

Prepared for

The Boeing Company
Santa Susana Site
5800 Woolsey Canyon Road
Canoga Park, California, 91304-1148

Santa Susana Field Laboratory
Site-Wide Stormwater Annual Report
2019/20 Reporting Year

Prepared by

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Abbreviations

CASQA	California Stormwater Quality Association
CM	Culvert Modification
COC	Constituent of Concern
DMR	Discharge Monitoring Report
DNQ	Detected not Quantified
DOE	Department of Energy
DTSC	Department of Toxic Substances Control
ELV	Expendable Launch Vehicle
GETS	Groundwater Extraction and Treatment System
ISRA	Interim Source Removal Action
LARWQCB	Los Angeles Regional Water Quality Control Board
LOE	Line of Evidence
LOX	Liquid Oxygen Plant
mg	milligram
µg/L	micrograms per liter
NASA	National Aeronautics and Space Administration
ND	Northern Drainage
NPDES	National Pollutant Discharge Elimination System
OF	Outfall
PL	Permit Effluent Limit
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Feasibility Investigation
RMHF	Radioactive Materials Handling Facility
RMMP	Restoration, Mitigation, and Monitoring Plan
SAP	Sampling and Analysis Plan
SSFL	Santa Susana Field Laboratory
SWPPP	Stormwater Pollution Prevention Plan
SWTS	Stormwater Conveyance and Treatment System
TCDD	Tetrachlorodibenzo- <i>p</i> -dioxin
TEQ	Toxic Equivalence
TSS	Total Suspended Solid

1 Introduction

The Santa Susana Field Laboratory (SSFL) occupies approximately 2,850 acres and is located at the top of Woolsey Canyon Road in the Simi Hills, Ventura County, California. The SSFL has the potential to discharge stormwater runoff impacted by constituents from the facility. As such, discharges from SSFL are currently regulated by the Los Angeles Regional Water Quality Control Board (LARWQCB) under *National Pollutant Discharge Elimination System (NPDES) Permit No. CA0001309 for the Boeing Company, SSFL, Canoga Park, CA, Order No. R4-2015-0033* (“2015 Permit”) (LARWQCB, 2015). The 2015 Permit¹ became effective on April 1, 2015 and states the following:

“The Discharger has agreed to maintain the Surface Water Expert Panel. With input from the Surface Water Expert Panel, the Discharger shall submit annual reports that describe the previous year’s monitoring results, evaluation of existing BMP performance, and submit a workplan that includes recommendations for modified and/or new storm water controls and monitoring that will address exceedances from any outfall addressed by this permit. The Discharger shall also support the Surface Water Expert Panel in organizing periodic public interaction events and encouraging public communication involvement. The first annual report shall be due within 6 months of the effective date of this permit [October 1, 2015].”

The *Site-Wide Stormwater Work Plan and 2014/15 Annual Report* (“2015 Work Plan”) (Santa Susana Surface Water Expert Panel and Geosyntec Consultants, 2015a) was intended to meet this requirement. This 2019/20 Annual Report is intended to meet the commitments outlined in the 2015 Work Plan. The existing work plan and permit will govern until a new permit is issued. This report focuses on the results and findings of the 2019/20 reporting year which covers the June 1, 2019 to May 31, 2020 period.

1.1 Background

The SSFL is jointly owned by the Boeing Company (Boeing) and the federal government. The National Aeronautics and Space Administration (NASA) administers the portion of the property owned by the federal government. As shown in Figure 1, the site is divided into four administrative areas (Areas I, II, III, and IV) with undeveloped land areas to both the north and south. Administrative Areas I and III are operated by Boeing, which owns the majority of Area I and all of Area III. A portion of Area I (40 acres) and all of Area II are owned by the federal government and are administered by NASA. Boeing and predecessor contractors performed work at the Department of Energy (DOE) ETEC (Energy Technology Engineering Center) site in Area IV at Santa Susana Field Laboratory prior to the 1998 Department of Energy remediation contract with Boeing. While the land in Area IV is owned by Boeing, the Department of Energy is responsible for the cleanup. Boeing no longer serves as the Department of Energy’s contractor. DOE owns specific facilities located on approximately 90 acres of Area IV. Industrial operations at the SSFL have ceased; current activities at the site include environmental monitoring and sampling, demolition, and remediation planning. The site also provides exceptional wildlife habitat and undeveloped land (open space).

¹ Prior to April 1, 2015 this site was regulated since 2010 under the *National Pollutant Discharge Elimination System (NPDES) Permit No. CA0001309 for the Boeing Company, SSFL, Canoga Park, CA, Order No. R4-2010-0090* (“2010 Permit”)

Stormwater discharges² from the SSFL are typically captured and treated upstream of or at the outfalls, up to a design storm size. An exception to this outfall-based treatment approach is at Outfalls 001 and 002 in the southern undeveloped land, where stormwater runoff consists of runoff from undeveloped areas with no or minimal history of industrial activity or known surface soil contamination, as well as treated stormwater from Outfalls 011 and 018, respectively. Runoff to Outfalls 001 and 002, downstream of Outfalls 011 and 018, is discharged without additional treatment. Another exception to this is at Outfalls 008 and 009, where the stormwater quality management strategy instead combines distributed source controls with natural treatment systems due to the challenge of treating stormwater at these canyon outfalls (i.e., outfall-based treatment would require construction of large dams with substantial environmental impact and potential risk to the public downstream). At Outfalls 008 and 009, Interim Source Removal Action (ISRA) and Best Management Practices (BMP) programs were implemented beginning in 2010 with oversight and participation of the LARWQCB to improve compliance with the 2010 Permit limits through the dual approach of remediation of surface soils that are above defined thresholds for NPDES constituents of concern, and through distributed control and/or treatment of stormwater runoff from prioritized subareas, respectively. The BMP Plan for the Outfall 008 and 009 Watersheds (MWH et al., 2010) (“2010 BMP Plan”) was developed under the oversight of the Surface Water Expert Panel (referred to herein as the “SWEP” or “Expert Panel”). The 2015 Work Plan replaced the 2010 BMP Plan, provides an overall strategy for improving NPDES compliance for stormwater discharges site-wide, and continues the important process of public outreach and engagement on stormwater issues.

The Surface Water Expert Panel -- consisting of Dr. Robert Pitt (University of Alabama), Dr. Robert Gearheart (Humboldt State University), Dr. Michael Stenstrom (University of California Los Angeles), Dr. Michael Josselyn (WRA Environmental Consultants), and Jonathan Jones (Wright Water Engineers) -- continues to oversee stormwater planning and design work at the SSFL, as well as provide input on monitoring, source removal activities and other NPDES Permit issues. The Surface Water Expert Panel also oversees scientific studies related to SSFL stormwater quality issues and BMP design, reviewed the stormwater Human Health Risk Assessment (HHRA), and interfaces with the public on SSFL stormwater activities and related considerations. Their original mission, to improve stormwater at NPDES Outfalls 008 and 009, was expanded through the 2015 Work Plan to include all NPDES outfalls as required through the 2015 Permit. This year, as in recent previous years, the Surface Water Expert Panel also reviewed the Quarterly Discharge Monitoring Reports (DMRs), SSFL SWPPP, BMP Plan, and Spill Contingency Plan, providing comments on these plans to offer the Panel’s perspective.

1.2 Site Overview

The outfalls regulated under the 2015 NPDES Permit are listed in Table 1 and depicted in Figure 1. The NPDES Permit states that 60% of the annual stormwater discharge from SSFL exits the property via two southerly discharge points (Outfalls 001 and 002) to Bell Creek, a tributary to the Los Angeles River. Upstream outfalls that contribute to the discharge at Outfalls 001 and 002 include Outfalls 011 and 018. Outfall 019 is permitted for the injection of treated groundwater, but not planned for the discharge of surface water. Outfall 020, while included in the NPDES Permit, is also not planned for the discharge of surface water. The Surface Water Expert Panel’s scope does not include groundwater, unless

² Treated groundwater discharges are also covered in the 2015 Permit, however, the 2015 Work Plan scope is limited to stormwater discharges.

groundwater is known to comingle with stormwater and potentially contribute constituents of concern to the NPDES outfalls. A separate Groundwater Expert Panel is active at SSFL and oversees Boeing related groundwater tasks, including addressing treated groundwater discharge and naturally occurring seeps and springs.

Stormwater from the northern areas of the site is transferred to Silvernale Pond for treatment prior to discharge at Outfall 018. Higher flows, beyond the storage/transfer system capacity, discharge at Outfalls 003 through 007 and 010. At Outfalls 011 and 018, stormwater conveyance and treatment systems (SWTSs) have been in place since 2012 for advanced treatment using ActiFlo coagulation and filtration systems which is pretreated. Flow variations are also minimized using storage ponds. However, the SWTS at Outfall 011 has had periods where operations lapsed during its lifetime. Because of the location, size and terrain of the Outfall 008 and 009 watersheds, coupled with the inability to practically store large amounts of stormwater in these watersheds, flows from these areas are not captured and treated by the SWTSs³, and instead a distributed stormwater treatment and iterative (or adaptive management-based) approach is employed in both the Outfall 008 and 009 watersheds, as described in the 2010 BMP Plan. Thus, Outfall 009 naturally flows to Arroyo Simi and stormwater runoff from Happy Valley (Outfall 008) naturally flows via Dayton Canyon Creek to Chatsworth Creek. Chatsworth Creek flows south to Bell Creek southwest of the intersection of Shoup Avenue and Sherman Way. Bell Creek subsequently flows southeast to the Los Angeles River.

Table 1. NPDES Outfall Descriptions

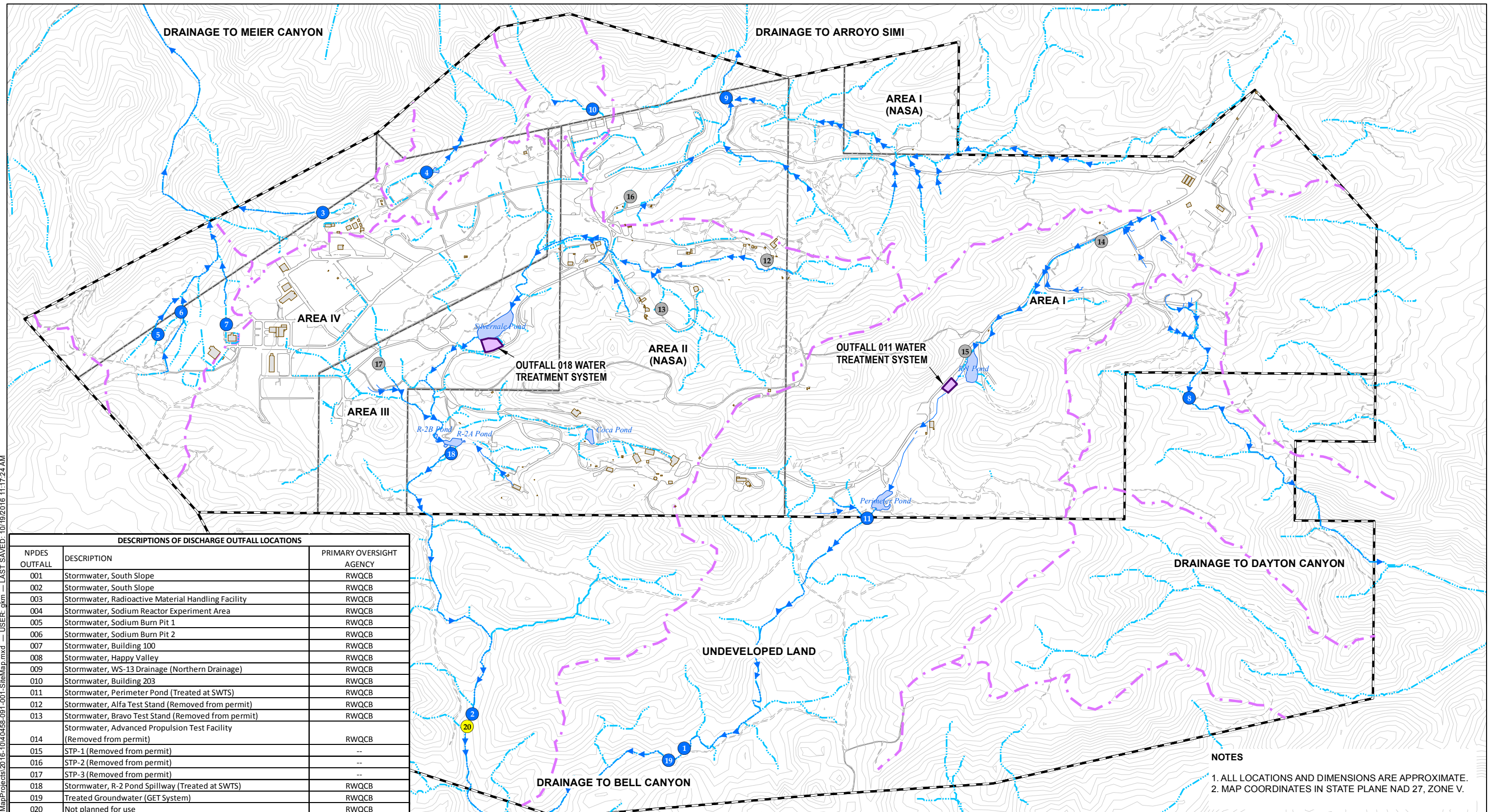
Outfall*	Status/Discharge Description
001	Downstream of Outfall 011; discharge to Bell Creek
002	Downstream of Outfall 018; discharge to Bell Creek
003	Runoff transferred to Silvernale for treatment prior to discharge at Outfall 018 ⁴
004	Runoff transferred to Silvernale for treatment prior to discharge at Outfall 018 ⁴
005	Runoff transferred to Silvernale for treatment prior to discharge at Outfall 018 ⁴
006	Runoff transferred to Silvernale for treatment prior to discharge at Outfall 018 ⁴
007	Runoff transferred to Silvernale for treatment prior to discharge at Outfall 018 ⁴
008	Stormwater from Happy Valley; discharge to Dayton Creek
009	Stormwater from Northern Drainage; discharge to Arroyo Simi
010	Runoff transferred to Silvernale for treatment prior to discharge at Outfall 018 ⁴
011	Stormwater and perimeter pond (treated at Stormwater Treatment System [SWTS]); discharge to Outfall 001
018	Stormwater and R-2 pond (treated at SWTS); discharge to Outfall 002
019	Injection of treated groundwater (GET System); no surface discharge
020	Not planned for use; Injection of treated groundwater (GET System); no surface discharge

*Outfalls 012 through 017 were excluded from the 2015 Permit

³ An exception to this is at the helipad, located in Area II in the Outfall 009 watershed, where some runoff is captured and piped to Silvernale Pond for treatment in the Outfall 018 SWTS.

⁴ If storage and transfer capacities to Silvernale are exceeded, stormwater runoff is treated in media filters at each individual outfall before discharging to Calleguas Creek tributaries.

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DESCRIPTIONS OF DISCHARGE OUTFALL LOCATIONS		
NPDES OUTFALL	DESCRIPTION	PRIMARY OVERSIGHT AGENCY
001	Stormwater, South Slope	RWQCB
002	Stormwater, South Slope	RWQCB
003	Stormwater, Radioactive Material Handling Facility	RWQCB
004	Stormwater, Sodium Reactor Experiment Area	RWQCB
005	Stormwater, Sodium Burn Pit 1	RWQCB
006	Stormwater, Sodium Burn Pit 2	RWQCB
007	Stormwater, Building 100	RWQCB
008	Stormwater, Happy Valley	RWQCB
009	Stormwater, WS-13 Drainage (Northern Drainage)	RWQCB
010	Stormwater, Building 203	RWQCB
011	Stormwater, Perimeter Pond (Treated at SWTS)	RWQCB
012	Stormwater, Alfa Test Stand (Removed from permit)	RWQCB
013	Stormwater, Bravo Test Stand (Removed from permit)	RWQCB
014	Stormwater, Advanced Propulsion Test Facility (Removed from permit)	RWQCB
015	STP-1 (Removed from permit)	--
016	STP-2 (Removed from permit)	--
017	STP-3 (Removed from permit)	--
018	Stormwater, R-2 Pond Spillway (Treated at SWTS)	RWQCB
019	Treated Groundwater (GET System)	RWQCB
020	Not planned for use	RWQCB

NOTES
 1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
 2. MAP COORDINATES IN STATE PLANE NAD 27, ZONE V.

LEGEND

FORMER NPDES OUTFALL LOCATION	SSFL PROPERTY BOUNDARY	DIRT ROAD	NATURAL DRAINAGE
NPDES OUTFALL LOCATION	ADMINISTRATIVE AREA BOUNDARY	25' ELEVATION CONTOUR	EFFLUENT PATHWAY
POSSIBLE FUTURE NPDES OUTFALL LOCATION	EXISTING BUILDING/STRUCTURE	SURFACE WATER DIVIDE	SURFACE WATER POND
GROUNDWATER EXTRACTION TREATMENT (GET) SYSTEM	STORMWATER TREATMENT SYSTEM		

0 1,200 2,400
 SCALE IN FEET

HALEY ALDRICH SANTA SUSANA FIELD LABORATORY
 VENTURA COUNTY, CALIFORNIA

SITE MAP WITH DRAINAGES, DRAINAGE AREAS, OUTFALL LOCATIONS, AND SURFACE WATER BODIES

FIGURE 1

1.3 Existing Stormwater Treatment

BMPs have been implemented throughout the site to treat stormwater prior to discharge. The major structural treatment BMPs (i.e., excluding site-wide erosion and sediment controls, unpaved road control measures, and demolition of buildings and paved areas with subsequent soil scarification and revegetation) are summarized in the *ISRA Performance Monitoring and BMP Monitoring for the Outfalls 008 and 009 Watersheds, 2014/2015 Rainy Season* (“2015 Annual Report for Outfalls 008 and 009”) (MWH *et al.*, 2015b), the 2015 BMP Plan (Haley & Aldrich, 2015), and subsequent Annual Reports, and include the following (see Figure 3 for photos of each), by completion date:

- 2009: Outfall 009 Culvert Modifications (CMs)
- 2010: Outfall 008 ISRA Excavations
- 2011: Outfall 009 Helipad Berms and Pumps
- 2011: Outfall 011 Stormwater Conveyance and Treatment System (SWTS)
- 2011: Outfall 018 Stormwater Conveyance and Treatment System (SWTS)
- 2012: Outfall 009 B-1 Sedimentation Basin and Media Filter
- 2012: Outfall 009 Northern Drainage Restoration Measures
- 2012: Outfall 009 CM-9 Additional Improvements
- 2013: Outfall 009 Lower Parking Lot Sedimentation Basin and Biofilter
- 2013: Outfall 009 ISRA Excavations
- 2013: Outfall 009 ELV Treatment BMP⁵
- 2013: Outfall 009 LOX Sandbag Berms and Slope Drains
- 2015: Outfall 009 B1436 Detention Bioswales
- 2017: Outfall 009 Wattles added around Poles along Roads
- 2017: Outfall 009 Upper Parking Lot Media Filter
- 2017: Outfall 009 Roadway Diversion to CM-3
- 2017: Outfall 009 Administration Area Inlet Filters
- 2017: Outfall 009 Enhanced Erosion Controls in the Former Shooting Range Area
- 2017: Outfall 009 Roadway Diversion to CM-1
- 2018: Outfall 009 CM-1 Reconstruction
- 2019: Outfall 009 Mulch Sack Curb Extension in Lower Parking Lot
- 2019: Area II Utility Pole vegetation clearing and soil base stabilization
- 2020: Outfall 009 ELV and Biofilter Cistern Generators Added
- 2020: Outfall 009 CM-3 Check Dams Added and Media Filter Reconstruction
- 2020: Southern Buffer Zone Utility Pole BMPs

In addition, there has been extensive use of erosion and sediment control BMPs, revegetation, stabilization of repaved road, and other activities to stabilize soil. Impervious surfaces, such as buildings and parking lots, have also been removed across the site and “disconnected” from one another, restoring those sites to more natural conditions.

⁵ ELV Treatment BMP was not operational in the 2018/19 reporting year due to the Woolsey Fire burning the power supply connection. A generator was purchased and was installed in September 2019, so it was operational for the 2019/20 reporting year.

Stormwater from Outfall 011 is pumped to a storage pond for settling and evaporation and, when runoff volumes are anticipated to exceed the pond storage capacity, stored stormwater is treated using an advanced treatment system. The treated stormwater then flows to Outfall 001. However, in November of 2018 the conveyance pipelines burned in the Woolsey wildfire and the OF011 SWTS was not operational in the following 2018/19 season, and flows from Outfall 011 were instead treated only by the flow-through media filter at the outfall. The OF011 SWTS was repaired in late 2019 and was operational prior to the first storm event of this recent 2019/2020 season. All stormwater (up to a certain size design storm event that varies by outfall based on site-specific pumping and storage capacities) from Outfalls 003, 004, 005, 006, 007, 009⁶, and 010 is pumped to the Outfall 018 SWTS and treated along with flows from the Outfall 018 watershed. The SWTS has been highly effective at reducing exceedances.

The various distributed BMPs in the Outfall 009 watershed (e.g., widespread revegetation, erosion and sediment controls, natural treatment BMPs) have also been effective at reducing the concentrations of the constituents of concern (COCs) in the watershed's stormwater. In general, the statistical evaluation of influent versus effluent BMP performance sample results included in this Annual Report indicated that significant COC removals are occurring in these subareas, particularly for BMP influent samples that are above Permit Limits.

Limited runoff has occurred at Outfall 008 since the completion of ISRA activities (the identification, evaluation, remediation or stabilization, and restoration of areas of contaminated soil containing COCs that may have contributed to exceedances of NPDES Permit limits in stormwater) and installation of new erosion and sediment controls, revegetation, and unpaved road stabilization in 2012. During the 2013-2018 period, four discharges occurred, each sampled and analyzed for approximately 60-200 parameters, and only three results were at concentrations above the 2015 Permit Limits. This outcome reflects positive performance of the ISRA soil removal activities, revegetation/restoration, and erosion controls targeting sediment-bound COCs. While the 2018/19 year had nine samples collected and 11 results at concentrations above the 2015 Permit Limits, this increase in runoff and exceedances is likely due to a combination of the above average rainfall and post-Woolsey wildfire conditions that decreased vegetative cover and accelerated runoff. In the 2019/20 year, there were only five samples collected and none had concentrations above the 2015 Permit Limits. These results further demonstrate the success of the iterative and distributed BMP approach that has been employed in these watersheds.

⁶ Stormwater runoff from a small area within the Outfall 009 watershed (helipad area) is pumped to the storage pond for treatment prior to being discharged from Outfall 018, while stormwater runoff from the remaining, vast majority of the watershed flows to Outfall 009.



2009: Culvert Modifications



2010: Outfall 008 Watershed ISRA Excavations



2011: Helipad Berms and Pumps



2011: Outfall 011 SWTS



2011: Outfall 018 SWTS



2012: B-1 Sedimentation Basin and Media Filter



2012: Northern Drainage Restoration Measures



2012: CM-9 Additional Improvements (Perforated Pipe and Rip Rap Berm)



2013: Lower Parking Lot Sedimentation Basin and Biofilter



2013: Outfall 009 Watershed ISRA Excavations



2013: ELV Treatment BMP



2013: LOX Sandbag Berms and Slope Drains



2015: B1436 Detention Bioswales



2017: Wattles around Poles along Roads



2017: Upper Parking Lot Media Filter



2017: Roadway Diversion to CM-3



**2017: Administration Area Inlet Filters
(Filter Basket)**



**2017: Administration Area Weighted Wattle and
Riprap at Culvert Inlet**



2017: Enhanced Erosion and Sediment Controls in Former Shooting Range Area



2017: Roadway Diversion to CM-1



2018: CM-1 Reconstruction Including Enlargement



2019: Mulch Sack Curb Extension in Lower Parking Lot



2019: Area II Utility Pole Vegetation Clearing and Soil Base Stabilization



2020: Outfall 009 CM-3 Check Dams Added and Filter Media Reconstruction



2020: Outfall 009 CM-3 Check Dams Added and Media Filter Reconstruction



2020: Southern Buffer Zone Utility Pole BMPs



2020: Outfall 009 ELV and Biofilter Cistern Generators Added

Figure 2. Photos of Example Structural BMPs and Years of Construction

1.4 Permit History

An overview of past SSFL stormwater permits, Expert Panel involvement, and Permit limit and benchmark exceedances (as compared to the 2015 Permit effluent limits/benchmarks) at the regulated outfalls over the past 20 years is provided in Figure 4. The number of Permit limit and benchmark exceedances that occur each year are a function of permit changes, annual rainfall, treatment BMPs and stormwater discharge avoidance strategies implemented, and natural variability of stormwater quality. Notable milestones shown on Figure 4 include:

- **1998 NPDES Permit:** NPDES Permit No. CA0001309 issued to regulate wastewater and stormwater discharged from SSFL.
- **2004 NPDES Permit:** The 2004 Permit included new CTR-based effluent limits and added 11 new compliance monitoring locations. As a result for the increased regulation, the number of benchmark and Permit limit exceedances increased.

- **2005 Topanga wildfire:** Approximately 97% of SSFL was burned resulting in an increased number of benchmark and Permit limit exceedances compared to reporting years with similar rainfall.
- **2006 NPDES Permit:** The 2004 Permit was revised to also include the waste load allocations (WLAs) from the applicable TMDLs for the downstream waterbodies.
- **2007 Cease and Desist Order (CDO):** Through the CDO, the RWQCB required “the assembly of a panel to review site conditions, modeled flow, contaminants of concern, and evaluate the BMPs capable of providing treatment to meet the final effluent limits.” The CDO also required BMP planning, performance evaluation, and reporting requirements.
- **2010 NPDES Permit:** No major changes to Permit. The Expert Panel continued to make data-informed BMP recommendations in the Outfall 008 and 009 watersheds, which were implemented at SSFL (see Section 1.3).
- In 2011, following the construction of the Outfall 018 SWTS, stormwater from Outfalls 003 through 007 and 010 was retained in storage tanks and transferred to the SWTS, reducing the number of discharges and opportunities for exceedances statewide.
- **2015 NPDES Permit:** Permit expanded the Expert Panel’s charge to all regulated SSFL outfalls. In response, the Panel reviews Permit limit and benchmark exceedances for all outfalls and makes data-driven BMP recommendations on a site-wide basis. In the 2015-2018 drought period, the number of Permit limit and benchmark exceedances fell compared to years with similar rainfall.
- **2018 Woolsey wildfire:** Approximately 80% of SSFL was burned and above-average rainfall was measured. Because of the hydrophobicity⁷ of the soil and the loss of vegetative cover due to the wildfire event, rain events after the fire produced significantly greater amounts of runoff compared to similar sized rains during non-fire years. There were an increased number of benchmark and Permit limit exceedances compared to reporting years with similar rainfall.

1.5 Report Organization

This report is organized as follows:

- Section 2: Monitoring Activities
- Section 3: BMP Activities
- Section 4: Key Findings
- Section 5: Recommendations
- Section 6: Milestones/Schedule
- Section 7: References

⁷ Soils that exhibit hydrophobicity cause water to collect on the soil surface rather than infiltrate into the ground. Wildfires generally cause soils to be hydrophobic temporarily, which increases water repellency, surface runoff and erosion in post-burn sites.

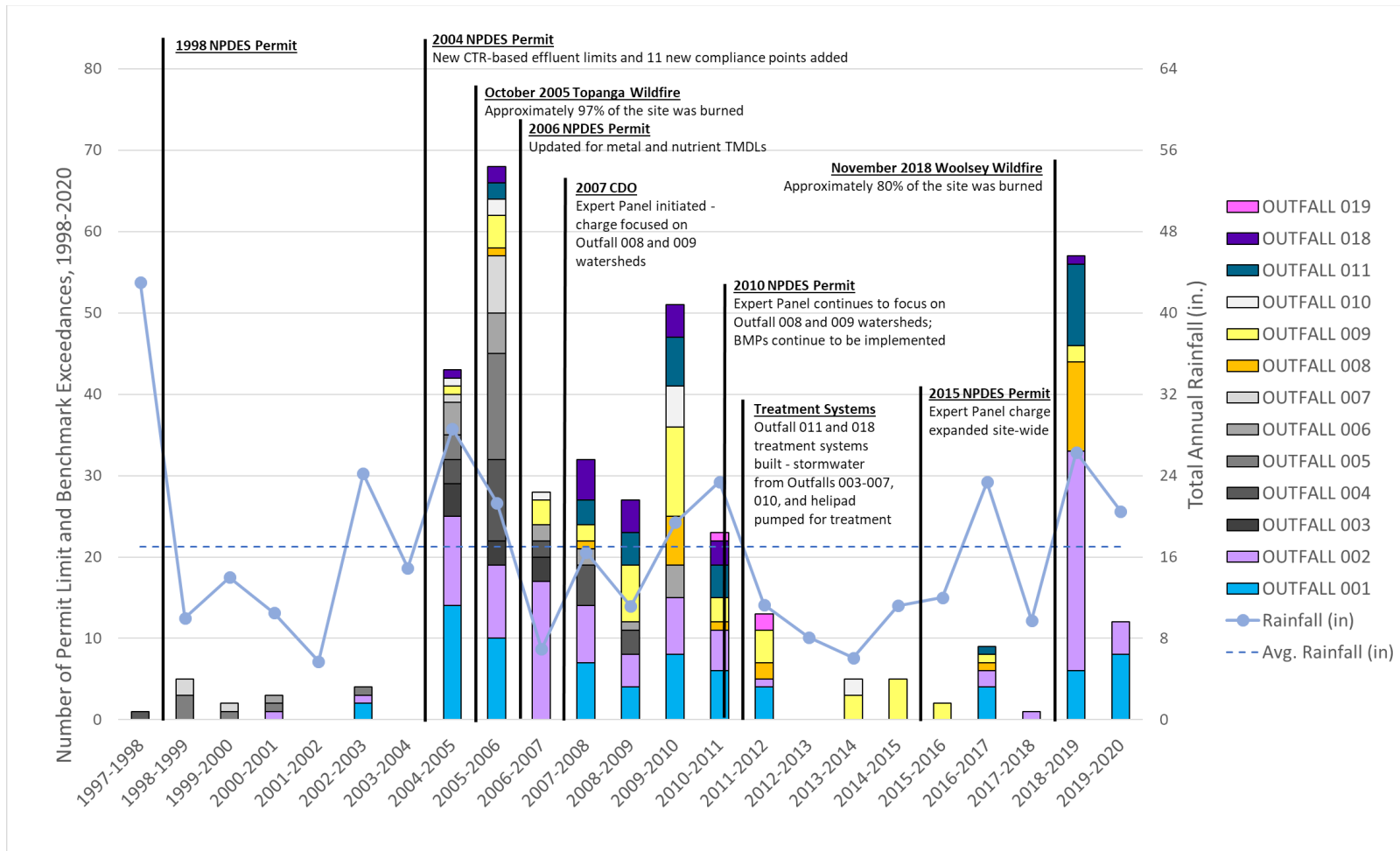


Figure 3. Summary of SSFL Permits, Surface Water Expert Panel Involvement, and Water Quality, 1998-2020

2 Monitoring Activities

This section describes the hydrologic characteristics of the past reporting year, as well as a summary of the results of stormwater samples collected at NPDES compliance outfalls (in accordance with the 2015 NPDES Permit), BMP monitoring in the Outfall 009 watershed (in accordance with the 2018/19 Sampling and Analysis Plan [Stantec, 2018]), as well as a summary of monitoring activities conducted as part of the Northern Drainage assessment and the non-industrial sources special study (Santa Susana Surface Water Expert Panel and Geosyntec Consultants, 2015b).

2.1 2019/20 Rainfall

The long-term average annual rainfall at SSFL from 1959 to 2020 is 17.02 inches⁸, primarily occurring as winter storms from October through March. Alternating periods of above average and below average annual rainfall amounts are common. Little rainfall typically occurs during the April through September dry season. 20.54 inches of rainfall were measured in the 2019/20 reporting year (the reporting year is defined as June 1 – May 31). This past season’s rainfall was higher than average and is equivalent to the 69th percentile rain year for the 1959-2020 period of record. Nine rain events (where a “rain event” is defined in the Permit as greater than 0.1 inches of rainfall in a 24-hour period and preceded by at least 72 hours of dry weather) occurred in the 2019/20 reporting year, with five of these storms producing observable flow at one or more Outfalls. For historical context, Table 2 summarizes the rainfall over the past eleven reporting years, since submittal of the Surface Water Expert Panel Work Plan in 2010. Five of these eleven years have had above average rainfall.

Table 2. Historical Rainfall at SSFL, since 2010 Surface Water Expert Panel Work Plan

Reporting Year	Annual Rainfall	Percent of Average Annual Rainfall	Number of Rain Events
2019/20	20.5	121%	9
2018/19	26.3	155%	12
2017/18	9.8	58%	4
2016/17	23.4	138%	14
2015/16	12.0	71%	13
2014/15	11.2	66%	9
2013/14	6.1	36%	5
2012/13	8.1	48%	9
2011/12	11.3	67%	10
2010/11	23.4	138%	14
2009/10	19.4	114%	11

Above average annual rainfall amounts are **bolded**.

Table 3 summarizes the 2019/20 individual rainfall event characteristics, as well as the NPDES outfalls sampled, and the number of watershed 009 BMP subarea monitoring samples. A total of 47 watershed

⁸ Data from the Simi Hills – Rocketdyne Lab gauge (Ventura County Watershed Protection District site 249) was used to determine annual rainfall from 1958/59 through 2000/01. However, rainfall data are not available at this gauge from 1977/78 through 1984/85. Data from the Area 4 gauge (which was moved to Area 1 on January 1, 2013) were used to determine annual rainfall from 2001/02 through 2019/20. This results in a period of record of 54 years.

BMP samples (including BMP performance, potential BMP subarea⁹, and background) were collected in the 2019/20 reporting year. Figure 5 illustrates the cumulative rainfall and NPDES outfall discharge samples collected during the 2019/20 reporting year.

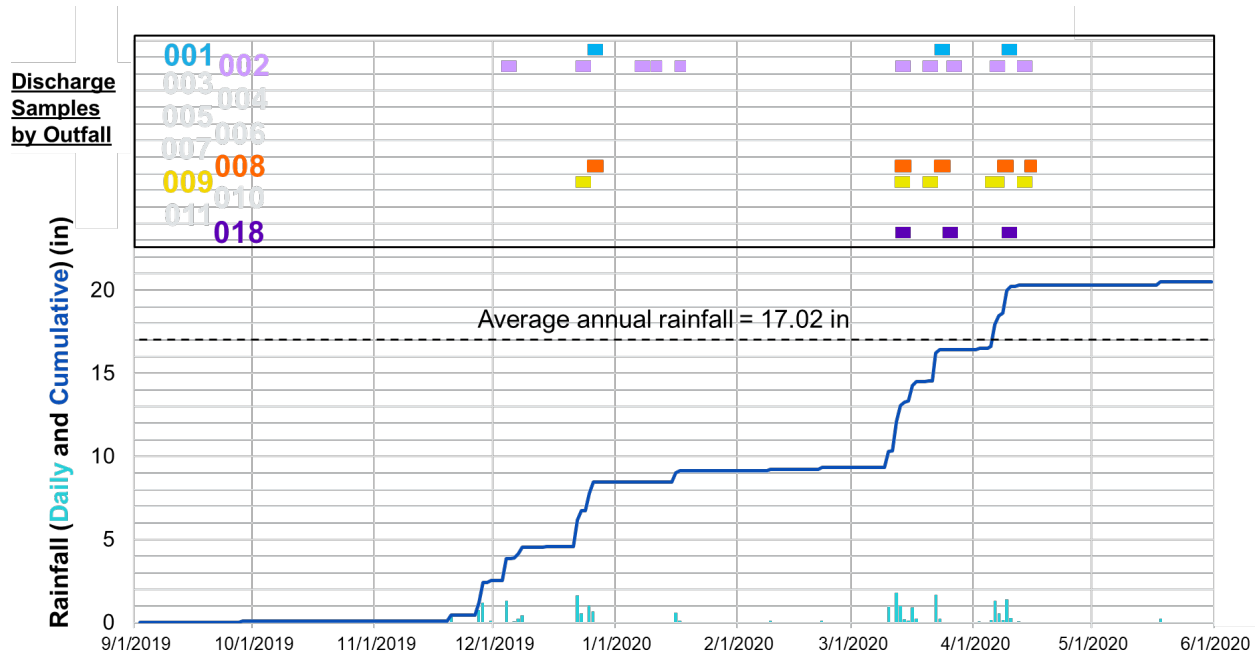


Figure 4. Annual Cumulative Rainfall and Outfall Discharge Samples Collected, 2019/20

The greatest rainfall event occurred on March 10-23, 2020 (7.08-in), which had both 6-hour and 24-hour maximum rainfall intensity recurrence intervals of 1-year (Figure 6). The next largest events occurred on December 22-26, 2019 (3.88-in) with a 6-hour maximum rainfall intensity recurrence interval of nearly 2-years and April 5-13, 2020 (3.81-in) with 6-hr rainfall intensity recurrence interval of less than 1-year (Table 3 and Table 4).

Table 3. NOAA Point Precipitation Frequency Estimates for Event Intensity at SSFL

Average Recurrence Interval (years)	1	2	5	10	25	50
1- hr Precipitation Depth (in)	0.51	0.67	0.87	1.03	1.24	1.41
3- hr Precipitation Depth (in)	0.95	1.24	1.62	1.92	2.32	2.62
6- hr Precipitation Depth (in)	1.38	1.80	2.35	2.78	3.36	3.79
12- hr Precipitation Depth (in)	1.89	2.47	3.21	3.81	4.59	5.18
24- hr Precipitation Depth (in)	2.53	3.33	4.34	5.14	6.20	6.99

⁹ “Potential BMP subarea monitoring locations” are defined here as drainage areas for stormwater runoff sampling points, and that include ISRA, RCRA Facility Investigation (RFI), and/or developed areas (i.e., buildings, parking lots, roads, etc.) so that impacted runoff quality might be expected and/or treatment BMPs might be necessary, pending an evaluation of the monitoring results.

Table 4. 2019/20 Reporting Year and Monitoring Event Summary

Rain Event	Total Rainfall ¹	Event Duration ¹	24-hr Recurrence Interval	Average Rainfall Intensity ¹	Maximum 1-Hour Rainfall Intensity ¹	NPDES Outfalls with Sampleable Discharge	Number of Outfall 009 Watershed BMP Subarea Monitoring Samples
	(in)	(hrs)	(years)	(in/hr)	(in/hr)		
11/20/2019	0.37	2	<1	0.185	0.33	None	5
11/27-11/30/2019	2.10	90	<1	0.023	0.28	None	14
12/4-8/2019	2.01	50	<1	0.018	0.31	002	5
12/22-26/2019	3.88	89	<1	0.044	0.49	001, 002, 008, 009	10
(018 SWTS treated discharge) 1/6-11/2020	No rain	No rain	No rain	No rain	No rain	002, 018	None
1/16-17/2020	0.70	11	<1	0.064	0.31	002	None
2/22/2020	0.11	3	<1	0.037	0.10	None	None
3/10-23/2020	7.08	319	1-yr	0.022	0.40	001, 008, 009, (009 also had 7 day follow up samples. 008 sampled again 10 days later due to new flow during same event)	9
(018 SWTS treated discharge, comingled with rain) 3/13-15/2020						002, 018 (002 also had 7 day follow up samples)	
(018 SWTS treated discharge) 3/25-29/2020	No rain	No rain	No rain	No rain	No rain	002, 018	None
4/5-13/2020	3.81	187	<1	0.021	0.29	001, 008, 009, 018, (008 and 009 also had 7 day follow up samples)	4
(018 SWTS treated discharge, co-mingled with rain) 4/9 – 4/15/2020						002, 018 (002 also had 7 day follow up samples)	
5/18/2020	0.22	7	<1	0.031	0.07	None	None
Non-Rain Event Total ²	0.26	--	--	--	--	--	--
Total	20.54	--	--	--	--	26 samples	47 samples

¹ Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a maintained and calibrated weather station within Area I.

² On the following six days, rainfall was measured but was not considered a rain event per the NPDES Permit definition: June 1, 2019 (0.01"), June 21, 2019 (0.01"), September 28, 2019 (0.07"), December 14, 2019 (0.01"), February 9, 2020 (0.09"), and April 2, 2020 (0.07").

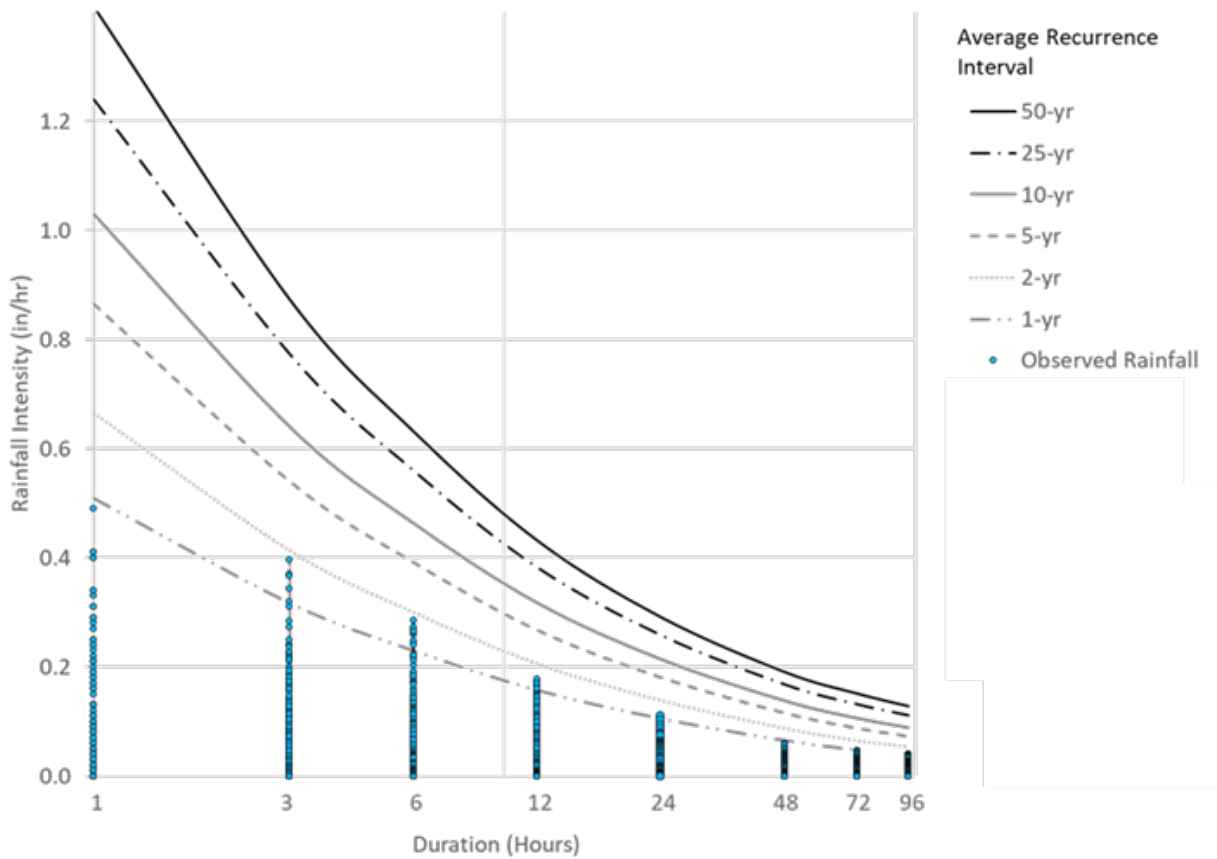


Figure 5. Observed Precipitation Intensities and Durations for 2019/20 Reporting Year, Area I Gauge, with NOAA Point Precipitation Frequency Estimates

Most site structural BMPs are designed to treat the 24-hr 1-year recurrence interval storm (2.5-in). Additionally, the rip rap placed in the Northern Drainage as grade control structures was sized to prevent movement during storms up to the 5-year event. However, when back to back storms occur, even a storm smaller than the design storm can overwhelm the BMPs. This past season, the highest recorded 24-hour rainfall (2.65-in on 3/12/2020) was just above the 1-year recurrence interval (2.53-in) and no significant back to back events occurred; both of which may have contributed to why no BMP overflow events were observed this year.

2.2 2019/20 Stormwater Sampling

During the 2019/20 rainy season, 26 NPDES outfall samples, 47 BMP performance samples in the Outfall 009 watershed, and 7 subarea samples in the Outfall 001 and 002 watersheds were collected. These results are discussed in the sections below.

2.2.1 NPDES Outfalls

SSFL outfall discharges are monitored for water quality compliance with the 2015 NPDES Permit. This past reporting year, 26 total discharge samples were reported for Outfalls 001, 002, 008, 009, and 018

combined, as shown in Table 5. Of the 26 discharge samples and across the suite of NPDES parameters sampled, twelve benchmark exceedances and no permit limit exceedances were measured. These benchmark exceedances are discussed following Table 5. No sampleable discharge (and thus no opportunities for Permit limit or benchmark exceedances) occurred at Outfalls 003, 004, 005, 006, 007, 010, 011, 019, or 020.

Table 5. NPDES Outfalls – Reported 2019/20 Stormwater Discharges and Benchmark Exceedances

Outfall	Dates of Discharge-Producing Storm Events and SWTS Operations ^{a,b}	Number of Reported Exceedances (Year Total) ^c	Reported Exceedances				
			Sample Date ^d	Parameter	Result	Benchmark	Units
001	12/22-26/2019	8	12/27/2019	Gross Alpha ^e	14.1+/-3.61	15	pCi/L
				Iron	14	0.3	mg/L
				Lead	6.6	5.2	mg/L
	3/10-23/2020			TCDD TEQ (no DNQ)	5.1E-08	2.8E-08	µg/L
			3/24/2020	Iron	5.4	0.3	mg/L
				Manganese	90	50	µg/L
				TCDD TEQ (no DNQ)	3.3E-08	2.8E-08	µg/L
4/5-13/2020	4/10/2020	Iron	2.1	0.3	mg/L		
002	12/4-8/2019	4	12/5/2019	Iron	1.5	0.3	mg/L
	12/22-26/2019		12/24/2019	Iron	8.7	0.3	mg/L
				TCDD TEQ (no DNQ)	5.1E-08	2.8E-08	µg/L
	1/6-11/2020 ^a		3/14/2020	Iron	1.3	0.3	mg/L
	1/16-17/2020						
	3/13-15/2020 ^b						
3/25-29/2020 ^a							
4/5-13/2020							
4/9-15/2020 ^b							
008	12/22-26/2019	0	--	--	--	--	--
	3/10-23/2020		--	--	--	--	--
	4/5-13/2020		--	--	--	--	--
009	12/22-26/2019	0	--	--	--	--	--
	3/10-23/2020		--	--	--	--	--
	4/5-13/2020		--	--	--	--	--
018	1/6-11/2020 ^a	0	--	--	--	--	--
	3/13-15/2020 ^b		--	--	--	--	--
	3/25-29/2020 ^a		--	--	--	--	--
	4/9-15/2020 ^b		--	--	--	--	--

^a Silvernale Stormwater Treatment System treated discharge

^b Silvernale Stormwater Treatment System treated discharge comingled with rainfall

^c The number of reported exceedances (year total) is based on the sum of the exceedances reported in the quarterly reports

^d Most parameters are analyzed from a 24-hr composite sample

^e Quarterly Monitoring Report reported one exceedance for gross alpha (14.1 +/- 3.6 pCi/L), but noted this result was indeterminate compared to the daily max benchmark (15 pCi/L) and that OF001 annual average (3.65 +/- 0.64 pCi/L) was below, therefore concluding gross alpha at OF001 was in compliance for the reporting year.

An investigation into the suspected causes of each exceedance is discussed in Appendix C. Potential sources evaluated included impacted surface soils (soils in or near former operations), pavement solids, treated wood, atmospheric deposition, and background soils. A summary of the exceeding constituents at each outfall are shown in Table 6 below. Outfall 001, 002, and 008 are similar in that they are largely undeveloped with only minimal access roads. The main difference between Outfall 008 and the Southern Buffer Zone watersheds (001 and 002) is that Outfall 008 has had more erosion control and stabilization measures implemented. This is reflected in the average TSS concentrations in each watershed: 85 mg/L at Outfall 001, 21 mg/L at Outfall 002, 4.4 mg/L in Outfall 008, and 3.8 mg/L in Outfall 009, and 0.85 mg/L at Outfall 018. The Surface Water Expert Panel developed recommendations based on their review of these results. This year's recommendations are discussed in Section 5.2 of this report.

Table 6. Summary of Exceeding Constituents by Outfall

Parameter	Outfall 001	Outfall 002	Outfall 008	Outfall 009	Outfall 018	Total
Gross Alpha	1 ^a	0	0	0	0	1
Iron	3	3	NR	NR	0	6
Lead	1	0	0	0	0	1
Manganese	1	0	NR	NR	0	1
TCDD TEQ (no DNQ)	2	1	0	0	0	3
Total	8	4	0	0	0	12

NR = this parameter does not have a regulated permit effluent limit at a particular outfall

^a Quarterly Monitoring Report reported one exceedance for gross alpha (14.1 +/- 3.6 pCi/L), but noted this result was indeterminate compared to the daily max benchmark (15 pCi/L) and that OF001 annual average (3.65 +/- 0.64 pCi/L) was below, therefore concluding gross alpha at OF001 was in compliance for the reporting year.

2.2.1.1 Outfall 001

Runoff from Outfall 011, if any, ultimately flows to Outfall 001. Outfall 011 receives treated stormwater from the advanced treatment system when operational, but stormwater can also be stored in a settling pond where it evaporates during dry weather. During the 2019/20 rainy season, there were three events that produced sampleable discharge at Outfall 001 and none at Outfall 011. From the three events sampled at Outfall 001, a total of eight benchmark exceedances were measured. Four exceedances occurred during the 12/22-26/2019 rain event, three during the 3/10-23/2020 rain event, and one during the 4/10/2020 rain event. It is important to note that Outfall 001 is within the Southern Buffer Zone and the majority of the watershed was never subject to industrial uses.

A brief discussion of reported exceedances is as follows; for more information, a thorough analysis of the causes of exceedances is available in Appendix C:

- Iron at Outfall 001:** Iron was detected above its daily maximum benchmark of 0.3 mg/L on 12/27/2019, 3/24/2020, and 4/10/2020 at Outfall 001. The source is believed to be background soils, based on three independent lines of evidence: (1) the uniform spatial pattern indicates that all outfalls likely shared the same diffuse, site-wide source of iron in stormwater; (2) the outfall stormwater particulate strengths were best explained by background soils out of all the source materials tested (although the iron content of the stormwater particulate strengths – which represent suspended solids that are finer sized than undisturbed soils -- are higher than

the bulk soil samples, likely due to different soil iron concentrations by particle size); and (3) metal ratios (iron to manganese) support natural background soils as the likely source of iron in the exceeding samples.

- **Lead at Outfall 001:** Lead was detected above its daily maximum benchmark of 5.2 µg/L on 12/27/2019 at Outfall 001. Background soils are believed to be a contributing source, based on three independent lines of evidence: (1) the uniform spatial pattern indicates that all outfalls likely shared the same diffuse, site-wide source of lead in stormwater; (2) the outfall stormwater particulate strengths were best explained by background soils out of all the source materials tested (although the lead content of the stormwater particulate strengths – which represent suspended solids that are finer sized than undisturbed soils -- are higher than the bulk soil samples, likely due to different soil iron concentrations by particle size); and (3) metal ratios (lead to iron and lead to manganese) support natural background soils as the likely source of lead in the exceeding samples. A comparison of particulate strengths in stormwater samples and solids concentration in potential source material samples show that the exceeding sample's particulate strength was below the upper range for atmospheric deposition, pavement solids fines, and impacted soils. However, impacted soils are unlikely to be a source of the exceedance at Outfall 001 due to the relatively small quantity of impacted soils in the Outfall 001 watershed. Additionally, preliminary results of the buffer zone subarea study found no elevated lead in stormwater from impacted soil subareas in the buffer zone. This indicates the lead exceedance in stormwater could have come from atmospheric deposition, pavement solids fines, and/or background soils.
- **Manganese at Outfall 001:** Manganese was detected above its daily maximum benchmark of 50 µg/L at Outfall 001 on 3/24/2020. The source is believed to be background soils, based on three independent lines of evidence: (1) the uniform spatial pattern indicates that all outfalls likely shared the same diffuse, site-wide source of manganese in stormwater; (2) the outfall stormwater particulate strengths were best explained by background soils out of all the source materials tested (although the manganese content of the stormwater particulate strengths – which represent suspended solids that are finer sized than undisturbed soils -- are higher than the bulk soil samples, likely due to different soil manganese concentrations by particle size); and (3) metal ratios (iron to manganese) support natural background soils as the likely source of manganese in the exceeding samples.
- **Gross Alpha at Outfall 001:** The highest result for gross alpha (14.1 +/- 3.6 pCi/L) this year was indeterminate compared to the daily max benchmark (15 pCi/L) and that OF001 annual average (3.65 +/- 0.64 pCi/L) was below the annual average benchmark (15 pCi/L), therefore the data indicate that gross alpha at OF001 was in compliance for the reporting year. When there is a gross alpha result above the benchmark, a follow up analysis must be done to determine which radionuclides are present. Man-made and naturally occurring alpha-emitting radionuclides were analyzed. Only naturally occurring alpha-emitting radionuclides were detected. No man-made alpha-emitting radionuclides were detected. This indicates that the gross alpha detected were not from previous industrial activities at the site, but rather a result of natural processes.
- **TCDD TEQ (no DNQ) at Outfall 001:** TCDD TEQ (excluding 'Detected not Quantified ["no DNQ"]') (dioxins) was calculated above the daily maximum benchmark of 2.8E-08 µg/L in samples from

12/27/2019 and 3/24/2020 at Outfall 001. The spatial patterns indicate there was likely a local source contributing to elevated TCDD TEQ (no DNQ) concentrations. A comparison of particulate strengths in stormwater samples and solids concentration in potential source material samples suggests the TCDD TEQ (no DNQ) exceedances in stormwater were likely from pavement solids fines and/or soils near treated wood (utility poles), both of which have been found to be potent sources of TCDD TEQ (100x exceeding stormwater concentrations) through potential source testing data collected by the Surface Water Expert Panel and Geosyntec. Additionally, background soils could not be ruled out due to potentially elevated concentrations in soil fines. Metal ratio fingerprinting further supports background soils as a potential source of TCDD TEQ (no DNQ) in the exceeding samples.

2.2.1.2 Outfall 002

Runoff from Outfall 018 ultimately flows to Outfall 002. Outfall 018 receives stormwater from an advanced water treatment system prior to discharge. Four benchmark exceedances were measured at Outfall 002 during the 2019/20 rainy season. The exceedances occurred for iron and TCDD TEQ (no DNQ) over the course of three rain events. One of the iron exceedances occurred when SWTS-treated discharge from Outfall 018 was comingled with stormwater runoff from the 002 watershed (3/13-3/15/2020). There were no exceedances at Outfall 018 during the 2019/20 reporting year.

A brief discussion of exceedances is as follows; for more information, a thorough analysis of the causes of exceedances is available in Appendix C:

- **Iron at Outfall 002:** Iron was detected above its daily maximum benchmark of 0.3 mg/L on 12/5/2019, 12/24/2019, and 3/14/2020. Iron was detected above its daily maximum benchmark of 0.3 mg/L on 12/27/2019, 3/24/2020, and 4/10/2020 at Outfall 001. The source is believed to be background soils, based on three independent lines of evidence: (1) the uniform spatial pattern indicates that all outfalls likely shared the same diffuse, site-wide source of iron in stormwater; (2) the outfall stormwater particulate strengths were best explained by background soils out of all the source materials tested (although the iron content of the stormwater particulate strengths – which represent suspended solids that are finer sized than undisturbed soils -- are higher than the bulk soil samples, likely due to different soil iron concentrations by particle size); and (3) metal ratios (iron to manganese) support natural background soils as the likely source of iron in the exceeding samples.
- **TCDD TEQ (no DNQ) at Outfall 002:** TCDD TEQ (no DNQ) was calculated to be above the daily maximum benchmark of 2.8E-08 µg/L in stormwater samples collected on 12/24/2019. The spatial patterns indicate there was likely a local source contributing to elevated TCDD TEQ (no DNQ) concentrations. A comparison of particulate strengths in stormwater samples and solids concentration in potential source material samples suggests the TCDD TEQ (no DNQ) exceedances in stormwater were likely from soils near treated wood (utility poles). Additionally, background soils could not be ruled out due to potentially elevated concentrations in soil fines. Metal ratio fingerprinting further supports background soils as a potential source of TCDD TEQ (no DNQ) in the exceeding samples.

2.2.1.3 Long-Term Exceedance Trends

This past reporting year experienced fewer discharges and fewer exceedances than during the reporting years immediately following wildfires (Topanga wildfire in 2005/06 and Woolsey wildfire in 2018/19 [Figure 6]). This is likely due to the post-fire recovery of vegetation, reduced soil hydrophobicity and slightly less rainfall. Results from the 2019/20 rainy season are most similar to the 2016/17 rainy season, which experienced a similar amount of rainfall and number of discharges. It is important to note that within a single discharge sample many parameters are analyzed. For example, if a single sample is analyzed for 49 constituents that have limits and one constituent recorded an exceedance, this means the sample was compliant with the limits for 98% of discharge-constituent combinations.

The general trend of improvement in compliance over time can be attributed to the numerous control measures that have been implemented across SSFL, including demolition of buildings and paved areas, restoration and revegetation measures, natural treatment BMPs and advanced treatment systems, in-channel measures, extensive erosion controls, and stormwater consolidation through pumping and storage (in tanks and ponds). These controls, including activities in 2019/20, are discussed further in Section 3 of this report.

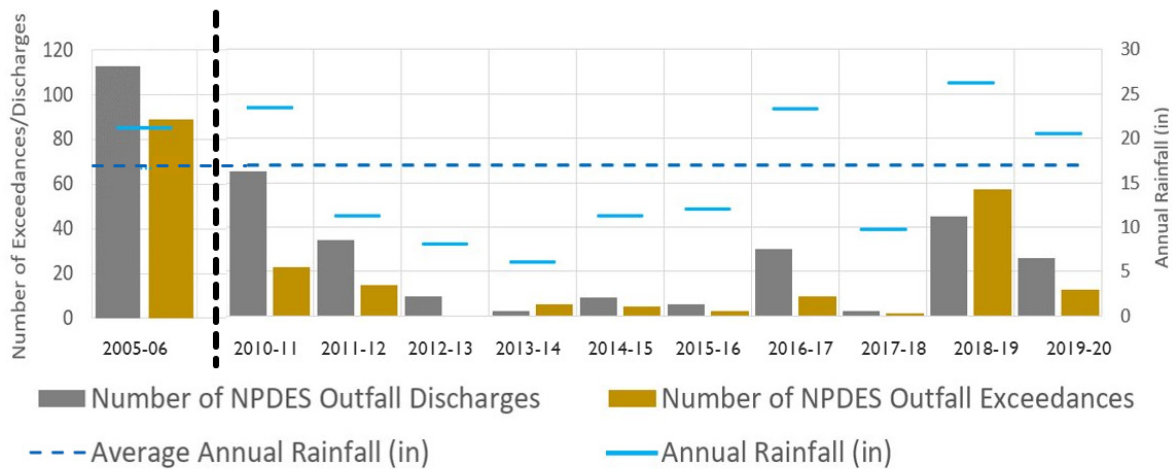


Figure 6. Summary of NPDES Outfall Discharges and “Exceedances” (of both Permit Limits and Benchmarks), 2010/11 to 2019/20

2.2.1.4 Summary

In summary, this past reporting year experienced nine rainfall events, all with relatively low rainfall intensities, and five of which produced discharge at one or more outfalls. Outfall 001 had eight benchmark exceedances, Outfall 002 had four benchmark exceedances, and half of this year’s exceedances were for iron (6 of 12). One storm had a 24-hour rainfall depth that slightly exceeded the design storm for the treatment controls in the Outfall 009 watershed (excluding the Northern Drainage mitigation measures), but only one overflow was observed in the Outfall 009 watershed structural BMPs. This occurred at CM-3 during a storm event smaller than the design storm, and the BMP was

rebuilt before the end of the season. No other BMPs overflowed and no storms exceeded the Outfall 018 or 011 pond capacities.

2.2.2 BMP Performance Monitoring

BMP performance monitoring is not required by the NPDES permit. However, the Expert Panel has recommended that individual BMPs be monitored to assess their relative ability to remove stormwater COCs before they reach the Outfalls. BMP monitoring in the Outfall 009 watershed was conducted throughout the 2019/20 reporting year as outlined in the *2019/20 Rainy Season Sampling and Analysis Plan (SAP) Updates, Best Management Practice (BMP) Monitoring Program ("2019/20 SAP")* (Appendix A to this report) (HAI, 2019). This SAP is updated on an annual basis and will be updated again for the 2020/21 reporting year, as later discussed in Section 5.2.1.

This past reporting year, stormwater samples at BMP performance monitoring locations were collected in the Outfall 009 watershed. At the Panel's recommendation, sampling at the BMP performance locations was temporarily reduced to two samples per year until site activities increase as remediation is initiated. Sampling at the potential BMP subareas to identify additional distributed control locations was discontinued after the 2018/19 reporting year due to improved runoff quality at Outfall 009. Table 7 summarizes the number of samples collected at each BMP monitoring location in the Outfall 009 watershed subareas, as well as the number of copper, lead, mercury, and dioxins results greater than the Outfall 009 Permit limits, for reference only as historical COCs, as the permit limits and benchmarks only apply to the outfall samples. A total of 47 samples were collected. Of these, 25 were BMP influent samples and 24% (6 of 25), 16% (4 of 25), 4% (1 of 25), and 60% (15 of 25) of these samples had concentrations greater than the NPDES outfall Permit limits for copper, lead, mercury, and dioxins, respectively. Focusing on the 17 fully treated (BMP effluent) samples only, 24% (4 of 17), 0% (0 of 17), 0% (0 of 17), and 29% (5 of 17) of these samples had concentrations greater than the NPDES Permit limits for copper, lead, mercury, and dioxins, respectively. It is notable that despite the 16% of influent subarea results greater than the Permit Limit, there were no lead exceedances reported at Outfall 009, suggesting that, working in combination, the distributed BMPs were successful at reducing these lead levels such that exceedances at the Outfall 009 discharge point were absent in this period. Similarly, no dioxin exceedances were reported at Outfall 009, despite 60% of influent samples exceeding the limit.

A BMP Performance Analysis is conducted annually to evaluate the performance of existing treatment BMPs in the Outfall 009 watershed using statistical, temporal, and other data analysis approaches. The 2019/20 reporting year data have been incorporated into the BMP Performance Analysis dataset that was first established in December 2009. Out of many constituents analyzed at the performance monitoring sites, specific COCs were selected for the data analyses based on historical exceedances at Outfall 009, including total lead, total copper¹⁰, and dioxins (TCDD TEQ no DNQ).

This year, as in previous years, the Surface Water Expert Panel has overseen and reviewed the BMP performance analysis and evaluated the results for any new BMP recommendations. Initial analysis results were presented to the Surface Water Expert Panel in a meeting held August 10-11, 2020. The Surface Water Expert Panel received the draft BMP Performance Analysis report in September 2020 and

¹⁰ Copper is not included as a pollutant of concern for the Outfall 009 watershed in the 2015 Expert Panel Work Plan. However, data for total copper are still presented in the paired line plots.

the revised draft in October 2020. Recommendations were developed based on their review of these results and incorporated into the recommendations found in Section 5.2 of this report.

The final report, *2019/20 BMP Performance Analysis, Santa Susana Field Laboratory* (Santa Susana Surface Water Expert Panel and Geosyntec Consultants, 2020b), is provided as Appendix D to this report. Key findings are discussed in Section 4 below.

Table 7. Outfall 009 BMP Subarea Stormwater Monitoring Results, 2019/20 Reporting Year

Site	Type	Site Description	Number of Samples	Results Greater than OF009 Permit Limit (reference only, as limits apply to permitted outfall locations only)			
				Copper	Lead	Mercury	TCDD TEQ (no DNQ)
				(13 ug/L)	(5.2 ug/L)	(0.13 ug/L)	(2.8e-8 ug/L)
A1BMP0002	Influent	Influent Undeveloped	2	-	-	-	-
A1BMP0003	Effluent	CM-9 Effluent	2	-	-	-	-
A2BMP0006/BGBMP0001	Background	Influent East/Background	1	-	-	-	-
A2BMP0007	Effluent	CM-1 Effluent	2	-	-	-	-
A2BMP0012	Influent	CM-1 Influent Road	2	-	-	-	3.24e-8, 3.30e-8
B1BMP0009	Influent	Upper Lot Influent North	2	30	8.4	-	1.86e-7, 1.71e-7
B1BMP0010	Influent	Upper Lot Influent South	2	28	5.4	-	6.64e-8, 7.73e-8
B1BMP0011	Effluent	Media Filter Effluent	2	19	-	-	5.16e-8, 3.49e-8
EVBMP0003	Influent	Influent West	2	-	-	-	6.65e-8, 1.33e-7
EVBMP0007	Influent	Upstream	2	-	-	-	-
EVBMP0008	Effluent	Downstream	2	-	-	-	-
EVBMP0009	Intermediate	Mid-Point	2	-	-	-	-
ILBMP0002	Influent	Influent Road Runoff	1	-	6.9	-	5.03e-8
ILBMP0004	Influent	Influent II South	2	14	-	-	1.69e-7, 8.13e-8
ILBMP0005	Effluent	Effluent South	2	21	-	-	1.53e-7
ILBMP0008	Influent	Influent I South	2	14	8.7	-	1.87e-7
ILBMP0009	Influent	Filter Basket Influent	2	24	-	0.3	9.16e-8, 2.51e-7

Site	Type	Site Description	Number of Samples	Results Greater than OF009 Permit Limit (reference only, as limits apply to permitted outfall locations only)			
				Copper	Lead	Mercury	TCDD TEQ (no DNQ)
				(13 ug/L)	(5.2 ug/L)	(0.13 ug/L)	(2.8e-8 ug/L)
ILBMP0010	Effluent	Filter Basket Effluent	2	25, 16	-	-	1.52e-7, 2.14e-6
LPBMP0002	Influent	Cistern	2	15	-	-	5.50e-8
LPBMP0003	Intermediate	Sediment Basin Effluent	2	-	-	-	3.68e-8
LPBMP0004	Effluent	Biofilter Effluent	2	-	-	-	-
LXBMP0010	Influent	Influent Road Runoff	1	-	-	-	-
LXBMP0011	Influent	CM-3 Influent Undeveloped	3	-	-	-	-
LXBMP0012	Effluent	CM-3 Effluent	3	-	-	-	-
SUBTOTAL COUNTS BY SITE TYPE							
		BMP Influent	25	6	4	1	15
		BMP Intermediate	4	0	0	0	1
		BMP Effluent	17	4	0	0	5
		Background	1	0	0	0	0
TOTAL COUNT			47	10	4	1	22

2.2.3 Outfall 001 and Outfall 002 Subarea Monitoring

To help investigate the cause of ongoing benchmark exceedances in the Outfall 001 and 002 watersheds, beginning in the 2019/20 reporting year, subarea samples were collected in these buffer zone watersheds to characterize runoff from both natural background and potentially impacted sites. Four of the six identified subarea sampling locations had sampleable flow, while two of the locations had no sampleable flow observed in 2019/20. Table 8 summarizes the number of samples collected at each monitoring site, as well as the number of iron, lead, manganese, and dioxins results greater than the Outfall 001 and Outfall 002 benchmarks (Appendix E, Figure 1).

A total of five samples were collected from subareas with potentially impacted soils (i.e., near RFI areas, but not necessarily including them) and two samples were collected from subareas known to be unimpacted, or natural background, soils (i.e., undeveloped without pavement). At least 50% of samples exceeded the benchmark for iron in both the subareas with unimpacted natural background soils (50%, 1 of 2) and impacted soils (60%, 3 of 5). There were no additional parameters above the benchmarks in subarea with impacted soils (Outfall 002 watershed), while there was one sample above the benchmarks each for lead, dioxins, and manganese in the subarea with natural background soils (Outfall 001 watershed), suggesting that elevated concentrations are not directly attributable to impacted soils. These preliminary results suggest that this year's manganese, lead, and dioxin exceedances may be explained by natural background soils, while iron exceedances may be due to natural background soils and potentially impacted soils. A more detailed source investigation is provided in Appendix C to this report. Key findings are discussed in Section 4 below. Lab reports are provided as Appendix B to this report. More data are needed to confirm these preliminary findings, therefore the Panel has recommended for the Southern Buffer Zone subarea sampling program to continue in the 2020/21 rainy season.

Table 8. Outfall 001 and Outfall 002 BMP Subarea Stormwater Monitoring Results, 2019/20 Reporting Year

Site	Type	Site Description	Number of Samples	Results Greater than OF001/OF002 Benchmarks (benchmarks for reference only, as limits apply to permitted outfall locations only)			
				Iron (0.3 mg/L)	Lead (5.2 ug/L)	Manganese (50 ug/L)	TCDD TEQ (no DNQ) (2.8e-8 ug/L)
EPSW001BG01	Natural Background	Outfall 001 Subarea: Background (natural unimpacted areas)	1	19	9.2	390	2.35e-7
EPSW001IE01	Potentially Impacted Soils	Outfall 001 Subarea: Potentially Impacted Soils Evaluation (A1BP, CTL-V)	2	-	-	-	-
EPSW001PV01	Background	Outfall 001 Subarea: Background (with paved areas)	0	-	-	-	-
EPSW002BG01	Natural Background	Outfall 002 Subarea: Background (natural unimpacted areas)	1	-	-	-	-
EPSW002IE01	Potentially Impacted Soils	Outfall 002 Subarea: Potentially Impacted Soils Evaluation (STL-IV)	0	-	-	-	-
EPSW002IE02	Potentially Impacted Soils	Outfall 002 Subarea: Potentially Impacted Soils Evaluation (Coca)	3	0.93, 0.59, 0.93	-	-	-
SUBTOTAL COUNTS BY SITE TYPE							
Natural Background (natural unimpacted areas)			2	1	1	1	1
Background (with paved areas)			0	-	-	-	-
Potentially Impacted Soils			5	3	0	0	0
TOTAL COUNT			7	4	1	1	1

2.3 Northern Drainage Assessment

As identified in the *Northern Drainage Restoration, Mitigation, and Monitoring Plan (RMMP)* (Haley & Aldrich, 2011), recurring site investigations were performed annually along the Northern Drainage for a duration of five years (2011/12 to 2016/17).

Although the RMMP expired in 2017, a voluntary annual stream walk and inspection of in-channel erosion risk areas and sediment control conditions in the lower portion of the Outfall 009 drainage was conducted on October 19, 2020. No additional stabilization measures or maintenance activities are recommended at this time.

2.4 Outfall 009 Non-Industrial Sources Special Study

To address periodic lead and dioxins exceedances at Outfall 009 despite the implementation of numerous BMPs in the upper watershed, and to follow-up on previous findings that paved subareas had significantly higher stormwater concentrations of exceeding constituents than unpaved subareas (regardless of whether impacted soils were known to exist), the 2015 Work Plan posed the following questions as the basis for a new non-industrial sources special study:

1. Where (spatially) within watershed 009 are dioxins and lead in stormwater predominantly coming from; and
2. What are the predominant sources of constituents in paved subareas -- e.g., pavement material itself (weathered or newly resurfaced), vehicles, treated wood poles, historic shooting range, and/or atmospheric deposition?

The Surface Water Expert Panel and Geosyntec developed the *Special Monitoring Studies for the 009 Watershed* ("Special Study Work Plan") (Santa Susana Surface Water Expert Panel and Geosyntec Consultants, 2015b), which proposed approaches to collect data to further investigate the causes and sources of dioxins and lead in stormwater at Outfall 009. The Expert Panel also recommended offsite sampling and lead isotope sampling in the Northern Drainage during the 2018/19 reporting year. Non-Industrial Sources Special Study was expanded again through recommendations in this Annual Report to include additional potential sources affecting stormwater quality in the Southern Buffer Zone. The frequency and samples dates of these programs are provided in Table 9. A summary report will be made available in 2021, after all monitoring activities have been completed and the results analyzed.

Table 9. Non-Industrial Sources Special Study – Monitoring Events, Planned and Completed

Activity	Event Frequency	Events Scoped	Events Completed	Completed Event Dates	
Atmospheric Deposition (2 sites)	Monthly	12	12	6/14/2016 7/14/2016 8/16/2016 9/16/2016 10/17/2016 11/15/2016	12/13/2016 3/14/2017 4/27/2017 5/31/2017 6/28/2017 7/31/2017
Pavement Solids (6 sites)	Quarterly	5	5	6/14-15/2016 7/28-29/2016 10/25-26/2017	3/13-14/2017 8/23-24/2017
Soils Near Treated Wood Poles (18 sites)	Single sampling event	1	1	5/11-12/2016	
Northern Drainage (ND) Stormwater	Storm-based	12	12	3/7/2016 (4 of 7 sites) 12/24/2016 (4 of 7) 1/9/2017 (4 of 7) 1/19/2017 (5 of 7) 2/4/2017 (6 of 7) 2/11/2017 (6 of 7)	2/17/2017 (7 of 7) 2/26/2017 (6 of 7) 3/22/2018 (5 of 6) 12/6/2018 (2 of 6) 2/18/2019 (6 of 6) 3/2/2019 (6 of 6)
Northern Drainage Sediments	Single sampling event	2	2	3/25-28/2016 (7 sites) 9/7/2017 (8 sites)	
Offsite Pavement Solids from Public Roads (3 sites)	Single sampling event	1	1	11/7/2018	
Offsite Stormwater Runoff from Public Roads (4 sites)	Single sampling event	3	3	3/2/2018 3/22/2018 1/14/2019	
Lead Isotope Study	Single sampling event	1 for solid samples 10 stormwater events	1 solid 6 storm-water	Shooting Range Soil: 8/27/2018 Background Soil: 8/28/2018 ND Sediment: 8/29-30/2018 Atmospheric Deposition: 10/2/2018 Pavement Solids: 10/2/2018 Lead Shot: 8/27/2018 Stormwater: 2/18/2019, 2/28/2019, 3/8/2019, 3/21/2019, 12/24/2019, 3/16/2020	
Core Sample of Treated Wood Poles (9 sites)	Single sampling event	1	1	10/6-7/2020	
Stormwater Runoff from Treated Wood Poles (3 pairs of upstream/downstream sites)	Single sampling event	1	0	Planned for first storm event in 2020/21	

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Activity	Event Frequency	Events Scoped	Events Completed	Completed Event Dates
Southern Buffer Zone Soils Near Treated Wood Poles	Single sampling event	1	0	Planned for 2020/21
Southern Buffer Zone Soils Near Metal Stakes	Single sampling event	1	0	Planned for 2020/21
Southern Buffer Zone Gravel Road Solids	Single sampling event	1	0	Planned for 2020/21

3 BMP Activities

The following sections summarize the construction and demolition activities conducted at SSFL, the BMP activities within each watershed (e.g., new BMPs, inspections, maintenance, etc.), and public involvement within the past year.

3.1 Demolition

DOE demolition activities of buildings in the Radioactive Materials Handling Facility (RMHF) area began in July 2020. Demolition activities are covered by a separate Construction SWPPP which has been reviewed by the Surface Water Expert Panel. Stormwater from this area will flow to the Outfall 018 SWTS.

3.2 New Activities/Maintenance

Outfall/BMP activities and maintenance conducted at SSFL during the past year (e.g., erosion, sediment control, and drainage stabilization inspections, removal of sediment and debris from outfalls following extreme storm events, BMP repairs, etc.) are incorporated by reference through the following quarterly NPDES Discharge Monitoring Reports (DMRs):

- The Boeing Company, 2019a. *Third Quarter 2019 NPDES Discharge Monitoring Report, Compliance File CI-6027 and NPDES No. CA0001309, Santa Susana Field Laboratory, Ventura County, California.* November 15.
- The Boeing Company, 2019b. *Fourth Quarter 2019 NPDES Discharge Monitoring Report, Compliance File CI-6027 and NPDES No. CA0001309, Santa Susana Field Laboratory, Ventura County, California.* February 15.
- The Boeing Company, 2020a. *First Quarter 2020 NPDES Discharge Monitoring Report, Compliance File CI-6027 and NPDES No. CA0001309, Santa Susana Field Laboratory, Ventura County, California.* May 15.
- The Boeing Company, 2020b. *Second Quarter 2020 NPDES Discharge Monitoring Report, Compliance File CI-6027 and NPDES No. CA0001309, Santa Susana Field Laboratory, Ventura County, California.* August 15.

As recommended in the 2018/19 SSFL Site-Wide Stormwater Annual Report (Surface Water Expert Panel and Geosyntec, 2019), the following BMP maintenance, improvement, and monitoring actions were taken this past season:

- **Outfall 008 erosion controls inspected and refurbished:** Assessed condition of post-fire erosion and sediment controls and vegetation reestablishment. Stormwater controls were repaired and supplemented where needed in October 2019. Armoring and vegetation erosion controls are pictured in Figure 7.



Figure 7. Erosion control at OF008 (Armoring)

- **Outfall 009 LOX access road curb extended:** A sandbag berm along the access road was previously used to direct runoff past the end of a curb to slope drain BMPs. The sandbag berm was replaced with an extension to the curb in July 2020 as shown in Figure 8.



Figure 8. LOX Access Road Curb Extension

- **Outfall 009 CM-9 continued to be monitored for signs of clogging:** The CM continues to perform well and has not yet exhibited signs of clogging, despite its long duration of operation.
- **Outfall 009 ELV and biofilter cistern generators added:** Power was out at the site after the Woolsey Fire destroyed the electrical infrastructure. This resulted in the ELV and biofilter not having power to operate for most of the 2018/19 season. To prevent this from happening again, the Expert Panel recommended adding generators to these BMPs which require power for full operation. A generator was added to the ELV system as the main power source, as shown in Figure 9, since electrical lines were not replaced in this area to reduce the risk of future

wildfires. A portable generator is on hand for the biofilter cistern pump as a backup power supply since power was restored to its surrounding area.



Figure 9. New ELV Generator

- **Outfall 009 CM-3 check dam construction and filter media reconstruction:** CM-3 received a heavy load of sediment and vegetation debris in the first storms of 2019/20 which resulted in a thick layer of accumulated material that clogged the BMP. Riprap check dams were installed upstream of CM-3 to capture sediment and debris before the CM and the filter media was replaced as shown in Figure 10. Construction and repairs were completed February 19, 2020.



Figure 10. Check dams upstream of CM-3 (left) and CM-3 looking upstream (right)

- **Southern Buffer Zone utility pole BMPs added:** Media wattles and straw wattles were placed around utility poles throughout the Southern Buffer Zone. Media wattles, as shown in Figure 11 were prioritized near drainages or along roads since these areas facilitate sediment transport and the media provides a higher level of protection.



Figure 11. Media wattle installed around pole in Southern Buffer Zone

- **Outfall 011 Stormwater Conveyance and Treatment System (SWTS) Repaired:** The electrical panel and piping system of the SWTS were damaged in the Woolsey fire. Repairs were started mid-2019 and the SWTS electrical panel was replaced and the system was operational prior to the first storm event in 2019/20.
- **Outfall 018 media filter replacement evaluated:** The media filter at Outfall 018 was destroyed in the Woolsey fire and removed from the site. A new media filter design is in progress to treat the occasional overflows from R2-A Pond. There were no overflow events in 2019/20.
- **Outfall 018 stormwater storage capacity increase feasibility assessed:** The feasibility of increasing stormwater storage capacity to allow more stormwater treatment at the SWTS was explored due to the continued high performance at the Outfall 018 SWTS. With the Outfall 011 SWTS back online the priority for this has diminished and is not considered critical to pursue further at this time.
- **Maintained erosion control material stockpile as feasible:** The late-season timing of the Woolsey fire highlighted the importance of being able to implement erosion controls quickly before a storm event. A stockpile of control measures, such as wattles, are maintained and cycled through at the site so there are always materials available if needed.
- **Tested variety of hydromulch products:** Following the heavy use of hydromulch at the site after the Woolsey fire it was recommended to test several hydromulch products to minimize the potential of the selected product to contribute to stormwater exceedances. Flexterra was determined to be the best candidate considering constituents of concern at the site.

3.3 Public Involvement

Numerous stakeholder groups and members of the public have expressed interest in the stormwater issues at the SSFL at past public involvement activities and Regional Board hearings. To keep these groups and others apprised of progress, and provide an opportunity for public input, periodic public forum meetings and site tours have been held with the Surface Water Expert Panel since 2011 and throughout the duration of the 2015 Work Plan. Additionally, project status reports and submittal documents have been posted on the Boeing project website after major project milestones and prior to public outreach meetings. Table 10 summarizes public involvement activities that have occurred since the 2010 BMP Plan (MWH et al., 2010). The most recent public meeting (remotely, via Zoom) was held

on August 11, 2020. Prior to the meeting, a survey was developed and distributed to the public to gauge topics of interest, which allowed the Expert Panel to tailor the presentation content. The Surface Water Expert Panel presented on the 2019/20 stormwater compliance monitoring results, BMP performance, results from internal subarea stormwater monitoring, and preliminary results of the stormwater constituent source investigation. Although site tours are typically planned as part of the public meeting, a public tour was not possible this year due to coronavirus restrictions on gatherings.

Table 10. Surface Water Expert Panel Public Involvement Activities, 2011-2020

Date	Activity
August 11, 2020	Public meeting (virtual)
July 17 2019	Public meeting and SSFL tour
May 9, 2019	Presentation to LARWQCB
May 25, 2018	Public meeting and SSFL tour
August 17, 2017	DIPCON LA Conference SSFL tour
March 21, 2017	Public meeting and SSFL tour
November 19, 2014	Community Action Group meeting
March 20, 2013	Public meeting and SSFL tour
October 6, 2013	Public meeting and SSFL tour
August 25, 2011	Public meeting
January 22, 2011	Public meeting and SSFL tour

4 Key Findings

Data supporting the following key findings are provided in the analyses referenced above. The following findings significantly shape the BMP and monitoring recommendations presented in Section 5.

- a. **Exceedance counts and concentrations have fallen markedly since last year’s post-fire conditions and water quality conditions have returned to typical levels for the site.**

Based on the decreasing trend of stormwater concentrations after the initial elevated concentrations observed in the first storms following both wildfires, concentrations were expected to continue to decrease back to typical levels for the site. The monitoring results from the 2019/20 season continued this pattern and stormwater concentrations of constituents of concern have returned to typical pre-fire concentrations for the site as shown in Appendix F. Similarly, the number of exceedances decreased markedly compared to last year. Temporal trends are discussed in more detail in Appendix C.

Less frequent and intense storm activity in the 2019/20 reporting year than the 2018/19 reporting year, in combination with the Discharger’s efforts to install post-fire erosion control measures, one year of natural landscape vegetation recovery and subsequent BMP improvements, resulted in fewer stormwater discharges and exceedances. A statistical comparison of rainfall depths and discharge volumes for storm events during pre-fire years, 2018/19 (immediately post-fire), and 2019/20 indicates the site runoff volumes have returned to normal, pre-fire conditions, as summarized in Table 11.

Table 11. Runoff Volume Effects Following the Woolsey Fire Have Diminished

		Storm Size	
		<2 inches	>2 inches
2018/19 vs pre-fire years	Burned Watersheds	Significant increase (7x)	No significant difference
	Unburned Watersheds	No significant difference	No significant difference
2019/20 vs pre-fire years	Burned Watersheds	No significant difference	No significant difference
	Unburned Watersheds	No significant difference	No significant difference

- b. **The stormwater controls and SWTs generally continue to be very effective across the site.**

In the 2019/20 reporting year, there were no exceedances at Outfall 009 (with extensive distributed BMPs) or Outfalls 011 or 018 (with SWTs). Straw wattles and media filled wattles were installed around utility poles along main roads in the Southern Buffer Zone prior to the 2019/20 wet season. More of these BMPs were implemented through the winter which may

have helped reduce the number of exceedances in the later part of the season. Remaining utility poles had BMPs added to them in June and July 2020. A more thorough BMP strategy will be evaluated for areas with continued exceedances.

c. The long-term performance of treatment controls continue to aid in compliance with NPDES Permit limits at Outfall 009.

Performance monitoring of the distributed treatment controls in the 009 watershed demonstrates continued water quality improvement, which supports NPDES compliance at Outfall 009. This past reporting year, all BMP-COC combinations had the same or fewer effluent concentration results above Permit Limits compared to the influent concentrations. Historically, most grouped BMP-COC combinations also showed lower average and maximum exceedance ratios (i.e., exceeding sample concentrations divided by the Permit Limit) for effluent results compared to the influent results.

As shown in Table 12 and Table 13, lead and dioxins reductions are observed for almost all BMP types, based on the median percent change from BMP influent to effluent concentrations. The percent of influent samples greater than the Outfall Permit limit is less than or equal the percent of effluent samples greater than the Permit limits for both lead and dioxins for all BMPs, indicating an improvement in water quality between influent and effluent. Performance analysis results (details in Appendix D) indicate that statistically significant ($p < 0.05$) lead and TCDD TEQ (no DNQ) concentration reductions are occurring between influent and effluent samples at the B-1 media filter, CM-9, CM-1, and upper lot media filter (grouped analyses for these similar controls), along with the southern detention bioswales, and the ELV treatment BMP. Statistically significant concentration reductions between influent and effluent samples were also observed for dioxins at the lower lot biofilter. The administrative area inlet filters were the only BMP that were not performing as expected. Fortunately, the effluent from these is treated again at either the Lower Lot Biofilter or CM-9 and there were no lead exceedances at Outfall 009 this year. The performance of the administrative area inlet filters will be monitored in the coming year and their benefit will be re-evaluated, as noted in Section 5.1.4.

Constituent loads are also being reduced, both because concentrations are being reduced, and because runoff volumes are being reduced by upstream pavement and building removal and stormwater storage in BMPs.

Table 12. Summary of TCDD TEQ (no DNQ) BMP Performance Stormwater Monitoring Results, Since Construction

BMP	Statistically Significant Removal?	Median % Change between Influent and Effluent ¹	% of Sample Concentrations Greater than Outfall Permit Limit	
			Influent	Effluent
B-1	Yes (grouped dataset)	-80% (grouped dataset)	85%	68%
CM-1			76%	58%
CM-3			0%	0%
CM-9			49%	22%
Upper Lot Media Filter			77%	44%
Lower Lot Biofilter	Yes	-99.7%	89%	10%
ELV Treatment BMP	Yes	-98%	33%	13%

Southern Detention Bioswales	Yes	-99.7%	74%	15%
Admin Area Inlet Filter	No	49%	100%	100%

¹ Percent change was calculated using the median influent and effluent concentrations before rounding. Negative values indicate a reduction in effluent concentrations compared to influent sample concentrations.

Table 13. Summary of Lead BMP Performance Stormwater Monitoring Results, Since Construction

BMP	Statistically Significant Removal?	Median % Change between Influent and Effluent ¹	% Greater than Outfall Permit Limit	
			Influent	Effluent
B-1	Yes (grouped dataset)	-40% (grouped dataset)	35%	8.7%
CM-1			37%	18%
CM-3			40%	0%
CM-9			41%	24%
Upper Lot Media Filter			13%	0%
Lower Lot Biofilter	No ²	-6%	11%	3.3%
ELV Treatment BMP	Yes	-40%	17%	0%
Detention Bioswales	Yes	-50%	35%	0%
Admin Area Inlet Filter	No	56%	0%	0%

¹ Percent change was calculated using the median influent and effluent concentrations before rounding.

² Can likely be attributed to the much lower influent lead concentrations to the lower lot biofilter in recent years. Although the percent change as reflected by the median influent and effluent concentrations was found to increase, a decrease between influent and effluent was observed for the average results.

Figure 12 and Figure 13 present summaries of influent and effluent monitoring results for dioxins and lead by BMP group.

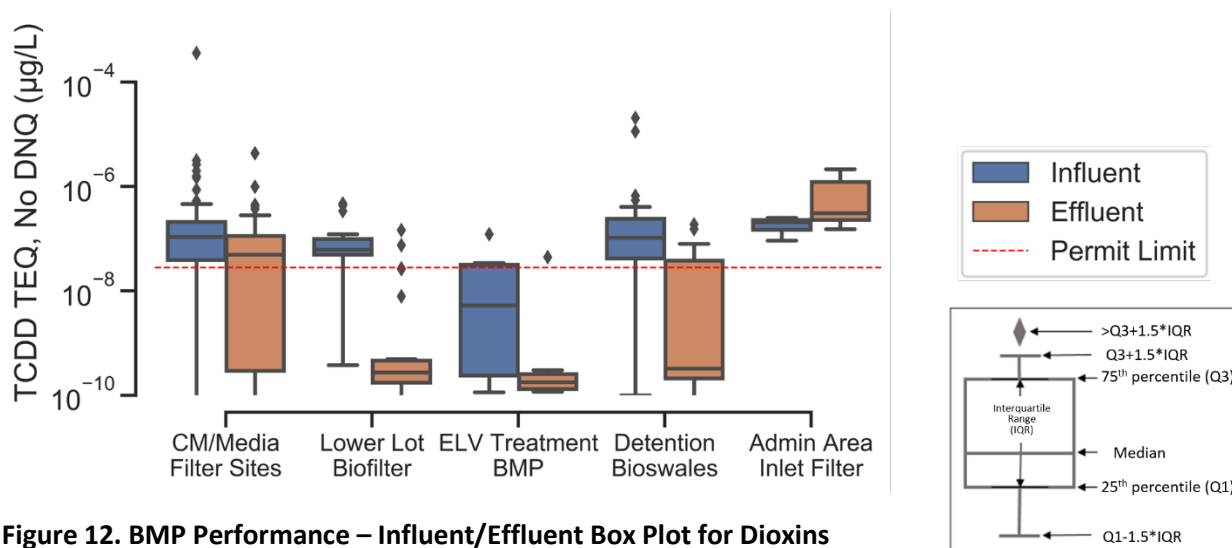


Figure 12. BMP Performance – Influent/Effluent Box Plot for Dioxins

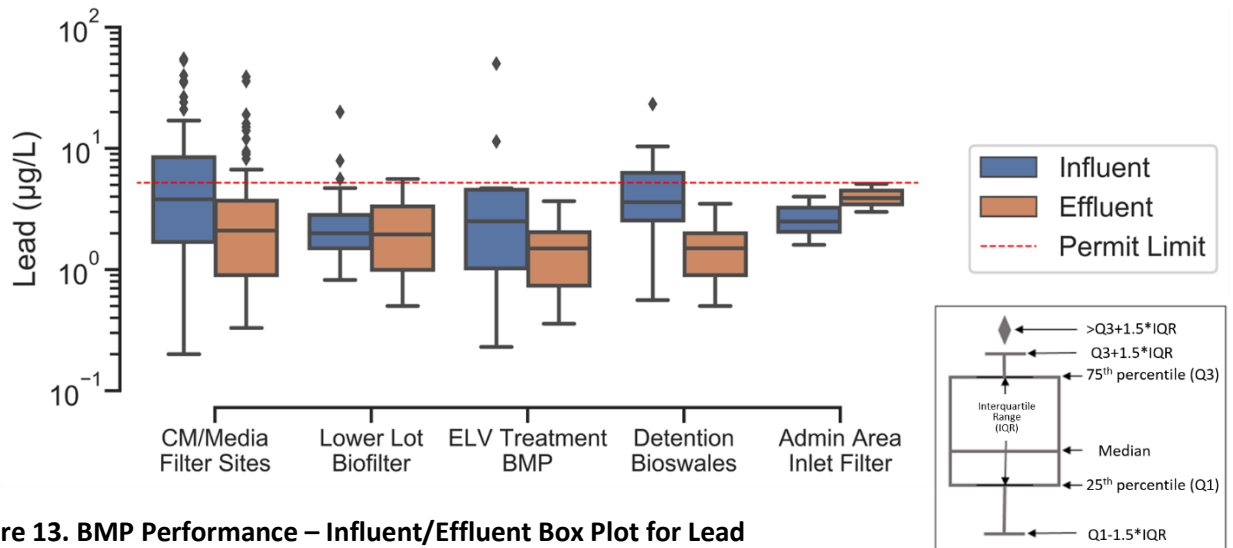


Figure 13. BMP Performance – Influent/Effluent Box Plot for Lead

d. The lower lot biofilter minimizes untreated stormwater runoff from discharging to the Northern Drainage.

Flow monitoring data at the lower lot biofilter examined in the *BMP Performance Analysis* (Appendix D) indicates the low flow diversion is able to prevent smaller storms from discharging to the Northern Drainage without first being treated. As shown in Figure 14, the diversion to the lower lot biofilter successfully prevented just over half of all storms less than or equal to one inch (event total) from discharging to the Northern Drainage.

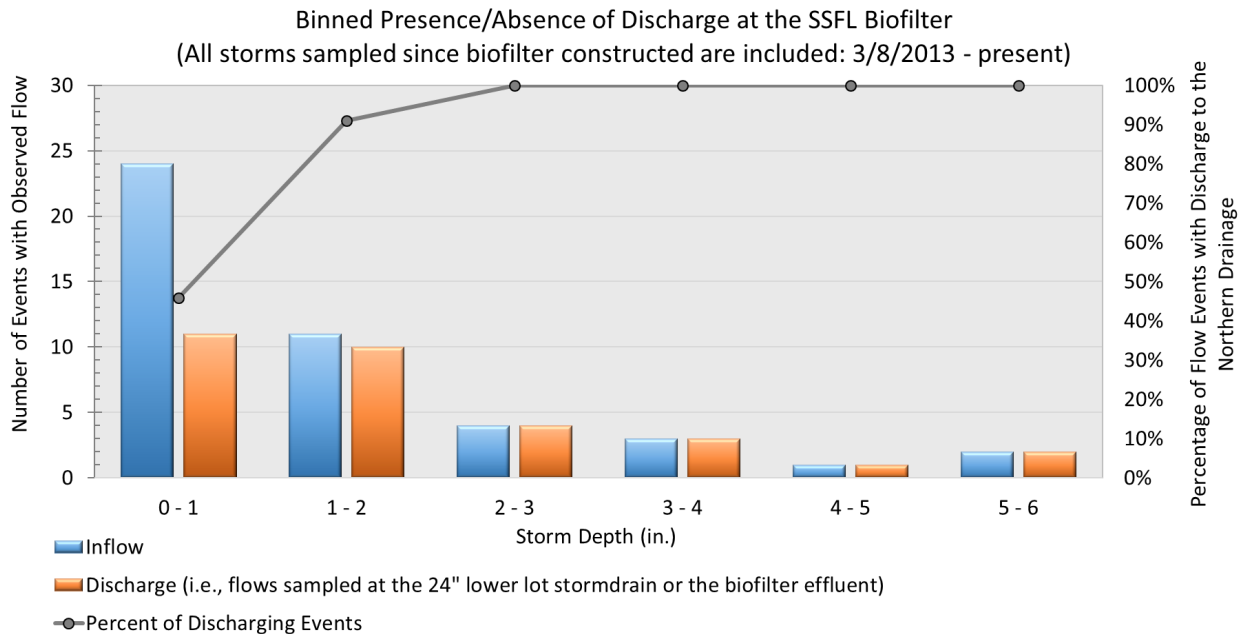


Figure 14. Binned Presence/Absence of Discharge at the SSFL Biofilter, 2013 to 2020

e. Boeing and NASA continue to implement Expert Panel recommendations.

As described in sections 1.3 and 3.2, recommendations from the Expert Panel continue to be implemented at the site in order to continue to improve stormwater quality. A summary of recommendations from the 2019 Annual Report and their status to-date are provided in Table 14.

Table 14. Summary of 2018/19 Expert Panel BMP Recommendations

Watershed	Recommendation	Status
Outfalls 001 & 002	Begin new subarea monitoring in Southern Buffer Zone to evaluate sources of recent exceedances	Initiated - ongoing
Outfall 008	Condition assessment of post-fire erosion and sediment controls and vegetation reestablishment, and repairing or supplementing where needed	Complete
Outfall 009	Add rock check structure for pretreatment upstream of CM-3, and replace clogged filter media	Complete
Outfall 009	Monitor CM-9 for signs of clogging	Initiated - ongoing
Outfall 009	Add generator as back-up power for biofilter cistern pump	Complete
Outfall 011	Make Stormwater Treatment System (SWTS) operational (including repair of fire-damaged electrical system)	Complete
Outfall 018	Assess feasibility of increasing Silvernale pond capacity to allow more stormwater to be treated by SWTS	Complete - Found to be infeasible
Outfall 018	Assess feasibility of reconstructing Outfall 018 media filter (for treatment of occasional SWTS overflows)	Complete
Southern Buffer Zone	Add filter socks and wattles around treated wood utility poles	Complete
Sitewide	Stockpile erosion control materials as feasible to minimize emergency response time	Complete
Sitewide	Test variety of hydromulch products for NPDES constituents of concern	Complete

f. The Surface Water Expert Panel continues to evaluate stormwater runoff from potentially impacted areas and recommend treatment controls as appropriate.

Based upon the success of subarea sampling guiding BMP prioritization and placement in the Outfall 008 and 009 watersheds, the Surface Water Expert Panel has initiated a similar process in the Outfall 001 and 002 watersheds. Six subarea monitoring locations were identified and monitored over the 2019/20 reporting year. Four of the six locations had sampleable flows, the results for which are shown in Appendix E. Two of the locations sampled runoff from natural unimpacted areas (one each in Outfall 001 and 002) and two locations sampled runoff from potentially impacted areas (again, one each in Outfall 001 and 002). This subarea monitoring program will be continued in order to gather more results for a robust analysis.

g. The recent benchmark exceedances are believed to be due to background soil, soil near treated wood, and pavement solids, however, impacted soils could not be ruled out.

All exceedances during the 2019/20 reporting year were recorded at Outfall 001 and Outfall 002. Both drainages are without major structural treatment controls; however, they are also both almost entirely natural and undeveloped except for a number of power poles, a few gravel roads, and a small paved area (paving in Outfall 001 only). Preliminary subarea sampling in the Outfall 001 and 002 watersheds indicates similar conditions in background and potentially impacted areas. The preliminary conclusion from this is that background soils are responsible for water quality in these areas. However, potentially impacted soils could not be ruled out at this point. It is the goal that continued targeted sampling at the Outfall 001/011 and 002/018 drainage divides will provide enough data to eventually rule out or support impacted soil contributions. Due to highly natural landcover within both watersheds, it is most likely that these exceeding constituents are coming from natural soil mobilized through erosive storm events.

Table 15. Summary of Exceeding Constituent Source Assessment

Exceeding Parameter	Likely Sources
Iron	Natural background soils
Lead	Natural background soils, pavement solid fines
Manganese	Natural background soils
Dioxins	Natural background soils, pavement solid fines, soils near treated wood
Gross Alpha*	Natural sources (only naturally occurring radionuclides detected)

*Quarterly Monitoring Report reported one exceedance for gross alpha (14.1 +/- 3.6 pCi/L), but noted this result was indeterminate compared to the daily max benchmark (15 pCi/L) and that OF001 annual average (3.65 +/- 0.64 pCi/L) was below the annual average benchmark (15 pCi/L), therefore concluding gross alpha at OF001 was in compliance for the reporting year.

h. Cumulative sediment loading calculations for the BMPs have aligned with what lab column tests predicted for sediment loading before requiring maintenance.

The *BMP Performance Analysis* (Appendix D) evaluated the cumulative TSS loading to the ELV treatment BMP, lower lot biofilter, B-1 media filter, upper lot media filter, CM-1, CM-3 and CM-9, and compared each to the estimated value of cumulative sediment¹¹ loading to the media before initial maintenance is needed based on column tests (Pitt, R.E. and Clark, S.E., 2010). The time to maintenance calculation assumes average rainfall for future years and considers the BMP drainage area characteristics and the annual average percent volume capture. Table 16 summarizes the current status of each BMP. All BMPs will continue to be monitored for clogging, however, given the short timeframe estimated until maintenance is needed for CM-9, its performance will be closely observed throughout the coming year. CM-1 was reconstructed in 2018 and is now has an estimated sediment loading of 27% with approximately 6 years until maintenance is needed.

¹¹ In the event that an effluent sample was collected without a parallel influent sample, the average of all TSS influent samples at the BMP was used to represent the influent loading of TSS during this specific event. If TSS loadings were estimated for storm events that were not sampled for the given BMP, the average of all TSS influent samples at the BMP was used to represent the influent loading of TSS during this specific event.

Table 16. Percent of Cumulative Sediment Loading until Clogging

BMP	Wet Seasons in Operation	Cumulative TSS load (kg)	% of “sediment load to the media until maintenance is needed”	Number of average years until media replacement is expected
ELV Treatment BMP	7	90	9.2%	30
Lower Lot Biofilter	7	925	8.6%	36
B-1	9	458	49%	5
Upper Lot Media Filter	4	163	13%	27
CM-1 ¹	2	80	27%	6
CM-9	11	240	82%	1

¹Restarted in 2018/2019 after BMP reconstruction and media replacement. Prior to reconstruction in August 2018, CM-1 was estimated to have approximately 400 kg of cumulative TSS loading after nine rainy seasons in operation.

i. Long-term BMP performance, as measured by effluent concentrations over time, has proven to be steady despite many years of BMP operation.

Effluent concentrations have remained constant over time indicating structural controls continue to perform as expected. This indicates no chemical breakthrough has occurred. For example, Figure 15 shows dioxin concentrations at media filter type BMPs over time. Additionally, influent and effluent particulate strengths are not changing over time, which indicates no particulate breakthrough or notable media export has occurred. Figure 16 shows the consistent particulate strengths recorded at CM-9 since the BMP’s construction. Long-term performance confirms no deterioration in pollutant removal despite a decade of operation in some cases, and despite multiple different media configurations. Long-term BMP performance and sediment loading is discussed in more detail in a forthcoming journal article by the Surface Water Expert Panel.

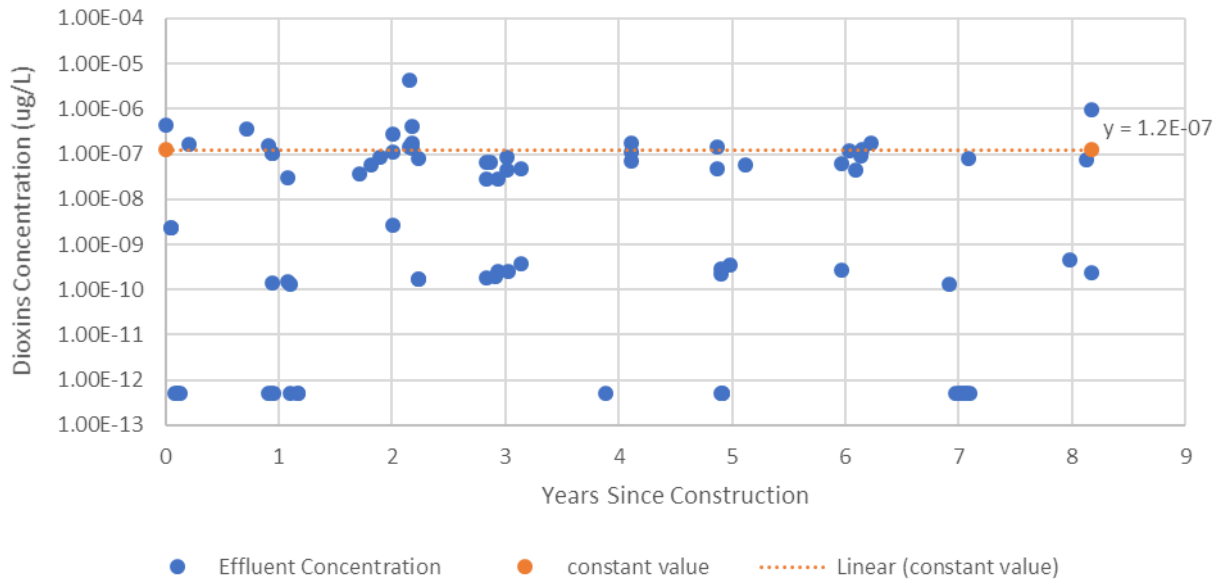


Figure 15. Long-Term Effluent Dioxins Concentrations at Media Filters (B-1, CM-1, CM-9, and Upper Lot Media Filter)

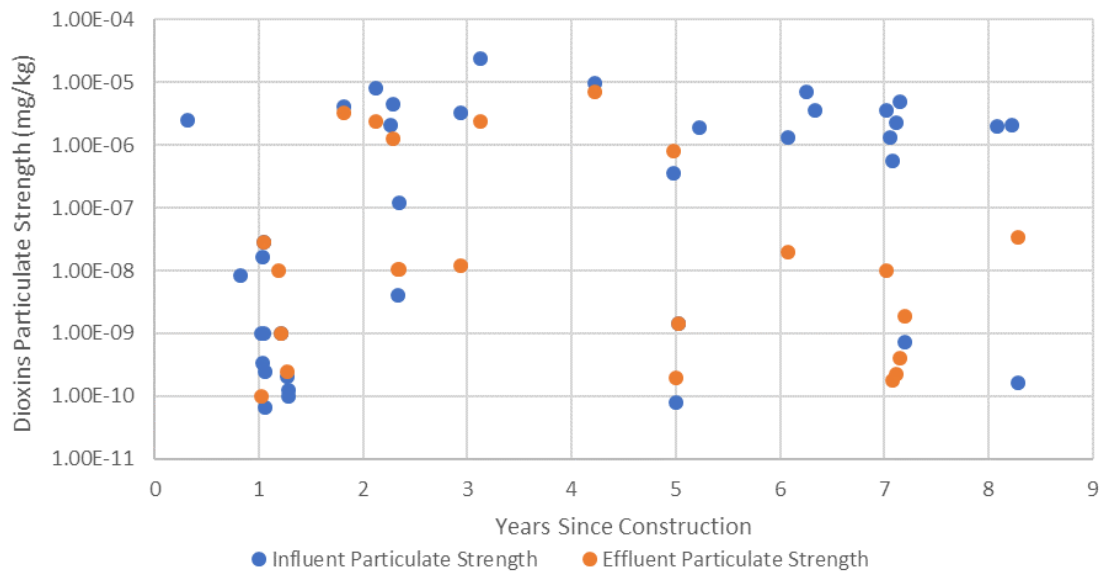


Figure 16. Long-Term Influent and Effluent Dioxins Particulate Strength at CM-9

5 Recommendations

5.1 BMP Recommendations

The following sections outline the proposed BMP recommendations for the Outfall 001, 002, 008, 009, 018 watersheds, although only Outfalls 001 and 002 had benchmark limit exceedances during the past reporting year, and no outfalls had permit limit exceedances.

5.1.1 Site-Wide Recommendations

The Expert Panel recommends identifying and evaluating the feasibility of removing unnecessary treated wood utility poles and other treated wood, and adjacent soils where staining is observed (prioritizing those adjacent to pavement, storm drains, unpaved roads, and drainages) to prevent or reduce the mobilization of adjacent soils containing pollutants.

Continue to have the Expert Panel receive and review all demolition (demo) and cleanup SWPPPs site-wide to help ensure that robust construction BMPs are used during these important projects.

The Expert Panel recommends continuing to monitor the condition of existing erosion and sediment controls and vegetation across the site and repairing or supplementing where needed.

5.1.2 Outfall 001 and Outfall 002 Watersheds

As discussed in Section 2.2.1, the Expert Panel found that the weight of evidence supports a conclusion that most exceedances of NPDES limits were associated with the erosion of natural background soils. Therefore, the Expert Panel recommends evaluating areas for erosion risk and adding erosion controls as necessary.

The Expert Panel also recommends installing non-flammable media wattles around the remaining bare treated wood utility poles in the Southern Buffer Zone (prioritizing those adjacent to pavement, storm drains, unpaved roads, and drainages due to enhanced mobilization in these areas) to prevent or reduce the mobilization of adjacent soils containing pollutants.

The subarea monitoring data in these areas should be evaluated through statistical analysis to identify any critical subwatersheds.

5.1.3 Outfall 009 Watershed

There were no NPDES exceedances at Outfall 009 this year, so no new treatment BMPs are recommended in this watershed. Existing BMPs should continue to be observed and repaired as needed.

The Expert Panel recommends observing the newly reconstructed CM-3 this year to ensure it continues to function as expected. Also, it is recommended to evaluate if the ELV system should be retrofitted to contain the filter media and prevent washout. As-built plans will be reviewed to determine the current design of the system. If no as-builts are available, the BMP will have to be inspected physically to determine if a retrofit is recommended.

Based on cumulative solids loading calculations, it is estimated that CM-9 has approximately one year until initial maintenance is needed. CM-9 should be closely watched in the coming year to look for signs of clogging.

The Expert Panel recommends continuing to maintain check dams in the Northern Drainage and remove accumulated sediments as needed to preserve their function.

Although the administrative area inlet filters do not appear to be performing as desired, it is recommended to maintain them, leave them in place, and continue to monitor. Their benefit will be evaluated again once enough samples have been collected to statistically evaluate their performance and the need to retain them, remove them, or replace them with more effective controls.

5.1.4 Outfall 018 Watershed

The SWTS at Silvernale treats runoff captured in the R-2A pond before discharging at Outfall 018. A flow-through media filter was originally designed and constructed on the spillway between R-2A and Outfall 018 to provide back-up treatment in the rare event the R-2A pond overflows during larger storms. The flow-through media filter was destroyed in the Woolsey wildfire and in 2019 the Expert Panel recommended evaluating the need for and feasibility of reconstructing a media filter. It was decided that in order to retain the capacity to treat a portion of future overflow, the Expert Panel recommends constructing a flow-through media filter.

5.2 Monitoring Recommendations

The sections below outline recommendations made by the Expert Panel with respect to stormwater monitoring of potential and existing BMP subareas as well as water level and flow bypass monitoring at specific BMPs in the Outfall 009 watershed, continuation of as-needed inspections along the Northern Drainage, and potential additions to the non-industrial source special study.

5.2.1 Stormwater Monitoring

Informed by the data analyses performed above, the Expert Panel recommends the following changes for the 2020/21 stormwater monitoring program, as documented in the *2019/20 Sampling and Analysis Plan (SAP) Updates, Best Management Practice (BMP) Monitoring Program* (Haley & Aldrich, 2019):

- Continue to sample all Outfall 009 BMP performance sites during two events per year. This temporary reduced sample frequency reflects the reduction in site activities within the Outfall 009 watershed anticipated for next year (e.g., limited ISRA, construction, demolition, etc. planned). The Panel will revisit all voluntary (i.e., not required by the NPDES Permit) monitoring frequencies when SSFL site remediation activities increase.
- Continue to complete full BMP performance inspection checklists for all BMPs which includes visiting each during every storm event to observe whether there is stormwater discharging and again 72 hours after the end of the rain event to observe if any ponded water remains.
- Continue subarea monitoring in Outfall 001 and 002 watersheds to evaluate sources of constituents found in stormwater at these outfalls.
- Continue to hold off on monitoring at Northern Drainage subarea sampling locations. If a lead exceedance is measured at Outfall 009, reevaluate monitoring at these locations, or at one site downstream of the shooting range.
- Continue to also analyze for the filtered form of each metal when total metals are already being analyzed in outfall samples as required by the permit.
- Collect stormwater samples from DOE RMHF demo area during first two storm events of the 2020/21 rainy season and analyze for the monitoring suite required at Outfall 003, the watershed where this area is located.

5.2.2 Northern Drainage

As specified in the RMMP, 2016/17 was the last year of required geomorphic monitoring. As such, near-term monitoring and maintenance should focus on NPDES compliance needs only. A continued annual assessment of sediment delivery and erosion along this important reach of drainage is recommended.

5.2.3 Non-Industrial Source Special Study

Initial monitoring activities associated with the Non-Industrial Source Special Study are now completed, as specified in Section 2.4. Additional activities recommended in the 2019/20 Annual Report are either complete, in progress, or planned for the start of the 2020/21 rainy season. A summary presentation and paper will be prepared in 2021.

Additional sampling of soils near metal stakes/pipe supports and gravel road solids in the Southern Buffer Zone was recommended after evaluating the Outfall 001 and 002 monitoring results from the 2019/20 reporting year. These samples will be evaluated for gross alpha, metals, and dioxins for the same three particle sizes evaluated in previous special studies sampling plans (<75 um and 75-1000 um, and >1000 um).

5.2.4 Bell Canyon Sampling

In response to continued public concerns expressed about sources of dry weather flow downstream of Outfall 002 and based on observations along this creek by the Expert Panel in 2019, the Expert Panel recommends a one-time dry weather sampling event, if feasible based on property access or other potential limitations, to assess potential flow contributions from non-SSFL private property along Bell Creek such as landscape irrigation, septic effluent, other discharges, and localized non-SSFL non-stormwater runoff above the North Buckskin Court bridge.

6 Milestones/Schedule

Following BMPs/treatment control implementation, effectiveness of these measures will be evaluated primarily by the results of surface water samples collected at outfalls, supplemented by any subarea data collected as part of the 2015 Work Plan. These sampling results will continue to be reviewed annually to determine whether additional upgrades or maintenance may be warranted. If required, a Work Plan Addendum may be submitted for LARWQCB review and approval. The following milestones are planned for the remainder of the NPDES Permit term.

2020/21

Future Expert Panel activities to be determined based on new Permit requirements and Boeing's requests for Expert Panel involvement.

7 References

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Appendix A: 2019/20 Reporting Year Sampling and Analysis Plan



HALEY & ALDRICH, INC.
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San Diego, CA 92108
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26 November 2019
File No. 129095-004

Mr. Peter Zorba
National Aeronautics and Space Administration
Santa Susana Field Laboratory
5800 Woolsey Canyon Road
Canoga Park, California 91304

Mr. Jeffrey Wokurka
The Boeing Company
Santa Susana Field Laboratory
5800 Woolsey Canyon Road
Canoga Park, California 91304

Subject: 2019/2020 Rainy Season Sampling and Analysis Plan (SAP) Updates,
Best Management Practice (BMP) Monitoring Program
Santa Susana Field Laboratory
Canoga Park, California

Dear Mr. Zorba and Mr. Wokurka:

This letter presents the sampling and analysis plan (SAP) updates to the Best Management Practice (BMP) subarea and BMP performance monitoring programs within the Outfalls 001, 002 and 009 watersheds at the Santa Susana Field Laboratory (SSFL) for the 2019/2020 rainy season, and serves as an addendum to the 2015/2016 and 2016/2017 rainy season SAPs (MWH Americas, Inc. [MWH], 2015; 2016) and the 2017/2018 and 2018/2019 SAPs (Haley & Aldrich, 2018; 2019). BMP subarea monitoring is conducted at locations receiving runoff from potential source areas and other infrastructure (e.g., roads, buildings, parking areas) to evaluate the potential for contribution of constituents of concern (COCs) from the potential source areas to stormwater runoff and to identify locations for new BMPs. BMP performance monitoring is conducted at BMPs (e.g., Lower Parking Lot BMP, B1436 detention bioswales) to assess the effectiveness of the structural BMPs at promoting sediment settling and improving surface water quality to comply with NPDES permit limits at Outfalls 001 and 009.

The updates to the BMP monitoring program SAP for the 2019/2020 rainy season account for field observations of monitoring locations during the 2018/2019 rainy season and an evaluation of surface water sampling data collected to date, and are described below. In addition, attached to this letter are 2019/2020 rainy season versions of the SAP tables and figures as well as standardized BMP inspection forms. The changes described in this letter were developed with input from, and in accordance with, the recommendations from the SSFL Surface Water Expert Panel (Expert Panel) and Geosyntec Consultants (Geosyntec), and were initially presented in the 2018/2019 Site-wide Stormwater Annual Report (Surface Water Expert Panel and Geosyntec Consultants, 2019).

BMP Monitoring Updates

OUTFALL 001

Monitoring at CABMP0001 is discontinued, as the 2018 Woolsey Wildfire introduced unknown variables to make before and after demo sampling comparisons impossible.

BMP monitoring locations to be added to assess potential flow contributions from landscape irrigation, septic effluent, other discharges, and localized non-stormwater runoff above the North Buckskin Court bridge in the Outfall 001 watershed:

- New potential BMP subarea monitoring location (EPSW001BG01) to characterize natural background unimpacted areas; located at the low spot along Bell Canyon Road and north of the road heading to Outfall 001.
- New potential BMP subarea monitoring location (EPSW001IE01) to evaluate impacted soils (A1BP, CTL-V); located at the bottom of the hill to the north of the intersection of the Southern Buffer Zone Road and Outfall 001 Road.
- New potential BMP subarea monitoring location (EPSW001PV01) to characterize background impacted areas; paved areas; south side of the road heading towards Outfall 001 at the intersection of Outfall 001 road and Bell Canyon Road.

Sampling at the new potential BMP subarea monitoring locations listed above will be collected during every rain event.

OUTFALL 002

BMP monitoring locations to be added to assess potential flow contributions from landscape irrigation, septic effluent, other discharges, and localized non-stormwater runoff above the North Buckskin Court bridge in the Outfall 002 watershed:

- New potential BMP subarea monitoring location (EPSW002BG01) to characterize natural background unimpacted areas; located past the second water guzzler just before the steep incline into Outfall 002. Road delineator to the west of culvert.
- New potential BMP subarea monitoring location (EPSW002IE01) to evaluate impacted soils; located at STL-IV immediately past the gates to the south east; adjacent to the new telephone pole.
- New potential BMP subarea monitoring location (EPSW002IE02) to evaluate impacted soils; located along the Southern Buffer Zone Road at the culvert inlet on the north side of the road. Approximately 400 feet east of the turnout.

Sampling at the new potential BMP subarea monitoring locations listed above will be collected during every rain event.

OUTFALL 009

Discontinue sampling at all subarea sites in the Outfall 009 watershed, which include:

- ILBMP0001
- EVBMP0002
- A2BMP0008
- A2BMP0009
- A2BMP0011
- EVBMP0010
- APBMP0001

BMP SAMPLING ACTIVITIES 2019/2020 SAP UPDATES

- Sample all active BMP performance sites twice a year. See above for new BMP subarea sites sampled every rain event.
- Discontinue monitoring at Northern Drainage sampling locations EPNSW07, EPNSW01, EPNSW02, EPNSW03, EPNSW04, EPNSW06, and BGBMP0004 (EPNSW05). If a lead exceedance is measured at Outfall 009, reevaluate monitoring at these locations, or onsite downstream of the shooting range.

BMP INSPECTION FORMS

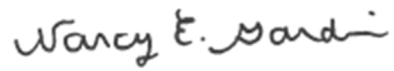
The BMP inspections will be conducted during every monitored event and once after the rainy season using the “BMP Inspection Forms”. These forms include observations, maintenance needs, and corrective actions and were revised to reflect current field conditions. As specified on each form, a standardized framed photo should be taken at the same location, facing the same direction, at each site visit. BMP inspection forms for Boeing locations were revised for the 2017/2018 rainy season to accommodate electronic data entry on a field tablet.

72 hours after the end of each rain event, field crews will also inspect and record maximum ponding levels at locations listed in the “Boeing 72 Hours After Rain Event Ponding Inspection Form” and “NASA 72 Hours After Rain Event Ponding Inspection Form”. These forms will be completed after every rain event at all of the listed locations.

Sincerely yours,
HALEY & ALDRICH, INC.

A handwritten signature in black ink that reads "Katherine R. Miller". The signature is written in a cursive style with a large initial 'K'.

Katherine Miller
Project Manager

A handwritten signature in black ink that reads "Nancy E. Gardiner". The signature is written in a cursive style with a large initial 'N'.

Nancy Gardiner, CPESC, QSD, QISP
Program Manager

Enclosures:

References

Table I – BMP Monitoring Inspection Locations and Analytical Plan, 2019/2020 Rainy Season

Figure 1 – Outfall 009, BMP Monitoring Locations

Figure 2 – Outfall 009, B-1 and Lower Parking Lot Areas – Boeing

Figure 3 – Outfall 009, IEL Area – Boeing

Figure 4 – Outfall 009, AILF Area – Boeing

Figure 5 – Outfall 009, CMs South of LOX Area – NASA

Figure 6 – Outfall 009, A2LF, CM-1, and Helipad Areas – NASA

Figure 7 – Outfall 009, ELV Area – NASA

Figure 8 – Outfall 001 and 002 BMP Monitoring Locations

Figure 9 – Outfall 001, Potential BMP Subarea

Figure 10– Outfall 001, Potential BMP Subarea

Figure 11 – Outfall 002, Potential BMP Subarea

Figure 12 – Outfall 002, Potential BMP Subarea

Figure 13 – Outfall 002, Potential BMP Subarea

BMP Inspection Forms – Outfalls 008 and 009 – Boeing

BMP Inspection Forms – Outfall 009 – NASA

Boeing 72 Hours After Rain Event Ponding Inspection Form

NASA 72 Hours After Rain Event Ponding Inspection Form

Sample Collection Forms

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TABLES

TABLE I
BMP MONITORING INSPECTION LOCATIONS AND ANALYTICAL PLAN
2019/2020 RAINY SEASON
SANTA SUSANA FIELD LABORATORY
CANOGA PARK, CALIFORNIA

Object ID	Sampling Responsibility	Location	Areas Monitored	Purpose	Notes	Sample Frequency	Cd, Cu, Pb (Total Dissolved) (Method 200.7/200.8) Hg (Total Dissolved) (Method 245.1)	Cd, Cu, Pb (Total Recoverable) (Method 200.7/200.8) Hg (Total Recoverable) (Method 245.1)	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Particle Size Distribution (Method ASTM D422)	Turbidity (Method 180.1)	As, Cd, Cu, Fe, Pb, Mn, Se, Zn (Total Dissolved) (Method 200.7/200.8) Hg (Total Dissolved) (Method 245.1)	As, Cd, Cu, Fe, Pb, Mn, Se, Zn (Total Recoverable) (Method 200.7/200.8) Hg (Total Recoverable) (Method 245.1)	SO4 (Method 300)	Gross Alpha (Total Dissolved) (Method 900.0)	Gross Alpha (Total Recoverable) (Method 900.0)
A1BMP0002	Boeing	AILF	CM-9, AILF	US South, Treatment BMP Performance Monitoring	AILF tributary drainage	Twice a year	X	X	X	X	X						
A1BMP0003	Boeing	AILF	CM-9, AILF, IEL, Area II Road	DS, Treatment BMP Performance Monitoring	CM-9 underdrain	Twice a year	X	X	X	X	X						
A2BMP0006	NASA	CM-1	CM-1	US East, Treatment BMP Performance Monitoring	CM-1 eastern tributary drainage	Twice a year	X	X	X	X	X						
A2BMP0007	NASA	CM-1	CM-1	DS, Treatment BMP Performance Monitoring	CM-1 culvert outlet	Twice a year	X	X	X	X	X						
A2BMP0012	NASA	CM-1	CM-1, Area II Road	US, Treatment BMP Performance Monitoring	Outlet pipe south side of road	Twice a year	X	X	X	X	X	X					
B1BMP0009	Boeing	B-1	B-1 Upper Parking Lot Media Filter	US North, Treatment BMP Performance Monitoring	Gunite swale conveying road runoff	Twice a year	X	X	X	X	X						
B1BMP0010	Boeing	B-1	B-1 Upper Parking Lot Media Filter	US South, Treatment BMP Performance Monitoring	Culvert outlet from upper parking lot area	Twice a year	X	X	X	X	X						
B1BMP0011	Boeing	B-1	B-1 Upper Parking Lot Media Filter	DS, Treatment BMP Performance Monitoring	Underdrains	Twice a year	X	X	X	X	X						
EV BMP0001	NASA	ELV	ELV, Helipad	ELV Treatment BMP Overflow Monitoring	Culvert inlet; runoff will only be present when rain events exceed ELV BMP design storm	Twice a year	X	X	X	X	X	X					
EV BMP0003	NASA	CM-1	CM-1, Area II Road	US West, Treatment BMP Performance Monitoring	Sheetflow along Area II Road upstream of sandbag berm	Twice a year	X	X	X	X	X						
EV BMP0007	NASA	ELV	ELV Treatment BMP	US, Treatment BMP Performance Monitoring	Sample port in BMP influent pipe prior to "T" connection	Twice a year	X	X	X	X	X						
EV BMP0008	NASA	ELV	ELV Treatment BMP	DS, Treatment BMP Performance Monitoring	Discharge from media filter tank pipe	Twice a year	X	X	X	X	X	X					
EV BMP0009	NASA	ELV	ELV Treatment BMP	Mid-Point Treatment BMP Performance Monitoring	Composite of samples from eastern and western sample ports between settling tanks and media filter	Twice a year	X	X	X	X	X	X					
ILBMP0002	Boeing	AILF	CM-9, IEL, Area II Road	US East, Treatment BMP Performance Monitoring	Culvert inlet off Area II Road	Twice a year	X	X	X	X	X						
ILBMP0004	Boeing	IEL	B1436 Southern Detention Bioswale	US, Treatment BMP Performance Monitoring	Concrete swale (western) diverting sheetflow into rock crib	Twice a year	X	X	X	X	X						
ILBMP0005	Boeing	IEL	B1436 Southern Detention Bioswale	DS, Treatment BMP Performance Monitoring	Bioswale underdrain (subsurface 12- inch drain connecting to existing culvert)	Twice a year	X*	X*	X*	X	X						
ILBMP0008	Boeing	IEL	B1436 Southern Detention Bioswale	US, Treatment BMP Performance Monitoring	Concrete swale (eastern) diverting sheetflow into rock crib	Twice a year	X	X	X	X	X						
ILBMP0009	Boeing	Administration bldgs. area	Administration buildings area filter basket	Filter basket BMP Performance Monitoring	Influent (upstream) filter basket sample	Twice a year	X	X	X	X	X						
ILBMP0010	Boeing	Administration bldgs. area	Administration buildings area filter basket	Filter basket BMP Performance Monitoring	Effluent (downstream) filter basket sample	Twice a year	X	X	X	X	X						
LPBMP0002	Boeing	Lower Parking Lot	Lower Parking Lot BMP	US, Treatment BMP Performance Monitoring	Sample port in cistern discharge pipe	Twice a year	X	X	X	X	X						
LPBMP0003	Boeing	Lower Parking Lot	Lower Parking Lot BMP	Mid-Point Treatment BMP Performance Monitoring	Sediment Basin outlet box	Twice a year	X	X	X	X	X						
LPBMP0004	Boeing	Lower Parking Lot	Lower Parking Lot BMP	DS Treatment BMP Performance Monitoring	Discharge from Biofilter effluent pipe	Twice a year	X	X	X	X	X						
LXBMP0010	Boeing	CM-3	Service Area Road BMP	US, Treatment BMP Performance Monitoring	Outlet pipe south side of road	Twice a year	X	X	X	X	X						
LXBMP0011	Boeing	CM-3	Service Area Road BMP	US, Treatment BMP Performance Monitoring	Natural drainage upstream of CM-3	Twice a year	X	X	X	X	X						
LXBMP0012	Boeing	CM-3	Service Area Road BMP	DS, Treatment BMP Performance Monitoring	Underdrains	Twice a year	X	X	X	X	X						
EPSW001BG01	Boeing	OF001 Watershed	Background (natural unimpacted areas)	Potential BMP Location	Located at the low spot along Bell Canyon Road and north of the road leading to Outfall 001.	Every Storm				X	X		X	X	X	X	X
EPSW001IE01	Boeing	OF001 Watershed	Impacted Soils Evaluation (A1BP, CTL-V)	Potential BMP Location	At the bottom of the hill to the north of the intersection of the Southern Buffer Zone Road and Outfall 001 Road.	Every Storm				X	X		X	X	X	X	X
EPSW001PV01	Boeing	OF001 Watershed	Background (with paved areas)	Potential BMP Location	South side of the road heading towards Outfall 001 at the intersection of Outfall 001 road and Bell Canyon Road.	Every Storm				X	X		X	X	X	X	X
EPSW002BG01	Boeing	OF002 Watershed	Natural Background	Potential BMP Location	Located past the second water guzzler just before the steep incline into Outfall 002. Road delineator to the west of culvert.	Every Storm				X	X		X	X	X	X	X

TABLE I
 BMP MONITORING INSPECTION LOCATIONS AND ANALYTICAL PLAN
 2019/2020 RAINY SEASON
 SANTA SUSANA FIELD LABORATORY
 CANOGA PARK, CALIFORNIA

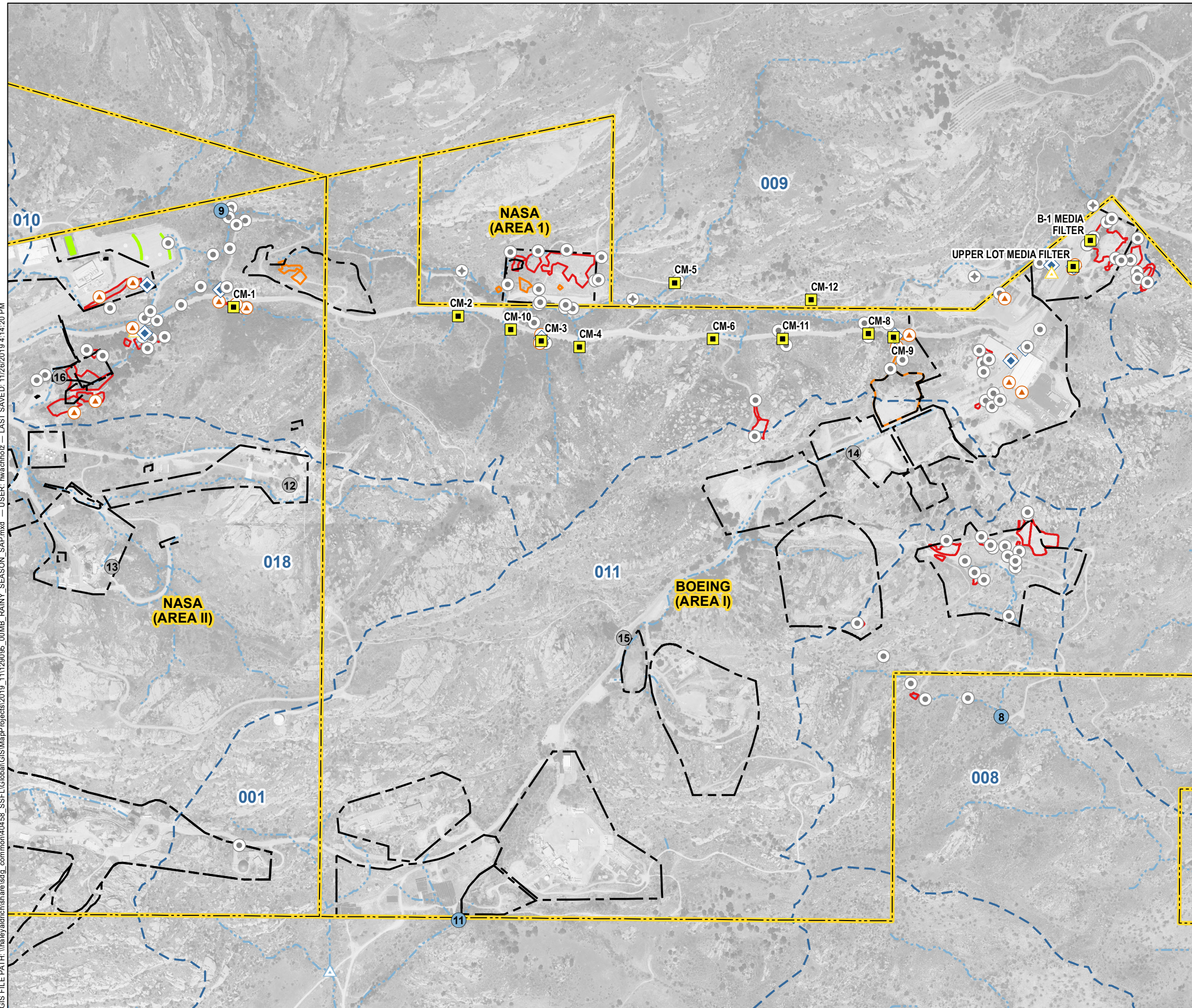
Object ID	Sampling Responsibility	Location	Areas Monitored	Purpose	Notes	Sample Frequency	Cd, Cu, Pb (Total Dissolved) (Method 200.7/200.8) Hg (Total Dissolved) (Method 245.1)	Cd, Cu, Pb (Total Recoverable) (Method 200.7/200.8) Hg (Total Recoverable) (Method 245.1)	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Particle Size Distribution (Method ASTM D422)	Turbidity (Method 180.1)	As, Cd, Cu, Fe, Pb, Mn, Se, Zn (Total Dissolved) (Method 200.7/200.8) Hg (Total Dissolved) (Method 245.1)	As, Cd, Cu, Fe, Pb, Mn, Se, Zn (Total Recoverable) (Method 200.7/200.8) Hg (Total Recoverable) (Method 245.1)	SO4 (Method 300)	Gross Alpha (Total Dissolved) (Method 900.0)	Gross Alpha (Total Recoverable) (Method 900.0)
EPSW002IE01	Boeing	OF002 Watershed	Impacted Soils Evaluation (STL-IV)	Potential BMP Location	At STL-IV. Immediately past the gates to the south east; adjacent to the new telephone pole.	Every Storm			X	X			X	X	X	X	X
EPSW002IE02	Boeing	OF002 Watershed	Impacted Soils Evaluation (Coca)	Potential BMP Location	Located along the Southern Buffer Zone Road at the culvert inlet on the north side of the road. Approximately 400 feet east of the turnout.	Every Storm			X	X			X	X	X	X	X

Notes:
 * Collect one equipment blank per sampling day from the equipment used to sample the B1436 Detention Bioswales downstream monitoring location (under drains) and place on hold for metals and dioxins analysis; the analyses will be performed if unusual results are reported for primary samples. The EB sample ID will be based on the ID of the primary sample collected immediately before collecting the equipment blank, and will either be ILQW0005_yyyyymmdd or ILQW0007_yyyyymmdd.

Abbreviations:
 CM - Culvert Modification
 DS - Downstream
 US - Upstream
 X = Collect and Analyze

FIGURES

GIS FILE PATH: \\haleyaldrich\share\sdg_common\40458_SSF\Global\GIS\Map\Projects\2019_11129095_00MB_RAINY_SEASON_SAP.mxd — USER: hwachholz — LAST SAVED: 11/26/2019 4:14:20 PM

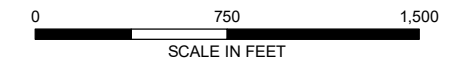


LEGEND

- CULVERT MODIFICATION (CM)
- UPSTREAM BMP PERFORMANCE MONITORING LOCATION
- DOWNSTREAM BMP PERFORMANCE MONITORING LOCATION
- MIDPOINT BMP PERFORMANCE MONITORING LOCATION
- PREVIOUS BMP PERFORMANCE MONITORING LOCATION
- POTENTIAL BMP PERFORMANCE MONITORING LOCATION
- ACTIVE NPDES OUTFALL
- FORMER NPDES OUTFALL
- PREVIOUS SPECIAL STUDIES AND OTHER SAMPLING LOCATIONS
- DRAINAGE
- SURFACE WATER DIVIDE
- EROSION CONTROL FABRIC/LINER
- ADMINISTRATIVE AREA BOUNDARY
- STUDY AREA
- ISRA EXCAVATION BOUNDARY
- FORMER ISRA EXCAVATION BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. SAP = SAMPLING AND ANALYSIS PLAN
3. BMP = BEST MANAGEMENT PRACTICE
4. AERIAL IMAGERY SOURCE: CIRGIS



**HALEY
ALDRICH**

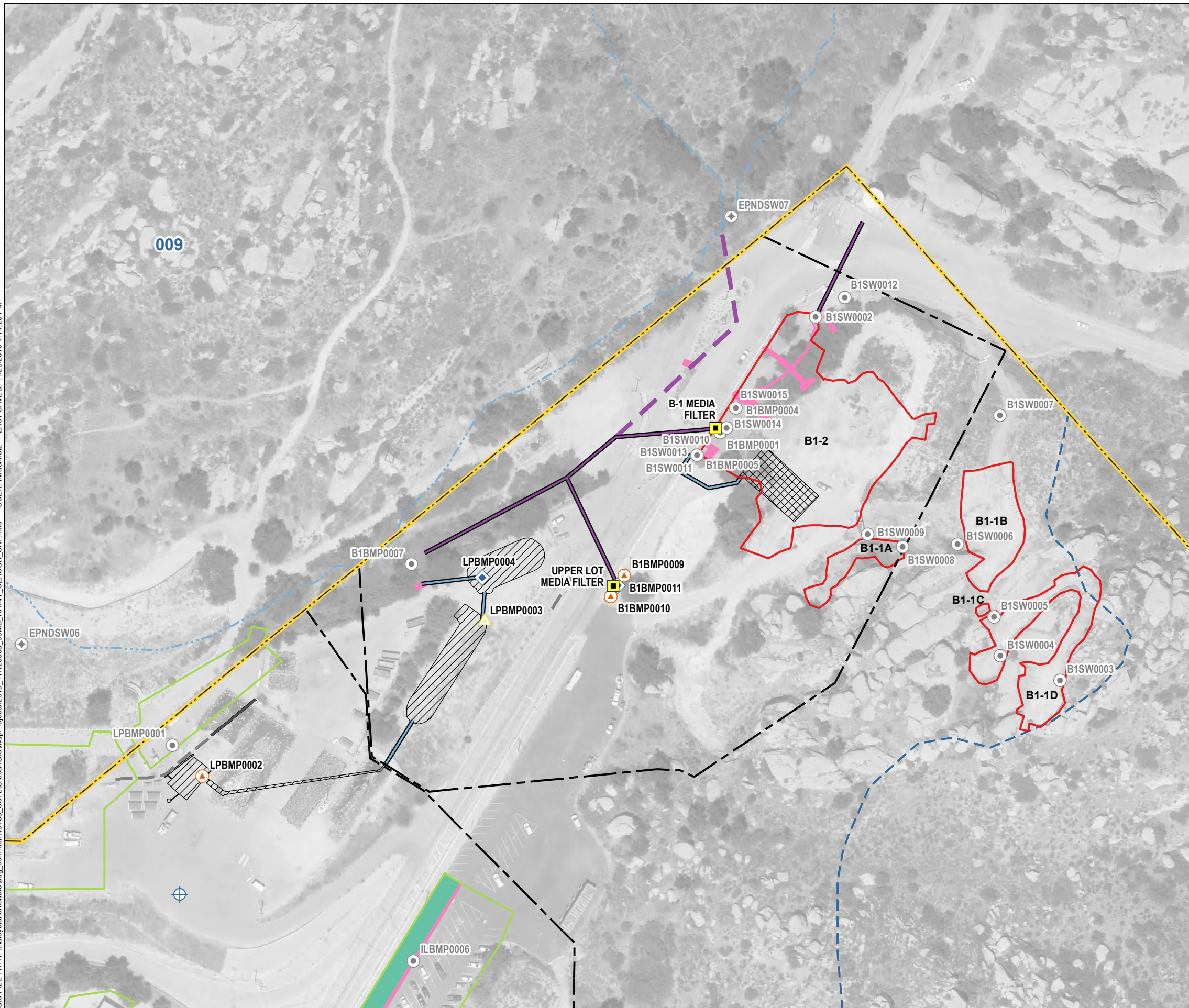
2019/2020 RAINY SEASON MAP
BMP MONITORING PROGRAM
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

**OUTFALL 009
BMP MONITORING LOCATIONS**

NOVEMBER 2019

FIGURE 1

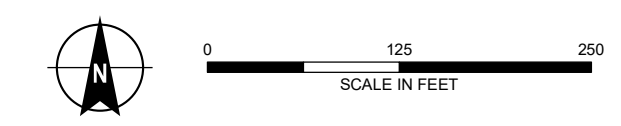
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LEGEND

- CULVERT MODIFICATION (CM)
- UPSTREAM BMP PERFORMANCE MONITORING LOCATION
- DOWNSTREAM BMP PERFORMANCE MONITORING LOCATION
- MIDPOINT BMP PERFORMANCE MONITORING LOCATION
- PREVIOUS BMP PERFORMANCE MONITORING LOCATION
- PREVIOUS SPECIAL STUDIES AND OTHER SAMPLING LOCATIONS
- 24" STORM DRAIN
- DRAINAGE
- SURFACE WATER DIVIDE
- CONVEYANCE PIPELINE
- ASPHALT CURB
- ROLLING AC BERM
- STORM DRAIN (ESTIMATED SUBSURFACE TRACE)
- STORM DRAIN INFERRED
- ASPHALT/CONCRETE REMOVAL AREA
- DETENTION BIOSWALE
- ENGINEERED NATURAL TREATMENT SYSTEM
- ROCK CRIB SWALE
- SEDIMENTATION BASIN
- ADMINISTRATIVE AREA BOUNDARY
- STUDY AREA
- ISRA EXCAVATION BOUNDARY

- NOTES**
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
 2. SAP = SAMPLING AND ANALYSIS PLAN
 3. BMP = BEST MANAGEMENT PRACTICE
 4. AERIAL IMAGERY SOURCE: CIRGIS

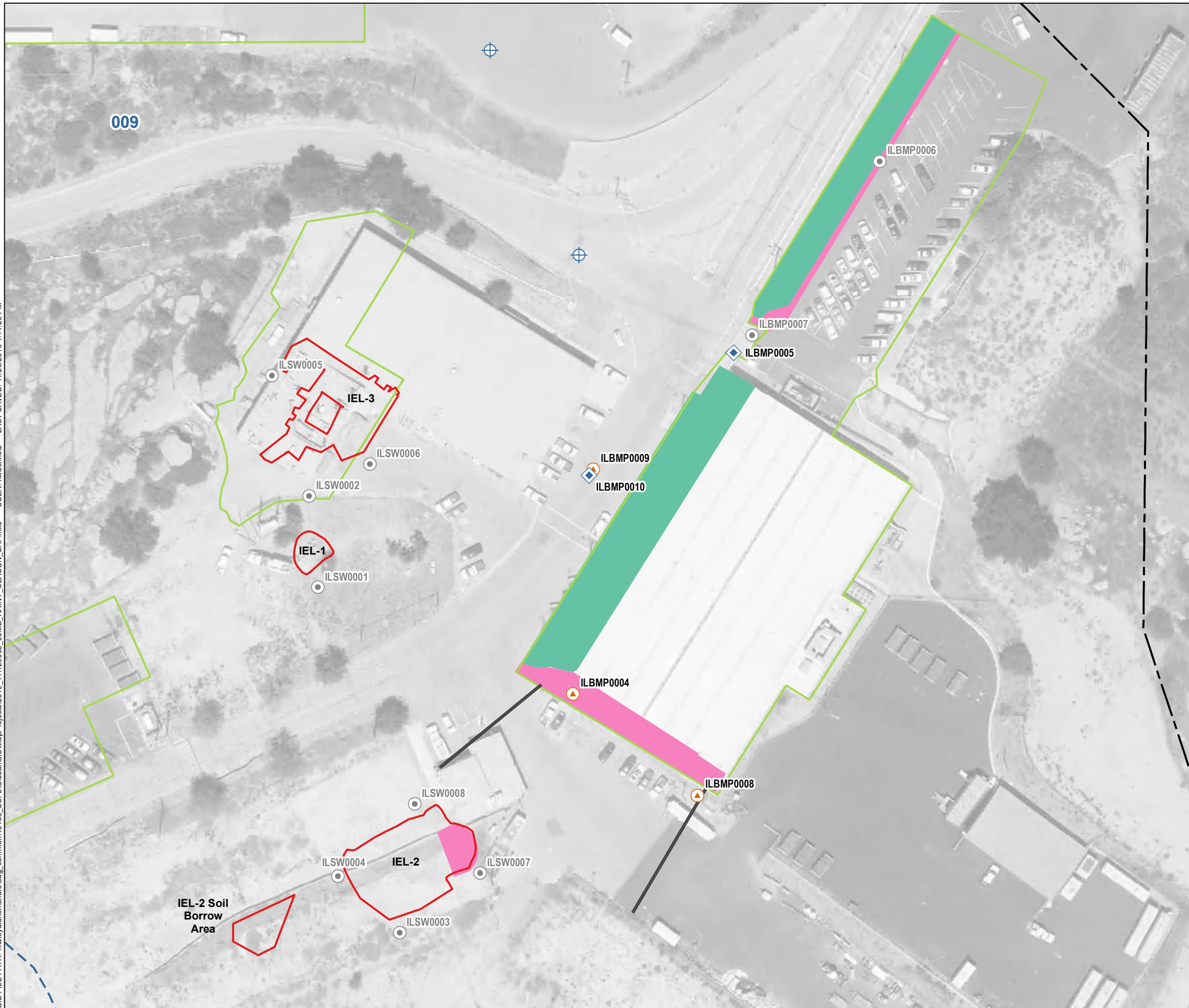


HALEY ALDRICH 2019/2020 RAINY SEASON MAP
 BMP MONITORING PROGRAM
 THE BOEING COMPANY
 VENTURA COUNTY, CALIFORNIA













**OUTFALL 009
 B-1 AND LOWER PARKING LOT
 AREAS - BOEING**

NOVEMBER 2019 FIGURE 2

GIS FILE PATH: \\haleyaldrich\share\sdcg_common\40458_SISFL\Global\GIS\Map\Projects\2019_11\1129095_00MB_RAINY_SEASON_SAP.mxd — USER: hwachholz — LAST SAVED: 11/26/2019 4:14:20 PM

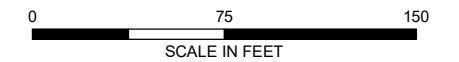


LEGEND

-  UPSTREAM BMP PERFORMANCE MONITORING LOCATION
-  DOWNSTREAM BMP PERFORMANCE MONITORING LOCATION
-  PREVIOUS BMP PERFORMANCE MONITORING LOCATION
-  24" STORM DRAIN
-  SURFACE WATER DIVIDE
-  ROLLING AC BERM
-  ASPHALT/CONCRETE REMOVAL AREA
-  DETENTION BIOSWALE
-  ROCK CRIB SWALE
-  ADMINISTRATIVE AREA BOUNDARY
-  STUDY AREA
-  ISRA EXCAVATION BOUNDARY

NOTES

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2. SAP = SAMPLING AND ANALYSIS PLAN
3. BMP = BEST MANAGEMENT PRACTICE
4. AERIAL IMAGERY SOURCE: CIRGIS



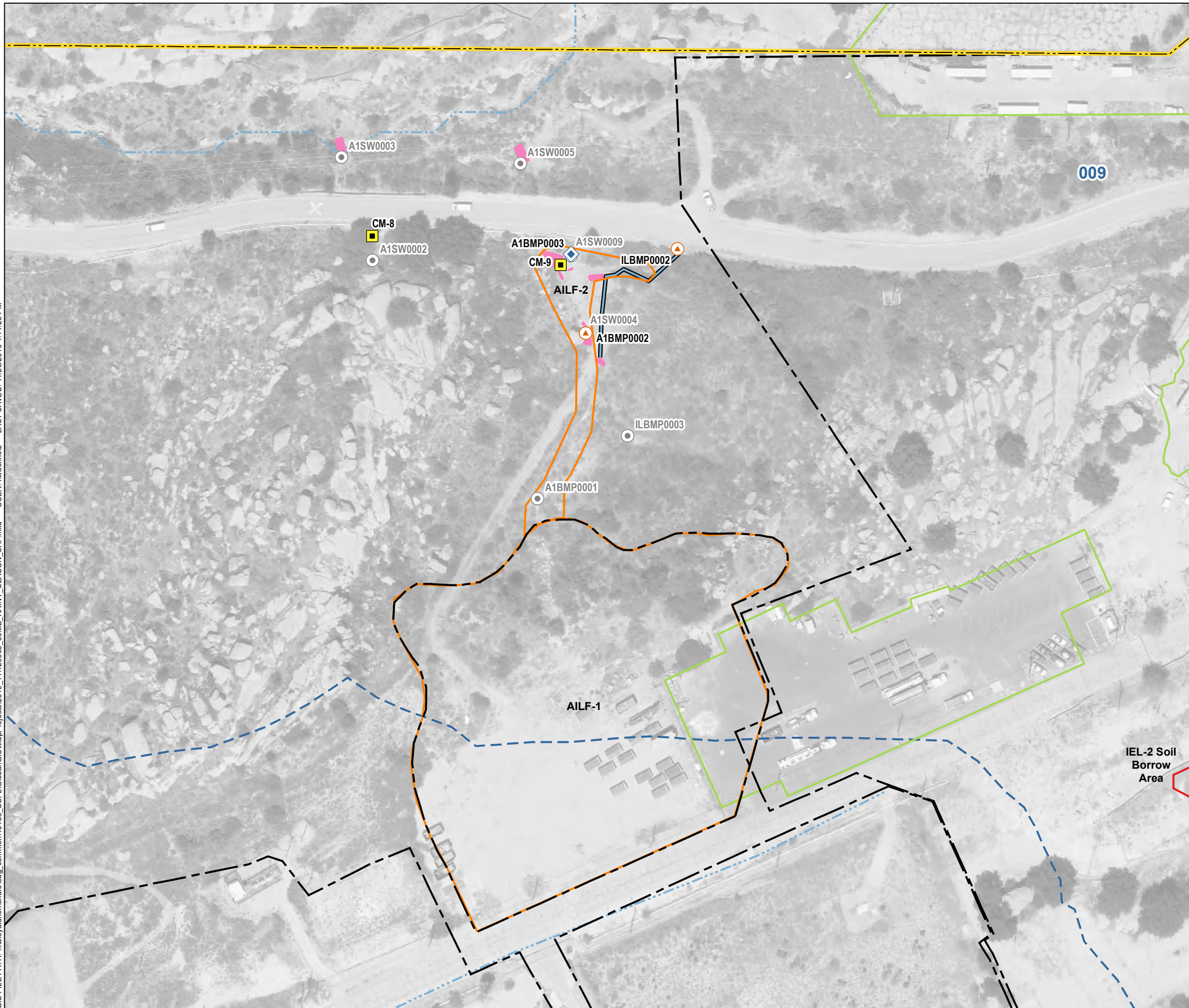
2019/2020 RAINY SEASON MAP
BMP MONITORING PROGRAM
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

OUTFALL 009
IEL AREA - BOEING














NOVEMBER 2019

FIGURE 3

GIS FILE PATH: \\haleyaldrich\share\sfg_common\40458_SISFL\Global\GIS\Map\Projects\2019_11129095_00MB_RAINY_SEASON_SAP.mxd — USER: hwachholz — LAST SAVED: 11/26/2019 4:14:20 PM

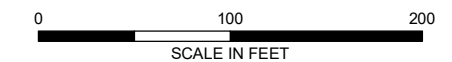


LEGEND

-  CULVERT MODIFICATION (CM)
-  UPSTREAM BMP PERFORMANCE MONITORING LOCATION
-  DOWNSTREAM BMP PERFORMANCE MONITORING LOCATION
-  PREVIOUS BMP PERFORMANCE MONITORING LOCATION
-  DRAINAGE
-  SURFACE WATER DIVIDE
-  CONVEYANCE PIPELINE
-  ASPHALT/CONCRETE REMOVAL AREA
-  ROCK CRIB SWALE
-  ADMINISTRATIVE AREA BOUNDARY
-  STUDY AREA
-  ISRA EXCAVATION BOUNDARY
-  FORMER ISRA EXCAVATION BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. SAP = SAMPLING AND ANALYSIS PLAN
3. BMP = BEST MANAGEMENT PRACTICE
4. AERIAL IMAGERY SOURCE: CIRGIS



**HALEY
ALDRICH**

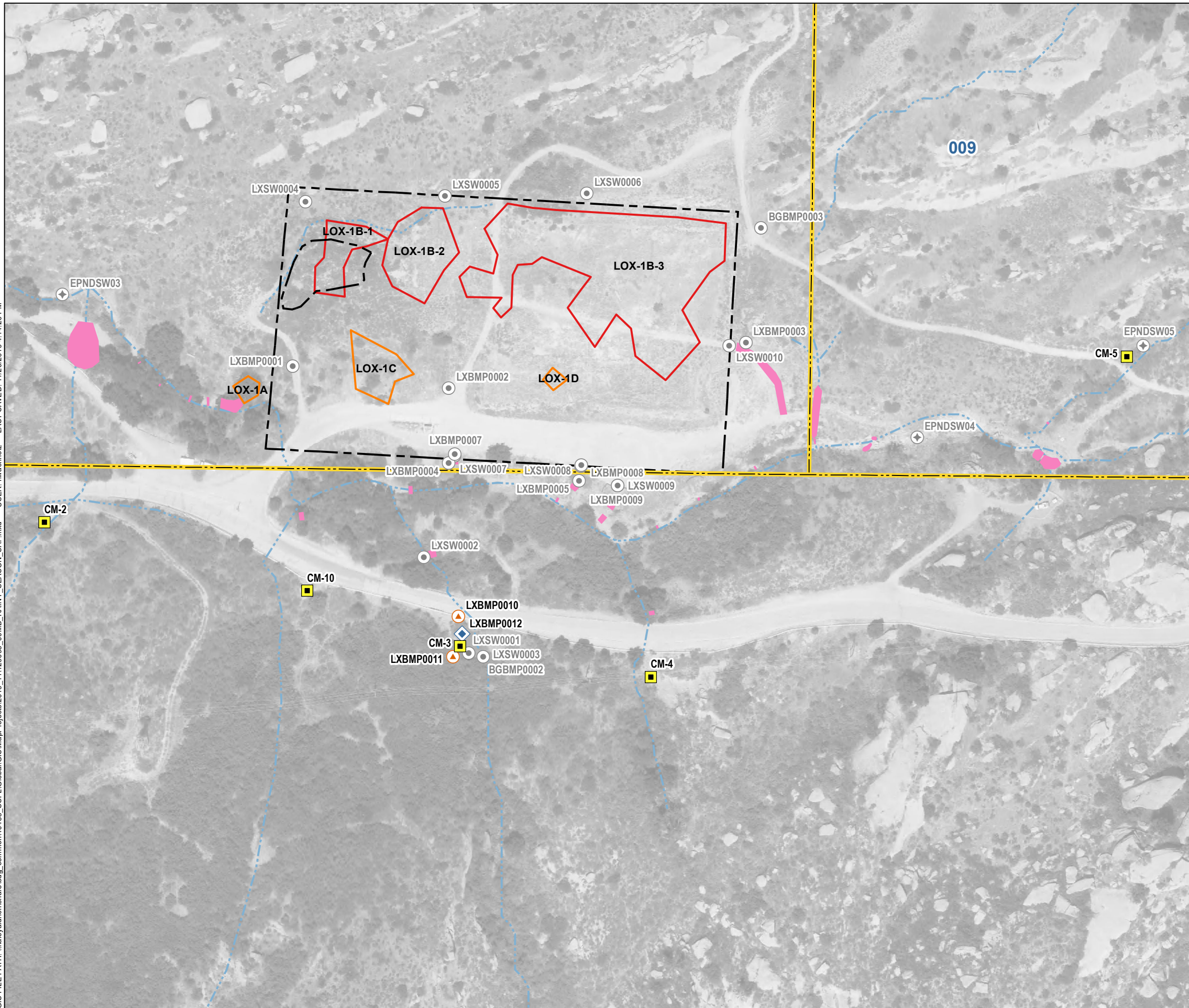
2019/2020 RAINY SEASON MAP
BMP MONITORING PROGRAM
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

OUTFALL 009
AILF AREA - BOEING












NOVEMBER 2019

FIGURE 4

GIS FILE PATH: \\haleyaldrich\share\sdg_common\40458_SISFL\Global\GIS\Map\Projects\2019_11129095_00MB_RAINY_SEASON_SAP.mxd — USER: hwachholz — LAST SAVED: 11/26/2019 4:14:20 PM

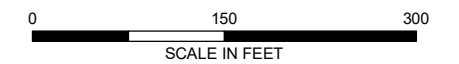


LEGEND

-  CULVERT MODIFICATION (CM)
-  UPSTREAM BMP PERFORMANCE MONITORING LOCATION
-  DOWNSTREAM BMP PERFORMANCE MONITORING LOCATION
-  PREVIOUS BMP PERFORMANCE MONITORING LOCATION
-  PREVIOUS SPECIAL STUDIES AND OTHER SAMPLING LOCATIONS
-  DRAINAGE
-  ROCK CRIB SWALE
-  ADMINISTRATIVE AREA BOUNDARY
-  STUDY AREA
-  ISRA EXCAVATION BOUNDARY
-  FORMER ISRA EXCAVATION BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. SAP = SAMPLING AND ANALYSIS PLAN
3. BMP = BEST MANAGEMENT PRACTICE
4. AERIAL IMAGERY SOURCE: CIRGIS



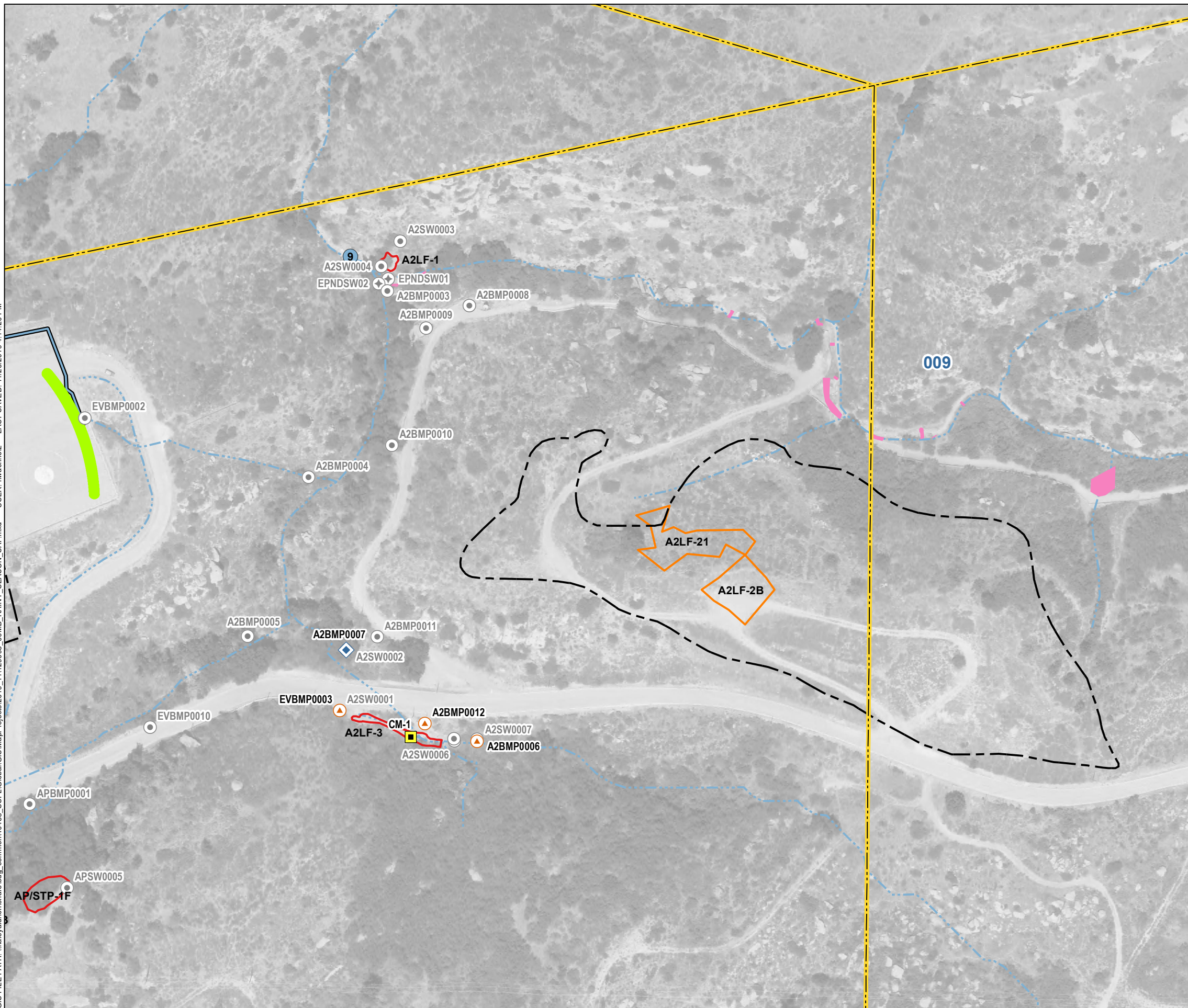
2019/2020 RAINY SEASON MAP
BMP MONITORING PROGRAM
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

OUTFALL 009
CMS SOUTH OF LOX AREA - NASA

NOVEMBER 2019

FIGURE 5

GIS FILE PATH: \\haleyaldrich\share\sdg_common\40458_SISFL\Global\GIS\Map\Projects\2019_11120095_00MB_RAINY_SEASON_SAP.mxd — USER: hwachholz — LAST SAVED: 11/26/2019 4:14:20 PM



LEGEND

- CULVERT MODIFICATION (CM)
- UPSTREAM BMP PERFORMANCE MONITORING LOCATION
- DOWNSTREAM BMP PERFORMANCE MONITORING LOCATION
- PREVIOUS BMP PERFORMANCE MONITORING LOCATION
- POTENTIAL BMP PERFORMANCE MONITORING LOCATION
- ACTIVE NPDES OUTFALL
- PREVIOUS SPECIAL STUDIES AND OTHER SAMPLING LOCATIONS
- DRAINAGE
- CONVEYANCE PIPELINE
- ROCK CRIB SWALE
- EROSION CONTROL FABRIC/LINER
- ADMINISTRATIVE AREA BOUNDARY
- STUDY AREA
- ISRA EXCAVATION BOUNDARY
- FORMER ISRA EXCAVATION BOUNDARY

- NOTES**
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
 2. SAP = SAMPLING AND ANALYSIS PLAN
 3. BMP = BEST MANAGEMENT PRACTICE
 4. AERIAL IMAGERY SOURCE: CIRGIS



HALEY ALDRICH 2019/2020 RAINY SEASON MAP
 BMP MONITORING PROGRAM
 THE BOEING COMPANY
 VENTURA COUNTY, CALIFORNIA

**OUTFALL 009
 A2LF, CM-1, AND HELIPAD
 AREAS - NASA**

NOVEMBER 2019 FIGURE 6

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LEGEND

- UPSTREAM BMP PERFORMANCE MONITORING LOCATION
- DOWNSTREAM BMP PERFORMANCE MONITORING LOCATION
- MIDPOINT BMP PERFORMANCE MONITORING LOCATION
- PREVIOUS BMP PERFORMANCE MONITORING LOCATION
- POTENTIAL BMP PERFORMANCE MONITORING LOCATION
- DRAINAGE
- CONVEYANCE PIPELINE
- ROCK CRIB SWALE
- SEDIMENTATION BASIN
- ADMINISTRATIVE AREA BOUNDARY
- STUDY AREA
- ISRA EXCAVATION BOUNDARY

- NOTES**
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 2. SAP = SAMPLING AND ANALYSIS PLAN
 3. BMP = BEST MANAGEMENT PRACTICE
 4. AERIAL IMAGERY SOURCE: CIRGIS



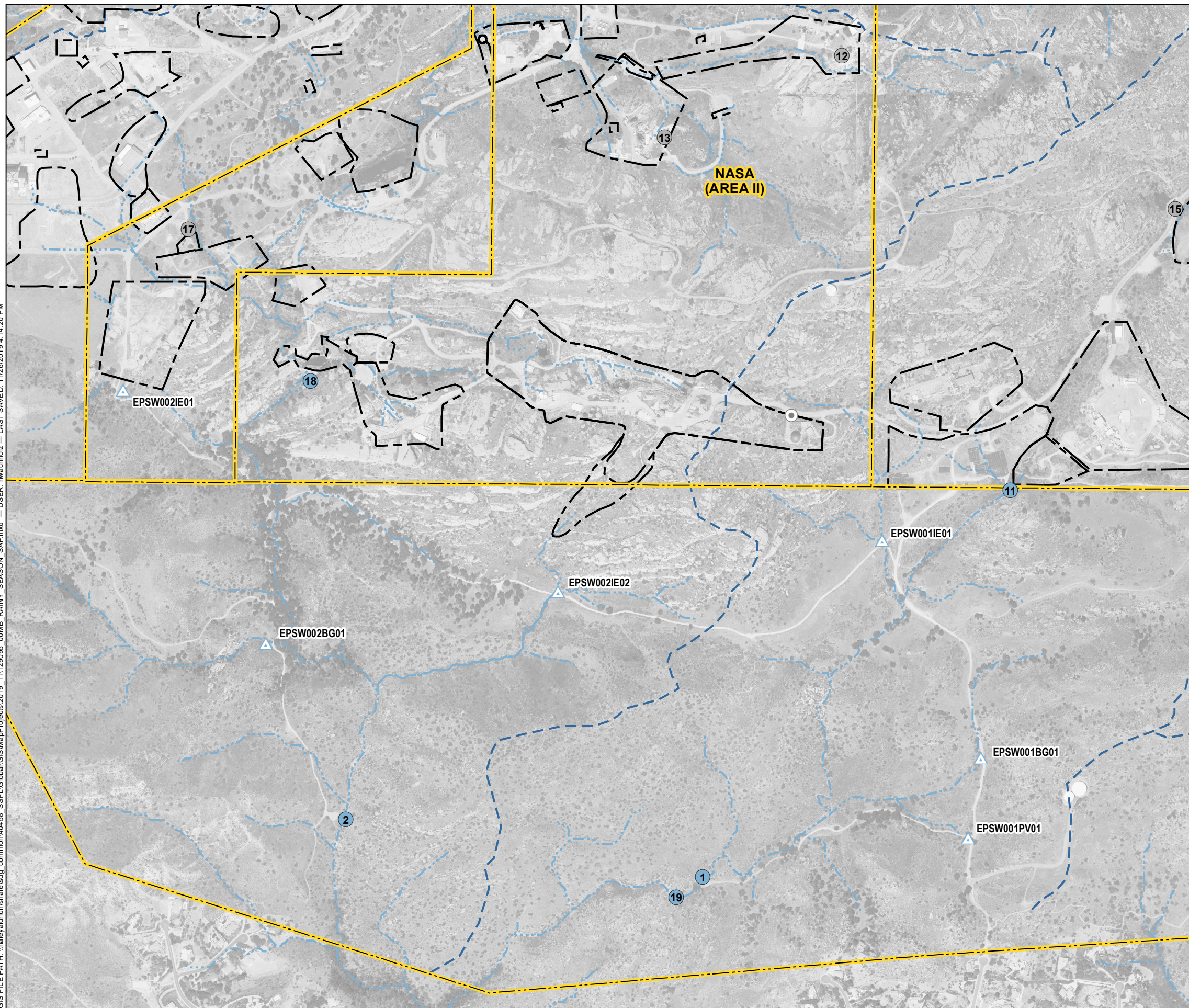
HALEY ALDRICH
 2019/2020 RAINY SEASON MAP
 BMP MONITORING PROGRAM
 THE BOEING COMPANY
 VENTURA COUNTY, CALIFORNIA

**OUTFALL 009
 ELV AREA - NASA**








NOVEMBER 2019

FIGURE 7

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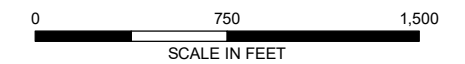


LEGEND

-  POTENTIAL BMP PERFORMANCE MONITORING
-  ACTIVE NPDES OUTFALL
-  FORMER NPDES OUTFALL
-  DRAINAGE
-  SURFACE WATER DIVIDE
-  ADMINISTRATIVE AREA BOUNDARY
-  STUDY AREA

NOTES

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2. SAP = SAMPLING AND ANALYSIS PLAN
3. BMP = BEST MANAGEMENT PRACTICE
4. AERIAL IMAGERY SOURCE: CIRGIS



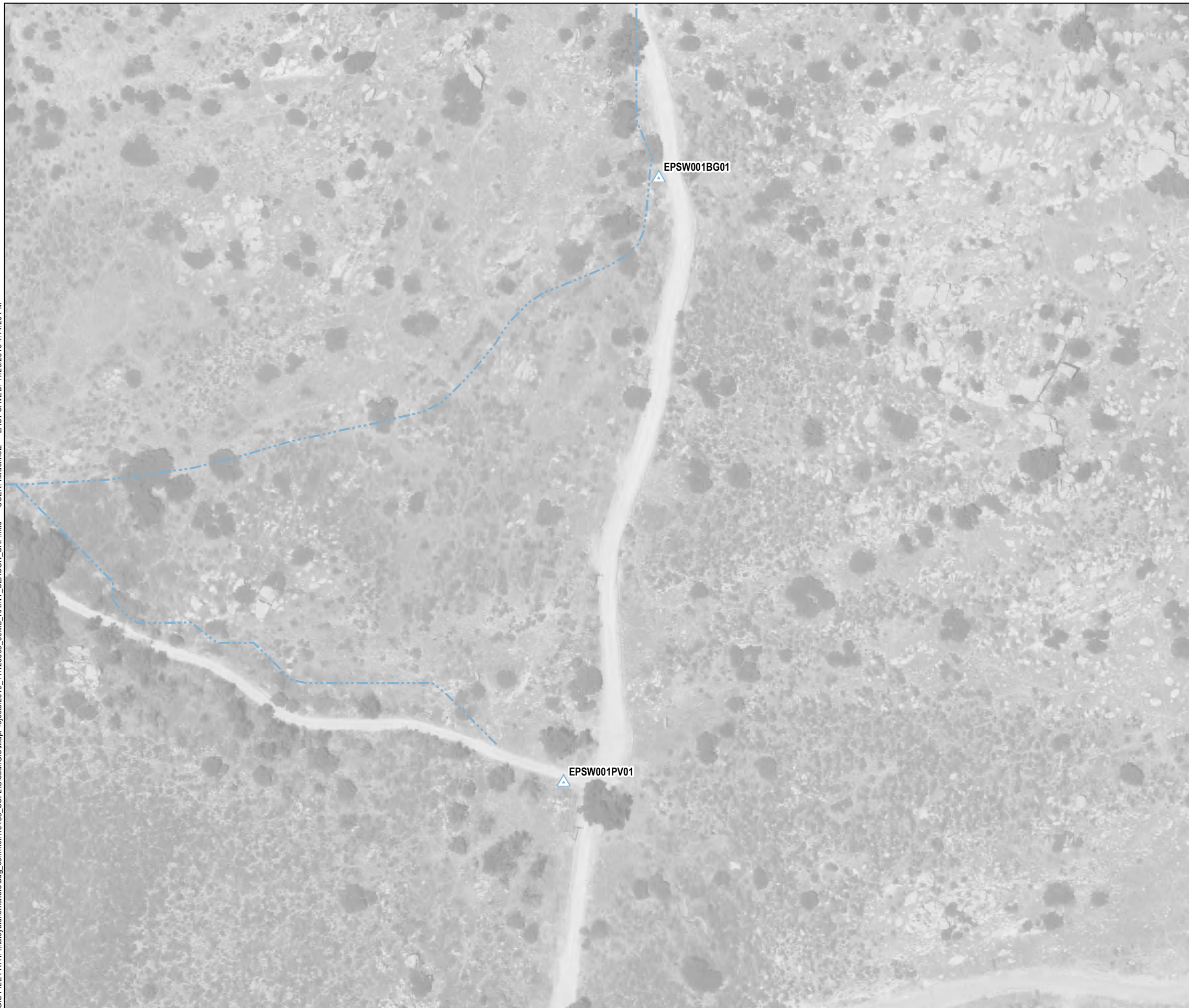
2019/2020 RAINY SEASON MAP
BMP MONITORING PROGRAM
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

**OUTFALL 001 AND 002 BMP
MONITORING WELL LOCATIONS**




NOVEMBER 2019

FIGURE 8

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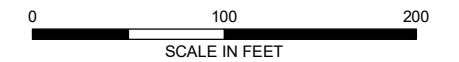


LEGEND

-  POTENTIAL BMP PERFORMANCE MONITORING LOCATION
-  DRAINAGE
-  ADMINISTRATIVE AREA BOUNDARY

NOTES

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2. SAP = SAMPLING AND ANALYSIS PLAN
3. BMP = BEST MANAGEMENT PRACTICE
4. AERIAL IMAGERY SOURCE: CIRGIS



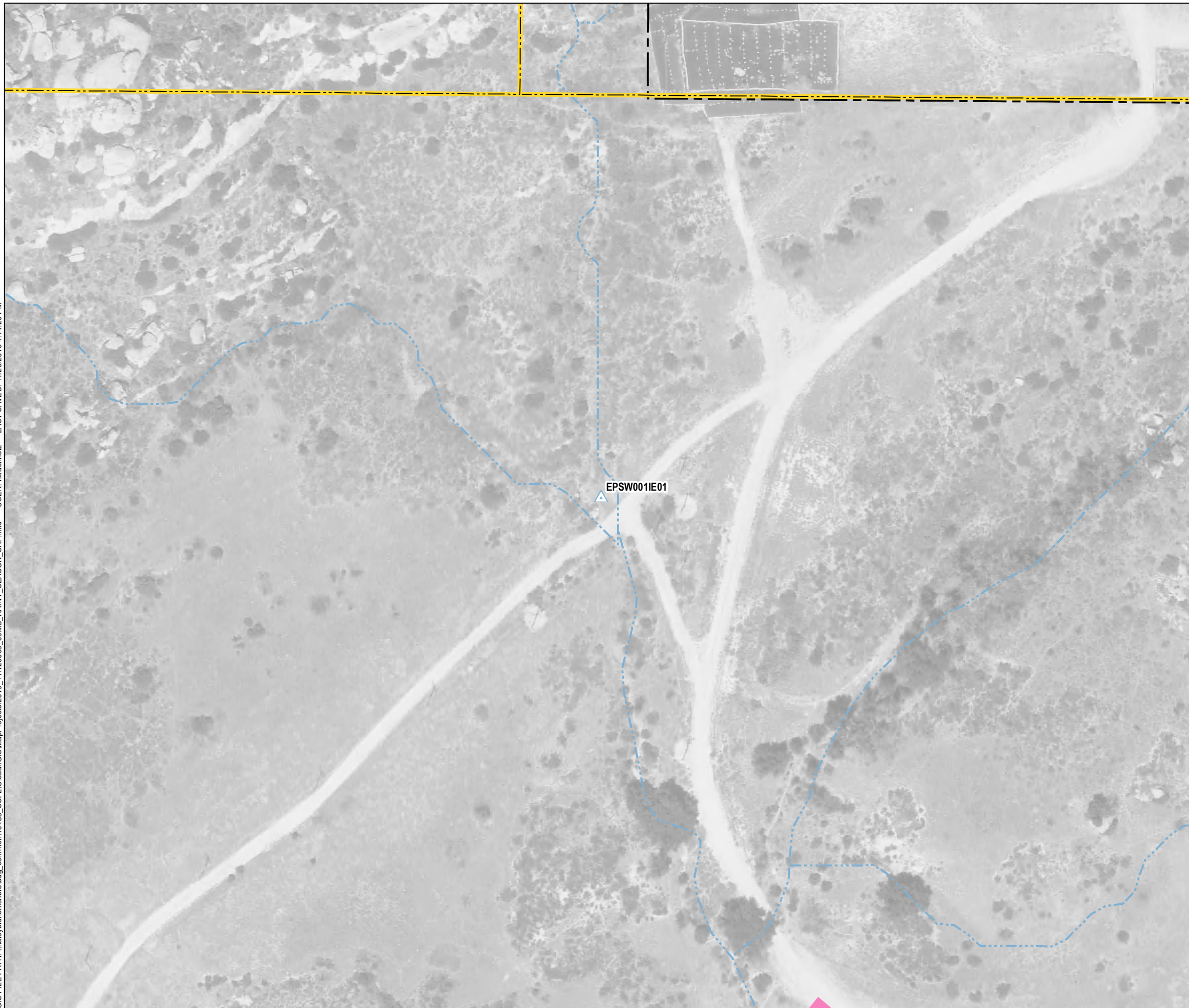
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THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

OUTFALL 001
POTENTIAL BMP SUBAREA






NOVEMBER 2019

FIGURE 9

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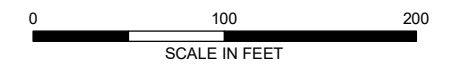


LEGEND

-  POTENTIAL BMP PERFORMANCE MONITORING LOCATION
-  DRAINAGE
-  ROCK CRIB SWALE
-  ADMINISTRATIVE AREA BOUNDARY
-  STUDY AREA

NOTES

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2. SAP = SAMPLING AND ANALYSIS PLAN
3. BMP = BEST MANAGEMENT PRACTICE
4. AERIAL IMAGERY SOURCE: CIRGIS



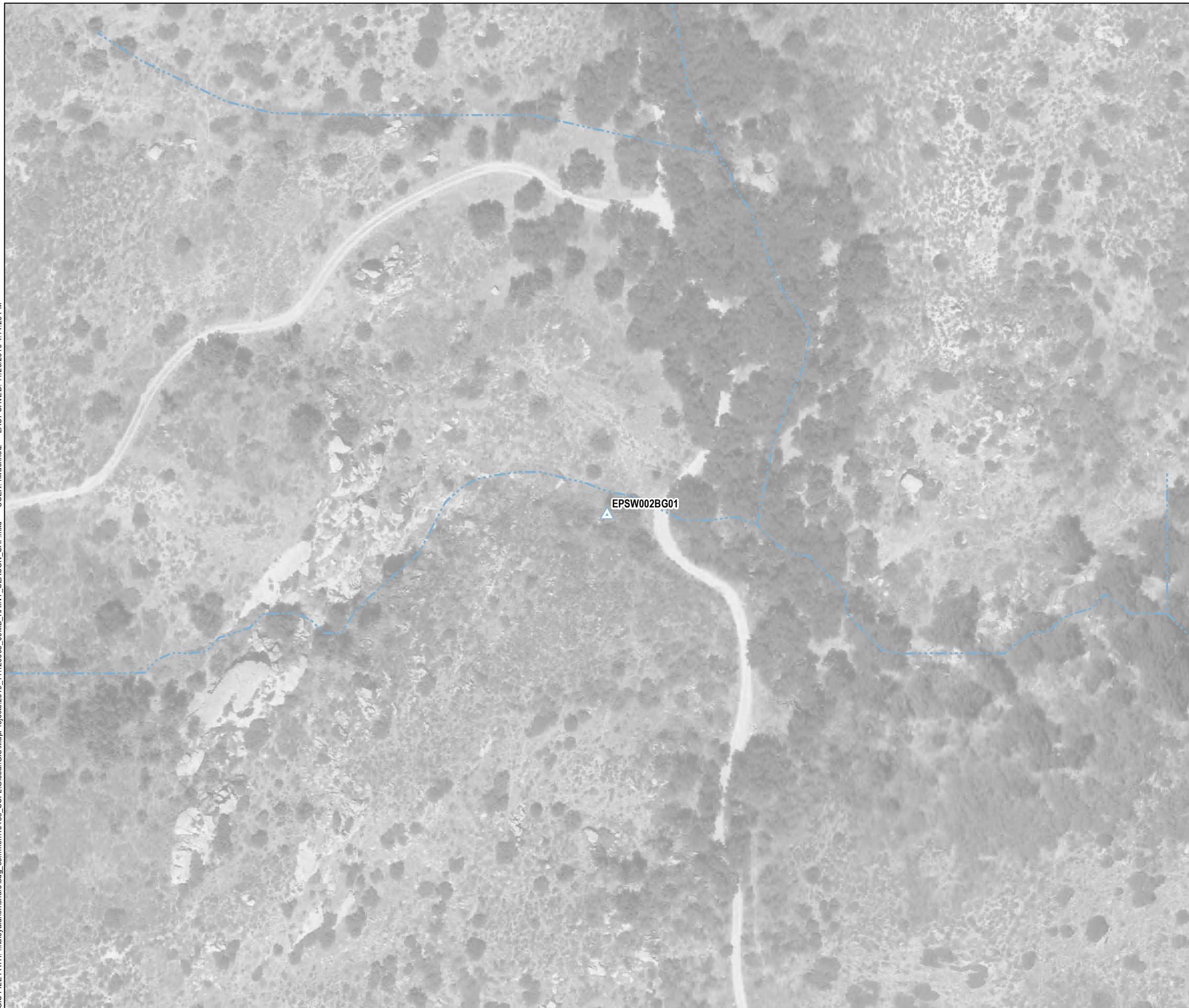
2019/2020 RAINY SEASON MAP
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VENTURA COUNTY, CALIFORNIA

OUTFALL 001
POTENTIAL BMP SUBAREA




NOVEMBER 2019

FIGURE 10

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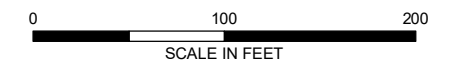


LEGEND

-  POTENTIAL BMP PERFORMANCE MONITORING LOCATION
-  DRAINAGE
-  ADMINISTRATIVE AREA BOUNDARY

NOTES

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2. SAP = SAMPLING AND ANALYSIS PLAN
3. BMP = BEST MANAGEMENT PRACTICE
4. AERIAL IMAGERY SOURCE: CIRGIS



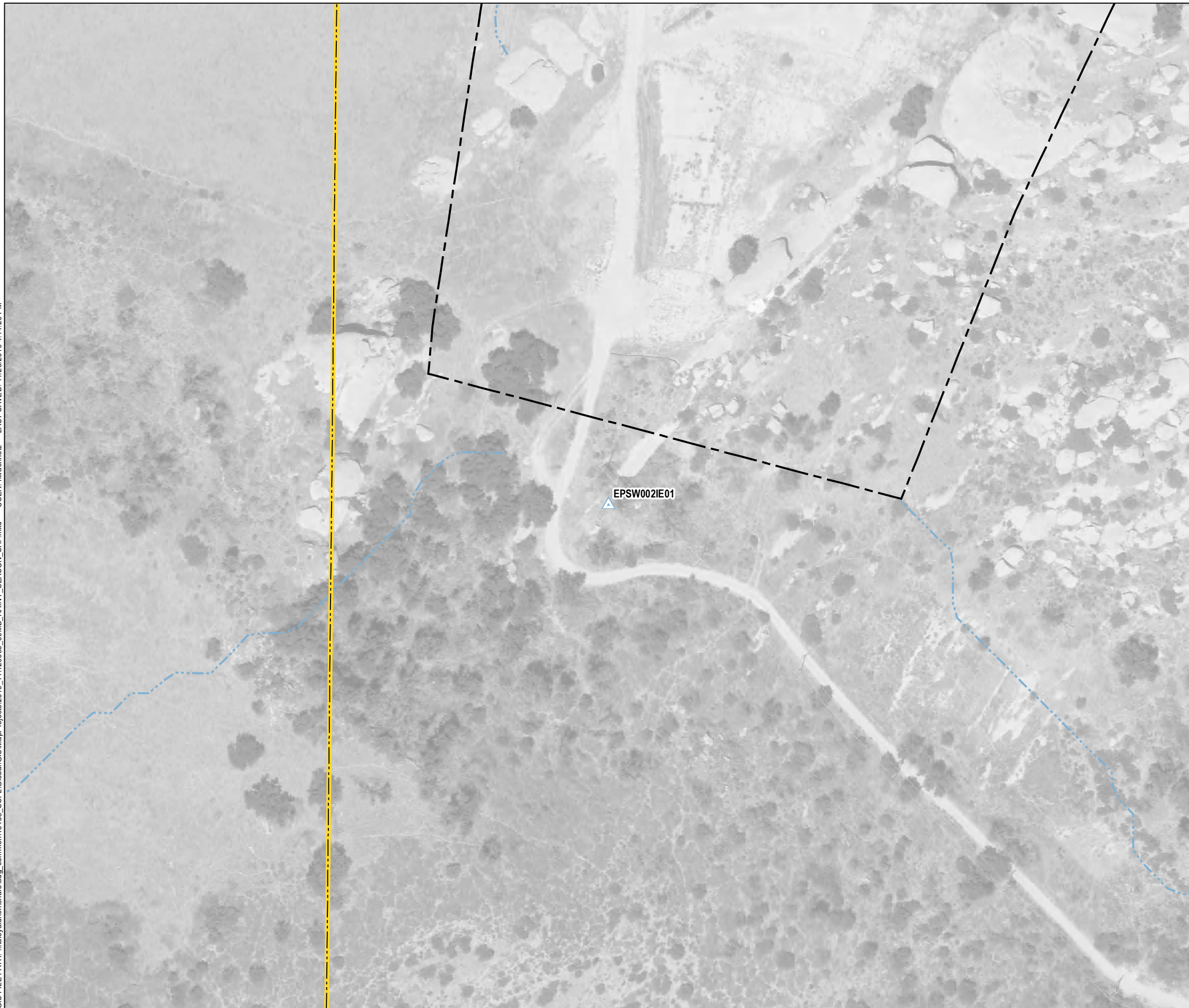
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BMP MONITORING PROGRAM
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

OUTFALL 002
POTENTIAL BMP SUBAREA





NOVEMBER 2019

FIGURE 11

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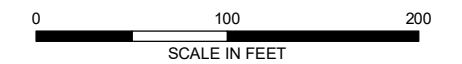


LEGEND

-  POTENTIAL BMP PERFORMANCE MONITORING LOCATION
-  DRAINAGE
-  ADMINISTRATIVE AREA BOUNDARY
-  STUDY AREA

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. SAP = SAMPLING AND ANALYSIS PLAN
3. BMP = BEST MANAGEMENT PRACTICE
4. AERIAL IMAGERY SOURCE: CIRGIS



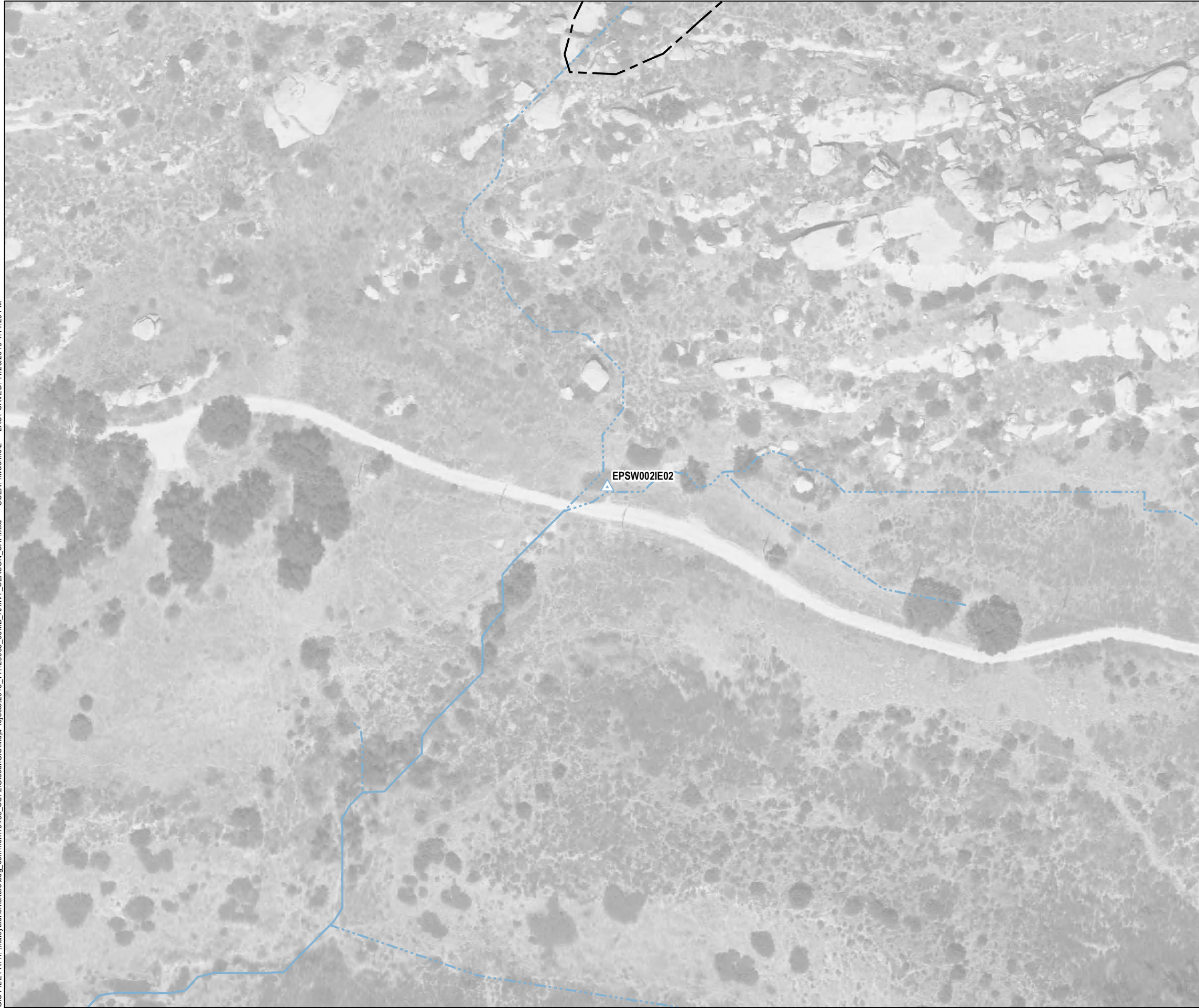
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BMP MONITORING PROGRAM
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

OUTFALL 002
POTENTIAL BMP SUBAREA





NOVEMBER 2019

FIGURE 12

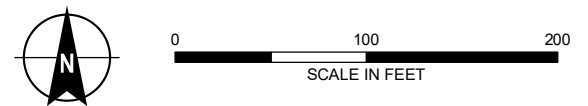
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LEGEND

-  POTENTIAL BMP PERFORMANCE MONITORING LOCATION
-  DRAINAGE
-  ADMINISTRATIVE AREA BOUNDARY
-  STUDY AREA

- NOTES**
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
 2. SAP = SAMPLING AND ANALYSIS PLAN
 3. BMP = BEST MANAGEMENT PRACTICE
 4. AERIAL IMAGERY SOURCE: CIRGIS



HALEY ALDRICH 2019/2020 RAINY SEASON MAP
BMP MONITORING PROGRAM
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

**OUTFALL 002
POTENTIAL BMP SUBAREA**

Happy Valley - Road Leading Down to Lower BMP Area

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Happy Valley - Road Leading Down to Lower BMP Area	Inspection Status: Conducted/Not Conducted
---	---

<i>Inspection Checklist Questions:</i>	<i>Inspection Answers:</i>
During Rain Event Inspection	
Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Is the road leading down to BMP area free of erosion?	No/Yes/NA with comment
Are rip rap berms free of sediment/debris?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection	
Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Is the road leading down to BMP area free of erosion?	No/Yes/NA with comment
Are rip rap berms free of sediment/debris?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Comments:

Signature

Company Name

Happy Valley - Road Leading Down to Lower BMP Area BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

**Photo LBMP-1: Overview of HVS Lower BMP Area
(from top of road east)**

**Photo LBMP-2: Overview of HVS Lower BMP Area
(from top of road west)**

General Comments:

Signature

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF008 Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions: *Inspection Answers:*

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comments

General Comments:

Signature

Company Name

OF008

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo OF008-1: HVS Drainage and Tributary Drainage Overview (looking north)

Photo OF008-2: Outfall 008 Overview

Insert photo here

Photo OF008-3: Tributary Drainage Check Dams

General Comments:

Signature

**OF009 ADMINISTRATION BUILDING
AREA**

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 Administration Building Area	Inspection Status:	Conducted/Not Conducted
---	--------------------	--------------------------------

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Is any short-circuiting present around the lip of the filter basket?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Is ponded water observed in filter basket?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Comments:

Signature

**OF009 ADMINISTRATION BUILDING
AREA**

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo OF 009 Filter Basket Overview

Photo 1: ILBMP0009-1: Filter Basket Influent

Insert photo here

Photo 2: ILBMP0010-1: Filter Basket Effluent

General Comments:

Signature

Company Name

OF009 Lower Parking Lot BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 Lower Parking Lot Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Is the area near or along the cistern drain inlet clear of unwanted sediment/debris?	No/Yes/NA with comment
Is runoff along the 24-inch drain being diverted by the low flow diversion weir to the cistern?	No/Yes/NA with comment
Is the gravel area/gravel bag berm (north of fence) in good condition?	No/Yes/NA with comment
Is the wood retaining wall in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
What is the approximate depth of water present in the low flow diversion structure?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Is the area near or along the cistern drain inlet clear of unwanted sediment/debris?	No/Yes/NA with comment
Is the gravel area/gravel bag berm (north of fence) in good condition?	No/Yes/NA with comment
Is the wood retaining wall in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Comments:

Signature

Company Name

**OF009 Lower Parking Lot
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo LPL-1: Cistern area

Photo LPL-2: Looking down into low flow diversion structure

Insert photo here

Insert photo here

Photo LPL-3: Grated inlet and concrete curb

Photo LPL-4: Wooden retaining wall

General Comments:

Signature

Company Name

OF009 Lower Parking Lot BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

**Photo 17: LPBMP0002: Lower Lot Area, Upstream BMP;
Sample Port in Cistern Discharge Pipe**

**Photo 18: LPBMP0002: Lower Lot Area, Upstream BMP;
Sample Port in Cistern Discharge Pipe**

Insert photo here

Insert photo here

**Photo 19: LPBMP0003: Lower Lot Area, Mid-Point Lower
Lot BMP; Sediment Basin Outlet Box**

**Photo 20: LPBMP0003: Lower Lot Area, Mid-Point Lower
Lot BMP; Sediment Basin Outlet Box**

General Comments:

Signature

Company Name

OF009 Lower Parking Lot BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

**Photo 21: LPBMP0004: Lower Lot Area, Downstream
Lower Lot Treatment BMP; Discharge from Biofilter
Effluent Pipe**

**Photo 22: LPBMP0004: Lower Lot Area, Downstream
Lower Lot Treatment BMP; Discharge from Biofilter
Effluent Pipe**

General Comments:

Signature

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 Sediment Basin	Inspection Status:	Conducted/Not Conducted
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<i>Inspection Checklist Questions:</i>	<i>Inspection Answers:</i>
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During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Is there overflow into the lower lot?	No/Yes/NA with comment
If above is YES, please record a video.	N/A

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Is the outlet box clear of unwanted sediment/debris?	No/Yes/NA with comment
Is there ponded water in the Sediment Basin?	No/Yes/NA with comment
If above is YES, note approximate depth to water from top of outlet box	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo SB-1: Sediment Basin Overview

Photo SB-2: Inside Sediment Basin Riser Structure

General Notes:

Signature

Company Name

OF009 BIOFILTER

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 BIOFILTER Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions: *Inspection Answers:*

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is there flow overtopping the riser structure?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A
Is there flow in the riser structure?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is there ponded water in the Biofilter?	No/Yes/NA with comment
If above is YES, record approximate depth from top of riser structure under comments	Depth
Are percolation holes in the concrete apron (at the sediment basin effluent pipe) clear of unwanted sediment/debris?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 BIOFILTER

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo BF-1: Sediment Basin Discharge Pipe

Photo BF-2: Biofilter Overview

Insert photo here

Insert photo here

Photo BF-3: Biofilter Discharge Pipe

Photo BF-4: Biofilter Outlet Structure

General Notes:

Signature

BMP Performance Inspection Checklist

Company Name

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-9 AILF Area	Inspection Status:	Conducted/Not Conducted
<i>Inspection Checklist Questions:</i>		<i>Inspection Answers:</i>

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is there flow overtopping the weir board?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A
Is the upstream perforated pipeline draining properly?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is the inlet swale along Area II Road clear of unwanted sediment/debris?	No/Yes/NA with comment
Is rip rap berm clear of unwanted sediment/debris?	No/Yes/NA with comment
Is any water observed coming out of landfill slope?	No/Yes/NA with comment
Does the CM-9 discharge pipe (north of Area II Road) show any additional signs of erosion?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is weir board filter fabric in good condition?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is water ponded in front of weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is the inlet swale along Area II Road clear of unwanted sediment/debris?	No/Yes/NA with comment
Is rip rap berm clear of unwanted sediment/debris?	No/Yes/NA with comment
Does the CM-9 discharge pipe (north of Area II Road) show any additional signs of erosion?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM9-1: Asphalt Swale Inlet from Area 2 Road – ILBMP0002

Photo CM9-2a: CM-9 Basin Overview (Upstream)

Insert photo here

Insert photo here

Photo CM9-2b: CM-9 Basin Overview (Towards Weir Boards)

Photo CM9-3a: Along Perforated Pipeline (upstream)

General Notes:

Signature

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM9-3b: Along Perforated Pipeline (downstream)

Photo CM9-4a: Rip Rap Berm (upstream)

Insert photo here

Insert photo here

Photo CM9-4b: Rip Rap Berm (downstream)

Photo 17: A1BMP0002: CM-9 Area, Upstream (South), CM-9 BMPs

General Notes:

Signature

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo 18: A1BMP0002: CM-9 Area, Upstream (South), CM-9 BMPs

Photo 19: A1BMP0003: CM-9 Area, Downstream, CM-9 BMPs; CM-9 Underdrains

Insert photo here

Insert photo here

Photo 20: A1BMP0003: CM-9 Area, Downstream, CM-9 BMPs; CM-9 Underdrains

Photo 21: ILBMP0002: CM-9 Area, Upstream (East), CM-9 BMPs; Culvert Inlet Off Area II Road

General Notes:

Signature

Company Name

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

**Photo 22: ILBMP0002: CM-9 Area, Upstream (East),
CM-9 BMPs; Culvert Inlet Off Area II Road**

General Notes:

Signature

Company Name

**OF009 B-1 Retention Basin
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 B-1 Retention Basin	Inspection Status:	Conducted/Not Conducted
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<i>Inspection Checklist Questions:</i>	<i>Inspection Answers:</i>
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During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is the retention basin clear of unwanted sediment/debris?	No/Yes/NA with comment
Is the perimeter of the basin free of erosion?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is the retention basin clear of unwanted sediment/debris?	No/Yes/NA with comment
Is the perimeter of the basin free of erosion?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

**OF009 B-1 Retention Basin
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo B1RB-1: B-1 Retention Overview

Photo B1RB-2: Close-up of Riser Structure in Retention Basin

General Notes:

Signature

Company Name

OF009 Upper Lot Media Filter BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 Upper Lot Media Filter	Inspection Status:	Conducted/Not Conducted
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<i>Inspection Checklist Questions:</i>	<i>Inspection Answers:</i>
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During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is there flow overtopping the box?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A
Is hillside free of erosion?	No/Yes/NA with comment
Is the asphalt/gunite swale going towards Upper Lot Media Filter clear of unwanted sediment/debris?	No/Yes/NA with comment
Note % flow from each underdrain	%

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is hillside free of erosion?	No/Yes/NA with comment
Is the asphalt/gunite swale going towards Upper Lot Media Filter clear of unwanted sediment/debris?	No/Yes/NA with comment
Is there ponded water present in media filter area?	No/Yes/NA with comment
If above is YES, record approximate depth from the top of riser structure	Depth
Is hillside free of erosion?	No/Yes/NA with comment
Is the asphalt/gunite swale going towards Upper Lot Media Filter clear of unwanted sediment/debris?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

**OF009 Upper Lot Media Filter
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo ULMF-1: Upper Lot Media Filter Overview

**Photo ULMF-2: Upper Lot Retention Basin Discharge
Pipe (inside of the riser structure)**

Insert photo here

Insert photo here

**Photo ULMF-3: ULMF Area, Gunite Swale Conveying
Road Runoff**

**Photo 10: B1BMP0009: B-1 Area, Gunite Swale
Conveying Road Runoff**

General Notes:

Signature

Company Name

**OF009 Upper Lot Media Filter
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

**Photo 11: B1BMP0009: B-1 Area, Gunite Swale
Conveying Road Runoff**

**Photo 12: B1BMP0010: B-1 Area, Culvert Outlet from
Upper Parking Lot Area**

Insert photo here

Insert photo here

**Photo 13: B1BMP0010: B-1 Area, Culvert Outlet from
Upper Parking Lot Area**

Photo 14: B1BMP0011: B-1 Area, Underdrains

General Notes:

Signature

Company Name

**OF009 Upper Lot Media Filter
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Photo 15: B1BMP0011: B-1 Area, Underdrains

General Notes:

Signature

Company Name

**OF009 Detention Bioswales
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 Detention Bioswales	Inspection Status:	Conducted/Not Conducted
----------------------------------	--------------------	--------------------------------

<i>Inspection Checklist Questions:</i>	<i>Inspection Answers:</i>
--	----------------------------

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is rip rap swale clear of unwanted sediment/debris?	No/Yes/NA with comment
Are vegetated swales in good condition?	No/Yes/NA with comment
Note % flow from northern underdrain	%
Note % flow from southern underdrain	%

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is rip rap swale clear of unwanted sediment/debris?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 Detention Bioswales BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

**Photo B1DB-1: Northern B1436 Bioswale Overview
(from the north end)**

**Photo B1DB-2: Northern B1436 Bioswale Overview
(from the south end)**

Insert photo here

Insert photo here

**Photo B1DB-3: Southern B1436 Bioswale Overview
(from the north end)**

**Photo B1DB-4: Southern B1436 Bioswale Overview
(from the south end)**

General Notes:

Signature

Company Name

**OF009 Detention Bioswales
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo B1DB-5: Western Swale Inlet to Southern B1436 Bioswale

Photo B1DB-6: Eastern Swale Inlet to Southern B1436 Bioswale

Insert photo here

Insert photo here

Photo 1: ILBMP0008: Upstream, B1436 Southern Detention Bioswale (Concrete Swale Diverting Sheet Flow into Rock Crib – East)

Photo 2: ILBMP0008: Upstream, B1436 Southern Detention Bioswale (Concrete Swale Diverting Sheet Flow into Rock Crib – East)

General Notes:

Signature

Company Name

OF009 Detention Bioswales BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo 3: ILBMP0004: Upstream, B1436 Southern Detention Bioswale (Concrete Swale Diverting Sheet Flow into Rock Crib – West)

Photo 4: ILBMP0004: Upstream, B1436 Southern Detention Bioswale (Concrete Swale Diverting Sheet Flow into Rock Crib – West)

Insert photo here

Insert photo here

Photo 5: ILBMP0005: Downstream, B1436 Southern Detention Bioswale; 12-inch Underdrain

Photo 6: ILBMP0005: Downstream, B1436 Southern Detention Bioswale; 12-inch Underdrain

General Notes:

Signature

Company Name

OF009 CM-8

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-8 Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is there flow overtopping the weir boards?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A

72 Hour Storm Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is weir board filter fabric in good condition?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is water ponded in front of weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 CM-8

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM8-1a: CM-8 Basin Overview (Upstream)

Photo CM8-1b: CM-8 Basin Overview (Towards Weir Boards)

General Notes:

Signature

Company Name

OF009 CM-11

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-11

Inspection Status:

Conducted/Not Conducted

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is there flow overtopping the weir boards?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is weir board filter fabric in good condition?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is water ponded in front of weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 CM-11

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM11-1a: CM-11 Basin Overview (Upstream)

Photo CM11-1b: CM-11 Basin Overview (Towards Weir Boards)

General Notes:

Signature

Company Name

OF009 CM-7

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-7 Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are the upstream swales clear of unwanted sediment/debris?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are the upstream swales clear of unwanted sediment/debris?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 CM-7

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Photo CM7-1a: CM-7 Upstream

General Notes:

Signature

Company Name

OF009 CM-6

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-6 Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is there flow overtopping the weir boards?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is weir board filter fabric in good condition?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is water ponded in front of weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 CM-6

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM6-1a: CM-6 Basin Overview (Upstream)

Photo CM6-1b: CM-6 Basin Overview (Towards Weir Boards)

General Notes:

Signature

Company Name

OF009 CM-5 Sage Ranch BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-5 Sage Ranch Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is there flow overtopping the weir boards?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is weir board filter fabric in good condition?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is water ponded in front of weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

**OF009 CM-5 Sage Ranch
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM5-1a: CM-5 Basin Overview (Upstream)

Photo CM5-1b: CM-5 Basin Overview (Towards Weir Boards)

General Notes:

Signature

Company Name

OF009 CM-12 Sage Ranch BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-12 Sage Ranch Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is there flow overtopping the weir boards?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is weir board filter fabric in good condition?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is water ponded in front of weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

**OF009 CM-12 Sage Ranch
BMP Performance Inspection Checklist**

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM12-1a: CM-12 Basin Overview (Upstream)

Photo CM12-1b: CM-12 Basin Overview (Towards Weir Boards)

General Notes:

Signature

Company Name

OF009 CM-4

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-4 Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is there flow overtopping the weir boards?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is weir board filter fabric in good condition?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is water ponded in front of weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 CM-4

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM4-1a: CM-4 Basin Overview (Upstream)

Photo CM4-1b: CM-4 Basin Overview (Towards Weir Boards)

General Notes:

Signature

Company Name

OF009 CM-3

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-3 Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is there flow overtopping the weir boards?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A
Is the drop inlet on the north side of the road clogged or otherwise obstructed?	No/Yes/NA with comment
Is there erosion at the diversion pipe outlet?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is weir board filter fabric in good condition?	No/Yes/NA with comment
Is the culvert basin clear of unwanted sediment/debris?	No/Yes/NA with comment
If above is NO, note approximate depth	Depth
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is water ponded in front of weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is the drop inlet on the north side of the road clogged or otherwise obstructed?	No/Yes/NA with comment
Is there erosion at the diversion pipe outlet?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 CM-3

BMP Performance Inspection Checklist

Client **The Boeing Company**
Project Name **Santa Susana**
County **Ventura County**
State **California**
Inspection Type(s) **Stormwater Inspection**

Inspection Date
Inspector Name
Inspector Company
Project Manager
Precip. Present

Insert photo here

Insert photo here

Photo CM3-1a: CM-3 Basin Overview (Upstream)

Photo CM3-1b: CM-3 Basin Overview (Towards Weir Boards)

Insert photo here

Insert photo here

Photo CM3-2: CM-3 Roadway Inlet

Photo CM3-3: CM-3 Diversion Outlet

General Notes:

Signature

Company Name

OF009 CM-3

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo 25: LXBMP0010: CM-3 Area, upstream of Service Area Road BMP; Outlet on South Side of Road

Photo 25: LXBMP0010: CM-3 Area, upstream of Service Area Road BMP; Outlet on South Side of Road

Insert photo here

Insert photo here

Photo 26: LXBMP0011: CM-3 Area, Upstream of Service Area Road BMP, Natural Drainage Upstream of CM-3

Photo 26: LXBMP0011: CM-3 Area, Upstream of Service Area Road BMP, Natural Drainage Upstream of CM-3

General Notes:

Signature

Company Name

OF009 CM-10

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-10 Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is there flow overtopping the weir boards?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A
Is there sediment accumulation in the culvert basin?	No/Yes/NA with comment
If above is YES, record approximate depth.	Depth
Is there erosion at the diversion pipe outlet?	No/Yes/NA with comment

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is there sediment accumulation in the culvert basin?	No/Yes/NA with comment
If above is YES, record approximate depth.	Depth
Is there erosion at the diversion pipe outlet?	No/Yes/NA with comment
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Is water ponded in front of weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Are underdrain(s) clear of unwanted sediment/debris?	No/Yes/NA with comment
Is weir board filter fabric in good condition?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 CM-10

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM10-1a: CM-10 Basin Overview (Upstream)

Photo CM10-1b: CM-10 Basin Overview (Towards Weir Boards)

General Notes:

Signature

Company Name

OF009 CM-2

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

OF009 CM-2 Inspection Status: **Conducted/Not Conducted**

Inspection Checklist Questions:

Inspection Answers:

During Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is there sediment accumulation in the culvert basin?	No/Yes/NA with comment
If above is YES, record approximate depth.	Depth
Is there flow overtopping the weir boards?	No/Yes/NA with comment
If above is YES, does the underdrain appear to be constricted?	No/Yes/NA with comment
If above is YES, please record a video.	N/A

72 Hours After the End of the Rain Event Inspection

Any odors, suspended materials, floating material, etc. observed?	No/Yes/NA with comment
Are erosion/sediment controls in good condition?	No/Yes/NA with comment
Are upstream areas free of erosion or sediment?	No/Yes/NA with comment
Is there sediment accumulation in the culvert basin?	No/Yes/NA with comment
If above is YES, record approximate depth.	Depth
Is a recent high-water mark visible on weir boards?	No/Yes/NA with comment
If above is YES, note approximate depth from top of weir boards	Depth
Are underdrain(s) clear of unwanted sediment/debris?	
Is weir board filter fabric in good condition?	No/Yes/NA with comment

Corrective action identified during this inspection event: No/Yes/NA with comment

General Notes:

Signature

Company Name

OF009 CM-2

BMP Performance Inspection Checklist

Client	The Boeing Company	Inspection Date
Project Name	Santa Susana	Inspector Name
County	Ventura County	Inspector Company
State	California	Project Manager
Inspection Type(s)	Stormwater Inspection	Precip. Present

Insert photo here

Insert photo here

Photo CM2-1a: CM-2 Basin Overview (Upstream)

Photo CM2-1b: CM-2 Basin Overview (Towards Weir Boards)

General Notes:

Signature

BMP Visual Inspection Form – OF009 NASA

Date/Time of Inspection _____

Inspector's Name/Title _____

Signature _____

Weather and Observations	
Precipitation present during inspection?	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOX Area BMPs			
Photo # _____	Photo Location: _____	LOX Berm Overview (West End)	
Photo # _____	Photo Location: _____	LOX Berm Overview (East End)	
Photo # _____	Photo Location: _____	Northern Drainage Overview Where Slope Drains Discharge	
Photo # _____	Additional Photo(s): _____		
<u>During Rain Event Inspection</u>	Yes No N/A	Comments/Corrective Action:	
Any odors, suspended material, floating material, etc. observed?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	
Are erosion/sediment controls in good condition?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	
Are slope drains in good condition?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	
Is the gravel bag berm in good condition?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	
Are upstream areas free of erosion or sediment? If no, note location and description under comments.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	
<u>72 Hours After the End of the Rain Event Inspection</u>			
Any odors, suspended material, floating material, etc. observed?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	
Are slope drains in good condition?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	
Is the gravel bag berm in good condition?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	
Are upstream areas free of erosion or sediment? If no, note location and description under comments.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	
Other _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____	

BMP Visual Inspection Form – OF009 NASA

Sandbag Berm – Near LOX Area

Photo # _____	Photo Location: _____	_____
Photo # _____	Photo Location: _____	_____
Photo # _____	Photo Location: _____	_____
Photo # _____	Additional Photo(s): _____	_____

During Rain Event Inspection

Yes No N/A

Comments/Corrective Action:

Any odors, suspended material, floating material, etc. observed?

Are the sandbags in good condition?

Is area behind sandbag berm free of debris/sediment buildup?

Are upstream areas free of erosion or sediment? If no, note location and description under comments.

72 Hours After the End of the Rain Event Inspection

Any odors, suspended material, floating material, etc. observed?

Are slope drains in good condition?

Are the sandbags in good condition?

Is area behind sandbag berm free of debris/sediment buildup?

Are upstream areas free of erosion or sediment? If no, note location and description under comments.

Other

BMP Visual Inspection Form – OF009 NASA

CM-1 Area

Photo #	Photo Location:	CM-1 Basin Overview (Upstream and Towards Weir Boards)
Photo #	Photo Location:	CM-1 Underdrains
Photo #	Photo Location:	CM-1 Discharge Pipe
Photo #	Photo Location:	Rip Rap Berm Northwest of CM-1
Photo #	Photo Location:	Stormwater Diversion to CM-1

During Rain Event Inspection

Yes No N/A

Comments/Corrective Action:

	Yes	No	N/A		
Any odors, suspended materials, floating material, etc. observed?					
Are erosion/sediment controls in good condition?					
Is there flow overtopping the weir boards? If yes, does the underdrain appear to be constricted? If yes, please record a video.					
Are underdrains in good condition? Note approximate % flow from each underdrain under comments.					
Is there sediment accumulation in the culvert basin? If yes, record approximate depth under comments.					
Any excessive ponding in front of sandbags at NW entrance?					
Are upstream areas free of erosion or sediment? If no, note location and description under comments.					
Is the drop inlet on the north side of the road clogged or otherwise obstructed?					
Is there erosion at the diversion pipe outlet?					

BMP Visual Inspection Form – OF009 NASA

CM-1 Area

72 Hours After the End of the Rain Event Inspection

Yes No N/A

Comments/Corrective Action:

Any odors, suspended materials, floating material, etc. observed?

--	--	--

Are erosion/sediment controls in good condition?

--	--	--

Is a recent high-water mark visible on weir boards? If yes, record depth from top of weir boards.

--	--	--

Is water ponded in front of weir boards? If yes, record depth from top of weir boards.

--	--	--

Is weir board filter fabric in good condition?

--	--	--

Is there sediment accumulation in the culvert basin? If yes, record approximate depth under comments.

--	--	--

Are upstream areas free of erosion or sediment? If no, note location and description under comments.

--	--	--

Is the drop inlet on the north side of the road clogged or otherwise obstructed?

--	--	--

Is there erosion at the diversion pipe outlet?

--	--	--

Other _____

--	--	--

BMP Visual Inspection Form – OF009 NASA

ELV Treatment BMP & ELV Channel

Photo # _____	Photo Location:	ELV Channel (Up- and Downstream) _____
Photo # _____	Photo Location:	ELV Settling Basin (looking towards intake pipe) _____
Photo # _____	Photo Location:	ELV Settling Basin (looking towards overflow bypass and culvert inlet) _____
Photo # _____	Photo Location:	ELV Treatment BMP Discharge Pipe _____
Photo # _____	Photo Location:	ELV Treatment BMP Tank Array Overview _____
Photo # _____	Additional Photo(s):	_____ _____

During Rain Event Inspection / 72 Hours
After the End of the Rain Event Inspection

Yes No N/A

Comments/Corrective Action:

	Yes	No	N/A	
Are erosion/sediment controls in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is ELV channel rip rap in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are fiber rolls and jute matting in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is influent screen free of debris (no clogging)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is basin intake pipe in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is the settling basin in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is tank array and associated piping in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is effluent pipe in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are upstream areas free of erosion or sediment? If no, note location and description under comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

BMP Visual Inspection Form – OF009 NASA

Sandbag Berm – Near ELV Treatment BMP

Photo #	Photo Location:	
_____	_____	_____
Photo #	Photo Location:	
_____	_____	_____
Photo #	Photo Location:	
_____	_____	_____
Photo #	Additional Photo(s):	
_____	_____	_____

During Rain Event Inspection

Yes No N/A

Comments/Corrective Action:

	Yes	No	N/A	
Are the sandbags in good condition?				
Is area behind sandbag berm free of debris/sediment buildup?				
Are upstream areas free of erosion or sediment? If no, note location and description under comments.				

72 Hours After the End of the Rain Event Inspection

Are the sandbags in good condition?	Yes	No	N/A	
Is area behind sandbag berm free of debris/sediment buildup?				
Are upstream areas free of erosion or sediment? If no, note location and description under comments.				
Is water ponded in front of sandbags? If yes, record depth from top of weir boards.				
Other _____				

BMP Visual Inspection Form – OF009 NASA

Helipad Area BMPs

Photo #	Photo Location:	Helipad Berm Overview (Eastern Berm)
Photo #	Photo Location:	Helipad Berm Overview (Western Berm)
Photo #	Photo Location:	Culvert Inlet Passing Beneath Helipad Road
Photo #	Photo Location:	
Photo #	Additional Photo(s):	

During Rain Event Inspection

Yes No N/A

	Yes	No	N/A		Comments/Corrective Action:
Are the Helipad Berms in good condition?					
Are upstream areas free of erosion or sediment? If no, note location and description under comments.					
Is area behind Helipad Berms free of debris/sediment buildup?					
Is parking lot free of excessive debris/sediment?					
Is water overtopping the Helipad Berm? If yes, note which berm(s) are being overtopped. If yes, please record a video.					

72 Hours After the End of the Rain Event Inspection

Are the Helipad Berms in good condition?					
Are upstream areas free of erosion or sediment? If no, note location and description under comments.					
Is area behind Helipad Berms free of debris/sediment buildup?					
Is parking lot free of excessive debris/sediment?					
Other					

BMP Visual Inspection Form – OF009 NASA

Additional Notes/Observations

Boeing 72 Hours After Rain Event Ponding Inspection Form

Date/Time of Inspection _____

Inspector's Name/Title _____

Signature _____

Culvert Modification	Ponding?		Depth (feet)
	Yes	No	
CM-2			
CM-3			
CM-4			
CM-5			
CM-6			
CM-7			
CM-8			
CM-9			
CM-10			
CM-11			
CM-12			
B-1 MEDIA FILTER			
SEDIMENT BASIN			
BIOFILTER			
UPPER LOT MEDIA FILTER			
NORTHERN DETENTION BIOSWALE			
SOUTHERN DETENTION BIOSWALE			
ADMIN AREA FILTER BASKET			

OF009 Lower Parking Lot - Cistern Inspection Checklist Questions:

Amount of volume pumped from the cistern?

What time did the pumping occur?

What was the resulting depth of the cistern?

Inspection Answers:

Volume _____

Time _____

Depth _____

NASA 72 Hours After Rain Event Ponding Inspection Form

Date/Time of Inspection _____

Inspector's Name/Title _____

Signature _____

Culvert Modification	Ponding?		Depth (feet)
	Yes	No	
CM-1			
ELV			

**Surface Water Monitoring Inspection and Sample Collection Form
PERFORMANCE MONITORING and BMP MONITORING PROGRAMS**

Sampling Responsibility: <u>NASA</u> Inspector/Sampler: _____ Date: _____ Outfall/Watershed: <u>009</u>						Weather: _____ Rain Event Start Date/Time: _____									
Sample Tracking Information						Sample Field Measurements				Leaf Test				Sample Observations	
ISRA Area(s) & Location	Qualitative Flow Observations*	Photo Number(s)	Object ID	Sample ID (Object ID_yyyyymmdd)	Sample/Observation Time	Conductivity (mS or uS)	pH	Temperature (°C)	Turbidity (NTU)	Distance (ft)	Time (s)	Speed (ft/s)	Water Depth (in)	Notes (color, odor, sheen, foam, biological material, nearby erosion, etc.)	
ELV TREATMENT BMP AND HELIPAD	Culvert inlet; runoff will only be present when rain events exceed ELV BMP design storm			EV BMP0001	EV BMP0001_										
	Sample port in BMP influent pipe prior to "T" connection			EV BMP0007	EV BMP0007_										
	Discharge from media filter tank pipe			EV BMP0008	EV BMP0008_										
	Composite of samples from eastern and western sample ports between settling tanks and media filter			EV BMP0009	EV BMP0009_										

Notes:

Additional Observations:

*Qualitative Flow Observations:		
No Flow Low Flow: Trickle or minor amount of flow. Moderate Flow: Water is flowing normally, no significant erosion or turbid water. High Flow: Significant water flow/velocity, slope erosion.	NPDES Permit Limits: Temperature < 86 °F pH 6.5 - 8.5	ALL RECEIVING AND SAMPLE COLLECTION BOTTLES MUST BE PRE-RINSED 3 TIMES WITH SOURCE WATER, PRIOR TO COLLECTION OF THE SAMPLE. EXCEPTION IS THE HNO3 (NITRIC) PRESERVED POLY BOTTLES - DO NOT PRE-RINSE THE HNO3 PRESERVED POLY'S

**Surface Water Monitoring Inspection and Sample Collection Form
PERFORMANCE MONITORING and BMP MONITORING PROGRAMS**

Sampling Responsibility: <u>NASA</u> Inspector/Sampler: _____ Date: _____ Outfall/Watershed: <u>009</u>						Weather: _____ Rain Event Start Date/Time: _____								
Sample Tracking Information						Sample Field Measurements				Leaf Test				Sample Observations
ISRA Area(s) & Location	Qualitative Flow Observations*	Photo Number(s)	Object ID	Sample ID (Object ID_yyyyymmdd)	Sample/Observation Time	Conductivity (mS or uS)	pH	Temperature (°C)	Turbidity (NTU)	Distance (ft)	Time (s)	Speed (ft/s)	Water Depth (in)	Notes (color, odor, sheen, foam, biological material, nearby erosion, etc.)
CM-1 AND AREA II ROAD	Sheetflow along Area II Road upstream of sandbag berm			EVBMP0003	EVBMP0003_									
	CM-1 eastern tributary drainage			A2BMP0006	A2BMP0006_									
	CM-1 culvert outlet			A2BMP0007	A2BMP0007_									
	Outlet pipe south side of road			A2BMP0012	A2BMP0012_									

Notes:

Additional Observations:

*Qualitative Flow Observations:		
No Flow Low Flow: Trickle or minor amount of flow. Moderate Flow: Water is flowing normally, no significant erosion or turbid water. High Flow: Significant water flow/velocity, slope erosion.	NPDES Permit Limits: Temperature < 86 °F pH 6.5 - 8.5	ALL RECEIVING AND SAMPLE COLLECTION BOTTLES MUST BE <u>PRE-RINSED 3 TIMES</u> WITH SOURCE WATER, PRIOR TO COLLECTION OF THE SAMPLE. EXCEPTION IS THE HNO3 (NITRIC) PRESERVED POLY BOTTLES - <u>DO NOT PRE-RINSE THE HNO3 PRESERVED POLY'S</u>

**Surface Water Monitoring Inspection and Sample Collection Form
PERFORMANCE MONITORING and BMP MONITORING PROGRAMS**

Sampling Responsibility: <u>Boeing</u> Inspector/Sampler: _____ Date: _____ Outfall/Watershed: <u>009</u>						Weather: _____ Rain Event Start Date/Time: _____									
Sample Tracking Information						Sample Field Measurements				Leaf Test				Sample Observations	
ISRA Area(s) & Location	Qualitative Flow Observations*	Photo Number(s)	Object ID	Sample ID (Object ID_yyyyymmdd)	Sample/Observation Time	Conductivity (mS or uS)	pH	Temperature (°C)	Turbidity (NTU)	Distance (ft)	Time (s)	Speed (ft/s)	Water Depth (in)	Notes (color, odor, sheen, foam, biological material, nearby erosion, etc.)	
CM-3 AREA	Upstream of Service Area Road BMP, outlet pipe on south side of road			LXBMP0010	LXBMP0010_										
	Upstream of Service Area Road BMP, natural drainage upstream of CM-3			LXBMP0011	LXBMP0011_										
	Downstream of Service Area Road BMP, underdrains			LXBMP0012	LXBMP0012_										

Notes:

Additional Observations:

*Qualitative Flow Observations:		
No Flow Low Flow: Trickle or minor amount of flow. Moderate Flow: Water is flowing normally, no significant erosion or turbid water. High Flow: Significant water flow/velocity, slope erosion.	NPDES Permit Limits: Temperature < 86 °F pH 6.5 - 8.5	ALL RECEIVING AND SAMPLE COLLECTION BOTTLES MUST BE <u>PRE-RINSED 3 TIMES</u> WITH SOURCE WATER, PRIOR TO COLLECTION OF THE SAMPLE. EXCEPTION IS THE HNO3 (NITRIC) PRESERVED POLY BOTTLES - <u>DO NOT PRE-RINSE THE HNO3 PRESERVED POLY'S</u>

**Surface Water Monitoring Inspection and Sample Collection Form
PERFORMANCE MONITORING and BMP MONITORING PROGRAMS**

Sampling Responsibility: <u>Boeing</u> Inspector/Sampler: _____ Date: _____ Outfall/Watershed: <u>009</u>						Weather: _____ Rain Event Start Date/Time: _____								
Sample Tracking Information						Sample Field Measurements				Leaf Test				Sample Observations
ISRA Area(s) & Location	Qualitative Flow Observations*	Photo Number(s)	Object ID	Sample ID (Object ID_yyyyymmdd)	Sample/Observation Time	Conductivity (mS or uS)	pH	Temperature (°C)	Turbidity (NTU)	Distance (ft)	Time (s)	Speed (ft/s)	Water Depth (in)	Notes (color, odor, sheen, foam, biological material, nearby erosion, etc.)
B-1 AREA	Gunite swale conveying road runoff		B1BMP0009	B1BMP0009_										
	Culvert outlet from upper parking lot area		B1BMP0010	B1BMP0010_										
	Underdrains		B1BMP0011	B1BMP0011_										

Notes:

Additional Observations:

*Qualitative Flow Observations:		
No Flow Low Flow: Trickle or minor amount of flow. Moderate Flow: Water is flowing normally, no significant erosion or turbid water. High Flow: Significant water flow/velocity, slope erosion.	NPDES Permit Limits: Temperature < 86 °F pH 6.5 - 8.5	ALL RECEIVING AND SAMPLE COLLECTION BOTTLES MUST BE <u>PRE-RINSED 3 TIMES</u> WITH SOURCE WATER, PRIOR TO COLLECTION OF THE SAMPLE. EXCEPTION IS THE HNO3 (NITRIC) PRESERVED POLY BOTTLES - <u>DO NOT PRE-RINSE THE HNO3 PRESERVED POLY'S</u>

**Surface Water Monitoring Inspection and Sample Collection Form
PERFORMANCE MONITORING and BMP MONITORING PROGRAMS**

Sampling Responsibility: <u>Boeing</u> Inspector/Sampler: _____ Date: _____ Outfall/Watershed: <u>009</u>						Weather: _____ Rain Event Start Date/Time: _____									
Sample Tracking Information						Sample Field Measurements				Leaf Test				Sample Observations	
ISRA Area(s) & Location	Qualitative Flow Observations*	Photo Number(s)	Object ID	Sample ID (Object ID_yyyyymmdd)	Sample/Observation Time	Conductivity (mS or uS)	pH	Temperature (°C)	Turbidity (NTU)	Distance (ft)	Time (s)	Speed (ft/s)	Water Depth (in)	Notes (color, odor, sheen, foam, biological material, nearby erosion, etc.)	
LOWER LOT AND ADMINISTRATION BUILDING AREA	Upstream Lower Lot Treatment BMP; sample port in cistern discharge pipeline		LPBMP0002	LPBMP0002_											
	Mid-Point Lower Lot BMP; Sediment Basin outlet box		LPBMP0003	LPBMP0003_											
	Downstream Lower Lot Treatment BMP; discharge from Biofilter effluent pipe		LPBMP0004	LPBMP0004_											
	Filter basket influent in the administration buildings area parking lot.		ILBMP0009	ILBMP0009_											
	Filter basket effluent in the administration buildings area parking lot.		ILBMP0010	ILBMP0010_											
CM-9 Area	Upstream (South), CM-9 BMPs		A1BMP0002	A1BMP0002_											
	Downstream, CM-9 BMPs; CM-9 underdrains		A1BMP0003	A1BMP0003_											
	Upstream (East), CM-9 BMPs; culvert inlet off Area II Road		ILBMP0002	ILBMP0002_											

Notes:

Additional Observations:

*Qualitative Flow Observations:		
No Flow	NPDES Permit Limits:	ALL RECEIVING AND SAMPLE COLLECTION BOTTLES MUST BE PRE-RINSED 3 TIMES WITH SOURCE WATER, PRIOR TO COLLECTION OF THE SAMPLE.
Low Flow: Trickle or minor amount of flow.	Temperature < 86 °F	
Moderate Flow: Water is flowing normally, no significant erosion or turbid water.	pH 6.5 - 8.5	EXCEPTION IS THE HNO3 (NITRIC) PRESERVED POLY BOTTLES - DO NOT PRE-RINSE THE HNO3 PRESERVED POLY'S
High Flow: Significant water flow/velocity, slope erosion.		

**Surface Water Monitoring Inspection and Sample Collection Form
PERFORMANCE MONITORING and BMP MONITORING PROGRAMS**

Sampling Responsibility: <u>Boeing</u> Inspector/Sampler: _____ Date: _____ Outfall/Watershed: <u>009</u>						Weather: _____ Rain Event Start Date/Time: _____								
Sample Tracking Information						Sample Field Measurements				Leaf Test				Sample Observations
ISRA Area(s) & Location	Qualitative Flow Observations*	Photo Number(s)	Object ID	Sample ID (Object ID_yyyyymmdd)	Sample/Observation Time	Conductivity (mS or uS)	pH	Temperature (°C)	Turbidity (NTU)	Distance (ft)	Time (s)	Speed (ft/s)	Water Depth (in)	Notes (color, odor, sheen, foam, biological material, nearby erosion, etc.)
B1436 DETENTION BIOSWALES Upstream, B1436 southern detention bioswale (concrete swale diverting sheet flow into rock crib - west)			ILBMP0004	ILBMP0004_										
Downstream, B1436 southern detention bioswale; 12-inch underdrain			ILBMP0005	ILBMP0005_										
Upstream, B1436 southern detention bioswale (concrete swale diverting sheet flow into rock crib - east)			ILBMP0008	ILBMP0008_										

Notes:

Additional Observations:

<p>*Qualitative Flow Observations:</p> <p>No Flow</p> <p>Low Flow: Trickle or minor amount of flow.</p> <p>Moderate Flow: Water is flowing normally, no significant erosion or turbid water.</p> <p>High Flow: Significant water flow/velocity, slope erosion.</p>	<p>NPDES Permit Limits:</p> <p>Temperature < 86 °F</p> <p>pH 6.5 - 8.5</p>	<p align="center">ALL RECEIVING AND SAMPLE COLLECTION BOTTLES MUST BE PRE-RINSED 3 TIMES WITH SOURCE WATER, PRIOR TO COLLECTION OF THE SAMPLE.</p> <p align="center">EXCEPTION IS THE HNO3 (NITRIC) PRESERVED POLY BOTTLES - DO NOT PRE-RINSE THE HNO3 PRESERVED POLY'S</p>
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**Surface Water Monitoring Inspection and Sample Collection Form
PERFORMANCE MONITORING and BMP MONITORING PROGRAMS**

Sampling Responsibility: <u>Boeing</u> Inspector/Sampler: _____ Date: _____ Outfall/Watershed: <u>001</u>						Weather: _____ Rain Event Start Date/Time: _____								
Sample Tracking Information						Sample Field Measurements				Leaf Test				Sample Observations
ISRA Area(s) & Location	Qualitative Flow Observations*	Photo Number(s)	Object ID	Sample ID (Object ID_yyyyymmdd)	Sample/Observation Time	Conductivity (mS or uS)	pH	Temperature (°C)	Turbidity (NTU)	Distance (ft)	Time (s)	Speed (ft/s)	Water Depth (in)	Notes (color, odor, sheen, foam, biological material, nearby erosion, etc.)
OF001	Potential BMP location, Outfall 001 watershed (located at the low spot along Bell Canyon Road north of the road heading to Outfall 001).			EPSW001BG01	EPSW001BG01_									
	Potential BMP location, Outfall 001 watershed (at the bottom of the hill to the north of the intersection of the Southern Buffer Zone Road and Outfall 01			EPSW001IE01	EPSW001IE01_									
	Potential BMP location, Outfall 001 watershed (south side of the road heading towards Outfall 001 at the intersection of Outfall 001 road and Bell Canyon Road).			EPSW001PV01	EPSW001PV01_									

Notes:

Additional Observations:

<p>*Qualitative Flow Observations:</p> <p>No Flow</p> <p>Low Flow: Trickle or minor amount of flow.</p> <p>Moderate Flow: Water is flowing normally, no significant erosion or turbid water.</p> <p>High Flow: Significant water flow/velocity, slope erosion.</p>			<p>NPDES Permit Limits:</p> <p>Temperature < 86 °F</p> <p>pH 6.5 - 8.5</p>			<p>ALL RECEIVING AND SAMPLE COLLECTION BOTTLES MUST BE PRE-RINSED 3 TIMES WITH SOURCE WATER, PRIOR TO COLLECTION OF THE SAMPLE.</p> <p>EXCEPTION IS THE HNO3 (NITRIC) PRESERVED POLY BOTTLES - DO NOT PRE-RINSE THE HNO3 PRESERVED POLY'S</p>		
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**Surface Water Monitoring Inspection and Sample Collection Form
PERFORMANCE MONITORING and BMP MONITORING PROGRAMS**

Sampling Responsibility: <u>Boeing</u> Inspector/Sampler: _____ Date: _____ Outfall/Watershed: <u>002</u>							Weather: _____ Rain Event Start Date/Time: _____								
Sample Tracking Information							Sample Field Measurements				Leaf Test				Sample Observations
ISRA Area(s) & Location	Qualitative Flow Observations*	Photo Number(s)	Object ID	Sample ID (Object ID_ yyyymmdd)	Sample/Observation Time	Conductivity (mS or uS)	pH	Temperature (°C)	Turbidity (NTU)	Distance (ft)	Time (s)	Speed (ft/s)	Water Depth (in)	Notes (color, odor, sheen, foam, biological material, nearby erosion, etc.)	
OF002	Potential BMP location, Outfall 002 watershed (located past the second water guzzler just before the steep incline into Outfall 002. Road delineator to the west of culvert).			EPSW002BG01	EPSW002BG01_										
	Potential BMP location, Outfall 002 watershed (at STLIV-IV. Immediately past the gates to the south east; adjacent to the new telephone pole).			EPSW002IE01	EPSW002IE01_										
	Potential BMP location, Outfall 002 watershed (located along the Southern Buffer Zone Road at the culvert inlet on the north side of the road. Approximately 400 feet east of the turnout).			EPSW002IE02	EPSW002IE02_										

Notes:

Additional Observations:

<p>*Qualitative Flow Observations:</p> <p>No Flow</p> <p>Low Flow: Trickle or minor amount of flow.</p> <p>Moderate Flow: Water is flowing normally, no significant erosion or turbid water.</p> <p>High Flow: Significant water flow/velocity, slope erosion.</p>			<p>NPDES Permit Limits:</p> <p>Temperature < 86 °F</p> <p>pH 6.5 - 8.5</p>		<p>ALL RECEIVING AND SAMPLE COLLECTION BOTTLES MUST BE PRE-RINSED 3 TIMES WITH SOURCE WATER, PRIOR TO COLLECTION OF THE SAMPLE.</p> <p>EXCEPTION IS THE HNO3 (NITRIC) PRESERVED POLY BOTTLES - DO NOT PRE-RINSE THE HNO3 PRESERVED POLY'S</p>	
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Appendix B: 2019/20 BMP Program Laboratory Reports

LABORATORY REPORTS

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4	440-255939-2 – November 28, 2019, Eurofins Calscience Analytical Report
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NASA

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12	570-25593-2 – April 09, 2020, Eurofins Calscience Analytical Report

ANALYTICAL REPORT

Eurofins TestAmerica, Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-255230-1

Client Project/Site: BMP Performance of 009 Watershed
Revision: 1

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
12/24/2019 5:20:22 PM

Urvashi Patel, Manager of Project Management
(949)260-3269
urvashi.patel@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-255230-1	B1BMP0009_20191120	Water	11/20/19 12:10	11/21/19 14:35	
440-255230-2	B1BMP0010_20191120	Water	11/20/19 12:15	11/21/19 14:35	
440-255230-3	B1BMP0011_20191120	Water	11/20/19 12:20	11/21/19 14:35	
440-255230-4	ILBMP0009_20191120	Water	11/20/19 11:40	11/21/19 14:35	
440-255230-5	ILBMP0010_20191120	Water	11/20/19 11:50	11/21/19 14:35	

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Job ID: 440-255230-1

Laboratory: Eurofins TestAmerica, Irvine

Narrative

Job Narrative 440-255230-1

Comments

No additional comments.

Receipt

The samples were received on 11/21/2019 2:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.5° C and 1.9° C.

Receipt Exceptions

FB_20191120 (440-255230-6) For sample FB was received one amber Glass 1 l . On the COC were listed two Poly 1L containers

Dioxin

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV120219). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 3D5 exceeded this criteria: B1BMP0009_20191120 (440-255230-1), B1BMP0010_20191120 (440-255230-2), B1BMP0011_20191120 (440-255230-3), ILBMP0009_20191120 (440-255230-4), ILBMP0010_20191120 (440-255230-5), (CCV 320-342749/2), (LCS 320-341282/2-A), (MB 320-341282/1-A) and (WDM 320-342749/1). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract non-Sister

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P preparation/analysis: Samples B1BMP0009_20191120 (440-255230-1), B1BMP0010_20191120 (440-255230-2), B1BMP0011_20191120 (440-255230-3) and ILBMP0010_20191120 (440-255230-5) were provided in wide-mouth amber glass bottles.

preparation batch 320-341282
Method: 1613B_Sox_Sep_P / 1613B
Matrix: Aqueous

Method 1613B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-341282. As per client guidelines in the associated QAS, QCs are MB/LCS.

Method: 1613B_Sox_Sep_P / 1613B
Matrix: Aqueous

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract Work

Method Particle Size: This method was subcontracted to Eurofins TestAmerica, Irvine. The subcontract laboratory certification is different from that of the facility issuing the final report.

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Job ID: 440-255230-1 (Continued)

Laboratory: Eurofins TestAmerica, Irvine (Continued)

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Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: B1BMP0009_20191120

Lab Sample ID: 440-255230-1

Date Collected: 11/20/19 12:10

Matrix: Water

Date Received: 11/21/19 14:35

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.000013	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,7,8-PeCDD	0.0000060	J,DX q	0.000054	0.000023	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,7,8-PeCDF	0.0000044	J,DX	0.000054	0.000018	ug/L		11/25/19 07:26	12/03/19 00:23	1
2,3,4,7,8-PeCDF	0.0000027	J,DX q	0.000054	0.000019	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,4,7,8-HxCDD	0.000010	J,DX MB	0.000054	0.000014	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,6,7,8-HxCDD	0.000015	J,DX	0.000054	0.000015	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,7,8,9-HxCDD	0.000016	J,DX	0.000054	0.000013	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,4,7,8-HxCDF	0.0000055	J,DX MB q	0.000054	0.000012	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,6,7,8-HxCDF	0.0000046	J,DX MB	0.000054	0.000012	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,7,8,9-HxCDF	0.0000031	J,DX MB q	0.000054	0.000009	ug/L		11/25/19 07:26	12/03/19 00:23	1
2,3,4,6,7,8-HxCDF	0.0000042	J,DX	0.000054	0.000009	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,4,6,7,8-HpCDD	0.00034	MB	0.000054	0.000057	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,4,6,7,8-HpCDF	0.00011	MB	0.000054	0.000028	ug/L		11/25/19 07:26	12/03/19 00:23	1
1,2,3,4,7,8,9-HpCDF	0.0000064	J,DX	0.000054	0.000031	ug/L		11/25/19 07:26	12/03/19 00:23	1
OCDD	0.0043	MB	0.00011	0.000039	ug/L		11/25/19 07:26	12/03/19 00:23	1
OCDF	0.00028	MB	0.00011	0.000025	ug/L		11/25/19 07:26	12/03/19 00:23	1
Total TCDD	ND		0.000011	0.000013	ug/L		11/25/19 07:26	12/03/19 00:23	1
Total TCDF	0.0000047	J,DX MB	0.000011	0.000011	ug/L		11/25/19 07:26	12/03/19 00:23	1
Total PeCDD	0.000010	J,DX q	0.000054	0.000023	ug/L		11/25/19 07:26	12/03/19 00:23	1
Total PeCDF	0.000013	J,DX q	0.000054	0.000018	ug/L		11/25/19 07:26	12/03/19 00:23	1
Total HxCDD	0.00010	J,DX MB q	0.000054	0.000013	ug/L		11/25/19 07:26	12/03/19 00:23	1
Total HxCDF	0.00010	J,DX MB q	0.000054	0.000009	ug/L		11/25/19 07:26	12/03/19 00:23	1
Total HpCDD	0.0011	MB	0.000054	0.000057	ug/L		11/25/19 07:26	12/03/19 00:23	1
Total HpCDF	0.00033	J,DX MB	0.000054	0.000028	ug/L		11/25/19 07:26	12/03/19 00:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	50		25 - 164	11/25/19 07:26	12/03/19 00:23	1
13C-2,3,7,8-TCDF	49		24 - 169	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,7,8-PeCDD	51		25 - 181	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,7,8-PeCDF	49		24 - 185	11/25/19 07:26	12/03/19 00:23	1
13C-2,3,4,7,8-PeCDF	50		21 - 178	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,4,7,8-HxCDD	50		32 - 141	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,6,7,8-HxCDD	46		28 - 130	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,4,7,8-HxCDF	56		26 - 152	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,6,7,8-HxCDF	49		26 - 123	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,7,8,9-HxCDF	56		29 - 147	11/25/19 07:26	12/03/19 00:23	1
13C-2,3,4,6,7,8-HxCDF	50		28 - 136	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,4,6,7,8-HpCDD	50		23 - 140	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,4,6,7,8-HpCDF	49		28 - 143	11/25/19 07:26	12/03/19 00:23	1
13C-1,2,3,4,7,8,9-HpCDF	54		26 - 138	11/25/19 07:26	12/03/19 00:23	1
13C-OCDD	47		17 - 157	11/25/19 07:26	12/03/19 00:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	122		35 - 197	11/25/19 07:26	12/03/19 00:23	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	0.0000018	J,DX	0.000011	0.000008	ug/L		11/25/19 07:26	12/03/19 14:48	1

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Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: B1BMP0009_20191120

Lab Sample ID: 440-255230-1

Date Collected: 11/20/19 12:10

Matrix: Water

Date Received: 11/21/19 14:35

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	48		24 - 169	11/25/19 07:26	12/03/19 14:48	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	114		35 - 197	11/25/19 07:26	12/03/19 14:48	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.41	J,DX	1.0	0.25	ug/L		11/22/19 10:40	11/25/19 10:04	1
Copper	30		2.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:04	1
Lead	8.4		1.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:04	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/23/19 16:23	11/24/19 18:27	1
Copper	16		2.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:27	1
Lead	ND		1.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:27	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/29/19 12:49	11/29/19 21:06	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/29/19 13:03	11/29/19 20:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	100		25	13	mg/L			11/27/19 17:36	1

Client Sample ID: B1BMP0010_20191120

Lab Sample ID: 440-255230-2

Date Collected: 11/20/19 12:15

Matrix: Water

Date Received: 11/21/19 14:35

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000012	0.0000012	ug/L		11/25/19 07:26	12/03/19 01:11	1
2,3,7,8-TCDF	ND		0.000012	0.0000013	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,7,8-PeCDD	ND		0.000058	0.0000024	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,7,8-PeCDF	ND		0.000058	0.0000017	ug/L		11/25/19 07:26	12/03/19 01:11	1
2,3,4,7,8-PeCDF	ND		0.000058	0.0000018	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,4,7,8-HxCDD	0.0000055	J,DX MB	0.000058	0.0000016	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,6,7,8-HxCDD	0.0000077	J,DX q	0.000058	0.0000017	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,7,8,9-HxCDD	0.0000088	J,DX	0.000058	0.0000016	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,4,7,8-HxCDF	0.0000027	J,DX MB	0.000058	0.0000013	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,6,7,8-HxCDF	0.0000025	J,DX MB q	0.000058	0.0000014	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,7,8,9-HxCDF	0.0000018	J,DX MB q	0.000058	0.0000010	ug/L		11/25/19 07:26	12/03/19 01:11	1
2,3,4,6,7,8-HxCDF	0.0000017	J,DX	0.000058	0.0000011	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,4,6,7,8-HpCDD	0.00015	MB	0.000058	0.0000035	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,4,6,7,8-HpCDF	0.000045	J,DX MB	0.000058	0.0000025	ug/L		11/25/19 07:26	12/03/19 01:11	1
1,2,3,4,7,8,9-HpCDF	0.0000036	J,DX q	0.000058	0.0000028	ug/L		11/25/19 07:26	12/03/19 01:11	1
OCDD	0.0020	MB	0.00012	0.0000040	ug/L		11/25/19 07:26	12/03/19 01:11	1
OCDF	0.00014	MB	0.00012	0.0000032	ug/L		11/25/19 07:26	12/03/19 01:11	1

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Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: B1BMP0010_20191120

Lab Sample ID: 440-255230-2

Date Collected: 11/20/19 12:15

Matrix: Water

Date Received: 11/21/19 14:35

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDD	ND		0.000012	0.0000012	ug/L		11/25/19 07:26	12/03/19 01:11	1
Total TCDF	0.0000013	J,DX MB q	0.000012	0.0000013	ug/L		11/25/19 07:26	12/03/19 01:11	1
Total PeCDD	0.0000026	J,DX q	0.000058	0.0000024	ug/L		11/25/19 07:26	12/03/19 01:11	1
Total PeCDF	0.0000055	J,DX q	0.000058	0.0000017	ug/L		11/25/19 07:26	12/03/19 01:11	1
Total HxCDD	0.000051	J,DX MB q	0.000058	0.0000016	ug/L		11/25/19 07:26	12/03/19 01:11	1
Total HxCDF	0.000040	J,DX MB q	0.000058	0.0000010	ug/L		11/25/19 07:26	12/03/19 01:11	1
Total HpCDD	0.00049	MB	0.000058	0.0000035	ug/L		11/25/19 07:26	12/03/19 01:11	1
Total HpCDF	0.00013	J,DX MB q	0.000058	0.0000025	ug/L		11/25/19 07:26	12/03/19 01:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	47		25 - 164				11/25/19 07:26	12/03/19 01:11	1
13C-2,3,7,8-TCDF	48		24 - 169				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,7,8-PeCDD	47		25 - 181				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,7,8-PeCDF	46		24 - 185				11/25/19 07:26	12/03/19 01:11	1
13C-2,3,4,7,8-PeCDF	48		21 - 178				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,4,7,8-HxCDD	43		32 - 141				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,6,7,8-HxCDD	40		28 - 130				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,4,7,8-HxCDF	50		26 - 152				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,6,7,8-HxCDF	43		26 - 123				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,7,8,9-HxCDF	47		29 - 147				11/25/19 07:26	12/03/19 01:11	1
13C-2,3,4,6,7,8-HxCDF	44		28 - 136				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,4,6,7,8-HpCDD	41		23 - 140				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,4,6,7,8-HpCDF	40		28 - 143				11/25/19 07:26	12/03/19 01:11	1
13C-1,2,3,4,7,8,9-HpCDF	47		26 - 138				11/25/19 07:26	12/03/19 01:11	1
13C-OCDD	36		17 - 157				11/25/19 07:26	12/03/19 01:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	123		35 - 197				11/25/19 07:26	12/03/19 01:11	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.33	J,DX	1.0	0.25	ug/L		11/22/19 10:40	11/25/19 10:11	1
Copper	28		2.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:11	1
Lead	5.4		1.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:11	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/23/19 16:23	11/24/19 18:21	1
Copper	21		2.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:21	1
Lead	0.64	J,DX	1.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:21	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/22/19 15:10	11/26/19 05:23	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/29/19 13:03	11/29/19 20:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	110		14	7.1	mg/L			11/27/19 18:14	1

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Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: B1BMP0011_20191120

Lab Sample ID: 440-255230-3

Date Collected: 11/20/19 12:20

Matrix: Water

Date Received: 11/21/19 14:35

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.000010	ug/L		11/25/19 07:26	12/03/19 01:58	1
2,3,7,8-TCDF	ND		0.000011	0.0000008	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,7,8-PeCDD	ND		0.000056	0.0000016	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,7,8-PeCDF	ND		0.000056	0.0000013	ug/L		11/25/19 07:26	12/03/19 01:58	1
2,3,4,7,8-PeCDF	ND		0.000056	0.0000013	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,4,7,8-HxCDD	0.0000038	J,DX MB q	0.000056	0.0000011	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,6,7,8-HxCDD	0.0000038	J,DX	0.000056	0.0000012	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,7,8,9-HxCDD	0.0000047	J,DX	0.000056	0.0000011	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,4,7,8-HxCDF	0.0000018	J,DX MB q	0.000056	0.0000008	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,6,7,8-HxCDF	0.0000012	J,DX MB q	0.000056	0.0000009	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,7,8,9-HxCDF	0.0000016	J,DX MB q	0.000056	0.0000007	ug/L		11/25/19 07:26	12/03/19 01:58	1
2,3,4,6,7,8-HxCDF	0.0000011	J,DX q	0.000056	0.0000007	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,4,6,7,8-HpCDD	0.000068	MB	0.000056	0.0000022	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,4,6,7,8-HpCDF	0.000022	J,DX MB	0.000056	0.0000014	ug/L		11/25/19 07:26	12/03/19 01:58	1
1,2,3,4,7,8,9-HpCDF	0.0000016	J,DX q	0.000056	0.0000015	ug/L		11/25/19 07:26	12/03/19 01:58	1
OCDD	0.00089	MB	0.00011	0.0000021	ug/L		11/25/19 07:26	12/03/19 01:58	1
OCDF	0.000062	J,DX MB	0.00011	0.0000019	ug/L		11/25/19 07:26	12/03/19 01:58	1
Total TCDD	ND		0.000011	0.0000010	ug/L		11/25/19 07:26	12/03/19 01:58	1
Total TCDF	ND		0.000011	0.0000008	ug/L		11/25/19 07:26	12/03/19 01:58	1
Total PeCDD	ND		0.000056	0.0000016	ug/L		11/25/19 07:26	12/03/19 01:58	1
Total PeCDF	0.0000021	J,DX q	0.000056	0.0000013	ug/L		11/25/19 07:26	12/03/19 01:58	1
Total HxCDD	0.000025	J,DX MB q	0.000056	0.0000011	ug/L		11/25/19 07:26	12/03/19 01:58	1
Total HxCDF	0.000019	J,DX MB q	0.000056	0.0000007	ug/L		11/25/19 07:26	12/03/19 01:58	1
Total HpCDD	0.00021	MB	0.000056	0.0000022	ug/L		11/25/19 07:26	12/03/19 01:58	1
Total HpCDF	0.000055	J,DX MB q	0.000056	0.0000014	ug/L		11/25/19 07:26	12/03/19 01:58	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	62		25 - 164				11/25/19 07:26	12/03/19 01:58	1
13C-2,3,7,8-TCDF	62		24 - 169				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,7,8-PeCDD	64		25 - 181				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,7,8-PeCDF	61		24 - 185				11/25/19 07:26	12/03/19 01:58	1
13C-2,3,4,7,8-PeCDF	66		21 - 178				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,4,7,8-HxCDD	63		32 - 141				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,6,7,8-HxCDD	56		28 - 130				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,4,7,8-HxCDF	73		26 - 152				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,7,8,9-HxCDF	70		29 - 147				11/25/19 07:26	12/03/19 01:58	1
13C-2,3,4,6,7,8-HxCDF	64		28 - 136				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,4,6,7,8-HpCDD	60		23 - 140				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,4,6,7,8-HpCDF	60		28 - 143				11/25/19 07:26	12/03/19 01:58	1
13C-1,2,3,4,7,8,9-HpCDF	69		26 - 138				11/25/19 07:26	12/03/19 01:58	1
13C-OCDD	55		17 - 157				11/25/19 07:26	12/03/19 01:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	126		35 - 197				11/25/19 07:26	12/03/19 01:58	1

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Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: B1BMP0011_20191120

Lab Sample ID: 440-255230-3

Date Collected: 11/20/19 12:20

Matrix: Water

Date Received: 11/21/19 14:35

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/22/19 10:40	11/25/19 10:14	1
Copper	19		2.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:14	1
Lead	2.7		1.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:14	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/23/19 16:23	11/24/19 18:29	1
Copper	16		2.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:29	1
Lead	ND		1.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:29	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/22/19 15:10	11/26/19 05:25	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/29/19 13:03	11/29/19 20:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	42		10	5.0	mg/L			11/27/19 19:22	1

Client Sample ID: ILBMP0009_20191120

Lab Sample ID: 440-255230-4

Date Collected: 11/20/19 11:40

Matrix: Water

Date Received: 11/21/19 14:35

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000008	ug/L		11/25/19 07:26	12/03/19 02:46	1
2,3,7,8-TCDF	ND		0.000010	0.0000007	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000016	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000012	ug/L		11/25/19 07:26	12/03/19 02:46	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000012	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,4,7,8-HxCDD	0.0000060	J,DX MB	0.000050	0.0000009	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,6,7,8-HxCDD	0.0000075	J,DX	0.000050	0.0000009	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,7,8,9-HxCDD	0.0000077	J,DX	0.000050	0.0000008	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,4,7,8-HxCDF	0.0000027	J,DX MB q	0.000050	0.0000009	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,6,7,8-HxCDF	0.0000041	J,DX MB	0.000050	0.0000009	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,7,8,9-HxCDF	0.0000012	J,DX MB	0.000050	0.0000007	ug/L		11/25/19 07:26	12/03/19 02:46	1
2,3,4,6,7,8-HxCDF	0.0000036	J,DX	0.000050	0.0000007	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,4,6,7,8-HpCDD	0.00016	MB	0.000050	0.0000029	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,4,6,7,8-HpCDF	0.000093	MB	0.000050	0.0000017	ug/L		11/25/19 07:26	12/03/19 02:46	1
1,2,3,4,7,8,9-HpCDF	0.0000022	J,DX q	0.000050	0.0000018	ug/L		11/25/19 07:26	12/03/19 02:46	1
OCDD	0.0021	MB	0.00010	0.0000024	ug/L		11/25/19 07:26	12/03/19 02:46	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: ILBMP0009_20191120

Lab Sample ID: 440-255230-4

Date Collected: 11/20/19 11:40

Matrix: Water

Date Received: 11/21/19 14:35

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDF	0.00011	MB	0.00010	0.0000018	ug/L		11/25/19 07:26	12/03/19 02:46	1
Total TCDD	0.0000015	J,DX MB q	0.000010	0.0000008	ug/L		11/25/19 07:26	12/03/19 02:46	1
Total TCDF	0.0000017	J,DX MB	0.000010	0.0000007	ug/L		11/25/19 07:26	12/03/19 02:46	1
Total PeCDD	0.0000040	J,DX	0.000050	0.0000016	ug/L		11/25/19 07:26	12/03/19 02:46	1
Total PeCDF	0.000020	J,DX	0.000050	0.0000012	ug/L		11/25/19 07:26	12/03/19 02:46	1
Total HxCDD	0.000073	J,DX MB q	0.000050	0.0000008	ug/L		11/25/19 07:26	12/03/19 02:46	1
Total HxCDF	0.000071	J,DX MB q	0.000050	0.0000007	ug/L		11/25/19 07:26	12/03/19 02:46	1
Total HpCDD	0.00045	MB	0.000050	0.0000029	ug/L		11/25/19 07:26	12/03/19 02:46	1
Total HpCDF	0.00014	J,DX MB q	0.000050	0.0000017	ug/L		11/25/19 07:26	12/03/19 02:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	67		25 - 164				11/25/19 07:26	12/03/19 02:46	1
13C-2,3,7,8-TCDF	68		24 - 169				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,7,8-PeCDD	68		25 - 181				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,7,8-PeCDF	67		24 - 185				11/25/19 07:26	12/03/19 02:46	1
13C-2,3,4,7,8-PeCDF	70		21 - 178				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,4,7,8-HxCDD	69		32 - 141				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,6,7,8-HxCDD	63		28 - 130				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,4,7,8-HxCDF	79		26 - 152				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,6,7,8-HxCDF	68		26 - 123				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,7,8,9-HxCDF	74		29 - 147				11/25/19 07:26	12/03/19 02:46	1
13C-2,3,4,6,7,8-HxCDF	70		28 - 136				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,4,6,7,8-HpCDD	66		23 - 140				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,4,6,7,8-HpCDF	65		28 - 143				11/25/19 07:26	12/03/19 02:46	1
13C-1,2,3,4,7,8,9-HpCDF	77		26 - 138				11/25/19 07:26	12/03/19 02:46	1
13C-OCDD	62		17 - 157				11/25/19 07:26	12/03/19 02:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	122		35 - 197				11/25/19 07:26	12/03/19 02:46	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/22/19 10:40	11/25/19 10:16	1
Copper	24		2.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:16	1
Lead	4.0		1.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:16	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/23/19 16:23	11/24/19 18:31	1
Copper	16		2.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:31	1
Lead	ND		1.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:31	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.30		0.20	0.10	ug/L		11/22/19 15:10	11/26/19 05:27	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: ILBMP0009_20191120

Lab Sample ID: 440-255230-4

Date Collected: 11/20/19 11:40

Matrix: Water

Date Received: 11/21/19 14:35

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/29/19 13:03	11/29/19 20:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	24		6.7	3.3	mg/L			11/27/19 17:36	1

Client Sample ID: ILBMP0010_20191120

Lab Sample ID: 440-255230-5

Date Collected: 11/20/19 11:50

Matrix: Water

Date Received: 11/21/19 14:35

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.0000007	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,7,8-PeCDD	ND		0.000055	0.0000014	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,7,8-PeCDF	ND		0.000055	0.0000012	ug/L		11/25/19 07:26	12/03/19 03:33	1
2,3,4,7,8-PeCDF	ND		0.000055	0.0000012	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,4,7,8-HxCDD	0.0000084	J,DX MB	0.000055	0.0000009	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,6,7,8-HxCDD	0.000014	J,DX	0.000055	0.0000011	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,7,8,9-HxCDD	0.000013	J,DX	0.000055	0.0000009	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,4,7,8-HxCDF	0.0000044	J,DX MB	0.000055	0.0000007	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,6,7,8-HxCDF	0.0000055	J,DX MB	0.000055	0.0000007	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,7,8,9-HxCDF	0.0000059	J,DX q MB	0.000055	0.0000005	ug/L		11/25/19 07:26	12/03/19 03:33	1
2,3,4,6,7,8-HxCDF	0.0000042	J,DX q	0.000055	0.0000006	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,4,6,7,8-HpCDD	0.00027	MB	0.000055	0.0000035	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,4,6,7,8-HpCDF	0.00014	MB	0.000055	0.0000019	ug/L		11/25/19 07:26	12/03/19 03:33	1
1,2,3,4,7,8,9-HpCDF	0.0000032	J,DX	0.000055	0.0000021	ug/L		11/25/19 07:26	12/03/19 03:33	1
OCDD	0.0030	MB	0.00011	0.0000026	ug/L		11/25/19 07:26	12/03/19 03:33	1
OCDF	0.00015	MB	0.00011	0.0000016	ug/L		11/25/19 07:26	12/03/19 03:33	1
Total TCDD	0.0000012	J,DX q MB	0.000011	0.0000007	ug/L		11/25/19 07:26	12/03/19 03:33	1
Total TCDF	0.0000026	J,DX q MB	0.000011	0.0000006	ug/L		11/25/19 07:26	12/03/19 03:33	1
Total PeCDD	0.0000061	J,DX q	0.000055	0.0000014	ug/L		11/25/19 07:26	12/03/19 03:33	1
Total PeCDF	0.000026	J,DX q	0.000055	0.0000012	ug/L		11/25/19 07:26	12/03/19 03:33	1
Total HxCDD	0.00011	J,DX q MB	0.000055	0.0000009	ug/L		11/25/19 07:26	12/03/19 03:33	1
Total HxCDF	0.000094	J,DX q MB	0.000055	0.0000005	ug/L		11/25/19 07:26	12/03/19 03:33	1
Total HpCDD	0.00072	MB	0.000055	0.0000035	ug/L		11/25/19 07:26	12/03/19 03:33	1
Total HpCDF	0.00021	J,DX MB	0.000055	0.0000019	ug/L		11/25/19 07:26	12/03/19 03:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	76		25 - 164				11/25/19 07:26	12/03/19 03:33	1
13C-2,3,7,8-TCDF	74		24 - 169				11/25/19 07:26	12/03/19 03:33	1
13C-1,2,3,7,8-PeCDD	77		25 - 181				11/25/19 07:26	12/03/19 03:33	1
13C-1,2,3,7,8-PeCDF	75		24 - 185				11/25/19 07:26	12/03/19 03:33	1
13C-2,3,4,7,8-PeCDF	79		21 - 178				11/25/19 07:26	12/03/19 03:33	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: ILBMP0010_20191120

Lab Sample ID: 440-255230-5

Date Collected: 11/20/19 11:50

Matrix: Water

Date Received: 11/21/19 14:35

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDD	81		32 - 141	11/25/19 07:26	12/03/19 03:33	1
13C-1,2,3,6,7,8-HxCDD	72		28 - 130	11/25/19 07:26	12/03/19 03:33	1
13C-1,2,3,4,7,8-HxCDF	92		26 - 152	11/25/19 07:26	12/03/19 03:33	1
13C-1,2,3,6,7,8-HxCDF	79		26 - 123	11/25/19 07:26	12/03/19 03:33	1
13C-1,2,3,7,8,9-HxCDF	90		29 - 147	11/25/19 07:26	12/03/19 03:33	1
13C-2,3,4,6,7,8-HxCDF	82		28 - 136	11/25/19 07:26	12/03/19 03:33	1
13C-1,2,3,4,6,7,8-HpCDD	78		23 - 140	11/25/19 07:26	12/03/19 03:33	1
13C-1,2,3,4,6,7,8-HpCDF	78		28 - 143	11/25/19 07:26	12/03/19 03:33	1
13C-1,2,3,4,7,8,9-HpCDF	89		26 - 138	11/25/19 07:26	12/03/19 03:33	1
13C-OCDD	71		17 - 157	11/25/19 07:26	12/03/19 03:33	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	123		35 - 197	11/25/19 07:26	12/03/19 03:33	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000011	0.0000005	ug/L		11/25/19 07:26	12/03/19 15:27	1
				5					
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C-2,3,7,8-TCDF	75		24 - 169	11/25/19 07:26	12/03/19 15:27	1			
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
37Cl4-2,3,7,8-TCDD	120		35 - 197	11/25/19 07:26	12/03/19 15:27	1			

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/22/19 10:40	11/25/19 10:24	1
Copper	25		2.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:24	1
Lead	3.9		1.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:24	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/23/19 16:23	11/24/19 18:33	1
Copper	20		2.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:33	1
Lead	ND		1.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:33	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/22/19 15:10	11/26/19 05:30	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/29/19 13:03	11/29/19 20:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	31		5.0	2.5	mg/L			11/27/19 17:36	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	40CFR136A	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
Subcontract	Particle Size	None	TAL IRV
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV
FILTRATION	Sample Filtration	None	TAL IRV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: B1BMP0009_20191120

Lab Sample ID: 440-255230-1

Date Collected: 11/20/19 12:10

Matrix: Water

Date Received: 11/21/19 14:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B	RA		923.7 mL	20 uL	341282	11/25/19 07:26	RDR	TAL SAC
Total/NA	Analysis	1613B	RA	1			342918	12/03/19 14:48	ALM	TAL SAC
Total/NA	Prep	1613B			923.7 mL	20 uL	341282	11/25/19 07:26	RDR	TAL SAC
Total/NA	Analysis	1613B		1			342749	12/03/19 00:23	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	581985	11/23/19 16:23	EP	TAL IRV
Dissolved	Analysis	200.8		1			582105	11/24/19 18:27	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	581767	11/22/19 10:40	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			582173	11/25/19 10:04	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	582992	11/29/19 13:03	DB	TAL IRV
Dissolved	Analysis	245.1		1			583061	11/29/19 20:54	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	582988	11/29/19 12:49	DB	TAL IRV
Total/NA	Analysis	245.1		1			583061	11/29/19 21:06	DB	TAL IRV
Total/NA	Analysis	SM 2540D		1	40 mL	1000 mL	582820	11/27/19 17:36	KL	TAL IRV

Client Sample ID: B1BMP0010_20191120

Lab Sample ID: 440-255230-2

Date Collected: 11/20/19 12:15

Matrix: Water

Date Received: 11/21/19 14:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			865.5 mL	20 uL	341282	11/25/19 07:26	RDR	TAL SAC
Total/NA	Analysis	1613B		1			342749	12/03/19 01:11	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	581985	11/23/19 16:23	EP	TAL IRV
Dissolved	Analysis	200.8		1			582105	11/24/19 18:21	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	581767	11/22/19 10:40	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			582173	11/25/19 10:11	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	582992	11/29/19 13:03	DB	TAL IRV
Dissolved	Analysis	245.1		1			583061	11/29/19 20:52	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	581832	11/22/19 15:10	DB	TAL IRV
Total/NA	Analysis	245.1		1			582608	11/26/19 05:23	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	70 mL	1000 mL	582830	11/27/19 18:14	KL	TAL IRV

Client Sample ID: B1BMP0011_20191120

Lab Sample ID: 440-255230-3

Date Collected: 11/20/19 12:20

Matrix: Water

Date Received: 11/21/19 14:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			897.8 mL	20 uL	341282	11/25/19 07:26	RDR	TAL SAC
Total/NA	Analysis	1613B		1			342749	12/03/19 01:58	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	581985	11/23/19 16:23	EP	TAL IRV
Dissolved	Analysis	200.8		1			582105	11/24/19 18:29	B1H	TAL IRV

Eurofins TestAmerica, Irvine

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: B1BMP0011_20191120

Lab Sample ID: 440-255230-3

Date Collected: 11/20/19 12:20

Matrix: Water

Date Received: 11/21/19 14:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			25 mL	25 mL	581767	11/22/19 10:40	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			582173	11/25/19 10:14	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	582992	11/29/19 13:03	DB	TAL IRV
Dissolved	Analysis	245.1		1			583061	11/29/19 20:50	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	581832	11/22/19 15:10	DB	TAL IRV
Total/NA	Analysis	245.1		1			582608	11/26/19 05:25	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	100 mL	1000 mL	582846	11/27/19 19:22	KL	TAL IRV

Client Sample ID: ILBMP0009_20191120

Lab Sample ID: 440-255230-4

Date Collected: 11/20/19 11:40

Matrix: Water

Date Received: 11/21/19 14:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			996.1 mL	20 uL	341282	11/25/19 07:26	RDR	TAL SAC
Total/NA	Analysis	1613B		1			342749	12/03/19 02:46	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	581985	11/23/19 16:23	EP	TAL IRV
Dissolved	Analysis	200.8		1			582105	11/24/19 18:31	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	581767	11/22/19 10:40	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			582173	11/25/19 10:16	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	582992	11/29/19 13:03	DB	TAL IRV
Dissolved	Analysis	245.1		1			583061	11/29/19 20:48	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	581832	11/22/19 15:10	DB	TAL IRV
Total/NA	Analysis	245.1		1			582608	11/26/19 05:27	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	150 mL	1000 mL	582820	11/27/19 17:36	KL	TAL IRV

Client Sample ID: ILBMP0010_20191120

Lab Sample ID: 440-255230-5

Date Collected: 11/20/19 11:50

Matrix: Water

Date Received: 11/21/19 14:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B	RA		910.8 mL	20 uL	341282	11/25/19 07:26	RDR	TAL SAC
Total/NA	Analysis	1613B	RA	1			342918	12/03/19 15:27	ALM	TAL SAC
Total/NA	Prep	1613B			910.8 mL	20 uL	341282	11/25/19 07:26	RDR	TAL SAC
Total/NA	Analysis	1613B		1			342749	12/03/19 03:33	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	581985	11/23/19 16:23	EP	TAL IRV
Dissolved	Analysis	200.8		1			582105	11/24/19 18:33	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	581767	11/22/19 10:40	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			582173	11/25/19 10:24	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	581823	11/22/19 14:16	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	582992	11/29/19 13:03	DB	TAL IRV
Dissolved	Analysis	245.1		1			583061	11/29/19 20:42	DB	TAL IRV

Eurofins TestAmerica, Irvine

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Client Sample ID: ILBMP0010_20191120

Lab Sample ID: 440-255230-5

Date Collected: 11/20/19 11:50

Matrix: Water

Date Received: 11/21/19 14:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			20 mL	20 mL	581832	11/22/19 15:10	DB	TAL IRV
Total/NA	Analysis	245.1		1			582608	11/26/19 05:30	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	200 mL	1000 mL	582820	11/27/19 17:36	KL	TAL IRV

Laboratory References:

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-341282/1-A
Matrix: Water
Analysis Batch: 342749

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 341282

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000009	ug/L		11/25/19 07:26	12/02/19 22:48	1
				1					
1,2,3,7,8-PeCDD	ND		0.000050	0.0000020	ug/L		11/25/19 07:26	12/02/19 22:48	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000015	ug/L		11/25/19 07:26	12/02/19 22:48	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000015	ug/L		11/25/19 07:26	12/02/19 22:48	1
1,2,3,4,7,8-HxCDD	0.00000259	J,DX	0.000050	0.0000011	ug/L		11/25/19 07:26	12/02/19 22:48	1
1,2,3,6,7,8-HxCDD	ND		0.000050	0.0000011	ug/L		11/25/19 07:26	12/02/19 22:48	1
1,2,3,7,8,9-HxCDD	ND		0.000050	0.0000010	ug/L		11/25/19 07:26	12/02/19 22:48	1
1,2,3,4,7,8-HxCDF	0.00000118	J,DX	0.000050	0.0000006	ug/L		11/25/19 07:26	12/02/19 22:48	1
				2					
1,2,3,6,7,8-HxCDF	0.00000111	J,DX	0.000050	0.0000006	ug/L		11/25/19 07:26	12/02/19 22:48	1
				8					
1,2,3,7,8,9-HxCDF	0.00000157	J,DX q	0.000050	0.0000004	ug/L		11/25/19 07:26	12/02/19 22:48	1
				9					
2,3,4,6,7,8-HxCDF	ND		0.000050	0.0000005	ug/L		11/25/19 07:26	12/02/19 22:48	1
				6					
1,2,3,4,6,7,8-HpCDD	0.00000201	J,DX q	0.000050	0.0000011	ug/L		11/25/19 07:26	12/02/19 22:48	1
1,2,3,4,6,7,8-HpCDF	0.00000189	J,DX q	0.000050	0.0000009	ug/L		11/25/19 07:26	12/02/19 22:48	1
				4					
1,2,3,4,7,8,9-HpCDF	ND		0.000050	0.0000011	ug/L		11/25/19 07:26	12/02/19 22:48	1
OCDD	0.0000103	J,DX	0.00010	0.0000015	ug/L		11/25/19 07:26	12/02/19 22:48	1
OCDF	0.00000612	J,DX	0.00010	0.0000021	ug/L		11/25/19 07:26	12/02/19 22:48	1
Total TCDD	0.00000122	J,DX q	0.000010	0.0000009	ug/L		11/25/19 07:26	12/02/19 22:48	1
				1					
Total TCDF	0.000000988	J,DX q	0.000010	0.0000007	ug/L		11/25/19 07:26	12/02/19 22:48	1
				8					
Total PeCDD	ND		0.000050	0.0000020	ug/L		11/25/19 07:26	12/02/19 22:48	1
Total PeCDF	ND		0.000050	0.0000015	ug/L		11/25/19 07:26	12/02/19 22:48	1
Total HxCDD	0.00000259	J,DX	0.000050	0.0000010	ug/L		11/25/19 07:26	12/02/19 22:48	1
Total HxCDF	0.00000387	J,DX q	0.000050	0.0000004	ug/L		11/25/19 07:26	12/02/19 22:48	1
				9					
Total HpCDD	0.00000532	J,DX q	0.000050	0.0000011	ug/L		11/25/19 07:26	12/02/19 22:48	1
Total HpCDF	0.00000189	J,DX q	0.000050	0.0000009	ug/L		11/25/19 07:26	12/02/19 22:48	1
				4					

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	63		25 - 164	11/25/19 07:26	12/02/19 22:48	1
13C-2,3,7,8-TCDF	63		24 - 169	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,7,8-PeCDD	63		25 - 181	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,7,8-PeCDF	61		24 - 185	11/25/19 07:26	12/02/19 22:48	1
13C-2,3,4,7,8-PeCDF	64		21 - 178	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,4,7,8-HxCDD	59		32 - 141	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,6,7,8-HxCDD	57		28 - 130	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,4,7,8-HxCDF	72		26 - 152	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,7,8,9-HxCDF	70		29 - 147	11/25/19 07:26	12/02/19 22:48	1
13C-2,3,4,6,7,8-HxCDF	62		28 - 136	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,4,6,7,8-HpCDD	46		23 - 140	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,4,6,7,8-HpCDF	60		28 - 143	11/25/19 07:26	12/02/19 22:48	1
13C-1,2,3,4,7,8,9-HpCDF	67		26 - 138	11/25/19 07:26	12/02/19 22:48	1
13C-OCDD	45		17 - 157	11/25/19 07:26	12/02/19 22:48	1

Eurofins TestAmerica, Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Surrogate	MB MB %Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	120	35 - 197	11/25/19 07:26	12/02/19 22:48	1

Lab Sample ID: LCS 320-341282/2-A
 Matrix: Water
 Analysis Batch: 342749

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 341282
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	0.000200	0.000209		ug/L		105	67 - 158
2,3,7,8-TCDF	0.000200	0.000208	MB	ug/L		104	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.00110		ug/L		110	70 - 142
1,2,3,7,8-PeCDF	0.00100	0.00116		ug/L		116	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.00112		ug/L		112	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.00106	MB	ug/L		106	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.00116		ug/L		116	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.00118		ug/L		118	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.000958	MB	ug/L		96	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.00107	MB	ug/L		107	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.00107	MB	ug/L		107	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.00108		ug/L		108	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.00111	MB	ug/L		111	70 - 140
1,2,3,4,6,7,8-HpCDF	0.00100	0.00110	MB	ug/L		110	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.00105		ug/L		105	78 - 138
OCDD	0.00200	0.00231	MB	ug/L		116	78 - 144
OCDF	0.00200	0.00253	MB	ug/L		126	63 - 170

Isotope Dilution	LCS LCS %Recovery Qualifier	Limits
13C-2,3,7,8-TCDD	55	20 - 175
13C-2,3,7,8-TCDF	56	22 - 152
13C-1,2,3,7,8-PeCDD	58	21 - 227
13C-1,2,3,7,8-PeCDF	55	21 - 192
13C-2,3,4,7,8-PeCDF	58	13 - 328
13C-1,2,3,4,7,8-HxCDD	58	21 - 193
13C-1,2,3,6,7,8-HxCDD	52	25 - 163
13C-1,2,3,4,7,8-HxCDF	64	19 - 202
13C-1,2,3,6,7,8-HxCDF	56	21 - 159
13C-1,2,3,7,8,9-HxCDF	63	17 - 205
13C-2,3,4,6,7,8-HxCDF	57	22 - 176
13C-1,2,3,4,6,7,8-HpCDD	55	26 - 166
13C-1,2,3,4,6,7,8-HpCDF	56	21 - 158
13C-1,2,3,4,7,8,9-HpCDF	65	20 - 186
13C-OCDD	49	13 - 199

Surrogate	LCS LCS %Recovery Qualifier	Limits
37Cl4-2,3,7,8-TCDD	123	31 - 191

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: MB 320-341282/1-A
Matrix: Water
Analysis Batch: 342918

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 341282

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF - RA	ND		0.000010	0.0000004	ug/L		11/25/19 07:26	12/03/19 14:10	1
				7					
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF - RA	63		24 - 169				11/25/19 07:26	12/03/19 14:10	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD - RA	114		35 - 197				11/25/19 07:26	12/03/19 14:10	1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-581767/1-A
Matrix: Water
Analysis Batch: 582173

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 581767

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/22/19 10:40	11/25/19 10:00	1
Copper	ND		2.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:00	1
Lead	ND		1.0	0.50	ug/L		11/22/19 10:40	11/25/19 10:00	1

Lab Sample ID: LCS 440-581767/2-A
Matrix: Water
Analysis Batch: 582173

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 581767

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	78.1		ug/L		98	85 - 115
Copper	80.0	77.6		ug/L		97	85 - 115
Lead	80.0	77.5		ug/L		97	85 - 115

Lab Sample ID: 440-255230-1 MS
Matrix: Water
Analysis Batch: 582173

Client Sample ID: B1BMP0009_20191120
Prep Type: Total Recoverable
Prep Batch: 581767

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	0.41	J,DX	80.0	81.1		ug/L		101	70 - 130
Copper	30		80.0	111		ug/L		101	70 - 130
Lead	8.4		80.0	89.9		ug/L		102	70 - 130

Lab Sample ID: 440-255230-1 MSD
Matrix: Water
Analysis Batch: 582173

Client Sample ID: B1BMP0009_20191120
Prep Type: Total Recoverable
Prep Batch: 581767

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	0.41	J,DX	80.0	83.4		ug/L		104	70 - 130	3	20
Copper	30		80.0	112		ug/L		102	70 - 130	1	20
Lead	8.4		80.0	92.0		ug/L		105	70 - 130	2	20

Eurofins TestAmerica, Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 440-581823/1-C
Matrix: Water
Analysis Batch: 582105

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 581985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/23/19 16:23	11/24/19 18:17	1
Copper	ND		2.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:17	1
Lead	ND		1.0	0.50	ug/L		11/23/19 16:23	11/24/19 18:17	1

Lab Sample ID: LCS 440-581823/2-C
Matrix: Water
Analysis Batch: 582105

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 581985

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	77.9		ug/L		97	85 - 115
Copper	80.0	77.4		ug/L		97	85 - 115
Lead	80.0	78.7		ug/L		98	85 - 115

Lab Sample ID: 440-255230-2 MS
Matrix: Water
Analysis Batch: 582105

Client Sample ID: B1BMP0010_20191120
Prep Type: Dissolved
Prep Batch: 581985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	ND		80.0	77.5		ug/L		97	70 - 130
Copper	21		80.0	98.8		ug/L		97	70 - 130
Lead	0.64	J,DX	80.0	77.8		ug/L		96	70 - 130

Lab Sample ID: 440-255230-2 MSD
Matrix: Water
Analysis Batch: 582105

Client Sample ID: B1BMP0010_20191120
Prep Type: Dissolved
Prep Batch: 581985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	ND		80.0	76.8		ug/L		96	70 - 130	1	20
Copper	21		80.0	98.1		ug/L		96	70 - 130	1	20
Lead	0.64	J,DX	80.0	77.9		ug/L		97	70 - 130	0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-581832/1-A
Matrix: Water
Analysis Batch: 582608

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 581832

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/22/19 15:10	11/26/19 04:58	1

Lab Sample ID: LCS 440-581832/2-A
Matrix: Water
Analysis Batch: 582608

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 581832

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	3.86		ug/L		96	85 - 115

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 440-255221-A-1-B MS
Matrix: Water
Analysis Batch: 582608

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 581832
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.94		ug/L		99	75 - 125

Lab Sample ID: 440-255221-A-1-C MSD
Matrix: Water
Analysis Batch: 582608

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 581832
 %Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.93		ug/L		98	75 - 125	0	20

Lab Sample ID: MB 440-582988/1-A
Matrix: Water
Analysis Batch: 583061

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 582988

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/29/19 12:49	11/29/19 20:56	1

Lab Sample ID: LCS 440-582988/2-A
Matrix: Water
Analysis Batch: 583061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 582988
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	3.85		ug/L		96	85 - 115

Lab Sample ID: LCSD 440-582988/3-A
Matrix: Water
Analysis Batch: 583061

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 582988
 %Rec. RPD

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	4.00	3.86		ug/L		97	85 - 115	0	20

Lab Sample ID: 440-255230-1 MS
Matrix: Water
Analysis Batch: 583061

Client Sample ID: B1BMP0009_20191120
Prep Type: Total/NA
Prep Batch: 582988
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.80		ug/L		95	75 - 125

Lab Sample ID: 440-255230-1 MSD
Matrix: Water
Analysis Batch: 583061

Client Sample ID: B1BMP0009_20191120
Prep Type: Total/NA
Prep Batch: 582988
 %Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.86		ug/L		97	75 - 125	2	20

Lab Sample ID: MB 440-581823/1-G
Matrix: Water
Analysis Batch: 583061

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 582992

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		11/29/19 13:03	11/29/19 20:37	1

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: LCS 440-581823/2-G
Matrix: Water
Analysis Batch: 583061

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 582992
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	3.82		ug/L		96	85 - 115

Lab Sample ID: 440-255230-5 MS
Matrix: Water
Analysis Batch: 583061

Client Sample ID: ILBMP0010_20191120
Prep Type: Dissolved
Prep Batch: 582992
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	4.13		ug/L		103	75 - 125

Lab Sample ID: 440-255230-5 MSD
Matrix: Water
Analysis Batch: 583061

Client Sample ID: ILBMP0010_20191120
Prep Type: Dissolved
Prep Batch: 582992
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.85		ug/L		96	75 - 125	7	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-582820/1
Matrix: Water
Analysis Batch: 582820

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			11/27/19 17:36	1

Lab Sample ID: LCS 440-582820/2
Matrix: Water
Analysis Batch: 582820

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Suspended Solids	1000	1090		mg/L		109	85 - 115

Lab Sample ID: 440-255168-B-1 DU
Matrix: Water
Analysis Batch: 582820

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	56		52.0		mg/L		7	10

Lab Sample ID: MB 440-582830/1
Matrix: Water
Analysis Batch: 582830

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			11/27/19 18:14	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 440-582830/2
Matrix: Water
Analysis Batch: 582830

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	1030		mg/L		103	85 - 115

Lab Sample ID: 440-255174-A-1 DU
Matrix: Water
Analysis Batch: 582830

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	220		215		mg/L		0.9	10

Lab Sample ID: MB 440-582846/1
Matrix: Water
Analysis Batch: 582846

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			11/27/19 19:22	1

Lab Sample ID: LCS 440-582846/2
Matrix: Water
Analysis Batch: 582846

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	1120		mg/L		112	85 - 115

Lab Sample ID: 440-255617-B-1 DU
Matrix: Water
Analysis Batch: 582846

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	330		350		mg/L		4	10

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Specialty Organics

Prep Batch: 341282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1 - RA	B1BMP0009_20191120	Total/NA	Water	1613B	
440-255230-1	B1BMP0009_20191120	Total/NA	Water	1613B	
440-255230-2	B1BMP0010_20191120	Total/NA	Water	1613B	
440-255230-3	B1BMP0011_20191120	Total/NA	Water	1613B	
440-255230-4	ILBMP0009_20191120	Total/NA	Water	1613B	
440-255230-5 - RA	ILBMP0010_20191120	Total/NA	Water	1613B	
440-255230-5	ILBMP0010_20191120	Total/NA	Water	1613B	
MB 320-341282/1-A - RA	Method Blank	Total/NA	Water	1613B	
MB 320-341282/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-341282/2-A	Lab Control Sample	Total/NA	Water	1613B	

Analysis Batch: 342749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Total/NA	Water	1613B	341282
440-255230-2	B1BMP0010_20191120	Total/NA	Water	1613B	341282
440-255230-3	B1BMP0011_20191120	Total/NA	Water	1613B	341282
440-255230-4	ILBMP0009_20191120	Total/NA	Water	1613B	341282
440-255230-5	ILBMP0010_20191120	Total/NA	Water	1613B	341282
MB 320-341282/1-A	Method Blank	Total/NA	Water	1613B	341282
LCS 320-341282/2-A	Lab Control Sample	Total/NA	Water	1613B	341282

Analysis Batch: 342918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1 - RA	B1BMP0009_20191120	Total/NA	Water	1613B	341282
440-255230-5 - RA	ILBMP0010_20191120	Total/NA	Water	1613B	341282
MB 320-341282/1-A - RA	Method Blank	Total/NA	Water	1613B	341282

Metals

Prep Batch: 581767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Total Recoverable	Water	200.2	
440-255230-2	B1BMP0010_20191120	Total Recoverable	Water	200.2	
440-255230-3	B1BMP0011_20191120	Total Recoverable	Water	200.2	
440-255230-4	ILBMP0009_20191120	Total Recoverable	Water	200.2	
440-255230-5	ILBMP0010_20191120	Total Recoverable	Water	200.2	
MB 440-581767/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-581767/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-255230-1 MS	B1BMP0009_20191120	Total Recoverable	Water	200.2	
440-255230-1 MSD	B1BMP0009_20191120	Total Recoverable	Water	200.2	

Filtration Batch: 581823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Dissolved	Water	FILTRATION	
440-255230-2	B1BMP0010_20191120	Dissolved	Water	FILTRATION	
440-255230-3	B1BMP0011_20191120	Dissolved	Water	FILTRATION	
440-255230-4	ILBMP0009_20191120	Dissolved	Water	FILTRATION	
440-255230-5	ILBMP0010_20191120	Dissolved	Water	FILTRATION	
MB 440-581823/1-C	Method Blank	Dissolved	Water	FILTRATION	
MB 440-581823/1-G	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-581823/2-C	Lab Control Sample	Dissolved	Water	FILTRATION	

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QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Metals (Continued)

Filtration Batch: 581823 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-581823/2-G	Lab Control Sample	Dissolved	Water	FILTRATION	
440-255230-2 MS	B1BMP0010_20191120	Dissolved	Water	FILTRATION	
440-255230-2 MSD	B1BMP0010_20191120	Dissolved	Water	FILTRATION	
440-255230-5 MS	ILBMP0010_20191120	Dissolved	Water	FILTRATION	
440-255230-5 MSD	ILBMP0010_20191120	Dissolved	Water	FILTRATION	

Prep Batch: 581832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-2	B1BMP0010_20191120	Total/NA	Water	245.1	
440-255230-3	B1BMP0011_20191120	Total/NA	Water	245.1	
440-255230-4	ILBMP0009_20191120	Total/NA	Water	245.1	
440-255230-5	ILBMP0010_20191120	Total/NA	Water	245.1	
MB 440-581832/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-581832/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-255221-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	
440-255221-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Prep Batch: 581985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Dissolved	Water	200.2	581823
440-255230-2	B1BMP0010_20191120	Dissolved	Water	200.2	581823
440-255230-3	B1BMP0011_20191120	Dissolved	Water	200.2	581823
440-255230-4	ILBMP0009_20191120	Dissolved	Water	200.2	581823
440-255230-5	ILBMP0010_20191120	Dissolved	Water	200.2	581823
MB 440-581823/1-C	Method Blank	Dissolved	Water	200.2	581823
LCS 440-581823/2-C	Lab Control Sample	Dissolved	Water	200.2	581823
440-255230-2 MS	B1BMP0010_20191120	Dissolved	Water	200.2	581823
440-255230-2 MSD	B1BMP0010_20191120	Dissolved	Water	200.2	581823

Analysis Batch: 582105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Dissolved	Water	200.8	581985
440-255230-2	B1BMP0010_20191120	Dissolved	Water	200.8	581985
440-255230-3	B1BMP0011_20191120	Dissolved	Water	200.8	581985
440-255230-4	ILBMP0009_20191120	Dissolved	Water	200.8	581985
440-255230-5	ILBMP0010_20191120	Dissolved	Water	200.8	581985
MB 440-581823/1-C	Method Blank	Dissolved	Water	200.8	581985
LCS 440-581823/2-C	Lab Control Sample	Dissolved	Water	200.8	581985
440-255230-2 MS	B1BMP0010_20191120	Dissolved	Water	200.8	581985
440-255230-2 MSD	B1BMP0010_20191120	Dissolved	Water	200.8	581985

Analysis Batch: 582173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Total Recoverable	Water	200.8	581767
440-255230-2	B1BMP0010_20191120	Total Recoverable	Water	200.8	581767
440-255230-3	B1BMP0011_20191120	Total Recoverable	Water	200.8	581767
440-255230-4	ILBMP0009_20191120	Total Recoverable	Water	200.8	581767
440-255230-5	ILBMP0010_20191120	Total Recoverable	Water	200.8	581767
MB 440-581767/1-A	Method Blank	Total Recoverable	Water	200.8	581767
LCS 440-581767/2-A	Lab Control Sample	Total Recoverable	Water	200.8	581767
440-255230-1 MS	B1BMP0009_20191120	Total Recoverable	Water	200.8	581767

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QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Metals (Continued)

Analysis Batch: 582173 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1 MSD	B1BMP0009_20191120	Total Recoverable	Water	200.8	581767

Analysis Batch: 582608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-2	B1BMP0010_20191120	Total/NA	Water	245.1	581832
440-255230-3	B1BMP0011_20191120	Total/NA	Water	245.1	581832
440-255230-4	ILBMP0009_20191120	Total/NA	Water	245.1	581832
440-255230-5	ILBMP0010_20191120	Total/NA	Water	245.1	581832
MB 440-581832/1-A	Method Blank	Total/NA	Water	245.1	581832
LCS 440-581832/2-A	Lab Control Sample	Total/NA	Water	245.1	581832
440-255221-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	581832
440-255221-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	581832

Prep Batch: 582988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Total/NA	Water	245.1	
MB 440-582988/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-582988/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 440-582988/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
440-255230-1 MS	B1BMP0009_20191120	Total/NA	Water	245.1	
440-255230-1 MSD	B1BMP0009_20191120	Total/NA	Water	245.1	

Prep Batch: 582992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Dissolved	Water	245.1	581823
440-255230-2	B1BMP0010_20191120	Dissolved	Water	245.1	581823
440-255230-3	B1BMP0011_20191120	Dissolved	Water	245.1	581823
440-255230-4	ILBMP0009_20191120	Dissolved	Water	245.1	581823
440-255230-5	ILBMP0010_20191120	Dissolved	Water	245.1	581823
MB 440-581823/1-G	Method Blank	Dissolved	Water	245.1	581823
LCS 440-581823/2-G	Lab Control Sample	Dissolved	Water	245.1	581823
440-255230-5 MS	ILBMP0010_20191120	Dissolved	Water	245.1	581823
440-255230-5 MSD	ILBMP0010_20191120	Dissolved	Water	245.1	581823

Analysis Batch: 583061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Dissolved	Water	245.1	582992
440-255230-1	B1BMP0009_20191120	Total/NA	Water	245.1	582988
440-255230-2	B1BMP0010_20191120	Dissolved	Water	245.1	582992
440-255230-3	B1BMP0011_20191120	Dissolved	Water	245.1	582992
440-255230-4	ILBMP0009_20191120	Dissolved	Water	245.1	582992
440-255230-5	ILBMP0010_20191120	Dissolved	Water	245.1	582992
MB 440-581823/1-G	Method Blank	Dissolved	Water	245.1	582992
MB 440-582988/1-A	Method Blank	Total/NA	Water	245.1	582988
LCS 440-581823/2-G	Lab Control Sample	Dissolved	Water	245.1	582992
LCS 440-582988/2-A	Lab Control Sample	Total/NA	Water	245.1	582988
LCSD 440-582988/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	582988
440-255230-1 MS	B1BMP0009_20191120	Total/NA	Water	245.1	582988
440-255230-1 MSD	B1BMP0009_20191120	Total/NA	Water	245.1	582988
440-255230-5 MS	ILBMP0010_20191120	Dissolved	Water	245.1	582992
440-255230-5 MSD	ILBMP0010_20191120	Dissolved	Water	245.1	582992

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QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

General Chemistry

Analysis Batch: 582820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-1	B1BMP0009_20191120	Total/NA	Water	SM 2540D	
440-255230-4	ILBMP0009_20191120	Total/NA	Water	SM 2540D	
440-255230-5	ILBMP0010_20191120	Total/NA	Water	SM 2540D	
MB 440-582820/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-582820/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-255168-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 582830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-2	B1BMP0010_20191120	Total/NA	Water	SM 2540D	
MB 440-582830/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-582830/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-255174-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 582846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255230-3	B1BMP0011_20191120	Total/NA	Water	SM 2540D	
MB 440-582846/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-582846/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-255617-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Laboratory: Eurofins TestAmerica, Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



INTEGRATED GEOSCIENCES LABORATORIES, LLC

*Environmental * Geotechnical * Core Analysis*

6016 Centralcrest Street • Houston, Texas 77092
Telephone (713) 316-1800 • Fax (877) 255-9953

November 25, 2019

Urvashi Patel.
Project Manager,
TestAmerica, Irvine.
17461 Derian Ave.
Irvine, CA 92614.

Re: IGL File No: **49159**
Project Name: SSFL BMP.
Project Number: N/A
Site Location: SSFL

Subject: Final Report: Laser Particle Size Analysis – (ASTM D4464)

Dear Urvashi Patel,

As you may have been informed, Integrated Geosciences Laboratories, LLC acquired PTS Laboratories effective September 1, 2019. Therefore, all communications regarding future and current projects (including this) are being executed in the new name.

Please find enclosed report for Physical Properties analyses conducted upon **five (5)** fluid sample received from your “**SSFL BMP**” project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for fifteen days past the completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

Integrated Geosciences Laboratories appreciate the opportunity to be of service. If you have any questions or require additional information, please contact me or Emeka Anazodo at (713) 316-1800.

Sincerely,
Integrated Geosciences Laboratories, LLC.

C.A.Umeh

Chidi Umeh
Technical Consultant.
Encl.

Integrated Geosciences Laboratories, LLC

Project Name:
Project Number:

SSFL BMP
N/A

IGL File No: 49159
Client: TestAmerica, Irvine

TEST PROGRAM - 20191122

FLUID ID	Date	Time	Fluid Type	Particle Size: Microsize	Comments
Date Received: 20191122				Method: ASTM D4464	
B1BMP009_20191120 (440-255230-1)	11/20/19	1210	G. Water	X	1L Plastic Bottle
B1BMP0010_20191120 (440-255230-2)	11/20/19	1215	G. Water	X	1L Plastic Bottle
B1BMP0011_20191120 (440-255230-3)	11/20/19	1220	G. Water	X	1L Plastic Bottle
ILBMP009_20191120 (440-255230-4)	11/20/19	1140	G. Water	X	1L Plastic Bottle
ILBMP0010_20191120 (440-255230-5)	11/20/19	1150	G. Water	X	1L Plastic Bottle
TOTALS:				5	

Laboratory Test Program Notes
Standard TAT for basic analysis is 10-15 business days.
Water samples to be disposed 15 days after completion of analyses.



PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D4464M)

PROJECT NAME: SSFL BMP
PROJECT NO: N/A

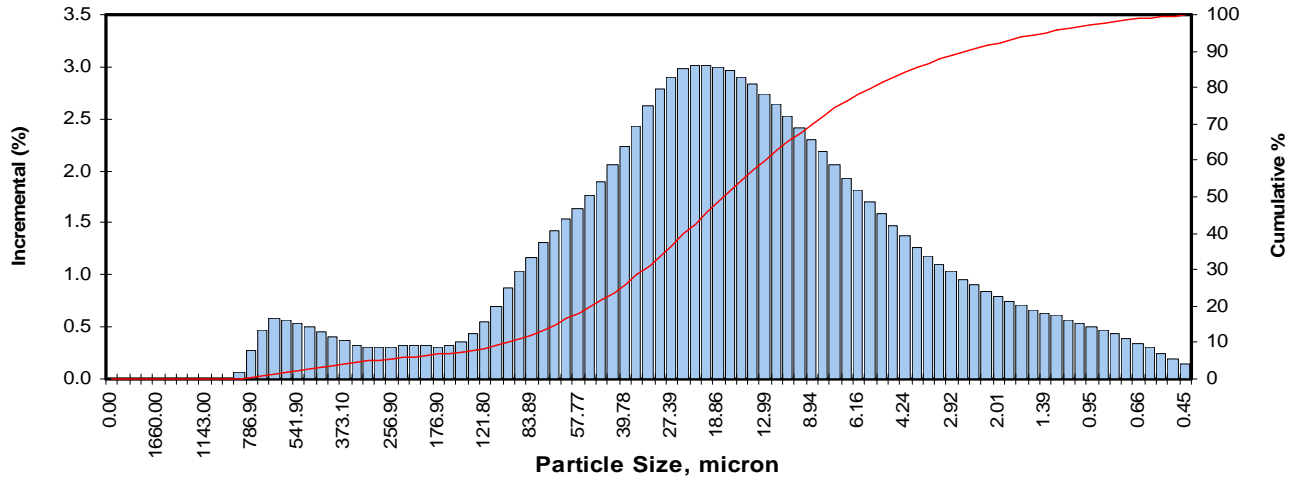
Sample ID	Matrix	Median Grain Size, micron (1)	CUMULATIVE PERCENT GREATER THAN										
			Distribution percent, microns										
			5%	10%	16%	25%	40%	50%	60%	75%	84%	90%	95%
BIBMP009_20191120(440-255230-1	Aqueous	13.721	252.841	86.093	55.295	35.222	19.936	13.721	9.268	4.216	1.716	1.169	0.705
BIBMP0010_20191120(440-255230-2	Aqueous	6.243	24.975	21.250	17.454	12.687	8.436	6.243	4.034	1.676	1.187	0.894	0.553
BIBMP0011_20191120(440-255230-3	Aqueous	1.948	18.891	13.233	9.657	6.853	3.413	1.948	1.548	1.098	0.799	0.587	0.461
ILBMP009_20191120(440-255230-4	Aqueous	6.237	70.721	57.002	43.267	25.301	10.251	6.237	3.017	1.376	1.001	0.674	0.479
ILBMP0010_20191120(440-255230-5	Aqueous	56.301	748.965	621.355	475.471	266.276	93.519	56.301	33.809	12.219	5.554	1.783	1.006

(1) Based on Trask Median



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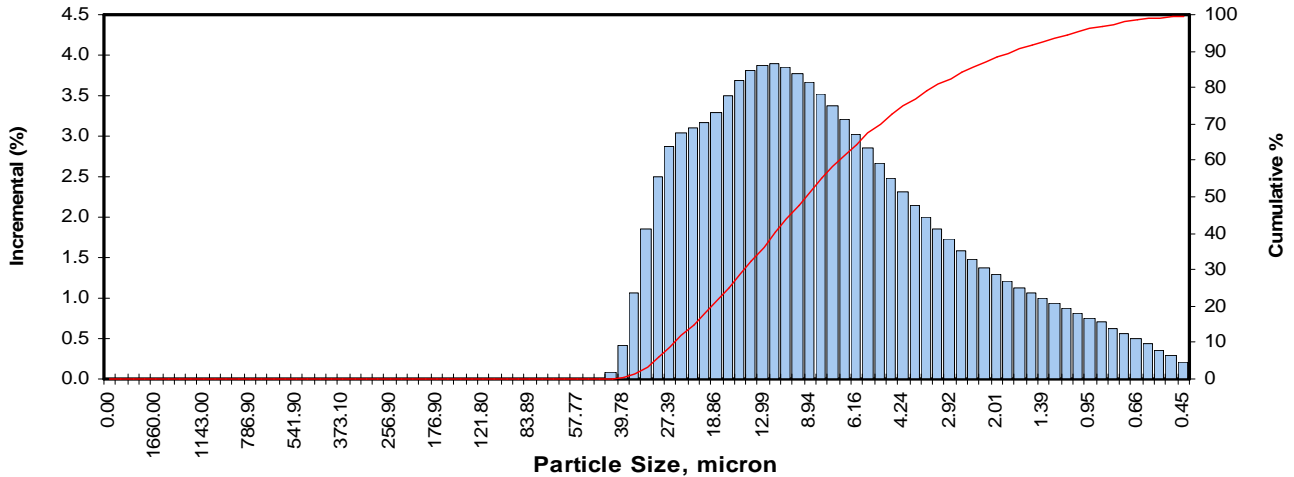
Client: TestAmerica, Irvine **IGL File No.:** 49159
Project: SSFL BMP **Sample ID:** BIBMP009_20191120(440-255230-1
Project No.: N/A **Matrix:** Aqueous



Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution	
	Incremental percent	Cumulative percent		Incremental percent	Cumulative percent		Incremental percent	Cumulative percent
0.00	0.00	0.0	63.41	1.54	16.5	1.668	0.710	93.8
0.00	0.00	0.0	57.77	1.64	18.1	1.520	0.670	94.4
2000.00	0.00	0.0	52.62	1.76	19.9	1.385	0.640	95.1
1822.00	0.00	0.0	47.94	1.89	21.8	1.261	0.610	95.7
1660.00	0.00	0.0	43.67	2.05	23.8	1.149	0.570	96.3
1512.00	0.00	0.0	39.78	2.23	26.1	1.047	0.540	96.8
1377.00	0.00	0.0	36.24	2.43	28.5	0.953	0.500	97.3
1255.00	0.00	0.0	33.01	2.62	31.1	0.868	0.470	97.8
1143.00	0.00	0.0	30.07	2.78	33.9	0.791	0.430	98.2
1041.00	0.00	0.0	27.39	2.90	36.8	0.721	0.390	98.6
948.30	0.01	0.0	24.95	2.98	39.8	0.656	0.340	98.9
863.90	0.07	0.1	22.73	3.02	42.8	0.598	0.300	99.2
786.90	0.27	0.3	20.70	3.02	45.8	0.545	0.250	99.5
716.80	0.47	0.8	18.86	3.00	48.8	0.496	0.200	99.7
653.00	0.59	1.4	17.18	2.96	51.8	0.452	0.140	99.8
594.90	0.56	2.0	15.65	2.90	54.7	TOTALS: 99.81 99.8		
541.90	0.54	2.5	14.26	2.83	57.5	Measure Trask Inman		
493.60	0.50	3.0	12.99	2.74	60.2	Median, mm	0.0137	0.0137
449.70	0.46	3.5	11.83	2.64	62.9	Median, micron	13.721	13.721
409.60	0.41	3.9	10.78	2.53	65.4	Mean, mm	0.0197	0.0097
373.10	0.37	4.2	9.82	2.42	67.8	Mean, micron	19.719	9.741
339.90	0.33	4.6	8.94	2.30	70.1	Sorting	2.8905	2.505
309.60	0.31	4.9	8.15	2.18	72.3	Skewness	0.8881	0.197
282.10	0.31	5.2	7.42	2.05	74.4	Kurtosis	0.1825	0.694
256.90	0.31	5.5	6.76	1.93	76.3	Cumulative Percent greater than		
234.10	0.32	5.8	6.16	1.81	78.1	Distribution percent	Particle Size	
213.20	0.33	6.2	5.61	1.70	79.8		Micron	Millimeters
194.20	0.32	6.5	5.11	1.58	81.4	5	252.841	0.2528
176.90	0.31	6.8	4.66	1.47	82.8	10	86.093	0.0861
161.20	0.32	7.1	4.24	1.37	84.2	16	55.295	0.0553
146.80	0.35	7.5	3.86	1.27	85.5	25	35.222	0.0352
133.70	0.43	7.9	3.52	1.18	86.7	40	19.936	0.0199
121.80	0.55	8.4	3.21	1.10	87.8	50	13.721	0.0137
111.00	0.70	9.1	2.92	1.03	88.8	60	9.268	0.0093
101.10	0.87	10.0	2.66	0.96	89.8	75	4.216	0.0042
92.09	1.03	11.0	2.42	0.90	90.7	84	1.716	0.0017
83.89	1.17	12.2	2.21	0.85	91.5	90	1.169	0.0012
76.42	1.31	13.5	2.01	0.80	92.3	95	0.705	0.0007
69.61	1.43	14.9	1.83	0.75	93.1			

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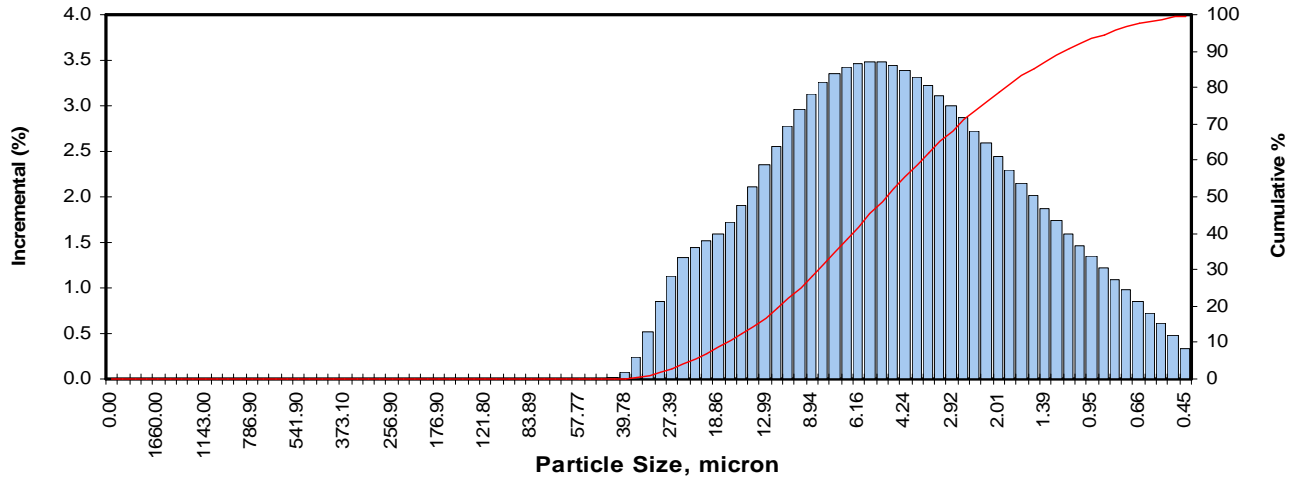
Client: TestAmerica, Irvine **IGL File No.:** 49159
Project: SSFL BMP **Sample ID:** BIBMP0010_20191120(440-255230-2
Project No.: N/A **Matrix:** Aqueous



Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution	
	Incremental percent	Cumulative percent		Incremental percent	Cumulative percent		Incremental percent	Cumulative percent
0.00	0.00	0.0	63.41	0.00	0.0	1.668	1.130	90.7
0.00	0.00	0.0	57.77	0.00	0.0	1.520	1.060	91.7
2000.00	0.00	0.0	52.62	0.00	0.0	1.385	0.990	92.7
1822.00	0.00	0.0	47.94	0.01	0.0	1.261	0.930	93.6
1660.00	0.00	0.0	43.67	0.08	0.1	1.149	0.870	94.5
1512.00	0.00	0.0	39.78	0.42	0.5	1.047	0.810	95.3
1377.00	0.00	0.0	36.24	1.06	1.6	0.953	0.750	96.1
1255.00	0.00	0.0	33.01	1.85	3.4	0.868	0.700	96.8
1143.00	0.00	0.0	30.07	2.49	5.9	0.791	0.630	97.4
1041.00	0.00	0.0	27.39	2.88	8.8	0.721	0.570	98.0
948.30	0.00	0.0	24.95	3.05	11.8	0.656	0.500	98.5
863.90	0.00	0.0	22.73	3.10	14.9	0.598	0.430	98.9
786.90	0.00	0.0	20.70	3.16	18.1	0.545	0.360	99.3
716.80	0.00	0.0	18.86	3.30	21.4	0.496	0.290	99.6
653.00	0.00	0.0	17.18	3.49	24.9	0.452	0.200	99.8
594.90	0.00	0.0	15.65	3.68	28.6	TOTALS: 99.76 99.8		
541.90	0.00	0.0	14.26	3.82	32.4	Measure Trask Inman		
493.60	0.00	0.0	12.99	3.88	36.3	Median, mm	0.0062	0.0062
449.70	0.00	0.0	11.83	3.89	40.2	Median, micron	6.243	6.243
409.60	0.00	0.0	10.78	3.85	44.0	Mean, mm	0.0072	0.0046
373.10	0.00	0.0	9.82	3.78	47.8	Mean, micron	7.181	4.551
339.90	0.00	0.0	8.94	3.67	51.5	Sorting	2.7514	1.939
309.60	0.00	0.0	8.15	3.53	55.0	Skewness	0.7386	0.235
282.10	0.00	0.0	7.42	3.37	58.4	Kurtosis	0.2705	0.418
256.90	0.00	0.0	6.76	3.20	61.6	Cumulative Percent greater than		
234.10	0.00	0.0	6.16	3.02	64.6	Distribution percent	Particle Size	
213.20	0.00	0.0	5.61	2.85	67.4		Micron	Millimeters
194.20	0.00	0.0	5.11	2.66	70.1	5	24.975	0.0250
176.90	0.00	0.0	4.66	2.48	72.6	10	21.250	0.0213
161.20	0.00	0.0	4.24	2.31	74.9	16	17.454	0.0175
146.80	0.00	0.0	3.86	2.15	77.0	25	12.687	0.0127
133.70	0.00	0.0	3.52	1.99	79.0	40	8.436	0.0084
121.80	0.00	0.0	3.21	1.85	80.9	50	6.243	0.0062
111.00	0.00	0.0	2.92	1.72	82.6	60	4.034	0.0040
101.10	0.00	0.0	2.66	1.59	84.2	75	1.676	0.0017
92.09	0.00	0.0	2.42	1.48	85.7	84	1.187	0.0012
83.89	0.00	0.0	2.21	1.38	87.0	90	0.894	0.0009
76.42	0.00	0.0	2.01	1.29	88.3	95	0.553	0.0006
69.61	0.00	0.0	1.83	1.21	89.5			

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Client: TestAmerica, Irvine **IGL File No.:** 49159
Project: SSFL BMP **Sample ID:** BIBMP0011_20191120(440-255230-3
Project No.: N/A **Matrix:** Aqueous



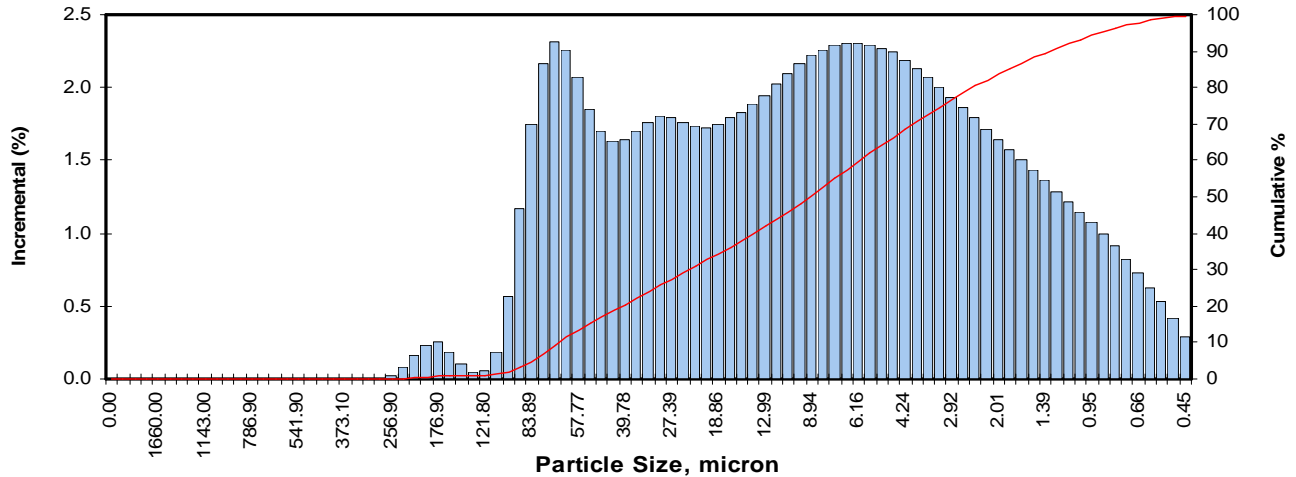
Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution	
	Incremental percent	Cumulative percent		Incremental percent	Cumulative percent		Incremental percent	Cumulative percent
0.00	0.00	0.0	63.41	0.00	0.0	1.668	2.150	83.3
0.00	0.00	0.0	57.77	0.00	0.0	1.520	2.010	85.3
2000.00	0.00	0.0	52.62	0.00	0.0	1.385	1.870	87.2
1822.00	0.00	0.0	47.94	0.00	0.0	1.261	1.740	88.9
1660.00	0.00	0.0	43.67	0.01	0.0	1.149	1.600	90.5
1512.00	0.00	0.0	39.78	0.07	0.1	1.047	1.470	92.0
1377.00	0.00	0.0	36.24	0.24	0.3	0.953	1.350	93.4
1255.00	0.00	0.0	33.01	0.52	0.8	0.868	1.220	94.6
1143.00	0.00	0.0	30.07	0.85	1.7	0.791	1.100	95.7
1041.00	0.00	0.0	27.39	1.13	2.8	0.721	0.980	96.7
948.30	0.00	0.0	24.95	1.33	4.2	0.656	0.850	97.5
863.90	0.00	0.0	22.73	1.44	5.6	0.598	0.730	98.2
786.90	0.00	0.0	20.70	1.51	7.1	0.545	0.610	98.8
716.80	0.00	0.0	18.86	1.59	8.7	0.496	0.480	99.3
653.00	0.00	0.0	17.18	1.73	10.4	0.452	0.330	99.7
594.90	0.00	0.0	15.65	1.91	12.3	TOTALS: 99.65 99.7		
541.90	0.00	0.0	14.26	2.12	14.5	Measure Trask Inman		
493.60	0.00	0.0	12.99	2.35	16.8	Median, mm	0.0019	0.0019
449.70	0.00	0.0	11.83	2.56	19.4	Median, micron	1.948	1.948
409.60	0.00	0.0	10.78	2.77	22.1	Mean, mm	0.0040	0.0028
373.10	0.00	0.0	9.82	2.96	25.1	Mean, micron	3.975	2.778
339.90	0.00	0.0	8.94	3.13	28.2	Sorting	2.4986	1.798
309.60	0.00	0.0	8.15	3.26	31.5	Skewness	1.4082	-0.285
282.10	0.00	0.0	7.42	3.36	34.8	Kurtosis	0.2276	0.490
256.90	0.00	0.0	6.76	3.43	38.3	Cumulative Percent greater than		
234.10	0.00	0.0	6.16	3.47	41.7	Distribution percent	Particle Size	
213.20	0.00	0.0	5.61	3.49	45.2		Micron	Millimeters
194.20	0.00	0.0	5.11	3.49	48.7	5	18.891	0.0189
176.90	0.00	0.0	4.66	3.45	52.2	10	13.233	0.0132
161.20	0.00	0.0	4.24	3.39	55.6	16	9.657	0.0097
146.80	0.00	0.0	3.86	3.32	58.9	25	6.853	0.0069
133.70	0.00	0.0	3.52	3.22	62.1	40	3.413	0.0034
121.80	0.00	0.0	3.21	3.12	65.2	50	1.948	0.0019
111.00	0.00	0.0	2.92	3.00	68.2	60	1.548	0.0015
101.10	0.00	0.0	2.66	2.87	71.1	75	1.098	0.0011
92.09	0.00	0.0	2.42	2.73	73.8	84	0.799	0.0008
83.89	0.00	0.0	2.21	2.59	76.4	90	0.587	0.0006
76.42	0.00	0.0	2.01	2.45	78.9	95	0.461	0.0005
69.61	0.00	0.0	1.83	2.30	81.2			

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IG Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

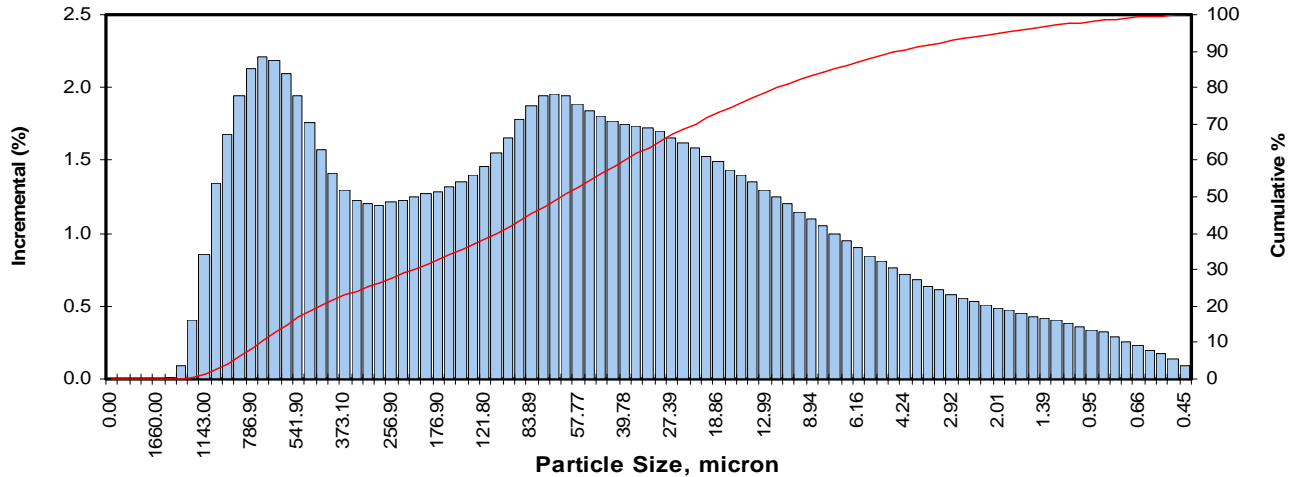
Client: TestAmerica, Irvine IGL File No: 49159
 Project: SSFL BMP Sample ID: ILBMP009_20191120(440-255230-4
 Project No: N/A Matrix: Aqueous



Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution	
	Incremental percent	Cumulative percent		Incremental percent	Cumulative percent		Incremental percent	Cumulative percent
0.00	0.00	0.0	63.41	2.26	11.6	1.668	1.500	86.8
0.00	0.00	0.0	57.77	2.07	13.6	1.520	1.430	88.2
2000.00	0.00	0.0	52.62	1.85	15.5	1.385	1.360	89.6
1822.00	0.00	0.0	47.94	1.70	17.2	1.261	1.290	90.8
1660.00	0.00	0.0	43.67	1.63	18.8	1.149	1.220	92.1
1512.00	0.00	0.0	39.78	1.64	20.4	1.047	1.150	93.2
1377.00	0.00	0.0	36.24	1.70	22.1	0.953	1.080	94.3
1255.00	0.00	0.0	33.01	1.76	23.9	0.868	1.000	95.3
1143.00	0.00	0.0	30.07	1.80	25.7	0.791	0.920	96.2
1041.00	0.00	0.0	27.39	1.79	27.5	0.721	0.820	97.0
948.30	0.00	0.0	24.95	1.76	29.3	0.656	0.730	97.8
863.90	0.00	0.0	22.73	1.74	31.0	0.598	0.630	98.4
786.90	0.00	0.0	20.70	1.73	32.7	0.545	0.530	98.9
716.80	0.00	0.0	18.86	1.75	34.5	0.496	0.420	99.3
653.00	0.00	0.0	17.18	1.79	36.3	0.452	0.290	99.6
594.90	0.00	0.0	15.65	1.83	38.1	TOTALS: 99.64 99.6		
541.90	0.00	0.0	14.26	1.89	40.0	Measure Trask Inman		
493.60	0.00	0.0	12.99	1.95	41.9	Median, mm	0.0062	0.0062
449.70	0.00	0.0	11.83	2.02	44.0	Median, micron	6.237	6.237
409.60	0.00	0.0	10.78	2.09	46.0	Mean, mm	0.0133	0.0066
373.10	0.00	0.0	9.82	2.16	48.2	Mean, micron	13.339	6.581
339.90	0.00	0.0	8.94	2.22	50.4	Sorting	4.2884	2.717
309.60	0.00	0.0	8.15	2.26	52.7	Skewness	0.9459	-0.029
282.10	0.00	0.0	7.42	2.29	55.0	Kurtosis	0.2124	0.326
256.90	0.02	0.0	6.76	2.30	57.3	Cumulative Percent greater than		
234.10	0.08	0.1	6.16	2.30	59.6	Distribution percent	Particle Size	
213.20	0.16	0.3	5.61	2.29	61.9		Micron	Millimeters
194.20	0.23	0.5	5.11	2.27	64.1	5	70.721	0.0707
176.90	0.25	0.7	4.66	2.24	66.4	10	57.002	0.0570
161.20	0.19	0.9	4.24	2.19	68.6	16	43.267	0.0433
146.80	0.10	1.0	3.86	2.13	70.7	25	25.301	0.0253
133.70	0.05	1.1	3.52	2.07	72.8	40	10.251	0.0103
121.80	0.05	1.1	3.21	2.00	74.8	50	6.237	0.0062
111.00	0.19	1.3	2.92	1.93	76.7	60	3.017	0.0030
101.10	0.57	1.9	2.66	1.86	78.6	75	1.376	0.0014
92.09	1.17	3.1	2.42	1.79	80.3	84	1.001	0.0010
83.89	1.75	4.8	2.21	1.71	82.1	90	0.674	0.0007
76.42	2.16	7.0	2.01	1.64	83.7	95	0.479	0.0005
69.61	2.32	9.3	1.83	1.57	85.3			

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Client: TestAmerica, Irvine **IGL File No:** 49159
Project: SSFL BMP **Sample ID:** ILBMP0010_20191120(440-255230-5)
Project No: N/A **Matrix:** Aqueous



Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution		Particle Diameter, micron	Particle Distribution	
	Incremental percent	Cumulative percent		Incremental percent	Cumulative percent		Incremental percent	Cumulative percent
0.00	0.00	0.0	63.41	1.94	51.1	1.668	0.450	95.9
0.00	0.00	0.0	57.77	1.89	52.9	1.520	0.430	96.3
2000.00	0.00	0.0	52.62	1.84	54.8	1.385	0.420	96.7
1822.00	0.00	0.0	47.94	1.80	56.6	1.261	0.400	97.1
1660.00	0.00	0.0	43.67	1.77	58.4	1.149	0.380	97.5
1512.00	0.01	0.0	39.78	1.75	60.1	1.047	0.360	97.9
1377.00	0.09	0.1	36.24	1.74	61.8	0.953	0.340	98.2
1255.00	0.41	0.5	33.01	1.72	63.6	0.868	0.320	98.5
1143.00	0.86	1.4	30.07	1.70	65.3	0.791	0.290	98.8
1041.00	1.34	2.7	27.39	1.66	66.9	0.721	0.260	99.1
948.30	1.68	4.4	24.95	1.62	68.5	0.656	0.230	99.3
863.90	1.95	6.3	22.73	1.58	70.1	0.598	0.200	99.5
786.90	2.13	8.5	20.70	1.53	71.7	0.545	0.170	99.7
716.80	2.21	10.7	18.86	1.49	73.1	0.496	0.140	99.8
653.00	2.19	12.9	17.18	1.44	74.6	0.452	0.095	99.9
594.90	2.10	15.0	15.65	1.40	76.0	TOTALS: 99.92 99.9		
541.90	1.94	16.9	14.26	1.35	77.3	Measure Trask Inman		
493.60	1.76	18.7	12.99	1.30	78.6	Median, mm	0.0563	0.0563
449.70	1.57	20.2	11.83	1.25	79.9	Median, micron	56.301	56.301
409.60	1.41	21.7	10.78	1.20	81.1	Mean, mm	0.1392	0.0514
373.10	1.30	23.0	9.82	1.15	82.2	Mean, micron	139.248	51.390
339.90	1.23	24.2	8.94	1.10	83.3	Sorting	4.6682	3.210
309.60	1.20	25.4	8.15	1.05	84.4	Skewness	1.0131	0.041
282.10	1.19	26.6	7.42	1.00	85.4	Kurtosis	0.2050	0.486
256.90	1.21	27.8	6.76	0.95	86.3	Cumulative Percent greater than		
234.10	1.23	29.0	6.16	0.90	87.2	Distribution percent	Particle Size	
213.20	1.25	30.3	5.61	0.85	88.1		Micron	Millimeters
194.20	1.27	31.5	5.11	0.81	88.9	5	748.965	0.7490
176.90	1.29	32.8	4.66	0.76	89.7	10	621.355	0.6214
161.20	1.32	34.1	4.24	0.72	90.4	16	475.471	0.4755
146.80	1.35	35.5	3.86	0.68	91.1	25	266.276	0.2663
133.70	1.40	36.9	3.52	0.64	91.7	40	93.519	0.0935
121.80	1.46	38.4	3.21	0.61	92.3	50	56.301	0.0563
111.00	1.55	39.9	2.92	0.58	92.9	60	33.809	0.0338
101.10	1.66	41.6	2.66	0.55	93.4	75	12.219	0.0122
92.09	1.78	43.3	2.42	0.53	94.0	84	5.554	0.0056
83.89	1.87	45.2	2.21	0.51	94.5	90	1.783	0.0018
76.42	1.94	47.2	2.01	0.49	95.0	95	1.006	0.0010
69.61	1.96	49.1	1.83	0.47	95.4			

Chain of Custody Record

Client Contact		Project Manager: Urvashi Patel				Site Contact: Urvashi.patel@testameri				Date:		COC No:					
PTS/IGL		Tel/Fax:				Lab Contact:				Carrier:		_____ of _____ COCs					
6016 CentralCrest Street		Analysis Turnaround Time				Filtered Sample particle size											
Houston, Texas 77092		Work Days (W) _____															
713-316-1800		TAT if different from Below _____															
FAX		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 5 days <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day															
Project Name: SSFL BMP																	
P.O.#:																	
												Job No. SDG No. 49159 Sample Specific Notes:					
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.											
B1BMP009_20191120 (440-255230-1)		11/20/19	12:10	G	W	1											
B1BMP010_20191120 (440-255230-2)		#####	12:15	G	W	1											
B1BMP011_20191120 (440-255230-3)		#####	12:20	G	W	1											
ILBMP009_20191120 (440-255230-4)		#####	11:40	G	W	1											
ILBMP010_20191120 (440-255230-5)		#####	11:50	G	W	1											
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____																	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
Special Instructions/QC Requirements & Comments:																	
Relinquished by: <i>A. Kennedy</i>				Company: <i>TA IRV</i>		Date/Time: <i>11/21/19</i>		Received by: <i>Urvashi Patel</i>				Company: <i>IGL</i>		Date/Time: <i>9:00</i>			
Relinquished by:				Company:		Date/Time:		Received by:				Company:		Date/Time:			
Relinquished by:				Company:		Date/Time:		Received by:				Company:		Date/Time:			

Regulatory Program: DW NPDES ICR Other **TestAmerica Laboratories, Inc.**
H&A Project Manager: Katherine Miller Tel/Fax: (620) 289-8606
H&A Site Contact: Matt Birney (618) 486-8782
Lab Contact: Urvaashi Patel (949) 333-9055

Sample Identification	Sample Date	Sample Type (C-Comp, G-Grab)	# of Matrix Cont.	Filtered Sample (Y/N)		Method 200.8: Cd, Cu, Pb (Total Dissolved)		Method 200.8: Cd, Cu, Pb (Total Recoverable)		Dioxins (Method 1631)		Total Suspended Solids (Method 2540D)		Particle Size Distribution (Method ASTM D422)		Turbidity (Method 180.1)		Sample Specific Notes
				Y	N	P	A	2-L	1-L	1-L	1-L	1-L	1-L	1-L	1-L	1-L	1-L	
B1BMP0009_20181120	11/20/19	G	7															Field Staff Notes: Lab may substitute 250mL Poly for 500mL for metals only need to fill half of 500mL. Must fill TSS to the top.
B1BMP0010_20181120	11/20/19	G	7															extra 250mL poly collected, B-1 Upper Parking Lot, Media Filter, Gumite swirls conveying road runoff
B1BMP0011_20181120	11/20/19	G	7															extra 250mL poly collected, B-1 Upper Parking Lot, Media Filter, Culvert outlet from upper parking lot area
ILBMP0009_20191120	11/20/19	G	7															extra 250mL poly collected, B-1 Upper Parking Lot, Underdrains
ILBMP0010_20191120	11/20/19	G	7															extra 250mL poly collected, Curb inlet media filter inlet
FB_20191120	11/20/19	G	2															extra 250mL poly collected, Curb inlet media filter outlet

Carrier: _____ **Archive for:** 6 Months **Disposal by Lab:** **Return to Client:** **Sample Disposal:** **Unknown:** **Poison B:**

Special Instructions/ICQ Requirements & Comments:
 Please email data to kmiller@halleyaldrich.com and post to Total Access; Bill to Halley & Aldrich at AP@halleyaldrich.com. Report Level II Data Package and provide EDD; All dissolved metal samples are to be filtered within 24 hours of receipt, even those placed on hold.
 Custody Seals Intact: Yes No
 Relinquished by: *[Signature]* Company: *HAH* Date/Time: 11/21/19
 Relinquished by: *[Signature]* Company: *DES* Date/Time: 11-21-19
 Relinquished by: *[Signature]* Company: *HAH* Date/Time: 11/21/19

Form No. CA-C-WI-045, Rev. 1.2, dated 1/8/2016

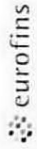
22/19 0.8/0.5 /R-93

6/11/19/19 14:35

440-255230 Chain of Custody




Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Lab PM: Patel, Urvashi		COC No: 440-148934-1	
Client Contact: Shipping/Receiving		E-Mail: urvashi.patel@testamericainc.com		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - California		Job #: 440-255230-1	
Address: 880 Riverside Parkway, West Sacramento, CA, 95605		Due Date Requested: 12/6/2019		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
City: West Sacramento		TAT Requested (days):		Analysis Requested	
State, Zip: CA, 95605		PO #:		Total Number of Containers	
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		WO #:		Field Filtered Sample (Yes or No)	
Email:		Project #: 44009815		Perform MS/MSD (Yes or No)	
Project Name: Boeing SSFL ISRA and BMP		SSOW#:		1613B/1613B_Box_Sep_P Standard List w/ Totals	
Site:		Sample Date		Sample Time	
Sample Identification - Client ID (Lab ID)		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Isobar, A=As)	
B1BMP0009_20191120 (440-255230-1)		12:10 Pacific		Water	
B1BMP0010_20191120 (440-255230-2)		12:15 Pacific		Water	
B1BMP0011_20191120 (440-255230-3)		12:20 Pacific		Water	
ILBMP009_20191120 (440-255230-4)		11:40 Pacific		Water	
ILBMP0010_20191120 (440-255230-5)		11:50 Pacific		Water	
Special Instructions/Note:		Preservation Code:		Special Instructions/Note:	
				See QAS, Boeing_w/lu to zero	
				See QAS, Boeing_w/lu to zero	
				See QAS, Boeing_w/lu to zero	
				See QAS, Boeing_w/lu to zero	
				See QAS, Boeing_w/lu to zero	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon-out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: A. Kennedy Date/Time: 11/23/19 17:00
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Custody Seals Intact: Yes No No
 Custody Seal No.: Seal
 Cooler Temperature(s) °C and Other Remarks: 0.80C

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Received by: J. Gu Date/Time: 11/23/19 - 9:15 Company: ETA-SAC
 Received by: _____ Date/Time: _____ Company: _____
 Received by: _____ Date/Time: _____ Company: _____



Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-255230-1

Login Number: 255230

List Source: Eurofins TestAmerica, Irvine

List Number: 1

Creator: Bonta, Lucia F

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-255230-1

Login Number: 255230

List Number: 2

Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento

List Creation: 11/23/19 11:46 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.8c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-255230-1	B1BMP0009_20191120	50	49	51	49	50	50	46	56
440-255230-1 - RA	B1BMP0009_20191120		48						
440-255230-2	B1BMP0010_20191120	47	48	47	46	48	43	40	50
440-255230-3	B1BMP0011_20191120	62	62	64	61	66	63	56	73
440-255230-4	ILBMP0009_20191120	67	68	68	67	70	69	63	79
440-255230-5	ILBMP0010_20191120	76	74	77	75	79	81	72	92
440-255230-5 - RA	ILBMP0010_20191120		75						
MB 320-341282/1-A	Method Blank	63	63	63	61	64	59	57	72
MB 320-341282/1-A - RA	Method Blank		63						

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	¹³ CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-255230-1	B1BMP0009_20191120	49	56	50	50	49	54	47
440-255230-1 - RA	B1BMP0009_20191120							
440-255230-2	B1BMP0010_20191120	43	47	44	41	40	47	36
440-255230-3	B1BMP0011_20191120	61	70	64	60	60	69	55
440-255230-4	ILBMP0009_20191120	68	74	70	66	65	77	62
440-255230-5	ILBMP0010_20191120	79	90	82	78	78	89	71
440-255230-5 - RA	ILBMP0010_20191120							
MB 320-341282/1-A	Method Blank	61	70	62	46	60	67	45
MB 320-341282/1-A - RA	Method Blank							

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCF = 13C-2,3,4,7,8-PeCDF
- HxCDD = 13C-1,2,3,4,7,8-HxCDD
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HxDF = 13C-1,2,3,6,7,8-HxCDF
- HxCF = 13C-1,2,3,7,8,9-HxCDF
- ¹³CHxCF = 13C-2,3,4,6,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
- OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-341282/2-A	Lab Control Sample	55	56	58	55	58	58	52	64

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	¹³ CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-341282/2-A	Lab Control Sample	56	63	57	55	56	65	49

Eurofins TestAmerica, Irvine

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance of 009 Watershed

Job ID: 440-255230-1

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

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- 17



Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-255230 Field Sheet

Job: _____

Tracking #: 1119-9741-5034

SO / ~~FO~~ / FO / SAT / 2-Day / Ground / UPS / CDO / Cour
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: _____

Therm. ID: Ak-12 Corr. Factor: (+/-) 0 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: Seal

Cooler ID: _____

Temp Observed: 0.8 °C Corrected: 0.8 °C
From: Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: JG Date: 11/23/19

Unpacking/Labeling The Samples	Yes	No	NA
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Non-conformance
NCM Filed? Yes No NA

Initials: JG Date: 11/23/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WRI-I

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Patel, Urvashi

From: Baluran, Dwayne <DBaluran@haleyaldrich.com>
Sent: Wednesday, December 04, 2019 9:10 AM
To: Patel, Urvashi
Subject: Sample Receipt Update: 440-255230

Categories: Red Category

-External Email-

Good Morning Urvashi,

The work order was reviewed from a couple weeks ago. Please review my comments, thanks.

Sample Delivery Group	Sample Date	Work Order or COC Corrections?
440-255230-1	11/20/2019	~On work order update H&A project number from -003 to -004. ~ILBMP0009 does not need Turbidity tested. I understand the analysis has probably already been done.

Dwayne Baluran, EIT, QSP
Staff Engineer

Haley & Aldrich, Inc.
5850 Canoga Avenue | Suite 400
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ANALYTICAL REPORT

Eurofins TestAmerica, Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-255714-1

Laboratory SDG: BMP Performance OF 001, 002, and/or 009
Watershed

Client Project/Site: 129095-004 SID 5.2

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
12/27/2019 2:55:06 PM

Urvashi Patel, Manager of Project Management
(949)260-3269
urvashi.patel@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-255714-1	B1BMP0009_20191127	Water	11/27/19 08:30	11/27/19 15:55	
440-255714-2	B1BMP0010_20191127	Water	11/27/19 08:10	11/27/19 15:55	
440-255714-3	B1BMP0011_20191127	Water	11/27/19 08:20	11/27/19 15:55	
440-255714-4	ILBMP0004_20191127	Water	11/27/19 09:00	11/27/19 15:55	
440-255714-5	ILBMP0005_20191127	Water	11/27/19 09:10	11/27/19 15:55	
440-255714-7	ILBMP0008_20191127	Water	11/27/19 08:50	11/27/19 15:55	
440-255714-8	LPBMP0002_20191127	Water	11/27/19 09:50	11/27/19 15:55	
440-255714-9	LPBMP0003_20191127	Water	11/27/19 09:30	11/27/19 15:55	
440-255714-10	LPBMP0004_20191127	Water	11/27/19 10:00	11/27/19 15:55	

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
DG: BMP Performance OF 001, 002, and/or 009 Watershed

Job ID: 440-255714-1

Laboratory: Eurofins TestAmerica, Irvine

Narrative

Job Narrative 440-255714-1

Comments

No additional comments.

Receipt

The samples were received on 11/27/2019 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.2° C, 4.6° C, 4.8° C and 5.7° C.

Receipt Exceptions

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): B1BMP0009_20191127 (440-255714-1), B1BMP0011_20191127 (440-255714-3), ILBMP0005_20191127 (440-255714-5), EB_20191127 (440-255714-6), LPBMP0002_20191127 (440-255714-8) and LPBMP0003_20191127 (440-255714-9). For the following samples the times don't match with the COC:

Times listed on the containers for : sample # 1-0930

- sample # 3-0920
- sample # 5-0950
- sample # 6-1230
- sample # 8-0930
- sample # 9-0910

The following sample was collected in an improper container: FB-20191127 (440-255714-11). Received improper container for Particle Size Distribution.

The Field Sampler was not listed on the Chain of Custody.

Dioxin

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 3D5 exceeded this criteria: B1BMP0009_20191127 (440-255714-1), B1BMP0010_20191127 (440-255714-2), B1BMP0011_20191127 (440-255714-3), ILBMP0004_20191127 (440-255714-4), ILBMP0005_20191127 (440-255714-5), (CCV 320-343844/2), (LCS 320-343025/2-A) and (MB 320-343025/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 3D5 exceeded this criteria: ILBMP0008_20191127 (440-255714-7), LPBMP0002_20191127 (440-255714-8), LPBMP0003_20191127 (440-255714-9), LPBMP0004_20191127 (440-255714-10) and (CCV 320-343845/14). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method blank for preparation batch 320-343025 and analytical batch 320-343844 contained OCDD above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
DG: BMP Performance OF 001, 002, and/or 009 Watershed

Job ID: 440-255714-1 (Continued)

Laboratory: Eurofins TestAmerica, Irvine (Continued)

Subcontract non-Sister

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P / 1613B preparation/analysis: Samples B1BMP0009_20191127 (440-255714-1), B1BMP0010_20191127 (440-255714-2), B1BMP0011_20191127 (440-255714-3), ILBMP0004_20191127 (440-255714-4), ILBMP0005_20191127 (440-255714-5), ILBMP0008_20191127 (440-255714-7), LPBMP0002_20191127 (440-255714-8), LPBMP0003_20191127 (440-255714-9) and LPBMP0004_20191127 (440-255714-10) were received in wide-mouth amber glass bottles.

preparation batch 320-343025
Method: 1613B_Sox_Sep_P / 1613B
Matrix: Aqueous

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract Work

Method Particle Size: This method was subcontracted to Integrated Geosciences Laboratories LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.



Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: B1BMP0009_20191127

Lab Sample ID: 440-255714-1

Date Collected: 11/27/19 08:30

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.0000031	J,DX	0.000011	0.0000009	ug/L		12/04/19 08:19	12/06/19 19:32	1
				5					
1,2,3,7,8-PeCDD	0.0000034	J,DX q	0.000054	0.0000020	ug/L		12/04/19 08:19	12/06/19 19:32	1
1,2,3,7,8-PeCDF	ND		0.000054	0.0000013	ug/L		12/04/19 08:19	12/06/19 19:32	1
2,3,4,7,8-PeCDF	ND		0.000054	0.0000013	ug/L		12/04/19 08:19	12/06/19 19:32	1
1,2,3,4,7,8-HxCDD	0.0000083	J,DX	0.000054	0.0000011	ug/L		12/04/19 08:19	12/06/19 19:32	1
1,2,3,6,7,8-HxCDD	0.000014	J,DX	0.000054	0.0000012	ug/L		12/04/19 08:19	12/06/19 19:32	1
1,2,3,7,8,9-HxCDD	0.000012	J,DX	0.000054	0.0000011	ug/L		12/04/19 08:19	12/06/19 19:32	1
1,2,3,4,7,8-HxCDF	0.0000031	J,DX	0.000054	0.0000009	ug/L		12/04/19 08:19	12/06/19 19:32	1
				3					
1,2,3,6,7,8-HxCDF	0.0000030	J,DX q	0.000054	0.0000010	ug/L		12/04/19 08:19	12/06/19 19:32	1
1,2,3,7,8,9-HxCDF	0.0000013	J,DX	0.000054	0.0000007	ug/L		12/04/19 08:19	12/06/19 19:32	1
				4					
2,3,4,6,7,8-HxCDF	0.0000028	J,DX	0.000054	0.0000007	ug/L		12/04/19 08:19	12/06/19 19:32	1
				7					
1,2,3,4,6,7,8-HpCDD	0.00032	MB	0.000054	0.0000036	ug/L		12/04/19 08:19	12/06/19 19:32	1
1,2,3,4,6,7,8-HpCDF	0.000073		0.000054	0.0000025	ug/L		12/04/19 08:19	12/06/19 19:32	1
1,2,3,4,7,8,9-HpCDF	0.0000047	J,DX	0.000054	0.0000028	ug/L		12/04/19 08:19	12/06/19 19:32	1
OCDD	0.0035	MB	0.00011	0.0000031	ug/L		12/04/19 08:19	12/06/19 19:32	1
OCDF	0.00021	MB	0.00011	0.0000023	ug/L		12/04/19 08:19	12/06/19 19:32	1
Total TCDD	0.0000031	J,DX	0.000011	0.0000009	ug/L		12/04/19 08:19	12/06/19 19:32	1
				5					
Total TCDF	0.0000011	J,DX q	0.000011	0.0000007	ug/L		12/04/19 08:19	12/06/19 19:32	1
				8					
Total PeCDD	0.0000034	J,DX q	0.000054	0.0000020	ug/L		12/04/19 08:19	12/06/19 19:32	1
Total PeCDF	0.0000049	J,DX	0.000054	0.0000013	ug/L		12/04/19 08:19	12/06/19 19:32	1
Total HxCDD	0.000087	J,DX q	0.000054	0.0000011	ug/L		12/04/19 08:19	12/06/19 19:32	1
Total HxCDF	0.000070	J,DX q	0.000054	0.0000007	ug/L		12/04/19 08:19	12/06/19 19:32	1
				4					
Total HpCDD	0.00092	MB	0.000054	0.0000036	ug/L		12/04/19 08:19	12/06/19 19:32	1
Total HpCDF	0.00022		0.000054	0.0000025	ug/L		12/04/19 08:19	12/06/19 19:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	54		25 - 164				12/04/19 08:19	12/06/19 19:32	1
13C-2,3,7,8-TCDF	57		24 - 169				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,7,8-PeCDD	53		25 - 181				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,7,8-PeCDF	53		24 - 185				12/04/19 08:19	12/06/19 19:32	1
13C-2,3,4,7,8-PeCDF	57		21 - 178				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,4,7,8-HxCDD	55		32 - 141				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,6,7,8-HxCDD	52		28 - 130				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,4,7,8-HxCDF	66		26 - 152				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,6,7,8-HxCDF	55		26 - 123				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,7,8,9-HxCDF	62		29 - 147				12/04/19 08:19	12/06/19 19:32	1
13C-2,3,4,6,7,8-HxCDF	58		28 - 136				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,4,6,7,8-HpCDD	51		23 - 140				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,4,6,7,8-HpCDF	51		28 - 143				12/04/19 08:19	12/06/19 19:32	1
13C-1,2,3,4,7,8,9-HpCDF	58		26 - 138				12/04/19 08:19	12/06/19 19:32	1
13C-OCDD	45		17 - 157				12/04/19 08:19	12/06/19 19:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	98		35 - 197				12/04/19 08:19	12/06/19 19:32	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: B1BMP0009_20191127

Lab Sample ID: 440-255714-1

Date Collected: 11/27/19 08:30

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000011	0.0000013	ug/L		12/04/19 08:19	12/11/19 12:55	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	53		24 - 169				12/04/19 08:19	12/11/19 12:55	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD	88		35 - 197				12/04/19 08:19	12/11/19 12:55	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 13:04	12/01/19 16:25	1
Copper	13		2.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:25	1
Lead	3.2		1.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:25	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 11:46	12/01/19 12:44	1
Copper	5.3		2.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:44	1
Lead	ND		1.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:44	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/03/19 10:09	12/04/19 02:55	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:19	12/03/19 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	53		5.0	2.5	mg/L			12/02/19 14:58	1

Client Sample ID: B1BMP0010_20191127

Lab Sample ID: 440-255714-2

Date Collected: 11/27/19 08:10

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.0000015	J,DX q	0.000011	0.0000009	ug/L		12/04/19 08:19	12/06/19 20:20	1
2,3,7,8-TCDF	ND		0.000011	0.0000007	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,7,8-PeCDD	0.0000045	J,DX	0.000053	0.0000018	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,7,8-PeCDF	ND		0.000053	0.0000013	ug/L		12/04/19 08:19	12/06/19 20:20	1
2,3,4,7,8-PeCDF	ND		0.000053	0.0000014	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,4,7,8-HxCDD	0.0000066	J,DX	0.000053	0.0000009	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,6,7,8-HxCDD	0.0000075	J,DX	0.000053	0.0000010	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,7,8,9-HxCDD	0.0000083	J,DX	0.000053	0.0000009	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,4,7,8-HxCDF	0.0000020	J,DX	0.000053	0.0000007	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,6,7,8-HxCDF	0.0000014	J,DX	0.000053	0.0000008	ug/L		12/04/19 08:19	12/06/19 20:20	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: B1BMP0010_20191127

Lab Sample ID: 440-255714-2

Date Collected: 11/27/19 08:10

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	0.0000016	J,DX	0.000053	0.0000006	ug/L		12/04/19 08:19	12/06/19 20:20	1
2,3,4,6,7,8-HxCDF	ND		0.000053	0.0000006	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,4,6,7,8-HpCDD	0.00013	MB	0.000053	0.0000022	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,4,6,7,8-HpCDF	0.000034	J,DX	0.000053	0.0000017	ug/L		12/04/19 08:19	12/06/19 20:20	1
1,2,3,4,7,8,9-HpCDF	0.0000022	J,DX	0.000053	0.0000020	ug/L		12/04/19 08:19	12/06/19 20:20	1
OCDD	0.0014	MB	0.00011	0.0000026	ug/L		12/04/19 08:19	12/06/19 20:20	1
OCDF	0.000067	J,DX MB	0.00011	0.0000019	ug/L		12/04/19 08:19	12/06/19 20:20	1
Total TCDD	0.0000015	J,DX q	0.000011	0.0000009	ug/L		12/04/19 08:19	12/06/19 20:20	1
Total TCDF	ND		0.000011	0.0000007	ug/L		12/04/19 08:19	12/06/19 20:20	1
Total PeCDD	0.0000045	J,DX	0.000053	0.0000018	ug/L		12/04/19 08:19	12/06/19 20:20	1
Total PeCDF	ND		0.000053	0.0000013	ug/L		12/04/19 08:19	12/06/19 20:20	1
Total HxCDD	0.000043	J,DX q	0.000053	0.0000009	ug/L		12/04/19 08:19	12/06/19 20:20	1
Total HxCDF	0.000032	J,DX	0.000053	0.0000006	ug/L		12/04/19 08:19	12/06/19 20:20	1
Total HpCDD	0.00034	MB	0.000053	0.0000022	ug/L		12/04/19 08:19	12/06/19 20:20	1
Total HpCDF	0.000099	J,DX	0.000053	0.0000017	ug/L		12/04/19 08:19	12/06/19 20:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164				12/04/19 08:19	12/06/19 20:20	1
13C-2,3,7,8-TCDF	59		24 - 169				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,7,8-PeCDD	58		25 - 181				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,7,8-PeCDF	57		24 - 185				12/04/19 08:19	12/06/19 20:20	1
13C-2,3,4,7,8-PeCDF	61		21 - 178				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,4,7,8-HxCDD	61		32 - 141				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,6,7,8-HxCDD	57		28 - 130				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,4,7,8-HxCDF	72		26 - 152				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,7,8,9-HxCDF	68		29 - 147				12/04/19 08:19	12/06/19 20:20	1
13C-2,3,4,6,7,8-HxCDF	65		28 - 136				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,4,6,7,8-HpCDF	58		28 - 143				12/04/19 08:19	12/06/19 20:20	1
13C-1,2,3,4,7,8,9-HpCDF	63		26 - 138				12/04/19 08:19	12/06/19 20:20	1
13C-OCDD	46		17 - 157				12/04/19 08:19	12/06/19 20:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	105		35 - 197				12/04/19 08:19	12/06/19 20:20	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 13:04	12/01/19 16:27	1
Copper	7.5		2.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:27	1
Lead	1.0		1.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:27	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 11:46	12/01/19 12:51	1
Copper	5.3		2.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:51	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: B1BMP0010_20191127

Lab Sample ID: 440-255714-2

Date Collected: 11/27/19 08:10

Matrix: Water

Date Received: 11/27/19 15:55

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		1.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:51	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/03/19 10:09	12/03/19 18:50	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:19	12/03/19 16:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	8.3		3.3	1.7	mg/L			12/02/19 14:58	1

Client Sample ID: B1BMP0011_20191127

Lab Sample ID: 440-255714-3

Date Collected: 11/27/19 08:20

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.0000009	ug/L		12/04/19 08:19	12/06/19 21:08	1
2,3,7,8-TCDF	ND		0.000011	0.0000007	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,7,8-PeCDD	ND		0.000054	0.0000019	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,7,8-PeCDF	ND		0.000054	0.0000012	ug/L		12/04/19 08:19	12/06/19 21:08	1
2,3,4,7,8-PeCDF	ND		0.000054	0.0000013	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,4,7,8-HxCDD	0.0000046	J,DX	0.000054	0.0000011	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,6,7,8-HxCDD	0.0000032	J,DX	0.000054	0.0000011	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,7,8,9-HxCDD	0.0000040	J,DX q	0.000054	0.0000010	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,4,7,8-HxCDF	ND		0.000054	0.0000009	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,6,7,8-HxCDF	ND		0.000054	0.0000009	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,7,8,9-HxCDF	ND		0.000054	0.0000007	ug/L		12/04/19 08:19	12/06/19 21:08	1
2,3,4,6,7,8-HxCDF	ND		0.000054	0.0000007	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,4,6,7,8-HpCDD	0.00010	MB	0.000054	0.0000022	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,4,6,7,8-HpCDF	0.000020	J,DX	0.000054	0.0000016	ug/L		12/04/19 08:19	12/06/19 21:08	1
1,2,3,4,7,8,9-HpCDF	0.0000019	J,DX q	0.000054	0.0000018	ug/L		12/04/19 08:19	12/06/19 21:08	1
OCDD	0.0013	MB	0.00011	0.0000024	ug/L		12/04/19 08:19	12/06/19 21:08	1
OCDF	0.00017	MB	0.00011	0.0000026	ug/L		12/04/19 08:19	12/06/19 21:08	1
Total TCDD	ND		0.000011	0.0000009	ug/L		12/04/19 08:19	12/06/19 21:08	1
Total TCDF	ND		0.000011	0.0000007	ug/L		12/04/19 08:19	12/06/19 21:08	1
Total PeCDD	ND		0.000054	0.0000019	ug/L		12/04/19 08:19	12/06/19 21:08	1
Total PeCDF	ND		0.000054	0.0000012	ug/L		12/04/19 08:19	12/06/19 21:08	1
Total HxCDD	0.000018	J,DX q	0.000054	0.0000010	ug/L		12/04/19 08:19	12/06/19 21:08	1
Total HxCDF	0.0000080	J,DX	0.000054	0.0000007	ug/L		12/04/19 08:19	12/06/19 21:08	1
Total HpCDD	0.00022	MB	0.000054	0.0000022	ug/L		12/04/19 08:19	12/06/19 21:08	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: B1BMP0011_20191127

Lab Sample ID: 440-255714-3

Date Collected: 11/27/19 08:20

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HpCDF	0.000080	J,DX q	0.000054	0.000016	ug/L		12/04/19 08:19	12/06/19 21:08	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	55		25 - 164				12/04/19 08:19	12/06/19 21:08	1
13C-2,3,7,8-TCDF	58		24 - 169				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,7,8-PeCDD	55		25 - 181				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,7,8-PeCDF	56		24 - 185				12/04/19 08:19	12/06/19 21:08	1
13C-2,3,4,7,8-PeCDF	57		21 - 178				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,4,7,8-HxCDD	57		32 - 141				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,6,7,8-HxCDD	52		28 - 130				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,4,7,8-HxCDF	65		26 - 152				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,6,7,8-HxCDF	57		26 - 123				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,7,8,9-HxCDF	65		29 - 147				12/04/19 08:19	12/06/19 21:08	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,4,6,7,8-HpCDD	51		23 - 140				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,4,6,7,8-HpCDF	52		28 - 143				12/04/19 08:19	12/06/19 21:08	1
13C-1,2,3,4,7,8,9-HpCDF	58		26 - 138				12/04/19 08:19	12/06/19 21:08	1
13C-OCDD	42		17 - 157				12/04/19 08:19	12/06/19 21:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	98		35 - 197				12/04/19 08:19	12/06/19 21:08	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 13:04	12/01/19 16:30	1
Copper	8.3		2.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:30	1
Lead	1.2		1.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:30	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 11:46	12/01/19 12:53	1
Copper	6.9		2.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:53	1
Lead	ND		1.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:53	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/03/19 10:09	12/03/19 18:53	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:19	12/03/19 16:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	13		5.0	2.5	mg/L			12/02/19 14:58	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: ILBMP0004_20191127

Lab Sample ID: 440-255714-4

Date Collected: 11/27/19 09:00

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 21:55	1
2,3,7,8-TCDF	ND		0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,7,8-PeCDD	0.0000071	J,DX	0.000052	0.0000022	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,7,8-PeCDF	ND		0.000052	0.0000012	ug/L		12/04/19 08:19	12/06/19 21:55	1
2,3,4,7,8-PeCDF	ND		0.000052	0.0000013	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,4,7,8-HxCDD	0.000014	J,DX	0.000052	0.0000014	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,6,7,8-HxCDD	0.000019	J,DX	0.000052	0.0000015	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,7,8,9-HxCDD	0.000023	J,DX	0.000052	0.0000013	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,4,7,8-HxCDF	0.0000025	J,DX q	0.000052	0.0000011	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,6,7,8-HxCDF	0.0000029	J,DX	0.000052	0.0000011	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,7,8,9-HxCDF	0.0000017	J,DX	0.000052	0.0000008	ug/L		12/04/19 08:19	12/06/19 21:55	1
2,3,4,6,7,8-HxCDF	0.0000028	J,DX	0.000052	0.0000008	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,4,6,7,8-HpCDD	0.00033	MB	0.000052	0.0000036	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,4,6,7,8-HpCDF	0.000041	J,DX	0.000052	0.0000016	ug/L		12/04/19 08:19	12/06/19 21:55	1
1,2,3,4,7,8,9-HpCDF	0.0000062	J,DX q	0.000052	0.0000020	ug/L		12/04/19 08:19	12/06/19 21:55	1
OCDD	0.0040	MB	0.00010	0.0000038	ug/L		12/04/19 08:19	12/06/19 21:55	1
OCDF	0.00012	MB	0.00010	0.0000024	ug/L		12/04/19 08:19	12/06/19 21:55	1
Total TCDD	0.0000013	J,DX q	0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 21:55	1
Total TCDF	ND		0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 21:55	1
Total PeCDD	0.0000084	J,DX q	0.000052	0.0000022	ug/L		12/04/19 08:19	12/06/19 21:55	1
Total PeCDF	ND		0.000052	0.0000012	ug/L		12/04/19 08:19	12/06/19 21:55	1
Total HxCDD	0.00012	J,DX q	0.000052	0.0000013	ug/L		12/04/19 08:19	12/06/19 21:55	1
Total HxCDF	0.000031	J,DX q	0.000052	0.0000008	ug/L		12/04/19 08:19	12/06/19 21:55	1
Total HpCDD	0.00076	MB	0.000052	0.0000036	ug/L		12/04/19 08:19	12/06/19 21:55	1
Total HpCDF	0.000080	J,DX q	0.000052	0.0000016	ug/L		12/04/19 08:19	12/06/19 21:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	48		25 - 164				12/04/19 08:19	12/06/19 21:55	1
13C-2,3,7,8-TCDF	48		24 - 169				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,7,8-PeCDD	43		25 - 181				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,7,8-PeCDF	44		24 - 185				12/04/19 08:19	12/06/19 21:55	1
13C-2,3,4,7,8-PeCDF	46		21 - 178				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,4,7,8-HxCDD	47		32 - 141				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,6,7,8-HxCDD	41		28 - 130				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,4,7,8-HxCDF	56		26 - 152				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,6,7,8-HxCDF	47		26 - 123				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,7,8,9-HxCDF	52		29 - 147				12/04/19 08:19	12/06/19 21:55	1
13C-2,3,4,6,7,8-HxCDF	48		28 - 136				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,4,6,7,8-HpCDD	40		23 - 140				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,4,6,7,8-HpCDF	41		28 - 143				12/04/19 08:19	12/06/19 21:55	1
13C-1,2,3,4,7,8,9-HpCDF	48		26 - 138				12/04/19 08:19	12/06/19 21:55	1
13C-OCDD	32		17 - 157				12/04/19 08:19	12/06/19 21:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	93		35 - 197				12/04/19 08:19	12/06/19 21:55	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: ILBMP0004_20191127

Lab Sample ID: 440-255714-4

Date Collected: 11/27/19 09:00

Matrix: Water

Date Received: 11/27/19 15:55

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.0		1.0	0.25	ug/L		11/29/19 13:04	12/01/19 16:40	1
Copper	14		2.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:40	1
Lead	4.2		1.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:40	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.27	J,DX	1.0	0.25	ug/L		11/29/19 11:46	12/01/19 12:56	1
Copper	5.5		2.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:56	1
Lead	ND		1.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:56	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/03/19 10:09	12/03/19 18:55	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:19	12/03/19 16:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	41		5.0	2.5	mg/L			12/02/19 14:58	1

Client Sample ID: ILBMP0005_20191127

Lab Sample ID: 440-255714-5

Date Collected: 11/27/19 09:10

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.0000036	J,DX	0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,7,8-PeCDD	0.000010	J,DX q	0.000052	0.0000017	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,7,8-PeCDF	0.0000040	J,DX q	0.000052	0.0000013	ug/L		12/04/19 08:19	12/06/19 22:43	1
2,3,4,7,8-PeCDF	0.0000041	J,DX q	0.000052	0.0000014	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,4,7,8-HxCDD	0.000018	J,DX	0.000052	0.0000012	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,6,7,8-HxCDD	0.000024	J,DX	0.000052	0.0000013	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,7,8,9-HxCDD	0.000026	J,DX	0.000052	0.0000012	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,4,7,8-HxCDF	0.0000090	J,DX	0.000052	0.0000009	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,6,7,8-HxCDF	0.0000098	J,DX q	0.000052	0.0000009	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,7,8,9-HxCDF	0.0000091	J,DX	0.000052	0.0000007	ug/L		12/04/19 08:19	12/06/19 22:43	1
2,3,4,6,7,8-HxCDF	0.000011	J,DX	0.000052	0.0000007	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,4,6,7,8-HpCDD	0.00028	MB	0.000052	0.0000030	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,4,6,7,8-HpCDF	0.00010		0.000052	0.0000019	ug/L		12/04/19 08:19	12/06/19 22:43	1
1,2,3,4,7,8,9-HpCDF	0.000016	J,DX q	0.000052	0.0000022	ug/L		12/04/19 08:19	12/06/19 22:43	1
OCDD	0.0025	MB	0.00010	0.0000025	ug/L		12/04/19 08:19	12/06/19 22:43	1
OCDF	0.00014	MB	0.00010	0.0000018	ug/L		12/04/19 08:19	12/06/19 22:43	1
Total TCDD	0.0000046	J,DX q	0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 22:43	1
Total TCDF	0.0000036	J,DX q	0.000010	0.0000006	ug/L		12/04/19 08:19	12/06/19 22:43	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: ILBMP0005_20191127

Lab Sample ID: 440-255714-5

Date Collected: 11/27/19 09:10

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	0.000017	J,DX q	0.000052	0.0000017	ug/L		12/04/19 08:19	12/06/19 22:43	1
Total PeCDF	0.000024	J,DX q	0.000052	0.0000013	ug/L		12/04/19 08:19	12/06/19 22:43	1
Total HxCDD	0.00013	J,DX q	0.000052	0.0000012	ug/L		12/04/19 08:19	12/06/19 22:43	1
Total HxCDF	0.00010	J,DX q	0.000052	0.0000007	ug/L		12/04/19 08:19	12/06/19 22:43	1
				0					
Total HpCDD	0.00065	MB	0.000052	0.0000030	ug/L		12/04/19 08:19	12/06/19 22:43	1
Total HpCDF	0.00017	J,DX q	0.000052	0.0000019	ug/L		12/04/19 08:19	12/06/19 22:43	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		25 - 164				12/04/19 08:19	12/06/19 22:43	1
13C-2,3,7,8-TCDF	62		24 - 169				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,7,8-PeCDD	59		25 - 181				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,7,8-PeCDF	59		24 - 185				12/04/19 08:19	12/06/19 22:43	1
13C-2,3,4,7,8-PeCDF	61		21 - 178				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,4,7,8-HxCDD	63		32 - 141				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,6,7,8-HxCDD	57		28 - 130				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,4,7,8-HxCDF	74		26 - 152				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,6,7,8-HxCDF	62		26 - 123				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,7,8,9-HxCDF	70		29 - 147				12/04/19 08:19	12/06/19 22:43	1
13C-2,3,4,6,7,8-HxCDF	63		28 - 136				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,4,6,7,8-HpCDF	58		28 - 143				12/04/19 08:19	12/06/19 22:43	1
13C-1,2,3,4,7,8,9-HpCDF	65		26 - 138				12/04/19 08:19	12/06/19 22:43	1
13C-OCDD	49		17 - 157				12/04/19 08:19	12/06/19 22:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	104		35 - 197				12/04/19 08:19	12/06/19 22:43	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000010	0.0000052	ug/L		12/04/19 08:19	12/11/19 13:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	56		24 - 169				12/04/19 08:19	12/11/19 13:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	90		35 - 197				12/04/19 08:19	12/11/19 13:33	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 13:04	12/01/19 16:42	1
Copper	10		2.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:42	1
Lead	3.5		1.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:42	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 11:46	12/01/19 12:58	1
Copper	7.0		2.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:58	1
Lead	ND		1.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:58	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/03/19 10:09	12/03/19 19:02	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: ILBMP0005_20191127

Lab Sample ID: 440-255714-5

Date Collected: 11/27/19 09:10

Matrix: Water

Date Received: 11/27/19 15:55

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:19	12/03/19 16:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	27		4.0	2.0	mg/L			12/02/19 14:58	1

Client Sample ID: ILBMP0008_20191127

Lab Sample ID: 440-255714-7

Date Collected: 11/27/19 08:50

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.000011	ug/L		12/04/19 08:19	12/07/19 03:10	1
2,3,7,8-TCDF	ND		0.000011	0.000010	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,7,8-PeCDD	ND		0.000054	0.000041	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,7,8-PeCDF	ND		0.000054	0.000019	ug/L		12/04/19 08:19	12/07/19 03:10	1
2,3,4,7,8-PeCDF	ND		0.000054	0.000019	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,4,7,8-HxCDD	0.000065	J,DX q	0.000054	0.000017	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,6,7,8-HxCDD	0.000014	J,DX	0.000054	0.000017	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,7,8,9-HxCDD	0.000012	J,DX	0.000054	0.000016	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,4,7,8-HxCDF	0.000061	J,DX	0.000054	0.000011	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,6,7,8-HxCDF	0.000091	J,DX	0.000054	0.000012	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,7,8,9-HxCDF	ND		0.000054	0.000008	ug/L		12/04/19 08:19	12/07/19 03:10	1
2,3,4,6,7,8-HxCDF	0.000046	J,DX	0.000054	0.000009	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,4,6,7,8-HpCDD	0.00033	MB	0.000054	0.000053	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,4,6,7,8-HpCDF	0.00018		0.000054	0.000027	ug/L		12/04/19 08:19	12/07/19 03:10	1
1,2,3,4,7,8,9-HpCDF	0.000062	J,DX	0.000054	0.000034	ug/L		12/04/19 08:19	12/07/19 03:10	1
OCDD	0.0035	MB	0.00011	0.000028	ug/L		12/04/19 08:19	12/07/19 03:10	1
OCDF	0.00038	MB	0.00011	0.000023	ug/L		12/04/19 08:19	12/07/19 03:10	1
Total TCDD	ND		0.000011	0.000011	ug/L		12/04/19 08:19	12/07/19 03:10	1
Total TCDF	0.000019	J,DX q	0.000011	0.000010	ug/L		12/04/19 08:19	12/07/19 03:10	1
Total PeCDD	0.000046	J,DX q	0.000054	0.000041	ug/L		12/04/19 08:19	12/07/19 03:10	1
Total PeCDF	0.000031	J,DX	0.000054	0.000019	ug/L		12/04/19 08:19	12/07/19 03:10	1
Total HxCDD	0.00011	J,DX q	0.000054	0.000016	ug/L		12/04/19 08:19	12/07/19 03:10	1
Total HxCDF	0.00013	J,DX	0.000054	0.000008	ug/L		12/04/19 08:19	12/07/19 03:10	1
Total HpCDD	0.0016	MB	0.000054	0.000053	ug/L		12/04/19 08:19	12/07/19 03:10	1
Total HpCDF	0.00043	J,DX	0.000054	0.000027	ug/L		12/04/19 08:19	12/07/19 03:10	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		25 - 164				12/04/19 08:19	12/07/19 03:10	1
13C-2,3,7,8-TCDF	61		24 - 169				12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,7,8-PeCDD	57		25 - 181				12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,7,8-PeCDF	59		24 - 185				12/04/19 08:19	12/07/19 03:10	1
13C-2,3,4,7,8-PeCDF	61		21 - 178				12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,4,7,8-HxCDD	62		32 - 141				12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,6,7,8-HxCDD	54		28 - 130				12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,4,7,8-HxCDF	73		26 - 152				12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,6,7,8-HxCDF	62		26 - 123				12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,7,8,9-HxCDF	71		29 - 147				12/04/19 08:19	12/07/19 03:10	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: ILBMP0008_20191127

Lab Sample ID: 440-255714-7

Date Collected: 11/27/19 08:50

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,4,6,7,8-HxCDF	65		28 - 136	12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,4,6,7,8-HpCDD	51		23 - 140	12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,4,6,7,8-HpCDF	57		28 - 143	12/04/19 08:19	12/07/19 03:10	1
13C-1,2,3,4,7,8,9-HpCDF	63		26 - 138	12/04/19 08:19	12/07/19 03:10	1
13C-OCDD	48		17 - 157	12/04/19 08:19	12/07/19 03:10	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	117		35 - 197	12/04/19 08:19	12/07/19 03:10	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.94	J,DX	1.0	0.25	ug/L		11/29/19 13:04	12/01/19 16:44	1
Copper	13		2.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:44	1
Lead	8.7		1.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:44	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.34	J,DX	1.0	0.25	ug/L		11/29/19 11:46	12/01/19 13:00	1
Copper	6.1		2.0	0.50	ug/L		11/29/19 11:46	12/01/19 13:00	1
Lead	ND		1.0	0.50	ug/L		11/29/19 11:46	12/01/19 13:00	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/03/19 10:09	12/03/19 19:04	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:19	12/03/19 16:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	72		10	5.0	mg/L			12/02/19 14:58	1

Client Sample ID: LPBMP0002_20191127

Lab Sample ID: 440-255714-8

Date Collected: 11/27/19 09:50

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.0000016	J,DX q	0.000011	0.0000011	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,7,8-PeCDD	0.0000065	J,DX	0.000054	0.0000019	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,7,8-PeCDF	0.0000040	J,DX q	0.000054	0.0000015	ug/L		12/04/19 08:19	12/07/19 03:58	1
2,3,4,7,8-PeCDF	0.0000045	J,DX	0.000054	0.0000016	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,4,7,8-HxCDD	0.0000094	J,DX	0.000054	0.0000013	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,6,7,8-HxCDD	0.000012	J,DX	0.000054	0.0000014	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,7,8,9-HxCDD	0.000013	J,DX	0.000054	0.0000013	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,4,7,8-HxCDF	0.0000060	J,DX q	0.000054	0.0000009	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,6,7,8-HxCDF	0.0000063	J,DX	0.000054	0.0000010	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,7,8,9-HxCDF	0.0000043	J,DX	0.000054	0.0000007	ug/L		12/04/19 08:19	12/07/19 03:58	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: LPBMP0002_20191127

Lab Sample ID: 440-255714-8

Date Collected: 11/27/19 09:50

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6,7,8-HxCDF	0.000067	J,DX	0.000054	0.000007	ug/L		12/04/19 08:19	12/07/19 03:58	1
				7					
1,2,3,4,6,7,8-HpCDD	0.00011	MB	0.000054	0.000021	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,4,6,7,8-HpCDF	0.000038	J,DX	0.000054	0.000015	ug/L		12/04/19 08:19	12/07/19 03:58	1
1,2,3,4,7,8,9-HpCDF	0.000058	J,DX q	0.000054	0.000018	ug/L		12/04/19 08:19	12/07/19 03:58	1
OCDD	0.0010	MB	0.00011	0.000021	ug/L		12/04/19 08:19	12/07/19 03:58	1
OCDF	0.000059	J,DX MB	0.00011	0.000023	ug/L		12/04/19 08:19	12/07/19 03:58	1
Total TCDD	0.000028	J,DX q	0.000011	0.000011	ug/L		12/04/19 08:19	12/07/19 03:58	1
Total TCDF	0.000016	J,DX q	0.000011	0.000008	ug/L		12/04/19 08:19	12/07/19 03:58	1
				5					
Total PeCDD	0.000065	J,DX	0.000054	0.000019	ug/L		12/04/19 08:19	12/07/19 03:58	1
Total PeCDF	0.000015	J,DX q	0.000054	0.000015	ug/L		12/04/19 08:19	12/07/19 03:58	1
Total HxCDD	0.000060	J,DX	0.000054	0.000013	ug/L		12/04/19 08:19	12/07/19 03:58	1
Total HxCDF	0.000045	J,DX q	0.000054	0.000007	ug/L		12/04/19 08:19	12/07/19 03:58	1
				3					
Total HpCDD	0.00025	MB	0.000054	0.000021	ug/L		12/04/19 08:19	12/07/19 03:58	1
Total HpCDF	0.000061	J,DX q	0.000054	0.000015	ug/L		12/04/19 08:19	12/07/19 03:58	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	53		25 - 164				12/04/19 08:19	12/07/19 03:58	1
13C-2,3,7,8-TCDF	53		24 - 169				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,7,8-PeCDD	51		25 - 181				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,7,8-PeCDF	51		24 - 185				12/04/19 08:19	12/07/19 03:58	1
13C-2,3,4,7,8-PeCDF	54		21 - 178				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,4,7,8-HxCDD	56		32 - 141				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,6,7,8-HxCDD	49		28 - 130				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,4,7,8-HxCDF	63		26 - 152				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,6,7,8-HxCDF	55		26 - 123				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,7,8,9-HxCDF	63		29 - 147				12/04/19 08:19	12/07/19 03:58	1
13C-2,3,4,6,7,8-HxCDF	56		28 - 136				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,4,6,7,8-HpCDD	49		23 - 140				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,4,6,7,8-HpCDF	50		28 - 143				12/04/19 08:19	12/07/19 03:58	1
13C-1,2,3,4,7,8,9-HpCDF	57		26 - 138				12/04/19 08:19	12/07/19 03:58	1
13C-OCDD	40		17 - 157				12/04/19 08:19	12/07/19 03:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	97		35 - 197				12/04/19 08:19	12/07/19 03:58	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000011	0.000013	ug/L		12/04/19 08:19	12/11/19 14:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	47		24 - 169				12/04/19 08:19	12/11/19 14:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	85		35 - 197				12/04/19 08:19	12/11/19 14:11	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 13:04	12/01/19 16:46	1
Copper	15		2.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:46	1
Lead	2.4		1.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:46	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: LPBMP0002_20191127

Lab Sample ID: 440-255714-8

Date Collected: 11/27/19 09:50

Matrix: Water

Date Received: 11/27/19 15:55

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 11:46	12/01/19 13:08	1
Copper	11		2.0	0.50	ug/L		11/29/19 11:46	12/01/19 13:08	1
Lead	ND		1.0	0.50	ug/L		11/29/19 11:46	12/01/19 13:08	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/03/19 10:09	12/03/19 19:07	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:19	12/03/19 16:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	25		6.7	3.3	mg/L			12/02/19 14:58	1

Client Sample ID: LPBMP0003_20191127

Lab Sample ID: 440-255714-9

Date Collected: 11/27/19 09:30

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000012	0.000015	ug/L		12/04/19 08:19	12/07/19 04:46	1
2,3,7,8-TCDF	ND		0.000012	0.000008	ug/L		12/04/19 08:19	12/07/19 04:46	1
				5					
1,2,3,7,8-PeCDD	ND		0.000060	0.000029	ug/L		12/04/19 08:19	12/07/19 04:46	1
1,2,3,7,8-PeCDF	ND		0.000060	0.000018	ug/L		12/04/19 08:19	12/07/19 04:46	1
2,3,4,7,8-PeCDF	ND		0.000060	0.000018	ug/L		12/04/19 08:19	12/07/19 04:46	1
1,2,3,4,7,8-HxCDD	ND		0.000060	0.000015	ug/L		12/04/19 08:19	12/07/19 04:46	1
1,2,3,6,7,8-HxCDD	ND		0.000060	0.000015	ug/L		12/04/19 08:19	12/07/19 04:46	1
1,2,3,7,8,9-HxCDD	ND		0.000060	0.000014	ug/L		12/04/19 08:19	12/07/19 04:46	1
1,2,3,4,7,8-HxCDF	0.000012	J,DX q	0.000060	0.000009	ug/L		12/04/19 08:19	12/07/19 04:46	1
				9					
1,2,3,6,7,8-HxCDF	ND		0.000060	0.000011	ug/L		12/04/19 08:19	12/07/19 04:46	1
1,2,3,7,8,9-HxCDF	ND		0.000060	0.000008	ug/L		12/04/19 08:19	12/07/19 04:46	1
				6					
2,3,4,6,7,8-HxCDF	ND		0.000060	0.000008	ug/L		12/04/19 08:19	12/07/19 04:46	1
				2					
1,2,3,4,6,7,8-HpCDD	0.000018	J,DX MB	0.000060	0.000013	ug/L		12/04/19 08:19	12/07/19 04:46	1
1,2,3,4,6,7,8-HpCDF	0.000099	J,DX	0.000060	0.000019	ug/L		12/04/19 08:19	12/07/19 04:46	1
1,2,3,4,7,8,9-HpCDF	ND		0.000060	0.000024	ug/L		12/04/19 08:19	12/07/19 04:46	1
OCDD	0.00014	MB	0.00012	0.000023	ug/L		12/04/19 08:19	12/07/19 04:46	1
OCDF	0.000021	J,DX MB	0.00012	0.000031	ug/L		12/04/19 08:19	12/07/19 04:46	1
Total TCDD	ND		0.000012	0.000015	ug/L		12/04/19 08:19	12/07/19 04:46	1
Total TCDF	ND		0.000012	0.000008	ug/L		12/04/19 08:19	12/07/19 04:46	1
				5					
Total PeCDD	ND		0.000060	0.000029	ug/L		12/04/19 08:19	12/07/19 04:46	1
Total PeCDF	ND		0.000060	0.000018	ug/L		12/04/19 08:19	12/07/19 04:46	1
Total HxCDD	0.000040	J,DX	0.000060	0.000014	ug/L		12/04/19 08:19	12/07/19 04:46	1
Total HxCDF	0.000045	J,DX q	0.000060	0.000008	ug/L		12/04/19 08:19	12/07/19 04:46	1
				2					
Total HpCDD	0.000050	J,DX MB	0.000060	0.000013	ug/L		12/04/19 08:19	12/07/19 04:46	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: LPBMP0003_20191127

Lab Sample ID: 440-255714-9

Date Collected: 11/27/19 09:30

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HpCDF	0.000014	J,DX	0.000060	0.0000019	ug/L		12/04/19 08:19	12/07/19 04:46	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	49		25 - 164				12/04/19 08:19	12/07/19 04:46	1
13C-2,3,7,8-TCDF	51		24 - 169				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,7,8-PeCDD	43		25 - 181				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,7,8-PeCDF	44		24 - 185				12/04/19 08:19	12/07/19 04:46	1
13C-2,3,4,7,8-PeCDF	48		21 - 178				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,4,7,8-HxCDD	49		32 - 141				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,6,7,8-HxCDD	43		28 - 130				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,6,7,8-HxCDF	48		26 - 123				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,7,8,9-HxCDF	52		29 - 147				12/04/19 08:19	12/07/19 04:46	1
13C-2,3,4,6,7,8-HxCDF	51		28 - 136				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,4,6,7,8-HpCDD	40		23 - 140				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,4,6,7,8-HpCDF	43		28 - 143				12/04/19 08:19	12/07/19 04:46	1
13C-1,2,3,4,7,8,9-HpCDF	47		26 - 138				12/04/19 08:19	12/07/19 04:46	1
13C-OCDD	32		17 - 157				12/04/19 08:19	12/07/19 04:46	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD	96		35 - 197				12/04/19 08:19	12/07/19 04:46	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 13:04	12/01/19 16:48	1
Copper	12		2.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:48	1
Lead	0.91	J,DX	1.0	0.50	ug/L		11/29/19 13:04	12/01/19 16:48	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 11:46	12/01/19 13:10	1
Copper	13		2.0	0.50	ug/L		11/29/19 11:46	12/01/19 13:10	1
Lead	ND		1.0	0.50	ug/L		11/29/19 11:46	12/01/19 13:10	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/03/19 10:09	12/03/19 19:09	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:19	12/03/19 16:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	8.6		2.0	1.0	mg/L			12/02/19 14:58	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: LPBMP0004_20191127

Lab Sample ID: 440-255714-10

Date Collected: 11/27/19 10:00

Matrix: Water

Date Received: 11/27/19 15:55

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000009	ug/L		12/04/19 08:19	12/07/19 05:33	1
				3					
2,3,7,8-TCDF	ND		0.000010	0.0000007	ug/L		12/04/19 08:19	12/07/19 05:33	1
				4					
1,2,3,7,8-PeCDD	ND		0.000052	0.0000019	ug/L		12/04/19 08:19	12/07/19 05:33	1
1,2,3,7,8-PeCDF	ND		0.000052	0.0000013	ug/L		12/04/19 08:19	12/07/19 05:33	1
2,3,4,7,8-PeCDF	ND		0.000052	0.0000014	ug/L		12/04/19 08:19	12/07/19 05:33	1
1,2,3,4,7,8-HxCDD	0.0000031	J,DX	0.000052	0.0000010	ug/L		12/04/19 08:19	12/07/19 05:33	1
1,2,3,6,7,8-HxCDD	0.0000024	J,DX	0.000052	0.0000011	ug/L		12/04/19 08:19	12/07/19 05:33	1
1,2,3,7,8,9-HxCDD	0.0000042	J,DX	0.000052	0.0000009	ug/L		12/04/19 08:19	12/07/19 05:33	1
				8					
1,2,3,4,7,8-HxCDF	ND		0.000052	0.0000007	ug/L		12/04/19 08:19	12/07/19 05:33	1
				9					
1,2,3,6,7,8-HxCDF	ND		0.000052	0.0000008	ug/L		12/04/19 08:19	12/07/19 05:33	1
				3					
1,2,3,7,8,9-HxCDF	ND		0.000052	0.0000006	ug/L		12/04/19 08:19	12/07/19 05:33	1
				2					
2,3,4,6,7,8-HxCDF	ND		0.000052	0.0000006	ug/L		12/04/19 08:19	12/07/19 05:33	1
				4					
1,2,3,4,6,7,8-HpCDD	0.000038	J,DX MB	0.000052	0.0000013	ug/L		12/04/19 08:19	12/07/19 05:33	1
1,2,3,4,6,7,8-HpCDF	0.000010	J,DX	0.000052	0.0000017	ug/L		12/04/19 08:19	12/07/19 05:33	1
1,2,3,4,7,8,9-HpCDF	ND		0.000052	0.0000020	ug/L		12/04/19 08:19	12/07/19 05:33	1
OCDD	0.000039	MB	0.00010	0.0000024	ug/L		12/04/19 08:19	12/07/19 05:33	1
OCDF	0.000023	J,DX MB	0.00010	0.0000024	ug/L		12/04/19 08:19	12/07/19 05:33	1
Total TCDD	ND		0.000010	0.0000009	ug/L		12/04/19 08:19	12/07/19 05:33	1
				3					
Total TCDF	ND		0.000010	0.0000007	ug/L		12/04/19 08:19	12/07/19 05:33	1
				4					
Total PeCDD	ND		0.000052	0.0000019	ug/L		12/04/19 08:19	12/07/19 05:33	1
Total PeCDF	ND		0.000052	0.0000013	ug/L		12/04/19 08:19	12/07/19 05:33	1
Total HxCDD	0.000018	J,DX q	0.000052	0.0000009	ug/L		12/04/19 08:19	12/07/19 05:33	1
				8					
Total HxCDF	0.0000032	J,DX q	0.000052	0.0000006	ug/L		12/04/19 08:19	12/07/19 05:33	1
				2					
Total HpCDD	0.000081	MB	0.000052	0.0000013	ug/L		12/04/19 08:19	12/07/19 05:33	1
Total HpCDF	0.000015	J,DX q	0.000052	0.0000017	ug/L		12/04/19 08:19	12/07/19 05:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	54		25 - 164				12/04/19 08:19	12/07/19 05:33	1
13C-2,3,7,8-TCDF	53		24 - 169				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,7,8-PeCDD	49		25 - 181				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,7,8-PeCDF	51		24 - 185				12/04/19 08:19	12/07/19 05:33	1
13C-2,3,4,7,8-PeCDF	53		21 - 178				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,4,7,8-HxCDD	51		32 - 141				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,6,7,8-HxCDD	48		28 - 130				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,4,7,8-HxCDF	61		26 - 152				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,6,7,8-HxCDF	52		26 - 123				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,7,8,9-HxCDF	58		29 - 147				12/04/19 08:19	12/07/19 05:33	1
13C-2,3,4,6,7,8-HxCDF	54		28 - 136				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,4,6,7,8-HpCDD	46		23 - 140				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,4,6,7,8-HpCDF	48		28 - 143				12/04/19 08:19	12/07/19 05:33	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138				12/04/19 08:19	12/07/19 05:33	1
13C-OCDD	37		17 - 157				12/04/19 08:19	12/07/19 05:33	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: LPBMP0004_20191127

Lab Sample ID: 440-255714-10

Date Collected: 11/27/19 10:00

Matrix: Water

Date Received: 11/27/19 15:55

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	100		35 - 197	12/04/19 08:19	12/07/19 05:33	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L	-	11/29/19 13:04	12/01/19 16:50	1
Copper	9.0		2.0	0.50	ug/L	-	11/29/19 13:04	12/01/19 16:50	1
Lead	0.71	J,DX	1.0	0.50	ug/L	-	11/29/19 13:04	12/01/19 16:50	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L	-	11/29/19 11:46	12/01/19 13:12	1
Copper	8.1		2.0	0.50	ug/L	-	11/29/19 11:46	12/01/19 13:12	1
Lead	ND		1.0	0.50	ug/L	-	11/29/19 11:46	12/01/19 13:12	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L	-	12/03/19 10:09	12/03/19 19:11	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L	-	12/02/19 21:19	12/03/19 16:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	10		3.3	1.7	mg/L	-		12/04/19 19:53	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	40CFR136A	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
Subcontract	Particle Size	None	IGL
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV
FILTRATION	Sample Filtration	None	TAL IRV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

IGL = Integrated Geosciences Laboratories LLC, 6016 Centralcrest St, Houston, TX 77092

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: B1BMP0009_20191127

Lab Sample ID: 440-255714-1

Date Collected: 11/27/19 08:30

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B	RA		928.7 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B	RA	1			344849	12/11/19 12:55	ALM	TAL SAC
Total/NA	Prep	1613B			928.7 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343844	12/06/19 19:32	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	582972	11/29/19 11:46	EP	TAL IRV
Dissolved	Analysis	200.8		1			583148	12/01/19 12:44	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	582994	11/29/19 13:04	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			583153	12/01/19 16:25	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583386	12/02/19 21:19	DB	TAL IRV
Dissolved	Analysis	245.1		1			583644	12/03/19 16:49	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583478	12/03/19 10:09	MEM	TAL IRV
Total/NA	Analysis	245.1		1			583647	12/04/19 02:55	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	200 mL	1000 mL	583318	12/02/19 14:58	KL	TAL IRV

Client Sample ID: B1BMP0010_20191127

Lab Sample ID: 440-255714-2

Date Collected: 11/27/19 08:10

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			940.2 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343844	12/06/19 20:20	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	582972	11/29/19 11:46	EP	TAL IRV
Dissolved	Analysis	200.8		1			583148	12/01/19 12:51	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	582994	11/29/19 13:04	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			583153	12/01/19 16:27	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583386	12/02/19 21:19	DB	TAL IRV
Dissolved	Analysis	245.1		1			583644	12/03/19 16:47	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583478	12/03/19 10:09	MEM	TAL IRV
Total/NA	Analysis	245.1		1			583647	12/03/19 18:50	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	300 mL	1000 mL	583318	12/02/19 14:58	KL	TAL IRV

Client Sample ID: B1BMP0011_20191127

Lab Sample ID: 440-255714-3

Date Collected: 11/27/19 08:20

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			922.1 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343844	12/06/19 21:08	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	582972	11/29/19 11:46	EP	TAL IRV
Dissolved	Analysis	200.8		1			583148	12/01/19 12:53	MQP	TAL IRV

Eurofins TestAmerica, Irvine

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: B1BMP0011_20191127

Lab Sample ID: 440-255714-3

Date Collected: 11/27/19 08:20

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			25 mL	25 mL	582994	11/29/19 13:04	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			583153	12/01/19 16:30	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583386	12/02/19 21:19	DB	TAL IRV
Dissolved	Analysis	245.1		1			583644	12/03/19 16:45	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583478	12/03/19 10:09	MEM	TAL IRV
Total/NA	Analysis	245.1		1			583647	12/03/19 18:53	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	200 mL	1000 mL	583318	12/02/19 14:58	KL	TAL IRV

Client Sample ID: ILBMP0004_20191127

Lab Sample ID: 440-255714-4

Date Collected: 11/27/19 09:00

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			968.8 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343844	12/06/19 21:55	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	582972	11/29/19 11:46	EP	TAL IRV
Dissolved	Analysis	200.8		1			583148	12/01/19 12:56	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	582994	11/29/19 13:04	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			583153	12/01/19 16:40	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583386	12/02/19 21:19	DB	TAL IRV
Dissolved	Analysis	245.1		1			583644	12/03/19 16:43	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583478	12/03/19 10:09	MEM	TAL IRV
Total/NA	Analysis	245.1		1			583647	12/03/19 18:55	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	200 mL	1000 mL	583318	12/02/19 14:58	KL	TAL IRV

Client Sample ID: ILBMP0005_20191127

Lab Sample ID: 440-255714-5

Date Collected: 11/27/19 09:10

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B	RA		953.5 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B	RA	1			344849	12/11/19 13:33	ALM	TAL SAC
Total/NA	Prep	1613B			953.5 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343844	12/06/19 22:43	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	582972	11/29/19 11:46	EP	TAL IRV
Dissolved	Analysis	200.8		1			583148	12/01/19 12:58	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	582994	11/29/19 13:04	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			583153	12/01/19 16:42	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583386	12/02/19 21:19	DB	TAL IRV
Dissolved	Analysis	245.1		1			583644	12/03/19 16:41	MEM	TAL IRV

Eurofins TestAmerica, Irvine

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: ILBMP0005_20191127

Lab Sample ID: 440-255714-5

Date Collected: 11/27/19 09:10

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			20 mL	20 mL	583478	12/03/19 10:09	MEM	TAL IRV
Total/NA	Analysis	245.1		1			583647	12/03/19 19:02	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	250 mL	1000 mL	583318	12/02/19 14:58	KL	TAL IRV

Client Sample ID: ILBMP0008_20191127

Lab Sample ID: 440-255714-7

Date Collected: 11/27/19 08:50

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			920.4 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343845	12/07/19 03:10	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	582972	11/29/19 11:46	EP	TAL IRV
Dissolved	Analysis	200.8		1			583148	12/01/19 13:00	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	582994	11/29/19 13:04	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			583153	12/01/19 16:44	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583386	12/02/19 21:19	DB	TAL IRV
Dissolved	Analysis	245.1		1			583644	12/03/19 16:39	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583478	12/03/19 10:09	MEM	TAL IRV
Total/NA	Analysis	245.1		1			583647	12/03/19 19:04	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	100 mL	1000 mL	583318	12/02/19 14:58	KL	TAL IRV

Client Sample ID: LPBMP0002_20191127

Lab Sample ID: 440-255714-8

Date Collected: 11/27/19 09:50

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B	RA		934 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B	RA	1			344849	12/11/19 14:11	ALM	TAL SAC
Total/NA	Prep	1613B			934 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343845	12/07/19 03:58	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	582972	11/29/19 11:46	EP	TAL IRV
Dissolved	Analysis	200.8		1			583148	12/01/19 13:08	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	582994	11/29/19 13:04	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			583153	12/01/19 16:46	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583386	12/02/19 21:19	DB	TAL IRV
Dissolved	Analysis	245.1		1			583644	12/03/19 16:37	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583478	12/03/19 10:09	MEM	TAL IRV
Total/NA	Analysis	245.1		1			583647	12/03/19 19:07	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	150 mL	1000 mL	583318	12/02/19 14:58	KL	TAL IRV

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Client Sample ID: LPBMP0003_20191127

Lab Sample ID: 440-255714-9

Date Collected: 11/27/19 09:30

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			834.8 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343845	12/07/19 04:46	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	582972	11/29/19 11:46	EP	TAL IRV
Dissolved	Analysis	200.8		1			583148	12/01/19 13:10	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	582994	11/29/19 13:04	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			583153	12/01/19 16:48	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583386	12/02/19 21:19	DB	TAL IRV
Dissolved	Analysis	245.1		1			583644	12/03/19 16:35	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583478	12/03/19 10:09	MEM	TAL IRV
Total/NA	Analysis	245.1		1			583647	12/03/19 19:09	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	583318	12/02/19 14:58	KL	TAL IRV

Client Sample ID: LPBMP0004_20191127

Lab Sample ID: 440-255714-10

Date Collected: 11/27/19 10:00

Matrix: Water

Date Received: 11/27/19 15:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			966.1 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343845	12/07/19 05:33	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	582972	11/29/19 11:46	EP	TAL IRV
Dissolved	Analysis	200.8		1			583148	12/01/19 13:12	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	582994	11/29/19 13:04	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			583153	12/01/19 16:50	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	582952	11/29/19 10:17	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583386	12/02/19 21:19	DB	TAL IRV
Dissolved	Analysis	245.1		1			583644	12/03/19 16:25	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583478	12/03/19 10:09	MEM	TAL IRV
Total/NA	Analysis	245.1		1			583647	12/03/19 19:11	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	300 mL	1000 mL	583870	12/04/19 19:53	KL	TAL IRV

Laboratory References:

IGL = Integrated Geosciences Laboratories LLC, 6016 Centralcrest St, Houston, TX 77092

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-343025/1-A
Matrix: Water
Analysis Batch: 343844

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 343025

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
2,3,7,8-TCDF	ND		0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000032	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000017	ug/L		12/04/19 08:19	12/06/19 16:22	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000017	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,7,8-HxCDD	ND		0.000050	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,6,7,8-HxCDD	ND		0.000050	0.0000012	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,7,8,9-HxCDD	ND		0.000050	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,7,8-HxCDF	ND		0.000050	0.0000008	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,6,7,8-HxCDF	ND		0.000050	0.0000009	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,7,8,9-HxCDF	ND		0.000050	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
2,3,4,6,7,8-HxCDF	ND		0.000050	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,6,7,8-HpCDD	0.0000121	J,DX q	0.000050	0.0000012	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,6,7,8-HpCDF	ND		0.000050	0.0000013	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,7,8,9-HpCDF	ND		0.000050	0.0000016	ug/L		12/04/19 08:19	12/06/19 16:22	1
OCDD	0.000105		0.00010	0.0000019	ug/L		12/04/19 08:19	12/06/19 16:22	1
OCDF	0.00000914	J,DX q	0.00010	0.0000026	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total TCDD	ND		0.000010	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total TCDF	ND		0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total PeCDD	ND		0.000050	0.0000032	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total PeCDF	ND		0.000050	0.0000017	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total HxCDD	ND		0.000050	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total HxCDF	ND		0.000050	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total HpCDD	0.0000207	J,DX q	0.000050	0.0000012	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total HpCDF	ND		0.000050	0.0000013	ug/L		12/04/19 08:19	12/06/19 16:22	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	44		25 - 164				12/04/19 08:19	12/06/19 16:22	1
13C-2,3,7,8-TCDF	46		24 - 169				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,7,8-PeCDD	42		25 - 181				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,7,8-PeCDF	42		24 - 185				12/04/19 08:19	12/06/19 16:22	1
13C-2,3,4,7,8-PeCDF	46		21 - 178				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,7,8-HxCDD	43		32 - 141				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,6,7,8-HxCDD	38		28 - 130				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,7,8-HxCDF	49		26 - 152				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,6,7,8-HxCDF	41		26 - 123				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,7,8,9-HxCDF	45		29 - 147				12/04/19 08:19	12/06/19 16:22	1
13C-2,3,4,6,7,8-HxCDF	43		28 - 136				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,6,7,8-HpCDD	34		23 - 140				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,6,7,8-HpCDF	39		28 - 143				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,7,8,9-HpCDF	43		26 - 138				12/04/19 08:19	12/06/19 16:22	1
13C-OCDD	31		17 - 157				12/04/19 08:19	12/06/19 16:22	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
 SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-343025/1-A
Matrix: Water
Analysis Batch: 343844

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 343025

Surrogate	MB MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD		91		35 - 197	12/04/19 08:19	12/06/19 16:22	1

Lab Sample ID: LCS 320-343025/2-A
Matrix: Water
Analysis Batch: 343844

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 343025

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	0.000200	0.000242		ug/L		121	67 - 158
2,3,7,8-TCDF	0.000200	0.000229		ug/L		114	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.00120		ug/L		120	70 - 142
1,2,3,7,8-PeCDF	0.00100	0.00127		ug/L		127	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.00123		ug/L		123	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.00117		ug/L		117	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.00121		ug/L		121	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.00120		ug/L		120	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.00107		ug/L		107	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.00116		ug/L		116	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.00119		ug/L		119	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.00120		ug/L		120	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.00111	MB	ug/L		111	70 - 140
1,2,3,4,6,7,8-HpCDF	0.00100	0.00114		ug/L		114	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.00105		ug/L		105	78 - 138
OCDD	0.00200	0.00232	MB	ug/L		116	78 - 144
OCDF	0.00200	0.00243	MB	ug/L		121	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	56		20 - 175
13C-2,3,7,8-TCDF	58		22 - 152
13C-1,2,3,7,8-PeCDD	55		21 - 227
13C-1,2,3,7,8-PeCDF	53		21 - 192
13C-2,3,4,7,8-PeCDF	58		13 - 328
13C-1,2,3,4,7,8-HxCDD	52		21 - 193
13C-1,2,3,6,7,8-HxCDD	48		25 - 163
13C-1,2,3,4,7,8-HxCDF	60		19 - 202
13C-1,2,3,6,7,8-HxCDF	52		21 - 159
13C-1,2,3,7,8,9-HxCDF	58		17 - 205
13C-2,3,4,6,7,8-HxCDF	54		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	47		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	47		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	53		20 - 186
13C-OCDD	38		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	112		31 - 191

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-582994/1-A
Matrix: Water
Analysis Batch: 583153

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 582994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 13:04	12/01/19 15:48	1
Copper	ND		2.0	0.50	ug/L		11/29/19 13:04	12/01/19 15:48	1
Lead	ND		1.0	0.50	ug/L		11/29/19 13:04	12/01/19 15:48	1

Lab Sample ID: LCS 440-582994/2-A
Matrix: Water
Analysis Batch: 583153

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 582994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	81.3		ug/L		102	85 - 115
Copper	80.0	80.7		ug/L		101	85 - 115
Lead	80.0	79.2		ug/L		99	85 - 115

Lab Sample ID: 440-255714-3 MS
Matrix: Water
Analysis Batch: 583153

Client Sample ID: B1BMP0011_20191127
Prep Type: Total Recoverable
Prep Batch: 582994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	ND		80.0	80.5		ug/L		101	70 - 130
Copper	8.3		80.0	88.9		ug/L		101	70 - 130
Lead	1.2		80.0	79.7		ug/L		98	70 - 130

Lab Sample ID: 440-255714-3 MSD
Matrix: Water
Analysis Batch: 583153

Client Sample ID: B1BMP0011_20191127
Prep Type: Total Recoverable
Prep Batch: 582994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	ND		80.0	80.4		ug/L		101	70 - 130	0	20
Copper	8.3		80.0	88.6		ug/L		100	70 - 130	0	20
Lead	1.2		80.0	79.5		ug/L		98	70 - 130	0	20

Lab Sample ID: MB 440-582952/1-B
Matrix: Water
Analysis Batch: 583148

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 582972

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/29/19 11:46	12/01/19 12:39	1
Copper	ND		2.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:39	1
Lead	ND		1.0	0.50	ug/L		11/29/19 11:46	12/01/19 12:39	1

Lab Sample ID: LCS 440-582952/2-B
Matrix: Water
Analysis Batch: 583148

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 582972

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	76.3		ug/L		95	85 - 115
Copper	80.0	75.5		ug/L		94	85 - 115
Lead	80.0	76.0		ug/L		95	85 - 115

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-255714-1 MS
Matrix: Water
Analysis Batch: 583148

Client Sample ID: B1BMP0009_20191127
Prep Type: Dissolved
Prep Batch: 582972

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Cadmium	ND		80.0	80.0		ug/L		100	70 - 130	
Copper	5.3		80.0	84.7		ug/L		99	70 - 130	
Lead	ND		80.0	80.9		ug/L		101	70 - 130	

Lab Sample ID: 440-255714-1 MSD
Matrix: Water
Analysis Batch: 583148

Client Sample ID: B1BMP0009_20191127
Prep Type: Dissolved
Prep Batch: 582972

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
Cadmium	ND		80.0	80.5		ug/L		101	70 - 130	1	20
Copper	5.3		80.0	84.9		ug/L		99	70 - 130	0	20
Lead	ND		80.0	81.3		ug/L		102	70 - 130	0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-583478/1-A
Matrix: Water
Analysis Batch: 583647

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 583478

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.20	0.10	ug/L		12/03/19 10:09	12/03/19 18:23	1

Lab Sample ID: LCS 440-583478/2-A
Matrix: Water
Analysis Batch: 583647

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 583478

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	
							Result	Qualifier	Limits
Mercury	4.00	4.26		ug/L		107	85 - 115	

Lab Sample ID: 440-255608-K-1-C MS
Matrix: Water
Analysis Batch: 583647

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 583478

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Mercury	ND		4.00	4.06		ug/L		101	75 - 125	

Lab Sample ID: 440-255608-K-1-D MSD
Matrix: Water
Analysis Batch: 583647

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 583478

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
Mercury	ND		4.00	4.03		ug/L		101	75 - 125	1	20

Lab Sample ID: MB 440-582952/1-F
Matrix: Water
Analysis Batch: 583644

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 583386

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:19	12/03/19 16:21	1

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 440-582952/2-F
Matrix: Water
Analysis Batch: 583644

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 583386
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	4.13		ug/L		103	85 - 115

Lab Sample ID: 440-255714-10 MS
Matrix: Water
Analysis Batch: 583644

Client Sample ID: LPBMP0004_20191127
Prep Type: Dissolved
Prep Batch: 583386
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	4.11		ug/L		103	75 - 125

Lab Sample ID: 440-255714-10 MSD
Matrix: Water
Analysis Batch: 583644

Client Sample ID: LPBMP0004_20191127
Prep Type: Dissolved
Prep Batch: 583386
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	4.20		ug/L		105	75 - 125	2	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-583318/1
Matrix: Water
Analysis Batch: 583318

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			12/02/19 14:58	1

Lab Sample ID: LCS 440-583318/2
Matrix: Water
Analysis Batch: 583318

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Suspended Solids	1000	943		mg/L		94	85 - 115

Lab Sample ID: 440-255714-8 DU
Matrix: Water
Analysis Batch: 583318

Client Sample ID: LPBMP0002_20191127
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	25		25.3		mg/L		0	10

Lab Sample ID: 440-255714-9 DU
Matrix: Water
Analysis Batch: 583318

Client Sample ID: LPBMP0003_20191127
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	8.6		9.20		mg/L		7	10

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
 SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: MB 440-583870/1
Matrix: Water
Analysis Batch: 583870

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L	-		12/04/19 19:53	1

Lab Sample ID: LCS 440-583870/2
Matrix: Water
Analysis Batch: 583870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	1080		mg/L	-	108	85 - 115

Lab Sample ID: 440-256241-E-6 DU
Matrix: Water
Analysis Batch: 583870

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	42		40.0		mg/L	-	4	10

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Specialty Organics

Prep Batch: 343025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1 - RA	B1BMP0009_20191127	Total/NA	Water	1613B	
440-255714-1	B1BMP0009_20191127	Total/NA	Water	1613B	
440-255714-2	B1BMP0010_20191127	Total/NA	Water	1613B	
440-255714-3	B1BMP0011_20191127	Total/NA	Water	1613B	
440-255714-4	ILBMP0004_20191127	Total/NA	Water	1613B	
440-255714-5 - RA	ILBMP0005_20191127	Total/NA	Water	1613B	
440-255714-5	ILBMP0005_20191127	Total/NA	Water	1613B	
440-255714-7	ILBMP0008_20191127	Total/NA	Water	1613B	
440-255714-8 - RA	LPBMP0002_20191127	Total/NA	Water	1613B	
440-255714-8	LPBMP0002_20191127	Total/NA	Water	1613B	
440-255714-9	LPBMP0003_20191127	Total/NA	Water	1613B	
440-255714-10	LPBMP0004_20191127	Total/NA	Water	1613B	
MB 320-343025/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-343025/2-A	Lab Control Sample	Total/NA	Water	1613B	

Analysis Batch: 343844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Total/NA	Water	1613B	343025
440-255714-2	B1BMP0010_20191127	Total/NA	Water	1613B	343025
440-255714-3	B1BMP0011_20191127	Total/NA	Water	1613B	343025
440-255714-4	ILBMP0004_20191127	Total/NA	Water	1613B	343025
440-255714-5	ILBMP0005_20191127	Total/NA	Water	1613B	343025
MB 320-343025/1-A	Method Blank	Total/NA	Water	1613B	343025
LCS 320-343025/2-A	Lab Control Sample	Total/NA	Water	1613B	343025

Analysis Batch: 343845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-7	ILBMP0008_20191127	Total/NA	Water	1613B	343025
440-255714-8	LPBMP0002_20191127	Total/NA	Water	1613B	343025
440-255714-9	LPBMP0003_20191127	Total/NA	Water	1613B	343025
440-255714-10	LPBMP0004_20191127	Total/NA	Water	1613B	343025

Analysis Batch: 344849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1 - RA	B1BMP0009_20191127	Total/NA	Water	1613B	343025
440-255714-5 - RA	ILBMP0005_20191127	Total/NA	Water	1613B	343025
440-255714-8 - RA	LPBMP0002_20191127	Total/NA	Water	1613B	343025

Metals

Filtration Batch: 582952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Dissolved	Water	FILTRATION	
440-255714-2	B1BMP0010_20191127	Dissolved	Water	FILTRATION	
440-255714-3	B1BMP0011_20191127	Dissolved	Water	FILTRATION	
440-255714-4	ILBMP0004_20191127	Dissolved	Water	FILTRATION	
440-255714-5	ILBMP0005_20191127	Dissolved	Water	FILTRATION	
440-255714-7	ILBMP0008_20191127	Dissolved	Water	FILTRATION	
440-255714-8	LPBMP0002_20191127	Dissolved	Water	FILTRATION	
440-255714-9	LPBMP0003_20191127	Dissolved	Water	FILTRATION	
440-255714-10	LPBMP0004_20191127	Dissolved	Water	FILTRATION	

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Metals (Continued)

Filtration Batch: 582952 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-582952/1-B	Method Blank	Dissolved	Water	FILTRATION	
MB 440-582952/1-F	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-582952/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 440-582952/2-F	Lab Control Sample	Dissolved	Water	FILTRATION	
440-255714-1 MS	B1BMP0009_20191127	Dissolved	Water	FILTRATION	
440-255714-1 MSD	B1BMP0009_20191127	Dissolved	Water	FILTRATION	
440-255714-10 MS	LPBMP0004_20191127	Dissolved	Water	FILTRATION	
440-255714-10 MSD	LPBMP0004_20191127	Dissolved	Water	FILTRATION	

Prep Batch: 582972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Dissolved	Water	200.2	582952
440-255714-2	B1BMP0010_20191127	Dissolved	Water	200.2	582952
440-255714-3	B1BMP0011_20191127	Dissolved	Water	200.2	582952
440-255714-4	ILBMP0004_20191127	Dissolved	Water	200.2	582952
440-255714-5	ILBMP0005_20191127	Dissolved	Water	200.2	582952
440-255714-7	ILBMP0008_20191127	Dissolved	Water	200.2	582952
440-255714-8	LPBMP0002_20191127	Dissolved	Water	200.2	582952
440-255714-9	LPBMP0003_20191127	Dissolved	Water	200.2	582952
440-255714-10	LPBMP0004_20191127	Dissolved	Water	200.2	582952
MB 440-582952/1-B	Method Blank	Dissolved	Water	200.2	582952
LCS 440-582952/2-B	Lab Control Sample	Dissolved	Water	200.2	582952
440-255714-1 MS	B1BMP0009_20191127	Dissolved	Water	200.2	582952
440-255714-1 MSD	B1BMP0009_20191127	Dissolved	Water	200.2	582952

Prep Batch: 582994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Total Recoverable	Water	200.2	
440-255714-2	B1BMP0010_20191127	Total Recoverable	Water	200.2	
440-255714-3	B1BMP0011_20191127	Total Recoverable	Water	200.2	
440-255714-4	ILBMP0004_20191127	Total Recoverable	Water	200.2	
440-255714-5	ILBMP0005_20191127	Total Recoverable	Water	200.2	
440-255714-7	ILBMP0008_20191127	Total Recoverable	Water	200.2	
440-255714-8	LPBMP0002_20191127	Total Recoverable	Water	200.2	
440-255714-9	LPBMP0003_20191127	Total Recoverable	Water	200.2	
440-255714-10	LPBMP0004_20191127	Total Recoverable	Water	200.2	
MB 440-582994/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-582994/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-255714-3 MS	B1BMP0011_20191127	Total Recoverable	Water	200.2	
440-255714-3 MSD	B1BMP0011_20191127	Total Recoverable	Water	200.2	

Analysis Batch: 583148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Dissolved	Water	200.8	582972
440-255714-2	B1BMP0010_20191127	Dissolved	Water	200.8	582972
440-255714-3	B1BMP0011_20191127	Dissolved	Water	200.8	582972
440-255714-4	ILBMP0004_20191127	Dissolved	Water	200.8	582972
440-255714-5	ILBMP0005_20191127	Dissolved	Water	200.8	582972
440-255714-7	ILBMP0008_20191127	Dissolved	Water	200.8	582972
440-255714-8	LPBMP0002_20191127	Dissolved	Water	200.8	582972
440-255714-9	LPBMP0003_20191127	Dissolved	Water	200.8	582972

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Metals (Continued)

Analysis Batch: 583148 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-10	LPBMP0004_20191127	Dissolved	Water	200.8	582972
MB 440-582952/1-B	Method Blank	Dissolved	Water	200.8	582972
LCS 440-582952/2-B	Lab Control Sample	Dissolved	Water	200.8	582972
440-255714-1 MS	B1BMP0009_20191127	Dissolved	Water	200.8	582972
440-255714-1 MSD	B1BMP0009_20191127	Dissolved	Water	200.8	582972

Analysis Batch: 583153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Total Recoverable	Water	200.8	582994
440-255714-2	B1BMP0010_20191127	Total Recoverable	Water	200.8	582994
440-255714-3	B1BMP0011_20191127	Total Recoverable	Water	200.8	582994
440-255714-4	ILBMP0004_20191127	Total Recoverable	Water	200.8	582994
440-255714-5	ILBMP0005_20191127	Total Recoverable	Water	200.8	582994
440-255714-7	ILBMP0008_20191127	Total Recoverable	Water	200.8	582994
440-255714-8	LPBMP0002_20191127	Total Recoverable	Water	200.8	582994
440-255714-9	LPBMP0003_20191127	Total Recoverable	Water	200.8	582994
440-255714-10	LPBMP0004_20191127	Total Recoverable	Water	200.8	582994
MB 440-582994/1-A	Method Blank	Total Recoverable	Water	200.8	582994
LCS 440-582994/2-A	Lab Control Sample	Total Recoverable	Water	200.8	582994
440-255714-3 MS	B1BMP0011_20191127	Total Recoverable	Water	200.8	582994
440-255714-3 MSD	B1BMP0011_20191127	Total Recoverable	Water	200.8	582994

Prep Batch: 583386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Dissolved	Water	245.1	582952
440-255714-2	B1BMP0010_20191127	Dissolved	Water	245.1	582952
440-255714-3	B1BMP0011_20191127	Dissolved	Water	245.1	582952
440-255714-4	ILBMP0004_20191127	Dissolved	Water	245.1	582952
440-255714-5	ILBMP0005_20191127	Dissolved	Water	245.1	582952
440-255714-7	ILBMP0008_20191127	Dissolved	Water	245.1	582952
440-255714-8	LPBMP0002_20191127	Dissolved	Water	245.1	582952
440-255714-9	LPBMP0003_20191127	Dissolved	Water	245.1	582952
440-255714-10	LPBMP0004_20191127	Dissolved	Water	245.1	582952
MB 440-582952/1-F	Method Blank	Dissolved	Water	245.1	582952
LCS 440-582952/2-F	Lab Control Sample	Dissolved	Water	245.1	582952
440-255714-10 MS	LPBMP0004_20191127	Dissolved	Water	245.1	582952
440-255714-10 MSD	LPBMP0004_20191127	Dissolved	Water	245.1	582952

Prep Batch: 583478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Total/NA	Water	245.1	
440-255714-2	B1BMP0010_20191127	Total/NA	Water	245.1	
440-255714-3	B1BMP0011_20191127	Total/NA	Water	245.1	
440-255714-4	ILBMP0004_20191127	Total/NA	Water	245.1	
440-255714-5	ILBMP0005_20191127	Total/NA	Water	245.1	
440-255714-7	ILBMP0008_20191127	Total/NA	Water	245.1	
440-255714-8	LPBMP0002_20191127	Total/NA	Water	245.1	
440-255714-9	LPBMP0003_20191127	Total/NA	Water	245.1	
440-255714-10	LPBMP0004_20191127	Total/NA	Water	245.1	
MB 440-583478/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-583478/2-A	Lab Control Sample	Total/NA	Water	245.1	

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Metals (Continued)

Prep Batch: 583478 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255608-K-1-C MS	Matrix Spike	Total/NA	Water	245.1	
440-255608-K-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 583644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Dissolved	Water	245.1	583386
440-255714-2	B1BMP0010_20191127	Dissolved	Water	245.1	583386
440-255714-3	B1BMP0011_20191127	Dissolved	Water	245.1	583386
440-255714-4	ILBMP0004_20191127	Dissolved	Water	245.1	583386
440-255714-5	ILBMP0005_20191127	Dissolved	Water	245.1	583386
440-255714-7	ILBMP0008_20191127	Dissolved	Water	245.1	583386
440-255714-8	LPBMP0002_20191127	Dissolved	Water	245.1	583386
440-255714-9	LPBMP0003_20191127	Dissolved	Water	245.1	583386
440-255714-10	LPBMP0004_20191127	Dissolved	Water	245.1	583386
MB 440-582952/1-F	Method Blank	Dissolved	Water	245.1	583386
LCS 440-582952/2-F	Lab Control Sample	Dissolved	Water	245.1	583386
440-255714-10 MS	LPBMP0004_20191127	Dissolved	Water	245.1	583386
440-255714-10 MSD	LPBMP0004_20191127	Dissolved	Water	245.1	583386

Analysis Batch: 583647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Total/NA	Water	245.1	583478
440-255714-2	B1BMP0010_20191127	Total/NA	Water	245.1	583478
440-255714-3	B1BMP0011_20191127	Total/NA	Water	245.1	583478
440-255714-4	ILBMP0004_20191127	Total/NA	Water	245.1	583478
440-255714-5	ILBMP0005_20191127	Total/NA	Water	245.1	583478
440-255714-7	ILBMP0008_20191127	Total/NA	Water	245.1	583478
440-255714-8	LPBMP0002_20191127	Total/NA	Water	245.1	583478
440-255714-9	LPBMP0003_20191127	Total/NA	Water	245.1	583478
440-255714-10	LPBMP0004_20191127	Total/NA	Water	245.1	583478
MB 440-583478/1-A	Method Blank	Total/NA	Water	245.1	583478
LCS 440-583478/2-A	Lab Control Sample	Total/NA	Water	245.1	583478
440-255608-K-1-C MS	Matrix Spike	Total/NA	Water	245.1	583478
440-255608-K-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	583478

General Chemistry

Analysis Batch: 583318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-1	B1BMP0009_20191127	Total/NA	Water	SM 2540D	
440-255714-2	B1BMP0010_20191127	Total/NA	Water	SM 2540D	
440-255714-3	B1BMP0011_20191127	Total/NA	Water	SM 2540D	
440-255714-4	ILBMP0004_20191127	Total/NA	Water	SM 2540D	
440-255714-5	ILBMP0005_20191127	Total/NA	Water	SM 2540D	
440-255714-7	ILBMP0008_20191127	Total/NA	Water	SM 2540D	
440-255714-8	LPBMP0002_20191127	Total/NA	Water	SM 2540D	
440-255714-9	LPBMP0003_20191127	Total/NA	Water	SM 2540D	
MB 440-583318/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-583318/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-255714-8 DU	LPBMP0002_20191127	Total/NA	Water	SM 2540D	
440-255714-9 DU	LPBMP0003_20191127	Total/NA	Water	SM 2540D	

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

General Chemistry

Analysis Batch: 583870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255714-10	LPBMP0004_20191127	Total/NA	Water	SM 2540D	
MB 440-583870/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-583870/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-256241-E-6 DU	Duplicate	Total/NA	Water	SM 2540D	

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- 4
- 5
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Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Laboratory: Eurofins TestAmerica, Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



INTEGRATED GEOSCIENCES LABORATORIES, LLC

*Environmental * Geotechnical * Core Analysis*

6016 Centralcrest Street • Houston, Texas 77092
Telephone (713) 316-1800 • Fax (877) 255-9953

December 11, 2019

Patel, Urvashi.
Project Manager,
Eurofins TestAmerica, Irvine.
17461 Derian Ave Suite 100.
Irvine, CA 92614-5817.

Re: PTS/IGL File No: **49167**
Project Name: Boeing SSFL ISRA and BMP.
Project Number: 44009815
Site Location:

Subject: Final Report: Laser Particle Size Analysis – (ASTM D4464)

Dear Patel, Urvashi

Please find enclosed report for Physical Properties analyses conducted upon **nine (9)** fluid samples received from your “**Boeing SSFL ISRA and BMP**” project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for fifteen days past the completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

Integrated Geosciences Laboratories appreciate the opportunity to be of service. If you have any questions or require additional information, please contact me or Emeka Anazodo at (713) 316-1800.

Sincerely,
Integrated Geosciences Laboratories, LLC.

C.A.Umeh

Chidi Umeh
Technical Consultant.
Encl.



Integrated Geosciences Laboratories, LLC.

Project Name:
Project Number:

Boeing SSFL ISRA and BMP
44009815

IGL File No: 49167
Client: Eurofins TestAmerica, Irvine

TEST PROGRAM - 20191202

FLUID ID	Date	Time	Fluid Type	Particle Size: Microsize	Comments
	Date Received: 20191202	Pacific		Method: ASTM D4464	
B1BMP0009_20191127 (440-255714-1)	11/27/19	0830	Water	X	1000ml-Plastic Bottle
B1BMP0010_20191127 (440-255714-2)	11/27/19	0810	Water	X	1000ml-Plastic Bottle
B1BMP0011_20191127 (440-255714-3)	11/27/19	0820	Water	X	1000ml-Plastic Bottle
ILBMP0004_20191127 (440-255714-4)	11/27/19	0900	Water	X	1000ml-Plastic Bottle
ILBMP0005_20191127 (440-255714-5)	11/27/19	0910	Water	X	1000ml-Plastic Bottle
ILBMP0008_20191127 (440-255714-7)	11/27/19	0850	Water	X	1000ml-Plastic Bottle
LPBMP0002_20191127 (440-255714-8)	11/27/19	0950	Water	X	1000ml-Plastic Bottle
LPBMP0003_20191127 (440-255714-9)	11/27/19	0930	Water	X	1000ml-Plastic Bottle
LPBMP0004_20191127 (440-255714-10)	11/27/19	1000	Water	X	1000ml-Plastic Bottle
TOTALS:				9	

Laboratory Test Program Notes

Standard TAT for basic analysis is 10-15 business days.

Water samples to be disposed 15 days after completion of analyses.

PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D4464M)

PROJECT NAME: Boeing SSFL ISRA and BMP
PROJECT NO: 44009815

Sample ID	Matrix	Median Grain Size, micron (1)	Median Grain Size, mm (1)	PERCENT (%) PARTICLES RETAINED ON SIEVE RANGE								
				Distribution percent, millimeter (mm)								
				Clay (less than 0.00391mm)	Silt (0.00391 to 0.0625mm)	Very Fine Sand (0.0625 to 0.125mm)	Fine Sand (0.125 to 0.25mm)	Medium Sand (0.25 to 0.50mm)	Coarse Sand (0.50 to 1.00mm)	Very Coarse Sand (1.00 to 2.00mm)	Gravel (greater than 2.00mm)	Total Silt and Clay (0-0.0625mm)
BIBMP0009_1127(440-255714-1)	Aqueous	11.906	0.01191	13.280	73.770	7.320	3.920	1.563	0.000	0.000	0.000	87.050
BIBMP0010_1127(440-255714-2)	Aqueous	17.702	0.01770	9.140	72.280	13.110	4.340	1.058	0.000	0.000	0.000	81.420
BIBMP0011_1127(440-255714-3)	Aqueous	7.432	0.00743	20.140	77.340	2.348	0.000	0.000	0.000	0.000	0.000	97.480
ILBMP0004_1127(440-255714-4)	Aqueous	17.985	0.01798	11.930	67.350	10.670	4.620	3.910	1.421	0.000	0.000	79.280
ILBMP0005_1127(440-255714-5)	Aqueous	12.889	0.01289	10.890	80.320	5.980	1.830	0.911	0.000	0.000	0.000	91.210
ILBMP0008_1127(440-255714-7)	Aqueous	12.016	0.01202	13.020	76.820	5.850	2.870	1.313	0.000	0.000	0.000	89.840
LPBMP0002_1127(440-255714-8)	Aqueous	18.516	0.01852	7.523	78.680	7.710	3.330	2.180	0.481	0.000	0.000	86.203
LPBMP0003_1127(440-255714-9)	Aqueous	12.191	0.01219	10.760	88.380	0.745	0.000	0.000	0.000	0.000	0.000	99.140
LPBMP0004_1127(440-255714-10)	Aqueous	14.320	0.01432	9.990	79.580	10.287	0.001	0.000	0.000	0.000	0.000	89.570

(1) Based on Trask Median

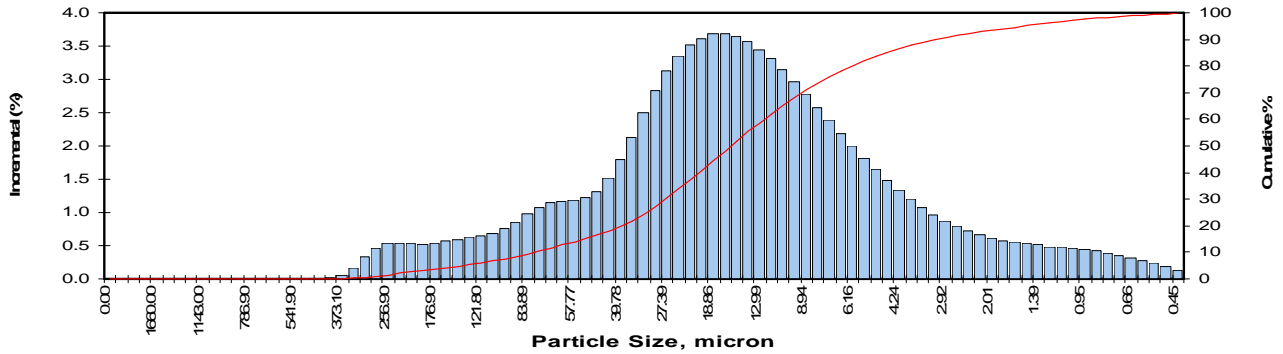
PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D4464M)

PROJECT NAME: Boeing SSFL ISRA and BMP
PROJECT NO: 44009815

Sample ID	Matrix	Median Grain Size, micron (1)	CUMULATIVE PERCENT GREATER THAN										
			Distribution percent, microns										
			5%	10%	16%	25%	40%	50%	60%	75%	84%	90%	95%
BIBMP0009_1127(440-255714-1)	Aqueous	11.906	121.259	67.516	42.078	26.490	16.717	11.906	8.899	4.985	2.018	1.296	0.799
BIBMP0010_1127(440-255714-2)	Aqueous	17.702	117.837	81.556	59.786	40.574	23.398	17.702	12.614	7.485	3.940	1.791	1.058
BIBMP0011_1127(440-255714-3)	Aqueous	7.432	36.988	26.945	21.365	15.804	9.633	7.432	5.343	2.086	1.369	1.050	0.633
ILBMP0004_1127(440-255714-4)	Aqueous	17.985	231.996	112.685	69.858	43.658	24.606	17.985	12.096	6.383	2.610	1.423	0.894
ILBMP0005_1127(440-255714-5)	Aqueous	12.889	76.873	48.381	34.446	24.497	17.078	12.889	9.727	5.858	2.740	1.518	0.989
ILBMP0008_1127(440-255714-7)	Aqueous	12.016	98.601	53.878	36.628	25.087	16.617	12.016	9.018	5.094	2.076	1.324	0.843
LPBMP0002_1127(440-255714-8)	Aqueous	18.516	130.432	71.147	47.558	34.676	23.223	18.516	13.903	8.323	5.151	2.230	1.207
LPBMP0003_1127(440-255714-9)	Aqueous	12.191	37.304	30.831	25.310	21.125	15.743	12.191	9.580	5.984	2.867	1.531	0.957
LPBMP0004_1127(440-255714-10)	Aqueous	14.320	66.850	54.031	41.386	29.058	19.062	14.320	10.262	6.122	3.043	1.610	0.982

(1) Based on Trask Median

Client: Eurofins TestAmerica, Irvine IGL File No: 49167
 Project: Boeing SSFL ISRA and BMP Sample ID: BIBMP0009_1127(440-255714-1)
 Project No: 44009815 Matrix: Aqueous



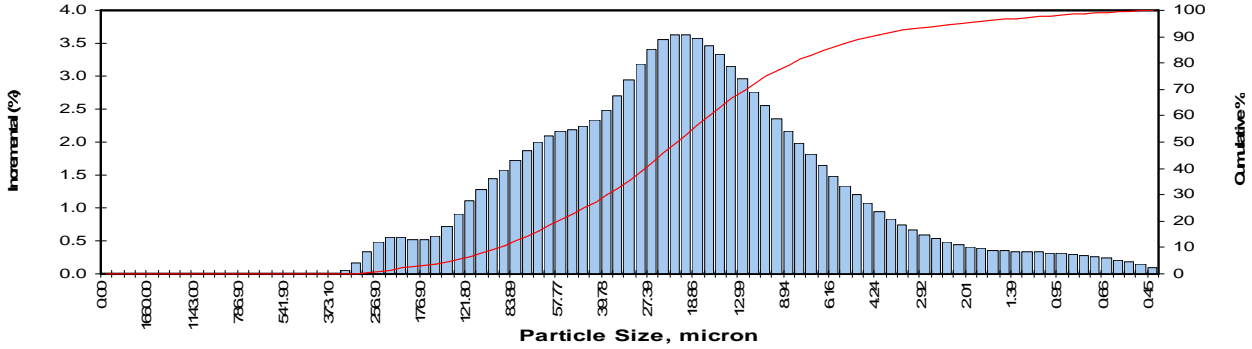
Particle Distribution				Particle Distribution				Particle Distribution				Particle Distribution			
Diameter, micron		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent	Diameter, micron		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent
0.00	0.0000	0.00	0.0	63.41	0.0634	1.16	12.8	1.668	0.00167	0.550	94.6	1.668	0.00167	0.550	94.6
0.00	0.0000	0.00	0.0	57.77	0.0578	1.18	14.0	1.520	0.00152	0.530	95.1	1.520	0.00152	0.530	95.1
2000.00	2.0000	0.00	0.0	52.62	0.0526	1.22	15.2	1.385	0.00139	0.510	95.7	1.385	0.00139	0.510	95.7
1822.00	1.8220	0.00	0.0	47.94	0.0479	1.32	16.5	1.261	0.00126	0.490	96.1	1.261	0.00126	0.490	96.1
1660.00	1.6600	0.00	0.0	43.67	0.0437	1.51	18.0	1.149	0.00115	0.480	96.6	1.149	0.00115	0.480	96.6
1512.00	1.5120	0.00	0.0	39.78	0.0398	1.79	19.8	1.047	0.00105	0.460	97.1	1.047	0.00105	0.460	97.1
1377.00	1.3770	0.00	0.0	36.24	0.0362	2.13	22.0	0.953	0.00095	0.440	97.5	0.953	0.00095	0.440	97.5
1255.00	1.2550	0.00	0.0	33.01	0.0330	2.50	24.5	0.868	0.00087	0.420	97.9	0.868	0.00087	0.420	97.9
1143.00	1.1430	0.00	0.0	30.07	0.0301	2.84	27.3	0.791	0.00079	0.390	98.3	0.791	0.00079	0.390	98.3
1041.00	1.0410	0.00	0.0	27.39	0.0274	3.13	30.4	0.721	0.00072	0.360	98.7	0.721	0.00072	0.360	98.7
948.30	0.9483	0.00	0.0	24.95	0.0250	3.35	33.8	0.656	0.00066	0.320	99.0	0.656	0.00066	0.320	99.0
863.90	0.8639	0.00	0.0	22.73	0.0227	3.51	37.3	0.598	0.00060	0.280	99.3	0.598	0.00060	0.280	99.3
786.90	0.7869	0.00	0.0	20.70	0.0207	3.62	40.9	0.545	0.00055	0.240	99.5	0.545	0.00055	0.240	99.5
716.80	0.7168	0.00	0.0	18.86	0.0189	3.68	44.6	0.496	0.00050	0.190	99.7	0.496	0.00050	0.190	99.7
653.00	0.6530	0.00	0.0	17.18	0.0172	3.69	48.3	0.452	0.00045	0.130	99.9	0.452	0.00045	0.130	99.9
594.90	0.5949	0.00	0.0	15.65	0.0157	3.65	51.9	TOTALS:				99.85	99.9		
541.90	0.5419	0.00	0.0	14.26	0.0143	3.57	55.5	Measure		Trask		Inman			
493.60	0.4936	0.00	0.0	12.99	0.0130	3.45	58.9	Median, mm	0.0119		0.0119				
449.70	0.4497	0.00	0.0	11.83	0.0118	3.31	62.3	Median, micron	11.906		11.906				
409.60	0.4096	0.01	0.0	10.78	0.0108	3.14	65.4	Mean, mm	0.0157		0.0092				
373.10	0.3731	0.06	0.1	9.82	0.0098	2.96	68.4	Mean, micron	15.737		9.214				
339.90	0.3399	0.17	0.2	8.94	0.0089	2.77	71.1	Sorting	2.3053		2.191				
309.60	0.3096	0.33	0.6	8.15	0.0081	2.58	73.7	Skewness	0.9652		0.169				
282.10	0.2821	0.46	1.0	7.42	0.0074	2.38	76.1	Kurtosis	0.1624		0.654				
256.90	0.2569	0.53	1.6	6.76	0.0068	2.19	78.3	Cumulative Percent greater than							
234.10	0.2341	0.54	2.1	6.16	0.0062	2.00	80.3	Distribution percent	Particle Size						
213.20	0.2132	0.53	2.6	5.61	0.0056	1.82	82.1		Micron	Millimeters					
194.20	0.1942	0.52	3.2	5.11	0.0051	1.65	83.7	5	121.259	0.1213					
176.90	0.1769	0.53	3.7	4.66	0.0047	1.49	85.2	10	67.516	0.0675					
161.20	0.1612	0.57	4.3	4.24	0.0042	1.34	86.6	16	42.078	0.0421					
146.80	0.1468	0.60	4.9	3.86	0.0039	1.20	87.8	25	26.490	0.0265					
133.70	0.1337	0.63	5.5	3.52	0.0035	1.08	88.9	40	16.717	0.0167					
121.80	0.1218	0.65	6.1	3.21	0.0032	0.97	89.8	50	11.906	0.0119					
111.00	0.1110	0.69	6.8	2.92	0.0029	0.87	90.7	60	8.899	0.0089					
101.10	0.1011	0.76	7.6	2.66	0.0027	0.79	91.5	75	4.985	0.0050					
92.09	0.0921	0.86	8.4	2.42	0.0024	0.72	92.2	84	2.018	0.0020					
83.89	0.0839	0.98	9.4	2.21	0.0022	0.66	92.9	90	1.296	0.0013					
76.42	0.0764	1.08	10.5	2.01	0.0020	0.62	93.5	95	0.799	0.0008					
69.61	0.0696	1.14	11.6	1.83	0.0018	0.58	94.1								

Total Silt and Clay (0-0.0625mm) 87.05

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		13.28
Silt (0.00391 to 0.0625mm)		73.77
Very Fine Sand (0.0625 to 0.125mm)		7.32
Fine Sand (0.125 to 0.25mm)		3.92
Medium Sand (0.25 to 0.50mm)		1.56
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49167
 Sample ID: BIBMP0010_1127(440-255714-2)
 Matrix: Aqueous



Particle Diameter, micron		Particle Distribution		Particle Diameter, micron		Particle Distribution		Particle Diameter, micron		Particle Distribution		
		Incremental percent	Cumulative percent			Incremental percent	Cumulative percent			Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	2.10	18.5	1.668	0.00167	0.360	96.2	
0.00	0.00000	0.00	0.0	57.77	0.05777	2.16	20.7	1.520	0.00152	0.350	96.6	
2000.00	2.00000	0.00	0.0	52.62	0.05262	2.19	22.9	1.385	0.00139	0.340	96.9	
1822.00	1.82200	0.00	0.0	47.94	0.04794	2.24	25.1	1.261	0.00126	0.340	97.3	
1660.00	1.66000	0.00	0.0	43.67	0.04367	2.33	27.4	1.149	0.00115	0.330	97.6	
1512.00	1.51200	0.00	0.0	39.78	0.03978	2.49	29.9	1.047	0.00105	0.320	97.9	
1377.00	1.37700	0.00	0.0	36.24	0.03624	2.70	32.6	0.953	0.00095	0.310	98.2	
1255.00	1.25500	0.00	0.0	33.01	0.03301	2.95	35.6	0.868	0.00087	0.300	98.5	
1143.00	1.14300	0.00	0.0	30.07	0.03007	3.19	38.8	0.791	0.00079	0.280	98.8	
1041.00	1.04100	0.00	0.0	27.39	0.02739	3.41	42.2	0.721	0.00072	0.260	99.1	
948.30	0.94830	0.00	0.0	24.95	0.02495	3.55	45.7	0.656	0.00066	0.240	99.3	
863.90	0.86390	0.00	0.0	22.73	0.02273	3.63	49.3	0.598	0.00060	0.210	99.5	
786.90	0.78690	0.00	0.0	20.70	0.02070	3.63	53.0	0.545	0.00055	0.180	99.7	
716.80	0.71680	0.00	0.0	18.86	0.01886	3.58	56.6	0.496	0.00050	0.140	99.8	
653.00	0.65300	0.00	0.0	17.18	0.01718	3.47	60.0	0.452	0.00045	0.100	99.9	
594.90	0.59490	0.00	0.0	15.65	0.01565	3.33	63.4	TOTALS:			99.93	99.9
541.90	0.54190	0.00	0.0	14.26	0.01426	3.15	66.5					
493.60	0.49360	0.00	0.0	12.99	0.01299	2.96	69.5					
449.70	0.44970	0.00	0.0	11.83	0.01183	2.76	72.2					
409.60	0.40960	0.00	0.0	10.78	0.01078	2.55	74.8					
373.10	0.37310	0.01	0.0	9.82	0.00982	2.36	77.1					
339.90	0.33990	0.05	0.1	8.94	0.00894	2.17	79.3					
309.60	0.30960	0.17	0.2	8.15	0.00815	1.98	81.3					
282.10	0.28210	0.34	0.6	7.42	0.00742	1.81	83.1					
256.90	0.25690	0.49	1.1	6.76	0.00676	1.64	84.7					
234.10	0.23410	0.56	1.6	6.16	0.00616	1.49	86.2					
213.20	0.21320	0.55	2.2	5.61	0.00561	1.34	87.6					
194.20	0.19420	0.52	2.7	5.11	0.00511	1.20	88.8					
176.90	0.17690	0.51	3.2	4.66	0.00466	1.07	89.8					
161.20	0.16120	0.57	3.8	4.24	0.00424	0.95	90.8					
146.80	0.14680	0.72	4.5	3.86	0.00386	0.84	91.6					
133.70	0.13370	0.91	5.4	3.52	0.00352	0.75	92.4					
121.80	0.12180	1.11	6.5	3.21	0.00321	0.66	93.0					
111.00	0.11100	1.28	7.8	2.92	0.00292	0.59	93.6					
101.10	0.10110	1.44	9.2	2.66	0.00266	0.53	94.2					
92.09	0.09209	1.58	10.8	2.42	0.00242	0.48	94.6					
83.89	0.08389	1.73	12.5	2.21	0.00221	0.44	95.1					
76.42	0.07642	1.87	14.4	2.01	0.00201	0.41	95.5					
69.61	0.06961	2.00	16.4	1.83	0.00183	0.38	95.9					

Measure	Trask	Inman
Median, mm	0.0177	0.0177
Median, micron	17.702	17.702
Mean, mm	0.0240	0.0153
Mean, micron	24.030	15.348
Sorting	2.3283	1.962
Skewness	0.9845	0.105
Kurtosis	0.2074	0.733

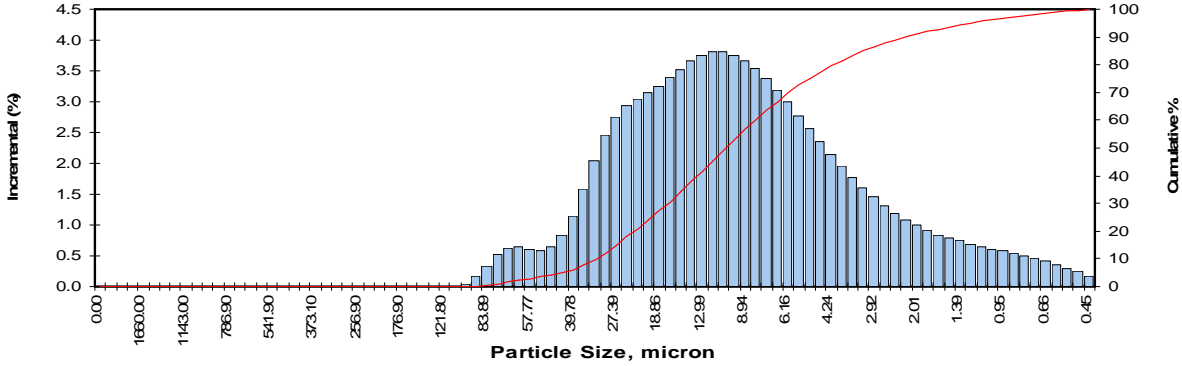
Distribution percent	Cumulative Percent greater than	
	Micron	Millimeters
5	117.837	0.1178
10	81.556	0.0816
16	59.786	0.0598
25	40.574	0.0406
40	23.398	0.0234
50	17.702	0.0177
60	12.614	0.0126
75	7.485	0.0075
84	3.940	0.0039
90	1.791	0.0018
95	1.058	0.0011

Total Silt and Clay (0-0.0625mm) 81.42

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		9.14
Silt (0.00391 to 0.0625mm)		72.28
Very Fine Sand (0.0625 to 0.125mm)		13.11
Fine Sand (0.125 to 0.25mm)		4.34
Medium Sand (0.25 to 0.50mm)		1.06
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49167
 Sample ID: BIBMP0011_1127(440-255714-3)
 Matrix: Aqueous



Particle Distribution				Particle Distribution				Particle Distribution				
Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	0.64	2.3	1.668	0.00167	0.840	92.8	
0.00	0.00000	0.00	0.0	57.77	0.05777	0.61	3.0	1.520	0.00152	0.790	93.6	
2000.00	2.00000	0.00	0.0	52.62	0.05262	0.58	3.5	1.385	0.00139	0.740	94.3	
1822.00	1.82200	0.00	0.0	47.94	0.04794	0.64	4.2	1.261	0.00126	0.690	95.0	
1660.00	1.66000	0.00	0.0	43.67	0.04367	0.83	5.0	1.149	0.00115	0.650	95.7	
1512.00	1.51200	0.00	0.0	39.78	0.03978	1.15	6.2	1.047	0.00105	0.610	96.3	
1377.00	1.37700	0.00	0.0	36.24	0.03624	1.59	7.7	0.953	0.00095	0.580	96.8	
1255.00	1.25500	0.00	0.0	33.01	0.03301	2.05	9.8	0.868	0.00087	0.540	97.4	
1143.00	1.14300	0.00	0.0	30.07	0.03007	2.45	12.2	0.791	0.00079	0.500	97.9	
1041.00	1.04100	0.00	0.0	27.39	0.02739	2.74	15.0	0.721	0.00072	0.460	98.3	
948.30	0.94830	0.00	0.0	24.95	0.02495	2.93	17.9	0.656	0.00066	0.410	98.8	
863.90	0.86390	0.00	0.0	22.73	0.02273	3.04	21.0	0.598	0.00060	0.360	99.1	
786.90	0.78690	0.00	0.0	20.70	0.02070	3.14	24.1	0.545	0.00055	0.300	99.4	
716.80	0.71680	0.00	0.0	18.86	0.01886	3.25	27.3	0.496	0.00050	0.240	99.7	
653.00	0.65300	0.00	0.0	17.18	0.01718	3.39	30.7	0.452	0.00045	0.170	99.8	
594.90	0.59490	0.00	0.0	15.65	0.01565	3.53	34.3	TOTALS:			99.83	99.8
541.90	0.54190	0.00	0.0	14.26	0.01426	3.66	37.9					
493.60	0.49360	0.00	0.0	12.99	0.01299	3.75	41.7					
449.70	0.44970	0.00	0.0	11.83	0.01183	3.81	45.5					
409.60	0.40960	0.00	0.0	10.78	0.01078	3.81	49.3					
373.10	0.37310	0.00	0.0	9.82	0.00982	3.76	53.1					
339.90	0.33990	0.00	0.0	8.94	0.00894	3.67	56.7					
309.60	0.30960	0.00	0.0	8.15	0.00815	3.54	60.3					
282.10	0.28210	0.00	0.0	7.42	0.00742	3.38	63.6					
256.90	0.25690	0.00	0.0	6.76	0.00676	3.19	66.8					
234.10	0.23410	0.00	0.0	6.16	0.00616	2.99	69.8					
213.20	0.21320	0.00	0.0	5.61	0.00561	2.78	72.6					
194.20	0.19420	0.00	0.0	5.11	0.00511	2.57	75.2					
176.90	0.17690	0.00	0.0	4.66	0.00466	2.36	77.5					
161.20	0.16120	0.00	0.0	4.24	0.00424	2.15	79.7					
146.80	0.14680	0.00	0.0	3.86	0.00386	1.95	81.6					
133.70	0.13370	0.00	0.0	3.52	0.00352	1.77	83.4					
121.80	0.12180	0.00	0.0	3.21	0.00321	1.60	85.0					
111.00	0.11100	0.01	0.0	2.92	0.00292	1.45	86.5					
101.10	0.10110	0.05	0.1	2.66	0.00266	1.31	87.8					
92.09	0.09209	0.16	0.2	2.42	0.00242	1.19	89.0					
83.89	0.08389	0.34	0.6	2.21	0.00221	1.09	90.0					
76.42	0.07642	0.52	1.1	2.01	0.00201	0.99	91.0					
69.61	0.06961	0.63	1.7	1.83	0.00183	0.91	91.9					

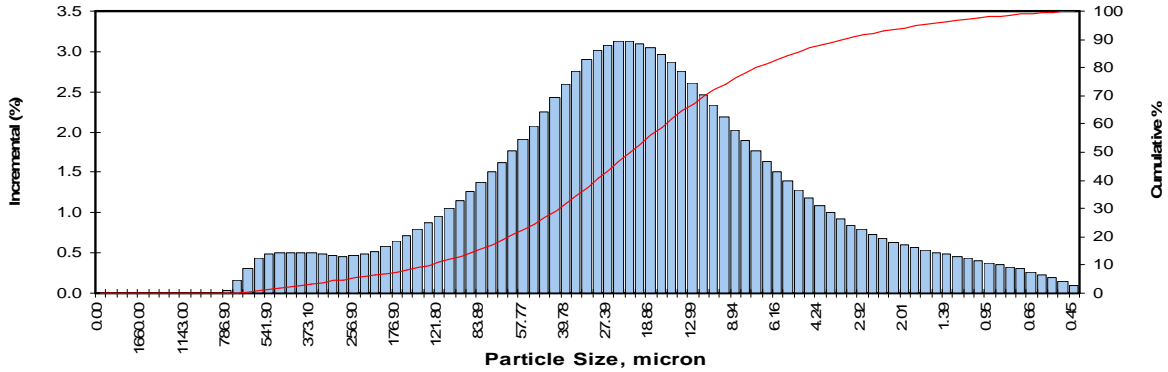
Measure	Trask	Inman
Median, mm	0.0074	0.0074
Median, micron	7.432	7.432
Mean, mm	0.0089	0.0054
Mean, micron	8.945	5.409
Sorting	2.7523	1.982
Skewness	0.7726	0.231
Kurtosis	0.2649	0.480

Distribution percent	Particle Size	
	Micron	Millimeters
5	36.988	0.0370
10	26.945	0.0269
16	21.365	0.0214
25	15.804	0.0158
40	9.633	0.0096
50	7.432	0.0074
60	5.343	0.0053
75	2.086	0.0021
84	1.369	0.0014
90	1.050	0.0010
95	0.633	0.0006

Total Silt and Clay (0-0.0625mm) 97.48

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		20.14
Silt (0.00391 to 0.0625mm)		77.34
Very Fine Sand (0.0625 to 0.125mm)		2.35
Fine Sand (0.125 to 0.25mm)		0.00
Medium Sand (0.25 to 0.50mm)		0.00
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine IGL File No: 49167
 Project: Boeing SSFL ISRA and BMP Sample ID: ILBMP0004_1127(440-255714-4)
 Project No: 44009815 Matrix: Aqueous



Particle Distribution				Particle Distribution				Particle Distribution				
Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	1.76	20.6	1.668	0.00167	0.540	95.3	
0.00	0.00000	0.00	0.0	57.77	0.05777	1.91	22.5	1.520	0.00152	0.510	95.8	
2000.00	2.00000	0.00	0.0	52.62	0.05262	2.08	24.6	1.385	0.00139	0.490	96.3	
1822.00	1.82200	0.00	0.0	47.94	0.04794	2.25	26.9	1.261	0.00126	0.460	96.8	
1660.00	1.66000	0.00	0.0	43.67	0.04367	2.43	29.3	1.149	0.00115	0.440	97.2	
1512.00	1.51200	0.00	0.0	39.78	0.03978	2.60	31.9	1.047	0.00105	0.410	97.6	
1377.00	1.37700	0.00	0.0	36.24	0.03624	2.76	34.7	0.953	0.00095	0.380	98.0	
1255.00	1.25500	0.00	0.0	33.01	0.03301	2.90	37.6	0.868	0.00087	0.360	98.3	
1143.00	1.14300	0.00	0.0	30.07	0.03007	3.01	40.6	0.791	0.00079	0.330	98.7	
1041.00	1.04100	0.00	0.0	27.39	0.02739	3.08	43.6	0.721	0.00072	0.300	99.0	
948.30	0.94830	0.00	0.0	24.95	0.02495	3.12	46.8	0.656	0.00066	0.260	99.2	
863.90	0.86390	0.00	0.0	22.73	0.02273	3.13	49.9	0.598	0.00060	0.230	99.5	
786.90	0.78690	0.04	0.0	20.70	0.02070	3.10	53.0	0.545	0.00055	0.190	99.7	
716.80	0.71680	0.16	0.2	18.86	0.01886	3.05	56.0	0.496	0.00050	0.150	99.8	
653.00	0.65300	0.31	0.5	17.18	0.01718	2.97	59.0	0.452	0.00045	0.100	99.9	
594.90	0.59490	0.43	0.9	15.65	0.01565	2.87	61.9	TOTALS:			99.90	99.9
541.90	0.54190	0.48	1.4	14.26	0.01426	2.75	64.6					
493.60	0.49360	0.50	1.9	12.99	0.01299	2.61	67.2					
449.70	0.44970	0.51	2.4	11.83	0.01183	2.47	69.7					
409.60	0.40960	0.51	2.9	10.78	0.01078	2.33	72.0					
373.10	0.37310	0.50	3.4	9.82	0.00982	2.18	74.2					
339.90	0.33990	0.49	3.9	8.94	0.00894	2.03	76.3					
309.60	0.30960	0.47	4.4	8.15	0.00815	1.89	78.1					
282.10	0.28210	0.46	4.9	7.42	0.00742	1.76	79.9					
256.90	0.25690	0.47	5.3	6.76	0.00676	1.63	81.5					
234.10	0.23410	0.48	5.8	6.16	0.00616	1.51	83.0					
213.20	0.21320	0.52	6.3	5.61	0.00561	1.39	84.4					
194.20	0.19420	0.58	6.9	5.11	0.00511	1.28	85.7					
176.90	0.17690	0.65	7.6	4.66	0.00466	1.18	86.9					
161.20	0.16120	0.72	8.3	4.24	0.00424	1.08	88.0					
146.80	0.14680	0.80	9.1	3.86	0.00386	1.00	89.0					
133.70	0.13370	0.87	10.0	3.52	0.00352	0.92	89.9					
121.80	0.12180	0.96	10.9	3.21	0.00321	0.85	90.7					
111.00	0.11100	1.05	12.0	2.92	0.00292	0.79	91.5					
101.10	0.10110	1.15	13.1	2.66	0.00266	0.73	92.3					
92.09	0.09209	1.26	14.4	2.42	0.00242	0.68	92.9					
83.89	0.08389	1.37	15.7	2.21	0.00221	0.64	93.6					
76.42	0.07642	1.50	17.2	2.01	0.00201	0.60	94.2					
69.61	0.06961	1.62	18.9	1.83	0.00183	0.57	94.8					

Measure	Trask	Inman
Median, mm	0.0180	0.0180
Median, micron	17.985	17.985
Mean, mm	0.0250	0.0135
Mean, micron	25.021	13.502
Sorting	2.6153	2.371
Skewness	0.9282	0.174
Kurtosis	0.1675	0.691

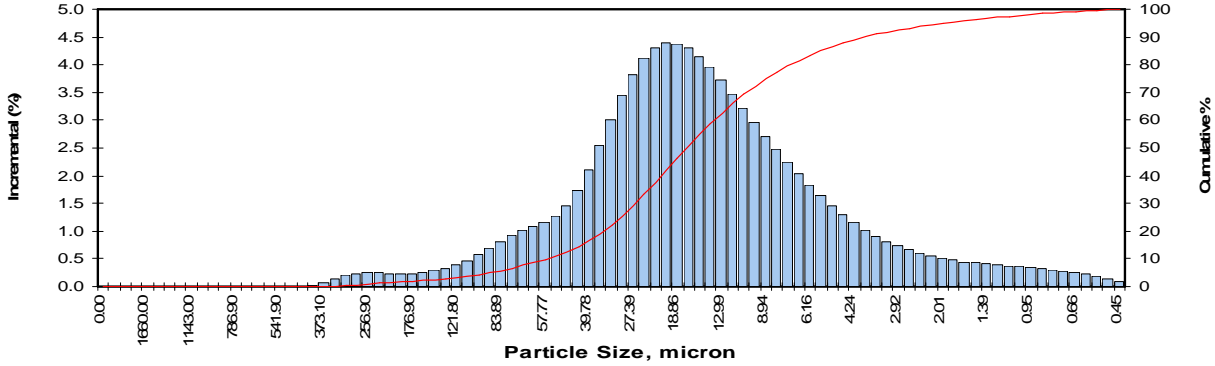
Distribution percent	Particle Size	
	Micron	Millimeters
5	231.996	0.2320
10	112.685	0.1127
16	69.858	0.0699
25	43.658	0.0437
40	24.606	0.0246
50	17.985	0.0180
60	12.096	0.0121
75	6.383	0.0064
84	2.610	0.0026
90	1.423	0.0014
95	0.894	0.0009

Total Silt and Clay (0-0.0625mm) 79.28

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		11.93
Silt (0.00391 to 0.0625mm)		67.35
Very Fine Sand (0.0625 to 0.125mm)		10.67
Fine Sand (0.125 to 0.25mm)		4.62
Medium Sand (0.25 to 0.50mm)		3.91
Coarse Sand (0.50 to 1.00mm)		1.42
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49167
 Sample ID: ILBMP0005_1127(440-255714-5)
 Matrix: Aqueous



Particle Distribution				Particle Distribution				Particle Distribution				
Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	1.08	8.7	1.668	0.00167	0.450	95.8	
0.00	0.00000	0.00	0.0	57.77	0.05777	1.16	9.9	1.520	0.00152	0.430	96.2	
2000.00	2.00000	0.00	0.0	52.62	0.05262	1.27	11.2	1.385	0.00139	0.410	96.6	
1822.00	1.82200	0.00	0.0	47.94	0.04794	1.46	12.6	1.261	0.00126	0.400	97.0	
1660.00	1.66000	0.00	0.0	43.67	0.04367	1.74	14.4	1.149	0.00115	0.380	97.4	
1512.00	1.51200	0.00	0.0	39.78	0.03978	2.11	16.5	1.047	0.00105	0.370	97.8	
1377.00	1.37700	0.00	0.0	36.24	0.03624	2.54	19.0	0.953	0.00095	0.350	98.1	
1255.00	1.25500	0.00	0.0	33.01	0.03301	3.00	22.0	0.868	0.00087	0.330	98.4	
1143.00	1.14300	0.00	0.0	30.07	0.03007	3.44	25.4	0.791	0.00079	0.310	98.8	
1041.00	1.04100	0.00	0.0	27.39	0.02739	3.82	29.3	0.721	0.00072	0.280	99.0	
948.30	0.94830	0.00	0.0	24.95	0.02495	4.11	33.4	0.656	0.00066	0.250	99.3	
863.90	0.86390	0.00	0.0	22.73	0.02273	4.30	37.7	0.598	0.00060	0.220	99.5	
786.90	0.78690	0.00	0.0	20.70	0.02070	4.39	42.1	0.545	0.00055	0.180	99.7	
716.80	0.71680	0.00	0.0	18.86	0.01886	4.38	46.4	0.496	0.00050	0.150	99.8	
653.00	0.65300	0.00	0.0	17.18	0.01718	4.30	50.7	0.452	0.00045	0.100	99.9	
594.90	0.59490	0.00	0.0	15.65	0.01565	4.15	54.9	TOTALS:			99.93	99.9
541.90	0.54190	0.00	0.0	14.26	0.01426	3.95	58.8					
493.60	0.49360	0.00	0.0	12.99	0.01299	3.72	62.6					
449.70	0.44970	0.00	0.0	11.83	0.01183	3.47	66.0					
409.60	0.40960	0.02	0.0	10.78	0.01078	3.21	69.2					
373.10	0.37310	0.06	0.1	9.82	0.00982	2.96	72.2					
339.90	0.33990	0.13	0.2	8.94	0.00894	2.71	74.9					
309.60	0.30960	0.20	0.4	8.15	0.00815	2.47	77.4					
282.10	0.28210	0.24	0.7	7.42	0.00742	2.24	79.6					
256.90	0.25690	0.26	0.9	6.76	0.00676	2.03	81.7					
234.10	0.23410	0.25	1.2	6.16	0.00616	1.83	83.5					
213.20	0.21320	0.23	1.4	5.61	0.00561	1.64	85.1					
194.20	0.19420	0.23	1.6	5.11	0.00511	1.46	86.6					
176.90	0.17690	0.24	1.9	4.66	0.00466	1.30	87.9					
161.20	0.16120	0.26	2.1	4.24	0.00424	1.16	89.0					
146.80	0.14680	0.29	2.4	3.86	0.00386	1.03	90.1					
133.70	0.13370	0.33	2.7	3.52	0.00352	0.91	91.0					
121.80	0.12180	0.39	3.1	3.21	0.00321	0.81	91.8					
111.00	0.11100	0.47	3.6	2.92	0.00292	0.73	92.5					
101.10	0.10110	0.58	4.2	2.66	0.00266	0.66	93.2					
92.09	0.09209	0.70	4.9	2.42	0.00242	0.60	93.8					
83.89	0.08389	0.82	5.7	2.21	0.00221	0.55	94.3					
76.42	0.07642	0.93	6.6	2.01	0.00201	0.51	94.8					
69.61	0.06961	1.01	7.6	1.83	0.00183	0.48	95.3					

Measure	Trask	Inman
Median, mm	0.0129	0.0129
Median, micron	12.889	12.889
Mean, mm	0.0152	0.0097
Mean, micron	15.178	9.714
Sorting	2.0449	1.826
Skewness	0.9295	0.223
Kurtosis	0.1989	0.719

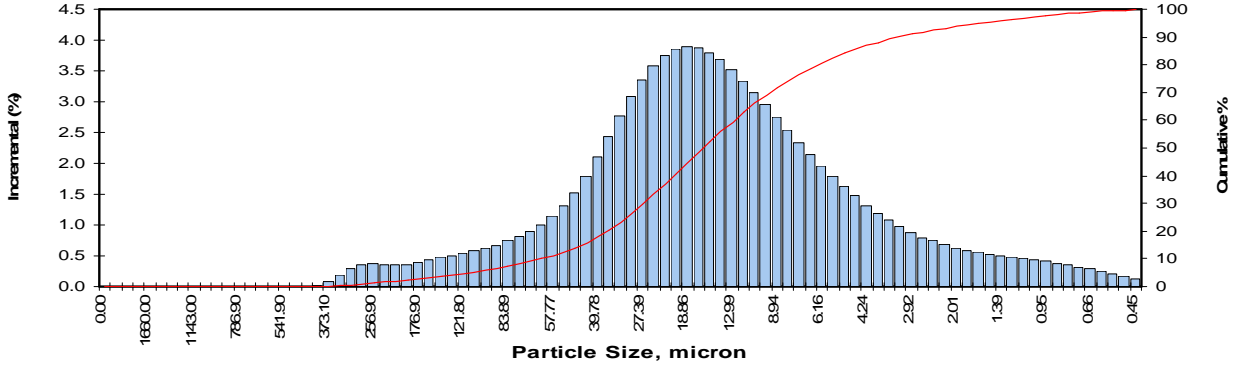
Distribution percent	Particle Size	
	Micron	Millimeters
5	76.873	0.0769
10	48.381	0.0484
16	34.446	0.0344
25	24.497	0.0245
40	17.078	0.0171
50	12.889	0.0129
60	9.727	0.0097
75	5.858	0.0059
84	2.740	0.0027
90	1.518	0.0015
95	0.989	0.0010

Total Silt and Clay (0-0.0625mm) 91.21

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		10.89
Silt (0.00391 to 0.0625mm)		80.32
Very Fine Sand (0.0625 to 0.125mm)		5.98
Fine Sand (0.125 to 0.25mm)		1.83
Medium Sand (0.25 to 0.50mm)		0.91
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49167
 Sample ID: ILBMP0008_1127(440-255714-7)
 Matrix: Aqueous



Particle Distribution				Particle Distribution				Particle Distribution				
Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	1.00	10.0	1.668	0.00167	0.560	95.0	
0.00	0.00000	0.00	0.0	57.77	0.05777	1.14	11.2	1.520	0.00152	0.530	95.5	
2000.00	2.00000	0.00	0.0	52.62	0.05262	1.31	12.5	1.385	0.00139	0.500	96.0	
1822.00	1.82200	0.00	0.0	47.94	0.04794	1.53	14.0	1.261	0.00126	0.480	96.5	
1660.00	1.66000	0.00	0.0	43.67	0.04367	1.80	15.8	1.149	0.00115	0.460	96.9	
1512.00	1.51200	0.00	0.0	39.78	0.03978	2.11	17.9	1.047	0.00105	0.430	97.4	
1377.00	1.37700	0.00	0.0	36.24	0.03624	2.44	20.4	0.953	0.00095	0.410	97.8	
1255.00	1.25500	0.00	0.0	33.01	0.03301	2.77	23.1	0.868	0.00087	0.380	98.2	
1143.00	1.14300	0.00	0.0	30.07	0.03007	3.08	26.2	0.791	0.00079	0.350	98.5	
1041.00	1.04100	0.00	0.0	27.39	0.02739	3.35	29.6	0.721	0.00072	0.320	98.8	
948.30	0.94830	0.00	0.0	24.95	0.02495	3.58	33.1	0.656	0.00066	0.290	99.1	
863.90	0.86390	0.00	0.0	22.73	0.02273	3.74	36.9	0.598	0.00060	0.250	99.4	
786.90	0.78690	0.00	0.0	20.70	0.02070	3.85	40.7	0.545	0.00055	0.210	99.6	
716.80	0.71680	0.00	0.0	18.86	0.01886	3.89	44.6	0.496	0.00050	0.170	99.8	
653.00	0.65300	0.00	0.0	17.18	0.01718	3.87	48.5	0.452	0.00045	0.120	99.9	
594.90	0.59490	0.00	0.0	15.65	0.01565	3.79	52.3	TOTALS:			99.87	99.9
541.90	0.54190	0.00	0.0	14.26	0.01426	3.68	56.0					
493.60	0.49360	0.00	0.0	12.99	0.01299	3.52	59.5					
449.70	0.44970	0.00	0.0	11.83	0.01183	3.34	62.8					
409.60	0.40960	0.02	0.0	10.78	0.01078	3.15	66.0					
373.10	0.37310	0.09	0.1	9.82	0.00982	2.95	68.9					
339.90	0.33990	0.19	0.3	8.94	0.00894	2.74	71.7					
309.60	0.30960	0.29	0.6	8.15	0.00815	2.54	74.2					
282.10	0.28210	0.35	0.9	7.42	0.00742	2.34	76.5					
256.90	0.25690	0.37	1.3	6.76	0.00676	2.15	78.7					
234.10	0.23410	0.36	1.7	6.16	0.00616	1.96	80.7					
213.20	0.21320	0.35	2.0	5.61	0.00561	1.79	82.4					
194.20	0.19420	0.36	2.4	5.11	0.00511	1.62	84.1					
176.90	0.17690	0.39	2.8	4.66	0.00466	1.47	85.5					
161.20	0.16120	0.43	3.2	4.24	0.00424	1.32	86.9					
146.80	0.14680	0.47	3.7	3.86	0.00386	1.19	88.0					
133.70	0.13370	0.51	4.2	3.52	0.00352	1.08	89.1					
121.80	0.12180	0.54	4.7	3.21	0.00321	0.97	90.1					
111.00	0.11100	0.58	5.3	2.92	0.00292	0.88	91.0					
101.10	0.10110	0.62	5.9	2.66	0.00266	0.80	91.8					
92.09	0.09209	0.67	6.6	2.42	0.00242	0.74	92.5					
83.89	0.08389	0.74	7.3	2.21	0.00221	0.68	93.2					
76.42	0.07642	0.81	8.1	2.01	0.00201	0.63	93.8					
69.61	0.06961	0.89	9.0	1.83	0.00183	0.59	94.4					

Measure	Trask	Inman
Median, mm	0.0120	0.0120
Median, micron	12.016	12.016
Mean, mm	0.0151	0.0087
Mean, micron	15.090	8.721
Sorting	2.2191	2.070
Skewness	0.9408	0.223
Kurtosis	0.1902	0.659

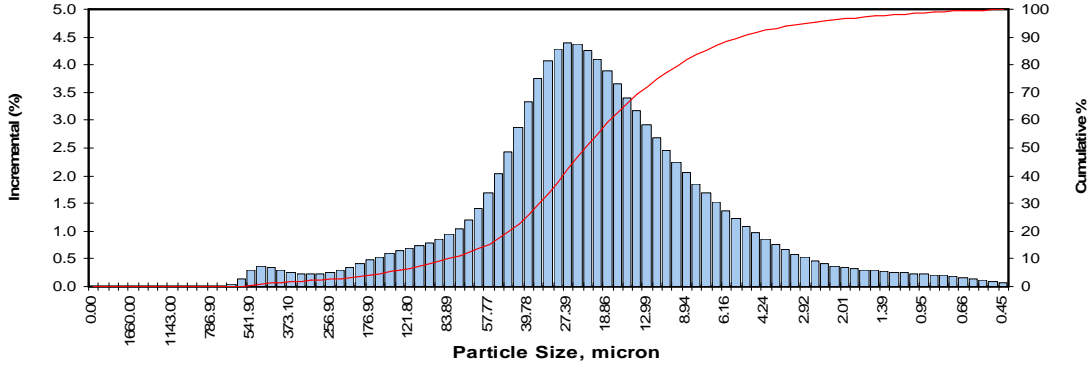
Distribution percent	Particle Size	
	Micron	Millimeters
5	98.601	0.0986
10	53.878	0.0539
16	36.628	0.0366
25	25.087	0.0251
40	16.617	0.0166
50	12.016	0.0120
60	9.018	0.0090
75	5.094	0.0051
84	2.076	0.0021
90	1.324	0.0013
95	0.843	0.0008

Total Silt and Clay (0-0.0625mm) 89.84

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		13.02
Silt (0.00391 to 0.0625mm)		76.82
Very Fine Sand (0.0625 to 0.125mm)		5.85
Fine Sand (0.125 to 0.25mm)		2.87
Medium Sand (0.25 to 0.50mm)		1.31
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49167
 Sample ID: LPBMP0002_1127(440-255714-8)
 Matrix: Aqueous



Particle Distribution				Particle Distribution				Particle Distribution				
Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	1.42	13.7	1.668	0.00167	0.310	97.2	
0.00	0.00000	0.00	0.0	57.77	0.05777	1.69	15.4	1.520	0.00152	0.290	97.5	
2000.00	2.00000	0.00	0.0	52.62	0.05262	2.03	17.4	1.385	0.00139	0.270	97.8	
1822.00	1.82200	0.00	0.0	47.94	0.04794	2.44	19.9	1.261	0.00126	0.260	98.0	
1660.00	1.66000	0.00	0.0	43.67	0.04367	2.88	22.7	1.149	0.00115	0.250	98.3	
1512.00	1.51200	0.00	0.0	39.78	0.03978	3.33	26.1	1.047	0.00105	0.240	98.5	
1377.00	1.37700	0.00	0.0	36.24	0.03624	3.74	29.8	0.953	0.00095	0.230	98.7	
1255.00	1.25500	0.00	0.0	33.01	0.03301	4.07	33.9	0.868	0.00087	0.210	98.9	
1143.00	1.14300	0.00	0.0	30.07	0.03007	4.29	38.2	0.791	0.00079	0.200	99.1	
1041.00	1.04100	0.00	0.0	27.39	0.02739	4.39	42.6	0.721	0.00072	0.180	99.3	
948.30	0.94830	0.00	0.0	24.95	0.02495	4.37	46.9	0.656	0.00066	0.160	99.5	
863.90	0.86390	0.00	0.0	22.73	0.02273	4.27	51.2	0.598	0.00060	0.140	99.6	
786.90	0.78690	0.00	0.0	20.70	0.02070	4.10	55.3	0.545	0.00055	0.120	99.7	
716.80	0.71680	0.00	0.0	18.86	0.01886	3.89	59.2	0.496	0.00050	0.096	99.8	
653.00	0.65300	0.04	0.0	17.18	0.01718	3.66	62.9	0.452	0.00045	0.067	99.9	
594.90	0.59490	0.15	0.2	15.65	0.01565	3.41	66.3	TOTALS:			99.90	99.9
541.90	0.54190	0.29	0.5	14.26	0.01426	3.16	69.4					
493.60	0.49360	0.36	0.8	12.99	0.01299	2.92	72.3					
449.70	0.44970	0.34	1.2	11.83	0.01183	2.68	75.0					
409.60	0.40960	0.29	1.5	10.78	0.01078	2.46	77.5					
373.10	0.37310	0.25	1.7	9.82	0.00982	2.25	79.7					
339.90	0.33990	0.23	2.0	8.94	0.00894	2.05	81.8					
309.60	0.30960	0.22	2.2	8.15	0.00815	1.86	83.6					
282.10	0.28210	0.23	2.4	7.42	0.00742	1.69	85.3					
256.90	0.25690	0.26	2.7	6.76	0.00676	1.53	86.9					
234.10	0.23410	0.30	3.0	6.16	0.00616	1.37	88.2					
213.20	0.21320	0.35	3.3	5.61	0.00561	1.23	89.5					
194.20	0.19420	0.41	3.7	5.11	0.00511	1.09	90.6					
176.90	0.17690	0.48	4.2	4.66	0.00466	0.97	91.5					
161.20	0.16120	0.54	4.7	4.24	0.00424	0.86	92.4					
146.80	0.14680	0.60	5.3	3.86	0.00386	0.76	93.1					
133.70	0.13370	0.65	6.0	3.52	0.00352	0.67	93.8					
121.80	0.12180	0.70	6.7	3.21	0.00321	0.59	94.4					
111.00	0.11100	0.74	7.4	2.92	0.00292	0.53	94.9					
101.10	0.10110	0.79	8.2	2.66	0.00266	0.47	95.4					
92.09	0.09209	0.86	9.1	2.42	0.00242	0.42	95.8					
83.89	0.08389	0.94	10.0	2.21	0.00221	0.38	96.2					
76.42	0.07642	1.05	11.1	2.01	0.00201	0.35	96.6					
69.61	0.06961	1.21	12.3	1.83	0.00183	0.33	96.9					

Measure	Trask	Inman
Median, mm	0.0185	0.0185
Median, micron	18.516	18.516
Mean, mm	0.0215	0.0157
Mean, micron	21.500	15.651
Sorting	2.0412	1.603
Skewness	0.9175	0.151
Kurtosis	0.1912	1.107

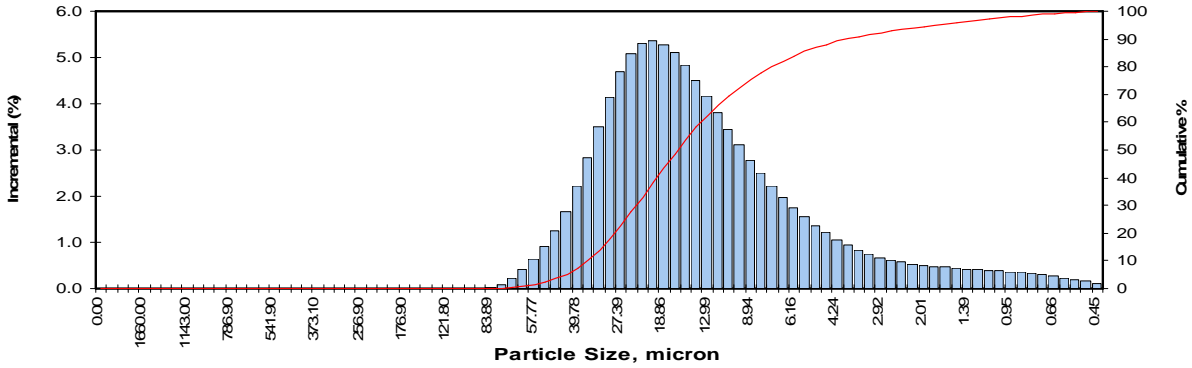
Distribution percent	Particle Size	
	Micron	Millimeters
5	130.432	0.1304
10	71.147	0.0711
16	47.558	0.0476
25	34.676	0.0347
40	23.223	0.0232
50	18.516	0.0185
60	13.903	0.0139
75	8.323	0.0083
84	5.151	0.0052
90	2.230	0.0022
95	1.207	0.0012

Total Silt and Clay (0-0.0625mm) 86.20

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		7.52
Silt (0.00391 to 0.0625mm)		78.68
Very Fine Sand (0.0625 to 0.125mm)		7.71
Fine Sand (0.125 to 0.25mm)		3.33
Medium Sand (0.25 to 0.50mm)		2.18
Coarse Sand (0.50 to 1.00mm)		0.48
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49167
 Sample ID: LPBMP0003_1127(440-255714-9)
 Matrix: Aqueous



Particle Distribution				Particle Distribution				Particle Distribution				
Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	0.42	0.7	1.668	0.00167	0.460	95.5	
0.00	0.00000	0.00	0.0	57.77	0.05777	0.65	1.4	1.520	0.00152	0.440	95.9	
2000.00	2.00000	0.00	0.0	52.62	0.05262	0.92	2.3	1.385	0.00139	0.430	96.4	
1822.00	1.82200	0.00	0.0	47.94	0.04794	1.26	3.6	1.261	0.00126	0.420	96.8	
1660.00	1.66000	0.00	0.0	43.67	0.04367	1.68	5.3	1.149	0.00115	0.400	97.2	
1512.00	1.51200	0.00	0.0	39.78	0.03978	2.21	7.5	1.047	0.00105	0.390	97.6	
1377.00	1.37700	0.00	0.0	36.24	0.03624	2.84	10.3	0.953	0.00095	0.370	97.9	
1255.00	1.25500	0.00	0.0	33.01	0.03301	3.51	13.8	0.868	0.00087	0.350	98.3	
1143.00	1.14300	0.00	0.0	30.07	0.03007	4.15	18.0	0.791	0.00079	0.330	98.6	
1041.00	1.04100	0.00	0.0	27.39	0.02739	4.70	22.7	0.721	0.00072	0.300	98.9	
948.30	0.94830	0.00	0.0	24.95	0.02495	5.09	27.8	0.656	0.00066	0.270	99.2	
863.90	0.86390	0.00	0.0	22.73	0.02273	5.31	33.1	0.598	0.00060	0.230	99.4	
786.90	0.78690	0.00	0.0	20.70	0.02070	5.37	38.4	0.545	0.00055	0.200	99.6	
716.80	0.71680	0.00	0.0	18.96	0.01896	5.28	43.7	0.496	0.00050	0.160	99.8	
653.00	0.65300	0.00	0.0	17.18	0.01718	5.10	48.8	0.452	0.00045	0.110	99.9	
594.90	0.59490	0.00	0.0	15.65	0.01565	4.83	53.6	TOTALS:			99.89	99.9
541.90	0.54190	0.00	0.0	14.26	0.01426	4.51	58.2					
493.60	0.49360	0.00	0.0	12.99	0.01299	4.16	62.3					
449.70	0.44970	0.00	0.0	11.83	0.01183	3.80	66.1					
409.60	0.40960	0.00	0.0	10.78	0.01078	3.45	69.6					
373.10	0.37310	0.00	0.0	9.82	0.00982	3.11	72.7					
339.90	0.33990	0.00	0.0	8.94	0.00894	2.79	75.5					
309.60	0.30960	0.00	0.0	8.15	0.00815	2.50	78.0					
282.10	0.28210	0.00	0.0	7.42	0.00742	2.23	80.2					
256.90	0.25690	0.00	0.0	6.76	0.00676	1.98	82.2					
234.10	0.23410	0.00	0.0	6.16	0.00616	1.76	83.9					
213.20	0.21320	0.00	0.0	5.61	0.00561	1.55	85.5					
194.20	0.19420	0.00	0.0	5.11	0.00511	1.37	86.9					
176.90	0.17690	0.00	0.0	4.66	0.00466	1.21	88.1					
161.20	0.16120	0.00	0.0	4.24	0.00424	1.06	89.1					
146.80	0.14680	0.00	0.0	3.86	0.00386	0.94	90.1					
133.70	0.13370	0.00	0.0	3.52	0.00352	0.84	90.9					
121.80	0.12180	0.00	0.0	3.21	0.00321	0.75	91.7					
111.00	0.11100	0.00	0.0	2.92	0.00292	0.67	92.3					
101.10	0.10110	0.00	0.0	2.66	0.00266	0.62	92.9					
92.09	0.09209	0.00	0.0	2.42	0.00242	0.57	93.5					
83.89	0.08389	0.02	0.0	2.21	0.00221	0.53	94.0					
76.42	0.07642	0.09	0.1	2.01	0.00201	0.50	94.5					
69.61	0.06961	0.22	0.3	1.83	0.00183	0.48	95.0					

Measure	Trask	Inman
Median, mm	0.0122	0.0122
Median, micron	12.191	12.191
Mean, mm	0.0136	0.0085
Mean, micron	13.555	8.519
Sorting	1.8789	1.571
Skewness	0.9223	0.329
Kurtosis	0.2584	0.682

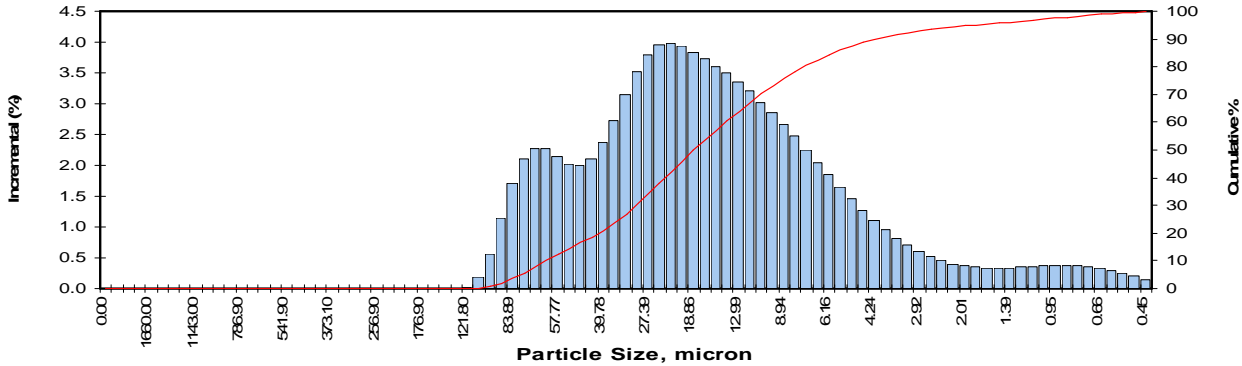
Distribution percent	Particle Size	
	Micron	Millimeters
5	37.304	0.0373
10	30.831	0.0308
16	25.310	0.0253
25	21.125	0.0211
40	15.743	0.0157
50	12.191	0.0122
60	9.580	0.0096
75	5.984	0.0060
84	2.867	0.0029
90	1.531	0.0015
95	0.957	0.0010

Total Silt and Clay (0-0.0625mm) 99.14

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		10.76
Silt (0.00391 to 0.0625mm)		88.38
Very Fine Sand (0.0625 to 0.125mm)		0.75
Fine Sand (0.125 to 0.25mm)		0.00
Medium Sand (0.25 to 0.50mm)		0.00
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49167
 Sample ID: LPBMP004_1127(440-255714-10)
 Matrix: Aqueous



Particle Distribution				Particle Distribution				Particle Distribution				
Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	Particle Diameter, micron		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	2.27	10.3	1.668	0.00167	0.340	95.4	
0.00	0.00000	0.00	0.0	57.77	0.05777	2.15	12.4	1.520	0.00152	0.340	95.7	
2000.00	2.00000	0.00	0.0	52.62	0.05262	2.03	14.5	1.385	0.00139	0.340	96.0	
1822.00	1.82200	0.00	0.0	47.94	0.04794	2.00	16.5	1.261	0.00126	0.350	96.4	
1660.00	1.66000	0.00	0.0	43.67	0.04367	2.11	18.6	1.149	0.00115	0.360	96.8	
1512.00	1.51200	0.00	0.0	39.78	0.03978	2.37	20.9	1.047	0.00105	0.370	97.1	
1377.00	1.37700	0.00	0.0	36.24	0.03624	2.73	23.7	0.953	0.00095	0.380	97.5	
1255.00	1.25500	0.00	0.0	33.01	0.03301	3.14	26.8	0.868	0.00087	0.380	97.9	
1143.00	1.14300	0.00	0.0	30.07	0.03007	3.52	30.3	0.791	0.00079	0.370	98.3	
1041.00	1.04100	0.00	0.0	27.39	0.02739	3.80	34.1	0.721	0.00072	0.350	98.6	
948.30	0.94830	0.00	0.0	24.95	0.02495	3.95	38.1	0.656	0.00066	0.330	98.9	
863.90	0.86390	0.00	0.0	22.73	0.02273	3.98	42.1	0.598	0.00060	0.300	99.2	
786.90	0.78690	0.00	0.0	20.70	0.02070	3.93	46.0	0.545	0.00055	0.260	99.5	
716.80	0.71680	0.00	0.0	18.86	0.01886	3.83	49.8	0.496	0.00050	0.210	99.7	
653.00	0.65300	0.00	0.0	17.18	0.01718	3.72	53.5	0.452	0.00045	0.150	99.9	
594.90	0.59490	0.00	0.0	15.65	0.01565	3.61	57.2	TOTALS:			99.86	99.9
541.90	0.54190	0.00	0.0	14.26	0.01426	3.49	60.6					
493.60	0.49360	0.00	0.0	12.99	0.01299	3.35	64.0					
449.70	0.44970	0.00	0.0	11.83	0.01183	3.20	67.2					
409.60	0.40960	0.00	0.0	10.78	0.01078	3.03	70.2					
373.10	0.37310	0.00	0.0	9.82	0.00982	2.86	73.1					
339.90	0.33990	0.00	0.0	8.94	0.00894	2.67	75.8					
309.60	0.30960	0.00	0.0	8.15	0.00815	2.47	78.2					
282.10	0.28210	0.00	0.0	7.42	0.00742	2.26	80.5					
256.90	0.25690	0.00	0.0	6.76	0.00676	2.05	82.5					
234.10	0.23410	0.00	0.0	6.16	0.00616	1.85	84.4					
213.20	0.21320	0.00	0.0	5.61	0.00561	1.65	86.0					
194.20	0.19420	0.00	0.0	5.11	0.00511	1.46	87.5					
176.90	0.17690	0.00	0.0	4.66	0.00466	1.27	88.8					
161.20	0.16120	0.00	0.0	4.24	0.00424	1.10	89.9					
146.80	0.14680	0.00	0.0	3.86	0.00386	0.95	90.8					
133.70	0.13370	0.00	0.0	3.52	0.00352	0.82	91.6					
121.80	0.12180	0.03	0.0	3.21	0.00321	0.70	92.3					
111.00	0.11100	0.18	0.2	2.92	0.00292	0.60	92.9					
101.10	0.10110	0.57	0.8	2.66	0.00266	0.52	93.5					
92.09	0.09209	1.15	1.9	2.42	0.00242	0.45	93.9					
83.89	0.08389	1.71	3.6	2.21	0.00221	0.40	94.3					
76.42	0.07642	2.10	5.7	2.01	0.00201	0.37	94.7					
69.61	0.06961	2.28	8.0	1.83	0.00183	0.35	95.0					

Measure	Trask	Inman
Median, mm	0.0143	0.0143
Median, micron	14.320	14.320
Mean, mm	0.0176	0.0112
Mean, micron	17.590	11.222
Sorting	2.1786	1.883
Skewness	0.9314	0.187
Kurtosis	0.2188	0.617

Distribution percent	Particle Size	
	Micron	Millimeters
5	66.850	0.0668
10	54.031	0.0540
16	41.386	0.0414
25	29.058	0.0291
40	19.062	0.0191
50	14.320	0.0143
60	10.262	0.0103
75	6.122	0.0061
84	3.043	0.0030
90	1.610	0.0016
95	0.982	0.0010

Total Silt and Clay (0-0.0625mm) 89.57

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		9.99
Silt (0.00391 to 0.0625mm)		79.58
Very Fine Sand (0.0625 to 0.125mm)		10.29
Fine Sand (0.125 to 0.25mm)		0.00
Medium Sand (0.25 to 0.50mm)		0.00
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Eurofins TestAmerica, Irvine

17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone: 949-261-1022 Fax: 949-260-3297

Chain of Custody Record



Environment Testing
TestAmerica

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Patel, Urvashi		Carrier Tracking No(s):		COC No: 440-149215.1	
Client Contact: Shipping/Receiving		Phone:		E-Mail: urvashi.patel@testamericainc.com		State of Origin: California		Page: Page 1 of 1	
Company: Integrated Geosciences Laboratories LLC				Accreditations Required (See note): State Program - California				Job #: 440-255714-1	
Address: 6016 Centralcrest St, City: Houston State, Zip: TX, 77092 Phone:		Due Date Requested: 12/10/2019 TAT Requested (days):		Analysis Requested				Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:	
Email:		PO #:							
Project Name: Boeing SSFL ISRA and BMP		Project #: 44009815							
Site:		SSOW#:							
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	
								Field Filtered Sample (Yes or No)	
								Perform MS/MSD (Yes or No)	
								SUB (Particle Size)/ Particle Size	
								Total Number of containers	
								Special Instructions/Note:	
								IGL ID: 49167	
B1BMP0009_20191127 (440-255714-1)		11/27/19		08:30 Pacific		Water		X	
B1BMP0010_20191127 (440-255714-2)		11/27/19		08:10 Pacific		Water		X	
B1BMP0011_20191127 (440-255714-3)		11/27/19		08:20 Pacific		Water		X	
ILBMP0004_20191127 (440-255714-4)		11/27/19		09:00 Pacific		Water		X	
ILBMP0005_20191127 (440-255714-5)		11/27/19		09:10 Pacific		Water		X	
ILBMP0008_20191127 (440-255714-7)		11/27/19		08:50 Pacific		Water		X	
LPBMP0002_20191127 (440-255714-8)		11/27/19		09:50 Pacific		Water		X	
LPBMP0003_20191127 (440-255714-9)		11/27/19		09:30 Pacific		Water		X	
LPBMP0004_20191127 (440-255714-10)		11/27/19		10:00 Pacific		Water		X	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.									
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months				
Deliverable Requested: I, II, III, IV, Other (specify)					Primary Deliverable Rank: 2				
Special Instructions/QC Requirements:									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <i>A. Kenney</i>		Date/Time: <i>11/29/19 1700</i>		Company: <i>TA IRV</i>		Received by: <i>W. ...</i>		Date/Time: <i>12/2/19 0900</i>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:				



Chain of Custody Record for
Haley & Aldrich, Inc. Blanket Service Agreement #2015-18-TestAmerica

Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614
phone (949) 261-1022 fax (949) 260-3299

Regulatory Program: DW NPDES RCRA Other

TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement # 2015-18-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories, Inc.

Client Contact		H&A Project Manager: Katherine Miller		H&A Site Contact: Matt Birney (618) 466-8782		Lab Contact: Urvasi Patel (949) 333-9055		Dates: 11/27/2019		Carrier:								
Haley & Aldrich, Inc.		5333 Mission Center Road, Suite 300 San Diego, California 92108		Tel/Fax: (620) 289-8606		Analysis Turnaround Time		COCs		COC No								
Sample Identification		Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Method 200.8: Cd, Cu, Pb (Total Dissolved)	Method 245.1: Hg (Total Recoverable)	Dioxins (Method 1631)	Total Suspended Solids (Method 2540D)	Particle Size Distribution (Method ASTM D422)	Method 200.8: As, Cd, Cu, Fe, Pb, Mn, Se, Zn (Total Recoverable)	Method 245.1: Hg (Total Recoverable)	SO4 (E300)	Gross Alpha (E900.0) (Total Dissolved)	Gross Alpha (E900.0) (Total Recoverable)	
B1BMP0009_20191127		11/27/2019	830	G	WM	6	N	X	X	X	X	X	X	X	500	1-L	1-L	A
B1BMP0010_20191127		11/27/2019	0810	G	WM	6	N	X	X	X	X	X	X	X		1-L	1-L	A
B1BMP0011_20191127		11/27/2019	0820	G	WM	6	N	X	X	X	X	X	X	X		1-L	1-L	A
ILBMP0004_20191127		11/27/2019	900	G	WM	6	N	X	X	X	X	X	X	X		1-L	1-L	A
ILBMP0005_20191127		11/27/2019	910	G	WM	6	N	X	X	X	X	X	X	X		1-L	1-L	A
EB_20191127		11/27/2019	1200	G	WM	4	N	H	H	H	H	H	H	H		1-L	1-L	A
ILBMP0008_20191127		11/27/19	0850	G	WM	6	N	X	X	X	X	X	X	X		1-L	1-L	A
LPBMP0002_20191127		11/27/19	0950	G	WM	6	N	X	X	X	X	X	X	X		1-L	1-L	A
LPBMP0003_20191127		11/27/19	0930	G	WM	6	N	X	X	X	X	X	X	X		1-L	1-L	A
LPBMP0004_20191127		11/27/19	1000	G	WM	6	N	X	X	X	X	X	X	X		1-L	1-L	A
FB-20191127		11/27/19	1230	G	WM	2	N	H	H	H	H	H	H	H		1-L	1-L	A

Preservation Used: 15 Ice, 20 HCl, 30 H2SO4, 4 HNO3, 5 NaOH, 6 Other
Possible Hazard Identification: Please List any EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/OC Requirements & Comments:
 Please email data to kmiller@haleyaldrich.com and post to Total Access, Bill to Haley & Aldrich at AP@haleyaldrich.com, Report Level II Data Package and provide EDD. All dissolved metal samples are to be filtered within 24 hours of receipt, even those placed on hold

Custody Seals Intact	<input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No	
Relinquished by	M. Birney	Company	H&A
Relinquished by	[Signature]	Company	H&A
Relinquished by	[Signature]	Company	H&A

Date/Time	11/27/19	1352	Company	H&A
Date/Time	11/27/19	1555	Company	H&A

5.1/4.8 4.9/4.6 2.5/2.2 6.0/5.7 IP-93



440-255714 Chain of Custody



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Lab PM: Patel, Urvashi		COC No: 440-149233.1	
Client Contact: Shipping/Receiving		E-Mail: urvashi.patel@testamericainc.com		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - California		Job #: 440-255714-1	
Address: 880 Riverside Parkway, West Sacramento, CA, 95605		Due Date Requested: 12/10/2019		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDA Other:	
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		TAT Requested (days):		Analysis Requested	
Email:		PO #:		Total Number of Containers	
Project Name: Boeing SSFL ISRA and BMP		WO #:		1613B/1613B_Sox_Sep_P Standard List w/ Totals	
Site:		Project #: 44009815		Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>	
		SSOW#:		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>	
Sample Identification - Client ID (Lab ID)		Sample Date: 11/27/19		Special Instructions/Note:	
EB_20191127 (440-255714-6)		Sample Time: 12:00 Pacific		See OAS, Boeing, w/u to zero	
		Sample Type (C=Comp, G=grab) <input checked="" type="checkbox"/>			
		Matrix (Water, Solid, Oil)			
		Preservation Code: Water			

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: <i>A. Remedy</i>		Date/Time: 11/30/19 - 9:40	
Relinquished by:		Company: <i>FA-SAC</i>	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: <i>0-6°C</i>	



Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-255714-1

SDG Number: BMP Performance OF 001, 002, and/or 009 Watershed

Login Number: 255714

List Source: Eurofins TestAmerica, Irvine

List Number: 1

Creator: Soderblom, Tim

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-255714-1

SDG Number: BMP Performance OF 001, 002, and/or 009 Watershed

Login Number: 255714

List Source: Eurofins TestAmerica, Sacramento

List Number: 2

List Creation: 11/30/19 11:00 AM

Creator: Guzman, Juan

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-255714-1	B1BMP0009_20191127	54	57	53	53	57	55	52	66
440-255714-1 - RA	B1BMP0009_20191127		53						
440-255714-2	B1BMP0010_20191127	60	59	58	57	61	61	57	72
440-255714-3	B1BMP0011_20191127	55	58	55	56	57	57	52	65
440-255714-4	ILBMP0004_20191127	48	48	43	44	46	47	41	56
440-255714-5	ILBMP0005_20191127	61	62	59	59	61	63	57	74
440-255714-5 - RA	ILBMP0005_20191127		56						
440-255714-7	ILBMP0008_20191127	61	61	57	59	61	62	54	73
440-255714-8	LPBMP0002_20191127	53	53	51	51	54	56	49	63
440-255714-8 - RA	LPBMP0002_20191127		47						
440-255714-9	LPBMP0003_20191127	49	51	43	44	48	49	43	57
440-255714-10	LPBMP0004_20191127	54	53	49	51	53	51	48	61
MB 320-343025/1-A	Method Blank	44	46	42	42	46	43	38	49

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxCDF (26-123)	HxCF (29-147)	13CHxCDF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-255714-1	B1BMP0009_20191127	55	62	58	51	51	58	45
440-255714-1 - RA	B1BMP0009_20191127							
440-255714-2	B1BMP0010_20191127	61	68	65	56	58	63	46
440-255714-3	B1BMP0011_20191127	57	65	59	51	52	58	42
440-255714-4	ILBMP0004_20191127	47	52	48	40	41	48	32
440-255714-5	ILBMP0005_20191127	62	70	63	56	58	65	49
440-255714-5 - RA	ILBMP0005_20191127							
440-255714-7	ILBMP0008_20191127	62	71	65	51	57	63	48
440-255714-8	LPBMP0002_20191127	55	63	56	49	50	57	40
440-255714-8 - RA	LPBMP0002_20191127							
440-255714-9	LPBMP0003_20191127	48	52	51	40	43	47	32
440-255714-10	LPBMP0004_20191127	52	58	54	46	48	53	37
MB 320-343025/1-A	Method Blank	41	45	43	34	39	43	31

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCF = 13C-2,3,4,7,8-PeCDF
- HxCDD = 13C-1,2,3,4,7,8-HxCDD
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HxDF = 13C-1,2,3,6,7,8-HxCDF
- HxCF = 13C-1,2,3,7,8,9-HxCDF
- 13CHxCDF = 13C-2,3,4,6,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
- OCDD = 13C-OCDD

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
 Project/Site: 129095-004 SID 5.2

Job ID: 440-255714-1
 SDG: BMP Performance OF 001, 002, and/or 009 Watershed

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-343025/2-A	Lab Control Sample	56	58	55	53	58	52	48	60

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-343025/2-A	Lab Control Sample	52	58	54	47	47	53	38

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCF = 13C-2,3,4,7,8-PeCDF
- HxCDD = 13C-1,2,3,4,7,8-HxCDD
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HxDF = 13C-1,2,3,6,7,8-HxCDF
- HxCF = 13C-1,2,3,7,8,9-HxCDF
- 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
- OCDD = 13C-OCDD



Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-255714 Field Sheet

Job: _____

Tracking #: 1119 9741 6670

SO / PO / FO / (SAT) 2-Day / Ground / UPS / CDO / Cour
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: _____

Therm. ID: AK12 Corr. Factor: (+/-) 0 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: Seal

Cooler ID: 1 of 2

Temp Observed: 0.3 °C Corrected: 0.3 °C

From: Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: SO Date: 11/30/19

Unpacking/Labeling The Samples	Yes	No	NA
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Non-conformance
NCM Filed? Yes No NA

Initials: SL Date: 11/30/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WRI-J

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Patel, Urvashi

From: Baluran, Dwayne <DBaluran@haleyaldrich.com>
Sent: Tuesday, December 03, 2019 4:31 PM
To: Patel, Urvashi
Cc: Miller, Katherine
Subject: RE: Sample Receipt Updates: 440-255714 and 440-255939

-External Email-

Urvashi – Alright, thanks for the follow up. Appreciate the help.

Take care,
Dwayne

From: Patel, Urvashi <Urvashi.Patel@testamericainc.com>
Sent: Tuesday, December 3, 2019 4:22 PM
To: Baluran, Dwayne <DBaluran@haleyaldrich.com>
Cc: Miller, Katherine <KMiller@haleyaldrich.com>
Subject: RE: Sample Receipt Updates: 440-255714 and 440-255939

CAUTION: External Email

Hi Dwayne

We can make the corrections in our login but cannot make corrections on the COC. I can use the email below and attach that to the job as instructions from you for the logins.

We analyzed the Turbidity past hold. If you do not need it, we can leave it out of the report but will charge for the analysis.

We sent the containers to PTS labs (now know as IGL) for the FB and will check to see if Irvine analyzed the TSS for the FB as well. If they didn't start it, I will cancel and no charge. If analysis has been completed, we do charge for the analysis. I'll contact all the labs now and let you know.

Urvashi

Urvashi Patel

Phone: 949-333-9055

E-mail: Urvashi.Patel@testamericainc.com

From: Baluran, Dwayne [<mailto:DBaluran@haleyaldrich.com>]
Sent: Tuesday, December 03, 2019 4:15 PM
To: Patel, Urvashi
Cc: Miller, Katherine
Subject: Sample Receipt Updates: 440-255714 and 440-255939

-External Email-

Hello Urvashi,

Thanks for catching the COC/ label time discrepancy for the samples sent in on 11/27/2019. Using the time as listed on the COC was correct.

I just reviewed the work orders. Could you please make the following adjustments?

Sample Delivery Group	Sample Date	Work Order or COC Corrections?
440-255714-1	11/27/2019	remove equipment blank and field blank. They do not need to be tested
440-255939-1	12/28/2019	~update H&A project number to "129095-004, SID 5.2" on both COC and work order ~the COC was wrong. Revise that ILBMP0009_20191128 does not need to be tested for Turbidity

Thank you!

Dwayne Baluran, EIT, QSP
Staff Engineer

Haley & Aldrich, Inc.
5850 Canoga Avenue | Suite 400
Woodland Hills, CA 91367

T: (978) 234.5022
C: (818) 224.0704

www.haleyaldrich.com



ANALYTICAL REPORT

Eurofins TestAmerica, Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-255939-1

Laboratory SDG: BMP Performance OF 009 Watershed
Client Project/Site: BMP Performance OF 009 Watershed

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
12/27/2019 10:01:16 PM

Urvashi Patel, Manager of Project Management
(949)260-3269
urvashi.patel@testamericainc.com

LINKS

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results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
SDG: BMP Performance OF 009 Watershed

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-255939-1	ILBMP0009_20191128	Water	11/28/19 07:50	11/30/19 10:30	
440-255939-2	ILBMP0010_20191128	Water	11/28/19 08:00	11/30/19 10:30	

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
SDG: BMP Performance OF 009 Watershed

Job ID: 440-255939-1

Laboratory: Eurofins TestAmerica, Irvine

Narrative

Job Narrative 440-255939-1

Comments

Turbidity analysis cancelled by client.

Receipt

The samples were received on 11/30/2019 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5° C.

Receipt Exceptions

The following sample was received outside of holding time: ILBMP0009_20191128 (440-255939-1). Received sample outside the holding time for Turbidity.

The Field Sampler was not listed on the Chain of Custody.

Metals

Method 200.8: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 440-583231 and analytical batch 440-583332 were outside control limits for Copper. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method FILTRATION: The following samples requested dissolved metals and were not filtered in the field: ILBMP0009_20191128 (440-255939-1) and ILBMP0010_20191128 (440-255939-2). These samples were filtered and preserved upon receipt to the laboratory.

11/30/19

2.5 mL of HNO3

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Methods 180.1, SM 2130B: The following sample was received outside of holding time: ILBMP0009_20191128 (440-255939-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract non-Sister

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Method Particle Size: This method was subcontracted to Integrated Geosciences Laboratories LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
 SDG: BMP Performance OF 009 Watershed

Client Sample ID: ILBMP0009_20191128

Lab Sample ID: 440-255939-1

Date Collected: 11/28/19 07:50

Matrix: Water

Date Received: 11/30/19 10:30

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/02/19 08:44	12/02/19 15:23	1
Copper	5.2		2.0	0.50	ug/L		12/02/19 08:44	12/02/19 15:23	1
Lead	1.6		1.0	0.50	ug/L		12/02/19 08:44	12/02/19 15:23	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/30/19 14:41	12/01/19 17:23	1
Copper	3.2		2.0	0.50	ug/L		11/30/19 14:41	12/01/19 17:23	1
Lead	ND		1.0	0.50	ug/L		11/30/19 14:41	12/01/19 17:23	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:15	12/03/19 16:19	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:55	12/03/19 17:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	19		2.0	1.0	mg/L			12/04/19 18:12	1

Client Sample ID: ILBMP0010_20191128

Lab Sample ID: 440-255939-2

Date Collected: 11/28/19 08:00

Matrix: Water

Date Received: 11/30/19 10:30

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/02/19 08:44	12/02/19 15:25	1
Copper	16		2.0	0.50	ug/L		12/02/19 08:44	12/02/19 15:25	1
Lead	5.1		1.0	0.50	ug/L		12/02/19 08:44	12/02/19 15:25	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/30/19 14:41	12/01/19 17:33	1
Copper	3.2		2.0	0.50	ug/L		11/30/19 14:41	12/01/19 17:33	1
Lead	ND		1.0	0.50	ug/L		11/30/19 14:41	12/01/19 17:33	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:15	12/03/19 16:17	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:55	12/04/19 02:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	15		2.0	1.0	mg/L			12/04/19 18:12	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
SDG: BMP Performance OF 009 Watershed

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
Subcontract	Particle Size	None	IGL
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV
FILTRATION	Sample Filtration	None	TAL IRV

Protocol References:

- EPA = US Environmental Protection Agency
- None = None
- SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

- IGL = Integrated Geosciences Laboratories LLC, 6016 Centralcrest St, Houston, TX 77092
- TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
 SDG: BMP Performance OF 009 Watershed

Client Sample ID: ILBMP0009_20191128

Lab Sample ID: 440-255939-1

Date Collected: 11/28/19 07:50

Matrix: Water

Date Received: 11/30/19 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			150 mL	150 mL	583110	11/30/19 13:50	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	583114	11/30/19 14:41	EP	TAL IRV
Dissolved	Analysis	200.8		1			583160	12/01/19 17:23	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	583231	12/02/19 08:44	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			583332	12/02/19 15:23	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	583110	11/30/19 13:50	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583415	12/02/19 21:55	DB	TAL IRV
Dissolved	Analysis	245.1		1			583647	12/03/19 17:31	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583384	12/02/19 21:15	DB	TAL IRV
Total/NA	Analysis	245.1		1			583644	12/03/19 16:19	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	583849	12/04/19 18:12	KL	TAL IRV

Client Sample ID: ILBMP0010_20191128

Lab Sample ID: 440-255939-2

Date Collected: 11/28/19 08:00

Matrix: Water

Date Received: 11/30/19 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			150 mL	150 mL	583110	11/30/19 13:50	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	583114	11/30/19 14:41	EP	TAL IRV
Dissolved	Analysis	200.8		1			583160	12/01/19 17:33	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	583231	12/02/19 08:44	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			583332	12/02/19 15:25	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	583110	11/30/19 13:50	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	583415	12/02/19 21:55	DB	TAL IRV
Dissolved	Analysis	245.1		1			583647	12/04/19 02:43	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	583384	12/02/19 21:15	DB	TAL IRV
Total/NA	Analysis	245.1		1			583644	12/03/19 16:17	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	583849	12/04/19 18:12	KL	TAL IRV

Laboratory References:

IGL = Integrated Geosciences Laboratories LLC, 6016 Centralcrest St, Houston, TX 77092

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
 SDG: BMP Performance OF 009 Watershed

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-583231/1-A
Matrix: Water
Analysis Batch: 583332

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 583231

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/02/19 08:44	12/02/19 15:06	1
Copper	ND		2.0	0.50	ug/L		12/02/19 08:44	12/02/19 15:06	1
Lead	ND		1.0	0.50	ug/L		12/02/19 08:44	12/02/19 15:06	1

Lab Sample ID: LCS 440-583231/2-A
Matrix: Water
Analysis Batch: 583332

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 583231

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	78.1		ug/L		98	85 - 115
Copper	80.0	76.4		ug/L		96	85 - 115
Lead	80.0	78.5		ug/L		98	85 - 115

Lab Sample ID: 720-96273-F-1-B MS
Matrix: Water
Analysis Batch: 583332

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 583231

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	ND		80.0	79.0		ug/L		99	70 - 130
Copper	62		80.0	85.6	LN	ug/L		30	70 - 130
Lead	2.0		80.0	81.2		ug/L		99	70 - 130

Lab Sample ID: 720-96273-F-1-C MSD
Matrix: Water
Analysis Batch: 583332

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 583231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	ND		80.0	77.5		ug/L		97	70 - 130	2	20
Copper	62		80.0	96.0	LN	ug/L		43	70 - 130	11	20
Lead	2.0		80.0	81.3		ug/L		99	70 - 130	0	20

Lab Sample ID: MB 440-583110/1-C
Matrix: Water
Analysis Batch: 583160

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 583114

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		11/30/19 14:41	12/01/19 17:19	1
Copper	ND		2.0	0.50	ug/L		11/30/19 14:41	12/01/19 17:19	1
Lead	ND		1.0	0.50	ug/L		11/30/19 14:41	12/01/19 17:19	1

Lab Sample ID: LCS 440-583110/2-C
Matrix: Water
Analysis Batch: 583160

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 583114

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	77.8		ug/L		97	85 - 115
Copper	80.0	76.8		ug/L		96	85 - 115
Lead	80.0	76.4		ug/L		96	85 - 115

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
 SDG: BMP Performance OF 009 Watershed

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-255939-1 MS
Matrix: Water
Analysis Batch: 583160

Client Sample ID: ILBMP0009_20191128
Prep Type: Dissolved
Prep Batch: 583114

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	ND		80.0	77.2		ug/L		96	70 - 130
Copper	3.2		80.0	80.4		ug/L		96	70 - 130
Lead	ND		80.0	76.0		ug/L		95	70 - 130

Lab Sample ID: 440-255939-1 MSD
Matrix: Water
Analysis Batch: 583160

Client Sample ID: ILBMP0009_20191128
Prep Type: Dissolved
Prep Batch: 583114

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	ND		80.0	80.7		ug/L		101	70 - 130	5	20
Copper	3.2		80.0	82.6		ug/L		99	70 - 130	3	20
Lead	ND		80.0	79.8		ug/L		100	70 - 130	5	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-583384/1-A
Matrix: Water
Analysis Batch: 583644

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 583384

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:15	12/03/19 16:07	1

Lab Sample ID: LCS 440-583384/2-A
Matrix: Water
Analysis Batch: 583644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 583384

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	4.03		ug/L		101	85 - 115

Lab Sample ID: 440-255910-A-1-B MS
Matrix: Water
Analysis Batch: 583644

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 583384

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.99		ug/L		100	75 - 125

Lab Sample ID: 440-255910-A-1-C MSD
Matrix: Water
Analysis Batch: 583644

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 583384

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.87		ug/L		97	75 - 125	3	20

Lab Sample ID: MB 440-583110/1-E
Matrix: Water
Analysis Batch: 583647

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 583415

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/02/19 21:55	12/04/19 02:41	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
 SDG: BMP Performance OF 009 Watershed

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 440-583110/2-E
Matrix: Water
Analysis Batch: 583647

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 583415
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	4.02		ug/L		100	85 - 115

Lab Sample ID: 440-255939-2 MS
Matrix: Water
Analysis Batch: 583647

Client Sample ID: ILBMP0010_20191128
Prep Type: Dissolved
Prep Batch: 583415
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	4.01		ug/L		100	75 - 125

Lab Sample ID: 440-255939-2 MSD
Matrix: Water
Analysis Batch: 583647

Client Sample ID: ILBMP0010_20191128
Prep Type: Dissolved
Prep Batch: 583415
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	4.13		ug/L		103	75 - 125	3	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-583849/1
Matrix: Water
Analysis Batch: 583849

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			12/04/19 18:12	1

Lab Sample ID: LCS 440-583849/2
Matrix: Water
Analysis Batch: 583849

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Suspended Solids	1000	982		mg/L		98	85 - 115

Lab Sample ID: 440-255894-B-5 DU
Matrix: Water
Analysis Batch: 583849

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	34		32.5		mg/L		4	10

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
 SDG: BMP Performance OF 009 Watershed

Metals

Filtration Batch: 583110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Dissolved	Water	FILTRATION	
440-255939-2	ILBMP0010_20191128	Dissolved	Water	FILTRATION	
MB 440-583110/1-C	Method Blank	Dissolved	Water	FILTRATION	
MB 440-583110/1-E	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-583110/2-C	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 440-583110/2-E	Lab Control Sample	Dissolved	Water	FILTRATION	
440-255939-1 MS	ILBMP0009_20191128	Dissolved	Water	FILTRATION	
440-255939-1 MSD	ILBMP0009_20191128	Dissolved	Water	FILTRATION	
440-255939-2 MS	ILBMP0010_20191128	Dissolved	Water	FILTRATION	
440-255939-2 MSD	ILBMP0010_20191128	Dissolved	Water	FILTRATION	

Prep Batch: 583114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Dissolved	Water	200.2	583110
440-255939-2	ILBMP0010_20191128	Dissolved	Water	200.2	583110
MB 440-583110/1-C	Method Blank	Dissolved	Water	200.2	583110
LCS 440-583110/2-C	Lab Control Sample	Dissolved	Water	200.2	583110
440-255939-1 MS	ILBMP0009_20191128	Dissolved	Water	200.2	583110
440-255939-1 MSD	ILBMP0009_20191128	Dissolved	Water	200.2	583110

Analysis Batch: 583160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Dissolved	Water	200.8	583114
440-255939-2	ILBMP0010_20191128	Dissolved	Water	200.8	583114
MB 440-583110/1-C	Method Blank	Dissolved	Water	200.8	583114
LCS 440-583110/2-C	Lab Control Sample	Dissolved	Water	200.8	583114
440-255939-1 MS	ILBMP0009_20191128	Dissolved	Water	200.8	583114
440-255939-1 MSD	ILBMP0009_20191128	Dissolved	Water	200.8	583114

Prep Batch: 583231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Total Recoverable	Water	200.2	
440-255939-2	ILBMP0010_20191128	Total Recoverable	Water	200.2	
MB 440-583231/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-583231/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
720-96273-F-1-B MS	Matrix Spike	Total Recoverable	Water	200.2	
720-96273-F-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.2	

Analysis Batch: 583332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Total Recoverable	Water	200.8	583231
440-255939-2	ILBMP0010_20191128	Total Recoverable	Water	200.8	583231
MB 440-583231/1-A	Method Blank	Total Recoverable	Water	200.8	583231
LCS 440-583231/2-A	Lab Control Sample	Total Recoverable	Water	200.8	583231
720-96273-F-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	583231
720-96273-F-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	583231

Prep Batch: 583384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Total/NA	Water	245.1	
440-255939-2	ILBMP0010_20191128	Total/NA	Water	245.1	

Eurofins TestAmerica, Irvine

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
SDG: BMP Performance OF 009 Watershed

Metals (Continued)

Prep Batch: 583384 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-583384/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-583384/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-255910-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	
440-255910-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Prep Batch: 583415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Dissolved	Water	245.1	583110
440-255939-2	ILBMP0010_20191128	Dissolved	Water	245.1	583110
MB 440-583110/1-E	Method Blank	Dissolved	Water	245.1	583110
LCS 440-583110/2-E	Lab Control Sample	Dissolved	Water	245.1	583110
440-255939-2 MS	ILBMP0010_20191128	Dissolved	Water	245.1	583110
440-255939-2 MSD	ILBMP0010_20191128	Dissolved	Water	245.1	583110

Analysis Batch: 583644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Total/NA	Water	245.1	583384
440-255939-2	ILBMP0010_20191128	Total/NA	Water	245.1	583384
MB 440-583384/1-A	Method Blank	Total/NA	Water	245.1	583384
LCS 440-583384/2-A	Lab Control Sample	Total/NA	Water	245.1	583384
440-255910-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	583384
440-255910-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	583384

Analysis Batch: 583647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Dissolved	Water	245.1	583415
440-255939-2	ILBMP0010_20191128	Dissolved	Water	245.1	583415
MB 440-583110/1-E	Method Blank	Dissolved	Water	245.1	583415
LCS 440-583110/2-E	Lab Control Sample	Dissolved	Water	245.1	583415
440-255939-2 MS	ILBMP0010_20191128	Dissolved	Water	245.1	583415
440-255939-2 MSD	ILBMP0010_20191128	Dissolved	Water	245.1	583415

General Chemistry

Analysis Batch: 583849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Total/NA	Water	SM 2540D	
440-255939-2	ILBMP0010_20191128	Total/NA	Water	SM 2540D	
MB 440-583849/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-583849/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-255894-B-5 DU	Duplicate	Total/NA	Water	SM 2540D	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
SDG: BMP Performance OF 009 Watershed

Qualifiers

Metals

Qualifier	Qualifier Description
LN	MS and/or MSD below acceptance limits. See Blank Spike (LCS)

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 009 Watershed

Job ID: 440-255939-1
SDG: BMP Performance OF 009 Watershed

Laboratory: Eurofins TestAmerica, Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

- 1
- 2
- 3
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- 15
- 16



INTEGRATED GEOSCIENCES LABORATORIES, LLC

*Environmental * Geotechnical * Core Analysis*

6016 Centralcrest Street • Houston, Texas 77092
Telephone (713) 316-1800 • Fax (877) 255-9953

December 12, 2019

Patel, Urvashi.
Project Manager,
Eurofins TestAmerica, Irvine.
17461 Derian Ave Suite 100.
Irvine, CA 92614-5817.

Re: PTS/IGL File No: **49167**
Project Name: Boeing SSFL ISRA and BMP.
Project Number: 44009815
Site Location:

Subject: Final Report: Laser Particle Size Analysis – (ASTM D4464)

Dear Patel, Urvashi

Please find enclosed report for Physical Properties analyses conducted upon **two (2)** fluid samples received from your “**Boeing SSFL ISRA and BMP**” project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for fifteen days past the completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

Integrated Geosciences Laboratories appreciate the opportunity to be of service. If you have any questions or require additional information, please contact me or Emeka Anazodo at (713) 316-1800.

Sincerely,
Integrated Geosciences Laboratories, LLC.

C.A.Umeh

Chidi Umeh
Technical Consultant.
Encl.



PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D4464M)

PROJECT NAME: Boeing SSFL ISRA and BMP
PROJECT NO: 44009815

Sample ID	Matrix	Median Grain Size, micron (1)	Median Grain Size, mm (1)	PERCENT (%) PARTICLES RETAINED ON SIEVE RANGE								
				Distribution percent, millimeter (mm)								
				Clay (less than 0.00391mm)	Silt (0.00391 to 0.0625mm)	Very Fine Sand (0.0625 to 0.125mm)	Fine Sand (0.125 to 0.25mm)	Medium Sand (0.25 to 0.50mm)	Coarse Sand (0.50 to 1.00mm)	Very Coarse Sand (1.00 to 2.00mm)	Gravel (greater than 2.00mm)	Total Silt and Clay (0-0.0625mm)
ILBMP0009_20191128 (440-255939-1)	Aqueous	18.936	0.01894	10.37	61.25	9.78	3.88	12.41	2.10	0.00	0.00	71.62
ILBMP0010_20191128 (440-255939-2)	Aqueous	11.646	0.01165	13.49	85.00	1.30	0.00	0.00	0.00	0.00	0.00	98.49

(1) Based on Trask Median



PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D4464M)

PROJECT NAME: Boeing SSFL ISRA and BMP
PROJECT NO: 44009815

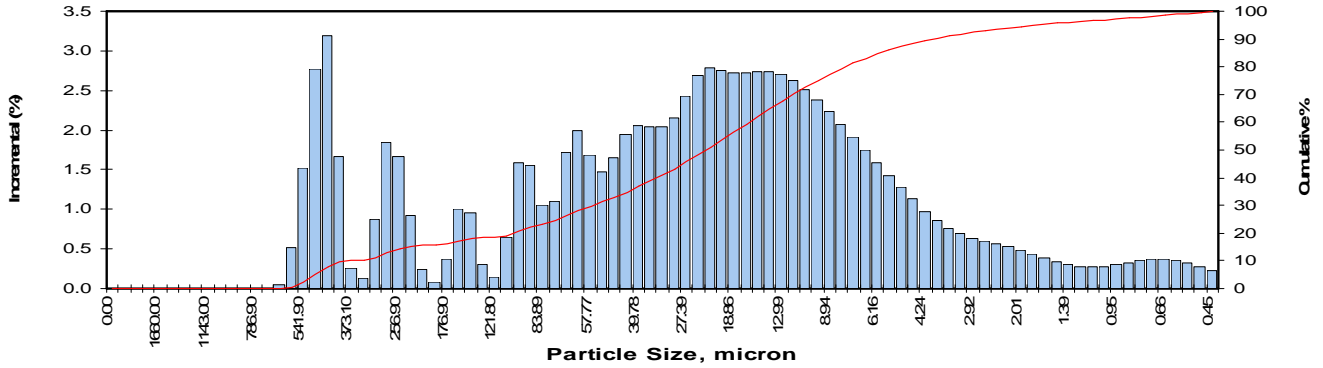
Sample ID	Matrix	Median Grain Size, micron (1)	CUMULATIVE PERCENT GREATER THAN										
			Distribution percent, microns										
			5%	10%	16%	25%	40%	50%	60%	75%	84%	90%	95%
ILBMP0009_20191128 (440-255939-1)	Aqueous	18.936	413.283	302.462	160.976	62.996	28.961	18.936	12.382	6.750	3.219	1.597	0.982
ILBMP0010_20191128 (440-255939-2)	Aqueous	11.646	45.565	39.010	32.693	23.968	16.143	11.646	8.831	4.970	1.993	1.254	0.721

(1) Based on Trask Median



Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49169
 Sample ID: ILBMP0009_20191128(440-255939-1)
 Matrix: Aqueous



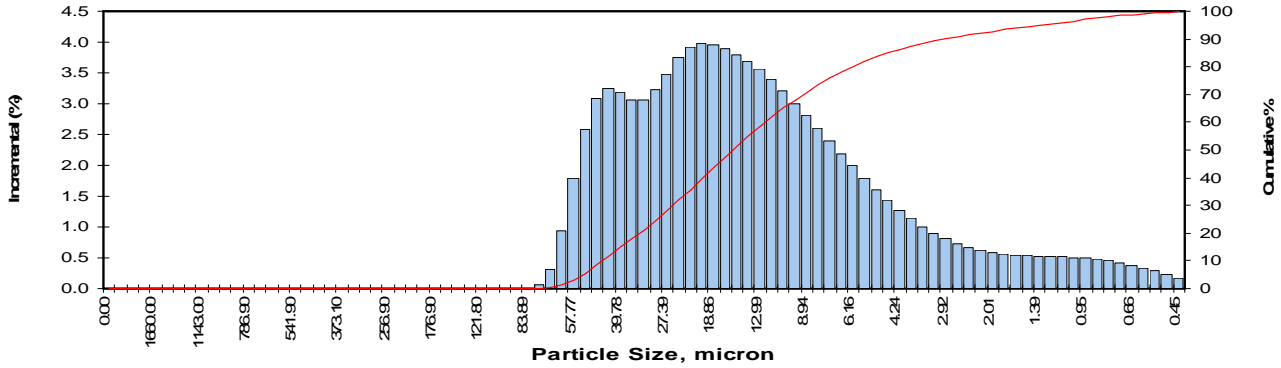
Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		
Diameter, microm		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	1.99	28.2	1.668	0.00167	0.390	95.4	
0.00	0.00000	0.00	0.0	57.77	0.05777	1.68	29.9	1.520	0.00152	0.340	95.7	
2000.00	2.00000	0.00	0.0	52.62	0.05262	1.48	31.3	1.385	0.00139	0.310	96.0	
1822.00	1.82200	0.00	0.0	47.94	0.04794	1.66	33.0	1.261	0.00126	0.280	96.3	
1660.00	1.66000	0.00	0.0	43.67	0.04367	1.95	34.9	1.149	0.00115	0.280	96.6	
1512.00	1.51200	0.00	0.0	39.78	0.03978	2.06	37.0	1.047	0.00105	0.280	96.9	
1377.00	1.37700	0.00	0.0	36.24	0.03624	2.04	39.0	0.953	0.00095	0.300	97.2	
1255.00	1.25500	0.00	0.0	33.01	0.03301	2.04	41.1	0.868	0.00087	0.330	97.5	
1143.00	1.14300	0.00	0.0	30.07	0.03007	2.16	43.2	0.791	0.00079	0.350	97.9	
1041.00	1.04100	0.00	0.0	27.39	0.02739	2.43	45.7	0.721	0.00072	0.370	98.2	
948.30	0.94830	0.00	0.0	24.95	0.02495	2.69	48.4	0.656	0.00066	0.370	98.6	
863.90	0.86390	0.00	0.0	22.73	0.02273	2.78	51.1	0.598	0.00060	0.360	99.0	
786.90	0.78690	0.00	0.0	20.70	0.02070	2.76	53.9	0.545	0.00055	0.330	99.3	
716.80	0.71680	0.00	0.0	18.86	0.01886	2.73	56.6	0.496	0.00050	0.280	99.6	
653.00	0.65300	0.05	0.0	17.18	0.01718	2.73	59.4	0.452	0.00045	0.220	99.8	
594.90	0.59490	0.52	0.6	15.65	0.01565	2.74	62.1	TOTALS:			99.79	99.8
541.90	0.54190	1.53	2.1	14.26	0.01426	2.74	64.8	Measure		Trask	Inman	
493.60	0.49360	2.77	4.9	12.99	0.01299	2.70	67.5	Median, mm	0.0189	0.0189		
449.70	0.44970	3.19	8.1	11.83	0.01183	2.62	70.2	Median, micron	18.936	18.936		
409.60	0.40960	1.67	9.7	10.78	0.01078	2.51	72.7	Mean, mm	0.0349	0.0228		
373.10	0.37310	0.26	10.0	9.82	0.00982	2.38	75.1	Mean, micron	34.873	22.764		
339.90	0.33990	0.13	10.1	8.94	0.00894	2.23	77.3	Sorting	3.0549	2.822		
309.60	0.30960	0.88	11.0	8.15	0.00815	2.07	79.4	Skewness	1.0890	-0.094		
282.10	0.28210	1.84	12.8	7.42	0.00742	1.91	81.3	Kurtosis	0.0935	0.544		
256.90	0.25690	1.67	14.5	6.76	0.00676	1.75	83.0	Cumulative Percent greater than				
234.10	0.23410	0.92	15.4	6.16	0.00616	1.59	84.6	Distribution percent	Particle Size			
213.20	0.21320	0.25	15.7	5.61	0.00561	1.43	86.0		Micron	Millimeters		
194.20	0.19420	0.08	15.8	5.11	0.00511	1.28	87.3	5	413.283	0.4133		
176.90	0.17690	0.37	16.1	4.66	0.00466	1.13	88.4	10	302.462	0.3025		
161.20	0.16120	1.00	17.1	4.24	0.00424	0.98	89.4	16	160.976	0.1610		
146.80	0.14680	0.95	18.1	3.86	0.00386	0.86	90.3	25	62.996	0.0630		
133.70	0.13370	0.31	18.4	3.52	0.00352	0.76	91.0	40	28.961	0.0290		
121.80	0.12180	0.14	18.5	3.21	0.00321	0.69	91.7	50	18.936	0.0189		
111.00	0.11100	0.65	19.2	2.92	0.00292	0.64	92.4	60	12.382	0.0124		
101.10	0.10110	1.59	20.8	2.66	0.00266	0.60	93.0	75	6.750	0.0068		
92.09	0.09209	1.55	22.3	2.42	0.00242	0.57	93.5	84	3.219	0.0032		
83.89	0.08389	1.05	23.4	2.21	0.00221	0.53	94.1	90	1.597	0.0016		
76.42	0.07642	1.10	24.5	2.01	0.00201	0.49	94.6	95	0.982	0.0010		
69.61	0.06961	1.71	26.2	1.83	0.00183	0.44	95.0					

Total Silt and Clay (0-0.0625mm) 71.62

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		10.37
Silt (0.00391 to 0.0625mm)		61.25
Very Fine Sand (0.0625 to 0.125mm)		9.78
Fine Sand (0.125 to 0.25mm)		3.88
Medium Sand (0.25 to 0.50mm)		12.41
Coarse Sand (0.50 to 1.00mm)		2.10
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49169
 Sample ID: ILBMP0010_20191128(440-255939-2)
 Matrix: Aqueous



Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		
Diameter, microm		Incremental percent	Cumulative percent	Diameter, millimeter		Incremental percent	Cumulative percent	Diameter, millimeter		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	0.93	1.3	1.668	0.00167	0.550	93.9	
0.00	0.00000	0.00	0.0	57.77	0.05777	1.79	3.1	1.520	0.00152	0.540	94.4	
2000.00	2.00000	0.00	0.0	52.62	0.05262	2.59	5.7	1.385	0.00139	0.530	95.0	
1822.00	1.82200	0.00	0.0	47.94	0.04794	3.09	8.8	1.261	0.00126	0.530	95.5	
1660.00	1.66000	0.00	0.0	43.67	0.04367	3.25	12.0	1.149	0.00115	0.520	96.0	
1512.00	1.51200	0.00	0.0	39.78	0.03978	3.18	15.2	1.047	0.00105	0.510	96.5	
1377.00	1.37700	0.00	0.0	36.24	0.03624	3.07	18.3	0.953	0.00095	0.500	97.0	
1255.00	1.25500	0.00	0.0	33.01	0.03301	3.07	21.3	0.868	0.00087	0.480	97.5	
1143.00	1.14300	0.00	0.0	30.07	0.03007	3.23	24.6	0.791	0.00079	0.460	98.0	
1041.00	1.04100	0.00	0.0	27.39	0.02739	3.48	28.0	0.721	0.00072	0.420	98.4	
948.30	0.94830	0.00	0.0	24.95	0.02495	3.74	31.8	0.656	0.00066	0.380	98.8	
863.90	0.86390	0.00	0.0	22.73	0.02273	3.92	35.7	0.598	0.00060	0.340	99.1	
786.90	0.78690	0.00	0.0	20.70	0.02070	3.98	39.7	0.545	0.00055	0.290	99.4	
716.80	0.71680	0.00	0.0	18.96	0.01896	3.96	43.6	0.496	0.00050	0.230	99.6	
653.00	0.65300	0.00	0.0	17.18	0.01718	3.89	47.5	0.452	0.00045	0.160	99.8	
594.90	0.59490	0.00	0.0	15.65	0.01565	3.80	51.3	TOTALS:			99.79	99.8
541.90	0.54190	0.00	0.0	14.26	0.01426	3.69	55.0					
493.60	0.49360	0.00	0.0	12.99	0.01299	3.56	58.6					
449.70	0.44970	0.00	0.0	11.83	0.01183	3.39	62.0					
409.60	0.40960	0.00	0.0	10.78	0.01078	3.21	65.2					
373.10	0.37310	0.00	0.0	9.82	0.00982	3.01	68.2					
339.90	0.33990	0.00	0.0	8.94	0.00894	2.81	71.0					
309.60	0.30960	0.00	0.0	8.15	0.00815	2.60	73.6					
282.10	0.28210	0.00	0.0	7.42	0.00742	2.39	76.0					
256.90	0.25690	0.00	0.0	6.76	0.00676	2.19	78.2					
234.10	0.23410	0.00	0.0	6.16	0.00616	1.99	80.2					
213.20	0.21320	0.00	0.0	5.61	0.00561	1.79	82.0					
194.20	0.19420	0.00	0.0	5.11	0.00511	1.61	83.6					
176.90	0.17690	0.00	0.0	4.66	0.00466	1.44	85.0					
161.20	0.16120	0.00	0.0	4.24	0.00424	1.28	86.3					
146.80	0.14680	0.00	0.0	3.86	0.00386	1.14	87.4					
133.70	0.13370	0.00	0.0	3.52	0.00352	1.01	88.4					
121.80	0.12180	0.00	0.0	3.21	0.00321	0.90	89.3					
111.00	0.11100	0.00	0.0	2.92	0.00292	0.81	90.2					
101.10	0.10110	0.00	0.0	2.66	0.00266	0.73	90.9					
92.09	0.09209	0.00	0.0	2.42	0.00242	0.67	91.6					
83.89	0.08389	0.00	0.0	2.21	0.00221	0.63	92.2					
76.42	0.07642	0.05	0.1	2.01	0.00201	0.59	92.8					
69.61	0.06961	0.31	0.4	1.83	0.00183	0.57	93.3					

Measure	Trask	Inman
Median, mm	0.0116	0.0116
Median, micron	11.646	11.646
Mean, mm	0.0145	0.0081
Mean, micron	14.469	8.072
Sorting	2.1961	2.018
Skewness	0.9371	0.262
Kurtosis	0.2516	0.482

Distribution percent	Particle Size	
	Micron	Millimeters
5	45.565	0.0456
10	39.010	0.0390
16	32.693	0.0327
25	23.968	0.0240
40	16.143	0.0161
50	11.646	0.0116
60	8.831	0.0088
75	4.970	0.0050
84	1.993	0.0020
90	1.254	0.0013
95	0.721	0.0010

Total Silt and Clay (0-0.0625mm) 98.49

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		13.49
Silt (0.00391 to 0.0625mm)		85.00
Very Fine Sand (0.0625 to 0.125mm)		1.30
Fine Sand (0.125 to 0.25mm)		0.00
Medium Sand (0.25 to 0.50mm)		0.00
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Eurofins TestAmerica, Irvine

17461 Derian Ave Suite 100
 Irvine, CA 92614-5817
 Phone: 949-261-1022 Fax: 949-260-3297

Chain of Custody Record



eurofins | Environment Testing
 TestAmerica

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:													
Client Contact: Shipping/Receiving		Patel, Urvashi	E-Mail:	State of Origin:	440-149307.1													
Company: Integrated Geosciences Laboratories LLC		Phone:	urvashi.patel@testamericainc.com	California	Page: Page 1 of 1													
Address: 6016 Centralcrest St, City: Houston State, Zip: TX, 77092 Phone: Email:		Accreditations Required (See note): State Program - California		Job #: 440-255939-1														
Due Date Requested: 12/12/2019		Analysis Requested			Preservation Codes:													
TAT Requested (days):		<table border="1"> <tr> <td>Field Filtered Sample (Yes or No)</td> <td>Perform MS/MSD (Yes or No)</td> <td>SUB (Particle Size)/ Particle Size</td> <td rowspan="4">Total Number of containers</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>			Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Particle Size)/ Particle Size	Total Number of containers										A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)				SUB (Particle Size)/ Particle Size	Total Number of containers												
Project Name: Boeing SSFL ISRA and BMP		Project #: 44009815		Other:														
Site:		SSOW#:		IGL ID: 49169														
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Special Instructions/Note:												
ILBMP0009_20191128 (440-255939-1)		11/28/19	07:50 Pacific		Water	1 6016 CentralCrest St, Houston Texas 77092												
ILBMP0010_20191128 (440-255939-2)		11/28/19	08:00 Pacific		Water	1 6016 CentralCrest St, Houston Texas 77092												
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.																		
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)														
Unconfirmed				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months														
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		Special Instructions/QC Requirements:														
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:														
Relinquished by: <i>A. Kenney</i>		Date/Time: <i>12/2/19 1700</i>	Company: <i>TA IRV</i>	Received by: <i>Alvin D...</i>		Date/Time: <i>12/3/19 9:30</i> Company: <i>IGL</i>												
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time: Company:												
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time: Company:												
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:														

Irvine
 17481 Denan Avenue, Suite 100
 Irvine, CA 92614
 phone (949) 281-1022 fax (949) 260-3299

Chain of Custody Record for
Haley & Aldrich, Inc. Blanket Service Agreement #2015-18-TestAmerica

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TestAmerica's services under this COC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2015-18-TestAmerica by and between Haley & Aldrich, Inc. its subsidiaries and affiliates, and TestAmerica Laboratories Inc.

Regulatory Program: OW NPDES RCRA Other:

Client Contact: Haley & Aldrich, Inc. 5333 Mission Center Road, Suite 300 San Diego, California 92108 (619) 280-9210 Phone (619) 280-9415 FAX
H&A Project Manager: Katherine Miller
Tel/Fax: (520) 288-8606
Analysis Turnaround Time: CALENDAR DAYS WORKING DAYS
 *If different from below: 2 weeks 1 week 2 days 1 day

H&A Site Contact: Matt Birney (619) 486-8782
Lab Contact: Urvasi Patel (949) 333-9055
Carrier: _____
COC No.: 1128/2019

Sample Identification	Sample Date	Sample Time	Sample Type (Co-Contaminants)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Method 2008: Cd, Cu, Pb (Total Dissolved)	Method 2008: Cd, Cu, Pb Method 2441: Hg (Total Recoverable)	Dioxins (Method 163)	Total Suspended Solids (Method 2140D)	Particle Size Distribution (Method ASTM D422)	Turbidity (Method 181.1)	Sample Specific Notes
ILBMP0009_20191128	11/28/19	0750	G	WM	7	N	X	X	X	X	X	X	X	Field Staff Note: Lab may substitute 250mL Poly for 500mL for metals. Only need to fill half of 500mL. Must fill TSS to the top extra 250mL. poly collected. Curb inlet media filter inlet extra 250mL. poly collected. Curb inlet media filter outlet
ILBMP0010_20191128	11/28/19	0800	G	WM	7	N	X	X	X	X	X	X	X	

Preservation Method: 1-ice, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-Other
Sample Disposal: Return to Client Disposal by Lab Archive for _____ Months

Special Instructions, QC Requirements & Comments:
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Custody Seal Intact: Yes No
Custody Seal No.: _____
Requisitioned by: *M. Hinds* **Company:** *STH* **Date/Time:** *11/28/19*
Received by: _____ **Date/Time:** _____
Requisitioned by: _____ **Company:** *THIR* **Date/Time:** *11/30/19*
Received by: _____ **Date/Time:** *10:30*



440-255939 Chain of Custody

LB 11/30/19

Form No. CA-C-MI-045, Rev. 1.2, dated 10/2016

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-255939-1

SDG Number: BMP Performance OF 009 Watershed

Login Number: 255939

List Number: 1

Creator: Bonta, Lucia F

List Source: Eurofins TestAmerica, Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	Turbidity
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-255939 Field Sheet

Tracking #: 111997417184

Job: _____

SO (FO) / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: _____

Therm. ID: AK-7 Corr. Factor: (+/-) 0.5 °C
Ice _____ Wet _____ Gel _____ Other _____
Cooler Custody Seal: Tape
Cooler ID: _____
Temp Observed: 0.1 °C Corrected: 0.4 °C
From: Temp Blank Sample

	Yes	No	NA
During Initial Triage			
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Initials: <u>[Signature]</u>			
Date: <u>3 Dec 19</u>			
During Labeling			
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Initials: <u>MAN</u>			
Date: <u>12/3/19</u>			

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WBC





Environment Testing
TestAmerica

AT 4 152423-424 RITE EXP 02/20 ee

ORIGIN ID: DTHA (949) 261-1022
TESTAMERICA-IRVINE/SAMPLE CONTROL

SHIP DATE: 12/18/19
ACTWGT 36.55
CAD: 61.1317

17461 DERIAN AVE
SUITE 100
IRVINE, CA 92614
UNITED STATES US

BILL RECIPIENT

TO SHIPPING/RECEIVING
TESTAMERICA LABORATORIES,
880 RIVERSIDE PARKWAY

WEST SACRAMENTO CA 95601
REF: 8440-174265

(916) 873-5600
PO: YES



IF SEAL IS BROKEN
CHECK CONTENTS
BEFORE ACCEPTING

Ex
Express



5652/18DD/0582

TUE - 03 DEC 0:30A
PRIOR OVERNIGHT

TRK# 1119 9741 7184
0201

WD BLUA

5605
SMF



ENVIRONMENTAL
ULTRA CLEAN

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- 16

Patel, Urvashi

From: Baluran, Dwayne <DBaluran@haleyaldrich.com>
Sent: Tuesday, December 03, 2019 4:31 PM
To: Patel, Urvashi
Cc: Miller, Katherine
Subject: RE: Sample Receipt Updates: 440-255714 and 440-255939

-External Email-

Urvashi – Alright, thanks for the follow up. Appreciate the help.

Take care,
Dwayne

From: Patel, Urvashi <Urvashi.Patel@testamericainc.com>
Sent: Tuesday, December 3, 2019 4:22 PM
To: Baluran, Dwayne <DBaluran@haleyaldrich.com>
Cc: Miller, Katherine <KMiller@haleyaldrich.com>
Subject: RE: Sample Receipt Updates: 440-255714 and 440-255939

CAUTION: External Email

Hi Dwayne

We can make the corrections in our login but cannot make corrections on the COC. I can use the email below and attach that to the job as instructions from you for the logins.

We analyzed the Turbidity past hold. If you do not need it, we can leave it out of the report but will charge for the analysis.

We sent the containers to PTS labs (now know as IGL) for the FB and will check to see if Irvine analyzed the TSS for the FB as well. If they didn't start it, I will cancel and no charge. If analysis has been completed, we do charge for the analysis. I'll contact all the labs now and let you know.

Urvashi

Urvashi Patel

Phone: 949-333-9055

E-mail: Urvashi.Patel@testamericainc.com

From: Baluran, Dwayne [<mailto:DBaluran@haleyaldrich.com>]
Sent: Tuesday, December 03, 2019 4:15 PM
To: Patel, Urvashi
Cc: Miller, Katherine
Subject: Sample Receipt Updates: 440-255714 and 440-255939

-External Email-

Hello Urvashi,

Thanks for catching the COC/ label time discrepancy for the samples sent in on 11/27/2019. Using the time as listed on the COC was correct.

I just reviewed the work orders. Could you please make the following adjustments?

Sample Delivery Group	Sample Date	Work Order or COC Corrections?
440-255714-1	11/27/2019	remove equipment blank and field blank. They do not need to be tested
440-255939-1	12/28/2019	~update H&A project number to "129095-004, SID 5.2" on both COC and work order ~the COC was wrong. Revise that ILBMP0009_20191128 does not need to be tested for Turbidity

Thank you!

Dwayne Baluran, EIT, QSP
Staff Engineer

Haley & Aldrich, Inc.
5850 Canoga Avenue | Suite 400
Woodland Hills, CA 91367

T: (978) 234.5022

C: (818) 224.0704

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ANALYTICAL REPORT

Eurofins TestAmerica, Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-255939-2

Laboratory SDG: BMP Performance OF 009 Watershed
Client Project/Site: 12095-003 SID 5.2

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
12/17/2019 10:11:26 PM

Urvashi Patel, Manager of Project Management
(949)260-3269
urvashi.patel@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-255939-1	ILBMP0009_20191128	Water	11/28/19 07:50	11/30/19 10:30	
440-255939-2	ILBMP0010_20191128	Water	11/28/19 08:00	11/30/19 10:30	

- 1
- 2
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- 9
- 10
- 11
- 12
- 13
- 14

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Job ID: 440-255939-2

Laboratory: Eurofins TestAmerica, Irvine

Narrative

Job Narrative 440-255939-2

Comments

No additional comments.

Receipt

The samples were received on 11/30/2019 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5° C.

Receipt Exceptions

The following sample was received outside of holding time: ILBMP0009_20191128 (440-255939-1). Received sample outside the holding time for Turbidity.

The Field Sampler was not listed on the Chain of Custody.

Dioxin

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 3D5 exceeded this criteria: ILBMP0009_20191128 (440-255939-1), ILBMP0010_20191128 (440-255939-2), (CCV 320-343844/2), (LCS 320-343025/2-A) and (MB 320-343025/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method blank for preparation batch 320-343025 and analytical batch 320-343844 contained OCDD above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P / 1613B preparation/analysis: Samples ILBMP0009_20191128 (440-255939-1) and ILBMP0010_20191128 (440-255939-2) were received in wide-mouth amber glass bottles.

preparation batch 320-343025
Method: 1613B_Sox_Sep_P / 1613B
Matrix: Aqueous

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Client Sample ID: ILBMP0009_20191128

Lab Sample ID: 440-255939-1

Date Collected: 11/28/19 07:50

Matrix: Water

Date Received: 11/30/19 10:30

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.000029	J,DX q	0.000013	0.000013	ug/L		12/04/19 08:19	12/06/19 17:57	1
2,3,7,8-TCDF	ND		0.000013	0.000011	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,7,8-PeCDD	0.000012	J,DX q	0.000064	0.000027	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,7,8-PeCDF	0.000052	J,DX	0.000064	0.000020	ug/L		12/04/19 08:19	12/06/19 17:57	1
2,3,4,7,8-PeCDF	0.000051	J,DX	0.000064	0.000022	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,4,7,8-HxCDD	0.000018	J,DX q	0.000064	0.000021	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,6,7,8-HxCDD	0.000037	J,DX	0.000064	0.000022	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,7,8,9-HxCDD	0.000033	J,DX	0.000064	0.000020	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,4,7,8-HxCDF	0.000013	J,DX	0.000064	0.000017	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,6,7,8-HxCDF	0.000015	J,DX	0.000064	0.000018	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,7,8,9-HxCDF	0.000010	J,DX	0.000064	0.000014	ug/L		12/04/19 08:19	12/06/19 17:57	1
2,3,4,6,7,8-HxCDF	0.000014	J,DX	0.000064	0.000014	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,4,6,7,8-HpCDD	0.00045	MB	0.000064	0.000051	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,4,6,7,8-HpCDF	0.00021		0.000064	0.000037	ug/L		12/04/19 08:19	12/06/19 17:57	1
1,2,3,4,7,8,9-HpCDF	0.000010	J,DX q	0.000064	0.000046	ug/L		12/04/19 08:19	12/06/19 17:57	1
OCDD	0.0041	MB	0.00013	0.000040	ug/L		12/04/19 08:19	12/06/19 17:57	1
OCDF	0.00028	MB	0.00013	0.000034	ug/L		12/04/19 08:19	12/06/19 17:57	1
Total TCDD	0.000029	J,DX q	0.000013	0.000013	ug/L		12/04/19 08:19	12/06/19 17:57	1
Total TCDF	0.000042	J,DX q	0.000013	0.000011	ug/L		12/04/19 08:19	12/06/19 17:57	1
Total PeCDD	0.000021	J,DX q	0.000064	0.000027	ug/L		12/04/19 08:19	12/06/19 17:57	1
Total PeCDF	0.000046	J,DX	0.000064	0.000020	ug/L		12/04/19 08:19	12/06/19 17:57	1
Total HxCDD	0.00023	J,DX q	0.000064	0.000020	ug/L		12/04/19 08:19	12/06/19 17:57	1
Total HxCDF	0.00021	J,DX	0.000064	0.000014	ug/L		12/04/19 08:19	12/06/19 17:57	1
Total HpCDD	0.0011	MB	0.000064	0.000051	ug/L		12/04/19 08:19	12/06/19 17:57	1
Total HpCDF	0.00037	J,DX q	0.000064	0.000037	ug/L		12/04/19 08:19	12/06/19 17:57	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	48		25 - 164	12/04/19 08:19	12/06/19 17:57	1
13C-2,3,7,8-TCDF	48		24 - 169	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,7,8-PeCDD	47		25 - 181	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,7,8-PeCDF	46		24 - 185	12/04/19 08:19	12/06/19 17:57	1
13C-2,3,4,7,8-PeCDF	48		21 - 178	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,4,7,8-HxCDD	49		32 - 141	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,6,7,8-HxCDD	43		28 - 130	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,4,7,8-HxCDF	55		26 - 152	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,6,7,8-HxCDF	47		26 - 123	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,7,8,9-HxCDF	51		29 - 147	12/04/19 08:19	12/06/19 17:57	1
13C-2,3,4,6,7,8-HxCDF	49		28 - 136	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,4,6,7,8-HpCDD	43		23 - 140	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,4,6,7,8-HpCDF	44		28 - 143	12/04/19 08:19	12/06/19 17:57	1
13C-1,2,3,4,7,8,9-HpCDF	49		26 - 138	12/04/19 08:19	12/06/19 17:57	1
13C-OCDD	38		17 - 157	12/04/19 08:19	12/06/19 17:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	96		35 - 197	12/04/19 08:19	12/06/19 17:57	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Client Sample ID: ILBMP0010_20191128

Lab Sample ID: 440-255939-2

Date Collected: 11/28/19 08:00

Matrix: Water

Date Received: 11/30/19 10:30

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.000020	J,DX q	0.000011	0.000008	ug/L		12/04/19 08:19	12/06/19 18:45	1
				2					
2,3,7,8-TCDF	ND		0.000011	0.000011	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,7,8-PeCDD	0.000019	J,DX q	0.000054	0.000021	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,7,8-PeCDF	ND		0.000054	0.000019	ug/L		12/04/19 08:19	12/06/19 18:45	1
2,3,4,7,8-PeCDF	0.000022	J,DX q	0.000054	0.000019	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,4,7,8-HxCDD	0.000034	J,DX	0.000054	0.000016	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,6,7,8-HxCDD	0.000077		0.000054	0.000018	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,7,8,9-HxCDD	0.000069		0.000054	0.000016	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,4,7,8-HxCDF	0.000018	J,DX	0.000054	0.000026	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,6,7,8-HxCDF	0.000028	J,DX	0.000054	0.000027	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,7,8,9-HxCDF	ND		0.000054	0.000021	ug/L		12/04/19 08:19	12/06/19 18:45	1
2,3,4,6,7,8-HxCDF	0.000023	J,DX	0.000054	0.000021	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,4,6,7,8-HpCDD	0.0012	MB	0.000054	0.000076	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,4,6,7,8-HpCDF	0.00073		0.000054	0.000059	ug/L		12/04/19 08:19	12/06/19 18:45	1
1,2,3,4,7,8,9-HpCDF	0.000090	J,DX	0.000054	0.000069	ug/L		12/04/19 08:19	12/06/19 18:45	1
OCDD	0.0077	MB	0.00011	0.000045	ug/L		12/04/19 08:19	12/06/19 18:45	1
OCDF	0.00063	MB	0.00011	0.000023	ug/L		12/04/19 08:19	12/06/19 18:45	1
Total TCDD	0.000044	J,DX q	0.000011	0.000008	ug/L		12/04/19 08:19	12/06/19 18:45	1
				2					
Total TCDF	0.000073	J,DX	0.000011	0.000011	ug/L		12/04/19 08:19	12/06/19 18:45	1
Total PeCDD	0.000059	J,DX q	0.000054	0.000021	ug/L		12/04/19 08:19	12/06/19 18:45	1
Total PeCDF	0.00012	J,DX q	0.000054	0.000019	ug/L		12/04/19 08:19	12/06/19 18:45	1
Total HxCDD	0.00059	J,DX q	0.000054	0.000016	ug/L		12/04/19 08:19	12/06/19 18:45	1
Total HxCDF	0.00051	J,DX q	0.000054	0.000021	ug/L		12/04/19 08:19	12/06/19 18:45	1
Total HpCDD	0.0028	MB	0.000054	0.000076	ug/L		12/04/19 08:19	12/06/19 18:45	1
Total HpCDF	0.0011	J,DX	0.000054	0.000059	ug/L		12/04/19 08:19	12/06/19 18:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	64		25 - 164				12/04/19 08:19	12/06/19 18:45	1
13C-2,3,7,8-TCDF	66		24 - 169				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,7,8-PeCDD	63		25 - 181				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,7,8-PeCDF	62		24 - 185				12/04/19 08:19	12/06/19 18:45	1
13C-2,3,4,7,8-PeCDF	0		21 - 178				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,4,7,8-HxCDD	0		32 - 141				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,6,7,8-HxCDD	58		28 - 130				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,4,7,8-HxCDF	0		26 - 152				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,6,7,8-HxCDF	64		26 - 123				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,7,8,9-HxCDF	71		29 - 147				12/04/19 08:19	12/06/19 18:45	1
13C-2,3,4,6,7,8-HxCDF	67		28 - 136				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,4,6,7,8-HpCDD	59		23 - 140				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,4,6,7,8-HpCDF	59		28 - 143				12/04/19 08:19	12/06/19 18:45	1
13C-1,2,3,4,7,8,9-HpCDF	0		26 - 138				12/04/19 08:19	12/06/19 18:45	1
13C-OCDD	52		17 - 157				12/04/19 08:19	12/06/19 18:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	112		35 - 197				12/04/19 08:19	12/06/19 18:45	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	40CFR136A	TAL SAC
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Client Sample ID: ILBMP0009_20191128

Lab Sample ID: 440-255939-1

Date Collected: 11/28/19 07:50

Matrix: Water

Date Received: 11/30/19 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			776.3 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343844	12/06/19 17:57	AS	TAL SAC

Client Sample ID: ILBMP0010_20191128

Lab Sample ID: 440-255939-2

Date Collected: 11/28/19 08:00

Matrix: Water

Date Received: 11/30/19 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			931.5 mL	20 uL	343025	12/04/19 08:19	RDR	TAL SAC
Total/NA	Analysis	1613B		1			343844	12/06/19 18:45	AS	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-343025/1-A
Matrix: Water
Analysis Batch: 343844

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 343025

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
2,3,7,8-TCDF	ND		0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000032	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000017	ug/L		12/04/19 08:19	12/06/19 16:22	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000017	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,7,8-HxCDD	ND		0.000050	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,6,7,8-HxCDD	ND		0.000050	0.0000012	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,7,8,9-HxCDD	ND		0.000050	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,7,8-HxCDF	ND		0.000050	0.0000008	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,6,7,8-HxCDF	ND		0.000050	0.0000009	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,7,8,9-HxCDF	ND		0.000050	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
2,3,4,6,7,8-HxCDF	ND		0.000050	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,6,7,8-HpCDD	0.0000121	J,DX q	0.000050	0.0000012	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,6,7,8-HpCDF	ND		0.000050	0.0000013	ug/L		12/04/19 08:19	12/06/19 16:22	1
1,2,3,4,7,8,9-HpCDF	ND		0.000050	0.0000016	ug/L		12/04/19 08:19	12/06/19 16:22	1
OCDD	0.000105		0.00010	0.0000019	ug/L		12/04/19 08:19	12/06/19 16:22	1
OCDF	0.00000914	J,DX q	0.00010	0.0000026	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total TCDD	ND		0.000010	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total TCDF	ND		0.000010	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total PeCDD	ND		0.000050	0.0000032	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total PeCDF	ND		0.000050	0.0000017	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total HxCDD	ND		0.000050	0.0000011	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total HxCDF	ND		0.000050	0.0000007	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total HpCDD	0.0000207	J,DX q	0.000050	0.0000012	ug/L		12/04/19 08:19	12/06/19 16:22	1
Total HpCDF	ND		0.000050	0.0000013	ug/L		12/04/19 08:19	12/06/19 16:22	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	44		25 - 164				12/04/19 08:19	12/06/19 16:22	1
13C-2,3,7,8-TCDF	46		24 - 169				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,7,8-PeCDD	42		25 - 181				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,7,8-PeCDF	42		24 - 185				12/04/19 08:19	12/06/19 16:22	1
13C-2,3,4,7,8-PeCDF	46		21 - 178				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,7,8-HxCDD	43		32 - 141				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,6,7,8-HxCDD	38		28 - 130				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,7,8-HxCDF	49		26 - 152				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,6,7,8-HxCDF	41		26 - 123				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,7,8,9-HxCDF	45		29 - 147				12/04/19 08:19	12/06/19 16:22	1
13C-2,3,4,6,7,8-HxCDF	43		28 - 136				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,6,7,8-HpCDD	34		23 - 140				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,6,7,8-HpCDF	39		28 - 143				12/04/19 08:19	12/06/19 16:22	1
13C-1,2,3,4,7,8,9-HpCDF	43		26 - 138				12/04/19 08:19	12/06/19 16:22	1
13C-OCDD	31		17 - 157				12/04/19 08:19	12/06/19 16:22	1

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-343025/1-A
Matrix: Water
Analysis Batch: 343844

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 343025

Surrogate	MB MB %Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	91	35 - 197	12/04/19 08:19	12/06/19 16:22	1

Lab Sample ID: LCS 320-343025/2-A
Matrix: Water
Analysis Batch: 343844

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 343025

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits %Rec.
2,3,7,8-TCDD	0.000200	0.000242		ug/L		121	67 - 158
2,3,7,8-TCDF	0.000200	0.000229		ug/L		114	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.00120		ug/L		120	70 - 142
1,2,3,7,8-PeCDF	0.00100	0.00127		ug/L		127	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.00123		ug/L		123	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.00117		ug/L		117	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.00121		ug/L		121	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.00120		ug/L		120	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.00107		ug/L		107	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.00116		ug/L		116	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.00119		ug/L		119	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.00120		ug/L		120	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.00111	MB	ug/L		111	70 - 140
1,2,3,4,6,7,8-HpCDF	0.00100	0.00114		ug/L		114	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.00105		ug/L		105	78 - 138
OCDD	0.00200	0.00232	MB	ug/L		116	78 - 144
OCDF	0.00200	0.00243	MB	ug/L		121	63 - 170

Isotope Dilution	LCS LCS %Recovery Qualifier	Limits
13C-2,3,7,8-TCDD	56	20 - 175
13C-2,3,7,8-TCDF	58	22 - 152
13C-1,2,3,7,8-PeCDD	55	21 - 227
13C-1,2,3,7,8-PeCDF	53	21 - 192
13C-2,3,4,7,8-PeCDF	58	13 - 328
13C-1,2,3,4,7,8-HxCDD	52	21 - 193
13C-1,2,3,6,7,8-HxCDD	48	25 - 163
13C-1,2,3,4,7,8-HxCDF	60	19 - 202
13C-1,2,3,6,7,8-HxCDF	52	21 - 159
13C-1,2,3,7,8,9-HxCDF	58	17 - 205
13C-2,3,4,6,7,8-HxCDF	54	22 - 176
13C-1,2,3,4,6,7,8-HpCDD	47	26 - 166
13C-1,2,3,4,6,7,8-HpCDF	47	21 - 158
13C-1,2,3,4,7,8,9-HpCDF	53	20 - 186
13C-OCDD	38	13 - 199

Surrogate	LCS LCS %Recovery Qualifier	Limits
37Cl4-2,3,7,8-TCDD	112	31 - 191

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Specialty Organics

Prep Batch: 343025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Total/NA	Water	1613B	
440-255939-2	ILBMP0010_20191128	Total/NA	Water	1613B	
MB 320-343025/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-343025/2-A	Lab Control Sample	Total/NA	Water	1613B	

Analysis Batch: 343844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-255939-1	ILBMP0009_20191128	Total/NA	Water	1613B	343025
440-255939-2	ILBMP0010_20191128	Total/NA	Water	1613B	343025
MB 320-343025/1-A	Method Blank	Total/NA	Water	1613B	343025
LCS 320-343025/2-A	Lab Control Sample	Total/NA	Water	1613B	343025

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Laboratory: Eurofins TestAmerica, Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Irvine
 17481 Denan Avenue, Suite 100
 Irvine, CA 92614
 phone (949) 281-1022 fax (949) 260-3299

Chain of Custody Record for
Haley & Aldrich, Inc. Blanket Service Agreement #2015-18-TestAmerica



TestAmerica Laboratories, Inc.

Regulatory Program: OW NPDES RCRA Other:

TestAmerica's services under this COC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2015-18-TestAmerica by and between Haley & Aldrich, Inc. its subsidiaries and affiliates, and TestAmerica Laboratories Inc.

Client Contact: Haley & Aldrich, Inc. 5333 Mission Center Road, Suite 300 San Diego, California 92108 (619) 280-9210 Phone (619) 280-9415 FAX
 H&A Project Manager: Katherine Miller Tel/Fax: (520) 288-8606
 H&A Site Contact: Matt Birney (619) 486-8782 Lab Contact: Urvasi Patel (949) 333-9055
 Analysis Turnaround Time: CALENDAR DAYS WORKING DAYS
 Carrier: 11/28/2019 COC No. 1128/2019

TA T if different from Below: 2 weeks 1 week 2 days 1 day
 Sample Specific Notes:
 Field Staff Note: Lab may substitute 250mL Poly for 500mL for metals. Only need to fill half of 500mL. Must fill TSS to the top extra 250mL. poly collected. Curb inlet media filter inlet extra 250mL. poly collected. Curb inlet media filter outlet

Sample Identification	Sample Date	Sample Time	Sample Type (Co-Contaminants)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Method 2008: Cd, Cu, Pb (Total Dissolved)	Method 2068: Cd, Cu, Pb Method 2441: Hg (Total Recoverable)	Dioxins (Method 163)	Total Suspended Solids (Method 2140D)	Particle Size Distribution (Method ASTM D422)	Turbidity (Method 181.1)
ILBMP0009_20191128	11/28/19	0750	G	WM	7	N	X	X	X	X	X	X	X
ILBMP0010_20191128	11/28/19	0800	G	WM	7	N	X	X	X	X	X	X	X

Preservation Method: 1-ice, 2-NOI, 3-H2SO4, 4-NHNO3, 5-NH2OH, 6-Other
 Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poisonous Unknown
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. Return to Client Disposal by Lab Archive for 6 Months

Special Instructions, QC Requirements & Comments:
 Custody Seals Intact: Yes No
 Relinquished by: *[Signature]* Company: *[Signature]* Date/Time: 11/30/19 10:30
 Received by: *[Signature]* Date/Time: 11/30/19 10:30
 Received in Laboratory by: *[Signature]* Date/Time: 11/30/19 10:30
 Company: TARIX
 Form No. CA-C-MI-045, Rev. 1.2, dated 10/2016



LB 11/30/19

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-255939-2

SDG Number: BMP Performance OF 009 Watershed

Login Number: 255939

List Number: 1

Creator: Bonta, Lucia F

List Source: Eurofins TestAmerica, Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	Turbidity
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-255939-2

SDG Number: BMP Performance OF 009 Watershed

Login Number: 255939

List Source: Eurofins TestAmerica, Sacramento

List Number: 2

List Creation: 12/03/19 11:40 AM

Creator: Thompson, Sarah W

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	-0.1C corr 0.4C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
Project/Site: 12095-003 SID 5.2

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-255939-1	ILBMP0009_20191128	48	48	47	46	48	49	43	55
440-255939-2	ILBMP0010_20191128	64	66	63	62	0	0	58	0
MB 320-343025/1-A	Method Blank	44	46	42	42	46	43	38	49

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxCDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-255939-1	ILBMP0009_20191128	47	51	49	43	44	49	38
440-255939-2	ILBMP0010_20191128	64	71	67	59	59	0	52
MB 320-343025/1-A	Method Blank	41	45	43	34	39	43	31

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxCDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-343025/2-A	Lab Control Sample	56	58	55	53	58	52	48	60

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxCDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-343025/2-A	Lab Control Sample	52	58	54	47	47	53	38

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxCDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.

Project/Site: 12095-003 SID 5.2

$^{13}\text{CH}_x\text{CF} = ^{13}\text{C-2,3,4,6,7,8-HxCDF}$

HpCDD = $^{13}\text{C-1,2,3,4,6,7,8-HpCDD}$

HpCDF = $^{13}\text{C-1,2,3,4,6,7,8-HpCDF}$

HpCDF2 = $^{13}\text{C-1,2,3,4,7,8,9-HpCDF}$

OCDD = $^{13}\text{C-OCDD}$

Job ID: 440-255939-2
SDG: BMP Performance OF 009 Watershed

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ANALYTICAL REPORT

Eurofins TestAmerica, Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-256482-1

Client Project/Site: Boeing SSFL ISRA and BMP

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
12/27/2019 10:36:09 PM

Urvashi Patel, Manager of Project Management
(949)260-3269

urvashi.patel@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-256482-1	A1BMP0002_20191204	Water	12/04/19 09:45	12/05/19 16:37	
440-256482-2	A1BMP0003_20191204	Water	12/04/19 09:55	12/05/19 16:37	
440-256482-3	ILBMP0002_20191204	Water	12/04/19 09:50	12/05/19 16:37	

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Job ID: 440-256482-1

Laboratory: Eurofins TestAmerica, Irvine

Narrative

Job Narrative 440-256482-1

Comments

No additional comments.

Receipt

The samples were received on 12/5/2019 4:37 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 1.0° C, 1.8° C, 2.1° C, 2.5° C and 2.8° C.

Metals

Method FILTRATION: The following samples requested dissolved metals and were not filtered in the field: A1BMP0002_20191204 (440-256482-1), A1BMP0003_20191204 (440-256482-2) and ILBMP0002_20191204 (440-256482-3). These samples were filtered and preserved upon receipt to the laboratory.

2.5 mL of Nitric Acid
Lot:0000234822
12/9/19

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract non-Sister

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Client Sample ID: A1BMP0002_20191204

Lab Sample ID: 440-256482-1

Date Collected: 12/04/19 09:45

Matrix: Water

Date Received: 12/05/19 16:37

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.38	J,DX	1.0	0.25	ug/L		12/06/19 08:00	12/07/19 00:01	1
Copper	12		2.0	0.50	ug/L		12/06/19 08:00	12/07/19 00:01	1
Lead	ND		1.0	0.50	ug/L		12/06/19 08:00	12/07/19 00:01	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.34	J,DX	1.0	0.25	ug/L		12/10/19 16:59	12/10/19 19:17	1
Copper	11		2.0	0.50	ug/L		12/10/19 16:59	12/10/19 19:17	1
Lead	ND		1.0	0.50	ug/L		12/10/19 16:59	12/10/19 19:17	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/09/19 18:06	12/10/19 10:23	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/12/19 08:57	12/12/19 15:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	5.4		2.0	1.0	mg/L			12/07/19 20:00	1

Client Sample ID: A1BMP0003_20191204

Lab Sample ID: 440-256482-2

Date Collected: 12/04/19 09:55

Matrix: Water

Date Received: 12/05/19 16:37

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/06/19 08:00	12/07/19 00:03	1
Copper	4.7		2.0	0.50	ug/L		12/06/19 08:00	12/07/19 00:03	1
Lead	1.1		1.0	0.50	ug/L		12/06/19 08:00	12/07/19 00:03	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/10/19 16:59	12/10/19 19:24	1
Copper	3.1		2.0	0.50	ug/L		12/10/19 16:59	12/10/19 19:24	1
Lead	0.54	J,DX	1.0	0.50	ug/L		12/10/19 16:59	12/10/19 19:24	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/09/19 18:06	12/10/19 09:41	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/12/19 08:57	12/12/19 15:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	6.8		2.5	1.3	mg/L			12/07/19 20:00	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Client Sample ID: ILBMP0002_20191204

Lab Sample ID: 440-256482-3

Date Collected: 12/04/19 09:50

Matrix: Water

Date Received: 12/05/19 16:37

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/06/19 08:00	12/07/19 00:05	1
Copper	3.8		2.0	0.50	ug/L		12/06/19 08:00	12/07/19 00:05	1
Lead	3.7		1.0	0.50	ug/L		12/06/19 08:00	12/07/19 00:05	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/10/19 16:59	12/10/19 19:26	1
Copper	2.5		2.0	0.50	ug/L		12/10/19 16:59	12/10/19 19:26	1
Lead	0.70	J,DX	1.0	0.50	ug/L		12/10/19 16:59	12/10/19 19:26	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/09/19 18:06	12/10/19 09:43	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/12/19 08:57	12/12/19 15:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	15		4.0	2.0	mg/L			12/07/19 20:00	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
Subcontract	Particle Size	None	IGL
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV
FILTRATION	Sample Filtration	None	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

IGL = Integrated Geosciences Laboratories LLC, 6016 Centralcrest St, Houston, TX 77092

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Client Sample ID: A1BMP0002_20191204

Lab Sample ID: 440-256482-1

Date Collected: 12/04/19 09:45

Matrix: Water

Date Received: 12/05/19 16:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			150 mL	150 mL	584780	12/09/19 16:11	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	585057	12/10/19 16:59	EP	TAL IRV
Dissolved	Analysis	200.8		1			585101	12/10/19 19:17	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	584107	12/06/19 08:00	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			584511	12/07/19 00:01	MQP	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	584780	12/09/19 16:11	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	585489	12/12/19 08:57	DB	TAL IRV
Dissolved	Analysis	245.1		1			585610	12/12/19 15:47	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	584802	12/09/19 18:06	DB	TAL IRV
Total/NA	Analysis	245.1		1			585048	12/10/19 10:23	DB	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	584492	12/07/19 20:00	KL	TAL IRV

Client Sample ID: A1BMP0003_20191204

Lab Sample ID: 440-256482-2

Date Collected: 12/04/19 09:55

Matrix: Water

Date Received: 12/05/19 16:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			150 mL	150 mL	584780	12/09/19 16:11	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	585057	12/10/19 16:59	EP	TAL IRV
Dissolved	Analysis	200.8		1			585101	12/10/19 19:24	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	584107	12/06/19 08:00	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			584511	12/07/19 00:03	MQP	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	584780	12/09/19 16:11	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	585489	12/12/19 08:57	DB	TAL IRV
Dissolved	Analysis	245.1		1			585610	12/12/19 15:53	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	584802	12/09/19 18:06	DB	TAL IRV
Total/NA	Analysis	245.1		1			585048	12/10/19 09:41	DB	TAL IRV
Total/NA	Analysis	SM 2540D		1	400 mL	1000 mL	584492	12/07/19 20:00	KL	TAL IRV

Client Sample ID: ILBMP0002_20191204

Lab Sample ID: 440-256482-3

Date Collected: 12/04/19 09:50

Matrix: Water

Date Received: 12/05/19 16:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			150 mL	150 mL	584780	12/09/19 16:11	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	585057	12/10/19 16:59	EP	TAL IRV
Dissolved	Analysis	200.8		1			585101	12/10/19 19:26	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	584107	12/06/19 08:00	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			584511	12/07/19 00:05	MQP	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	584780	12/09/19 16:11	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	585489	12/12/19 08:57	DB	TAL IRV
Dissolved	Analysis	245.1		1			585610	12/12/19 15:55	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	584802	12/09/19 18:06	DB	TAL IRV
Total/NA	Analysis	245.1		1			585048	12/10/19 09:43	DB	TAL IRV
Total/NA	Analysis	SM 2540D		1	250 mL	1000 mL	584492	12/07/19 20:00	KL	TAL IRV

Eurofins TestAmerica, Irvine

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Laboratory References:

IGL = Integrated Geosciences Laboratories LLC, 6016 Centralcrest St, Houston, TX 77092

TAL IRV = Eurofins TestAmerica, Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-584107/1-A
Matrix: Water
Analysis Batch: 584511

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 584107

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/06/19 08:00	12/06/19 23:08	1
Copper	ND		2.0	0.50	ug/L		12/06/19 08:00	12/06/19 23:08	1
Lead	ND		1.0	0.50	ug/L		12/06/19 08:00	12/06/19 23:08	1

Lab Sample ID: LCS 440-584107/2-A
Matrix: Water
Analysis Batch: 584511

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 584107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	80.6		ug/L		101	85 - 115
Copper	80.0	80.1		ug/L		100	85 - 115
Lead	80.0	76.5		ug/L		96	85 - 115

Lab Sample ID: 440-256457-A-1-B MS
Matrix: Water
Analysis Batch: 584511

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 584107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	0.50	J,DX	80.0	77.0		ug/L		96	70 - 130
Copper	69		80.0	148		ug/L		98	70 - 130
Lead	6.6		80.0	81.4		ug/L		94	70 - 130

Lab Sample ID: 440-256457-A-1-C MSD
Matrix: Water
Analysis Batch: 584511

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 584107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	0.50	J,DX	80.0	77.0		ug/L		96	70 - 130	0	20
Copper	69		80.0	147		ug/L		98	70 - 130	0	20
Lead	6.6		80.0	81.4		ug/L		94	70 - 130	0	20

Lab Sample ID: MB 440-584780/1-C
Matrix: Water
Analysis Batch: 585101

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 585057

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/10/19 16:59	12/10/19 18:58	1
Copper	ND		2.0	0.50	ug/L		12/10/19 16:59	12/10/19 18:58	1
Lead	ND		1.0	0.50	ug/L		12/10/19 16:59	12/10/19 18:58	1

Lab Sample ID: LCS 440-584780/2-C
Matrix: Water
Analysis Batch: 585101

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 585057

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	73.9		ug/L		92	85 - 115
Copper	80.0	74.9		ug/L		94	85 - 115
Lead	80.0	73.0		ug/L		91	85 - 115

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-256243-D-2-D MS
Matrix: Water
Analysis Batch: 585101

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 585057

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	ND		80.0	67.8		ug/L		85	70 - 130
Copper	39		80.0	107		ug/L		85	70 - 130
Lead	ND		80.0	66.7		ug/L		83	70 - 130

Lab Sample ID: 440-256243-D-2-E MSD
Matrix: Water
Analysis Batch: 585101

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 585057

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	ND		80.0	62.9		ug/L		79	70 - 130	7	20
Copper	39		80.0	102		ug/L		79	70 - 130	5	20
Lead	ND		80.0	62.3		ug/L		78	70 - 130	7	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-584802/1-A
Matrix: Water
Analysis Batch: 585048

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 584802

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/09/19 18:06	12/10/19 08:52	1

Lab Sample ID: LCS 440-584802/2-A
Matrix: Water
Analysis Batch: 585048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 584802

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	3.91		ug/L		98	85 - 115

Lab Sample ID: 440-256802-A-1-B MS
Matrix: Water
Analysis Batch: 585048

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 584802

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	4.06		ug/L		101	75 - 125

Lab Sample ID: 440-256802-A-1-C MSD
Matrix: Water
Analysis Batch: 585048

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 584802

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.71		ug/L		93	75 - 125	9	20

Lab Sample ID: MB 440-584780/1-D
Matrix: Water
Analysis Batch: 585610

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 585489

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/12/19 08:57	12/12/19 15:43	1

Eurofins TestAmerica, Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 440-584780/2-D
Matrix: Water
Analysis Batch: 585610

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 585489
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	4.16		ug/L		104	85 - 115

Lab Sample ID: 440-256482-1 MS
Matrix: Water
Analysis Batch: 585610

Client Sample ID: A1BMP0002_20191204
Prep Type: Dissolved
Prep Batch: 585489
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	4.21		ug/L		105	75 - 125

Lab Sample ID: 440-256482-1 MSD
Matrix: Water
Analysis Batch: 585610

Client Sample ID: A1BMP0002_20191204
Prep Type: Dissolved
Prep Batch: 585489
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	4.07		ug/L		102	75 - 125	3	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-584492/1
Matrix: Water
Analysis Batch: 584492

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			12/07/19 20:00	1

Lab Sample ID: LCS 440-584492/2
Matrix: Water
Analysis Batch: 584492

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Suspended Solids	1000	1080		mg/L		108	85 - 115

Lab Sample ID: 440-256482-1 DU
Matrix: Water
Analysis Batch: 584492

Client Sample ID: A1BMP0002_20191204
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	5.4		5.20		mg/L		4	10

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Metals

Prep Batch: 584107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Total Recoverable	Water	200.2	
440-256482-2	A1BMP0003_20191204	Total Recoverable	Water	200.2	
440-256482-3	ILBMP0002_20191204	Total Recoverable	Water	200.2	
MB 440-584107/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-584107/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-256457-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.2	
440-256457-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.2	

Analysis Batch: 584511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Total Recoverable	Water	200.8	584107
440-256482-2	A1BMP0003_20191204	Total Recoverable	Water	200.8	584107
440-256482-3	ILBMP0002_20191204	Total Recoverable	Water	200.8	584107
MB 440-584107/1-A	Method Blank	Total Recoverable	Water	200.8	584107
LCS 440-584107/2-A	Lab Control Sample	Total Recoverable	Water	200.8	584107
440-256457-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	584107
440-256457-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	584107

Filtration Batch: 584780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Dissolved	Water	FILTRATION	
440-256482-2	A1BMP0003_20191204	Dissolved	Water	FILTRATION	
440-256482-3	ILBMP0002_20191204	Dissolved	Water	FILTRATION	
MB 440-584780/1-C	Method Blank	Dissolved	Water	FILTRATION	
MB 440-584780/1-D	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-584780/2-C	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 440-584780/2-D	Lab Control Sample	Dissolved	Water	FILTRATION	
440-256243-D-2-D MS	Matrix Spike	Dissolved	Water	FILTRATION	
440-256243-D-2-E MSD	Matrix Spike Duplicate	Dissolved	Water	FILTRATION	
440-256482-1 MS	A1BMP0002_20191204	Dissolved	Water	FILTRATION	
440-256482-1 MSD	A1BMP0002_20191204	Dissolved	Water	FILTRATION	

Prep Batch: 584802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Total/NA	Water	245.1	
440-256482-2	A1BMP0003_20191204	Total/NA	Water	245.1	
440-256482-3	ILBMP0002_20191204	Total/NA	Water	245.1	
MB 440-584802/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-584802/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-256802-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	
440-256802-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 585048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Total/NA	Water	245.1	584802
440-256482-2	A1BMP0003_20191204	Total/NA	Water	245.1	584802
440-256482-3	ILBMP0002_20191204	Total/NA	Water	245.1	584802
MB 440-584802/1-A	Method Blank	Total/NA	Water	245.1	584802
LCS 440-584802/2-A	Lab Control Sample	Total/NA	Water	245.1	584802
440-256802-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	584802
440-256802-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	584802

Eurofins TestAmerica, Irvine

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Metals

Prep Batch: 585057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Dissolved	Water	200.2	584780
440-256482-2	A1BMP0003_20191204	Dissolved	Water	200.2	584780
440-256482-3	ILBMP0002_20191204	Dissolved	Water	200.2	584780
MB 440-584780/1-C	Method Blank	Dissolved	Water	200.2	584780
LCS 440-584780/2-C	Lab Control Sample	Dissolved	Water	200.2	584780
440-256243-D-2-D MS	Matrix Spike	Dissolved	Water	200.2	584780
440-256243-D-2-E MSD	Matrix Spike Duplicate	Dissolved	Water	200.2	584780

Analysis Batch: 585101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Dissolved	Water	200.8	585057
440-256482-2	A1BMP0003_20191204	Dissolved	Water	200.8	585057
440-256482-3	ILBMP0002_20191204	Dissolved	Water	200.8	585057
MB 440-584780/1-C	Method Blank	Dissolved	Water	200.8	585057
LCS 440-584780/2-C	Lab Control Sample	Dissolved	Water	200.8	585057
440-256243-D-2-D MS	Matrix Spike	Dissolved	Water	200.8	585057
440-256243-D-2-E MSD	Matrix Spike Duplicate	Dissolved	Water	200.8	585057

Prep Batch: 585489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Dissolved	Water	245.1	584780
440-256482-2	A1BMP0003_20191204	Dissolved	Water	245.1	584780
440-256482-3	ILBMP0002_20191204	Dissolved	Water	245.1	584780
MB 440-584780/1-D	Method Blank	Dissolved	Water	245.1	584780
LCS 440-584780/2-D	Lab Control Sample	Dissolved	Water	245.1	584780
440-256482-1 MS	A1BMP0002_20191204	Dissolved	Water	245.1	584780
440-256482-1 MSD	A1BMP0002_20191204	Dissolved	Water	245.1	584780

Analysis Batch: 585610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Dissolved	Water	245.1	585489
440-256482-2	A1BMP0003_20191204	Dissolved	Water	245.1	585489
440-256482-3	ILBMP0002_20191204	Dissolved	Water	245.1	585489
MB 440-584780/1-D	Method Blank	Dissolved	Water	245.1	585489
LCS 440-584780/2-D	Lab Control Sample	Dissolved	Water	245.1	585489
440-256482-1 MS	A1BMP0002_20191204	Dissolved	Water	245.1	585489
440-256482-1 MSD	A1BMP0002_20191204	Dissolved	Water	245.1	585489

General Chemistry

Analysis Batch: 584492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Total/NA	Water	SM 2540D	
440-256482-2	A1BMP0003_20191204	Total/NA	Water	SM 2540D	
440-256482-3	ILBMP0002_20191204	Total/NA	Water	SM 2540D	
MB 440-584492/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-584492/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-256482-1 DU	A1BMP0002_20191204	Total/NA	Water	SM 2540D	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Qualifiers

Metals

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-1

Laboratory: Eurofins TestAmerica, Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

- 1
- 2
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INTEGRATED GEOSCIENCES LABORATORIES, LLC

*Environmental * Geotechnical * Core Analysis*

6016 Centralcrest Street • Houston, Texas 77092
Telephone (713) 316-1800 • Fax (877) 255-9953

December 12, 2019

Patel, Urvashi.
Project Manager,
Eurofins TestAmerica, Irvine.
17461 Derian Ave Suite 100.
Irvine, CA 92614-5817.

Re: PTS/IGL File No: **49172**
Project Name: Boeing SSFL ISRA and BMP.
Project Number: 44009815
Site Location:

Subject: Final Report: Laser Particle Size Analysis – (ASTM D4464)

Dear Patel, Urvashi

Please find enclosed report for Physical Properties analyses conducted upon **three (3)** fluid samples received from your “**Boeing SSFL ISRA and BMP**” project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for fifteen days past the completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

Integrated Geosciences Laboratories appreciate the opportunity to be of service. If you have any questions or require additional information, please contact me or Emeka Anazodo at (713) 316-1800.

Sincerely,
Integrated Geosciences Laboratories, LLC.

C.A.Umeh

Chidi Umeh
Technical Consultant.
Encl.



PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D4464M)

PROJECT NAME: Boeing SSFL ISRA and BMP
PROJECT NO: 44009815

Sample ID	Matrix	Median Grain Size, micron (1)	Median Grain Size, mm (1)	PERCENT (%) PARTICLES RETAINED ON SIEVE RANGE								
				Distribution percent, millimeter (mm)								
				Clay (less than 0.00391mm)	Silt (0.00391 to 0.0625mm)	Very Fine Sand (0.0625 to 0.125mm)	Fine Sand (0.125 to 0.25mm)	Medium Sand (0.25 to 0.50mm)	Coarse Sand (0.50 to 1.00mm)	Very Coarse Sand (1.00 to 2.00mm)	Gravel (greater than 2.00mm)	Total Silt and Clay (0-0.0625mm)
A1BMP0002_20191204 (440-256482-1)	Aqueous	58.841	0.05884	6.567	37.950	37.720	7.720	9.931	0.000	0.000	0.000	44.517
A1BMP0003_20191204 (440-256482-2)	Aqueous	6.622	0.00662	23.330	62.990	13.080	0.290	0.000	0.000	0.000	0.000	86.320
ILBMP0002_20191204 (440-256482-3)	Aqueous	83.588	0.08359	6.953	34.780	14.650	13.240	20.170	10.109	0.000	0.000	41.733

(1) Based on Trask Median



PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D4464M)

PROJECT NAME: Boeing SSFL ISRA and BMP
PROJECT NO: 44009815

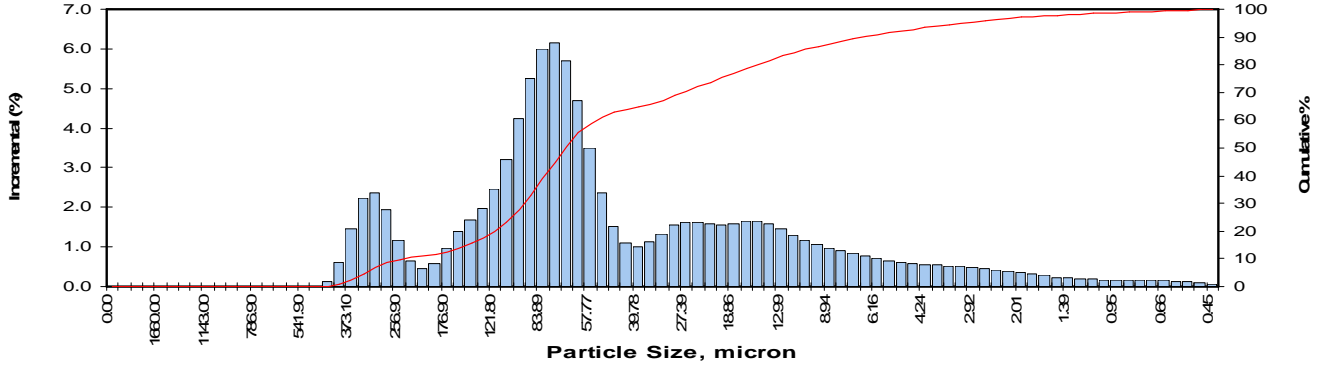
Sample ID	Matrix	Median Grain Size, micron (1)	CUMULATIVE PERCENT GREATER THAN										
			Distribution percent, microns										
			5%	10%	16%	25%	40%	50%	60%	75%	84%	90%	95%
A1BMP0002_20191204 (440-256482-1)	Aqueous	58.841	275.409	212.232	122.083	90.510	69.408	58.841	46.149	16.614	8.603	3.886	1.358
A1BMP0003_20191204 (440-256482-2)	Aqueous	6.622	78.193	61.863	45.742	18.126	9.021	6.622	4.485	1.769	1.215	0.896	0.516
ILBMP0002_20191204 (440-256482-3)	Aqueous	83.588	533.543	457.276	381.918	271.114	133.000	83.588	48.025	15.931	7.819	3.211	1.238

(1) Based on Trask Median



Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49172
 Sample ID: A1BMP0002_20191204 (440-256482-1)
 Matrix: Aqueous



Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution	
Diameter, microm		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent
0.00	0.00000	0.00	0.0	63.41	0.06341	4.71	55.4	1.668	0.00167	0.280	97.6
0.00	0.00000	0.00	0.0	57.77	0.05777	3.50	58.9	1.520	0.00152	0.240	97.8
2000.00	2.00000	0.00	0.0	52.62	0.05262	2.35	61.2	1.385	0.00139	0.220	98.1
1822.00	1.82200	0.00	0.0	47.94	0.04794	1.53	62.8	1.261	0.00126	0.200	98.3
1660.00	1.66000	0.00	0.0	43.67	0.04367	1.10	63.9	1.149	0.00115	0.180	98.4
1512.00	1.51200	0.00	0.0	39.78	0.03978	1.00	64.9	1.047	0.00105	0.170	98.6
1377.00	1.37700	0.00	0.0	36.24	0.03624	1.12	66.0	0.953	0.00095	0.170	98.8
1255.00	1.25500	0.00	0.0	33.01	0.03301	1.34	67.3	0.868	0.00087	0.170	99.0
1143.00	1.14300	0.00	0.0	30.07	0.03007	1.54	68.9	0.791	0.00079	0.170	99.1
1041.00	1.04100	0.00	0.0	27.39	0.02739	1.63	70.5	0.721	0.00072	0.160	99.3
948.30	0.94830	0.00	0.0	24.95	0.02495	1.62	72.1	0.656	0.00066	0.150	99.4
863.90	0.86390	0.00	0.0	22.73	0.02273	1.58	73.7	0.598	0.00060	0.140	99.6
786.90	0.78690	0.00	0.0	20.70	0.02070	1.57	75.3	0.545	0.00055	0.130	99.7
716.80	0.71680	0.00	0.0	18.96	0.01896	1.59	76.8	0.496	0.00050	0.110	99.8
653.00	0.65300	0.00	0.0	17.18	0.01718	1.64	78.5	0.452	0.00045	0.077	99.9
594.90	0.59490	0.00	0.0	15.65	0.01565	1.64	80.1	TOTALS:			
541.90	0.54190	0.00	0.0	14.26	0.01426	1.58	81.7			99.89	99.9
493.60	0.49360	0.01	0.0	12.99	0.01299	1.45	83.2				
449.70	0.44970	0.13	0.1	11.83	0.01183	1.30	84.5				
409.60	0.40960	0.63	0.8	10.78	0.01078	1.16	85.6				
373.10	0.37310	1.46	2.2	9.82	0.00982	1.06	86.7				
339.90	0.33990	2.22	4.5	8.94	0.00894	0.98	87.7				
309.60	0.30960	2.37	6.8	8.15	0.00815	0.91	88.6				
282.10	0.28210	1.93	8.8	7.42	0.00742	0.84	89.4				
256.90	0.25690	1.18	9.9	6.76	0.00676	0.78	90.2				
234.10	0.23410	0.64	10.6	6.16	0.00616	0.71	90.9				
213.20	0.21320	0.44	11.0	5.61	0.00561	0.66	91.6				
194.20	0.19420	0.59	11.6	5.11	0.00511	0.62	92.2				
176.90	0.17690	0.96	12.6	4.66	0.00466	0.59	92.8				
161.20	0.16120	1.40	14.0	4.24	0.00424	0.56	93.3				
146.80	0.14680	1.70	15.7	3.86	0.00386	0.54	93.9				
133.70	0.13370	1.99	17.7	3.52	0.00352	0.52	94.4				
121.80	0.12180	2.46	20.1	3.21	0.00321	0.51	94.9				
111.00	0.11100	3.22	23.3	2.92	0.00292	0.49	95.4				
101.10	0.10110	4.23	27.6	2.66	0.00266	0.46	95.8				
92.09	0.09209	5.26	32.8	2.42	0.00242	0.43	96.3				
83.89	0.08389	5.99	38.8	2.21	0.00221	0.39	96.7				
76.42	0.07642	6.16	45.0	2.01	0.00201	0.35	97.0				
69.61	0.06961	5.69	50.7	1.83	0.00183	0.31	97.3				

Measure	Trask	Inman
Median, mm	0.0588	0.0588
Median, micron	58.841	58.841
Mean, mm	0.0536	0.0324
Mean, micron	53.562	32.408
Sorting	2.3340	1.913
Skewness	0.6590	0.450
Kurtosis	0.1773	1.003

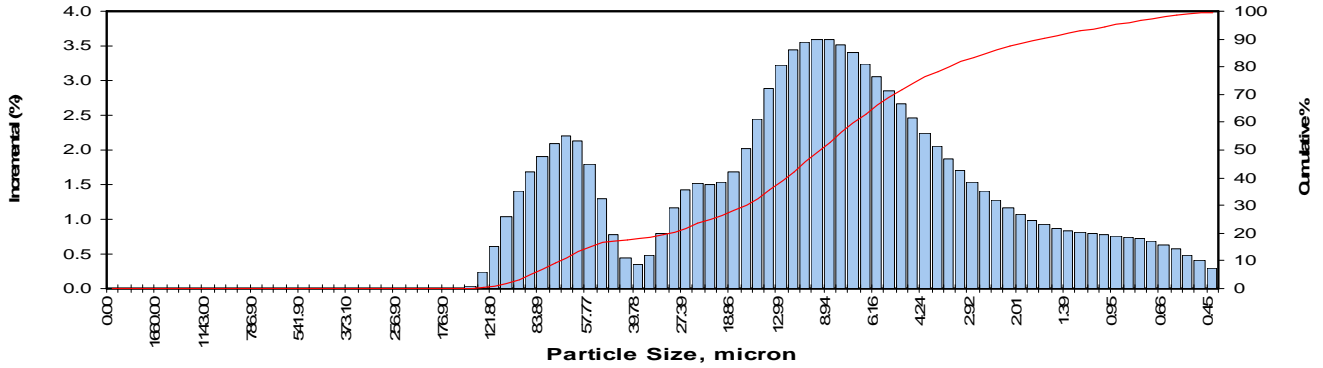
Distribution percent	Particle Size	
	Micron	Millimeters
5	275.409	0.2754
10	212.232	0.2122
16	122.083	0.1221
25	90.510	0.0905
40	69.408	0.0694
50	58.841	0.0588
60	46.149	0.0461
75	16.614	0.0166
84	8.603	0.0086
90	3.886	0.0039
95	1.358	0.0014

Total Silt and Clay (0-0.0625mm) 44.52

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		6.57
Silt (0.00391 to 0.0625mm)		37.95
Very Fine Sand (0.0625 to 0.125mm)		37.72
Fine Sand (0.125 to 0.25mm)		7.72
Medium Sand (0.25 to 0.50mm)		9.93
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49172
 Sample ID: A1BMP003_20191204 (440-256482-2)
 Matrix: Aqueous



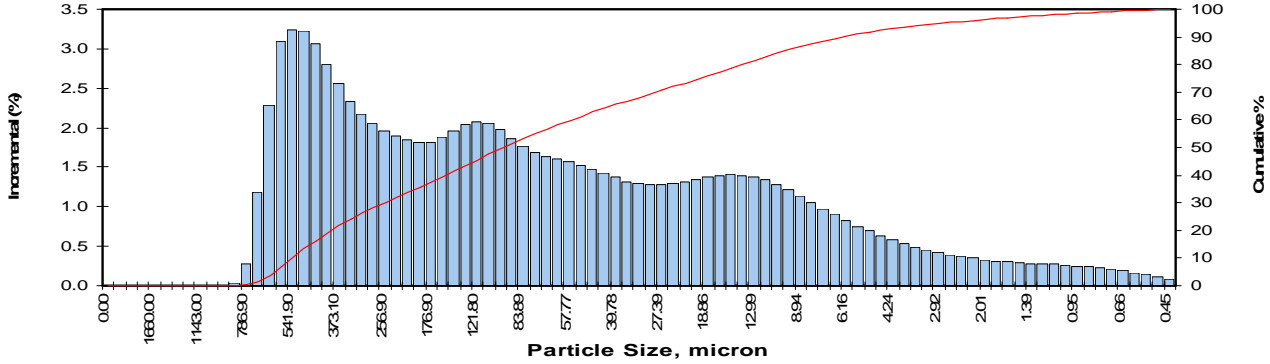
Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		
Diameter, microm		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	2.13	13.4	1.668	0.00167	0.920	90.3	
0.00	0.00000	0.00	0.0	57.77	0.05777	1.80	15.2	1.520	0.00152	0.870	91.2	
2000.00	2.00000	0.00	0.0	52.62	0.05262	1.29	16.5	1.385	0.00139	0.830	92.0	
1822.00	1.82200	0.00	0.0	47.94	0.04794	0.78	17.2	1.261	0.00126	0.810	92.8	
1660.00	1.66000	0.00	0.0	43.67	0.04367	0.45	17.7	1.149	0.00115	0.790	93.6	
1512.00	1.51200	0.00	0.0	39.78	0.03978	0.36	18.0	1.047	0.00105	0.780	94.4	
1377.00	1.37700	0.00	0.0	36.24	0.03624	0.49	18.5	0.953	0.00095	0.760	95.2	
1255.00	1.25500	0.00	0.0	33.01	0.03301	0.80	19.3	0.868	0.00087	0.750	95.9	
1143.00	1.14300	0.00	0.0	30.07	0.03007	1.16	20.5	0.791	0.00079	0.720	96.6	
1041.00	1.04100	0.00	0.0	27.39	0.02739	1.42	21.9	0.721	0.00072	0.680	97.3	
948.30	0.94830	0.00	0.0	24.95	0.02495	1.51	23.4	0.656	0.00066	0.630	97.9	
863.90	0.86390	0.00	0.0	22.73	0.02273	1.50	24.9	0.598	0.00060	0.570	98.5	
786.90	0.78690	0.00	0.0	20.70	0.02070	1.53	26.5	0.545	0.00055	0.490	99.0	
716.80	0.71680	0.00	0.0	18.86	0.01886	1.69	28.1	0.496	0.00050	0.400	99.4	
653.00	0.65300	0.00	0.0	17.18	0.01718	2.01	30.2	0.452	0.00045	0.290	99.7	
594.90	0.59490	0.00	0.0	15.65	0.01565	2.44	32.6	TOTALS:			99.69	99.7
541.90	0.54190	0.00	0.0	14.26	0.01426	2.88	35.5	Measure		Trask	Inman	
493.60	0.49360	0.00	0.0	12.99	0.01299	3.23	38.7	Median, mm	0.0066	0.0066		
449.70	0.44970	0.00	0.0	11.83	0.01183	3.45	42.2	Median, micron	6.622	6.622		
409.60	0.40960	0.00	0.0	10.78	0.01078	3.56	45.7	Mean, mm	0.0099	0.0075		
373.10	0.37310	0.00	0.0	9.82	0.00982	3.60	49.3	Mean, micron	9.948	7.454		
339.90	0.33990	0.00	0.0	8.94	0.00894	3.59	52.9	Sorting	3.2006	2.617		
309.60	0.30960	0.00	0.0	8.15	0.00815	3.52	56.4	Skewness	0.8553	-0.065		
282.10	0.28210	0.00	0.0	7.42	0.00742	3.40	59.8	Kurtosis	0.1341	0.384		
256.90	0.25690	0.00	0.0	6.76	0.00676	3.24	63.1	Cumulative Percent greater than				
234.10	0.23410	0.00	0.0	6.16	0.00616	3.06	66.1	Distribution percent	Particle Size			
213.20	0.21320	0.00	0.0	5.61	0.00561	2.86	69.0		Micron	Millimeters		
194.20	0.19420	0.00	0.0	5.11	0.00511	2.66	71.6	5	78.193	0.0782		
176.90	0.17690	0.00	0.0	4.66	0.00466	2.46	74.1	10	61.863	0.0619		
161.20	0.16120	0.00	0.0	4.24	0.00424	2.25	76.4	16	45.742	0.0457		
146.80	0.14680	0.05	0.0	3.86	0.00386	2.05	78.4	25	18.126	0.0181		
133.70	0.13370	0.24	0.3	3.52	0.00352	1.87	80.3	40	9.021	0.0090		
121.80	0.12180	0.61	0.9	3.21	0.00321	1.70	82.0	50	6.622	0.0066		
111.00	0.11100	1.04	1.9	2.92	0.00292	1.54	83.5	60	4.485	0.0045		
101.10	0.10110	1.40	3.3	2.66	0.00266	1.40	84.9	75	1.769	0.0018		
92.09	0.09209	1.68	5.0	2.42	0.00242	1.27	86.2	84	1.215	0.0012		
83.89	0.08389	1.91	6.9	2.21	0.00221	1.16	87.3	90	0.896	0.0009		
76.42	0.07642	2.10	9.0	2.01	0.00201	1.07	88.4	95	0.516	0.0005		
69.61	0.06961	2.21	11.2	1.83	0.00183	0.98	89.4					

Total Silt and Clay (0-0.0625mm) 86.32

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		23.33
Silt (0.00391 to 0.0625mm)		62.99
Very Fine Sand (0.0625 to 0.125mm)		13.08
Fine Sand (0.125 to 0.25mm)		0.29
Medium Sand (0.25 to 0.50mm)		0.00
Coarse Sand (0.50 to 1.00mm)		0.00
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Client: Eurofins TestAmerica, Irvine
 Project: Boeing SSFL ISRA and BMP
 Project No: 44009815

IGL File No: 49172
 Sample ID: ILBMP0002_20191204 (440-256482-3)
 Matrix: Aqueous



Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		Particle Distribution		
Diameter, microm		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent	Diameter, Millimeter		Incremental percent	Cumulative percent	
0.00	0.00000	0.00	0.0	63.41	0.06341	1.60	58.2	1.668	0.00167	0.300	96.9	
0.00	0.00000	0.00	0.0	57.77	0.05777	1.57	59.7	1.520	0.00152	0.290	97.2	
2000.00	2.00000	0.00	0.0	52.62	0.05262	1.53	61.3	1.385	0.00139	0.280	97.5	
1822.00	1.82200	0.00	0.0	47.94	0.04794	1.48	62.7	1.261	0.00126	0.270	97.7	
1660.00	1.66000	0.00	0.0	43.67	0.04367	1.42	64.2	1.149	0.00115	0.270	98.0	
1512.00	1.51200	0.00	0.0	39.78	0.03978	1.37	65.5	1.047	0.00105	0.260	98.3	
1377.00	1.37700	0.00	0.0	36.24	0.03624	1.32	66.9	0.953	0.00095	0.250	98.5	
1255.00	1.25500	0.00	0.0	33.01	0.03301	1.29	68.1	0.868	0.00087	0.240	98.7	
1143.00	1.14300	0.00	0.0	30.07	0.03007	1.28	69.4	0.791	0.00079	0.230	99.0	
1041.00	1.04100	0.00	0.0	27.39	0.02739	1.28	70.7	0.721	0.00072	0.210	99.2	
948.30	0.94830	0.00	0.0	24.95	0.02495	1.29	72.0	0.656	0.00066	0.190	99.4	
863.90	0.86390	0.03	0.0	22.73	0.02273	1.31	73.3	0.598	0.00060	0.170	99.5	
786.90	0.78690	0.28	0.3	20.70	0.02070	1.34	74.6	0.545	0.00055	0.150	99.7	
716.80	0.71680	1.19	1.5	18.86	0.01886	1.37	76.0	0.496	0.00050	0.120	99.8	
653.00	0.65300	2.28	3.8	17.18	0.01718	1.39	77.4	0.452	0.00045	0.083	99.9	
594.90	0.59490	3.09	6.9	15.65	0.01565	1.41	78.8	TOTALS:			99.90	99.9
541.90	0.54190	3.24	10.1	14.26	0.01426	1.40	80.2	Measure		Trask	Inman	
493.60	0.49360	3.22	13.3	12.99	0.01299	1.38	81.6	Median, mm	0.0836	0.0836		
449.70	0.44970	3.06	16.4	11.83	0.01183	1.34	82.9	Median, micron	83.588	83.588		
409.60	0.40960	2.81	19.2	10.78	0.01078	1.28	84.2	Mean, mm	0.1435	0.0546		
373.10	0.37310	2.56	21.8	9.82	0.00982	1.21	85.4	Mean, micron	143.523	54.648		
339.90	0.33990	2.34	24.1	8.94	0.00894	1.13	86.6	Sorting	4.1252	2.805		
309.60	0.30960	2.17	26.3	8.15	0.00815	1.05	87.6	Skewness	0.7862	0.219		
282.10	0.28210	2.05	28.3	7.42	0.00742	0.97	88.6	Kurtosis	0.2810	0.560		
256.90	0.25690	1.96	30.3	6.76	0.00676	0.90	89.5	Cumulative Percent greater than				
234.10	0.23410	1.89	32.2	6.16	0.00616	0.82	90.3	Distribution percent	Particle Size			
213.20	0.21320	1.84	34.0	5.61	0.00561	0.75	91.0		Micron	Millimeters		
194.20	0.19420	1.81	35.8	5.11	0.00511	0.69	91.7	5	533.543	0.5335		
176.90	0.17690	1.82	37.6	4.66	0.00466	0.63	92.4	10	457.276	0.4573		
161.20	0.16120	1.88	39.5	4.24	0.00424	0.58	92.9	16	381.918	0.3819		
146.80	0.14680	1.96	41.5	3.86	0.00386	0.53	93.5	25	271.114	0.2711		
133.70	0.13370	2.04	43.5	3.52	0.00352	0.49	94.0	40	133.000	0.1330		
121.80	0.12180	2.08	45.6	3.21	0.00321	0.45	94.4	50	83.588	0.0836		
111.00	0.11100	2.05	47.6	2.92	0.00292	0.42	94.8	60	48.025	0.0480		
101.10	0.10110	1.97	49.6	2.66	0.00266	0.39	95.2	75	15.931	0.0159		
92.09	0.09209	1.86	51.5	2.42	0.00242	0.37	95.6	84	7.819	0.0078		
83.89	0.08389	1.76	53.2	2.21	0.00221	0.35	95.9	90	3.211	0.0032		
76.42	0.07642	1.69	54.9	2.01	0.00201	0.33	96.3	95	1.238	0.0012		
69.61	0.06961	1.64	56.6	1.83	0.00183	0.31	96.6					

Total Silt and Clay (0-0.0625mm) 41.73

Description	Retained on Sieve #	Weight Percent (%)
Clay (less than 0.00391mm)		6.95
Silt (0.00391 to 0.0625mm)		34.78
Very Fine Sand (0.0625 to 0.125mm)		14.65
Fine Sand (0.125 to 0.25mm)		13.24
Medium Sand (0.25 to 0.50mm)		20.17
Coarse Sand (0.50 to 1.00mm)		10.11
Very Coarse Sand (1.00 to 2.00mm)		0.00
Gravel (greater than 2.00mm)		0.00
Total		100

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-256482-1

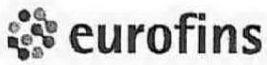
Login Number: 256482

List Source: Eurofins TestAmerica, Irvine

List Number: 1

Creator: Soderblom, Tim

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



440-256482 Field Sheet

Tracking #: 1119-9741-8950

Job: _____

SO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: _____

Therm. ID: Ak-11 Corr. Factor: (~~0~~ -) 0.4 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: Seal

Cooler ID: X

Temp Observed: 1.3 °C Corrected: 1.7 °C
From: Temp Blank Sample

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: JG Date: 12/7/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: PK Date: 12/09/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WRIA

Nguyen, Jocelyn

From: Patel, Urvashi
Sent: Monday, December 09, 2019 11:23 AM
To: 'Baluran, Dwayne'
Cc: Bondoc, Christian M.; Nguyen, Jocelyn
Subject: RE: Sample Receipt update: 440-256482-1

Thanks Dwayne
We'll make the corrections.

Urvashi

Urvashi Patel

Phone: 949-333-9055

E-mail: Urvashi.Patel@testamericainc.com

From: Baluran, Dwayne [<mailto:DBaluran@haleyaldrich.com>]
Sent: Monday, December 09, 2019 9:30 AM
To: Patel, Urvashi
Subject: Sample Receipt update: 440-256482-1

-External Email-

Good Morning Urvashi,

The work order for the recent BMP sampling had been reviewed and the following (minor) comments are below. I don't think I've sent this one to you yet.

Sample Delivery Group	Sample Date	Work Order or COC Corrections?
440-256482-1	12/4/2019	~on work order update sample 2 name from "1LBMP0002_20191204" "1LBMP" (first part is the letter "l" not the number 1) ~update H&A purchase # to "129095-004"

Thanks,
Dwayne Baluran, EIT, QSP
Staff Engineer

Haley & Aldrich, Inc.
5850 Canoga Avenue | Suite 400

Woodland Hills, CA 91367

T: (978) 234.5022

C: (818) 224.0704

www.haleyaldrich.com

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ANALYTICAL REPORT

Eurofins TestAmerica, Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-256482-2

Client Project/Site: Boeing SSFL ISRA and BMP

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
12/27/2019 10:50:29 PM

Urvashi Patel, Manager of Project Management
(949)260-3269

urvashi.patel@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-256482-1	A1BMP0002_20191204	Water	12/04/19 09:45	12/05/19 16:37	
440-256482-2	A1BMP0003_20191204	Water	12/04/19 09:55	12/05/19 16:37	
440-256482-3	ILBMP0002_20191204	Water	12/04/19 09:50	12/05/19 16:37	

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Job ID: 440-256482-2

Laboratory: Eurofins TestAmerica, Irvine

Narrative

**Job Narrative
440-256482-2**

Comments

No additional comments.

Receipt

The samples were received on 12/5/2019 4:37 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 1.0° C, 1.8° C, 2.1° C, 2.5° C and 2.8° C.

Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P / 1613B preparation/analysis: Samples A1BMP0002_20191204 (440-256482-1), A1BMP0003_20191204 (440-256482-2) and ILBMP0002_20191204 (440-256482-3) were received in wide-mouth amber glass bottles.

preparation batch 320-345993

Method: 1613B_Sox_Sep_P / 1613B

Matrix: Aqueous

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Client Sample ID: A1BMP0002_20191204

Lab Sample ID: 440-256482-1

Date Collected: 12/04/19 09:45

Matrix: Water

Date Received: 12/05/19 16:37

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000009	ug/L		12/17/19 09:23	12/21/19 01:10	1
2,3,7,8-TCDF	ND		0.000010	0.0000007	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,7,8-PeCDD	ND		0.000051	0.0000014	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,7,8-PeCDF	ND		0.000051	0.0000011	ug/L		12/17/19 09:23	12/21/19 01:10	1
2,3,4,7,8-PeCDF	ND		0.000051	0.0000011	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,4,7,8-HxCDD	0.0000038	J,DX	0.000051	0.0000009	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,6,7,8-HxCDD	0.0000027	J,DX	0.000051	0.0000009	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,7,8,9-HxCDD	ND		0.000051	0.0000008	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,4,7,8-HxCDF	0.0000027	J,DX	0.000051	0.0000009	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,6,7,8-HxCDF	0.0000025	J,DX q	0.000051	0.0000009	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,7,8,9-HxCDF	0.0000037	J,DX q	0.000051	0.0000007	ug/L		12/17/19 09:23	12/21/19 01:10	1
2,3,4,6,7,8-HxCDF	0.0000026	J,DX	0.000051	0.0000007	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,4,6,7,8-HpCDD	0.0000058	J,DX MB	0.000051	0.0000007	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,4,6,7,8-HpCDF	0.0000038	J,DX q MB	0.000051	0.0000013	ug/L		12/17/19 09:23	12/21/19 01:10	1
1,2,3,4,7,8,9-HpCDF	0.0000029	J,DX q	0.000051	0.0000019	ug/L		12/17/19 09:23	12/21/19 01:10	1
OCDD	0.0000026	J,DX MB	0.00010	0.0000012	ug/L		12/17/19 09:23	12/21/19 01:10	1
OCDF	0.0000012	J,DX	0.00010	0.0000018	ug/L		12/17/19 09:23	12/21/19 01:10	1
Total TCDD	ND		0.000010	0.0000009	ug/L		12/17/19 09:23	12/21/19 01:10	1
Total TCDF	ND		0.000010	0.0000007	ug/L		12/17/19 09:23	12/21/19 01:10	1
Total PeCDD	ND		0.000051	0.0000014	ug/L		12/17/19 09:23	12/21/19 01:10	1
Total PeCDF	ND		0.000051	0.0000011	ug/L		12/17/19 09:23	12/21/19 01:10	1
Total HxCDD	0.0000098	J,DX q	0.000051	0.0000008	ug/L		12/17/19 09:23	12/21/19 01:10	1
Total HxCDF	0.000011	J,DX q	0.000051	0.0000007	ug/L		12/17/19 09:23	12/21/19 01:10	1
Total HpCDD	0.0000090	J,DX MB	0.000051	0.0000007	ug/L		12/17/19 09:23	12/21/19 01:10	1
Total HpCDF	0.0000066	J,DX q MB	0.000051	0.0000013	ug/L		12/17/19 09:23	12/21/19 01:10	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	58		25 - 164				12/17/19 09:23	12/21/19 01:10	1
13C-2,3,7,8-TCDF	58		24 - 169				12/17/19 09:23	12/21/19 01:10	1
13C-1,2,3,7,8-PeCDD	55		25 - 181				12/17/19 09:23	12/21/19 01:10	1
13C-1,2,3,7,8-PeCDF	55		24 - 185				12/17/19 09:23	12/21/19 01:10	1
13C-2,3,4,7,8-PeCDF	58		21 - 178				12/17/19 09:23	12/21/19 01:10	1
13C-1,2,3,4,7,8-HxCDD	59		32 - 141				12/17/19 09:23	12/21/19 01:10	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130				12/17/19 09:23	12/21/19 01:10	1
13C-1,2,3,4,7,8-HxCDF	62		26 - 152				12/17/19 09:23	12/21/19 01:10	1
13C-1,2,3,6,7,8-HxCDF	63		26 - 123				12/17/19 09:23	12/21/19 01:10	1
13C-1,2,3,7,8,9-HxCDF	57		29 - 147				12/17/19 09:23	12/21/19 01:10	1
13C-2,3,4,6,7,8-HxCDF	60		28 - 136				12/17/19 09:23	12/21/19 01:10	1
13C-1,2,3,4,6,7,8-HpCDD	57		23 - 140				12/17/19 09:23	12/21/19 01:10	1

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Client Sample ID: A1BMP0002_20191204

Lab Sample ID: 440-256482-1

Date Collected: 12/04/19 09:45

Matrix: Water

Date Received: 12/05/19 16:37

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDF	57		28 - 143	12/17/19 09:23	12/21/19 01:10	1
13C-1,2,3,4,7,8,9-HpCDF	60		26 - 138	12/17/19 09:23	12/21/19 01:10	1
13C-OCDD	59		17 - 157	12/17/19 09:23	12/21/19 01:10	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	101		35 - 197	12/17/19 09:23	12/21/19 01:10	1

Client Sample ID: A1BMP0003_20191204

Lab Sample ID: 440-256482-2

Date Collected: 12/04/19 09:55

Matrix: Water

Date Received: 12/05/19 16:37

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.000010	ug/L		12/17/19 09:23	12/21/19 01:58	1
2,3,7,8-TCDF	ND		0.000011	0.000008	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,7,8-PeCDD	ND		0.000053	0.000018	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,7,8-PeCDF	ND		0.000053	0.000013	ug/L		12/17/19 09:23	12/21/19 01:58	1
2,3,4,7,8-PeCDF	ND		0.000053	0.000015	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,4,7,8-HxCDD	0.000023	J,DX q	0.000053	0.000012	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,6,7,8-HxCDD	0.000018	J,DX q	0.000053	0.000013	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,7,8,9-HxCDD	0.000021	J,DX q	0.000053	0.000011	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,4,7,8-HxCDF	ND		0.000053	0.000011	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,6,7,8-HxCDF	ND		0.000053	0.000011	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,7,8,9-HxCDF	0.000025	J,DX	0.000053	0.000008	ug/L		12/17/19 09:23	12/21/19 01:58	1
2,3,4,6,7,8-HxCDF	0.000011	J,DX q	0.000053	0.000008	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,4,6,7,8-HpCDD	0.000092	J,DX MB	0.000053	0.000013	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,4,6,7,8-HpCDF	0.000060	J,DX MB	0.000053	0.000017	ug/L		12/17/19 09:23	12/21/19 01:58	1
1,2,3,4,7,8,9-HpCDF	ND		0.000053	0.000023	ug/L		12/17/19 09:23	12/21/19 01:58	1
OCDD	0.000084	J,DX MB	0.00011	0.000017	ug/L		12/17/19 09:23	12/21/19 01:58	1
OCDF	0.000013	J,DX	0.00011	0.000023	ug/L		12/17/19 09:23	12/21/19 01:58	1
Total TCDD	ND		0.000011	0.000010	ug/L		12/17/19 09:23	12/21/19 01:58	1
Total TCDF	ND		0.000011	0.000008	ug/L		12/17/19 09:23	12/21/19 01:58	1
Total PeCDD	ND		0.000053	0.000018	ug/L		12/17/19 09:23	12/21/19 01:58	1
Total PeCDF	ND		0.000053	0.000013	ug/L		12/17/19 09:23	12/21/19 01:58	1
Total HxCDD	0.000062	J,DX q	0.000053	0.000011	ug/L		12/17/19 09:23	12/21/19 01:58	1
Total HxCDF	0.000036	J,DX q	0.000053	0.000008	ug/L		12/17/19 09:23	12/21/19 01:58	1
Total HpCDD	0.000023	J,DX MB	0.000053	0.000013	ug/L		12/17/19 09:23	12/21/19 01:58	1
Total HpCDF	0.000011	J,DX MB	0.000053	0.000017	ug/L		12/17/19 09:23	12/21/19 01:58	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C-2,3,7,8-TCDD	53		25 - 164	12/17/19 09:23	12/21/19 01:58	1			
13C-2,3,7,8-TCDF	54		24 - 169	12/17/19 09:23	12/21/19 01:58	1			
13C-1,2,3,7,8-PeCDD	49		25 - 181	12/17/19 09:23	12/21/19 01:58	1			
13C-1,2,3,7,8-PeCDF	50		24 - 185	12/17/19 09:23	12/21/19 01:58	1			
13C-2,3,4,7,8-PeCDF	51		21 - 178	12/17/19 09:23	12/21/19 01:58	1			
13C-1,2,3,4,7,8-HxCDD	56		32 - 141	12/17/19 09:23	12/21/19 01:58	1			
13C-1,2,3,6,7,8-HxCDD	55		28 - 130	12/17/19 09:23	12/21/19 01:58	1			

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Client Sample ID: A1BMP0003_20191204

Lab Sample ID: 440-256482-2

Date Collected: 12/04/19 09:55

Matrix: Water

Date Received: 12/05/19 16:37

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDF	56		26 - 152	12/17/19 09:23	12/21/19 01:58	1
13C-1,2,3,6,7,8-HxCDF	55		26 - 123	12/17/19 09:23	12/21/19 01:58	1
13C-1,2,3,7,8,9-HxCDF	50		29 - 147	12/17/19 09:23	12/21/19 01:58	1
13C-2,3,4,6,7,8-HxCDF	54		28 - 136	12/17/19 09:23	12/21/19 01:58	1
13C-1,2,3,4,6,7,8-HpCDD	49		23 - 140	12/17/19 09:23	12/21/19 01:58	1
13C-1,2,3,4,6,7,8-HpCDF	48		28 - 143	12/17/19 09:23	12/21/19 01:58	1
13C-1,2,3,4,7,8,9-HpCDF	51		26 - 138	12/17/19 09:23	12/21/19 01:58	1
13C-OCDD	48		17 - 157	12/17/19 09:23	12/21/19 01:58	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	108		35 - 197	12/17/19 09:23	12/21/19 01:58	1

Client Sample ID: ILBMP0002_20191204

Lab Sample ID: 440-256482-3

Date Collected: 12/04/19 09:50

Matrix: Water

Date Received: 12/05/19 16:37

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.0000009	ug/L		12/17/19 09:23	12/21/19 02:45	1
2,3,7,8-TCDF	ND		0.000011	0.0000008	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,7,8-PeCDD	ND		0.000055	0.0000018	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,7,8-PeCDF	ND		0.000055	0.0000015	ug/L		12/17/19 09:23	12/21/19 02:45	1
2,3,4,7,8-PeCDF	ND		0.000055	0.0000016	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,4,7,8-HxCDD	0.0000037	J,DX q	0.000055	0.0000011	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,6,7,8-HxCDD	0.0000049	J,DX	0.000055	0.0000011	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,7,8,9-HxCDD	0.0000034	J,DX q	0.000055	0.0000009	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,4,7,8-HxCDF	0.0000020	J,DX q	0.000055	0.0000014	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,6,7,8-HxCDF	0.0000018	J,DX q	0.000055	0.0000014	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,7,8,9-HxCDF	0.0000018	J,DX	0.000055	0.0000011	ug/L		12/17/19 09:23	12/21/19 02:45	1
2,3,4,6,7,8-HxCDF	0.0000017	J,DX	0.000055	0.0000011	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,4,6,7,8-HpCDD	0.000052	J,DX MB	0.000055	0.0000020	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,4,6,7,8-HpCDF	0.000020	J,DX MB	0.000055	0.0000017	ug/L		12/17/19 09:23	12/21/19 02:45	1
1,2,3,4,7,8,9-HpCDF	ND		0.000055	0.0000021	ug/L		12/17/19 09:23	12/21/19 02:45	1
OCDD	0.00046	MB	0.00011	0.0000022	ug/L		12/17/19 09:23	12/21/19 02:45	1
OCDF	0.000037	J,DX	0.00011	0.0000019	ug/L		12/17/19 09:23	12/21/19 02:45	1
Total TCDD	ND		0.000011	0.0000009	ug/L		12/17/19 09:23	12/21/19 02:45	1
Total TCDF	ND		0.000011	0.0000008	ug/L		12/17/19 09:23	12/21/19 02:45	1
Total PeCDD	ND		0.000055	0.0000018	ug/L		12/17/19 09:23	12/21/19 02:45	1
Total PeCDF	0.0000039	J,DX	0.000055	0.0000015	ug/L		12/17/19 09:23	12/21/19 02:45	1
Total HxCDD	0.000023	J,DX q	0.000055	0.0000009	ug/L		12/17/19 09:23	12/21/19 02:45	1
Total HxCDF	0.000022	J,DX q	0.000055	0.0000011	ug/L		12/17/19 09:23	12/21/19 02:45	1
Total HpCDD	0.00011	J,DX MB	0.000055	0.0000020	ug/L		12/17/19 09:23	12/21/19 02:45	1
Total HpCDF	0.000036	J,DX MB	0.000055	0.0000017	ug/L		12/17/19 09:23	12/21/19 02:45	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C-2,3,7,8-TCDD	61		25 - 164	12/17/19 09:23	12/21/19 02:45	1			

Eurofins TestAmerica, Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Client Sample ID: ILBMP0002_20191204

Lab Sample ID: 440-256482-3

Date Collected: 12/04/19 09:50

Matrix: Water

Date Received: 12/05/19 16:37

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	60		24 - 169	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,7,8-PeCDD	56		25 - 181	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,7,8-PeCDF	57		24 - 185	12/17/19 09:23	12/21/19 02:45	1
13C-2,3,4,7,8-PeCDF	59		21 - 178	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,4,7,8-HxCDD	62		32 - 141	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,6,7,8-HxCDD	63		28 - 130	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,4,7,8-HxCDF	63		26 - 152	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,7,8,9-HxCDF	58		29 - 147	12/17/19 09:23	12/21/19 02:45	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,4,6,7,8-HpCDD	57		23 - 140	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,4,6,7,8-HpCDF	55		28 - 143	12/17/19 09:23	12/21/19 02:45	1
13C-1,2,3,4,7,8,9-HpCDF	59		26 - 138	12/17/19 09:23	12/21/19 02:45	1
13C-OCDD	59		17 - 157	12/17/19 09:23	12/21/19 02:45	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	106		35 - 197	12/17/19 09:23	12/21/19 02:45	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	40CFR136A	TAL SAC
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Client Sample ID: A1BMP0002_20191204

Lab Sample ID: 440-256482-1

Date Collected: 12/04/19 09:45

Matrix: Water

Date Received: 12/05/19 16:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			986.7 mL	20 uL	345993	12/17/19 09:23	RDR	TAL SAC
Total/NA	Analysis	1613B		1			346948	12/21/19 01:10	AS	TAL SAC

Client Sample ID: A1BMP0003_20191204

Lab Sample ID: 440-256482-2

Date Collected: 12/04/19 09:55

Matrix: Water

Date Received: 12/05/19 16:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			939.1 mL	20 uL	345993	12/17/19 09:23	RDR	TAL SAC
Total/NA	Analysis	1613B		1			346948	12/21/19 01:58	AS	TAL SAC

Client Sample ID: ILBMP0002_20191204

Lab Sample ID: 440-256482-3

Date Collected: 12/04/19 09:50

Matrix: Water

Date Received: 12/05/19 16:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			907.7 mL	20 uL	345993	12/17/19 09:23	RDR	TAL SAC
Total/NA	Analysis	1613B		1			346948	12/21/19 02:45	AS	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-345993/1-A
Matrix: Water
Analysis Batch: 346948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 345993

Analyte	MB	MB	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,3,7,8-TCDD	ND		0.000010	0.0000009	ug/L		12/17/19 09:23	12/20/19 23:35	1
2,3,7,8-TCDF	ND		0.000010	0.0000009	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000020	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000013	ug/L		12/17/19 09:23	12/20/19 23:35	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000014	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,4,7,8-HxCDD	ND		0.000050	0.0000011	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,6,7,8-HxCDD	ND		0.000050	0.0000011	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,7,8,9-HxCDD	ND		0.000050	0.0000010	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,4,7,8-HxCDF	ND		0.000050	0.0000010	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,6,7,8-HxCDF	ND		0.000050	0.0000009	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,7,8,9-HxCDF	ND		0.000050	0.0000008	ug/L		12/17/19 09:23	12/20/19 23:35	1
2,3,4,6,7,8-HxCDF	ND		0.000050	0.0000008	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,4,6,7,8-HpCDD	0.00000252	J,DX q	0.000050	0.0000008	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,4,6,7,8-HpCDF	0.00000258	J,DX	0.000050	0.0000015	ug/L		12/17/19 09:23	12/20/19 23:35	1
1,2,3,4,7,8,9-HpCDF	ND		0.000050	0.0000021	ug/L		12/17/19 09:23	12/20/19 23:35	1
OCDD	0.0000113	J,DX	0.00010	0.0000014	ug/L		12/17/19 09:23	12/20/19 23:35	1
OCDF	ND		0.00010	0.0000024	ug/L		12/17/19 09:23	12/20/19 23:35	1
Total TCDD	0.00000124	J,DX q	0.000010	0.0000009	ug/L		12/17/19 09:23	12/20/19 23:35	1
Total TCDF	ND		0.000010	0.0000009	ug/L		12/17/19 09:23	12/20/19 23:35	1
Total PeCDD	ND		0.000050	0.0000020	ug/L		12/17/19 09:23	12/20/19 23:35	1
Total PeCDF	ND		0.000050	0.0000013	ug/L		12/17/19 09:23	12/20/19 23:35	1
Total HxCDD	ND		0.000050	0.0000010	ug/L		12/17/19 09:23	12/20/19 23:35	1
Total HxCDF	ND		0.000050	0.0000008	ug/L		12/17/19 09:23	12/20/19 23:35	1
Total HpCDD	0.00000526	J,DX q	0.000050	0.0000008	ug/L		12/17/19 09:23	12/20/19 23:35	1
Total HpCDF	0.00000258	J,DX	0.000050	0.0000015	ug/L		12/17/19 09:23	12/20/19 23:35	1
		MB MB							
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	53		25 - 164				12/17/19 09:23	12/20/19 23:35	1
13C-2,3,7,8-TCDF	53		24 - 169				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,7,8-PeCDD	52		25 - 181				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,7,8-PeCDF	53		24 - 185				12/17/19 09:23	12/20/19 23:35	1
13C-2,3,4,7,8-PeCDF	55		21 - 178				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,4,7,8-HxCDD	61		32 - 141				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,6,7,8-HxCDD	62		28 - 130				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,4,7,8-HxCDF	61		26 - 152				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,6,7,8-HxCDF	62		26 - 123				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,7,8,9-HxCDF	57		29 - 147				12/17/19 09:23	12/20/19 23:35	1
13C-2,3,4,6,7,8-HxCDF	58		28 - 136				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,4,6,7,8-HpCDD	53		23 - 140				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,4,6,7,8-HpCDF	54		28 - 143				12/17/19 09:23	12/20/19 23:35	1
13C-1,2,3,4,7,8,9-HpCDF	56		26 - 138				12/17/19 09:23	12/20/19 23:35	1

Eurofins TestAmerica, Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-345993/1-A
Matrix: Water
Analysis Batch: 346948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 345993

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-OCDD	51		17 - 157	12/17/19 09:23	12/20/19 23:35	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
37Cl4-2,3,7,8-TCDD	96		35 - 197	12/17/19 09:23	12/20/19 23:35	1

Lab Sample ID: LCS 320-345993/2-A
Matrix: Water
Analysis Batch: 346948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 345993

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
2,3,7,8-TCDF	0.000200	0.000236		ug/L		118	75 - 158	
1,2,3,7,8-PeCDD	0.00100	0.00107		ug/L		107	70 - 142	
1,2,3,7,8-PeCDF	0.00100	0.00113		ug/L		113	80 - 134	
2,3,4,7,8-PeCDF	0.00100	0.00107		ug/L		107	68 - 160	
1,2,3,4,7,8-HxCDD	0.00100	0.000979		ug/L		98	70 - 164	
1,2,3,6,7,8-HxCDD	0.00100	0.00106		ug/L		106	76 - 134	
1,2,3,7,8,9-HxCDD	0.00100	0.000964		ug/L		96	64 - 162	
1,2,3,4,7,8-HxCDF	0.00100	0.00102		ug/L		102	72 - 134	
1,2,3,6,7,8-HxCDF	0.00100	0.00107		ug/L		107	84 - 130	
1,2,3,7,8,9-HxCDF	0.00100	0.00109		ug/L		109	78 - 130	
2,3,4,6,7,8-HxCDF	0.00100	0.00109		ug/L		109	70 - 156	
1,2,3,4,6,7,8-HpCDD	0.00100	0.000942	MB	ug/L		94	70 - 140	
1,2,3,4,6,7,8-HpCDF	0.00100	0.00103	MB	ug/L		103	82 - 122	
1,2,3,4,7,8,9-HpCDF	0.00100	0.000982		ug/L		98	78 - 138	
OCDD	0.00200	0.00183	MB	ug/L		92	78 - 144	
OCDF	0.00200	0.00195		ug/L		98	63 - 170	

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	64		20 - 175
13C-2,3,7,8-TCDF	65		22 - 152
13C-1,2,3,7,8-PeCDD	61		21 - 227
13C-1,2,3,7,8-PeCDF	61		21 - 192
13C-2,3,4,7,8-PeCDF	65		13 - 328
13C-1,2,3,4,7,8-HxCDD	70		21 - 193
13C-1,2,3,6,7,8-HxCDD	70		25 - 163
13C-1,2,3,4,7,8-HxCDF	68		19 - 202
13C-1,2,3,6,7,8-HxCDF	68		21 - 159
13C-1,2,3,7,8,9-HxCDF	64		17 - 205
13C-2,3,4,6,7,8-HxCDF	67		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	62		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	60		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	65		20 - 186
13C-OCDD	60		13 - 199

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
37Cl4-2,3,7,8-TCDD	110		31 - 191

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Specialty Organics

Prep Batch: 345993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Total/NA	Water	1613B	
440-256482-2	A1BMP0003_20191204	Total/NA	Water	1613B	
440-256482-3	ILBMP0002_20191204	Total/NA	Water	1613B	
MB 320-345993/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-345993/2-A	Lab Control Sample	Total/NA	Water	1613B	

Analysis Batch: 346948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-256482-1	A1BMP0002_20191204	Total/NA	Water	1613B	345993
440-256482-2	A1BMP0003_20191204	Total/NA	Water	1613B	345993
440-256482-3	ILBMP0002_20191204	Total/NA	Water	1613B	345993
MB 320-345993/1-A	Method Blank	Total/NA	Water	1613B	345993
LCS 320-345993/2-A	Lab Control Sample	Total/NA	Water	1613B	345993

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Laboratory: Eurofins TestAmerica, Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Regulatory Program: DW RPDES RCRA Other: _____
H&A Project Manager: Katherine Miller
Lab Contact: Urvasi Patel (949) 333-9055
H&A Site Contact: Matt Birney (618) 486-8782

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)										Carrier:	COC No.
						Perform MS/MSD (Y/N)	Method 200.8: Cd, Cu, Pb (Total Dissolved)	Method 245.1: Hg (Total Recoverable)	Dioxins (Method 1613)	Total Suspended Solids (Method 2540D)	Particle Size Distribution (Method ASTM D422)	Method 200.8: As, Cd, Cu, Fe, Pb (Total Dissolved)	Method 245.1: Hg (Total Recoverable)	Method 200.8: As, Cd, Cu, Fe, Pb	SO ₄ (E900)			Gross Alpha (E900)	Gross Alpha (E900)
A1BMP0002_20191204	12/4/2019	0945	G	WM	6	N	X	X	A	X	X	X	X	X	X	X	Field Staff Notes: Lab may substitute 250mL Poly for 500mL for metals. Only need to fill half of 500mL. Must fill TSS to the top.
A1BMP0003_20191204	12/4/2019	0955	G	WM	6	N	X	X	X	X	X	X	X	X	X	X	Upstream (South), CM-9 BMPs
ILBMP0002_20191204	12/4/2019	0950	G	WM	6	N	X	X	X	X	X	X	X	X	X	X	Downstream, CM-9 BMPs, CM-9 underdrains

Preservation Used: 1= Ice, 2= HCI, 3= H2SO4, 4= HNO3, 5= NaOH; 6= Other _____
 Possible Hazard Identification: _____
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:
 Please email data to kmiller@haleyaldrich.com and post to Total Access; Bill to Haley & Aldrich at AP@haleyaldrich.com; Report Level II Data Package and provide EDD; All dissolved metal samples are to be filtered within 24 hours of receipt, even those placed on hold

Relinquished by: <u>Walter Reiro</u>	Company: <u>TA-IRU</u>	Date/Time: <u>12/05/19 1310</u>
Relinquished by: <u>Walter Reiro</u>	Company: _____	Date/Time: _____
Relinquished by: _____	Company: _____	Date/Time: <u>12/15/19 16:37</u>

Custody Seal No.: _____
 Cooler Temp. (°C): _____
 Corrd: _____
 Therm ID No.: _____

1.5/1.8; 0.8/1.0; 2.4/2.8; 1.9/2.1; 2.3/2.5 #89



440-2556482 Chain of Custody



Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-256482-2

Login Number: 256482

List Source: Eurofins TestAmerica, Irvine

List Number: 1

Creator: Soderblom, Tim

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-256482-2

Login Number: 256482

List Number: 2

Creator: Kintaudi, Pauline W

List Source: Eurofins TestAmerica, Sacramento

List Creation: 12/09/19 03:11 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	Ob:1.3c Corr:1.7c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-256482-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-256482-1	A1BMP0002_20191204	58	58	55	55	58	59	65	62
440-256482-2	A1BMP0003_20191204	53	54	49	50	51	56	55	56
440-256482-3	ILBMP0002_20191204	61	60	56	57	59	62	63	63
MB 320-345993/1-A	Method Blank	53	53	52	53	55	61	62	61

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-256482-1	A1BMP0002_20191204	63	57	60	57	57	60	59
440-256482-2	A1BMP0003_20191204	55	50	54	49	48	51	48
440-256482-3	ILBMP0002_20191204	61	58	59	57	55	59	59
MB 320-345993/1-A	Method Blank	62	57	58	53	54	56	51

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-345993/2-A	Lab Control Sample	64	65	61	61	65	70	70	68

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-345993/2-A	Lab Control Sample	68	64	67	62	60	65	60

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF

Eurofins TestAmerica, Irvine

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.

Project/Site: Boeing SSFL ISRA and BMP

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

Job ID: 440-256482-2

1

2

3

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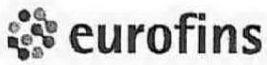
11

12

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15



Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-256482 Field Sheet

Tracking #: 1119-9741-8950

SO / / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Job: _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes: _____

Therm. ID: Ak-11 Corr. Factor: (~~0~~-) 0.4 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: Seal

Cooler ID: X

Temp Observed: 1.3 °C Corrected: 1.7 °C
From: Temp Blank Sample

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: JG Date: 12/17/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: PK Date: 12/09/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WR1A

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

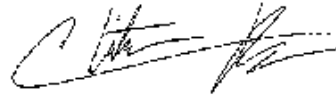
Laboratory Job ID: 440-258024-1

Client Project/Site: BMP Performance OF 001, 002, and/or 009

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
1/8/2020 4:04:00 PM

Christian Bondoc, Project Manager I
(949)260-3218
christian.bondoc@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Haley & Aldrich, Inc.

Job ID: 440-258024-1

Project/Site: BMP Performance OF 001, 002, and/or 009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-258024-1	LPBMP0002_20191223	Water	12/23/19 06:50	12/23/19 16:05	
440-258024-2	LPBMP0003_20191223	Water	12/23/19 07:00	12/23/19 16:05	
440-258024-3	LPBMP0004_20191223	Water	12/23/19 07:10	12/23/19 16:05	
440-258024-4	EPSW002IE02_20191223	Water	12/23/19 08:00	12/23/19 16:05	

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Job ID: 440-258024-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-258024-1

Comments

No additional comments.

Receipt

The samples were received on 12/23/2019 4:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.7° C and 2.3° C.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method FILTRATION: The following samples requested dissolved metals and were not filtered in the field: LPBMP0002_20191223 (440-258024-1), LPBMP0003_20191223 (440-258024-2), LPBMP0004_20191223 (440-258024-3) and EPSW002IE02_20191223 (440-258024-4). These samples were filtered and preserved upon receipt to the laboratory.

Method 200.8: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 440-587802 and analytical batch 440-588003 were outside control limits for Iron. Sample matrix interference and/or non-homogeneity are suspected. The associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method D4464: The sample duplicate precision for the following sample associated with analytical batch 570-42967 was outside control limits: LPBMP0003_20191223 (440-258024-2) and (440-258024-D-2 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P preparation/analysis: Sample LPBMP0002_20191223 (440-258024-1), LPBMP0004_20191223 (440-258024-3) and EPSW002IE02_20191223 (440-258024-4) was received in a wide-mouth amber glass bottle.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Client Sample ID: LPBMP0002_20191223

Lab Sample ID: 440-258024-1

Date Collected: 12/23/19 06:50

Matrix: Water

Date Received: 12/23/19 16:05

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000016	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,7,8-PeCDD	ND		0.000052	0.0000028	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,7,8-PeCDF	ND		0.000052	0.0000022	ug/L		12/30/19 16:10	01/06/20 21:35	1
2,3,4,7,8-PeCDF	0.0000027	J,DX q	0.000052	0.0000023	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,4,7,8-HxCDD	0.0000036	J,DX MB q	0.000052	0.0000015	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,6,7,8-HxCDD	0.0000042	J,DX MB	0.000052	0.0000015	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,7,8,9-HxCDD	0.0000025	J,DX	0.000052	0.0000014	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,4,7,8-HxCDF	0.000028	J,DX	0.000052	0.0000034	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,6,7,8-HxCDF	0.000011	J,DX	0.000052	0.0000034	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,7,8,9-HxCDF	ND		0.000052	0.0000025	ug/L		12/30/19 16:10	01/06/20 21:35	1
2,3,4,6,7,8-HxCDF	ND		0.000052	0.0000026	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,4,6,7,8-HpCDD	0.000045	J,DX MB	0.000052	0.0000018	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,4,6,7,8-HpCDF	0.00025	MB	0.000052	0.0000029	ug/L		12/30/19 16:10	01/06/20 21:35	1
1,2,3,4,7,8,9-HpCDF	ND		0.000052	0.0000033	ug/L		12/30/19 16:10	01/06/20 21:35	1
OCDD	0.00037	MB	0.00010	0.0000032	ug/L		12/30/19 16:10	01/06/20 21:35	1
OCDF	0.00022	MB	0.00010	0.0000029	ug/L		12/30/19 16:10	01/06/20 21:35	1
Total TCDD	ND		0.000010	0.0000016	ug/L		12/30/19 16:10	01/06/20 21:35	1
Total TCDF	0.0000063	J,DX	0.000010	0.0000012	ug/L		12/30/19 16:10	01/06/20 21:35	1
Total PeCDD	ND		0.000052	0.0000028	ug/L		12/30/19 16:10	01/06/20 21:35	1
Total PeCDF	0.000015	J,DX q	0.000052	0.0000022	ug/L		12/30/19 16:10	01/06/20 21:35	1
Total HxCDD	0.000021	J,DX MB q	0.000052	0.0000014	ug/L		12/30/19 16:10	01/06/20 21:35	1
Total HxCDF	0.000079	q	0.000052	0.0000025	ug/L		12/30/19 16:10	01/06/20 21:35	1
Total HpCDD	0.00011	J,DX MB	0.000052	0.0000018	ug/L		12/30/19 16:10	01/06/20 21:35	1
Total HpCDF	0.00027	MB q	0.000052	0.0000029	ug/L		12/30/19 16:10	01/06/20 21:35	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	59		25 - 164	12/30/19 16:10	01/06/20 21:35	1
13C-2,3,7,8-TCDF	55		24 - 169	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,7,8-PeCDD	58		25 - 181	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,7,8-PeCDF	55		24 - 185	12/30/19 16:10	01/06/20 21:35	1
13C-2,3,4,7,8-PeCDF	60		21 - 178	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,4,7,8-HxCDD	58		32 - 141	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,6,7,8-HxCDD	52		28 - 130	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,4,7,8-HxCDF	54		26 - 152	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,6,7,8-HxCDF	49		26 - 123	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,7,8,9-HxCDF	52		29 - 147	12/30/19 16:10	01/06/20 21:35	1
13C-2,3,4,6,7,8-HxCDF	52		28 - 136	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,4,6,7,8-HpCDD	62		23 - 140	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,4,6,7,8-HpCDF	56		28 - 143	12/30/19 16:10	01/06/20 21:35	1
13C-1,2,3,4,7,8,9-HpCDF	63		26 - 138	12/30/19 16:10	01/06/20 21:35	1
13C-OCDD	63		17 - 157	12/30/19 16:10	01/06/20 21:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	107		35 - 197	12/30/19 16:10	01/06/20 21:35	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000010	0.0000006	ug/L		12/30/19 16:10	01/08/20 12:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	57		24 - 169	12/30/19 16:10	01/08/20 12:22	1

Eurofins Calscience Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Client Sample ID: LPBMP0002_20191223

Lab Sample ID: 440-258024-1

Date Collected: 12/23/19 06:50

Matrix: Water

Date Received: 12/23/19 16:05

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	108		35 - 197	12/30/19 16:10	01/08/20 12:22	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/24/19 11:12	12/26/19 12:21	1
Copper	5.3		2.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:21	1
Lead	1.0		1.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:21	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/27/19 15:14	12/29/19 15:03	1
Copper	4.4		2.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:03	1
Lead	ND		1.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:03	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/30/19 11:02	12/30/19 22:37	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 13:01	01/07/20 00:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	23		4.0	2.0	mg/L			12/24/19 19:35	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	5.55		0.01	0.01	%			01/06/20 16:07	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			01/06/20 16:07	1
Fine Sand (0.125 to 0.25mm)	15.64		0.01	0.01	%			01/06/20 16:07	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			01/06/20 16:07	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			01/06/20 16:07	1
Silt (0.00391 to 0.0625mm)	42.45		0.01	0.01	%			01/06/20 16:07	1
Total Silt and Clay (0 to 0.0626mm)	48.00		0.01	0.01	%			01/06/20 16:07	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			01/06/20 16:07	1
Very Fine Sand (0.0625 to 0.125 mm)	36.36		0.01	0.01	%			01/06/20 16:07	1

Client Sample ID: LPBMP0003_20191223

Lab Sample ID: 440-258024-2

Date Collected: 12/23/19 07:00

Matrix: Water

Date Received: 12/23/19 16:05

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.000017	ug/L		12/30/19 16:10	01/06/20 22:21	1
2,3,7,8-TCDF	ND		0.000010	0.000012	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,7,8-PeCDD	0.0000039	J,DX	0.000050	0.000022	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,7,8-PeCDF	0.0000018	J,DX	0.000050	0.000015	ug/L		12/30/19 16:10	01/06/20 22:21	1
2,3,4,7,8-PeCDF	0.0000020	J,DX q	0.000050	0.000014	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,4,7,8-HxCDD	0.0000046	J,DX MB	0.000050	0.000016	ug/L		12/30/19 16:10	01/06/20 22:21	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Client Sample ID: LPBMP0003_20191223

Lab Sample ID: 440-258024-2

Date Collected: 12/23/19 07:00

Matrix: Water

Date Received: 12/23/19 16:05

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDD	0.000057	J,DX MB	0.000050	0.000016	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,7,8,9-HxCDD	0.000056	J,DX	0.000050	0.000014	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,4,7,8-HxCDF	0.000049	J,DX	0.000050	0.000030	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,6,7,8-HxCDF	0.000043	J,DX	0.000050	0.000030	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,7,8,9-HxCDF	0.000047	J,DX	0.000050	0.000023	ug/L		12/30/19 16:10	01/06/20 22:21	1
2,3,4,6,7,8-HxCDF	0.000044	J,DX	0.000050	0.000023	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,4,6,7,8-HpCDD	0.000076	MB	0.000050	0.000017	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,4,6,7,8-HpCDF	0.000046	J,DX MB	0.000050	0.000015	ug/L		12/30/19 16:10	01/06/20 22:21	1
1,2,3,4,7,8,9-HpCDF	0.000025	J,DX MB	0.000050	0.000018	ug/L		12/30/19 16:10	01/06/20 22:21	1
OCDD	0.00063	MB	0.00010	0.000025	ug/L		12/30/19 16:10	01/06/20 22:21	1
OCDF	0.000051	J,DX MB	0.00010	0.000018	ug/L		12/30/19 16:10	01/06/20 22:21	1
Total TCDD	ND		0.000010	0.000017	ug/L		12/30/19 16:10	01/06/20 22:21	1
Total TCDF	ND		0.000010	0.000012	ug/L		12/30/19 16:10	01/06/20 22:21	1
Total PeCDD	0.000039	J,DX	0.000050	0.000022	ug/L		12/30/19 16:10	01/06/20 22:21	1
Total PeCDF	0.000061	J,DX q	0.000050	0.000014	ug/L		12/30/19 16:10	01/06/20 22:21	1
Total HxCDD	0.000032	J,DX MB	0.000050	0.000014	ug/L		12/30/19 16:10	01/06/20 22:21	1
Total HxCDF	0.000042	J,DX q	0.000050	0.000023	ug/L		12/30/19 16:10	01/06/20 22:21	1
Total HpCDD	0.00017	MB	0.000050	0.000017	ug/L		12/30/19 16:10	01/06/20 22:21	1
Total HpCDF	0.000061	J,DX MB q	0.000050	0.000015	ug/L		12/30/19 16:10	01/06/20 22:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	12/30/19 16:10	01/06/20 22:21	1
13C-2,3,7,8-TCDF	57		24 - 169	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,7,8-PeCDD	59		25 - 181	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,7,8-PeCDF	56		24 - 185	12/30/19 16:10	01/06/20 22:21	1
13C-2,3,4,7,8-PeCDF	63		21 - 178	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,4,7,8-HxCDD	59		32 - 141	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,6,7,8-HxCDD	55		28 - 130	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,4,7,8-HxCDF	56		26 - 152	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,6,7,8-HxCDF	51		26 - 123	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,7,8,9-HxCDF	52		29 - 147	12/30/19 16:10	01/06/20 22:21	1
13C-2,3,4,6,7,8-HxCDF	53		28 - 136	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,4,6,7,8-HpCDD	63		23 - 140	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,4,6,7,8-HpCDF	58		28 - 143	12/30/19 16:10	01/06/20 22:21	1
13C-1,2,3,4,7,8,9-HpCDF	64		26 - 138	12/30/19 16:10	01/06/20 22:21	1
13C-OCDD	63		17 - 157	12/30/19 16:10	01/06/20 22:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	111		35 - 197	12/30/19 16:10	01/06/20 22:21	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/24/19 11:12	12/26/19 12:23	1
Copper	4.2		2.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:23	1
Lead	1.0		1.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:23	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/27/19 15:14	12/29/19 15:06	1
Copper	4.0		2.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:06	1
Lead	ND		1.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:06	1

Eurofins Calscience Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Client Sample ID: LPBMP0003_20191223

Lab Sample ID: 440-258024-2

Date Collected: 12/23/19 07:00

Matrix: Water

Date Received: 12/23/19 16:05

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/30/19 11:02	12/30/19 22:50	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 13:01	01/07/20 00:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	8.0		2.9	1.4	mg/L			12/24/19 19:35	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	4.99		0.01	0.01	%			01/06/20 16:13	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			01/06/20 16:13	1
Fine Sand (0.125 to 0.25mm)	24.77		0.01	0.01	%			01/06/20 16:13	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			01/06/20 16:13	1
Medium Sand (0.25 to 0.5 mm)	0.01		0.01	0.01	%			01/06/20 16:13	1
Silt (0.00391 to 0.0625mm)	34.17		0.01	0.01	%			01/06/20 16:13	1
Total Silt and Clay (0 to 0.0626mm)	39.15		0.01	0.01	%			01/06/20 16:13	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			01/06/20 16:13	1
Very Fine Sand (0.0625 to 0.125 mm)	36.07		0.01	0.01	%			01/06/20 16:13	1

Client Sample ID: LPBMP0004_20191223

Lab Sample ID: 440-258024-3

Date Collected: 12/23/19 07:10

Matrix: Water

Date Received: 12/23/19 16:05

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000012	0.0000024	ug/L		12/30/19 16:10	01/06/20 23:07	1
2,3,7,8-TCDF	ND		0.000012	0.0000017	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,7,8-PeCDD	ND		0.000061	0.0000035	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,7,8-PeCDF	ND		0.000061	0.0000018	ug/L		12/30/19 16:10	01/06/20 23:07	1
2,3,4,7,8-PeCDF	ND		0.000061	0.0000018	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,4,7,8-HxCDD	0.0000032	J,DX MB q	0.000061	0.0000023	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,6,7,8-HxCDD	ND		0.000061	0.0000024	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,7,8,9-HxCDD	0.0000030	J,DX	0.000061	0.0000021	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,4,7,8-HxCDF	0.0000060	J,DX q	0.000061	0.0000026	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,6,7,8-HxCDF	0.0000035	J,DX q	0.000061	0.0000026	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,7,8,9-HxCDF	0.0000024	J,DX	0.000061	0.0000021	ug/L		12/30/19 16:10	01/06/20 23:07	1
2,3,4,6,7,8-HxCDF	ND		0.000061	0.0000021	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,4,6,7,8-HpCDD	0.000019	J,DX MB	0.000061	0.0000015	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,4,6,7,8-HpCDF	0.000076	MB	0.000061	0.0000015	ug/L		12/30/19 16:10	01/06/20 23:07	1
1,2,3,4,7,8,9-HpCDF	0.0000021	J,DX MB	0.000061	0.0000018	ug/L		12/30/19 16:10	01/06/20 23:07	1
OCDD	0.00023	MB	0.00012	0.0000028	ug/L		12/30/19 16:10	01/06/20 23:07	1
OCDF	0.000094	J,DX MB	0.00012	0.0000026	ug/L		12/30/19 16:10	01/06/20 23:07	1
Total TCDD	ND		0.000012	0.0000024	ug/L		12/30/19 16:10	01/06/20 23:07	1
Total TCDF	ND		0.000012	0.0000017	ug/L		12/30/19 16:10	01/06/20 23:07	1
Total PeCDD	ND		0.000061	0.0000035	ug/L		12/30/19 16:10	01/06/20 23:07	1
Total PeCDF	ND		0.000061	0.0000018	ug/L		12/30/19 16:10	01/06/20 23:07	1

Eurofins Calscience Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Client Sample ID: LPBMP0004_20191223

Lab Sample ID: 440-258024-3

Date Collected: 12/23/19 07:10

Matrix: Water

Date Received: 12/23/19 16:05

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	0.0000078	J,DX MB q	0.000061	0.0000021	ug/L		12/30/19 16:10	01/06/20 23:07	1
Total HxCDF	0.000020	J,DX q	0.000061	0.0000021	ug/L		12/30/19 16:10	01/06/20 23:07	1
Total HpCDD	0.000044	J,DX MB	0.000061	0.0000015	ug/L		12/30/19 16:10	01/06/20 23:07	1
Total HpCDF	0.000086	J,DX MB	0.000061	0.0000015	ug/L		12/30/19 16:10	01/06/20 23:07	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	63		25 - 164				12/30/19 16:10	01/06/20 23:07	1
13C-2,3,7,8-TCDF	59		24 - 169				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,7,8-PeCDD	62		25 - 181				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,7,8-PeCDF	59		24 - 185				12/30/19 16:10	01/06/20 23:07	1
13C-2,3,4,7,8-PeCDF	65		21 - 178				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,4,7,8-HxCDD	63		32 - 141				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,6,7,8-HxCDD	54		28 - 130				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,6,7,8-HxCDF	54		26 - 123				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,7,8,9-HxCDF	53		29 - 147				12/30/19 16:10	01/06/20 23:07	1
13C-2,3,4,6,7,8-HxCDF	55		28 - 136				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,4,6,7,8-HpCDD	63		23 - 140				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,4,6,7,8-HpCDF	59		28 - 143				12/30/19 16:10	01/06/20 23:07	1
13C-1,2,3,4,7,8,9-HpCDF	65		26 - 138				12/30/19 16:10	01/06/20 23:07	1
13C-OCDD	63		17 - 157				12/30/19 16:10	01/06/20 23:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	119		35 - 197				12/30/19 16:10	01/06/20 23:07	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/24/19 11:12	12/26/19 12:26	1
Copper	3.5		2.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:26	1
Lead	ND		1.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:26	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/27/19 15:14	12/29/19 15:08	1
Copper	3.2		2.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:08	1
Lead	ND		1.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:08	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/30/19 11:02	12/30/19 22:52	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 13:01	01/07/20 00:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	7.7		2.9	1.4	mg/L			12/24/19 19:35	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	3.69		0.01	0.01	%			01/06/20 16:22	1

Eurofins Calscience Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Client Sample ID: LPBMP0004_20191223

Lab Sample ID: 440-258024-3

Date Collected: 12/23/19 07:10

Matrix: Water

Date Received: 12/23/19 16:05

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering) (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			01/06/20 16:22	1
Fine Sand (0.125 to 0.25mm)	0.44		0.01	0.01	%			01/06/20 16:22	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			01/06/20 16:22	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			01/06/20 16:22	1
Silt (0.00391 to 0.0625mm)	61.84		0.01	0.01	%			01/06/20 16:22	1
Total Silt and Clay (0 to 0.0626mm)	65.53		0.01	0.01	%			01/06/20 16:22	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			01/06/20 16:22	1
Very Fine Sand (0.0625 to 0.125 mm)	34.03		0.01	0.01	%			01/06/20 16:22	1

Client Sample ID: EPSW002IE02_20191223

Lab Sample ID: 440-258024-4

Date Collected: 12/23/19 08:00

Matrix: Water

Date Received: 12/23/19 16:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	6.8		0.50	0.25	mg/L			12/24/19 22:50	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.000022	J,DX q	0.000012	0.000016	ug/L		12/30/19 16:10	01/06/20 23:53	1
2,3,7,8-TCDF	ND		0.000012	0.000012	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,7,8-PeCDD	ND		0.000061	0.000029	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,7,8-PeCDF	ND		0.000061	0.000022	ug/L		12/30/19 16:10	01/06/20 23:53	1
2,3,4,7,8-PeCDF	ND		0.000061	0.000021	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,4,7,8-HxCDD	0.000022	J,DX MB	0.000061	0.000018	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,6,7,8-HxCDD	0.000023	J,DX MB	0.000061	0.000019	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,7,8,9-HxCDD	ND		0.000061	0.000017	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,4,7,8-HxCDF	0.000036	J,DX	0.000061	0.000027	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,6,7,8-HxCDF	0.000081	J,DX q	0.000061	0.000027	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,7,8,9-HxCDF	ND		0.000061	0.000021	ug/L		12/30/19 16:10	01/06/20 23:53	1
2,3,4,6,7,8-HxCDF	0.000023	J,DX	0.000061	0.000022	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,4,6,7,8-HpCDD	0.000049	J,DX MB	0.000061	0.000024	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,4,6,7,8-HpCDF	0.00026	MB	0.000061	0.000028	ug/L		12/30/19 16:10	01/06/20 23:53	1
1,2,3,4,7,8,9-HpCDF	0.000076	J,DX MB	0.000061	0.000034	ug/L		12/30/19 16:10	01/06/20 23:53	1
OCDD	0.0010	MB	0.00012	0.000030	ug/L		12/30/19 16:10	01/06/20 23:53	1
OCDF	0.00025	MB	0.00012	0.000022	ug/L		12/30/19 16:10	01/06/20 23:53	1
Total TCDD	0.000022	J,DX q	0.000012	0.000016	ug/L		12/30/19 16:10	01/06/20 23:53	1
Total TCDF	ND		0.000012	0.000012	ug/L		12/30/19 16:10	01/06/20 23:53	1
Total PeCDD	ND		0.000061	0.000029	ug/L		12/30/19 16:10	01/06/20 23:53	1
Total PeCDF	0.000011	J,DX q	0.000061	0.000021	ug/L		12/30/19 16:10	01/06/20 23:53	1
Total HxCDD	0.000014	J,DX MB q	0.000061	0.000017	ug/L		12/30/19 16:10	01/06/20 23:53	1
Total HxCDF	0.000083	J,DX q	0.000061	0.000021	ug/L		12/30/19 16:10	01/06/20 23:53	1
Total HpCDD	0.00021	J,DX MB	0.000061	0.000024	ug/L		12/30/19 16:10	01/06/20 23:53	1
Total HpCDF	0.00030	J,DX MB q	0.000061	0.000028	ug/L		12/30/19 16:10	01/06/20 23:53	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		25 - 164				12/30/19 16:10	01/06/20 23:53	1
13C-2,3,7,8-TCDF	64		24 - 169				12/30/19 16:10	01/06/20 23:53	1
13C-1,2,3,7,8-PeCDD	67		25 - 181				12/30/19 16:10	01/06/20 23:53	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Client Sample ID: EPSW002IE02_20191223

Lab Sample ID: 440-258024-4

Date Collected: 12/23/19 08:00

Matrix: Water

Date Received: 12/23/19 16:05

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDF	64		24 - 185	12/30/19 16:10	01/06/20 23:53	1
13C-2,3,4,7,8-PeCDF	70		21 - 178	12/30/19 16:10	01/06/20 23:53	1
13C-1,2,3,4,7,8-HxCDD	69		32 - 141	12/30/19 16:10	01/06/20 23:53	1
13C-1,2,3,6,7,8-HxCDD	63		28 - 130	12/30/19 16:10	01/06/20 23:53	1
13C-1,2,3,4,7,8-HxCDF	67		26 - 152	12/30/19 16:10	01/06/20 23:53	1
13C-1,2,3,6,7,8-HxCDF	60		26 - 123	12/30/19 16:10	01/06/20 23:53	1
13C-1,2,3,7,8,9-HxCDF	61		29 - 147	12/30/19 16:10	01/06/20 23:53	1
13C-2,3,4,6,7,8-HxCDF	62		28 - 136	12/30/19 16:10	01/06/20 23:53	1
13C-1,2,3,4,6,7,8-HpCDD	73		23 - 140	12/30/19 16:10	01/06/20 23:53	1
13C-1,2,3,4,6,7,8-HpCDF	67		28 - 143	12/30/19 16:10	01/06/20 23:53	1
13C-1,2,3,4,7,8,9-HpCDF	75		26 - 138	12/30/19 16:10	01/06/20 23:53	1
13C-OCDD	70		17 - 157	12/30/19 16:10	01/06/20 23:53	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	116		35 - 197	12/30/19 16:10	01/06/20 23:53	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/24/19 11:12	12/26/19 12:37	1
Copper	2.6		2.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:37	1
Lead	0.65	J,DX	1.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:37	1
Selenium	ND		2.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:37	1
Zinc	4.7	J,DX	20	2.5	ug/L		12/24/19 11:12	12/26/19 12:37	1
Iron	590		20	8.0	ug/L		12/24/19 11:12	12/26/19 12:37	1
Arsenic	1.2		1.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:37	1
Manganese	44		1.0	0.50	ug/L		12/24/19 11:12	12/26/19 12:37	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/27/19 15:14	12/29/19 15:10	1
Copper	2.2		2.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:10	1
Lead	ND		1.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:10	1
Selenium	ND		2.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:10	1
Zinc	12	J,DX	20	2.5	ug/L		12/27/19 15:14	12/29/19 15:10	1
Iron	81		20	8.0	ug/L		12/27/19 15:14	12/29/19 15:10	1
Arsenic	1.1		1.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:10	1
Manganese	3.7		1.0	0.50	ug/L		12/27/19 15:14	12/29/19 15:10	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/30/19 11:02	12/30/19 22:54	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 13:01	01/07/20 00:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	110		10	5.0	mg/L			12/24/19 19:35	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

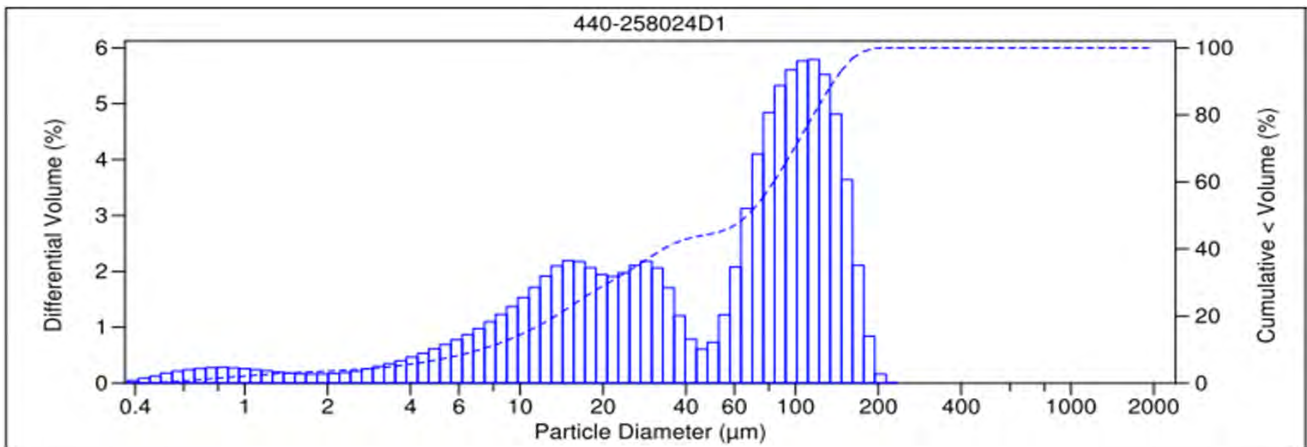
Haley & Aldrich, Inc.

Date Sampled: 12/23/19
 Date Received: 12/23/19
 Work Order No: 440-258024
 Date Analyzed: 01/06/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
LPBMP0002_20191223		Very Fine Sand	0.066

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	15.64	36.36	42.45	5.55	48.00



V 3.0

- 1
- 2
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- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

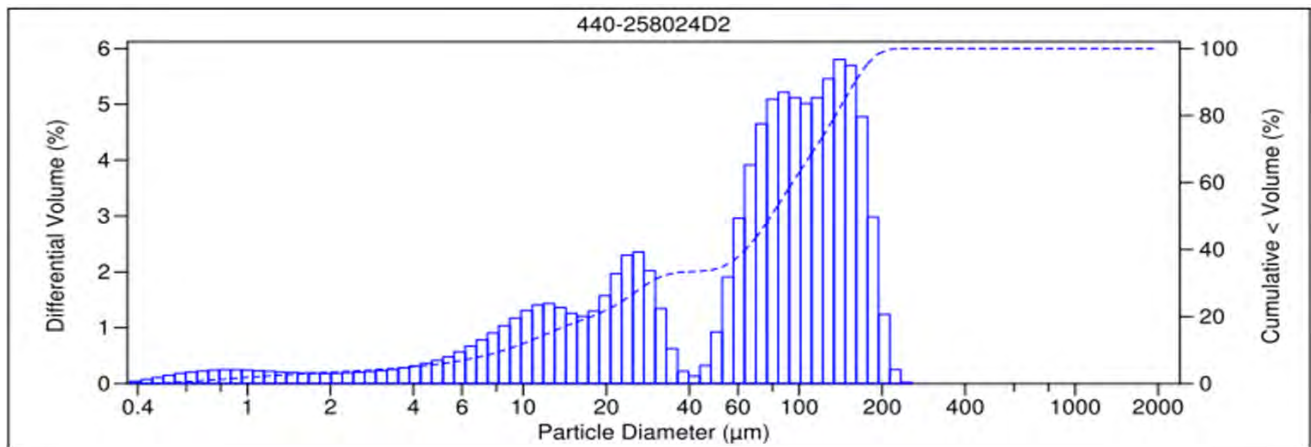
Haley & Aldrich, Inc.

Date Sampled: 12/23/19
 Date Received: 12/23/19
 Work Order No: 440-258024
 Date Analyzed: 01/06/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
LPBMP0003_20191223		Very Fine Sand	0.080

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.01	24.77	36.07	34.17	4.99	39.15



V 3.0

- 1
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- 13
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- 15

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

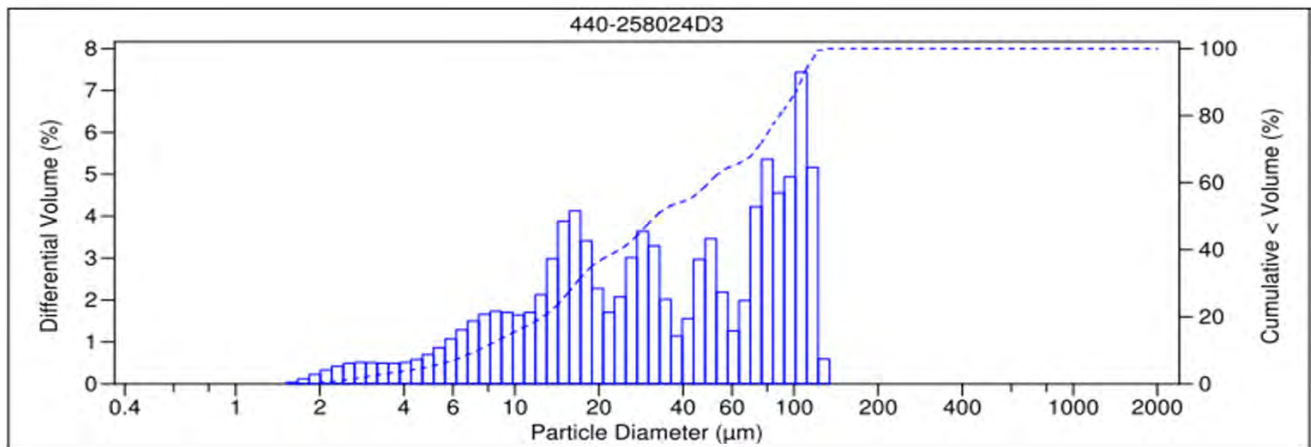
Haley & Aldrich, Inc.

Date Sampled: 12/23/19
 Date Received: 12/23/19
 Work Order No: 440-258024
 Date Analyzed: 01/06/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
LPBMP0004_20191223		Silt	0.047

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.44	34.03	61.84	3.69	65.53



V 3.0

Method Summary

Client: Haley & Aldrich, Inc.

Job ID: 440-258024-1

Project/Site: BMP Performance OF 001, 002, and/or 009

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
1613B	Dioxins and Furans (HRGC/HRMS)	40CFR136A	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV
FILTRATION	Sample Filtration	None	TAL IRV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

ASTM = ASTM International

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Client Sample ID: LPBMP0002_20191223

Lab Sample ID: 440-258024-1

Date Collected: 12/23/19 06:50

Matrix: Water

Date Received: 12/23/19 16:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			967.1 mL	20 uL	348645	12/30/19 16:10	NIR	TAL SAC
Total/NA	Analysis	1613B		1			349278	01/06/20 21:35	KSS	TAL SAC
Total/NA	Prep	1613B	RA		967.1 mL	20 uL	348645	12/30/19 16:10	NIR	TAL SAC
Total/NA	Analysis	1613B	RA	1			349578	01/08/20 12:22	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	587851	12/24/19 14:45	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588211	12/27/19 15:14	EP	TAL IRV
Dissolved	Analysis	200.8		1			588376	12/29/19 15:03	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	587802	12/24/19 11:12	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			588003	12/26/19 12:21	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	587851	12/24/19 14:45	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	589047	01/03/20 13:01	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/07/20 00:26	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588499	12/30/19 11:02	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588685	12/30/19 22:37	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	250 mL	1000 mL	587887	12/24/19 19:35	KL	TAL IRV
Total/NA	Analysis	D4464		1			42967	01/06/20 16:07	C4LT	ECL 1

Client Sample ID: LPBMP0003_20191223

Lab Sample ID: 440-258024-2

Date Collected: 12/23/19 07:00

Matrix: Water

Date Received: 12/23/19 16:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			992.4 mL	20 uL	348645	12/30/19 16:10	NIR	TAL SAC
Total/NA	Analysis	1613B		1			349278	01/06/20 22:21	KSS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	587851	12/24/19 14:45	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588211	12/27/19 15:14	EP	TAL IRV
Dissolved	Analysis	200.8		1			588376	12/29/19 15:06	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	587802	12/24/19 11:12	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			588003	12/26/19 12:23	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	587851	12/24/19 14:45	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	589047	01/03/20 13:01	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/07/20 00:33	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588499	12/30/19 11:02	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588685	12/30/19 22:50	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	350 mL	1000 mL	587887	12/24/19 19:35	KL	TAL IRV
Total/NA	Analysis	D4464		1			42967	01/06/20 16:13	C4LT	ECL 1

Client Sample ID: LPBMP0004_20191223

Lab Sample ID: 440-258024-3

Date Collected: 12/23/19 07:10

Matrix: Water

Date Received: 12/23/19 16:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			818.7 mL	20 uL	348645	12/30/19 16:10	NIR	TAL SAC
Total/NA	Analysis	1613B		1			349278	01/06/20 23:07	KSS	TAL SAC

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Client Sample ID: LPBMP0004_20191223

Lab Sample ID: 440-258024-3

Date Collected: 12/23/19 07:10

Matrix: Water

Date Received: 12/23/19 16:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			150 mL	150 mL	587851	12/24/19 14:45	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588211	12/27/19 15:14	EP	TAL IRV
Dissolved	Analysis	200.8		1			588376	12/29/19 15:08	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	587802	12/24/19 11:12	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			588003	12/26/19 12:26	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	587851	12/24/19 14:45	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	589047	01/03/20 13:01	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/07/20 00:35	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588499	12/30/19 11:02	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588685	12/30/19 22:52	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	350 mL	1000 mL	587887	12/24/19 19:35	KL	TAL IRV
Total/NA	Analysis	D4464		1			42967	01/06/20 16:22	C4LT	ECL 1

Client Sample ID: EPSW002IE02_20191223

Lab Sample ID: 440-258024-4

Date Collected: 12/23/19 08:00

Matrix: Water

Date Received: 12/23/19 16:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			587739	12/24/19 22:50	NTN	TAL IRV
Total/NA	Prep	1613B			822.8 mL	20 uL	348645	12/30/19 16:10	NIR	TAL SAC
Total/NA	Analysis	1613B		1			349278	01/06/20 23:53	KSS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	587851	12/24/19 14:45	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588211	12/27/19 15:14	EP	TAL IRV
Dissolved	Analysis	200.8		1			588376	12/29/19 15:10	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	587802	12/24/19 11:12	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			588003	12/26/19 12:37	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	587851	12/24/19 14:45	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	589047	01/03/20 13:01	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/07/20 00:37	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588499	12/30/19 11:02	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588685	12/30/19 22:54	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	100 mL	1000 mL	587887	12/24/19 19:35	KL	TAL IRV

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-587739/6
Matrix: Water
Analysis Batch: 587739

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.25	mg/L			12/24/19 11:13	1

Lab Sample ID: LCS 440-587739/5
Matrix: Water
Analysis Batch: 587739

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.54		mg/L		91	90 - 110

Lab Sample ID: 440-258110-A-4 MS
Matrix: Water
Analysis Batch: 587739

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	94		100	191		mg/L		97	80 - 120

Lab Sample ID: 440-258110-A-4 MSD
Matrix: Water
Analysis Batch: 587739

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	94		100	190		mg/L		97	80 - 120	0	20

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-348645/1-A
Matrix: Water
Analysis Batch: 349278

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348645

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000024	ug/L		12/30/19 16:10	01/06/20 19:17	1
2,3,7,8-TCDF	ND		0.000010	0.0000019	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000029	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000020	ug/L		12/30/19 16:10	01/06/20 19:17	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000020	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,4,7,8-HxCDD	0.00000241	J,DX q	0.000050	0.0000013	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,6,7,8-HxCDD	0.00000154	J,DX	0.000050	0.0000013	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,7,8,9-HxCDD	ND		0.000050	0.0000012	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,4,7,8-HxCDF	ND		0.000050	0.0000022	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,6,7,8-HxCDF	ND		0.000050	0.0000023	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,7,8,9-HxCDF	ND		0.000050	0.0000017	ug/L		12/30/19 16:10	01/06/20 19:17	1
2,3,4,6,7,8-HxCDF	ND		0.000050	0.0000018	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,4,6,7,8-HpCDD	0.00000304	J,DX	0.000050	0.0000006	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,4,6,7,8-HpCDF	0.00000413	J,DX q	0.000050	0.0000005	ug/L		12/30/19 16:10	01/06/20 19:17	1
1,2,3,4,7,8,9-HpCDF	0.00000119	J,DX q	0.000050	0.0000006	ug/L		12/30/19 16:10	01/06/20 19:17	1
OCDD	0.0000133	J,DX	0.00010	0.0000025	ug/L		12/30/19 16:10	01/06/20 19:17	1
OCDF	0.00000511	J,DX	0.00010	0.0000024	ug/L		12/30/19 16:10	01/06/20 19:17	1

Eurofins Calscience Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-348645/1-A
Matrix: Water
Analysis Batch: 349278

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348645

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDD	ND		0.000010	0.0000024	ug/L		12/30/19 16:10	01/06/20 19:17	1
Total TCDF	ND		0.000010	0.0000019	ug/L		12/30/19 16:10	01/06/20 19:17	1
Total PeCDD	ND		0.000050	0.0000029	ug/L		12/30/19 16:10	01/06/20 19:17	1
Total PeCDF	ND		0.000050	0.0000020	ug/L		12/30/19 16:10	01/06/20 19:17	1
Total HxCDD	0.00000395	J,DX q	0.000050	0.0000012	ug/L		12/30/19 16:10	01/06/20 19:17	1
Total HxCDF	ND		0.000050	0.0000017	ug/L		12/30/19 16:10	01/06/20 19:17	1
Total HpCDD	0.00000495	J,DX	0.000050	0.0000006	ug/L		12/30/19 16:10	01/06/20 19:17	1
Total HpCDF	0.00000533	J,DX q	0.000050	0.0000005	ug/L		12/30/19 16:10	01/06/20 19:17	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	62		25 - 164	12/30/19 16:10	01/06/20 19:17	1
13C-2,3,7,8-TCDF	61		24 - 169	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,7,8-PeCDD	67		25 - 181	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,7,8-PeCDF	62		24 - 185	12/30/19 16:10	01/06/20 19:17	1
13C-2,3,4,7,8-PeCDF	69		21 - 178	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,4,7,8-HxCDD	70		32 - 141	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,6,7,8-HxCDD	58		28 - 130	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,4,7,8-HxCDF	62		26 - 152	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,6,7,8-HxCDF	56		26 - 123	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,7,8,9-HxCDF	60		29 - 147	12/30/19 16:10	01/06/20 19:17	1
13C-2,3,4,6,7,8-HxCDF	60		28 - 136	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,4,6,7,8-HpCDD	71		23 - 140	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,4,6,7,8-HpCDF	65		28 - 143	12/30/19 16:10	01/06/20 19:17	1
13C-1,2,3,4,7,8,9-HpCDF	72		26 - 138	12/30/19 16:10	01/06/20 19:17	1
13C-OCDD	72		17 - 157	12/30/19 16:10	01/06/20 19:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	112		35 - 197	12/30/19 16:10	01/06/20 19:17	1

Lab Sample ID: LCS 320-348645/2-A
Matrix: Water
Analysis Batch: 349278

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 348645

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	0.000200	0.000205		ug/L		102	67 - 158
2,3,7,8-TCDF	0.000200	0.000215		ug/L		107	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.00109		ug/L		109	70 - 142
1,2,3,7,8-PeCDF	0.00100	0.00107		ug/L		107	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.000984		ug/L		98	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.00103	MB	ug/L		103	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.00108	MB	ug/L		108	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.00107		ug/L		107	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.000991		ug/L		99	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.00103		ug/L		103	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.00102		ug/L		102	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.00101		ug/L		101	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.00108	MB	ug/L		108	70 - 140

Eurofins Calscience Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-348645/2-A
Matrix: Water
Analysis Batch: 349278

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 348645

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,4,6,7,8-HpCDF	0.00100	0.00110	MB	ug/L		110	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.00102	MB	ug/L		102	78 - 138
OCDD	0.00200	0.00223	MB	ug/L		112	78 - 144
OCDF	0.00200	0.00221	MB	ug/L		111	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	66		20 - 175
13C-2,3,7,8-TCDF	61		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	61		21 - 192
13C-2,3,4,7,8-PeCDF	68		13 - 328
13C-1,2,3,4,7,8-HxCDD	63		21 - 193
13C-1,2,3,6,7,8-HxCDD	54		25 - 163
13C-1,2,3,4,7,8-HxCDF	57		19 - 202
13C-1,2,3,6,7,8-HxCDF	53		21 - 159
13C-1,2,3,7,8,9-HxCDF	56		17 - 205
13C-2,3,4,6,7,8-HxCDF	57		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	62		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	57		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	64		20 - 186
13C-OCDD	63		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	112		31 - 191

Lab Sample ID: LCSD 320-348645/3-A
Matrix: Water
Analysis Batch: 349278

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 348645

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	0.000200	0.000211		ug/L		105	67 - 158	3	50
2,3,7,8-TCDF	0.000200	0.000215		ug/L		107	75 - 158	0	50
1,2,3,7,8-PeCDD	0.00100	0.00112		ug/L		112	70 - 142	2	50
1,2,3,7,8-PeCDF	0.00100	0.00109		ug/L		109	80 - 134	2	50
2,3,4,7,8-PeCDF	0.00100	0.00102		ug/L		102	68 - 160	4	50
1,2,3,4,7,8-HxCDD	0.00100	0.00104	MB	ug/L		104	70 - 164	1	50
1,2,3,6,7,8-HxCDD	0.00100	0.00113	MB	ug/L		113	76 - 134	4	50
1,2,3,7,8,9-HxCDD	0.00100	0.00111		ug/L		111	64 - 162	4	50
1,2,3,4,7,8-HxCDF	0.00100	0.00103		ug/L		103	72 - 134	3	50
1,2,3,6,7,8-HxCDF	0.00100	0.00106		ug/L		106	84 - 130	3	50
1,2,3,7,8,9-HxCDF	0.00100	0.00106		ug/L		106	78 - 130	4	50
2,3,4,6,7,8-HxCDF	0.00100	0.00106		ug/L		106	70 - 156	4	50
1,2,3,4,6,7,8-HpCDD	0.00100	0.00109	MB	ug/L		109	70 - 140	1	50
1,2,3,4,6,7,8-HpCDF	0.00100	0.00111	MB	ug/L		111	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF	0.00100	0.00104	MB	ug/L		104	78 - 138	2	50
OCDD	0.00200	0.00217	MB	ug/L		109	78 - 144	3	50
OCDF	0.00200	0.00216	MB	ug/L		108	63 - 170	2	50

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	65		20 - 175
13C-2,3,7,8-TCDF	61		22 - 152
13C-1,2,3,7,8-PeCDD	63		21 - 227
13C-1,2,3,7,8-PeCDF	60		21 - 192
13C-2,3,4,7,8-PeCDF	66		13 - 328
13C-1,2,3,4,7,8-HxCDD	61		21 - 193
13C-1,2,3,6,7,8-HxCDD	56		25 - 163
13C-1,2,3,4,7,8-HxCDF	57		19 - 202
13C-1,2,3,6,7,8-HxCDF	54		21 - 159
13C-1,2,3,7,8,9-HxCDF	56		17 - 205
13C-2,3,4,6,7,8-HxCDF	57		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	66		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	59		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	68		20 - 186
13C-OCDD	69		13 - 199

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
37Cl4-2,3,7,8-TCDD	107		31 - 191

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-587802/1-A
 Matrix: Water
 Analysis Batch: 588003

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 587802

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		1.0	0.25	ug/L		12/24/19 11:12	12/26/19 11:04	1
Copper	ND		2.0	0.50	ug/L		12/24/19 11:12	12/26/19 11:04	1
Lead	ND		1.0	0.50	ug/L		12/24/19 11:12	12/26/19 11:04	1
Selenium	ND		2.0	0.50	ug/L		12/24/19 11:12	12/26/19 11:04	1
Zinc	ND		20	2.5	ug/L		12/24/19 11:12	12/26/19 11:04	1
Iron	ND		20	8.0	ug/L		12/24/19 11:12	12/26/19 11:04	1
Arsenic	ND		1.0	0.50	ug/L		12/24/19 11:12	12/26/19 11:04	1
Manganese	ND		1.0	0.50	ug/L		12/24/19 11:12	12/26/19 11:04	1

Lab Sample ID: LCS 440-587802/2-A
 Matrix: Water
 Analysis Batch: 588003

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 587802

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Cadmium	80.0	84.3		ug/L		105	85 - 115
Copper	80.0	83.7		ug/L		105	85 - 115
Lead	80.0	84.1		ug/L		105	85 - 115
Selenium	80.0	81.9		ug/L		102	85 - 115
Zinc	80.0	83.9		ug/L		105	85 - 115
Iron	800	853		ug/L		107	85 - 115
Arsenic	80.0	82.2		ug/L		103	85 - 115
Manganese	80.0	83.0		ug/L		104	85 - 115

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-258010-C-4-E MS
Matrix: Water
Analysis Batch: 588003

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 587802

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	0.84	J,DX	80.0	86.0		ug/L		106	70 - 130
Copper	65		80.0	153		ug/L		110	70 - 130
Lead	14		80.0	98.6		ug/L		106	70 - 130
Selenium	ND		80.0	81.6		ug/L		102	70 - 130
Zinc	1000		80.0	1120	BB	ug/L		137	70 - 130
Iron	2100		800	3040		ug/L		123	70 - 130
Arsenic	0.87	J,DX	80.0	82.0		ug/L		101	70 - 130
Manganese	150		80.0	241		ug/L		110	70 - 130

Lab Sample ID: 440-258010-C-4-F MSD
Matrix: Water
Analysis Batch: 588003

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 587802

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Cadmium	0.84	J,DX	80.0	85.5		ug/L		106	70 - 130	1	20
Copper	65		80.0	155		ug/L		113	70 - 130	1	20
Lead	14		80.0	101		ug/L		109	70 - 130	2	20
Selenium	ND		80.0	84.3		ug/L		105	70 - 130	3	20
Zinc	1000		80.0	1160	BB	ug/L		183	70 - 130	3	20
Iron	2100		800	3130	LM	ug/L		133	70 - 130	3	20
Arsenic	0.87	J,DX	80.0	83.7		ug/L		104	70 - 130	2	20
Manganese	150		80.0	250		ug/L		121	70 - 130	3	20

Lab Sample ID: MB 440-587851/1-B
Matrix: Water
Analysis Batch: 588376

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 588211

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/27/19 15:14	12/29/19 14:35	1
Copper	ND		2.0	0.50	ug/L		12/27/19 15:14	12/29/19 14:35	1
Lead	ND		1.0	0.50	ug/L		12/27/19 15:14	12/29/19 14:35	1
Selenium	ND		2.0	0.50	ug/L		12/27/19 15:14	12/29/19 14:35	1
Zinc	ND		20	2.5	ug/L		12/27/19 15:14	12/29/19 14:35	1
Iron	ND		20	8.0	ug/L		12/27/19 15:14	12/29/19 14:35	1
Arsenic	ND		1.0	0.50	ug/L		12/27/19 15:14	12/29/19 14:35	1
Manganese	ND		1.0	0.50	ug/L		12/27/19 15:14	12/29/19 14:35	1

Lab Sample ID: LCS 440-587851/2-B
Matrix: Water
Analysis Batch: 588376

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 588211

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	79.6		ug/L		100	85 - 115
Copper	80.0	78.6		ug/L		98	85 - 115
Lead	80.0	78.9		ug/L		99	85 - 115
Selenium	80.0	79.3		ug/L		99	85 - 115
Zinc	80.0	79.6		ug/L		100	85 - 115
Iron	800	795		ug/L		99	85 - 115
Arsenic	80.0	80.1		ug/L		100	85 - 115

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 440-587851/2-B
Matrix: Water
Analysis Batch: 588376

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 588211

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	80.0	79.0		ug/L		99	85 - 115

Lab Sample ID: 440-258024-4 MS
Matrix: Water
Analysis Batch: 588376

Client Sample ID: EPSW002IE02_20191223
Prep Type: Dissolved
Prep Batch: 588211

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		80.0	78.1		ug/L		98	70 - 130
Copper	2.2		80.0	79.7		ug/L		97	70 - 130
Lead	ND		80.0	77.5		ug/L		97	70 - 130
Selenium	ND		80.0	77.8		ug/L		97	70 - 130
Zinc	12	J,DX	80.0	89.9		ug/L		98	70 - 130
Iron	81		800	853		ug/L		97	70 - 130
Arsenic	1.1		80.0	79.9		ug/L		99	70 - 130
Manganese	3.7		80.0	81.0		ug/L		97	70 - 130

Lab Sample ID: 440-258024-4 MSD
Matrix: Water
Analysis Batch: 588376

Client Sample ID: EPSW002IE02_20191223
Prep Type: Dissolved
Prep Batch: 588211

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cadmium	ND		80.0	75.5		ug/L		94	70 - 130	3	20
Copper	2.2		80.0	76.6		ug/L		93	70 - 130	4	20
Lead	ND		80.0	74.5		ug/L		93	70 - 130	4	20
Selenium	ND		80.0	75.0		ug/L		94	70 - 130	4	20
Zinc	12	J,DX	80.0	85.3		ug/L		92	70 - 130	5	20
Iron	81		800	815		ug/L		92	70 - 130	5	20
Arsenic	1.1		80.0	76.0		ug/L		94	70 - 130	5	20
Manganese	3.7		80.0	77.5		ug/L		92	70 - 130	4	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-588499/1-A
Matrix: Water
Analysis Batch: 588685

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 588499

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/30/19 11:02	12/30/19 22:29	1

Lab Sample ID: LCS 440-588499/2-A
Matrix: Water
Analysis Batch: 588685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 588499

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	4.00	3.75		ug/L		94	85 - 115

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 440-258024-1 MS
 Matrix: Water
 Analysis Batch: 588685

Client Sample ID: LPBMP0002_20191223
 Prep Type: Total/NA
 Prep Batch: 588499

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.76		ug/L		94	75 - 125

Lab Sample ID: 440-258024-1 MSD
 Matrix: Water
 Analysis Batch: 588685

Client Sample ID: LPBMP0002_20191223
 Prep Type: Total/NA
 Prep Batch: 588499

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.66		ug/L		91	75 - 125	3	20

Lab Sample ID: MB 440-587851/1-D
 Matrix: Water
 Analysis Batch: 589374

Client Sample ID: Method Blank
 Prep Type: Dissolved
 Prep Batch: 589047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 13:01	01/07/20 00:17	1

Lab Sample ID: LCS 440-587851/2-D
 Matrix: Water
 Analysis Batch: 589374

Client Sample ID: Lab Control Sample
 Prep Type: Dissolved
 Prep Batch: 589047

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	3.71		ug/L		93	85 - 115

Lab Sample ID: 440-258024-1 MS
 Matrix: Water
 Analysis Batch: 589374

Client Sample ID: LPBMP0002_20191223
 Prep Type: Dissolved
 Prep Batch: 589047

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.85		ug/L		96	75 - 125

Lab Sample ID: 440-258024-1 MSD
 Matrix: Water
 Analysis Batch: 589374

Client Sample ID: LPBMP0002_20191223
 Prep Type: Dissolved
 Prep Batch: 589047

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.67		ug/L		92	75 - 125	5	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-587887/1
 Matrix: Water
 Analysis Batch: 587887

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			12/24/19 19:35	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 440-587887/2
Matrix: Water
Analysis Batch: 587887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	1040		mg/L		104	85 - 115

Lab Sample ID: 440-257942-B-1 DU
Matrix: Water
Analysis Batch: 587887

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	470		460		mg/L		2	10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

HPLC/IC

Analysis Batch: 587739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-4	EPSW002IE02_20191223	Total/NA	Water	300.0	
MB 440-587739/6	Method Blank	Total/NA	Water	300.0	
LCS 440-587739/5	Lab Control Sample	Total/NA	Water	300.0	
440-258110-A-4 MS	Matrix Spike	Total/NA	Water	300.0	
440-258110-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Specialty Organics

Prep Batch: 348645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Total/NA	Water	1613B	
440-258024-1 - RA	LPBMP0002_20191223	Total/NA	Water	1613B	
440-258024-2	LPBMP0003_20191223	Total/NA	Water	1613B	
440-258024-3	LPBMP0004_20191223	Total/NA	Water	1613B	
440-258024-4	EPSW002IE02_20191223	Total/NA	Water	1613B	
MB 320-348645/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-348645/2-A	Lab Control Sample	Total/NA	Water	1613B	
LCSD 320-348645/3-A	Lab Control Sample Dup	Total/NA	Water	1613B	

Analysis Batch: 349278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Total/NA	Water	1613B	348645
440-258024-2	LPBMP0003_20191223	Total/NA	Water	1613B	348645
440-258024-3	LPBMP0004_20191223	Total/NA	Water	1613B	348645
440-258024-4	EPSW002IE02_20191223	Total/NA	Water	1613B	348645
MB 320-348645/1-A	Method Blank	Total/NA	Water	1613B	348645
LCS 320-348645/2-A	Lab Control Sample	Total/NA	Water	1613B	348645
LCSD 320-348645/3-A	Lab Control Sample Dup	Total/NA	Water	1613B	348645

Analysis Batch: 349578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1 - RA	LPBMP0002_20191223	Total/NA	Water	1613B	348645

Metals

Prep Batch: 587802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Total Recoverable	Water	200.2	
440-258024-2	LPBMP0003_20191223	Total Recoverable	Water	200.2	
440-258024-3	LPBMP0004_20191223	Total Recoverable	Water	200.2	
440-258024-4	EPSW002IE02_20191223	Total Recoverable	Water	200.2	
MB 440-587802/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-587802/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-258010-C-4-E MS	Matrix Spike	Total Recoverable	Water	200.2	
440-258010-C-4-F MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.2	

Filtration Batch: 587851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Dissolved	Water	FILTRATION	
440-258024-2	LPBMP0003_20191223	Dissolved	Water	FILTRATION	
440-258024-3	LPBMP0004_20191223	Dissolved	Water	FILTRATION	
440-258024-4	EPSW002IE02_20191223	Dissolved	Water	FILTRATION	

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QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Metals (Continued)

Filtration Batch: 587851 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-587851/1-B	Method Blank	Dissolved	Water	FILTRATION	
MB 440-587851/1-D	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-587851/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 440-587851/2-D	Lab Control Sample	Dissolved	Water	FILTRATION	
440-258024-1 MS	LPBMP0002_20191223	Dissolved	Water	FILTRATION	
440-258024-1 MSD	LPBMP0002_20191223	Dissolved	Water	FILTRATION	
440-258024-4 MS	EPSW002IE02_20191223	Dissolved	Water	FILTRATION	
440-258024-4 MSD	EPSW002IE02_20191223	Dissolved	Water	FILTRATION	

Analysis Batch: 588003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Total Recoverable	Water	200.8	587802
440-258024-2	LPBMP0003_20191223	Total Recoverable	Water	200.8	587802
440-258024-3	LPBMP0004_20191223	Total Recoverable	Water	200.8	587802
440-258024-4	EPSW002IE02_20191223	Total Recoverable	Water	200.8	587802
MB 440-587802/1-A	Method Blank	Total Recoverable	Water	200.8	587802
LCS 440-587802/2-A	Lab Control Sample	Total Recoverable	Water	200.8	587802
440-258010-C-4-E MS	Matrix Spike	Total Recoverable	Water	200.8	587802
440-258010-C-4-F MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	587802

Prep Batch: 588211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Dissolved	Water	200.2	587851
440-258024-2	LPBMP0003_20191223	Dissolved	Water	200.2	587851
440-258024-3	LPBMP0004_20191223	Dissolved	Water	200.2	587851
440-258024-4	EPSW002IE02_20191223	Dissolved	Water	200.2	587851
MB 440-587851/1-B	Method Blank	Dissolved	Water	200.2	587851
LCS 440-587851/2-B	Lab Control Sample	Dissolved	Water	200.2	587851
440-258024-4 MS	EPSW002IE02_20191223	Dissolved	Water	200.2	587851
440-258024-4 MSD	EPSW002IE02_20191223	Dissolved	Water	200.2	587851

Analysis Batch: 588376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Dissolved	Water	200.8	588211
440-258024-2	LPBMP0003_20191223	Dissolved	Water	200.8	588211
440-258024-3	LPBMP0004_20191223	Dissolved	Water	200.8	588211
440-258024-4	EPSW002IE02_20191223	Dissolved	Water	200.8	588211
MB 440-587851/1-B	Method Blank	Dissolved	Water	200.8	588211
LCS 440-587851/2-B	Lab Control Sample	Dissolved	Water	200.8	588211
440-258024-4 MS	EPSW002IE02_20191223	Dissolved	Water	200.8	588211
440-258024-4 MSD	EPSW002IE02_20191223	Dissolved	Water	200.8	588211

Prep Batch: 588499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Total/NA	Water	245.1	
440-258024-2	LPBMP0003_20191223	Total/NA	Water	245.1	
440-258024-3	LPBMP0004_20191223	Total/NA	Water	245.1	
440-258024-4	EPSW002IE02_20191223	Total/NA	Water	245.1	
MB 440-588499/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-588499/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-258024-1 MS	LPBMP0002_20191223	Total/NA	Water	245.1	

Eurofins Calscience Irvine

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Metals (Continued)

Prep Batch: 588499 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1 MSD	LPBMP0002_20191223	Total/NA	Water	245.1	

Analysis Batch: 588685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Total/NA	Water	245.1	588499
440-258024-2	LPBMP0003_20191223	Total/NA	Water	245.1	588499
440-258024-3	LPBMP0004_20191223	Total/NA	Water	245.1	588499
440-258024-4	EPSW002IE02_20191223	Total/NA	Water	245.1	588499
MB 440-588499/1-A	Method Blank	Total/NA	Water	245.1	588499
LCS 440-588499/2-A	Lab Control Sample	Total/NA	Water	245.1	588499
440-258024-1 MS	LPBMP0002_20191223	Total/NA	Water	245.1	588499
440-258024-1 MSD	LPBMP0002_20191223	Total/NA	Water	245.1	588499

Prep Batch: 589047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Dissolved	Water	245.1	587851
440-258024-2	LPBMP0003_20191223	Dissolved	Water	245.1	587851
440-258024-3	LPBMP0004_20191223	Dissolved	Water	245.1	587851
440-258024-4	EPSW002IE02_20191223	Dissolved	Water	245.1	587851
MB 440-587851/1-D	Method Blank	Dissolved	Water	245.1	587851
LCS 440-587851/2-D	Lab Control Sample	Dissolved	Water	245.1	587851
440-258024-1 MS	LPBMP0002_20191223	Dissolved	Water	245.1	587851
440-258024-1 MSD	LPBMP0002_20191223	Dissolved	Water	245.1	587851

Analysis Batch: 589374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Dissolved	Water	245.1	589047
440-258024-2	LPBMP0003_20191223	Dissolved	Water	245.1	589047
440-258024-3	LPBMP0004_20191223	Dissolved	Water	245.1	589047
440-258024-4	EPSW002IE02_20191223	Dissolved	Water	245.1	589047
MB 440-587851/1-D	Method Blank	Dissolved	Water	245.1	589047
LCS 440-587851/2-D	Lab Control Sample	Dissolved	Water	245.1	589047
440-258024-1 MS	LPBMP0002_20191223	Dissolved	Water	245.1	589047
440-258024-1 MSD	LPBMP0002_20191223	Dissolved	Water	245.1	589047

General Chemistry

Analysis Batch: 587887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Total/NA	Water	SM 2540D	
440-258024-2	LPBMP0003_20191223	Total/NA	Water	SM 2540D	
440-258024-3	LPBMP0004_20191223	Total/NA	Water	SM 2540D	
440-258024-4	EPSW002IE02_20191223	Total/NA	Water	SM 2540D	
MB 440-587887/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-587887/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-257942-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Geotechnical

Analysis Batch: 42967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-1	LPBMP0002_20191223	Total/NA	Water	D4464	

Eurofins Calscience Irvine

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Geotechnical (Continued)

Analysis Batch: 42967 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-2	LPBMP0003_20191223	Total/NA	Water	D4464	
440-258024-3	LPBMP0004_20191223	Total/NA	Water	D4464	

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Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
BB	Sample > 4X spike concentration
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
LM	MS and/or MSD above acceptance limits. See Blank Spike (LCS)

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-18-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc.

Client Contact Haley & Aldrich, Inc. 5333 Mission Center Road, Suite 300 San Diego, California 92108 (619) 280-9210 Phone (619) 280-9415 FAX H&A Project Number: 129095-004 SID 5.2 Site: BMP Performance OF 001, 002, and/or 009 Watershed H&A P.O.#		H&A Project Manager: Katherine Miller Tel/Fax: (520) 289-9606 Analysis Turnaround Time <input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		H&A Site Contact: Matt Birney (619) 466-9782 Lab Contact: Urvasi Patel (949) 333-9055		Date: _____ Carrier: _____ COC No. 1 of 1 COCs										
Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Gra)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Method 200.8: Cd, Cu, Pb (Total Dissolved)	Method 245.1: Hg (Total Recoverable)	Method 200.8: As, Cd, Cu, Fe, Pb (Total Dissolved)	Method 245.1: Hg (Total Recoverable)	Method 200.8: As, Cd, Cu, Fe, Pb (Total Recoverable)	SO4 (E300)	Gross Alpha (E900.0) (Total Dissolved)	Gross Alpha (E900.0) (Total Recoverable)	Sample Specific Notes
LPBMP0002_20191223	12/23/2019	0650	G	WM	6	N	N	X	X	X	X	X	P	A	A	Field Start Notes: Lab may substitute 250mL Poly for 500mL for metals. Only need to fill half of 500mL. Must fill TSS to the top. Lower Parking Lot, sample port in cast iron discharge pipe
LPBMP0003_20191223	12/23/2019	0700	G	WM	6	N	N	X	X	X	X	X	P	A	A	Lower Parking Lot, Sediment Basin outlet box
LPBMP0004_20191223	12/23/2019	0710	G	WM	6	N	N	X	X	X	X	X	P	A	A	Lower Parking Lot, discharge from Broffiler effluent pipe
EPSW002IE02_20191223	12/23/2019	0800	G	WM	8	N	N	X	X	X	X	X	P	A	A	OF002 watershed, located along the Southern Buffer Zone Road at the culvert inlet on the north side of the road. Approximately 400 feet east of the turnout

Retention Used: 1=Lab, 2=H&A, 3=H&SO4, 4=H&NO3, 5=LabOut, 6=Other

Sample Disposal: Return to Client Deposit by Lab Archive for 6 Months

Special Instructions/QC Requirements & Comments:
Please email data to kmiller@haleyaldrich.com and post to Total Access, Bill to Haley & Aldrich at AP@haleyaldrich.com, Report Level III Data Package and provide EDD, All dissolved metal samples are to be filtered within 24 hours of receipt, even those placed on hold

Custody Seal Intact: Yes No

Relinquished by: *[Signature]* Company: *[Signature]* Date/Time: 12/23/2019 12:30
Relinquished by: *[Signature]* Company: *[Signature]* Date/Time: 12/23/2019 16:05
Relinquished by: *[Signature]* Company: TA 18V Date/Time: 12/23/2019 16:05

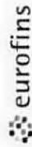
1993
1.4/1.7
2.0/2.3



440-258024 Chain of Custody



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Patel, Urvashi	Carrier Tracking No(s):	COC No: 440-150581.1
Client Contact: urvashi.patel@testamericainc.com		Phone:	State of Origin: California	Page: Page 1 of 1
Shipping/Receiving		E-Mail:	Accreditations Required (See note): State Program - California	Job #: 440-258024-1
Company: TestAmerica Laboratories, Inc.		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSC4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		
Address: 880 Riverside Parkway, West Sacramento, CA, 95605		Analysis Requested		
Phone: 916-373-5600 (Tel) 916-372-1059 (Fax)		Total Number of Containers		
Email:		Perform MS/MSD (Yes or No)		
Project #: 44009815		Field Filtered Sample (Yes or No)		
Site: BMP Performance OF 001, 002, and/or 009		1618/16138_Sox_Sep_P Standard List w/ Totals		
Due Date Requested: 1/6/2020		Matrix (W=water, S=soil, O=water/oil, I=Inert, A=All)		
TAT Requested (days):		Preservation Code:		
PO #:		Sample Type (C=comp, G=grab)		
WO #:		Sample Time		
Sample Date		Sample Date		
Sample Identification - Client ID (Lab ID)		Sample Date		
LPBMP0002_20191223 (440-258024-1)	12/23/19	06:50 Pacific	X	2
LPBMP0003_20191223 (440-258024-2)	12/23/19	07:00 Pacific	X	2
LPBMP0004_20191223 (440-258024-3)	12/23/19	07:10 Pacific	X	2
EPSW002E02_20191223 (440-258024-4)	12/23/19	08:00 Pacific	X	2
Special Instructions/Note: See QAS, Boeing_w/lu to zero				
Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/leak/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.				
Possible Hazard Identification				
Unconfirmed				
Deliverable Requested: I, II, III, IV, Other (specify)				
Primary Deliverable Rank: 2				
Empty Kit Relinquished by:				
Relinquished by: [Signature]				
Relinquished by:				
Relinquished by:				
Custody Seal No.: [Signature]				
Cooler Temperature(s) °C and Other Remarks: 1.0 C-5 D-8				



Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258024-1

SDG Number:

Login Number: 258024

List Number: 1

Creator: Soderblom, Tim

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258024-1

SDG Number:

Login Number: 258024

List Number: 2

Creator: Cortez Diaz, Antonio

List Source: Eurofins Calscience

List Creation: 12/26/19 02:08 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258024-1

SDG Number:

Login Number: 258024

List Number: 4

Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento

List Creation: 12/27/19 11:33 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	Ob:1.0c Corr:0.8c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258024-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-258024-1	LPBMP0002_20191223	59	55	58	55	60	58	52	54
440-258024-1 - RA	LPBMP0002_20191223		57						
440-258024-2	LPBMP0003_20191223	60	57	59	56	63	59	55	56
440-258024-3	LPBMP0004_20191223	63	59	62	59	65	63	54	57
440-258024-4	EPSW002IE02_20191223	68	64	67	64	70	69	63	67
MB 320-348645/1-A	Method Blank	62	61	67	62	69	70	58	62

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-258024-1	LPBMP0002_20191223	49	52	52	62	56	63	63
440-258024-1 - RA	LPBMP0002_20191223							
440-258024-2	LPBMP0003_20191223	51	52	53	63	58	64	63
440-258024-3	LPBMP0004_20191223	54	53	55	63	59	65	63
440-258024-4	EPSW002IE02_20191223	60	61	62	73	67	75	70
MB 320-348645/1-A	Method Blank	56	60	60	71	65	72	72

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-348645/2-A	Lab Control Sample	66	61	65	61	68	63	54	57
LCSD 320-348645/3-A	Lab Control Sample Dup	65	61	63	60	66	61	56	57

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-348645/2-A	Lab Control Sample	53	56	57	62	57	64	63
LCSD 320-348645/3-A	Lab Control Sample Dup	54	56	57	66	59	68	69

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.

Job ID: 440-258024-1

Project/Site: BMP Performance OF 001, 002, and/or 009

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

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ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-258024-2

Client Project/Site: BMP Performance OF 001, 002, and/or 900

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
1/28/2020 9:32:26 AM

Christian Bondoc, Project Manager I
(949)260-3218
christian.bondoc@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-258024-4	EPSW002IE02_20191223	Water	12/23/19 08:00	12/23/19 16:05	

- 1
- 2
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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Job ID: 440-258024-2

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-258024-2

Comments

No additional comments.

Receipt

The samples were received on 12/23/2019 4:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.7° C and 2.3° C.

Receipt Exceptions

The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of 7. The sample was preserved to the appropriate pH in the laboratory, by adding approx. 24mL of HNO3 to each 2.5Gal cubicontainer. For a final pH of <2.

Requested Method: RAD

pH strip: HC902937

HNO3 lot: 1848535

RAD

Method 900.0: Gross Alpha Beta Prep Batch 160-455777

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EPSW002IE02_20191223 (440-258024-4), (LCS 160-455777/2-A), (LCSB 160-455777/3-A), (MB 160-455777/1-A), (440-258077-J-1-F), (440-258077-J-1-G MS), (440-258077-J-1-I MSBT), (440-258077-J-1-J MSBTD) and (440-258077-J-1-H MSD)

Method 900.0: Gross Alpha-Beta Prep Batch 160-457240

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EPSW002IE02_20191223 (440-258024-4), (LCS 160-457240/2-A), (LCSB 160-457240/3-A) and (MB 160-457240/1-A)

Method Evaporation: Gross Alpha/Beta preparation batch 160-455663 and 160-455777

To reach target mass and efficiency additional volume was added to the following samples:EPSW002IE02_20191223 (440-258024-4). The total sample volume is reflected in the initial amount field.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Client Sample ID: EPSW002IE02_20191223

Lab Sample ID: 440-258024-4

Date Collected: 12/23/19 08:00

Matrix: Water

Date Received: 12/23/19 16:05

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	4.77		1.92	1.99	3.00	2.09	pCi/L	01/20/20 09:24	01/25/20 10:58	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.307	U	0.854	0.854	3.00	1.57	pCi/L	01/06/20 07:19	01/13/20 11:03	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Method	Method Description	Protocol	Laboratory
900.0	Gross Alpha and Gross Beta Radioactivity	EPA	TAL SL
Evaporation	Preparation, Evaporation	None	TAL SL
Filtration	Sample Filtration	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency
None = None

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Client Sample ID: EPSW002IE02_20191223

Lab Sample ID: 440-258024-4

Date Collected: 12/23/19 08:00

Matrix: Water

Date Received: 12/23/19 16:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			1000 mL	1.0 mL	455663	12/30/19 14:06	CMM	TAL SL
Dissolved	Prep	Evaporation			200.23 mL	1.0 g	455777	01/06/20 07:19	RJD	TAL SL
Dissolved	Analysis	900.0		1	1.0 mL	1.0 mL	456567	01/13/20 11:03	KLS	TAL SL
Total/NA	Prep	Evaporation			200.03 g	1.0 g	457240	01/20/20 09:24	RJD	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	458102	01/25/20 10:58	AJD	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: MB 160-455777/1-A
Matrix: Water
Analysis Batch: 456563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 455777

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.01239	U	0.607	0.607	3.00	1.18	pCi/L	01/06/20 07:19	01/12/20 12:20	1

Lab Sample ID: LCS 160-455777/2-A
Matrix: Water
Analysis Batch: 456563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 455777

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	49.6	48.74		7.33	3.00	1.85	pCi/L	98	75 - 125

Lab Sample ID: 440-258077-J-1-G MS
Matrix: Water
Analysis Batch: 456567

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 455777

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	1.38		49.6	41.94		6.03	3.00	1.42	pCi/L	82	60 - 140

Lab Sample ID: 440-258077-J-1-H MSD
Matrix: Water
Analysis Batch: 456563

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 455777

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Gross Alpha	1.38		49.6	47.24		6.58	3.00	1.16	pCi/L	93	60 - 140	0.42	1

Lab Sample ID: MB 160-457240/1-A
Matrix: Water
Analysis Batch: 458102

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457240

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.07441	U	0.446	0.447	3.00	0.886	pCi/L	01/20/20 09:24	01/25/20 10:58	1

Lab Sample ID: LCS 160-457240/2-A
Matrix: Water
Analysis Batch: 458102

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457240

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	49.6	54.40		8.00	3.00	1.83	pCi/L	110	75 - 125

Lab Sample ID: 550-136409-N-1-B MS
Matrix: Water
Analysis Batch: 458202

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 457240

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	-0.445	U G	145	227.2	F1	31.0	3.00	4.48	pCi/L	156	60 - 140

Eurofins Calscience Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: 550-136409-N-1-D DU
Matrix: Water
Analysis Batch: 458102

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 457240

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Gross Alpha	-0.445	U G	0.1926	U G	3.06	3.00	5.93	pCi/L	0.12	1

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QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Rad

Filtration Batch: 455663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-4	EPSW002IE02_20191223	Dissolved	Water	Filtration	

Prep Batch: 455777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-4	EPSW002IE02_20191223	Dissolved	Water	Evaporation	455663
MB 160-455777/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-455777/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-455777/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
440-258077-J-1-G MS	Matrix Spike	Total/NA	Water	Evaporation	
440-258077-J-1-H MSD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	
440-258077-J-1-I MSBT	Matrix Spike	Total/NA	Water	Evaporation	
440-258077-J-1-J MSBTD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	

Prep Batch: 457240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258024-4	EPSW002IE02_20191223	Total/NA	Water	Evaporation	
MB 160-457240/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-457240/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-457240/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
550-136409-N-1-B MS	Matrix Spike	Total/NA	Water	Evaporation	
550-136409-N-1-C MSBT	Matrix Spike	Total/NA	Water	Evaporation	
550-136409-N-1-D DU	Duplicate	Total/NA	Water	Evaporation	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Qualifiers

Rad

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 900

Job ID: 440-258024-2

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-19 *
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-20
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-20
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	02-02-20
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Patel, Urvashi		Carrier Tracking No(s): 440-150577.1	
Client Contact: Shipping/Receiving		E-Mail: urvashi.patel@testamericainc.com		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - California		Job #: 440-258024-2	
Address: 13715 Rider Trail North,		Due Date Requested: 1/6/2020		Preservation Codes:	
City: Earth City		TAT Requested (days):		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anichlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
State, Zip: MO, 63045		PO #:		Other:	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:			
Email:		Project #:			
BMP Performance OF 001, 002, and/or 900		44009815			
Site:		SSOW#:			
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time	
EPSW002IE02_20191223 (440-258024-4)		12/23/19		08:00 Pacific	
Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)		Preservation Code:	
				Water	
Field Filtered Sample (Yes or No)		Form MS/MSD (Yes or No)		900.0/Evaporation (MOD) Gross Alpha/Beta	
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
900.0/Filtration_Rad Gross Alpha Only- Dissolved		900.0/Filtration_Rad Gross Alpha Only- Dissolved		Total Number of containers	
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		2	
Special Instructions/Note:				Boeing SSFL: DO NOT FILTER; use prep date from preservation	
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysts/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2			
Empty Kit Relinquished by:		Date:		Time:	
Relinquished by:		Date/Time: 12/24/19 17:00		Company: TAPRV	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/>		Disposal By, Lab <input type="checkbox"/>	
Special Instructions/QC Requirements:		Archive For <input type="checkbox"/>		Months	
Received by: Michael Fleum		Date/Time: 12-27-19 08:15		Company: TAPRV	
Received by:		Date/Time:		Company:	
Received by:		Date/Time:		Company:	



Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258024-2

SDG Number:

Login Number: 258024

List Number: 1

Creator: Soderblom, Tim

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258024-2

SDG Number:

Login Number: 258024

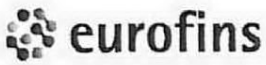
List Number: 3

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 12/27/19 12:57 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-258024 Field Sheet

Tracking #: 111a 9742 9500

Job: _____

SO PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: _____	Therm. ID: <u>MCS</u> Corr. Factor: (+) <u>0.2</u> °C																																																												
	Ice <input checked="" type="checkbox"/> Wet <input checked="" type="checkbox"/> Gel _____ Other _____																																																												
	Cooler Custody Seal: <u>Seal</u>																																																												
	Cooler ID: _____																																																												
	Temp Observed: <u>1.0</u> °C Corrected: <u>0.8</u> °C From: Temp Blank <input checked="" type="checkbox"/> Sample <input type="checkbox"/>																																																												
	During Initial Triage																																																												
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Initials: <u>PK</u> Date: <u>12/27/19</u>																																																													

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-258216-1

Client Project/Site: BMP Performance OF 001, 002, and/or 009

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
1/20/2020 9:35:30 AM

Christian Bondoc, Project Manager I
(949)260-3218
christian.bondoc@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

Client: Haley & Aldrich, Inc.

Job ID: 440-258216-1

Project/Site: BMP Performance OF 001, 002, and/or 009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-258216-1	A1BMP0002_20191226	Water	12/26/19 08:40	12/27/19 11:20	
440-258216-2	A1BMP0003_20191226	Water	12/26/19 08:20	12/27/19 11:20	
440-258216-3	LXBMP0011_20191226	Water	12/26/19 09:20	12/27/19 11:20	
440-258216-4	LXBMP0012_20191226	Water	12/26/19 09:00	12/27/19 11:20	
440-258216-5	EPSW001IE01_20191226	Water	12/26/19 07:40	12/27/19 11:20	
440-258216-6	EPSW002BG01_20191226	Water	12/26/19 07:30	12/27/19 11:20	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Job ID: 440-258216-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-258216-1

Comments

No additional comments.

Receipt

The samples were received on 12/27/2019 11:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.0° C, 1.2° C and 1.3° C.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method FILTRATION: The following samples requested dissolved metals and were not filtered in the field: A1BMP0002_20191226 (440-258216-1), A1BMP0003_20191226 (440-258216-2), LXBMP0011_20191226 (440-258216-3), LXBMP0012_20191226 (440-258216-4), EPSW001IE01_20191226 (440-258216-5) and EPSW002BG01_20191226 (440-258216-6). These samples were filtered and preserved upon receipt to the laboratory.

12/28/19

150mL of sample filtered
2.5mL of HNO₃
LOt: 0000234822

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method SM 2540D: Insufficient sample volume was provided to produce results within the specifications of SM 2540D which requires at least 2.5 mg dried residue with a sample volume not to exceed 1L. A sample volume less than 1L, that yielded less than 2.5 mg dried residue, was provided for the following samples: 440-258216-1, 440-258216-2, 440-258216-4, 440-258216-5, 440-258216-6.

Method D4464: The sample duplicate precision for the following sample associated with analytical batch 570-42967 was outside control limits: (440-258024-D-2) and (440-258024-D-2 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

Method D4464: Insufficient sample provided for particle size analysis: A1BMP0002_20191226 (440-258216-1) and LXBMP0012_20191226 (440-258216-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P preparation/analysis: Sample A1BMP0002_20191226 (440-258216-1), A1BMP0003_20191226 (440-258216-2), LXBMP0011_20191226 (440-258216-3), LXBMP0012_20191226 (440-258216-4), EPSW001IE01_20191226 (440-258216-5) and EPSW002BG01_20191226 (440-258216-6) was received in a narrow-mouth amber glass bottle.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: A1BMP0002_20191226

Lab Sample ID: 440-258216-1

Date Collected: 12/26/19 08:40

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
2,3,7,8-TCDF	ND		0.000010	0.0000003	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,7,8-PeCDD	0.0000082	J,DX q	0.000051	0.0000006	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,7,8-PeCDF	0.0000067	J,DX q	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
2,3,4,7,8-PeCDF	0.0000075	J,DX q	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,4,7,8-HxCDD	0.0000018	J,DX MB	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,6,7,8-HxCDD	0.0000012	J,DX MB q	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,7,8,9-HxCDD	0.0000013	J,DX MB q	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,4,7,8-HxCDF	0.0000074	J,DX q	0.000051	0.0000006	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,6,7,8-HxCDF	0.0000010	J,DX q	0.000051	0.0000007	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,7,8,9-HxCDF	0.0000010	J,DX MB q	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
2,3,4,6,7,8-HxCDF	0.0000080	J,DX MB	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,4,6,7,8-HpCDD	0.0000088	J,DX MB	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,4,6,7,8-HpCDF	0.0000044	J,DX MB	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 16:24	1
1,2,3,4,7,8,9-HpCDF	0.0000013	J,DX q	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
OCDD	0.000053	J,DX MB	0.00010	0.0000007	ug/L		01/08/20 11:27	01/13/20 16:24	1
OCDF	0.0000080	J,DX MB	0.00010	0.0000006	ug/L		01/08/20 11:27	01/13/20 16:24	1
Total TCDD	ND		0.000010	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
Total TCDF	ND		0.000010	0.0000003	ug/L		01/08/20 11:27	01/13/20 16:24	1
Total PeCDD	0.0000082	J,DX q	0.000051	0.0000006	ug/L		01/08/20 11:27	01/13/20 16:24	1
Total PeCDF	0.0000014	J,DX q	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
Total HxCDD	0.0000043	J,DX MB q	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 16:24	1
Total HxCDF	0.0000035	J,DX MB q	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 16:24	1
Total HpCDD	0.000016	J,DX MB q	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 16:24	1
Total HpCDF	0.0000075	J,DX MB q	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 16:24	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	62		25 - 164				01/08/20 11:27	01/13/20 16:24	1
13C-2,3,7,8-TCDF	63		24 - 169				01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,7,8-PeCDD	65		25 - 181				01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,7,8-PeCDF	63		24 - 185				01/08/20 11:27	01/13/20 16:24	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: A1BMP0002_20191226

Lab Sample ID: 440-258216-1

Date Collected: 12/26/19 08:40

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,4,7,8-PeCDF	70		21 - 178	01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,4,7,8-HxCDD	69		32 - 141	01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,6,7,8-HxCDD	59		28 - 130	01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,4,7,8-HxCDF	67		26 - 152	01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,6,7,8-HxCDF	57		26 - 123	01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,7,8,9-HxCDF	61		29 - 147	01/08/20 11:27	01/13/20 16:24	1
13C-2,3,4,6,7,8-HxCDF	61		28 - 136	01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,4,6,7,8-HpCDD	59		23 - 140	01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,4,6,7,8-HpCDF	58		28 - 143	01/08/20 11:27	01/13/20 16:24	1
13C-1,2,3,4,7,8,9-HpCDF	65		26 - 138	01/08/20 11:27	01/13/20 16:24	1
13C-OCDD	58		17 - 157	01/08/20 11:27	01/13/20 16:24	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	101		35 - 197	01/08/20 11:27	01/13/20 16:24	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/28/19 09:46	12/30/19 18:09	1
Copper	4.6		2.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:09	1
Lead	ND		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:09	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/30/19 11:16	12/30/19 20:24	1
Copper	4.7		2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:24	1
Lead	ND		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:24	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/31/19 12:26	01/02/20 13:08	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 08:29	01/06/20 21:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.0	1.0	mg/L			12/27/19 16:12	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	N/A		0.01	0.01	%			01/06/20 18:14	1
Coarse Sand (0.5mm to 1mm)	N/A		0.01	0.01	%			01/06/20 18:14	1
Fine Sand (0.125 to 0.25mm)	N/A		0.01	0.01	%			01/06/20 18:14	1
Gravel (greater than 2 mm)	N/A		0.01	0.01	%			01/06/20 18:14	1
Medium Sand (0.25 to 0.5 mm)	N/A		0.01	0.01	%			01/06/20 18:14	1
Silt (0.00391 to 0.0625mm)	N/A		0.01	0.01	%			01/06/20 18:14	1
Total Silt and Clay (0 to 0.0626mm)	N/A		0.01	0.01	%			01/06/20 18:14	1
Very Coarse Sand (1 to 2mm)	N/A		0.01	0.01	%			01/06/20 18:14	1
Very Fine Sand (0.0625 to 0.125 mm)	N/A		0.01	0.01	%			01/06/20 18:14	1

Eurofins Calscience Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: A1BMP0003_20191226

Lab Sample ID: 440-258216-2

Date Collected: 12/26/19 08:20

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,7,8-PeCDD	0.00000076	J,DX q	0.000055	0.0000007	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,7,8-PeCDF	0.00000055	J,DX q	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
2,3,4,7,8-PeCDF	0.00000052	J,DX q	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,4,7,8-HxCDD	0.00000022	J,DX MB	0.000055	0.0000003	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,6,7,8-HxCDD	0.00000073	J,DX MB q	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,7,8,9-HxCDD	0.00000087	J,DX MB q	0.000055	0.0000003	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,4,7,8-HxCDF	ND		0.000055	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,6,7,8-HxCDF	0.00000077	J,DX q	0.000055	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,7,8,9-HxCDF	0.00000013	J,DX MB	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
2,3,4,6,7,8-HxCDF	0.00000072	J,DX MB	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,4,6,7,8-HpCDD	0.00000057	J,DX MB	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,4,6,7,8-HpCDF	0.00000029	J,DX MB	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
1,2,3,4,7,8,9-HpCDF	0.00000081	J,DX q	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
OCDD	0.00000035	J,DX MB	0.00011	0.0000007	ug/L		01/08/20 11:27	01/13/20 17:10	1
OCDF	0.00000058	J,DX MB	0.00011	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:10	1
Total TCDD	ND		0.000011	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
Total TCDF	0.00000057	J,DX MB q	0.000011	0.0000003	ug/L		01/08/20 11:27	01/13/20 17:10	1
Total PeCDD	0.00000076	J,DX q	0.000055	0.0000007	ug/L		01/08/20 11:27	01/13/20 17:10	1
Total PeCDF	0.00000011	J,DX q	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
Total HxCDD	0.00000038	J,DX MB q	0.000055	0.0000003	ug/L		01/08/20 11:27	01/13/20 17:10	1
Total HxCDF	0.00000034	J,DX MB q	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
Total HpCDD	0.00000011	J,DX MB	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
Total HpCDF	0.00000047	J,DX MB q	0.000055	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:10	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
13C-2,3,7,8-TCDD	71		25 - 164			01/08/20 11:27	01/13/20 17:10	1	
13C-2,3,7,8-TCDF	72		24 - 169			01/08/20 11:27	01/13/20 17:10	1	
13C-1,2,3,7,8-PeCDD	74		25 - 181			01/08/20 11:27	01/13/20 17:10	1	
13C-1,2,3,7,8-PeCDF	74		24 - 185			01/08/20 11:27	01/13/20 17:10	1	
13C-2,3,4,7,8-PeCDF	81		21 - 178			01/08/20 11:27	01/13/20 17:10	1	
13C-1,2,3,4,7,8-HxCDD	80		32 - 141			01/08/20 11:27	01/13/20 17:10	1	

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: A1BMP0003_20191226

Lab Sample ID: 440-258216-2

Date Collected: 12/26/19 08:20

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,6,7,8-HxCDD	67		28 - 130	01/08/20 11:27	01/13/20 17:10	1
13C-1,2,3,4,7,8-HxCDF	76		26 - 152	01/08/20 11:27	01/13/20 17:10	1
13C-1,2,3,6,7,8-HxCDF	66		26 - 123	01/08/20 11:27	01/13/20 17:10	1
13C-1,2,3,7,8,9-HxCDF	70		29 - 147	01/08/20 11:27	01/13/20 17:10	1
13C-2,3,4,6,7,8-HxCDF	68		28 - 136	01/08/20 11:27	01/13/20 17:10	1
13C-1,2,3,4,6,7,8-HpCDD	66		23 - 140	01/08/20 11:27	01/13/20 17:10	1
13C-1,2,3,4,6,7,8-HpCDF	66		28 - 143	01/08/20 11:27	01/13/20 17:10	1
13C-1,2,3,4,7,8,9-HpCDF	74		26 - 138	01/08/20 11:27	01/13/20 17:10	1
13C-OCDD	61		17 - 157	01/08/20 11:27	01/13/20 17:10	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	93		35 - 197	01/08/20 11:27	01/13/20 17:10	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000011	0.0000005	ug/L		01/08/20 11:27	01/16/20 14:36	1
				4					
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C-2,3,7,8-TCDF	78		24 - 169	01/08/20 11:27	01/16/20 14:36	1			
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
37Cl4-2,3,7,8-TCDD	94		35 - 197	01/08/20 11:27	01/16/20 14:36	1			

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/28/19 09:46	12/30/19 18:11	1
Copper	7.1		2.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:11	1
Lead	ND		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:11	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/30/19 11:16	12/30/19 20:27	1
Copper	7.4		2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:27	1
Lead	ND		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:27	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/31/19 12:26	01/02/20 13:10	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 08:29	01/06/20 21:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.0	1.0	mg/L			12/27/19 16:12	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	6.17		0.01	0.01	%			01/06/20 18:23	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			01/06/20 18:23	1
Fine Sand (0.125 to 0.25mm)	12.22		0.01	0.01	%			01/06/20 18:23	1

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Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: A1BMP0003_20191226

Lab Sample ID: 440-258216-2

Date Collected: 12/26/19 08:20

Matrix: Water

Date Received: 12/27/19 11:20

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering) (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel (greater than 2 mm)	ND		0.01	0.01	%			01/06/20 18:23	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			01/06/20 18:23	1
Silt (0.00391 to 0.0625mm)	23.78		0.01	0.01	%			01/06/20 18:23	1
Total Silt and Clay (0 to 0.0626mm)	29.95		0.01	0.01	%			01/06/20 18:23	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			01/06/20 18:23	1
Very Fine Sand (0.0625 to 0.125 mm)	57.83		0.01	0.01	%			01/06/20 18:23	1

Client Sample ID: LXBMP0011_20191226

Lab Sample ID: 440-258216-3

Date Collected: 12/26/19 09:20

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.0000007	ug/L		01/08/20 11:27	01/13/20 17:56	1
2,3,7,8-TCDF	ND		0.000011	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,7,8-PeCDD	ND		0.000054	0.0000010	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,7,8-PeCDF	0.00000081	J,DX q	0.000054	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:56	1
2,3,4,7,8-PeCDF	ND		0.000054	0.0000007	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,4,7,8-HxCDD	0.0000026	J,DX MB	0.000054	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,6,7,8-HxCDD	ND		0.000054	0.0000007	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,7,8,9-HxCDD	0.0000011	J,DX MB q	0.000054	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,4,7,8-HxCDF	0.0000011	J,DX q	0.000054	0.0000008	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,6,7,8-HxCDF	ND		0.000054	0.0000008	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,7,8,9-HxCDF	0.0000011	J,DX MB	0.000054	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:56	1
2,3,4,6,7,8-HxCDF	0.00000083	J,DX MB q	0.000054	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,4,6,7,8-HpCDD	0.0000027	J,DX MB	0.000054	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,4,6,7,8-HpCDF	0.0000033	J,DX MB q	0.000054	0.0000005	ug/L		01/08/20 11:27	01/13/20 17:56	1
1,2,3,4,7,8,9-HpCDF	0.0000010	J,DX	0.000054	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:56	1
OCDD	0.000015	J,DX MB	0.00011	0.0000010	ug/L		01/08/20 11:27	01/13/20 17:56	1
OCDF	0.0000081	J,DX MB q	0.00011	0.0000008	ug/L		01/08/20 11:27	01/13/20 17:56	1
Total TCDD	ND		0.000011	0.0000007	ug/L		01/08/20 11:27	01/13/20 17:56	1
Total TCDF	ND		0.000011	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:56	1
Total PeCDD	ND		0.000054	0.0000010	ug/L		01/08/20 11:27	01/13/20 17:56	1
Total PeCDF	0.00000081	J,DX q	0.000054	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:56	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: LXBMP0011_20191226

Lab Sample ID: 440-258216-3

Date Collected: 12/26/19 09:20

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	0.0000043	J,DX MB q	0.000054	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:56	1
				3					
Total HxCDF	0.0000039	J,DX MB q	0.000054	0.0000006	ug/L		01/08/20 11:27	01/13/20 17:56	1
				2					
Total HpCDD	0.0000051	J,DX MB q	0.000054	0.0000004	ug/L		01/08/20 11:27	01/13/20 17:56	1
				6					
Total HpCDF	0.0000043	J,DX MB q	0.000054	0.0000005	ug/L		01/08/20 11:27	01/13/20 17:56	1
				2					

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	47		25 - 164				01/08/20 11:27	01/13/20 17:56	1
13C-2,3,7,8-TCDF	49		24 - 169				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,7,8-PeCDD	49		25 - 181				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,7,8-PeCDF	49		24 - 185				01/08/20 11:27	01/13/20 17:56	1
13C-2,3,4,7,8-PeCDF	52		21 - 178				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,4,7,8-HxCDD	51		32 - 141				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,6,7,8-HxCDD	44		28 - 130				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,4,7,8-HxCDF	50		26 - 152				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,6,7,8-HxCDF	43		26 - 123				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,7,8,9-HxCDF	47		29 - 147				01/08/20 11:27	01/13/20 17:56	1
13C-2,3,4,6,7,8-HxCDF	46		28 - 136				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,4,6,7,8-HpCDD	45		23 - 140				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,4,6,7,8-HpCDF	44		28 - 143				01/08/20 11:27	01/13/20 17:56	1
13C-1,2,3,4,7,8,9-HpCDF	50		26 - 138				01/08/20 11:27	01/13/20 17:56	1
13C-OCDD	43		17 - 157				01/08/20 11:27	01/13/20 17:56	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	91		35 - 197				01/08/20 11:27	01/13/20 17:56	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/28/19 09:46	12/30/19 18:14	1
Copper	1.1	J,DX	2.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:14	1
Lead	0.51	J,DX	1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:14	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/30/19 11:16	12/30/19 20:29	1
Copper	1.8	J,DX	2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:29	1
Lead	ND		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:29	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/31/19 12:32	01/02/20 13:52	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 08:29	01/06/20 21:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	7.7		2.9	1.4	mg/L			12/27/19 16:12	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: LXBMP0011_20191226

Lab Sample ID: 440-258216-3

Date Collected: 12/26/19 09:20

Matrix: Water

Date Received: 12/27/19 11:20

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	1.22		0.01	0.01	%			01/06/20 18:31	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			01/06/20 18:31	1
Fine Sand (0.125 to 0.25mm)	44.16		0.01	0.01	%			01/06/20 18:31	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			01/06/20 18:31	1
Medium Sand (0.25 to 0.5 mm)	0.13		0.01	0.01	%			01/06/20 18:31	1
Silt (0.00391 to 0.0625mm)	9.01		0.01	0.01	%			01/06/20 18:31	1
Total Silt and Clay (0 to 0.0626mm)	10.23		0.01	0.01	%			01/06/20 18:31	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			01/06/20 18:31	1
Very Fine Sand (0.0625 to 0.125 mm)	45.48		0.01	0.01	%			01/06/20 18:31	1

Client Sample ID: LXBMP0012_20191226

Lab Sample ID: 440-258216-4

Date Collected: 12/26/19 09:00

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,7,8-PeCDD	0.0000017	J,DX	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,7,8-PeCDF	0.0000016	J,DX	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
2,3,4,7,8-PeCDF	0.0000012	J,DX q	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,4,7,8-HxCDD	0.0000031	J,DX MB	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,6,7,8-HxCDD	0.0000020	J,DX MB	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,7,8,9-HxCDD	0.0000021	J,DX MB	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,4,7,8-HxCDF	0.0000012	J,DX q	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,6,7,8-HxCDF	0.0000012	J,DX q	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,7,8,9-HxCDF	0.0000019	J,DX MB q	0.000051	0.0000003	ug/L		01/08/20 11:27	01/13/20 18:42	1
2,3,4,6,7,8-HxCDF	0.0000013	J,DX MB	0.000051	0.0000003	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,4,6,7,8-HpCDD	0.0000037	J,DX MB	0.000051	0.0000003	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,4,6,7,8-HpCDF	0.0000038	J,DX MB	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
1,2,3,4,7,8,9-HpCDF	0.0000022	J,DX	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
OCDD	0.000015	J,DX MB	0.00010	0.0000005	ug/L		01/08/20 11:27	01/13/20 18:42	1
OCDF	0.000011	J,DX MB	0.00010	0.0000005	ug/L		01/08/20 11:27	01/13/20 18:42	1
Total TCDD	ND		0.000010	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
Total TCDF	0.0000063	J,DX MB q	0.000010	0.0000002	ug/L		01/08/20 11:27	01/13/20 18:42	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: LXBMP0012_20191226

Lab Sample ID: 440-258216-4

Date Collected: 12/26/19 09:00

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	0.0000017	J,DX	0.000051	0.0000005	ug/L		01/08/20 11:27	01/13/20 18:42	1
Total PeCDF	0.0000028	J,DX q	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
Total HxCDD	0.0000071	J,DX MB	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1
Total HxCDF	0.0000055	J,DX MB q	0.000051	0.0000003	ug/L		01/08/20 11:27	01/13/20 18:42	1
Total HpCDD	0.0000052	J,DX MB q	0.000051	0.0000003	ug/L		01/08/20 11:27	01/13/20 18:42	1
Total HpCDF	0.0000060	J,DX MB	0.000051	0.0000004	ug/L		01/08/20 11:27	01/13/20 18:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		25 - 164	01/08/20 11:27	01/13/20 18:42	1
13C-2,3,7,8-TCDF	62		24 - 169	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,7,8-PeCDD	63		25 - 181	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,7,8-PeCDF	63		24 - 185	01/08/20 11:27	01/13/20 18:42	1
13C-2,3,4,7,8-PeCDF	69		21 - 178	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,4,7,8-HxCDD	70		32 - 141	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,6,7,8-HxCDD	58		28 - 130	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,4,7,8-HxCDF	66		26 - 152	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,6,7,8-HxCDF	57		26 - 123	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,7,8,9-HxCDF	61		29 - 147	01/08/20 11:27	01/13/20 18:42	1
13C-2,3,4,6,7,8-HxCDF	60		28 - 136	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,4,6,7,8-HpCDD	59		23 - 140	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,4,6,7,8-HpCDF	60		28 - 143	01/08/20 11:27	01/13/20 18:42	1
13C-1,2,3,4,7,8,9-HpCDF	67		26 - 138	01/08/20 11:27	01/13/20 18:42	1
13C-OCDD	57		17 - 157	01/08/20 11:27	01/13/20 18:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	93		35 - 197	01/08/20 11:27	01/13/20 18:42	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000010	0.0000005	ug/L		01/08/20 11:27	01/16/20 15:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	67		24 - 169	01/08/20 11:27	01/16/20 15:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	94		35 - 197	01/08/20 11:27	01/16/20 15:14	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/28/19 09:46	12/30/19 18:16	1
Copper	1.4	J,DX	2.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:16	1
Lead	ND		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:16	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/30/19 11:16	12/30/19 20:31	1
Copper	1.2	J,DX	2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:31	1

Eurofins Calscience Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: LXBMP0012_20191226

Lab Sample ID: 440-258216-4

Date Collected: 12/26/19 09:00

Matrix: Water

Date Received: 12/27/19 11:20

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:31	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/31/19 12:32	01/02/20 13:54	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 08:29	01/06/20 21:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.6	J,DX	2.0	1.0	mg/L			12/27/19 16:12	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	N/A		0.01	0.01	%			01/06/20 18:40	1
Coarse Sand (0.5mm to 1mm)	N/A		0.01	0.01	%			01/06/20 18:40	1
Fine Sand (0.125 to 0.25mm)	N/A		0.01	0.01	%			01/06/20 18:40	1
Gravel (greater than 2 mm)	N/A		0.01	0.01	%			01/06/20 18:40	1
Medium Sand (0.25 to 0.5 mm)	N/A		0.01	0.01	%			01/06/20 18:40	1
Silt (0.00391 to 0.0625mm)	N/A		0.01	0.01	%			01/06/20 18:40	1
Total Silt and Clay (0 to 0.0626mm)	N/A		0.01	0.01	%			01/06/20 18:40	1
Very Coarse Sand (1 to 2mm)	N/A		0.01	0.01	%			01/06/20 18:40	1
Very Fine Sand (0.0625 to 0.125 mm)	N/A		0.01	0.01	%			01/06/20 18:40	1

Client Sample ID: EPSW001IE01_20191226

Lab Sample ID: 440-258216-5

Date Collected: 12/26/19 07:40

Matrix: Water

Date Received: 12/27/19 11:20

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	8.9		0.50	0.25	mg/L			12/27/19 20:12	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.0000030	J,DX q	0.000011	0.0000004	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,7,8-PeCDD	0.0000011	J,DX q	0.000053	0.0000006	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,7,8-PeCDF	0.0000010	J,DX q	0.000053	0.0000005	ug/L		01/08/20 11:27	01/13/20 19:28	1
2,3,4,7,8-PeCDF	0.00000084	J,DX	0.000053	0.0000004	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,4,7,8-HxCDD	0.0000021	J,DX MB	0.000053	0.0000004	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,6,7,8-HxCDD	0.0000012	J,DX MB q	0.000053	0.0000004	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,7,8,9-HxCDD	0.0000014	J,DX MB q	0.000053	0.0000003	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,4,7,8-HxCDF	0.00000098	J,DX	0.000053	0.0000005	ug/L		01/08/20 11:27	01/13/20 19:28	1

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Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: EPSW001IE01_20191226

Lab Sample ID: 440-258216-5

Date Collected: 12/26/19 07:40

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	0.0000068	J,DX q	0.000053	0.0000005	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,7,8,9-HxCDF	0.0000012	J,DX MB	0.000053	0.0000003	ug/L		01/08/20 11:27	01/13/20 19:28	1
2,3,4,6,7,8-HxCDF	0.0000075	J,DX MB q	0.000053	0.0000004	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,4,6,7,8-HpCDD	0.000010	J,DX MB	0.000053	0.0000005	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,4,6,7,8-HpCDF	0.0000029	J,DX MB q	0.000053	0.0000004	ug/L		01/08/20 11:27	01/13/20 19:28	1
1,2,3,4,7,8,9-HpCDF	0.0000013	J,DX q	0.000053	0.0000005	ug/L		01/08/20 11:27	01/13/20 19:28	1
OCDD	0.000077	J,DX MB	0.00011	0.0000009	ug/L		01/08/20 11:27	01/13/20 19:28	1
OCDF	0.0000088	J,DX MB	0.00011	0.0000009	ug/L		01/08/20 11:27	01/13/20 19:28	1
Total TCDD	0.0000030	J,DX q	0.000011	0.0000004	ug/L		01/08/20 11:27	01/13/20 19:28	1
Total TCDF	0.0000075	J,DX MB	0.000011	0.0000003	ug/L		01/08/20 11:27	01/13/20 19:28	1
Total PeCDD	0.0000011	J,DX q	0.000053	0.0000006	ug/L		01/08/20 11:27	01/13/20 19:28	1
Total PeCDF	0.0000019	J,DX q	0.000053	0.0000004	ug/L		01/08/20 11:27	01/13/20 19:28	1
Total HxCDD	0.0000046	J,DX MB q	0.000053	0.0000003	ug/L		01/08/20 11:27	01/13/20 19:28	1
Total HxCDF	0.0000036	J,DX MB q	0.000053	0.0000003	ug/L		01/08/20 11:27	01/13/20 19:28	1
Total HpCDD	0.000018	J,DX MB	0.000053	0.0000005	ug/L		01/08/20 11:27	01/13/20 19:28	1
Total HpCDF	0.0000075	J,DX MB q	0.000053	0.0000004	ug/L		01/08/20 11:27	01/13/20 19:28	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	57		25 - 164				01/08/20 11:27	01/13/20 19:28	1
13C-2,3,7,8-TCDF	59		24 - 169				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,7,8-PeCDD	58		25 - 181				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,7,8-PeCDF	59		24 - 185				01/08/20 11:27	01/13/20 19:28	1
13C-2,3,4,7,8-PeCDF	64		21 - 178				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,4,7,8-HxCDD	61		32 - 141				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,6,7,8-HxCDD	52		28 - 130				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,4,7,8-HxCDF	59		26 - 152				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,6,7,8-HxCDF	51		26 - 123				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,7,8,9-HxCDF	54		29 - 147				01/08/20 11:27	01/13/20 19:28	1
13C-2,3,4,6,7,8-HxCDF	51		28 - 136				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,4,6,7,8-HpCDD	45		23 - 140				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,4,6,7,8-HpCDF	48		28 - 143				01/08/20 11:27	01/13/20 19:28	1
13C-1,2,3,4,7,8,9-HpCDF	56		26 - 138				01/08/20 11:27	01/13/20 19:28	1
13C-OCDD	34		17 - 157				01/08/20 11:27	01/13/20 19:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	92		35 - 197				01/08/20 11:27	01/13/20 19:28	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: EPSW001IE01_20191226

Lab Sample ID: 440-258216-5

Date Collected: 12/26/19 07:40

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000011	0.00000069	ug/L		01/08/20 11:27	01/16/20 15:52	1
Isotope Dilution									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	63		24 - 169				01/08/20 11:27	01/16/20 15:52	1
Surrogate									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	91		35 - 197				01/08/20 11:27	01/16/20 15:52	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/28/19 09:46	12/30/19 18:22	1
Copper	6.2		2.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:22	1
Lead	ND		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:22	1
Selenium	0.91	J,DX	2.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:22	1
Zinc	38		20	2.5	ug/L		12/28/19 09:46	12/30/19 18:22	1
Iron	74		20	8.0	ug/L		12/28/19 09:46	12/30/19 18:22	1
Arsenic	1.1		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:22	1
Manganese	1.8		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:22	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/30/19 11:16	12/30/19 20:39	1
Copper	2.6		2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:39	1
Lead	ND		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:39	1
Selenium	ND		2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:39	1
Zinc	40		20	2.5	ug/L		12/30/19 11:16	12/30/19 20:39	1
Iron	35		20	8.0	ug/L		12/30/19 11:16	12/30/19 20:39	1
Arsenic	0.95	J,DX	1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:39	1
Manganese	1.2		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:39	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/31/19 12:32	01/02/20 13:56	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 08:29	01/06/20 21:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	2.0		2.0	1.0	mg/L			12/27/19 16:12	1

Client Sample ID: EPSW002BG01_20191226

Lab Sample ID: 440-258216-6

Date Collected: 12/26/19 07:30

Matrix: Water

Date Received: 12/27/19 11:20

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	620		25	13	mg/L			12/27/19 20:28	50

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: EPSW002BG01_20191226

Lab Sample ID: 440-258216-6

Date Collected: 12/26/19 07:30

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.0000016	J,DX q	0.000010	0.0000005	ug/L		01/08/20 11:27	01/13/20 20:14	1
2,3,7,8-TCDF	ND		0.000010	0.0000003	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,7,8-PeCDD	ND		0.000052	0.0000006	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,7,8-PeCDF	0.0000011	J,DX q	0.000052	0.0000006	ug/L		01/08/20 11:27	01/13/20 20:14	1
2,3,4,7,8-PeCDF	ND		0.000052	0.0000006	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,4,7,8-HxCDD	0.0000018	J,DX MB	0.000052	0.0000005	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,6,7,8-HxCDD	ND		0.000052	0.0000005	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,7,8,9-HxCDD	0.0000011	J,DX MB	0.000052	0.0000004	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,4,7,8-HxCDF	0.0000016	J,DX q	0.000052	0.0000006	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,6,7,8-HxCDF	0.00000094	J,DX q	0.000052	0.0000007	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,7,8,9-HxCDF	0.00000090	J,DX MB q	0.000052	0.0000005	ug/L		01/08/20 11:27	01/13/20 20:14	1
2,3,4,6,7,8-HxCDF	0.00000056	J,DX MB q	0.000052	0.0000005	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,4,6,7,8-HpCDD	0.0000023	J,DX MB q	0.000052	0.0000004	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,4,6,7,8-HpCDF	0.0000036	J,DX MB	0.000052	0.0000007	ug/L		01/08/20 11:27	01/13/20 20:14	1
1,2,3,4,7,8,9-HpCDF	0.0000012	J,DX q	0.000052	0.0000009	ug/L		01/08/20 11:27	01/13/20 20:14	1
OCDD	0.000017	J,DX MB	0.00010	0.0000007	ug/L		01/08/20 11:27	01/13/20 20:14	1
OCDF	0.000069	J,DX MB	0.00010	0.0000007	ug/L		01/08/20 11:27	01/13/20 20:14	1
Total TCDD	0.0000016	J,DX q	0.000010	0.0000005	ug/L		01/08/20 11:27	01/13/20 20:14	1
Total TCDF	ND		0.000010	0.0000003	ug/L		01/08/20 11:27	01/13/20 20:14	1
Total PeCDD	ND		0.000052	0.0000006	ug/L		01/08/20 11:27	01/13/20 20:14	1
Total PeCDF	0.0000017	J,DX q	0.000052	0.0000006	ug/L		01/08/20 11:27	01/13/20 20:14	1
Total HxCDD	0.0000034	J,DX MB	0.000052	0.0000004	ug/L		01/08/20 11:27	01/13/20 20:14	1
Total HxCDF	0.0000060	J,DX MB q	0.000052	0.0000005	ug/L		01/08/20 11:27	01/13/20 20:14	1
Total HpCDD	0.0000049	J,DX MB q	0.000052	0.0000004	ug/L		01/08/20 11:27	01/13/20 20:14	1
Total HpCDF	0.0000039	J,DX MB q	0.000052	0.0000007	ug/L		01/08/20 11:27	01/13/20 20:14	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	57		25 - 164				01/08/20 11:27	01/13/20 20:14	1
13C-2,3,7,8-TCDF	59		24 - 169				01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,7,8-PeCDD	59		25 - 181				01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,7,8-PeCDF	59		24 - 185				01/08/20 11:27	01/13/20 20:14	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: EPSW002BG01_20191226

Lab Sample ID: 440-258216-6

Date Collected: 12/26/19 07:30

Matrix: Water

Date Received: 12/27/19 11:20

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,4,7,8-PeCDF	64		21 - 178	01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,4,7,8-HxCDD	63		32 - 141	01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,6,7,8-HxCDD	52		28 - 130	01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,4,7,8-HxCDF	60		26 - 152	01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,6,7,8-HxCDF	51		26 - 123	01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,7,8,9-HxCDF	56		29 - 147	01/08/20 11:27	01/13/20 20:14	1
13C-2,3,4,6,7,8-HxCDF	54		28 - 136	01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,4,6,7,8-HpCDD	53		23 - 140	01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,4,6,7,8-HpCDF	54		28 - 143	01/08/20 11:27	01/13/20 20:14	1
13C-1,2,3,4,7,8,9-HpCDF	61		26 - 138	01/08/20 11:27	01/13/20 20:14	1
13C-OCDD	49		17 - 157	01/08/20 11:27	01/13/20 20:14	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	96		35 - 197	01/08/20 11:27	01/13/20 20:14	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/28/19 09:46	12/30/19 18:24	1
Copper	1.6	J,DX	2.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:24	1
Lead	ND		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:24	1
Selenium	2.1		2.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:24	1
Zinc	67		20	2.5	ug/L		12/28/19 09:46	12/30/19 18:24	1
Iron	37		20	8.0	ug/L		12/28/19 09:46	12/30/19 18:24	1
Arsenic	1.1		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:24	1
Manganese	2.1		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 18:24	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		12/30/19 11:16	12/30/19 20:41	1
Copper	1.6	J,DX	2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:41	1
Lead	ND		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:41	1
Selenium	1.4	J,DX	2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:41	1
Zinc	69		20	2.5	ug/L		12/30/19 11:16	12/30/19 20:41	1
Iron	8.9	J,DX	20	8.0	ug/L		12/30/19 11:16	12/30/19 20:41	1
Arsenic	1.1		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:41	1
Manganese	1.7		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:41	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/31/19 12:32	01/02/20 13:58	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 08:29	01/06/20 21:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.6	J,DX	2.0	1.0	mg/L			12/27/19 16:12	1

File name:	C:\LS13320\440-258216D1_6 Jan 2020_18.14.18.\$ls		
	440-258216D1_6 Jan 2020_18.14.18.\$ls		
File ID:	440-258216D1		
Sample ID:	440-258216D1		
Operator:	1106		
Run number:	5		
Comment 1:	ASTM D4464M , LPSA 1		
LS 13 320	Aqueous Liquid Module		
Start time:	18:13 6 Jan 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	2%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

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PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

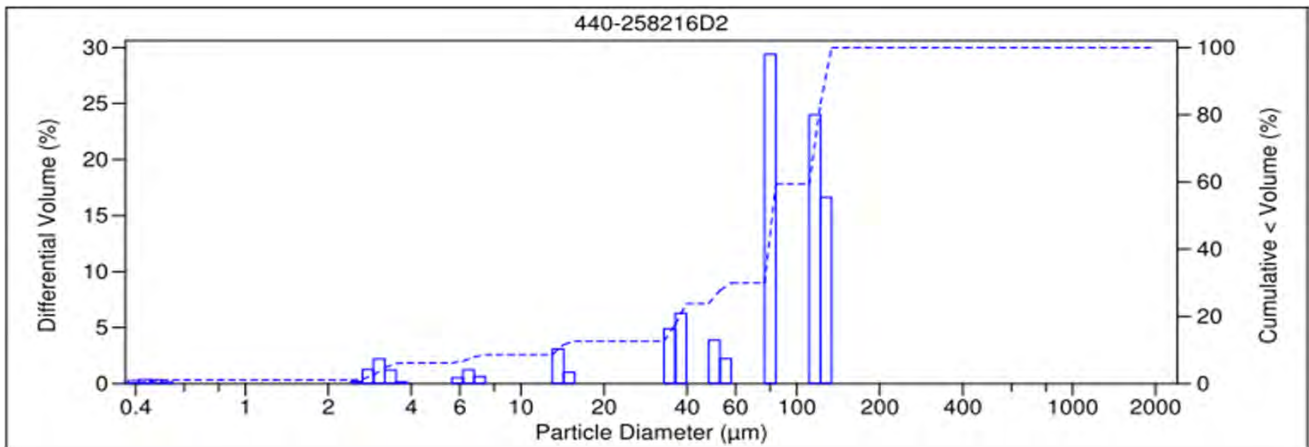
Haley & Aldrich

Date Sampled: 12/26/19
 Date Received: 12/27/19
 Work Order No: 440-258216
 Date Analyzed: 01/06/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
A1BMP0003_2019121226		Very Fine Sand	0.081

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	12.22	57.83	23.78	6.17	29.95



V 3.0

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PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

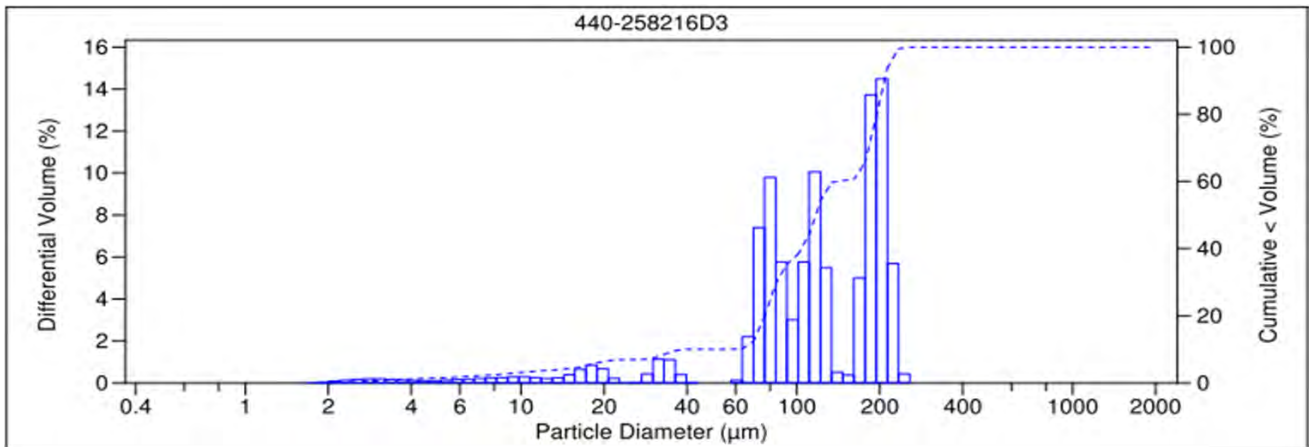
Haley & Aldrich

Date Sampled: 12/26/19
 Date Received: 12/27/19
 Work Order No: 440-258216
 Date Analyzed: 01/06/20
 Method: ASTM D4464M

Project:

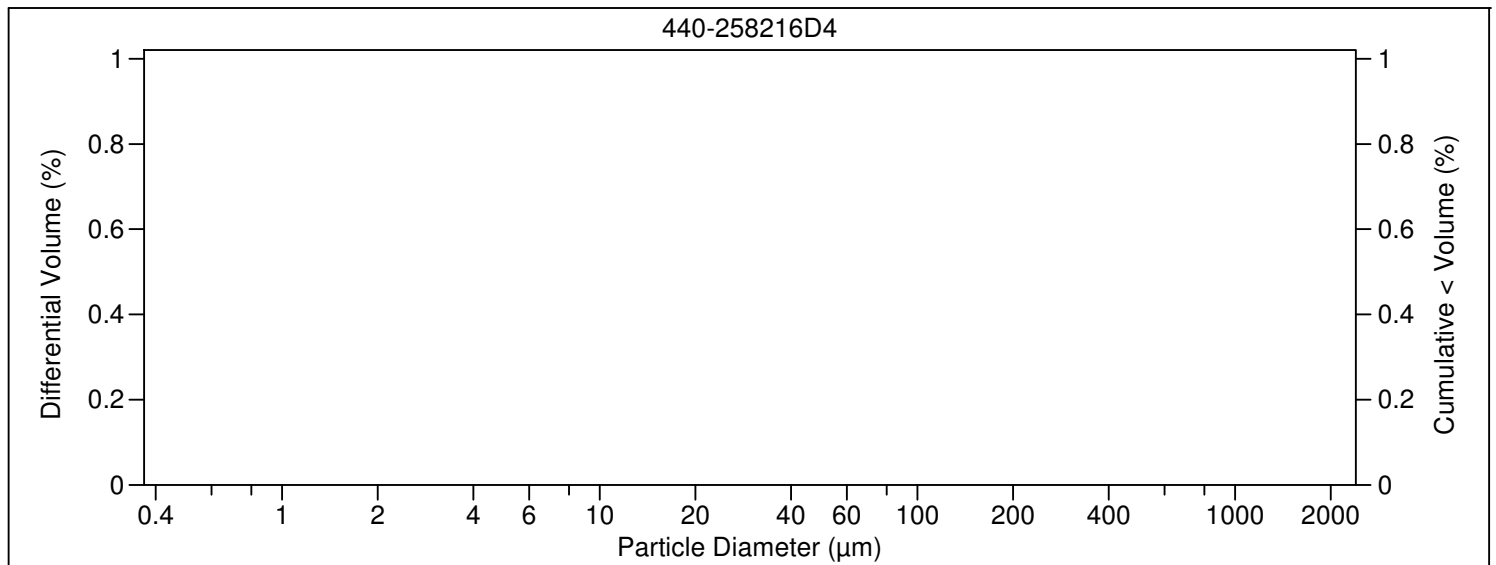
Sample ID	Depth ft	Description	Mean Grain Size mm
LXBMP0011_2019121226		Fine Sand	0.128

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.13	44.16	45.48	9.01	1.22	10.23



V 3.0

File name:	C:\LS13320\440-258216D4_6 Jan 2020_18.40.46.\$ls		
	440-258216D4_6 Jan 2020_18.40.46.\$ls		
File ID:	440-258216D4		
Sample ID:	440-258216D4		
Operator:	1106		
Run number:	8		
Comment 1:	ASTM D4464M , LPSA 1		
Optical model:	Fraunhofer.rf780d		
Residual:	4.22%		
LS 13 320	Aqueous Liquid Module		
Start time:	18:39 6 Jan 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	1%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00


Volume Statistics (Arithmetic) 440-258216D4_6 Jan 2020_18.40.46.\$ls

Calculations from 0.375 µm to 2000 µm

Volume:	0%		
Mean:	0.000 µm	S.D.:	0 µm
Median:	0.000 µm	Variance:	0 µm ²
Mean/Median ratio:	0.000	Skewness:	0
Mode:	0.000 µm	Kurtosis:	0

d ₁₀ :	0.000 µm	d ₅₀ :	0.000 µm	d ₉₀ :	0.000 µm
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Folk and Ward Statistics (Phi)

Mean:	0.00	Median:	0.00	Deviation:	0.00
Skewness:	0.00	Kurtosis:	0.00		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
0.000 µm	0.000 µm	0.000 µm	0.000 µm	0.000 µm	0.000 µm	0.000 µm	0.000 µm

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Particle Diameter µm	440-258216D 4_6 Jan 2020_18.40 .46.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	0
250	0
500	0
1000	0
2000	0

440-258216D4_6 Jan 2020_18.40.46.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0		
2.660	0	176.9	0		
2.920	0	194.2	0		
3.206	0	213.2	0		
3.519	0	234.1	0		
3.863	0	256.9	0		
4.241	0	282.1	0		
4.656	0	309.6	0		
5.111	0	339.9	0		
5.611	0	373.1	0		
6.159	0	409.6	0		
6.761	0	449.7	0		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

Method Summary

Client: Haley & Aldrich, Inc.

Job ID: 440-258216-1

Project/Site: BMP Performance OF 001, 002, and/or 009

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
1613B	Dioxins and Furans (HRGC/HRMS)	40CFR136A	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV
FILTRATION	Sample Filtration	None	TAL IRV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

ASTM = ASTM International

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: A1BMP0002_20191226

Lab Sample ID: 440-258216-1

Date Collected: 12/26/19 08:40

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			985 mL	20 uL	349535	01/08/20 11:27	NIR	TAL SAC
Total/NA	Analysis	1613B		1			350522	01/13/20 16:24	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588503	12/30/19 11:16	EP	TAL IRV
Dissolved	Analysis	200.8		1			588634	12/30/19 20:24	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	588198	12/28/19 09:46	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			588597	12/30/19 18:09	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	588989	01/03/20 08:29	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/06/20 21:27	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588732	12/31/19 12:26	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588954	01/02/20 13:08	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	588223	12/27/19 16:12	KL	TAL IRV
Total/NA	Analysis	D4464		1			42967	01/06/20 18:14	C4LT	ECL 1

Client Sample ID: A1BMP0003_20191226

Lab Sample ID: 440-258216-2

Date Collected: 12/26/19 08:20

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			906.4 mL	20 uL	349535	01/08/20 11:27	NIR	TAL SAC
Total/NA	Analysis	1613B		1			350522	01/13/20 17:10	ALM	TAL SAC
Total/NA	Prep	1613B	RA		906.4 mL	20 uL	349535	01/08/20 11:27	NIR	TAL SAC
Total/NA	Analysis	1613B	RA	1			351318	01/16/20 14:36	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588503	12/30/19 11:16	EP	TAL IRV
Dissolved	Analysis	200.8		1			588634	12/30/19 20:27	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	588198	12/28/19 09:46	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			588597	12/30/19 18:11	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	588989	01/03/20 08:29	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/06/20 21:33	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588732	12/31/19 12:26	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588954	01/02/20 13:10	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	588223	12/27/19 16:12	KL	TAL IRV
Total/NA	Analysis	D4464		1			42967	01/06/20 18:23	C4LT	ECL 1

Client Sample ID: LXBMP0011_20191226

Lab Sample ID: 440-258216-3

Date Collected: 12/26/19 09:20

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			920.4 mL	20 uL	349535	01/08/20 11:27	NIR	TAL SAC
Total/NA	Analysis	1613B		1			350522	01/13/20 17:56	ALM	TAL SAC

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: LXBMP0011_20191226

Lab Sample ID: 440-258216-3

Date Collected: 12/26/19 09:20

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588503	12/30/19 11:16	EP	TAL IRV
Dissolved	Analysis	200.8		1			588634	12/30/19 20:29	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	588198	12/28/19 09:46	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			588597	12/30/19 18:14	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	588989	01/03/20 08:29	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/06/20 21:35	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588737	12/31/19 12:32	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588954	01/02/20 13:52	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	350 mL	1000 mL	588223	12/27/19 16:12	KL	TAL IRV
Total/NA	Analysis	D4464		1			42967	01/06/20 18:31	C4LT	ECL 1

Client Sample ID: LXBMP0012_20191226

Lab Sample ID: 440-258216-4

Date Collected: 12/26/19 09:00

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			989 mL	20 uL	349535	01/08/20 11:27	NIR	TAL SAC
Total/NA	Analysis	1613B		1			350522	01/13/20 18:42	ALM	TAL SAC
Total/NA	Prep	1613B	RA		989 mL	20 uL	349535	01/08/20 11:27	NIR	TAL SAC
Total/NA	Analysis	1613B	RA	1			351318	01/16/20 15:14	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588503	12/30/19 11:16	EP	TAL IRV
Dissolved	Analysis	200.8		1			588634	12/30/19 20:31	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	588198	12/28/19 09:46	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			588597	12/30/19 18:16	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	588989	01/03/20 08:29	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/06/20 21:37	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588737	12/31/19 12:32	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588954	01/02/20 13:54	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	588223	12/27/19 16:12	KL	TAL IRV
Total/NA	Analysis	D4464		1			42967	01/06/20 18:40	C4LT	ECL 1

Client Sample ID: EPSW001IE01_20191226

Lab Sample ID: 440-258216-5

Date Collected: 12/26/19 07:40

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			588134	12/27/19 20:12	NTN	TAL IRV
Total/NA	Prep	1613B			936.6 mL	20 uL	349535	01/08/20 11:27	NIR	TAL SAC
Total/NA	Analysis	1613B		1			350522	01/13/20 19:28	ALM	TAL SAC
Total/NA	Prep	1613B	RA		936.6 mL	20 uL	349535	01/08/20 11:27	NIR	TAL SAC
Total/NA	Analysis	1613B	RA	1			351318	01/16/20 15:52	ALM	TAL SAC

Eurofins Calscience Irvine

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Client Sample ID: EPSW001IE01_20191226

Lab Sample ID: 440-258216-5

Date Collected: 12/26/19 07:40

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588503	12/30/19 11:16	EP	TAL IRV
Dissolved	Analysis	200.8		1			588634	12/30/19 20:39	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	588198	12/28/19 09:46	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			588597	12/30/19 18:22	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	588989	01/03/20 08:29	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/06/20 21:39	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588737	12/31/19 12:32	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588954	01/02/20 13:56	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	588223	12/27/19 16:12	KL	TAL IRV

Client Sample ID: EPSW002BG01_20191226

Lab Sample ID: 440-258216-6

Date Collected: 12/26/19 07:30

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			588134	12/27/19 20:28	NTN	TAL IRV
Total/NA	Prep	1613B			964.3 mL	20 uL	349535	01/08/20 11:27	NIR	TAL SAC
Total/NA	Analysis	1613B		1			350522	01/13/20 20:14	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	588503	12/30/19 11:16	EP	TAL IRV
Dissolved	Analysis	200.8		1			588634	12/30/19 20:41	B1H	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	588198	12/28/19 09:46	M1G	TAL IRV
Total Recoverable	Analysis	200.8		1			588597	12/30/19 18:24	B1H	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	588288	12/28/19 09:35	EP	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	588989	01/03/20 08:29	MEM	TAL IRV
Dissolved	Analysis	245.1		1			589374	01/06/20 21:42	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	588737	12/31/19 12:32	MEM	TAL IRV
Total/NA	Analysis	245.1		1			588954	01/02/20 13:58	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	588223	12/27/19 16:12	KL	TAL IRV

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-588134/6
Matrix: Water
Analysis Batch: 588134

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.25	mg/L			12/27/19 12:01	1

Lab Sample ID: LCS 440-588134/5
Matrix: Water
Analysis Batch: 588134

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	5.04		mg/L		101	90 - 110

Lab Sample ID: 440-258216-6 MS
Matrix: Water
Analysis Batch: 588134

Client Sample ID: EPSW002BG01_20191226
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	620		250	829		mg/L		84	80 - 120

Lab Sample ID: 440-258216-6 MSD
Matrix: Water
Analysis Batch: 588134

Client Sample ID: EPSW002BG01_20191226
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	620		250	872		mg/L		101	80 - 120	5	20

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-349535/1-A
Matrix: Water
Analysis Batch: 350522

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349535

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000007	ug/L		01/08/20 11:27	01/13/20 14:52	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000007	ug/L		01/08/20 11:27	01/13/20 14:52	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000005	ug/L		01/08/20 11:27	01/13/20 14:52	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000005	ug/L		01/08/20 11:27	01/13/20 14:52	1
1,2,3,4,7,8-HxCDD	0.00000175	J,DX	0.000050	0.0000004	ug/L		01/08/20 11:27	01/13/20 14:52	1
1,2,3,6,7,8-HxCDD	0.000000762	J,DX	0.000050	0.0000005	ug/L		01/08/20 11:27	01/13/20 14:52	1
1,2,3,7,8,9-HxCDD	0.00000109	J,DX	0.000050	0.0000004	ug/L		01/08/20 11:27	01/13/20 14:52	1
1,2,3,4,7,8-HxCDF	ND		0.000050	0.0000007	ug/L		01/08/20 11:27	01/13/20 14:52	1
1,2,3,6,7,8-HxCDF	ND		0.000050	0.0000008	ug/L		01/08/20 11:27	01/13/20 14:52	1
1,2,3,7,8,9-HxCDF	0.00000119	J,DX	0.000050	0.0000005	ug/L		01/08/20 11:27	01/13/20 14:52	1
2,3,4,6,7,8-HxCDF	0.000000647	J,DX	0.000050	0.0000005	ug/L		01/08/20 11:27	01/13/20 14:52	1

Eurofins Calscience Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-349535/1-A
Matrix: Water
Analysis Batch: 350522

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349535

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	0.00000175	J,DX	0.000050	0.0000004	ug/L		01/08/20 11:27	01/13/20 14:52	1
				0					
1,2,3,4,6,7,8-HpCDF	0.00000215	J,DX	0.000050	0.0000004	ug/L		01/08/20 11:27	01/13/20 14:52	1
				7					
1,2,3,4,7,8,9-HpCDF	ND		0.000050	0.0000005	ug/L		01/08/20 11:27	01/13/20 14:52	1
				6					
OCDD	0.0000115	J,DX	0.00010	0.0000007	ug/L		01/08/20 11:27	01/13/20 14:52	1
				3					
OCDF	0.00000502	J,DX	0.00010	0.0000007	ug/L		01/08/20 11:27	01/13/20 14:52	1
				9					
Total TCDD	ND		0.000010	0.0000007	ug/L		01/08/20 11:27	01/13/20 14:52	1
				9					
Total TCDF	0.000000535	J,DX	0.000010	0.0000004	ug/L		01/08/20 11:27	01/13/20 14:52	1
				1					
Total PeCDD	ND		0.000050	0.0000007	ug/L		01/08/20 11:27	01/13/20 14:52	1
				4					
Total PeCDF	ND		0.000050	0.0000005	ug/L		01/08/20 11:27	01/13/20 14:52	1
				3					
Total HxCDD	0.00000360	J,DX	0.000050	0.0000004	ug/L		01/08/20 11:27	01/13/20 14:52	1
				6					
Total HxCDF	0.00000184	J,DX	0.000050	0.0000005	ug/L		01/08/20 11:27	01/13/20 14:52	1
				8					
Total HpCDD	0.00000357	J,DX	0.000050	0.0000004	ug/L		01/08/20 11:27	01/13/20 14:52	1
				0					
Total HpCDF	0.00000309	J,DX	0.000050	0.0000004	ug/L		01/08/20 11:27	01/13/20 14:52	1
				7					

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	63		25 - 164	01/08/20 11:27	01/13/20 14:52	1
13C-2,3,7,8-TCDF	65		24 - 169	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,7,8-PeCDD	69		25 - 181	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,7,8-PeCDF	68		24 - 185	01/08/20 11:27	01/13/20 14:52	1
13C-2,3,4,7,8-PeCDF	74		21 - 178	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,4,7,8-HxCDD	75		32 - 141	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,6,7,8-HxCDD	64		28 - 130	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,4,7,8-HxCDF	73		26 - 152	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,6,7,8-HxCDF	62		26 - 123	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,7,8,9-HxCDF	67		29 - 147	01/08/20 11:27	01/13/20 14:52	1
13C-2,3,4,6,7,8-HxCDF	66		28 - 136	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,4,6,7,8-HpCDD	64		23 - 140	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	01/08/20 11:27	01/13/20 14:52	1
13C-1,2,3,4,7,8,9-HpCDF	71		26 - 138	01/08/20 11:27	01/13/20 14:52	1
13C-OCDD	63		17 - 157	01/08/20 11:27	01/13/20 14:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	96		35 - 197	01/08/20 11:27	01/13/20 14:52	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-349535/2-A
Matrix: Water
Analysis Batch: 350522

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 349535
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	0.000200	0.000194		ug/L		97	67 - 158
2,3,7,8-TCDF	0.000200	0.000184	MB	ug/L		92	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.000970		ug/L		97	70 - 142
1,2,3,7,8-PeCDF	0.00100	0.000964		ug/L		96	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.000876		ug/L		88	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.000883	MB	ug/L		88	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.000966	MB	ug/L		97	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.000917	MB	ug/L		92	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.000860		ug/L		86	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.000900		ug/L		90	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.000917	MB	ug/L		92	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.000914	MB	ug/L		91	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.000990	MB	ug/L		99	70 - 140
1,2,3,4,6,7,8-HpCDF	0.00100	0.000972	MB	ug/L		97	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.000900		ug/L		90	78 - 138
OCDD	0.00200	0.00194	MB	ug/L		97	78 - 144
OCDF	0.00200	0.00199	MB	ug/L		99	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	64		20 - 175
13C-2,3,7,8-TCDF	65		22 - 152
13C-1,2,3,7,8-PeCDD	69		21 - 227
13C-1,2,3,7,8-PeCDF	66		21 - 192
13C-2,3,4,7,8-PeCDF	73		13 - 328
13C-1,2,3,4,7,8-HxCDD	74		21 - 193
13C-1,2,3,6,7,8-HxCDD	60		25 - 163
13C-1,2,3,4,7,8-HxCDF	69		19 - 202
13C-1,2,3,6,7,8-HxCDF	61		21 - 159
13C-1,2,3,7,8,9-HxCDF	65		17 - 205
13C-2,3,4,6,7,8-HxCDF	64		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	62		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	63		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	71		20 - 186
13C-OCDD	62		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	97		31 - 191

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: MB 320-349535/1-A
Matrix: Water
Analysis Batch: 351071

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349535

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF - RA	ND		0.000010	0.0000005	ug/L		01/08/20 11:27	01/15/20 15:46	1

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF - RA	70		24 - 169	01/08/20 11:27	01/15/20 15:46	1

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD - RA	96		35 - 197	01/08/20 11:27	01/15/20 15:46	1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-588198/1-A
Matrix: Water
Analysis Batch: 588597

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 588198

<i>Analyte</i>	<i>MB Result</i>	<i>MB Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Cadmium	ND		1.0	0.25	ug/L		12/28/19 09:46	12/30/19 17:42	1
Copper	ND		2.0	0.50	ug/L		12/28/19 09:46	12/30/19 17:42	1
Lead	ND		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 17:42	1
Selenium	ND		2.0	0.50	ug/L		12/28/19 09:46	12/30/19 17:42	1
Zinc	ND		20	2.5	ug/L		12/28/19 09:46	12/30/19 17:42	1
Iron	ND		20	8.0	ug/L		12/28/19 09:46	12/30/19 17:42	1
Arsenic	ND		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 17:42	1
Manganese	ND		1.0	0.50	ug/L		12/28/19 09:46	12/30/19 17:42	1

Lab Sample ID: LCS 440-588198/2-A
Matrix: Water
Analysis Batch: 588597

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 588198

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
Cadmium	80.0	85.7		ug/L		107	85 - 115
Copper	80.0	88.0		ug/L		110	85 - 115
Lead	80.0	83.1		ug/L		104	85 - 115
Selenium	80.0	84.9		ug/L		106	85 - 115
Zinc	80.0	84.2		ug/L		105	85 - 115
Iron	800	874		ug/L		109	85 - 115
Arsenic	80.0	82.8		ug/L		104	85 - 115
Manganese	80.0	86.3		ug/L		108	85 - 115

Lab Sample ID: 440-258216-4 MS
Matrix: Water
Analysis Batch: 588597

Client Sample ID: LXBMP0012_20191226
Prep Type: Total Recoverable
Prep Batch: 588198

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
Cadmium	ND		80.0	79.1		ug/L		99	70 - 130
Copper	1.4	J,DX	80.0	77.5		ug/L		95	70 - 130
Lead	ND		80.0	77.3		ug/L		97	70 - 130
Selenium	0.80	J,DX	80.0	83.6		ug/L		103	70 - 130
Zinc	27		80.0	92.8		ug/L		83	70 - 130
Iron	120		800	912		ug/L		99	70 - 130
Arsenic	1.3		80.0	79.6		ug/L		98	70 - 130
Manganese	5.3		80.0	84.6		ug/L		99	70 - 130

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-258216-4 MSD
Matrix: Water
Analysis Batch: 588597

Client Sample ID: LXBMP0012_20191226
Prep Type: Total Recoverable
Prep Batch: 588198

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier							
Cadmium	ND		80.0	79.2		ug/L		99	70 - 130	0	20	
Copper	1.4	J,DX	80.0	78.8		ug/L		97	70 - 130	2	20	
Lead	ND		80.0	76.9		ug/L		96	70 - 130	1	20	
Selenium	0.80	J,DX	80.0	81.5		ug/L		101	70 - 130	3	20	
Zinc	27		80.0	91.3		ug/L		81	70 - 130	2	20	
Iron	120		800	907		ug/L		99	70 - 130	1	20	
Arsenic	1.3		80.0	79.0		ug/L		97	70 - 130	1	20	
Manganese	5.3		80.0	83.9		ug/L		98	70 - 130	1	20	

Lab Sample ID: MB 440-588288/1-D
Matrix: Water
Analysis Batch: 588634

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 588503

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Cadmium	ND		1.0	0.25	ug/L		12/30/19 11:16	12/30/19 20:12		1
Copper	ND		2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:12		1
Lead	ND		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:12		1
Selenium	ND		2.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:12		1
Zinc	ND		20	2.5	ug/L		12/30/19 11:16	12/30/19 20:12		1
Iron	ND		20	8.0	ug/L		12/30/19 11:16	12/30/19 20:12		1
Arsenic	ND		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:12		1
Manganese	ND		1.0	0.50	ug/L		12/30/19 11:16	12/30/19 20:12		1

Lab Sample ID: LCS 440-588288/2-D
Matrix: Water
Analysis Batch: 588634

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 588503

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Added	Result						Qualifier
Cadmium	80.0	79.6		ug/L		100	85 - 115	
Copper	80.0	77.1		ug/L		96	85 - 115	
Lead	80.0	79.5		ug/L		99	85 - 115	
Selenium	80.0	80.7		ug/L		101	85 - 115	
Zinc	80.0	82.0		ug/L		103	85 - 115	
Iron	800	808		ug/L		101	85 - 115	
Arsenic	80.0	81.1		ug/L		101	85 - 115	
Manganese	80.0	80.3		ug/L		100	85 - 115	

Lab Sample ID: 440-258227-B-2-G MS
Matrix: Water
Analysis Batch: 588634

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 588503

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Cadmium	ND		80.0	78.9		ug/L		99	70 - 130	
Copper	5.0		80.0	80.9		ug/L		95	70 - 130	
Lead	ND		80.0	79.3		ug/L		99	70 - 130	
Selenium	ND		80.0	80.8		ug/L		101	70 - 130	
Zinc	10	J,DX	80.0	88.9		ug/L		98	70 - 130	
Iron	45		800	842		ug/L		100	70 - 130	
Arsenic	1.3		80.0	81.1		ug/L		100	70 - 130	

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-258227-B-2-G MS
Matrix: Water
Analysis Batch: 588634

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 588503

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	5.1		80.0	85.0		ug/L		100	70 - 130

Lab Sample ID: 440-258227-B-2-H MSD
Matrix: Water
Analysis Batch: 588634

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 588503

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cadmium	ND		80.0	80.6		ug/L		101	70 - 130	2	20
Copper	5.0		80.0	81.4		ug/L		96	70 - 130	1	20
Lead	ND		80.0	81.1		ug/L		101	70 - 130	2	20
Selenium	ND		80.0	81.2		ug/L		102	70 - 130	0	20
Zinc	10	J,DX	80.0	90.8		ug/L		101	70 - 130	2	20
Iron	45		800	843		ug/L		100	70 - 130	0	20
Arsenic	1.3		80.0	82.2		ug/L		101	70 - 130	1	20
Manganese	5.1		80.0	85.7		ug/L		101	70 - 130	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-588732/1-A
Matrix: Water
Analysis Batch: 588954

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 588732

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/31/19 12:26	01/02/20 12:14	1

Lab Sample ID: LCS 440-588732/2-A
Matrix: Water
Analysis Batch: 588954

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 588732

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	4.00	3.66		ug/L		91	85 - 115

Lab Sample ID: 440-258290-K-1-E MS
Matrix: Water
Analysis Batch: 588954

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 588732

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		4.00	3.51		ug/L		88	75 - 125

Lab Sample ID: 440-258290-K-1-F MSD
Matrix: Water
Analysis Batch: 588954

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 588732

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	ND		4.00	3.63		ug/L		91	75 - 125	3	20

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: MB 440-588737/1-A
Matrix: Water
Analysis Batch: 588954

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 588737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		12/31/19 12:32	01/02/20 13:12	1

Lab Sample ID: LCS 440-588737/2-A
Matrix: Water
Analysis Batch: 588954

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 588737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	3.55		ug/L		89	85 - 115

Lab Sample ID: 440-258077-D-1-H MS
Matrix: Water
Analysis Batch: 588954

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 588737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.43		ug/L		86	75 - 125

Lab Sample ID: 440-258077-D-1-I MSD
Matrix: Water
Analysis Batch: 588954

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 588737

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.55		ug/L		89	75 - 125	3	20

Lab Sample ID: MB 440-588288/1-E
Matrix: Water
Analysis Batch: 589374

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 588989

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		01/03/20 08:29	01/06/20 21:22	1

Lab Sample ID: LCS 440-588288/2-E
Matrix: Water
Analysis Batch: 589374

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 588989

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	4.09		ug/L		102	85 - 115

Lab Sample ID: 440-258216-1 MS
Matrix: Water
Analysis Batch: 589374

Client Sample ID: A1BMP0002_20191226
Prep Type: Dissolved
Prep Batch: 588989

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.74		ug/L		94	75 - 125

Lab Sample ID: 440-258216-1 MSD
Matrix: Water
Analysis Batch: 589374

Client Sample ID: A1BMP0002_20191226
Prep Type: Dissolved
Prep Batch: 588989

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.95		ug/L		99	75 - 125	5	20

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-588223/1
Matrix: Water
Analysis Batch: 588223

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			12/27/19 16:12	1

Lab Sample ID: LCS 440-588223/2
Matrix: Water
Analysis Batch: 588223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	969		mg/L		97	85 - 115

Lab Sample ID: 440-258218-A-1 DU
Matrix: Water
Analysis Batch: 588223

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	28		27.0		mg/L		4	10

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

HPLC/IC

Analysis Batch: 588134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-5	EPSW001IE01_20191226	Total/NA	Water	300.0	
440-258216-6	EPSW002BG01_20191226	Total/NA	Water	300.0	
MB 440-588134/6	Method Blank	Total/NA	Water	300.0	
LCS 440-588134/5	Lab Control Sample	Total/NA	Water	300.0	
440-258216-6 MS	EPSW002BG01_20191226	Total/NA	Water	300.0	
440-258216-6 MSD	EPSW002BG01_20191226	Total/NA	Water	300.0	

Specialty Organics

Prep Batch: 349535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Total/NA	Water	1613B	
440-258216-2	A1BMP0003_20191226	Total/NA	Water	1613B	
440-258216-2 - RA	A1BMP0003_20191226	Total/NA	Water	1613B	
440-258216-3	LXBMP0011_20191226	Total/NA	Water	1613B	
440-258216-4	LXBMP0012_20191226	Total/NA	Water	1613B	
440-258216-4 - RA	LXBMP0012_20191226	Total/NA	Water	1613B	
440-258216-5	EPSW001IE01_20191226	Total/NA	Water	1613B	
440-258216-5 - RA	EPSW001IE01_20191226	Total/NA	Water	1613B	
440-258216-6	EPSW002BG01_20191226	Total/NA	Water	1613B	
MB 320-349535/1-A	Method Blank	Total/NA	Water	1613B	
MB 320-349535/1-A - RA	Method Blank	Total/NA	Water	1613B	
LCS 320-349535/2-A	Lab Control Sample	Total/NA	Water	1613B	

Analysis Batch: 350522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Total/NA	Water	1613B	349535
440-258216-2	A1BMP0003_20191226	Total/NA	Water	1613B	349535
440-258216-3	LXBMP0011_20191226	Total/NA	Water	1613B	349535
440-258216-4	LXBMP0012_20191226	Total/NA	Water	1613B	349535
440-258216-5	EPSW001IE01_20191226	Total/NA	Water	1613B	349535
440-258216-6	EPSW002BG01_20191226	Total/NA	Water	1613B	349535
MB 320-349535/1-A	Method Blank	Total/NA	Water	1613B	349535
LCS 320-349535/2-A	Lab Control Sample	Total/NA	Water	1613B	349535

Analysis Batch: 351071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-349535/1-A - RA	Method Blank	Total/NA	Water	1613B	349535

Analysis Batch: 351318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-2 - RA	A1BMP0003_20191226	Total/NA	Water	1613B	349535
440-258216-4 - RA	LXBMP0012_20191226	Total/NA	Water	1613B	349535
440-258216-5 - RA	EPSW001IE01_20191226	Total/NA	Water	1613B	349535

Metals

Prep Batch: 588198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Total Recoverable	Water	200.2	
440-258216-2	A1BMP0003_20191226	Total Recoverable	Water	200.2	
440-258216-3	LXBMP0011_20191226	Total Recoverable	Water	200.2	

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QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Metals (Continued)

Prep Batch: 588198 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-4	LXBMP0012_20191226	Total Recoverable	Water	200.2	
440-258216-5	EPSW001IE01_20191226	Total Recoverable	Water	200.2	
440-258216-6	EPSW002BG01_20191226	Total Recoverable	Water	200.2	
MB 440-588198/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-588198/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-258216-4 MS	LXBMP0012_20191226	Total Recoverable	Water	200.2	
440-258216-4 MSD	LXBMP0012_20191226	Total Recoverable	Water	200.2	

Filtration Batch: 588288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Dissolved	Water	FILTRATION	
440-258216-2	A1BMP0003_20191226	Dissolved	Water	FILTRATION	
440-258216-3	LXBMP0011_20191226	Dissolved	Water	FILTRATION	
440-258216-4	LXBMP0012_20191226	Dissolved	Water	FILTRATION	
440-258216-5	EPSW001IE01_20191226	Dissolved	Water	FILTRATION	
440-258216-6	EPSW002BG01_20191226	Dissolved	Water	FILTRATION	
MB 440-588288/1-D	Method Blank	Dissolved	Water	FILTRATION	
MB 440-588288/1-E	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-588288/2-D	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 440-588288/2-E	Lab Control Sample	Dissolved	Water	FILTRATION	
440-258216-1 MS	A1BMP0002_20191226	Dissolved	Water	FILTRATION	
440-258216-1 MSD	A1BMP0002_20191226	Dissolved	Water	FILTRATION	
440-258227-B-2-G MS	Matrix Spike	Dissolved	Water	FILTRATION	
440-258227-B-2-H MSD	Matrix Spike Duplicate	Dissolved	Water	FILTRATION	

Prep Batch: 588503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Dissolved	Water	200.2	588288
440-258216-2	A1BMP0003_20191226	Dissolved	Water	200.2	588288
440-258216-3	LXBMP0011_20191226	Dissolved	Water	200.2	588288
440-258216-4	LXBMP0012_20191226	Dissolved	Water	200.2	588288
440-258216-5	EPSW001IE01_20191226	Dissolved	Water	200.2	588288
440-258216-6	EPSW002BG01_20191226	Dissolved	Water	200.2	588288
MB 440-588288/1-D	Method Blank	Dissolved	Water	200.2	588288
LCS 440-588288/2-D	Lab Control Sample	Dissolved	Water	200.2	588288
440-258227-B-2-G MS	Matrix Spike	Dissolved	Water	200.2	588288
440-258227-B-2-H MSD	Matrix Spike Duplicate	Dissolved	Water	200.2	588288

Analysis Batch: 588597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Total Recoverable	Water	200.8	588198
440-258216-2	A1BMP0003_20191226	Total Recoverable	Water	200.8	588198
440-258216-3	LXBMP0011_20191226	Total Recoverable	Water	200.8	588198
440-258216-4	LXBMP0012_20191226	Total Recoverable	Water	200.8	588198
440-258216-5	EPSW001IE01_20191226	Total Recoverable	Water	200.8	588198
440-258216-6	EPSW002BG01_20191226	Total Recoverable	Water	200.8	588198
MB 440-588198/1-A	Method Blank	Total Recoverable	Water	200.8	588198
LCS 440-588198/2-A	Lab Control Sample	Total Recoverable	Water	200.8	588198
440-258216-4 MS	LXBMP0012_20191226	Total Recoverable	Water	200.8	588198
440-258216-4 MSD	LXBMP0012_20191226	Total Recoverable	Water	200.8	588198

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Metals

Analysis Batch: 588634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Dissolved	Water	200.8	588503
440-258216-2	A1BMP0003_20191226	Dissolved	Water	200.8	588503
440-258216-3	LXBMP0011_20191226	Dissolved	Water	200.8	588503
440-258216-4	LXBMP0012_20191226	Dissolved	Water	200.8	588503
440-258216-5	EPSW001IE01_20191226	Dissolved	Water	200.8	588503
440-258216-6	EPSW002BG01_20191226	Dissolved	Water	200.8	588503
MB 440-588288/1-D	Method Blank	Dissolved	Water	200.8	588503
LCS 440-588288/2-D	Lab Control Sample	Dissolved	Water	200.8	588503
440-258227-B-2-G MS	Matrix Spike	Dissolved	Water	200.8	588503
440-258227-B-2-H MSD	Matrix Spike Duplicate	Dissolved	Water	200.8	588503

Prep Batch: 588732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Total/NA	Water	245.1	
440-258216-2	A1BMP0003_20191226	Total/NA	Water	245.1	
MB 440-588732/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-588732/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-258290-K-1-E MS	Matrix Spike	Total/NA	Water	245.1	
440-258290-K-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Prep Batch: 588737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-3	LXBMP0011_20191226	Total/NA	Water	245.1	
440-258216-4	LXBMP0012_20191226	Total/NA	Water	245.1	
440-258216-5	EPSW001IE01_20191226	Total/NA	Water	245.1	
440-258216-6	EPSW002BG01_20191226	Total/NA	Water	245.1	
MB 440-588737/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-588737/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-258077-D-1-H MS	Matrix Spike	Total/NA	Water	245.1	
440-258077-D-1-I MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 588954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Total/NA	Water	245.1	588732
440-258216-2	A1BMP0003_20191226	Total/NA	Water	245.1	588732
440-258216-3	LXBMP0011_20191226	Total/NA	Water	245.1	588737
440-258216-4	LXBMP0012_20191226	Total/NA	Water	245.1	588737
440-258216-5	EPSW001IE01_20191226	Total/NA	Water	245.1	588737
440-258216-6	EPSW002BG01_20191226	Total/NA	Water	245.1	588737
MB 440-588732/1-A	Method Blank	Total/NA	Water	245.1	588732
MB 440-588737/1-A	Method Blank	Total/NA	Water	245.1	588737
LCS 440-588732/2-A	Lab Control Sample	Total/NA	Water	245.1	588732
LCS 440-588737/2-A	Lab Control Sample	Total/NA	Water	245.1	588737
440-258077-D-1-H MS	Matrix Spike	Total/NA	Water	245.1	588737
440-258077-D-1-I MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	588737
440-258290-K-1-E MS	Matrix Spike	Total/NA	Water	245.1	588732
440-258290-K-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	588732

Prep Batch: 588989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Dissolved	Water	245.1	588288

Eurofins Calscience Irvine

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Metals (Continued)

Prep Batch: 588989 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-2	A1BMP0003_20191226	Dissolved	Water	245.1	588288
440-258216-3	LXBMP0011_20191226	Dissolved	Water	245.1	588288
440-258216-4	LXBMP0012_20191226	Dissolved	Water	245.1	588288
440-258216-5	EPSW001IE01_20191226	Dissolved	Water	245.1	588288
440-258216-6	EPSW002BG01_20191226	Dissolved	Water	245.1	588288
MB 440-588288/1-E	Method Blank	Dissolved	Water	245.1	588288
LCS 440-588288/2-E	Lab Control Sample	Dissolved	Water	245.1	588288
440-258216-1 MS	A1BMP0002_20191226	Dissolved	Water	245.1	588288
440-258216-1 MSD	A1BMP0002_20191226	Dissolved	Water	245.1	588288

Analysis Batch: 589374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Dissolved	Water	245.1	588989
440-258216-2	A1BMP0003_20191226	Dissolved	Water	245.1	588989
440-258216-3	LXBMP0011_20191226	Dissolved	Water	245.1	588989
440-258216-4	LXBMP0012_20191226	Dissolved	Water	245.1	588989
440-258216-5	EPSW001IE01_20191226	Dissolved	Water	245.1	588989
440-258216-6	EPSW002BG01_20191226	Dissolved	Water	245.1	588989
MB 440-588288/1-E	Method Blank	Dissolved	Water	245.1	588989
LCS 440-588288/2-E	Lab Control Sample	Dissolved	Water	245.1	588989
440-258216-1 MS	A1BMP0002_20191226	Dissolved	Water	245.1	588989
440-258216-1 MSD	A1BMP0002_20191226	Dissolved	Water	245.1	588989

General Chemistry

Analysis Batch: 588223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Total/NA	Water	SM 2540D	
440-258216-2	A1BMP0003_20191226	Total/NA	Water	SM 2540D	
440-258216-3	LXBMP0011_20191226	Total/NA	Water	SM 2540D	
440-258216-4	LXBMP0012_20191226	Total/NA	Water	SM 2540D	
440-258216-5	EPSW001IE01_20191226	Total/NA	Water	SM 2540D	
440-258216-6	EPSW002BG01_20191226	Total/NA	Water	SM 2540D	
MB 440-588223/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-588223/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-258218-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Geotechnical

Analysis Batch: 42967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-1	A1BMP0002_20191226	Total/NA	Water	D4464	
440-258216-2	A1BMP0003_20191226	Total/NA	Water	D4464	
440-258216-3	LXBMP0011_20191226	Total/NA	Water	D4464	
440-258216-4	LXBMP0012_20191226	Total/NA	Water	D4464	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

General Chemistry

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20 *
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20 *
Hawaii	State	<cert No.>	01-29-20 *
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20 *
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20 *
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
West Virginia (DW)	State	9930C	12-31-19 *
Wyoming	State Program	8TMS-L	01-28-19 *

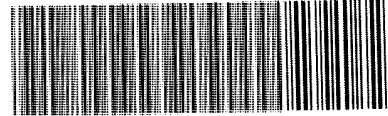
* Accreditation/Certification renewal pending - accreditation/certification considered valid.



258216



Environment Testing
TestAmerica



440-258216 Waybill

9:43A RIT2 EXP 10/20

ORIGIN ID: DTHA (949) 260-1022
SHIPPING
TESTAMERICA IRVINE LABS
17461 DERIAN AVE STE 100
IRVINE, CA 92614
UNITED STATES US

SHIP DATE: 27DEC19
ACTWGT: 49.45 LB
CAD: 616730/CAFE3311

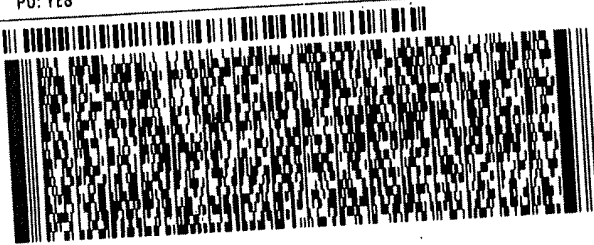
BILL SENDER

TO SHIPPING/RECEIVING
EUROFINS CALSCIENCE LLC
7440 LINCOLN WAY

GARDEN GROVE CA 92841

(714) 806-5484
PO: YES

REF: 8440-176202



FedEx
Express



JT191218062001.W

TRK# 1119 9742 5252
0201

SATURDAY 12:00P
PRIORITY OVERNIGHT

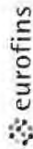
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92841
CA-US SNA



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Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Patel, Urvashi	Carrier Tracking No(s): 440-150642.1						
Client Contact: Shipping/Receiving		Phone: urvashi.patel@testamericainc.com	Page: Page 1 of 1						
Company: TestAmerica Laboratories, Inc.		E-Mail: urvashi.patel@testamericainc.com	Job #: 440-258216-1						
Address: 13715 Rider Trail North, Irvine, CA 92614		Accreditations Required (See note): State Program - California	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:						
City: Earth City, MO, 63045		Due Date Requested: 1/9/2020	Analysis Requested						
State, Zip: MO, 63045		TAT Requested (days):							
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		PO #:	Total Number of containers						
Email:		WO #:							
Project Name: Boeing SSFL ISRA and BMP		Project #: 44009815	Special Instructions/Note: Boeing SSFL; DO NOT FILTER; use prep date from preservation Boeing SSFL; DO NOT FILTER; use prep date from preservation						
Site:		SSOW#:							
Sample Identification - Client ID (Lab ID)									
Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Swab, Dr-wast, Soil, BI-Tissue, AC/AV)	Preservation Code	Field Filled Sample (Yes or No)	Perform MS/MSD (Yes or No)	900 0/Evaporation (MOD) Gross Alpha/Beta	900 0/Filtration_Rad Gross Alpha Only - Dissolved
EPSW001IE01_2019121226 (440-258216-5)	12/26/19	07:40 Pacific	Water	Water		X	X	X	X
EPSW002BG01_2019121226 (440-258216-6)	12/26/19	07:30 Pacific	Water	Water		X	X	X	X
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>									
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Unconfirmed				Special Instructions/QC Requirements:					
Deliverable Requested: I, II, III, IV, Other (Specify)				Primary Deliverable Rank: 2					
Empty Kit Relinquished by:				Date: _____ Time: _____					
Relinquished by: <i>[Signature]</i>				Date/Time: 12/27/19 17:00					
Relinquished by:				Date/Time: _____					
Relinquished by:				Date/Time: _____					
Custody Seals Intact: _____				Custody Seal No.: _____					
Cooler Temperature(s) °C and Other Remarks:				Date/Time: 12/28/19 8:15					
Received by: <i>[Signature]</i>				Date/Time: _____					
Received by:				Date/Time: _____					
Received by:				Date/Time: _____					
Company: TRIP				Company: STABIT					
Company:				Company:					
Company:				Company:					



Chain of Custody Record

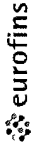


Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:					
Shipping/Receiving		Patel, Urvashi	Patel, Urvashi		440-150640-1					
Company: TestAmerica Laboratories, Inc.		Phone:	E-Mail:	State of Origin:	Page:					
Address: 880 Riverside Parkway, West Sacramento, CA, 95605		1/9/2020	urvashi.patel@testamericainc.com	California	Page 1 of 1					
City: West Sacramento		TAT Requested (days):	Accreditations Required (See note):	Job #:	440-258216-1					
State, Zip: CA, 95605		PO #:	State Program - California	Preservation Codes:	M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify)					
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		WO #:	Due Date Requested:	Analysis Requested						
Email:		Project #:	1/9/2020							
Project Name: Boeing SSFL ISRA and BMP		SOW#:								
Site:										
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Swab, Dried, Soil, etc.)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B/1613B_Sox_Sep_P Standard List w/ Totals	Total Number of Containers	Special Instructions/Note:
A1BMP0002_2019121226 (440-258216-1)	12/26/19	08:40 Pacific	Water	Water	X	X	2		See OAS, Boeing_wiu to zero	
A1BMP0003_2019121226 (440-258216-2)	12/26/19	08:20 Pacific	Water	Water	X	X	2		See OAS, Boeing_wiu to zero	
LXBMP0011_2019121226 (440-258216-3)	12/26/19	09:20 Pacific	Water	Water	X	X	2		See OAS, Boeing_wiu to zero	
LXBMP0012_2019121226 (440-258216-4)	12/26/19	09:00 Pacific	Water	Water	X	X	2		See OAS, Boeing_wiu to zero	
EPSW001E01_2019121226 (440-258216-5)	12/26/19	07:40 Pacific	Water	Water	X	X	2		See OAS, Boeing_wiu to zero	
EPSW002EG01_2019121226 (440-258216-6)	12/26/19	07:30 Pacific	Water	Water	X	X	2		See OAS, Boeing_wiu to zero	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *[Signature]* Date/Time: 12/27/19 1700 Company: *[Signature]*
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: *[Signature]* Custody Seal No.: *[Signature]*
 Yes No

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Patel, Urvashi	Carrier Tracking No(s): 440-150641.1							
Client Contact: Shipping/Receiving		E-Mail: urvashi.patel@testamericainc.com	Page: Page 1 of 1							
Company: Eurofins Calscience LLC		Accreditations Required (See note): State Program - California	Job #: 440-258216-1							
Address: 7440 Lincoln Way.		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 F - MeOH R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate G - Amchlor H - Ascorbic Acid I - Ice J - DI Water U - Acetone K - EDTA V - MCAA L - EDTA W - pH 4-5 Z - other (specify) Other:								
City: Garden Grove		Analysis Requested								
State, Zip: CA, 92841		Total Number of containers								
Phone: 714-895-5494(Tel) 714-894-7501(Fax)		Perform HSM/SD (Yes or No)								
Email:		D464/ D464-Particle Size								
Project Name: Boeing SSFL ISRA and BMP		Field Filtered Sample (Yes or No)								
Site:		Special Instructions/Note:								
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, On-water, Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform HSM/SD (Yes or No)	D464/ D464-Particle Size	Total Number of containers	Special Instructions/Note:
A1BMP0002_2019121226 (440-258216-1)	12/26/19	08:40 Pacific	Water	Water		X	X		1	Normal TAT
A1BMP0003_2019121226 (440-258216-2)	12/26/19	08:20 Pacific	Water	Water		X	X		1	Normal TAT
LXBMP0011_2019121226 (440-258216-3)	12/26/19	09:20 Pacific	Water	Water		X	X		1	Normal TAT
LXBMP0012_2019121226 (440-258216-4)	12/26/19	09:00 Pacific	Water	Water		X	X		1	Normal TAT

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *[Signature]* Date: 12/27/19 1700 Company: TARRV
 Relinquished by: _____ Date/Time: _____ Received by: *[Signature]* Date/Time: 12/28/19 10:30 Company: EU
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____ Company: Company

Custody Seals Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks: 7.9 / 4.4 S66
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258216-1

SDG Number:

Login Number: 258216

List Number: 1

Creator: Soderblom, Tim

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258216-1

SDG Number:

Login Number: 258216

List Number: 3

Creator: Ramos, Maribel

List Source: Eurofins Calscience

List Creation: 12/28/19 10:32 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258216-1

SDG Number:

Login Number: 258216

List Number: 4

Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

List Creation: 12/28/19 11:10 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-258216-1	A1BMP0002_20191226	62	63	65	63	70	69	59	67
440-258216-2	A1BMP0003_20191226	71	72	74	74	81	80	67	76
440-258216-2 - RA	A1BMP0003_20191226		78						
440-258216-3	LXBMP0011_20191226	47	49	49	49	52	51	44	50
440-258216-4	LXBMP0012_20191226	61	62	63	63	69	70	58	66
440-258216-4 - RA	LXBMP0012_20191226		67						
440-258216-5	EPSW001IE01_20191226	57	59	58	59	64	61	52	59
440-258216-5 - RA	EPSW001IE01_20191226		63						
440-258216-6	EPSW002BG01_20191226	57	59	59	59	64	63	52	60
MB 320-349535/1-A	Method Blank	63	65	69	68	74	75	64	73
MB 320-349535/1-A - RA	Method Blank		70						

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-258216-1	A1BMP0002_20191226	57	61	61	59	58	65	58
440-258216-2	A1BMP0003_20191226	66	70	68	66	66	74	61
440-258216-2 - RA	A1BMP0003_20191226							
440-258216-3	LXBMP0011_20191226	43	47	46	45	44	50	43
440-258216-4	LXBMP0012_20191226	57	61	60	59	60	67	57
440-258216-4 - RA	LXBMP0012_20191226							
440-258216-5	EPSW001IE01_20191226	51	54	51	45	48	56	34
440-258216-5 - RA	EPSW001IE01_20191226							
440-258216-6	EPSW002BG01_20191226	51	56	54	53	54	61	49
MB 320-349535/1-A	Method Blank	62	67	66	64	64	71	63
MB 320-349535/1-A - RA	Method Blank							

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCF = 13C-2,3,4,7,8-PeCDF
- HxCDD = 13C-1,2,3,4,7,8-HxCDD
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HxDF = 13C-1,2,3,6,7,8-HxCDF
- HxCF = 13C-1,2,3,7,8,9-HxCDF
- 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
- OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-349535/2-A	Lab Control Sample	64	65	69	66	73	74	60	69

Eurofins Calscience Irvine

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.

Job ID: 440-258216-1

Project/Site: BMP Performance OF 001, 002, and/or 009

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Water

Prep Type: Total/NA

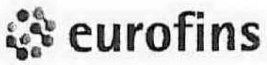
Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-349535/2-A	Lab Control Sample	61	65	64	62	63	71	62

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCF = 13C-2,3,4,7,8-PeCDF
- HxCDD = 13C-1,2,3,4,7,8-HxCDD
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HxDF = 13C-1,2,3,6,7,8-HxCDF
- HxCF = 13C-1,2,3,7,8,9-HxCDF
- 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
- OCDD = 13C-OCDD





Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-258216 Field Sheet

Tracking #: 1119-9742-5322

SO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Job: _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes: _____

Therm. ID: AK-12 Corr. Factor: (+/-) 0 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: Scal

Cooler ID: 20F2

Temp Observed: 1.3 °C Corrected: 1.3 °C

From: Temp Blank Sample

During Initial Triage

	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: JL Date: 12/28/19

During Labeling

	Yes	No	NA
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filled	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: JL Date: 12/28/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

w18-A



Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes

Have Field Sheet Label Jobs

Tracking #: 1119 9742 5311

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Job: _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: _____

Therm. ID: 1119 Corr. Factor: (+) 0.2 °C
Ice _____ Wet ✓ Gel _____ Other _____
Cooler Custody Seal: SCA1
Cooler ID: 1022
Temp Observed: 0.2 °C Corrected: 0.0 °C
From: Temp Blank Sample

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: ST Date: 12/28/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: JUT Date: 12/18/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

W18-A

Christine, Mark B.

From: Baluran, Dwayne <DBaluran@haleyaldrich.com>
Sent: Monday, December 30, 2019 2:54 PM
To: Christine, Mark B.
Cc: Miller, Katherine
Subject: FW: Eurofins TestAmerica sample confirmation files from 440-258216-1 BMP Performance OF 001, 002, and/or 009
Attachments: SmpLoginAckLimits_440-258216-1 [Std_Tal_Login_Limits].pdf; COC 440-258216 (201912271418).pdf; SampleLoginAck_440-258216-1 [Std_Tal_Login_Ack].pdf; Eurofins TestAmerica sample confirmation files from 440-258219-1 Outfall 001 Comp.msg
Importance: High

-External Email-

Hi Mark,

After reviewing the sample receipts for recent events (BMP sampling, OF001 comp, OF008 comp) I have the following comments:

Sampling Event	Sample Delivery Group	Samples Included	Work Order or COC Corrections?
ISRA/BMP	440-258216-1	A1BMP0002_20191226, A1BMP0003_20191226, LXBMP0011_20191226, LXBMP0012_20191226, EPSW0011E01_20191226, EPSW002BG01_20191226	COC - incorrect sample ID names. All should be readjusted to "20191226" (the date the samples were collected) in the work order. Incorrect project number. Please update Work Order to "129095-004 5.1" I assume the Gross Alpha Total and Dissolved for the last two sample IDs are in a separate SDG (440-258216-2) that will be sent to us at a later date?
OF001 -Qtrly	440-258219-1	Outfall001_20191227_Comp, Outfall001_20191227_Comp_F	Work Order - per the comments, only test for Fe at OF001. Please remove Al, As, and Mn from both Total and Dissolved Metals.

From: Miller, Katherine <KMiller@haleyaldrich.com>
Sent: Monday, December 30, 2019 9:15 AM
To: Baluran, Dwayne <DBaluran@haleyaldrich.com>
Subject: FW: Eurofins TestAmerica sample confirmation files from 440-258216-1 BMP Performance OF 001, 002, and/or 009
Importance: High

Please review and see email below

Katherine Miller
HALEY & ALDRICH

Tel: 520.289.8606

From: Mark Christine <mark.christine@testamericainc.com>

Sent: Monday, December 30, 2019 10:01 AM

To: Kim Schultz <kim.schultz@mecx.net>; Miller, Katherine <KMiller@haleyaldrich.com>

Subject: Eurofins TestAmerica sample confirmation files from 440-258216-1 BMP Performance OF 001, 002, and/or 009

CAUTION: External Email

Hello,

Attached please find the sample confirmation files for job 440-258216-1; BMP Performance OF 001, 002, and/or 009.

Please verify sample IDs. COC SAMPLE #_2019121226, looks like it is doubled up on the 12s. Logged in per COC.

Sample #1 A1BMP002_2019121226 (440-258216-1) has a "1" instead of an "X" under the 1613 Dioxons. Sample was logged in for the dioxins, please confirm.

Please feel free to contact me or your PM Urvashi Patel if you have any questions.

Thank you.

Mark B Christine

Project Manager Assistant

Eurofins TestAmerica, Irvine

E-mail: mark.christine@testamericainc.com

www.eurofinsus.com | www.testamericainc.com



Reference: [440-575685]

Attachments: 3

Please let us know if we met your expectations by rating the service you received from Eurofins TestAmerica on this project by visiting our website at: [Project Feedback](#)

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-258216-2

Client Project/Site: BMP Performance OF 001, 002, and/or 009

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
1/28/2020 9:44:05 AM

Christian Bondoc, Project Manager I
(949)260-3218
christian.bondoc@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Haley & Aldrich, Inc.

Job ID: 440-258216-2

Project/Site: BMP Performance OF 001, 002, and/or 009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-258216-5	EPSW001IE01_20191226	Water	12/26/19 07:40	12/27/19 11:20	
440-258216-6	EPSW002BG01_20191226	Water	12/26/19 07:30	12/27/19 11:20	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-2

Job ID: 440-258216-2

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-258216-2

Comments

No additional comments.

Receipt

The samples were received on 12/27/2019 11:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.0° C, 1.2° C and 1.3° C.

RAD

Method 900.0: Gross Alpha Beta Prep Batch 160-455777

The detection goal was not met for the following sample due to a reduction of the sample size attributed to high residual mass: EPSW002BG01_20191226 (440-258216-6). Analytical results are reported with the detection limit achieved.

Method 900.0: Gross Alpha Beta Prep Batch 160-455777

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EPSW001IE01_20191226 (440-258216-5), EPSW002BG01_20191226 (440-258216-6), (LCS 160-455777/2-A), (LCSB 160-455777/3-A), (MB 160-455777/1-A), (440-258077-J-1-F), (440-258077-J-1-G MS), (440-258077-J-1-I MSBT), (440-258077-J-1-J MSBTD) and (440-258077-J-1-H MSD)

Method 900.0: Gross Alpha-Beta Prep Batch 160-457240

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EPSW001IE01_20191226 (440-258216-5), (LCS 160-457240/2-A), (LCSB 160-457240/3-A) and (MB 160-457240/1-A)

Method Evaporation: Gross Alpha/Beta preparation batch 160-455663 and 160-455777

To reach target mass and efficiency additional volume was added to the following samples:EPSW002BG01_20191226 (440-258216-6). The total sample volume is reflected in the initial amount field.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-2

Client Sample ID: EPSW001IE01_20191226

Lab Sample ID: 440-258216-5

Date Collected: 12/26/19 07:40

Matrix: Water

Date Received: 12/27/19 11:20

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	1.43	U	1.30	1.31	3.00	2.06	pCi/L	01/20/20 09:24	01/25/20 10:59	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity - Dissolved

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	1.96		1.06	1.09	3.00	1.32	pCi/L	01/06/20 07:19	01/12/20 17:30	1

Client Sample ID: EPSW002BG01_20191226

Lab Sample ID: 440-258216-6

Date Collected: 12/26/19 07:30

Matrix: Water

Date Received: 12/27/19 11:20

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	5.34	U G	6.67	6.70	3.00	11.1	pCi/L	01/20/20 09:24	01/25/20 10:59	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity - Dissolved

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	0.727	U G	6.05	6.05	3.00	11.5	pCi/L	01/06/20 07:19	01/12/20 17:30	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-2

Method	Method Description	Protocol	Laboratory
900.0	Gross Alpha and Gross Beta Radioactivity	EPA	TAL SL
Evaporation	Preparation, Evaporation	None	TAL SL
Filtration	Sample Filtration	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency
None = None

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-2

Client Sample ID: EPSW001IE01_20191226

Lab Sample ID: 440-258216-5

Date Collected: 12/26/19 07:40

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			1000 mL	1.0 mL	455663	12/30/19 14:06	CMM	TAL SL
Dissolved	Prep	Evaporation			200.21 mL	1.0 g	455777	01/06/20 07:19	RJD	TAL SL
Dissolved	Analysis	900.0		1	1.0 mL	1.0 mL	456563	01/12/20 17:30	AJD	TAL SL
Total/NA	Prep	Evaporation			200.11 g	1.0 g	457240	01/20/20 09:24	RJD	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	458102	01/25/20 10:59	AJD	TAL SL

Client Sample ID: EPSW002BG01_20191226

Lab Sample ID: 440-258216-6

Date Collected: 12/26/19 07:30

Matrix: Water

Date Received: 12/27/19 11:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			1000 mL	1.0 mL	455663	12/30/19 14:06	CMM	TAL SL
Dissolved	Prep	Evaporation			37.05 mL	1.0 g	455777	01/06/20 07:19	RJD	TAL SL
Dissolved	Analysis	900.0		1	1.0 mL	1.0 mL	456563	01/12/20 17:30	AJD	TAL SL
Total/NA	Prep	Evaporation			43.12 g	1.0 g	457240	01/20/20 09:24	RJD	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	458102	01/25/20 10:59	AJD	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-2

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: MB 160-455777/1-A
Matrix: Water
Analysis Batch: 456563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 455777

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	0.01239	U	0.607	0.607	3.00	1.18	pCi/L	01/06/20 07:19	01/12/20 12:20	1

Lab Sample ID: LCS 160-455777/2-A
Matrix: Water
Analysis Batch: 456563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 455777

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
		Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	49.6	48.74		7.33	3.00	1.85	pCi/L	98	75 - 125

Lab Sample ID: 440-258077-J-1-G MS
Matrix: Water
Analysis Batch: 456567

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 455777

Analyte	Sample Result	Sample Qual	Spike Added	MS	MS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	1.38		49.6	41.94		6.03	3.00	1.42	pCi/L	82	60 - 140

Lab Sample ID: 440-258077-J-1-H MSD
Matrix: Water
Analysis Batch: 456563

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 455777

Analyte	Sample Result	Sample Qual	Spike Added	MSD	MSD	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Result	Qual	Uncert. (2σ+/-)							
Gross Alpha	1.38		49.6	47.24		6.58	3.00	1.16	pCi/L	93	60 - 140	0.42	1

Lab Sample ID: MB 160-457240/1-A
Matrix: Water
Analysis Batch: 458102

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457240

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	0.07441	U	0.446	0.447	3.00	0.886	pCi/L	01/20/20 09:24	01/25/20 10:58	1

Lab Sample ID: LCS 160-457240/2-A
Matrix: Water
Analysis Batch: 458102

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457240

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
		Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	49.6	54.40		8.00	3.00	1.83	pCi/L	110	75 - 125

Lab Sample ID: 550-136409-N-1-B MS
Matrix: Water
Analysis Batch: 458202

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 457240

Analyte	Sample Result	Sample Qual	Spike Added	MS	MS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	-0.445	U G	145	227.2	F1	31.0	3.00	4.48	pCi/L	156	60 - 140

Eurofins Calscience Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-2

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: 550-136409-N-1-D DU
 Matrix: Water
 Analysis Batch: 458102

Client Sample ID: Duplicate
 Prep Type: Total/NA
 Prep Batch: 457240

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					Limit
Gross Alpha	-0.445	U G	0.1926	U G	3.06	3.00	5.93	pCi/L	0.12	1

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QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-2

Rad

Filtration Batch: 455663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-5	EPSW001IE01_20191226	Dissolved	Water	Filtration	
440-258216-6	EPSW002BG01_20191226	Dissolved	Water	Filtration	

Prep Batch: 455777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-5	EPSW001IE01_20191226	Dissolved	Water	Evaporation	455663
440-258216-6	EPSW002BG01_20191226	Dissolved	Water	Evaporation	455663
MB 160-455777/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-455777/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-455777/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
440-258077-J-1-G MS	Matrix Spike	Total/NA	Water	Evaporation	
440-258077-J-1-H MSD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	
440-258077-J-1-I MSBT	Matrix Spike	Total/NA	Water	Evaporation	
440-258077-J-1-J MSBTD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	

Prep Batch: 457240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258216-5	EPSW001IE01_20191226	Total/NA	Water	Evaporation	
440-258216-6	EPSW002BG01_20191226	Total/NA	Water	Evaporation	
MB 160-457240/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-457240/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-457240/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
550-136409-N-1-B MS	Matrix Spike	Total/NA	Water	Evaporation	
550-136409-N-1-C MSBT	Matrix Spike	Total/NA	Water	Evaporation	
550-136409-N-1-D DU	Duplicate	Total/NA	Water	Evaporation	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-2

Qualifiers

Rad

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002, and/or 009

Job ID: 440-258216-2

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State Program	CA ELAP 2706	06-30-20

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-19 *
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-20
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-20
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	02-02-20
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

258216



Environment Testing
TestAmerica

9434 RIT2 EXP 10/20



440-258216 Waybill

ORIGIN ID: DTHA (949) 260-1022
SHIPPING
TESTAMERICA IRVINE LABS
17461 DERIAN AVE STE 100
IRVINE, CA 92614
UNITED STATES US

SHIP DATE: 27DEC19
ACTWGT: 49.45 LB
CAD: 616730/CAFE3311

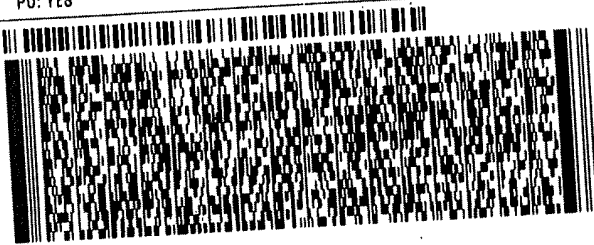
BILL SENDER

TO SHIPPING/RECEIVING
EUROFINS CALSCIENCE LLC
7440 LINCOLN WAY

GARDEN GROVE CA 92841

(714) 806-5484
PO: YES

REF: 8440-176202



FedEx
Express



JT191218062001 W

TRK# 1119 9742 5252
0201

SATURDAY 12:00P
PRIORITY OVERNIGHT

90 APVA

92841
CA-US SNA



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Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258216-2

SDG Number:

Login Number: 258216

List Number: 1

Creator: Soderblom, Tim

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-258216-2

SDG Number:

Login Number: 258216

List Number: 2

Creator: Harris, Lorin C

List Source: Eurofins TestAmerica, St. Louis

List Creation: 12/28/19 12:05 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Christine, Mark B.

From: Baluran, Dwayne <DBaluran@haleyaldrich.com>
Sent: Monday, December 30, 2019 2:54 PM
To: Christine, Mark B.
Cc: Miller, Katherine
Subject: FW: Eurofins TestAmerica sample confirmation files from 440-258216-1 BMP Performance OF 001, 002, and/or 009
Attachments: SmpLoginAckLimits_440-258216-1 [Std_Tal_Login_Limits].pdf; COC 440-258216 (201912271418).pdf; SampleLoginAck_440-258216-1 [Std_Tal_Login_Ack].pdf; Eurofins TestAmerica sample confirmation files from 440-258219-1 Outfall 001 Comp.msg
Importance: High

-External Email-

Hi Mark,

After reviewing the sample receipts for recent events (BMP sampling, OF001 comp, OF008 comp) I have the following comments:

Sampling Event	Sample Delivery Group	Samples Included	Work Order or COC Corrections?
ISRA/BMP	440-258216-1	A1BMP0002_20191226, A1BMP0003_20191226, LXBMP0011_20191226, LXBMP0012_20191226, EPSW0011E01_20191226, EPSW002BG01_20191226	COC - incorrect sample ID names. All should be readjusted to "20191226" (the date the samples were collected) in the work order. Incorrect project number. Please update Work Order to "129095-004 5.1" I assume the Gross Alpha Total and Dissolved for the last two sample IDs are in a separate SDG (440-258216-2) that will be sent to us at a later date?
OF001 -Qtrly	440-258219-1	Outfall001_20191227_Comp, Outfall001_20191227_Comp_F	Work Order - per the comments, only test for Fe at OF001. Please remove Al, As, and Mn from both Total and Dissolved Metals.

From: Miller, Katherine <KMiller@haleyaldrich.com>
Sent: Monday, December 30, 2019 9:15 AM
To: Baluran, Dwayne <DBaluran@haleyaldrich.com>
Subject: FW: Eurofins TestAmerica sample confirmation files from 440-258216-1 BMP Performance OF 001, 002, and/or 009
Importance: High

Please review and see email below

Katherine Miller
HALEY & ALDRICH

Tel: 520.289.8606

From: Mark Christine <mark.christine@testamericainc.com>

Sent: Monday, December 30, 2019 10:01 AM

To: Kim Schultz <kim.schultz@mecx.net>; Miller, Katherine <KMiller@haleyaldrich.com>

Subject: Eurofins TestAmerica sample confirmation files from 440-258216-1 BMP Performance OF 001, 002, and/or 009

CAUTION: External Email

Hello,

Attached please find the sample confirmation files for job 440-258216-1; BMP Performance OF 001, 002, and/or 009.

Please verify sample IDs. COC SAMPLE #_2019121226, looks like it is doubled up on the 12s. Logged in per COC.

Sample #1 A1BMP002_2019121226 (440-258216-1) has a "1" instead of an "X" under the 1613 Dioxons. Sample was logged in for the dioxins, please confirm.

Please feel free to contact me or your PM Urvashi Patel if you have any questions.

Thank you.

Mark B Christine

Project Manager Assistant

Eurofins TestAmerica, Irvine

E-mail: mark.christine@testamericainc.com

www.eurofinsus.com | www.testamericainc.com



Reference: [440-575685]
Attachments: 3

Please let us know if we met your expectations by rating the service you received from Eurofins TestAmerica on this project by visiting our website at: [Project Feedback](#)

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-262590-1

Client Project/Site: Boeing SSFL ISRA and BMP

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
3/30/2020 4:52:47 PM

Christian Bondoc, Project Manager I
(949)260-3218
christian.bondoc@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-262590-1	ILBMP0004_20200310	Water	03/10/20 08:00	03/11/20 13:11	
440-262590-2	ILBMP0005_20200310	Water	03/10/20 08:10	03/11/20 13:11	
440-262590-3	ILBMP0008_20200310	Water	03/10/20 07:50	03/11/20 13:11	

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Job ID: 440-262590-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-262590-1

Comments

No additional comments.

Receipt

The samples were received on 3/11/2020 4:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9° C and 4.6° C.

Dioxin

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: ILBMP0004_20200310 (440-262590-1), ILBMP0005_20200310 (440-262590-2), ILBMP0008_20200310 (440-262590-3), (CCV 320-366401/17), (LCS 320-365527/2-A) and (MB 320-365527/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method FILTRATION: The following samples requested dissolved metals and were not filtered in the field: ILBMP0004_20200310 (440-262590-1), ILBMP0005_20200310 (440-262590-2) and ILBMP0008_20200310 (440-262590-3). These samples were filtered and preserved upon receipt to the laboratory.

03/11/20
2.5mL of HNO3
HNO3 Bottle Lot # 0000234822

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method D4464: The sample duplicate precision for the following sample associated with analytical batch 570-57158 was outside control limits: ILBMP0008_20200310 (440-262590-3) and (440-262590-E-3 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P preparation/analysis: Samples ILBMP0004_20200310 (440-262590-1), ILBMP0005_20200310 (440-262590-2) and ILBMP0008_20200310 (440-262590-3) were received in wide-mouth amber glass bottles.

preparation batch 320-365527
Method: 1613B_Sox_Sep_P / 1613B
Matrix: Aqueous

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Client Sample ID: ILBMP0004_20200310

Lab Sample ID: 440-262590-1

Date Collected: 03/10/20 08:00

Matrix: Water

Date Received: 03/11/20 13:11

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.000040	J,DX q	0.000011	0.000009	ug/L		03/18/20 08:33	03/21/20 09:56	1
				2					
1,2,3,7,8-PeCDD	0.000063	J,DX	0.000053	0.000013	ug/L		03/18/20 08:33	03/21/20 09:56	1
1,2,3,7,8-PeCDF	0.000038	J,DX	0.000053	0.000009	ug/L		03/18/20 08:33	03/21/20 09:56	1
				7					
2,3,4,7,8-PeCDF	0.000031	J,DX q	0.000053	0.000010	ug/L		03/18/20 08:33	03/21/20 09:56	1
1,2,3,4,7,8-HxCDD	0.000086	J,DX MB q	0.000053	0.000014	ug/L		03/18/20 08:33	03/21/20 09:56	1
1,2,3,6,7,8-HxCDD	0.000012	J,DX	0.000053	0.000015	ug/L		03/18/20 08:33	03/21/20 09:56	1
1,2,3,7,8,9-HxCDD	0.000011	J,DX q	0.000053	0.000013	ug/L		03/18/20 08:33	03/21/20 09:56	1
1,2,3,4,7,8-HxCDF	0.000088	J,DX	0.000053	0.000009	ug/L		03/18/20 08:33	03/21/20 09:56	1
				7					
1,2,3,6,7,8-HxCDF	0.000084	J,DX	0.000053	0.000010	ug/L		03/18/20 08:33	03/21/20 09:56	1
1,2,3,7,8,9-HxCDF	0.000036	J,DX MB q	0.000053	0.000011	ug/L		03/18/20 08:33	03/21/20 09:56	1
2,3,4,6,7,8-HxCDF	0.000071	J,DX	0.000053	0.000009	ug/L		03/18/20 08:33	03/21/20 09:56	1
				7					
1,2,3,4,6,7,8-HpCDD	0.00014	MB	0.000053	0.000013	ug/L		03/18/20 08:33	03/21/20 09:56	1
1,2,3,4,6,7,8-HpCDF	0.000098		0.000053	0.000019	ug/L		03/18/20 08:33	03/21/20 09:56	1
1,2,3,4,7,8,9-HpCDF	0.000059	J,DX q	0.000053	0.000021	ug/L		03/18/20 08:33	03/21/20 09:56	1
OCDD	0.0013	MB	0.00011	0.000020	ug/L		03/18/20 08:33	03/21/20 09:56	1
OCDF	0.00012	MB	0.00011	0.000014	ug/L		03/18/20 08:33	03/21/20 09:56	1
Total TCDD	0.000040	J,DX q	0.000011	0.000009	ug/L		03/18/20 08:33	03/21/20 09:56	1
				2					
Total TCDF	0.000019	J,DX q	0.000011	0.000004	ug/L		03/18/20 08:33	03/21/20 09:56	1
				9					
Total PeCDD	0.000097	J,DX	0.000053	0.000013	ug/L		03/18/20 08:33	03/21/20 09:56	1
Total PeCDF	0.000023	J,DX q	0.000053	0.000009	ug/L		03/18/20 08:33	03/21/20 09:56	1
				7					
Total HxCDD	0.000086	J,DX MB q	0.000053	0.000013	ug/L		03/18/20 08:33	03/21/20 09:56	1
Total HxCDF	0.000094	J,DX MB q	0.000053	0.000009	ug/L		03/18/20 08:33	03/21/20 09:56	1
				7					
Total HpCDD	0.00038	MB	0.000053	0.000013	ug/L		03/18/20 08:33	03/21/20 09:56	1
Total HpCDF	0.00016	J,DX q	0.000053	0.000019	ug/L		03/18/20 08:33	03/21/20 09:56	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		25 - 164				03/18/20 08:33	03/21/20 09:56	1
13C-2,3,7,8-TCDF	64		24 - 169				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,7,8-PeCDD	55		25 - 181				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,7,8-PeCDF	56		24 - 185				03/18/20 08:33	03/21/20 09:56	1
13C-2,3,4,7,8-PeCDF	62		21 - 178				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,4,7,8-HxCDD	63		32 - 141				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,6,7,8-HxCDD	58		28 - 130				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,4,7,8-HxCDF	69		26 - 152				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,6,7,8-HxCDF	63		26 - 123				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,7,8,9-HxCDF	59		29 - 147				03/18/20 08:33	03/21/20 09:56	1
13C-2,3,4,6,7,8-HxCDF	64		28 - 136				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,4,6,7,8-HpCDD	55		23 - 140				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,4,6,7,8-HpCDF	57		28 - 143				03/18/20 08:33	03/21/20 09:56	1
13C-1,2,3,4,7,8,9-HpCDF	57		26 - 138				03/18/20 08:33	03/21/20 09:56	1
13C-OCDD	47		17 - 157				03/18/20 08:33	03/21/20 09:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	77		35 - 197				03/18/20 08:33	03/21/20 09:56	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Client Sample ID: ILBMP0004_20200310

Lab Sample ID: 440-262590-1

Date Collected: 03/10/20 08:00

Matrix: Water

Date Received: 03/11/20 13:11

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000011	0.0000007	ug/L		03/18/20 08:33	03/24/20 23:25	1
				7					
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C-2,3,7,8-TCDF	56		24 - 169				03/18/20 08:33	03/24/20 23:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
³⁷ Cl4-2,3,7,8-TCDD	85		35 - 197				03/18/20 08:33	03/24/20 23:25	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.36	J,DX	1.0	0.25	ug/L		03/12/20 09:46	03/12/20 18:30	1
Copper	9.6		2.0	0.50	ug/L		03/12/20 09:46	03/12/20 18:30	1
Lead	2.7		1.0	0.50	ug/L		03/12/20 09:46	03/12/20 18:30	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.37	J,DX	1.0	0.25	ug/L		03/11/20 19:40	03/11/20 21:12	1
Copper	7.7		2.0	0.50	ug/L		03/11/20 19:40	03/11/20 21:12	1
Lead	0.58	J,DX	1.0	0.50	ug/L		03/11/20 19:40	03/11/20 21:12	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/12/20 17:07	03/13/20 05:37	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/12/20 17:15	03/13/20 06:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	27		2.0	1.0	mg/L			03/11/20 16:24	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	7.46		0.01	0.01	%			03/12/20 20:15	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			03/12/20 20:15	1
Fine Sand (0.125 to 0.25mm)	10.92		0.01	0.01	%			03/12/20 20:15	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			03/12/20 20:15	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			03/12/20 20:15	1
Silt (0.00391 to 0.0625mm)	44.58		0.01	0.01	%			03/12/20 20:15	1
Total Silt and Clay (0 to 0.0626mm)	52.03		0.01	0.01	%			03/12/20 20:15	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			03/12/20 20:15	1
Very Fine Sand (0.0625 to 0.125 mm)	37.04		0.01	0.01	%			03/12/20 20:15	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Client Sample ID: ILBMP0005_20200310

Lab Sample ID: 440-262590-2

Date Collected: 03/10/20 08:10

Matrix: Water

Date Received: 03/11/20 13:11

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000009	ug/L		03/18/20 08:33	03/21/20 10:44	1
2,3,7,8-TCDF	ND		0.000010	0.0000002	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,7,8-PeCDD	0.0000016	J,DX q	0.000052	0.0000011	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,7,8-PeCDF	ND		0.000052	0.0000011	ug/L		03/18/20 08:33	03/21/20 10:44	1
2,3,4,7,8-PeCDF	ND		0.000052	0.0000012	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,4,7,8-HxCDD	0.0000034	J,DX MB	0.000052	0.0000012	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,6,7,8-HxCDD	0.0000026	J,DX	0.000052	0.0000013	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,7,8,9-HxCDD	0.0000033	J,DX q	0.000052	0.0000011	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,4,7,8-HxCDF	0.0000020	J,DX	0.000052	0.0000006	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,6,7,8-HxCDF	0.0000017	J,DX	0.000052	0.0000006	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,7,8,9-HxCDF	0.0000018	J,DX q MB	0.000052	0.0000007	ug/L		03/18/20 08:33	03/21/20 10:44	1
2,3,4,6,7,8-HxCDF	0.0000015	J,DX q	0.000052	0.0000006	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,4,6,7,8-HpCDD	0.000018	J,DX MB	0.000052	0.0000004	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,4,6,7,8-HpCDF	0.0000076	J,DX q	0.000052	0.0000009	ug/L		03/18/20 08:33	03/21/20 10:44	1
1,2,3,4,7,8,9-HpCDF	0.0000022	J,DX q	0.000052	0.0000010	ug/L		03/18/20 08:33	03/21/20 10:44	1
OCDD	0.00014	MB	0.00010	0.0000014	ug/L		03/18/20 08:33	03/21/20 10:44	1
OCDF	0.000013	J,DX q MB	0.00010	0.0000011	ug/L		03/18/20 08:33	03/21/20 10:44	1
Total TCDD	ND		0.000010	0.0000009	ug/L		03/18/20 08:33	03/21/20 10:44	1
Total TCDF	ND		0.000010	0.0000002	ug/L		03/18/20 08:33	03/21/20 10:44	1
Total PeCDD	0.0000016	J,DX q	0.000052	0.0000011	ug/L		03/18/20 08:33	03/21/20 10:44	1
Total PeCDF	ND		0.000052	0.0000011	ug/L		03/18/20 08:33	03/21/20 10:44	1
Total HxCDD	0.000013	J,DX q MB	0.000052	0.0000011	ug/L		03/18/20 08:33	03/21/20 10:44	1
Total HxCDF	0.000010	J,DX q MB	0.000052	0.0000006	ug/L		03/18/20 08:33	03/21/20 10:44	1
Total HpCDD	0.000041	J,DX MB	0.000052	0.0000004	ug/L		03/18/20 08:33	03/21/20 10:44	1
Total HpCDF	0.000015	J,DX q	0.000052	0.0000009	ug/L		03/18/20 08:33	03/21/20 10:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	03/18/20 08:33	03/21/20 10:44	1
13C-2,3,7,8-TCDF	68		24 - 169	03/18/20 08:33	03/21/20 10:44	1
13C-1,2,3,7,8-PeCDD	53		25 - 181	03/18/20 08:33	03/21/20 10:44	1
13C-1,2,3,7,8-PeCDF	57		24 - 185	03/18/20 08:33	03/21/20 10:44	1
13C-2,3,4,7,8-PeCDF	64		21 - 178	03/18/20 08:33	03/21/20 10:44	1
13C-1,2,3,4,7,8-HxCDD	67		32 - 141	03/18/20 08:33	03/21/20 10:44	1
13C-1,2,3,6,7,8-HxCDD	61		28 - 130	03/18/20 08:33	03/21/20 10:44	1
13C-1,2,3,4,7,8-HxCDF	73		26 - 152	03/18/20 08:33	03/21/20 10:44	1
13C-1,2,3,6,7,8-HxCDF	67		26 - 123	03/18/20 08:33	03/21/20 10:44	1
13C-1,2,3,7,8,9-HxCDF	64		29 - 147	03/18/20 08:33	03/21/20 10:44	1
13C-2,3,4,6,7,8-HxCDF	70		28 - 136	03/18/20 08:33	03/21/20 10:44	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	03/18/20 08:33	03/21/20 10:44	1
13C-1,2,3,4,6,7,8-HpCDF	59		28 - 143	03/18/20 08:33	03/21/20 10:44	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Client Sample ID: ILBMP0005_20200310

Lab Sample ID: 440-262590-2

Date Collected: 03/10/20 08:10

Matrix: Water

Date Received: 03/11/20 13:11

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8,9-HpCDF	58		26 - 138	03/18/20 08:33	03/21/20 10:44	1
13C-OCDD	47		17 - 157	03/18/20 08:33	03/21/20 10:44	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	77		35 - 197	03/18/20 08:33	03/21/20 10:44	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.50	J,DX	1.0	0.25	ug/L		03/12/20 09:46	03/12/20 18:37	1
Copper	21		2.0	0.50	ug/L		03/12/20 09:46	03/12/20 18:37	1
Lead	1.2		1.0	0.50	ug/L		03/12/20 09:46	03/12/20 18:37	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.78	J,DX	1.0	0.25	ug/L		03/11/20 19:40	03/11/20 21:18	1
Copper	19		2.0	0.50	ug/L		03/11/20 19:40	03/11/20 21:18	1
Lead	1.0		1.0	0.50	ug/L		03/11/20 19:40	03/11/20 21:18	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/12/20 17:07	03/13/20 05:39	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/12/20 17:15	03/13/20 06:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	6.1		1.0	0.50	mg/L			03/11/20 16:24	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	5.17		0.01	0.01	%			03/12/20 20:21	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			03/12/20 20:21	1
Fine Sand (0.125 to 0.25mm)	40.22		0.01	0.01	%			03/12/20 20:21	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			03/12/20 20:21	1
Medium Sand (0.25 to 0.5 mm)	3.66		0.01	0.01	%			03/12/20 20:21	1
Silt (0.00391 to 0.0625mm)	22.45		0.01	0.01	%			03/12/20 20:21	1
Total Silt and Clay (0 to 0.0626mm)	27.62		0.01	0.01	%			03/12/20 20:21	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			03/12/20 20:21	1
Very Fine Sand (0.0625 to 0.125 mm)	28.50		0.01	0.01	%			03/12/20 20:21	1

Client Sample ID: ILBMP0008_20200310

Lab Sample ID: 440-262590-3

Date Collected: 03/10/20 07:50

Matrix: Water

Date Received: 03/11/20 13:11

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.000011	ug/L		03/18/20 08:33	03/21/20 11:32	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Client Sample ID: ILBMP0008_20200310

Lab Sample ID: 440-262590-3

Date Collected: 03/10/20 07:50

Matrix: Water

Date Received: 03/11/20 13:11

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000011	0.0000004	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,7,8-PeCDD	ND		0.000053	0.0000012	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,7,8-PeCDF	ND		0.000053	0.0000009	ug/L		03/18/20 08:33	03/21/20 11:32	1
2,3,4,7,8-PeCDF	0.0000015	J,DX q	0.000053	0.0000009	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,4,7,8-HxCDD	0.0000032	J,DX q MB	0.000053	0.0000012	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,6,7,8-HxCDD	0.0000029	J,DX q	0.000053	0.0000014	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,7,8,9-HxCDD	0.0000040	J,DX	0.000053	0.0000012	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,4,7,8-HxCDF	0.0000069	J,DX	0.000053	0.0000008	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,6,7,8-HxCDF	0.0000041	J,DX	0.000053	0.0000009	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,7,8,9-HxCDF	0.0000015	J,DX q MB	0.000053	0.0000009	ug/L		03/18/20 08:33	03/21/20 11:32	1
2,3,4,6,7,8-HxCDF	0.0000023	J,DX	0.000053	0.0000008	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,4,6,7,8-HpCDD	0.000052	J,DX MB	0.000053	0.0000006	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,4,6,7,8-HpCDF	0.000055		0.000053	0.0000016	ug/L		03/18/20 08:33	03/21/20 11:32	1
1,2,3,4,7,8,9-HpCDF	0.0000030	J,DX q	0.000053	0.0000018	ug/L		03/18/20 08:33	03/21/20 11:32	1
OCDD	0.00038	MB	0.00011	0.0000015	ug/L		03/18/20 08:33	03/21/20 11:32	1
OCDF	0.000097	J,DX MB	0.00011	0.0000011	ug/L		03/18/20 08:33	03/21/20 11:32	1
Total TCDD	ND		0.000011	0.0000011	ug/L		03/18/20 08:33	03/21/20 11:32	1
Total TCDF	0.0000012	J,DX q	0.000011	0.0000004	ug/L		03/18/20 08:33	03/21/20 11:32	1
Total PeCDD	0.0000018	J,DX q	0.000053	0.0000012	ug/L		03/18/20 08:33	03/21/20 11:32	1
Total PeCDF	0.000015	J,DX q	0.000053	0.0000009	ug/L		03/18/20 08:33	03/21/20 11:32	1
Total HxCDD	0.000031	J,DX q MB	0.000053	0.0000012	ug/L		03/18/20 08:33	03/21/20 11:32	1
Total HxCDF	0.000046	J,DX q MB	0.000053	0.0000008	ug/L		03/18/20 08:33	03/21/20 11:32	1
Total HpCDD	0.00021	J,DX MB	0.000053	0.0000006	ug/L		03/18/20 08:33	03/21/20 11:32	1
Total HpCDF	0.00010	J,DX q	0.000053	0.0000016	ug/L		03/18/20 08:33	03/21/20 11:32	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	63		25 - 164				03/18/20 08:33	03/21/20 11:32	1
13C-2,3,7,8-TCDF	77		24 - 169				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,7,8-PeCDD	61		25 - 181				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,7,8-PeCDF	67		24 - 185				03/18/20 08:33	03/21/20 11:32	1
13C-2,3,4,7,8-PeCDF	74		21 - 178				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,4,7,8-HxCDD	74		32 - 141				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,4,7,8-HxCDF	80		26 - 152				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,6,7,8-HxCDF	73		26 - 123				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,7,8,9-HxCDF	69		29 - 147				03/18/20 08:33	03/21/20 11:32	1
13C-2,3,4,6,7,8-HxCDF	75		28 - 136				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,4,6,7,8-HpCDD	62		23 - 140				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,4,6,7,8-HpCDF	66		28 - 143				03/18/20 08:33	03/21/20 11:32	1
13C-1,2,3,4,7,8,9-HpCDF	64		26 - 138				03/18/20 08:33	03/21/20 11:32	1
13C-OCDD	51		17 - 157				03/18/20 08:33	03/21/20 11:32	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Client Sample ID: ILBMP0008_20200310

Lab Sample ID: 440-262590-3

Date Collected: 03/10/20 07:50

Matrix: Water

Date Received: 03/11/20 13:11

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	03/18/20 08:33	03/21/20 11:32	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.94	J,DX	1.0	0.25	ug/L		03/12/20 09:46	03/12/20 18:39	1
Copper	14		2.0	0.50	ug/L		03/12/20 09:46	03/12/20 18:39	1
Lead	3.9		1.0	0.50	ug/L		03/12/20 09:46	03/12/20 18:39	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.84	J,DX	1.0	0.25	ug/L		03/11/20 19:40	03/11/20 21:20	1
Copper	8.1		2.0	0.50	ug/L		03/11/20 19:40	03/11/20 21:20	1
Lead	0.96	J,DX	1.0	0.50	ug/L		03/11/20 19:40	03/11/20 21:20	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/12/20 17:07	03/13/20 05:46	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/12/20 17:15	03/13/20 05:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	23		2.0	1.0	mg/L			03/11/20 16:24	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	4.92		0.01	0.01	%			03/12/20 20:28	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			03/12/20 20:28	1
Fine Sand (0.125 to 0.25mm)	24.84		0.01	0.01	%			03/12/20 20:28	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			03/12/20 20:28	1
Medium Sand (0.25 to 0.5 mm)	1.65		0.01	0.01	%			03/12/20 20:28	1
Silt (0.00391 to 0.0625mm)	24.89		0.01	0.01	%			03/12/20 20:28	1
Total Silt and Clay (0 to 0.0626mm)	29.81		0.01	0.01	%			03/12/20 20:28	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			03/12/20 20:28	1
Very Fine Sand (0.0625 to 0.125 mm)	43.70		0.01	0.01	%			03/12/20 20:28	1

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PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

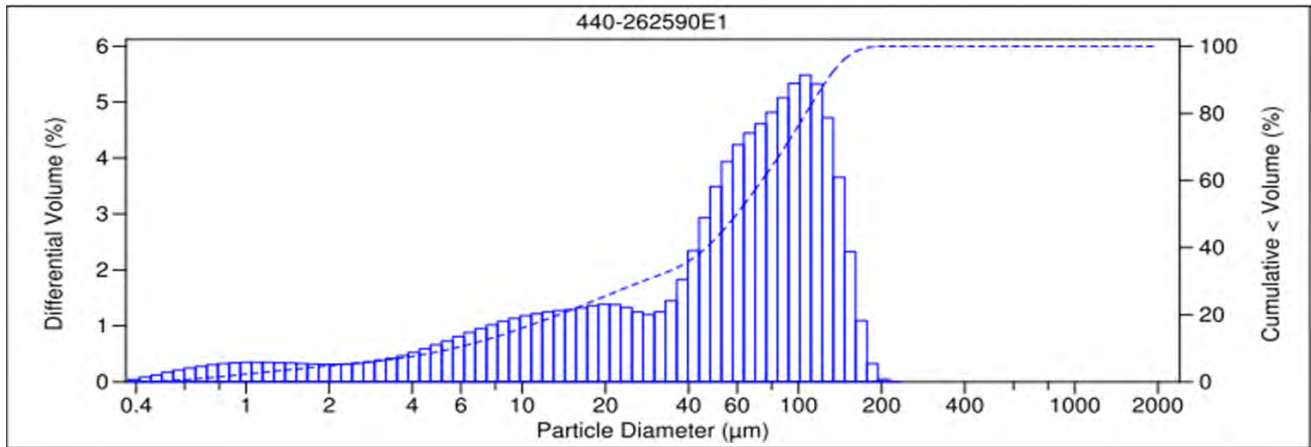
Haley & Aldrich, Inc.

Date Sampled: 03/10/20
 Date Received: 03/12/20
 Work Order No: 440-262590
 Date Analyzed: 03/12/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
ILBMP0004_20200310		Very Fine Sand	0.063

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	10.92	37.04	44.58	7.46	52.03



V 3.0

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PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

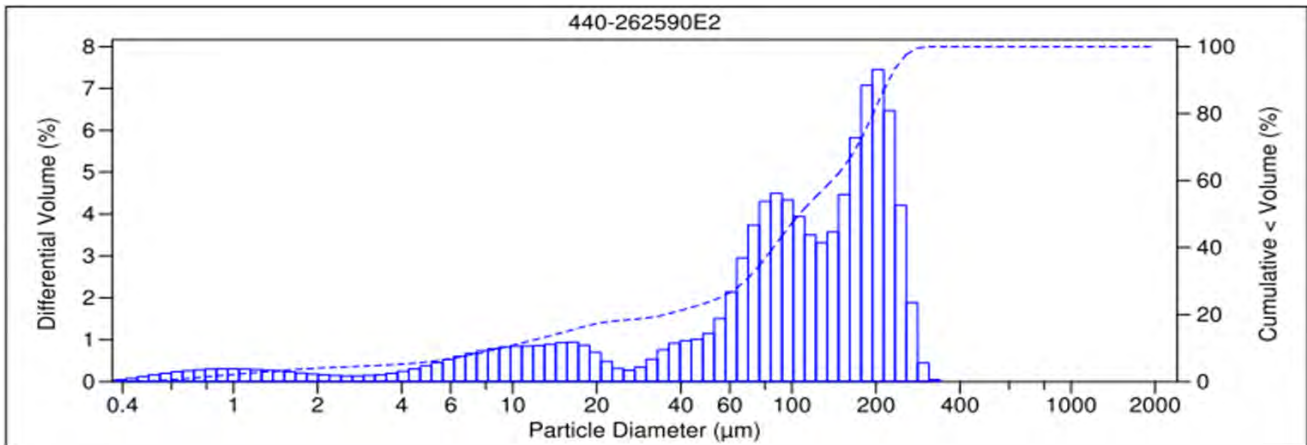
Haley & Aldrich, Inc.

Date Sampled: 03/10/20
 Date Received: 03/12/20
 Work Order No: 440-262590
 Date Analyzed: 03/12/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
ILBMP0005_20200310		Very Fine Sand	0.116

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	3.66	40.22	28.50	22.45	5.17	27.62



V 3.0

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PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

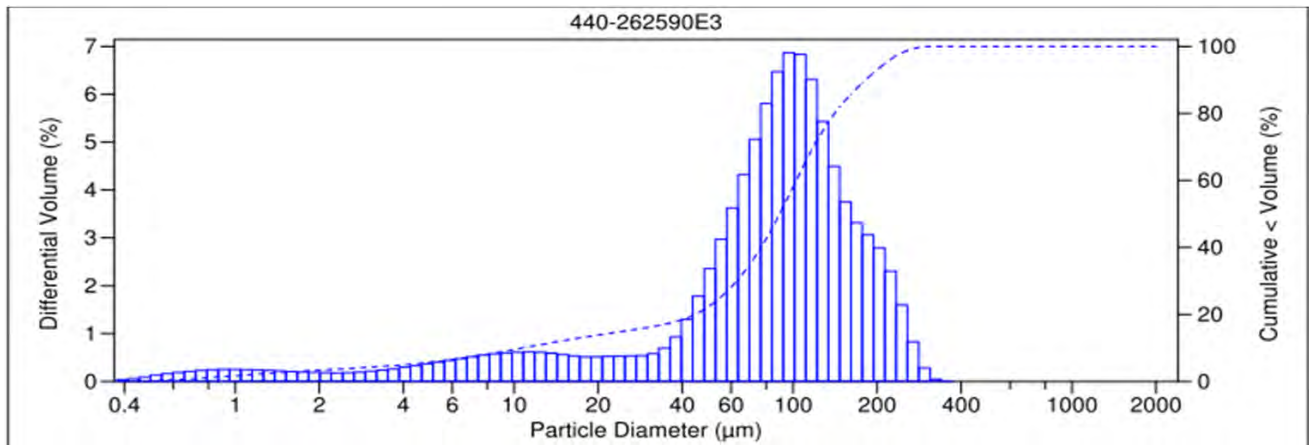
Haley & Aldrich, Inc.

Date Sampled: 03/10/20
 Date Received: 03/12/20
 Work Order No: 440-262590
 Date Analyzed: 03/12/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
ILBMP0008_20200310		Very Fine Sand	0.095

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	1.65	24.84	43.70	24.89	4.92	29.81



V 3.0

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	40CFR136A	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV
FILTRATION	Sample Filtration	None	TAL IRV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

ASTM = ASTM International

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Client Sample ID: ILBMP0004_20200310

Lab Sample ID: 440-262590-1

Date Collected: 03/10/20 08:00

Matrix: Water

Date Received: 03/11/20 13:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B	RA		952 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B	RA	1			367395	03/24/20 23:25	ALM	TAL SAC
Total/NA	Prep	1613B			952 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			366401	03/21/20 09:56	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	600022	03/11/20 18:59	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	600038	03/11/20 19:40	M1G	TAL IRV
Dissolved	Analysis	200.8		1			600049	03/11/20 21:12	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600134	03/12/20 09:46	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600299	03/12/20 18:30	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	600022	03/11/20 18:59	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	600266	03/12/20 17:15	DB	TAL IRV
Dissolved	Analysis	245.1		1			600380	03/13/20 06:03	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	600263	03/12/20 17:07	DB	TAL IRV
Total/NA	Analysis	245.1		1			600380	03/13/20 05:37	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	599991	03/11/20 16:24	KL	TAL IRV
Total/NA	Analysis	D4464		1			57158	03/12/20 20:15	C4LT	ECL 1

Client Sample ID: ILBMP0005_20200310

Lab Sample ID: 440-262590-2

Date Collected: 03/10/20 08:10

Matrix: Water

Date Received: 03/11/20 13:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			967.7 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			366401	03/21/20 10:44	AS	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	600022	03/11/20 18:59	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	600038	03/11/20 19:40	M1G	TAL IRV
Dissolved	Analysis	200.8		1			600049	03/11/20 21:18	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600134	03/12/20 09:46	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600299	03/12/20 18:37	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	600022	03/11/20 18:59	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	600266	03/12/20 17:15	DB	TAL IRV
Dissolved	Analysis	245.1		1			600380	03/13/20 06:01	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	600263	03/12/20 17:07	DB	TAL IRV
Total/NA	Analysis	245.1		1			600380	03/13/20 05:39	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	599991	03/11/20 16:24	KL	TAL IRV
Total/NA	Analysis	D4464		1			57158	03/12/20 20:21	C4LT	ECL 1

Client Sample ID: ILBMP0008_20200310

Lab Sample ID: 440-262590-3

Date Collected: 03/10/20 07:50

Matrix: Water

Date Received: 03/11/20 13:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			943.5 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			366401	03/21/20 11:32	AS	TAL SAC

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Client Sample ID: ILBMP0008_20200310

Lab Sample ID: 440-262590-3

Date Collected: 03/10/20 07:50

Matrix: Water

Date Received: 03/11/20 13:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			150 mL	150 mL	600022	03/11/20 18:59	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	600038	03/11/20 19:40	M1G	TAL IRV
Dissolved	Analysis	200.8		1			600049	03/11/20 21:20	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600134	03/12/20 09:46	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600299	03/12/20 18:39	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			150 mL	150 mL	600022	03/11/20 18:59	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	600266	03/12/20 17:15	DB	TAL IRV
Dissolved	Analysis	245.1		1			600380	03/13/20 05:55	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	600263	03/12/20 17:07	DB	TAL IRV
Total/NA	Analysis	245.1		1			600380	03/13/20 05:46	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	599991	03/11/20 16:24	KL	TAL IRV
Total/NA	Analysis	D4464		1			57158	03/12/20 20:28	C4LT	ECL 1

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-365527/1-A
Matrix: Water
Analysis Batch: 366401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365527

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000008	ug/L	-	03/18/20 08:33	03/21/20 08:20	1
2,3,7,8-TCDF	ND		0.000010	0.0000002	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000009	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,4,7,8-HxCDD	0.00000318	J,DX	0.000050	0.0000010	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,6,7,8-HxCDD	ND		0.000050	0.0000012	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,7,8,9-HxCDD	ND		0.000050	0.0000009	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,4,7,8-HxCDF	ND		0.000050	0.0000007	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,6,7,8-HxCDF	ND		0.000050	0.0000007	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,7,8,9-HxCDF	0.00000180	J,DX	0.000050	0.0000007	ug/L		03/18/20 08:33	03/21/20 08:20	1
2,3,4,6,7,8-HxCDF	ND		0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,4,6,7,8-HpCDD	0.00000587	J,DX	0.000050	0.0000003	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,4,6,7,8-HpCDF	ND		0.000050	0.0000013	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,4,7,8,9-HpCDF	ND		0.000050	0.0000014	ug/L		03/18/20 08:33	03/21/20 08:20	1
OCDD	0.0000202	J,DX	0.00010	0.0000013	ug/L		03/18/20 08:33	03/21/20 08:20	1
OCDF	0.00000627	J,DX	0.00010	0.0000011	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total TCDD	ND		0.000010	0.0000008	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total TCDF	ND		0.000010	0.0000002	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total PeCDD	ND		0.000050	0.0000009	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total PeCDF	ND		0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total HxCDD	0.00000318	J,DX	0.000050	0.0000009	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total HxCDF	0.00000180	J,DX	0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total HpCDD	0.0000101	J,DX	0.000050	0.0000003	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total HpCDF	ND		0.000050	0.0000013	ug/L		03/18/20 08:33	03/21/20 08:20	1
	MB	MB							
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	73		25 - 164				03/18/20 08:33	03/21/20 08:20	1
13C-2,3,7,8-TCDF	81		24 - 169				03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,7,8-PeCDD	63		25 - 181				03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,7,8-PeCDF	67		24 - 185				03/18/20 08:33	03/21/20 08:20	1
13C-2,3,4,7,8-PeCDF	74		21 - 178				03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,7,8-HxCDD	74		32 - 141				03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,6,7,8-HxCDD	66		28 - 130				03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,7,8-HxCDF	81		26 - 152				03/18/20 08:33	03/21/20 08:20	1

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-365527/1-A
Matrix: Water
Analysis Batch: 366401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365527

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-1,2,3,6,7,8-HxCDF	74		26 - 123	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,7,8,9-HxCDF	71		29 - 147	03/18/20 08:33	03/21/20 08:20	1
13C-2,3,4,6,7,8-HxCDF	78		28 - 136	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,6,7,8-HpCDD	60		23 - 140	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,7,8,9-HpCDF	63		26 - 138	03/18/20 08:33	03/21/20 08:20	1
13C-OCDD	50		17 - 157	03/18/20 08:33	03/21/20 08:20	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
37Cl4-2,3,7,8-TCDD	79		35 - 197	03/18/20 08:33	03/21/20 08:20	1

Lab Sample ID: LCS 320-365527/2-A
Matrix: Water
Analysis Batch: 366401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365527

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDF	0.000200	0.000262		ug/L		131	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.00111		ug/L		111	70 - 142
1,2,3,7,8-PeCDF	0.00100	0.00123		ug/L		123	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.00114		ug/L		114	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.00101	MB	ug/L		101	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.00112		ug/L		112	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.00102		ug/L		102	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.00110		ug/L		110	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.00119		ug/L		119	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.00120	MB	ug/L		120	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.00117		ug/L		117	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.000997	MB	ug/L		100	70 - 140
1,2,3,4,6,7,8-HpCDF	0.00100	0.00108		ug/L		108	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.00102		ug/L		102	78 - 138
OCDD	0.00200	0.00201	MB	ug/L		100	78 - 144
OCDF	0.00200	0.00231	MB	ug/L		115	63 - 170

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	68		20 - 175
13C-2,3,7,8-TCDF	75		22 - 152
13C-1,2,3,7,8-PeCDD	63		21 - 227
13C-1,2,3,7,8-PeCDF	64		21 - 192
13C-2,3,4,7,8-PeCDF	74		13 - 328
13C-1,2,3,4,7,8-HxCDD	73		21 - 193
13C-1,2,3,6,7,8-HxCDD	64		25 - 163
13C-1,2,3,4,7,8-HxCDF	79		19 - 202
13C-1,2,3,6,7,8-HxCDF	71		21 - 159
13C-1,2,3,7,8,9-HxCDF	69		17 - 205
13C-2,3,4,6,7,8-HxCDF	75		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	63		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	64		21 - 158

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-365527/2-A
Matrix: Water
Analysis Batch: 366401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365527

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C-1,2,3,4,7,8,9-HpCDF	68		20 - 186
13C-OCDD	52		13 - 199

Surrogate	LCS		Limits
	%Recovery	Qualifier	
37Cl4-2,3,7,8-TCDD	81		31 - 191

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-600134/1-A
Matrix: Water
Analysis Batch: 600299

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 600134

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/12/20 09:46	03/12/20 18:26	1
Copper	ND		2.0	0.50	ug/L		03/12/20 09:46	03/12/20 18:26	1
Lead	ND		1.0	0.50	ug/L		03/12/20 09:46	03/12/20 18:26	1

Lab Sample ID: LCS 440-600134/2-A
Matrix: Water
Analysis Batch: 600299

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 600134

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	78.2		ug/L		98	85 - 115
Copper	80.0	79.3		ug/L		99	85 - 115
Lead	80.0	78.1		ug/L		98	85 - 115

Lab Sample ID: 440-262590-1 MS
Matrix: Water
Analysis Batch: 600299

Client Sample ID: ILBMP0004_20200310
Prep Type: Total Recoverable
Prep Batch: 600134

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	0.36	J,DX	80.0	78.5		ug/L		98	70 - 130
Copper	9.6		80.0	90.4		ug/L		101	70 - 130
Lead	2.7		80.0	80.9		ug/L		98	70 - 130

Lab Sample ID: 440-262590-1 MSD
Matrix: Water
Analysis Batch: 600299

Client Sample ID: ILBMP0004_20200310
Prep Type: Total Recoverable
Prep Batch: 600134

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	0.36	J,DX	80.0	80.3		ug/L		100	70 - 130	2	20
Copper	9.6		80.0	91.1		ug/L		102	70 - 130	1	20
Lead	2.7		80.0	82.3		ug/L		100	70 - 130	2	20

Lab Sample ID: MB 440-600022/1-B
Matrix: Water
Analysis Batch: 600049

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 600038

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/11/20 19:40	03/11/20 21:07	1

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 440-600022/1-B
 Matrix: Water
 Analysis Batch: 600049

Client Sample ID: Method Blank
 Prep Type: Dissolved
 Prep Batch: 600038

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.50	ug/L		03/11/20 19:40	03/11/20 21:07	1
Lead	ND		1.0	0.50	ug/L		03/11/20 19:40	03/11/20 21:07	1

Lab Sample ID: LCS 440-600022/2-B
 Matrix: Water
 Analysis Batch: 600049

Client Sample ID: Lab Control Sample
 Prep Type: Dissolved
 Prep Batch: 600038

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	80.0	81.0		ug/L		101	85 - 115
Copper	80.0	81.9		ug/L		102	85 - 115
Lead	80.0	81.9		ug/L		102	85 - 115

Lab Sample ID: 440-262590-1 MS
 Matrix: Water
 Analysis Batch: 600049

Client Sample ID: ILBMP0004_20200310
 Prep Type: Dissolved
 Prep Batch: 600038

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	0.37	J,DX	80.0	77.5		ug/L		96	70 - 130
Copper	7.7		80.0	86.7		ug/L		99	70 - 130
Lead	0.58	J,DX	80.0	78.8		ug/L		98	70 - 130

Lab Sample ID: 440-262590-1 MSD
 Matrix: Water
 Analysis Batch: 600049

Client Sample ID: ILBMP0004_20200310
 Prep Type: Dissolved
 Prep Batch: 600038

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Cadmium	0.37	J,DX	80.0	77.9		ug/L		97	70 - 130	0	20
Copper	7.7		80.0	86.9		ug/L		99	70 - 130	0	20
Lead	0.58	J,DX	80.0	79.6		ug/L		99	70 - 130	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-600263/1-A
 Matrix: Water
 Analysis Batch: 600380

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 600263

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/12/20 17:07	03/13/20 04:54	1

Lab Sample ID: LCS 440-600263/2-A
 Matrix: Water
 Analysis Batch: 600380

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 600263

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	3.83		ug/L		96	85 - 115

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 440-262437-A-1-C MS
Matrix: Water
Analysis Batch: 600380

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 600263
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.50		ug/L		88	75 - 125

Lab Sample ID: 440-262437-A-1-D MSD
Matrix: Water
Analysis Batch: 600380

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 600263
%Rec.
RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.36		ug/L		84	75 - 125	4	20

Lab Sample ID: MB 440-600022/1-C
Matrix: Water
Analysis Batch: 600380

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 600266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/12/20 17:15	03/13/20 05:50	1

Lab Sample ID: LCS 440-600022/2-C
Matrix: Water
Analysis Batch: 600380

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 600266
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	4.02		ug/L		100	85 - 115

Lab Sample ID: 440-262590-3 MS
Matrix: Water
Analysis Batch: 600380

Client Sample ID: ILBMP0008_20200310
Prep Type: Dissolved
Prep Batch: 600266
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.92		ug/L		98	75 - 125

Lab Sample ID: 440-262590-3 MSD
Matrix: Water
Analysis Batch: 600380

Client Sample ID: ILBMP0008_20200310
Prep Type: Dissolved
Prep Batch: 600266
%Rec.
RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.80		ug/L		95	75 - 125	3	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-599991/1
Matrix: Water
Analysis Batch: 599991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			03/11/20 16:24	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 440-599991/2
Matrix: Water
Analysis Batch: 599991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	922		mg/L		92	85 - 115

Lab Sample ID: 440-262581-C-2 DU
Matrix: Water
Analysis Batch: 599991

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	640		640		mg/L		0.8	10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Specialty Organics

Prep Batch: 365527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1 - RA	ILBMP0004_20200310	Total/NA	Water	1613B	
440-262590-1	ILBMP0004_20200310	Total/NA	Water	1613B	
440-262590-2	ILBMP0005_20200310	Total/NA	Water	1613B	
440-262590-3	ILBMP0008_20200310	Total/NA	Water	1613B	
MB 320-365527/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-365527/2-A	Lab Control Sample	Total/NA	Water	1613B	

Analysis Batch: 366401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Total/NA	Water	1613B	365527
440-262590-2	ILBMP0005_20200310	Total/NA	Water	1613B	365527
440-262590-3	ILBMP0008_20200310	Total/NA	Water	1613B	365527
MB 320-365527/1-A	Method Blank	Total/NA	Water	1613B	365527
LCS 320-365527/2-A	Lab Control Sample	Total/NA	Water	1613B	365527

Analysis Batch: 367395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1 - RA	ILBMP0004_20200310	Total/NA	Water	1613B	365527

Metals

Filtration Batch: 600022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Dissolved	Water	FILTRATION	
440-262590-2	ILBMP0005_20200310	Dissolved	Water	FILTRATION	
440-262590-3	ILBMP0008_20200310	Dissolved	Water	FILTRATION	
MB 440-600022/1-B	Method Blank	Dissolved	Water	FILTRATION	
MB 440-600022/1-C	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-600022/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 440-600022/2-C	Lab Control Sample	Dissolved	Water	FILTRATION	
440-262590-1 MS	ILBMP0004_20200310	Dissolved	Water	FILTRATION	
440-262590-1 MSD	ILBMP0004_20200310	Dissolved	Water	FILTRATION	
440-262590-3 MS	ILBMP0008_20200310	Dissolved	Water	FILTRATION	
440-262590-3 MSD	ILBMP0008_20200310	Dissolved	Water	FILTRATION	

Prep Batch: 600038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Dissolved	Water	200.2	600022
440-262590-2	ILBMP0005_20200310	Dissolved	Water	200.2	600022
440-262590-3	ILBMP0008_20200310	Dissolved	Water	200.2	600022
MB 440-600022/1-B	Method Blank	Dissolved	Water	200.2	600022
LCS 440-600022/2-B	Lab Control Sample	Dissolved	Water	200.2	600022
440-262590-1 MS	ILBMP0004_20200310	Dissolved	Water	200.2	600022
440-262590-1 MSD	ILBMP0004_20200310	Dissolved	Water	200.2	600022

Analysis Batch: 600049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Dissolved	Water	200.8	600038
440-262590-2	ILBMP0005_20200310	Dissolved	Water	200.8	600038
440-262590-3	ILBMP0008_20200310	Dissolved	Water	200.8	600038
MB 440-600022/1-B	Method Blank	Dissolved	Water	200.8	600038

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QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Metals (Continued)

Analysis Batch: 600049 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-600022/2-B	Lab Control Sample	Dissolved	Water	200.8	600038
440-262590-1 MS	ILBMP0004_20200310	Dissolved	Water	200.8	600038
440-262590-1 MSD	ILBMP0004_20200310	Dissolved	Water	200.8	600038

Prep Batch: 600134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Total Recoverable	Water	200.2	
440-262590-2	ILBMP0005_20200310	Total Recoverable	Water	200.2	
440-262590-3	ILBMP0008_20200310	Total Recoverable	Water	200.2	
MB 440-600134/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-600134/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-262590-1 MS	ILBMP0004_20200310	Total Recoverable	Water	200.2	
440-262590-1 MSD	ILBMP0004_20200310	Total Recoverable	Water	200.2	

Prep Batch: 600263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Total/NA	Water	245.1	
440-262590-2	ILBMP0005_20200310	Total/NA	Water	245.1	
440-262590-3	ILBMP0008_20200310	Total/NA	Water	245.1	
MB 440-600263/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-600263/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-262437-A-1-C MS	Matrix Spike	Total/NA	Water	245.1	
440-262437-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Prep Batch: 600266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Dissolved	Water	245.1	600022
440-262590-2	ILBMP0005_20200310	Dissolved	Water	245.1	600022
440-262590-3	ILBMP0008_20200310	Dissolved	Water	245.1	600022
MB 440-600022/1-C	Method Blank	Dissolved	Water	245.1	600022
LCS 440-600022/2-C	Lab Control Sample	Dissolved	Water	245.1	600022
440-262590-3 MS	ILBMP0008_20200310	Dissolved	Water	245.1	600022
440-262590-3 MSD	ILBMP0008_20200310	Dissolved	Water	245.1	600022

Analysis Batch: 600299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Total Recoverable	Water	200.8	600134
440-262590-2	ILBMP0005_20200310	Total Recoverable	Water	200.8	600134
440-262590-3	ILBMP0008_20200310	Total Recoverable	Water	200.8	600134
MB 440-600134/1-A	Method Blank	Total Recoverable	Water	200.8	600134
LCS 440-600134/2-A	Lab Control Sample	Total Recoverable	Water	200.8	600134
440-262590-1 MS	ILBMP0004_20200310	Total Recoverable	Water	200.8	600134
440-262590-1 MSD	ILBMP0004_20200310	Total Recoverable	Water	200.8	600134

Analysis Batch: 600380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Dissolved	Water	245.1	600266
440-262590-1	ILBMP0004_20200310	Total/NA	Water	245.1	600263
440-262590-2	ILBMP0005_20200310	Dissolved	Water	245.1	600266
440-262590-2	ILBMP0005_20200310	Total/NA	Water	245.1	600263
440-262590-3	ILBMP0008_20200310	Dissolved	Water	245.1	600266

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QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Metals (Continued)

Analysis Batch: 600380 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-3	ILBMP0008_20200310	Total/NA	Water	245.1	600263
MB 440-600022/1-C	Method Blank	Dissolved	Water	245.1	600266
MB 440-600263/1-A	Method Blank	Total/NA	Water	245.1	600263
LCS 440-600022/2-C	Lab Control Sample	Dissolved	Water	245.1	600266
LCS 440-600263/2-A	Lab Control Sample	Total/NA	Water	245.1	600263
440-262437-A-1-C MS	Matrix Spike	Total/NA	Water	245.1	600263
440-262437-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	600263
440-262590-3 MS	ILBMP0008_20200310	Dissolved	Water	245.1	600266
440-262590-3 MSD	ILBMP0008_20200310	Dissolved	Water	245.1	600266

General Chemistry

Analysis Batch: 599991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Total/NA	Water	SM 2540D	
440-262590-2	ILBMP0005_20200310	Total/NA	Water	SM 2540D	
440-262590-3	ILBMP0008_20200310	Total/NA	Water	SM 2540D	
MB 440-599991/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-599991/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-262581-C-2 DU	Duplicate	Total/NA	Water	SM 2540D	

Geotechnical

Analysis Batch: 57158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262590-1	ILBMP0004_20200310	Total/NA	Water	D4464	
440-262590-2	ILBMP0005_20200310	Total/NA	Water	D4464	
440-262590-3	ILBMP0008_20200310	Total/NA	Water	D4464	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-20

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20 *
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wyoming	State Program	8TMS-L	01-28-19 *

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* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM	Carrier (Tracking No(s))		COC No:																	
Client Contact:		Bondoc, Christian M	Bondoc, Christian M	State of Origin:		440-153734.1																	
Shipping/Receiving		Phone:	E-Mail:	California		Page:																	
Company:		christian.bondoc@testamericainc.com		Page 1 of 1																			
TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #:																			
Address:		State Program - California		440-262590-1																			
880 Riverside Parkway,		Due Date Requested:		Preservation Codes:																			
City:		3/25/2020		A - HCL		M - Hexane																	
West Sacramento		TAT Requested (days):		B - NaOH		N - None																	
State, Zip:				C - Zn Acetate		O - AsNaO2																	
CA, 95605				D - Nitric Acid		P - Na2O4S																	
Phone:		PO #:		E - NaHSO4		Q - Na2SO3																	
916-373-5600(Tel) 916-372-1059(Fax)				F - MeOH		R - Na2SO3																	
Email:		WO #:		G - Amchlor		S - H2SO4																	
				H - Ascorbic Acid		T - TSP Dodecahydrate																	
Project #:		Project #:		I - Ice		U - Acetone																	
44009815		44009815		J - DI Water		V - MCAA																	
Site:		SSOW#:		K - EDTA		W - pH 4.5																	
				L - EDTA		Z - other (specify)																	
				Other:																			
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (Water, Solid, On-water, Oil)		Preservation Code:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		1613B/613B_Sox_Sep_P Standard List w/ Totals		Analysis Requested		Total Number of Containers		Special Instructions/Note:	
ILBMP004_20200310 (440-262590-1)		3/10/20		08:00 Pacific		Water		Water				X		X		2				See QAS, Boeing_w/u to zero			
ILBMP005_20200310 (440-262590-2)		3/10/20		08:10 Pacific		Water		Water				X		X		2				See QAS, Boeing_w/u to zero			
ILBMP008_20200310 (440-262590-3)		3/10/20		07:50 Pacific		Water		Water				X		X		2				See QAS, Boeing_w/u to zero			
								</															

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Bondoc, Christian M		Carrier Tracking No(s): 440-153729.1				
Client Contact: Shipping/Receiving		E-Mail: christian.bondoc@testamericainc.com		Page: Page 1 of 1				
Company: Eurofins Calscience LLC		Accreditations Required (See note): State Program - California		Job #: 440-262590-1				
Address: 7440 Lincoln Way,		Due Date Requested: 3/24/2020		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:				
City: Garden Grove		TAT Requested (days):		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)				
State, Zip: CA, 92841		PO #:		Total Number of Containers				
Phone: 714-895-5494(Tel) 714-894-7501(Fax)		WO #:		Special Instructions/Note:				
Email:		Project #: 44009815		Normal TAT				
Project Name: Boeing SSFL ISRA and BMP		SSOW#:		Normal TAT				
Site:		Site:		Normal TAT				
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Smoked, Onwaste/Oil, BT-Tissue, Air/ur)	Field Filtered Sample (Yes or No)	D464/ D464- Particle Size	Reform MS/MSD (Yes or No)	Analysis Requested
ILBMP004_20200310 (440-262590-1)	3/10/20	08:00 Pacific	Water	Water	X	X	X	
ILBMP005_20200310 (440-262590-2)	3/10/20	08:10 Pacific	Water	Water	X	X	X	
ILBMP008_20200310 (440-262590-3)	3/10/20	07:50 Pacific	Water	Water	X	X	X	
 440-262590 Chain of Custody								
<p>Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.</p>								
<p>Possible Hazard Identification</p> <p>Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2</p>								
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p>								
<p>Special Instructions/QC Requirements:</p>								
<p>Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____</p>								
<p>Relinquished by: Date/Time: 3/12/20 10:30 Company: ILBMP</p>								
<p>Relinquished by: _____ Date/Time: _____ Company: _____</p>								
<p>Relinquished by: _____ Date/Time: _____ Company: _____</p>								
<p>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Custody Seal No.: _____</p>								
<p>Cooler Temperature(s) °C and Other Remarks: _____</p>								

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-262590-1

Login Number: 262590

List Number: 1

Creator: Dolidze, Lado

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-262590-1

Login Number: 262590

List Number: 2

Creator: Cruise, Noel

List Source: Eurofins Calscience

List Creation: 03/12/20 12:40 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-262590-1

Login Number: 262590

List Number: 3

Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

List Creation: 03/12/20 03:29 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	obs 1.6 corr 2.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262590-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-262590-1	ILBMP0004_20200310	61	64	55	56	62	63	58	69
440-262590-1 - RA	ILBMP0004_20200310		56						
440-262590-2	ILBMP0005_20200310	60	68	53	57	64	67	61	73
440-262590-3	ILBMP0008_20200310	63	77	61	67	74	74	65	80
MB 320-365527/1-A	Method Blank	73	81	63	67	74	74	66	81

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-262590-1	ILBMP0004_20200310	63	59	64	55	57	57	47
440-262590-1 - RA	ILBMP0004_20200310							
440-262590-2	ILBMP0005_20200310	67	64	70	56	59	58	47
440-262590-3	ILBMP0008_20200310	73	69	75	62	66	64	51
MB 320-365527/1-A	Method Blank	74	71	78	60	64	63	50

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-365527/2-A	Lab Control Sample	68	75	63	64	74	73	64	79

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-365527/2-A	Lab Control Sample	71	69	75	63	64	68	52

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.

Project/Site: Boeing SSFL ISRA and BMP

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

Job ID: 440-262590-1

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Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-262590 Field Sheet

Tracking #: 1540 41 07 1201

Job: _____

SO / ~~PO~~ / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes: _____

Therm. ID: AK-5 Corr. Factor: 0/-) 0.4 °C
Ice Wet Gel _____ Other _____
Cooler Custody Seal: Seal
Cooler ID: _____
Temp Observed: 1.6 °C Corrected: 2.0 °C
From: Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: [Signature] Date: 12 March 20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Containers are not broken or leaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples w/o discrepancies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiphasic samples are not present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Non-conformance	Yes	No	NA
NCM Filed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: _____ Date: _____

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

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ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022


Laboratory Job ID: 440-262973-1

Client Project/Site: Boeing SSFL ISRA and BMP

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
3/30/2020 4:54:58 PM

Christian Bondoc, Project Manager I
(949)260-3218
christian.bondoc@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-262973-1	ILBMP0002_20200312	Water	03/12/20 12:50	03/13/20 17:25	
440-262973-2	LXBMP0011_20200313	Water	03/13/20 08:30	03/13/20 17:25	
440-262973-3	LXBMP0012_20200313	Water	03/13/20 08:40	03/13/20 17:25	
440-262973-4	EPSW001BG01_20200313	Water	03/13/20 09:20	03/13/20 17:25	
440-262973-5	EPSW001IE01_20200313	Water	03/13/20 09:10	03/13/20 17:25	
440-262973-6	EPSW002IE02_20200313	Water	03/13/20 09:40	03/13/20 17:25	

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Job ID: 440-262973-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-262973-1

Comments

No additional comments.

Receipt

The samples were received on 3/13/2020 5:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 4.5° C, 4.7° C, 5.3° C and 5.4° C.

Receipt Exceptions

For samples #1, 2, and 3: The COC listed 6 containers however 7 containers were received for each. ILBMP0002_20200312 (440-262973-1), LXBMP0011_20200313 (440-262973-2) and LXBMP0012_20200313 (440-262973-3)

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: ILBMP0002_20200312 (440-262973-1), LXBMP0011_20200313 (440-262973-2), LXBMP0012_20200313 (440-262973-3), EPSW001BG01_20200313 (440-262973-4), EPSW001IE01_20200313 (440-262973-5), EPSW002IE02_20200313 (440-262973-6), (CCV 320-366401/17), (CCV 320-366402/31), (LCS 320-365527/2-A) and (MB 320-365527/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method FILTRATION: The following samples requested dissolved metals and were not filtered in the field: ILBMP0002_20200312 (440-262973-1), LXBMP0011_20200313 (440-262973-2), LXBMP0012_20200313 (440-262973-3), EPSW001BG01_20200313 (440-262973-4), EPSW001IE01_20200313 (440-262973-5) and EPSW002IE02_20200313 (440-262973-6). These samples were filtered and preserved upon receipt to the laboratory.

03/16/20

2.5mL of HNO3

HNO3 Lot # 0000234822

Method 245.1: The initial calibration verification (ICV) result for batch 440-602330 was above the upper control limit. Sample results were non-detects, and have been reported as qualified data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P preparation/analysis: Samples ILBMP0002_20200312 (440-262973-1), LXBMP0011_20200313 (440-262973-2), LXBMP0012_20200313 (440-262973-3), EPSW001BG01_20200313 (440-262973-4), EPSW001IE01_20200313 (440-262973-5) and EPSW002IE02_20200313 (440-262973-6) were received in wide-mouth amber glass bottles.

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Job ID: 440-262973-1 (Continued)

Laboratory: Eurofins Calscience Irvine (Continued)

preparation batch 320-365527
Method: 1613B_Sox_Sep_P / 1613B
Matrix: Aqueous

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: ILBMP0002_20200312

Lab Sample ID: 440-262973-1

Date Collected: 03/12/20 12:50

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.0000006	ug/L		03/18/20 08:33	03/21/20 20:12	1
2,3,7,8-TCDF	ND		0.000011	0.0000001	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,7,8-PeCDD	0.0000031	J,DX q	0.000053	0.0000009	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,7,8-PeCDF	ND		0.000053	0.0000008	ug/L		03/18/20 08:33	03/21/20 20:12	1
2,3,4,7,8-PeCDF	0.0000028	J,DX	0.000053	0.0000009	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,4,7,8-HxCDD	0.0000074	J,DX MB	0.000053	0.0000013	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,6,7,8-HxCDD	0.0000068	J,DX q	0.000053	0.0000014	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,7,8,9-HxCDD	0.0000090	J,DX q	0.000053	0.0000013	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,4,7,8-HxCDF	0.0000044	J,DX	0.000053	0.0000007	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,6,7,8-HxCDF	0.0000045	J,DX	0.000053	0.0000007	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,7,8,9-HxCDF	0.0000028	J,DX MB	0.000053	0.0000007	ug/L		03/18/20 08:33	03/21/20 20:12	1
2,3,4,6,7,8-HxCDF	0.0000029	J,DX q	0.000053	0.0000007	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,4,6,7,8-HpCDD	0.000098	MB	0.000053	0.0000011	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,4,6,7,8-HpCDF	0.000034	J,DX	0.000053	0.0000013	ug/L		03/18/20 08:33	03/21/20 20:12	1
1,2,3,4,7,8,9-HpCDF	0.0000036	J,DX	0.000053	0.0000015	ug/L		03/18/20 08:33	03/21/20 20:12	1
OCDD	0.0013	MB	0.00011	0.0000019	ug/L		03/18/20 08:33	03/21/20 20:12	1
OCDF	0.000063	J,DX MB	0.00011	0.0000011	ug/L		03/18/20 08:33	03/21/20 20:12	1
Total TCDD	ND		0.000011	0.0000006	ug/L		03/18/20 08:33	03/21/20 20:12	1
Total TCDF	ND		0.000011	0.0000001	ug/L		03/18/20 08:33	03/21/20 20:12	1
Total PeCDD	0.0000031	J,DX q	0.000053	0.0000009	ug/L		03/18/20 08:33	03/21/20 20:12	1
Total PeCDF	0.0000028	J,DX	0.000053	0.0000008	ug/L		03/18/20 08:33	03/21/20 20:12	1
Total HxCDD	0.000045	J,DX q MB	0.000053	0.0000013	ug/L		03/18/20 08:33	03/21/20 20:12	1
Total HxCDF	0.000029	J,DX q MB	0.000053	0.0000007	ug/L		03/18/20 08:33	03/21/20 20:12	1
Total HpCDD	0.00022	MB	0.000053	0.0000011	ug/L		03/18/20 08:33	03/21/20 20:12	1
Total HpCDF	0.000057	J,DX	0.000053	0.0000013	ug/L		03/18/20 08:33	03/21/20 20:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	63		25 - 164				03/18/20 08:33	03/21/20 20:12	1
13C-2,3,7,8-TCDF	76		24 - 169				03/18/20 08:33	03/21/20 20:12	1
13C-1,2,3,7,8-PeCDD	62		25 - 181				03/18/20 08:33	03/21/20 20:12	1
13C-1,2,3,7,8-PeCDF	64		24 - 185				03/18/20 08:33	03/21/20 20:12	1
13C-2,3,4,7,8-PeCDF	65		21 - 178				03/18/20 08:33	03/21/20 20:12	1
13C-1,2,3,4,7,8-HxCDD	54		32 - 141				03/18/20 08:33	03/21/20 20:12	1
13C-1,2,3,6,7,8-HxCDD	50		28 - 130				03/18/20 08:33	03/21/20 20:12	1
13C-1,2,3,4,7,8-HxCDF	63		26 - 152				03/18/20 08:33	03/21/20 20:12	1
13C-1,2,3,6,7,8-HxCDF	59		26 - 123				03/18/20 08:33	03/21/20 20:12	1
13C-1,2,3,7,8,9-HxCDF	61		29 - 147				03/18/20 08:33	03/21/20 20:12	1
13C-2,3,4,6,7,8-HxCDF	60		28 - 136				03/18/20 08:33	03/21/20 20:12	1
13C-1,2,3,4,6,7,8-HpCDD	51		23 - 140				03/18/20 08:33	03/21/20 20:12	1
13C-1,2,3,4,6,7,8-HpCDF	59		28 - 143				03/18/20 08:33	03/21/20 20:12	1

Eurofins Calscience Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: ILBMP0002_20200312

Lab Sample ID: 440-262973-1

Date Collected: 03/12/20 12:50

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8,9-HpCDF	59		26 - 138	03/18/20 08:33	03/21/20 20:12	1
13C-OCDD	51		17 - 157	03/18/20 08:33	03/21/20 20:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	88		35 - 197	03/18/20 08:33	03/21/20 20:12	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 10:39	03/16/20 18:04	1
Copper	6.9		2.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:04	1
Lead	6.9		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:04	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 16:01	03/16/20 20:01	1
Copper	4.6		2.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:01	1
Lead	1.3		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:01	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/24/20 14:38	03/25/20 03:49	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/18/20 08:16	03/18/20 18:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	44		2.9	1.4	mg/L			03/14/20 13:18	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	4.10		0.01	0.01	%			03/20/20 18:46	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			03/20/20 18:46	1
Fine Sand (0.125 to 0.25mm)	19.81		0.01	0.01	%			03/20/20 18:46	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			03/20/20 18:46	1
Medium Sand (0.25 to 0.5 mm)	5.00		0.01	0.01	%			03/20/20 18:46	1
Silt (0.00391 to 0.0625mm)	47.03		0.01	0.01	%			03/20/20 18:46	1
Total Silt and Clay (0 to 0.0626mm)	51.12		0.01	0.01	%			03/20/20 18:46	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			03/20/20 18:46	1
Very Fine Sand (0.0625 to 0.125 mm)	24.06		0.01	0.01	%			03/20/20 18:46	1

Client Sample ID: LXBMP0011_20200313

Lab Sample ID: 440-262973-2

Date Collected: 03/13/20 08:30

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000005	ug/L		03/18/20 08:33	03/21/20 21:00	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: LXBMP0011_20200313

Lab Sample ID: 440-262973-2

Date Collected: 03/13/20 08:30

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000010	0.0000001	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,7,8-PeCDD	0.0000035	J,DX	0.000052	0.0000010	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,7,8-PeCDF	0.0000039	J,DX q	0.000052	0.0000007	ug/L		03/18/20 08:33	03/21/20 21:00	1
2,3,4,7,8-PeCDF	0.0000031	J,DX	0.000052	0.0000007	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,4,7,8-HxCDD	0.0000089	J,DX MB	0.000052	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,6,7,8-HxCDD	0.0000066	J,DX q	0.000052	0.0000012	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,7,8,9-HxCDD	0.0000053	J,DX q	0.000052	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,4,7,8-HxCDF	0.0000063	J,DX	0.000052	0.0000005	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,6,7,8-HxCDF	0.0000054	J,DX q	0.000052	0.0000006	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,7,8,9-HxCDF	0.0000056	J,DX MB	0.000052	0.0000005	ug/L		03/18/20 08:33	03/21/20 21:00	1
2,3,4,6,7,8-HxCDF	0.0000053	J,DX	0.000052	0.0000006	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,4,6,7,8-HpCDD	0.000018	J,DX MB	0.000052	0.0000003	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,4,6,7,8-HpCDF	0.000011	J,DX	0.000052	0.0000012	ug/L		03/18/20 08:33	03/21/20 21:00	1
1,2,3,4,7,8,9-HpCDF	0.0000080	J,DX	0.000052	0.0000012	ug/L		03/18/20 08:33	03/21/20 21:00	1
OCDD	0.000089	J,DX MB	0.00010	0.0000015	ug/L		03/18/20 08:33	03/21/20 21:00	1
OCDF	0.000035	J,DX MB	0.00010	0.0000011	ug/L		03/18/20 08:33	03/21/20 21:00	1
Total TCDD	ND		0.000010	0.0000005	ug/L		03/18/20 08:33	03/21/20 21:00	1
Total TCDF	ND		0.000010	0.0000001	ug/L		03/18/20 08:33	03/21/20 21:00	1
Total PeCDD	0.0000035	J,DX	0.000052	0.0000010	ug/L		03/18/20 08:33	03/21/20 21:00	1
Total PeCDF	0.0000071	J,DX q	0.000052	0.0000007	ug/L		03/18/20 08:33	03/21/20 21:00	1
Total HxCDD	0.000021	J,DX q MB	0.000052	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:00	1
Total HxCDF	0.000023	J,DX q MB	0.000052	0.0000005	ug/L		03/18/20 08:33	03/21/20 21:00	1
Total HpCDD	0.000026	J,DX MB	0.000052	0.0000003	ug/L		03/18/20 08:33	03/21/20 21:00	1
Total HpCDF	0.000021	J,DX q	0.000052	0.0000012	ug/L		03/18/20 08:33	03/21/20 21:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	56		25 - 164				03/18/20 08:33	03/21/20 21:00	1
13C-2,3,7,8-TCDF	73		24 - 169				03/18/20 08:33	03/21/20 21:00	1
13C-1,2,3,7,8-PeCDD	60		25 - 181				03/18/20 08:33	03/21/20 21:00	1
13C-1,2,3,7,8-PeCDF	69		24 - 185				03/18/20 08:33	03/21/20 21:00	1
13C-2,3,4,7,8-PeCDF	75		21 - 178				03/18/20 08:33	03/21/20 21:00	1
13C-1,2,3,4,7,8-HxCDD	74		32 - 141				03/18/20 08:33	03/21/20 21:00	1
13C-1,2,3,6,7,8-HxCDD	62		28 - 130				03/18/20 08:33	03/21/20 21:00	1
13C-1,2,3,4,7,8-HxCDF	82		26 - 152				03/18/20 08:33	03/21/20 21:00	1
13C-1,2,3,6,7,8-HxCDF	72		26 - 123				03/18/20 08:33	03/21/20 21:00	1
13C-1,2,3,7,8,9-HxCDF	73		29 - 147				03/18/20 08:33	03/21/20 21:00	1
13C-2,3,4,6,7,8-HxCDF	70		28 - 136				03/18/20 08:33	03/21/20 21:00	1
13C-1,2,3,4,6,7,8-HpCDD	55		23 - 140				03/18/20 08:33	03/21/20 21:00	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: LXBMP0011_20200313

Lab Sample ID: 440-262973-2

Date Collected: 03/13/20 08:30

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDF	58		28 - 143	03/18/20 08:33	03/21/20 21:00	1
13C-1,2,3,4,7,8,9-HpCDF	65		26 - 138	03/18/20 08:33	03/21/20 21:00	1
13C-OCDD	51		17 - 157	03/18/20 08:33	03/21/20 21:00	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	76		35 - 197	03/18/20 08:33	03/21/20 21:00	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 10:39	03/16/20 18:39	1
Copper	2.3		2.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:39	1
Lead	2.6		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:39	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 16:01	03/16/20 20:03	1
Copper	1.4	J,DX	2.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:03	1
Lead	ND		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:03	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/24/20 14:38	03/25/20 03:51	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/18/20 08:16	03/18/20 18:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	8.4		2.0	1.0	mg/L			03/19/20 17:43	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	0.49		0.01	0.01	%			03/20/20 18:55	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			03/20/20 18:55	1
Fine Sand (0.125 to 0.25mm)	31.51		0.01	0.01	%			03/20/20 18:55	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			03/20/20 18:55	1
Medium Sand (0.25 to 0.5 mm)	0.01		0.01	0.01	%			03/20/20 18:55	1
Silt (0.00391 to 0.0625mm)	37.40		0.01	0.01	%			03/20/20 18:55	1
Total Silt and Clay (0 to 0.0626mm)	37.89		0.01	0.01	%			03/20/20 18:55	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			03/20/20 18:55	1
Very Fine Sand (0.0625 to 0.125 mm)	30.58		0.01	0.01	%			03/20/20 18:55	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: LXBMP0012_20200313

Lab Sample ID: 440-262973-3

Date Collected: 03/13/20 08:40

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.0000007	ug/L		03/18/20 08:33	03/21/20 21:48	1
2,3,7,8-TCDF	ND		0.000011	0.0000000	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,7,8-PeCDD	ND		0.000054	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,7,8-PeCDF	ND		0.000054	0.0000007	ug/L		03/18/20 08:33	03/21/20 21:48	1
2,3,4,7,8-PeCDF	ND		0.000054	0.0000006	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,4,7,8-HxCDD	0.0000027	J,DX q MB	0.000054	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,6,7,8-HxCDD	0.0000024	J,DX q	0.000054	0.0000012	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,7,8,9-HxCDD	ND		0.000054	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,4,7,8-HxCDF	0.0000018	J,DX	0.000054	0.0000004	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,6,7,8-HxCDF	0.0000016	J,DX	0.000054	0.0000004	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,7,8,9-HxCDF	0.0000020	J,DX MB	0.000054	0.0000004	ug/L		03/18/20 08:33	03/21/20 21:48	1
2,3,4,6,7,8-HxCDF	0.0000010	J,DX	0.000054	0.0000004	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,4,6,7,8-HpCDD	0.0000026	J,DX MB	0.000054	0.0000003	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,4,6,7,8-HpCDF	0.0000070	J,DX	0.000054	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:48	1
1,2,3,4,7,8,9-HpCDF	0.0000017	J,DX	0.000054	0.0000010	ug/L		03/18/20 08:33	03/21/20 21:48	1
OCDD	0.00011	J,DX MB	0.00011	0.0000011	ug/L		03/18/20 08:33	03/21/20 21:48	1
OCDF	0.000018	J,DX MB	0.00011	0.0000008	ug/L		03/18/20 08:33	03/21/20 21:48	1
Total TCDD	ND		0.000011	0.0000007	ug/L		03/18/20 08:33	03/21/20 21:48	1
Total TCDF	ND		0.000011	0.0000000	ug/L		03/18/20 08:33	03/21/20 21:48	1
Total PeCDD	ND		0.000054	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:48	1
Total PeCDF	ND		0.000054	0.0000006	ug/L		03/18/20 08:33	03/21/20 21:48	1
Total HxCDD	0.0000051	J,DX q MB	0.000054	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:48	1
Total HxCDF	0.0000065	J,DX MB	0.000054	0.0000004	ug/L		03/18/20 08:33	03/21/20 21:48	1
Total HpCDD	0.000039	J,DX MB	0.000054	0.0000003	ug/L		03/18/20 08:33	03/21/20 21:48	1
Total HpCDF	0.000013	J,DX	0.000054	0.0000009	ug/L		03/18/20 08:33	03/21/20 21:48	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	57		25 - 164				03/18/20 08:33	03/21/20 21:48	1
13C-2,3,7,8-TCDF	66		24 - 169				03/18/20 08:33	03/21/20 21:48	1
13C-1,2,3,7,8-PeCDD	66		25 - 181				03/18/20 08:33	03/21/20 21:48	1
13C-1,2,3,7,8-PeCDF	60		24 - 185				03/18/20 08:33	03/21/20 21:48	1
13C-2,3,4,7,8-PeCDF	78		21 - 178				03/18/20 08:33	03/21/20 21:48	1
13C-1,2,3,4,7,8-HxCDD	72		32 - 141				03/18/20 08:33	03/21/20 21:48	1
13C-1,2,3,6,7,8-HxCDD	58		28 - 130				03/18/20 08:33	03/21/20 21:48	1

Eurofins Calscience Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: LXBMP0012_20200313

Lab Sample ID: 440-262973-3

Date Collected: 03/13/20 08:40

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDF	79		26 - 152	03/18/20 08:33	03/21/20 21:48	1
13C-1,2,3,6,7,8-HxCDF	72		26 - 123	03/18/20 08:33	03/21/20 21:48	1
13C-1,2,3,7,8,9-HxCDF	69		29 - 147	03/18/20 08:33	03/21/20 21:48	1
13C-2,3,4,6,7,8-HxCDF	74		28 - 136	03/18/20 08:33	03/21/20 21:48	1
13C-1,2,3,4,6,7,8-HpCDD	60		23 - 140	03/18/20 08:33	03/21/20 21:48	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	03/18/20 08:33	03/21/20 21:48	1
13C-1,2,3,4,7,8,9-HpCDF	65		26 - 138	03/18/20 08:33	03/21/20 21:48	1
13C-OCDD	63		17 - 157	03/18/20 08:33	03/21/20 21:48	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	03/18/20 08:33	03/21/20 21:48	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 10:39	03/16/20 18:41	1
Copper	2.6		2.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:41	1
Lead	3.5		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:41	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 16:01	03/16/20 20:05	1
Copper	1.5	J,DX	2.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:05	1
Lead	ND		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:05	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/24/20 14:38	03/25/20 03:53	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/18/20 08:16	03/18/20 18:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	24		2.8	1.4	mg/L			03/19/20 17:43	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	55.00		0.01	0.01	%			03/20/20 19:04	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			03/20/20 19:04	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			03/20/20 19:04	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			03/20/20 19:04	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			03/20/20 19:04	1
Silt (0.00391 to 0.0625mm)	45.00		0.01	0.01	%			03/20/20 19:04	1
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%			03/20/20 19:04	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			03/20/20 19:04	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			03/20/20 19:04	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: EPSW001BG01_20200313

Lab Sample ID: 440-262973-4

Date Collected: 03/13/20 09:20

Matrix: Water

Date Received: 03/13/20 17:25

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.5		0.50	0.25	mg/L			03/14/20 01:34	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.000008	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,7,8-PeCDD	0.000048	J,DX	0.000053	0.000013	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,7,8-PeCDF	0.000049	J,DX q	0.000053	0.000012	ug/L		03/18/20 08:33	03/21/20 22:36	1
2,3,4,7,8-PeCDF	0.000038	J,DX q	0.000053	0.000012	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,4,7,8-HxCDD	0.000082	J,DX MB q	0.000053	0.000019	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,6,7,8-HxCDD	0.000018	J,DX	0.000053	0.000021	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,7,8,9-HxCDD	0.000014	J,DX	0.000053	0.000018	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,4,7,8-HxCDF	0.000014	J,DX	0.000053	0.000011	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,6,7,8-HxCDF	0.000011	J,DX	0.000053	0.000012	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,7,8,9-HxCDF	0.000050	J,DX MB	0.000053	0.000011	ug/L		03/18/20 08:33	03/21/20 22:36	1
2,3,4,6,7,8-HxCDF	0.000070	J,DX q	0.000053	0.000013	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,4,6,7,8-HpCDD	0.00042	MB	0.000053	0.000031	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,4,6,7,8-HpCDF	0.00021		0.000053	0.000028	ug/L		03/18/20 08:33	03/21/20 22:36	1
1,2,3,4,7,8,9-HpCDF	0.000099	J,DX q	0.000053	0.000032	ug/L		03/18/20 08:33	03/21/20 22:36	1
OCDD	0.0035	MB	0.00011	0.000038	ug/L		03/18/20 08:33	03/21/20 22:36	1
OCDF	0.00042	MB	0.00011	0.000018	ug/L		03/18/20 08:33	03/21/20 22:36	1
Total TCDD	ND		0.000011	0.000008	ug/L		03/18/20 08:33	03/21/20 22:36	1
Total TCDF	0.000033	J,DX q	0.000011	0.000003	ug/L		03/18/20 08:33	03/21/20 22:36	1
Total PeCDD	0.000083	J,DX q	0.000053	0.000013	ug/L		03/18/20 08:33	03/21/20 22:36	1
Total PeCDF	0.000035	J,DX q	0.000053	0.000012	ug/L		03/18/20 08:33	03/21/20 22:36	1
Total HxCDD	0.00011	J,DX MB q	0.000053	0.000018	ug/L		03/18/20 08:33	03/21/20 22:36	1
Total HxCDF	0.00012	J,DX MB q	0.000053	0.000011	ug/L		03/18/20 08:33	03/21/20 22:36	1
Total HpCDD	0.0011	MB	0.000053	0.000031	ug/L		03/18/20 08:33	03/21/20 22:36	1
Total HpCDF	0.00035	J,DX q	0.000053	0.000028	ug/L		03/18/20 08:33	03/21/20 22:36	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	55		25 - 164				03/18/20 08:33	03/21/20 22:36	1
13C-2,3,7,8-TCDF	56		24 - 169				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,7,8-PeCDD	55		25 - 181				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,7,8-PeCDF	52		24 - 185				03/18/20 08:33	03/21/20 22:36	1
13C-2,3,4,7,8-PeCDF	59		21 - 178				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,4,7,8-HxCDD	49		32 - 141				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,6,7,8-HxCDD	43		28 - 130				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,6,7,8-HxCDF	52		26 - 123				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,7,8,9-HxCDF	55		29 - 147				03/18/20 08:33	03/21/20 22:36	1
13C-2,3,4,6,7,8-HxCDF	46		28 - 136				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,4,6,7,8-HpCDD	37		23 - 140				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,4,6,7,8-HpCDF	44		28 - 143				03/18/20 08:33	03/21/20 22:36	1
13C-1,2,3,4,7,8,9-HpCDF	45		26 - 138				03/18/20 08:33	03/21/20 22:36	1
13C-OCDD	35		17 - 157				03/18/20 08:33	03/21/20 22:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	96		35 - 197				03/18/20 08:33	03/21/20 22:36	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: EPSW001BG01_20200313

Lab Sample ID: 440-262973-4

Date Collected: 03/13/20 09:20

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000011	0.0000007	ug/L		03/18/20 08:33	03/25/20 01:58	1
7									
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	42		24 - 169				03/18/20 08:33	03/25/20 01:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	83		35 - 197				03/18/20 08:33	03/25/20 01:58	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.27	J,DX	1.0	0.25	ug/L		03/16/20 10:39	03/16/20 17:54	1
Copper	18		2.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:54	1
Lead	9.2		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:54	1
Selenium	2.6		2.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:54	1
Zinc	71		20	2.5	ug/L		03/16/20 10:39	03/16/20 17:54	1
Iron	19000		20	8.0	ug/L		03/16/20 10:39	03/16/20 17:54	1
Arsenic	5.6		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:54	1
Manganese	390		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:54	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 16:01	03/16/20 20:11	1
Copper	2.2		2.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:11	1
Lead	ND		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:11	1
Selenium	ND		2.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:11	1
Zinc	ND		20	2.5	ug/L		03/16/20 16:01	03/16/20 20:11	1
Iron	310		20	8.0	ug/L		03/16/20 16:01	03/16/20 20:11	1
Arsenic	0.76	J,DX	1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:11	1
Manganese	5.8		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:11	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/24/20 14:38	03/25/20 03:56	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/18/20 08:16	03/18/20 18:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	250		20	10	mg/L			03/19/20 17:43	1

Client Sample ID: EPSW001IE01_20200313

Lab Sample ID: 440-262973-5

Date Collected: 03/13/20 09:10

Matrix: Water

Date Received: 03/13/20 17:25

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.3		0.50	0.25	mg/L			03/14/20 01:50	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: EPSW001E01_20200313

Lab Sample ID: 440-262973-5

Date Collected: 03/13/20 09:10

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000012	0.0000006	ug/L		03/18/20 08:33	03/21/20 23:24	1
2,3,7,8-TCDF	ND		0.000012	0.0000000	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,7,8-PeCDD	ND		0.000059	0.0000010	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,7,8-PeCDF	ND		0.000059	0.0000006	ug/L		03/18/20 08:33	03/21/20 23:24	1
2,3,4,7,8-PeCDF	ND		0.000059	0.0000008	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,4,7,8-HxCDD	0.0000031	J,DX q MB	0.000059	0.0000010	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,6,7,8-HxCDD	0.0000034	J,DX q	0.000059	0.0000012	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,7,8,9-HxCDD	0.0000042	J,DX	0.000059	0.0000009	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,4,7,8-HxCDF	0.0000012	J,DX q	0.000059	0.0000006	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,6,7,8-HxCDF	0.0000011	J,DX q	0.000059	0.0000006	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,7,8,9-HxCDF	0.0000019	J,DX q MB	0.000059	0.0000005	ug/L		03/18/20 08:33	03/21/20 23:24	1
2,3,4,6,7,8-HxCDF	0.0000016	J,DX	0.000059	0.0000005	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,4,6,7,8-HpCDD	0.000044	J,DX MB	0.000059	0.0000005	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,4,6,7,8-HpCDF	0.000011	J,DX	0.000059	0.0000012	ug/L		03/18/20 08:33	03/21/20 23:24	1
1,2,3,4,7,8,9-HpCDF	0.0000020	J,DX q	0.000059	0.0000012	ug/L		03/18/20 08:33	03/21/20 23:24	1
OCDD	0.00036	MB	0.00012	0.0000016	ug/L		03/18/20 08:33	03/21/20 23:24	1
OCDF	0.000027	J,DX MB	0.00012	0.0000011	ug/L		03/18/20 08:33	03/21/20 23:24	1
Total TCDD	ND		0.000012	0.0000006	ug/L		03/18/20 08:33	03/21/20 23:24	1
Total TCDF	ND		0.000012	0.0000000	ug/L		03/18/20 08:33	03/21/20 23:24	1
Total PeCDD	ND		0.000059	0.0000010	ug/L		03/18/20 08:33	03/21/20 23:24	1
Total PeCDF	ND		0.000059	0.0000006	ug/L		03/18/20 08:33	03/21/20 23:24	1
Total HxCDD	0.000015	J,DX q MB	0.000059	0.0000009	ug/L		03/18/20 08:33	03/21/20 23:24	1
Total HxCDF	0.000010	J,DX q MB	0.000059	0.0000005	ug/L		03/18/20 08:33	03/21/20 23:24	1
Total HpCDD	0.000081	J,DX MB	0.000059	0.0000005	ug/L		03/18/20 08:33	03/21/20 23:24	1
Total HpCDF	0.000026	J,DX q	0.000059	0.0000012	ug/L		03/18/20 08:33	03/21/20 23:24	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		25 - 164				03/18/20 08:33	03/21/20 23:24	1
13C-2,3,7,8-TCDF	80		24 - 169				03/18/20 08:33	03/21/20 23:24	1
13C-1,2,3,7,8-PeCDD	72		25 - 181				03/18/20 08:33	03/21/20 23:24	1
13C-1,2,3,7,8-PeCDF	77		24 - 185				03/18/20 08:33	03/21/20 23:24	1
13C-2,3,4,7,8-PeCDF	76		21 - 178				03/18/20 08:33	03/21/20 23:24	1
13C-1,2,3,4,7,8-HxCDD	81		32 - 141				03/18/20 08:33	03/21/20 23:24	1
13C-1,2,3,6,7,8-HxCDD	72		28 - 130				03/18/20 08:33	03/21/20 23:24	1
13C-1,2,3,4,7,8-HxCDF	76		26 - 152				03/18/20 08:33	03/21/20 23:24	1
13C-1,2,3,6,7,8-HxCDF	68		26 - 123				03/18/20 08:33	03/21/20 23:24	1
13C-1,2,3,7,8,9-HxCDF	78		29 - 147				03/18/20 08:33	03/21/20 23:24	1
13C-2,3,4,6,7,8-HxCDF	88		28 - 136				03/18/20 08:33	03/21/20 23:24	1

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: EPSW001IE01_20200313

Lab Sample ID: 440-262973-5

Date Collected: 03/13/20 09:10

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	65		23 - 140	03/18/20 08:33	03/21/20 23:24	1
13C-1,2,3,4,6,7,8-HpCDF	65		28 - 143	03/18/20 08:33	03/21/20 23:24	1
13C-1,2,3,4,7,8,9-HpCDF	74		26 - 138	03/18/20 08:33	03/21/20 23:24	1
13C-OCDD	57		17 - 157	03/18/20 08:33	03/21/20 23:24	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	83		35 - 197	03/18/20 08:33	03/21/20 23:24	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 10:39	03/16/20 18:00	1
Copper	2.9		2.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:00	1
Lead	ND		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:00	1
Selenium	0.58	J,DX	2.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:00	1
Zinc	48		20	2.5	ug/L		03/16/20 10:39	03/16/20 18:00	1
Iron	160		20	8.0	ug/L		03/16/20 10:39	03/16/20 18:00	1
Arsenic	1.0		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:00	1
Manganese	3.4		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:00	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 16:01	03/16/20 20:13	1
Copper	2.4		2.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:13	1
Lead	ND		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:13	1
Selenium	0.52	J,DX	2.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:13	1
Zinc	38		20	2.5	ug/L		03/16/20 16:01	03/16/20 20:13	1
Iron	51		20	8.0	ug/L		03/16/20 16:01	03/16/20 20:13	1
Arsenic	0.77	J,DX	1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:13	1
Manganese	1.2		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:13	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/24/20 14:38	03/25/20 03:58	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/18/20 08:16	03/18/20 18:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.6		1.0	0.50	mg/L			03/19/20 17:43	1

Client Sample ID: EPSW002IE02_20200313

Lab Sample ID: 440-262973-6

Date Collected: 03/13/20 09:40

Matrix: Water

Date Received: 03/13/20 17:25

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.9		0.50	0.25	mg/L			03/14/20 02:06	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: EPSW002IE02_20200313

Lab Sample ID: 440-262973-6

Date Collected: 03/13/20 09:40

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.0000005	ug/L		03/18/20 08:33	03/22/20 00:12	1
2,3,7,8-TCDF	ND		0.000011	0.0000000	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,7,8-PeCDD	ND		0.000057	0.0000007	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,7,8-PeCDF	ND		0.000057	0.0000005	ug/L		03/18/20 08:33	03/22/20 00:12	1
2,3,4,7,8-PeCDF	ND		0.000057	0.0000006	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,4,7,8-HxCDD	0.0000027	J,DX q MB	0.000057	0.0000008	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,6,7,8-HxCDD	0.0000014	J,DX q	0.000057	0.0000008	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,7,8,9-HxCDD	ND		0.000057	0.0000007	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,4,7,8-HxCDF	0.0000010	J,DX q	0.000057	0.0000004	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,6,7,8-HxCDF	0.0000081	J,DX q	0.000057	0.0000004	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,7,8,9-HxCDF	ND		0.000057	0.0000004	ug/L		03/18/20 08:33	03/22/20 00:12	1
2,3,4,6,7,8-HxCDF	0.0000012	J,DX q	0.000057	0.0000004	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,4,6,7,8-HpCDD	0.0000049	J,DX MB	0.000057	0.0000002	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,4,6,7,8-HpCDF	0.0000026	J,DX q	0.000057	0.0000007	ug/L		03/18/20 08:33	03/22/20 00:12	1
1,2,3,4,7,8,9-HpCDF	ND		0.000057	0.0000008	ug/L		03/18/20 08:33	03/22/20 00:12	1
OCDD	0.000038	J,DX MB	0.00011	0.0000009	ug/L		03/18/20 08:33	03/22/20 00:12	1
OCDF	0.0000098	J,DX MB	0.00011	0.0000006	ug/L		03/18/20 08:33	03/22/20 00:12	1
Total TCDD	ND		0.000011	0.0000005	ug/L		03/18/20 08:33	03/22/20 00:12	1
Total TCDF	ND		0.000011	0.0000000	ug/L		03/18/20 08:33	03/22/20 00:12	1
Total PeCDD	ND		0.000057	0.0000007	ug/L		03/18/20 08:33	03/22/20 00:12	1
Total PeCDF	ND		0.000057	0.0000005	ug/L		03/18/20 08:33	03/22/20 00:12	1
Total HxCDD	0.0000041	J,DX q MB	0.000057	0.0000007	ug/L		03/18/20 08:33	03/22/20 00:12	1
Total HxCDF	0.0000030	J,DX q MB	0.000057	0.0000004	ug/L		03/18/20 08:33	03/22/20 00:12	1
Total HpCDD	0.0000093	J,DX MB	0.000057	0.0000002	ug/L		03/18/20 08:33	03/22/20 00:12	1
Total HpCDF	0.0000026	J,DX q	0.000057	0.0000007	ug/L		03/18/20 08:33	03/22/20 00:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	78		25 - 164				03/18/20 08:33	03/22/20 00:12	1
13C-2,3,7,8-TCDF	75		24 - 169				03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,7,8-PeCDD	88		25 - 181				03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,7,8-PeCDF	95		24 - 185				03/18/20 08:33	03/22/20 00:12	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: EPSW002IE02_20200313

Lab Sample ID: 440-262973-6

Date Collected: 03/13/20 09:40

Matrix: Water

Date Received: 03/13/20 17:25

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,4,7,8-PeCDF	99		21 - 178	03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,4,7,8-HxCDD	76		32 - 141	03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,6,7,8-HxCDD	71		28 - 130	03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,4,7,8-HxCDF	90		26 - 152	03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,6,7,8-HxCDF	88		26 - 123	03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,7,8,9-HxCDF	79		29 - 147	03/18/20 08:33	03/22/20 00:12	1
13C-2,3,4,6,7,8-HxCDF	80		28 - 136	03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,4,6,7,8-HpCDD	71		23 - 140	03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,4,6,7,8-HpCDF	81		28 - 143	03/18/20 08:33	03/22/20 00:12	1
13C-1,2,3,4,7,8,9-HpCDF	75		26 - 138	03/18/20 08:33	03/22/20 00:12	1
13C-OCDD	74		17 - 157	03/18/20 08:33	03/22/20 00:12	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	85		35 - 197	03/18/20 08:33	03/22/20 00:12	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 10:39	03/16/20 18:02	1
Copper	2.8		2.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:02	1
Lead	0.88	J,DX	1.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:02	1
Selenium	0.73	J,DX	2.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:02	1
Zinc	8.9	J,DX	20	2.5	ug/L		03/16/20 10:39	03/16/20 18:02	1
Iron	930		20	8.0	ug/L		03/16/20 10:39	03/16/20 18:02	1
Arsenic	1.4		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:02	1
Manganese	16		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 18:02	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 16:01	03/16/20 20:15	1
Copper	2.0		2.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:15	1
Lead	ND		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:15	1
Selenium	0.63	J,DX	2.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:15	1
Zinc	3.6	J,DX	20	2.5	ug/L		03/16/20 16:01	03/16/20 20:15	1
Iron	140		20	8.0	ug/L		03/16/20 16:01	03/16/20 20:15	1
Arsenic	1.0		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:15	1
Manganese	3.6		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 20:15	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/24/20 14:41	03/25/20 02:03	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/18/20 08:16	03/18/20 18:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	12		1.1	0.53	mg/L			03/19/20 17:43	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

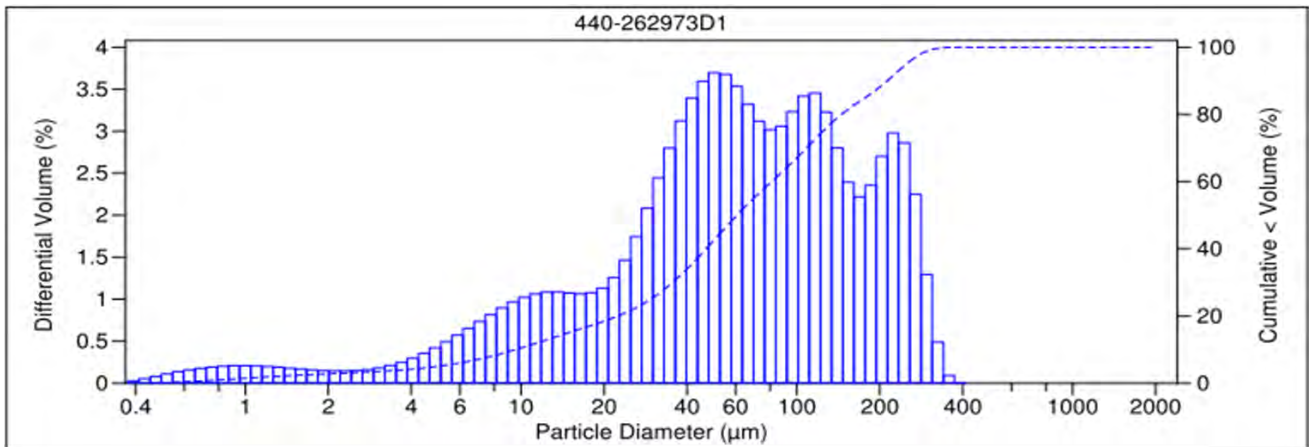
Haley & Aldrich, Inc.

Date Sampled: 03/12/20
 Date Received: 03/13/20
 Work Order No: 440-262973
 Date Analyzed: 03/20/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
ILBMP0002_20200312		Very Fine Sand	0.087

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	5.00	19.81	24.06	47.03	4.10	51.12



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

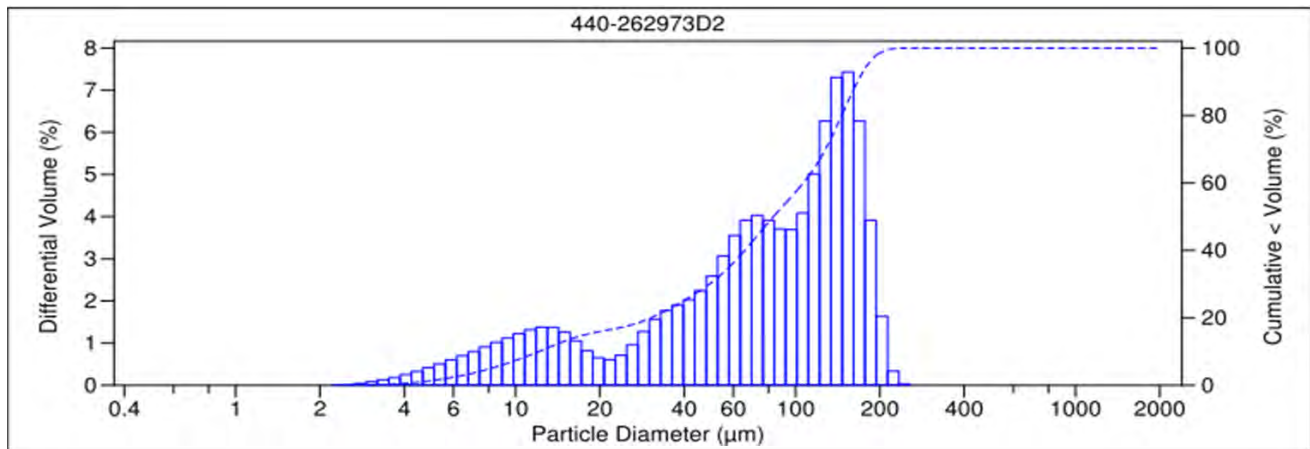
Haley & Aldrich, Inc.

Date Sampled: 03/13/20
 Date Received: 03/13/20
 Work Order No: 440-262973
 Date Analyzed: 03/20/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
LXBMP0011_20200313		Very Fine Sand	0.089

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.01	31.51	30.58	37.40	0.49	37.89



V 3.0

- 1
- 2
- 3
- 4
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- 8
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- 10
- 11
- 12
- 13
- 14
- 15

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

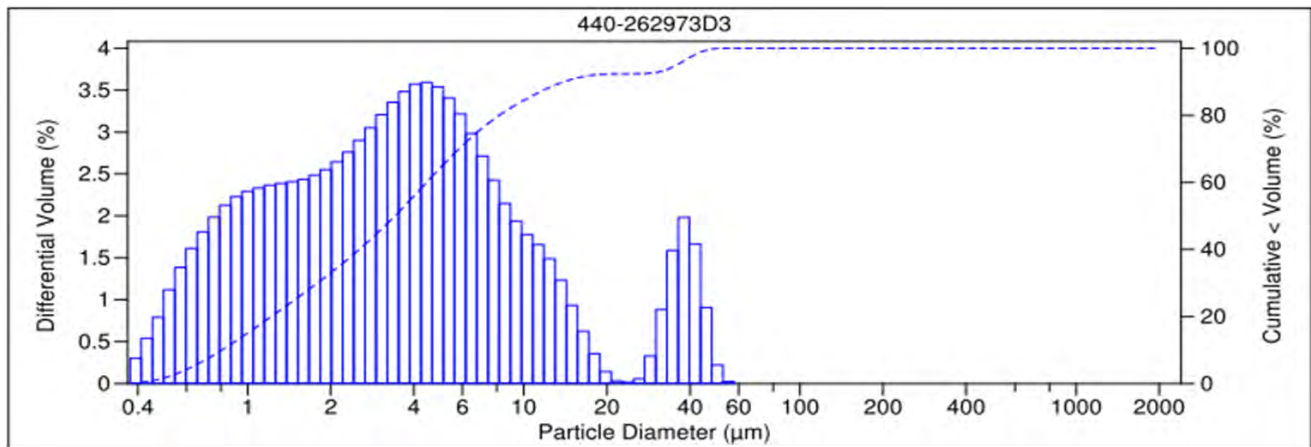
Haley & Aldrich, Inc.

Date Sampled: 03/13/20
 Date Received: 03/13/20
 Work Order No: 440-262973
 Date Analyzed: 03/20/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
LXBMP0012_20200313		Silt	0.007

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	0.00	45.00	55.00	100.00



V 3.0

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
1613B	Dioxins and Furans (HRGC/HRMS)	40CFR136A	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV
FILTRATION	Sample Filtration	None	TAL IRV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

ASTM = ASTM International

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: ILBMP0002_20200312

Lab Sample ID: 440-262973-1

Date Collected: 03/12/20 12:50

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			944.4 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			366402	03/21/20 20:12	AS	TAL SAC
Dissolved	Filtration	FILTRATION			125 mL	125 mL	600737	03/16/20 13:29	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	600769	03/16/20 16:01	M1G	TAL IRV
Dissolved	Analysis	200.8		1			600824	03/16/20 20:01	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600704	03/16/20 10:39	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600823	03/16/20 18:04	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			80 mL	80 mL	600735	03/16/20 13:23	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	601070	03/18/20 08:16	DB	TAL IRV
Dissolved	Analysis	245.1		1			601310	03/18/20 18:14	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	602147	03/24/20 14:38	MEM	TAL IRV
Total/NA	Analysis	245.1		1			602330	03/25/20 03:49	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	350 mL	1000 mL	600559	03/14/20 13:18	KL	TAL IRV
Total/NA	Analysis	D4464		1			59046	03/20/20 18:46	C4LT	ECL 1

Client Sample ID: LXBMP0011_20200313

Lab Sample ID: 440-262973-2

Date Collected: 03/13/20 08:30

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			953.9 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			366402	03/21/20 21:00	AS	TAL SAC
Dissolved	Filtration	FILTRATION			125 mL	125 mL	600737	03/16/20 13:29	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	600769	03/16/20 16:01	M1G	TAL IRV
Dissolved	Analysis	200.8		1			600824	03/16/20 20:03	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600704	03/16/20 10:39	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600823	03/16/20 18:39	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			80 mL	80 mL	600735	03/16/20 13:23	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	601070	03/18/20 08:16	DB	TAL IRV
Dissolved	Analysis	245.1		1			601310	03/18/20 18:16	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	602147	03/24/20 14:38	MEM	TAL IRV
Total/NA	Analysis	245.1		1			602330	03/25/20 03:51	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	601522	03/19/20 17:43	KL	TAL IRV
Total/NA	Analysis	D4464		1			59046	03/20/20 18:55	C4LT	ECL 1

Client Sample ID: LXBMP0012_20200313

Lab Sample ID: 440-262973-3

Date Collected: 03/13/20 08:40

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			931.2 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			366402	03/21/20 21:48	AS	TAL SAC
Dissolved	Filtration	FILTRATION			125 mL	125 mL	600737	03/16/20 13:29	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	600769	03/16/20 16:01	M1G	TAL IRV
Dissolved	Analysis	200.8		1			600824	03/16/20 20:05	P1R	TAL IRV

Eurofins Calscience Irvine

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: LXBMP0012_20200313

Lab Sample ID: 440-262973-3

Date Collected: 03/13/20 08:40

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			25 mL	25 mL	600704	03/16/20 10:39	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600823	03/16/20 18:41	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			80 mL	80 mL	600735	03/16/20 13:23	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	601070	03/18/20 08:16	DB	TAL IRV
Dissolved	Analysis	245.1		1			601310	03/18/20 18:18	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	602147	03/24/20 14:38	MEM	TAL IRV
Total/NA	Analysis	245.1		1			602330	03/25/20 03:53	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	360 mL	1000 mL	601522	03/19/20 17:43	KL	TAL IRV
Total/NA	Analysis	D4464		1			59046	03/20/20 19:04	C4LT	ECL 1

Client Sample ID: EPSW001BG01_20200313

Lab Sample ID: 440-262973-4

Date Collected: 03/13/20 09:20

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			600387	03/14/20 01:34	NTN	TAL IRV
Total/NA	Prep	1613B	RA		949.8 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B	RA	1			367395	03/25/20 01:58	ALM	TAL SAC
Total/NA	Prep	1613B			949.8 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			366402	03/21/20 22:36	AS	TAL SAC
Dissolved	Filtration	FILTRATION			125 mL	125 mL	600737	03/16/20 13:29	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	600769	03/16/20 16:01	M1G	TAL IRV
Dissolved	Analysis	200.8		1			600824	03/16/20 20:11	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600704	03/16/20 10:39	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600823	03/16/20 17:54	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			80 mL	80 mL	600735	03/16/20 13:23	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	601070	03/18/20 08:16	DB	TAL IRV
Dissolved	Analysis	245.1		1			601310	03/18/20 18:20	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	602147	03/24/20 14:38	MEM	TAL IRV
Total/NA	Analysis	245.1		1			602330	03/25/20 03:56	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	50 mL	1000 mL	601522	03/19/20 17:43	KL	TAL IRV

Client Sample ID: EPSW001IE01_20200313

Lab Sample ID: 440-262973-5

Date Collected: 03/13/20 09:10

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			600387	03/14/20 01:50	NTN	TAL IRV
Total/NA	Prep	1613B			841.3 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			366402	03/21/20 23:24	AS	TAL SAC
Dissolved	Filtration	FILTRATION			125 mL	125 mL	600737	03/16/20 13:29	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	600769	03/16/20 16:01	M1G	TAL IRV
Dissolved	Analysis	200.8		1			600824	03/16/20 20:13	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600704	03/16/20 10:39	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600823	03/16/20 18:00	P1R	TAL IRV

Eurofins Calscience Irvine

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Client Sample ID: EPSW001IE01_20200313

Lab Sample ID: 440-262973-5

Date Collected: 03/13/20 09:10

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			80 mL	80 mL	600735	03/16/20 13:23	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	601070	03/18/20 08:16	DB	TAL IRV
Dissolved	Analysis	245.1		1			601310	03/18/20 18:22	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	602147	03/24/20 14:38	MEM	TAL IRV
Total/NA	Analysis	245.1		1			602330	03/25/20 03:58	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	601522	03/19/20 17:43	KL	TAL IRV

Client Sample ID: EPSW002IE02_20200313

Lab Sample ID: 440-262973-6

Date Collected: 03/13/20 09:40

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			600387	03/14/20 02:06	NTN	TAL IRV
Total/NA	Prep	1613B			882.4 mL	20 uL	365527	03/18/20 08:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			366402	03/22/20 00:12	AS	TAL SAC
Dissolved	Filtration	FILTRATION			125 mL	125 mL	600737	03/16/20 13:32	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	600769	03/16/20 16:01	M1G	TAL IRV
Dissolved	Analysis	200.8		1			600824	03/16/20 20:15	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	600704	03/16/20 10:39	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			600823	03/16/20 18:02	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			80 mL	80 mL	600735	03/16/20 13:23	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	601070	03/18/20 08:16	DB	TAL IRV
Dissolved	Analysis	245.1		1			601310	03/18/20 18:25	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	602148	03/24/20 14:41	MEM	TAL IRV
Total/NA	Analysis	245.1		1			602304	03/25/20 02:03	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	950 mL	1000 mL	601522	03/19/20 17:43	KL	TAL IRV

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-600387/6
Matrix: Water
Analysis Batch: 600387

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.25	mg/L			03/13/20 12:09	1

Lab Sample ID: LCS 440-600387/5
Matrix: Water
Analysis Batch: 600387

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	5.00		mg/L		100	90 - 110

Lab Sample ID: 440-262880-E-4 MS
Matrix: Water
Analysis Batch: 600387

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	8.2		5.00	13.6		mg/L		108	80 - 120

Lab Sample ID: 440-262880-E-4 MSD
Matrix: Water
Analysis Batch: 600387

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	8.2		5.00	13.9		mg/L		115	80 - 120	2	20

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-365527/1-A
Matrix: Water
Analysis Batch: 366401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365527

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000008	ug/L		03/18/20 08:33	03/21/20 08:20	1
2,3,7,8-TCDF	ND		0.000010	0.0000002	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000009	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,4,7,8-HxCDD	0.00000318	J,DX	0.000050	0.0000010	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,6,7,8-HxCDD	ND		0.000050	0.0000012	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,7,8,9-HxCDD	ND		0.000050	0.0000009	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,4,7,8-HxCDF	ND		0.000050	0.0000007	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,6,7,8-HxCDF	ND		0.000050	0.0000007	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,7,8,9-HxCDF	0.00000180	J,DX	0.000050	0.0000007	ug/L		03/18/20 08:33	03/21/20 08:20	1
2,3,4,6,7,8-HxCDF	ND		0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1

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QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-365527/1-A
Matrix: Water
Analysis Batch: 366401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365527

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	0.00000587	J,DX	0.000050	0.0000003	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,4,6,7,8-HpCDF	ND		0.000050	0.0000013	ug/L		03/18/20 08:33	03/21/20 08:20	1
1,2,3,4,7,8,9-HpCDF	ND		0.000050	0.0000014	ug/L		03/18/20 08:33	03/21/20 08:20	1
OCDD	0.0000202	J,DX	0.00010	0.0000013	ug/L		03/18/20 08:33	03/21/20 08:20	1
OCDF	0.00000627	J,DX	0.00010	0.0000011	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total TCDD	ND		0.000010	0.0000008	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total TCDF	ND		0.000010	0.0000002	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total PeCDD	ND		0.000050	0.0000009	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total PeCDF	ND		0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total HxCDD	0.00000318	J,DX	0.000050	0.0000009	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total HxCDF	0.00000180	J,DX	0.000050	0.0000006	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total HpCDD	0.0000101	J,DX	0.000050	0.0000003	ug/L		03/18/20 08:33	03/21/20 08:20	1
Total HpCDF	ND		0.000050	0.0000013	ug/L		03/18/20 08:33	03/21/20 08:20	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	73		25 - 164	03/18/20 08:33	03/21/20 08:20	1
13C-2,3,7,8-TCDF	81		24 - 169	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,7,8-PeCDD	63		25 - 181	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,7,8-PeCDF	67		24 - 185	03/18/20 08:33	03/21/20 08:20	1
13C-2,3,4,7,8-PeCDF	74		21 - 178	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,7,8-HxCDD	74		32 - 141	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,6,7,8-HxCDD	66		28 - 130	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,7,8-HxCDF	81		26 - 152	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,6,7,8-HxCDF	74		26 - 123	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,7,8,9-HxCDF	71		29 - 147	03/18/20 08:33	03/21/20 08:20	1
13C-2,3,4,6,7,8-HxCDF	78		28 - 136	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,6,7,8-HpCDD	60		23 - 140	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	03/18/20 08:33	03/21/20 08:20	1
13C-1,2,3,4,7,8,9-HpCDF	63		26 - 138	03/18/20 08:33	03/21/20 08:20	1
13C-OCDD	50		17 - 157	03/18/20 08:33	03/21/20 08:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	79		35 - 197	03/18/20 08:33	03/21/20 08:20	1

Lab Sample ID: LCS 320-365527/2-A
Matrix: Water
Analysis Batch: 366401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365527

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	0.000200	0.000234		ug/L		117	67 - 158
2,3,7,8-TCDF	0.000200	0.000262		ug/L		131	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.00111		ug/L		111	70 - 142

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QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-365527/2-A
Matrix: Water
Analysis Batch: 366401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365527

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,7,8-PeCDF	0.00100	0.00123		ug/L		123	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.00114		ug/L		114	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.00101	MB	ug/L		101	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.00112		ug/L		112	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.00102		ug/L		102	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.00110		ug/L		110	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.00119		ug/L		119	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.00120	MB	ug/L		120	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.00117		ug/L		117	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.000997	MB	ug/L		100	70 - 140
1,2,3,4,6,7,8-HpCDF	0.00100	0.00108		ug/L		108	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.00102		ug/L		102	78 - 138
OCDD	0.00200	0.00201	MB	ug/L		100	78 - 144
OCDF	0.00200	0.00231	MB	ug/L		115	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	68		20 - 175
13C-2,3,7,8-TCDF	75		22 - 152
13C-1,2,3,7,8-PeCDD	63		21 - 227
13C-1,2,3,7,8-PeCDF	64		21 - 192
13C-2,3,4,7,8-PeCDF	74		13 - 328
13C-1,2,3,4,7,8-HxCDD	73		21 - 193
13C-1,2,3,6,7,8-HxCDD	64		25 - 163
13C-1,2,3,4,7,8-HxCDF	79		19 - 202
13C-1,2,3,6,7,8-HxCDF	71		21 - 159
13C-1,2,3,7,8,9-HxCDF	69		17 - 205
13C-2,3,4,6,7,8-HxCDF	75		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	63		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	64		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	68		20 - 186
13C-OCDD	52		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	81		31 - 191

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-600704/1-A
Matrix: Water
Analysis Batch: 600823

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 600704

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 10:39	03/16/20 17:50	1
Copper	ND		2.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:50	1
Lead	ND		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:50	1
Selenium	ND		2.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:50	1
Zinc	ND		20	2.5	ug/L		03/16/20 10:39	03/16/20 17:50	1
Iron	ND		20	8.0	ug/L		03/16/20 10:39	03/16/20 17:50	1
Arsenic	ND		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:50	1

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QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 440-600704/1-A
Matrix: Water
Analysis Batch: 600823

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 600704

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		1.0	0.50	ug/L		03/16/20 10:39	03/16/20 17:50	1

Lab Sample ID: LCS 440-600704/2-A
Matrix: Water
Analysis Batch: 600823

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 600704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	80.0	77.9		ug/L		97	85 - 115
Copper	80.0	78.1		ug/L		98	85 - 115
Lead	80.0	76.7		ug/L		96	85 - 115
Selenium	80.0	75.9		ug/L		95	85 - 115
Zinc	80.0	81.3		ug/L		102	85 - 115
Iron	800	773		ug/L		97	85 - 115
Arsenic	80.0	76.1		ug/L		95	85 - 115
Manganese	80.0	77.4		ug/L		97	85 - 115

Lab Sample ID: 440-262973-4 MS
Matrix: Water
Analysis Batch: 600823

Client Sample ID: EPSW001BG01_20200313
Prep Type: Total Recoverable
Prep Batch: 600704

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.27	J,DX	80.0	76.5		ug/L		95	70 - 130
Copper	18		80.0	93.7		ug/L		94	70 - 130
Lead	9.2		80.0	84.9		ug/L		95	70 - 130
Selenium	2.6		80.0	66.4		ug/L		80	70 - 130
Zinc	71		80.0	141		ug/L		88	70 - 130
Iron	19000		800	19800	BB	ug/L		33	70 - 130
Arsenic	5.6		80.0	72.2		ug/L		83	70 - 130
Manganese	390		80.0	466	BB	ug/L		94	70 - 130

Lab Sample ID: 440-262973-4 MSD
Matrix: Water
Analysis Batch: 600823

Client Sample ID: EPSW001BG01_20200313
Prep Type: Total Recoverable
Prep Batch: 600704

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.27	J,DX	80.0	79.7		ug/L		99	70 - 130	4	20
Copper	18		80.0	96.3		ug/L		98	70 - 130	3	20
Lead	9.2		80.0	88.3		ug/L		99	70 - 130	4	20
Selenium	2.6		80.0	70.1		ug/L		84	70 - 130	5	20
Zinc	71		80.0	146		ug/L		94	70 - 130	3	20
Iron	19000		800	19800	BB	ug/L		39	70 - 130	0	20
Arsenic	5.6		80.0	76.6		ug/L		89	70 - 130	6	20
Manganese	390		80.0	468	BB	ug/L		96	70 - 130	0	20

Lab Sample ID: MB 440-600737/1-B
Matrix: Water
Analysis Batch: 600824

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 600769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		03/16/20 16:01	03/16/20 19:51	1

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 440-600737/1-B
Matrix: Water
Analysis Batch: 600824

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 600769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.50	ug/L		03/16/20 16:01	03/16/20 19:51	1
Lead	ND		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 19:51	1
Selenium	ND		2.0	0.50	ug/L		03/16/20 16:01	03/16/20 19:51	1
Zinc	ND		20	2.5	ug/L		03/16/20 16:01	03/16/20 19:51	1
Iron	ND		20	8.0	ug/L		03/16/20 16:01	03/16/20 19:51	1
Arsenic	ND		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 19:51	1
Manganese	ND		1.0	0.50	ug/L		03/16/20 16:01	03/16/20 19:51	1

Lab Sample ID: LCS 440-600737/2-B
Matrix: Water
Analysis Batch: 600824

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 600769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	80.0	77.6		ug/L		97	85 - 115
Copper	80.0	78.0		ug/L		97	85 - 115
Lead	80.0	77.6		ug/L		97	85 - 115
Selenium	80.0	81.0		ug/L		101	85 - 115
Zinc	80.0	77.3		ug/L		97	85 - 115
Iron	800	780		ug/L		98	85 - 115
Arsenic	80.0	77.6		ug/L		97	85 - 115
Manganese	80.0	77.9		ug/L		97	85 - 115

Lab Sample ID: 440-263045-D-3-C MS
Matrix: Water
Analysis Batch: 600824

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 600769

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		80.0	76.9		ug/L		96	70 - 130
Copper	1.3	J,DX	80.0	78.1		ug/L		96	70 - 130
Lead	ND		80.0	77.1		ug/L		96	70 - 130
Selenium	ND		80.0	80.5		ug/L		101	70 - 130
Zinc	ND		80.0	76.1		ug/L		95	70 - 130
Iron	38		800	804		ug/L		96	70 - 130
Arsenic	1.1		80.0	79.4		ug/L		98	70 - 130
Manganese	4.8		80.0	81.8		ug/L		96	70 - 130

Lab Sample ID: 440-263045-D-3-D MSD
Matrix: Water
Analysis Batch: 600824

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 600769

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		80.0	76.8		ug/L		96	70 - 130	0	20
Copper	1.3	J,DX	80.0	77.6		ug/L		95	70 - 130	1	20
Lead	ND		80.0	77.0		ug/L		96	70 - 130	0	20
Selenium	ND		80.0	80.7		ug/L		101	70 - 130	0	20
Zinc	ND		80.0	76.6		ug/L		96	70 - 130	1	20
Iron	38		800	792		ug/L		94	70 - 130	2	20
Arsenic	1.1		80.0	80.2		ug/L		99	70 - 130	1	20
Manganese	4.8		80.0	81.2		ug/L		96	70 - 130	1	20

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-602147/1-A
Matrix: Water
Analysis Batch: 602330

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602147

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/24/20 14:38	03/25/20 02:59	1

Lab Sample ID: LCS 440-602147/2-A
Matrix: Water
Analysis Batch: 602330

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602147

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	3.99		ug/L		100	85 - 115

Lab Sample ID: 440-263409-D-1-E MS
Matrix: Water
Analysis Batch: 602330

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 602147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.96		ug/L		99	75 - 125

Lab Sample ID: 440-263409-D-1-F MSD
Matrix: Water
Analysis Batch: 602330

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 602147

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.98		ug/L		99	75 - 125	1	20

Lab Sample ID: MB 440-602148/1-A
Matrix: Water
Analysis Batch: 602304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602148

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/24/20 14:41	03/25/20 01:52	1

Lab Sample ID: LCS 440-602148/2-A
Matrix: Water
Analysis Batch: 602304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602148

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	4.04		ug/L		101	85 - 115

Lab Sample ID: 440-263045-G-1-E MS
Matrix: Water
Analysis Batch: 602304

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 602148

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	3.99		ug/L		100	75 - 125

Lab Sample ID: 440-263045-G-1-F MSD
Matrix: Water
Analysis Batch: 602304

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 602148

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	3.93		ug/L		98	75 - 125	2	20

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QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-600735/1-B
Matrix: Water
Analysis Batch: 601310

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 601070

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		03/18/20 08:16	03/18/20 17:54	1

Lab Sample ID: LCS 440-600735/2-B
Matrix: Water
Analysis Batch: 601310

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 601070

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	4.00	3.89		ug/L		97	85 - 115

Lab Sample ID: 440-263045-A-3-E MS
Matrix: Water
Analysis Batch: 601310

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 601070

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		4.00	3.86		ug/L		96	75 - 125

Lab Sample ID: 440-263045-A-3-F MSD
Matrix: Water
Analysis Batch: 601310

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 601070

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	ND		4.00	3.87		ug/L		97	75 - 125	0	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-600559/1
Matrix: Water
Analysis Batch: 600559

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			03/14/20 13:18	1

Lab Sample ID: LCS 440-600559/2
Matrix: Water
Analysis Batch: 600559

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	900		mg/L		90	85 - 115

Lab Sample ID: 440-262947-A-1 DU
Matrix: Water
Analysis Batch: 600559

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	100		100		mg/L		1	10

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: MB 440-601522/1
Matrix: Water
Analysis Batch: 601522

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L	-		03/19/20 17:43	1

Lab Sample ID: LCS 440-601522/2
Matrix: Water
Analysis Batch: 601522

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	1030		mg/L	-	103	85 - 115

Lab Sample ID: 440-262973-4 DU
Matrix: Water
Analysis Batch: 601522

Client Sample ID: EPSW001BG01_20200313
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	250		248		mg/L	-	0.8	10

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

HPLC/IC

Analysis Batch: 600387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-4	EPSW001BG01_20200313	Total/NA	Water	300.0	
440-262973-5	EPSW001IE01_20200313	Total/NA	Water	300.0	
440-262973-6	EPSW002IE02_20200313	Total/NA	Water	300.0	
MB 440-600387/6	Method Blank	Total/NA	Water	300.0	
LCS 440-600387/5	Lab Control Sample	Total/NA	Water	300.0	
440-262880-E-4 MS	Matrix Spike	Total/NA	Water	300.0	
440-262880-E-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Specialty Organics

Prep Batch: 365527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Total/NA	Water	1613B	
440-262973-2	LXBMP0011_20200313	Total/NA	Water	1613B	
440-262973-3	LXBMP0012_20200313	Total/NA	Water	1613B	
440-262973-4 - RA	EPSW001BG01_20200313	Total/NA	Water	1613B	
440-262973-4	EPSW001BG01_20200313	Total/NA	Water	1613B	
440-262973-5	EPSW001IE01_20200313	Total/NA	Water	1613B	
440-262973-6	EPSW002IE02_20200313	Total/NA	Water	1613B	
MB 320-365527/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-365527/2-A	Lab Control Sample	Total/NA	Water	1613B	

Analysis Batch: 366401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-365527/1-A	Method Blank	Total/NA	Water	1613B	365527
LCS 320-365527/2-A	Lab Control Sample	Total/NA	Water	1613B	365527

Analysis Batch: 366402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Total/NA	Water	1613B	365527
440-262973-2	LXBMP0011_20200313	Total/NA	Water	1613B	365527
440-262973-3	LXBMP0012_20200313	Total/NA	Water	1613B	365527
440-262973-4	EPSW001BG01_20200313	Total/NA	Water	1613B	365527
440-262973-5	EPSW001IE01_20200313	Total/NA	Water	1613B	365527
440-262973-6	EPSW002IE02_20200313	Total/NA	Water	1613B	365527

Analysis Batch: 367395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-4 - RA	EPSW001BG01_20200313	Total/NA	Water	1613B	365527

Metals

Prep Batch: 600704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Total Recoverable	Water	200.2	
440-262973-2	LXBMP0011_20200313	Total Recoverable	Water	200.2	
440-262973-3	LXBMP0012_20200313	Total Recoverable	Water	200.2	
440-262973-4	EPSW001BG01_20200313	Total Recoverable	Water	200.2	
440-262973-5	EPSW001IE01_20200313	Total Recoverable	Water	200.2	
440-262973-6	EPSW002IE02_20200313	Total Recoverable	Water	200.2	
MB 440-600704/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-600704/2-A	Lab Control Sample	Total Recoverable	Water	200.2	

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QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Metals (Continued)

Prep Batch: 600704 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-4 MS	EPSW001BG01_20200313	Total Recoverable	Water	200.2	
440-262973-4 MSD	EPSW001BG01_20200313	Total Recoverable	Water	200.2	

Filtration Batch: 600735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Dissolved	Water	FILTRATION	
440-262973-2	LXBMP0011_20200313	Dissolved	Water	FILTRATION	
440-262973-3	LXBMP0012_20200313	Dissolved	Water	FILTRATION	
440-262973-4	EPSW001BG01_20200313	Dissolved	Water	FILTRATION	
440-262973-5	EPSW001IE01_20200313	Dissolved	Water	FILTRATION	
440-262973-6	EPSW002IE02_20200313	Dissolved	Water	FILTRATION	
MB 440-600735/1-B	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-600735/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
440-263045-A-3-E MS	Matrix Spike	Dissolved	Water	FILTRATION	
440-263045-A-3-F MSD	Matrix Spike Duplicate	Dissolved	Water	FILTRATION	

Filtration Batch: 600737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Dissolved	Water	FILTRATION	
440-262973-2	LXBMP0011_20200313	Dissolved	Water	FILTRATION	
440-262973-3	LXBMP0012_20200313	Dissolved	Water	FILTRATION	
440-262973-4	EPSW001BG01_20200313	Dissolved	Water	FILTRATION	
440-262973-5	EPSW001IE01_20200313	Dissolved	Water	FILTRATION	
440-262973-6	EPSW002IE02_20200313	Dissolved	Water	FILTRATION	
MB 440-600737/1-B	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-600737/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
440-263045-D-3-C MS	Matrix Spike	Dissolved	Water	FILTRATION	
440-263045-D-3-D MSD	Matrix Spike Duplicate	Dissolved	Water	FILTRATION	

Prep Batch: 600769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Dissolved	Water	200.2	600737
440-262973-2	LXBMP0011_20200313	Dissolved	Water	200.2	600737
440-262973-3	LXBMP0012_20200313	Dissolved	Water	200.2	600737
440-262973-4	EPSW001BG01_20200313	Dissolved	Water	200.2	600737
440-262973-5	EPSW001IE01_20200313	Dissolved	Water	200.2	600737
440-262973-6	EPSW002IE02_20200313	Dissolved	Water	200.2	600737
MB 440-600737/1-B	Method Blank	Dissolved	Water	200.2	600737
LCS 440-600737/2-B	Lab Control Sample	Dissolved	Water	200.2	600737
440-263045-D-3-C MS	Matrix Spike	Dissolved	Water	200.2	600737
440-263045-D-3-D MSD	Matrix Spike Duplicate	Dissolved	Water	200.2	600737

Analysis Batch: 600823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Total Recoverable	Water	200.8	600704
440-262973-2	LXBMP0011_20200313	Total Recoverable	Water	200.8	600704
440-262973-3	LXBMP0012_20200313	Total Recoverable	Water	200.8	600704
440-262973-4	EPSW001BG01_20200313	Total Recoverable	Water	200.8	600704
440-262973-5	EPSW001IE01_20200313	Total Recoverable	Water	200.8	600704
440-262973-6	EPSW002IE02_20200313	Total Recoverable	Water	200.8	600704
MB 440-600704/1-A	Method Blank	Total Recoverable	Water	200.8	600704

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Metals (Continued)

Analysis Batch: 600823 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-600704/2-A	Lab Control Sample	Total Recoverable	Water	200.8	600704
440-262973-4 MS	EPSW001BG01_20200313	Total Recoverable	Water	200.8	600704
440-262973-4 MSD	EPSW001BG01_20200313	Total Recoverable	Water	200.8	600704

Analysis Batch: 600824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Dissolved	Water	200.8	600769
440-262973-2	LXBMP0011_20200313	Dissolved	Water	200.8	600769
440-262973-3	LXBMP0012_20200313	Dissolved	Water	200.8	600769
440-262973-4	EPSW001BG01_20200313	Dissolved	Water	200.8	600769
440-262973-5	EPSW001IE01_20200313	Dissolved	Water	200.8	600769
440-262973-6	EPSW002IE02_20200313	Dissolved	Water	200.8	600769
MB 440-600737/1-B	Method Blank	Dissolved	Water	200.8	600769
LCS 440-600737/2-B	Lab Control Sample	Dissolved	Water	200.8	600769
440-263045-D-3-C MS	Matrix Spike	Dissolved	Water	200.8	600769
440-263045-D-3-D MSD	Matrix Spike Duplicate	Dissolved	Water	200.8	600769

Prep Batch: 601070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Dissolved	Water	245.1	600735
440-262973-2	LXBMP0011_20200313	Dissolved	Water	245.1	600735
440-262973-3	LXBMP0012_20200313	Dissolved	Water	245.1	600735
440-262973-4	EPSW001BG01_20200313	Dissolved	Water	245.1	600735
440-262973-5	EPSW001IE01_20200313	Dissolved	Water	245.1	600735
440-262973-6	EPSW002IE02_20200313	Dissolved	Water	245.1	600735
MB 440-600735/1-B	Method Blank	Dissolved	Water	245.1	600735
LCS 440-600735/2-B	Lab Control Sample	Dissolved	Water	245.1	600735
440-263045-A-3-E MS	Matrix Spike	Dissolved	Water	245.1	600735
440-263045-A-3-F MSD	Matrix Spike Duplicate	Dissolved	Water	245.1	600735

Analysis Batch: 601310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Dissolved	Water	245.1	601070
440-262973-2	LXBMP0011_20200313	Dissolved	Water	245.1	601070
440-262973-3	LXBMP0012_20200313	Dissolved	Water	245.1	601070
440-262973-4	EPSW001BG01_20200313	Dissolved	Water	245.1	601070
440-262973-5	EPSW001IE01_20200313	Dissolved	Water	245.1	601070
440-262973-6	EPSW002IE02_20200313	Dissolved	Water	245.1	601070
MB 440-600735/1-B	Method Blank	Dissolved	Water	245.1	601070
LCS 440-600735/2-B	Lab Control Sample	Dissolved	Water	245.1	601070
440-263045-A-3-E MS	Matrix Spike	Dissolved	Water	245.1	601070
440-263045-A-3-F MSD	Matrix Spike Duplicate	Dissolved	Water	245.1	601070

Prep Batch: 602147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Total/NA	Water	245.1	
440-262973-2	LXBMP0011_20200313	Total/NA	Water	245.1	
440-262973-3	LXBMP0012_20200313	Total/NA	Water	245.1	
440-262973-4	EPSW001BG01_20200313	Total/NA	Water	245.1	
440-262973-5	EPSW001IE01_20200313	Total/NA	Water	245.1	
MB 440-602147/1-A	Method Blank	Total/NA	Water	245.1	

Eurofins Calscience Irvine

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Metals (Continued)

Prep Batch: 602147 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-602147/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-263409-D-1-E MS	Matrix Spike	Total/NA	Water	245.1	
440-263409-D-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Prep Batch: 602148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-6	EPSW002IE02_20200313	Total/NA	Water	245.1	
MB 440-602148/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-602148/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-263045-G-1-E MS	Matrix Spike	Total/NA	Water	245.1	
440-263045-G-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 602304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-6	EPSW002IE02_20200313	Total/NA	Water	245.1	602148
MB 440-602148/1-A	Method Blank	Total/NA	Water	245.1	602148
LCS 440-602148/2-A	Lab Control Sample	Total/NA	Water	245.1	602148
440-263045-G-1-E MS	Matrix Spike	Total/NA	Water	245.1	602148
440-263045-G-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	602148

Analysis Batch: 602330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Total/NA	Water	245.1	602147
440-262973-2	LXBMP0011_20200313	Total/NA	Water	245.1	602147
440-262973-3	LXBMP0012_20200313	Total/NA	Water	245.1	602147
440-262973-4	EPSW001BG01_20200313	Total/NA	Water	245.1	602147
440-262973-5	EPSW001IE01_20200313	Total/NA	Water	245.1	602147
MB 440-602147/1-A	Method Blank	Total/NA	Water	245.1	602147
LCS 440-602147/2-A	Lab Control Sample	Total/NA	Water	245.1	602147
440-263409-D-1-E MS	Matrix Spike	Total/NA	Water	245.1	602147
440-263409-D-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	602147

General Chemistry

Analysis Batch: 600559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Total/NA	Water	SM 2540D	
MB 440-600559/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-600559/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-262947-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 601522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-2	LXBMP0011_20200313	Total/NA	Water	SM 2540D	
440-262973-3	LXBMP0012_20200313	Total/NA	Water	SM 2540D	
440-262973-4	EPSW001BG01_20200313	Total/NA	Water	SM 2540D	
440-262973-5	EPSW001IE01_20200313	Total/NA	Water	SM 2540D	
440-262973-6	EPSW002IE02_20200313	Total/NA	Water	SM 2540D	
MB 440-601522/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-601522/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-262973-4 DU	EPSW001BG01_20200313	Total/NA	Water	SM 2540D	

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QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Geotechnical

Analysis Batch: 59046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-1	ILBMP0002_20200312	Total/NA	Water	D4464	
440-262973-2	LXBMP0011_20200313	Total/NA	Water	D4464	
440-262973-3	LXBMP0012_20200313	Total/NA	Water	D4464	

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Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
BB	Sample > 4X spike concentration
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-20

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20 *
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-20
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Calscience Irvine

Chain of Custody Record



Calscience



Client Information (Sub Contract Lab)		Lab PM:		Carrier Tracking No(s):		COC No:		
Client Contact: Shipping/Receiving		Bondoc, Christian M				440-153953.1		
Company: TestAmerica Laboratories, Inc.		E-Mail: christian.bondoc@testamericainc.com		State of Origin: California		Page: Page 1 of 1		
Address: 880 Riverside Parkway;		Accreditations Required (See note): State Program - California		Job #: 440-262973-1		Preservation Codes: A - HCL M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 X - DI Water Y - EDTA Z - other (specify)		
City: West Sacramento		Due Date Requested: 3/27/2020		Analysis Requested		Total Number of Containers		
State, Zip: CA, 95605		TAT Requested (days):						
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		PO #:						
Email: Project Name: Boeing SSFL ISRA and BMP		WO #:						
Site: 44009815		SSOW#:						
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=oil, BT=tissue, AB=)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B/1613B_Sox_Sep_P Standard List w/ Totals	Special Instructions/Note:
ILBMP0002_20200312 (440-262973-1)	3/12/20	12:50 Pacific		Water	X	X		See OAS, Boeing_w/u to zero
LXBMP0011_20200313 (440-262973-2)	3/13/20	08:30 Pacific		Water	X	X		See OAS, Boeing_w/u to zero
LXBMP0012_20200313 (440-262973-3)	3/13/20	08:40 Pacific		Water	X	X		See OAS, Boeing_w/u to zero
EPSW001BG01_20200313 (440-262973-4)	3/13/20	09:20 Pacific		Water	X	X		See OAS, Boeing_w/u to zero
EPSW001IE01_20200313 (440-262973-5)	3/13/20	09:10 Pacific		Water	X	X		See OAS, Boeing_w/u to zero
EPSW001IE02_20200313 (440-262973-6)	3/13/20	09:40 Pacific		Water	X	X		See OAS, Boeing_w/u to zero

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analysis & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, IV, Other (specify) _____
 Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: T4 454 AMH Date: 3.16.20 1700
 Relinquished by: _____ Date: _____
 Relinquished by: _____ Date: _____
 Custody Seal No.: _____
 Custody Seals Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks: 1.8°C / 2.2°C, 0.4°C / 1.3°C



Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-262973-1

Login Number: 262973

List Number: 1

Creator: Bonta, Lucia F

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-262973-1

Login Number: 262973

List Number: 2

Creator: Cruise, Noel

List Source: Eurofins Calscience

List Creation: 03/16/20 05:29 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-262973-1

Login Number: 262973

List Number: 3

Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

List Creation: 03/17/20 01:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	obs 1.8 corr 2.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-262973-1	ILBMP0002_20200312	63	76	62	64	65	54	50	63
440-262973-2	LXBMP0011_20200313	56	73	60	69	75	74	62	82
440-262973-3	LXBMP0012_20200313	57	66	66	60	78	72	58	79
440-262973-4	EPSW001BG01_20200313	55	56	55	52	59	49	43	57
440-262973-4 - RA	EPSW001BG01_20200313		42						
440-262973-5	EPSW001IE01_20200313	68	80	72	77	76	81	72	76
440-262973-6	EPSW002IE02_20200313	78	75	88	95	99	76	71	90
MB 320-365527/1-A	Method Blank	73	81	63	67	74	74	66	81

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-262973-1	ILBMP0002_20200312	59	61	60	51	59	59	51
440-262973-2	LXBMP0011_20200313	72	73	70	55	58	65	51
440-262973-3	LXBMP0012_20200313	72	69	74	60	64	65	63
440-262973-4	EPSW001BG01_20200313	52	55	46	37	44	45	35
440-262973-4 - RA	EPSW001BG01_20200313							
440-262973-5	EPSW001IE01_20200313	68	78	88	65	65	74	57
440-262973-6	EPSW002IE02_20200313	88	79	80	71	81	75	74
MB 320-365527/1-A	Method Blank	74	71	78	60	64	63	50

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-365527/2-A	Lab Control Sample	68	75	63	64	74	73	64	79

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-365527/2-A	Lab Control Sample	71	69	75	63	64	68	52

Surrogate Legend

Eurofins Calscience Irvine

Isotope Dilution Summary

Job ID: 440-262973-1

Client: Haley & Aldrich, Inc.

Project/Site: Boeing SSFL ISRA and BMP

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

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Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-262973 Field Sheet

Job: _____

Tracking #: 1540 41071999

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: 262973

Therm. ID: AK7 Corr. Factor: (+/-) 0.4 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: Seal

Cooler ID: _____

Temp Observed: 1.8 °C Corrected: 2.2 °C

From: Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: SO Date: 3/17/20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Non-conformance	Yes	No	NA
NCM Filed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: JG Date: 3/17/20

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

W12-C

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

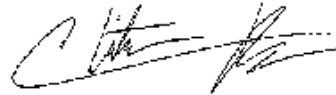
Laboratory Job ID: 440-262973-2

Client Project/Site: Boeing SSFL ISRA and BMP

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
4/2/2020 12:57:40 PM

Christian Bondoc, Project Manager I
(949)260-3218
christian.bondoc@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-262973-4	EPSW001BG01_20200313	Water	03/13/20 09:20	03/13/20 17:25	
440-262973-5	EPSW001IE01_20200313	Water	03/13/20 09:10	03/13/20 17:25	
440-262973-6	EPSW002IE02_20200313	Water	03/13/20 09:40	03/13/20 17:25	

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Job ID: 440-262973-2

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-262973-2

Comments

No additional comments.

Receipt

The samples were received on 3/13/2020 5:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 4.5° C, 4.7° C, 5.3° C and 5.4° C.

RAD

Method 900.0: Gross Alpha/Beta Prep Batch 160-465288

The gross alpha detection goal was not met for the following samples due to a reduction of the sample size attributed to high residual mass. Analytical results are reported with the MDC achieved.
(440-263045-Q-1-E) and (440-263045-Q-1-J DU).

Method 900.0: Gross Alpha/Beta Prep Batch 160-465288

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EPSW001BG01_20200313 (440-262973-4), EPSW001IE01_20200313 (440-262973-5), EPSW002IE02_20200313 (440-262973-6), (LCS 160-465288/2-A), (LCSB 160-465288/3-A), (MB 160-465288/1-A), (440-263045-Q-1-E), (440-263045-Q-1-J DU), (440-263045-Q-1-F MS), (440-263045-Q-1-H MSBT), (440-263045-Q-1-I MSBTD) and (440-263045-Q-1-G MSD)

Method 900.0: Gross Alpha Beta Prep Batch 160-465556

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EPSW001BG01_20200313 (440-262973-4), EPSW001IE01_20200313 (440-262973-5), EPSW002IE02_20200313 (440-262973-6), (LCS 160-465556/2-A), (LCSB 160-465556/3-A), (MB 160-465556/1-A), (680-181935-A-5-A), (680-181935-A-5-D DU), (680-181935-A-5-B MS) and (680-181935-A-5-C MSBT)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Client Sample ID: EPSW001BG01_20200313

Lab Sample ID: 440-262973-4

Date Collected: 03/13/20 09:20

Matrix: Water

Date Received: 03/13/20 17:25

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	11.4		2.91	3.19	3.00	2.65	pCi/L	03/23/20 11:56	03/28/20 14:43	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity - Dissolved

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	8.30		2.31	2.50	3.00	2.13	pCi/L	03/25/20 13:49	03/30/20 15:47	1

Client Sample ID: EPSW001IE01_20200313

Lab Sample ID: 440-262973-5

Date Collected: 03/13/20 09:10

Matrix: Water

Date Received: 03/13/20 17:25

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	0.997	U	0.993	0.999	3.00	1.59	pCi/L	03/23/20 11:58	03/28/20 14:43	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity - Dissolved

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	1.53	U	1.29	1.30	3.00	2.01	pCi/L	03/25/20 13:49	03/30/20 15:48	1

Client Sample ID: EPSW002IE02_20200313

Lab Sample ID: 440-262973-6

Date Collected: 03/13/20 09:40

Matrix: Water

Date Received: 03/13/20 17:25

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	1.32	U	1.03	1.04	3.00	1.53	pCi/L	03/23/20 11:58	03/28/20 14:43	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity - Dissolved

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	1.83		1.02	1.04	3.00	1.30	pCi/L	03/25/20 13:49	03/30/20 15:49	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Method	Method Description	Protocol	Laboratory
900.0	Gross Alpha and Gross Beta Radioactivity	EPA	TAL SL
Evaporation	Preparation, Evaporation	None	TAL SL
Filtration	Sample Filtration	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency
None = None

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Client Sample ID: EPSW001BG01_20200313

Lab Sample ID: 440-262973-4

Date Collected: 03/13/20 09:20

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			1.0 mL	1.0 mL	464796	03/18/20 10:58	LTC	TAL SL
Dissolved	Prep	Evaporation			200.23 mL	1.0 g	465556	03/25/20 13:49	RJD	TAL SL
Dissolved	Analysis	900.0		1	1.0 mL	1.0 mL	466082	03/30/20 15:47	AJD	TAL SL
Total/NA	Prep	Evaporation			199.99 g	1.0 g	465288	03/23/20 11:56	RJD	TAL SL
Total/NA	Analysis	900.0		1			466007	03/28/20 14:43	CJQ	TAL SL

Client Sample ID: EPSW001IE01_20200313

Lab Sample ID: 440-262973-5

Date Collected: 03/13/20 09:10

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			1.0 mL	1.0 mL	464796	03/18/20 10:58	LTC	TAL SL
Dissolved	Prep	Evaporation			200.14 mL	1.0 g	465556	03/25/20 13:49	RJD	TAL SL
Dissolved	Analysis	900.0		1	1.0 mL	1.0 mL	466082	03/30/20 15:48	AJD	TAL SL
Total/NA	Prep	Evaporation			200.05 g	1.0 g	465288	03/23/20 11:58	RJD	TAL SL
Total/NA	Analysis	900.0		1			466007	03/28/20 14:43	CJQ	TAL SL

Client Sample ID: EPSW002IE02_20200313

Lab Sample ID: 440-262973-6

Date Collected: 03/13/20 09:40

Matrix: Water

Date Received: 03/13/20 17:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			1.0 mL	1.0 mL	464796	03/18/20 10:58	LTC	TAL SL
Dissolved	Prep	Evaporation			200.22 mL	1.0 g	465556	03/25/20 13:49	RJD	TAL SL
Dissolved	Analysis	900.0		1	1.0 mL	1.0 mL	466082	03/30/20 15:49	AJD	TAL SL
Total/NA	Prep	Evaporation			200.10 g	1.0 g	465288	03/23/20 11:58	RJD	TAL SL
Total/NA	Analysis	900.0		1			466007	03/28/20 14:43	CJQ	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: MB 160-465288/1-A
Matrix: Water
Analysis Batch: 466007

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 465288

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	0.4757	U	0.672	0.674	3.00	1.14	pCi/L	03/23/20 11:56	03/28/20 14:39	1

Lab Sample ID: LCS 160-465288/2-A
Matrix: Water
Analysis Batch: 466007

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 465288

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
		Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	49.6	56.94		8.37	3.00	2.76	pCi/L	115	75 - 125

Lab Sample ID: 440-263045-Q-1-F MS
Matrix: Water
Analysis Batch: 466007

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 465288

Analyte	Sample	Sample	Spike	MS	MS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	Result	Qual	Added	Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	1.95	U G	92.5	76.59		12.5	3.00	3.54	pCi/L	81	60 - 140

Lab Sample ID: 440-263045-Q-1-G MSD
Matrix: Water
Analysis Batch: 466007

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 465288

Analyte	Sample	Sample	Spike	MSD	MSD	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
	Result	Qual	Added	Result	Qual	Uncert. (2σ+/-)							
Gross Alpha	1.95	U G	92.4	70.83		11.8	3.00	3.95	pCi/L	75	60 - 140	0.24	1

Lab Sample ID: 440-263045-Q-1-J DU
Matrix: Water
Analysis Batch: 466007

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 465288

Analyte	Sample	Sample	DU		Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	1.95	U G	4.519	G	2.89	3.00	3.88	pCi/L	0.47	1

Lab Sample ID: MB 160-465556/1-A
Matrix: Water
Analysis Batch: 466082

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 465556

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	0.3693	U	0.467	0.469	3.00	0.772	pCi/L	03/25/20 13:49	03/30/20 15:47	1

Lab Sample ID: LCS 160-465556/2-A
Matrix: Water
Analysis Batch: 466246

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 465556

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
		Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	49.6	38.51		6.13	3.00	2.22	pCi/L	78	75 - 125

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: 680-181935-A-5-B MS
Matrix: Water
Analysis Batch: 466082

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 465556

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	2.64		49.7	36.55		5.82	3.00	1.54	pCi/L	68	60 - 140

Lab Sample ID: 680-181935-A-5-D DU
Matrix: Water
Analysis Batch: 466082

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 465556

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Gross Alpha	2.64		2.681		1.45	3.00	1.81	pCi/L	0.02	1

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QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Rad

Filtration Batch: 464796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-4	EPSW001BG01_20200313	Dissolved	Water	Filtration	
440-262973-5	EPSW001IE01_20200313	Dissolved	Water	Filtration	
440-262973-6	EPSW002IE02_20200313	Dissolved	Water	Filtration	

Prep Batch: 465288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-4	EPSW001BG01_20200313	Total/NA	Water	Evaporation	
440-262973-5	EPSW001IE01_20200313	Total/NA	Water	Evaporation	
440-262973-6	EPSW002IE02_20200313	Total/NA	Water	Evaporation	
MB 160-465288/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-465288/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
440-263045-Q-1-F MS	Matrix Spike	Total/NA	Water	Evaporation	
440-263045-Q-1-G MSD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	
440-263045-Q-1-J DU	Duplicate	Total/NA	Water	Evaporation	

Prep Batch: 465556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-262973-4	EPSW001BG01_20200313	Dissolved	Water	Evaporation	464796
440-262973-5	EPSW001IE01_20200313	Dissolved	Water	Evaporation	464796
440-262973-6	EPSW002IE02_20200313	Dissolved	Water	Evaporation	464796
MB 160-465556/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-465556/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
680-181935-A-5-B MS	Matrix Spike	Total/NA	Water	Evaporation	
680-181935-A-5-D DU	Duplicate	Total/NA	Water	Evaporation	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Qualifiers

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Boeing SSFL ISRA and BMP

Job ID: 440-262973-2

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-20

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-20
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-20 *
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Irvine
17461 Dorian Avenue, Suite 100
Irvine, CA 92614
phone (949) 281-1022 fax (949) 260-3299

Regulatory Program: DW NPDES PCBs Other:

TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement #2019-22-TestAmerica by and between Haley & Aldrich, Inc. its subsidiaries and affiliates, and TestAmerica Laboratories, Inc.

Client Contact: Haley & Aldrich, Inc. **5533 Mission Center Road, Suite 300 San Diego, California 92108** Phone (619) 280-9210 FAX (619) 280-9415
H&A Project Manager: Katherine Miller **Tel/Fax: (620) 286-8606**

Analysis Turnaround Time: CALENDAR DAYS WORKING DAYS
TAT if different from below: 2 weeks 1 week 2 days 1 day

Site BMP Performance: OF 001, 002, and/or 009 Watershed
H&A P O #

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)		Method 200.8: Cd, Cu, Pb (Total Dissolved)		Method 245.1: Hg (Total Recoverable)		Method 200.8: As, Cd, Cu, Fe, Pb (Total Dissolved)		Method 245.1: Hg (Total Recoverable)		Method 200.8: As, Cd, Cu, Fe, Pb (Total Recoverable)		SO ₄ (E300)	Gross Alpha (E900.0) (Total Dissolved)	Gross Alpha (E900.0) (Total Recoverable)	Carrier	Date: 3/13/2020	COC No. 1 of 1 COCs
						Y	N	P	A	P	A	P	A	P	A								
ILBMP002_20200312	3/12/20	1250	G	WM	6																		
LXBMP0011_20200313	3/13/20	0830	G	WM	6																		
LXBMP0012_20200313	3/13/20	0840	G	WM	6																		
EPSW001BG01_20200313	3/13/20	0820	G	WM	6																		
EPSW001IE01_20200313	3/13/20	0910	G	WM	6																		
EPSW002IE02_20200313	3/13/20	0940	G	WM	6																		

Preservation Used: 1= Ice, 2= HCI, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/CC Requirements & Comments: Please email data to kmiller@haleyaldrich.com and post to Total Access, Bill to Haley & Aldrich at AP@haleyaldrich.com. Report Level II Data Package and provide EDD; All dissolved metal samples are to be filtered within 24 hours of receipt, even those placed on hold

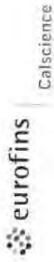
4.5 4.7 5.3
4.5 4.7 5.3
5.4 5.4 5.3

Relinquished by	Custody Seal No	Company	Date/Time	Received by	Company	Date/Time	Relinquished by	Company	Date/Time	Received by	Company	Date/Time
<i>[Signature]</i>		JHA	3-13-20	<i>[Signature]</i>	DC's	11-13-20 15:00	<i>[Signature]</i>	Company		<i>[Signature]</i>	Company	
<i>[Signature]</i>		DC's	3/25	<i>[Signature]</i>	Company		<i>[Signature]</i>	Company		<i>[Signature]</i>	Company	
<i>[Signature]</i>		Company		<i>[Signature]</i>	Company		<i>[Signature]</i>	Company		<i>[Signature]</i>	Company	

440-262973 Chain of Custody
Cooler Temp (°C) Obs'd 5.4 Cor'd 5.4 Therm ID No: 811

Form No. CA-C-WI-045, Rev. 1.2, dated 1/8/2016

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Lab PM: Bondoc, Christian M		Carrier Tracking No(s): 440-153951.1	
Client Contact: Shipping/Receiving		E-Mail: christian.bondoc@testamericainc.com		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - California		Job #: 440-262973-1	
Address: 13715 Rider Trail North, Earth City, MO, 63045		Due Date Requested: 3/25/2020		Preservation Codes:	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		TAT Requested (days):		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Email:		PO #:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Project Name: Boeing SSFL ISRA and BMP		WO #:		Total Number of containers	
Site:		Project #: 44009815		Analysis Requested	
SSOW#:		Field Filtered Sample (Yes or No)		900.0/Evaporation (MOD) Gross Alpha/Beta	
		Perform MS/MSD (Yes or No)		900.0/Filtration, Rad Gross Alpha Only- Dissolved	
		Preservation Code:		Special Instructions/Note:	
Sample Identification - Client ID (Lab ID)		Sample Date		Boeing SSFL; DO NOT FILTER; use prep date from preservation	
EPW001BG01_20200313 (440-262973-4)	Sample Time: 09:20 Pacific	Sample Date: 3/13/20	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefluid, BT=tissue, A=Ab)	Boeing SSFL; DO NOT FILTER; use prep date from preservation
EPW001E01_20200313 (440-262973-5)	Sample Time: 09:10 Pacific	Sample Date: 3/13/20			Boeing SSFL; DO NOT FILTER; use prep date from preservation
EPW001E02_20200313 (440-262973-6)	Sample Time: 09:40 Pacific	Sample Date: 3/13/20			Boeing SSFL; DO NOT FILTER; use prep date from preservation
<p>Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.</p>					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Special Instructions/QC Requirements:					
Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____					
Relinquished by: <i>Jessie Chen</i> Date/Time: 3/16/20 1700 Company: CC IRV					
Relinquished by: FE Date/Time: 3/13/2020 08:25 Company: ETA STU					
Relinquished by: _____ Date/Time: _____ Company: _____					
Custody Seals Intact: _____ Custody Seal No.: _____					
Cooler: Temperature(s) °C and Other Remarks:					



CONDITION UPON RECEIPT FORM

Client: Irvin

Initiated by: MK Date: 3/17/2020 Time: 08:25 Shipper: FE Package Quantity: 1

**Sample must be received at < 6°. If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids. If samples are from West Virginia, temperature of EVERY SAMPLE that is temperature critical must be recorded on the COC.

	Shipping #(s):*	Thermometer #:	Package Temp:**	Document #:
1.	1540 4107 2002	192688461	7.0	
2.				
3.				
4.				
5.				
6.				
7.				

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	<input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on the cooler?	8.	Y <input type="radio"/> <input checked="" type="radio"/> N	Are there custody seals present on bottles?
2.	Y <input type="radio"/> <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9.	Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3.	<input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10.	Y <input type="radio"/> <input checked="" type="radio"/> N <input type="radio"/> N/A	Was sample received with proper pH? (If not, make note below) pH strip lot #: <u>HC904495</u>
4.	<input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?	11.	Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Containers for Rn-222, C-14, Cl-36, H-3 & I-129/131 marked with "Do Not Preserve" label?
5.	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	<input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?
6.	Y <input type="radio"/> <input checked="" type="radio"/> N	Was sample received broken?	13.	Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Headspace in VOA, or Rn-222 liquid samples? (>6mm) (If Yes, note sample ID's below)
7.	<input checked="" type="radio"/> Y <input type="radio"/> N	Is sample volume sufficient for analysis?	14.	Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Soil containers for C-14, H-3, Tc-99 & I-129/131 marked with "Do Not Dry" label?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, Oil & Grease, Rn-222 and soils.

Notes:

Samples were received unpreserved; all "F" containers preserved w/ HNO₃

pH Adjustment (if needed)

Date/Time of Preservation: 3/17/2020 17:20

Initial pH and pH strip lot#: 7.5 / HC904495

Preservative and lot#: HNO₃ 244827

Final pH and pH strip lot#: < 7.5 / HC904495

Amount of Preservative: 1 mL

Sample Labels Applied By:

Labels 2nd Reviewed By:

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-262973-2

Login Number: 262973

List Number: 1

Creator: Bonta, Lucia F

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-262973-2

Login Number: 262973

List Number: 4

Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

List Creation: 03/17/20 04:56 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-262973 Field Sheet

Tracking #: 1540 41071999

Job: _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: 262973

Therm. ID: AK7 Corr. Factor: (+/-) 0.4 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: Seal

Cooler ID: _____

Temp Observed: 1.8 °C Corrected: 2.2 °C

From: Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: SO Date: 3/17/20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Non-conformance	Yes	No	NA
NCM Filed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: JG Date: 3/17/20

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

W12-C

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-264190-1

Client Project/Site: BMP Performace OF 001, 002 and/or 009

For:

Haley & Aldrich, Inc.
400 E Van Buren St.
Suite 545
Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:
4/27/2020 10:41:22 AM

Christian Bondoc, Project Manager I
(949)260-3218
christian.bondoc@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

Client: Haley & Aldrich, Inc.

Job ID: 440-264190-1

Project/Site: BMP Performance OF 001, 002 and/or 009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-264190-1	LXBMP0010_20200406	Water	04/06/20 08:30	04/07/20 14:30	
440-264190-2	LXBMP0011_20200406	Water	04/06/20 08:40	04/07/20 14:30	
440-264190-3	LXBMP0012_20200406	Water	04/06/20 08:50	04/07/20 14:30	
440-264190-4	EPSW002IE02_20200406	Water	04/06/20 07:40	04/07/20 14:30	

1

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Job ID: 440-264190-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-264190-1

Comments

No additional comments.

Receipt

The samples were received on 4/7/2020 2:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.8° C and 2.6° C.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

RAD

Method Evaporation: Gross Alpha/Beta preparation batch 160-468136

The following samples had additional volume added to reach target mass and efficiency EPSW002IE02_20200406 (440-264190-4). The total sample volume is reflected in the initial amount field.

Method 900.0: Gross Alpha Beta Prep Batch 160-468140

The gross alpha-beta detection goals were not met for the following samples due to a reduction of the sample size attributed to high residual mass: (440-264451-B-4-A), (440-264451-B-4-D DU), (440-264451-B-4-B MS) and (440-264451-B-4-C MSBT). Analytical results are reported with the detection limit achieved.

Method 900.0: Gross Alpha Beta Prep Batch 160-468140

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EPSW002IE02_20200406 (440-264190-4), (LCS 160-468140/2-A), (LCSB 160-468140/3-A), (MB 160-468140/1-A), (440-264451-B-4-A), (440-264451-B-4-D DU), (440-264451-B-4-B MS) and (440-264451-B-4-C MSBT)

Method 900.0: Gross Alpha Beta Prep Batch 160-468136

The gross alpha detection goal was not met for the following samples due to a reduction of the sample size attributed to high residual mass: (440-264162-K-1-N), (440-264162-K-1-S DU), (440-264162-K-1-O MS), (440-264162-K-1-Q MSBT), (440-264162-K-1-R MSBTD) and (440-264162-K-1-P MSD). Analytical results are reported with the detection limit achieved.

Method 900.0: Gross Alpha Beta Prep Batch 160-468136

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EPSW002IE02_20200406 (440-264190-4), (LCS 160-468136/2-A), (LCSB 160-468136/3-A), (MB 160-468136/1-A), (440-264162-K-1-N), (440-264162-K-1-S DU), (440-264162-K-1-O MS), (440-264162-K-1-Q MSBT), (440-264162-K-1-R MSBTD) and (440-264162-K-1-P MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Job ID: 440-264190-1 (Continued)

Laboratory: Eurofins Calscience Irvine (Continued)

Method FILTRATION: The following samples requested dissolved metals and were not filtered in the field: LXBMP0010_20200406 (440-264190-1), LXBMP0011_20200406 (440-264190-2), LXBMP0012_20200406 (440-264190-3) and EPSW002IE02_20200406 (440-264190-4). These samples were filtered and preserved upon receipt to the laboratory.

04/07/20
2.5mL of HNO3
HNO3 Lot # 0000234822

Method 200.8: The matrix spike / matrix spike duplicate (MS/MSD) recoveries of Thallium for preparation batch 440-604189 and analytical batch 440-604275 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected. The associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 200.8: The matrix spike duplicate (MSD) precision of Zinc for preparation batch 440-604189 and analytical batch 440-604275 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected. The associated laboratory control sample (LCS) was within acceptance limits

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method D4464: Insufficient amount of particles in sample for analysis.

LXBMP0011_20200406 (440-264190-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P preparation/analysis: Samples LXBMP0010_20200406 (440-264190-1), LXBMP0011_20200406 (440-264190-2), LXBMP0012_20200406 (440-264190-3) and EPSW002IE02_20200406 (440-264190-4) were provided in wide-mouth amber glass bottles.

preparation batch 320-371493
Method: 1613B_Sox_Sep_P / 1613B
Matrix: Aqueous

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: LXBMP0010_20200406

Lab Sample ID: 440-264190-1

Date Collected: 04/06/20 08:30

Matrix: Water

Date Received: 04/07/20 14:30

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000018	ug/L		04/10/20 07:33	04/10/20 22:44	1
2,3,7,8-TCDF	ND		0.000010	0.0000004	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,7,8-PeCDD	ND		0.000052	0.0000013	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,7,8-PeCDF	ND		0.000052	0.0000008	ug/L		04/10/20 07:33	04/10/20 22:44	1
2,3,4,7,8-PeCDF	ND		0.000052	0.0000008	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,4,7,8-HxCDD	0.0000037	J,DX MB	0.000052	0.0000009	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,6,7,8-HxCDD	0.0000034	J,DX	0.000052	0.0000009	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,7,8,9-HxCDD	0.0000022	J,DX MB	0.000052	0.0000008	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,4,7,8-HxCDF	0.0000015	J,DX MB	0.000052	0.0000006	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,6,7,8-HxCDF	0.0000013	J,DX MB q	0.000052	0.0000006	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,7,8,9-HxCDF	0.0000012	J,DX MB q	0.000052	0.0000005	ug/L		04/10/20 07:33	04/10/20 22:44	1
2,3,4,6,7,8-HxCDF	0.0000013	J,DX q	0.000052	0.0000005	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,4,6,7,8-HpCDD	0.000031	J,DX MB	0.000052	0.0000007	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,4,6,7,8-HpCDF	0.000018	J,DX MB	0.000052	0.0000014	ug/L		04/10/20 07:33	04/10/20 22:44	1
1,2,3,4,7,8,9-HpCDF	0.0000017	J,DX q	0.000052	0.0000013	ug/L		04/10/20 07:33	04/10/20 22:44	1
OCDD	0.00020	MB	0.00010	0.0000015	ug/L		04/10/20 07:33	04/10/20 22:44	1
OCDF	0.000052	J,DX MB	0.00010	0.0000016	ug/L		04/10/20 07:33	04/10/20 22:44	1
Total TCDD	ND		0.000010	0.0000018	ug/L		04/10/20 07:33	04/10/20 22:44	1
Total TCDF	ND		0.000010	0.0000004	ug/L		04/10/20 07:33	04/10/20 22:44	1
Total PeCDD	ND		0.000052	0.0000013	ug/L		04/10/20 07:33	04/10/20 22:44	1
Total PeCDF	ND		0.000052	0.0000008	ug/L		04/10/20 07:33	04/10/20 22:44	1
Total HxCDD	0.000016	J,DX MB q	0.000052	0.0000008	ug/L		04/10/20 07:33	04/10/20 22:44	1
Total HxCDF	0.000015	J,DX MB q	0.000052	0.0000005	ug/L		04/10/20 07:33	04/10/20 22:44	1
Total HpCDD	0.000056	J,DX MB	0.000052	0.0000007	ug/L		04/10/20 07:33	04/10/20 22:44	1
Total HpCDF	0.000038	J,DX MB q	0.000052	0.0000013	ug/L		04/10/20 07:33	04/10/20 22:44	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		25 - 164				04/10/20 07:33	04/10/20 22:44	1
13C-2,3,7,8-TCDF	71		24 - 169				04/10/20 07:33	04/10/20 22:44	1
13C-1,2,3,7,8-PeCDD	64		25 - 181				04/10/20 07:33	04/10/20 22:44	1
13C-1,2,3,7,8-PeCDF	63		24 - 185				04/10/20 07:33	04/10/20 22:44	1
13C-2,3,4,7,8-PeCDF	73		21 - 178				04/10/20 07:33	04/10/20 22:44	1
13C-1,2,3,4,7,8-HxCDD	71		32 - 141				04/10/20 07:33	04/10/20 22:44	1
13C-1,2,3,6,7,8-HxCDD	63		28 - 130				04/10/20 07:33	04/10/20 22:44	1
13C-1,2,3,4,7,8-HxCDF	72		26 - 152				04/10/20 07:33	04/10/20 22:44	1
13C-1,2,3,6,7,8-HxCDF	65		26 - 123				04/10/20 07:33	04/10/20 22:44	1
13C-1,2,3,7,8,9-HxCDF	73		29 - 147				04/10/20 07:33	04/10/20 22:44	1
13C-2,3,4,6,7,8-HxCDF	73		28 - 136				04/10/20 07:33	04/10/20 22:44	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: LXBMP0010_20200406

Lab Sample ID: 440-264190-1

Date Collected: 04/06/20 08:30

Matrix: Water

Date Received: 04/07/20 14:30

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	58		23 - 140	04/10/20 07:33	04/10/20 22:44	1
13C-1,2,3,4,6,7,8-HpCDF	57		28 - 143	04/10/20 07:33	04/10/20 22:44	1
13C-1,2,3,4,7,8,9-HpCDF	64		26 - 138	04/10/20 07:33	04/10/20 22:44	1
13C-OCDD	50		17 - 157	04/10/20 07:33	04/10/20 22:44	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	04/10/20 07:33	04/10/20 22:44	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		04/08/20 09:20	04/08/20 16:48	1
Copper	2.2		2.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:48	1
Lead	2.4		1.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:48	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		04/08/20 15:02	04/08/20 18:57	1
Copper	0.94	J,DX	2.0	0.50	ug/L		04/08/20 15:02	04/08/20 18:57	1
Lead	ND		1.0	0.50	ug/L		04/08/20 15:02	04/08/20 18:57	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/08/20 11:23	04/08/20 18:38	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/07/20 19:51	04/07/20 22:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	46		2.0	1.0	mg/L			04/09/20 18:46	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	3.12		0.01	0.01	%			04/16/20 15:51	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			04/16/20 15:51	1
Fine Sand (0.125 to 0.25mm)	14.90		0.01	0.01	%			04/16/20 15:51	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			04/16/20 15:51	1
Medium Sand (0.25 to 0.5 mm)	8.02		0.01	0.01	%			04/16/20 15:51	1
Silt (0.00391 to 0.0625mm)	50.84		0.01	0.01	%			04/16/20 15:51	1
Total Silt and Clay (0 to 0.0626mm)	53.96		0.01	0.01	%			04/16/20 15:51	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			04/16/20 15:51	1
Very Fine Sand (0.0625 to 0.125 mm)	23.11		0.01	0.01	%			04/16/20 15:51	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: LXBMP0011_20200406

Lab Sample ID: 440-264190-2

Date Collected: 04/06/20 08:40

Matrix: Water

Date Received: 04/07/20 14:30

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.000015	ug/L		04/10/20 07:33	04/10/20 23:32	1
2,3,7,8-TCDF	ND		0.000011	0.000003	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,7,8-PeCDD	ND		0.000054	0.000012	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,7,8-PeCDF	ND		0.000054	0.000007	ug/L		04/10/20 07:33	04/10/20 23:32	1
2,3,4,7,8-PeCDF	ND		0.000054	0.000007	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,4,7,8-HxCDD	0.000028	J,DX MB	0.000054	0.000008	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,6,7,8-HxCDD	ND		0.000054	0.000009	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,7,8,9-HxCDD	ND		0.000054	0.000007	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,4,7,8-HxCDF	0.000010	J,DX MB q	0.000054	0.000004	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,6,7,8-HxCDF	0.0000098	J,DX MB q	0.000054	0.000005	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,7,8,9-HxCDF	0.0000098	J,DX MB q	0.000054	0.000004	ug/L		04/10/20 07:33	04/10/20 23:32	1
2,3,4,6,7,8-HxCDF	0.000011	J,DX q	0.000054	0.000004	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,4,6,7,8-HpCDD	0.000059	J,DX MB	0.000054	0.000003	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,4,6,7,8-HpCDF	0.000035	J,DX MB q	0.000054	0.000009	ug/L		04/10/20 07:33	04/10/20 23:32	1
1,2,3,4,7,8,9-HpCDF	0.000010	J,DX q	0.000054	0.000009	ug/L		04/10/20 07:33	04/10/20 23:32	1
OCDD	0.000039	J,DX MB	0.00011	0.000011	ug/L		04/10/20 07:33	04/10/20 23:32	1
OCDF	0.000012	J,DX MB	0.00011	0.000013	ug/L		04/10/20 07:33	04/10/20 23:32	1
Total TCDD	ND		0.000011	0.000015	ug/L		04/10/20 07:33	04/10/20 23:32	1
Total TCDF	ND		0.000011	0.000003	ug/L		04/10/20 07:33	04/10/20 23:32	1
Total PeCDD	ND		0.000054	0.000012	ug/L		04/10/20 07:33	04/10/20 23:32	1
Total PeCDF	ND		0.000054	0.000007	ug/L		04/10/20 07:33	04/10/20 23:32	1
Total HxCDD	0.000028	J,DX MB	0.000054	0.000007	ug/L		04/10/20 07:33	04/10/20 23:32	1
Total HxCDF	0.000041	J,DX MB q	0.000054	0.000004	ug/L		04/10/20 07:33	04/10/20 23:32	1
Total HpCDD	0.000011	J,DX MB q	0.000054	0.000003	ug/L		04/10/20 07:33	04/10/20 23:32	1
Total HpCDF	0.000082	J,DX MB q	0.000054	0.000009	ug/L		04/10/20 07:33	04/10/20 23:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	72		25 - 164				04/10/20 07:33	04/10/20 23:32	1
13C-2,3,7,8-TCDF	75		24 - 169				04/10/20 07:33	04/10/20 23:32	1
13C-1,2,3,7,8-PeCDD	71		25 - 181				04/10/20 07:33	04/10/20 23:32	1
13C-1,2,3,7,8-PeCDF	75		24 - 185				04/10/20 07:33	04/10/20 23:32	1
13C-2,3,4,7,8-PeCDF	84		21 - 178				04/10/20 07:33	04/10/20 23:32	1
13C-1,2,3,4,7,8-HxCDD	77		32 - 141				04/10/20 07:33	04/10/20 23:32	1
13C-1,2,3,6,7,8-HxCDD	68		28 - 130				04/10/20 07:33	04/10/20 23:32	1
13C-1,2,3,4,7,8-HxCDF	81		26 - 152				04/10/20 07:33	04/10/20 23:32	1
13C-1,2,3,6,7,8-HxCDF	71		26 - 123				04/10/20 07:33	04/10/20 23:32	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: LXBMP0011_20200406

Lab Sample ID: 440-264190-2

Date Collected: 04/06/20 08:40

Matrix: Water

Date Received: 04/07/20 14:30

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	86		29 - 147	04/10/20 07:33	04/10/20 23:32	1
13C-2,3,4,6,7,8-HxCDF	79		28 - 136	04/10/20 07:33	04/10/20 23:32	1
13C-1,2,3,4,6,7,8-HpCDD	69		23 - 140	04/10/20 07:33	04/10/20 23:32	1
13C-1,2,3,4,6,7,8-HpCDF	70		28 - 143	04/10/20 07:33	04/10/20 23:32	1
13C-1,2,3,4,7,8,9-HpCDF	77		26 - 138	04/10/20 07:33	04/10/20 23:32	1
13C-OCDD	60		17 - 157	04/10/20 07:33	04/10/20 23:32	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	81		35 - 197	04/10/20 07:33	04/10/20 23:32	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		04/08/20 09:20	04/08/20 16:50	1
Copper	2.0		2.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:50	1
Lead	1.1		1.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:50	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		04/08/20 15:02	04/08/20 18:59	1
Copper	1.0	J,DX	2.0	0.50	ug/L		04/08/20 15:02	04/08/20 18:59	1
Lead	ND		1.0	0.50	ug/L		04/08/20 15:02	04/08/20 18:59	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/08/20 11:23	04/08/20 18:40	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/07/20 19:51	04/07/20 22:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	9.8		2.0	1.0	mg/L			04/09/20 18:46	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	ND		0.01	0.01	%			04/16/20 16:01	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			04/16/20 16:01	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			04/16/20 16:01	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			04/16/20 16:01	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			04/16/20 16:01	1
Silt (0.00391 to 0.0625mm)	ND		0.01	0.01	%			04/16/20 16:01	1
Total Silt and Clay (0 to 0.0626mm)	ND		0.01	0.01	%			04/16/20 16:01	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			04/16/20 16:01	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			04/16/20 16:01	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: LXBMP0012_20200406

Lab Sample ID: 440-264190-3

Date Collected: 04/06/20 08:50

Matrix: Water

Date Received: 04/07/20 14:30

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000011	0.000015	ug/L		04/10/20 07:33	04/11/20 00:21	1
2,3,7,8-TCDF	ND		0.000011	0.000003	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,7,8-PeCDD	ND		0.000055	0.000013	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,7,8-PeCDF	0.000016	J,DX q	0.000055	0.000007	ug/L		04/10/20 07:33	04/11/20 00:21	1
2,3,4,7,8-PeCDF	0.000014	J,DX	0.000055	0.000007	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,4,7,8-HxCDD	0.000032	J,DX MB q	0.000055	0.000008	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,6,7,8-HxCDD	0.000015	J,DX q	0.000055	0.000009	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,7,8,9-HxCDD	0.000012	J,DX MB q	0.000055	0.000007	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,4,7,8-HxCDF	0.000017	J,DX MB	0.000055	0.000004	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,6,7,8-HxCDF	0.000018	J,DX MB	0.000055	0.000005	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,7,8,9-HxCDF	0.000018	J,DX MB q	0.000055	0.000004	ug/L		04/10/20 07:33	04/11/20 00:21	1
2,3,4,6,7,8-HxCDF	0.000014	J,DX q	0.000055	0.000004	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,4,6,7,8-HpCDD	0.000036	J,DX MB q	0.000055	0.000003	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,4,6,7,8-HpCDF	0.000035	J,DX MB q	0.000055	0.000008	ug/L		04/10/20 07:33	04/11/20 00:21	1
1,2,3,4,7,8,9-HpCDF	0.000017	J,DX q	0.000055	0.000008	ug/L		04/10/20 07:33	04/11/20 00:21	1
OCDD	0.000025	J,DX MB	0.00011	0.000012	ug/L		04/10/20 07:33	04/11/20 00:21	1
OCDF	0.000086	J,DX MB	0.00011	0.000013	ug/L		04/10/20 07:33	04/11/20 00:21	1
Total TCDD	ND		0.000011	0.000015	ug/L		04/10/20 07:33	04/11/20 00:21	1
Total TCDF	ND		0.000011	0.000003	ug/L		04/10/20 07:33	04/11/20 00:21	1
Total PeCDD	ND		0.000055	0.000013	ug/L		04/10/20 07:33	04/11/20 00:21	1
Total PeCDF	0.000030	J,DX q	0.000055	0.000007	ug/L		04/10/20 07:33	04/11/20 00:21	1
Total HxCDD	0.000060	J,DX MB q	0.000055	0.000007	ug/L		04/10/20 07:33	04/11/20 00:21	1
Total HxCDF	0.000067	J,DX MB q	0.000055	0.000004	ug/L		04/10/20 07:33	04/11/20 00:21	1
Total HpCDD	0.000057	J,DX MB q	0.000055	0.000003	ug/L		04/10/20 07:33	04/11/20 00:21	1
Total HpCDF	0.000074	J,DX MB q	0.000055	0.000008	ug/L		04/10/20 07:33	04/11/20 00:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	62		25 - 164				04/10/20 07:33	04/11/20 00:21	1
13C-2,3,7,8-TCDF	70		24 - 169				04/10/20 07:33	04/11/20 00:21	1
13C-1,2,3,7,8-PeCDD	64		25 - 181				04/10/20 07:33	04/11/20 00:21	1
13C-1,2,3,7,8-PeCDF	70		24 - 185				04/10/20 07:33	04/11/20 00:21	1
13C-2,3,4,7,8-PeCDF	76		21 - 178				04/10/20 07:33	04/11/20 00:21	1
13C-1,2,3,4,7,8-HxCDD	72		32 - 141				04/10/20 07:33	04/11/20 00:21	1
13C-1,2,3,6,7,8-HxCDD	64		28 - 130				04/10/20 07:33	04/11/20 00:21	1
13C-1,2,3,4,7,8-HxCDF	76		26 - 152				04/10/20 07:33	04/11/20 00:21	1
13C-1,2,3,6,7,8-HxCDF	69		26 - 123				04/10/20 07:33	04/11/20 00:21	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: LXBMP0012_20200406

Lab Sample ID: 440-264190-3

Date Collected: 04/06/20 08:50

Matrix: Water

Date Received: 04/07/20 14:30

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	76		29 - 147	04/10/20 07:33	04/11/20 00:21	1
13C-2,3,4,6,7,8-HxCDF	75		28 - 136	04/10/20 07:33	04/11/20 00:21	1
13C-1,2,3,4,6,7,8-HpCDD	62		23 - 140	04/10/20 07:33	04/11/20 00:21	1
13C-1,2,3,4,6,7,8-HpCDF	67		28 - 143	04/10/20 07:33	04/11/20 00:21	1
13C-1,2,3,4,7,8,9-HpCDF	68		26 - 138	04/10/20 07:33	04/11/20 00:21	1
13C-OCDD	57		17 - 157	04/10/20 07:33	04/11/20 00:21	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	75		35 - 197	04/10/20 07:33	04/11/20 00:21	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		04/08/20 09:20	04/08/20 16:52	1
Copper	2.0		2.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:52	1
Lead	2.0		1.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:52	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		04/08/20 15:02	04/08/20 19:01	1
Copper	1.1	J,DX	2.0	0.50	ug/L		04/08/20 15:02	04/08/20 19:01	1
Lead	ND		1.0	0.50	ug/L		04/08/20 15:02	04/08/20 19:01	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/08/20 11:23	04/08/20 18:43	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/07/20 19:51	04/07/20 22:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	37		3.3	1.7	mg/L			04/09/20 18:46	1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	51.99		0.01	0.01	%			04/16/20 16:11	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			04/16/20 16:11	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			04/16/20 16:11	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			04/16/20 16:11	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			04/16/20 16:11	1
Silt (0.00391 to 0.0625mm)	48.01		0.01	0.01	%			04/16/20 16:11	1
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%			04/16/20 16:11	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			04/16/20 16:11	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			04/16/20 16:11	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: EPSW002IE02_20200406

Lab Sample ID: 440-264190-4

Date Collected: 04/06/20 07:40

Matrix: Water

Date Received: 04/07/20 14:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	3.6		0.50	0.25	mg/L			04/16/20 12:33	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.000032	J,DX q	0.000011	0.000012	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,7,8-PeCDD	0.000024	J,DX q	0.000053	0.000010	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,7,8-PeCDF	0.000023	J,DX	0.000053	0.000006	ug/L		04/10/20 07:33	04/11/20 01:09	1
2,3,4,7,8-PeCDF	0.000019	J,DX q	0.000053	0.000007	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,4,7,8-HxCDD	0.000034	J,DX MB q	0.000053	0.000006	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,6,7,8-HxCDD	0.000027	J,DX	0.000053	0.000007	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,7,8,9-HxCDD	0.000021	J,DX MB q	0.000053	0.000006	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,4,7,8-HxCDF	0.000018	J,DX MB	0.000053	0.000004	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,6,7,8-HxCDF	0.000019	J,DX MB	0.000053	0.000004	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,7,8,9-HxCDF	0.000023	J,DX MB q	0.000053	0.000004	ug/L		04/10/20 07:33	04/11/20 01:09	1
2,3,4,6,7,8-HxCDF	0.000020	J,DX	0.000053	0.000004	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,4,6,7,8-HpCDD	0.000038	J,DX MB q	0.000053	0.000003	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,4,6,7,8-HpCDF	0.000027	J,DX MB	0.000053	0.000008	ug/L		04/10/20 07:33	04/11/20 01:09	1
1,2,3,4,7,8,9-HpCDF	0.000021	J,DX	0.000053	0.000008	ug/L		04/10/20 07:33	04/11/20 01:09	1
OCDD	0.000023	J,DX MB	0.00011	0.000009	ug/L		04/10/20 07:33	04/11/20 01:09	1
OCDF	0.000080	J,DX MB	0.00011	0.000012	ug/L		04/10/20 07:33	04/11/20 01:09	1
Total TCDD	0.000032	J,DX q	0.000011	0.000012	ug/L		04/10/20 07:33	04/11/20 01:09	1
Total TCDF	0.000011	J,DX	0.000011	0.000003	ug/L		04/10/20 07:33	04/11/20 01:09	1
Total PeCDD	0.000024	J,DX q	0.000053	0.000010	ug/L		04/10/20 07:33	04/11/20 01:09	1
Total PeCDF	0.000041	J,DX q	0.000053	0.000006	ug/L		04/10/20 07:33	04/11/20 01:09	1
Total HxCDD	0.000082	J,DX MB q	0.000053	0.000006	ug/L		04/10/20 07:33	04/11/20 01:09	1
Total HxCDF	0.000079	J,DX MB q	0.000053	0.000004	ug/L		04/10/20 07:33	04/11/20 01:09	1
Total HpCDD	0.000062	J,DX MB q	0.000053	0.000003	ug/L		04/10/20 07:33	04/11/20 01:09	1
Total HpCDF	0.000058	J,DX MB q	0.000053	0.000008	ug/L		04/10/20 07:33	04/11/20 01:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	69		25 - 164				04/10/20 07:33	04/11/20 01:09	1
13C-2,3,7,8-TCDF	76		24 - 169				04/10/20 07:33	04/11/20 01:09	1
13C-1,2,3,7,8-PeCDD	72		25 - 181				04/10/20 07:33	04/11/20 01:09	1
13C-1,2,3,7,8-PeCDF	76		24 - 185				04/10/20 07:33	04/11/20 01:09	1
13C-2,3,4,7,8-PeCDF	84		21 - 178				04/10/20 07:33	04/11/20 01:09	1
13C-1,2,3,4,7,8-HxCDD	78		32 - 141				04/10/20 07:33	04/11/20 01:09	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: EPSW002IE02_20200406

Lab Sample ID: 440-264190-4

Date Collected: 04/06/20 07:40

Matrix: Water

Date Received: 04/07/20 14:30

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,6,7,8-HxCDD	71		28 - 130	04/10/20 07:33	04/11/20 01:09	1
13C-1,2,3,4,7,8-HxCDF	86		26 - 152	04/10/20 07:33	04/11/20 01:09	1
13C-1,2,3,6,7,8-HxCDF	76		26 - 123	04/10/20 07:33	04/11/20 01:09	1
13C-1,2,3,7,8,9-HxCDF	81		29 - 147	04/10/20 07:33	04/11/20 01:09	1
13C-2,3,4,6,7,8-HxCDF	81		28 - 136	04/10/20 07:33	04/11/20 01:09	1
13C-1,2,3,4,6,7,8-HpCDD	72		23 - 140	04/10/20 07:33	04/11/20 01:09	1
13C-1,2,3,4,6,7,8-HpCDF	76		28 - 143	04/10/20 07:33	04/11/20 01:09	1
13C-1,2,3,4,7,8,9-HpCDF	81		26 - 138	04/10/20 07:33	04/11/20 01:09	1
13C-OCDD	67		17 - 157	04/10/20 07:33	04/11/20 01:09	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	76		35 - 197	04/10/20 07:33	04/11/20 01:09	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		0.000011	0.000010	ug/L		04/10/20 07:33	04/14/20 14:37	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C-2,3,7,8-TCDF	66		24 - 169	04/10/20 07:33	04/14/20 14:37	1			
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
37Cl4-2,3,7,8-TCDD	76		35 - 197	04/10/20 07:33	04/14/20 14:37	1			

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		04/08/20 09:20	04/08/20 16:42	1
Copper	2.5		2.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:42	1
Lead	0.67	J,DX	1.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:42	1
Selenium	ND		2.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:42	1
Zinc	15	J,DX	20	2.5	ug/L		04/08/20 09:20	04/08/20 16:42	1
Iron	930		20	8.0	ug/L		04/08/20 09:20	04/08/20 16:42	1
Arsenic	1.3		1.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:42	1
Manganese	16		1.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:42	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		04/09/20 09:10	04/09/20 15:30	1
Copper	1.5	J,DX	2.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:30	1
Lead	0.64	J,DX	1.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:30	1
Selenium	0.54	J,DX	2.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:30	1
Zinc	5.6	J,DX MB	20	2.5	ug/L		04/09/20 09:10	04/09/20 15:30	1
Iron	130		20	8.0	ug/L		04/09/20 09:10	04/09/20 15:30	1
Arsenic	0.98	J,DX	1.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:30	1
Manganese	3.7		1.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:30	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/08/20 11:23	04/08/20 18:45	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/07/20 19:51	04/07/20 22:54	1

Eurofins Calscience Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: EPSW002IE02_20200406

Lab Sample ID: 440-264190-4

Date Collected: 04/06/20 07:40

Matrix: Water

Date Received: 04/07/20 14:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	11		1.0	0.50	mg/L			04/09/20 18:46	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	0.414	U	0.773	0.774	3.00	1.36	pCi/L	04/20/20 09:20	04/24/20 04:25	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity - Dissolved

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	0.984	U	1.06	1.06	3.00	1.69	pCi/L	04/20/20 12:17	04/26/20 19:06	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

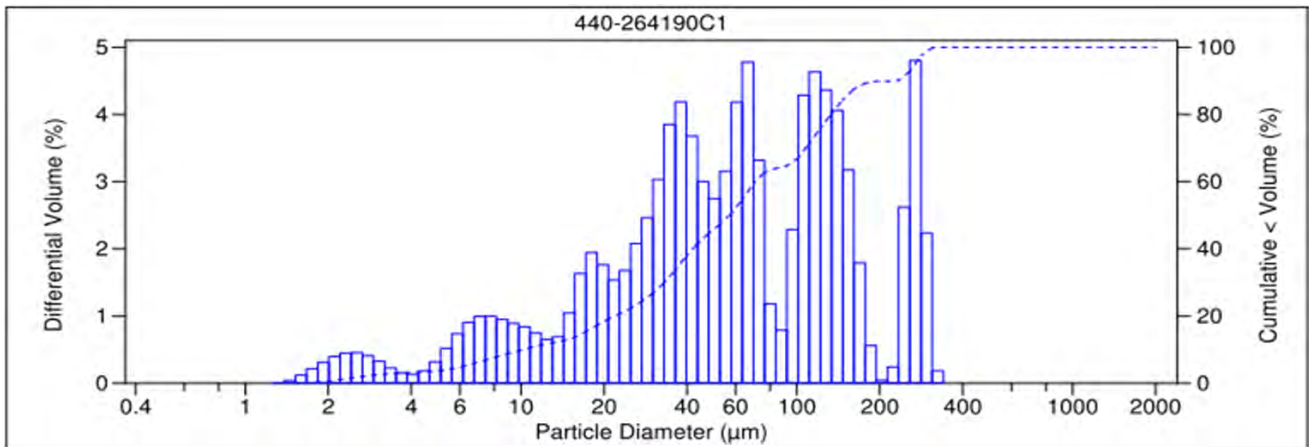
Haley & Aldrich, Inc.

Date Sampled: 04/06/20
 Date Received: 04/07/20
 Work Order No: 440-264190
 Date Analyzed: 03/04/20
 Method: ASTM D4464M

Project:

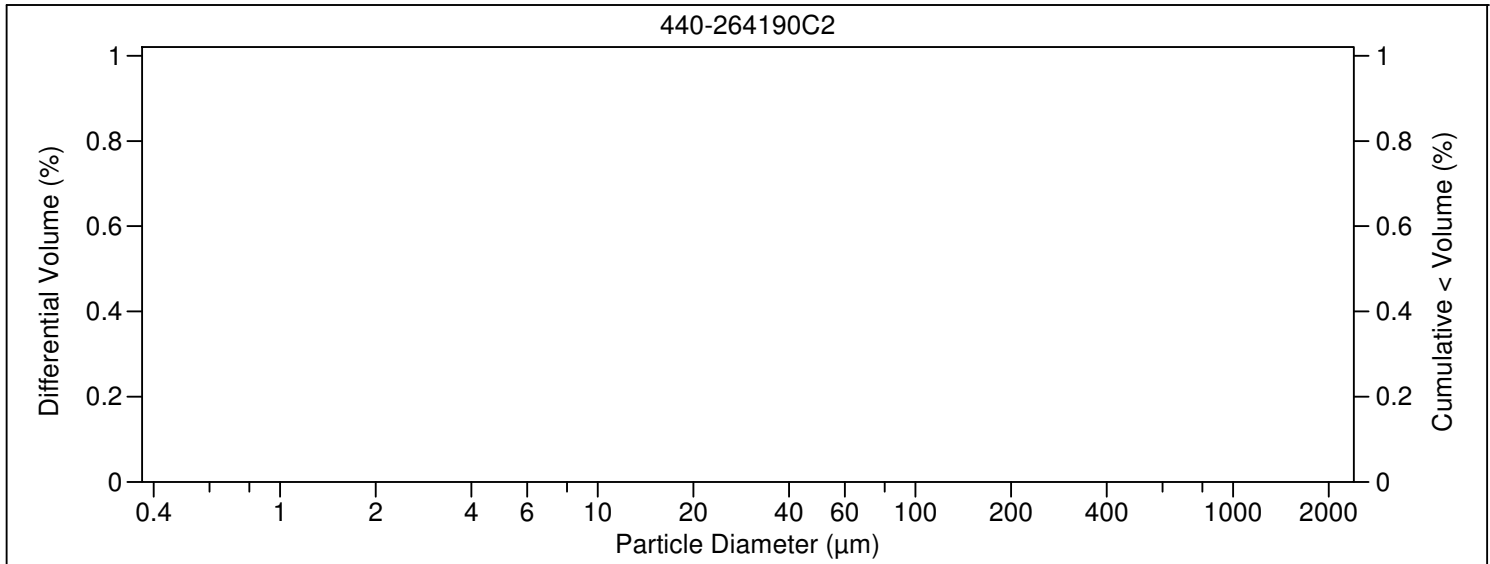
Sample ID	Depth ft	Description	Mean Grain Size mm
LXBMP0010_20200406		Very Fine Sand	0.083

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	8.02	14.90	23.11	50.84	3.12	53.96



V 3.0

File name:	C:\LS13320\440-264190C2_16 Apr 2020_16.01.36.\$ls		
	440-264190C2_16 Apr 2020_16.01.36.\$ls		
File ID:	440-264190C2		
Sample ID:	440-264190C2		
Operator:	1106		
Run number:	4		
Comment 1:	ASTM D4464M , LPSA 1		
Optical model:	Fraunhofer.rf780d		
Residual:	3.80%		
LS 13 320	Aqueous Liquid Module		
Start time:	15:59 16 Apr 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	0%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00



Volume Statistics (Arithmetic)		440-264190C2_16 Apr 2020_16.01.36.\$ls					
Calculations from 0.375 µm to 2000 µm							
Volume:	0%						
Mean:	0.000 µm	S.D.:	0 µm				
Median:	0.000 µm	Variance:	0 µm ²				
Mean/Median ratio:	0.000	Skewness:	0				
Mode:	0.000 µm	Kurtosis:	0				
d ₁₀ :	0.000 µm	d ₅₀ :	0.000 µm	d ₉₀ :	0.000 µm		
Folk and Ward Statistics (Phi)							
Mean:	0.00	Median:	0.00	Deviation:	0.00		
Skewness:	0.00	Kurtosis:	0.00				
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
0.000 µm	0.000 µm	0.000 µm	0.000 µm	0.000 µm	0.000 µm	0.000 µm	0.000 µm



Particle Diameter µm	440-264190C 2_16 Apr 2020_16.01 .36.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	0
250	0
500	0
1000	0
2000	0

440-264190C2_16 Apr 2020_16.01.36.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0		
2.660	0	176.9	0		
2.920	0	194.2	0		
3.206	0	213.2	0		
3.519	0	234.1	0		
3.863	0	256.9	0		
4.241	0	282.1	0		
4.656	0	309.6	0		
5.111	0	339.9	0		
5.611	0	373.1	0		
6.159	0	409.6	0		
6.761	0	449.7	0		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

- 1
- 2
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- 14
- 15

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

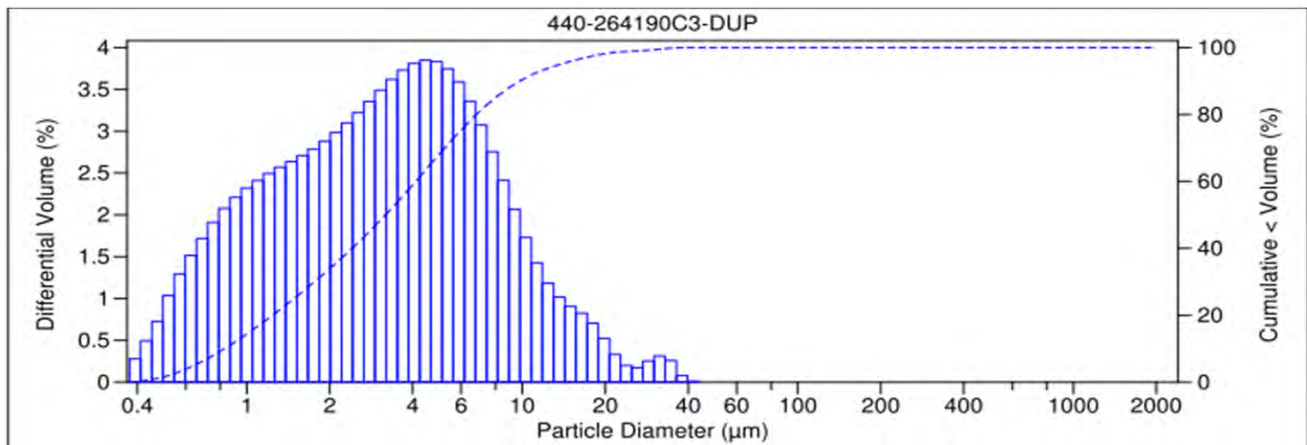
Haley & Aldrich, Inc.

Date Sampled: 04/06/20
 Date Received: 04/07/20
 Work Order No: 440-264190
 Date Analyzed: 03/04/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
LXBMP0012_20200406		Silt	0.005

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	0.00	41.97	58.03	100.00



V 3.0

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

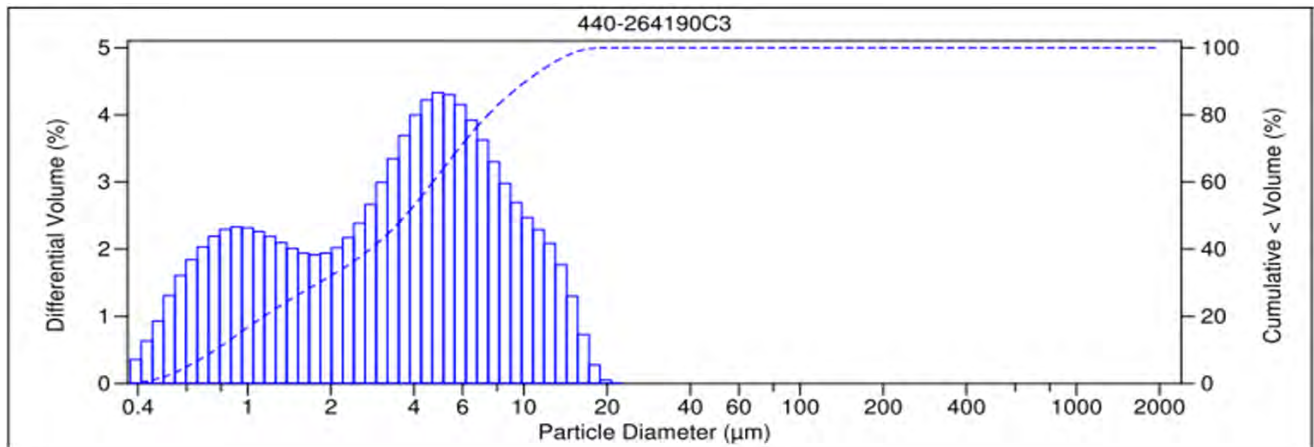
Haley & Aldrich, Inc.

Date Sampled: 04/06/20
 Date Received: 04/07/20
 Work Order No: 440-264190
 Date Analyzed: 03/04/20
 Method: ASTM D4464M

Project:

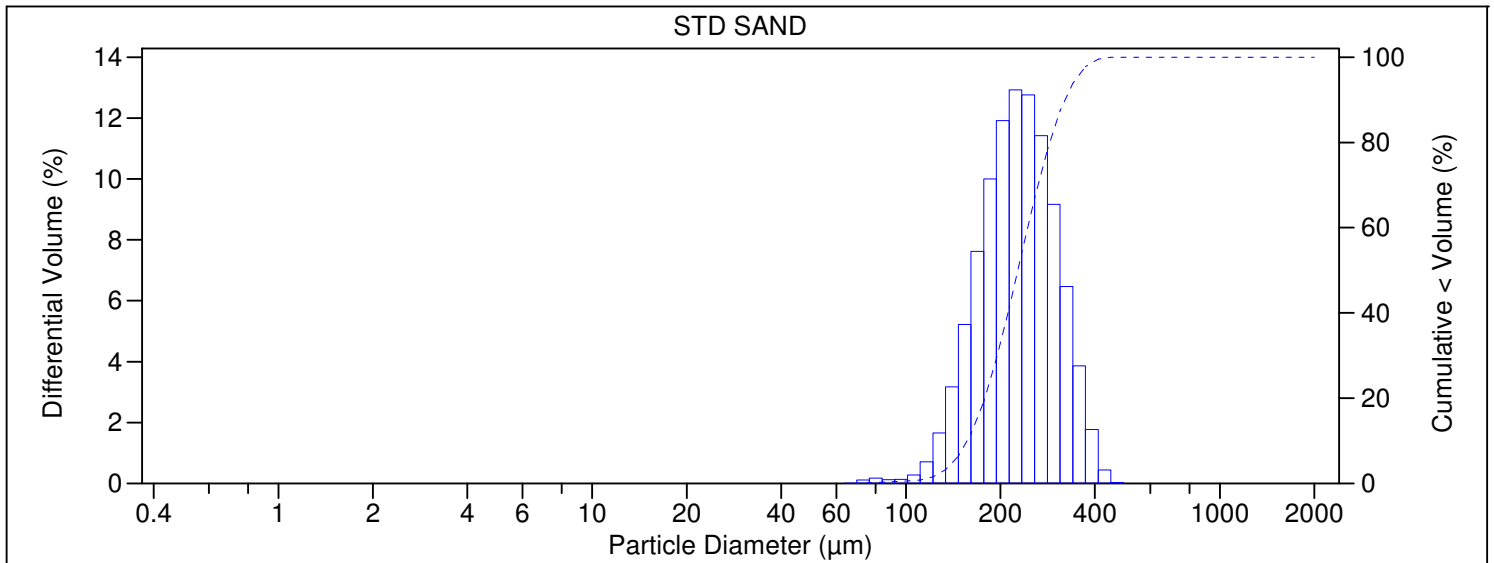
Sample ID	Depth ft	Description	Mean Grain Size mm
LXBMP0012_20200406		Silt	0.005

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	0.00	48.01	51.99	100.00



V 3.0

File name:	C:\LS13320\STD SAND_16 Apr 2020_16.26.59.\$ls		
	STD SAND_16 Apr 2020_16.26.59.\$ls		
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	1106		
Run number:	6		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602396 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	2.21%		
LS 13 320	Aqueous Liquid Module		
Start time:	16:25 16 Apr 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00


Volume Statistics (Arithmetic) STD SAND_16 Apr 2020_16.26.59.\$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%		
Mean:	233.6 µm	S.D.:	63.16 µm
Median:	227.5 µm	Variance:	3989 µm ²
Mean/Median ratio:	1.027	Skewness:	0.432 Right skewed
Mode:	223.4 µm	Kurtosis:	-0.084 Platykurtic

d ₁₀ :	156.8 µm	d ₅₀ :	227.5 µm	d ₉₀ :	321.7 µm
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Folk and Ward Statistics (Phi)

Mean:	2.14	Median:	2.14	Deviation:	0.40
Skewness:	0.04	Kurtosis:	0.96		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
141.1 µm	170.3 µm	186.9 µm	211.4 µm	227.5 µm	274.9 µm	299.3 µm	349.4 µm

Particle Diameter µm	STD SAND _16 Apr 2020_16.26 .59.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.00
125	61.0
250	37.0
500	0
1000	0
2000	0

STD SAND_16 Apr 2020_16.26.59.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.012		
1.047	0	69.62	0.12		
1.149	0	76.43	0.18		
1.261	0	83.90	0.13		
1.385	0	92.10	0.13		
1.520	0	101.1	0.27		
1.669	0	111.0	0.72		
1.832	0	121.8	1.66		
2.011	0	133.7	3.17		
2.208	0	146.8	5.22		
2.423	0	161.2	7.62		
2.660	0	176.9	10.0		
2.920	0	194.2	11.9		
3.206	0	213.2	12.9		
3.519	0	234.1	12.8		
3.863	0	256.9	11.4		
4.241	0	282.1	9.17		
4.656	0	309.6	6.47		
5.111	0	339.9	3.87		
5.611	0	373.1	1.77		
6.159	0	409.6	0.44		
6.761	0	449.7	0.027		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		



Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
900.0	Gross Alpha and Gross Beta Radioactivity	EPA	TAL SL
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	EPA	TAL SAC
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV
Evaporation	Preparation, Evaporation	None	TAL SL
FILTRATION	Sample Filtration	None	TAL IRV
Filtration	Sample Filtration	None	TAL SL

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: LXBMP0010_20200406

Lab Sample ID: 440-264190-1

Date Collected: 04/06/20 08:30

Matrix: Water

Date Received: 04/07/20 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			967.2 mL	20 uL	371493	04/10/20 07:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			371730	04/10/20 22:44	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			100 mL	100 mL	604093	04/07/20 18:52	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	604252	04/08/20 15:02	M1G	TAL IRV
Dissolved	Analysis	200.8		1			604292	04/08/20 18:57	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604189	04/08/20 09:20	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			604275	04/08/20 16:48	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			80 mL	80 mL	604089	04/07/20 18:34	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	604095	04/07/20 19:51	DB	TAL IRV
Dissolved	Analysis	245.1		1			604111	04/07/20 22:48	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	604216	04/08/20 11:23	MEM	TAL IRV
Total/NA	Analysis	245.1		1			604378	04/08/20 18:38	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	604465	04/09/20 18:46	KL	TAL IRV
Total/NA	Analysis	D4464		1			63641	04/16/20 15:51	C4LT	ECL 1

Client Sample ID: LXBMP0011_20200406

Lab Sample ID: 440-264190-2

Date Collected: 04/06/20 08:40

Matrix: Water

Date Received: 04/07/20 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			918.6 mL	20 uL	371493	04/10/20 07:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			371730	04/10/20 23:32	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			100 mL	100 mL	604093	04/07/20 18:52	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	604252	04/08/20 15:02	M1G	TAL IRV
Dissolved	Analysis	200.8		1			604292	04/08/20 18:59	P1R	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604189	04/08/20 09:20	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			604275	04/08/20 16:50	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			80 mL	80 mL	604089	04/07/20 18:34	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	604095	04/07/20 19:51	DB	TAL IRV
Dissolved	Analysis	245.1		1			604111	04/07/20 22:50	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	604216	04/08/20 11:23	MEM	TAL IRV
Total/NA	Analysis	245.1		1			604378	04/08/20 18:40	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	604465	04/09/20 18:46	KL	TAL IRV
Total/NA	Analysis	D4464		1			63641	04/16/20 16:01	C4LT	ECL 1

Client Sample ID: LXBMP0012_20200406

Lab Sample ID: 440-264190-3

Date Collected: 04/06/20 08:50

Matrix: Water

Date Received: 04/07/20 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			913.6 mL	20 uL	371493	04/10/20 07:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			371730	04/11/20 00:21	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			100 mL	100 mL	604093	04/07/20 18:52	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	604252	04/08/20 15:02	M1G	TAL IRV
Dissolved	Analysis	200.8		1			604292	04/08/20 19:01	P1R	TAL IRV

Eurofins Calscience Irvine

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Client Sample ID: LXBMP0012_20200406

Lab Sample ID: 440-264190-3

Date Collected: 04/06/20 08:50

Matrix: Water

Date Received: 04/07/20 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			25 mL	25 mL	604189	04/08/20 09:20	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			604275	04/08/20 16:52	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			80 mL	80 mL	604089	04/07/20 18:34	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	604095	04/07/20 19:51	DB	TAL IRV
Dissolved	Analysis	245.1		1			604111	04/07/20 22:52	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	604216	04/08/20 11:23	MEM	TAL IRV
Total/NA	Analysis	245.1		1			604378	04/08/20 18:43	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	300 mL	1000 mL	604465	04/09/20 18:46	KL	TAL IRV
Total/NA	Analysis	D4464		1			63641	04/16/20 16:11	C4LT	ECL 1

Client Sample ID: EPSW002IE02_20200406

Lab Sample ID: 440-264190-4

Date Collected: 04/06/20 07:40

Matrix: Water

Date Received: 04/07/20 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			605256	04/16/20 12:33	NTN	TAL IRV
Total/NA	Prep	1613B	RA		940.8 mL	20 uL	371493	04/10/20 07:33	RDR	TAL SAC
Total/NA	Analysis	1613B	RA	1			372444	04/14/20 14:37	ALM	TAL SAC
Total/NA	Prep	1613B			940.8 mL	20 uL	371493	04/10/20 07:33	RDR	TAL SAC
Total/NA	Analysis	1613B		1			371730	04/11/20 01:09	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			150 mL	150 mL	604093	04/07/20 18:52	M1G	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	604254	04/09/20 09:10	M1G	TAL IRV
Dissolved	Analysis	200.8		1			604443	04/09/20 15:30	MQP	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	604189	04/08/20 09:20	EP	TAL IRV
Total Recoverable	Analysis	200.8		1			604275	04/08/20 16:42	P1R	TAL IRV
Dissolved	Filtration	FILTRATION			80 mL	80 mL	604089	04/07/20 18:34	M1G	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	604095	04/07/20 19:51	DB	TAL IRV
Dissolved	Analysis	245.1		1			604111	04/07/20 22:54	MEM	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	604216	04/08/20 11:23	MEM	TAL IRV
Total/NA	Analysis	245.1		1			604378	04/08/20 18:45	MEM	TAL IRV
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	604465	04/09/20 18:46	KL	TAL IRV
Dissolved	Filtration	Filtration			1.0 mL	1.0 mL	467452	04/12/20 16:36	CLP	TAL SL
Dissolved	Prep	Evaporation			156.23 mL	1.0 g	468140	04/20/20 12:17	RJD	TAL SL
Dissolved	Analysis	900.0		1			468939	04/26/20 19:06	KLS	TAL SL
Total/NA	Prep	Evaporation			200.42 mL	1.0 g	468136	04/20/20 09:20	RJD	TAL SL
Total/NA	Analysis	900.0		1			468726	04/24/20 04:25	KLS	TAL SL

Laboratory References:

- ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494
- TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022
- TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
- TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-605256/6
Matrix: Water
Analysis Batch: 605256

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.25	mg/L			04/16/20 06:07	1

Lab Sample ID: LCS 440-605256/5
Matrix: Water
Analysis Batch: 605256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	5.05		mg/L		101	90 - 110

Lab Sample ID: 440-264190-4 MS
Matrix: Water
Analysis Batch: 605256

Client Sample ID: EPSW002IE02_20200406
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	3.6		5.00	8.75		mg/L		103	80 - 120

Lab Sample ID: 440-264190-4 MSD
Matrix: Water
Analysis Batch: 605256

Client Sample ID: EPSW002IE02_20200406
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	3.6		5.00	8.98		mg/L		108	80 - 120	3	20

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-371493/1-A
Matrix: Water
Analysis Batch: 371730

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371493

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000016	ug/L		04/10/20 07:33	04/10/20 19:32	1
2,3,7,8-TCDF	ND		0.000010	0.0000003	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000009	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000007	ug/L		04/10/20 07:33	04/10/20 19:32	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000007	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,4,7,8-HxCDD	0.00000284	J,DX	0.000050	0.0000008	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,6,7,8-HxCDD	ND		0.000050	0.0000009	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,7,8,9-HxCDD	0.00000216	J,DX q	0.000050	0.0000007	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,4,7,8-HxCDF	0.00000110	J,DX q	0.000050	0.0000005	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,6,7,8-HxCDF	0.00000131	J,DX	0.000050	0.0000005	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,7,8,9-HxCDF	0.00000159	J,DX q	0.000050	0.0000004	ug/L		04/10/20 07:33	04/10/20 19:32	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-371493/1-A
Matrix: Water
Analysis Batch: 371730

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371493

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6,7,8-HxCDF	ND		0.000050	0.0000004	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,4,6,7,8-HpCDD	0.00000303	J,DX	0.000050	0.0000003	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,4,6,7,8-HpCDF	0.00000362	J,DX	0.000050	0.0000009	ug/L		04/10/20 07:33	04/10/20 19:32	1
1,2,3,4,7,8,9-HpCDF	ND		0.000050	0.0000009	ug/L		04/10/20 07:33	04/10/20 19:32	1
OCDD	0.0000240	J,DX	0.00010	0.0000013	ug/L		04/10/20 07:33	04/10/20 19:32	1
OCDF	0.00000970	J,DX	0.00010	0.0000013	ug/L		04/10/20 07:33	04/10/20 19:32	1
Total TCDD	ND		0.000010	0.0000016	ug/L		04/10/20 07:33	04/10/20 19:32	1
Total TCDF	ND		0.000010	0.0000003	ug/L		04/10/20 07:33	04/10/20 19:32	1
Total PeCDD	ND		0.000050	0.0000009	ug/L		04/10/20 07:33	04/10/20 19:32	1
Total PeCDF	ND		0.000050	0.0000007	ug/L		04/10/20 07:33	04/10/20 19:32	1
Total HxCDD	0.00000500	J,DX q	0.000050	0.0000007	ug/L		04/10/20 07:33	04/10/20 19:32	1
Total HxCDF	0.00000399	J,DX q	0.000050	0.0000004	ug/L		04/10/20 07:33	04/10/20 19:32	1
Total HpCDD	0.00000510	J,DX	0.000050	0.0000003	ug/L		04/10/20 07:33	04/10/20 19:32	1
Total HpCDF	0.00000362	J,DX	0.000050	0.0000009	ug/L		04/10/20 07:33	04/10/20 19:32	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	71		25 - 164	04/10/20 07:33	04/10/20 19:32	1
13C-2,3,7,8-TCDF	83		24 - 169	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,7,8-PeCDD	70		25 - 181	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,7,8-PeCDF	73		24 - 185	04/10/20 07:33	04/10/20 19:32	1
13C-2,3,4,7,8-PeCDF	77		21 - 178	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,4,7,8-HxCDD	76		32 - 141	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,6,7,8-HxCDD	68		28 - 130	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,4,7,8-HxCDF	81		26 - 152	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,6,7,8-HxCDF	75		26 - 123	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,7,8,9-HxCDF	80		29 - 147	04/10/20 07:33	04/10/20 19:32	1
13C-2,3,4,6,7,8-HxCDF	83		28 - 136	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,4,6,7,8-HpCDD	71		23 - 140	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,4,6,7,8-HpCDF	71		28 - 143	04/10/20 07:33	04/10/20 19:32	1
13C-1,2,3,4,7,8,9-HpCDF	82		26 - 138	04/10/20 07:33	04/10/20 19:32	1
13C-OCDD	64		17 - 157	04/10/20 07:33	04/10/20 19:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	04/10/20 07:33	04/10/20 19:32	1

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-371493/2-A
Matrix: Water
Analysis Batch: 371730

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371493

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	0.000200	0.000232		ug/L		116	67 - 158
2,3,7,8-TCDF	0.000200	0.000266		ug/L		133	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.00118		ug/L		118	70 - 142
1,2,3,7,8-PeCDF	0.00100	0.00126		ug/L		126	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.00120		ug/L		120	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.00107	MB	ug/L		107	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.00118		ug/L		118	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.00112	MB	ug/L		112	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.00113	MB	ug/L		113	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.00121	MB	ug/L		121	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.00123	MB	ug/L		123	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.00120		ug/L		120	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.00107	MB	ug/L		107	70 - 140
1,2,3,4,6,7,8-HpCDF	0.00100	0.00111	MB	ug/L		111	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.00104		ug/L		104	78 - 138
OCDD	0.00200	0.00222	MB	ug/L		111	78 - 144
OCDF	0.00200	0.00262	MB	ug/L		131	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	68		20 - 175
13C-2,3,7,8-TCDF	77		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	70		21 - 192
13C-2,3,4,7,8-PeCDF	75		13 - 328
13C-1,2,3,4,7,8-HxCDD	71		21 - 193
13C-1,2,3,6,7,8-HxCDD	63		25 - 163
13C-1,2,3,4,7,8-HxCDF	71		19 - 202
13C-1,2,3,6,7,8-HxCDF	66		21 - 159
13C-1,2,3,7,8,9-HxCDF	74		17 - 205
13C-2,3,4,6,7,8-HxCDF	74		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	61		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	64		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	69		20 - 186
13C-OCDD	59		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	78		31 - 191

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-604189/1-A
Matrix: Water
Analysis Batch: 604275

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 604189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.25	ug/L		04/08/20 09:20	04/08/20 16:38	1
Copper	ND		2.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:38	1
Lead	ND		1.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:38	1

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 440-604189/1-A
Matrix: Water
Analysis Batch: 604275

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 604189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		2.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:38	1
Zinc	ND		20	2.5	ug/L		04/08/20 09:20	04/08/20 16:38	1
Iron	ND		20	8.0	ug/L		04/08/20 09:20	04/08/20 16:38	1
Arsenic	ND		1.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:38	1
Manganese	ND		1.0	0.50	ug/L		04/08/20 09:20	04/08/20 16:38	1

Lab Sample ID: LCS 440-604189/2-A
Matrix: Water
Analysis Batch: 604275

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 604189

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	80.0	86.5		ug/L		108	85 - 115
Cadmium	80.0	78.1		ug/L		98	85 - 115
Copper	80.0	78.3		ug/L		98	85 - 115
Lead	80.0	77.6		ug/L		97	85 - 115
Antimony	80.0	80.1		ug/L		100	85 - 115
Selenium	80.0	75.8		ug/L		95	85 - 115
Thallium	80.0	72.9		ug/L		91	85 - 115
Zinc	80.0	80.2		ug/L		100	85 - 115
Iron	800	783		ug/L		98	85 - 115
Arsenic	80.0	76.8		ug/L		96	85 - 115
Manganese	80.0	77.3		ug/L		97	85 - 115

Lab Sample ID: 440-264190-4 MS
Matrix: Water
Analysis Batch: 604275

Client Sample ID: EPSW002IE02_20200406
Prep Type: Total Recoverable
Prep Batch: 604189

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		80.0	89.0		ug/L		111	70 - 130
Cadmium	ND		80.0	81.1		ug/L		101	70 - 130
Copper	2.5		80.0	83.8		ug/L		102	70 - 130
Lead	0.67	J,DX	80.0	80.7		ug/L		100	70 - 130
Antimony	ND		80.0	81.8		ug/L		102	70 - 130
Selenium	ND		80.0	75.4		ug/L		94	70 - 130
Thallium	ND		80.0	52.1	LN	ug/L		65	70 - 130
Zinc	15	J,DX	80.0	88.7		ug/L		92	70 - 130
Iron	930		800	1840		ug/L		113	70 - 130
Arsenic	1.3		80.0	79.1		ug/L		97	70 - 130
Manganese	16		80.0	95.0		ug/L		99	70 - 130

Lab Sample ID: 440-264190-4 MSD
Matrix: Water
Analysis Batch: 604275

Client Sample ID: EPSW002IE02_20200406
Prep Type: Total Recoverable
Prep Batch: 604189

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		80.0	86.4		ug/L		108	70 - 130	3	20
Cadmium	ND		80.0	79.2		ug/L		99	70 - 130	2	20
Copper	2.5		80.0	82.1		ug/L		99	70 - 130	2	20
Lead	0.67	J,DX	80.0	78.9		ug/L		98	70 - 130	2	20

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-264190-4 MSD
Matrix: Water
Analysis Batch: 604275

Client Sample ID: EPSW002IE02_20200406
Prep Type: Total Recoverable
Prep Batch: 604189

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Antimony	ND		80.0	80.5		ug/L		101	70 - 130	2	20
Selenium	ND		80.0	76.8		ug/L		96	70 - 130	2	20
Thallium	ND		80.0	50.0	LN	ug/L		62	70 - 130	4	20
Zinc	15	J,DX	80.0	117	BA	ug/L		128	70 - 130	28	20
Iron	930		800	1840		ug/L		113	70 - 130	0	20
Arsenic	1.3		80.0	78.4		ug/L		96	70 - 130	1	20
Manganese	16		80.0	93.7		ug/L		97	70 - 130	1	20

Lab Sample ID: MB 440-604093/1-C
Matrix: Water
Analysis Batch: 604292

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 604252

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		1.0	0.25	ug/L		04/08/20 15:02	04/08/20 18:46	1
Copper	ND		2.0	0.50	ug/L		04/08/20 15:02	04/08/20 18:46	1
Lead	ND		1.0	0.50	ug/L		04/08/20 15:02	04/08/20 18:46	1

Lab Sample ID: LCS 440-604093/2-C
Matrix: Water
Analysis Batch: 604292

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 604252

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Cadmium	80.0	78.9		ug/L		99	85 - 115
Copper	80.0	77.7		ug/L		97	85 - 115
Lead	80.0	78.3		ug/L		98	85 - 115

Lab Sample ID: 440-264162-A-3-H MS
Matrix: Water
Analysis Batch: 604292

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 604252

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Cadmium	ND		80.0	75.9		ug/L		95	70 - 130
Copper	1.0	J,DX	80.0	75.4		ug/L		93	70 - 130
Lead	ND		80.0	74.5		ug/L		93	70 - 130

Lab Sample ID: 440-264162-A-3-I MSD
Matrix: Water
Analysis Batch: 604292

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 604252

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Cadmium	ND		80.0	77.2		ug/L		97	70 - 130	2	20
Copper	1.0	J,DX	80.0	77.4		ug/L		95	70 - 130	3	20
Lead	ND		80.0	76.4		ug/L		95	70 - 130	3	20

Lab Sample ID: MB 440-604093/1-D
Matrix: Water
Analysis Batch: 604443

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 604254

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		1.0	0.25	ug/L		04/09/20 09:10	04/09/20 15:24	1

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 440-604093/1-D
Matrix: Water
Analysis Batch: 604443

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 604254

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:24	1
Lead	ND		1.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:24	1
Selenium	ND		2.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:24	1
Zinc	2.69	J,DX	20	2.5	ug/L		04/09/20 09:10	04/09/20 15:24	1
Iron	ND		20	8.0	ug/L		04/09/20 09:10	04/09/20 15:24	1
Arsenic	ND		1.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:24	1
Manganese	ND		1.0	0.50	ug/L		04/09/20 09:10	04/09/20 15:24	1

Lab Sample ID: LCS 440-604093/2-D
Matrix: Water
Analysis Batch: 604443

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 604254

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	80.0	86.4		ug/L		108	85 - 115
Cadmium	80.0	78.7		ug/L		98	85 - 115
Copper	80.0	80.0		ug/L		100	85 - 115
Lead	80.0	79.8		ug/L		100	85 - 115
Antimony	80.0	80.7		ug/L		101	85 - 115
Selenium	80.0	78.4		ug/L		98	85 - 115
Thallium	80.0	76.7		ug/L		96	85 - 115
Zinc	80.0	87.3		ug/L		109	85 - 115
Iron	800	798		ug/L		100	85 - 115
Arsenic	80.0	78.2		ug/L		98	85 - 115
Manganese	80.0	79.0		ug/L		99	85 - 115

Lab Sample ID: 440-264190-4 MS
Matrix: Water
Analysis Batch: 604443

Client Sample ID: EPSW002IE02_20200406
Prep Type: Dissolved
Prep Batch: 604254

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		80.0	90.5		ug/L		113	70 - 130
Cadmium	ND		80.0	82.8		ug/L		104	70 - 130
Copper	1.5	J,DX	80.0	85.6		ug/L		105	70 - 130
Lead	0.64	J,DX	80.0	83.4		ug/L		103	70 - 130
Antimony	ND		80.0	84.8		ug/L		106	70 - 130
Selenium	0.54	J,DX	80.0	80.2		ug/L		100	70 - 130
Thallium	ND		80.0	80.5		ug/L		101	70 - 130
Zinc	5.6	J,DX MB	80.0	85.4		ug/L		100	70 - 130
Iron	130		800	950		ug/L		102	70 - 130
Arsenic	0.98	J,DX	80.0	82.0		ug/L		101	70 - 130
Manganese	3.7		80.0	85.6		ug/L		102	70 - 130

Lab Sample ID: 440-264190-4 MSD
Matrix: Water
Analysis Batch: 604443

Client Sample ID: EPSW002IE02_20200406
Prep Type: Dissolved
Prep Batch: 604254

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		80.0	91.0		ug/L		114	70 - 130	1	20
Cadmium	ND		80.0	83.2		ug/L		104	70 - 130	0	20

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-264190-4 MSD
 Matrix: Water
 Analysis Batch: 604443

Client Sample ID: EPSW002IE02_20200406
 Prep Type: Dissolved
 Prep Batch: 604254

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Copper	1.5	J,DX	80.0	86.9		ug/L		107	70 - 130	1	20
Lead	0.64	J,DX	80.0	83.8		ug/L		104	70 - 130	0	20
Antimony	ND		80.0	85.4		ug/L		107	70 - 130	1	20
Selenium	0.54	J,DX	80.0	81.4		ug/L		101	70 - 130	1	20
Thallium	ND		80.0	81.2		ug/L		102	70 - 130	1	20
Zinc	5.6	J,DX MB	80.0	86.6		ug/L		101	70 - 130	1	20
Iron	130		800	974		ug/L		105	70 - 130	3	20
Arsenic	0.98	J,DX	80.0	83.5		ug/L		103	70 - 130	2	20
Manganese	3.7		80.0	86.4		ug/L		103	70 - 130	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-604216/1-A
 Matrix: Water
 Analysis Batch: 604378

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 604216

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.20	0.10	ug/L		04/08/20 11:23	04/08/20 17:57	1

Lab Sample ID: LCS 440-604216/2-A
 Matrix: Water
 Analysis Batch: 604378

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 604216

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
Mercury	4.00	3.90		ug/L		97	85 - 115

Lab Sample ID: 440-264210-A-1-B MS
 Matrix: Water
 Analysis Batch: 604378

Client Sample ID: Matrix Spike
 Prep Type: Total/NA
 Prep Batch: 604216

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limit
	Result	Qualifier		Result	Qualifier				Limits	
Mercury	ND		4.00	3.56		ug/L		89	75 - 125	

Lab Sample ID: 440-264210-A-1-C MSD
 Matrix: Water
 Analysis Batch: 604378

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA
 Prep Batch: 604216

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Mercury	ND		4.00	3.64		ug/L		91	75 - 125	2	20

Lab Sample ID: MB 440-604089/1-B
 Matrix: Water
 Analysis Batch: 604111

Client Sample ID: Method Blank
 Prep Type: Dissolved
 Prep Batch: 604095

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.20	0.10	ug/L		04/07/20 19:51	04/07/20 22:35	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 440-604089/2-B
Matrix: Water
Analysis Batch: 604111

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 604095
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	4.00	3.99		ug/L		100	85 - 115

Lab Sample ID: 440-264162-B-3-E MS
Matrix: Water
Analysis Batch: 604111

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 604095
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		4.00	4.09		ug/L		102	75 - 125

Lab Sample ID: 440-264162-B-3-F MSD
Matrix: Water
Analysis Batch: 604111

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 604095
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		4.00	4.10		ug/L		103	75 - 125	0	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-604465/1
Matrix: Water
Analysis Batch: 604465

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			04/09/20 18:46	1

Lab Sample ID: LCS 440-604465/2
Matrix: Water
Analysis Batch: 604465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Suspended Solids	1000	987		mg/L		99	85 - 115

Lab Sample ID: 440-264358-A-1 DU
Matrix: Water
Analysis Batch: 604465

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	55		51.5		mg/L		6	10

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Lab Sample ID: 440-264190-3 DU
Matrix: Water
Analysis Batch: 63641

Client Sample ID: LXBMP0012_20200406
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Clay(less than 0.00391 mm)	51.99		58.03		%		11	20
Coarse Sand (0.5mm to 1mm)	ND		ND		%		NC	20
Fine Sand (0.125 to 0.25mm)	ND		ND		%		NC	20
Gravel (greater than 2 mm)	ND		ND		%		NC	20

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QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering) (Continued)

Lab Sample ID: 440-264190-3 DU
Matrix: Water
Analysis Batch: 63641

Client Sample ID: LXBMP0012_20200406
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Result	Qualifier					Limit
Medium Sand (0.25 to 0.5 mm)	ND		ND		%		NC	20
Silt (0.00391 to 0.0625mm)	48.01		41.97		%		13	20
Total Silt and Clay (0 to 0.0626mm)	100.00		100.00		%		0	20
Very Coarse Sand (1 to 2mm)	ND		ND		%		NC	20
Very Fine Sand (0.0625 to 0.125 mm)	ND		ND		%		NC	20

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: MB 160-468136/1-A
Matrix: Water
Analysis Batch: 468726

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468136

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	-0.2223	U	0.373	0.374	3.00	0.910	pCi/L	04/20/20 09:20	04/24/20 04:25	1

Lab Sample ID: LCS 160-468136/2-A
Matrix: Water
Analysis Batch: 468726

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468136

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Gross Alpha	49.6	44.64		6.82	3.00	1.74	pCi/L	90	75 - 125

Lab Sample ID: 440-264162-K-1-O MS
Matrix: Water
Analysis Batch: 468726

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 468136

Analyte	Sample	Sample	Spike	MS	MS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	Result	Qual	Added	Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	1.55	U G	92.5	80.08		13.2	3.00	6.01	pCi/L	85	60 - 140

Lab Sample ID: 440-264162-K-1-P MSD
Matrix: Water
Analysis Batch: 468726

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 468136

Analyte	Sample	Sample	Spike	MSD	MSD	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
	Result	Qual	Added	Result	Qual	Uncert. (2σ+/-)							
Gross Alpha	1.55	U G	92.5	61.31		10.6	3.00	4.10	pCi/L	65	60 - 140	0.79	1

Lab Sample ID: 440-264162-K-1-S DU
Matrix: Water
Analysis Batch: 468726

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 468136

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Gross Alpha	1.55	U G	1.240	U G	2.61	3.00	4.64	pCi/L	0.06	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity (Continued)

Lab Sample ID: MB 160-468140/1-A
Matrix: Water
Analysis Batch: 468726

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468140

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Gross Alpha	-0.01284	U	0.563	0.563	3.00	1.12	pCi/L	04/20/20 09:40	04/24/20 07:53	1

Lab Sample ID: LCS 160-468140/2-A
Matrix: Water
Analysis Batch: 468726

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468140

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits

Lab Sample ID: 440-264451-B-4-B MS
Matrix: Water
Analysis Batch: 468726

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 468140

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits

Lab Sample ID: 440-264451-B-4-D DU
Matrix: Water
Analysis Batch: 468726

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 468140

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

HPLC/IC

Analysis Batch: 605256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-4	EPSW002IE02_20200406	Total/NA	Water	300.0	
MB 440-605256/6	Method Blank	Total/NA	Water	300.0	
LCS 440-605256/5	Lab Control Sample	Total/NA	Water	300.0	
440-264190-4 MS	EPSW002IE02_20200406	Total/NA	Water	300.0	
440-264190-4 MSD	EPSW002IE02_20200406	Total/NA	Water	300.0	

Specialty Organics

Prep Batch: 371493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Total/NA	Water	1613B	
440-264190-2	LXBMP0011_20200406	Total/NA	Water	1613B	
440-264190-3	LXBMP0012_20200406	Total/NA	Water	1613B	
440-264190-4 - RA	EPSW002IE02_20200406	Total/NA	Water	1613B	
440-264190-4	EPSW002IE02_20200406	Total/NA	Water	1613B	
MB 320-371493/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-371493/2-A	Lab Control Sample	Total/NA	Water	1613B	

Analysis Batch: 371730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Total/NA	Water	1613B	371493
440-264190-2	LXBMP0011_20200406	Total/NA	Water	1613B	371493
440-264190-3	LXBMP0012_20200406	Total/NA	Water	1613B	371493
440-264190-4	EPSW002IE02_20200406	Total/NA	Water	1613B	371493
MB 320-371493/1-A	Method Blank	Total/NA	Water	1613B	371493
LCS 320-371493/2-A	Lab Control Sample	Total/NA	Water	1613B	371493

Analysis Batch: 372444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-4 - RA	EPSW002IE02_20200406	Total/NA	Water	1613B	371493

Metals

Filtration Batch: 604089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Dissolved	Water	FILTRATION	
440-264190-2	LXBMP0011_20200406	Dissolved	Water	FILTRATION	
440-264190-3	LXBMP0012_20200406	Dissolved	Water	FILTRATION	
440-264190-4	EPSW002IE02_20200406	Dissolved	Water	FILTRATION	
MB 440-604089/1-B	Method Blank	Dissolved	Water	FILTRATION	
LCS 440-604089/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
440-264162-B-3-E MS	Matrix Spike	Dissolved	Water	FILTRATION	
440-264162-B-3-F MSD	Matrix Spike Duplicate	Dissolved	Water	FILTRATION	

Filtration Batch: 604093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Dissolved	Water	FILTRATION	
440-264190-2	LXBMP0011_20200406	Dissolved	Water	FILTRATION	
440-264190-3	LXBMP0012_20200406	Dissolved	Water	FILTRATION	
440-264190-4	EPSW002IE02_20200406	Dissolved	Water	FILTRATION	
MB 440-604093/1-C	Method Blank	Dissolved	Water	FILTRATION	
MB 440-604093/1-D	Method Blank	Dissolved	Water	FILTRATION	

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QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Metals (Continued)

Filtration Batch: 604093 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-604093/2-C	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 440-604093/2-D	Lab Control Sample	Dissolved	Water	FILTRATION	
440-264162-A-3-H MS	Matrix Spike	Dissolved	Water	FILTRATION	
440-264162-A-3-I MSD	Matrix Spike Duplicate	Dissolved	Water	FILTRATION	
440-264190-4 MS	EPSW002IE02_20200406	Dissolved	Water	FILTRATION	
440-264190-4 MSD	EPSW002IE02_20200406	Dissolved	Water	FILTRATION	

Prep Batch: 604095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Dissolved	Water	245.1	604089
440-264190-2	LXBMP0011_20200406	Dissolved	Water	245.1	604089
440-264190-3	LXBMP0012_20200406	Dissolved	Water	245.1	604089
440-264190-4	EPSW002IE02_20200406	Dissolved	Water	245.1	604089
MB 440-604089/1-B	Method Blank	Dissolved	Water	245.1	604089
LCS 440-604089/2-B	Lab Control Sample	Dissolved	Water	245.1	604089
440-264162-B-3-E MS	Matrix Spike	Dissolved	Water	245.1	604089
440-264162-B-3-F MSD	Matrix Spike Duplicate	Dissolved	Water	245.1	604089

Analysis Batch: 604111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Dissolved	Water	245.1	604095
440-264190-2	LXBMP0011_20200406	Dissolved	Water	245.1	604095
440-264190-3	LXBMP0012_20200406	Dissolved	Water	245.1	604095
440-264190-4	EPSW002IE02_20200406	Dissolved	Water	245.1	604095
MB 440-604089/1-B	Method Blank	Dissolved	Water	245.1	604095
LCS 440-604089/2-B	Lab Control Sample	Dissolved	Water	245.1	604095
440-264162-B-3-E MS	Matrix Spike	Dissolved	Water	245.1	604095
440-264162-B-3-F MSD	Matrix Spike Duplicate	Dissolved	Water	245.1	604095

Prep Batch: 604189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Total Recoverable	Water	200.2	
440-264190-2	LXBMP0011_20200406	Total Recoverable	Water	200.2	
440-264190-3	LXBMP0012_20200406	Total Recoverable	Water	200.2	
440-264190-4	EPSW002IE02_20200406	Total Recoverable	Water	200.2	
MB 440-604189/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-604189/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-264190-4 MS	EPSW002IE02_20200406	Total Recoverable	Water	200.2	
440-264190-4 MSD	EPSW002IE02_20200406	Total Recoverable	Water	200.2	

Prep Batch: 604216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Total/NA	Water	245.1	
440-264190-2	LXBMP0011_20200406	Total/NA	Water	245.1	
440-264190-3	LXBMP0012_20200406	Total/NA	Water	245.1	
440-264190-4	EPSW002IE02_20200406	Total/NA	Water	245.1	
MB 440-604216/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-604216/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-264210-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	
440-264210-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Metals

Prep Batch: 604252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Dissolved	Water	200.2	604093
440-264190-2	LXBMP0011_20200406	Dissolved	Water	200.2	604093
440-264190-3	LXBMP0012_20200406	Dissolved	Water	200.2	604093
MB 440-604093/1-C	Method Blank	Dissolved	Water	200.2	604093
LCS 440-604093/2-C	Lab Control Sample	Dissolved	Water	200.2	604093
440-264162-A-3-H MS	Matrix Spike	Dissolved	Water	200.2	604093
440-264162-A-3-I MSD	Matrix Spike Duplicate	Dissolved	Water	200.2	604093

Prep Batch: 604254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-4	EPSW002IE02_20200406	Dissolved	Water	200.2	604093
MB 440-604093/1-D	Method Blank	Dissolved	Water	200.2	604093
LCS 440-604093/2-D	Lab Control Sample	Dissolved	Water	200.2	604093
440-264190-4 MS	EPSW002IE02_20200406	Dissolved	Water	200.2	604093
440-264190-4 MSD	EPSW002IE02_20200406	Dissolved	Water	200.2	604093

Analysis Batch: 604275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Total Recoverable	Water	200.8	604189
440-264190-2	LXBMP0011_20200406	Total Recoverable	Water	200.8	604189
440-264190-3	LXBMP0012_20200406	Total Recoverable	Water	200.8	604189
440-264190-4	EPSW002IE02_20200406	Total Recoverable	Water	200.8	604189
MB 440-604189/1-A	Method Blank	Total Recoverable	Water	200.8	604189
LCS 440-604189/2-A	Lab Control Sample	Total Recoverable	Water	200.8	604189
440-264190-4 MS	EPSW002IE02_20200406	Total Recoverable	Water	200.8	604189
440-264190-4 MSD	EPSW002IE02_20200406	Total Recoverable	Water	200.8	604189

Analysis Batch: 604292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Dissolved	Water	200.8	604252
440-264190-2	LXBMP0011_20200406	Dissolved	Water	200.8	604252
440-264190-3	LXBMP0012_20200406	Dissolved	Water	200.8	604252
MB 440-604093/1-C	Method Blank	Dissolved	Water	200.8	604252
LCS 440-604093/2-C	Lab Control Sample	Dissolved	Water	200.8	604252
440-264162-A-3-H MS	Matrix Spike	Dissolved	Water	200.8	604252
440-264162-A-3-I MSD	Matrix Spike Duplicate	Dissolved	Water	200.8	604252

Analysis Batch: 604378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Total/NA	Water	245.1	604216
440-264190-2	LXBMP0011_20200406	Total/NA	Water	245.1	604216
440-264190-3	LXBMP0012_20200406	Total/NA	Water	245.1	604216
440-264190-4	EPSW002IE02_20200406	Total/NA	Water	245.1	604216
MB 440-604216/1-A	Method Blank	Total/NA	Water	245.1	604216
LCS 440-604216/2-A	Lab Control Sample	Total/NA	Water	245.1	604216
440-264210-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	604216
440-264210-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	604216

Analysis Batch: 604443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-4	EPSW002IE02_20200406	Dissolved	Water	200.8	604254

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QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Metals (Continued)

Analysis Batch: 604443 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-604093/1-D	Method Blank	Dissolved	Water	200.8	604254
LCS 440-604093/2-D	Lab Control Sample	Dissolved	Water	200.8	604254
440-264190-4 MS	EPSW002IE02_20200406	Dissolved	Water	200.8	604254
440-264190-4 MSD	EPSW002IE02_20200406	Dissolved	Water	200.8	604254

General Chemistry

Analysis Batch: 604465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Total/NA	Water	SM 2540D	
440-264190-2	LXBMP0011_20200406	Total/NA	Water	SM 2540D	
440-264190-3	LXBMP0012_20200406	Total/NA	Water	SM 2540D	
440-264190-4	EPSW002IE02_20200406	Total/NA	Water	SM 2540D	
MB 440-604465/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-604465/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-264358-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Geotechnical

Analysis Batch: 63641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-1	LXBMP0010_20200406	Total/NA	Water	D4464	
440-264190-2	LXBMP0011_20200406	Total/NA	Water	D4464	
440-264190-3	LXBMP0012_20200406	Total/NA	Water	D4464	
LCS 570-63641/6	Lab Control Sample	Total/NA	Water	D4464	
440-264190-3 DU	LXBMP0012_20200406	Total/NA	Water	D4464	

Rad

Filtration Batch: 467452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-4	EPSW002IE02_20200406	Dissolved	Water	Filtration	

Prep Batch: 468136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-4	EPSW002IE02_20200406	Total/NA	Water	Evaporation	
MB 160-468136/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-468136/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
440-264162-K-1-O MS	Matrix Spike	Total/NA	Water	Evaporation	
440-264162-K-1-P MSD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	
440-264162-K-1-S DU	Duplicate	Total/NA	Water	Evaporation	

Prep Batch: 468140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-264190-4	EPSW002IE02_20200406	Dissolved	Water	Evaporation	467452
MB 160-468140/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-468140/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
440-264451-B-4-B MS	Matrix Spike	Total/NA	Water	Evaporation	
440-264451-B-4-D DU	Duplicate	Total/NA	Water	Evaporation	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
BA	Relative percent difference out of control
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
LN	MS and/or MSD below acceptance limits. See Blank Spike (LCS)
MB	Analyte present in the method blank

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-20

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Illinois	NELAP	200060	03-17-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20 *
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-21
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-21
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wyoming	State Program	8TMS-L	01-28-19 *

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Chain of Custody Record



calscience

Client Information (Sub Contract Lab)		Sampler: Lab PM: Bondoc, Christian M	Carrier Tracking No(s):	COC No: 440-154819-1
Client Contact: Shipping/Receiving		Phone: christian.bondoc@testamericainc.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - California	Job #: 440-264190-1	Job #: 440-264190-1
Address: 13715 Rider Trail North,		Due Date Requested: 4/17/2020	Analysis Requested	
City: Earth City	TAT Requested (days):	Perform MS/MSD (Yes or No)	900.0/Evaporation (MOD) Gross Alpha/Beta	900.0/Filtration_Rad Gross Alpha Only- Dissolved
State/Zip: MO, 63045	PO #:	Field Filtered Sample (Yes or No)		
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:	Sample Date	Sample Time	Sample Matrix
Email:	Project #: 44009815	4/6/20	07:40 Pacific	(W=Water, S=Solid, O=Other, T=Blood, A=Air)
Site: Boeing SSFL ISRA and BMP	SSOW#:	Preservation Code:	Water	
Sample Identification - Client ID (Lab ID)		Total Number of Containers		
EPW002IE02_20200406 (440-264190-4)		2		
Special Instructions/Note:		Boeing SSFL, DO NOT FILTER, use prep date from preservation		
<p>Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.</p>				
Possible Hazard Identification				
Unconfirmed				
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		
Empty Kit Relinquished by		Date/Time: Method of Shipment:		
Relinquished by: A. Kenney		Date/Time: 4/8/20 1700		
Relinquished by: FEDEX		Date/Time: 4/8/20 09:20		
Relinquished by:		Date/Time:		
Custody Seals Intact: Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		
A Yes Δ No				



CONDITION UPON RECEIPT FORM

Client: ETA Irvine

Initiated by: LAM Date: 4/9/2020 Time: 09:20 Shipper: FedEx Package Quantity: 5

**Sample must be received at < 6°. If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids. If samples are from West Virginia, temperature of EVERY SAMPLE that is temperature critical must be recorded on the COC.

	Shipping #(s):*	Thermometer #:	Package Temp:**	Document #:
1.	1540 4107 7227 (2 of 3)	192688461	1.7	
2.	1540 4107 7210 (1 of 3)		-1.4	
3.	1540 4107 7232 (2 of 3)		1.2	
4.	1540 4107 7243 (1 of 2)		-0.1	
5.	1540 4107 7254 (2 of 2)		-1.3	
6.				
7.				

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	<input checked="" type="radio"/> N	Are there custody seals present on the cooler?	8.	Y <input checked="" type="radio"/> N	Are there custody seals present on bottles?
2.	Y <input checked="" type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9.	Y N <input checked="" type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3.	<input checked="" type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10.	Y <input checked="" type="radio"/> N/A	Was sample received with proper pH? (If not, make note below) pH strip lot #: <u>HC904495</u>
4.	<input checked="" type="radio"/> N	Sample received with Chain of Custody?	11.	<input checked="" type="radio"/> N N/A	Containers for Rn-222, C-14, Cl-36, H-3 & I-129/131 marked with "Do Not Preserve" label?
5.	<input checked="" type="radio"/> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	<input checked="" type="radio"/> N	Sample received in proper containers?
6.	Y <input checked="" type="radio"/> N	Was sample received broken?	13.	Y N <input checked="" type="radio"/> N/A	Headspace in VOA, or Rn-222 liquid samples? (>6mm) (If Yes, note sample ID's below)
7.	<input checked="" type="radio"/> N	Is sample volume sufficient for analysis?	14.	Y N <input checked="" type="radio"/> N/A	Soil containers for C-14, H-3, Tc-99 & I-129/131 marked with "Do Not Dry" label?

* For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, Oil & Grease, Rn-222 and soils.

Notes:

One container required preservation

pH Adjustment (if needed)

Date/Time of Preservation: 4/10/2020 19:00

Initial pH and pH strip lot#: HC904495

Preservative and lot#: HN03 | 244827

Final pH and pH strip lot#: HC904495

Amount of Preservative: 2ml

Sample Labels Applied By: MV

Labels 2nd Reviewed By:

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.



Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler: Lab PM	Bondoc, Christian M		Carrier Tracking No(s):	COC No: 440-154829.1
Client Contact:		Phone:	E-Mail: christian.bondoc@testamericainc.com		State of Origin:	Page: Page 1 of 1
Shipping/Receiving		Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - California		Job #: 440-264190-1
Address:		Due Date Requested:		Analysis Requested		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)
880 Riverside Parkway, City: West Sacramento State, Zip: CA, 95605 Phone: 916-373-5600(Tel) 916-372-1059(Fax) Email:		4/17/2020 TAT Requested (days):		Perform MS/MSD (Yes or No)		
Project Name: Boeing SSFL ISRA and BMP Site:		Project #: 44009815 SSOW#:		Field Filtered Sample (Yes or No)		Total Number of Containers
PO #: WO #:		1613B/1613B_Sox_Sep_P Standard List w/ Totals		Special Instructions/Note:		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, On-site/Off-site)	Preservation Code:	
LXBMP0010_20200406 (440-264190-1)	4/6/20	08:30 Pacific	Water	Water		2 See OAS, Boeing_w/lu to zero
LXBMP0011_20200406 (440-264190-2)	4/6/20	08:40 Pacific	Water	Water		2 See OAS, Boeing_w/lu to zero
LXBMP0012_20200406 (440-264190-3)	4/6/20	08:50 Pacific	Water	Water		2 See OAS, Boeing_w/lu to zero
EPSW002IE02_20200406 (440-264190-4)	4/6/20	07:40 Pacific	Water	Water		2 See OAS, Boeing_w/lu to zero

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analysis & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

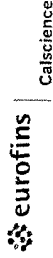
Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: A. Romney Date: 4/8/20 1700
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Custody Seals Intact: Yes Δ No Custody Seal No.: 5121
 Cooler Temperature(s) °C and Other Remarks: 2.0°C / 3.0°C

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:



17461 Deiran Ave Suite 100
Irvine, CA 92614-5817
Phone: 949-261-1022 Fax: 949-260-3297

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Bondoc, Christian M	Lab PM: Bondoc, Christian M	Carrier Tracking No(s): 440-154804.1	COC No: 440-154804.1
Client Contact: Shipping/Receiving		Phone: christian.bondoc@testamericainc.com	E-Mail: christian.bondoc@testamericainc.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Calscience LLC		Accreditations Required (See note): State Program - California		Job #: 440-264190-1	Preservation Codes: 440-264190-1
Address: 7440 Lincoln Way,		Due Date Requested: 4/20/2020		Analysis Requested:	
City: Garden Grove		TAT Requested (days):		A - HCL M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify)	
State, Zip: CA, 92841		FO #:		Other:	
Phone: 714-895-5494(Tel) 714-894-7501(Fax)		WO #:			
Email:		Project #: 44009815			
Project Name: Boeing SSFL ISRA and BMP		SSOW#:			
Site:					

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Overstabil, Et-Tissue, Air)	Field Filtered Sample (Yes or No)	D464/ D464-Particle Size	Total Number of Containers	Special Instructions/Note:
LXBMP0010_20200406 (440-264190-1)	4/6/20	08:30 Pacific	Water	Water	X	X	1	Normal TAT
LXBMP0011_20200406 (440-264190-2)	4/6/20	08:40 Pacific	Water	Water	X	X	1	Normal TAT
LXBMP0012_20200406 (440-264190-3)	4/6/20	08:50 Pacific	Water	Water	X	X	1	Normal TAT

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification

Unconfirmed
 Return To Client
 Disposal By Lab
 Archive For _____ Months

Special Instructions/QC Requirements:

Primary Deliverable Rank: 2

Method of Shipment:

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *[Signature]* Date/Time: **4-8-20 07:48** Company: **CC FLA**

Relinquished by: *[Signature]* Date/Time: **4-8-20 07:47** Company: **CC FLA**

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: **N/A** Custody Seal No.: _____

Δ Yes Δ No

Cooler Temperature(s) °C and Other Remarks: **3.7 / 2-8 066**

Received by: <i>[Signature]</i>	Date/Time: 4-8-20 07:47	Company: CC FLA
Received by: <i>[Signature]</i>	Date/Time: _____	Company: _____
Received by: _____	Date/Time: _____	Company: _____



Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-264190-1

Login Number: 264190

List Number: 1

Creator: Escalante, Maria I

List Source: Eurofins Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-264190-1

Login Number: 264190

List Number: 2

Creator: Cruise, Noel

List Source: Eurofins Calscience

List Creation: 04/08/20 06:11 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-264190-1

Login Number: 264190

List Number: 3

Creator: Her, David A

List Source: Eurofins TestAmerica, Sacramento

List Creation: 04/09/20 03:34 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	3.0c
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-264190-1

Login Number: 264190

List Number: 4

Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

List Creation: 04/10/20 08:22 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	One container was improperly preserved upon receipt.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
 Project/Site: BMP Performance OF 001, 002 and/or 009

Job ID: 440-264190-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-264190-1	LXBMP0010_20200406	68	71	64	63	73	71	63	72
440-264190-2	LXBMP0011_20200406	72	75	71	75	84	77	68	81
440-264190-3	LXBMP0012_20200406	62	70	64	70	76	72	64	76
440-264190-4	EPSW002IE02_20200406	69	76	72	76	84	78	71	86
440-264190-4 - RA	EPSW002IE02_20200406		66						
MB 320-371493/1-A	Method Blank	71	83	70	73	77	76	68	81

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-264190-1	LXBMP0010_20200406	65	73	73	58	57	64	50
440-264190-2	LXBMP0011_20200406	71	86	79	69	70	77	60
440-264190-3	LXBMP0012_20200406	69	76	75	62	67	68	57
440-264190-4	EPSW002IE02_20200406	76	81	81	72	76	81	67
440-264190-4 - RA	EPSW002IE02_20200406							
MB 320-371493/1-A	Method Blank	75	80	83	71	71	82	64

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-371493/2-A	Lab Control Sample	68	77	65	70	75	71	63	71

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-371493/2-A	Lab Control Sample	66	74	74	61	64	69	59

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.

Job ID: 440-264190-1

Project/Site: BMP Performance OF 001, 002 and/or 009

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

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Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



440-264190 Field Sheet

Job: _____

Tracking #: 1540 41077405

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes: _____

Therm. ID: AK-5 Corr. Factor: 0/- 0.4 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: Seal

Cooler ID: _____

Temp Observed: 2.6 °C Corrected: 3.0 °C

From: Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: [Signature] Date: 9 April 20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Non-conformance Yes No NA

NCM Filed?

Initials: DH Date: 4/9/20

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")


ANALYTICAL REPORT

Job Number: 570-14206-1

Job Description: CH661 / 692670.61.SW

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Ritu Sedha
Project Manager I
12/20/2019 3:07 PM

Designee for
Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
12/20/2019

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

Tel (714) 895-5494 Fax (714) 894-7501 www.EurofinsUS.com

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Qualifiers

Metals

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CH661 / 692670.61.SW

Report Number: 570-14206-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/27/2019 at 5:10 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.9 degrees Celsius.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 degrees Celsius of the required temperature or method specified range. For samples with a specified temperature of 4 degrees Celsius, samples with a temperature ranging from just above freezing temperature of water to 6 degrees Celsius shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DISSOLVED METALS (ICPMS)

Samples A2BMP0012S007 (570-14206-1) and EVBMP0003S029 (570-14206-2) were analyzed for Dissolved Metals (ICPMS) in accordance with EPA Method 200.8. The samples were analyzed on 12/10/2019.

The following samples were not filtered within 15 minutes of sample collection as required by the method: A2BMP0012S007 (570-14206-1) and EVBMP0003S029 (570-14206-2). The samples were filtered prior to analysis at the laboratory, and the results have been flagged.

Lead failed the recovery criteria low for the MS of sample 570-14202-7 in batch 570-38174.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Samples A2BMP0012S007 (570-14206-1), EVBMP0003S029 (570-14206-2) and FBQW1869Q001 (570-14206-3) were analyzed for Total Recoverable Metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 12/08/2019 and analyzed on 12/10/2019.

The continuing calibration blank (CCB) contained analytes greater than the lowest method detection limits (MDL), and were not reanalyzed because detections were below the reporting limits (RL). The data has been reported.

Lead failed the recovery criteria low for the MS and MSD of sample 570-14380-2 in batch 570-37974.

Refer to the QC report for details.

Samples A2BMP0012S007 (570-14206-1)[5X] and EVBMP0003S029 (570-14206-2)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY

Samples A2BMP0012S007 (570-14206-1) and EVBMP0003S029 (570-14206-2) were analyzed for Dissolved Mercury in accordance with EPA Method 245.1. The samples were prepared and analyzed on 12/06/2019.

The following samples were not filtered within 15 minutes of sample collection as required by the method: A2BMP0012S007 (570-14206-1) and EVBMP0003S029 (570-14206-2). The samples were filtered prior to analysis at the laboratory, and the results have been flagged.

Mercury exceeded the RPD limit for the MSD of sample 570-14202-1 in batch 570-37422.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples A2BMP0012S007 (570-14206-1), EVBMP0003S029 (570-14206-2) and FBQW1869Q001 (570-14206-3) were analyzed for Total Mercury in accordance with EPA Method 245.1. The samples were prepared on 12/06/2019 and analyzed on 12/06/2019 and 12/09/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS

Samples A2BMP0012S007 (570-14206-1) and EVBMP0003S029 (570-14206-2) were analyzed for Total Suspended Solids in accordance with SM 2540D. The samples were analyzed on 12/04/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PARTICLE SIZE

Samples A2BMP0012S007 (570-14206-1) and EVBMP0003S029 (570-14206-2) were analyzed for Particle Size in accordance with ASTM D 4464. The samples were analyzed on 12/03/2019.

The sample duplicate precision for the following sample associated with analytical batch 570-36792 was outside control limits: EVBMP0003S029 (570-14206-2) and (570-14206-D-2 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TURBIDITY

Samples A2BMP0012S007 (570-14206-1) and FBQW1869Q001 (570-14206-3) were analyzed for Turbidity in accordance with SM 2130B. The samples were analyzed on 11/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Client Sample ID: A2BMP0012S007

Lab Sample ID: 570-14206-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.00403	J	0.00500	0.000640	mg/L	5		200.8	Total Recoverable
Copper	0.00600		0.00500	0.000700	mg/L	5		200.8	Total Recoverable
Lead	0.00352	J	0.00500	0.000449	mg/L	5		200.8	Total Recoverable
Copper	0.000872	J H	0.00100	0.000140	mg/L	1		200.8	Dissolved
Lead	0.000518	J H	0.00100	0.0000898	mg/L	1		200.8	Dissolved
Turbidity	5.20		0.0500	0.0439	NTU	1		SM 2130B	Total/NA
Total Suspended Solids	6.43		1.43	1.18	mg/L	1		SM 2540D	Total/NA
Clay(less than 0.00391 mm)	100.00		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%	1		D4464	Total/NA

Client Sample ID: EVBMP0003S029

Lab Sample ID: 570-14206-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.00373	J	0.00500	0.000640	mg/L	5		200.8	Total Recoverable
Copper	0.00622		0.00500	0.000700	mg/L	5		200.8	Total Recoverable
Lead	0.00331	J	0.00500	0.000449	mg/L	5		200.8	Total Recoverable
Copper	0.000811	J H	0.00100	0.000140	mg/L	1		200.8	Dissolved
Total Suspended Solids	9.00		3.33	2.76	mg/L	1		SM 2540D	Total/NA
Clay(less than 0.00391 mm)	5.71		0.01	0.01	%	1		D4464	Total/NA
Fine Sand (0.125 to 0.25mm)	17.04		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	38.32		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	44.03		0.01	0.01	%	1		D4464	Total/NA
Very Fine Sand (0.0625 to 0.125 mm)	38.94		0.01	0.01	%	1		D4464	Total/NA

Client Sample ID: FBQW1869Q001

Lab Sample ID: 570-14206-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Turbidity	0.110		0.0500	0.0439	NTU	1		SM 2130B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: A2BMP0012S007
Date Collected: 11/27/19 07:50
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.00403	J	0.00500	0.000640	mg/L		12/08/19 07:30	12/10/19 07:28	5
Copper	0.00600		0.00500	0.000700	mg/L		12/08/19 07:30	12/10/19 07:28	5
Lead	0.00352	J	0.00500	0.000449	mg/L		12/08/19 07:30	12/10/19 07:28	5

Client Sample ID: EVBMP0003S029
Date Collected: 11/27/19 07:30
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.00373	J	0.00500	0.000640	mg/L		12/08/19 07:30	12/10/19 07:30	5
Copper	0.00622		0.00500	0.000700	mg/L		12/08/19 07:30	12/10/19 07:30	5
Lead	0.00331	J	0.00500	0.000449	mg/L		12/08/19 07:30	12/10/19 07:30	5

Client Sample ID: FBQW1869Q001
Date Collected: 11/27/19 07:15
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L		12/08/19 07:30	12/10/19 07:33	1
Copper	ND		0.00100	0.000140	mg/L		12/08/19 07:30	12/10/19 07:33	1
Lead	ND		0.00100	0.0000898	mg/L		12/08/19 07:30	12/10/19 07:33	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Client Sample ID: A2BMP0012S007
Date Collected: 11/27/19 07:50
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000128	mg/L			12/10/19 19:49	1
Copper	0.000872	J H	0.00100	0.000140	mg/L			12/10/19 19:49	1
Lead	0.000518	J H	0.00100	0.0000898	mg/L			12/10/19 19:49	1

Client Sample ID: EVBMP0003S029
Date Collected: 11/27/19 07:30
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000128	mg/L			12/10/19 19:51	1
Copper	0.000811	J H	0.00100	0.000140	mg/L			12/10/19 19:51	1
Lead	ND	H	0.00100	0.0000898	mg/L			12/10/19 19:51	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: A2BMP0012S007

Date Collected: 11/27/19 07:50

Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/06/19 19:31	12/06/19 22:30	1

Client Sample ID: EVBMP0003S029

Date Collected: 11/27/19 07:30

Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/06/19 19:31	12/09/19 16:55	1

Client Sample ID: FBQW1869Q001

Date Collected: 11/27/19 07:15

Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/06/19 19:31	12/09/19 16:57	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method: 245.1 - Mercury (CVAA) - Dissolved

Client Sample ID: A2BMP0012S007

Date Collected: 11/27/19 07:50

Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		12/06/19 11:49	12/06/19 22:58	1

Client Sample ID: EVBMP0003S029

Date Collected: 11/27/19 07:30

Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		12/06/19 11:49	12/06/19 23:00	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

General Chemistry

Client Sample ID: A2BMP0012S007
Date Collected: 11/27/19 07:50
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	5.20		0.0500	0.0439	NTU			11/27/19 21:46	1
Total Suspended Solids	6.43		1.43	1.18	mg/L			12/04/19 11:00	1

Client Sample ID: EVBMP0003S029
Date Collected: 11/27/19 07:30
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	9.00		3.33	2.76	mg/L			12/04/19 11:00	1

Client Sample ID: FBQW1869Q001
Date Collected: 11/27/19 07:15
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	0.110		0.0500	0.0439	NTU			11/27/19 21:46	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Client Sample ID: A2BMP0012S007
Date Collected: 11/27/19 07:50
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	100.00		0.01	0.01	%			12/03/19 20:24	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			12/03/19 20:24	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			12/03/19 20:24	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			12/03/19 20:24	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			12/03/19 20:24	1
Silt (0.00391 to 0.0625mm)	ND		0.01	0.01	%			12/03/19 20:24	1
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%			12/03/19 20:24	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			12/03/19 20:24	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			12/03/19 20:24	1

Client Sample ID: EVBMP0003S029
Date Collected: 11/27/19 07:30
Date Received: 11/27/19 17:10

Lab Sample ID: 570-14206-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	5.71		0.01	0.01	%			12/03/19 20:32	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			12/03/19 20:32	1
Fine Sand (0.125 to 0.25mm)	17.04		0.01	0.01	%			12/03/19 20:32	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			12/03/19 20:32	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			12/03/19 20:32	1
Silt (0.00391 to 0.0625mm)	38.32		0.01	0.01	%			12/03/19 20:32	1
Total Silt and Clay (0 to 0.0626mm)	44.03		0.01	0.01	%			12/03/19 20:32	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			12/03/19 20:32	1
Very Fine Sand (0.0625 to 0.125 mm)	38.94		0.01	0.01	%			12/03/19 20:32	1

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

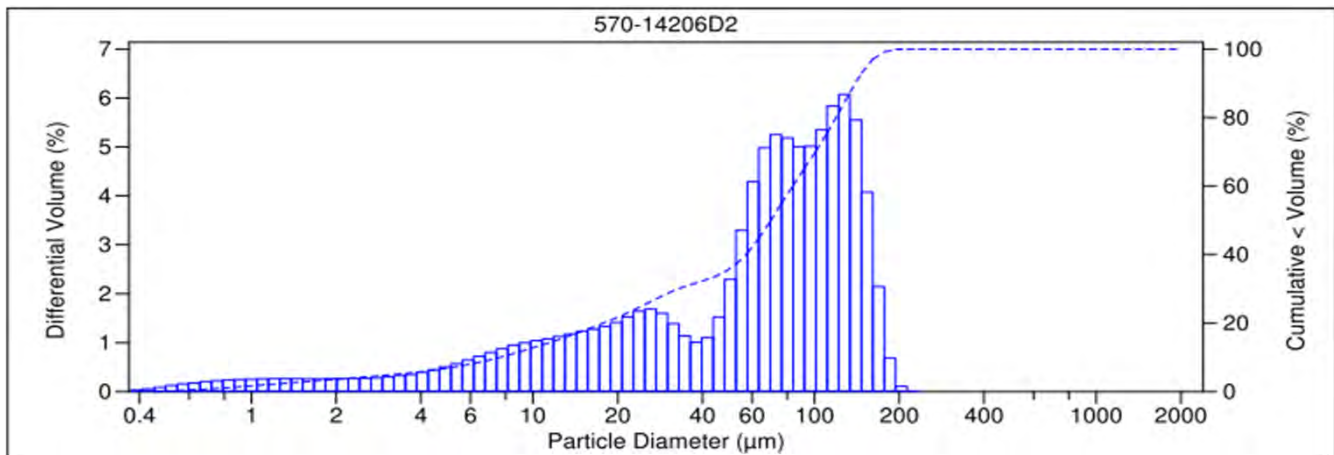
Date Sampled: 11/27/19
 Date Received: 11/27/19
 Work Order No: 570-14206
 Date Analyzed: 12/03/19
 Method: ASTM D4464M

Project: SSFL

Page 2 of 3

Sample ID	Depth ft	Description	Mean Grain Size mm
EVBMP0003S029		Very Fine Sand	0.071

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	17.04	38.94	38.32	5.71	44.03



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

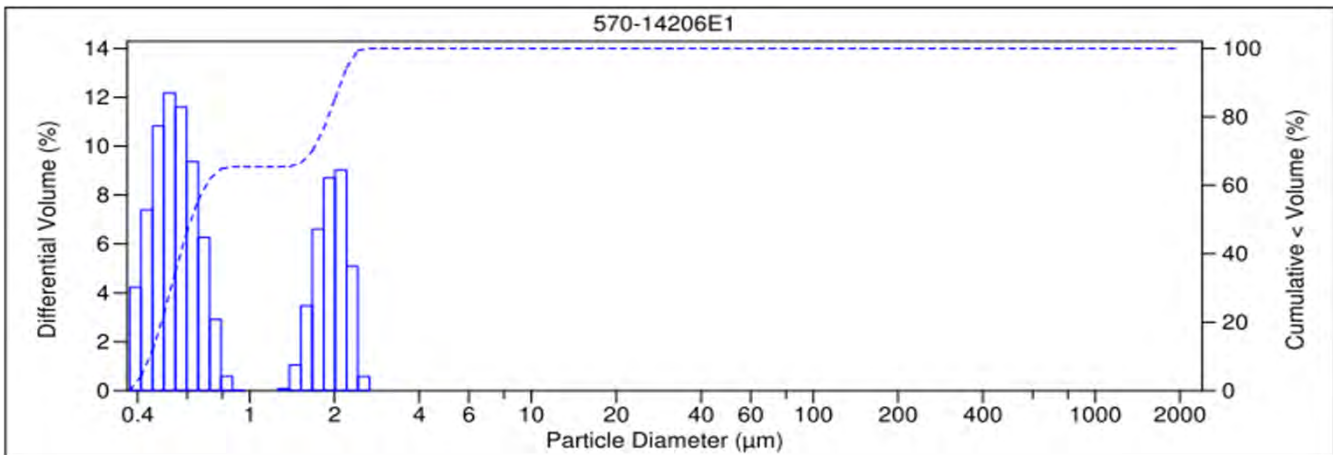
Date Sampled: 11/27/19
 Date Received: 11/27/19
 Work Order No: 570-14206
 Date Analyzed: 12/03/19
 Method: ASTM D4464M

Project: SSFL

Page 1 of 3

Sample ID	Depth ft	Description	Mean Grain Size mm
A2BMP0012S007		Med+Fine Clay	0.001

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00



V 3.0

Default Detection Limits

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Prep: 200.8

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000128	mg/L
Copper	0.00100	0.000140	mg/L
Lead	0.00100	0.0000898	mg/L

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000128	mg/L
Copper	0.00100	0.000140	mg/L
Lead	0.00100	0.0000898	mg/L

Method: 245.1 - Mercury (CVAA)

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

Method: 245.1 - Mercury (CVAA) - Dissolved

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

General Chemistry

Analyte	RL	MDL	Units
Turbidity	0.0500	0.0439	NTU
Total Suspended Solids	1.00	0.829	mg/L

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	RL	MDL	Units
Clay(less than 0.00391 mm)	0.01	0.01	%
Coarse Sand (0.5mm to 1mm)	0.01	0.01	%
Fine Sand (0.125 to 0.25mm)	0.01	0.01	%
Gravel (greater than 2 mm)	0.01	0.01	%
Medium Sand (0.25 to 0.5 mm)	0.01	0.01	%
Silt (0.00391 to 0.0625mm)	0.01	0.01	%
Total Silt and Clay (0 to 0.0626mm)	0.01	0.01	%
Very Coarse Sand (1 to 2mm)	0.01	0.01	%
Very Fine Sand (0.0625 to 0.125 mm)	0.01	0.01	%

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 570-37640/1-A
Matrix: Water
Analysis Batch: 37974

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 37640

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L		12/08/19 07:30	12/10/19 06:43	1
Copper	ND		0.00100	0.000140	mg/L		12/08/19 07:30	12/10/19 06:43	1
Lead	ND		0.00100	0.0000898	mg/L		12/08/19 07:30	12/10/19 06:43	1

Lab Sample ID: LCS 570-37640/2-A
Matrix: Water
Analysis Batch: 37974

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 37640

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.1025		mg/L		103	80 - 120
Copper	0.100	0.1002		mg/L		100	80 - 120
Lead	0.100	0.09660		mg/L		97	80 - 120

Lab Sample ID: LCSD 570-37640/3-A
Matrix: Water
Analysis Batch: 37974

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 37640

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.1049		mg/L		105	80 - 120	2	20
Copper	0.100	0.1026		mg/L		103	80 - 120	2	20
Lead	0.100	0.09788		mg/L		98	80 - 120	1	20

Lab Sample ID: LCS 570-37643/2-A
Matrix: Water
Analysis Batch: 38174

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.1042		mg/L		104	80 - 120
Copper	0.100	0.1024		mg/L		102	80 - 120
Lead	0.100	0.09654		mg/L		97	80 - 120

Lab Sample ID: LCSD 570-37643/3-A
Matrix: Water
Analysis Batch: 38174

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.1027		mg/L		103	80 - 120	1	20
Copper	0.100	0.1019		mg/L		102	80 - 120	1	20
Lead	0.100	0.09610		mg/L		96	80 - 120	0	20

Lab Sample ID: MB 570-37643/1-A
Matrix: Water
Analysis Batch: 38297

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L			12/11/19 12:01	1
Copper	ND		0.00100	0.000140	mg/L			12/11/19 12:01	1
Lead	ND		0.00100	0.0000898	mg/L			12/11/19 12:01	1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 570-37493/1-A
Matrix: Water
Analysis Batch: 37422

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37493

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/06/19 19:31	12/06/19 22:23	1

Lab Sample ID: LCS 570-37493/2-A
Matrix: Water
Analysis Batch: 37422

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37493

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.009560		mg/L		96	85 - 121

Lab Sample ID: LCSD 570-37493/3-A
Matrix: Water
Analysis Batch: 37422

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 37493

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.009641		mg/L		96	85 - 121	1	10

Lab Sample ID: 570-14206-1 MS
Matrix: Water
Analysis Batch: 37422

Client Sample ID: A2BMP0012S007
Prep Type: Total/NA
Prep Batch: 37493

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.0100	0.009568		mg/L		96	57 - 141

Lab Sample ID: 570-14206-1 MSD
Matrix: Water
Analysis Batch: 37422

Client Sample ID: A2BMP0012S007
Prep Type: Total/NA
Prep Batch: 37493

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.0100	0.009684		mg/L		97	57 - 141	1	10

Lab Sample ID: MB 570-37331/1-B
Matrix: Water
Analysis Batch: 37422

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 37335

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/06/19 11:49	12/06/19 15:43	1

Lab Sample ID: LCS 570-37331/2-B
Matrix: Water
Analysis Batch: 37422

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 37335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.009739		mg/L		97	85 - 121

Lab Sample ID: LCSD 570-37331/3-B
Matrix: Water
Analysis Batch: 37422

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 37335

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.009776		mg/L		98	85 - 121	0	10

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method: SM 2130B - Turbidity

Lab Sample ID: LCSSRM 570-35992/1
Matrix: Water
Analysis Batch: 35992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	1000	990.0		NTU		99.0	99.0 - 101.0

Lab Sample ID: LCSSRM 570-35992/2
Matrix: Water
Analysis Batch: 35992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	10.0	9.910		NTU		99.1	99.0 - 101.0

Lab Sample ID: LCSSRM 570-35992/3
Matrix: Water
Analysis Batch: 35992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	0.0200	ND		NTU		200.0	0.0 - 200.0

Lab Sample ID: 570-14206-1 DU
Matrix: Water
Analysis Batch: 35992

Client Sample ID: A2BMP0012S007
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	5.20		5.190		NTU		0.2	25

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 570-36718/1
Matrix: Water
Analysis Batch: 36718

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.00	0.829	mg/L			12/04/19 11:00	1

Lab Sample ID: LCS 570-36718/2
Matrix: Water
Analysis Batch: 36718

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	104.0		mg/L		104	85 - 115

Lab Sample ID: LCSD 570-36718/3
Matrix: Water
Analysis Batch: 36718

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	103.0		mg/L		103	85 - 115	1	10

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Metals

Filtration Batch: 37331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Dissolved	Water	Filtration	
570-14206-2	EVBMP0003S029	Dissolved	Water	Filtration	
MB 570-37331/1-B	Method Blank	Dissolved	Water	Filtration	
LCS 570-37331/2-B	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-37331/3-B	Lab Control Sample Dup	Dissolved	Water	Filtration	

Prep Batch: 37335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Dissolved	Water	245.1	37331
570-14206-2	EVBMP0003S029	Dissolved	Water	245.1	37331
MB 570-37331/1-B	Method Blank	Dissolved	Water	245.1	37331
LCS 570-37331/2-B	Lab Control Sample	Dissolved	Water	245.1	37331
LCSD 570-37331/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	37331

Analysis Batch: 37422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Dissolved	Water	245.1	37335
570-14206-1	A2BMP0012S007	Total/NA	Water	245.1	37493
570-14206-2	EVBMP0003S029	Dissolved	Water	245.1	37335
MB 570-37331/1-B	Method Blank	Dissolved	Water	245.1	37335
MB 570-37493/1-A	Method Blank	Total/NA	Water	245.1	37493
LCS 570-37331/2-B	Lab Control Sample	Dissolved	Water	245.1	37335
LCS 570-37493/2-A	Lab Control Sample	Total/NA	Water	245.1	37493
LCSD 570-37331/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	37335
LCSD 570-37493/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	37493
570-14206-1 MS	A2BMP0012S007	Total/NA	Water	245.1	37493
570-14206-1 MSD	A2BMP0012S007	Total/NA	Water	245.1	37493

Prep Batch: 37493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Total/NA	Water	245.1	
570-14206-2	EVBMP0003S029	Total/NA	Water	245.1	
570-14206-3	FBQW1869Q001	Total/NA	Water	245.1	
MB 570-37493/1-A	Method Blank	Total/NA	Water	245.1	
LCS 570-37493/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 570-37493/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
570-14206-1 MS	A2BMP0012S007	Total/NA	Water	245.1	
570-14206-1 MSD	A2BMP0012S007	Total/NA	Water	245.1	

Prep Batch: 37640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Total Recoverable	Water	200.8	
570-14206-2	EVBMP0003S029	Total Recoverable	Water	200.8	
570-14206-3	FBQW1869Q001	Total Recoverable	Water	200.8	
MB 570-37640/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 570-37640/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 570-37640/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Filtration Batch: 37643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Dissolved	Water	Filtration	

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Metals (Continued)

Filtration Batch: 37643 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-2	EVBMP0003S029	Dissolved	Water	Filtration	
MB 570-37643/1-A	Method Blank	Dissolved	Water	Filtration	
LCS 570-37643/2-A	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-37643/3-A	Lab Control Sample Dup	Dissolved	Water	Filtration	

Analysis Batch: 37882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-2	EVBMP0003S029	Total/NA	Water	245.1	37493
570-14206-3	FBQW1869Q001	Total/NA	Water	245.1	37493

Analysis Batch: 37974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Total Recoverable	Water	200.8	37640
570-14206-2	EVBMP0003S029	Total Recoverable	Water	200.8	37640
570-14206-3	FBQW1869Q001	Total Recoverable	Water	200.8	37640
MB 570-37640/1-A	Method Blank	Total Recoverable	Water	200.8	37640
LCS 570-37640/2-A	Lab Control Sample	Total Recoverable	Water	200.8	37640
LCSD 570-37640/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	37640

Analysis Batch: 38174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Dissolved	Water	200.8	37643
570-14206-2	EVBMP0003S029	Dissolved	Water	200.8	37643
LCS 570-37643/2-A	Lab Control Sample	Dissolved	Water	200.8	37643
LCSD 570-37643/3-A	Lab Control Sample Dup	Dissolved	Water	200.8	37643

Analysis Batch: 38297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-37643/1-A	Method Blank	Dissolved	Water	200.8	37643

General Chemistry

Analysis Batch: 35992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Total/NA	Water	SM 2130B	
570-14206-3	FBQW1869Q001	Total/NA	Water	SM 2130B	
LCSSRM 570-35992/1	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-35992/2	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-35992/3	Lab Control Sample	Total/NA	Water	SM 2130B	
570-14206-1 DU	A2BMP0012S007	Total/NA	Water	SM 2130B	

Analysis Batch: 36718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Total/NA	Water	SM 2540D	
570-14206-2	EVBMP0003S029	Total/NA	Water	SM 2540D	
MB 570-36718/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-36718/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-36718/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Geotechnical

Analysis Batch: 36792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14206-1	A2BMP0012S007	Total/NA	Water	D4464	
570-14206-2	EVBMP0003S029	Total/NA	Water	D4464	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Client Sample ID: A2BMP0012S007

Lab Sample ID: 570-14206-1

Date Collected: 11/27/19 07:50

Matrix: Water

Date Received: 11/27/19 17:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	37643	11/28/19 12:30	WL8G	ECL 1
Dissolved	Analysis	200.8		1			38174	12/10/19 19:49	UFLE	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	37640	12/08/19 07:30	WL8G	ECL 1
Total Recoverable	Analysis	200.8		5			37974	12/10/19 07:28	UFLE	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	37331	11/28/19 10:00	WL8G	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	37335	12/06/19 11:49	WL8G	ECL 1
Dissolved	Analysis	245.1		1			37422	12/06/19 22:58	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Prep	245.1			50 mL	100 mL	37493	12/06/19 19:31	WL8G	ECL 1
Total/NA	Analysis	245.1		1			37422	12/06/19 22:30	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2130B		1			35992	11/27/19 21:46	KZ4O	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	SM 2540D		1	700 mL	1000 mL	36718	12/04/19 11:00	XL6Z	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			36792	12/03/19 20:24	C4LT	ECL 1
Instrument ID: NOEQUIP										

Client Sample ID: EVBMP0003S029

Lab Sample ID: 570-14206-2

Date Collected: 11/27/19 07:30

Matrix: Water

Date Received: 11/27/19 17:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	37643	11/28/19 12:30	WL8G	ECL 1
Dissolved	Analysis	200.8		1			38174	12/10/19 19:51	UFLE	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	37640	12/08/19 07:30	WL8G	ECL 1
Total Recoverable	Analysis	200.8		5			37974	12/10/19 07:30	UFLE	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	37331	11/28/19 10:00	WL8G	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	37335	12/06/19 11:49	WL8G	ECL 1
Dissolved	Analysis	245.1		1			37422	12/06/19 23:00	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Prep	245.1			50 mL	100 mL	37493	12/06/19 19:31	WL8G	ECL 1
Total/NA	Analysis	245.1		1			37882	12/09/19 16:55	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2540D		1	300 mL	1000 mL	36718	12/04/19 11:00	XL6Z	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			36792	12/03/19 20:32	C4LT	ECL 1
Instrument ID: NOEQUIP										

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Client Sample ID: FBQW1869Q001

Lab Sample ID: 570-14206-3

Date Collected: 11/27/19 07:15

Matrix: Water

Date Received: 11/27/19 17:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			50 mL	50 mL	37640	12/08/19 07:30	WL8G	ECL 1
Total Recoverable	Analysis	200.8		1			37974	12/10/19 07:33	UFLE	ECL 1
		Instrument ID: ICPMS05								
Total/NA	Prep	245.1			50 mL	100 mL	37493	12/06/19 19:31	WL8G	ECL 1
Total/NA	Analysis	245.1		1			37882	12/09/19 16:57	MD3A	ECL 1
		Instrument ID: HG8								
Total/NA	Analysis	SM 2130B		1			35992	11/27/19 21:46	KZ4O	ECL 1
		Instrument ID: NOEQUIP								

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	ECL 1
245.1	Mercury (CVAA)	EPA	ECL 1
SM 2130B	Turbidity	SM	ECL 1
SM 2540D	Solids, Total Suspended (TSS)	SM	ECL 1
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
200.8	Preparation, Total Recoverable Metals	EPA	ECL 1
245.1	Preparation, Mercury	EPA	ECL 1
Filtration	Sample Filtration	None	ECL 1

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-14206-1	A2BMP0012S007	Water	11/27/19 07:50	11/27/19 17:10	
570-14206-2	EVBMP0003S029	Water	11/27/19 07:30	11/27/19 17:10	
570-14206-3	FBQW1869Q001	Water	11/27/19 07:15	11/27/19 17:10	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HG_1ppm ICV_00012	12/30/19	11/30/19	DI Water, Lot n/a	100 mL	MT-Hg-CS_00002	0.1 mL	Mercury	1 mg/L
.MT-Hg-CS_00002	12/31/20		High Purity Standards, Lot 1914918-100		MT: HNO3 Conc 00001	5 mL	Nitric acid	3.5 mg/L
.MT: HNO3 Conc 00001	11/11/20		Fisher Scientific, Lot 118110		(Purchased Reagent)		Mercury	1000 ug/mL
					(Purchased Reagent)		Nitric acid	70 mL
HG_1ppm STD_00008	12/30/19	11/30/19	DI Water, Lot n/a	100 mL	MT-Hg-SS 00001	1 mL	Mercury	1 mg/L
.MT-Hg-SS 00001	07/14/22		AccuStandard, Lot 217075028		MT HNO3 00014	5 mL	Nitric acid	34500 mg/L
.MT HNO3 00014	05/02/21		FISHER, Lot 1119040		(Purchased Reagent)		Mercury	100 ug/mL
					(Purchased Reagent)		Nitric acid	69 %
Hg H2SO4_00001	02/21/21		Fisher, Lot 3117052		(Purchased Reagent)		Sulfuric acid	98 mg/L
Hg K2S2O3_00001	02/19/20	02/19/19	DI Water, Lot N/A	10 L	HG_7440K2S2O8_00001	500 g	Potassium persulfate	4950000 mg/L
.HG 7440K2S2O8_00001	02/27/22		AcrosOrganic, Lot A0379062		(Purchased Reagent)		Potassium persulfate	99 g/g
Hg KMnO4_00002	02/19/20	02/19/19	DI Water, Lot N/A	10 L	HG_7471 KMNO4_00001	500 g	Potassium Permanganate	5000000 mg/L
.HG 7471 KMNO4_00001	08/22/23		VWR, Lot 0277-C094		(Purchased Reagent)		Potassium Permanganate	100 g/g
Hg NaCl-NH2OH_00005	03/23/20	11/30/19	DI Water, Lot N/A	10 L	HG 7470 NH3OH_00002	1.2 Kg	Hydroxylamine hydrochloride	0.01188 L
.HG 7470 NH3OH_00002	10/02/20		VWR Chemicals, LLC, Lot 19F1856849		HG 7470 NaCl_00001	1.2 Kg	Sodium Chloride	11880 L
.HG 7470 NaCl_00001	03/23/20		Fisher, Lot 176121		(Purchased Reagent)		Hydroxylamine hydrochloride	99 g
					(Purchased Reagent)		Sodium Chloride	99 g/g
MT: 1:1 HCl_00002	03/02/20	06/05/19	DI Water, Lot Di water	500 mL	MT: HCl Conc. 00002	250 mL	Hydrogen Chloride	18.5 mL
.MT: HCl Conc. 00002	11/14/22		Fisher Scientific, Lot 4118110		(Purchased Reagent)		Hydrogen Chloride	37 mL
MT: 1:1 HNO3_00001	03/15/20	06/05/19	DI Water, Lot DI Water	500 mL	MT: H2NO3 Con_00001	250 mL	Nitric acid	35 mL
.MT: H2NO3 Con_00001	11/14/20		Fisher Chemical, Lot 1118101		(Purchased Reagent)		Nitric acid	70 mL
							Nitric acid	70 mL
MT_ICP_Spike1_00005	01/30/20	09/06/19	HNO3, Lot 1118092	1000 mL	MT-As-SpS_00001	10 mL	As	100 ug/mL
					MT-Be-SpS_00001	10 mL	Be	100 ug/mL
					MT-Bi-CS-SpS_00001	10 mL	Bi	100 ug/mL
					MT-Ca-SpS_00001	10 mL	Ca	100 ug/mL
					MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Co-SpS_00001	10 mL	Co	100 ug/mL
					MT-Cr-SpS_00001	10 mL	Cr	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Fe-SpS_00001	10 mL	Fe	100 ug/mL
					MT-Li-CS-SpS_00001	10 mL	Li	100 ug/mL
					MT-Mg-SpS_00001	10 mL	Mg	100 ug/mL
					MT-Mn-SpS_00001	10 mL	Mn	100 ug/mL
					MT-Mo-SpS_00001	10 mL	Mo	100 ug/mL
					MT-Ni-SpS_00001	10 mL	Ni	100 ug/mL
					MT-P-SpS_00001	10 mL	P	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
					MT-S-CS-SpS_00001	10 mL	Sulfur	100 ug/mL
					MT-Sb-SpS_00001	10 mL	Sb	100 ug/mL
					MT-Se-SpS_00001	10 mL	Se	100 ug/mL
					MT-Sn-SpS_00001	10 mL	Sn	100 ug/mL
					MT-Sr-SpS_00001	10 mL	Sr	100 ug/mL
					MT-Ti-SpS_00001	10 mL	Ti	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MT-Tl-SpS_00001	10 mL	Tl	100 ug/mL
					MT-V-SpS_00001	10 mL	V	100 ug/mL
					MT-Zn-SpS_00001	10 mL	Zn	100 ug/mL
.MT-As-SpS_00001	04/30/23		AccuStandard, Lot 218045118		(Purchased Reagent)		As	10000 ug/mL
.MT-Be-SpS_00001	02/28/23		Ultra, Lot CP-0170		(Purchased Reagent)		Be	10000 ug/mL
.MT-Bi-CS-SpS_00001	06/30/23		Ultra, Lot CP-2124		(Purchased Reagent)		Bi	10000 ug/mL
.MT-Ca-SpS_00001	04/30/23		Ultra, Lot CP-0877		(Purchased Reagent)		Ca	10000 ug/mL
.MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
.MT-Co-SpS_00001	05/31/23		Ultra, Lot CP-2011		(Purchased Reagent)		Co	10000 ug/mL
.MT-Cr-SpS_00001	05/31/23		Ultra, Lot CP-1768		(Purchased Reagent)		Cr	10000 ug/mL
.MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
.MT-Fe-SpS_00001	08/31/24		Ultra, Lot CR-3137		(Purchased Reagent)		Fe	10000 ug/mL
.MT-Li-CS-SpS_00001	05/31/21		Ultra, Lot T00356		(Purchased Reagent)		Li	10000 ug/mL
.MT-Mg-SpS_00001	09/30/22		Ultra, Lot CM-4445		(Purchased Reagent)		Mg	10000 ug/mL
.MT-Mn-SpS_00001	01/31/24		Ultra, Lot M00334A		(Purchased Reagent)		Mn	10000 ug/mL
.MT-Mo-SpS_00001	08/31/21		Ultra, Lot CL-2860		(Purchased Reagent)		Mo	10000 ug/mL
.MT-Ni-SpS_00001	02/28/23		Ultra, Lot CP-0006		(Purchased Reagent)		Ni	10000 ug/mL
.MT-P-SpS_00001	09/10/23		Ultra, Lot CP-4381		(Purchased Reagent)		P	10000 ug/mL
.MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
.MT-S-CS-SpS_00001	11/30/22		Ultra, Lot CM-5393		(Purchased Reagent)		Sulfur	10000 ug/mL
.MT-Sb-SpS_00001	06/30/23		Ultra, Lot CP-2412		(Purchased Reagent)		Sb	10000 ug/mL
.MT-Se-SpS_00001	11/30/22		Ultra, Lot CM-5316		(Purchased Reagent)		Se	10000 ug/mL
.MT-Sn-SpS_00001	07/31/21		Ultra, Lot T00753		(Purchased Reagent)		Sn	10000 ug/mL
.MT-Sr-SpS_00001	09/30/22		Ultra, Lot CM-4363		(Purchased Reagent)		Sr	10000 ug/mL
.MT-Ti-SpS_00001	04/30/22		Ultra, Lot CM-1138		(Purchased Reagent)		Ti	10000 ug/mL
.MT-Tl-SpS_00001	05/31/23		Ultra, Lot CP-2010		(Purchased Reagent)		Tl	10000 ug/mL
.MT-V-SpS_00001	08/31/23		Ultra, Lot CP-3591		(Purchased Reagent)		V	10000 ug/mL
.MT-Zn-SpS_00001	02/28/23		Ultra, Lot CP-0155		(Purchased Reagent)		Zn	10000 ug/mL
MT_ICP_Spike2_00003	01/30/20	07/04/19	HNO3, Lot 1118092	1000 mL	MT_ICP_Ag_SpS_00001	5 mL	Ag	50 ug/mL
					MT_ICP_Al_SpS_00001	10 mL	Al	100 ug/mL
					MT_ICP_B_SpS_00001	10 mL	B	100 ug/mL
					MT_ICP_Ba_SpS_00001	10 mL	Ba	100 ug/mL
					MT_ICP_K_SpS_00001	100 mL	K	1000 ug/mL
					MT_ICP_Na_SpS_00001	100 mL	Na	1000 ug/mL
					MT_ICP_Si_SpS_00004	10 mL	Si	100 ug/mL
							SiO2	214 ug/mL
.MT_ICP_Ag_SpS_00001	09/30/23		Ultra, Lot CP-4409		(Purchased Reagent)		Ag	10000 ug/mL
.MT_ICP_Al_SpS_00001	09/30/23		Ultra, Lot CP-3976		(Purchased Reagent)		Al	10000 ug/mL
.MT_ICP_B_SpS_00001	12/31/21		Ultra, Lot K00924A		(Purchased Reagent)		B	10000 ug/mL
.MT_ICP_Ba_SpS_00001	01/31/23		Ultra, Lot CM-6544		(Purchased Reagent)		Ba	10000 ug/mL
.MT_ICP_K_SpS_00001	04/30/24		Ultra, Lot CR-0917		(Purchased Reagent)		K	10000 ug/mL
.MT_ICP_Na_SpS_00001	09/30/23		Ultra, Lot CP-3978		(Purchased Reagent)		Na	10000 ug/mL
.MT_ICP_Si_SpS_00004	04/30/23		Ultra, Lot CP-1238		(Purchased Reagent)		Si	10000 ug/mL
							SiO2	21400 ug/mL
MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
..MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
.MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_ICS_A_00002	05/30/20	07/01/19	1% HNO3, Lot DIWATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
							Ti	20 mg/L
MT_MS_ICS_AB_00002	05/14/20	07/01/19	1% HNO3, Lot DIWAATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
					MT_MS_Int_B_00002	0.5 mL	Ag	0.005 mg/L
							As	0.01 mg/L
							Cadmium	0.01 mg/L
							Co	0.02 mg/L
							Copper	0.02 mg/L
							Cr	0.02 mg/L
							Mn	0.02 mg/L
							Ni	0.02 mg/L
							Se	0.01 mg/L
							V	0.02 mg/L
							Zn	0.01 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
.MT_MS_Int_B_00002	05/30/20		Spex, Lot CL6-114MKBY		(Purchased Reagent)		Ag	5 mg/L
							As	10 mg/L
							Cadmium	10 mg/L
							Co	20 mg/L
							Copper	20 mg/L
							Cr	20 mg/L
							Mn	20 mg/L
							Ni	20 mg/L
							Se	10 mg/L
							V	20 mg/L
							Zn	10 mg/L
MT_MS_ICV1_00002	01/11/20	10/03/19	1% Nitric Acid, Lot DIWATER	2000 mL	MT_MS_Spike1_00001	2 mL	Cadmium	0.1 ug/mL
							Copper	0.1 ug/mL
							Lead	0.1 ug/mL
.MT_MS_Spike1_00001	01/30/20	09/26/19	HNO3, Lot 1118092	1000 mL	MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
..MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
..MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
..MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
MT_MS_LL_00006	08/30/20	09/24/19	1% HNO3, Lot DIWATER	100 mL	MT_MS_CCV_00005	1 mL	Cadmium	0.001 mg/L
							Copper	0.001 mg/L
							Lead	0.001 mg/L
.MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
..MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
...MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_SPIKE_3_00002	12/31/22	07/09/19	2% Nitric Acid, Lot DIWATER	1000 mL	MT_MS_Ca10000_00001	100 mL	Ca	1000 mg/L
					MT_MS_Fe10000_00001	100 mL	Fe	1000 mg/L
					MT_MS_Mg10000_00001	100 mL	Mg	1000 mg/L
.MT_MS_Ca10000_00001	09/30/24		Ultra, Lot CR-3808		(Purchased Reagent)		Ca	10000 mg/L
.MT_MS_Fe10000_00001	08/31/24		Ultra, Lot ICP-126-L		(Purchased Reagent)		Fe	10000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT MS Mg10000 00001	04/20/23		Ultra, Lot ICP-112-L		(Purchased Reagent)		Mg	10000 mg/L
WC SSC STD 00001	02/05/20	08/05/19	DI Water, Lot 022619	2 L	WC TSS STK 00001	0.2 g	Total Suspended Solids	100 mg/L
.WC TSS STK 00001	11/04/21		FISHER, Lot 160676		(Purchased Reagent)		Total Suspended Solids	1 g/g
WC TUR STD 00008	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	10 NTU
WC TUR STD 00009	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	1000 NTU
WC TUR STD 00010	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	0.02 NTU
WC TUR STD2 00055	11/28/19	11/27/19	H2O, Lot 1	100 mL	WC_TUR_STD1_00001	2.5 mL	Turbidity	100 NTU
.WC TUR STD1 00001	11/27/20		HACH, Lot A8330		(Purchased Reagent)		Turbidity	4000 NTU

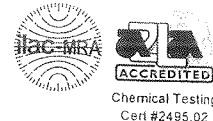
Reagent

MT_MS_ICs2_00002



SPEXertificate®

Certificate of Reference Material



Catalog Number: CL-CAL-2 **Lot No.** CL2-69WGY
Description: Instrument Calibration Standard 2
Matrix: 5% HNO₃ / Tr. Tart. Acid / Tr. HF

This CLARITAS PPT® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.6 µg/mL	±0.5 µg/mL	3151*	Mn	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3132*
Al	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3101a*	Mo	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3134*
As	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3103a*	Na	100 µg/mL	100 µg/mL	±0.5 µg/mL	3152a*
Ba	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3104a*	Ni	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3136*
Be	100 µg/mL	100 µg/mL	±0.5 µg/mL	3105a*	Pb	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3128*
Ca	100 µg/mL	100 µg/mL	±0.5 µg/mL	3109a*	Sb	100 µg/mL	100 µg/mL	±0.5 µg/mL	3102a*
Cd	100 µg/mL	99.0 µg/mL	±0.5 µg/mL	3108*	Se	100 µg/mL	100 µg/mL	±0.5 µg/mL	3149*
Co	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3113*	Sn	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3161a*
Cr	100 µg/mL	100 µg/mL	±0.5 µg/mL	3112a*	Sr	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3153a*
Cu	100 µg/mL	101 µg/mL	±0.5 µg/mL	3114*	Ti	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3162a*
Fe	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3126a*	Tl	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3158*
K	100 µg/mL	100 µg/mL	±0.5 µg/mL	3141a*	V	100 µg/mL	100 µg/mL	±0.5 µg/mL	3165*
Mg	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3131a*	Zn	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3168a*

* - indicates NIST SRM

† - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# CL5-135MKB, CL6-41MKB, CL-1-112YJ, CL1372YP

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.08	Eu	<0.1	In	<20	P	<400	Ru	2
B	<4	Ga	<0.01	Ir	<0.1	Pd	<50	Sc	<0.4
Bi	2	Gd	0.4	La	5	Pr	0.04	Si	<300
Ce	0.9	Ge	<0.7	Li	0.5	Pt	<0.1	Sm	3
Cs	0.3	Hf	0.07	Lu	<0.02	Rb	3	Ta	0.6
Dy	<0.01	Hg	<0.2	Nb	0.4	Re	1	Tb	<0.01
Er	<0.01	Ho	<0.01	Nd	0.1	Rh	4	Te	<1
								Th	<0.03
								Tm	<0.01
								U	<0.03
								W	9
								Y	0.3
								Yb	<0.03
								Zr	3



116696
 ID: MI_MS_JCS2_00002
 Exp: 08/30/20 Pppl U/LE Cph 0881319
 1000ppm Cal Std 2 SPEX

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: AUG -- 2019

Certifying Officer: Katherine Cullinan
 Katherine Cullinan, QC Manager

METALS

COVER PAGE
METALS

Lab Name: Eurofins Calscience _____ Job Number: 570-14206-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID	Lab Sample ID
A2BMP0012S007	570-14206-1
EVBMP0003S029	570-14206-2
FBQW1869Q001	570-14206-3

Comments:

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: A2BMP0012S007

Lab Sample ID: 570-14206-1

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:50

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: A2BMP0012S007

Lab Sample ID: 570-14206-1

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:50

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.00403	0.00500	0.000640	mg/L	J		5	200.8
7440-50-8	Copper	0.00600	0.00500	0.000700	mg/L			5	200.8
7439-92-1	Lead	0.00352	0.00500	0.000449	mg/L	J		5	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: A2BMP0012S007

Lab Sample ID: 570-14206-1

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:50

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L		H	1	200.8
7440-50-8	Copper	0.000872	0.00100	0.000140	mg/L	J	H	1	200.8
7439-92-1	Lead	0.000518	0.00100	0.000089 8	mg/L	J	H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: EV BMP0003S029

Lab Sample ID: 570-14206-2

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:30

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: EV BMP0003S029

Lab Sample ID: 570-14206-2

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:30

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.00373	0.00500	0.000640	mg/L	J		5	200.8
7440-50-8	Copper	0.00622	0.00500	0.000700	mg/L			5	200.8
7439-92-1	Lead	0.00331	0.00500	0.000449	mg/L	J		5	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: EV BMP0003S029

Lab Sample ID: 570-14206-2

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:30

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L		H	1	200.8
7440-50-8	Copper	0.000811	0.00100	0.000140	mg/L	J	H	1	200.8
7439-92-1	Lead	ND	0.00100	0.000089 8	mg/L		H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: FBQW1869Q001

Lab Sample ID: 570-14206-3

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:15

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: FBQW1869Q001

Lab Sample ID: 570-14206-3

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:15

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L			1	200.8
7440-50-8	Copper	ND	0.00100	0.000140	mg/L			1	200.8
7439-92-1	Lead	ND	0.00100	0.000089 8	mg/L			1	200.8

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-37974/46 12/09/2019 15:37				CCV 570-37974/3 12/10/2019 06:32				CCV 570-37974/17 12/10/2019 07:11			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	103.4		100	103	102.7		100	103	102.3		100	102
Copper	103.9		100	104	102.9		100	103	101.4		100	101
Lead	104.8		100	105	97.09		100	97	95.63		100	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-37974/30 12/10/2019 07:47											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	104.0		100	104								
Copper	102.3		100	102								
Lead	97.78		100	98								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-37974/3 12/10/2019 06:32				ICVL 570-37974/6 12/10/2019 06:41				CCV 570-37974/17 12/10/2019 07:11			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	102.7		100	103	1.034		1.00	103	102.3		100	102
Copper	102.9		100	103	1.070		1.00	107	101.4		100	101
Lead	97.09		100	97	1.010		1.00	101	95.63		100	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-37974/30 12/10/2019 07:47											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	104.0		100	104								
Copper	102.3		100	102								
Lead	97.78		100	98								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-38174/46 12/10/2019 11:36				CCV 570-38174/3 12/10/2019 18:19				CCV 570-38174/14 12/10/2019 18:53			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	102.8		100	103	101.3		100	101	101.6		100	102
Copper	103.0		100	103	103.8		100	104	102.6		100	103
Lead	98.59		100	99	96.34		100	96	97.51		100	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38174/25 12/10/2019 19:29				CCV 570-38174/33 12/10/2019 20:05							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.9		100	102	102.3		100	102				
Copper	103.4		100	103	103.2		100	103				
Lead	98.23		100	98	99.45		100	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38174/3 12/10/2019 18:19				ICVL 570-38174/5 12/10/2019 18:26				CCV 570-38174/14 12/10/2019 18:53			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.3		100	101	1.253		1.00	125	101.6		100	102
Copper	103.8		100	104	1.034		1.00	103	102.6		100	103
Lead	96.34		100	96	0.9766	J	1.00	98	97.51		100	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38174/25 12/10/2019 19:29				CCV 570-38174/33 12/10/2019 20:05							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.9		100	102	102.3		100	102				
Copper	103.4		100	103	103.2		100	103				
Lead	98.23		100	98	99.45		100	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-38297/4 12/11/2019 11:31				CCV 570-38297/8 12/11/2019 11:42				CCV 570-38297/18 12/11/2019 12:09			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	102.7		100	103	100.3		100	100	101.8		100	102
Copper	101.7		100	102	102.0		100	102	101.1		100	101
Lead	105.0		100	105	102.0		100	102	100.7		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38297/8 12/11/2019 11:42				ICVL 570-38297/14 12/11/2019 11:58				CCV 570-38297/18 12/11/2019 12:09			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	100.3		100	100	0.9898	J	1.00	99	101.8		100	102
Copper	102.0		100	102	1.036		1.00	104	101.1		100	101
Lead	102.0		100	102	0.9989	J	1.00	100	100.7		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	ICV 570-37330/2-A 12/06/2019 13:20				CCV 570-37330/10-A 12/06/2019 15:25				CCV 570-37330/10-A 12/06/2019 15:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00956 6		0.0100	96	0.00397 3		0.00400	99	0.00397 0		0.00400	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	CCV 570-37330/10-A 12/06/2019 16:15				CCV 570-37330/10-A 12/06/2019 21:54				CCV 570-37330/10-A 12/06/2019 22:46			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00392 3		0.00400	98	0.00391 7		0.00400	98	0.00389 2		0.00400	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	CCV 570-37330/10-A 12/06/2019 23:02											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00390 3		0.00400	98								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	ICV 570-37330/2-A 12/09/2019 16:21				CCV 570-37330/10-A 12/09/2019 16:28				CCV 570-37330/10-A 12/09/2019 16:59			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00994 8		0.0100	99	0.00400 0		0.00400	100	0.00397 4		0.00400	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1
 SDG No.: _____
 Method: 245.1 Instrument ID: HG8
 Lab Sample ID: CRA 570-37330/12-A Concentration Units: mg/L
 CRQL Check Standard Source: HG_1ppm STD_00008

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0005559		111	65-135

Lab Sample ID: CRA 570-37769/12-A Concentration Units: mg/L
 CRQL Check Standard Source: HG_1ppm STD_00008

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0005427		109	65-135

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-37974/48 12/09/2019 15:45		CCB 570-37974/5 12/10/2019 06:38		CCB 570-37974/18 12/10/2019 07:14		CCB 570-37974/19 12/10/2019 07:17	
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		0.1899	J	0.3121	J	0.1662	J
Copper	1.00	ND		ND		ND		ND	
Lead	1.00	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 570-37974/31 12/10/2019 07:50							
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	0.2883	J						
Copper	1.00	ND							
Lead	1.00	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-38174/48 12/10/2019 11:51		CCB 570-38174/4 12/10/2019 18:23		CCB 570-38174/15 12/10/2019 18:59		CCB 570-38174/26 12/10/2019 19:35	
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		ND		ND		ND	
Copper	1.00	ND		ND		ND		ND	
Lead	1.00	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 570-38174/34 12/10/2019 20:11							
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND							
Copper	1.00	ND							
Lead	1.00	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-38297/7 12/11/2019 11:39		CCB 570-38297/13 12/11/2019 11:56		CCB 570-38297/19 12/11/2019 12:13		Found	C
		Found	C	Found	C	Found	C		
Cadmium	1.00	ND		ND		ND			
Copper	1.00	ND		ND		ND			
Lead	1.00	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-37330/3-A 12/06/2019 13:22		CCB 570-37330/11-A 12/06/2019 15:27		CCB 570-37330/11-A 12/06/2019 15:55		CCB 570-37330/11-A 12/06/2019 16:18	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.000200	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	CCB 570-37330/11-A 12/06/2019 21:56		CCB 570-37330/11-A 12/06/2019 22:48		CCB 570-37330/11-A 12/06/2019 23:05		Found	C
		Found	C	Found	C	Found	C		
Mercury	0.000200	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-37330/3-A 12/09/2019 16:24		CCB 570-37330/11-A 12/09/2019 16:31		CCB 570-37330/11-A 12/09/2019 17:01		Found	C
		Found	C	Found	C	Found	C		
Mercury	0.000200	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job No.: 570-14206-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-37640/1-A
Instrument Code: ICPMS05 Batch No.: 37974

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-14206-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-37643/1-A
Instrument Code: ICPMS05 Batch No.: 38297

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-37493/1-A
Instrument Code: HG8 Batch No.: 37422

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-14206-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-37331/1-B
Instrument Code: HG8 Batch No.: 37422

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG No.: _____

Lab Sample ID: ICSA 570-38297/10

Instrument ID: ICPMS05

Lab File ID: 191211E2_iCal.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Cadmium		-0.0540	
Copper		0.0633	
Lead		0.0370	
<i>Aluminum</i>	<i>10000</i>	<i>9800</i>	<i>98</i>
<i>Antimony</i>		<i>0.248</i>	
<i>Arsenic</i>		<i>0.136</i>	
<i>Barium</i>		<i>0.184</i>	
<i>Beryllium</i>		<i>0.0024</i>	
<i>Boron</i>		<i>0.808</i>	
<i>Calcium</i>	<i>30000</i>	<i>30087</i>	<i>100</i>
<i>Chromium</i>		<i>0.0836</i>	
<i>Cobalt</i>		<i>0.0738</i>	
<i>Iron</i>	<i>25000</i>	<i>24594</i>	<i>98</i>
<i>Magnesium</i>	<i>10000</i>	<i>9841</i>	<i>98</i>
<i>Manganese</i>		<i>0.339</i>	
<i>Molybdenum</i>	<i>200</i>	<i>205</i>	<i>103</i>
<i>Nickel</i>		<i>0.320</i>	
<i>Potassium</i>	<i>10000</i>	<i>10313</i>	<i>103</i>
<i>Selenium</i>		<i>-0.114</i>	
<i>Silver</i>		<i>0.0608</i>	
<i>Sodium</i>	<i>25000</i>	<i>25243</i>	<i>101</i>
<i>Strontium</i>		<i>0.411</i>	
<i>Thallium</i>		<i>0.0189</i>	
<i>Tin</i>		<i>0.657</i>	
<i>Titanium</i>	<i>200</i>	<i>208</i>	<i>104</i>
<i>Vanadium</i>		<i>0.0870</i>	
<i>Zinc</i>		<i>0.371</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG No.: _____

Lab Sample ID: ICSAB 570-38297/11

Instrument ID: ICPMS05

Lab File ID: 191211E2_iCal.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Cadmium	10.0	9.85	99
Copper	20.0	19.5	98
Lead		0.0288	
<i>Aluminum</i>	<i>10000</i>	<i>9621</i>	<i>96</i>
<i>Antimony</i>		<i>0.177</i>	
<i>Arsenic</i>	<i>10.0</i>	<i>10.8</i>	<i>108</i>
<i>Barium</i>		<i>0.196</i>	
<i>Beryllium</i>		<i>0.0031</i>	
<i>Boron</i>		<i>0.418</i>	
<i>Calcium</i>	<i>30000</i>	<i>29415</i>	<i>98</i>
<i>Chromium</i>	<i>20.0</i>	<i>20.2</i>	<i>101</i>
<i>Cobalt</i>	<i>20.0</i>	<i>20.1</i>	<i>100</i>
<i>Iron</i>	<i>25000</i>	<i>23438</i>	<i>94</i>
<i>Magnesium</i>	<i>10000</i>	<i>9612</i>	<i>96</i>
<i>Manganese</i>	<i>20.0</i>	<i>19.1</i>	<i>96</i>
<i>Molybdenum</i>	<i>200</i>	<i>204</i>	<i>102</i>
<i>Nickel</i>	<i>20.0</i>	<i>20.1</i>	<i>101</i>
<i>Potassium</i>	<i>10000</i>	<i>10083</i>	<i>101</i>
<i>Selenium</i>	<i>10.0</i>	<i>10.00</i>	<i>100</i>
<i>Silver</i>	<i>5.00</i>	<i>5.09</i>	<i>102</i>
<i>Sodium</i>	<i>25000</i>	<i>24751</i>	<i>99</i>
<i>Strontium</i>		<i>0.415</i>	
<i>Thallium</i>		<i>0.0157</i>	
<i>Tin</i>		<i>0.258</i>	
<i>Titanium</i>	<i>200</i>	<i>202</i>	<i>101</i>
<i>Vanadium</i>	<i>20.0</i>	<i>21.4</i>	<i>107</i>
<i>Zinc</i>	<i>10.0</i>	<i>9.91</i>	<i>99</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS

Client ID: A2BMP0012S007 MS Lab ID: 570-14206-1 MS
 Lab Name: Eurofins Calscience Job No.: 570-14206-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.009568	ND	0.0100	96	57-141		245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS

Client ID: A2BMP0012S007 MSD Lab ID: 570-14206-1 MSD
 Lab Name: Eurofins Calscience Job No.: 570-14206-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009684	0.0100	97	57-141	1	10		245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 METALS - TOTAL RECOVERABLE

Lab ID: LCS 570-37640/2-A

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1025		103	80	120		200.8
Copper	0.100	0.1002		100	80	120		200.8
Lead	0.100	0.09660		97	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - TOTAL RECOVERABLE

Lab ID: LCSD 570-37640/3-A

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1049	0.100	105	80-120	2	20		200.8
Copper	0.1026	0.100	103	80-120	2	20		200.8
Lead	0.09788	0.100	98	80-120	1	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-37643/2-A

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1042		104	80	120		200.8
Copper	0.100	0.1024		102	80	120		200.8
Lead	0.100	0.09654		97	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-37643/3-A

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1027	0.100	103	80-120	1	20		200.8
Copper	0.1019	0.100	102	80-120	1	20		200.8
Lead	0.09610	0.100	96	80-120	0	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-37331/2-B

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.009739		97	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-37331/3-B

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009776	0.0100	98	85-121	0	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 570-37493/2-A

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.009560		96	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS

Lab ID: LCSD 570-37493/3-A

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009641	0.0100	96	85-121	1	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience

Job Number: 570-14206-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 06/04/2013 00:00

Prep Method: 200.8

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.000128
Copper	65	0.001	0.00014
Lead	207	0.001	0.0000898

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job Number: 570-14206-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 06/04/2013 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.128
Copper	65	1	0.14
Lead	207	1	0.09

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-14206-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 06/04/2013 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.000128
Copper	65	0.001	0.00014
Lead	207	0.001	0.0000898

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-14206-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

XMDL Date: 06/04/2013 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.128
Copper	65	1	0.14
Lead	207	1	0.09

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience

Job Number: 570-14206-1

SDG Number: _____

Matrix: Water

Instrument ID: HG8

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience Job Number: 570-14206-1
SDG Number: _____
Matrix: Water Instrument ID: HG8
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-14206-1

SDG Number: _____

Matrix: Water

Instrument ID: HG8

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-14206-1
SDG Number: _____
Matrix: Water Instrument ID: HG8
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-14206-1

SDG No.: _____

Instrument ID: ICPMS05

Date: 04/17/2017 06:04

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Cadmium		10	200.8
Copper		50	200.8
Lead		20	200.8

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-14206-1

SDG No.: _____

Instrument ID: HG8

Date: 04/17/2017 05:54

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Mercury		10	245.1

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Prep Method: 200.8

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-37640/1-A	12/08/2019 07:30	37640		50	50
LCS 570-37640/2-A	12/08/2019 07:30	37640		50	50
LCSD 570-37640/3-A	12/08/2019 07:30	37640		50	50
570-14206-1	12/08/2019 07:30	37640		50	50
570-14206-2	12/08/2019 07:30	37640		50	50
570-14206-3	12/08/2019 07:30	37640		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-37331/1-B	12/06/2019 11:49	37335		50	100
LCS 570-37331/2-B	12/06/2019 11:49	37335		50	100
LCSD 570-37331/3-B	12/06/2019 11:49	37335		50	100
570-14206-1	12/06/2019 11:49	37335		50	100
570-14206-2	12/06/2019 11:49	37335		50	100

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-37493/1-A	12/06/2019 19:31	37493		50	100
LCS 570-37493/2-A	12/06/2019 19:31	37493		50	100
LCSD 570-37493/3-A	12/06/2019 19:31	37493		50	100
570-14206-1	12/06/2019 19:31	37493		50	100
570-14206-1 MS	12/06/2019 19:31	37493		50	100
570-14206-1 MSD	12/06/2019 19:31	37493		50	100
570-14206-2	12/06/2019 19:31	37493		50	100
570-14206-3	12/06/2019 19:31	37493		50	100

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 12/09/2019 15:37 End Date: 12/10/2019 08:28

Lab Sample Id	D/F	Type	Time	Analytes																											
				C	C	P																									
ICV 570-37974/46	1		15:37	X	X	X																									
ICV 570-37974/47	1		15:43	X	X	X																									
ICB 570-37974/48	1		15:45	X	X	X																									
ICIS 570-37974/1			06:27	X	X	X																									
IC 570-37974/2	1		06:30	X	X	X																									
CCV 570-37974/3	1		06:32	X	X	X																									
CCB 570-37974/4			06:35																												
CCB 570-37974/5	1		06:38	X	X	X																									
ICVL 570-37974/6	1		06:41	X	X	X																									
MB 570-37640/1-A	1	R	06:43	X	X	X																									
LCS 570-37640/2-A	1	R	06:46	X	X	X																									
LCSD 570-37640/3-A	1	R	06:49	X	X	X																									
ZZZZZZ			06:52																												
ZZZZZZ			06:54																												
ZZZZZZ			06:57																												
ZZZZZZ			07:00																												
ZZZZZZ			07:03																												
ZZZZZZ			07:06																												
ZZZZZZ			07:08																												
CCV 570-37974/17	1		07:11	X	X	X																									
CCB 570-37974/18	1		07:14	X	X	X																									
CCB 570-37974/19	1		07:17	X	X	X																									
ZZZZZZ			07:19																												
ZZZZZZ			07:22																												
ZZZZZZ			07:25																												
570-14206-1	5	R	07:28	X	X	X																									
570-14206-2	5	R	07:30	X	X	X																									
570-14206-3	1	R	07:33	X	X	X																									
ZZZZZZ			07:36																												
ZZZZZZ			07:39																												
ZZZZZZ			07:41																												
ZZZZZZ			07:44																												
CCV 570-37974/30	1		07:47	X	X	X																									
CCB 570-37974/31	1		07:50	X	X	X																									
CCB 570-37974/32			07:52																												
ZZZZZZ			07:55																												
ZZZZZZ			07:58																												
ZZZZZZ			08:01																												
ZZZZZZ			08:04																												
ZZZZZZ			08:06																												
ZZZZZZ			08:09																												
ZZZZZZ			08:12																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 12/09/2019 15:37 End Date: 12/10/2019 08:28

Lab Sample Id	D/F	T y p e	Time	Analytes																											
				C d	C u	P b																									
ZZZZZZ			08:15																												
ZZZZZZ			08:17																												
ZZZZZZ			08:20																												
CCV 570-37974/43			08:23																												
CCB 570-37974/44			08:26																												
CCB 570-37974/45			08:28																												

Prep Types: _____
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG No.: _____

Instrument ID: ICPMS05

Analysis Method: 200.8

Start Date: 12/10/2019 11:36

End Date: 12/10/2019 20:44

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICV 570-38174/46	1		11:36	X	X	X																									
ICV 570-38174/47	1		11:48	X	X	X																									
ICB 570-38174/48	1		11:51	X	X	X																									
ICIS 570-38174/1			18:13	X	X	X																									
IC 570-38174/2	1		18:16	X	X	X																									
CCV 570-38174/3	1		18:19	X	X	X																									
CCB 570-38174/4	1		18:23	X	X	X																									
ICVL 570-38174/5	1		18:26	X	X	X																									
ZZZZZZ			18:29																												
LCS 570-37643/2-A	1	D	18:31	X	X	X																									
LCSD 570-37643/3-A	1	D	18:34	X	X	X																									
ZZZZZZ			18:40																												
ZZZZZZ			18:42																												
ZZZZZZ			18:45																												
ZZZZZZ			18:48																												
ZZZZZZ			18:51																												
CCV 570-38174/14	1		18:53	X	X	X																									
CCB 570-38174/15	1		18:59	X	X	X																									
ZZZZZZ			19:02																												
ZZZZZZ			19:05																												
ZZZZZZ			19:07																												
ZZZZZZ			19:10																												
ZZZZZZ			19:16																												
ZZZZZZ			19:18																												
ZZZZZZ			19:21																												
ZZZZZZ			19:24																												
ZZZZZZ			19:27																												
CCV 570-38174/25	1		19:29	X	X	X																									
CCB 570-38174/26	1		19:35	X	X	X																									
ZZZZZZ			19:38																												
ZZZZZZ			19:40																												
ZZZZZZ			19:43																												
ZZZZZZ			19:46																												
570-14206-1	1	D	19:49	X	X	X																									
570-14206-2	1	D	19:51	X	X	X																									
CCV 570-38174/33	1		20:05	X	X	X																									
CCB 570-38174/34	1		20:11	X	X	X																									
ZZZZZZ			20:13																												
ZZZZZZ			20:16																												
ZZZZZZ			20:19																												
ZZZZZZ			20:22																												
ZZZZZZ			20:24																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 12/10/2019 11:36 End Date: 12/10/2019 20:44

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			20:27																												
ZZZZZZ			20:30																												
ZZZZZZ			20:33																												
ZZZZZZ			20:35																												
CCV 570-38174/44			20:38																												
CCB 570-38174/45			20:44																												

Prep Types: _____
D = Dissolved

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/06/2019 13:03 End Date: 12/06/2019 23:05

Lab Sample Id	D/F	Type	Time	Hg	Analytes																			
ICIS 570-37330/1-A			13:03	X																				
IC 570-37330/4-A			13:06	X																				
IC 570-37330/5-A			13:08	X																				
IC 570-37330/7-A			13:10	X																				
IC 570-37330/7-A			13:12	X																				
IC 570-37330/8-A			13:15	X																				
IC 570-37330/9-A			13:17	X																				
ICV 570-37330/2-A	1		13:20	X																				
ICB 570-37330/3-A	1		13:22	X																				
CRA 570-37330/12-A	1		13:24	X																				
CCV 570-37330/10-A			13:27																					
CCB 570-37330/11-A			13:29																					
ZZZZZZ			13:49																					
ZZZZZZ			13:52																					
ZZZZZZ			13:54																					
ZZZZZZ			13:56																					
ZZZZZZ			13:59																					
ZZZZZZ			14:01																					
ZZZZZZ			14:03																					
CCV 570-37330/10-A			14:05																					
CCB 570-37330/11-A			14:08																					
ZZZZZZ			14:34																					
ZZZZZZ			14:36																					
ZZZZZZ			14:39																					
ZZZZZZ			14:41																					
ZZZZZZ			14:43																					
ZZZZZZ			14:46																					
ZZZZZZ			14:48																					
CCV 570-37330/10-A			14:50																					
CCB 570-37330/11-A			14:52																					
ZZZZZZ			15:02																					
ZZZZZZ			15:04																					
ZZZZZZ			15:07																					
ZZZZZZ			15:09																					
ZZZZZZ			15:11																					
ZZZZZZ			15:14																					
ZZZZZZ			15:16																					
ZZZZZZ			15:18																					
ZZZZZZ			15:20																					
ZZZZZZ			15:23																					
CCV 570-37330/10-A	1		15:25	X																				
CCB 570-37330/11-A	1		15:27	X																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/06/2019 13:03 End Date: 12/06/2019 23:05

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			15:30																												
ZZZZZZ			15:32																												
ZZZZZZ			15:34																												
ZZZZZZ			15:36																												
ZZZZZZ			15:39																												
ZZZZZZ			15:41																												
MB 570-37331/1-B	1	D	15:43	X																											
LCS 570-37331/2-B	1	D	15:46	X																											
LCSD 570-37331/3-B	1	D	15:48	X																											
ZZZZZZ			15:50																												
CCV 570-37330/10-A	1		15:52	X																											
CCB 570-37330/11-A	1		15:55	X																											
ZZZZZZ			15:57																												
ZZZZZZ			15:59																												
ZZZZZZ			16:02																												
ZZZZZZ			16:04																												
ZZZZZZ			16:06																												
ZZZZZZ			16:09																												
ZZZZZZ			16:11																												
ZZZZZZ			16:13																												
CCV 570-37330/10-A	1		16:15	X																											
CCB 570-37330/11-A	1		16:18	X																											
ZZZZZZ			16:26																												
ZZZZZZ			16:28																												
ZZZZZZ			16:30																												
CCV 570-37330/10-A			16:32																												
CCB 570-37330/11-A			16:35																												
CCV 570-37330/10-A			18:48																												
CCV 570-37330/10-A			18:54																												
CCB 570-37330/11-A			18:56																												
ZZZZZZ			19:01																												
ZZZZZZ			19:04																												
ZZZZZZ			19:06																												
ZZZZZZ			19:08																												
ZZZZZZ			19:11																												
ZZZZZZ			19:13																												
ZZZZZZ			19:15																												
ZZZZZZ			19:17																												
ZZZZZZ			19:20																												
ZZZZZZ			19:22																												
CCV 570-37330/10-A			19:24																												
CCB 570-37330/11-A			19:27																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/06/2019 13:03 End Date: 12/06/2019 23:05

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			19:29																												
ZZZZZZ			19:31																												
CCV 570-37330/10-A			19:33																												
CCB 570-37330/11-A			19:36																												
ZZZZZZ			19:43																												
ZZZZZZ			19:45																												
ZZZZZZ			19:48																												
ZZZZZZ			19:50																												
ZZZZZZ			19:52																												
ZZZZZZ			19:55																												
CCV 570-37330/10-A			19:57																												
CCB 570-37330/11-A			19:59																												
ZZZZZZ			21:35																												
ZZZZZZ			21:38																												
ZZZZZZ			21:40																												
ZZZZZZ			21:42																												
ZZZZZZ			21:44																												
ZZZZZZ			21:47																												
ZZZZZZ			21:49																												
ZZZZZZ			21:51																												
CCV 570-37330/10-A	1		21:54	X																											
CCB 570-37330/11-A	1		21:56	X																											
MB 570-37493/1-A	1	T	22:23	X																											
LCS 570-37493/2-A	1	T	22:25	X																											
LCSD 570-37493/3-A	1	T	22:28	X																											
570-14206-1	1	T	22:30	X																											
570-14206-1 MS	1	T	22:32	X																											
570-14206-1 MSD	1	T	22:35	X																											
ZZZZZZ			22:37																												
ZZZZZZ			22:39																												
ZZZZZZ			22:42																												
ZZZZZZ			22:44																												
CCV 570-37330/10-A	1		22:46	X																											
CCB 570-37330/11-A	1		22:48	X																											
ZZZZZZ			22:51																												
ZZZZZZ			22:53																												
ZZZZZZ			22:55																												
570-14206-1	1	D	22:58	X																											
570-14206-2	1	D	23:00	X																											
CCV 570-37330/10-A	1		23:02	X																											
CCB 570-37330/11-A	1		23:05	X																											

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/06/2019 13:03 End Date: 12/06/2019 23:05

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											

Prep Types: _____
D = Dissolved
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			15:15																												
ZZZZZZ			15:17																												
ICV 570-37769/2-A			15:57																												
IC 570-37769/4-A			15:59	X																											
IC 570-37769/5-A			16:01	X																											
ICIS 570-37769/1-A			16:03	X																											
ICIS 570-37769/1-A			16:04	X																											
IC 570-37769/4-A			16:06	X																											
IC 570-37769/5-A			16:08	X																											
IC 570-37769/6-A			16:11	X																											
IC 570-37769/7-A			16:13	X																											
IC 570-37769/8-A			16:15	X																											
IC 570-37769/9-A			16:17	X																											
ICV 570-37330/2-A	1		16:21	X																											
ICB 570-37330/3-A	1		16:24	X																											
CRA 570-37769/12-A	1		16:26	X																											
CCV 570-37330/10-A	1		16:28	X																											
CCB 570-37330/11-A	1		16:31	X																											
ZZZZZZ			16:36																												
ZZZZZZ			16:39																												
ZZZZZZ			16:41																												
ZZZZZZ			16:43																												
ZZZZZZ			16:46																												
ZZZZZZ			16:48																												
ZZZZZZ			16:50																												
ZZZZZZ			16:52																												
570-14206-2	1	T	16:55	X																											
570-14206-3	1	T	16:57	X																											
CCV 570-37330/10-A	1		16:59	X																											
CCB 570-37330/11-A	1		17:01	X																											
ZZZZZZ			17:04																												
ZZZZZZ			17:06																												
ZZZZZZ			17:08																												
ZZZZZZ			17:11																												
ZZZZZZ			17:13																												
ZZZZZZ			17:15																												
ZZZZZZ			17:18																												
ZZZZZZ			17:20																												
ZZZZZZ			17:22																												
ZZZZZZ			17:24																												
CCV 570-37330/10-A			17:27																												
CCB 570-37330/11-A			17:29																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			17:31																												
ZZZZZZ			17:33																												
ZZZZZZ			17:36																												
ZZZZZZ			17:38																												
ZZZZZZ			17:40																												
CCV 570-37330/10-A			17:43																												
CCB 570-37330/11-A			17:45																												
ZZZZZZ			17:54																												
ZZZZZZ			17:56																												
ZZZZZZ			17:59																												
ZZZZZZ			18:01																												
ZZZZZZ			18:03																												
ZZZZZZ			18:06																												
ZZZZZZ			18:08																												
ZZZZZZ			18:10																												
ZZZZZZ			18:12																												
ZZZZZZ			18:15																												
CCV 570-37330/10-A			18:17																												
CCB 570-37330/11-A			18:19																												
ZZZZZZ			18:22																												
ZZZZZZ			18:24																												
ZZZZZZ			18:26																												
ZZZZZZ			18:28																												
ZZZZZZ			18:31																												
ZZZZZZ			18:33																												
ZZZZZZ			18:35																												
ZZZZZZ			18:38																												
ZZZZZZ			18:40																												
ZZZZZZ			18:42																												
CCV 570-37330/10-A			18:45																												
CCB 570-37330/11-A			18:47																												
ZZZZZZ			18:49																												
ZZZZZZ			18:51																												
ZZZZZZ			18:54																												
ZZZZZZ			18:56																												
ZZZZZZ			18:58																												
ZZZZZZ			19:01																												
ZZZZZZ			19:03																												
ZZZZZZ			19:05																												
ZZZZZZ			19:07																												
ZZZZZZ			19:10																												
CCV 570-37330/10-A			19:12																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
CCB 570-37330/11-A			19:14																												
ZZZZZZ			19:17																												
ZZZZZZ			19:19																												
ZZZZZZ			19:21																												
ZZZZZZ			19:24																												
ZZZZZZ			19:26																												
ZZZZZZ			19:28																												
ZZZZZZ			19:30																												
ZZZZZZ			19:33																												
ZZZZZZ			19:35																												
ZZZZZZ			19:37																												
CCV 570-37330/10-A			19:40																												
CCB 570-37330/11-A			19:42																												
ZZZZZZ			19:44																												
ZZZZZZ			19:46																												
ZZZZZZ			19:49																												
ZZZZZZ			19:51																												
ZZZZZZ			19:53																												
ZZZZZZ			19:56																												
ZZZZZZ			19:58																												
ZZZZZZ			20:00																												
ZZZZZZ			20:02																												
ZZZZZZ			20:05																												
CCV 570-37330/10-A			20:07																												
CCB 570-37330/11-A			20:09																												
ZZZZZZ			20:12																												
ZZZZZZ			20:14																												
ZZZZZZ			20:16																												
ZZZZZZ			20:19																												
ZZZZZZ			20:21																												
ZZZZZZ			20:23																												
ZZZZZZ			20:25																												
ZZZZZZ			20:28																												
ZZZZZZ			20:30																												
ZZZZZZ			20:32																												
CCV 570-37330/10-A			20:35																												
CCB 570-37330/11-A			20:37																												
ZZZZZZ			20:39																												
ZZZZZZ			20:42																												
ZZZZZZ			20:44																												
ZZZZZZ			20:46																												
ZZZZZZ			20:48																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1
 SDG No.: _____
 Instrument ID: HG8 Analysis Method: 245.1
 Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			20:51																												
ZZZZZZ			20:53																												
ZZZZZZ			20:55																												
ZZZZZZ			20:58																												
CCV 570-37330/10-A			21:00																												
CCB 570-37330/11-A			21:02																												

Prep Types: _____
 T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/09/2019 End Date: 12/10/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICV 570-37974/46	15:37			105				101		99	
ICV 570-37974/47	15:43			106				104		100	
ICB 570-37974/48	15:45			104				103		100	
IC 570-37974/2	06:30										
CCV 570-37974/3	06:32			101				100		98	
CCB 570-37974/5	06:38			101				102		102	
ICVL 570-37974/6	06:41			102				101		101	
MB 570-37640/1-A	06:43			101				104		103	
LCS 570-37640/2-A	06:46			103				101		99	
LCSD 570-37640/3-A	06:49			101				102		99	
CCV 570-37974/17	07:11			105				102		103	
CCB 570-37974/18	07:14			104				104		104	
CCB 570-37974/19	07:17			103				106		105	
570-14206-1	07:28			106				109		105	
570-14206-2	07:30			107				109		106	
570-14206-3	07:33			106				108		107	
CCV 570-37974/30	07:47			102				104		101	
CCB 570-37974/31	07:50			100				101		102	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/09/2019 End Date: 12/10/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-37974/46	15:37	98									
ICV 570-37974/47	15:43	101									
ICB 570-37974/48	15:45	101									
IC 570-37974/2	06:30										
CCV 570-37974/3	06:32	99									
CCB 570-37974/5	06:38	100									
ICVL 570-37974/6	06:41	100									
MB 570-37640/1-A	06:43	101									
LCS 570-37640/2-A	06:46	100									
LCSD 570-37640/3-A	06:49	100									
CCV 570-37974/17	07:11	102									
CCB 570-37974/18	07:14	103									
CCB 570-37974/19	07:17	103									
570-14206-1	07:28	104									
570-14206-2	07:30	104									
570-14206-3	07:33	103									
CCV 570-37974/30	07:47	101									
CCB 570-37974/31	07:50	102									

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/10/2019 End Date: 12/10/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
				Sc		Ga		Ga		In	
ICV 570-38174/46	11:36			99				98		97	
ICV 570-38174/47	11:48			97				98		94	
ICB 570-38174/48	11:51			100				98		97	
IC 570-38174/2	18:16										
CCV 570-38174/3	18:19			98				98		96	
CCB 570-38174/4	18:23			97				99		99	
ICVL 570-38174/5	18:26			98				100		98	
LCS 570-37643/2-A	18:31			97				100		97	
LCSD 570-37643/3-A	18:34			96				99		97	
CCV 570-38174/14	18:53			97				97		97	
CCB 570-38174/15	18:59			96				101		98	
CCV 570-38174/25	19:29			99				101		99	
CCB 570-38174/26	19:35			98				100		102	
570-14206-1	19:49			96				101		99	
570-14206-2	19:51			95				101		101	
CCV 570-38174/33	20:05			97				100		99	
CCB 570-38174/34	20:11			95				101		101	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/10/2019 End Date: 12/10/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-38174/46	11:36	98									
ICV 570-38174/47	11:48	94									
ICB 570-38174/48	11:51	97									
IC 570-38174/2	18:16										
CCV 570-38174/3	18:19	97									
CCB 570-38174/4	18:23	98									
ICVL 570-38174/5	18:26	97									
LCS 570-37643/2-A	18:31	97									
LCSD 570-37643/3-A	18:34	97									
CCV 570-38174/14	18:53	96									
CCB 570-38174/15	18:59	98									
CCV 570-38174/25	19:29	99									
CCB 570-38174/26	19:35	101									
570-14206-1	19:49	100									
570-14206-2	19:51	99									
CCV 570-38174/33	20:05	99									
CCB 570-38174/34	20:11	99									

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/11/2019 End Date: 12/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
IC 570-38297/2	11:25										
ICV 570-38297/4	11:31	97		97		95					
ICV 570-38297/6	11:36	98		98		95					
ICB 570-38297/7	11:39	96		97		95					
CCV 570-38297/8	11:42	96		95		93					
ICSA 570-38297/10	11:47	97		93		94					
ICSAB 570-38297/11	11:50	98		95		97					
CCB 570-38297/13	11:56	99		95		96					
ICVL 570-38297/14	11:58	99		96		97					
MB 570-37643/1-A	12:01	98		96		94					
CCV 570-38297/18	12:09	98		95		92					
CCB 570-38297/19	12:13	97		95		95					

15-IN
 ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/11/2019 End Date: 12/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
IC 570-38297/2	11:25										
ICV 570-38297/4	11:31	97									
ICV 570-38297/6	11:36	96									
ICB 570-38297/7	11:39	96									
CCV 570-38297/8	11:42	95									
ICSA 570-38297/10	11:47	100									
ICSAB 570-38297/11	11:50	100									
CCB 570-38297/13	11:56	96									
ICVL 570-38297/14	11:58	99									
MB 570-37643/1-A	12:01	97									
CCV 570-38297/18	12:09	95									
CCB 570-38297/19	12:13	95									

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37640 Batch Start Date: 12/08/19 07:30 Batch Analyst: Rolin, Randy

Batch Method: 200.8 Batch End Date: 12/08/19 11:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MT: 1:1 HCl 00002	MT: 1:1 HNO3 00001	MT_ICP_Spike1 00005
MB 570-37640/1		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	
LCS 570-37640/2		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
LCS 570-37640/3		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
570-14206-B-1	A2BMP0012S007	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	
570-14206-B-2	EVBMP0003S029	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	
570-14206-B-3	FBQW1869Q001	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00003	MT_MS_SPIKE_3 00002				
MB 570-37640/1		200.8, 200.8							
LCS 570-37640/2		200.8, 200.8		50 uL	0.25 mL				
LCS 570-37640/3		200.8, 200.8		50 uL	0.25 mL				
570-14206-B-1	A2BMP0012S007	200.8, 200.8	R						
570-14206-B-2	EVBMP0003S029	200.8, 200.8	R						
570-14206-B-3	FBQW1869Q001	200.8, 200.8	R						

Batch Notes	
Batch Comment	DISPENSERS- D-30/MD-032
Lot # of hydrochloric acid	MR013019A
Lot # of Nitric Acid	MR013019B
Hot Block ID	12
Oven, Bath or Block Temperature 1	94.6 Degrees C
Oven, Bath or Block Temperature 2	94.6 Degrees C
pH Paper ID	M006-47-07
Pipette ID	P-116/P-069
Thermometer ID	31465640
Digestion Tube/Cup ID	J3330884566
Uncorrected Temperature	95 Degrees C
Uncorrected Temperature 2	95 Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37640 Batch Start Date: 12/08/19 07:30 Batch Analyst: Rolin, Randy

Batch Method: 200.8 Batch End Date: 12/08/19 11:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37643 Batch Start Date: 11/28/19 12:30 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00001	MT_ICP_Spike1 00005
MB 570-37643/1		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-37643/2		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
LCSD 570-37643/3		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-14206-E-1	A2BMP0012S007	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14206-E-2	EV BMP0003S029	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00003	MT_MS_SPIKE_3 00002				
MB 570-37643/1		Filtration, 200.8							
LCS 570-37643/2		Filtration, 200.8		50 uL	0.25 mL				
LCSD 570-37643/3		Filtration, 200.8		50 uL	0.25 mL				
570-14206-E-1	A2BMP0012S007	Filtration, 200.8	D						
570-14206-E-2	EV BMP0003S029	Filtration, 200.8	D						

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 38174 Batch Start Date: 12/10/19 11:36 Batch Analyst: Lee, Francis

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_BLK_1 00002	MT_MS_CCV 00005	MT_MS_IC 00008	MT_MS_ICV1 00002	MT_MS_ICV2 00003	MT_MS_LL 00006
IC 570-38174/2		200.8				# mL			
CCV 570-38174/3		200.8			# mL				
CCB 570-38174/4		200.8		# mL					
ICVL 570-38174/5		200.8							# mL
CCV 570-38174/14		200.8			# mL				
CCB 570-38174/15		200.8		# mL					
CCV 570-38174/25		200.8			# mL				
CCB 570-38174/26		200.8		# mL					
CCV 570-38174/33		200.8			# mL				
CCB 570-38174/34		200.8		# mL					
ICV 570-38174/46		200.8					# mL		
ICV 570-38174/47		200.8						# mL	
ICB 570-38174/48		200.8		# mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 38297 Batch Start Date: 12/11/19 11:22 Batch Analyst: Lee, Francis

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_BLK_1 00002	MT_MS_CCV 00005	MT_MS_IC 00008	MT_MS_ICS_A 00002	MT_MS_ICS_AB 00002	MT_MS_ICV1 00002
IC 570-38297/2		200.8				# mL			
ICV 570-38297/4		200.8							# mL
ICV 570-38297/6		200.8							
ICB 570-38297/7		200.8		# mL					
CCV 570-38297/8		200.8			# mL				
ICSA 570-38297/10		200.8					# mL		
ICSAB 570-38297/11		200.8						# mL	
CCB 570-38297/13		200.8		# mL					
ICVL 570-38297/14		200.8							
CCV 570-38297/18		200.8			# mL				
CCB 570-38297/19		200.8		# mL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_ICV2 00003	MT_MS_LL 00006				
IC 570-38297/2		200.8							
ICV 570-38297/4		200.8							
ICV 570-38297/6		200.8		# mL					
ICB 570-38297/7		200.8							
CCV 570-38297/8		200.8							
ICSA 570-38297/10		200.8							
ICSAB 570-38297/11		200.8							
CCB 570-38297/13		200.8							
ICVL 570-38297/14		200.8			# mL				
CCV 570-38297/18		200.8							
CCB 570-38297/19		200.8							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 38297 Batch Start Date: 12/11/19 11:22 Batch Analyst: Lee, Francis

Batch Method: 200.8 Batch End Date: _____

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37330 Batch Start Date: 12/06/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/06/19 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00012	HG_1ppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
ICV 570-37330/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-37330/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-37330/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-37330/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CRA 570-37330/12		7470A, 245.1		50 mL	100 mL		25 uL	2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
ICV 570-37330/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-37330/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-37330/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-37330/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CRA 570-37330/12		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37330 Batch Start Date: 12/06/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/06/19 12:00

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12:00
Digestion Start Time	10:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37331 Batch Start Date: 11/28/19 10:00 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00001	
MB 570-37331/1		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-37331/2		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCSD 570-37331/3		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14206-E-1	A2BMP0012S007	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14206-E-2	EV BMP0003S029	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37335 Batch Start Date: 12/06/19 11:49 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 12/06/19 13:49

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg_lppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
MB 570-37331/1-A		245.1, 245.1		<2	50 mL	100 mL		2.5 mL	4 mL
LCS 570-37331/2-A		245.1, 245.1		<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
LCS 570-37331/3-A		245.1, 245.1		<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14206-E-1-B	A2BMP0012S007	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL
570-14206-E-2-B	EV BMP0003S029	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
MB 570-37331/1-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-37331/2-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-37331/3-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-14206-E-1-B	A2BMP0012S007	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-14206-E-2-B	EV BMP0003S029	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37335 Batch Start Date: 12/06/19 11:49 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 12/06/19 13:49

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12/06/2019 13:49
Digestion Start Time	12/06/2019 11:49
Digestion Unit ID	Block 3
Sulfuric Acid Lot Number	022376
Nitric Acid ID	026291
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37493 Batch Start Date: 12/06/19 19:31 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 12/10/19 10:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg_lppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
MB 570-37493/1		245.1, 245.1			50 mL	100 mL		2.5 mL	4 mL
LCS 570-37493/2		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-37493/3		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14206-A-1	A2BMP0012S007	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL
570-14206-A-1	A2BMP0012S007	245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
MS 570-14206-A-1	A2BMP0012S007	245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
MSD 570-14206-A-2	EV BMP0003S029	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL
570-14206-A-3	FBQW1869Q001	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
MB 570-37493/1		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-37493/2		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-37493/3		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-14206-A-1	A2BMP0012S007	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-14206-A-1	A2BMP0012S007	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
MS 570-14206-A-1	A2BMP0012S007	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
MSD 570-14206-A-2	EV BMP0003S029	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-14206-A-3	FBQW1869Q001	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37493 Batch Start Date: 12/06/19 19:31 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 12/10/19 10:40

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12/06/2019 21:31
Digestion Start Time	12/06/2019 19:31
Digestion Unit ID	Block 3
Sulfuric Acid Lot Number	022376
Nitric Acid ID	026291
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 37769 Batch Start Date: 12/09/19 11:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/09/19 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg_1ppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001	Hg_KMnO4 00002
CRA 570-37769/12		7470A, 245.1		50 mL	100 mL	25 uL	2.5 mL	4 mL	7.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001				
CRA 570-37769/12		7470A, 245.1		3 mL	1.25 mL				

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	13:00
Digestion Start Time	11:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Tuesday, December 10, 2019 06:27:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\ICIS-23447.307

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		47027.292		ppb			1.702	
9	Be	|		24.444		ppb			34.317	
10	B	|		3095.891		ppb			3.047	
27	Al	|		3999.449		ppb			1.473	
43	Ca-2	|		106.667		ppb			15.068	
49	Ti	|		166.668		ppb			7.211	
52	Cr	|		11497.959		ppb			1.038	
55	Mn	|		796.689		ppb			10.975	
57	Fe	|		11074.292		ppb			1.972	
45	Sc-IS	|>		2258970.662		ppb			0.852	
66	Zn	|		1505.635		ppb			2.768	
86	Sr	|		57.938		ppb			10.463	
65	Cu	|		195.182		ppb			9.991	
69	Ga-IS	|		674512.414		ppb			1.588	
95	Mo	|		418.895		ppb			3.925	
115	In-IS	|>		424835.533		ppb			0.623	
111	Cd	|		45.787		ppb			7.219	
118	Sn	|		3435.970		ppb			6.534	
121	Sb	|		732.241		ppb			2.151	
135	Ba	|		76.667		ppb			4.348	
165	Ho-IS	|		476365.650		ppb			0.658	
159	Tb-IS	|>		553967.024		ppb			0.888	
207	Pb	|		592.227		ppb			7.806	
203	Tl	|		187.779		ppb			8.005	
209	Bi-IS	|		295774.323		ppb			1.551	
51	V	|		5.556		ppb			69.282	
59	Co	|		27.778		ppb			36.661	
60	Ni	|		54.445		ppb			14.139	
75	As	|		557.132		ppb			6.404	
71	Ga-ISK	|>		93586.704		ppb			1.520	
82	Se-2	|		0.213		ppb			2109.601	
107	Ag-1	|		190.001		ppb			22.942	
115	In-ISK	|		125178.383		ppb			2.311	
45	Sc-ISK	|>		224970.912		ppb			0.063	
23	Na	|		1021.703		ppb			6.517	
39	K	|		75655.379		ppb			1.268	
24	Mg	|		468.341		ppb			15.484	
159	Tb-ISK	|		270462.969		ppb			0.566	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Tuesday, December 10, 2019 06:30:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\IC-210761.308

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	46925.843		ppb		1.323		47027.292
9	Be	|	239122.719	200.000000	ppb		1.422	1.283	24.444
10	B	|	156395.961	500.000000	ppb		1.250	0.871	3095.891
27	Al	|	1230595.402	200.000000	ppb		0.630	0.714	3999.449
43	Ca-2	|	229470.392	10200.000000	ppb		1.884	1.439	106.667
49	Ti	|	133581.637	200.000000	ppb		0.219	0.650	166.668
52	Cr	|	1797600.030	200.000000	ppb		0.943	1.142	11497.959
55	Mn	|	3067201.214	200.000000	ppb		0.739	1.049	796.689
57	Fe	|	3331470.945	10200.000000	ppb		1.302	1.149	11074.292
45	Sc-IS	>	2294350.825		ppb		0.523		2258970.662
66	Zn	|	344822.025	200.000000	ppb		0.522	0.634	1505.635
86	Sr	|	535465.869	200.000000	ppb		0.982	0.985	57.938
65	Cu	|	545114.857	200.000000	ppb		1.091	1.204	195.182
69	Ga-IS	|	704784.845		ppb		0.557		674512.414
95	Mo	|	481342.830	200.000000	ppb		1.610	1.736	418.895
115	In-IS	>	410609.775		ppb		0.903		424835.533
111	Cd	|	410895.716	200.000000	ppb		0.981	1.886	45.787
118	Sn	|	1318498.187	200.000000	ppb		0.828	0.670	3435.970
121	Sb	|	1421654.803	200.000000	ppb		2.232	1.627	732.241
135	Ba	|	357702.386	200.000000	ppb		1.426	1.273	76.667
165	Ho-IS	|	469246.428		ppb		1.352		476365.650
159	Tb-IS	>	542702.690		ppb		1.747		553967.024
207	Pb	|	4695197.728	200.000000	ppb		1.464	0.541	592.227
203	Tl	|	1488146.907	200.000000	ppb		1.835	0.587	187.779
209	Bi-IS	|	274828.436		ppb		0.535		295774.323
51	V	|	69795.685	200.000000	ppb		1.996	4.782	5.556
59	Co	|	226072.599	200.000000	ppb		0.688	3.290	27.778
60	Ni	|	158050.604	200.000000	ppb		0.225	2.899	54.445
75	As	|	66795.889	200.000000	ppb		1.895	0.919	557.132
71	Ga-ISK	>	91699.072		ppb		2.801		93586.704
82	Se-2	|	6472.346	200.000000	ppb		1.475	3.027	0.213
107	Ag-1	|	840146.803	200.000000	ppb		1.504	4.240	190.001
115	In-ISK	|	121770.239		ppb		0.628		125178.383
45	Sc-ISK	>	218497.280		ppb		1.113		224970.912
23	Na	|	3453812.346	10200.000000	ppb		1.144	0.590	1021.703
39	K	|	7024327.563	10200.000000	ppb		0.779	1.378	75655.379
24	Mg	|	4067205.143	10200.000000	ppb		1.243	1.801	468.341
159	Tb-ISK	|	270174.897		ppb		0.367		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Tuesday, December 10, 2019 06:32:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCV-210770.309

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	46547.943		ppb		1.319		47027.292
9	Be	|	120397.450	101.228990	ppb		0.621	0.318	24.444
10	B	|	80181.101	252.763273	ppb		1.804	2.273	3095.891
27	Al	|	625246.355	101.838378	ppb		0.234	0.674	3999.449
43	Ca-2	|	115184.253	5145.464725	ppb		1.731	2.036	106.667
49	Ti	|	67069.305	100.828164	ppb		1.028	1.035	166.668
52	Cr	|	931856.224	103.608189	ppb		0.449	0.951	11497.959
55	Mn	|	1509526.021	98.931580	ppb		0.569	1.026	796.689
57	Fe	|	1667714.932	5116.450565	ppb		0.913	1.254	11074.292
45	Sc-IS	>	2282131.753		ppb		0.638		2258970.662
66	Zn	|	177774.905	103.234184	ppb		0.847	0.871	1505.635
86	Sr	|	270130.315	101.432632	ppb		1.829	2.356	57.938
65	Cu	|	278968.579	102.862892	ppb		0.785	0.381	195.182
69	Ga-IS	|	687353.012		ppb		1.052		674512.414
95	Mo	|	247675.979	103.371570	ppb		2.312	2.077	418.895
115	In-IS	>	418025.061		ppb		1.446		424835.533
111	Cd	|	214809.558	102.689720	ppb		0.903	1.266	45.787
118	Sn	|	694411.256	103.234617	ppb		0.156	1.534	3435.970
121	Sb	|	736657.819	101.755098	ppb		1.288	0.770	732.241
135	Ba	|	183065.577	100.523738	ppb		1.078	0.773	76.667
165	Ho-IS	|	468754.989		ppb		1.245		476365.650
159	Tb-IS	>	547779.186		ppb		1.372		553967.024
207	Pb	|	2300960.594	97.086764	ppb		1.564	0.244	592.227
203	Tl	|	752051.757	100.129810	ppb		0.782	0.859	187.779
209	Bi-IS	|	281727.091		ppb		1.979		295774.323
51	V	|	34881.429	97.678324	ppb		1.594	1.639	5.556
59	Co	|	114449.017	98.960752	ppb		2.400	1.793	27.778
60	Ni	|	82217.134	101.671760	ppb		2.695	2.094	54.445
75	As	|	34313.019	99.663571	ppb		0.880	1.173	557.132
71	Ga-ISK	>	93748.856		ppb		1.228		93586.704
82	Se-2	|	3247.604	98.102018	ppb		2.193	1.359	0.213
107	Ag-1	|	426653.195	99.249999	ppb		0.745	0.728	190.001
115	In-ISK	|	122844.527		ppb		0.653		125178.383
45	Sc-ISK	>	224427.081		ppb		1.249		224970.912
23	Na	|	1745366.139	5017.417788	ppb		0.957	1.766	1021.703
39	K	|	3633865.471	5084.190500	ppb		0.925	2.072	75655.379
24	Mg	|	2086852.685	5094.688534	ppb		0.440	1.256	468.341
159	Tb-ISK	|	268232.283		ppb		1.025		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Tuesday, December 10, 2019 06:35:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCB-23446.310

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46971.542		ppb	0.778		47027.292
9	Be	143.334	0.099404	ppb	22.185	26.550	24.444
10	B	3408.185	0.889631	ppb	3.085	39.163	3095.891
27	Al	4975.313	0.151056	ppb	6.470	35.470	3999.449
43	Ca-2	198.335	4.022611	ppb	30.287	66.184	106.667
49	Ti	251.113	0.123723	ppb	22.066	67.644	166.668
52	Cr	12172.968	0.058916	ppb	4.292	96.928	11497.959
55	Mn	2090.155	0.083885	ppb	13.742	22.155	796.689
57	Fe	13579.787	7.271646	ppb	2.351	12.782	11074.292
45	Sc-IS	> 2288420.270		ppb	0.218		2258970.662
66	Zn	2132.381	0.354604	ppb	2.943	10.152	1505.635
86	Sr	254.633	0.073375	ppb	17.153	22.206	57.938
65	Cu	443.284	0.090361	ppb	1.178	2.347	195.182
69	Ga-IS	675329.032		ppb	0.867		674512.414
95	Mo	3958.328	1.473405	ppb	6.327	7.010	418.895
115	In-IS	> 427448.356		ppb	1.186		424835.533
111	Cd	798.377	0.351987	ppb	8.184	9.778	45.787
118	Sn	14317.184	1.586294	ppb	5.255	6.484	3435.970
121	Sb	1887.903	0.155665	ppb	2.474	4.069	732.241
135	Ba	208.890	0.070831	ppb	5.604	10.556	76.667
165	Ho-IS	476442.530		ppb	1.583		476365.650
159	Tb-IS	> 555683.106		ppb	1.049		553967.024
207	Pb	3219.032	0.109189	ppb	4.182	4.072	592.227
203	Tl	874.471	0.090057	ppb	4.216	4.803	187.779
209	Bi-IS	295582.493		ppb	1.299		295774.323
51	V	25.556	0.055094	ppb	19.924	28.259	5.556
59	Co	84.445	0.047881	ppb	12.689	20.220	27.778
60	Ni	147.779	0.112259	ppb	16.930	24.684	54.445
75	As	629.982	0.184766	ppb	4.865	70.206	557.132
71	Ga-ISK	> 95254.404		ppb	2.313		93586.704
82	Se-2	23.591	0.697160	ppb	32.437	34.411	0.213
107	Ag-1	960.032	0.175810	ppb	9.395	13.436	190.001
115	In-ISK	125503.016		ppb	0.857		125178.383
45	Sc-ISK	> 223288.467		ppb	1.656		224970.912
23	Na	2910.299	5.490281	ppb	11.789	19.693	1021.703
39	K	78252.648	4.570854	ppb	1.273	63.276	75655.379
24	Mg	2306.854	4.525771	ppb	10.612	14.578	468.341
159	Tb-ISK	272485.034		ppb	1.177		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Tuesday, December 10, 2019 06:38:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCB-23446.311

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		47291.492		ppb		1.464		47027.292
9	Be	|		102.223	0.065056	ppb	26.155	35.471		24.444
10	B	|		3285.933	0.490241	ppb	1.773	57.374		3095.891
27	Al	|		5625.552	0.257274	ppb	0.460	3.346		3999.449
43	Ca-2	|		170.001	2.759365	ppb	13.478	35.995		106.667
49	Ti	|		198.890	0.045530	ppb	23.840	162.509		166.668
52	Cr	|		12115.137	0.052501	ppb	2.276	73.262		11497.959
55	Mn	|		1835.686	0.067508	ppb	40.348	73.476		796.689
57	Fe	|		12100.688	2.725241	ppb	5.199	82.267		11074.292
45	Sc-IS	>		2288623.437		ppb		0.836		2258970.662
66	Zn	|		2139.049	0.358613	ppb	2.619	11.758		1505.635
86	Sr	|		259.602	0.075509	ppb	54.646	71.676		57.938
65	Cu	|		382.528	0.068213	ppb	31.360	66.532		195.182
69	Ga-IS	|		682597.922		ppb		0.733		674512.414
95	Mo	|		1164.492	0.308794	ppb	8.343	14.443		418.895
115	In-IS	>		433757.756		ppb		3.280		424835.533
111	Cd	|		457.562	0.189884	ppb	24.113	28.759		45.787
118	Sn	|		7181.806	0.530161	ppb	3.213	11.962		3435.970
121	Sb	|		1313.395	0.075567	ppb	19.448	47.061		732.241
135	Ba	|		183.335	0.055738	ppb	48.208	86.039		76.667
165	Ho-IS	|		472771.386		ppb		2.677		476365.650
159	Tb-IS	>		551611.291		ppb		1.838		553967.024
207	Pb	|		2158.956	0.065811	ppb	28.324	39.380		592.227
203	Tl	|		654.461	0.061761	ppb	41.053	57.635		187.779
209	Bi-IS	|		293105.714		ppb		1.564		295774.323
51	V	|		21.111	0.043031	ppb	92.518	127.272		5.556
59	Co	|		103.334	0.064242	ppb	51.915	72.303		27.778
60	Ni	|		121.112	0.079977	ppb	35.921	64.701		54.445
75	As	|		592.787	0.077503	ppb	3.084	52.388		557.132
71	Ga-ISK	>		95093.244		ppb		0.990		93586.704
82	Se-2	|		4.226	0.119857	ppb	192.110	201.743		0.213
107	Ag-1	|		436.673	0.055836	ppb	9.380	15.138		190.001
115	In-ISK	|		125613.767		ppb		0.739		125178.383
45	Sc-ISK	>		225849.314		ppb		1.498		224970.912
23	Na	|		2246.848	3.501871	ppb	19.265	37.484		1021.703
39	K	|		76858.476	1.322380	ppb	2.018	275.796		75655.379
24	Mg	|		1620.097	2.800613	ppb	27.657	40.438		468.341
159	Tb-ISK	|		271269.453		ppb		0.874		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Tuesday, December 10, 2019 06:41:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\ICVL-210771.312

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	47066.298		ppb	0.850		47027.292
9	Be	1307.838	1.064619	ppb	3.572	4.754	24.444
10	B	19763.675	53.678625	ppb	3.841	2.863	3095.891
27	Al	330596.284	52.808729	ppb	1.120	1.892	3999.449
43	Ca-2	1293.392	52.265744	ppb	6.633	8.490	106.667
49	Ti	893.361	1.074543	ppb	6.376	7.961	166.668
52	Cr	21016.563	1.026279	ppb	2.062	1.458	11497.959
55	Mn	16818.785	1.035208	ppb	1.561	1.493	796.689
57	Fe	28526.234	52.366864	ppb	1.311	2.268	11074.292
45	Sc-IS	> 2313371.169		ppb	1.424		2258970.662
66	Zn	10756.273	5.325699	ppb	3.350	4.862	1505.635
86	Sr	2984.412	1.083583	ppb	3.822	3.316	57.938
65	Cu	3140.490	1.070337	ppb	4.673	4.605	195.182
69	Ga-IS	680050.406		ppb	1.588		674512.414
95	Mo	3141.457	1.119053	ppb	4.651	6.028	418.895
115	In-IS	> 430922.442		ppb	0.422		424835.533
111	Cd	2275.808	1.034143	ppb	5.738	6.262	45.787
118	Sn	11281.119	1.129668	ppb	1.087	1.928	3435.970
121	Sb	8406.917	1.027973	ppb	0.683	1.117	732.241
135	Ba	2014.586	1.032096	ppb	0.253	0.701	76.667
165	Ho-IS	471223.385		ppb	2.076		476365.650
159	Tb-IS	> 552189.253		ppb	2.782		553967.024
207	Pb	24718.387	1.010293	ppb	2.733	1.612	592.227
203	Tl	8042.263	1.038252	ppb	0.791	3.081	187.779
209	Bi-IS	290634.863		ppb	1.541		295774.323
51	V	387.783	1.056245	ppb	10.885	9.946	5.556
59	Co	1210.051	1.010309	ppb	7.874	9.167	27.778
60	Ni	1061.151	1.230317	ppb	6.175	7.898	54.445
75	As	949.082	1.118684	ppb	7.362	15.712	557.132
71	Ga-ISK	> 94918.769		ppb	1.278		93586.704
82	Se-2	39.880	1.184926	ppb	21.885	22.620	0.213
107	Ag-1	4765.240	1.050969	ppb	3.636	3.446	190.001
115	In-ISK	124344.690		ppb	1.030		125178.383
45	Sc-ISK	> 229553.033		ppb	0.860		224970.912
23	Na	19852.127	52.901173	ppb	3.256	4.266	1021.703
39	K	111152.987	47.439630	ppb	0.742	5.162	75655.379
24	Mg	22449.307	52.461498	ppb	3.592	4.502	468.341
159	Tb-ISK	274199.934		ppb	0.834		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-37640_1-A

Autosampler Position: 428

Sample Date/Time: Tuesday, December 10, 2019 06:43:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\MB 570-37640_1-A.313

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		47287.029		ppb			1.209			47027.292
9	Be	|		77.778	0.044634	ppb	69.810	103.326				24.444
10	B	|		3254.815	0.390610	ppb	3.067	76.100				3095.891
27	Al	|		4339.550	0.047206	ppb	7.279	105.983				3999.449
43	Ca-2	|		133.334	1.149794	ppb	40.098	212.740				106.667
49	Ti	|		193.335	0.037060	ppb	24.866	198.825				166.668
52	Cr	|		12297.514	0.073301	ppb	1.371	7.431				11497.959
55	Mn	|		1402.295	0.038987	ppb	27.500	65.680				796.689
57	Fe	|		11504.631	0.894147	ppb	0.370	54.482				11074.292
45	Sc-IS	>		2287839.791		ppb			1.395			2258970.662
66	Zn	|		1636.760	0.065546	ppb	2.600	47.313				1505.635
86	Sr	|		146.229	0.032786	ppb	37.717	63.356				57.938
65	Cu	|		302.722	0.038653	ppb	13.298	38.108				195.182
69	Ga-IS	|		684410.038		ppb			2.575			674512.414
95	Mo	|		571.123	0.061528	ppb	12.331	52.331				418.895
115	In-IS	>		437178.912		ppb			1.545			424835.533
111	Cd	|		139.912	0.042508	ppb	31.664	48.946				45.787
118	Sn	|		4129.486	0.085035	ppb	2.814	29.233				3435.970
121	Sb	|		963.367	0.027857	ppb	19.827	94.198				732.241
135	Ba	|		143.334	0.034001	ppb	32.308	73.999				76.667
165	Ho-IS	|		480332.724		ppb			1.434			476365.650
159	Tb-IS	>		560942.823		ppb			1.059			553967.024
207	Pb	|		1655.599	0.043397	ppb	42.338	65.688				592.227
203	Tl	|		505.566	0.040903	ppb	44.804	71.155				187.779
209	Bi-IS	|		293668.933		ppb			0.644			295774.323
51	V	|		16.667	0.029605	ppb	69.282	105.972				5.556
59	Co	|		52.222	0.019660	ppb	25.797	57.947				27.778
60	Ni	|		66.667	0.012364	ppb	13.229	88.263				54.445
75	As	|		584.913	0.023047	ppb	10.195	730.919				557.132
71	Ga-ISK	>		96890.803		ppb			0.513			93586.704
82	Se-2	|		6.567	0.185143	ppb	75.515	78.025				0.213
107	Ag-1	|		253.336	0.012742	ppb	10.770	47.349				190.001
115	In-ISK	|		125254.679		ppb			1.044			125178.383
45	Sc-ISK	>		229984.603		ppb			1.717			224970.912
23	Na	|		1241.721	0.553220	ppb	2.681	6.537				1021.703
39	K	|		74686.952	-3.683924	ppb	0.551	41.206				75655.379
24	Mg	|		841.692	0.867094	ppb	8.918	24.342				468.341
159	Tb-ISK	|		272758.762		ppb			0.927			270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-37640_2-A

Autosampler Position: 429

Sample Date/Time: Tuesday, December 10, 2019 06:46:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\LCS 570-37640_2-A.314

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47430.833		ppb		0.725		47027.292
9	Be	|	123202.321	101.971911	ppb	0.550	1.387		24.444
10	B	|	33933.592	99.319878	ppb	1.251	2.517		3095.891
27	Al	|	649217.429	104.096984	ppb	1.067	0.464		3999.449
43	Ca-2	|	101877.026	4478.755297	ppb	1.506	0.981		106.667
49	Ti	|	66613.850	98.566841	ppb	1.141	0.669		166.668
52	Cr	|	930831.616	101.850644	ppb	0.544	0.803		11497.959
55	Mn	|	1479174.378	95.423153	ppb	0.837	1.277		796.689
57	Fe	|	1428822.933	4309.620575	ppb	1.174	1.750		11074.292
45	Sc-IS	>	2318537.428		ppb	1.321			2258970.662
66	Zn	|	181922.188	103.992967	ppb	0.868	0.498		1505.635
86	Sr	|	266358.238	98.442986	ppb	1.448	1.519		57.938
65	Cu	|	276195.682	100.246487	ppb	0.558	0.776		195.182
69	Ga-IS	|	700657.714		ppb	1.790			674512.414
95	Mo	|	243782.709	100.151465	ppb	1.376	1.394		418.895
115	In-IS	>	421947.771		ppb	1.320			424835.533
111	Cd	|	216511.927	102.537806	ppb	0.630	0.705		45.787
118	Sn	|	714338.353	105.208791	ppb	0.893	0.651		3435.970
121	Sb	|	681473.083	93.249049	ppb	0.932	0.400		732.241
135	Ba	|	187087.115	101.780435	ppb	0.606	1.004		76.667
165	Ho-IS	|	478184.760		ppb	0.289			476365.650
159	Tb-IS	>	552816.602		ppb	1.330			553967.024
207	Pb	|	2310463.766	96.602711	ppb	1.405	0.885		592.227
203	Tl	|	735328.568	97.008520	ppb	1.293	1.166		187.779
209	Bi-IS	|	288128.045		ppb	1.306			295774.323
51	V	|	36091.089	99.951748	ppb	0.559	0.682		5.556
59	Co	|	114830.820	98.212314	ppb	1.180	1.976		27.778
60	Ni	|	82145.504	100.470836	ppb	0.590	0.219		54.445
75	As	|	34811.502	99.994250	ppb	2.606	2.281		557.132
71	Ga-ISK	>	94791.239		ppb	0.799			93586.704
82	Se-2	|	3211.901	95.959314	ppb	1.159	0.361		0.213
107	Ag-1	|	195823.002	45.027267	ppb	0.253	0.591		190.001
115	In-ISK	|	123465.575		ppb	0.983			125178.383
45	Sc-ISK	>	225654.124		ppb	1.716			224970.912
23	Na	|	345005.355	983.978312	ppb	1.642	1.261		1021.703
39	K	|	765114.169	979.351713	ppb	1.183	1.298		75655.379
24	Mg	|	1786958.911	4338.530927	ppb	1.139	0.646		468.341
159	Tb-ISK	|	274485.896		ppb	0.041			270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-37640_3-A

Autosampler Position: 430

Sample Date/Time: Tuesday, December 10, 2019 06:49:28

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\LCSD 570-37640_3-A.315

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		47809.869		ppb		0.253		47027.292
9	Be	|		123012.957	103.146345	ppb		1.138	0.693	24.444
10	B	|		33599.470	99.651586	ppb		1.289	0.994	3095.891
27	Al	|		643021.255	104.467573	ppb		0.607	1.017	3999.449
43	Ca-2	|		101803.168	4534.489162	ppb		1.496	1.123	106.667
49	Ti	|		67783.817	101.624008	ppb		2.207	1.910	166.668
52	Cr	|		933818.289	103.538508	ppb		1.175	0.670	11497.959
55	Mn	|		1482881.944	96.917046	ppb		0.839	0.483	796.689
57	Fe	|		1441867.214	4406.919593	ppb		1.229	1.728	11074.292
45	Sc-IS	>		2288323.523		ppb		0.531		2258970.662
66	Zn	|		183487.536	106.291767	ppb		0.514	1.056	1505.635
86	Sr	|		269125.652	100.774396	ppb		0.309	0.435	57.938
65	Cu	|		278891.740	102.563216	ppb		1.459	1.972	195.182
69	Ga-IS	|		689681.328		ppb		0.232		674512.414
95	Mo	|		250043.733	104.082758	ppb		0.228	0.586	418.895
115	In-IS	>		420330.235		ppb		1.093		424835.533
111	Cd	|		220604.320	104.879030	ppb		0.252	0.936	45.787
118	Sn	|		730781.387	108.053464	ppb		1.194	0.499	3435.970
121	Sb	|		705107.495	96.855976	ppb		0.947	0.225	732.241
135	Ba	|		187043.291	102.148673	ppb		1.152	1.612	76.667
165	Ho-IS	|		479527.848		ppb		0.803		476365.650
159	Tb-IS	>		552399.061		ppb		0.824		553967.024
207	Pb	|		2339100.695	97.877645	ppb		0.265	0.993	592.227
203	Tl	|		734021.745	96.911788	ppb		0.900	1.529	187.779
209	Bi-IS	|		285289.750		ppb		1.408		295774.323
51	V	|		35275.738	97.192683	ppb		2.357	4.034	5.556
59	Co	|		113713.104	96.747555	ppb		1.857	3.646	27.778
60	Ni	|		84200.750	102.439011	ppb		0.514	2.188	54.445
75	As	|		34614.235	98.881338	ppb		0.277	1.772	557.132
71	Ga-ISK	>		95322.602		ppb		1.951		93586.704
82	Se-2	|		3231.236	96.042857	ppb		1.720	3.519	0.213
107	Ag-1	|		197718.960	45.220491	ppb		1.137	2.313	190.001
115	In-ISK	|		123894.933		ppb		1.587		125178.383
45	Sc-ISK	>		226317.492		ppb		0.215		224970.912
23	Na	|		347722.784	988.784040	ppb		0.641	0.791	1021.703
39	K	|		762149.846	971.857477	ppb		0.837	0.833	75655.379
24	Mg	|		1771290.541	4287.531489	ppb		1.706	1.594	468.341
159	Tb-ISK	|		269797.345		ppb		1.022		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14380-A-2-A

Autosampler Position: 431

Sample Date/Time: Tuesday, December 10, 2019 06:52:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14380-A-2-A.316

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46856.719		ppb	0.150		47027.292
9	Be	92.223	0.056565	ppb	17.830	23.229	24.444
10	B	3297.047	0.534906	ppb	3.343	42.656	3095.891
27	Al	288062.437	46.484322	ppb	1.566	2.322	3999.449
43	Ca-2	17083.554	757.596233	ppb	4.253	3.746	106.667
49	Ti	1112.266	1.419789	ppb	1.211	2.154	166.668
52	Cr	16149.125	0.507331	ppb	2.041	8.072	11497.959
55	Mn	87431.183	5.670878	ppb	0.656	1.760	796.689
57	Fe	27461.932	50.144615	ppb	1.861	5.980	11074.292
45	Sc-IS	> 2286253.150		ppb	1.735		2258970.662
66	Zn	61110.429	34.844677	ppb	0.356	1.878	1505.635
86	Sr	6811.878	2.531610	ppb	1.743	0.743	57.938
65	Cu	8691.576	3.129937	ppb	3.307	4.710	195.182
69	Ga-IS	667528.210		ppb	0.849		674512.414
95	Mo	4940.854	1.885914	ppb	1.929	3.938	418.895
115	In-IS	> 423083.001		ppb	0.272		424835.533
111	Cd	222.959	0.083774	ppb	11.361	14.142	45.787
118	Sn	9090.671	0.836632	ppb	3.096	4.909	3435.970
121	Sb	30057.167	4.006327	ppb	3.416	3.353	732.241
135	Ba	4709.666	2.514821	ppb	3.429	3.671	76.667
165	Ho-IS	475002.593		ppb	2.256		476365.650
159	Tb-IS	> 555387.814		ppb	2.197		553967.024
207	Pb	6606.153	0.250289	ppb	2.842	2.300	592.227
203	Tl	682.239	0.064804	ppb	13.223	16.858	187.779
209	Bi-IS	286257.996		ppb	1.858		295774.323
51	V	707.795	1.987340	ppb	9.770	10.490	5.556
59	Co	183.335	0.136127	ppb	14.883	17.914	27.778
60	Ni	626.681	0.715287	ppb	13.758	14.274	54.445
75	As	806.262	0.755770	ppb	6.935	20.176	557.132
71	Ga-ISK	> 92825.057		ppb	0.773		93586.704
82	Se-2	25.562	0.773287	ppb	15.748	15.638	0.213
107	Ag-1	574.457	0.090546	ppb	28.204	40.811	190.001
115	In-ISK	124648.340		ppb	1.219		125178.383
45	Sc-ISK	> 220648.737		ppb	0.342		224970.912
23	Na	2006202.155	5865.545906	ppb	1.979	1.637	1021.703
39	K	1391882.656	1914.591099	ppb	0.938	0.728	75655.379
24	Mg	60425.867	148.923150	ppb	1.008	0.919	468.341
159	Tb-ISK	267949.031		ppb	0.994		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14380-A-2-B MS

Autosampler Position: 432

Sample Date/Time: Tuesday, December 10, 2019 06:54:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14380-A-2-B MS.317

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		78909.581		ppb		1.283		47027.292
9	Be	|		100579.498	83.482892	ppb		0.448	1.227	24.444
10	B	|		26743.902	76.337028	ppb		1.343	0.674	3095.891
27	Al	|		737585.247	118.697009	ppb		1.368	0.591	3999.449
43	Ca-2	|		127546.859	5625.031943	ppb		0.269	0.856	106.667
49	Ti	|		54794.898	81.271191	ppb		1.313	1.425	166.668
52	Cr	|		768486.865	84.106723	ppb		1.113	1.550	11497.959
55	Mn	|		1297023.975	83.905729	ppb		0.234	0.629	796.689
57	Fe	|		1580861.910	4785.485048	ppb		0.384	0.435	11074.292
45	Sc-IS	>		2311784.528		ppb		0.785		2258970.662
66	Zn	|		202073.768	115.945757	ppb		1.378	1.047	1505.635
86	Sr	|		225220.850	83.470523	ppb		1.491	0.733	57.938
65	Cu	|		227766.370	82.892652	ppb		0.704	0.251	195.182
69	Ga-IS	|		681612.123		ppb		0.424		674512.414
95	Mo	|		183342.476	75.492703	ppb		1.338	0.956	418.895
115	In-IS	>		417181.236		ppb		0.863		424835.533
111	Cd	|		178999.816	85.732738	ppb		0.784	0.225	45.787
118	Sn	|		438733.678	65.167383	ppb		1.308	1.941	3435.970
121	Sb	|		557303.515	77.115364	ppb		2.151	2.461	732.241
135	Ba	|		146085.574	80.367974	ppb		2.101	1.978	76.667
165	Ho-IS	|		468228.381		ppb		2.573		476365.650
159	Tb-IS	>		538204.993		ppb		1.149		553967.024
207	Pb	|		1818263.548	78.075552	ppb		2.090	0.955	592.227
203	Tl	|		598221.673	81.052719	ppb		1.603	0.536	187.779
209	Bi-IS	|		953831.236		ppb		2.207		295774.323
51	V	|		29338.985	82.611596	ppb		0.095	0.314	5.556
59	Co	|		96407.554	83.826377	ppb		0.668	0.396	27.778
60	Ni	|		65297.786	81.191478	ppb		0.637	0.635	54.445
75	As	|		29352.790	85.495499	ppb		1.601	1.334	557.132
71	Ga-ISK	>		93226.537		ppb		0.297		93586.704
82	Se-2	|		2919.194	88.684341	ppb		2.558	2.857	0.213
107	Ag-1	|		166952.209	39.027151	ppb		1.235	1.535	190.001
115	In-ISK	|		122286.683		ppb		0.343		125178.383
45	Sc-ISK	>		224104.347		ppb		1.419		224970.912
23	Na	|		2291600.211	6598.414629	ppb		0.618	1.901	1021.703
39	K	|		1897318.188	2606.931282	ppb		0.228	1.722	75655.379
24	Mg	|		1968865.851	4814.006697	ppb		0.740	2.151	468.341
159	Tb-ISK	|		268174.434		ppb		0.605		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14380-A-2-C MSD

Autosampler Position: 433

Sample Date/Time: Tuesday, December 10, 2019 06:57:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14380-A-2-C MSD.318

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	79455.916		ppb		0.832		47027.292
9	Be	|	105793.641	88.562141	ppb		0.930	1.960	24.444
10	B	|	28512.876	82.871588	ppb		1.727	3.355	3095.891
27	Al	|	840434.169	136.512056	ppb		0.319	1.547	3999.449
43	Ca-2	|	136356.208	6064.077214	ppb		2.215	1.122	106.667
49	Ti	|	56313.004	84.248100	ppb		1.135	2.049	166.668
52	Cr	|	799924.723	88.357493	ppb		0.897	1.638	11497.959
55	Mn	|	1352458.185	88.236122	ppb		0.669	0.701	796.689
57	Fe	|	1712460.354	5231.483947	ppb		0.812	1.812	11074.292
45	Sc-IS	>	2292415.896		ppb		1.314		2258970.662
66	Zn	|	207646.200	120.207574	ppb		1.486	2.585	1505.635
86	Sr	|	234738.165	87.740286	ppb		0.922	0.467	57.938
65	Cu	|	238193.890	87.428892	ppb		1.203	1.267	195.182
69	Ga-IS	|	681137.683		ppb		2.053		674512.414
95	Mo	|	199539.472	82.880434	ppb		0.487	0.901	418.895
115	In-IS	>	416567.709		ppb		1.036		424835.533
111	Cd	|	187117.363	89.751314	ppb		1.337	0.332	45.787
118	Sn	|	478536.625	71.224173	ppb		1.733	1.383	3435.970
121	Sb	|	596509.914	82.663506	ppb		0.989	0.150	732.241
135	Ba	|	160024.673	88.169987	ppb		0.967	0.103	76.667
165	Ho-IS	|	469629.422		ppb		2.795		476365.650
159	Tb-IS	>	543150.040		ppb		2.780		553967.024
207	Pb	|	1893532.461	80.583927	ppb		2.092	0.678	592.227
203	Tl	|	623181.439	83.680628	ppb		2.354	1.415	187.779
209	Bi-IS	|	1174360.860		ppb		2.684		295774.323
51	V	|	30041.558	85.409146	ppb		1.294	2.652	5.556
59	Co	|	99750.388	87.569635	ppb		0.698	2.039	27.778
60	Ni	|	68644.627	86.149724	ppb		3.016	1.671	54.445
75	As	|	30619.454	90.117486	ppb		1.530	0.902	557.132
71	Ga-ISK	>	92355.390		ppb		1.448		93586.704
82	Se-2	|	3117.223	95.605751	ppb		0.486	1.855	0.213
107	Ag-1	|	180922.906	42.702312	ppb		0.399	1.831	190.001
115	In-ISK	|	124009.105		ppb		0.438		125178.383
45	Sc-ISK	>	222831.226		ppb		1.060		224970.912
23	Na	|	2447821.147	7087.924794	ppb		0.896	1.242	1021.703
39	K	|	1963056.886	2716.885966	ppb		0.558	1.555	75655.379
24	Mg	|	2214265.163	5444.701302	ppb		1.510	2.241	468.341
159	Tb-ISK	|	269110.523		ppb		0.869		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14380-A-1-A @5

Autosampler Position: 434

Sample Date/Time: Tuesday, December 10, 2019 07:00:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14380-A-1-A @5.319

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46716.261		ppb	0.521		47027.292
9	Be	142.223	0.098116	ppb	42.274	51.867	24.444
10	B	5076.458	6.272952	ppb	1.949	6.192	3095.891
27	Al	252254.363	40.391448	ppb	0.632	0.798	3999.449
43	Ca-2	13764.962	606.162272	ppb	1.186	0.839	106.667
49	Ti	751.131	0.870437	ppb	9.099	12.446	166.668
52	Cr	14433.958	0.305536	ppb	2.460	13.292	11497.959
55	Mn	120880.384	7.816206	ppb	0.384	0.744	796.689
57	Fe	44168.199	100.895018	ppb	2.360	4.272	11074.292
45	Sc-IS	> 2298810.834		ppb	0.829		2258970.662
66	Zn	78284.003	44.623284	ppb	2.596	1.805	1505.635
86	Sr	8123.090	3.006819	ppb	2.030	2.645	57.938
65	Cu	17804.050	6.448691	ppb	3.199	2.831	195.182
69	Ga-IS	671063.535		ppb	1.274		674512.414
95	Mo	12392.042	4.967489	ppb	2.841	3.799	418.895
115	In-IS	> 429624.897		ppb	1.772		424835.533
111	Cd	2030.792	0.924225	ppb	9.439	11.207	45.787
118	Sn	38476.251	5.090171	ppb	4.211	6.189	3435.970
121	Sb	35975.269	4.742816	ppb	3.057	4.895	732.241
135	Ba	3916.093	2.052727	ppb	5.806	6.989	76.667
165	Ho-IS	477433.509		ppb	1.461		476365.650
159	Tb-IS	> 556053.712		ppb	1.620		553967.024
207	Pb	14149.394	0.563588	ppb	8.962	9.317	592.227
203	Tl	1074.487	0.116270	ppb	26.930	33.079	187.779
209	Bi-IS	653086.025		ppb	0.540		295774.323
51	V	228.891	0.613335	ppb	6.882	6.276	5.556
59	Co	173.334	0.123344	ppb	18.546	24.056	27.778
60	Ni	671.127	0.748124	ppb	5.538	7.726	54.445
75	As	703.324	0.390810	ppb	8.658	47.371	557.132
71	Ga-ISK	> 95529.500		ppb	1.499		93586.704
82	Se-2	19.906	0.584670	ppb	18.217	19.623	0.213
107	Ag-1	777.799	0.133440	ppb	11.293	15.763	190.001
115	In-ISK	125461.918		ppb	0.344		125178.383
45	Sc-ISK	> 224564.766		ppb	1.219		224970.912
23	Na	307036.374	879.578279	ppb	1.168	0.284	1021.703
39	K	771277.687	993.361970	ppb	0.967	0.861	75655.379
24	Mg	73311.107	177.731127	ppb	3.441	2.747	468.341
159	Tb-ISK	272998.956		ppb	1.690		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14380-A-3-A

Autosampler Position: 435

Sample Date/Time: Tuesday, December 10, 2019 07:03:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14380-A-3-A.320

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46264.817		ppb	2.162		47027.292
9	Be	82.222	0.047654	ppb	22.328	32.866	24.444
10	B	2742.486	-1.360467	ppb	2.551	25.519	3095.891
27	Al	203436.527	32.327205	ppb	4.084	5.168	3999.449
43	Ca-2	38119.127	1680.775954	ppb	1.144	1.985	106.667
49	Ti	1855.687	2.507554	ppb	36.087	39.385	166.668
52	Cr	15896.618	0.462337	ppb	1.254	9.045	11497.959
55	Mn	63912.650	4.091830	ppb	0.227	1.459	796.689
57	Fe	24621.200	40.655236	ppb	1.006	3.937	11074.292
45	Sc-IS	> 2307866.298		ppb	1.377		2258970.662
66	Zn	44621.806	24.954353	ppb	0.860	0.783	1505.635
86	Sr	13631.741	5.040566	ppb	2.716	2.730	57.938
65	Cu	5299.682	1.860372	ppb	5.025	3.898	195.182
69	Ga-IS	677450.861		ppb	1.062		674512.414
95	Mo	2215.728	0.739364	ppb	6.569	8.717	418.895
115	In-IS	> 429700.819		ppb	1.361		424835.533
111	Cd	265.350	0.101853	ppb	18.475	22.036	45.787
118	Sn	6607.084	0.455455	ppb	3.055	9.238	3435.970
121	Sb	10914.169	1.368626	ppb	2.295	3.068	732.241
135	Ba	7371.902	3.899159	ppb	2.207	3.491	76.667
165	Ho-IS	474851.978		ppb	2.178		476365.650
159	Tb-IS	> 553850.064		ppb	0.546		553967.024
207	Pb	6174.966	0.233089	ppb	4.825	5.855	592.227
203	Tl	626.681	0.057860	ppb	15.536	22.914	187.779
209	Bi-IS	320852.147		ppb	0.823		295774.323
51	V	308.892	0.844959	ppb	17.445	16.127	5.556
59	Co	146.667	0.102477	ppb	15.909	20.897	27.778
60	Ni	348.893	0.362916	ppb	3.861	6.232	54.445
75	As	691.118	0.385125	ppb	4.095	17.973	557.132
71	Ga-ISK	> 94091.121		ppb	1.648		93586.704
82	Se-2	12.221	0.363071	ppb	61.989	64.054	0.213
107	Ag-1	326.670	0.031556	ppb	17.937	45.596	190.001
115	In-ISK	124164.875		ppb	1.089		125178.383
45	Sc-ISK	> 228226.406		ppb	0.408		224970.912
23	Na	484359.763	1366.917881	ppb	0.970	0.970	1021.703
39	K	220319.264	201.687141	ppb	0.318	1.028	75655.379
24	Mg	216359.640	518.345213	ppb	1.429	1.554	468.341
159	Tb-ISK	271537.156		ppb	0.945		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14315-A-1-A @5

Autosampler Position: 436

Sample Date/Time: Tuesday, December 10, 2019 07:06:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14315-A-1-A @5.321

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	51045.493		ppb	1.509		47027.292
9	Be	48.889	0.018211	ppb	51.174	108.785	24.444
10	B	57327.016	168.242947	ppb	0.336	0.212	3095.891
27	Al	46069.813	6.506982	ppb	4.326	4.831	3999.449
43	Ca-2	138930.628	5891.903180	ppb	0.279	0.646	106.667
49	Ti	522.232	0.493134	ppb	13.241	19.462	166.668
52	Cr	28315.814	1.718399	ppb	0.980	1.237	11497.959
55	Mn	179920.384	11.146306	ppb	0.662	0.672	796.689
57	Fe	103907.667	270.099676	ppb	1.226	1.740	11074.292
45	Sc-IS	> 2404090.279		ppb	0.418		2258970.662
66	Zn	235605.989	130.109363	ppb	1.030	1.450	1505.635
86	Sr	117861.989	41.996911	ppb	1.223	1.638	57.938
65	Cu	3693.869	1.221159	ppb	1.545	2.075	195.182
69	Ga-IS	686877.902		ppb	0.543		674512.414
95	Mo	3752.715	1.312425	ppb	2.166	2.304	418.895
115	In-IS	> 438997.516		ppb	1.749		424835.533
111	Cd	1826.682	0.809998	ppb	5.893	5.436	45.787
118	Sn	12092.907	1.216536	ppb	6.080	11.032	3435.970
121	Sb	10591.703	1.295161	ppb	0.185	2.094	732.241
135	Ba	8570.349	4.441361	ppb	2.374	1.424	76.667
165	Ho-IS	498495.691		ppb	3.382		476365.650
159	Tb-IS	> 573232.121		ppb	2.056		553967.024
207	Pb	2157.841	0.062190	ppb	12.445	14.377	592.227
203	Tl	308.892	0.014494	ppb	18.857	45.315	187.779
209	Bi-IS	334115.828		ppb	1.394		295774.323
51	V	105.556	0.280297	ppb	11.956	11.855	5.556
59	Co	204.446	0.153000	ppb	4.103	4.378	27.778
60	Ni	1957.912	2.359048	ppb	3.000	3.377	54.445
75	As	1242.300	2.024600	ppb	22.979	41.428	557.132
71	Ga-ISK	> 93616.867		ppb	0.832		93586.704
82	Se-2	3225.904	97.586912	ppb	1.301	0.673	0.213
107	Ag-1	238.891	0.011372	ppb	50.259	245.364	190.001
115	In-ISK	122855.753		ppb	1.066		125178.383
45	Sc-ISK	> 233751.579		ppb	1.447		224970.912
23	Na	20329169.348	56134.336072	ppb	1.276	0.873	1021.703
39	K	1695598.245	2217.905969	ppb	2.208	2.092	75655.379
24	Mg	1211789.717	2839.590162	ppb	2.911	2.534	468.341
159	Tb-ISK	275870.976		ppb	0.814		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14306-A-1-A @5

Autosampler Position: 437

Sample Date/Time: Tuesday, December 10, 2019 07:08:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14306-A-1-A @5.322

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	60095.024		ppb	0.335		47027.292
9	Be	72.222	0.035775	ppb	32.417	52.607	24.444
10	B	122860.641	364.386262	ppb	2.029	1.702	3095.891
27	Al	235845.451	35.284559	ppb	1.042	1.900	3999.449
43	Ca-2	387688.997	16109.650007	ppb	1.210	0.434	106.667
49	Ti	983.367	1.123906	ppb	8.515	10.215	166.668
52	Cr	18218.277	0.599128	ppb	1.403	4.852	11497.959
55	Mn	930397.426	56.669304	ppb	0.771	1.809	796.689
57	Fe	40120.710	80.671053	ppb	1.245	3.957	11074.292
45	Sc-IS	> 2454930.519		ppb	1.540		2258970.662
66	Zn	23177.678	11.729564	ppb	1.405	1.253	1505.635
86	Sr	472950.015	165.091026	ppb	1.715	0.894	57.938
65	Cu	2595.635	0.817938	ppb	3.423	5.049	195.182
69	Ga-IS	672396.055		ppb	0.516		674512.414
95	Mo	24345.189	9.284286	ppb	3.671	2.974	418.895
115	In-IS	> 424005.798		ppb	1.098		424835.533
111	Cd	1824.554	0.838608	ppb	1.116	2.152	45.787
118	Sn	10149.169	0.989841	ppb	6.392	10.042	3435.970
121	Sb	12953.656	1.666470	ppb	4.403	5.197	732.241
135	Ba	49420.894	26.725083	ppb	0.540	1.131	76.667
165	Ho-IS	485967.340		ppb	1.980		476365.650
159	Tb-IS	> 564022.543		ppb	0.848		553967.024
207	Pb	3602.399	0.122993	ppb	12.210	15.101	592.227
203	Tl	422.229	0.029908	ppb	39.838	73.296	187.779
209	Bi-IS	289046.135		ppb	0.868		295774.323
51	V	188.890	0.522807	ppb	8.151	8.134	5.556
59	Co	391.117	0.319951	ppb	12.565	12.269	27.778
60	Ni	2974.754	3.679592	ppb	2.467	2.544	54.445
75	As	1281.517	2.204369	ppb	7.558	14.032	557.132
71	Ga-ISK	> 92108.241		ppb	1.354		93586.704
82	Se-2	105.836	3.253108	ppb	16.592	17.983	0.213
107	Ag-1	171.112	-0.003843	ppb	25.942	260.452	190.001
115	In-ISK	121136.847		ppb	0.108		125178.383
45	Sc-ISK	> 233532.860		ppb	2.253		224970.912
23	Na	46712550.097	129155.781211	ppb	0.781	2.705	1021.703
39	K	7487844.085	10172.532643	ppb	2.183	1.292	75655.379
24	Mg	3560795.523	8356.279825	ppb	0.670	1.863	468.341
159	Tb-ISK	272338.926		ppb	1.105		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Tuesday, December 10, 2019 07:11:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCV-210770.323

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		48455.376		ppb		0.860		47027.292
9	Be	|		124012.623	100.031600	ppb		0.606	1.596	24.444
10	B	|		84745.095	256.387884	ppb		1.407	0.498	3095.891
27	Al	|		644215.359	100.643842	ppb		1.194	0.669	3999.449
43	Ca-2	|		122037.436	5229.526818	ppb		1.320	1.300	106.667
49	Ti	|		69308.836	99.955759	ppb		0.435	1.303	166.668
52	Cr	|		959803.629	102.357334	ppb		0.709	1.344	11497.959
55	Mn	|		1556294.122	97.845208	ppb		0.219	1.129	796.689
57	Fe	|		1716206.084	5050.900731	ppb		1.503	2.437	11074.292
45	Sc-IS	>		2379032.959		ppb		1.006		2258970.662
66	Zn	|		184411.557	102.728423	ppb		0.666	1.335	1505.635
86	Sr	|		281146.199	101.266551	ppb		0.118	0.920	57.938
65	Cu	|		286640.294	101.396902	ppb		0.704	1.656	195.182
69	Ga-IS	|		708984.167		ppb		1.564		674512.414
95	Mo	|		254792.216	102.013661	ppb		0.944	0.981	418.895
115	In-IS	>		436975.962		ppb		1.856		424835.533
111	Cd	|		223770.034	102.341781	ppb		0.882	1.569	45.787
118	Sn	|		708954.028	100.800341	ppb		2.159	1.267	3435.970
121	Sb	|		763206.554	100.863393	ppb		1.336	1.859	732.241
135	Ba	|		189418.700	99.516221	ppb		0.984	1.889	76.667
165	Ho-IS	|		489173.503		ppb		2.659		476365.650
159	Tb-IS	>		567424.039		ppb		0.345		553967.024
207	Pb	|		2347789.059	95.632898	ppb		1.890	1.747	592.227
203	Tl	|		779602.564	100.200677	ppb		2.395	2.546	187.779
209	Bi-IS	|		291378.074		ppb		2.253		295774.323
51	V	|		36367.348	100.488509	ppb		1.281	1.471	5.556
59	Co	|		119141.437	101.657461	ppb		0.773	0.335	27.778
60	Ni	|		84161.631	102.705553	ppb		0.449	0.711	54.445
75	As	|		35509.561	101.809350	ppb		2.463	2.893	557.132
71	Ga-ISK	>		95008.231		ppb		0.860		93586.704
82	Se-2	|		3310.605	98.686781	ppb		0.674	0.659	0.213
107	Ag-1	|		443588.701	101.820157	ppb		0.882	0.838	190.001
115	In-ISK	|		126036.486		ppb		0.524		125178.383
45	Sc-ISK	>		230346.713		ppb		0.536		224970.912
23	Na	|		1844101.777	5164.656179	ppb		0.718	1.178	1021.703
39	K	|		3771309.195	5141.359807	ppb		0.073	0.616	75655.379
24	Mg	|		2201954.653	5237.091533	ppb		0.595	0.500	468.341
159	Tb-ISK	|		272734.330		ppb		1.013		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Tuesday, December 10, 2019 07:14:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCB-23446.324

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		48039.534		ppb			1.220			47027.292
9	Be	|		74.445	0.039733	ppb	35.914	53.384				24.444
10	B	|		3540.439	0.987261	ppb	1.567	11.268				3095.891
27	Al	|		4905.287	0.116328	ppb	2.805	14.199				3999.449
43	Ca-2	|		228.335	5.058458	ppb	17.700	32.586				106.667
49	Ti	|		218.891	0.065527	ppb	11.829	53.764				166.668
52	Cr	|		12318.647	0.035179	ppb	3.643	111.588				11497.959
55	Mn	|		1915.685	0.068838	ppb	9.897	16.605				796.689
57	Fe	|		13778.866	6.664756	ppb	2.267	17.773				11074.292
45	Sc-IS	>		2356520.069		ppb			0.970			2258970.662
66	Zn	|		2219.062	0.367360	ppb	7.443	22.667				1505.635
86	Sr	|		251.762	0.069499	ppb	15.320	18.836				57.938
65	Cu	|		341.219	0.049127	ppb	6.881	14.688				195.182
69	Ga-IS	|		697787.416		ppb			0.887			674512.414
95	Mo	|		3680.474	1.313613	ppb	3.340	4.726				418.895
115	In-IS	>		440682.328		ppb			1.381			424835.533
111	Cd	|		735.624	0.312122	ppb	10.278	11.015				45.787
118	Sn	|		13551.984	1.415887	ppb	2.700	5.515				3435.970
121	Sb	|		3848.297	0.405311	ppb	5.260	7.755				732.241
135	Ba	|		195.557	0.060344	ppb	24.485	39.787				76.667
165	Ho-IS	|		487357.713		ppb			1.143			476365.650
159	Tb-IS	>		568005.447		ppb			0.489			553967.024
207	Pb	|		2282.294	0.068161	ppb	13.710	18.332				592.227
203	Tl	|		638.903	0.057298	ppb	10.998	15.096				187.779
209	Bi-IS	|		296999.407		ppb			1.634			295774.323
51	V	|		22.222	0.044346	ppb	17.321	23.435				5.556
59	Co	|		67.778	0.032384	ppb	5.679	9.872				27.778
60	Ni	|		145.556	0.105962	ppb	9.255	15.125				54.445
75	As	|		669.257	0.255018	ppb	3.197	23.907				557.132
71	Ga-ISK	>		97353.930		ppb			0.136			93586.704
82	Se-2	|		18.221	0.523698	ppb	17.698	18.022				0.213
107	Ag-1	|		872.249	0.151175	ppb	10.483	13.537				190.001
115	In-ISK	|		125785.281		ppb			2.295			125178.383
45	Sc-ISK	>		226864.987		ppb			0.507			224970.912
23	Na	|		23923.979	65.181584	ppb	21.751	23.157				1021.703
39	K	|		84148.240	11.108686	ppb	1.222	18.285				75655.379
24	Mg	|		3822.205	8.099654	ppb	28.087	32.491				468.341
159	Tb-ISK	|		272355.765		ppb			0.602			270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Tuesday, December 10, 2019 07:17:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCB-23446.325

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		47895.735		ppb		2.124		47027.292
9	Be	|		82.222	0.046940	ppb	26.993	39.711		24.444
10	B	|		3550.442	1.124745	ppb	5.326	39.360		3095.891
27	Al	|		6042.389	0.306265	ppb	2.247	5.602		3999.449
43	Ca-2	|		275.003	7.217145	ppb	24.052	40.739		106.667
49	Ti	|		196.668	0.036468	ppb	11.864	107.175		166.668
52	Cr	|		12620.019	0.081713	ppb	2.637	45.172		11497.959
55	Mn	|		1901.241	0.069251	ppb	20.880	37.685		796.689
57	Fe	|		12636.699	3.624162	ppb	2.065	37.398		11074.292
45	Sc-IS	>		2333804.011		ppb	1.519			2258970.662
66	Zn	|		2131.270	0.330230	ppb	2.445	14.514		1505.635
86	Sr	|		225.094	0.060818	ppb	37.718	51.820		57.938
65	Cu	|		349.335	0.053361	ppb	8.249	21.484		195.182
69	Ga-IS	|		701992.404		ppb	1.587			674512.414
95	Mo	|		1135.601	0.287705	ppb	6.202	12.567		418.895
115	In-IS	>		445635.444		ppb	1.387			424835.533
111	Cd	|		418.733	0.166211	ppb	9.871	10.677		45.787
118	Sn	|		6809.401	0.449398	ppb	2.657	8.095		3435.970
121	Sb	|		2822.503	0.266479	ppb	11.394	15.809		732.241
135	Ba	|		170.001	0.046005	ppb	29.607	54.411		76.667
165	Ho-IS	|		491213.745		ppb	1.560			476365.650
159	Tb-IS	>		569429.278		ppb	0.328			553967.024
207	Pb	|		1592.258	0.039888	ppb	31.768	51.059		592.227
203	Tl	|		496.676	0.038846	ppb	39.751	64.590		187.779
209	Bi-IS	|		294957.012		ppb	2.158			295774.323
51	V	|		41.111	0.093317	ppb	53.987	63.126		5.556
59	Co	|		86.667	0.046765	ppb	44.356	67.078		27.778
60	Ni	|		94.445	0.043063	ppb	7.347	20.124		54.445
75	As	|		605.908	0.044357	ppb	5.551	233.688		557.132
71	Ga-ISK	>		99136.132		ppb	0.623			93586.704
82	Se-2	|		11.586	0.325318	ppb	56.287	57.849		0.213
107	Ag-1	|		264.447	0.013938	ppb	13.827	60.170		190.001
115	In-ISK	|		126435.781		ppb	0.598			125178.383
45	Sc-ISK	>		234057.668		ppb	1.518			224970.912
23	Na	|		11709.882	29.386460	ppb	16.267	18.695		1021.703
39	K	|		79420.158	0.992239	ppb	0.624	216.193		75655.379
24	Mg	|		1656.765	2.739000	ppb	17.667	25.451		468.341
159	Tb-ISK	|		273775.159		ppb	0.497			270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14307-A-1-A @5

Autosampler Position: 438

Sample Date/Time: Tuesday, December 10, 2019 07:19:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14307-A-1-A @5.326

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	59455.695		ppb	0.793		47027.292
9	Be	65.556	0.031136	ppb	19.251	28.783	24.444
10	B	109488.021	328.691607	ppb	1.420	3.129	3095.891
27	Al	173120.472	26.119015	ppb	0.739	1.987	3999.449
43	Ca-2	508038.305	21428.679853	ppb	1.226	1.438	106.667
49	Ti	917.808	1.049809	ppb	11.078	11.478	166.668
52	Cr	17908.997	0.594799	ppb	1.210	5.163	11497.959
55	Mn	1357334.710	83.944084	ppb	0.763	2.643	796.689
57	Fe	40995.405	84.931615	ppb	0.497	2.796	11074.292
45	Sc-IS	> 2418921.504		ppb	1.946		2258970.662
66	Zn	28027.467	14.601196	ppb	0.410	2.432	1505.635
86	Sr	620160.168	219.727984	ppb	1.247	0.945	57.938
65	Cu	2019.778	0.630116	ppb	6.962	6.471	195.182
69	Ga-IS	679968.490		ppb	1.023		674512.414
95	Mo	21280.283	8.219567	ppb	0.822	2.520	418.895
115	In-IS	> 425913.650		ppb	0.300		424835.533
111	Cd	1806.543	0.826087	ppb	6.810	6.720	45.787
118	Sn	4809.699	0.200171	ppb	3.780	14.327	3435.970
121	Sb	5766.723	0.682831	ppb	6.828	7.480	732.241
135	Ba	66955.480	36.056836	ppb	2.225	2.218	76.667
165	Ho-IS	496264.145		ppb	1.698		476365.650
159	Tb-IS	> 568881.697		ppb	1.899		553967.024
207	Pb	3776.859	0.128711	ppb	10.083	10.913	592.227
203	Tl	343.338	0.019143	ppb	42.752	94.305	187.779
209	Bi-IS	277843.882		ppb	1.129		295774.323
51	V	156.668	0.425399	ppb	19.500	18.747	5.556
59	Co	380.005	0.306673	ppb	10.956	10.875	27.778
60	Ni	2842.506	3.474189	ppb	5.825	5.886	54.445
75	As	1090.186	1.592992	ppb	2.867	5.867	557.132
71	Ga-ISK	> 93118.102		ppb	1.542		93586.704
82	Se-2	121.170	3.677739	ppb	8.309	7.562	0.213
107	Ag-1	124.445	-0.015093	ppb	13.213	28.664	190.001
115	In-ISK	122091.600		ppb	1.023		125178.383
45	Sc-ISK	> 231893.868		ppb	1.392		224970.912
23	Na	33560233.875	93415.270235	ppb	0.969	0.954	1021.703
39	K	5129994.908	6985.481652	ppb	0.950	1.561	75655.379
24	Mg	3795163.691	8966.968836	ppb	2.425	2.052	468.341
159	Tb-ISK	271710.689		ppb	1.602		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14308-A-1-A @5

Autosampler Position: 439

Sample Date/Time: Tuesday, December 10, 2019 07:22:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14308-A-1-A @5.327

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	61368.209		ppb	1.231		47027.292
9	Be	47.778	0.017190	ppb	47.490	103.553	24.444
10	B	115786.250	349.297338	ppb	0.969	0.237	3095.891
27	Al	183043.200	27.749844	ppb	1.690	2.666	3999.449
43	Ca-2	423749.158	17931.370203	ppb	1.793	1.233	106.667
49	Ti	972.255	1.133390	ppb	3.365	3.694	166.668
52	Cr	17132.490	0.518511	ppb	1.214	7.091	11497.959
55	Mn	1494303.149	92.724705	ppb	1.579	2.638	796.689
57	Fe	39887.831	82.083533	ppb	0.138	1.417	11074.292
45	Sc-IS	> 2410610.987		ppb	1.080		2258970.662
66	Zn	16107.970	8.042652	ppb	2.739	3.952	1505.635
86	Sr	548731.866	195.077640	ppb	0.508	0.760	57.938
65	Cu	1884.830	0.585740	ppb	1.958	2.887	195.182
69	Ga-IS	691197.548		ppb	1.041		674512.414
95	Mo	22575.604	8.759829	ppb	1.303	2.180	418.895
115	In-IS	> 435621.102		ppb	0.740		424835.533
111	Cd	1781.597	0.795831	ppb	1.061	0.330	45.787
118	Sn	4574.067	0.150704	ppb	4.884	22.510	3435.970
121	Sb	4916.403	0.552606	ppb	5.447	6.049	732.241
135	Ba	61790.013	32.529815	ppb	0.741	0.512	76.667
165	Ho-IS	496009.863		ppb	2.597		476365.650
159	Tb-IS	> 576174.412		ppb	1.916		553967.024
207	Pb	2117.841	0.060421	ppb	16.724	25.808	592.227
203	Tl	313.337	0.015155	ppb	56.404	152.655	187.779
209	Bi-IS	284073.439		ppb	0.929		295774.323
51	V	198.890	0.536925	ppb	6.773	6.641	5.556
59	Co	305.559	0.238122	ppb	9.778	10.803	27.778
60	Ni	2441.320	2.929369	ppb	4.888	4.691	54.445
75	As	1052.202	1.433685	ppb	8.652	18.105	557.132
71	Ga-ISK	> 94499.304		ppb	0.318		93586.704
82	Se-2	71.242	2.129527	ppb	24.715	25.045	0.213
107	Ag-1	102.223	-0.020689	ppb	17.960	20.672	190.001
115	In-ISK	123267.738		ppb	1.084		125178.383
45	Sc-ISK	> 237641.391		ppb	0.332		224970.912
23	Na	38526173.138	104639.363187	ppb	0.701	0.861	1021.703
39	K	4796525.822	6363.298814	ppb	0.719	0.786	75655.379
24	Mg	3338503.628	7697.187159	ppb	1.306	1.529	468.341
159	Tb-ISK	269371.943		ppb	0.346		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14309-A-1-A @5

Autosampler Position: 440

Sample Date/Time: Tuesday, December 10, 2019 07:25:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14309-A-1-A @5.328

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	63883.653		ppb	1.497		47027.292
9	Be	23.333	-0.002623	ppb	28.571	203.912	24.444
10	B	117575.245	345.898753	ppb	1.339	2.614	3095.891
27	Al	212202.280	31.461918	ppb	0.874	2.129	3999.449
43	Ca-2	502600.181	20745.239955	ppb	0.442	1.071	106.667
49	Ti	776.688	0.826574	ppb	5.580	5.450	166.668
52	Cr	17007.908	0.460954	ppb	4.202	20.727	11497.959
55	Mn	1244923.165	75.324584	ppb	0.714	1.413	796.689
57	Fe	42624.610	87.012023	ppb	0.879	2.390	11074.292
45	Sc-IS	> 2471735.370		ppb	1.413		2258970.662
66	Zn	24767.007	12.504560	ppb	0.976	2.031	1505.635
86	Sr	606064.910	210.134280	ppb	0.842	0.571	57.938
65	Cu	3795.745	1.221089	ppb	4.457	6.206	195.182
69	Ga-IS	696601.197		ppb	0.655		674512.414
95	Mo	18311.732	6.891460	ppb	1.974	0.880	418.895
115	In-IS	> 443039.888		ppb	1.121		424835.533
111	Cd	1743.879	0.765289	ppb	4.065	4.681	45.787
118	Sn	3194.803	-0.054448	ppb	7.575	71.775	3435.970
121	Sb	3886.084	0.407283	ppb	2.810	2.241	732.241
135	Ba	78420.286	40.600042	ppb	2.354	1.294	76.667
165	Ho-IS	496389.946		ppb	1.916		476365.650
159	Tb-IS	> 582591.019		ppb	1.269		553967.024
207	Pb	3835.760	0.127560	ppb	4.563	6.613	592.227
203	Tl	192.224	-0.000615	ppb	26.883	1084.820	187.779
209	Bi-IS	282774.390		ppb	2.287		295774.323
51	V	194.446	0.517746	ppb	13.316	12.656	5.556
59	Co	310.003	0.238793	ppb	3.725	4.829	27.778
60	Ni	4727.449	5.667685	ppb	1.870	2.846	54.445
75	As	1100.751	1.537891	ppb	4.720	10.164	557.132
71	Ga-ISK	> 95646.924		ppb	1.034		93586.704
82	Se-2	50.888	1.502732	ppb	24.650	25.521	0.213
107	Ag-1	81.111	-0.025766	ppb	19.421	14.604	190.001
115	In-ISK	125334.097		ppb	0.892		125178.383
45	Sc-ISK	> 242513.423		ppb	0.769		224970.912
23	Na	34292139.267	91273.056743	ppb	0.584	1.334	1021.703
39	K	5196514.024	6762.236966	ppb	0.653	0.835	75655.379
24	Mg	3552506.099	8025.880509	ppb	0.806	0.172	468.341
159	Tb-ISK	271121.955		ppb	2.083		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14206-B-1-A @5

Autosampler Position: 441

Sample Date/Time: Tuesday, December 10, 2019 07:28:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14206-B-1-A @5.329

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		53101.851		ppb				1.052		47027.292
9	Be	|		36.667	0.008547	ppb	18.182	65.401				24.444
10	B	|		4246.187	2.966179	ppb	3.194	12.435				3095.891
27	Al	|		748195.356	115.816501	ppb	0.451	1.241				3999.449
43	Ca-2	|		16602.976	700.115734	ppb	0.520	0.409				106.667
49	Ti	|		3424.855	4.648122	ppb	1.364	2.069				166.668
52	Cr	|		16965.624	0.506189	ppb	0.870	6.000				11497.959
55	Mn	|		171302.179	10.614849	ppb	1.410	2.290				796.689
57	Fe	|		67868.612	164.504231	ppb	0.377	1.058				11074.292
45	Sc-IS	>		2403277.609		ppb	0.908					2258970.662
66	Zn	|		22610.101	11.685241	ppb	0.276	1.223				1505.635
86	Sr	|		8707.332	3.083502	ppb	0.888	1.791				57.938
65	Cu	|		3631.735	1.199695	ppb	1.744	0.941				195.182
69	Ga-IS	|		715683.505		ppb	0.191					674512.414
95	Mo	|		1098.931	0.259300	ppb	3.215	3.891				418.895
115	In-IS	>		447448.903		ppb	0.640					424835.533
111	Cd	|		1851.146	0.805395	ppb	2.005	2.718				45.787
118	Sn	|		2493.552	-0.157106	ppb	6.595	13.435				3435.970
121	Sb	|		1500.079	0.094120	ppb	4.704	8.605				732.241
135	Ba	|		4971.977	2.510425	ppb	2.757	3.330				76.667
165	Ho-IS	|		492489.121		ppb	2.685					476365.650
159	Tb-IS	>		573370.446		ppb	1.463					553967.024
207	Pb	|		18064.436	0.703726	ppb	0.720	0.775				592.227
203	Tl	|		170.001	-0.003104	ppb	25.641	178.123				187.779
209	Bi-IS	|		299795.540		ppb	1.161					295774.323
51	V	|		465.563	1.184755	ppb	7.854	7.154				5.556
59	Co	|		291.114	0.207794	ppb	8.043	8.714				27.778
60	Ni	|		681.127	0.708643	ppb	6.387	6.503				54.445
75	As	|		671.974	0.181097	ppb	8.741	103.926				557.132
71	Ga-ISK	>		101803.729		ppb	1.506					93586.704
82	Se-2	|		9.252	0.250353	ppb	63.137	64.388				0.213
107	Ag-1	|		85.556	-0.025939	ppb	22.829	16.611				190.001
115	In-ISK	|		129437.738		ppb	1.085					125178.383
45	Sc-ISK	>		242423.027		ppb	0.809					224970.912
23	Na	|		276695.445	733.676158	ppb	6.136	5.725				1021.703
39	K	|		532984.134	597.047631	ppb	1.528	1.307				75655.379
24	Mg	|		114949.102	258.677383	ppb	2.270	1.801				468.341
159	Tb-ISK	|		272960.434		ppb	0.339					270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14206-B-2-A @5

Autosampler Position: 442

Sample Date/Time: Tuesday, December 10, 2019 07:30:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14206-B-2-A @5.330

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	53885.898		ppb	1.523		47027.292
9	Be	28.889	0.002100	ppb	35.251	385.414	24.444
10	B	3958.326	1.951500	ppb	0.716	8.377	3095.891
27	Al	787276.240	120.713300	ppb	0.533	1.458	3999.449
43	Ca-2	7850.490	325.286833	ppb	0.224	1.385	106.667
49	Ti	2610.239	3.444486	ppb	4.141	2.901	166.668
52	Cr	16572.942	0.447043	ppb	1.552	8.836	11497.959
55	Mn	158404.593	9.715550	ppb	1.339	1.968	796.689
57	Fe	66982.222	160.013309	ppb	0.453	2.174	11074.292
45	Sc-IS	> 2426941.782		ppb	1.495		2258970.662
66	Zn	19632.374	9.923625	ppb	2.121	2.950	1505.635
86	Sr	4198.060	1.459867	ppb	5.838	4.418	57.938
65	Cu	3790.609	1.243262	ppb	4.833	6.654	195.182
69	Ga-IS	717943.123		ppb	0.604		674512.414
95	Mo	1541.194	0.429130	ppb	6.633	9.933	418.895
115	In-IS	> 449894.830		ppb	1.558		424835.533
111	Cd	1727.980	0.745913	ppb	7.658	7.166	45.787
118	Sn	2414.648	-0.169808	ppb	0.558	4.005	3435.970
121	Sb	1391.179	0.079172	ppb	5.910	14.937	732.241
135	Ba	4901.952	2.460469	ppb	2.090	1.185	76.667
165	Ho-IS	500681.338		ppb	1.201		476365.650
159	Tb-IS	> 577754.261		ppb	0.907		553967.024
207	Pb	17161.820	0.662026	ppb	1.242	0.831	592.227
203	Tl	168.890	-0.003417	ppb	23.130	140.964	187.779
209	Bi-IS	305200.397		ppb	1.099		295774.323
51	V	454.452	1.149334	ppb	6.656	6.345	5.556
59	Co	233.335	0.160615	ppb	5.151	4.439	27.778
60	Ni	541.121	0.546189	ppb	11.563	14.423	54.445
75	As	620.051	0.028408	ppb	3.650	251.689	557.132
71	Ga-ISK	> 102412.490		ppb	1.334		93586.704
82	Se-2	5.896	0.158186	ppb	151.547	156.011	0.213
107	Ag-1	197.779	-0.002135	ppb	11.838	248.047	190.001
115	In-ISK	129948.635		ppb	0.483		125178.383
45	Sc-ISK	> 243450.321		ppb	0.989		224970.912
23	Na	136749.146	359.885340	ppb	10.136	11.218	1021.703
39	K	267330.597	244.285445	ppb	1.276	3.126	75655.379
24	Mg	55658.355	124.172066	ppb	4.425	5.239	468.341
159	Tb-ISK	271461.694		ppb	0.780		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14206-B-3-A

Autosampler Position: 443

Sample Date/Time: Tuesday, December 10, 2019 07:33:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14206-B-3-A.331

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	53482.156		ppb	1.169		47027.292
9	Be	20.000	-0.004691	ppb	16.667	57.064	24.444
10	B	3014.763	-0.802118	ppb	0.460	32.498	3095.891
27	Al	15847.676	1.821363	ppb	1.711	1.511	3999.449
43	Ca-2	438.340	13.870304	ppb	18.120	20.985	106.667
49	Ti	230.002	0.077205	ppb	13.825	52.366	166.668
52	Cr	16180.273	0.433846	ppb	2.606	9.942	11497.959
55	Mn	2450.211	0.100667	ppb	8.512	9.511	796.689
57	Fe	12940.303	3.661736	ppb	0.847	20.828	11074.292
45	Sc-IS	> 2387401.523		ppb	2.403		2258970.662
66	Zn	6614.865	2.812856	ppb	2.125	1.063	1505.635
86	Sr	314.048	0.090494	ppb	22.673	26.257	57.938
65	Cu	496.055	0.101971	ppb	11.935	16.543	195.182
69	Ga-IS	716017.300		ppb	1.395		674512.414
95	Mo	563.344	0.048340	ppb	5.159	28.779	418.895
115	In-IS	> 452885.538		ppb	1.341		424835.533
111	Cd	35.484	-0.005911	ppb	33.893	86.741	45.787
118	Sn	1205.607	-0.338807	ppb	5.393	2.372	3435.970
121	Sb	858.915	0.009996	ppb	1.569	8.265	732.241
135	Ba	407.784	0.165340	ppb	7.551	9.526	76.667
165	Ho-IS	491593.174		ppb	2.579		476365.650
159	Tb-IS	> 569964.150		ppb	1.681		553967.024
207	Pb	902.234	0.011844	ppb	10.621	27.748	592.227
203	Tl	130.001	-0.008109	ppb	12.821	22.952	187.779
209	Bi-IS	303540.934		ppb	0.415		295774.323
51	V	22.222	0.042306	ppb	22.913	33.562	5.556
59	Co	50.000	0.015803	ppb	52.068	126.131	27.778
60	Ni	137.778	0.090271	ppb	18.478	28.198	54.445
75	As	575.358	-0.071049	ppb	9.789	221.527	557.132
71	Ga-ISK	> 101042.897		ppb	2.534		93586.704
82	Se-2	2.552	0.063499	ppb	182.513	201.445	0.213
107	Ag-1	56.667	-0.032051	ppb	15.563	6.040	190.001
115	In-ISK	128987.134		ppb	0.903		125178.383
45	Sc-ISK	> 240319.093		ppb	1.050		224970.912
23	Na	234395.720	626.701194	ppb	0.831	1.901	1021.703
39	K	81366.623	0.746210	ppb	0.672	246.673	75655.379
24	Mg	2581.902	4.744533	ppb	10.032	11.730	468.341
159	Tb-ISK	270312.913		ppb	0.890		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14552-B-1-A @5

Autosampler Position: 444

Sample Date/Time: Tuesday, December 10, 2019 07:36:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14552-B-1-A @5.332

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	51091.204		ppb	1.017		47027.292
9	Be	20.000	-0.004687	ppb	60.093	205.958	24.444
10	B	7307.424	12.698490	ppb	0.399	2.150	3095.891
27	Al	60674.632	8.858613	ppb	7.651	6.888	3999.449
43	Ca-2	70388.029	3008.997504	ppb	2.064	0.946	106.667
49	Ti	380.005	0.294694	ppb	2.321	2.859	166.668
52	Cr	13293.975	0.126692	ppb	5.971	85.364	11497.959
55	Mn	538709.602	33.782069	ppb	0.673	1.958	796.689
57	Fe	1115845.579	3266.461479	ppb	0.293	1.678	11074.292
45	Sc-IS	> 2383009.236		ppb	1.575		2258970.662
66	Zn	56876.337	31.017488	ppb	0.925	2.033	1505.635
86	Sr	36289.800	13.031186	ppb	1.787	2.137	57.938
65	Cu	41335.383	14.537971	ppb	1.141	2.727	195.182
69	Ga-IS	711480.689		ppb	0.775		674512.414
95	Mo	1043.371	0.240935	ppb	1.464	4.757	418.895
115	In-IS	> 447305.644		ppb	1.090		424835.533
111	Cd	2179.087	0.952512	ppb	5.027	6.206	45.787
118	Sn	2518.000	-0.153381	ppb	3.975	11.619	3435.970
121	Sb	1506.746	0.095132	ppb	3.512	9.271	732.241
135	Ba	11103.202	5.659177	ppb	0.971	1.922	76.667
165	Ho-IS	495448.612		ppb	2.151		476365.650
159	Tb-IS	> 579017.721		ppb	2.120		553967.024
207	Pb	5579.315	0.198110	ppb	0.871	2.067	592.227
203	Tl	80.000	-0.014626	ppb	16.667	12.564	187.779
209	Bi-IS	302491.998		ppb	1.938		295774.323
51	V	44.445	0.100837	ppb	30.311	32.601	5.556
59	Co	110.000	0.065648	ppb	26.243	38.861	27.778
60	Ni	707.795	0.755800	ppb	1.439	4.123	54.445
75	As	625.757	0.089006	ppb	4.335	116.006	557.132
71	Ga-ISK	> 99798.618		ppb	2.367		93586.704
82	Se-2	2.242	0.055619	ppb	157.523	177.034	0.213
107	Ag-1	72.222	-0.028528	ppb	13.324	6.141	190.001
115	In-ISK	130271.194		ppb	0.967		125178.383
45	Sc-ISK	> 240885.624		ppb	2.107		224970.912
23	Na	740349.263	1981.729331	ppb	1.080	3.159	1021.703
39	K	569707.479	650.766872	ppb	1.087	3.662	75655.379
24	Mg	166833.647	378.537360	ppb	1.434	3.261	468.341
159	Tb-ISK	272639.204		ppb	1.005		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14552-B-1-B MS @5

Autosampler Position: 445

Sample Date/Time: Tuesday, December 10, 2019 07:39:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14552-B-1-B MS @5.333

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	57658.347		ppb	0.541		47027.292
9	Be	21254.696	17.226300	ppb	2.547	1.056	24.444
10	B	12428.745	29.071954	ppb	4.619	4.540	3095.891
27	Al	167373.691	25.818781	ppb	0.609	1.394	3999.449
43	Ca-2	93172.962	4015.069063	ppb	2.320	1.259	106.667
49	Ti	12474.343	17.892967	ppb	5.398	5.885	166.668
52	Cr	177644.358	17.995255	ppb	0.221	1.636	11497.959
55	Mn	794016.726	50.198530	ppb	0.620	1.862	796.689
57	Fe	1450464.791	4289.732236	ppb	1.244	2.816	11074.292
45	Sc-IS	> 2364888.633		ppb	1.528		2258970.662
66	Zn	85939.948	47.691827	ppb	0.358	1.821	1505.635
86	Sr	83974.117	30.411196	ppb	1.636	1.033	57.938
65	Cu	87963.545	31.256209	ppb	1.108	2.443	195.182
69	Ga-IS	702932.614		ppb	0.712		674512.414
95	Mo	34606.365	13.792383	ppb	4.448	5.792	418.895
115	In-IS	> 448126.029		ppb	1.141		424835.533
111	Cd	42018.143	18.717524	ppb	1.646	0.652	45.787
118	Sn	97101.724	13.025258	ppb	5.306	5.508	3435.970
121	Sb	117087.918	15.001874	ppb	1.142	0.589	732.241
135	Ba	44408.925	22.714511	ppb	1.190	0.606	76.667
165	Ho-IS	494539.602		ppb	1.267		476365.650
159	Tb-IS	> 577417.641		ppb	1.494		553967.024
207	Pb	409193.572	16.359546	ppb	1.435	0.890	592.227
203	Tl	133249.682	16.811767	ppb	0.589	1.843	187.779
209	Bi-IS	552217.400		ppb	3.165		295774.323
51	V	6284.716	16.371439	ppb	1.251	1.900	5.556
59	Co	21379.320	17.190400	ppb	0.798	0.361	27.778
60	Ni	15522.875	17.815553	ppb	1.462	1.149	54.445
75	As	6637.624	16.596310	ppb	2.469	2.751	557.132
71	Ga-ISK	> 100701.469		ppb	0.648		93586.704
82	Se-2	594.265	16.708915	ppb	2.611	3.045	0.213
107	Ag-1	38928.527	8.389615	ppb	0.973	0.859	190.001
115	In-ISK	128607.336		ppb	1.051		125178.383
45	Sc-ISK	> 237796.582		ppb	1.834		224970.912
23	Na	792217.187	2147.657073	ppb	1.621	1.669	1021.703
39	K	677254.148	805.404047	ppb	1.095	1.542	75655.379
24	Mg	612939.749	1411.405740	ppb	2.829	2.679	468.341
159	Tb-ISK	273531.878		ppb	0.352		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14552-B-1-C MSD @5

Autosampler Position: 446

Sample Date/Time: Tuesday, December 10, 2019 07:41:54

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14552-B-1-C MSD @5.334

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		55776.452		ppb		0.333		47027.292
9	Be	|		20707.221	17.044835	ppb	1.248	0.639		24.444
10	B	|		11949.443	28.149794	ppb	2.897	3.042		3095.891
27	Al	|		162938.450	25.515466	ppb	1.005	1.167		3999.449
43	Ca-2	|		91835.912	4019.255579	ppb	0.603	0.357		106.667
49	Ti	|		11720.364	17.055506	ppb	2.556	1.839		166.668
52	Cr	|		169893.303	17.436604	ppb	1.531	0.895		11497.959
55	Mn	|		785713.870	50.438501	ppb	0.671	0.716		796.689
57	Fe	|		1422837.777	4272.086408	ppb	1.416	1.088		11074.292
45	Sc-IS	|>		2328666.777		ppb	0.752			2258970.662
66	Zn	|		86332.309	48.667103	ppb	0.677	1.390		1505.635
86	Sr	|		82427.370	30.314614	ppb	1.480	1.295		57.938
65	Cu	|		85411.965	30.814896	ppb	0.228	0.986		195.182
69	Ga-IS	|		703541.437		ppb	1.583			674512.414
95	Mo	|		35065.212	14.189910	ppb	1.640	0.975		418.895
115	In-IS	|>		445008.092		ppb	0.292			424835.533
111	Cd	|		40138.437	18.005077	ppb	0.783	0.527		45.787
118	Sn	|		91932.918	12.394908	ppb	3.791	4.093		3435.970
121	Sb	|		116593.870	15.043279	ppb	0.543	0.279		732.241
135	Ba	|		43031.434	22.161560	ppb	3.575	3.296		76.667
165	Ho-IS	|		495401.216		ppb	2.877			476365.650
159	Tb-IS	|>		574177.935		ppb	1.661			553967.024
207	Pb	|		396192.760	15.929050	ppb	1.064	0.627		592.227
203	Tl	|		129418.089	16.418322	ppb	1.362	1.228		187.779
209	Bi-IS	|		571390.220		ppb	0.884			295774.323
51	V	|		6085.740	16.288853	ppb	0.538	1.027		5.556
59	Co	|		20869.678	17.242649	ppb	0.842	0.261		27.778
60	Ni	|		14331.632	16.897298	ppb	1.993	1.513		54.445
75	As	|		6458.514	16.592053	ppb	2.443	2.441		557.132
71	Ga-ISK	|>		98002.795		ppb	0.588			93586.704
82	Se-2	|		558.240	16.129525	ppb	5.277	5.755		0.213
107	Ag-1	|		37010.103	8.195107	ppb	0.706	1.249		190.001
115	In-ISK	|		127974.278		ppb	0.576			125178.383
45	Sc-ISK	|>		234395.356		ppb	1.507			224970.912
23	Na	|		777783.091	2138.912805	ppb	1.450	0.716		1021.703
39	K	|		668985.540	807.223472	ppb	1.495	0.106		75655.379
24	Mg	|		591277.528	1381.367670	ppb	1.123	1.955		468.341
159	Tb-ISK	|		270935.809		ppb	0.598			270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14550-B-1-A @5

Autosampler Position: 447

Sample Date/Time: Tuesday, December 10, 2019 07:44:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14550-B-1-A @5.335

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48687.278		ppb	1.249		47027.292
9	Be	27.778	0.001917	ppb	6.928	97.595	24.444
10	B	5011.991	5.693717	ppb	3.166	7.478	3095.891
27	Al	55401.673	8.153241	ppb	1.168	2.925	3999.449
43	Ca-2	62034.400	2687.119804	ppb	0.509	1.730	106.667
49	Ti	531.121	0.521044	ppb	26.571	37.075	166.668
52	Cr	14846.600	0.314419	ppb	1.079	7.834	11497.959
55	Mn	7324.099	0.413359	ppb	0.781	2.620	796.689
57	Fe	19507.763	23.937526	ppb	2.972	10.728	11074.292
45	Sc-IS	> 2351789.169		ppb	1.570		2258970.662
66	Zn	9220.753	4.349655	ppb	1.833	0.507	1505.635
86	Sr	15787.867	5.732037	ppb	0.780	1.107	57.938
65	Cu	3711.432	1.256854	ppb	3.628	5.423	195.182
69	Ga-IS	693625.418		ppb	1.427		674512.414
95	Mo	1691.212	0.509395	ppb	8.652	12.109	418.895
115	In-IS	> 443492.599		ppb	0.843		424835.533
111	Cd	2124.385	0.936096	ppb	4.642	5.566	45.787
118	Sn	3333.723	-0.035688	ppb	3.859	43.852	3435.970
121	Sb	3527.102	0.360031	ppb	2.137	2.314	732.241
135	Ba	3018.097	1.521535	ppb	3.324	4.109	76.667
165	Ho-IS	490712.883		ppb	1.017		476365.650
159	Tb-IS	> 573675.746		ppb	1.494		553967.024
207	Pb	1962.277	0.054401	ppb	4.339	8.021	592.227
203	Tl	161.112	-0.004210	ppb	26.603	133.386	187.779
209	Bi-IS	319591.699		ppb	1.896		295774.323
51	V	235.557	0.608960	ppb	0.817	2.579	5.556
59	Co	46.667	0.014199	ppb	37.797	103.158	27.778
60	Ni	185.557	0.149968	ppb	7.260	12.053	54.445
75	As	719.209	0.360894	ppb	6.542	27.133	557.132
71	Ga-ISK	> 99054.518		ppb	1.749		93586.704
82	Se-2	4.872	0.130800	ppb	134.446	141.593	0.213
107	Ag-1	182.223	-0.004110	ppb	13.484	144.213	190.001
115	In-ISK	126861.145		ppb	1.556		125178.383
45	Sc-ISK	> 233216.066		ppb	0.698		224970.912
23	Na	759448.168	2098.943471	ppb	0.833	0.362	1021.703
39	K	406038.414	450.382709	ppb	0.280	0.558	75655.379
24	Mg	149053.656	349.067364	ppb	1.380	0.684	468.341
159	Tb-ISK	270310.121		ppb	0.589		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Tuesday, December 10, 2019 07:47:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCV-210770.336

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47839.975		ppb		1.074		47027.292
9	Be	|	122312.593	101.636717	ppb		1.714	1.939	24.444
10	B	|	82100.877	255.920349	ppb		2.244	3.058	3095.891
27	Al	|	634311.212	102.096770	ppb		1.708	1.014	3999.449
43	Ca-2	|	118067.751	5212.063550	ppb		2.446	2.210	106.667
49	Ti	|	67844.101	100.781502	ppb		2.186	0.540	166.668
52	Cr	|	946768.588	104.037961	ppb		1.469	1.802	11497.959
55	Mn	|	1561180.947	101.127039	ppb		0.837	2.024	796.689
57	Fe	|	1708590.344	5181.100168	ppb		0.856	1.790	11074.292
45	Sc-IS	>	2309443.265		ppb		1.829		2258970.662
66	Zn	>	180486.321	103.589596	ppb		0.338	1.505	1505.635
86	Sr	|	281449.657	104.439591	ppb		0.782	1.232	57.938
65	Cu	|	280660.452	102.283716	ppb		0.450	1.738	195.182
69	Ga-IS	|	704391.992		ppb		0.752		674512.414
95	Mo	|	253578.697	104.599836	ppb		0.986	1.045	418.895
115	In-IS	>	429163.122		ppb		1.420		424835.533
111	Cd	|	223263.504	103.965458	ppb		0.348	1.459	45.787
118	Sn	|	701275.846	101.512243	ppb		2.898	1.526	3435.970
121	Sb	|	770326.576	103.640396	ppb		1.734	0.583	732.241
135	Ba	|	188269.316	100.692313	ppb		1.505	0.093	76.667
165	Ho-IS	|	482021.532		ppb		1.427		476365.650
159	Tb-IS	>	557055.104		ppb		1.104		553967.024
207	Pb	|	2356713.748	97.781090	ppb		1.688	0.617	592.227
203	Tl	|	777734.847	101.815309	ppb		1.550	0.450	187.779
209	Bi-IS	|	297169.349		ppb		1.282		295774.323
51	V	|	36394.080	98.067060	ppb		0.886	1.057	5.556
59	Co	|	118711.192	98.782879	ppb		0.128	1.095	27.778
60	Ni	|	86465.348	102.911518	ppb		1.184	2.254	54.445
75	As	|	35796.092	100.058666	ppb		1.286	2.066	557.132
71	Ga-ISK	>	97426.675		ppb		1.171		93586.704
82	Se-2	|	3394.971	98.690387	ppb		1.600	1.486	0.213
107	Ag-1	|	444744.245	99.552409	ppb		2.071	2.068	190.001
115	In-ISK	|	125161.242		ppb		2.089		125178.383
45	Sc-ISK	>	236272.379		ppb		0.877		224970.912
23	Na	|	1887521.125	5153.878945	ppb		1.446	1.920	1021.703
39	K	|	3842081.889	5105.847767	ppb		0.275	0.742	75655.379
24	Mg	|	2227981.101	5166.411023	ppb		0.528	1.271	468.341
159	Tb-ISK	|	269067.066		ppb		0.927		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Tuesday, December 10, 2019 07:50:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCB-23446.337

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	47113.134		ppb	1.886		47027.292
9	Be	48.889	0.020600	ppb	27.555	52.784	24.444
10	B	3320.386	0.734640	ppb	1.205	48.561	3095.891
27	Al	4616.302	0.101188	ppb	2.150	7.210	3999.449
43	Ca-2	275.003	7.557452	ppb	20.000	29.465	106.667
49	Ti	213.335	0.071208	ppb	10.938	59.053	166.668
52	Cr	11650.304	0.015911	ppb	0.466	132.804	11497.959
55	Mn	1738.995	0.062175	ppb	9.094	13.606	796.689
57	Fe	13465.233	7.425825	ppb	1.887	20.779	11074.292
45	Sc-IS	> 2261882.729		ppb	2.056		2258970.662
66	Zn	2065.705	0.330404	ppb	4.213	19.337	1505.635
86	Sr	153.982	0.036472	ppb	19.049	32.262	57.938
65	Cu	303.631	0.040387	ppb	9.999	30.940	195.182
69	Ga-IS	685156.479		ppb	0.929		674512.414
95	Mo	3120.341	1.139696	ppb	2.794	3.982	418.895
115	In-IS	> 433579.852		ppb	1.012		424835.533
111	Cd	672.352	0.288252	ppb	7.522	7.011	45.787
118	Sn	11153.246	1.101726	ppb	4.044	7.337	3435.970
121	Sb	2060.149	0.175023	ppb	3.676	6.033	732.241
135	Ba	124.445	0.024440	ppb	17.835	46.938	76.667
165	Ho-IS	484157.854		ppb	1.621		476365.650
159	Tb-IS	> 564587.698		ppb	2.382		553967.024
207	Pb	1720.040	0.045707	ppb	12.253	18.076	592.227
203	Tl	471.119	0.036114	ppb	6.536	7.942	187.779
209	Bi-IS	296984.729		ppb	1.734		295774.323
51	V	16.667	0.030626	ppb	20.000	30.047	5.556
59	Co	68.889	0.034971	ppb	41.153	69.671	27.778
60	Ni	102.223	0.057675	ppb	11.452	23.265	54.445
75	As	654.838	0.267038	ppb	10.845	81.280	557.132
71	Ga-ISK	> 94696.169		ppb	0.853		93586.704
82	Se-2	15.547	0.458889	ppb	44.260	44.929	0.213
107	Ag-1	783.355	0.136165	ppb	3.213	3.409	190.001
115	In-ISK	125652.352		ppb	0.943		125178.383
45	Sc-ISK	> 227178.883		ppb	0.956		224970.912
23	Na	8305.887	20.692202	ppb	29.464	34.380	1021.703
39	K	82784.793	9.035291	ppb	2.014	38.195	75655.379
24	Mg	1956.811	3.584625	ppb	33.604	45.147	468.341
159	Tb-ISK	265600.192		ppb	1.901		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Tuesday, December 10, 2019 07:52:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCB-23446.338

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	47615.891		ppb	0.659		47027.292
9	Be	35.556	0.008837	ppb	14.321	48.824	24.444
10	B	3355.951	0.637137	ppb	6.290	107.737	3095.891
27	Al	5685.576	0.260175	ppb	2.855	9.199	3999.449
43	Ca-2	241.669	5.872652	ppb	23.980	43.230	106.667
49	Ti	162.223	-0.011762	ppb	13.211	271.203	166.668
52	Cr	11883.831	0.016568	ppb	1.785	138.103	11497.959
55	Mn	1581.200	0.049829	ppb	15.147	30.708	796.689
57	Fe	12357.567	3.225633	ppb	2.413	29.515	11074.292
45	Sc-IS	> 2305563.734		ppb	0.284		2258970.662
66	Zn	1982.360	0.258333	ppb	2.356	9.230	1505.635
86	Sr	181.298	0.045358	ppb	49.723	73.470	57.938
65	Cu	247.258	0.017524	ppb	25.706	131.409	195.182
69	Ga-IS	687473.797		ppb	1.349		674512.414
95	Mo	764.465	0.139450	ppb	2.480	6.201	418.895
115	In-IS	> 443344.500		ppb	1.601		424835.533
111	Cd	389.511	0.153839	ppb	17.577	18.578	45.787
118	Sn	4964.198	0.194635	ppb	5.711	25.727	3435.970
121	Sb	1310.060	0.071097	ppb	7.664	15.708	732.241
135	Ba	115.556	0.018338	ppb	24.533	76.847	76.667
165	Ho-IS	480787.654		ppb	1.436		476365.650
159	Tb-IS	> 562009.866		ppb	0.777		553967.024
207	Pb	955.569	0.014532	ppb	30.853	81.027	592.227
203	Tl	236.669	0.005930	ppb	44.739	227.275	187.779
209	Bi-IS	298835.418		ppb	2.300		295774.323
51	V	13.333	0.020172	ppb	25.000	43.501	5.556
59	Co	74.445	0.037607	ppb	26.236	42.442	27.778
60	Ni	110.000	0.062997	ppb	3.030	7.584	54.445
75	As	583.724	0.003377	ppb	10.665	4928.833	557.132
71	Ga-ISK	> 97813.731		ppb	0.670		93586.704
82	Se-2	3.203	0.086449	ppb	64.096	69.218	0.213
107	Ag-1	308.892	0.024644	ppb	12.461	36.840	190.001
115	In-ISK	125895.722		ppb	1.058		125178.383
45	Sc-ISK	> 229258.297		ppb	0.497		224970.912
23	Na	8257.455	20.331140	ppb	20.855	24.312	1021.703
39	K	81938.764	6.773510	ppb	0.408	13.676	75655.379
24	Mg	1643.432	2.790170	ppb	25.184	36.013	468.341
159	Tb-ISK	267115.505		ppb	0.421		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14550-B-2-A @5

Autosampler Position: 448

Sample Date/Time: Tuesday, December 10, 2019 07:55:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14550-B-2-A @5.339

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	47404.078		ppb	0.650		47027.292
9	Be	41.111	0.013380	ppb	38.317	98.262	24.444
10	B	3768.275	1.949338	ppb	2.012	6.546	3095.891
27	Al	72598.706	11.089672	ppb	4.604	3.476	3999.449
43	Ca-2	85188.278	3757.397570	ppb	1.469	0.937	106.667
49	Ti	801.136	0.939457	ppb	40.042	51.288	166.668
52	Cr	14453.976	0.299958	ppb	1.100	13.724	11497.959
55	Mn	77500.771	4.967623	ppb	0.610	2.066	796.689
57	Fe	20248.785	27.230570	ppb	0.737	4.933	11074.292
45	Sc-IS	> 2310497.801		ppb	1.495		2258970.662
66	Zn	18066.973	9.561883	ppb	0.853	0.954	1505.635
86	Sr	25773.572	9.539986	ppb	0.284	1.770	57.938
65	Cu	61776.364	22.443482	ppb	1.409	1.281	195.182
69	Ga-IS	697196.621		ppb	0.277		674512.414
95	Mo	1188.938	0.314119	ppb	2.918	5.118	418.895
115	In-IS	> 445544.957		ppb	0.838		424835.533
111	Cd	1952.082	0.854224	ppb	7.769	8.141	45.787
118	Sn	2765.823	-0.117302	ppb	3.326	13.723	3435.970
121	Sb	1624.537	0.111109	ppb	2.482	3.774	732.241
135	Ba	4675.209	2.368071	ppb	1.246	0.856	76.667
165	Ho-IS	483315.573		ppb	2.175		476365.650
159	Tb-IS	> 569803.720		ppb	1.261		553967.024
207	Pb	6250.529	0.228784	ppb	6.793	6.286	592.227
203	Tl	308.893	0.014689	ppb	40.050	104.667	187.779
209	Bi-IS	298935.758		ppb	1.496		295774.323
51	V	165.557	0.433576	ppb	12.136	11.709	5.556
59	Co	107.778	0.066298	ppb	26.304	35.767	27.778
60	Ni	608.902	0.663064	ppb	7.671	8.743	54.445
75	As	614.856	0.110671	ppb	13.760	206.493	557.132
71	Ga-ISK	> 96712.948		ppb	0.875		93586.704
82	Se-2	7.898	0.224185	ppb	76.562	78.713	0.213
107	Ag-1	195.557	-0.000202	ppb	31.538	6792.356	190.001
115	In-ISK	125974.194		ppb	0.491		125178.383
45	Sc-ISK	> 229135.208		ppb	0.152		224970.912
23	Na	433443.740	1218.062873	ppb	1.849	1.930	1021.703
39	K	247307.828	238.216804	ppb	0.124	0.063	75655.379
24	Mg	105875.926	252.059561	ppb	1.163	1.248	468.341
159	Tb-ISK	267597.111		ppb	0.700		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14550-B-3-A @5

Autosampler Position: 449

Sample Date/Time: Tuesday, December 10, 2019 07:58:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14550-B-3-A @5.340

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	47717.358		ppb	1.932		47027.292
9	Be	27.778	0.002418	ppb	49.960	475.276	24.444
10	B	3820.511	2.187406	ppb	4.387	21.235	3095.891
27	Al	209517.404	33.453333	ppb	3.258	2.831	3999.449
43	Ca-2	24207.162	1070.423353	ppb	1.515	2.191	106.667
49	Ti	874.471	1.055196	ppb	4.076	4.212	166.668
52	Cr	15401.632	0.414706	ppb	1.116	3.956	11497.959
55	Mn	72783.837	4.688278	ppb	0.762	1.387	796.689
57	Fe	24502.116	40.624669	ppb	2.727	5.623	11074.292
45	Sc-IS	> 2297398.337		ppb	0.704		2258970.662
66	Zn	79007.890	45.076853	ppb	0.988	0.692	1505.635
86	Sr	8607.197	3.188721	ppb	2.120	1.475	57.938
65	Cu	21666.237	7.869044	ppb	2.223	2.426	195.182
69	Ga-IS	697351.289		ppb	0.871		674512.414
95	Mo	932.253	0.210222	ppb	2.155	2.917	418.895
115	In-IS	> 441315.203		ppb	1.321		424835.533
111	Cd	2237.107	0.991803	ppb	1.820	2.881	45.787
118	Sn	2333.524	-0.174760	ppb	2.781	6.859	3435.970
121	Sb	1673.432	0.119692	ppb	8.668	17.652	732.241
135	Ba	3335.945	1.694895	ppb	2.729	4.028	76.667
165	Ho-IS	482140.880		ppb	2.870		476365.650
159	Tb-IS	> 568028.160		ppb	1.681		553967.024
207	Pb	4609.178	0.162975	ppb	2.890	5.200	592.227
203	Tl	200.001	0.001016	ppb	23.334	629.983	187.779
209	Bi-IS	295065.443		ppb	1.554		295774.323
51	V	318.892	0.863815	ppb	7.984	8.326	5.556
59	Co	124.445	0.082441	ppb	28.891	40.360	27.778
60	Ni	652.237	0.729768	ppb	10.328	15.921	54.445
75	As	661.433	0.273522	ppb	6.236	30.329	557.132
71	Ga-ISK	> 95276.992		ppb	3.955		93586.704
82	Se-2	10.549	0.301417	ppb	71.534	72.031	0.213
107	Ag-1	178.890	-0.003143	ppb	20.777	306.833	190.001
115	In-ISK	123018.307		ppb	5.313		125178.383
45	Sc-ISK	> 224721.045		ppb	3.952		224970.912
23	Na	394501.496	1132.039829	ppb	2.345	6.302	1021.703
39	K	212337.807	195.577793	ppb	1.650	8.847	75655.379
24	Mg	67351.841	163.409884	ppb	3.257	7.388	468.341
159	Tb-ISK	262469.737		ppb	4.016		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14550-B-4-A @5

Autosampler Position: 450

Sample Date/Time: Tuesday, December 10, 2019 08:01:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14550-B-4-A @5.341

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48117.611		ppb	2.881		47027.292
9	Be	34.444	0.007903	ppb	11.175	39.392	24.444
10	B	4611.856	4.715125	ppb	3.520	8.579	3095.891
27	Al	59642.063	9.016894	ppb	2.296	2.064	3999.449
43	Ca-2	44604.535	1969.520946	ppb	1.351	0.631	106.667
49	Ti	703.356	0.791568	ppb	66.725	86.860	166.668
52	Cr	14185.929	0.273374	ppb	1.147	3.295	11497.959
55	Mn	50008.493	3.193885	ppb	0.938	1.849	796.689
57	Fe	16844.381	16.940382	ppb	4.209	10.065	11074.292
45	Sc-IS	> 2305176.748		ppb	0.897		2258970.662
66	Zn	11217.736	5.613629	ppb	1.086	0.278	1505.635
86	Sr	17948.849	6.652063	ppb	1.911	2.582	57.938
65	Cu	61154.308	22.267543	ppb	0.364	0.551	195.182
69	Ga-IS	689351.738		ppb	0.502		674512.414
95	Mo	1427.849	0.413925	ppb	5.556	6.779	418.895
115	In-IS	> 437826.133		ppb	1.899		424835.533
111	Cd	1922.687	0.856035	ppb	3.214	1.918	45.787
118	Sn	1960.135	-0.225211	ppb	5.212	8.742	3435.970
121	Sb	1261.167	0.066715	ppb	9.656	19.650	732.241
135	Ba	2569.120	1.305691	ppb	3.662	1.828	76.667
165	Ho-IS	491500.493		ppb	2.319		476365.650
159	Tb-IS	> 565020.083		ppb	1.115		553967.024
207	Pb	2925.673	0.094969	ppb	4.611	4.650	592.227
203	Tl	204.446	0.001628	ppb	21.528	331.972	187.779
209	Bi-IS	298941.043		ppb	0.603		295774.323
51	V	331.115	0.873662	ppb	17.735	19.009	5.556
59	Co	125.556	0.080145	ppb	28.635	38.560	27.778
60	Ni	483.342	0.505583	ppb	2.069	3.430	54.445
75	As	697.837	0.326048	ppb	5.897	36.587	557.132
71	Ga-ISK	> 97867.441		ppb	0.974		93586.704
82	Se-2	3.539	0.094901	ppb	171.084	183.732	0.213
107	Ag-1	137.778	-0.013607	ppb	26.977	59.384	190.001
115	In-ISK	126128.438		ppb	0.554		125178.383
45	Sc-ISK	> 230412.228		ppb	0.710		224970.912
23	Na	383937.806	1072.620448	ppb	0.889	0.910	1021.703
39	K	271204.835	269.555101	ppb	1.284	1.738	75655.379
24	Mg	86970.775	205.688977	ppb	3.157	2.979	468.341
159	Tb-ISK	268530.700		ppb	1.551		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14550-B-5-A @5

Autosampler Position: 451

Sample Date/Time: Tuesday, December 10, 2019 08:04:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14550-B-5-A @5.342

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48147.669		ppb	0.557		47027.292
9	Be	28.889	0.003207	ppb	63.549	475.368	24.444
10	B	4142.823	3.147791	ppb	3.864	17.567	3095.891
27	Al	548451.879	88.038485	ppb	1.815	2.147	3999.449
43	Ca-2	35305.243	1552.506879	ppb	1.213	1.644	106.667
49	Ti	2379.087	3.283114	ppb	3.507	3.308	166.668
52	Cr	16115.753	0.482108	ppb	1.348	3.418	11497.959
55	Mn	99528.863	6.385297	ppb	1.002	0.567	796.689
57	Fe	52585.524	125.661595	ppb	2.152	2.239	11074.292
45	Sc-IS	> 2313322.796		ppb	0.440		2258970.662
66	Zn	72962.532	41.267383	ppb	1.156	1.089	1505.635
86	Sr	15867.929	5.856846	ppb	0.211	0.437	57.938
65	Cu	15897.169	5.713928	ppb	1.010	0.662	195.182
69	Ga-IS	682901.782		ppb	0.618		674512.414
95	Mo	1060.039	0.260379	ppb	7.632	13.467	418.895
115	In-IS	> 444808.356		ppb	0.444		424835.533
111	Cd	2010.138	0.881548	ppb	6.276	6.129	45.787
118	Sn	1994.584	-0.224996	ppb	5.381	6.855	3435.970
121	Sb	1574.531	0.104966	ppb	1.276	1.704	732.241
135	Ba	6371.421	3.247854	ppb	1.179	1.581	76.667
165	Ho-IS	483348.409		ppb	1.297		476365.650
159	Tb-IS	> 565380.472		ppb	1.032		553967.024
207	Pb	8721.043	0.331893	ppb	1.639	1.053	592.227
203	Tl	116.667	-0.009668	ppb	27.256	42.843	187.779
209	Bi-IS	294578.720		ppb	2.691		295774.323
51	V	354.449	0.948007	ppb	6.262	6.082	5.556
59	Co	143.334	0.096183	ppb	22.904	27.959	27.778
60	Ni	631.125	0.690837	ppb	2.496	3.540	54.445
75	As	605.764	0.089023	ppb	4.422	103.566	557.132
71	Ga-ISK	> 96569.763		ppb	0.905		93586.704
82	Se-2	4.552	0.128925	ppb	237.902	248.539	0.213
107	Ag-1	102.223	-0.021218	ppb	18.542	19.418	190.001
115	In-ISK	127095.468		ppb	1.223		125178.383
45	Sc-ISK	> 232009.744		ppb	2.741		224970.912
23	Na	634498.571	1762.844833	ppb	1.661	2.277	1021.703
39	K	325637.619	342.311873	ppb	1.061	2.293	75655.379
24	Mg	122123.192	287.432724	ppb	1.599	3.110	468.341
159	Tb-ISK	268170.997		ppb	0.348		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14550-B-6-A @5

Autosampler Position: 452

Sample Date/Time: Tuesday, December 10, 2019 08:06:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14550-B-6-A @5.343

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48497.742		ppb	0.904		47027.292
9	Be	13.333	-0.009633	ppb	43.301	50.296	24.444
10	B	3613.790	1.505874	ppb	0.423	2.519	3095.891
27	Al	363242.815	58.438830	ppb	1.274	1.266	3999.449
43	Ca-2	41684.065	1844.993980	ppb	1.143	1.331	106.667
49	Ti	1554.529	2.071394	ppb	4.469	4.780	166.668
52	Cr	19388.704	0.858747	ppb	0.641	1.377	11497.959
55	Mn	60440.946	3.880613	ppb	1.681	1.489	796.689
57	Fe	49841.252	118.227614	ppb	1.544	1.778	11074.292
45	Sc-IS	> 2299352.614		ppb	0.213		2258970.662
66	Zn	217915.050	125.787913	ppb	0.534	0.675	1505.635
86	Sr	13082.902	4.854372	ppb	1.145	0.960	57.938
65	Cu	104621.118	38.241930	ppb	1.247	1.213	195.182
69	Ga-IS	687593.061		ppb	0.192		674512.414
95	Mo	556.678	0.054066	ppb	1.584	6.672	418.895
115	In-IS	> 440753.658		ppb	0.657		424835.533
111	Cd	2515.719	1.119156	ppb	2.133	1.641	45.787
118	Sn	1813.449	-0.248124	ppb	4.473	4.209	3435.970
121	Sb	1939.021	0.154681	ppb	4.582	8.123	732.241
135	Ba	6668.224	3.433259	ppb	4.095	4.738	76.667
165	Ho-IS	486819.803		ppb	1.836		476365.650
159	Tb-IS	> 564496.807		ppb	1.206		553967.024
207	Pb	30340.371	1.217881	ppb	1.901	1.432	592.227
203	Tl	144.445	-0.006099	ppb	26.547	77.508	187.779
209	Bi-IS	297380.127		ppb	0.781		295774.323
51	V	203.335	0.525986	ppb	14.571	15.088	5.556
59	Co	162.223	0.109424	ppb	21.089	26.193	27.778
60	Ni	638.903	0.684489	ppb	10.849	12.179	54.445
75	As	653.688	0.187498	ppb	4.324	41.860	557.132
71	Ga-ISK	> 98586.789		ppb	0.370		93586.704
82	Se-2	3.911	0.105481	ppb	179.974	191.590	0.213
107	Ag-1	151.112	-0.010848	ppb	12.149	37.903	190.001
115	In-ISK	127835.063		ppb	1.351		125178.383
45	Sc-ISK	> 232811.723		ppb	0.298		224970.912
23	Na	318130.031	879.083102	ppb	0.772	1.018	1021.703
39	K	304032.317	310.868886	ppb	0.330	0.429	75655.379
24	Mg	61483.716	143.574502	ppb	1.677	1.730	468.341
159	Tb-ISK	268860.200		ppb	1.655		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14550-B-7-A @5

Autosampler Position: 453

Sample Date/Time: Tuesday, December 10, 2019 08:09:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14550-B-7-A @5.344

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48318.263		ppb	1.974		47027.292
9	Be	25.556	0.000723	ppb	7.531	234.281	24.444
10	B	3681.586	1.814270	ppb	2.174	13.909	3095.891
27	Al	182192.649	29.197498	ppb	2.397	2.256	3999.449
43	Ca-2	19855.463	882.893525	ppb	2.807	3.613	106.667
49	Ti	1122.267	1.437765	ppb	12.611	15.185	166.668
52	Cr	17205.913	0.628863	ppb	1.959	5.149	11497.959
55	Mn	21249.130	1.340103	ppb	2.221	1.481	796.689
57	Fe	26598.080	47.577017	ppb	2.340	3.992	11074.292
45	Sc-IS	> 2282692.882		ppb	0.900		2258970.662
66	Zn	104044.175	60.036011	ppb	0.206	0.774	1505.635
86	Sr	7478.785	2.786291	ppb	2.246	2.845	57.938
65	Cu	8041.549	2.894154	ppb	1.711	2.578	195.182
69	Ga-IS	693842.887		ppb	0.705		674512.414
95	Mo	1420.071	0.416917	ppb	7.163	11.494	418.895
115	In-IS	> 436761.137		ppb	0.213		424835.533
111	Cd	2388.329	1.071356	ppb	2.794	2.881	45.787
118	Sn	1670.098	-0.266226	ppb	5.038	4.705	3435.970
121	Sb	1093.375	0.045077	ppb	4.301	14.396	732.241
135	Ba	4368.446	2.255272	ppb	0.117	0.329	76.667
165	Ho-IS	482200.580		ppb	1.300		476365.650
159	Tb-IS	> 560411.962		ppb	1.352		553967.024
207	Pb	3654.632	0.126059	ppb	0.950	0.806	592.227
203	Tl	107.778	-0.010688	ppb	6.438	10.168	187.779
209	Bi-IS	295048.545		ppb	1.727		295774.323
51	V	270.003	0.716445	ppb	16.610	18.866	5.556
59	Co	56.667	0.023179	ppb	50.259	100.142	27.778
60	Ni	234.446	0.212715	ppb	17.081	21.853	54.445
75	As	712.254	0.384719	ppb	2.171	21.068	557.132
71	Ga-ISK	> 97044.136		ppb	1.939		93586.704
82	Se-2	4.578	0.128557	ppb	91.205	96.256	0.213
107	Ag-1	68.889	-0.028848	ppb	24.354	12.103	190.001
115	In-ISK	125793.203		ppb	1.061		125178.383
45	Sc-ISK	> 228662.345		ppb	1.234		224970.912
23	Na	649509.395	1830.685771	ppb	0.894	1.653	1021.703
39	K	471106.499	552.759923	ppb	0.481	0.901	75655.379
24	Mg	48221.252	114.423187	ppb	0.862	0.899	468.341
159	Tb-ISK	267032.740		ppb	0.868		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14550-B-8-A @5

Autosampler Position: 454

Sample Date/Time: Tuesday, December 10, 2019 08:12:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\570-14550-B-8-A @5.345

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48132.061		ppb	0.629		47027.292
9	Be	17.778	-0.005961	ppb	28.641	72.617	24.444
10	B	3788.280	2.035809	ppb	2.337	8.058	3095.891
27	Al	274957.541	43.941777	ppb	0.475	0.646	3999.449
43	Ca-2	21192.377	932.966608	ppb	1.658	2.704	106.667
49	Ti	914.474	1.110193	ppb	4.976	6.474	166.668
52	Cr	15818.757	0.454528	ppb	2.369	8.300	11497.959
55	Mn	103082.813	6.636254	ppb	0.794	1.537	796.689
57	Fe	29585.058	55.856023	ppb	2.276	2.044	11074.292
45	Sc-IS	> 2306289.332		ppb	1.045		2258970.662
66	Zn	142251.474	81.552544	ppb	1.261	0.267	1505.635
86	Sr	5730.217	2.107511	ppb	0.831	0.891	57.938
65	Cu	55350.414	20.138464	ppb	0.612	1.263	195.182
69	Ga-IS	687355.826		ppb	0.689		674512.414
95	Mo	563.345	0.056017	ppb	10.798	41.967	418.895
115	In-IS	> 435276.284		ppb	2.402		424835.533
111	Cd	1977.843	0.886073	ppb	6.223	3.964	45.787
118	Sn	1724.549	-0.257237	ppb	8.624	10.218	3435.970
121	Sb	2183.500	0.190445	ppb	3.896	7.424	732.241
135	Ba	3544.885	1.829726	ppb	3.783	5.255	76.667
165	Ho-IS	484235.078		ppb	0.962		476365.650
159	Tb-IS	> 563472.971		ppb	1.124		553967.024
207	Pb	8319.848	0.316610	ppb	2.602	1.635	592.227
203	Tl	113.334	-0.010074	ppb	20.588	28.591	187.779
209	Bi-IS	294181.061		ppb	1.919		295774.323
51	V	261.114	0.680207	ppb	10.630	9.527	5.556
59	Co	106.667	0.063624	ppb	21.875	28.515	27.778
60	Ni	687.794	0.742930	ppb	4.879	4.554	54.445
75	As	609.648	0.068115	ppb	10.240	291.887	557.132
71	Ga-ISK	> 98444.742		ppb	1.381		93586.704
82	Se-2	2.224	0.057122	ppb	112.408	125.475	0.213
107	Ag-1	98.889	-0.022370	ppb	5.149	5.733	190.001
115	In-ISK	124814.906		ppb	1.213		125178.383
45	Sc-ISK	> 229351.075		ppb	1.368		224970.912
23	Na	249169.254	698.372648	ppb	0.623	1.268	1021.703
39	K	222868.413	203.755930	ppb	0.806	1.887	75655.379
24	Mg	50029.136	118.385563	ppb	1.862	0.794	468.341
159	Tb-ISK	266172.801		ppb	0.248		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Tuesday, December 10, 2019 08:15:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\b.346

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		47841.092		ppb		1.207		47027.292
9	Be	|		15.556	-0.007748	ppb	12.372	21.309		24.444
10	B	|		3114.785	-0.093142	ppb	5.437	607.696		3095.891
27	Al	|		5339.887	0.208557	ppb	2.620	9.600		3999.449
43	Ca-2	|		175.001	2.962968	ppb	18.736	48.187		106.667
49	Ti	|		247.780	0.117802	ppb	6.904	22.030		166.668
52	Cr	|		13469.682	0.201038	ppb	1.575	10.484		11497.959
55	Mn	|		1201.162	0.025570	ppb	13.253	39.875		796.689
57	Fe	|		11558.007	0.962880	ppb	1.030	31.602		11074.292
45	Sc-IS	>		2293712.298		ppb	0.412			2258970.662
66	Zn	|		2147.940	0.360891	ppb	5.915	21.003		1505.635
86	Sr	|		82.907	0.008976	ppb	32.860	112.618		57.938
65	Cu	|		253.740	0.020393	ppb	14.484	65.958		195.182
69	Ga-IS	|		691588.855		ppb	1.365			674512.414
95	Mo	|		218.891	-0.085892	ppb	12.215	12.747		418.895
115	In-IS	>		441831.485		ppb	2.298			424835.533
111	Cd	|		555.107	0.229351	ppb	12.837	12.656		45.787
118	Sn	|		1743.440	-0.258315	ppb	6.599	8.331		3435.970
121	Sb	|		624.458	-0.017786	ppb	9.189	53.419		732.241
135	Ba	|		96.667	0.008883	ppb	15.031	92.842		76.667
165	Ho-IS	|		484440.479		ppb	1.589			476365.650
159	Tb-IS	>		562213.271		ppb	1.520			553967.024
207	Pb	|		467.781	-0.005420	ppb	29.358	110.437		592.227
203	Tl	|		87.778	-0.013295	ppb	35.892	32.275		187.779
209	Bi-IS	|		297557.879		ppb	2.115			295774.323
51	V	|		8.889	0.008459	ppb	86.603	246.176		5.556
59	Co	|		14.444	-0.011966	ppb	74.182	75.278		27.778
60	Ni	|		81.111	0.029610	ppb	15.559	51.327		54.445
75	As	|		554.150	-0.065072	ppb	4.797	121.025		557.132
71	Ga-ISK	>		96918.765		ppb	0.269			93586.704
82	Se-2	|		1.872	0.048444	ppb	192.889	218.349		0.213
107	Ag-1	|		136.667	-0.013536	ppb	29.572	66.841		190.001
115	In-ISK	|		124817.670		ppb	0.669			125178.383
45	Sc-ISK	>		228272.500		ppb	2.816			224970.912
23	Na	|		3997.298	8.435369	ppb	43.998	62.083		1021.703
39	K	|		79265.976	3.586692	ppb	0.819	111.788		75655.379
24	Mg	|		805.027	0.807475	ppb	53.806	135.907		468.341
159	Tb-ISK	|		268092.571		ppb	1.524			270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Tuesday, December 10, 2019 08:17:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\b.347

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48934.789		ppb	1.343		47027.292
9	Be	11.111	-0.011497	ppb	45.826	36.110	24.444
10	B	3164.795	0.072085	ppb	2.494	355.940	3095.891
27	Al	5179.828	0.182669	ppb	1.321	2.811	3999.449
43	Ca-2	148.334	1.784541	ppb	12.762	48.640	106.667
49	Ti	213.335	0.066187	ppb	6.250	29.314	166.668
52	Cr	13399.615	0.193529	ppb	1.252	4.555	11497.959
55	Mn	1012.258	0.013285	ppb	2.662	14.977	796.689
57	Fe	11495.735	0.784422	ppb	1.614	107.737	11074.292
45	Sc-IS	> 2293209.217		ppb	1.032		2258970.662
66	Zn	2034.589	0.295183	ppb	3.650	16.338	1505.635
86	Sr	39.535	-0.007299	ppb	114.309	230.470	57.938
65	Cu	180.817	-0.006453	ppb	23.687	232.808	195.182
69	Ga-IS	686031.966		ppb	1.159		674512.414
95	Mo	200.001	-0.093749	ppb	13.642	11.763	418.895
115	In-IS	> 436409.819		ppb	1.774		424835.533
111	Cd	576.258	0.242073	ppb	11.284	10.438	45.787
118	Sn	1582.310	-0.278503	ppb	2.272	3.306	3435.970
121	Sb	544.455	-0.027489	ppb	5.555	15.849	732.241
135	Ba	68.889	-0.005190	ppb	5.587	37.856	76.667
165	Ho-IS	489229.232		ppb	1.339		476365.650
159	Tb-IS	> 564643.356		ppb	2.087		553967.024
207	Pb	274.445	-0.013485	ppb	5.991	3.236	592.227
203	Tl	56.667	-0.017403	ppb	23.529	10.073	187.779
209	Bi-IS	296105.170		ppb	2.501		295774.323
51	V	7.778	0.005166	ppb	24.744	101.447	5.556
59	Co	20.000	-0.007585	ppb	28.868	63.840	27.778
60	Ni	82.222	0.029313	ppb	20.405	66.042	54.445
75	As	560.815	-0.071270	ppb	5.725	137.028	557.132
71	Ga-ISK	> 98482.743		ppb	0.470		93586.704
82	Se-2	0.554	0.009782	ppb	1518.518	2474.059	0.213
107	Ag-1	116.667	-0.018429	ppb	22.678	32.538	190.001
115	In-ISK	124688.560		ppb	0.715		125178.383
45	Sc-ISK	> 227868.615		ppb	0.899		224970.912
23	Na	2695.258	4.704453	ppb	15.313	25.103	1021.703
39	K	78746.446	2.988761	ppb	0.740	60.248	75655.379
24	Mg	481.675	0.017448	ppb	16.877	1117.574	468.341
159	Tb-ISK	266227.875		ppb	0.669		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Tuesday, December 10, 2019 08:20:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\b.348

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		48846.708		ppb		1.149		47027.292
9	Be	|		6.667	-0.015158	ppb	50.000	18.623		24.444
10	B	|		3060.328	-0.231232	ppb	3.443	129.067		3095.891
27	Al	|		4938.635	0.146558	ppb	7.711	43.725		3999.449
43	Ca-2	|		150.001	1.880356	ppb	12.019	41.530		106.667
49	Ti	|		208.890	0.060946	ppb	16.609	88.172		166.668
52	Cr	|		13391.830	0.198564	ppb	0.707	8.567		11497.959
55	Mn	|		1000.035	0.012731	ppb	4.359	21.031		796.689
57	Fe	|		11454.593	0.793047	ppb	2.802	140.930		11074.292
45	Sc-IS	>		2284308.547		ppb	0.533			2258970.662
66	Zn	|		2076.818	0.324165	ppb	6.570	23.242		1505.635
86	Sr	|		43.007	-0.005880	ppb	62.469	169.570		57.938
65	Cu	|		199.743	0.000899	ppb	10.977	934.096		195.182
69	Ga-IS	|		693650.892		ppb	1.371			674512.414
95	Mo	|		165.557	-0.107784	ppb	4.650	2.845		418.895
115	In-IS	>		438566.720		ppb	2.273			424835.533
111	Cd	|		528.551	0.219294	ppb	7.366	7.478		45.787
118	Sn	|		1475.632	-0.294770	ppb	3.399	3.709		3435.970
121	Sb	|		528.899	-0.029838	ppb	16.060	39.544		732.241
135	Ba	|		76.667	-0.001343	ppb	23.007	661.503		76.667
165	Ho-IS	|		479330.311		ppb	3.408			476365.650
159	Tb-IS	>		559292.244		ppb	1.682			553967.024
207	Pb	|		337.779	-0.010743	ppb	6.345	10.000		592.227
203	Tl	|		66.667	-0.016005	ppb	36.056	20.066		187.779
209	Bi-IS	|		301247.090		ppb	1.785			295774.323
51	V	|		16.667	0.029470	ppb	20.000	28.009		5.556
59	Co	|		18.889	-0.008275	ppb	10.189	17.414		27.778
60	Ni	|		71.111	0.017696	ppb	5.413	33.925		54.445
75	As	|		555.364	-0.062386	ppb	5.569	101.975		557.132
71	Ga-ISK	>		96922.186		ppb	1.750			93586.704
82	Se-2	|		-2.784	-0.086832	ppb	161.555	149.426		0.213
107	Ag-1	|		128.889	-0.015244	ppb	9.083	20.480		190.001
115	In-ISK	|		124887.106		ppb	0.343			125178.383
45	Sc-ISK	>		229340.738		ppb	0.656			224970.912
23	Na	|		2048.481	2.832659	ppb	6.758	12.621		1021.703
39	K	|		78352.070	1.716045	ppb	0.965	51.600		75655.379
24	Mg	|		321.670	-0.372135	ppb	9.370	19.566		468.341
159	Tb-ISK	|		266615.007		ppb	0.723			270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Tuesday, December 10, 2019 08:23:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCV-210770.349

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		47751.898		ppb			0.235			47027.292
9	Be	|		122085.094	102.686122	ppb			1.628	0.922		24.444
10	B	|		82200.323	259.464318	ppb			2.050	1.381		3095.891
27	Al	|		627582.420	102.269378	ppb			0.575	1.476		3999.449
43	Ca-2	|		115404.272	5157.440448	ppb			0.624	1.181		106.667
49	Ti	|		66283.438	99.683127	ppb			1.453	1.161		166.668
52	Cr	|		926413.962	103.031335	ppb			1.347	0.485		11497.959
55	Mn	|		1523347.525	99.873949	ppb			1.025	0.157		796.689
57	Fe	|		1668516.086	5121.037085	ppb			0.603	0.894		11074.292
45	Sc-IS	>		2281202.987		ppb			0.884			2258970.662
66	Zn	|		178481.436	103.688718	ppb			1.032	0.434		1505.635
86	Sr	|		277447.207	104.221971	ppb			1.280	1.761		57.938
65	Cu	|		277039.605	102.195310	ppb			0.504	0.401		195.182
69	Ga-IS	|		697167.875		ppb			0.664			674512.414
95	Mo	|		247867.574	103.499628	ppb			1.107	1.219		418.895
115	In-IS	>		433923.381		ppb			0.488			424835.533
111	Cd	|		220019.985	101.321043	ppb			0.958	1.378		45.787
118	Sn	|		691186.619	98.959287	ppb			0.825	1.317		3435.970
121	Sb	|		757726.713	100.829928	ppb			0.717	1.169		732.241
135	Ba	|		185937.819	98.353810	ppb			0.682	0.311		76.667
165	Ho-IS	|		484293.534		ppb			1.669			476365.650
159	Tb-IS	>		558351.343		ppb			1.347			553967.024
207	Pb	|		2389625.527	98.929353	ppb			0.791	1.180		592.227
203	Tl	|		783784.511	102.381903	ppb			0.773	1.234		187.779
209	Bi-IS	|		287396.649		ppb			0.749			295774.323
51	V	|		36798.446	100.740053	ppb			0.693	0.886		5.556
59	Co	|		118612.741	100.270186	ppb			2.082	1.865		27.778
60	Ni	|		84615.448	102.304506	ppb			1.564	1.560		54.445
75	As	|		35575.783	101.042307	ppb			1.514	1.913		557.132
71	Ga-ISK	>		95891.872		ppb			0.409			93586.704
82	Se-2	|		3323.601	98.159185	ppb			1.298	1.280		0.213
107	Ag-1	|		439818.553	100.020056	ppb			1.346	1.110		190.001
115	In-ISK	|		123433.117		ppb			1.797			125178.383
45	Sc-ISK	>		230665.465		ppb			1.751			224970.912
23	Na	|		1829588.866	5117.596730	ppb			0.364	1.516		1021.703
39	K	|		3778411.151	5144.942907	ppb			0.655	1.916		75655.379
24	Mg	|		2154833.768	5118.311065	ppb			1.400	1.204		468.341
159	Tb-ISK	|		264858.276		ppb			1.247			270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Tuesday, December 10, 2019 08:26:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCB-23446.350

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48294.839		ppb	1.308		47027.292
9	Be	47.778	0.019671	ppb	17.558	36.811	24.444
10	B	3205.915	0.321653	ppb	3.008	141.472	3095.891
27	Al	4665.209	0.106991	ppb	7.740	57.120	3999.449
43	Ca-2	160.001	2.381074	ppb	9.375	30.344	106.667
49	Ti	224.446	0.087087	ppb	14.425	63.500	166.668
52	Cr	11613.608	0.007608	ppb	0.886	413.342	11497.959
55	Mn	1241.165	0.029030	ppb	6.635	13.858	796.689
57	Fe	12671.173	4.818981	ppb	1.080	23.039	11074.292
45	Sc-IS	> 2269100.011		ppb	1.742		2258970.662
66	Zn	1976.804	0.272687	ppb	8.283	28.122	1505.635
86	Sr	102.907	0.017157	ppb	60.474	140.676	57.938
65	Cu	247.024	0.019086	ppb	16.907	88.000	195.182
69	Ga-IS	674110.693		ppb	0.445		674512.414
95	Mo	3142.568	1.144947	ppb	3.271	4.933	418.895
115	In-IS	> 430109.576		ppb	1.031		424835.533
111	Cd	655.638	0.283112	ppb	10.894	11.656	45.787
118	Sn	11553.567	1.172749	ppb	4.973	8.086	3435.970
121	Sb	1196.717	0.061285	ppb	10.960	30.457	732.241
135	Ba	138.890	0.032752	ppb	32.229	73.404	76.667
165	Ho-IS	476713.301		ppb	1.408		476365.650
159	Tb-IS	> 558417.465		ppb	1.489		553967.024
207	Pb	1502.253	0.037513	ppb	5.897	11.508	592.227
203	Tl	397.783	0.027263	ppb	4.300	10.837	187.779
209	Bi-IS	303536.516		ppb	0.860		295774.323
51	V	34.444	0.079740	ppb	62.217	74.838	5.556
59	Co	95.556	0.057394	ppb	31.266	46.370	27.778
60	Ni	133.334	0.094644	ppb	19.843	33.395	54.445
75	As	563.119	-0.012871	ppb	2.933	528.280	557.132
71	Ga-ISK	> 95372.906		ppb	1.534		93586.704
82	Se-2	15.562	0.454459	ppb	37.805	37.658	0.213
107	Ag-1	807.801	0.140767	ppb	13.775	19.858	190.001
115	In-ISK	124161.054		ppb	0.590		125178.383
45	Sc-ISK	> 221836.926		ppb	0.317		224970.912
23	Na	2636.920	4.741488	ppb	24.583	39.811	1021.703
39	K	81286.161	9.662233	ppb	0.285	6.707	75655.379
24	Mg	1201.721	1.827606	ppb	31.598	51.304	468.341
159	Tb-ISK	263639.810		ppb	0.263		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Tuesday, December 10, 2019 08:28:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191209E1\CCB-23446.351

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48089.710		ppb	1.695		47027.292
9	Be	31.111	0.005773	ppb	44.607	207.329	24.444
10	B	3313.718	0.753431	ppb	4.336	52.507	3095.891
27	Al	6468.168	0.412419	ppb	19.505	51.452	3999.449
43	Ca-2	163.334	2.579981	ppb	6.372	15.977	106.667
49	Ti	186.668	0.031370	ppb	20.594	188.797	166.668
52	Cr	11665.873	0.023110	ppb	1.307	31.711	11497.959
55	Mn	1108.932	0.020943	ppb	8.552	32.609	796.689
57	Fe	11285.567	0.769530	ppb	0.916	75.227	11074.292
45	Sc-IS	> 2252101.667		ppb	0.785		2258970.662
66	Zn	1946.799	0.264834	ppb	4.429	22.347	1505.635
86	Sr	87.888	0.011467	ppb	43.596	127.702	57.938
65	Cu	222.837	0.010587	ppb	7.737	65.179	195.182
69	Ga-IS	680967.238		ppb	0.732		674512.414
95	Mo	747.797	0.139993	ppb	5.886	15.028	418.895
115	In-IS	> 435852.115		ppb	0.796		424835.533
111	Cd	339.545	0.134202	ppb	5.380	7.028	45.787
118	Sn	5089.796	0.224313	ppb	3.571	13.849	3435.970
121	Sb	727.796	-0.003100	ppb	1.907	70.928	732.241
135	Ba	98.889	0.010676	ppb	5.149	28.692	76.667
165	Ho-IS	481766.285		ppb	2.449		476365.650
159	Tb-IS	> 557388.862		ppb	1.686		553967.024
207	Pb	844.455	0.010327	ppb	14.267	49.580	592.227
203	Tl	215.557	0.003472	ppb	23.213	184.121	187.779
209	Bi-IS	300772.348		ppb	0.995		295774.323
51	V	4.444	-0.003439	ppb	43.301	156.414	5.556
59	Co	28.889	0.000226	ppb	13.323	1274.755	27.778
60	Ni	67.778	0.014150	ppb	39.752	230.977	54.445
75	As	572.220	-0.003500	ppb	4.840	2091.963	557.132
71	Ga-ISK	> 96319.214		ppb	1.382		93586.704
82	Se-2	9.596	0.274899	ppb	36.713	36.367	0.213
107	Ag-1	265.558	0.015836	ppb	23.894	90.476	190.001
115	In-ISK	125910.207		ppb	0.195		125178.383
45	Sc-ISK	> 230662.847		ppb	0.381		224970.912
23	Na	2053.484	2.816936	ppb	16.289	33.891	1021.703
39	K	79855.909	3.180513	ppb	0.536	31.944	75655.379
24	Mg	753.355	0.650061	ppb	34.809	96.673	468.341
159	Tb-ISK	268256.594		ppb	0.447		270462.969

QC Out of Limits

AnalyteMassOut of Limits Message

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Monday, December 09, 2019 15:16:22

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2019\191209E1\STD Performance Check.039

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens. SD	Net Intens. RSD	Mode
Be	9.0		3250.3		3250.303	25.119	0.8	Standard
In	114.9		68199.5		68199.545	537.735	0.8	Standard
U	238.1		53180.3		53180.343	554.860	1.0	Standard
[CeO	155.9		1418.5		0.023	0.000	1.2	Standard
> Ce	139.9		61562.2		61562.163	270.504	0.4	Standard
[Ce++	70.0		681.9		0.011	0.000	2.7	Standard
Bkgd	220.0		1.1		1.133	0.558	49.2	Standard

Current Conditions File Data

Current Value	Description
0.96	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.50	Deflector Voltage
1600.00	ICP RF Power
-2150.00	Analog Stage Voltage
1900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-13.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-17.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.50	DRC Mode QRO
-2.50	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-15.50	KED Mode CRO
-22.50	KED Mode QRO
-18.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Monday, December 09, 2019 15:18:26

Page 1

475.00 KED Mode Axial Field Voltage

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Monday, December 09, 2019 15:11:12

File Name: default.tun

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1243	2062	0.707	
Mg 24	23.985	23.975	4624	2062	0.691	
In 115	114.904	114.925	22806	2058	0.692	
U	238.050	238.025	47441	2049	0.693	

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Tuesday, December 10, 2019 11:07:26

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2019\191210E1\STD Performance Check.006

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens. SD	Net Intens. RSD	Mode	
Be	9.0		3955.9		3955.948	34.480	0.9	Standard	
In	114.9		75906.9		75906.869	419.434	0.6	Standard	
U	238.1		62974.6		62974.575	614.034	1.0	Standard	
[	CeO	155.9		1737.0		0.024		1.2	Standard
>	Ce	139.9		72175.0		72175.000	324.074	0.4	Standard
[	Ce++	70.0		943.3		0.013		2.3	Standard
	Bkgd	220.0		1.6		1.600	0.303	18.9	Standard

Current Conditions File Data

Current Value	Description
0.98	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.50	Deflector Voltage
1600.00	ICP RF Power
-2150.00	Analog Stage Voltage
1900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-13.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-17.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.50	DRC Mode QRO
-2.50	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-15.50	KED Mode CRO
-22.50	KED Mode QRO
-18.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Tuesday, December 10, 2019 11:15:24

Page 1

475.00 KED Mode Axial Field Voltage

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Tuesday, December 10, 2019 10:55:06

File Name:

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1246	2062	0.698	
Mg 24	23.985	23.975	4619	2062	0.700	
In 115	114.904	114.875	22800	2056	0.713	
U	238.050	238.075	47444	2047	0.711	

Report Date/Time: Tuesday, December 10, 2019 11:15:08

Page 1

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Tuesday, December 10, 2019 18:13:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\ICIS-23447.136

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		42868.696		ppb		2.559		
9	Be	|		46.667		ppb		25.754		
10	B	|		4940.855		ppb		3.741		
27	Al	|		6567.065		ppb		2.529		
43	Ca-2	|		985.041		ppb		54.598		
49	Ti	|		227.780		ppb		10.382		
52	Cr	|		16179.161		ppb		2.642		
55	Mn	|		2806.958		ppb		28.837		
57	Fe	|		18409.633		ppb		0.966		
45	Sc-IS	|>		1900606.701		ppb		2.873		
66	Zn	|		2656.914		ppb		4.937		
86	Sr	|		871.891		ppb		23.464		
65	Cu	|		369.286		ppb		7.829		
69	Ga-IS	|		547737.660		ppb		0.483		
95	Mo	|		493.342		ppb		3.762		
115	In-IS	|>		327805.977		ppb		1.171		
111	Cd	|		1629.057		ppb		4.719		
118	Sn	|		8050.056		ppb		8.234		
121	Sb	|		2004.585		ppb		6.070		
135	Ba	|		203.335		ppb		4.918		
165	Ho-IS	|		350617.912		ppb		1.650		
159	Tb-IS	|>		427340.256		ppb		2.010		
207	Pb	|		771.120		ppb		16.211		
203	Tl	|		192.224		ppb		15.735		
209	Bi-IS	|		209804.917		ppb		3.263		
51	V	|		21.111		ppb		9.116		
59	Co	|		78.889		ppb		84.964		
60	Ni	|		170.001		ppb		27.660		
75	As	|		721.358		ppb		4.074		
71	Ga-ISK	|>		99678.852		ppb		1.910		
82	Se-2	|		6.573		ppb		38.313		
107	Ag-1	|		472.230		ppb		8.626		
115	In-ISK	|		99457.792		ppb		1.681		
45	Sc-ISK	|>		242742.069		ppb		1.825		
23	Na	|		39213.269		ppb		41.627		
39	K	|		87260.158		ppb		1.138		
24	Mg	|		9076.663		ppb		48.262		
159	Tb-ISK	|		211731.003		ppb		1.255		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Tuesday, December 10, 2019 18:16:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\IC-210761.137

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42137.644		ppb	2.916		42868.696
9	Be	341561.754	200.000000	ppb	0.513	1.602	46.667
10	B	253320.828	500.000000	ppb	0.915	0.420	4940.855
27	Al	1683567.796	200.000000	ppb	1.389	1.117	6567.065
43	Ca-2	288307.167	10200.000000	ppb	1.320	0.693	985.041
49	Ti	157003.749	200.000000	ppb	1.640	1.269	227.780
52	Cr	2310250.800	200.000000	ppb	1.515	1.229	16179.161
55	Mn	3852068.600	200.000000	ppb	1.790	1.002	2806.958
57	Fe	4268324.947	10200.000000	ppb	1.187	1.615	18409.633
45	Sc-IS	> 1852301.944		ppb	1.133		1900606.701
66	Zn	413518.533	200.000000	ppb	1.790	1.854	2656.914
86	Sr	618115.465	200.000000	ppb	1.200	0.859	871.891
65	Cu	675049.223	200.000000	ppb	0.782	0.858	369.286
69	Ga-IS	583973.587		ppb	0.386		547737.660
95	Mo	577772.894	200.000000	ppb	0.996	1.146	493.342
115	In-IS	> 312742.329		ppb	0.934		327805.977
111	Cd	462618.611	200.000000	ppb	0.453	1.030	1629.057
118	Sn	1496117.324	200.000000	ppb	1.446	0.770	8050.056
121	Sb	1559011.760	200.000000	ppb	0.406	0.587	2004.585
135	Ba	411847.066	200.000000	ppb	0.961	1.210	203.335
165	Ho-IS	345646.976		ppb	1.928		350617.912
159	Tb-IS	> 413563.810		ppb	1.423		427340.256
207	Pb	5033313.404	200.000000	ppb	1.605	0.522	771.120
203	Tl	1552713.831	200.000000	ppb	2.092	0.709	192.224
209	Bi-IS	192728.120		ppb	1.186		209804.917
51	V	107485.084	200.000000	ppb	0.883	1.368	21.111
59	Co	353608.584	200.000000	ppb	0.763	0.660	78.889
60	Ni	238465.003	200.000000	ppb	0.742	0.269	170.001
75	As	97893.594	200.000000	ppb	0.771	1.047	721.358
71	Ga-ISK	> 98387.656		ppb	0.798		99678.852
82	Se-2	9173.513	200.000000	ppb	0.423	0.818	6.573
107	Ag-1	1040550.755	200.000000	ppb	0.573	1.270	472.230
115	In-ISK	98764.077		ppb	1.785		99457.792
45	Sc-ISK	> 242365.468		ppb	1.091		242742.069
23	Na	5642733.108	10200.000000	ppb	1.070	0.821	39213.269
39	K	11380456.197	200.000000	ppb	0.792	1.811	87260.158
24	Mg	5914315.198	10200.000000	ppb	0.274	1.353	9076.663
159	Tb-ISK	212065.814		ppb	0.766		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Tuesday, December 10, 2019 18:19:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCV-210770.138

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	41594.914		ppb		0.838		42868.696
9	Be	|	174303.819	101.185311	ppb	1.844	0.709		46.667
10	B	|	128860.988	247.422061	ppb	2.255	1.880		4940.855
27	Al	|	850302.111	99.790336	ppb	1.251	0.363		6567.065
43	Ca-2	|	147130.556	5145.641703	ppb	1.500	1.746		985.041
49	Ti	|	79724.148	100.561148	ppb	2.431	1.037		227.780
52	Cr	|	1118041.639	95.270139	ppb	1.263	0.560		16179.161
55	Mn	|	1864950.256	95.950756	ppb	1.524	0.028		2806.958
57	Fe	|	2211124.617	5218.758326	ppb	1.095	0.443		18409.633
45	Sc-IS	>	1867866.017		ppb	1.534			1900606.701
66	Zn	>	219325.573	104.589909	ppb	1.720	0.449		2656.914
86	Sr	|	317224.887	101.644576	ppb	2.076	0.549		871.891
65	Cu	|	353486.687	103.802870	ppb	1.331	0.391		369.286
69	Ga-IS	|	561901.787		ppb	1.707			547737.660
95	Mo	|	299933.249	102.869240	ppb	1.846	0.310		493.342
115	In-IS	>	314167.917		ppb	0.537			327805.977
111	Cd	|	236073.119	101.255286	ppb	1.592	1.099		1629.057
118	Sn	|	769911.651	101.953547	ppb	1.093	1.027		8050.056
121	Sb	|	797696.213	101.744164	ppb	0.880	0.448		2004.585
135	Ba	|	210068.933	101.499328	ppb	1.168	1.079		203.335
165	Ho-IS	|	344221.512		ppb	1.301			350617.912
159	Tb-IS	>	413049.206		ppb	1.395			427340.256
207	Pb	|	2421613.418	96.336694	ppb	0.521	0.883		771.120
203	Tl	|	801180.970	103.322572	ppb	1.213	0.187		192.224
209	Bi-IS	|	195268.824		ppb	0.167			209804.917
51	V	|	53531.221	100.364577	ppb	0.509	1.335		21.111
59	Co	|	176751.180	100.730109	ppb	0.584	1.120		78.889
60	Ni	|	120089.398	101.446950	ppb	1.669	2.509		170.001
75	As	|	49167.077	100.513877	ppb	0.536	1.544		721.358
71	Ga-ISK	>	97630.283		ppb	1.226			99678.852
82	Se-2	|	4647.017	102.044289	ppb	0.985	2.163		6.573
107	Ag-1	|	525271.410	101.702978	ppb	0.040	1.207		472.230
115	In-ISK	|	98380.264		ppb	0.157			99457.792
45	Sc-ISK	>	238766.608		ppb	0.516			242742.069
23	Na	|	2885855.528	5260.694132	ppb	1.304	0.910		39213.269
39	K	|	5805506.696	5243.107313	ppb	0.722	0.259		87260.158
24	Mg	|	3032159.317	5300.026907	ppb	1.176	0.685		9076.663
159	Tb-ISK	|	212959.624		ppb	0.726			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Tuesday, December 10, 2019 18:23:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCB-23446.139

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42398.394		ppb	1.878		42868.696
9	Be	116.667	0.041699	ppb	8.571	12.893	46.667
10	B	5372.122	1.128577	ppb	2.872	34.091	4940.855
27	Al	6321.401	-0.008858	ppb	5.714	506.796	6567.065
43	Ca-2	521.676	-15.538670	ppb	10.068	12.893	985.041
49	Ti	210.002	-0.015154	ppb	4.200	67.866	227.780
52	Cr	15047.926	-0.062069	ppb	3.150	57.033	16179.161
55	Mn	2470.216	-0.013671	ppb	11.966	116.163	2806.958
57	Fe	17208.138	-1.734593	ppb	1.897	46.913	18409.633
45	Sc-IS	> 1851200.509		ppb	0.751		1900606.701
66	Zn	2422.428	-0.080516	ppb	3.626	53.737	2656.914
86	Sr	485.703	-0.117583	ppb	34.015	46.734	871.891
65	Cu	510.063	0.044731	ppb	23.228	80.593	369.286
69	Ga-IS	529339.899		ppb	0.494		547737.660
95	Mo	2059.038	0.547376	ppb	6.365	9.093	493.342
115	In-IS	> 325650.340		ppb	1.497		327805.977
111	Cd	1184.614	-0.180482	ppb	2.592	10.974	1629.057
118	Sn	10934.189	0.379209	ppb	4.509	17.517	8050.056
121	Sb	1654.541	-0.041586	ppb	7.969	37.038	2004.585
135	Ba	211.113	0.004288	ppb	21.437	496.686	203.335
165	Ho-IS	344273.268		ppb	1.918		350617.912
159	Tb-IS	> 416711.516		ppb	1.749		427340.256
207	Pb	2057.838	0.051318	ppb	25.565	38.056	771.120
203	Tl	632.237	0.056716	ppb	19.260	25.197	192.224
209	Bi-IS	204992.537		ppb	0.503		209804.917
51	V	122.223	0.188197	ppb	72.994	87.684	21.111
59	Co	375.562	0.168085	ppb	67.505	84.993	78.889
60	Ni	204.446	0.030704	ppb	26.357	144.952	170.001
75	As	768.304	0.116474	ppb	1.508	23.718	721.358
71	Ga-ISK	> 98351.849		ppb	0.610		99678.852
82	Se-2	11.581	0.110858	ppb	80.599	183.249	6.573
107	Ag-1	710.018	0.046939	ppb	2.347	5.183	472.230
115	In-ISK	99849.152		ppb	1.358		99457.792
45	Sc-ISK	> 239267.160		ppb	0.847		242742.069
23	Na	25702.434	-23.870215	ppb	25.496	50.900	39213.269
39	K	90004.995	3.659941	ppb	2.656	66.464	87260.158
24	Mg	7011.841	-3.384241	ppb	32.385	117.788	9076.663
159	Tb-ISK	213720.249		ppb	1.041		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Tuesday, December 10, 2019 18:26:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\ICVL-210771.140

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		41677.393		ppb		2.219		42868.696
9	Be	|		1737.884	0.983839	ppb	5.895	4.955		46.667
10	B	|		29570.575	49.415256	ppb	0.898	2.070		4940.855
27	Al	|		434673.926	50.721314	ppb	1.678	0.898		6567.065
43	Ca-2	|		1883.458	32.278278	ppb	9.778	17.159		985.041
49	Ti	|		956.699	0.928688	ppb	7.416	8.713		227.780
52	Cr	|		25749.860	0.854859	ppb	2.225	3.186		16179.161
55	Mn	|		21002.108	0.941529	ppb	3.765	2.753		2806.958
57	Fe	|		37363.246	46.004178	ppb	1.256	1.780		18409.633
45	Sc-IS	>		1864848.363		ppb	1.422			1900606.701
66	Zn	|		14201.501	5.606816	ppb	1.602	3.681		2656.914
86	Sr	|		3361.632	0.806583	ppb	1.146	1.038		871.891
65	Cu	|		3873.867	1.033909	ppb	1.279	0.664		369.286
69	Ga-IS	|		533423.371		ppb	0.703			547737.660
95	Mo	|		3939.433	1.189322	ppb	3.918	5.206		493.342
115	In-IS	>		320198.363		ppb	1.110			327805.977
111	Cd	|		4548.009	1.252545	ppb	1.817	1.159		1629.057
118	Sn	|		14207.064	0.832775	ppb	2.605	6.539		8050.056
121	Sb	|		9073.994	0.892693	ppb	3.141	3.784		2004.585
135	Ba	|		2311.298	1.002532	ppb	1.684	1.804		203.335
165	Ho-IS	|		344371.563		ppb	1.031			350617.912
159	Tb-IS	>		416094.180		ppb	0.949			427340.256
207	Pb	|		25473.321	0.976590	ppb	0.878	1.275		771.120
203	Tl	|		8545.889	1.070428	ppb	1.099	1.958		192.224
209	Bi-IS	|		200082.600		ppb	0.910			209804.917
51	V	|		596.679	1.054765	ppb	15.969	17.323		21.111
59	Co	|		2052.370	1.098911	ppb	7.998	9.238		78.889
60	Ni	|		1492.300	1.091513	ppb	1.900	2.458		170.001
75	As	|		1236.734	1.038969	ppb	3.238	8.278		721.358
71	Ga-ISK	>		100001.033		ppb	1.023			99678.852
82	Se-2	|		54.890	1.037660	ppb	11.924	14.658		6.573
107	Ag-1	|		5521.067	0.954952	ppb	1.631	2.424		472.230
115	In-ISK	|		101207.682		ppb	0.347			99457.792
45	Sc-ISK	>		241914.459		ppb	0.485			242742.069
23	Na	|		63572.068	44.715929	ppb	21.343	56.272		39213.269
39	K	|		147989.368	55.219431	ppb	1.554	4.427		87260.158
24	Mg	|		41119.551	55.509918	ppb	10.791	14.142		9076.663
159	Tb-ISK	|		215003.961		ppb	1.022			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-37643_1-A

Autosampler Position: 301

Sample Date/Time: Tuesday, December 10, 2019 18:29:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\MB 570-37643_1-A.141

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	41714.148		ppb	0.396		42868.696
9	Be	93.334	0.027813	ppb	10.714	21.579	46.667
10	B	4853.047	0.038649	ppb	2.162	762.840	4940.855
27	Al	5354.338	-0.127027	ppb	4.017	25.684	6567.065
43	Ca-2	658.349	-10.762175	ppb	21.487	48.611	985.041
49	Ti	232.224	0.012039	ppb	7.366	204.911	227.780
52	Cr	14873.296	-0.083119	ppb	2.180	35.217	16179.161
55	Mn	2100.161	-0.033266	ppb	26.094	88.432	2806.958
57	Fe	16377.166	-3.901118	ppb	3.053	40.713	18409.633
45	Sc-IS	> 1859771.242		ppb	1.148		1900606.701
66	Zn	20088.562	8.479168	ppb	1.719	3.184	2656.914
86	Sr	368.458	-0.156256	ppb	50.896	39.269	871.891
65	Cu	369.219	0.002546	ppb	31.012	1369.478	369.286
69	Ga-IS	534689.586		ppb	0.877		547737.660
95	Mo	700.017	0.075230	ppb	14.577	50.065	493.342
115	In-IS	> 325037.681		ppb	1.975		327805.977
111	Cd	100.753	-0.632105	ppb	44.780	2.999	1629.057
118	Sn	5298.762	-0.346250	ppb	5.749	15.025	8050.056
121	Sb	1132.267	-0.105620	ppb	6.065	9.549	2004.585
135	Ba	150.001	-0.024174	ppb	16.025	44.836	203.335
165	Ho-IS	350711.064		ppb	1.409		350617.912
159	Tb-IS	> 421269.517		ppb	1.243		427340.256
207	Pb	1397.805	0.024887	ppb	13.309	29.590	771.120
203	Tl	394.450	0.025971	ppb	24.931	48.958	192.224
209	Bi-IS	202971.771		ppb	0.551		209804.917
51	V	8.889	-0.022603	ppb	21.651	16.225	21.111
59	Co	60.000	-0.010939	ppb	9.623	26.200	78.889
60	Ni	273.336	0.083454	ppb	27.242	75.974	170.001
75	As	737.260	0.015499	ppb	2.599	149.717	721.358
71	Ga-ISK	> 100801.087		ppb	1.321		99678.852
82	Se-2	2.872	-0.081179	ppb	184.086	136.836	6.573
107	Ag-1	540.010	0.011656	ppb	11.826	95.325	472.230
115	In-ISK	101188.294		ppb	0.436		99457.792
45	Sc-ISK	> 238563.224		ppb	0.225		242742.069
23	Na	23582.312	-27.632527	ppb	47.038	74.609	39213.269
39	K	93969.327	7.537049	ppb	2.895	35.312	87260.158
24	Mg	6505.232	-4.228922	ppb	65.049	176.275	9076.663
159	Tb-ISK	213121.304		ppb	0.407		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-37643_2-A

Autosampler Position: 302

Sample Date/Time: Tuesday, December 10, 2019 18:31:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\LCS 570-37643_2-A.142

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		42159.902		ppb			1.116		42868.696
9	Be	|		175595.953	103.340340	ppb			0.578	2.137	46.667
10	B	|		53154.261	97.819992	ppb			0.325	1.853	4940.855
27	Al	|		868843.940	103.373067	ppb			1.506	0.794	6567.065
43	Ca-2	|		128707.338	4557.948314	ppb			1.933	1.283	985.041
49	Ti	|		78298.529	100.097974	ppb			2.628	1.383	227.780
52	Cr	|		1112257.706	96.065879	ppb			1.851	0.607	16179.161
55	Mn	|		1800769.977	93.905761	ppb			1.109	0.911	2806.958
57	Fe	|		1832328.165	4376.457003	ppb			1.179	1.037	18409.633
45	Sc-IS	>		1842976.544		ppb			1.811		1900606.701
66	Zn	|		229120.836	110.815879	ppb			1.592	0.535	2656.914
86	Sr	|		311891.241	101.308274	ppb			0.409	1.538	871.891
65	Cu	|		344173.400	102.448630	ppb			0.798	1.764	369.286
69	Ga-IS	|		564546.834		ppb			1.387		547737.660
95	Mo	|		291929.141	101.476415	ppb			2.233	1.224	493.342
115	In-IS	>		316370.353		ppb			1.403		327805.977
111	Cd	|		244463.533	104.157739	ppb			0.614	1.236	1629.057
118	Sn	|		775633.711	101.991838	ppb			2.184	1.241	8050.056
121	Sb	|		724020.111	91.690688	ppb			2.370	2.617	2004.585
135	Ba	|		212714.294	102.070778	ppb			1.063	1.288	203.335
165	Ho-IS	|		346662.433		ppb			2.089		350617.912
159	Tb-IS	>		414384.647		ppb			1.203		427340.256
207	Pb	|		2434656.178	96.539151	ppb			0.894	0.685	771.120
203	Tl	|		762832.384	98.060214	ppb			1.173	0.943	192.224
209	Bi-IS	|		201654.683		ppb			1.753		209804.917
51	V	|		53585.883	98.494995	ppb			1.485	1.512	21.111
59	Co	|		173984.413	97.204847	ppb			1.878	1.603	78.889
60	Ni	|		123436.551	102.228178	ppb			0.515	1.367	170.001
75	As	|		49197.935	98.580216	ppb			1.346	1.965	721.358
71	Ga-ISK	>		99576.968		ppb			0.874		99678.852
82	Se-2	|		4751.013	102.278778	ppb			0.434	1.302	6.573
107	Ag-1	|		238905.546	45.300122	ppb			0.297	0.670	472.230
115	In-ISK	|		101362.537		ppb			0.767		99457.792
45	Sc-ISK	>		245286.850		ppb			0.804		242742.069
23	Na	|		564701.899	944.381105	ppb			0.812	0.493	39213.269
39	K	|		1206505.441	997.915872	ppb			1.150	1.050	87260.158
24	Mg	|		2664730.932	4531.763448	ppb			1.125	0.576	9076.663
159	Tb-ISK	|		215334.151		ppb			0.685		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-37643_3-A

Autosampler Position: 303

Sample Date/Time: Tuesday, December 10, 2019 18:34:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\LCSD 570-37643_3-A.143

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	41533.636		ppb		1.853		42868.696
9	Be	|	173660.420	103.474558	ppb		1.509	2.333	46.667
10	B	|	52407.066	97.634187	ppb		0.711	2.055	4940.855
27	Al	|	863785.118	104.078327	ppb		0.513	1.937	6567.065
43	Ca-2	|	127597.314	4575.756292	ppb		0.523	1.246	985.041
49	Ti	|	78068.321	101.067465	ppb		1.532	1.228	227.780
52	Cr	|	1090375.204	95.348986	ppb		1.247	0.718	16179.161
55	Mn	|	1755299.128	92.677465	ppb		1.035	0.983	2806.958
57	Fe	|	1804867.446	4365.116873	ppb		0.403	1.799	18409.633
45	Sc-IS	>	1820161.539		ppb		1.463		1900606.701
66	Zn	|	222715.037	109.051298	ppb		1.236	1.161	2656.914
86	Sr	|	308275.875	101.373011	ppb		2.068	1.684	871.891
65	Cu	|	337942.861	101.851645	ppb		0.313	1.706	369.286
69	Ga-IS	|	554809.059		ppb		1.098		547737.660
95	Mo	|	292643.817	103.011213	ppb		0.806	0.924	493.342
115	In-IS	>	318648.284		ppb		1.262		327805.977
111	Cd	|	242858.316	102.731664	ppb		0.761	2.025	1629.057
118	Sn	|	802287.170	104.774428	ppb		2.159	1.754	8050.056
121	Sb	|	763894.781	96.051100	ppb		1.187	0.362	2004.585
135	Ba	|	213236.426	101.588906	ppb		1.012	1.344	203.335
165	Ho-IS	|	344672.178		ppb		1.289		350617.912
159	Tb-IS	>	413339.116		ppb		0.764		427340.256
207	Pb	|	2417590.810	96.099239	ppb		1.220	0.520	771.120
203	Tl	|	771464.515	99.420968	ppb		0.658	0.887	192.224
209	Bi-IS	|	197083.597		ppb		1.108		209804.917
51	V	|	52009.015	96.200883	ppb		3.342	3.161	21.111
59	Co	|	168889.617	94.965088	ppb		2.731	2.903	78.889
60	Ni	|	122338.427	101.951911	ppb		2.150	1.613	170.001
75	As	|	49688.532	100.219150	ppb		1.331	1.703	721.358
71	Ga-ISK	>	98951.572		ppb		1.567		99678.852
82	Se-2	|	4487.911	97.212827	ppb		2.258	1.810	6.573
107	Ag-1	|	237591.985	45.337729	ppb		1.549	1.528	472.230
115	In-ISK	|	99058.568		ppb		0.650		99457.792
45	Sc-ISK	>	242809.512		ppb		0.825		242742.069
23	Na	|	568786.871	962.270881	ppb		1.406	2.296	39213.269
39	K	|	1197706.124	1001.031694	ppb		0.537	1.382	87260.158
24	Mg	|	2693060.721	4627.138027	ppb		0.730	0.683	9076.663
159	Tb-ISK	|	215052.647		ppb		0.829		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-D @5000

Autosampler Position: 304

Sample Date/Time: Tuesday, December 10, 2019 18:40:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-D @5000.145

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	41836.739		ppb	1.737		42868.696
9	Be	105.556	0.036389	ppb	32.256	56.118	46.667
10	B	5754.493	2.115681	ppb	2.921	14.340	4940.855
27	Al	5077.570	-0.146071	ppb	4.257	11.575	6567.065
43	Ca-2	346.671	-21.530088	ppb	19.899	11.658	985.041
49	Ti	196.668	-0.027336	ppb	7.767	76.846	227.780
52	Cr	14448.416	-0.090134	ppb	1.963	42.357	16179.161
55	Mn	2033.480	-0.034281	ppb	12.348	43.290	2806.958
57	Fe	16925.578	-1.639313	ppb	1.560	57.085	18409.633
45	Sc-IS	> 1816857.622		ppb	1.506		1900606.701
66	Zn	6052.394	1.742487	ppb	2.700	2.161	2656.914
86	Sr	375.186	-0.151234	ppb	11.737	10.656	871.891
65	Cu	403.455	0.015322	ppb	10.994	93.089	369.286
69	Ga-IS	538110.797		ppb	0.392		547737.660
95	Mo	1271.168	0.282545	ppb	2.037	5.500	493.342
115	In-IS	> 321779.434		ppb	1.607		327805.977
111	Cd	170.665	-0.602089	ppb	12.796	1.696	1629.057
118	Sn	9656.599	0.229800	ppb	3.590	27.856	8050.056
121	Sb	12214.109	1.279377	ppb	1.858	3.109	2004.585
135	Ba	187.779	-0.005516	ppb	18.476	307.481	203.335
165	Ho-IS	348241.637		ppb	3.720		350617.912
159	Tb-IS	> 414716.031		ppb	1.920		427340.256
207	Pb	1956.718	0.047819	ppb	15.078	22.538	771.120
203	Tl	645.570	0.058920	ppb	9.023	10.666	192.224
209	Bi-IS	204200.355		ppb	1.365		209804.917
51	V	47.778	0.049847	ppb	46.454	78.916	21.111
59	Co	147.779	0.039655	ppb	27.564	56.796	78.889
60	Ni	145.556	-0.018246	ppb	11.527	89.428	170.001
75	As	775.429	0.135276	ppb	5.262	88.147	721.358
71	Ga-ISK	> 98199.807		ppb	2.297		99678.852
82	Se-2	6.560	0.002726	ppb	38.421	2137.364	6.573
107	Ag-1	455.563	-0.001784	ppb	17.627	899.621	472.230
115	In-ISK	98549.749		ppb	0.594		99457.792
45	Sc-ISK	> 239515.648		ppb	0.431		242742.069
23	Na	9419.808	-53.910503	ppb	13.400	4.422	39213.269
39	K	86051.740	-0.043510	ppb	0.877	1743.187	87260.158
24	Mg	2585.247	-11.131205	ppb	28.490	11.694	9076.663
159	Tb-ISK	212114.476		ppb	0.273		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-D @1000

Autosampler Position: 305

Sample Date/Time: Tuesday, December 10, 2019 18:42:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-D @1000.146

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	41856.788		ppb	0.831		42868.696
9	Be	88.889	0.025817	ppb	21.323	44.532	46.667
10	B	9773.344	10.112510	ppb	2.649	3.530	4940.855
27	Al	6988.702	0.080516	ppb	53.526	577.889	6567.065
43	Ca-2	418.340	-19.085368	ppb	22.115	18.706	985.041
49	Ti	183.335	-0.047212	ppb	11.060	65.911	227.780
52	Cr	14504.026	-0.101189	ppb	1.140	16.109	16179.161
55	Mn	1822.340	-0.046589	ppb	12.717	30.377	2806.958
57	Fe	16264.811	-3.730753	ppb	1.619	40.697	18409.633
45	Sc-IS	> 1839601.204		ppb	2.377		1900606.701
66	Zn	7959.996	2.640895	ppb	2.376	2.593	2656.914
86	Sr	334.661	-0.166117	ppb	18.232	12.127	871.891
65	Cu	386.874	0.008660	ppb	10.372	110.336	369.286
69	Ga-IS	526010.349		ppb	0.653		547737.660
95	Mo	796.689	0.111754	ppb	11.094	31.563	493.342
115	In-IS	> 325174.122		ppb	1.817		327805.977
111	Cd	177.217	-0.600155	ppb	8.418	1.175	1629.057
118	Sn	6336.963	-0.212475	ppb	4.558	23.974	8050.056
121	Sb	6569.289	0.566293	ppb	2.606	6.315	2004.585
135	Ba	183.335	-0.008287	ppb	29.931	329.281	203.335
165	Ho-IS	347779.149		ppb	2.135		350617.912
159	Tb-IS	> 419860.040		ppb	1.254		427340.256
207	Pb	1491.141	0.028791	ppb	15.256	33.378	771.120
203	Tl	447.785	0.032943	ppb	20.392	37.207	192.224
209	Bi-IS	205484.997		ppb	3.284		209804.917
51	V	12.222	-0.016763	ppb	68.635	89.376	21.111
59	Co	67.778	-0.006660	ppb	19.876	112.555	78.889
60	Ni	131.112	-0.033663	ppb	19.251	58.852	170.001
75	As	728.302	-0.004346	ppb	1.899	777.948	721.358
71	Ga-ISK	> 100953.293		ppb	1.684		99678.852
82	Se-2	7.229	0.013125	ppb	100.413	1183.002	6.573
107	Ag-1	418.895	-0.011248	ppb	20.418	133.800	472.230
115	In-ISK	98367.000		ppb	0.172		99457.792
45	Sc-ISK	> 244406.344		ppb	0.523		242742.069
23	Na	11359.519	-50.760967	ppb	3.748	1.573	39213.269
39	K	86062.911	-1.605996	ppb	0.592	43.949	87260.158
24	Mg	2568.567	-11.253091	ppb	13.230	5.158	9076.663
159	Tb-ISK	213983.405		ppb	0.618		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-E MS @1000

Autosampler Position: 306

Sample Date/Time: Tuesday, December 10, 2019 18:45:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-E MS @1000.147

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42041.776		ppb	1.018		42868.696
9	Be	146.667	0.060793	ppb	13.636	21.923	46.667
10	B	9950.131	10.657672	ppb	1.857	1.676	4940.855
27	Al	4998.653	-0.157287	ppb	3.178	14.037	6567.065
43	Ca-2	386.672	-20.133718	ppb	10.044	6.347	985.041
49	Ti	208.890	-0.012615	ppb	14.303	280.979	227.780
52	Cr	15265.932	-0.021562	ppb	1.914	218.956	16179.161
55	Mn	2571.343	-0.006374	ppb	3.042	35.295	2806.958
57	Fe	16439.459	-2.965056	ppb	2.897	24.280	18409.633
45	Sc-IS	> 1822580.456		ppb	1.623		1900606.701
66	Zn	7087.314	2.245044	ppb	2.289	1.102	2656.914
86	Sr	372.964	-0.152636	ppb	12.425	8.890	871.891
65	Cu	513.545	0.047942	ppb	7.382	19.168	369.286
69	Ga-IS	532693.755		ppb	2.088		547737.660
95	Mo	687.794	0.075450	ppb	11.161	32.975	493.342
115	In-IS	> 321173.432		ppb	0.903		327805.977
111	Cd	246.336	-0.570184	ppb	18.112	3.178	1629.057
118	Sn	5767.865	-0.276798	ppb	21.045	58.907	8050.056
121	Sb	4700.777	0.342037	ppb	8.011	12.212	2004.585
135	Ba	241.113	0.019733	ppb	17.175	95.676	203.335
165	Ho-IS	348440.633		ppb	2.996		350617.912
159	Tb-IS	> 418342.655		ppb	1.776		427340.256
207	Pb	2397.855	0.064602	ppb	3.490	7.464	771.120
203	Tl	813.357	0.079740	ppb	8.819	13.598	192.224
209	Bi-IS	205411.853		ppb	0.704		209804.917
51	V	52.222	0.056589	ppb	9.750	16.161	21.111
59	Co	156.668	0.042934	ppb	14.894	30.267	78.889
60	Ni	217.779	0.038552	ppb	3.535	16.760	170.001
75	As	730.428	0.009925	ppb	3.111	451.833	721.358
71	Ga-ISK	> 100251.646		ppb	0.188		99678.852
82	Se-2	12.549	0.126961	ppb	57.819	121.844	6.573
107	Ag-1	495.564	0.003893	ppb	2.547	63.809	472.230
115	In-ISK	101580.062		ppb	1.478		99457.792
45	Sc-ISK	> 238310.208		ppb	0.622		242742.069
23	Na	11854.923	-49.323098	ppb	4.361	1.720	39213.269
39	K	87588.822	1.768948	ppb	1.011	65.450	87260.158
24	Mg	3723.819	-9.111449	ppb	2.052	1.148	9076.663
159	Tb-ISK	212975.170		ppb	0.608		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-F MSD @1000

Autosampler Position: 307

Sample Date/Time: Tuesday, December 10, 2019 18:48:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-F MSD @1000.148

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42416.220		ppb	1.569		42868.696
9	Be	147.779	0.060491	ppb	23.693	36.269	46.667
10	B	9990.159	10.495278	ppb	1.126	4.820	4940.855
27	Al	5218.731	-0.138217	ppb	1.160	14.342	6567.065
43	Ca-2	408.339	-19.503658	ppb	14.609	11.938	985.041
49	Ti	212.224	-0.010851	ppb	13.723	389.606	227.780
52	Cr	15215.880	-0.043109	ppb	2.571	19.302	16179.161
55	Mn	2572.458	-0.007853	ppb	17.122	305.099	2806.958
57	Fe	16664.158	-2.898829	ppb	0.363	33.023	18409.633
45	Sc-IS	> 1845228.877		ppb	2.140		1900606.701
66	Zn	8515.872	2.899936	ppb	2.569	0.744	2656.914
86	Sr	374.574	-0.153425	ppb	1.592	2.886	871.891
65	Cu	501.402	0.042760	ppb	11.632	46.540	369.286
69	Ga-IS	532163.121		ppb	1.461		547737.660
95	Mo	581.123	0.035870	ppb	12.334	78.915	493.342
115	In-IS	> 322424.893		ppb	1.721		327805.977
111	Cd	207.670	-0.586604	ppb	14.848	2.444	1629.057
118	Sn	4318.433	-0.468557	ppb	7.546	11.060	8050.056
121	Sb	3552.664	0.197056	ppb	0.852	4.568	2004.585
135	Ba	246.669	0.022002	ppb	13.032	69.145	203.335
165	Ho-IS	350661.281		ppb	1.758		350617.912
159	Tb-IS	> 420822.595		ppb	1.606		427340.256
207	Pb	2392.301	0.063886	ppb	13.155	21.131	771.120
203	Tl	803.357	0.077934	ppb	21.252	29.541	192.224
209	Bi-IS	203768.871		ppb	1.908		209804.917
51	V	37.778	0.029955	ppb	22.205	52.089	21.111
59	Co	168.890	0.049086	ppb	22.705	39.697	78.889
60	Ni	185.557	0.010958	ppb	21.432	267.388	170.001
75	As	791.303	0.126979	ppb	3.394	64.268	721.358
71	Ga-ISK	> 100688.130		ppb	2.050		99678.852
82	Se-2	8.557	0.039386	ppb	76.177	343.439	6.573
107	Ag-1	440.007	-0.007026	ppb	8.932	81.449	472.230
115	In-ISK	99696.880		ppb	1.396		99457.792
45	Sc-ISK	> 240030.892		ppb	0.687		242742.069
23	Na	9830.050	-53.201126	ppb	3.276	0.899	39213.269
39	K	87240.029	0.876445	ppb	0.986	151.927	87260.158
24	Mg	3063.663	-10.309857	ppb	6.377	3.166	9076.663
159	Tb-ISK	213826.050		ppb	1.829		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-D PDS @1000

Autosampler Position: 308

Sample Date/Time: Tuesday, December 10, 2019 18:51:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-D PDS @1000.149

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	42206.744		ppb		3.204		42868.696
9	Be	|	176690.418	106.351963	ppb	0.300	4.074		46.667
10	B	|	56918.732	108.048981	ppb	1.187	4.252		4940.855
27	Al	|	880520.680	107.223413	ppb	1.488	5.197		6567.065
43	Ca-2	|	128397.874	4653.514316	ppb	1.715	5.365		985.041
49	Ti	|	79041.418	103.376479	ppb	1.293	3.855		227.780
52	Cr	|	1112473.587	98.295071	ppb	1.126	2.878		16179.161
55	Mn	|	1790503.844	95.507087	ppb	1.103	4.014		2806.958
57	Fe	|	1834689.038	4483.207688	ppb	0.256	3.809		18409.633
45	Sc-IS	>	1803345.074		ppb	3.744			1900606.701
66	Zn	|	225798.359	111.723402	ppb	0.937	4.045		2656.914
86	Sr	|	312757.204	103.925074	ppb	1.029	4.525		871.891
65	Cu	|	344252.300	104.805172	ppb	1.136	3.962		369.286
69	Ga-IS	|	552081.668		ppb	2.724			547737.660
95	Mo	|	292110.923	103.856404	ppb	1.006	3.217		493.342
115	In-IS	>	315610.695		ppb	4.753			327805.977
111	Cd	|	246858.352	105.576749	ppb	0.570	4.443		1629.057
118	Sn	|	789757.419	104.294365	ppb	0.233	5.133		8050.056
121	Sb	|	738808.650	93.917034	ppb	0.513	4.474		2004.585
135	Ba	|	216914.416	104.499637	ppb	0.292	5.124		203.335
165	Ho-IS	|	338633.579		ppb	3.174			350617.912
159	Tb-IS	>	409016.914		ppb	4.497			427340.256
207	Pb	|	2462911.833	99.115252	ppb	1.351	5.962		771.120
203	Tl	|	779331.892	101.690785	ppb	1.824	6.474		192.224
209	Bi-IS	|	197617.196		ppb	3.098			209804.917
51	V	|	53372.885	97.112997	ppb	2.290	3.374		21.111
59	Co	|	172283.745	95.272012	ppb	0.165	1.371		78.889
60	Ni	|	122763.014	100.622918	ppb	0.687	1.575		170.001
75	As	|	50250.058	99.664222	ppb	0.611	1.125		721.358
71	Ga-ISK	>	100617.590		ppb	1.501			99678.852
82	Se-2	|	4561.260	97.166117	ppb	2.026	1.619		6.573
107	Ag-1	|	238195.866	44.690501	ppb	2.676	1.209		472.230
115	In-ISK	|	101447.289		ppb	1.536			99457.792
45	Sc-ISK	>	242942.981		ppb	1.246			242742.069
23	Na	|	563245.620	951.620885	ppb	0.155	1.168		39213.269
39	K	|	1208292.105	1010.055246	ppb	0.550	1.852		87260.158
24	Mg	|	2702937.758	4642.395172	ppb	1.321	2.425		9076.663
159	Tb-ISK	|	216075.218		ppb	0.703			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Tuesday, December 10, 2019 18:53:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCV-210770.150

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		41623.885		ppb		0.495		42868.696
9	Be	|		170950.292	101.044790	ppb		1.736	3.146	46.667
10	B	|		127725.145	249.774138	ppb		1.027	2.667	4940.855
27	Al	|		832834.781	99.506248	ppb		0.479	2.287	6567.065
43	Ca-2	|		143568.015	5109.698240	ppb		2.104	0.350	985.041
49	Ti	|		78692.828	101.052838	ppb		1.101	1.222	227.780
52	Cr	|		1102600.592	95.647565	ppb		0.947	1.544	16179.161
55	Mn	|		1843848.189	96.579389	ppb		0.333	1.836	2806.958
57	Fe	|		2187779.185	5257.020689	ppb		0.373	1.882	18409.633
45	Sc-IS	>		1835128.441		ppb		1.826		1900606.701
66	Zn	|		215543.060	104.627809	ppb		1.648	1.090	2656.914
86	Sr	|		316508.596	103.231989	ppb		2.002	0.178	871.891
65	Cu	|		343305.108	102.615748	ppb		1.218	0.705	369.286
69	Ga-IS	|		556538.974		ppb		2.144		547737.660
95	Mo	|		295295.446	103.098230	ppb		1.111	0.776	493.342
115	In-IS	>		317948.979		ppb		1.790		327805.977
111	Cd	|		239715.888	101.614119	ppb		0.922	1.251	1629.057
118	Sn	|		770171.077	100.775957	ppb		0.814	1.186	8050.056
121	Sb	|		827611.437	104.335968	ppb		0.166	1.956	2004.585
135	Ba	|		207365.449	99.031906	ppb		1.307	2.924	203.335
165	Ho-IS	|		344352.424		ppb		1.350		350617.912
159	Tb-IS	>		410250.008		ppb		1.146		427340.256
207	Pb	|		2434604.117	97.513198	ppb		0.675	1.072	771.120
203	Tl	|		804388.076	104.438551	ppb		1.700	0.664	192.224
209	Bi-IS	|		198222.733		ppb		1.866		209804.917
51	V	|		53603.722	101.684513	ppb		1.169	1.232	21.111
59	Co	|		179622.287	103.575127	ppb		1.139	1.200	78.889
60	Ni	|		120488.200	102.977420	ppb		0.285	0.300	170.001
75	As	|		49392.009	102.185049	ppb		0.792	0.890	721.358
71	Ga-ISK	>		96484.729		ppb		0.098		99678.852
82	Se-2	|		4679.666	103.966744	ppb		1.029	1.124	6.573
107	Ag-1	|		522924.962	102.441647	ppb		1.711	1.736	472.230
115	In-ISK	|		97803.961		ppb		0.403		99457.792
45	Sc-ISK	>		237337.836		ppb		1.610		242742.069
23	Na	|		2853841.030	5234.002034	ppb		1.747	2.013	39213.269
39	K	|		5872272.672	5337.556458	ppb		0.644	1.537	87260.158
24	Mg	|		3068973.728	5397.765088	ppb		0.422	1.199	9076.663
159	Tb-ISK	|		210450.163		ppb		0.622		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Tuesday, December 10, 2019 18:59:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCB-23446.152

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42338.220		ppb	2.112		42868.696
9	Be	102.223	0.034028	ppb	36.360	64.644	46.667
10	B	4964.196	0.438793	ppb	2.843	66.138	4940.855
27	Al	6109.086	-0.024502	ppb	5.491	172.233	6567.065
43	Ca-2	226.669	-25.917608	ppb	35.864	11.350	985.041
49	Ti	197.779	-0.027422	ppb	6.811	59.180	227.780
52	Cr	14429.506	-0.099117	ppb	1.026	16.494	16179.161
55	Mn	1964.583	-0.038620	ppb	19.293	52.246	2806.958
57	Fe	16480.614	-2.952893	ppb	1.945	31.743	18409.633
45	Sc-IS	> 1826870.915		ppb	0.585		1900606.701
66	Zn	2300.185	-0.125177	ppb	0.950	4.413	2656.914
86	Sr	158.988	-0.223142	ppb	40.478	9.387	871.891
65	Cu	385.965	0.009295	ppb	12.770	156.607	369.286
69	Ga-IS	526202.059		ppb	1.036		547737.660
95	Mo	1226.719	0.264413	ppb	4.959	8.998	493.342
115	In-IS	> 322081.508		ppb	1.443		327805.977
111	Cd	1177.473	-0.178039	ppb	2.275	10.310	1629.057
118	Sn	8932.800	0.132967	ppb	6.424	43.752	8050.056
121	Sb	6019.050	0.504611	ppb	7.563	9.135	2004.585
135	Ba	178.890	-0.010044	ppb	33.141	267.448	203.335
165	Ho-IS	346722.293		ppb	1.637		350617.912
159	Tb-IS	> 416454.722		ppb	1.254		427340.256
207	Pb	1681.153	0.036663	ppb	22.358	40.077	771.120
203	Tl	556.678	0.047281	ppb	32.639	49.758	192.224
209	Bi-IS	202503.438		ppb	2.295		209804.917
51	V	25.556	0.007820	ppb	58.816	349.776	21.111
59	Co	102.223	0.012626	ppb	30.299	136.205	78.889
60	Ni	172.223	0.000823	ppb	21.582	3721.789	170.001
75	As	793.187	0.134436	ppb	6.576	81.018	721.358
71	Ga-ISK	> 100403.821		ppb	0.298		99678.852
82	Se-2	11.914	0.113570	ppb	80.246	180.930	6.573
107	Ag-1	514.454	0.007297	ppb	14.837	195.114	472.230
115	In-ISK	99159.621		ppb	0.868		99457.792
45	Sc-ISK	> 237742.075		ppb	1.096		242742.069
23	Na	6368.119	-59.462723	ppb	18.882	3.582	39213.269
39	K	84958.582	-0.460407	ppb	1.472	263.628	87260.158
24	Mg	2371.891	-11.486945	ppb	45.460	16.300	9076.663
159	Tb-ISK	214277.075		ppb	0.476		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-1-A @1000

Autosampler Position: 309

Sample Date/Time: Tuesday, December 10, 2019 19:02:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-1-A @1000.153

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42116.457		ppb	2.265		42868.696
9	Be	77.778	0.019335	ppb	77.183	184.447	46.667
10	B	128065.956	250.071424	ppb	1.052	0.313	4940.855
27	Al	5378.794	-0.116306	ppb	7.158	44.042	6567.065
43	Ca-2	401.673	-19.695469	ppb	28.856	21.318	985.041
49	Ti	188.890	-0.040181	ppb	3.674	29.132	227.780
52	Cr	14764.297	-0.077146	ppb	3.094	41.162	16179.161
55	Mn	1781.227	-0.048791	ppb	25.000	48.469	2806.958
57	Fe	16381.618	-3.413645	ppb	3.630	52.095	18409.633
45	Sc-IS	> 1837418.029		ppb	1.293		1900606.701
66	Zn	6491.475	1.924851	ppb	2.539	4.292	2656.914
86	Sr	229.589	-0.200233	ppb	23.763	9.150	871.891
65	Cu	437.244	0.023739	ppb	22.675	117.354	369.286
69	Ga-IS	531213.501		ppb	1.628		547737.660
95	Mo	826.691	0.122411	ppb	21.644	52.400	493.342
115	In-IS	> 328204.307		ppb	2.303		327805.977
111	Cd	139.376	-0.616442	ppb	55.120	5.141	1629.057
118	Sn	6224.692	-0.234793	ppb	5.243	18.181	8050.056
121	Sb	4173.946	0.265510	ppb	9.154	18.687	2004.585
135	Ba	203.335	-0.000215	ppb	53.974234	26.746	203.335
165	Ho-IS	353347.537		ppb	1.900		350617.912
159	Tb-IS	> 421913.689		ppb	1.260		427340.256
207	Pb	1727.824	0.037641	ppb	45.546	81.443	771.120
203	Tl	460.009	0.034130	ppb	48.335	82.330	192.224
209	Bi-IS	206983.175		ppb	0.668		209804.917
51	V	43.333	0.040417	ppb	30.769	61.164	21.111
59	Co	86.667	0.004103	ppb	29.038	346.849	78.889
60	Ni	124.445	-0.038360	ppb	12.078	31.584	170.001
75	As	762.886	0.074899	ppb	7.498	140.223	721.358
71	Ga-ISK	> 100260.608		ppb	0.705		99678.852
82	Se-2	5.560	-0.021899	ppb	108.914	596.254	6.573
107	Ag-1	444.451	-0.005813	ppb	14.355	197.708	472.230
115	In-ISK	100746.275		ppb	0.351		99457.792
45	Sc-ISK	> 242304.286		ppb	0.130		242742.069
23	Na	118281.051	144.083493	ppb	1.500	2.051	39213.269
39	K	86383.727	-0.649058	ppb	0.569	83.846	87260.158
24	Mg	2043.486	-12.121920	ppb	25.583	7.451	9076.663
159	Tb-ISK	214267.597		ppb	0.434		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-2-B @1000

Autosampler Position: 310

Sample Date/Time: Tuesday, December 10, 2019 19:05:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-2-B @1000.154

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		43091.561		ppb			0.493			42868.696
9	Be	|		63.333	0.009888	ppb	44.969	161.530				46.667
10	B	|		456441.998	897.969786	ppb	0.853	1.166				4940.855
27	Al	|		6779.386	0.035822	ppb	1.207	36.767				6567.065
43	Ca-2	|		516.676	-15.967333	ppb	8.992	8.221				985.041
49	Ti	|		181.112	-0.055046	ppb	9.079	30.563				227.780
52	Cr	|		14941.144	-0.087355	ppb	1.661	11.674				16179.161
55	Mn	|		2240.178	-0.027242	ppb	13.056	48.384				2806.958
57	Fe	|		16749.816	-3.334125	ppb	1.992	4.321				18409.633
45	Sc-IS	>		1874344.632		ppb	1.684					1900606.701
66	Zn	|		12440.970	4.724196	ppb	0.457	1.629				2656.914
86	Sr	|		266.793	-0.190063	ppb	19.859	8.095				871.891
65	Cu	|		352.883	-0.003497	ppb	20.072	545.270				369.286
69	Ga-IS	|		545334.721		ppb	1.246					547737.660
95	Mo	|		490.008	0.001245	ppb	6.046	889.918				493.342
115	In-IS	>		333962.138		ppb	0.759					327805.977
111	Cd	|		73.416	-0.644275	ppb	29.526	1.398				1629.057
118	Sn	|		4685.215	-0.442622	ppb	7.367	8.839				8050.056
121	Sb	|		3049.215	0.121053	ppb	7.182	20.448				2004.585
135	Ba	|		158.890	-0.021922	ppb	11.554	39.931				203.335
165	Ho-IS	|		360286.459		ppb	1.781					350617.912
159	Tb-IS	>		428286.431		ppb	1.728					427340.256
207	Pb	|		1076.683	0.011600	ppb	17.462	56.640				771.120
203	Tl	|		286.670	0.011650	ppb	26.744	78.742				192.224
209	Bi-IS	|		210469.097		ppb	0.553					209804.917
51	V	|		92.223	0.127404	ppb	72.680	95.589				21.111
59	Co	|		224.447	0.078777	ppb	50.959	80.470				78.889
60	Ni	|		161.112	-0.010438	ppb	15.529	185.217				170.001
75	As	|		718.907	-0.037413	ppb	2.195	110.846				721.358
71	Ga-ISK	>		101956.996		ppb	0.713					99678.852
82	Se-2	|		5.534	-0.025542	ppb	92.834	421.070				6.573
107	Ag-1	|		404.450	-0.014606	ppb	8.256	38.780				472.230
115	In-ISK	|		101463.231		ppb	1.950					99457.792
45	Sc-ISK	>		242872.112		ppb	1.986					242742.069
23	Na	|		262375.153	405.329022	ppb	2.511	2.076				39213.269
39	K	|		87466.953	0.167542	ppb	0.492	1071.478				87260.158
24	Mg	|		2501.890	-11.348377	ppb	16.895	5.666				9076.663
159	Tb-ISK	|		215661.234		ppb	1.547					211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-3-B @1000

Autosampler Position: 311

Sample Date/Time: Tuesday, December 10, 2019 19:07:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-3-B @1000.155

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		42678.106		ppb		1.249		42868.696
9	Be	|		63.333	0.010513	ppb	34.513	118.190		46.667
10	B	|		30892.260	52.733695	ppb	1.623	1.641		4940.855
27	Al	|		5059.786	-0.157284	ppb	5.063	18.257		6567.065
43	Ca-2	|		378.338	-20.602443	ppb	14.498	8.798		985.041
49	Ti	|		158.890	-0.079603	ppb	5.280	13.965		227.780
52	Cr	|		14816.575	-0.077492	ppb	3.541	50.213		16179.161
55	Mn	|		1491.191	-0.064340	ppb	17.592	20.892		2806.958
57	Fe	|		16328.223	-3.708164	ppb	3.503	29.644		18409.633
45	Sc-IS	>		1844454.022		ppb		1.411		1900606.701
66	Zn	|		14021.323	5.594636	ppb	1.643	3.723		2656.914
86	Sr	|		180.137	-0.216545	ppb	27.033	7.762		871.891
65	Cu	|		290.561	-0.020133	ppb	16.295	71.896		369.286
69	Ga-IS	|		537028.233		ppb		1.583		547737.660
95	Mo	|		432.229	-0.016000	ppb	12.539	131.569		493.342
115	In-IS	>		330275.422		ppb		1.542		327805.977
111	Cd	|		76.870	-0.642654	ppb	29.001	1.360		1629.057
118	Sn	|		3762.719	-0.552985	ppb	6.184	6.203		8050.056
121	Sb	|		2251.289	0.028274	ppb	4.298	51.018		2004.585
135	Ba	|		120.001	-0.039097	ppb	21.695	29.351		203.335
165	Ho-IS	|		354487.258		ppb		2.596		350617.912
159	Tb-IS	>		425852.989		ppb		1.686		427340.256
207	Pb	|		1023.348	0.009797	ppb	15.646	58.083		771.120
203	Tl	|		318.893	0.015831	ppb	34.006	82.135		192.224
209	Bi-IS	|		211308.424		ppb		2.071		209804.917
51	V	|		18.889	-0.004597	ppb	66.811	488.655		21.111
59	Co	|		67.778	-0.006812	ppb	49.262	262.756		78.889
60	Ni	|		154.445	-0.014105	ppb	11.075	96.251		170.001
75	As	|		751.799	0.046874	ppb	4.281	73.845		721.358
71	Ga-ISK	>		100635.547		ppb		2.128		99678.852
82	Se-2	|		1.883	-0.102679	ppb	296.847	115.807		6.573
107	Ag-1	|		351.116	-0.023794	ppb	25.779	67.126		472.230
115	In-ISK	|		103317.806		ppb		0.483		99457.792
45	Sc-ISK	>		240696.431		ppb		0.863		242742.069
23	Na	|		19074.408	-36.302771	ppb	4.243	4.282		39213.269
39	K	|		86359.133	-0.148994	ppb	0.511	203.315		87260.158
24	Mg	|		1770.111	-12.573068	ppb	14.201	3.521		9076.663
159	Tb-ISK	|		216800.972		ppb		1.582		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-5-A @1000

Autosampler Position: 312

Sample Date/Time: Tuesday, December 10, 2019 19:10:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-5-A @1000.156

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42812.956		ppb	1.546		42868.696
9	Be	57.778	0.007264	ppb	24.019	115.705	46.667
10	B	10661.757	11.779140	ppb	3.019	7.895	4940.855
27	Al	4549.614	-0.220181	ppb	5.044	15.469	6567.065
43	Ca-2	325.004	-22.515230	ppb	23.231	12.414	985.041
49	Ti	165.557	-0.071922	ppb	22.631	66.789	227.780
52	Cr	15166.937	-0.051871	ppb	1.188	17.888	16179.161
55	Mn	1395.624	-0.069558	ppb	8.633	9.833	2806.958
57	Fe	16416.095	-3.637907	ppb	1.814	30.864	18409.633
45	Sc-IS	> 1851722.164		ppb	1.806		1900606.701
66	Zn	8207.914	2.737692	ppb	3.261	6.892	2656.914
86	Sr	199.538	-0.210450	ppb	23.316	7.668	871.891
65	Cu	284.483	-0.022166	ppb	14.715	62.156	369.286
69	Ga-IS	544800.579		ppb	1.851		547737.660
95	Mo	374.449	-0.036691	ppb	8.961	35.677	493.342
115	In-IS	> 331230.971		ppb	1.228		327805.977
111	Cd	86.992	-0.638450	ppb	39.250	2.232	1629.057
118	Sn	3389.292	-0.601934	ppb	5.429	4.020	8050.056
121	Sb	1974.582	-0.006154	ppb	11.504	448.301	2004.585
135	Ba	130.001	-0.034600	ppb	11.177	19.603	203.335
165	Ho-IS	350086.314		ppb	1.751		350617.912
159	Tb-IS	> 422945.321		ppb	0.704		427340.256
207	Pb	1031.127	0.010467	ppb	31.337	121.940	771.120
203	Tl	274.447	0.010661	ppb	35.146	115.638	192.224
209	Bi-IS	206470.333		ppb	1.007		209804.917
51	V	26.667	0.009160	ppb	45.069	233.671	21.111
59	Co	101.111	0.011375	ppb	35.251	174.382	78.889
60	Ni	108.889	-0.052456	ppb	20.383	34.145	170.001
75	As	730.585	-0.010736	ppb	4.308	678.445	721.358
71	Ga-ISK	> 101723.118		ppb	0.791		99678.852
82	Se-2	10.573	0.082150	ppb	58.107	158.985	6.573
107	Ag-1	314.448	-0.031170	ppb	12.736	22.818	472.230
115	In-ISK	101762.643		ppb	0.711		99457.792
45	Sc-ISK	> 242135.009		ppb	1.299		242742.069
23	Na	7100.100	-58.323526	ppb	4.794	1.343	39213.269
39	K	84783.069	-2.036887	ppb	0.578	28.826	87260.158
24	Mg	1178.382	-13.615794	ppb	6.660	0.822	9076.663
159	Tb-ISK	214679.040		ppb	0.453		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-G-1-G

Autosampler Position: 313

Sample Date/Time: Tuesday, December 10, 2019 19:16:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14202-G-1-G.158

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		42076.323		ppb				1.107		42868.696
9	Be	|		47.778	0.001585	ppb			31.460	573.755		46.667
10	B	|		9652.150	9.855947	ppb			2.571	4.123		4940.855
27	Al	|		46094.264	4.768661	ppb			2.004	1.784		6567.065
43	Ca-2	|		24497.670	840.930049	ppb			3.464	2.166		985.041
49	Ti	|		306.670	0.110754	ppb			33.485	120.414		227.780
52	Cr	|		16891.092	0.107394	ppb			1.485	16.485		16179.161
55	Mn	|		11161.028	0.441429	ppb			3.242	3.090		2806.958
57	Fe	|		17480.695	-0.837317	ppb			3.077	139.937		18409.633
45	Sc-IS	>		1840497.247		ppb			1.371			1900606.701
66	Zn	|		72352.806	34.176961	ppb			1.948	0.987		2656.914
86	Sr	|		14283.465	4.381900	ppb			2.494	1.531		871.891
65	Cu	|		19097.390	5.589753	ppb			5.067	4.575		369.286
69	Ga-IS	|		530526.691		ppb			1.121			547737.660
95	Mo	|		586.679	0.038120	ppb			6.453	41.342		493.342
115	In-IS	>		321977.423		ppb			1.715			327805.977
111	Cd	|		192.103	-0.593180	ppb			1.697	0.405		1629.057
118	Sn	|		496.675	-0.967142	ppb			9.029	0.644		8050.056
121	Sb	|		1982.361	0.001912	ppb			9.802	1441.326		2004.585
135	Ba	|		2339.081	1.009339	ppb			3.380	1.873		203.335
165	Ho-IS	|		346035.880		ppb			2.562			350617.912
159	Tb-IS	>		416473.278		ppb			2.255			427340.256
207	Pb	|		2668.988	0.075646	ppb			7.072	8.660		771.120
203	Tl	|		166.668	-0.002619	ppb			36.715	301.131		192.224
209	Bi-IS	|		208419.521		ppb			1.334			209804.917
51	V	|		121.112	0.184249	ppb			26.732	33.061		21.111
59	Co	|		51.111	-0.015357	ppb			35.919	69.027		78.889
60	Ni	|		1387.845	1.010742	ppb			4.684	4.602		170.001
75	As	|		780.793	0.123244	ppb			5.476	62.294		721.358
71	Ga-ISK	>		99505.394		ppb			1.479			99678.852
82	Se-2	|		6.909	0.008427	ppb			63.354	1136.844		6.573
107	Ag-1	|		177.779	-0.055872	ppb			15.725	8.547		472.230
115	In-ISK	|		98929.663		ppb			0.470			99457.792
45	Sc-ISK	>		239291.949		ppb			0.461			242742.069
23	Na	|		478801.681	811.472293	ppb			0.527	0.921		39213.269
39	K	|		365453.359	255.598953	ppb			0.711	1.364		87260.158
24	Mg	|		55760.349	81.890384	ppb			3.145	3.799		9076.663
159	Tb-ISK	|		213344.687		ppb			0.994			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-G-2-C

Autosampler Position: 314

Sample Date/Time: Tuesday, December 10, 2019 19:18:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14202-G-2-C.159

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		42271.337		ppb		0.349		42868.696
9	Be	|		33.333	-0.007045	ppb	36.056	101.686		46.667
10	B	|		8481.406	7.398530	ppb	0.693	2.285		4940.855
27	Al	|		96782.408	10.791048	ppb	2.354	1.225		6567.065
43	Ca-2	|		33322.166	1150.119961	ppb	2.416	1.238		985.041
49	Ti	|		492.231	0.346323	ppb	32.859	60.214		227.780
52	Cr	|		18711.136	0.258717	ppb	1.326	10.927		16179.161
55	Mn	|		41899.141	2.037538	ppb	1.475	0.047		2806.958
57	Fe	|		20022.913	5.065118	ppb	1.291	25.682		18409.633
45	Sc-IS	>		1850043.371		ppb	1.465			1900606.701
66	Zn	|		148939.709	71.300985	ppb	3.605	2.361		2656.914
86	Sr	|		22431.775	7.001959	ppb	1.727	1.677		871.891
65	Cu	|		37634.017	11.062025	ppb	1.820	0.512		369.286
69	Ga-IS	|		530368.143		ppb	0.541			547737.660
95	Mo	|		524.454	0.015354	ppb	6.972	82.085		493.342
115	In-IS	>		328120.174		ppb	0.321			327805.977
111	Cd	|		358.903	-0.525789	ppb	10.694	2.936		1629.057
118	Sn	|		707.795	-0.941360	ppb	8.765	0.813		8050.056
121	Sb	|		3114.784	0.135673	ppb	0.696	1.145		2004.585
135	Ba	|		6706.020	3.011227	ppb	4.160	4.537		203.335
165	Ho-IS	|		353081.786		ppb	1.466			350617.912
159	Tb-IS	>		423345.591		ppb	1.652			427340.256
207	Pb	|		2930.117	0.084007	ppb	8.979	9.983		771.120
203	Tl	|		154.445	-0.004542	ppb	16.764	68.877		192.224
209	Bi-IS	|		206662.267		ppb	2.021			209804.917
51	V	|		252.224	0.416408	ppb	3.815	5.454		21.111
59	Co	|		93.334	0.007220	ppb	19.885	149.373		78.889
60	Ni	|		1381.178	0.982965	ppb	3.655	4.335		170.001
75	As	|		820.965	0.173168	ppb	6.971	73.557		721.358
71	Ga-ISK	>		101495.977		ppb	1.245			99678.852
82	Se-2	|		8.573	0.040758	ppb	102.230	455.046		6.573
107	Ag-1	|		181.112	-0.055911	ppb	23.666	13.651		472.230
115	In-ISK	|		101382.387		ppb	1.730			99457.792
45	Sc-ISK	>		241915.628		ppb	0.723			242742.069
23	Na	|		606194.620	1034.151595	ppb	1.568	0.943		39213.269
39	K	|		479595.534	355.237342	ppb	0.689	0.381		87260.158
24	Mg	|		112751.586	179.443748	ppb	1.293	1.138		9076.663
159	Tb-ISK	|		214711.003		ppb	1.293			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-G-3-C

Autosampler Position: 315

Sample Date/Time: Tuesday, December 10, 2019 19:21:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14202-G-3-C.160

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42894.313		ppb	1.728		42868.696
9	Be	14.444	-0.018259	ppb	48.038	21.974	46.667
10	B	8810.494	7.859756	ppb	1.323	2.639	4940.855
27	Al	16541.797	1.189556	ppb	2.303	4.033	6567.065
43	Ca-2	99851.094	3474.638316	ppb	0.874	0.601	985.041
49	Ti	198.890	-0.032061	ppb	7.920	59.448	227.780
52	Cr	21965.764	0.521040	ppb	0.952	5.303	16179.161
55	Mn	3558.221	0.040884	ppb	3.634	16.509	2806.958
57	Fe	19684.664	3.707786	ppb	0.255	9.211	18409.633
45	Sc-IS	> 1871144.594		ppb	0.525		1900606.701
66	Zn	11325.600	4.196730	ppb	2.406	3.761	2656.914
86	Sr	30589.237	9.536070	ppb	3.282	3.412	871.891
65	Cu	17098.998	4.911243	ppb	2.322	2.912	369.286
69	Ga-IS	545180.200		ppb	0.116		547737.660
95	Mo	5206.504	1.618930	ppb	0.872	0.519	493.342
115	In-IS	> 330882.790		ppb	0.896		327805.977
111	Cd	72.400	-0.644443	ppb	7.846	0.399	1629.057
118	Sn	478.897	-0.971193	ppb	6.689	0.363	8050.056
121	Sb	3231.477	0.146738	ppb	3.895	12.061	2004.585
135	Ba	2640.244	1.118197	ppb	3.609	4.066	203.335
165	Ho-IS	359081.118		ppb	1.785		350617.912
159	Tb-IS	> 427640.291		ppb	1.290		427340.256
207	Pb	714.452	-0.002198	ppb	1.347	9.857	771.120
203	Tl	116.667	-0.009413	ppb	13.093	22.187	192.224
209	Bi-IS	208399.203		ppb	1.239		209804.917
51	V	203.335	0.334916	ppb	7.512	8.942	21.111
59	Co	61.111	-0.009983	ppb	27.991	91.178	78.889
60	Ni	511.120	0.282954	ppb	10.763	17.489	170.001
75	As	1044.446	0.657917	ppb	6.291	23.930	721.358
71	Ga-ISK	> 99667.657		ppb	1.838		99678.852
82	Se-2	3.869	-0.057331	ppb	89.817	134.352	6.573
107	Ag-1	97.778	-0.071107	ppb	25.587	6.247	472.230
115	In-ISK	100931.138		ppb	2.588		99457.792
45	Sc-ISK	> 241380.139		ppb	1.203		242742.069
23	Na	1069986.362	1884.347785	ppb	1.293	1.036	39213.269
39	K	947184.227	780.196209	ppb	1.120	0.304	87260.158
24	Mg	145163.845	236.126340	ppb	0.847	2.197	9076.663
159	Tb-ISK	213874.116		ppb	1.881		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-G-4-C

Autosampler Position: 316

Sample Date/Time: Tuesday, December 10, 2019 19:24:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14202-G-4-C.161

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	44340.932		ppb	0.641		42868.696
9	Be	38.889	-0.003986	ppb	9.897	66.349	46.667
10	B	12821.308	15.931811	ppb	1.712	1.636	4940.855
27	Al	7577.567	0.134657	ppb	3.876	34.808	6567.065
43	Ca-2	249366.972	8756.303204	ppb	2.704	1.459	985.041
49	Ti	201.113	-0.028408	ppb	7.474	63.617	227.780
52	Cr	25442.643	0.827955	ppb	2.153	1.454	16179.161
55	Mn	293919.230	15.024178	ppb	2.102	0.746	2806.958
57	Fe	29746.493	27.851283	ppb	0.318	4.731	18409.633
45	Sc-IS	> 1865110.374		ppb	1.726		1900606.701
66	Zn	25520.569	11.072586	ppb	3.284	1.759	2656.914
86	Sr	175902.829	56.332929	ppb	1.121	1.319	871.891
65	Cu	4451.251	1.204167	ppb	1.567	3.502	369.286
69	Ga-IS	534075.693		ppb	0.244		547737.660
95	Mo	1420.071	0.322340	ppb	6.523	11.667	493.342
115	In-IS	> 325455.915		ppb	1.673		327805.977
111	Cd	84.796	-0.638902	ppb	28.524	1.500	1629.057
118	Sn	423.340	-0.977258	ppb	11.438	0.730	8050.056
121	Sb	1351.175	-0.078842	ppb	1.113	4.124	2004.585
135	Ba	19119.463	8.831299	ppb	3.470	2.885	203.335
165	Ho-IS	354871.520		ppb	0.686		350617.912
159	Tb-IS	> 427223.245		ppb	0.830		427340.256
207	Pb	662.228	-0.004171	ppb	8.184	53.949	771.120
203	Tl	108.889	-0.010352	ppb	44.817	59.733	192.224
209	Bi-IS	206023.430		ppb	2.667		209804.917
51	V	72.222	0.094539	ppb	23.230	32.347	21.111
59	Co	77.778	-0.000379	ppb	12.372	1471.326	78.889
60	Ni	447.785	0.231956	ppb	6.017	8.639	170.001
75	As	801.410	0.171444	ppb	9.238	91.433	721.358
71	Ga-ISK	> 99166.352		ppb	0.942		99678.852
82	Se-2	5.877	-0.014872	ppb	85.140	723.985	6.573
107	Ag-1	88.889	-0.072685	ppb	46.587	10.756	472.230
115	In-ISK	100650.297		ppb	0.961		99457.792
45	Sc-ISK	> 243034.442		ppb	0.995		242742.069
23	Na	4362962.755	7849.199951	ppb	1.063	1.767	39213.269
39	K	885468.726	718.828368	ppb	0.596	1.518	87260.158
24	Mg	544032.704	921.573897	ppb	2.928	3.862	9076.663
159	Tb-ISK	216251.159		ppb	0.508		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-G-5-C

Autosampler Position: 317

Sample Date/Time: Tuesday, December 10, 2019 19:27:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14202-G-5-C.162

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	43677.784		ppb	0.901		42868.696
9	Be	27.778	-0.010317	ppb	60.399	96.857	46.667
10	B	6354.747	3.058672	ppb	1.856	1.602	4940.855
27	Al	36191.408	3.538718	ppb	4.693	4.552	6567.065
43	Ca-2	22559.467	764.436006	ppb	1.230	1.984	985.041
49	Ti	288.892	0.084029	ppb	7.418	25.843	227.780
52	Cr	19793.707	0.345642	ppb	2.070	3.010	16179.161
55	Mn	14658.630	0.617313	ppb	1.844	2.674	2806.958
57	Fe	17560.787	-1.033938	ppb	0.087	61.288	18409.633
45	Sc-IS	> 1857858.150		ppb	1.476		1900606.701
66	Zn	45446.622	20.793666	ppb	0.882	1.306	2656.914
86	Sr	9132.626	2.675190	ppb	0.760	1.562	871.891
65	Cu	20386.534	5.918501	ppb	2.920	2.873	369.286
69	Ga-IS	539430.779		ppb	0.934		547737.660
95	Mo	250.002	-0.080244	ppb	6.928	6.481	493.342
115	In-IS	> 332605.635		ppb	0.455		327805.977
111	Cd	405.036	-0.508921	ppb	4.528	1.619	1629.057
118	Sn	454.452	-0.974570	ppb	2.964	0.198	8050.056
121	Sb	1384.512	-0.078393	ppb	9.441	20.883	2004.585
135	Ba	2074.595	0.853514	ppb	3.817	4.495	203.335
165	Ho-IS	356050.444		ppb	0.958		350617.912
159	Tb-IS	> 426288.300		ppb	1.029		427340.256
207	Pb	1322.246	0.021305	ppb	7.347	15.696	771.120
203	Tl	121.112	-0.008824	ppb	19.527	34.084	192.224
209	Bi-IS	208720.620		ppb	1.620		209804.917
51	V	151.112	0.236339	ppb	29.786	35.191	21.111
59	Co	41.111	-0.021427	ppb	38.317	39.377	78.889
60	Ni	585.568	0.339538	ppb	5.843	10.696	170.001
75	As	765.622	0.074227	ppb	2.073	82.768	721.358
71	Ga-ISK	> 100746.312		ppb	2.008		99678.852
82	Se-2	-0.125	-0.143908	ppb	3485.950	64.786	6.573
107	Ag-1	132.223	-0.064762	ppb	10.189	4.516	472.230
115	In-ISK	101420.147		ppb	1.337		99457.792
45	Sc-ISK	> 244853.316		ppb	2.033		242742.069
23	Na	449795.016	739.459014	ppb	0.926	3.180	39213.269
39	K	219651.349	117.712963	ppb	0.616	3.109	87260.158
24	Mg	58009.225	83.524646	ppb	1.581	0.724	9076.663
159	Tb-ISK	213353.391		ppb	0.335		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Tuesday, December 10, 2019 19:29:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCV-210770.163

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	43343.463		ppb		2.693		42868.696
9	Be	|	176663.605	102.353206	ppb	1.627	3.478		46.667
10	B	|	133302.490	255.712716	ppb	1.646	2.929		4940.855
27	Al	|	891802.182	104.457961	ppb	0.791	1.599		6567.065
43	Ca-2	|	148762.213	5191.077993	ppb	0.178	1.908		985.041
49	Ti	|	80375.508	101.152595	ppb	1.517	0.702		227.780
52	Cr	|	1131005.393	96.157791	ppb	1.327	0.779		16179.161
55	Mn	|	1883625.607	96.684300	ppb	1.403	0.753		2806.958
57	Fe	|	2237570.698	5269.661606	ppb	0.426	1.752		18409.633
45	Sc-IS	>	1872444.241		ppb	2.025			1900606.701
66	Zn	|	216669.671	103.072902	ppb	0.667	1.370		2656.914
86	Sr	|	323346.107	103.386518	ppb	0.699	1.798		871.891
65	Cu	|	352922.378	103.403031	ppb	0.869	1.758		369.286
69	Ga-IS	|	559718.005		ppb	0.762			547737.660
95	Mo	|	295428.007	101.094285	ppb	0.729	1.295		493.342
115	In-IS	>	324717.976		ppb	0.996			327805.977
111	Cd	|	245548.310	101.902511	ppb	1.490	0.635		1629.057
118	Sn	|	774113.683	99.152001	ppb	0.842	0.200		8050.056
121	Sb	|	815000.386	100.577437	ppb	0.637	1.014		2004.585
135	Ba	|	214101.373	100.093559	ppb	0.602	1.381		203.335
165	Ho-IS	|	354988.120		ppb	1.401			350617.912
159	Tb-IS	>	423958.228		ppb	1.001			427340.256
207	Pb	|	2534316.409	98.230719	ppb	0.875	1.872		771.120
203	Tl	|	838158.310	105.322531	ppb	1.246	2.131		192.224
209	Bi-IS	|	201942.872		ppb	0.135			209804.917
51	V	|	54704.547	99.321953	ppb	0.996	1.421		21.111
59	Co	|	180592.263	99.672730	ppb	1.552	2.251		78.889
60	Ni	|	123580.101	101.083083	ppb	1.718	1.513		170.001
75	As	|	50258.929	99.469623	ppb	2.080	1.357		721.358
71	Ga-ISK	>	100812.249		ppb	0.748			99678.852
82	Se-2	|	4805.328	102.185216	ppb	1.943	2.643		6.573
107	Ag-1	|	548969.436	102.930886	ppb	0.796	1.039		472.230
115	In-ISK	|	102315.403		ppb	1.013			99457.792
45	Sc-ISK	>	246512.734		ppb	2.244			242742.069
23	Na	|	2996054.091	5291.488720	ppb	0.992	1.311		39213.269
39	K	|	6056676.652	5300.757328	ppb	0.400	2.343		87260.158
24	Mg	|	3185728.376	5395.644432	ppb	0.133	2.196		9076.663
159	Tb-ISK	|	218136.192		ppb	0.734			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Tuesday, December 10, 2019 19:35:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCB-23446.165

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	43139.496		ppb	1.801		42868.696
9	Be	52.222	0.003810	ppb	7.370	54.285	46.667
10	B	5153.152	0.635639	ppb	0.879	11.209	4940.855
27	Al	7135.115	0.084026	ppb	0.769	7.848	6567.065
43	Ca-2	238.335	-25.661809	ppb	16.295	5.053	985.041
49	Ti	194.446	-0.036606	ppb	28.290	185.762	227.780
52	Cr	14629.711	-0.104612	ppb	1.870	24.132	16179.161
55	Mn	1538.972	-0.062520	ppb	10.506	13.217	2806.958
57	Fe	16226.990	-4.277485	ppb	1.413	18.251	18409.633
45	Sc-IS	> 1860265.180		ppb	0.981		1900606.701
66	Zn	2466.880	-0.064676	ppb	0.811	24.926	2656.914
86	Sr	139.549	-0.230191	ppb	35.737	7.214	871.891
65	Cu	446.084	0.024946	ppb	6.118	28.167	369.286
69	Ga-IS	540554.822		ppb	1.287		547737.660
95	Mo	1097.820	0.212320	ppb	8.803	17.118	493.342
115	In-IS	> 333884.050		ppb	1.368		327805.977
111	Cd	1143.296	-0.209913	ppb	8.003	14.743	1629.057
118	Sn	7192.925	-0.126173	ppb	5.547	48.146	8050.056
121	Sb	1217.830	-0.099014	ppb	9.121	15.171	2004.585
135	Ba	94.445	-0.051273	ppb	14.264	11.707	203.335
165	Ho-IS	356881.947		ppb	2.210		350617.912
159	Tb-IS	> 431160.565		ppb	3.161		427340.256
207	Pb	863.343	0.003248	ppb	3.919	11.368	771.120
203	Tl	230.002	0.004445	ppb	5.225	15.249	192.224
209	Bi-IS	211533.724		ppb	1.458		209804.917
51	V	23.333	0.004500	ppb	37.796	382.631	21.111
59	Co	55.556	-0.012965	ppb	30.199	69.551	78.889
60	Ni	153.334	-0.013729	ppb	34.166	304.426	170.001
75	As	740.989	0.045761	ppb	0.864	118.704	721.358
71	Ga-ISK	> 99360.097		ppb	2.988		99678.852
82	Se-2	7.890	0.028009	ppb	38.369	222.271	6.573
107	Ag-1	495.565	0.004639	ppb	30.024	591.796	472.230
115	In-ISK	102341.607		ppb	0.795		99457.792
45	Sc-ISK	> 241140.049		ppb	3.773		242742.069
23	Na	5582.896	-61.118107	ppb	43.633	6.760	39213.269
39	K	85553.334	-0.977753	ppb	2.904	284.410	87260.158
24	Mg	1661.816	-12.809308	ppb	90.138	19.404	9076.663
159	Tb-ISK	216666.016		ppb	0.163		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-G-6-C

Autosampler Position: 318

Sample Date/Time: Tuesday, December 10, 2019 19:38:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14202-G-6-C.166

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42653.583		ppb	0.525		42868.696
9	Be	61.111	0.009233	ppb	38.698	154.067	46.667
10	B	8141.208	6.682405	ppb	0.367	2.203	4940.855
27	Al	67130.790	7.236267	ppb	3.051	2.710	6567.065
43	Ca-2	40186.463	1391.388239	ppb	2.268	1.033	985.041
49	Ti	346.671	0.158191	ppb	19.869	52.277	227.780
52	Cr	19172.863	0.295544	ppb	2.636	8.619	16179.161
55	Mn	9329.714	0.342319	ppb	2.739	3.659	2806.958
57	Fe	19107.215	2.769898	ppb	0.955	17.707	18409.633
45	Sc-IS	> 1853494.836		ppb	1.259		1900606.701
66	Zn	61089.284	28.448224	ppb	2.573	1.364	2656.914
86	Sr	24855.305	7.771299	ppb	3.619	2.594	871.891
65	Cu	22998.494	6.705122	ppb	3.133	1.984	369.286
69	Ga-IS	537921.051		ppb	1.653		547737.660
95	Mo	435.562	-0.015756	ppb	12.443	120.326	493.342
115	In-IS	> 328075.808		ppb	1.993		327805.977
111	Cd	99.086	-0.633168	ppb	26.815	1.740	1629.057
118	Sn	535.566	-0.963469	ppb	14.760	0.946	8050.056
121	Sb	5064.240	0.373610	ppb	12.662	17.776	2004.585
135	Ba	4109.481	1.808249	ppb	4.896	3.164	203.335
165	Ho-IS	351680.571		ppb	1.988		350617.912
159	Tb-IS	> 427079.766		ppb	2.813		427340.256
207	Pb	1046.683	0.010627	ppb	5.661	20.254	771.120
203	Tl	232.224	0.005013	ppb	7.906	46.746	192.224
209	Bi-IS	211111.901		ppb	1.090		209804.917
51	V	132.223	0.204875	ppb	8.854	11.004	21.111
59	Co	63.333	-0.008552	ppb	22.942	97.074	78.889
60	Ni	694.462	0.436419	ppb	12.990	17.782	170.001
75	As	857.959	0.282303	ppb	8.599	51.279	721.358
71	Ga-ISK	> 99387.872		ppb	0.622		99678.852
82	Se-2	8.562	0.044152	ppb	107.941	452.998	6.573
107	Ag-1	224.446	-0.046923	ppb	13.719	11.928	472.230
115	In-ISK	100508.519		ppb	0.696		99457.792
45	Sc-ISK	> 238457.028		ppb	0.209		242742.069
23	Na	602424.841	1043.256972	ppb	0.322	0.415	39213.269
39	K	415684.887	302.865329	ppb	1.131	1.335	87260.158
24	Mg	105031.390	168.720100	ppb	1.113	1.069	9076.663
159	Tb-ISK	211958.929		ppb	0.870		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-G-7-C

Autosampler Position: 319

Sample Date/Time: Tuesday, December 10, 2019 19:40:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14202-G-7-C.167

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		42644.671		ppb			1.090			42868.696
9	Be	|		44.445	-0.000096	ppb			47.631134	13413.420		46.667
10	B	|		6035.721	2.619032	ppb			4.536	9.520		4940.855
27	Al	|		98881.172	11.191953	ppb			2.490	1.641		6567.065
43	Ca-2	|		19756.996	676.894075	ppb			3.308	1.857		985.041
49	Ti	|		257.780	0.050207	ppb			4.157	22.431		227.780
52	Cr	|		18979.266	0.303402	ppb			0.716	12.984		16179.161
55	Mn	|		108803.894	5.591709	ppb			0.729	2.710		2806.958
57	Fe	|		19851.562	5.260199	ppb			0.714	22.759		18409.633
45	Sc-IS	>		1827196.423		ppb			2.923			1900606.701
66	Zn	>		108234.181	52.147915	ppb			2.435	1.587		2656.914
86	Sr	|		13619.476	4.200237	ppb			0.698	2.700		871.891
65	Cu	|		95013.816	28.450223	ppb			2.098	1.457		369.286
69	Ga-IS	|		536758.426		ppb			0.919			547737.660
95	Mo	|		481.119	0.002117	ppb			12.107	762.055		493.342
115	In-IS	>		328326.055		ppb			0.912			327805.977
111	Cd	|		1550.185	-0.033861	ppb			6.361	103.593		1629.057
118	Sn	|		550.011	-0.961581	ppb			3.687	0.320		8050.056
121	Sb	|		1753.441	-0.031093	ppb			1.435	14.419		2004.585
135	Ba	|		6443.675	2.887707	ppb			1.378	1.295		203.335
165	Ho-IS	|		355719.922		ppb			2.015			350617.912
159	Tb-IS	>		427161.781		ppb			1.228			427340.256
207	Pb	|		8107.571	0.282211	ppb			4.435	3.532		771.120
203	Tl	|		188.890	-0.000386	ppb			17.677	1120.684		192.224
209	Bi-IS	|		209717.676		ppb			2.548			209804.917
51	V	|		540.010	0.941146	ppb			4.321	6.757		21.111
59	Co	|		226.668	0.081086	ppb			9.643	18.382		78.889
60	Ni	|		1637.872	1.199001	ppb			1.555	3.970		170.001
75	As	|		781.474	0.100277	ppb			7.543	86.638		721.358
71	Ga-ISK	>		100994.749		ppb			2.251			99678.852
82	Se-2	|		7.205	0.010403	ppb			56.148	801.833		6.573
107	Ag-1	|		194.446	-0.053335	ppb			27.123	17.195		472.230
115	In-ISK	|		101659.274		ppb			1.742			99457.792
45	Sc-ISK	>		239386.203		ppb			1.958			242742.069
23	Na	|		361722.398	595.567302	ppb			0.696	2.908		39213.269
39	K	|		303503.469	198.892333	ppb			0.312	2.930		87260.158
24	Mg	|		67028.566	101.577956	ppb			1.335	2.314		9076.663
159	Tb-ISK	|		214934.859		ppb			0.588			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-G-7-D MS

Autosampler Position: 320

Sample Date/Time: Tuesday, December 10, 2019 19:43:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14202-G-7-D MS.168

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	86871.112		ppb	0.510			42868.696
9	Be	|	145959.641	86.391450	ppb	0.321	1.119		46.667
10	B	|	53055.007	98.249388	ppb	0.718	1.839		4940.855
27	Al	|	911795.688	109.165940	ppb	1.550	1.068		6567.065
43	Ca-2	|	157501.829	5619.095733	ppb	0.535	1.429		985.041
49	Ti	|	52340.189	67.215970	ppb	2.435	1.414		227.780
52	Cr	|	897663.752	77.734176	ppb	1.098	0.203		16179.161
55	Mn	|	1580353.291	82.876736	ppb	1.748	1.189		2806.958
57	Fe	|	1728439.510	4150.509608	ppb	0.526	0.737		18409.633
45	Sc-IS	>	1832069.568		ppb	1.140			1900606.701
66	Zn	|	331041.239	161.624551	ppb	1.673	0.763		2656.914
86	Sr	|	267279.252	87.282507	ppb	1.407	1.181		871.891
65	Cu	|	388726.141	116.394475	ppb	0.900	0.509		369.286
69	Ga-IS	|	555181.124		ppb	2.848			547737.660
95	Mo	|	197874.795	69.134950	ppb	2.320	1.441		493.342
115	In-IS	>	319986.783		ppb	2.920			327805.977
111	Cd	|	209166.451	88.026324	ppb	1.626	1.893		1629.057
118	Sn	|	76103.556	8.961925	ppb	4.503	3.383		8050.056
121	Sb	|	581295.003	72.753676	ppb	1.072	2.088		2004.585
135	Ba	|	209647.246	99.498152	ppb	1.150	2.643		203.335
165	Ho-IS	|	348631.189		ppb	1.558			350617.912
159	Tb-IS	>	419696.000		ppb	0.684			427340.256
207	Pb	|	2011357.958	78.736279	ppb	1.084	0.712		771.120
203	Tl	|	674719.518	85.632662	ppb	0.394	0.758		192.224
209	Bi-IS	|	486871.776		ppb	4.555			209804.917
51	V	|	41922.558	76.428163	ppb	2.452	3.337		21.111
59	Co	|	148792.154	82.459924	ppb	1.925	3.115		78.889
60	Ni	|	99291.702	81.517463	ppb	1.615	0.573		170.001
75	As	|	42777.980	84.818254	ppb	1.316	2.548		721.358
71	Ga-ISK	>	100403.854		ppb	1.212			99678.852
82	Se-2	|	4263.526	91.013787	ppb	0.315	1.111		6.573
107	Ag-1	|	257496.797	48.430749	ppb	1.145	1.352		472.230
115	In-ISK	|	99287.647		ppb	0.668			99457.792
45	Sc-ISK	>	242770.568		ppb	2.268			242742.069
23	Na	|	1021971.246	1786.080112	ppb	1.570	1.130		39213.269
39	K	|	1461806.084	1239.649711	ppb	0.165	2.212		87260.158
24	Mg	|	3011494.317	5177.489103	ppb	1.452	0.867		9076.663
159	Tb-ISK	|	212643.669		ppb	0.922			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-G-7-E MSD

Autosampler Position: 321

Sample Date/Time: Tuesday, December 10, 2019 19:46:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14202-G-7-E MSD.169

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	88875.609		ppb		0.571		42868.696
9	Be	|	151804.541	89.211185	ppb		0.609	2.043	46.667
10	B	|	53706.340	98.799613	ppb		1.758	3.312	4940.855
27	Al	|	922927.472	109.715131	ppb		0.694	1.425	6567.065
43	Ca-2	|	161298.829	5713.752458	ppb		0.173	1.617	985.041
49	Ti	|	54900.890	70.005377	ppb		2.485	1.215	227.780
52	Cr	|	935238.355	80.451095	ppb		1.267	0.792	16179.161
55	Mn	|	1628781.841	84.808245	ppb		0.963	1.036	2806.958
57	Fe	|	1903488.037	4542.183717	ppb		1.141	1.888	18409.633
45	Sc-IS	>	1845445.568		ppb		1.493		1900606.701
66	Zn	|	357162.070	173.220458	ppb		0.846	0.736	2656.914
86	Sr	|	275173.458	89.220830	ppb		0.935	1.127	871.891
65	Cu	|	382536.260	113.713953	ppb		0.826	0.816	369.286
69	Ga-IS	|	558082.461		ppb		0.712		547737.660
95	Mo	|	227345.964	78.889563	ppb		0.998	0.775	493.342
115	In-IS	>	322455.430		ppb		1.206		327805.977
111	Cd	|	215083.543	89.809105	ppb		1.201	0.174	1629.057
118	Sn	|	88734.787	10.531827	ppb		1.742	0.641	8050.056
121	Sb	|	613548.503	76.185187	ppb		1.174	0.460	2004.585
135	Ba	|	209684.502	98.710077	ppb		1.344	1.151	203.335
165	Ho-IS	|	351438.706		ppb		1.510		350617.912
159	Tb-IS	>	418238.541		ppb		0.513		427340.256
207	Pb	|	2054835.648	80.721289	ppb		1.400	1.497	771.120
203	Tl	|	667674.722	85.031116	ppb		2.012	1.938	192.224
209	Bi-IS	|	534437.929		ppb		4.024		209804.917
51	V	|	43289.946	81.050035	ppb		1.526	2.440	21.111
59	Co	|	151034.217	85.949960	ppb		0.588	1.229	78.889
60	Ni	|	101061.776	85.235686	ppb		0.592	2.157	170.001
75	As	|	42307.787	86.157322	ppb		1.187	0.667	721.358
71	Ga-ISK	>	97767.908		ppb		1.580		99678.852
82	Se-2	|	4282.872	93.891350	ppb		1.614	1.083	6.573
107	Ag-1	|	251228.917	48.524957	ppb		1.250	0.626	472.230
115	In-ISK	|	99269.853		ppb		2.494		99457.792
45	Sc-ISK	>	242035.425		ppb		0.801		242742.069
23	Na	|	962841.789	1683.780533	ppb		0.589	1.004	39213.269
39	K	|	1398600.514	1186.116229	ppb		0.279	0.556	87260.158
24	Mg	|	3101936.225	5349.162259	ppb		0.561	0.659	9076.663
159	Tb-ISK	|	215650.445		ppb		1.662		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14206-E-1-D

Autosampler Position: 322

Sample Date/Time: Tuesday, December 10, 2019 19:49:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14206-E-1-D.170

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42359.389		ppb	1.848		42868.696
9	Be	160.001	0.068290	ppb	20.519	27.559	46.667
10	B	7279.633	5.169067	ppb	2.846	10.455	4940.855
27	Al	46836.660	4.901691	ppb	1.176	2.074	6567.065
43	Ca-2	16464.482	558.676020	ppb	0.547	0.528	985.041
49	Ti	432.229	0.276099	ppb	2.479	6.295	227.780
52	Cr	16901.109	0.119741	ppb	3.030	38.345	16179.161
55	Mn	53415.238	2.672644	ppb	1.057	0.596	2806.958
57	Fe	28019.676	25.140655	ppb	1.025	3.510	18409.633
45	Sc-IS	> 1826362.311		ppb	0.788		1900606.701
66	Zn	22180.543	9.688638	ppb	1.861	2.489	2656.914
86	Sr	8196.381	2.418483	ppb	2.448	3.555	871.891
65	Cu	3255.482	0.872044	ppb	1.754	2.082	369.286
69	Ga-IS	530262.501		ppb	0.964		547737.660
95	Mo	9298.583	3.100436	ppb	2.951	2.933	493.342
115	In-IS	> 325546.475		ppb	2.085		327805.977
111	Cd	194.919	-0.592873	ppb	2.583	0.590	1629.057
118	Sn	2095.709	-0.761440	ppb	2.852	0.923	8050.056
121	Sb	39825.448	4.670951	ppb	1.905	4.085	2004.585
135	Ba	2901.406	1.259363	ppb	4.983	3.151	203.335
165	Ho-IS	352500.010		ppb	2.552		350617.912
159	Tb-IS	> 425442.584		ppb	2.588		427340.256
207	Pb	14176.076	0.518230	ppb	2.975	4.101	771.120
203	Tl	1511.191	0.165261	ppb	7.404	7.695	192.224
209	Bi-IS	237688.874		ppb	0.627		209804.917
51	V	568.900	0.999480	ppb	5.284	4.080	21.111
59	Co	145.556	0.036709	ppb	7.362	14.803	78.889
60	Ni	544.455	0.307237	ppb	6.547	7.490	170.001
75	As	779.873	0.109775	ppb	4.164	74.149	721.358
71	Ga-ISK	> 100290.853		ppb	1.400		99678.852
82	Se-2	36.216	0.633903	ppb	11.272	14.373	6.573
107	Ag-1	1177.827	0.132751	ppb	8.665	16.646	472.230
115	In-ISK	100484.945		ppb	1.320		99457.792
45	Sc-ISK	> 237875.248		ppb	0.455		242742.069
23	Na	317956.320	518.405625	ppb	1.001	0.875	39213.269
39	K	540880.466	419.005382	ppb	0.663	1.106	87260.158
24	Mg	112180.424	181.756223	ppb	0.908	1.164	9076.663
159	Tb-ISK	211662.505		ppb	0.042		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14206-E-2-D

Autosampler Position: 323

Sample Date/Time: Tuesday, December 10, 2019 19:51:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14206-E-2-D.171

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	43528.442		ppb	1.083		42868.696
9	Be	50.000	0.003339	ppb	6.667	67.807	46.667
10	B	5772.277	2.195732	ppb	2.035	12.691	4940.855
27	Al	96417.732	11.002084	ppb	2.363	2.965	6567.065
43	Ca-2	7955.549	254.911250	ppb	3.273	4.252	985.041
49	Ti	437.785	0.287365	ppb	28.300	54.728	227.780
52	Cr	15977.821	0.050557	ppb	1.960	41.638	16179.161
55	Mn	119138.067	6.191834	ppb	0.578	0.376	2806.958
57	Fe	21344.823	9.356583	ppb	0.393	4.886	18409.633
45	Sc-IS	> 1810308.820		ppb	0.908		1900606.701
66	Zn	14189.266	5.805714	ppb	0.761	0.630	2656.914
86	Sr	3613.965	0.922682	ppb	2.320	1.847	871.891
65	Cu	3024.451	0.810564	ppb	5.201	5.590	369.286
69	Ga-IS	528024.136		ppb	1.692		547737.660
95	Mo	4245.077	1.338058	ppb	6.251	6.803	493.342
115	In-IS	> 330495.864		ppb	1.226		327805.977
111	Cd	87.752	-0.638117	ppb	10.642	0.608	1629.057
118	Sn	1164.492	-0.883918	ppb	4.191	0.705	8050.056
121	Sb	15245.920	1.608116	ppb	4.596	6.530	2004.585
135	Ba	1774.555	0.721623	ppb	1.035	1.504	203.335
165	Ho-IS	354300.346		ppb	2.501		350617.912
159	Tb-IS	> 424272.936		ppb	1.949		427340.256
207	Pb	2964.566	0.085181	ppb	2.306	0.880	771.120
203	Tl	325.559	0.016959	ppb	7.264	21.337	192.224
209	Bi-IS	232848.264		ppb	1.817		209804.917
51	V	313.337	0.530569	ppb	5.923	7.808	21.111
59	Co	183.335	0.057296	ppb	22.044	40.277	78.889
60	Ni	512.231	0.278524	ppb	5.905	7.269	170.001
75	As	804.131	0.150442	ppb	8.481	101.717	721.358
71	Ga-ISK	> 100832.422		ppb	1.372		99678.852
82	Se-2	5.885	-0.016086	ppb	61.397	482.884	6.573
107	Ag-1	668.905	0.036063	ppb	15.127	57.254	472.230
115	In-ISK	101268.804		ppb	0.581		99457.792
45	Sc-ISK	> 239723.173		ppb	2.441		242742.069
23	Na	117709.662	145.419393	ppb	1.121	3.138	39213.269
39	K	347711.911	238.896514	ppb	0.448	2.741	87260.158
24	Mg	39683.402	53.676161	ppb	2.754	5.311	9076.663
159	Tb-ISK	213952.322		ppb	0.899		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Tuesday, December 10, 2019 20:05:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCV-210770.176

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	42520.970		ppb		1.058		42868.696
9	Be	|	173952.706	102.516989	ppb		0.674	1.430	46.667
10	B	|	130895.857	255.455949	ppb		0.750	1.963	4940.855
27	Al	|	865892.316	103.195961	ppb		0.196	2.158	6567.065
43	Ca-2	|	146571.488	5203.338138	ppb		1.273	0.850	985.041
49	Ti	|	79517.493	101.802061	ppb		3.026	0.928	227.780
52	Cr	|	1117478.382	96.659498	ppb		2.555	0.604	16179.161
55	Mn	|	1871142.865	97.728615	ppb		1.237	1.263	2806.958
57	Fe	|	2238689.488	5365.260117	ppb		0.594	1.847	18409.633
45	Sc-IS	>	1840298.659		ppb		2.114		1900606.701
66	Zn	|	215065.760	104.107497	ppb		0.976	1.203	2656.914
86	Sr	|	320566.837	104.274191	ppb		1.731	0.819	871.891
65	Cu	|	346081.219	103.170517	ppb		0.987	1.805	369.286
69	Ga-IS	|	559892.353		ppb		0.697		547737.660
95	Mo	|	294478.914	102.528400	ppb		1.255	1.142	493.342
115	In-IS	>	323740.104		ppb		1.176		327805.977
111	Cd	|	245790.773	102.324923	ppb		0.334	1.049	1629.057
118	Sn	|	778560.906	100.028729	ppb		1.694	0.935	8050.056
121	Sb	|	818698.278	101.342861	ppb		0.957	1.329	2004.585
135	Ba	|	214868.302	100.757239	ppb		0.490	1.316	203.335
165	Ho-IS	|	351445.771		ppb		2.665		350617.912
159	Tb-IS	>	422412.117		ppb		0.716		427340.256
207	Pb	|	2556838.202	99.453449	ppb		1.438	1.119	771.120
203	Tl	|	827867.858	104.390496	ppb		2.303	1.768	192.224
209	Bi-IS	|	210532.317		ppb		1.028		209804.917
51	V	|	54874.079	100.931123	ppb		0.427	0.928	21.111
59	Co	|	182475.849	102.020215	ppb		0.860	0.810	78.889
60	Ni	|	122492.961	101.507421	ppb		1.137	1.313	170.001
75	As	|	50144.225	100.563960	ppb		1.688	1.712	721.358
71	Ga-ISK	>	99510.944		ppb		0.524		99678.852
82	Se-2	|	4875.028	105.014059	ppb		1.591	1.505	6.573
107	Ag-1	|	554050.839	105.241306	ppb		0.342	0.212	472.230
115	In-ISK	|	101905.781		ppb		0.812		99457.792
45	Sc-ISK	>	244421.108		ppb		0.888		242742.069
23	Na	|	2964603.833	5279.552075	ppb		1.466	1.095	39213.269
39	K	|	6044827.400	5334.673722	ppb		0.567	1.211	87260.158
24	Mg	|	3169696.083	5412.912215	ppb		1.023	1.174	9076.663
159	Tb-ISK	|	217079.601		ppb		0.656		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Tuesday, December 10, 2019 20:11:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCB-23446.178

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		42060.783		ppb				4.025		42868.696
9	Be	|		13.333	-0.018751	ppb	90.139	36.732				46.667
10	B	|		4907.510	0.399907	ppb	2.001	54.888				4940.855
27	Al	|		6265.820	0.000370	ppb	4.26610	465.260				6567.065
43	Ca-2	|		115.000	-29.908372	ppb	8.696	1.097				985.041
49	Ti	|		190.001	-0.034623	ppb	15.294	134.843				227.780
52	Cr	|		14487.343	-0.084199	ppb	1.578	28.681				16179.161
55	Mn	|		1071.151	-0.085239	ppb	3.414	3.778				2806.958
57	Fe	|		16891.093	-1.629060	ppb	1.761	89.811				18409.633
45	Sc-IS	>		1813698.015		ppb	3.415					1900606.701
66	Zn	|		2384.643	-0.073594	ppb	1.546	80.476				2656.914
86	Sr	|		42.345	-0.261257	ppb	15.896	1.008				871.891
65	Cu	|		254.858	-0.029274	ppb	17.086	50.517				369.286
69	Ga-IS	|		529023.241		ppb	3.651					547737.660
95	Mo	|		1164.492	0.245518	ppb	5.043	7.486				493.342
115	In-IS	>		330750.123		ppb	3.157					327805.977
111	Cd	|		1195.383	-0.183394	ppb	3.541	15.135				1629.057
118	Sn	|		5963.470	-0.273531	ppb	6.048	20.622				8050.056
121	Sb	|		1852.342	-0.020478	ppb	1.924	49.663				2004.585
135	Ba	|		77.778	-0.058603	ppb	16.225	8.379				203.335
165	Ho-IS	|		348076.715		ppb	3.788					350617.912
159	Tb-IS	>		422874.354		ppb	3.402					427340.256
207	Pb	|		521.115	-0.009397	ppb	9.602	20.771				771.120
203	Tl	|		122.223	-0.008559	ppb	1.575	4.368				192.224
209	Bi-IS	|		213100.665		ppb	4.286					209804.917
51	V	|		12.222	-0.016557	ppb	41.660	56.517				21.111
59	Co	|		20.000	-0.033005	ppb	16.667	5.770				78.889
60	Ni	|		95.556	-0.062589	ppb	4.028	4.678				170.001
75	As	|		777.377	0.095204	ppb	6.255	92.699				721.358
71	Ga-ISK	>		100842.457		ppb	0.632					99678.852
82	Se-2	|		4.547	-0.043871	ppb	253.802	562.007				6.573
107	Ag-1	|		344.449	-0.024973	ppb	11.464	31.414				472.230
115	In-ISK	|		101381.380		ppb	1.033					99457.792
45	Sc-ISK	>		242692.229		ppb	1.573					242742.069
23	Na	|		2668.583	-66.413108	ppb	2.929	0.321				39213.269
39	K	|		82438.296	-4.317272	ppb	0.666	34.955				87260.158
24	Mg	|		283.336	-15.163377	ppb	3.674	0.098				9076.663
159	Tb-ISK	|		215942.526		ppb	0.321					211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-D @500

Autosampler Position: 324

Sample Date/Time: Tuesday, December 10, 2019 20:13:54

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-D @500.179

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	43074.849		ppb	1.252		42868.696
9	Be	16.667	-0.016780	ppb	34.641	20.587	46.667
10	B	15362.701	21.471769	ppb	0.779	2.414	4940.855
27	Al	7466.395	0.134363	ppb	1.574	14.490	6567.065
43	Ca-2	305.003	-23.156088	ppb	8.675	4.649	985.041
49	Ti	141.112	-0.101872	ppb	11.890	19.390	227.780
52	Cr	14986.748	-0.057347	ppb	2.010	72.271	16179.161
55	Mn	1203.384	-0.079123	ppb	3.122	1.586	2806.958
57	Fe	16383.835	-3.416546	ppb	1.465	30.113	18409.633
45	Sc-IS	> 1837623.081		ppb	1.147		1900606.701
66	Zn	5676.683	1.524453	ppb	1.998	2.029	2656.914
86	Sr	101.834	-0.242056	ppb	5.829	0.801	871.891
65	Cu	235.207	-0.036336	ppb	16.123	32.836	369.286
69	Ga-IS	543569.084		ppb	1.712		547737.660
95	Mo	625.569	0.051968	ppb	10.087	44.346	493.342
115	In-IS	> 336698.095		ppb	2.775		327805.977
111	Cd	29.797	-0.662182	ppb	45.651	0.795	1629.057
118	Sn	4043.906	-0.526579	ppb	4.514	7.092	8050.056
121	Sb	1496.745	-0.066844	ppb	4.052	18.542	2004.585
135	Ba	100.000	-0.049192	ppb	13.333	10.218	203.335
165	Ho-IS	361649.444		ppb	2.041		350617.912
159	Tb-IS	> 433009.668		ppb	1.371		427340.256
207	Pb	461.114	-0.012167	ppb	9.039	11.114	771.120
203	Tl	83.334	-0.013687	ppb	34.871	26.786	192.224
209	Bi-IS	216692.369		ppb	1.309		209804.917
51	V	14.444	-0.012525	ppb	35.251	71.395	21.111
59	Co	21.111	-0.032301	ppb	65.737	24.244	78.889
60	Ni	93.334	-0.064087	ppb	14.286	17.747	170.001
75	As	764.057	0.074628	ppb	7.210	152.104	721.358
71	Ga-ISK	> 100473.225		ppb	1.165		99678.852
82	Se-2	2.875	-0.079729	ppb	92.399	72.192	6.573
107	Ag-1	280.003	-0.036863	ppb	9.298	14.743	472.230
115	In-ISK	102565.109		ppb	1.350		99457.792
45	Sc-ISK	> 242270.549		ppb	1.106		242742.069
23	Na	8444.162	-55.887632	ppb	2.070	0.746	39213.269
39	K	85378.855	-1.546883	ppb	1.469	43.679	87260.158
24	Mg	516.676	-14.758880	ppb	5.913	0.425	9076.663
159	Tb-ISK	216580.150		ppb	0.923		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-D @100

Autosampler Position: 325

Sample Date/Time: Tuesday, December 10, 2019 20:16:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-D @100.180

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	43307.770		ppb	0.748		42868.696
9	Be	21.111	-0.014240	ppb	65.737	56.082	46.667
10	B	56191.410	104.173503	ppb	0.719	1.365	4940.855
27	Al	5875.653	-0.057727	ppb	2.993	19.907	6567.065
43	Ca-2	1020.037	2.392225	ppb	6.373	101.382	985.041
49	Ti	165.557	-0.070605	ppb	13.100	37.888	227.780
52	Cr	14962.280	-0.061234	ppb	2.892	33.951	16179.161
55	Mn	2906.963	0.009933	ppb	3.614	34.045	2806.958
57	Fe	16587.404	-2.965170	ppb	1.813	30.584	18409.633
45	Sc-IS	> 1839382.596		ppb	1.404		1900606.701
66	Zn	13970.167	5.585953	ppb	3.626	3.579	2656.914
86	Sr	306.869	-0.175055	ppb	13.139	8.303	871.891
65	Cu	310.641	-0.013953	ppb	11.471	75.848	369.286
69	Ga-IS	538066.951		ppb	1.898		547737.660
95	Mo	485.564	0.003106	ppb	16.105	951.332	493.342
115	In-IS	> 341558.765		ppb	1.835		327805.977
111	Cd	27.869	-0.663077	ppb	7.358	0.097	1629.057
118	Sn	3190.356	-0.639291	ppb	1.831	2.255	8050.056
121	Sb	1255.611	-0.097856	ppb	5.137	10.386	2004.585
135	Ba	294.447	0.036659	ppb	9.760	31.190	203.335
165	Ho-IS	356268.170		ppb	2.329		350617.912
159	Tb-IS	> 434782.875		ppb	2.411		427340.256
207	Pb	507.781	-0.010474	ppb	8.742	13.474	771.120
203	Tl	71.111	-0.015262	ppb	10.825	4.836	192.224
209	Bi-IS	218506.330		ppb	1.212		209804.917
51	V	14.444	-0.012573	ppb	58.076	121.610	21.111
59	Co	32.222	-0.026291	ppb	15.802	10.282	78.889
60	Ni	111.112	-0.049906	ppb	10.536	19.684	170.001
75	As	728.619	-0.003584	ppb	11.724	4775.709	721.358
71	Ga-ISK	> 100926.389		ppb	0.884		99678.852
82	Se-2	-2.138	-0.187107	ppb	384.752	93.946	6.573
107	Ag-1	213.335	-0.049606	ppb	13.350	11.378	472.230
115	In-ISK	101568.792		ppb	1.797		99457.792
45	Sc-ISK	> 241310.109		ppb	1.288		242742.069
23	Na	31050.380	-14.500853	ppb	1.551	2.708	39213.269
39	K	92772.498	5.479069	ppb	0.874	28.804	87260.158
24	Mg	1376.733	-13.263445	ppb	0.914	0.388	9076.663
159	Tb-ISK	216885.313		ppb	0.304		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-E MS @100

Autosampler Position: 326

Sample Date/Time: Tuesday, December 10, 2019 20:19:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-E MS @100.181

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		43382.438		ppb		0.056		42868.696
9	Be	|		981.145	0.550780	ppb	7.290	5.769		46.667
10	B	|		56906.467	105.463946	ppb	1.489	1.000		4940.855
27	Al	|		10260.362	0.466789	ppb	7.091	15.486		6567.065
43	Ca-2	|		1748.441	28.286373	ppb	8.496	14.410		985.041
49	Ti	|		571.123	0.449259	ppb	8.199	12.053		227.780
52	Cr	|		21142.304	0.478871	ppb	2.018	1.508		16179.161
55	Mn	|		13372.924	0.556677	ppb	1.797	1.483		2806.958
57	Fe	|		25572.876	18.656985	ppb	2.223	1.545		18409.633
45	Sc-IS	>		1841917.465		ppb	2.106			1900606.701
66	Zn	|		16718.668	6.922834	ppb	1.799	1.052		2656.914
86	Sr	|		2039.137	0.389607	ppb	3.498	9.465		871.891
65	Cu	|		2188.232	0.545510	ppb	3.380	1.840		369.286
69	Ga-IS	|		542027.471		ppb	1.613			547737.660
95	Mo	|		2075.706	0.556886	ppb	1.385	4.240		493.342
115	In-IS	>		333058.121		ppb	2.637			327805.977
111	Cd	|		1343.482	-0.126772	ppb	4.099	19.144		1629.057
118	Sn	|		6497.129	-0.207460	ppb	31.324	133.006		8050.056
121	Sb	|		5509.952	0.419291	ppb	2.942	7.107		2004.585
135	Ba	|		1420.071	0.553855	ppb	0.704	2.978		203.335
165	Ho-IS	|		360457.153		ppb	1.577			350617.912
159	Tb-IS	>		433652.236		ppb	1.517			427340.256
207	Pb	|		14873.005	0.534163	ppb	0.723	2.337		771.120
203	Tl	|		5262.080	0.622592	ppb	1.542	1.576		192.224
209	Bi-IS	|		224012.757		ppb	0.727			209804.917
51	V	|		341.115	0.580411	ppb	3.432	4.752		21.111
59	Co	|		1054.484	0.537360	ppb	8.062	7.631		78.889
60	Ni	|		777.799	0.495481	ppb	6.561	7.226		170.001
75	As	|		1057.824	0.657747	ppb	12.041	39.535		721.358
71	Ga-ISK	>		100902.914		ppb	1.327			99678.852
82	Se-2	|		28.864	0.473781	ppb	24.224	32.916		6.573
107	Ag-1	|		1674.543	0.224349	ppb	1.280	1.817		472.230
115	In-ISK	|		104009.812		ppb	0.930			99457.792
45	Sc-ISK	>		240976.613		ppb	0.674			242742.069
23	Na	|		40146.331	2.232490	ppb	0.185	22.799		39213.269
39	K	|		98375.337	10.675233	ppb	0.254	6.795		87260.158
24	Mg	|		15141.353	10.650961	ppb	0.645	3.254		9076.663
159	Tb-ISK	|		217291.489		ppb	0.878			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-F MSD @100

Autosampler Position: 327

Sample Date/Time: Tuesday, December 10, 2019 20:22:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-F MSD @100.182

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42925.522		ppb	1.981		42868.696
9	Be	943.365	0.525568	ppb	6.770	8.732	46.667
10	B	56461.394	103.809279	ppb	2.263	3.920	4940.855
27	Al	9410.877	0.357976	ppb	1.338	9.196	6567.065
43	Ca-2	1695.101	26.014949	ppb	4.599	9.479	985.041
49	Ti	640.014	0.532917	ppb	11.304	18.798	227.780
52	Cr	21073.310	0.460351	ppb	0.647	4.159	16179.161
55	Mn	13171.625	0.541474	ppb	0.744	1.646	2806.958
57	Fe	25450.436	17.949472	ppb	2.273	8.622	18409.633
45	Sc-IS	> 1854611.689		ppb	1.629		1900606.701
66	Zn	17728.774	7.357221	ppb	1.675	0.113	2656.914
86	Sr	2065.819	0.393269	ppb	3.416	6.150	871.891
65	Cu	2257.973	0.561941	ppb	2.537	3.879	369.286
69	Ga-IS	545419.285		ppb	0.582		547737.660
95	Mo	2042.368	0.540062	ppb	3.912	4.502	493.342
115	In-IS	> 340276.831		ppb	1.019		327805.977
111	Cd	1401.336	-0.115706	ppb	9.240	41.402	1629.057
118	Sn	4173.944	-0.516353	ppb	4.501	5.336	8050.056
121	Sb	5640.002	0.420267	ppb	1.810	4.417	2004.585
135	Ba	1350.064	0.508344	ppb	9.321	10.287	203.335
165	Ho-IS	362237.443		ppb	2.842		350617.912
159	Tb-IS	> 433634.040		ppb	1.609		427340.256
207	Pb	14672.912	0.526455	ppb	1.984	0.393	771.120
203	Tl	5254.300	0.621621	ppb	2.500	2.063	192.224
209	Bi-IS	222556.164		ppb	1.915		209804.917
51	V	353.338	0.589244	ppb	1.887	2.801	21.111
59	Co	1095.598	0.548218	ppb	7.517	9.389	78.889
60	Ni	782.244	0.486287	ppb	4.269	6.442	170.001
75	As	1016.957	0.533678	ppb	3.092	14.387	721.358
71	Ga-ISK	> 103030.234		ppb	1.204		99678.852
82	Se-2	20.505	0.285117	ppb	17.135	23.927	6.573
107	Ag-1	1730.105	0.228025	ppb	6.969	9.365	472.230
115	In-ISK	103749.532		ppb	1.003		99457.792
45	Sc-ISK	> 246244.242		ppb	0.887		242742.069
23	Na	35739.651	-7.234466	ppb	0.449	6.096	39213.269
39	K	97954.702	8.388868	ppb	0.953	9.418	87260.158
24	Mg	15211.429	10.209164	ppb	1.343	5.578	9076.663
159	Tb-ISK	219863.665		ppb	0.392		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-4-D PDS @100

Autosampler Position: 328

Sample Date/Time: Tuesday, December 10, 2019 20:24:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-4-D PDS @100.183

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		43062.586		ppb		0.765		42868.696
9	Be	|		174032.562	103.148197	ppb		0.700	0.097	46.667
10	B	|		100560.476	195.169199	ppb		0.484	1.217	4940.855
27	Al	|		881226.473	105.625845	ppb		1.438	0.875	6567.065
43	Ca-2	|		129055.332	4604.086604	ppb		0.686	0.181	985.041
49	Ti	|		77539.932	99.857907	ppb		2.176	1.671	227.780
52	Cr	|		1103919.798	96.051695	ppb		0.549	1.208	16179.161
55	Mn	|		1801698.704	94.640351	ppb		0.680	0.892	2806.958
57	Fe	|		1821936.129	4383.532980	ppb		0.379	1.117	18409.633
45	Sc-IS	>		1829520.845		ppb		0.796		1900606.701
66	Zn	|		236528.731	115.294219	ppb		0.536	1.294	2656.914
86	Sr	|		310182.520	101.478251	ppb		0.684	0.650	871.891
65	Cu	|		338179.217	101.387603	ppb		0.405	0.726	369.286
69	Ga-IS	|		568144.143		ppb		0.499		547737.660
95	Mo	|		290296.092	101.645985	ppb		1.901	1.112	493.342
115	In-IS	>		328560.795		ppb		1.517		327805.977
111	Cd	|		250578.424	102.793756	ppb		0.660	1.198	1629.057
118	Sn	|		807266.286	102.215392	ppb		2.650	1.876	8050.056
121	Sb	|		742268.656	90.508727	ppb		1.341	1.427	2004.585
135	Ba	|		219649.134	101.500853	ppb		0.863	2.231	203.335
165	Ho-IS	|		352377.785		ppb		1.094		350617.912
159	Tb-IS	>		423302.135		ppb		0.132		427340.256
207	Pb	|		2543364.030	98.721316	ppb		1.105	0.983	771.120
203	Tl	|		804480.509	101.232999	ppb		0.495	0.488	192.224
209	Bi-IS	|		212096.828		ppb		2.456		209804.917
51	V	|		54705.670	98.586864	ppb		1.438	1.960	21.111
59	Co	|		177851.425	97.423699	ppb		1.007	1.483	78.889
60	Ni	|		125291.534	101.719574	ppb		1.279	0.742	170.001
75	As	|		50538.289	99.287585	ppb		0.980	1.471	721.358
71	Ga-ISK	>		101567.566		ppb		0.595		99678.852
82	Se-2	|		4771.629	100.704729	ppb		1.390	1.770	6.573
107	Ag-1	|		245446.361	45.627478	ppb		1.289	1.227	472.230
115	In-ISK	|		103424.824		ppb		1.417		99457.792
45	Sc-ISK	>		246836.807		ppb		1.603		242742.069
23	Na	|		601418.458	1003.643288	ppb		1.988	1.557	39213.269
39	K	|		1222308.847	1005.268765	ppb		0.950	1.264	87260.158
24	Mg	|		2718540.614	4594.500131	ppb		2.364	1.754	9076.663
159	Tb-ISK	|		218361.780		ppb		1.483		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-1-A @100

Autosampler Position: 329

Sample Date/Time: Tuesday, December 10, 2019 20:27:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-1-A @100.184

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	44204.981		ppb	2.459		42868.696
9	Be	8.889	-0.021584	ppb	86.603	20.257	46.667
10	B	1262892.009	2474.080676	ppb	1.331	2.741	4940.855
27	Al	12261.929	0.666102	ppb	2.275	7.075	6567.065
43	Ca-2	1956.801	33.826307	ppb	1.918	6.811	985.041
49	Ti	261.114	0.043674	ppb	43.859	339.715	227.780
52	Cr	15086.852	-0.089254	ppb	1.589	14.417	16179.161
55	Mn	4070.581	0.064455	ppb	6.317	15.416	2806.958
57	Fe	19239.615	2.065802	ppb	1.249	14.681	18409.633
45	Sc-IS	> 1895496.389		ppb	1.857		1900606.701
66	Zn	14244.882	5.513607	ppb	3.451	2.584	2656.914
86	Sr	749.049	-0.038145	ppb	3.396	18.796	871.891
65	Cu	993.453	0.181128	ppb	2.431	4.174	369.286
69	Ga-IS	550443.127		ppb	2.272		547737.660
95	Mo	4547.391	1.373377	ppb	2.065	3.633	493.342
115	In-IS	> 343151.089		ppb	2.205		327805.977
111	Cd	29.339	-0.662577	ppb	23.956	0.377	1629.057
118	Sn	17458.450	1.107122	ppb	3.859	9.767	8050.056
121	Sb	35389.343	3.898752	ppb	1.608	3.490	2004.585
135	Ba	607.791	0.174960	ppb	2.814	5.660	203.335
165	Ho-IS	362642.579		ppb	1.608		350617.912
159	Tb-IS	> 443486.296		ppb	1.543		427340.256
207	Pb	1963.385	0.043115	ppb	2.284	4.351	771.120
203	Tl	327.782	0.015393	ppb	6.459	12.740	192.224
209	Bi-IS	222569.851		ppb	2.222		209804.917
51	V	68.889	0.084857	ppb	15.554	23.477	21.111
59	Co	30.000	-0.027732	ppb	40.062	23.083	78.889
60	Ni	152.223	-0.017765	ppb	17.835	120.164	170.001
75	As	785.967	0.093095	ppb	5.535	74.975	721.358
71	Ga-ISK	> 102085.704		ppb	1.085		99678.852
82	Se-2	16.208	0.198963	ppb	13.041	20.589	6.573
107	Ag-1	556.678	0.013525	ppb	3.642	22.673	472.230
115	In-ISK	103333.784		ppb	2.166		99457.792
45	Sc-ISK	> 244765.084		ppb	1.898		242742.069
23	Na	1155242.265	2011.607117	ppb	0.865	2.759	39213.269
39	K	100699.245	11.379317	ppb	1.004	9.566	87260.158
24	Mg	3818.844	-9.120685	ppb	1.899	1.057	9076.663
159	Tb-ISK	218934.322		ppb	1.039		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-2-B @100

Autosampler Position: 330

Sample Date/Time: Tuesday, December 10, 2019 20:30:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-2-B @100.185

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		45131.184		ppb			1.229			42868.696
9	Be	|		11.111	-0.020841	ppb			34.641	8.796		46.667
10	B	|		5030850.985	9083.784035	ppb			0.170	3.963		4940.855
27	Al	|		26076.006	2.029341	ppb			2.031	4.153		6567.065
43	Ca-2	|		5687.800	147.475799	ppb			3.333	9.167		985.041
49	Ti	|		142.223	-0.120691	ppb			11.561	10.590		227.780
52	Cr	|		16844.373	-0.054898	ppb			2.298	135.693		16179.161
55	Mn	|		11879.382	0.412294	ppb			1.541	4.915		2806.958
57	Fe	|		31515.846	24.925984	ppb			1.998	16.570		18409.633
45	Sc-IS	>		2064007.076		ppb			4.037			1900606.701
66	Zn	|		31368.856	12.450575	ppb			2.036	3.443		2656.914
86	Sr	|		1689.124	0.216472	ppb			2.654	12.430		871.891
65	Cu	|		1405.538	0.267688	ppb			7.231	11.803		369.286
69	Ga-IS	|		583510.794		ppb			0.384			547737.660
95	Mo	|		1188.938	0.203695	ppb			3.561	12.443		493.342
115	In-IS	>		361763.366		ppb			1.613			327805.977
111	Cd	|		33.059	-0.661715	ppb			25.129	0.490		1629.057
118	Sn	|		6948.358	-0.224548	ppb			3.634	16.853		8050.056
121	Sb	|		12462.101	1.138247	ppb			1.743	2.357		2004.585
135	Ba	|		647.792	0.177868	ppb			5.645	9.035		203.335
165	Ho-IS	|		383785.669		ppb			1.758			350617.912
159	Tb-IS	>		465420.106		ppb			1.567			427340.256
207	Pb	|		885.566	0.001600	ppb			10.925	195.969		771.120
203	Tl	|		118.889	-0.010380	ppb			21.414	26.293		192.224
209	Bi-IS	|		224904.428		ppb			0.965			209804.917
51	V	|		61.111	0.068060	ppb			13.727	19.608		21.111
59	Co	|		46.667	-0.019215	ppb			12.372	16.514		78.889
60	Ni	|		187.779	0.007318	ppb			8.935	165.805		170.001
75	As	|		835.723	0.151359	ppb			7.970	75.514		721.358
71	Ga-ISK	>		104626.217		ppb			1.229			99678.852
82	Se-2	|		7.547	0.012746	ppb			53.950	639.258		6.573
107	Ag-1	|		303.337	-0.034759	ppb			25.131	40.062		472.230
115	In-ISK	|		106355.002		ppb			1.378			99457.792
45	Sc-ISK	>		249512.367		ppb			0.494			242742.069
23	Na	|		2752240.997	4794.785569	ppb			1.899	1.605		39213.269
39	K	|		110200.135	17.988685	ppb			1.451	7.650		87260.158
24	Mg	|		7553.667	-2.977989	ppb			5.067	23.095		9076.663
159	Tb-ISK	|		225685.444		ppb			0.725			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-3-B @100

Autosampler Position: 331

Sample Date/Time: Tuesday, December 10, 2019 20:33:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-3-B @100.186

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	45104.439		ppb	1.693		42868.696
9	Be	17.778	-0.017182	ppb	47.186	24.962	46.667
10	B	278469.468	500.092206	ppb	1.637	4.723	4940.855
27	Al	13157.214	0.645818	ppb	75.012	157.332	6567.065
43	Ca-2	1408.403	11.273730	ppb	10.076	22.763	985.041
49	Ti	125.556	-0.137826	ppb	9.324	5.791	227.780
52	Cr	15668.589	-0.132106	ppb	1.497	33.270	16179.161
55	Mn	2641.355	-0.017285	ppb	1.474	29.346	2806.958
57	Fe	29646.289	21.675336	ppb	1.357	13.727	18409.633
45	Sc-IS	> 2038725.340		ppb	4.922		1900606.701
66	Zn	41325.244	17.044259	ppb	0.847	5.685	2656.914
86	Sr	412.953	-0.154101	ppb	14.547	8.185	871.891
65	Cu	422.854	0.007475	ppb	4.121	123.396	369.286
69	Ga-IS	587290.817		ppb	1.138		547737.660
95	Mo	586.679	0.018653	ppb	4.546	93.472	493.342
115	In-IS	> 359389.851		ppb	1.641		327805.977
111	Cd	30.990	-0.662387	ppb	61.114	1.098	1629.057
118	Sn	4696.329	-0.482461	ppb	5.159	7.602	8050.056
121	Sb	5564.417	0.376559	ppb	2.368	6.551	2004.585
135	Ba	218.891	-0.001816	ppb	14.474	663.961	203.335
165	Ho-IS	378084.770		ppb	2.784		350617.912
159	Tb-IS	> 457447.603		ppb	2.711		427340.256
207	Pb	695.562	-0.004683	ppb	9.072	40.286	771.120
203	Tl	88.889	-0.013662	ppb	31.225	21.452	192.224
209	Bi-IS	223290.512		ppb	0.949		209804.917
51	V	20.000	-0.004883	ppb	44.096	308.202	21.111
59	Co	27.778	-0.029747	ppb	42.143	20.372	78.889
60	Ni	153.334	-0.023716	ppb	25.630	128.509	170.001
75	As	795.376	0.023261	ppb	2.772	171.440	721.358
71	Ga-ISK	> 108188.124		ppb	0.469		99678.852
82	Se-2	2.869	-0.084528	ppb	210.191	142.009	6.573
107	Ag-1	227.780	-0.049788	ppb	12.273	9.967	472.230
115	In-ISK	107912.663		ppb	0.686		99457.792
45	Sc-ISK	> 256851.894		ppb	0.742		242742.069
23	Na	147233.243	181.617550	ppb	1.284	1.569	39213.269
39	K	90054.102	-1.944162	ppb	1.486	29.671	87260.158
24	Mg	2290.184	-11.918565	ppb	5.576	1.984	9076.663
159	Tb-ISK	228343.292		ppb	1.200		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-5-A @100

Autosampler Position: 332

Sample Date/Time: Tuesday, December 10, 2019 20:35:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\570-14182-D-5-A @100.187

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	44296.353		ppb	1.120		42868.696
9	Be	10.000	-0.021152	ppb	33.333	8.745	46.667
10	B	63565.588	109.863928	ppb	1.983	2.224	4940.855
27	Al	7052.853	0.022903	ppb	3.492	105.124	6567.065
43	Ca-2	1295.059	8.889826	ppb	4.300	18.590	985.041
49	Ti	155.556	-0.097707	ppb	20.254	38.406	227.780
52	Cr	15825.434	-0.085077	ppb	3.468	46.176	16179.161
55	Mn	3159.238	0.011305	ppb	2.064	28.487	2806.958
57	Fe	27193.635	17.945130	ppb	0.019	1.725	18409.633
45	Sc-IS	> 1981565.366		ppb	0.527		1900606.701
66	Zn	16709.775	6.340788	ppb	3.537	3.600	2656.914
86	Sr	317.931	-0.179039	ppb	5.004	2.415	871.891
65	Cu	287.240	-0.027115	ppb	8.754	24.081	369.286
69	Ga-IS	587088.612		ppb	1.301		547737.660
95	Mo	423.340	-0.029476	ppb	9.866	45.844	493.342
115	In-IS	> 366534.941		ppb	1.664		327805.977
111	Cd	25.778	-0.664578	ppb	46.948	0.690	1629.057
118	Sn	3544.886	-0.625436	ppb	7.857	5.411	8050.056
121	Sb	3527.103	0.141003	ppb	5.521	16.501	2004.585
135	Ba	332.226	0.043515	ppb	6.451	22.143	203.335
165	Ho-IS	378574.885		ppb	2.553		350617.912
159	Tb-IS	> 460873.233		ppb	0.959		427340.256
207	Pb	598.894	-0.008300	ppb	4.499	11.460	771.120
203	Tl	74.445	-0.015358	ppb	2.585	1.794	192.224
209	Bi-IS	223832.441		ppb	1.663		209804.917
51	V	18.889	-0.006923	ppb	79.575	364.559	21.111
59	Co	21.111	-0.033176	ppb	59.778	19.674	78.889
60	Ni	123.334	-0.046815	ppb	21.109	41.950	170.001
75	As	811.569	0.052220	ppb	4.080	121.499	721.358
71	Ga-ISK	> 108288.885		ppb	0.551		99678.852
82	Se-2	-0.474	-0.150477	ppb	1500.607	93.488	6.573
107	Ag-1	208.890	-0.053117	ppb	18.701	13.063	472.230
115	In-ISK	108999.856		ppb	0.950		99457.792
45	Sc-ISK	> 257275.014		ppb	0.947		242742.069
23	Na	33875.122	-13.171530	ppb	1.502	10.204	39213.269
39	K	91427.199	-0.891519	ppb	0.851	147.642	87260.158
24	Mg	1535.083	-13.154529	ppb	2.783	0.455	9076.663
159	Tb-ISK	230480.496		ppb	1.037		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Tuesday, December 10, 2019 20:38:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCV-210770.188

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	44155.917		ppb		0.873		42868.696
9	Be	|	176689.327	99.974491	ppb	0.747	1.219		46.667
10	B	|	139972.404	262.523178	ppb	0.627	1.495		4940.855
27	Al	|	919462.346	105.208835	ppb	1.750	1.727		6567.065
43	Ca-2	|	155926.342	5315.920777	ppb	0.295	1.393		985.041
49	Ti	|	83327.918	102.447643	ppb	1.678	0.574		227.780
52	Cr	|	1180321.606	98.060314	ppb	1.380	0.943		16179.161
55	Mn	|	2088089.770	104.709547	ppb	5.075	4.771		2806.958
57	Fe	|	2369097.861	5451.606529	ppb	0.462	0.824		18409.633
45	Sc-IS	>	1916525.827		ppb	1.102			1900606.701
66	Zn	|	226663.177	105.352034	ppb	1.529	0.494		2656.914
86	Sr	|	339410.477	106.015400	ppb	1.029	1.223		871.891
65	Cu	|	365801.463	104.689655	ppb	1.207	0.288		369.286
69	Ga-IS	|	598160.856		ppb	0.653			547737.660
95	Mo	|	316164.833	105.695845	ppb	0.568	0.696		493.342
115	In-IS	>	348131.184		ppb	1.394			327805.977
111	Cd	|	263592.354	102.051910	ppb	0.991	1.814		1629.057
118	Sn	|	822193.684	98.223203	ppb	2.296	2.295		8050.056
121	Sb	|	856286.872	98.561950	ppb	2.609	2.620		2004.585
135	Ba	|	226829.370	98.898991	ppb	2.121	1.194		203.335
165	Ho-IS	|	371181.718		ppb	2.132			350617.912
159	Tb-IS	>	448701.772		ppb	2.565			427340.256
207	Pb	|	2684935.774	98.333930	ppb	1.701	1.133		771.120
203	Tl	|	879232.780	104.407218	ppb	0.974	1.734		192.224
209	Bi-IS	|	216402.351		ppb	0.792			209804.917
51	V	|	56986.850	98.194011	ppb	3.261	2.534		21.111
59	Co	|	191486.242	100.300458	ppb	1.985	1.058		78.889
60	Ni	|	132327.859	102.750916	ppb	0.905	1.460		170.001
75	As	|	53099.160	99.768645	ppb	1.787	1.940		721.358
71	Ga-ISK	>	106206.689		ppb	0.937			99678.852
82	Se-2	|	5169.139	104.347023	ppb	1.869	2.823		6.573
107	Ag-1	|	576441.387	102.590725	ppb	0.654	0.476		472.230
115	In-ISK	|	106888.678		ppb	0.349			99457.792
45	Sc-ISK	>	253864.721		ppb	0.540			242742.069
23	Na	|	3145872.128	5395.325841	ppb	1.629	1.106		39213.269
39	K	|	6372020.560	5414.960297	ppb	1.169	0.715		87260.158
24	Mg	|	3295911.345	5418.857807	ppb	0.706	0.170		9076.663
159	Tb-ISK	|	226830.713		ppb	0.779			211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Tuesday, December 10, 2019 20:44:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191210E1\CCB-23446.190

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		44396.675		ppb		1.933		42868.696
9	Be	|		15.556	-0.017899	ppb	44.607	21.632		46.667
10	B	|		6478.135	2.819157	ppb	0.726	5.319		4940.855
27	Al	|		8836.182	0.248717	ppb	25.334	105.100		6567.065
43	Ca-2	|		126.667	-29.762058	ppb	8.217	1.239		985.041
49	Ti	|		157.779	-0.090058	ppb	6.791	14.278		227.780
52	Cr	|		15397.183	-0.086588	ppb	1.128	13.422		16179.161
55	Mn	|		1033.371	-0.090616	ppb	3.274	1.901		2806.958
57	Fe	|		17697.623	-2.300417	ppb	1.372	32.421		18409.633
45	Sc-IS	>		1930346.436		ppb		0.506		1900606.701
66	Zn	|		2477.993	-0.102941	ppb	1.028	14.216		2656.914
86	Sr	|		8.961	-0.272515	ppb	481.108	4.907		871.891
65	Cu	|		234.512	-0.039929	ppb	21.048	36.109		369.286
69	Ga-IS	|		563294.983		ppb		1.085		547737.660
95	Mo	|		1020.037	0.172597	ppb	9.939	20.160		493.342
115	In-IS	>		350528.528		ppb		1.054		327805.977
111	Cd	|		1162.350	-0.224153	ppb	4.832	11.473		1629.057
118	Sn	|		6334.738	-0.272463	ppb	3.013	9.327		8050.056
121	Sb	|		1899.015	-0.027980	ppb	2.331	24.518		2004.585
135	Ba	|		61.111	-0.067740	ppb	36.318	14.331		203.335
165	Ho-IS	|		370139.470		ppb		2.006		350617.912
159	Tb-IS	>		447311.023		ppb		0.906		427340.256
207	Pb	|		547.782	-0.009529	ppb	6.563	14.065		771.120
203	Tl	|		146.667	-0.006499	ppb	13.825	36.570		192.224
209	Bi-IS	|		225973.220		ppb		0.260		209804.917
51	V	|		11.111	-0.019432	ppb	34.641	36.040		21.111
59	Co	|		22.222	-0.032352	ppb	48.218	17.541		78.889
60	Ni	|		107.778	-0.056788	ppb	22.797	32.373		170.001
75	As	|		792.684	0.052129	ppb	7.093	156.598		721.358
71	Ga-ISK	>		105717.638		ppb		2.288		99678.852
82	Se-2	|		-1.125	-0.162590	ppb	627.659	88.576		6.573
107	Ag-1	|		317.781	-0.032722	ppb	13.850	25.193		472.230
115	In-ISK	|		107107.109		ppb		0.501		99457.792
45	Sc-ISK	>		249249.022		ppb		0.905		242742.069
23	Na	|		2618.573	-66.630663	ppb	3.364	0.269		39213.269
39	K	|		83086.479	-5.717094	ppb	0.635	8.132		87260.158
24	Mg	|		300.003	-15.148058	ppb	11.667	0.401		9076.663
159	Tb-ISK	|		223129.867		ppb		1.191		211731.003

QC Out of Limits

AnalyteMassOut of Limits Message

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Wednesday, December 11, 2019 10:08:27

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2019\191211E1\STD Performance Check.006

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode
Be	9.0		2435.8		2435.808		31.469		1.3	Standard
In	114.9		45553.1		45553.127		734.176		1.6	Standard
U	238.1		39078.9		39078.853		573.820		1.5	Standard
[CeO	155.9		983.3		0.024		0.001		2.7	Standard
> Ce	139.9		41719.5		41719.498		237.965		0.6	Standard
[Ce++	70.0		588.2		0.014		0.001		3.7	Standard
Bkgd	220.0		1.1		1.067		0.450		42.2	Standard

Current Conditions File Data

Current Value	Description
0.98	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.50	Deflector Voltage
1600.00	ICP RF Power
-2150.00	Analog Stage Voltage
1900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-13.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-17.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.50	DRC Mode QRO
-2.50	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-15.50	KED Mode CRO
-22.50	KED Mode QRO
-18.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Wednesday, December 11, 2019 10:13:27

Page 1

475.00 KED Mode Axial Field Voltage

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Wednesday, December 11, 2019 11:22:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICIS-23447.012

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		24972.922		ppb		1.253		
9	Be	|		10.000		ppb		0.000		
10	B	|		3700.479		ppb		1.450		
27	Al	|		2758.044		ppb		3.508		
43	Ca-2	|		65.000		ppb		23.077		
49	Ti	|		118.889		ppb		6.475		
52	Cr	|		12666.724		ppb		0.150		
55	Mn	|		475.563		ppb		6.662		
57	Fe	|		14389.466		ppb		0.465		
45	Sc-IS	|>		817473.585		ppb		2.850		
66	Zn	|		1103.376		ppb		8.901		
86	Sr	|		1.870		ppb	1573.537			
65	Cu	|		81.983		ppb		29.358		
69	Ga-IS	|		280345.243		ppb		2.596		
95	Mo	|		52.222		ppb		16.064		
115	In-IS	|>		167628.439		ppb		3.110		
111	Cd	|		13.224		ppb		25.340		
118	Sn	|		1115.599		ppb		4.858		
121	Sb	|		203.335		ppb		12.377		
135	Ba	|		36.667		ppb		15.746		
165	Ho-IS	|		161235.197		ppb		2.638		
159	Tb-IS	|>		193207.036		ppb		2.189		
207	Pb	|		86.667		ppb		10.176		
203	Tl	|		7.778		ppb		89.214		
209	Bi-IS	|		105080.785		ppb		2.631		
51	V	|		0.000		ppb				
59	Co	|		11.111		ppb		17.321		
60	Ni	|		41.111		ppb		56.950		
75	As	|		621.800		ppb		5.388		
71	Ga-ISK	|>		43972.179		ppb		6.043		
82	Se-2	|		4.232		ppb	130.644			
107	Ag-1	|		45.556		ppb		8.449		
115	In-ISK	|		47538.206		ppb		5.080		
45	Sc-ISK	|>		109157.608		ppb		6.168		
23	Na	|		1463.408		ppb		3.686		
39	K	|		94331.568		ppb		1.324		
24	Mg	|		71.667		ppb		34.416		
159	Tb-ISK	|		99911.551		ppb		5.591		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Wednesday, December 11, 2019 11:25:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\IC-210761.013

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	22367.502		ppb		2.071		24972.922
9	Be	|	219972.411	200.000000	ppb		2.454	2.471	10.000
10	B	|	171411.566	500.000000	ppb		2.563	1.256	3700.479
27	Al	|	1025504.871	200.000000	ppb		0.679	1.757	2758.044
43	Ca-2	|	188308.137	10200.000000	ppb		1.424	1.892	65.000
49	Ti	|	101546.320	200.000000	ppb		0.986	1.642	118.889
52	Cr	|	1458843.760	200.000000	ppb		2.336	0.525	12666.724
55	Mn	|	2643101.648	200.000000	ppb		0.606	2.146	475.563
57	Fe	|	2926745.754	10200.000000	ppb		0.996	3.214	14389.466
45	Sc-IS	>	796232.257		ppb		2.378		817473.585
66	Zn	|	277554.453	200.000000	ppb		2.118	0.760	1103.376
86	Sr	|	434675.853	200.000000	ppb		1.431	1.836	1.870
65	Cu	|	439244.907	200.000000	ppb		1.352	1.907	81.983
69	Ga-IS	|	294670.662		ppb		2.759		280345.243
95	Mo	|	425166.080	200.000000	ppb		2.244	1.327	52.222
115	In-IS	>	154090.339		ppb		0.458		167628.439
111	Cd	|	346506.581	200.000000	ppb		1.479	1.126	13.224
118	Sn	|	1076380.734	200.000000	ppb		1.154	0.828	1115.599
121	Sb	|	1110412.131	200.000000	ppb		1.466	1.008	203.335
135	Ba	|	279600.575	200.000000	ppb		2.272	2.707	36.667
165	Ho-IS	|	156081.467		ppb		1.443		161235.197
159	Tb-IS	>	186548.246		ppb		2.127		193207.036
207	Pb	|	3452229.483	200.000000	ppb		0.525	1.784	86.667
203	Tl	|	1113626.933	200.000000	ppb		1.239	1.924	7.778
209	Bi-IS	|	94660.614		ppb		3.474		105080.785
51	V	|	69723.226	200.000000	ppb		3.773	1.395	0.000
59	Co	|	235851.985	200.000000	ppb		2.823	0.370	11.111
60	Ni	|	174738.904	200.000000	ppb		0.887	2.271	41.111
75	As	|	63969.101	200.000000	ppb		0.408	2.225	621.800
71	Ga-ISK	>	42874.268		ppb		2.512		43972.179
82	Se-2	|	6189.907	200.000000	ppb		1.934	0.650	4.232
107	Ag-1	|	772784.915	200.000000	ppb		0.350	2.719	45.556
115	In-ISK	|	48496.433		ppb		1.595		47538.206
45	Sc-ISK	>	111014.303		ppb		2.531		109157.608
23	Na	|	4372567.104	10200.000000	ppb		0.570	2.186	1463.408
39	K	|	7829639.928	10200.000000	ppb		1.716	4.045	94331.568
24	Mg	|	4552155.956	10200.000000	ppb		0.587	2.862	71.667
159	Tb-ISK	|	102548.083		ppb		0.318		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 201

Sample Date/Time: Wednesday, December 11, 2019 11:28:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\b.014

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23006.289		ppb	0.754		24972.922
9	Be	40.000	0.027642	ppb	16.667	21.669	10.000
10	B	3750.492	0.478795	ppb	0.876	10.159	3700.479
27	Al	5544.410	0.562991	ppb	2.741	5.933	2758.044
43	Ca-2	116.667	2.922433	ppb	26.186	58.535	65.000
49	Ti	215.557	0.198045	ppb	13.152	26.915	118.889
52	Cr	10785.181	-0.208835	ppb	0.820	5.827	12666.724
55	Mn	1263.389	0.060900	ppb	3.111	3.832	475.563
57	Fe	14832.144	3.058035	ppb	2.548	38.988	14389.466
45	Sc-IS	> 793161.453		ppb	0.793		817473.585
66	Zn	1100.042	0.021462	ppb	2.891	115.786	1103.376
86	Sr	83.519	0.037737	ppb	82.568	84.165	1.870
65	Cu	248.829	0.077336	ppb	16.437	23.714	81.983
69	Ga-IS	267448.515		ppb	1.665		280345.243
95	Mo	4211.732	1.965223	ppb	3.588	3.928	52.222
115	In-IS	> 161779.753		ppb	2.315		167628.439
111	Cd	74.489	0.033912	ppb	15.076	17.373	13.224
118	Sn	13793.323	2.254058	ppb	1.261	3.828	1115.599
121	Sb	1128.934	0.160418	ppb	11.384	16.246	203.335
135	Ba	114.445	0.053803	ppb	11.027	14.054	36.667
165	Ho-IS	156678.040		ppb	1.941		161235.197
159	Tb-IS	> 189575.793		ppb	2.843		193207.036
207	Pb	1441.140	0.077398	ppb	5.858	8.646	86.667
203	Tl	360.005	0.062333	ppb	9.755	11.420	7.778
209	Bi-IS	100748.494		ppb	1.281		105080.785
51	V	23.333	0.067771	ppb	24.744	23.990	0.000
59	Co	58.889	0.041434	ppb	18.196	22.098	11.111
60	Ni	103.334	0.074485	ppb	38.032	63.238	41.111
75	As	668.536	0.225874	ppb	0.533	13.821	621.800
71	Ga-ISK	> 42290.291		ppb	1.506		43972.179
82	Se-2	14.896	0.354742	ppb	48.564	67.208	4.232
107	Ag-1	827.802	0.205548	ppb	5.240	4.114	45.556
115	In-ISK	47421.188		ppb	0.326		47538.206
45	Sc-ISK	> 106042.163		ppb	1.320		109157.608
23	Na	3897.199	6.047257	ppb	5.118	8.620	1463.408
39	K	98877.716	10.007562	ppb	1.361	28.547	94331.568
24	Mg	1485.077	3.319631	ppb	5.563	6.313	71.667
159	Tb-ISK	99168.397		ppb	1.499		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-235105

Autosampler Position: 206

Sample Date/Time: Wednesday, December 11, 2019 11:31:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICV-235105.015

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	22651.285		ppb	2.555			24972.922
9	Be	|	115094.145	105.245889	ppb	2.213	0.463		10.000
10	B	|	4218.401	1.906849	ppb	1.484	9.775		3700.479
27	Al	|	3611.568	0.184930	ppb	3.741	6.421		2758.044
43	Ca-2	|	94132.580	5126.140386	ppb	2.542	0.497		65.000
49	Ti	|	51317.595	101.539347	ppb	2.290	0.629		118.889
52	Cr	|	748603.591	102.451896	ppb	0.326	2.386		12666.724
55	Mn	|	1238121.879	94.211925	ppb	1.261	1.136		475.563
57	Fe	|	1450835.463	5061.026012	ppb	0.102	2.168		14389.466
45	Sc-IS	>	791486.098		ppb	2.075			817473.585
66	Zn	|	148535.010	107.319093	ppb	1.690	1.294		1103.376
86	Sr	|	217846.753	100.842529	ppb	0.407	2.271		1.870
65	Cu	|	222150.119	101.724633	ppb	1.519	1.029		81.983
69	Ga-IS	|	263547.785		ppb	0.814			280345.243
95	Mo	|	211647.447	100.159478	ppb	0.715	1.730		52.222
115	In-IS	>	159285.471		ppb	1.772			167628.439
111	Cd	|	183923.173	102.719287	ppb	0.245	1.988		13.224
118	Sn	|	544707.937	97.811730	ppb	2.154	0.881		1115.599
121	Sb	|	531594.320	92.616747	ppb	1.209	0.895		203.335
135	Ba	|	115.556	0.055776	ppb	11.658	14.442		36.667
165	Ho-IS	|	157300.680		ppb	2.998			161235.197
159	Tb-IS	>	187169.795		ppb	2.559			193207.036
207	Pb	|	1818560.165	104.996893	ppb	2.335	2.091		86.667
203	Tl	|	554501.413	99.242195	ppb	1.943	0.763		7.778
209	Bi-IS	|	100635.579		ppb	2.429			105080.785
51	V	|	34545.061	99.693430	ppb	1.905	0.970		0.000
59	Co	|	112787.964	96.226201	ppb	1.028	2.288		11.111
60	Ni	|	86821.944	99.909205	ppb	1.136	1.457		41.111
75	As	|	32933.635	102.619272	ppb	1.765	1.741		621.800
71	Ga-ISK	>	42623.501		ppb	1.458			43972.179
82	Se-2	|	3184.897	103.442972	ppb	1.380	1.241		4.232
107	Ag-1	|	260.002	0.056212	ppb	5.588	8.446		45.556
115	In-ISK	|	48330.815		ppb	2.464			47538.206
45	Sc-ISK	>	107322.806		ppb	1.588			109157.608
23	Na	|	2788.606	3.257137	ppb	4.719	9.322		1463.408
39	K	|	97014.969	5.840056	ppb	0.197	32.042		94331.568
24	Mg	|	2191635.166	5079.108710	ppb	2.061	3.600		71.667
159	Tb-ISK	|	100086.057		ppb	0.692			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Wednesday, December 11, 2019 11:33:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\b.016

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23039.675		ppb	0.440		24972.922
9	Be	82.223	0.065658	ppb	57.667	63.660	10.000
10	B	3683.809	0.257860	ppb	4.035	140.672	3700.479
27	Al	2780.271	0.019496	ppb	0.839	26.125	2758.044
43	Ca-2	135.001	3.893801	ppb	19.598	35.851	65.000
49	Ti	201.113	0.168794	ppb	12.659	28.519	118.889
52	Cr	10671.763	-0.227276	ppb	1.206	4.791	12666.724
55	Mn	1163.382	0.053016	ppb	16.789	25.299	475.563
57	Fe	13961.265	-0.091894	ppb	2.002	651.938	14389.466
45	Sc-IS	> 794628.623		ppb	1.511		817473.585
66	Zn	1537.861	0.337291	ppb	7.012	22.915	1103.376
86	Sr	125.779	0.056867	ppb	55.907	55.905	1.870
65	Cu	265.926	0.084756	ppb	19.506	25.655	81.983
69	Ga-IS	260905.534		ppb	0.950		280345.243
95	Mo	2890.292	1.338698	ppb	2.530	3.060	52.222
115	In-IS	> 159480.800		ppb	2.561		167628.439
111	Cd	130.598	0.066016	ppb	22.167	26.178	13.224
118	Sn	13794.439	2.290574	ppb	3.228	6.285	1115.599
121	Sb	17346.085	2.987890	ppb	2.631	4.887	203.335
135	Ba	73.334	0.026595	ppb	18.182	34.454	36.667
165	Ho-IS	158236.172		ppb	1.869		161235.197
159	Tb-IS	> 185184.855		ppb	1.086		193207.036
207	Pb	1730.044	0.095910	ppb	31.436	31.921	86.667
203	Tl	731.131	0.130661	ppb	27.517	26.665	7.778
209	Bi-IS	101089.756		ppb	0.754		105080.785
51	V	36.667	0.105929	ppb	31.492	31.004	0.000
59	Co	86.667	0.065024	ppb	11.538	14.848	11.111
60	Ni	104.445	0.074977	ppb	27.143	46.061	41.111
75	As	644.246	0.135612	ppb	5.773	58.455	621.800
71	Ga-ISK	> 42523.209		ppb	1.927		43972.179
82	Se-2	19.883	0.513305	ppb	31.495	38.363	4.232
107	Ag-1	285.558	0.063175	ppb	20.027	25.536	45.556
115	In-ISK	47189.078		ppb	2.538		47538.206
45	Sc-ISK	> 108025.795		ppb	0.579		109157.608
23	Na	3030.324	3.789876	ppb	10.324	18.620	1463.408
39	K	95652.522	3.111306	ppb	1.147	24.115	94331.568
24	Mg	2135.170	4.745681	ppb	30.715	31.178	71.667
159	Tb-ISK	99135.554		ppb	2.118		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-62207

Autosampler Position: 213

Sample Date/Time: Wednesday, December 11, 2019 11:36:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICV-62207.017

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		23051.919		ppb			1.408			24972.922
9	Be	|		21.111	0.010270	ppb	81.025	151.666				10.000
10	B	|		37677.406	100.823813	ppb	1.545	1.231				3700.479
27	Al	|		534495.543	103.314664	ppb	1.425	1.512				2758.044
43	Ca-2	|		55.000	-0.466535	ppb	24.052	155.263				65.000
49	Ti	|		151.112	0.067689	ppb	11.103	47.101				118.889
52	Cr	|		10750.711	-0.228551	ppb	0.753	8.139				12666.724
55	Mn	|		722.241	0.019249	ppb	6.549	17.127				475.563
57	Fe	|		12223.006	-6.541508	ppb	2.110	10.500				14389.466
45	Sc-IS	>		801195.637		ppb		0.505				817473.585
66	Zn	|		1044.483	-0.026641	ppb	7.615	206.079				1103.376
86	Sr	|		25.715	0.010869	ppb	132.557	142.771				1.870
65	Cu	|		161.633	0.036724	ppb	22.979	44.872				81.983
69	Ga-IS	|		287539.685		ppb		1.277				280345.243
95	Mo	|		687.794	0.297588	ppb	10.906	11.621				52.222
115	In-IS	>		159485.298		ppb		1.070				167628.439
111	Cd	|		44.111	0.017624	ppb	22.772	33.268				13.224
118	Sn	|		6007.930	0.889132	ppb	2.701	4.451				1115.599
121	Sb	|		5250.966	0.880506	ppb	4.479	5.335				203.335
135	Ba	|		148875.137	102.867530	ppb	1.343	0.463				36.667
165	Ho-IS	|		156547.756		ppb		2.037				161235.197
159	Tb-IS	>		186129.506		ppb		2.140				193207.036
207	Pb	|		426.669	0.019949	ppb	7.694	11.528				86.667
203	Tl	|		126.667	0.021418	ppb	13.925	12.951				7.778
209	Bi-IS	|		100635.648		ppb		2.969				105080.785
51	V	|		4.444	0.012742	ppb	43.301	42.843				0.000
59	Co	|		26.667	0.013424	ppb	25.000	41.492				11.111
60	Ni	|		90.000	0.057160	ppb	20.621	37.158				41.111
75	As	|		599.682	-0.020250	ppb	5.665	495.152				621.800
71	Ga-ISK	>		42856.410		ppb		0.408				43972.179
82	Se-2	|		3.898	-0.007232	ppb	44.607	782.020				4.232
107	Ag-1	|		200709.048	51.933603	ppb	0.736	0.374				45.556
115	In-ISK	|		46654.909		ppb		1.139				47538.206
45	Sc-ISK	>		108164.611		ppb		0.368				109157.608
23	Na	|		422184.454	1007.304746	ppb	0.770	0.887				1463.408
39	K	|		848964.785	1021.994094	ppb	1.494	1.488				94331.568
24	Mg	|		1263.390	2.740775	ppb	14.051	14.814				71.667
159	Tb-ISK	|		100135.069		ppb		0.815				99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Wednesday, December 11, 2019 11:39:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICB-23446.018

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		23174.337		ppb		0.535		24972.922
9	Be	|		17.778	0.007621	ppb	10.825	21.344		10.000
10	B	|		3714.928	0.549638	ppb	3.313	47.861		3700.479
27	Al	|		4298.425	0.332099	ppb	1.846	6.843		2758.044
43	Ca-2	|		71.667	0.525866	ppb	17.558	124.156		65.000
49	Ti	|		137.778	0.048317	ppb	24.234	133.030		118.889
52	Cr	|		10921.952	-0.165511	ppb	1.606	7.660		12666.724
55	Mn	|		757.798	0.023431	ppb	2.794	4.918		475.563
57	Fe	|		12317.535	-5.087748	ppb	3.727	23.133		14389.466
45	Sc-IS	|>		780591.735		ppb	1.055			817473.585
66	Zn	|		963.366	-0.066512	ppb	9.291	100.075		1103.376
86	Sr	|		38.026	0.017011	ppb	45.779	48.197		1.870
65	Cu	|		156.293	0.036180	ppb	10.676	19.305		81.983
69	Ga-IS	|		267332.701		ppb	0.811			280345.243
95	Mo	|		367.783	0.152458	ppb	9.258	9.545		52.222
115	In-IS	|>		159352.131		ppb	3.564			167628.439
111	Cd	|		29.228	0.009142	ppb	57.060	95.897		13.224
118	Sn	|		3617.125	0.460734	ppb	3.047	8.891		1115.599
121	Sb	|		2460.212	0.395589	ppb	4.936	8.426		203.335
135	Ba	|		86.667	0.036048	ppb	13.868	28.087		36.667
165	Ho-IS	|		153587.137		ppb	2.651			161235.197
159	Tb-IS	|>		184426.583		ppb	2.333			193207.036
207	Pb	|		295.557	0.012496	ppb	7.922	14.172		86.667
203	Tl	|		86.667	0.014449	ppb	30.528	35.503		7.778
209	Bi-IS	|		99885.899		ppb	2.431			105080.785
51	V	|		10.000	0.028824	ppb	88.192	88.190		0.000
59	Co	|		23.333	0.010753	ppb	28.571	54.373		11.111
60	Ni	|		43.333	0.004052	ppb	40.704	501.218		41.111
75	As	|		584.453	-0.057311	ppb	4.470	121.836		621.800
71	Ga-ISK	|>		42601.208		ppb	1.061			43972.179
82	Se-2	|		3.549	-0.017463	ppb	65.454	436.495		4.232
107	Ag-1	|		296.670	0.065749	ppb	5.149	5.875		45.556
115	In-ISK	|		48229.893		ppb	1.800			47538.206
45	Sc-ISK	|>		106810.149		ppb	2.136			109157.608
23	Na	|		2406.870	2.370276	ppb	5.763	19.540		1463.408
39	K	|		94016.132	2.392552	ppb	0.381	134.107		94331.568
24	Mg	|		285.003	0.499476	ppb	17.805	21.940		71.667
159	Tb-ISK	|		98313.149		ppb	0.892			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 11:42:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.019

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	22438.724		ppb		1.903		24972.922
9	Be	|	110218.028	101.898097	ppb	1.142	2.314		10.000
10	B	|	88275.289	256.749559	ppb	1.782	2.209		3700.479
27	Al	|	518675.301	102.597740	ppb	2.596	3.233		2758.044
43	Ca-2	|	92097.595	5070.103820	ppb	0.821	0.544		65.000
49	Ti	|	50777.928	101.557129	ppb	3.332	2.887		118.889
52	Cr	|	740349.039	102.398711	ppb	0.719	1.753		12666.724
55	Mn	|	1255984.354	96.610187	ppb	1.571	2.459		475.563
57	Fe	|	1405272.864	4952.976738	ppb	2.463	2.559		14389.466
45	Sc-IS	>	783005.674		ppb	1.186			817473.585
66	Zn	|	141679.120	103.439464	ppb	0.846	0.656		1103.376
86	Sr	|	219569.376	102.733260	ppb	1.887	3.051		1.870
65	Cu	|	220319.958	101.982188	ppb	0.734	1.747		81.983
69	Ga-IS	|	277450.516		ppb	2.464			280345.243
95	Mo	|	208031.538	99.501209	ppb	0.314	1.222		52.222
115	In-IS	>	155585.648		ppb	2.372			167628.439
111	Cd	|	175464.022	100.318257	ppb	1.363	1.125		13.224
118	Sn	|	534284.712	98.247758	ppb	1.519	1.952		1115.599
121	Sb	|	561788.939	100.241393	ppb	0.471	2.668		203.335
135	Ba	|	138626.091	98.211280	ppb	1.262	1.861		36.667
165	Ho-IS	|	155858.833		ppb	4.244			161235.197
159	Tb-IS	>	183593.403		ppb	3.955			193207.036
207	Pb	|	1731149.987	101.966228	ppb	1.206	3.438		86.667
203	Tl	|	565871.357	103.287717	ppb	2.345	2.031		7.778
209	Bi-IS	|	95653.620		ppb	0.597			105080.785
51	V	|	34904.822	102.749087	ppb	1.832	3.007		0.000
59	Co	|	116075.284	100.994336	ppb	1.447	2.947		11.111
60	Ni	|	84879.198	99.607511	ppb	0.783	1.789		41.111
75	As	|	31930.400	101.440658	ppb	0.559	1.272		621.800
71	Ga-ISK	>	41798.849		ppb	1.574			43972.179
82	Se-2	|	3134.217	103.822503	ppb	1.998	2.835		4.232
107	Ag-1	|	383263.926	101.722456	ppb	1.544	3.056		45.556
115	In-ISK	|	47426.571		ppb	2.282			47538.206
45	Sc-ISK	>	107722.435		ppb	1.205			109157.608
23	Na	|	2135514.201	5131.083306	ppb	0.939	2.125		1463.408
39	K	|	3897254.968	5167.811239	ppb	0.620	1.409		94331.568
24	Mg	|	2225599.681	5137.664413	ppb	1.017	2.195		71.667
159	Tb-ISK	|	99924.285		ppb	1.189			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Wednesday, December 11, 2019 11:44:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.020

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		22229.506		ppb		1.455		24972.922
9	Be	|		32.222	0.021415	ppb	11.945	18.557		10.000
10	B	|		3671.583	0.553846	ppb	1.563	8.520		3700.479
27	Al	|		2614.684	0.002450	ppb	5.768	1144.599		2758.044
43	Ca-2	|		75.000	0.766861	ppb	23.094	127.886		65.000
49	Ti	|		137.778	0.052367	ppb	10.910	64.665		118.889
52	Cr	|		10344.856	-0.229279	ppb	1.687	6.947		12666.724
55	Mn	|		672.238	0.017469	ppb	1.741	7.953		475.563
57	Fe	|		13226.121	-1.263703	ppb	1.988	75.784		14389.466
45	Sc-IS	>		771287.591		ppb	1.151			817473.585
66	Zn	|		755.576	-0.213500	ppb	9.067	21.122		1103.376
86	Sr	|		30.248	0.013498	ppb	31.339	32.518		1.870
65	Cu	|		140.381	0.029660	ppb	16.653	37.767		81.983
69	Ga-IS	|		261300.923		ppb	2.003			280345.243
95	Mo	|		2476.882	1.179427	ppb	4.723	5.873		52.222
115	In-IS	>		156498.040		ppb	1.925			167628.439
111	Cd	|		47.021	0.019672	ppb	15.869	19.828		13.224
118	Sn	|		10101.348	1.659530	ppb	0.871	2.279		1115.599
121	Sb	|		1506.746	0.233739	ppb	4.709	6.733		203.335
135	Ba	|		57.778	0.016589	ppb	21.842	53.881		36.667
165	Ho-IS	|		152303.226		ppb	1.411			161235.197
159	Tb-IS	>		183066.840		ppb	1.714			193207.036
207	Pb	|		838.899	0.044655	ppb	6.943	6.825		86.667
203	Tl	|		187.779	0.033037	ppb	17.423	18.698		7.778
209	Bi-IS	|		97854.073		ppb	1.865			105080.785
51	V	|		16.667	0.049947	ppb	20.000	19.335		0.000
59	Co	|		42.222	0.028162	ppb	24.119	29.845		11.111
60	Ni	|		50.000	0.014114	ppb	29.059	127.593		41.111
75	As	|		608.195	0.094030	ppb	0.716	49.657		621.800
71	Ga-ISK	>		41005.444		ppb	1.644			43972.179
82	Se-2	|		4.242	0.010026	ppb	13.565	194.703		4.232
107	Ag-1	|		517.787	0.128586	ppb	0.983	1.706		45.556
115	In-ISK	|		47293.084		ppb	1.303			47538.206
45	Sc-ISK	>		106735.157		ppb	2.220			109157.608
23	Na	|		2746.931	3.197577	ppb	2.583	9.948		1463.408
39	K	|		97450.151	7.187466	ppb	0.791	42.628		94331.568
24	Mg	|		695.017	1.456136	ppb	0.719	1.677		71.667
159	Tb-ISK	|		98545.485		ppb	2.053			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Wednesday, December 11, 2019 11:47:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICSA-30518.021

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20899.728		ppb			2.615			24972.922
9	Be	|		12.222	0.002380	ppb	41.660	204.866				10.000
10	B	|		3852.742	0.808088	ppb	3.861	85.164				3700.479
27	Al	|		49874903.221	9800.357148	ppb	2.764	2.743				2758.044
43	Ca-2	|		552464.194	30086.673533	ppb	2.515	3.400				65.000
49	Ti	|		105028.035	207.963967	ppb	1.167	3.271				118.889
52	Cr	|		12874.692	0.083564	ppb	3.340	69.216				12666.724
55	Mn	|		4917.513	0.338954	ppb	1.794	2.041				475.563
57	Fe	|		7002873.118	24593.657340	ppb	0.402	2.012				14389.466
45	Sc-IS	>		792208.741		ppb	2.222					817473.585
66	Zn	|		1578.976	0.370609	ppb	1.962	1.521				1103.376
86	Sr	|		890.373	0.410991	ppb	0.758	2.841				1.870
65	Cu	|		217.910	0.063335	ppb	4.548	4.404				81.983
69	Ga-IS	|		261947.622		ppb	0.731					280345.243
95	Mo	|		434110.202	205.340909	ppb	1.453	3.701				52.222
115	In-IS	>		157343.029		ppb	2.482					167628.439
111	Cd	|		-82.718	-0.054007	ppb	106.093	91.483				13.224
118	Sn	|		4654.092	0.657048	ppb	3.290	3.385				1115.599
121	Sb	|		1592.311	0.247515	ppb	4.645	7.521				203.335
135	Ba	|		296.670	0.184392	ppb	17.003	22.221				36.667
165	Ho-IS	|		160447.578		ppb	2.846					161235.197
159	Tb-IS	>		192450.659		ppb	3.085					193207.036
207	Pb	|		745.563	0.037031	ppb	0.931	2.415				86.667
203	Tl	|		116.667	0.018918	ppb	13.093	10.776				7.778
209	Bi-IS	|		96971.348		ppb	0.588					105080.785
51	V	|		28.889	0.087023	ppb	17.625	19.441				0.000
59	Co	|		93.334	0.073753	ppb	7.143	8.562				11.111
60	Ni	|		305.559	0.320283	ppb	11.665	12.575				41.111
75	As	|		619.493	0.136170	ppb	3.999	93.385				621.800
71	Ga-ISK	>		40934.136		ppb	2.149					43972.179
82	Se-2	|		0.518	-0.114278	ppb	1135.672	174.341				4.232
107	Ag-1	|		266.669	0.060840	ppb	6.960	10.295				45.556
115	In-ISK	|		46270.629		ppb	1.352					47538.206
45	Sc-ISK	>		106471.023		ppb	2.604					109157.608
23	Na	|		10375911.025	25242.672987	ppb	1.466	2.613				1463.408
39	K	|		7591942.800	10312.880486	ppb	1.490	3.502				94331.568
24	Mg	|		4211404.680	9840.521133	ppb	2.263	4.059				71.667
159	Tb-ISK	|		99861.828		ppb	0.669					99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Wednesday, December 11, 2019 11:50:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICSAB-30517.022

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20928.654		ppb			1.343			24972.922
9	Be	|		13.333	0.003111	ppb	75.000	289.791				10.000
10	B	|		3779.389	0.417921	ppb	1.656	92.782				3700.479
27	Al	|		49686028.768	9620.729663	ppb	0.278	1.690				2758.044
43	Ca-2	|		548261.281	29414.953801	ppb	0.741	1.207				65.000
49	Ti	|		103614.407	202.110596	ppb	0.502	2.089				118.889
52	Cr	|		159734.818	20.173595	ppb	1.197	2.981				12666.724
55	Mn	|		256025.358	19.149707	ppb	1.655	1.106				475.563
57	Fe	|		6773851.339	23438.059444	ppb	0.318	2.130				14389.466
45	Sc-IS	>		803981.553		ppb	1.898					817473.585
66	Zn	|		14921.122	9.914296	ppb	0.747	2.301				1103.376
86	Sr	|		912.893	0.415189	ppb	4.004	4.767				1.870
65	Cu	|		43393.808	19.537169	ppb	0.984	2.833				81.983
69	Ga-IS	|		264904.124		ppb	1.925					280345.243
95	Mo	|		438637.984	204.382472	ppb	0.560	2.011				52.222
115	In-IS	>		163038.564		ppb	0.810					167628.439
111	Cd	|		18070.367	9.851891	ppb	1.786	2.193				13.224
118	Sn	|		2553.562	0.258297	ppb	6.030	11.821				1115.599
121	Sb	|		1237.831	0.177092	ppb	5.155	6.224				203.335
135	Ba	|		325.559	0.196137	ppb	13.363	15.728				36.667
165	Ho-IS	|		163070.116		ppb	1.977					161235.197
159	Tb-IS	>		193698.003		ppb	2.020					193207.036
207	Pb	|		603.338	0.028807	ppb	3.361	2.799				86.667
203	Tl	|		98.889	0.015696	ppb	27.246	27.224				7.778
209	Bi-IS	|		98142.763		ppb	2.421					105080.785
51	V	|		7248.507	21.426038	ppb	3.914	7.279				0.000
59	Co	|		23024.096	20.097921	ppb	1.264	5.027				11.111
60	Ni	|		17129.155	20.126020	ppb	2.162	2.715				41.111
75	As	|		3903.375	10.770843	ppb	2.338	6.719				621.800
71	Ga-ISK	>		41689.693		ppb	3.905					43972.179
82	Se-2	|		305.225	9.998253	ppb	10.691	7.387				4.232
107	Ag-1	|		19132.809	5.085328	ppb	2.394	5.309				45.556
115	In-ISK	|		47719.850		ppb	1.477					47538.206
45	Sc-ISK	>		106209.001		ppb	1.917					109157.608
23	Na	|		10148031.584	24751.182329	ppb	2.469	4.066				1463.408
39	K	|		7408108.495	10082.612072	ppb	0.894	2.507				94331.568
24	Mg	|		4105945.511	9612.282070	ppb	1.588	0.364				71.667
159	Tb-ISK	|		101176.362		ppb	0.636					99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 11:53:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\b.023

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	21704.253		ppb	0.553		24972.922
9	Be	11.111	0.001300	ppb	17.321	142.758	10.000
10	B	3282.600	-0.918673	ppb	4.961	47.215	3700.479
27	Al	8323.540	1.108522	ppb	5.318	6.826	2758.044
43	Ca-2	186.668	6.728349	ppb	6.741	11.129	65.000
49	Ti	210.002	0.187858	ppb	11.984	28.958	118.889
52	Cr	10731.811	-0.215532	ppb	3.557	27.515	12666.724
55	Mn	773.354	0.023712	ppb	4.800	11.700	475.563
57	Fe	15977.822	7.118691	ppb	2.319	27.106	14389.466
45	Sc-IS	> 792886.587		ppb	1.135		817473.585
66	Zn	5824.522	3.454479	ppb	4.179	5.871	1103.376
86	Sr	14.105	0.005637	ppb	109.383	126.088	1.870
65	Cu	132.517	0.024228	ppb	11.515	28.566	81.983
69	Ga-IS	263881.619		ppb	0.723		280345.243
95	Mo	4143.936	1.934868	ppb	6.795	8.002	52.222
115	In-IS	> 159338.170		ppb	4.981		167628.439
111	Cd	23.520	0.006134	ppb	22.825	48.806	13.224
118	Sn	2021.254	0.174204	ppb	6.203	23.998	1115.599
121	Sb	588.901	0.069022	ppb	2.552	4.726	203.335
135	Ba	34.444	0.000067	ppb	40.290164	12.710	36.667
165	Ho-IS	156636.039		ppb	3.976		161235.197
159	Tb-IS	> 188922.941		ppb	3.169		193207.036
207	Pb	610.005	0.030081	ppb	2.382	6.303	86.667
203	Tl	48.889	0.007291	ppb	23.945	25.521	7.778
209	Bi-IS	100671.346		ppb	2.051		105080.785
51	V	7.778	0.022911	ppb	98.974	99.528	0.000
59	Co	26.667	0.013846	ppb	54.486	88.580	11.111
60	Ni	58.889	0.023114	ppb	13.072	42.061	41.111
75	As	604.325	0.037443	ppb	7.006	393.063	621.800
71	Ga-ISK	> 41928.111		ppb	1.127		43972.179
82	Se-2	5.229	0.037347	ppb	203.164	935.012	4.232
107	Ag-1	116.667	0.019324	ppb	24.412	37.233	45.556
115	In-ISK	48271.407		ppb	2.036		47538.206
45	Sc-ISK	> 105985.084		ppb	1.451		109157.608
23	Na	5601.101	10.218186	ppb	7.021	10.012	1463.408
39	K	94069.816	3.445108	ppb	0.246	64.302	94331.568
24	Mg	1108.377	2.440204	ppb	16.293	18.404	71.667
159	Tb-ISK	98719.289		ppb	1.303		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 11:56:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.024

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		21473.906		ppb		0.906		24972.922
9	Be	|		6.667	-0.002859	ppb	100.000	209.652		10.000
10	B	|		3269.263	-1.128630	ppb	1.022	12.346		3700.479
27	Al	|		5340.998	0.504924	ppb	0.687	0.829		2758.044
43	Ca-2	|		131.667	3.601244	ppb	25.849	49.396		65.000
49	Ti	|		166.668	0.095966	ppb	8.718	31.042		118.889
52	Cr	|		11014.244	-0.203371	ppb	0.240	4.992		12666.724
55	Mn	|		736.686	0.019939	ppb	5.986	16.008		475.563
57	Fe	|		12735.678	-5.077266	ppb	2.915	25.644		14389.466
45	Sc-IS	>		807062.451		ppb	0.511			817473.585
66	Zn	|		5850.087	3.397454	ppb	1.020	1.219		1103.376
86	Sr	|		20.772	0.008582	ppb	55.070	60.433		1.870
65	Cu	|		140.559	0.026786	ppb	7.622	18.339		81.983
69	Ga-IS	|		265883.804		ppb	0.784			280345.243
95	Mo	|		931.142	0.408138	ppb	7.375	7.332		52.222
115	In-IS	>		160906.625		ppb	2.777			167628.439
111	Cd	|		19.156	0.003673	ppb	49.623	148.741		13.224
118	Sn	|		1796.780	0.129581	ppb	5.661	17.805		1115.599
121	Sb	|		503.342	0.053359	ppb	15.658	28.476		203.335
135	Ba	|		37.778	0.001685	ppb	22.205	299.544		36.667
165	Ho-IS	|		155606.848		ppb	3.375			161235.197
159	Tb-IS	>		184760.541		ppb	3.951			193207.036
207	Pb	|		635.561	0.032215	ppb	15.597	13.844		86.667
203	Tl	|		33.333	0.004707	ppb	36.056	47.932		7.778
209	Bi-IS	|		99470.669		ppb	0.668			105080.785
51	V	|		4.444	0.012963	ppb	43.301	40.230		0.000
59	Co	|		22.222	0.010230	ppb	22.913	50.695		11.111
60	Ni	|		60.000	0.024566	ppb	33.333	94.946		41.111
75	As	|		595.220	0.007694	ppb	8.134	1240.597		621.800
71	Ga-ISK	>		41898.112		ppb	4.814			43972.179
82	Se-2	|		4.237	0.007446	ppb	49.104	929.137		4.232
107	Ag-1	|		71.111	0.007441	ppb	21.651	62.191		45.556
115	In-ISK	|		47426.717		ppb	0.877			47538.206
45	Sc-ISK	>		105182.496		ppb	1.119			109157.608
23	Na	|		3008.651	3.935756	ppb	5.838	10.951		1463.408
39	K	|		92797.163	2.657535	ppb	1.961	116.313		94331.568
24	Mg	|		368.338	0.708162	ppb	11.545	15.318		71.667
159	Tb-ISK	|		98626.781		ppb	2.716			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Wednesday, December 11, 2019 11:58:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICVL-210771.025

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	22329.663		ppb	1.551		24972.922
9	Be	1153.380	1.026638	ppb	2.023	3.130	10.000
10	B	20168.673	48.595574	ppb	1.036	0.070	3700.479
27	Al	267605.508	51.130848	ppb	0.780	1.358	2758.044
43	Ca-2	986.701	49.317633	ppb	9.070	8.587	65.000
49	Ti	684.461	1.103880	ppb	5.539	6.356	118.889
52	Cr	18661.072	0.841866	ppb	2.018	6.608	12666.724
55	Mn	13732.154	0.991003	ppb	2.118	3.314	475.563
57	Fe	26782.862	43.509086	ppb	0.996	2.794	14389.466
45	Sc-IS	> 806417.678		ppb	1.080		817473.585
66	Zn	8479.183	5.279388	ppb	1.115	2.467	1103.376
86	Sr	2239.265	1.016106	ppb	3.377	2.580	1.870
65	Cu	2385.317	1.035948	ppb	4.813	4.844	81.983
69	Ga-IS	269134.314		ppb	1.887		280345.243
95	Mo	2653.580	1.208774	ppb	3.088	3.599	52.222
115	In-IS	> 163103.253		ppb	1.555		167628.439
111	Cd	1826.768	0.989826	ppb	6.408	7.752	13.224
118	Sn	6759.377	0.997219	ppb	0.584	2.512	1115.599
121	Sb	6054.616	0.997078	ppb	1.208	2.822	203.335
135	Ba	1485.633	0.980960	ppb	8.752	10.562	36.667
165	Ho-IS	156535.168		ppb	0.288		161235.197
159	Tb-IS	> 192015.586		ppb	2.227		193207.036
207	Pb	17834.382	0.998937	ppb	1.555	1.997	86.667
203	Tl	5707.808	0.994160	ppb	3.390	1.177	7.778
209	Bi-IS	100980.099		ppb	0.866		105080.785
51	V	354.449	1.032770	ppb	7.998	10.069	0.000
59	Co	1120.044	0.953873	ppb	4.092	1.850	11.111
60	Ni	826.691	0.913624	ppb	3.847	3.400	41.111
75	As	953.004	1.141172	ppb	7.902	26.888	621.800
71	Ga-ISK	> 42275.816		ppb	2.251		43972.179
82	Se-2	35.599	1.033656	ppb	3.238	1.629	4.232
107	Ag-1	3872.747	1.005342	ppb	2.798	5.075	45.556
115	In-ISK	47473.962		ppb	1.754		47538.206
45	Sc-ISK	> 107163.860		ppb	1.797		109157.608
23	Na	22098.751	49.938367	ppb	2.051	2.585	1463.408
39	K	128252.080	48.679499	ppb	1.284	2.341	94331.568
24	Mg	21699.803	50.197434	ppb	1.103	2.515	71.667
159	Tb-ISK	100928.643		ppb	1.201		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-37643_1-A

Autosampler Position: 301

Sample Date/Time: Wednesday, December 11, 2019 12:01:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\MB 570-37643_1-A.026

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		22045.887		ppb				0.405		24972.922
9	Be	|		8.889	-0.000776	ppb		57.282	592.759			10.000
10	B	|		3430.412	-0.536024	ppb		1.703	75.704			3700.479
27	Al	|		3896.089	0.234064	ppb		7.555	17.212			2758.044
43	Ca-2	|		66.667	0.165992	ppb		15.613	293.358			65.000
49	Ti	|		155.556	0.077526	ppb		11.802	43.031			118.889
52	Cr	|		11496.847	-0.119255	ppb		1.623	43.900			12666.724
55	Mn	|		475.563	0.000827	ppb		7.363	235.991			475.563
57	Fe	|		12295.290	-6.094645	ppb		1.764	29.271			14389.466
45	Sc-IS	>		798109.195		ppb		2.335				817473.585
66	Zn	|		756.687	-0.231154	ppb		1.588	5.907			1103.376
86	Sr	|		11.833	0.004486	ppb		148.033	177.914			1.870
65	Cu	|		98.533	0.008402	ppb		7.149	36.068			81.983
69	Ga-IS	|		265010.232		ppb		1.401				280345.243
95	Mo	|		398.895	0.163762	ppb		14.017	18.949			52.222
115	In-IS	>		157411.438		ppb		2.824				167628.439
111	Cd	|		20.273	0.004353	ppb		50.766	129.524			13.224
118	Sn	|		1628.982	0.106248	ppb		8.374	27.949			1115.599
121	Sb	|		395.561	0.036104	ppb		11.503	22.011			203.335
135	Ba	|		27.778	-0.004722	ppb		27.713	104.725			36.667
165	Ho-IS	|		154239.459		ppb		1.791				161235.197
159	Tb-IS	>		186960.000		ppb		1.213				193207.036
207	Pb	|		171.112	0.005048	ppb		6.262	14.501			86.667
203	Tl	|		33.333	0.004617	ppb		17.321	21.259			7.778
209	Bi-IS	|		97673.899		ppb		0.933				105080.785
51	V	|		3.333	0.009677	ppb		100.000	100.821			0.000
59	Co	|		10.000	-0.000607	ppb		100.000	1426.149			11.111
60	Ni	|		35.556	-0.004603	ppb		23.593	194.634			41.111
75	As	|		592.477	-0.011615	ppb		3.881	444.303			621.800
71	Ga-ISK	>		42149.885		ppb		2.061				43972.179
82	Se-2	|		3.560	-0.018302	ppb		127.125	800.670			4.232
107	Ag-1	|		67.778	0.006331	ppb		7.512	15.290			45.556
115	In-ISK	|		47052.574		ppb		1.351				47538.206
45	Sc-ISK	>		106196.622		ppb		1.080				109157.608
23	Na	|		1843.452	1.023533	ppb		1.253	2.691			1463.408
39	K	|		91679.958	-0.103754	ppb		1.600	3244.413			94331.568
24	Mg	|		263.336	0.453441	ppb		25.285	34.494			71.667
159	Tb-ISK	|		98386.978		ppb		0.564				99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-37651_1-A

Autosampler Position: 302

Sample Date/Time: Wednesday, December 11, 2019 12:04:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\MB 570-37651_1-A.027

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	22019.184		ppb	2.221		24972.922
9	Be	5.556	-0.003885	ppb	34.641	43.898	10.000
10	B	3478.201	-0.531169	ppb	2.410	54.479	3700.479
27	Al	3581.560	0.164434	ppb	3.171	12.954	2758.044
43	Ca-2	88.334	1.287641	ppb	48.802	180.271	65.000
49	Ti	145.556	0.054669	ppb	28.265	148.978	118.889
52	Cr	11604.712	-0.125477	ppb	0.857	13.670	12666.724
55	Mn	480.008	0.000730	ppb	7.048	362.316	475.563
57	Fe	12291.954	-6.683568	ppb	1.882	8.272	14389.466
45	Sc-IS	> 808420.733		ppb	0.621		817473.585
66	Zn	747.797	-0.244577	ppb	3.163	7.596	1103.376
86	Sr	2.470	0.000273	ppb	744.650	3062.391	1.870
65	Cu	86.329	0.002367	ppb	6.645	118.050	81.983
69	Ga-IS	264895.713		ppb	0.835		280345.243
95	Mo	251.113	0.092441	ppb	3.832	5.559	52.222
115	In-IS	> 161914.554		ppb	1.583		167628.439
111	Cd	15.028	0.001176	ppb	83.923	576.173	13.224
118	Sn	1456.741	0.067215	ppb	4.049	19.349	1115.599
121	Sb	318.892	0.021028	ppb	13.802	36.841	203.335
135	Ba	33.333	-0.001385	ppb	30.000	498.461	36.667
165	Ho-IS	155252.149		ppb	3.972		161235.197
159	Tb-IS	> 186504.291		ppb	1.966		193207.036
207	Pb	126.667	0.002473	ppb	29.656	83.186	86.667
203	Tl	41.111	0.006070	ppb	44.656	55.857	7.778
209	Bi-IS	99827.588		ppb	0.606		105080.785
51	V	3.333	0.009604	ppb	100.000	99.386	0.000
59	Co	14.444	0.003132	ppb	58.076	224.752	11.111
60	Ni	33.333	-0.007267	ppb	45.826	247.289	41.111
75	As	621.173	0.065492	ppb	2.309	70.702	621.800
71	Ga-ISK	> 42475.278		ppb	1.001		43972.179
82	Se-2	2.883	-0.038835	ppb	125.536	305.253	4.232
107	Ag-1	48.889	0.001264	ppb	48.372	488.478	45.556
115	In-ISK	47582.575		ppb	2.405		47538.206
45	Sc-ISK	> 106357.841		ppb	1.475		109157.608
23	Na	1698.435	0.665782	ppb	5.681	41.705	1463.408
39	K	92302.824	0.561458	ppb	1.338	520.824	94331.568
24	Mg	211.668	0.332286	ppb	19.094	30.209	71.667
159	Tb-ISK	98742.754		ppb	0.604		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-37904_1-A @20

Autosampler Position: 303

Sample Date/Time: Wednesday, December 11, 2019 12:07:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\MB 570-37904_1-A @20.028

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	22363.048		ppb	1.371		24972.922
9	Be	14.444	0.004192	ppb	26.647	85.338	10.000
10	B	3428.189	-0.609825	ppb	2.238	19.843	3700.479
27	Al	3550.442	0.163433	ppb	4.313	22.361	2758.044
43	Ca-2	75.000	0.610255	ppb	37.119	252.203	65.000
49	Ti	146.667	0.058350	ppb	6.818	28.321	118.889
52	Cr	11932.760	-0.069388	ppb	1.634	52.002	12666.724
55	Mn	464.452	-0.000180	ppb	16.959	3339.420	475.563
57	Fe	12330.875	-6.248145	ppb	0.825	10.898	14389.466
45	Sc-IS	> 802849.241		ppb	1.060		817473.585
66	Zn	980.034	-0.074128	ppb	3.245	39.764	1103.376
86	Sr	6.239	0.002074	ppb	417.989	577.980	1.870
65	Cu	111.922	0.014180	ppb	1.658	3.521	81.983
69	Ga-IS	270268.374		ppb	1.100		280345.243
95	Mo	211.113	0.074567	ppb	0.912	0.585	52.222
115	In-IS	> 158969.565		ppb	1.645		167628.439
111	Cd	18.446	0.003325	ppb	45.476	144.182	13.224
118	Sn	1294.503	0.042722	ppb	5.255	32.659	1115.599
121	Sb	312.226	0.020802	ppb	10.800	24.864	203.335
135	Ba	24.444	-0.007133	ppb	15.746	40.607	36.667
165	Ho-IS	156570.196		ppb	1.920		161235.197
159	Tb-IS	> 189522.492		ppb	1.864		193207.036
207	Pb	107.778	0.001316	ppb	23.213	117.244	86.667
203	Tl	17.778	0.001787	ppb	28.641	48.325	7.778
209	Bi-IS	100388.165		ppb	0.699		105080.785
51	V	10.000	0.029552	ppb	33.333	35.615	0.000
59	Co	25.556	0.012881	ppb	52.715	88.054	11.111
60	Ni	48.889	0.011387	ppb	14.193	63.798	41.111
75	As	611.154	0.061271	ppb	9.628	254.686	621.800
71	Ga-ISK	> 41844.552		ppb	2.445		43972.179
82	Se-2	4.903	0.031899	ppb	113.679	597.096	4.232
107	Ag-1	36.667	-0.001771	ppb	36.364	196.692	45.556
115	In-ISK	47549.519		ppb	2.319		47538.206
45	Sc-ISK	> 107160.564		ppb	2.361		109157.608
23	Na	1573.420	0.334334	ppb	8.906	117.079	1463.408
39	K	92164.154	-0.532667	ppb	1.327	847.666	94331.568
24	Mg	198.335	0.296189	ppb	13.885	18.039	71.667
159	Tb-ISK	99839.668		ppb	0.452		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 12:09:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.029

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	21697.576		ppb		0.511		24972.922
9	Be	|	111211.212	100.105200	ppb		0.680	1.414	10.000
10	B	|	85901.000	242.769330	ppb		3.217	4.440	3700.479
27	Al	|	526541.649	101.404203	ppb		0.693	1.569	2758.044
43	Ca-2	|	94108.981	5044.746656	ppb		1.010	1.154	65.000
49	Ti	|	52269.900	101.806161	ppb		0.926	1.363	118.889
52	Cr	|	752093.304	101.262937	ppb		1.032	1.202	12666.724
55	Mn	|	1272203.786	95.290930	ppb		1.409	2.740	475.563
57	Fe	|	1425558.860	4892.511429	ppb		0.290	2.225	14389.466
45	Sc-IS	>	804219.752		ppb		2.059		817473.585
66	Zn	|	144181.762	102.494874	ppb		0.959	1.159	1103.376
86	Sr	|	222425.573	101.330038	ppb		0.337	2.152	1.870
65	Cu	|	224391.841	101.125129	ppb		1.776	1.514	81.983
69	Ga-IS	|	279125.010		ppb		0.635		280345.243
95	Mo	|	211544.786	98.528040	ppb		0.238	1.842	52.222
115	In-IS	>	153344.738		ppb		2.207		167628.439
111	Cd	|	175524.052	101.836364	ppb		0.836	2.434	13.224
118	Sn	|	519806.988	96.940790	ppb		3.367	1.174	1115.599
121	Sb	|	567496.752	102.712726	ppb		1.249	1.080	203.335
135	Ba	|	139367.923	100.157351	ppb		2.559	1.538	36.667
165	Ho-IS	|	154031.565		ppb		4.641		161235.197
159	Tb-IS	>	184302.733		ppb		2.209		193207.036
207	Pb	|	1717270.427	100.698785	ppb		0.459	1.788	86.667
203	Tl	|	559615.977	101.718945	ppb		1.288	1.048	7.778
209	Bi-IS	|	96889.708		ppb		1.176		105080.785
51	V	|	35158.771	103.288642	ppb		1.150	1.471	0.000
59	Co	|	117842.966	102.318864	ppb		0.958	0.631	11.111
60	Ni	|	86763.809	101.625836	ppb		0.993	1.318	41.111
75	As	|	31769.346	100.726080	ppb		1.919	2.009	621.800
71	Ga-ISK	>	41874.621		ppb		1.172		43972.179
82	Se-2	|	3141.911	103.869587	ppb		1.889	1.770	4.232
107	Ag-1	|	385132.468	102.008222	ppb		0.460	0.879	45.556
115	In-ISK	|	47281.153		ppb		0.981		47538.206
45	Sc-ISK	>	108633.720		ppb		0.795		109157.608
23	Na	|	2100151.060	5003.189194	ppb		0.663	1.341	1463.408
39	K	|	3878104.374	5097.398354	ppb		1.485	1.879	94331.568
24	Mg	|	2187431.895	5006.416554	ppb		1.410	1.385	71.667
159	Tb-ISK	|	100576.167		ppb		1.151		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 12:13:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.030

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		22368.615		ppb				2.088		24972.922
9	Be	|		20.000	0.009440	ppb				28.868	53.688	10.000
10	B	|		3437.080	-0.411096	ppb				3.758	122.927	3700.479
27	Al	|		3878.305	0.239132	ppb				4.624	13.808	2758.044
43	Ca-2	|		138.334	4.125839	ppb				4.174	7.984	65.000
49	Ti	|		162.223	0.094031	ppb				15.961	53.574	118.889
52	Cr	|		11323.375	-0.127272	ppb				0.700	22.502	12666.724
55	Mn	|		768.910	0.023558	ppb				11.149	24.835	475.563
57	Fe	|		12750.132	-4.064768	ppb				1.262	11.827	14389.466
45	Sc-IS	>		789808.658		ppb				1.198		817473.585
66	Zn	|		5752.271	3.416518	ppb				5.624	6.136	1103.376
86	Sr	|		59.124	0.026492	ppb				48.060	48.958	1.870
65	Cu	|		121.756	0.019590	ppb				13.454	41.364	81.983
69	Ga-IS	|		264071.941		ppb				1.305		280345.243
95	Mo	|		924.475	0.414819	ppb				8.959	10.647	52.222
115	In-IS	>		159803.515		ppb				1.475		167628.439
111	Cd	|		42.503	0.016718	ppb				38.278	56.363	13.224
118	Sn	|		5274.309	0.755312	ppb				5.475	7.179	1115.599
121	Sb	|		468.897	0.047824	ppb				6.211	12.296	203.335
135	Ba	|		40.000	0.003429	ppb				30.046	231.951	36.667
165	Ho-IS	|		155865.813		ppb				1.534		161235.197
159	Tb-IS	>		183983.060		ppb				2.105		193207.036
207	Pb	|		768.897	0.040369	ppb				9.755	12.809	86.667
203	Tl	|		91.111	0.015257	ppb				14.786	17.124	7.778
209	Bi-IS	|		99215.640		ppb				1.862		105080.785
51	V	|		8.889	0.026084	ppb				78.062	77.685	0.000
59	Co	|		34.444	0.020841	ppb				33.986	50.225	11.111
60	Ni	|		72.222	0.038983	ppb				9.608	22.921	41.111
75	As	|		588.426	-0.007678	ppb				8.703	2206.335	621.800
71	Ga-ISK	>		41786.584		ppb				0.905		43972.179
82	Se-2	|		4.573	0.018509	ppb				176.978	1444.123	4.232
107	Ag-1	|		171.112	0.033924	ppb				6.262	7.970	45.556
115	In-ISK	|		46613.537		ppb				0.612		47538.206
45	Sc-ISK	>		105129.874		ppb				0.823		109157.608
23	Na	|		2128.492	1.770032	ppb				6.899	18.747	1463.408
39	K	|		95898.590	7.027405	ppb				0.703	9.488	94331.568
24	Mg	|		356.671	0.680371	ppb				4.506	5.855	71.667
159	Tb-ISK	|		98223.188		ppb				0.493		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Wednesday, December 11, 2019 10:01:02

File Name: Default.tun

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1247	2062	0.699	
Mg 24	23.985	24.025	4626	2062	0.705	
In 115	114.904	114.925	22804	2056	0.710	
U	238.050	238.025	47439	2047	0.704	

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:

Results Data Set: 191206H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Sample ID: icis 570-37330_1-a

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 12/6/2019 1:03:47 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: icis 570-37330_1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0002	0.0002	0.0002	1:04:51 PM	Yes
2		[0.00]	0.0001	-0.0010	0.0001	1:05:37 PM	Yes
Mean:		[0.00]	0.0002				
SD:		0.0000	0.0001				
%RSD:		0.00%	35.05				

Auto-zero performed.

=====
Sequence No.: 2

Sample ID: ic 570-37330_4-a

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 2

Date Collected: 12/6/2019 1:06:02 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: ic 570-37330_4-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0003	0.0013	0.0005	1:07:07 PM	Yes
2		[0.025]	0.0003	0.0005	0.0005	1:07:53 PM	Yes
Mean:		[0.025]	0.0003				
SD:		0.00000	0.0000				
%RSD:		0.00%	3.70				

Standard number 1 applied. [0.025]

Correlation Coef.: 1.000000 Slope: 0.01239 Intercept: 0.00000

=====
Sequence No.: 3

Sample ID: ic 570-37330_5-a

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 3

Date Collected: 12/6/2019 1:08:19 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: ic 570-37330_5-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0011	0.0041	0.0013	1:09:24 PM	Yes
2		[0.100]	0.0011	0.0037	0.0012	1:10:10 PM	Yes
Mean:		[0.100]	0.0011				
SD:		0.00000	0.0000				
%RSD:		0.00%	1.71				

Standard number 2 applied. [0.100]

Correlation Coef.: 0.999294 Slope: 0.01075 Intercept: 0.00002

=====
Sequence No.: 4

Sample ID: ic 570-37330_7-a

Autosampler Location: 4

Date Collected: 12/6/2019 1:10:36 PM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-37330_7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0112	0.0442	0.0114	1:11:42 PM	Yes
2		[1.000]	0.0113	0.0442	0.0114	1:12:28 PM	Yes
Mean:		[1.000]	0.0112				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.43				

Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999988 Slope: 0.01123 Intercept: -0.00000

=====

Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-37330_7-a Date Collected: 12/6/2019 1:12:54 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-37330_7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0224	0.0899	0.0226	1:14:00 PM	Yes
2		[2.000]	0.0226	0.0912	0.0228	1:14:46 PM	Yes
Mean:		[2.000]	0.0225				
SD:		0.00000	0.0002				
%RSD:		0.00%	0.70				

Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999996 Slope: 0.01126 Intercept: -0.00001

=====

Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-37330_8-a Date Collected: 12/6/2019 1:15:13 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-37330_8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0561	0.2280	0.0563	1:16:17 PM	Yes
2		[5.000]	0.0563	0.2316	0.0565	1:17:03 PM	Yes
Mean:		[5.000]	0.0562				
SD:		0.00000	0.0002				
%RSD:		0.00%	0.29				

Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999999 Slope: 0.01124 Intercept: 0.00000

=====

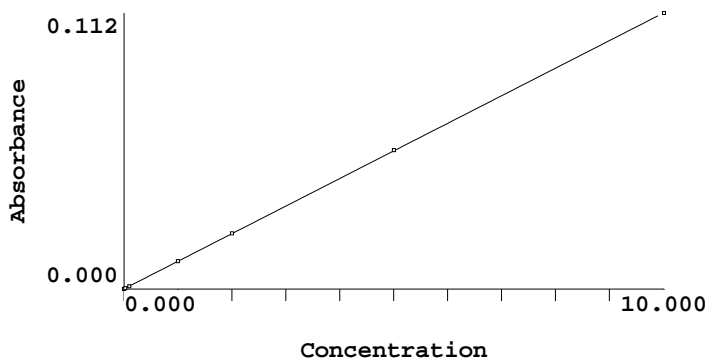
Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-37330_9-a Date Collected: 12/6/2019 1:17:29 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-37330_9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.1113	0.4640	0.1115	1:18:33 PM	Yes
2		[10.000]	0.1123	0.4711	0.1125	1:19:19 PM	Yes
Mean:		[10.000]	0.1118				
SD:		0.00000	0.0007				
%RSD:		0.00%	0.66				

Standard number 6 applied. [10.000]

Correlation Coef.: 0.999996 Slope: 0.01119 Intercept: 0.00006



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-37330_1-a	0.0000	0	-0.0050	0.00	35.05
ic 570-37330_4-a	0.0003	0.025	0.0226	0.00	3.70
ic 570-37330_5-a	0.0011	0.100	0.0921	0.00	1.71
ic 570-37330_7-a	0.0112	1.000	0.9990	0.00	0.43
ic 570-37330_7-a	0.0225	2.000	2.0080	0.00	0.70
ic 570-37330_8-a	0.0562	5.000	5.0194	0.00	0.29
ic 570-37330_9-a	0.1118	10.000	9.9889	0.00	0.66

Correlation Coef.: 0.999996 Slope: 0.01119 Intercept: 0.00006

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:
Results Data Set: 191206H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-37330_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 12/6/2019 1:20:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-37330_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.78	0.0535	0.2248	0.0536	1:21:27 PM	Yes
2	0.0048	4.79	0.0537	0.2257	0.0538	1:22:13 PM	Yes
Mean:	0.0048	4.78	0.0536				
SD:	0.00001	0.010	0.0001				
%RSD:	0.22%	0.22%	0.22				

QC value within limits for Hg 253.7 Recovery = 95.66%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-37330_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/6/2019 1:22:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-37330_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0041	0.0001	0.0017	0.0003	1:23:43 PM	Yes
2	-0.0000	-0.0048	0.0000	0.0000	0.0002	1:24:29 PM	Yes
Mean:	-0.0000	-0.0004	0.0001				
SD:	0.00001	0.00629	0.0001				
%RSD:	>999.9%	>999.9%	135.17				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-37330_12-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 12/6/2019 1:24:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-37330_12-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0006	0.278	0.0032	0.0132	0.0033	1:26:00 PM	Yes
2	0.0006	0.278	0.0032	0.0123	0.0033	1:26:46 PM	Yes
Mean:	0.0006	0.278	0.0032				
SD:	0.00000	0.0006	0.0000				
%RSD:	0.22%	0.22%	0.21				

=====
Sequence No.: 4
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Autosampler Location: 5
Date Collected: 12/6/2019 1:27:12 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.01	0.0226	0.0912	0.0227	1:28:18 PM	Yes
2	0.0020	2.03	0.0228	0.0922	0.0229	1:29:04 PM	Yes
Mean:	0.0020	2.02	0.0227				
SD:	0.00001	0.012	0.0001				
%RSD:	0.61%	0.61%	0.61				

QC value within limits for Hg 253.7 Recovery = 101.10%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-37330_11-a Date Collected: 12/6/2019 1:29:31 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0006	0.0001	0.0004	0.0002	1:30:36 PM	Yes
2	-0.0000	-0.0023	0.0000	0.0006	0.0002	1:31:21 PM	Yes
Mean:	-0.0000	-0.0008	0.0000				
SD:	0.00000	0.00203	0.0000				
%RSD:	239.35%	239.35%	48.43				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:
Results Data Set: 191206H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37361_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 12/6/2019 1:49:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37361_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0092	-0.0000	0.0003	0.0001	1:50:53 PM	Yes
2	-0.0000	-0.0073	-0.0000	0.0017	0.0001	1:51:38 PM	Yes
Mean:	-0.0000	-0.0082	-0.0000				
SD:	0.00000	0.00133	0.0000				
%RSD:	16.16%	16.16%	41.54				

=====
Sequence No.: 2
Sample ID: lcs 570-37361_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 11
Date Collected: 12/6/2019 1:52:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37361_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0066	-0.0000	0.0012	0.0001	1:53:11 PM	Yes
2	-0.0000	-0.0119	-0.0001	0.0007	0.0001	1:53:56 PM	Yes
Mean:	-0.0000	-0.0093	-0.0000				
SD:	0.00000	0.00374	0.0000				
%RSD:	40.38%	40.38%	88.52				

=====
Sequence No.: 3
Sample ID: lcsd 570-37361_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 12
Date Collected: 12/6/2019 1:54:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37361_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0022	0.0000	0.0016	0.0002	1:55:29 PM	Yes
2	-0.0000	-0.0017	0.0000	0.0024	0.0002	1:56:14 PM	Yes
Mean:	-0.0000	-0.0019	0.0000				
SD:	0.00000	0.00040	0.0000				
%RSD:	20.51%	20.51%	12.81				

=====
Sequence No.: 4
Sample ID: 570-14707-a-7-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 13
Date Collected: 12/6/2019 1:56:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14707-a-7-d Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0113	-0.0001	0.0011	0.0001	1:57:47 PM	Yes
2	-0.0000	-0.0098	-0.0001	0.0010	0.0001	1:58:34 PM	Yes
Mean:	-0.0000	-0.0106	-0.0001				
SD:	0.00000	0.00106	0.0000				
%RSD:	10.08%	10.08%	19.28				

=====

Sequence No.: 5 Autosampler Location: 14
 Sample ID: 570-14707-a-7-e ms Date Collected: 12/6/2019 1:59:01 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14707-a-7-e ms Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0149	-0.0001	0.0002	0.0000	2:00:05 PM	Yes
2	-0.0000	-0.0147	-0.0001	0.0004	0.0001	2:00:51 PM	Yes
Mean:	-0.0000	-0.0148	-0.0001				
SD:	0.00000	0.00007	0.0000				
%RSD:	0.49%	0.49%	0.74				

=====

Sequence No.: 6 Autosampler Location: 15
 Sample ID: 570-14707-a-7-f Date Collected: 12/6/2019 2:01:17 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14707-a-7-f Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0152	-0.0001	0.0002	0.0000	2:02:21 PM	Yes
2	-0.0000	-0.0153	-0.0001	-0.0003	0.0000	2:03:07 PM	Yes
Mean:	-0.0000	-0.0152	-0.0001				
SD:	0.00000	0.00005	0.0000				
%RSD:	0.31%	0.31%	0.46				

=====

Sequence No.: 7 Autosampler Location: 16
 Sample ID: 570-14707-a-14-d Date Collected: 12/6/2019 2:03:33 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14707-a-14-d Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0154	-0.0001	-0.0005	0.0000	2:04:37 PM	Yes
2	-0.0000	-0.0138	-0.0001	0.0006	0.0001	2:05:22 PM	Yes
Mean:	-0.0000	-0.0146	-0.0001				
SD:	0.00000	0.00116	0.0000				
%RSD:	7.92%	7.92%	12.08				

=====

Sequence No.: 8 Autosampler Location: 5
 Sample ID: ccv 570-37330_10-a Date Collected: 12/6/2019 2:05:48 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	------------------	----------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	2.01	0.0225	0.0933	0.0227	2:06:54 PM	Yes
2	0.0020	2.01	0.0226	0.0922	0.0227	2:07:40 PM	Yes
Mean:	0.0020	2.01	0.0225				
SD:	0.00000	0.004	0.0000				
%RSD:	0.22%	0.22%	0.22				

QC value within limits for Hg 253.7 Recovery = 100.51%

All analyte(s) passed QC.

Sequence No.: 9

Autosampler Location: 1

Sample ID: ccb 570-37330_11-a

Date Collected: 12/6/2019 2:08:07 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	-0.0000	-0.0018	0.0000	0.0017	0.0002	2:09:11 PM	Yes
2	-0.0000	-0.0032	0.0000	0.0008	0.0002	2:09:57 PM	Yes
Mean:	-0.0000	-0.0025	0.0000				
SD:	0.00000	0.00096	0.0000				
%RSD:	38.24%	38.24%	38.12				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:

Results Data Set: 191206H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37361_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 12/6/2019 2:34:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37361_1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0018	0.0000	0.0011	0.0002	2:35:41 PM	Yes
2	-0.0000	-0.0026	0.0000	0.0006	0.0002	2:36:27 PM	Yes
Mean:	-0.0000	-0.0022	0.0000				
SD:	0.00000	0.00056	0.0000				
%RSD:	25.05%	25.05%	19.71				

=====
Sequence No.: 2
Sample ID: lcs 570-37361_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 11
Date Collected: 12/6/2019 2:36:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37361_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.68	0.0524	0.2206	0.0526	2:37:59 PM	Yes
2	0.0047	4.73	0.0530	0.2253	0.0531	2:38:45 PM	Yes
Mean:	0.0047	4.70	0.0527				
SD:	0.00003	0.034	0.0004				
%RSD:	0.73%	0.73%	0.73				

=====
Sequence No.: 3
Sample ID: lcsd 570-37361_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 12
Date Collected: 12/6/2019 2:39:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37361_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.76	0.0534	0.2260	0.0535	2:40:17 PM	Yes
2	0.0047	4.73	0.0530	0.2265	0.0532	2:41:03 PM	Yes
Mean:	0.0047	4.75	0.0532				
SD:	0.00002	0.023	0.0003				
%RSD:	0.49%	0.49%	0.49				

=====
Sequence No.: 4
Sample ID: 570-14707-a-7-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 13
Date Collected: 12/6/2019 2:41:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14707-a-7-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.223	0.0026	0.0124	0.0027	2:42:36 PM	Yes
2	0.0002	0.198	0.0023	0.0106	0.0024	2:43:21 PM	Yes
Mean:	0.0002	0.211	0.0024				
SD:	0.00002	0.0178	0.0002				
%RSD:	8.46%	8.46%	8.26				

Sequence No.: 5

Autosampler Location: 14

Sample ID: 570-14707-a-7-e ms

Date Collected: 12/6/2019 2:43:49 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14707-a-7-e ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.86	0.0544	0.2458	0.0546	2:44:53 PM	Yes
2	0.0049	4.93	0.0552	0.2499	0.0553	2:45:39 PM	Yes
Mean:	0.0049	4.89	0.0548				
SD:	0.00005	0.049	0.0006				
%RSD:	1.01%	1.01%	1.00				

Sequence No.: 6

Autosampler Location: 15

Sample ID: 570-14707-a-7-f

Date Collected: 12/6/2019 2:46:05 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14707-a-7-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.91	0.0550	0.2519	0.0551	2:47:09 PM	Yes
2	0.0049	4.91	0.0550	0.2536	0.0552	2:47:55 PM	Yes
Mean:	0.0049	4.91	0.0550				
SD:	0.00000	0.005	0.0001				
%RSD:	0.10%	0.10%	0.10				

Sequence No.: 7

Autosampler Location: 16

Sample ID: 570-14707-a-14-d

Date Collected: 12/6/2019 2:48:21 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14707-a-14-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.164	0.0019	0.0086	0.0021	2:49:26 PM	Yes
2	0.0001	0.138	0.0016	0.0072	0.0018	2:50:11 PM	Yes
Mean:	0.0002	0.151	0.0017				
SD:	0.00002	0.0182	0.0002				
%RSD:	12.07%	12.07%	11.68				

Sequence No.: 8

Autosampler Location: 5

Sample ID: ccv 570-37330_10-a

Date Collected: 12/6/2019 2:50:37 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	2.04	0.0229	0.0938	0.0230	2:51:43 PM	Yes
2	0.0020	2.04	0.0229	0.0936	0.0230	2:52:29 PM	Yes
Mean:	0.0020	2.04	0.0229				
SD:	0.00000	0.001	0.0000				
%RSD:	0.07%	0.07%	0.07				

QC value within limits for Hg 253.7 Recovery = 101.93%

All analyte(s) passed QC.

```

=====
Sequence No.: 9                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                 Date Collected: 12/6/2019 2:52:56 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-37330_11-a           Analyte: Hg 253.7

```

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0079	0.0001	0.0008	0.0003	2:54:01 PM	Yes
2	0.0000	0.0008	0.0001	-0.0003	0.0002	2:54:46 PM	Yes
Mean:	0.0000	0.0044	0.0001				
SD:	0.00001	0.00502	0.0001				
%RSD:	115.24%	115.24%	53.47				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:
Results Data Set: 191206H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-14700-a-1-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 17
Date Collected: 12/6/2019 3:02:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14700-a-1-b
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0216	0.0003	0.0014	0.0005	3:03:45 PM	Yes
2	0.0000	0.0189	0.0003	0.0010	0.0004	3:04:31 PM	Yes
Mean:	0.0000	0.0202	0.0003				
SD:	0.00000	0.00188	0.0000				
%RSD:	9.30%	9.30%	7.45				

=====
Sequence No.: 2
Sample ID: 570-14388-a-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 18
Date Collected: 12/6/2019 3:04:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14388-a-1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0070	0.0001	0.0009	0.0003	3:06:01 PM	Yes
2	0.0000	0.0124	0.0002	0.0006	0.0004	3:06:47 PM	Yes
Mean:	0.0000	0.0097	0.0002				
SD:	0.00000	0.00386	0.0000				
%RSD:	39.76%	39.76%	26.18				

=====
Sequence No.: 3
Sample ID: 570-14160-d-1-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 19
Date Collected: 12/6/2019 3:07:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14160-d-1-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0048	0.0001	0.0009	0.0003	3:08:17 PM	Yes
2	0.0000	0.0042	0.0001	0.0004	0.0003	3:09:03 PM	Yes
Mean:	0.0000	0.0045	0.0001				
SD:	0.00000	0.00038	0.0000				
%RSD:	8.43%	8.43%	3.97				

=====
Sequence No.: 4
Sample ID: 570-14396-q-2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 20
Date Collected: 12/6/2019 3:09:29 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14396-q-2-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0049	0.0001	0.0006	0.0003	3:10:34 PM	Yes
2	0.0000	0.0027	0.0001	0.0004	0.0002	3:11:20 PM	Yes
Mean:	0.0000	0.0038	0.0001				
SD:	0.00000	0.00152	0.0000				
%RSD:	39.82%	39.82%	17.19				

Sequence No.: 5

Autosampler Location: 21

Sample ID: mb 570-37340_1-a

Date Collected: 12/6/2019 3:11:46 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: mb 570-37340_1-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0017	0.0001	0.0005	0.0002	3:12:52 PM	Yes
2	0.0000	0.0001	0.0001	0.0004	0.0002	3:13:37 PM	Yes
Mean:	0.0000	0.0009	0.0001				
SD:	0.00000	0.00114	0.0000				
%RSD:	125.45%	125.45%	19.24				

Sequence No.: 6

Autosampler Location: 22

Sample ID: lcs 570-37340_2-a

Date Collected: 12/6/2019 3:14:04 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcs 570-37340_2-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.93	0.0553	0.2254	0.0554	3:15:10 PM	Yes
2	0.0050	4.99	0.0559	0.2300	0.0561	3:15:55 PM	Yes
Mean:	0.0050	4.96	0.0556				
SD:	0.00004	0.040	0.0005				
%RSD:	0.82%	0.82%	0.81				

Sequence No.: 7

Autosampler Location: 23

Sample ID: lcsd 570-37340_3-a

Date Collected: 12/6/2019 3:16:22 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcsd 570-37340_3-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.98	0.0558	0.2311	0.0559	3:17:28 PM	Yes
2	0.0050	4.98	0.0558	0.2318	0.0560	3:18:13 PM	Yes
Mean:	0.0050	4.98	0.0558				
SD:	0.00000	0.002	0.0000				
%RSD:	0.03%	0.03%	0.03				

Sequence No.: 8

Autosampler Location: 24

Sample ID: 570-14202-f-1-a

Date Collected: 12/6/2019 3:18:40 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14202-f-1-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	------------------	----------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0022	0.0001	0.0004	0.0002	3:19:46 PM	Yes
2	-0.0000	-0.0025	0.0000	-0.0006	0.0002	3:20:31 PM	Yes
Mean:	-0.0000	-0.0002	0.0001				
SD:	0.00000	0.00328	0.0000				
%RSD:	>999.9%	>999.9%	67.12				

```

=====
Sequence No.: 9                               Autosampler Location: 25
Sample ID: 570-14202-f-1-b ms                Date Collected: 12/6/2019 3:20:58 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-f-1-b ms           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0049     4.88     0.0547   0.2260 0.0548  3:22:04 PM  Yes
2      0.0049     4.89     0.0548   0.2296 0.0549  3:22:50 PM  Yes
Mean:  0.0049     4.89     0.0547
SD:    0.00000    0.005    0.0001
%RSD:  0.09%     0.09%    0.09
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 26
Sample ID: 570-14202-f-1-c msd              Date Collected: 12/6/2019 3:23:17 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-f-1-c msd           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0048     4.85     0.0543   0.2241 0.0545  3:24:21 PM  Yes
2      0.0049     4.88     0.0547   0.2267 0.0548  3:25:07 PM  Yes
Mean:  0.0049     4.86     0.0545
SD:    0.00002    0.022    0.0002
%RSD:  0.46%     0.46%    0.46
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-37330_10-a              Date Collected: 12/6/2019 3:25:33 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-37330_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0020     1.99     0.0223   0.0923 0.0224  3:26:39 PM  Yes
2      0.0020     1.99     0.0223   0.0916 0.0225  3:27:24 PM  Yes
Mean:  0.0020     1.99     0.0223
SD:    0.00000    0.001    0.0000
%RSD:  0.04%     0.04%    0.04
=====

```

QC value within limits for Hg 253.7 Recovery = 99.33%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-37330_11-a              Date Collected: 12/6/2019 3:27:52 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-37330_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
=====

```

1	0.0000	0.0059	0.0001	0.0006	0.0003	3:28:56 PM	Yes
2	0.0000	0.0032	0.0001	-0.0002	0.0003	3:29:42 PM	Yes
Mean:	0.0000	0.0045	0.0001				
SD:	0.00000	0.00193	0.0000				
%RSD:	42.58%	42.58%	20.19				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 27
Sample ID: 570-14202-f-2-a                    Date Collected: 12/6/2019 3:30:08 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                       Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-f-2-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0073   0.0001   0.0008 0.0003 3:31:12 PM  Yes
2      0.0000     0.0024   0.0001   0.0001 0.0002 3:31:58 PM  Yes
Mean:  0.0000     0.0049   0.0001
SD:    0.00000     0.00344  0.0000
%RSD:  70.85%     70.85%   34.79
=====

```

```

=====
Sequence No.: 14                               Autosampler Location: 28
Sample ID: 570-14202-f-3-a                    Date Collected: 12/6/2019 3:32:24 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                       Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-f-3-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0071   0.0001   0.0010 0.0003 3:33:29 PM  Yes
2      0.0000     0.0052   0.0001   0.0002 0.0003 3:34:15 PM  Yes
Mean:  0.0000     0.0062   0.0001
SD:    0.00000     0.00129  0.0000
%RSD:  20.92%     20.92%   11.51
=====

```

```

=====
Sequence No.: 15                               Autosampler Location: 29
Sample ID: 570-14202-f-4-a                    Date Collected: 12/6/2019 3:34:41 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                       Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-f-4-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0116   0.0002   0.0003 0.0003 3:35:45 PM  Yes
2      0.0000     0.0050   0.0001   0.0005 0.0003 3:36:31 PM  Yes
Mean:  0.0000     0.0083   0.0001
SD:    0.00000     0.00468  0.0001
%RSD:  56.56%     56.56%   35.16
=====

```

```

=====
Sequence No.: 16                               Autosampler Location: 30
Sample ID: 570-14202-f-5-a                    Date Collected: 12/6/2019 3:36:57 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                       Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-f-5-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      -0.0000     -0.0037  0.0000   0.0003 0.0002 3:38:01 PM  Yes
=====

```

2 -0.0000 -0.0031 0.0000 -0.0001 0.0002 3:38:47 PM Yes
 Mean: -0.0000 -0.0034 0.0000
 SD: 0.00000 0.00041 0.0000
 %RSD: 11.93% 11.93% 25.28

Sequence No.: 17 Autosampler Location: 31
 Sample ID: 570-14202-f-6-a Date Collected: 12/6/2019 3:39:13 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14202-f-6-a Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 -0.0000 -0.0015 0.0000 0.0003 0.0002 3:40:18 PM Yes
 2 -0.0000 -0.0027 0.0000 0.0001 0.0002 3:41:04 PM Yes
 Mean: -0.0000 -0.0021 0.0000
 SD: 0.00000 0.00087 0.0000
 %RSD: 41.62% 41.62% 29.37

Sequence No.: 18 Autosampler Location: 32
 Sample ID: 570-14202-f-7-a Date Collected: 12/6/2019 3:41:30 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14202-f-7-a Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0000 0.0008 0.0001 0.0004 0.0002 3:42:35 PM Yes
 2 -0.0000 -0.0005 0.0001 0.0001 0.0002 3:43:21 PM Yes
 Mean: 0.0000 0.0001 0.0001
 SD: 0.00000 0.00092 0.0000
 %RSD: 706.07% 706.07% 17.80

Sequence No.: 19 Autosampler Location: 33
 Sample ID: mb 570-37331_1-b Date Collected: 12/6/2019 3:43:47 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: mb 570-37331_1-b Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 -0.0000 -0.0024 0.0000 0.0002 0.0002 3:44:52 PM Yes
 2 -0.0000 -0.0052 -0.0000 0.0001 0.0002 3:45:38 PM Yes
 Mean: -0.0000 -0.0038 0.0000
 SD: 0.00000 0.00199 0.0000
 %RSD: 52.64% 52.64% 158.51

Sequence No.: 20 Autosampler Location: 34
 Sample ID: lcs 570-37331_2-b Date Collected: 12/6/2019 3:46:04 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: lcs 570-37331_2-b Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0049 4.85 0.0543 0.2223 0.0545 3:47:09 PM Yes
 2 0.0049 4.89 0.0548 0.2270 0.0549 3:47:55 PM Yes
 Mean: 0.0049 4.87 0.0545
 SD: 0.00003 0.027 0.0003

%RSD: 0.56% 0.56% 0.56

```

=====
Sequence No.: 21                               Autosampler Location: 35
Sample ID: lcs 570-37331_2-b                 Date Collected: 12/6/2019 3:48:22 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

Replicate Data: lcs 570-37331_2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.88	0.0546	0.2273	0.0548	3:49:28 PM	Yes
2	0.0049	4.90	0.0548	0.2286	0.0550	3:50:13 PM	Yes
Mean:	0.0049	4.89	0.0547				
SD:	0.00001	0.013	0.0001				
%RSD:	0.27%	0.27%	0.27				

```

=====
Sequence No.: 22                               Autosampler Location: 36
Sample ID: 570-14202-g-1-d                 Date Collected: 12/6/2019 3:50:40 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

Replicate Data: 570-14202-g-1-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0013	0.0001	0.0006	0.0002	3:51:45 PM	Yes
2	-0.0000	-0.0038	0.0000	-0.0004	0.0002	3:52:31 PM	Yes
Mean:	-0.0000	-0.0012	0.0000				
SD:	0.00000	0.00361	0.0000				
%RSD:	291.75%	291.75%	94.97				

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a             Date Collected: 12/6/2019 3:52:58 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.99	0.0223	0.0912	0.0225	3:54:04 PM	Yes
2	0.0020	1.98	0.0222	0.0911	0.0224	3:54:50 PM	Yes
Mean:	0.0020	1.98	0.0223				
SD:	0.00001	0.007	0.0001				
%RSD:	0.37%	0.37%	0.37				

QC value within limits for Hg 253.7 Recovery = 99.24%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a             Date Collected: 12/6/2019 3:55:17 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0059	0.0001	0.0007	0.0003	3:56:22 PM	Yes
2	0.0000	0.0033	0.0001	0.0001	0.0003	3:57:07 PM	Yes
Mean:	0.0000	0.0046	0.0001				
SD:	0.00000	0.00180	0.0000				
%RSD:	39.25%	39.25%	18.70				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 37
Sample ID: 570-14202-g-1-e ms Date Collected: 12/6/2019 3:57:33 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14202-g-1-e ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0044	4.37	0.0489	0.2040	0.0491	3:58:39 PM	Yes
2	0.0044	4.35	0.0488	0.2065	0.0489	3:59:24 PM	Yes
Mean:	0.0044	4.36	0.0488				
SD:	0.00001	0.011	0.0001				
%RSD:	0.26%	0.26%	0.26				

Sequence No.: 26 Autosampler Location: 38
Sample ID: 570-14202-g-1-f ms Date Collected: 12/6/2019 3:59:52 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14202-g-1-f ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.97	0.0557	0.2371	0.0559	4:00:57 PM	Yes
2	0.0050	5.01	0.0561	0.2401	0.0563	4:01:43 PM	Yes
Mean:	0.0050	4.99	0.0559				
SD:	0.00002	0.025	0.0003				
%RSD:	0.49%	0.49%	0.49				

Sequence No.: 27 Autosampler Location: 39
Sample ID: 570-14202-g-2-b Date Collected: 12/6/2019 4:02:09 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14202-g-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0027	0.0001	0.0004	0.0002	4:03:14 PM	Yes
2	-0.0000	-0.0024	0.0000	-0.0005	0.0002	4:03:59 PM	Yes
Mean:	0.0000	0.0001	0.0001				
SD:	0.00000	0.00362	0.0000				
%RSD:	>999.9%	>999.9%	70.21				

Sequence No.: 28 Autosampler Location: 40
Sample ID: 570-14202-g-3-b Date Collected: 12/6/2019 4:04:26 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14202-g-3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0029	0.0000	0.0003	0.0002	4:05:31 PM	Yes
2	-0.0000	-0.0050	0.0000	-0.0002	0.0002	4:06:17 PM	Yes
Mean:	-0.0000	-0.0039	0.0000				
SD:	0.00000	0.00145	0.0000				
%RSD:	36.88%	36.88%	132.75				


```

=====
Sequence No.: 29                               Autosampler Location: 41
Sample ID: 570-14202-g-4-b                   Date Collected: 12/6/2019 4:06:43 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-g-4-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      -0.0000     -0.0005  0.0001    0.0003  0.0002   4:07:48 PM  Yes
2      -0.0000     -0.0024  0.0000    0.0004  0.0002   4:08:34 PM  Yes
Mean:  -0.0000     -0.0014  0.0000
SD:     0.00000    0.00137  0.0000
%RSD:   94.83%    94.83%   37.98
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 42
Sample ID: 570-14202-g-5-b                   Date Collected: 12/6/2019 4:09:00 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-g-5-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      -0.0000     -0.0007  0.0000    0.0006  0.0002   4:10:05 PM  Yes
2      -0.0000     -0.0021  0.0000    0.0001  0.0002   4:10:51 PM  Yes
Mean:  -0.0000     -0.0014  0.0000
SD:     0.00000    0.00099  0.0000
%RSD:   71.44%    71.44%   27.02
=====

```

```

=====
Sequence No.: 31                               Autosampler Location: 43
Sample ID: 570-14202-g-6-b                   Date Collected: 12/6/2019 4:11:17 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-g-6-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0000      0.0019   0.0001    0.0009  0.0002   4:12:22 PM  Yes
2      -0.0000     -0.0023  0.0000    0.0004  0.0002   4:13:08 PM  Yes
Mean:  -0.0000     -0.0002  0.0001
SD:     0.00000    0.00298  0.0000
%RSD:  >999.9%    >999.9%  61.78
=====

```

```

=====
Sequence No.: 32                               Autosampler Location: 44
Sample ID: 570-14202-g-7-b                   Date Collected: 12/6/2019 4:13:35 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-g-7-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0000      0.0043   0.0001    0.0006  0.0003   4:14:40 PM  Yes
2      0.0000      0.0009   0.0001    0.0006  0.0002   4:15:26 PM  Yes
Mean:  0.0000      0.0026   0.0001
SD:     0.00000    0.00236  0.0000
%RSD:   90.37%    90.37%   30.87
=====

```

```

=====
Sequence No.: 33                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                 Date Collected: 12/6/2019 4:15:52 PM
=====

```

Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.95	0.0219	0.0898	0.0221	4:16:58 PM	Yes
2	0.0020	1.97	0.0221	0.0908	0.0223	4:17:44 PM	Yes
Mean:	0.0020	1.96	0.0220				
SD:	0.00001	0.013	0.0001				
%RSD:	0.68%	0.68%	0.68				

QC value within limits for Hg 253.7 Recovery = 98.08%
All analyte(s) passed QC.

=====

Sequence No.: 34
Sample ID: ccb 570-37330_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/6/2019 4:18:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0089	0.0002	0.0009	0.0003	4:19:15 PM	Yes
2	0.0000	0.0062	0.0001	0.0005	0.0003	4:20:01 PM	Yes
Mean:	0.0000	0.0076	0.0001				
SD:	0.00000	0.00195	0.0000				
%RSD:	25.69%	25.69%	15.43				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:
Results Data Set: 191206H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-14883-a-2-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 45
Date Collected: 12/6/2019 4:26:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14883-a-2-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0037	3.66	0.0411	0.1902	0.0412	4:27:07 PM	Yes
2	0.0037	3.71	0.0415	0.1901	0.0417	4:27:52 PM	Yes
Mean:	0.0037	3.68	0.0413				
SD:	0.00003	0.028	0.0003				
%RSD:	0.77%	0.77%	0.77				

=====
Sequence No.: 2
Sample ID: 570-14881-b-1-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 46
Date Collected: 12/6/2019 4:28:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14881-b-1-b
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0068	6.78	0.0759	0.3546	0.0760	4:29:24 PM	Yes
2	0.0068	6.82	0.0764	0.3582	0.0765	4:30:10 PM	Yes
Mean:	0.0068	6.80	0.0761				
SD:	0.00003	0.032	0.0004				
%RSD:	0.46%	0.46%	0.46				

=====
Sequence No.: 3
Sample ID: 570-14892-a-2-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 47
Date Collected: 12/6/2019 4:30:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14892-a-2-b
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.399	0.0045	0.0235	0.0047	4:31:42 PM	Yes
2	0.0003	0.315	0.0036	0.0175	0.0037	4:32:29 PM	Yes
Mean:	0.0004	0.357	0.0041				
SD:	0.00006	0.0592	0.0007				
%RSD:	16.59%	16.59%	16.36				

=====
Sequence No.: 4
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 12/6/2019 4:32:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

```

-----
Replicate Data: ccv 570-37330_10-a          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0020       1.96     0.0220   0.0920   0.0222   4:34:01 PM  Yes
2      0.0020       1.95     0.0219   0.0904   0.0220   4:34:47 PM  Yes
Mean:  0.0020       1.96     0.0219
SD:    0.00001     0.008    0.0001
%RSD:  0.40%     0.40%    0.40

```

QC value within limits for Hg 253.7 Recovery = 97.83%
All analyte(s) passed QC.

```

=====
Sequence No.: 5                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                Date Collected: 12/6/2019 4:35:14 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-37330_11-a          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0000       0.0104   0.0002   0.0015   0.0003   4:36:19 PM  Yes
2      0.0000       0.0061   0.0001   0.0006   0.0003   4:37:04 PM  Yes
Mean:  0.0000       0.0083   0.0001
SD:    0.00000     0.00300  0.0000
%RSD:  36.31%     36.31%   22.57

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
 Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
 Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
 191206H1.sifx

Batch ID:

Results Data Set: 191206H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
 Sequence No.: 1

Sample ID: ccv 570-37330_10-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 5

Date Collected: 12/6/2019 6:48:54 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0166	-0.0001	-0.0000	0.0000	6:50:00 PM	Yes
2	-0.0000	-0.0154	-0.0001	0.0002	0.0000	6:50:45 PM	Yes
Mean:	-0.0000	-0.0160	-0.0001				
SD:	0.00000	0.00086	0.0000				
%RSD:	5.38%	5.38%	7.85				

QC value less than the lower limit for Hg 253.7 Recovery = -0.80%
 QC Failed. Retry.

=====
 Sequence No.: 2

Sample ID: ccv 570-37330_10-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

User canceled analysis.

Autosampler Location: 5

Date Collected: 12/6/2019 6:51:13 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:
Results Data Set: 191206H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 12/6/2019 6:54:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.93	0.0217	0.0932	0.0218	6:55:18 PM	Yes
2	0.0019	1.92	0.0215	0.0927	0.0216	6:56:04 PM	Yes
Mean:	0.0019	1.92	0.0216				
SD:	0.00001	0.012	0.0001				
%RSD:	0.61%	0.61%	0.61				

QC value within limits for Hg 253.7 Recovery = 96.18%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: ccb 570-37330_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/6/2019 6:56:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0174	0.0003	0.0019	0.0004	6:57:36 PM	Yes
2	0.0000	0.0158	0.0002	0.0015	0.0004	6:58:22 PM	Yes
Mean:	0.0000	0.0166	0.0002				
SD:	0.00000	0.00119	0.0000				
%RSD:	7.15%	7.15%	5.48				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:

Results Data Set: 191206H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====

Sequence No.: 1

Sample ID: ccv 570-37330_10-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

User canceled analysis.

Autosampler Location: 5

Date Collected: 12/6/2019 6:59:11 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:
Results Data Set: 191206H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: lb4 570-36289_1-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 48
Date Collected: 12/6/2019 7:01:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lb4 570-36289_1-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0085	0.0002	0.0015	0.0003	7:02:53 PM	Yes
2	0.0000	0.0000	0.0001	0.0003	0.0002	7:03:39 PM	Yes
Mean:	0.0000	0.0042	0.0001				
SD:	0.00001	0.00600	0.0001				
%RSD:	141.23%	141.23%	64.61				

=====
Sequence No.: 2
Sample ID: lcs 570-36289_2-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 49
Date Collected: 12/6/2019 7:04:06 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-36289_2-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.86	0.0545	0.2281	0.0546	7:05:12 PM	Yes
2	0.0049	4.88	0.0547	0.2320	0.0549	7:05:58 PM	Yes
Mean:	0.0049	4.87	0.0546				
SD:	0.00002	0.015	0.0002				
%RSD:	0.32%	0.32%	0.31				

=====
Sequence No.: 3
Sample ID: lcsd 570-36289_3-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 50
Date Collected: 12/6/2019 7:06:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-36289_3-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.91	0.0550	0.2332	0.0552	7:07:31 PM	Yes
2	0.0049	4.89	0.0547	0.2338	0.0549	7:08:16 PM	Yes
Mean:	0.0049	4.90	0.0549				
SD:	0.00002	0.018	0.0002				
%RSD:	0.36%	0.36%	0.36				

=====
Sequence No.: 4
Sample ID: 570-14259-a-1-i
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 51
Date Collected: 12/6/2019 7:08:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14259-a-1-i

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0044	4.37	0.0490	0.2106	0.0491	7:09:49 PM	Yes
2	0.0044	4.36	0.0488	0.2115	0.0490	7:10:34 PM	Yes
Mean:	0.0044	4.37	0.0489				
SD:	0.00001	0.010	0.0001				
%RSD:	0.22%	0.22%	0.22				

Sequence No.: 5

Autosampler Location: 52

Sample ID: 570-14259-a-1-j ms

Date Collected: 12/6/2019 7:11:01 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14259-a-1-j ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0043	4.26	0.0477	0.2062	0.0479	7:12:06 PM	Yes
2	0.0043	4.28	0.0480	0.2077	0.0482	7:12:52 PM	Yes
Mean:	0.0043	4.27	0.0479				
SD:	0.00002	0.017	0.0002				
%RSD:	0.40%	0.40%	0.40				

Sequence No.: 6

Autosampler Location: 53

Sample ID: 570-14259-a-1-k msd

Date Collected: 12/6/2019 7:13:19 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14259-a-1-k msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0111	0.0002	0.0008	0.0003	7:14:24 PM	Yes
2	0.0000	0.0100	0.0002	0.0000	0.0003	7:15:09 PM	Yes
Mean:	0.0000	0.0105	0.0002				
SD:	0.00000	0.00079	0.0000				
%RSD:	7.53%	7.53%	5.10				

Sequence No.: 7

Autosampler Location: 54

Sample ID: lb4 570-36793_1-c

Date Collected: 12/6/2019 7:15:36 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lb4 570-36793_1-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0012	0.0001	0.0004	0.0002	7:16:41 PM	Yes
2	-0.0000	-0.0030	0.0000	-0.0002	0.0002	7:17:27 PM	Yes
Mean:	-0.0000	-0.0009	0.0000				
SD:	0.00000	0.00295	0.0000				
%RSD:	326.41%	326.41%	71.53				

Sequence No.: 8

Autosampler Location: 55

Sample ID: lcs 570-36793_2-c

Date Collected: 12/6/2019 7:17:53 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcs 570-36793_2-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0049	4.90	0.0549	0.2304	0.0551	7:18:58 PM	Yes
2	0.0049	4.93	0.0552	0.2342	0.0553	7:19:44 PM	Yes
Mean:	0.0049	4.91	0.0550				
SD:	0.00002	0.018	0.0002				
%RSD:	0.36%	0.36%	0.36				

```

=====
Sequence No.: 9                               Autosampler Location: 56
Sample ID: lcsd 570-36793_3-c                Date Collected: 12/6/2019 7:20:11 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lcsd 570-36793_3-c           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L        Signal   Area  Height
1      0.0049      4.95        0.0554   0.2352 0.0556  7:21:16 PM  Yes
2      0.0049      4.94        0.0553   0.2359 0.0555  7:22:01 PM  Yes
Mean:  0.0049      4.94        0.0554
SD:    0.00001     0.006       0.0001
%RSD:  0.12%      0.12%       0.12
=====

```

```

=====
Sequence No.: 10                             Autosampler Location: 57
Sample ID: 570-13803-a-1-i                  Date Collected: 12/6/2019 7:22:28 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-13803-a-1-i           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L        Signal   Area  Height
1      0.0000      0.0257     0.0003   0.0014 0.0005  7:23:33 PM  Yes
2      0.0000      0.0193     0.0003   0.0003 0.0004  7:24:19 PM  Yes
Mean:  0.0000      0.0225     0.0003
SD:    0.00000     0.00451    0.0001
%RSD:  20.02%     20.02%     16.36
=====

```

```

=====
Sequence No.: 11                             Autosampler Location: 5
Sample ID: ccv 570-37330_10-a              Date Collected: 12/6/2019 7:24:45 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-37330_10-a       Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L        Signal   Area  Height
1      0.0020      1.96        0.0219   0.0921 0.0221  7:25:52 PM  Yes
2      0.0020      1.97        0.0221   0.0917 0.0223  7:26:37 PM  Yes
Mean:  0.0020      1.96        0.0220
SD:    0.00001     0.011       0.0001
%RSD:  0.58%      0.58%       0.58
=====

```

QC value within limits for Hg 253.7 Recovery = 98.18%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                             Autosampler Location: 1
Sample ID: ccb 570-37330_11-a              Date Collected: 12/6/2019 7:27:04 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-37330_11-a       Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L        Signal   Area  Height
=====

```

1	0.0000	0.0112	0.0002	0.0007	0.0003	7:28:09 PM	Yes
2	0.0000	0.0041	0.0001	-0.0005	0.0003	7:28:55 PM	Yes
Mean:	0.0000	0.0076	0.0001				
SD:	0.00001	0.00500	0.0001				
%RSD:	65.43%	65.43%	39.45				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 58
Sample ID: 570-13803-a-1-j ms                 Date Collected: 12/6/2019 7:29:20 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-13803-a-1-j ms             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0034     3.41     0.0382   0.1729 0.0384 7:30:26 PM  Yes
2      0.0034     3.44     0.0385   0.1764 0.0386 7:31:12 PM  Yes
Mean:  0.0034     3.42     0.0384
SD:    0.00002     0.018    0.0002
%RSD:  0.51%      0.51%    0.51
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 59
Sample ID: 570-13803-a-1-k ms                 Date Collected: 12/6/2019 7:31:39 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-13803-a-1-k ms             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0034     3.38     0.0378   0.1740 0.0380 7:32:44 PM  Yes
2      0.0034     3.36     0.0377   0.1740 0.0379 7:33:30 PM  Yes
Mean:  0.0034     3.37     0.0378
SD:    0.00001     0.009    0.0001
%RSD:  0.27%      0.27%    0.27
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                Date Collected: 12/6/2019 7:33:57 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====
  
```

```

-----
Replicate Data: ccv 570-37330_10-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0020     1.98     0.0222   0.0947 0.0224 7:35:03 PM  Yes
2      0.0020     1.96     0.0220   0.0917 0.0222 7:35:49 PM  Yes
Mean:  0.0020     1.97     0.0221
SD:    0.00001     0.012    0.0001
%RSD:  0.62%      0.62%    0.62
=====
  
```

QC value within limits for Hg 253.7 Recovery = 98.56%
 All analyte(s) passed QC.

```

=====
Sequence No.: 16                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                Date Collected: 12/6/2019 7:36:16 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====
  
```

```

-----
Replicate Data: ccb 570-37330_11-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
=====
  
```

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0070	0.0001	0.0007	0.0003	7:37:21 PM	Yes
2	-0.0000	-0.0026	0.0000	-0.0008	0.0002	7:38:06 PM	Yes
Mean:	0.0000	0.0022	0.0001				
SD:	0.00001	0.00679	0.0001				
%RSD:	305.97%	305.97%	93.61				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:
Results Data Set: 191206H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37448_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 60
Date Collected: 12/6/2019 7:43:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37448_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0001	0.0001	-0.0003	0.0002	7:44:45 PM	Yes
2	-0.0000	-0.0052	-0.0000	-0.0003	0.0002	7:45:30 PM	Yes
Mean:	-0.0000	-0.0027	0.0000				
SD:	0.00000	0.00363	0.0000				
%RSD:	135.56%	135.56%	153.82				

=====
Sequence No.: 2
Sample ID: lcs 570-37448_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 61
Date Collected: 12/6/2019 7:45:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37448_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.88	0.0546	0.2312	0.0548	7:47:03 PM	Yes
2	0.0049	4.88	0.0547	0.2329	0.0548	7:47:49 PM	Yes
Mean:	0.0049	4.88	0.0547				
SD:	0.00000	0.004	0.0000				
%RSD:	0.07%	0.07%	0.07				

=====
Sequence No.: 3
Sample ID: lcsd 570-37448_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 62
Date Collected: 12/6/2019 7:48:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37448_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.88	0.0547	0.2345	0.0549	7:49:21 PM	Yes
2	0.0049	4.90	0.0549	0.2354	0.0551	7:50:07 PM	Yes
Mean:	0.0049	4.89	0.0548				
SD:	0.00001	0.014	0.0002				
%RSD:	0.28%	0.28%	0.28				

=====
Sequence No.: 4
Sample ID: 570-14961-a-1-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 63
Date Collected: 12/6/2019 7:50:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14961-a-1-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0286	0.0004	0.0018	0.0005	7:51:39 PM	Yes
2	0.0000	0.0162	0.0002	0.0009	0.0004	7:52:25 PM	Yes
Mean:	0.0000	0.0224	0.0003				
SD:	0.00001	0.00877	0.0001				
%RSD:	39.25%	39.25%	32.03				

Sequence No.: 5

Autosampler Location: 64

Sample ID: 570-14961-a-1-e ms

Date Collected: 12/6/2019 7:52:51 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14961-a-1-e ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0044	4.40	0.0493	0.2331	0.0495	7:53:57 PM	Yes
2	0.0044	4.43	0.0497	0.2352	0.0498	7:54:42 PM	Yes
Mean:	0.0044	4.42	0.0495				
SD:	0.00002	0.023	0.0003				
%RSD:	0.51%	0.51%	0.51				

Sequence No.: 6

Autosampler Location: 65

Sample ID: 570-14961-a-1-f msd

Date Collected: 12/6/2019 7:55:09 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14961-a-1-f msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0044	4.39	0.0492	0.2341	0.0493	7:56:14 PM	Yes
2	0.0044	4.38	0.0490	0.2324	0.0492	7:57:00 PM	Yes
Mean:	0.0044	4.38	0.0491				
SD:	0.00001	0.011	0.0001				
%RSD:	0.25%	0.25%	0.25				

Sequence No.: 7

Autosampler Location: 5

Sample ID: ccv 570-37330_10-a

Date Collected: 12/6/2019 7:57:27 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.94	0.0218	0.0935	0.0220	7:58:33 PM	Yes
2	0.0019	1.94	0.0218	0.0913	0.0220	7:59:18 PM	Yes
Mean:	0.0019	1.94	0.0218				
SD:	0.00000	0.001	0.0000				
%RSD:	0.04%	0.04%	0.04				

QC value within limits for Hg 253.7 Recovery = 97.21%

All analyte(s) passed QC.

Sequence No.: 8

Autosampler Location: 1

Sample ID: ccb 570-37330_11-a

Date Collected: 12/6/2019 7:59:45 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0202	0.0003	0.0015	0.0004	8:00:49 PM	Yes
2	0.0000	0.0146	0.0002	-0.0002	0.0004	8:01:35 PM	Yes
Mean:	0.0000	0.0174	0.0003				
SD:	0.00000	0.00395	0.0000				
%RSD:	22.73%	22.73%	17.63				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191206H1.sifx

Batch ID:
Results Data Set: 191206H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37455_1-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 66
Date Collected: 12/6/2019 9:35:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37455_1-b
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0219	0.0003	0.0045	0.0005	9:36:51 PM	Yes
2	0.0000	0.0033	0.0001	0.0018	0.0003	9:37:36 PM	Yes
Mean:	0.0000	0.0126	0.0002				
SD:	0.00001	0.01309	0.0001				
%RSD:	103.88%	103.88%	74.23				

=====
Sequence No.: 2
Sample ID: lcs 570-37455_2-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 67
Date Collected: 12/6/2019 9:38:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37455_2-b
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0542	0.2313	0.0544	9:39:08 PM	Yes
2	0.0049	4.87	0.0546	0.2347	0.0547	9:39:54 PM	Yes
Mean:	0.0049	4.86	0.0544				
SD:	0.00002	0.020	0.0002				
%RSD:	0.41%	0.41%	0.41				

=====
Sequence No.: 3
Sample ID: lcsd 570-37455_3-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 68
Date Collected: 12/6/2019 9:40:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37455_3-b
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.89	0.0547	0.2359	0.0549	9:41:28 PM	Yes
2	0.0049	4.89	0.0547	0.2359	0.0549	9:42:14 PM	Yes
Mean:	0.0049	4.89	0.0547				
SD:	0.00000	0.000	0.0000				
%RSD:	0.00%	0.00%	0.00				

=====
Sequence No.: 4
Sample ID: 570-14138-g-1-e
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 69
Date Collected: 12/6/2019 9:42:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14138-g-1-e

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0009	0.0001	0.0006	0.0002	9:43:46 PM	Yes
2	0.0000	0.0008	0.0001	-0.0005	0.0002	9:44:32 PM	Yes
Mean:	0.0000	0.0009	0.0001				
SD:	0.00000	0.00004	0.0000				
%RSD:	4.27%	4.27%	0.63				

Sequence No.: 5

Autosampler Location: 70

Sample ID: 570-14138-g-1-f ms

Date Collected: 12/6/2019 9:44:59 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14138-g-1-f ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.68	0.0524	0.2262	0.0526	9:46:05 PM	Yes
2	0.0047	4.74	0.0531	0.2316	0.0532	9:46:51 PM	Yes
Mean:	0.0047	4.71	0.0527				
SD:	0.00004	0.042	0.0005				
%RSD:	0.89%	0.89%	0.89				

Sequence No.: 6

Autosampler Location: 71

Sample ID: 570-14138-g-1-g msd

Date Collected: 12/6/2019 9:47:19 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14138-g-1-g msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.75	0.0532	0.2304	0.0533	9:48:25 PM	Yes
2	0.0048	4.75	0.0532	0.2322	0.0534	9:49:11 PM	Yes
Mean:	0.0048	4.75	0.0532				
SD:	0.00000	0.004	0.0000				
%RSD:	0.09%	0.09%	0.09				

Sequence No.: 7

Autosampler Location: 72

Sample ID: 570-14142-d-6-b

Date Collected: 12/6/2019 9:49:38 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14142-d-6-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0042	0.0001	0.0007	0.0003	9:50:44 PM	Yes
2	-0.0000	-0.0016	0.0000	-0.0004	0.0002	9:51:30 PM	Yes
Mean:	0.0000	0.0013	0.0001				
SD:	0.00000	0.00415	0.0000				
%RSD:	319.47%	319.47%	65.58				

Sequence No.: 8

Autosampler Location: 73

Sample ID: 570-14142-e-7-b

Date Collected: 12/6/2019 9:51:57 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14142-e-7-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0055	0.0001	0.0002	0.0003	9:53:03 PM	Yes
2	0.0000	0.0065	0.0001	0.0001	0.0003	9:53:50 PM	Yes
Mean:	0.0000	0.0060	0.0001				
SD:	0.00000	0.00070	0.0000				
%RSD:	11.65%	11.65%	6.32				

```

=====
Sequence No.: 9                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                Date Collected: 12/6/2019 9:54:17 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak Area	Peak Height	Time	Peak Stored
#	mg/L	ug/L	Signal				
1	0.0020	1.96	0.0220	0.0919	0.0221	9:55:24 PM	Yes
2	0.0020	1.96	0.0220	0.0919	0.0221	9:56:10 PM	Yes
Mean:	0.0020	1.96	0.0220				
SD:	0.00000	0.001	0.0000				
%RSD:	0.07%	0.07%	0.07				

QC value within limits for Hg 253.7 Recovery = 97.93%
All analyte(s) passed QC.

```

=====
Sequence No.: 10                              Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                Date Collected: 12/6/2019 9:56:37 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak Area	Peak Height	Time	Peak Stored
#	mg/L	ug/L	Signal				
1	0.0000	0.0020	0.0001	0.0002	0.0002	9:57:42 PM	Yes
2	0.0000	0.0020	0.0001	-0.0001	0.0002	9:58:28 PM	Yes
Mean:	0.0000	0.0020	0.0001				
SD:	0.00000	0.00006	0.0000				
%RSD:	2.99%	2.99%	0.85				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Replicate Data: 570-14206-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0023	0.0001	0.0011	0.0002	10:31:30 PM	Yes
2	-0.0000	-0.0032	0.0000	0.0002	0.0002	10:32:16 PM	Yes
Mean:	-0.0000	-0.0005	0.0001				
SD:	0.00000	0.00385	0.0000				
%RSD:	823.95%	823.95%	84.38				

Sequence No.: 5

Autosampler Location: 78

Sample ID: 570-14206-a-1-b ms

Date Collected: 12/6/2019 10:32:43 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14206-a-1-b ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.79	0.0536	0.2329	0.0538	10:33:50 PM	Yes
2	0.0048	4.78	0.0535	0.2359	0.0537	10:34:36 PM	Yes
Mean:	0.0048	4.78	0.0536				
SD:	0.00001	0.007	0.0001				
%RSD:	0.14%	0.14%	0.14				

Sequence No.: 6

Autosampler Location: 79

Sample ID: 570-14206-a-1-c msd

Date Collected: 12/6/2019 10:35:03 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14206-a-1-c msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0542	0.2381	0.0544	10:36:10 PM	Yes
2	0.0048	4.84	0.0543	0.2381	0.0544	10:36:56 PM	Yes
Mean:	0.0048	4.84	0.0542				
SD:	0.00000	0.005	0.0001				
%RSD:	0.09%	0.09%	0.09				

Sequence No.: 7

Autosampler Location: 80

Sample ID: mb 570-37501_1-a

Date Collected: 12/6/2019 10:37:23 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: mb 570-37501_1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0017	0.0001	0.0009	0.0002	10:38:28 PM	Yes
2	-0.0000	-0.0033	0.0000	-0.0001	0.0002	10:39:14 PM	Yes
Mean:	-0.0000	-0.0008	0.0000				
SD:	0.00000	0.00350	0.0000				
%RSD:	441.58%	441.58%	82.40				

Sequence No.: 8

Autosampler Location: 81

Sample ID: lcs 570-37501_2-a

Date Collected: 12/6/2019 10:39:42 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcs 570-37501_2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height	Time	Stored
1	0.0048	4.84	0.0542	0.2341	0.0544	10:40:47 PM	Yes
2	0.0049	4.87	0.0546	0.2368	0.0547	10:41:34 PM	Yes
Mean:	0.0049	4.86	0.0544				
SD:	0.00002	0.024	0.0003				
%RSD:	0.49%	0.49%	0.49				

Sequence No.: 9
 Sample ID: lcsd 570-37501_3-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 82
 Date Collected: 12/6/2019 10:42:01 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: lcsd 570-37501_3-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0049	4.89	0.0548	0.2379	0.0550	10:43:07 PM	Yes
2	0.0049	4.89	0.0547	0.2371	0.0549	10:43:53 PM	Yes
Mean:	0.0049	4.89	0.0548				
SD:	0.00001	0.006	0.0001				
%RSD:	0.12%	0.12%	0.12				

Sequence No.: 10
 Sample ID: 570-14142-b-6-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 83
 Date Collected: 12/6/2019 10:44:20 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14142-b-6-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0009	0.0001	0.0003	0.0002	10:45:25 PM	Yes
2	-0.0000	-0.0009	0.0000	-0.0004	0.0002	10:46:11 PM	Yes
Mean:	0.0000	0.0000	0.0001				
SD:	0.00000	0.00131	0.0000				
%RSD:	>999.9%	>999.9%	25.89				

Sequence No.: 11
 Sample ID: ccv 570-37330_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 12/6/2019 10:46:39 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0019	1.94	0.0218	0.0930	0.0219	10:47:45 PM	Yes
2	0.0020	1.95	0.0219	0.0939	0.0221	10:48:31 PM	Yes
Mean:	0.0019	1.95	0.0218				
SD:	0.00001	0.010	0.0001				
%RSD:	0.49%	0.49%	0.49				

QC value within limits for Hg 253.7 Recovery = 97.31%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-37330_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 12/6/2019 10:48:58 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0000	0.0036	0.0001	0.0004	0.0003	10:50:02 PM	Yes
2	0.0000	0.0000	0.0001	0.0001	0.0002	10:50:49 PM	Yes
Mean:	0.0000	0.0018	0.0001				
SD:	0.00000	0.00253	0.0000				
%RSD:	138.22%	138.22%	36.83				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 84
Sample ID: 570-14142-b-6-b ms                 Date Collected: 12/6/2019 10:51:15 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14142-b-6-b ms             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0048     4.83     0.0541   0.2354 0.0542 10:52:20 PM  Yes
2      0.0049     4.86     0.0544   0.2388 0.0545 10:53:07 PM  Yes
Mean:  0.0048     4.84     0.0542
SD:     0.00002     0.020    0.0002
%RSD:  0.42%      0.42%    0.42
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 85
Sample ID: 570-14142-b-6-c msd                 Date Collected: 12/6/2019 10:53:34 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14142-b-6-c msd             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0049     4.91     0.0550   0.2418 0.0551 10:54:40 PM  Yes
2      0.0049     4.94     0.0553   0.2428 0.0555 10:55:26 PM  Yes
Mean:  0.0049     4.92     0.0552
SD:     0.00002     0.024    0.0003
%RSD:  0.48%      0.48%    0.48
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 86
Sample ID: 570-14142-c-7-a                     Date Collected: 12/6/2019 10:55:53 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14142-c-7-a                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0069   0.0001   0.0008 0.0003 10:57:00 PM  Yes
2      0.0000     0.0024   0.0001  -0.0003 0.0002 10:57:46 PM  Yes
Mean:  0.0000     0.0047   0.0001
SD:     0.00000     0.00321  0.0000
%RSD:  68.88%     68.88%   33.10
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 87
Sample ID: 570-14206-e-1-c                     Date Collected: 12/6/2019 10:58:13 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14206-e-1-c                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1     -0.0000     -0.0055  -0.0000   0.0001 0.0002 10:59:19 PM  Yes
=====
  
```

2 -0.0000 -0.0098 -0.0001 -0.0006 0.0001 11:00:06 PM Yes
 Mean: -0.0000 -0.0076 -0.0000
 SD: 0.00000 0.00303 0.0000
 %RSD: 39.66% 39.66% 116.41

=====
 Sequence No.: 17 Autosampler Location: 88
 Sample ID: 570-14206-e-2-c Date Collected: 12/6/2019 11:00:33 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14206-e-2-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0057	-0.0000	0.0000	0.0002	11:01:38 PM	Yes
2	-0.0000	-0.0068	-0.0000	-0.0005	0.0001	11:02:24 PM	Yes
Mean:	-0.0000	-0.0063	-0.0000				
SD:	0.00000	0.00075	0.0000				
%RSD:	11.99%	11.99%	61.25				

=====
 Sequence No.: 18 Autosampler Location: 5
 Sample ID: ccv 570-37330_10-a Date Collected: 12/6/2019 11:02:52 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.95	0.0218	0.0921	0.0220	11:03:58 PM	Yes
2	0.0020	1.96	0.0219	0.0919	0.0221	11:04:44 PM	Yes
Mean:	0.0020	1.95	0.0219				
SD:	0.00001	0.006	0.0001				
%RSD:	0.30%	0.30%	0.30				

QC value within limits for Hg 253.7 Recovery = 97.56%
 All analyte(s) passed QC.

=====
 Sequence No.: 19 Autosampler Location: 1
 Sample ID: ccb 570-37330_11-a Date Collected: 12/6/2019 11:05:11 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0044	0.0001	0.0007	0.0003	11:06:16 PM	Yes
2	-0.0000	-0.0009	0.0000	-0.0001	0.0002	11:07:02 PM	Yes
Mean:	0.0000	0.0018	0.0001				
SD:	0.00000	0.00374	0.0000				
%RSD:	209.33%	209.33%	54.83				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.

Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1 Autosampler Location: 1
Sample ID: icv 570-37769_2-a Date Collected: 12/9/2019 3:30:08 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1
User canceled analysis.

=====
Sequence No.: 3 Autosampler Location:
Sample ID: Manual FIAS Cycle Date Collected: 12/9/2019 3:31:31 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1
User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1 Autosampler Location: 1
Sample ID: icv 570-37769_2-a Date Collected: 12/9/2019 3:57:28 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: icv 570-37769_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1				2.225e-3082	2.225e-3082	12:00:00 AM	Yes
2				2.225e-3082	2.225e-3082	12:00:00 AM	Yes

=====
Sequence No.: 2 Autosampler Location: 2
Sample ID: ic 570-37769_4-a Date Collected: 12/9/2019 3:59:34 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-37769_4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1				2.225e-3082	2.225e-3082	12:00:00 AM	Yes
2				2.225e-3082	2.225e-3082	12:00:00 AM	Yes

=====
Sequence No.: 3 Autosampler Location: 3

Sample ID: ic 570-37769_5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 4:01:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-37769_5-a

Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1				2.225e-308	2.225e-308	12:00:00 AM	Yes

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:

Results Data Set: 191209H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icis 570-37769_1-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/9/2019 4:03:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icis 570-37769_1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1				2.225e-308	2.225e-308	12:00:00 AM	Yes

User canceled analysis.

=====
Analysis BegunLogged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:

Results Data Set: 191209H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb
=====

Sequence No.: 1

Sample ID: icis 570-37769_1-a

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 12/9/2019 4:04:13 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: icis 570-37769_1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	-0.0011	0.0000	4:05:18 PM	Yes
2		[0.00]	0.0000	-0.0007	0.0000	4:06:04 PM	Yes

Mean: [0.00] 0.0000
SD: 0.0000 0.0000
%RSD: 0.00% 101.82

Auto-zero performed.

Sequence No.: 2

Sample ID: ic 570-37769_4-a

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 2

Date Collected: 12/9/2019 4:06:30 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: ic 570-37769_4-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0003	0.0004	0.0003	4:07:35 PM	Yes
2		[0.025]	0.0002	-0.0001	0.0002	4:08:21 PM	Yes

Mean: [0.025] 0.0002
SD: 0.00000 0.0001
%RSD: 0.00% 34.92

Standard number 1 applied. [0.025]

Correlation Coef.: 1.000000 Slope: 0.00812 Intercept: 0.00000
=====

Sequence No.: 3

Sample ID: ic 570-37769_5-a

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 3

Date Collected: 12/9/2019 4:08:47 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: ic 570-37769_5-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0008	0.0031	0.0008	4:09:52 PM	Yes
2		[0.100]	0.0007	0.0030	0.0008	4:10:38 PM	Yes

Mean: [0.100] 0.0008
SD: 0.00000 0.0001
%RSD: 0.00% 7.01

Standard number 2 applied. [0.100]

Correlation Coef.: 0.999931 Slope: 0.00775 Intercept: 0.00000
=====

Sequence No.: 4

Sample ID: ic 570-37769_6-a

Autosampler Location: 4

Date Collected: 12/9/2019 4:11:05 PM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-37769_6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0089	0.0445	0.0089	4:12:11 PM	Yes
2		[1.000]	0.0089	0.0441	0.0089	4:12:57 PM	Yes

Mean: [1.000] 0.0089
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.38
 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999930 Slope: 0.00893 Intercept: -0.00004

=====
 Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-37769_7-a Date Collected: 12/9/2019 4:13:24 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-37769_7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0181	0.0911	0.0181	4:14:29 PM	Yes
2		[2.000]	0.0181	0.0910	0.0181	4:15:15 PM	Yes

Mean: [2.000] 0.0181
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.18
 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999957 Slope: 0.00906 Intercept: -0.00007

=====
 Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-37769_8-a Date Collected: 12/9/2019 4:15:42 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-37769_8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0452	0.2293	0.0452	4:16:45 PM	Yes
2		[5.000]	0.0452	0.2312	0.0452	4:17:31 PM	Yes

Mean: [5.000] 0.0452
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.01
 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999993 Slope: 0.00905 Intercept: -0.00006

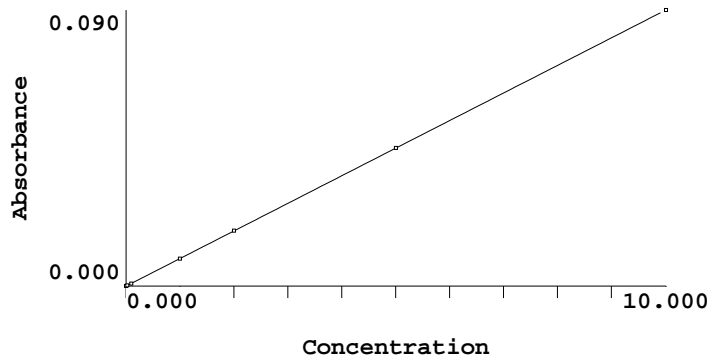
=====
 Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-37769_9-a Date Collected: 12/9/2019 4:17:57 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-37769_9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.0901	0.4648	0.0901	4:19:01 PM	Yes
2		[10.000]	0.0905	0.4711	0.0905	4:19:47 PM	Yes

Mean: [10.000] 0.0903
 SD: 0.00000 0.0002
 %RSD: 0.00% 0.27
 Standard number 6 applied. [10.000]

Correlation Coef.: 0.999998 Slope: 0.00903 Intercept: -0.00005



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-37769_1-a	0.0000	0	0.0054	0.00	101.82
ic 570-37769_4-a	0.0002	0.025	0.0278	0.00	34.92
ic 570-37769_5-a	0.0008	0.100	0.0914	0.00	7.01
ic 570-37769_6-a	0.0089	1.000	0.9902	0.00	0.38
ic 570-37769_7-a	0.0181	2.000	2.0092	0.00	0.18
ic 570-37769_8-a	0.0452	5.000	5.0034	0.00	0.01
ic 570-37769_9-a	0.0903	10.000	9.9975	0.00	0.27

Correlation Coef.: 0.999998 Slope: 0.00903 Intercept: -0.00005

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-37330_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 12/9/2019 4:21:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-37330_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.97	0.0449	0.2326	0.0449	4:22:58 PM	Yes
2	0.0050	4.97	0.0449	0.2340	0.0449	4:23:44 PM	Yes
Mean:	0.0050	4.97	0.0449				
SD:	0.00000	0.001	0.0000				
%RSD:	0.01%	0.01%	0.01				

QC value within limits for Hg 253.7 Recovery = 99.48%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-37330_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/9/2019 4:24:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-37330_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0166	0.0001	0.0012	0.0001	4:25:14 PM	Yes
2	0.0000	0.0125	0.0001	0.0002	0.0001	4:26:00 PM	Yes
Mean:	0.0000	0.0146	0.0001				
SD:	0.00000	0.00286	0.0000				
%RSD:	19.64%	19.64%	31.19				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-37769_12-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 12/9/2019 4:26:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-37769_12-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.272	0.0024	0.0127	0.0024	4:27:30 PM	Yes
2	0.0005	0.270	0.0024	0.0123	0.0024	4:28:16 PM	Yes
Mean:	0.0005	0.271	0.0024				
SD:	0.00000	0.0014	0.0000				
%RSD:	0.53%	0.53%	0.54				

=====
Sequence No.: 4
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Autosampler Location: 5
Date Collected: 12/9/2019 4:28:42 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.00	0.0180	0.0929	0.0180	4:29:48 PM	Yes
2	0.0020	2.00	0.0180	0.0923	0.0180	4:30:34 PM	Yes
Mean:	0.0020	2.00	0.0180				
SD:	0.00000	0.001	0.0000				
%RSD:	0.06%	0.06%	0.06				

QC value within limits for Hg 253.7 Recovery = 99.99%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-37330_11-a Date Collected: 12/9/2019 4:31:01 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0069	0.0000	-0.0005	0.0000	4:32:05 PM	Yes
2	0.0000	0.0055	0.0000	-0.0012	0.0000	4:32:51 PM	Yes
Mean:	0.0000	0.0062	0.0000				
SD:	0.00000	0.00101	0.0000				
%RSD:	16.24%	16.24%	123.54				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:

Results Data Set: 191209H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====

Sequence No.: 1
Sample ID: icv 570-37330_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.

Autosampler Location: 8
Date Collected: 12/9/2019 4:36:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1 Autosampler Location: 10
Sample ID: mb 570-37642_1-a Date Collected: 12/9/2019 4:36:52 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: mb 570-37642_1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0039	-0.0000	-0.0014	0.0000	4:37:57 PM	Yes
2	0.0000	0.0025	-0.0000	-0.0014	-0.0000	4:38:43 PM	Yes
Mean:	0.0000	0.0032	-0.0000				
SD:	0.00000	0.00098	0.0000				
%RSD:	30.85%	30.85%	44.10				

=====
Sequence No.: 2 Autosampler Location: 11
Sample ID: lcs 570-37642_2-a Date Collected: 12/9/2019 4:39:09 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: lcs 570-37642_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0437	0.2283	0.0437	4:40:15 PM	Yes
2	0.0049	4.87	0.0440	0.2307	0.0440	4:41:00 PM	Yes
Mean:	0.0049	4.86	0.0438				
SD:	0.00002	0.021	0.0002				
%RSD:	0.44%	0.44%	0.44				

=====
Sequence No.: 3 Autosampler Location: 12
Sample ID: lcsd 570-37642_3-a Date Collected: 12/9/2019 4:41:27 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: lcsd 570-37642_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.90	0.0442	0.2317	0.0442	4:42:33 PM	Yes
2	0.0049	4.90	0.0442	0.2311	0.0442	4:43:19 PM	Yes
Mean:	0.0049	4.90	0.0442				
SD:	0.00000	0.000	0.0000				
%RSD:	0.01%	0.01%	0.01				

=====
Sequence No.: 4 Autosampler Location: 13
Sample ID: 570-14372-e-2-a Date Collected: 12/9/2019 4:43:46 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14372-e-2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0110	0.0001	-0.0002	0.0001	4:44:52 PM	Yes
2	0.0000	0.0116	0.0001	-0.0006	0.0001	4:45:37 PM	Yes
Mean:	0.0000	0.0113	0.0001				
SD:	0.00000	0.00044	0.0000				
%RSD:	3.92%	3.92%	7.48				

Sequence No.: 5

Autosampler Location: 14

Sample ID: 570-14372-e-2-b ms

Date Collected: 12/9/2019 4:46:05 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14372-e-2-b ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.94	0.0174	0.0889	0.0175	4:47:09 PM	Yes
2	0.0020	1.97	0.0178	0.0913	0.0178	4:47:55 PM	Yes
Mean:	0.0020	1.95	0.0176				
SD:	0.00002	0.025	0.0002				
%RSD:	1.27%	1.27%	1.27				

Sequence No.: 6

Autosampler Location: 15

Sample ID: 570-14372-e-2-c msd

Date Collected: 12/9/2019 4:48:20 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14372-e-2-c msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0437	0.2286	0.0437	4:49:24 PM	Yes
2	0.0049	4.90	0.0443	0.2336	0.0443	4:50:10 PM	Yes
Mean:	0.0049	4.87	0.0440				
SD:	0.00004	0.043	0.0004				
%RSD:	0.89%	0.89%	0.89				

Sequence No.: 7

Autosampler Location: 16

Sample ID: 570-14597-f-1-b

Date Collected: 12/9/2019 4:50:36 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14597-f-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0211	0.0001	0.0002	0.0002	4:51:40 PM	Yes
2	0.0000	0.0191	0.0001	0.0000	0.0001	4:52:26 PM	Yes
Mean:	0.0000	0.0201	0.0001				
SD:	0.00000	0.00144	0.0000				
%RSD:	7.18%	7.18%	9.80				

Sequence No.: 8

Autosampler Location: 17

Sample ID: 570-14206-b-1-b

Date Collected: 12/9/2019 4:52:52 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14206-b-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0780	0.0007	0.0028	0.0007	4:53:56 PM	Yes
2	0.0001	0.0724	0.0006	0.0017	0.0006	4:54:42 PM	Yes
Mean:	0.0001	0.0752	0.0006				
SD:	0.00000	0.00401	0.0000				
%RSD:	5.33%	5.33%	5.74				

Sequence No.: 9
 Sample ID: 570-14206-a-2-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 18
 Date Collected: 12/9/2019 4:55:08 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14206-a-2-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak Area	Peak Height	Time	Peak Stored
#	mg/L	ug/L	Signal	Area	Height		
1	0.0000	0.0126	0.0001	-0.0005	0.0001	4:56:12 PM	Yes
2	0.0000	0.0140	0.0001	-0.0004	0.0001	4:56:58 PM	Yes
Mean:	0.0000	0.0133	0.0001				
SD:	0.00000	0.00100	0.0000				
%RSD:	7.57%	7.57%	12.74				

Sequence No.: 10
 Sample ID: 570-14206-a-3-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 19
 Date Collected: 12/9/2019 4:57:24 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14206-a-3-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak Area	Peak Height	Time	Peak Stored
#	mg/L	ug/L	Signal	Area	Height		
1	0.0000	0.0129	0.0001	0.0001	0.0001	4:58:29 PM	Yes
2	0.0000	0.0096	0.0000	-0.0005	0.0001	4:59:14 PM	Yes
Mean:	0.0000	0.0113	0.0001				
SD:	0.00000	0.00234	0.0000				
%RSD:	20.71%	20.71%	39.66				

Sequence No.: 11
 Sample ID: ccv 570-37330_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 12/9/2019 4:59:40 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak Area	Peak Height	Time	Peak Stored
#	mg/L	ug/L	Signal	Area	Height		
1	0.0020	1.99	0.0179	0.0923	0.0179	5:00:46 PM	Yes
2	0.0020	1.99	0.0179	0.0914	0.0179	5:01:32 PM	Yes
Mean:	0.0020	1.99	0.0179				
SD:	0.00000	0.002	0.0000				
%RSD:	0.10%	0.10%	0.10				

QC value within limits for Hg 253.7 Recovery = 99.35%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-37330_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 12/9/2019 5:01:59 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak Area	Peak Height	Time	Peak Stored
#	mg/L	ug/L	Signal	Area	Height		

1	0.0000	0.0075	0.0000	-0.0005	0.0000	5:03:03 PM	Yes
2	0.0000	0.0022	-0.0000	-0.0018	-0.0000	5:03:49 PM	Yes
Mean:	0.0000	0.0049	-0.0000				
SD:	0.00000	0.00377	0.0000				
%RSD:	77.39%	77.39%	733.61				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 20
Sample ID: 570-14372-f-1-a                    Date Collected: 12/9/2019 5:04:14 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14372-f-1-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0128   0.0001   -0.0002 0.0001  5:05:19 PM  Yes
2      0.0000     0.0135   0.0001   0.0001  0.0001  5:06:05 PM  Yes
Mean:  0.0000     0.0132   0.0001
SD:    0.00000     0.00050  0.0000
%RSD:  3.81%      3.81%    6.45
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 21
Sample ID: 570-14597-f-2-b                    Date Collected: 12/9/2019 5:06:31 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14597-f-2-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0100   0.0000   0.0000  0.0001  5:07:36 PM  Yes
2      0.0000     0.0118   0.0001   -0.0002 0.0001  5:08:21 PM  Yes
Mean:  0.0000     0.0109   0.0000
SD:    0.00000     0.00130  0.0000
%RSD:  11.87%     11.87%   23.44
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 22
Sample ID: 570-14506-a-1-a                    Date Collected: 12/9/2019 5:08:47 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14506-a-1-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0003     0.301    0.0027   0.0135  0.0027  5:09:52 PM  Yes
2      0.0003     0.297    0.0026   0.0131  0.0026  5:10:38 PM  Yes
Mean:  0.0003     0.299    0.0027
SD:    0.00000     0.0029   0.0000
%RSD:  0.98%      0.98%    0.99
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 23
Sample ID: 570-14506-a-2-a                    Date Collected: 12/9/2019 5:11:05 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14506-a-2-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0005     0.503    0.0045   0.0233  0.0045  5:12:10 PM  Yes
=====
  
```

2 0.0005 0.499 0.0045 0.0228 0.0045 5:12:56 PM Yes
 Mean: 0.0005 0.501 0.0045
 SD: 0.00000 0.0028 0.0000
 %RSD: 0.56% 0.56% 0.56

=====
 Sequence No.: 17 Autosampler Location: 24
 Sample ID: 570-14506-a-3-a Date Collected: 12/9/2019 5:13:23 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14506-a-3-a Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0001 0.0569 0.0005 0.0021 0.0005 5:14:28 PM Yes
 2 0.0001 0.0538 0.0004 0.0016 0.0005 5:15:14 PM Yes
 Mean: 0.0001 0.0554 0.0005
 SD: 0.00000 0.00223 0.0000
 %RSD: 4.03% 4.03% 4.46

=====
 Sequence No.: 18 Autosampler Location: 25
 Sample ID: 570-14559-f-1-a Date Collected: 12/9/2019 5:15:41 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14559-f-1-a Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0001 0.114 0.0010 0.0047 0.0010 5:16:47 PM Yes
 2 0.0001 0.117 0.0010 0.0047 0.0010 5:17:33 PM Yes
 Mean: 0.0001 0.115 0.0010
 SD: 0.00000 0.0017 0.0000
 %RSD: 1.48% 1.48% 1.56

=====
 Sequence No.: 19 Autosampler Location: 26
 Sample ID: 570-14559-f-1-b ms Date Collected: 12/9/2019 5:18:00 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14559-f-1-b ms Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0050 4.96 0.0448 0.2343 0.0448 5:19:04 PM Yes
 2 0.0050 5.00 0.0451 0.2373 0.0452 5:19:50 PM Yes
 Mean: 0.0050 4.98 0.0449
 SD: 0.00003 0.030 0.0003
 %RSD: 0.61% 0.61% 0.61

=====
 Sequence No.: 20 Autosampler Location: 27
 Sample ID: 570-14559-f-1-c msd Date Collected: 12/9/2019 5:20:16 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14559-f-1-c msd Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0050 4.96 0.0447 0.2369 0.0448 5:21:21 PM Yes
 2 0.0050 4.96 0.0448 0.2380 0.0448 5:22:06 PM Yes
 Mean: 0.0050 4.96 0.0448
 SD: 0.00000 0.005 0.0000

%RSD: 0.09% 0.09% 0.09

```

=====
Sequence No.: 21                               Autosampler Location: 28
Sample ID: 570-14559-f-2-a                   Date Collected: 12/9/2019 5:22:32 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14559-f-2-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0006       0.614     0.0055   0.0294   0.0055   5:23:37 PM  Yes
2      0.0006       0.603     0.0054   0.0277   0.0054   5:24:22 PM  Yes
Mean:  0.0006       0.608     0.0054
SD:     0.00001     0.0078    0.0001
%RSD:  1.28%       1.28%     1.29

```

```

=====
Sequence No.: 22                               Autosampler Location: 29
Sample ID: 570-14559-f-3-a                   Date Collected: 12/9/2019 5:24:48 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14559-f-3-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0004       0.389     0.0035   0.0186   0.0035   5:25:53 PM  Yes
2      0.0004       0.378     0.0034   0.0165   0.0034   5:26:39 PM  Yes
Mean:  0.0004       0.384     0.0034
SD:     0.00001     0.0079    0.0001
%RSD:  2.05%       2.05%     2.08

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                Date Collected: 12/9/2019 5:27:05 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccv 570-37330_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0020       1.99      0.0179   0.0948   0.0180   5:28:10 PM  Yes
2      0.0020       1.98      0.0178   0.0922   0.0179   5:28:56 PM  Yes
Mean:  0.0020       1.99      0.0179
SD:     0.00001     0.008     0.0001
%RSD:  0.39%       0.39%     0.40

```

QC value within limits for Hg 253.7 Recovery = 99.31%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                Date Collected: 12/9/2019 5:29:23 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-37330_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0000       0.0094    0.0000   0.0001   0.0001   5:30:27 PM  Yes
2      0.0000       0.0045    -0.0000  -0.0008  0.0000   5:31:13 PM  Yes
Mean:  0.0000       0.0069    0.0000
SD:     0.00000     0.00341   0.0000
%RSD:  49.13%       49.13%    218.77

```


QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 30
Sample ID: 570-14559-f-4-a Date Collected: 12/9/2019 5:31:39 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14559-f-4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.142	0.0012	0.0062	0.0012	5:32:43 PM	Yes
2	0.0001	0.139	0.0012	0.0059	0.0012	5:33:29 PM	Yes
Mean:	0.0001	0.141	0.0012				
SD:	0.00000	0.0019	0.0000				
%RSD:	1.33%	1.33%	1.39				

Sequence No.: 26 Autosampler Location: 31
Sample ID: 570-14631-g-1-a Date Collected: 12/9/2019 5:33:55 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14631-g-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0145	0.0001	0.0000	0.0001	5:35:00 PM	Yes
2	0.0000	0.0129	0.0001	-0.0002	0.0001	5:35:45 PM	Yes
Mean:	0.0000	0.0137	0.0001				
SD:	0.00000	0.00115	0.0000				
%RSD:	8.41%	8.41%	13.85				

Sequence No.: 27 Autosampler Location: 32
Sample ID: 570-14631-g-2-a Date Collected: 12/9/2019 5:36:11 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14631-g-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0134	0.0001	-0.0000	0.0001	5:37:16 PM	Yes
2	0.0000	0.0121	0.0001	-0.0002	0.0001	5:38:02 PM	Yes
Mean:	0.0000	0.0128	0.0001				
SD:	0.00000	0.00091	0.0000				
%RSD:	7.15%	7.15%	12.37				

Sequence No.: 28 Autosampler Location: 33
Sample ID: 570-14631-g-3-a Date Collected: 12/9/2019 5:38:28 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14631-g-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0153	0.0001	-0.0001	0.0001	5:39:33 PM	Yes
2	0.0000	0.0156	0.0001	-0.0003	0.0001	5:40:19 PM	Yes
Mean:	0.0000	0.0154	0.0001				
SD:	0.00000	0.00025	0.0000				
%RSD:	1.64%	1.64%	2.53				

```

=====
Sequence No.: 29                               Autosampler Location: 34
Sample ID: 570-14862-b-1-a                   Date Collected: 12/9/2019 5:40:45 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14862-b-1-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0000      0.0139   0.0001   -0.0000 0.0001   5:41:51 PM  Yes
2      0.0000      0.0106   0.0000   -0.0002 0.0001   5:42:36 PM  Yes
Mean:  0.0000      0.0123   0.0001
SD:    0.00000    0.00233  0.0000
%RSD:  18.97%     18.97%   33.79
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                Date Collected: 12/9/2019 5:43:03 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-37330_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0020      1.96     0.0176   0.0918  0.0177   5:44:09 PM  Yes
2      0.0020      1.98     0.0178   0.0923  0.0178   5:44:54 PM  Yes
Mean:  0.0020      1.97     0.0177
SD:    0.00001    0.012    0.0001
%RSD:  0.61%     0.61%    0.61
=====

```

QC value within limits for Hg 253.7 Recovery = 98.35%
All analyte(s) passed QC.

```

=====
Sequence No.: 31                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                Date Collected: 12/9/2019 5:45:21 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-37330_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0000      0.0066   0.0000   -0.0005 0.0000   5:46:26 PM  Yes
2      0.0000      0.0056   0.0000   -0.0007 0.0000   5:47:11 PM  Yes
Mean:  0.0000      0.0061   0.0000
SD:    0.00000    0.00068  0.0000
%RSD:  11.26%     11.26%   98.98
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:

Results Data Set: 191209H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37401_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 35
Date Collected: 12/9/2019 5:54:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37401_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0059	0.0000	-0.0002	0.0000	5:55:39 PM	Yes
2	0.0000	0.0074	0.0000	-0.0001	0.0000	5:56:25 PM	Yes
Mean:	0.0000	0.0067	0.0000				
SD:	0.00000	0.00104	0.0000				
%RSD:	15.69%	15.69%	82.44				

=====
Sequence No.: 2
Sample ID: lcs 570-37401_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 36
Date Collected: 12/9/2019 5:56:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37401_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.77	0.0430	0.2261	0.0430	5:57:58 PM	Yes
2	0.0048	4.79	0.0432	0.2290	0.0432	5:58:43 PM	Yes
Mean:	0.0048	4.78	0.0431				
SD:	0.00001	0.012	0.0001				
%RSD:	0.26%	0.26%	0.26				

=====
Sequence No.: 3
Sample ID: lcsd 570-37401_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 37
Date Collected: 12/9/2019 5:59:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37401_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.83	0.0436	0.2305	0.0436	6:00:17 PM	Yes
2	0.0048	4.80	0.0433	0.2301	0.0433	6:01:02 PM	Yes
Mean:	0.0048	4.81	0.0434				
SD:	0.00002	0.022	0.0002				
%RSD:	0.45%	0.45%	0.45				

=====
Sequence No.: 4
Sample ID: 570-14509-a-1-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 38
Date Collected: 12/9/2019 6:01:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-1-f Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0888	0.0008	0.0043	0.0008	6:02:35 PM	Yes
2	0.0001	0.0786	0.0007	0.0031	0.0007	6:03:21 PM	Yes
Mean:	0.0001	0.0837	0.0007				
SD:	0.00001	0.00721	0.0001				
%RSD:	8.62%	8.62%	9.21				

Sequence No.: 5 Autosampler Location: 39
 Sample ID: 570-14509-a-1-g ms Date Collected: 12/9/2019 6:03:47 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-1-g ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.85	0.0438	0.2500	0.0438	6:04:52 PM	Yes
2	0.0049	4.93	0.0445	0.2557	0.0445	6:05:38 PM	Yes
Mean:	0.0049	4.89	0.0442				
SD:	0.00005	0.054	0.0005				
%RSD:	1.11%	1.11%	1.11				

Sequence No.: 6 Autosampler Location: 40
 Sample ID: 570-14509-a-1-h msd Date Collected: 12/9/2019 6:06:04 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-1-h msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.88	0.0440	0.2519	0.0440	6:07:09 PM	Yes
2	0.0049	4.87	0.0440	0.2505	0.0440	6:07:55 PM	Yes
Mean:	0.0049	4.87	0.0440				
SD:	0.00000	0.003	0.0000				
%RSD:	0.07%	0.07%	0.07				

Sequence No.: 7 Autosampler Location: 41
 Sample ID: 570-14509-a-2-h Date Collected: 12/9/2019 6:08:22 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-2-h Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0533	0.0004	0.0024	0.0004	6:09:26 PM	Yes
2	0.0000	0.0195	0.0001	-0.0003	0.0001	6:10:12 PM	Yes
Mean:	0.0000	0.0364	0.0003				
SD:	0.00002	0.02388	0.0002				
%RSD:	65.59%	65.59%	76.98				

Sequence No.: 8 Autosampler Location: 42
 Sample ID: 570-14509-a-3-d Date Collected: 12/9/2019 6:10:39 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-3-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0403	0.0003	0.0020	0.0003	6:11:44 PM	Yes
2	0.0000	0.0379	0.0003	0.0015	0.0003	6:12:30 PM	Yes
Mean:	0.0000	0.0391	0.0003				
SD:	0.00000	0.00175	0.0000				
%RSD:	4.47%	4.47%	5.18				

Sequence No.: 9
 Sample ID: 570-14509-a-4-d
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 43
 Date Collected: 12/9/2019 6:12:56 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-4-d Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0772	0.0006	0.0040	0.0007	6:14:01 PM	Yes
2	0.0001	0.0702	0.0006	0.0031	0.0006	6:14:47 PM	Yes
Mean:	0.0001	0.0737	0.0006				
SD:	0.00000	0.00494	0.0000				
%RSD:	6.71%	6.71%	7.24				

Sequence No.: 10
 Sample ID: 570-14509-a-5-d
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 44
 Date Collected: 12/9/2019 6:15:13 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-5-d Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0302	0.0002	0.0014	0.0002	6:16:18 PM	Yes
2	0.0000	0.0294	0.0002	0.0012	0.0002	6:17:04 PM	Yes
Mean:	0.0000	0.0298	0.0002				
SD:	0.00000	0.00057	0.0000				
%RSD:	1.92%	1.92%	2.35				

Sequence No.: 11
 Sample ID: ccv 570-37330_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 12/9/2019 6:17:30 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	1.96	0.0177	0.0934	0.0177	6:18:36 PM	Yes
2	0.0020	1.98	0.0178	0.0931	0.0178	6:19:22 PM	Yes
Mean:	0.0020	1.97	0.0178				
SD:	0.00001	0.010	0.0001				
%RSD:	0.49%	0.49%	0.49				

QC value within limits for Hg 253.7 Recovery = 98.53%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-37330_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 12/9/2019 6:19:49 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0000	0.0090	0.0000	0.0004	0.0000	6:20:53 PM	Yes
2	0.0000	0.0097	0.0000	0.0003	0.0001	6:21:39 PM	Yes
Mean:	0.0000	0.0094	0.0000				
SD:	0.00000	0.00045	0.0000				
%RSD:	4.85%	4.85%	11.42				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 45
Sample ID: 570-14509-a-6-d                   Date Collected: 12/9/2019 6:22:05 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-6-d              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0280   0.0002   0.0015 0.0002 6:23:10 PM  Yes
2      0.0000     0.0256   0.0002   0.0010 0.0002 6:23:56 PM  Yes
Mean:  0.0000     0.0268   0.0002
SD:    0.00000     0.00165  0.0000
%RSD:  6.16%      6.16%    7.71
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 46
Sample ID: 570-14509-a-7-d                   Date Collected: 12/9/2019 6:24:22 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-7-d              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0461   0.0004   0.0024 0.0004 6:25:27 PM  Yes
2      0.0000     0.0428   0.0003   0.0019 0.0004 6:26:13 PM  Yes
Mean:  0.0000     0.0444   0.0004
SD:    0.00000     0.00233  0.0000
%RSD:  5.25%      5.25%    5.97
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 47
Sample ID: 570-14509-a-8-d                   Date Collected: 12/9/2019 6:26:40 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-8-d              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0170   0.0001   0.0008 0.0001 6:27:45 PM  Yes
2      0.0000     0.0144   0.0001   0.0005 0.0001 6:28:31 PM  Yes
Mean:  0.0000     0.0157   0.0001
SD:    0.00000     0.00187  0.0000
%RSD:  11.93%     11.93%   18.18
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 48
Sample ID: 570-14509-a-9-d                   Date Collected: 12/9/2019 6:28:58 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-9-d              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0270   0.0002   0.0010 0.0002 6:30:03 PM  Yes
=====
  
```

2 0.0000 0.0268 0.0002 0.0010 0.0002 6:30:49 PM Yes
 Mean: 0.0000 0.0269 0.0002
 SD: 0.00000 0.00019 0.0000
 %RSD: 0.72% 0.72% 0.90

=====
 Sequence No.: 17 Autosampler Location: 49
 Sample ID: 570-14509-a-10-d Date Collected: 12/9/2019 6:31:16 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-10-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0307	0.0002	0.0016	0.0002	6:32:22 PM	Yes
2	0.0000	0.0287	0.0002	0.0010	0.0002	6:33:07 PM	Yes
Mean:	0.0000	0.0297	0.0002				
SD:	0.00000	0.00137	0.0000				
%RSD:	4.61%	4.61%	5.63				

=====
 Sequence No.: 18 Autosampler Location: 50
 Sample ID: 570-14509-a-11-d Date Collected: 12/9/2019 6:33:35 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-11-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0338	0.0003	0.0019	0.0003	6:34:40 PM	Yes
2	0.0000	0.0322	0.0002	0.0014	0.0003	6:35:25 PM	Yes
Mean:	0.0000	0.0330	0.0002				
SD:	0.00000	0.00113	0.0000				
%RSD:	3.42%	3.42%	4.08				

=====
 Sequence No.: 19 Autosampler Location: 51
 Sample ID: 570-14509-a-12-d Date Collected: 12/9/2019 6:35:52 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-12-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0207	0.0001	0.0009	0.0002	6:36:57 PM	Yes
2	0.0000	0.0196	0.0001	0.0006	0.0001	6:37:43 PM	Yes
Mean:	0.0000	0.0201	0.0001				
SD:	0.00000	0.00084	0.0000				
%RSD:	4.15%	4.15%	5.67				

=====
 Sequence No.: 20 Autosampler Location: 52
 Sample ID: 570-14509-a-13-d Date Collected: 12/9/2019 6:38:09 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-13-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0239	0.0002	0.0008	0.0002	6:39:14 PM	Yes
2	0.0000	0.0229	0.0002	0.0008	0.0002	6:39:59 PM	Yes
Mean:	0.0000	0.0234	0.0002				
SD:	0.00000	0.00070	0.0000				

%RSD: 3.00% 3.00% 3.90

```

=====
Sequence No.: 21                               Autosampler Location: 53
Sample ID: 570-14509-a-14-d                   Date Collected: 12/9/2019 6:40:26 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14509-a-14-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0000      0.0287    0.0002    0.0013   0.0002    6:41:31 PM  Yes
2      0.0000      0.0255    0.0002    0.0009   0.0002    6:42:17 PM  Yes
Mean:  0.0000      0.0271    0.0002
SD:    0.00000     0.00223   0.0000
%RSD:  8.24%      8.24%     10.29

```

```

=====
Sequence No.: 22                               Autosampler Location: 54
Sample ID: 570-14509-a-15-d                   Date Collected: 12/9/2019 6:42:44 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14509-a-15-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0001      0.0635    0.0005    0.0029   0.0005    6:43:49 PM  Yes
2      0.0001      0.0655    0.0005    0.0034   0.0006    6:44:35 PM  Yes
Mean:  0.0001      0.0645    0.0005
SD:    0.00000     0.00144   0.0000
%RSD:  2.23%      2.23%     2.43

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                 Date Collected: 12/9/2019 6:45:01 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccv 570-37330_10-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0020      1.96      0.0176    0.0929   0.0177    6:46:07 PM  Yes
2      0.0020      1.95      0.0176    0.0927   0.0176    6:46:52 PM  Yes
Mean:  0.0020      1.96      0.0176
SD:    0.00000     0.002     0.0000
%RSD:  0.12%      0.12%     0.12

```

QC value within limits for Hg 253.7 Recovery = 97.78%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                 Date Collected: 12/9/2019 6:47:20 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-37330_11-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0000      0.0116    0.0001    0.0004   0.0001    6:48:24 PM  Yes
2      0.0000      0.0065    0.0000    -0.0000  0.0000    6:49:10 PM  Yes
Mean:  0.0000      0.0090    0.0000
SD:    0.00000     0.00363   0.0000
%RSD:  40.20%      40.20%    99.55

```


QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 55
Sample ID: 570-14509-a-16-d                   Date Collected: 12/9/2019 6:49:35 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                       Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-14509-a-16-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0266   0.0002   0.0013 0.0002 6:50:40 PM  Yes
2      0.0000     0.0230   0.0002   0.0005 0.0002 6:51:26 PM  Yes
Mean:  0.0000     0.0248   0.0002
SD:    0.00000    0.00250  0.0000
%RSD:  10.10%    10.10%   12.90
    
```

```

=====
Sequence No.: 26                               Autosampler Location: 56
Sample ID: 570-14509-a-17-d                   Date Collected: 12/9/2019 6:51:52 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                       Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-14509-a-17-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0353   0.0003   0.0016 0.0003 6:52:57 PM  Yes
2      0.0000     0.0363   0.0003   0.0017 0.0003 6:53:43 PM  Yes
Mean:  0.0000     0.0358   0.0003
SD:    0.00000    0.00070  0.0000
%RSD:  1.96%     1.96%    2.31
    
```

```

=====
Sequence No.: 27                               Autosampler Location: 57
Sample ID: 570-14509-a-18-d                   Date Collected: 12/9/2019 6:54:09 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                       Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-14509-a-18-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0345   0.0003   0.0020 0.0003 6:55:14 PM  Yes
2      0.0000     0.0264   0.0002   0.0004 0.0002 6:55:59 PM  Yes
Mean:  0.0000     0.0304   0.0002
SD:    0.00001    0.00577  0.0001
%RSD:  18.95%    18.95%   23.02
    
```

```

=====
Sequence No.: 28                               Autosampler Location: 58
Sample ID: 570-14621-a-1-d                   Date Collected: 12/9/2019 6:56:26 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                       Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-14621-a-1-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0002     0.159    0.0014   0.0084 0.0014 6:57:31 PM  Yes
2      0.0002     0.154    0.0013   0.0071 0.0014 6:58:17 PM  Yes
Mean:  0.0002     0.157    0.0014
SD:    0.00000    0.0036   0.0000
%RSD:  2.30%     2.30%    2.38
    
```

```

=====
Sequence No.: 29                               Autosampler Location: 59
Sample ID: 570-14626-a-1-f                    Date Collected: 12/9/2019 6:58:44 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14626-a-1-f                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0010       1.00      0.0090    0.0540    0.0090    6:59:50 PM  Yes
2      0.0010       0.998     0.0090    0.0528    0.0090    7:00:35 PM  Yes
Mean:  0.0010       1.00      0.0090
SD:    0.00000      0.004     0.0000
%RSD:  0.44%       0.44%     0.44

```

```

=====
Sequence No.: 30                               Autosampler Location: 60
Sample ID: 570-14202-g-6-b                    Date Collected: 12/9/2019 7:01:02 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14202-g-6-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0000       0.0111   0.0001    -0.0003   0.0001    7:02:09 PM  Yes
2      0.0000       0.0094   0.0000    -0.0006   0.0001    7:02:54 PM  Yes
Mean:  0.0000       0.0102   0.0000
SD:    0.00000      0.00117  0.0000
%RSD:  11.43%     11.43%   24.14

```

```

=====
Sequence No.: 31                               Autosampler Location: 61
Sample ID: 570-14202-g-7-b                    Date Collected: 12/9/2019 7:03:22 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14202-g-7-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0000       0.0153   0.0001    0.0002    0.0001    7:04:28 PM  Yes
2      0.0000       0.0104   0.0000    0.0002    0.0001    7:05:14 PM  Yes
Mean:  0.0000       0.0128   0.0001
SD:    0.00000      0.00348  0.0000
%RSD:  27.14%     27.14%   46.78

```

```

=====
Sequence No.: 32                               Autosampler Location: 62
Sample ID: lb4 570-37344_1-c                  Date Collected: 12/9/2019 7:05:41 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: lb4 570-37344_1-c              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0000       0.0089   0.0000    0.0002    0.0000    7:06:46 PM  Yes
2      0.0000       0.0100   0.0000    0.0002    0.0001    7:07:31 PM  Yes
Mean:  0.0000       0.0094   0.0000
SD:    0.00000      0.00080  0.0000
%RSD:  8.48%       8.48%    19.83

```

```

=====
Sequence No.: 33                               Autosampler Location: 63
Sample ID: lcs 570-37344_2-c                  Date Collected: 12/9/2019 7:07:58 PM

```

Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37344_2-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.78	0.0431	0.2295	0.0431	7:09:04 PM	Yes
2	0.0048	4.79	0.0432	0.2338	0.0433	7:09:49 PM	Yes
Mean:	0.0048	4.78	0.0432				
SD:	0.00001	0.011	0.0001				
%RSD:	0.23%	0.23%	0.23				

=====
Sequence No.: 34
Sample ID: lcsd 570-37344_3-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 64
Date Collected: 12/9/2019 7:10:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37344_3-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.80	0.0433	0.2335	0.0434	7:11:21 PM	Yes
2	0.0048	4.80	0.0433	0.2343	0.0433	7:12:06 PM	Yes
Mean:	0.0048	4.80	0.0433				
SD:	0.00000	0.005	0.0000				
%RSD:	0.10%	0.10%	0.10				

=====
Sequence No.: 35
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/9/2019 7:12:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.97	0.0177	0.0944	0.0177	7:13:39 PM	Yes
2	0.0020	1.97	0.0178	0.0947	0.0178	7:14:25 PM	Yes
Mean:	0.0020	1.97	0.0177				
SD:	0.00000	0.004	0.0000				
%RSD:	0.19%	0.19%	0.19				

QC value within limits for Hg 253.7 Recovery = 98.44%
All analyte(s) passed QC.

=====
Sequence No.: 36
Sample ID: ccb 570-37330_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/9/2019 7:14:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0115	0.0001	0.0006	0.0001	7:15:56 PM	Yes
2	0.0000	0.0101	0.0000	-0.0000	0.0001	7:16:42 PM	Yes
Mean:	0.0000	0.0108	0.0000				
SD:	0.00000	0.00095	0.0000				
%RSD:	8.83%	8.83%	17.62				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 37

Autosampler Location: 65

Sample ID: 570-14434-a-1-j
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 7:17:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14434-a-1-j

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0057	0.0000	-0.0002	0.0000	7:18:14 PM	Yes
2	0.0000	0.0032	-0.0000	-0.0006	-0.0000	7:19:00 PM	Yes
Mean:	0.0000	0.0044	-0.0000				
SD:	0.00000	0.00178	0.0000				
%RSD:	40.26%	40.26%	181.93				

=====

Sequence No.: 38
Sample ID: 570-14434-a-1-m ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 66
Date Collected: 12/9/2019 7:19:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14434-a-1-m ms

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal
1	0.0011	1.09	0.0098
2	0.0011	1.09	0.0098
Mean:	0.0011	1.09	0.0098
SD:	0.00000	0.002	0.0000
%RSD:	0.20%	0.20%	0.20

Analyte: Hg 253.7

Peak Area	Peak Height	Time	Peak Stored
0.0523	0.0098	7:20:32 PM	Yes
0.0518	0.0098	7:21:17 PM	Yes

=====

Sequence No.: 39
Sample ID: 570-14434-a-1-n msd
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 67
Date Collected: 12/9/2019 7:21:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14434-a-1-n msd

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal
1	0.0001	0.0883	0.0007
2	0.0001	0.0851	0.0007
Mean:	0.0001	0.0867	0.0007
SD:	0.00000	0.00224	0.0000
%RSD:	2.59%	2.59%	2.76

Analyte: Hg 253.7

Peak Area	Peak Height	Time	Peak Stored
0.0038	0.0008	7:22:49 PM	Yes
0.0036	0.0007	7:23:35 PM	Yes

=====

Sequence No.: 40
Sample ID: mb 570-37796_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 68
Date Collected: 12/9/2019 7:24:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37796_1-a

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal
1	0.0000	0.0112	0.0001
2	0.0000	0.0070	0.0000
Mean:	0.0000	0.0091	0.0000
SD:	0.00000	0.00299	0.0000
%RSD:	32.87%	32.87%	80.62

Analyte: Hg 253.7

Peak Area	Peak Height	Time	Peak Stored
0.0004	0.0001	7:25:07 PM	Yes
0.0000	0.0000	7:25:52 PM	Yes

=====

Sequence No.: 41
Sample ID: lcs 570-37796_2-a
Analyst: 1174 HG-8
Initial Sample Wt:

Autosampler Location: 69
Date Collected: 12/9/2019 7:26:19 PM
Data Type: Original
Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37796_2-a

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 42
Sample ID: lcsd 570-37796_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 70
Date Collected: 12/9/2019 7:28:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37796_3-a

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 43
Sample ID: 570-15011-a-1-i
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 71
Date Collected: 12/9/2019 7:30:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15011-a-1-i

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 44
Sample ID: 570-15011-a-1-j ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 72
Date Collected: 12/9/2019 7:33:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15011-a-1-j ms

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 45
Sample ID: 570-15011-a-1-k msd
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 73
Date Collected: 12/9/2019 7:35:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15011-a-1-k msd

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.97	0.0448	0.2688	0.0448	7:36:36 PM	Yes
2	0.0049	4.92	0.0444	0.2676	0.0444	7:37:22 PM	Yes
Mean:	0.0049	4.95	0.0446				
SD:	0.00003	0.031	0.0003				
%RSD:	0.63%	0.63%	0.63				

Sequence No.: 46

Autosampler Location: 74

Sample ID: 570-15097-a-1-b

Date Collected: 12/9/2019 7:37:49 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15097-a-1-b

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.132	0.0011	0.0064	0.0012	7:38:55 PM	Yes
2	0.0001	0.0901	0.0008	0.0039	0.0008	7:39:41 PM	Yes
Mean:	0.0001	0.111	0.0010				
SD:	0.00003	0.0296	0.0003				
%RSD:	26.63%	26.63%	27.99				

Sequence No.: 47

Autosampler Location: 5

Sample ID: ccv 570-37330_10-a

Date Collected: 12/9/2019 7:40:08 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.95	0.0176	0.0946	0.0176	7:41:13 PM	Yes
2	0.0020	1.96	0.0176	0.0944	0.0176	7:41:59 PM	Yes
Mean:	0.0020	1.95	0.0176				
SD:	0.00000	0.003	0.0000				
%RSD:	0.15%	0.15%	0.15				

QC value within limits for Hg 253.7 Recovery = 97.67%

All analyte(s) passed QC.

Sequence No.: 48

Autosampler Location: 1

Sample ID: ccb 570-37330_11-a

Date Collected: 12/9/2019 7:42:26 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0163	0.0001	0.0013	0.0001	7:43:31 PM	Yes
2	0.0000	0.0045	-0.0000	-0.0008	0.0000	7:44:16 PM	Yes
Mean:	0.0000	0.0104	0.0000				
SD:	0.00001	0.00838	0.0001				
%RSD:	80.75%	80.75%	167.96				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 49

Autosampler Location: 75

Sample ID: mb 570-37499_1-a

Date Collected: 12/9/2019 7:44:42 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

 Replicate Data: mb 570-37499_1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0105	0.0000	0.0005	0.0001	7:45:47 PM	Yes
2	0.0000	0.0052	-0.0000	-0.0003	0.0000	7:46:32 PM	Yes
Mean:	0.0000	0.0079	0.0000				
SD:	0.00000	0.00378	0.0000				
%RSD:	48.07%	48.07%	152.91				

=====

Sequence No.: 50	Autosampler Location: 76
Sample ID: lcs 570-37499_2-a	Date Collected: 12/9/2019 7:46:59 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

 Replicate Data: lcs 570-37499_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.75	0.0428	0.2320	0.0428	7:48:04 PM	Yes
2	0.0048	4.80	0.0433	0.2359	0.0433	7:48:49 PM	Yes
Mean:	0.0048	4.77	0.0431				
SD:	0.00004	0.039	0.0004				
%RSD:	0.82%	0.82%	0.82				

=====

Sequence No.: 51	Autosampler Location: 77
Sample ID: lcsd 570-37499_3-a	Date Collected: 12/9/2019 7:49:15 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

 Replicate Data: lcsd 570-37499_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.80	0.0433	0.2359	0.0433	7:50:20 PM	Yes
2	0.0048	4.79	0.0432	0.2366	0.0432	7:51:05 PM	Yes
Mean:	0.0048	4.79	0.0433				
SD:	0.00001	0.009	0.0001				
%RSD:	0.18%	0.18%	0.18				

=====

Sequence No.: 52	Autosampler Location: 78
Sample ID: 570-14854-a-1-b	Date Collected: 12/9/2019 7:51:32 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

 Replicate Data: 570-14854-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0286	0.0002	0.0008	0.0002	7:52:36 PM	Yes
2	0.0000	0.0198	0.0001	0.0005	0.0001	7:53:21 PM	Yes
Mean:	0.0000	0.0242	0.0002				
SD:	0.00001	0.00621	0.0001				
%RSD:	25.69%	25.69%	33.06				

=====

Sequence No.: 53	Autosampler Location: 79
Sample ID: 570-14854-a-1-c ms	Date Collected: 12/9/2019 7:53:48 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

 Replicate Data: 570-14854-a-1-c ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.62	0.0417	0.2432	0.0417	7:54:53 PM	Yes
2	0.0047	4.70	0.0424	0.2485	0.0424	7:55:38 PM	Yes
Mean:	0.0047	4.66	0.0421				
SD:	0.00005	0.051	0.0005				
%RSD:	1.10%	1.10%	1.10				

Sequence No.: 54
Sample ID: 570-14854-a-1-d msd
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 80
Date Collected: 12/9/2019 7:56:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14854-a-1-d msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.63	0.0418	0.2469	0.0418	7:57:09 PM	Yes
2	0.0046	4.61	0.0416	0.2467	0.0416	7:57:54 PM	Yes
Mean:	0.0046	4.62	0.0417				
SD:	0.00001	0.014	0.0001				
%RSD:	0.30%	0.30%	0.30				

Sequence No.: 55
Sample ID: 570-14854-a-2-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 81
Date Collected: 12/9/2019 7:58:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14854-a-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0744	0.0006	0.0032	0.0006	7:59:26 PM	Yes
2	0.0000	0.0250	0.0002	0.0006	0.0002	8:00:11 PM	Yes
Mean:	0.0000	0.0497	0.0004				
SD:	0.00003	0.03495	0.0003				
%RSD:	70.36%	70.36%	78.93				

Sequence No.: 56
Sample ID: 570-14854-a-3-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 82
Date Collected: 12/9/2019 8:00:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14854-a-3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.158	0.0014	0.0072	0.0014	8:01:42 PM	Yes
2	0.0002	0.159	0.0014	0.0069	0.0014	8:02:27 PM	Yes
Mean:	0.0002	0.158	0.0014				
SD:	0.00000	0.0005	0.0000				
%RSD:	0.34%	0.34%	0.35				

Sequence No.: 57
Sample ID: 570-14837-a-1-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 83
Date Collected: 12/9/2019 8:02:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14837-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0155	0.0001	0.0010	0.0001	8:03:58 PM	Yes

2 0.0000 0.0081 0.0000 -0.0001 0.0000 8:04:44 PM Yes
 Mean: 0.0000 0.0118 0.0001
 SD: 0.00001 0.00525 0.0000
 %RSD: 44.51% 44.51% 81.96

=====
 Sequence No.: 58 Autosampler Location: 84
 Sample ID: 570-14836-a-1-b Date Collected: 12/9/2019 8:05:11 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14836-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0048	-0.0000	-0.0005	0.0000	8:06:17 PM	Yes
2	0.0000	0.0123	0.0001	0.0003	0.0001	8:07:03 PM	Yes
Mean:	0.0000	0.0085	0.0000				
SD:	0.00001	0.00531	0.0000				
%RSD:	62.19%	62.19%	168.46				

=====
 Sequence No.: 59 Autosampler Location: 5
 Sample ID: ccv 570-37330_10-a Date Collected: 12/9/2019 8:07:30 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.92	0.0173	0.0934	0.0173	8:08:36 PM	Yes
2	0.0019	1.93	0.0174	0.0939	0.0174	8:09:21 PM	Yes
Mean:	0.0019	1.92	0.0173				
SD:	0.00001	0.009	0.0001				
%RSD:	0.47%	0.47%	0.47				

QC value within limits for Hg 253.7 Recovery = 96.20%
 All analyte(s) passed QC.

=====
 Sequence No.: 60 Autosampler Location: 1
 Sample ID: ccb 570-37330_11-a Date Collected: 12/9/2019 8:09:49 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0063	0.0000	-0.0005	0.0000	8:10:53 PM	Yes
2	0.0000	0.0053	-0.0000	-0.0005	0.0000	8:11:38 PM	Yes
Mean:	0.0000	0.0058	0.0000				
SD:	0.00000	0.00066	0.0000				
%RSD:	11.31%	11.31%	163.20				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
 Sequence No.: 61 Autosampler Location: 85
 Sample ID: 570-14768-a-1-b Date Collected: 12/9/2019 8:12:04 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14768-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0063	0.0000	-0.0005	0.0000	8:10:53 PM	Yes
2	0.0000	0.0053	-0.0000	-0.0005	0.0000	8:11:38 PM	Yes

1	0.0000	0.0433	0.0003	0.0023	0.0004	8:13:10 PM	Yes
2	0.0000	0.0394	0.0003	0.0016	0.0003	8:13:56 PM	Yes
Mean:	0.0000	0.0414	0.0003				
SD:	0.00000	0.00279	0.0000				
%RSD:	6.75%	6.75%	7.76				

```

=====
Sequence No.: 62
Sample ID: 570-14696-a-1-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 86
Date Collected: 12/9/2019 8:14:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14696-a-1-d
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0058 5.84 0.0527 0.3168 0.0527 8:15:29 PM Yes
2 0.0060 5.99 0.0540 0.3229 0.0540 8:16:14 PM Yes
Mean: 0.0059 5.91 0.0534
SD: 0.00010 0.103 0.0009
%RSD: 1.74% 1.74% 1.74
-----

```

```

=====
Sequence No.: 63
Sample ID: 570-14869-a-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 87
Date Collected: 12/9/2019 8:16:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-1-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0001 0.106 0.0009 0.0049 0.0009 8:17:47 PM Yes
2 0.0001 0.0644 0.0005 0.0026 0.0005 8:18:33 PM Yes
Mean: 0.0001 0.0853 0.0007
SD: 0.00003 0.02955 0.0003
%RSD: 34.64% 34.64% 36.97
-----

```

```

=====
Sequence No.: 64
Sample ID: 570-14869-a-2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 88
Date Collected: 12/9/2019 8:19:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0001 0.0752 0.0006 0.0037 0.0006 8:20:05 PM Yes
2 0.0001 0.0764 0.0006 0.0040 0.0007 8:20:51 PM Yes
Mean: 0.0001 0.0758 0.0006
SD: 0.00000 0.00088 0.0000
%RSD: 1.16% 1.16% 1.25
-----

```

```

=====
Sequence No.: 65
Sample ID: 570-14869-a-3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 89
Date Collected: 12/9/2019 8:21:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0001 0.0826 0.0007 0.0048 0.0007 8:22:23 PM Yes
2 0.0001 0.0760 0.0006 0.0033 0.0007 8:23:09 PM Yes
Mean: 0.0001 0.0793 0.0007
-----

```

SD: 0.00000 0.00464 0.00000
%RSD: 5.85% 5.85% 6.28

Sequence No.: 66 Autosampler Location: 90
Sample ID: 570-14869-a-4-a Date Collected: 12/9/2019 8:23:36 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-14869-a-4-a.

Sequence No.: 67 Autosampler Location: 91
Sample ID: 570-14869-a-5-a Date Collected: 12/9/2019 8:25:54 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-14869-a-5-a.

Sequence No.: 68 Autosampler Location: 92
Sample ID: 570-14869-a-6-a Date Collected: 12/9/2019 8:28:13 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-14869-a-6-a.

Sequence No.: 69 Autosampler Location: 93
Sample ID: 570-14869-a-7-a Date Collected: 12/9/2019 8:30:32 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-14869-a-7-a.

```

=====
Sequence No.: 70                               Autosampler Location: 94
Sample ID: 570-14869-a-8-a                   Date Collected: 12/9/2019 8:32:50 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-8-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0905   0.0008   0.0050 0.0008 8:33:56 PM  Yes
2      0.0001     0.0902   0.0008   0.0047 0.0008 8:34:42 PM  Yes
Mean:  0.0001     0.0904   0.0008
SD:    0.00000    0.00022  0.0000
%RSD:  0.25%     0.25%    0.26
=====

```

```

=====
Sequence No.: 71                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                Date Collected: 12/9/2019 8:35:09 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-37330_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0019     1.92     0.0173   0.0933 0.0173 8:36:15 PM  Yes
2      0.0019     1.91     0.0172   0.0937 0.0173 8:37:01 PM  Yes
Mean:  0.0019     1.91     0.0173
SD:    0.00000    0.001    0.0000
%RSD:  0.05%     0.05%    0.05
=====

```

QC value within limits for Hg 253.7 Recovery = 95.75%
All analyte(s) passed QC.

```

=====
Sequence No.: 72                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                Date Collected: 12/9/2019 8:37:28 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-37330_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0110   0.0001   0.0007 0.0001 8:38:32 PM  Yes
2      0.0000     0.0054   0.0000   -0.0003 0.0000 8:39:17 PM  Yes
Mean:  0.0000     0.0082   0.0000
SD:    0.00000    0.00396  0.0000
%RSD:  48.05%     48.05%  138.85
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 73                               Autosampler Location: 95
Sample ID: 570-14869-a-9-a                   Date Collected: 12/9/2019 8:39:43 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-9-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0002     0.191    0.0017   0.0101 0.0017 8:40:49 PM  Yes
2      0.0002     0.185    0.0016   0.0093 0.0016 8:41:34 PM  Yes
Mean:  0.0002     0.188    0.0016
SD:    0.00000    0.0039   0.0000
%RSD:  2.07%     2.07%    2.13
=====

```

```

=====
Sequence No.: 74                               Autosampler Location: 96
Sample ID: 570-14869-a-10-a                   Date Collected: 12/9/2019 8:42:02 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-10-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      0.0001       0.0851   0.0007   0.0044 0.0007  8:43:07 PM Yes
2      0.0001       0.0798   0.0007   0.0035 0.0007  8:43:53 PM Yes
Mean:  0.0001       0.0825   0.0007
SD:    0.00000      0.00374  0.0000
%RSD:  4.53%       4.53%    4.85
=====

```

```

=====
Sequence No.: 75                               Autosampler Location: 97
Sample ID: 570-14869-a-11-a                   Date Collected: 12/9/2019 8:44:20 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-11-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      0.0001       0.0712   0.0006   0.0035 0.0006  8:45:26 PM Yes
2      0.0001       0.0703   0.0006   0.0032 0.0006  8:46:11 PM Yes
Mean:  0.0001       0.0707   0.0006
SD:    0.00000      0.00066  0.0000
%RSD:  0.93%       0.93%    1.01
=====

```

```

=====
Sequence No.: 76                               Autosampler Location: 98
Sample ID: 720-96376-b-1-a                   Date Collected: 12/9/2019 8:46:38 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 720-96376-b-1-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      0.0003       0.329    0.0029   0.0173 0.0029  8:47:44 PM Yes
2      0.0003       0.326    0.0029   0.0165 0.0029  8:48:30 PM Yes
Mean:  0.0003       0.328    0.0029
SD:    0.00000      0.0025   0.0000
%RSD:  0.75%       0.75%    0.76
=====

```

```

=====
Sequence No.: 77                               Autosampler Location: 99
Sample ID: 720-96377-b-1-a                   Date Collected: 12/9/2019 8:48:57 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 720-96377-b-1-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      0.0004       0.383    0.0034   0.0201 0.0034  8:50:03 PM Yes
2      0.0004       0.376    0.0034   0.0193 0.0034  8:50:49 PM Yes
Mean:  0.0004       0.380    0.0034
SD:    0.00000      0.0043   0.0000
%RSD:  1.14%       1.14%    1.16
=====

```

```

=====
Sequence No.: 78                               Autosampler Location: 100
=====

```

Sample ID: mb 570-37593_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 8:51:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37593_1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0091	0.0000	0.0001	0.0000	8:52:22 PM	Yes
2	0.0000	0.0072	0.0000	-0.0002	0.0000	8:53:07 PM	Yes
Mean:	0.0000	0.0082	0.0000				
SD:	0.00000	0.00135	0.0000				
%RSD:	16.47%	16.47%	48.27				

=====
Sequence No.: 79 Autosampler Location: 101
Sample ID: lcs 570-37593_2-a Date Collected: 12/9/2019 8:53:35 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: lcs 570-37593_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.67	0.0422	0.2329	0.0422	8:54:41 PM	Yes
2	0.0047	4.70	0.0424	0.2353	0.0424	8:55:26 PM	Yes
Mean:	0.0047	4.69	0.0423				
SD:	0.00002	0.018	0.0002				
%RSD:	0.38%	0.38%	0.38				

=====
Sequence No.: 80 Autosampler Location: 102
Sample ID: lcsd 570-37593_3-a Date Collected: 12/9/2019 8:55:53 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: lcsd 570-37593_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.74	0.0427	0.2402	0.0427	8:56:59 PM	Yes
2	0.0047	4.74	0.0428	0.2399	0.0428	8:57:45 PM	Yes
Mean:	0.0047	4.74	0.0427				
SD:	0.00000	0.002	0.0000				
%RSD:	0.04%	0.04%	0.04				

=====
Sequence No.: 81 Autosampler Location: 103
Sample ID: 570-14172-a-1-g Date Collected: 12/9/2019 8:58:12 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14172-a-1-g Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0240	0.0002	0.0007	0.0002	8:59:18 PM	Yes
2	0.0000	0.0130	0.0001	-0.0002	0.0001	9:00:04 PM	Yes
Mean:	0.0000	0.0185	0.0001				
SD:	0.00001	0.00782	0.0001				
%RSD:	42.28%	42.28%	59.66				

=====
Sequence No.: 82 Autosampler Location: 5
Sample ID: ccv 570-37330_10-a Date Collected: 12/9/2019 9:00:31 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.90	0.0172	0.0952	0.0172	9:01:37 PM	Yes
2	0.0019	1.91	0.0172	0.0950	0.0172	9:02:23 PM	Yes
Mean:	0.0019	1.91	0.0172				
SD:	0.00000	0.004	0.0000				
%RSD:	0.19%	0.19%	0.19				

QC value within limits for Hg 253.7 Recovery = 95.38%
All analyte(s) passed QC.

=====

Sequence No.: 83

Autosampler Location: 1

Sample ID: ccb 570-37330_11-a

Date Collected: 12/9/2019 9:02:50 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0042	-0.0000	-0.0005	0.0000	9:03:54 PM	Yes
2	0.0000	0.0102	0.0000	0.0005	0.0001	9:04:40 PM	Yes
Mean:	0.0000	0.0072	0.0000				
SD:	0.00000	0.00421	0.0000				
%RSD:	58.32%	58.32%	229.73				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience _____ Job Number: 570-14206-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID	Lab Sample ID
A2BMP0012S007	570-14206-1
EVBMP0003S029	570-14206-2
FBQW1869Q001	570-14206-3

Comments:

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: A2BMP0012S007

Lab Sample ID: 570-14206-1

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:50

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Turbidity	5.20	0.0500	0.0439	NTU			1	SM 2130B
	Total Suspended Solids	6.43	1.43	1.18	mg/L			1	SM 2540D

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: EV BMP0003S029

Lab Sample ID: 570-14206-2

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:30

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Suspended Solids	9.00	3.33	2.76	mg/L			1	SM 2540D

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: FBQW1869Q001

Lab Sample ID: 570-14206-3

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:15

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Turbidity	0.110	0.0500	0.0439	NTU			1	SM 2130B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14206-1
SDG No.: _____
Analyst: KZ40 Batch Start Date: 11/27/2019
Reporting Units: NTU Analytical Batch No.: 35992

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
4	CCV	21:46	Turbidity	96.30	100	96	95-105		WC_TUR_STD2_00055
8	CCV	21:46	Turbidity	96.00	100	96	95-105		WC_TUR_STD2_00055

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 36718 Date: 12/04/2019 11:00							
SM 2540D	MB 570-36718/1	Total Suspended Solids	ND		mg/L	1.00	1

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 35992 Date: 11/27/2019 21:46								
SM 2130B	A2BMP0012S007	570-14206-1	Turbidity	5.20	NTU			
SM 2130B	A2BMP0012S007	570-14206-1 DU	Turbidity	5.190	NTU	0.2	25	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14206-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 36718		Date: 12/04/2019 11:00									
						LCS Source: WC_SSC_STD_00001					
SM 2540D	LCS 570-36718/2	Total Suspended Solids	104.0		mg/L	100	104	85-115	1	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE DUPLICATE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14206-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 36718		Date: 12/04/2019 11:00									
						LCSD Source: WC_SSC_STD_00001					
SM 2540D	LCSD 570-36718/3	Total Suspended Solids	103.0		mg/L	100	103	85-115	1	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LCS-CERTIFIED REFERENCE MATERIAL
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 35992 Date: 11/27/2019 21:46											
SM	LCSSRM	Turbidity	990.0		NTU	1000	99.0	99.0-10			
2130B	570-35992/1							1.0			
Batch ID: 35992 Date: 11/27/2019 21:46											
SM	LCSSRM	Turbidity	9.910		NTU	10.0	99.1	99.0-10			
2130B	570-35992/2							1.0			
Batch ID: 35992 Date: 11/27/2019 21:46											
SM	LCSSRM	Turbidity	ND		NTU	0.0200	200.0	0.0-200			
2130B	570-35992/3							.0			

Calculations are performed before rounding to avoid round-off errors in calculated results.

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience

Job Number: 570-14206-1

SDG Number: _____

Matrix: Water

Instrument ID: NOEQUIP

Method: SM 2130B

MDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	RL (NTU)	MDL (NTU)
Turbidity		0.05	0.04392

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-14206-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2130B XMDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	XRL (NTU)	XMDL (NTU)
Turbidity		0.05	0.04391639

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience

Job Number: 570-14206-1

SDG Number: _____

Matrix: Water

Instrument ID: NOEQUIP

Method: SM 2540D

MDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Suspended Solids		1	0.82873

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-14206-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2540D XMDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Suspended Solids		1	0.82873

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: NOEQUIP Analysis Method: SM 2130B

Start Date: 11/27/2019 21:46 End Date: 11/27/2019 21:46

Lab Sample Id	D/F	Type	Time	Turb	Analytes																			
LCSSRM 570-35992/1	1	T	21:46	X																				
LCSSRM 570-35992/2	1	T	21:46	X																				
LCSSRM 570-35992/3	1	T	21:46	X																				
CCV 570-35992/4	1		21:46	X																				
570-14206-1	1	T	21:46	X																				
570-14206-1 DU	1	T	21:46	X																				
570-14206-3	1	T	21:46	X																				
CCV 570-35992/8	1		21:46	X																				

Prep Types: _____
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Instrument ID: NOEQUIP Analysis Method: SM 2540D

Start Date: 12/04/2019 11:00 End Date: 12/04/2019 11:00

Lab Sample Id	D/F	Type	Time	T S S	Analytes																			
MB 570-36718/1	1	T	11:00	X																				
LCS 570-36718/2	1	T	11:00	X																				
LCSD 570-36718/3	1	T	11:00	X																				
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
570-14206-1	1	T	11:00	X																				
570-14206-2	1	T	11:00	X																				
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
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ZZZZZZ			11:00																					
ZZZZZZ			11:00																					
ZZZZZZ			11:00																					

Prep Types: _____
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 35992 Batch Start Date: 11/27/19 21:46 Batch Analyst: DeVera, Christopher A

Batch Method: SM 2130B Batch End Date: 11/27/19 21:58

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	WC_TUR_STD 00008	WC_TUR_STD 00009	WC_TUR_STD 00010	WC_TUR_STD2 00055	
LCSSRM 570-35992/1		SM 2130B		30 mL		30 mL			
LCSSRM 570-35992/2		SM 2130B		30 mL	30 mL				
LCSSRM 570-35992/3		SM 2130B		30 mL			30 mL		
CCV 570-35992/4		SM 2130B		30 mL				30 mL	
570-14206-D-1	A2BMP0012S007	SM 2130B	T	30 mL					
570-14206-D-1 DU	A2BMP0012S007	SM 2130B	T	30 mL					
570-14206-C-3	FBQW1869Q001	SM 2130B	T	30 mL					
CCV 570-35992/8		SM 2130B		30 mL				30 mL	

Batch Notes	
Calibration Date	10-01-2019
Instrument ID	TUR04
Pipette/Syringe/Dispenser ID	P-121

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 36718 Batch Start Date: 12/04/19 11:00 Batch Analyst: Luu, Kieu Linh

Batch Method: SM 2540D Batch End Date: 12/04/19 16:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	CrucibleID	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 570-36718/1		SM 2540D		B0758135	0.3951 g	1000 mL	0.3948 g	0.3948 g	0 g
LCS 570-36718/2		SM 2540D		B0758134	0.3951 g	100 mL	0.4056 g	0.4055 g	0 g
LCSD 570-36718/3		SM 2540D		B0758133	0.3915 g	100 mL	0.4019 g	0.4018 g	0 g
570-14206-F-1	A2BMP0012S007	SM 2540D	T	B0758123	0.3958 g	700 mL	0.4003 g	0.4003 g	0 g
570-14206-E-2	EV BMP0003S029	SM 2540D	T	B0758122	0.3954 g	300 mL	0.3981 g	0.3981 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	Residue	Residue2	FinalAmount	ResDishWt	DishWeight
MB 570-36718/1		SM 2540D		PASS <0.5mg	-0.0003 g	-0.0003 g	1000 mL	0.3948 g	0.3951 g
LCS 570-36718/2		SM 2540D		PASS <0.5mg	0.0105 g	0.0104 g	1000 mL	0.4055 g	0.3951 g
LCSD 570-36718/3		SM 2540D		PASS <0.5mg	0.0104 g	0.0103 g	1000 mL	0.4018 g	0.3915 g
570-14206-F-1	A2BMP0012S007	SM 2540D	T	PASS <0.5mg	0.0045 g	0.0045 g	1000 mL	0.4003 g	0.3958 g
570-14206-E-2	EV BMP0003S029	SM 2540D	T	PASS <0.5mg	0.0027 g	0.0027 g	1000 mL	0.3981 g	0.3954 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC_SSC_STD 00001					
MB 570-36718/1		SM 2540D							
LCS 570-36718/2		SM 2540D		100 mL					
LCSD 570-36718/3		SM 2540D		100 mL					
570-14206-F-1	A2BMP0012S007	SM 2540D	T						
570-14206-E-2	EV BMP0003S029	SM 2540D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14206-1

SDG No.: _____

Batch Number: 36718 Batch Start Date: 12/04/19 11:00 Batch Analyst: Luu, Kieu Linh

Batch Method: SM 2540D Batch End Date: 12/04/19 16:00

Batch Notes	
Balance ID	71
Date/Time - In - CW (WT2)	12/04/2019 14:00
Date/Time - Out - CW (WT2)	12/04/2019 15:00
Temperature - Start - CW (WT2) - Correct	104 Celsius
Temperature - End - CW (WT2) - Correct	104 Celsius
Temperature - Start-CW(WT2) -Uncorrected	104 Celsius
Temperature - End-CW(WT2) -Uncorrected	104 Celsius
Temperature - Start - Corrected	104 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	12/04/2019 12:00
Date/Time - Out	12/04/2019 13:00
Filter ID	37634
Nominal Amount Used	1000 mL
Oven ID	io7a
Perform Calculation (0=No, 1=Yes)	1
Thermometer ID	tss io7a
Temperature - Start - Uncorrected	104 Celsius
Temperature - End - Uncorrected	104 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
GEOTECHNICAL

Lab Name: Eurofins Calscience _____ Job Number: 570-14206-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID	Lab Sample ID
A2BMP0012S007	570-14206-1
EVBMP0003S029	570-14206-2

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: A2BMP0012S007

Lab Sample ID: 570-14206-1

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:50

Reporting Basis: WET

Date Received: 11/27/2019 17:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	100.00	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	ND	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	ND	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	ND	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	100.00	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	ND	0.01	0.01	%			1	D4464

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: EV BMP0003S029

Lab Sample ID: 570-14206-2

Lab Name: Eurofins Calscience

Job No.: 570-14206-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/27/2019 07:30

Reporting Basis: WET

Date Received: 11/27/2019 17:10

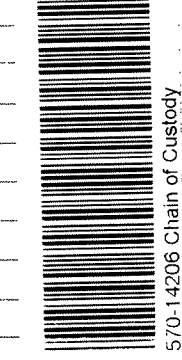
CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	5.71	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	17.04	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	ND	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	38.32	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	44.03	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	38.94	0.01	0.01	%			1	D4464

Shipping and Receiving Documents

JACOBS CH2M

COC Number: CALS11271901

Chain of Custody Record



Project Name SSFL Location Santa Susana Field Lab
 Project CH661 PO 100067108373
 Project Number 692670.61.SW Task Order 661
 Project Manager Randy Dean
 Sample Manager Jamie Beckett
 Turnaround Time 10 Days
 PO Number 100067108373

Sample ID	Sample Date/Time	Type	Matrix	Preservative	# Containers	Field Filtered
A2BMP0012S007	11/27/19 0750	N	Water		2	
Dioxins				4C	<input type="checkbox"/>	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C	<input type="checkbox"/>	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg			HNO3, 4C		<input type="checkbox"/>	<input type="checkbox"/>
Particle Size Distribution TSS			4C		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Turbidity			4C		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Total Containers: 8						
EVBMP0003S029	11/27/19 0730	N	Water		2	
Dioxins				4C	<input type="checkbox"/>	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C	<input type="checkbox"/>	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg			HNO3, 4C		<input type="checkbox"/>	<input type="checkbox"/>
Particle Size Distribution TSS			4C		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Total Containers: 7						

MS = Matrix Spike SD = Matrix Spike Duplicate

Sampled by RYAN DENSON Date/Time 11/27/19 12:00 Shipping Details
 Relinquished by [Signature] Shipment Method: FedEx
 Received by [Signature] Date/Time 11/27/19 12:00 Airbill No:
 Relinquished by [Signature] Date/Time 11/27/19 14:45 Lab Name: Eurofins Calscience Lab
 Received by [Signature] Date/Time 11/27/19 2:45 Lab Phone: (949) 870-8766
 On Ice: yes / no Cooler Temp _____

ATTN: Sample Custody and

Special Instructions: Report Copy to Mark Fesler (530) 229-3273

4.4/4.9 SW
 11/27/19 1710
 Chamber w 1710

14206

JACOBS CH2M

Chain of Custody Record COC Number: **CALS11271901**

Project Name	SSFL	Location	Santa Susana Field Lab
Project	CH661 PO 100067108373	Task Order	661
Project Number	692670.61.SW	Sample Manager	Randy Dean
Sample Manager	Jamie Beckett	Sample Date/Time	11/27/19 0730 PM
Turnaround Time	10 Days	Type Matrix	EB Water
PO Number	100067108373	Preservative	4C
Sample ID	FBQW1869Q001	# Containers	2
Dioxins		Field Filtered	<input type="checkbox"/>
Include Cd, Cu, Pb, Pp		4C	<input type="checkbox"/>
Turbidity		HNO3, 4C	<input type="checkbox"/>
		4C	<input type="checkbox"/>
		Total Containers:	5

SW8290/1613B
SM2540
ASTMD4464
200.8/245.1F
200.8/245.1
180.1

MS = Matrix Spike SD = Matrix Spike Duplicate

Sampled by	<i>Bryan Deason</i>	Date/Time	11/27/19 12:00	Shipping Details	Shipment Method: FedEx	Special Instructions:	
Relinquished by	<i>PS</i>	Date/Time	11/27/19 12:00	ATTN:	Sample Custody and		
Received by	<i>[Signature]</i>	Date/Time	11/27/19 12:00	Lab Name:	Eurofins Calscience Lab		
Relinquished by	<i>[Signature]</i>	Date/Time	11/27/19 14:45	Lab Phone:	(949) 870-8766		Report Copy to Mark Fesler (530) 229-3273
Received by	<i>[Signature]</i>	Date/Time	11/27/19 2:45	On Ice:	yes / no	Cooler Temp	

11/27/19 617211
710
Numbered on 11/27/19 1710

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-14206-1

Login Number: 14206
List Number: 1
Creator: Ramos, Maribel

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 570-14206-2

Job Description: CH661 / 692670.61.SW

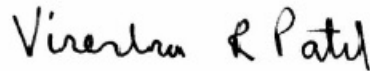
For:

Jacobs Engineering Group, Inc.

4121 Carmichael Rd #400

Montgomery, AL 36106

Attention: Mr. Randy Dean



Approved for release.
Virendra Patel
Project Manager I
1/6/2020 12:09 PM

Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
01/06/2020

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
570-14206-2

Comments

No additional comments.

Receipt

The samples were received on 11/27/2019 5:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9° C.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Method EPA 1613B - Dioxins/Furans - Report with J - Level IV: This method was subcontracted to Cape Fear Analytical, LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-2

Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-2

Method	Method Description	Protocol	Laboratory
1613B	EPA 1613B Dioxin/Furan	EPA	CFAnalytic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

CFAnalytic = Cape Fear Analytical, LLC, 3306 Kitty Hawk Road, Wilmington, NC 28405

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14206-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-14206-1	A2BMP0012S007	Water	11/27/19 07:50	11/27/19 17:10	
570-14206-2	EVBMP0003S029	Water	11/27/19 07:30	11/27/19 17:10	
570-14206-3	FBQW1869Q001	Water	11/27/19 07:15	11/27/19 17:10	

December 24, 2019

Mr. Virendra Patel
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, California 92841-1432

Re: Stormwater RFP Boeing SSFL MECX DXN
Work Order: 15900
SDG: 570-14206

Dear Mr. Patel:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 04, 2019. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421 Ext. 2.

Sincerely,

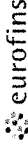


Cynde Larkins
Project Manager

Chain of Custody: 570-12676.1
Enclosures

Chain of Custody Record

CFA WO#15900



Calscience



Client Information (Sub Contract Lab) Client Contact: Cape Fear Analytical, LLC Shipping/Receiving: 3306 Kitty Hawk Road, Wilmington, NC, 28405 Company: Cape Fear Analytical, LLC Address: 3306 Kitty Hawk Road, Wilmington, NC, 28405 City: Wilmington, State, Zip: NC, 28405 Phone #: PO #: Email:		Lab PM: Patel, Virendra E-Mail: virendrapatel@eurofins.com Carrier Tracking No(s): 570-12676-1 State of Origin: California Page: Page 1 of 1 Job #: 570-14206-2 Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Anchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)	
Due Date Requested: 12/20/2019 TAT Requested (days): Project #: 57003454 SOW#: 570-14206		Accreditations Required (See note): Analysis Requested:	
Sample Information: Project Name: CH661 / 692670.61.SW Site:		Total Number of Containers:	
Sample Identification - Client ID (Lab ID) A2BMP0012S007 (570-14206-1) EVBMP0003S029 (570-14206-2) FBQW1869Q001 (570-14206-3)		Special Instructions/Note: Ch2m Hill Lab Spec 7 EDD, Standard TAT Ch2m Hill Lab Spec 7 EDD, Standard TAT Ch2m Hill Lab Spec 7 EDD, Standard TAT	
Sample Date: 11/27/19 Sample Time: 07:50 Pacific 11/27/19 07:30 Pacific 11/27/19 07:15 Pacific	Matrix (W=water, S=solid, O=wastwash, BT=tissue, A=air) Water Water Water	Field Filtered Sample (Yes or No) [X] Perform MS/MSD (Yes or No) [X] SUB (EPA 1631B - Dioxins/Furans - Report with J - Level IV) EPA 1631B - Dioxins/Furans	Preservation Code: Water Water Water
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.			
Possible Hazard Identification Unconfirmed Deliverable Requested: 1, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Empty Kit Relinquished by: Date: Relinquished by: Date/Time: 12/2/19 12:15 Relinquished by: Date/Time: Relinquished by: Date/Time: Custody Seals Intact: Custody Seal No.: Yes Δ No			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months			
Special Instructions/QC Requirements: Method of Shipment: Received by: Cyndie Jenkins Date/Time: 04-Dec-19/1100 Company: CFA Received by: Date/Time: Company: Received by: Date/Time: Company: Cooler Temperature(s) °C and Other Remarks: 2.3°C			

SAMPLE RECEIPT CHECKLIST
Cape Fear Analytical

Client: <u>CALS</u>	Work Order: <u>15900</u>
Shipping Company: <u>FedEx</u>	Date/Time Received: <u>04DEC19 1100</u>

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Samples < 2x background?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Air Witness: _____

#	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: seals broken damaged container leaking container other(describe)
2	Custody seal/s present on cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Seal intact? <u>Yes</u> No
3	Chain of Custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Samples requiring cold preservation within 0-6°C?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>ice bags</u> blue ice dry ice none other (describe) Temperature Blank present: <u>Yes</u> No <u>2.2° + 0.1 = 2.3°C</u>
5	Aqueous samples found to have visible solids?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: <u>Minimal visible solids (<1%) in all except FBQW1869Q001</u>
5	Samples requiring chemical preservation at proper pH?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected and pH observed: <u>pH = 7 on all</u> If preservative added, Lot#:
7	Samples requiring preservation have no residual chlorine?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: If preservative added, Lot#:
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, tests affected:
9	Sample IDs on COC match IDs on containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
10	Date & time of COC match date & time on containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Sample IDs, containers affected: <u>Collection time on label for FBQW1869Q001 is 07:30, COC has 07:15</u>
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	List type and number of containers / Sample IDs, containers affected:
12	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Comments:

Checklist performed by: Initials: Cp Date: 04DEC19

Subject: RE: 570-14206-2
From: Virendra Patel <VirendraPatel@eurofinsUS.com>
Date: 12/5/2019, 1:43 PM
To: Cynde Larkins <Cynde.larkins@cfanalytical.com>

Please use 07:15 as the collection time (as listed on the COC). Thank you!

Best Regards,

W9 # 15900

Virendra Patel
Project Manager

Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841
USA
P: +1 714 895 5494
F: +1 714 894 7501

****Christmas and New Year's Holiday Hours****

12/24/2019 – Tuesday – 0730-1800*
12/25/2019 – Wednesday – CLOSED
12/31/2019 – Tuesday – 0730-1800
01/01/2020 – Wednesday – CLOSED
(*Courier service is not available on these dates.)

Email: virendrapatel@eurofinsUS.com
Website: www.eurofinsUS.com/Calscience



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From: Cynde Larkins [mailto:Cynde.larkins@cfanalytical.com]
Sent: Thursday, December 05, 2019 10:22 AM
To: Virendra Patel
Subject: 570-14206-2

EXTERNAL EMAIL*

Good afternoon,

CFA received the samples for your Job number 570-14206-2 yesterday in good condition and within

temperature. Will you please verify the collection date for sample FBQW1869Q001? The COC has 07:15 but the label has 07:30.

Thank you,

--
Cynde Larkins
Project Manager
Cape Fear Analytical, LLC
3306 Kitty Hawk Road, Suite 120
Wilmington, NC 28405
(910) 795-0421

Notify us [here](#) to report this email as spam.

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High Resolution Dioxins and Furans Analysis

Case Narrative

**HDOX Case Narrative
Eurofins Calscience (CALs)
SDG 570-14206
Work Order 15900**

Method/Analysis Information

Product: Dioxins/Furans by EPA Method 1613B in Liquids
Analytical Method: EPA Method 1613B
Extraction Method: SW846 3520C
Analytical Batch Number: 42571
Clean Up Batch Number: 42568
Extraction Batch Number: 42567

Sample Analysis

Samples were received at 2.3°C (15900001, 15900002, 15900003). The following samples were analyzed using the analytical protocol as established in EPA Method 1613B:

Sample ID	Client ID
12025525	Method Blank (MB)
12025526	Laboratory Control Sample (LCS)
12025527	Laboratory Control Sample Duplicate (LCSD)
15900001	A2BMP00112S007
15900002	EVBMP0003S029
15900003	FBQW1869Q001

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 15.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement

The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement

The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery

The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement

The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation

A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation

A NCR was not required for this SDG.

Manual Integrations

Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

System Configuration

This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP750_2	Primary Dioxin Analysis	Dioxin Analysis	DB-5MS	60m x 0.25mm, 0.25um

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report for

CALS001 Eurofins Calscience

Client SDG: 570-14206 CFA Work Order: 15900

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- J Value is estimated
- K Estimated Maximum Possible Concentration
- U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: 

Name: Heather Patterson

Date: 24 DEC 2019

Title: Group Leader

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 15900001	Date Collected: 11/27/2019 07:50	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: A2BMP00112S007		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 19:28	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-11		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1024.1 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	BJ	0.00158	ng/L	0.000676	0.00976
40321-76-4	1,2,3,7,8-PeCDD	J	0.0125	ng/L	0.000685	0.0488
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.0177	ng/L	0.00125	0.0488
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.0336	ng/L	0.00126	0.0488
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.0333	ng/L	0.00127	0.0488
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.627	ng/L	0.00373	0.0488
3268-87-9	1,2,3,4,6,7,8,9-OCDD		4.08	ng/L	0.0057	0.0976
51207-31-9	2,3,7,8-TCDF	U	0.00073	ng/L	0.00073	0.00976
57117-41-6	1,2,3,7,8-PeCDF	U	0.000707	ng/L	0.000707	0.0488
57117-31-4	2,3,4,7,8-PeCDF	U	0.000693	ng/L	0.000693	0.0488
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.00416	ng/L	0.000935	0.0488
57117-44-9	1,2,3,6,7,8-HxCDF	BJK	0.00344	ng/L	0.000967	0.0488
60851-34-5	2,3,4,6,7,8-HxCDF	BJK	0.00506	ng/L	0.000961	0.0488
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00133	ng/L	0.00133	0.0488
67562-39-4	1,2,3,4,6,7,8-HpCDF		0.118	ng/L	0.00148	0.0488
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJK	0.00521	ng/L	0.00186	0.0488
39001-02-0	1,2,3,4,6,7,8,9-OCDF		0.171	ng/L	0.00191	0.0976
41903-57-5	Total TeCDD	BJ	0.00158	ng/L	0.000676	0.00976
36088-22-9	Total PeCDD	JK	0.0303	ng/L	0.000685	0.0488
34465-46-8	Total HxCDD	J	0.186	ng/L	0.00125	0.0488
37871-00-4	Total HpCDD		1.06	ng/L	0.00373	0.0488
30402-14-3	Total TeCDF	U	0.00073	ng/L	0.00073	0.00976
30402-15-4	Total PeCDF	BJK	0.0156	ng/L	0.000287	0.0488
55684-94-1	Total HxCDF	JK	0.0927	ng/L	0.000935	0.0488
38998-75-3	Total HpCDF	JK	0.265	ng/L	0.00148	0.0488
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0325	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.0328	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.67	1.95	ng/L	85.6	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.68	1.95	ng/L	86.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.50	1.95	ng/L	76.9	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.53	1.95	ng/L	78.5	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.68	1.95	ng/L	85.8	(23%-140%)
13C-OCDD		3.05	3.91	ng/L	78.1	(17%-157%)
13C-2,3,7,8-TCDF		1.68	1.95	ng/L	86.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.91	1.95	ng/L	97.8	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.67	1.95	ng/L	85.5	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.56	1.95	ng/L	79.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.51	1.95	ng/L	77.3	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.54	1.95	ng/L	78.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.59	1.95	ng/L	81.3	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 15900001	Date Collected: 11/27/2019 07:50	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: A2BMP00112S007		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 19:28	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-11		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1024.1 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.41	1.95	ng/L	72.2 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.56	1.95	ng/L	80.1 (26%-138%)
37Cl-2,3,7,8-TCDD			0.180	0.195	ng/L	92.2 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-14206
Lab Sample ID: 15900002
Client Sample: 1613B Water
Client ID: EVBMP0003S029
Batch ID: 42571
Run Date: 12/14/2019 20:16
Data File: A14DEC19A-12
Prep Batch: 42567
Prep Date: 10-DEC-19

Client: CALS001
Date Collected: 11/27/2019 07:30
Date Received: 12/04/2019 11:00
Method: EPA Method 1613B
Analyst: MJC
Prep Method: SW846 3520C
Prep Aliquot: 1045.1 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.000494	ng/L	0.000494	0.00957
40321-76-4	1,2,3,7,8-PeCDD	BJ	0.003	ng/L	0.000743	0.0478
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.00367	ng/L	0.00107	0.0478
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.00863	ng/L	0.001	0.0478
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.00756	ng/L	0.00105	0.0478
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.131	ng/L	0.00205	0.0478
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.970	ng/L	0.00366	0.0957
51207-31-9	2,3,7,8-TCDF	U	0.000574	ng/L	0.000574	0.00957
57117-41-6	1,2,3,7,8-PeCDF	U	0.000417	ng/L	0.000417	0.0478
57117-31-4	2,3,4,7,8-PeCDF	BJK	0.00044	ng/L	0.000417	0.0478
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.00138	ng/L	0.000647	0.0478
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.00159	ng/L	0.000679	0.0478
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	0.00216	ng/L	0.000668	0.0478
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000875	ng/L	0.000875	0.0478
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.0428	ng/L	0.000804	0.0478
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	0.00151	ng/L	0.00109	0.0478
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.047	ng/L	0.0032	0.0957
41903-57-5	Total TeCDD	U	0.000494	ng/L	0.000494	0.00957
36088-22-9	Total PeCDD	JK	0.00938	ng/L	0.000743	0.0478
34465-46-8	Total HxCDD	JK	0.0517	ng/L	0.001	0.0478
37871-00-4	Total HpCDD		0.255	ng/L	0.00205	0.0478
30402-14-3	Total TeCDF	U	0.000574	ng/L	0.000574	0.00957
30402-15-4	Total PeCDF	BJK	0.00951	ng/L	0.000277	0.0478
55684-94-1	Total HxCDF	BJK	0.0373	ng/L	0.000647	0.0478
38998-75-3	Total HpCDF	JK	0.0817	ng/L	0.000804	0.0478
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0077	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00802	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.57	1.91	ng/L	82.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.63	1.91	ng/L	84.9	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.42	1.91	ng/L	74.2	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.41	1.91	ng/L	73.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.58	1.91	ng/L	82.4	(23%-140%)
13C-OCDD		2.70	3.83	ng/L	70.7	(17%-157%)
13C-2,3,7,8-TCDF		1.55	1.91	ng/L	81.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.78	1.91	ng/L	93.1	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.62	1.91	ng/L	84.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.38	1.91	ng/L	72.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.34	1.91	ng/L	70.2	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.46	1.91	ng/L	76.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.49	1.91	ng/L	77.8	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 15900002	Date Collected: 11/27/2019 07:30	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: EVBMP0003S029		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 20:16	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-12		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1045.1 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.34	1.91	ng/L	69.9 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.48	1.91	ng/L	77.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.163	0.191	ng/L	85.1 (35%-197%)

Comments:
B The target analyte was detected in the associated blank.
J Value is estimated
K Estimated Maximum Possible Concentration
U Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206
Lab Sample ID: 15900003
Client Sample: 1613B Water
Client ID: FBQW1869Q001
Batch ID: 42571
Run Date: 12/14/2019 21:04
Data File: A14DEC19A-13
Prep Batch: 42567
Prep Date: 10-DEC-19

Client: CALS001
Date Collected: 11/27/2019 07:15
Date Received: 12/04/2019 11:00

Method: EPA Method 1613B
Analyst: MJC

Prep Method: SW846 3520C
Prep Aliquot: 972.7 mL

Project: CALS00214
Matrix: WATER

Prep Basis: As Received

Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00053	ng/L	0.00053	0.0103
40321-76-4	1,2,3,7,8-PeCDD	U	0.000572	ng/L	0.000572	0.0514
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00081	ng/L	0.00081	0.0514
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.000765	ng/L	0.000765	0.0514
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.0008	ng/L	0.0008	0.0514
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.000629	ng/L	0.000629	0.0514
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJK	0.00158	ng/L	0.000948	0.103
51207-31-9	2,3,7,8-TCDF	U	0.000475	ng/L	0.000475	0.0103
57117-41-6	1,2,3,7,8-PeCDF	U	0.000409	ng/L	0.000409	0.0514
57117-31-4	2,3,4,7,8-PeCDF	U	0.000409	ng/L	0.000409	0.0514
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000317	ng/L	0.000317	0.0514
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000335	ng/L	0.000335	0.0514
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000302	ng/L	0.000302	0.0514
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000405	ng/L	0.000405	0.0514
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.000405	ng/L	0.000405	0.0514
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000518	ng/L	0.000518	0.0514
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.000567	ng/L	0.000567	0.103
41903-57-5	Total TeCDD	U	0.00053	ng/L	0.00053	0.0103
36088-22-9	Total PeCDD	U	0.000572	ng/L	0.000572	0.0514
34465-46-8	Total HxCDD	JK	0.00202	ng/L	0.000765	0.0514
37871-00-4	Total HpCDD	U	0.000629	ng/L	0.000629	0.0514
30402-14-3	Total TeCDF	U	0.000475	ng/L	0.000475	0.0103
30402-15-4	Total PeCDF	U	0.000269	ng/L	0.000269	0.0514
55684-94-1	Total HxCDF	U	0.000302	ng/L	0.000302	0.0514
38998-75-3	Total HpCDF	U	0.000405	ng/L	0.000405	0.0514
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		4.75E-07	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.000837	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.85	2.06	ng/L	90.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.86	2.06	ng/L	90.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.65	2.06	ng/L	80.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.64	2.06	ng/L	79.8	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.83	2.06	ng/L	89.0	(23%-140%)
13C-OCDD		3.15	4.11	ng/L	76.6	(17%-157%)
13C-2,3,7,8-TCDF		1.87	2.06	ng/L	91.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		2.08	2.06	ng/L	101	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.85	2.06	ng/L	89.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.60	2.06	ng/L	77.8	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.58	2.06	ng/L	77.0	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.69	2.06	ng/L	82.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.76	2.06	ng/L	85.4	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 15900003	Date Collected: 11/27/2019 07:15	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: FBQW1869Q001		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 21:04	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-13		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 972.7 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.56	2.06	ng/L	76.0 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.74	2.06	ng/L	84.5 (26%-138%)
37Cl-2,3,7,8-TCDD			0.199	0.206	ng/L	96.7 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-14206

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12025526	LCS for batch 42567	13C-2,3,7,8-TCDD		90.9	(20%-175%)
		13C-1,2,3,7,8-PeCDD		95.4	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		85.7	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		86.0	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		98.6	(22%-166%)
		13C-OCDD		83.8	(13%-199%)
		13C-2,3,7,8-TCDF		92.3	(22%-152%)
		13C-1,2,3,7,8-PeCDF		105	(21%-192%)
		13C-2,3,4,7,8-PeCDF		93.7	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		84.4	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		83.4	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		87.6	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		91.4	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		82.2	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		94.3	(20%-186%)
		37Cl-2,3,7,8-TCDD		97.6	(31%-191%)
12025527	LCSD for batch 42567	13C-2,3,7,8-TCDD		82.3	(20%-175%)
		13C-1,2,3,7,8-PeCDD		85.3	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		76.2	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		76.0	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		88.3	(22%-166%)
		13C-OCDD		74.9	(13%-199%)
		13C-2,3,7,8-TCDF		82.7	(22%-152%)
		13C-1,2,3,7,8-PeCDF		93.7	(21%-192%)
		13C-2,3,4,7,8-PeCDF		83.6	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		73.7	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		72.4	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		77.4	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		79.9	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		72.4	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		83.7	(20%-186%)
		37Cl-2,3,7,8-TCDD		88.0	(31%-191%)
12025525	MB for batch 42567	13C-2,3,7,8-TCDD		85.2	(25%-164%)
		13C-1,2,3,7,8-PeCDD		87.4	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		79.6	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		75.7	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		87.9	(23%-140%)
		13C-OCDD		74.7	(17%-157%)
		13C-2,3,7,8-TCDF		85.3	(24%-169%)
		13C-1,2,3,7,8-PeCDF		95.4	(24%-185%)
		13C-2,3,4,7,8-PeCDF		84.9	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		77.3	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		74.8	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		79.2	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		82.7	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		74.4	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		83.7	(26%-138%)
		37Cl-2,3,7,8-TCDD		93.9	(35%-197%)
15900001	A2BMP00112S007	13C-2,3,7,8-TCDD		85.6	(25%-164%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-14206

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
15900001	A2BMP00112S007	13C-1,2,3,7,8-PeCDD		86.0	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		76.9	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		78.5	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		85.8	(23%-140%)
		13C-OCDD		78.1	(17%-157%)
		13C-2,3,7,8-TCDF		86.0	(24%-169%)
		13C-1,2,3,7,8-PeCDF		97.8	(24%-185%)
		13C-2,3,4,7,8-PeCDF		85.5	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		79.7	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		77.3	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		78.8	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		81.3	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		72.2	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		80.1	(26%-138%)
		37Cl-2,3,7,8-TCDD		92.2	(35%-197%)
		15900002	EVBMP0003S029	13C-2,3,7,8-TCDD		82.0	(25%-164%)
13C-1,2,3,7,8-PeCDD				84.9	(25%-181%)
13C-1,2,3,4,7,8-HxCDD				74.2	(32%-141%)
13C-1,2,3,6,7,8-HxCDD				73.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD				82.4	(23%-140%)
13C-OCDD				70.7	(17%-157%)
13C-2,3,7,8-TCDF				81.0	(24%-169%)
13C-1,2,3,7,8-PeCDF				93.1	(24%-185%)
13C-2,3,4,7,8-PeCDF				84.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF				72.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF				70.2	(26%-123%)
13C-2,3,4,6,7,8-HxCDF				76.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF				77.8	(29%-147%)
13C-1,2,3,4,6,7,8-HpCDF				69.9	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF				77.3	(26%-138%)
37Cl-2,3,7,8-TCDD				85.1	(35%-197%)
15900003	FBQW1869Q001	13C-2,3,7,8-TCDD		90.0	(25%-164%)
		13C-1,2,3,7,8-PeCDD		90.2	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		80.4	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		79.8	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		89.0	(23%-140%)
		13C-OCDD		76.6	(17%-157%)
		13C-2,3,7,8-TCDF		91.1	(24%-169%)
		13C-1,2,3,7,8-PeCDF		101	(24%-185%)
		13C-2,3,4,7,8-PeCDF		89.9	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		77.8	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		77.0	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		82.1	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		85.4	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		76.0	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		84.5	(26%-138%)
		37Cl-2,3,7,8-TCDD		96.7	(35%-197%)

* Recovery outside Acceptance Limits

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-14206

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
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* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-14206

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 42567

Matrix: WATER

Lab Sample ID: 12025526

Instrument: HRP750

Analysis Date: 12/14/2019 12:15

Dilution: 1

Analyst: MJC

Prep Batch ID:42567

Batch ID: 42571

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits
1746-01-6	LCS 2,3,7,8-TCDD	0.200	0.206	103	67-158
40321-76-4	LCS 1,2,3,7,8-PeCDD	1.00	1.06	106	70-142
39227-28-6	LCS 1,2,3,4,7,8-HxCDD	1.00	1.02	102	70-164
57653-85-7	LCS 1,2,3,6,7,8-HxCDD	1.00	1.02	102	74-134
19408-74-3	LCS 1,2,3,7,8,9-HxCDD	1.00	1.09	109	64-162
35822-46-9	LCS 1,2,3,4,6,7,8-HpCDD	1.00	0.934	93.4	70-140
3268-87-9	LCS 1,2,3,4,6,7,8,9-OCDD	2.00	2.00	100	78-144
51207-31-9	LCS 2,3,7,8-TCDF	0.200	0.179	89.4	75-158
57117-41-6	LCS 1,2,3,7,8-PeCDF	1.00	0.919	91.9	80-134
57117-31-4	LCS 2,3,4,7,8-PeCDF	1.00	0.995	99.5	68-160
70648-26-9	LCS 1,2,3,4,7,8-HxCDF	1.00	0.973	97.3	72-134
57117-44-9	LCS 1,2,3,6,7,8-HxCDF	1.00	0.976	97.6	84-130
60851-34-5	LCS 2,3,4,6,7,8-HxCDF	1.00	0.951	95.1	70-156
72918-21-9	LCS 1,2,3,7,8,9-HxCDF	1.00	0.959	95.9	78-130
67562-39-4	LCS 1,2,3,4,6,7,8-HpCDF	1.00	1.02	102	82-122
55673-89-7	LCS 1,2,3,4,7,8,9-HpCDF	1.00	0.962	96.2	78-138
39001-02-0	LCS 1,2,3,4,6,7,8,9-OCDF	2.00	1.90	95.1	63-170

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-14206

Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 42567

Matrix: WATER

Lab Sample ID: 12025527

Instrument: HRP750

Analysis Date: 12/14/2019 13:03

Dilution: 1

Analyst: MJC

Prep Batch ID: 42567

Batch ID: 42571

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD 2,3,7,8-TCDD	0.200	0.207	104	67-158	0.668	0-20
40321-76-4	LCSD 1,2,3,7,8-PeCDD	1.00	1.06	106	70-142	0.287	0-20
39227-28-6	LCSD 1,2,3,4,7,8-HxCDD	1.00	1.02	102	70-164	0.592	0-20
57653-85-7	LCSD 1,2,3,6,7,8-HxCDD	1.00	1.03	103	74-134	0.614	0-20
19408-74-3	LCSD 1,2,3,7,8,9-HxCDD	1.00	1.09	109	64-162	0.366	0-20
35822-46-9	LCSD 1,2,3,4,6,7,8-HpCDD	1.00	0.921	92.1	70-140	1.41	0-20
3268-87-9	LCSD 1,2,3,4,6,7,8,9-OCDD	2.00	2.02	101	78-144	0.901	0-20
51207-31-9	LCSD 2,3,7,8-TCDF	0.200	0.174	87	75-158	2.73	0-20
57117-41-6	LCSD 1,2,3,7,8-PeCDF	1.00	0.906	90.6	80-134	1.42	0-20
57117-31-4	LCSD 2,3,4,7,8-PeCDF	1.00	1.01	101	68-160	1.29	0-20
70648-26-9	LCSD 1,2,3,4,7,8-HxCDF	1.00	0.969	96.9	72-134	0.443	0-20
57117-44-9	LCSD 1,2,3,6,7,8-HxCDF	1.00	0.993	99.3	84-130	1.69	0-20
60851-34-5	LCSD 2,3,4,6,7,8-HxCDF	1.00	0.948	94.8	70-156	0.305	0-20
72918-21-9	LCSD 1,2,3,7,8,9-HxCDF	1.00	0.957	95.7	78-130	0.242	0-20
67562-39-4	LCSD 1,2,3,4,6,7,8-HpCDF	1.00	1.01	101	82-122	1.18	0-20
55673-89-7	LCSD 1,2,3,4,7,8,9-HpCDF	1.00	0.923	92.3	78-138	4.16	0-20
39001-02-0	LCSD 1,2,3,4,6,7,8,9-OCDF	2.00	1.89	94.5	63-170	0.580	0-20

Method Blank Summary

Page 1 of 1

SDG Number: 570-14206
Client ID: MB for batch 42567
Lab Sample ID: 12025525
Column:

Client: CALS001
Instrument ID: HRP750
Prep Date: 10-DEC-19

Matrix: WATER
Data File: A14DEC19A-4
Analyzed: 12/14/19 13:51

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 42567	12025526	A12DEC19A_2-1	12/13/19	0025
02 LCSD for batch 42567	12025527	A12DEC19A_2-2	12/13/19	0112
03 LCS for batch 42567	12025526	A14DEC19A-2	12/14/19	1215
04 LCSD for batch 42567	12025527	A14DEC19A-3	12/14/19	1303
05 A2BMP00112S007	15900001	A14DEC19A-11	12/14/19	1928
06 EVBMP0003S029	15900002	A14DEC19A-12	12/14/19	2016
07 FBQW1869Q001	15900003	A14DEC19A-13	12/14/19	2104

Sample Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-14206
Lab Sample ID: 15900001
Client Sample: 1613B Water
Client ID: A2BMP00112S007
Batch ID: 42571
Run Date: 12/14/2019 19:28
Data File: A14DEC19A-11
Prep Batch: 42567
Prep Date: 10-DEC-19

Client: CALS001
Date Collected: 11/27/2019 07:50
Date Received: 12/04/2019 11:00
Method: EPA Method 1613B
Analyst: MJC
Prep Method: SW846 3520C
Prep Aliquot: 1024.1 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	BJ	0.00158	ng/L	0.000676	0.00976
40321-76-4	1,2,3,7,8-PeCDD	J	0.0125	ng/L	0.000685	0.0488
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.0177	ng/L	0.00125	0.0488
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.0336	ng/L	0.00126	0.0488
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.0333	ng/L	0.00127	0.0488
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.627	ng/L	0.00373	0.0488
3268-87-9	1,2,3,4,6,7,8,9-OCDD		4.08	ng/L	0.0057	0.0976
51207-31-9	2,3,7,8-TCDF	U	0.00073	ng/L	0.00073	0.00976
57117-41-6	1,2,3,7,8-PeCDF	U	0.000707	ng/L	0.000707	0.0488
57117-31-4	2,3,4,7,8-PeCDF	U	0.000693	ng/L	0.000693	0.0488
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.00416	ng/L	0.000935	0.0488
57117-44-9	1,2,3,6,7,8-HxCDF	BJK	0.00344	ng/L	0.000967	0.0488
60851-34-5	2,3,4,6,7,8-HxCDF	BJK	0.00506	ng/L	0.000961	0.0488
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00133	ng/L	0.00133	0.0488
67562-39-4	1,2,3,4,6,7,8-HpCDF		0.118	ng/L	0.00148	0.0488
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJK	0.00521	ng/L	0.00186	0.0488
39001-02-0	1,2,3,4,6,7,8,9-OCDF		0.171	ng/L	0.00191	0.0976
41903-57-5	Total TeCDD	BJ	0.00158	ng/L	0.000676	0.00976
36088-22-9	Total PeCDD	JK	0.0303	ng/L	0.000685	0.0488
34465-46-8	Total HxCDD	J	0.186	ng/L	0.00125	0.0488
37871-00-4	Total HpCDD		1.06	ng/L	0.00373	0.0488
30402-14-3	Total TeCDF	U	0.00073	ng/L	0.00073	0.00976
30402-15-4	Total PeCDF	BJK	0.0156	ng/L	0.000287	0.0488
55684-94-1	Total HxCDF	JK	0.0927	ng/L	0.000935	0.0488
38998-75-3	Total HpCDF	JK	0.265	ng/L	0.00148	0.0488
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0325	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.0328	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.67	1.95	ng/L	85.6	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.68	1.95	ng/L	86.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.50	1.95	ng/L	76.9	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.53	1.95	ng/L	78.5	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.68	1.95	ng/L	85.8	(23%-140%)
13C-OCDD		3.05	3.91	ng/L	78.1	(17%-157%)
13C-2,3,7,8-TCDF		1.68	1.95	ng/L	86.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.91	1.95	ng/L	97.8	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.67	1.95	ng/L	85.5	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.56	1.95	ng/L	79.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.51	1.95	ng/L	77.3	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.54	1.95	ng/L	78.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.59	1.95	ng/L	81.3	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 15900001	Date Collected: 11/27/2019 07:50	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: A2BMP00112S007		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 19:28	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-11		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1024.1 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.41	1.95	ng/L	72.2 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.56	1.95	ng/L	80.1 (26%-138%)
37Cl-2,3,7,8-TCDD			0.180	0.195	ng/L	92.2 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:23:48 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:24:21 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.44e2	8.70e2	1.51e3	31.12	1.000	0.74	NO	0.081	0.0346	1.21e4	2229	5.4	1.30e4	1824	7.1	MM	bb
2	12378-PeCDD	4.79e3	2.93e3	7.72e3	34.04	1.000	1.63	NO	0.638	0.0351	9.62e4	2144	44.9	6.37e4	1866	34.1	bb	bd
3	123478-HxCDD	5.75e3	4.81e3	1.06e4	36.60	1.000	1.20	NO	0.905	0.0639	1.20e5	3280	36.6	1.08e5	2952	36.6	bd	bd
4	123678-HxCDD	1.21e4	1.05e4	2.26e4	36.70	1.001	1.16	NO	1.720	0.0643	2.82e5	3280	86.0	1.98e5	2952	66.9	db	dd
5	123789-HxCDD	1.16e4	9.24e3	2.08e4	36.93	1.007	1.26	NO	1.707	0.0651	2.23e5	3280	67.9	1.71e5	2952	57.8	dd	db
6	1234678-HpCDD	1.72e5	1.74e5	3.46e5	39.95	1.000	0.99	NO	32.082	0.191	2.58e6	6297	409.6	2.72e6	6243	436.4	bb	bd
7	OCDD	8.58e5	9.75e5	1.83e6	44.13	1.000	0.88	NO	209.038	0.292	9.57e6	5651	1692.8	1.06e7	5656	1872.8	bd	bd
8	2378-TCDF	5.92e2	3.68e2	9.60e2	33.24	1.000	1.61	NO	0.047	0.0362	1.75e4	2521	7.0	8.56e3	4348	2.0	db	bd
9	12378-PeCDF	7.77e2	5.80e2	1.36e3	33.85	1.000	1.34	NO	0.069	0.0355	1.82e4	2521	7.2	9.14e3	4348	2.1	MM	MM
10	23478-PeCDF	1.85e3	1.85e3	3.69e3	35.90	1.000	1.00	YES	0.213	0.0479	4.20e4	3689	11.4	5.30e4	3185	16.6	dd	dd
11	123478-HxCDF	1.60e3	1.58e3	3.17e3	36.00	1.000	1.01	YES	0.176	0.0495	4.44e4	3689	12.0	2.71e4	3185	8.5	db	db
12	123678-HxCDF	2.23e3	2.29e3	4.52e3	36.47	1.000	0.97	YES	0.259	0.0492	4.50e4	3689	12.2	4.91e4	3185	15.4	bb	bb
13	234678-HxCDF	7.08e2	3.76e2	1.08e3	37.26	1.001	1.89	YES	0.072	0.0683	1.57e4	3689	4.2	7.55e3	3185	2.4	bb	bb
14	123789-HxCDF	3.89e4	4.00e4	7.89e4	38.71	1.000	0.97	NO	6.066	0.0756	6.22e5	3428	181.5	6.58e5	3042	216.4	bb	bd
15	1234678-HpCDF	1.44e3	1.70e3	3.14e3	40.62	1.001	0.84	YES	0.267	0.0952	2.32e4	3428	6.8	2.53e4	3042	8.3	MM	MM
16	1234789-HpCDF	4.26e4	4.71e4	8.97e4	44.42	1.007	0.91	NO	8.769	0.0978	4.65e5	1845	251.8	5.57e5	2564	217.1	bd	bd
17	OCDF	9.20e5	1.20e6	2.12e6	31.12	1.019	0.77	NO	85.643	0.0861	1.44e7	6014	2388.9	1.88e7	3990	4834.5	bb	bb
18	13C-2378-TCDD	8.60e5	5.59e5	1.42e6	34.03	1.114	1.54	NO	86.035	0.140	2.03e7	6281	3227.7	1.29e7	4417	2928.2	bb	bb
19	13C-12378-PeCDD	6.90e5	5.51e5	1.24e6	36.60	0.991	1.25	NO	76.914	0.132	1.44e7	9975	1447.0	1.13e7	5531	2035.8	bd	bd
20	13C-123478-HxCDD	7.70e5	6.23e5	1.39e6	36.68	0.993	1.24	NO	78.455	0.120	1.42e7	9975	1422.3	1.15e7	5531	2076.8	dd	dd
21	13C-123678-HxCDD	5.28e5	5.09e5	1.04e6	39.94	1.082	1.04	NO	85.802	0.131	8.04e6	5880	1367.2	7.70e6	5655	1361.6	bb	bd
22	13C-1234678-HpCDD	8.51e5	9.55e5	1.81e6	44.12	1.195	0.89	NO	156.160	0.138	9.38e6	5750	1630.6	1.06e7	5892	1797.5	bd	bd
23	13C-OCDD	1.03e6	1.33e6	2.36e6	30.31	0.992	0.77	NO	85.998	0.109	1.17e7	8725	1345.6	1.53e7	5170	2964.4	bb	bd
24	13C-2378-TCDF	1.32e6	8.48e5	2.17e6	33.23	1.088	1.56	NO	97.785	0.265	3.06e7	12509	2444.3	2.03e7	14746	1374.9	bd	bd
25	13C-12378-PeCDF	1.22e6	7.80e5	2.00e6	33.84	1.108	1.56	NO	85.524	0.252	2.99e7	12509	2386.9	1.94e7	14746	1318.0	bb	bb
26	13C-23478-PeCDF	5.40e5	1.05e6	1.59e6	35.89	0.972	0.51	NO	79.708	0.156	1.12e7	11077	1009.3	2.18e7	11559	1889.1	bd	bd
27	13C-123478-HxCDF	5.88e5	1.15e6	1.74e6	35.99	0.975	0.51	NO	77.337	0.139	1.13e7	11077	1019.8	2.15e7	11559	1863.0	dd	db
28	13C-123678-HxCDF	5.22e5	1.01e6	1.54e6	36.46	0.988	0.51	NO	78.841	0.160	1.04e7	11077	943.0	2.00e7	11559	1734.1	bb	bb
29	13C-234678-HxCDF	4.86e5	9.31e5	1.42e6	37.23	1.009	0.52	NO	81.344	0.179	8.13e6	11077	734.1	1.61e7	11559	1394.1	bd	bb

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:23:48 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:24:21 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
31	13C-1234678-HpCDF	3.47e5	7.84e5	1.13e6	38.70	1.048	0.44	NO	72.238	0.128	5.71e6	5498	1038.6	1.29e7	9114	1416.6	bb
32	13C-1234789-HpCDF	2.97e5	6.80e5	9.77e5	40.60	1.100	0.44	NO	80.100	0.165	4.29e6	5498	781.0	9.61e6	9114	1054.5	bb
33	13C-1234-TCDD	9.60e5	1.24e6	2.20e6	30.54	0.000	0.78	NO	100.000	0.0972	1.11e7	6014	1852.3	1.41e7	3890	3614.9	bb
34	13C-123789-HxCDD	9.96e5	8.05e5	1.80e6	36.92	0.000	1.24	NO	100.000	0.118	1.81e7	9975	1816.7	1.48e7	5531	2674.0	dd
35	37Cl+2378-TCDD	2.15e5		2.15e5	31.13	1.019			9.224	0.0210	3.60e6	2269	1588.3				bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:23:48 Eastern Standard Time
Printed: Monday, December 16, 2019 17:24:21 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.44e2	8.70e2	1.51e3	31.12	0.74	NO	0.081	0.0346	1.21e4	2229	5.4	1.30e4	1824	7.1	MM	bb
2	Total-tetraiodoxins	1.66e2	1.17e2	2.89e2	30.61	1.42	YES	0.015	0.0346	6.00e3	2229	2.7	5.69e3	1824	3.1	db	bd
3	Total-tetraiodoxins	1.57e2	5.94e1	2.17e2	30.36	2.65	YES	0.012	0.0346	5.44e3	2229	2.4	1.80e3	1824	1.0	db	db
4	Total-tetraiodoxins	1.67e2	7.42e1	2.42e2	30.31	2.26	YES	0.013	0.0346	4.53e3	2229	2.0	4.19e3	1824	2.3	dd	bd
5	Total-tetraiodoxins	1.55e2	3.93e2	5.48e2	29.60	0.39	YES	0.029	0.0346	4.81e3	2229	2.2	5.96e3	1824	3.3	db	bd
6	Total-tetraiodoxins	8.60e1	6.80e1	1.54e2	26.62	1.27	YES	0.008	0.0346	3.47e3	2229	1.6	1.77e3	1824	1.0	bb	bb
7	Total-tetraiodoxins	6.84e1	1.13e2	1.81e2	25.50	0.61	YES	0.010	0.0346	3.98e3	2229	1.8	6.82e3	1824	3.7	bb	bb
8	Total-tetraiodoxins	5.77e1	5.64e1	1.14e2	32.13	1.02	YES	0.006	0.0346	4.23e3	2229	1.9	1.87e3	1824	1.0	bb	bb
9	Total-tetraiodoxins	2.49e2	3.84e2	6.33e2	31.37	0.65	YES	0.034	0.0346	5.52e3	2229	2.5	6.65e3	1824	3.8	bb	bb

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	8.75e2	5.63e2	1.44e3	33.42	1.56	NO	0.119	0.0351	2.43e4	2144	11.3	1.61e4	1866	8.7	dd	dd
2	Total-pentadioxins	2.28e3	1.26e3	3.54e3	33.37	1.82	YES	0.292	0.0351	5.66e4	2144	26.4	3.13e4	1866	16.8	dd	dd
3	Total-pentadioxins	1.04e3	4.71e2	1.51e3	33.26	2.21	YES	0.125	0.0351	2.30e4	2144	10.7	1.15e4	1866	6.2	bd	bd
4	Total-pentadioxins	2.27e2	2.10e2	4.37e2	32.98	1.08	YES	0.036	0.0351	6.70e3	2144	3.1	6.41e3	1866	3.4	db	bb
5	Total-pentadioxins	9.07e2	5.69e2	1.48e3	32.71	1.59	NO	0.122	0.0351	1.96e4	2144	9.1	1.26e4	1866	6.8	bb	bb
6	Total-pentadioxins	8.20e2	3.88e2	1.21e3	34.29	2.12	YES	0.100	0.0351	1.79e4	2144	8.4	8.13e3	1866	4.4	bb	MM
7	12378-PeCDD	4.79e3	2.93e3	7.72e3	34.04	1.63	NO	0.638	0.0351	9.62e4	2144	44.9	6.37e4	1866	34.1	bb	bd
8	Total-pentadioxins	2.25e2	7.27e1	2.97e2	33.78	3.09	YES	0.025	0.0351	8.22e3	2144	3.8	2.54e3	1866	1.4	MM	bb
9	Total-pentadioxins	8.62e2	5.92e2	1.45e3	33.57	1.45	NO	0.120	0.0351	1.53e4	2144	7.1	1.08e4	1866	5.8	db	db

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:23:48 Eastern Standard Time
Printed: Monday, December 16, 2019 17:24:21 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDD	1.16e4	9.24e3	2.08e4	36.93	1.26	NO	1.707	0.0651	2.23e5	3280	67.9	1.71e5	2952	57.8	dd	db
2	Total-hexadioxins	9.08e2	8.21e2	1.73e3	36.86	1.11	NO	0.140	0.0645	2.76e4	3280	8.4	1.86e4	2952	6.3	bd	dd
3	123678-HxCDD	1.21e4	1.05e4	2.26e4	36.70	1.16	NO	1.720	0.0643	2.82e5	3280	86.0	1.98e5	2952	66.9	db	dd
4	123478-HxCDD	5.75e3	4.81e3	1.06e4	36.60	1.20	NO	0.905	0.0639	1.20e5	3280	36.6	1.08e5	2952	36.6	bd	bd
5	Total-hexadioxins	3.49e2	2.21e2	5.70e2	36.47	1.58	YES	0.046	0.0645	7.76e3	3280	2.4	6.47e3	2952	2.2	bb	bb
6	Total-hexadioxins	2.48e4	1.85e4	4.32e4	36.05	1.34	NO	3.503	0.0645	4.10e5	3280	125.1	3.09e5	2952	104.6	bb	bd
7	Total-hexadioxins	2.11e3	1.52e3	3.63e3	35.85	1.39	NO	0.294	0.0645	4.24e4	3280	12.9	3.03e4	2952	10.3	bd	bb
8	Total-hexadioxins	7.98e3	7.33e3	1.53e4	35.40	1.09	NO	1.240	0.0645	1.86e5	3280	56.7	1.61e5	2952	54.5	bb	bb

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	1.21e5	1.17e5	2.38e5	39.03	1.03	NO	22.016	0.191	1.90e6	6297	301.7	1.89e6	6243	302.4	bd	bb
2	Total-heptadioxins	2.98e2	5.52e2	8.50e2	40.22	0.54	YES	0.079	0.191	1.02e4	6297	1.6	1.52e4	6243	2.4	bb	db
3	1234678-HpCDD	1.72e5	1.74e5	3.46e5	39.95	0.99	NO	32.082	0.191	2.58e6	6297	409.6	2.72e6	6243	436.4	bb	bd

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	1.17e2	6.33e1	1.80e2	29.30	1.85	YES	0.008	0.0374	4.18e3	1632	2.6	2.24e3	2310	1.0	bb	bb
2	Total-tetrafurans	8.28e1	7.77e1	1.60e2	29.01	1.07	YES	0.007	0.0374	6.33e3	1632	3.9	3.87e3	2310	1.7	bb	dd
3	Total-tetrafurans	7.71e1	1.69e2	2.46e2	28.94	0.46	YES	0.011	0.0374	2.26e3	1632	1.4	3.93e3	2310	1.7	bb	dd
4	Total-tetrafurans	7.34e1	6.32e1	1.37e2	28.76	1.16	YES	0.006	0.0374	3.69e3	1632	2.3	2.59e3	2310	1.1	bb	bd
5	Total-tetrafurans	1.42e2	1.85e2	3.27e2	28.06	0.77	NO	0.014	0.0374	3.91e3	1632	2.4	1.06e4	2310	4.6	bd	bb
6	Total-tetrafurans	5.62e1	5.90e1	1.15e2	27.69	0.95	YES	0.005	0.0374	3.15e3	1632	1.9	1.95e3	2310	0.8	db	bb
7	Total-tetrafurans	1.83e2	2.13e2	3.96e2	27.01	0.86	NO	0.017	0.0374	6.13e3	1632	3.8	7.78e3	2310	3.4	db	db
8	Total-tetrafurans	5.79e1	1.81e2	2.39e2	26.95	0.32	YES	0.010	0.0374	3.28e3	1632	2.0	5.91e3	2310	2.6	bd	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:23:48 Eastern Standard Time
Printed: Monday, December 16, 2019 17:24:21 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

PF1

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentafurans (F1)	7.39e3	4.17e3	1.16e4	31.83	1.77	NO	0.575	0.0147	1.64e5	980	166.9	8.65e4	1831	47.3	bb	db
Total-pentafurans (F1)	5.58e1	1.04e2	1.60e2	31.59	0.54	YES	0.008	0.0147	2.43e3	980	2.5	2.40e3	1831	1.3	bb	dd
Total-pentafurans (F1)	3.97e2	7.95e1	4.76e2	30.92	4.99	YES	0.024	0.0147	8.49e3	980	8.7	2.90e3	1831	1.6	bb	bb

PF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentafurans	2.19e2	1.33e2	3.52e2	33.13	1.65	NO	0.017	0.0358	4.99e3	2521	2.0	4.66e3	4348	1.1	dd	bb
Total-pentafurans	8.91e2	6.77e2	1.57e3	33.03	1.32	YES	0.078	0.0358	1.77e4	2521	7.0	2.22e4	4348	5.1	bd	bb
Total-pentafurans	1.74e3	1.19e3	2.92e3	32.69	1.46	NO	0.145	0.0358	3.01e4	2521	11.9	3.03e4	4348	7.0	db	db
Total-pentafurans	1.15e2	1.96e2	3.11e2	32.59	0.58	YES	0.015	0.0358	5.16e3	2521	2.0	7.97e3	4348	1.8	bd	bd
23478-PeCDF	7.77e2	5.80e2	1.36e3	33.85	1.34	NO	0.069	0.0355	1.82e4	2521	7.2	9.14e3	4348	2.1	MM	MM
Total-pentafurans	5.93e2	3.78e2	9.71e2	33.42	1.57	NO	0.048	0.0358	1.30e4	2521	5.2	1.04e4	4348	2.4	bb	db
12378-PeCDF	5.92e2	3.68e2	9.60e2	33.24	1.61	NO	0.047	0.0362	1.75e4	2521	7.0	8.56e3	4348	2.0	db	bd

HF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-hexafurans	9.75e1	5.65e1	1.54e2	37.49	1.73	YES	0.009	0.0531	8.25e3	3689	2.2	4.34e3	3185	1.4	bb	bb
123789-HxCDF	7.08e2	3.76e2	1.08e3	37.26	1.89	YES	0.072	0.0683	1.57e4	3689	4.2	7.55e3	3185	2.4	bb	bb
234678-HxCDF	2.23e3	2.29e3	4.52e3	36.47	0.97	YES	0.259	0.0492	4.50e4	3689	12.2	4.91e4	3185	15.4	bb	bb
123678-HxCDF	1.60e3	1.58e3	3.17e3	36.00	1.01	YES	0.176	0.0495	4.44e4	3689	12.0	2.71e4	3185	8.5	db	db
123478-HxCDF	1.85e3	1.85e3	3.69e3	35.90	1.00	YES	0.213	0.0479	4.20e4	3689	11.4	5.30e4	3185	16.6	dd	dd
Total-hexafurans	2.54e2	4.84e2	7.39e2	35.83	0.52	YES	0.043	0.0531	8.70e3	3689	2.4	1.09e4	3185	3.4	bd	bd
Total-hexafurans	1.44e4	1.04e4	2.49e4	35.53	1.39	NO	1.465	0.0531	2.82e5	3689	76.5	2.26e5	3185	71.0	bb	bd
Total-hexafurans	1.85e4	1.48e4	3.33e4	35.10	1.24	NO	1.960	0.0531	3.95e5	3689	107.0	3.49e5	3185	109.6	db	db
Total-hexafurans	6.40e3	5.09e3	1.15e4	34.96	1.26	NO	0.676	0.0531	1.43e5	3689	38.7	1.14e5	3185	35.9	bd	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:23:48 Eastern Standard Time
Printed: Monday, December 16, 2019 17:24:21 Eastern Standard Time

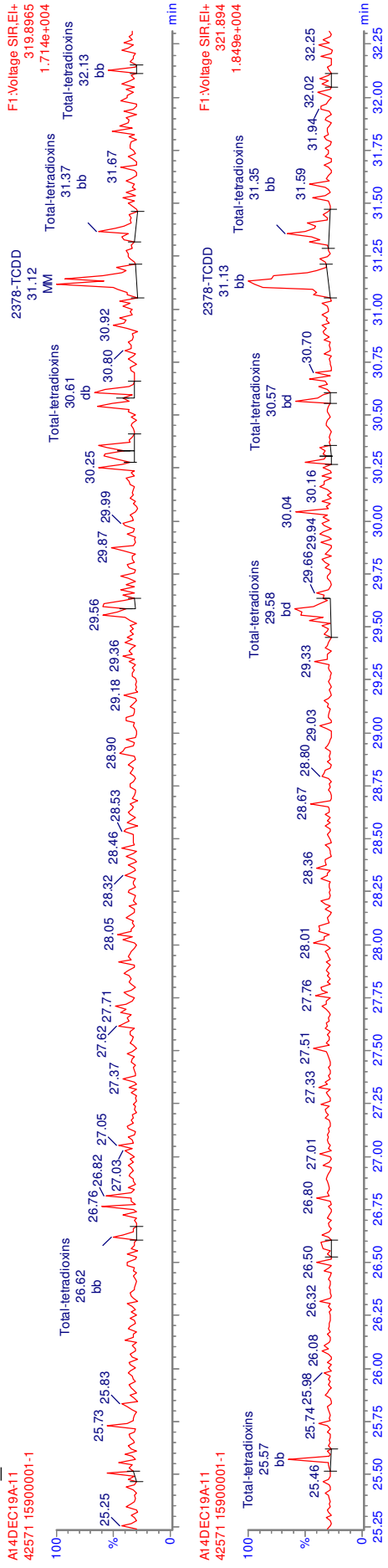
Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	8.90e1	3.87e2	4.76e2	38.90	0.23	YES	0.038	0.0848	4.50e3	3428	1.3	9.57e3	3042	3.1	bb	db
2	1234678-HpCDF	3.89e4	4.00e4	7.89e4	38.71	0.97	NO	6.066	0.0756	6.22e5	3428	181.5	6.58e5	3042	216.4	bb	bd
3	1234789-HpCDF	1.44e3	1.70e3	3.14e3	40.62	0.84	YES	0.267	0.0952	2.32e4	3428	6.8	2.53e4	3042	8.3	MM	MM
4	Total-heptafurans	4.37e4	4.44e4	8.81e4	39.24	0.99	NO	7.108	0.0848	7.37e5	3428	215.0	7.34e5	3042	241.3	bb	bd
5	Total-heptafurans	9.24e2	6.08e2	1.53e3	39.06	1.52	YES	0.124	0.0848	1.92e4	3428	5.6	1.49e4	3042	4.9	bb	bb

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

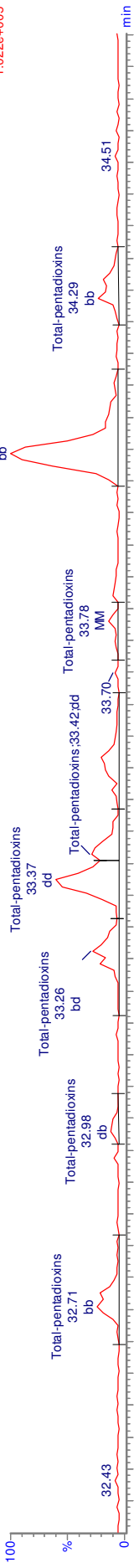
A14DEC19A-11
 42571 15900001-1



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

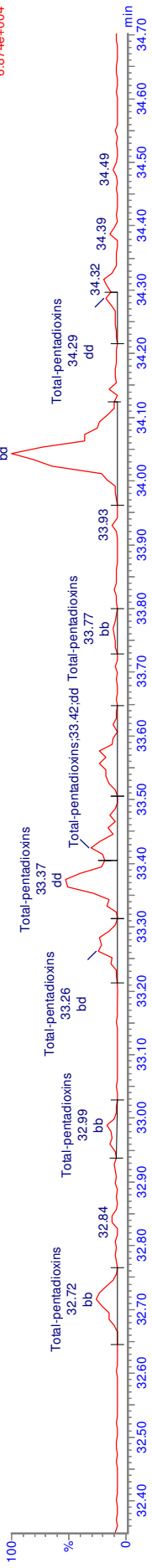
A14DEC19A-11
 42571 15900001-1

F2:Voltage SIR,EI+
 355.855
 1.022e+005



A14DEC19A-11
 42571 15900001-1

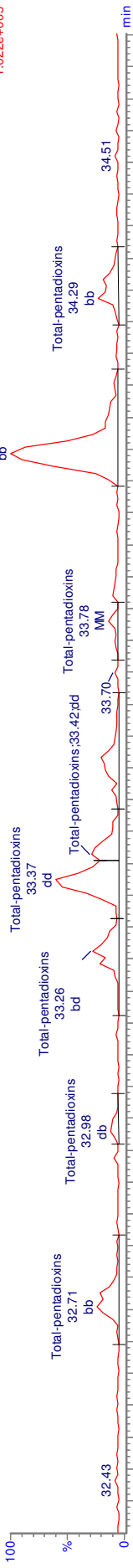
F2:Voltage SIR,EI+
 357.852
 6.874e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

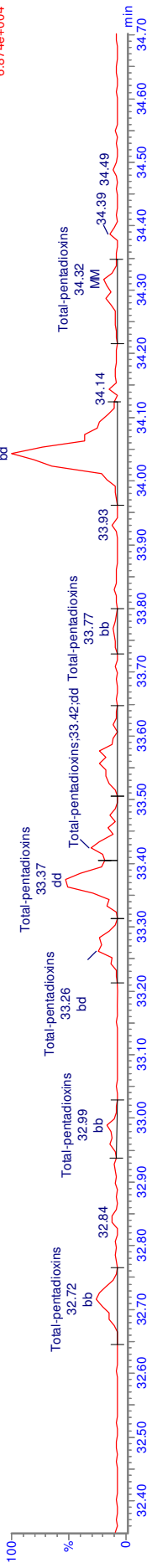
A14DEC19A-11
 42571 15900001-1

F2:Voltage SIR,EI+
 355.855
 1.022e+005



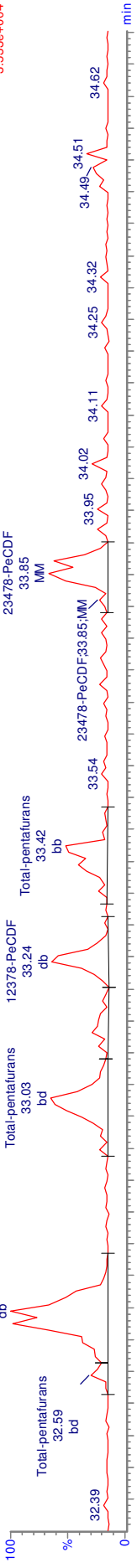
A14DEC19A-11
 42571 15900001-1

F2:Voltage SIR,EI+
 357.852
 6.874e+004

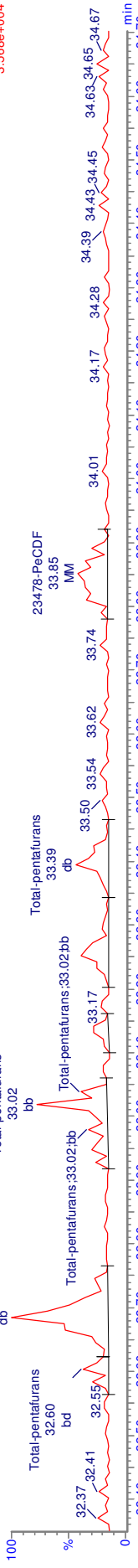


MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

AI4DEC19A-11
 42571 15900001-1
 Total-pentaturans 32.69 db
 Total-pentaturans 32.59 bd
 Total-pentaturans 33.03 bd
 Total-pentaturans 33.24 db
 Total-pentaturans 33.42 db
 23478-PeCDF 33.85 MM
 23478-PeCDF:33.85:MM
 33.54
 33.95
 34.02
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 34.32
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 34.51
 34.62
 F2:Voltage SIR,EI+
 339.860
 3.533e+004



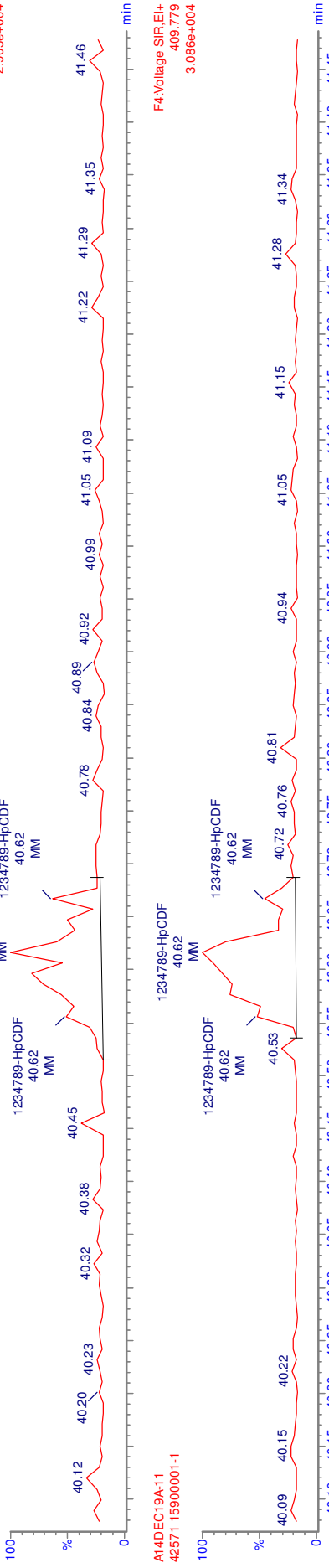
AI4DEC19A-11
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 Total-pentaturans 32.60 bd
 Total-pentaturans:33.02:bb
 Total-pentaturans 33.02 bb
 Total-pentaturans 33.39 db
 Total-pentaturans:33.02:bb
 33.17
 33.54
 33.62
 33.74
 33.85
 23478-PeCDF 33.85 MM
 33.95
 34.01
 34.17
 34.28
 34.39
 34.43
 34.45
 34.63
 34.65
 34.67
 F2:Voltage SIR,EI+
 341.857
 3.568e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

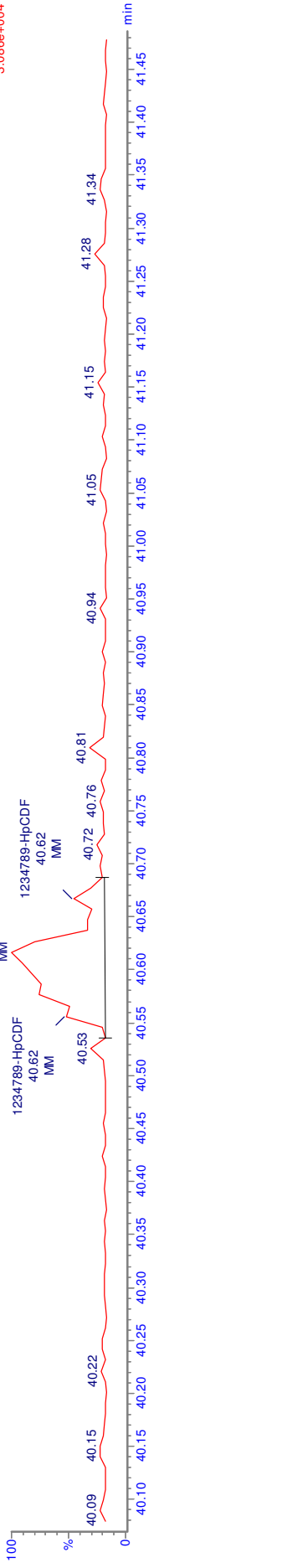
A14DEC19A-11
 42571 15900001-1

F4:Voltage SIR,EI+
 407.782
 2.905e+004



A14DEC19A-11
 42571 15900001-1

F4:Voltage SIR,EI+
 409.779
 3.086e+004



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

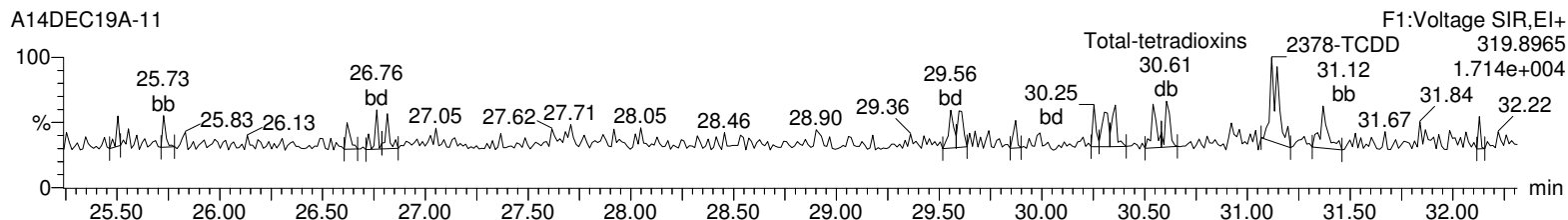
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Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

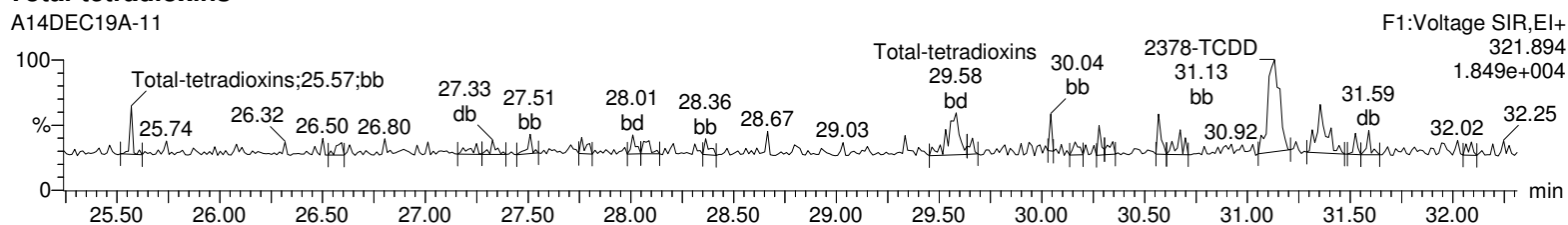
Total-tetradoxins

A14DEC19A-11



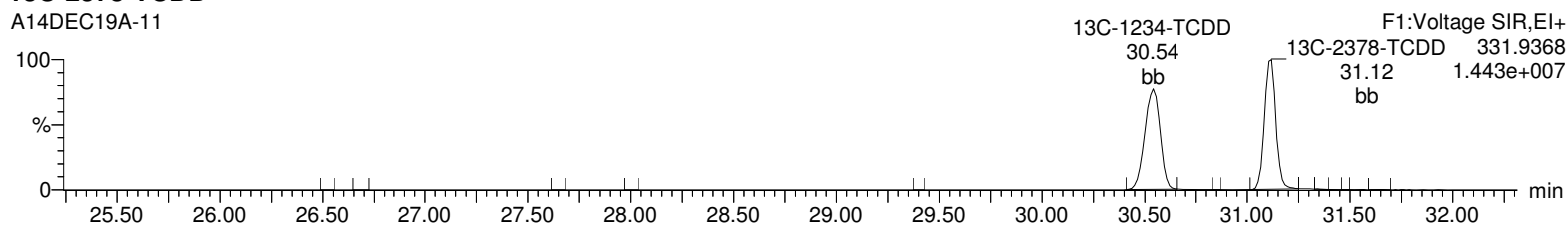
Total-tetradoxins

A14DEC19A-11



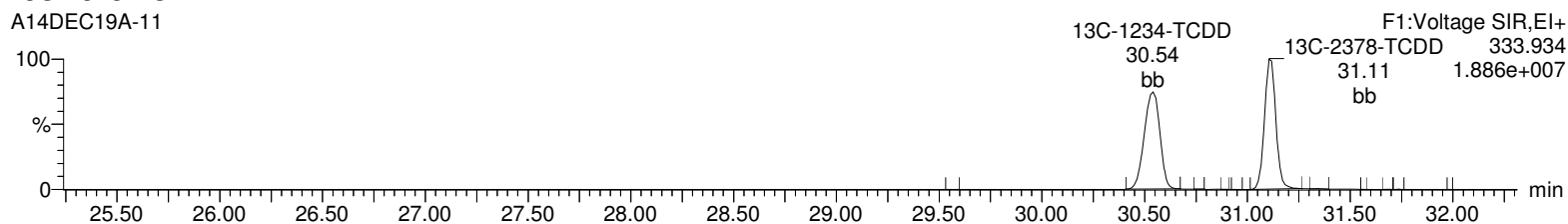
13C-2378-TCDD

A14DEC19A-11



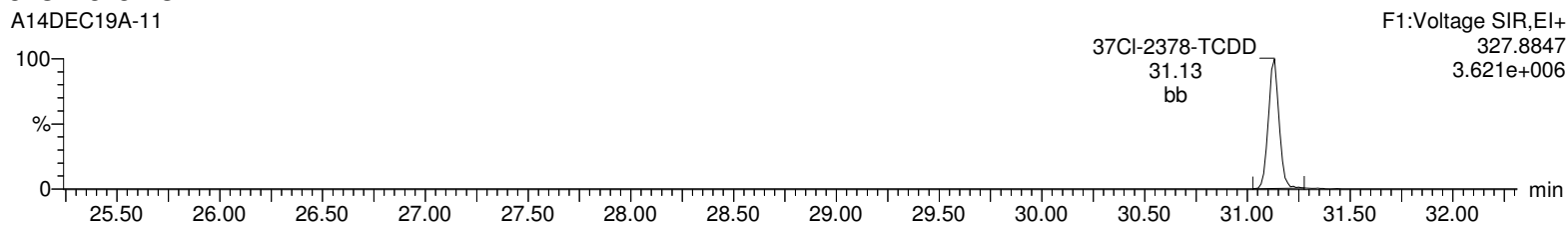
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A14DEC19A-11



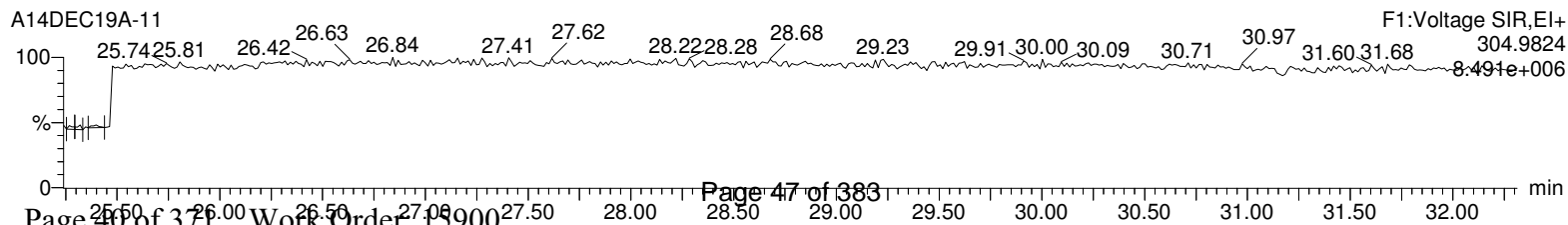
37Cl-2378-TCDD

A14DEC19A-11



Lock Mass F1

A14DEC19A-11



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

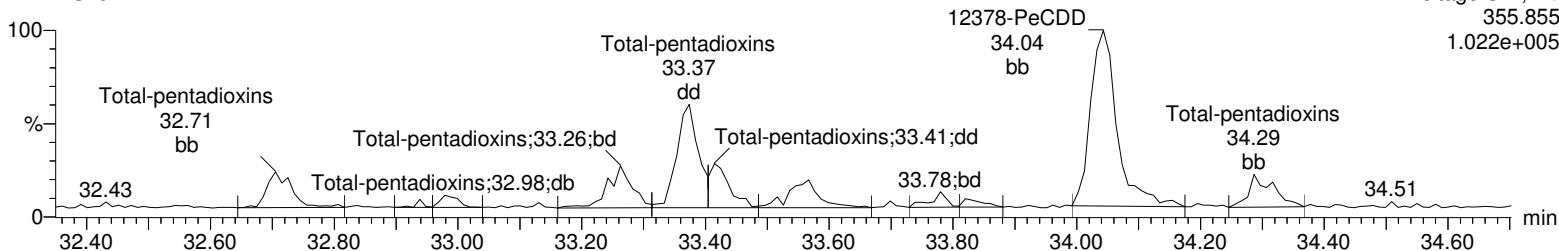
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Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-pentadioxins

A14DEC19A-11

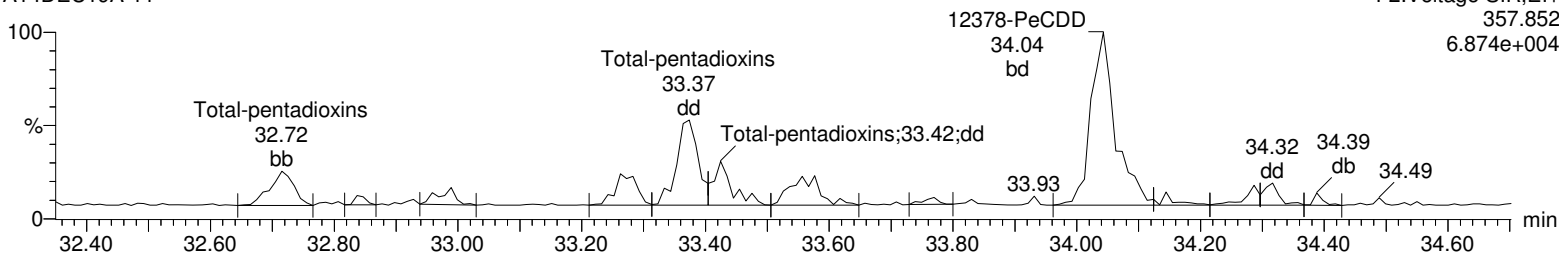
F2:Voltage SIR,EI+
355.855
1.022e+005



Total-pentadioxins

A14DEC19A-11

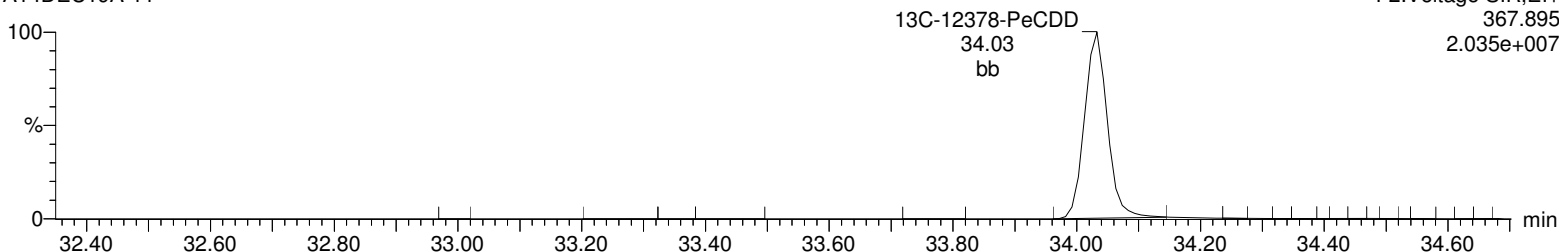
F2:Voltage SIR,EI+
357.852
6.874e+004



13C-12378-PeCDD

A14DEC19A-11

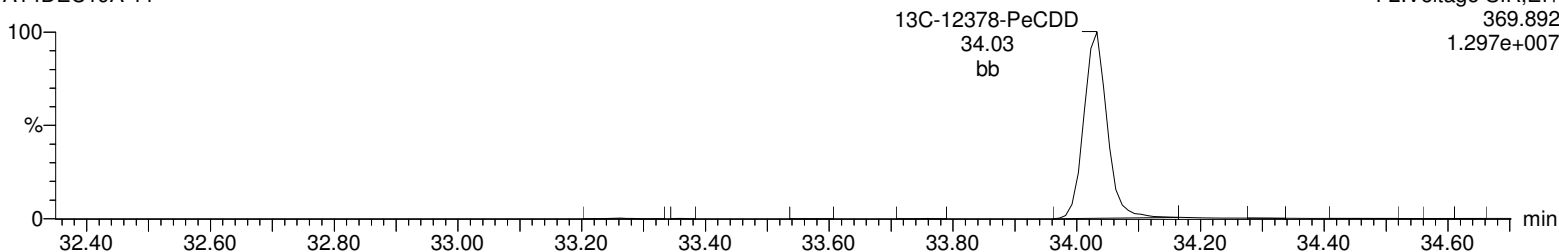
F2:Voltage SIR,EI+
367.895
2.035e+007



13C-12378-PeCDD

A14DEC19A-11

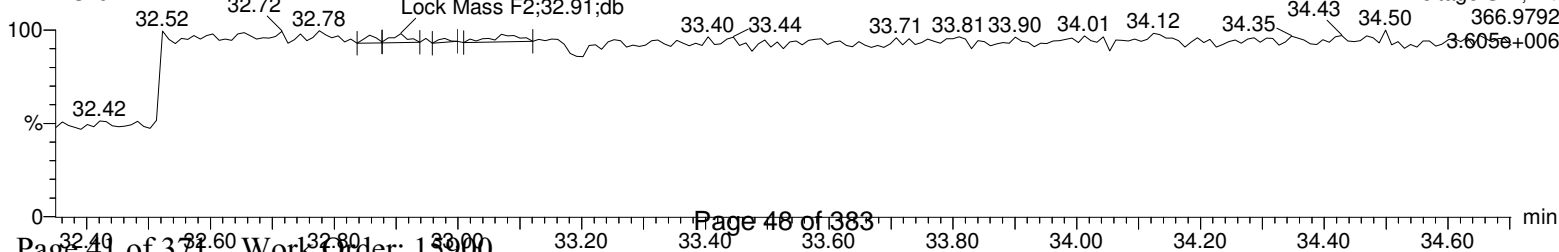
F2:Voltage SIR,EI+
369.892
1.297e+007



Lock Mass F2

A14DEC19A-11

F2:Voltage SIR,EI+
366.9792
3.605e+006



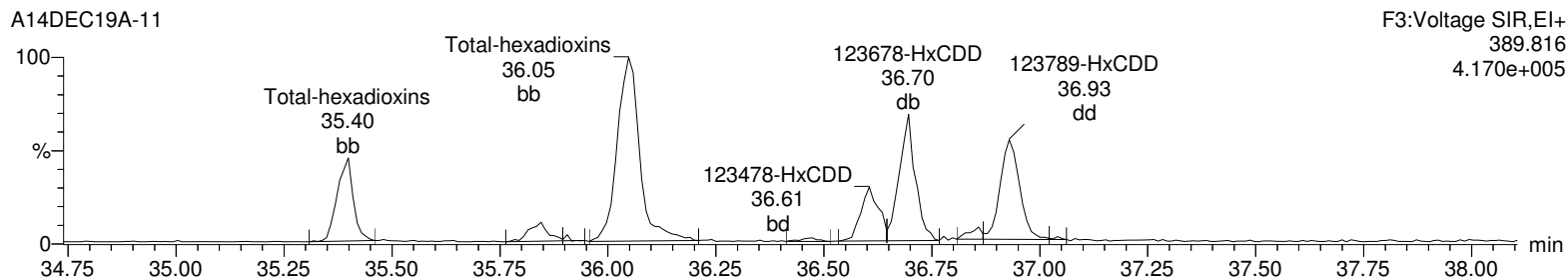
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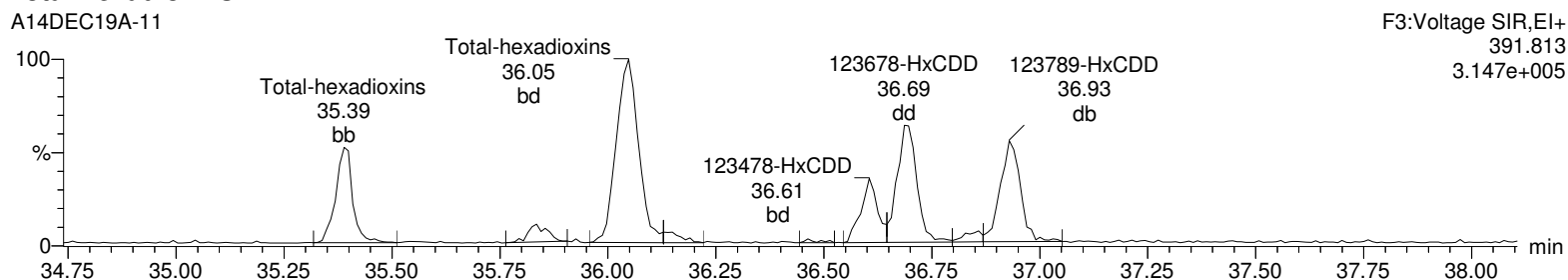
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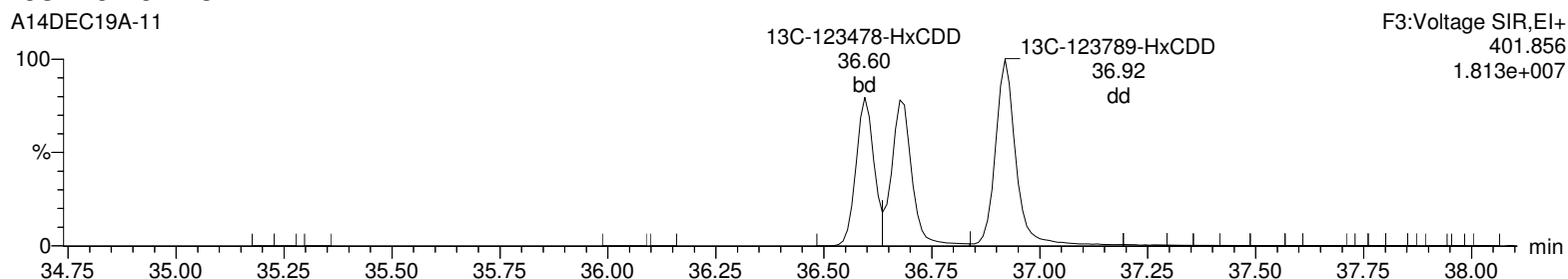
Total-hexadioxins



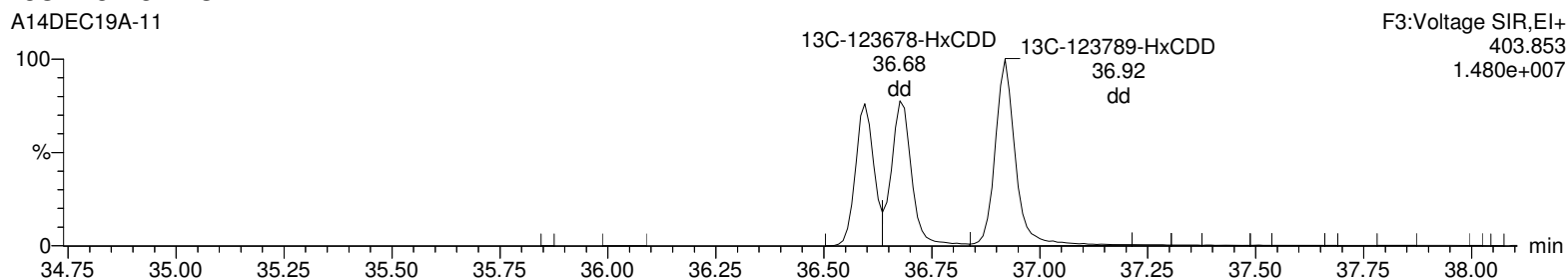
Total-hexadioxins



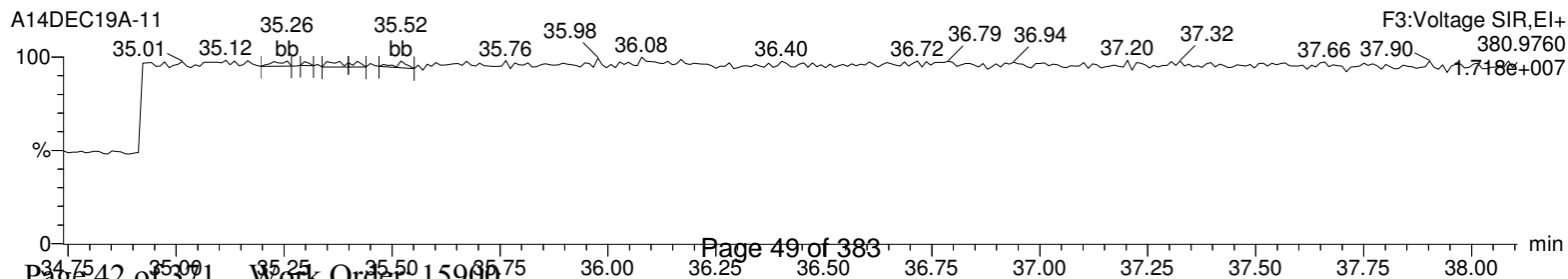
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

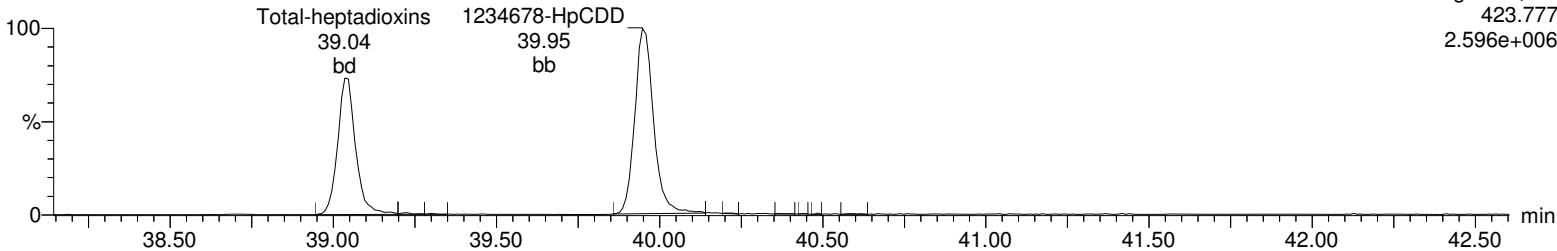
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Total-heptadioxins

A14DEC19A-11

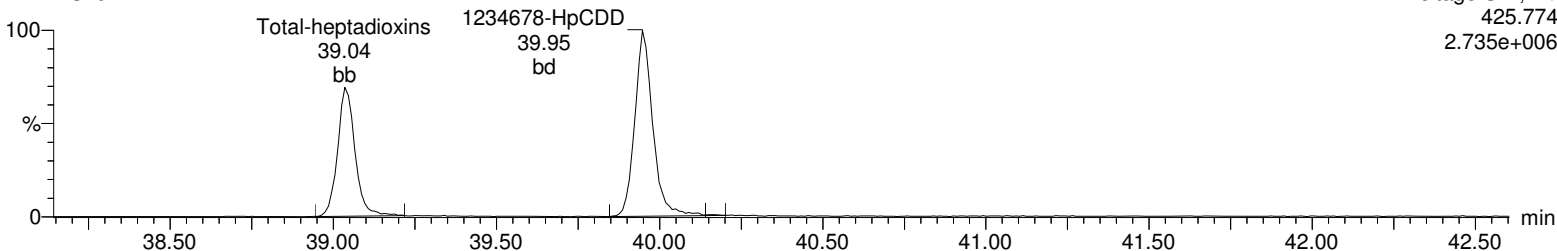
F4:Voltage SIR,EI+
423.777
2.596e+006



Total-heptadioxins

A14DEC19A-11

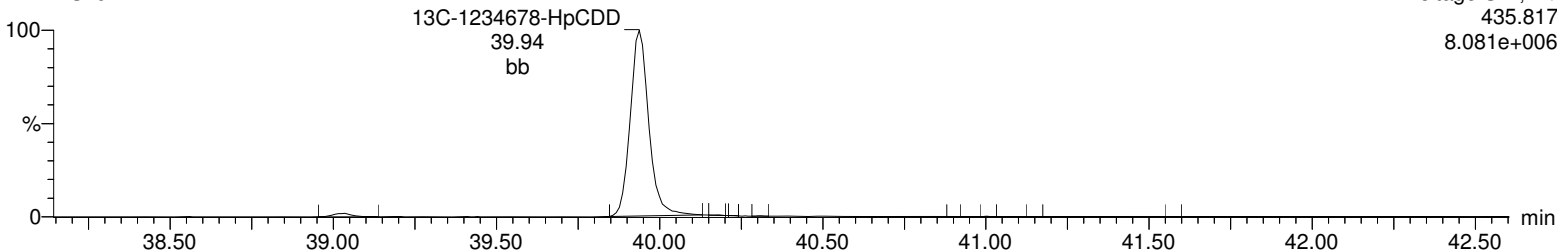
F4:Voltage SIR,EI+
425.774
2.735e+006



13C-1234678-HpCDD

A14DEC19A-11

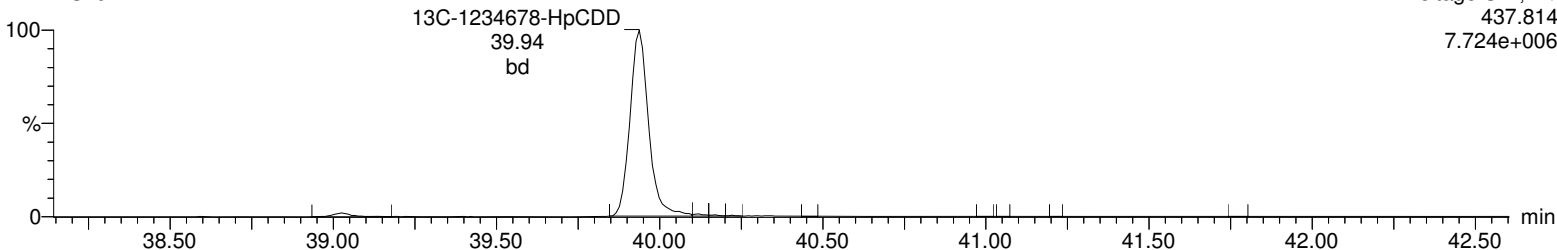
F4:Voltage SIR,EI+
435.817
8.081e+006



13C-1234678-HpCDD

A14DEC19A-11

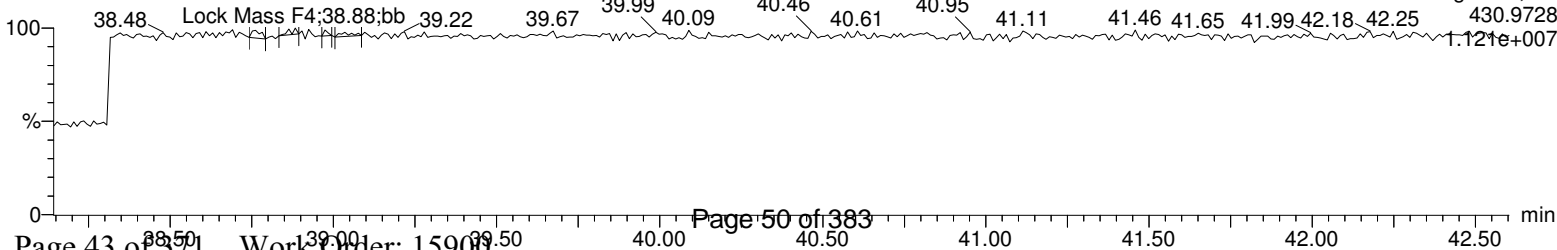
F4:Voltage SIR,EI+
437.814
7.724e+006



Lock Mass F4

A14DEC19A-11

F4:Voltage SIR,EI+
430.9728
1.121e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

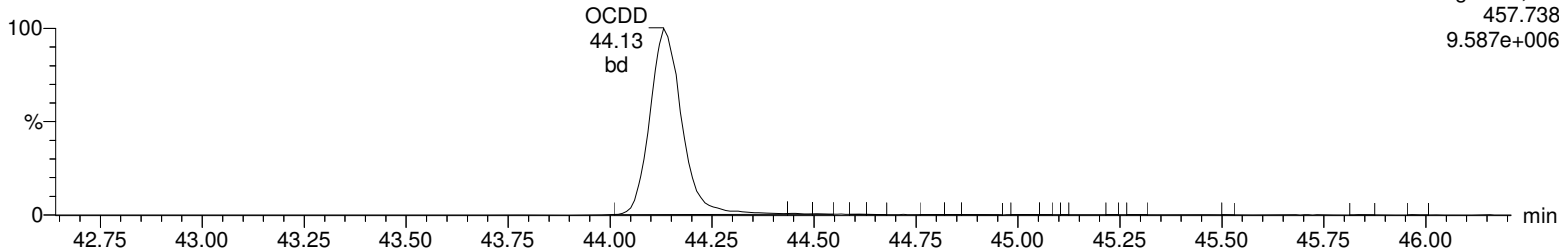
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDD

A14DEC19A-11

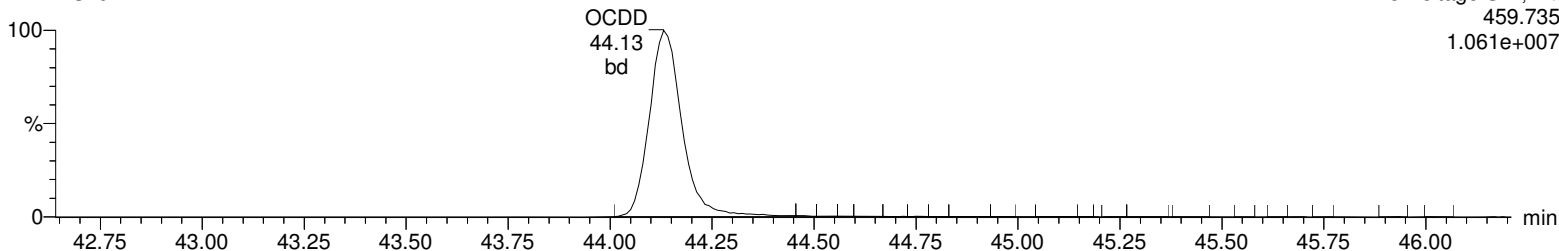
F5:Voltage SIR,EI+
457.738
9.587e+006



OCDD

A14DEC19A-11

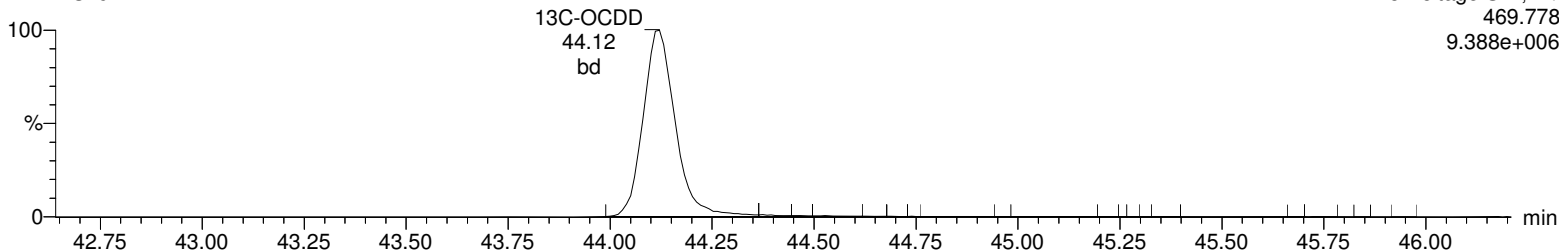
F5:Voltage SIR,EI+
459.735
1.061e+007



13C-OCDD

A14DEC19A-11

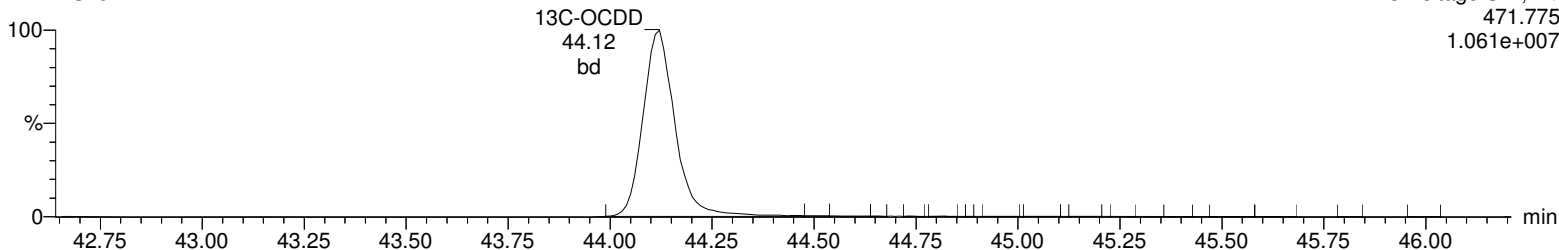
F5:Voltage SIR,EI+
469.778
9.388e+006



13C-OCDD

A14DEC19A-11

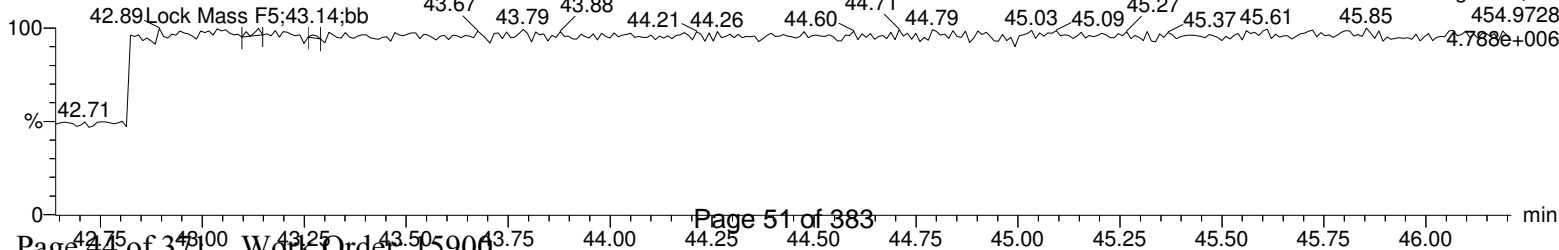
F5:Voltage SIR,EI+
471.775
1.061e+007



Lock Mass F5

A14DEC19A-11

F5:Voltage SIR,EI+
454.9728
4.788e+006



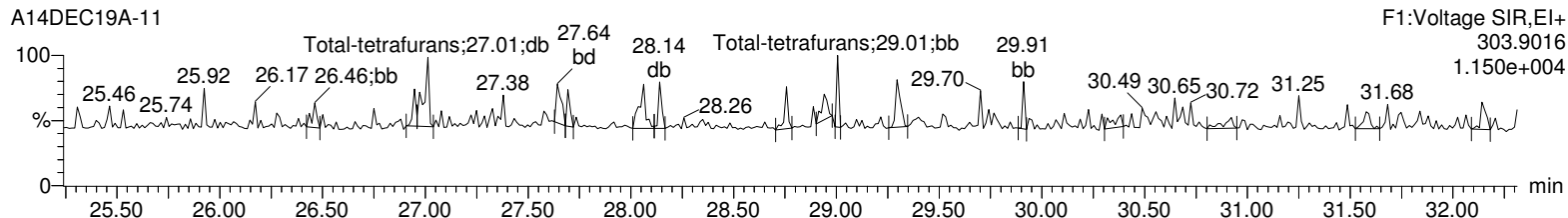
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

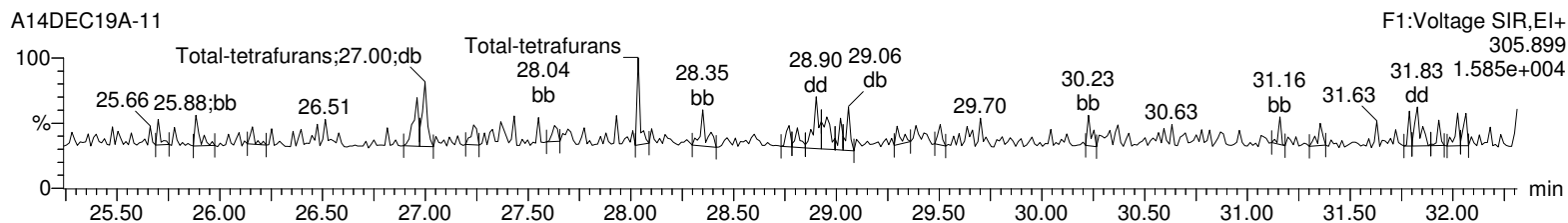
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

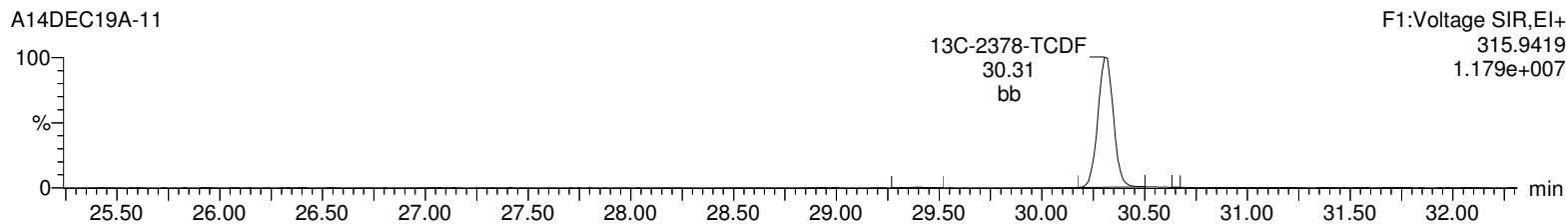
Total-tetrafurans



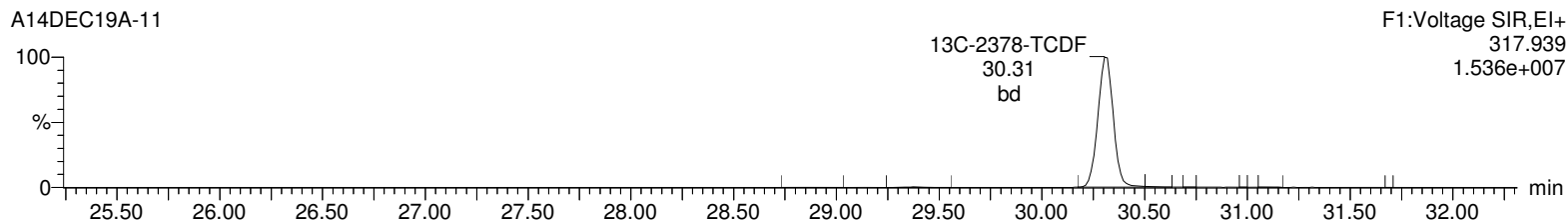
Total-tetrafurans



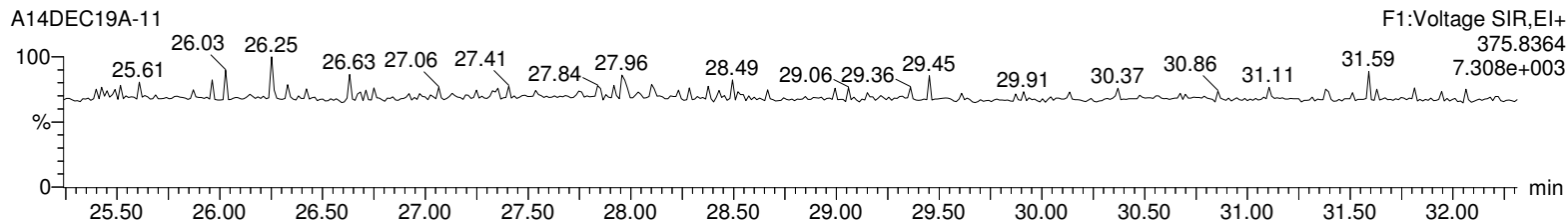
13C-2378-TCDF



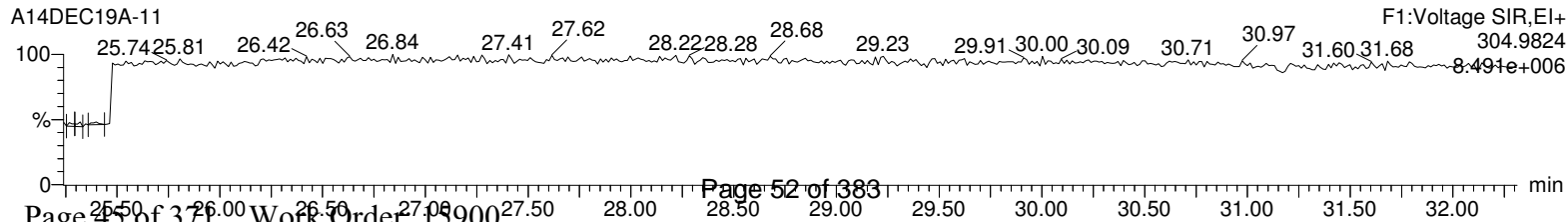
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

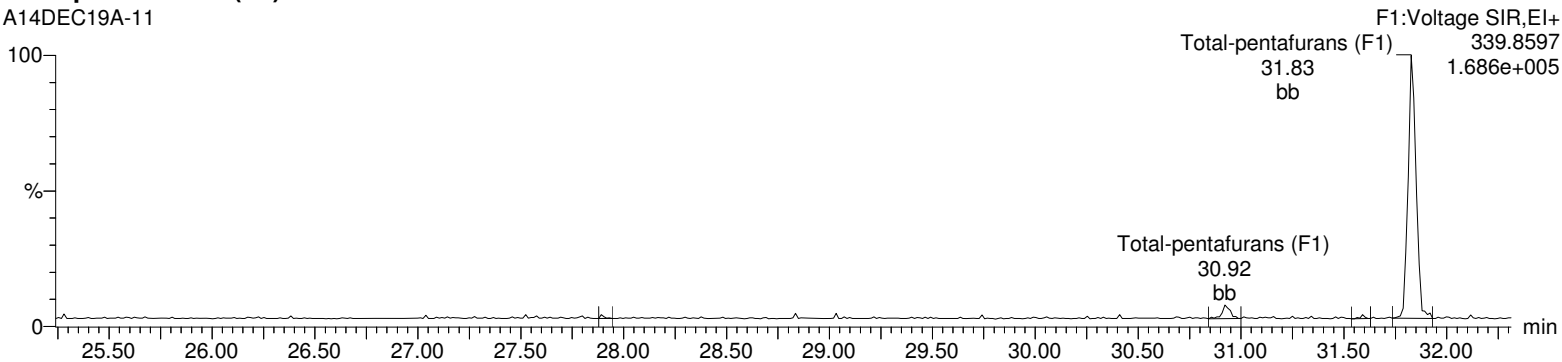
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

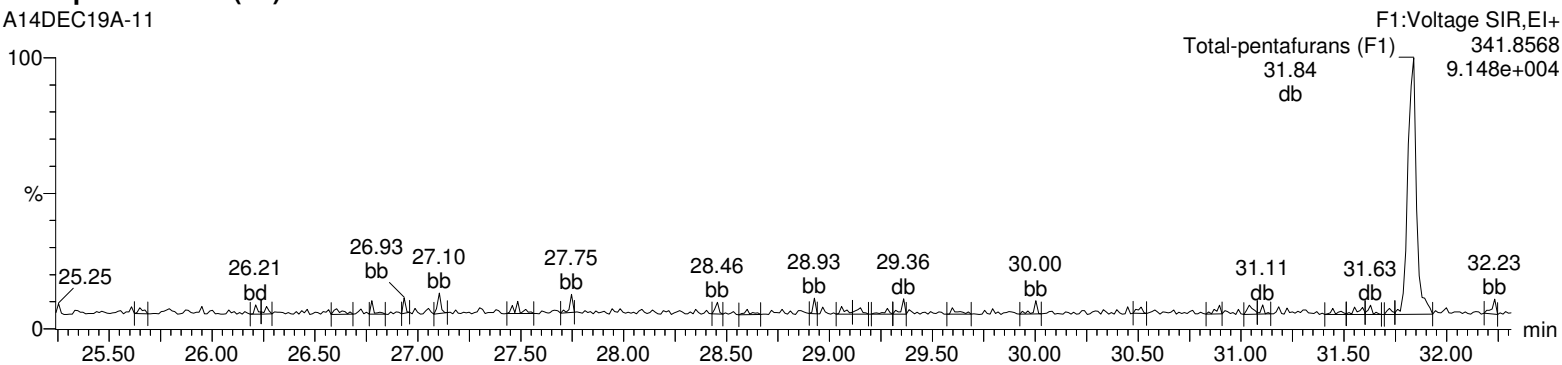
Total-pentafurans (F1)

A14DEC19A-11



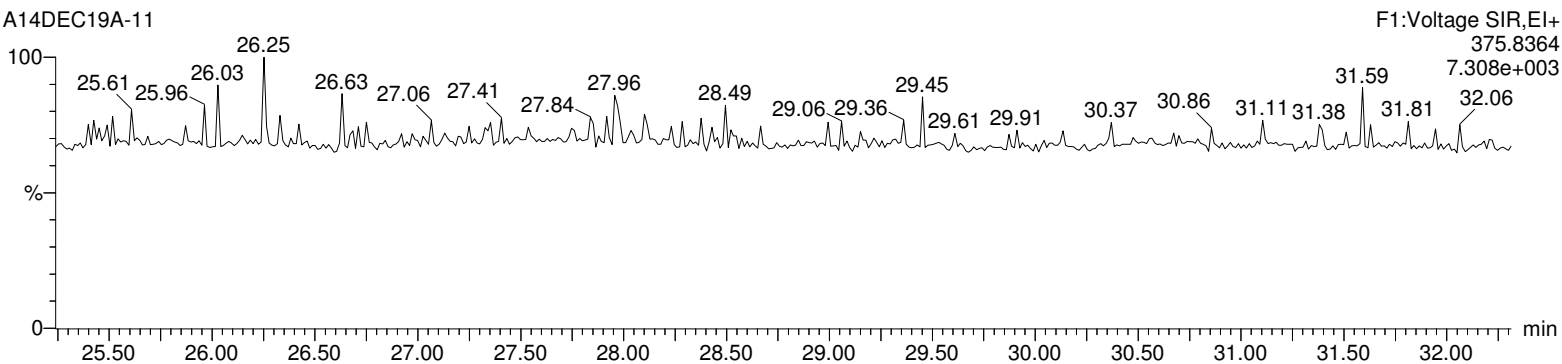
Total-pentafurans (F1)

A14DEC19A-11



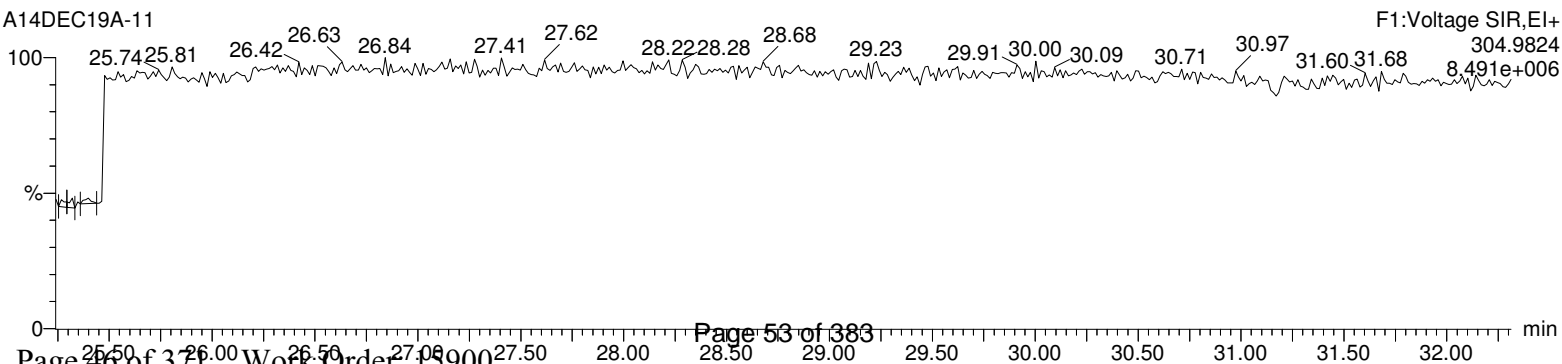
HxDPE

A14DEC19A-11



Lock Mass F1

A14DEC19A-11



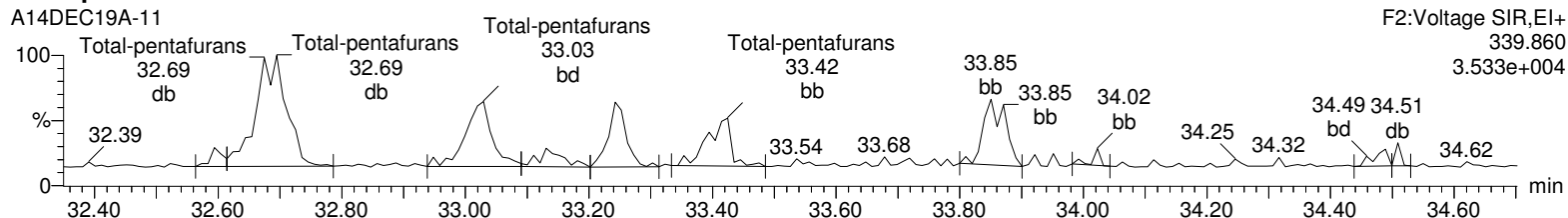
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

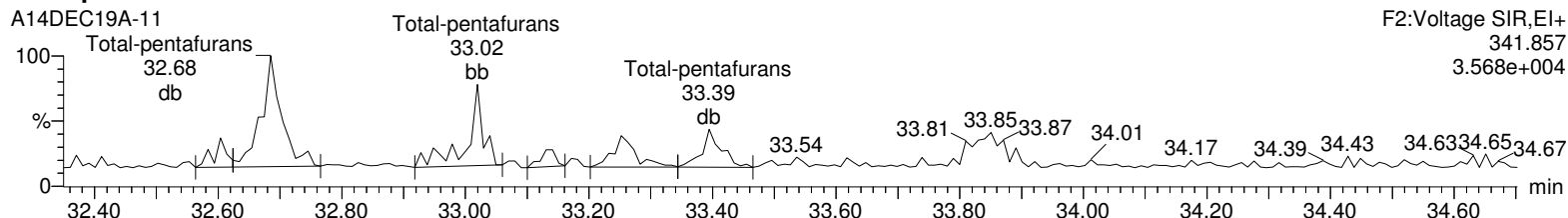
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

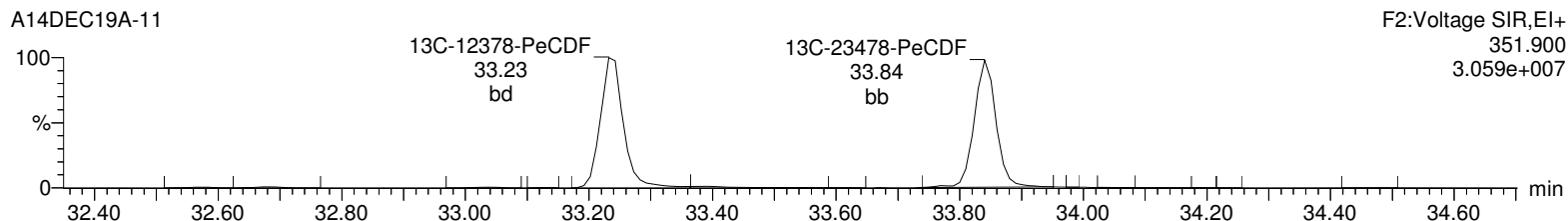
Total-pentafurans



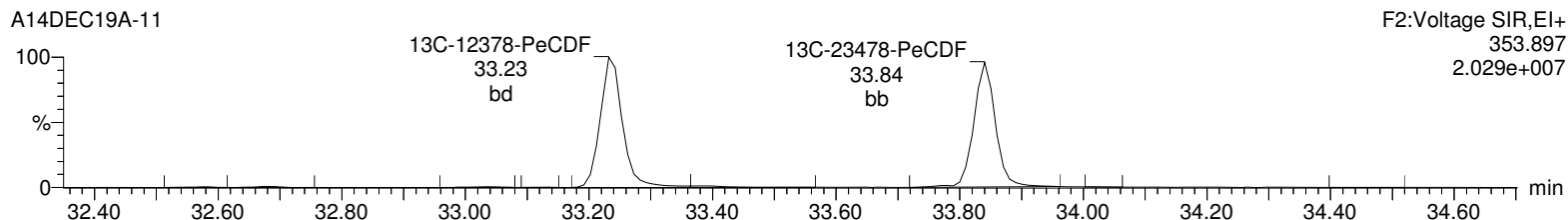
Total-pentafurans



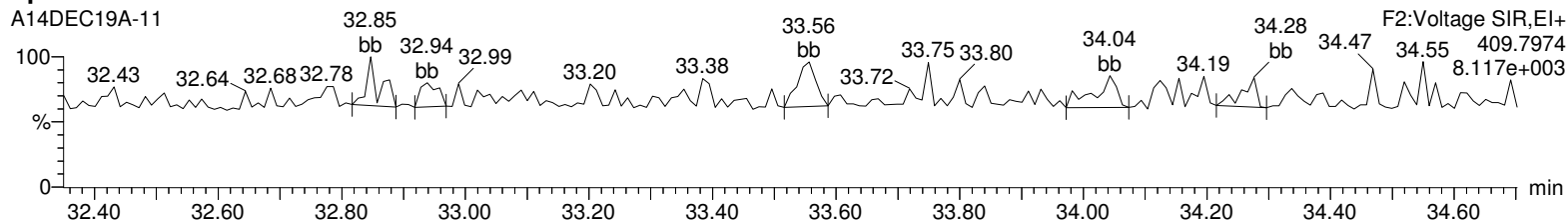
13C-12378-PeCDF



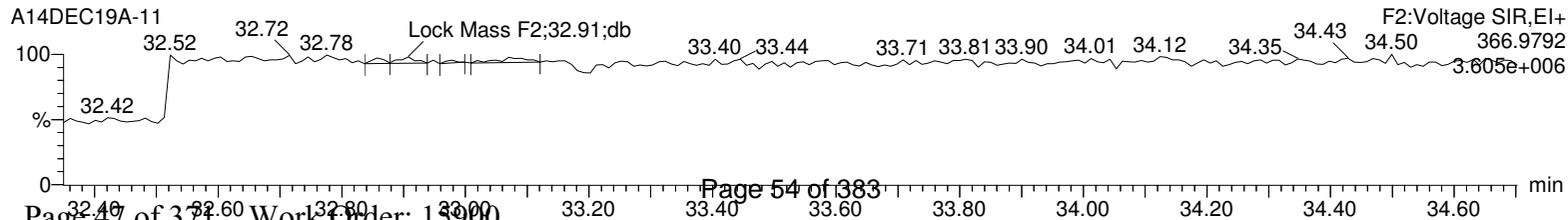
13C-12378-PeCDF



HpDPE



Lock Mass F2



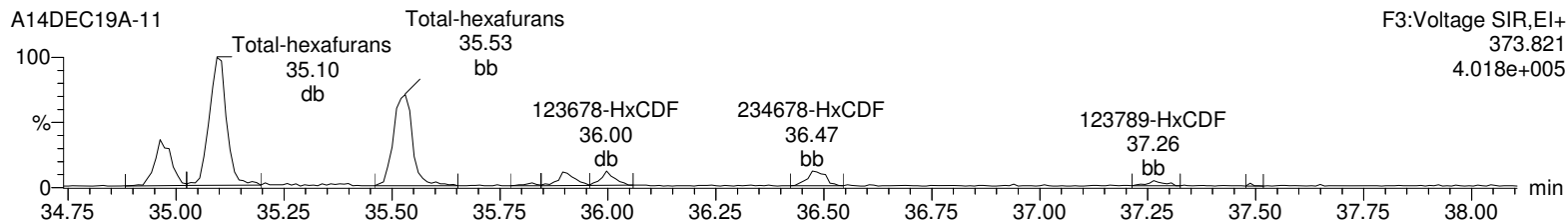
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

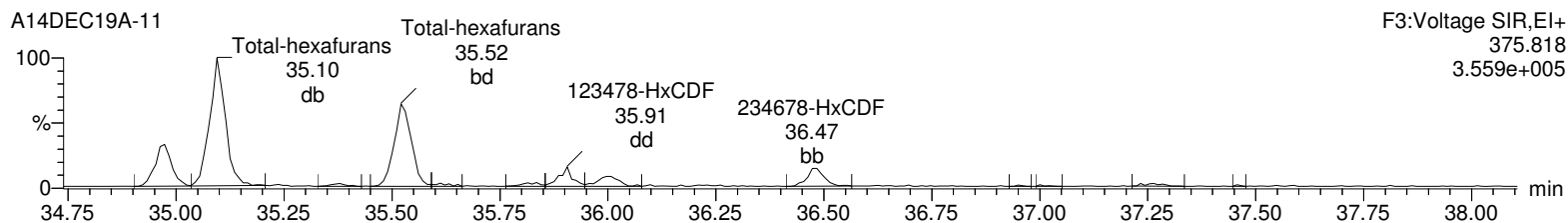
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

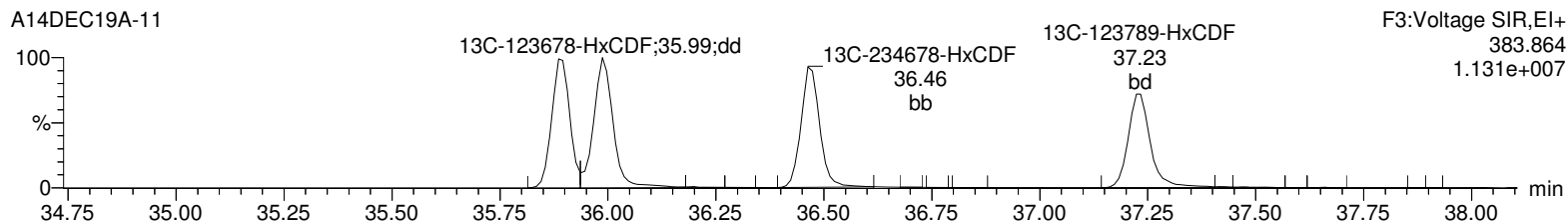
Total-hexafurans



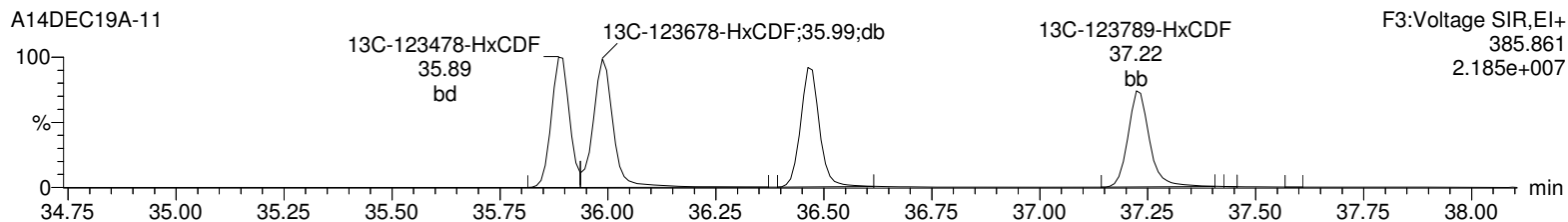
Total-hexafurans



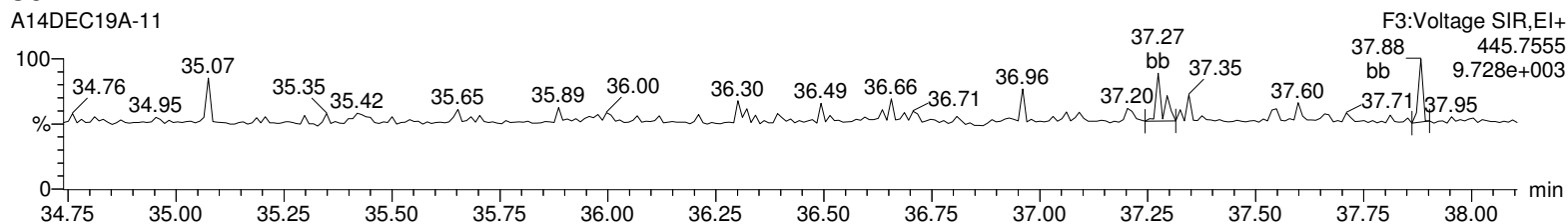
13C-123478-HxCDF



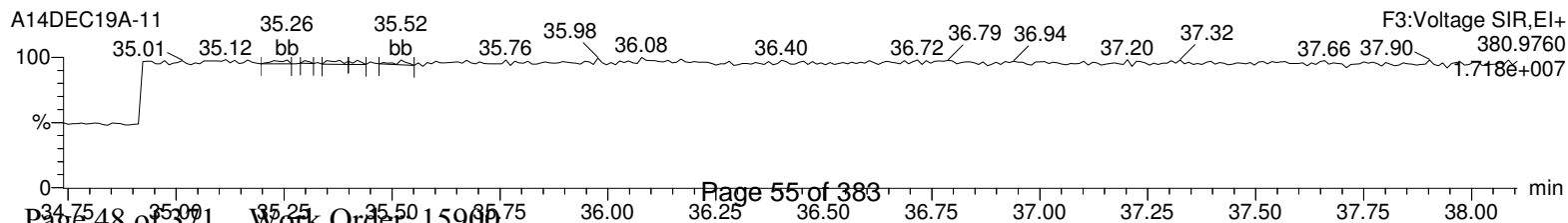
13C-123478-HxCDF



OCDFE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

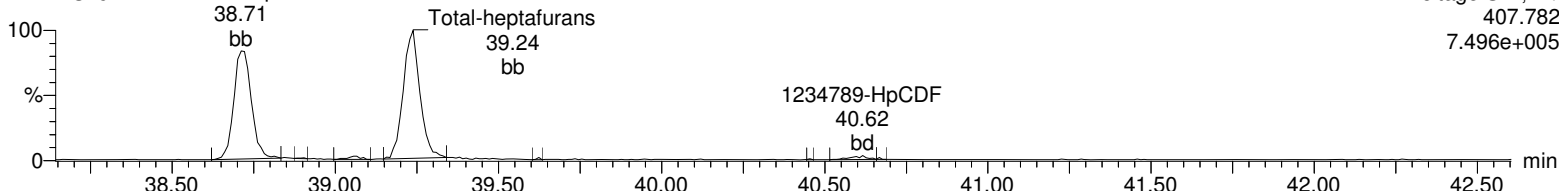
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-heptafurans

A14DEC19A-11 1234678-HpCDF

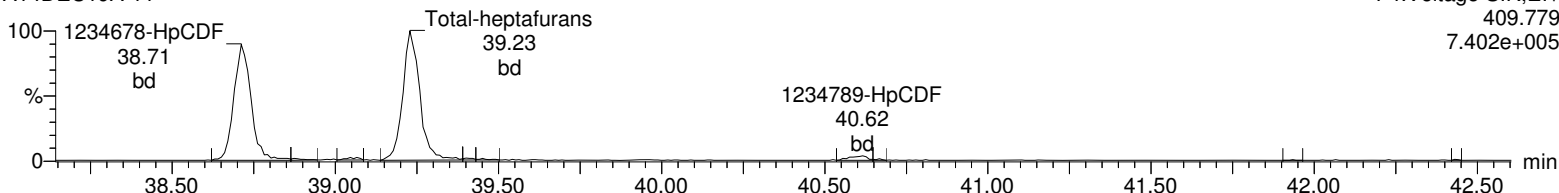
F4:Voltage SIR,EI+
407.782
7.496e+005



Total-heptafurans

A14DEC19A-11

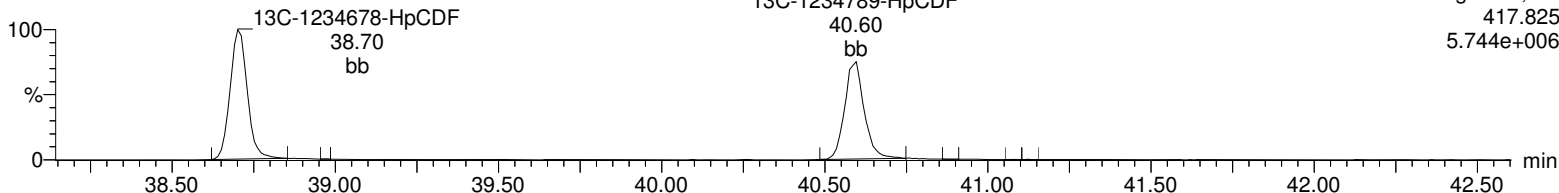
F4:Voltage SIR,EI+
409.779
7.402e+005



13C-1234678-HpCDF

A14DEC19A-11

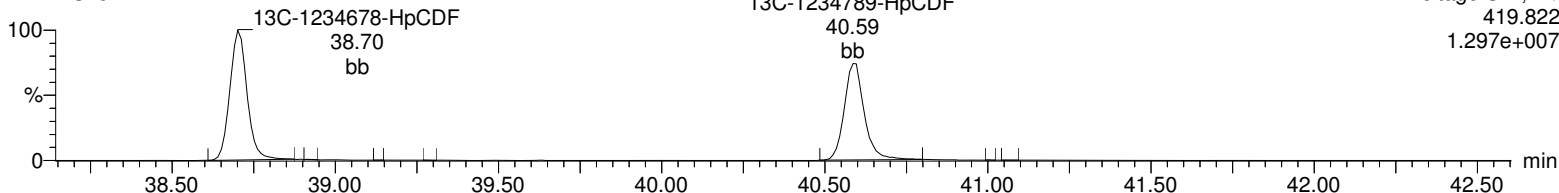
F4:Voltage SIR,EI+
417.825
5.744e+006



13C-1234678-HpCDF

A14DEC19A-11

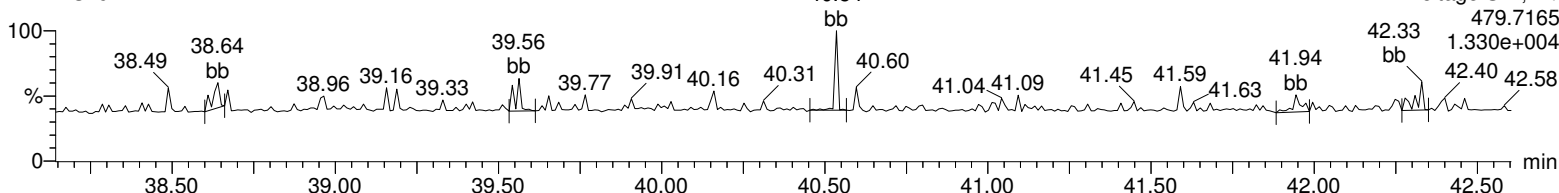
F4:Voltage SIR,EI+
419.822
1.297e+007



NoDPE

A14DEC19A-11

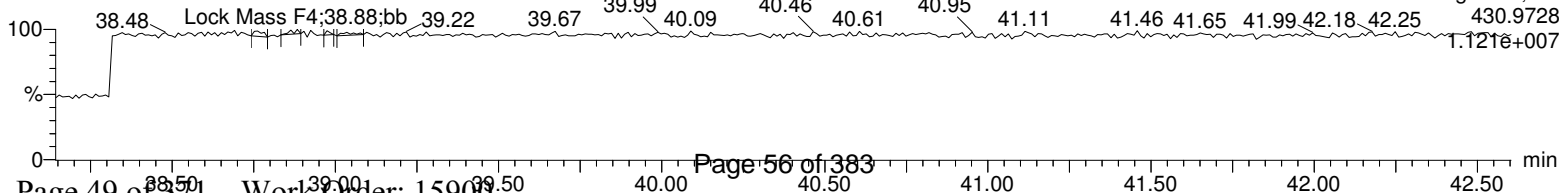
F4:Voltage SIR,EI+
479.7165
1.330e+004



Lock Mass F4

A14DEC19A-11

F4:Voltage SIR,EI+
430.9728
1.121e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

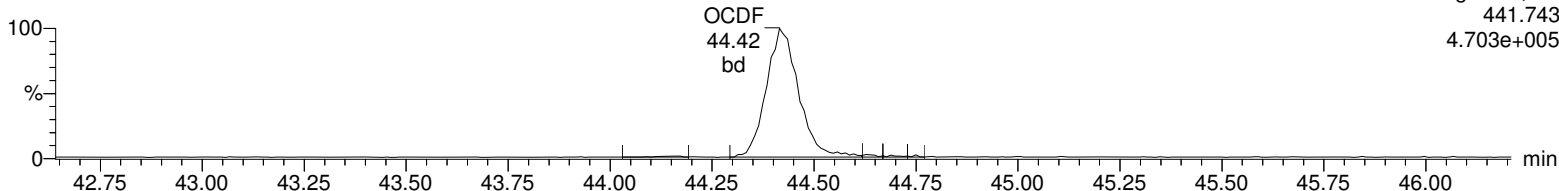
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-11, Date: 14-Dec-2019, Time: 19:28:21, ID: 15900001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDF

A14DEC19A-11

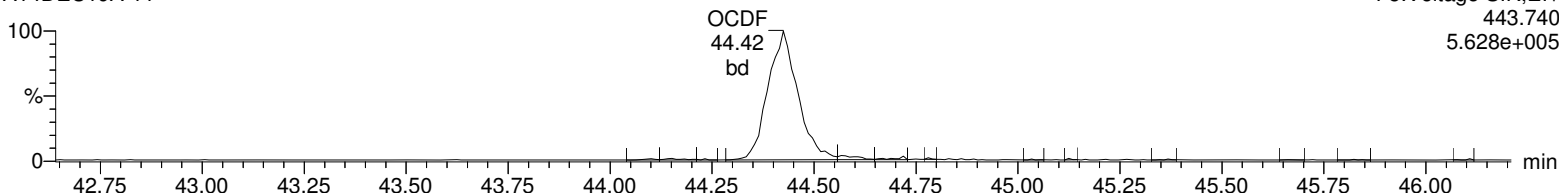
F5:Voltage SIR,EI+
441.743
4.703e+005



OCDF

A14DEC19A-11

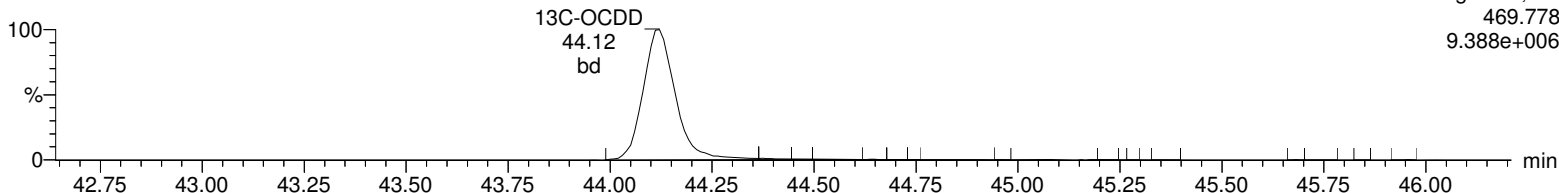
F5:Voltage SIR,EI+
443.740
5.628e+005



13C-OCDD

A14DEC19A-11

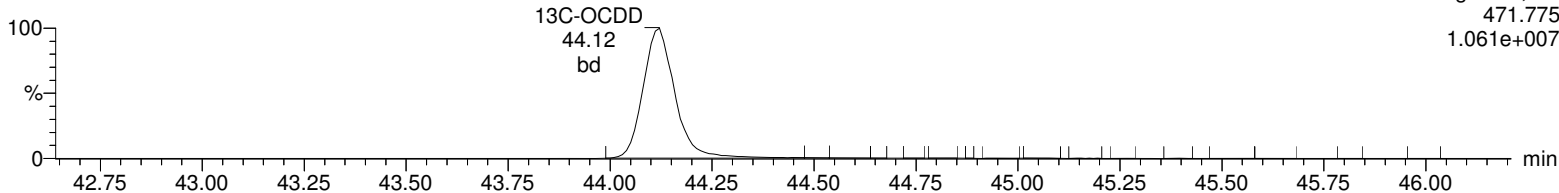
F5:Voltage SIR,EI+
469.778
9.388e+006



13C-OCDD

A14DEC19A-11

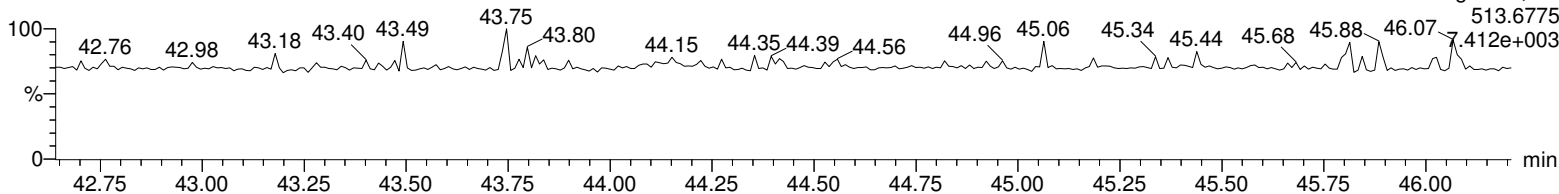
F5:Voltage SIR,EI+
471.775
1.061e+007



DeDPE

A14DEC19A-11

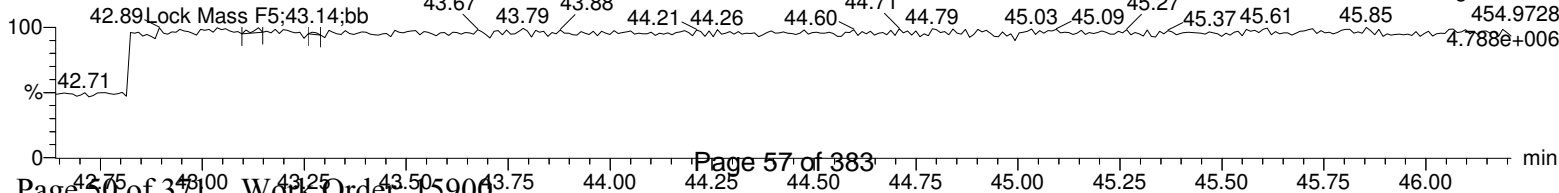
F5:Voltage SIR,EI+
513.6775
4.412e+003



Lock Mass F5

A14DEC19A-11

F5:Voltage SIR,EI+
454.9728
4.788e+006



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 15900002	Date Collected: 11/27/2019 07:30	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: EVBMP0003S029		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 20:16	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-12		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1045.1 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.000494	ng/L	0.000494	0.00957
40321-76-4	1,2,3,7,8-PeCDD	BJ	0.003	ng/L	0.000743	0.0478
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.00367	ng/L	0.00107	0.0478
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.00863	ng/L	0.001	0.0478
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.00756	ng/L	0.00105	0.0478
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.131	ng/L	0.00205	0.0478
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.970	ng/L	0.00366	0.0957
51207-31-9	2,3,7,8-TCDF	U	0.000574	ng/L	0.000574	0.00957
57117-41-6	1,2,3,7,8-PeCDF	U	0.000417	ng/L	0.000417	0.0478
57117-31-4	2,3,4,7,8-PeCDF	BJK	0.00044	ng/L	0.000417	0.0478
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.00138	ng/L	0.000647	0.0478
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.00159	ng/L	0.000679	0.0478
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	0.00216	ng/L	0.000668	0.0478
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000875	ng/L	0.000875	0.0478
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.0428	ng/L	0.000804	0.0478
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	0.00151	ng/L	0.00109	0.0478
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.047	ng/L	0.0032	0.0957
41903-57-5	Total TeCDD	U	0.000494	ng/L	0.000494	0.00957
36088-22-9	Total PeCDD	JK	0.00938	ng/L	0.000743	0.0478
34465-46-8	Total HxCDD	JK	0.0517	ng/L	0.001	0.0478
37871-00-4	Total HpCDD		0.255	ng/L	0.00205	0.0478
30402-14-3	Total TeCDF	U	0.000574	ng/L	0.000574	0.00957
30402-15-4	Total PeCDF	BJK	0.00951	ng/L	0.000277	0.0478
55684-94-1	Total HxCDF	BJK	0.0373	ng/L	0.000647	0.0478
38998-75-3	Total HpCDF	JK	0.0817	ng/L	0.000804	0.0478
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0077	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00802	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.57	1.91	ng/L	82.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.63	1.91	ng/L	84.9	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.42	1.91	ng/L	74.2	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.41	1.91	ng/L	73.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.58	1.91	ng/L	82.4	(23%-140%)
13C-OCDD		2.70	3.83	ng/L	70.7	(17%-157%)
13C-2,3,7,8-TCDF		1.55	1.91	ng/L	81.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.78	1.91	ng/L	93.1	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.62	1.91	ng/L	84.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.38	1.91	ng/L	72.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.34	1.91	ng/L	70.2	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.46	1.91	ng/L	76.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.49	1.91	ng/L	77.8	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 15900002	Date Collected: 11/27/2019 07:30	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: EVBMP0003S029		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 20:16	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-12		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1045.1 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.34	1.91	ng/L	69.9 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.48	1.91	ng/L	77.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.163	0.191	ng/L	85.1 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:28:19 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:28:38 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	9.64e1	4.53e2	5.49e2	31.10	1.000	0.21	YES	0.028	0.0258	3.61e3	1963	1.8	8.37e3	1256	6.7	dd	bb
2	12378-PeCDD	1.28e3	7.91e2	2.07e3	34.03	1.000	1.61	NO	0.157	0.0388	2.58e4	2506	10.3	1.97e4	2288	8.6	bb	bb
3	123478-HxCDD	1.31e3	1.11e3	2.42e3	36.60	1.000	1.18	NO	0.192	0.0558	2.80e4	1959	14.3	2.62e4	3671	7.1	dd	bd
4	123678-HxCDD	3.43e3	2.81e3	6.24e3	36.69	1.000	1.22	NO	0.451	0.0525	8.51e4	1959	43.4	6.97e4	3671	19.0	dd	dd
5	123789-HxCDD	2.90e3	2.24e3	5.14e3	36.93	1.007	1.30	NO	0.395	0.0549	6.16e4	1959	31.5	4.10e4	3671	11.2	db	dd
6	1234678-HpCDD	4.06e4	3.89e4	7.95e4	39.95	1.000	1.04	NO	6.859	0.107	6.18e5	3801	162.6	5.61e5	3244	173.0	bb	bb
7	OCDD	2.12e5	2.38e5	4.50e5	44.13	1.000	0.89	NO	50.697	0.191	2.37e6	2830	898.8	2.63e6	4728	556.9	bd	bb
8	2378-TCDF	1.07e2	1.02e2	2.09e2	30.32	1.000	1.05	YES	0.009	0.0300	5.77e3	1398	4.1	2.19e3	1954	1.1	bb	bb
9	12378-PeCDF	2.42e2	2.85e2	5.27e2	33.25	1.001	0.85	YES	0.024	0.0218	5.32e3	2173	2.4	5.50e3	2261	2.4	MM	bb
10	23478-PeCDF	2.54e2	2.47e2	5.01e2	33.84	1.000	1.03	YES	0.023	0.0218	8.34e3	2173	3.8	5.68e3	2261	2.5	dd	bb
11	123478-HxCDF	6.45e2	6.14e2	1.26e3	35.91	1.001	1.05	YES	0.072	0.0338	1.52e4	2712	5.6	1.72e4	2574	6.7	MM	dd
12	123678-HxCDF	8.11e2	7.14e2	1.52e3	36.00	1.000	1.14	NO	0.083	0.0355	2.01e4	2712	7.4	1.47e4	2574	5.7	MM	db
13	234678-HxCDF	1.25e3	8.92e2	2.14e3	36.48	1.001	1.40	NO	0.113	0.0349	2.70e4	2712	9.9	1.87e4	2574	7.3	bb	bb
14	123789-HxCDF	2.22e2	1.78e2	4.00e2	37.26	1.001	1.25	NO	0.025	0.0457	5.52e3	2712	2.0	4.19e3	2574	1.6	bb	bb
15	1234678-HpCDF	1.55e4	1.60e4	3.14e4	38.71	1.000	0.97	NO	2.235	0.0420	2.46e5	2254	109.2	2.67e5	1833	145.6	bd	bb
16	1234789-HpCDF	5.10e2	4.97e2	1.01e3	40.61	1.000	1.03	NO	0.079	0.0568	9.25e3	2254	4.1	9.96e3	1833	5.4	bb	MM
17	OCDF	1.15e4	1.39e4	2.54e4	44.42	1.007	0.83	NO	2.457	0.167	1.45e5	1257	115.3	1.82e5	6435	28.3	bd	bd
18	13C-2378-TCDD	9.79e5	1.26e6	2.24e6	31.10	1.018	0.78	NO	82.009	0.0942	1.54e7	6063	2540.7	2.01e7	6154	3263.3	bd	bb
19	13C-12378-PeCDD	9.40e5	6.06e5	1.55e6	34.02	1.114	1.55	NO	84.919	0.130	2.20e7	4849	4541.0	1.41e7	6375	2210.3	bb	bb
20	13C-123478-HxCDD	7.44e5	5.95e5	1.34e6	36.60	0.991	1.25	NO	74.206	0.105	1.49e7	5790	2576.4	1.17e7	7621	1531.2	bd	bd
21	13C-123678-HxCDD	8.15e5	6.50e5	1.47e6	36.68	0.993	1.25	NO	73.875	0.0954	1.58e7	5790	2730.1	1.25e7	7621	1637.8	dd	dd
22	13C-1234678-HpCDD	5.70e5	5.44e5	1.11e6	39.94	1.082	1.05	NO	82.420	0.140	8.13e6	6398	1271.4	7.84e6	7052	1112.1	bd	bd
23	13C-OCDD	8.58e5	9.68e5	1.83e6	44.11	1.195	0.89	NO	141.309	0.138	9.56e6	5429	1760.4	1.06e7	7184	1470.4	bd	bd
24	13C-2378-TCDF	1.08e6	1.38e6	2.45e6	30.31	0.992	0.78	NO	81.026	0.0981	1.26e7	7659	1638.6	1.60e7	6443	2487.9	bb	bb
25	13C-12378-PeCDF	1.39e6	8.88e5	2.28e6	33.23	1.088	1.57	NO	93.118	0.219	3.28e7	12006	2731.9	2.11e7	13401	1574.6	bd	bd
26	13C-23478-PeCDF	1.34e6	8.48e5	2.19e6	33.84	1.108	1.58	NO	84.848	0.208	3.16e7	12006	2631.2	2.00e7	13401	1494.5	bb	bb
27	13C-123478-HxCDF	5.48e5	1.07e6	1.62e6	35.89	0.972	0.51	NO	72.299	0.161	1.22e7	11786	1035.3	2.36e7	13644	1729.7	bd	bd
28	13C-123678-HxCDF	6.14e5	1.15e6	1.76e6	35.99	0.975	0.54	NO	70.164	0.143	1.25e7	11786	1059.1	2.36e7	13644	1731.3	dd	db
29	13C-234678-HxCDF	5.74e5	1.09e6	1.66e6	36.46	0.988	0.53	NO	76.441	0.165	1.15e7	11786	975.5	2.24e7	13644	1643.9	bd	bb
30	13C-123789-HxCDF	5.15e5	9.98e5	1.51e6	37.22	1.008	0.52	NO	77.789	0.184	9.29e6	11786	788.1	1.80e7	13644	1317.8	bb	bb

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:28:19 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:28:38 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
31	13C-1234678-HpCDF	3.74e5	8.49e5	1.22e6	38.70	1.048	0.44	NO	69.862	0.113	6.47e6	5788	1117.3	1.45e7	8268	1758.6	bb
32	13C-1234789-HpCDF	3.20e5	7.34e5	1.05e6	40.59	1.099	0.44	NO	77.292	0.146	4.54e6	5788	784.9	1.02e7	8268	1238.7	bd
33	13C-1234-TCDD	1.06e6	1.36e6	2.42e6	30.54	0.000	0.78	NO	100.000	0.106	1.26e7	6063	2073.6	1.61e7	6154	2613.8	bb
34	13C-123789-HxCDD	1.11e6	9.05e5	2.01e6	36.92	0.000	1.22	NO	100.000	0.0941	1.96e7	5790	3387.8	1.57e7	7621	2057.5	dd
35	37Cl+2378-TCDD	2.19e5		2.19e5	31.12	1.019			8.514	0.0239	3.57e6	2910	1226.6				bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:28:19 Eastern Standard Time
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Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraoxins	5.50e1	5.44e1	1.09e2	29.06	1.01	YES	0.006	0.0258	1.93e3	1963	1.0	2.56e3	1256	2.0	bb	bb
2	Total-tetraoxins	6.25e1	7.98e1	1.42e2	26.84	0.78	NO	0.007	0.0258	2.87e3	1963	1.5	4.38e3	1256	3.5	bb	bb
3	2378-TCDD	9.64e1	4.53e2	5.49e2	31.10	0.21	YES	0.028	0.0258	3.61e3	1963	1.8	8.37e3	1256	6.7	dd	bb
4	Total-tetraoxins	4.86e2	7.11e1	5.57e2	30.32	6.84	YES	0.028	0.0258	1.31e4	1963	6.7	2.28e3	1256	1.8	bb	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	2.05e2	6.79e1	2.72e2	34.31	3.01	YES	0.021	0.0388	5.20e3	2506	2.1	3.64e3	2288	1.6	bb	bb
2	12378+PeCDD	1.28e3	7.91e2	2.07e3	34.03	1.61	NO	0.157	0.0388	2.58e4	2506	10.3	1.97e4	2288	8.6	bb	bb
3	Total-pentadioxins	4.94e2	3.25e2	8.19e2	33.56	1.52	NO	0.062	0.0388	8.91e3	2506	3.6	7.84e3	2288	3.4	db	MM
4	Total-pentadioxins	2.75e2	2.60e2	5.36e2	33.42	1.06	YES	0.041	0.0388	1.31e4	2506	5.2	7.40e3	2288	3.2	dd	db
5	Total-pentadioxins	9.18e2	4.70e2	1.39e3	33.38	1.95	YES	0.105	0.0388	1.98e4	2506	7.9	1.05e4	2288	4.6	dd	dd
6	Total-pentadioxins	4.52e2	2.37e2	6.89e2	33.27	1.91	YES	0.052	0.0388	9.90e3	2506	3.9	7.26e3	2288	3.2	bd	bd
7	Total-pentadioxins	1.41e2	9.31e1	2.34e2	32.98	1.51	NO	0.018	0.0388	4.89e3	2506	1.9	5.59e3	2288	2.4	db	bb
8	Total-pentadioxins	6.18e2	3.43e2	9.61e2	32.72	1.80	YES	0.073	0.0388	1.13e4	2506	4.5	5.73e3	2288	2.5	bb	bb

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	7.84e3	5.40e3	1.32e4	36.04	1.45	YES	1.009	0.0543	1.22e5	1959	62.2	8.30e4	3671	22.6	dd	dd
2	Total-hexadioxins	1.07e3	8.31e2	1.90e3	35.83	1.29	NO	0.145	0.0543	1.52e4	1959	7.7	1.37e4	3671	3.7	MM	MM
3	Total-hexadioxins	3.76e3	2.96e3	6.73e3	35.39	1.27	NO	0.512	0.0543	8.87e4	1959	45.3	6.39e4	3671	17.4	bb	bb
4	123789-HxCDD	2.90e3	2.24e3	5.14e3	36.93	1.30	NO	0.395	0.0549	6.16e4	1959	31.5	4.10e4	3671	11.2	db	dd
5	Total-hexadioxins	5.72e2	4.67e2	1.04e3	36.86	1.22	NO	0.079	0.0543	1.45e4	1959	7.4	8.28e3	3671	2.3	dd	dd
6	123678-HxCDD	3.43e3	2.81e3	6.24e3	36.69	1.22	NO	0.451	0.0525	8.51e4	1959	43.4	6.97e4	3671	19.0	dd	dd
7	123478-HxCDD	1.31e3	1.11e3	2.42e3	36.60	1.18	NO	0.192	0.0558	2.80e4	1959	14.3	2.62e4	3671	7.1	dd	bd
8	Total-hexadioxins	4.89e2	1.26e2	6.15e2	36.45	3.87	YES	0.047	0.0543	8.86e3	1959	4.5	4.88e3	3671	1.3	bd	bb
9	Total-hexadioxins	1.75e2	4.57e2	6.32e2	36.17	0.38	YES	0.048	0.0543	8.55e3	1959	4.4	9.71e3	3671	2.6	db	dd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:28:19 Eastern Standard Time
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Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	4.06e4	3.89e4	7.95e4	39.95	1.04	NO	6.859	0.107	6.18e5	3801	162.6	5.61e5	3244	173.0	bb	bb
2	Total-heptadioxins	3.78e4	3.71e4	7.49e4	39.04	1.02	NO	6.464	0.107	6.42e5	3801	169.0	5.78e5	3244	178.2	bb	bb

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	1.00e2	5.04e1	1.50e2	30.55	1.99	YES	0.006	0.0300	5.67e3	1398	4.1	2.05e3	1954	1.0	bb	bb
2	2378-TCDF	1.07e2	1.02e2	2.09e2	30.32	1.05	YES	0.009	0.0300	5.77e3	1398	4.1	2.19e3	1954	1.1	bb	bb
3	Total-tetrafurans	1.52e2	1.82e2	3.34e2	29.74	0.83	NO	0.014	0.0300	7.43e3	1398	5.3	4.57e3	1954	2.3	bb	bb
4	Total-tetrafurans	8.11e1	6.40e1	1.45e2	29.45	1.27	YES	0.006	0.0300	2.26e3	1398	1.6	2.29e3	1954	1.2	bb	db
5	Total-tetrafurans	2.26e2	8.30e1	3.09e2	28.95	2.73	YES	0.013	0.0300	5.23e3	1398	3.7	2.79e3	1954	1.4	bb	bb
6	Total-tetrafurans	5.48e1	9.32e1	1.48e2	27.68	0.59	YES	0.006	0.0300	1.47e3	1398	1.0	4.00e3	1954	2.0	bb	bb
7	Total-tetrafurans	5.44e1	1.02e2	1.57e2	27.38	0.53	YES	0.007	0.0300	2.09e3	1398	1.5	5.13e3	1954	2.6	bb	bb
8	Total-tetrafurans	1.69e2	3.79e2	5.47e2	27.01	0.45	YES	0.023	0.0300	2.36e3	1398	1.7	5.43e3	1954	2.8	db	bb

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	6.55e1	8.89e1	1.54e2	32.05	0.74	YES	0.007	0.0145	2.33e3	1029	2.3	5.64e3	1926	2.9	bb	bb
2	Total-pentafurans (F1)	4.39e3	2.78e3	7.17e3	31.83	1.58	NO	0.332	0.0145	9.94e4	1029	96.6	6.10e4	1926	31.7	bb	bb
3	Total-pentafurans (F1)	6.80e1	1.03e2	1.71e2	31.32	0.66	YES	0.008	0.0145	2.46e3	1029	2.4	2.83e3	1926	1.5	bb	db
4	Total-pentafurans (F1)	7.32e1	7.57e1	1.49e2	26.88	0.97	YES	0.007	0.0145	5.49e3	1029	5.3	3.44e3	1926	1.8	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	2.54e2	2.47e2	5.01e2	33.84	1.03	YES	0.023	0.0218	8.34e3	2173	3.8	5.68e3	2261	2.5	dd	bb
2	Total-pentafurans	3.14e2	2.44e2	5.58e2	33.40	1.28	YES	0.026	0.0218	7.61e3	2173	3.5	7.78e3	2261	3.4	bb	bb
3	12378-PeCDF	2.42e2	2.85e2	5.27e2	33.25	0.85	YES	0.024	0.0218	5.32e3	2173	2.4	5.50e3	2261	2.4	MM	bb
4	Total-pentafurans	4.56e2	4.06e2	8.62e2	33.02	1.12	YES	0.040	0.0218	2.09e4	2173	9.6	6.32e3	2261	2.8	bb	bb
5	Total-pentafurans	9.23e2	7.22e2	1.64e3	32.69	1.28	YES	0.076	0.0218	2.18e4	2173	10.0	1.59e4	2261	7.0	db	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:28:19 Eastern Standard Time
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Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HIF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123678-HxCDF	8.11e2	7.14e2	1.52e3	36.00	1.14	NO	0.083	0.0355	2.01e4	2712	7.4	1.47e4	2574	5.7	MM	db
2	123478-HxCDF	6.45e2	6.14e2	1.26e3	35.91	1.05	YES	0.072	0.0338	1.52e4	2712	5.6	1.72e4	2574	6.7	MM	dd
3	Total-hexaturans	1.89e2	1.74e2	3.62e2	35.85	1.09	NO	0.020	0.0372	6.51e3	2712	2.4	6.10e3	2574	2.4	db	bd
4	Total-hexaturans	3.97e3	3.37e3	7.34e3	35.51	1.18	NO	0.414	0.0372	7.70e4	2712	28.4	6.89e4	2574	26.8	bb	bd
5	Total-hexaturans	1.21e2	1.89e2	3.10e2	35.37	0.64	YES	0.018	0.0372	4.56e3	2712	1.7	6.61e3	2574	2.6	bb	bb
6	Total-hexaturans	1.53e2	1.09e2	2.62e2	35.21	1.40	NO	0.015	0.0372	6.79e3	2712	2.5	7.93e3	2574	3.1	db	db
7	Total-hexaturans	9.64e3	7.58e3	1.72e4	35.10	1.27	NO	0.972	0.0372	2.08e5	2712	76.8	1.57e5	2574	61.0	dd	dd
8	Total-hexaturans	2.96e3	2.27e3	5.23e3	34.96	1.30	NO	0.295	0.0372	6.21e4	2712	22.9	6.17e4	2574	24.0	bd	bd
9	123789-HxCDF	2.22e2	1.78e2	4.00e2	37.26	1.25	NO	0.025	0.0457	5.52e3	2712	2.0	4.19e3	2574	1.6	bb	bb
10	234678-HxCDF	1.25e3	8.92e2	2.14e3	36.48	1.40	NO	0.113	0.0349	2.70e4	2712	9.9	1.87e4	2574	7.3	bb	bb
11	Total-hexaturans	1.24e2	8.37e1	2.08e2	36.21	1.48	YES	0.012	0.0372	4.10e3	2712	1.5	3.08e3	2574	1.2	bb	bb

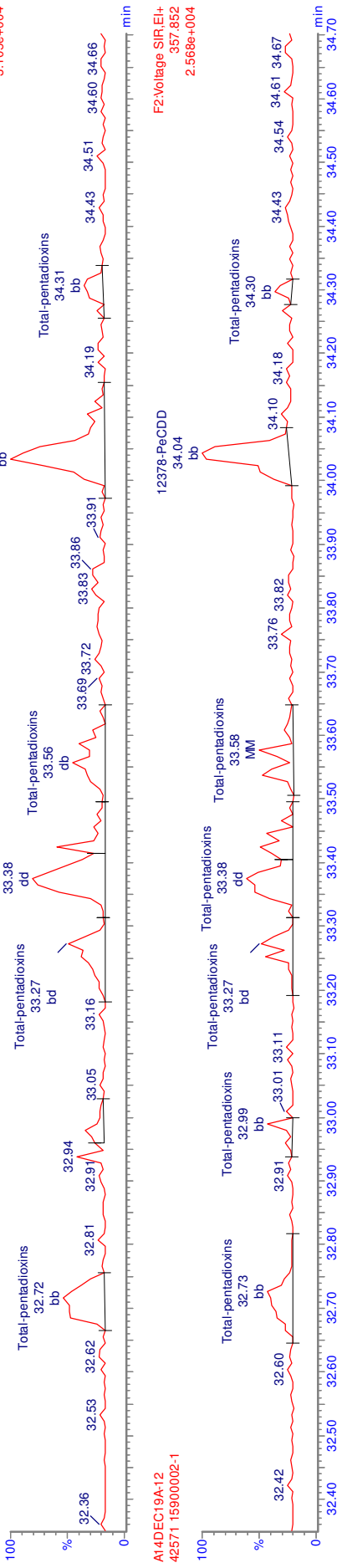
HPF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptaturans	1.16e2	6.27e1	1.79e2	38.88	1.86	YES	0.013	0.0489	9.90e3	2254	4.4	4.62e3	1833	2.5	db	bb
2	1234678-HpCDF	1.55e4	1.60e4	3.14e4	38.71	0.97	NO	2.235	0.0420	2.46e5	2254	109.2	2.67e5	1833	145.6	bd	bb
3	Total-heptaturans	6.19e1	5.34e1	1.15e2	38.24	1.16	NO	0.009	0.0489	3.90e3	2254	1.7	3.44e3	1833	1.9	bb	bb
4	1234789-HpCDF	5.10e2	4.97e2	1.01e3	40.61	1.03	NO	0.079	0.0568	9.25e3	2254	4.1	9.96e3	1833	5.4	bb	MM
5	Total-heptaturans	1.34e4	1.19e4	2.54e4	39.24	1.13	NO	1.897	0.0489	2.07e5	2254	91.8	2.06e5	1833	112.6	bb	bd
6	Total-heptaturans	3.47e2	4.03e2	7.51e2	39.07	0.86	YES	0.056	0.0489	8.87e3	2254	3.9	7.02e3	1833	3.8	bb	bb

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

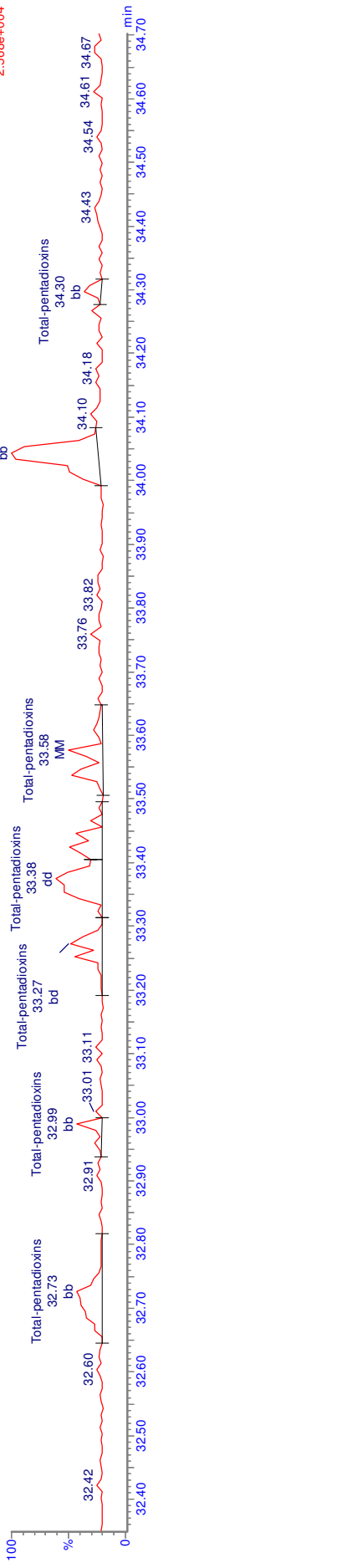
A14DEC19A-12
 42571 15900002-1

F2:Voltage SIR,EI+
 355.855
 3.105e+004



A14DEC19A-12
 42571 15900002-1

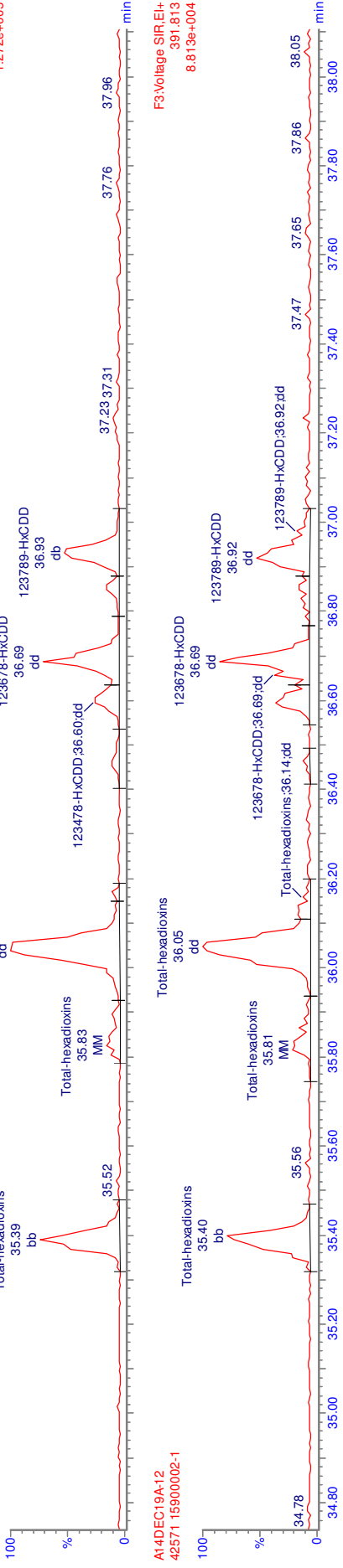
F2:Voltage SIR,EI+
 357.852
 2.568e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

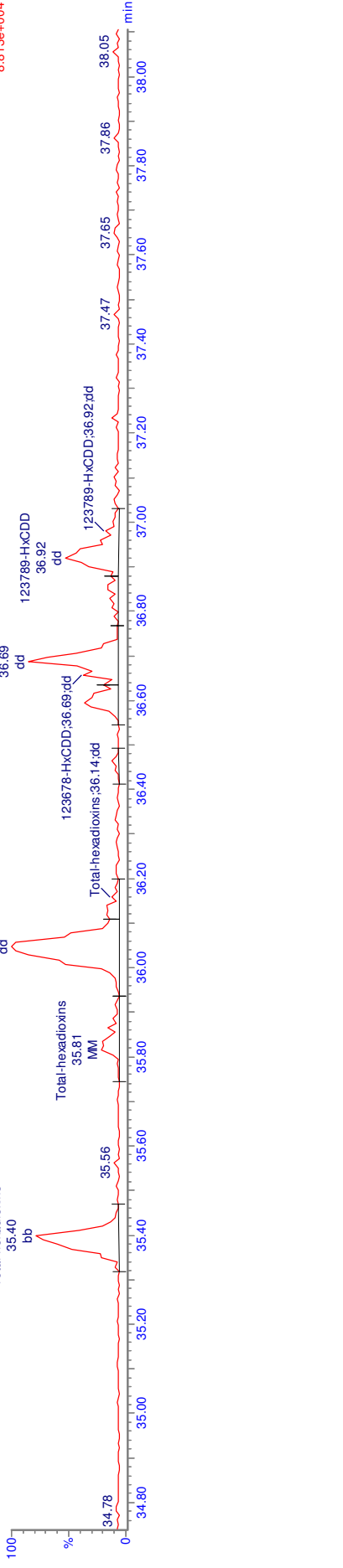
A14DEC19A-12
 42571 15900002-1

F3:Voltage SIR,El+
 389.816
 1.272e+005



A14DEC19A-12
 42571 15900002-1

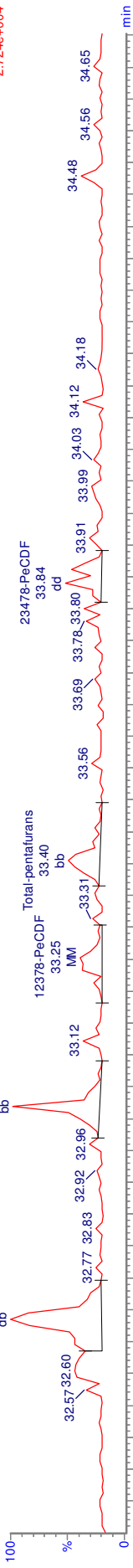
F3:Voltage SIR,El+
 391.813
 8.813e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

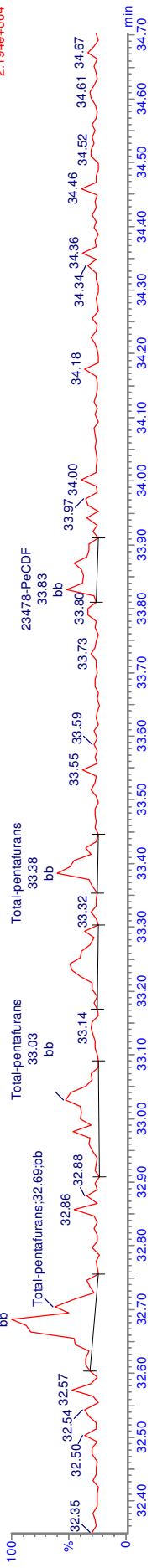
A14DEC19A-12
 42571 15900002-1

F2:Voltage SIR,EI+
 339.860
 2.724e+004



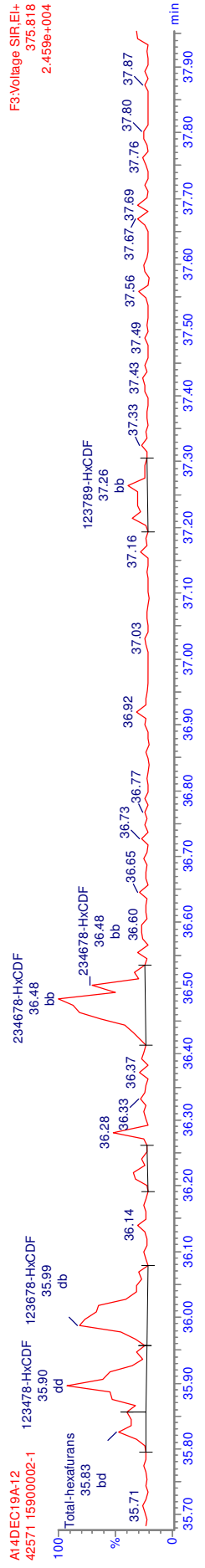
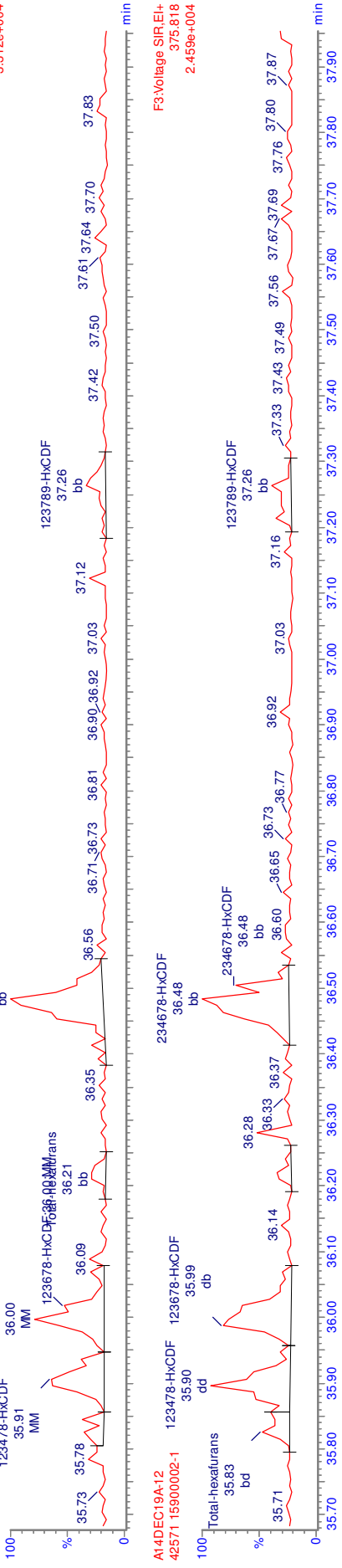
A14DEC19A-12
 42571 15900002-1

F2:Voltage SIR,EI+
 341.857
 2.194e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

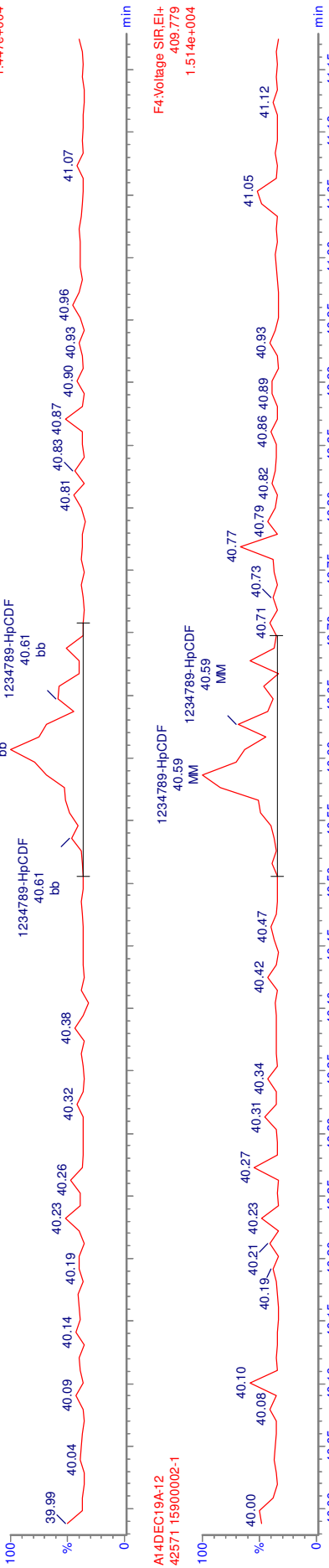
AI4DEC19A-12
 42571 15900002-1
 F3:Voltage SIR,El+
 373.821
 3.312e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

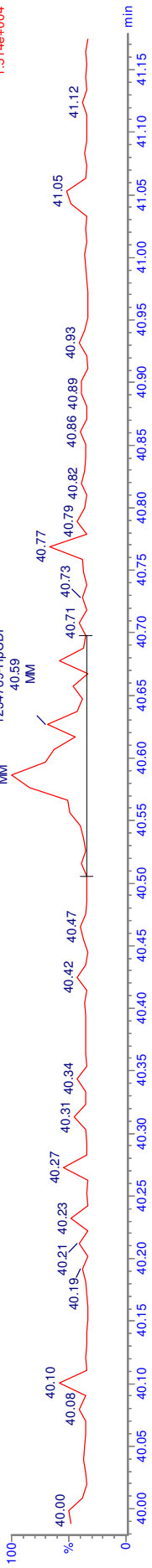
A14DEC19A-12
 42571 15900002-1

F4:Voltage SIR.EI+
 407.782
 1.447e+004



A14DEC19A-12
 42571 15900002-1

F4:Voltage SIR.EI+
 409.779
 1.514e+004



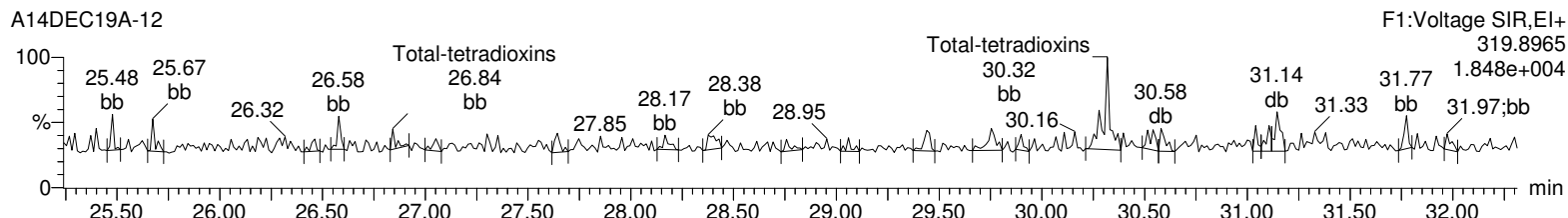
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

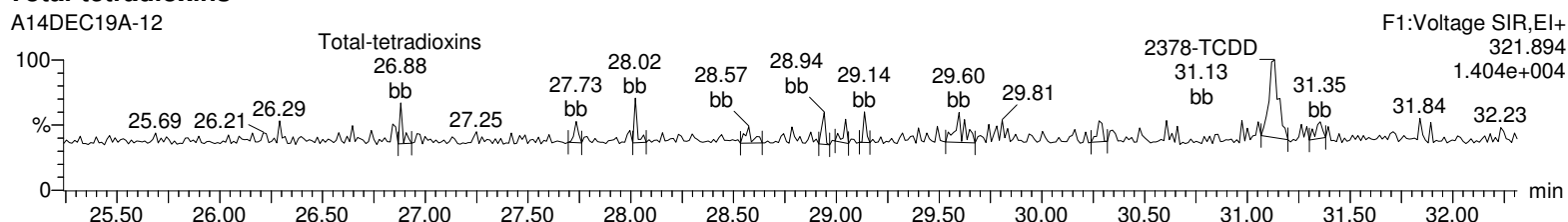
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

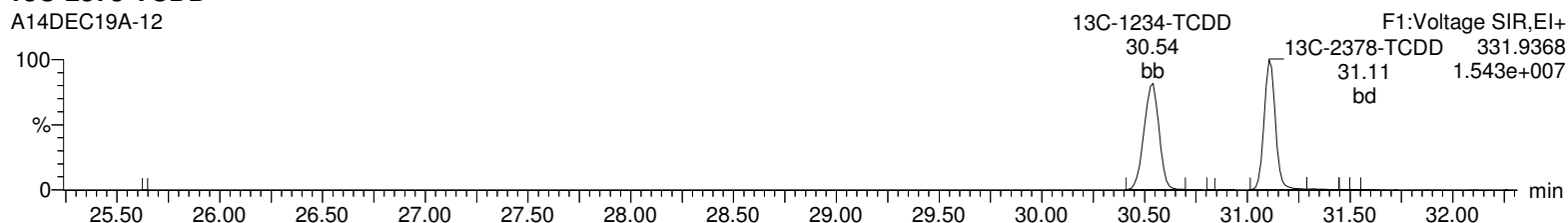
Total-tetradoxins



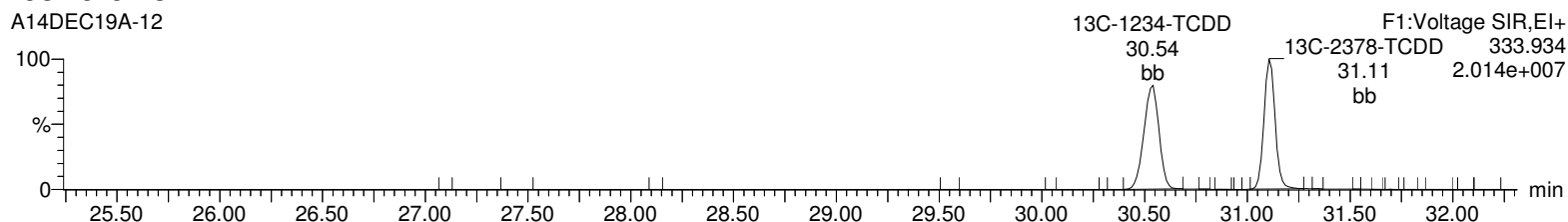
Total-tetradoxins



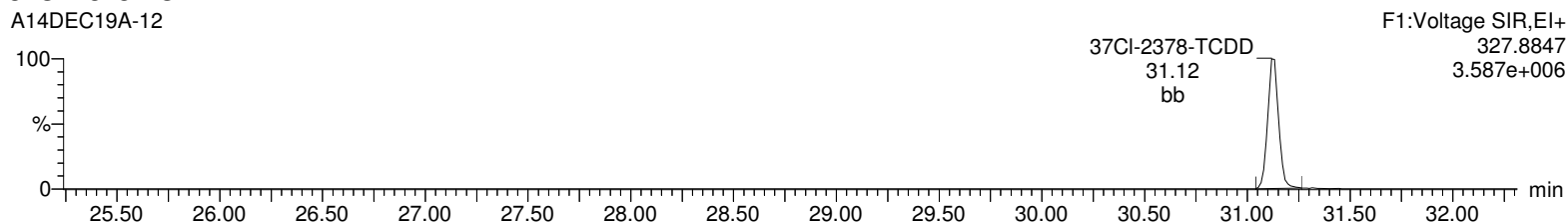
13C-2378-TCDD



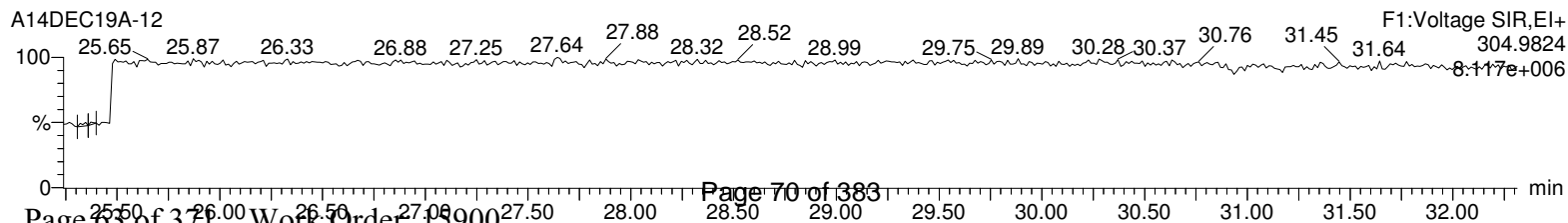
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

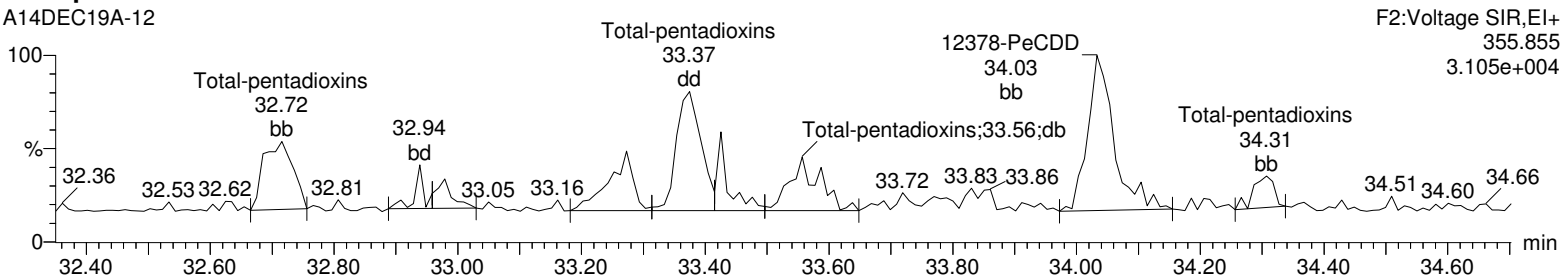
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

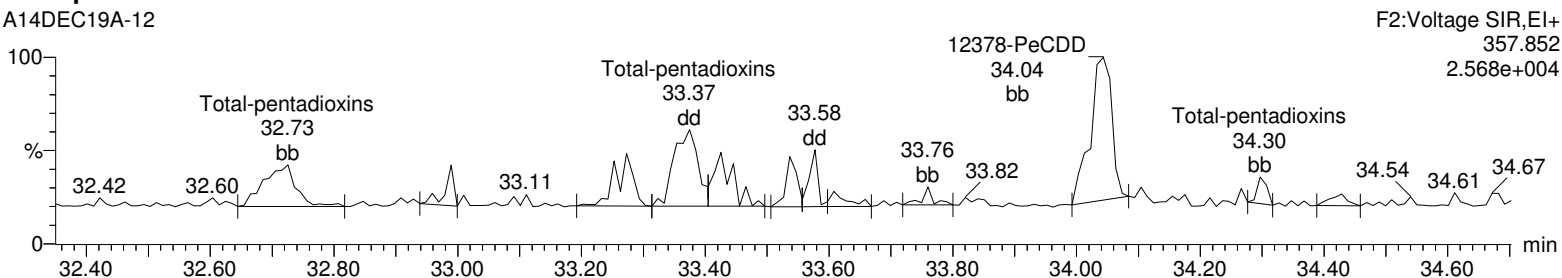
Total-pentadioxins

A14DEC19A-12



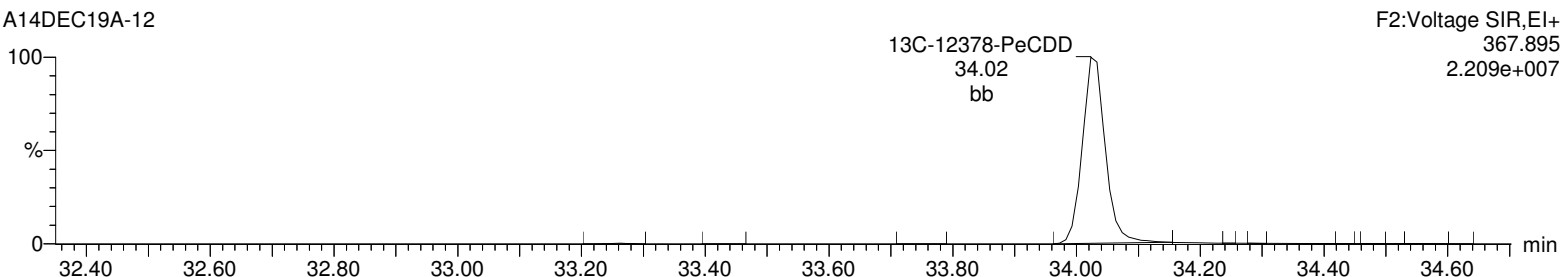
Total-pentadioxins

A14DEC19A-12



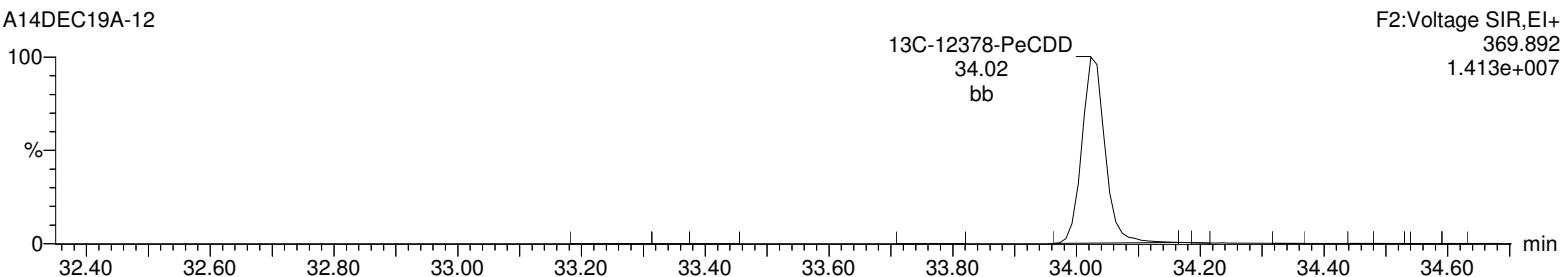
13C-12378-PeCDD

A14DEC19A-12



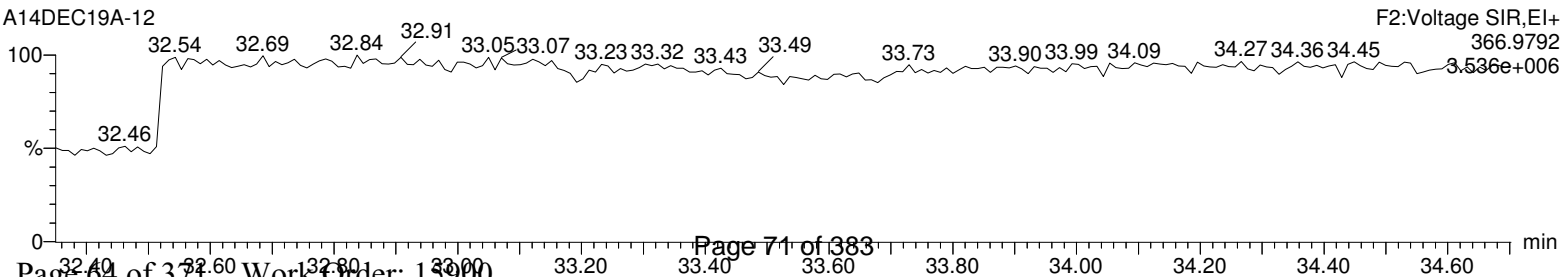
13C-12378-PeCDD

A14DEC19A-12



Lock Mass F2

A14DEC19A-12



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

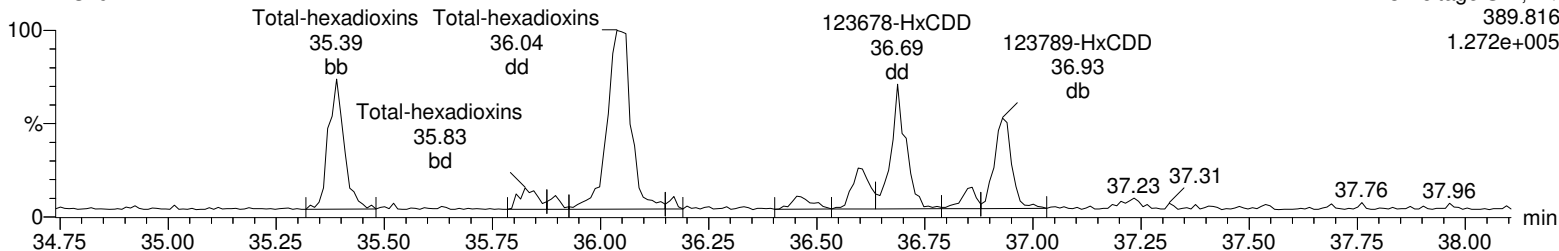
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-hexadioxins

A14DEC19A-12

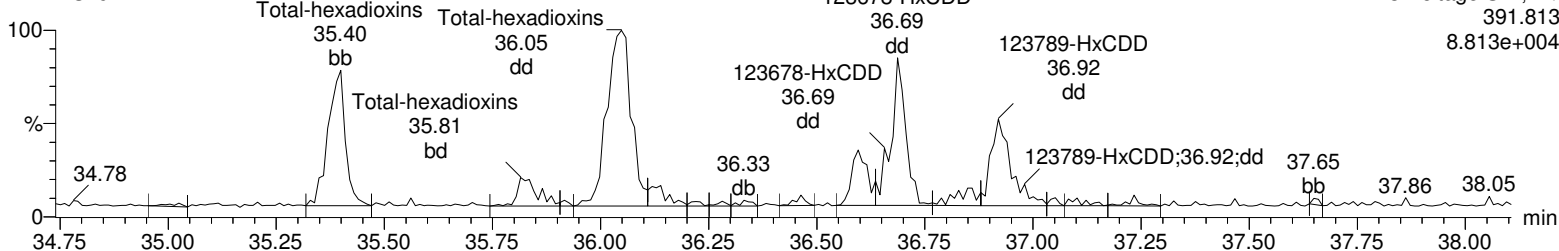
F3:Voltage SIR,EI+
389.816
1.272e+005



Total-hexadioxins

A14DEC19A-12

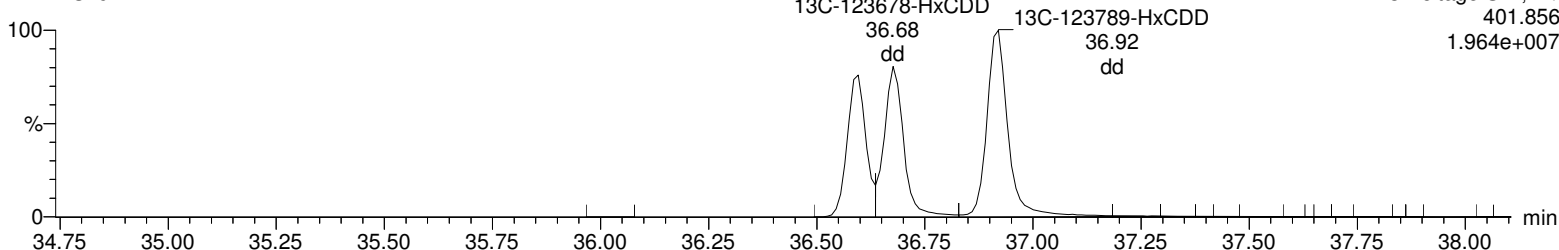
F3:Voltage SIR,EI+
391.813
8.813e+004



13C-123478-HxCDD

A14DEC19A-12

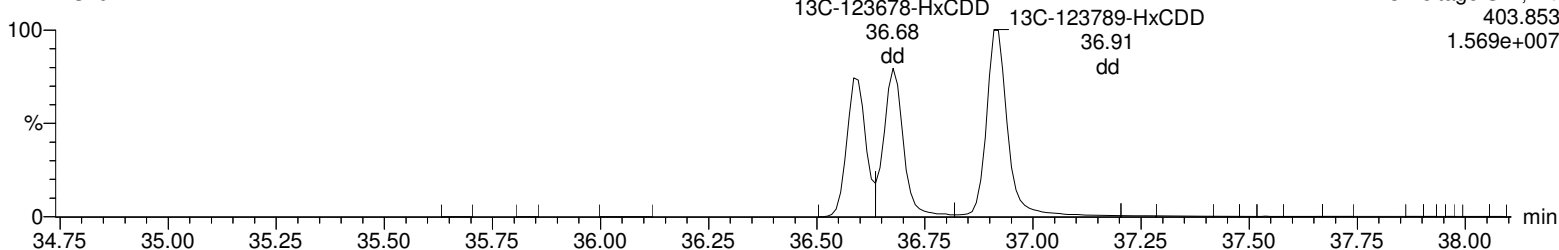
F3:Voltage SIR,EI+
401.856
1.964e+007



13C-123478-HxCDD

A14DEC19A-12

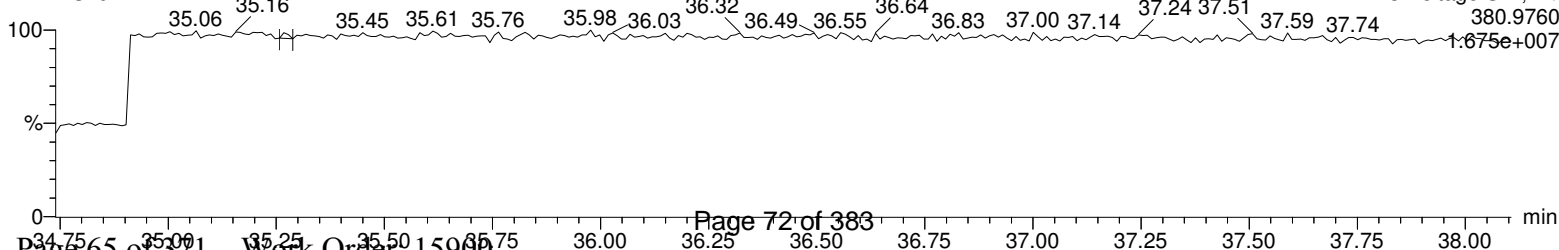
F3:Voltage SIR,EI+
403.853
1.569e+007



Lock Mass F3

A14DEC19A-12

F3:Voltage SIR,EI+
380.9760
1.675e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

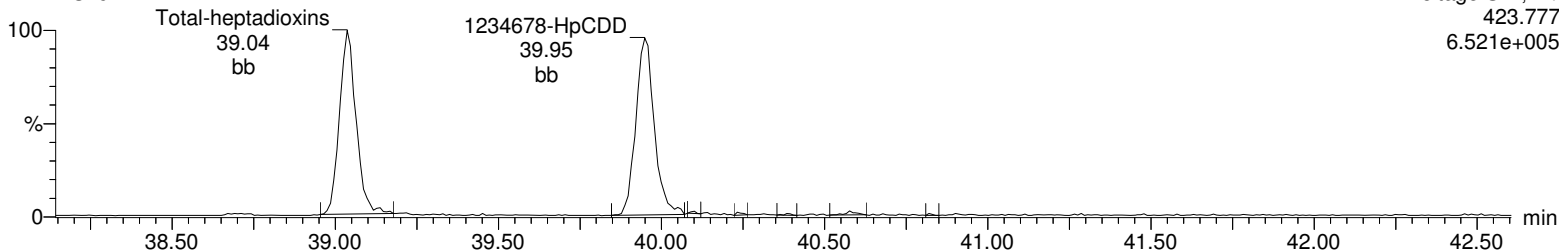
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-heptadioxins

A14DEC19A-12

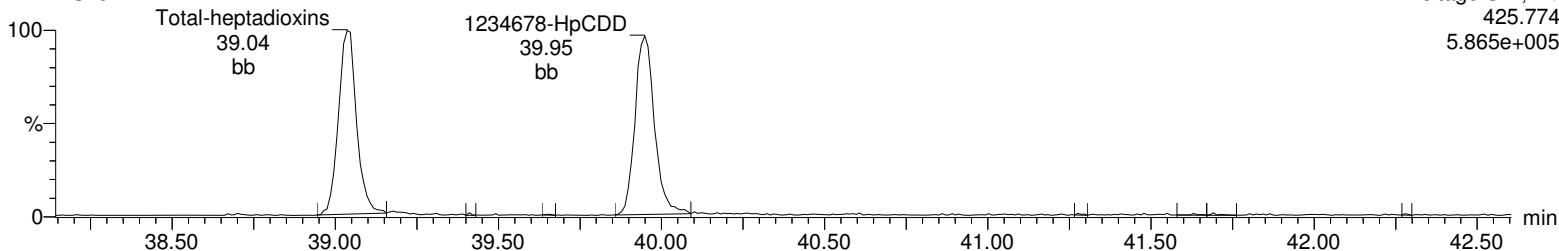
F4:Voltage SIR,EI+
423.777
6.521e+005



Total-heptadioxins

A14DEC19A-12

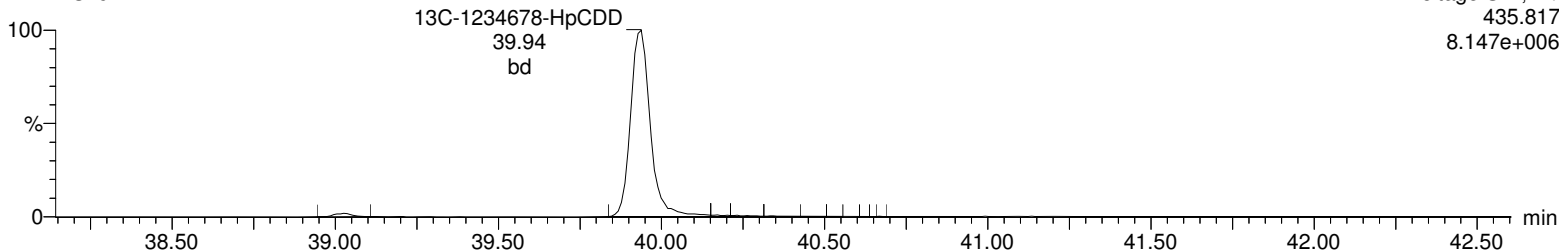
F4:Voltage SIR,EI+
425.774
5.865e+005



13C-1234678-HpCDD

A14DEC19A-12

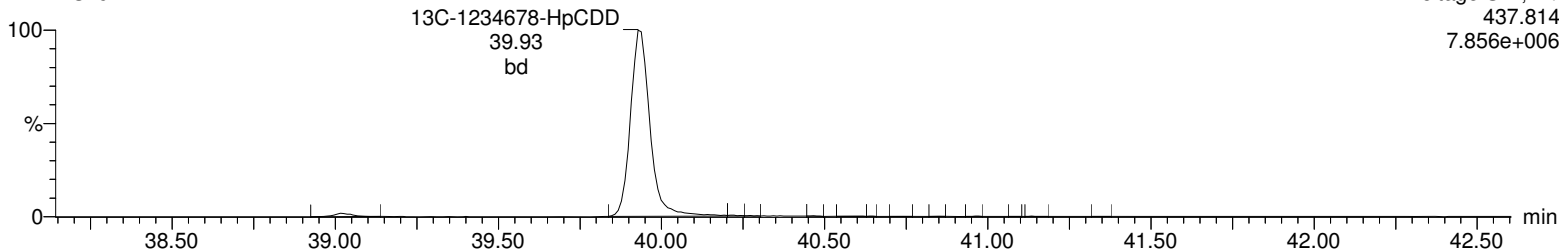
F4:Voltage SIR,EI+
435.817
8.147e+006



13C-1234678-HpCDD

A14DEC19A-12

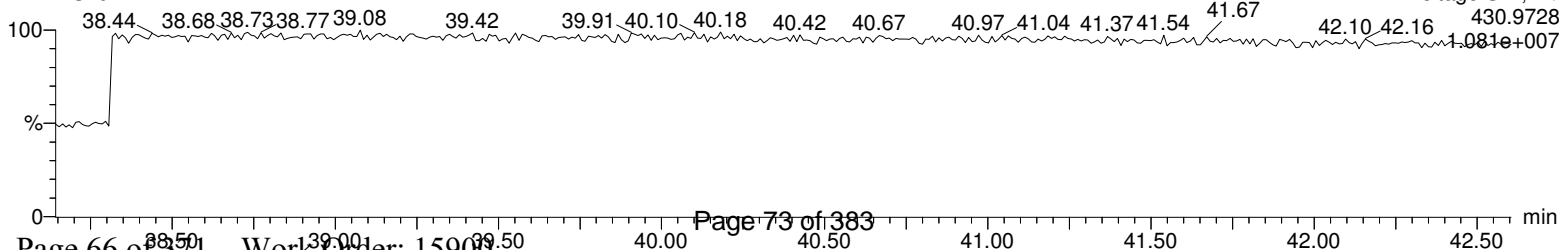
F4:Voltage SIR,EI+
437.814
7.856e+006



Lock Mass F4

A14DEC19A-12

F4:Voltage SIR,EI+
430.9728
1.081e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

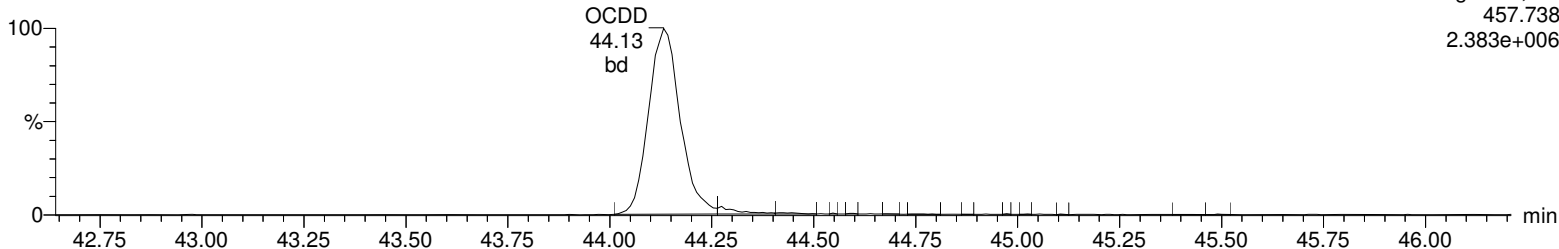
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDD

A14DEC19A-12

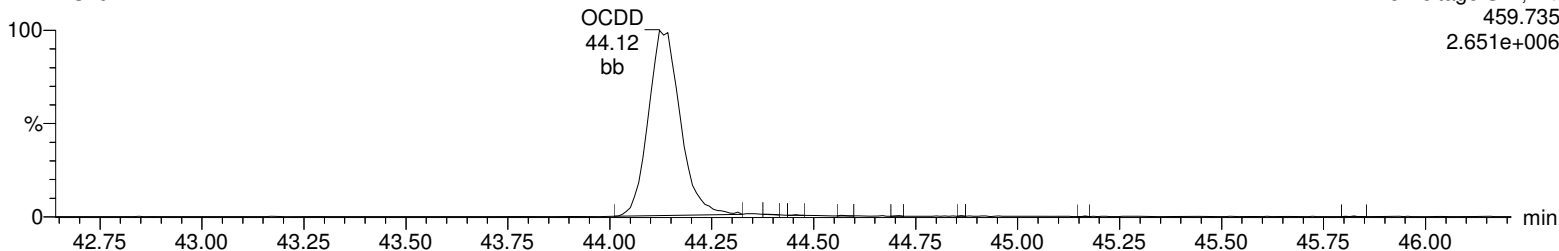
F5:Voltage SIR,EI+
457.738
2.383e+006



OCDD

A14DEC19A-12

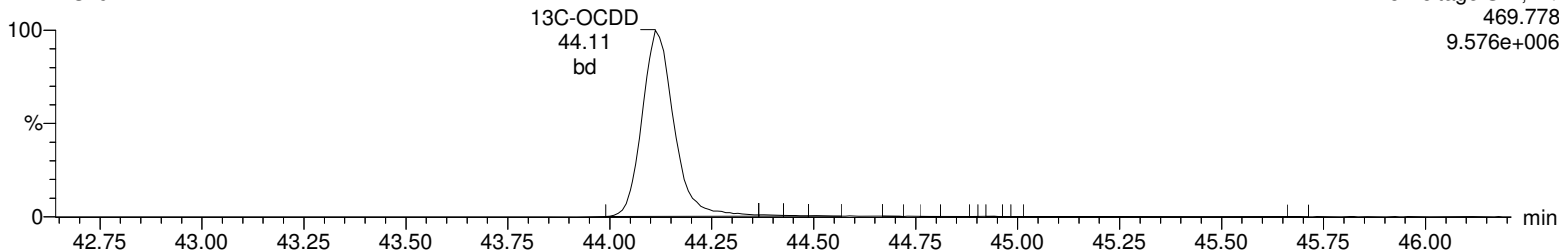
F5:Voltage SIR,EI+
459.735
2.651e+006



13C-OCDD

A14DEC19A-12

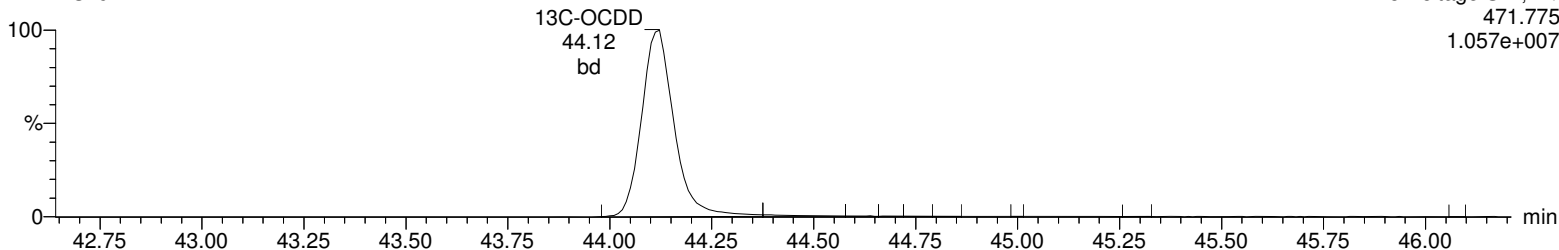
F5:Voltage SIR,EI+
469.778
9.576e+006



13C-OCDD

A14DEC19A-12

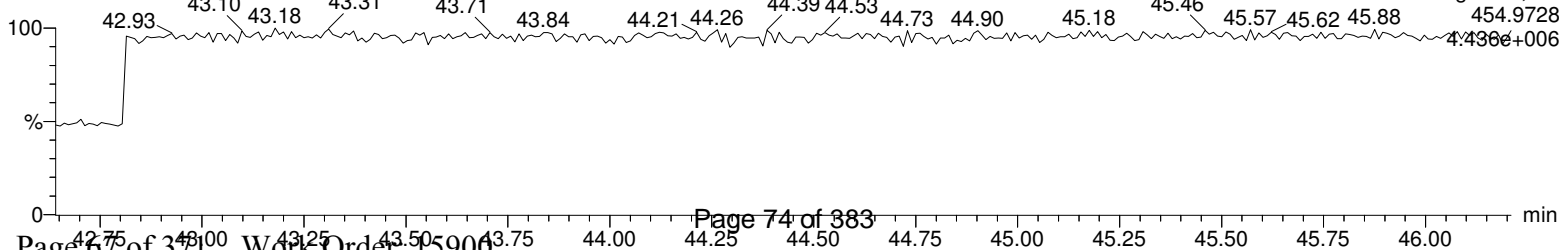
F5:Voltage SIR,EI+
471.775
1.057e+007



Lock Mass F5

A14DEC19A-12

F5:Voltage SIR,EI+
454.9728
4.436e+006



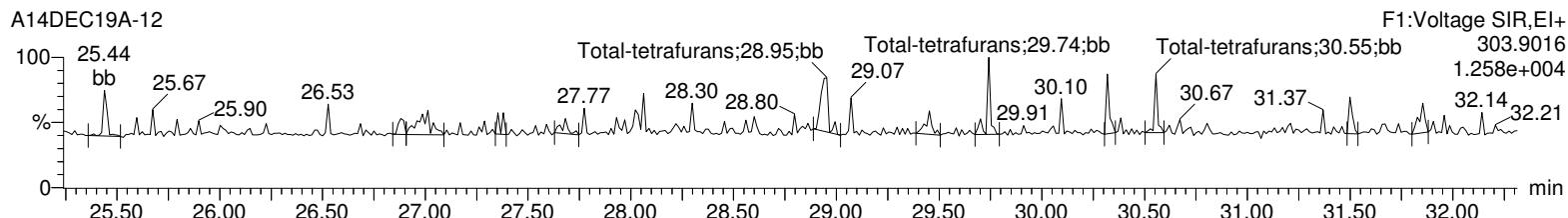
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

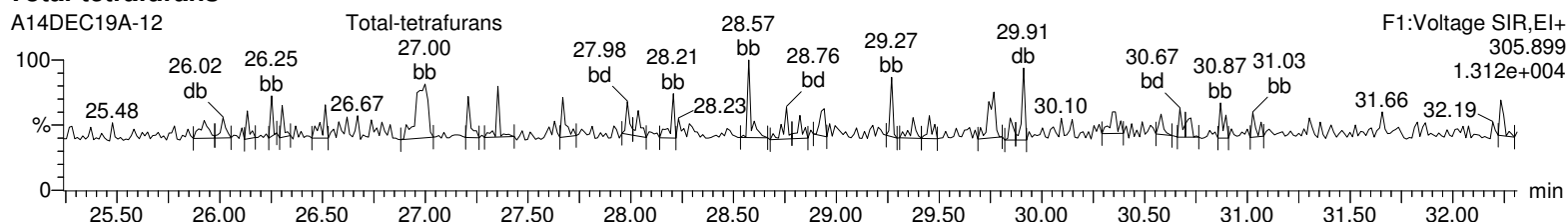
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

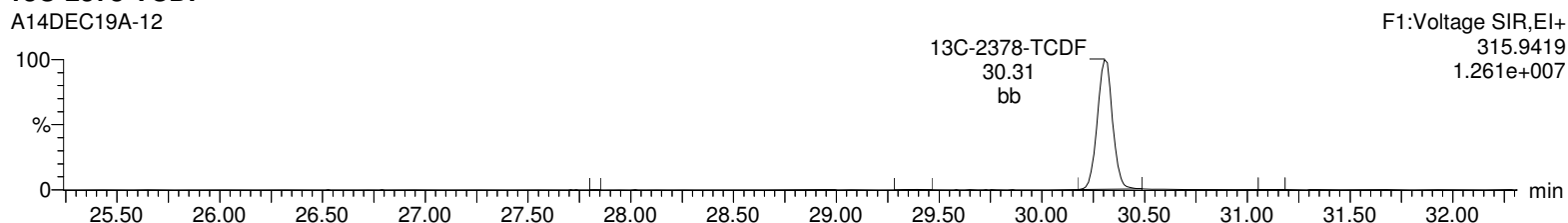
Total-tetrafurans



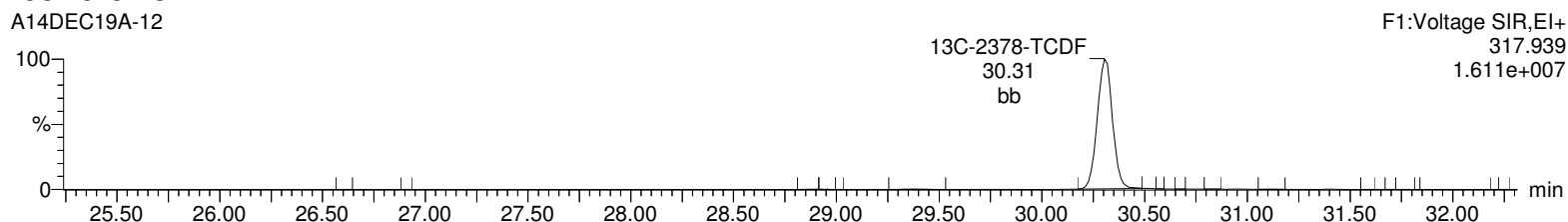
Total-tetrafurans



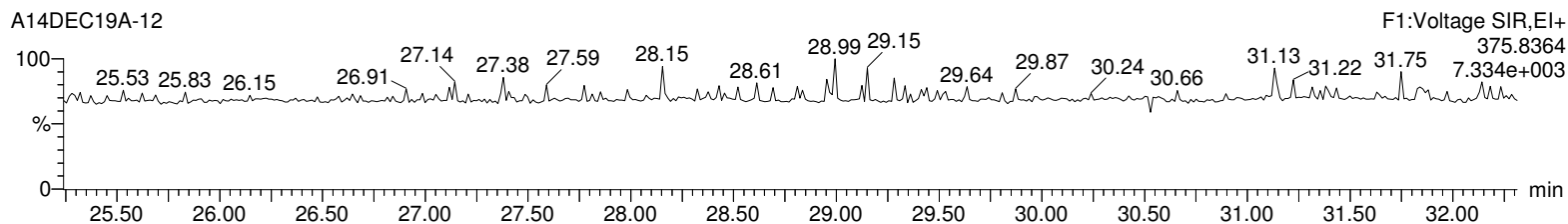
13C-2378-TCDF



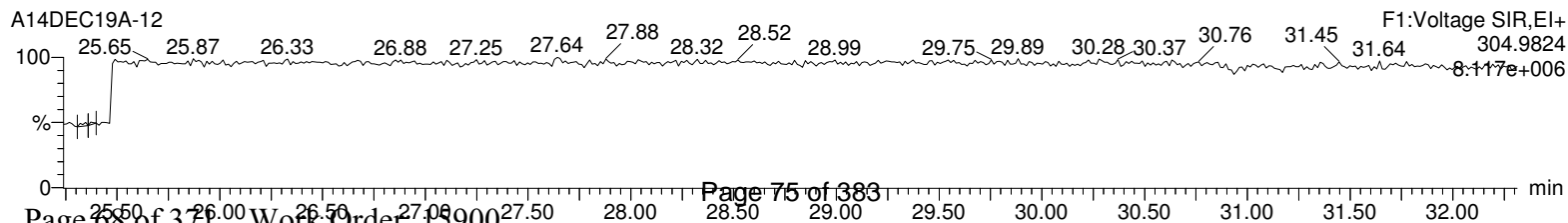
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

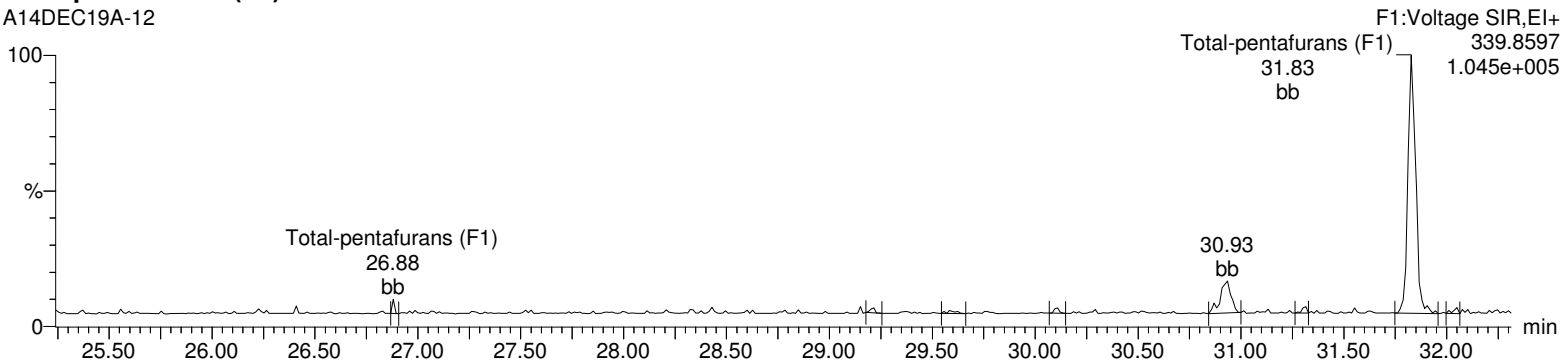
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

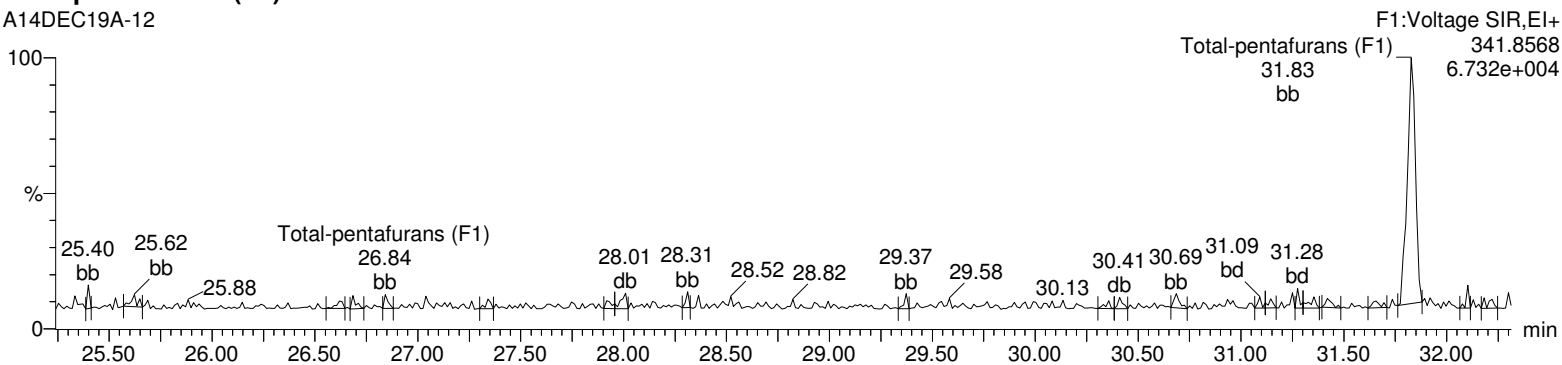
Total-pentafurans (F1)

A14DEC19A-12



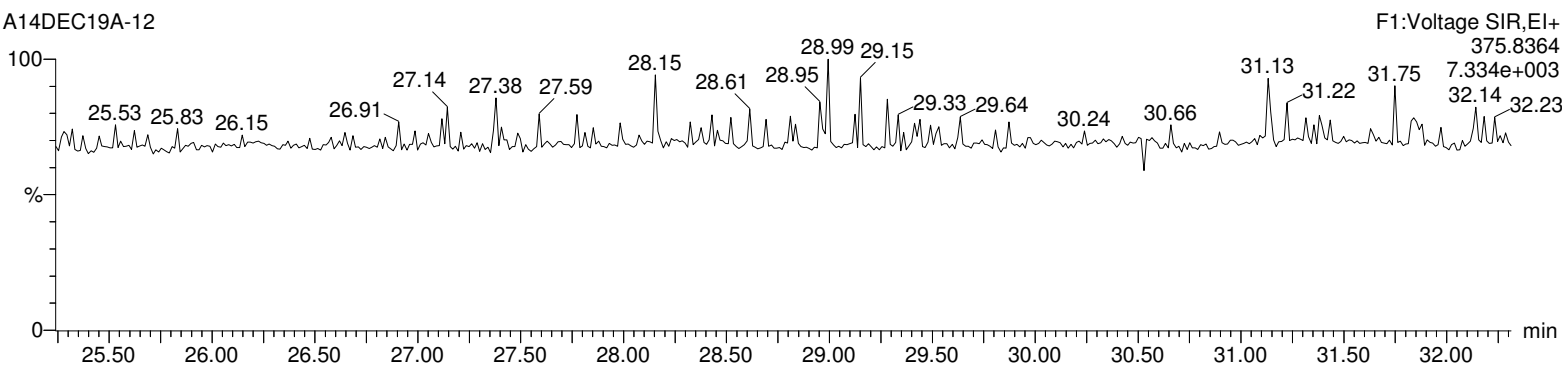
Total-pentafurans (F1)

A14DEC19A-12



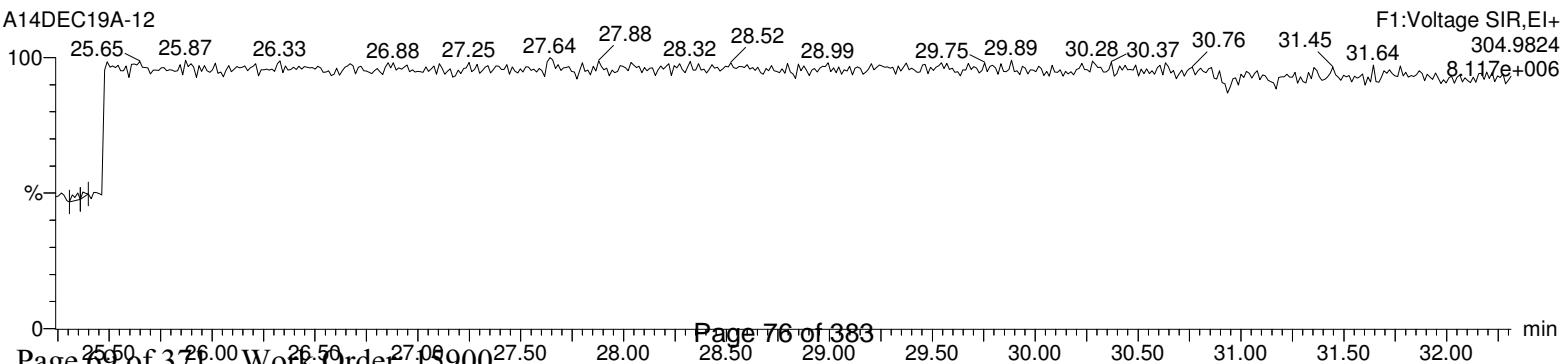
HxDPE

A14DEC19A-12



Lock Mass F1

A14DEC19A-12



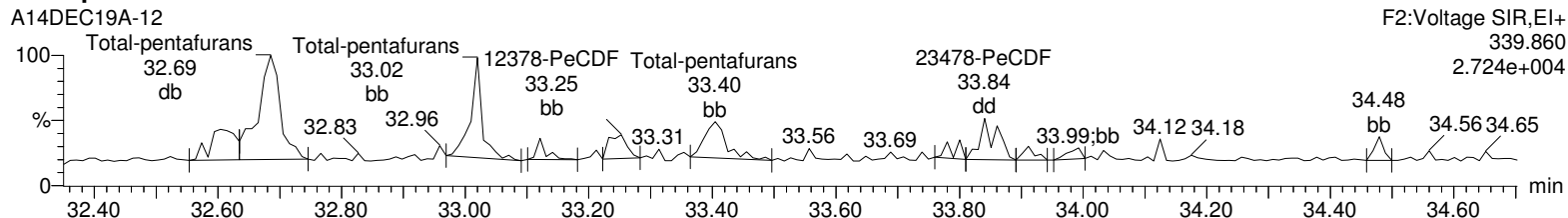
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

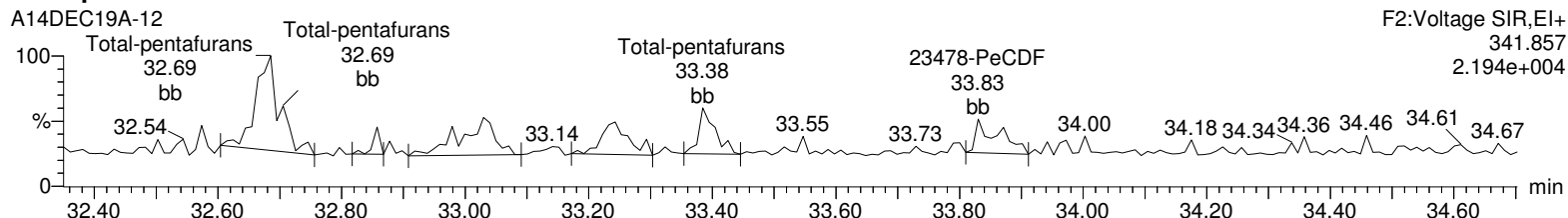
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

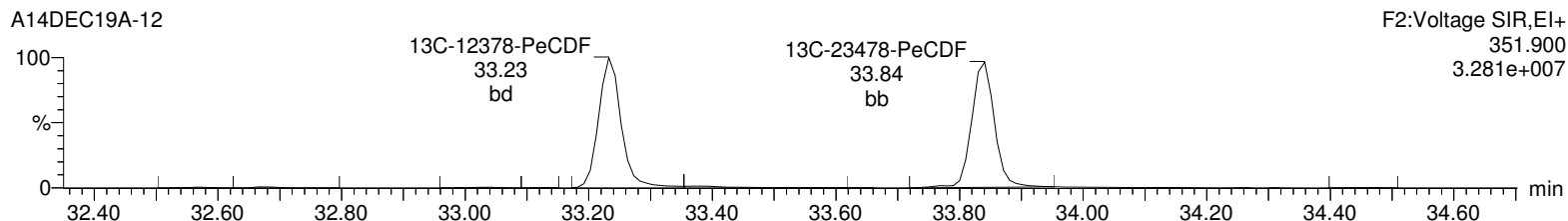
Total-pentafurans



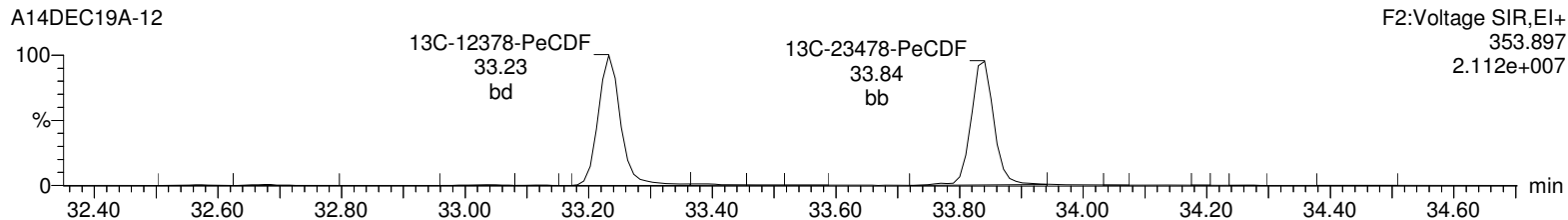
Total-pentafurans



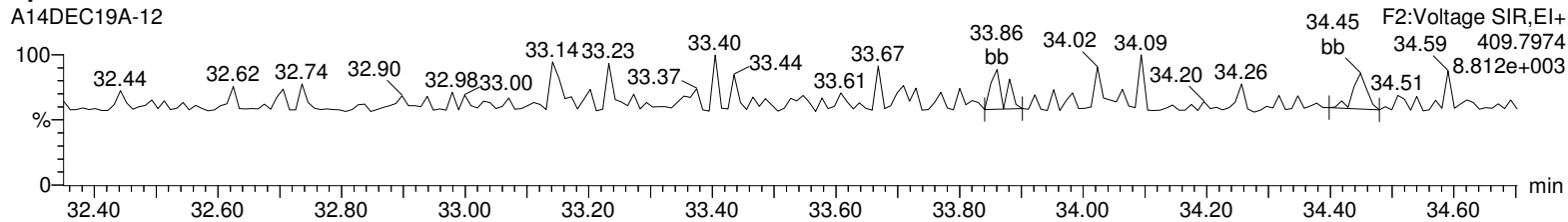
13C-12378-PeCDF



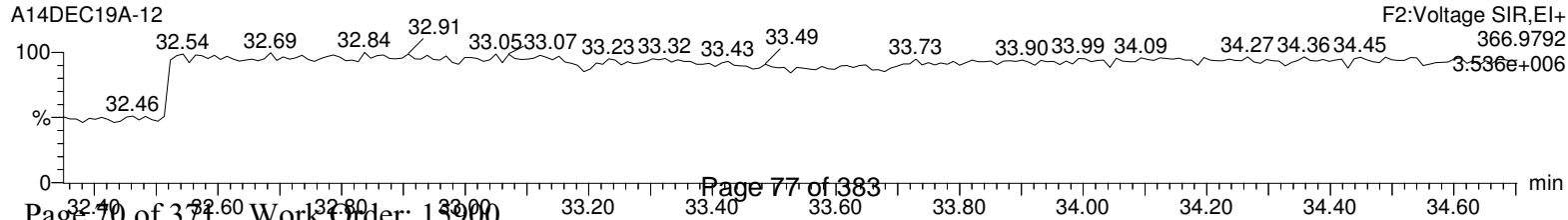
13C-12378-PeCDF



HpDPE



Lock Mass F2



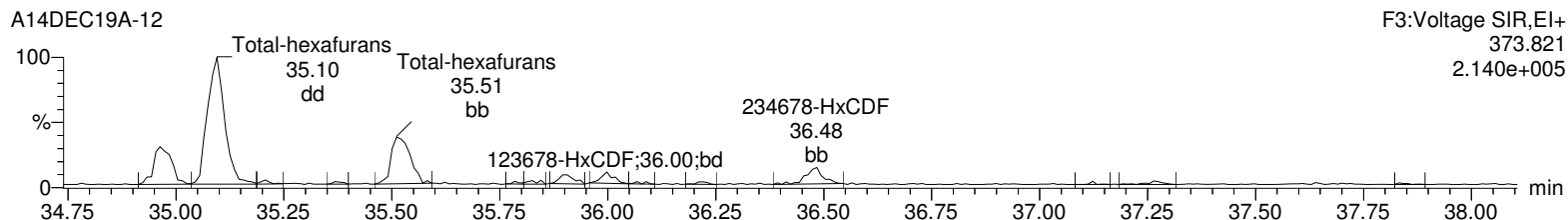
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

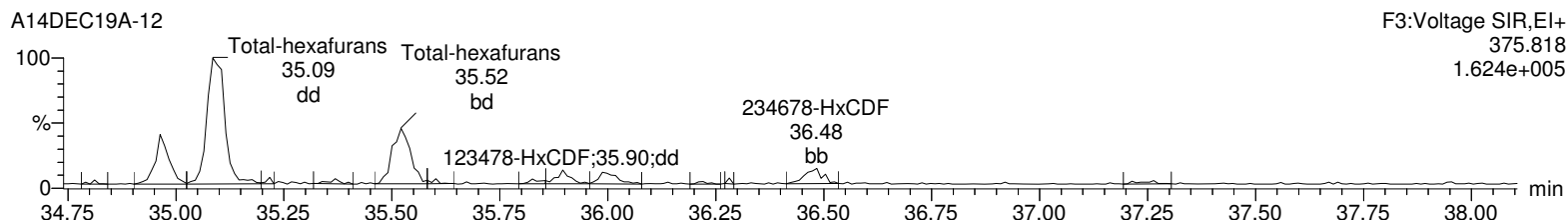
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

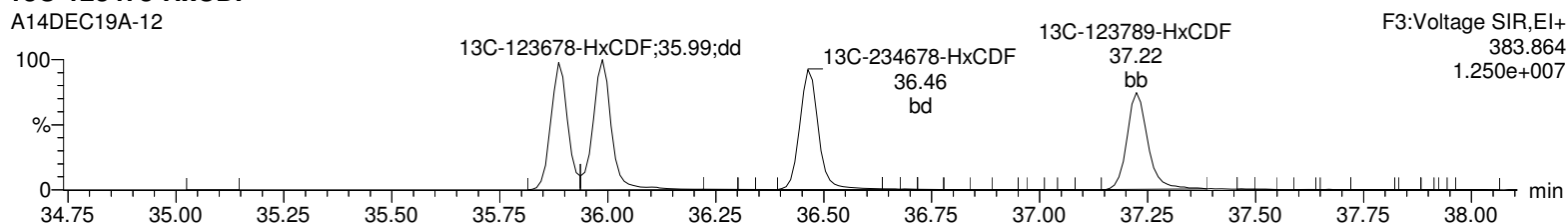
Total-hexafurans



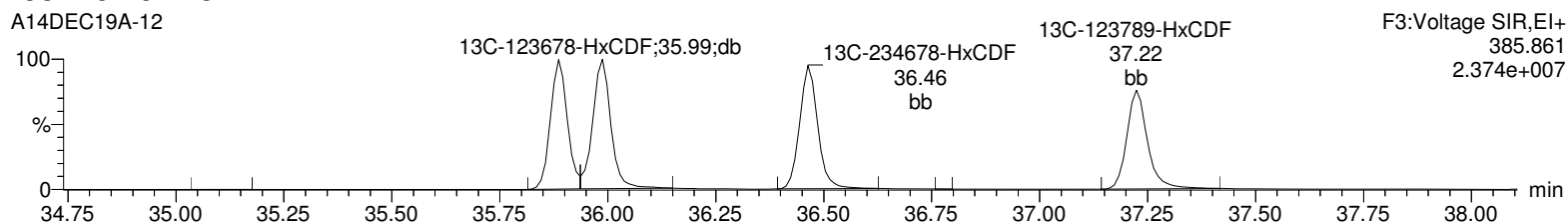
Total-hexafurans



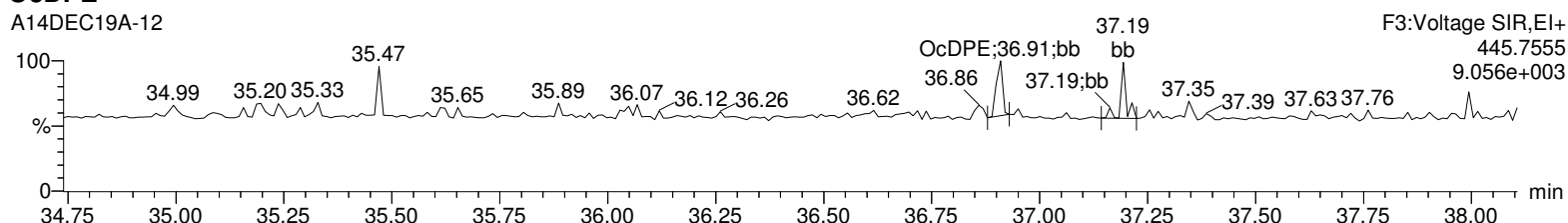
13C-123478-HxCDF



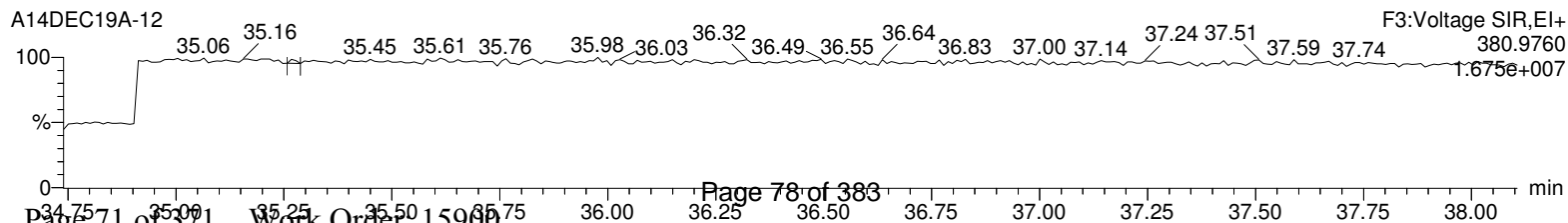
13C-123478-HxCDF



OcDPE



Lock Mass F3



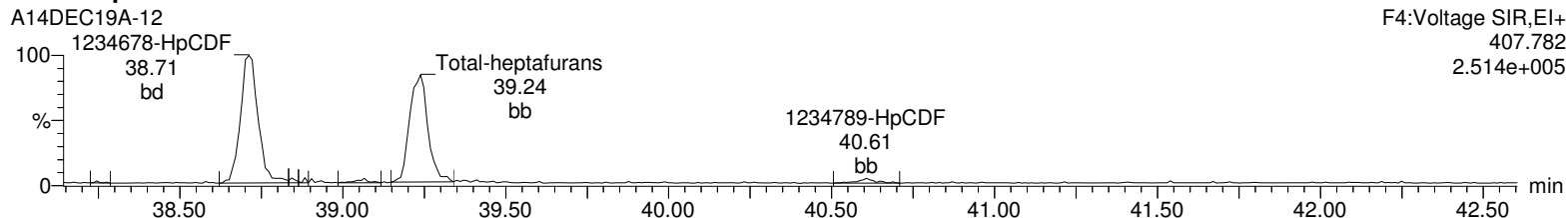
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

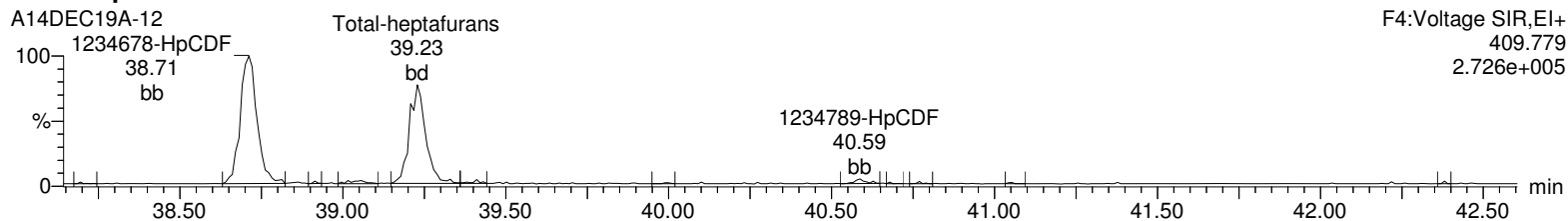
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

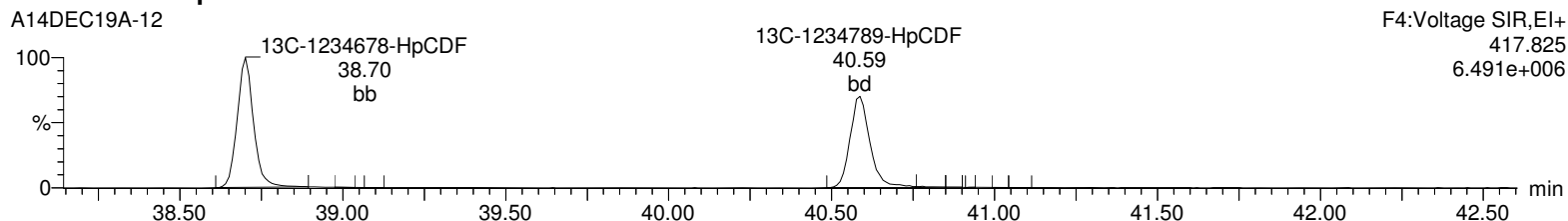
Total-heptafurans



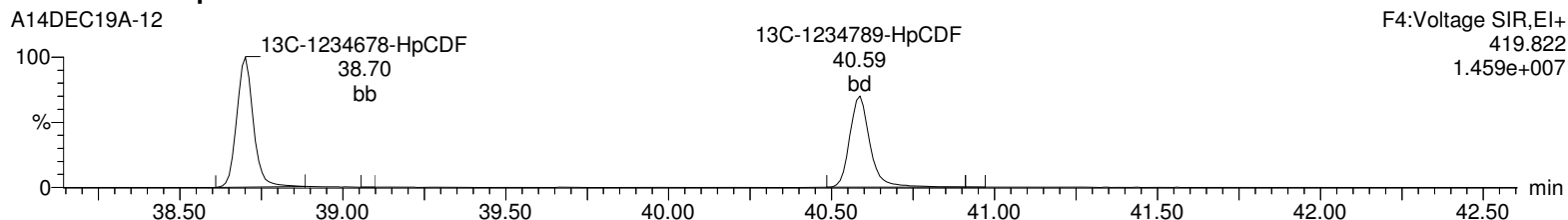
Total-heptafurans



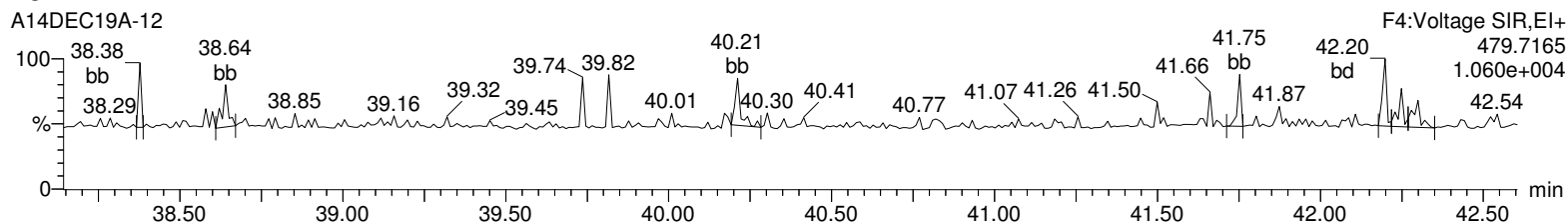
13C-1234678-HpCDF



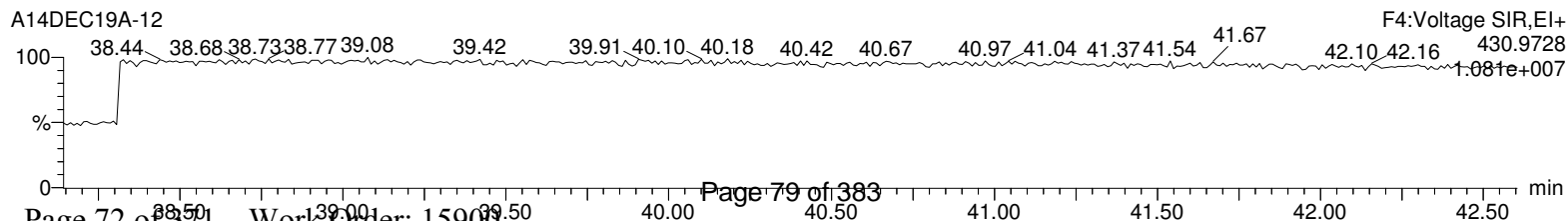
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

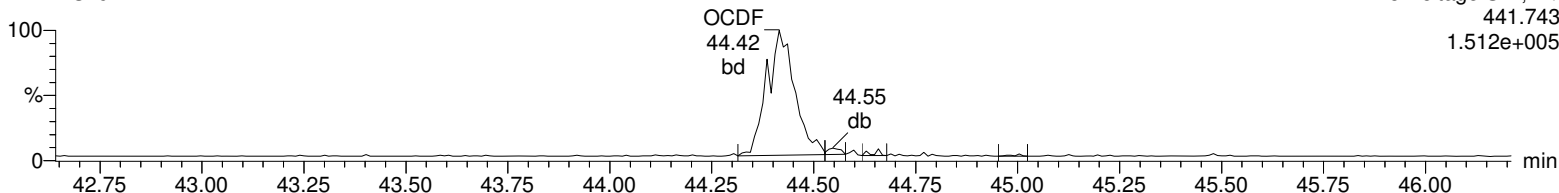
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-12, Date: 14-Dec-2019, Time: 20:16:30, ID: 15900002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDF

A14DEC19A-12

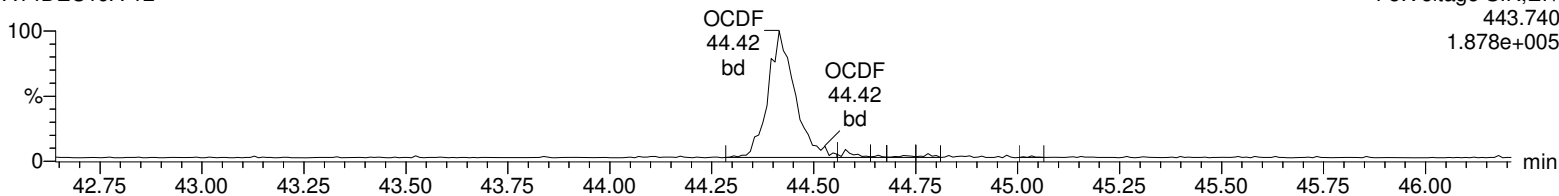
F5:Voltage SIR,EI+
441.743
1.512e+005



OCDF

A14DEC19A-12

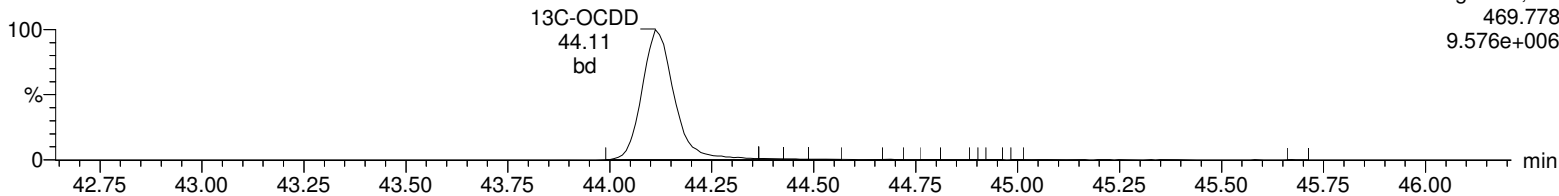
F5:Voltage SIR,EI+
443.740
1.878e+005



13C-OCDD

A14DEC19A-12

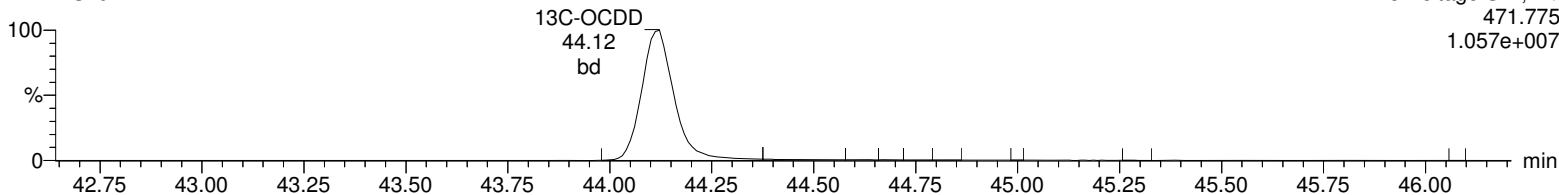
F5:Voltage SIR,EI+
469.778
9.576e+006



13C-OCDD

A14DEC19A-12

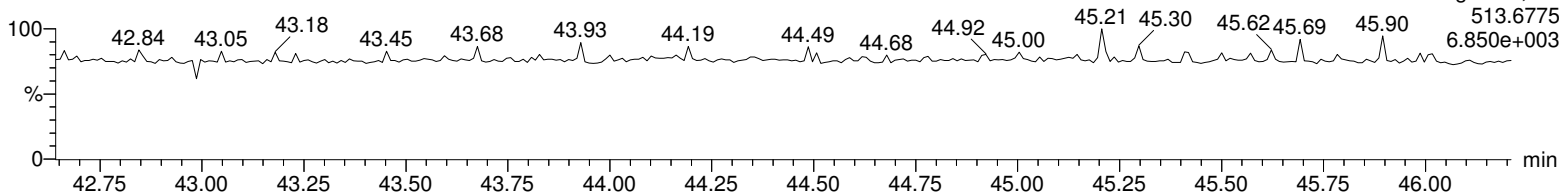
F5:Voltage SIR,EI+
471.775
1.057e+007



DeDPE

A14DEC19A-12

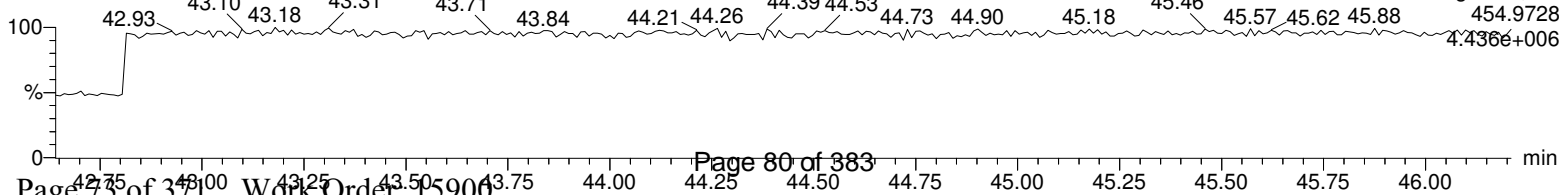
F5:Voltage SIR,EI+
513.6775
6.850e+003



Lock Mass F5

A14DEC19A-12

F5:Voltage SIR,EI+
454.9728
4.436e+006



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 15900003	Date Collected: 11/27/2019 07:15	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: FBQW1869Q001		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 21:04	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-13		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 972.7 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00053	ng/L	0.00053	0.0103
40321-76-4	1,2,3,7,8-PeCDD	U	0.000572	ng/L	0.000572	0.0514
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00081	ng/L	0.00081	0.0514
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.000765	ng/L	0.000765	0.0514
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.0008	ng/L	0.0008	0.0514
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.000629	ng/L	0.000629	0.0514
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJK	0.00158	ng/L	0.000948	0.103
51207-31-9	2,3,7,8-TCDF	U	0.000475	ng/L	0.000475	0.0103
57117-41-6	1,2,3,7,8-PeCDF	U	0.000409	ng/L	0.000409	0.0514
57117-31-4	2,3,4,7,8-PeCDF	U	0.000409	ng/L	0.000409	0.0514
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000317	ng/L	0.000317	0.0514
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000335	ng/L	0.000335	0.0514
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000302	ng/L	0.000302	0.0514
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000405	ng/L	0.000405	0.0514
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.000405	ng/L	0.000405	0.0514
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000518	ng/L	0.000518	0.0514
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.000567	ng/L	0.000567	0.103
41903-57-5	Total TeCDD	U	0.00053	ng/L	0.00053	0.0103
36088-22-9	Total PeCDD	U	0.000572	ng/L	0.000572	0.0514
34465-46-8	Total HxCDD	JK	0.00202	ng/L	0.000765	0.0514
37871-00-4	Total HpCDD	U	0.000629	ng/L	0.000629	0.0514
30402-14-3	Total TeCDF	U	0.000475	ng/L	0.000475	0.0103
30402-15-4	Total PeCDF	U	0.000269	ng/L	0.000269	0.0514
55684-94-1	Total HxCDF	U	0.000302	ng/L	0.000302	0.0514
38998-75-3	Total HpCDF	U	0.000405	ng/L	0.000405	0.0514
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		4.75E-07	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.000837	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.85	2.06	ng/L	90.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.86	2.06	ng/L	90.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.65	2.06	ng/L	80.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.64	2.06	ng/L	79.8	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.83	2.06	ng/L	89.0	(23%-140%)
13C-OCDD		3.15	4.11	ng/L	76.6	(17%-157%)
13C-2,3,7,8-TCDF		1.87	2.06	ng/L	91.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		2.08	2.06	ng/L	101	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.85	2.06	ng/L	89.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.60	2.06	ng/L	77.8	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.58	2.06	ng/L	77.0	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.69	2.06	ng/L	82.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.76	2.06	ng/L	85.4	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 15900003	Date Collected: 11/27/2019 07:15	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: FBQW1869Q001		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 21:04	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-13		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 972.7 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.56	2.06	ng/L	76.0 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.74	2.06	ng/L	84.5 (26%-138%)
37Cl-2,3,7,8-TCDD			0.199	0.206	ng/L	96.7 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report **MassLynx 4.1**

Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:31:33 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:32:28 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-13, **Date:** 14-Dec-2019, **Time:** 21:04:43, **ID:** 15900003-1, **Description:** 42571, **Job:** HMS1613_1L, **Task:** HRP750_2, **User:** MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	9.31e1	1.85e2	2.78e2	31.15	1.001	0.50	YES	0.013	0.0258	2.72e3	2179	1.2	4.30e3	1296	3.3	db	dd
2	12378-PeCDD							NO	0.0278			1880			1402			
3	123478-HxCDD							NO	0.0394			2101			1918			
4	123678-HxCDD							NO	0.0372			2101			1918			
5	123789-HxCDD							NO	0.0389			2101			1918			
6	1234678-HpCDD	1.94e2	5.29e1	2.47e2	39.96	1.001	3.67	YES	0.021	0.0306	8.62e3	1294	6.7	2.33e3	887	2.6	bb	db
7	OCDD	2.63e2	4.31e2	6.94e2	44.13	1.000	0.61	YES	0.077	0.0461	6.66e3	947	7.0	5.67e3	906	6.3	MM	MM
8	2378-TCDF	1.22e2	9.07e1	2.12e2	30.36	1.002	1.34	YES	0.008	0.0231	7.96e3	1153	6.9	2.48e3	1590	1.6	bb	db
9	12378-PeCDF	1.34e2	1.43e2	2.77e2	33.24	1.000	0.94	YES	0.013	0.0199	5.34e3	2096	2.5	2.98e3	2178	1.4	bb	bb
10	23478-PeCDF							NO	0.0199			2096			2178			
11	123478-HxCDF							NO	0.0154			1237			1096			
12	123678-HxCDF							NO	0.0163			1237			1096			
13	234678-HxCDF							NO	0.0147			1237			1096			
14	123789-HxCDF							NO	0.0197			1237			1096			
15	1234678-HpCDF							NO	0.0197			836			1065			
16	1234789-HpCDF							NO	0.0252			836			1065			
17	OCDF							NO	0.0276			412			880			
18	13C-2378-TCDD	1.02e6	1.32e6	2.33e6	31.11	1.018	0.77	NO	90.012	0.0857	1.66e7	6000	2762.6	2.12e7	4229	5015.0	bb	bb
19	13C-12378-PeCDD	9.46e5	6.10e5	1.56e6	34.03	1.114	1.55	NO	90.229	0.138	2.10e7	5392	3898.4	1.36e7	5609	2426.0	bb	bb
20	13C-123478-HxCDD	7.62e5	6.04e5	1.37e6	36.60	0.991	1.26	NO	80.391	0.108	1.51e7	8171	1852.0	1.19e7	4319	2751.0	bd	bd
21	13C-123678-HxCDD	8.23e5	6.67e5	1.49e6	36.68	0.993	1.23	NO	79.756	0.0981	1.58e7	8171	1932.3	1.28e7	4319	2965.8	dd	dd
22	13C-1234678-HpCDD	5.76e5	5.57e5	1.13e6	39.94	1.082	1.03	NO	89.041	0.166	8.73e6	7075	1233.4	8.18e6	7298	1120.2	bb	bb
23	13C-OCDD	8.81e5	9.83e5	1.86e6	44.12	1.195	0.90	NO	153.143	0.178	9.78e6	6911	1414.7	1.08e7	7804	1384.8	bd	bd
24	13C-2378-TCDF	1.15e6	1.47e6	2.61e6	30.31	0.992	0.78	NO	91.083	0.109	1.33e7	7591	1753.1	1.67e7	6873	2430.8	bb	bb
25	13C-12378-PeCDF	1.43e6	9.15e5	2.35e6	33.23	1.088	1.56	NO	101.166	0.337	3.47e7	24076	1441.2	2.20e7	11998	1829.6	bd	bd
26	13C-23478-PeCDF	1.34e6	8.54e5	2.20e6	33.84	1.108	1.57	NO	89.947	0.321	3.33e7	24076	1381.3	2.10e7	11998	1748.3	bb	bb
27	13C-123478-HxCDF	5.56e5	1.08e6	1.64e6	35.89	0.972	0.51	NO	77.802	0.168	1.18e7	11254	1048.7	2.30e7	12892	1780.7	bd	bd
28	13C-123678-HxCDF	6.25e5	1.19e6	1.82e6	35.99	0.975	0.52	NO	76.977	0.150	1.18e7	11254	1048.7	2.26e7	12892	1755.2	db	dd
29	13C-234678-HxCDF	5.80e5	1.10e6	1.68e6	36.46	0.988	0.53	NO	82.071	0.173	1.21e7	11254	1072.3	2.25e7	12892	1743.0	bb	bb
30	13C-123789-HxCDF	5.22e5	1.04e6	1.56e6	37.22	1.008	0.50	NO	85.365	0.193	9.28e6	11254	824.8	1.81e7	12892	1403.2	bb	bd

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:31:33 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:32:28 Eastern Standard Time

Name: A14DEC19A-13, Date: 14-Dec-2019, Time: 21:04:43, ID: 15900003-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.90e5	8.63e5	1.25e6	38.70	1.048	0.45	NO	76.001	0.142	6.52e6	6051	1077.3	1.45e7	9887	1464.5	bb	bb
32	13C-1234789-HpCDF	3.33e5	7.52e5	1.09e6	40.59	1.099	0.44	NO	84.521	0.182	4.82e6	6051	796.9	1.03e7	9887	1043.5	bb	bd
33	13C-1234-TCDD	1.00e6	1.29e6	2.30e6	30.54	0.000	0.78	NO	100.000	0.0967	1.16e7	6000	1925.4	1.48e7	4229	3495.7	bb	bb
34	13C-123789-HxCDD	1.05e6	8.50e5	1.90e6	36.92	0.000	1.23	NO	100.000	0.0967	1.78e7	8171	2179.1	1.42e7	4319	3276.1	dd	dd
35	37Cl+2378-TCDD	2.35e5		2.35e5	31.12	1.019			9.666	0.0181	3.71e6	2032	1827.7				bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:31:33 Eastern Standard Time
Printed: Monday, December 16, 2019 17:32:28 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-13, Date: 14-Dec-2019, Time: 21:04:43, ID: 15900003-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraoxins	7.69e1	1.29e2	2.06e2	29.19	0.60	YES	0.010	0.0258	4.29e3	2179	2.0	3.00e3	1296	2.3	bb	bb
2	Total-tetraoxins	6.27e1	8.73e1	1.50e2	28.81	0.72	NO	0.007	0.0258	1.91e3	2179	0.9	2.51e3	1296	1.9	bb	bd
3	Total-tetraoxins	1.60e2	5.82e1	2.19e2	28.63	2.75	YES	0.011	0.0258	4.87e3	2179	2.2	1.82e3	1296	1.4	bb	bb
4	Total-tetraoxins	6.46e1	1.14e2	1.79e2	28.17	0.57	YES	0.009	0.0258	3.83e3	2179	1.8	4.18e3	1296	3.2	bb	bb
5	Total-tetraoxins	5.23e1	1.53e2	2.05e2	27.30	0.34	YES	0.010	0.0258	1.36e3	2179	0.6	1.94e3	1296	1.5	bb	db
6	Total-tetraoxins	7.56e1	6.36e1	1.39e2	26.67	1.19	YES	0.007	0.0258	4.25e3	2179	2.0	2.51e3	1296	1.9	bb	bb
7	Total-tetraoxins	9.67e1	1.16e2	2.13e2	32.18	0.83	NO	0.010	0.0258	3.28e3	2179	1.5	1.36e3	1296	1.0	bd	bb
8	2378-TCDD	9.31e1	1.85e2	2.78e2	31.15	0.50	YES	0.013	0.0258	2.72e3	2179	1.2	4.30e3	1296	3.3	db	dd
9	Total-tetraoxins	6.41e1	8.05e1	1.45e2	31.04	0.80	NO	0.007	0.0258	2.10e3	2179	1.0	2.63e3	1296	2.0	bd	bd
10	Total-tetraoxins	1.11e2	7.76e1	1.89e2	30.91	1.43	YES	0.009	0.0258	3.96e3	2179	1.8	3.19e3	1296	2.5	db	bb
11	Total-tetraoxins	4.98e2	1.17e2	6.15e2	30.32	4.25	YES	0.030	0.0258	7.81e3	2179	3.6	3.06e3	1296	2.4	db	db
12	Total-tetraoxins	1.14e2	6.83e1	1.83e2	30.23	1.67	YES	0.009	0.0258	3.94e3	2179	1.8	2.97e3	1296	2.3	bd	bd

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	1.27e2	7.11e1	1.98e2	34.38	1.78	NO	0.015	0.0278	2.80e3	1880	1.5	6.97e3	1402	5.0	bb	bb
2	Total-pentadioxins	2.49e2	7.56e1	3.25e2	33.83	3.29	YES	0.024	0.0278	5.49e3	1880	2.9	2.44e3	1402	1.7	MM	bb
3	Total-pentadioxins	9.01e1	7.33e1	1.63e2	32.80	1.23	YES	0.012	0.0278	2.52e3	1880	1.3	5.49e3	1402	3.9	bb	bb

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	5.53e1	5.08e1	1.06e2	37.83	1.09	NO	0.008	0.0385	2.93e3	2101	1.4	2.21e3	1918	1.2	bb	bb
2	Total-hexadioxins	2.78e2	1.46e2	4.24e2	37.22	1.90	YES	0.032	0.0385	5.56e3	2101	2.6	2.55e3	1918	1.3	bb	bb
3	Total-hexadioxins	3.70e2	2.20e2	5.90e2	36.46	1.68	YES	0.044	0.0385	9.95e3	2101	4.7	8.20e3	1918	4.3	bb	bb
4	Total-hexadioxins	5.40e2	1.80e2	7.20e2	35.97	3.00	YES	0.054	0.0385	1.66e4	2101	7.9	7.95e3	1918	4.1	MM	MM
5	Total-hexadioxins	4.65e2	1.30e2	5.94e2	35.89	3.57	YES	0.044	0.0385	1.53e4	2101	7.3	3.49e3	1918	1.8	bd	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:31:33 Eastern Standard Time
Printed: Monday, December 16, 2019 17:32:28 Eastern Standard Time

Name: A14DEC19A-13, Date: 14-Dec-2019, Time: 21:04:43, ID: 15900003-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HPD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-heptadioxins	3.35e2	1.39e2	4.75e2	40.60	2.41	YES	0.040	0.0306	1.03e4	1294	8.0	3.42e3	887	3.9	db	db
2 Total-heptadioxins	1.73e2	5.62e1	2.29e2	40.57	3.08	YES	0.019	0.0306	8.87e3	1294	6.9	4.09e3	887	4.6	dd	bd
3 1234678-HpCDD	1.94e2	5.29e1	2.47e2	39.96	3.67	YES	0.021	0.0306	8.62e3	1294	6.7	2.33e3	887	2.6	bb	db
4 Total-heptadioxins	6.25e2	2.29e2	8.54e2	38.70	2.73	YES	0.072	0.0306	1.47e4	1294	11.4	4.24e3	887	4.8	bb	bb

TF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-tetrafurans	6.04e1	7.41e1	1.34e2	26.45	0.82	NO	0.005	0.0231	1.64e3	1153	1.4	3.47e3	1590	2.2	bb	bb
2 Total-tetrafurans	1.02e2	6.75e1	1.69e2	26.13	1.51	YES	0.007	0.0231	3.20e3	1153	2.8	3.82e3	1590	2.4	bb	bb
3 2378-TCDF	1.22e2	9.07e1	2.12e2	30.36	1.34	YES	0.008	0.0231	7.96e3	1153	6.9	2.48e3	1590	1.6	bb	db
4 Total-tetrafurans	9.14e1	6.02e1	1.52e2	28.40	1.52	YES	0.006	0.0231	4.03e3	1153	3.5	1.24e3	1590	0.8	bb	bb
5 Total-tetrafurans	5.87e1	6.86e1	1.27e2	27.33	0.86	NO	0.005	0.0231	2.62e3	1153	2.3	2.37e3	1590	1.5	db	bb

PF1

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-pentafurans (F1)	9.63e2	1.81e2	1.14e3	30.91	5.32	YES	0.052	0.0131	1.51e4	1041	14.5	3.09e3	1783	1.7	bb	db
2 Total-pentafurans (F1)	5.80e1	6.17e1	1.20e2	29.72	0.94	YES	0.005	0.0131	1.99e3	1041	1.9	2.67e3	1783	1.5	bb	bb

PF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-pentafurans	7.17e1	1.46e2	2.17e2	33.74	0.49	YES	0.010	0.0199	3.21e3	2096	1.5	5.88e3	2178	2.7	db	bb
2 12378-PeCDF	1.34e2	1.43e2	2.77e2	33.24	0.94	YES	0.013	0.0199	5.34e3	2096	2.5	2.98e3	2178	1.4	bb	bb

HF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-hexafurans	5.30e1	6.18e1	1.15e2	37.00	0.86	YES	0.006	0.0164	2.10e3	1237	1.7	2.95e3	1096	2.7	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:31:33 Eastern Standard Time
Printed: Monday, December 16, 2019 17:32:28 Eastern Standard Time

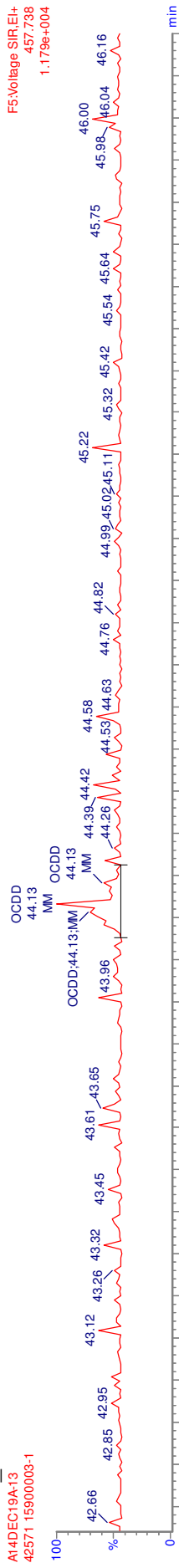
Name: A14DEC19A-13, Date: 14-Dec-2019, Time: 21:04:43, ID: 15900003-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HIPF

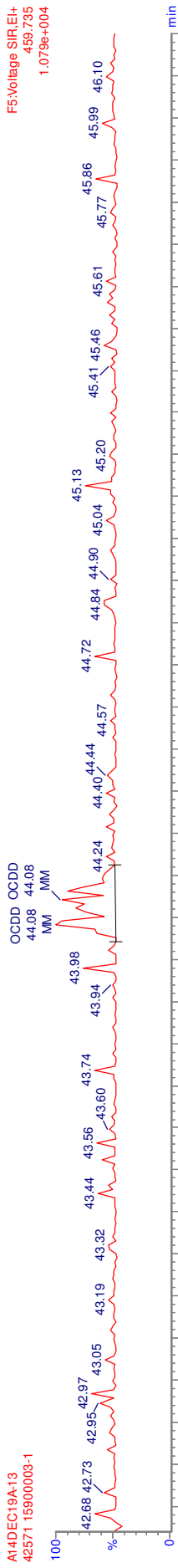
	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

A14DEC19A-13
 42571 15900003-1

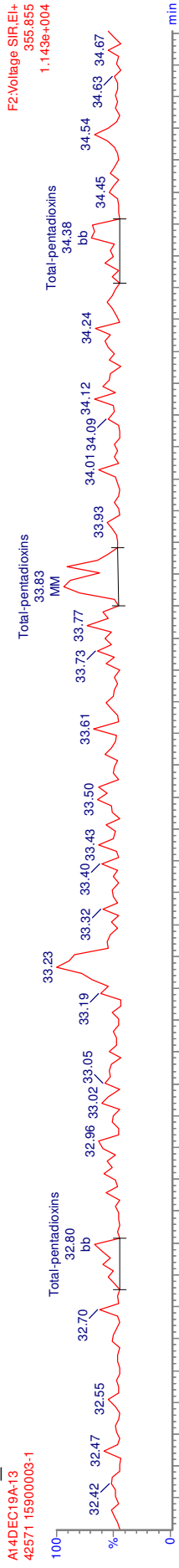


A14DEC19A-13
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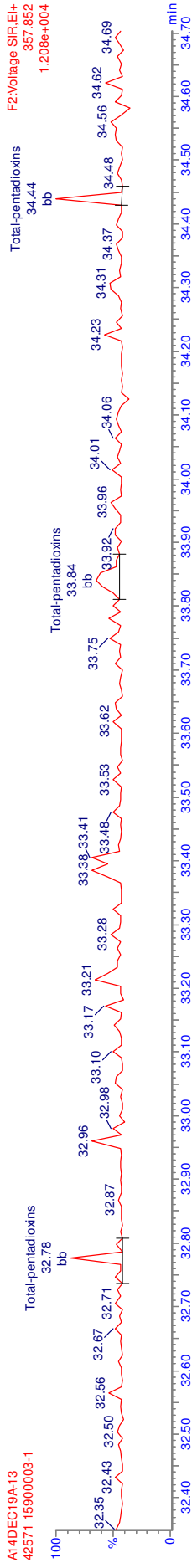


MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

A14DEC19A-13
 42571 15900003-1

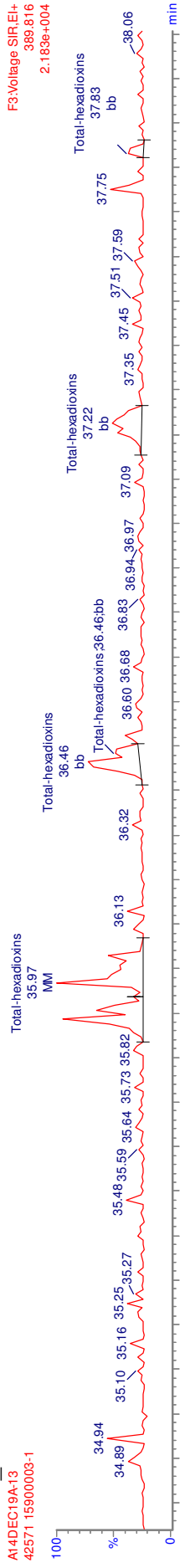


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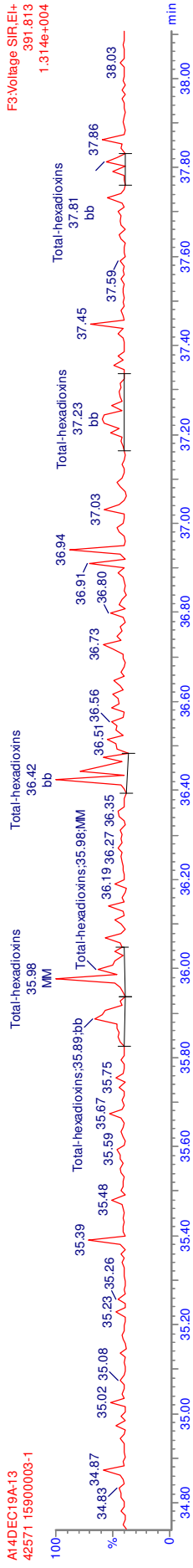


MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

AI14DEC19A-13
 42571 15900003-1



AI14DEC19A-13
 42571 15900003-1



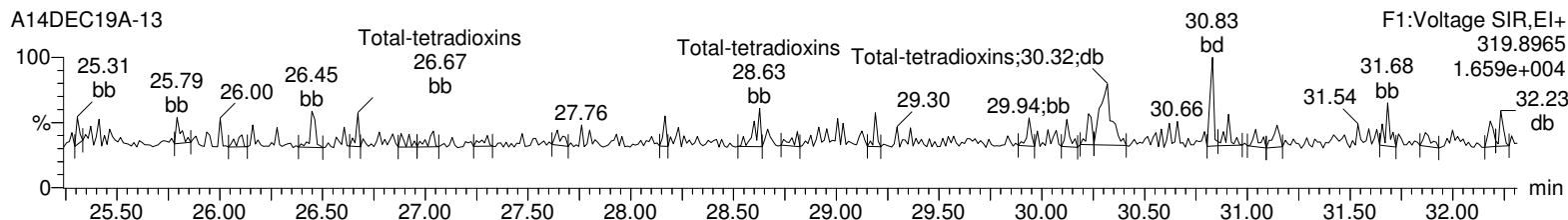
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Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

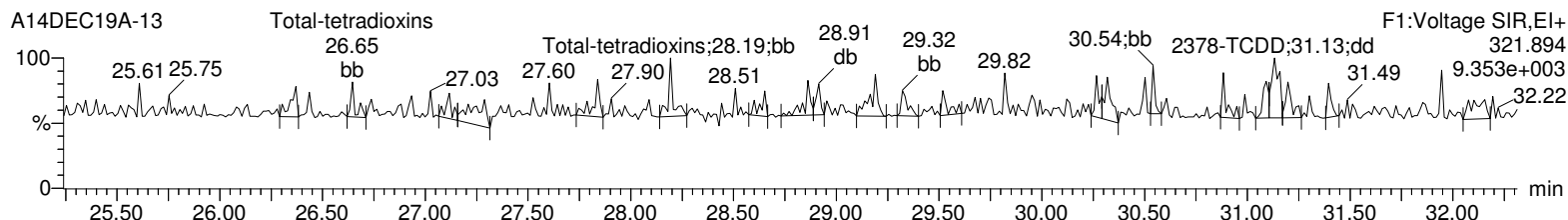
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Name: A14DEC19A-13, Date: 14-Dec-2019, Time: 21:04:43, ID: 15900003-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

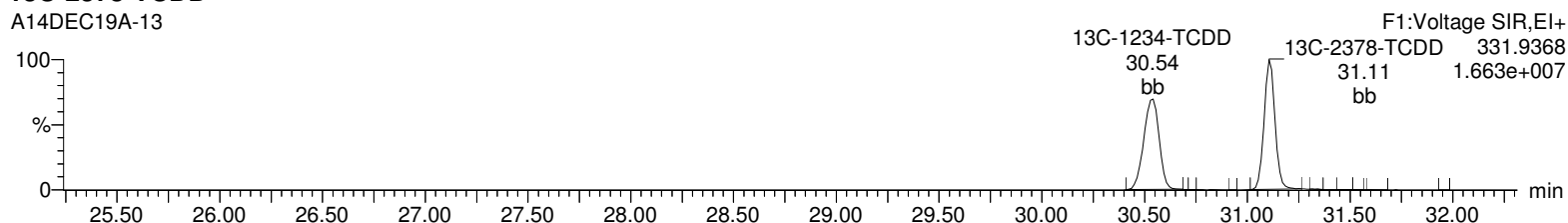
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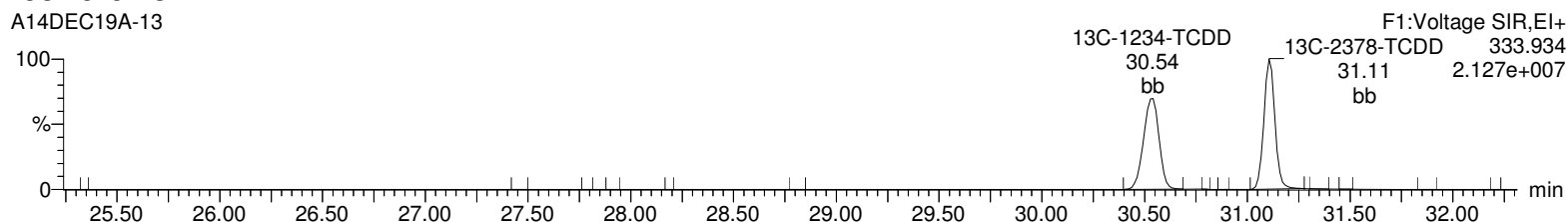
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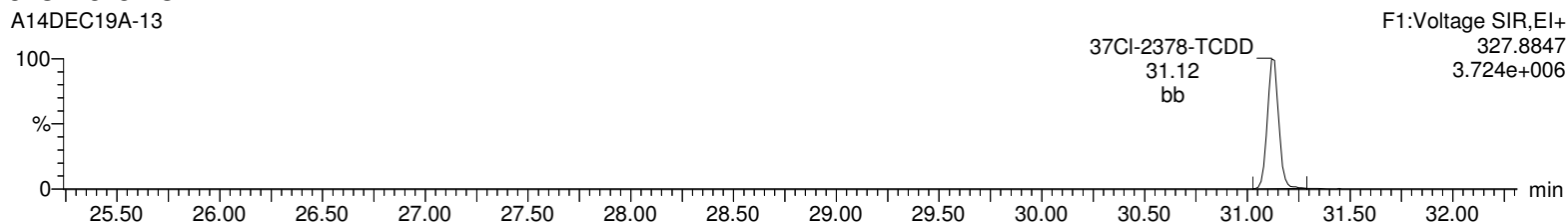
13C-2378-TCDD



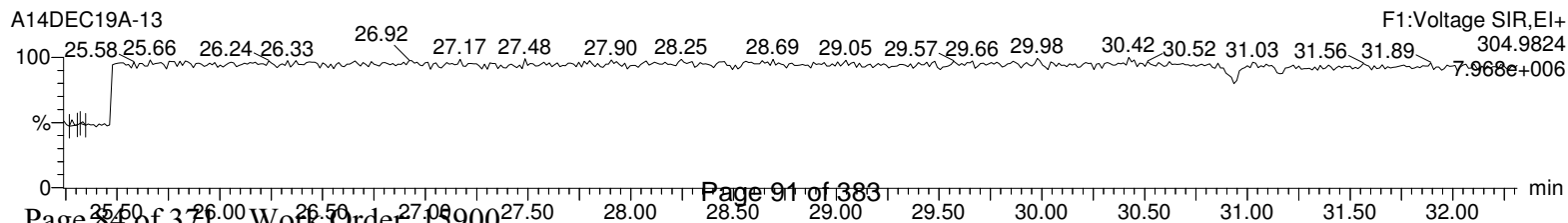
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



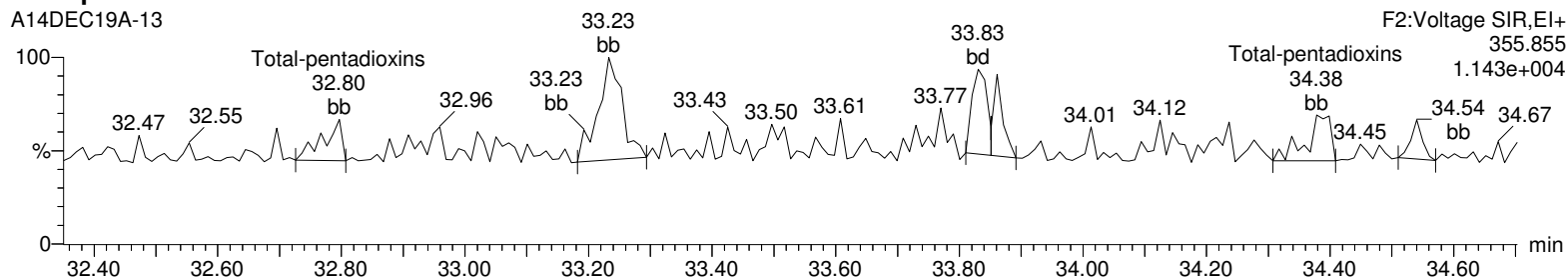
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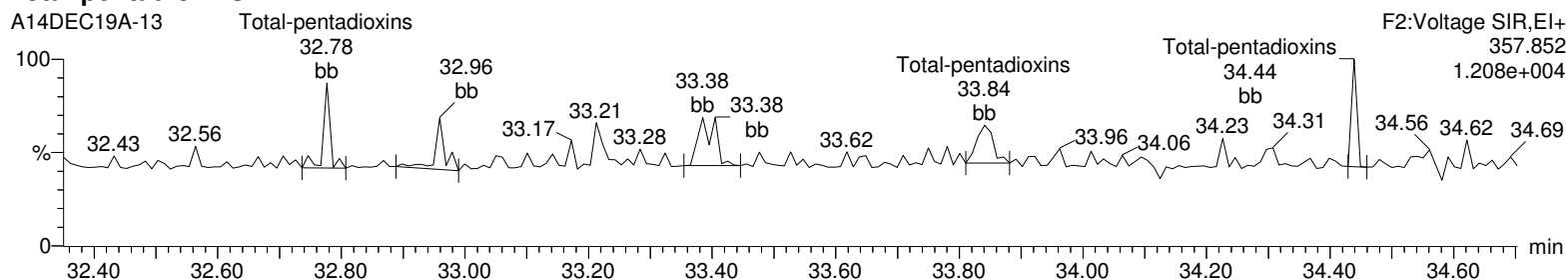
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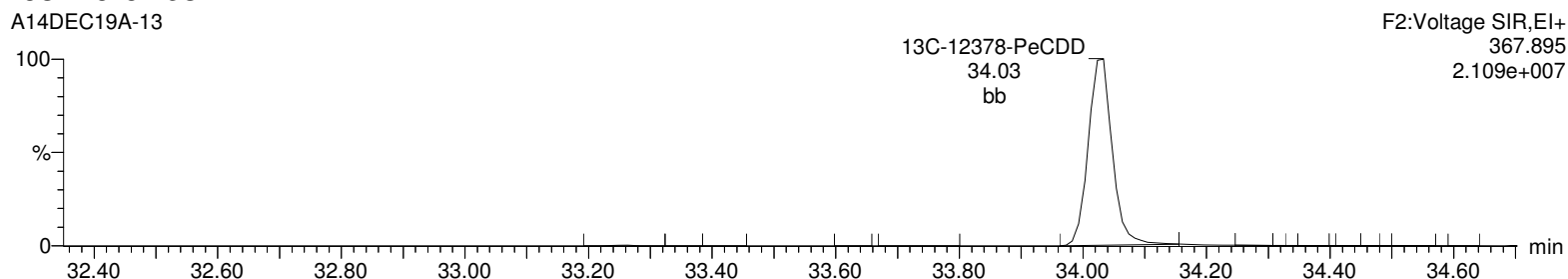
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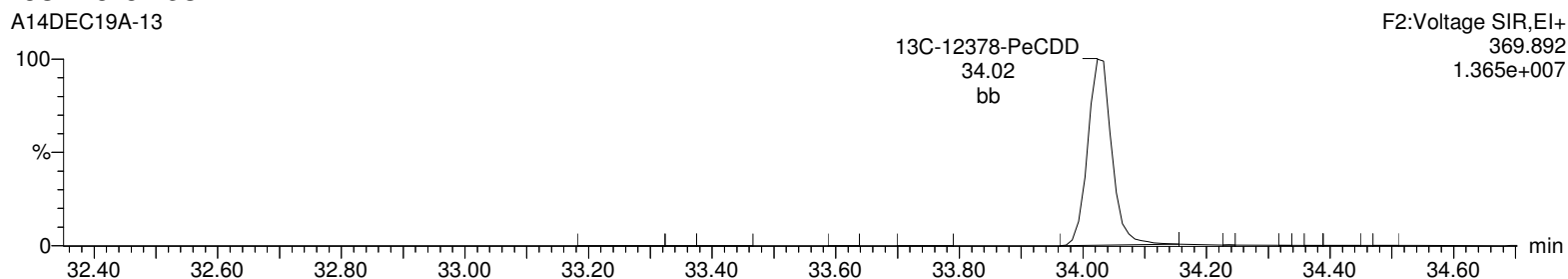
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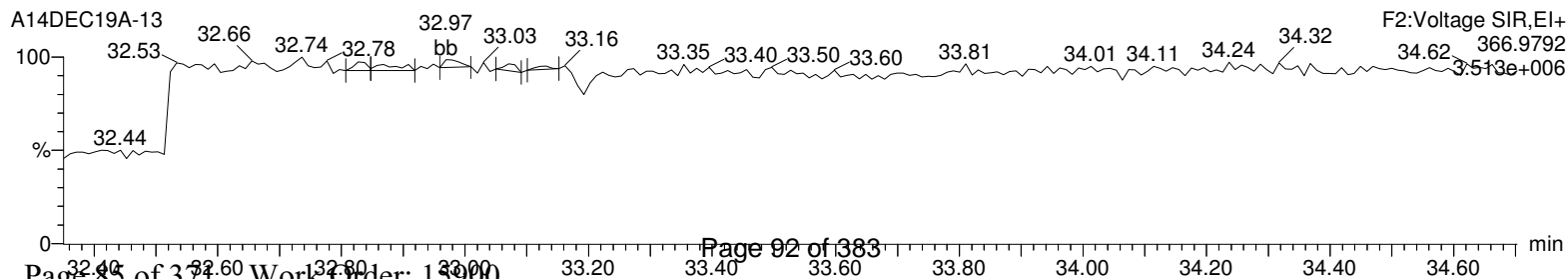
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



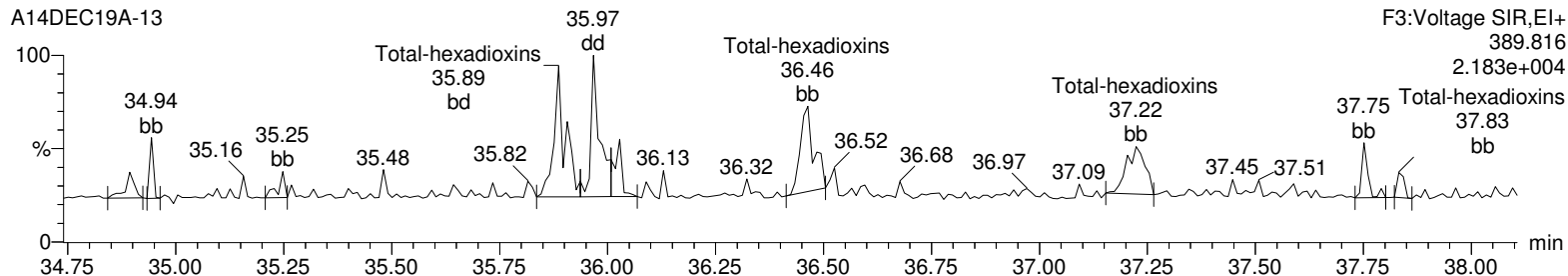
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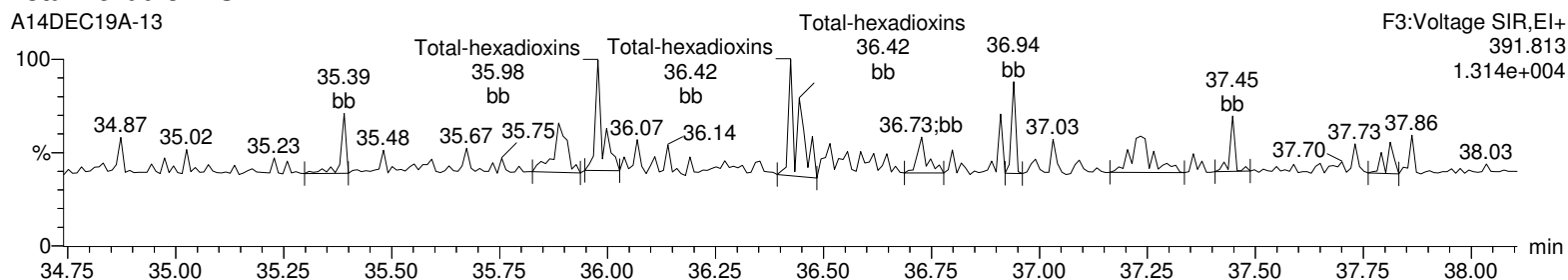
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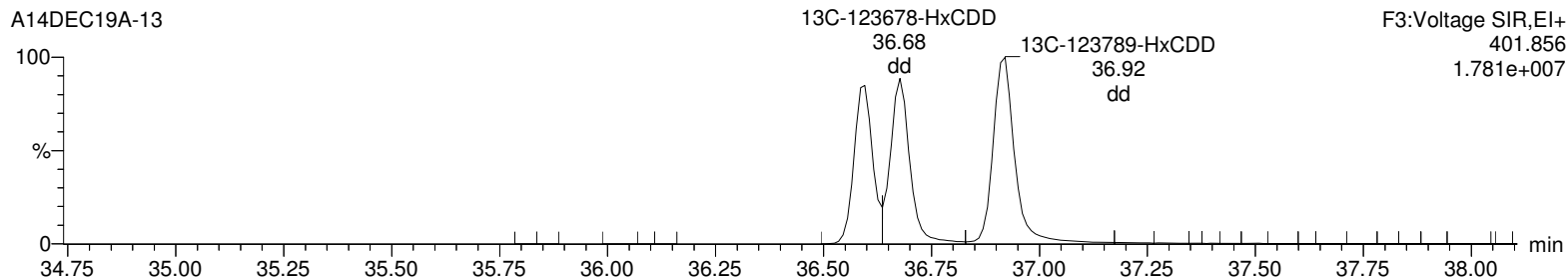
Total-hexadioxins



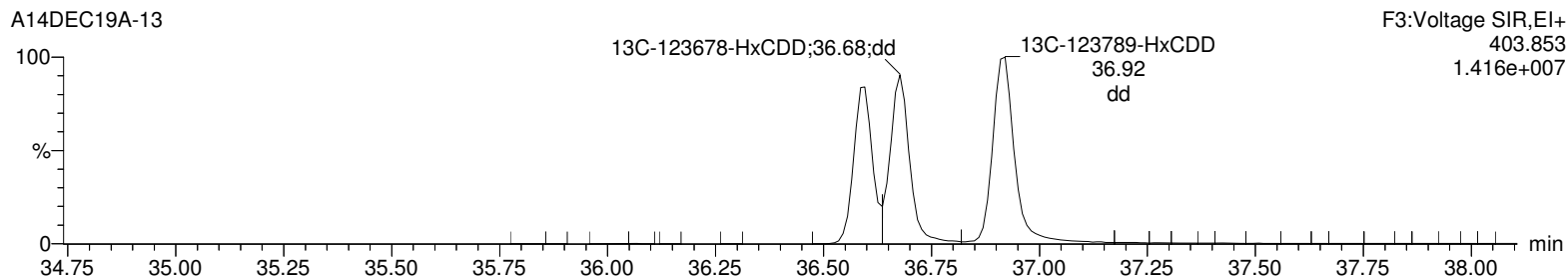
Total-hexadioxins



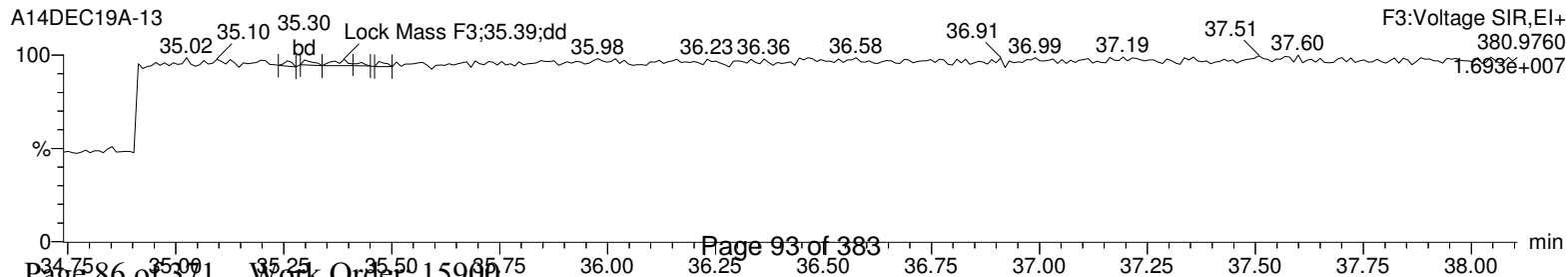
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



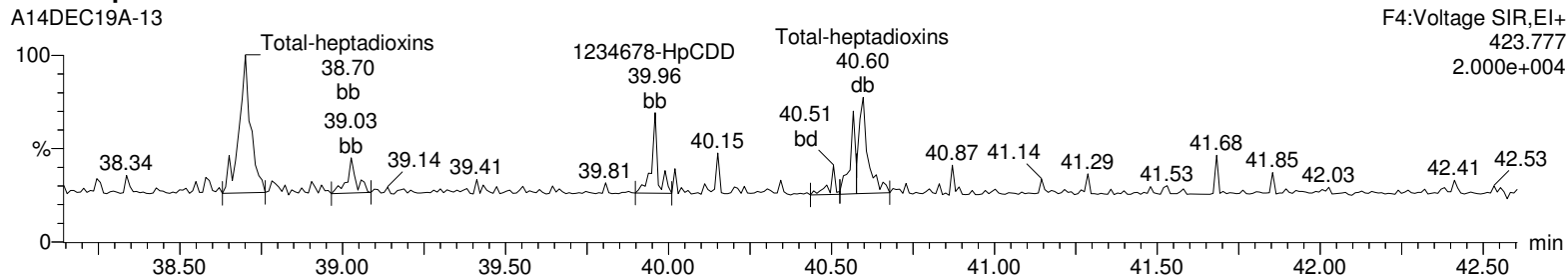
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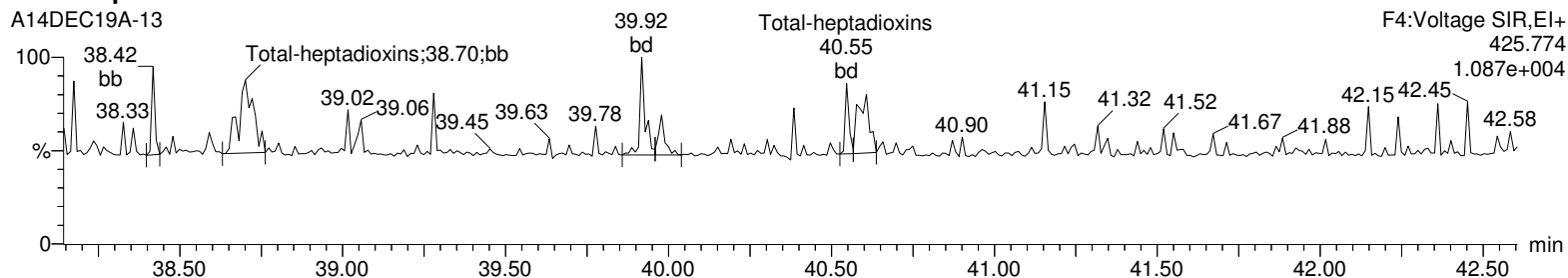
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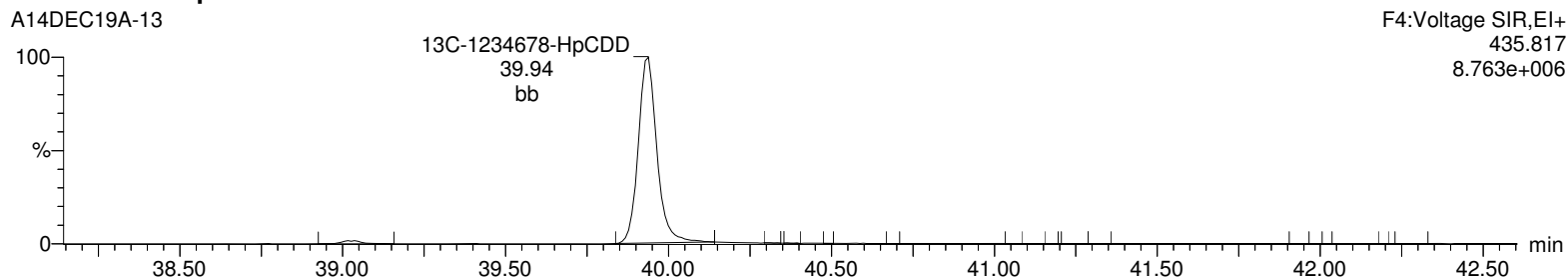
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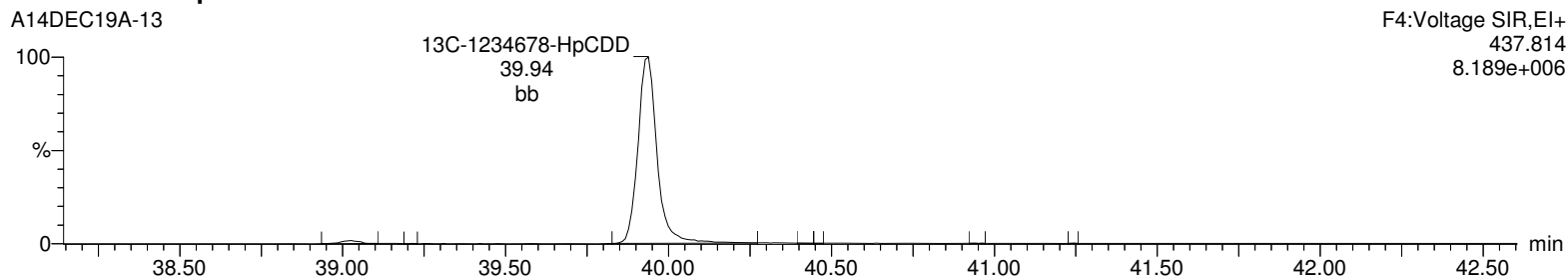
Total-heptadioxins



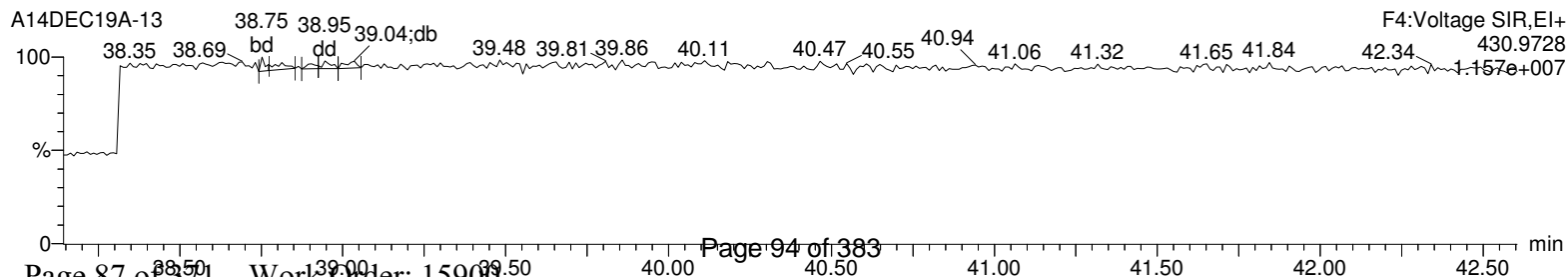
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

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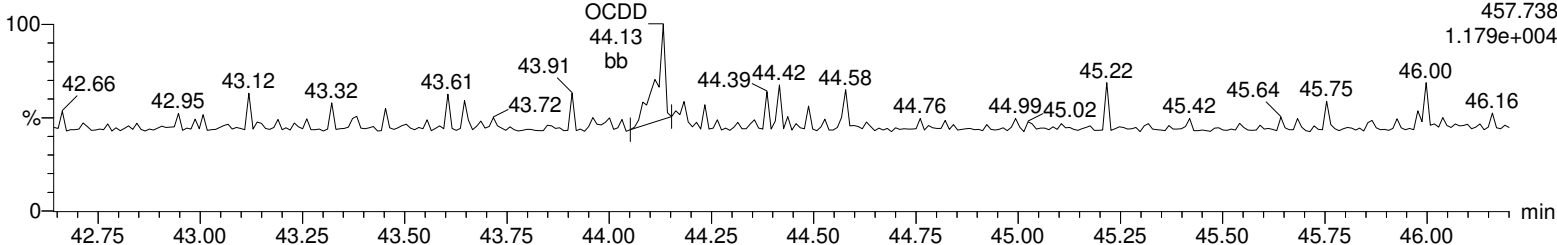
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OCDD

A14DEC19A-13

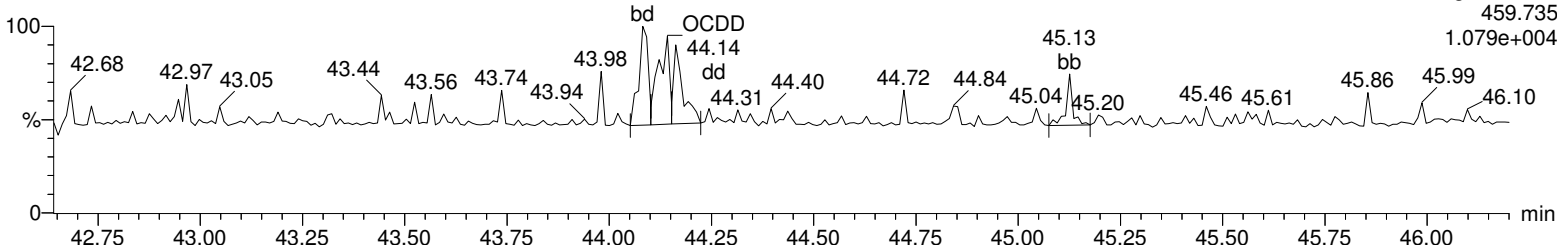
F5:Voltage SIR,EI+
457.738
1.179e+004



OCDD

A14DEC19A-13

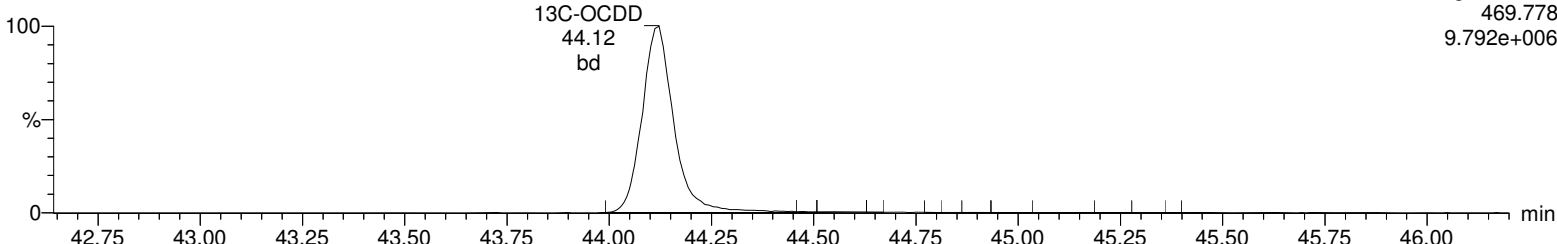
F5:Voltage SIR,EI+
459.735
1.079e+004



13C-OCDD

A14DEC19A-13

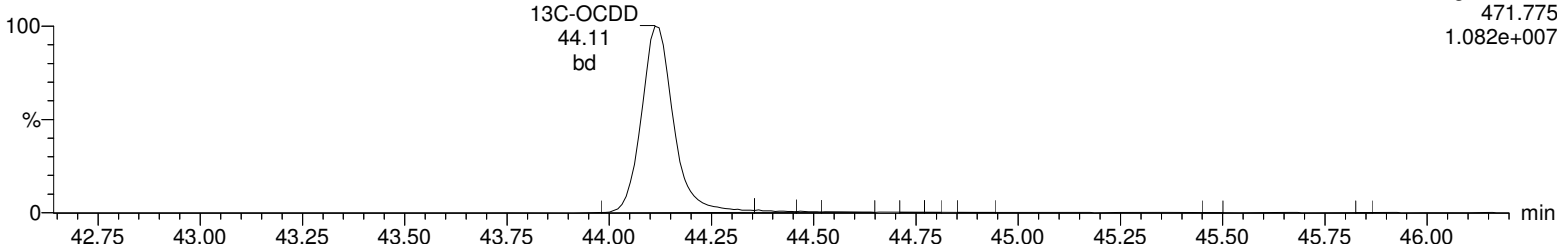
F5:Voltage SIR,EI+
469.778
9.792e+006



13C-OCDD

A14DEC19A-13

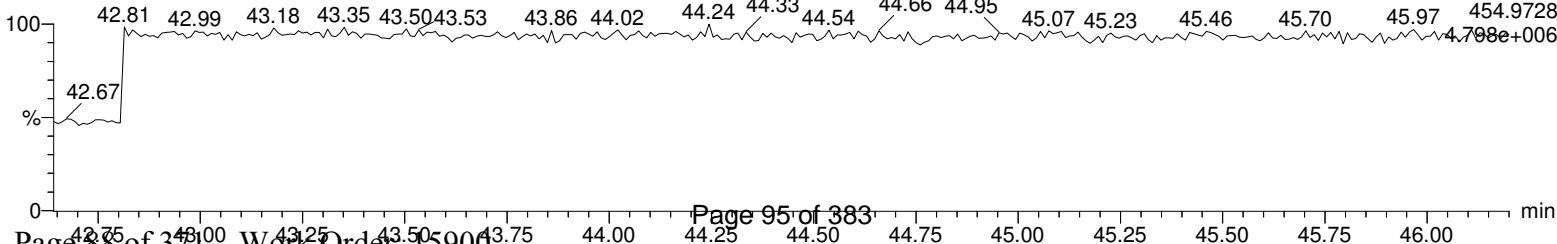
F5:Voltage SIR,EI+
471.775
1.082e+007



Lock Mass F5

A14DEC19A-13

F5:Voltage SIR,EI+
454.9728
4.798e+006



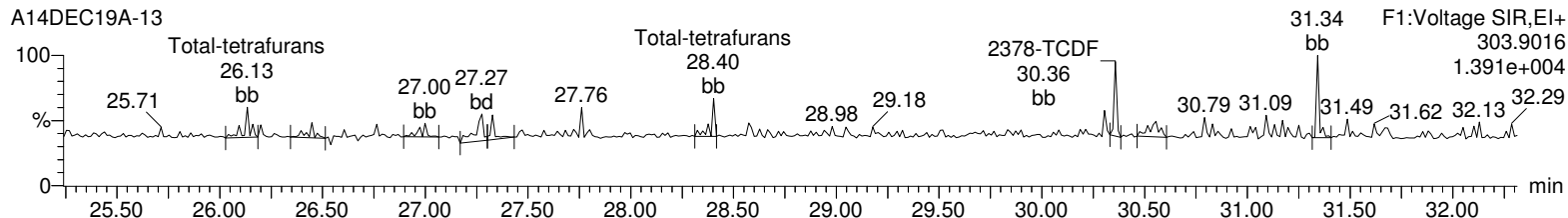
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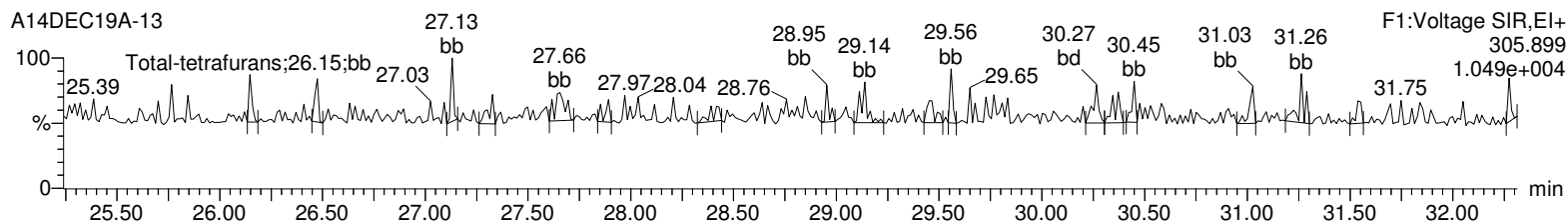
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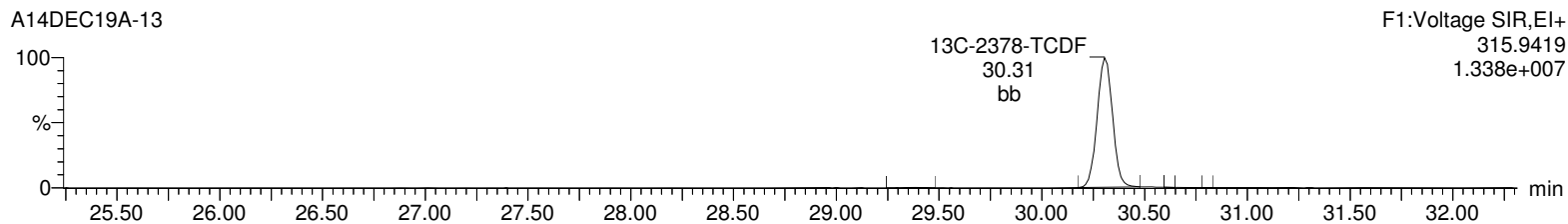
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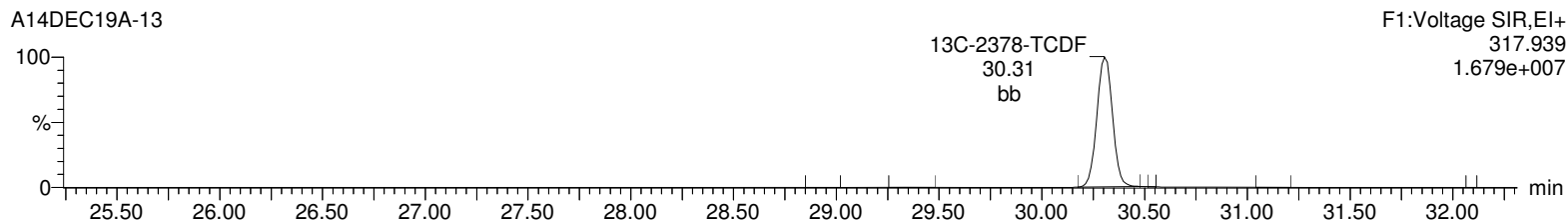
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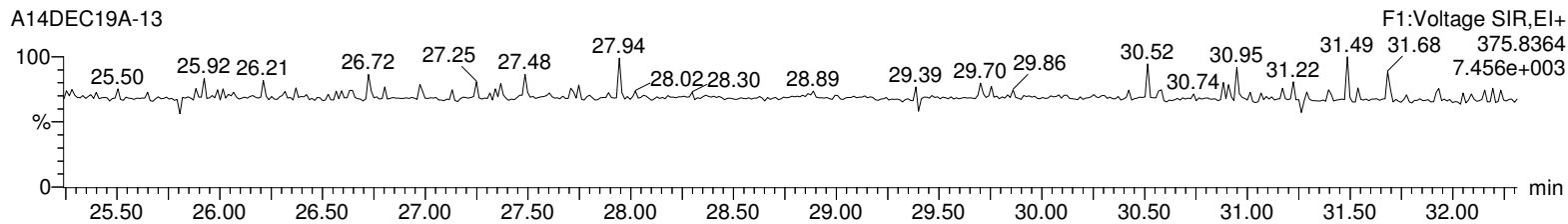
13C-2378-TCDF



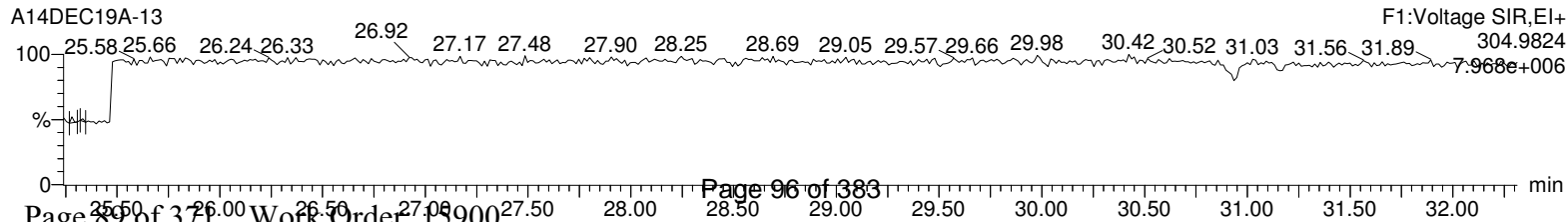
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

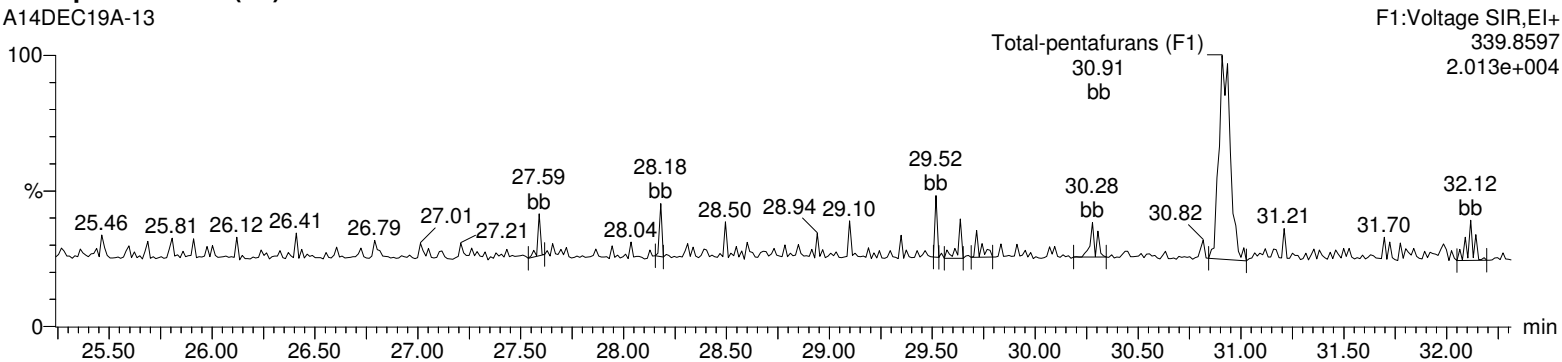
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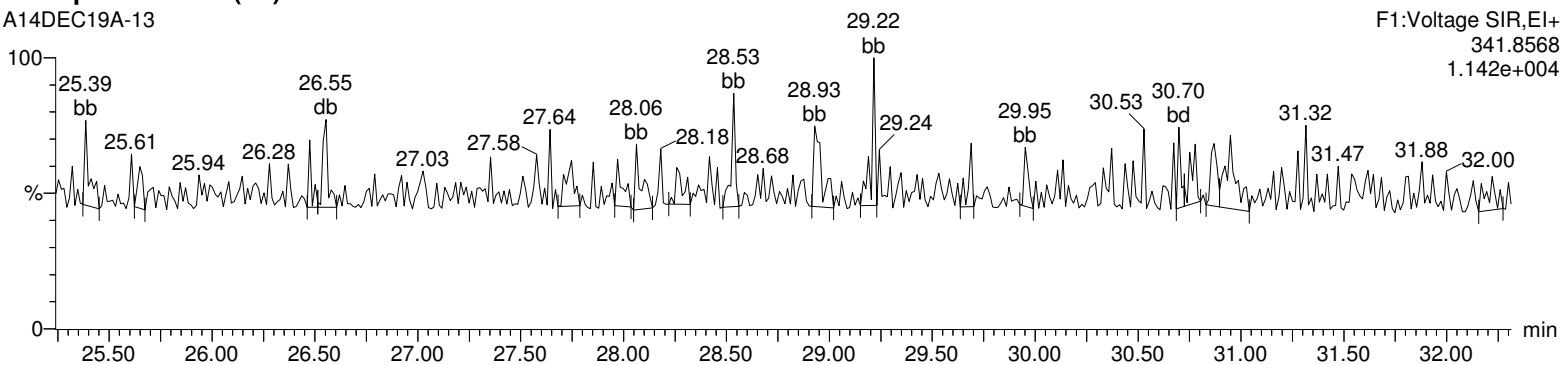
Total-pentafurans (F1)

A14DEC19A-13



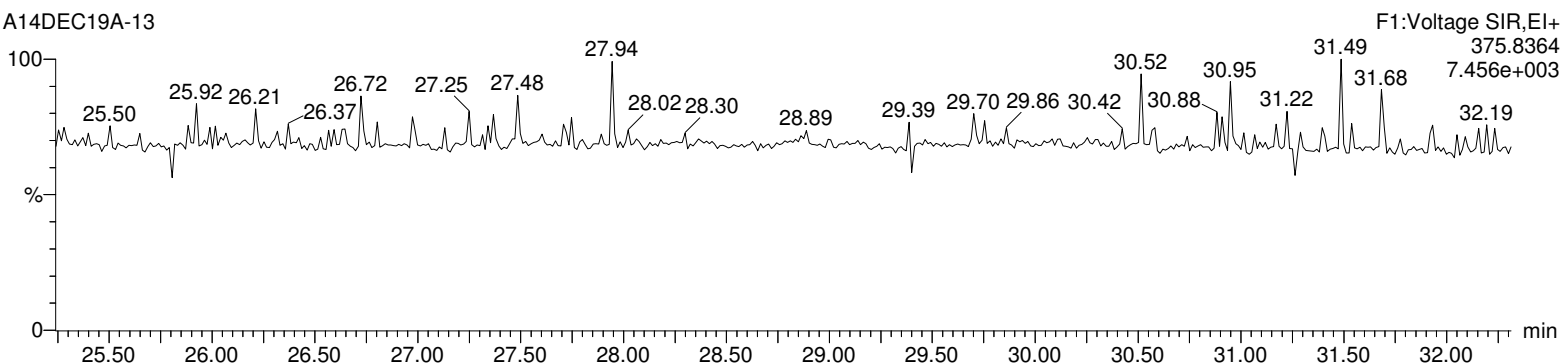
Total-pentafurans (F1)

A14DEC19A-13



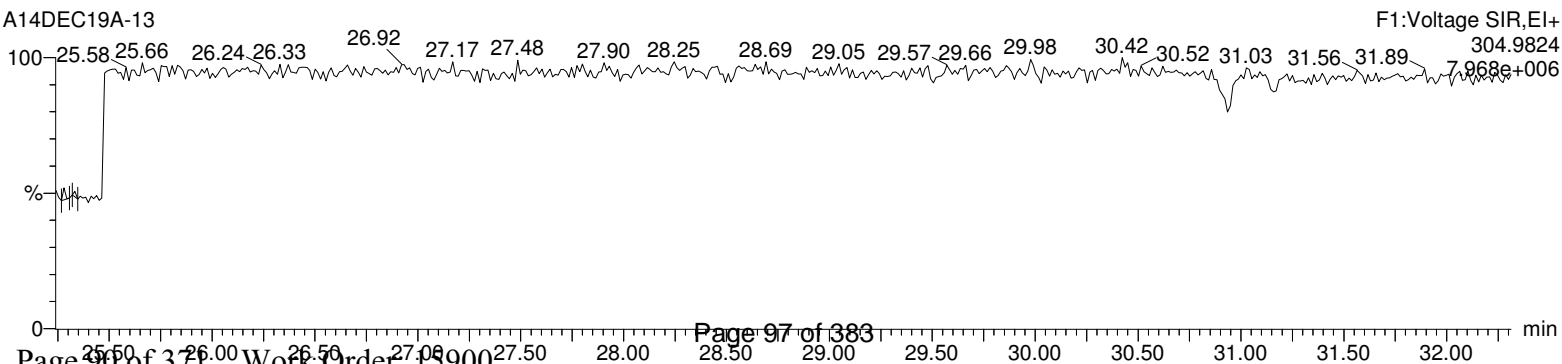
HxDPE

A14DEC19A-13



Lock Mass F1

A14DEC19A-13



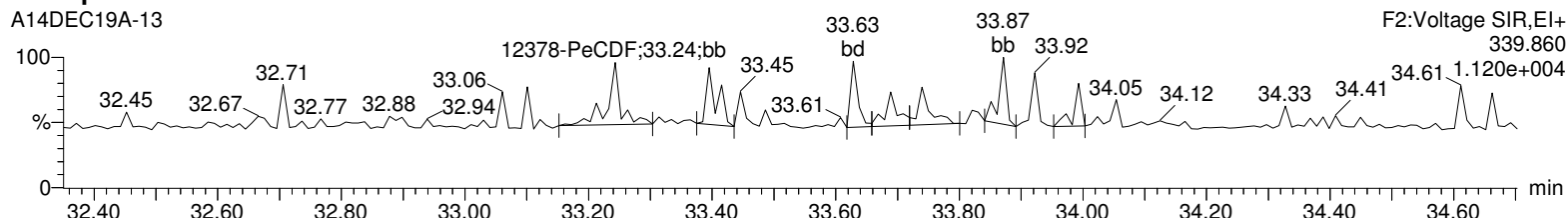
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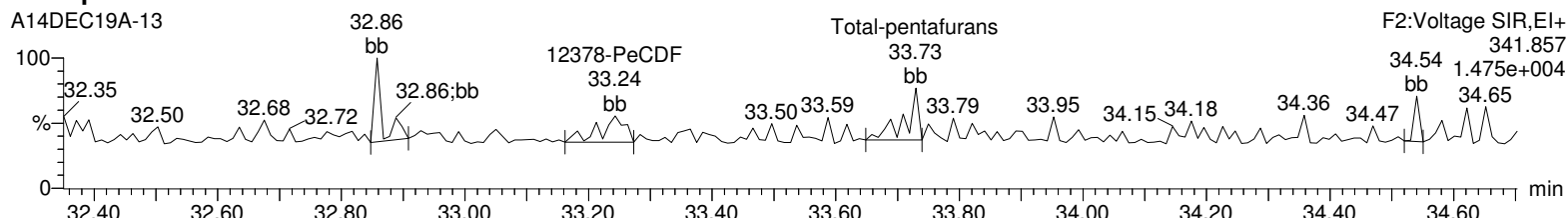
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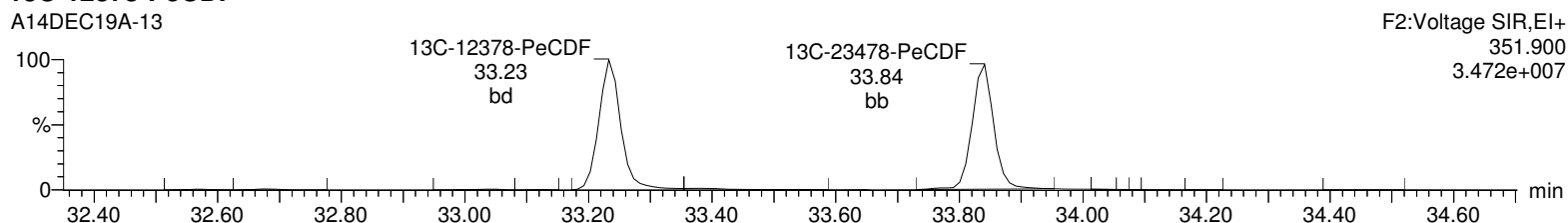
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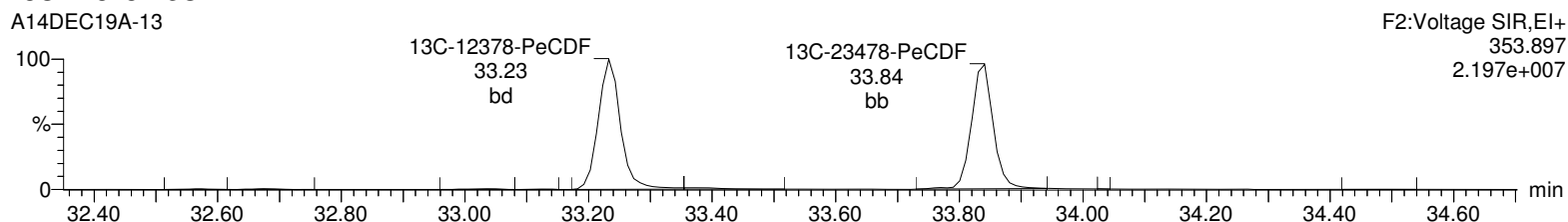
Total-pentafurans



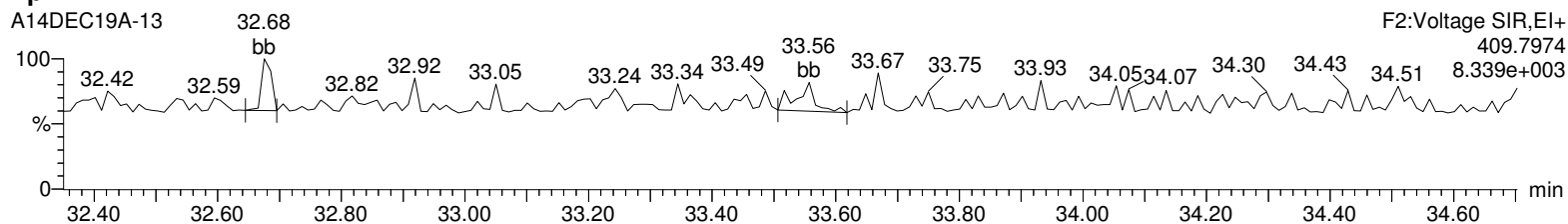
13C-12378-PeCDF



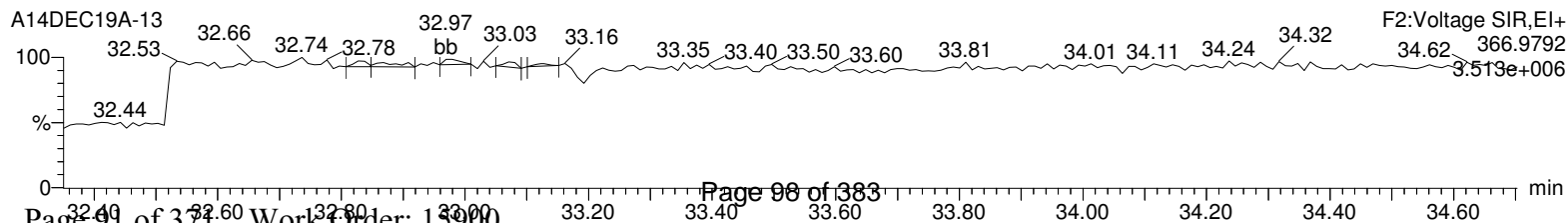
13C-12378-PeCDF



HpDPE



Lock Mass F2



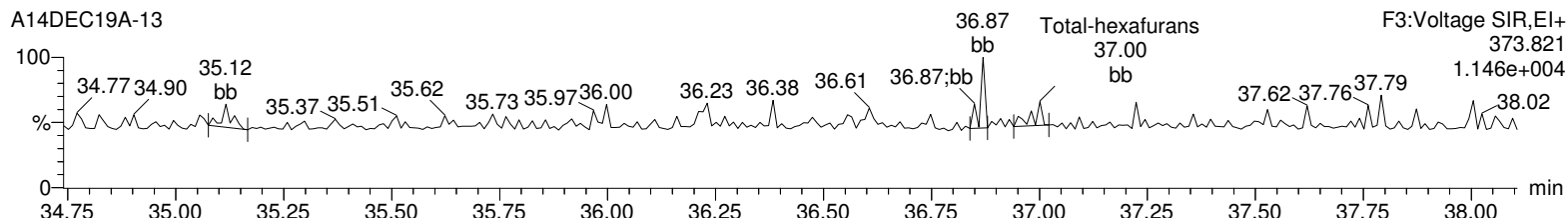
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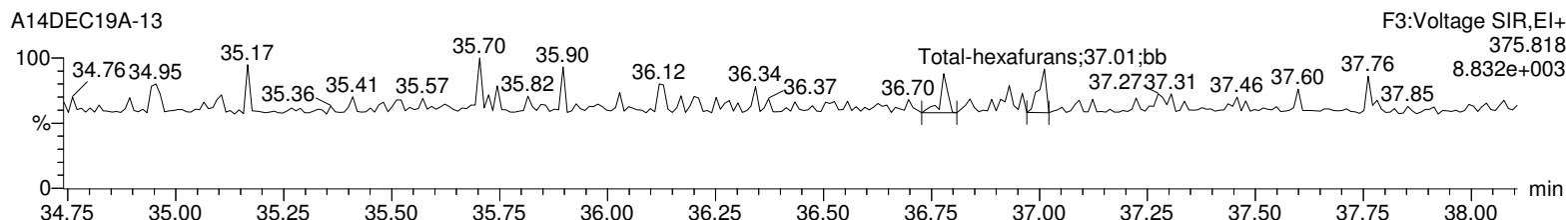
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-13, Date: 14-Dec-2019, Time: 21:04:43, ID: 15900003-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

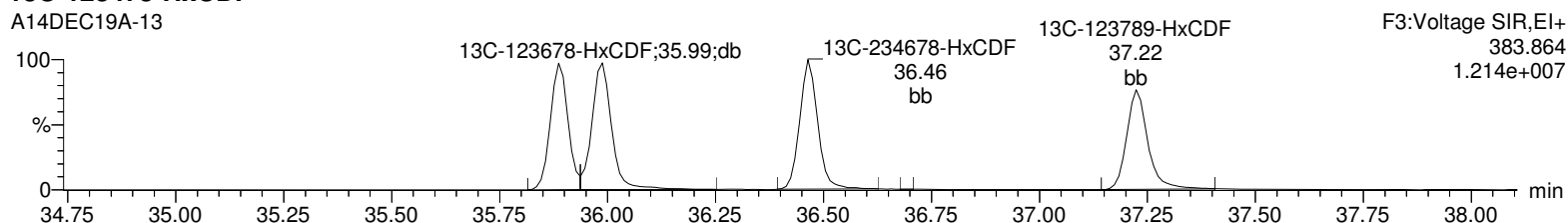
Total-hexafurans



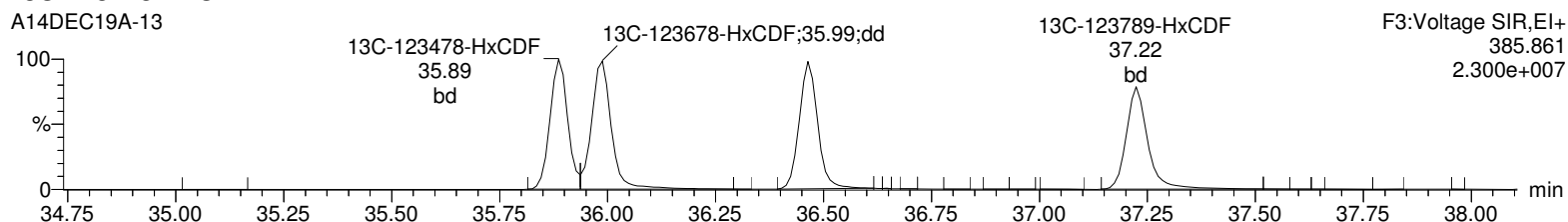
Total-hexafurans



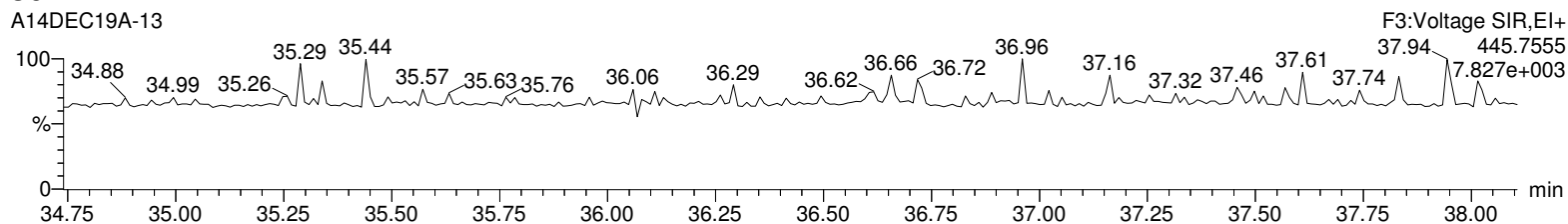
13C-123478-HxCDF



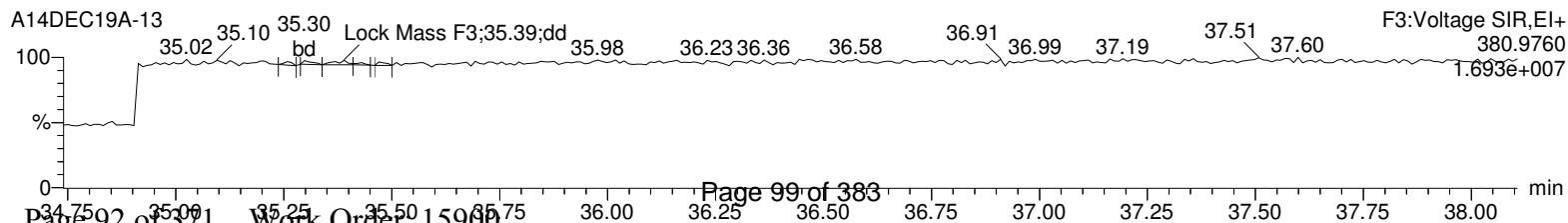
13C-123478-HxCDF



OcDPE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

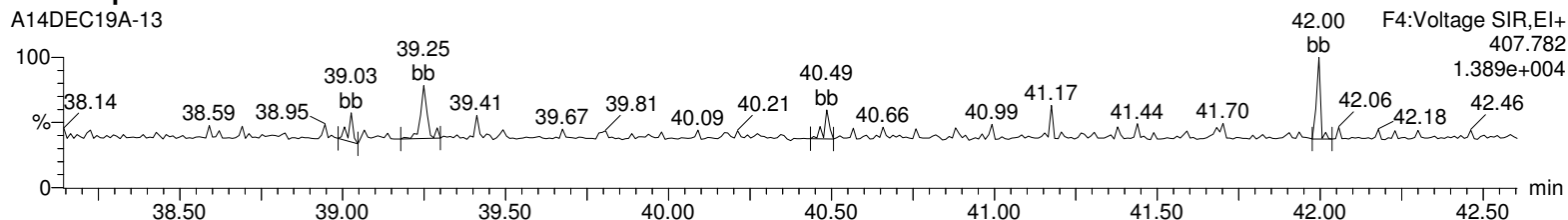
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-13, Date: 14-Dec-2019, Time: 21:04:43, ID: 15900003-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

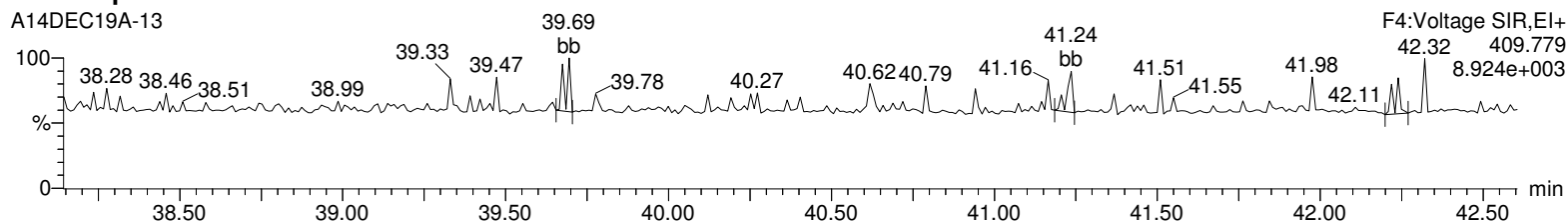
Total-heptafurans

A14DEC19A-13



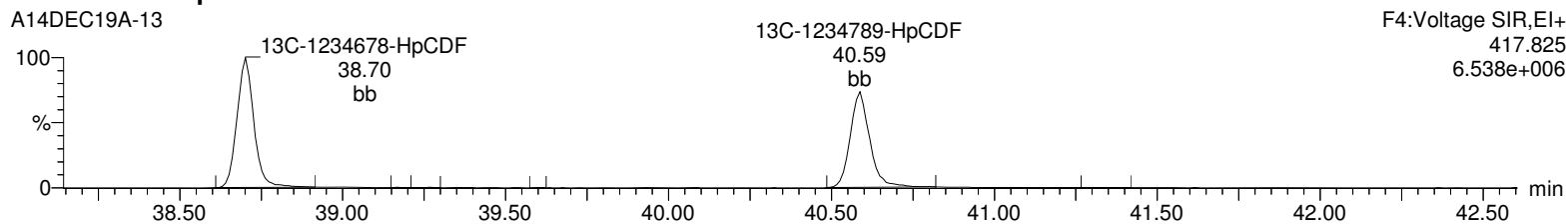
Total-heptafurans

A14DEC19A-13



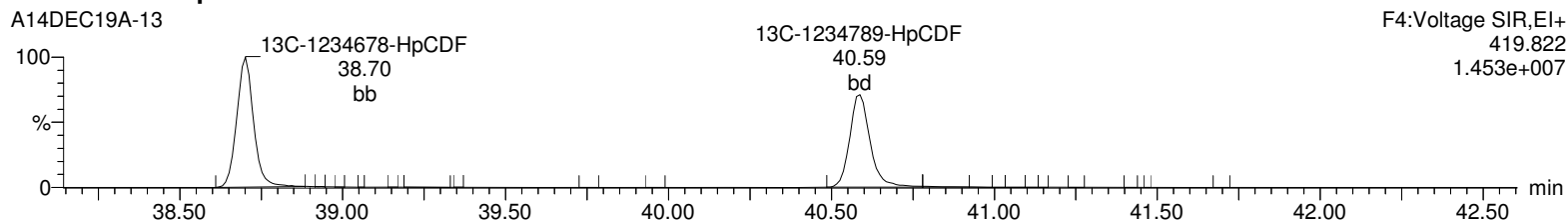
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A14DEC19A-13



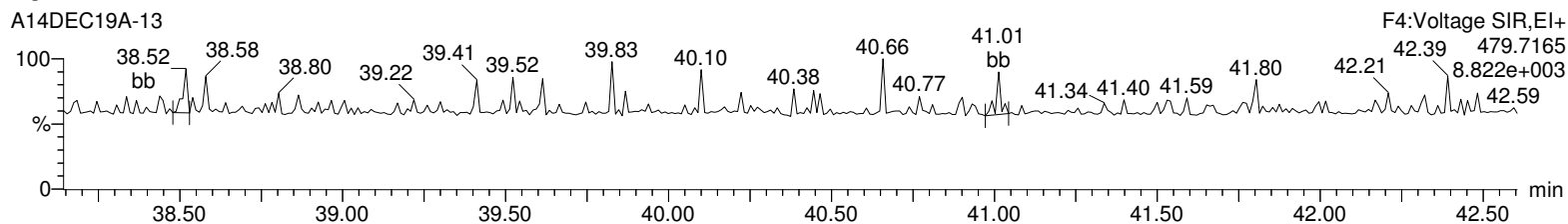
13C-1234678-HpCDF

A14DEC19A-13



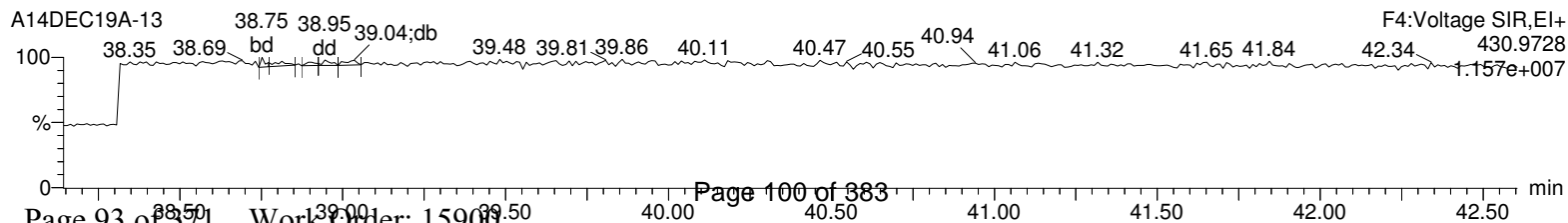
NoDPE

A14DEC19A-13



Lock Mass F4

A14DEC19A-13



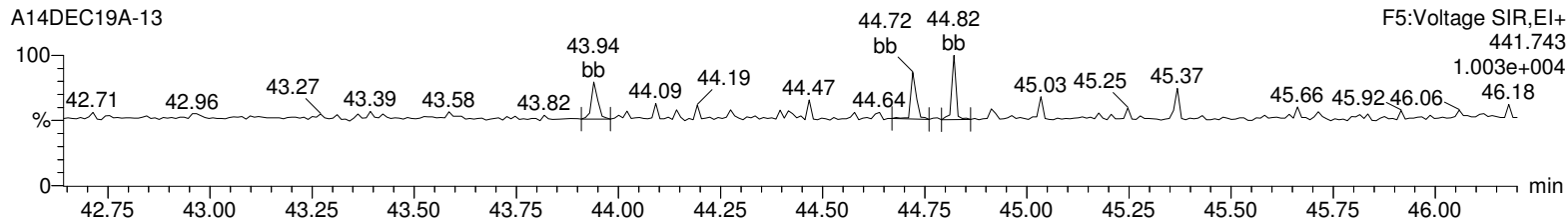
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Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

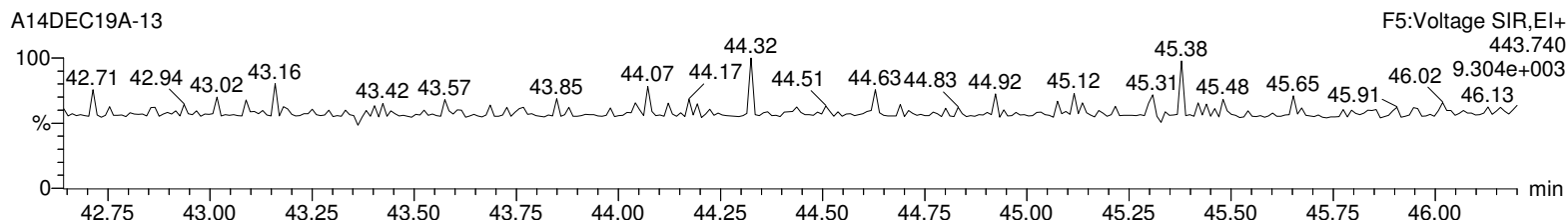
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-13, Date: 14-Dec-2019, Time: 21:04:43, ID: 15900003-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

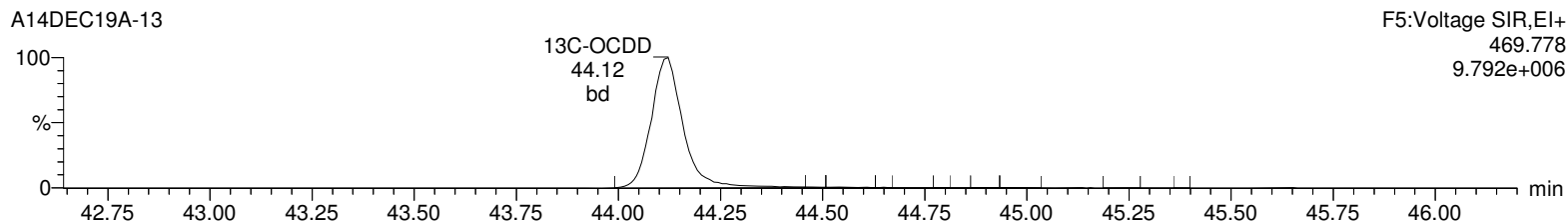
OCDF



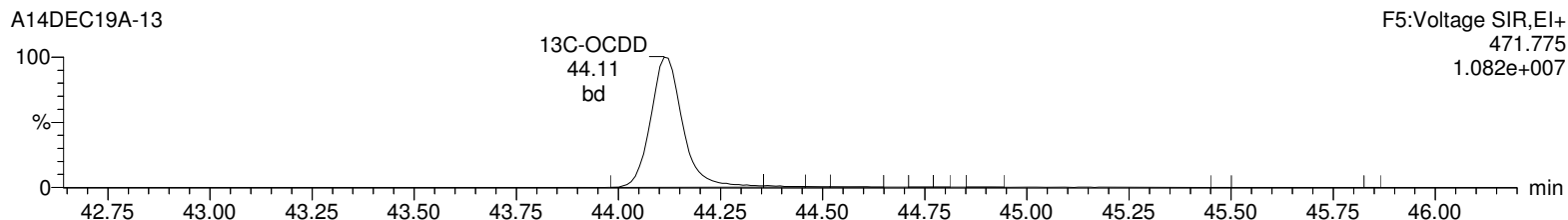
OCDF



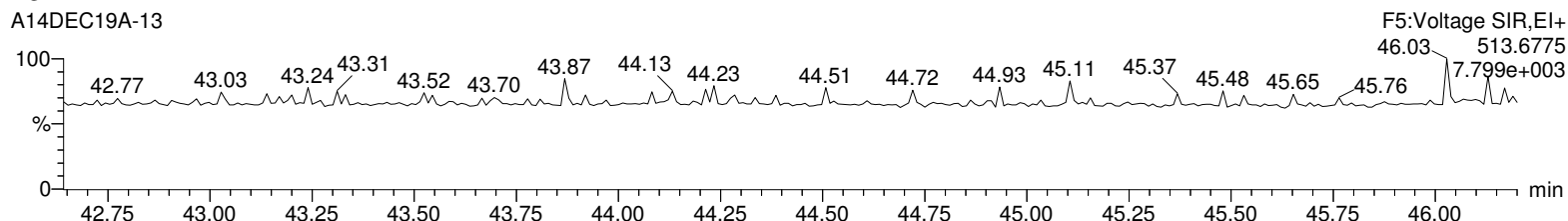
13C-OCDD



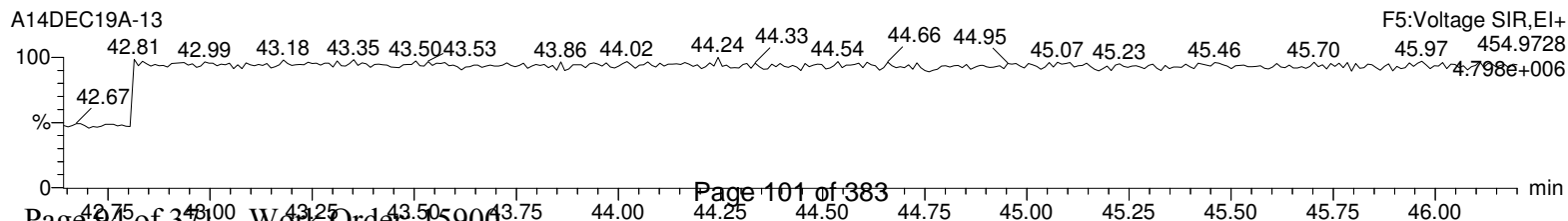
13C-OCDD



DeDPE



Lock Mass F5



Quality Control Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206
Lab Sample ID: 12025525
Client Sample: QC for batch 42567
Client ID: MB for batch 42567
Batch ID: 42571
Run Date: 12/14/2019 13:51
Data File: A14DEC19A-4
Prep Batch: 42567
Prep Date: 10-DEC-19

Client: CALS001
Method: EPA Method 1613B
Analyst: MJC
Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK	0.0005	ng/L	0.00047	0.010
40321-76-4	1,2,3,7,8-PeCDD	J	0.00088	ng/L	0.000564	0.050
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00088	ng/L	0.00088	0.050
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.000848	ng/L	0.000848	0.050
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.000878	ng/L	0.000878	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD	JK	0.00116	ng/L	0.000904	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	0.00276	ng/L	0.000914	0.100
51207-31-9	2,3,7,8-TCDF	U	0.000588	ng/L	0.000588	0.010
57117-41-6	1,2,3,7,8-PeCDF	JK	0.00082	ng/L	0.000454	0.050
57117-31-4	2,3,4,7,8-PeCDF	JK	0.00086	ng/L	0.000476	0.050
70648-26-9	1,2,3,4,7,8-HxCDF	J	0.0009	ng/L	0.000444	0.050
57117-44-9	1,2,3,6,7,8-HxCDF	JK	0.00078	ng/L	0.000456	0.050
60851-34-5	2,3,4,6,7,8-HxCDF	J	0.00102	ng/L	0.00045	0.050
72918-21-9	1,2,3,7,8,9-HxCDF	J	0.00112	ng/L	0.000582	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF	JK	0.0005	ng/L	0.000478	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	0.0008	ng/L	0.000598	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.00208	ng/L	0.000798	0.100
41903-57-5	Total TeCDD	JK	0.0005	ng/L	0.00047	0.010
36088-22-9	Total PeCDD	J	0.00088	ng/L	0.000564	0.050
34465-46-8	Total HxCDD	U	0.000848	ng/L	0.000848	0.050
37871-00-4	Total HpCDD	JK	0.00116	ng/L	0.000904	0.050
30402-14-3	Total TeCDF	U	0.000588	ng/L	0.000588	0.010
30402-15-4	Total PeCDF	JK	0.00168	ng/L	0.000296	0.050
55684-94-1	Total HxCDF	JK	0.00382	ng/L	0.000444	0.050
38998-75-3	Total HpCDF	JK	0.0013	ng/L	0.000478	0.050
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.00207	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00223	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.70	2.00	ng/L	85.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.75	2.00	ng/L	87.4	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.59	2.00	ng/L	79.6	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.51	2.00	ng/L	75.7	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.76	2.00	ng/L	87.9	(23%-140%)
13C-OCDD		2.99	4.00	ng/L	74.7	(17%-157%)
13C-2,3,7,8-TCDF		1.71	2.00	ng/L	85.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.91	2.00	ng/L	95.4	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.70	2.00	ng/L	84.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.55	2.00	ng/L	77.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.50	2.00	ng/L	74.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.58	2.00	ng/L	79.2	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.65	2.00	ng/L	82.7	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025525		Matrix: WATER
Client Sample: QC for batch 42567		
Client ID: MB for batch 42567		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 13:51	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-4		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.49	2.00	ng/L	74.4 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.67	2.00	ng/L	83.7 (26%-138%)
37Cl-2,3,7,8-TCDD			0.188	0.200	ng/L	93.9 (35%-197%)

Comments:

- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report
 Method 1613 Quantification Report

MassLynx 4.1
 C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:18:33 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:19:05 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\ICFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

-3 FOR BATCH 425 H

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	1.91e2	3.64e2	5.55e2	31.13	1.000	0.53	YES	0.025	0.0235	6.35e3	2030	3.1	8.79e3	1355	6.5	bb
2	12378-PeCDD	3.76e2	2.63e2	6.39e2	34.06	1.001	1.43	NO	0.044	0.0282	8.88e3	2501	3.6	5.78e3	1488	3.9	db
3	123478-HxCDD	3.07e2	1.84e2	4.92e2	36.63	1.001	1.66	YES	0.035	0.0440	8.98e3	3570	2.5	3.83e3	1512	2.5	bd
4	123678-HxCDD	3.16e2	2.51e2	5.67e2	36.69	1.000	1.26	NO	0.038	0.0424	1.02e4	3570	2.9	9.84e3	1512	6.5	db
5	123789-HxCDD	2.71e2	2.65e2	5.36e2	36.95	1.007	1.02	YES	0.037	0.0439	8.71e3	3570	2.4	6.57e3	1512	4.3	bb
6	1234678-HpCDD	3.30e2	4.20e2	7.50e2	39.93	1.000	0.79	YES	0.058	0.0452	5.14e3	1962	2.6	9.67e3	1553	6.2	MM
7	OCDD	6.86e2	6.74e2	1.36e3	44.16	1.001	1.02	NO	0.138	0.0457	1.30e4	866	15.0	9.30e3	1208	7.7	MM
8	2378-TCDF	1.00e2	6.98e1	1.70e2	30.38	1.002	1.44	YES	0.006	0.0294	3.21e3	1468	2.2	2.38e3	2219	1.1	dd
9	12378-PeCDF	4.98e2	4.80e2	9.77e2	33.25	1.000	1.04	YES	0.041	0.0227	1.72e4	3400	5.1	1.33e4	1887	7.1	bb
10	23478-PeCDF	5.52e2	4.56e2	1.01e3	33.85	1.000	1.21	YES	0.043	0.0238	2.05e4	3400	6.0	1.12e4	1887	5.9	db
11	123478-HxCDF	5.08e2	3.86e2	8.94e2	35.90	1.000	1.31	NO	0.045	0.0222	1.68e4	1957	8.6	7.83e3	1810	4.3	bd
12	123678-HxCDF	5.24e2	2.82e2	8.06e2	36.00	1.000	1.86	YES	0.039	0.0228	1.17e4	1957	6.0	7.47e3	1810	4.1	db
13	234678-HxCDF	5.78e2	4.81e2	1.06e3	36.48	1.000	1.20	NO	0.051	0.0225	6.89e3	1957	3.5	1.02e4	1810	5.6	MM
14	123789-HxCDF	5.23e2	4.75e2	9.98e2	37.24	1.000	1.10	NO	0.056	0.0291	8.15e3	1957	4.2	7.73e3	1810	4.3	db
15	1234678-HpCDF	7.43e1	3.15e2	3.89e2	38.71	1.000	0.24	YES	0.025	0.0239	4.62e3	1489	3.1	8.13e3	1079	7.5	dd
16	1234789-HpCDF	3.12e2	2.81e2	5.73e2	40.60	1.000	1.20	NO	0.040	0.0299	6.20e3	1489	4.2	5.07e3	1079	4.7	bb
17	OCDF	5.71e2	6.22e2	1.19e3	44.40	1.006	0.92	NO	0.104	0.0399	1.06e4	726	14.7	1.33e4	1384	9.6	MM
18	13C-2378-TCDD	1.09e6	1.43e6	2.51e6	31.12	1.018	0.76	NO	85.179	0.0764	1.76e7	5986	2943.4	2.30e7	4729	4855.2	bb
19	13C-12378-PeCDD	1.05e6	6.71e5	1.72e6	34.03	1.114	1.56	NO	87.404	0.0931	2.53e7	4766	5304.8	1.65e7	3931	4201.5	bb
20	13C-123478-HxCDD	8.38e5	6.71e5	1.51e6	36.60	0.991	1.25	NO	79.556	0.120	1.71e7	9278	1838.8	1.35e7	7007	1928.3	bd
21	13C-123678-HxCDD	8.77e5	7.03e5	1.58e6	36.69	0.994	1.25	NO	75.745	0.110	1.76e7	9278	1897.9	1.40e7	7007	2003.9	dd
22	13C-1234678-HpCDD	6.36e5	6.14e5	1.25e6	39.94	1.082	1.03	NO	87.897	0.131	9.50e6	6913	1374.1	9.22e6	6373	1447.3	bb
23	13C-OCDD	9.60e5	1.07e6	2.03e6	44.13	1.195	0.90	NO	149.410	0.114	1.10e7	5127	2154.3	1.23e7	5939	2067.2	bb
24	13C-2378-TCDF	1.22e6	1.57e6	2.79e6	30.32	0.992	0.78	NO	85.309	0.109	1.41e7	8784	1600.8	1.76e7	8122	2167.2	bb
25	13C-12378-PeCDF	1.55e6	9.77e5	2.52e6	33.24	1.088	1.58	NO	95.380	0.184	3.78e7	13958	2706.7	2.38e7	9217	2577.3	bd
26	13C-23478-PeCDF	1.44e6	9.23e5	2.36e6	33.84	1.108	1.56	NO	84.868	0.175	3.43e7	13958	2455.1	2.23e7	9217	2423.3	bb
27	13C-123478-HxCDF	6.19e5	1.20e6	1.82e6	35.90	0.972	0.52	NO	77.328	0.172	1.33e7	11012	1204.9	2.57e7	17848	1437.2	bd
28	13C-123678-HxCDF	6.71e5	1.30e6	1.97e6	36.00	0.975	0.52	NO	74.777	0.153	1.35e7	11012	1228.4	2.62e7	17848	1467.1	dd
29	13C-234678-HxCDF	6.32e5	1.18e6	1.81e6	36.47	0.988	0.53	NO	79.196	0.177	1.29e7	11012	1168.1	2.45e7	17848	1375.3	bd
30	13C-123789-HxCDF	5.72e5	1.12e6	1.69e6	37.23	1.009	0.51	NO	82.709	0.198	1.03e7	11012	935.6	1.97e7	17848	1101.9	bb

2020 DEC 19

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Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:18:33 Eastern Standard Time

Printed: Monday, December 16, 2019 17:19:05 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	ppb/L	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	4.25e5	9.45e5	1.37e6	38.71	1.049	0.45	NO	74.388	0.118	7.26e6	6815	1065.3	1.61e7	8649	1865.6	bd	bb
32	13C-1234789-HpCDF	3.69e5	8.31e5	1.20e6	40.60	1.100	0.44	NO	83.676	0.151	5.49e6	6815	805.3	1.19e7	8649	1376.3	bb	bb
33	13C-1234-TCDD	1.14e6	1.47e6	2.62e6	30.55	0.000	0.78	NO	100.000	0.0882	1.36e7	5986	2268.8	1.74e7	4729	3673.2	bb	bb
34	13C-123789-HxCDD	1.17e6	9.47e5	2.12e6	36.92	0.000	1.24	NO	100.000	0.108	2.08e7	9278	2246.5	1.71e7	7007	2441.7	dd	dd
35	37Cl-2378-TCDD	2.61e5		2.61e5	31.13	1.019			9.388	0.0156	4.28e6	2059	2077.9				bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:18:33 Eastern Standard Time
Printed: Monday, December 16, 2019 17:19:05 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethdBICFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

JD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-tetradioxins	5.21e1	5.52e1	1.07e2	27.80	0.94	YES	0.005	0.0235	2.69e3	2030	1.3	2.73e3	1355	2.0	bb	bb
Total-tetradioxins	6.39e1	6.77e1	1.32e2	27.31	0.94	YES	0.006	0.0235	1.81e3	2030	0.9	1.52e3	1355	1.1	bb	bb
Total-tetradioxins	1.44e2	6.75e1	2.12e2	27.01	2.14	YES	0.010	0.0235	5.48e3	2030	2.7	2.24e3	1355	1.7	bd	bb
Total-tetradioxins	5.92e1	6.25e1	1.22e2	26.34	0.95	YES	0.005	0.0235	1.72e3	2030	0.8	2.38e3	1355	1.8	bb	bb
2378-TCDD	1.91e2	3.64e2	5.55e2	31.13	0.53	YES	0.025	0.0235	6.35e3	2030	3.1	8.79e3	1355	6.5	bb	bd
Total-tetradioxins	5.22e1	7.14e1	1.24e2	30.93	0.73	NO	0.006	0.0235	1.90e3	2030	0.9	2.29e3	1355	1.7	bb	bb
Total-tetradioxins	1.56e2	1.02e2	2.57e2	30.31	1.53	YES	0.012	0.0235	4.44e3	2030	2.2	2.13e3	1355	1.6	bb	db
Total-tetradioxins	5.82e1	6.88e1	1.27e2	29.64	0.85	NO	0.006	0.0235	2.32e3	2030	1.1	2.21e3	1355	1.6	db	bb
Total-tetradioxins	8.68e1	6.34e1	1.50e2	28.74	1.37	YES	0.007	0.0235	2.81e3	2030	1.4	2.89e3	1355	2.1	bb	bb
Total-tetradioxins	7.94e1	9.13e1	1.71e2	32.05	0.87	NO	0.008	0.0235	2.50e3	2030	1.2	3.48e3	1355	2.6	bb	bb
Total-tetradioxins	1.30e2	7.20e1	2.02e2	31.89	1.81	YES	0.009	0.0235	2.32e3	2030	1.1	1.69e3	1355	1.2	bb	db
Total-tetradioxins	6.79e1	9.97e1	1.68e2	31.72	0.68	NO	0.008	0.0235	4.69e3	2030	2.3	2.09e3	1355	1.5	bb	bd

PD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentadioxins	6.47e1	7.26e1	1.37e2	32.55	0.89	YES	0.009	0.0282	1.86e3	2501	0.7	2.60e3	1488	1.7	bb	bb
Total-pentadioxins	7.13e1	6.35e1	1.35e2	34.34	1.12	YES	0.009	0.0282	2.24e3	2501	0.9	5.23e3	1488	3.5	dd	bb
12378-PeCDD	3.76e2	2.63e2	6.39e2	34.06	1.43	NO	0.044	0.0282	8.88e3	2501	3.6	5.78e3	1488	3.9	db	bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

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Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

HD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	SIN1	Height2	Noise2	SIN2	M	M2
Total-hexadioxins	7.18e1	5.91e1	1.31e2	38.08	1.22	NO	0.009	0.0434	2.67e3	3570	0.7	2.35e3	1512	1.6	bb	bb
Total-hexadioxins	8.64e1	6.69e1	1.53e2	37.67	1.29	NO	0.011	0.0434	5.58e3	3570	1.6	4.90e3	1512	3.2	bb	bb
Total-hexadioxins	3.96e2	1.39e2	5.36e2	37.24	2.84	YES	0.037	0.0434	6.83e3	3570	1.9	2.95e3	1512	1.9	bb	bb
123789-HxCDD	2.71e2	2.65e2	5.36e2	36.95	1.02	YES	0.037	0.0439	8.71e3	3570	2.4	6.57e3	1512	4.3	bb	bb
123678-HxCDD	3.16e2	2.51e2	5.67e2	36.69	1.26	NO	0.038	0.0424	1.02e4	3570	2.9	9.84e3	1512	6.5	db	db
123478-HxCDD	3.07e2	1.84e2	4.92e2	36.63	1.66	YES	0.035	0.0440	8.98e3	3570	2.5	3.83e3	1512	2.5	bd	bd
Total-hexadioxins	5.24e2	8.52e1	6.09e2	35.99	6.15	YES	0.042	0.0434	2.05e4	3570	5.7	3.22e3	1512	2.1	db	bb
Total-hexadioxins	9.56e1	1.06e2	2.02e2	35.95	0.90	YES	0.014	0.0434	5.88e3	3570	1.6	4.63e3	1512	3.1	dd	bb

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HPD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	SIN1	Height2	Noise2	SIN2	M	M2
Total-heptadioxins	7.29e2	2.43e2	9.71e2	38.69	3.01	YES	0.075	0.0452	1.44e4	1962	7.4	4.46e3	1553	2.9	bb	bb
Total-heptadioxins	4.10e2	1.69e2	5.79e2	40.58	2.43	YES	0.045	0.0452	8.25e3	1962	4.2	6.47e3	1553	4.2	MM	bb
Total-heptadioxins	7.08e1	7.89e1	1.50e2	40.08	0.90	NO	0.012	0.0452	2.53e3	1962	1.3	3.95e3	1553	2.5	db	db
1234678-HpCDD	3.30e2	4.20e2	7.50e2	39.93	0.79	YES	0.058	0.0452	5.14e3	1962	2.6	9.67e3	1553	6.2	MM	bd

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TF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	SIN1	Height2	Noise2	SIN2	M	M2
Total-tetrafurans	6.03e1	9.33e1	1.54e2	28.18	0.65	YES	0.006	0.0294	2.39e3	1468	1.6	4.15e3	2219	1.9	bb	bb
Total-tetrafurans	7.92e1	6.19e1	1.41e2	27.85	1.28	YES	0.005	0.0294	2.90e3	1468	2.0	2.21e3	2219	1.0	bb	bb
Total-tetrafurans	5.12e1	6.90e1	1.20e2	26.84	0.74	NO	0.004	0.0294	1.88e3	1468	1.3	4.41e3	2219	2.0	bb	bb
Total-tetrafurans	6.51e1	1.17e2	1.82e2	26.46	0.56	YES	0.007	0.0294	4.30e3	1468	2.9	3.65e3	2219	1.6	bb	dd
Total-tetrafurans	5.62e1	8.75e1	1.44e2	25.39	0.64	YES	0.005	0.0294	3.63e3	1468	2.5	5.00e3	2219	2.3	bb	bb
Total-tetrafurans	1.53e2	1.57e2	3.10e2	31.68	0.97	YES	0.011	0.0294	4.51e3	1468	3.1	5.94e3	2219	2.7	bb	bb
Total-tetrafurans	7.69e1	1.05e2	1.82e2	30.58	0.73	NO	0.007	0.0294	3.33e3	1468	2.3	3.72e3	2219	1.7	db	bb
2378-TCDF	1.00e2	6.98e1	1.70e2	30.38	1.44	YES	0.006	0.0294	3.21e3	1468	2.2	2.38e3	2219	1.1	dd	bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

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Handwritten signature: J. J. O'Connell

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

PF1

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentafurans (F1)	6.39e1	1.80e2	2.44e2	30.08	0.35	YES	0.010	0.0148	4.37e3	1229	3.6	3.08e3	2130	1.4	bb	db
Total-pentafurans (F1)	6.94e1	2.11e2	2.81e2	31.80	0.33	YES	0.012	0.0148	2.66e3	1229	2.2	7.82e3	2130	3.7	bb	bb

PF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentafurans	5.13e1	9.17e1	1.43e2	34.50	0.56	YES	0.006	0.0232	1.10e3	3400	0.3	3.85e3	1887	2.0	bb	bb
23478-PeCDF	5.52e2	4.56e2	1.01e3	33.85	1.21	YES	0.043	0.0238	2.05e4	3400	6.0	1.12e4	1887	5.9	db	bb
12378-PeCDF	4.98e2	4.80e2	9.77e2	33.25	1.04	YES	0.041	0.0227	1.72e4	3400	5.1	1.39e4	1887	7.1	bb	bb

HPF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
234678-HxCDF	5.78e2	4.81e2	1.06e3	36.48	1.20	NO	0.051	0.0225	6.89e3	1957	3.5	1.02e4	1810	5.6	MM	MM
123678-HxCDF	5.24e2	2.82e2	8.06e2	36.00	1.86	YES	0.039	0.0228	1.17e4	1957	6.0	7.47e3	1810	4.1	db	dd
123478-HxCDF	5.08e2	3.86e2	8.94e2	35.90	1.31	NO	0.045	0.0222	1.68e4	1957	8.6	7.83e3	1810	4.3	bd	bd
123789-HxCDF	5.23e2	4.75e2	9.98e2	37.24	1.10	NO	0.056	0.0291	8.15e3	1957	4.2	7.73e3	1810	4.3	db	MM

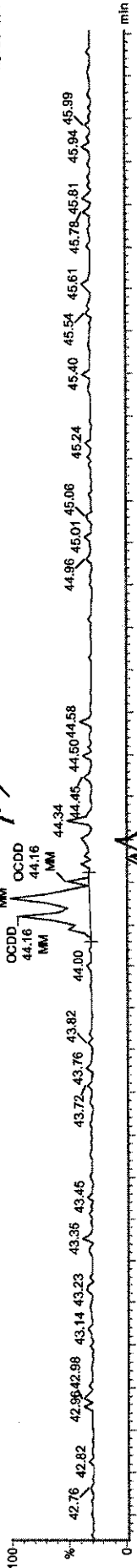
HPF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1234789-HpCDF	3.12e2	2.61e2	5.73e2	40.60	1.20	NO	0.040	0.0299	6.20e3	1489	4.2	5.07e3	1079	4.7	bb	bd
Total-heptafurans	5.02e1	7.71e1	1.27e2	39.23	0.65	YES	0.008	0.0267	1.12e3	1489	0.8	2.16e3	1079	2.0	bb	db
Total-heptafurans	5.35e1	6.95e1	1.23e2	39.15	0.77	YES	0.008	0.0267	2.40e3	1489	1.6	2.95e3	1079	2.7	bb	bd
Total-heptafurans	5.06e1	5.88e1	1.09e2	38.82	0.86	YES	0.007	0.0267	2.99e3	1489	2.0	4.00e3	1079	3.7	db	bb
1234678-HpCDF	7.43e1	3.15e2	3.89e2	38.71	0.24	YES	0.025	0.0239	4.62e3	1489	3.1	8.13e3	1079	7.5	dd	bb
Total-heptafurans	5.93e1	6.87e1	1.28e2	41.05	0.86	YES	0.008	0.0267	4.51e3	1489	3.0	4.02e3	1079	3.7	bb	bb

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

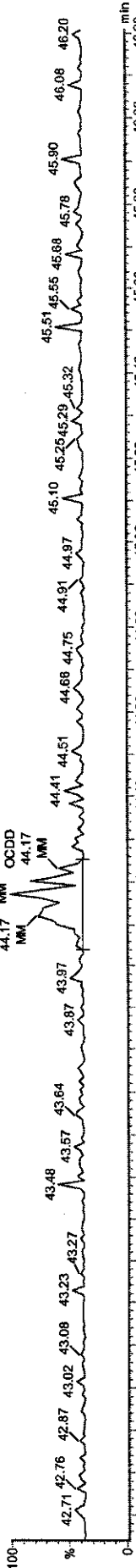
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A14DEC19A-4
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F5:Voltage SIR.EI+
 459.735
 1.476e+004

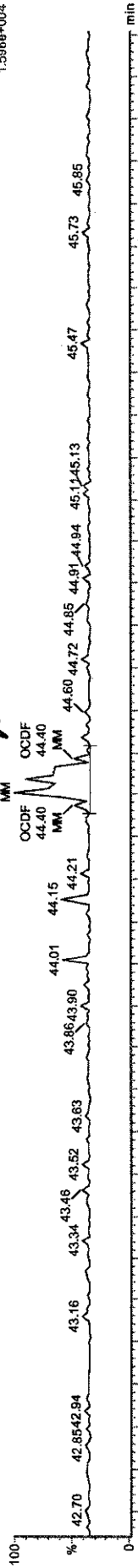


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MANUAL INTEGRATION
METHOD 1613
HRP750_2

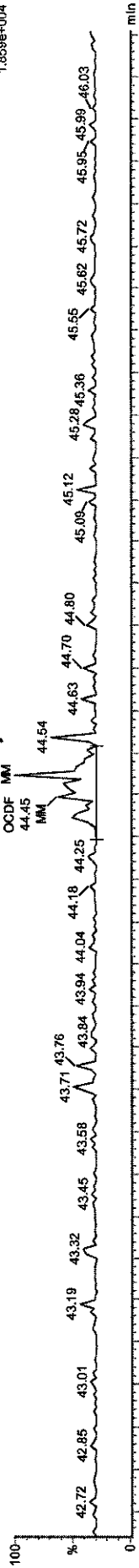
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12025525-2.MB

F5:Voltage SIR,EI+
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1.596e+004



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12025525-2.MB

F5:Voltage SIR,EI+
443.740
1.859e+004

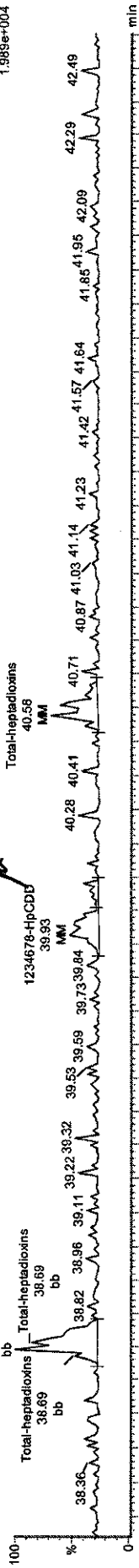


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HRP750_2

MANUAL INTEGRATION
METHOD 1613
HRP750_2

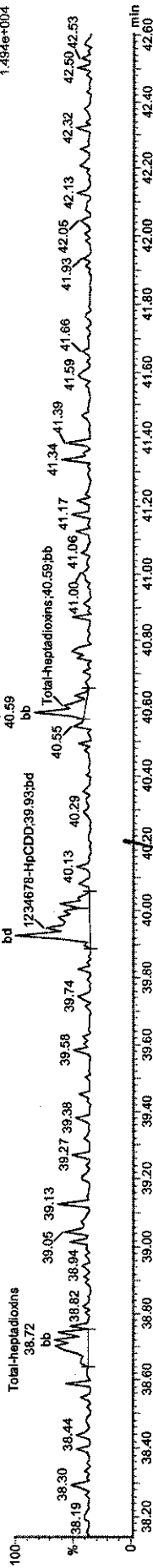
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F4-Voltage SIR.EI+
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1.989e+004



A14DEC19A-4
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F4-Voltage SIR.EI+
425.774
1.484e+004

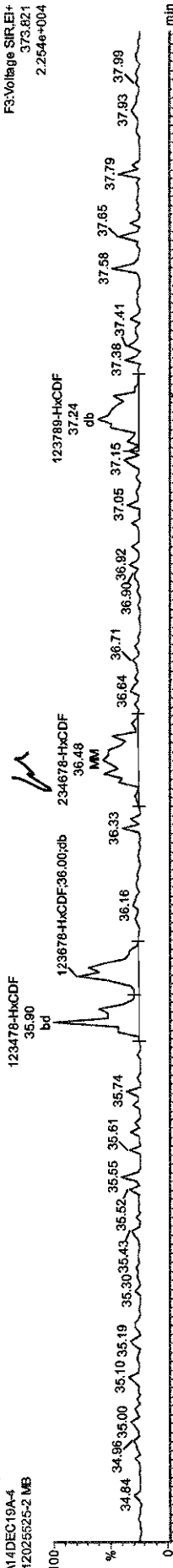


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MANUAL INTEGRATION
METHOD 1613
HRP750_2

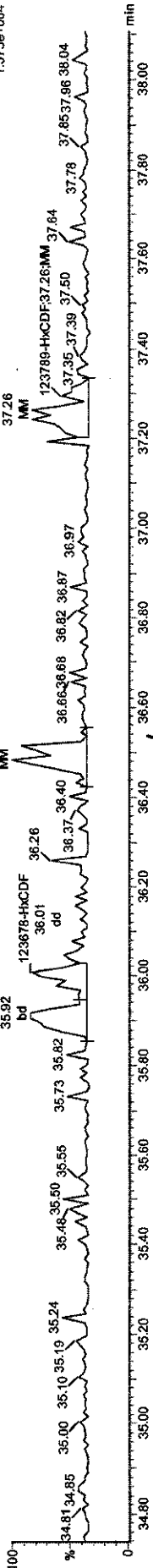
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12025525-2.MS

F3:Voltage SIRLEI+
373.821
2.264e+004



A14DEC19A-4
12025525-2.MS

F3:Voltage SIRLEI+
375.818
1.573e+004



Yafu/s
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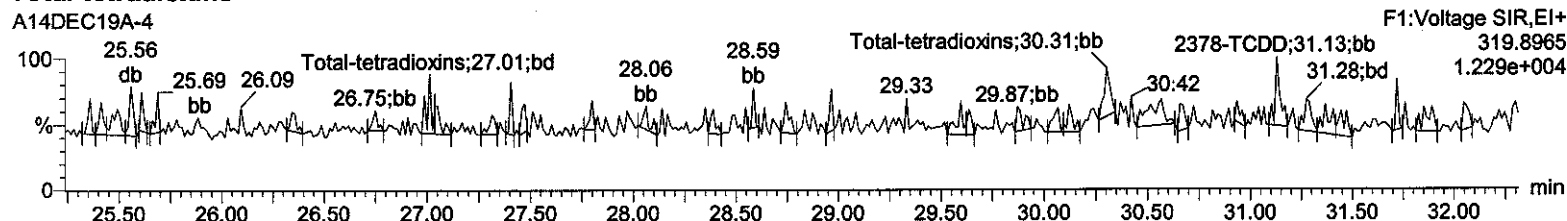
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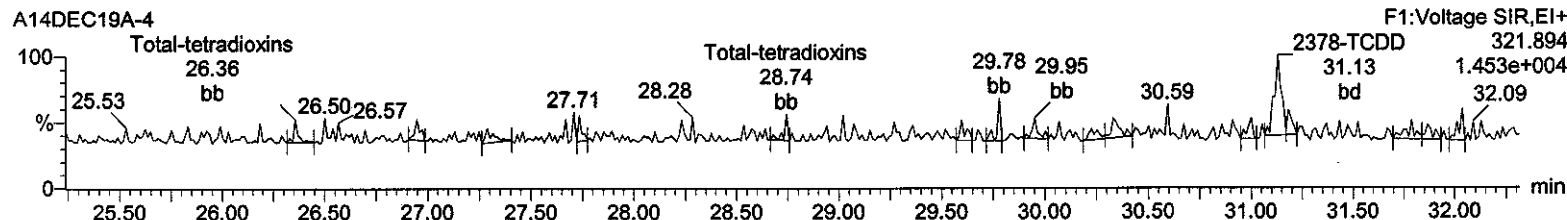
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User: MJC

-3 FOR BATCH 42571

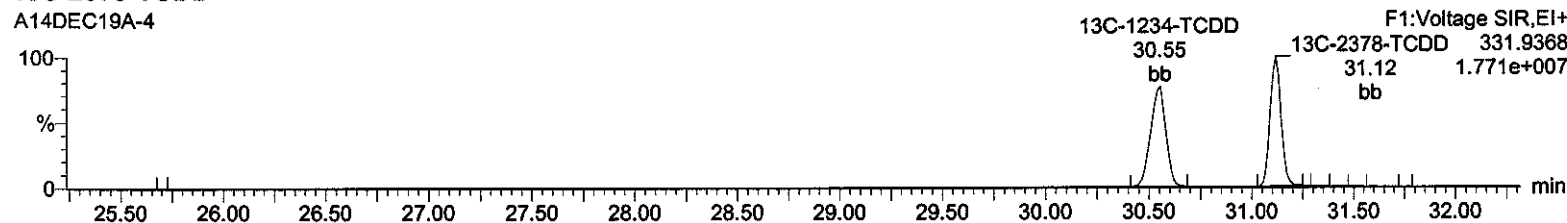
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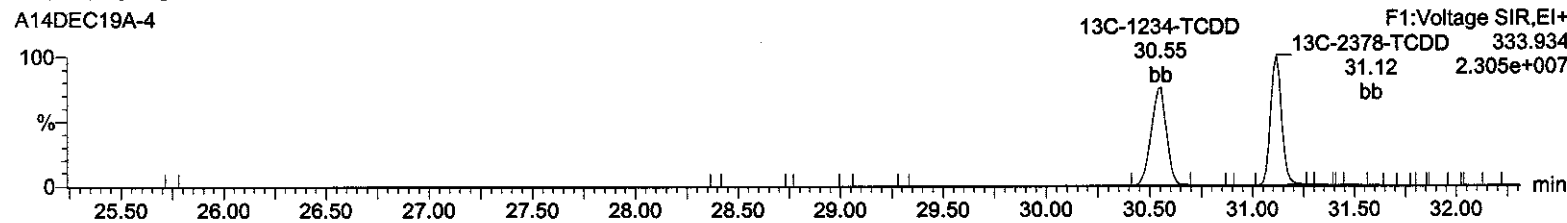
Total-tetradoxins



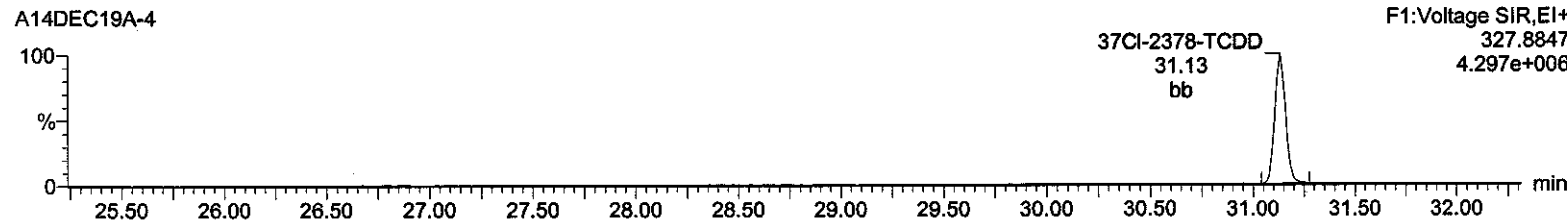
13C-2378-TCDD



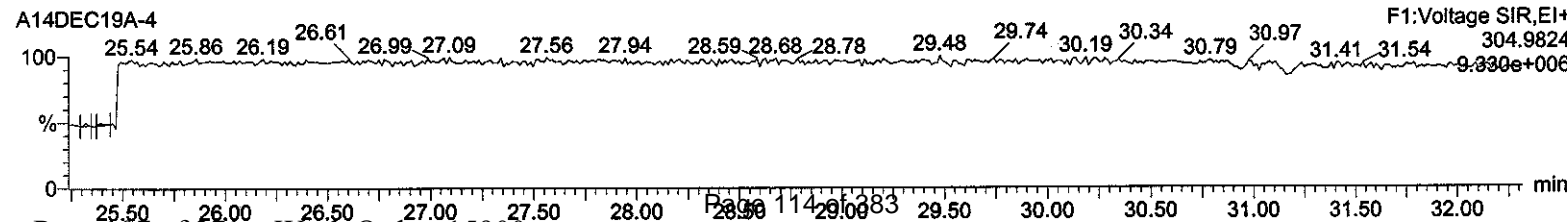
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1

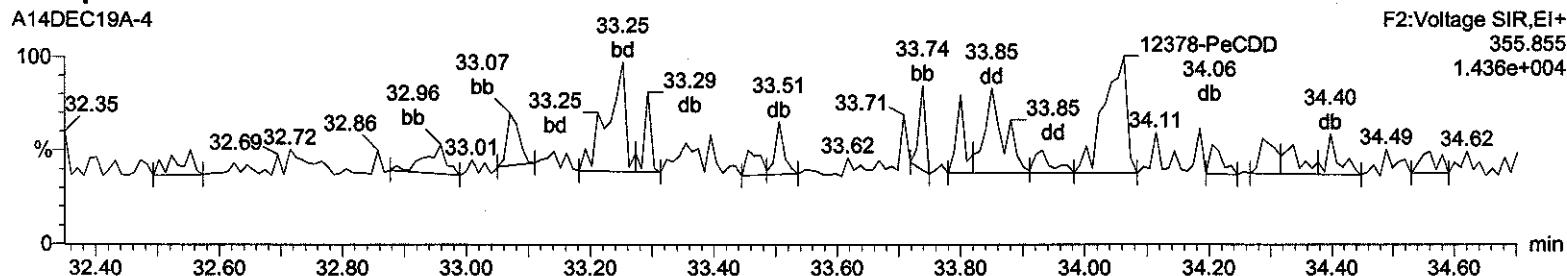


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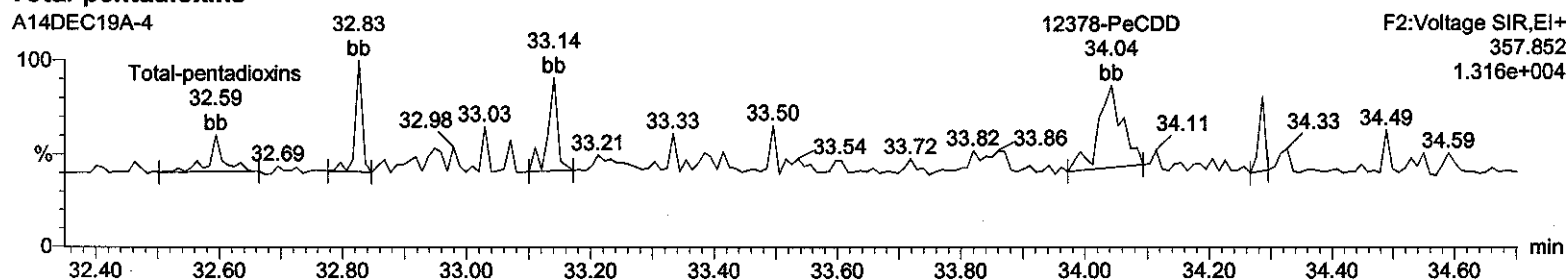
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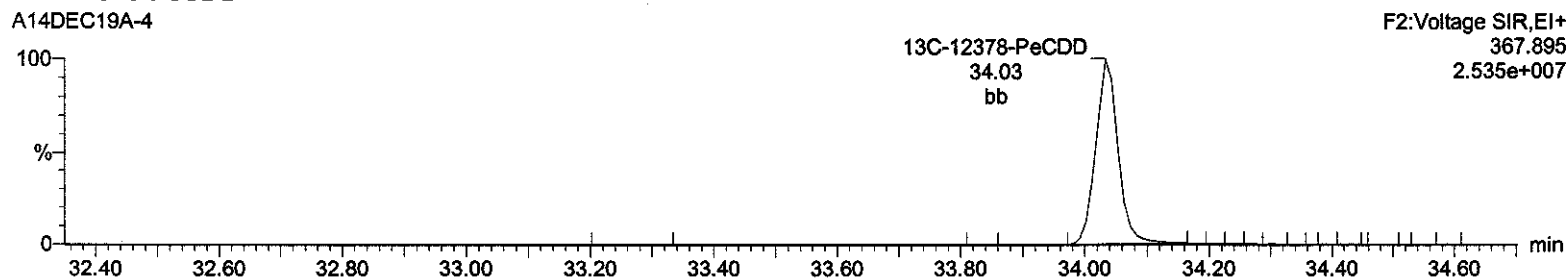
Total-pentadioxins



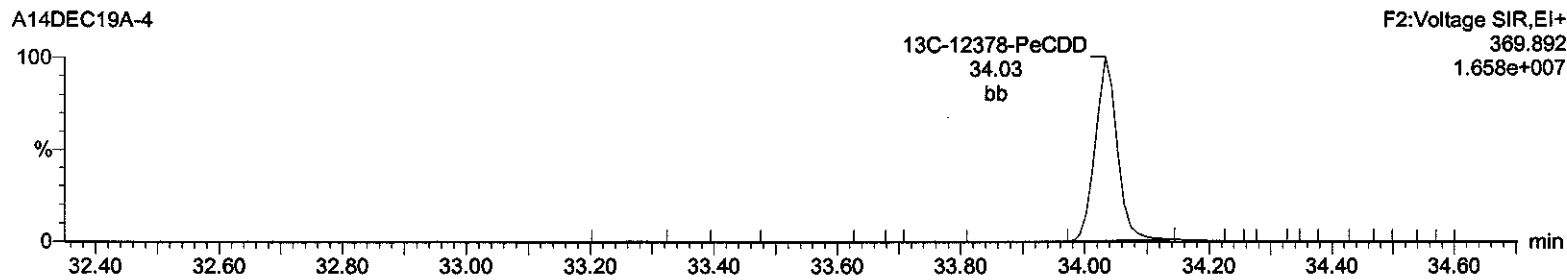
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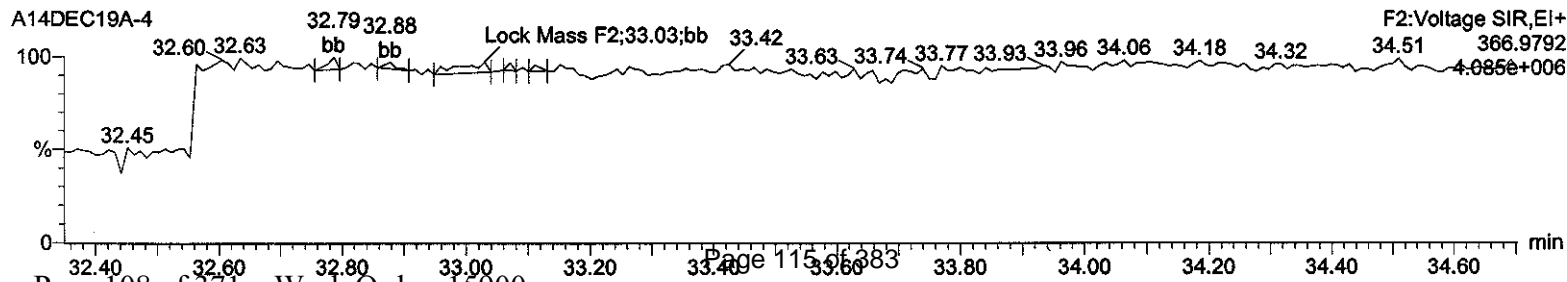
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13C-12378-PeCDD



Lock Mass F2

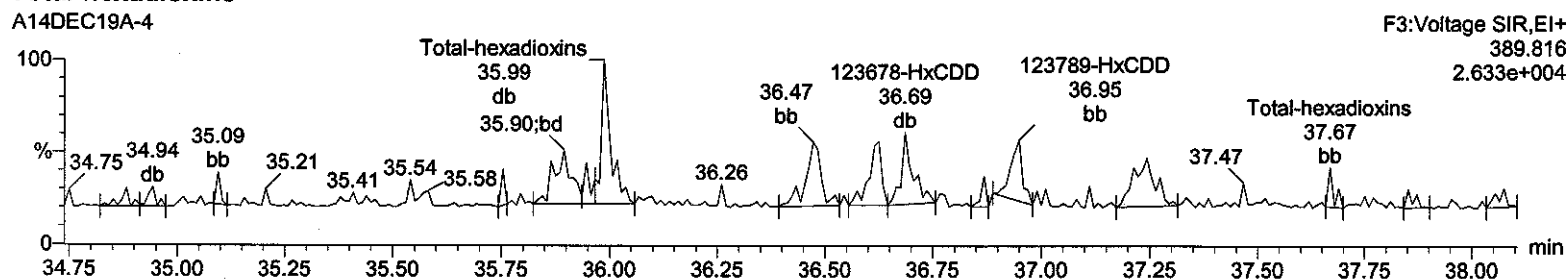


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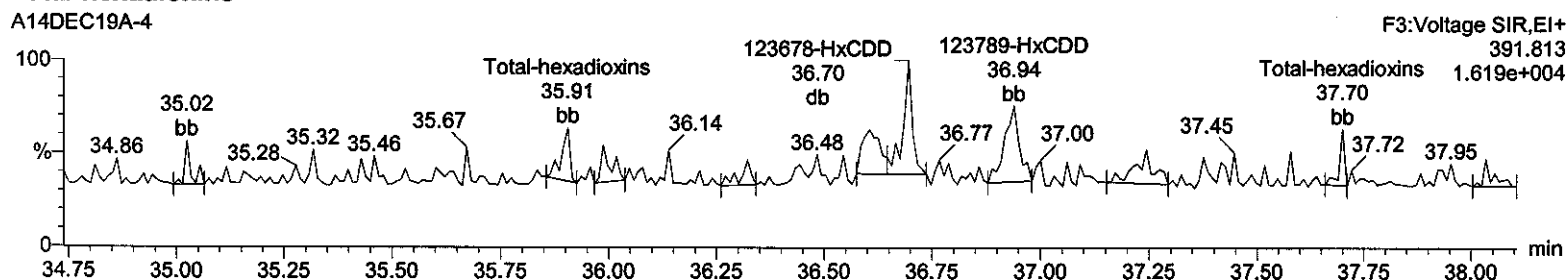
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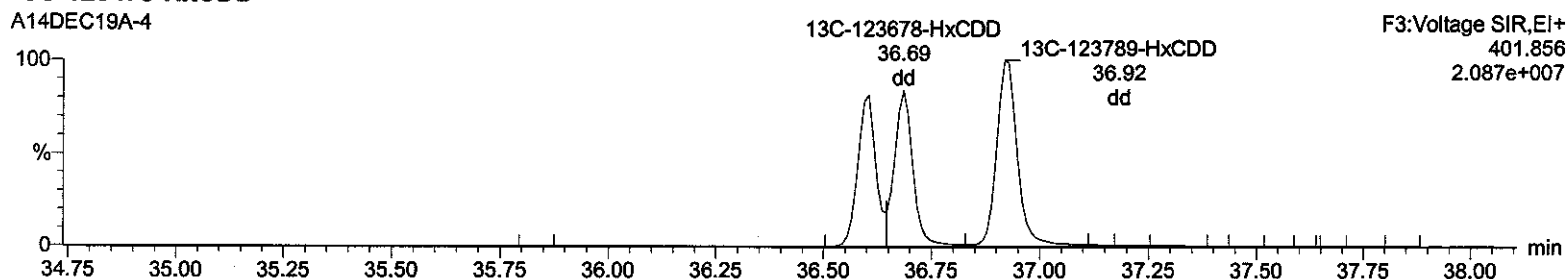
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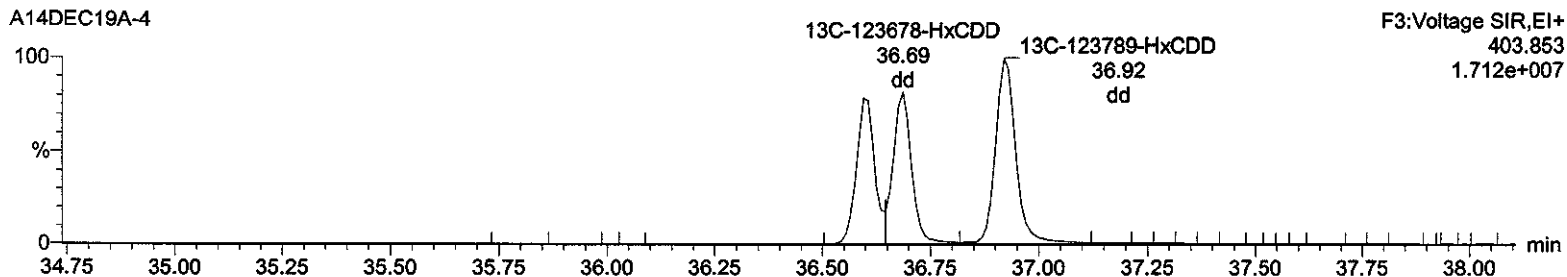
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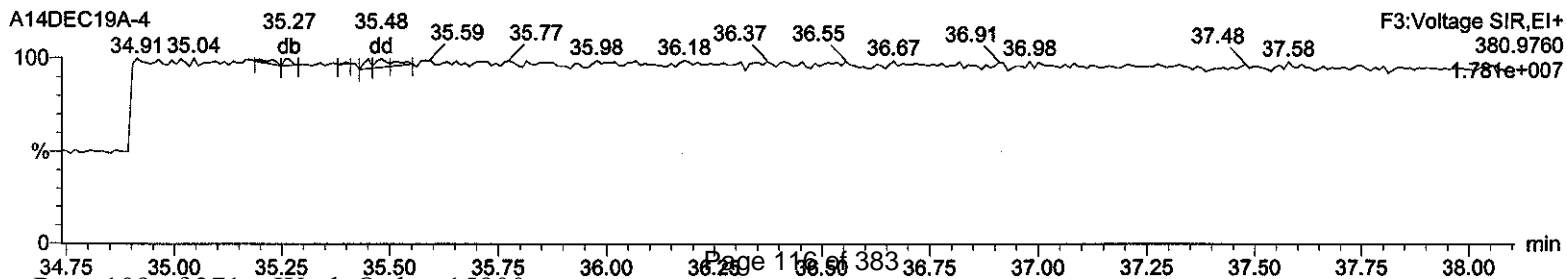
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13C-123478-HxCDD



Lock Mass F3



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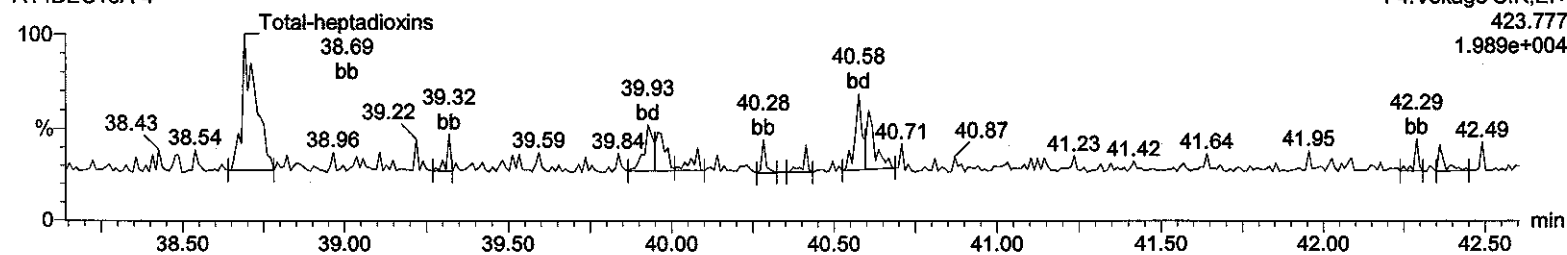
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Total-heptadioxins

A14DEC19A-4

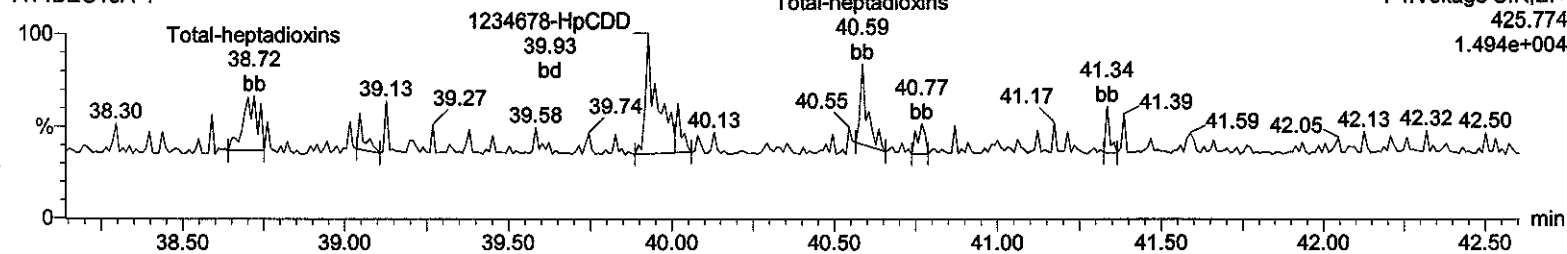
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423.777
1.989e+004



Total-heptadioxins

A14DEC19A-4

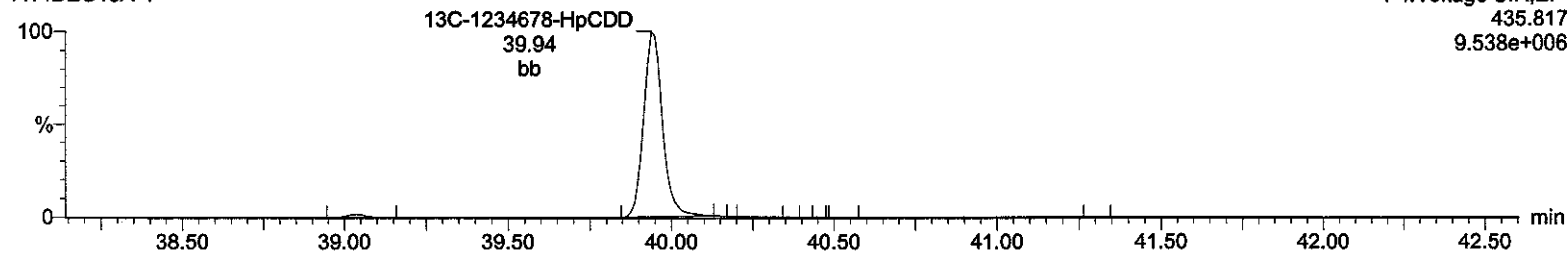
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1.494e+004



13C-1234678-HpCDD

A14DEC19A-4

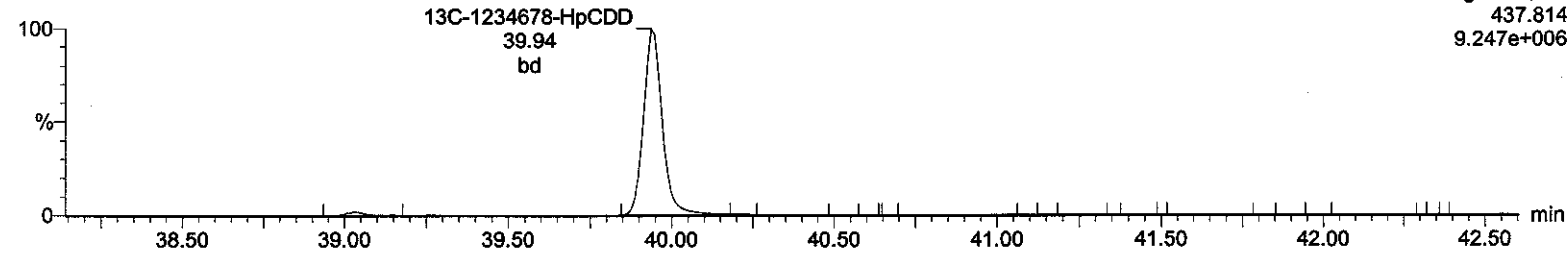
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9.538e+006



13C-1234678-HpCDD

A14DEC19A-4

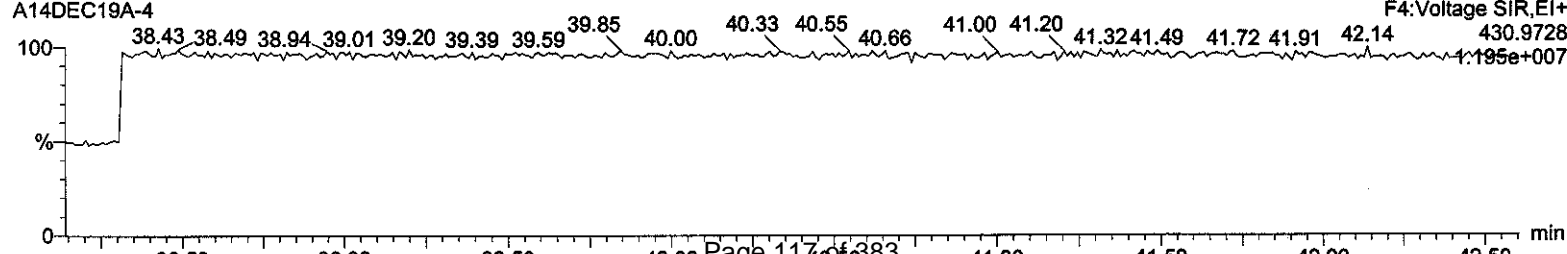
F4:Voltage SIR,EI+
437.814
9.247e+006



Lock Mass F4

A14DEC19A-4

F4:Voltage SIR,EI+
430.9728
1.195e+007



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

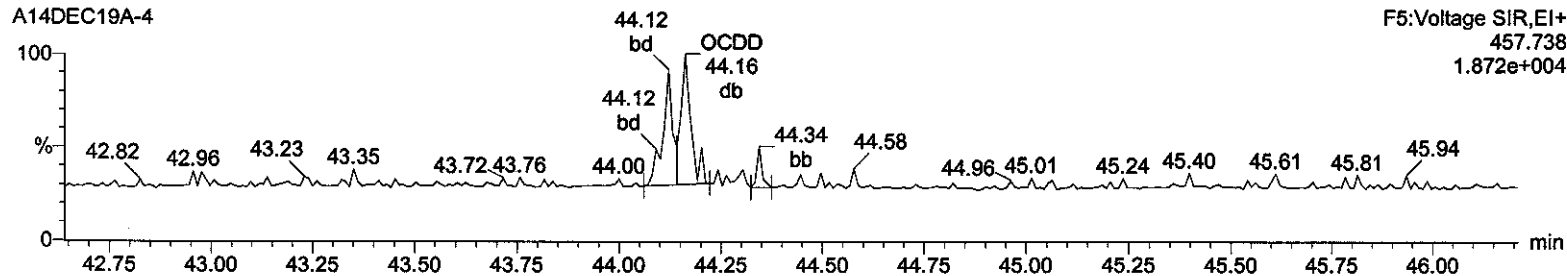
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

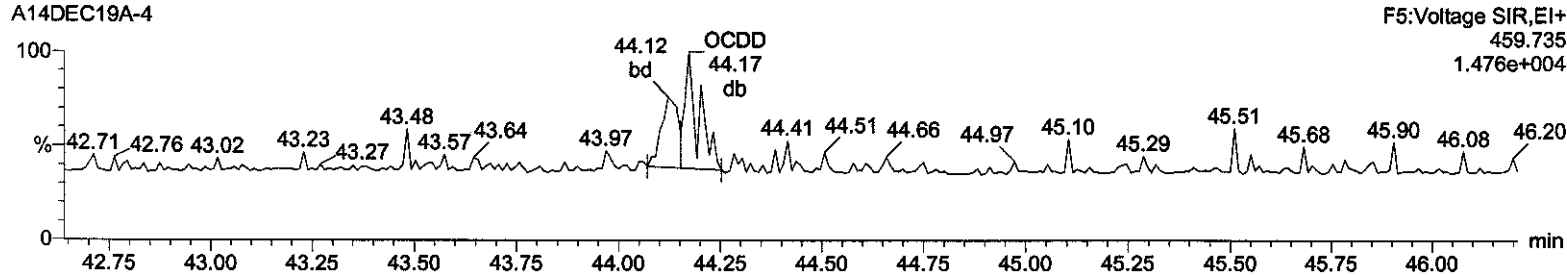
OCDD

A14DEC19A-4



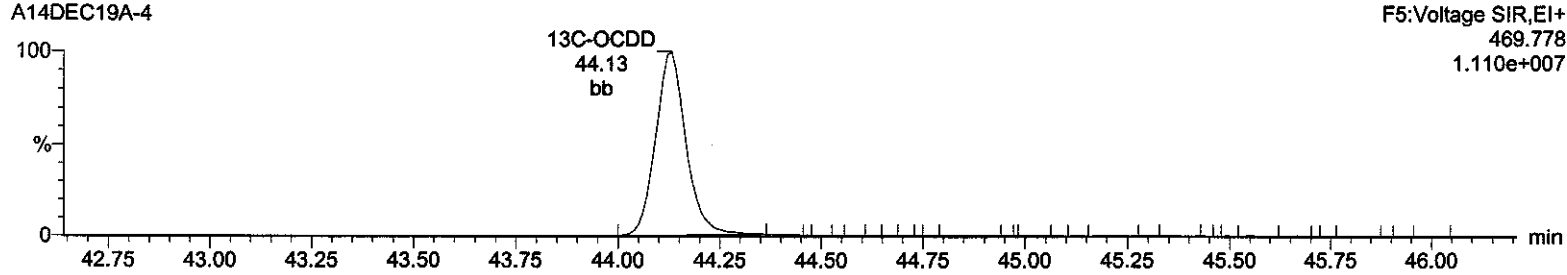
OCDD

A14DEC19A-4



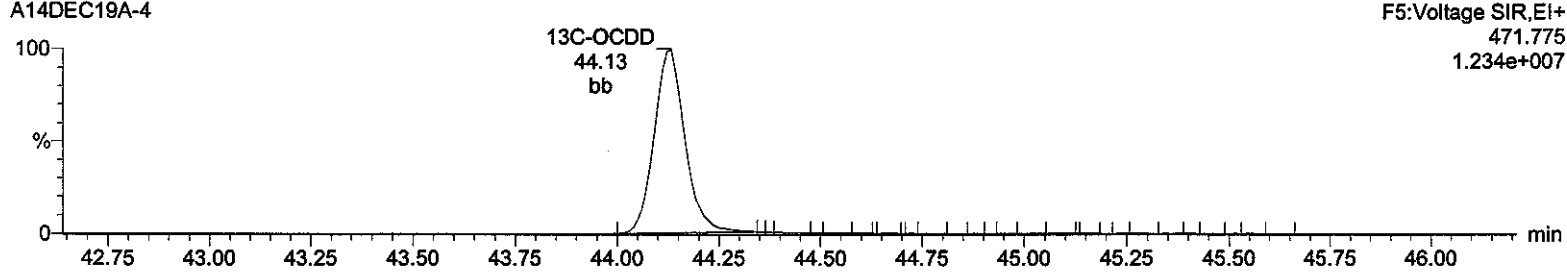
13C-OCDD

A14DEC19A-4



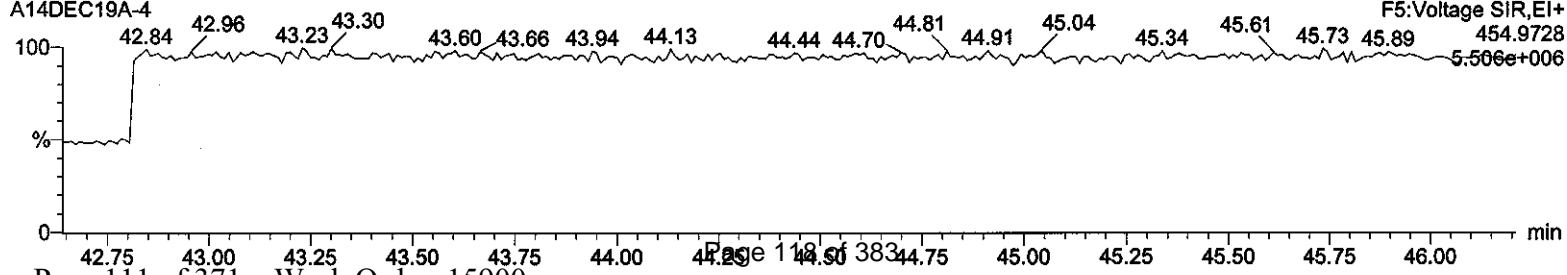
13C-OCDD

A14DEC19A-4



Lock Mass F5

A14DEC19A-4

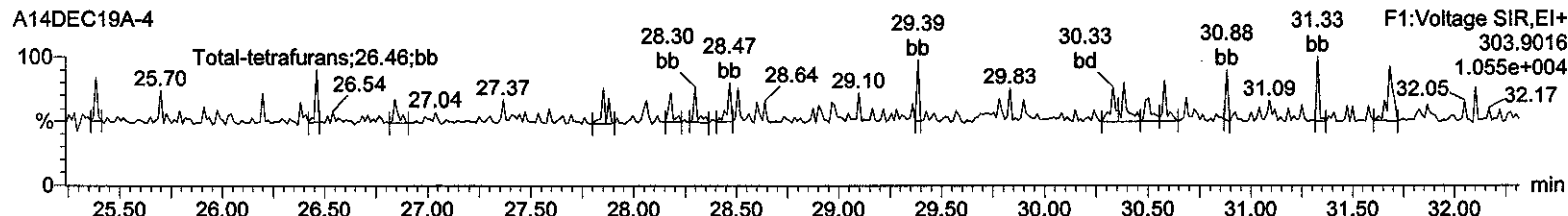


Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

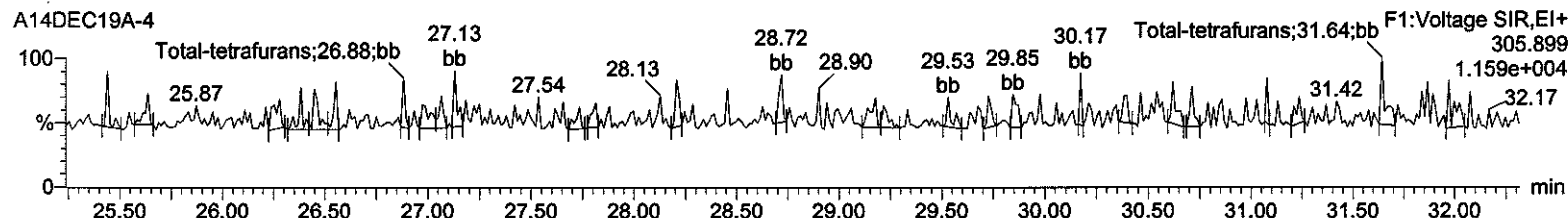
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

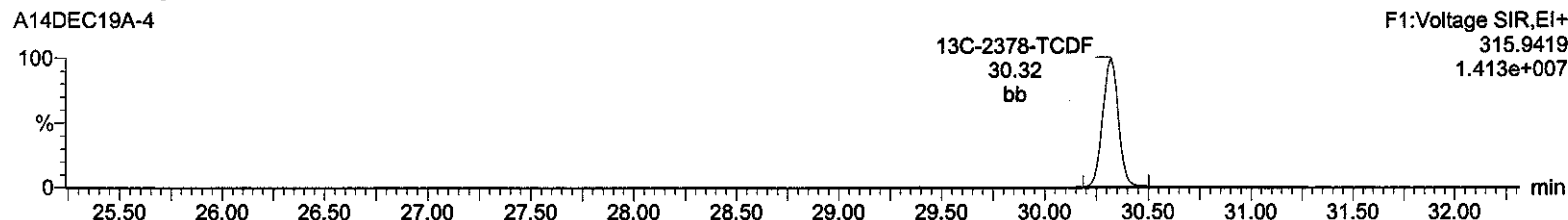
Total-tetrafurans



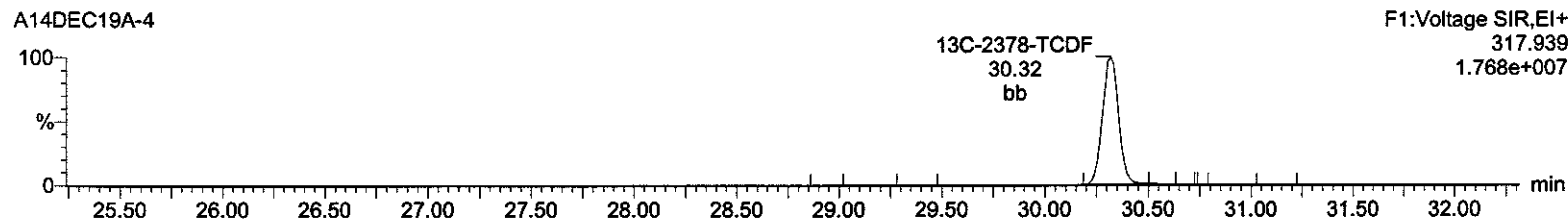
Total-tetrafurans



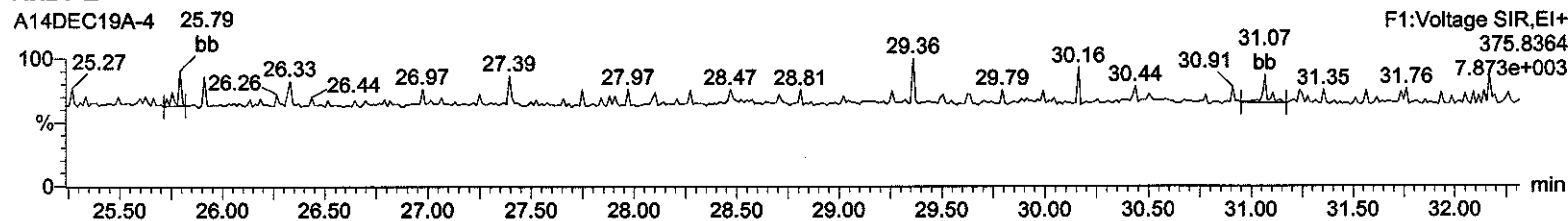
13C-2378-TCDF



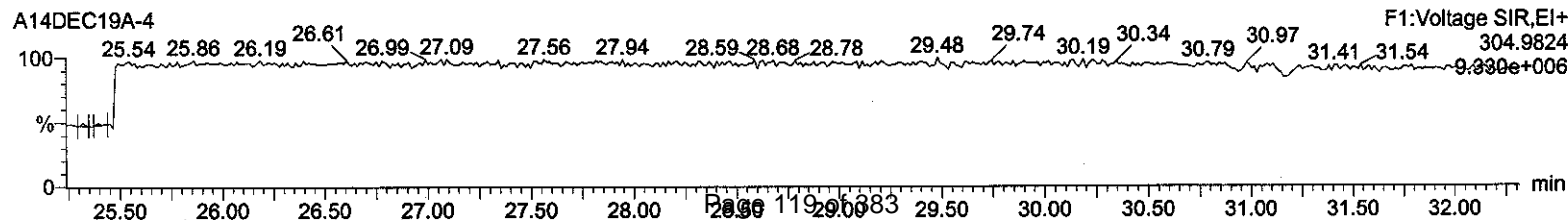
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

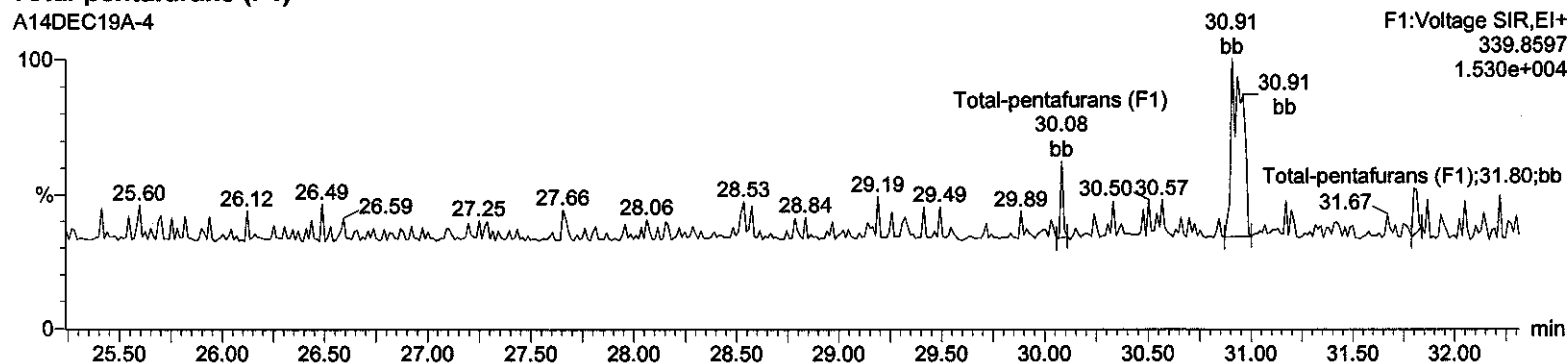
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

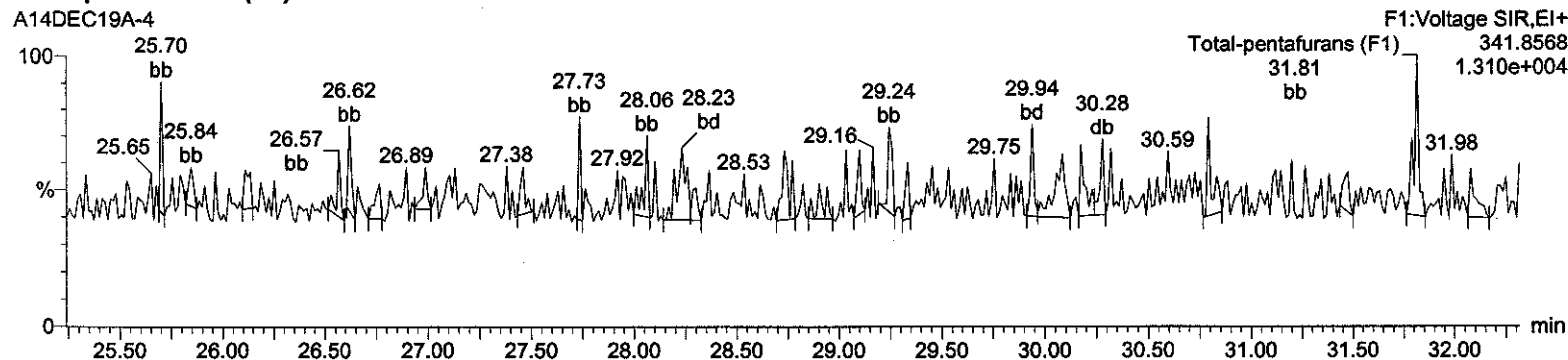
Total-pentafurans (F1)

A14DEC19A-4



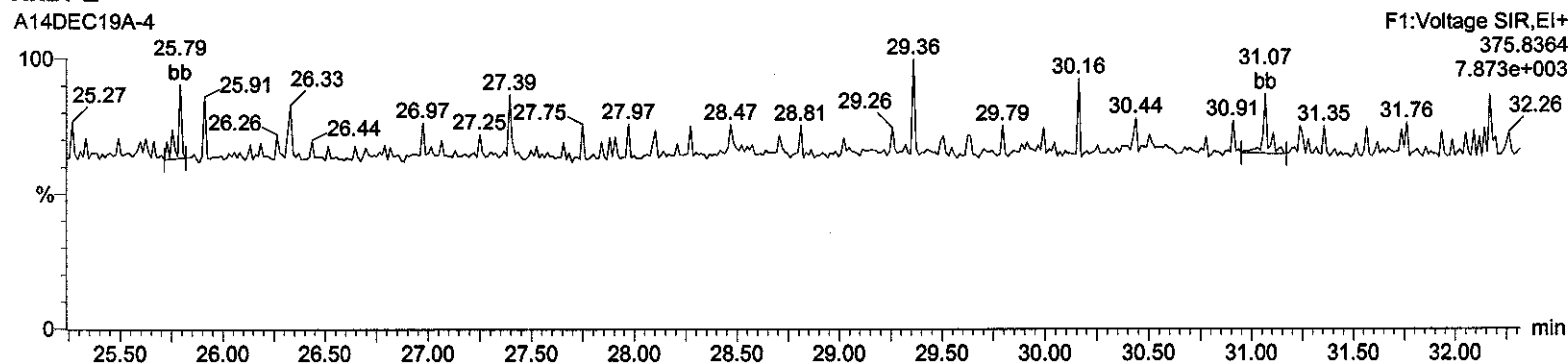
Total-pentafurans (F1)

A14DEC19A-4



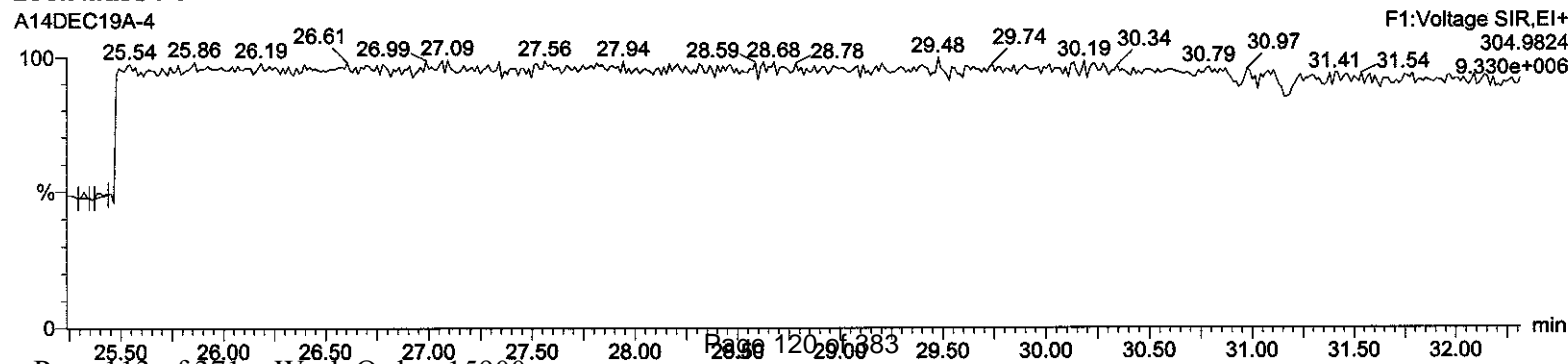
HxDPE

A14DEC19A-4



Lock Mass F1

A14DEC19A-4

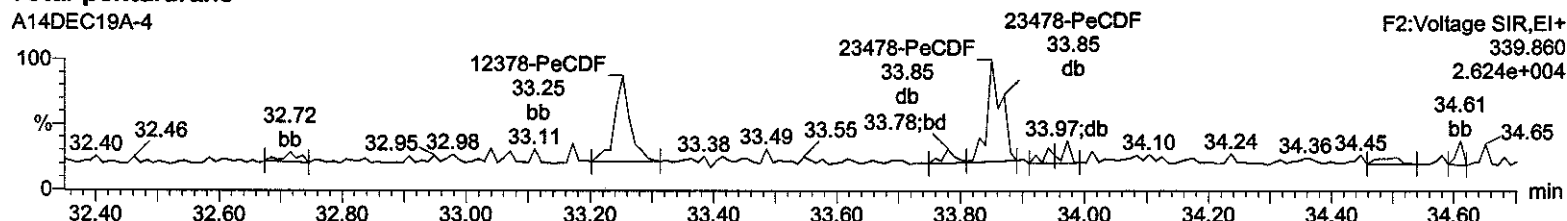


Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

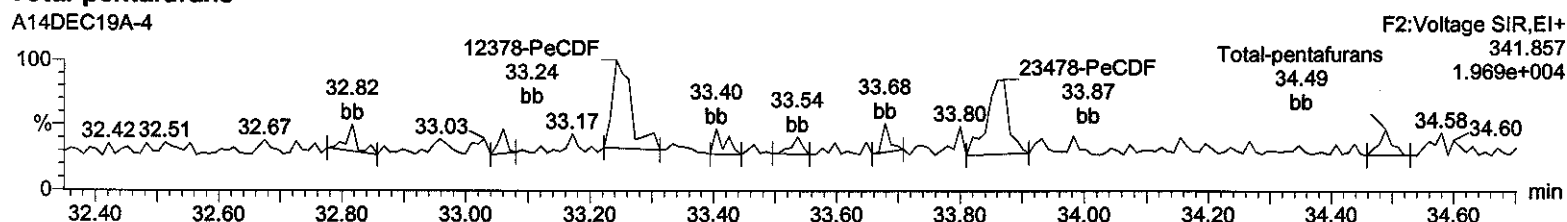
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

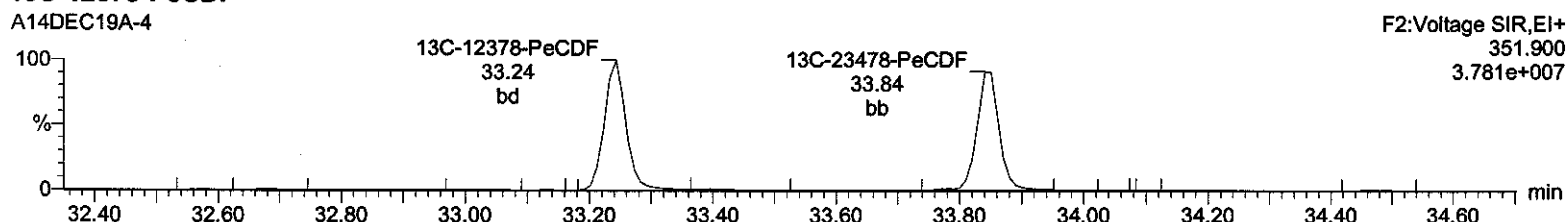
Total-pentafurans



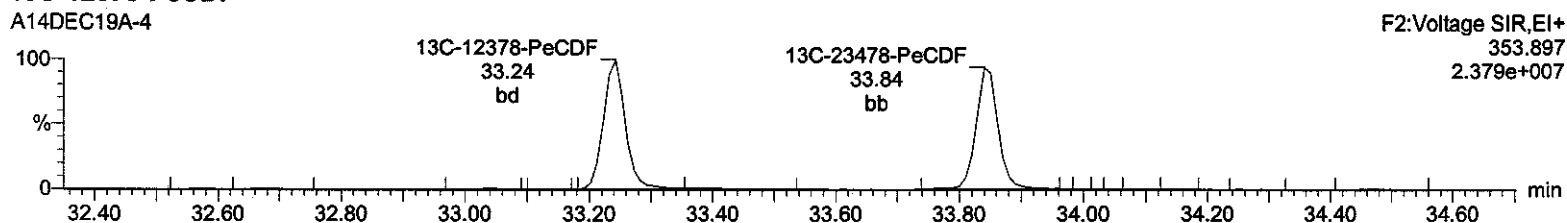
Total-pentafurans



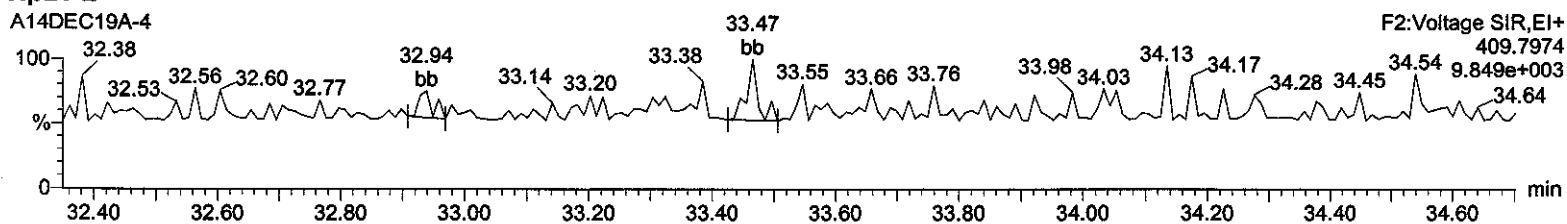
13C-12378-PeCDF



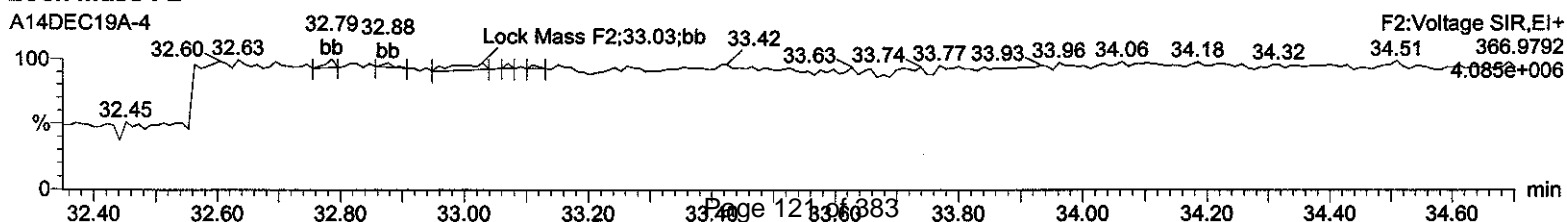
13C-12378-PeCDF



HpDPE



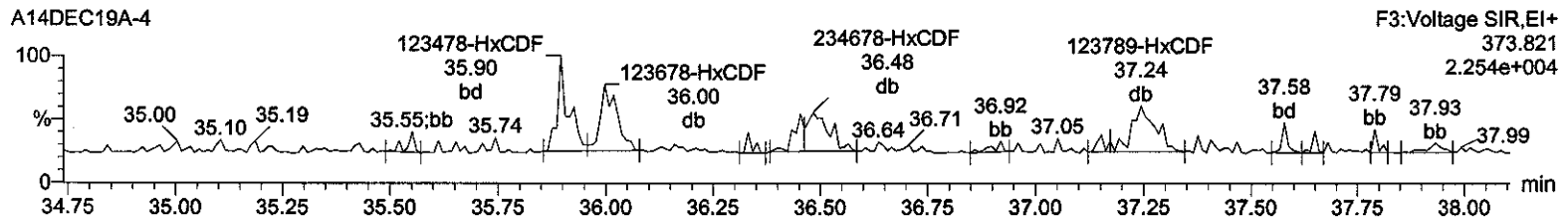
Lock Mass F2



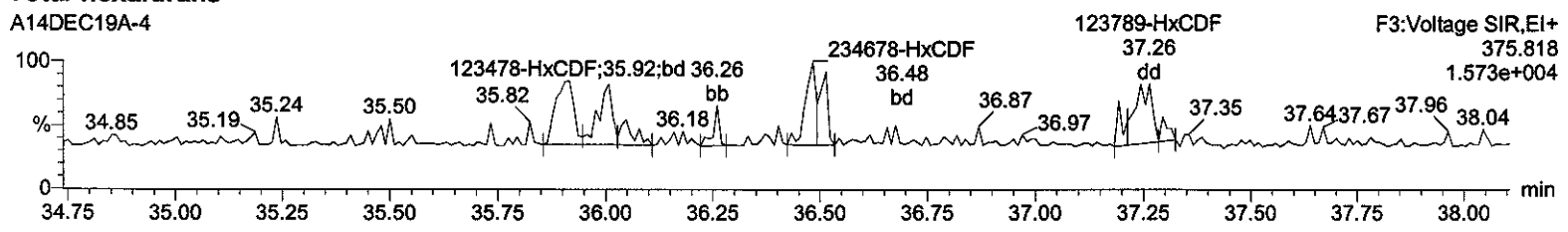
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

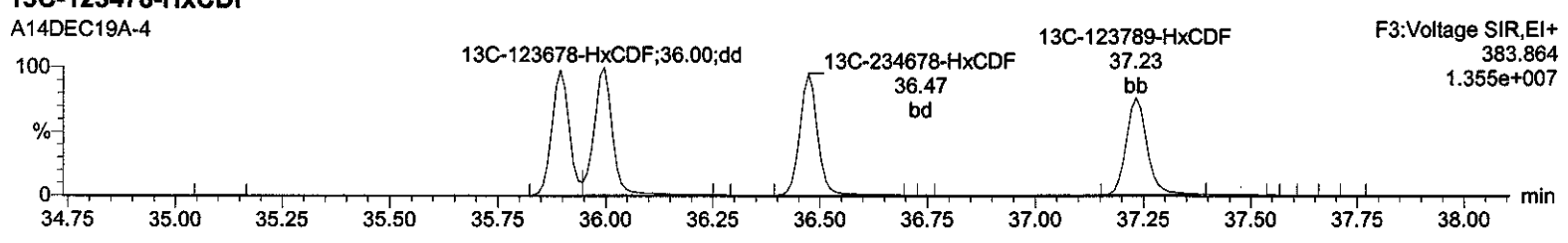
Total-hexafurans



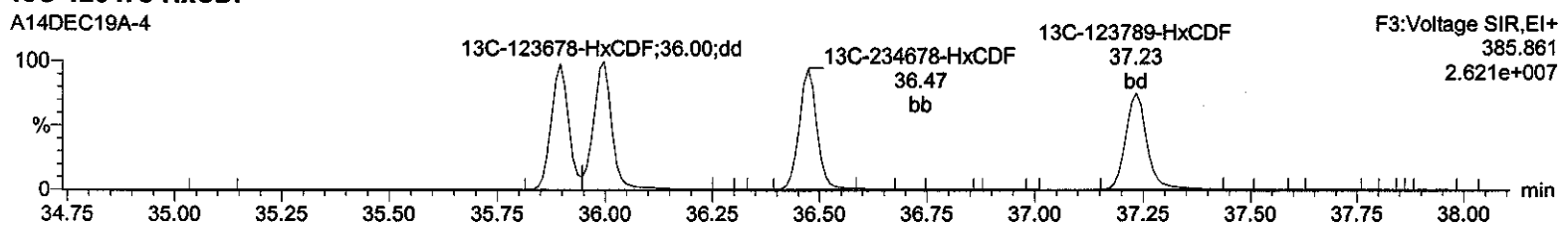
Total-hexafurans



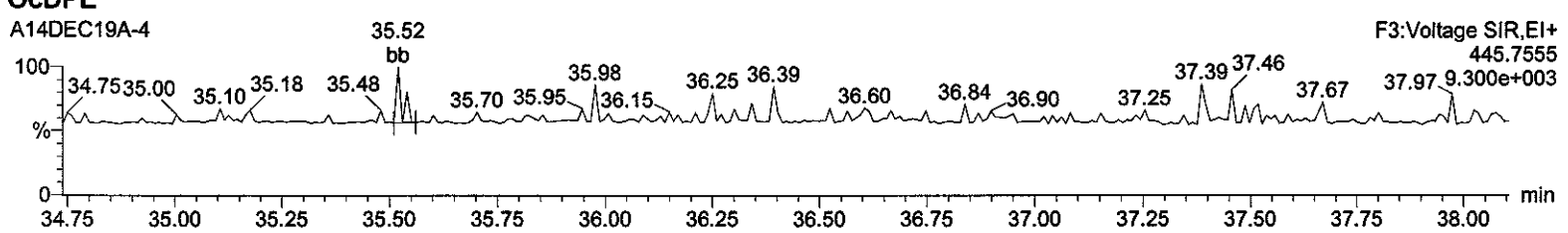
13C-123478-HxCDF



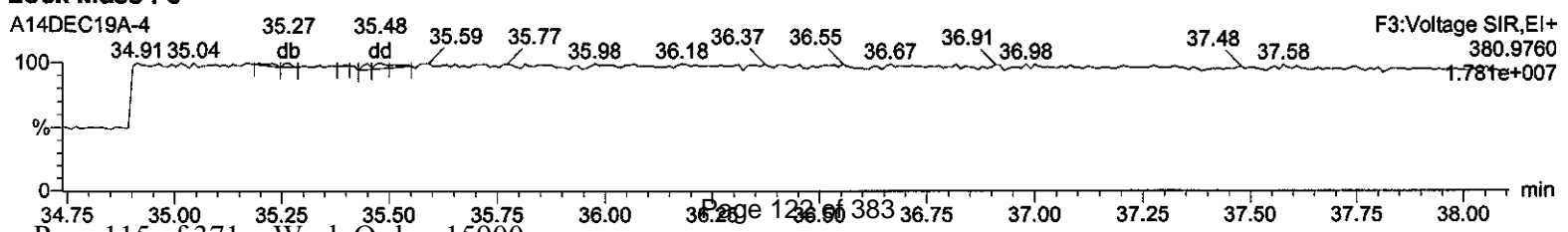
13C-123478-HxCDF



OcDPE



Lock Mass F3



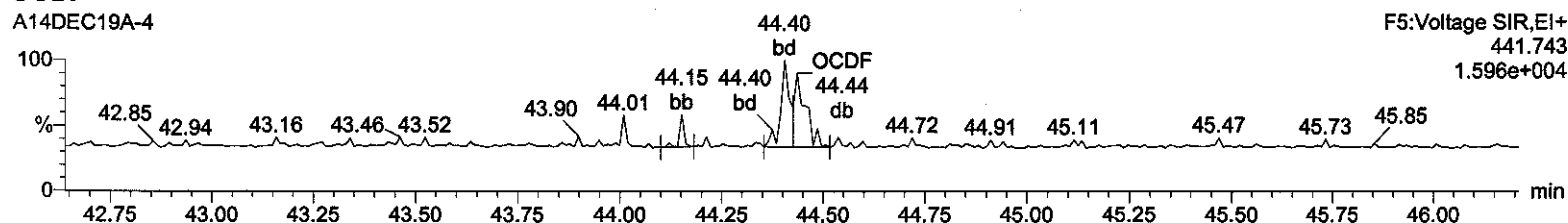
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

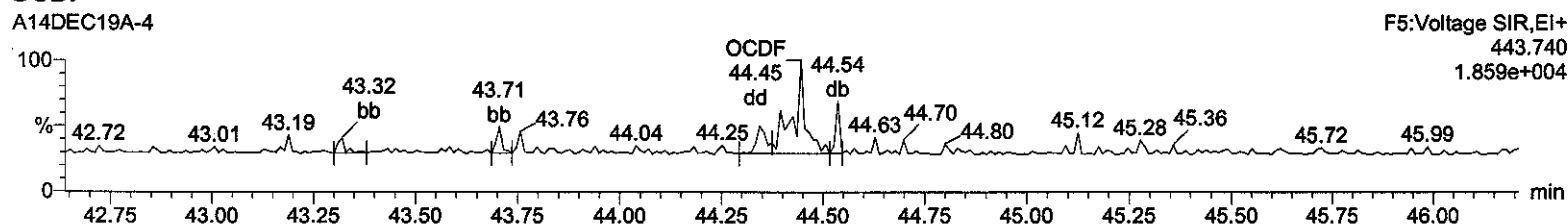
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

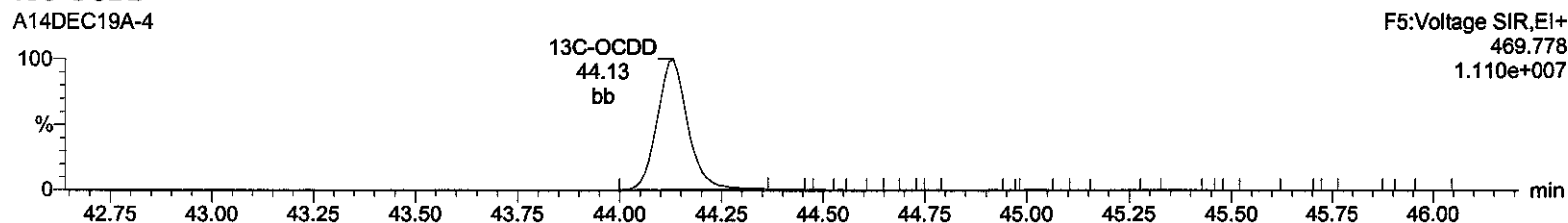
OCDF



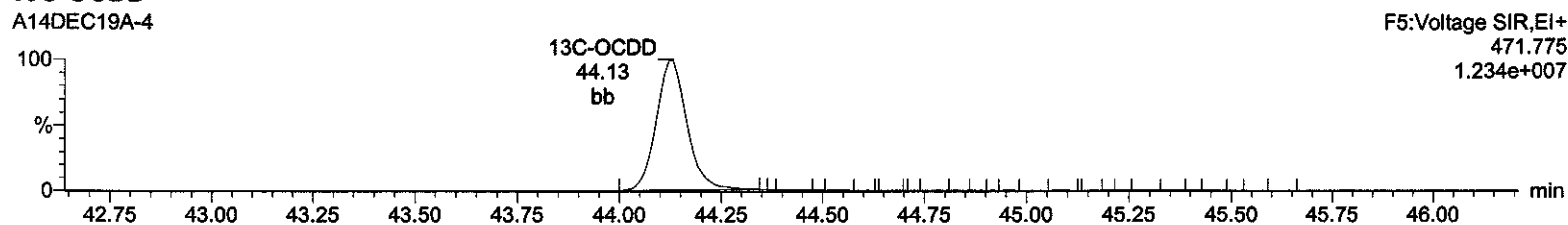
OCDF



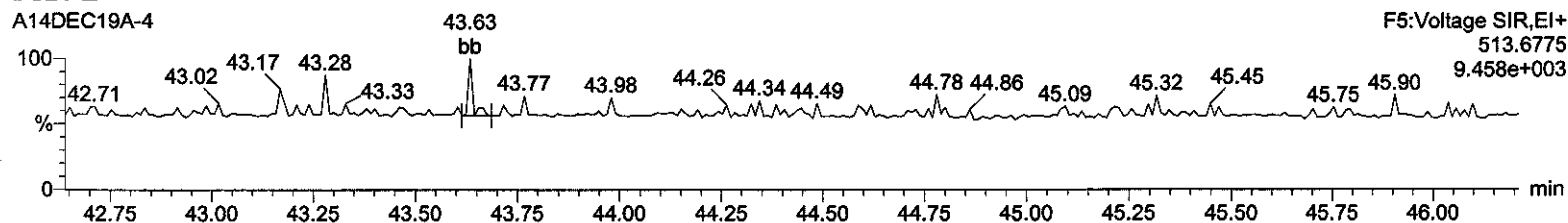
13C-OCDD



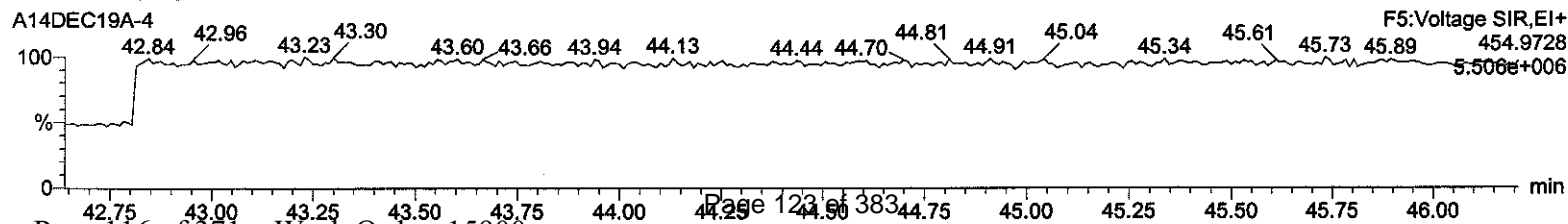
13C-OCDD



DeDPE



Lock Mass F5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025526		Matrix: WATER
Client Sample: QC for batch 42567		
Client ID: LCS for batch 42567		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 12:15	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-2		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.206	ng/L	0.00064	0.010
40321-76-4	1,2,3,7,8-PeCDD		1.06	ng/L	0.000926	0.050
39227-28-6	1,2,3,4,7,8-HxCDD		1.02	ng/L	0.00199	0.050
57653-85-7	1,2,3,6,7,8-HxCDD		1.02	ng/L	0.00196	0.050
19408-74-3	1,2,3,7,8,9-HxCDD		1.09	ng/L	0.002	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.934	ng/L	0.00214	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2.00	ng/L	0.00424	0.100
51207-31-9	2,3,7,8-TCDF		0.179	ng/L	0.000778	0.010
57117-41-6	1,2,3,7,8-PeCDF		0.919	ng/L	0.00128	0.050
57117-31-4	2,3,4,7,8-PeCDF		0.995	ng/L	0.0013	0.050
70648-26-9	1,2,3,4,7,8-HxCDF		0.973	ng/L	0.0026	0.050
57117-44-9	1,2,3,6,7,8-HxCDF		0.976	ng/L	0.00272	0.050
60851-34-5	2,3,4,6,7,8-HxCDF		0.951	ng/L	0.00272	0.050
72918-21-9	1,2,3,7,8,9-HxCDF		0.959	ng/L	0.00346	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.02	ng/L	0.00244	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.962	ng/L	0.00318	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.90	ng/L	0.00482	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.82	2.00	ng/L	90.9	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.91	2.00	ng/L	95.4	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.71	2.00	ng/L	85.7	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.72	2.00	ng/L	86.0	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.97	2.00	ng/L	98.6	(22%-166%)
13C-OCDD		3.35	4.00	ng/L	83.8	(13%-199%)
13C-2,3,7,8-TCDF		1.85	2.00	ng/L	92.3	(22%-152%)
13C-1,2,3,7,8-PeCDF		2.11	2.00	ng/L	105	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.87	2.00	ng/L	93.7	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.69	2.00	ng/L	84.4	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.67	2.00	ng/L	83.4	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.75	2.00	ng/L	87.6	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.83	2.00	ng/L	91.4	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.64	2.00	ng/L	82.2	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.89	2.00	ng/L	94.3	(20%-186%)
37Cl-2,3,7,8-TCDD		0.195	0.200	ng/L	97.6	(31%-191%)

Comments:
U Analyte was analyzed for, but not detected above the specified detection limit.

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:14:29 Eastern Standard Time

20 DEC 19

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: . Job: %613%, Task: HRP750_2, User: MJC

FOR BATCH 42571

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	ppb/L	EDL	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	9.82e4	1.27e5	2.25e5	31.13	1.000	0.77	NO	10.290	0.0320	1.67e6	2483	672.1	2.16e6	2096	1029.6	bb	bb
2	12378-PeCDD	4.74e5	3.06e5	7.80e5	34.04	1.000	1.55	NO	52.833	0.0463	1.19e7	4362	2732.1	7.79e6	2468	3157.2	bb	bb
3	123478-HxCDD	4.08e5	3.28e5	7.37e5	36.61	1.000	1.24	NO	51.134	0.0995	8.81e6	6440	1367.3	7.06e6	5868	1204.0	bd	bd
4	123678-HxCDD	4.50e5	3.64e5	8.14e5	36.69	1.000	1.24	NO	50.959	0.0979	8.81e6	6440	1367.4	7.20e6	5868	1226.3	dd	dd
5	123789-HxCDD	4.49e5	3.65e5	8.14e5	36.93	1.007	1.23	NO	54.462	0.100	8.68e6	6440	1347.5	7.03e6	5868	1197.4	dd	db
6	1234678-HpCDD	3.26e5	3.17e5	6.43e5	39.95	1.000	1.03	NO	46.720	0.107	5.06e6	4439	1139.0	4.95e6	4913	1007.9	bd	bd
7	OCDD	4.86e5	5.57e5	1.04e6	44.14	1.000	0.87	NO	99.966	0.212	5.63e6	5563	1012.4	6.26e6	4645	1346.8	bd	bb
8	2378-TCDF	1.02e5	1.41e5	2.43e5	30.34	1.001	0.72	NO	8.939	0.0389	1.18e6	2069	571.6	1.67e6	2847	587.4	bb	bd
9	12378-PeCDF	6.78e5	4.37e5	1.12e6	33.24	1.000	1.55	NO	45.936	0.0641	1.70e7	6757	2514.2	1.11e7	8716	1270.9	bd	bd
10	23478-PeCDF	7.17e5	4.63e5	1.18e6	33.85	1.000	1.55	NO	49.759	0.0649	1.91e7	6757	2833.3	1.24e7	8716	1420.8	bb	bb
11	123478-HxCDF	5.46e5	4.45e5	9.91e5	35.91	1.000	1.23	NO	48.667	0.130	1.23e7	12965	948.8	9.96e6	10872	915.9	bd	bd
12	123678-HxCDF	5.85e5	4.70e5	1.05e6	36.00	1.000	1.25	NO	48.805	0.136	1.23e7	12965	945.6	9.79e6	10872	900.4	db	db
13	234678-HxCDF	5.62e5	4.59e5	1.02e6	36.48	1.000	1.22	NO	47.557	0.136	1.18e7	12965	911.6	9.56e6	10872	879.0	bb	bb
14	123789-HxCDF	4.97e5	4.01e5	8.98e5	37.24	1.000	1.24	NO	47.953	0.173	9.26e6	12965	714.4	7.30e6	10872	671.4	bb	bb
15	1234678-HpCDF	4.24e5	4.16e5	8.40e5	38.72	1.000	1.02	NO	51.199	0.122	7.33e6	7143	1026.1	6.94e6	6925	1002.7	bb	bd
16	1234789-HpCDF	3.73e5	3.64e5	7.37e5	40.61	1.000	1.03	NO	48.114	0.159	5.61e6	7143	785.1	5.30e6	6925	765.0	bd	bd
17	OCDF	5.44e5	6.13e5	1.16e6	44.43	1.007	0.89	NO	95.053	0.241	6.21e6	5655	1097.8	6.98e6	7890	884.5	bd	bd
18	13C-2378-TCDD	1.07e6	1.40e6	2.47e6	31.12	1.019	0.76	NO	90.897	0.0758	1.75e7	6100	2873.6	2.28e7	3747	6077.3	bb	bb
19	13C-12378-PeCDD	1.05e6	6.80e5	1.73e6	34.03	1.114	1.54	NO	95.415	0.165	2.62e7	8806	2974.9	1.69e7	5477	3090.4	bb	bb
20	13C-123478-HxCDD	8.54e5	6.79e5	1.53e6	36.60	0.991	1.26	NO	85.681	0.114	1.84e7	6492	2826.5	1.48e7	9203	1603.1	bd	bd
21	13C-123678-HxCDD	9.40e5	7.51e5	1.69e6	36.69	0.994	1.25	NO	85.953	0.104	1.85e7	6492	2849.2	1.49e7	9203	1617.7	dd	dd
22	13C-1234678-HpCDD	6.72e5	6.50e5	1.32e6	39.94	1.082	1.03	NO	98.640	0.134	1.07e7	6556	1633.2	1.05e7	7224	1448.3	bb	bd
23	13C-OCDD	9.97e5	1.15e6	2.15e6	44.12	1.195	0.87	NO	167.574	0.126	1.15e7	6240	1847.4	1.31e7	6118	2133.2	bb	bd
24	13C-2378-TCDF	1.22e6	1.59e6	2.78e6	30.32	0.993	0.78	NO	92.315	0.0997	1.41e7	8874	1594.1	1.81e7	5483	3303.2	bb	bb
25	13C-12378-PeCDF	1.57e6	9.94e5	2.57e6	33.23	1.088	1.58	NO	105.327	0.168	3.91e7	11263	3472.7	2.51e7	8269	3033.9	bd	bd
26	13C-23478-PeCDF	1.47e6	9.37e5	2.40e6	33.84	1.108	1.56	NO	93.697	0.159	3.69e7	11263	3273.0	2.38e7	8269	2881.6	bb	bb
27	13C-123478-HxCDF	6.41e5	1.23e6	1.87e6	35.90	0.972	0.52	NO	84.435	0.167	1.44e7	12052	1193.4	2.77e7	16457	1684.6	bd	bd
28	13C-123678-HxCDF	7.07e5	1.37e6	2.08e6	35.99	0.975	0.52	NO	83.444	0.149	1.44e7	12052	1193.1	2.79e7	16457	1692.8	dd	dd
29	13C-234678-HxCDF	6.52e5	1.24e6	1.89e6	36.47	0.988	0.53	NO	87.588	0.172	1.33e7	12052	1104.6	2.57e7	16457	1560.6	bd	bb
30	13C-123789-HxCDF	6.07e5	1.16e6	1.77e6	37.22	1.008	0.52	NO	91.438	0.192	1.12e7	12052	927.8	2.18e7	16457	1325.2	bd	bb

Quantify Sample Summary Report
 Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:14:29 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	4.40e5	9.87e5	1.43e6	38.70	1.048	0.45	NO	82.187	0.109	7.72e6	5617	1373.7	1.72e7	8898	1931.4	bb	bb
32	13C-1234789-HpCDF	3.84e5	8.91e5	1.27e6	40.59	1.099	0.43	NO	94.266	0.140	5.54e6	5617	986.8	1.30e7	8898	1461.7	bb	bd
33	13C-1234-TCDD	1.05e6	1.36e6	2.41e6	30.54	0.000	0.77	NO	100.000	0.0855	1.25e7	6100	2051.9	1.63e7	3747	4348.6	bb	bb
34	13C-123789-HxCDD	1.11e6	8.87e5	2.00e6	36.92	0.000	1.25	NO	100.000	0.102	2.13e7	6492	3281.4	1.69e7	9203	1838.7	dd	dd
35	37Cl-2378-TCDD	2.50e5	2.50e5	31.13	1.019				9.758	0.0210	4.16e6	2562	1622.7				bb	bb

Quantify Sample Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18

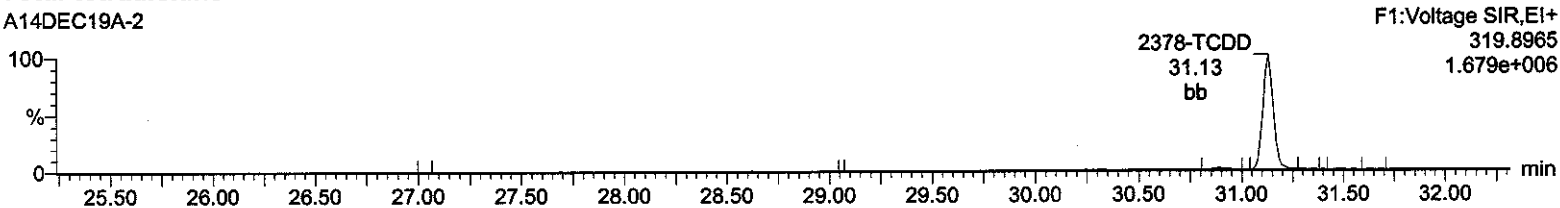
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2,
User: MJC

-3 FOR 42571

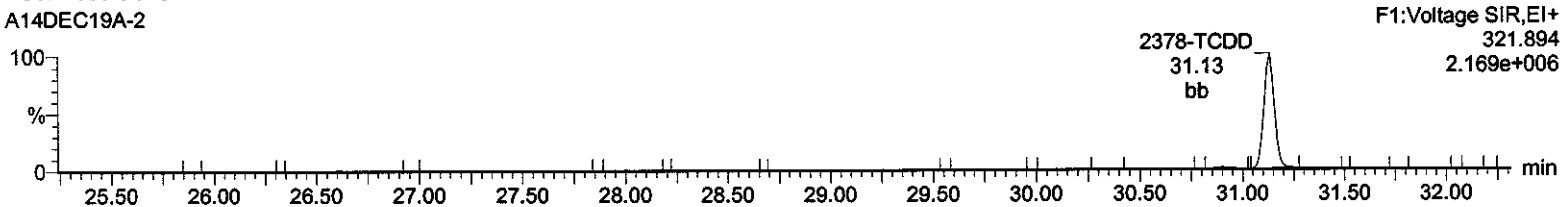
Total-tetradoxins

A14DEC19A-2



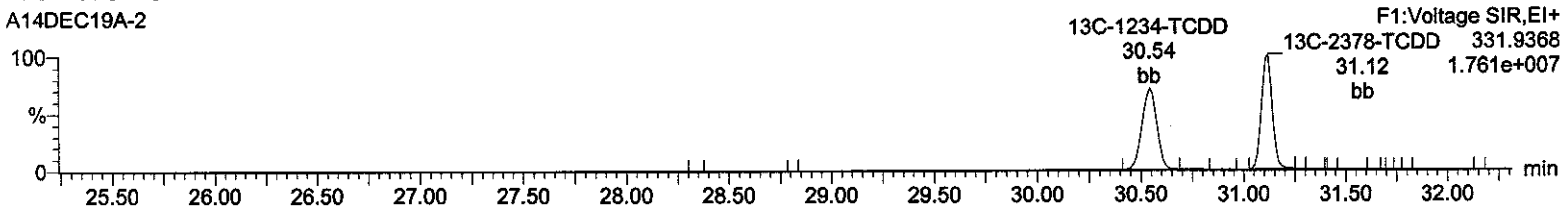
Total-tetradoxins

A14DEC19A-2



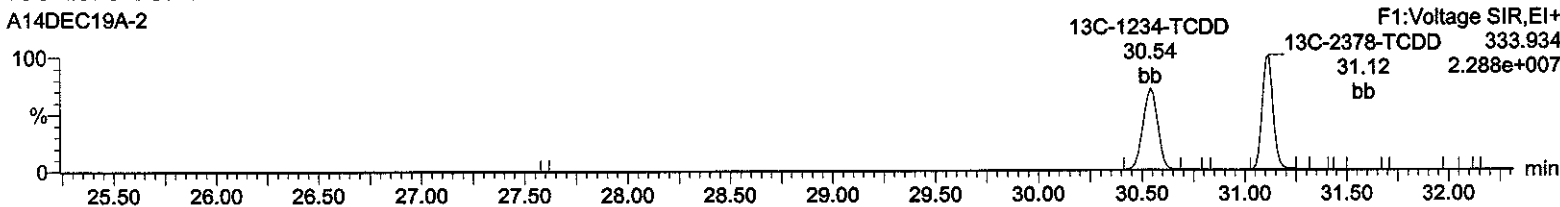
13C-2378-TCDD

A14DEC19A-2



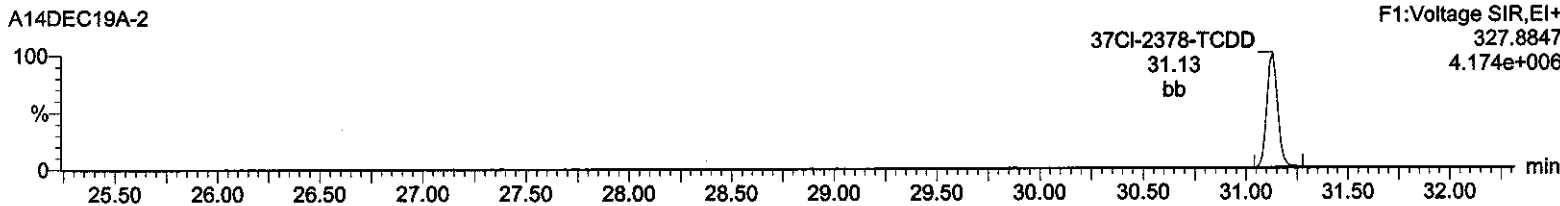
13C-2378-TCDD

A14DEC19A-2



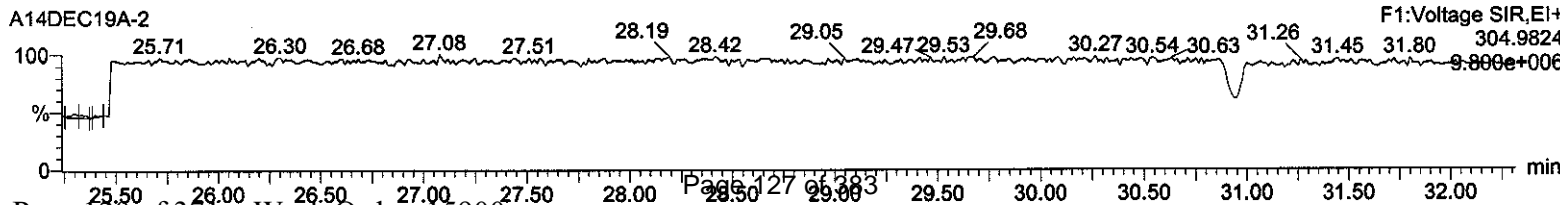
37Cl-2378-TCDD

A14DEC19A-2



Lock Mass F1

A14DEC19A-2



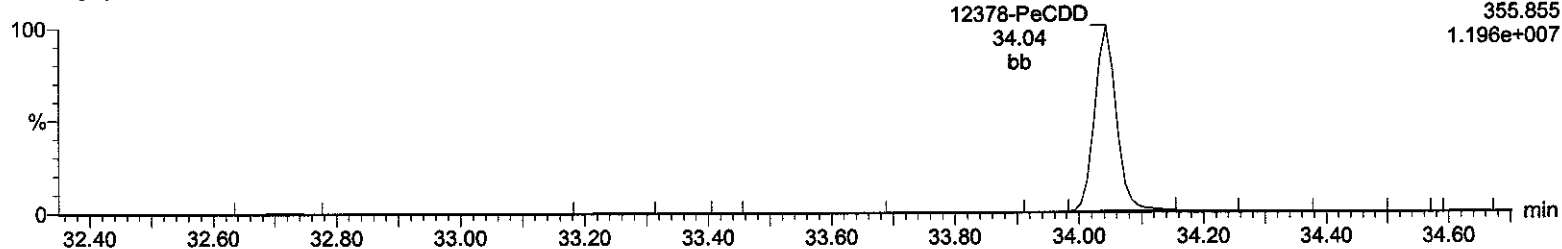
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2,
User: MJC

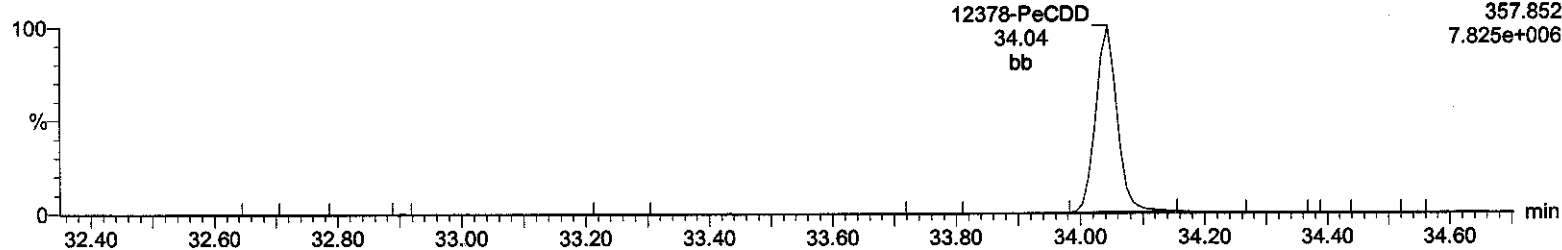
Total-pentadioxins

A14DEC19A-2



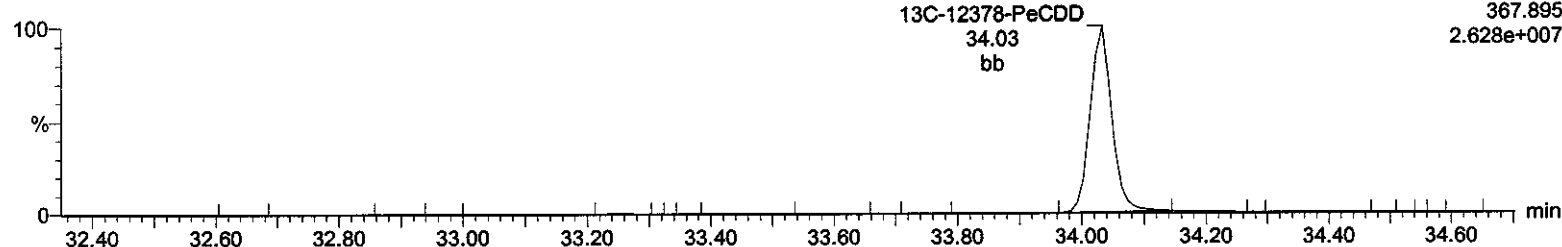
Total-pentadioxins

A14DEC19A-2



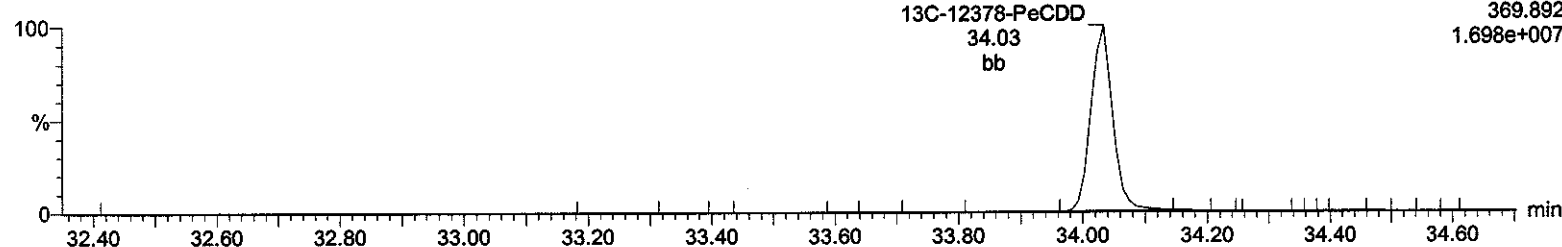
¹³C-12378-PeCDD

A14DEC19A-2



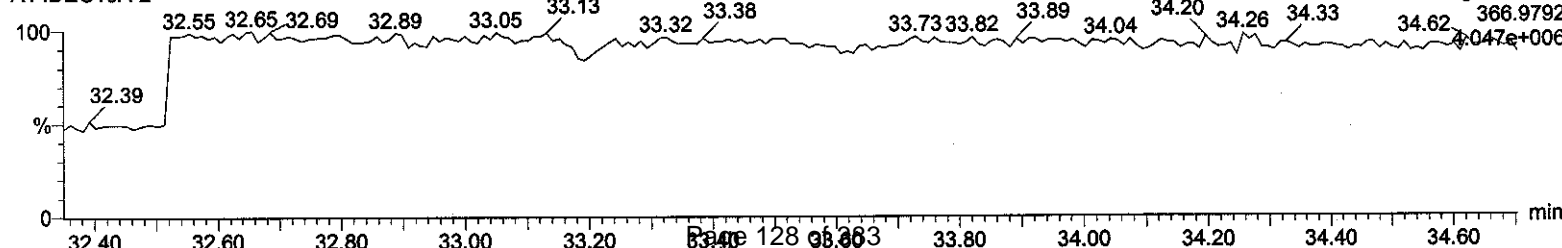
¹³C-12378-PeCDD

A14DEC19A-2



Lock Mass F2

A14DEC19A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

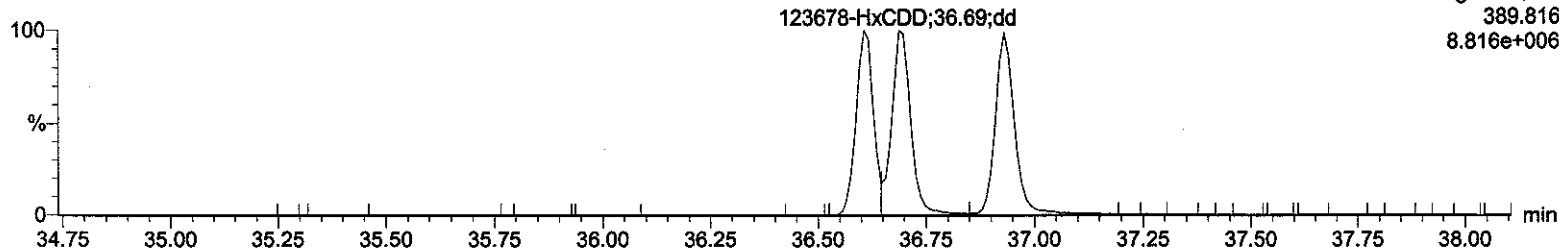
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-hexadioxins

A14DEC19A-2

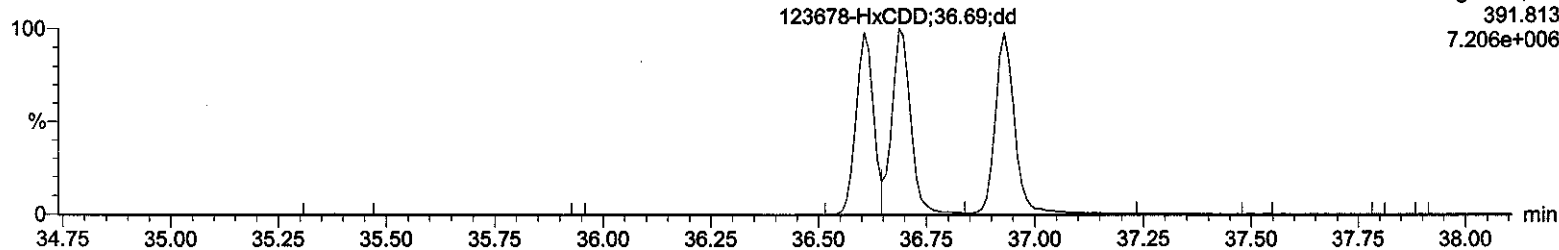
F3:Voltage SIR,EI+
389.816
8.816e+006



Total-hexadioxins

A14DEC19A-2

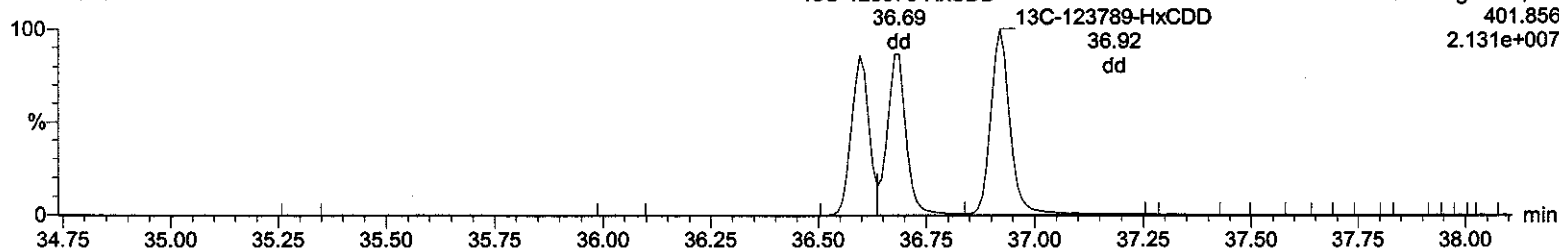
F3:Voltage SIR,EI+
391.813
7.206e+006



13C-123478-HxCDD

A14DEC19A-2

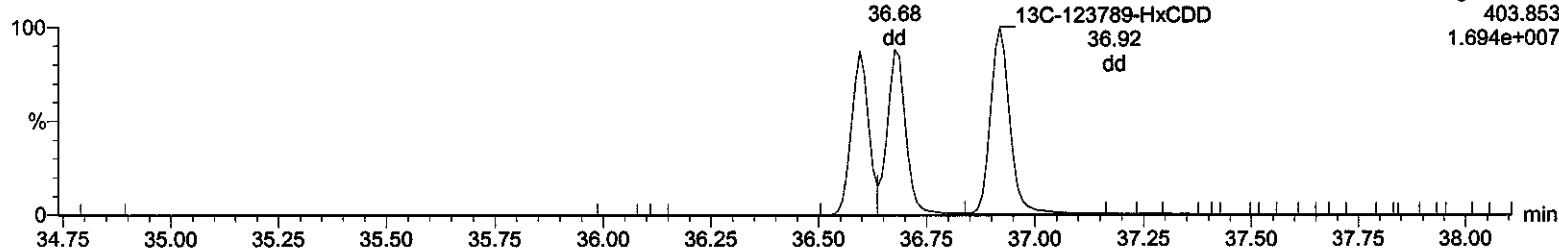
F3:Voltage SIR,EI+
401.856
2.131e+007



13C-123478-HxCDD

A14DEC19A-2

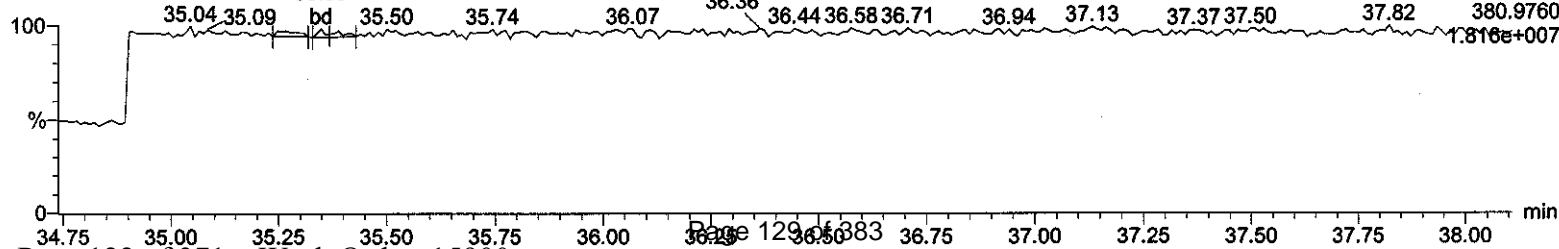
F3:Voltage SIR,EI+
403.853
1.694e+007



Lock Mass F3

A14DEC19A-2

F3:Voltage SIR,EI+
380.9760
1.816e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

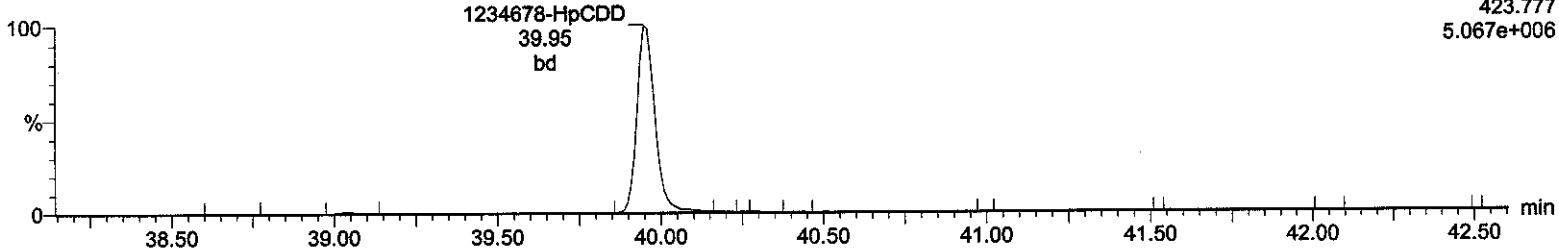
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-heptadioxins

A14DEC19A-2

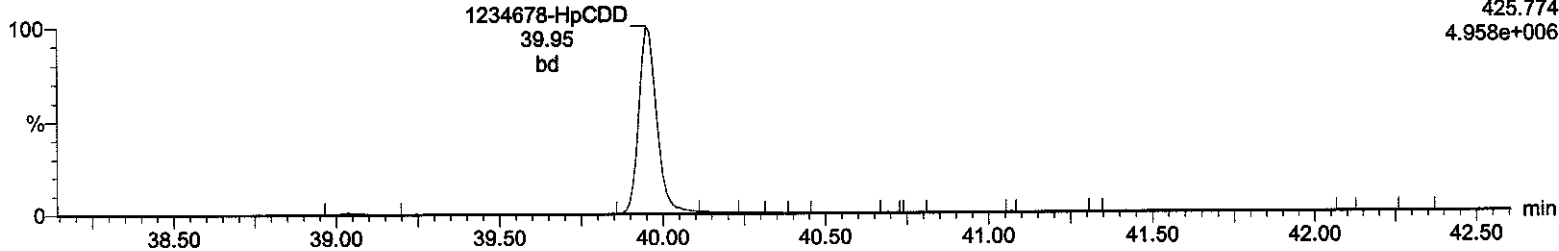
F4:Voltage SIR,EI+
423.777
5.067e+006



Total-heptadioxins

A14DEC19A-2

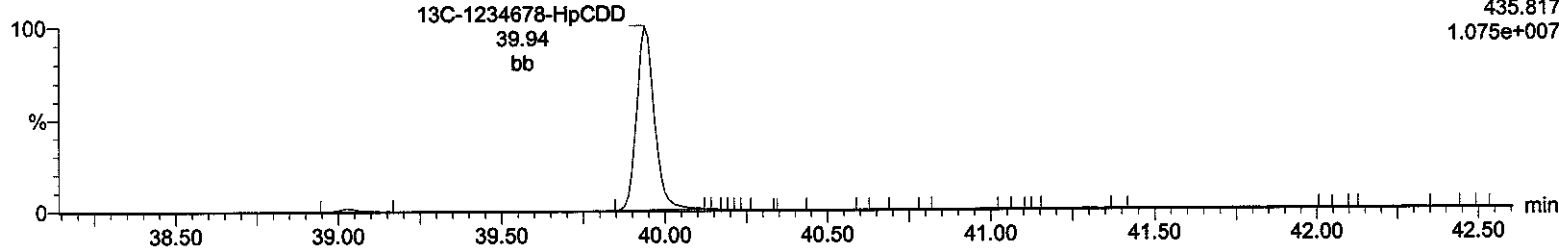
F4:Voltage SIR,EI+
425.774
4.958e+006



13C-1234678-HpCDD

A14DEC19A-2

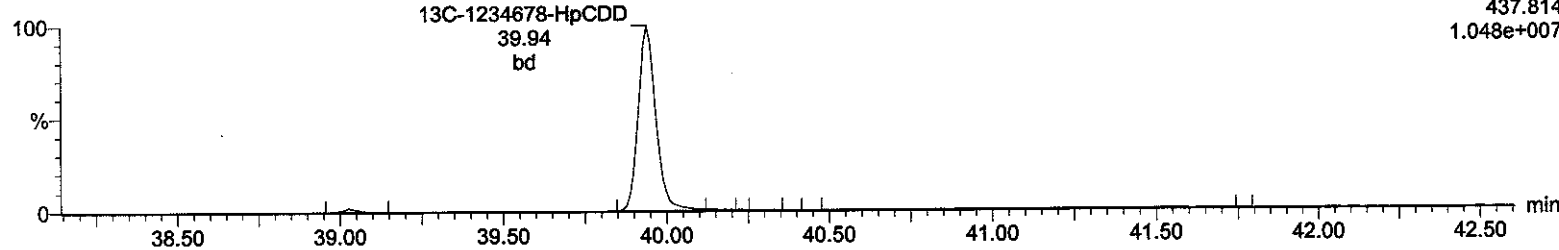
F4:Voltage SIR,EI+
435.817
1.075e+007



13C-1234678-HpCDD

A14DEC19A-2

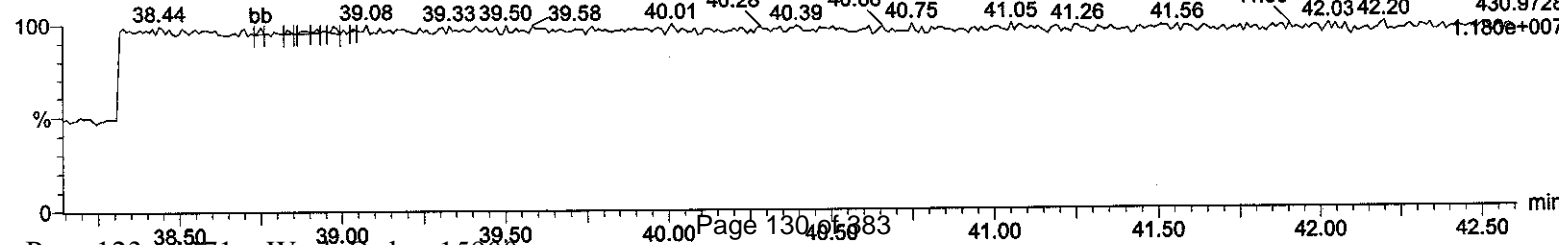
F4:Voltage SIR,EI+
437.814
1.048e+007



Lock Mass F4

A14DEC19A-2

F4:Voltage SIR,EI+
430.9728
1.180e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

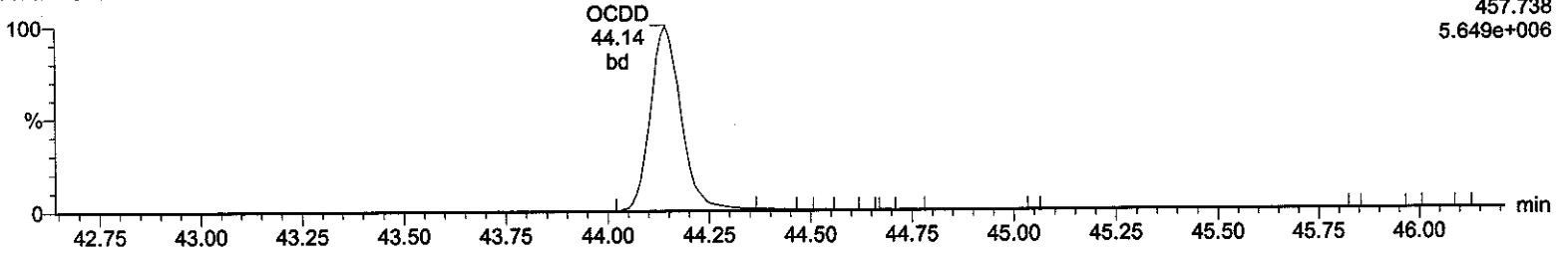
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDD

A14DEC19A-2

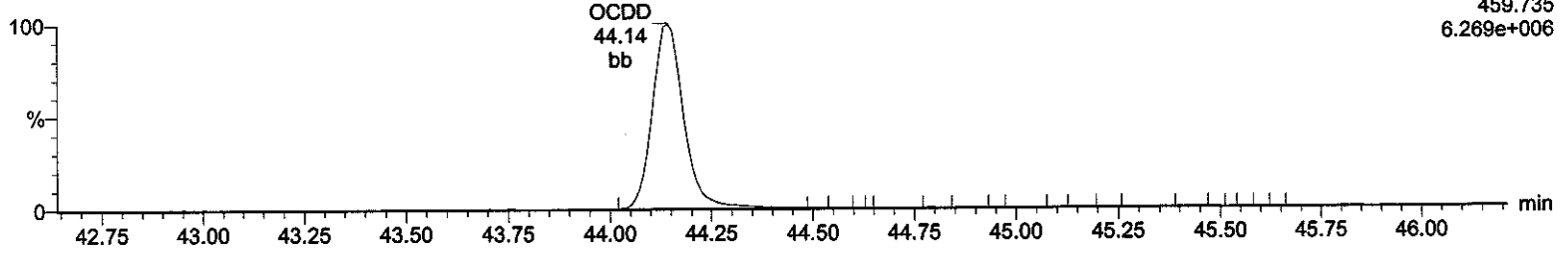
F5:Voltage SIR,EI+
457.738
5.649e+006



OCDD

A14DEC19A-2

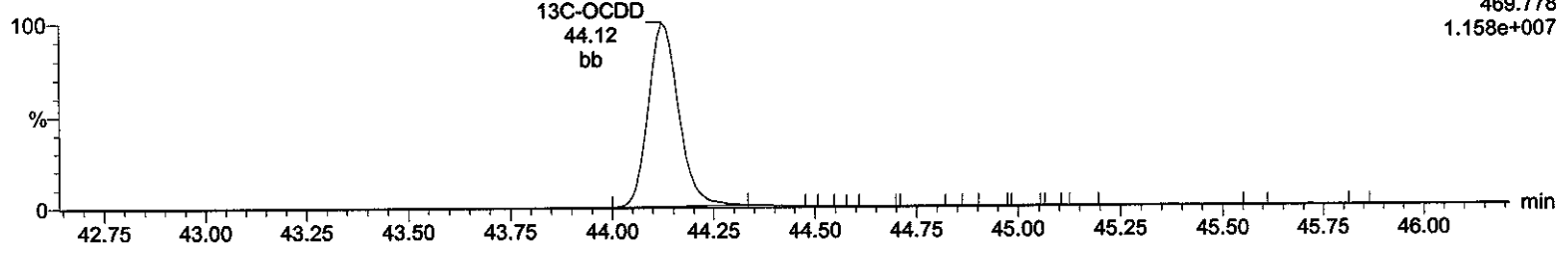
F5:Voltage SIR,EI+
459.735
6.269e+006



13C-OCDD

A14DEC19A-2

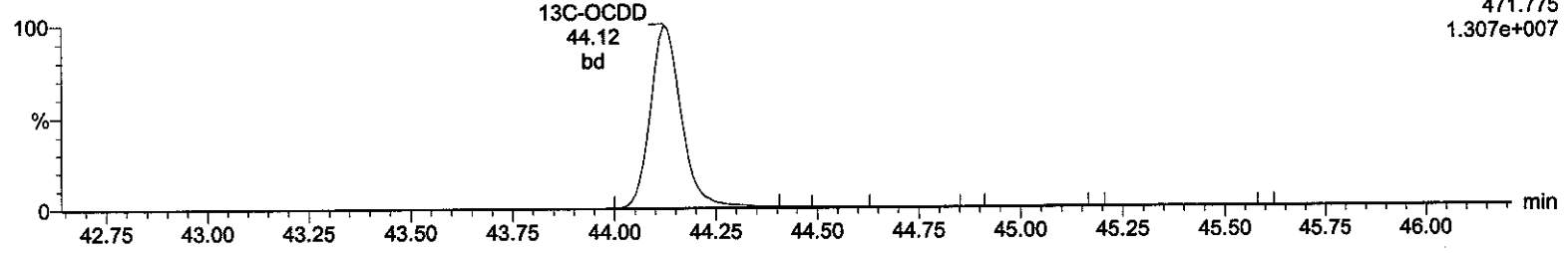
F5:Voltage SIR,EI+
469.778
1.158e+007



13C-OCDD

A14DEC19A-2

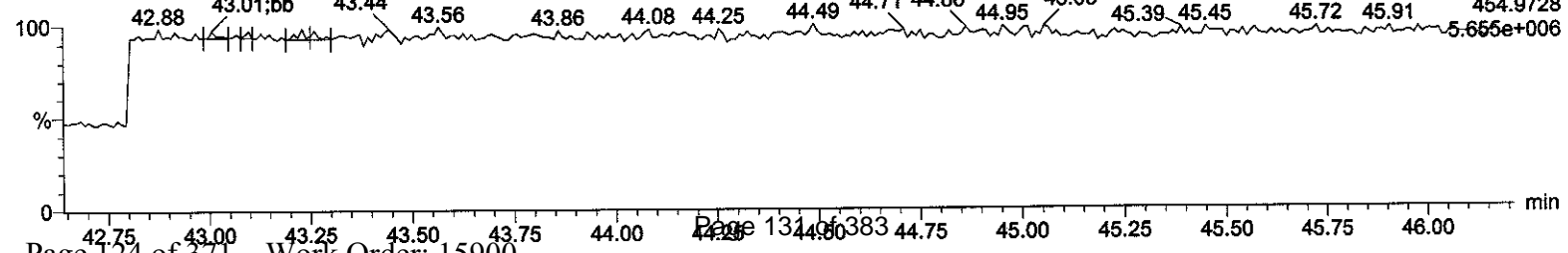
F5:Voltage SIR,EI+
471.775
1.307e+007



Lock Mass F5

A14DEC19A-2

F5:Voltage SIR,EI+
454.9728
5.655e+006



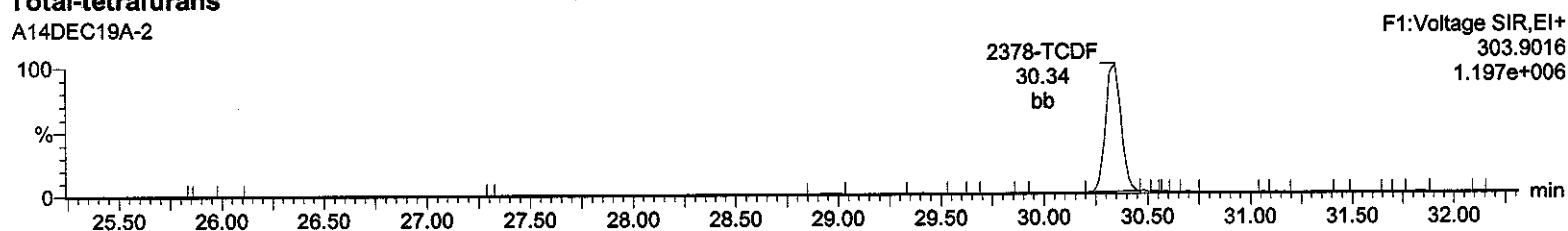
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-tetrafurans

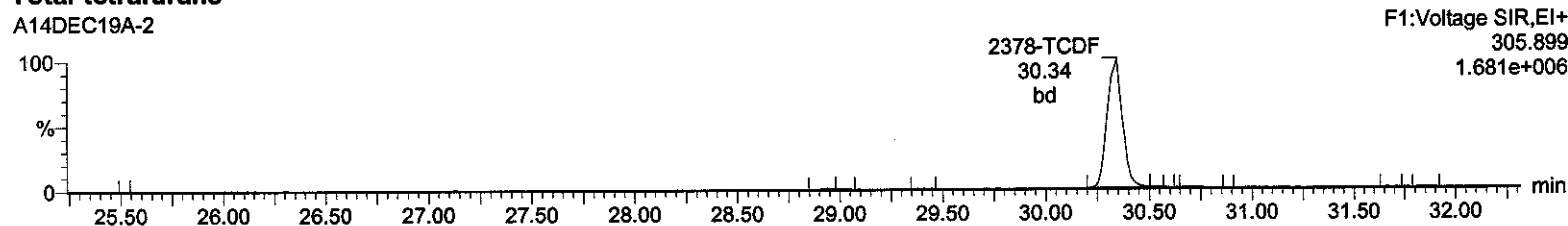
A14DEC19A-2



F1:Voltage SIR,EI+
303.9016
1.197e+006

Total-tetrafurans

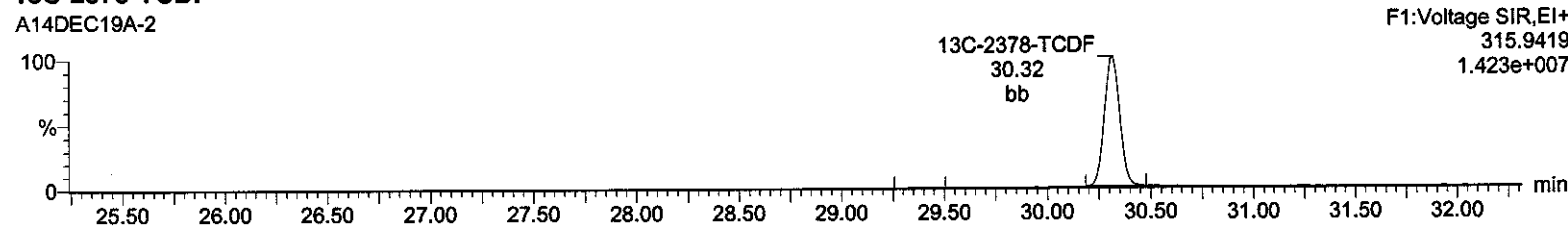
A14DEC19A-2



F1:Voltage SIR,EI+
305.899
1.681e+006

13C-2378-TCDF

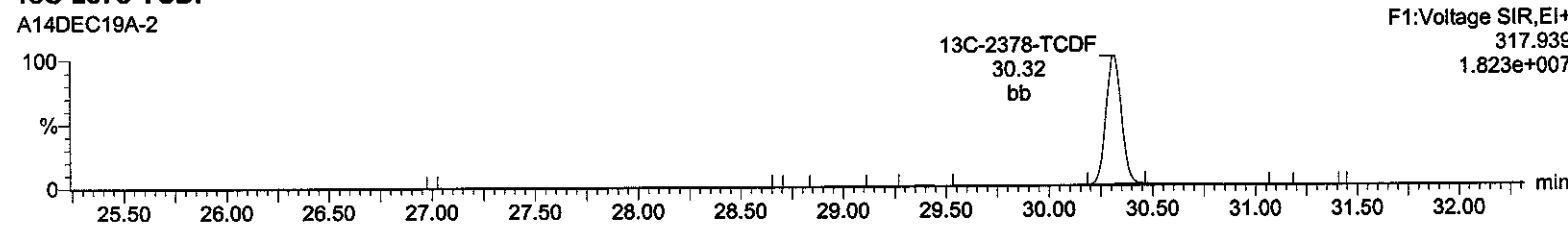
A14DEC19A-2



F1:Voltage SIR,EI+
315.9419
1.423e+007

13C-2378-TCDF

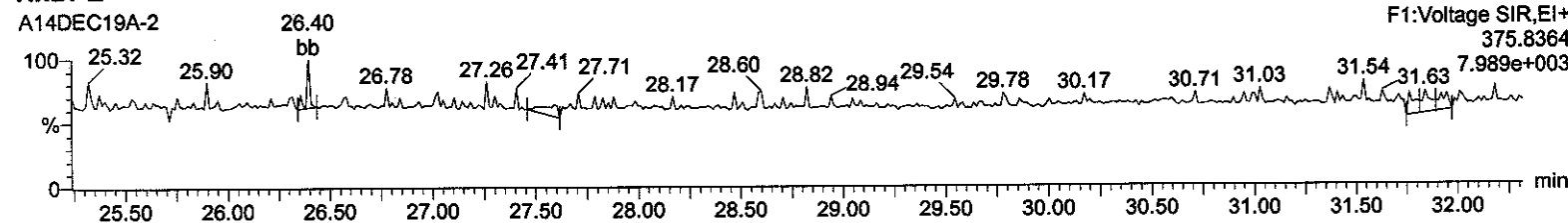
A14DEC19A-2



F1:Voltage SIR,EI+
317.939
1.823e+007

HxDPE

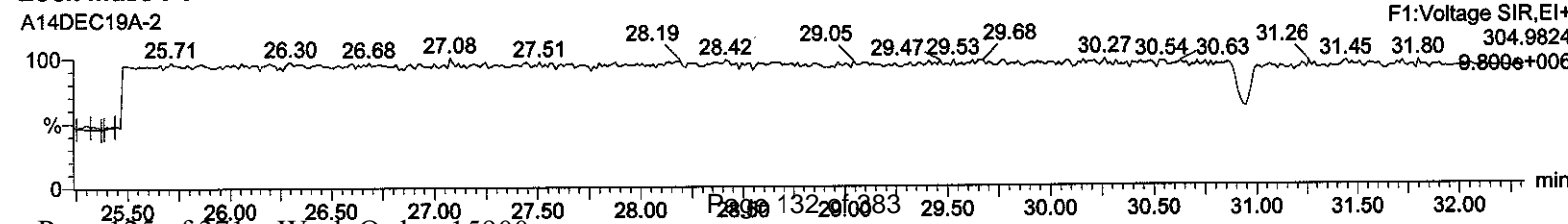
A14DEC19A-2



F1:Voltage SIR,EI+
375.8364
7.989e+003

Lock Mass F1

A14DEC19A-2



F1:Voltage SIR,EI+
304.9824
9.899e+006

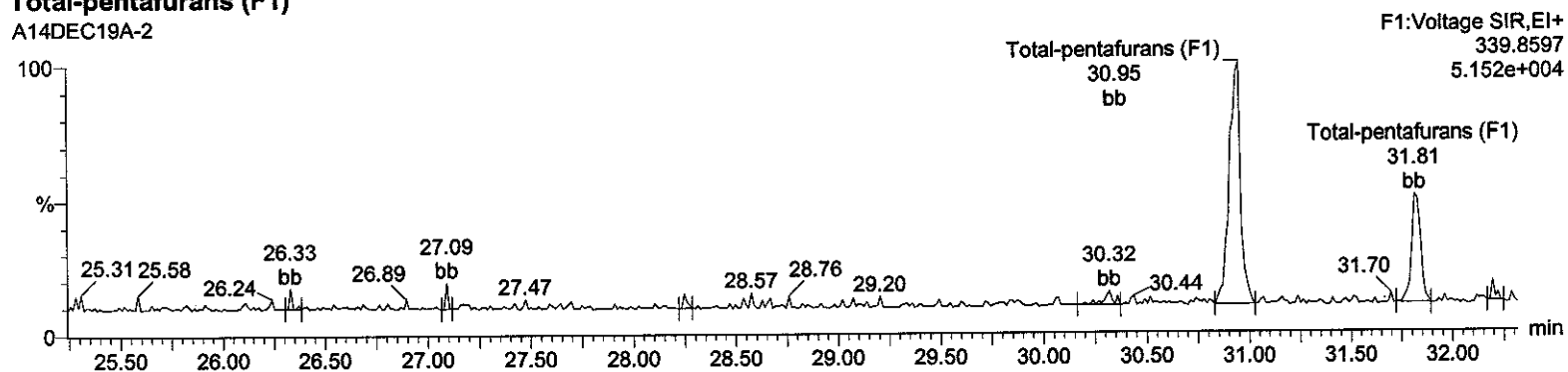
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2,
User: MJC

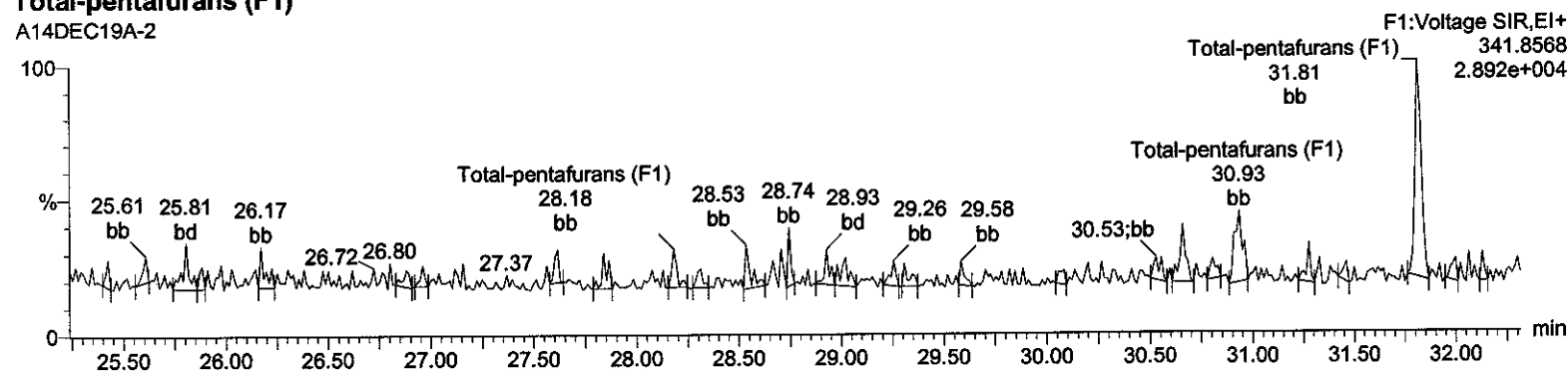
Total-pentafurans (F1)

A14DEC19A-2



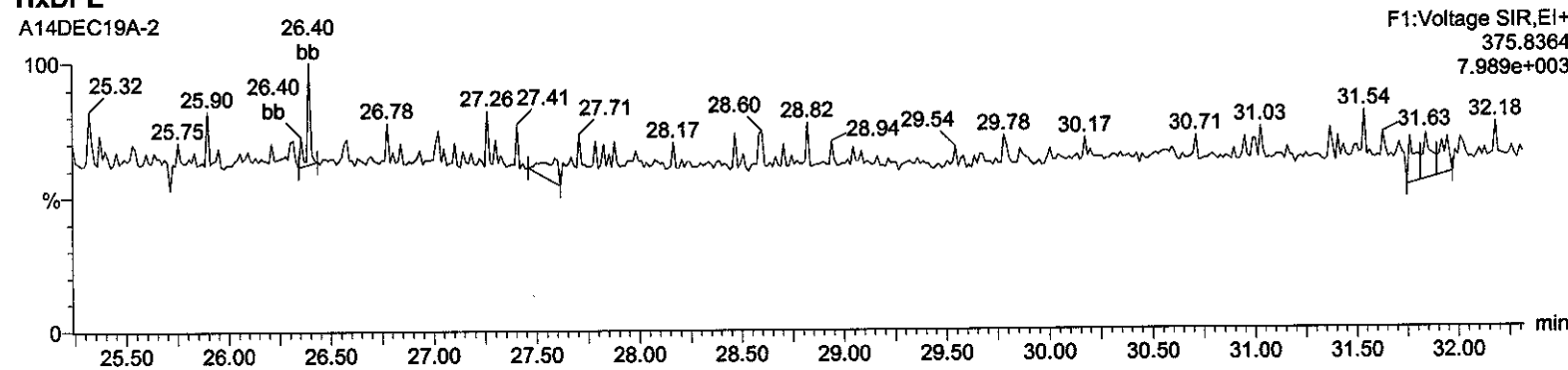
Total-pentafurans (F1)

A14DEC19A-2



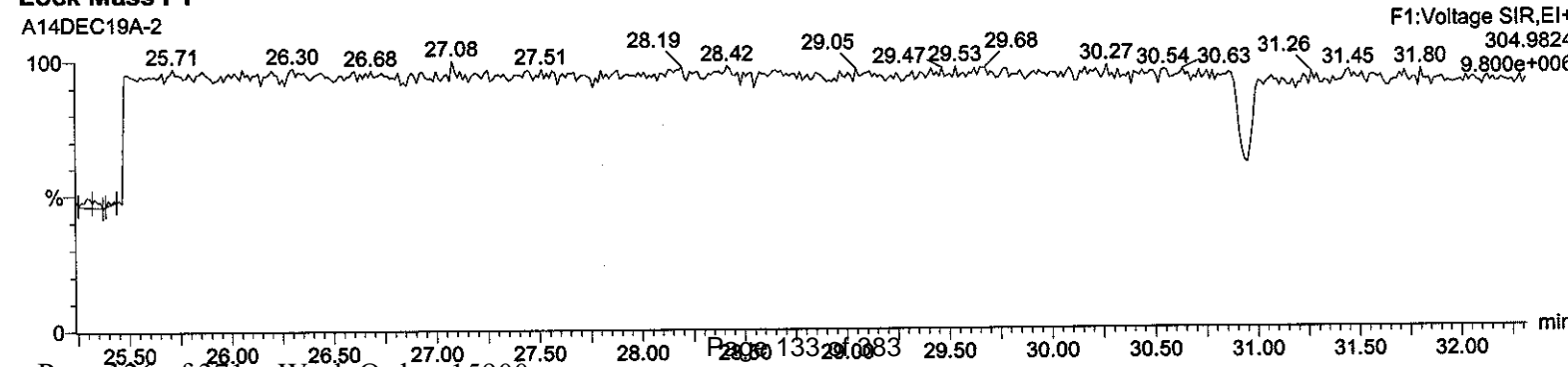
HxDPE

A14DEC19A-2



Lock Mass F1

A14DEC19A-2



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

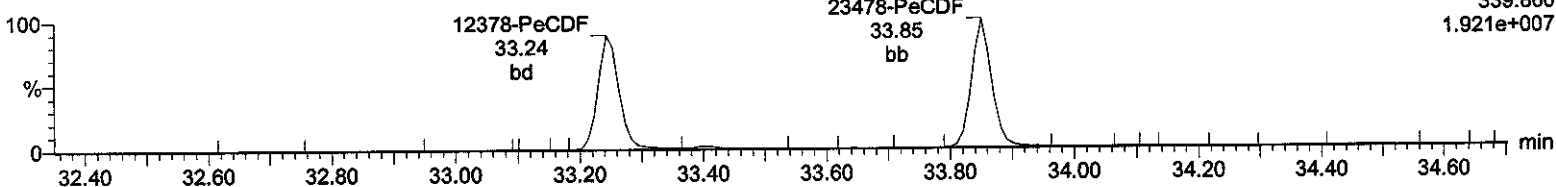
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentafurans

A14DEC19A-2

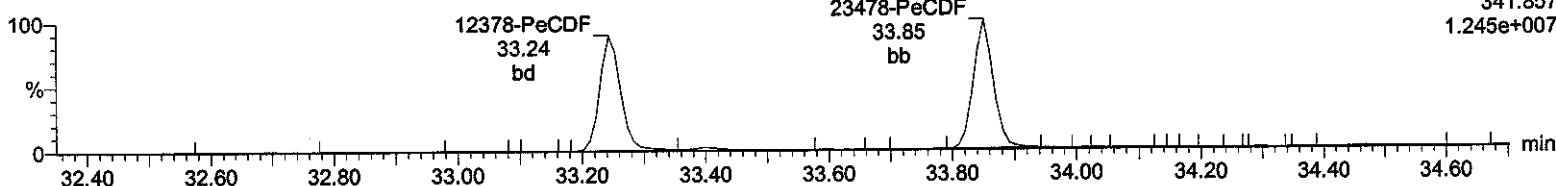
F2:Voltage SIR,EI+
339.860
1.921e+007



Total-pentafurans

A14DEC19A-2

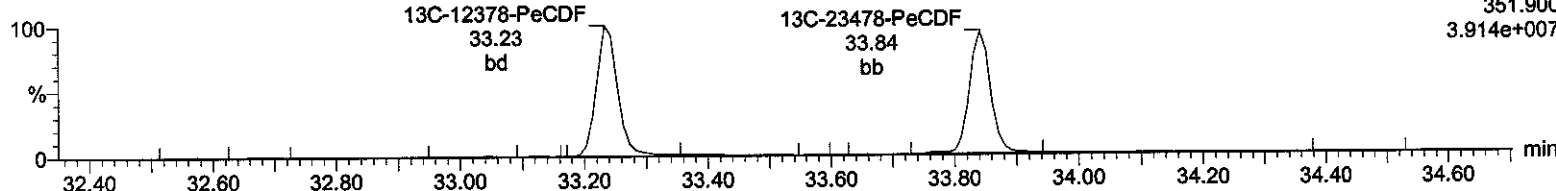
F2:Voltage SIR,EI+
341.857
1.245e+007



13C-12378-PeCDF

A14DEC19A-2

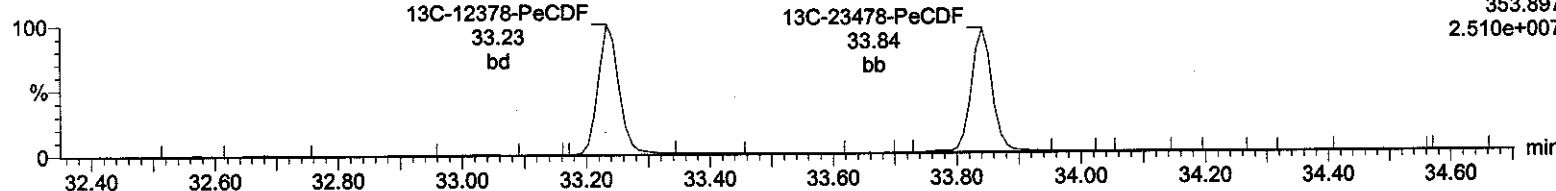
F2:Voltage SIR,EI+
351.900
3.914e+007



13C-12378-PeCDF

A14DEC19A-2

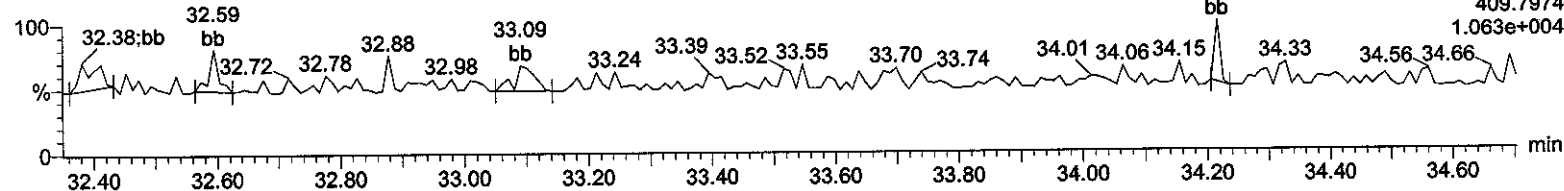
F2:Voltage SIR,EI+
353.897
2.510e+007



HpDPE

A14DEC19A-2

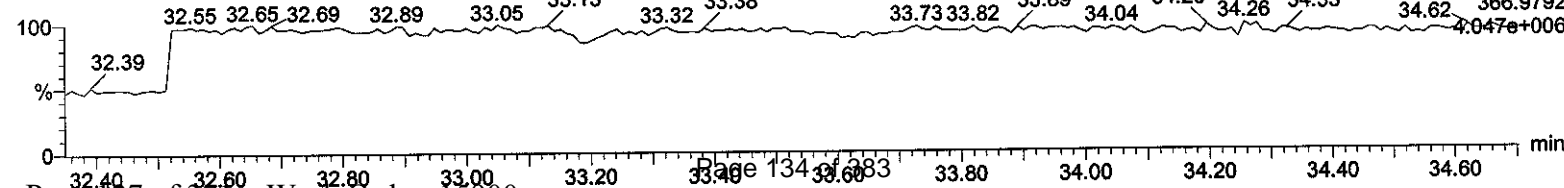
F2:Voltage SIR,EI+
409.7974
1.063e+004



Lock Mass F2

A14DEC19A-2

F2:Voltage SIR,EI+
366.9792
4.047e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

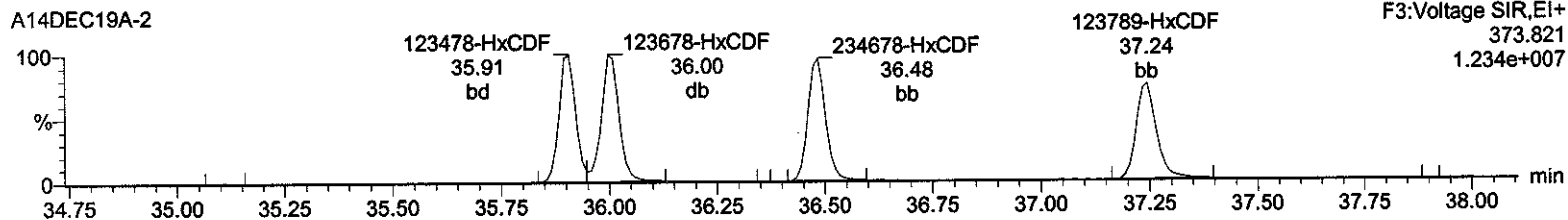
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

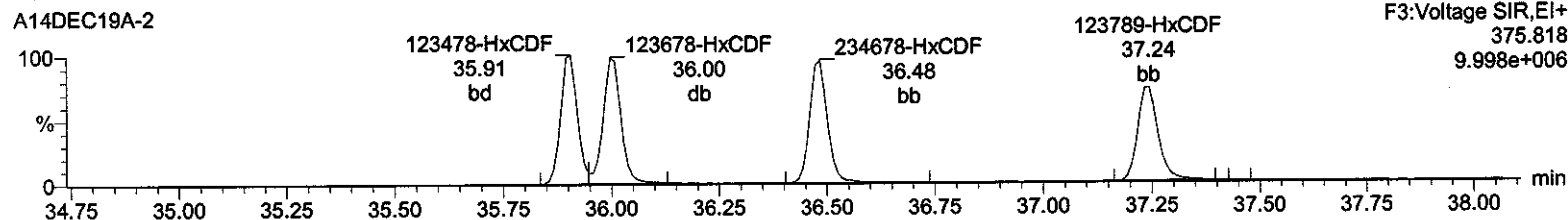
Total-hexafurans

A14DEC19A-2



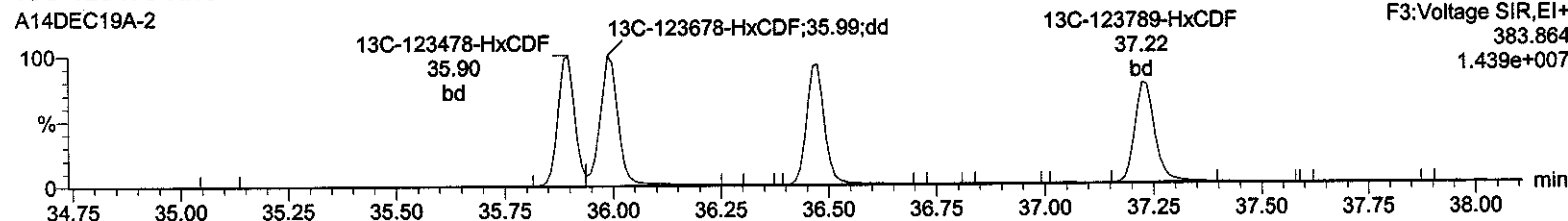
Total-hexafurans

A14DEC19A-2



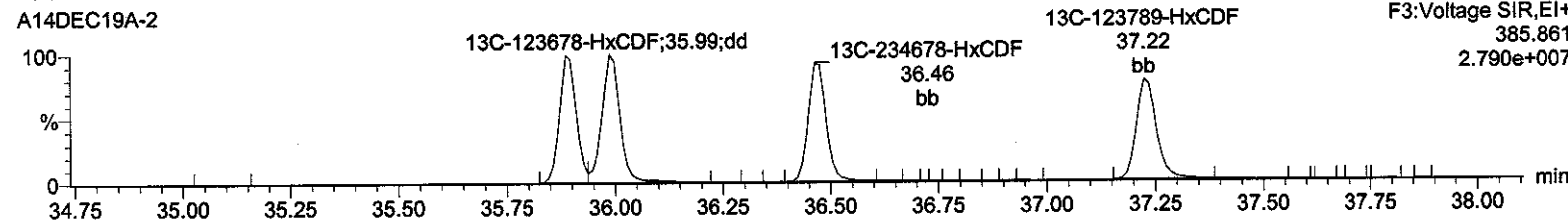
13C-123478-HxCDF

A14DEC19A-2



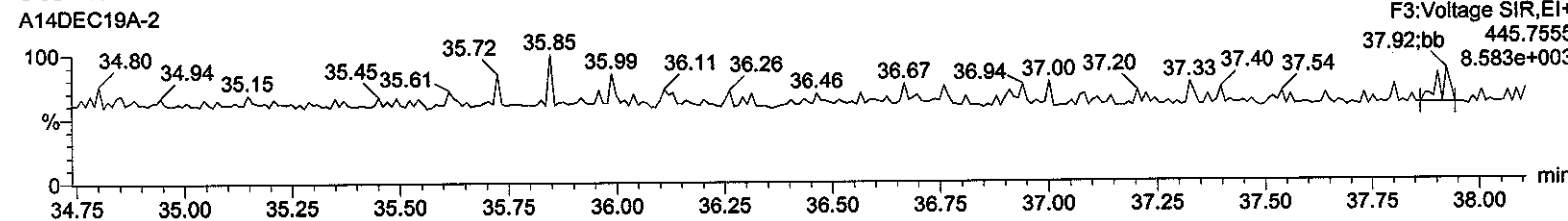
13C-123478-HxCDF

A14DEC19A-2



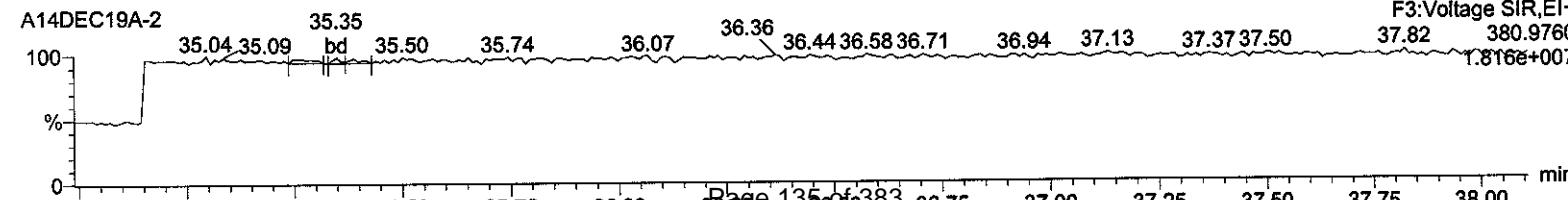
OcDPE

A14DEC19A-2



Lock Mass F3

A14DEC19A-2



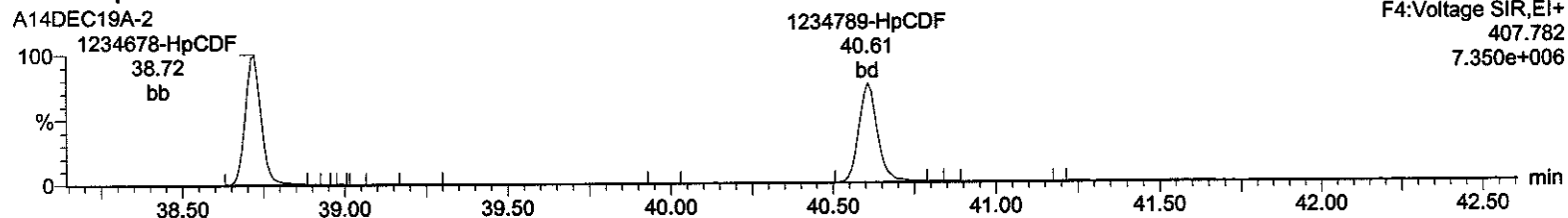
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

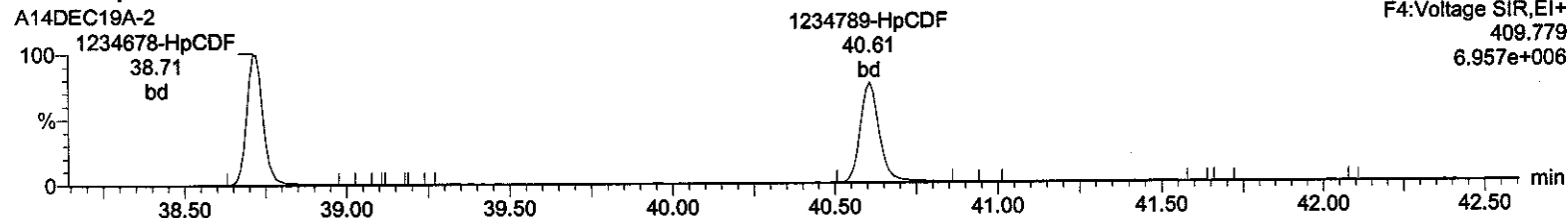
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

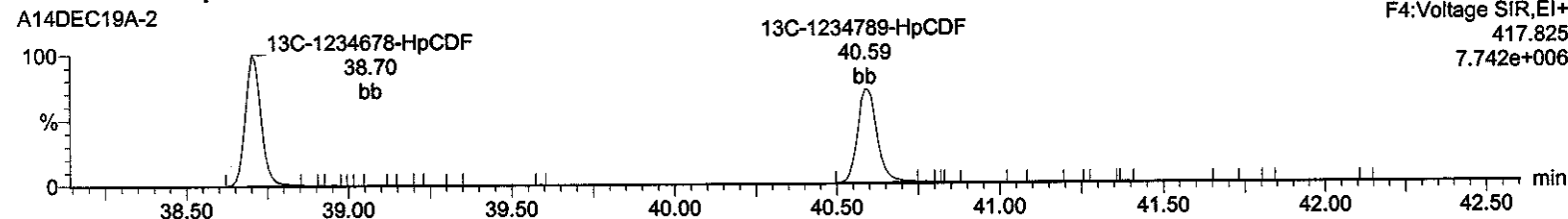
Total-heptafurans



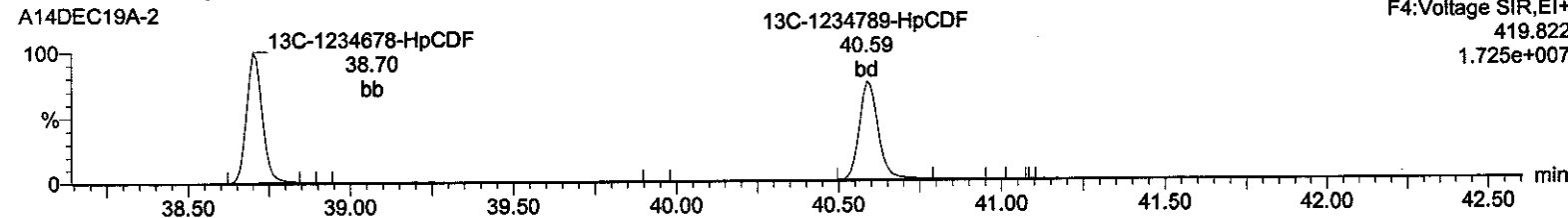
Total-heptafurans



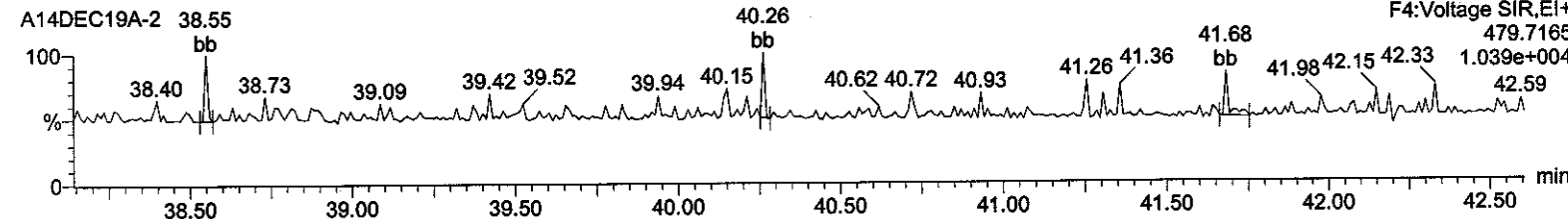
13C-1234678-HpCDF



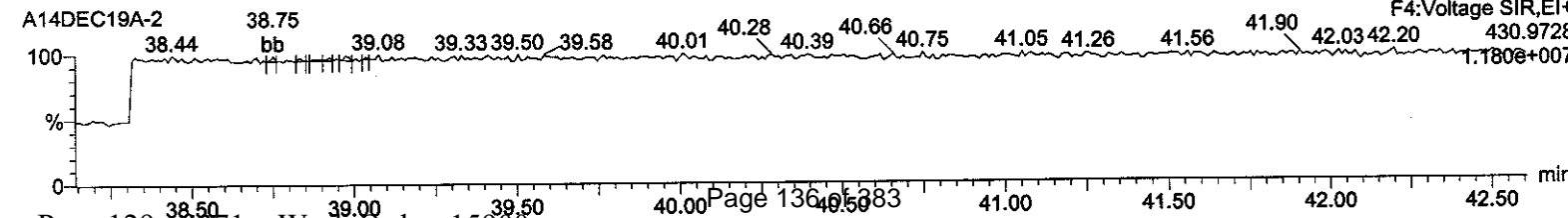
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Quantify Sample Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

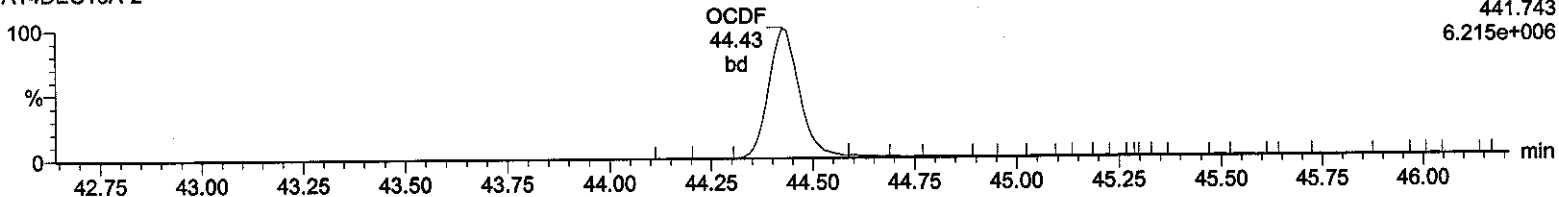
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDF

A14DEC19A-2

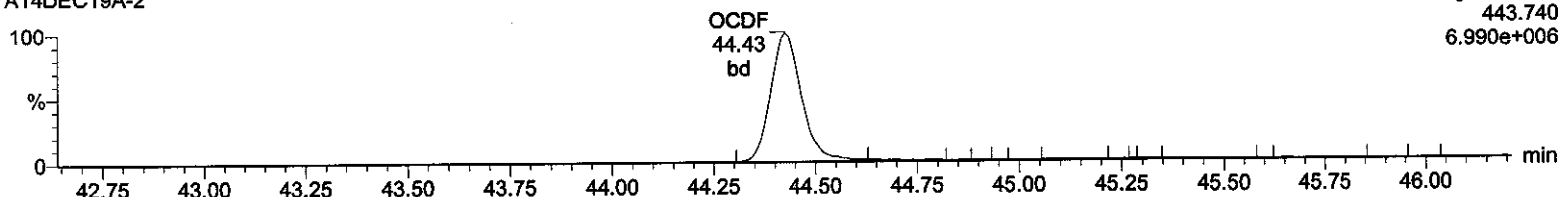
F5:Voltage SIR,EI+
441.743
6.215e+006



OCDF

A14DEC19A-2

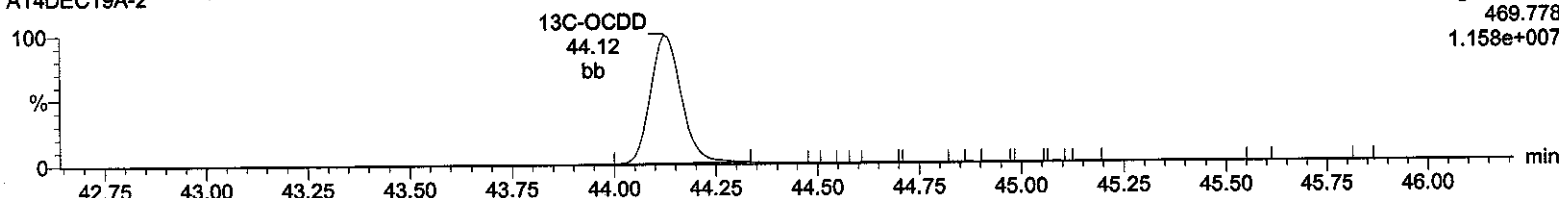
F5:Voltage SIR,EI+
443.740
6.990e+006



13C-OCDD

A14DEC19A-2

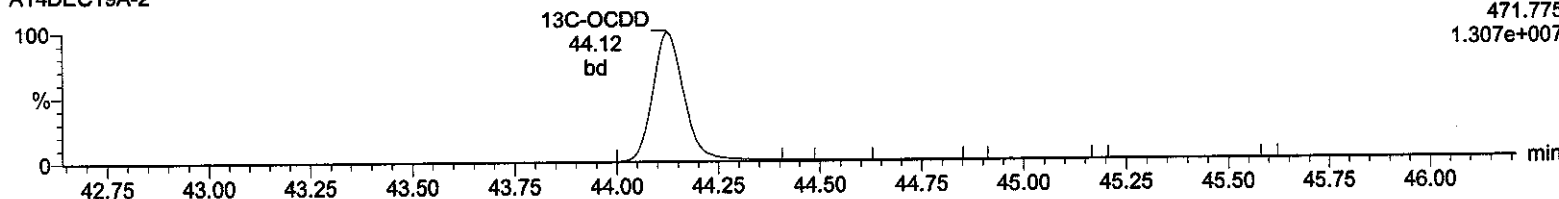
F5:Voltage SIR,EI+
469.778
1.158e+007



13C-OCDD

A14DEC19A-2

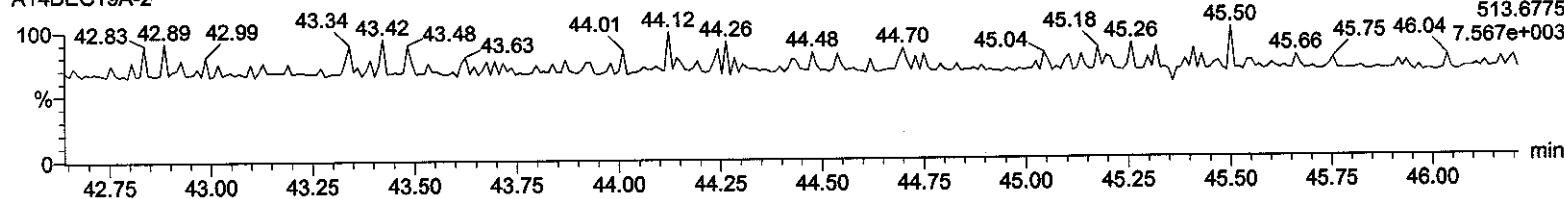
F5:Voltage SIR,EI+
471.775
1.307e+007



DeDPE

A14DEC19A-2

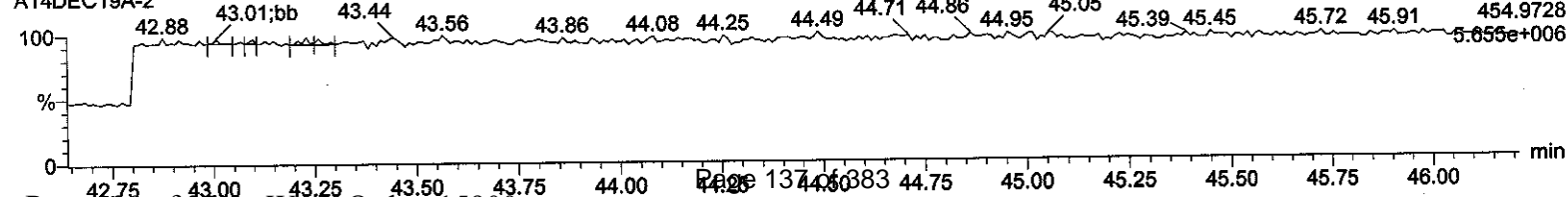
F5:Voltage SIR,EI+
513.6775
7.567e+003



Lock Mass F5

A14DEC19A-2

F5:Voltage SIR,EI+
454.9728
5.655e+006



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14206	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025527		Matrix: WATER
Client Sample: QC for batch 42567		
Client ID: LCSD for batch 42567		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 13:03	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-3		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.207	ng/L	0.00062	0.010
40321-76-4	1,2,3,7,8-PeCDD		1.06	ng/L	0.0018	0.050
39227-28-6	1,2,3,4,7,8-HxCDD		1.02	ng/L	0.00174	0.050
57653-85-7	1,2,3,6,7,8-HxCDD		1.03	ng/L	0.00173	0.050
19408-74-3	1,2,3,7,8,9-HxCDD		1.09	ng/L	0.00176	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.921	ng/L	0.00242	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2.02	ng/L	0.0053	0.100
51207-31-9	2,3,7,8-TCDF		0.174	ng/L	0.00084	0.010
57117-41-6	1,2,3,7,8-PeCDF		0.906	ng/L	0.00133	0.050
57117-31-4	2,3,4,7,8-PeCDF		1.01	ng/L	0.00132	0.050
70648-26-9	1,2,3,4,7,8-HxCDF		0.969	ng/L	0.0024	0.050
57117-44-9	1,2,3,6,7,8-HxCDF		0.993	ng/L	0.00252	0.050
60851-34-5	2,3,4,6,7,8-HxCDF		0.948	ng/L	0.00246	0.050
72918-21-9	1,2,3,7,8,9-HxCDF		0.957	ng/L	0.0033	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.01	ng/L	0.00244	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.923	ng/L	0.00316	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.89	ng/L	0.00402	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.65	2.00	ng/L	82.3	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.71	2.00	ng/L	85.3	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.52	2.00	ng/L	76.2	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.52	2.00	ng/L	76.0	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.77	2.00	ng/L	88.3	(22%-166%)
13C-OCDD		3.00	4.00	ng/L	74.9	(13%-199%)
13C-2,3,7,8-TCDF		1.65	2.00	ng/L	82.7	(22%-152%)
13C-1,2,3,7,8-PeCDF		1.87	2.00	ng/L	93.7	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.67	2.00	ng/L	83.6	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.47	2.00	ng/L	73.7	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.45	2.00	ng/L	72.4	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.55	2.00	ng/L	77.4	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.60	2.00	ng/L	79.9	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.45	2.00	ng/L	72.4	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.67	2.00	ng/L	83.7	(20%-186%)
37Cl-2,3,7,8-TCDD		0.176	0.200	ng/L	88.0	(31%-191%)

Comments:
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:15:44 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PROMethDB\CIFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A06JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: Job: %61.3%, Task: HRP750_2, User: MJC

-3 FOR BATCH 4257

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#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	NO	ppb/ul	EDL	Height	Noise1	S/N1	Height2	Noise2	SIN2	M	M2
1	2378-TCDD	9.41e4	1.20e5	2.14e5	31.13	1.000	0.79	NO	NO	10.359	0.0310	1.53e6	2332	657.2	1.99e6	1724	1156.4	bb	bb
2	12378-PeCDD	4.43e5	2.86e5	7.28e5	34.04	1.000	1.55	NO	NO	52.985	0.0902	1.05e7	5697	1839.3	6.77e6	5864	1154.6	bb	bb
3	123478-HxCDD	3.83e5	3.06e5	6.88e5	36.60	1.000	1.25	NO	NO	50.832	0.0869	8.03e6	4209	1907.0	6.30e6	5516	1141.4	bd	bd
4	123678-HxCDD	4.24e5	3.41e5	7.64e5	36.69	1.000	1.24	NO	NO	51.273	0.0866	7.95e6	4209	1888.0	6.49e6	5516	1177.1	dd	dd
5	123789-HxCDD	4.22e5	3.37e5	7.60e5	36.93	1.007	1.25	NO	NO	54.263	0.0881	7.77e6	4209	1846.9	6.13e6	5516	1111.9	dd	dd
6	1234678-HpCDD	3.05e5	2.94e5	6.00e5	39.95	1.000	1.04	NO	NO	46.068	0.121	4.54e6	4805	944.8	4.38e6	4929	889.2	bd	bd
7	OCDD	4.68e5	5.26e5	9.94e5	44.14	1.000	0.89	NO	NO	100.871	0.265	5.29e6	7448	710.7	6.00e6	4629	1296.4	bd	bd
8	2378-TCDF	9.41e4	1.27e5	2.21e5	30.34	1.001	0.74	NO	NO	8.698	0.0420	1.08e6	1953	553.6	1.52e6	2900	524.2	bb	bb
9	12378-PeCDF	6.21e5	3.99e5	1.02e6	33.24	1.000	1.56	NO	NO	45.288	0.0866	1.47e7	7643	1924.0	9.67e6	6583	1468.8	bd	bb
10	23478-PeCDF	6.72e5	4.40e5	1.11e6	33.85	1.000	1.53	NO	NO	50.404	0.0661	1.66e7	7643	2171.1	1.07e7	6583	1620.2	bb	bb
11	123478-HxCDF	5.02e5	4.08e5	9.09e5	35.91	1.001	1.23	NO	NO	48.452	0.120	1.08e7	10699	1005.6	8.61e6	8901	967.8	bd	bd
12	123678-HxCDF	5.37e5	4.48e5	9.83e5	36.00	1.000	1.21	NO	NO	49.638	0.126	1.09e7	10699	1016.9	8.89e6	8901	998.2	db	db
13	234678-HxCDF	5.32e5	4.20e5	9.51e5	36.48	1.001	1.27	NO	NO	47.412	0.123	1.05e7	10699	977.0	8.45e6	8901	949.0	bd	bb
14	123789-HxCDF	4.60e5	3.67e5	8.27e5	37.24	1.000	1.25	NO	NO	47.837	0.165	8.33e6	10699	778.4	6.52e6	8901	732.7	bb	bb
15	1234678-HpCDF	3.98e5	3.75e5	7.73e5	38.71	1.000	1.06	NO	NO	50.597	0.122	6.53e6	6629	984.8	6.20e6	6433	964.1	bb	bb
16	1234789-HpCDF	3.41e5	3.23e5	6.64e5	40.61	1.000	1.06	NO	NO	46.153	0.158	4.79e6	6629	722.3	4.68e6	6433	726.8	bb	bb
17	OCDF	5.09e5	5.77e5	1.09e6	44.42	1.007	0.88	NO	NO	94.503	0.201	5.64e6	5292	1066.2	6.25e6	5407	1155.8	bd	bd
18	13C-2378-TCDD	1.01e6	1.32e6	2.33e6	31.12	1.019	0.76	NO	NO	82.291	0.0774	1.60e7	6277	2550.1	2.06e7	3962	5186.7	bb	bb
19	13C-12378-PeCDD	9.79e5	6.32e5	1.61e6	34.03	1.114	1.55	NO	NO	85.303	0.124	2.28e7	4707	4851.1	1.46e7	6248	2335.6	bb	bb
20	13C-123478-HxCDD	8.03e5	6.38e5	1.44e6	36.60	0.991	1.26	NO	NO	76.224	0.116	1.66e7	7019	2362.2	1.31e7	9451	1383.5	bd	bd
21	13C-123678-HxCDD	8.75e5	7.05e5	1.58e6	36.68	0.993	1.24	NO	NO	75.961	0.106	1.65e7	7019	2346.4	1.37e7	9451	1444.4	dd	dd
22	13C-1234678-HpCDD	6.39e5	6.13e5	1.25e6	39.94	1.082	1.04	NO	NO	88.349	0.122	9.84e6	8374	1175.2	9.36e6	4595	2036.3	bd	bd
23	13C-OCDD	9.47e5	1.08e6	2.03e6	44.12	1.195	0.88	NO	NO	149.820	0.117	1.09e7	5713	1914.9	1.22e7	6140	1993.6	bb	bb
24	13C-2378-TCDF	1.14e6	1.46e6	2.60e6	30.32	0.993	0.78	NO	NO	82.665	0.0977	1.29e7	8452	1532.1	1.68e7	5851	2872.3	bb	bb
25	13C-12378-PeCDF	1.45e6	9.27e5	2.38e6	33.23	1.088	1.57	NO	NO	93.705	0.229	3.45e7	12017	2871.5	2.26e7	15167	1489.0	bd	bd
26	13C-23478-PeCDF	1.36e6	8.72e5	2.23e6	33.84	1.108	1.56	NO	NO	83.633	0.218	3.33e7	12017	2767.7	2.12e7	15167	1397.8	bb	bb
27	13C-123478-HxCDF	5.91e5	1.14e6	1.73e6	35.89	0.972	0.52	NO	NO	73.694	0.157	1.28e7	10559	1211.9	2.44e7	16922	1442.4	bd	bd
28	13C-123678-HxCDF	6.57e5	1.25e6	1.90e6	35.99	0.975	0.53	NO	NO	72.365	0.139	1.29e7	10559	1218.9	2.53e7	16922	1494.3	db	db
29	13C-234678-HxCDF	6.11e5	1.16e6	1.77e6	36.46	0.988	0.53	NO	NO	77.423	0.161	1.22e7	10559	1154.1	2.26e7	16922	1337.2	bd	bb
30	13C-123789-HxCDF	5.66e5	1.06e6	1.63e6	37.23	1.008	0.53	NO	NO	79.902	0.180	9.72e6	10559	920.8	1.89e7	16922	1109.9	bd	bb

Quantify Sample Summary Report
 Method 1613 Quantification Report

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 Work Order: 15900

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:15:44 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	ppb/ul	EDL	Height	Noise1	S/N1	Height2	Noise2	S/N2	M
31	13C-1234678-HpCDF	4.09e5	9.20e5	1.33e6	38.70	1.048	0.44	NO	72.395	0.0957	7.18e6	6468	1109.9	1.62e7	6689	2415.0	bb
32	13C-1234789-HpCDF	3.65e5	8.31e5	1.20e6	40.59	1.099	0.44	NO	83.721	0.123	5.26e6	6468	813.3	1.17e7	6689	1748.0	bd
33	13C-1234-TCDD	1.10e6	1.42e6	2.51e6	30.54	0.000	0.77	NO	100.000	0.0874	1.28e7	6277	2037.8	1.64e7	3962	4150.8	bb
34	13C-123789-HxCDD	1.17e6	9.38e5	2.11e6	36.92	0.000	1.25	NO	100.000	0.104	2.19e7	7019	3124.9	1.76e7	9451	1861.1	dd
35	37Cl-2378-TCDD	2.35e5		2.35e5	31.13	1.019			8.803	0.0194	3.91e6	2418	1616.4				bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

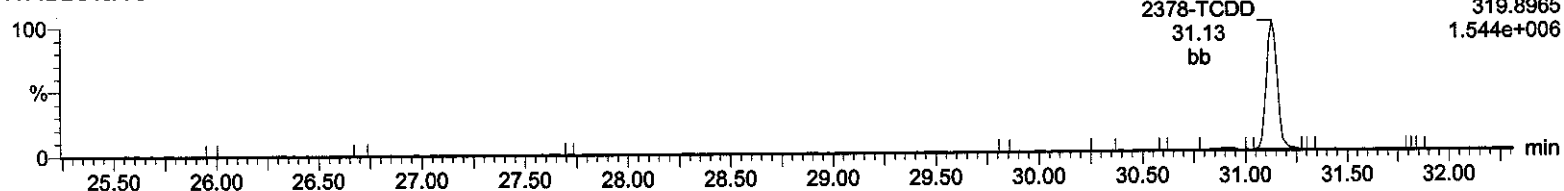
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2,
User: MJC

-3 FOR BATCH 42571

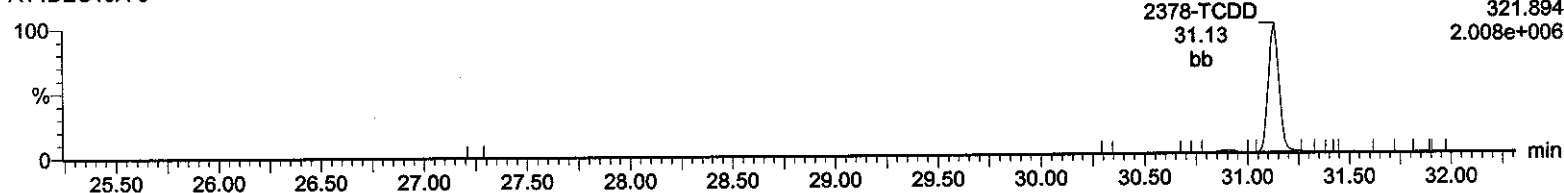
Total-tetradoxins

A14DEC19A-3



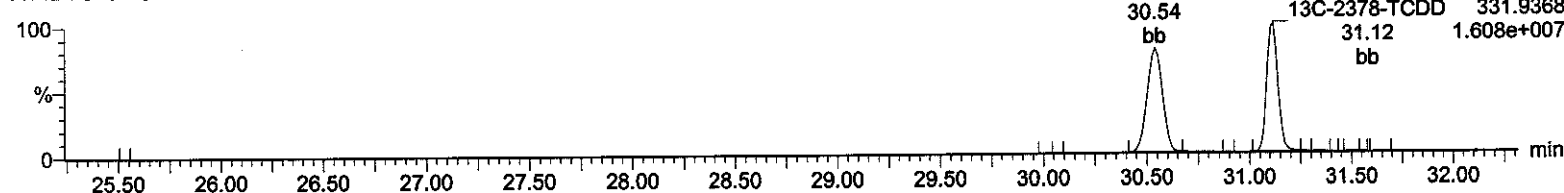
Total-tetradoxins

A14DEC19A-3



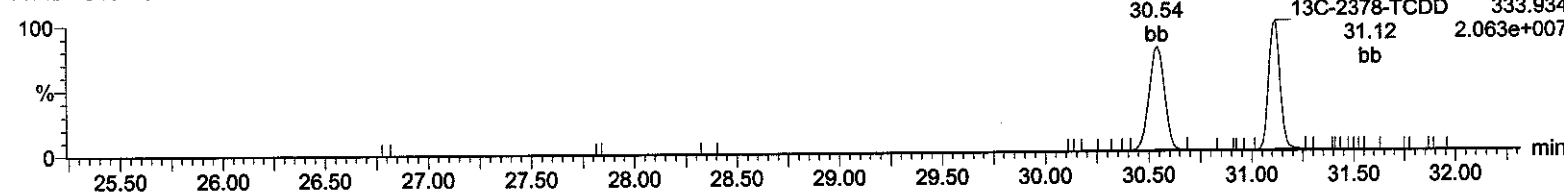
13C-2378-TCDD

A14DEC19A-3



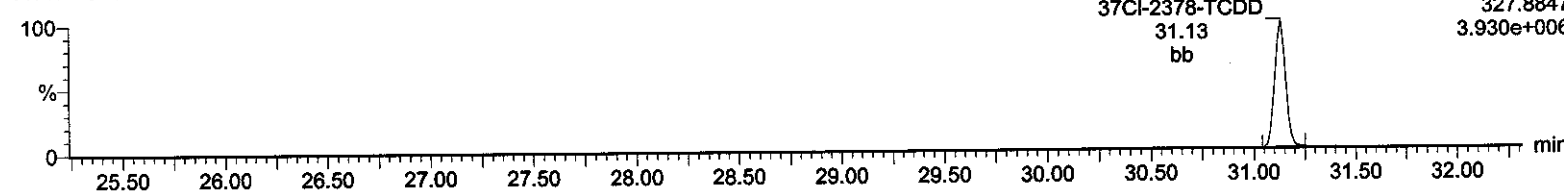
13C-2378-TCDD

A14DEC19A-3



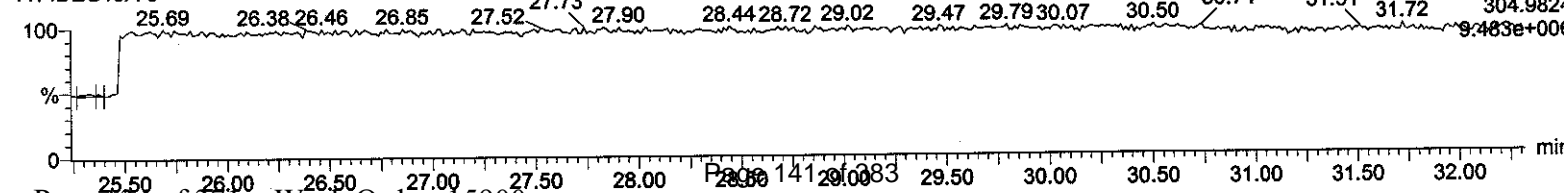
37Cl-2378-TCDD

A14DEC19A-3



Lock Mass F1

A14DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

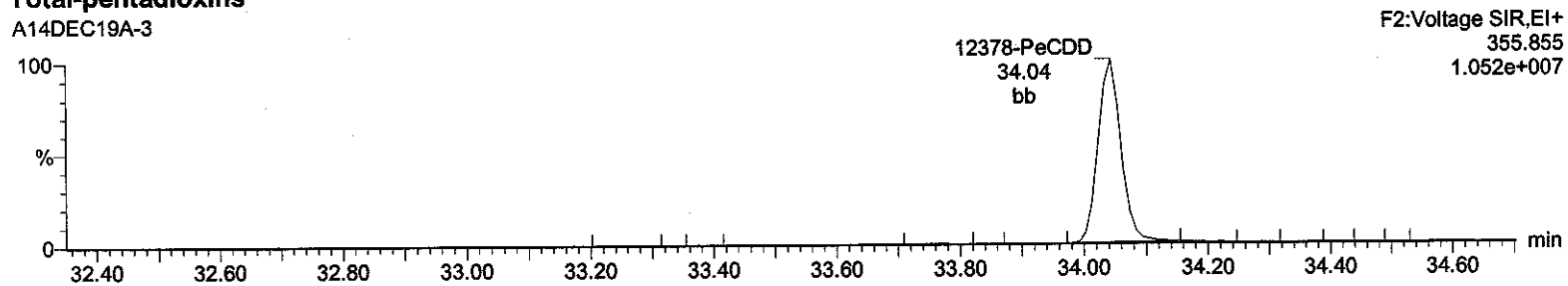
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

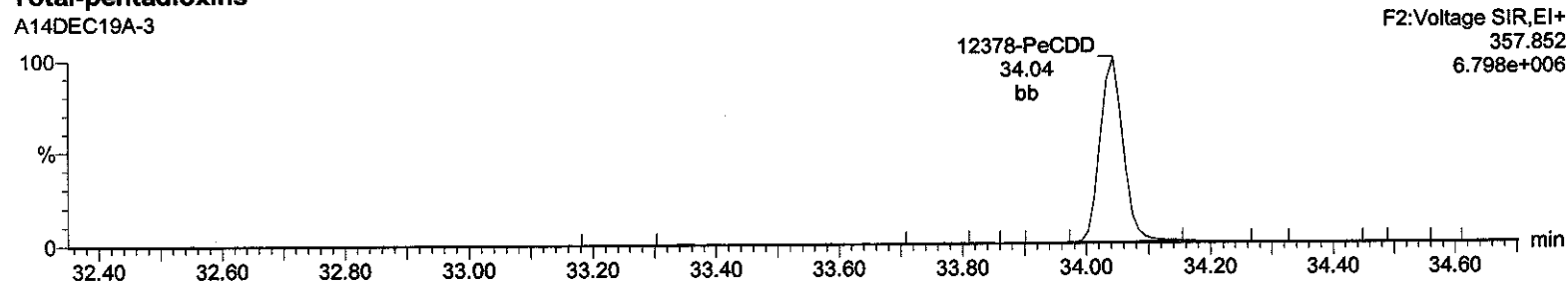
Total-pentadioxins

A14DEC19A-3



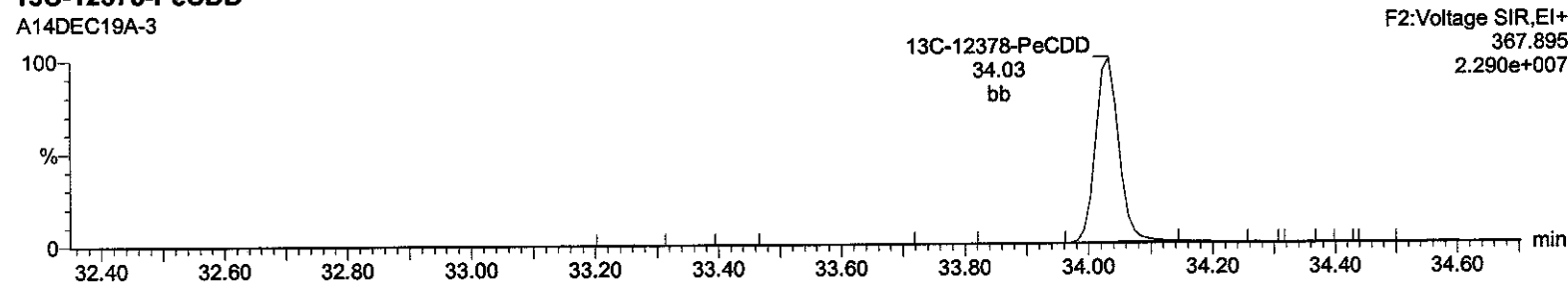
Total-pentadioxins

A14DEC19A-3



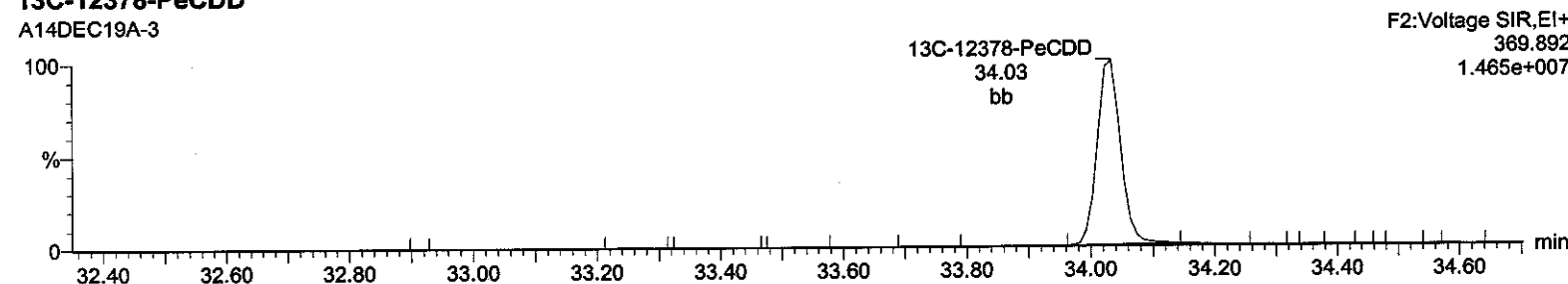
13C-12378-PeCDD

A14DEC19A-3



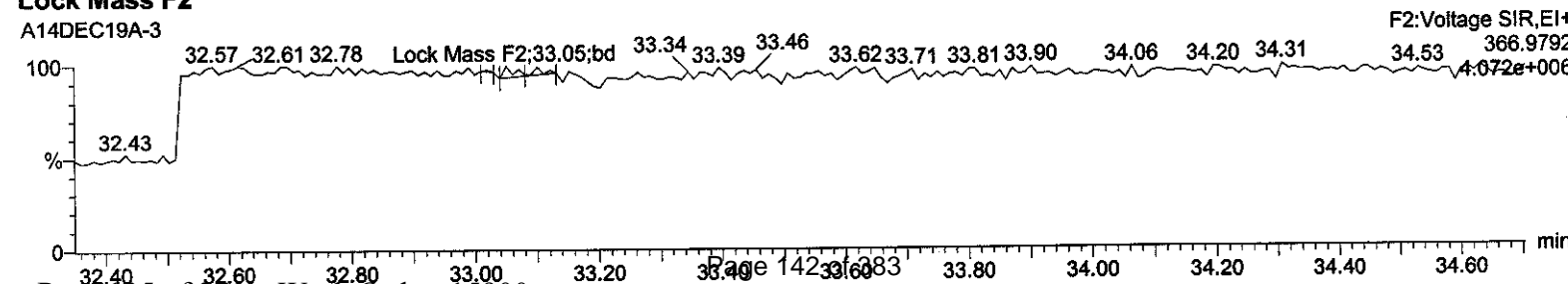
13C-12378-PeCDD

A14DEC19A-3



Lock Mass F2

A14DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

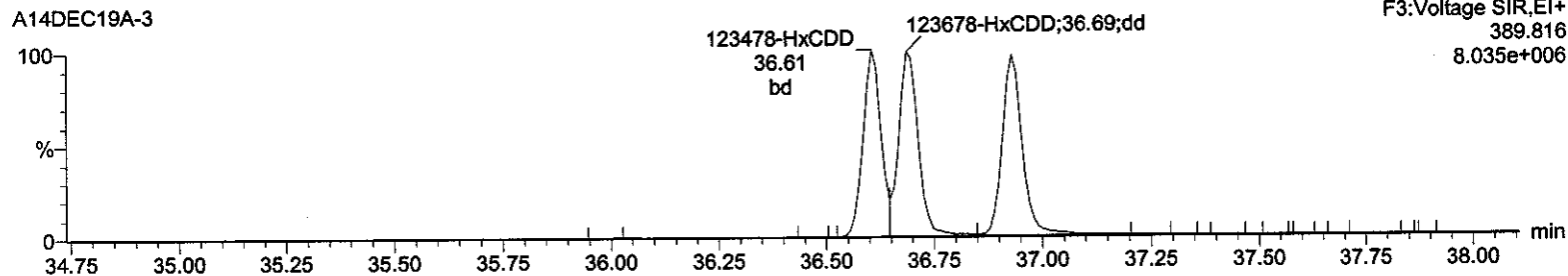
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

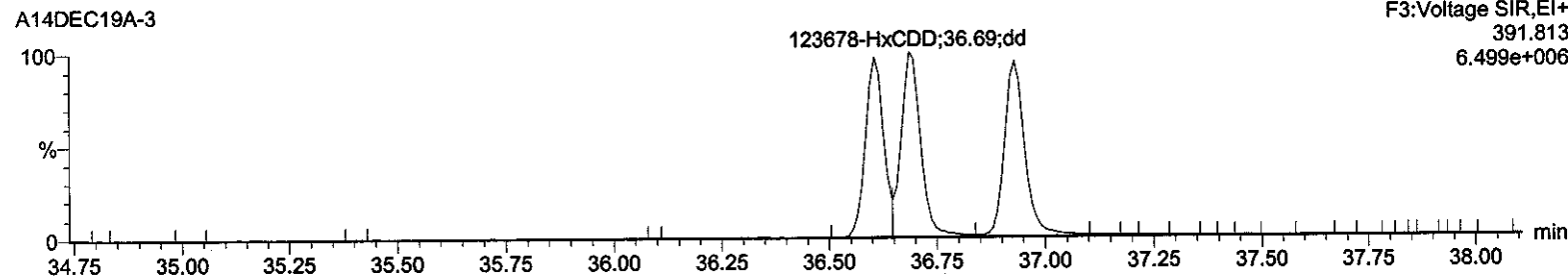
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A14DEC19A-3



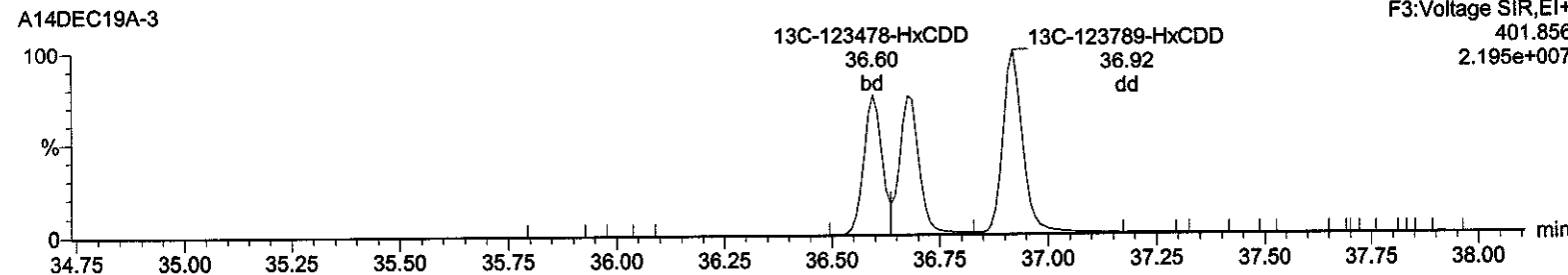
Total-hexadioxins

A14DEC19A-3



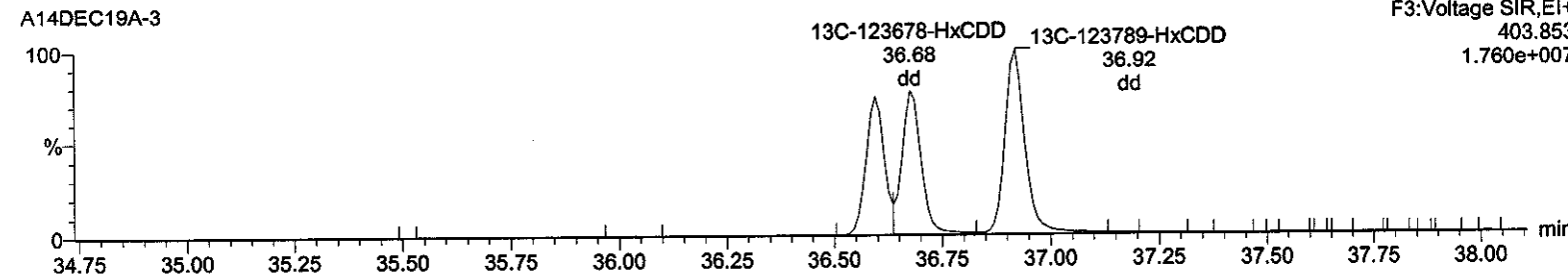
13C-123478-HxCDD

A14DEC19A-3



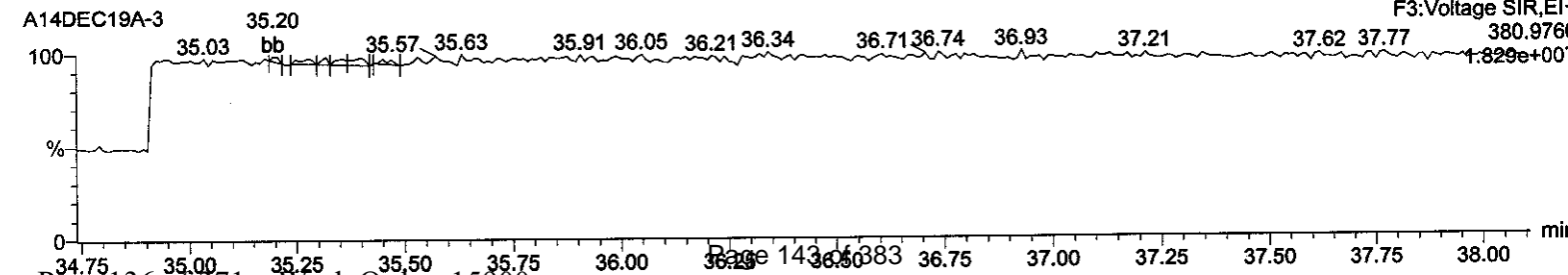
13C-123478-HxCDD

A14DEC19A-3



Lock Mass F3

A14DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

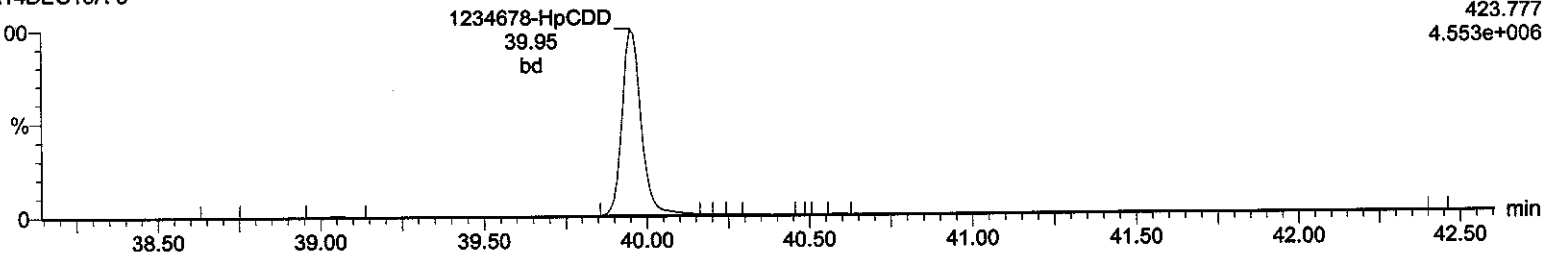
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-heptadioxins

A14DEC19A-3

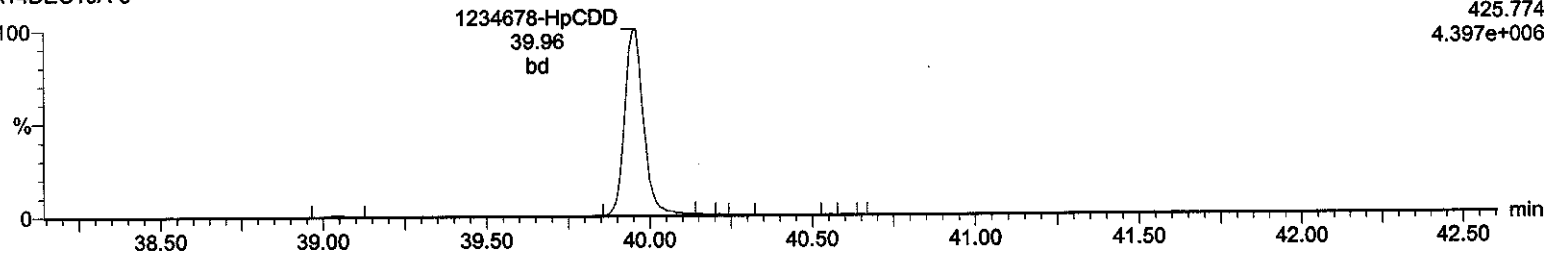
F4:Voltage SIR,EI+
423.777
4.553e+006



Total-heptadioxins

A14DEC19A-3

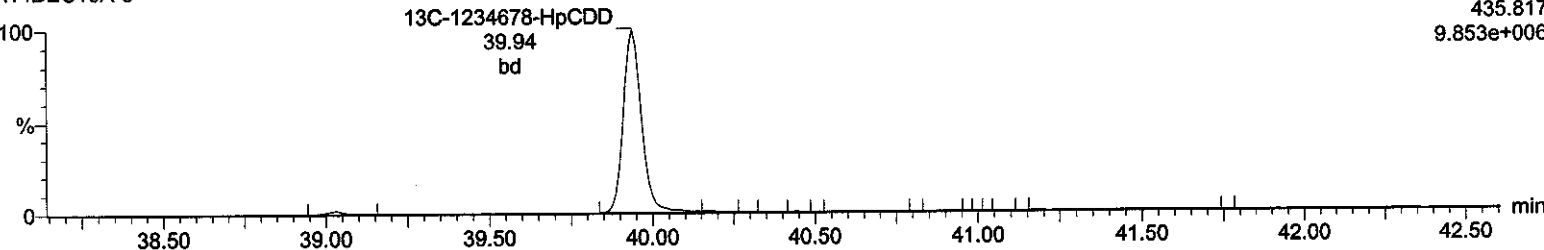
F4:Voltage SIR,EI+
425.774
4.397e+006



13C-1234678-HpCDD

A14DEC19A-3

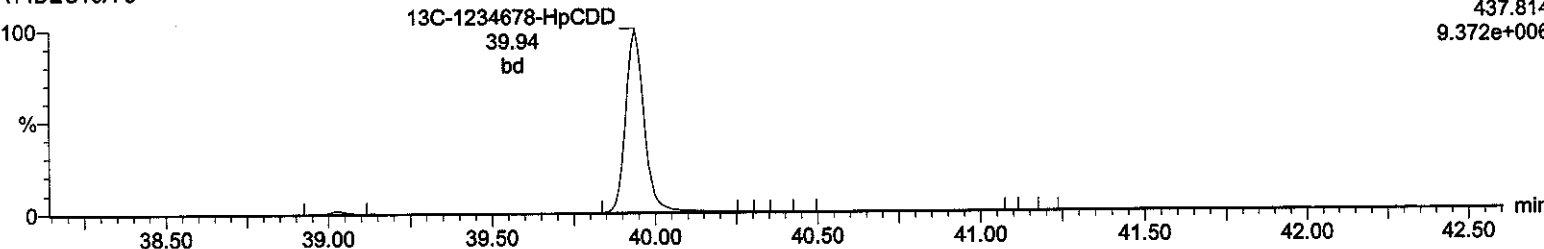
F4:Voltage SIR,EI+
435.817
9.853e+006



13C-1234678-HpCDD

A14DEC19A-3

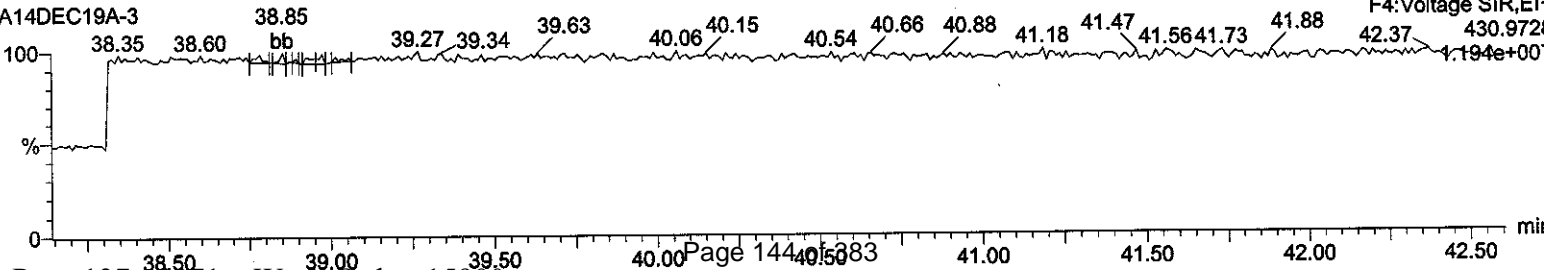
F4:Voltage SIR,EI+
437.814
9.372e+006



Lock Mass F4

A14DEC19A-3

F4:Voltage SIR,EI+
430.9728
4.194e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

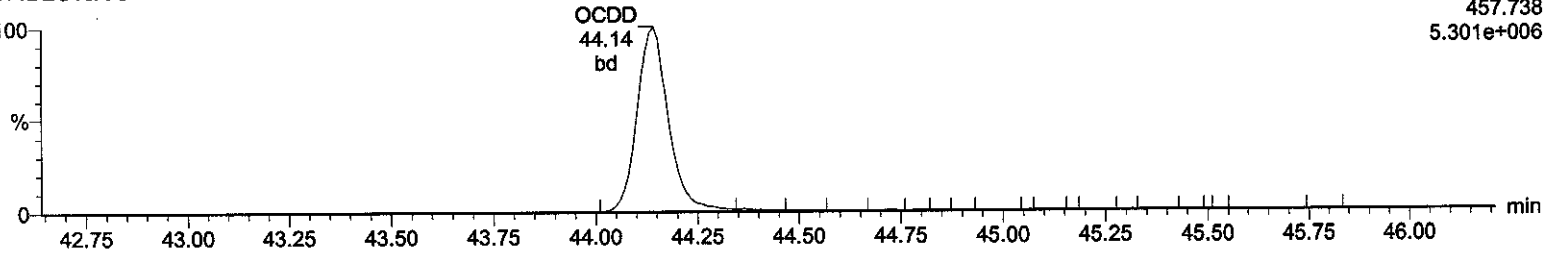
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDD

A14DEC19A-3

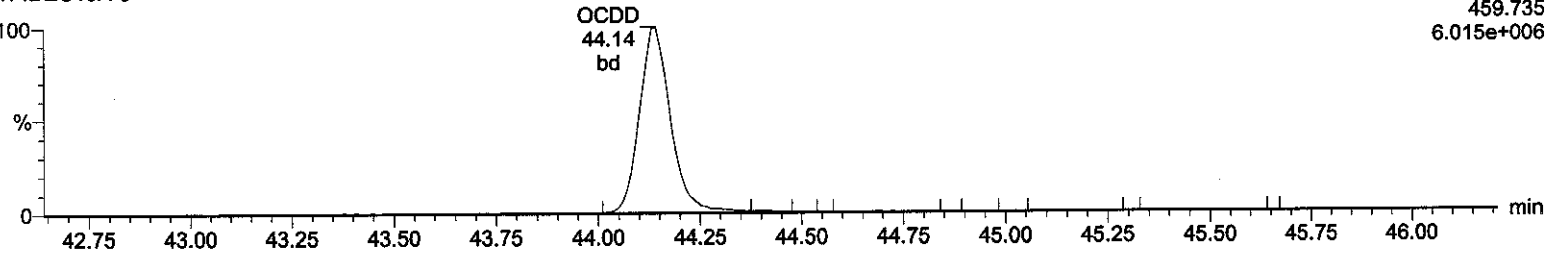
F5:Voltage SIR,EI+
457.738
5.301e+006



OCDD

A14DEC19A-3

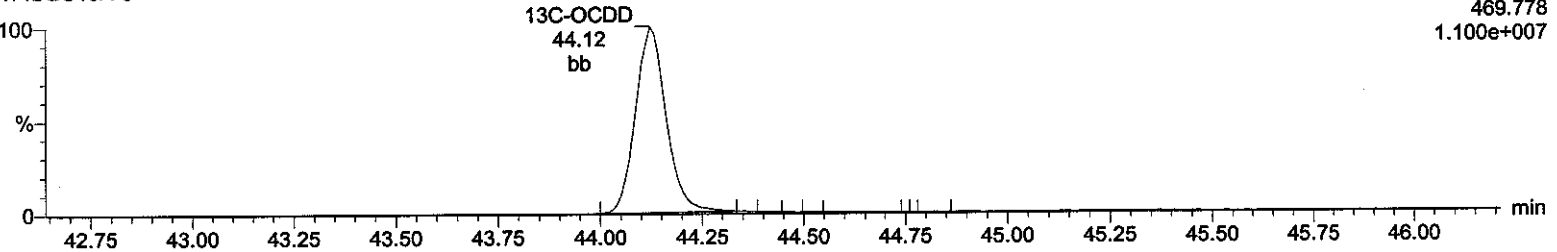
F5:Voltage SIR,EI+
459.735
6.015e+006



13C-OCDD

A14DEC19A-3

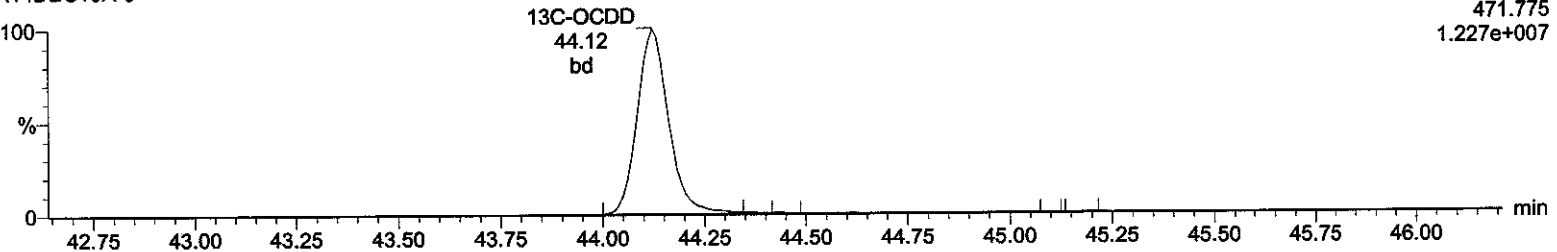
F5:Voltage SIR,EI+
469.778
1.100e+007



13C-OCDD

A14DEC19A-3

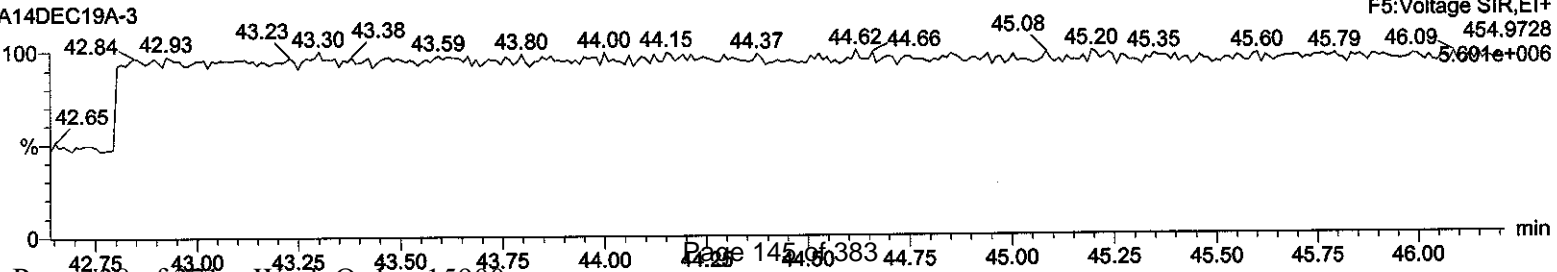
F5:Voltage SIR,EI+
471.775
1.227e+007



Lock Mass F5

A14DEC19A-3

F5:Voltage SIR,EI+
454.9728
5.601e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

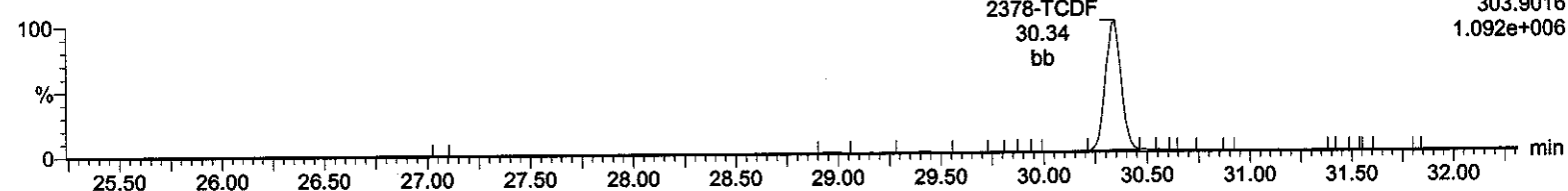
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

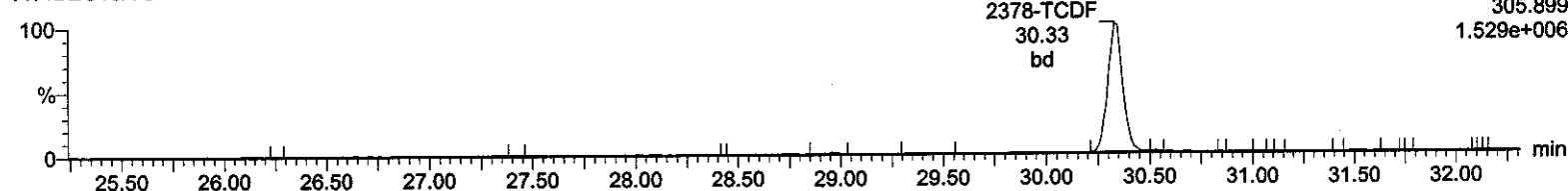
Total-tetrafurans

A14DEC19A-3



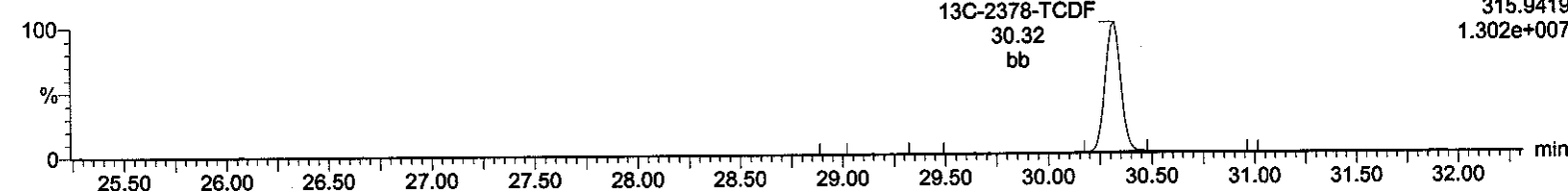
Total-tetrafurans

A14DEC19A-3



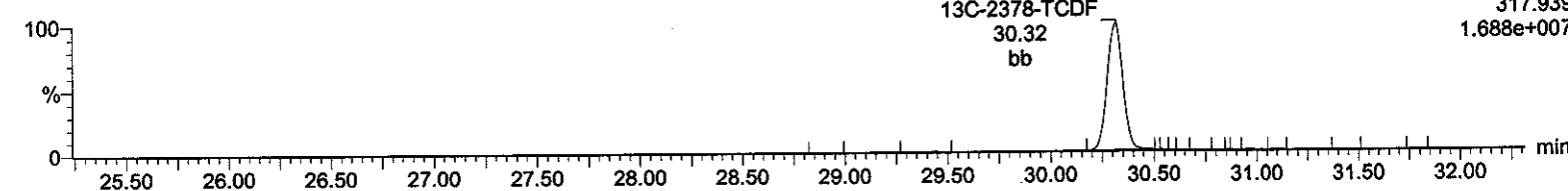
13C-2378-TCDF

A14DEC19A-3



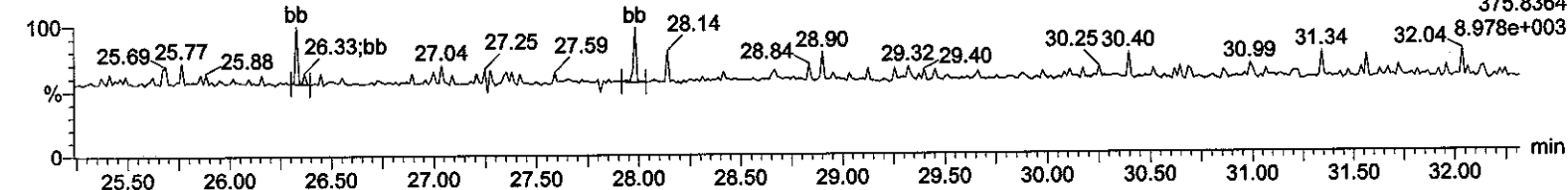
13C-2378-TCDF

A14DEC19A-3



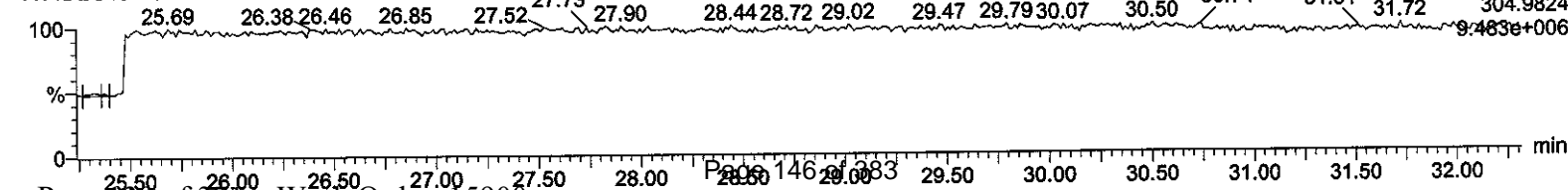
HxDPE

A14DEC19A-3



Lock Mass F1

A14DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

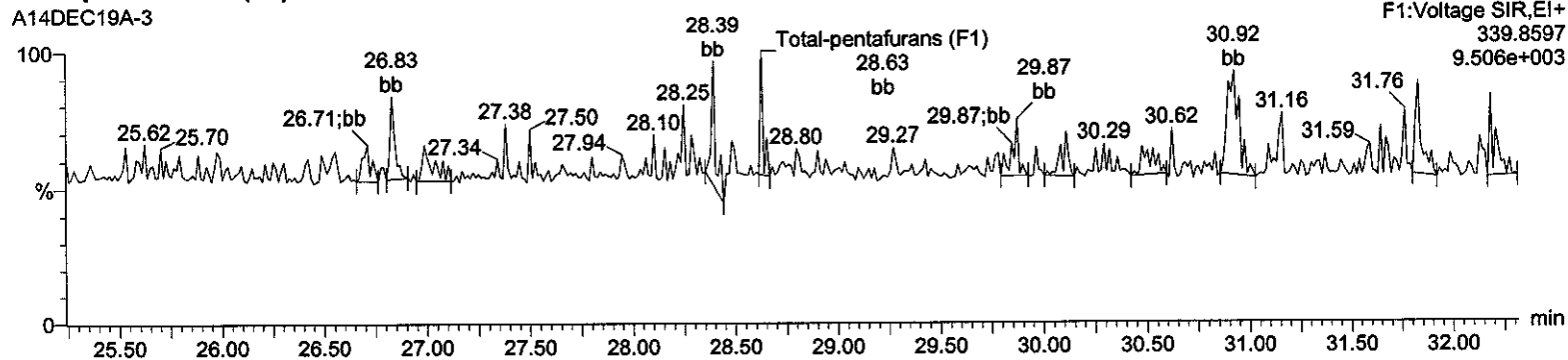
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

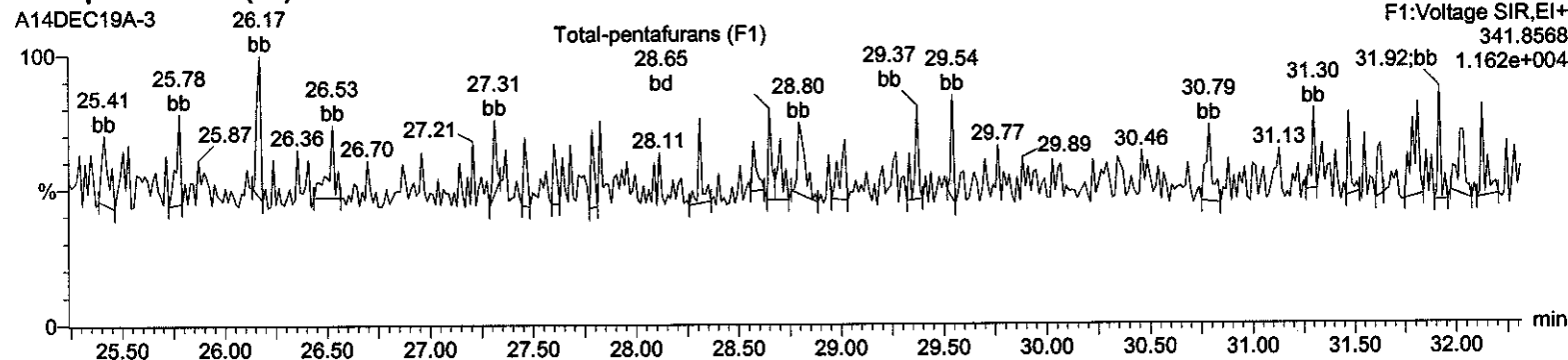
Total-pentafurans (F1)

A14DEC19A-3



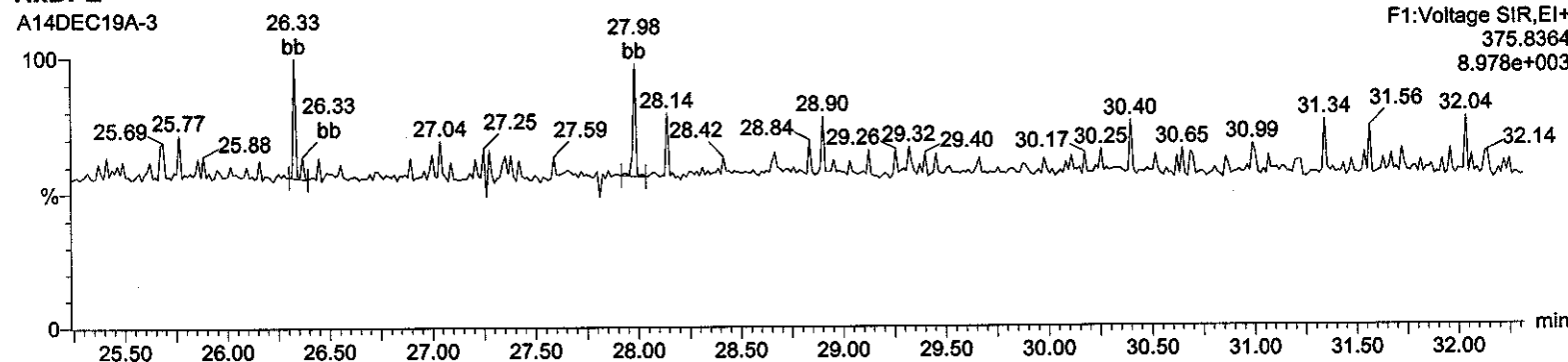
Total-pentafurans (F1)

A14DEC19A-3



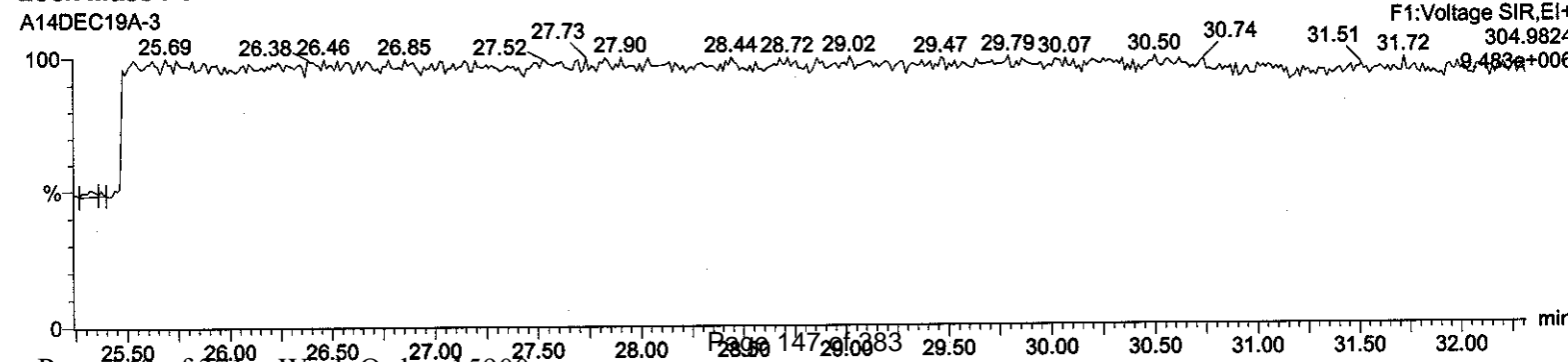
HxDPE

A14DEC19A-3



Lock Mass F1

A14DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

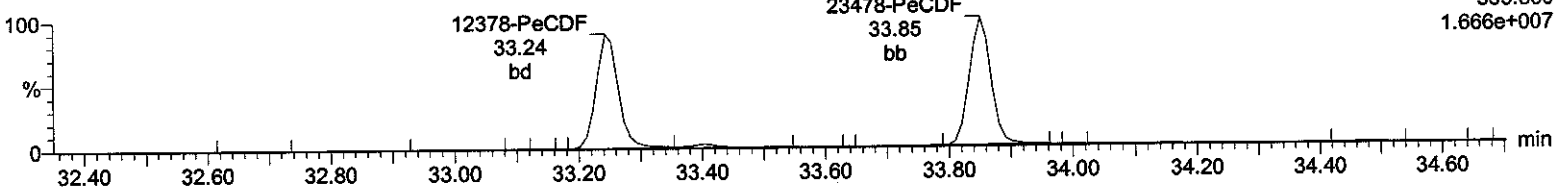
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2,
User: MJC

Total-pentafurans

A14DEC19A-3

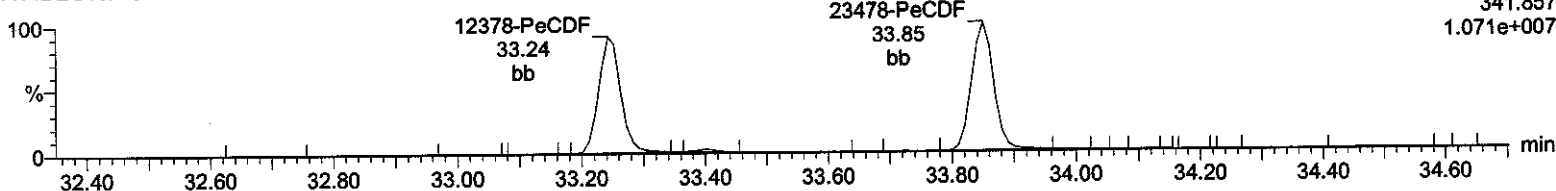
F2:Voltage SIR,EI+
339.860
1.666e+007



Total-pentafurans

A14DEC19A-3

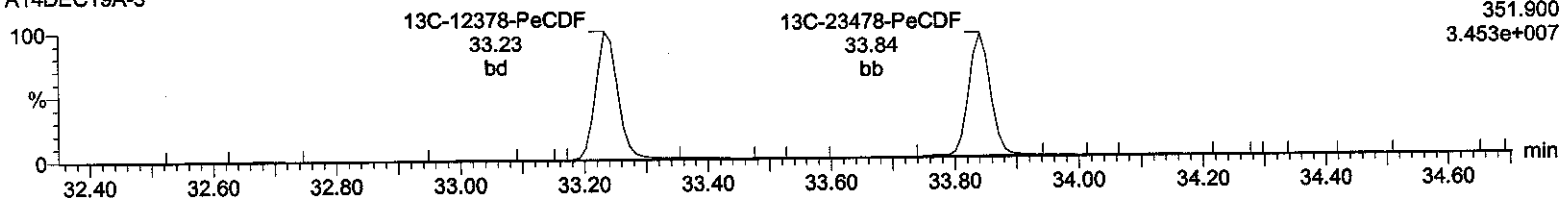
F2:Voltage SIR,EI+
341.857
1.071e+007



13C-12378-PeCDF

A14DEC19A-3

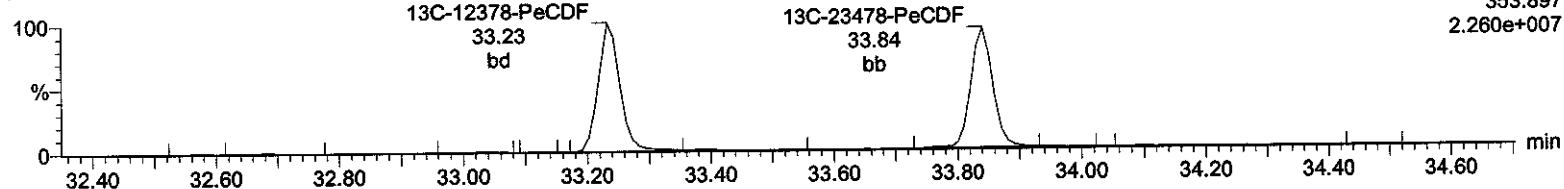
F2:Voltage SIR,EI+
351.900
3.453e+007



13C-12378-PeCDF

A14DEC19A-3

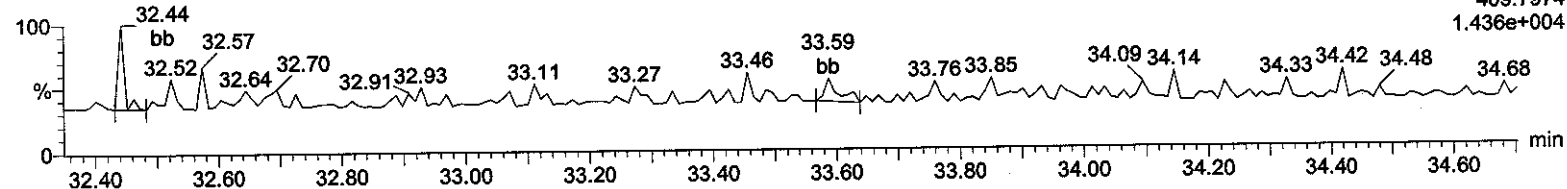
F2:Voltage SIR,EI+
353.897
2.260e+007



HpDPE

A14DEC19A-3

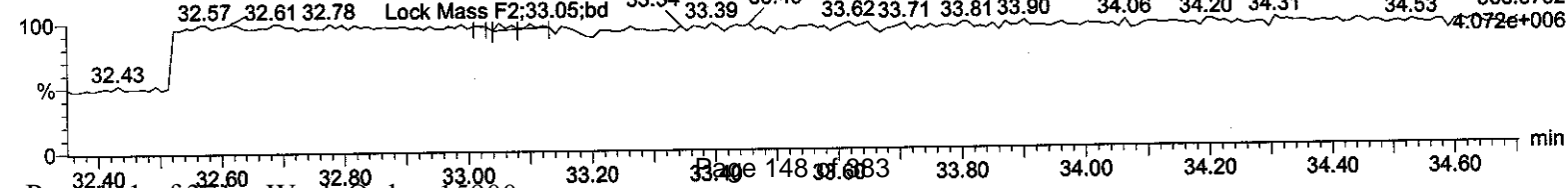
F2:Voltage SIR,EI+
409.7974
1.436e+004



Lock Mass F2

A14DEC19A-3

F2:Voltage SIR,EI+
366.9792
4.072e+006



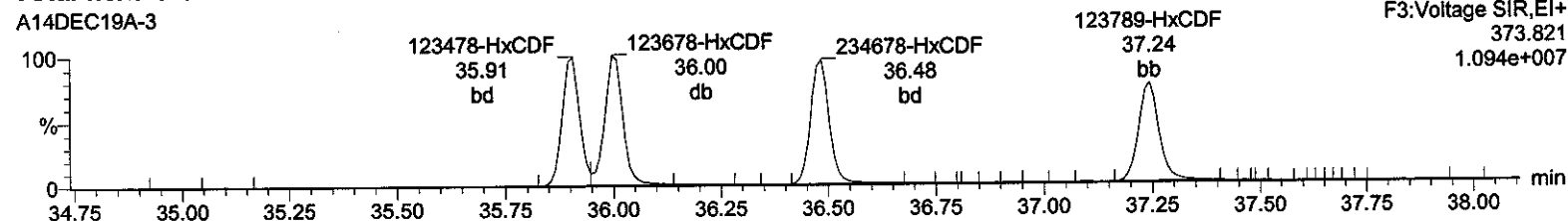
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

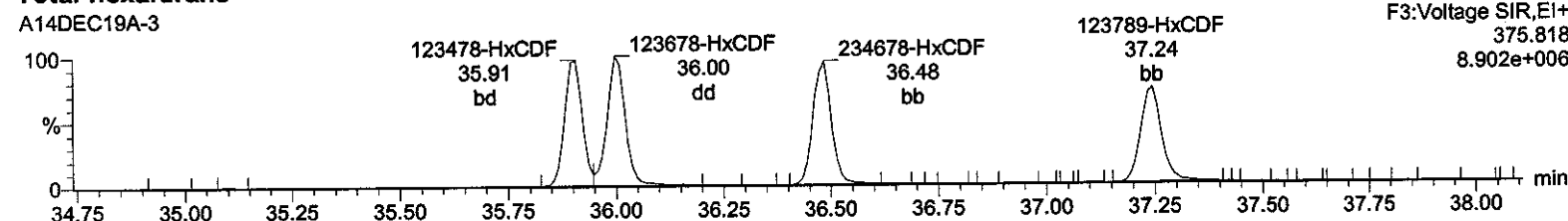
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

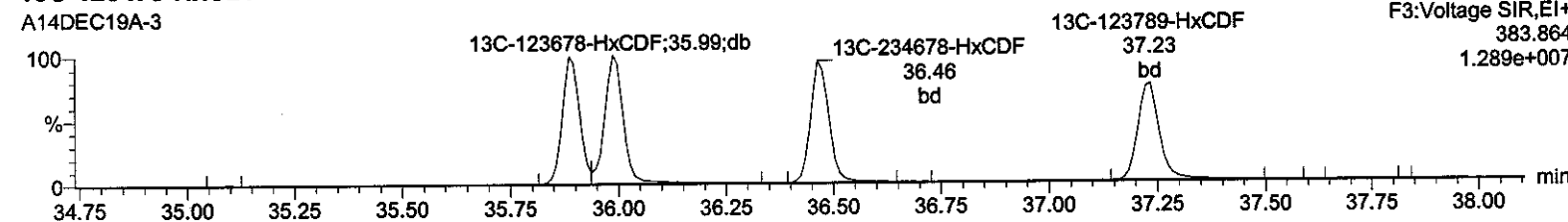
Total-hexafurans



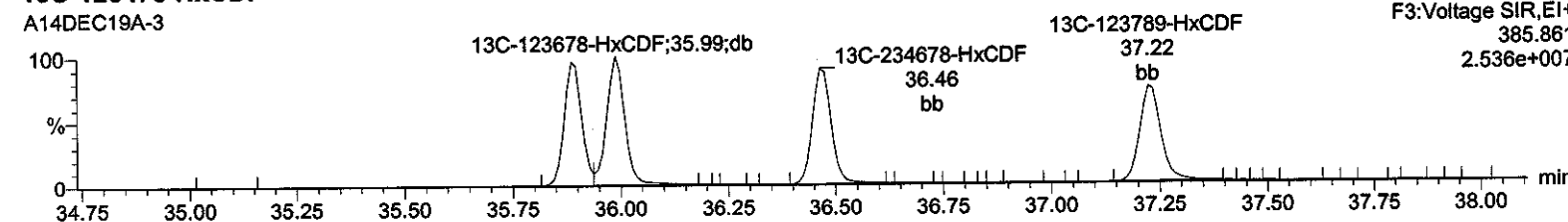
Total-hexafurans



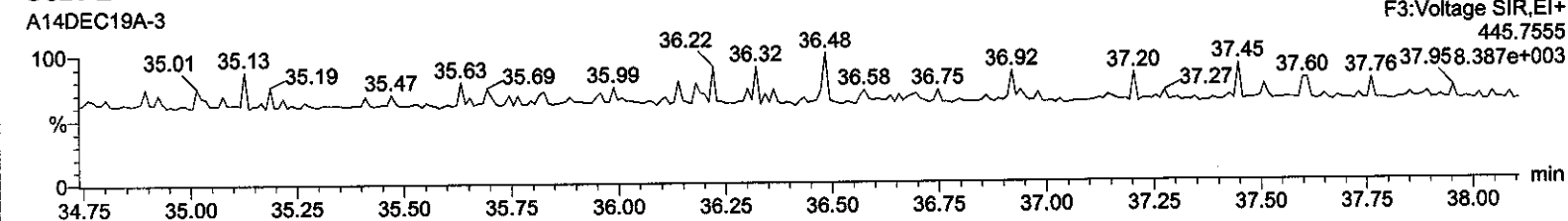
¹³C-123478-HxCDF



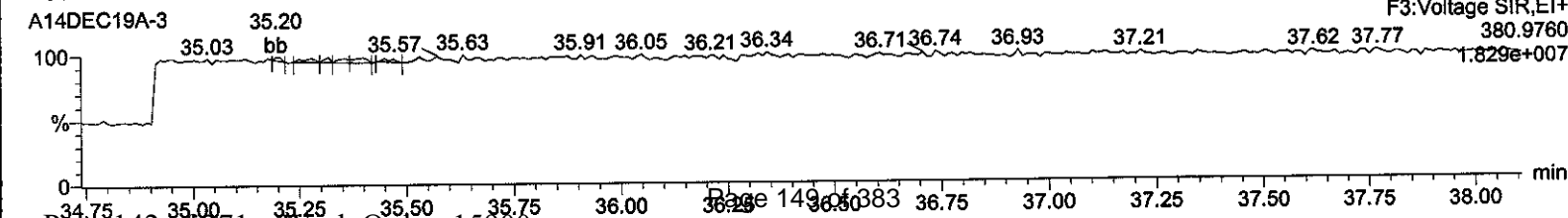
¹³C-123478-HxCDF



OcDPE



Lock Mass F3



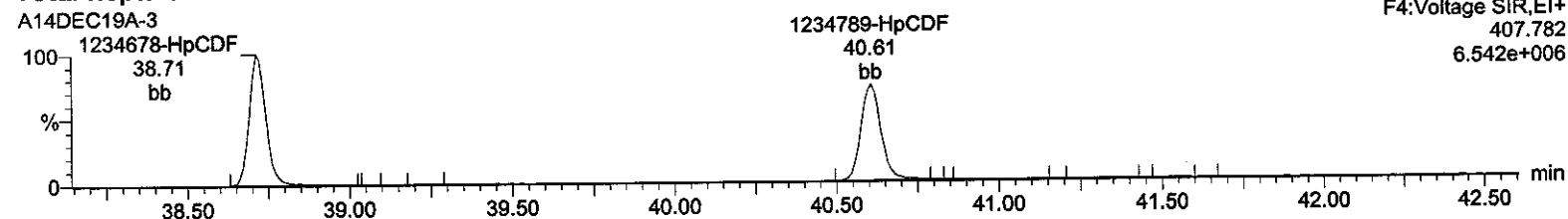
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

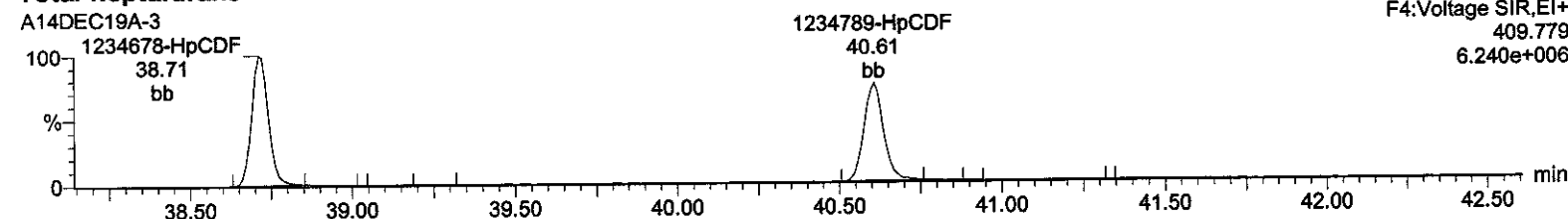
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

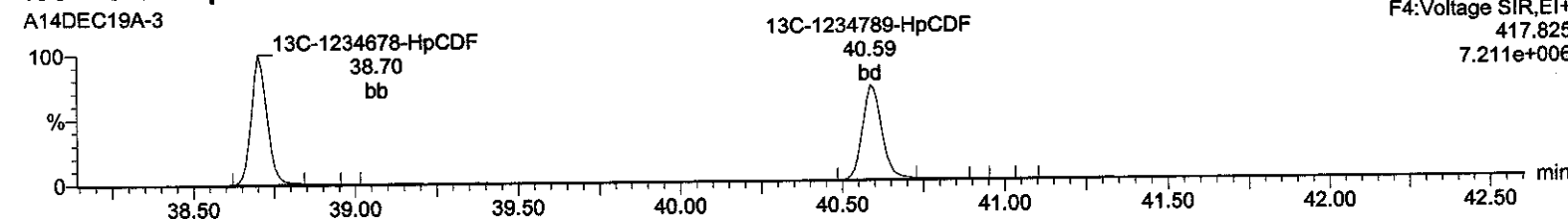
Total-heptafurans



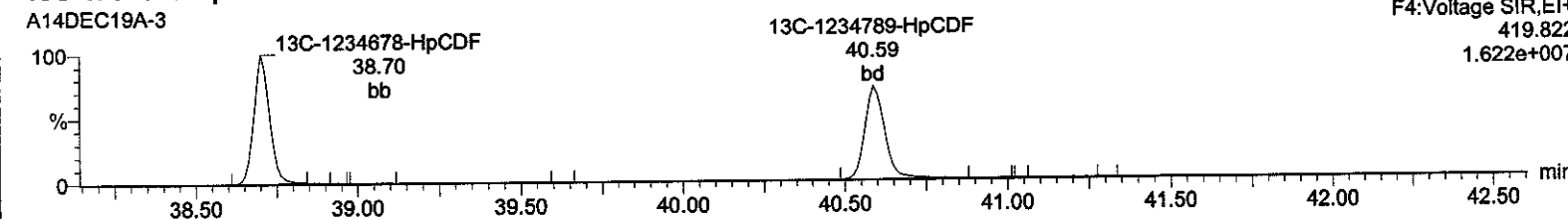
Total-heptafurans



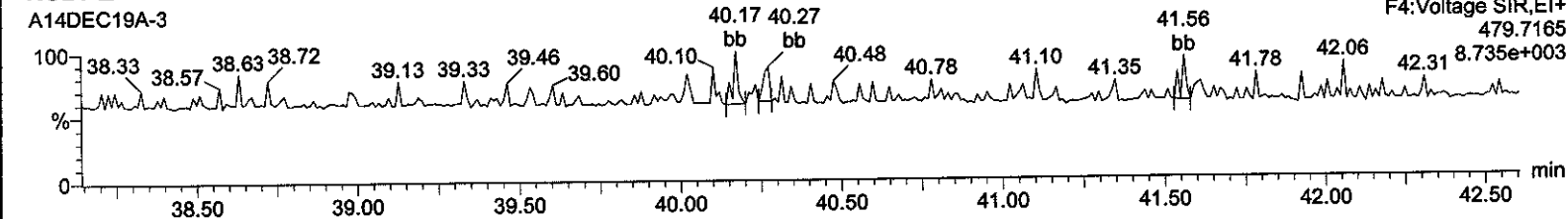
¹³C-1234678-HpCDF



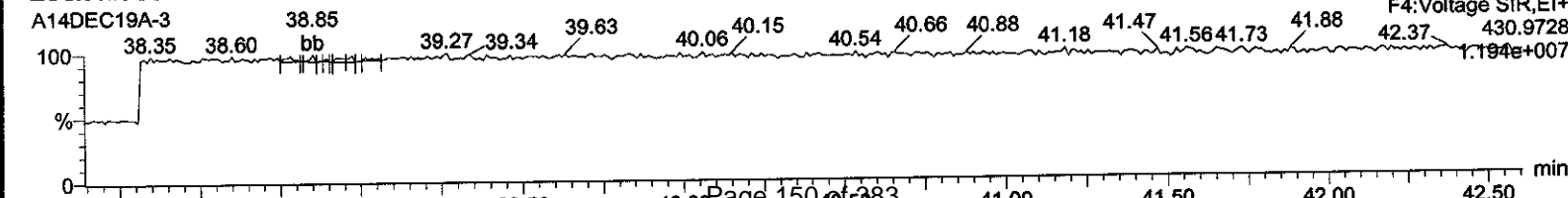
¹³C-1234678-HpCDF



NoDPE



Lock Mass F4



Quantify Sample Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

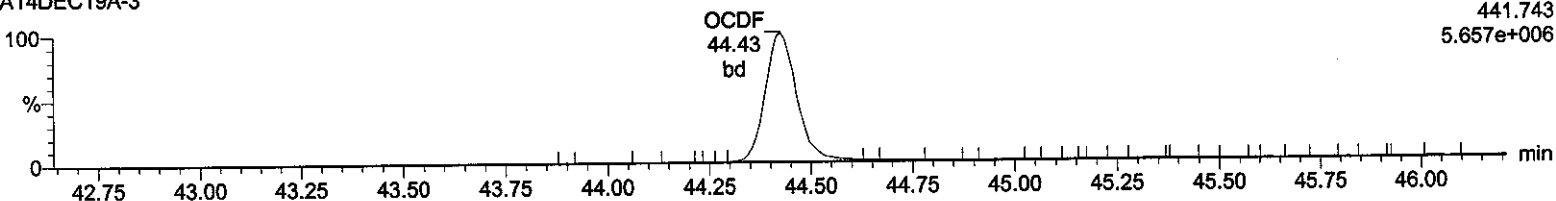
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2,
User: MJC

OCDF

A14DEC19A-3

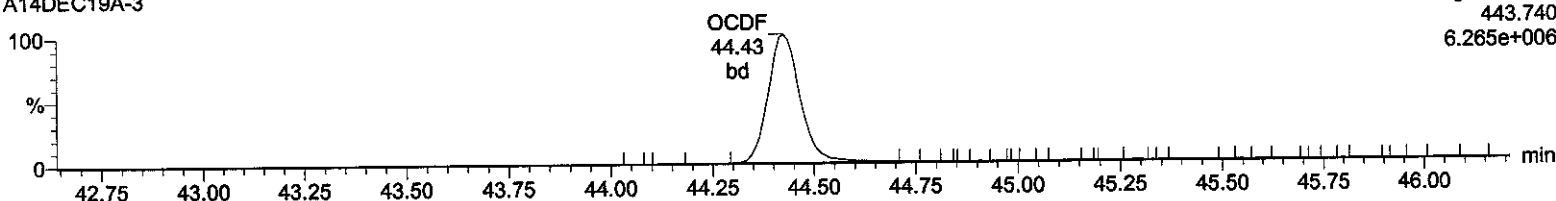
F5:Voltage SIR,EI+
441.743
5.657e+006



OCDF

A14DEC19A-3

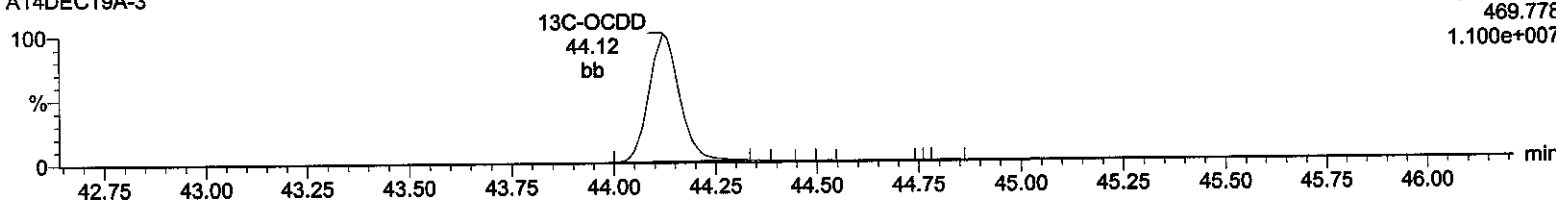
F5:Voltage SIR,EI+
443.740
6.265e+006



13C-OCDD

A14DEC19A-3

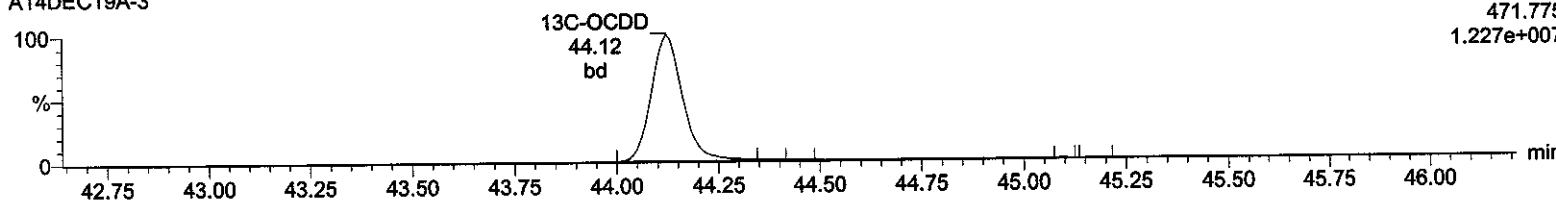
F5:Voltage SIR,EI+
469.778
1.100e+007



13C-OCDD

A14DEC19A-3

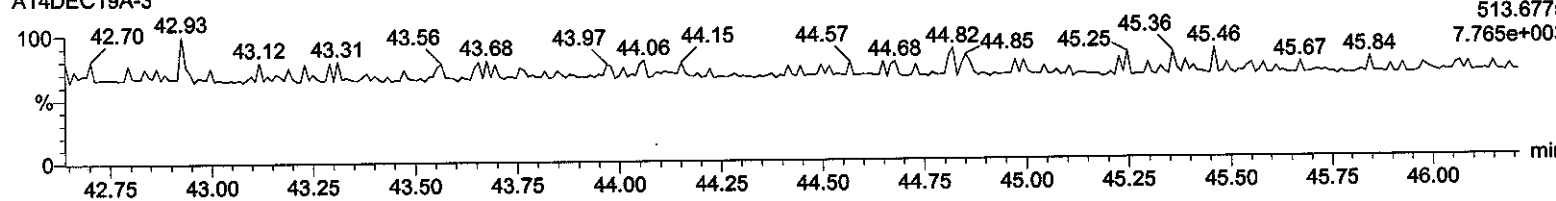
F5:Voltage SIR,EI+
471.775
1.227e+007



DeDPE

A14DEC19A-3

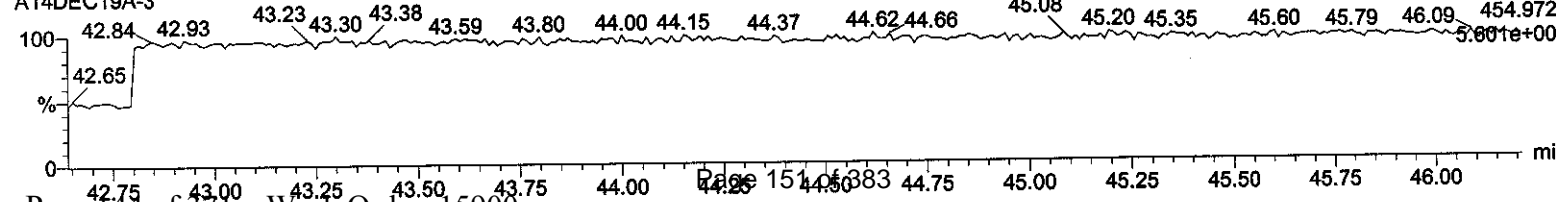
F5:Voltage SIR,EI+
513.6775
7.765e+003



Lock Mass F5

A14DEC19A-3

F5:Voltage SIR,EI+
549.9728
5.801e+006



Logbooks

Prep Logbook

3520C Aqueous Extraction for Method 1613B

Batch ID: 42567 **Verified by:** _____
Analyst: Andrea Scarpello **Lab SOP:** CF-OA-E-002 REV# 15
Method: SW846 3520C **Instrument:** Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
12025525 MB	10-DEC-2019 12:11	1400	400	1000	5	40			WD191203 N -01.2	
12025525 MB	10-DEC-2019 12:11	1400	400	1000	5	40			.05 ng/uL WD191203 N -01.2	
12025526 LCS	10-DEC-2019 12:11	1400	400	1000	5	40	40	WD191209 -01	.05 ng/uL WD191203 N -01.2	
12025526 LCS	10-DEC-2019 12:11	1400	400	1000	5	40	40	WD191209 -01	.05 ng/uL WD191203 N -01.2	
12025527 LCSD	10-DEC-2019 12:11	1400	400	1000	5	40	40	WD191209 -01	.05 ng/uL WD191203 N -01.2	
12025527 LCSD	10-DEC-2019 12:11	1400	400	1000	5	40	40	WD191209 -01	.05 ng/uL WD191203 N -01.2	
15896001	10-DEC-2019 12:11	1571.5	514.6	1056.9	7	40		.005 ng/uL WD191203 N -01.2		
15897001	10-DEC-2019 12:11	1172.3	397.6	774.7	7	40		.05 ng/uL WD191203 N -01.2		
15900001	10-DEC-2019 12:11	1534.6	510.5	1024.1	7	40		.05 ng/uL WD191203 N -01.2		
15900002	10-DEC-2019 12:11	1557.5	512.4	1045.1	7	40		.05 ng/uL WD191203 N -01.2		
15900003	10-DEC-2019 12:11	1483	510.3	972.7	7	40		.05 ng/uL WD191203 N -01.2		
15901001	10-DEC-2019 12:11	1299.1	504.4	794.7	7	40		.05 ng/uL WD191210 N -02		
15901002	10-DEC-2019 12:11	1447.3	506.1	941.2	7	40		.05 ng/uL WD191210 N -02		
15903001	10-DEC-2019 12:11	1195.8	394.4	801.4	8	40		.05 ng/uL WD191210 N -02		
15903002	10-DEC-2019 12:11	1295.1	397.6	897.5	8	40		.05 ng/uL WD191210 N -02		
15903003	10-DEC-2019 12:11	1221	392.9	828.1	8	40		.05 ng/uL WD191210 N -02		

Prep Logbook

Batch ID: 42567 Verified by: _____
Analyst: Andrea Scarpello **Lab SOP:** CF-OA-E-002 REV# 15
Method: SW846 3520C **Instrument:** Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
15903004	10-DEC-2019 12:11	1237.6	394.3	843.3	8	40			WD191210 N -02	
15903005	10-DEC-2019 12:11	1115.8	394.7	721.1	7	40			.05 ng/uL WD191210 N -02	
15904001	10-DEC-2019 12:11	1345.2	409.5	935.7	8	40			.05 ng/uL WD191210 N -02	
15918001	10-DEC-2019 12:11	1468.1	476.4	991.7	7	40			.05 ng/uL WD191210 N -02	
15919001	10-DEC-2019 12:11	1448	476.9	971.1	7	40			.05 ng/uL WD191210 N -02	
15920001	10-DEC-2019 12:11	1432.7	478.4	954.3	7	40			.05 ng/uL WD191210 N -02	
15925001	10-DEC-2019 12:11	1306.4	475	831.4	8	40			.05 ng/uL WD191210 N -02	
15931001	10-DEC-2019 12:11	1464.9	457.7	1007.2	7	40			.05 ng/uL WD191210 N -02	
15931002	10-DEC-2019 12:11	1477.4	447	1030.4	7	40			.05 ng/uL WD191210 N -02	

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Salt	1152107	10	g	Finish Time: 11-DEC-2019 08:05:00
REAGENT		Acetone	1152234-A.6	100	uL	
REAGENT		Methylene Chloride	1152286-A	250	mL	

Prep Logbook

Cleanup Procedure for Liquids

Batch ID: 42568
 Analyst: Mike Medwedeff

Verified by: _____

Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
12025525 MB	11-DEC-2019 10:00	AB Siltica Florisl	148	100	20	WD191210-04 .01 ng/uL
12025525 MB	11-DEC-2019 10:00	AB Siltica Florisl	148	100	20	WD191210-04 .01 ng/uL
12025526 LCS	11-DEC-2019 10:00	AB Siltica Florisl	30	100	20	WD191210-04 .01 ng/uL
12025526 LCS	11-DEC-2019 10:00	AB Siltica Florisl	30	100	20	WD191210-04 .01 ng/uL
12025527 LCSD	11-DEC-2019 10:00	AB Siltica Florisl	85	100	20	WD191210-04 .01 ng/uL
12025527 LCSD	11-DEC-2019 10:00	AB Siltica Florisl	85	100	20	WD191210-04 .01 ng/uL
15896001	11-DEC-2019 10:00	AB Siltica Florisl	106	100	20	WD191210-04 .01 ng/uL
15897001	11-DEC-2019 10:00	AB Siltica Florisl	1	100	20	WD191210-04 .01 ng/uL
15900001	11-DEC-2019 10:00	AB Siltica Florisl	156	100	20	WD191210-04 .01 ng/uL
15900002	11-DEC-2019 10:00	AB Siltica Florisl	102	100	20	WD191210-04 .01 ng/uL
15900003	11-DEC-2019 10:00	AB Siltica Florisl	126	100	20	WD191210-04 .01 ng/uL
15901001	11-DEC-2019 10:00	AB Siltica Florisl	191	100	20	WD191210-04 .01 ng/uL
15901002	11-DEC-2019 10:00	AB Siltica Florisl	88	100	20	WD191210-04 .01 ng/uL
15903001	11-DEC-2019 10:00	AB Siltica Florisl	70	100	20	WD191210-04 .01 ng/uL
15903002	11-DEC-2019 10:00	AB Siltica Florisl	166	100	20	WD191210-04 .01 ng/uL
15903003	11-DEC-2019 10:00	AB Siltica Florisl	50	100	20	WD191210-04 .01 ng/uL
15903004	11-DEC-2019 10:00	AB Siltica Florisl	28	100	20	WD191210-04 .01 ng/uL
15903005	11-DEC-2019 10:00	AB Siltica Florisl	177	100	20	WD191210-04 .01 ng/uL
15904001	11-DEC-2019 10:00	AB Siltica Florisl	7	100	20	WD191210-04 .01 ng/uL
15918001	11-DEC-2019 10:00	AB Siltica Florisl	77	100	20	WD191210-04 .01 ng/uL
15919001	11-DEC-2019 10:00	AB Siltica Florisl	171	100	20	WD191210-04 .01 ng/uL
15920001	11-DEC-2019 10:00	AB Siltica Florisl	180	100	20	WD191210-04 .01 ng/uL
15925001	11-DEC-2019 10:00	AB Siltica Florisl	6	100	20	WD191210-04 .01 ng/uL
15931001	11-DEC-2019 10:00	AB Siltica Florisl	149	100	20	WD191210-04 .01 ng/uL

Prep Logbook

Batch ID: 42568

Verified by: _____

Analyst: Mike Medwedeff

Lab SOP:

Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
15931002	11-DEC-2019 10:00	AB Silica Florisil	38	100	20	WD191210-04 .01 ng/uL

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Activated Florisil	1149228	1	g	
REAGENT		Silica Gel	1151237-A	2	g	
REAGENT		Glass Wool	1151781-A.3	1	each	
REAGENT		Salt	1152107	1	g	
REAGENT		Hexane	1152192-A.11	130	mL	
REAGENT		Hexane	1152194-A.12	130	mL	
REAGENT		Methylene Chloride	1152286-A	100	mL	
REAGENT		Hexane	1152498-A.1	130	mL	
REAGENT		Base silica	1152566-C	3	g	
REAGENT		Acid silica	1152569	7	g	

Initial Calibration Data

Runlog Information

16131CA

Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
• A08JUL19A-1	HRP750_2	08-JUL-2019 09:40	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYQ	1 uL
• A08JUL19A-2	HRP750_2	08-JUL-2019 10:28	A08JUL19A	Matt Cash		SB DIBLK2M	1 uL
• A08JUL19A-3	HRP750_2	08-JUL-2019 11:16	A08JUL19A	Matt Cash		CS0.5 UD190207-01	1 uL
• A08JUL19A-4	HRP750_2	08-JUL-2019 12:03	A08JUL19A	Matt Cash		CS1 UD190207-02 CS143	1 uL
• A08JUL19A-5	HRP750_2	08-JUL-2019 12:51	A08JUL19A	Matt Cash		CS2 UD190207-03 CS243	1 uL
• A08JUL19A-6	HRP750_2	08-JUL-2019 13:39	A08JUL19A	Matt Cash		CS3 UD190207-04 CS3KG	1 uL
• A08JUL19A-7	HRP750_2	08-JUL-2019 14:27	A08JUL19A	Matt Cash		CS4 UD190207-05 CS442	1 uL
• A08JUL19A-8	HRP750_2	08-JUL-2019 15:15	A08JUL19A	Matt Cash		CS5 UD190207-06 CS543	1 uL
• A08JUL19A-9	HRP750_2	08-JUL-2019 16:03	A08JUL19A	Matt Cash		SB DIBLK2N	1 uL
• A08JUL19A-10	HRP750_2	08-JUL-2019 16:51	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYR	1 uL

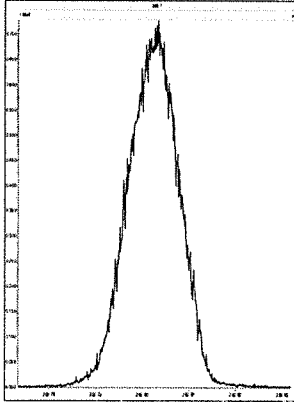
Experiment Calibration Report

MassLynx 4.1

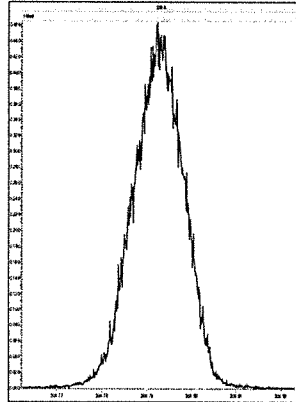
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Printed: Monday, July 08, 2019 09:38:33 Eastern Standard Time

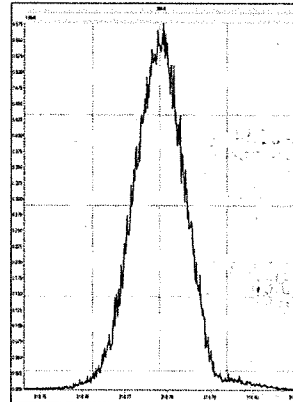
M 292.9824 R 12382



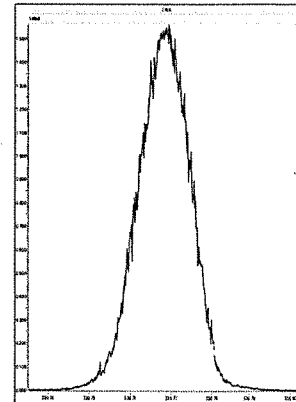
M 304.9824 R 11789



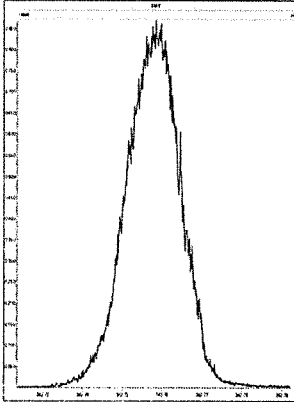
M 318.9792 R 11905



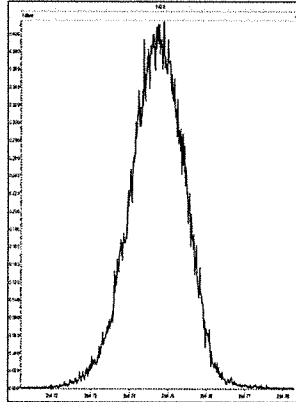
M 330.9792 R 11572



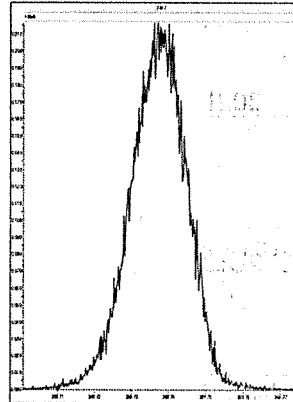
M 342.9792 R 10961



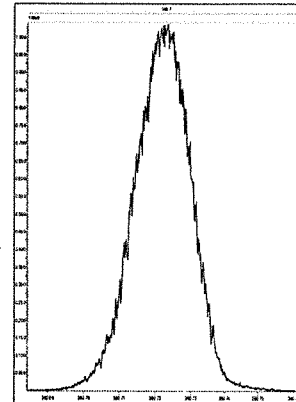
M 354.9792 R 10868



M 366.9792 R 10506



M 380.9760 R 10417



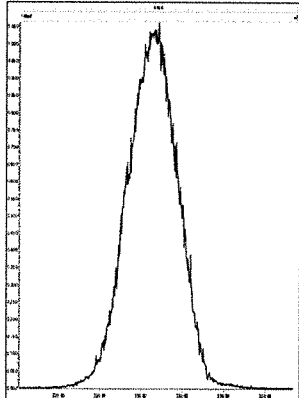
Experiment Calibration Report

MassLynx 4.1

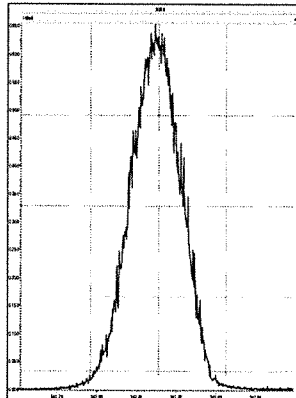
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 08, 2019 09:38:55 Eastern Standard Time

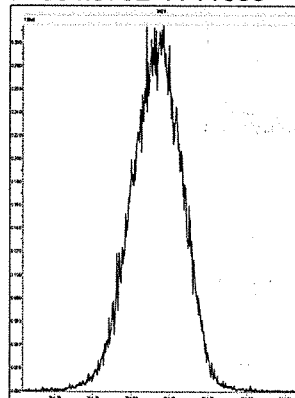
M 330.9792 R 12136



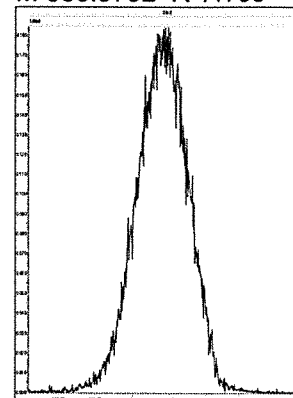
M 342.9792 R 11959



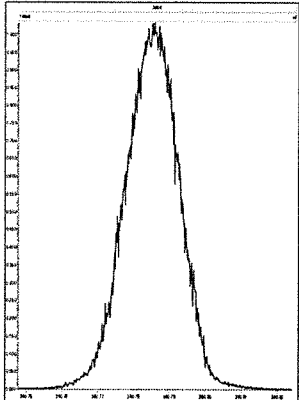
M 354.9792 R 11683



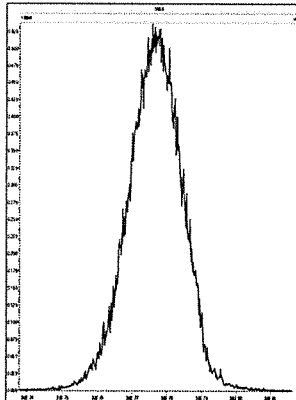
M 366.9792 R 11736



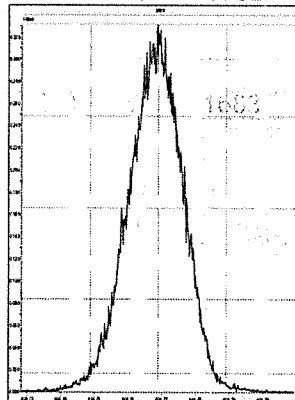
M 380.9760 R 11158



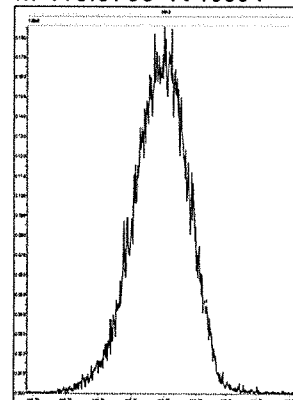
M 392.9760 R 10961



M 404.9760 R 10732



M 416.9760 R 10594



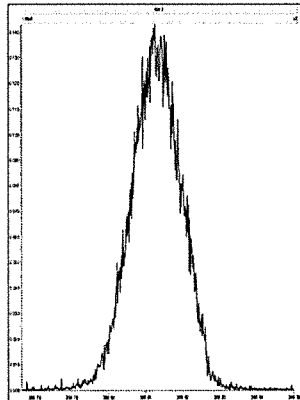
Experiment Calibration Report

MassLynx 4.1

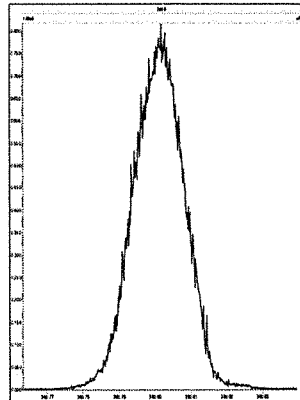
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Printed: Monday, July 08, 2019 09:39:18 Eastern Standard Time

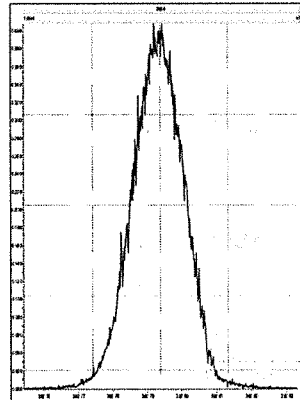
M 366.9792 R 12254



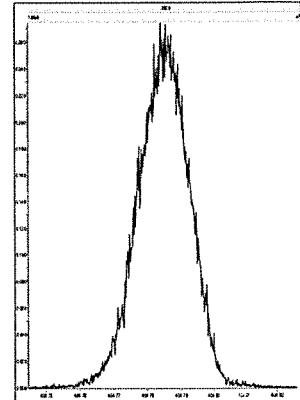
M 380.9760 R 12379



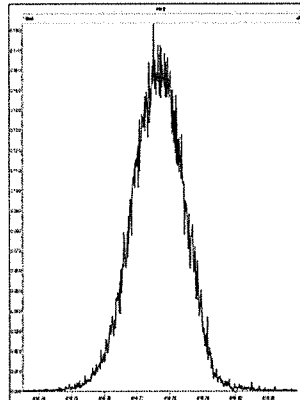
M 392.9760 R 11574



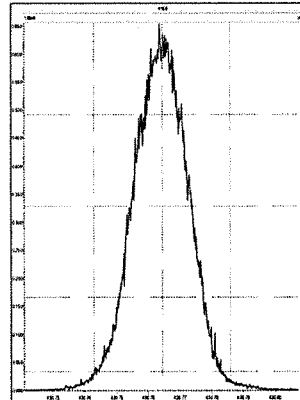
M 404.9760 R 11740



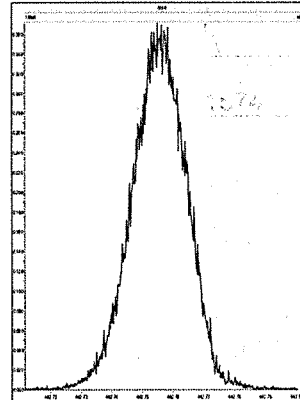
M 416.9760 R 11625



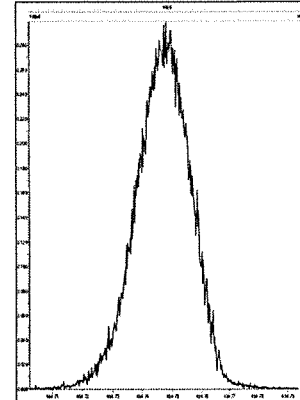
M 430.9728 R 10869



M 442.9728 R 11466



M 454.9728 R 10730



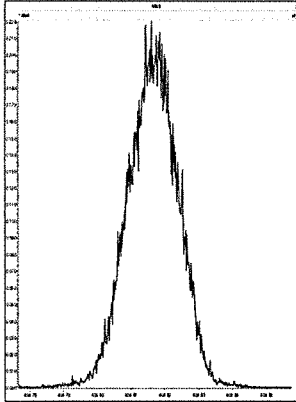
Experiment Calibration Report

MassLynx 4.1

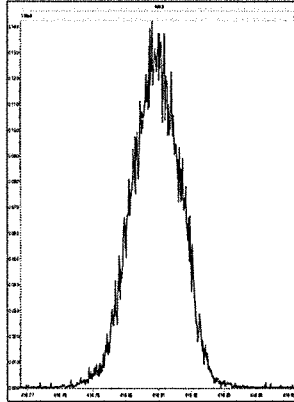
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Printed: Monday, July 08, 2019 09:39:46 Eastern Standard Time

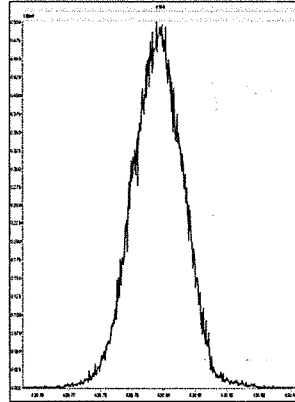
M 404.9760 R 12135



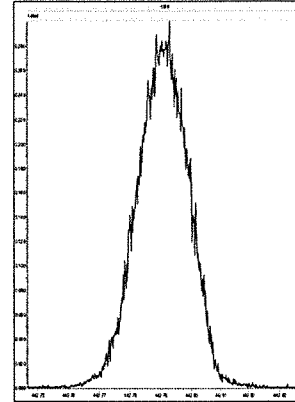
M 416.9760 R 12313



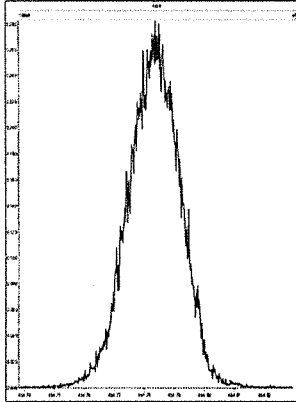
M 430.9728 R 12074



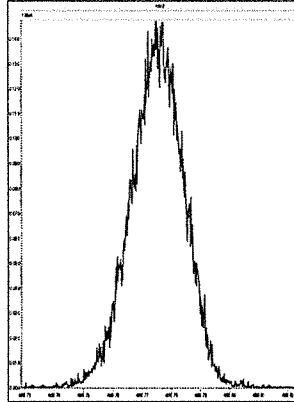
M 442.9728 R 11681



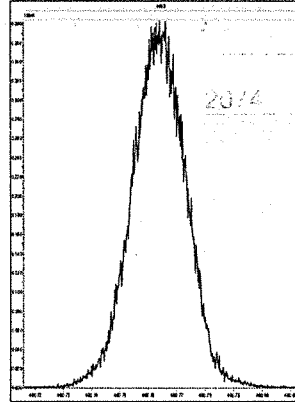
M 454.9728 R 11734



M 466.9728 R 11160



M 480.9696 R 10682



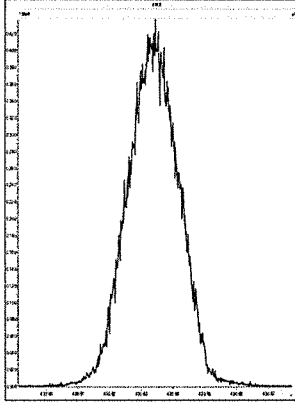
Experiment Calibration Report

MassLynx 4.1

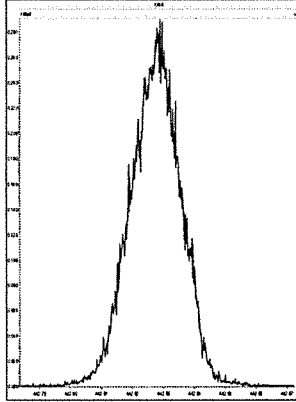
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Printed: Monday, July 08, 2019 09:40:08 Eastern Standard Time

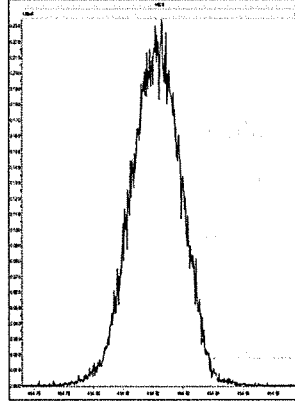
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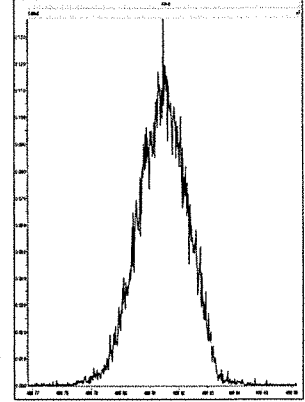
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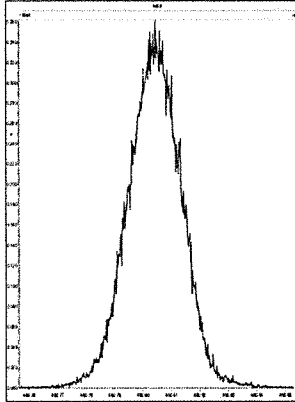
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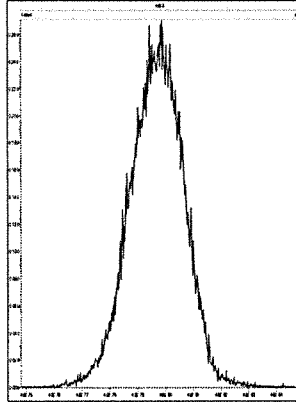
M 466.9728 R 12501



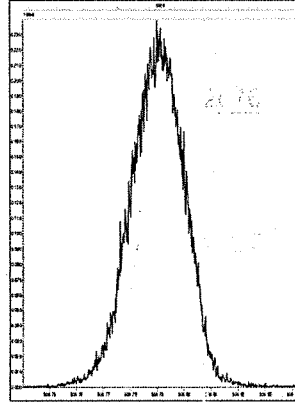
M 480.9696 R 11312



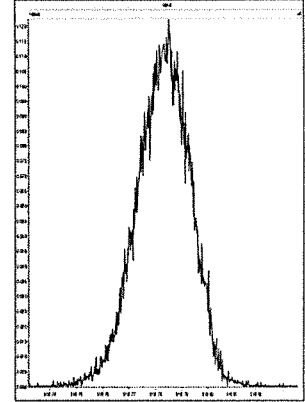
M 492.9696 R 11159



M 504.9696 R 11737



M 516.9697 R 11418

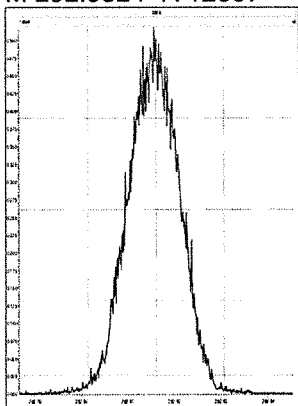


Resolution Check Report

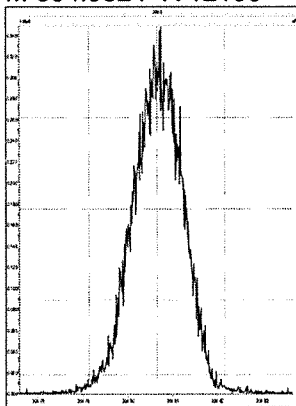
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

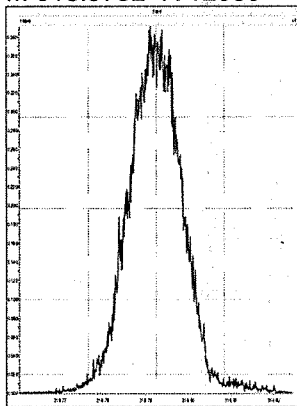
M 292.9824 R 12567



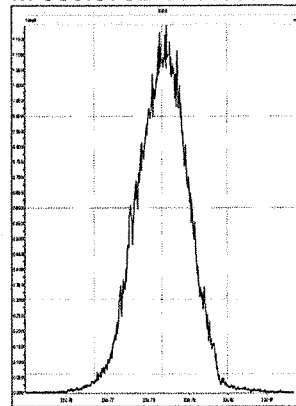
M 304.9824 R 12106



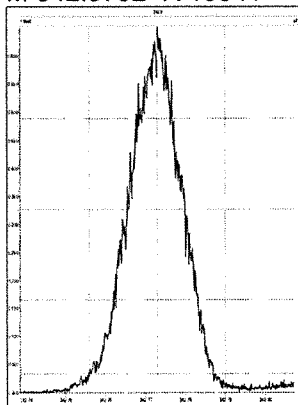
M 318.9792 R 12059



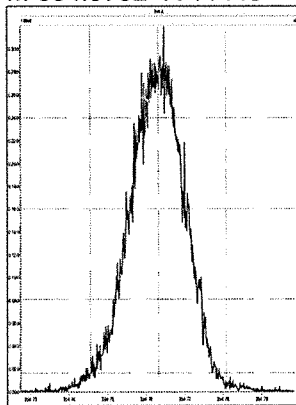
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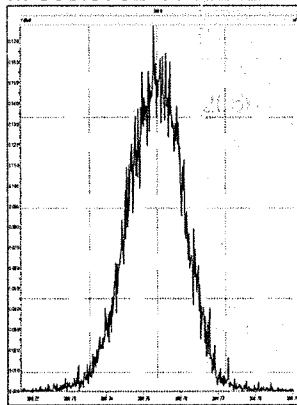
M 342.9792 R 10941



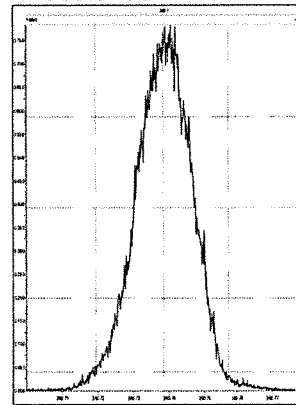
M 354.9792 R 11443



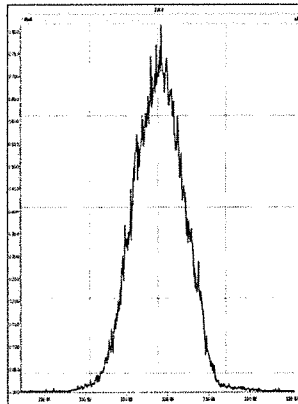
M 366.9792 R 11242



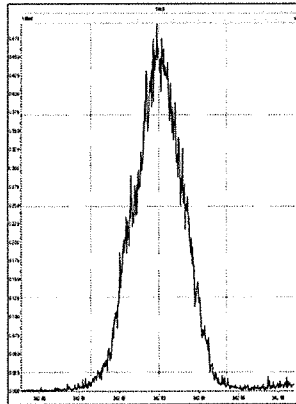
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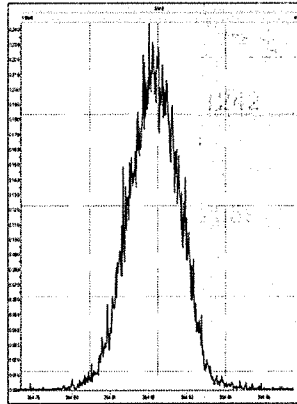
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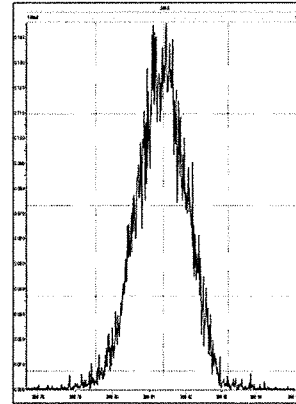
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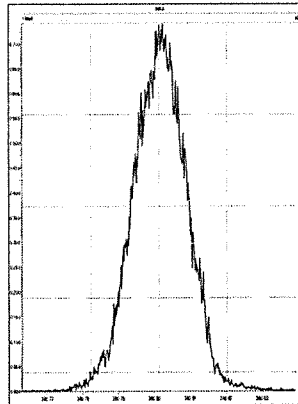
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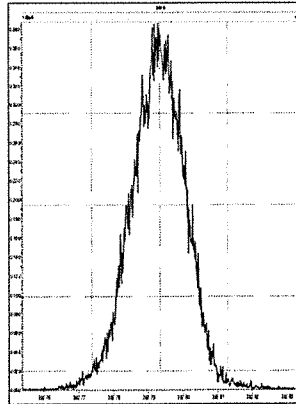
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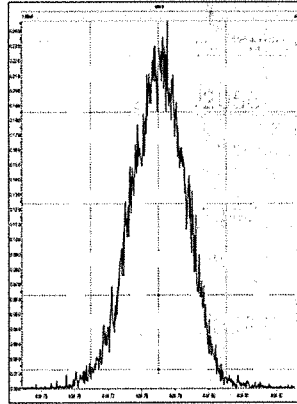
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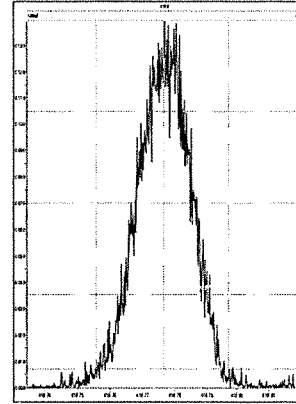
M 392.9760 R 11441



M 404.9760 R 11289



M 416.9760 R 11443

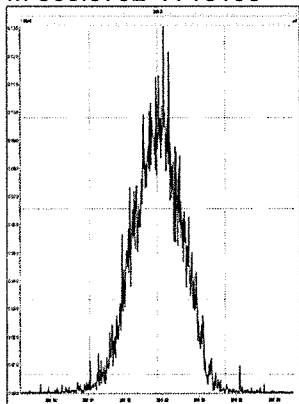


Resolution Check Report

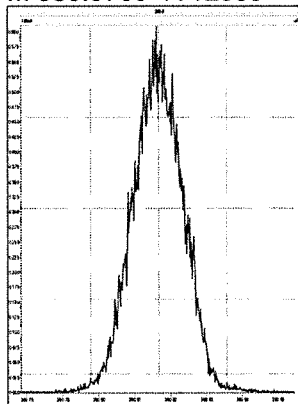
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

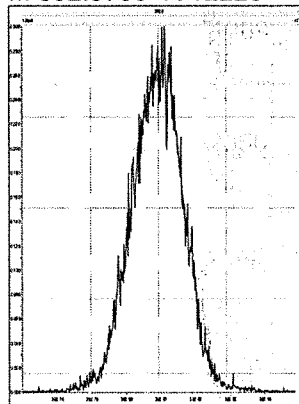
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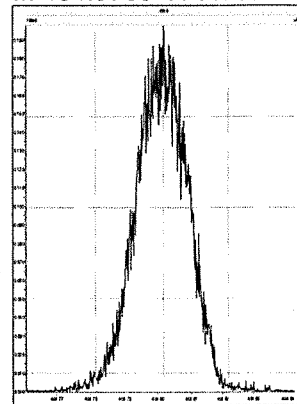
M 380.9760 R 12059



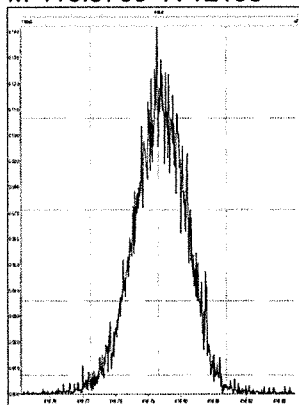
M 392.9760 R 12228



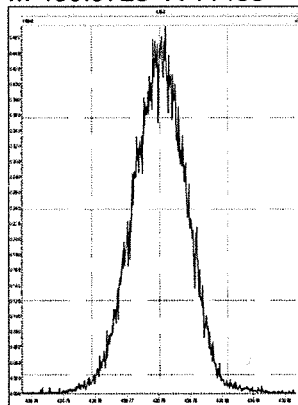
M 404.9760 R 11753



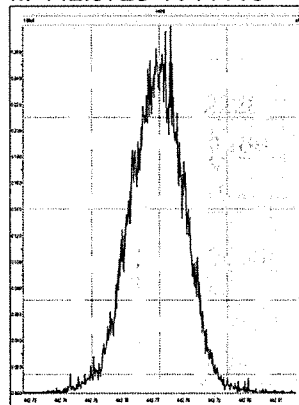
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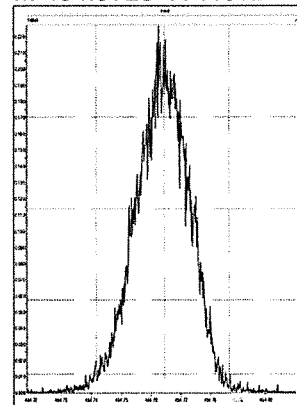
M 430.9728 R 11468



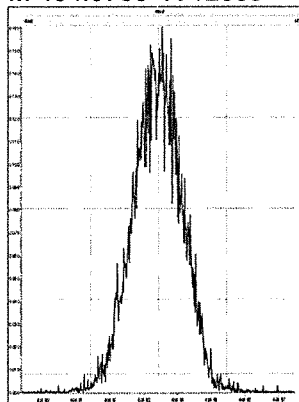
M 442.9728 R 11116



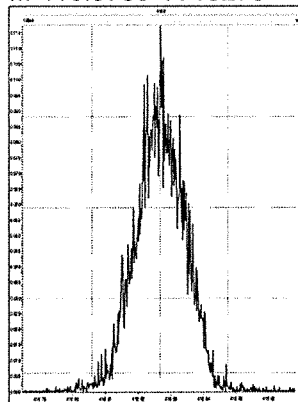
M 454.9728 R 11012



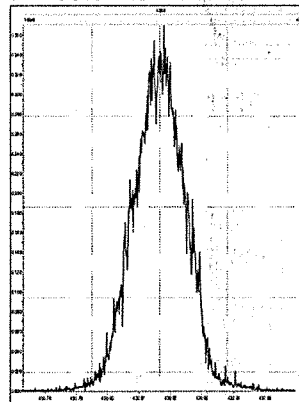
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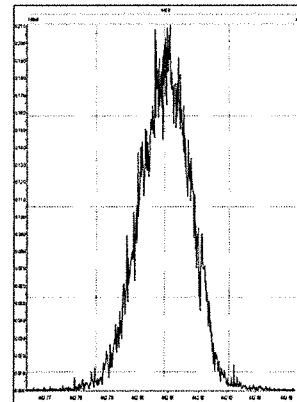
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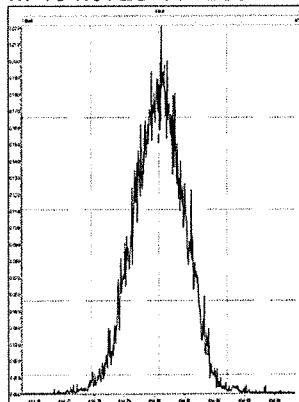
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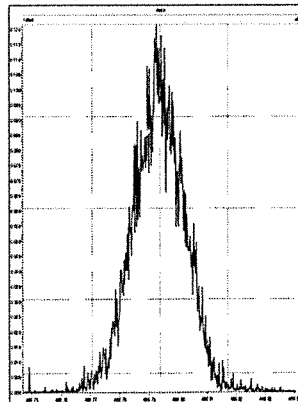
M 442.9728 R 12019



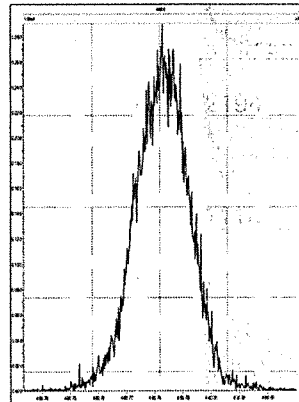
M 454.9728 R 12334



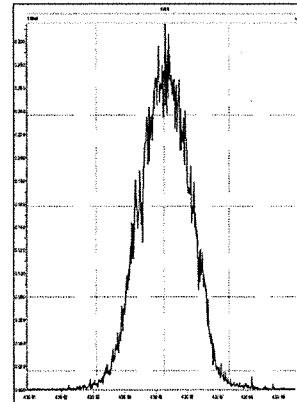
M 466.9728 R 12524



M 480.9696 R 11467



M 430.9728 R 11914

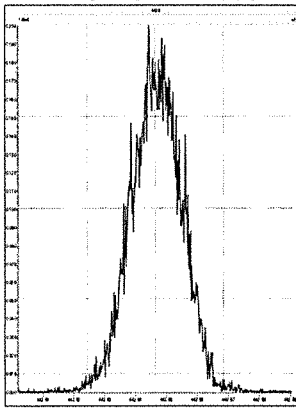


Resolution Check Report

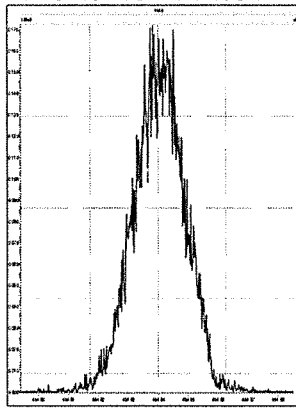
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

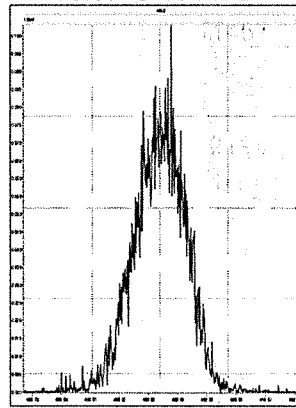
M 442.9728 R 13033



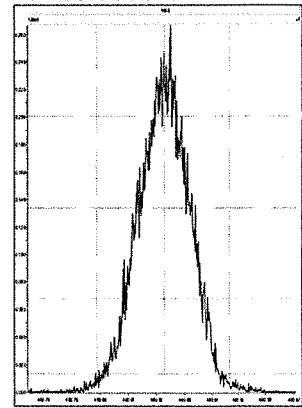
M 454.9728 R 12334



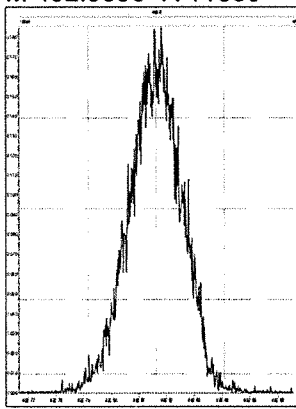
M 466.9728 R 12722



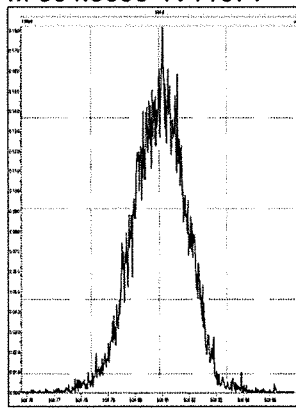
M 480.9696 R 11769



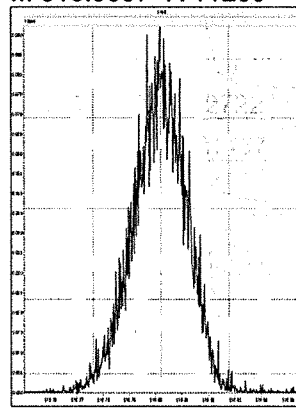
M 492.9696 R 11560



M 504.9696 R 11371



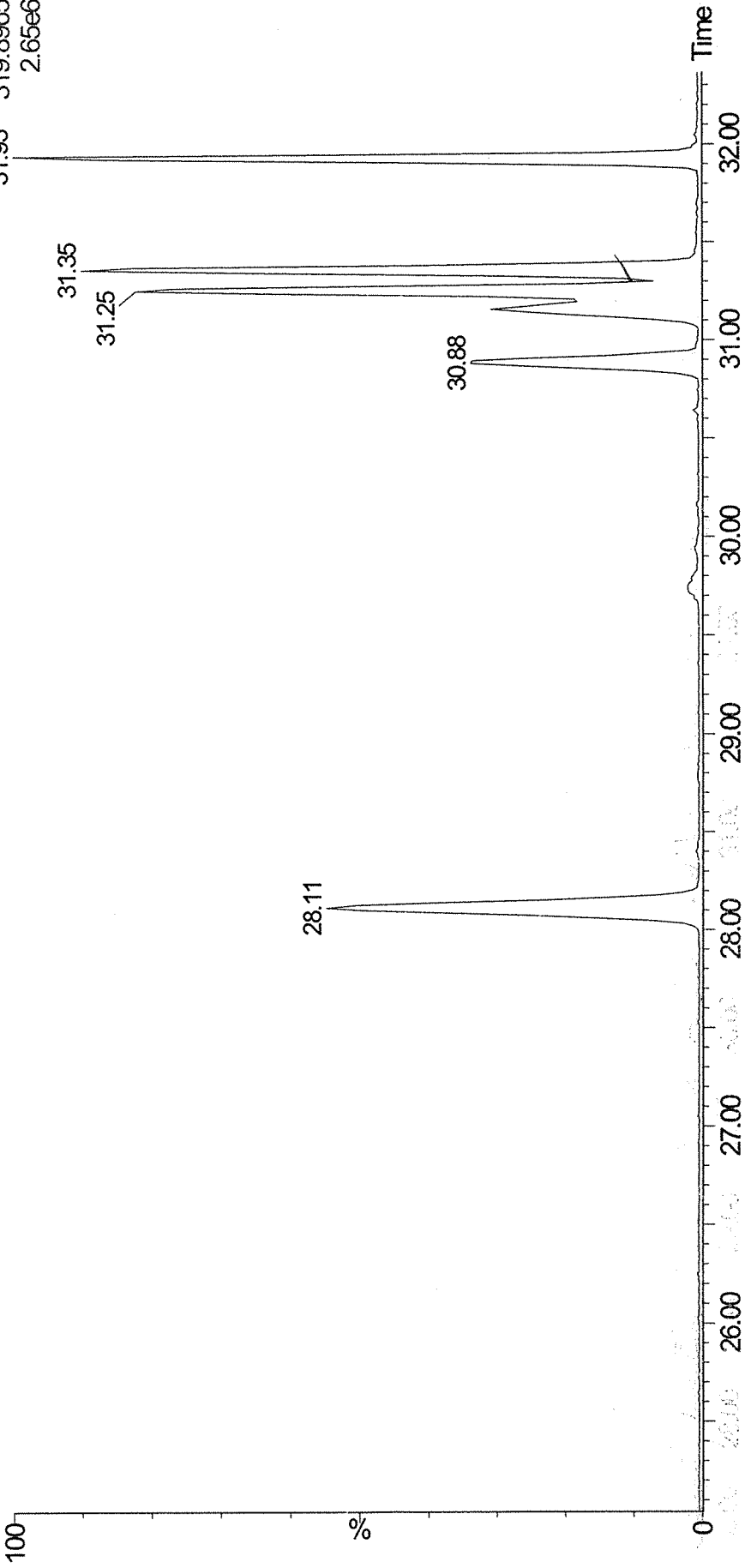
M 516.9697 R 11260



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYQ
A08JUL19A-1

HRP750_2

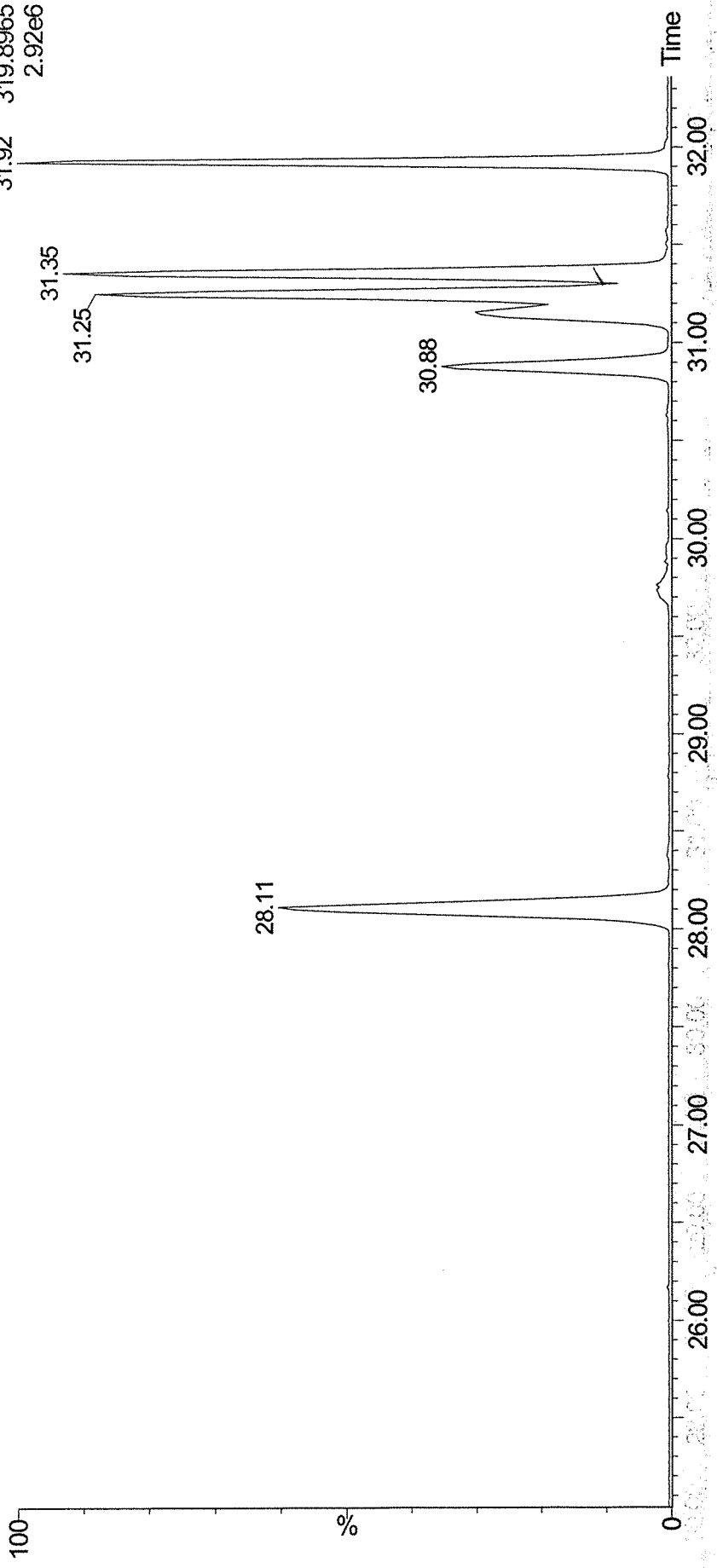
08-Jul-2019 09:40:54
1: Voltage SIR 13 Channels EI+
31.93 319.8965
2.65e6



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYR
A08JUL19A-10 ✓

HRP750_2

08-Jul-2019 16:51:30
1: Voltage SIR 13 Channels EI+
31.92 319.8965
2.92e6



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methodb\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.38
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.48
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.93
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.32
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

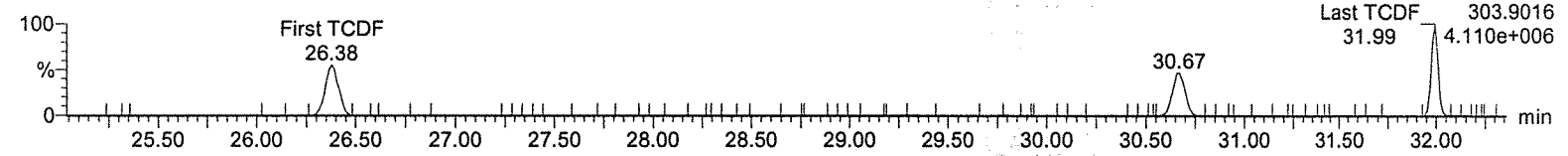
Method: C:\MassLynx\Default.pro\Methdb\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

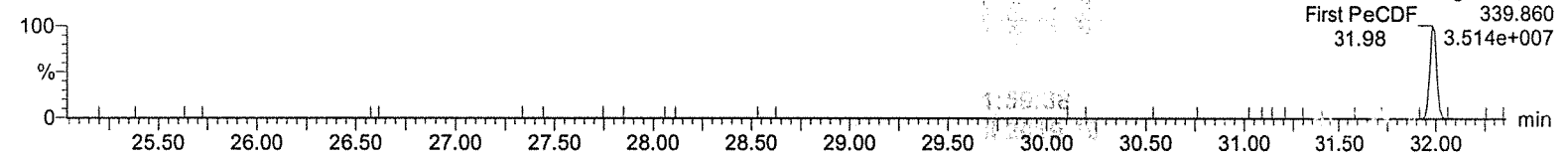
First TCDF

A08JUL19A-1



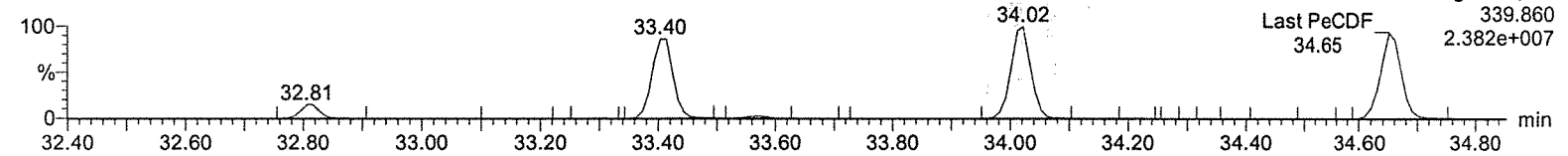
First PeCDF

A08JUL19A-1



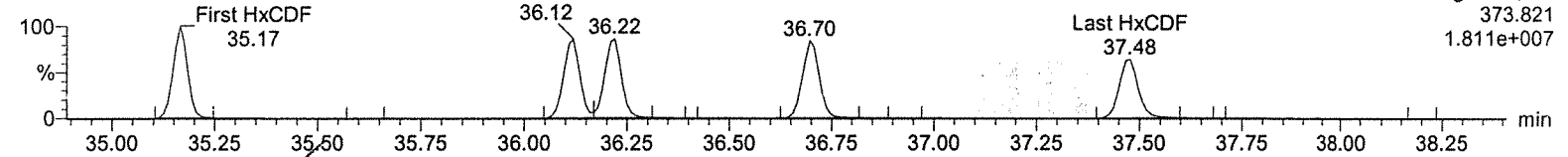
Last PeCDF

A08JUL19A-1



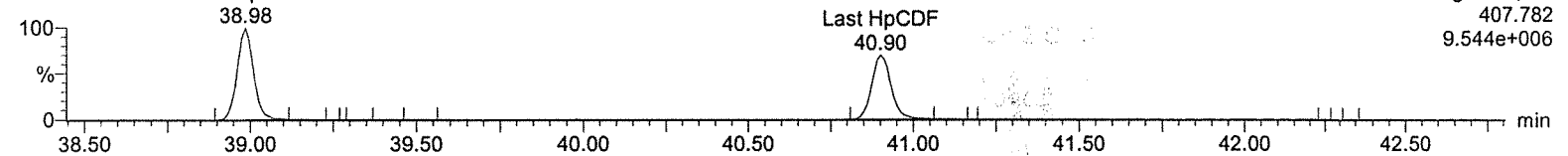
First HxCDF

A08JUL19A-1



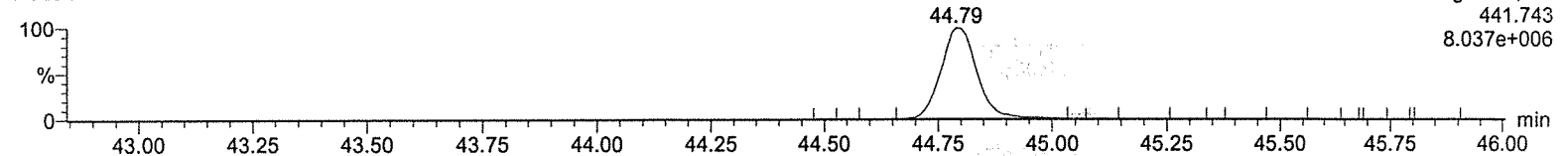
First HpCDF

A08JUL19A-1



OCDF

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

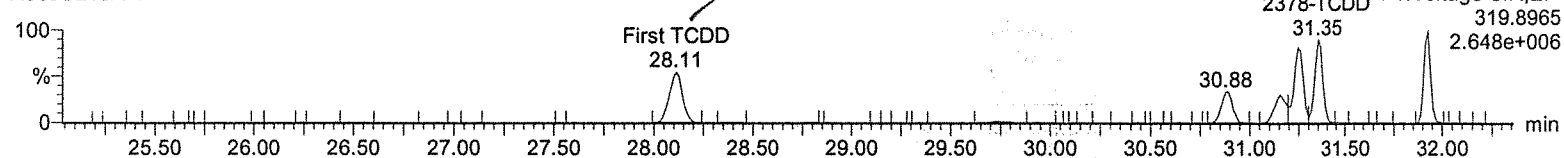
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

23209 JUL 19

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

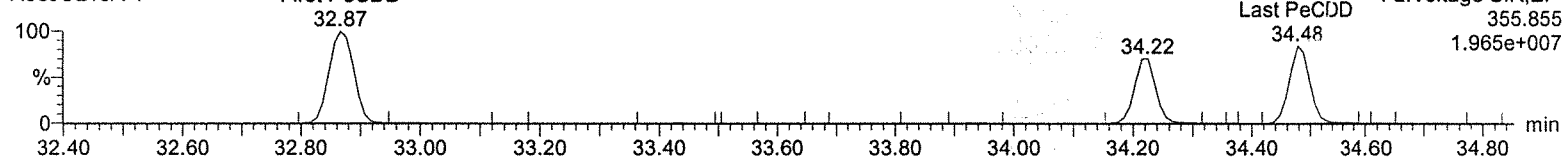
First TCDD

A08JUL19A-1



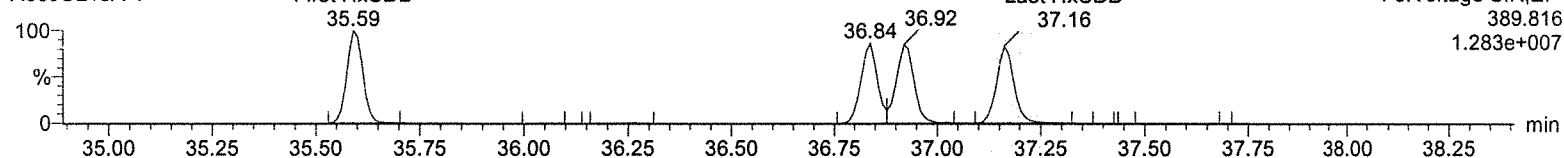
First PeCDD

A08JUL19A-1



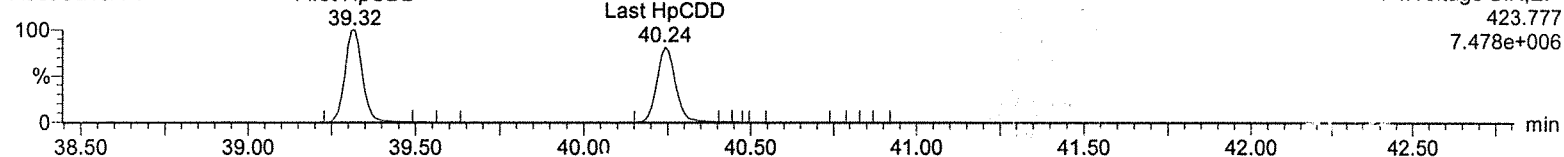
First HxCDD

A08JUL19A-1



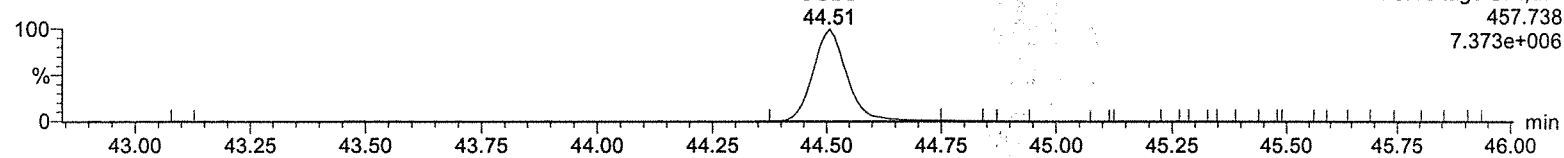
First HpCDD

A08JUL19A-1



OCDD

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.37
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.47
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.92
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.31
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

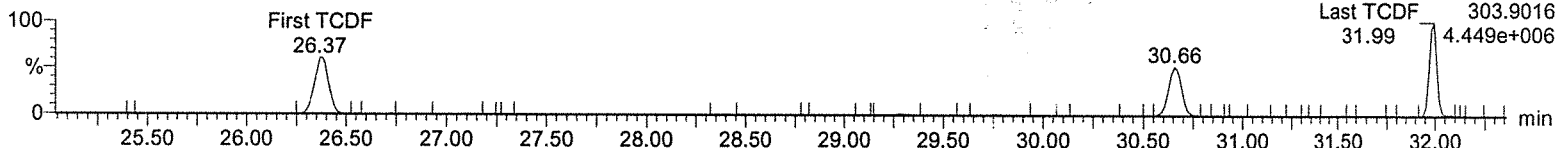
Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

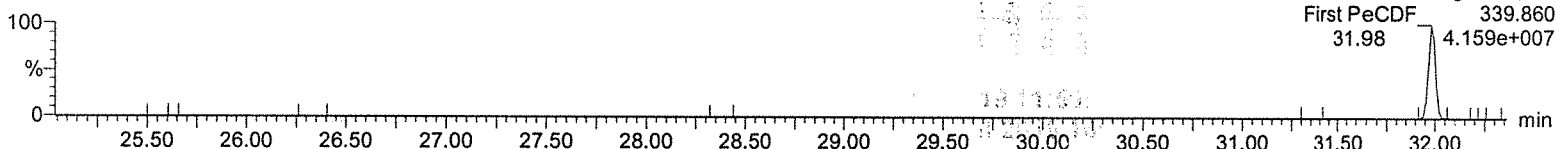
First TCDF

A08JUL19A-10



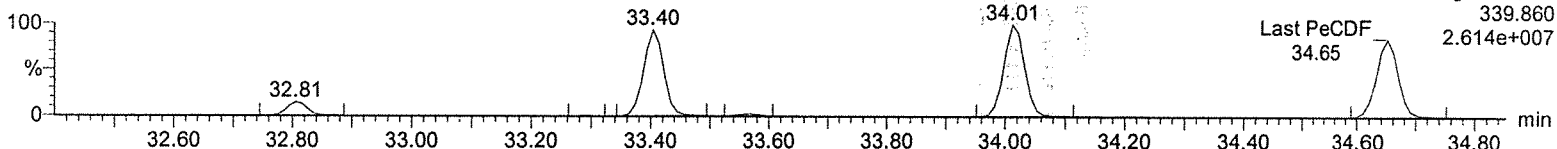
First PeCDF

A08JUL19A-10



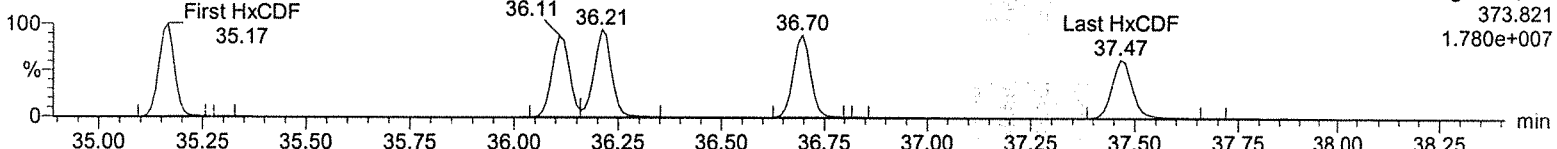
Last PeCDF

A08JUL19A-10



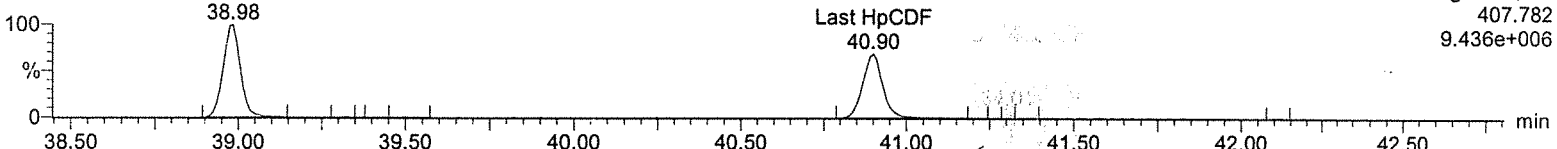
First HxCDF

A08JUL19A-10



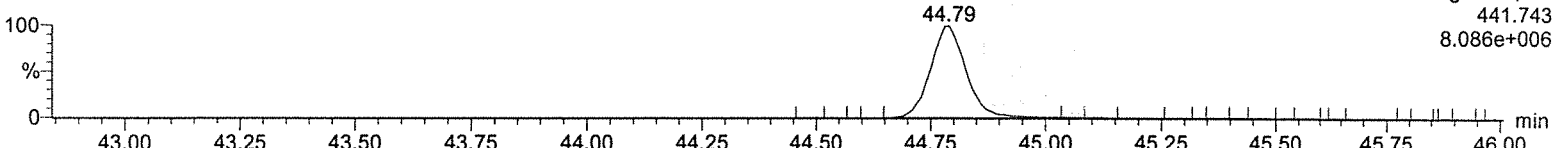
First HpCDF

A08JUL19A-10



OCDF

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

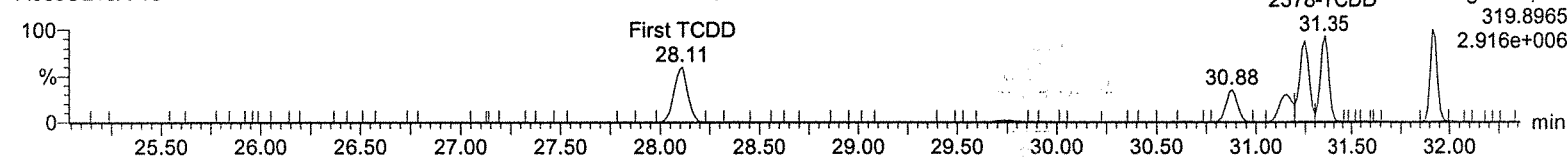
0809 JUL 19

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

LAST

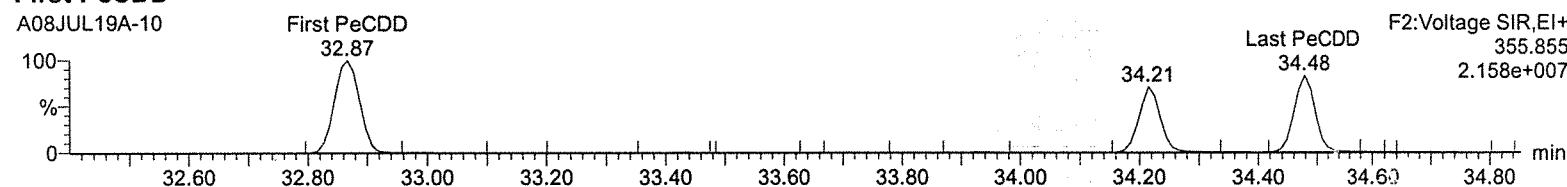
First TCDD

A08JUL19A-10



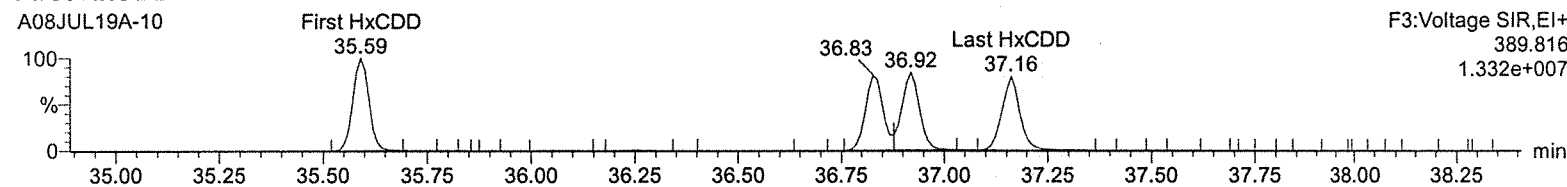
First PeCDD

A08JUL19A-10



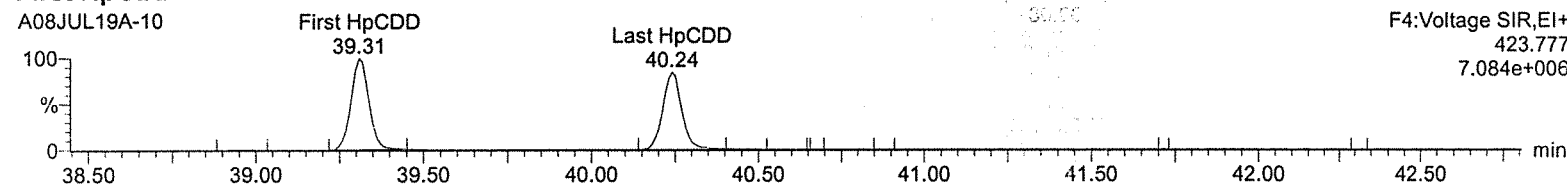
First HxCDD

A08JUL19A-10



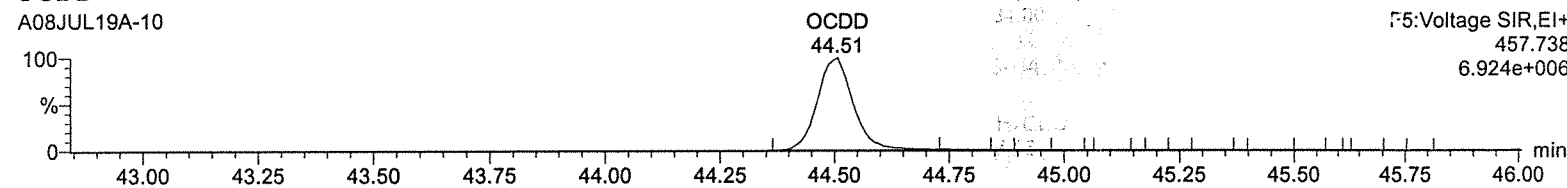
First HpCDD

A08JUL19A-10



OCDD

A08JUL19A-10



Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Date: 08-Jul-2019, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

	Name	ICAL RRF
1	2378-TCDD	0.884
2	12378-PeCDD	0.853
3	123478-HxCDD	0.940
4	123678-HxCDD	0.944
5	123789-HxCDD	0.927
6	1234678-HpCDD	1.040
7	OCDD	0.971
8	2378-TCDF	0.978
9	12378-PeCDF	0.945
10	23478-PeCDF	0.987
11	123478-HxCDF	1.087
12	123678-HxCDF	1.041
13	234678-HxCDF	1.136
14	123789-HxCDF	1.061
15	1234678-HpCDF	1.150
16	1234789-HpCDF	1.202
17	OCDF	1.133
18	13C-2378-TCDD	1.128
19	13C-12378-PeCDD	0.751
20	13C-123478-HxCDD	0.896
21	13C-123678-HxCDD	0.986
22	13C-1234678-HpCDD	0.672
23	13C-OCDD	0.642
24	13C-2378-TCDF	1.250
25	13C-12378-PeCDF	1.011
26	13C-23478-PeCDF	1.063
27	13C-123478-HxCDF	1.111
28	13C-123678-HxCDF	1.247
29	13C-234678-HxCDF	1.082
30	13C-123789-HxCDF	0.967
31	13C-1234678-HpCDF	0.870
32	13C-1234789-HpCDF	0.677
33	13C-1234-TCDD	1.000
34	13C-123789-HxCDD	1.000
35	37Cl-2378-TCDD	1.061

Quantify Compound Summary Report **MassLynx 4.1**

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

12 July 19

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36

Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Compound name: 2378-TCDD

Response Factor: 0.884458

RRF SD: 0.0448767, Relative SD: 5.07393

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

$$CS0.5 \text{ RRF} = \frac{(5.2423)(100)}{(2.20124)(0.25)} = 0.952$$

$$\text{RRF SD} = \sqrt{\frac{0.010119}{5}} = 0.04499 \times 100 = 5.09$$

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.36	0.27	0.952	0.884	bd
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.36	0.47	0.823	0.884	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.93	0.852	0.884	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.35	9.94	0.879	0.884	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.31	0.891	0.884	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	205.76	0.910	0.884	bb

Compound name: 12378-PeCDD

Response Factor: 0.853475

RRF SD: 0.0140917, Relative SD: 1.65109

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.21	1.28	0.873	0.853	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.22	2.44	0.834	0.853	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.21	9.86	0.841	0.853	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.21	50.22	0.857	0.853	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.21	199.88	0.853	0.853	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.22	1009.56	0.862	0.853	bb

Compound name: 123478-HxCDD

Response Factor: 0.939643

RRF SD: 0.0292523, Relative SD: 3.11313

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.83	1.22	0.917	0.940	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.84	2.37	0.892	0.940	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.83	10.13	0.952	0.940	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.83	50.56	0.950	0.940	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.84	204.08	0.959	0.940	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.84	1030.90	0.969	0.940	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123678-HxCDD

Response Factor: 0.944066

RRF SD: 0.0242859, Relative SD: 2.57248

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.92	1.21	0.916	0.944	db
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.92	2.46	0.930	0.944	dd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.92	9.76	0.922	0.944	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.92	51.25	0.968	0.944	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.92	203.46	0.960	0.944	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.92	1026.32	0.969	0.944	dd

Compound name: 123789-HxCDD

Response Factor: 0.927099

RRF SD: 0.0305511, Relative SD: 3.29534

Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.15	1.21	0.900	0.927	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.16	2.38	0.881	0.927	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.16	10.00	0.927	0.927	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.16	51.43	0.954	0.927	db
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.16	204.71	0.949	0.927	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.16	1026.76	0.952	0.927	dd

Compound name: 1234678-HpCDD

Response Factor: 1.03994

RRF SD: 0.0299236, Relative SD: 2.87742

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.24	1.23	1.027	1.040	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.25	2.38	0.991	1.040	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.24	10.00	1.040	1.040	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.23	51.50	1.071	1.040	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.25	200.19	1.041	1.040	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.24	1029.04	1.070	1.040	bb

Compound name: OCDD

Response Factor: 0.971418

RRF SD: 0.0232154, Relative SD: 2.38985

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.49	2.48	0.962	0.971	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.49	4.96	0.946	0.971	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: OCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.49	19.47	0.945	0.971	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.49	102.63	0.997	0.971	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.51	407.18	0.989	0.971	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.51	2036.59	0.989	0.971	bb

Compound name: 2378-TCDF

Response Factor: 0.978424

RRF SD: 0.0546693, Relative SD: 5.58748

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	30.67	0.28	1.077	0.978	MM
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	30.67	0.47	0.916	0.978	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	30.66	1.93	0.944	0.978	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	30.67	9.95	0.973	0.978	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	30.67	39.70	0.971	0.978	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	30.67	202.19	0.989	0.978	bb

Compound name: 12378-PeCDF

Response Factor: 0.945213

RRF SD: 0.032234, Relative SD: 3.41024

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	33.40	1.28	0.969	0.945	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	33.41	2.35	0.888	0.945	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	33.40	9.78	0.925	0.945	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	33.40	50.77	0.960	0.945	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	33.40	204.22	0.965	0.945	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	33.40	1020.23	0.964	0.945	bb

Compound name: 23478-PeCDF

Response Factor: 0.986747

RRF SD: 0.0368449, Relative SD: 3.73397

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.01	1.18	0.933	0.987	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.02	2.46	0.973	0.987	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.01	9.78	0.965	0.987	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.01	50.78	1.002	0.987	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.02	205.34	1.013	0.987	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.02	1048.35	1.034	0.987	bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

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Compound name: 123478-HxCDF

Response Factor: 1.08717

RRF SD: 0.0419813, Relative SD: 3.86151

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.11	1.19	1.039	1.087	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.11	2.41	1.049	1.087	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.11	9.76	1.061	1.087	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.11	51.25	1.114	1.087	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.12	208.35	1.133	1.087	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.12	1036.34	1.127	1.087	bd

Compound name: 123678-HxCDF

Response Factor: 1.04051

RRF SD: 0.0335945, Relative SD: 3.22866

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.21	1.26	1.052	1.041	dd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.22	2.35	0.977	1.041	db
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.21	9.95	1.035	1.041	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.21	51.61	1.074	1.041	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.21	202.58	1.054	1.041	db
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.22	1010.63	1.052	1.041	db

Compound name: 234678-HxCDF

Response Factor: 1.13575

RRF SD: 0.0360558, Relative SD: 3.17463

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.69	1.19	1.084	1.136	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.69	2.44	1.107	1.136	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.69	9.95	1.130	1.136	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.69	50.73	1.152	1.136	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.69	207.52	1.178	1.136	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.69	1024.66	1.164	1.136	bd

Compound name: 123789-HxCDF

Response Factor: 1.06073

RRF SD: 0.0242888, Relative SD: 2.28983

Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.46	1.21	1.029	1.061	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.47	2.44	1.034	1.061	bb

Quantify Compound Summary Report MassLynx 4.1

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Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

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Compound name: 123789-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.48	10.04	1.065	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.47	51.19	1.086	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.48	201.24	1.067	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.48	1021.59	1.084	1.061	bb

Compound name: 1234678-HpCDF

Response Factor: 1.14983

RRF SD: 0.0443867, Relative SD: 3.8603

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	38.97	1.17	1.074	1.150	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	38.98	2.45	1.126	1.150	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	38.98	9.98	1.148	1.150	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	38.97	51.63	1.187	1.150	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	38.98	205.56	1.182	1.150	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	38.98	1028.22	1.182	1.150	bb

Compound name: 1234789-HpCDF

Response Factor: 1.20215

RRF SD: 0.0229239, Relative SD: 1.90691

Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.90	1.25	1.200	1.202	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.89	2.47	1.188	1.202	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.90	9.74	1.171	1.202	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.89	49.74	1.196	1.202	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.91	204.32	1.228	1.202	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.91	1022.70	1.229	1.202	bb

Compound name: OCDF

Response Factor: 1.13283

RRF SD: 0.076827, Relative SD: 6.78187

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.78	2.31	1.049	1.133	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.81	4.64	1.052	1.133	bd
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.78	19.91	1.128	1.133	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.78	100.46	1.138	1.133	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.80	416.81	1.180	1.133	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.80	2206.18	1.250	1.133	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 13C-2378-TCDD

Response Factor: 1.12834

RRF SD: 0.0266676, Relative SD: 2.36343

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	31.34	100.14	1.130	1.128	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	31.34	96.74	1.092	1.128	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	31.34	99.09	1.118	1.128	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	31.34	102.35	1.155	1.128	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	31.34	98.65	1.113	1.128	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	31.34	103.02	1.162	1.128	bb

Compound name: 13C-12378-PeCDD

Response Factor: 0.75125

RRF SD: 0.0377537, Relative SD: 5.02545

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.20	103.04	0.774	0.751	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.21	93.93	0.706	0.751	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.20	96.78	0.727	0.751	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.20	99.64	0.749	0.751	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.20	98.42	0.739	0.751	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.21	108.20	0.813	0.751	bb

Compound name: 13C-123478-HxCDD

Response Factor: 0.896281

RRF SD: 0.0124016, Relative SD: 1.38367

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.82	99.03	0.888	0.896	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.83	101.29	0.908	0.896	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.82	99.74	0.894	0.896	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.82	97.87	0.877	0.896	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.83	100.73	0.903	0.896	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.83	101.35	0.908	0.896	bd

Compound name: 13C-123678-HxCDD

Response Factor: 0.985774

RRF SD: 0.00823518, Relative SD: 0.835403

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.91	98.89	0.975	0.986	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.91	100.38	0.990	0.986	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

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Compound name: 13C-123678-HxCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.91	98.98	0.976	0.986	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.91	100.62	0.992	0.986	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.91	100.68	0.993	0.986	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.91	100.46	0.990	0.986	dd

Compound name: 13C-1234678-HpCDD

Response Factor: 0.671678

RRF SD: 0.00864315, Relative SD: 1.2868

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.22	99.85	0.671	0.672	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.23	101.04	0.679	0.672	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.23	101.05	0.679	0.672	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.22	99.38	0.667	0.672	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.23	100.89	0.678	0.672	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.23	97.79	0.657	0.672	bb

Compound name: 13C-OCDD

Response Factor: 0.64212

RRF SD: 0.0312445, Relative SD: 4.86583

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	200.000	44.47	190.01	0.610	0.642	bb
A08JUL19A-4	CS1 UD190207-02 CS143	200.000	44.49	195.03	0.626	0.642	bd
A08JUL19A-5	CS2 UD190207-03 CS243	200.000	44.49	191.09	0.614	0.642	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	200.000	44.47	212.75	0.683	0.642	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	44.49	210.31	0.675	0.642	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	44.49	200.81	0.645	0.642	bd

Compound name: 13C-2378-TCDF

Response Factor: 1.24989

RRF SD: 0.0235442, Relative SD: 1.8837

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.64	102.21	1.277	1.250	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.64	97.12	1.214	1.250	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.64	99.85	1.248	1.250	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.64	101.40	1.267	1.250	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.64	98.61	1.233	1.250	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.64	100.81	1.260	1.250	bb

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Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

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Compound name: 13C-12378-PeCDF

Response Factor: 1.0108

RRF SD: 0.042891, Relative SD: 4.24328

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	33.39	101.65	1.028	1.011	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	33.40	95.18	0.962	1.011	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	33.39	98.01	0.991	1.011	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	33.39	100.21	1.013	1.011	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	33.39	97.58	0.986	1.011	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	33.39	107.36	1.085	1.011	bb

Compound name: 13C-23478-PeCDF

Response Factor: 1.06317

RRF SD: 0.056146, Relative SD: 5.28101

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.00	105.12	1.118	1.063	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.01	92.69	0.985	1.063	db
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.00	98.16	1.044	1.063	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.00	99.71	1.060	1.063	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.01	97.32	1.035	1.063	db
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.01	107.01	1.138	1.063	db

Compound name: 13C-123478-HxCDF

Response Factor: 1.11071

RRF SD: 0.0157984, Relative SD: 1.42237

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.10	100.10	1.112	1.111	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.11	102.58	1.139	1.111	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.10	100.42	1.115	1.111	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.10	99.09	1.101	1.111	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.10	98.72	1.097	1.111	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.11	99.08	1.101	1.111	bd

Compound name: 13C-123678-HxCDF

Response Factor: 1.24684

RRF SD: 0.0132688, Relative SD: 1.0642

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.20	98.41	1.227	1.247	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.21	99.91	1.246	1.247	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 13C-123678-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.20	101.24	1.262	1.247	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.20	99.13	1.236	1.247	db
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.20	100.72	1.256	1.247	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.21	100.59	1.254	1.247	dd

Compound name: 13C-234678-HxCDF

Response Factor: 1.08201

RRF SD: 0.0109147, Relative SD: 1.00875

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.69	101.62	1.100	1.082	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.69	100.88	1.092	1.082	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.69	99.61	1.078	1.082	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.67	99.46	1.076	1.082	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.69	99.28	1.074	1.082	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.69	99.15	1.073	1.082	bb

Compound name: 13C-123789-HxCDF

Response Factor: 0.967011

RRF SD: 0.010414, Relative SD: 1.07693

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.46	101.72	0.984	0.967	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.46	99.20	0.959	0.967	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.46	100.57	0.973	0.967	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.46	100.32	0.970	0.967	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.47	99.37	0.961	0.967	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.47	98.82	0.956	0.967	bb

Compound name: 13C-1234678-HpCDF

Response Factor: 0.869967

RRF SD: 0.00962967, Relative SD: 1.1069

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	38.96	100.76	0.877	0.870	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	38.97	101.06	0.879	0.870	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	38.96	101.10	0.880	0.870	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	38.96	99.47	0.865	0.870	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	38.97	99.00	0.861	0.870	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	38.97	98.61	0.858	0.870	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 13C-1234789-HpCDF

Response Factor: 0.677351

RRF SD: 0.00683684, Relative SD: 1.00935

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.88	100.25	0.679	0.677	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.89	100.10	0.678	0.677	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.88	101.11	0.685	0.677	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.88	100.56	0.681	0.677	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.89	99.85	0.676	0.677	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.89	98.14	0.665	0.677	bb

Compound name: 13C-1234-TCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.87	100.00	1.000	1.000	bb

Compound name: 13C-123789-HxCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.15	100.00	1.000	1.000	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.15	100.00	1.000	1.000	dd

Compound name: 37Cl-2378-TCDD

Response Factor: 1.06124

RRF SD: 0.0481575, Relative SD: 4.53786

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.35	0.24	1.038	1.061	bb
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.35	0.48	1.012	1.061	bb

Quantify Compound Summary Report **MassLynx 4.1**

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 37CI-2378-TCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.92	1.018	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.34	10.43	1.107	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.07	1.063	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	212.93	1.130	1.061	bb

Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methd\CFIA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	2.36e3	2.88e3	5.24e3	31.36	1.001	0.82	NO	0.269	0.952	0.884	5.07	0.0280	5.51e4	2748	20.1	4.64e4	1441	32.2	bd	bb
2	12378-PeCDD	1.02e4	6.32e3	1.65e4	34.21	1.000	1.61	NO	1.279	0.873	0.853	1.65	0.0287	2.62e5	2362	110.9	1.76e5	1093	161.1	bd	bb
3	123478-HxCDD	8.05e3	6.32e3	1.44e4	36.83	1.000	1.27	NO	1.220	0.917	0.940	3.11	0.0368	1.82e5	1603	113.3	1.13e5	1951	57.9	bd	bd
4	123678-HxCDD	8.50e3	7.26e3	1.58e4	36.92	1.000	1.17	NO	1.212	0.916	0.944	2.57	0.0376	1.59e5	1603	99.1	1.28e5	1951	65.8	db	db
5	123789-HxCDD	8.04e3	6.76e3	1.48e4	37.15	1.007	1.19	NO	1.214	0.900	0.927	3.30	0.0378	1.53e5	1603	95.3	1.15e5	1951	58.8	bd	bb
6	1234678-HpCDD	6.04e3	6.12e3	1.22e4	40.24	1.000	0.99	NO	1.235	1.027	1.040	2.88	0.0649	1.03e5	1757	58.6	9.52e4	1920	49.6	bd	bd
7	OCDD	9.77e3	1.10e4	2.07e4	44.49	1.000	0.89	NO	2.477	0.962	0.971	2.39	0.0920	1.23e5	1257	98.1	1.39e5	1991	69.6	bd	bd
8	2378-TCDF	2.70e3	4.01e3	6.71e3	30.67	1.001	0.67	NO	0.275	1.077	0.978	5.59	0.0419	3.94e4	1747	22.5	4.74e4	3466	13.7	M...	db
9	12378-PeCDF	1.47e4	9.62e3	2.43e4	33.40	1.000	1.52	NO	1.281	0.969	0.945	3.41	0.0370	3.34e5	2702	123.5	2.39e5	4145	57.8	bb	bb
10	23478-PeCDF	1.50e4	1.04e4	2.54e4	34.01	1.000	1.45	NO	1.181	0.933	0.987	3.73	0.0321	3.89e5	2702	144.0	2.53e5	4145	61.0	bb	bb
11	123478-HxCDF	1.08e4	9.59e3	2.04e4	36.11	1.000	1.13	NO	1.194	1.039	1.087	3.86	0.0268	2.15e5	2156	99.8	2.06e5	1702	120.8	bd	bd
12	123678-HxCDF	1.26e4	1.02e4	2.28e4	36.21	1.000	1.24	NO	1.263	1.052	1.041	3.23	0.0263	2.63e5	2156	122.0	2.03e5	1702	119.1	dd	dd
13	234678-HxCDF	1.13e4	9.70e3	2.10e4	36.69	1.000	1.17	NO	1.192	1.084	1.136	3.17	0.0290	2.25e5	2156	104.4	1.97e5	1702	115.7	bd	bd
14	123789-HxCDF	9.32e3	8.55e3	1.79e4	37.46	1.000	1.09	NO	1.213	1.029	1.061	2.29	0.0371	1.72e5	2156	79.6	1.49e5	1702	87.4	bd	bd
15	1234678-HpCDF	8.42e3	8.19e3	1.66e4	38.97	1.000	1.03	NO	1.167	1.074	1.150	3.86	0.0282	1.38e5	1549	89.3	1.35e5	1086	124.8	bd	bd
16	1234789-HpCDF	7.33e3	7.06e3	1.44e4	40.90	1.000	1.04	NO	1.248	1.200	1.202	1.91	0.0417	1.12e5	1549	72.2	9.77e4	1086	90.0	bd	bd
17	OCDF	1.05e4	1.21e4	2.26e4	44.78	1.007	0.86	NO	2.315	1.049	1.133	6.78	0.102	1.13e5	2106	53.7	1.39e5	2087	66.4	bb	bb
18	13C-2378-TCDD	9.61e5	1.24e6	2.20e6	31.34	1.015	0.77	NO	100.141	1.130	1.128	2.36	0.101	1.84e7	8503	2165.5	2.38e7	4565	5220.0	bb	bb
19	13C-12378-PeCDD	9.14e5	5.96e5	1.51e6	34.20	1.108	1.53	NO	103.043	0.774	0.751	5.03	0.106	2.14e7	3266	6548.1	1.41e7	5905	2388.5	bb	bb
20	13C-123478-HxCDD	6.92e5	5.62e5	1.25e6	36.82	0.991	1.23	NO	99.030	0.888	0.896	1.38	0.123	1.42e7	5998	2362.3	1.14e7	4559	2506.6	bd	bd
21	13C-123678-HxCDD	7.61e5	6.16e5	1.38e6	36.91	0.994	1.24	NO	98.887	0.975	0.986	0.84	0.112	1.38e7	5998	2308.3	1.11e7	4559	2432.5	dd	dd
22	13C-1234678-HpCDD	4.84e5	4.64e5	9.47e5	40.22	1.083	1.04	NO	99.853	0.671	0.672	1.29	0.246	6.95e6	9910	701.2	6.93e6	5863	1181.6	bd	bb
23	13C-OCDD	7.96e5	9.26e5	1.72e6	44.47	1.197	0.86	NO	190.015	0.610	0.642	4.87	0.239	8.40e6	9103	923.0	9.66e6	5539	1744.6	bb	bd
24	13C-2378-TCDF	1.09e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	102.207	1.277	1.250	1.88	0.156	1.39e7	14607	949.6	1.80e7	7808	2301.1	bb	bb
25	13C-12378-PeCDF	1.23e6	7.70e5	2.00e6	33.39	1.082	1.60	NO	101.654	1.028	1.011	4.24	0.175	3.01e7	14002	2152.1	1.18e7	6379	2945.5	bb	bb
26	13C-23478-PeCDF	1.34e6	8.44e5	2.18e6	34.00	1.102	1.58	NO	105.121	1.118	1.063	5.28	0.166	3.31e7	14002	2361.9	2.10e7	6379	3289.0	bb	bb
27	13C-123478-HxCDF	5.36e5	1.03e6	1.57e6	36.10	0.972	0.52	NO	100.103	1.112	1.111	1.42	0.208	1.13e7	10560	1068.6	2.15e7	11523	1868.6	bd	bd
28	13C-123678-HxCDF	5.97e5	1.14e6	1.73e6	36.20	0.975	0.53	NO	98.415	1.227	1.247	1.06	0.185	1.21e7	10560	1148.5	2.26e7	11523	1961.5	dd	dd
29	13C-234678-HxCDF	5.42e5	1.01e6	1.55e6	36.69	0.988	0.54	NO	101.678	1.100	1.082	1.01	0.214	1.02e7	10560	967.2	1.97e7	11523	1710.4	bd	bd
30	13C-123789-HxCDF	4.77e5	9.12e5	1.39e6	37.46	1.008	0.52	NO	107.717	0.984	0.967	1.08	0.239	8.42e6	10560	797.3	1.58e7	11523	1371.7	bd	bd

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Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

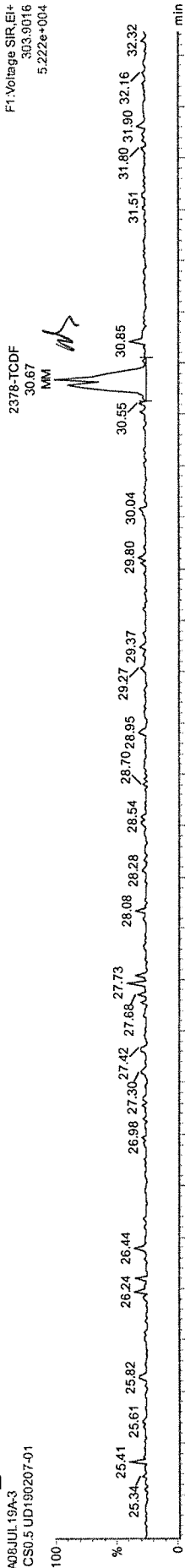
Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

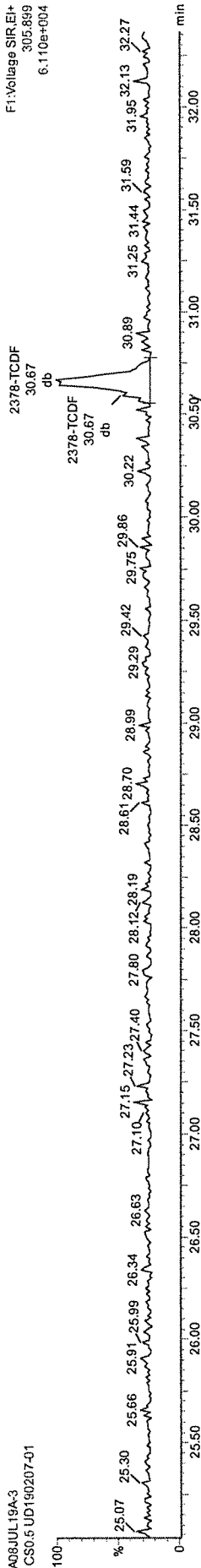
#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.76e5	8.62e5	1.24e6	38.96	1.049	0.44	NO	100.757	0.877	0.870	1.11	0.166	6.16e6	6681	922.6	1.42e7	7130	1992.4	bb	bb
32	13C-1234789-HpCDF	2.94e5	6.65e5	9.59e5	40.88	1.101	0.44	NO	100.246	0.679	0.677	1.01	0.213	4.03e6	6681	603.9	9.12e6	7130	1278.8	bd	bd
33	13C-1234-TCDD	8.61e5	1.09e6	1.95e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.113	1.27e7	8503	1493.6	1.61e7	4565	3518.9	bb	bb
34	13C-123789-HxCDD	7.78e5	6.34e5	1.41e6	37.14	0.000	1.23	NO	100.000	1.000	1.000	0.00	0.111	1.32e7	5998	2193.3	1.10e7	4559	2409.9	dd	dd
35	37Cl-2378-TCDD	5.06e3		5.06e3	31.35	1.016			0.244	1.038	1.061	4.54	0.0287	1.02e5	3507	29.0				bb	bb

MANUAL INTEGRATION
METHOD 1613
HRP750_2

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CS0.5 UD190207-01



A08JUL19A-3
CS0.5 UD190207-01

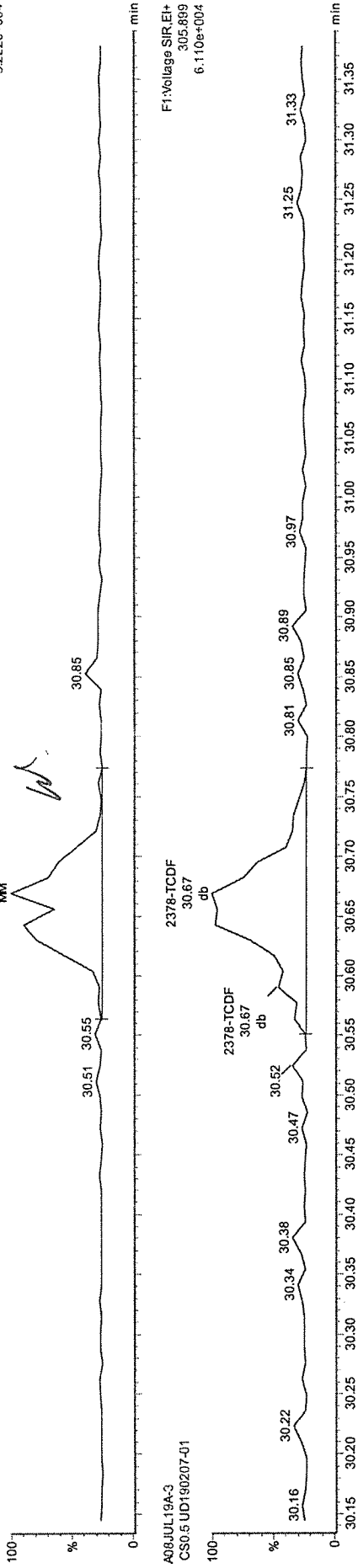


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7/9/19
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MANUAL INTEGRATION
METHOD 1613
HRP750_2

A08-JUL19A-3
CS0.5 UD190207-01

F1:Voltage SIR.EI+
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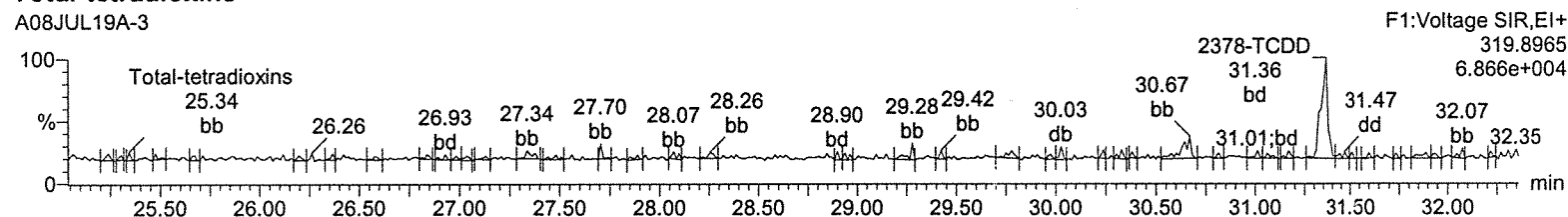
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Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

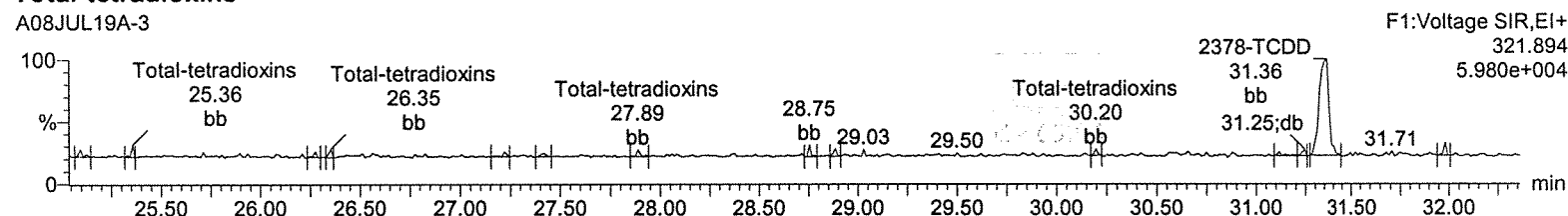
Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
Calibration: 09 Jul 2019 08:43:27

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

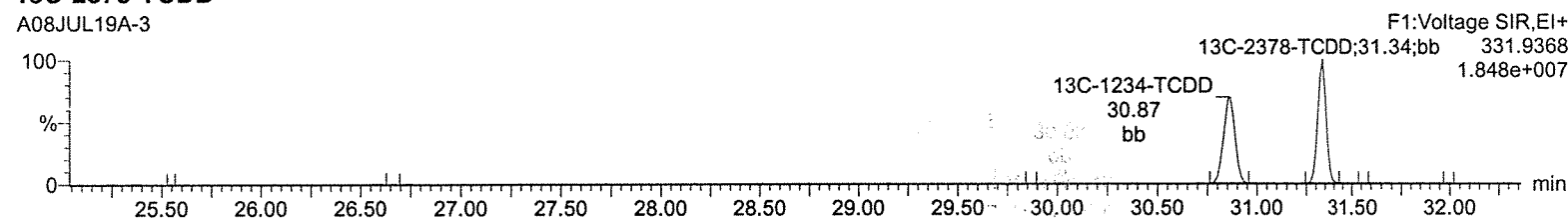
Total-tetradoxins



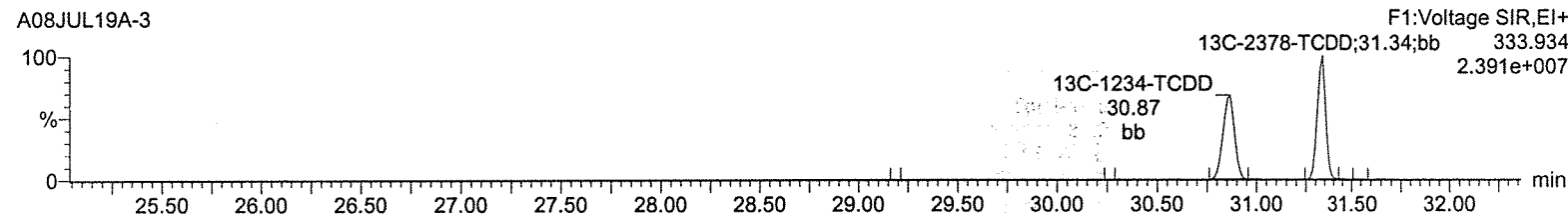
Total-tetradoxins



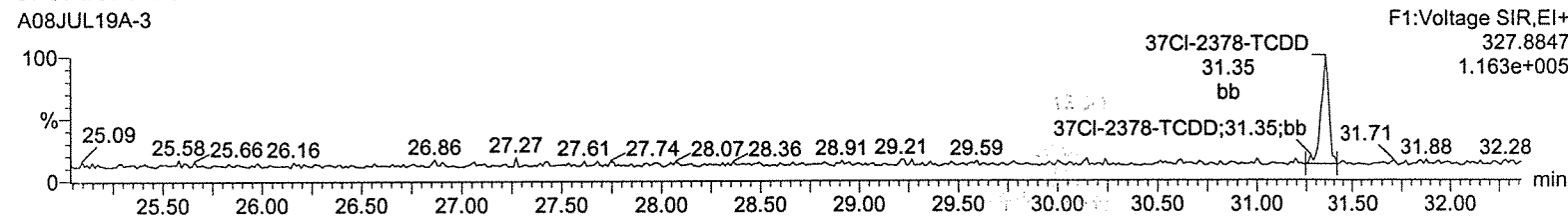
13C-2378-TCDD



13C-2378-TCDD



37Cl-2378-TCDD



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

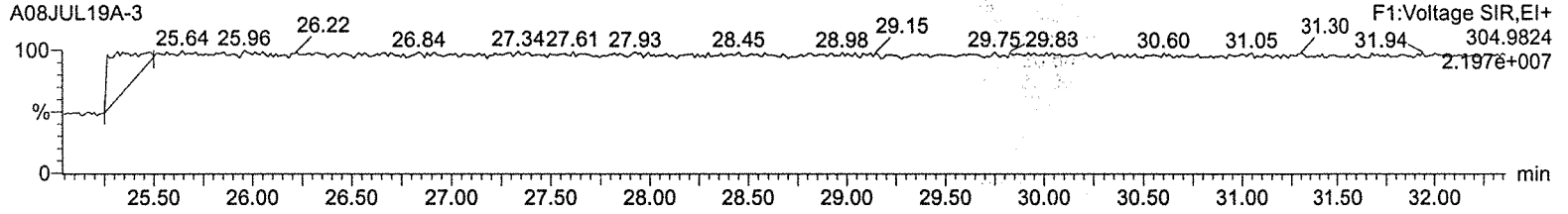
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Lock Mass F1

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

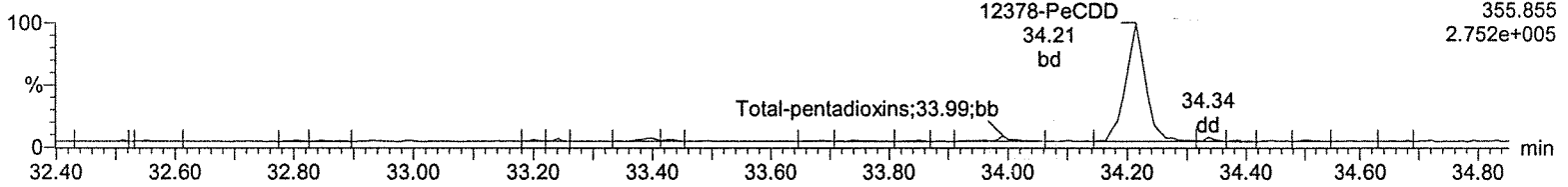
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

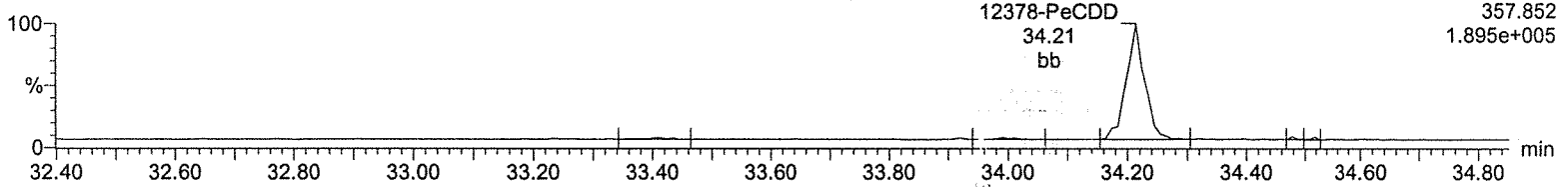
Total-pentadioxins

A08JUL19A-3



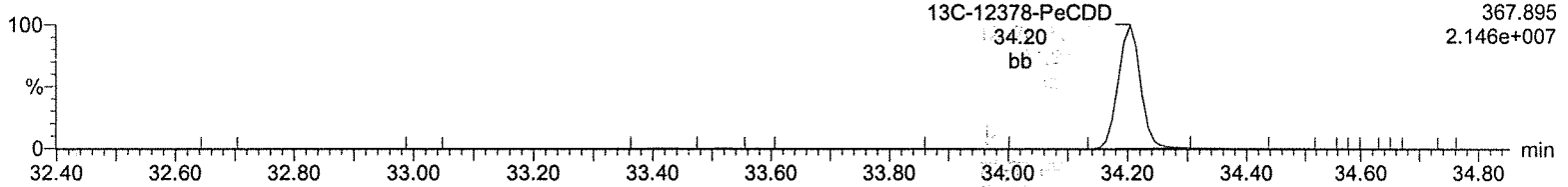
Total-pentadioxins

A08JUL19A-3



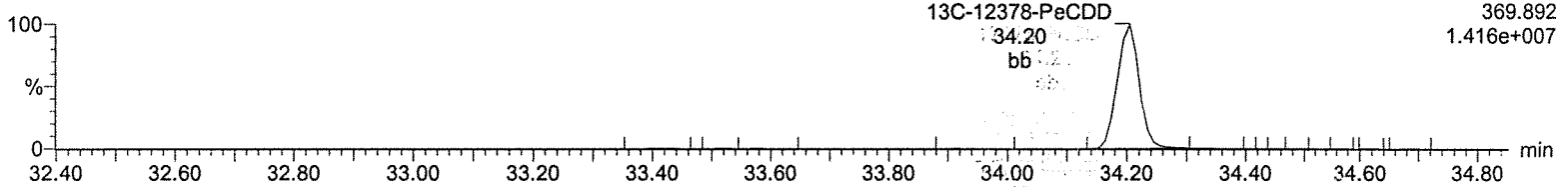
13C-12378-PeCDD

A08JUL19A-3



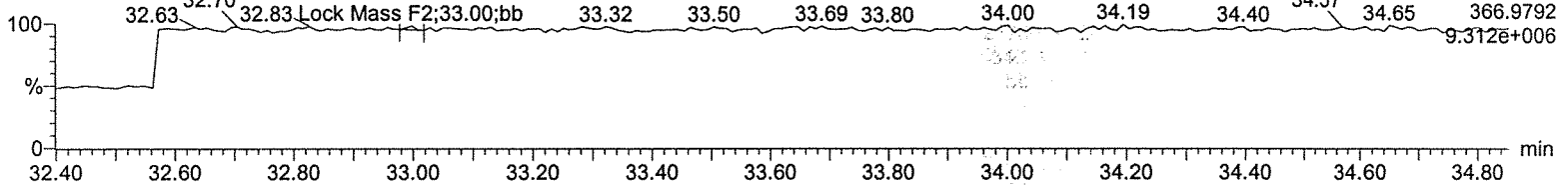
13C-12378-PeCDD

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

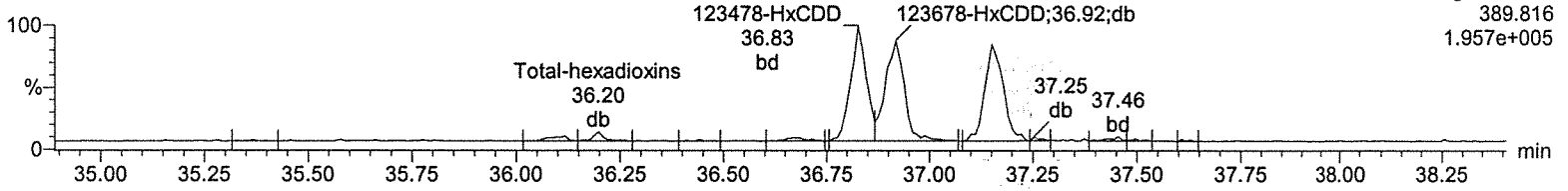
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Total-hexadioxins

A08JUL19A-3

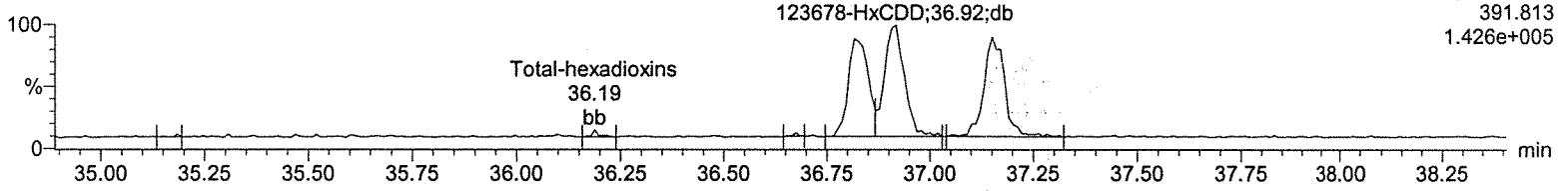
F3:Voltage SIR,EI+
389.816
1.957e+005



Total-hexadioxins

A08JUL19A-3

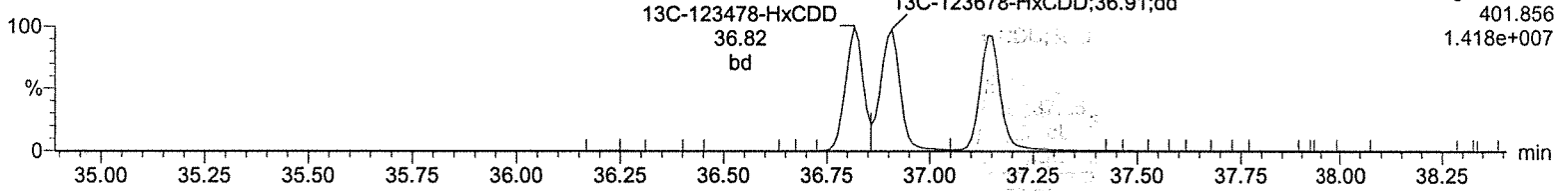
F3:Voltage SIR,EI+
391.813
1.426e+005



13C-123478-HxCDD

A08JUL19A-3

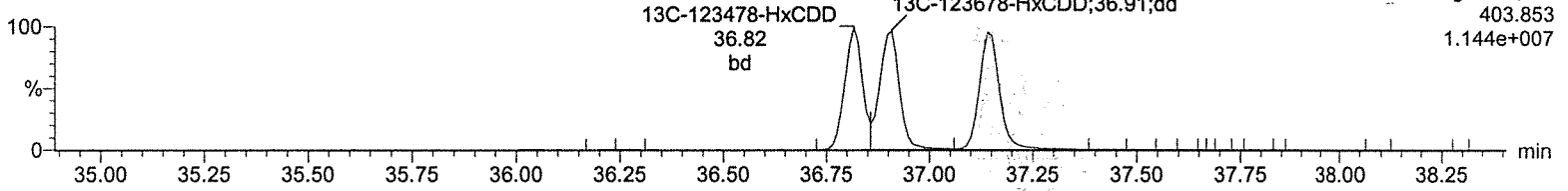
F3:Voltage SIR,EI+
401.856
1.418e+007



13C-123478-HxCDD

A08JUL19A-3

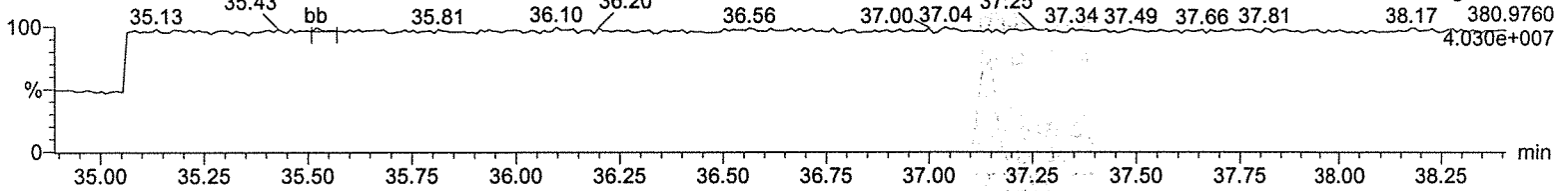
F3:Voltage SIR,EI+
403.853
1.144e+007



Lock Mass F3

A08JUL19A-3

F3:Voltage SIR,EI+
38.17 380.9760
4.030e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

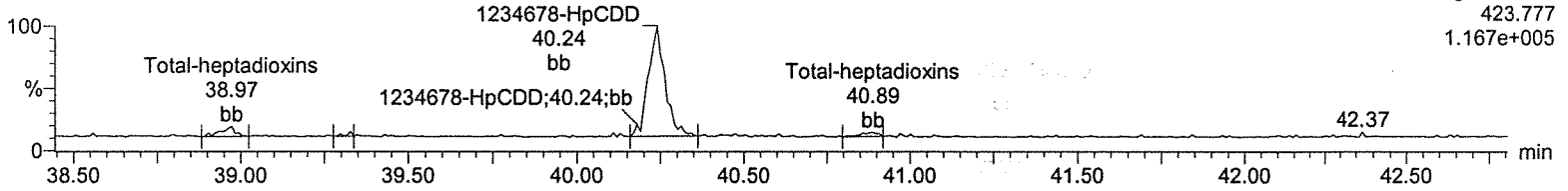
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Total-heptadioxins

A08JUL19A-3

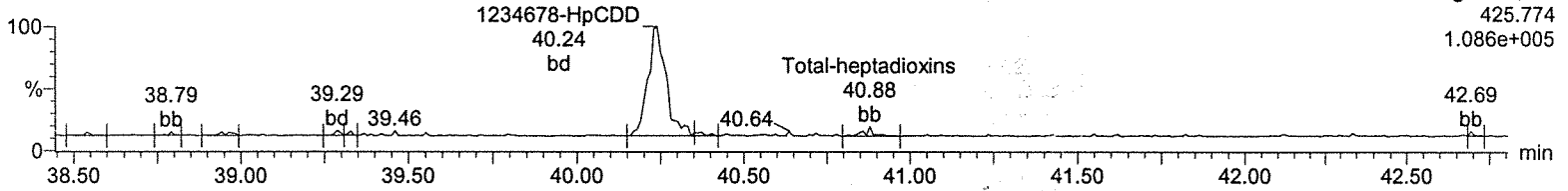
F4:Voltage SIR,EI+
423.777
1.167e+005



Total-heptadioxins

A08JUL19A-3

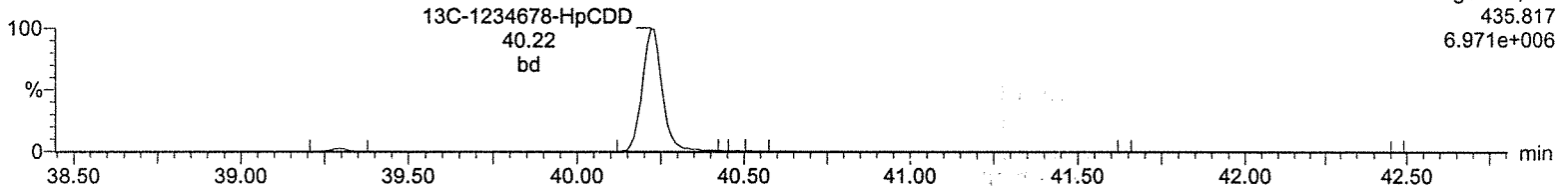
F4:Voltage SIR,EI+
425.774
1.086e+005



13C-1234678-HpCDD

A08JUL19A-3

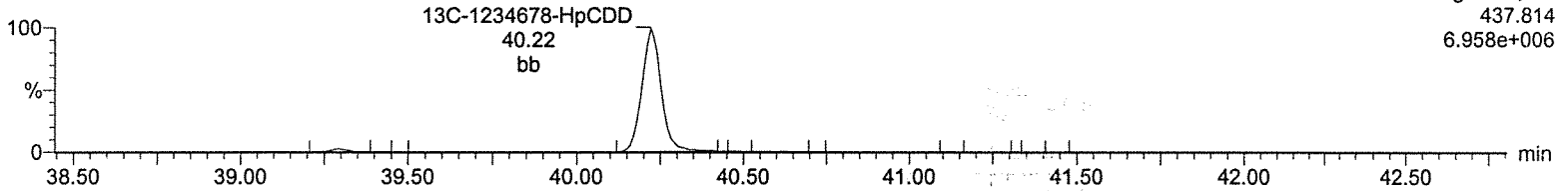
F4:Voltage SIR,EI+
435.817
6.971e+006



13C-1234678-HpCDD

A08JUL19A-3

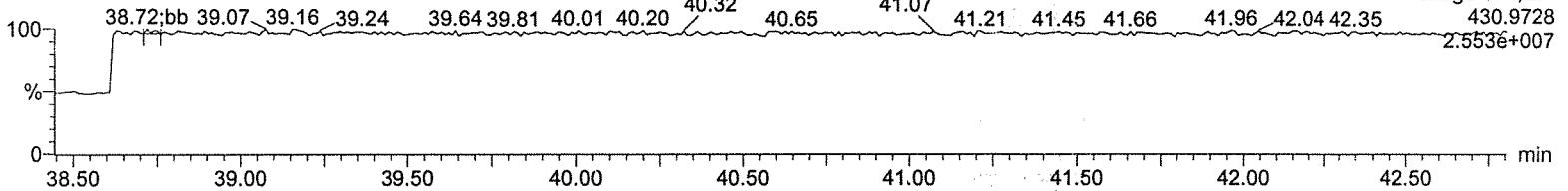
F4:Voltage SIR,EI+
437.814
6.958e+006



Lock Mass F4

A08JUL19A-3

F4:Voltage SIR,EI+
430.9728
2.553e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

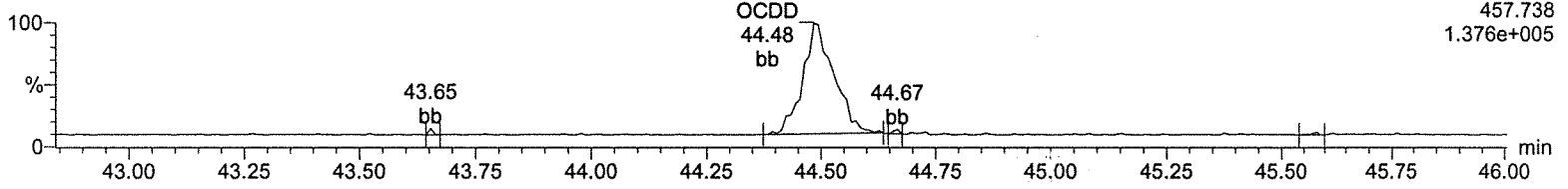
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

OCDD

A08JUL19A-3

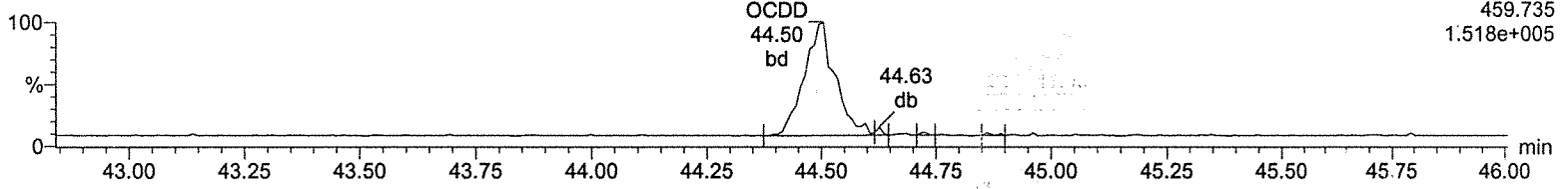
F5:Voltage SIR,EI+
457.738
1.376e+005



OCDD

A08JUL19A-3

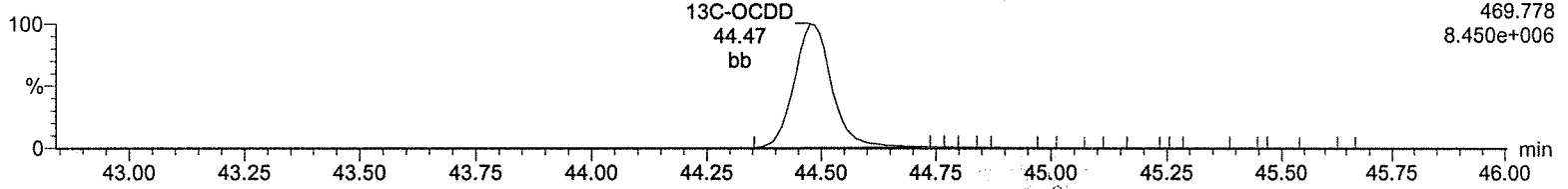
F5:Voltage SIR,EI+
459.735
1.518e+005



13C-OCDD

A08JUL19A-3

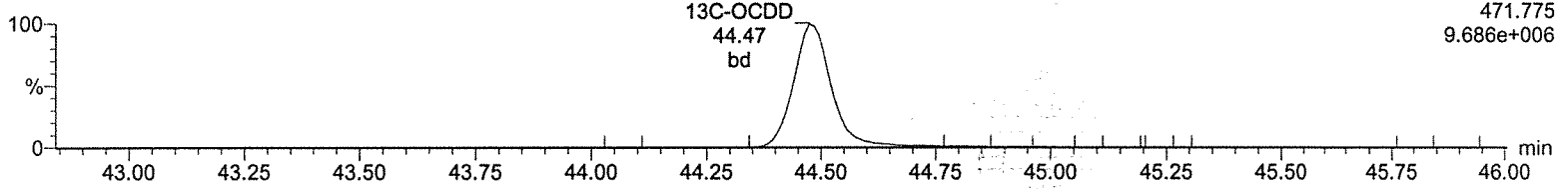
F5:Voltage SIR,EI+
469.778
8.450e+006



13C-OCDD

A08JUL19A-3

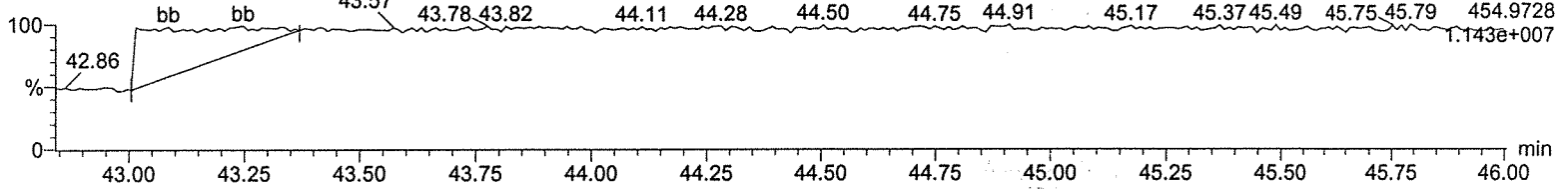
F5:Voltage SIR,EI+
471.775
9.686e+006



Lock Mass F5

A08JUL19A-3

F5:Voltage SIR,EI+
454.9728
1.143e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

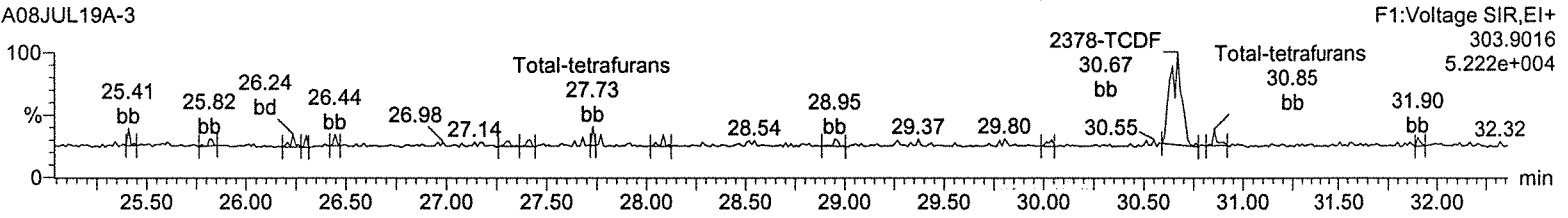
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

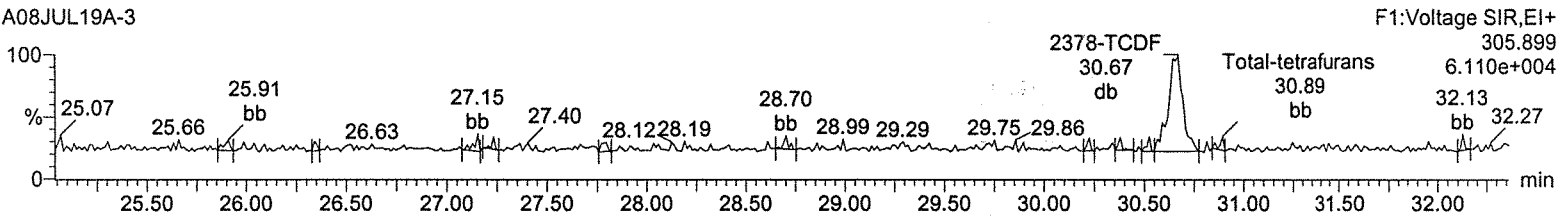
Total-tetrafurans

A08JUL19A-3



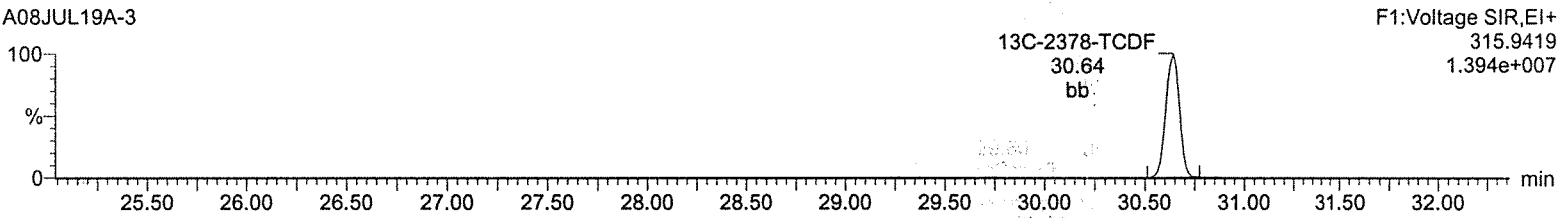
Total-tetrafurans

A08JUL19A-3



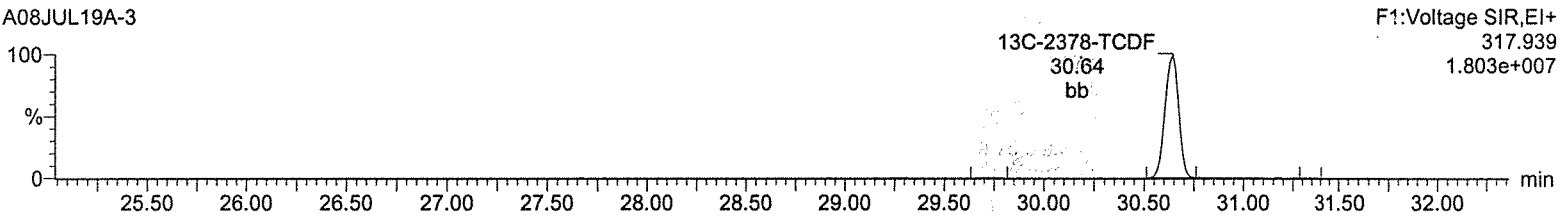
13C-2378-TCDF

A08JUL19A-3



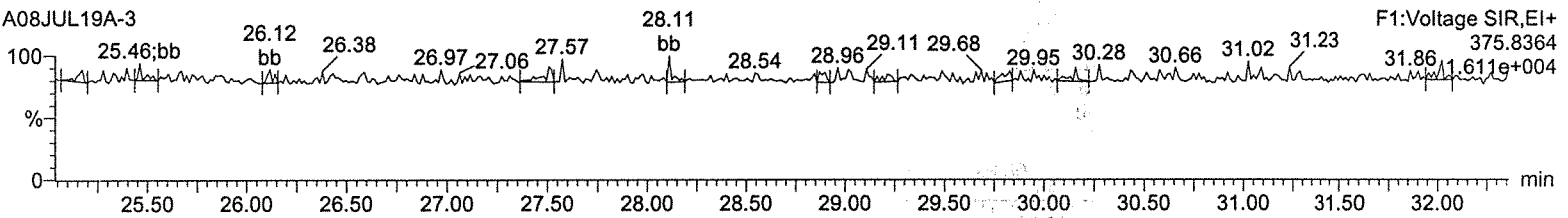
13C-2378-TCDF

A08JUL19A-3



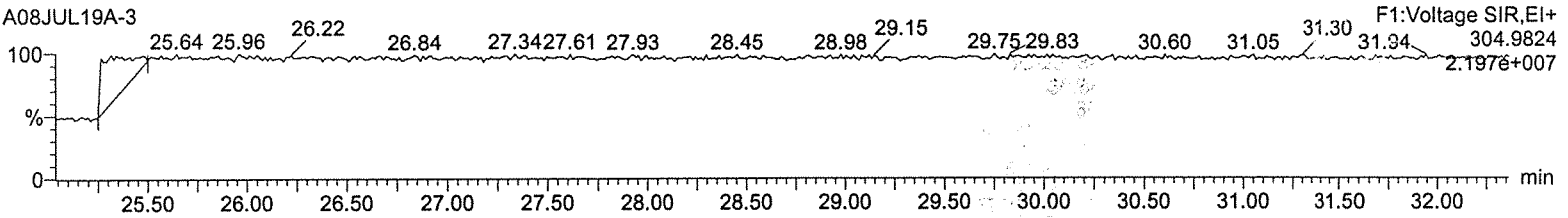
HxDPE

A08JUL19A-3



Lock Mass F1

A08JUL19A-3



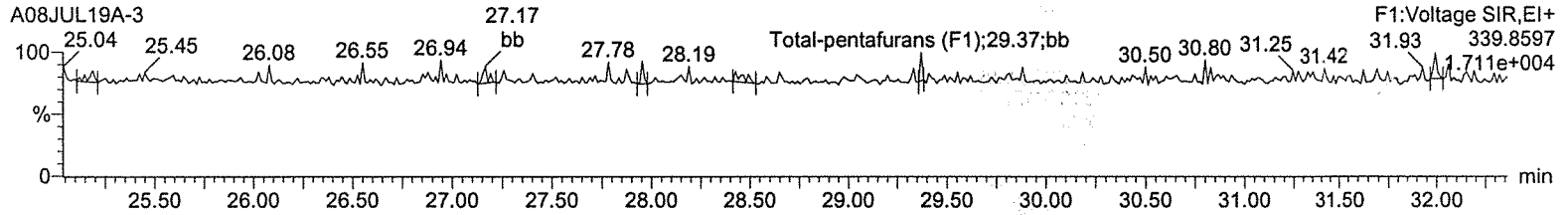
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

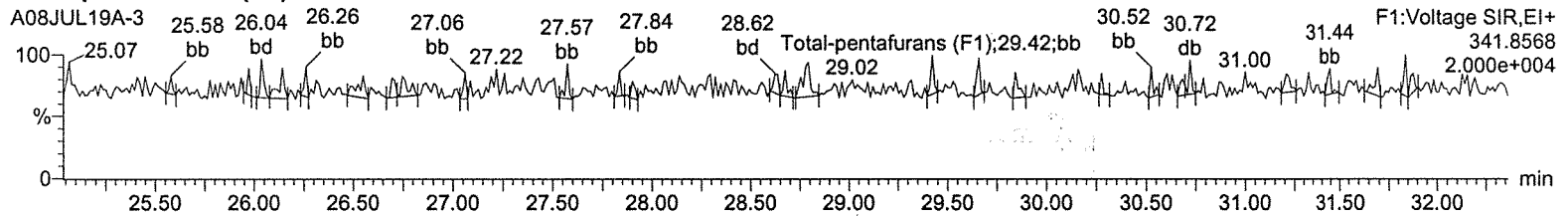
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

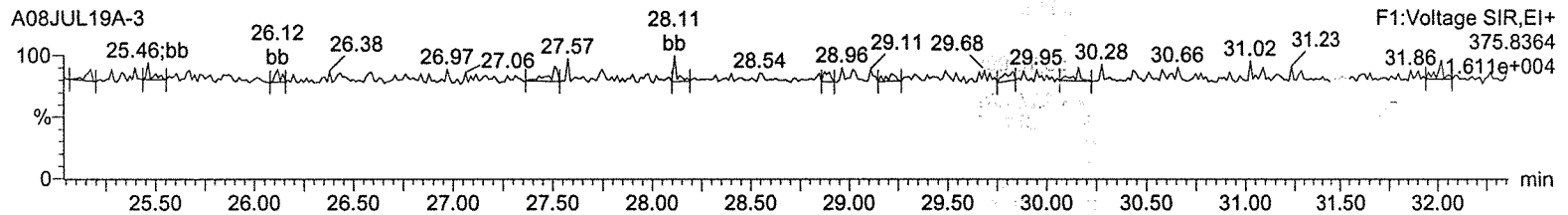
Total-pentafurans (F1)



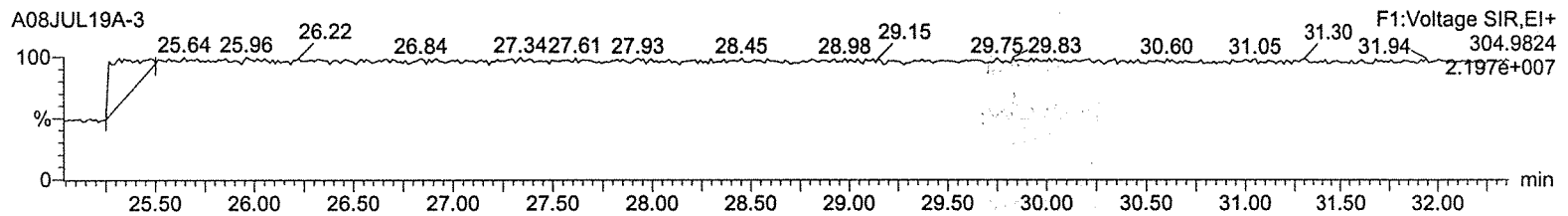
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

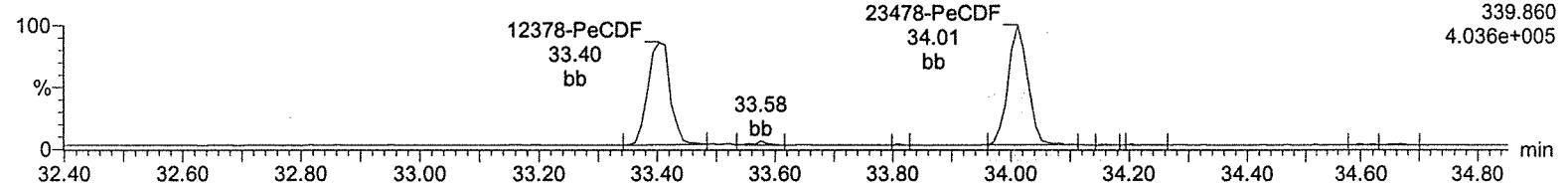
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

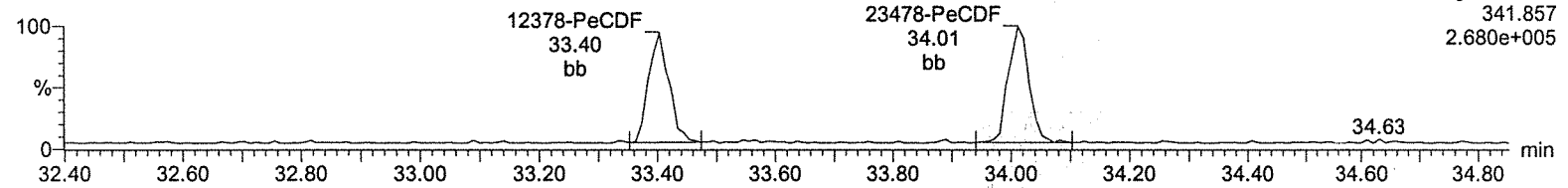
Total-pentafurans

A08JUL19A-3



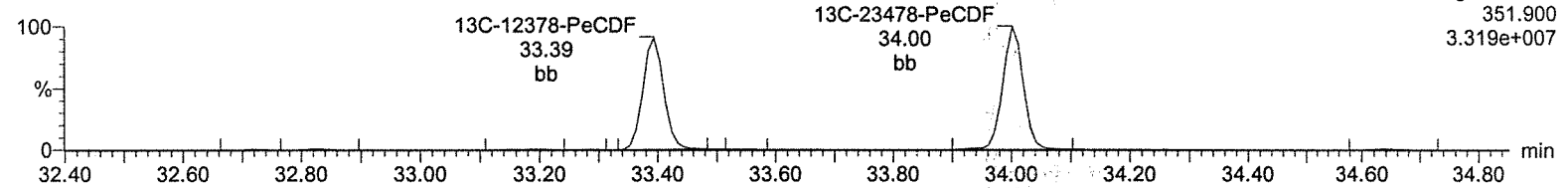
Total-pentafurans

A08JUL19A-3



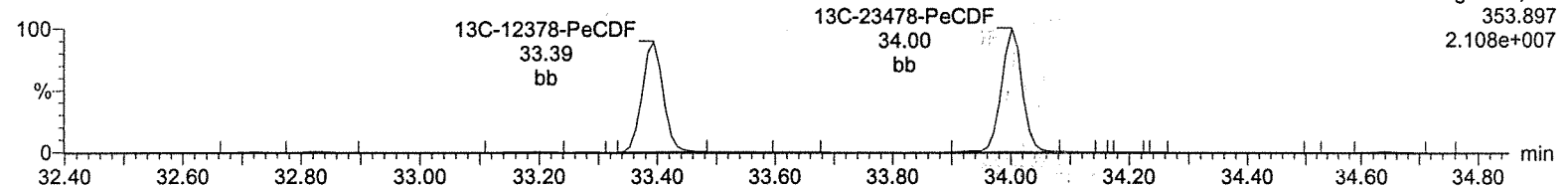
13C-12378-PeCDF

A08JUL19A-3



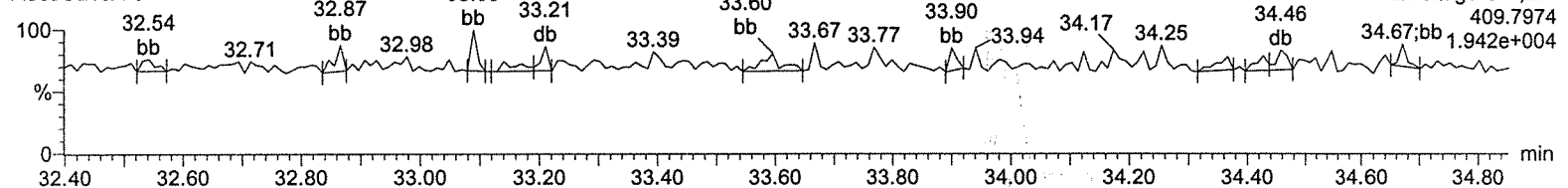
13C-12378-PeCDF

A08JUL19A-3



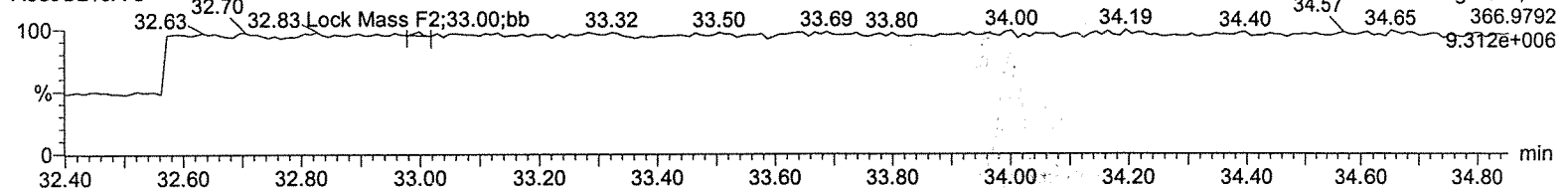
HpDPE

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

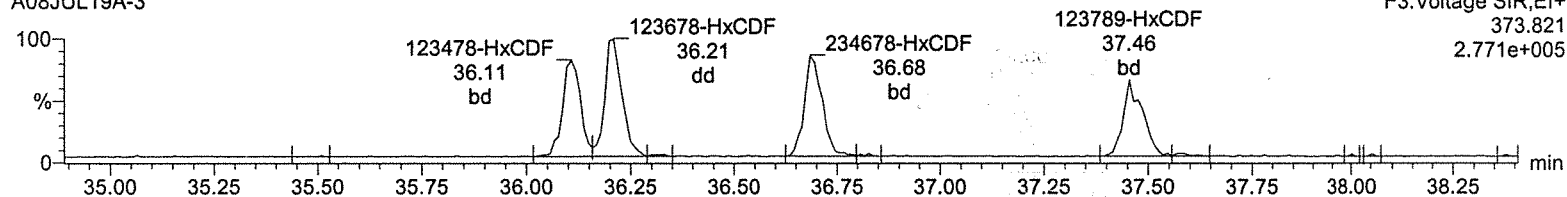
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

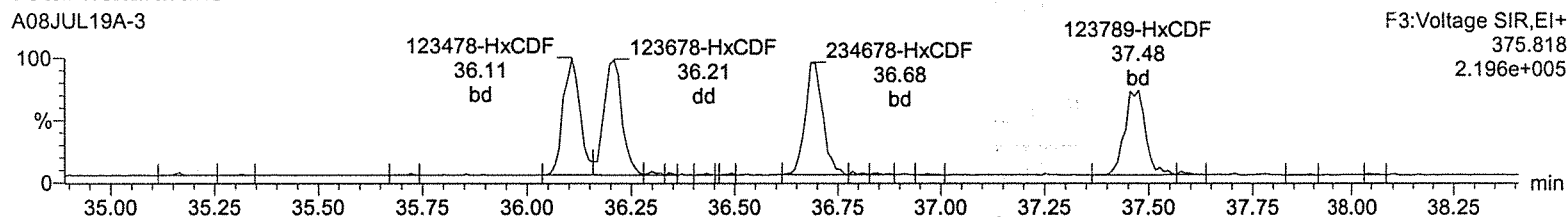
Total-hexafurans

A08JUL19A-3



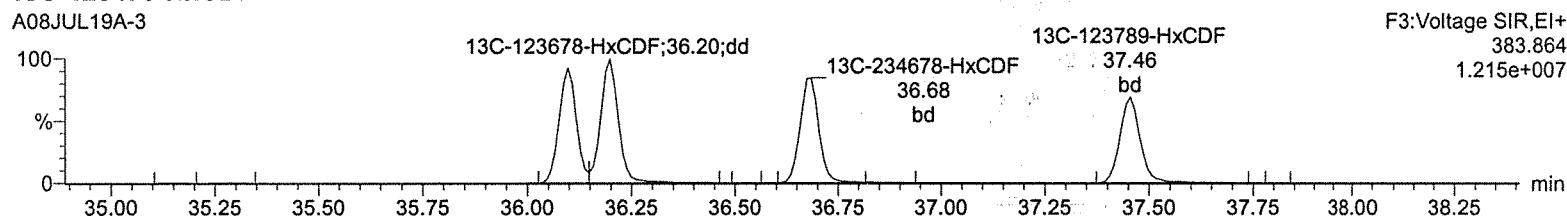
Total-hexafurans

A08JUL19A-3



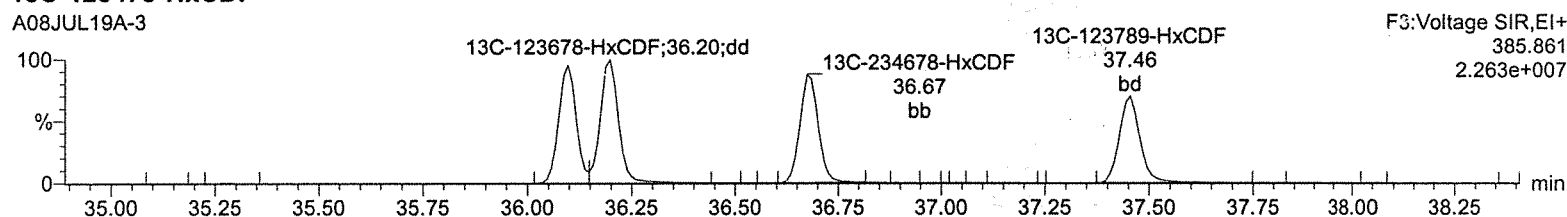
13C-123478-HxCDF

A08JUL19A-3



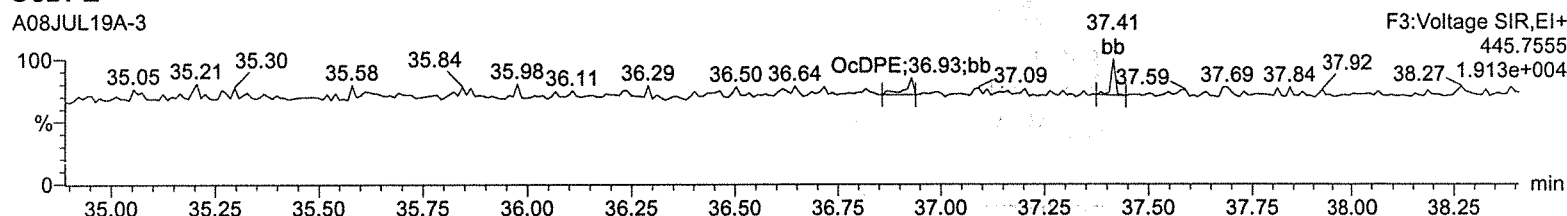
13C-123478-HxCDF

A08JUL19A-3



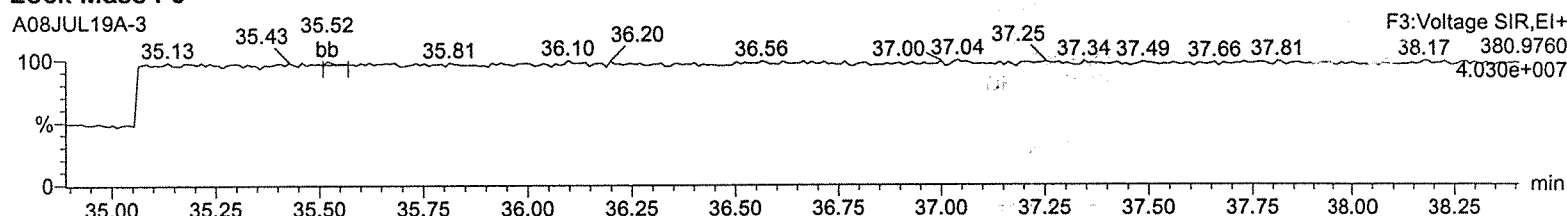
OcDPE

A08JUL19A-3



Lock Mass F3

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

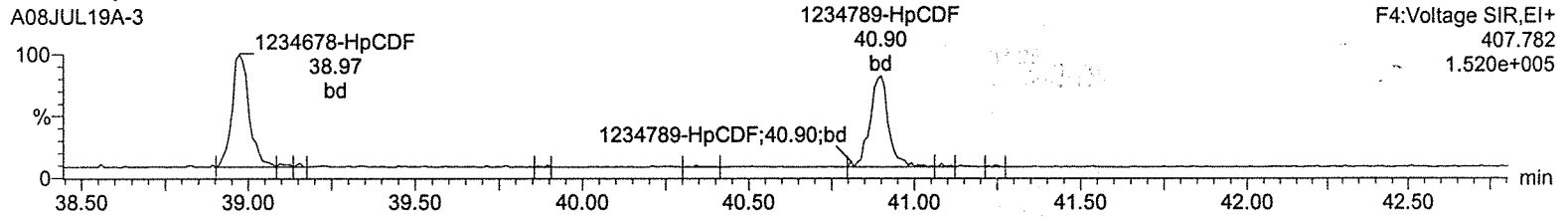
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

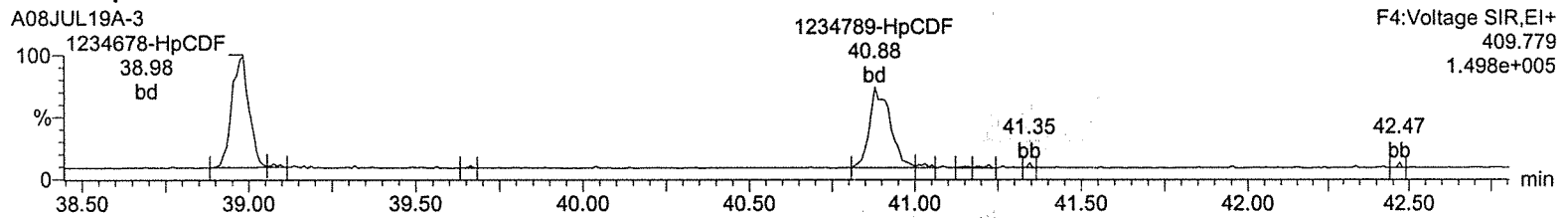
Total-heptafurans

A08JUL19A-3



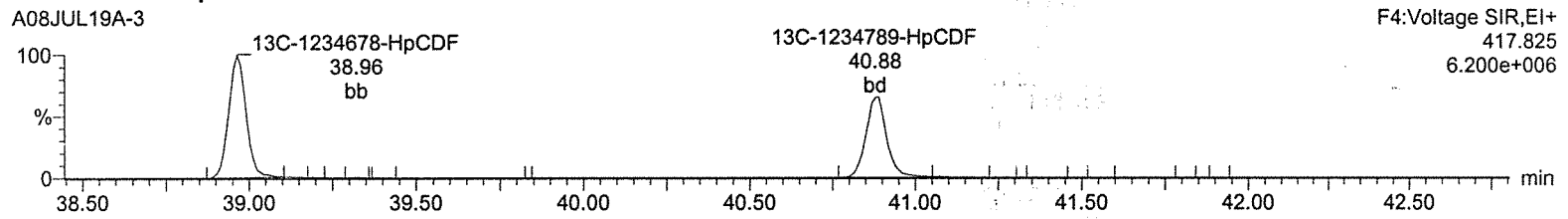
Total-heptafurans

A08JUL19A-3



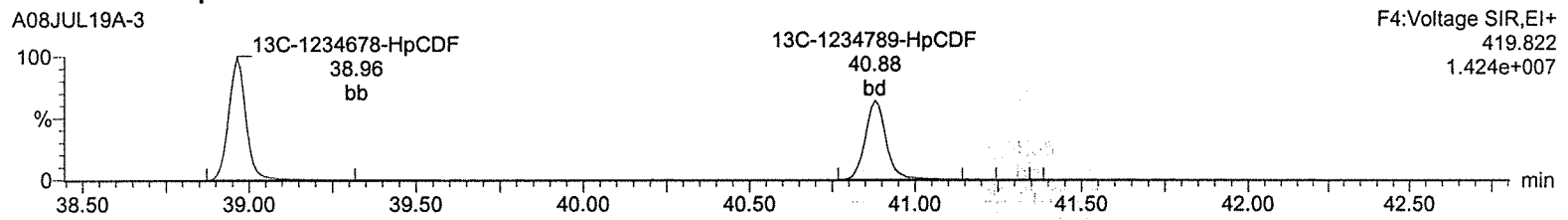
¹³C-1234678-HpCDF

A08JUL19A-3



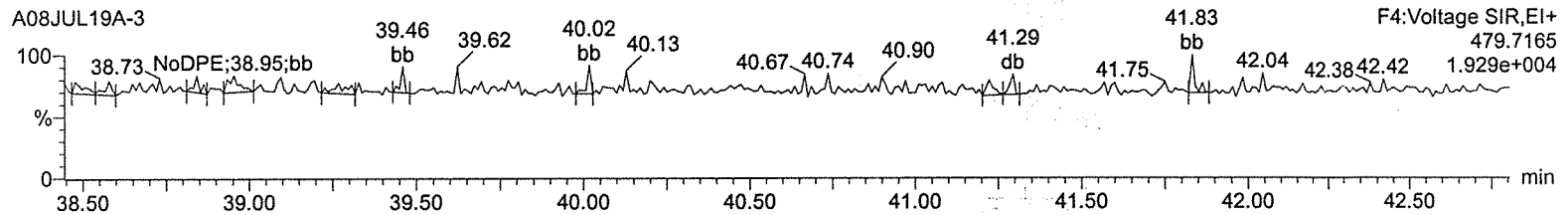
¹³C-1234678-HpCDF

A08JUL19A-3



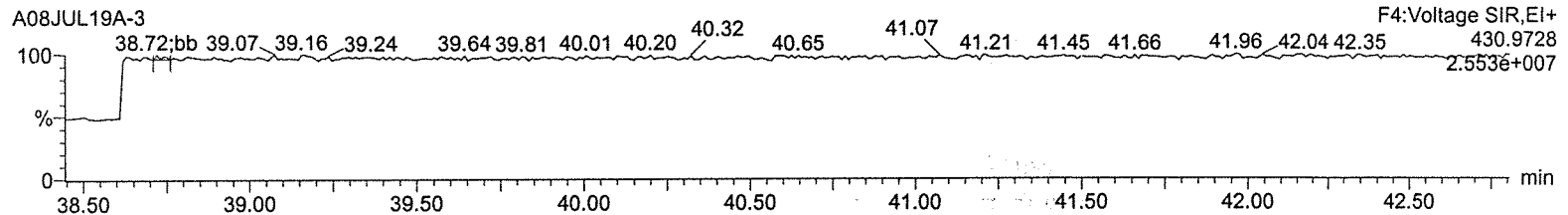
NoDPE

A08JUL19A-3



Lock Mass F4

A08JUL19A-3



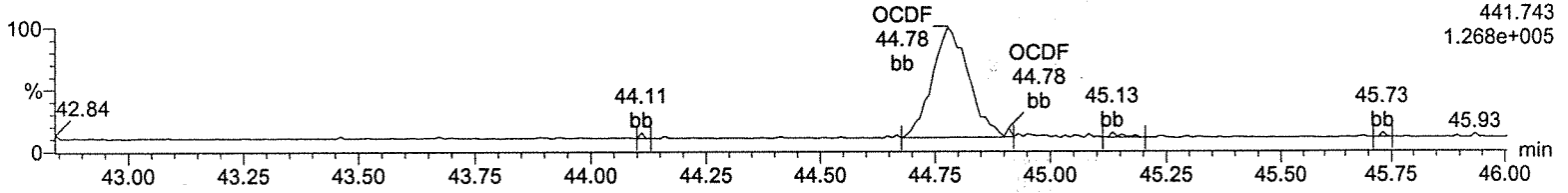
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

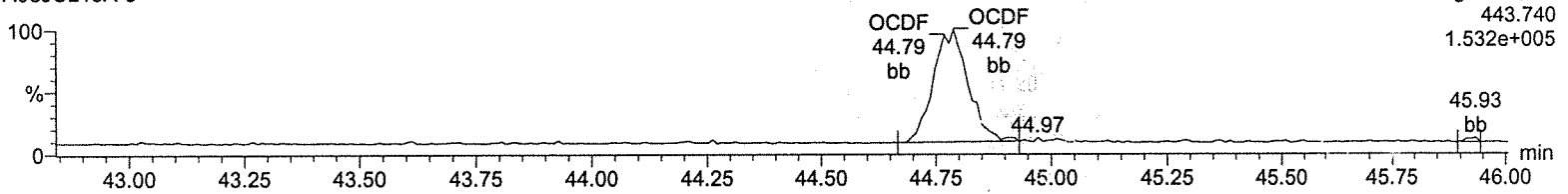
OCDF

A08JUL19A-3



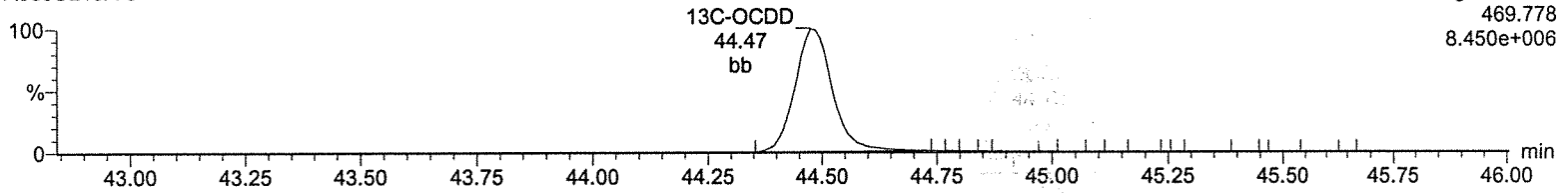
OCDF

A08JUL19A-3



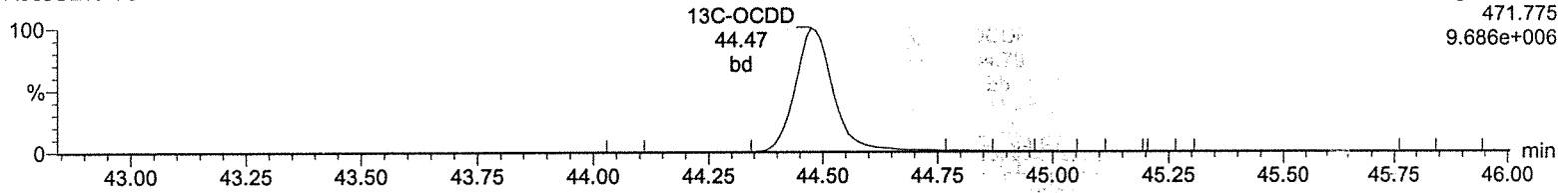
13C-OCDD

A08JUL19A-3



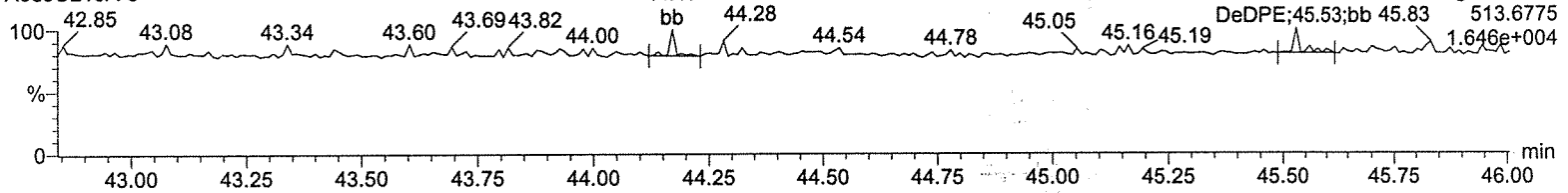
13C-OCDD

A08JUL19A-3



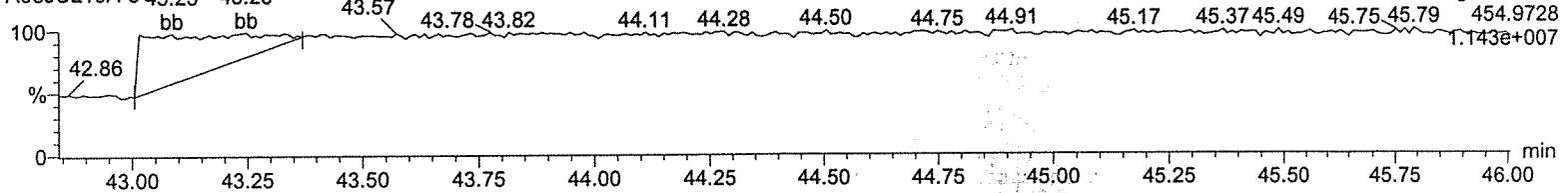
DeDPE

A08JUL19A-3



Lock Mass F5

A08JUL19A-3



Quantify Sample Summary Report
 Method 1613 ICAL Report
 MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

7/21/19

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.57e3	4.22e3	7.80e3	31.36	1.001	0.85	NO	0.465	0.823	0.884	5.07	0.0381	8.65e4	2341	36.9	7.83e4	1703	45.9	bb	bd
2	12378-PeCDD	1.58e4	9.75e3	2.55e4	34.22	1.000	1.62	NO	2.444	0.834	0.853	1.65	0.0498	3.90e5	2742	142.4	2.48e5	1479	167.7	bd	bb
3	123478-HxCDD	1.23e4	1.02e4	2.25e4	36.84	1.000	1.21	NO	2.373	0.892	0.940	3.11	0.0590	2.55e5	2027	125.9	2.33e5	1848	125.8	bd	bd
4	123678-HxCDD	1.38e4	1.18e4	2.56e4	36.92	1.000	1.16	NO	2.463	0.930	0.944	2.57	0.0565	2.81e5	2027	138.8	2.54e5	1848	137.3	dd	dd
5	123789-HxCDD	1.28e4	1.04e4	2.32e4	37.16	1.007	1.24	NO	2.375	0.881	0.927	3.30	0.0586	2.66e5	2027	131.4	2.12e5	1848	114.5	bd	dd
6	1234678-HpCDD	9.30e3	9.39e3	1.87e4	40.25	1.000	0.99	NO	2.381	0.991	1.040	2.88	0.0813	1.41e5	1799	78.5	1.51e5	1462	103.4	bb	bd
7	OCDD	1.59e4	1.70e4	3.29e4	44.49	1.000	0.93	NO	4.867	0.946	0.971	2.39	0.153	1.93e5	1820	106.0	1.82e5	1858	97.7	bd	bb
8	2378-TCDF	4.46e3	5.19e3	9.65e3	30.67	1.001	0.86	NO	0.468	0.916	0.978	5.59	0.0667	7.01e4	2698	26.0	7.50e4	3399	22.1	bb	bb
9	12378-PeCDF	2.14e4	1.57e4	3.71e4	33.41	1.000	1.36	NO	2.350	0.888	0.945	3.41	0.0418	5.52e5	2463	223.9	3.85e5	3187	120.8	bd	bb
10	23478-PeCDF	2.55e4	1.61e4	4.16e4	34.02	1.000	1.58	NO	2.465	0.973	0.987	3.73	0.0389	6.39e5	2463	259.3	4.09e5	3187	128.4	bb	bd
11	123478-HxCDF	1.80e4	1.52e4	3.32e4	36.11	1.000	1.18	NO	2.413	1.049	1.087	3.86	0.0490	3.72e5	2602	143.0	3.37e5	2286	147.4	bd	bd
12	123678-HxCDF	1.83e4	1.55e4	3.38e4	36.22	1.000	1.18	NO	2.347	0.977	1.041	3.23	0.0513	4.45e5	2602	170.9	3.20e5	2286	139.8	db	db
13	234678-HxCDF	1.88e4	1.48e4	3.36e4	36.69	1.000	1.27	NO	2.436	1.107	1.136	3.17	0.0512	3.63e5	2602	139.4	3.00e5	2286	131.3	bd	bd
14	123789-HxCDF	1.51e4	1.25e4	2.76e4	37.47	1.000	1.21	NO	2.437	1.034	1.061	2.29	0.0691	2.81e5	2602	108.0	2.34e5	2286	102.5	bb	bd
15	1234678-HpCDF	1.32e4	1.44e4	2.75e4	38.98	1.000	0.92	NO	2.449	1.126	1.150	3.86	0.0571	2.36e5	1436	164.0	2.50e5	2218	112.8	bb	bd
16	1234789-HpCDF	1.11e4	1.12e4	2.24e4	40.89	1.000	0.99	NO	2.471	1.188	1.202	1.91	0.0865	1.56e5	1436	108.6	1.54e5	2218	69.5	bd	bd
17	OCDF	1.74e4	1.92e4	3.66e4	44.81	1.007	0.90	NO	4.644	1.052	1.133	6.78	0.201	1.76e5	3765	46.8	2.08e5	1885	110.1	bd	bb
18	13C-2378-TCDD	8.21e5	1.07e6	1.89e6	31.34	1.015	0.77	NO	96.744	1.092	1.128	2.36	0.138	1.56e7	9025	1728.5	2.08e7	4935	4206.5	bb	bb
19	13C-2378-PeCDD	7.37e5	4.88e5	1.22e6	34.21	1.109	1.51	NO	93.933	0.706	0.751	5.03	0.138	1.79e7	3968	4522.8	1.17e7	5328	2187.5	bb	bb
20	13C-123478-HxCDD	5.54e5	4.55e5	1.01e6	36.83	0.991	1.22	NO	101.285	0.908	0.896	1.38	0.180	1.15e7	5441	2114.1	9.33e6	5749	1623.8	bd	bd
21	13C-123678-HxCDD	6.06e5	4.95e5	1.10e6	36.91	0.993	1.22	NO	100.379	0.990	0.986	0.84	0.163	1.20e7	5441	2206.7	9.90e6	5749	1721.4	dd	dd
22	13C-1234678-HpCDD	3.80e5	3.75e5	7.55e5	40.23	1.083	1.01	NO	101.038	0.679	0.672	1.29	0.265	5.82e6	6152	946.8	5.53e6	6204	892.2	bb	bd
23	13C-OCDD	6.49e5	7.44e5	1.39e6	44.49	1.197	0.87	NO	195.027	0.626	0.642	4.87	0.267	6.93e6	5999	1155.6	8.01e6	5912	1355.8	bd	bd
24	13C-2378-TCDF	9.11e5	1.20e6	2.11e6	30.64	0.993	0.76	NO	97.118	1.214	1.250	1.88	0.194	1.21e7	14708	823.8	1.61e7	7000	2294.6	bb	bb
25	13C-12378-PeCDF	1.02e6	6.53e5	1.67e6	33.40	1.082	1.56	NO	95.178	0.962	1.011	4.24	0.227	2.62e7	15253	1715.1	1.64e7	5304	3093.6	bb	bd
26	13C-23478-PeCDF	1.05e6	6.60e5	1.71e6	34.01	1.102	1.59	NO	92.689	0.985	1.063	5.28	0.216	2.71e7	15253	1776.2	1.71e7	5304	3222.8	db	db
27	13C-123478-HxCDF	4.33e5	8.34e5	1.27e6	36.11	0.972	0.52	NO	102.576	1.139	1.111	1.42	0.257	9.40e6	8141	1154.2	1.76e7	11678	1502.8	bd	bd
28	13C-123678-HxCDF	4.78e5	9.08e5	1.39e6	36.21	0.975	0.53	NO	99.908	1.246	1.247	1.06	0.229	9.47e6	8141	1163.6	1.83e7	11678	1564.1	dd	db
29	13C-234678-HxCDF	4.19e5	7.95e5	1.21e6	36.69	0.988	0.53	NO	100.882	1.092	1.082	1.01	0.263	8.70e6	8141	1069.1	1.65e7	11678	1414.7	bb	bb
30	13C-123789-HxCDF	3.73e5	6.94e5	1.07e6	37.46	1.008	0.54	NO	99.201	0.959	0.967	1.08	0.295	6.99e6	8141	859.2	1.29e7	11678	1106.7	bd	bb
31	13C-1234678-HpCDF	3.03e5	6.75e5	9.78e5	38.97	1.049	0.45	NO	101.064	0.879	0.870	1.11	0.205	5.17e6	5374	961.9	1.14e7	7011	1632.7	bb	bb
32	13C-1234789-HpCDF	2.33e5	5.21e5	7.54e5	40.89	1.101	0.45	NO	100.102	0.678	0.677	1.01	0.263	3.26e6	5374	606.3	7.49e6	7011	1069.0	bd	bb
33	13C-1234-TCDD	7.57e5	9.78e5	1.74e6	30.87	0.000	0.77	NO	100.000	1.000	1.000	0.00	0.156	1.17e7	9025	1300.0	1.53e7	4935	3106.6	bb	bb
34	13C-123789-HxCDD	6.11e5	5.01e5	1.11e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.161	1.15e7	5441	2105.6	9.54e6	5749	1659.5	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Cr#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	8.78e3	8.78e3	8.78e3	31.35	1.016			0.477	1.012	1.061	4.54	0.0460	1.91e5	4378	43.7				M	M2	
																						bb

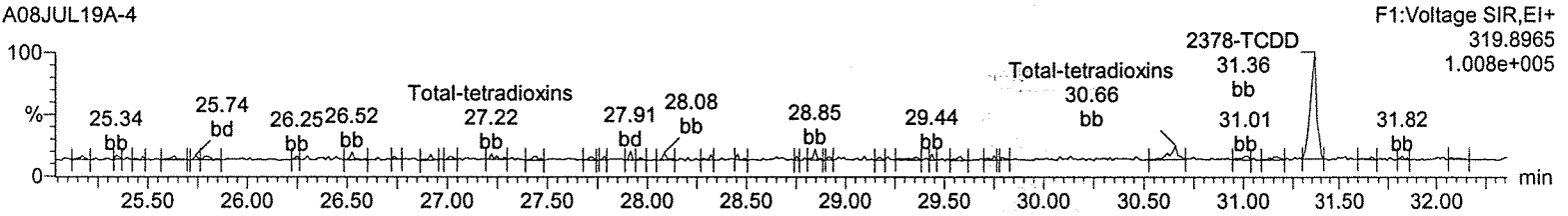
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Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
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Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

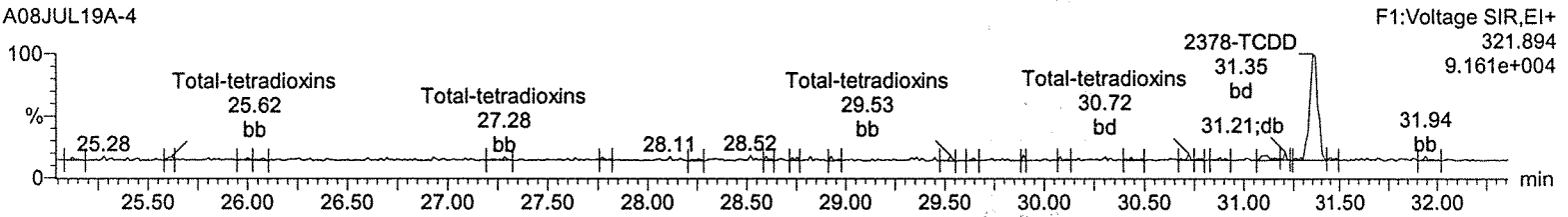
Total-tetradoxins

A08JUL19A-4



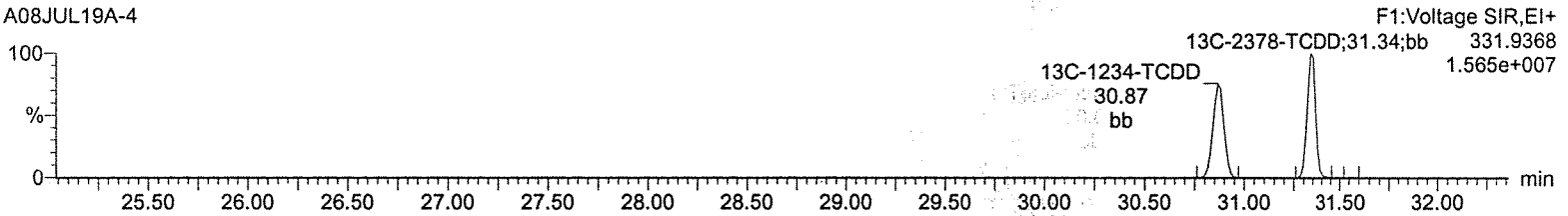
Total-tetradoxins

A08JUL19A-4



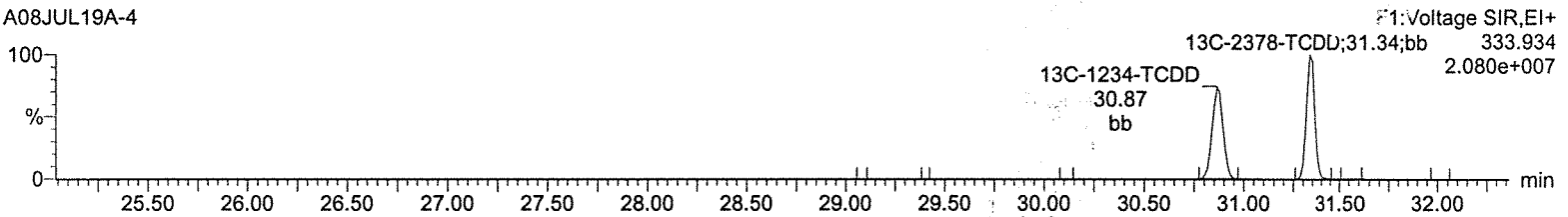
13C-2378-TCDD

A08JUL19A-4



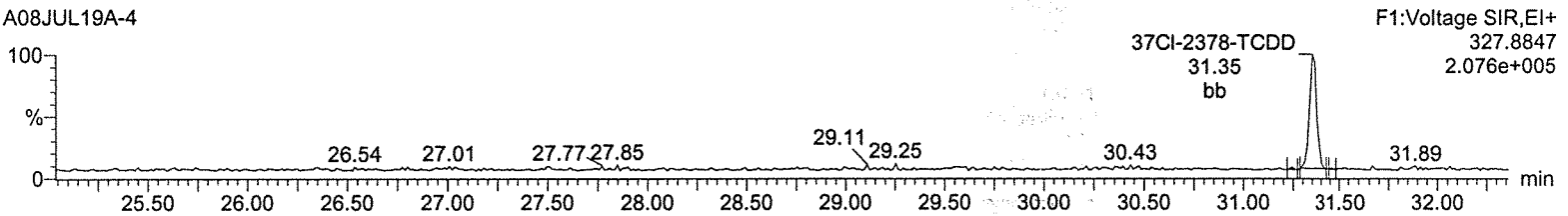
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A08JUL19A-4



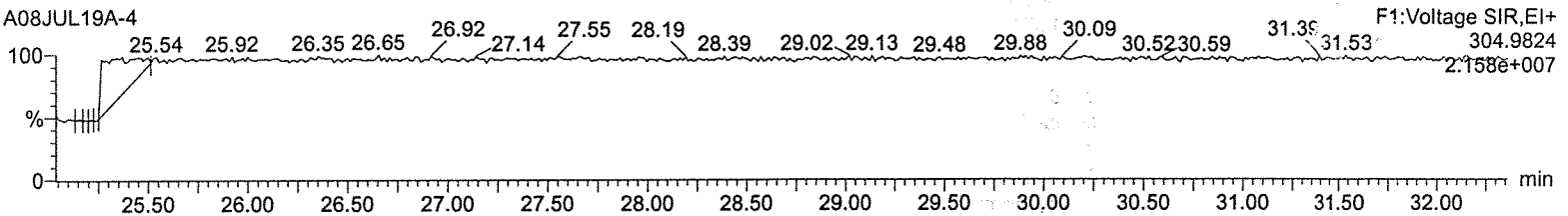
37Cl-2378-TCDD

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

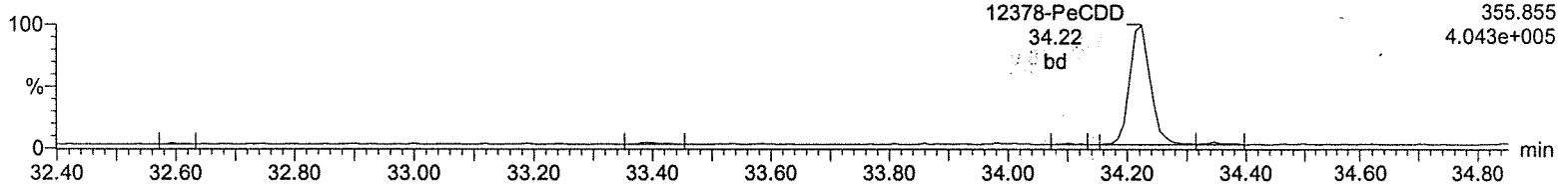
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

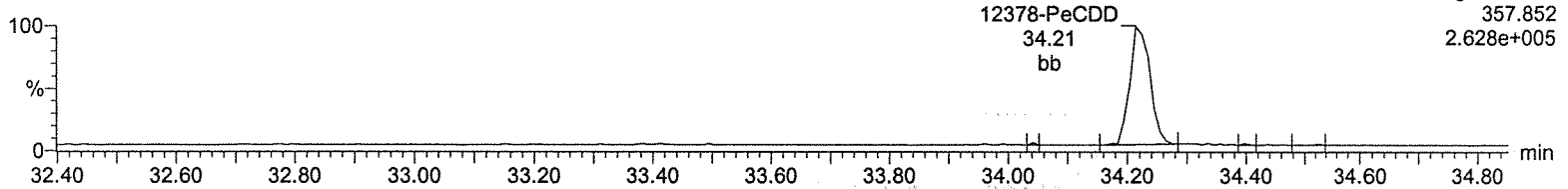
Total-pentadioxins

A08JUL19A-4



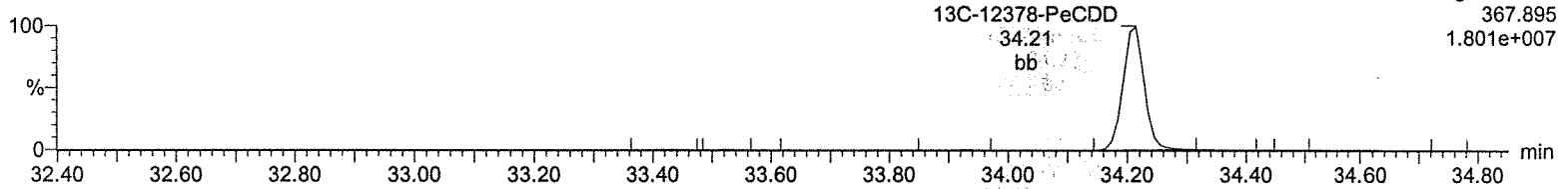
Total-pentadioxins

A08JUL19A-4



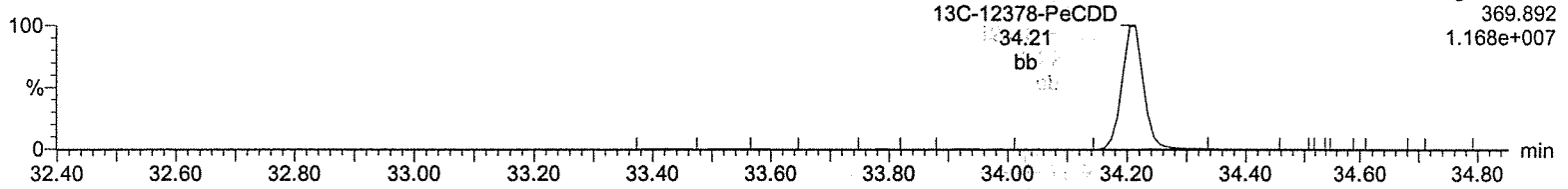
13C-12378-PeCDD

A08JUL19A-4



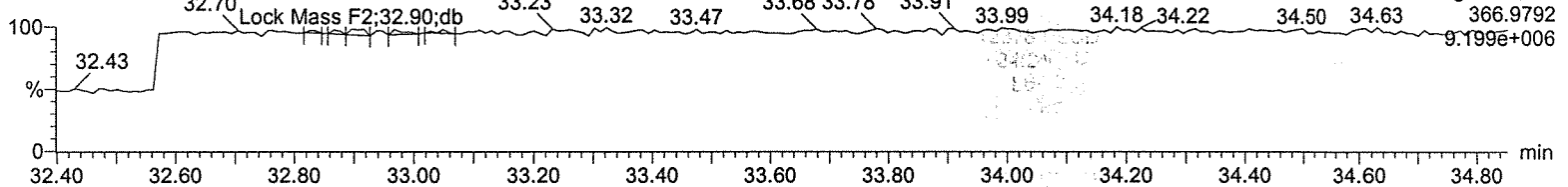
13C-12378-PeCDD

A08JUL19A-4



Lock Mass F2

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

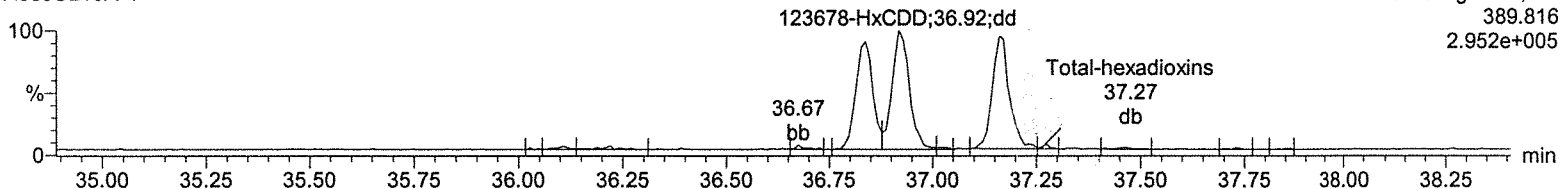
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexadioxins

A08JUL19A-4

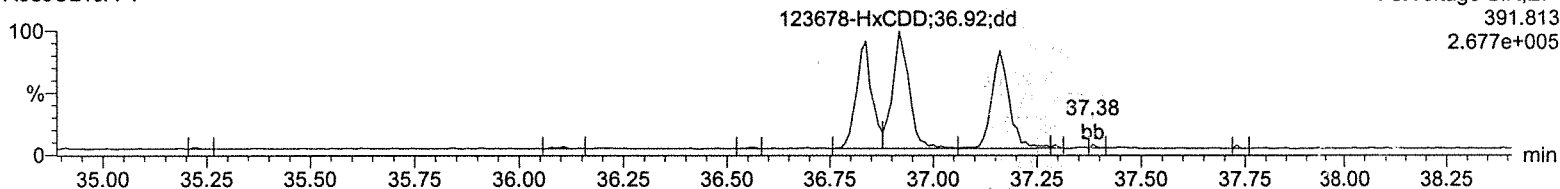
F3:Voltage SIR,EI+
389.816
2.952e+005



Total-hexadioxins

A08JUL19A-4

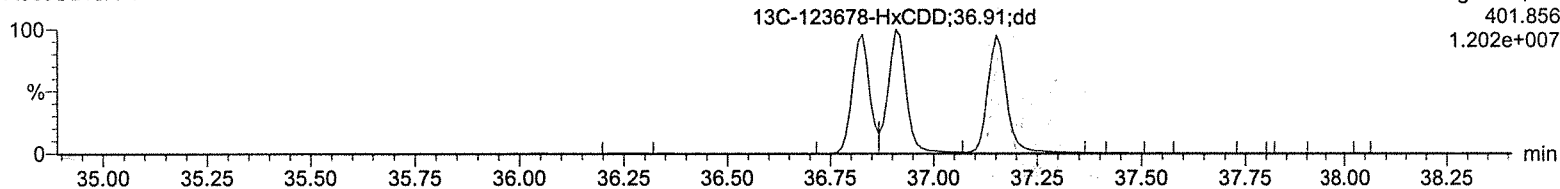
F3:Voltage SIR,EI+
391.813
2.677e+005



13C-123478-HxCDD

A08JUL19A-4

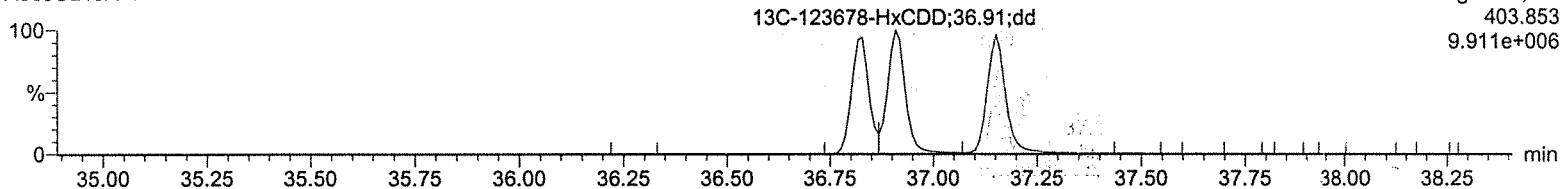
F3:Voltage SIR,EI+
401.856
1.202e+007



13C-123478-HxCDD

A08JUL19A-4

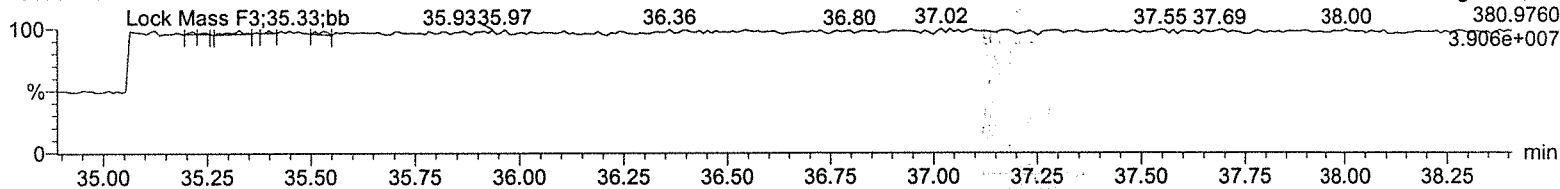
F3:Voltage SIR,EI+
403.853
9.911e+006



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

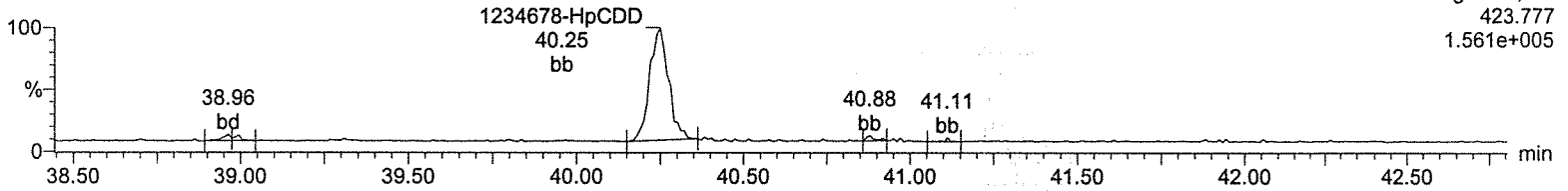
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptadioxins

A08JUL19A-4

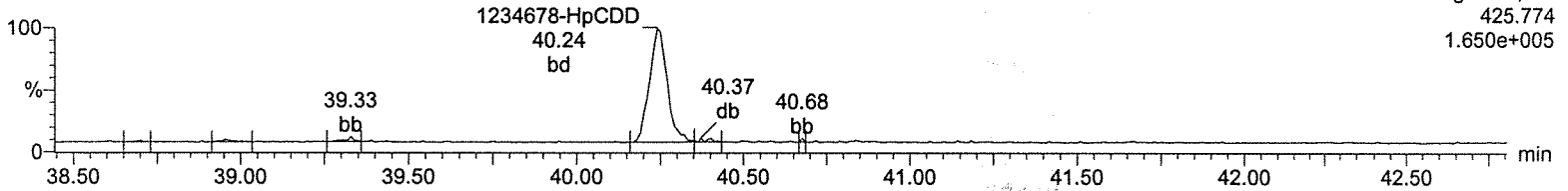
F4:Voltage SIR,EI+
423.777
1.561e+005



Total-heptadioxins

A08JUL19A-4

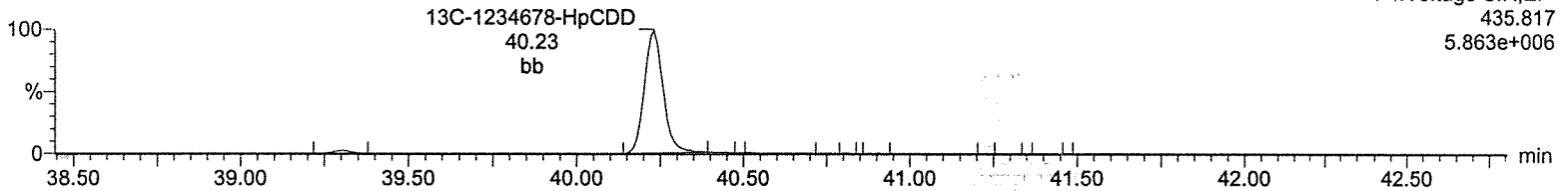
F4:Voltage SIR,EI+
425.774
1.650e+005



13C-1234678-HpCDD

A08JUL19A-4

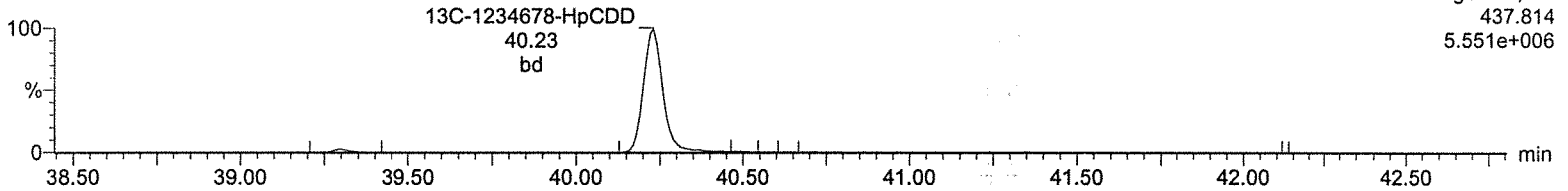
F4:Voltage SIR,EI+
435.817
5.863e+006



13C-1234678-HpCDD

A08JUL19A-4

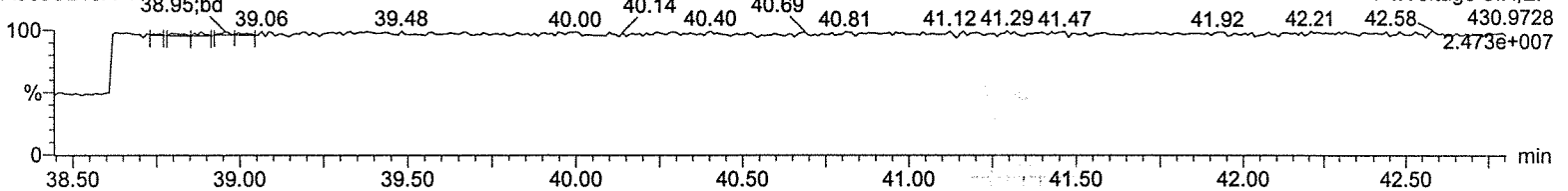
F4:Voltage SIR,EI+
437.814
5.551e+006



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

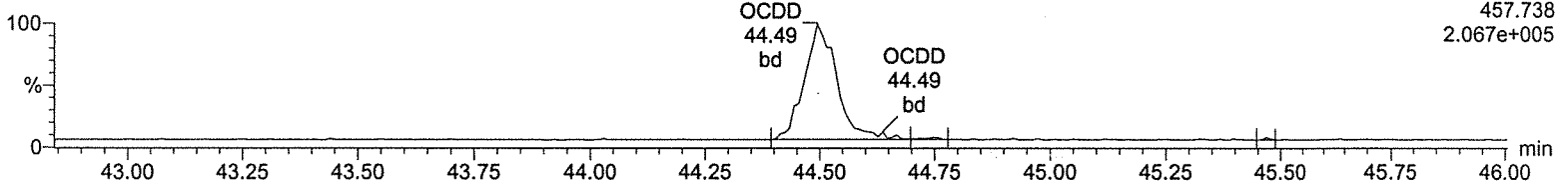
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

OCDD

A08JUL19A-4

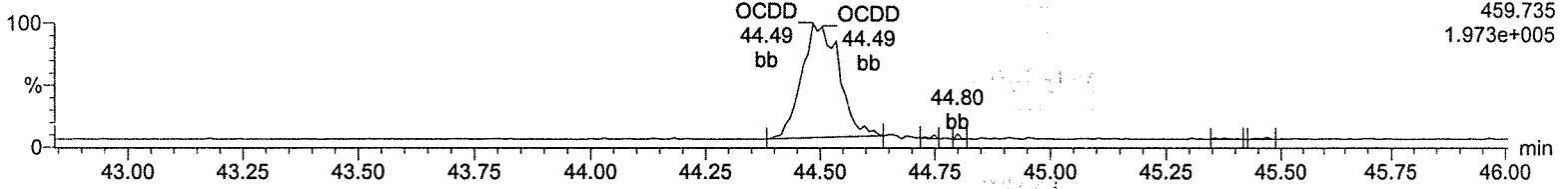
F5:Voltage SIR,EI+
457.738
2.067e+005



OCDD

A08JUL19A-4

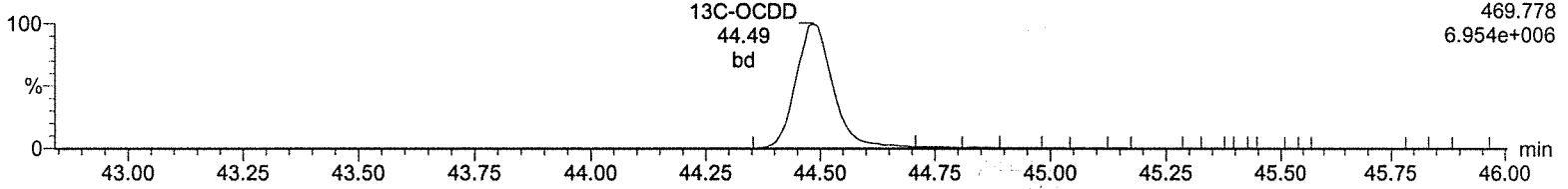
F5:Voltage SIR,EI+
459.735
1.973e+005



13C-OCDD

A08JUL19A-4

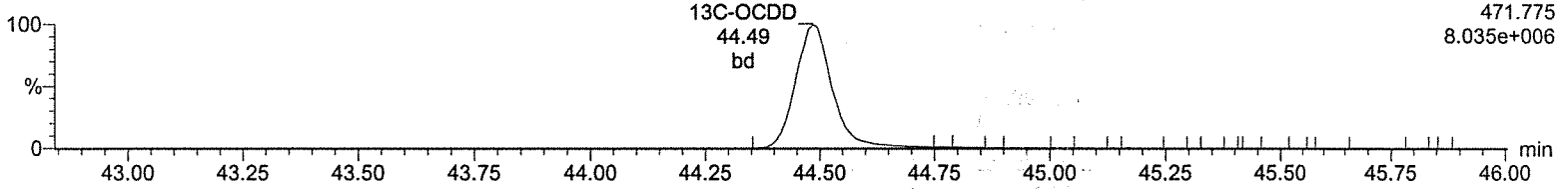
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

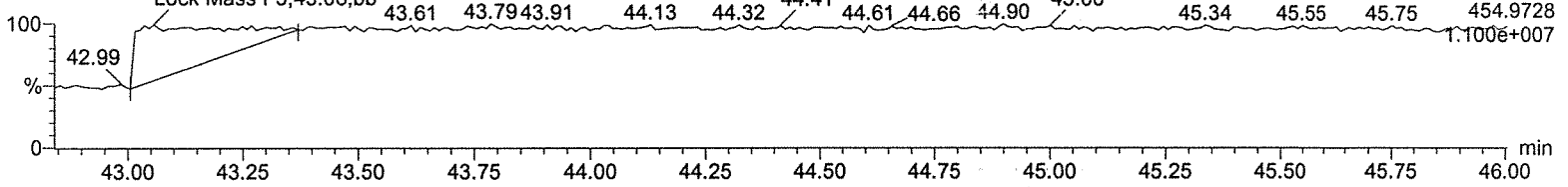
F5:Voltage SIR,EI+
471.775
8.035e+006



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
454.9728
1.100e+007



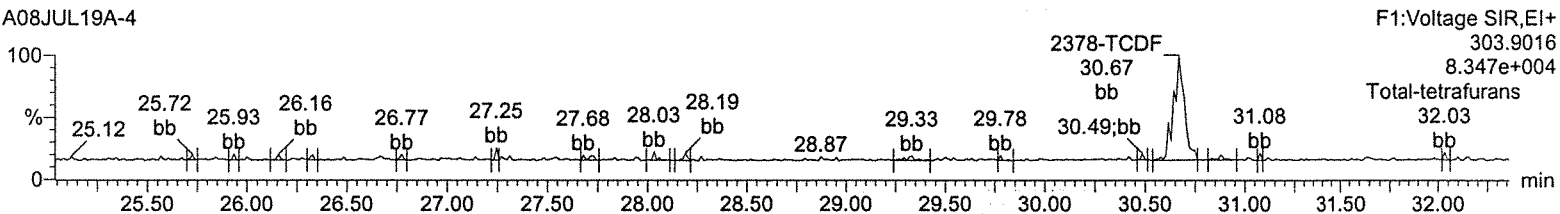
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Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

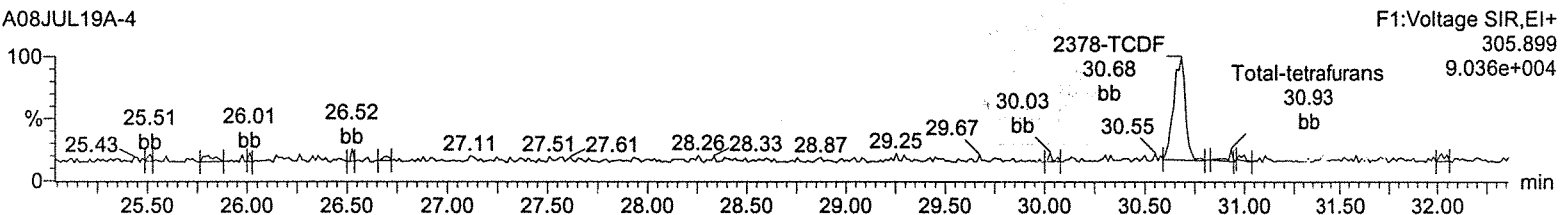
Total-tetrafurans

A08JUL19A-4



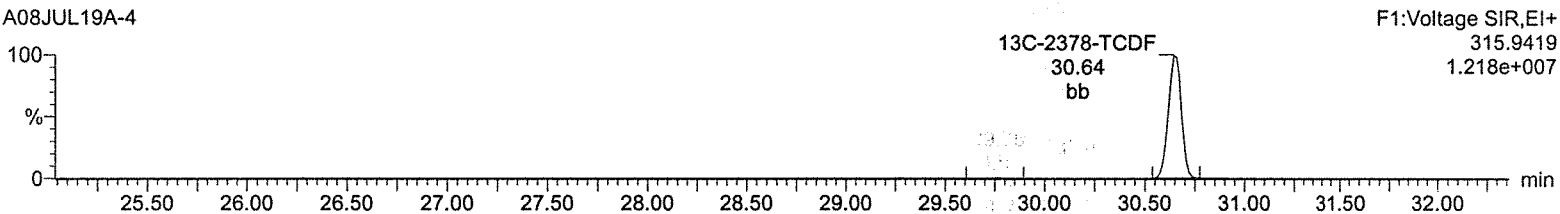
Total-tetrafurans

A08JUL19A-4



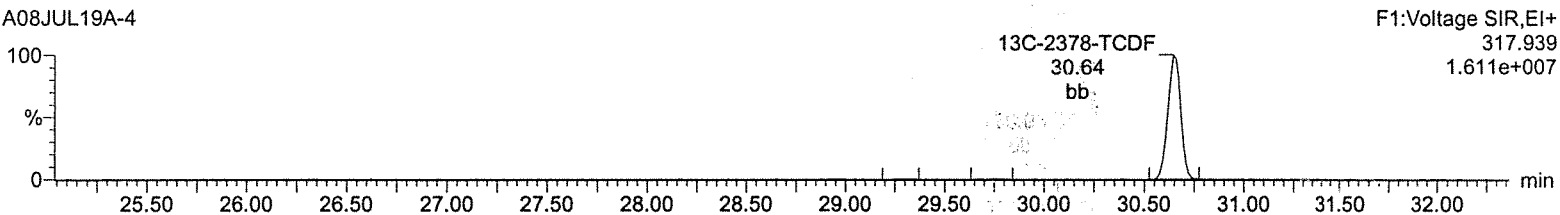
13C-2378-TCDF

A08JUL19A-4



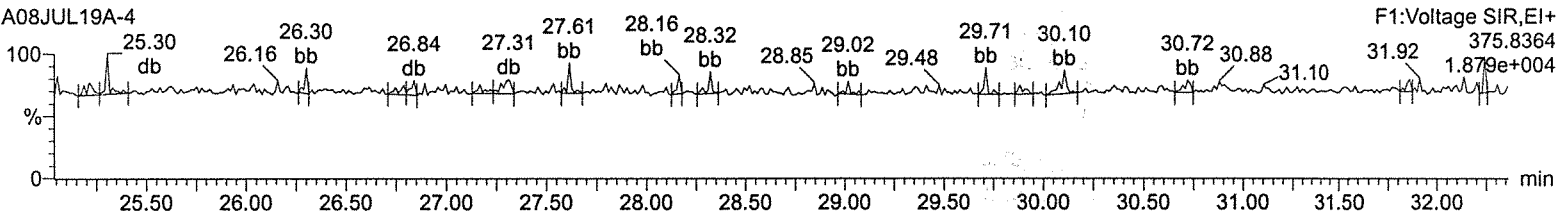
13C-2378-TCDF

A08JUL19A-4



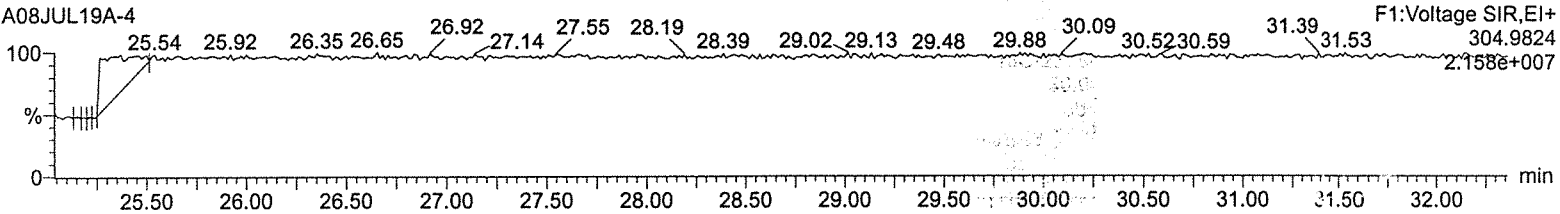
HxDPE

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



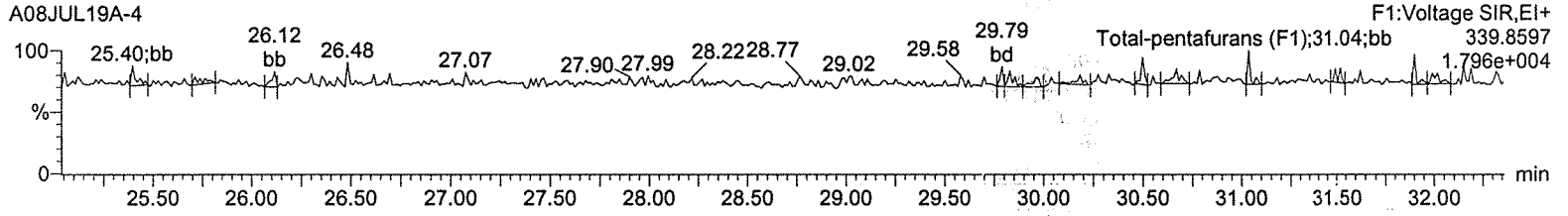
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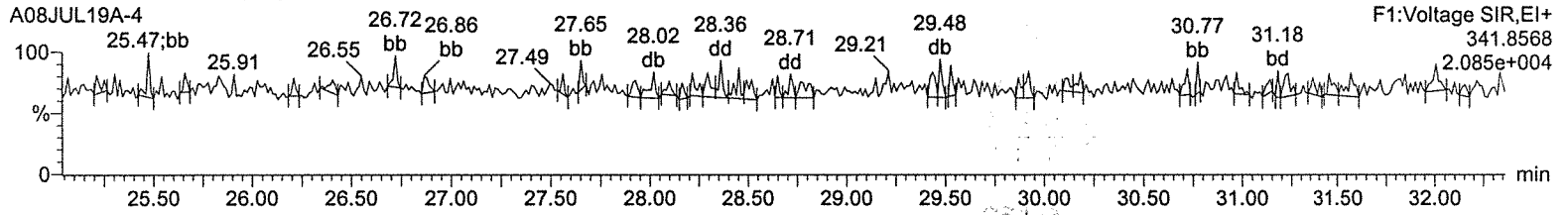
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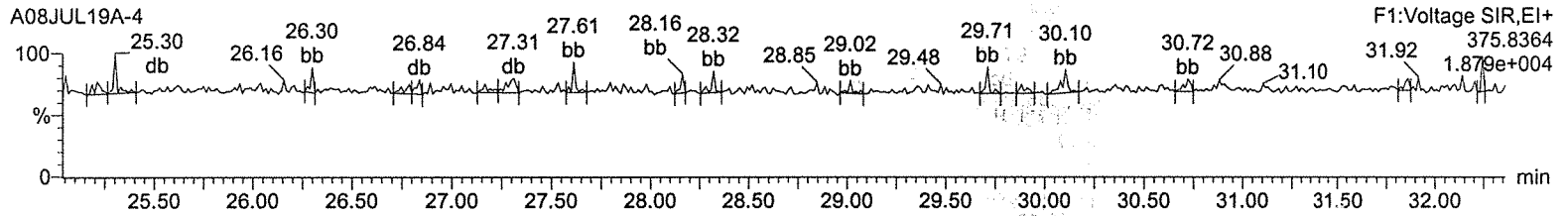
Total-pentafurans (F1)



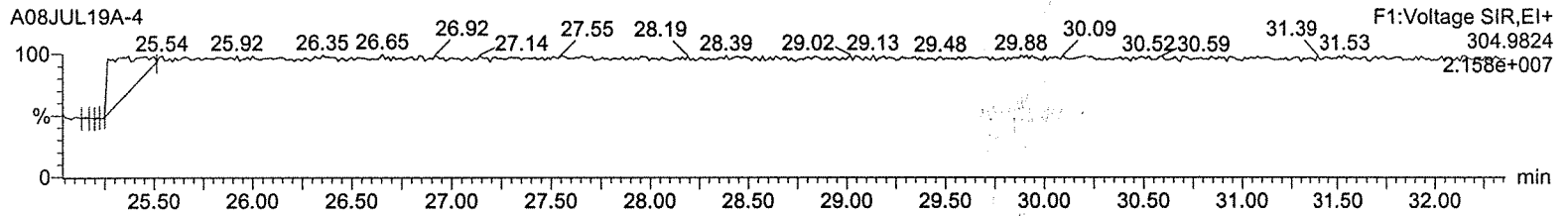
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

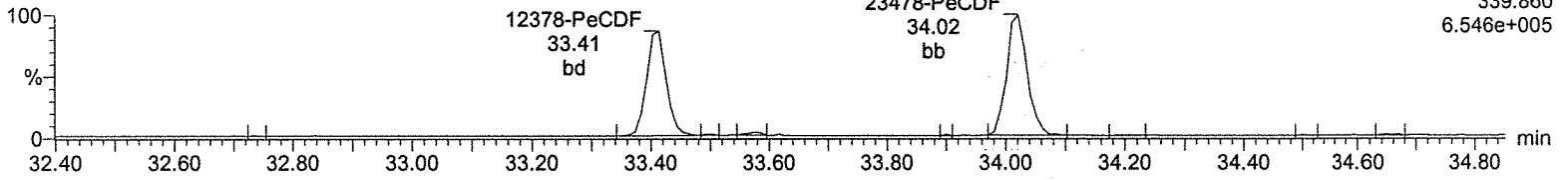
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-pentafurans

A08JUL19A-4

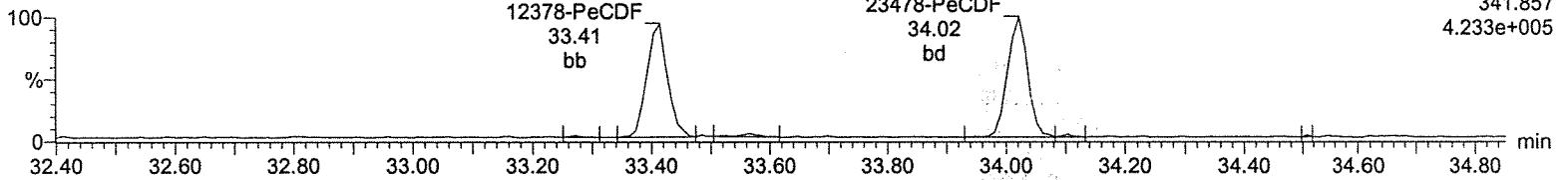
F2:Voltage SIR,EI+
339.860
6.546e+005



Total-pentafurans

A08JUL19A-4

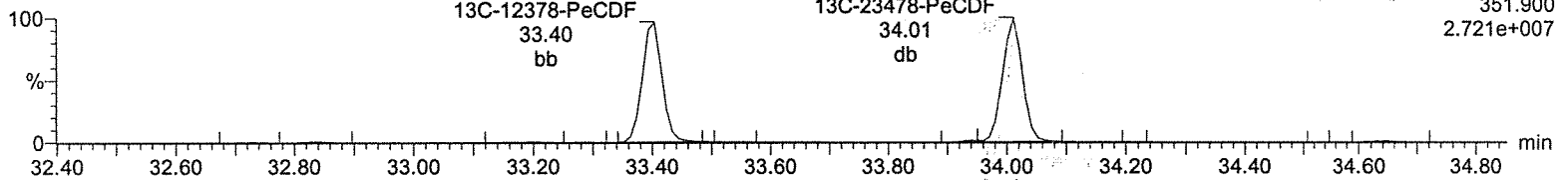
F2:Voltage SIR,EI+
341.857
4.233e+005



13C-12378-PeCDF

A08JUL19A-4

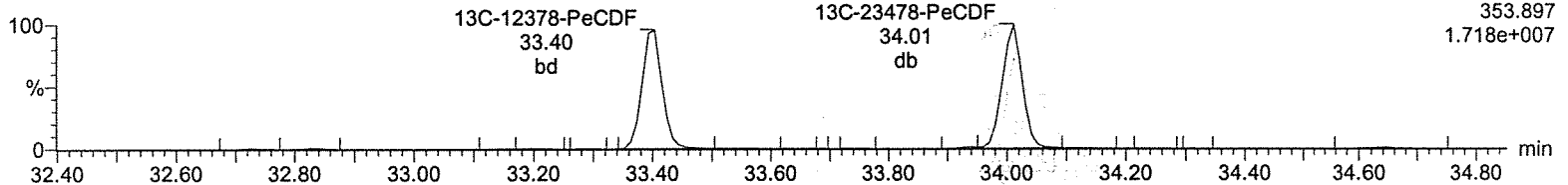
F2:Voltage SIR,EI+
351.900
2.721e+007



13C-12378-PeCDF

A08JUL19A-4

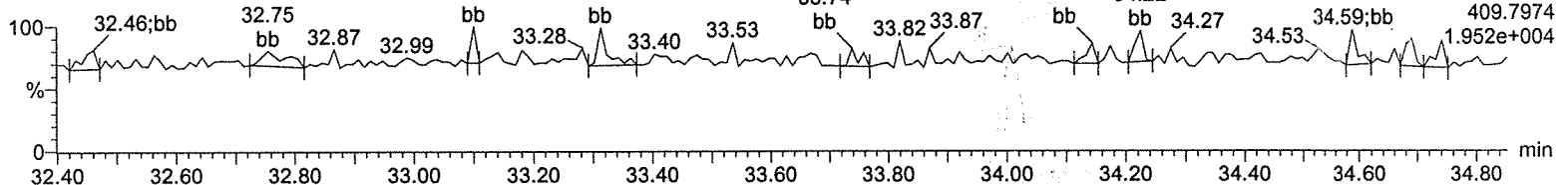
F2:Voltage SIR,EI+
353.897
1.718e+007



HpDPE

A08JUL19A-4

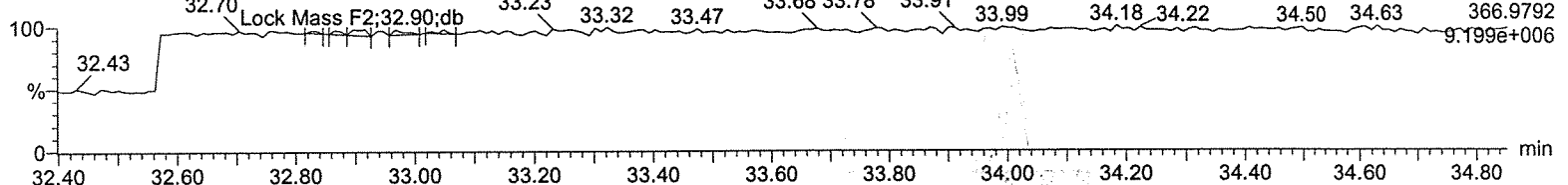
F2:Voltage SIR,EI+
409.7974
1.952e+004



Lock Mass F2

A08JUL19A-4

F2:Voltage SIR,EI+
366.9792
9.199e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

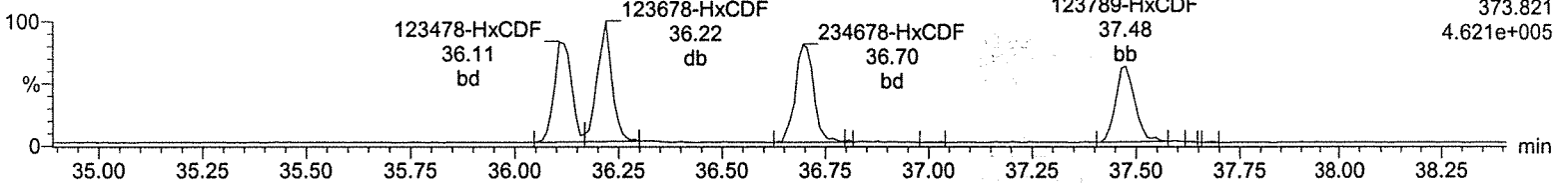
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexafurans

A08JUL19A-4

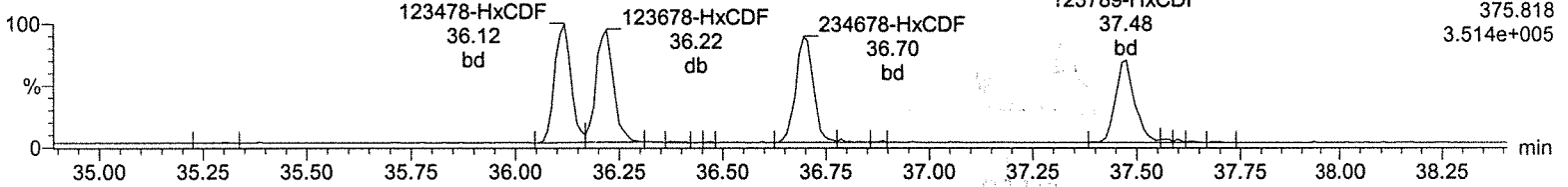
F3:Voltage SIR,EI+
373.821
4.621e+005



Total-hexafurans

A08JUL19A-4

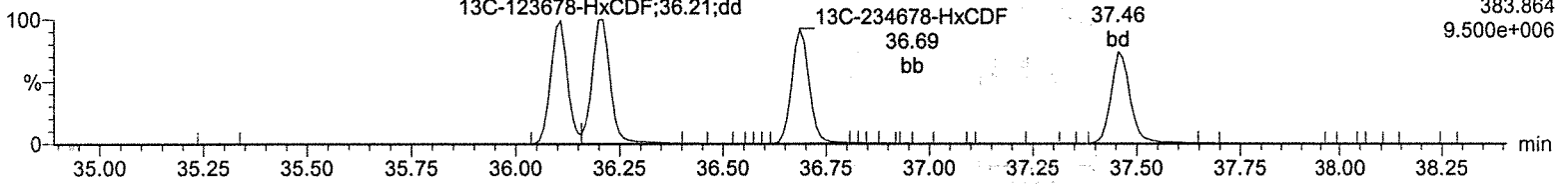
F3:Voltage SIR,EI+
375.818
3.514e+005



13C-123478-HxCDF

A08JUL19A-4

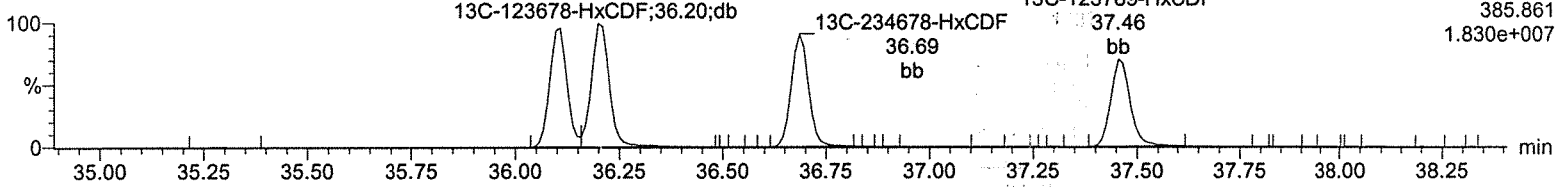
F3:Voltage SIR,EI+
383.864
9.500e+006



13C-123478-HxCDF

A08JUL19A-4

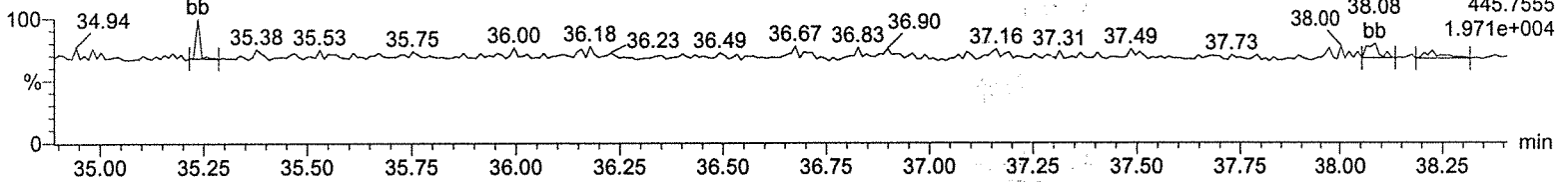
F3:Voltage SIR,EI+
385.861
1.830e+007



OcDPE

A08JUL19A-4

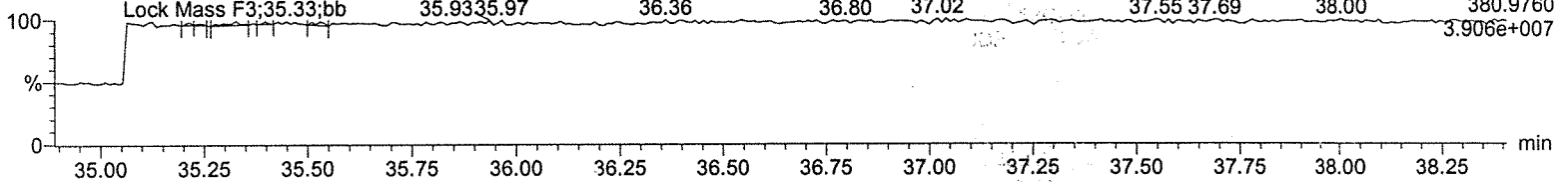
F3:Voltage SIR,EI+
445.7555
1.971e+004



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

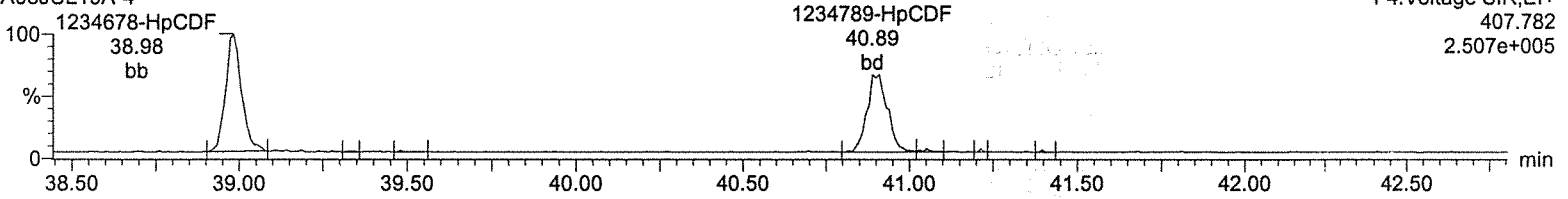
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptafurans

A08JUL19A-4

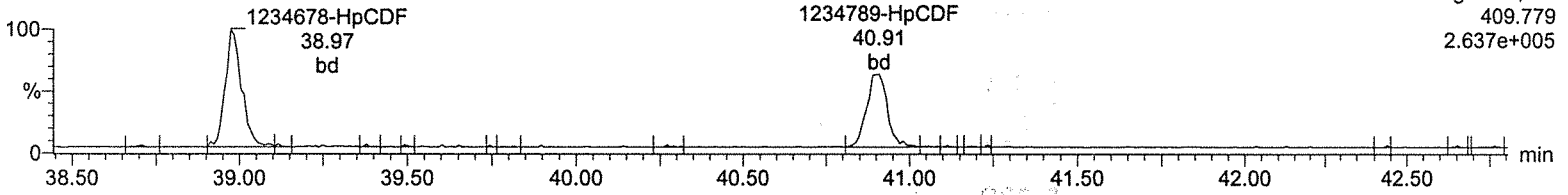
F4:Voltage SIR,EI+
407.782
2.507e+005



Total-heptafurans

A08JUL19A-4

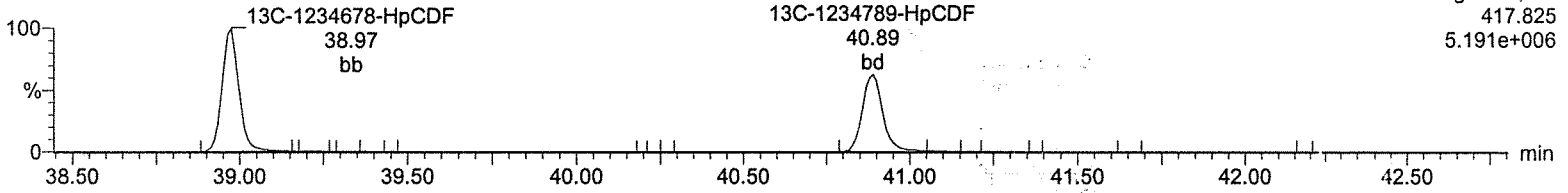
F4:Voltage SIR,EI+
409.779
2.637e+005



13C-1234678-HpCDF

A08JUL19A-4

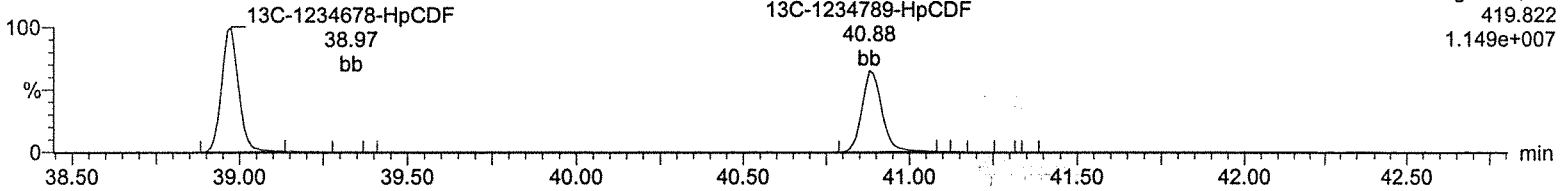
F4:Voltage SIR,EI+
417.825
5.191e+006



13C-1234678-HpCDF

A08JUL19A-4

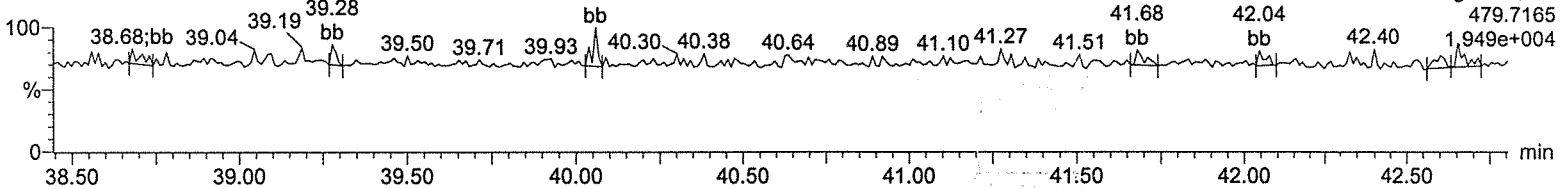
F4:Voltage SIR,EI+
419.822
1.149e+007



NoDPE

A08JUL19A-4

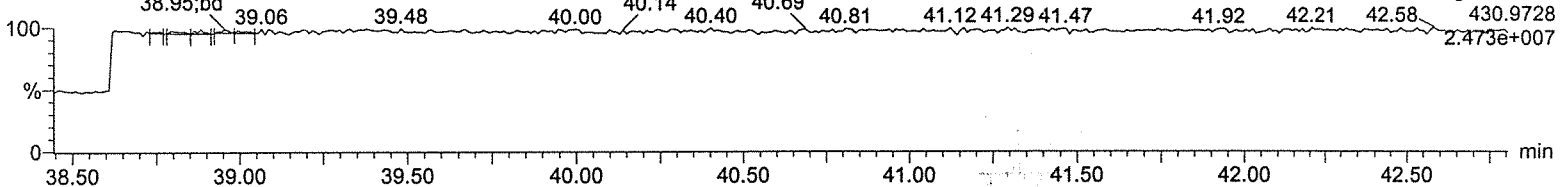
F4:Voltage SIR,EI+
479.7165
1.949e+004



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

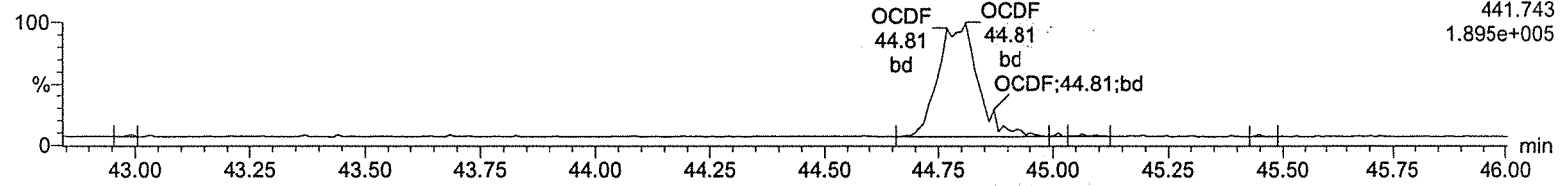
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

OCDF

A08JUL19A-4

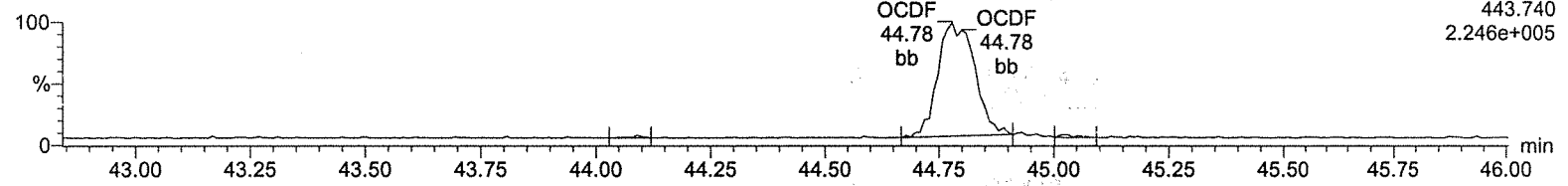
F5:Voltage SIR,EI+
441.743
1.895e+005



OCDF

A08JUL19A-4

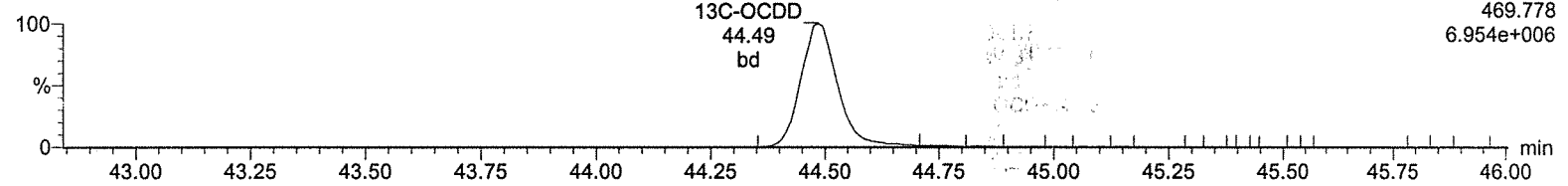
F5:Voltage SIR,EI+
443.740
2.246e+005



13C-OCDD

A08JUL19A-4

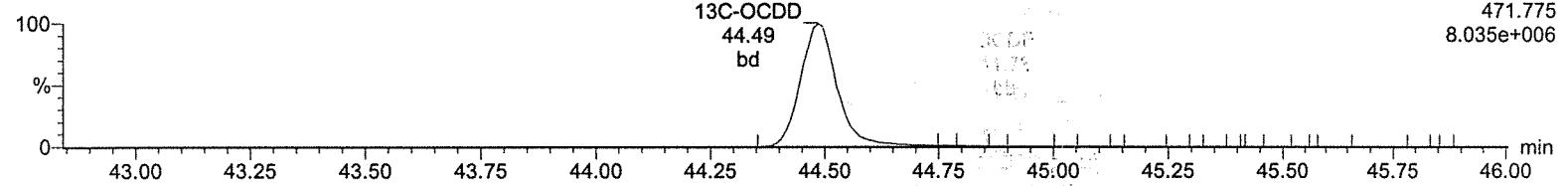
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

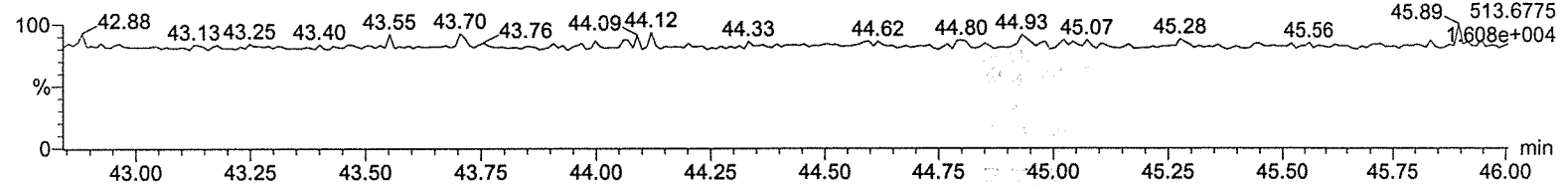
F5:Voltage SIR,EI+
471.775
8.035e+006



DeDPE

A08JUL19A-4

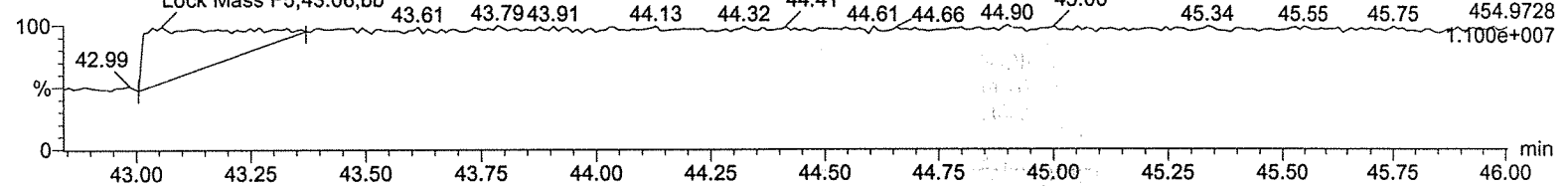
F5:Voltage SIR,EI+
45.89 513.6775
1.608e+004



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
45.75 454.9728
1.100e+007



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2011 July 9

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	SM2	M	M2
1	2378-TCDD	1.64e4	1.96e4	3.60e4	31.35	1.000	0.84	NO	1.926	0.852	0.884	5.07	0.0366	3.15e5	2708	116.2	3.71e5	1865	198.8	bd	bb
2	12378-PeCDD	7.01e4	4.54e4	1.16e5	34.21	1.000	1.54	NO	9.858	0.841	0.853	1.65	0.0620	1.64e6	4036	407.1	1.04e6	1793	580.0	bd	bd
3	123478-HxCDD	6.07e4	4.76e4	1.08e5	36.83	1.000	1.27	NO	10.128	0.952	0.940	3.11	0.0942	1.22e6	2456	497.4	9.73e5	4175	232.9	bd	bd
4	123678-HxCDD	6.34e4	5.11e4	1.15e5	36.92	1.000	1.24	NO	9.763	0.922	0.944	2.57	0.0868	1.18e6	2456	481.4	1.03e6	4175	246.2	dd	db
5	123789-HxCDD	6.39e4	4.66e4	1.10e5	37.16	1.007	1.37	NO	10.002	0.927	0.927	3.30	0.0918	1.18e6	2456	480.1	9.15e5	4175	219.1	dd	bb
6	1234678-HpCDD	4.59e4	4.40e4	8.99e4	40.24	1.000	1.04	NO	9.996	1.040	1.040	2.88	0.110	6.56e5	2814	233.2	6.28e5	2050	306.2	bd	bd
7	OCDD	7.02e4	7.76e4	1.48e5	44.49	1.000	0.90	NO	19.465	0.945	0.971	2.39	0.188	8.27e5	1894	436.6	8.97e5	3432	261.3	bb	bd
8	2378-TCDF	1.89e4	2.56e4	4.45e4	30.66	1.000	0.74	NO	1.930	0.944	0.978	5.59	0.0473	2.49e5	1586	157.1	3.39e5	3348	101.3	bb	bb
9	12378-PeCDF	1.06e5	6.71e4	1.73e5	33.40	1.000	1.58	NO	9.783	0.925	0.945	3.41	0.0636	2.70e6	3895	693.8	1.78e6	5562	320.5	bd	bb
10	23478-PeCDF	1.18e5	7.25e4	1.90e5	34.01	1.000	1.63	NO	9.783	0.965	0.987	3.73	0.0611	2.97e6	3895	763.7	1.80e6	5562	323.0	bb	bb
11	123478-HxCDF	8.27e4	6.81e4	1.51e5	36.11	1.000	1.21	NO	9.763	1.061	1.087	3.86	0.0759	1.84e6	4254	433.3	1.52e6	3988	381.2	bd	bd
12	123678-HxCDF	9.22e4	7.42e4	1.66e5	36.21	1.000	1.24	NO	9.951	1.035	1.041	3.23	0.0734	1.84e6	4254	432.3	1.62e6	3988	407.3	db	db
13	234678-HxCDF	8.43e4	7.08e4	1.55e5	36.69	1.000	1.19	NO	9.949	1.130	1.136	3.17	0.0789	1.74e6	4254	408.5	1.48e6	3988	370.3	bd	bd
14	23789-HxCDF	7.38e4	5.81e4	1.32e5	37.48	1.000	1.27	NO	10.037	1.065	1.061	2.29	0.105	1.25e6	4254	294.9	1.09e6	3988	272.3	bb	bb
15	1234678-HpCDF	6.54e4	6.32e4	1.29e5	38.98	1.000	1.03	NO	9.981	1.148	1.150	3.86	0.0875	1.11e6	3400	327.0	1.11e6	2921	379.1	bd	bd
16	1234789-HpCDF	5.22e4	4.99e4	1.02e5	40.90	1.000	1.04	NO	9.741	1.171	1.202	1.91	0.129	7.25e5	3400	213.2	7.43e5	2921	254.5	bd	bd
17	OCDF	8.37e4	9.25e4	1.76e5	44.78	1.007	0.90	NO	19.911	1.128	1.133	6.78	0.224	8.60e5	5124	167.8	1.02e6	2272	447.0	bd	bd
18	13C-2378-TCDD	9.19e5	1.19e6	2.11e6	31.34	1.015	0.77	NO	99.089	1.118	1.128	2.36	0.123	1.85e7	8904	2075.2	2.42e7	4676	5171.3	bb	bb
19	13C-12378-PeCDD	8.32e5	5.41e5	1.37e6	34.20	1.108	1.54	NO	96.776	0.727	0.751	5.03	0.0911	2.00e7	3434	5827.9	1.32e7	3264	4047.5	bb	bb
20	13C-123478-HxCDD	6.41e5	4.98e5	1.14e6	36.82	0.991	1.29	NO	99.739	0.894	0.896	1.38	0.237	1.27e7	7585	1668.3	1.03e7	8736	1182.7	bd	bd
21	13C-123678-HxCDD	6.70e5	5.73e5	1.24e6	36.91	0.993	1.17	NO	98.976	0.976	0.986	0.84	0.216	1.31e7	7585	1725.4	1.07e7	8736	1227.3	dd	dd
22	13C-1234678-HpCDD	4.39e5	4.25e5	8.65e5	40.23	1.083	1.03	NO	101.051	0.679	0.672	1.29	0.236	6.46e6	6562	985.2	6.05e6	5587	1082.0	bb	bd
23	13C-OCDD	7.21e5	8.42e5	1.58e6	44.49	1.197	0.86	NO	191.086	0.614	0.642	4.87	0.302	8.07e6	5375	1501.9	8.99e6	9504	945.8	bb	bd
24	13C-2378-TCDF	1.03e6	1.33e6	2.36e6	30.64	0.993	0.77	NO	99.848	1.248	1.250	1.88	0.185	1.40e7	15077	925.5	1.82e7	7573	2401.2	bb	bb
25	13C-12378-PeCDF	1.14e6	7.27e5	1.87e6	33.39	1.082	1.57	NO	98.012	0.991	1.011	4.24	0.186	2.88e7	10165	2836.7	1.87e7	8269	2257.4	bb	bb
26	13C-23478-PeCDF	1.20e6	7.67e5	1.97e6	34.00	1.102	1.57	NO	98.156	1.044	1.063	5.28	0.177	2.88e7	10165	2830.5	1.86e7	8269	2249.2	bb	bb
27	13C-123478-HxCDF	4.84e5	9.37e5	1.42e6	36.10	0.972	0.52	NO	100.421	1.115	1.111	1.42	0.255	1.02e7	10424	978.9	1.98e7	11320	1746.0	bd	bd
28	13C-123678-HxCDF	5.51e5	1.06e6	1.61e6	36.20	0.974	0.52	NO	101.235	1.262	1.247	1.06	0.227	1.11e7	10424	1065.6	2.11e7	11320	1864.5	dd	dd
29	13C-234678-HxCDF	4.74e5	8.99e5	1.37e6	36.69	0.987	0.53	NO	99.614	1.078	1.082	1.01	0.262	9.53e6	10424	914.6	1.83e7	11320	1619.4	bb	bb
30	13C-123789-HxCDF	4.34e5	8.05e5	1.24e6	37.46	1.008	0.54	NO	100.569	0.973	0.967	1.08	0.293	7.78e6	10424	746.4	1.45e7	11320	1279.8	bd	bb
31	13C-1234678-HpCDF	3.48e5	7.72e5	1.12e6	38.96	1.049	0.45	NO	101.100	0.880	0.870	1.11	0.203	5.86e6	7080	827.3	1.29e7	6451	1996.6	bd	bb
32	13C-1234789-HpCDF	2.69e5	6.03e5	8.72e5	40.88	1.100	0.45	NO	101.106	0.685	0.677	1.01	0.260	3.78e6	7080	534.3	8.61e6	6451	1355.0	bd	bb
33	13C-1234-TCDD	8.25e5	1.06e6	1.89e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.139	1.28e7	8904	1440.8	1.64e7	4676	3505.8	bb	bb
34	13C-123789-HxCDD	7.00e5	5.74e5	1.27e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.213	1.26e7	7585	1667.6	1.04e7	8736	1189.4	db	dd

Quantify Sample Summary Report MassLynx 4.1
 Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

CP#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	3.85e4	3.85e4	3.85e4	31.35	1.016			1.919	1.018	1.061	4.54	0.0384	7.43e5	3989	186.2						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

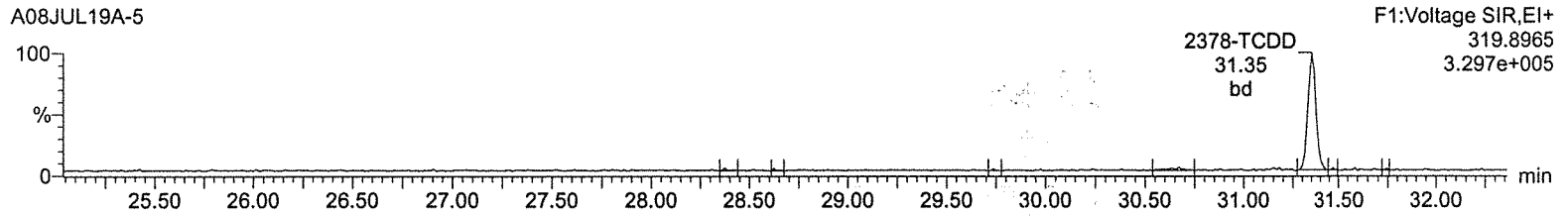
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

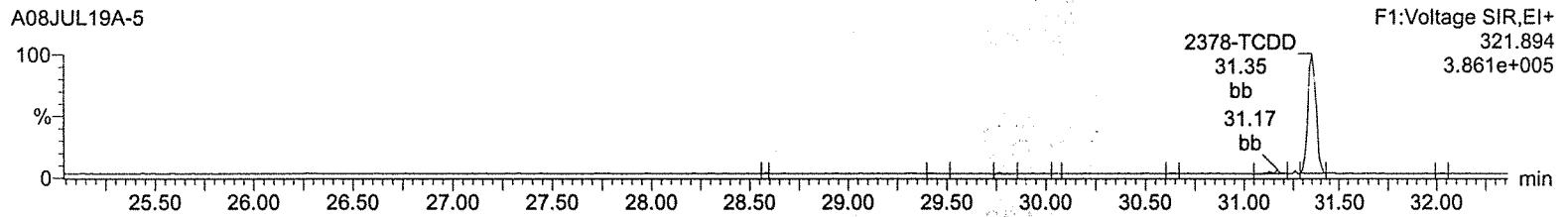
Total-tetradoxins

A08JUL19A-5



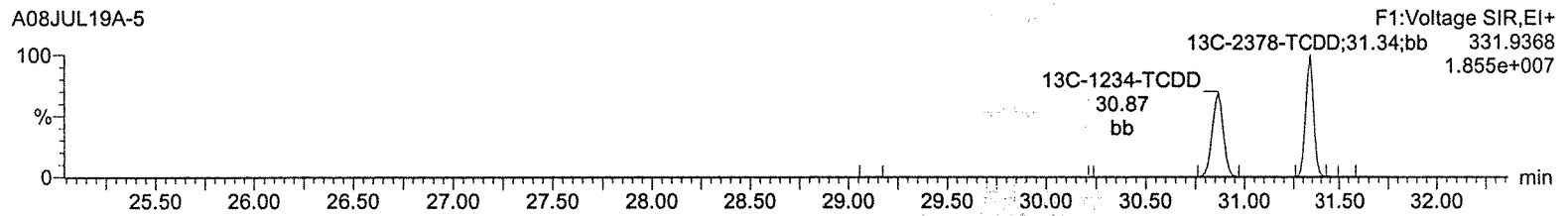
Total-tetradoxins

A08JUL19A-5



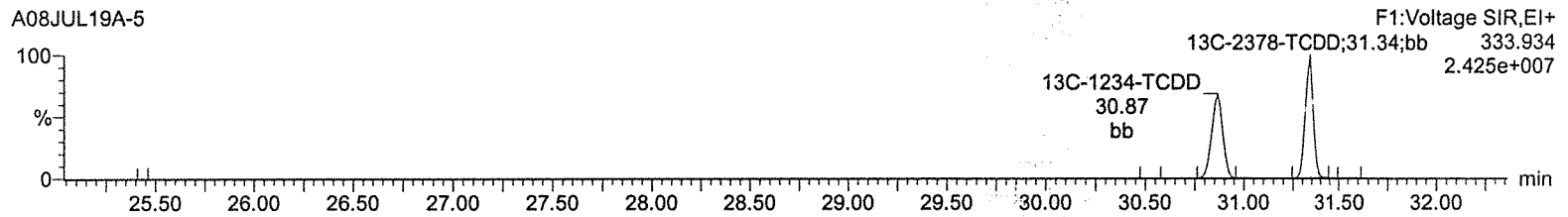
13C-2378-TCDD

A08JUL19A-5



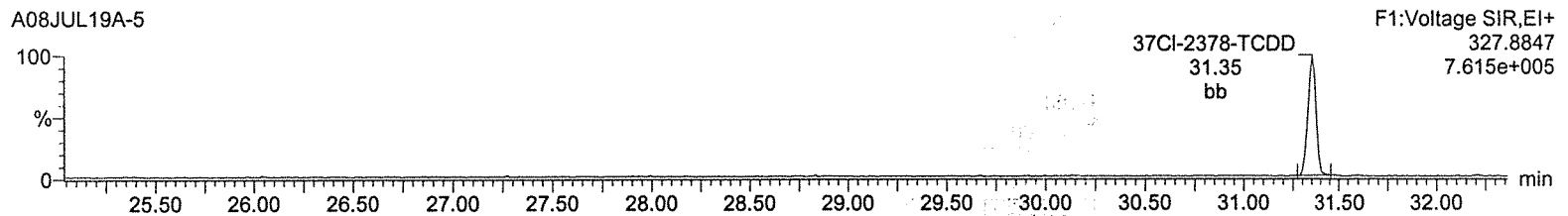
13C-2378-TCDD

A08JUL19A-5



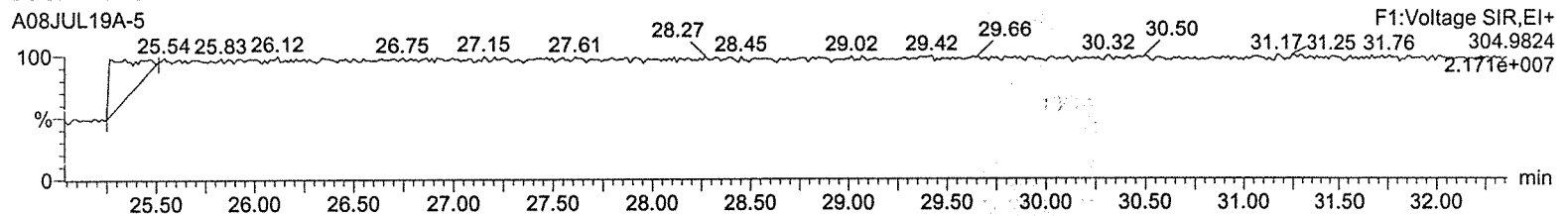
37Cl-2378-TCDD

A08JUL19A-5



Lock Mass F1

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

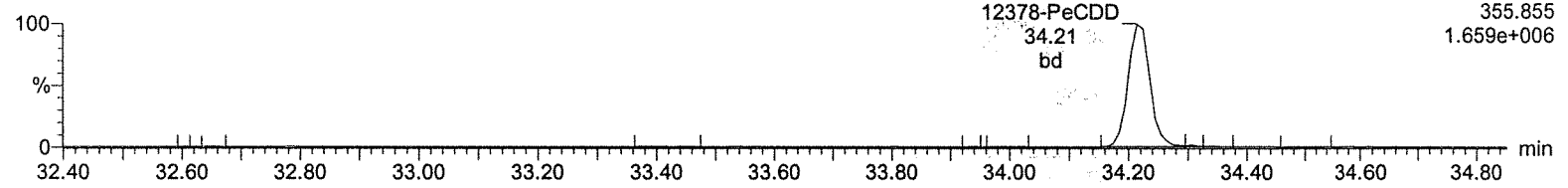
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

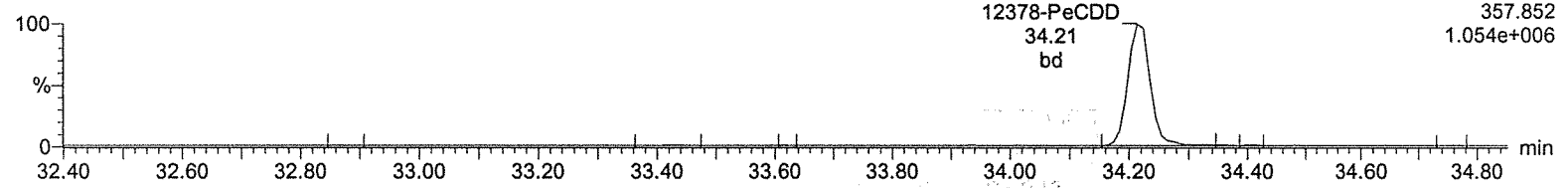
Total-pentadioxins

A08JUL19A-5



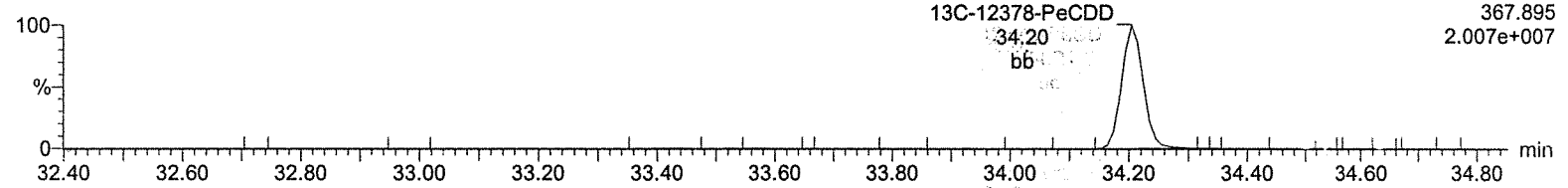
Total-pentadioxins

A08JUL19A-5



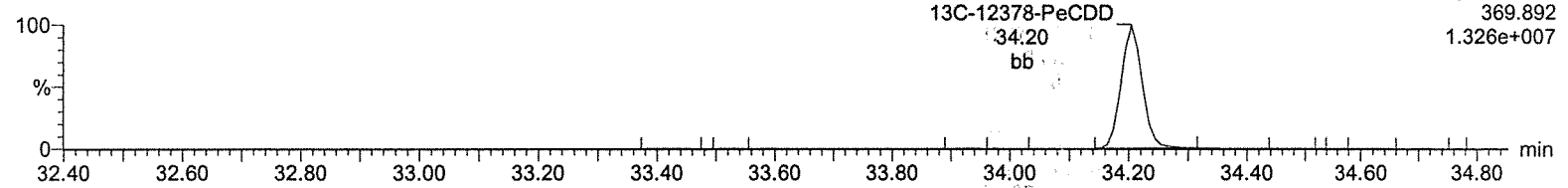
13C-12378-PeCDD

A08JUL19A-5



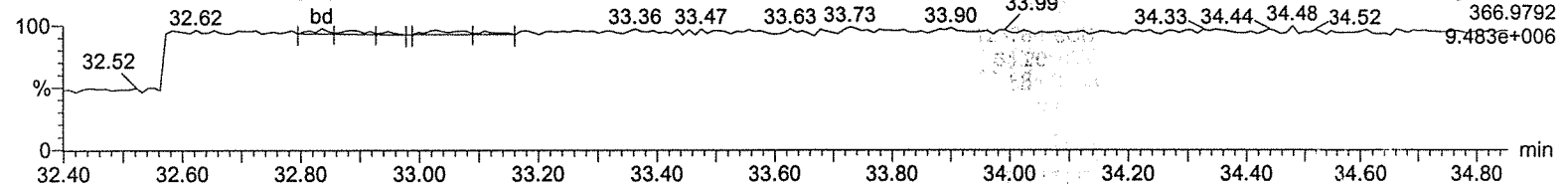
13C-12378-PeCDD

A08JUL19A-5



Lock Mass F2

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

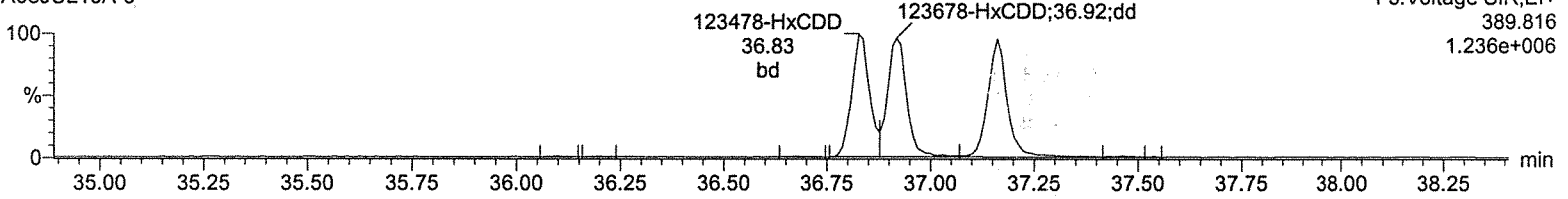
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

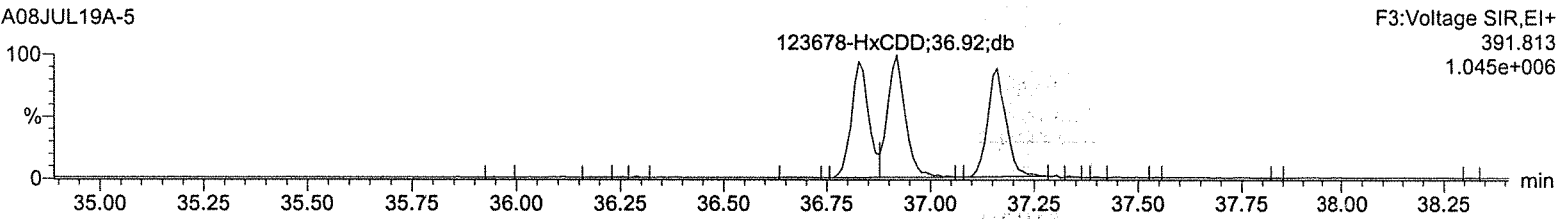
Total-hexadioxins

A08JUL19A-5



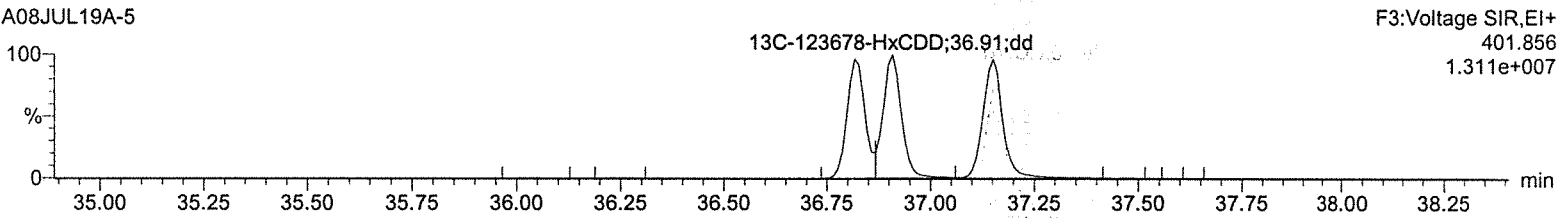
Total-hexadioxins

A08JUL19A-5



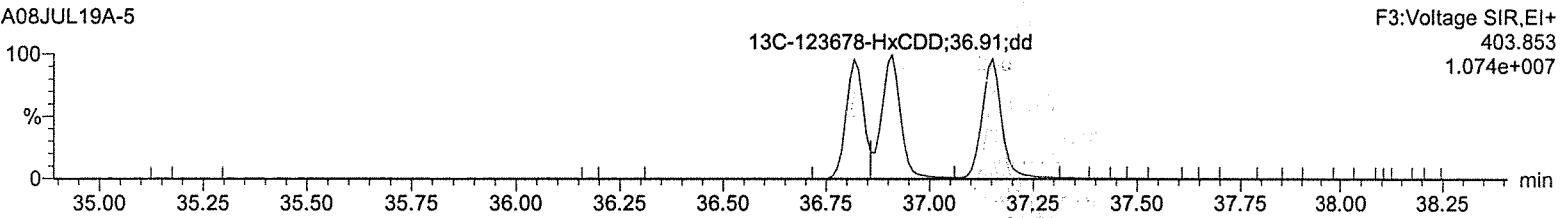
13C-123478-HxCDD

A08JUL19A-5



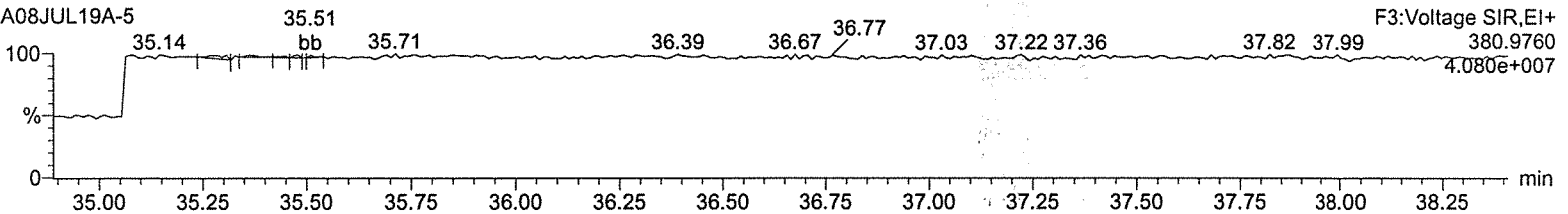
13C-123478-HxCDD

A08JUL19A-5



Lock Mass F3

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

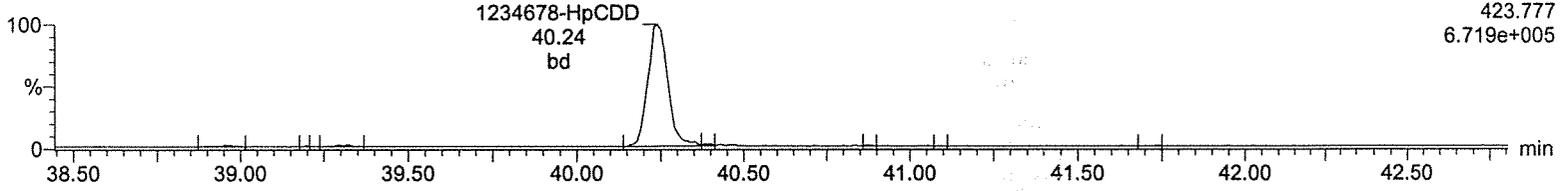
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-heptadioxins

A08JUL19A-5

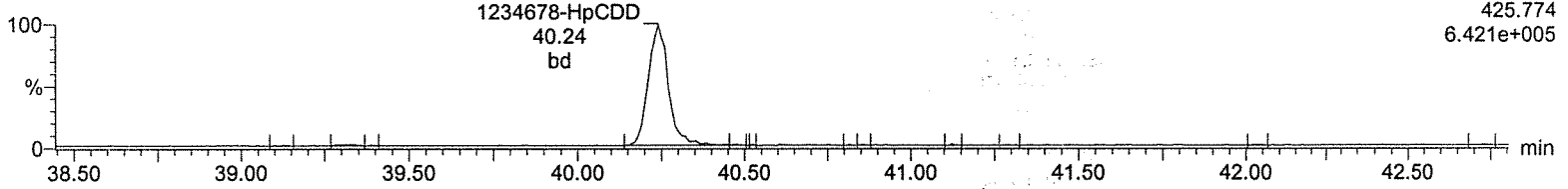
F4:Voltage SIR,EI+
423.777
6.719e+005



Total-heptadioxins

A08JUL19A-5

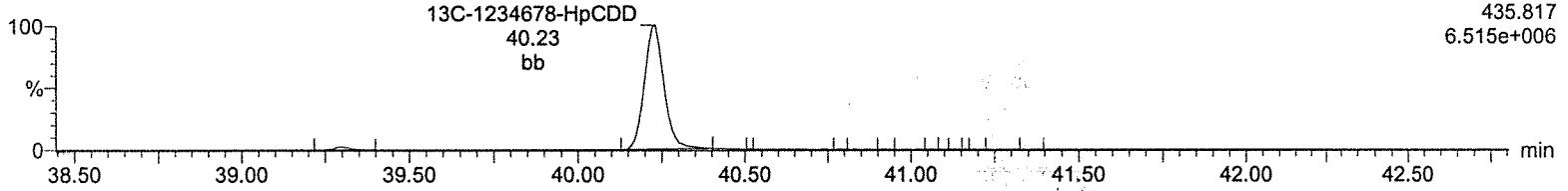
F4:Voltage SIR,EI+
425.774
6.421e+005



13C-1234678-HpCDD

A08JUL19A-5

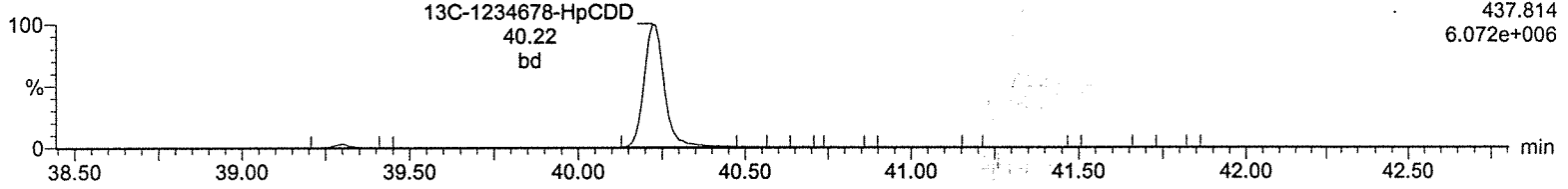
F4:Voltage SIR,EI+
435.817
6.515e+006



13C-1234678-HpCDD

A08JUL19A-5

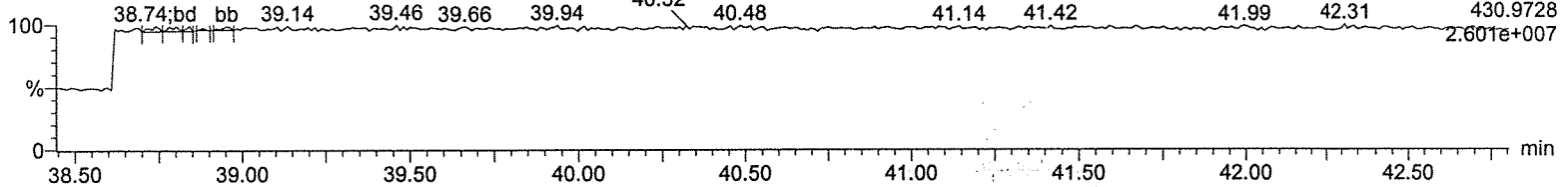
F4:Voltage SIR,EI+
437.814
6.072e+006



Lock Mass F4

A08JUL19A-5

F4:Voltage SIR,EI+
430.9728
2.601e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

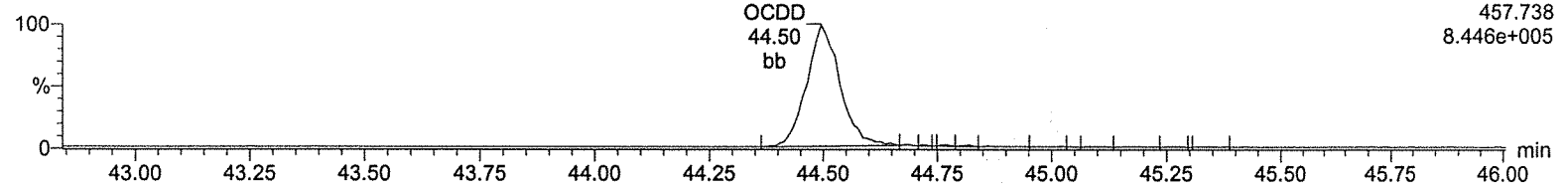
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

OCDD

A08JUL19A-5

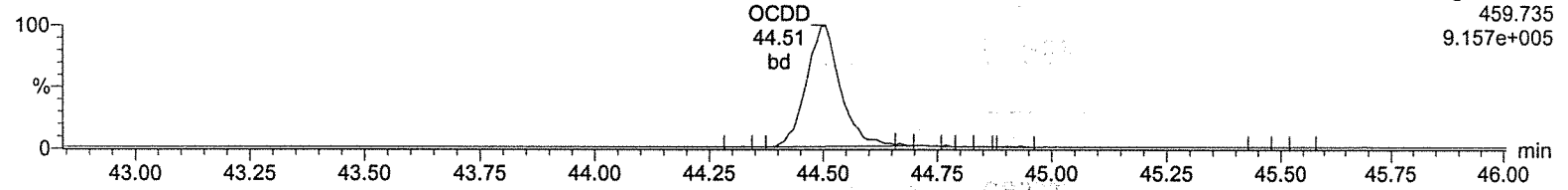
F5:Voltage SIR,EI+
457.738
8.446e+005



OCDD

A08JUL19A-5

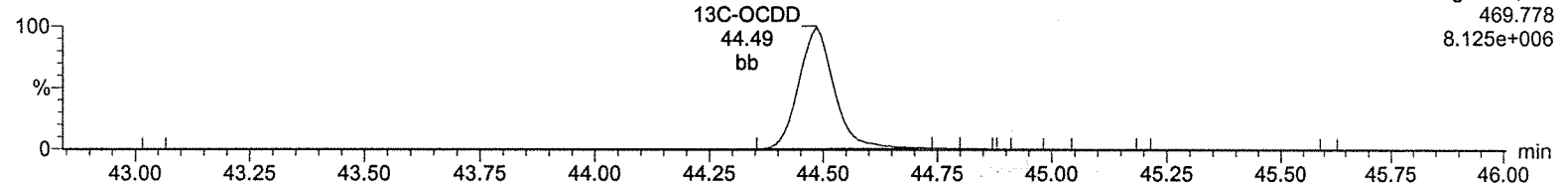
F5:Voltage SIR,EI+
459.735
9.157e+005



13C-OCDD

A08JUL19A-5

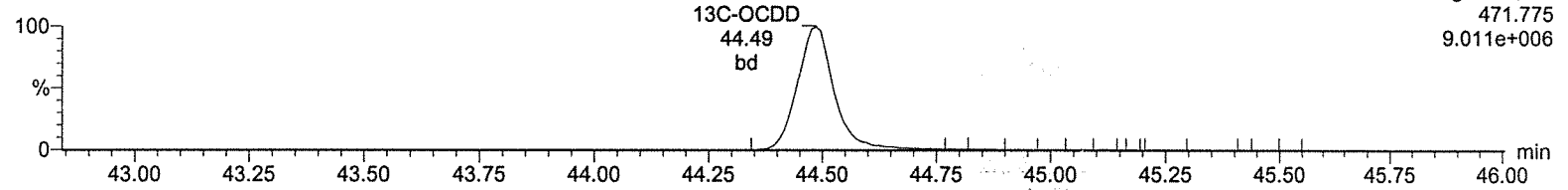
F5:Voltage SIR,EI+
469.778
8.125e+006



13C-OCDD

A08JUL19A-5

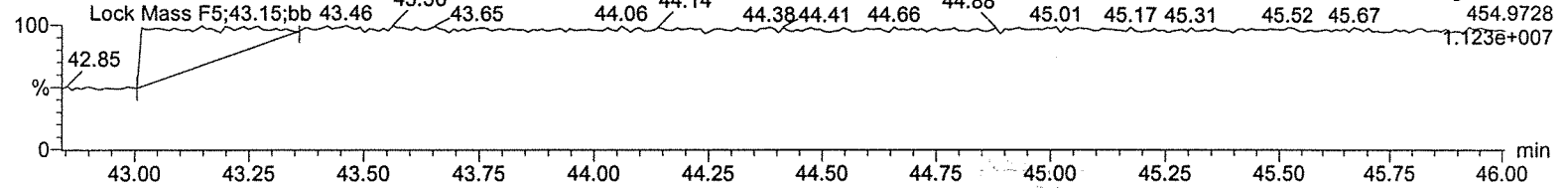
F5:Voltage SIR,EI+
471.775
9.011e+006



Lock Mass F5

A08JUL19A-5

F5:Voltage SIR,EI+
454.9728
1.123e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

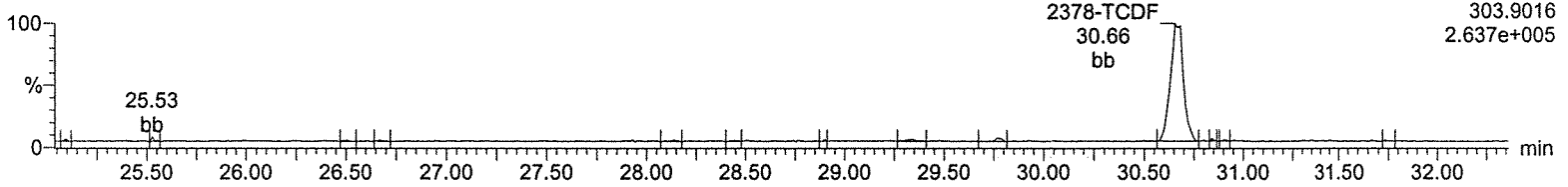
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-tetrafurans

A08JUL19A-5

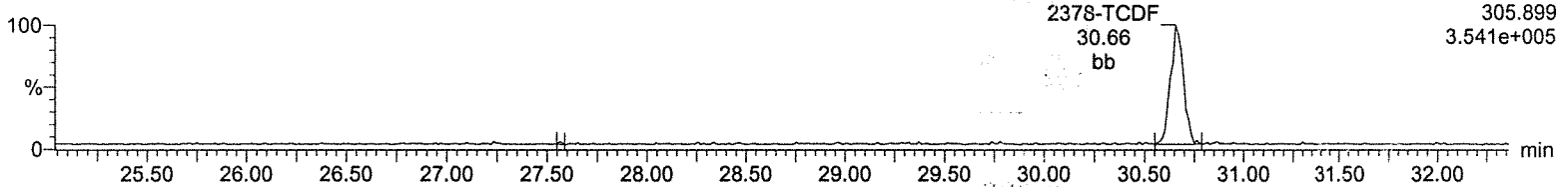
F1:Voltage SIR,EI+
303.9016
2.637e+005



Total-tetrafurans

A08JUL19A-5

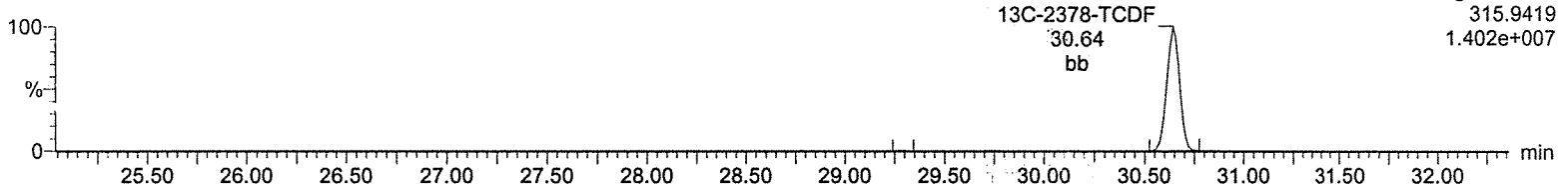
F1:Voltage SIR,EI+
305.899
3.541e+005



13C-2378-TCDF

A08JUL19A-5

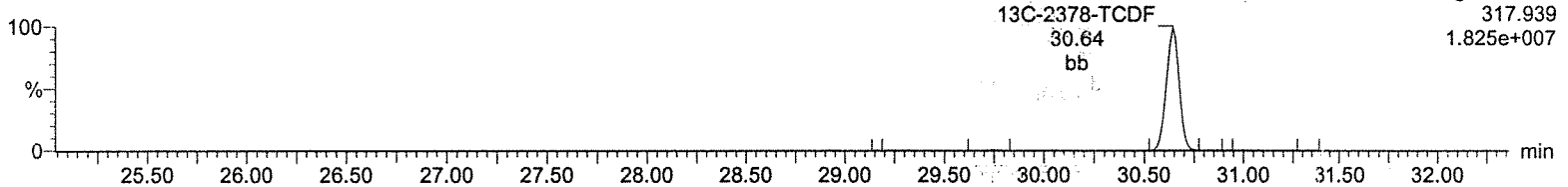
F1:Voltage SIR,EI+
315.9419
1.402e+007



13C-2378-TCDF

A08JUL19A-5

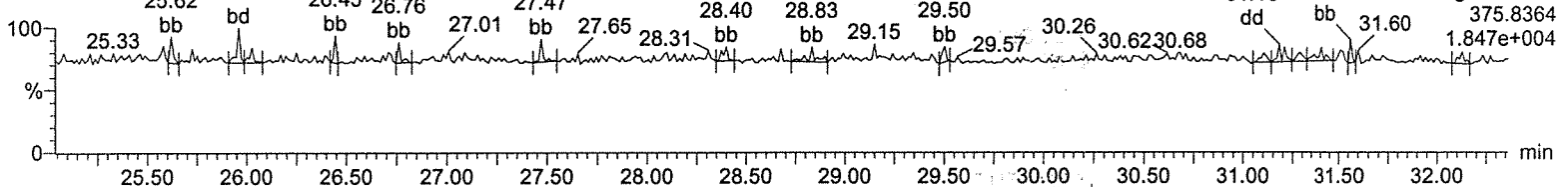
F1:Voltage SIR,EI+
317.939
1.825e+007



HxDPE

A08JUL19A-5

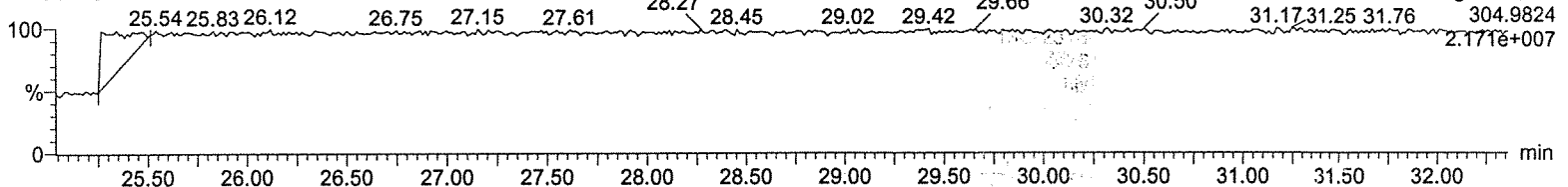
F1:Voltage SIR,EI+
375.8364
1.847e+004



Lock Mass F1

A08JUL19A-5

F1:Voltage SIR,EI+
304.9824
2.171e+007



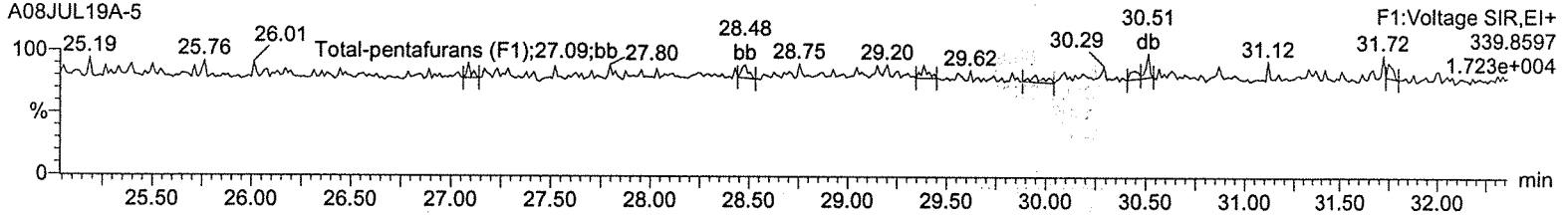
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

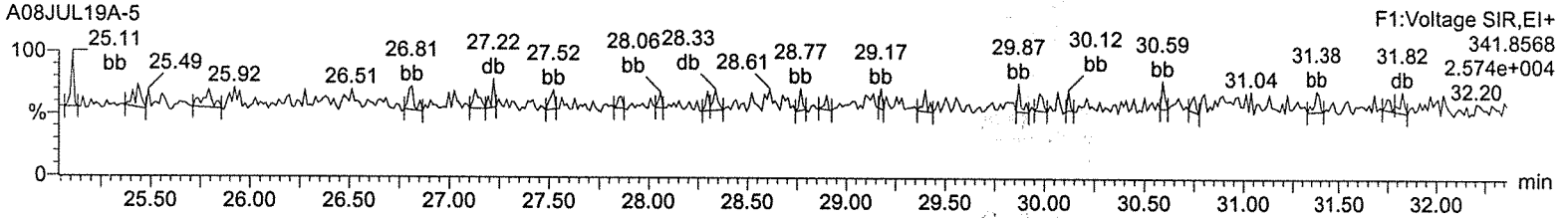
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

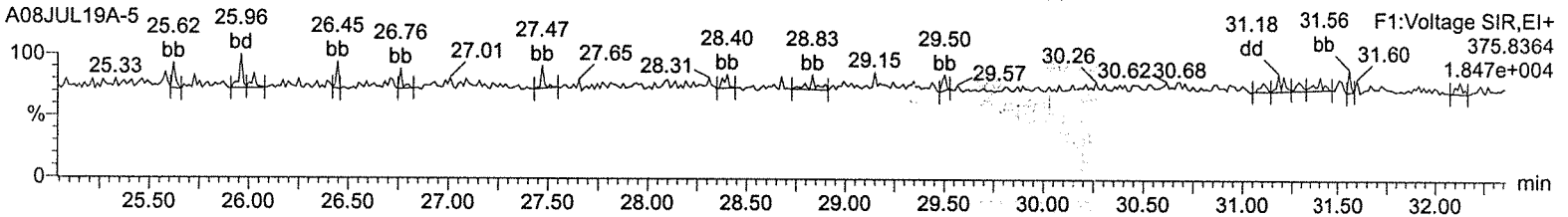
Total-pentafurans (F1)



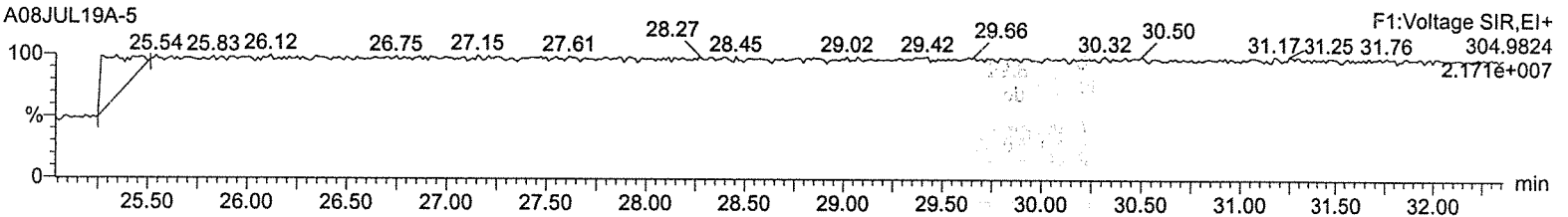
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

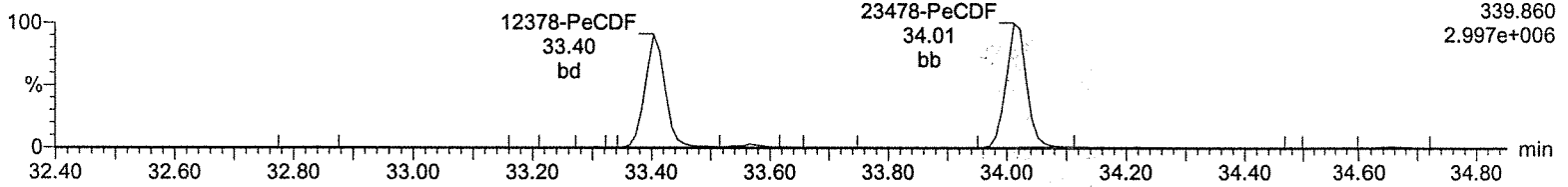
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-pentafurans

A08JUL19A-5

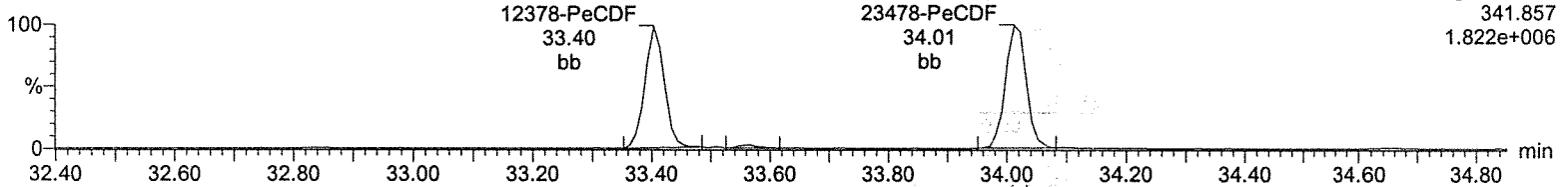
F2:Voltage SIR,EI+
339.860
2.997e+006



Total-pentafurans

A08JUL19A-5

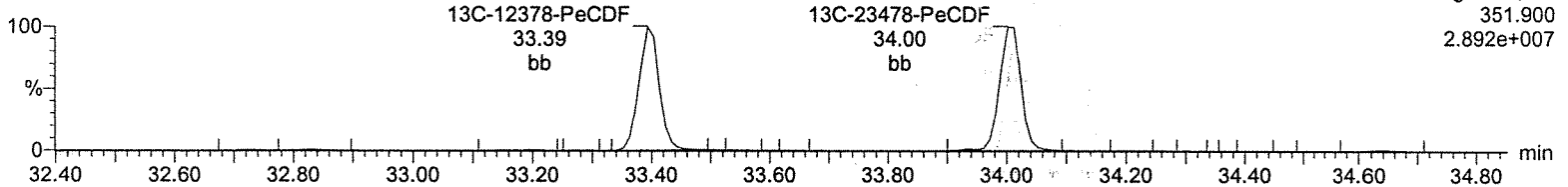
F2:Voltage SIR,EI+
341.857
1.822e+006



13C-12378-PeCDF

A08JUL19A-5

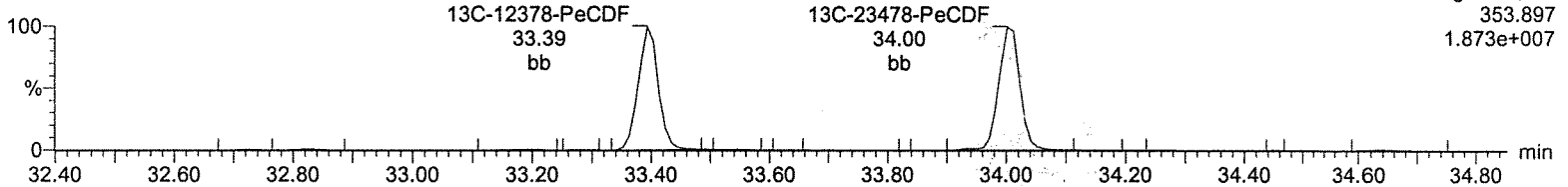
F2:Voltage SIR,EI+
351.900
2.892e+007



13C-12378-PeCDF

A08JUL19A-5

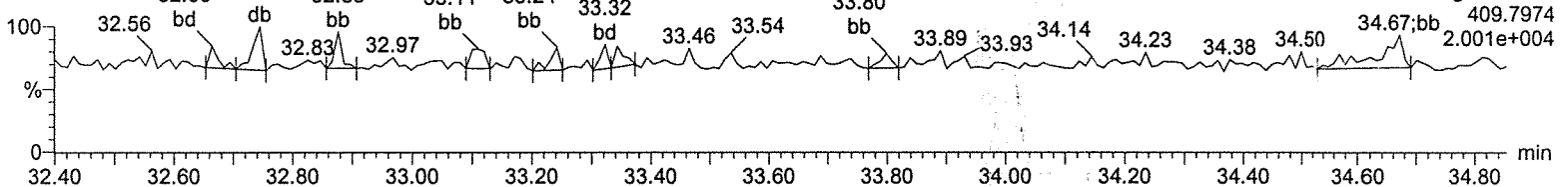
F2:Voltage SIR,EI+
353.897
1.873e+007



HpDPE

A08JUL19A-5

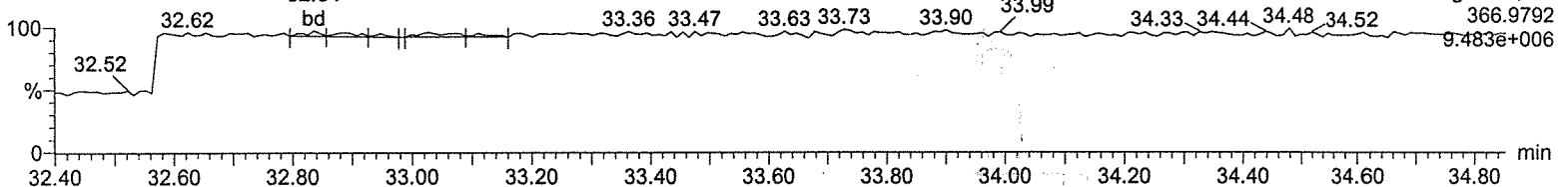
F2:Voltage SIR,EI+
409.7974
2.001e+004



Lock Mass F2

A08JUL19A-5

F2:Voltage SIR,EI+
366.9792
9.483e+006



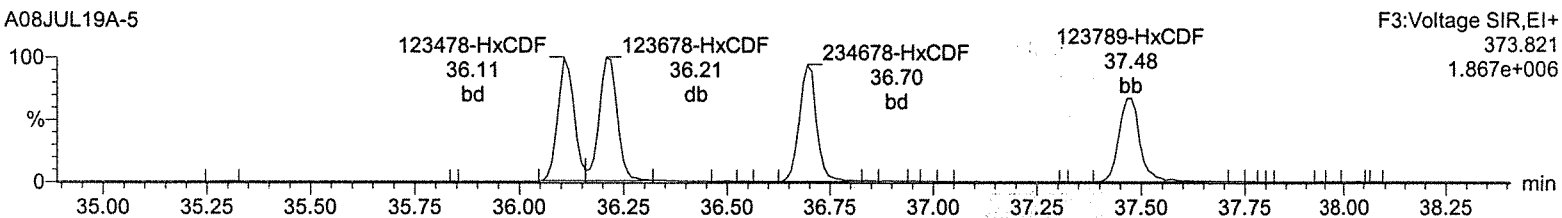
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

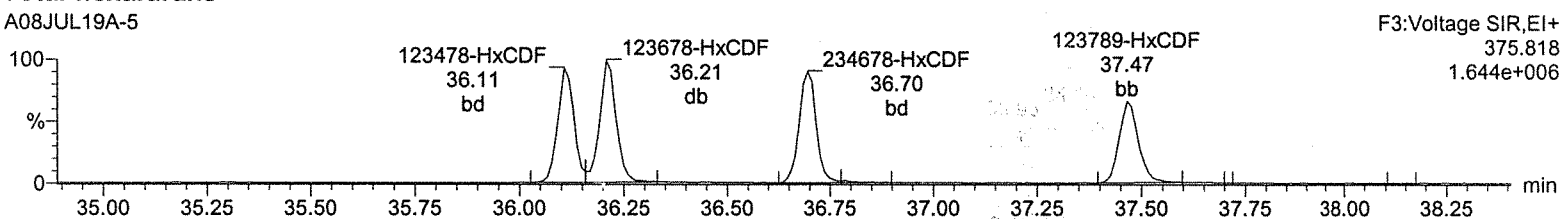
Total-hexafurans

A08JUL19A-5



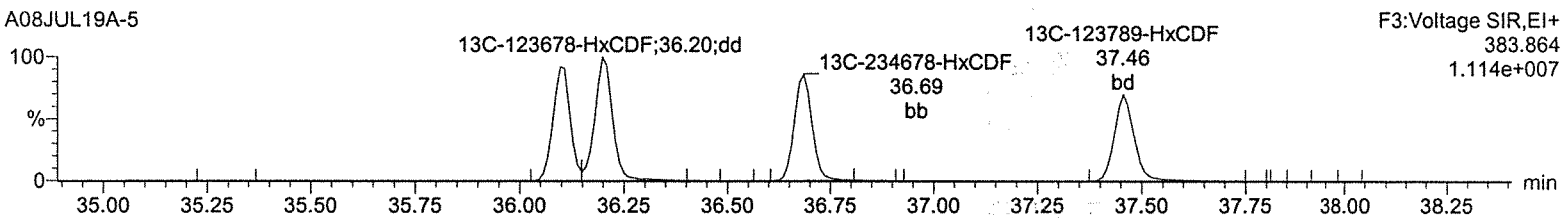
Total-hexafurans

A08JUL19A-5



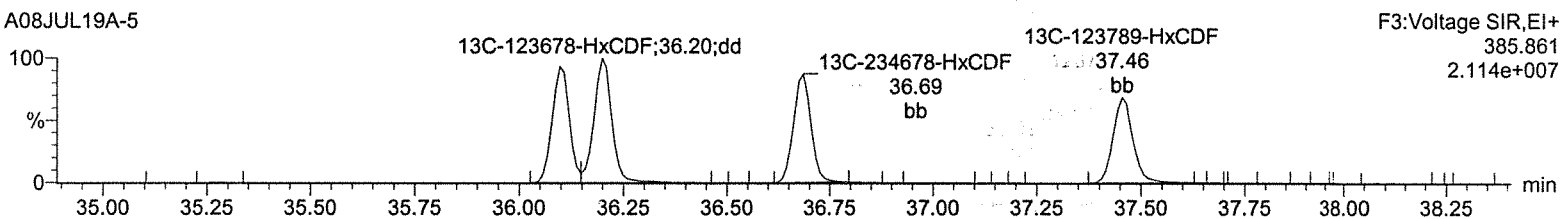
¹³C-123478-HxCDF

A08JUL19A-5



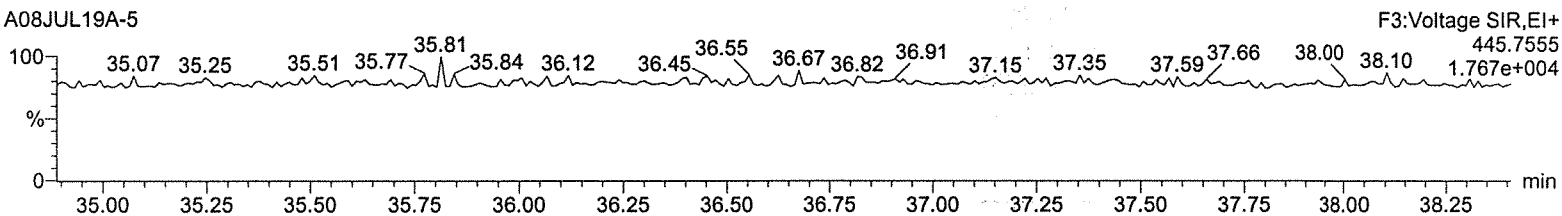
¹³C-123478-HxCDF

A08JUL19A-5



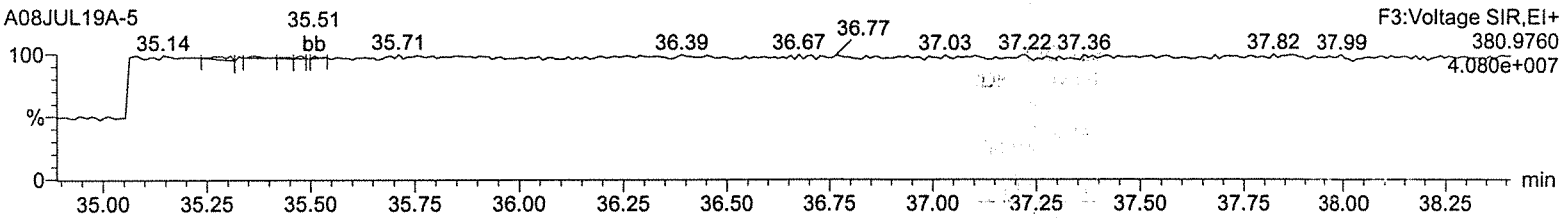
OcDPE

A08JUL19A-5



Lock Mass F3

A08JUL19A-5

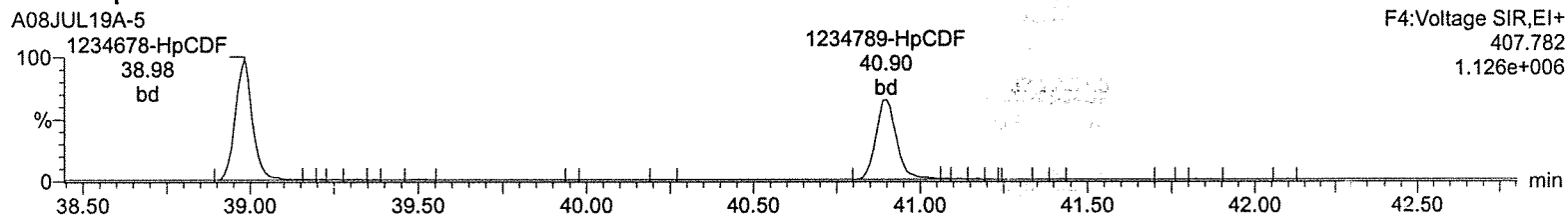


Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

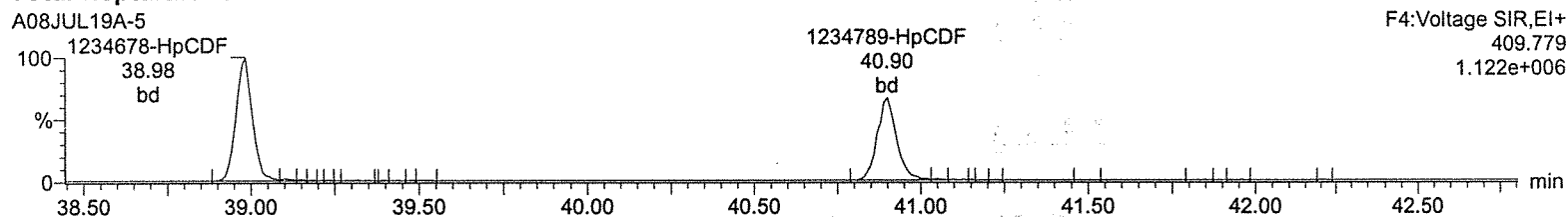
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

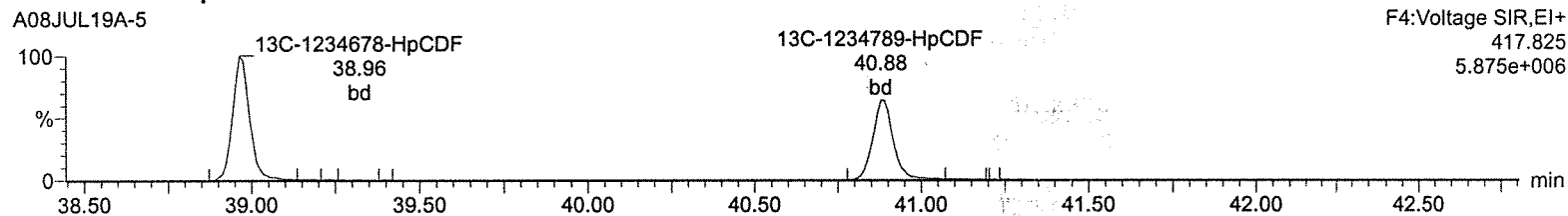
Total-heptafurans



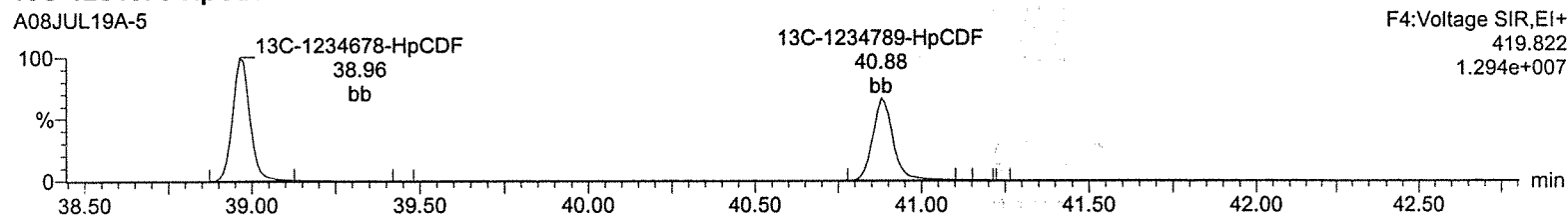
Total-heptafurans



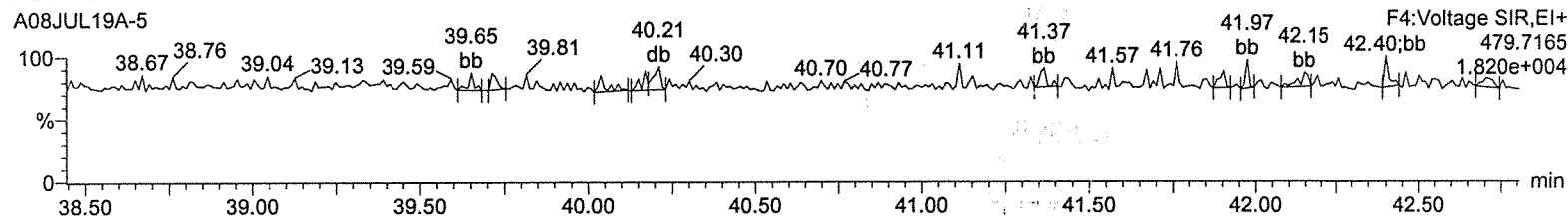
13C-1234678-HpCDF



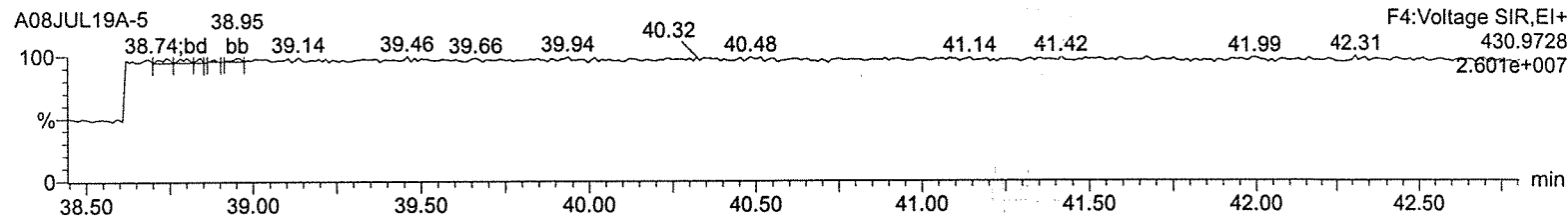
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

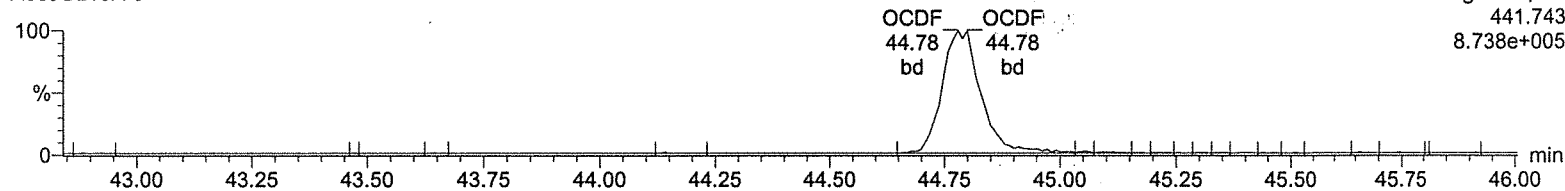
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

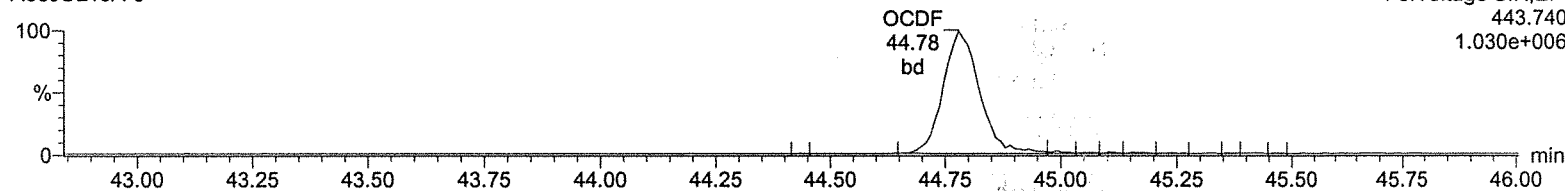
OCDF

A08JUL19A-5



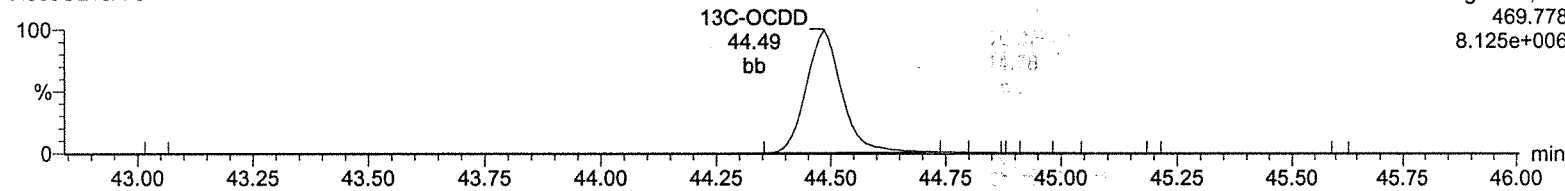
OCDF

A08JUL19A-5



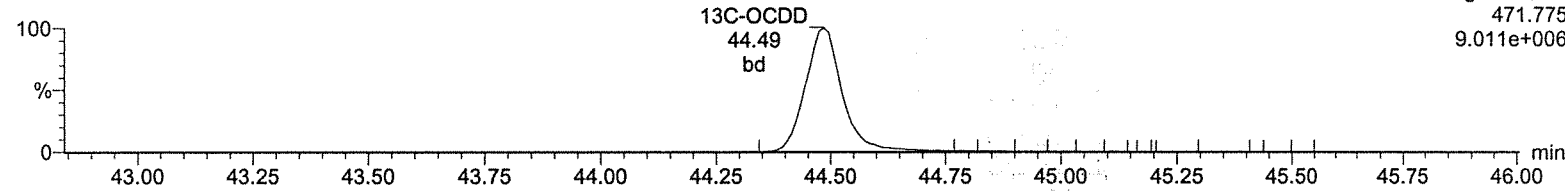
13C-OCDD

A08JUL19A-5



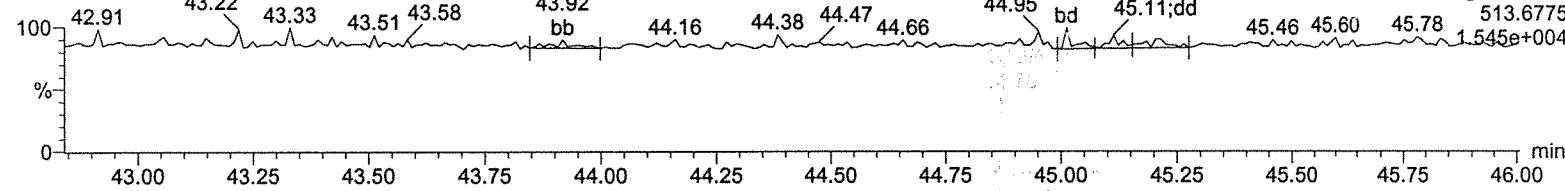
13C-OCDD

A08JUL19A-5



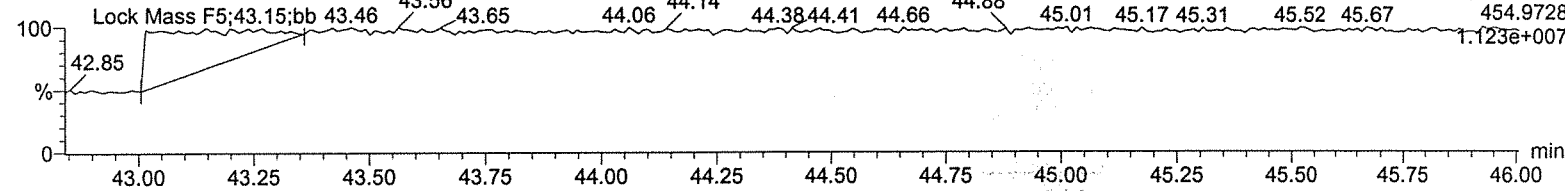
DeDPE

A08JUL19A-5



Lock Mass F5

A08JUL19A-5



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Handwritten signature

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	8.68e4	1.19e5	2.00e5	31.35	1.000	0.77	NO	9.942	0.879	0.884	5.07	0.0990	1.57e6	2450	641.8	2.15e6	2611	823.3	bb	bb
2	12378-PeCDD	3.84e5	2.47e5	6.31e5	34.21	1.000	1.55	NO	50.221	0.857	0.853	1.65	0.0618	9.31e6	2979	3125.8	6.05e6	3309	1827.4	bb	bb
3	123478-HxCDD	3.18e5	2.55e5	5.73e5	36.83	1.000	1.25	NO	50.558	0.950	0.940	3.11	0.139	6.71e6	4648	1442.7	5.39e6	6081	886.4	bd	bd
4	123678-HxCDD	3.66e5	2.94e5	6.60e5	36.92	1.000	1.25	NO	51.250	0.968	0.944	2.57	0.135	6.98e6	4648	1501.3	5.54e6	6081	911.6	dd	dd
5	123789-HxCDD	3.38e5	2.74e5	6.12e5	37.16	1.007	1.24	NO	51.427	0.954	0.927	3.30	0.139	6.19e6	4648	1331.0	5.01e6	6081	823.3	dd	dd
6	1234678-HpCDD	2.49e5	2.42e5	4.91e5	40.23	1.000	1.03	NO	51.498	1.071	1.040	2.88	0.178	3.60e6	4071	884.4	3.45e6	4114	898.4	bd	bd
7	OCDD	4.42e5	4.94e5	9.36e5	44.49	1.000	0.90	NO	102.635	0.997	0.971	2.39	0.414	4.83e6	5533	872.8	5.28e6	7922	666.2	bd	bd
8	2378-TCDF	1.06e5	1.37e5	2.43e5	30.67	1.001	0.77	NO	9.949	0.973	0.978	5.59	0.0625	1.36e6	2841	478.3	1.75e6	3684	475.9	bb	bb
9	12378-PeCDF	5.82e5	3.75e5	9.56e5	33.40	1.000	1.55	NO	50.773	0.960	0.945	3.41	0.103	1.43e7	8482	1685.4	9.31e6	7788	1195.1	bd	bb
10	123478-PeCDF	6.27e5	4.19e5	1.05e6	34.01	1.000	1.50	NO	50.780	1.002	0.987	3.73	0.0954	1.57e7	8482	1848.3	1.04e7	7788	1331.7	bb	bb
11	123478-HxCDF	4.65e5	3.78e5	8.43e5	36.11	1.000	1.23	NO	51.251	1.114	1.087	3.86	0.106	1.00e7	5453	1833.5	8.26e6	7295	1131.6	bd	bd
12	123678-HxCDF	5.03e5	4.09e5	9.12e5	36.21	1.000	1.23	NO	51.606	1.074	1.041	3.23	0.109	1.03e7	5453	1882.3	8.37e6	7295	1147.0	dd	db
13	1234678-HxCDF	4.63e5	3.89e5	8.52e5	36.69	1.001	1.19	NO	50.727	1.152	1.136	3.17	0.117	9.28e6	5453	1701.9	7.55e6	7295	1035.1	bb	bd
14	123789-HxCDF	3.95e5	3.29e5	7.24e5	37.47	1.000	1.20	NO	51.190	1.086	1.061	2.29	0.151	7.02e6	5453	1288.2	5.96e6	7295	817.0	bb	bb
15	1234678-HpCDF	3.50e5	3.56e5	7.06e5	38.97	1.000	0.98	NO	51.632	1.187	1.150	3.86	0.160	6.00e6	6270	956.4	6.00e6	6223	963.4	bb	bd
16	1234789-HpCDF	2.81e5	2.79e5	5.60e5	40.89	1.000	1.01	NO	49.736	1.196	1.202	1.91	0.237	4.07e6	6270	648.8	3.95e6	6223	634.8	bb	bb
17	OCDF	4.97e5	5.71e5	1.07e6	44.78	1.007	0.87	NO	100.464	1.138	1.133	6.78	0.245	5.22e6	4930	1059.5	5.92e6	4365	1356.2	bd	bb
18	13C-2378-TCDD	9.90e5	1.28e6	2.27e6	31.34	1.015	0.77	NO	102.354	1.155	1.128	2.36	0.127	1.92e7	8469	2264.4	2.44e7	5255	4640.6	bb	bb
19	13C-12378-PeCDD	8.92e5	5.81e5	1.47e6	34.20	1.108	1.54	NO	99.635	0.749	0.751	5.03	0.124	2.17e7	5732	3778.6	1.40e7	3222	4330.4	bb	bb
20	13C-123478-HxCDD	6.63e5	5.43e5	1.21e6	36.82	0.991	1.22	NO	97.866	0.877	0.896	1.38	0.150	1.36e7	6280	2158.5	1.10e7	4593	2391.6	bd	bd
21	13C-123678-HxCDD	7.53e5	6.11e5	1.36e6	36.91	0.994	1.23	NO	100.617	0.992	0.986	0.84	0.137	1.39e7	6280	2215.9	1.16e7	4593	2523.5	dd	dd
22	13C-1234678-HpCDD	4.70e5	4.47e5	9.17e5	40.22	1.083	1.05	NO	99.377	0.667	0.672	1.29	0.265	6.78e6	6524	1039.1	6.60e6	7834	842.1	bb	bb
23	13C-OCDD	8.79e5	9.99e5	1.88e6	44.47	1.197	0.88	NO	212.754	0.683	0.642	4.87	0.207	9.40e6	5805	1618.6	1.06e7	4926	2154.4	bb	bd
24	13C-2378-TCDF	1.08e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	101.401	1.267	1.250	1.88	0.189	1.39e7	15695	887.2	1.76e7	6952	2535.5	bb	bb
25	13C-12378-PeCDF	1.22e6	7.73e5	1.99e6	33.39	1.082	1.58	NO	100.209	1.013	1.011	4.24	0.182	3.06e7	12046	2538.6	1.95e7	5629	3457.2	bb	bb
26	13C-23478-PeCDF	1.28e6	8.10e5	2.09e6	34.00	1.102	1.57	NO	99.710	1.060	1.063	5.28	0.173	3.17e7	12046	2632.4	2.00e7	5629	3558.0	bb	bb
27	13C-123478-HxCDF	5.20e5	9.92e5	1.51e6	36.10	0.972	0.52	NO	99.093	1.101	1.111	1.42	0.219	1.14e7	8433	1357.0	2.19e7	11233	1938.7	bd	bd
28	13C-123678-HxCDF	5.84e5	1.11e6	1.70e6	36.20	0.975	0.52	NO	99.133	1.236	1.247	1.06	0.196	1.17e7	8433	1381.4	2.19e7	11233	1948.6	db	dd
29	13C-234678-HxCDF	5.07e5	9.72e5	1.48e6	36.67	0.987	0.52	NO	99.455	1.076	1.082	1.01	0.225	9.88e6	8433	1171.9	1.91e7	11233	1703.9	bb	bb
30	13C-123789-HxCDF	4.66e5	8.67e5	1.33e6	37.46	1.008	0.54	NO	100.322	0.970	0.967	1.08	0.252	8.35e6	8433	990.6	1.57e7	11233	1400.3	bd	bb
31	13C-1234678-HpCDF	3.65e5	8.24e5	1.19e6	38.96	1.049	0.44	NO	99.467	0.865	0.870	1.11	0.193	6.26e6	5883	1064.8	1.38e7	7684	1800.2	bb	bd
32	13C-1234789-HpCDF	2.84e5	6.52e5	9.36e5	40.88	1.101	0.44	NO	100.559	0.681	0.677	1.01	0.248	4.00e6	5883	679.7	9.16e6	7684	1192.4	bd	bd
33	13C-1234-TCDD	8.63e5	1.10e6	1.97e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.143	1.26e7	8469	1491.7	1.63e7	5255	3108.4	bb	bb
34	13C-123789-HxCDD	7.56e5	6.18e5	1.37e6	37.14	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.135	1.33e7	6280	2120.3	1.08e7	4593	2349.2	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Ch	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	2.18e5	2.18e5	2.18e5	31.34	1.015			10.427	1.107	1.061	4.54	0.0452	3.98e6	4599	864.6				M	M2	
																					bb	

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

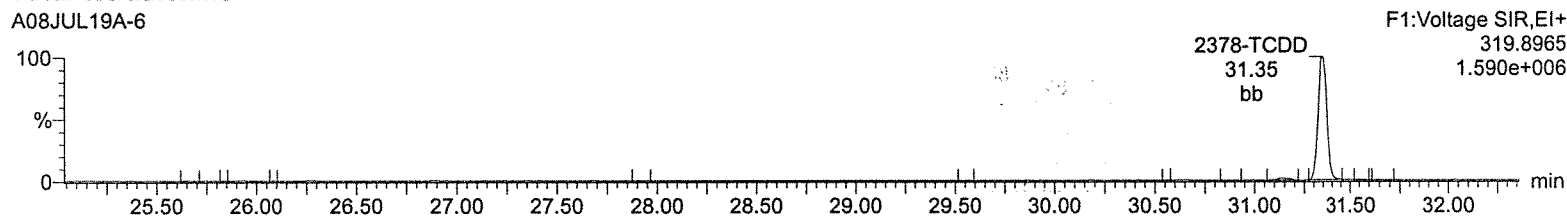
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

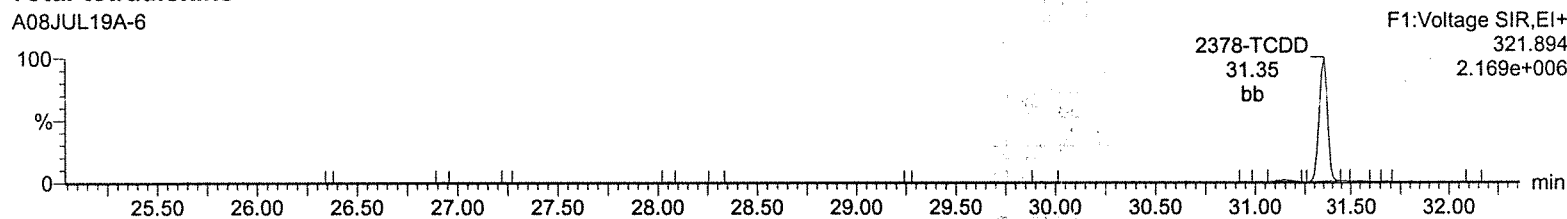
Total-tetradoxins

A08JUL19A-6



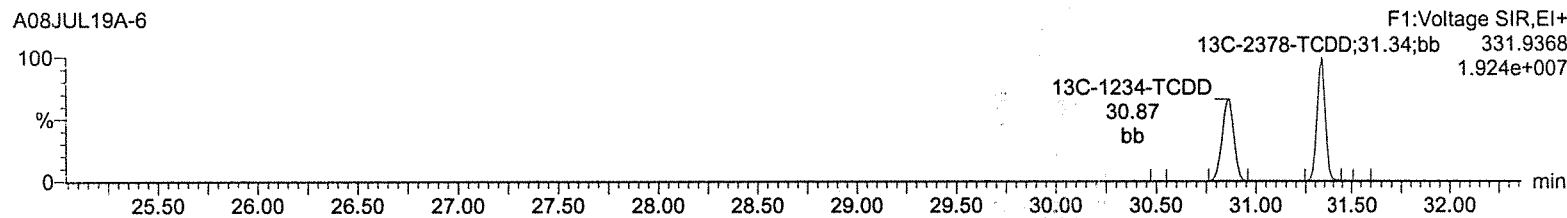
Total-tetradoxins

A08JUL19A-6



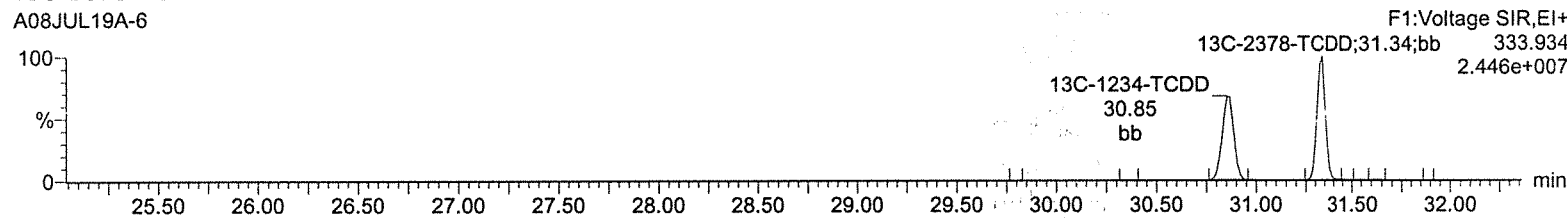
13C-2378-TCDD

A08JUL19A-6



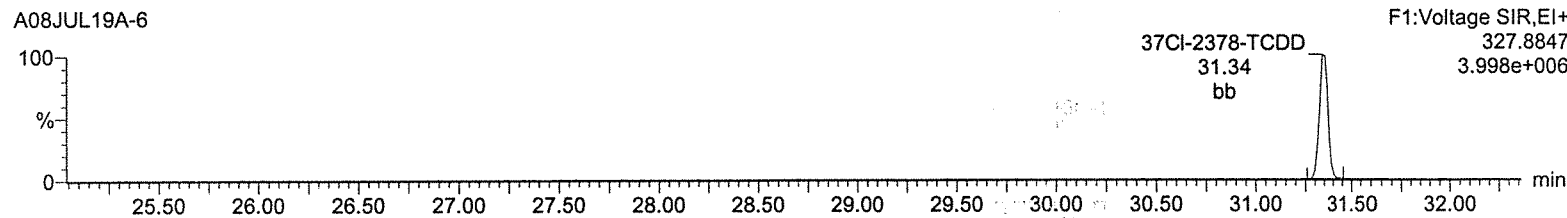
13C-2378-TCDD

A08JUL19A-6



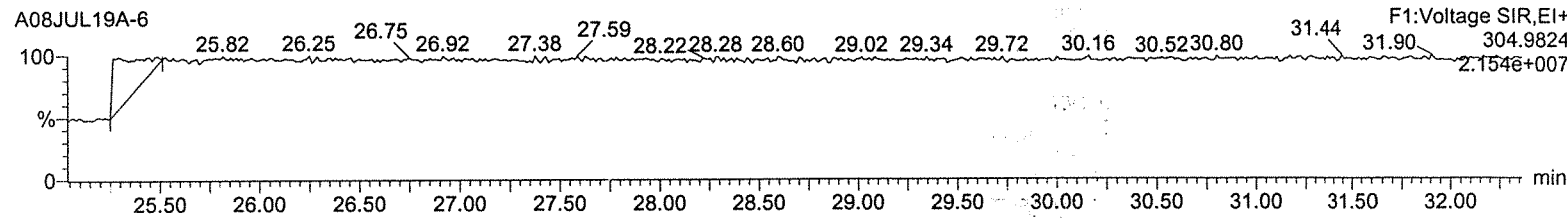
37Cl-2378-TCDD

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

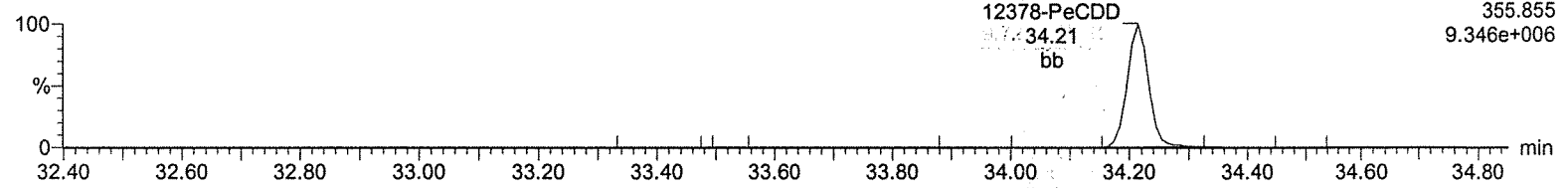
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

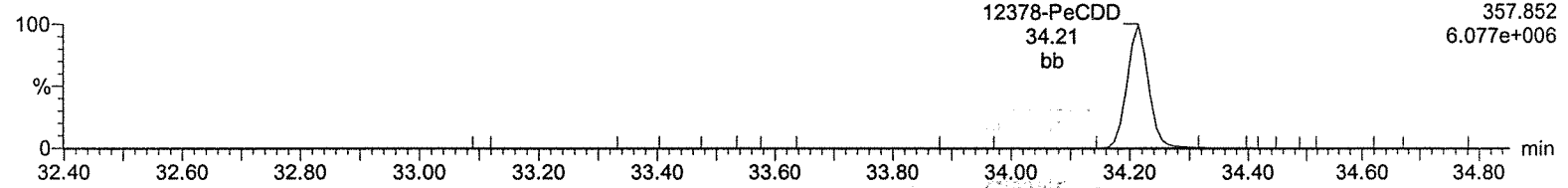
Total-pentadioxins

A08JUL19A-6



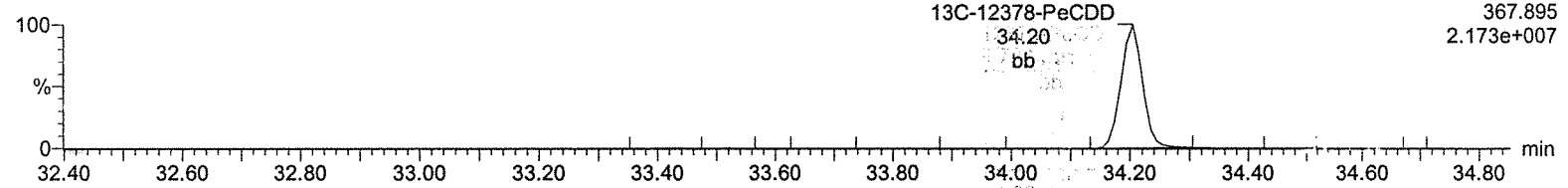
Total-pentadioxins

A08JUL19A-6



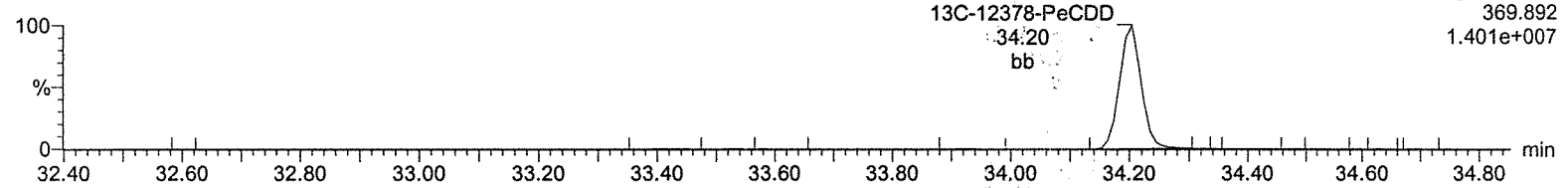
¹³C-12378-PeCDD

A08JUL19A-6



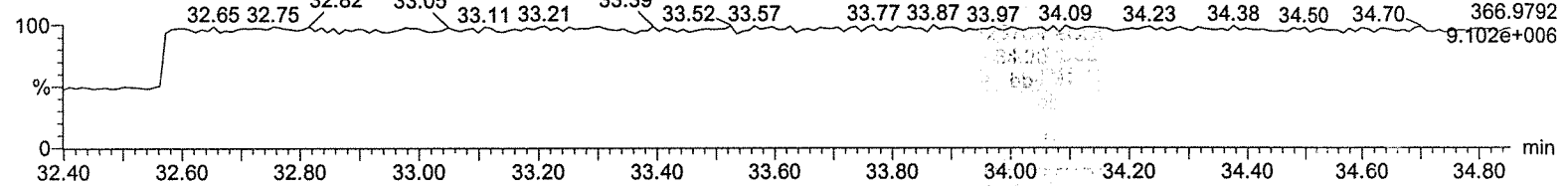
¹³C-12378-PeCDD

A08JUL19A-6



Lock Mass F2

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

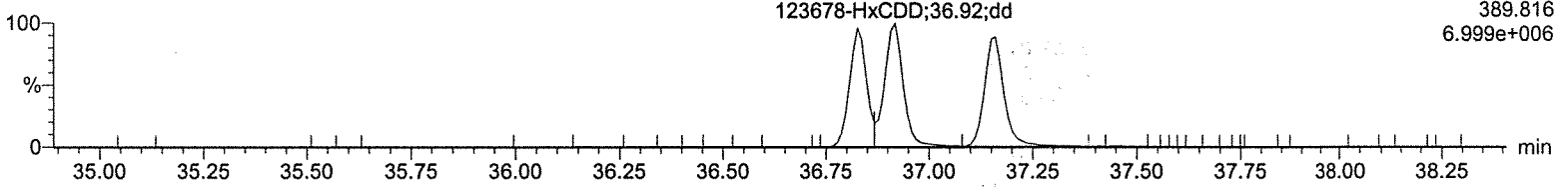
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

Total-hexadioxins

A08JUL19A-6

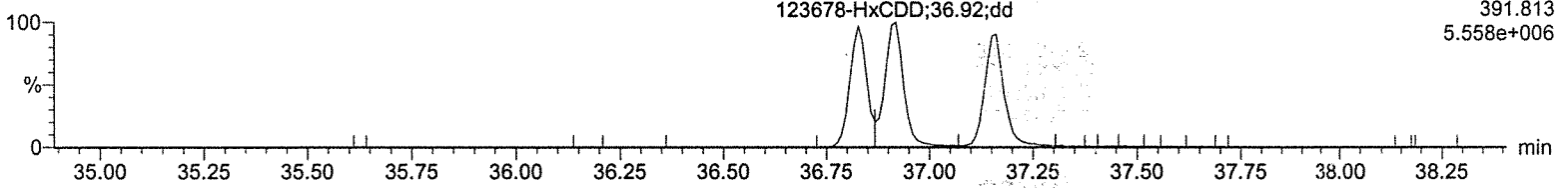
F3:Voltage SIR,EI+
389.816
6.999e+006



Total-hexadioxins

A08JUL19A-6

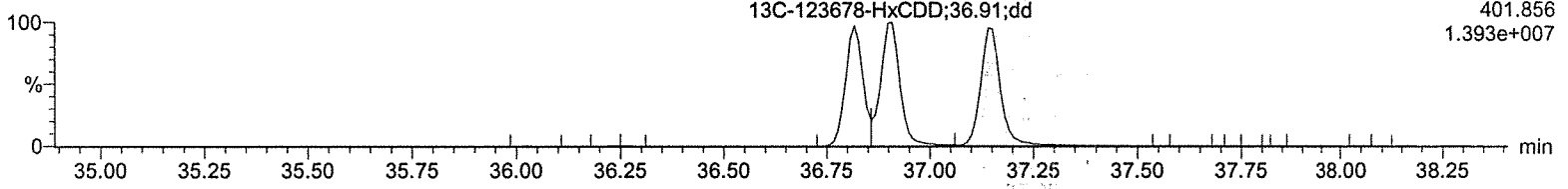
F3:Voltage SIR,EI+
391.813
5.558e+006



13C-123478-HxCDD

A08JUL19A-6

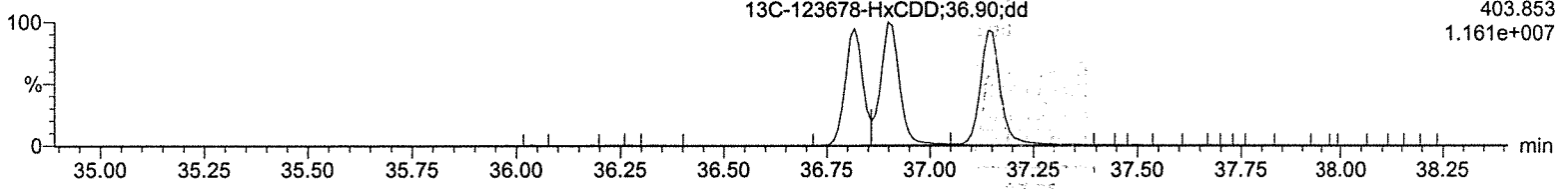
F3:Voltage SIR,EI+
401.856
1.393e+007



13C-123478-HxCDD

A08JUL19A-6

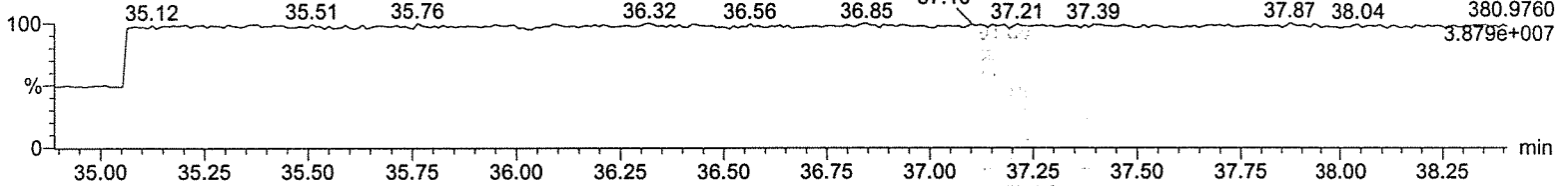
F3:Voltage SIR,EI+
403.853
1.161e+007



Lock Mass F3

A08JUL19A-6

F3:Voltage SIR,EI+
380.9760
3.879e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

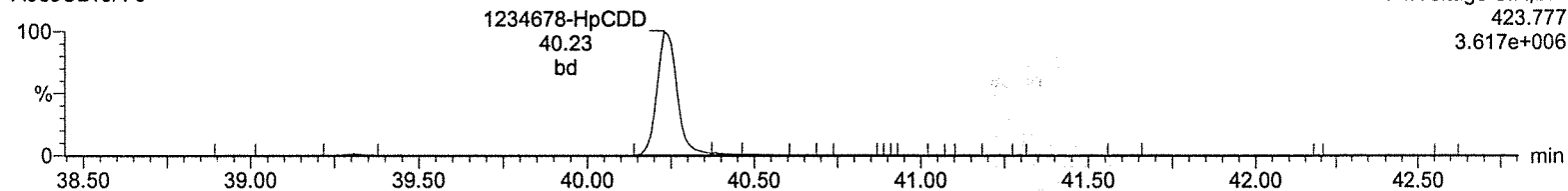
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

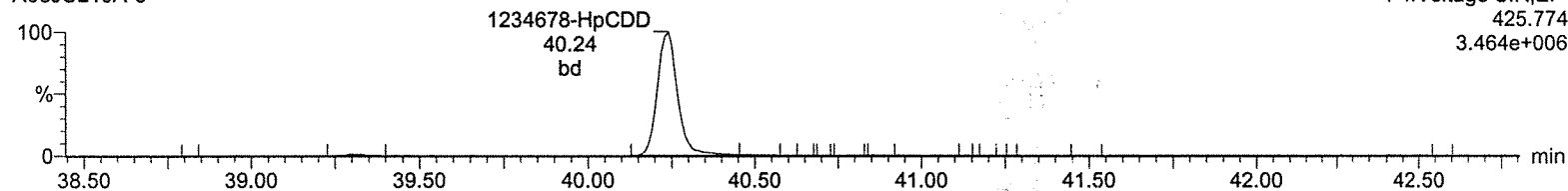
Total-heptadioxins

A08JUL19A-6



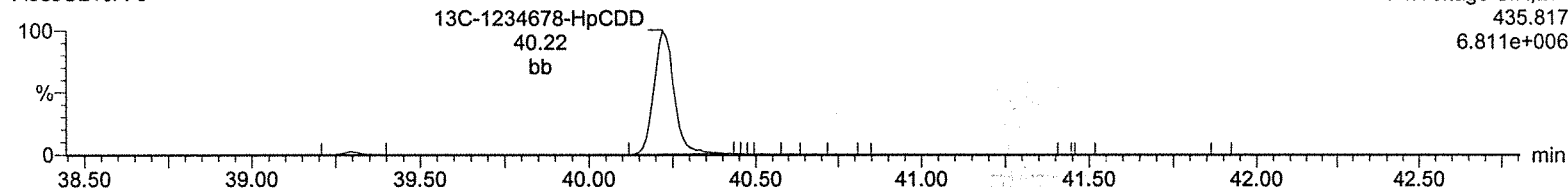
Total-heptadioxins

A08JUL19A-6



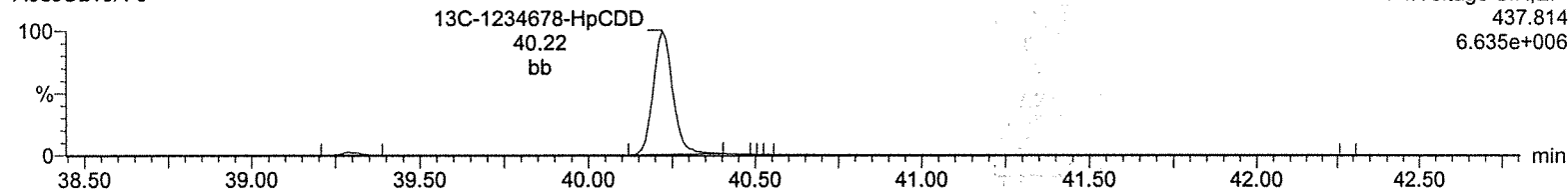
13C-1234678-HpCDD

A08JUL19A-6



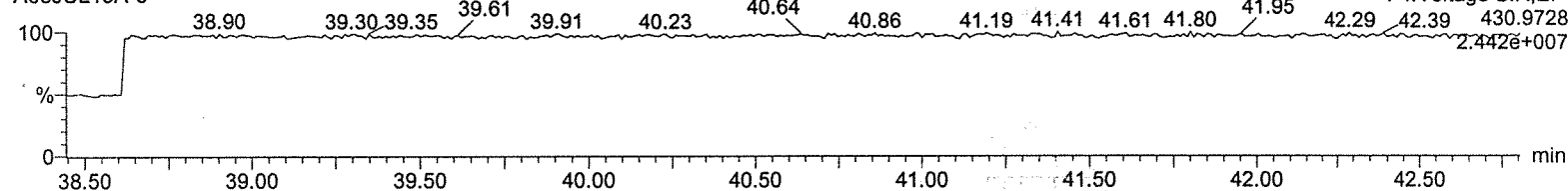
13C-1234678-HpCDD

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

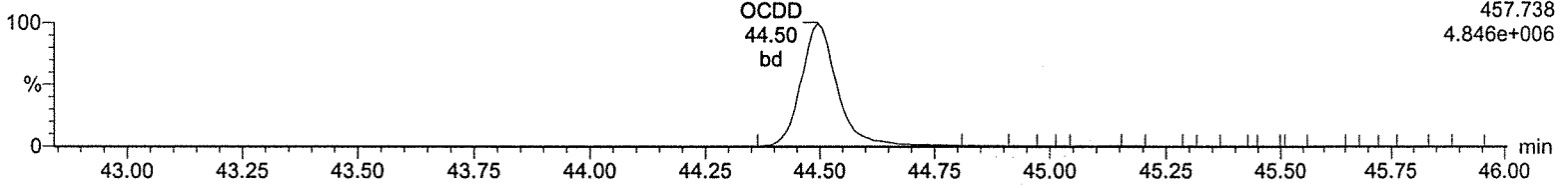
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Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

OCDD

A08JUL19A-6

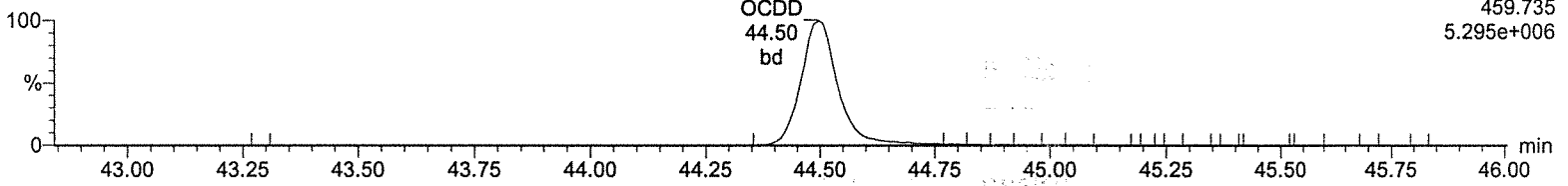
F5:Voltage SIR,EI+
457.738
4.846e+006



OCDD

A08JUL19A-6

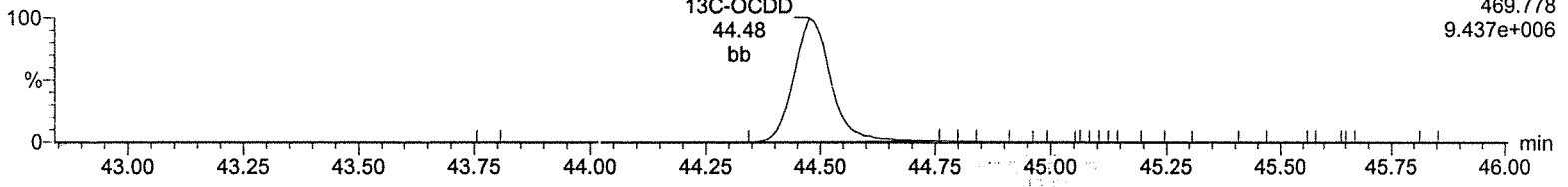
F5:Voltage SIR,EI+
459.735
5.295e+006



13C-OCDD

A08JUL19A-6

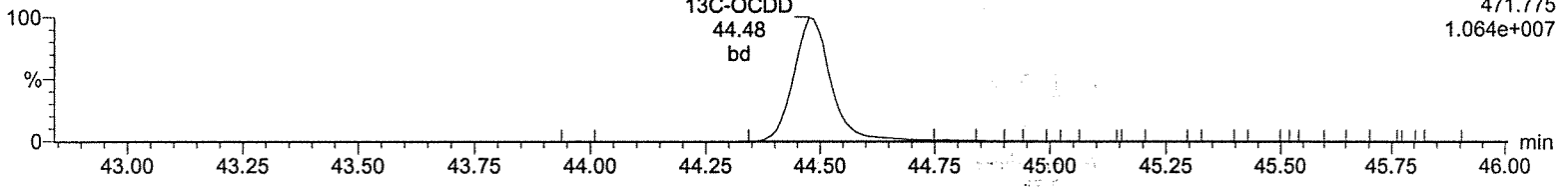
F5:Voltage SIR,EI+
469.778
9.437e+006



13C-OCDD

A08JUL19A-6

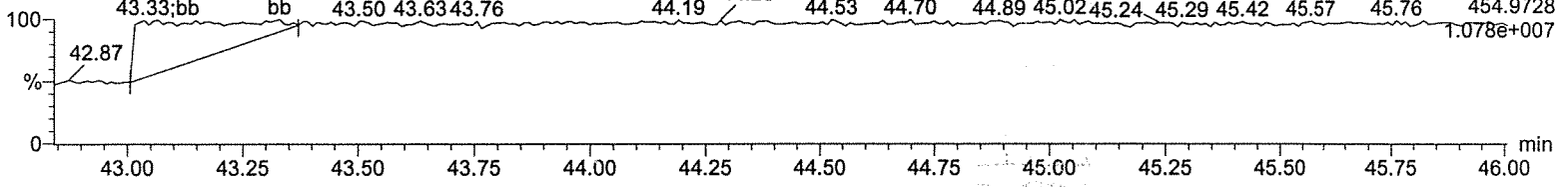
F5:Voltage SIR,EI+
471.775
1.064e+007



Lock Mass F5

A08JUL19A-6

F5:Voltage SIR,EI+
454.9728
1.078e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

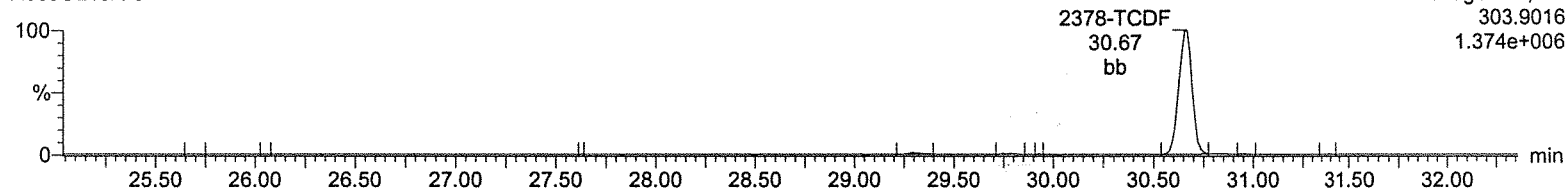
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

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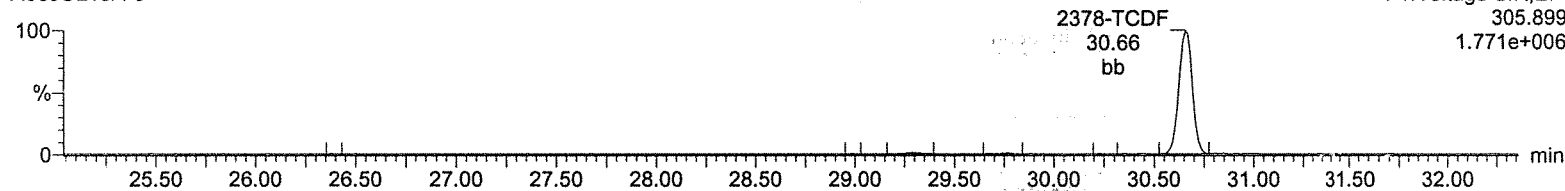
Total-tetrafurans

A08JUL19A-6



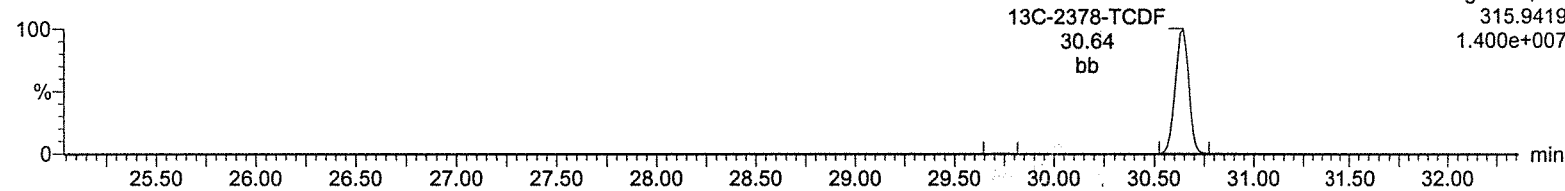
Total-tetrafurans

A08JUL19A-6



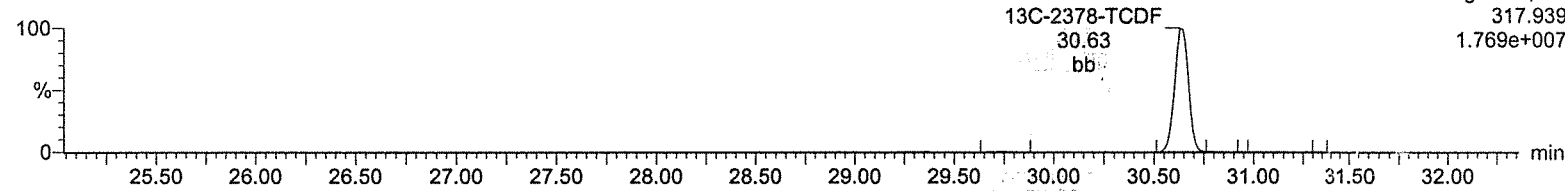
13C-2378-TCDF

A08JUL19A-6



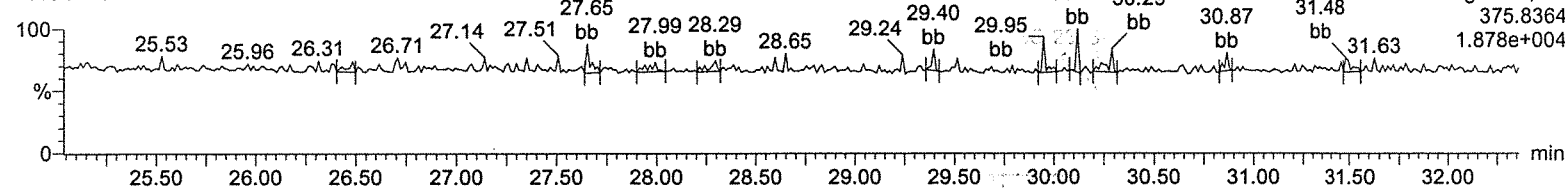
13C-2378-TCDF

A08JUL19A-6



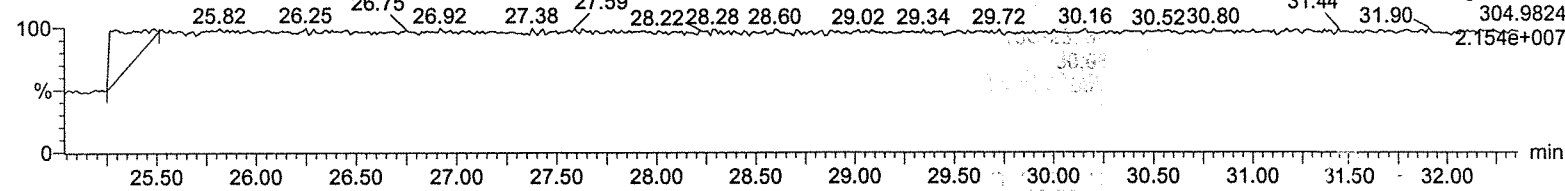
HxDPE

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



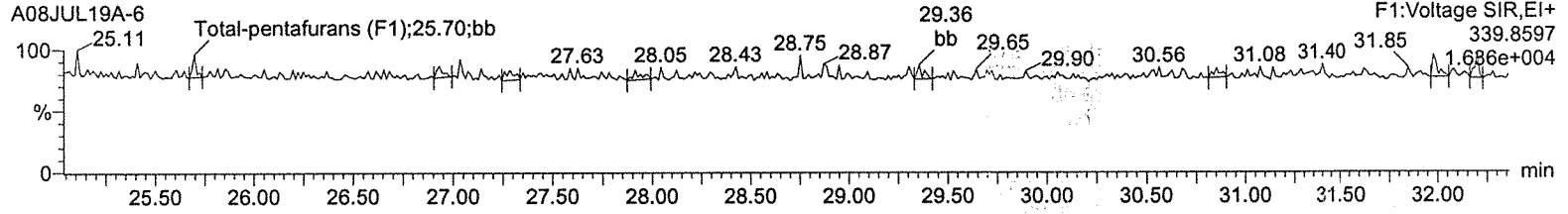
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

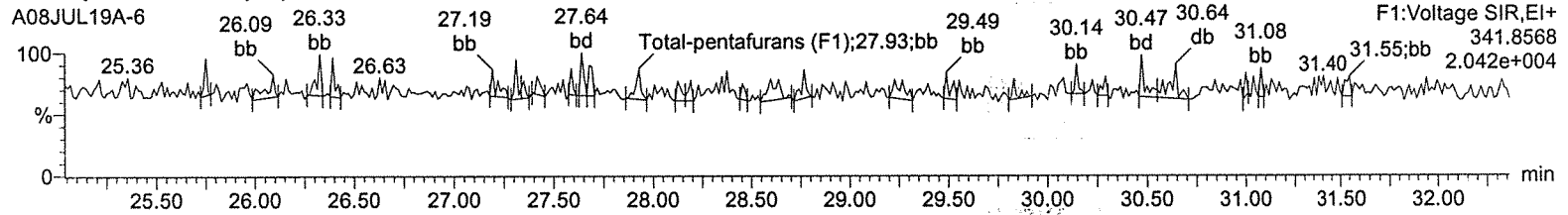
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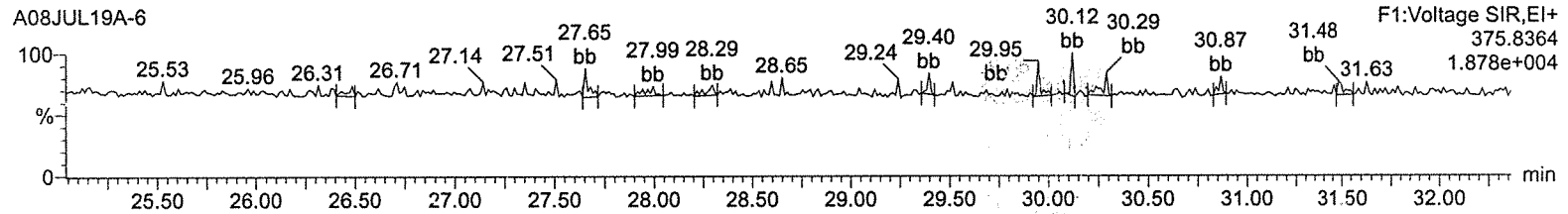
Total-pentafurans (F1)



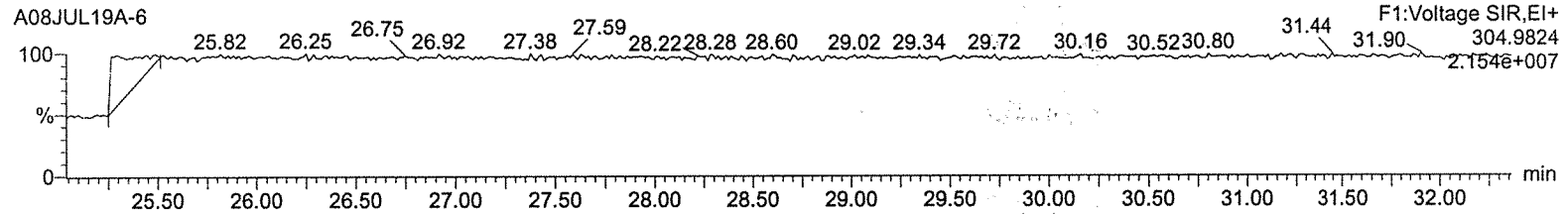
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

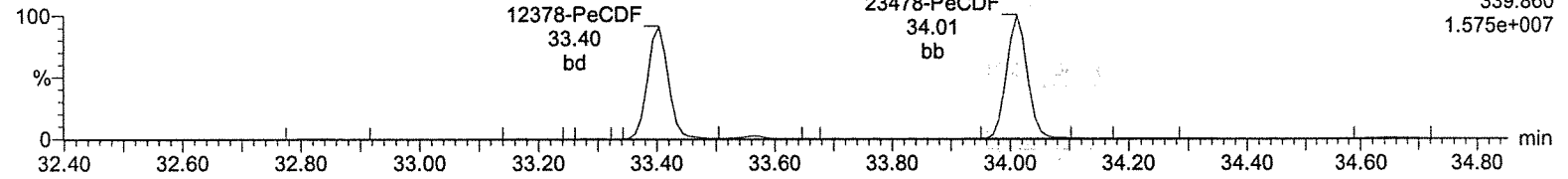
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Total-pentafurans

A08JUL19A-6

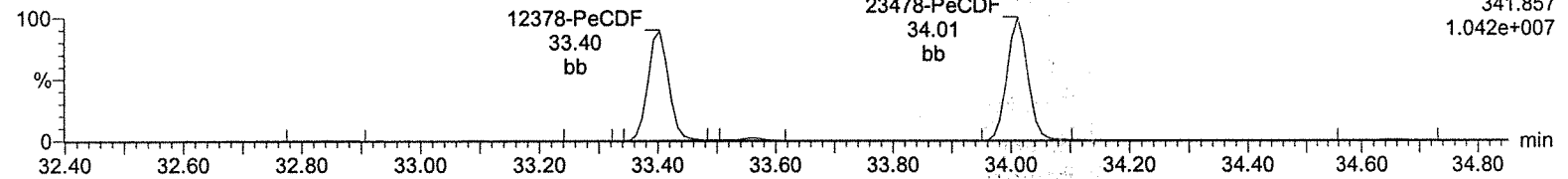
F2:Voltage SIR,EI+
339.860
1.575e+007



Total-pentafurans

A08JUL19A-6

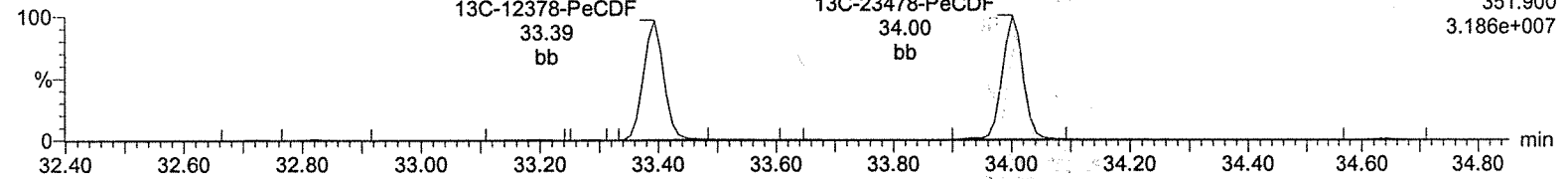
F2:Voltage SIR,EI+
341.857
1.042e+007



13C-12378-PeCDF

A08JUL19A-6

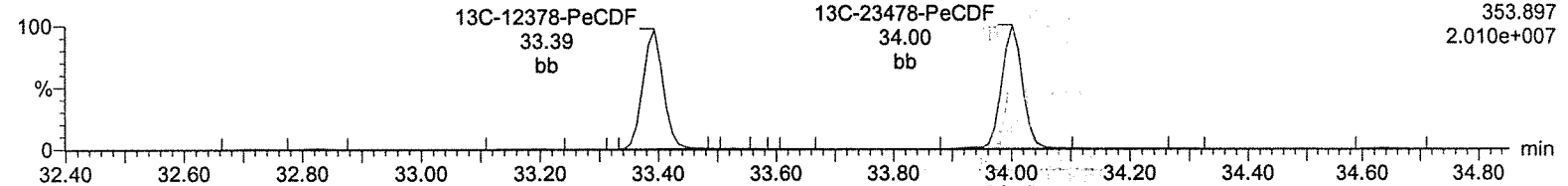
F2:Voltage SIR,EI+
351.900
3.186e+007



13C-12378-PeCDF

A08JUL19A-6

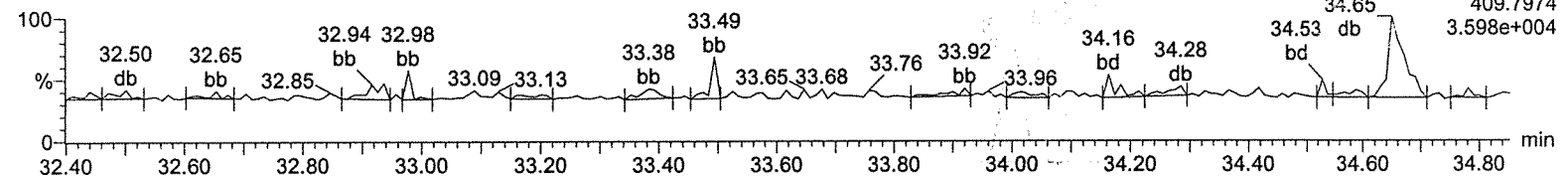
F2:Voltage SIR,EI+
353.897
2.010e+007



HpDPE

A08JUL19A-6

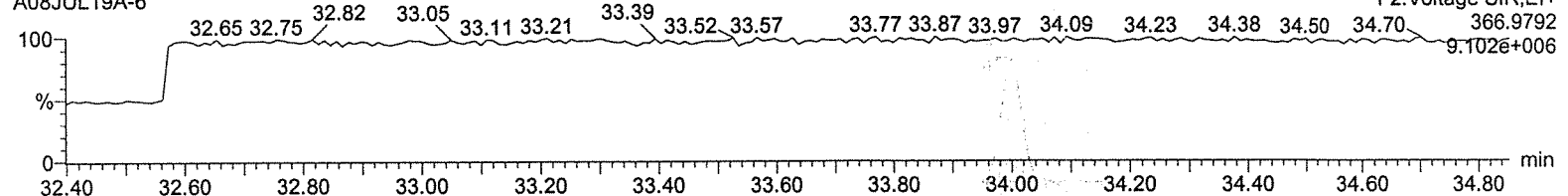
F2:Voltage SIR,EI+
409.7974
3.598e+004



Lock Mass F2

A08JUL19A-6

F2:Voltage SIR,EI+
366.9792
9.102e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

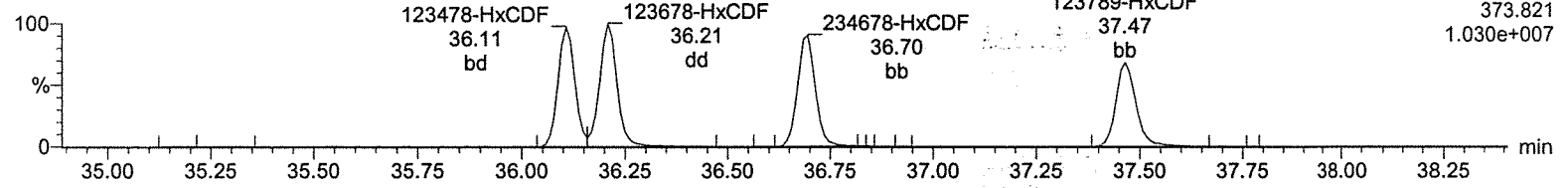
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

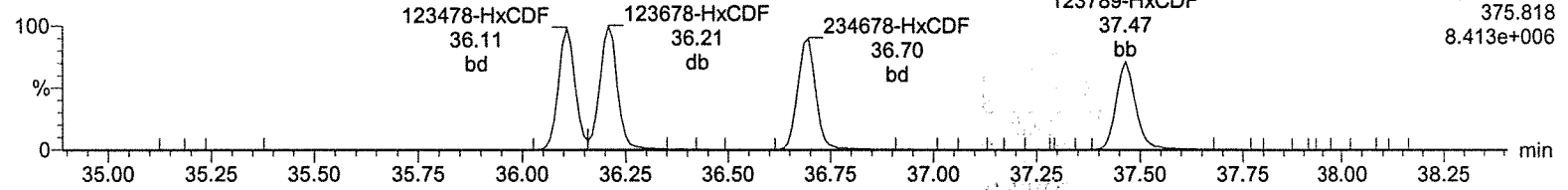
Total-hexafurans

A08JUL19A-6



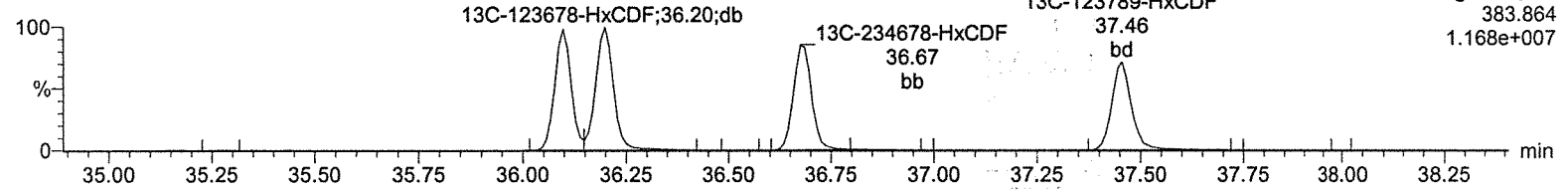
Total-hexafurans

A08JUL19A-6



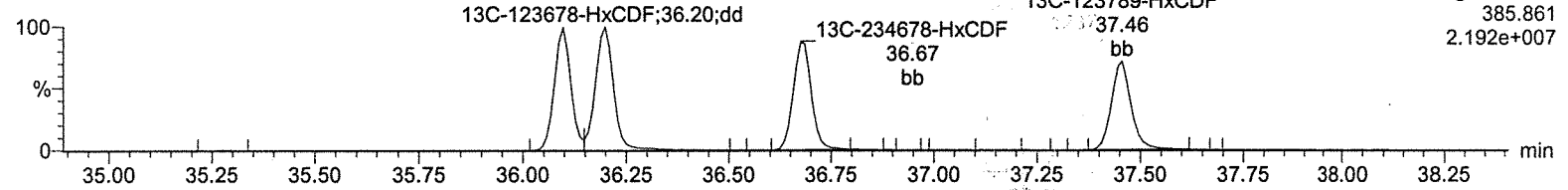
13C-123478-HxCDF

A08JUL19A-6



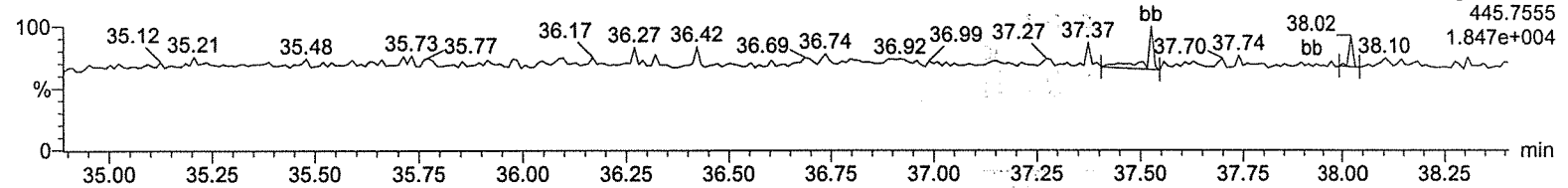
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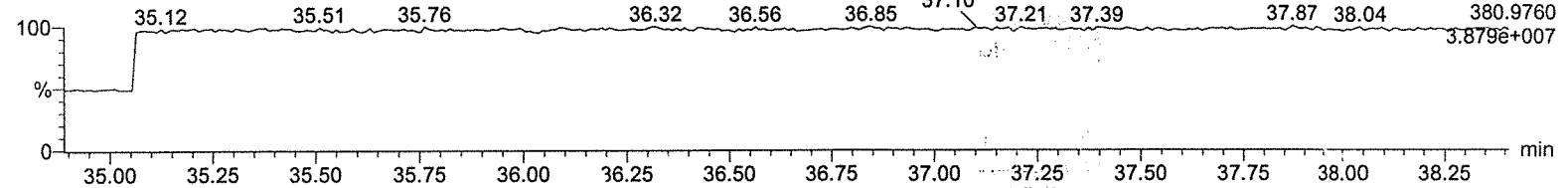
OcDPE

A08JUL19A-6



Lock Mass F3

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

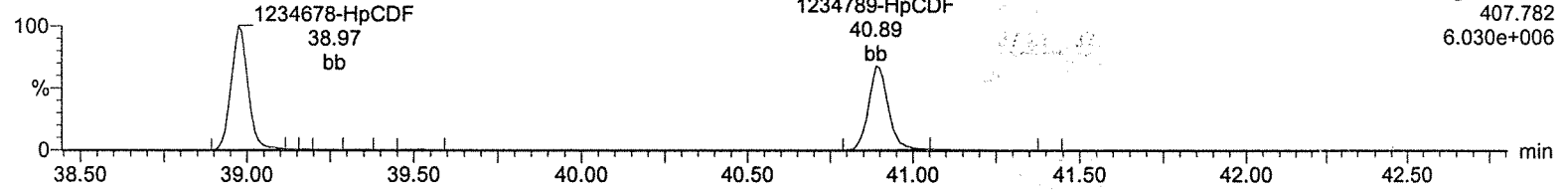
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

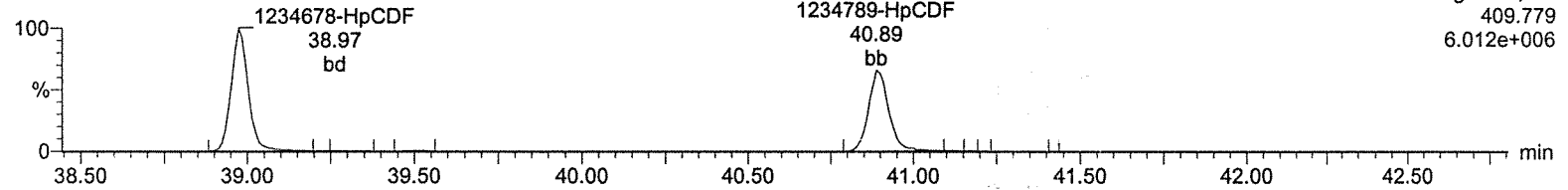
Total-heptafurans

A08JUL19A-6



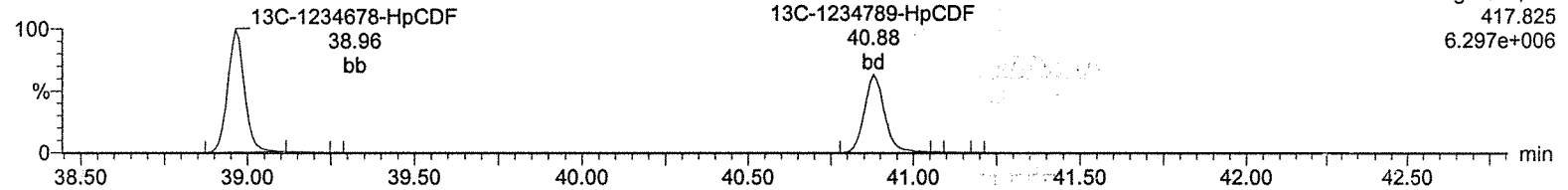
Total-heptafurans

A08JUL19A-6



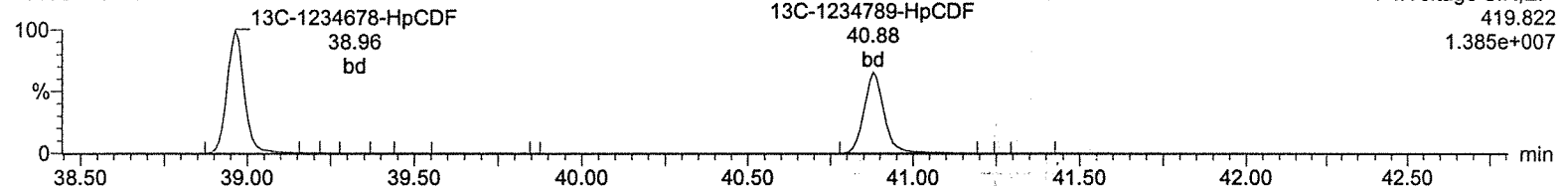
13C-1234678-HpCDF

A08JUL19A-6



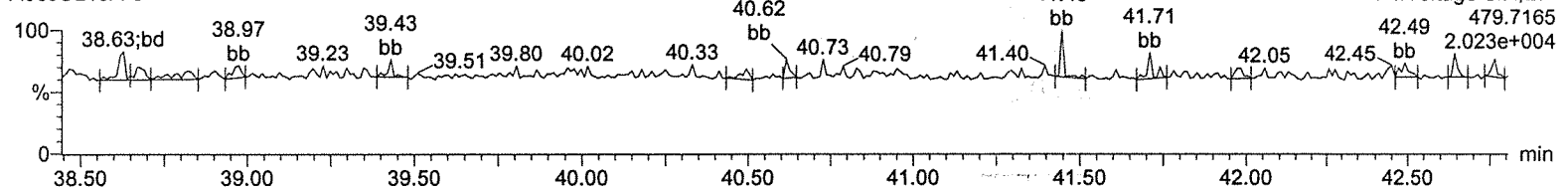
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A08JUL19A-6



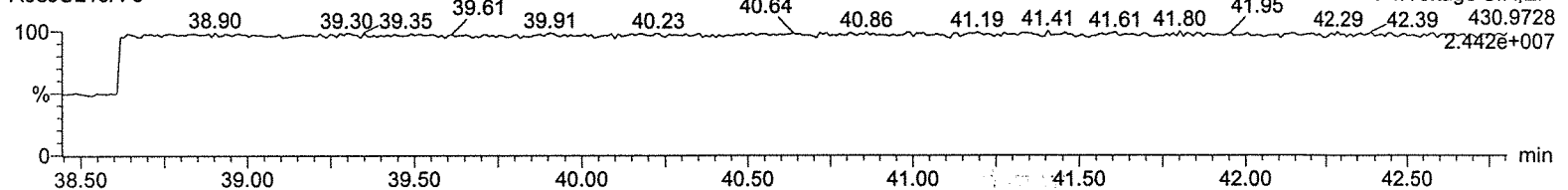
NoDPE

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

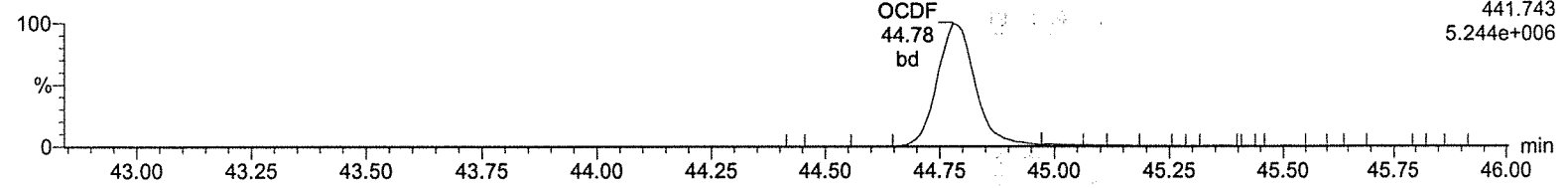
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

OCDF

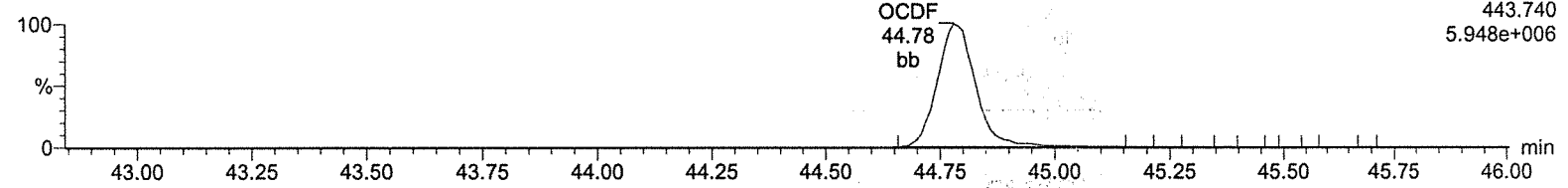
A08JUL19A-6



F5:Voltage SIR,EI+
441.743
5.244e+006

OCDF

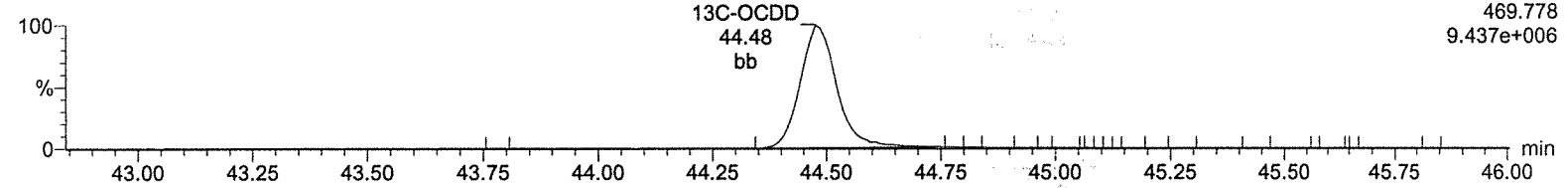
A08JUL19A-6



F5:Voltage SIR,EI+
443.740
5.948e+006

13C-OCDD

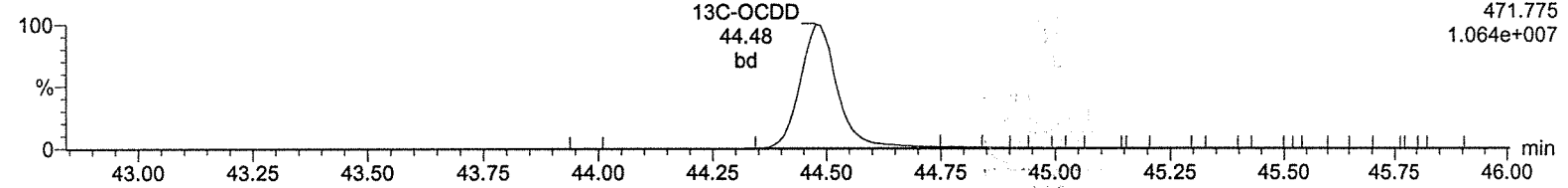
A08JUL19A-6



F5:Voltage SIR,EI+
469.778
9.437e+006

13C-OCDD

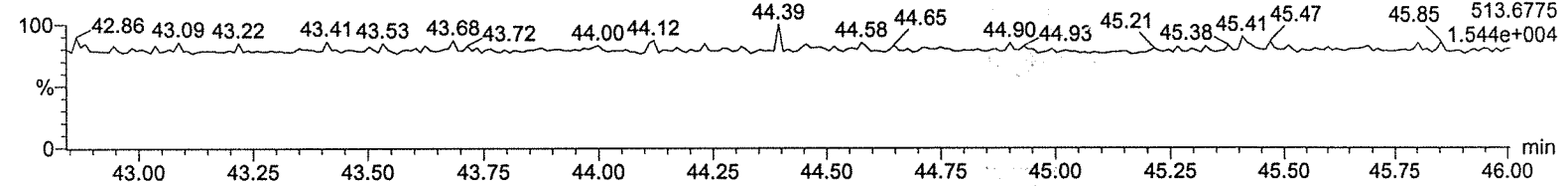
A08JUL19A-6



F5:Voltage SIR,EI+
471.775
1.064e+007

DeDPE

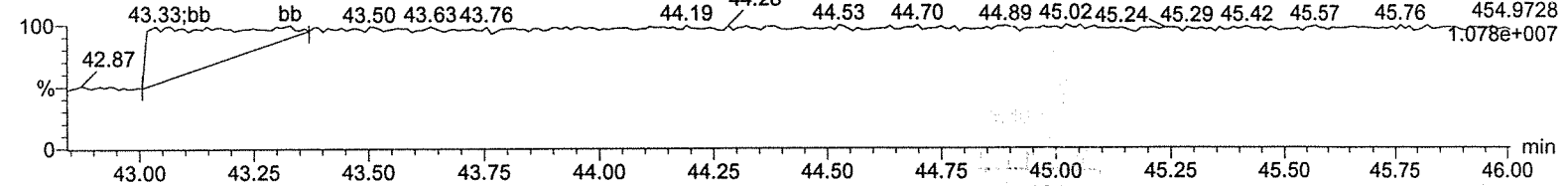
A08JUL19A-6



F5:Voltage SIR,EI+
513.6775
1.544e+004

Lock Mass F5

A08JUL19A-6



F5:Voltage SIR,EI+
454.9728
1.078e+007

Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2011/8/19

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.20e5	4.23e5	7.43e5	31.35	1.000	0.76	NO	40.313	0.891	0.884	5.07	0.0467	6.28e6	2669	2351.7	8.28e6	3196	2591.3	bb	bd
2	12378-PeCDD	1.43e6	9.27e5	2.36e6	34.21	1.000	1.55	NO	199.882	0.853	0.853	1.65	0.134	3.45e7	7066	4888.6	2.27e7	5786	3925.7	bb	bb
3	123478-HxCDD	1.20e6	9.61e5	2.16e6	36.84	1.000	1.25	NO	204.080	0.959	0.940	3.11	0.210	2.48e7	6620	3745.7	1.94e7	8330	2329.2	dd	bd
4	123678-HxCDD	1.32e6	1.06e6	2.38e6	36.92	1.000	1.25	NO	203.463	0.960	0.944	2.57	0.193	2.62e7	6620	3954.5	2.14e7	8330	2574.5	dd	dd
5	123789-HxCDD	1.25e6	9.97e5	2.25e6	37.16	1.007	1.25	NO	204.709	0.949	0.927	3.30	0.204	2.37e7	6620	3578.2	1.91e7	8330	2291.3	dd	dd
6	1234678-HpCDD	8.98e5	8.65e5	1.76e6	40.25	1.000	1.04	NO	200.188	1.041	1.040	2.88	0.324	1.35e7	6485	2081.7	1.29e7	7778	1662.5	bb	bd
7	OCDD	1.60e6	1.73e6	3.34e6	44.51	1.000	0.93	NO	407.176	0.989	0.971	2.39	0.535	1.76e7	8985	1960.9	1.94e7	7406	2624.3	bd	bb
8	2378-TCDF	3.91e5	5.06e5	8.96e5	30.67	1.001	0.77	NO	39.698	0.971	0.978	5.59	0.0830	5.42e6	3365	1611.9	6.79e6	5160	1315.9	bb	bb
9	12378-PeCDF	2.15e6	1.42e6	3.56e6	33.40	1.000	1.51	NO	204.220	0.965	0.945	3.41	0.104	5.57e7	6926	8041.1	3.68e7	8542	4302.7	bb	bd
10	123478-PeCDF	2.37e6	1.56e6	3.92e6	34.02	1.000	1.52	NO	205.338	1.013	0.987	3.73	0.0933	6.14e7	6926	8866.5	3.90e7	8542	4567.7	bb	bb
11	123478-HxCDF	1.70e6	1.40e6	3.10e6	36.12	1.001	1.22	NO	208.354	1.133	1.087	3.86	0.274	3.75e7	14090	2658.9	3.03e7	15421	1963.2	bd	bd
12	123678-HxCDF	1.82e6	1.49e6	3.31e6	36.21	1.000	1.22	NO	202.580	1.054	1.041	3.23	0.271	3.78e7	14090	2683.1	3.11e7	15421	2019.8	db	db
13	1234678-HxCDF	1.73e6	1.43e6	3.16e6	36.69	1.000	1.21	NO	207.523	1.178	1.136	3.17	0.277	3.67e7	14090	2608.0	3.05e7	15421	1976.9	bd	bd
14	123789-HxCDF	1.41e6	1.15e6	2.56e6	37.48	1.000	1.22	NO	201.238	1.067	1.061	2.29	0.378	2.64e7	14090	1872.9	2.13e7	15421	1383.0	bb	bb
15	1234678-HpCDF	1.28e6	1.26e6	2.54e6	38.98	1.000	1.01	NO	205.556	1.182	1.150	3.86	0.276	2.27e7	10691	2125.0	2.21e7	9042	2443.4	bb	bb
16	1234789-HpCDF	1.04e6	1.03e6	2.08e6	40.91	1.000	1.01	NO	204.324	1.228	1.202	1.91	0.419	1.49e7	10691	1395.5	1.48e7	9042	1631.4	bd	bd
17	OCDF	1.90e6	2.09e6	3.98e6	44.80	1.007	0.91	NO	416.811	1.180	1.133	6.78	0.402	2.07e7	8487	2437.5	2.34e7	5859	3990.3	bd	bb
18	13C-2378-TCDD	9.08e5	1.18e6	2.08e6	31.34	1.015	0.77	NO	98.652	1.113	1.128	2.36	0.112	1.86e7	7944	2339.0	2.37e7	4559	5208.0	bb	bb
19	13C-12378-PeCDD	8.37e5	5.47e5	1.38e6	34.20	1.108	1.53	NO	98.417	0.739	0.751	5.03	0.104	2.04e7	4338	4692.3	1.34e7	3347	4003.3	bb	bb
20	13C-123478-HxCDD	6.25e5	5.03e5	1.13e6	36.83	0.991	1.24	NO	100.728	0.903	0.896	1.38	0.172	1.26e7	6951	1815.9	1.00e7	5143	1950.2	bd	bd
21	13C-123678-HxCDD	6.83e5	5.57e5	1.24e6	36.91	0.993	1.23	NO	100.685	0.993	0.986	0.84	0.156	1.36e7	6951	1953.6	1.11e7	5143	2156.6	dd	dd
22	13C-1234678-HpCDD	4.33e5	4.13e5	8.47e5	40.23	1.083	1.05	NO	100.892	0.678	0.672	1.29	0.183	6.49e6	4520	1436.4	6.16e6	5151	1196.0	bd	bd
23	13C-OCDD	7.80e5	9.07e5	1.69e6	44.49	1.197	0.86	NO	210.311	0.675	0.642	4.87	0.272	8.74e6	8904	981.8	9.98e6	4818	2071.9	bb	bd
24	13C-2378-TCDF	1.01e6	1.30e6	2.31e6	30.64	0.993	0.77	NO	98.614	1.233	1.250	1.88	0.165	1.37e7	13730	999.5	1.79e7	6681	2683.0	bb	bb
25	13C-12378-PeCDF	1.13e6	7.17e5	1.85e6	33.39	1.082	1.58	NO	97.584	0.986	1.011	4.24	0.190	2.89e7	13181	2193.7	1.86e7	5800	3205.6	bb	bb
26	13C-23478-PeCDF	1.19e6	7.44e5	1.94e6	34.01	1.102	1.60	NO	97.318	1.035	1.063	5.28	0.181	3.10e7	13181	2355.2	1.88e7	5800	3248.7	db	bb
27	13C-123478-HxCDF	4.71e5	8.99e5	1.37e6	36.10	0.972	0.52	NO	98.724	1.097	1.111	1.42	0.276	1.02e7	10993	928.5	1.98e7	13101	1511.7	bd	bd
28	13C-123678-HxCDF	5.42e5	1.03e6	1.57e6	36.20	0.974	0.53	NO	100.717	1.256	1.247	1.06	0.246	1.08e7	10993	985.4	2.09e7	13101	1591.5	dd	dd
29	13C-234678-HxCDF	4.70e5	8.72e5	1.34e6	36.69	0.987	0.54	NO	99.282	1.074	1.082	1.01	0.284	9.85e6	10993	896.3	1.88e7	13101	1435.8	bd	bb
30	13C-123789-HxCDF	4.17e5	7.84e5	1.20e6	37.47	1.008	0.53	NO	99.370	0.961	0.967	1.08	0.317	7.67e6	10993	697.3	1.47e7	13101	1123.3	bd	bb
31	13C-1234678-HpCDF	3.30e5	7.46e5	1.08e6	38.97	1.049	0.44	NO	99.003	0.861	0.870	1.11	0.194	5.71e6	6045	944.3	1.31e7	7193	1816.3	bb	bb
32	13C-1234789-HpCDF	2.66e5	5.79e5	8.45e5	40.89	1.101	0.46	NO	99.849	0.676	0.677	1.01	0.249	3.70e6	6045	611.9	8.36e6	7193	1162.3	bd	bb
33	13C-1234-TCDD	8.26e5	1.05e6	1.87e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.127	1.31e7	7944	1645.5	1.65e7	4559	3617.1	bb	bb
34	13C-123789-HxCDD	6.86e5	5.64e5	1.25e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.154	1.29e7	6951	1859.3	1.06e7	5143	2053.6	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Ch#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	7.96e5	7.96e5	7.96e5	31.35	1.016			40.065	1.063	1.061	4.54	0.0384	1.57e7	4023	3910.2						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

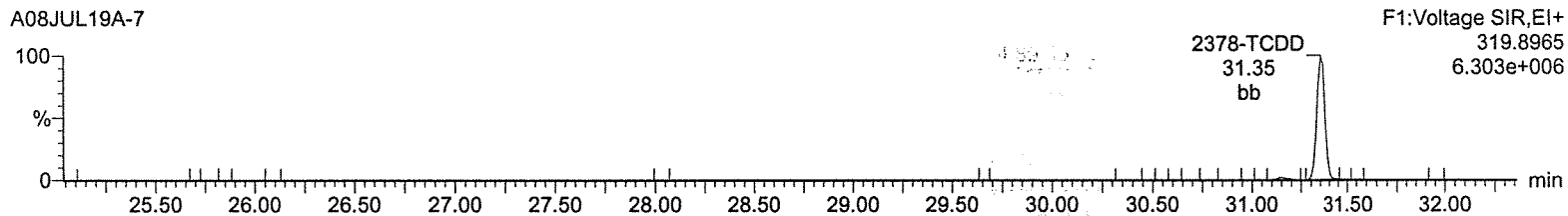
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Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

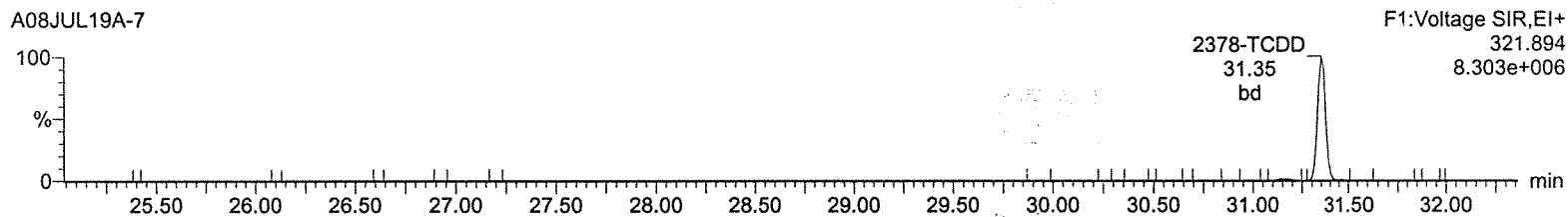
Total-tetradoxins

A08JUL19A-7



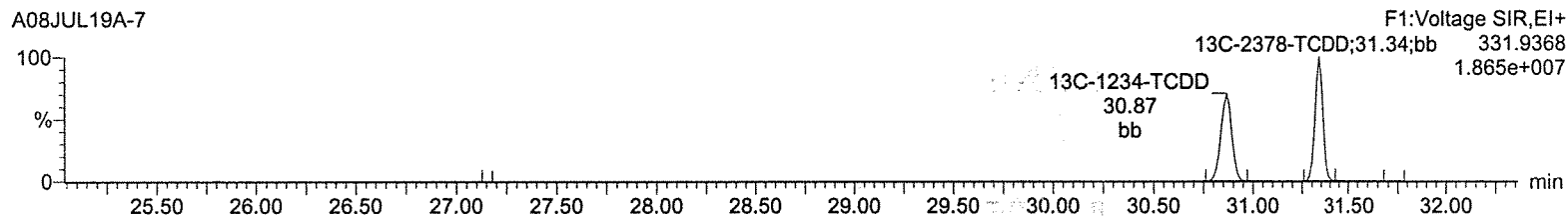
Total-tetradoxins

A08JUL19A-7



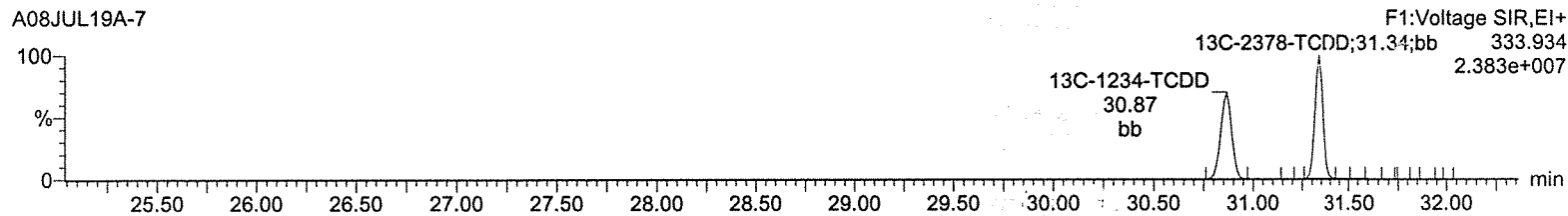
13C-2378-TCDD

A08JUL19A-7



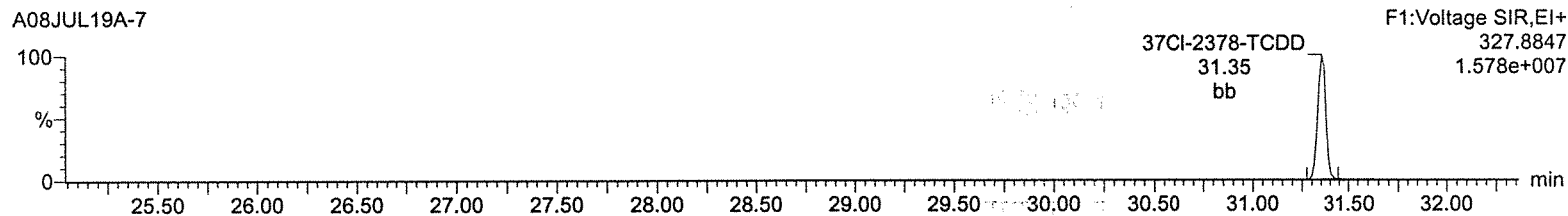
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A08JUL19A-7



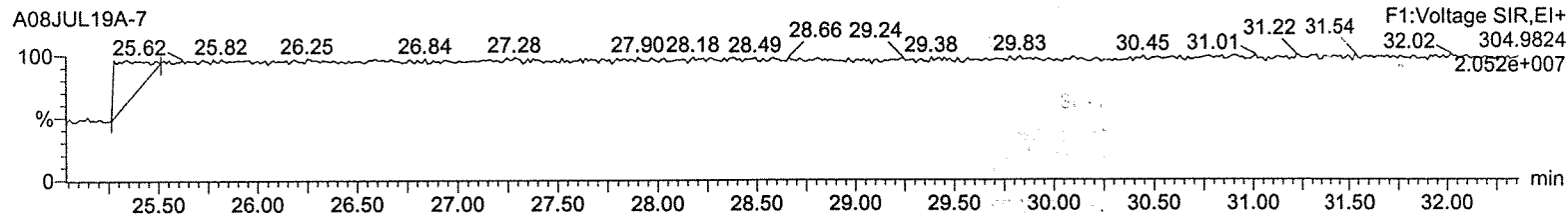
37Cl-2378-TCDD

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

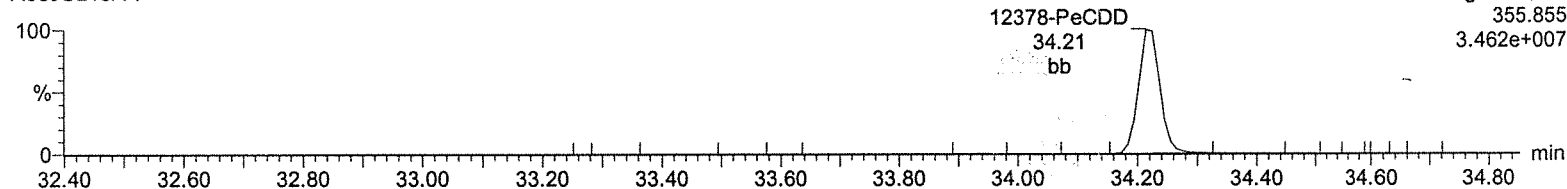
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

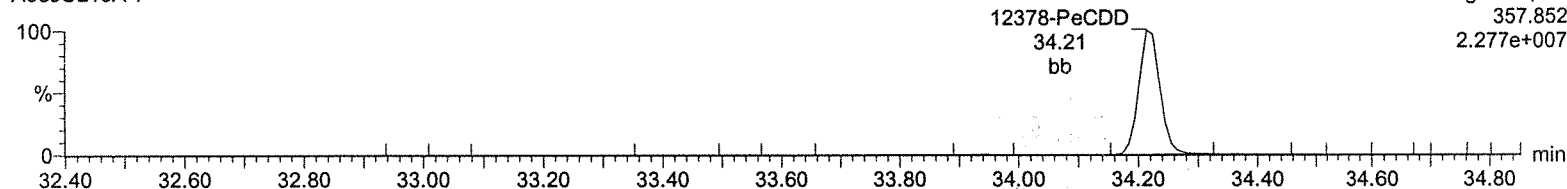
Total-pentadioxins

A08JUL19A-7



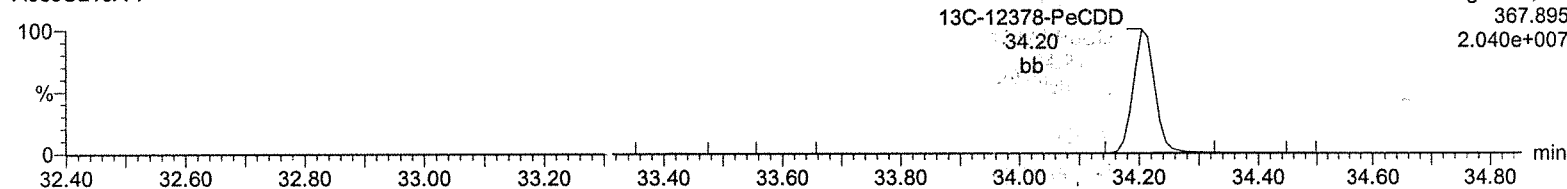
Total-pentadioxins

A08JUL19A-7



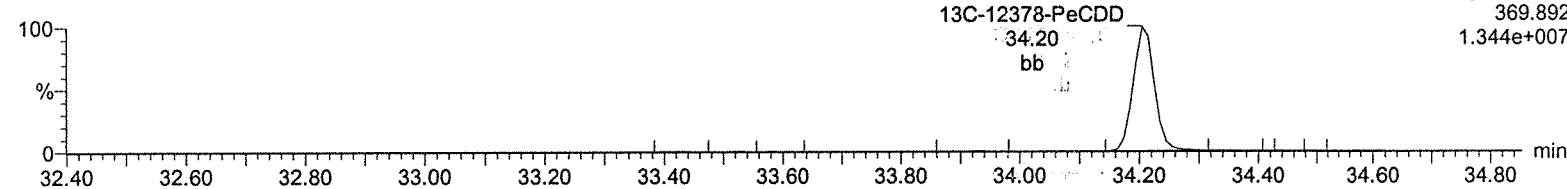
13C-12378-PeCDD

A08JUL19A-7



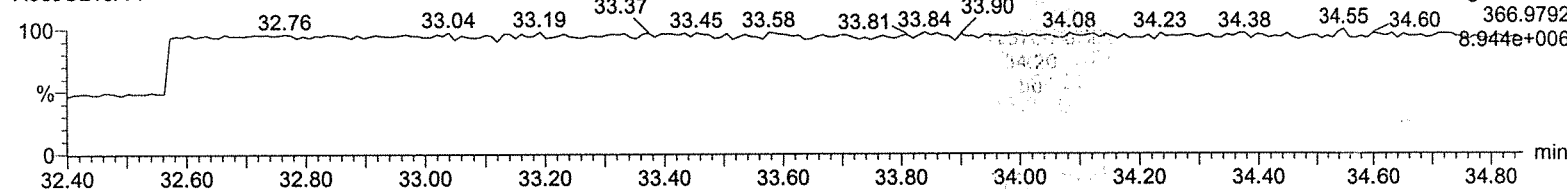
13C-12378-PeCDD

A08JUL19A-7



Lock Mass F2

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

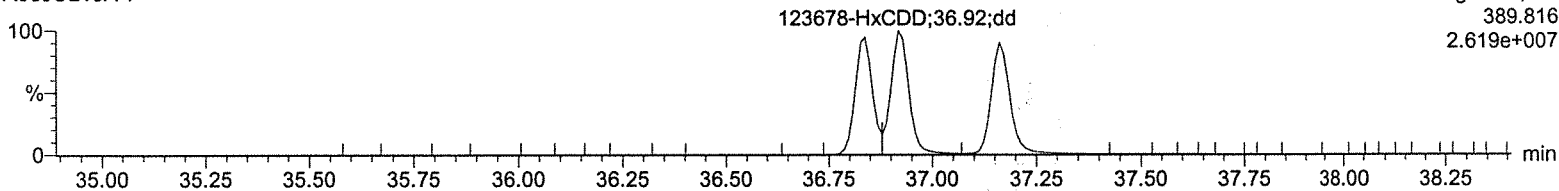
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Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

Total-hexadioxins

A08JUL19A-7

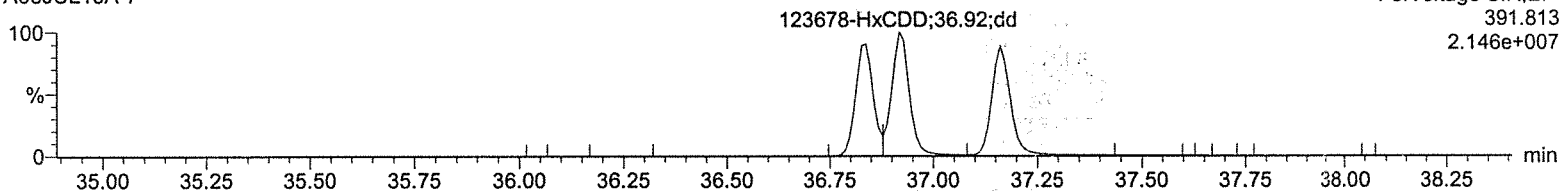
F3:Voltage SIR,EI+
389.816
2.619e+007



Total-hexadioxins

A08JUL19A-7

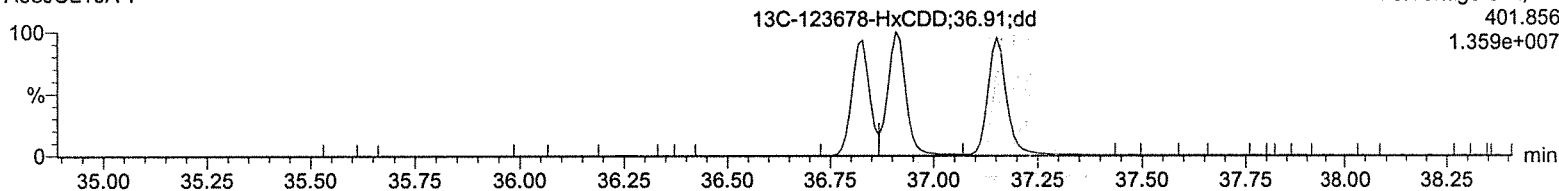
F3:Voltage SIR,EI+
391.813
2.146e+007



13C-123478-HxCDD

A08JUL19A-7

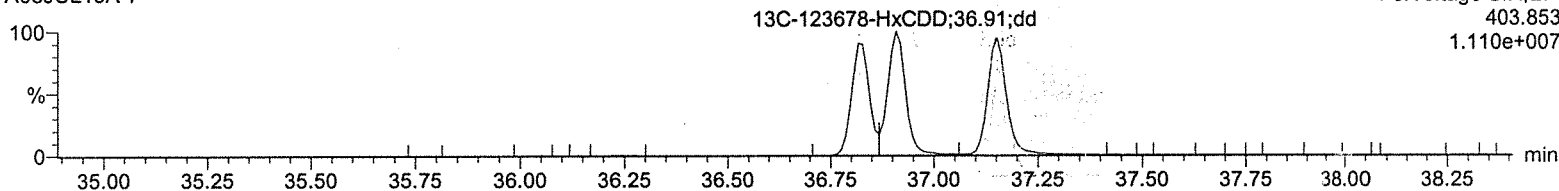
F3:Voltage SIR,EI+
401.856
1.359e+007



13C-123478-HxCDD

A08JUL19A-7

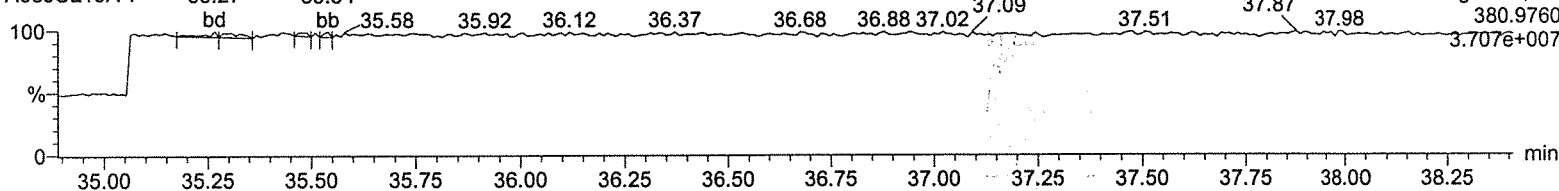
F3:Voltage SIR,EI+
403.853
1.110e+007



Lock Mass F3

A08JUL19A-7

F3:Voltage SIR,EI+
380.9760
3.707e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

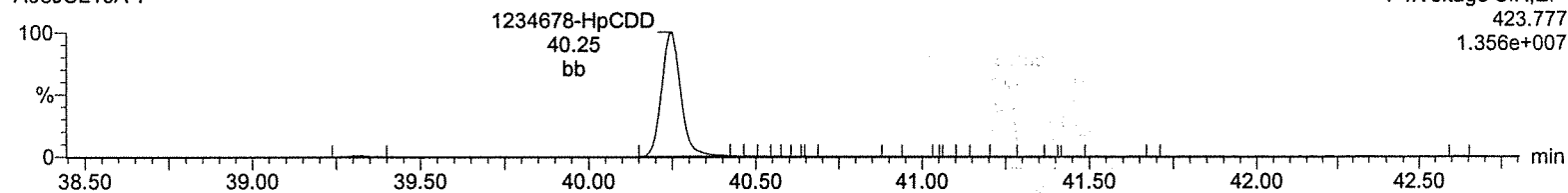
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

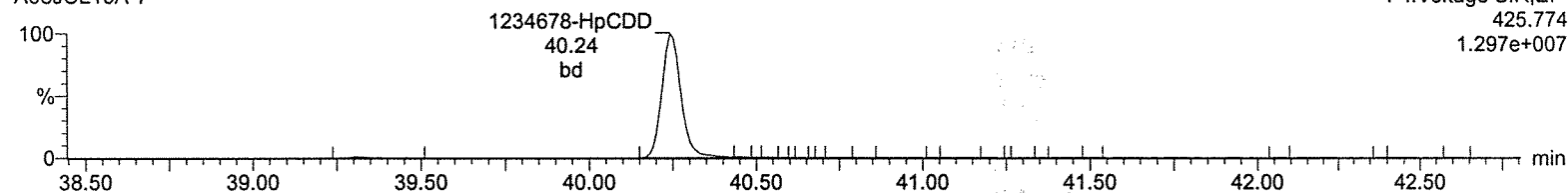
Total-heptadioxins

A08JUL19A-7



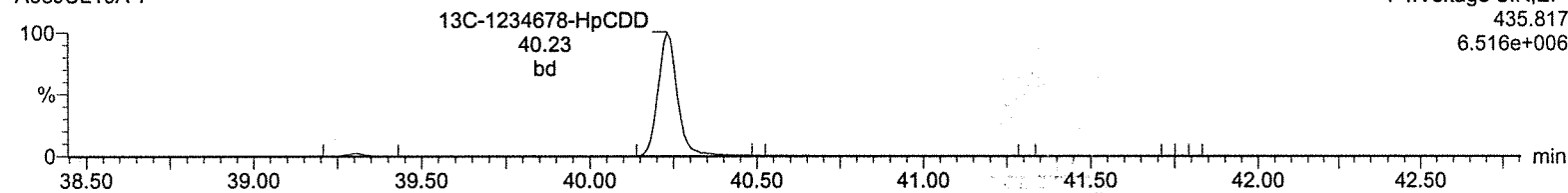
Total-heptadioxins

A08JUL19A-7



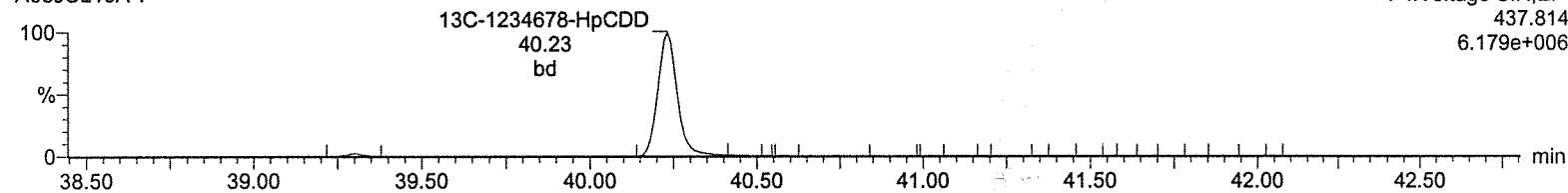
13C-1234678-HpCDD

A08JUL19A-7



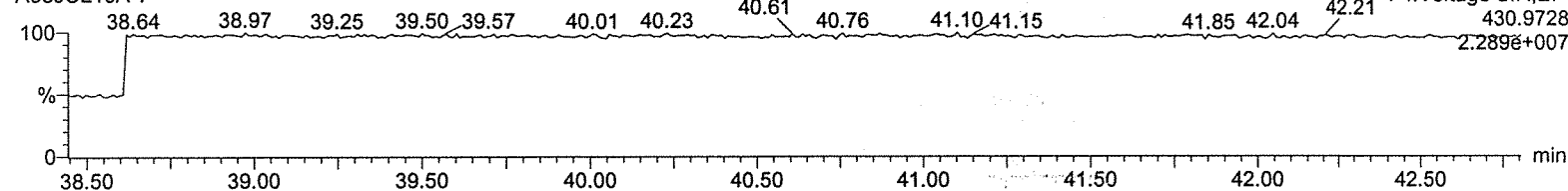
13C-1234678-HpCDD

A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

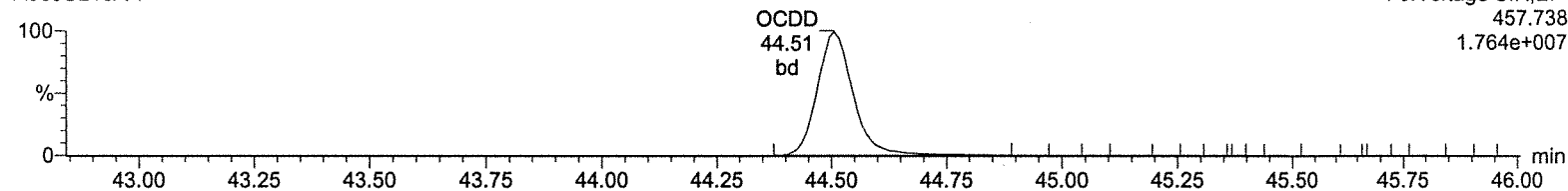
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

OCDD

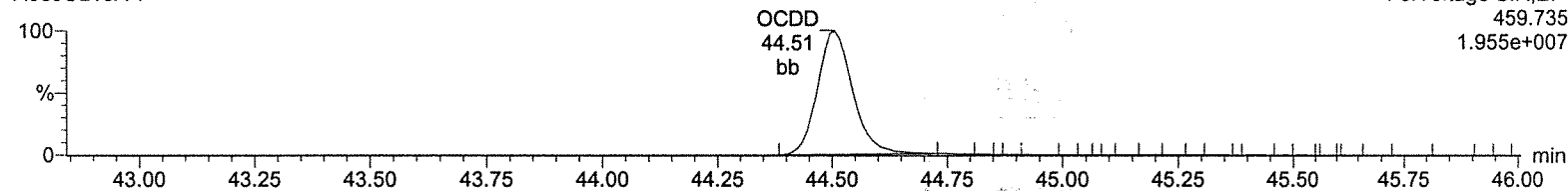
A08JUL19A-7



F5:Voltage SIR,EI+
457.738
1.764e+007

OCDD

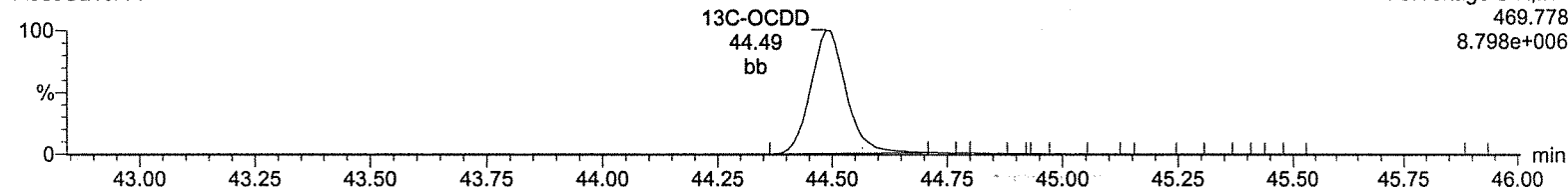
A08JUL19A-7



F5:Voltage SIR,EI+
459.735
1.955e+007

13C-OCDD

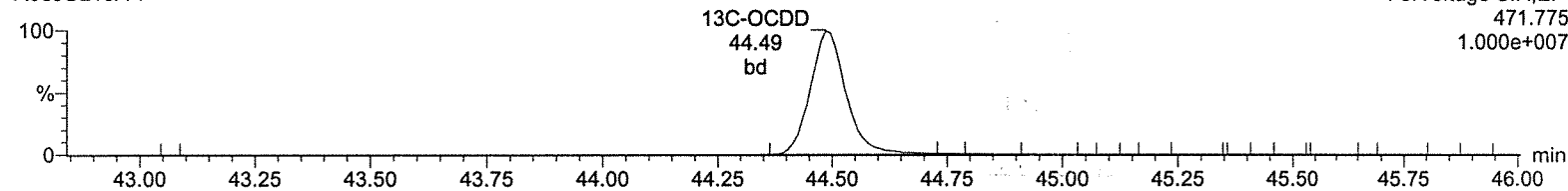
A08JUL19A-7



F5:Voltage SIR,EI+
469.778
8.798e+006

13C-OCDD

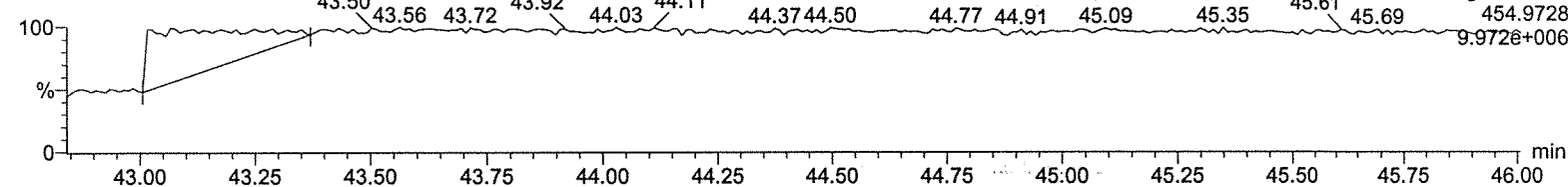
A08JUL19A-7



F5:Voltage SIR,EI+
471.775
1.000e+007

Lock Mass F5

A08JUL19A-7



F5:Voltage SIR,EI+
454.9728
9.972e+006

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qid

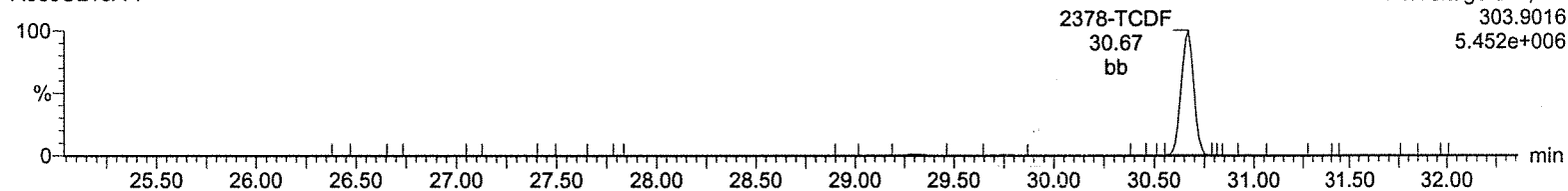
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

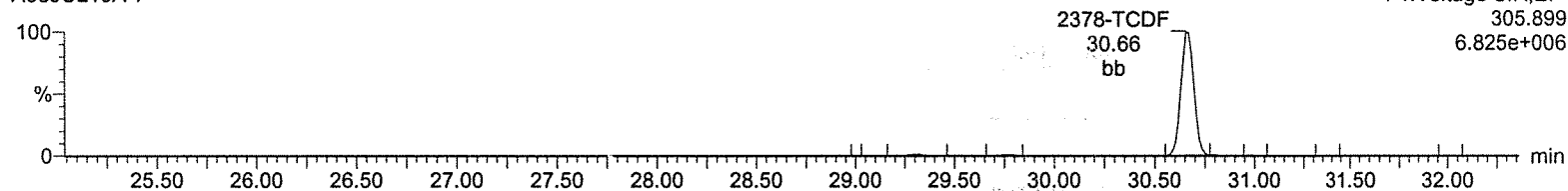
Total-tetrafurans

A08JUL19A-7



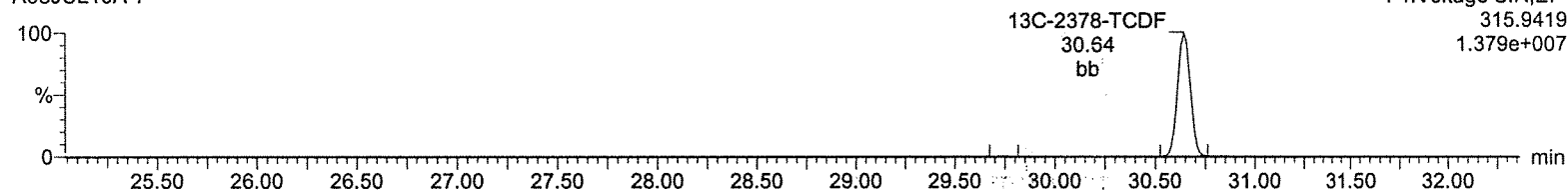
Total-tetrafurans

A08JUL19A-7



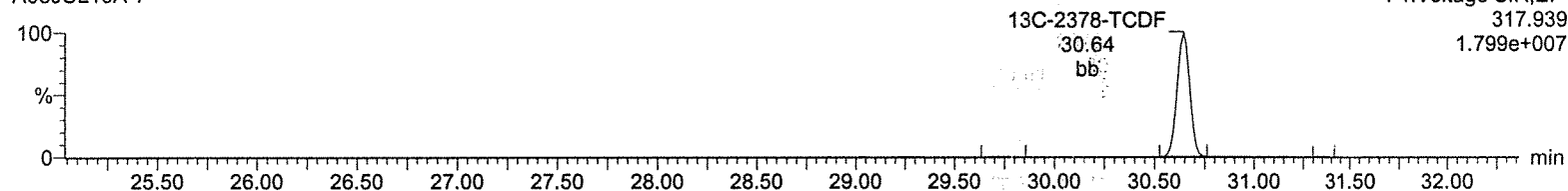
13C-2378-TCDF

A08JUL19A-7



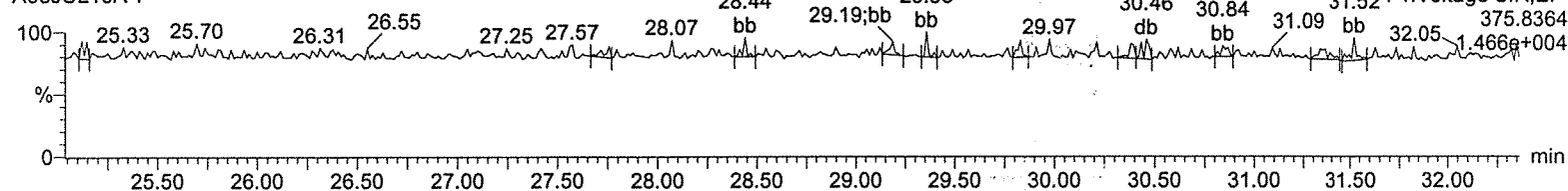
13C-2378-TCDF

A08JUL19A-7



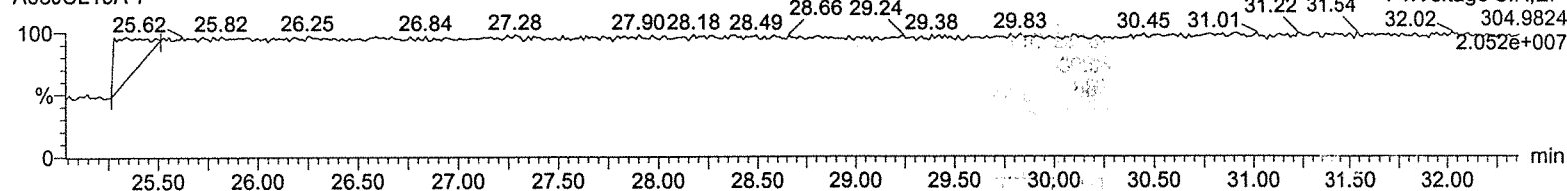
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

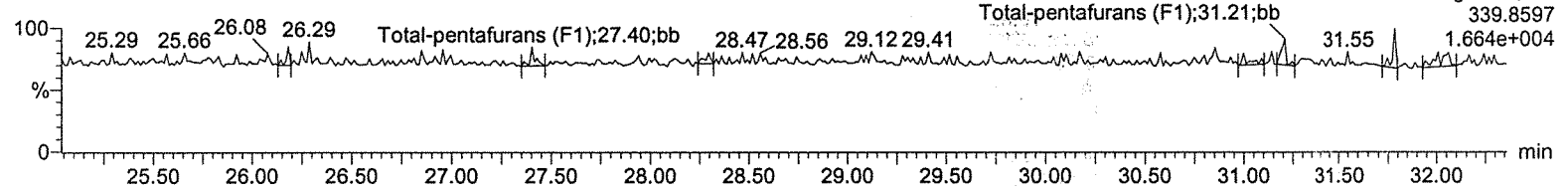
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

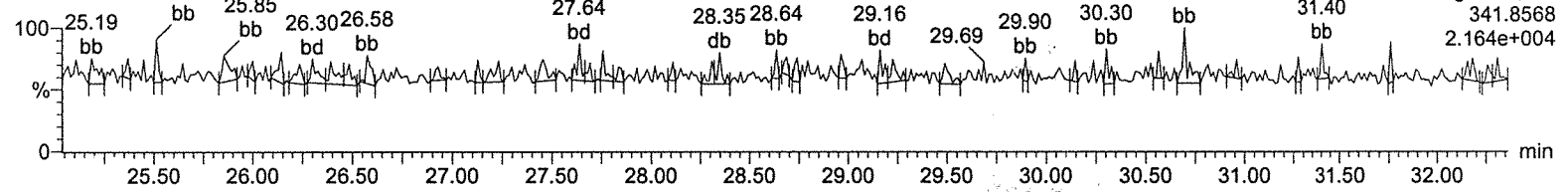
Total-pentafurans (F1)

A08JUL19A-7



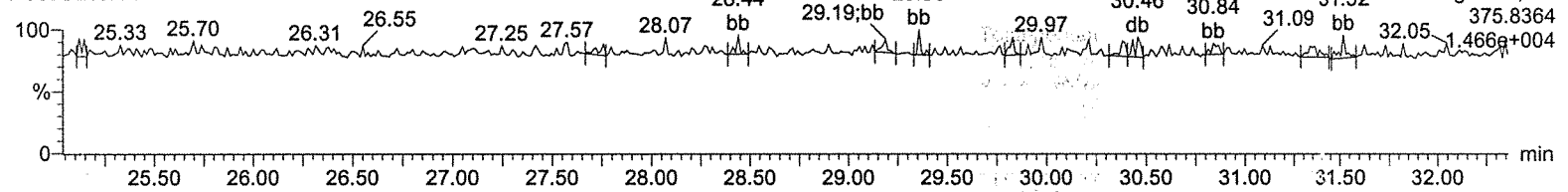
Total-pentafurans (F1)

A08JUL19A-7



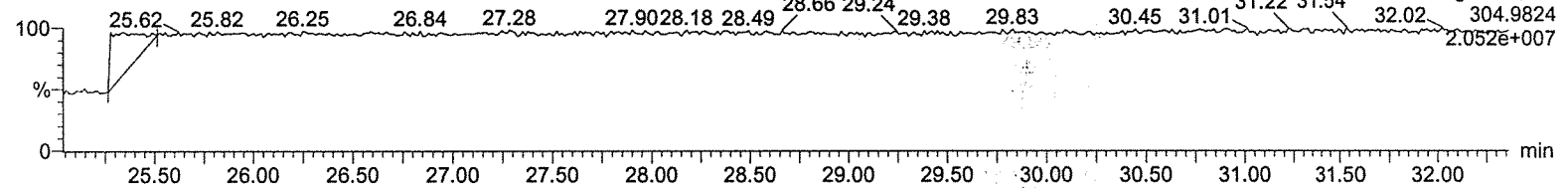
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

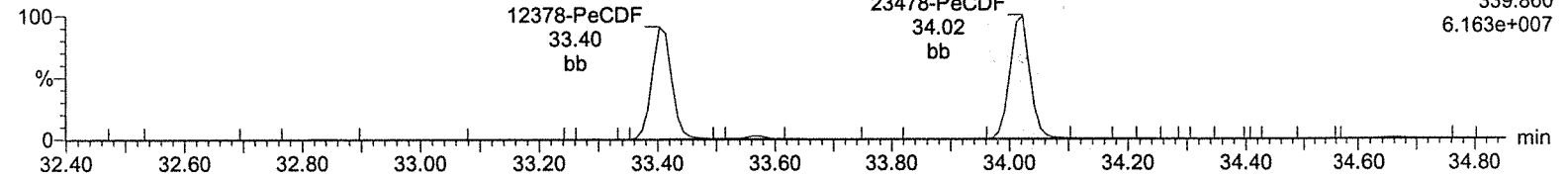
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

Total-pentafurans

A08JUL19A-7

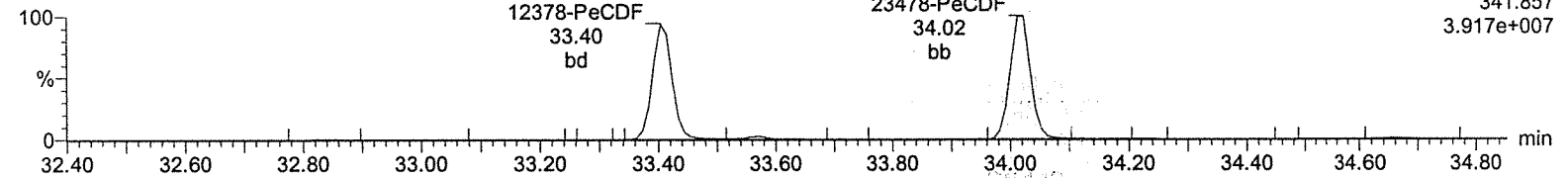
F2:Voltage SIR,EI+
339.860
6.163e+007



Total-pentafurans

A08JUL19A-7

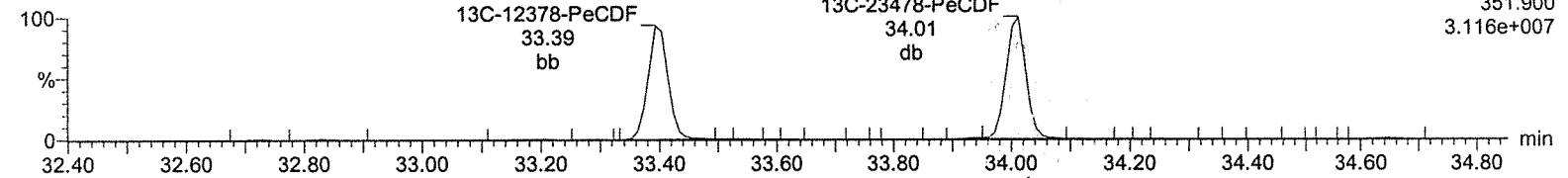
F2:Voltage SIR,EI+
341.857
3.917e+007



13C-12378-PeCDF

A08JUL19A-7

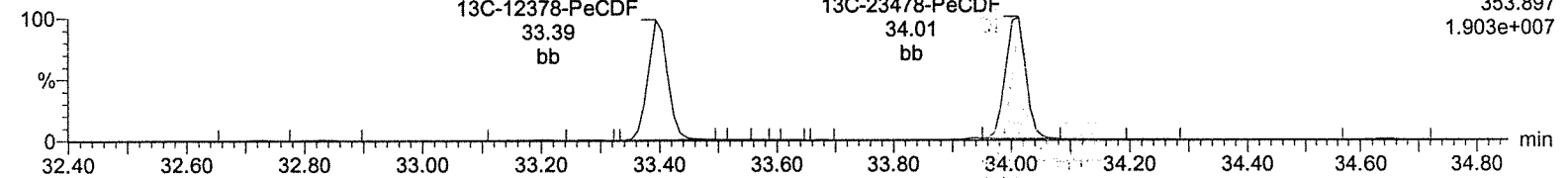
F2:Voltage SIR,EI+
351.900
3.116e+007



13C-12378-PeCDF

A08JUL19A-7

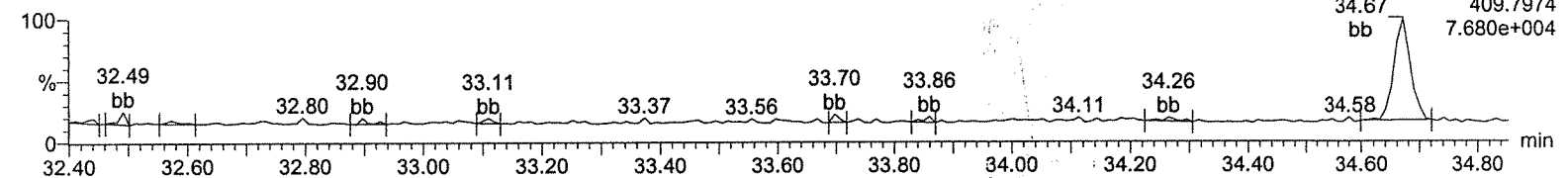
F2:Voltage SIR,EI+
353.897
1.903e+007



HpDPE

A08JUL19A-7

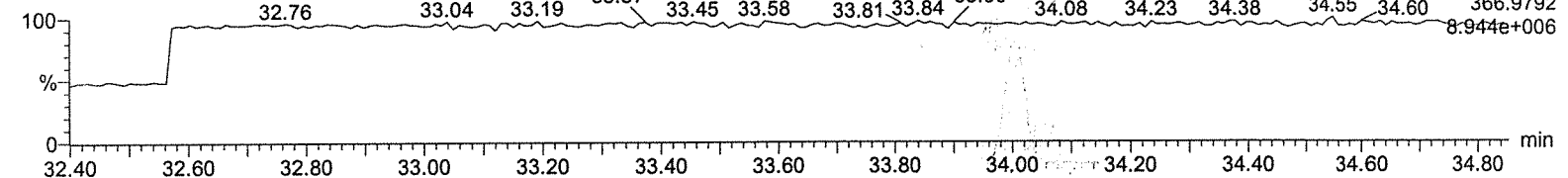
F2:Voltage SIR,EI+
34.67
409.7974
7.680e+004



Lock Mass F2

A08JUL19A-7

F2:Voltage SIR,EI+
366.9792
8.944e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

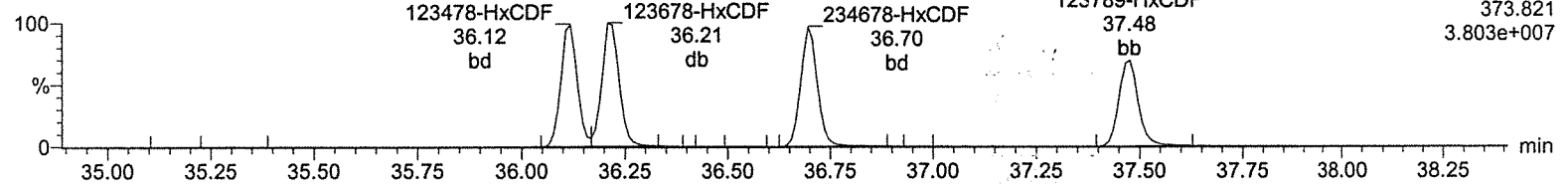
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

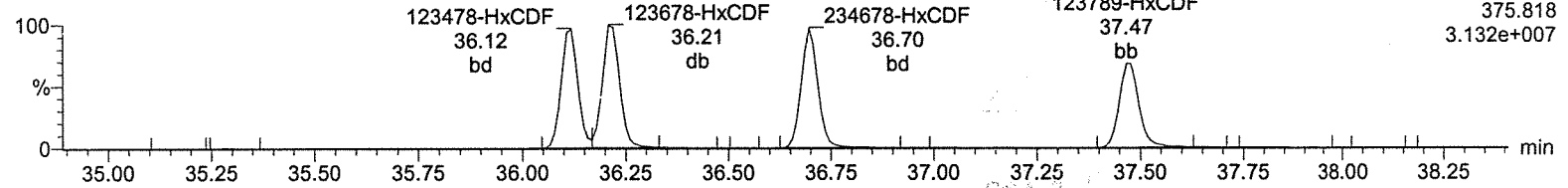
Total-hexafurans

A08JUL19A-7



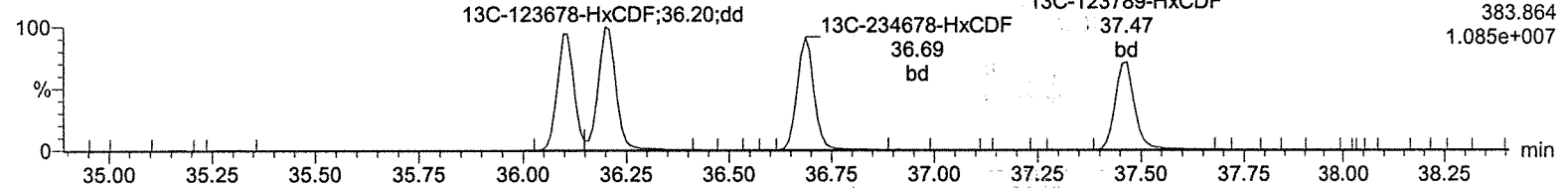
Total-hexafurans

A08JUL19A-7



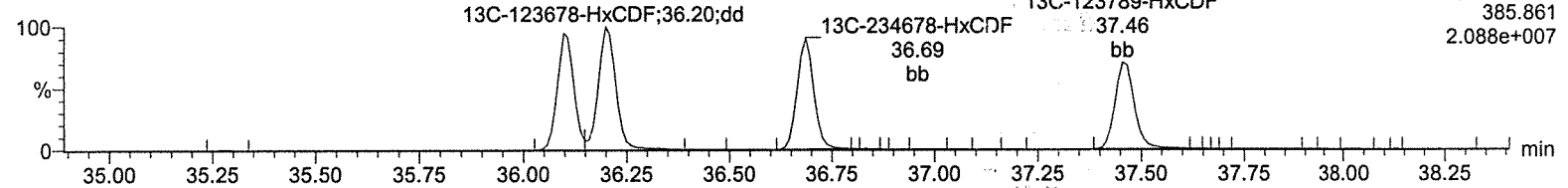
13C-123478-HxCDF

A08JUL19A-7



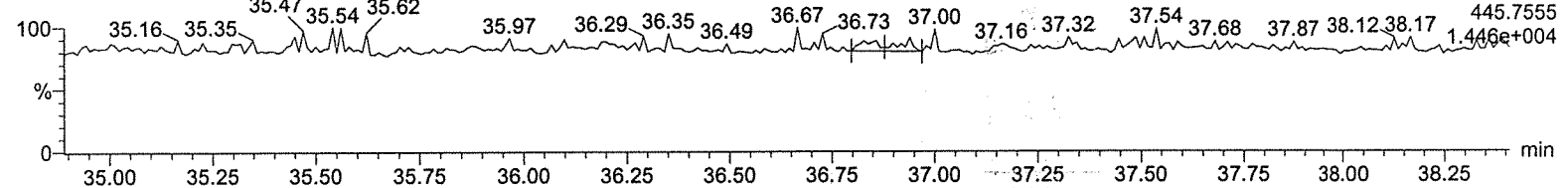
13C-123478-HxCDF

A08JUL19A-7



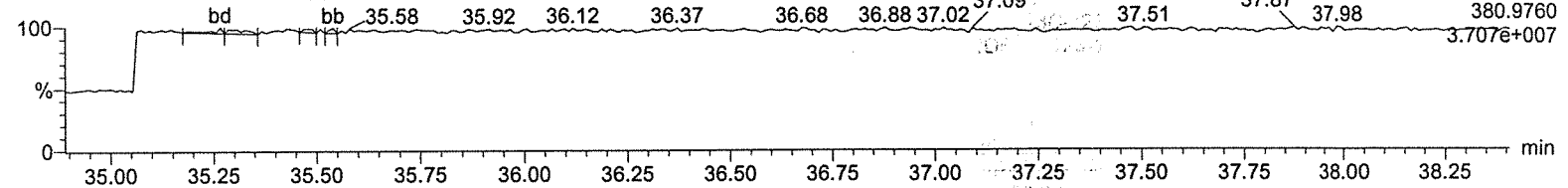
OcDPE

A08JUL19A-7



Lock Mass F3

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

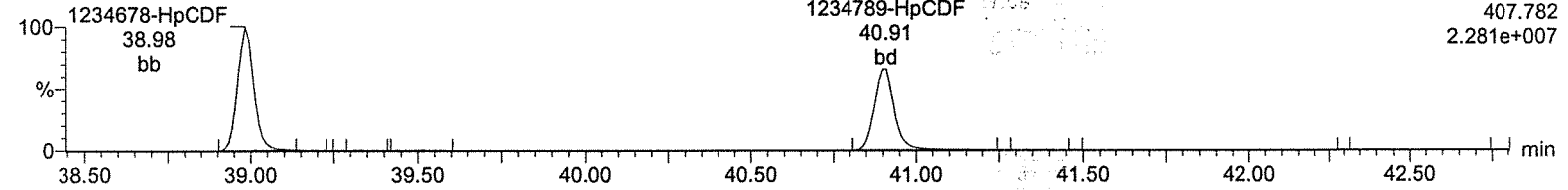
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

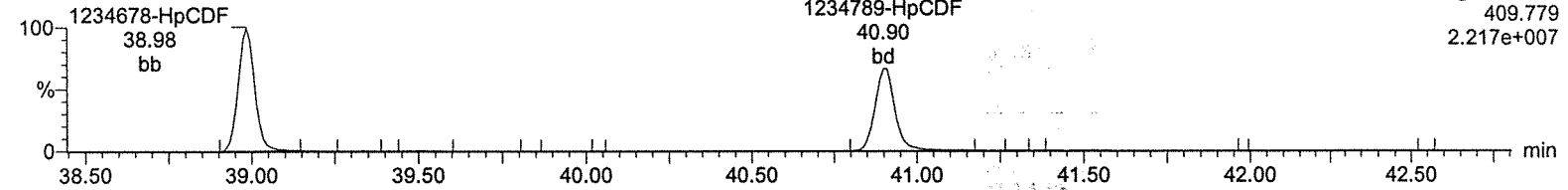
Total-heptafurans

A08JUL19A-7



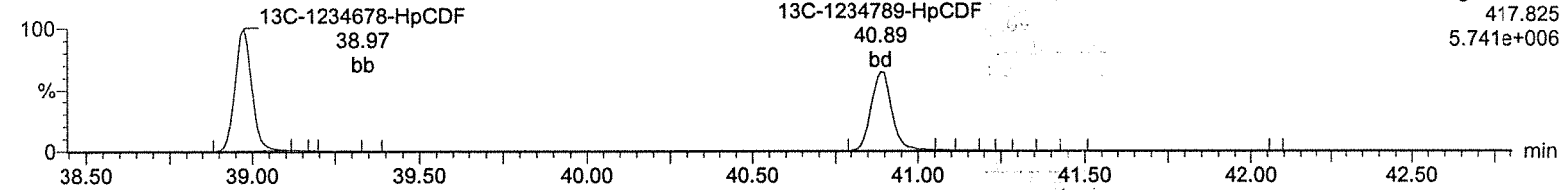
Total-heptafurans

A08JUL19A-7



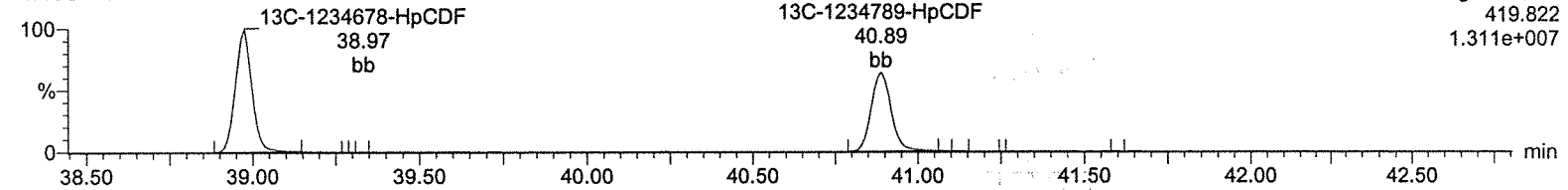
13C-1234678-HpCDF

A08JUL19A-7



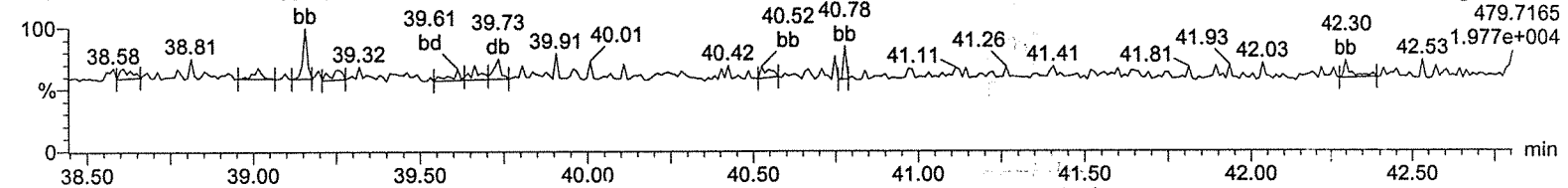
13C-1234678-HpCDF

A08JUL19A-7



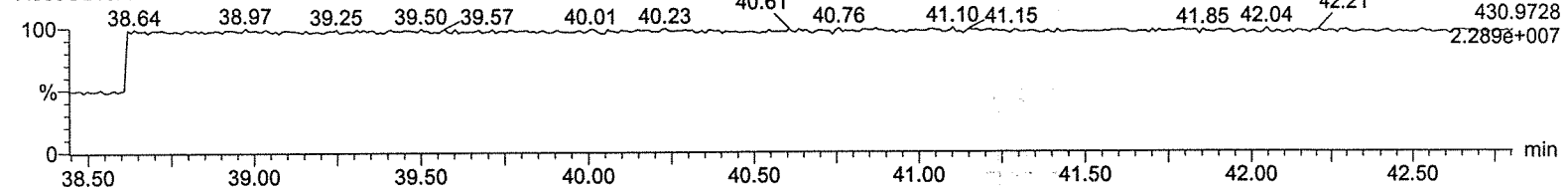
NoDPE

A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

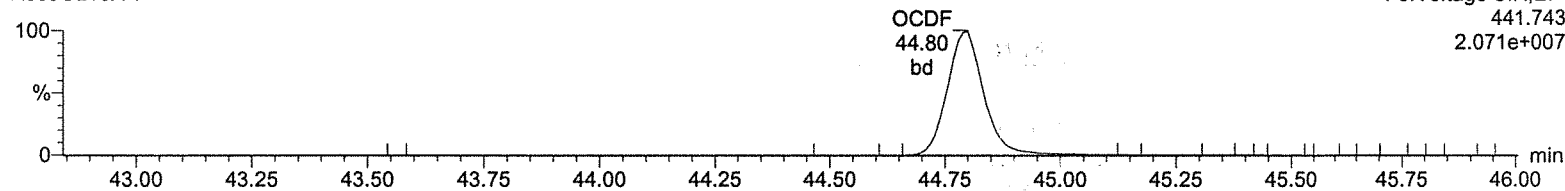
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

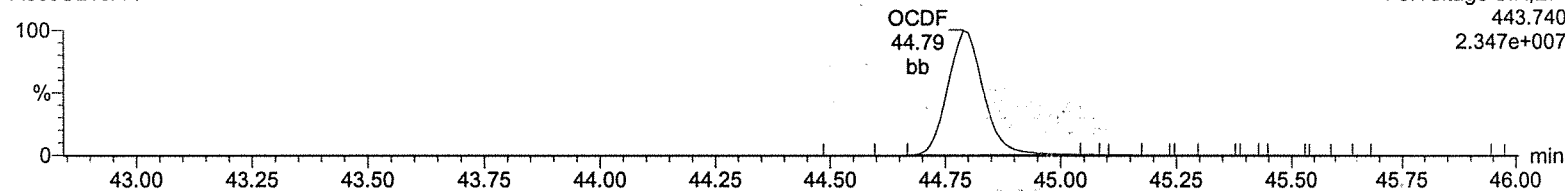
OCDF

A08JUL19A-7



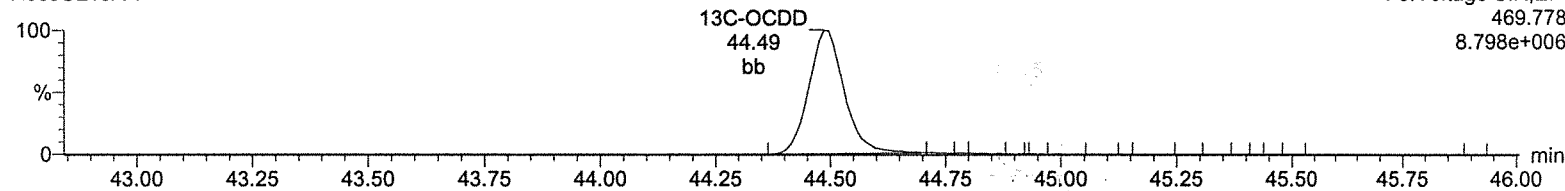
OCDF

A08JUL19A-7



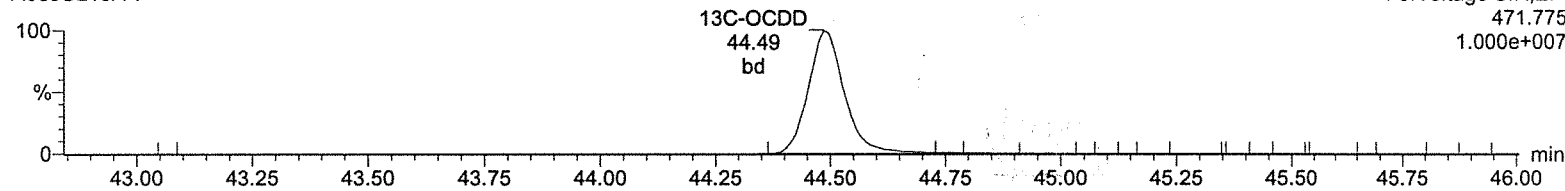
13C-OCDD

A08JUL19A-7



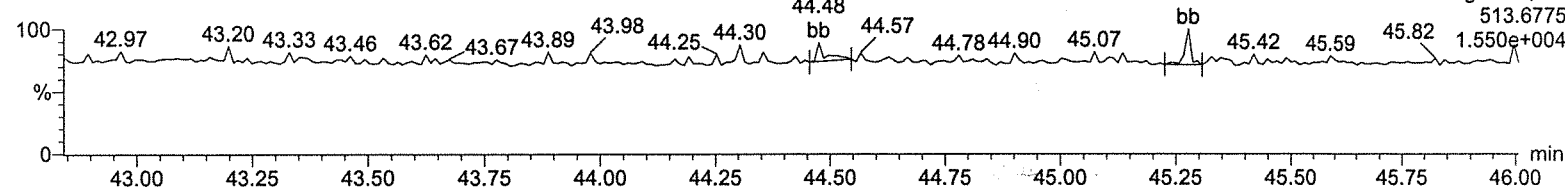
13C-OCDD

A08JUL19A-7



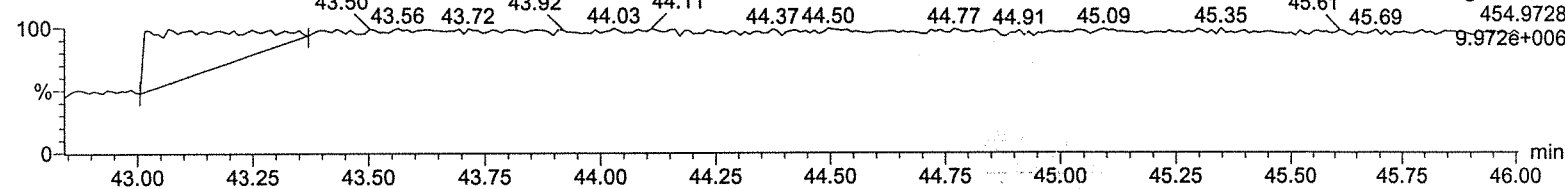
DeDPE

A08JUL19A-7



Lock Mass F5

A08JUL19A-7



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2281849

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.78e6	2.34e6	4.12e6	31.35	1.000	0.76	NO	205.757	0.910	0.884	5.07	0.0469	3.47e7	3058	11358.0	4.56e7	3176	14350.1	bb	bb
2	12378-PeCDD	8.29e6	5.35e6	1.36e7	34.22	1.000	1.55	NO	1009.561	0.862	0.853	1.65	0.130	2.10e8	4103	51087.5	1.33e8	10010	13303.8	bb	bb
3	123478-HxCDD	7.14e6	5.72e6	1.29e7	36.84	1.000	1.25	NO	1030.901	0.969	0.940	3.11	0.258	1.49e8	10705	13935.4	1.18e8	11148	10602.9	bd	bd
4	123678-HxCDD	7.78e6	6.24e6	1.40e7	36.92	1.000	1.25	NO	1026.323	0.969	0.944	2.57	0.240	1.53e8	10705	14298.1	1.25e8	11148	1183.8	dd	dd
5	123789-HxCDD	7.35e6	5.86e6	1.32e7	37.16	1.007	1.25	NO	1026.758	0.952	0.927	3.30	0.253	1.43e8	10705	13389.8	1.15e8	11148	10340.8	dd	dd
6	1234678-HpCDD	5.26e6	5.01e6	1.03e7	40.24	1.000	1.05	NO	1029.037	1.070	1.040	2.88	0.612	8.19e7	13310	6152.6	7.83e7	18608	4207.3	bb	bb
7	OCDD	8.83e6	9.80e6	1.86e7	44.51	1.000	0.90	NO	2036.586	0.989	0.971	2.39	0.715	1.05e8	11377	9196.2	1.17e8	13516	8665.0	bb	bb
8	2378-TCDF	2.10e6	2.75e6	4.85e6	30.67	1.001	0.76	NO	202.186	0.989	0.978	5.59	0.0956	2.82e7	4854	5802.8	3.67e7	5522	6647.2	bb	bb
9	12378-PeCDF	1.23e7	8.04e6	2.04e7	33.40	1.000	1.54	NO	1020.233	0.964	0.945	3.41	0.271	3.19e8	31922	9979.2	2.11e8	13143	16048.5	bb	bb
10	123478-PeCDF	1.38e7	9.07e6	2.29e7	34.02	1.000	1.53	NO	1048.349	1.034	0.987	3.73	0.236	3.64e8	31922	11387.7	2.33e8	13143	17714.6	bb	bb
11	123478-HxCDF	9.95e6	8.17e6	1.81e7	36.12	1.000	1.22	NO	1036.336	1.127	1.087	3.86	0.482	2.21e8	28521	7761.7	1.79e8	32460	5528.1	bd	bd
12	123678-HxCDF	1.06e7	8.66e6	1.93e7	36.22	1.000	1.23	NO	1010.825	1.052	1.041	3.23	0.454	2.29e8	28521	8033.9	1.86e8	32460	5739.4	db	db
13	1234678-HxCDF	1.01e7	8.11e6	1.82e7	36.69	1.000	1.25	NO	1024.664	1.164	1.136	3.17	0.472	2.17e8	28521	7620.3	1.80e8	32460	5559.1	bd	bd
14	123789-HxCDF	8.33e6	6.80e6	1.51e7	37.48	1.000	1.23	NO	1021.587	1.084	1.061	2.29	0.652	1.66e8	28521	5836.8	1.34e8	32460	4119.4	bb	bb
15	1234678-HpCDF	7.47e6	7.34e6	1.48e7	38.98	1.000	1.02	NO	1028.218	1.182	1.150	3.86	0.526	1.33e8	22716	5841.8	1.30e8	21882	5933.2	bb	bb
16	1234789-HpCDF	6.03e6	5.91e6	1.19e7	40.91	1.000	1.02	NO	1022.696	1.229	1.202	1.91	0.765	8.92e7	22716	3925.2	8.80e7	21882	4023.5	bb	bb
17	OCDF	1.11e7	1.25e7	2.35e7	44.80	1.007	0.89	NO	2206.183	1.250	1.133	6.78	0.605	1.31e8	9724	13509.9	1.47e8	14872	9854.1	bb	bb
18	13C-2378-TCDD	9.90e5	1.27e6	2.26e6	31.34	1.015	0.78	NO	103.020	1.162	1.128	2.36	0.109	1.97e7	8334	2369.3	2.52e7	4305	5853.2	bb	bb
19	13C-12378-PeCDD	9.58e5	6.25e5	1.58e6	34.21	1.109	1.53	NO	108.196	0.813	0.751	5.03	0.0899	2.31e7	4492	5145.4	1.50e7	2453	6119.5	bb	bb
20	13C-123478-HxCDD	7.35e5	5.93e5	1.33e6	36.83	0.991	1.24	NO	101.352	0.908	0.896	1.38	0.166	1.50e7	7897	1897.6	1.22e7	6151	1976.9	bd	bd
21	13C-123678-HxCDD	7.98e5	6.49e5	1.45e6	36.91	0.993	1.23	NO	100.457	0.990	0.986	0.84	0.151	1.60e7	7897	2020.5	1.31e7	6151	2136.4	dd	dd
22	13C-1234678-HpCDD	4.87e5	4.73e5	9.60e5	40.23	1.083	1.03	NO	97.789	0.657	0.672	1.29	0.151	7.63e6	4493	1698.8	7.17e6	5124	1399.8	bb	bb
23	13C-OCDD	8.91e5	9.93e5	1.88e6	44.49	1.198	0.90	NO	200.806	0.645	0.642	4.87	0.183	1.02e7	6392	1591.5	1.14e7	4751	2406.3	bd	bd
24	13C-2378-TCDF	1.07e6	1.39e6	2.45e6	30.64	0.993	0.77	NO	100.812	1.260	1.250	1.88	0.164	1.45e7	13730	1053.1	1.91e7	7393	2582.1	bb	bb
25	13C-12378-PeCDF	1.29e6	8.22e5	2.11e6	33.39	1.082	1.57	NO	107.363	1.085	1.011	4.24	0.205	3.23e7	11309	2852.5	2.12e7	10040	2107.4	bb	bb
26	13C-23478-PeCDF	1.36e6	8.59e5	2.22e6	34.01	1.102	1.58	NO	107.006	1.138	1.063	5.28	0.195	3.55e7	11309	3143.2	2.23e7	10040	2223.5	db	db
27	13C-123478-HxCDF	5.56e5	1.05e6	1.61e6	36.11	0.972	0.53	NO	99.083	1.101	1.111	1.42	0.196	1.21e7	11074	1089.3	2.33e7	9505	2456.5	bd	bd
28	13C-123678-HxCDF	6.26e5	1.21e6	1.83e6	36.21	0.975	0.52	NO	100.592	1.254	1.247	1.06	0.174	1.32e7	11074	1193.6	2.46e7	9505	2583.0	dd	dd
29	13C-234678-HxCDF	5.29e5	1.04e6	1.57e6	36.69	0.987	0.51	NO	99.147	1.073	1.082	1.01	0.201	1.15e7	11074	1041.6	2.24e7	9505	2355.3	bd	bd
30	13C-123789-HxCDF	4.81e5	9.15e5	1.40e6	37.47	1.008	0.53	NO	98.821	0.956	0.967	1.08	0.225	9.11e6	11074	822.3	1.74e7	9505	1832.5	bb	bb
31	13C-1234678-HpCDF	3.85e5	8.69e5	1.25e6	38.97	1.049	0.44	NO	98.609	0.858	0.870	1.11	0.141	6.80e6	5478	1240.5	1.53e7	6127	2499.4	bb	bb
32	13C-1234789-HpCDF	2.97e5	6.74e5	9.71e5	40.89	1.101	0.44	NO	98.139	0.665	0.677	1.01	0.181	4.44e6	5478	811.4	9.75e6	6127	1591.7	bb	bb
33	13C-1234-TCDD	8.51e5	1.10e6	1.95e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.123	1.35e7	8334	1618.7	1.69e7	4305	3920.6	bb	bb
34	13C-123789-HxCDD	8.04e5	6.57e5	1.46e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.148	1.56e7	7897	1978.2	1.28e7	6151	2088.1	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	4.40e6	4.40e6	4.40e6	31.35	1.016			212.931	1.130	1.061	4.54	0.0449	8.48e7	4902	17292.5				M	M2	
																						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

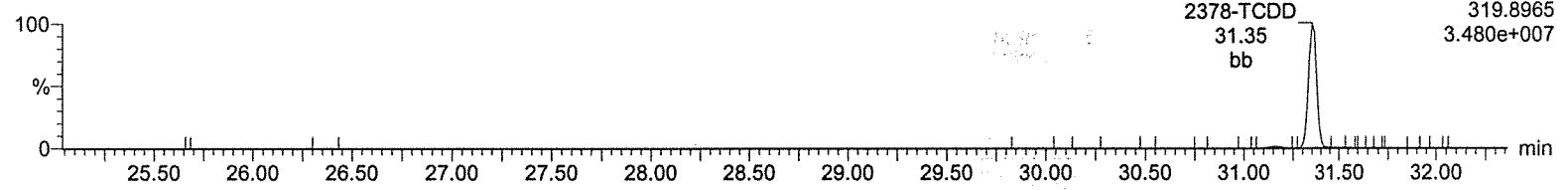
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

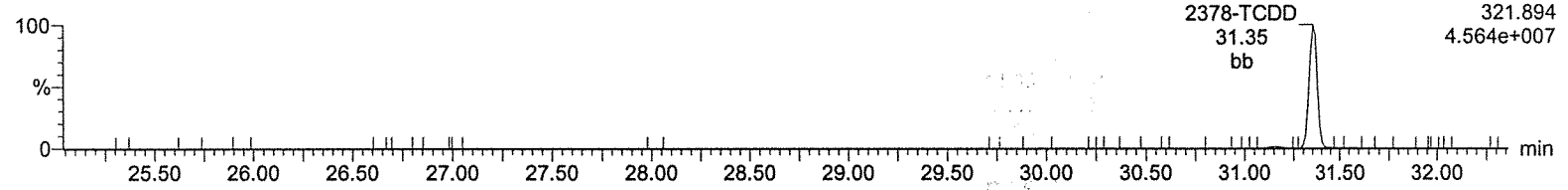
Total-tetradoxins

A08JUL19A-8



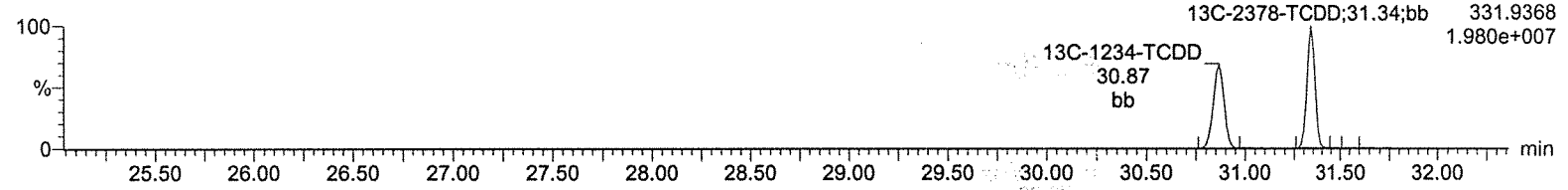
Total-tetradoxins

A08JUL19A-8



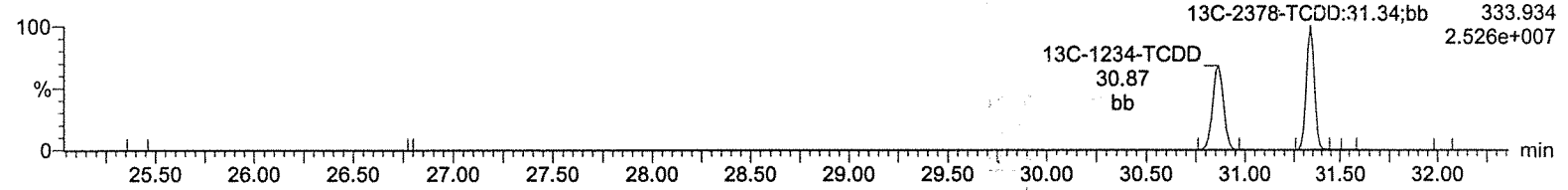
13C-2378-TCDD

A08JUL19A-8



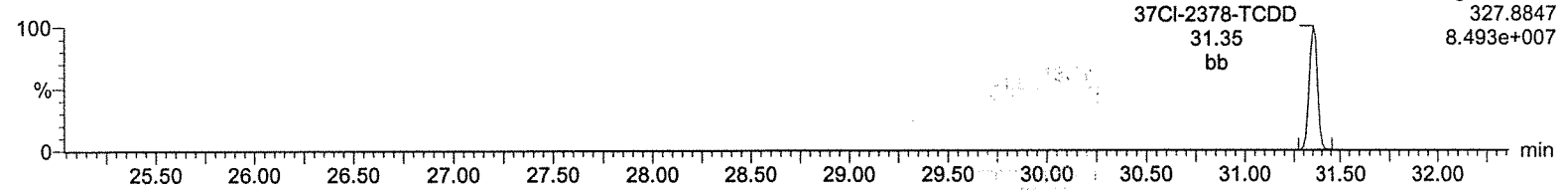
13C-2378-TCDD

A08JUL19A-8



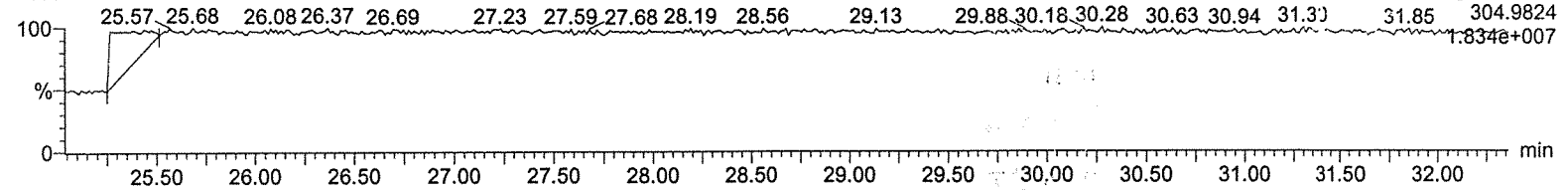
37Cl-2378-TCDD

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

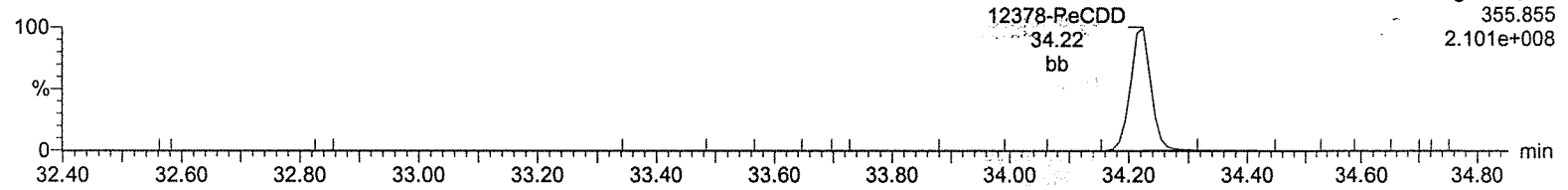
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

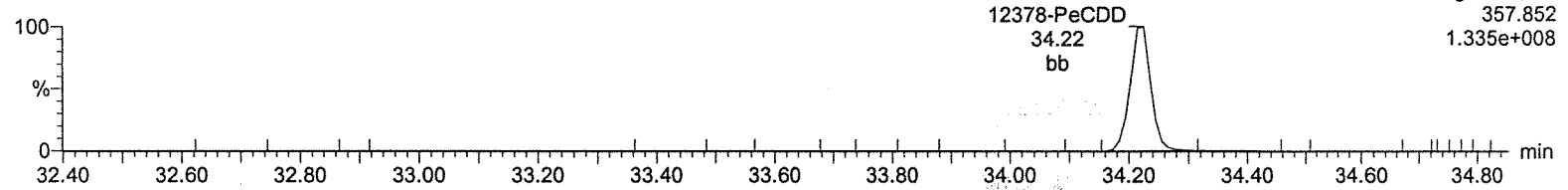
Total-pentadioxins

A08JUL19A-8



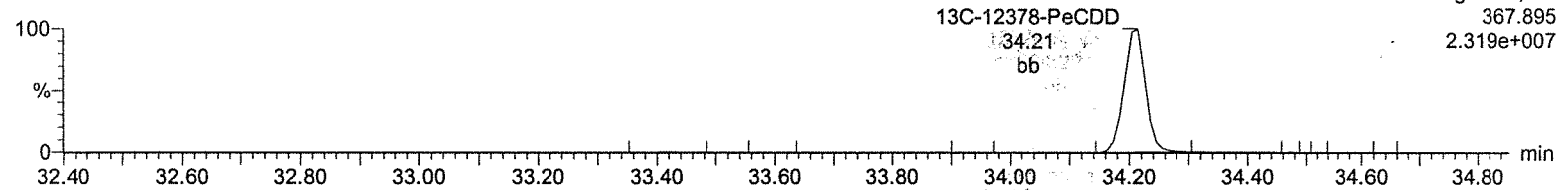
Total-pentadioxins

A08JUL19A-8



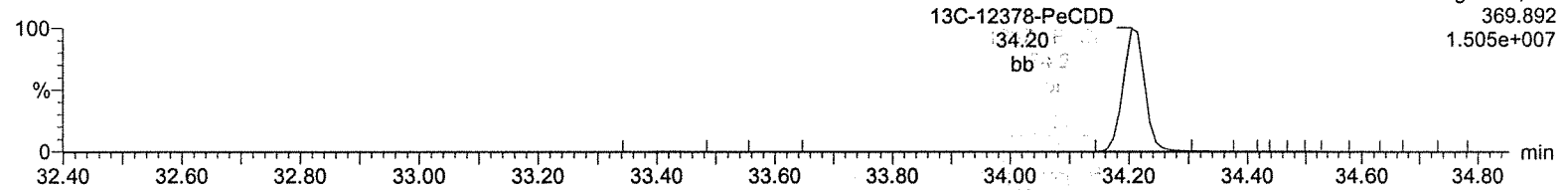
¹³C-12378-PeCDD

A08JUL19A-8



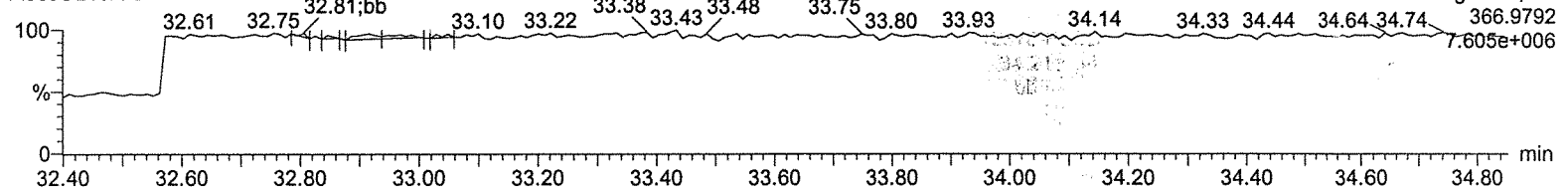
¹³C-12378-PeCDD

A08JUL19A-8



Lock Mass F2

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

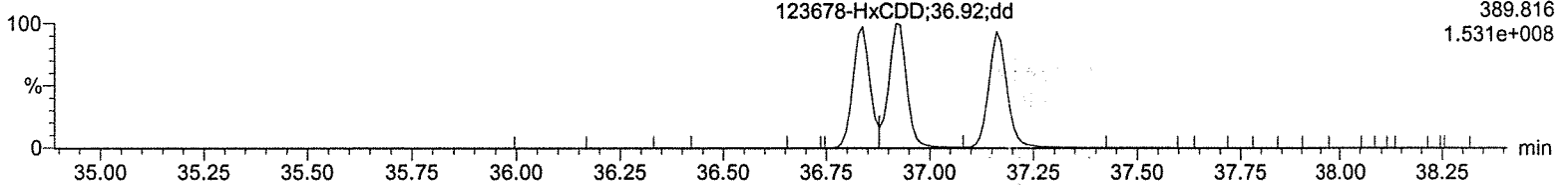
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-hexadioxins

A08JUL19A-8

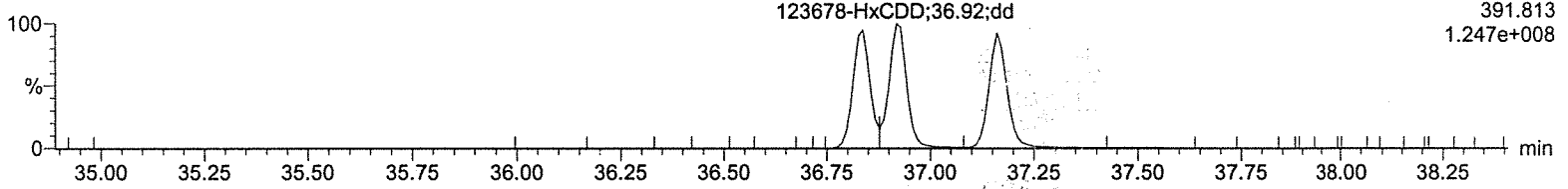
F3:Voltage SIR,EI+
389.816
1.531e+008



Total-hexadioxins

A08JUL19A-8

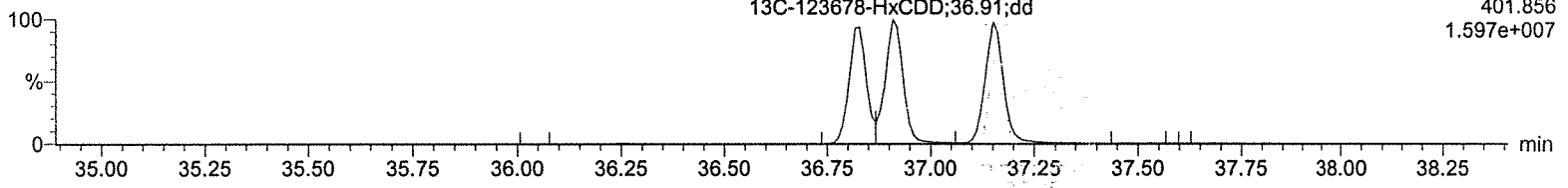
F3:Voltage SIR,EI+
391.813
1.247e+008



13C-123478-HxCDD

A08JUL19A-8

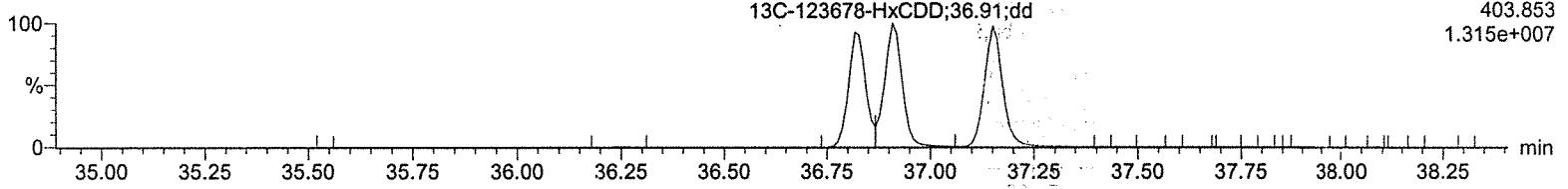
F3:Voltage SIR,EI+
401.856
1.597e+007



13C-123478-HxCDD

A08JUL19A-8

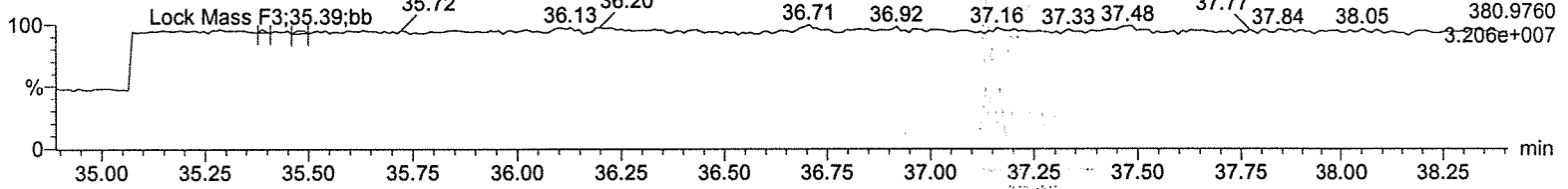
F3:Voltage SIR,EI+
403.853
1.315e+007



Lock Mass F3

A08JUL19A-8

F3:Voltage SIR,EI+
380.9760
3.206e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

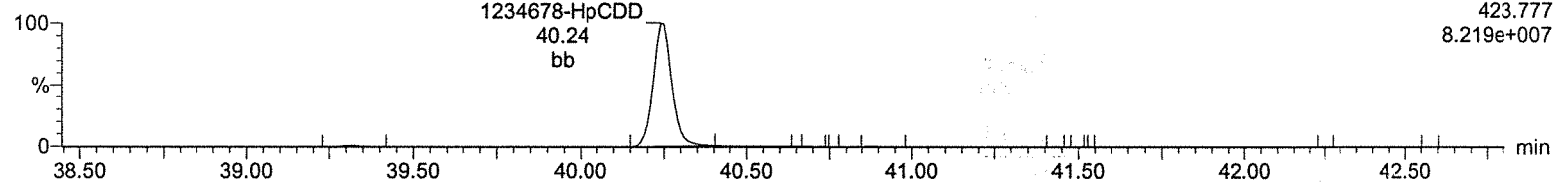
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-heptadioxins

A08JUL19A-8

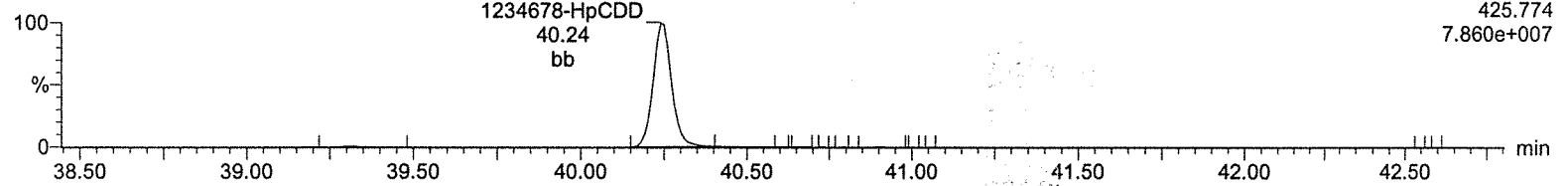
F4:Voltage SIR,EI+
423.777
8.219e+007



Total-heptadioxins

A08JUL19A-8

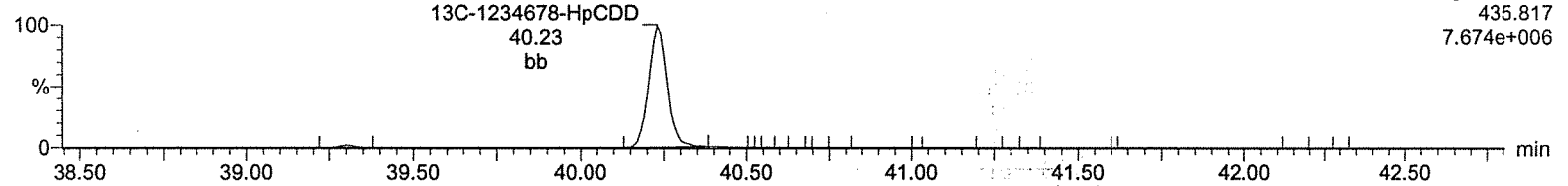
F4:Voltage SIR,EI+
425.774
7.860e+007



13C-1234678-HpCDD

A08JUL19A-8

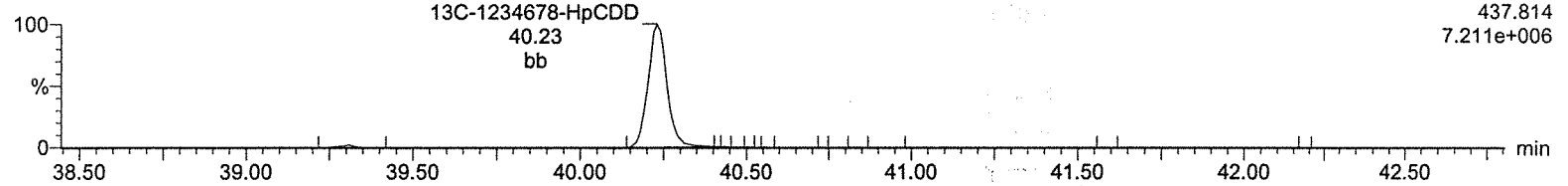
F4:Voltage SIR,EI+
435.817
7.674e+006



13C-1234678-HpCDD

A08JUL19A-8

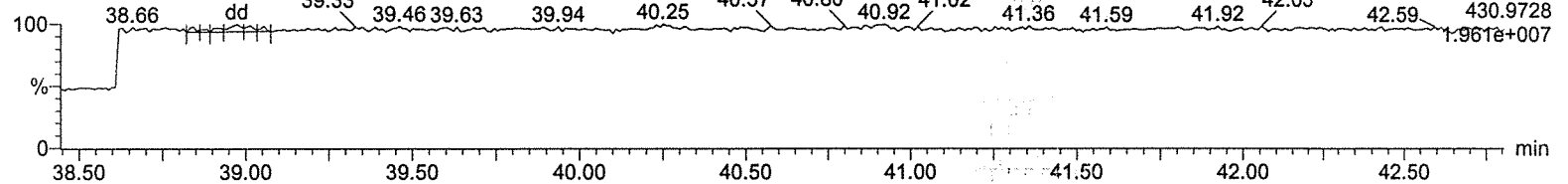
F4:Voltage SIR,EI+
437.814
7.211e+006



Lock Mass F4

A08JUL19A-8

F4:Voltage SIR,EI+
430.9728
1.961e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

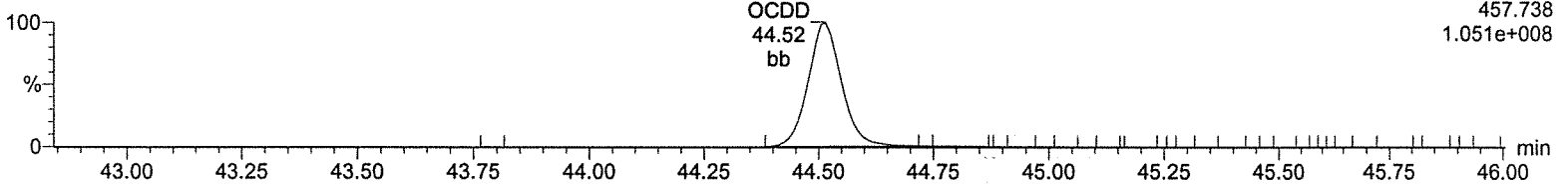
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDD

A08JUL19A-8

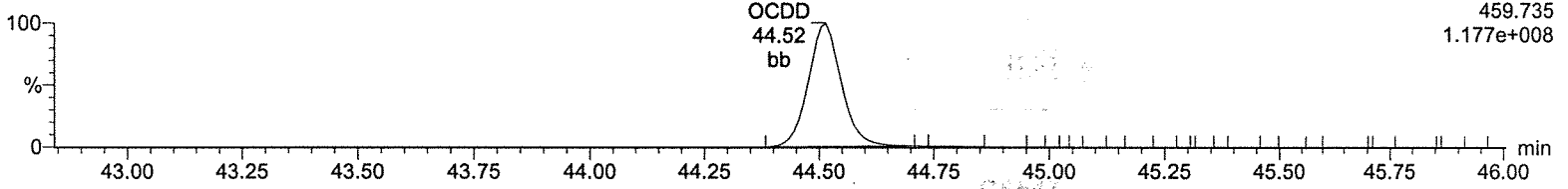
F5:Voltage SIR,EI+
457.738
1.051e+008



OCDD

A08JUL19A-8

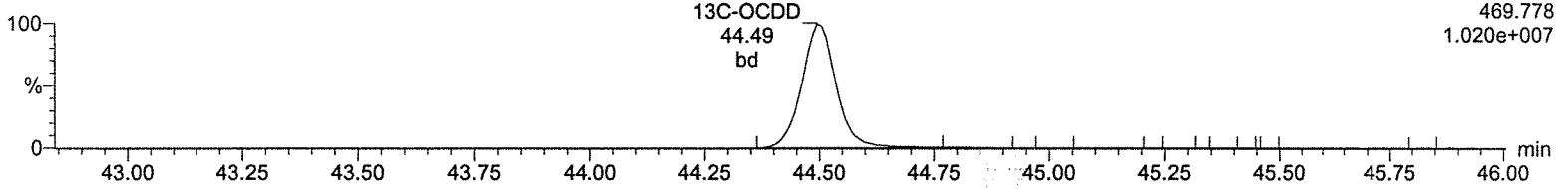
F5:Voltage SIR,EI+
459.735
1.177e+008



13C-OCDD

A08JUL19A-8

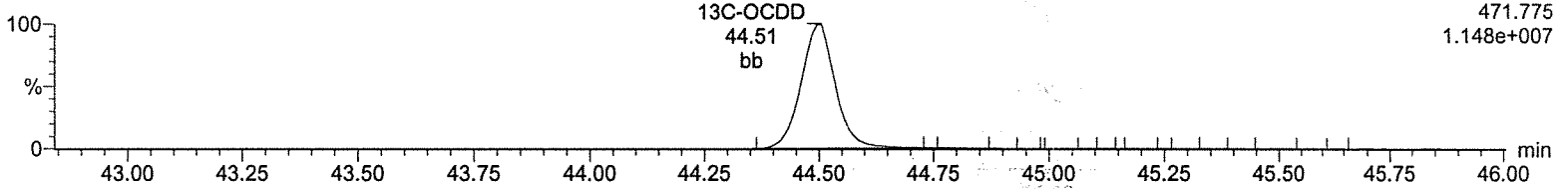
F5:Voltage SIR,EI+
469.778
1.020e+007



13C-OCDD

A08JUL19A-8

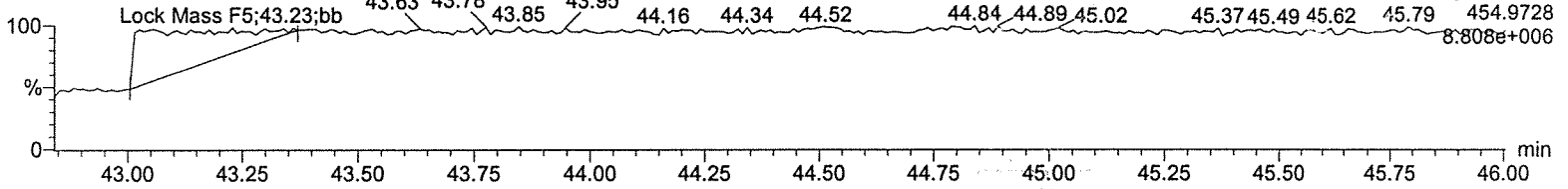
F5:Voltage SIR,EI+
471.775
1.148e+007



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
8.808e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

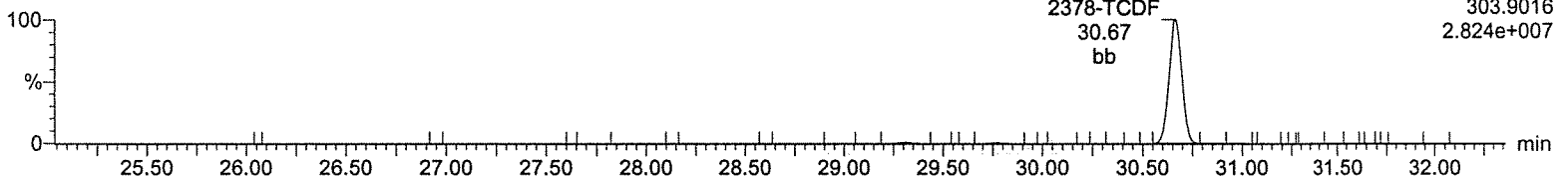
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-tetrafurans

A08JUL19A-8

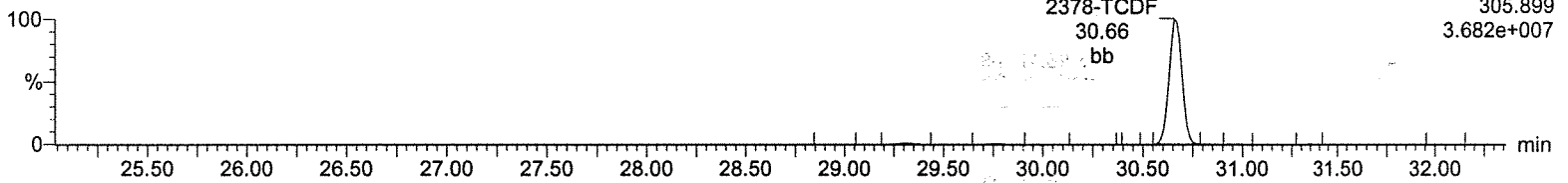
F1:Voltage SIR,EI+
303.9016
2.824e+007



Total-tetrafurans

A08JUL19A-8

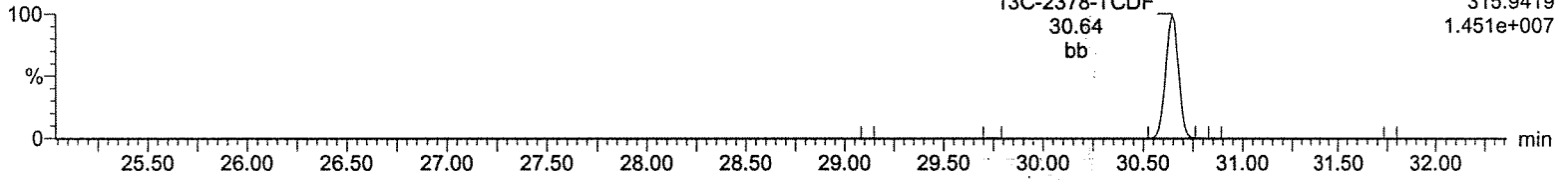
F1:Voltage SIR,EI+
305.899
3.682e+007



13C-2378-TCDF

A08JUL19A-8

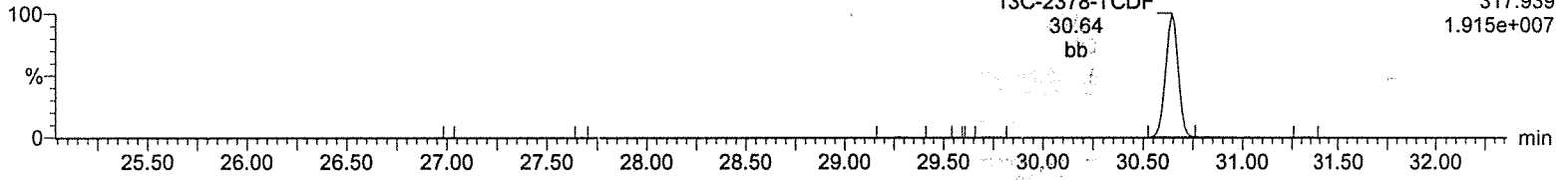
F1:Voltage SIR,EI+
315.9419
1.451e+007



13C-2378-TCDF

A08JUL19A-8

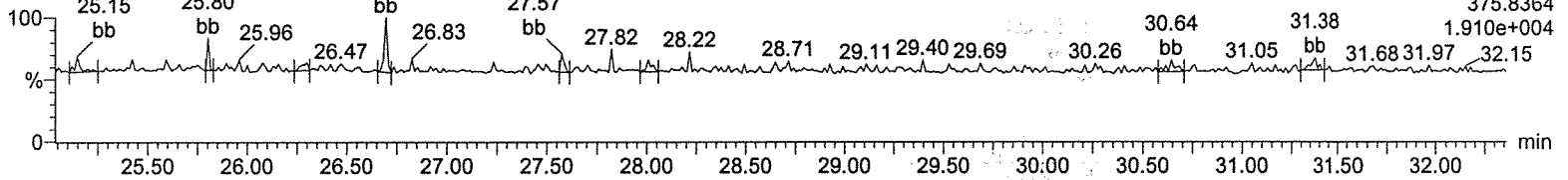
F1:Voltage SIR,EI+
317.939
1.915e+007



HxDPE

A08JUL19A-8

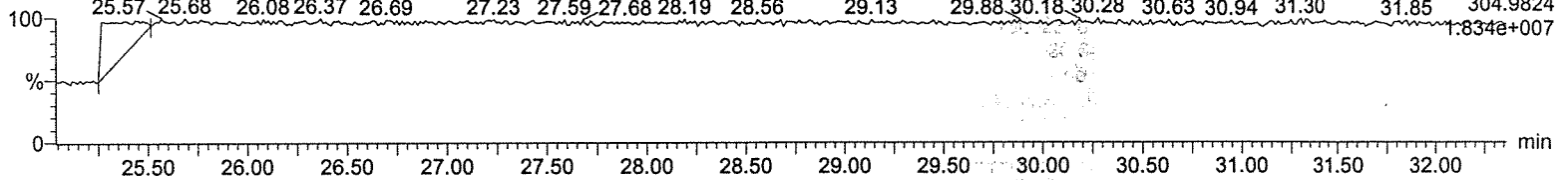
F1:Voltage SIR,EI+
375.8364
1.910e+004



Lock Mass F1

A08JUL19A-8

F1:Voltage SIR,EI+
304.9824
1.834e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

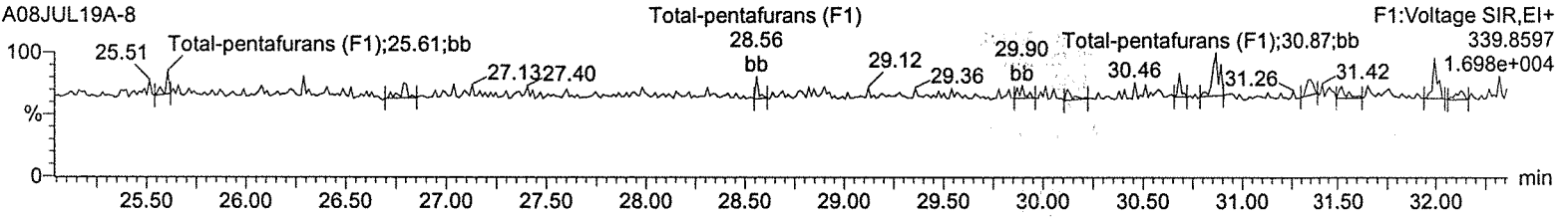
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

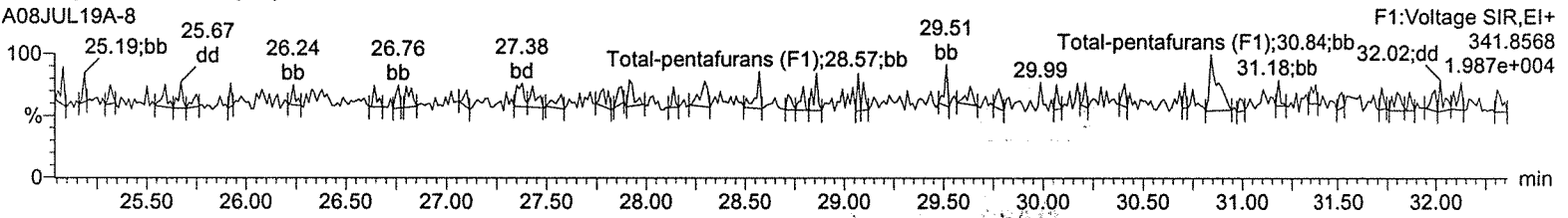
Total-pentafurans (F1)

A08JUL19A-8



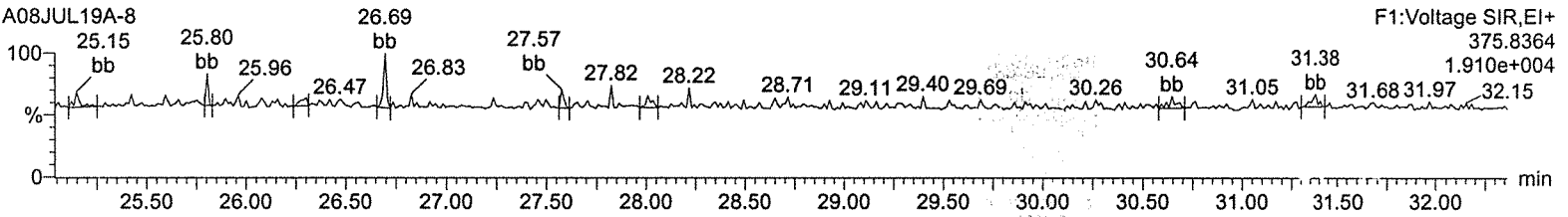
Total-pentafurans (F1)

A08JUL19A-8



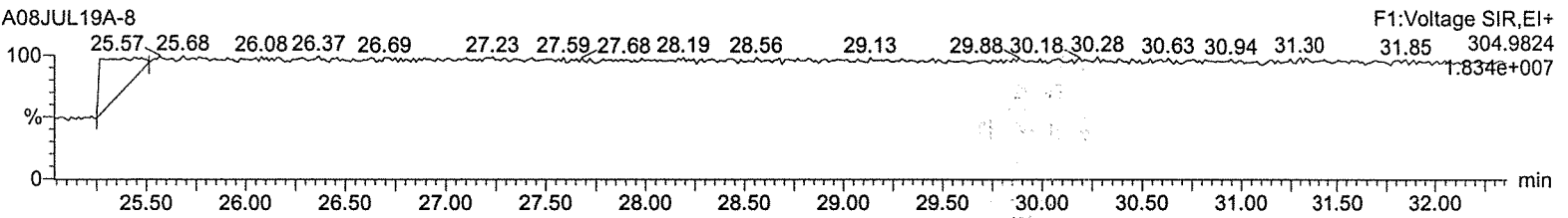
HxDPE

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

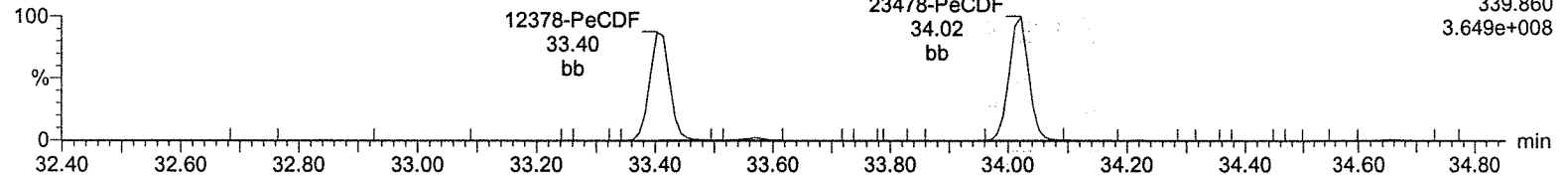
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-pentafurans

A08JUL19A-8

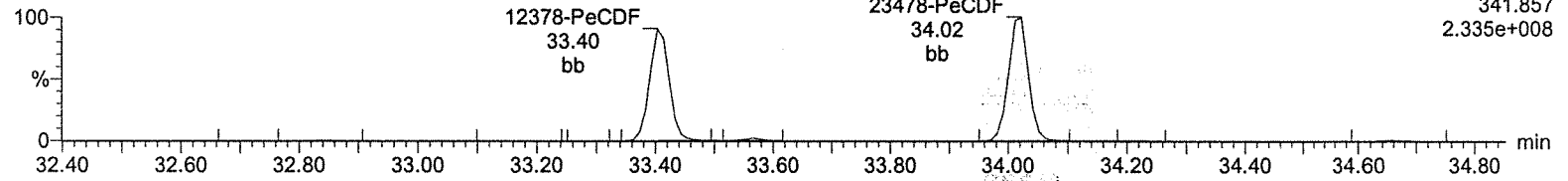
F2:Voltage SIR,EI+
339.860
3.649e+008



Total-pentafurans

A08JUL19A-8

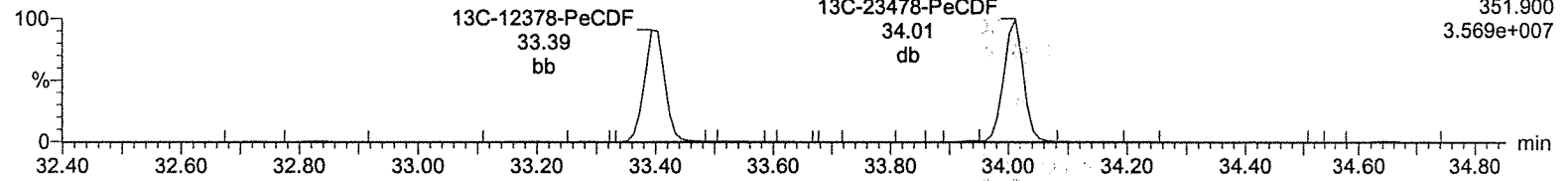
F2:Voltage SIR,EI+
341.857
2.335e+008



13C-12378-PeCDF

A08JUL19A-8

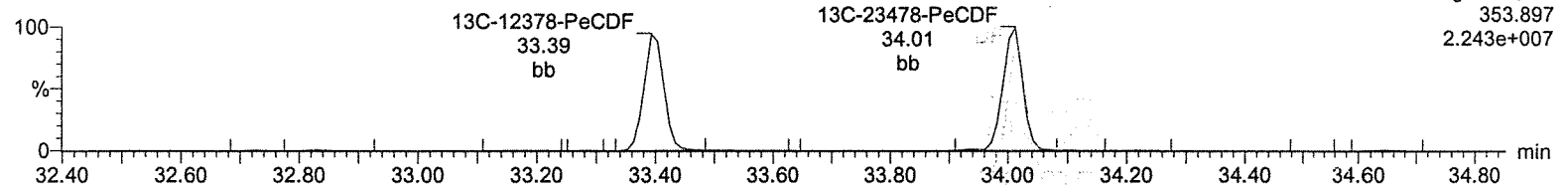
F2:Voltage SIR,EI+
351.900
3.569e+007



13C-12378-PeCDF

A08JUL19A-8

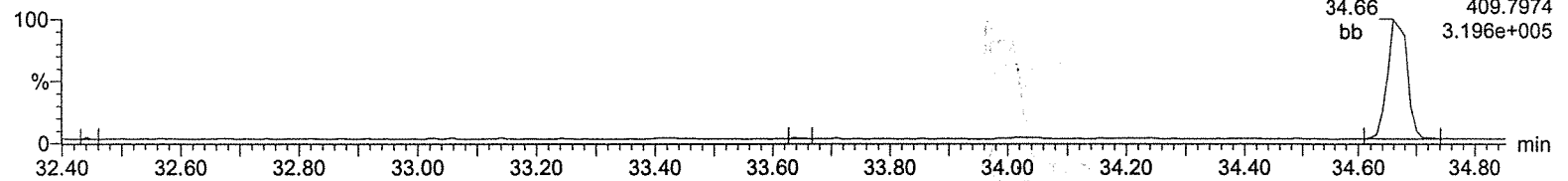
F2:Voltage SIR,EI+
353.897
2.243e+007



HpDPE

A08JUL19A-8

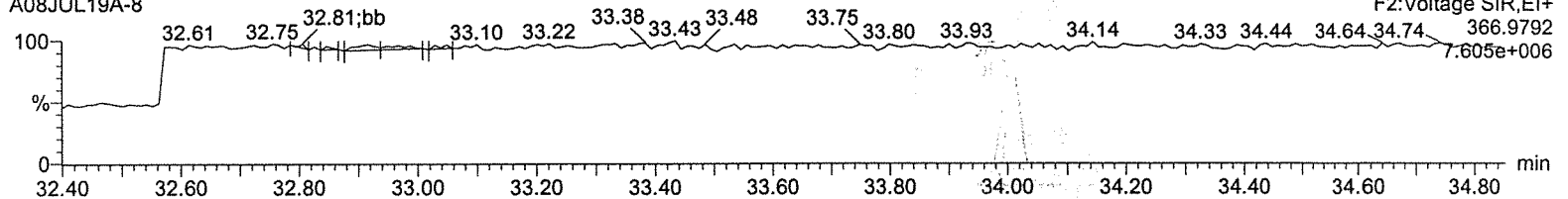
F2:Voltage SIR,EI+
34.66
409.7974
3.196e+005



Lock Mass F2

A08JUL19A-8

F2:Voltage SIR,EI+
366.9792
7.605e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

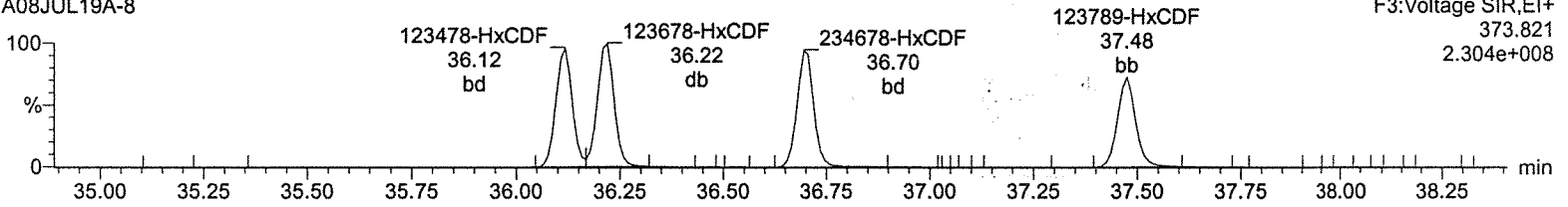
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

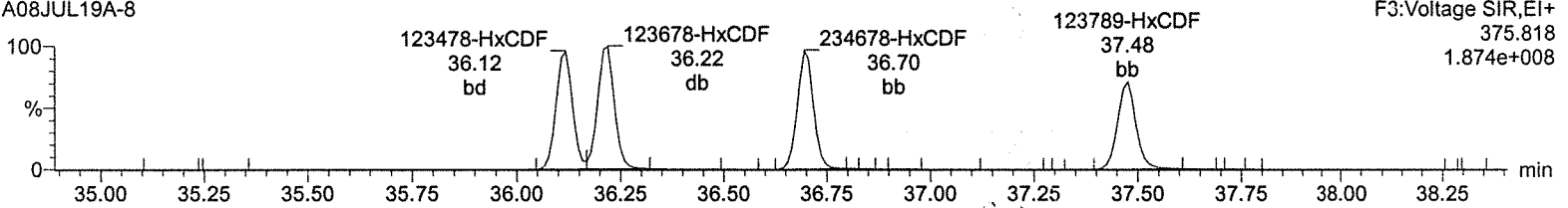
Total-hexafurans

A08JUL19A-8



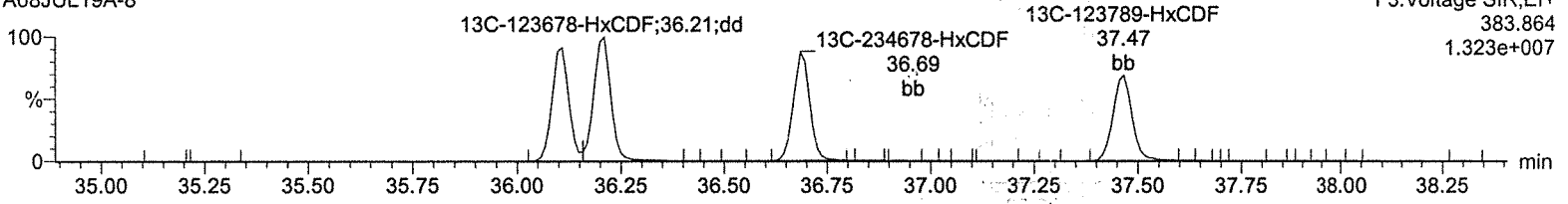
Total-hexafurans

A08JUL19A-8



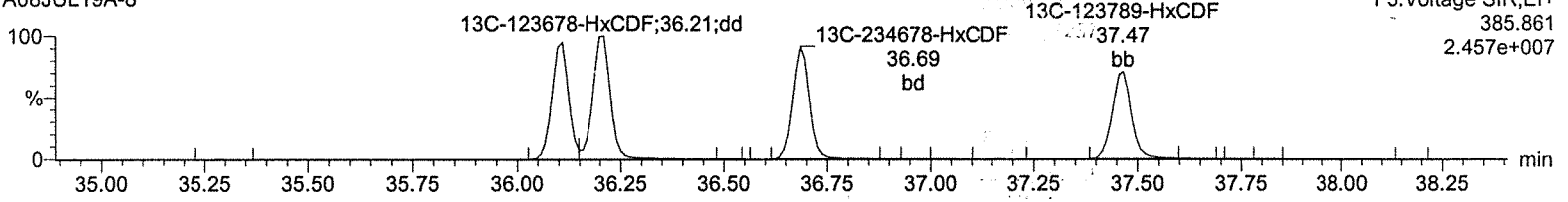
13C-123478-HxCDF

A08JUL19A-8



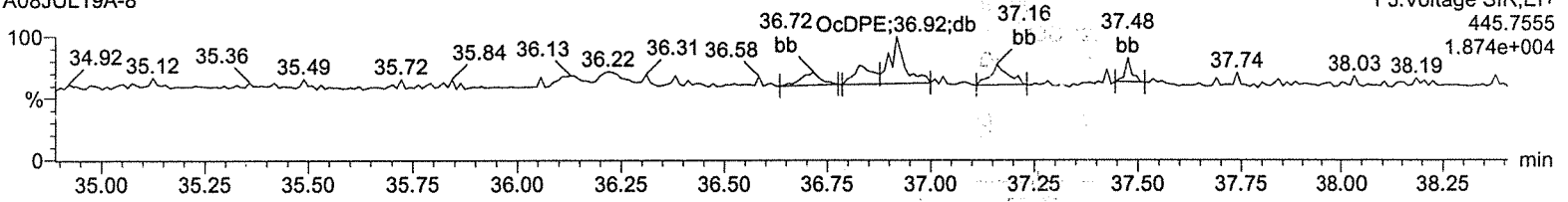
13C-123478-HxCDF

A08JUL19A-8



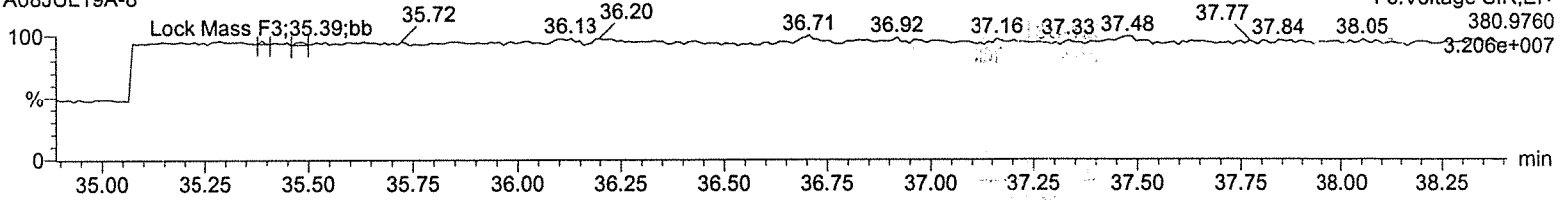
OcDPE

A08JUL19A-8



Lock Mass F3

A08JUL19A-8



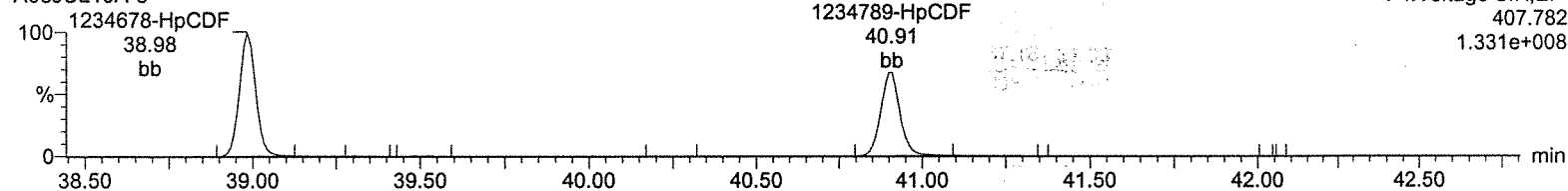
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

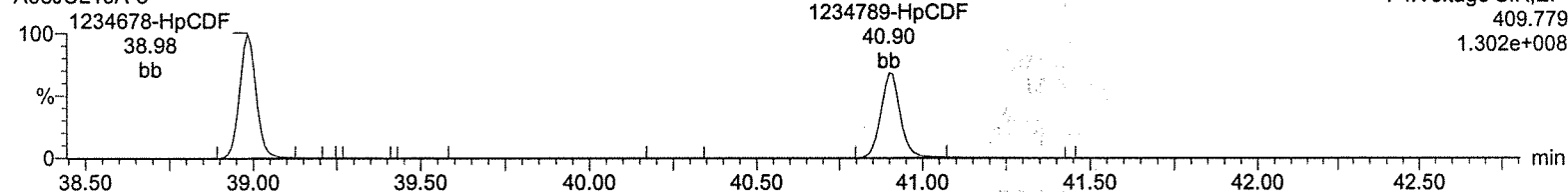
Total-heptafurans

A08JUL19A-8



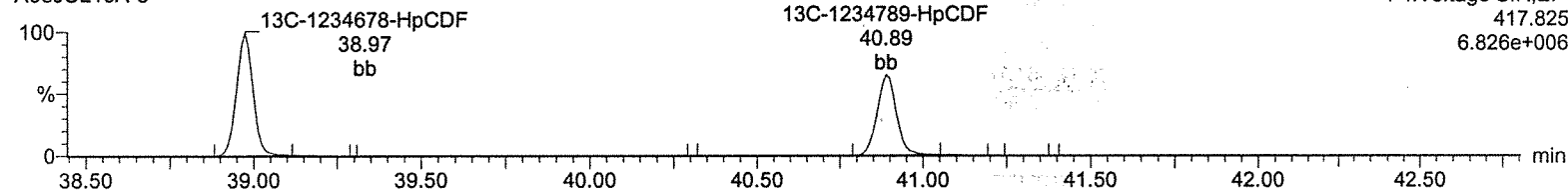
Total-heptafurans

A08JUL19A-8



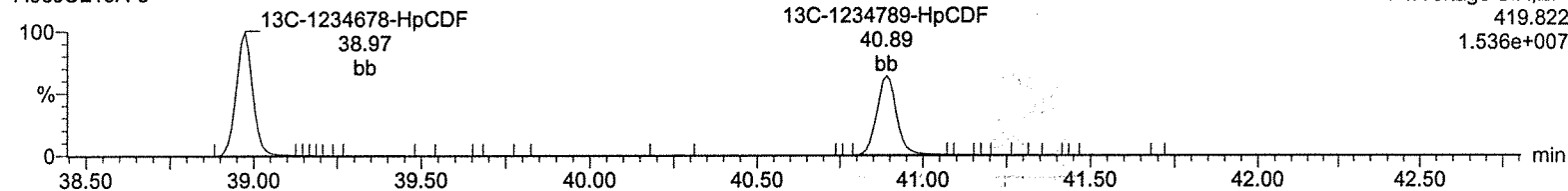
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A08JUL19A-8



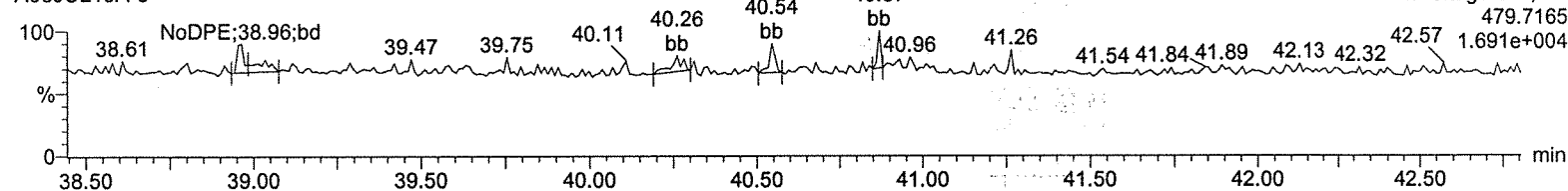
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A08JUL19A-8



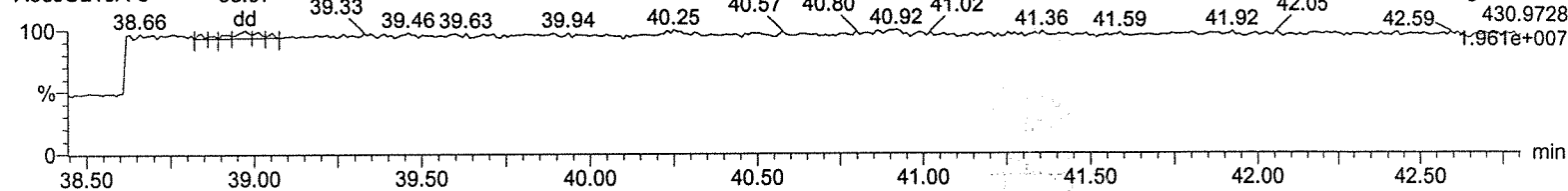
NoDPE

A08JUL19A-8



Lock Mass F4

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

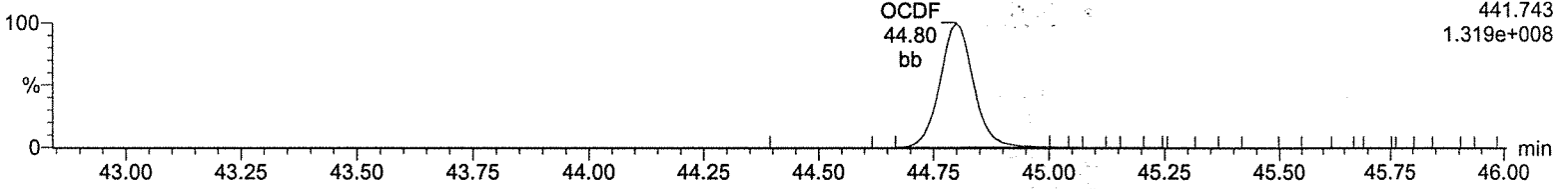
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDF

A08JUL19A-8

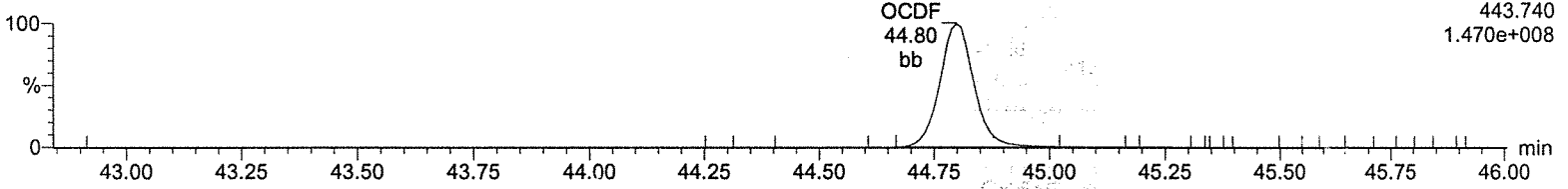
F5:Voltage SIR,EI+
441.743
1.319e+008



OCDF

A08JUL19A-8

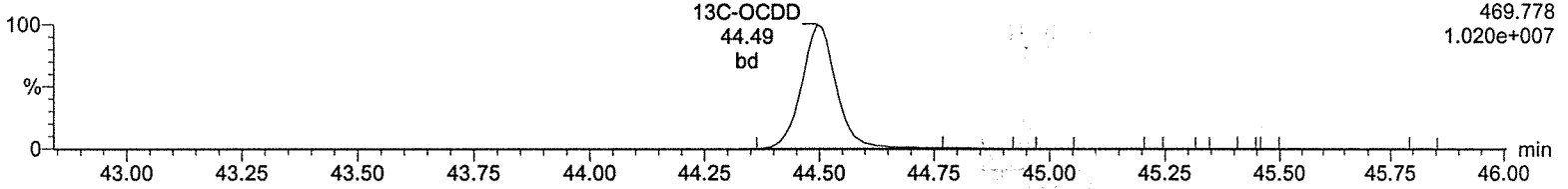
F5:Voltage SIR,EI+
443.740
1.470e+008



13C-OCDD

A08JUL19A-8

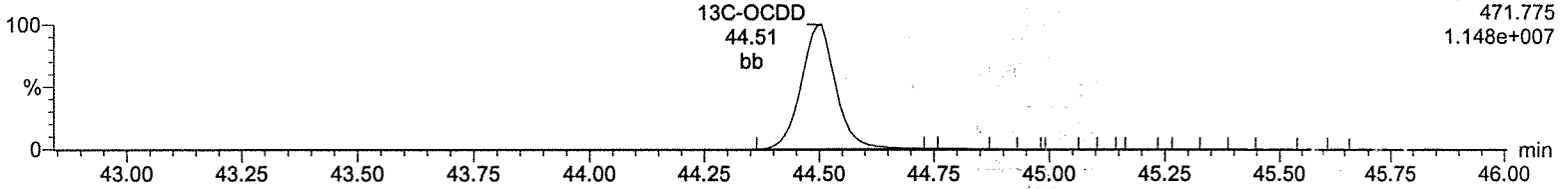
F5:Voltage SIR,EI+
469.778
1.020e+007



13C-OCDD

A08JUL19A-8

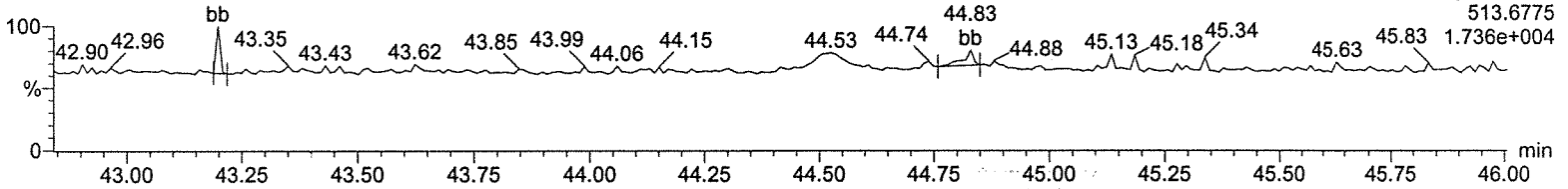
F5:Voltage SIR,EI+
471.775
1.148e+007



DeDPE

A08JUL19A-8

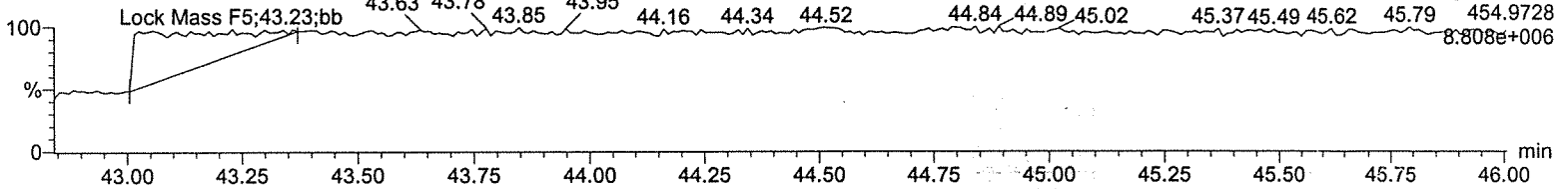
F5:Voltage SIR,EI+
513.6775
1.736e+004



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
454.9728
8.808e+006



Quantify Sample Summary Report
 Method 1613 CCAL Report
 MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Bill Gull

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.41e5	1.82e5	3.24e5	31.35	1.000	0.77	NO	9.832	0.0339	0.870	0.884	-1.7	2.69e6	3060	878.9	3.53e6	5470	645.8	db	db
2	12378-PeCDD	6.28e5	4.05e5	1.03e6	34.21	1.000	1.55	NO	49.971	0.0946	0.853	0.853	-0.1	1.53e7	12457	1224.5	9.64e6	6367	1513.5	bb	bb
3	123478-HxCDD	5.43e5	4.16e5	9.59e5	36.83	1.003	1.31	NO	51.806	0.105	0.974	0.940	3.6	1.08e7	8144	1328.2	8.57e6	8244	1039.0	bd	bd
4	123678-HxCDD	5.67e5	4.68e5	1.03e6	36.92	1.000	1.21	NO	49.386	0.103	0.932	0.944	-1.2	1.12e7	8144	1379.0	9.12e6	8244	1106.7	dd	dd
5	123789-HxCDD	5.58e5	4.36e5	9.94e5	37.16	1.007	1.28	NO	51.189	0.106	0.949	0.927	2.4	1.07e7	8144	1312.0	8.23e6	8244	998.2	dd	db
6	1234678-HpCDD	3.98e5	3.76e5	7.74e5	40.24	1.000	1.06	NO	49.581	0.150	1.031	1.040	-0.8	5.98e6	7083	844.3	5.67e6	6641	854.3	bd	bd
7	OCDD	6.28e5	7.01e5	1.33e6	44.51	1.000	0.90	NO	102.285	0.401	0.994	0.971	2.3	6.90e6	17082	404.1	7.71e6	5735	1344.7	bd	bd
8	2378-TCDF	1.72e5	2.22e5	3.94e5	30.66	1.000	0.77	NO	9.823	0.0430	0.961	0.978	-1.8	2.30e6	3145	731.2	2.96e6	5788	511.5	bb	bb
9	12378-PeCDF	9.44e5	6.09e5	1.55e6	33.40	1.000	1.55	NO	50.062	0.0563	0.946	0.945	0.1	2.45e7	10653	2295.4	1.55e7	7239	2135.3	bb	bb
10	23478-PeCDF	1.04e6	6.88e5	1.73e6	34.01	1.000	1.51	NO	50.564	0.0527	0.998	0.987	1.1	2.61e7	10653	2446.1	1.76e7	7239	2425.8	bb	bb
11	123478-HxCDF	7.43e5	6.15e5	1.36e6	36.11	1.000	1.21	NO	50.445	0.0894	1.097	1.087	0.9	1.57e7	9481	1652.2	1.28e7	11235	1143.5	bd	bd
12	123678-HxCDF	8.06e5	6.66e5	1.47e6	36.21	1.000	1.21	NO	50.994	0.0885	1.061	1.041	2.0	1.68e7	9481	1768.9	1.39e7	11235	1235.2	db	db
13	234678-HxCDF	7.55e5	6.18e5	1.37e6	36.70	1.000	1.22	NO	50.671	0.0922	1.151	1.136	1.3	1.58e7	9481	1664.0	1.25e7	11235	1111.0	bb	bb
14	123789-HxCDF	6.33e5	5.14e5	1.15e6	37.47	1.000	1.23	NO	50.766	0.123	1.077	1.061	1.5	1.12e7	9481	1180.5	9.35e6	11235	832.1	bd	bb
15	1234678-HpCDF	5.58e5	5.57e5	1.12e6	38.98	1.001	1.00	NO	50.942	0.0954	1.171	1.150	1.9	9.40e6	6651	1412.9	9.27e6	7143	1297.6	bb	bd
16	1234789-HpCDF	4.59e5	4.46e5	9.05e5	40.90	1.000	1.03	NO	50.253	0.138	1.208	1.202	0.5	6.56e6	6651	985.8	6.41e6	7143	896.9	bb	bd
17	OCDF	7.28e5	8.04e5	1.53e6	44.79	1.007	0.91	NO	101.154	0.168	1.146	1.133	1.2	8.07e6	4510	1788.9	8.87e6	6658	1332.1	bd	bb
18	13C-2378-TCDD	1.62e6	2.10e6	3.72e6	31.34	1.015	0.77	NO	100.391	0.0536	1.133	1.128	0.4	3.09e7	7595	4072.7	4.03e7	4391	9166.0	bb	bb
19	13C-12378-PeCDD	1.47e6	9.56e5	2.42e6	34.20	1.108	1.53	NO	98.091	0.0648	0.737	0.751	-1.9	3.53e7	4920	7177.0	2.29e7	4727	4839.8	bb	bb
20	13C-123478-HxCDD	1.09e6	8.81e5	1.97e6	36.82	0.991	1.24	NO	99.188	0.128	0.889	0.896	-0.8	2.29e7	5728	3998.3	1.85e7	12292	1505.5	bd	bd
21	13C-123678-HxCDD	1.22e6	9.99e5	2.22e6	36.91	0.993	1.22	NO	101.615	0.116	1.002	0.986	1.6	2.32e7	5728	4044.5	1.91e7	12292	1555.2	dd	dd
22	13C-1234678-HpCDD	7.66e5	7.34e5	1.50e6	40.23	1.083	1.04	NO	100.813	0.141	0.677	0.672	0.8	1.12e7	8086	1388.7	1.07e7	6816	1575.1	bd	bd
23	13C-OCDD	1.26e6	1.42e6	2.67e6	44.49	1.197	0.89	NO	187.951	0.195	0.603	0.642	-6.0	1.38e7	9703	1418.2	1.56e7	10005	1564.1	bb	bb
24	13C-2378-TCDF	1.79e6	2.31e6	4.10e6	30.64	0.993	0.78	NO	99.787	0.0758	1.247	1.250	-0.2	2.32e7	12127	1915.0	3.00e7	6648	4519.7	bb	bb
25	13C-12378-PeCDF	2.01e6	1.27e6	3.28e6	33.39	1.082	1.58	NO	98.830	0.132	0.999	1.011	-1.2	5.15e7	10054	5118.1	3.27e7	16300	2004.3	bb	bb
26	13C-23478-PeCDF	2.12e6	1.34e6	3.48e6	34.00	1.102	1.58	NO	99.016	0.125	1.053	1.063	-1.0	5.26e7	10054	5234.8	3.35e7	16300	2054.1	bb	bb
27	13C-123478-HxCDF	8.52e5	1.62e6	2.48e6	36.10	0.972	0.53	NO	100.589	0.156	1.117	1.111	0.6	1.83e7	10145	1807.7	3.44e7	17090	2014.8	bd	bd
28	13C-123678-HxCDF	9.54e5	1.82e6	2.77e6	36.20	0.974	0.52	NO	100.412	0.139	1.252	1.247	0.4	1.93e7	10145	1906.8	3.71e7	17090	2170.1	dd	dd
29	13C-234678-HxCDF	8.17e5	1.57e6	2.39e6	36.69	0.987	0.52	NO	99.533	0.160	1.077	1.082	-0.5	1.69e7	10145	1670.0	3.21e7	17090	1878.8	bb	bb
30	13C-123789-HxCDF	7.27e5	1.40e6	2.13e6	37.46	1.008	0.52	NO	99.456	0.179	0.962	0.967	-0.5	1.36e7	10145	1338.3	2.55e7	17090	1490.9	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	5.97e5	1.31e6	1.90e6	38.96	1.049	0.46	NO	98.762	0.113	0.859	0.870	-1.2	9.86e6	5992	1645.9	2.20e7	9443	2325.7	bd	bb
32	13C-1234789-HpCDF	4.61e5	1.04e6	1.50e6	40.88	1.100	0.44	NO	99.800	0.145	0.676	0.677	-0.2	6.40e6	5992	1068.7	1.42e7	9443	1505.6	bd	bb
33	13C-1234-TCDD	1.43e6	1.85e6	3.29e6	30.87	0.000	0.77	NO	100.000	0.0605	1.000	1.000	0.0	2.16e7	7595	2846.5	2.76e7	4391	6279.9	bb	bb
34	13C-123789-HxCDD	1.22e6	9.94e5	2.22e6	37.15	0.000	1.23	NO	100.000	0.114	1.000	1.000	0.0	2.17e7	5728	3793.8	1.77e7	12292	1436.7	dd	dd
35	37Cl-2378-TCDD	3.41e5		3.41e5	31.35	1.016			9.764	0.0169	1.036	1.061	-2.4	6.62e6	3545	1868.0				db	

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

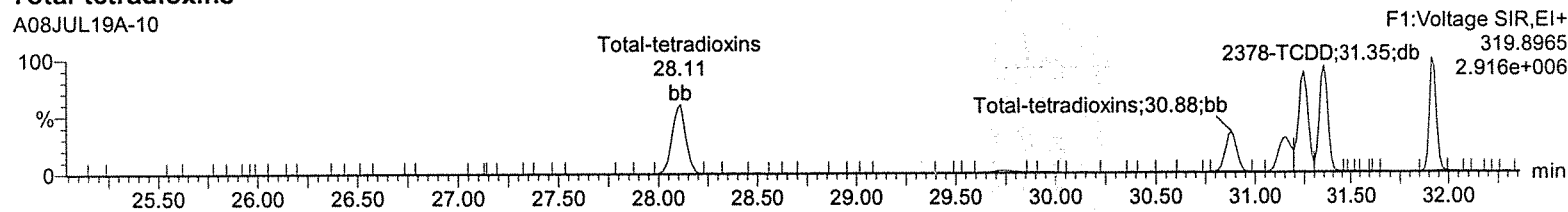
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

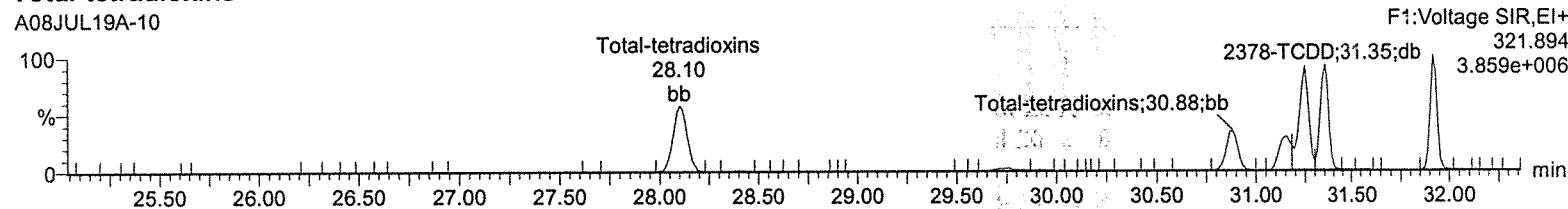
Total-tetradoxins

A08JUL19A-10



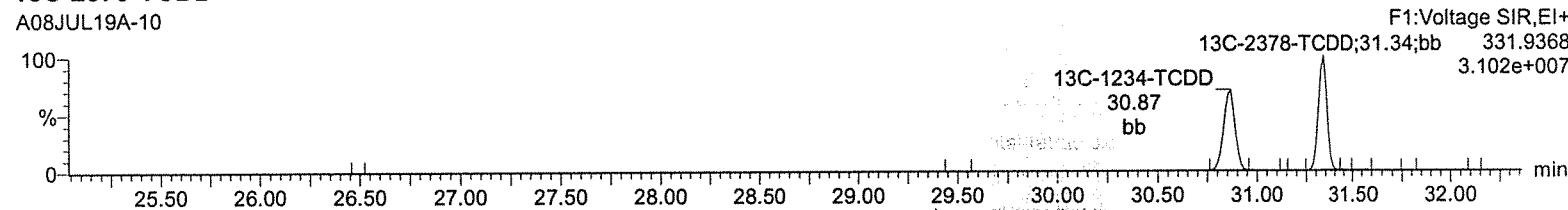
Total-tetradoxins

A08JUL19A-10



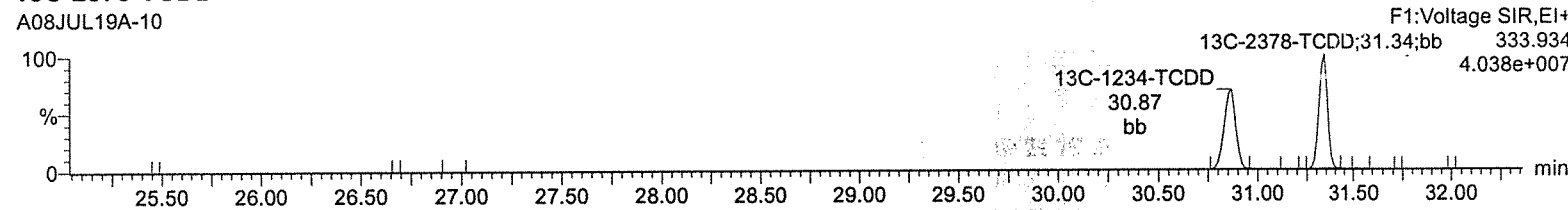
13C-2378-TCDD

A08JUL19A-10



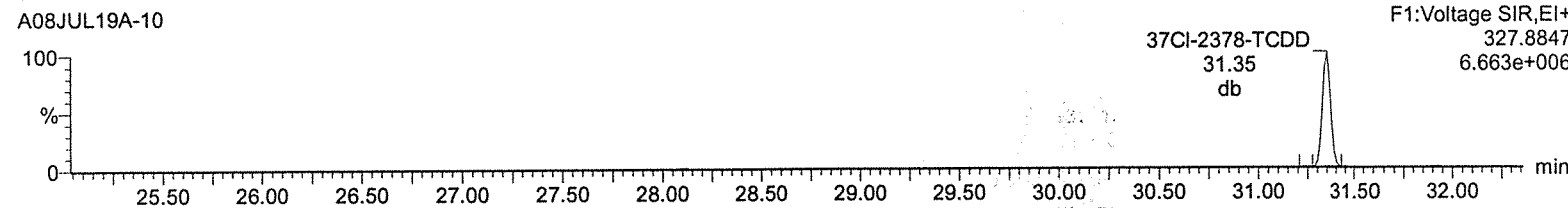
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A08JUL19A-10



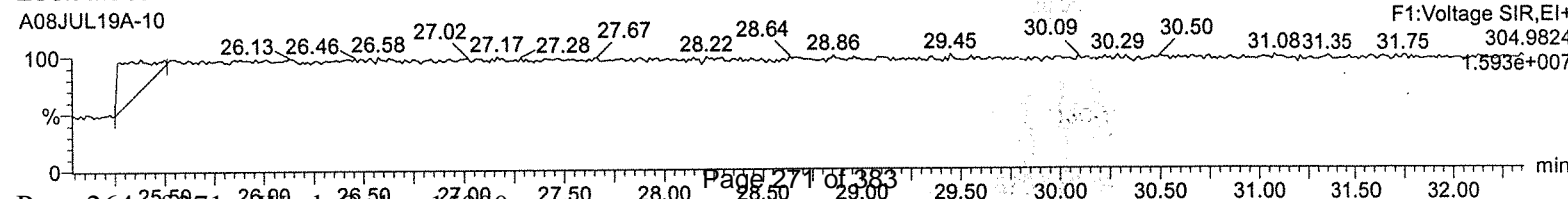
37Cl-2378-TCDD

A08JUL19A-10



Lock Mass F1

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

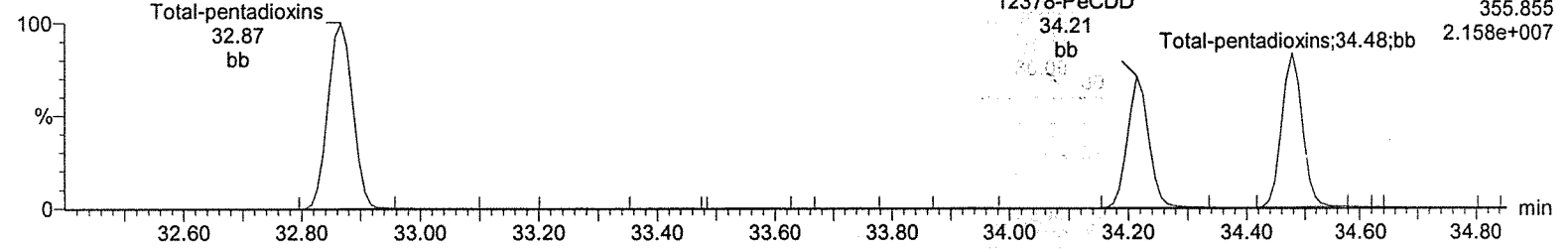
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

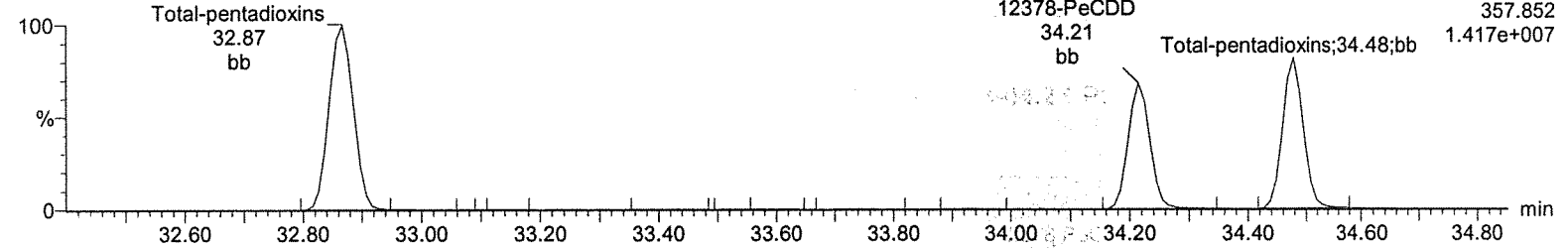
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A08JUL19A-10



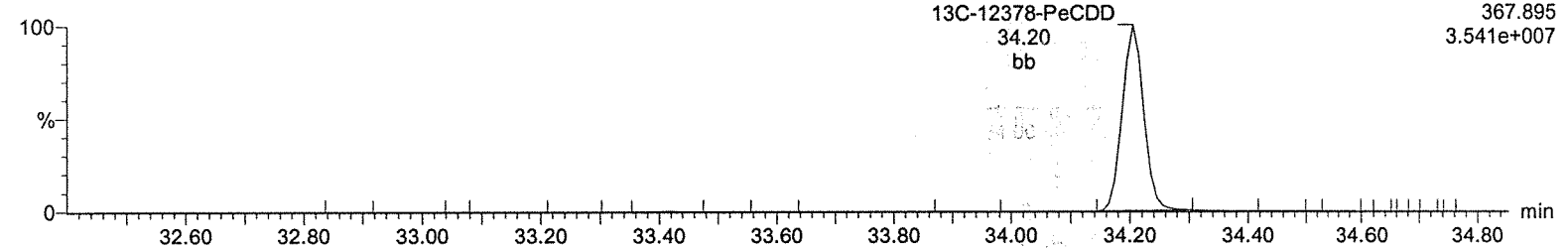
Total-pentadioxins

A08JUL19A-10



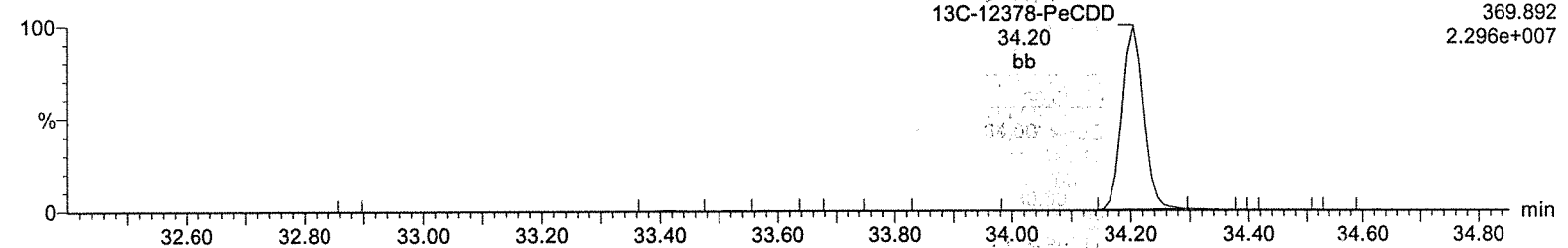
13C-12378-PeCDD

A08JUL19A-10



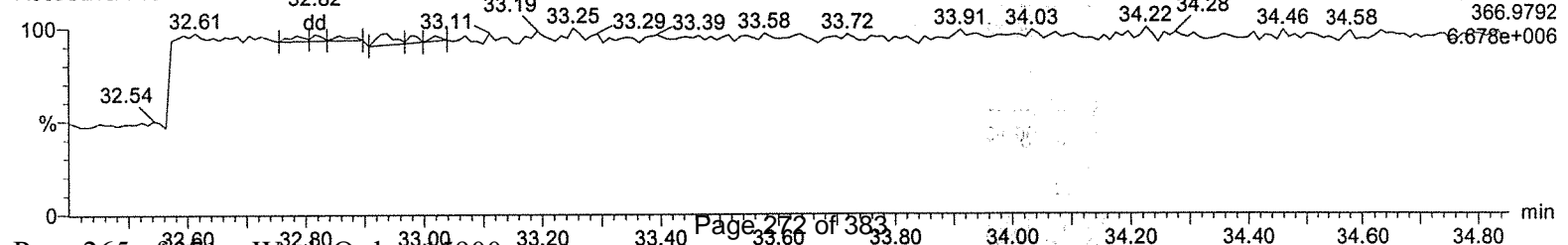
13C-12378-PeCDD

A08JUL19A-10



Lock Mass F2

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

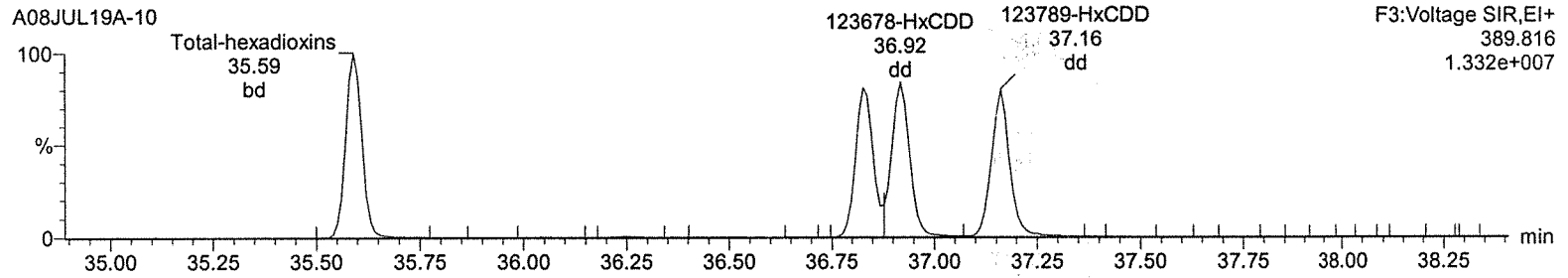
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

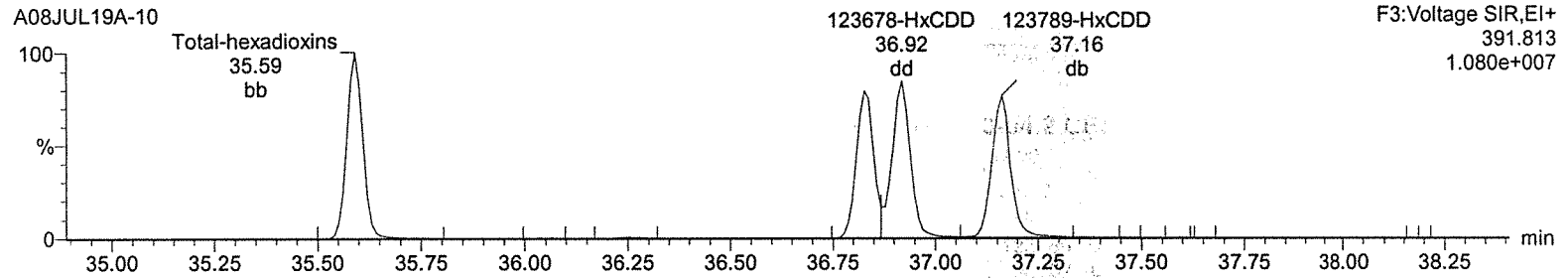
Total-hexadioxins

A08JUL19A-10



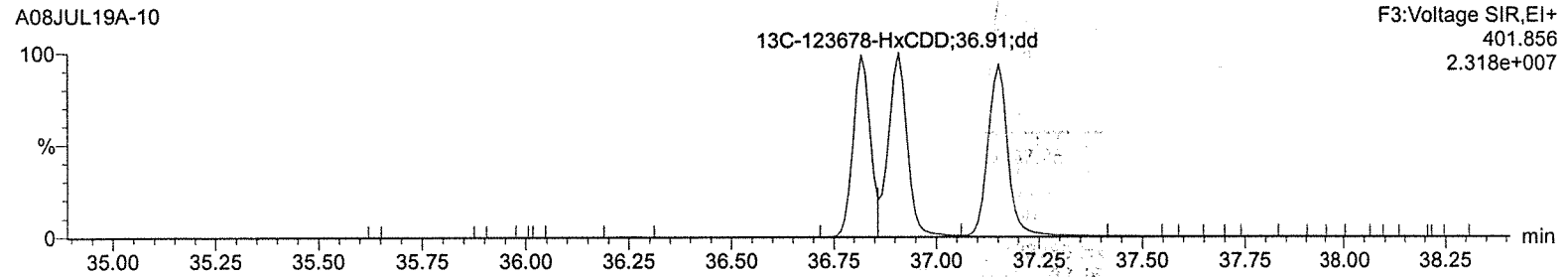
Total-hexadioxins

A08JUL19A-10



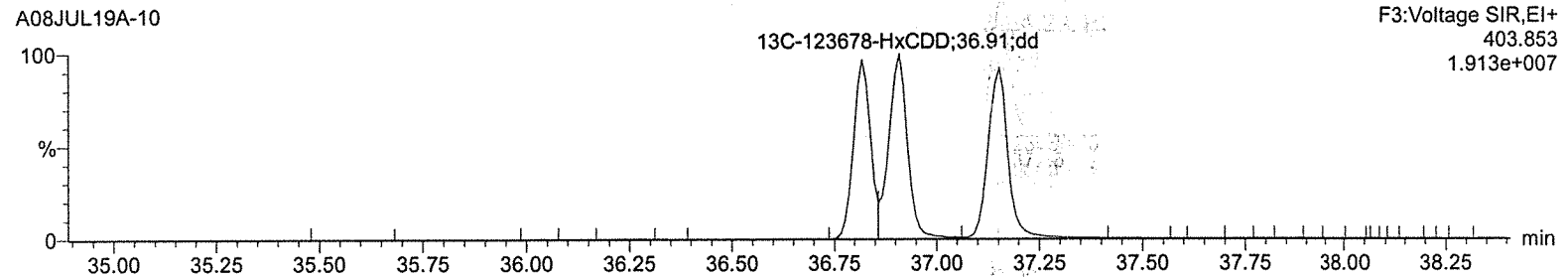
13C-123478-HxCDD

A08JUL19A-10



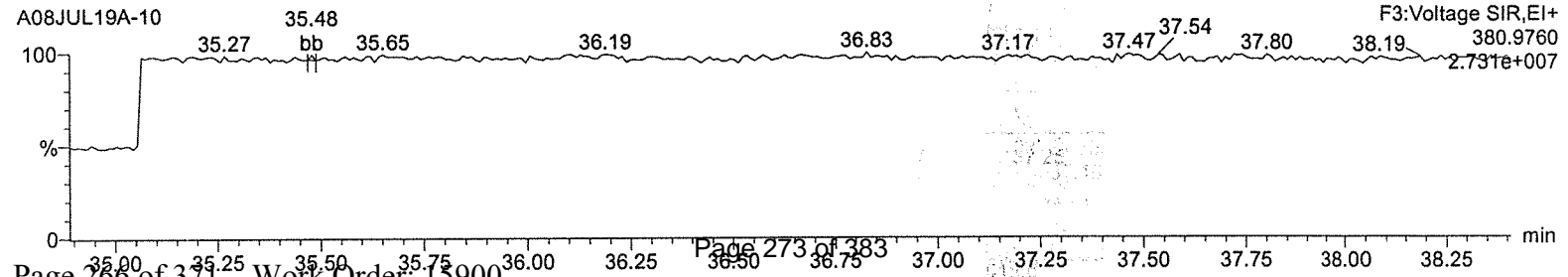
13C-123478-HxCDD

A08JUL19A-10



Lock Mass F3

A08JUL19A-10



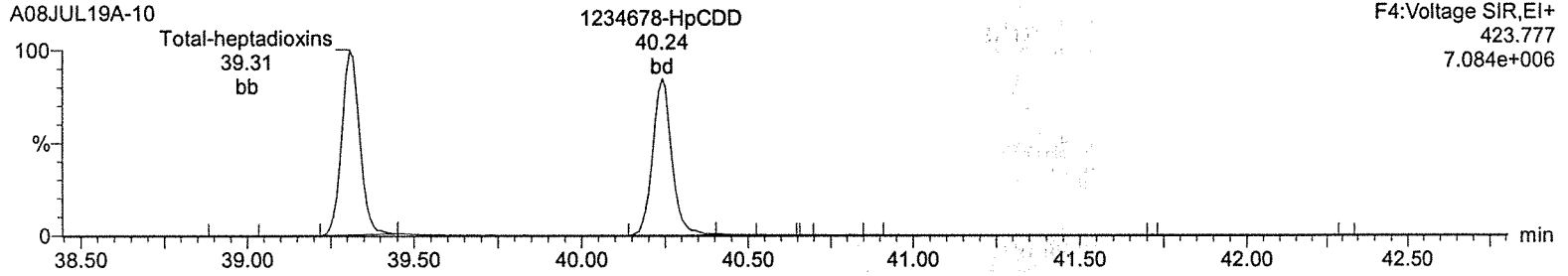
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

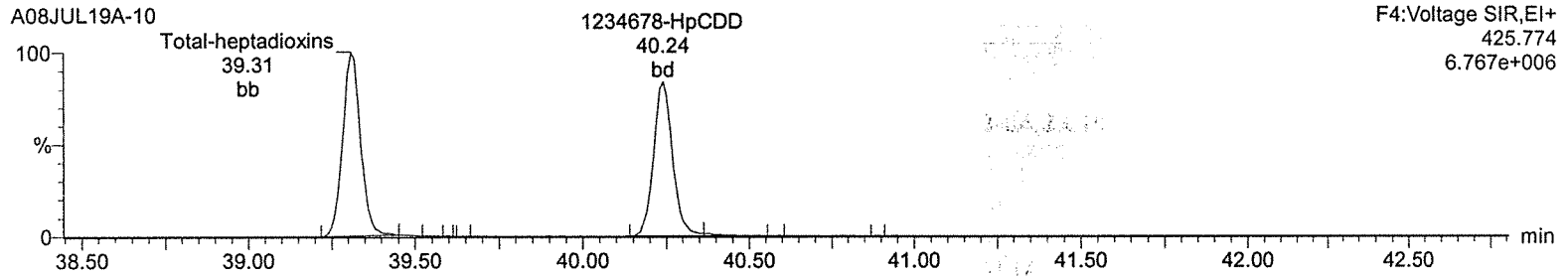
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

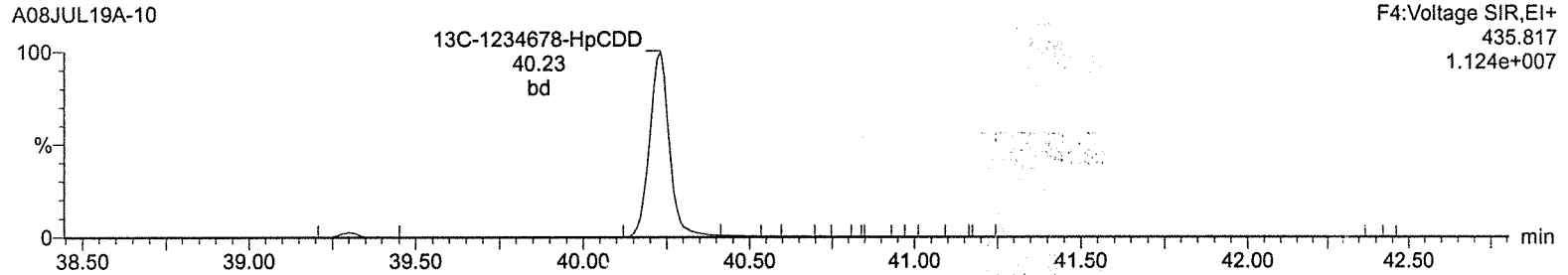
Total-heptadioxins



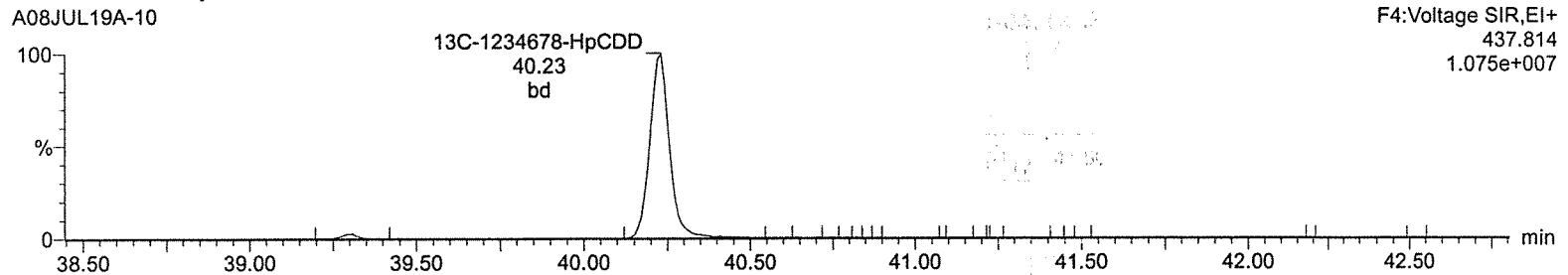
Total-heptadioxins



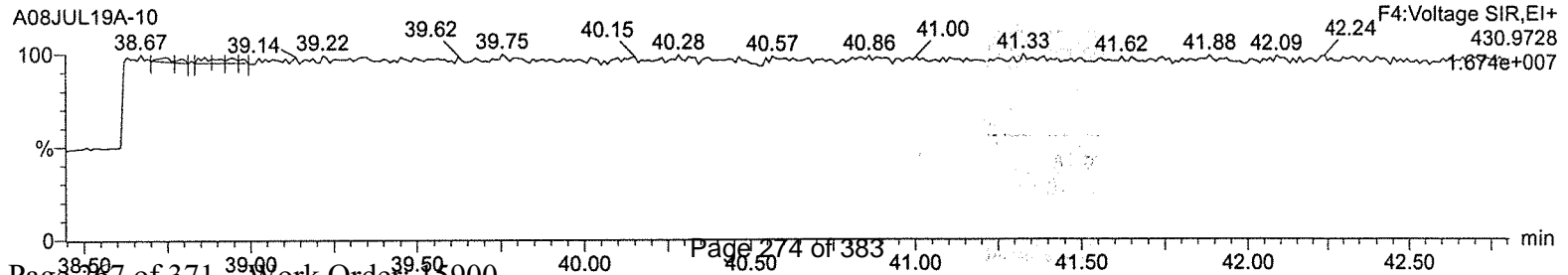
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

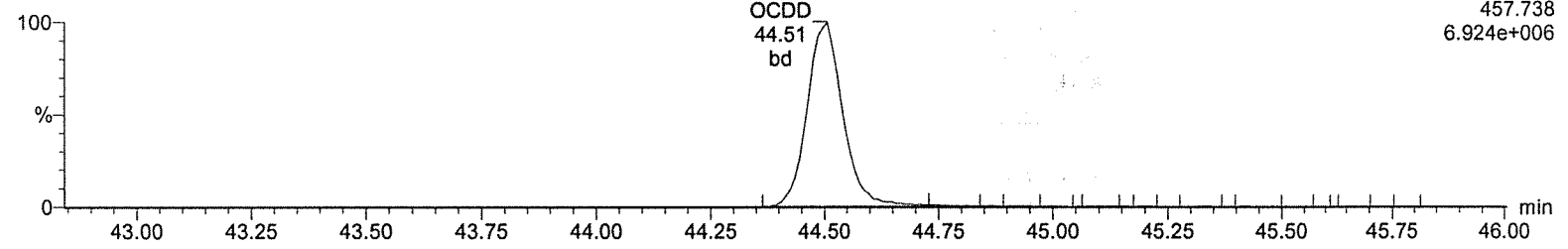
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

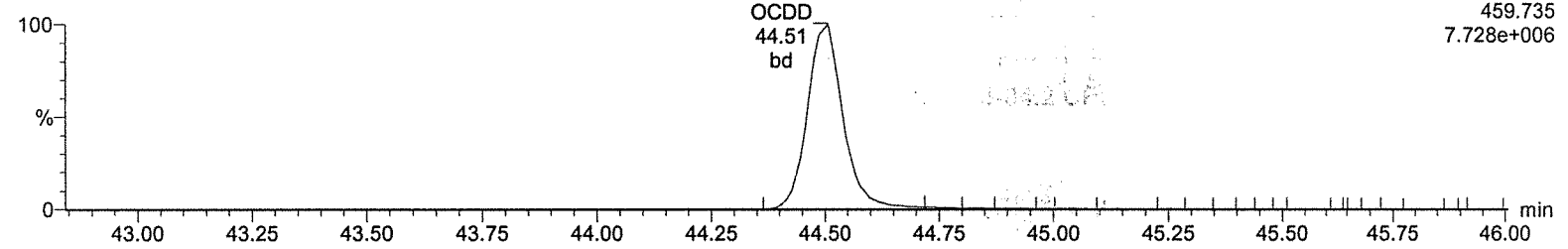
OCDD

A08JUL19A-10



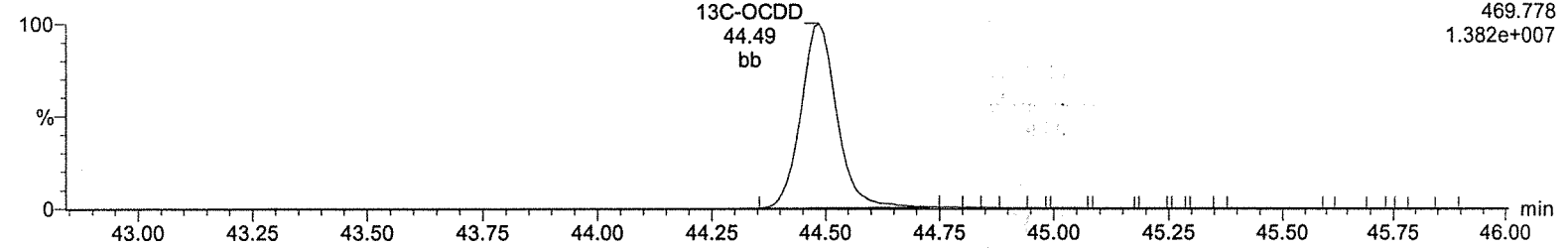
OCDD

A08JUL19A-10



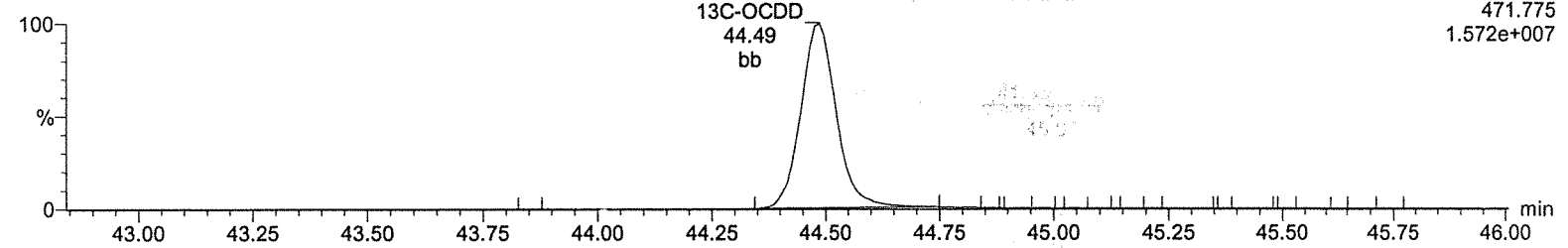
13C-OCDD

A08JUL19A-10



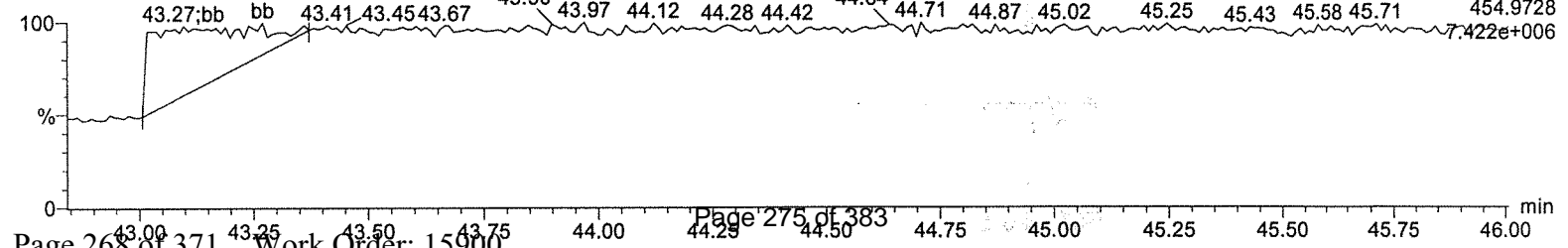
13C-OCDD

A08JUL19A-10



Lock Mass F5

A08JUL19A-10



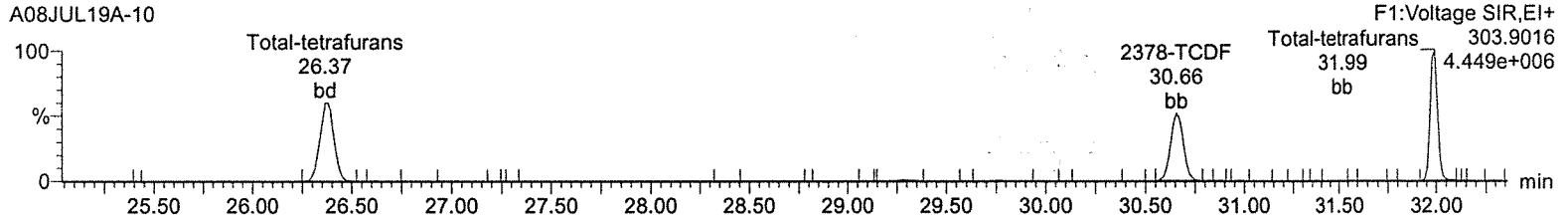
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

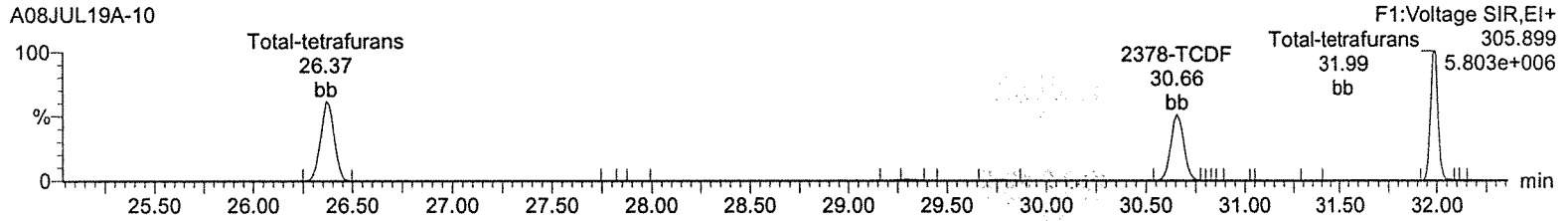
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

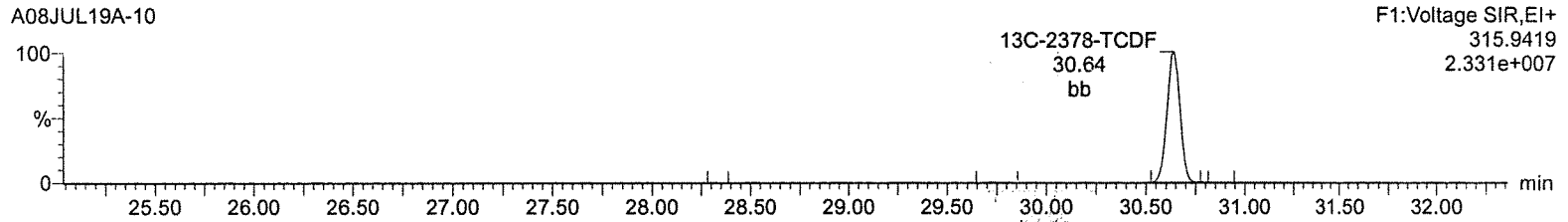
Total-tetrafurans



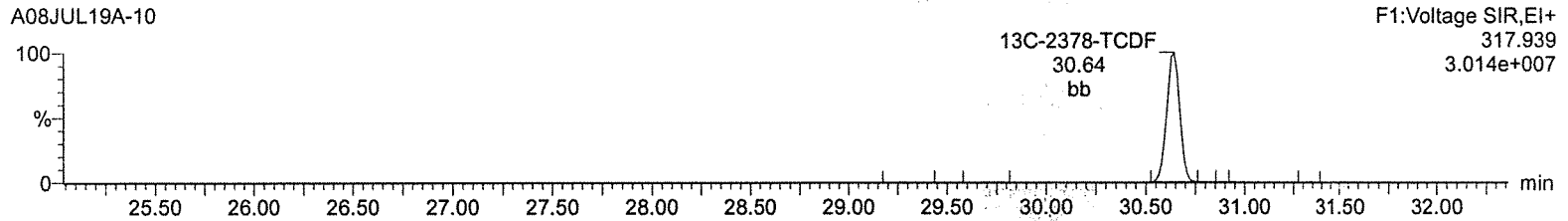
Total-tetrafurans



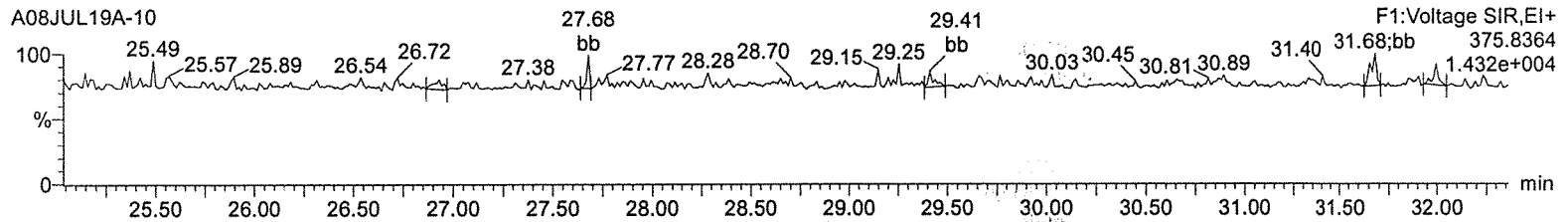
13C-2378-TCDF



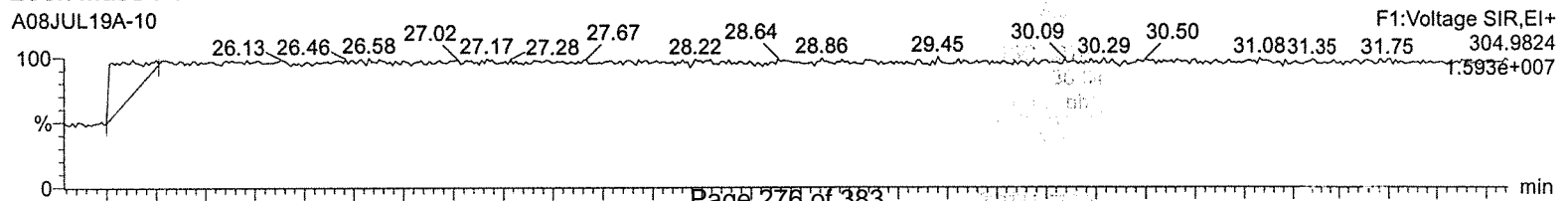
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

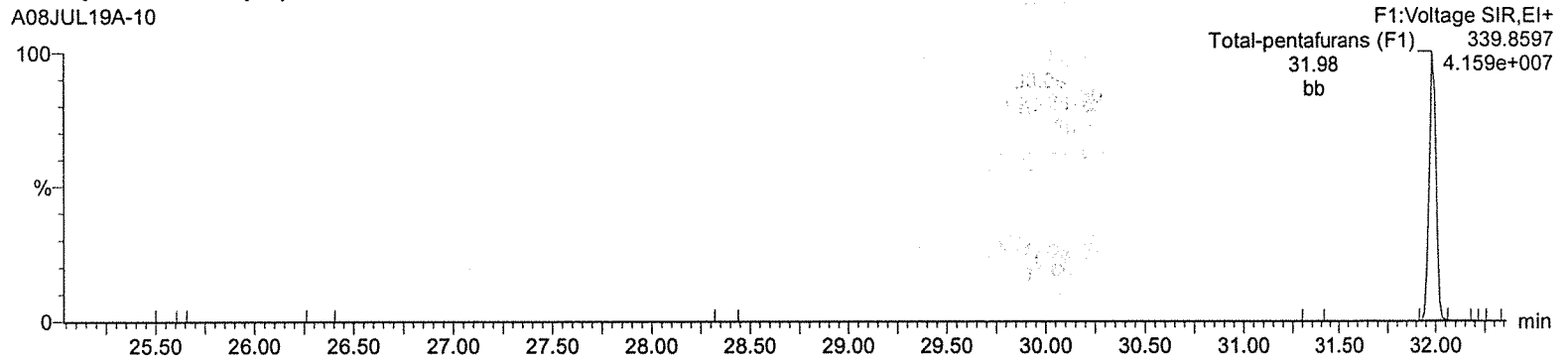
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

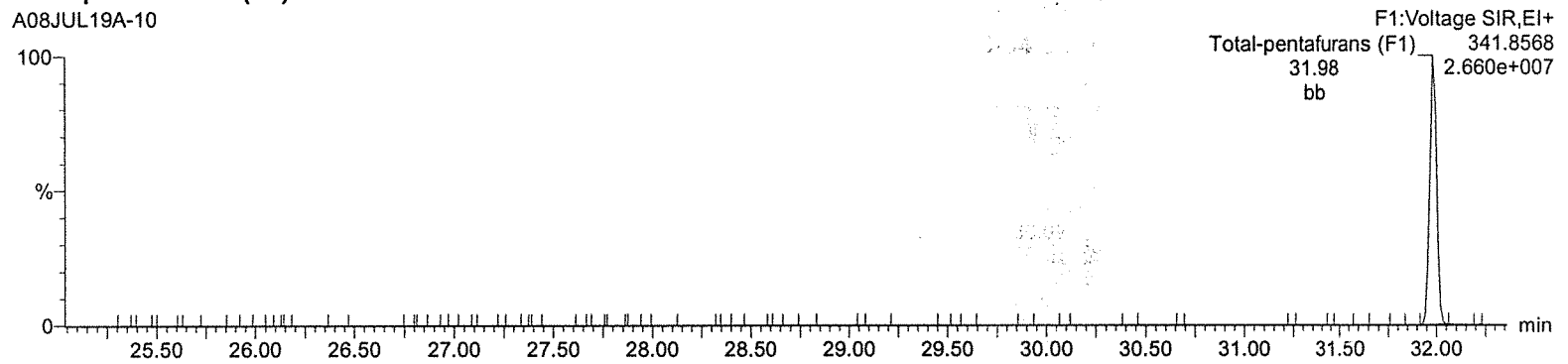
Total-pentafurans (F1)

A08JUL19A-10



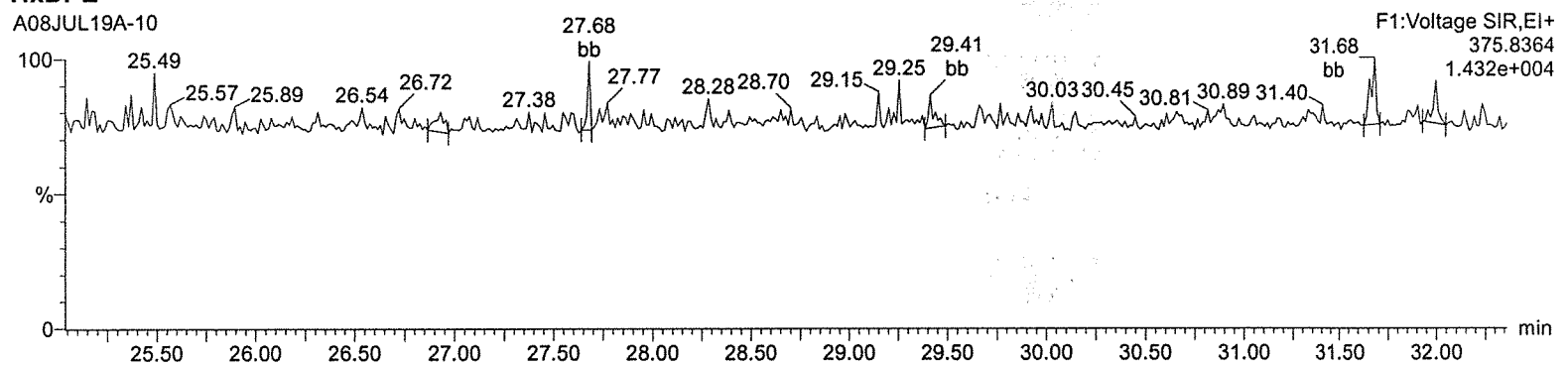
Total-pentafurans (F1)

A08JUL19A-10



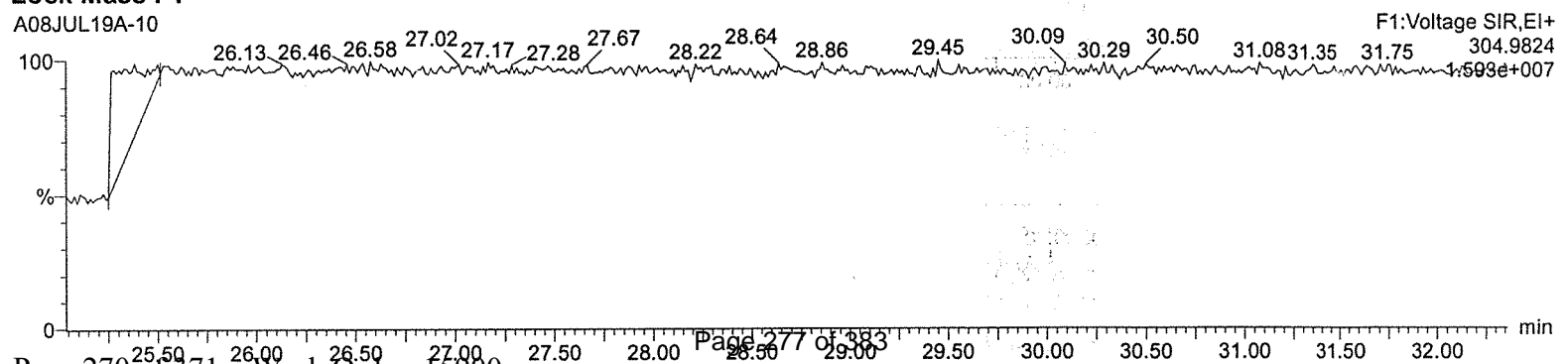
HxDPE

A08JUL19A-10



Lock Mass F1

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

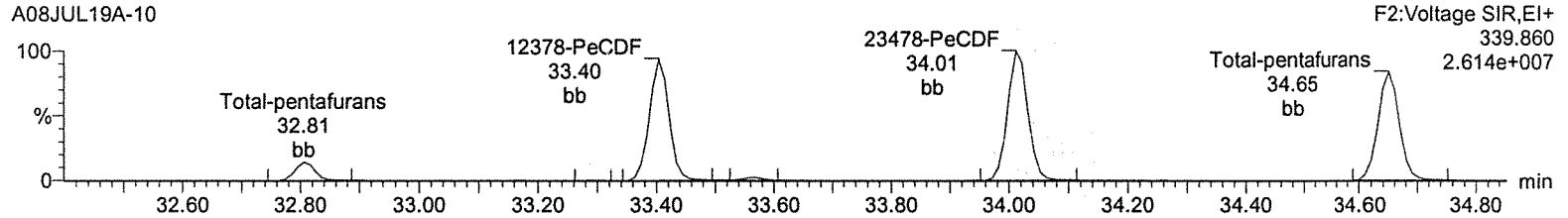
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

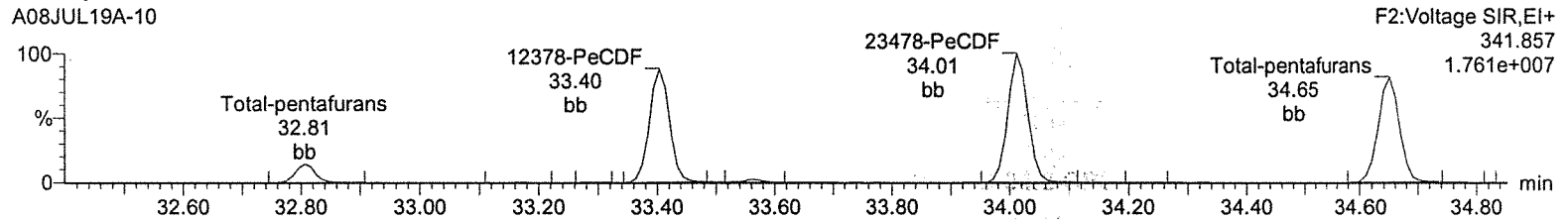
Total-pentafurans

A08JUL19A-10



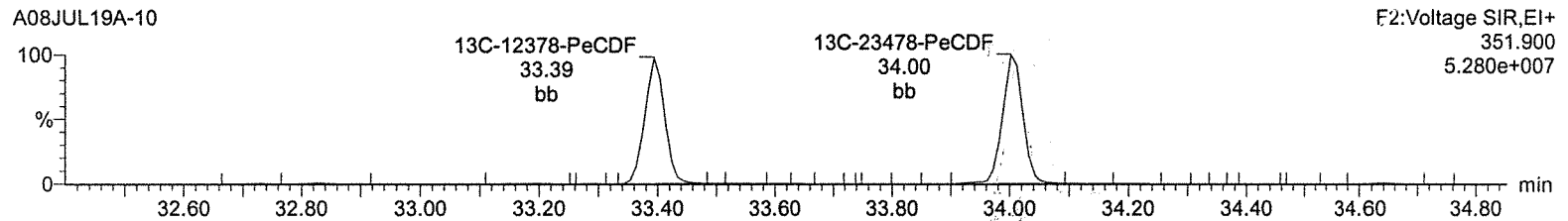
Total-pentafurans

A08JUL19A-10



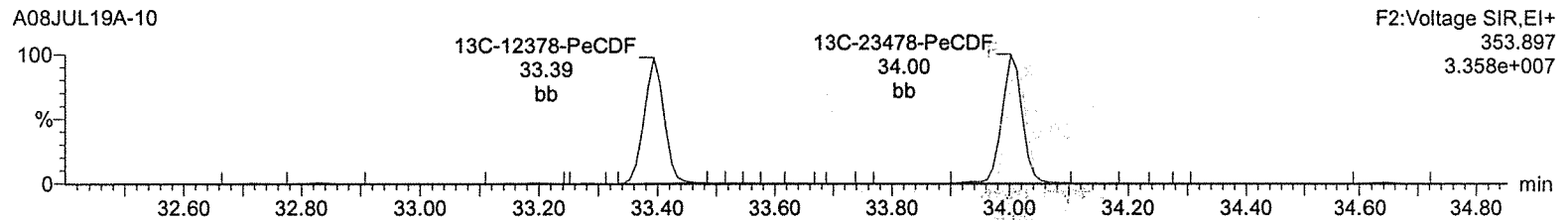
13C-12378-PeCDF

A08JUL19A-10



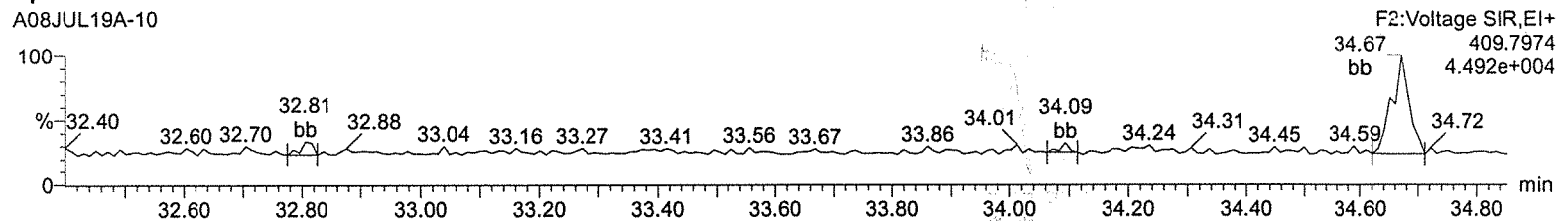
13C-12378-PeCDF

A08JUL19A-10



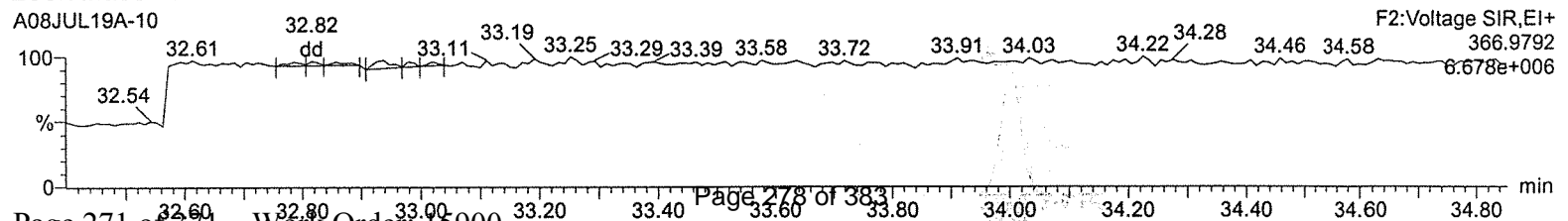
HpdPE

A08JUL19A-10



Lock Mass F2

A08JUL19A-10

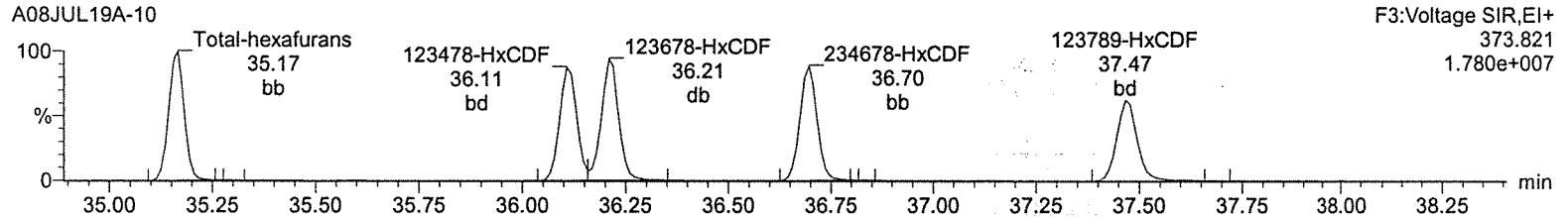


Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

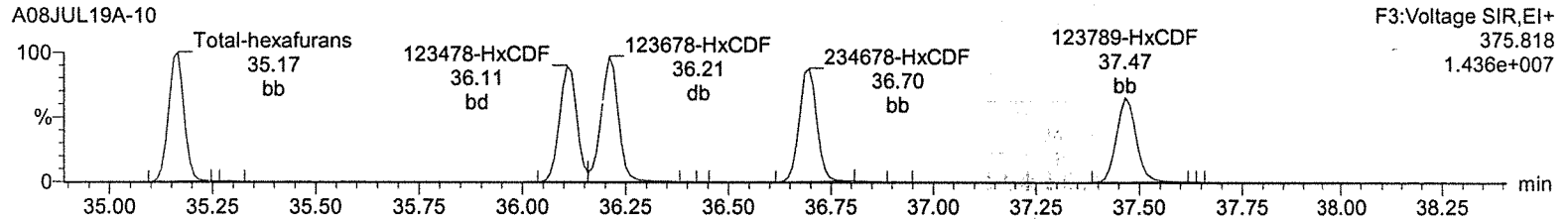
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

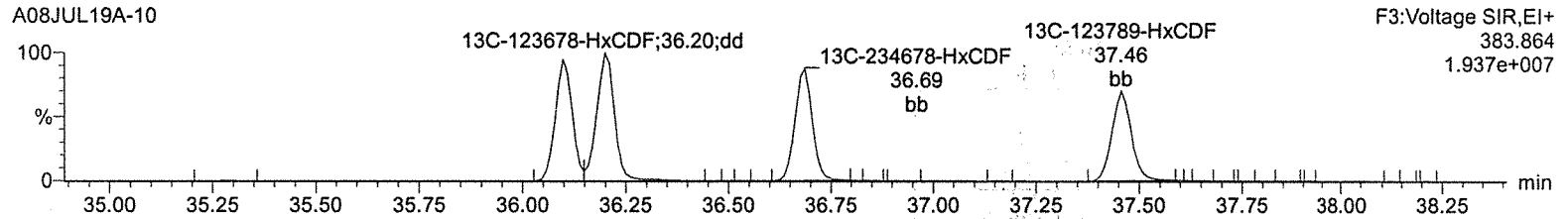
Total-hexafurans



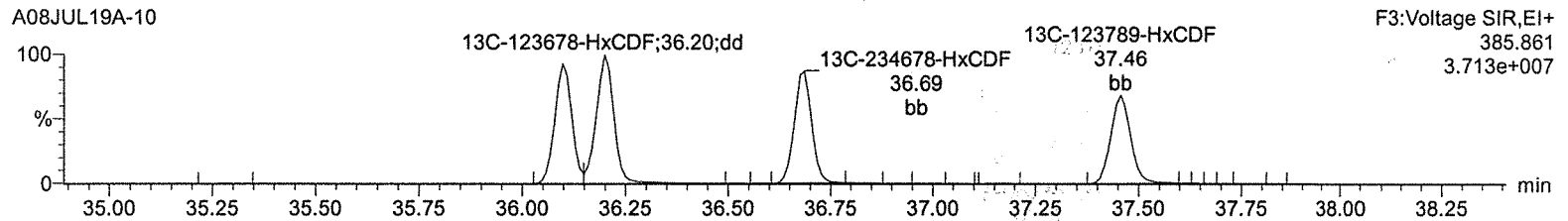
Total-hexafurans



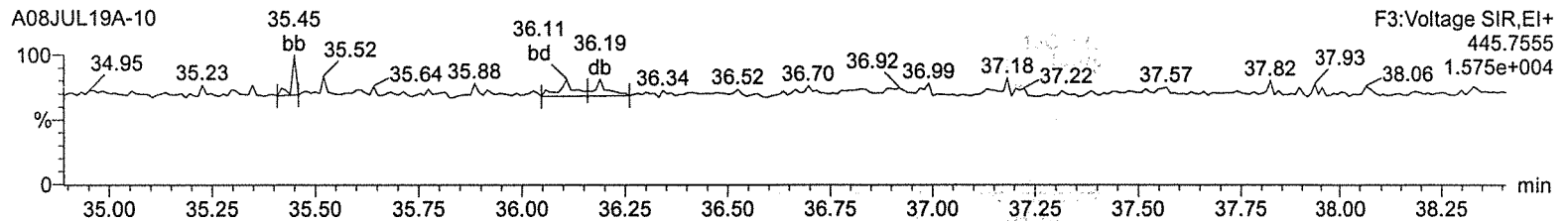
13C-123478-HxCDF



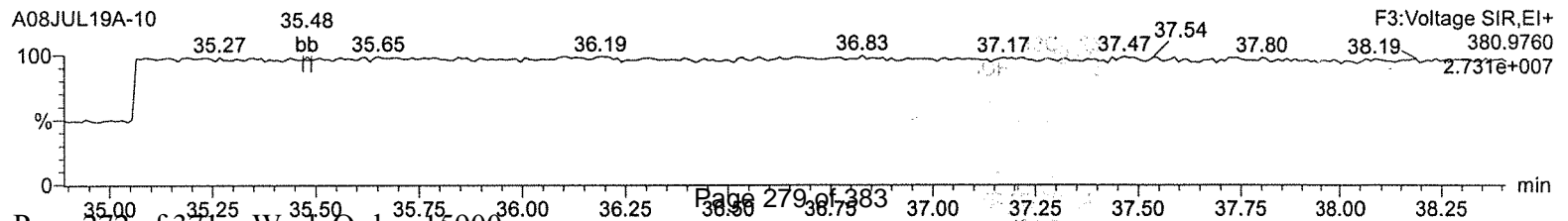
13C-123478-HxCDF



OcDPE



Lock Mass F3



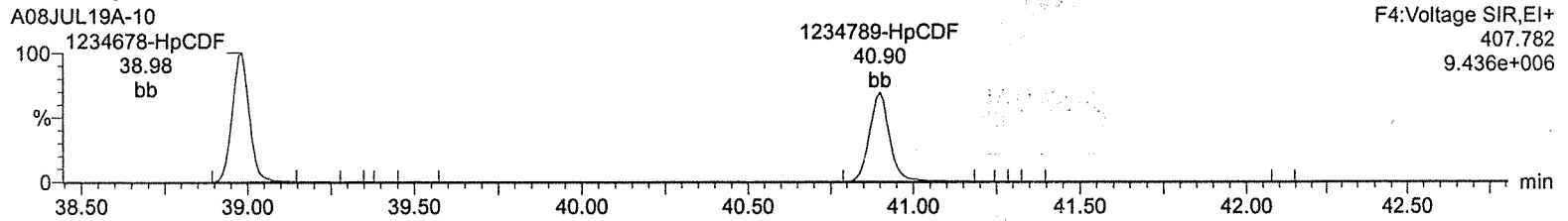
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

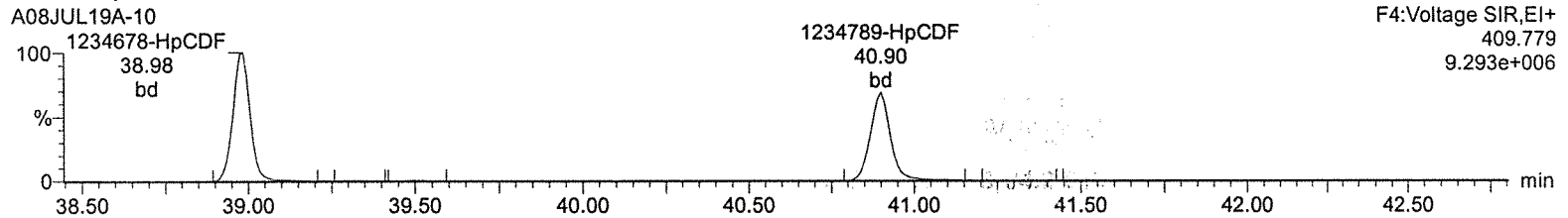
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

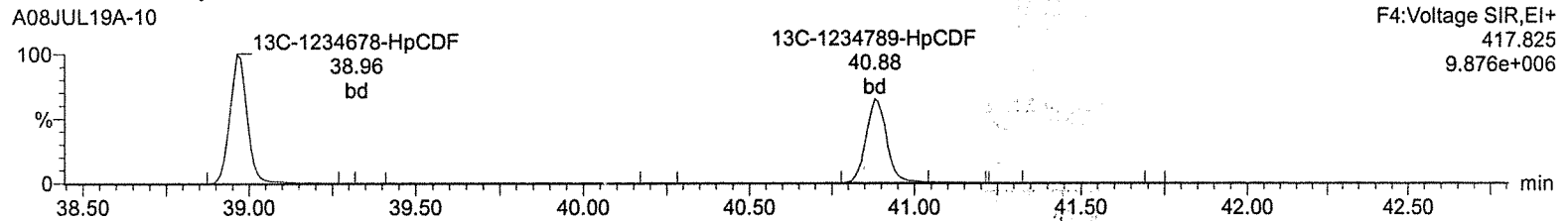
Total-heptafurans



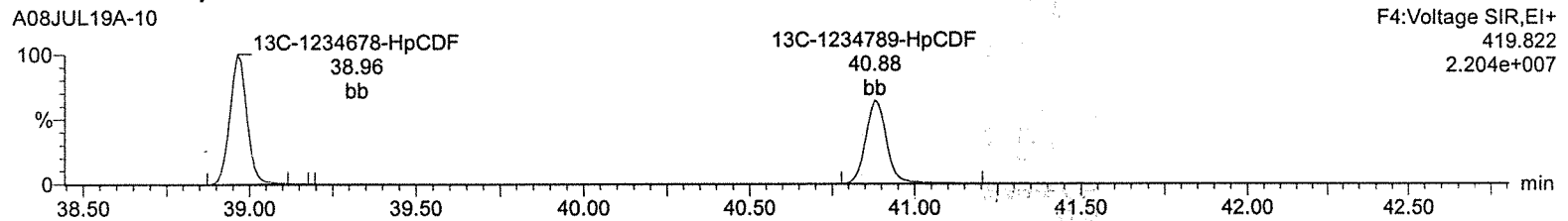
Total-heptafurans



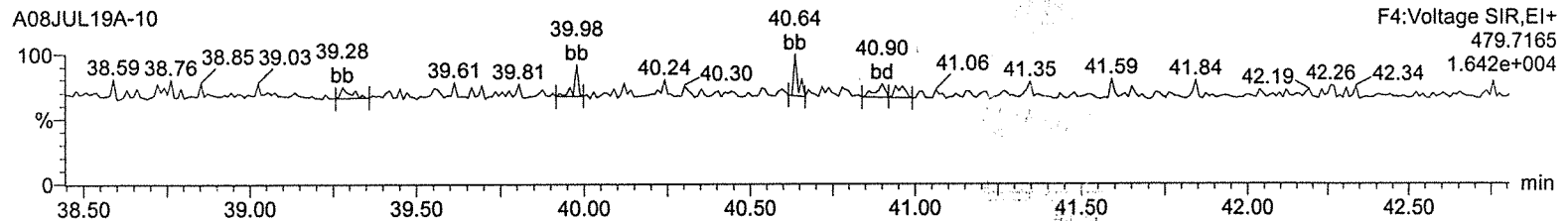
13C-1234678-HpCDF



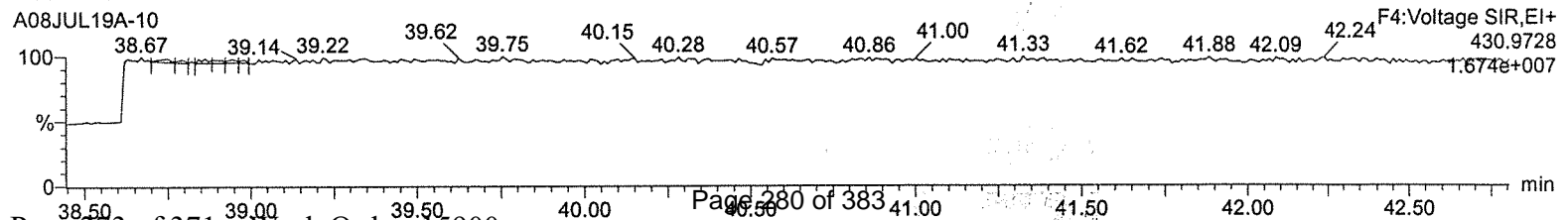
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

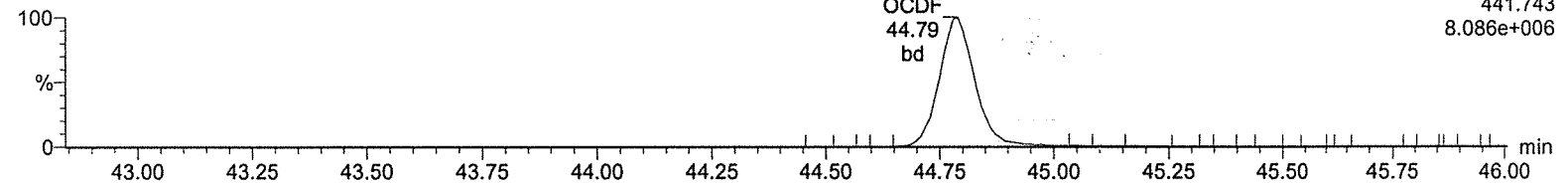
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

OCDF

A08JUL19A-10

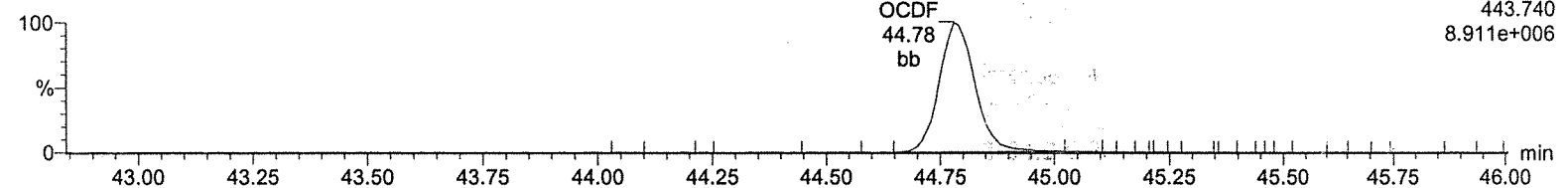
F5:Voltage SIR,EI+
441.743
8.086e+006



OCDF

A08JUL19A-10

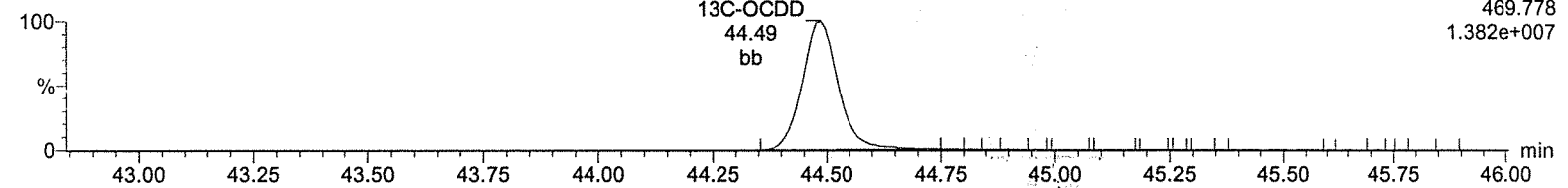
F5:Voltage SIR,EI+
443.740
8.911e+006



13C-OCDD

A08JUL19A-10

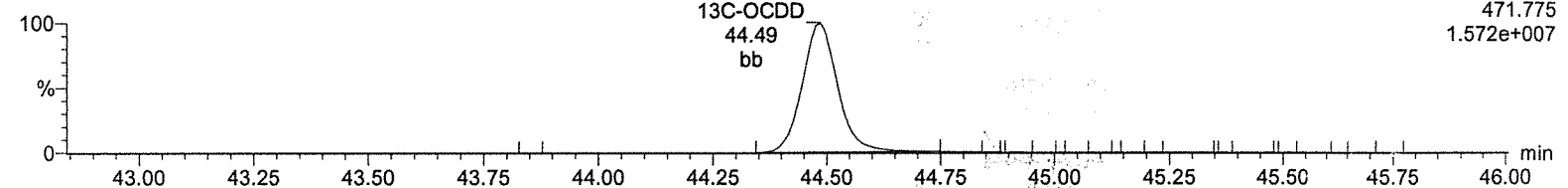
F5:Voltage SIR,EI+
469.778
1.382e+007



13C-OCDD

A08JUL19A-10

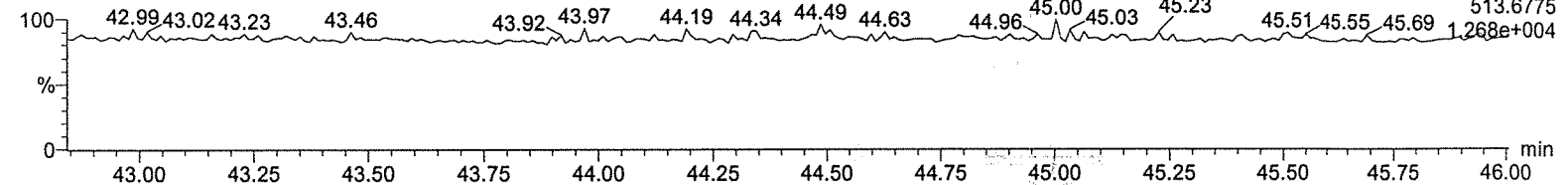
F5:Voltage SIR,EI+
471.775
1.572e+007



DeDPE

A08JUL19A-10

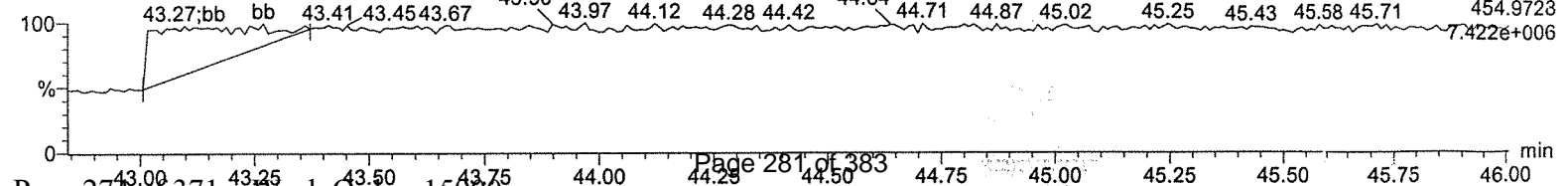
F5:Voltage SIR,EI+
513.6775
1.268e+004



Lock Mass F5

A08JUL19A-10

F5:Voltage SIR,EI+
454.9728
7.422e+006



Continuing Calibration Data

RUN LOG

Instrument: HRP750_2

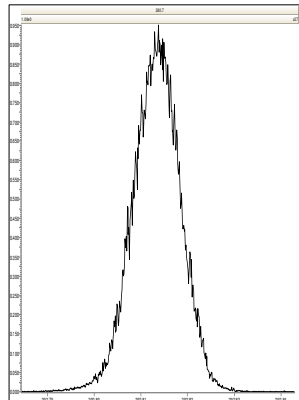
Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
A12DEC19A-1	12-DEC-2019 12:15:44	Matt Cash	CS3WT UD191018-02.1		1 uL	dioxin_db5ms	10K_dx
A12DEC19A-2	12-DEC-2019 13:03:05	Matt Cash	SB		1 uL	dioxin_db5ms	10K_dx
A12DEC19A-3	12-DEC-2019 13:51:14	Matt Cash	15879001-1	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-4	12-DEC-2019 14:39:23	Matt Cash	15878003-1	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-5	12-DEC-2019 15:27:32	Matt Cash	15879002-1	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-6	12-DEC-2019 16:15:43	Matt Cash	15878002-1	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-7	12-DEC-2019 17:03:53	Matt Cash	15878001-1 x5	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-8	12-DEC-2019 17:52:01	Matt Cash	15893002-1 x5	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-9	12-DEC-2019 18:40:09	Matt Cash	15894004-1 x5	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-10	12-DEC-2019 19:28:20	Matt Cash	15894003-1 x20	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-11	12-DEC-2019 20:16:29	Matt Cash	15893001-1 x20	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-12	12-DEC-2019 21:04:39	Matt Cash	15894002-1 x20	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-13	12-DEC-2019 21:52:48	Matt Cash	15893003-1 x20	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-14	12-DEC-2019 22:40:57	Matt Cash	15894001-1	42529	1 uL	dioxin_db5ms	10K_dx
A12DEC19A-15	12-DEC-2019 23:29:08	Matt Cash	CS3WT UD191018-02.1		1 uL	dioxin_db5ms	10K_dx

CCAL meets tetra only methods, QC is being rerun for full list samples

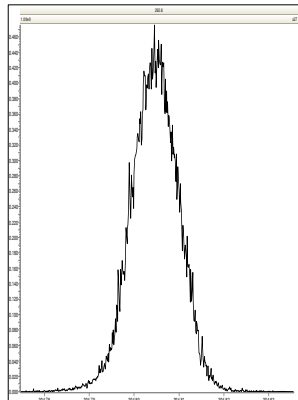
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, December 12, 2019 12:12:38 Eastern Standard Time

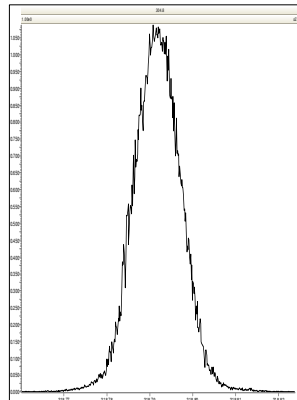
M 292.9824 R 12690



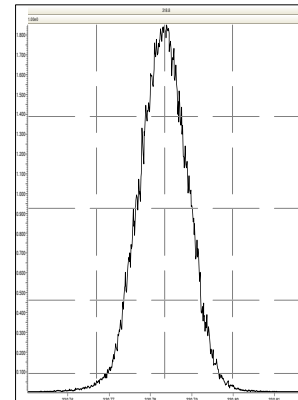
M 304.9824 R 12566



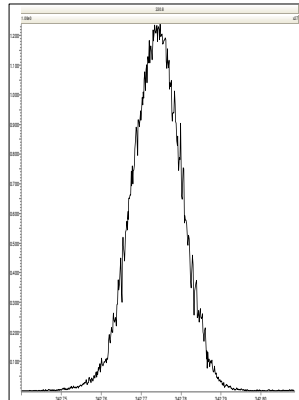
M 318.9792 R 13022



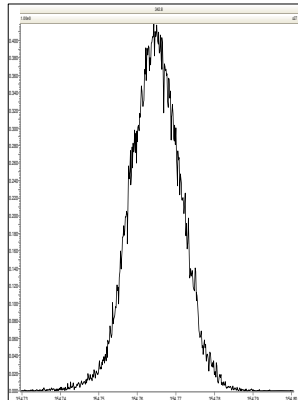
M 330.9792 R 12194



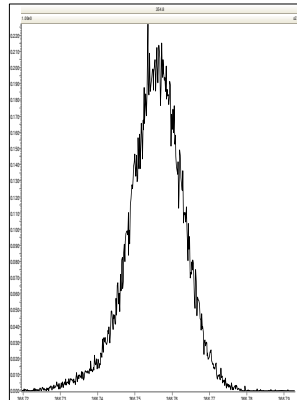
M 342.9792 R 11684



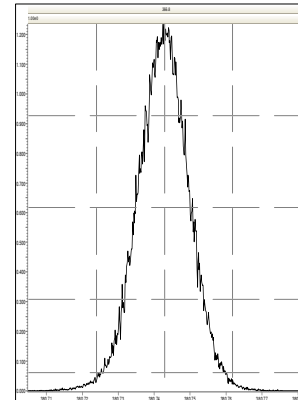
M 354.9792 R 11792



M 366.9792 R 10328



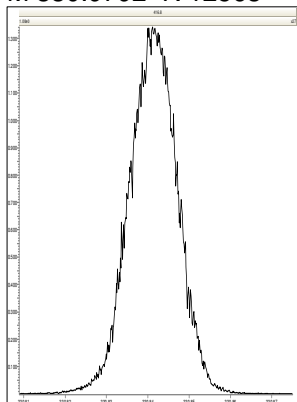
M 380.9760 R 10965



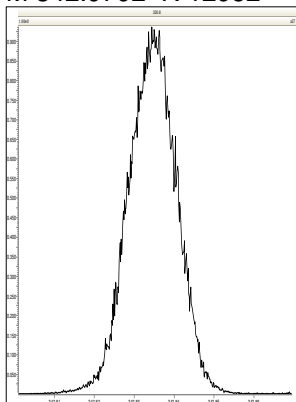
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, December 12, 2019 12:13:01 Eastern Standard Time

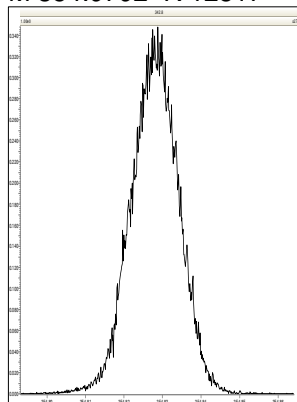
M 330.9792 R 12563



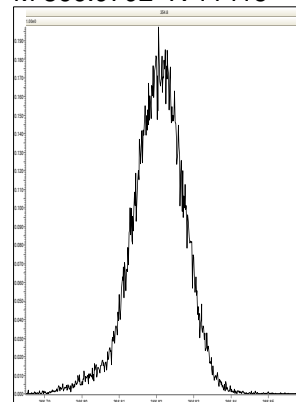
M 342.9792 R 12952



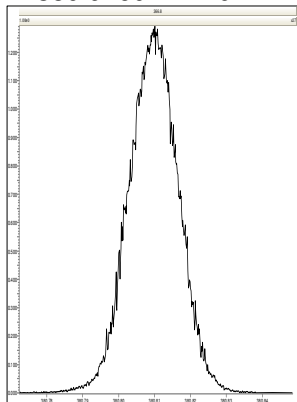
M 354.9792 R 12817



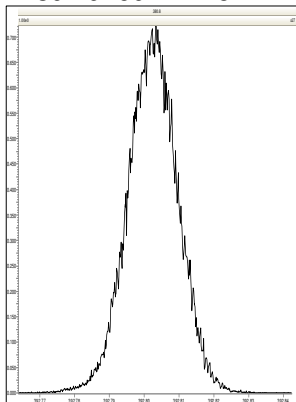
M 366.9792 R 11415



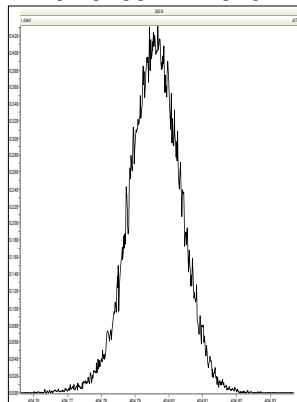
M 380.9760 R 12017



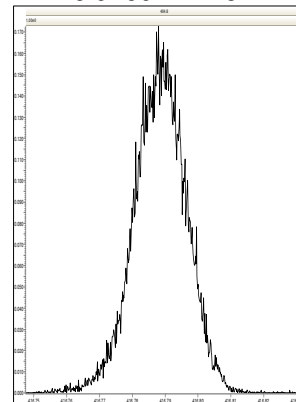
M 392.9760 R 11521



M 404.9760 R 11520



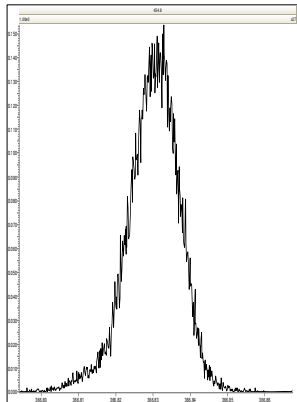
M 416.9760 R 11522



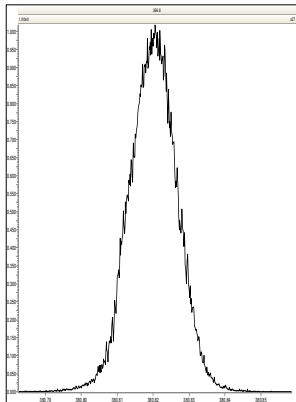
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, December 12, 2019 12:13:28 Eastern Standard Time

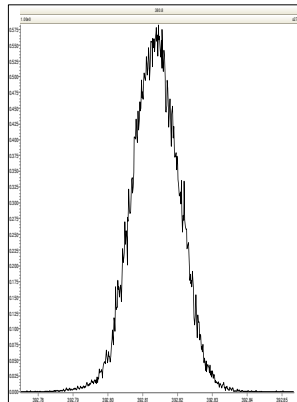
M 366.9792 R 11904



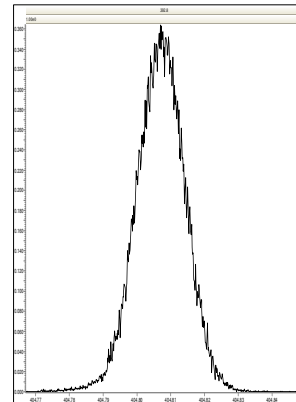
M 380.9760 R 12379



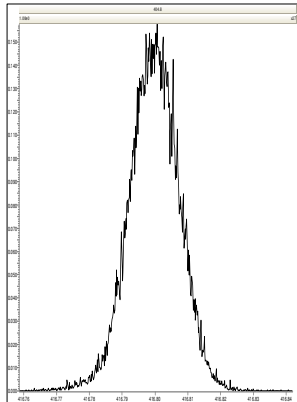
M 392.9760 R 12692



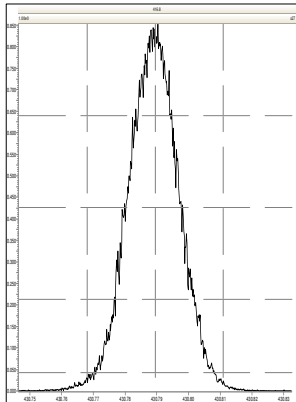
M 404.9760 R 12499



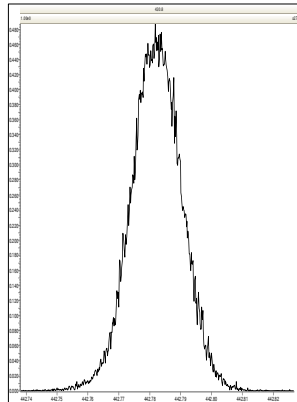
M 416.9760 R 11625



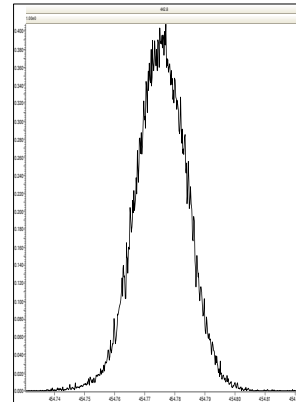
M 430.9728 R 11574



M 442.9728 R 11577



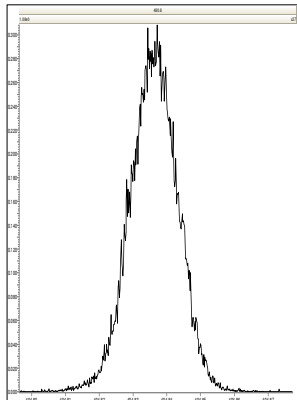
M 454.9728 R 11575



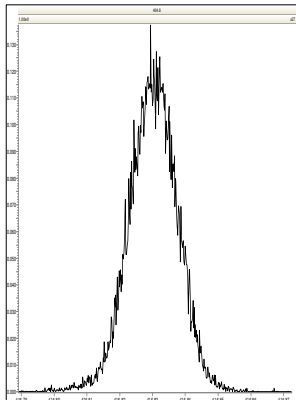
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, December 12, 2019 12:13:49 Eastern Standard Time

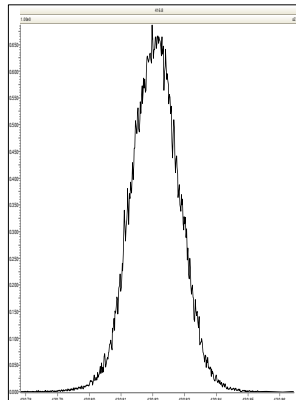
M 404.9760 R 12136



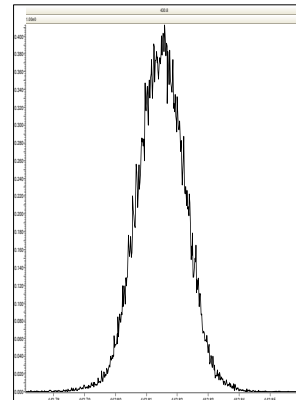
M 416.9760 R 12625



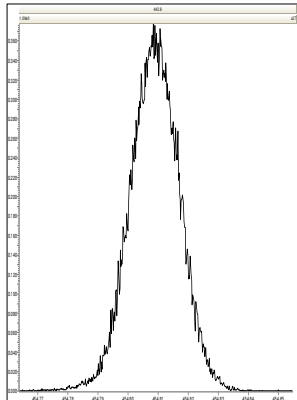
M 430.9728 R 12196



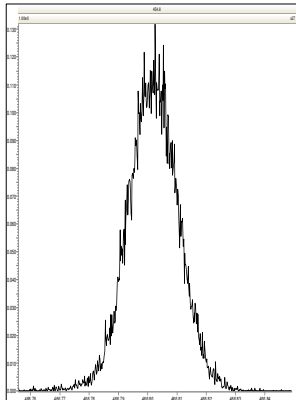
M 442.9728 R 12562



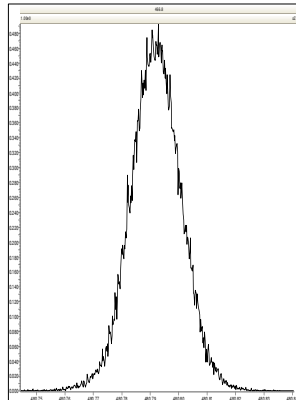
M 454.9728 R 12313



M 466.9728 R 11905



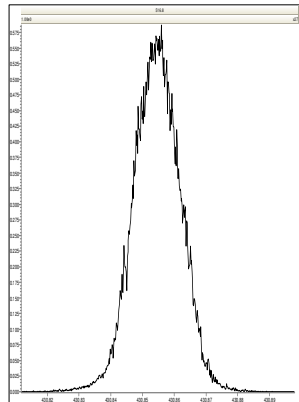
M 480.9696 R 11520



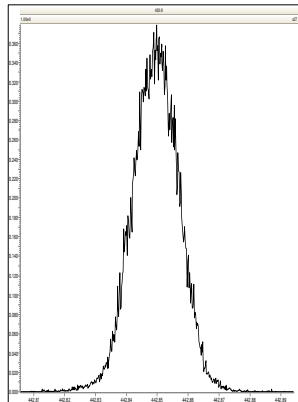
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, December 12, 2019 12:14:11 Eastern Standard Time

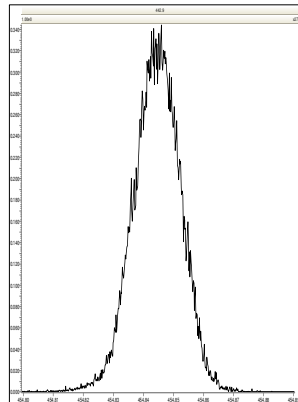
M 430.9728 R 12889



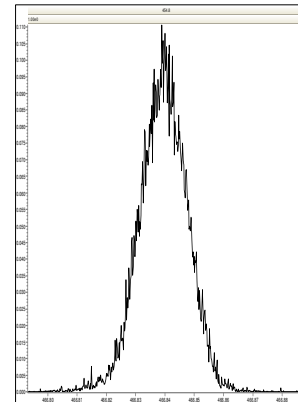
M 442.9728 R 12821



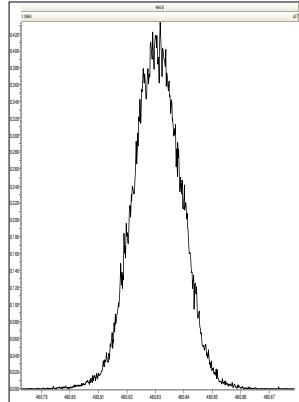
M 454.9728 R 12886



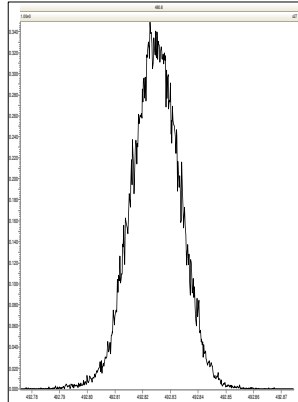
M 466.9728 R 13022



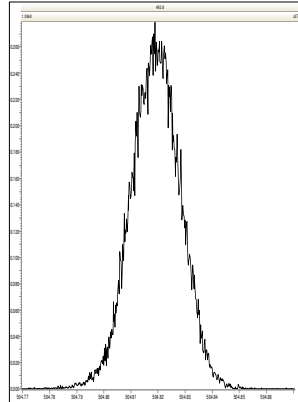
M 480.9696 R 12136



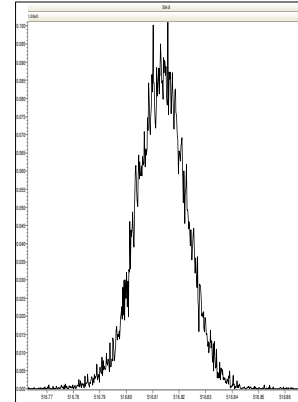
M 492.9696 R 12314



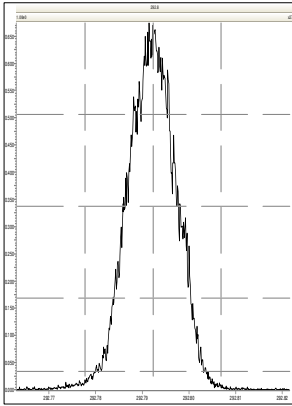
M 504.9696 R 12016



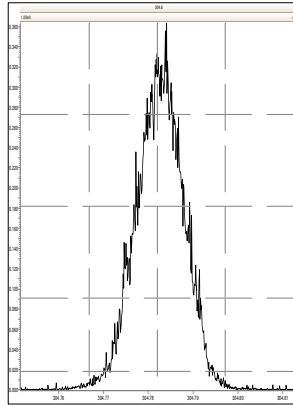
M 516.9697 R 11958



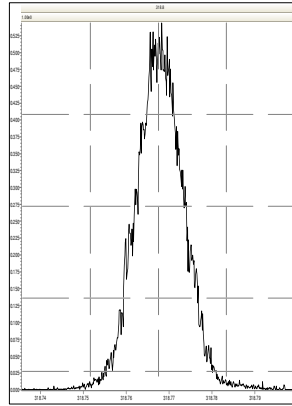
M 292.9824 R 12448



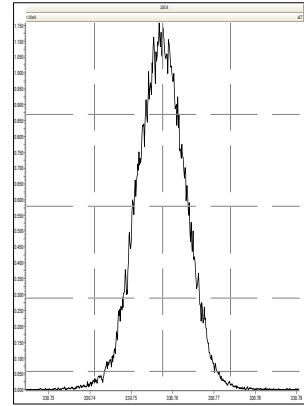
M 304.9824 R 13123



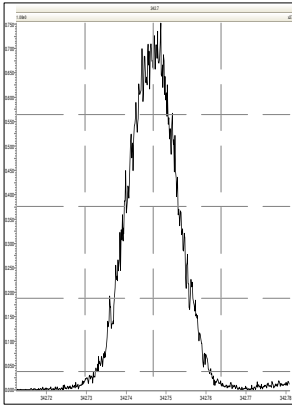
M 318.9792 R 13021



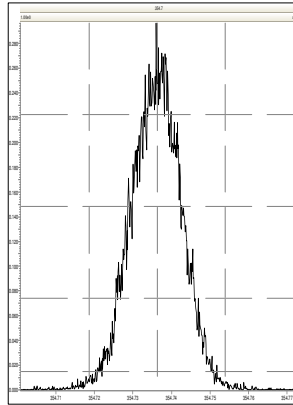
M 330.9792 R 12501



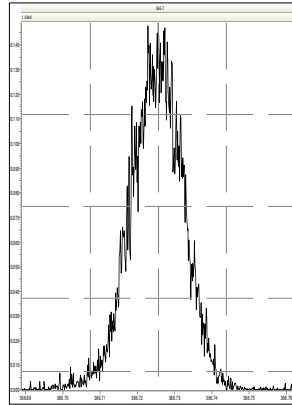
M 342.9792 R 11934



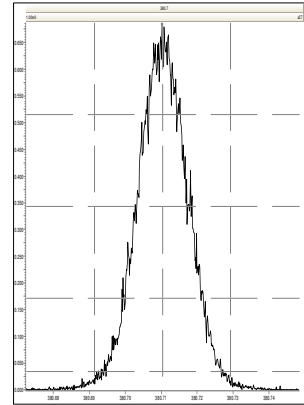
M 354.9792 R 12533



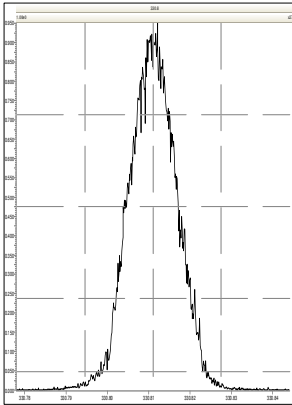
M 366.9792 R 12048



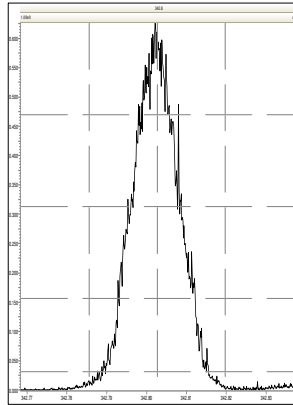
M 380.9760 R 12049



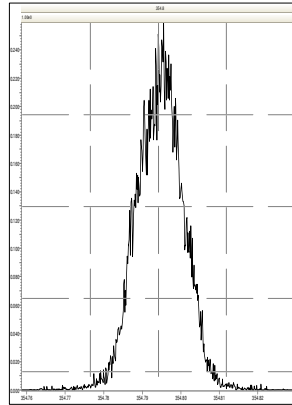
M 330.9792 R 12820



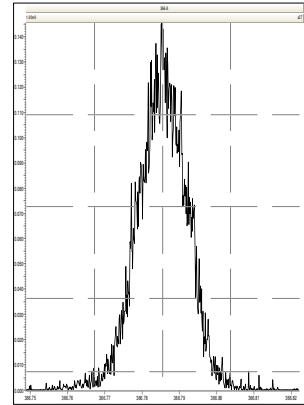
M 342.9792 R 13058



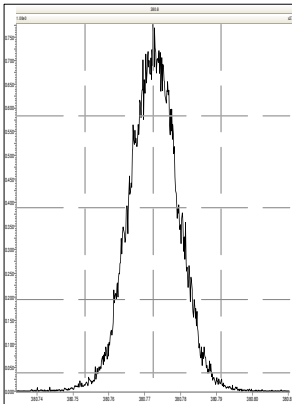
M 354.9792 R 13371



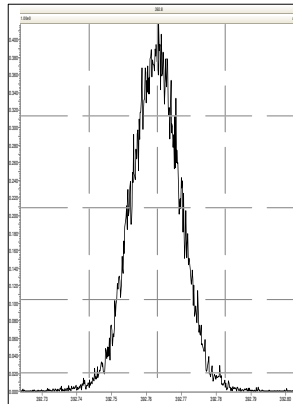
M 366.9792 R 13635



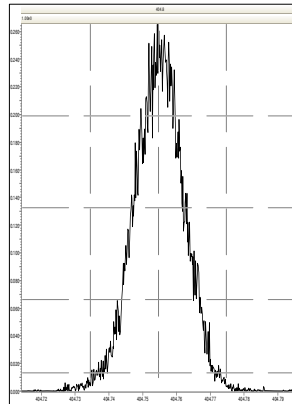
M 380.9760 R 12259



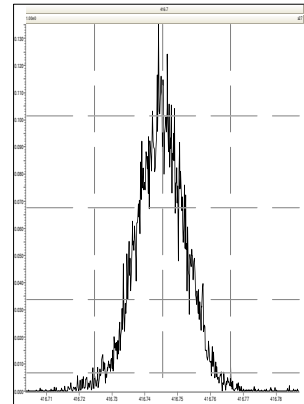
M 392.9760 R 12079



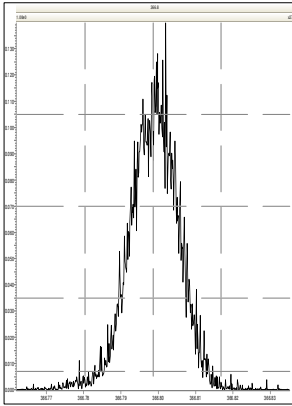
M 404.9760 R 12284



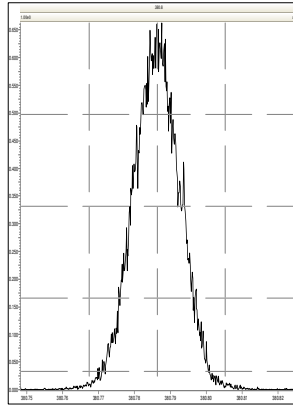
M 416.9760 R 12857



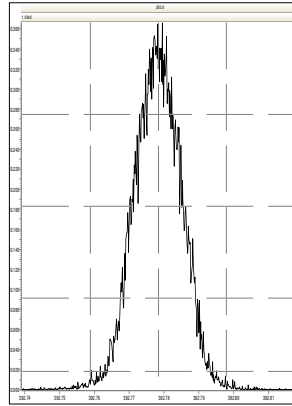
M 366.9792 R 13307



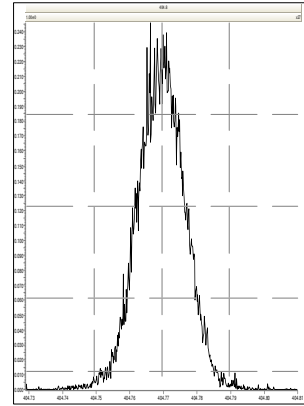
M 380.9760 R 12894



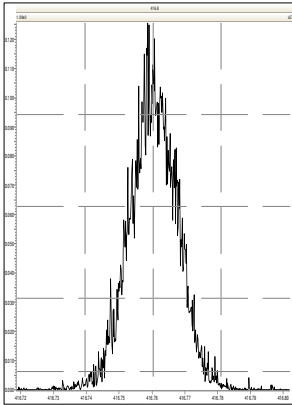
M 392.9760 R 13158



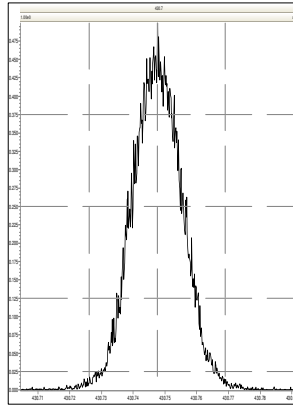
M 404.9760 R 13227



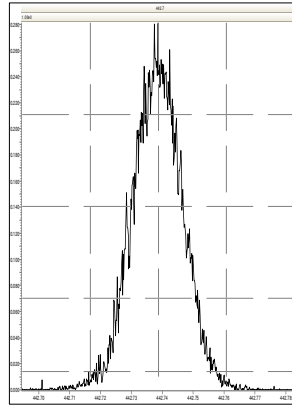
M 416.9760 R 13444



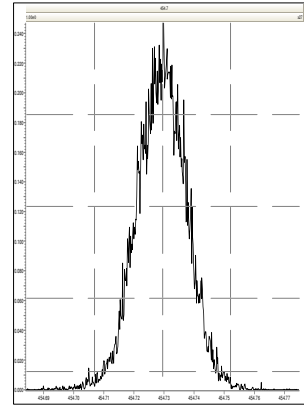
M 430.9728 R 12273



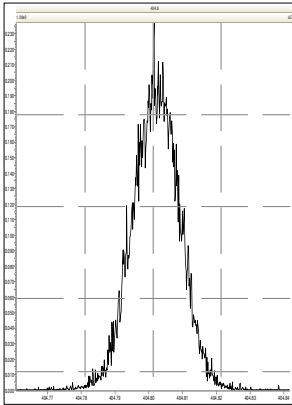
M 442.9728 R 12230



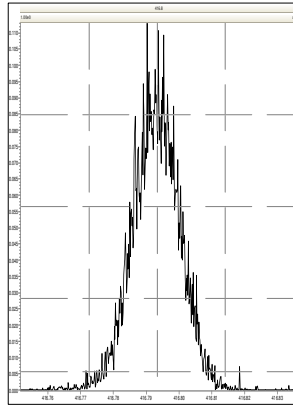
M 454.9728 R 12548



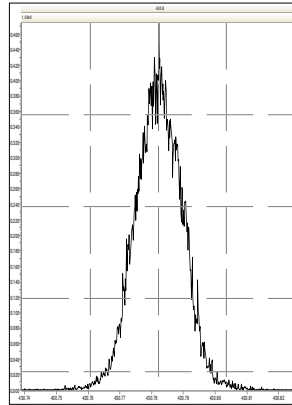
M 404.9760 R 13056



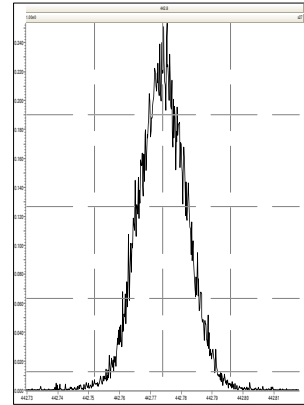
M 416.9760 R 13626



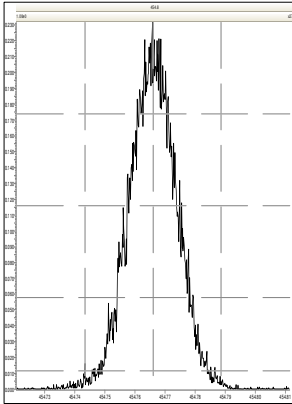
M 430.9728 R 13026



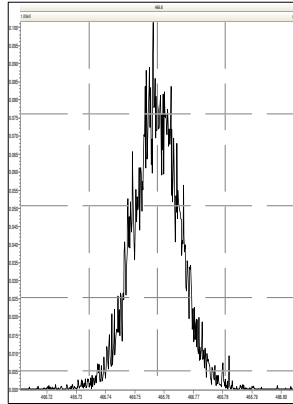
M 442.9728 R 12922



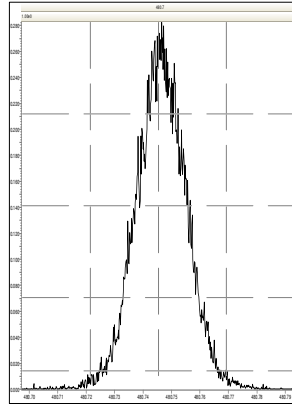
M 454.9728 R 12889



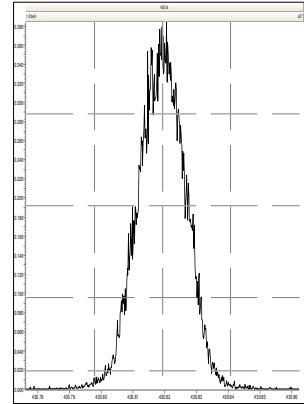
M 466.9728 R 13586



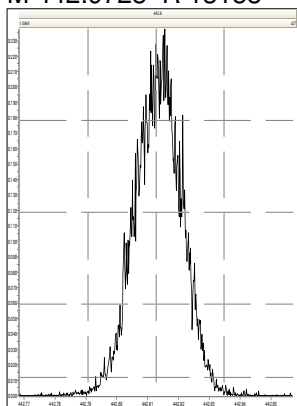
M 480.9696 R 12254



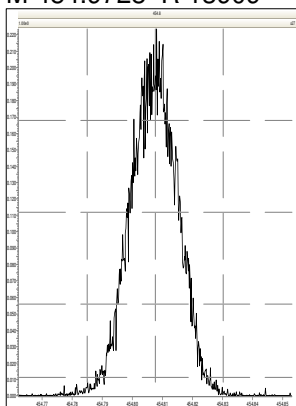
M 430.9728 R 13056



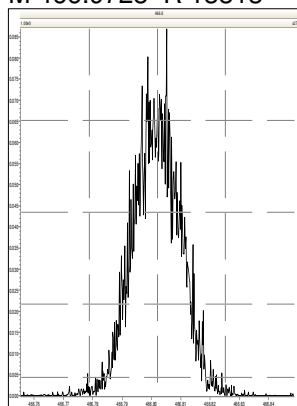
M 442.9728 R 13158



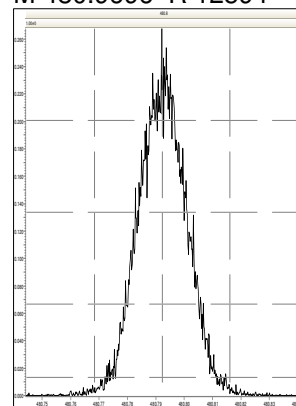
M 454.9728 R 13909



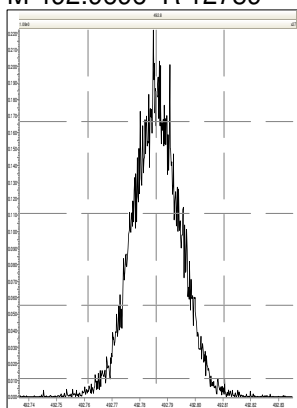
M 466.9728 R 13813



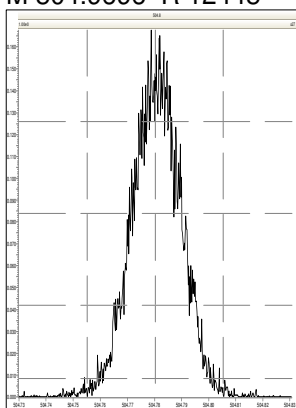
M 480.9696 R 12594



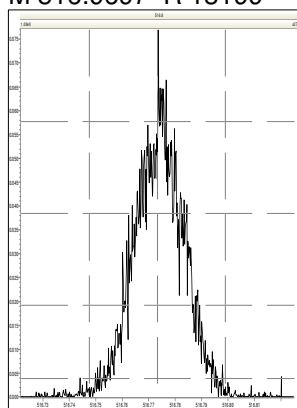
M 492.9696 R 12759



M 504.9696 R 12445



M 516.9697 R 13199



Quantify Sample Summary Report
Method Window Defining Report

MassLynx 4.1
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A12DEC19A-15.qld
Last Altered: Friday, December 13, 2019 08:14:41 Eastern Standard Time
Printed: Friday, December 13, 2019 08:15:00 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.04
2	Last TCDF	31.83
3	First PeCDF	31.81
4	Last PeCDF	34.48
5	First HxCDF	34.97
6	Last HxCDF	37.24
7	First HpCDF	38.72
8	Last HpCDF	40.62
9	OCDF	44.44
10	First TCDD	27.76
11	2378-TCDD	31.13
12	Last TCDD	31.75
13	First PeCDD	32.72
14	Last PeCDD	34.30
15	First HxCDD	35.39
16	Last HxCDD	36.93
17	First HpCDD	39.05
18	Last HpCDD	39.96
19	OCDD	44.15

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A12DEC19A-15.qld

Last Altered: Friday, December 13, 2019 08:14:41 Eastern Standard Time

Printed: Friday, December 13, 2019 08:15:00 Eastern Standard Time

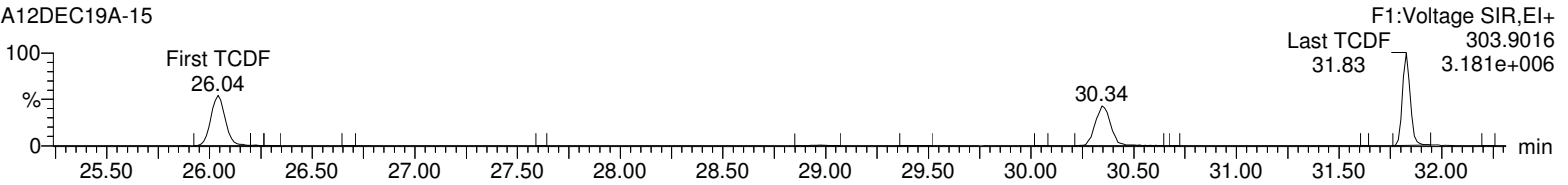
Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

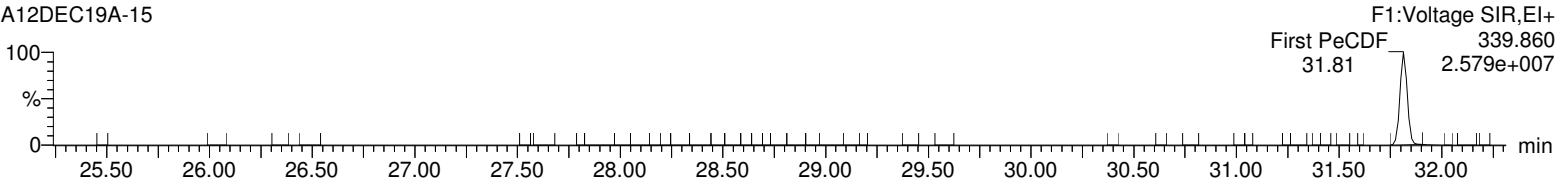
First TCDF

A12DEC19A-15



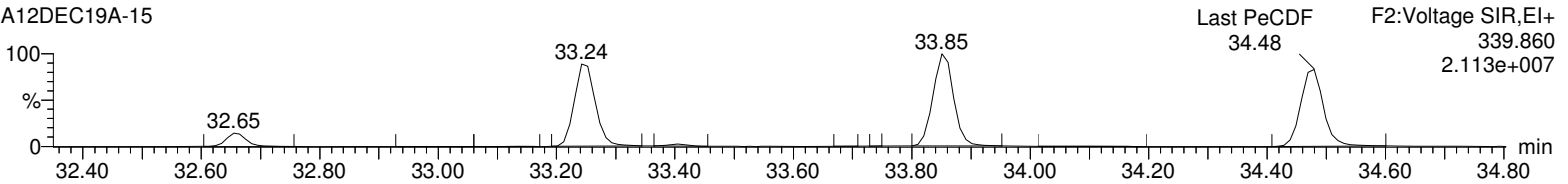
First PeCDF

A12DEC19A-15



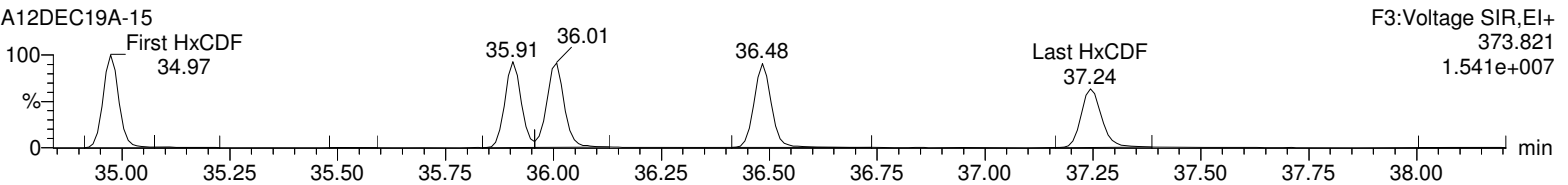
Last PeCDF

A12DEC19A-15



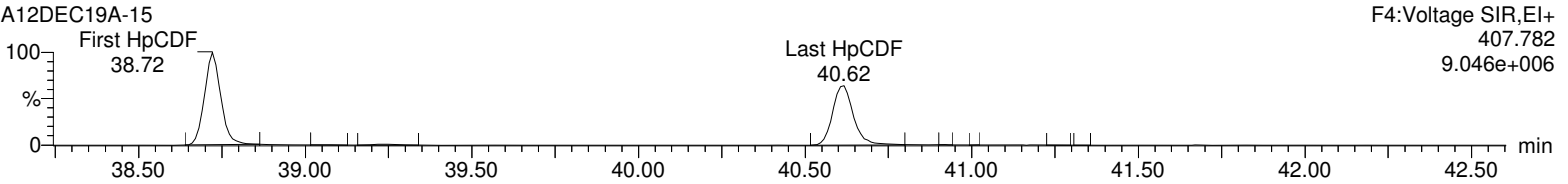
First HxCDF

A12DEC19A-15



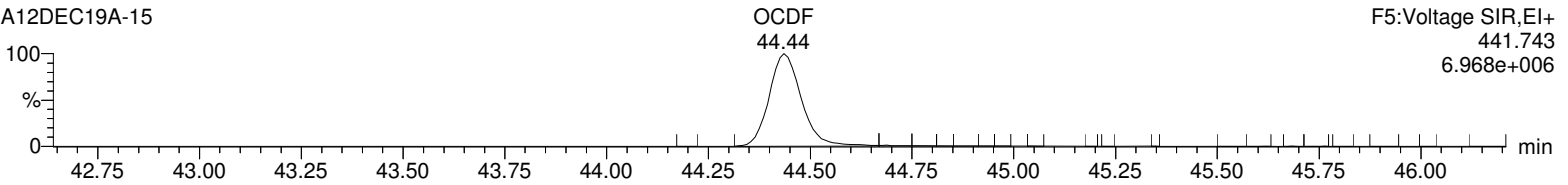
First HpCDF

A12DEC19A-15



OCDF

A12DEC19A-15



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A12DEC19A-15.qld

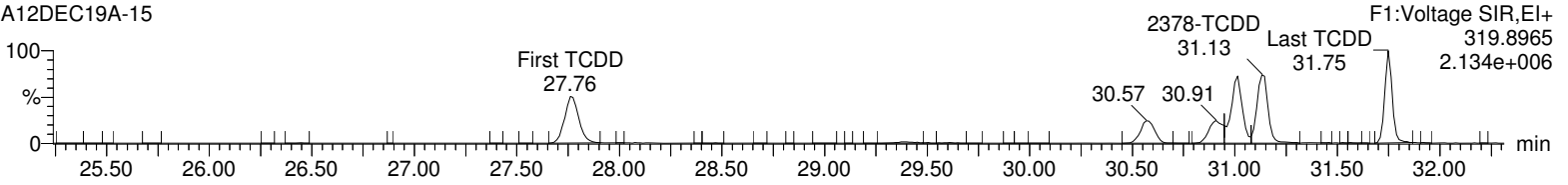
Last Altered: Friday, December 13, 2019 08:14:41 Eastern Standard Time

Printed: Friday, December 13, 2019 08:15:00 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

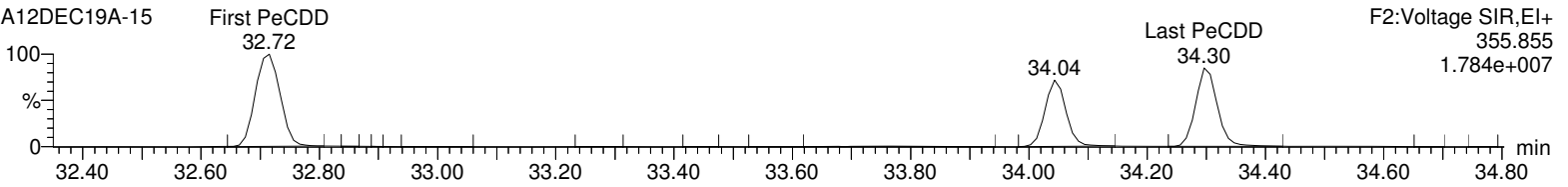
First TCDD

A12DEC19A-15



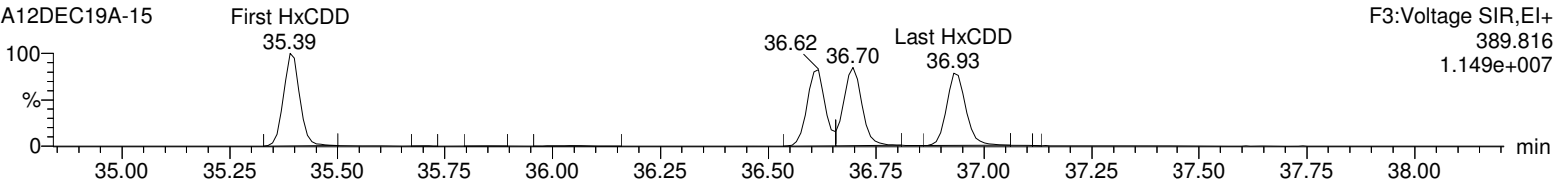
First PeCDD

A12DEC19A-15



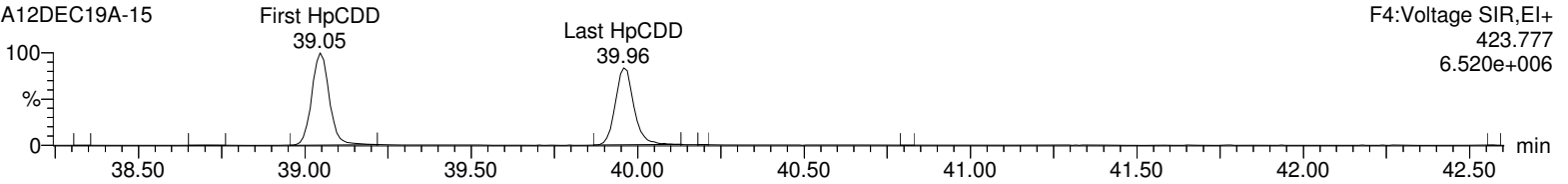
First HxCDD

A12DEC19A-15



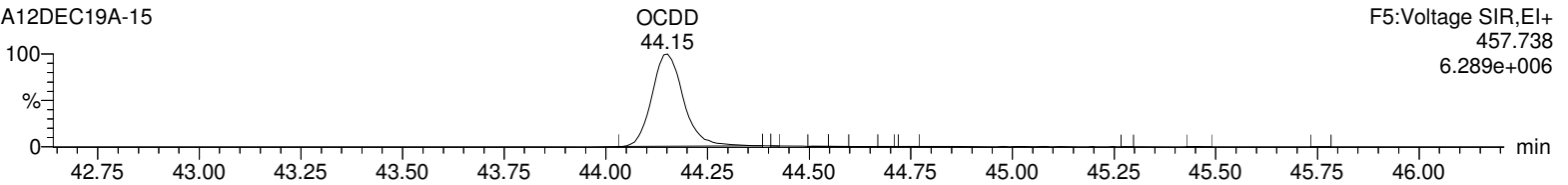
First HpCDD

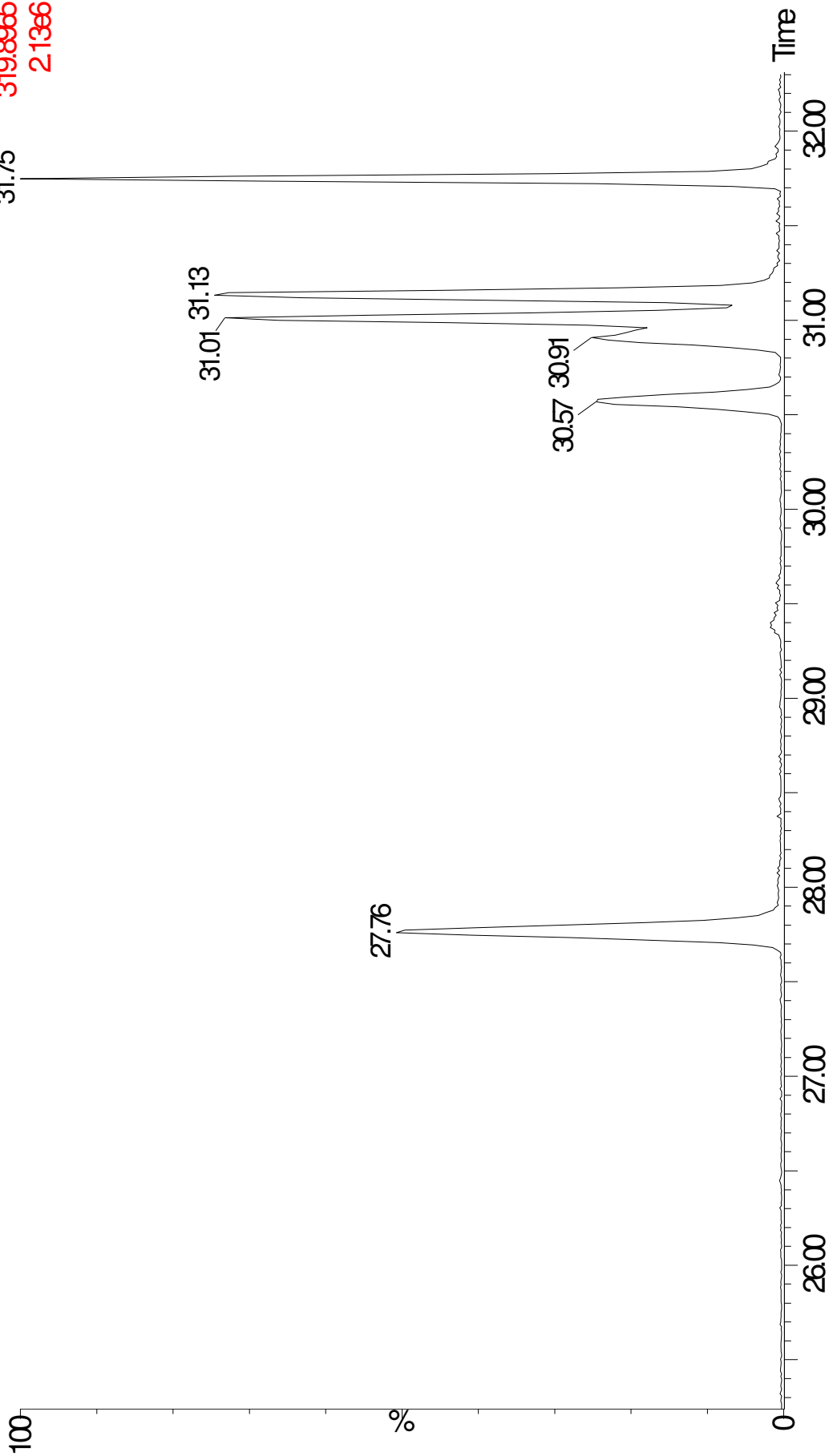
A12DEC19A-15



OCDD

A12DEC19A-15





Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time
Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	9.76e4	1.25e5	2.23e5	31.13	1.000	0.78	NO	11.022	0.0628	0.975	0.884	10.2	1.58e6	5312	297.5	2.08e6	3460	602.1	db	db
2	12378-PeCDD	5.20e5	3.33e5	8.53e5	34.04	1.000	1.56	NO	55.188	0.131	0.942	0.853	10.4	1.28e7	11416	1120.6	8.26e6	8646	955.8	bb	bb
3	123478-HxCDD	4.60e5	3.65e5	8.25e5	36.62	1.001	1.26	NO	55.279	0.131	1.039	0.940	10.6	9.46e6	9063	1043.5	7.49e6	7014	1067.7	bd	bd
4	123678-HxCDD	4.84e5	3.83e5	8.67e5	36.70	1.000	1.26	NO	52.396	0.120	0.989	0.944	4.8	9.72e6	9063	1073.0	7.83e6	7014	1115.9	dd	dd
5	123789-HxCDD	4.78e5	3.84e5	8.63e5	36.93	1.007	1.25	NO	55.694	0.127	1.033	0.927	11.4	9.05e6	9063	998.6	7.37e6	7014	1050.4	dd	dd
6	1234678-HpCDD	3.49e5	3.43e5	6.92e5	39.96	1.000	1.02	NO	49.109	0.158	1.021	1.040	-1.8	5.44e6	6233	872.9	5.29e6	8059	656.8	bb	bd
7	OCDD	5.68e5	6.35e5	1.20e6	44.15	1.000	0.89	NO	103.805	0.193	1.008	0.971	3.8	6.26e6	5117	1223.1	6.97e6	4560	1527.5	bb	bb
8	2378-TCDF	1.17e5	1.54e5	2.71e5	30.34	1.000	0.76	NO	9.633	0.0752	0.942	0.978	-3.7	1.35e6	4286	315.1	1.79e6	5459	328.6	bb	bd
9	12378-PeCDF	7.62e5	4.94e5	1.26e6	33.24	1.000	1.54	NO	49.262	0.126	0.931	0.945	-1.5	1.87e7	14233	1315.8	1.23e7	17581	698.0	bb	bd
10	23478-PeCDF	8.33e5	5.41e5	1.37e6	33.85	1.000	1.54	NO	49.845	0.112	0.984	0.987	-0.3	2.10e7	14233	1472.8	1.40e7	17581	796.2	bb	bb
11	123478-HxCDF	6.26e5	5.05e5	1.13e6	35.91	1.000	1.24	NO	51.149	0.127	1.112	1.087	2.3	1.43e7	12805	1115.8	1.16e7	12865	900.0	bd	bd
12	123678-HxCDF	6.53e5	5.33e5	1.19e6	36.01	1.000	1.23	NO	51.205	0.137	1.066	1.041	2.4	1.40e7	12805	1094.7	1.12e7	12865	867.7	db	dd
13	234678-HxCDF	6.50e5	5.09e5	1.16e6	36.48	1.000	1.28	NO	52.046	0.131	1.182	1.136	4.1	1.40e7	12805	1093.0	1.12e7	12865	867.1	bb	bb
14	123789-HxCDF	5.35e5	4.40e5	9.75e5	37.24	1.000	1.22	NO	50.934	0.189	1.081	1.061	1.9	9.77e6	12805	762.6	7.92e6	12865	616.0	bb	bb
15	1234678-HpCDF	5.05e5	4.93e5	9.98e5	38.72	1.000	1.02	NO	53.059	0.131	1.220	1.150	6.1	9.01e6	7480	1204.0	8.69e6	9231	941.4	bb	bb
16	1234789-HpCDF	4.13e5	4.03e5	8.16e5	40.62	1.001	1.03	NO	52.994	0.185	1.274	1.202	6.0	5.76e6	7480	770.5	5.53e6	9231	599.3	bb	bb
17	OCDF	6.39e5	7.11e5	1.35e6	44.44	1.007	0.90	NO	99.890	0.241	1.132	1.133	-0.1	6.96e6	7434	935.8	7.87e6	6635	1186.4	bd	bb
18	13C-2378-TCDD	9.89e5	1.30e6	2.29e6	31.12	1.018	0.76	NO	103.889	0.0923	1.172	1.128	3.9	1.71e7	6586	2590.4	2.23e7	3883	5741.1	bb	bb
19	13C-12378-PeCDD	1.10e6	7.09e5	1.81e6	34.03	1.114	1.55	NO	123.552	0.199	0.928	0.751	23.6	2.73e7	10070	2709.3	1.77e7	4931	3585.1	bb	bb
20	13C-123478-HxCDD	9.04e5	6.84e5	1.59e6	36.60	0.991	1.32	NO	98.414	0.138	0.882	0.896	-1.6	1.86e7	7730	2409.6	1.48e7	9206	1603.5	bd	bd
21	13C-123678-HxCDD	9.58e5	7.95e5	1.75e6	36.69	0.994	1.20	NO	98.739	0.125	0.973	0.986	-1.3	1.94e7	7730	2506.4	1.56e7	9206	1698.5	dd	dd
22	13C-1234678-HpCDD	6.90e5	6.65e5	1.35e6	39.95	1.082	1.04	NO	112.028	0.129	0.752	0.672	12.0	1.10e7	5957	1854.3	1.02e7	5933	1723.1	bb	bd
23	13C-OCDD	1.12e6	1.26e6	2.39e6	44.13	1.195	0.89	NO	206.379	0.172	0.663	0.642	3.2	1.21e7	6465	1876.8	1.37e7	8714	1570.8	bd	bd
24	13C-2378-TCDF	1.27e6	1.61e6	2.88e6	30.33	0.993	0.78	NO	118.056	0.143	1.476	1.250	18.1	1.46e7	11562	1259.1	1.87e7	6367	2943.3	bb	bb
25	13C-12378-PeCDF	1.64e6	1.06e6	2.70e6	33.23	1.088	1.54	NO	136.804	0.173	1.383	1.011	36.8	4.05e7	8493	4772.4	2.63e7	9098	2894.4	bb	bd
26	13C-23478-PeCDF	1.68e6	1.11e6	2.79e6	33.84	1.108	1.52	NO	134.639	0.165	1.431	1.063	34.6	4.32e7	8483	5096.2	2.80e7	9098	3081.4	bb	bb
27	13C-123478-HxCDF	6.94e5	1.34e6	2.04e6	35.90	0.972	0.52	NO	101.749	0.130	1.130	1.111	1.7	1.59e7	8545	1860.4	3.01e7	11249	2676.0	bd	bd
28	13C-123678-HxCDF	7.71e5	1.46e6	2.23e6	36.00	0.975	0.53	NO	99.146	0.116	1.236	1.247	-0.9	1.56e7	8545	1825.0	2.99e7	11249	2662.1	db	dd
29	13C-234678-HxCDF	6.69e5	1.29e6	1.96e6	36.47	0.988	0.52	NO	100.693	0.133	1.090	1.082	0.7	1.47e7	8545	1716.5	2.80e7	11249	2491.4	bb	bb
30	13C-123789-HxCDF	6.34e5	1.17e6	1.80e6	37.23	1.009	0.54	NO	103.656	0.149	1.002	0.967	3.7	1.12e7	8545	1314.6	2.18e7	11249	1935.6	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time
 Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	5.06e5	1.13e6	1.64e6	38.71	1.049	0.45	NO	104.401	0.113	0.908	0.870	4.4	8.60e6	5591	1538.1	1.94e7	7940	2437.7	bb	bb
32	13C-1234789-HpCDF	3.95e5	8.86e5	1.28e6	40.60	1.100	0.45	NO	104.982	0.146	0.711	0.677	5.0	5.78e6	5591	1033.5	1.26e7	7940	1585.7	bb	bb
33	13C-1234-TCDD	8.57e5	1.09e6	1.95e6	30.55	0.000	0.78	NO	100.000	0.104	1.000	1.000	0.0	1.10e7	6586	1677.2	1.38e7	3883	3545.3	bb	bb
34	13C-123789-HxCDD	1.00e6	7.99e5	1.80e6	36.92	0.000	1.25	NO	100.000	0.123	1.000	1.000	0.0	1.91e7	7730	2467.3	1.54e7	9206	1677.6	dd	dd
35	37Cl+2378-TCDD	2.12e5		2.12e5	31.13	1.019			10.237	0.0246	1.086	1.061	2.4	3.66e6	2621	1395.1				bb	bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

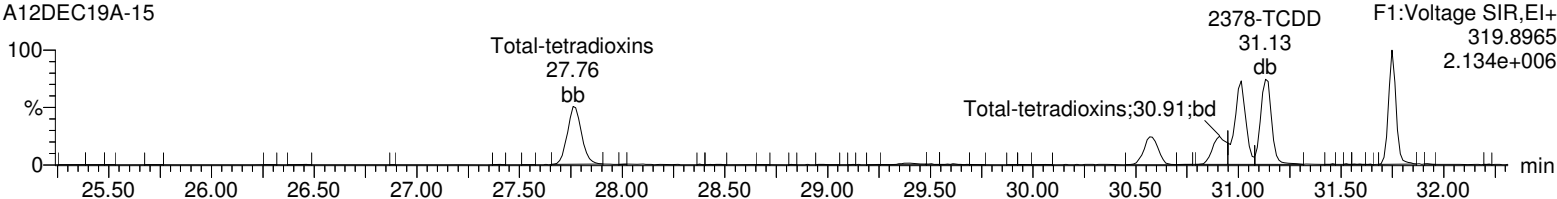
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A,
Task: HRP750_2, User: MJC

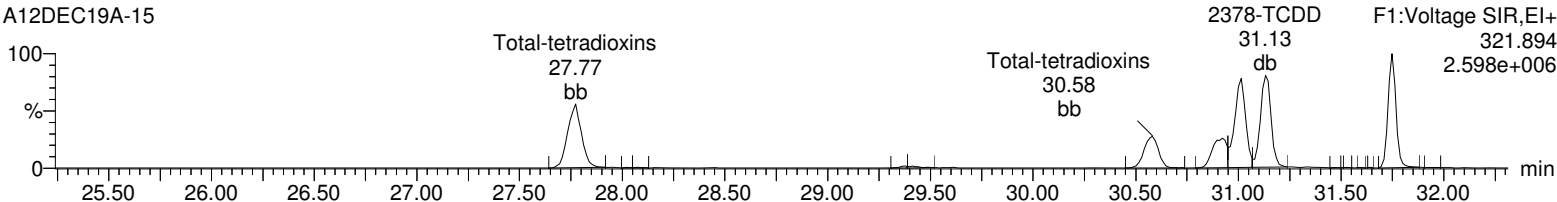
Total-tetradoxins

A12DEC19A-15



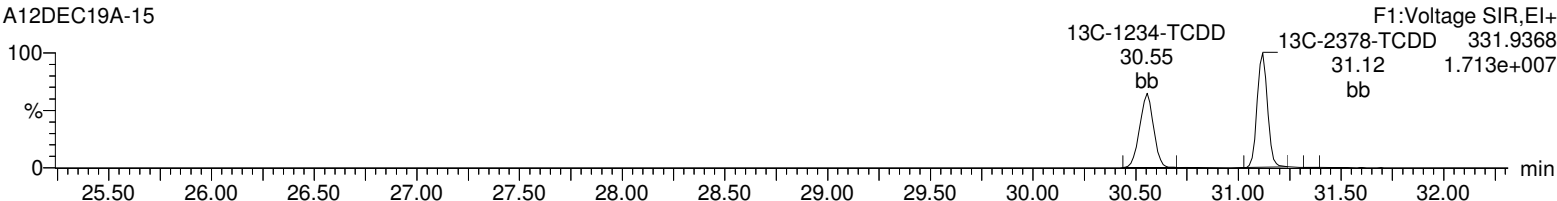
Total-tetradoxins

A12DEC19A-15



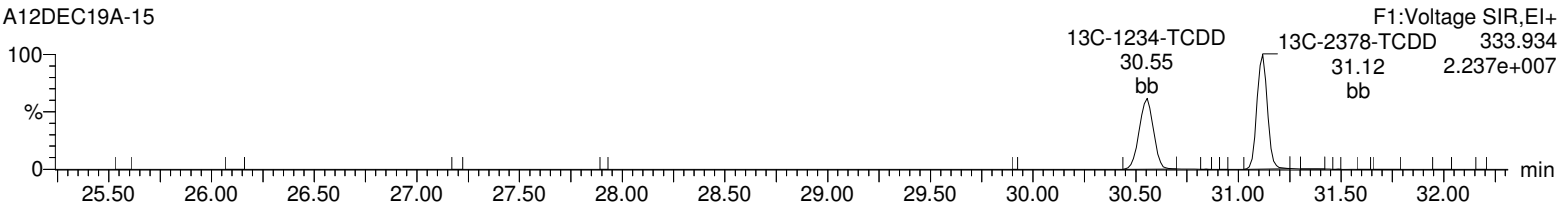
13C-2378-TCDD

A12DEC19A-15



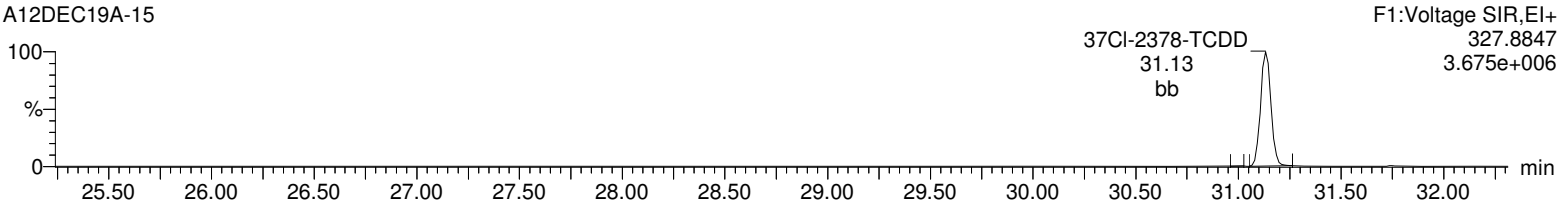
13C-2378-TCDD

A12DEC19A-15



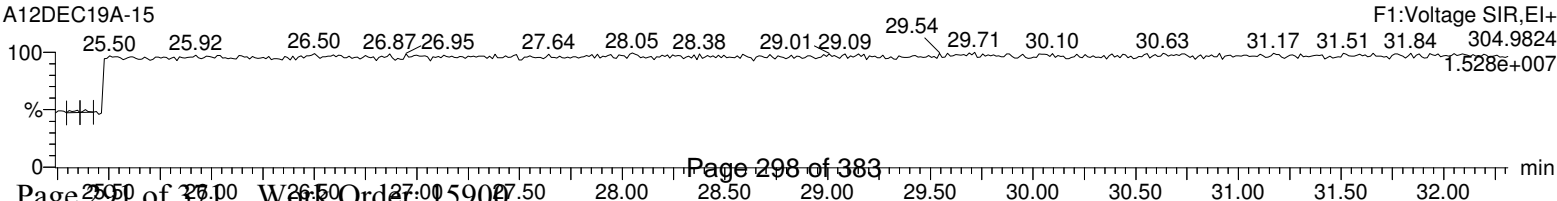
37Cl-2378-TCDD

A12DEC19A-15



Lock Mass F1

A12DEC19A-15



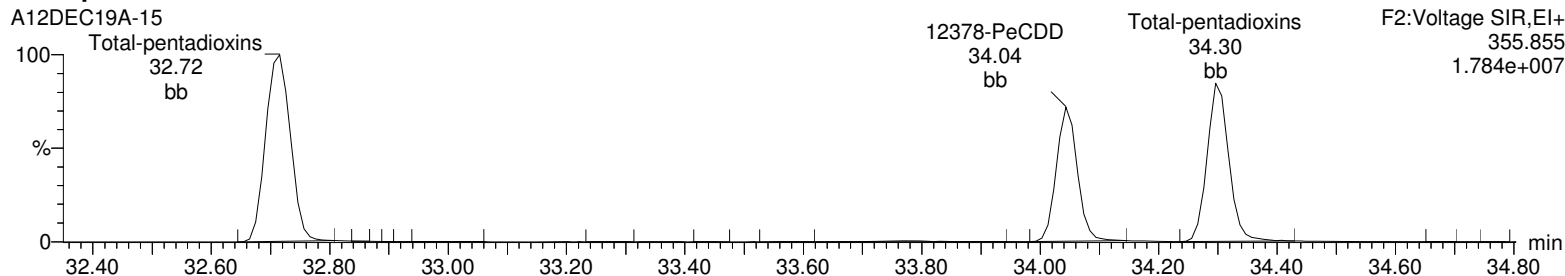
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Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

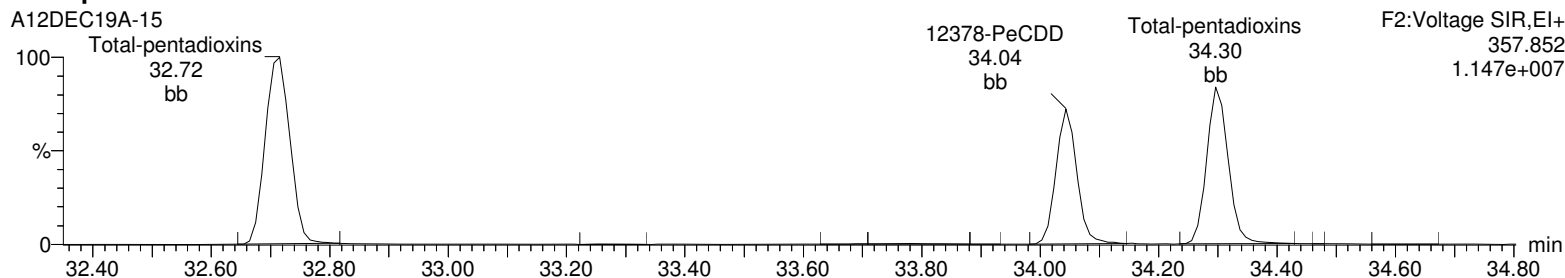
Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

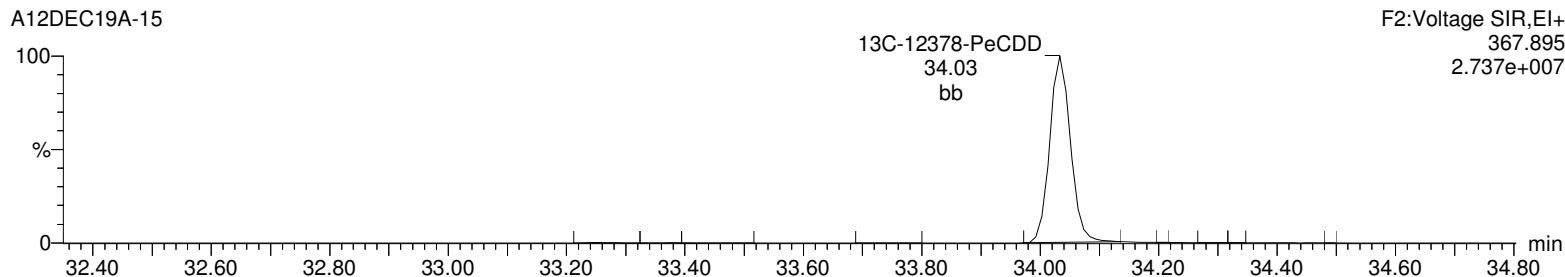
Total-pentadioxins



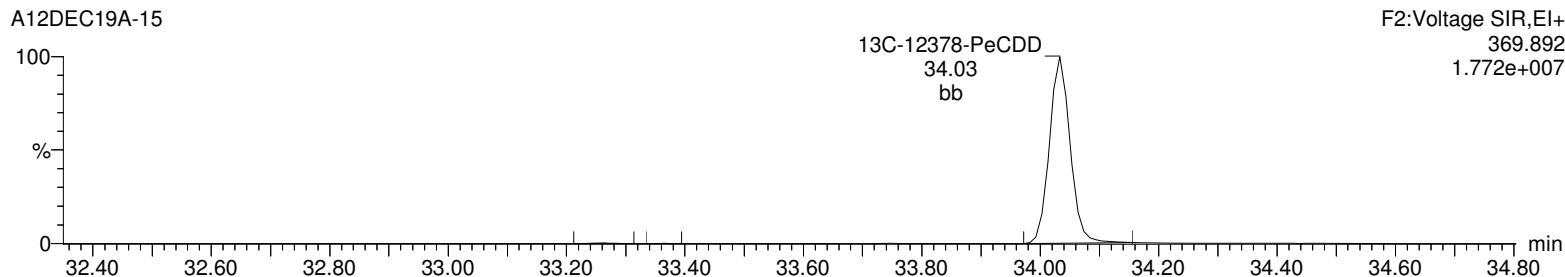
Total-pentadioxins



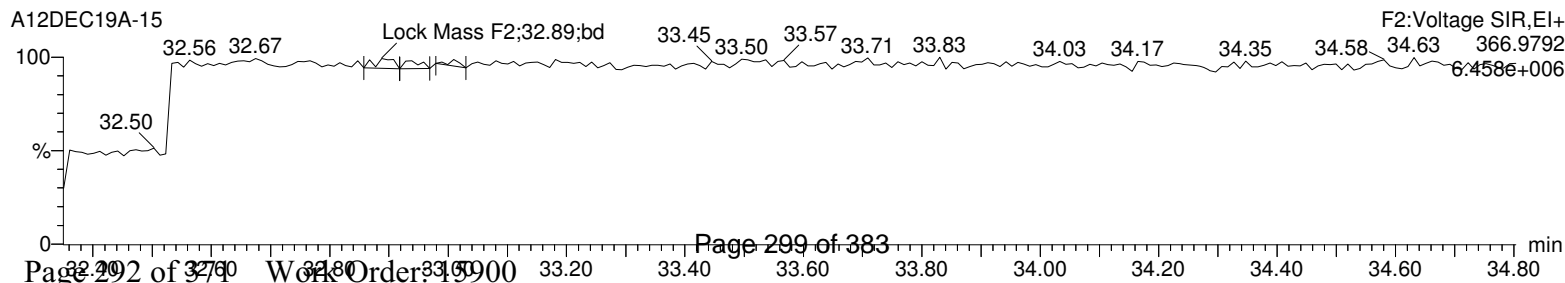
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



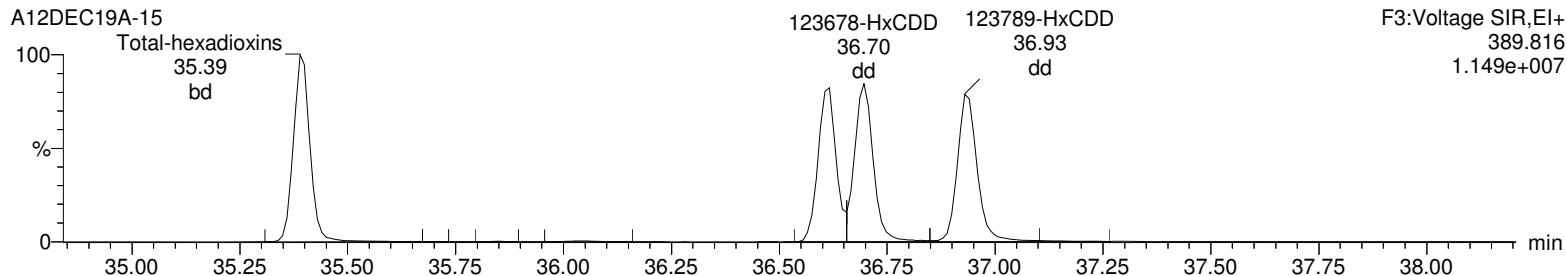
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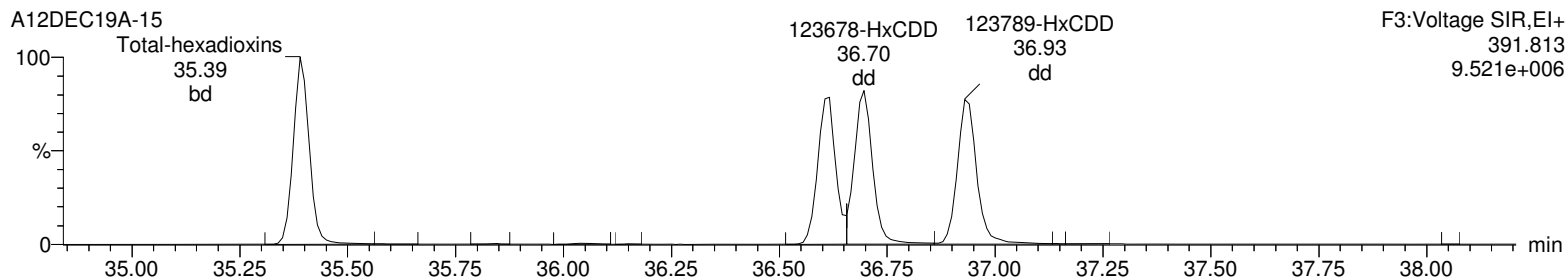
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Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A,
Task: HRP750_2, User: MJC

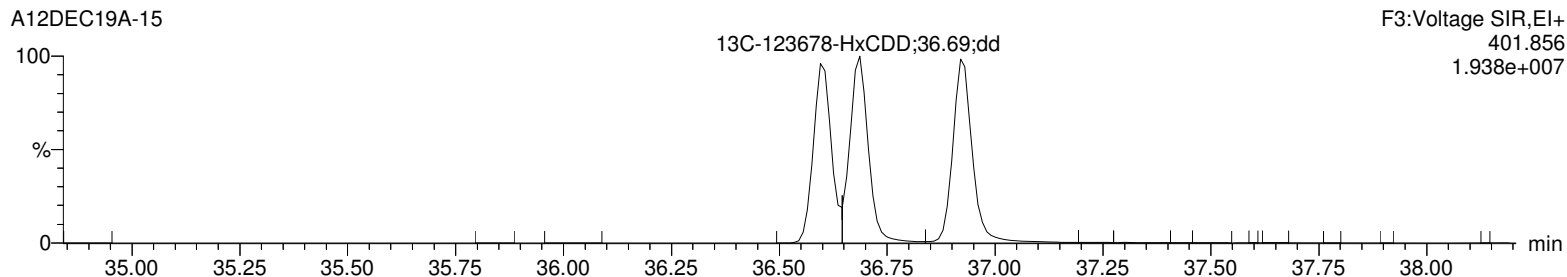
Total-hexadioxins



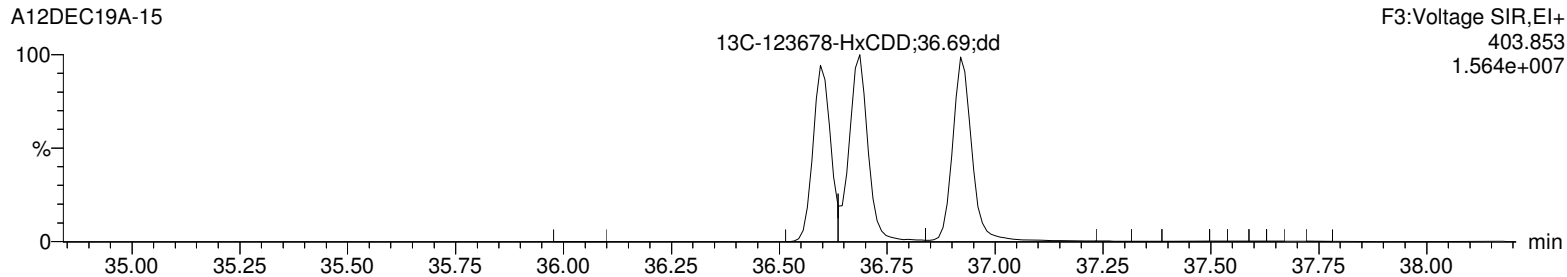
Total-hexadioxins



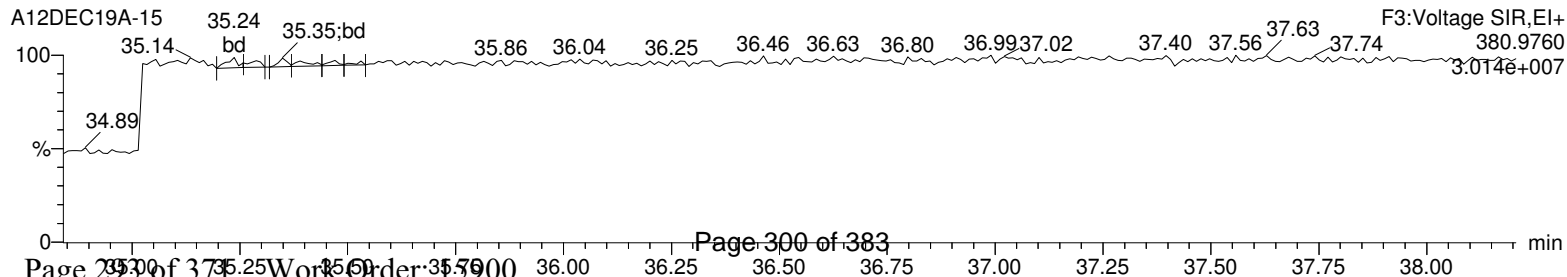
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



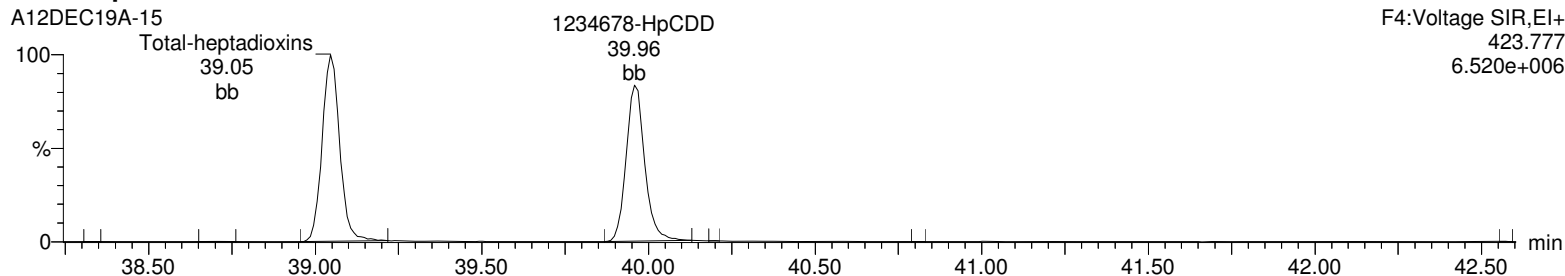
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Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

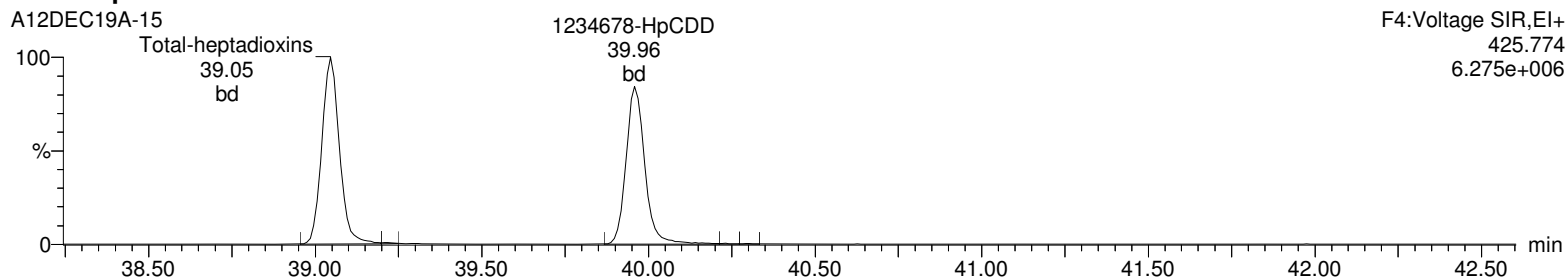
Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

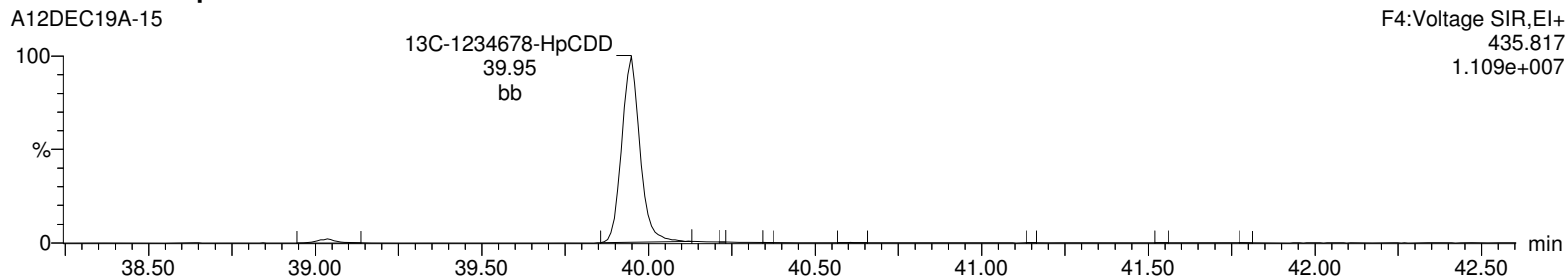
Total-heptadioxins



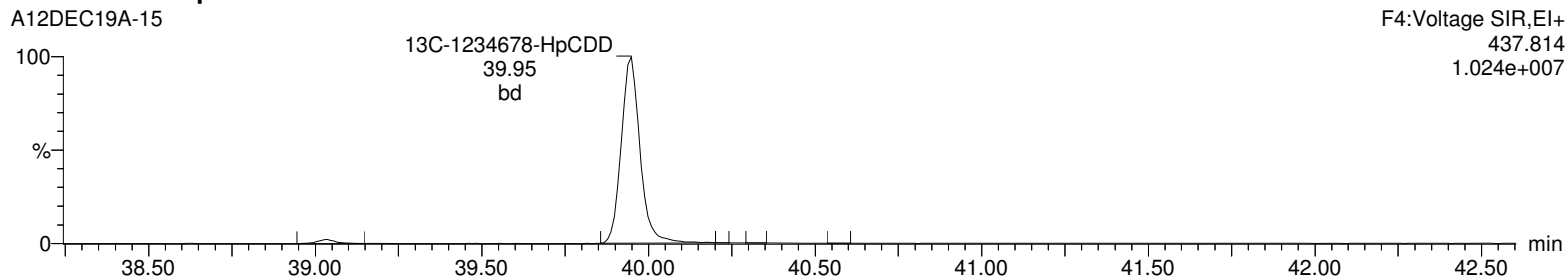
Total-heptadioxins



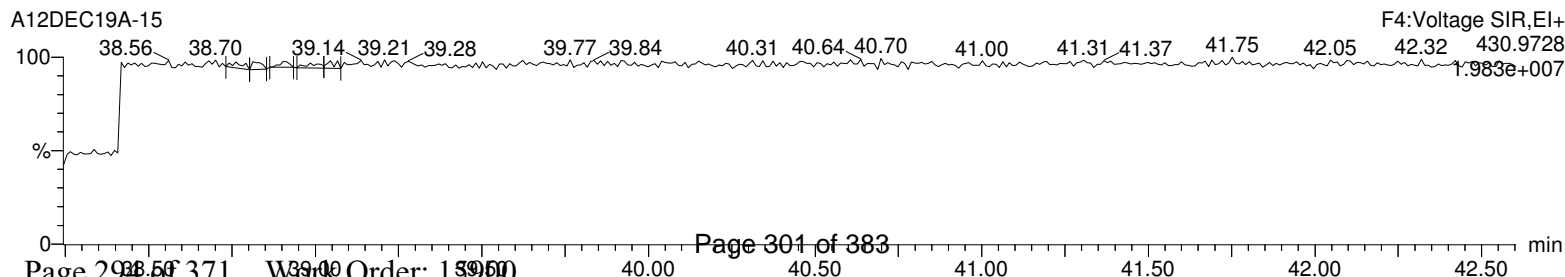
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

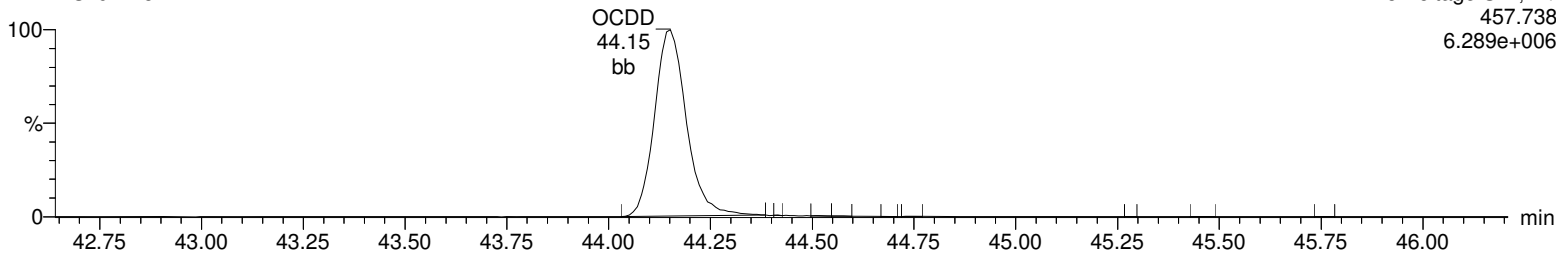
Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

OCDD

A12DEC19A-15

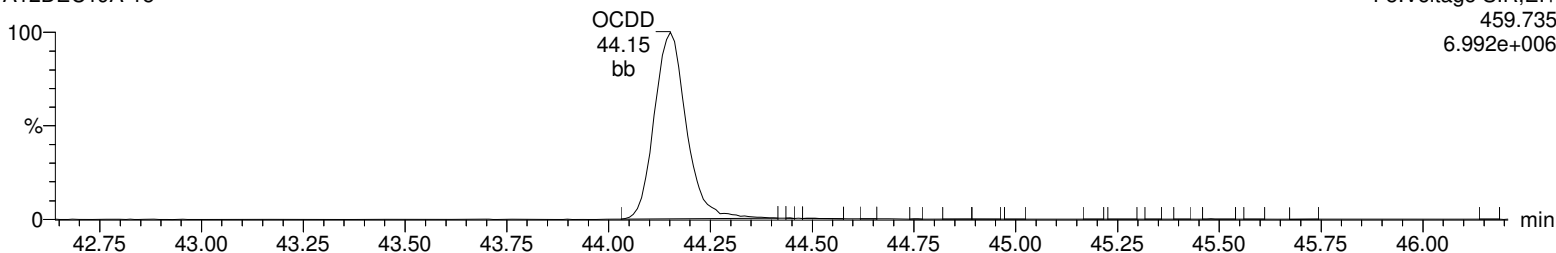
F5:Voltage SIR,EI+
457.738
6.289e+006



OCDD

A12DEC19A-15

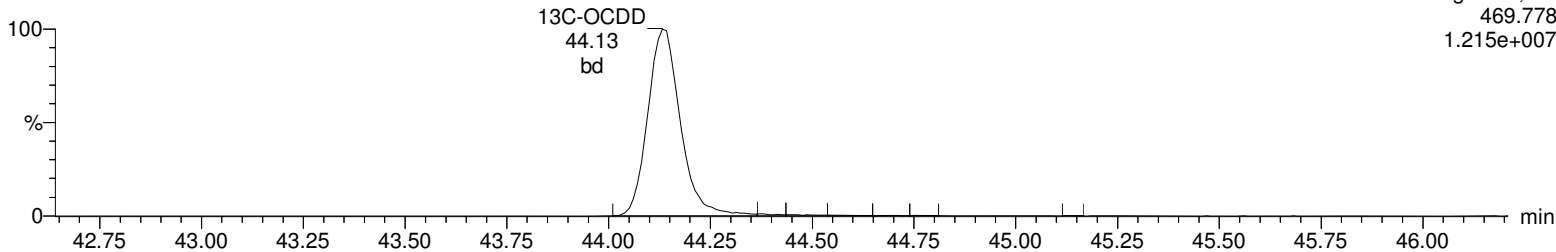
F5:Voltage SIR,EI+
459.735
6.992e+006



13C-OCDD

A12DEC19A-15

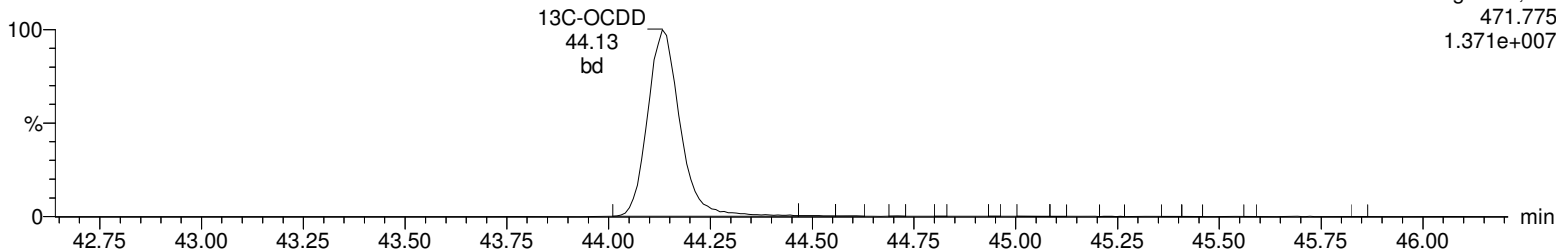
F5:Voltage SIR,EI+
469.778
1.215e+007



13C-OCDD

A12DEC19A-15

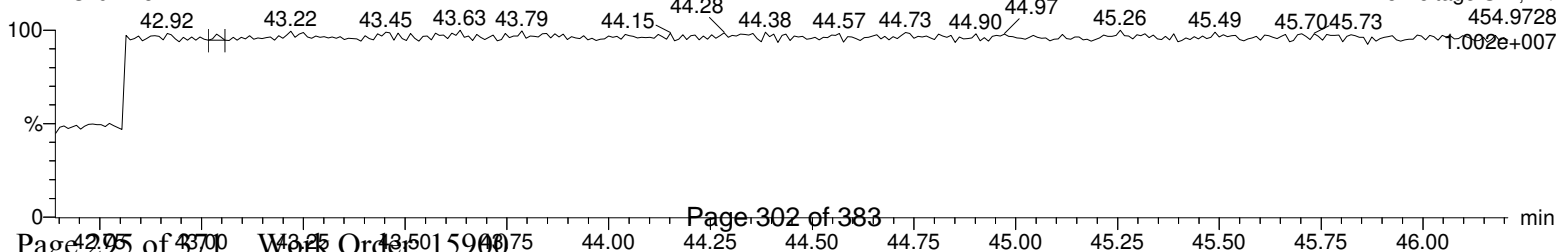
F5:Voltage SIR,EI+
471.775
1.371e+007



Lock Mass F5

A12DEC19A-15

F5:Voltage SIR,EI+
454.9728
1.002e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

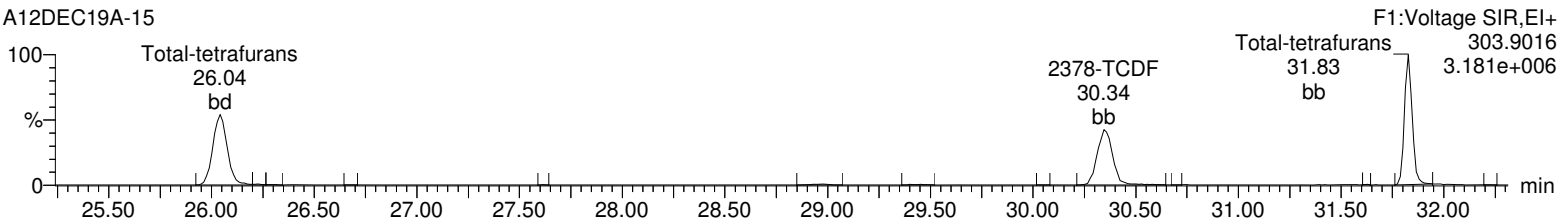
Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

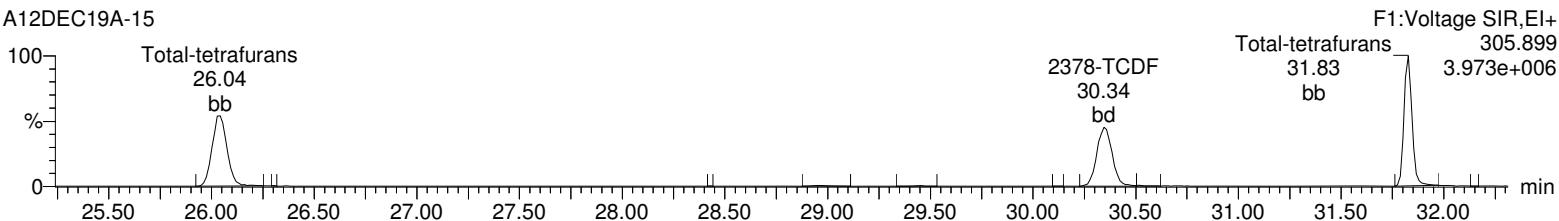
Total-tetrafurans

A12DEC19A-15



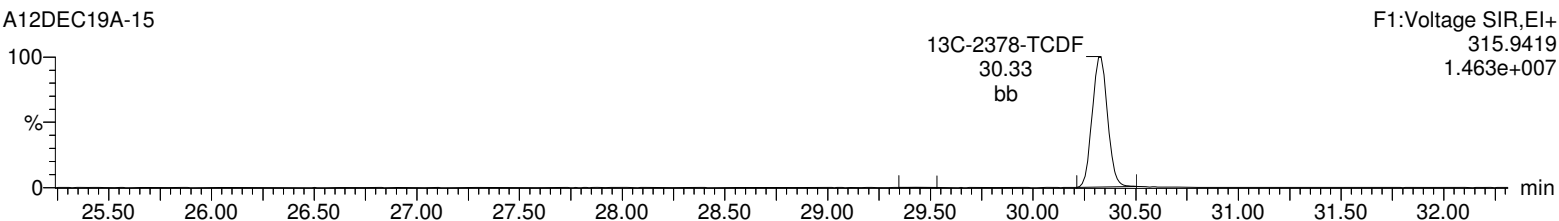
Total-tetrafurans

A12DEC19A-15



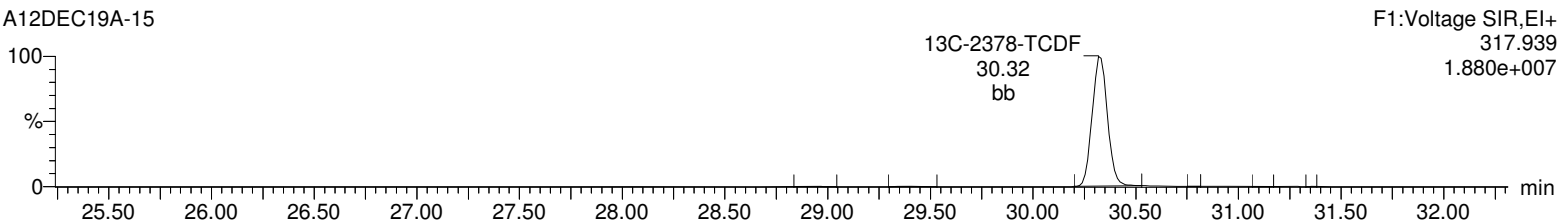
13C-2378-TCDF

A12DEC19A-15



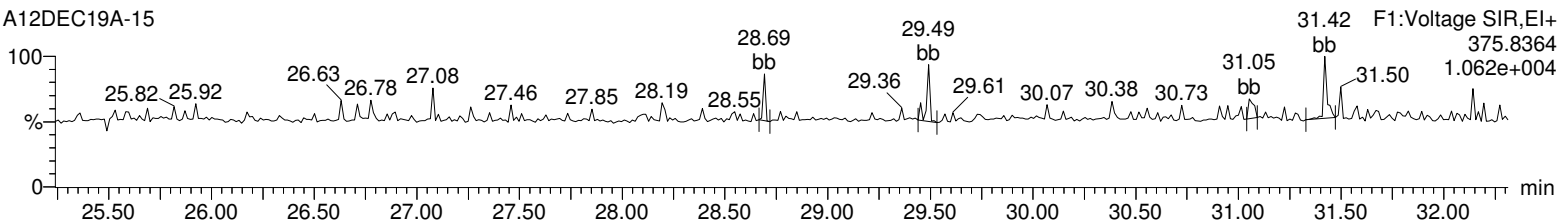
13C-2378-TCDF

A12DEC19A-15



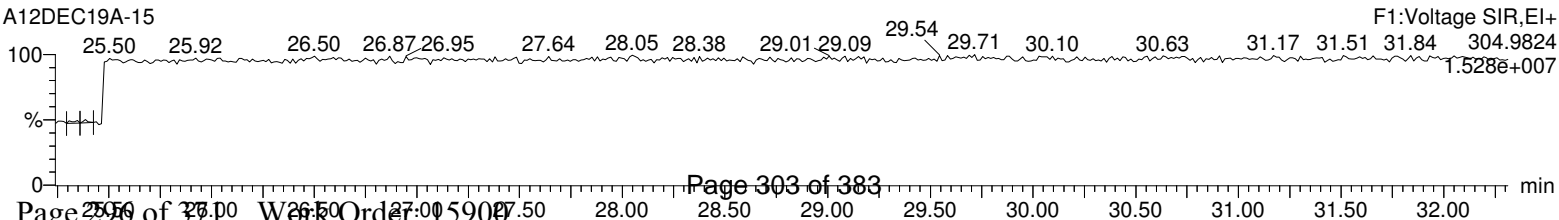
HxDPE

A12DEC19A-15



Lock Mass F1

A12DEC19A-15



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

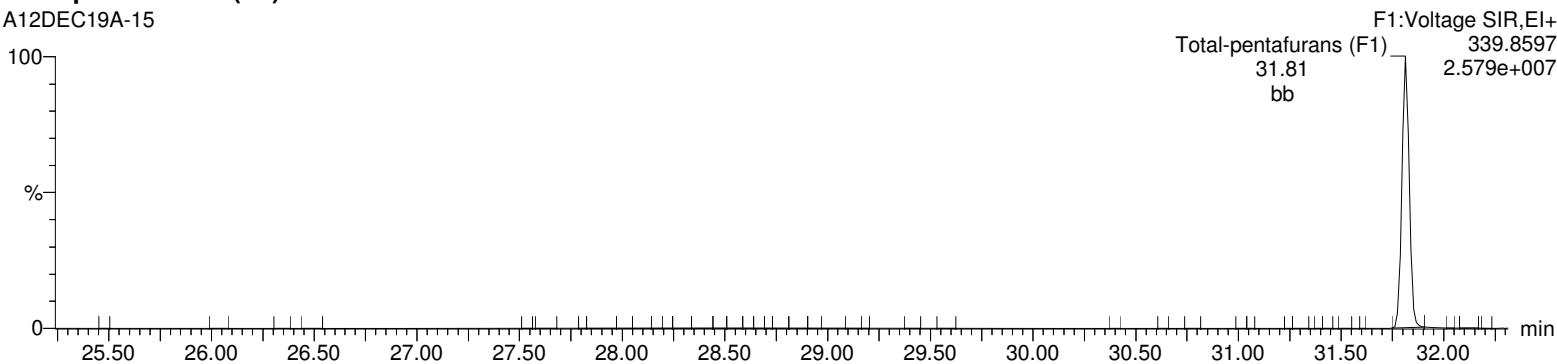
Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

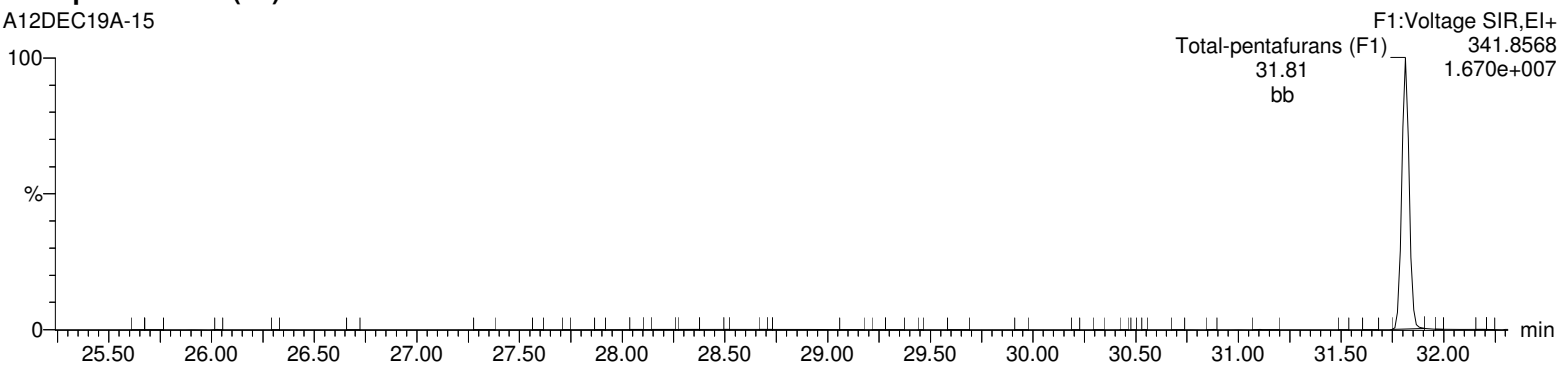
Total-pentafurans (F1)

A12DEC19A-15



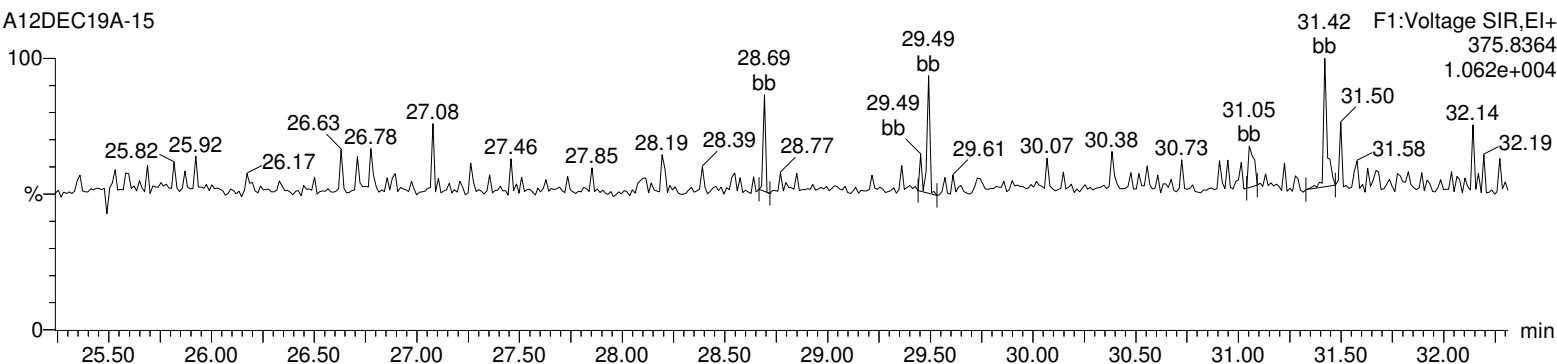
Total-pentafurans (F1)

A12DEC19A-15



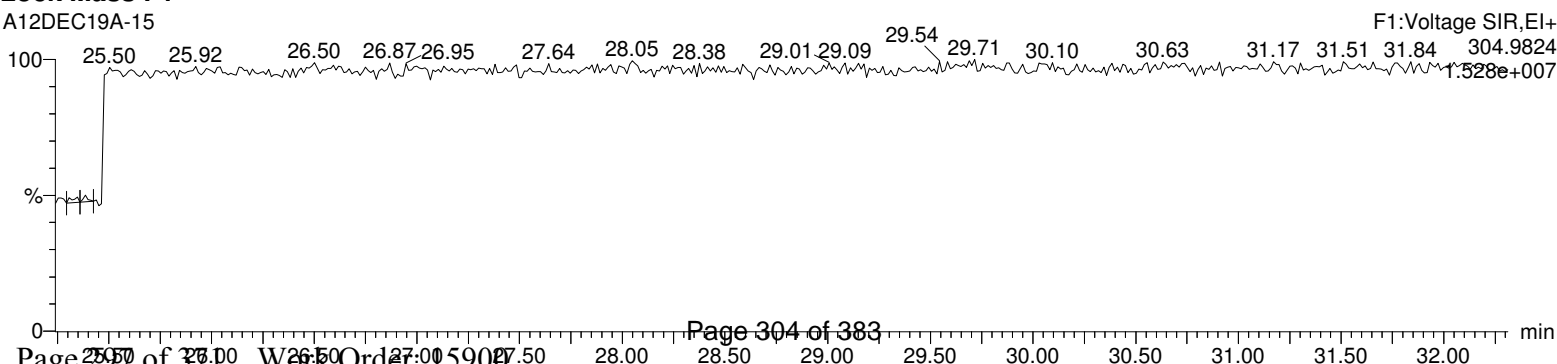
HxDPE

A12DEC19A-15



Lock Mass F1

A12DEC19A-15



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

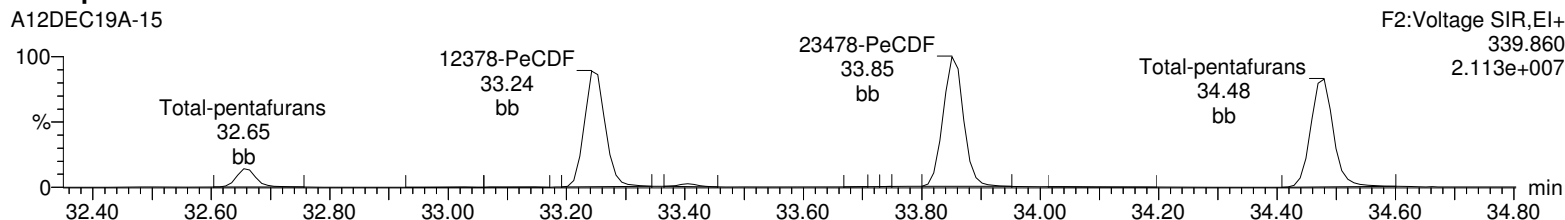
Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

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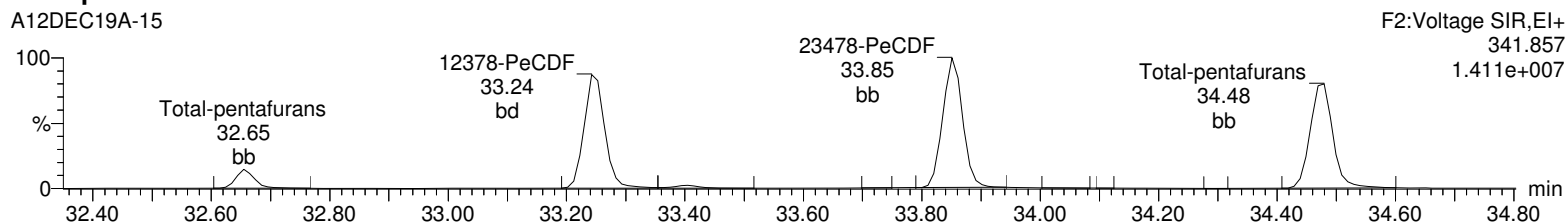
Total-pentafurans

A12DEC19A-15



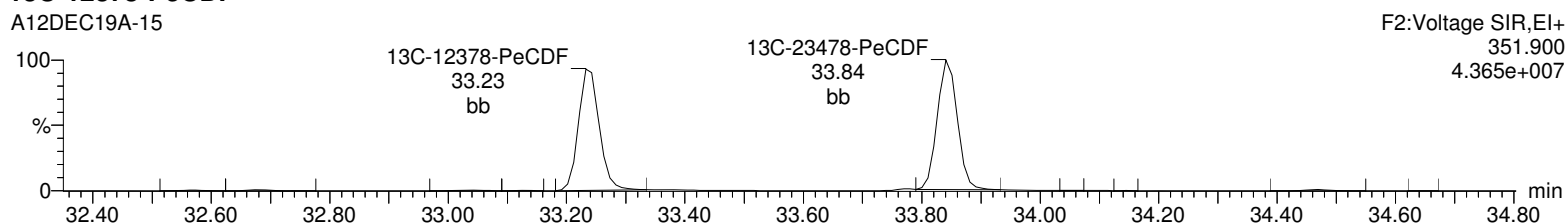
Total-pentafurans

A12DEC19A-15



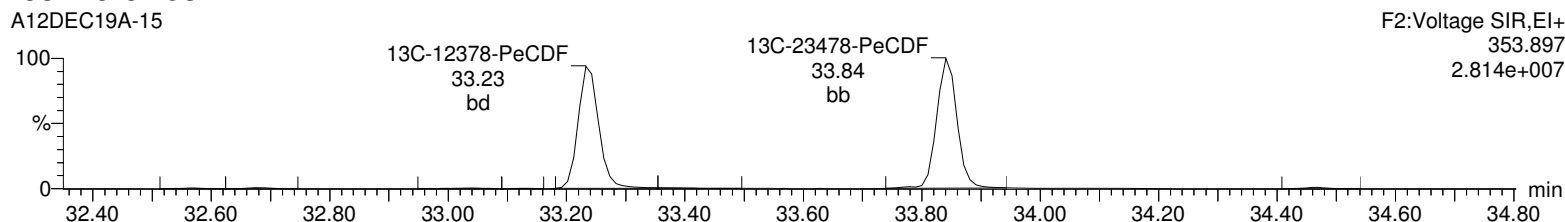
13C-12378-PeCDF

A12DEC19A-15



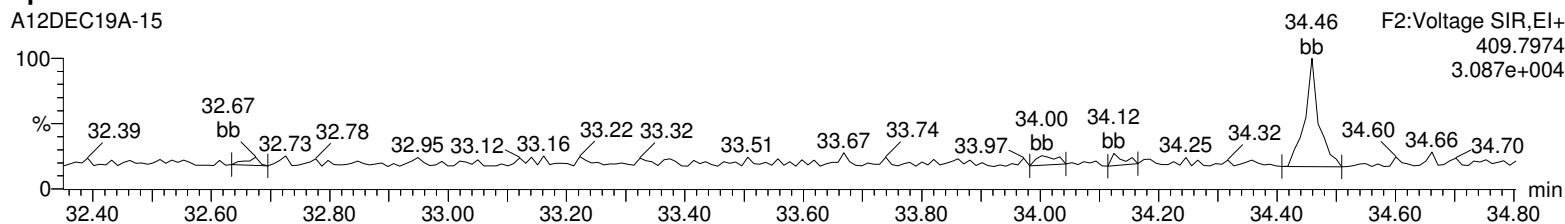
13C-12378-PeCDF

A12DEC19A-15



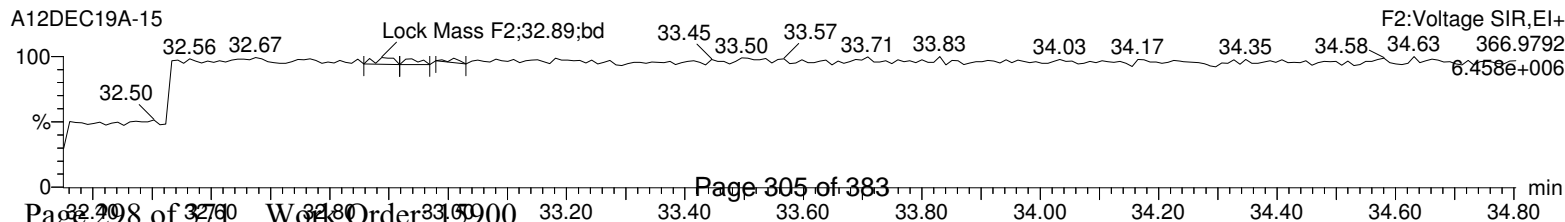
HpDPE

A12DEC19A-15



Lock Mass F2

A12DEC19A-15



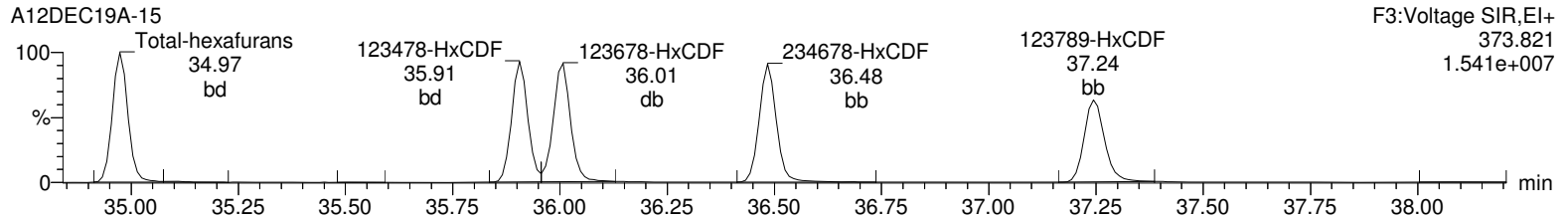
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

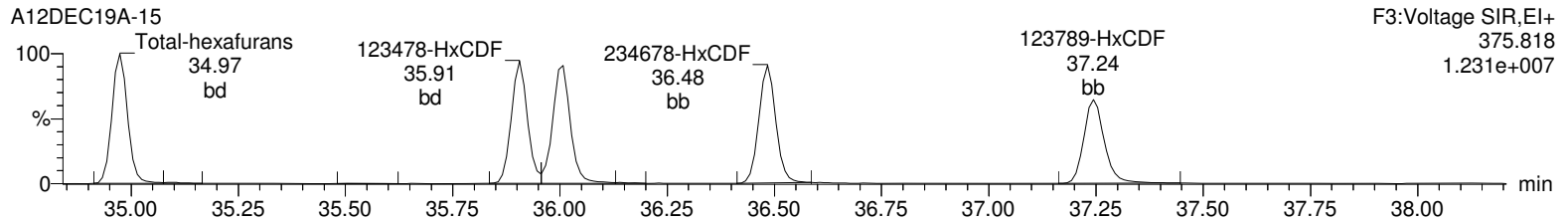
Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

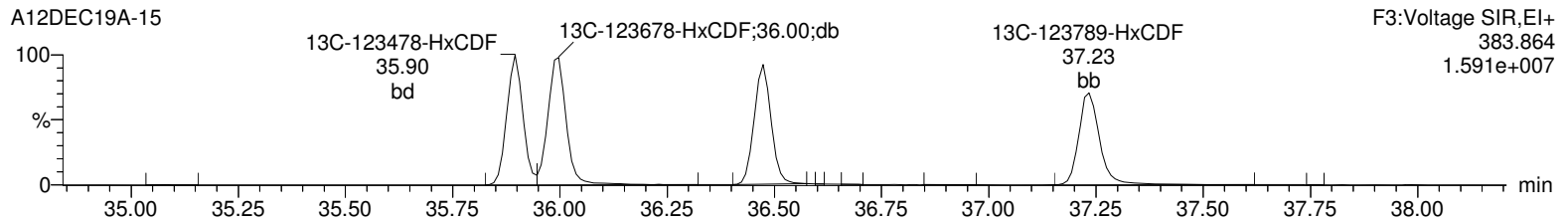
Total-hexafurans



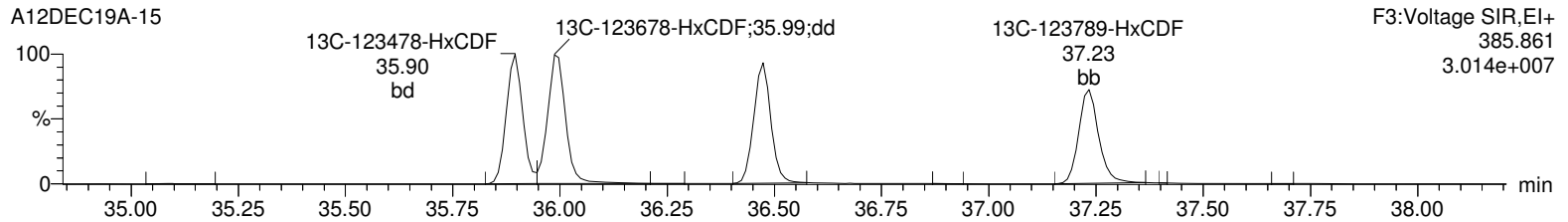
Total-hexafurans



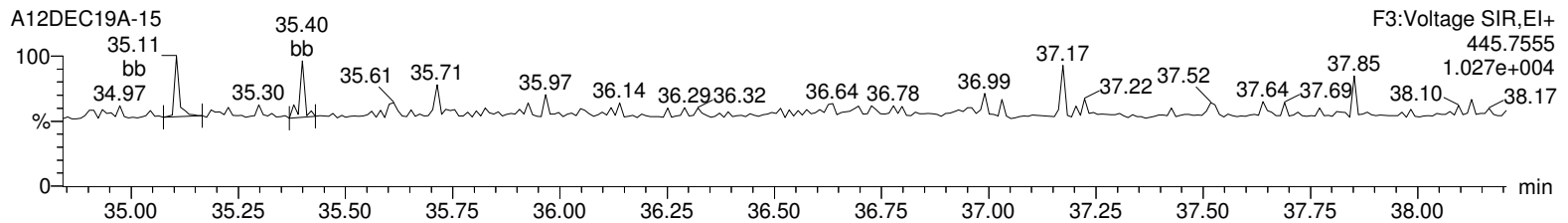
13C-123478-HxCDF



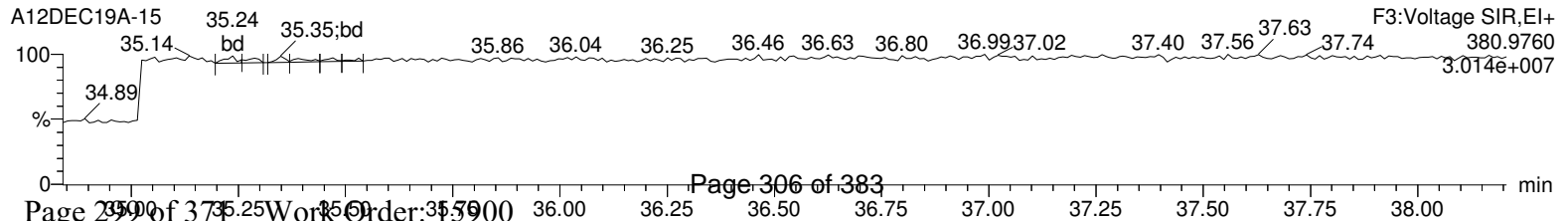
13C-123478-HxCDF



OcDPE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

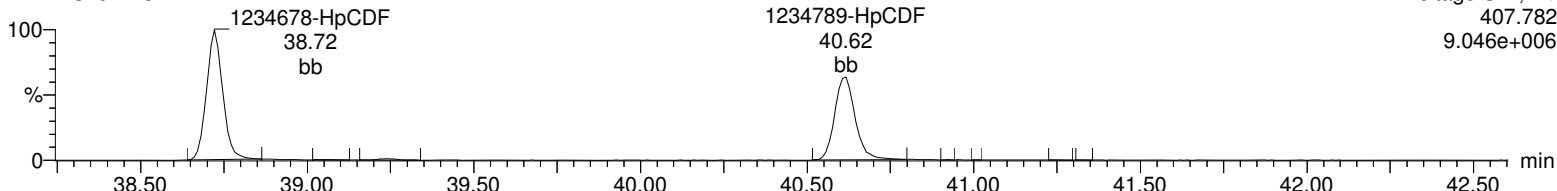
Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

Total-heptafurans

A12DEC19A-15

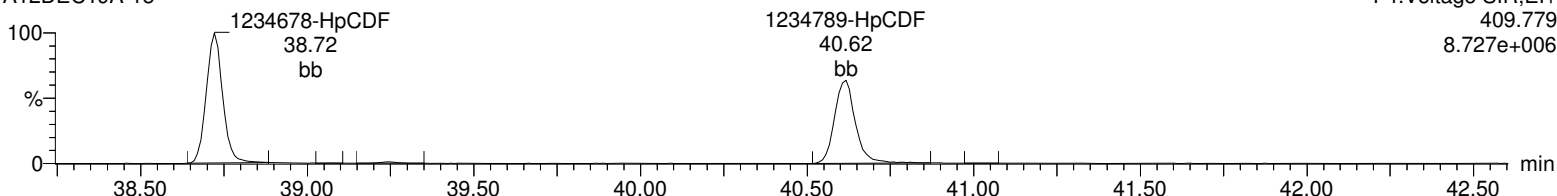
F4:Voltage SIR,EI+
407.782
9.046e+006



Total-heptafurans

A12DEC19A-15

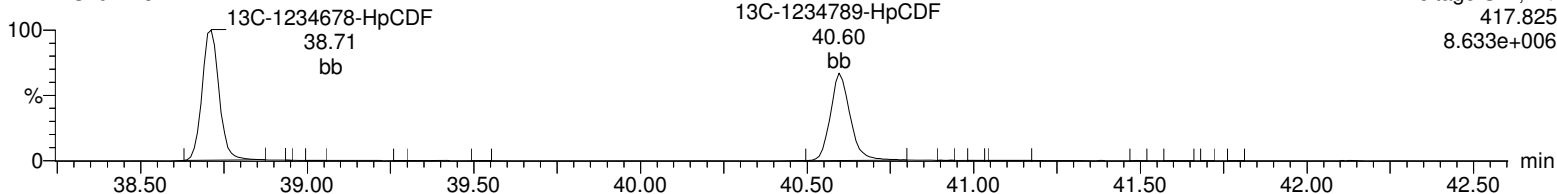
F4:Voltage SIR,EI+
409.779
8.727e+006



13C-1234678-HpCDF

A12DEC19A-15

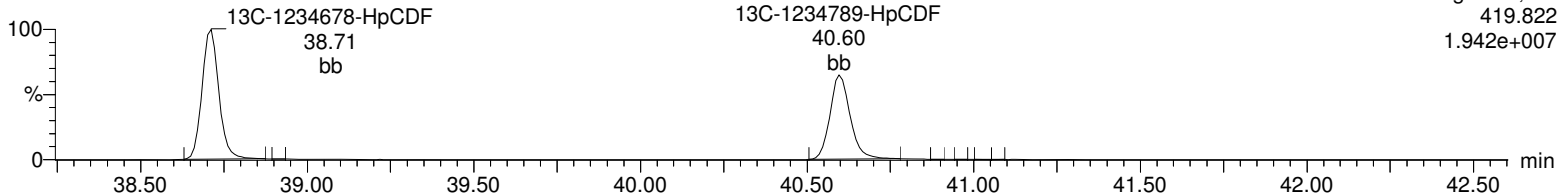
F4:Voltage SIR,EI+
417.825
8.633e+006



13C-1234678-HpCDF

A12DEC19A-15

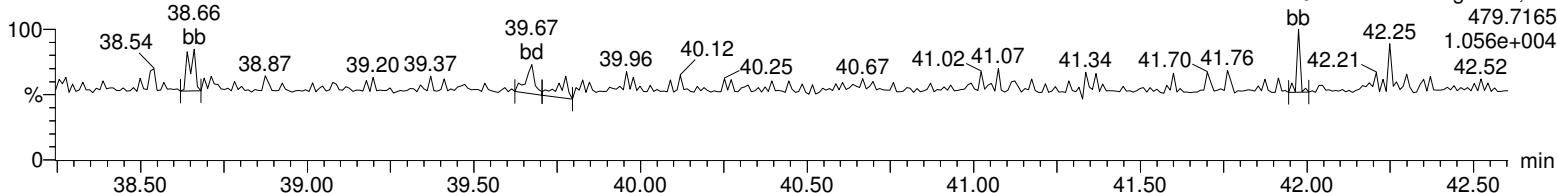
F4:Voltage SIR,EI+
419.822
1.942e+007



NoDPE

A12DEC19A-15

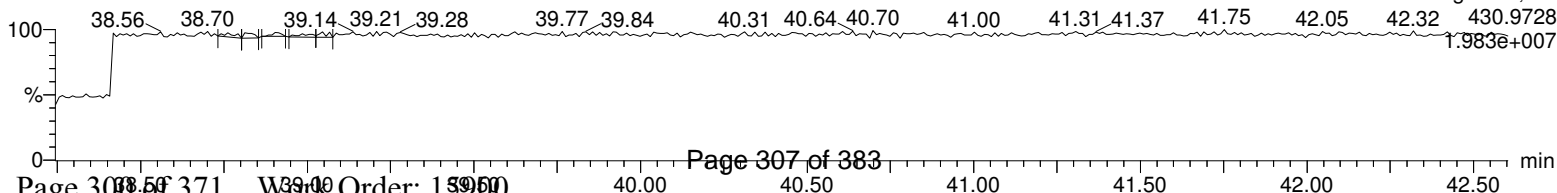
F4:Voltage SIR,EI+
479.7165
1.056e+004



Lock Mass F4

A12DEC19A-15

F4:Voltage SIR,EI+
430.9728
1.983e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A12DEC19A-15.qld

Last Altered: Friday, December 13, 2019 08:16:27 Eastern Standard Time

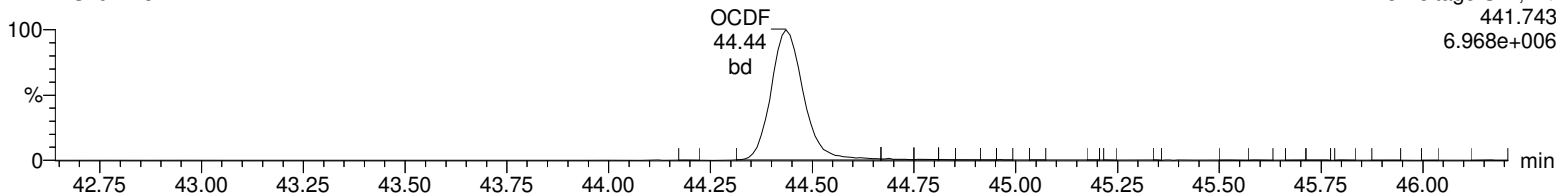
Printed: Friday, December 13, 2019 08:17:15 Eastern Standard Time

Name: A12DEC19A-15, Date: 12-Dec-2019, Time: 23:29:08, ID: CS3WT UD191018-02.1, Description: , Job: A12DEC19A, Task: HRP750_2, User: MJC

OCDF

A12DEC19A-15

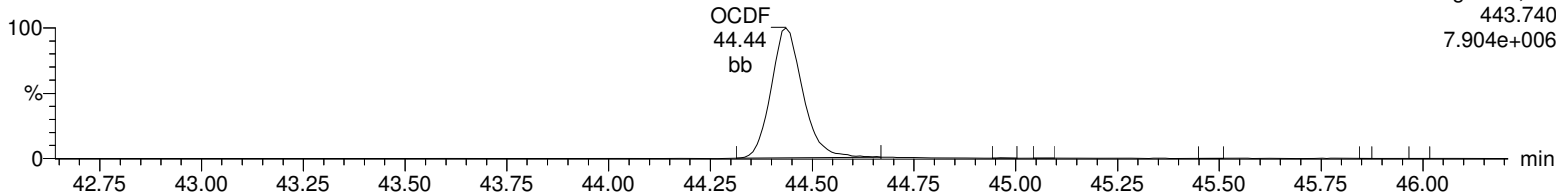
F5:Voltage SIR,EI+
441.743
6.968e+006



OCDF

A12DEC19A-15

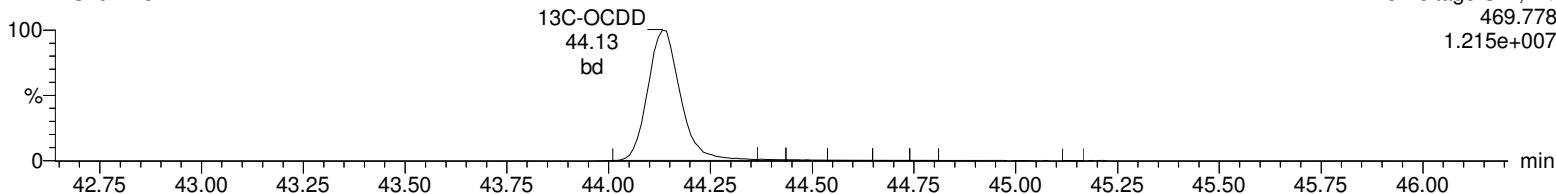
F5:Voltage SIR,EI+
443.740
7.904e+006



13C-OCDD

A12DEC19A-15

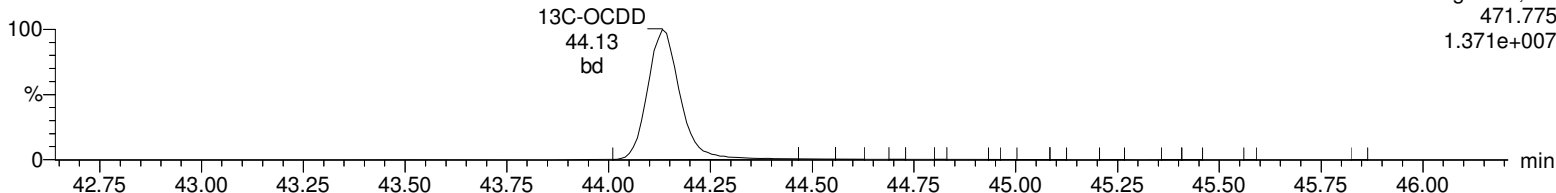
F5:Voltage SIR,EI+
469.778
1.215e+007



13C-OCDD

A12DEC19A-15

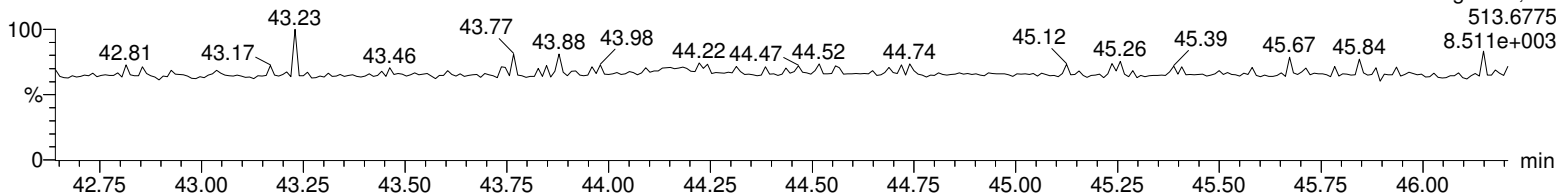
F5:Voltage SIR,EI+
471.775
1.371e+007



DeDPE

A12DEC19A-15

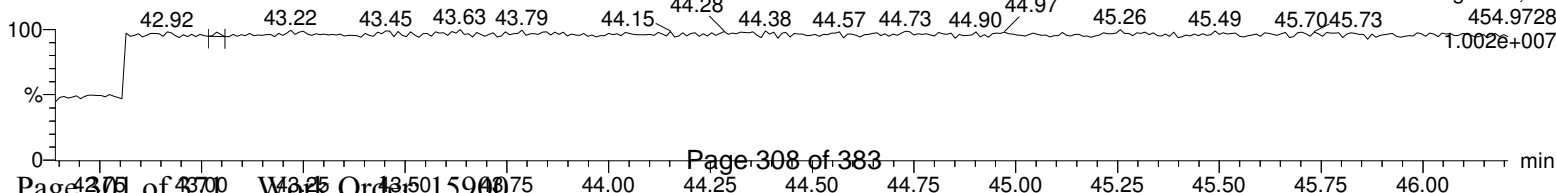
F5:Voltage SIR,EI+
513.6775
8.511e+003



Lock Mass F5

A12DEC19A-15

F5:Voltage SIR,EI+
454.9728
1.002e+007

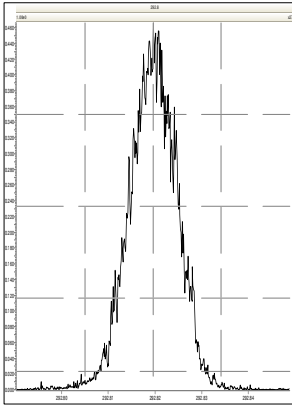


RUN LOG

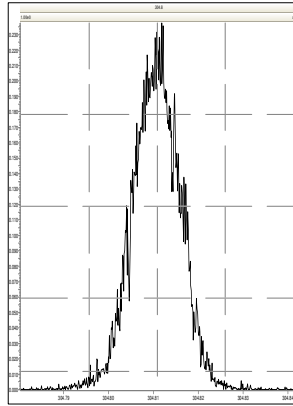
Instrument: HRP750_2

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
A12DEC19A_2-1	13-DEC-2019 00:25:26	Matt Cash	12025526-1 LCS		1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-2	13-DEC-2019 01:12:50	Matt Cash	12025527-1 LCSD		1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-3	13-DEC-2019 02:00:58	Matt Cash	12025525-1 MB		1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-4	13-DEC-2019 02:49:03	Matt Cash	15896001-1	42569	1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-5	13-DEC-2019 03:37:11	Matt Cash	15918001-1	42569	1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-6	13-DEC-2019 04:25:24	Matt Cash	15919001-1	42569	1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-7	13-DEC-2019 05:13:30	Matt Cash	15920001-1	42569	1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-8	13-DEC-2019 06:01:41	Matt Cash	15925001-1	42569	1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-9	13-DEC-2019 06:49:48	Matt Cash	15931001-1	42569	1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-10	13-DEC-2019 07:38:00	Matt Cash	15931002-1	42569	1 uL	dioxin_db5ms	10K_dx
A12DEC19A_2-11	13-DEC-2019 08:27:03	Matt Cash	15904001-1	42570	1 uL	dioxin_db5ms	10K_dx

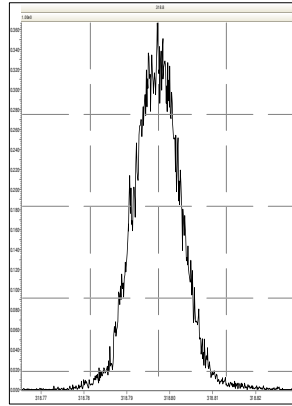
M 292.9824 R 12757



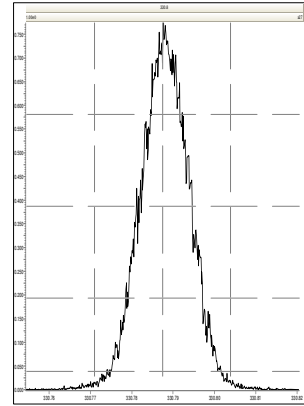
M 304.9824 R 13405



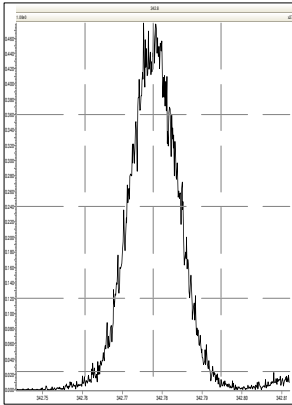
M 318.9792 R 13441



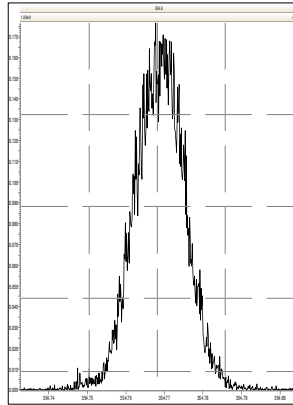
M 330.9792 R 12567



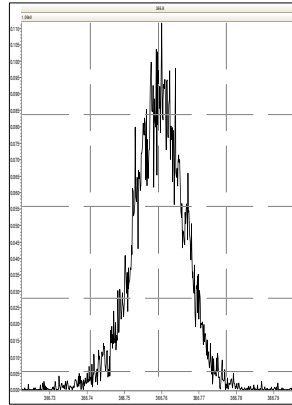
M 342.9792 R 12255



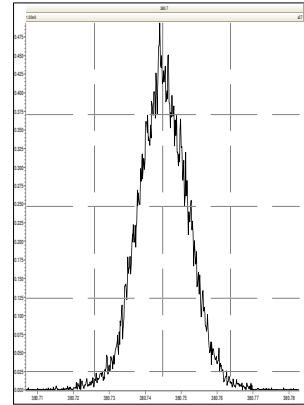
M 354.9792 R 12255



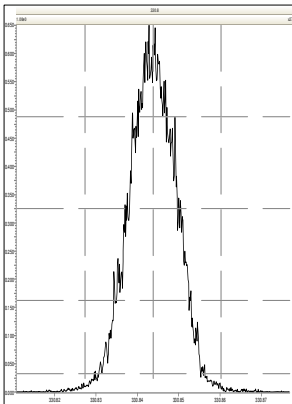
M 366.9792 R 12934



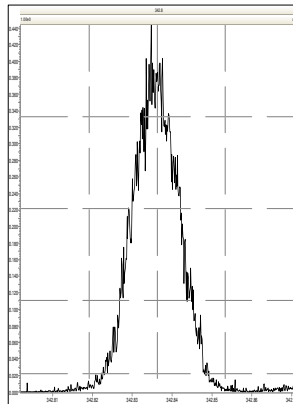
M 380.9760 R 11827



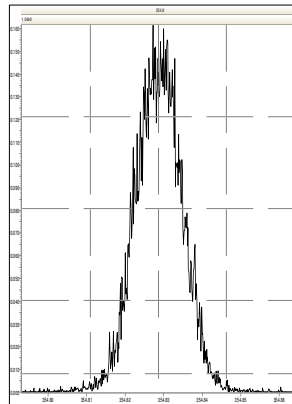
M 330.9792 R 13001



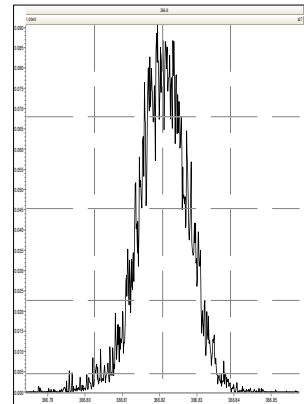
M 342.9792 R 13465



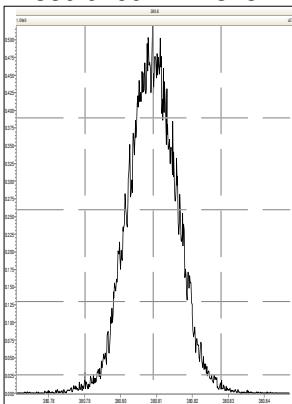
M 354.9792 R 13375



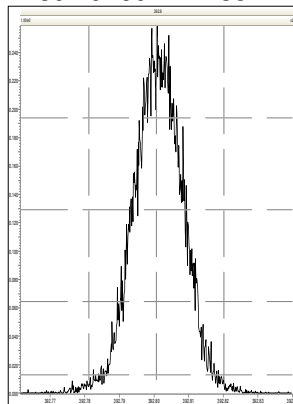
M 366.9792 R 12756



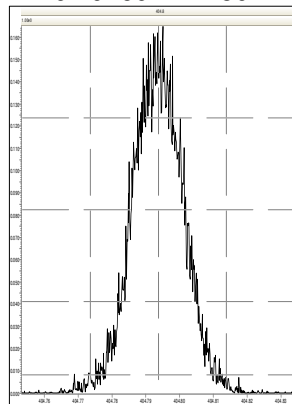
M 380.9760 R 12348



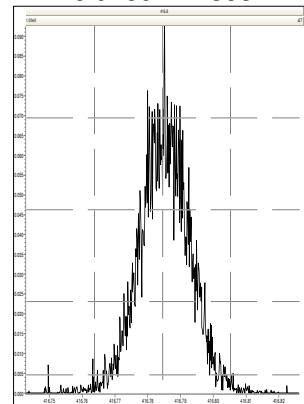
M 392.9760 R 12857



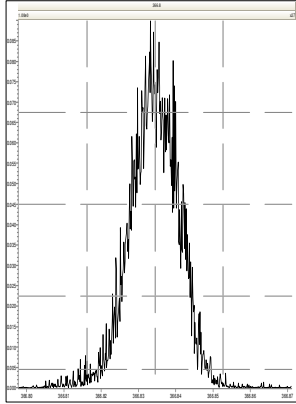
M 404.9760 R 12504



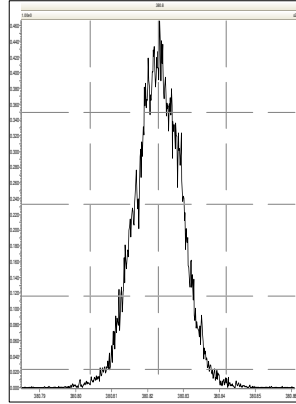
M 416.9760 R 13582



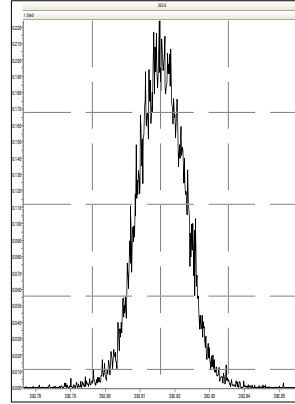
M 366.9792 R 14089



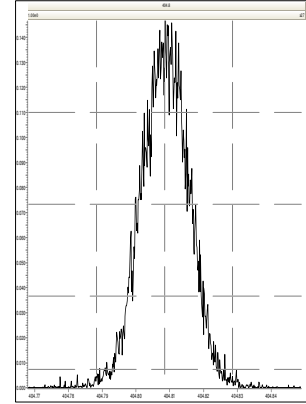
M 380.9760 R 12821



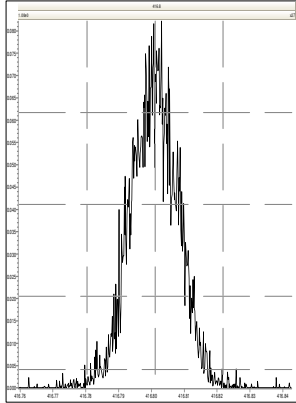
M 392.9760 R 13488



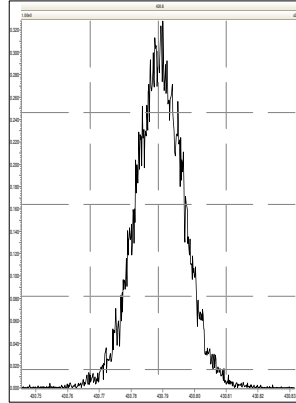
M 404.9760 R 12929



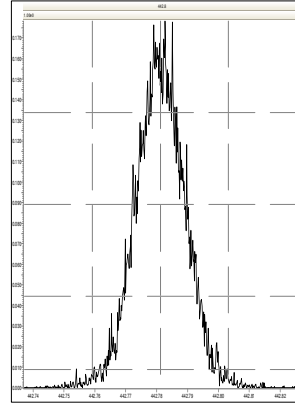
M 416.9760 R 14124



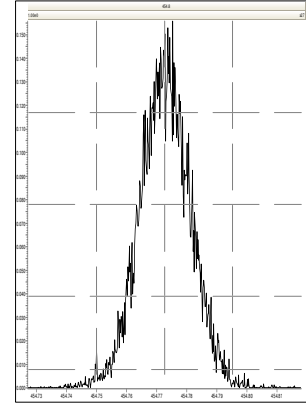
M 430.9728 R 12438



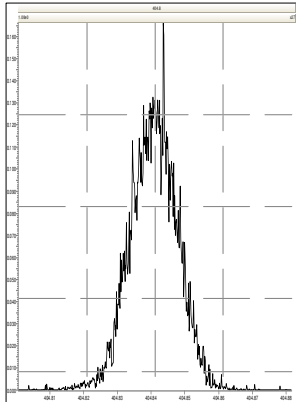
M 442.9728 R 12690



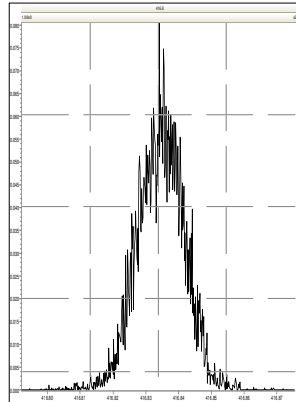
M 454.9728 R 12793



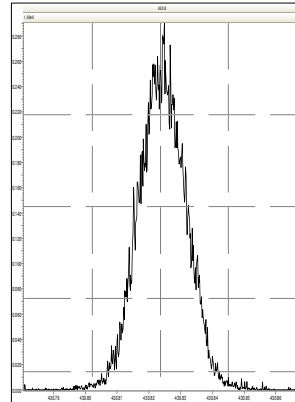
M 404.9760 R 13786



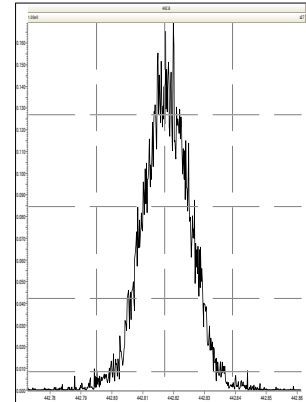
M 416.9760 R 14495



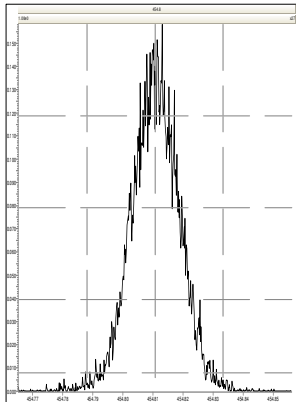
M 430.9728 R 12902



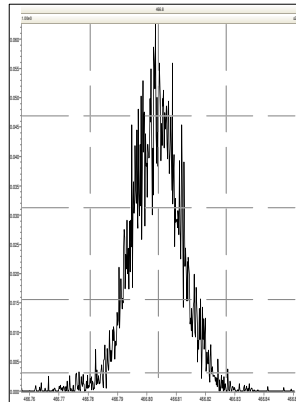
M 442.9728 R 13675



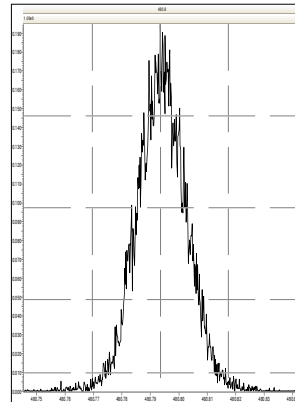
M 454.9728 R 13001



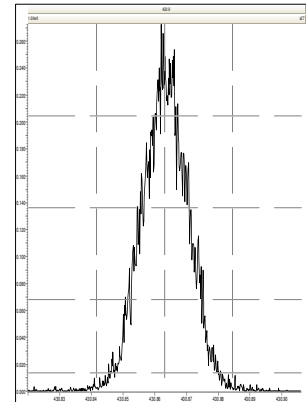
M 466.9728 R 13370



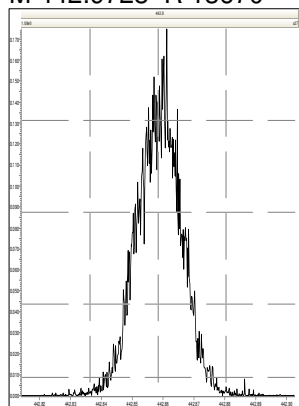
M 480.9696 R 12771



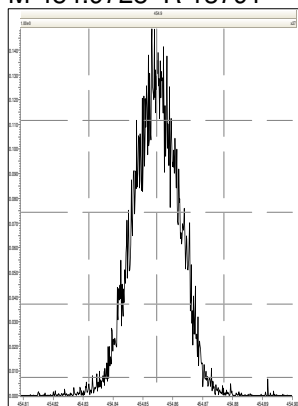
M 430.9728 R 13158



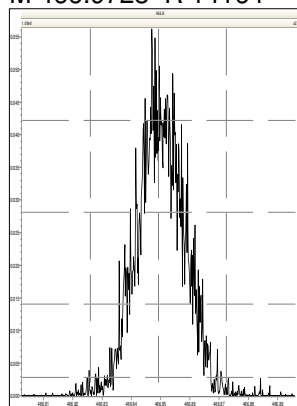
M 442.9728 R 13670



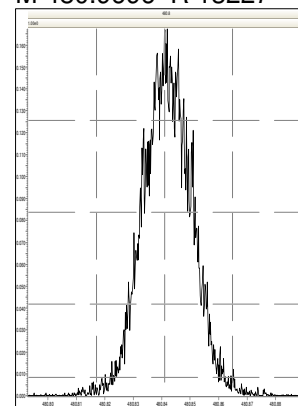
M 454.9728 R 13791



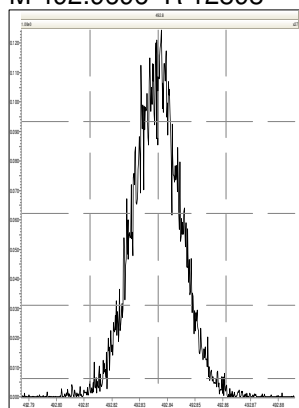
M 466.9728 R 14164



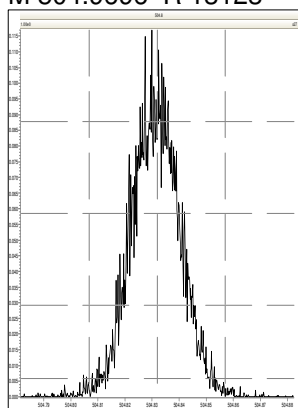
M 480.9696 R 13227



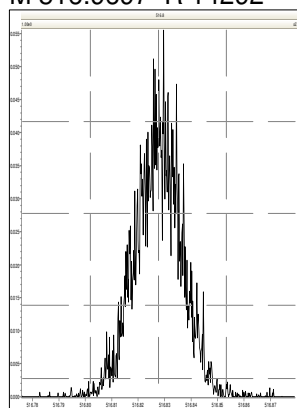
M 492.9696 R 12898



M 504.9696 R 13123



M 516.9697 R 14292



Runlog Information

12/24/2019

Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
• A14DEC19A-1	HRP750_2	14- DEC-2019 11:20	A14DEC19A	Matt Cash		CS3WT UD191018-02.1 CPS5G	1 uL
• A14DEC19A-2	HRP750_2	14- DEC-2019 12:15	%613%	Matt Cash		12025526-2 LCS	1 uL
• A14DEC19A-3	HRP750_2	14- DEC-2019 13:03	%613%	Matt Cash		12025527-2 LCSD	1 uL
• A14DEC19A-4	HRP750_2	14- DEC-2019 13:51	%613%	Matt Cash		12025525-2 MB	1 uL
• A14DEC19A-5	HRP750_2	14- DEC-2019 14:39	HMS1613_1L	Matt Cash	42570	15897001-1	1 uL
• A14DEC19A-6	HRP750_2	14- DEC-2019 15:27	HMS1613_1L	Matt Cash	42570	15903001-1	1 uL
• A14DEC19A-7	HRP750_2	14- DEC-2019 16:15	HMS1613_1L	Matt Cash	42570	15903002-1	1 uL
• A14DEC19A-8	HRP750_2	14- DEC-2019 17:03	HMS1613_1L	Matt Cash	42570	15903003-1	1 uL
• A14DEC19A-9	HRP750_2	14- DEC-2019 17:52	HMS1613_1L	Matt Cash	42570	15903004-1	1 uL
• A14DEC19A-10	HRP750_2	14- DEC-2019 18:40	HMS1613_1L	Matt Cash	42570	15903005-1	1 uL
• A14DEC19A-11	HRP750_2	14- DEC-2019 19:28	HMS1613_1L	Matt Cash	42571	15900001-1	1 uL
• A14DEC19A-12	HRP750_2	14- DEC-2019 20:16	HMS1613_1L	Matt Cash	42571	15900002-1	1 uL
• A14DEC19A-13	HRP750_2	14- DEC-2019 21:04	HMS1613_1L	Matt Cash	42571	15900003-1	1 uL

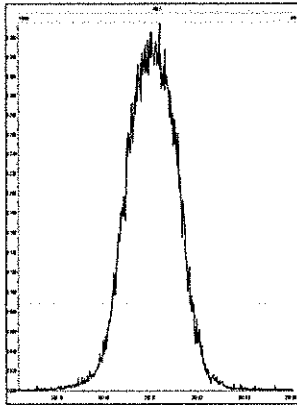
• A14DEC19A-14	HRP750_2	14- DEC-2019 21:52	HMS1613_1L	Matt Cash	42571	15901001-1	1 uL
• A14DEC19A-15	HRP750_2	14- DEC-2019 22:41	HMS1613_1L	Matt Cash	42571	15901002-1	1 uL
• A14DEC19A-16	HRP750_2	14- DEC-2019 23:29	A14DEC19A	Matt Cash		CS3WT UD191018-02.1 CPS5G	1 uL
• <u>A14DEC19A_2-1</u>	HRP750_2	15- DEC-2019 00:25	%8290%	Matt Cash		12025516-1 LCS	1 uL
Corrected Instance							
• A14DEC19A_2-2	HRP750_2	15- DEC-2019 01:12	%8290%	Matt Cash		12025517-1 LCSD	1 uL
Corrected Instance							
• A14DEC19A_2-3	HRP750_2	15- DEC-2019 02:00	%8290%	Matt Cash		12025515-1 MB	1 uL
Corrected Instance							
• A14DEC19A_2-4	HRP750_2	15- DEC-2019 02:49	HMS8290_1S	Matt Cash	42553	15902001-1	1 uL
• A14DEC19A_2-5	HRP750_2	15- DEC-2019 03:37	HMS8290_1S	Matt Cash	42553	15902002-1	1 uL
• A14DEC19A_2-6	HRP750_2	15- DEC-2019 04:25	HMS8290_1S	Matt Cash	42553	15902003-1	1 uL
• A14DEC19A_2-7	HRP750_2	15- DEC-2019 05:13	HMS8290_1S	Matt Cash	42553	15902004-1	1 uL
• A14DEC19A_2-8	HRP750_2	15- DEC-2019 06:01	HMS8290_1S	Matt Cash	42553	15902005-1	1 uL
• A14DEC19A_2-9	HRP750_2	15- DEC-2019 06:49	HMS8290_1S	Matt Cash	42553	15902006-1	1 uL
• A14DEC19A_2-10	HRP750_2	15- DEC-2019 07:38	HMS8290_1S	Matt Cash	42553	15902007-1	1 uL
• A14DEC19A_2-11	HRP750_2	15- DEC-2019 08:26	HMS8290_1S	Matt Cash	42553	15902008-1	1 uL

• A14DEC19A_2-12	HRP750_2	15- DEC-2019 09:14	HMS8290_1S	Matt Cash	42553	15902009-1	1 uL
• A14DEC19A_2-13	HRP750_2	15- DEC-2019 10:02	HMS8290_1S	Matt Cash	42553	15902010-1	1 uL
• A14DEC19A_2-14	HRP750_2	15- DEC-2019 10:50	A14DEC19A_2	Matt Cash		CS3WT UD191018-02.1 CPS5G	1 uL
• <u>A14DEC19A_3-1</u>	HRP750_2	15- DEC-2019 11:47	A14DEC19A_3	Matt Cash		SB	1 uL
• A14DEC19A_3-2	HRP750_2	15- DEC-2019 12:34	A14DEC19A_3	Matt Cash		D271 A	1 uL
Instrument paused, restart with seq 3							

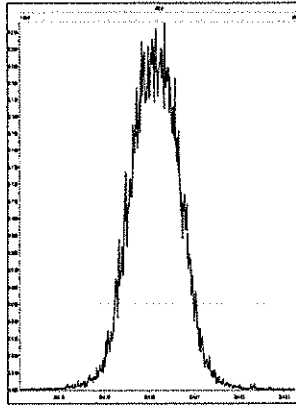
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Saturday, December 14, 2019 11:16:32 Eastern Standard Time

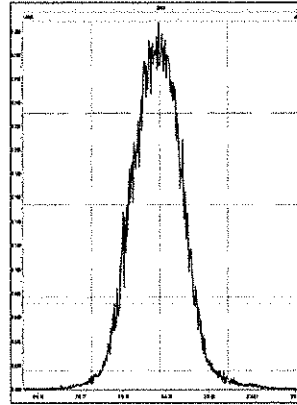
M 292.9824 R 12254



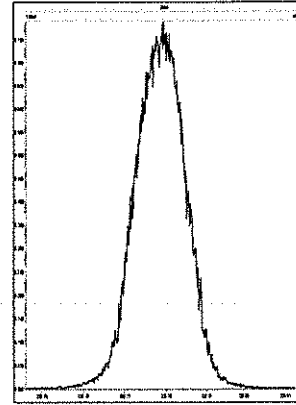
M 304.9824 R 12192



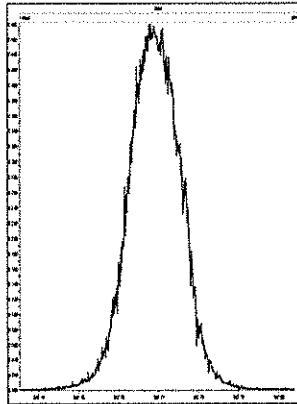
M 318.9792 R 12316



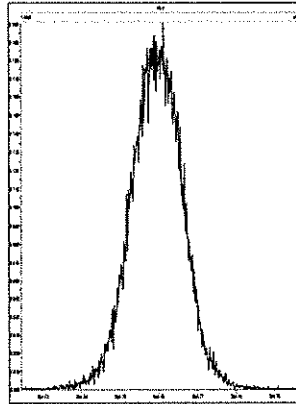
M 330.9792 R 11681



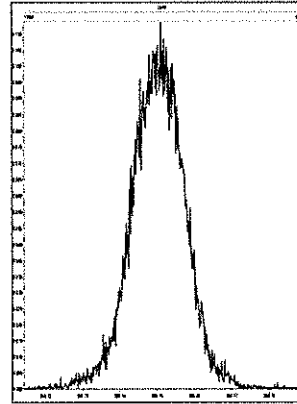
M 342.9792 R 12191



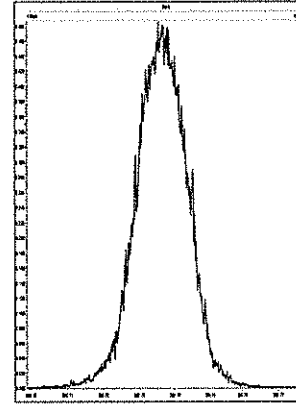
M 354.9792 R 11961



M 366.9792 R 11679



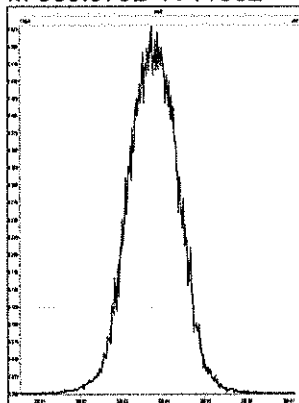
M 380.9760 R 11574



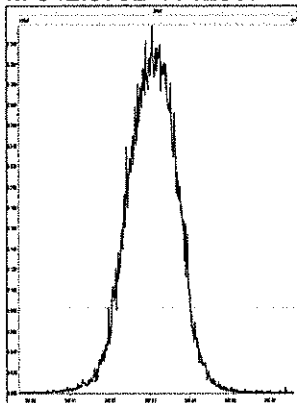
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Printed: Saturday, December 14, 2019 11:16:59 Eastern Standard Time

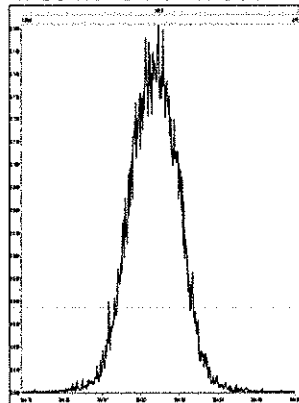
M 330.9792 R 11962



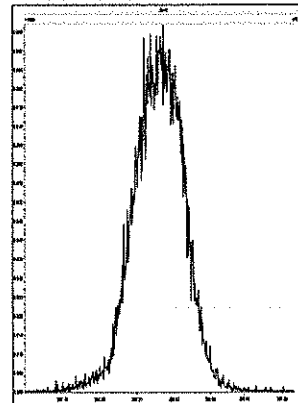
M 342.9792 R 12567



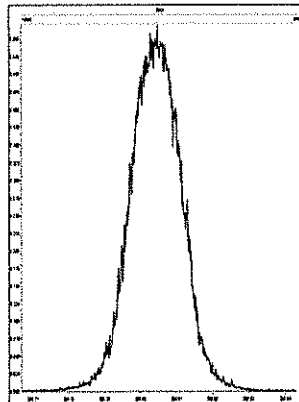
M 354.9792 R 12501



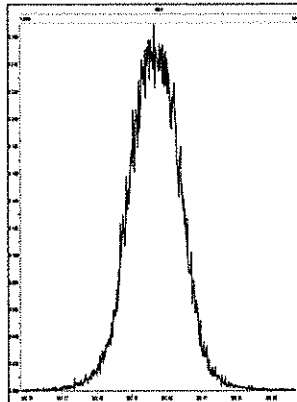
M 366.9792 R 12254



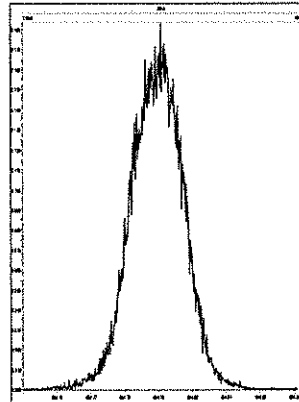
M 380.9760 R 12134



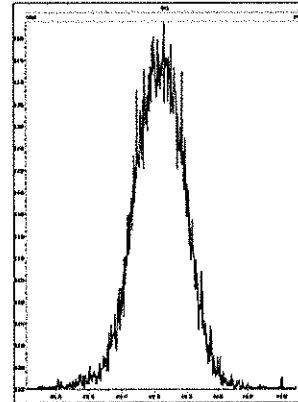
M 392.9760 R 11905



M 404.9760 R 11847



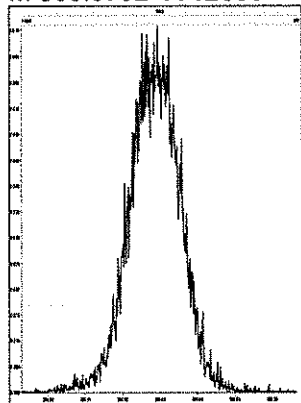
M 416.9760 R 12079



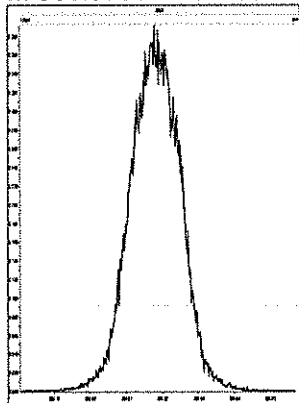
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Saturday, December 14, 2019 11:17:22 Eastern Standard Time

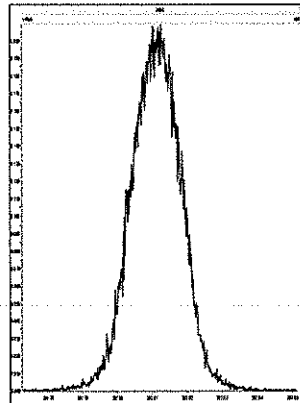
M 366.9792 R 12500



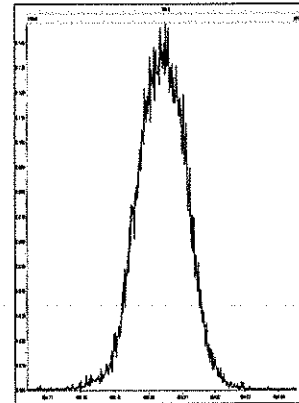
M 380.9760 R 12436



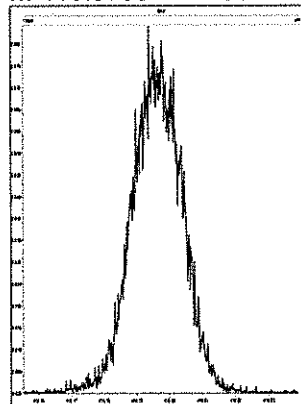
M 392.9760 R 12191



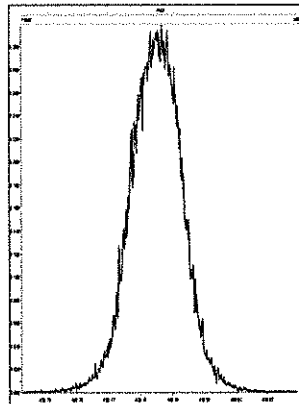
M 404.9760 R 12375



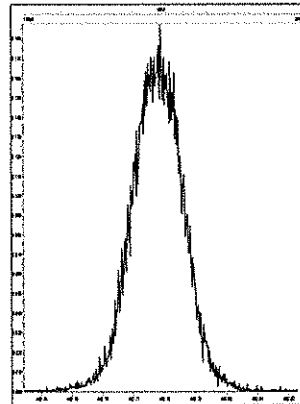
M 416.9760 R 11907



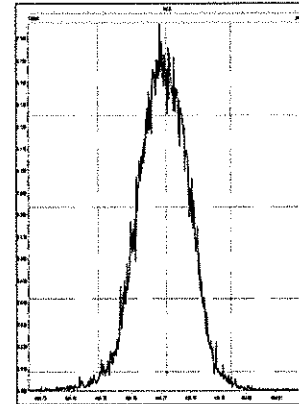
M 430.9728 R 11789



M 442.9728 R 11736



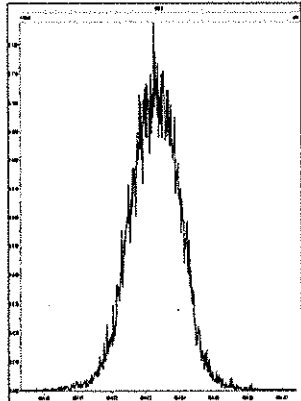
M 454.9728 R 11683



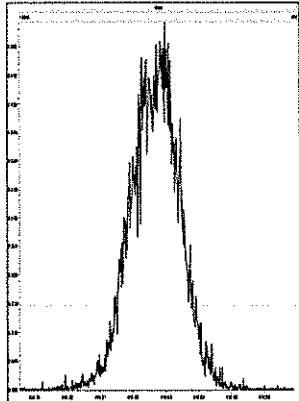
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Printed: Saturday, December 14, 2019 11:17:42 Eastern Standard Time

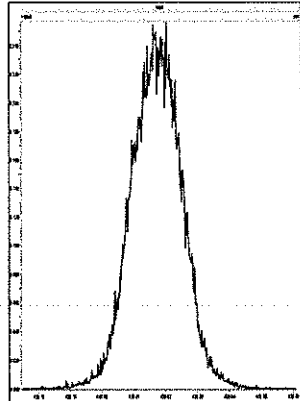
M 404.9760 R 12438



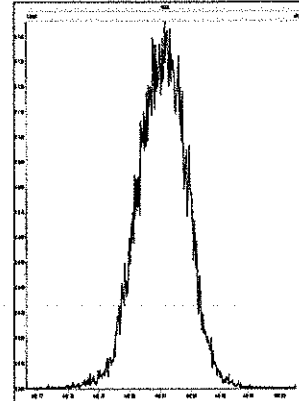
M 416.9760 R 13087



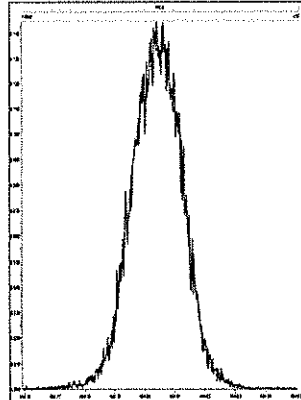
M 430.9728 R 12256



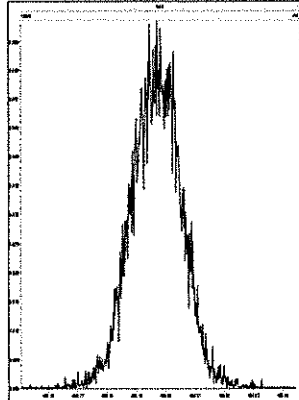
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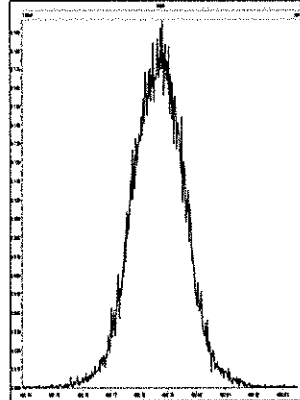
M 454.9728 R 12440



M 466.9728 R 12078



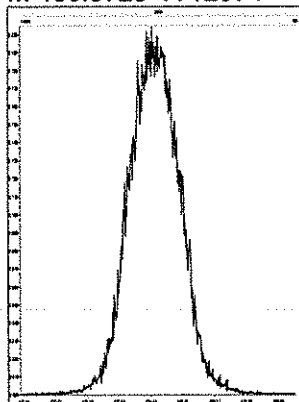
M 480.9696 R 12375



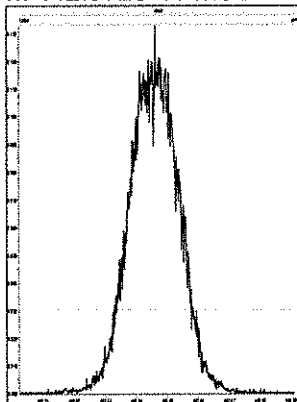
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Saturday, December 14, 2019 11:18:04 Eastern Standard Time

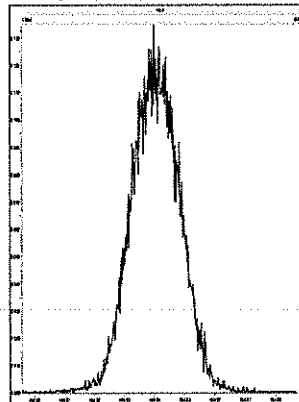
M 430.9728 R 12374



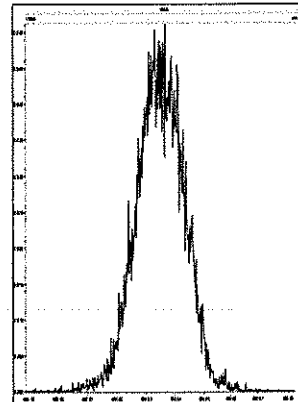
M 442.9728 R 12821



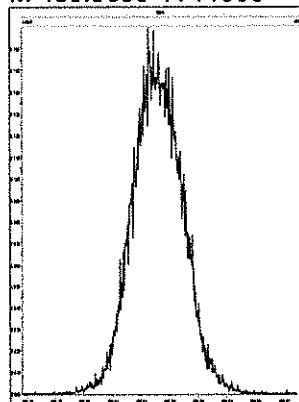
M 454.9728 R 12754



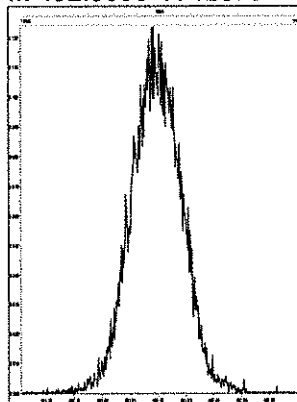
M 466.9728 R 12884



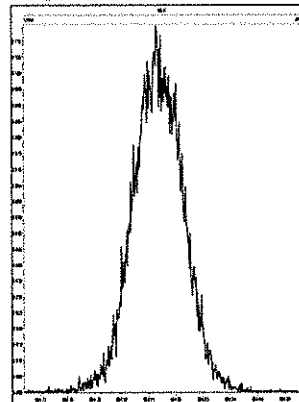
M 480.9696 R 11905



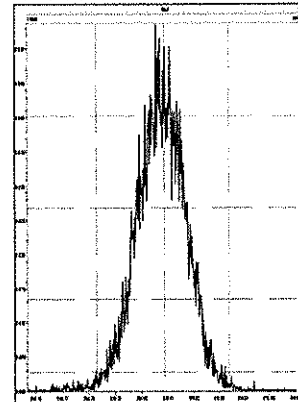
M 492.9696 R 12375



M 504.9696 R 12691

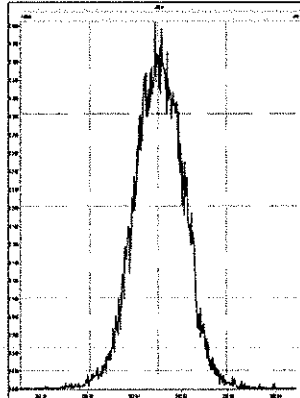


M 516.9697 R 12191

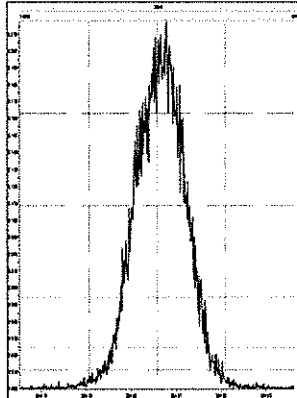


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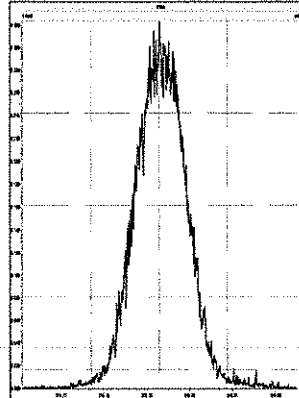
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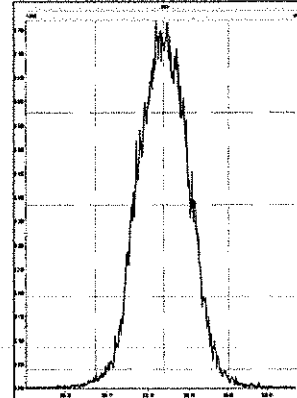
M 304.9824 R 12419



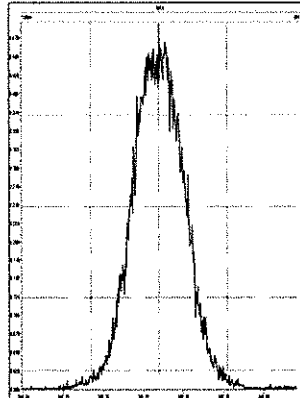
M 318.9792 R 12437



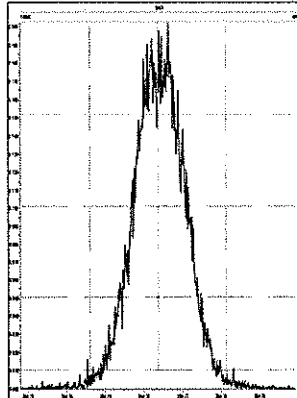
M 330.9792 R 11820



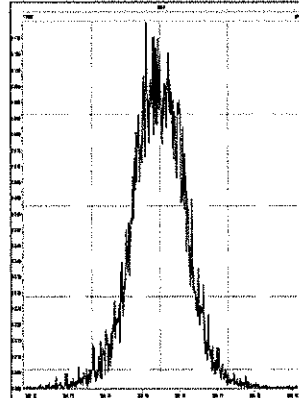
M 342.9792 R 11848



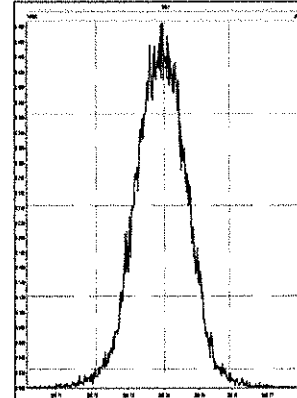
M 354.9792 R 12317



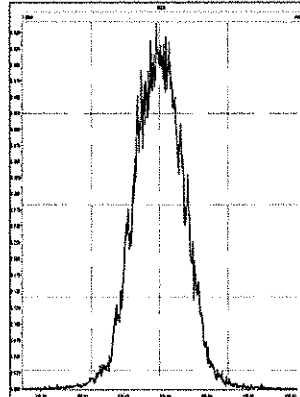
M 366.9792 R 12562



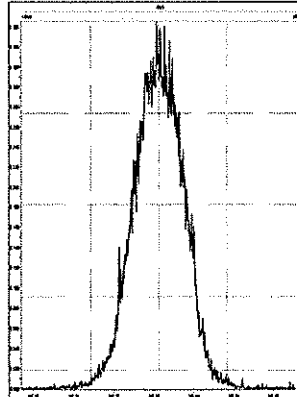
M 380.9760 R 11312



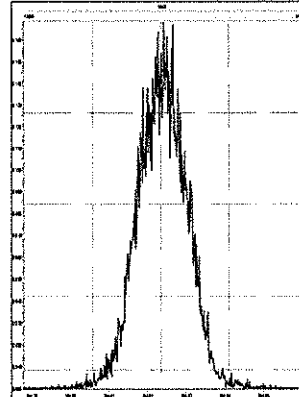
M 330.9792 R 12410



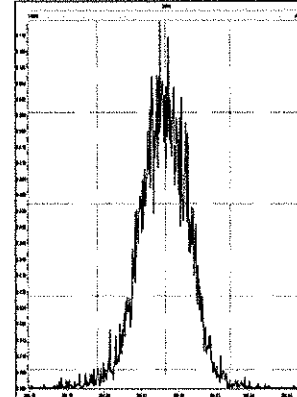
M 342.9792 R 12081



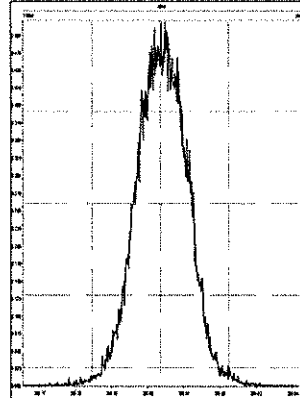
M 354.9792 R 12886



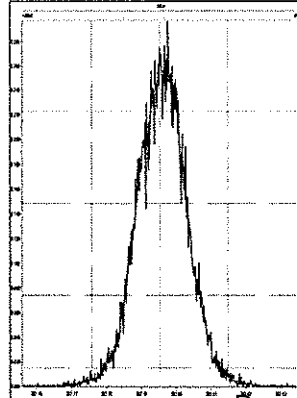
M 366.9792 R 12481



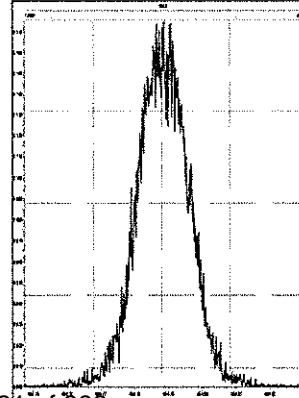
M 380.9760 R 12048



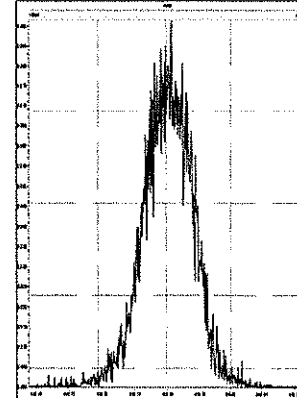
M 392.9760 R 11993



M 404.9760 R 12376

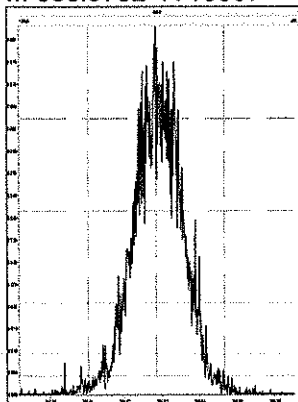


M 416.9760 R 13020

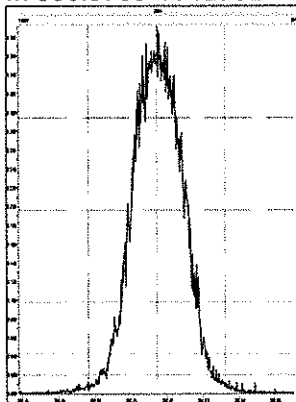


Printed: Saturday, December 14, 2019 12:15:45 Eastern Standard Time

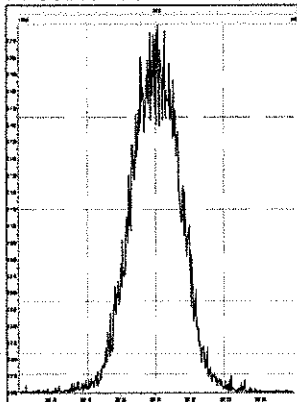
M 366.9792 R 13307



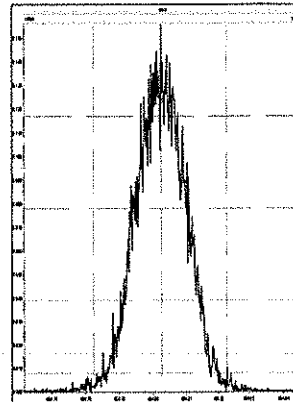
M 380.9760 R 12702



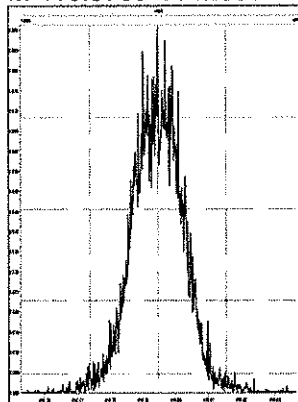
M 392.9760 R 12562



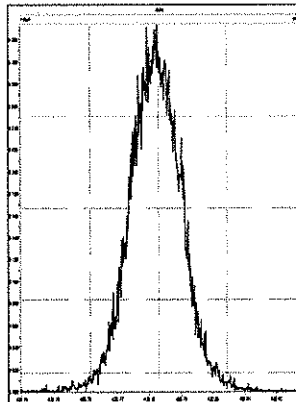
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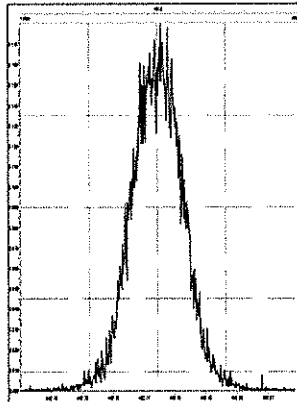
M 416.9760 R 12836



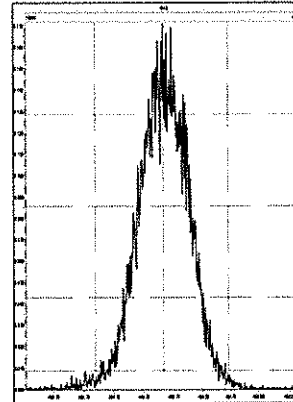
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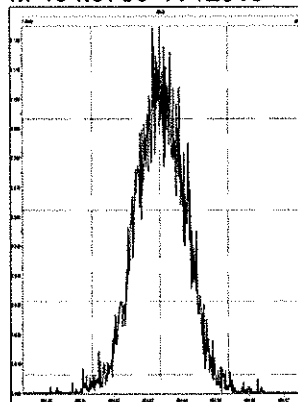
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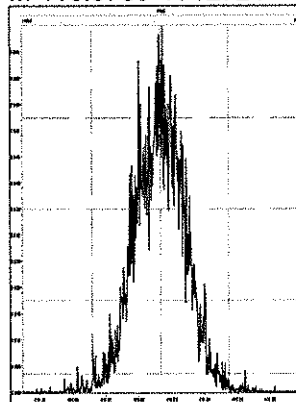
M 454.9728 R 12563



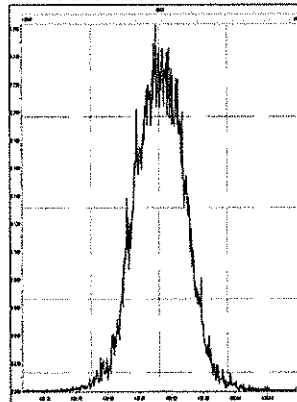
M 404.9760 R 12919



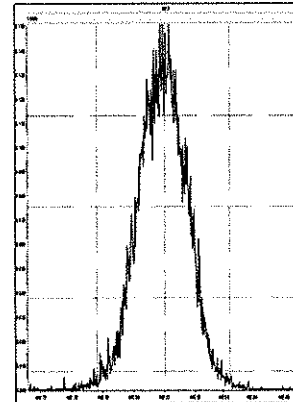
M 416.9760 R 12724



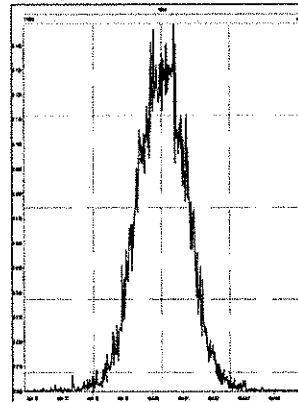
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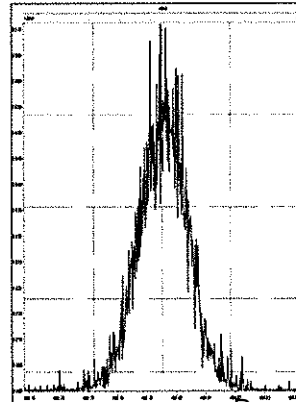
M 442.9728 R 12540



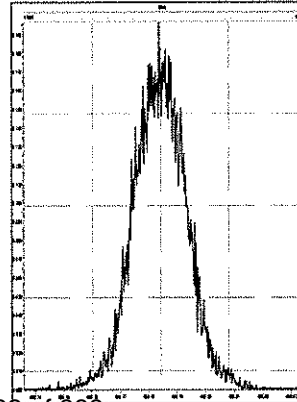
M 454.9728 R 12501



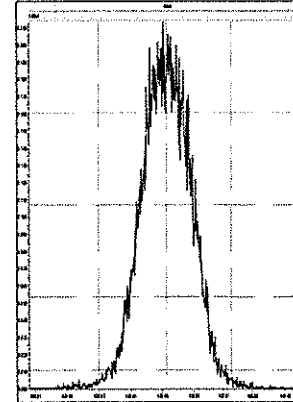
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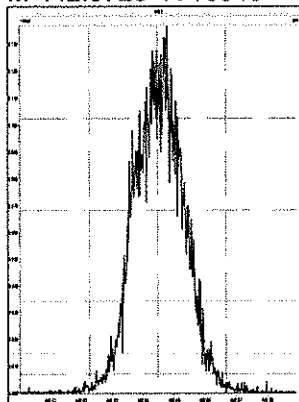
M 480.9696 R 12577



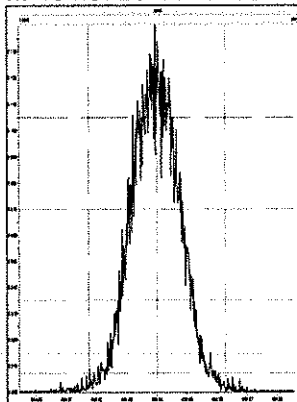
M 430.9728 R 12598



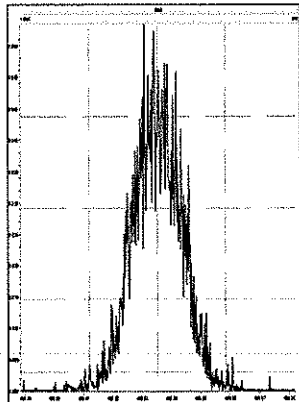
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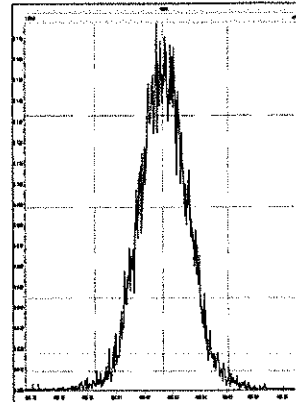
M 454.9728 R 13493



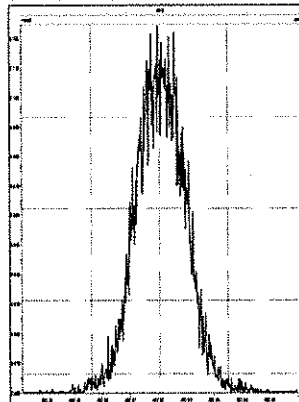
M 466.9728 R 14051



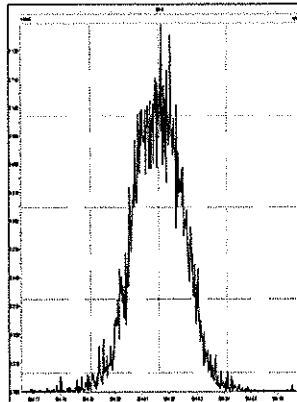
M 480.9696 R 12406



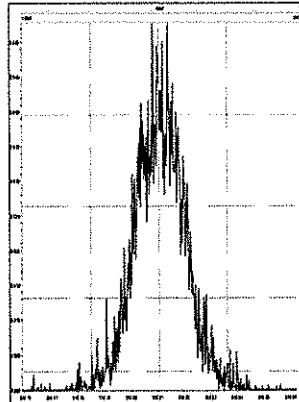
M 492.9696 R 12705



M 504.9696 R 12832

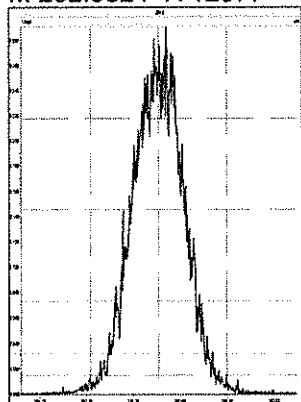


M 516.9697 R 12987

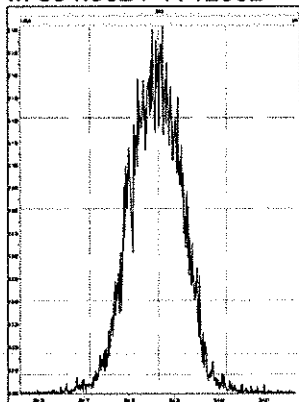


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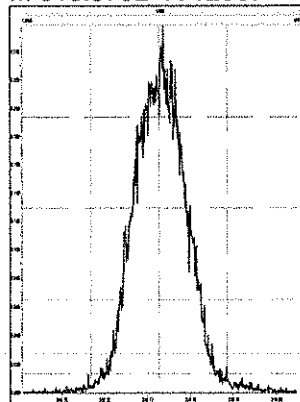
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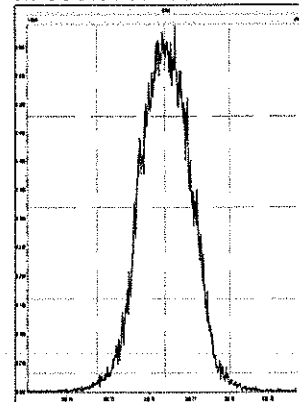
M 304.9824 R 12562



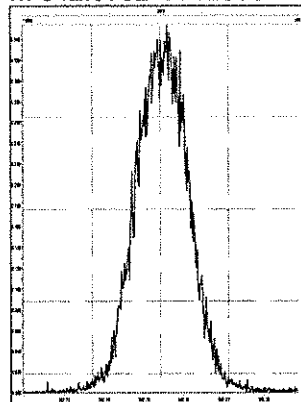
M 318.9792 R 12367



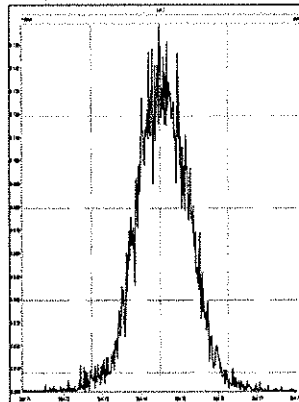
M 330.9792 R 12136



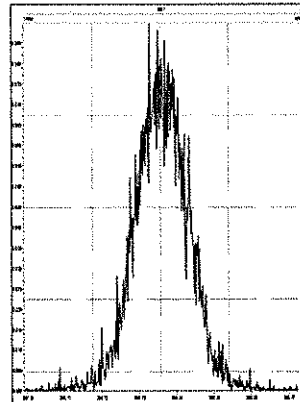
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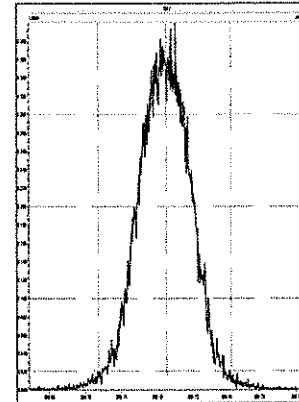
M 354.9792 R 11805



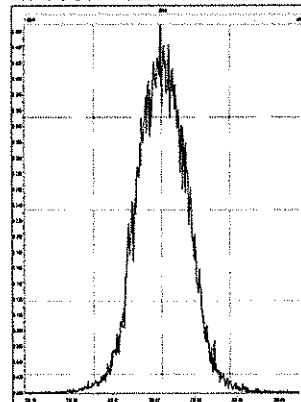
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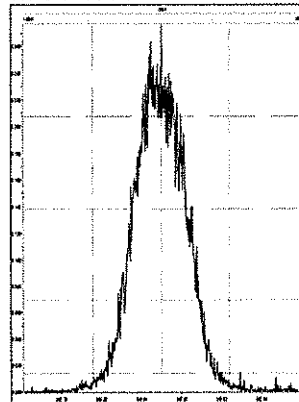
M 380.9760 R 11365



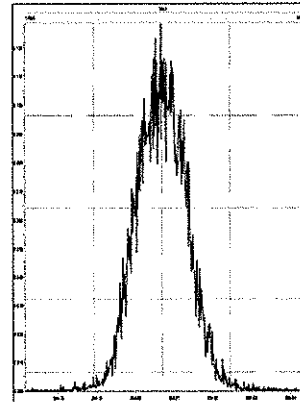
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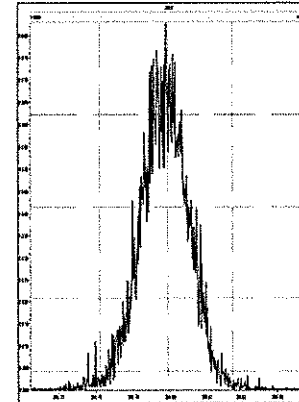
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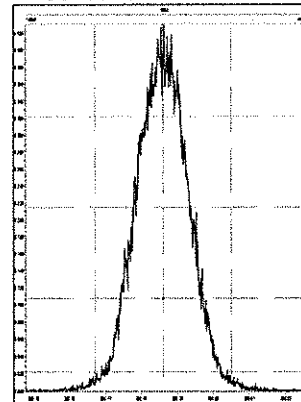
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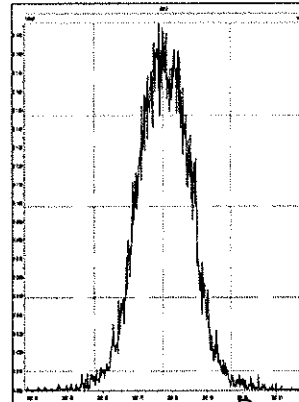
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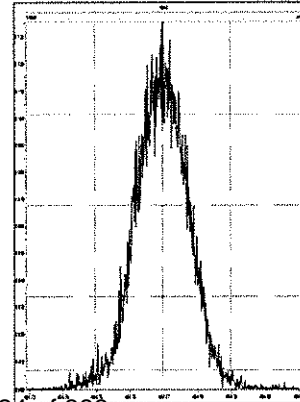
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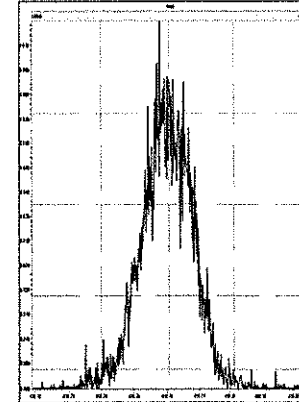
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M 404.9760 R 12284

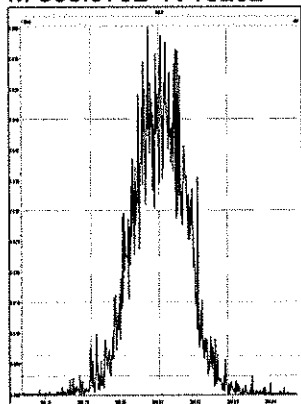


M 416.9760 R 13149

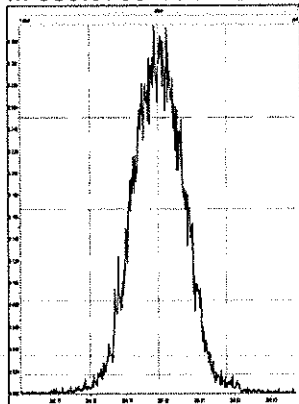


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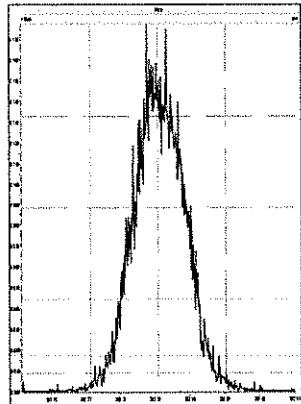
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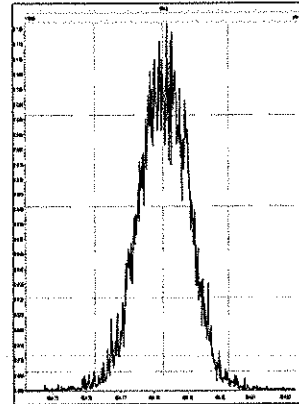
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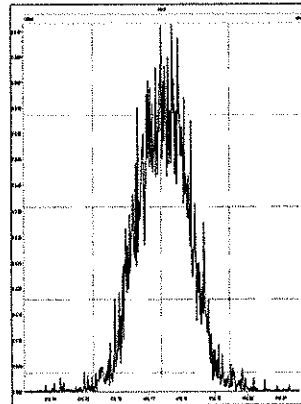
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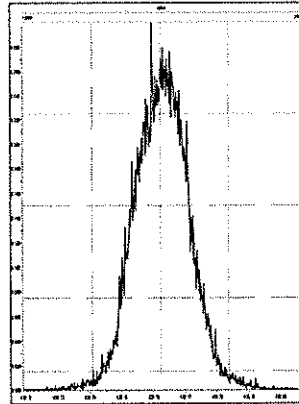
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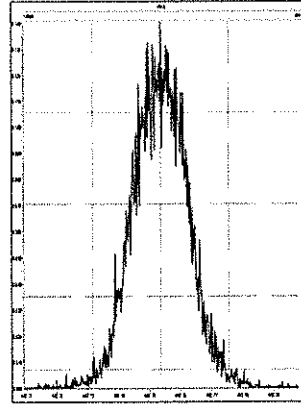
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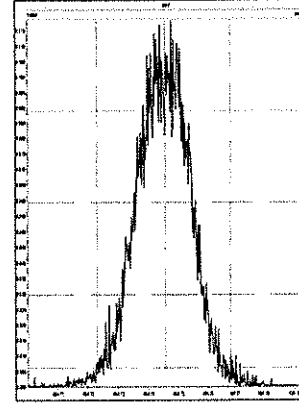
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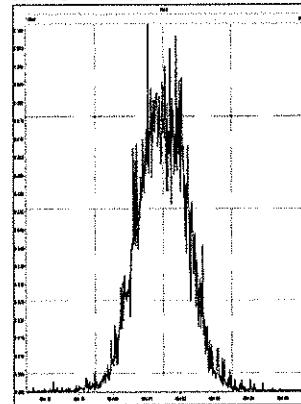
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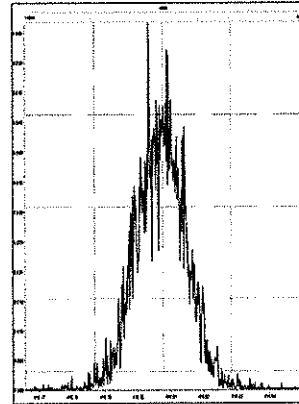
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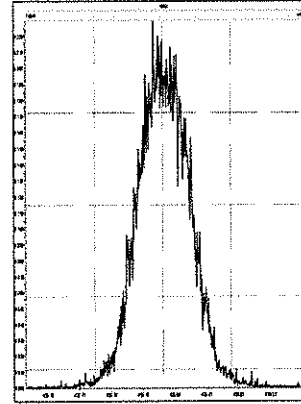
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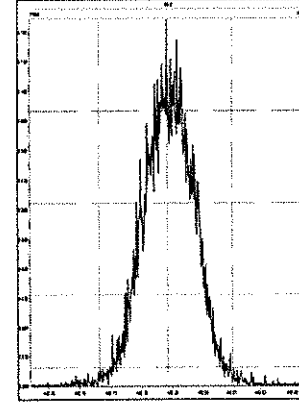
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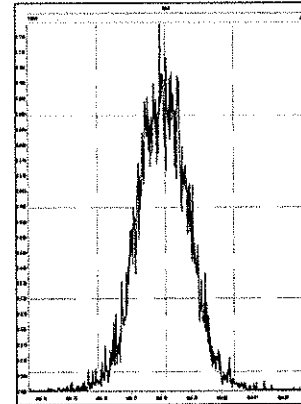
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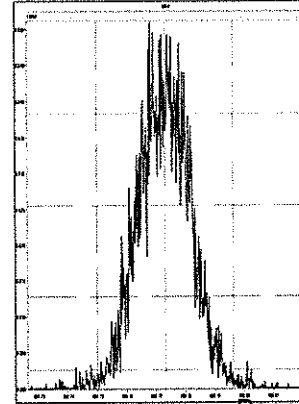
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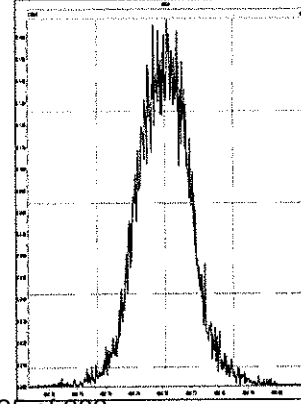
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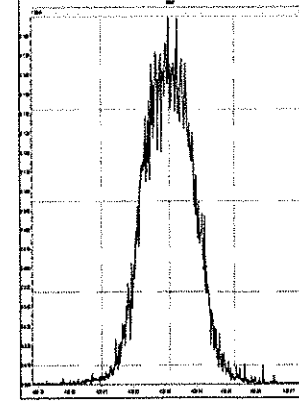
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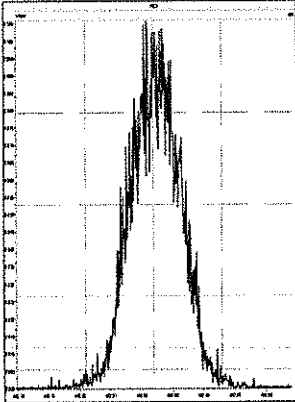
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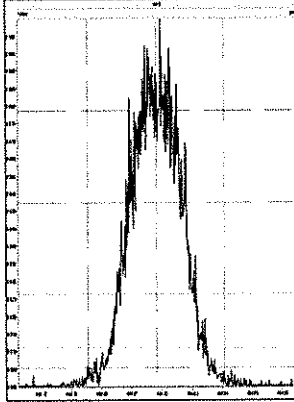
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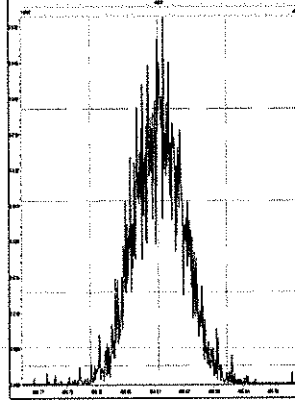
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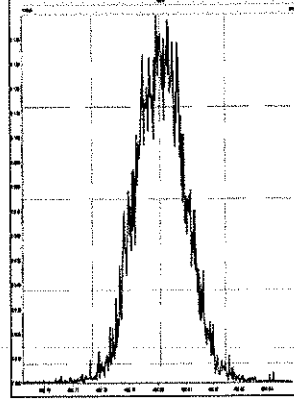
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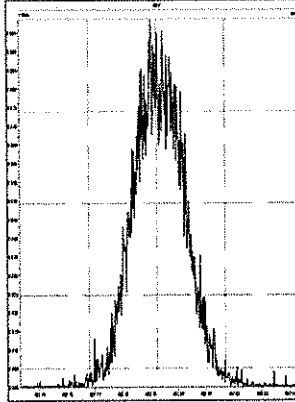
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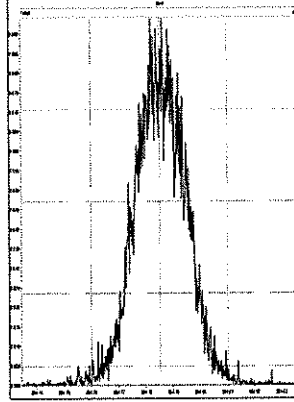
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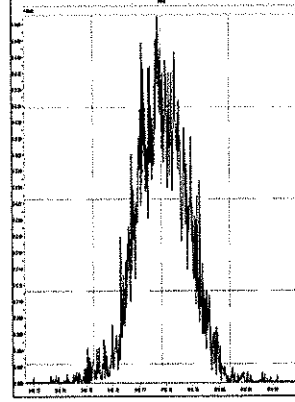
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M 504.9696 R 12958

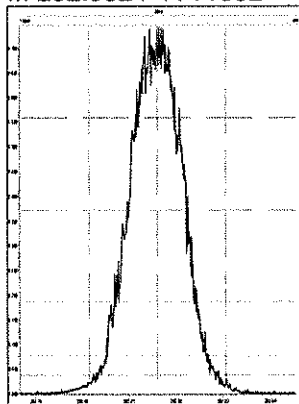


M 516.9697 R 12661

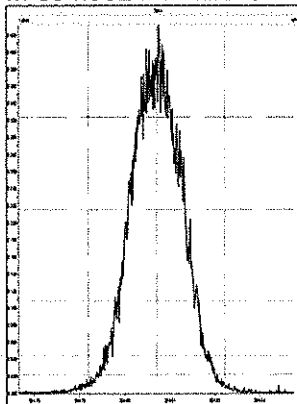


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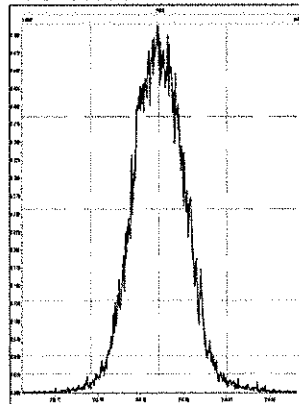
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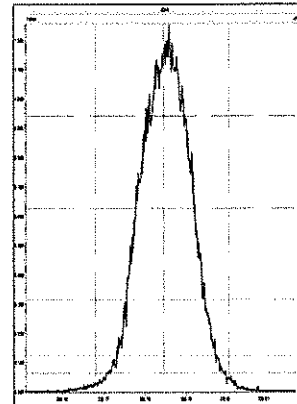
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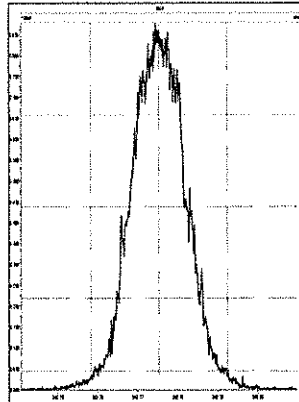
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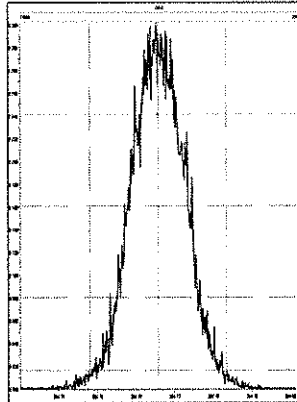
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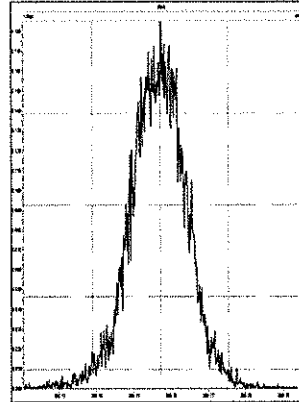
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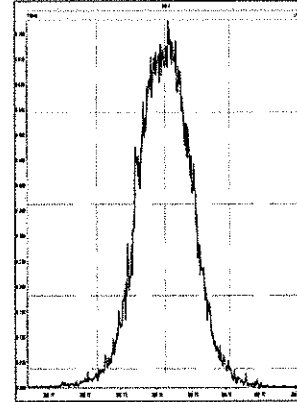
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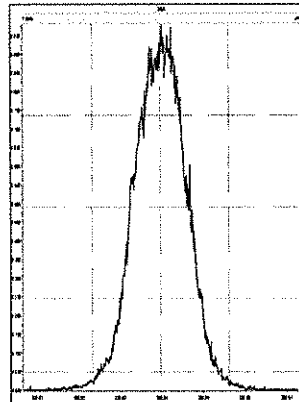
M 366.9792 R 11237



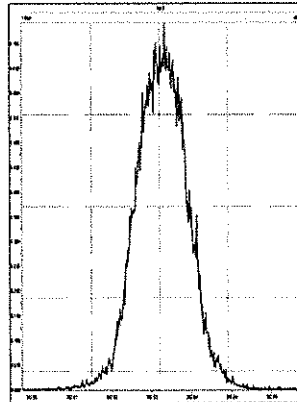
M 380.9760 R 10869



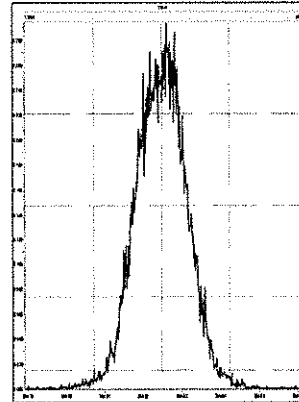
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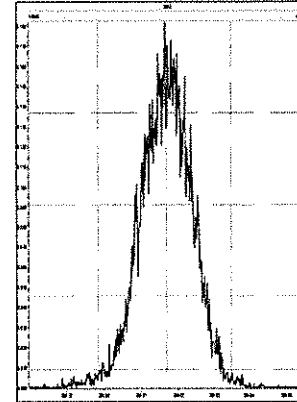
M 342.9792 R 11682



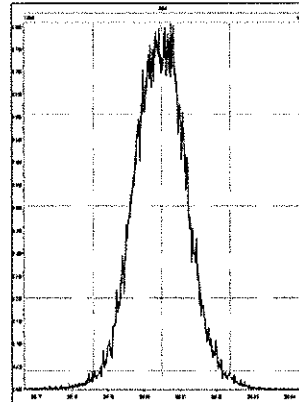
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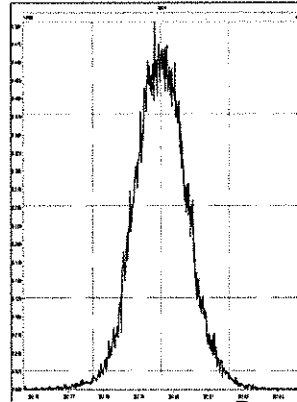
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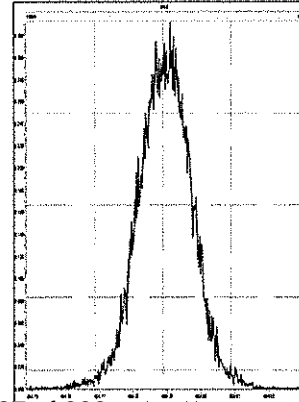
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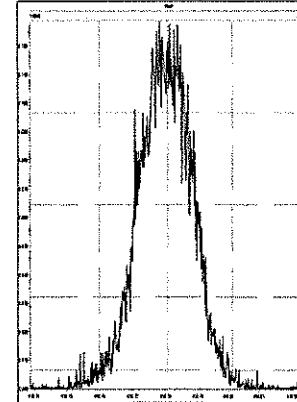
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M 404.9760 R 11075

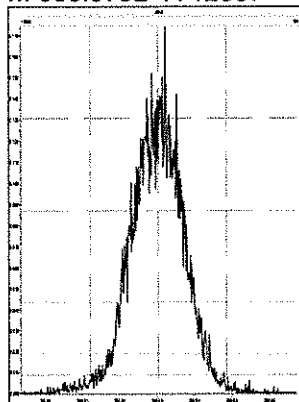


M 416.9760 R 12023

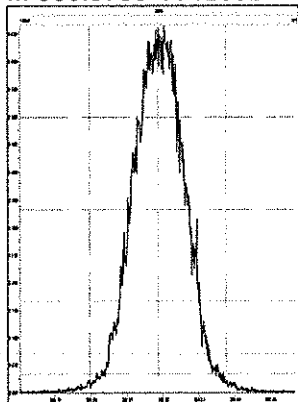


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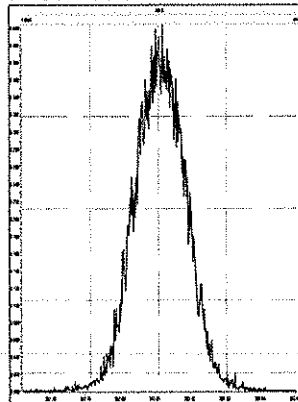
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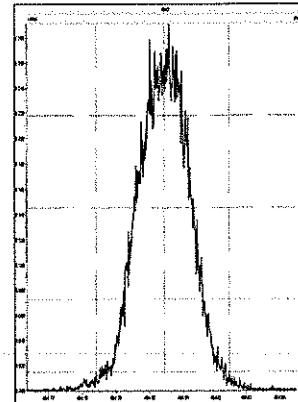
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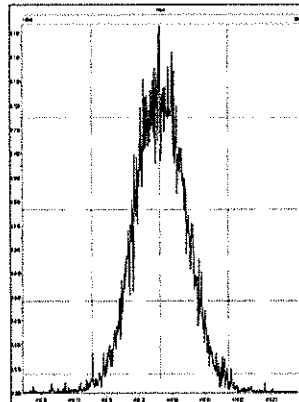
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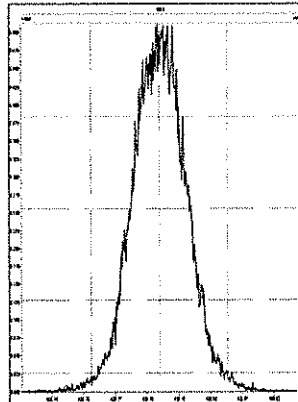
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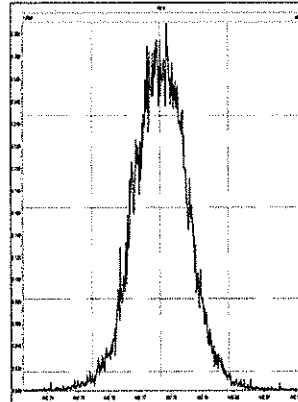
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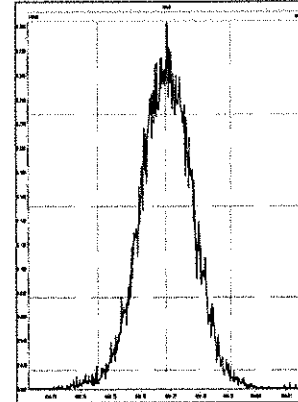
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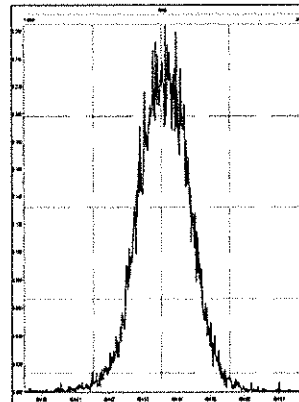
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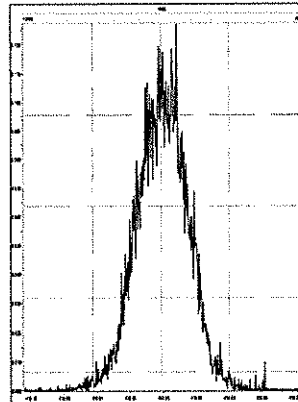
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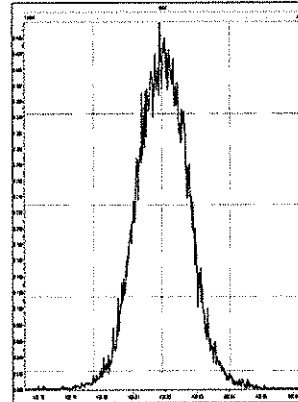
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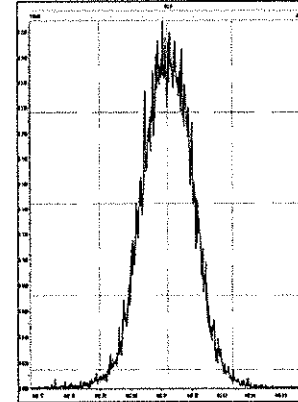
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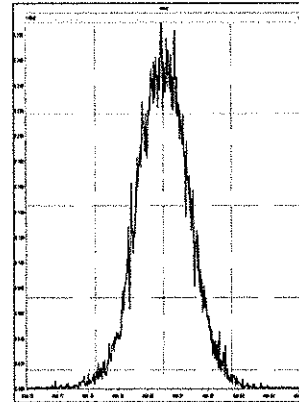
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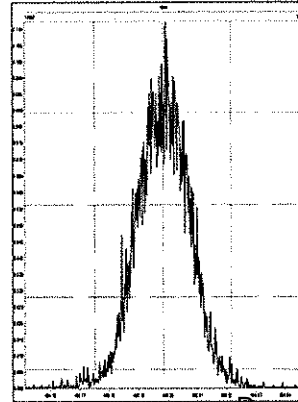
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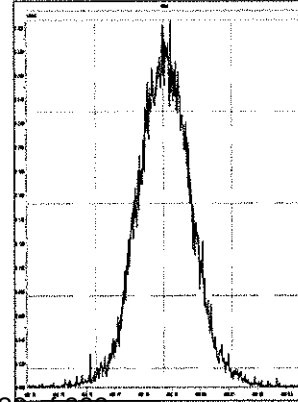
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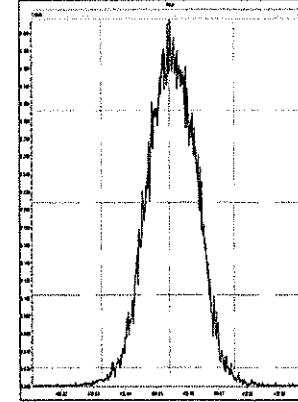
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M 480.9696 R 11237

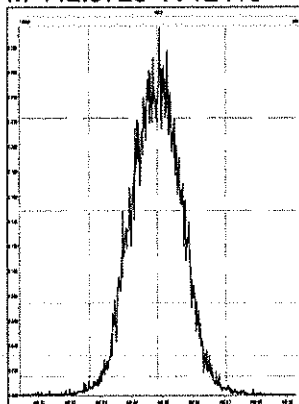


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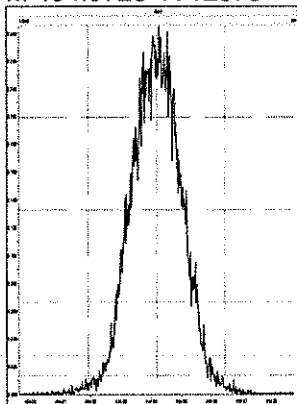


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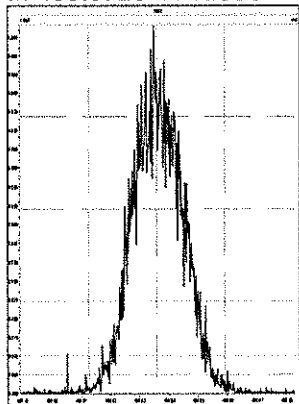
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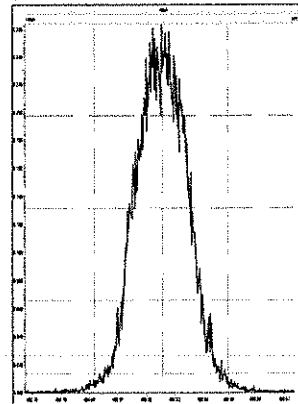
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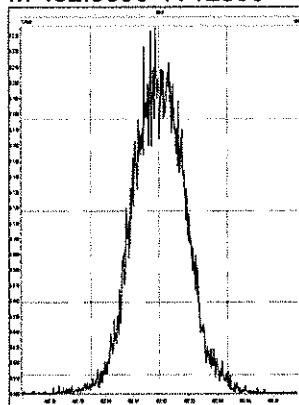
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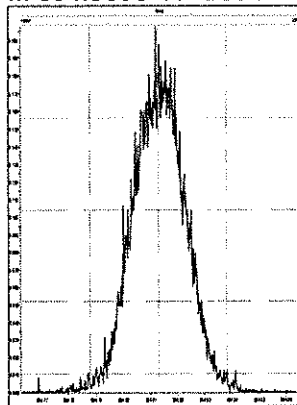
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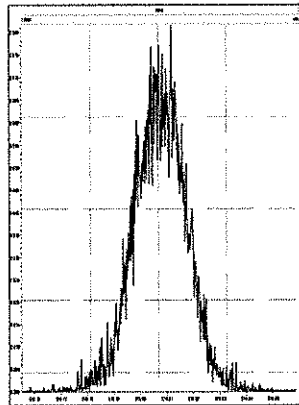
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M 504.9696 R 12094



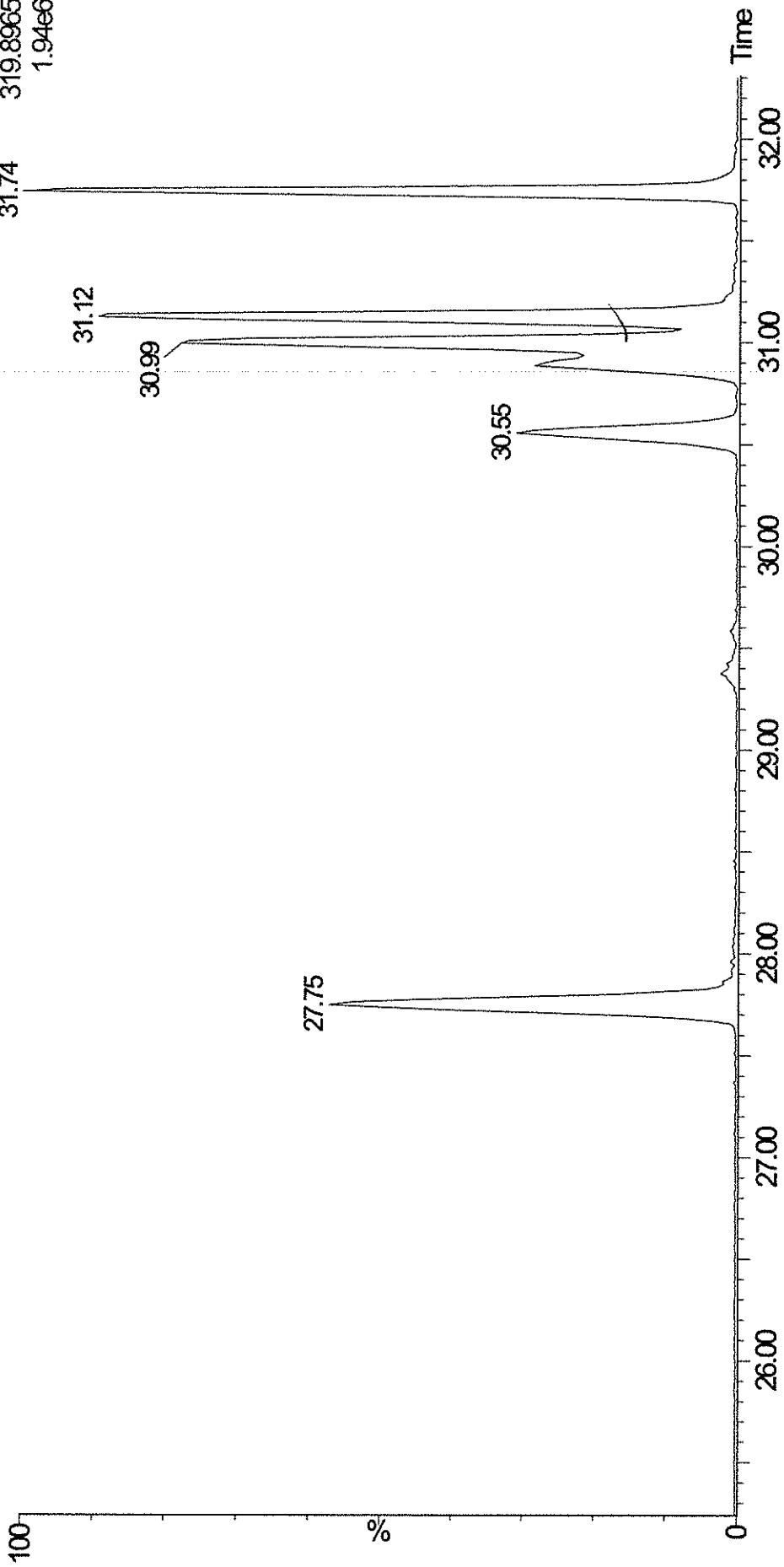
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COLUMN CHECK (2378-TCDD 10%)
CS3WT UD191018-02.1 CPS5G
A14DEC19A-1

HRP750_2

14-Dec-2019 11:20:17
1: Voltage SIR 13 Channels EI+
31.74 319.8965
1.94e6

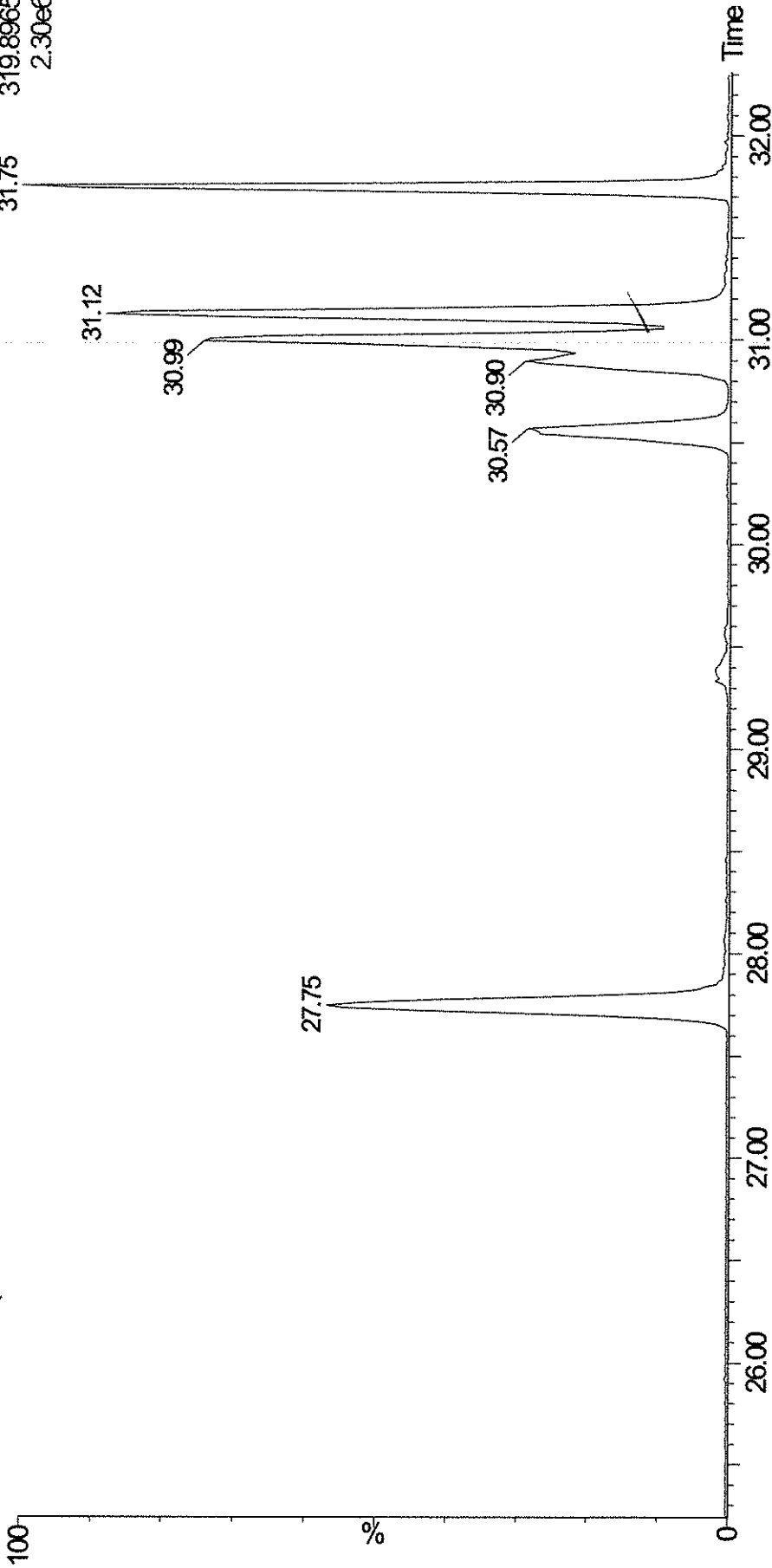


COLUMN CHECK (2378-TCDD 13%)
CS3WT UD191018-02.1 CPS5G
A14DEC19A-16 ✓

HRP750_2

14-Dec-2019 23:29:10

1: Voltage SIR 13 Channels EI+
31.75 319.8965
2.30e6



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:34:15 Eastern Standard Time
Printed: Monday, December 16, 2019 10:34:57 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

Name	RT
First TCDF	26.03
Last TCDF	31.81
First PeCDF	31.80
Last PeCDF	34.47
First HxCDF	34.96
Last HxCDF	37.23
First HpCDF	38.71
Last HpCDF	40.60
OCDF	44.43
First TCDD	27.75
2378-TCDD	31.12
Last TCDD	31.74
First PeCDD	32.71
Last PeCDD	34.29
First HxCDD	35.38
Last HxCDD	36.93
First HpCDD	39.04
Last HpCDD	39.95
OCDD	44.14

Quantify Sample Report **MassLynx 4.1**

Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:34:15 Eastern Standard Time

Printed: Monday, December 16, 2019 10:34:57 Eastern Standard Time

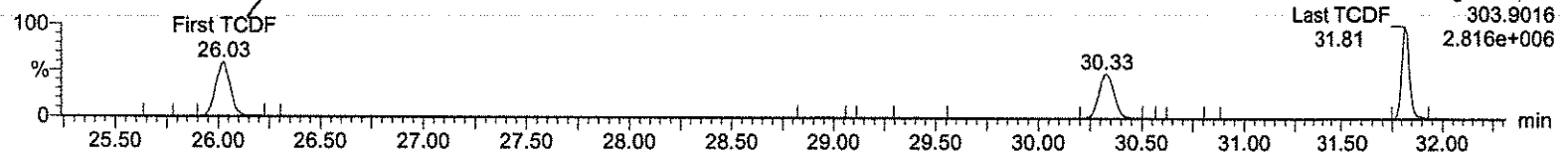
Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

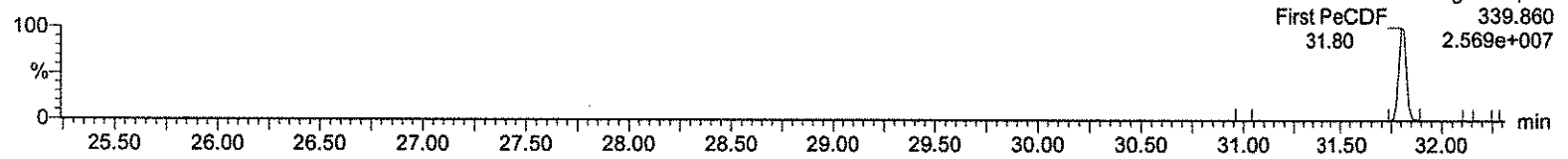
First TCDF

A14DEC19A-1



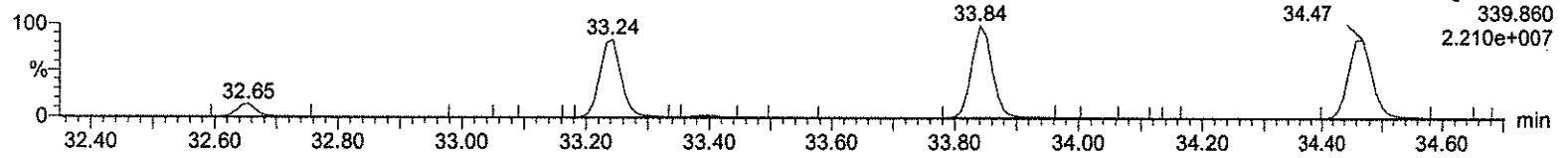
First PeCDF

A14DEC19A-1



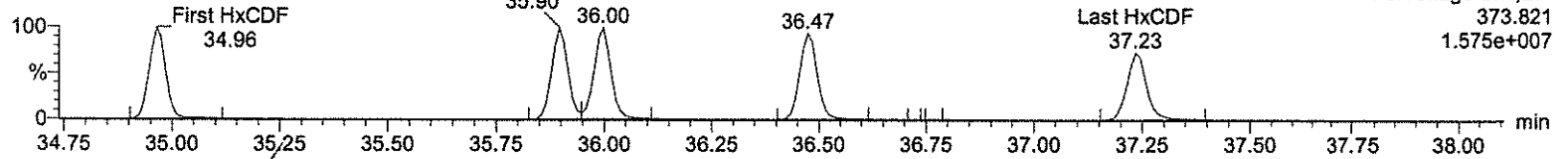
Last PeCDF

A14DEC19A-1



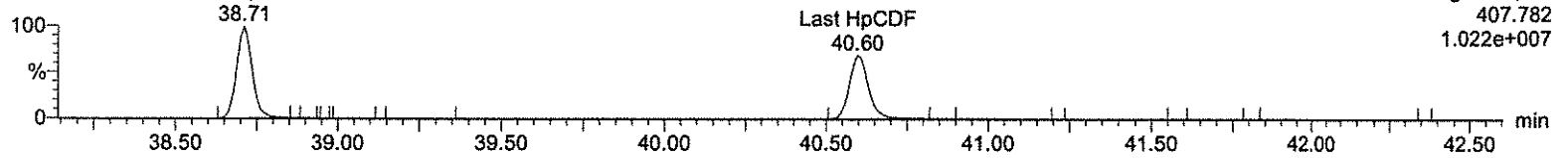
First HxCDF

A14DEC19A-1



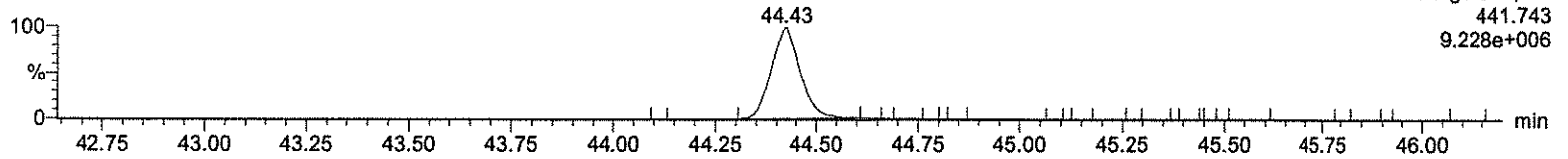
First HpCDF

A14DEC19A-1



OCDF

A14DEC19A-1



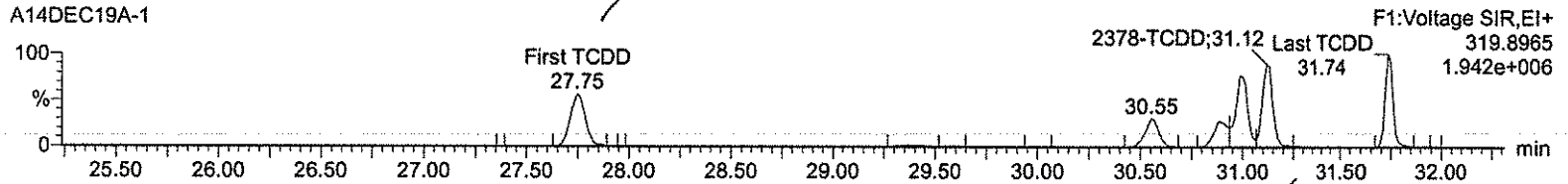
Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-1.qld

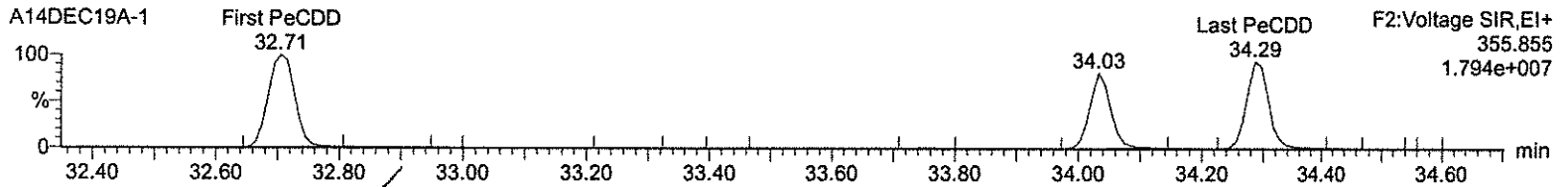
Last Altered: Monday, December 16, 2019 10:34:15 Eastern Standard Time
Printed: Monday, December 16, 2019 10:34:57 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

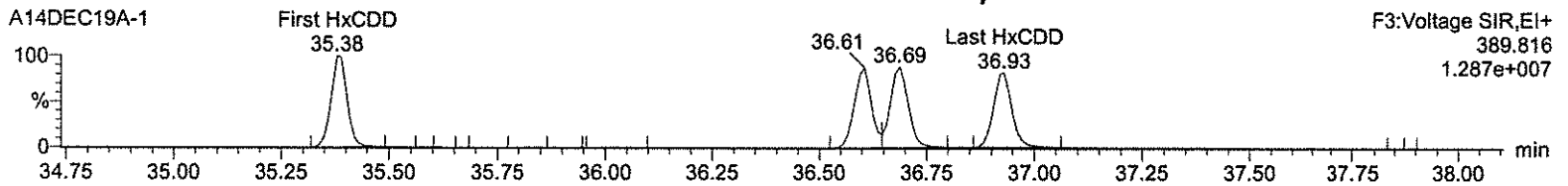
First TCDD



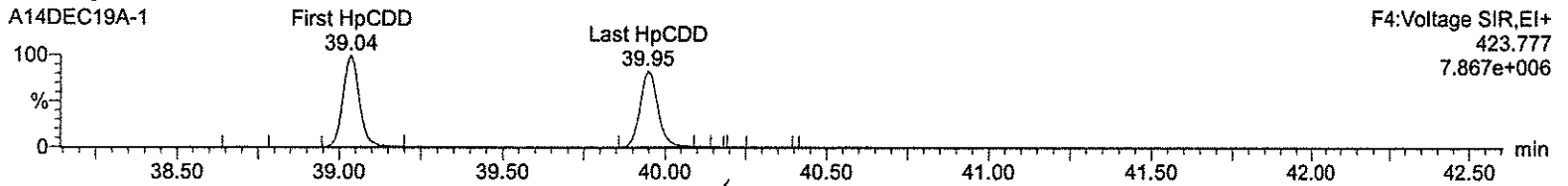
First PeCDD



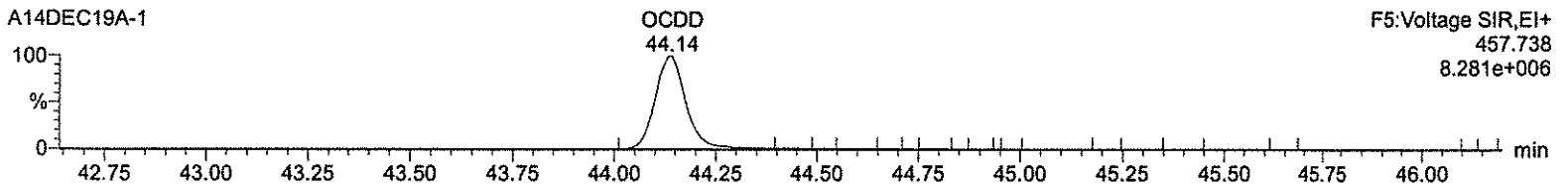
First HxCDD



First HpCDD



OCDD



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 10:35:13 Eastern Standard Time
Printed: Monday, December 16, 2019 10:35:42 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

Name	RT
First TCDF	26.03
Last TCDF	31.83
First PeCDF	31.81
Last PeCDF	34.47
First HxCDF	34.96
Last HxCDF	37.23
First HpCDF	38.71
Last HpCDF	40.60
OCDF	44.42
First TCDD	27.75
2378-TCDD	31.12
Last TCDD	31.75
First PeCDD	32.71
Last PeCDD	34.29
First HxCDD	35.38
Last HxCDD	36.92
First HpCDD	39.04
Last HpCDD	39.95
OCDD	44.12

Quantify Sample Report **MassLynx 4.1**

Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 10:35:13 Eastern Standard Time

Printed: Monday, December 16, 2019 10:35:42 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53

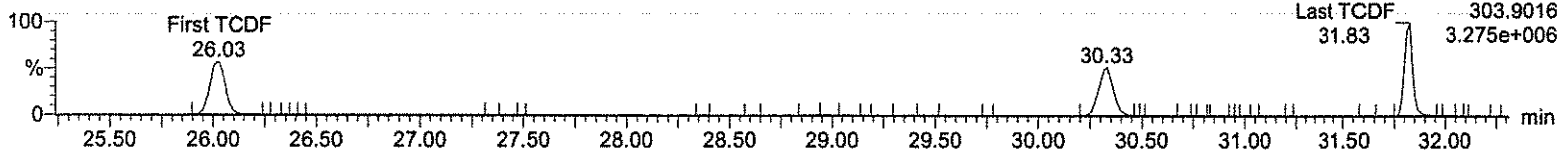
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A

Task: HRP750_2, User: MJC

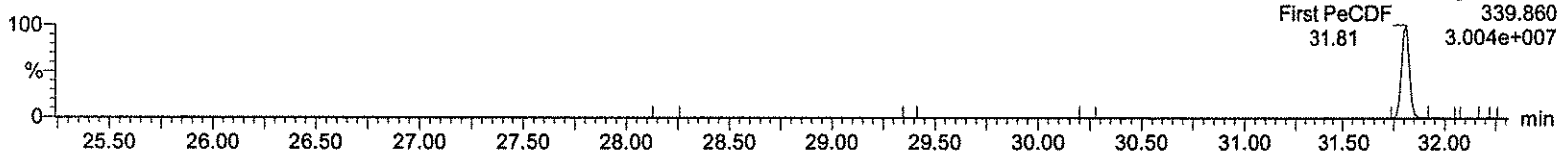
First TCDF

A14DEC19A-16



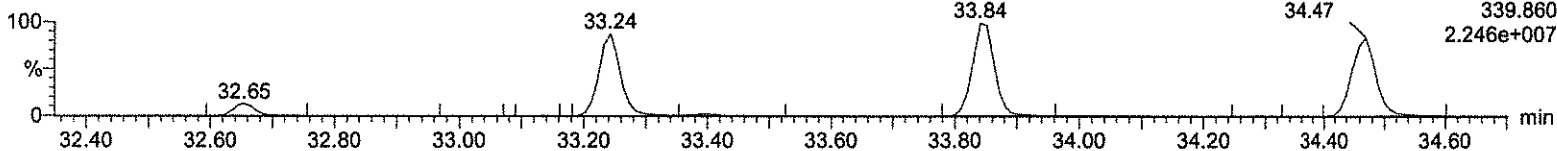
First PeCDF

A14DEC19A-16



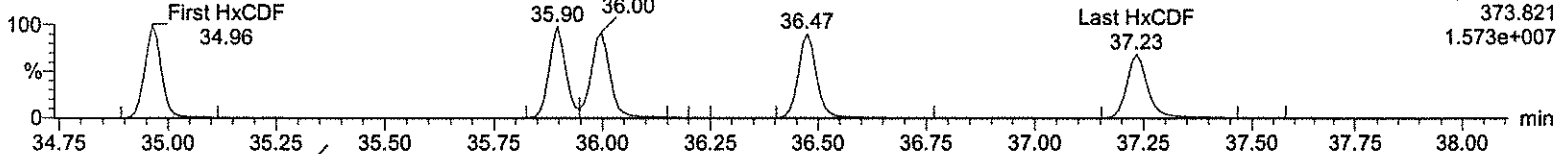
Last PeCDF

A14DEC19A-16



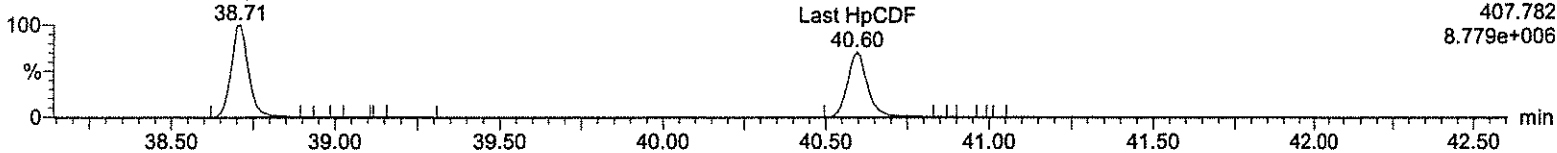
First HxCDF

A14DEC19A-16



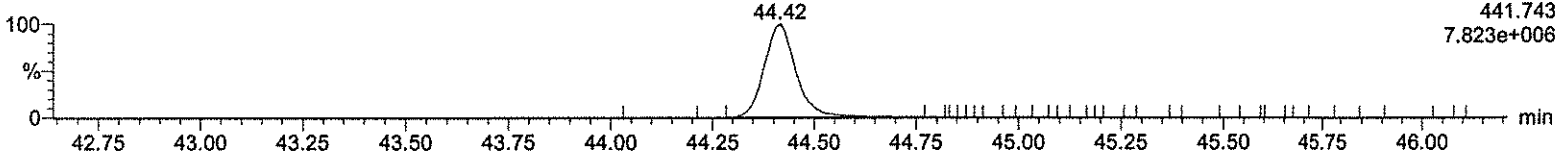
First HpCDF

A14DEC19A-16



OCDF

A14DEC19A-16



Quantify Sample Report **MassLynx 4.1**

Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-16.qld

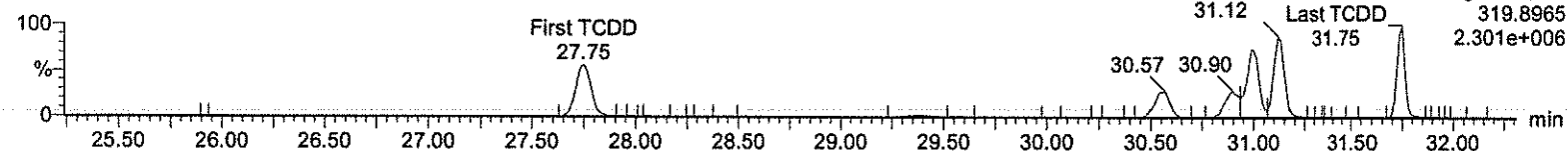
Last Altered: Monday, December 16, 2019 10:35:13 Eastern Standard Time

Printed: Monday, December 16, 2019 10:35:42 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

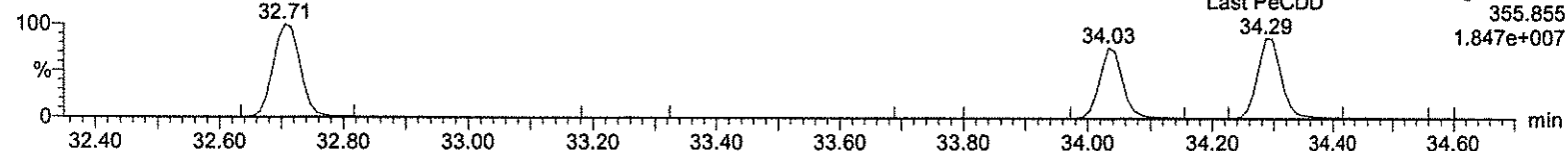
First TCDD

A14DEC19A-16



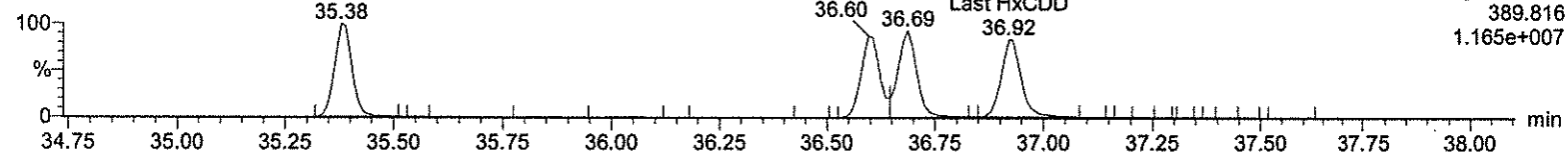
First PeCDD

A14DEC19A-16



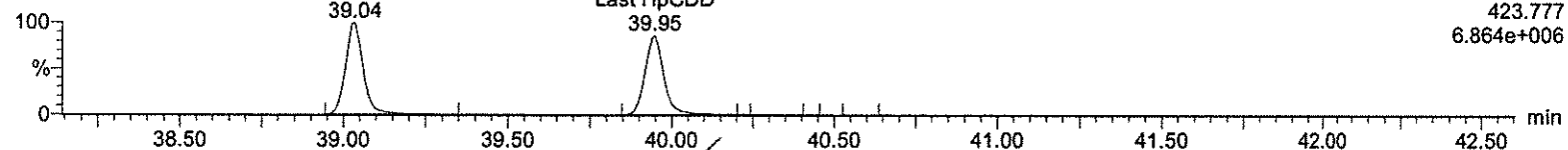
First HxCDD

A14DEC19A-16



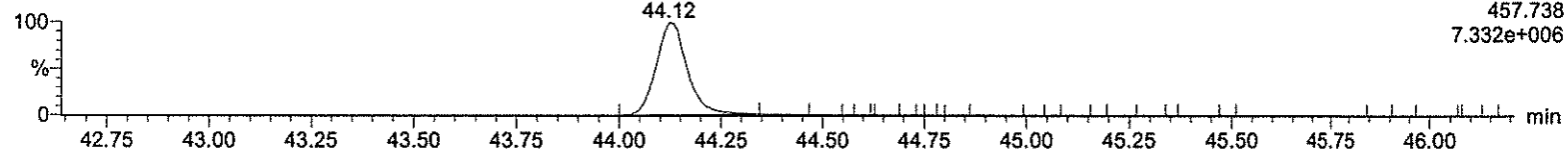
First HpCDD

A14DEC19A-16



OCDD

A14DEC19A-16



Quantify Sample Summary Report

Method 1613 CCAL Report

33 of 33

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Acq. Date: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\Default.pro\Methdb\CF_A_1613_A10DEC19.mdb 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	ICRRP	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.04e5	1.34e5	2.38e5	31.12	1.000	0.77	NO	10.326	0.0447	0.913	0.884	3.3	1.72e6	3185	540.3	2.32e6	4019	578.3	db	db
2	12378-PeCDD	5.69e5	3.62e5	9.31e5	34.03	1.000	1.57	NO	53.075	0.102	0.906	0.853	6.1	1.46e7	7933	1838.5	9.55e6	10025	952.7	bb	bb
3	123478-HxCDD	5.24e5	4.22e5	9.46e5	36.61	1.000	1.24	NO	51.827	0.117	0.974	0.940	3.7	1.13e7	8695	1296.0	8.73e6	8410	1038.0	bd	bd
4	123678-HxCDD	5.63e5	4.46e5	1.01e6	36.69	1.000	1.26	NO	51.804	0.106	0.978	0.944	3.6	1.14e7	8695	1314.9	9.18e6	8410	1091.3	dd	dd
5	123789-HxCDD	5.62e5	4.47e5	1.01e6	36.93	1.007	1.26	NO	54.333	0.113	1.007	0.927	8.7	1.06e7	8695	1223.9	8.61e6	8410	1023.8	db	db
6	1234678-HpCDD	4.11e5	3.98e5	8.08e5	39.95	1.000	1.03	NO	46.789	0.116	0.973	1.040	-6.4	6.51e6	6059	1074.6	6.43e6	6341	1014.0	bb	bb
7	OCDD	7.31e5	8.11e5	1.54e6	44.14	1.000	0.90	NO	101.262	0.193	0.984	0.971	1.3	8.27e6	4995	1655.0	9.26e6	8314	1113.2	bd	bb
8	2378-TCDF	1.15e5	1.55e5	2.71e5	30.33	1.001	0.74	NO	9.022	0.0546	0.883	0.978	-9.8	1.36e6	2739	495.2	1.81e6	5138	352.2	bb	bb
9	2378-PeCDF	7.37e5	4.76e5	1.21e6	33.24	1.000	1.55	NO	46.116	0.0802	0.872	0.945	-7.8	1.85e7	10936	1694.5	1.16e7	10129	1147.6	bb	bb
10	23478-PeCDF	8.50e5	5.60e5	1.41e6	33.84	1.000	1.52	NO	47.182	0.0685	0.931	0.987	-5.6	2.20e7	10936	2014.4	1.46e7	10129	1445.8	bb	bb
11	23478-HxCDF	6.77e5	5.47e5	1.22e6	35.90	1.000	1.24	NO	49.166	0.0995	1.069	1.087	-1.7	1.56e7	12026	1299.3	1.27e7	10736	1180.9	bd	bd
12	123678-HxCDF	7.07e5	5.75e5	1.28e6	36.00	1.000	1.23	NO	49.223	0.101	1.024	1.041	-1.6	1.56e7	12026	1300.8	1.26e7	10736	1173.7	db	db
13	234678-HxCDF	6.97e5	5.65e5	1.26e6	36.47	1.000	1.23	NO	49.106	0.101	1.115	1.136	-1.8	1.48e7	12026	1228.1	1.20e7	10736	1121.6	bb	bb
14	123789-HxCDF	6.06e5	4.93e5	1.10e6	37.23	1.000	1.23	NO	49.168	0.135	1.043	1.061	-1.7	1.16e7	12026	960.9	9.54e6	10736	888.3	bb	bb
15	1234678-HpCDF	5.57e5	5.39e5	1.10e6	38.71	1.000	1.03	NO	51.809	0.108	1.191	1.150	3.6	1.02e7	6974	1459.1	9.72e6	9248	1050.8	bb	bb
16	1234789-HpCDF	4.80e5	4.58e5	9.38e5	40.60	1.000	1.05	NO	51.172	0.150	1.230	1.202	2.3	7.04e6	6974	1009.4	6.90e6	9248	745.6	bd	bb
17	OCDF	7.70e5	8.63e5	1.63e6	44.43	1.007	0.89	NO	91.964	0.120	1.042	1.133	-8.0	9.17e6	4114	2228.0	9.87e6	5554	1776.7	bb	bb
18	13C-2378-TCDD	1.12e6	1.48e6	2.61e6	31.11	1.018	0.76	NO	104.513	0.0825	1.179	1.128	4.5	1.97e7	6149	3200.1	2.55e7	4009	6371.6	bb	bb
19	13C-12378-PeCDD	1.24e6	8.14e5	2.05e6	34.02	1.114	1.52	NO	123.749	0.153	0.930	0.751	23.7	3.12e7	7861	3967.0	2.04e7	4701	4342.7	bb	bb
20	13C-123478-HxCDD	1.08e6	8.66e5	1.94e6	36.60	0.991	1.24	NO	97.755	0.0954	0.876	0.896	-2.2	2.16e7	7057	3062.5	1.74e7	7277	2394.1	bd	bd
21	13C-123678-HxCDD	1.14e6	9.20e5	2.06e6	36.68	0.994	1.24	NO	94.443	0.0868	0.931	0.986	-5.6	2.37e7	7057	3351.2	1.88e7	7277	2589.2	dd	dd
22	13C-1234678-HpCDD	8.51e5	8.11e5	1.66e6	39.94	1.082	1.05	NO	111.562	0.136	0.749	0.672	11.6	1.31e7	8011	1641.1	1.24e7	7330	1698.3	bb	bb
23	13C-OCDD	1.46e6	1.67e6	3.13e6	44.12	1.195	0.87	NO	220.206	0.138	0.707	0.642	10.1	1.65e7	5348	3086.1	1.87e7	9476	1975.8	bb	bd
24	13C-2378-TCDF	1.34e6	1.73e6	3.07e6	30.31	0.992	0.78	NO	111.035	0.118	1.388	1.250	11.0	1.61e7	9465	1702.0	2.04e7	6636	3080.4	bb	bb
25	13C-12378-PeCDF	1.70e6	1.08e6	2.78e6	33.23	1.088	1.57	NO	124.562	0.256	1.259	1.011	24.6	4.24e7	14837	2857.3	2.69e7	13348	2014.6	bb	bb
26	13C-23478-PeCDF	1.85e6	1.18e6	3.03e6	33.83	1.108	1.57	NO	128.897	0.243	1.370	1.063	28.9	4.76e7	14837	3205.1	3.07e7	13348	2300.1	bb	bb
27	13C-123478-HxCDF	7.81e5	1.51e6	2.29e6	35.89	0.972	0.52	NO	92.938	0.141	1.032	1.111	-7.1	1.79e7	13279	1351.8	3.47e7	12982	2669.6	bd	bd
28	13C-123678-HxCDF	8.53e5	1.65e6	2.50e6	35.99	0.975	0.52	NO	90.536	0.126	1.129	1.247	-9.5	1.84e7	13279	1386.2	3.48e7	12982	2681.9	dd	db
29	13C-234678-HxCDF	7.73e5	1.49e6	2.26e6	36.46	0.988	0.52	NO	94.304	0.145	1.020	1.082	-5.7	1.70e7	13279	1277.6	3.24e7	12982	2494.4	bb	bb
30	13C-123789-HxCDF	7.34e5	1.37e6	2.11e6	37.22	1.009	0.53	NO	98.342	0.162	0.951	0.967	-1.7	1.39e7	13279	1045.2	2.59e7	12982	1998.0	bd	bb

Quantify Sample Summary Report

Method 1613 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Test Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
 Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRE	ICRRE	%D	Height1	Noise1	SN1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	5.70e5	1.27e6	1.84e6	38.70	1.049	0.45	NO	95.464	0.113	0.831	0.870	-4.5	1.01e7	7355	1369.4	2.25e7	9157	2455.9	bb	bb
32	13C-1234789-HpCDF	4.79e5	1.05e6	1.52e6	40.59	1.100	0.46	NO	101.519	0.145	0.688	0.677	1.5	7.06e6	7355	959.3	1.57e7	9157	1714.8	bd	bb
33	13C-1234-TCDD	9.64e5	1.25e6	2.21e6	30.54	0.000	0.77	NO	100.000	0.0931	1.000	1.000	0.0	1.19e7	6149	1934.0	1.52e7	4009	3798.2	bb	bb
34	13C-123789-HxCDD	1.23e6	9.90e5	2.22e6	36.91	0.000	1.24	NO	100.000	0.0855	1.000	1.000	0.0	2.32e7	7057	3285.6	1.87e7	7277	2571.5	dd	dd
35	37Cl-2378-TCDD	2.39e5		2.39e5	31.12	1.019			10.294	0.0279	1.083	1.061	2.0	4.11e6	3226	1272.7				bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

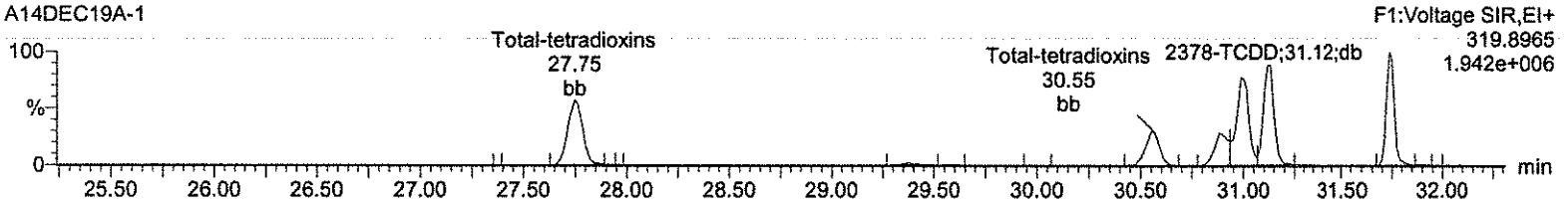
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

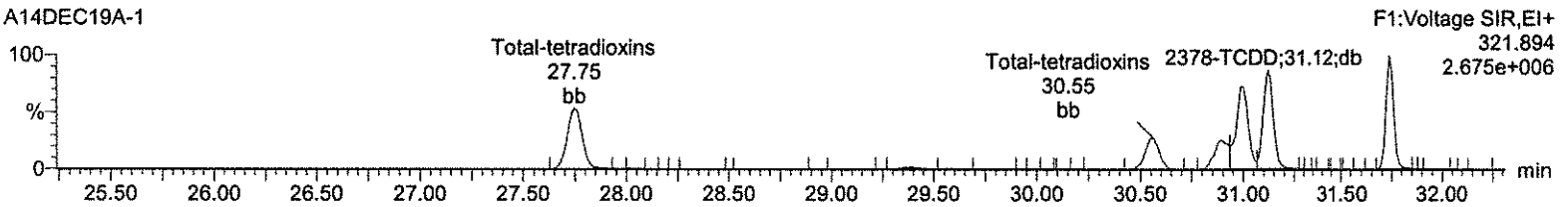
Total-tetradoxins

A14DEC19A-1



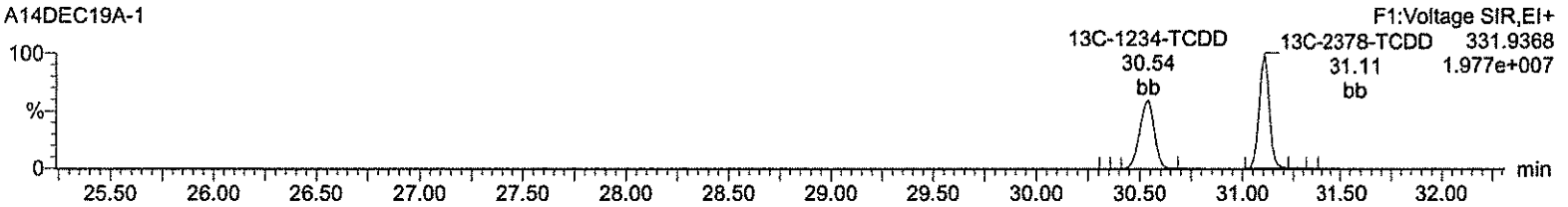
Total-tetradoxins

A14DEC19A-1



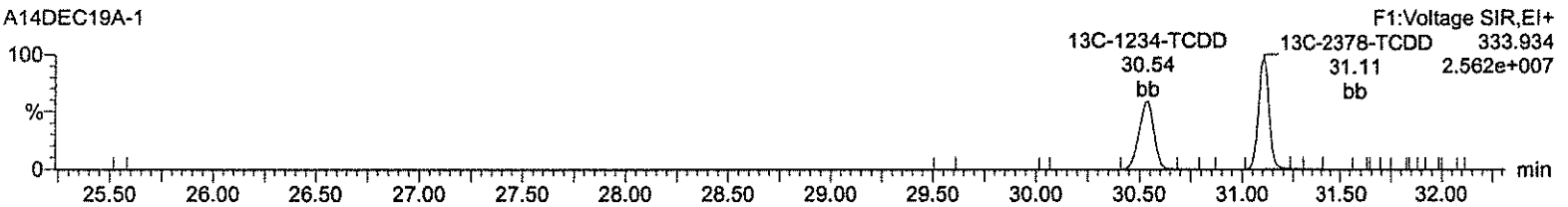
13C-2378-TCDD

A14DEC19A-1



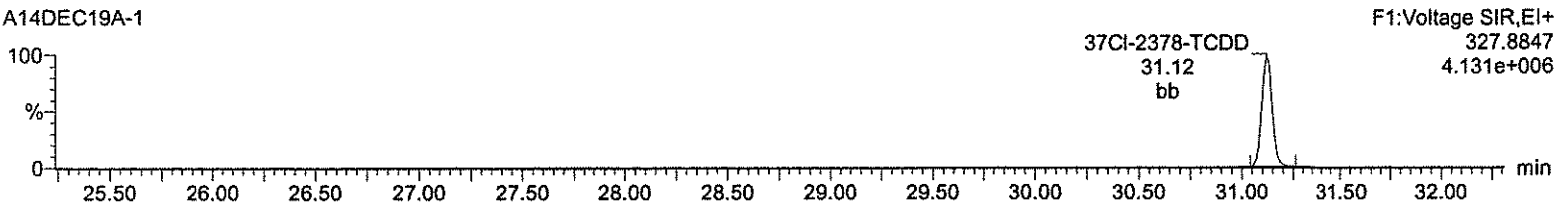
13C-2378-TCDD

A14DEC19A-1



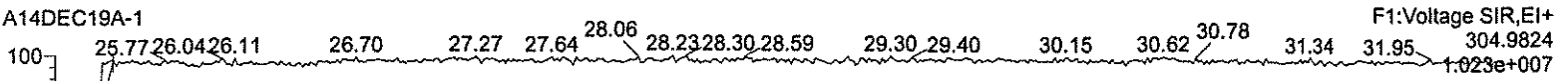
37Cl-2378-TCDD

A14DEC19A-1



Lock Mass F1

A14DEC19A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

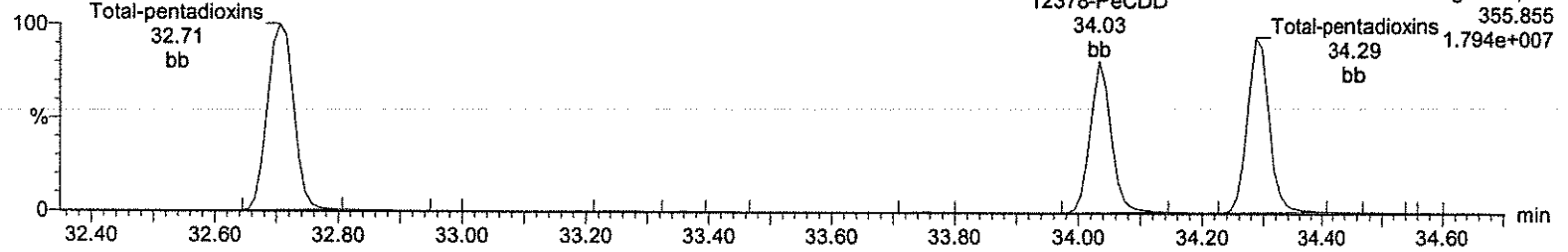
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

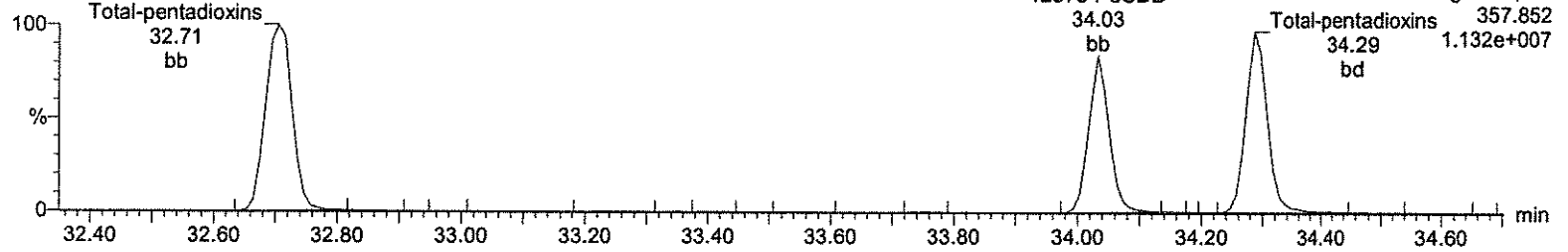
Total-pentadioxins

A14DEC19A-1



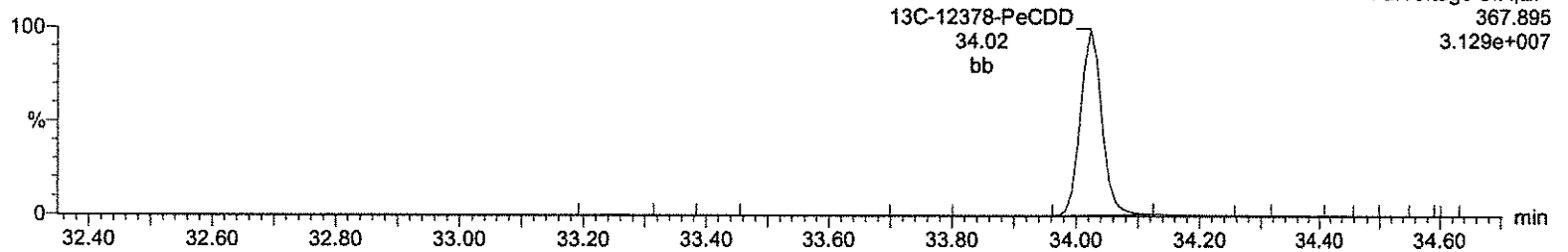
Total-pentadioxins

A14DEC19A-1



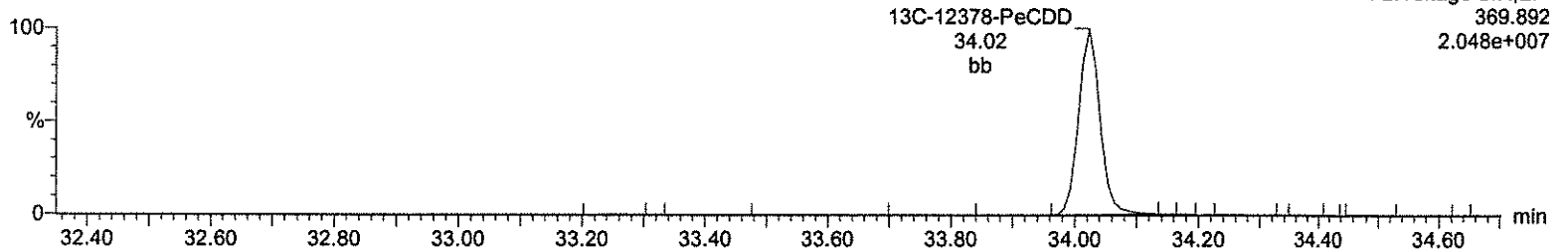
13C-12378-PeCDD

A14DEC19A-1



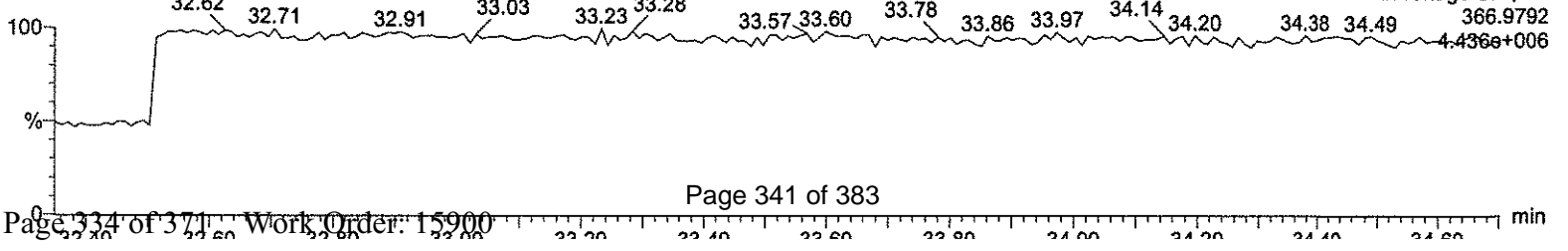
13C-12378-PeCDD

A14DEC19A-1



Lock Mass F2

A14DEC19A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

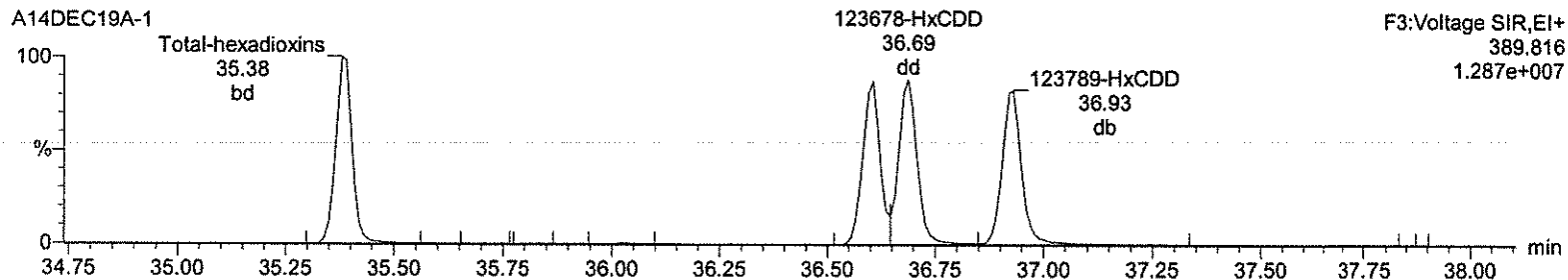
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

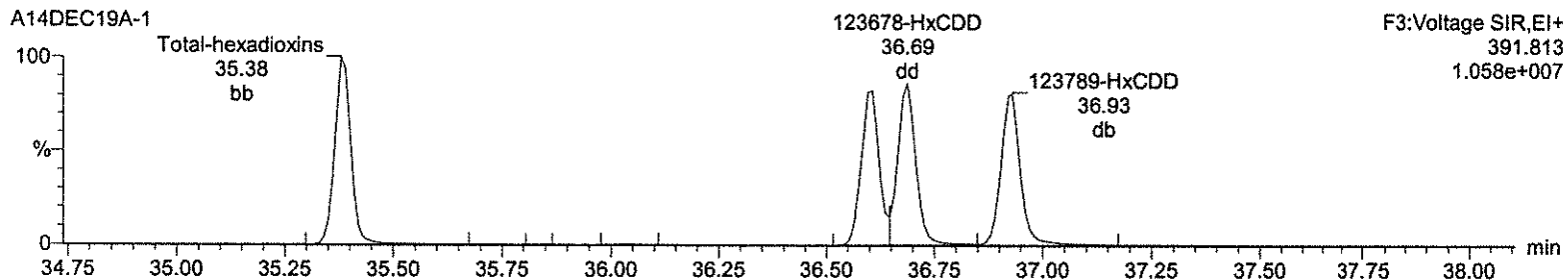
Total-hexadioxins

A14DEC19A-1



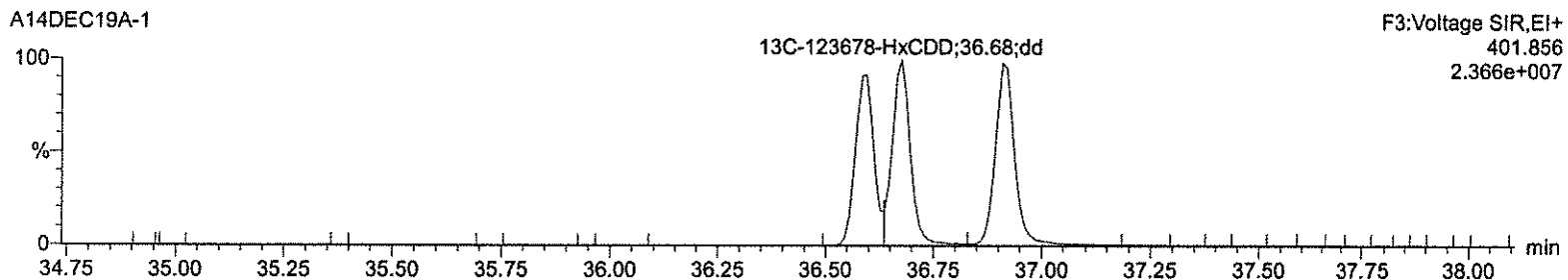
Total-hexadioxins

A14DEC19A-1



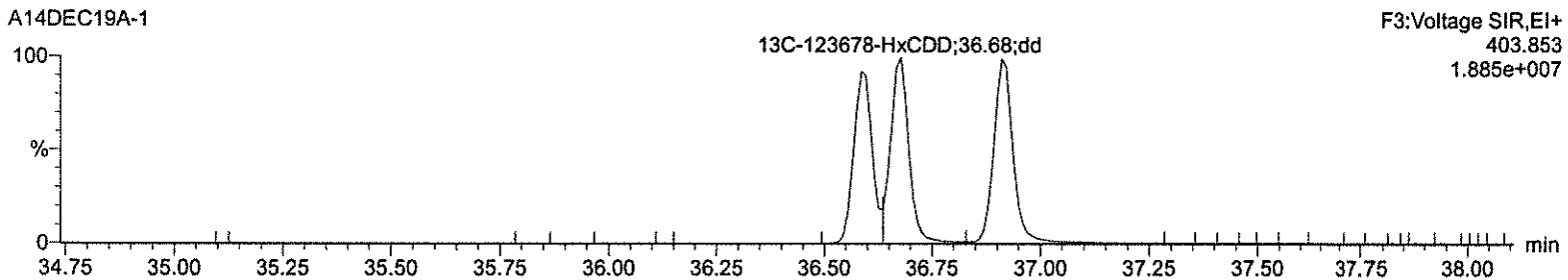
13C-123478-HxCDD

A14DEC19A-1



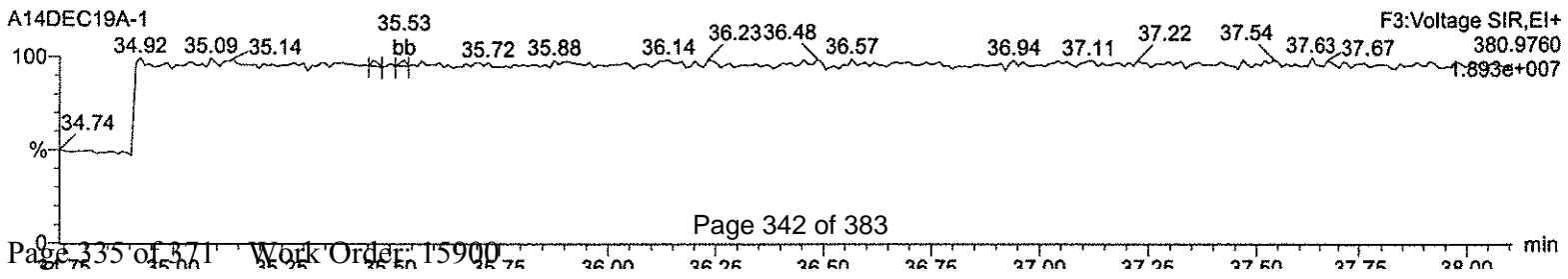
13C-123478-HxCDD

A14DEC19A-1



Lock Mass F3

A14DEC19A-1

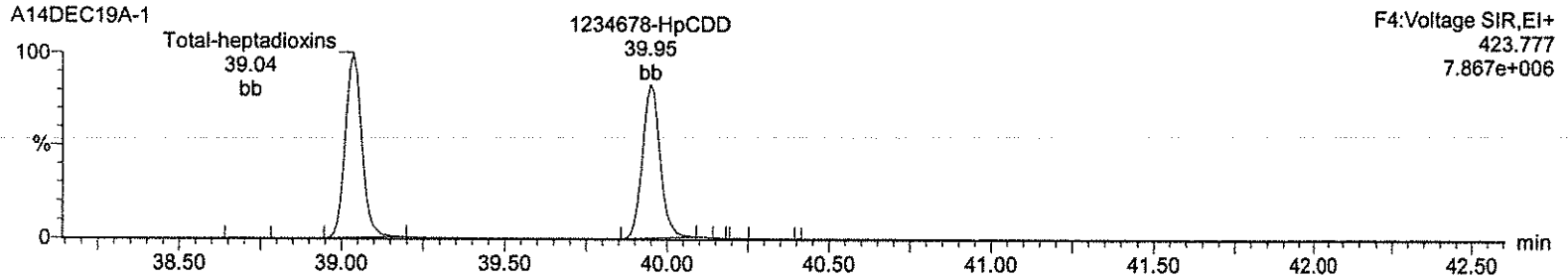


Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

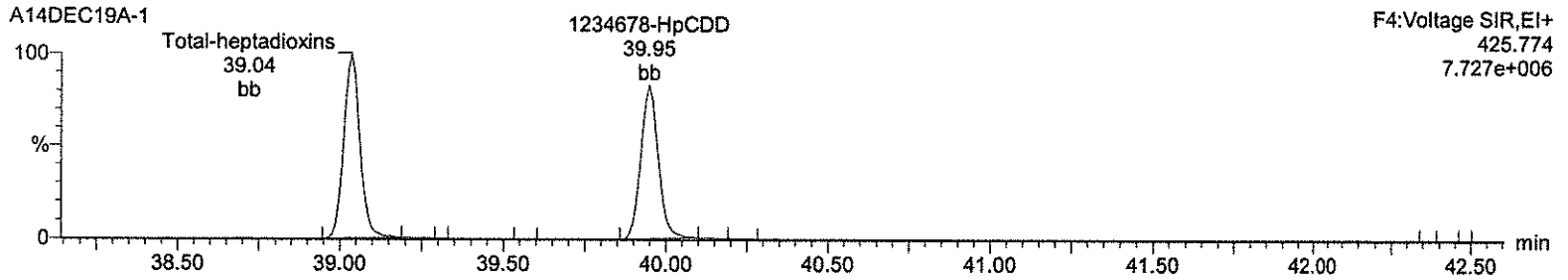
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

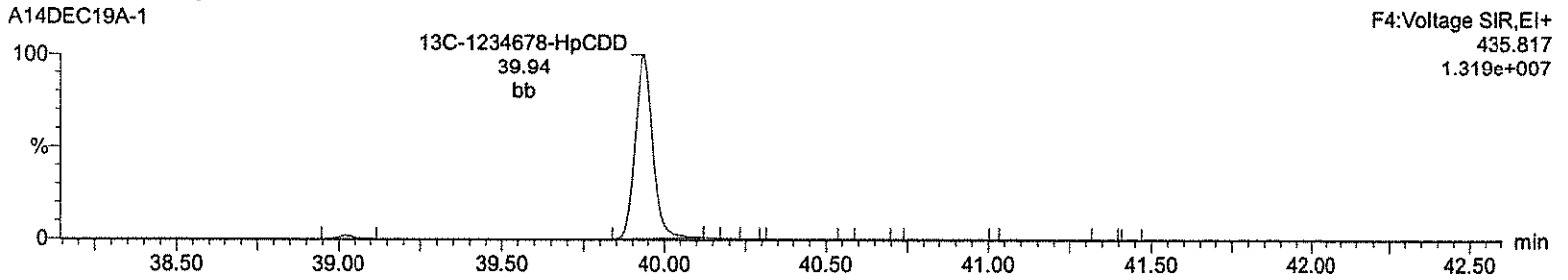
Total-heptadioxins



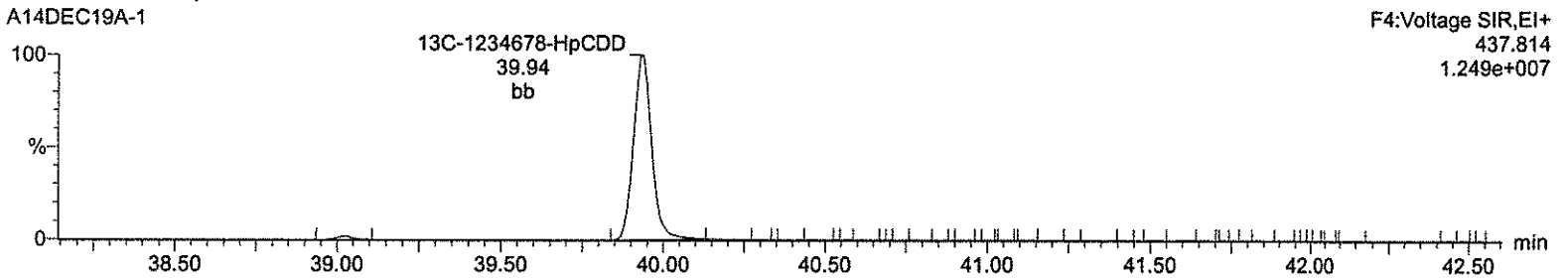
Total-heptadioxins



13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

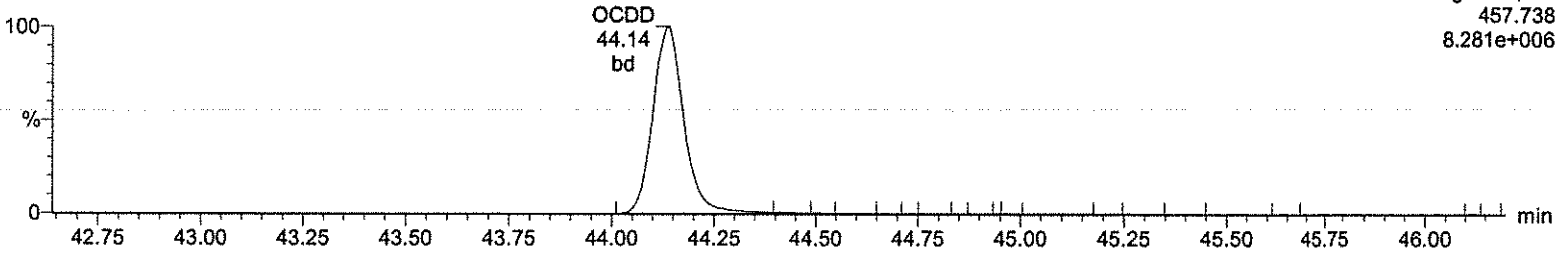
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

OCDD

A14DEC19A-1

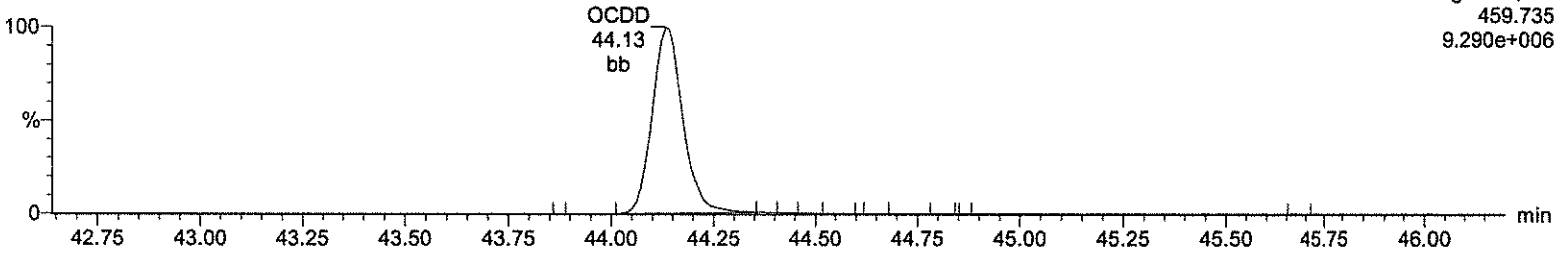
F5:Voltage SIR,EI+
457.738
8.281e+006



OCDD

A14DEC19A-1

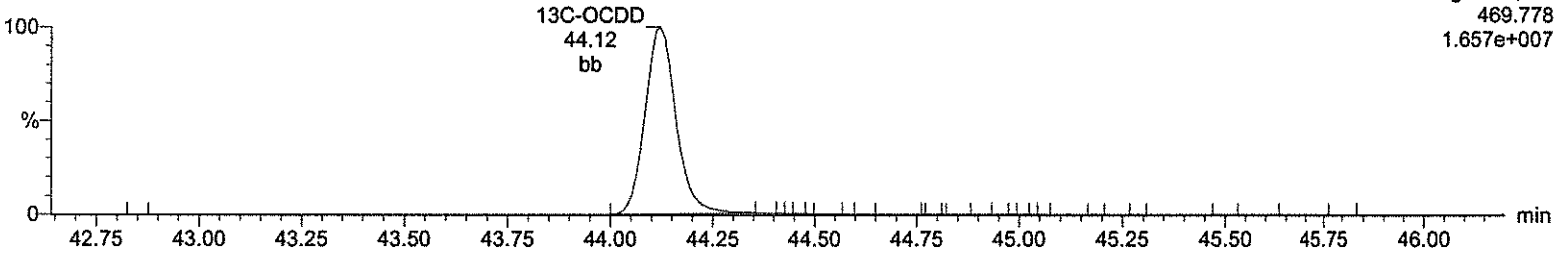
F5:Voltage SIR,EI+
459.735
9.290e+006



13C-OCDD

A14DEC19A-1

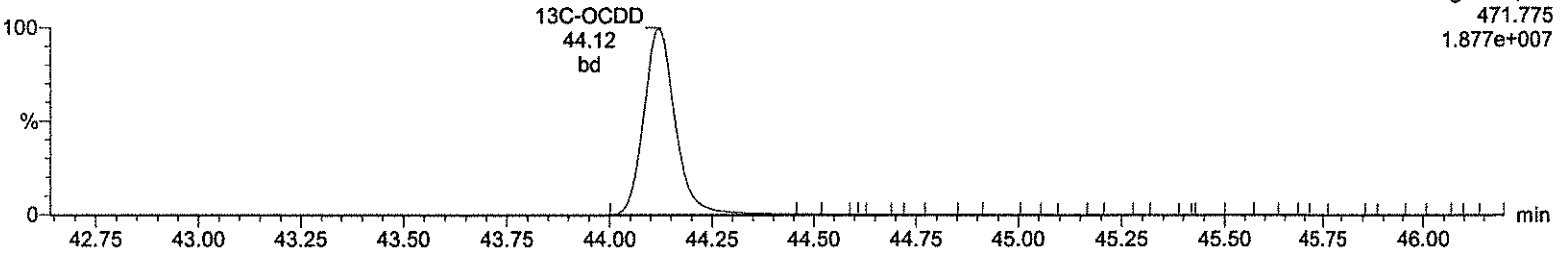
F5:Voltage SIR,EI+
469.778
1.657e+007



13C-OCDD

A14DEC19A-1

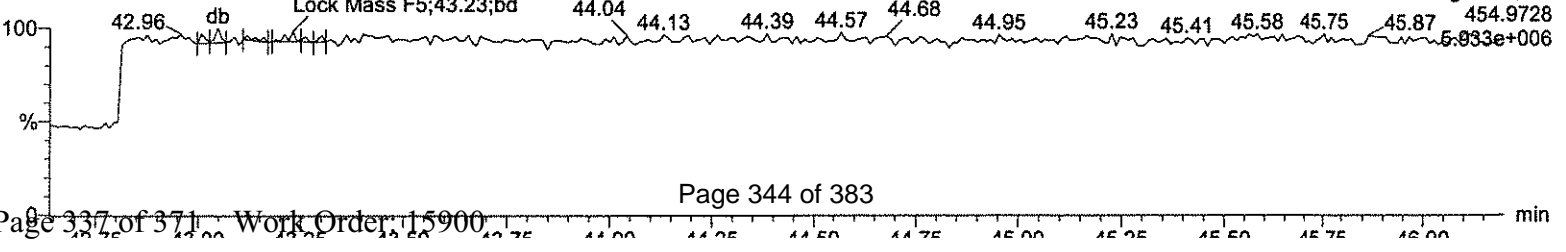
F5:Voltage SIR,EI+
471.775
1.877e+007



Lock Mass F5

A14DEC19A-1

F5:Voltage SIR,EI+
454.9728
5.833e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

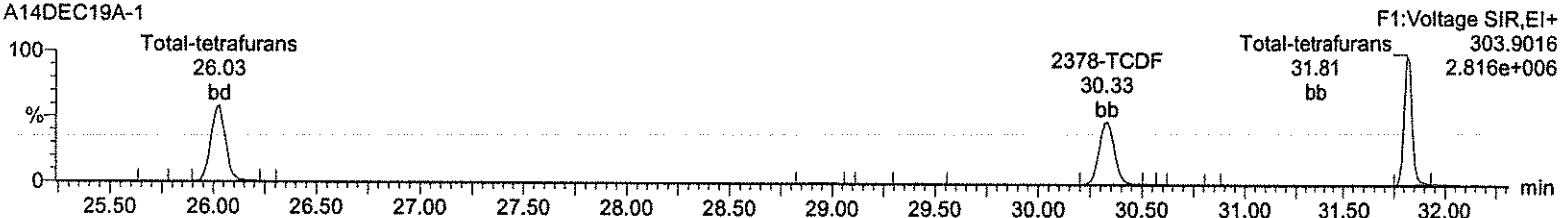
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

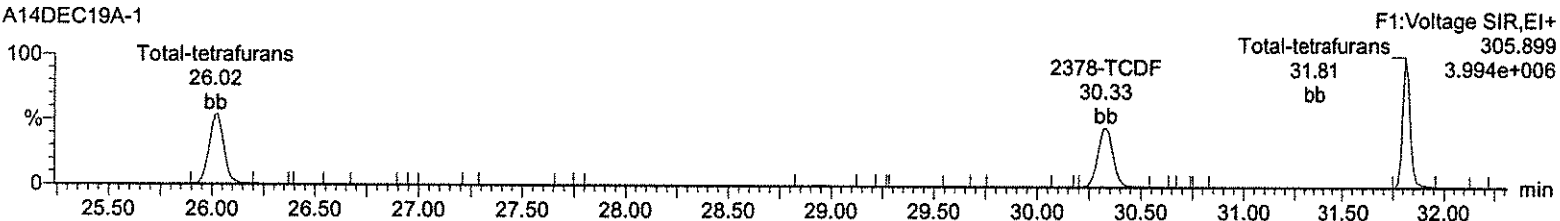
Total-tetrafurans

A14DEC19A-1



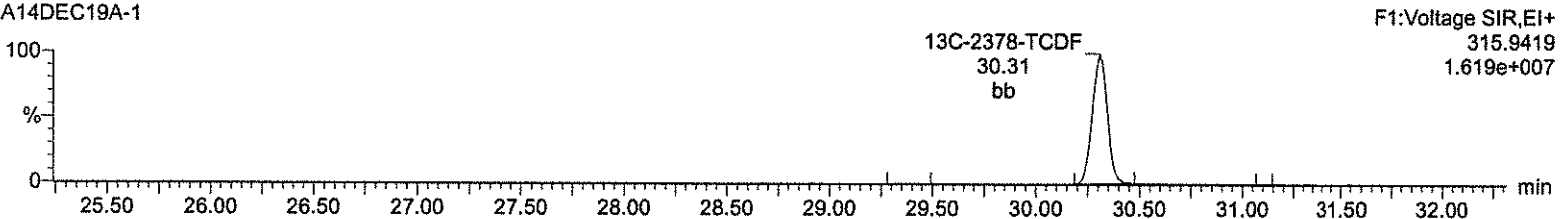
Total-tetrafurans

A14DEC19A-1



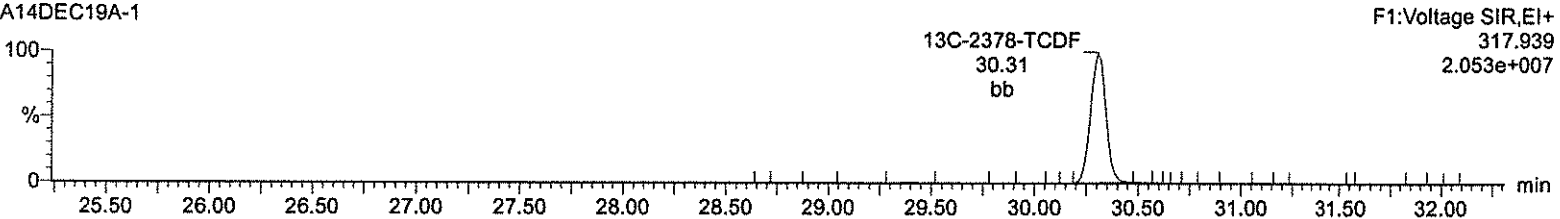
13C-2378-TCDF

A14DEC19A-1



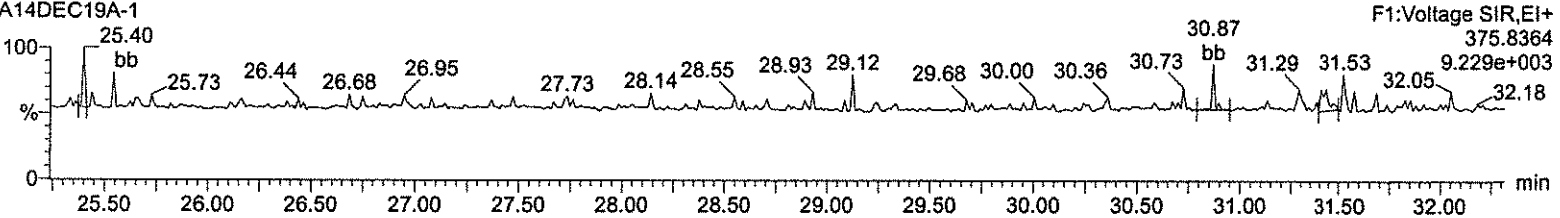
13C-2378-TCDF

A14DEC19A-1



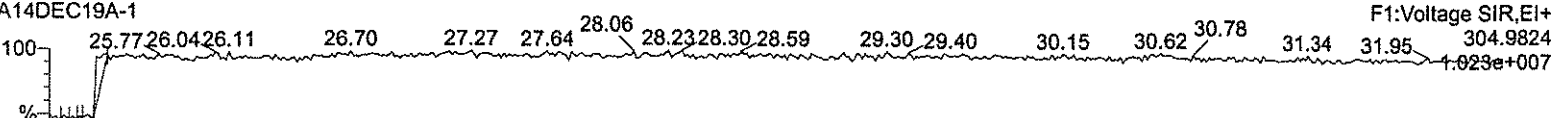
HxDPE

A14DEC19A-1



Lock Mass F1

A14DEC19A-1



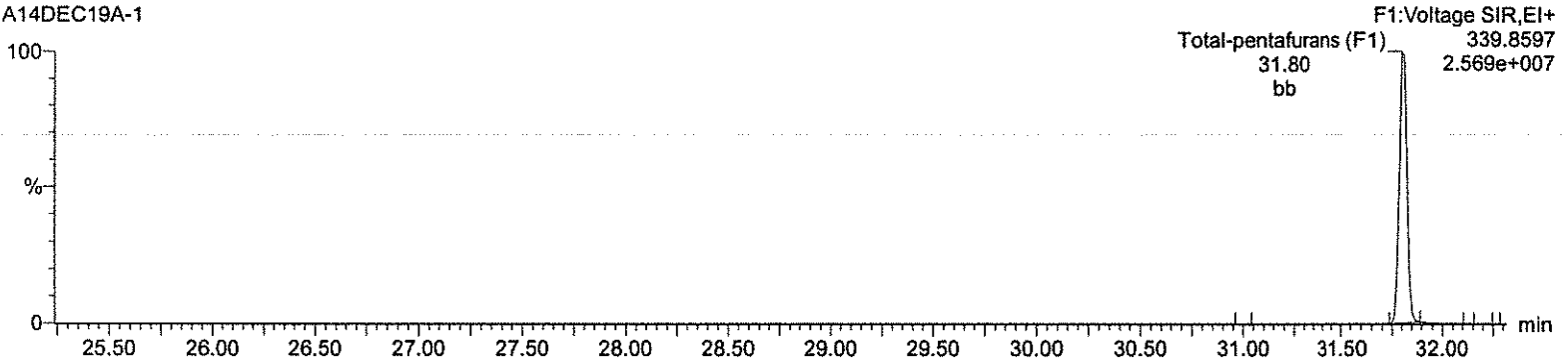
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

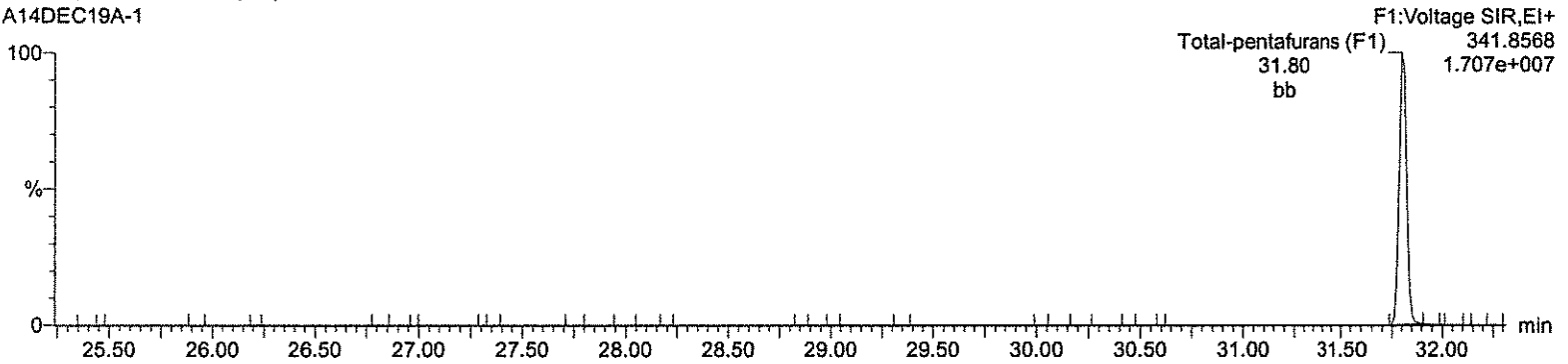
Total-pentafurans (F1)

A14DEC19A-1



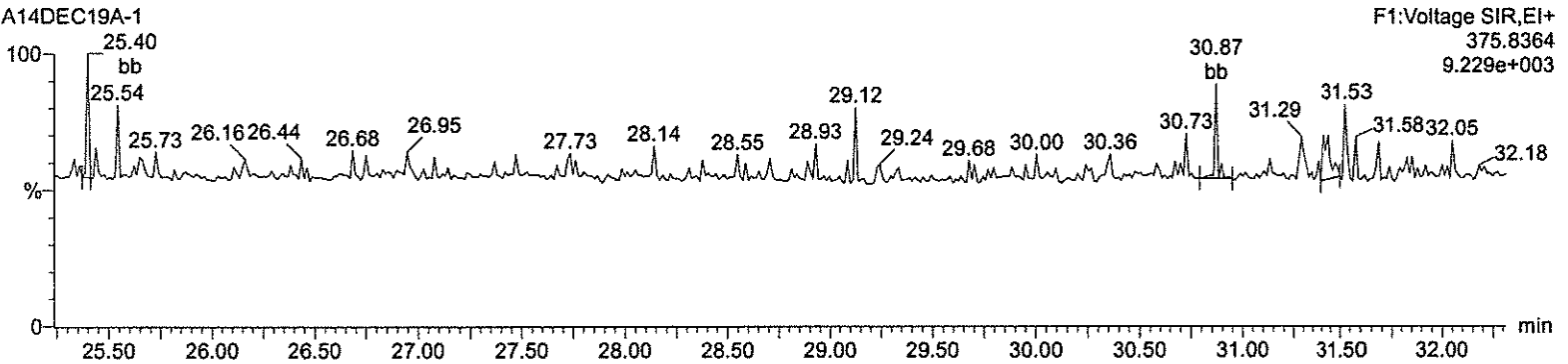
Total-pentafurans (F1)

A14DEC19A-1



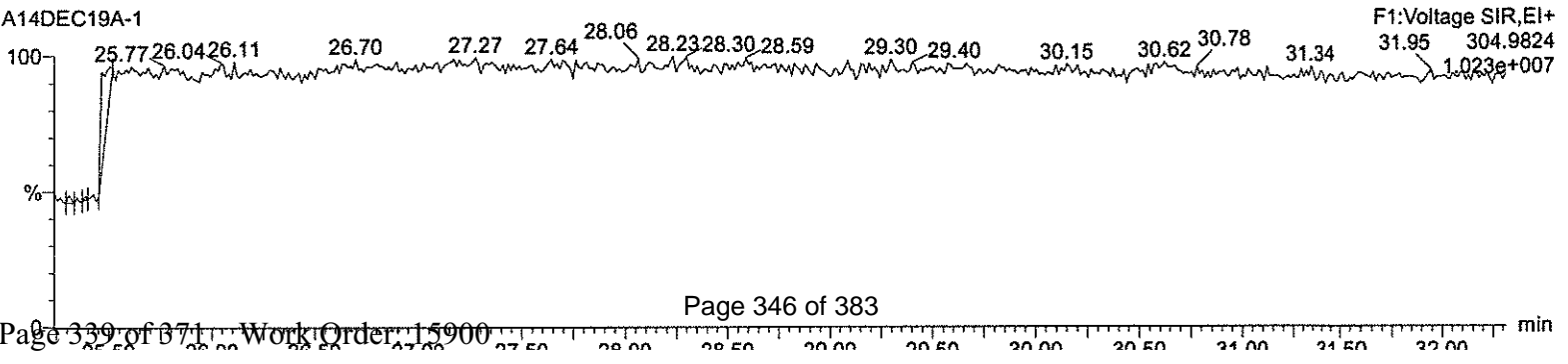
HxDPE

A14DEC19A-1



Lock Mass F1

A14DEC19A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

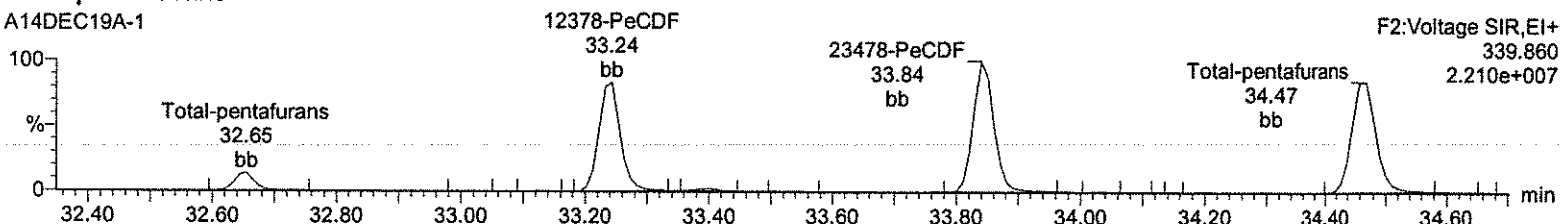
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

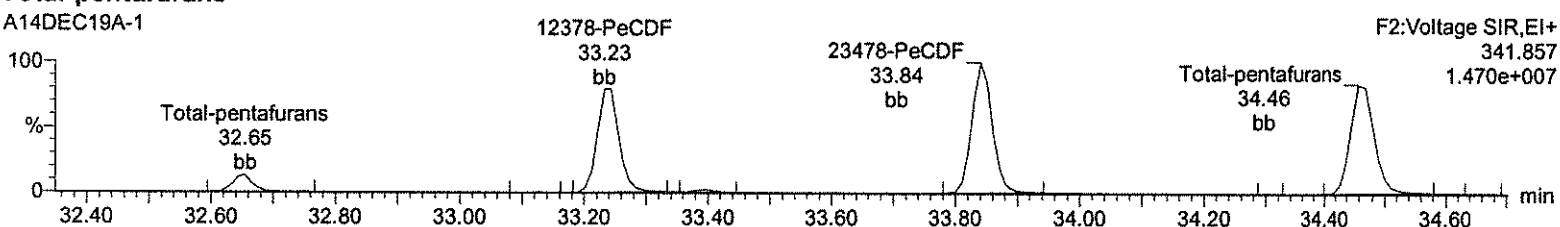
Total-pentafurans

A14DEC19A-1



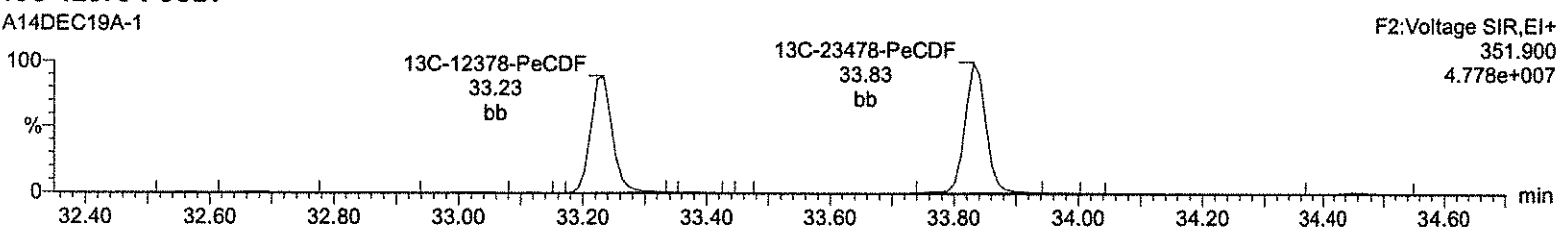
Total-pentafurans

A14DEC19A-1



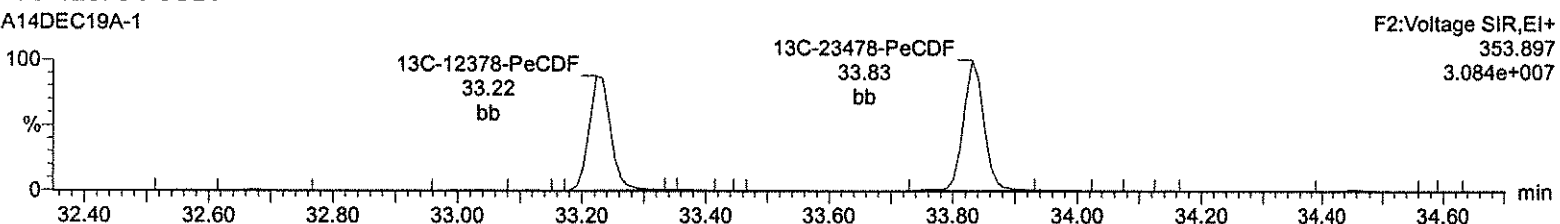
13C-12378-PeCDF

A14DEC19A-1



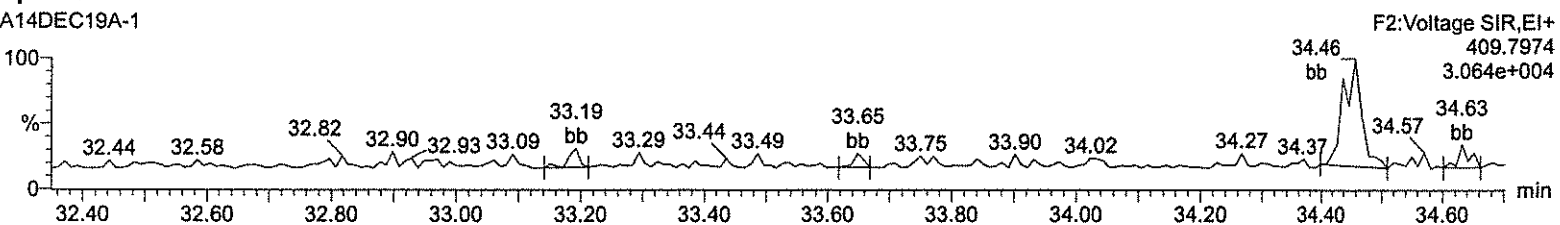
13C-12378-PeCDF

A14DEC19A-1



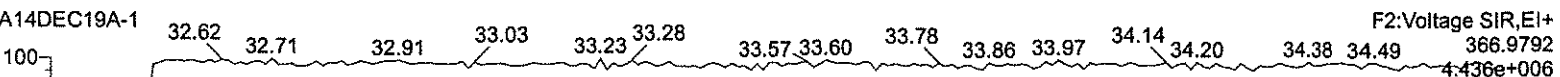
HpDPE

A14DEC19A-1



Lock Mass F2

A14DEC19A-1



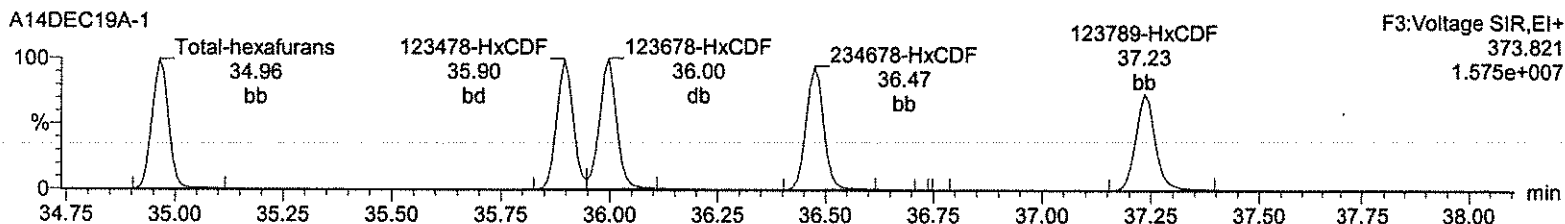
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

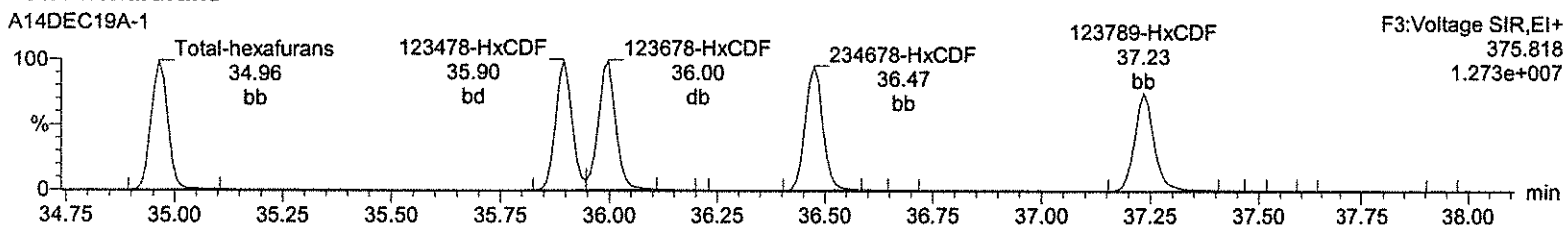
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

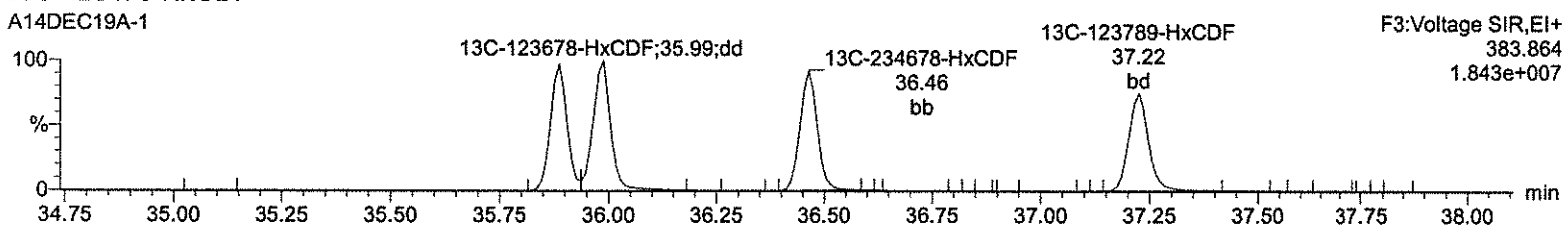
Total-hexafurans



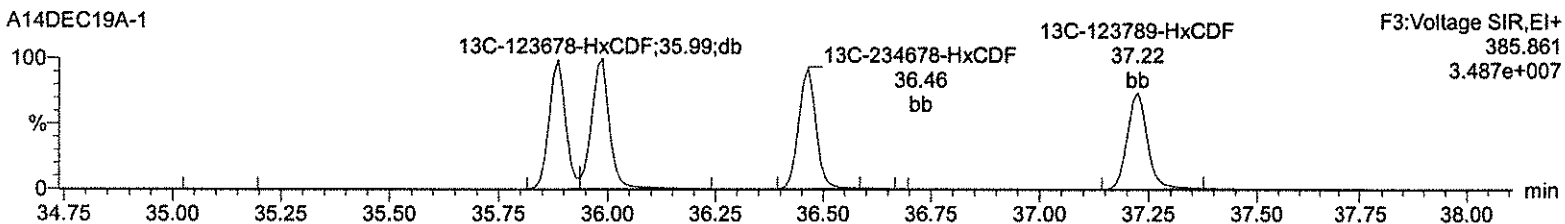
Total-hexafurans



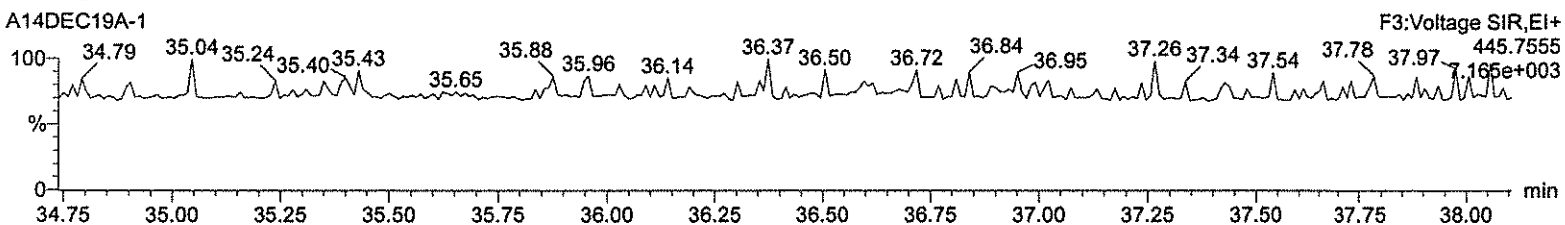
13C-123478-HxCDF



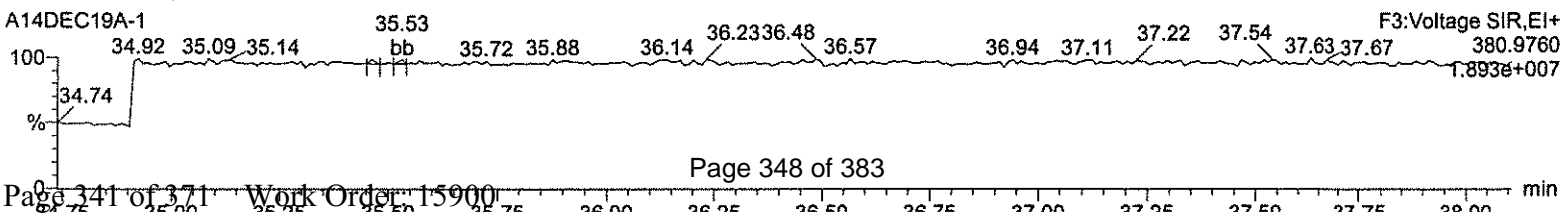
13C-123478-HxCDF



OcDPE



Lock Mass F3

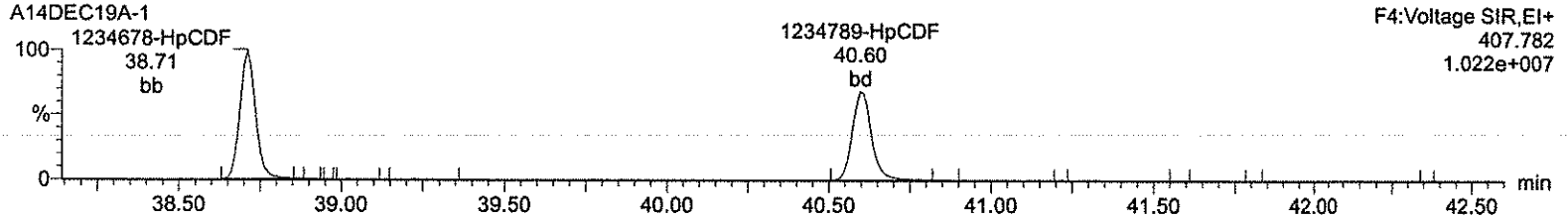


Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

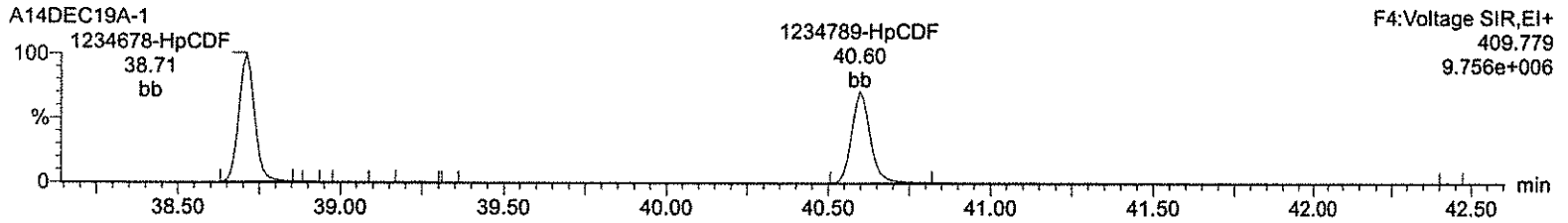
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

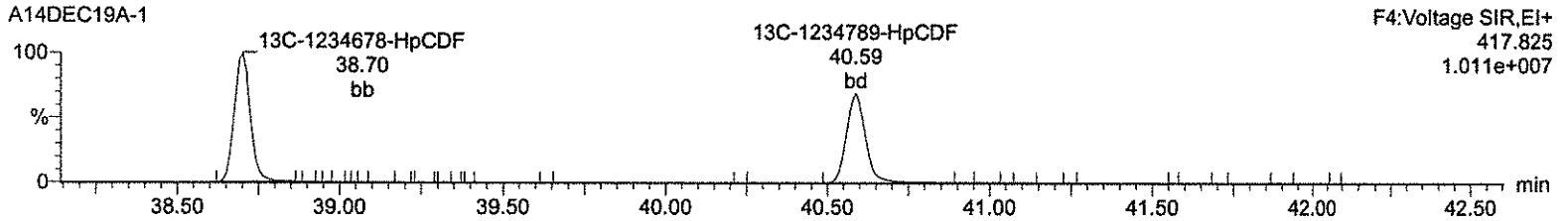
Total-heptafurans



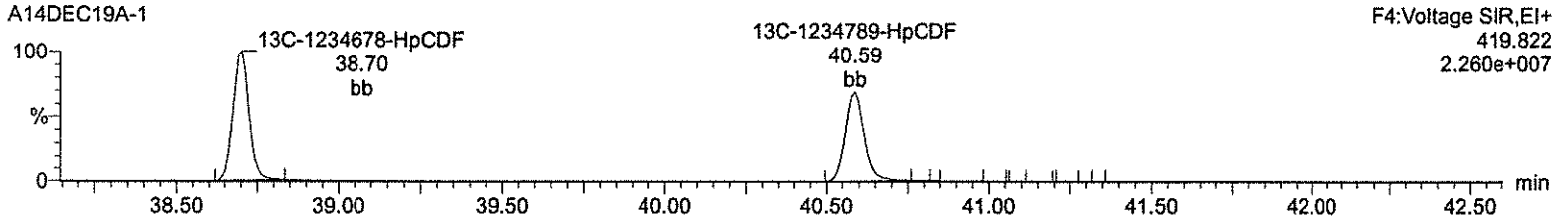
Total-heptafurans



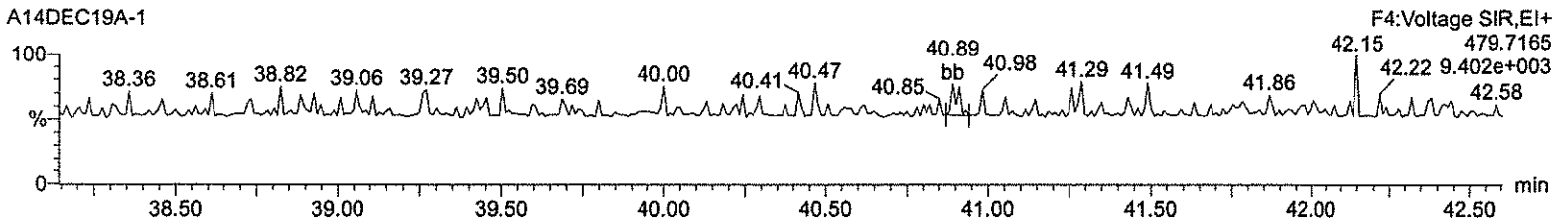
13C-1234678-HpCDF



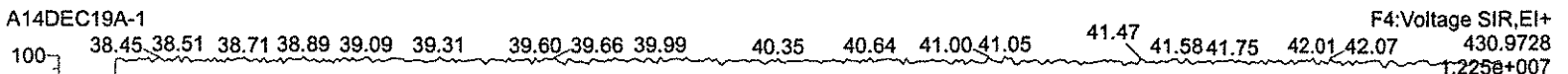
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Quantify Sample Report MassLynx 4.1

Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

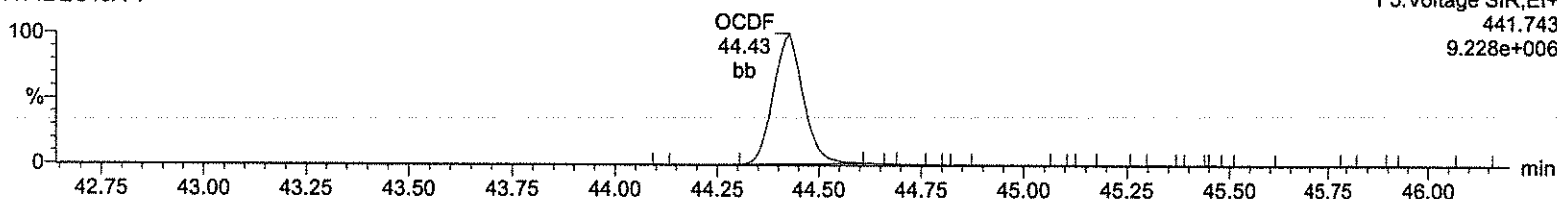
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

OCDF

A14DEC19A-1

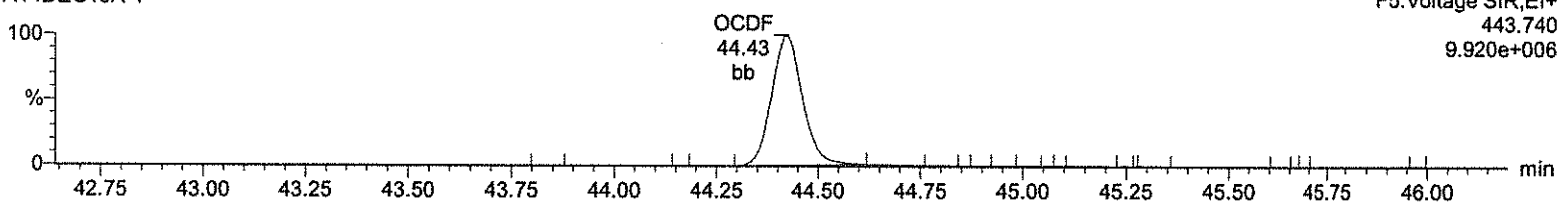
F5:Voltage SIR,EI+
441.743
9.228e+006



OCDF

A14DEC19A-1

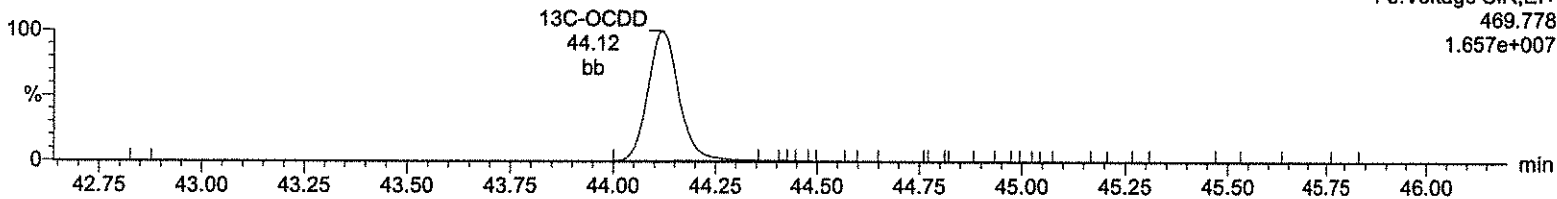
F5:Voltage SIR,EI+
443.740
9.920e+006



13C-OCDD

A14DEC19A-1

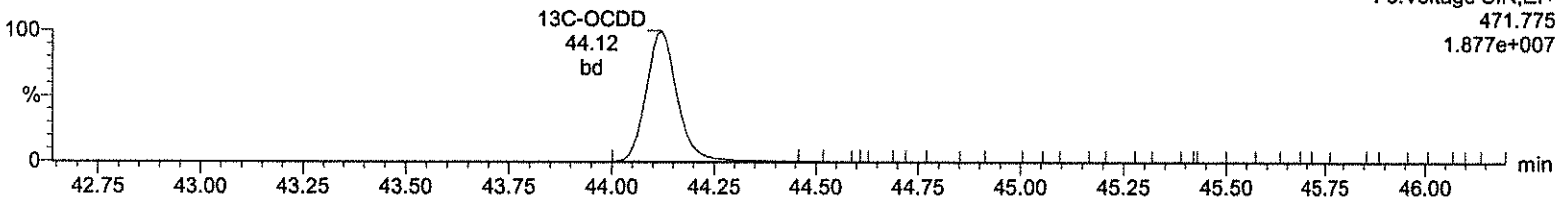
F5:Voltage SIR,EI+
469.778
1.657e+007



13C-OCDD

A14DEC19A-1

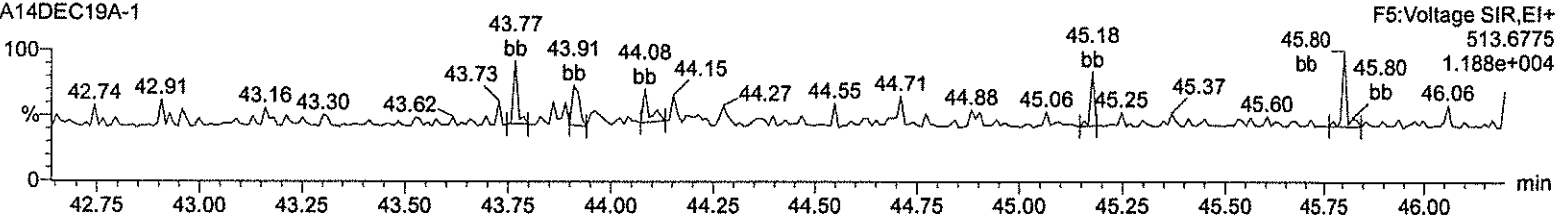
F5:Voltage SIR,EI+
471.775
1.877e+007



DeDPE

A14DEC19A-1

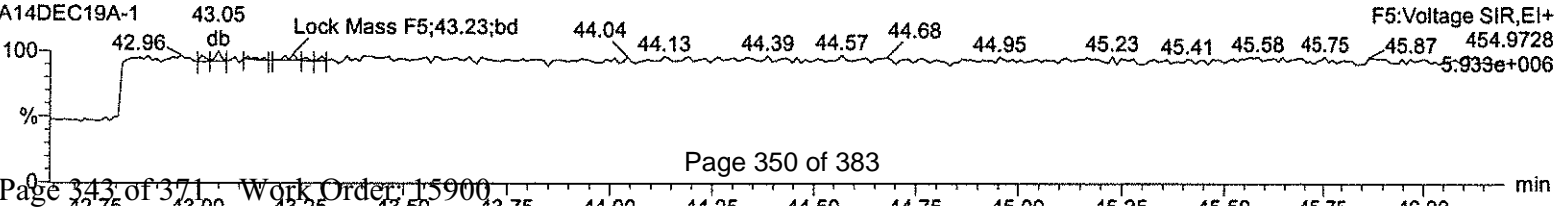
F5:Voltage SIR,EI+
513.6775
1.188e+004



Lock Mass F5

A14DEC19A-1

F5:Voltage SIR,EI+
454.9728
5.933e+006



Quantify Sample Summary Report

Method 8290 CCAL Report

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MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
 Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Work Coord: 1900

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 25 Nov 2019 10:50:22
 Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08.JUL19A.cdb 09 Jul 2019 09:23:09

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean ²	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.22e5	1.61e5	2.84e5	31.12	1.000	0.76	NO	10.542	0.0936	0.932	0.884	5.4	2.01e6	3371	596.0	2.58e6	13329	193.4	db	db
2	12378-PeCDD	5.97e5	3.85e5	9.82e5	34.03	1.000	1.55	NO	53.508	0.114	0.913	0.853	7.0	1.40e7	14331	978.5	9.21e6	5738	1605.4	bb	bb
3	123478-HxCDD	5.17e5	4.21e5	9.38e5	36.60	0.998	1.23	NO	51.858	0.109	0.886	0.854	3.7	1.02e7	8284	1232.3	8.23e6	7069	1163.6	dd	bd
4	123678-HxCDD	5.52e5	4.40e5	9.93e5	36.69	1.000	1.25	NO	49.664	0.0985	0.938	0.944	-0.7	1.09e7	8284	1314.6	8.75e6	7069	1238.3	dd	dd
5	123789-HxCDD	5.54e5	4.36e5	9.90e5	36.92	1.007	1.27	NO	52.852	0.105	0.935	0.885	5.7	9.79e6	8284	1182.2	7.96e6	7069	1125.5	dd	dd
6	1234678-HpCDD	3.95e5	3.73e5	7.68e5	39.95	1.001	1.06	NO	47.137	0.150	0.980	1.040	-5.7	5.91e6	7744	763.1	5.54e6	7003	790.5	bd	bd
7	OCDD	6.49e5	7.42e5	1.39e6	44.12	1.000	0.87	NO	97.995	0.200	0.952	0.971	-2.0	7.29e6	6108	1194.0	8.26e6	6369	1297.6	bb	bb
8	12378-TCDF	1.39e5	1.83e5	3.21e5	30.33	1.001	0.76	NO	8.947	0.0512	0.875	0.978	-10.5	1.69e6	3722	454.3	2.14e6	4927	433.5	bb	bb
9	12378-PeCDF	7.94e5	5.05e5	1.30e6	33.24	1.000	1.57	NO	46.242	0.0797	0.874	0.945	-7.5	1.97e7	14213	1387.1	1.26e7	8546	1477.5	bd	bb
10	123478-PeCDF	9.13e5	5.93e5	1.51e6	33.84	1.018	1.54	NO	48.854	0.0726	1.013	1.037	-2.3	2.24e7	14213	1574.9	1.50e7	8546	1751.0	bb	bb
11	123478-HxCDF	6.74e5	5.50e5	1.22e6	35.90	0.997	1.23	NO	50.802	0.134	0.984	0.968	1.6	1.54e7	12378	1248.2	1.22e7	13417	909.5	bd	bd
12	123678-HxCDF	7.22e5	5.77e5	1.30e6	36.00	1.000	1.25	NO	50.167	0.125	1.044	1.041	0.3	1.44e7	12378	1164.0	1.14e7	13417	851.0	db	db
13	1234678-HxCDF	7.03e5	5.59e5	1.26e6	36.47	1.014	1.26	NO	51.468	0.132	1.014	0.985	2.9	1.43e7	12378	1156.3	1.14e7	13417	848.9	bb	bb
14	123789-HxCDF	6.07e5	4.90e5	1.10e6	37.23	1.035	1.24	NO	53.562	0.158	0.881	0.823	7.1	1.09e7	12378	876.6	8.57e6	13417	638.5	bd	bd
15	1234678-HpCDF	5.34e5	5.23e5	1.06e6	38.71	1.000	1.02	NO	51.237	0.107	1.178	1.150	2.5	8.75e6	6766	1293.7	8.69e6	7815	1111.7	bb	bb
16	1234789-HpCDF	4.36e5	4.33e5	8.69e5	40.60	1.049	1.01	NO	51.739	0.132	0.969	0.936	3.5	6.20e6	6766	916.5	6.28e6	7815	803.7	bb	bd
17	OCDF	7.12e5	7.88e5	1.50e6	44.42	1.007	0.90	NO	90.592	0.179	1.026	1.133	-9.4	7.80e6	6571	1187.2	8.57e6	6482	1321.6	bd	bd
18	13C-2378-TCDD	1.33e6	1.72e6	3.04e6	31.11	1.018	0.77	NO	103.299	0.0875	1.166	1.128	3.3	2.20e7	6043	3637.2	2.84e7	5819	4878.3	bb	bb
19	13C-12378-PeCDD	1.31e6	8.41e5	2.15e6	34.02	1.114	1.56	NO	109.658	0.134	0.824	0.751	9.7	3.13e7	7133	4394.1	2.06e7	4996	4130.2	bb	bb
20	13C-123678-HxCDD	1.15e6	9.69e5	2.12e6	36.68	0.994	1.19	NO	98.676	0.109	0.973	0.986	-1.3	2.24e7	10373	2158.4	1.84e7	6240	2940.6	dd	dd
21	13C-1234678-HpCDD	7.86e5	7.80e5	1.57e6	39.93	1.082	1.01	NO	107.098	0.137	0.719	0.672	7.1	1.19e7	6987	1700.2	1.13e7	7265	1557.8	bb	bd
22	13C-OCDD	1.37e6	1.56e6	2.92e6	44.11	1.195	0.88	NO	209.169	0.206	0.672	0.642	4.6	1.50e7	9665	1555.9	1.66e7	10897	1525.4	bd	bd
23	13C-2378-TCDF	1.61e6	2.06e6	3.67e6	30.31	0.992	0.78	NO	112.597	0.100	1.407	1.250	12.6	1.89e7	8248	2291.4	2.43e7	6796	3579.4	bb	bb
24	13C-12378-PeCDF	1.78e6	1.19e6	2.97e6	33.23	1.088	1.50	NO	112.679	0.210	1.139	1.011	12.7	4.53e7	13916	3255.8	2.91e7	11546	2519.6	bb	bd
25	13C-123678-HxCDF	8.50e5	1.64e6	2.49e6	35.99	0.975	0.52	NO	91.704	0.127	1.143	1.247	-8.3	1.69e7	8326	2032.5	3.22e7	16260	1980.8	db	db
26	13C-1234678-HpCDF	5.59e5	1.23e6	1.79e6	38.70	1.049	0.45	NO	94.715	0.140	0.824	0.870	-5.3	9.23e6	7877	1172.2	2.06e7	11064	1858.0	bd	bb
27	13C-1234-TCDD	1.14e6	1.47e6	2.61e6	30.54	0.000	0.77	NO	100.000	0.0987	1.000	1.000	0.0	1.31e7	6043	2169.5	1.69e7	5819	2901.4	bb	bb
28	13C-123789-HxCDD	1.21e6	9.71e5	2.18e6	36.91	0.000	1.24	NO	100.000	0.107	1.000	1.000	0.0	2.15e7	10373	2073.3	1.77e7	6240	2836.5	dd	dd
29	37Cl-2378-TCDD (SS)	2.77e5		2.77e5	31.12	1.000			9.684	0.0182	0.910	0.940	-3.2	4.50e6	3458	1301.9				bb	
30	13C-23478-PeCDF (SS)	1.98e6	1.26e6	3.25e6	33.84	1.018	1.57	NO	103.904	0.0801	1.093	1.052	3.9	4.85e7	13916	3482.7	3.04e7	11546	2629.3	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time

Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Job Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-123478-HxCDF (SS)	7.79e5	1.52e6	2.30e6	35.89	0.997	0.51	NO	103.618	0.139	0.923	0.891	3.6	1.73e7	8326	2074.5	3.37e7	16260	2070.5	bd	bd
32	13C-123478-HxCDD (SS)	1.08e6	8.21e5	1.90e6	36.59	0.998	1.31	NO	98.501	0.111	0.896	0.909	-1.5	2.11e7	10373	2035.5	1.70e7	6240	2717.8	bd	bd
33	13C-1234789-HpCDF (SS)	4.34e5	9.91e5	1.42e6	40.59	1.049	0.44	NO	102.011	0.205	0.794	0.779	2.0	6.16e6	7877	782.0	1.42e7	11064	1283.1	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

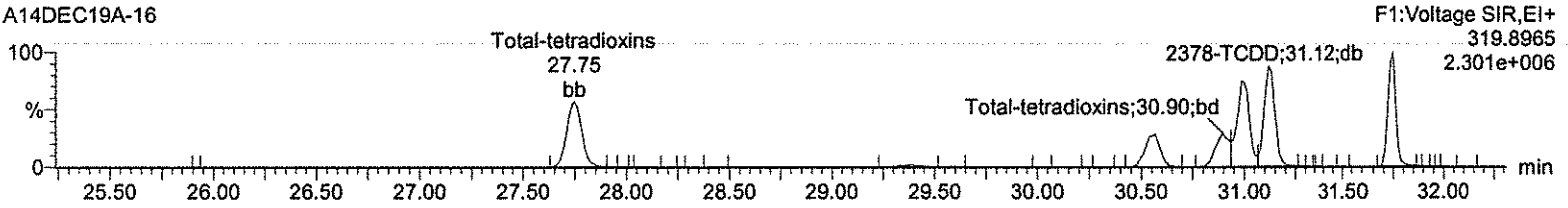
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 25 Nov 2019 10:50:22
Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

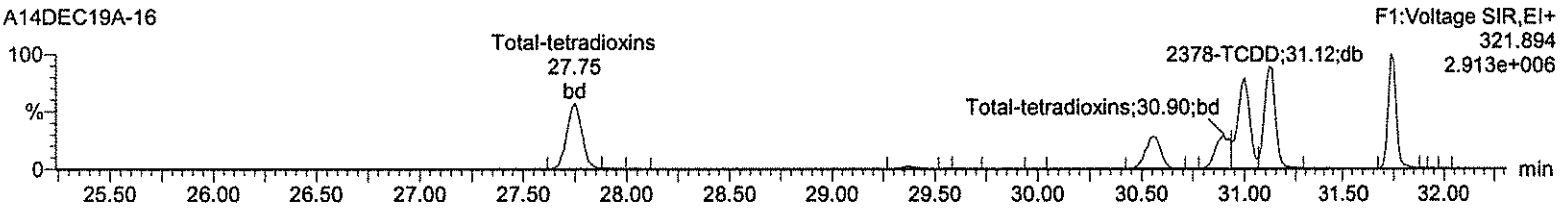
Total-tetradoxins

A14DEC19A-16



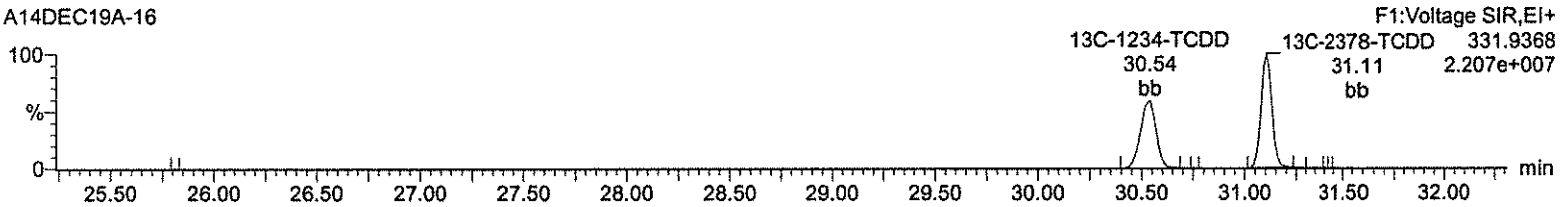
Total-tetradoxins

A14DEC19A-16



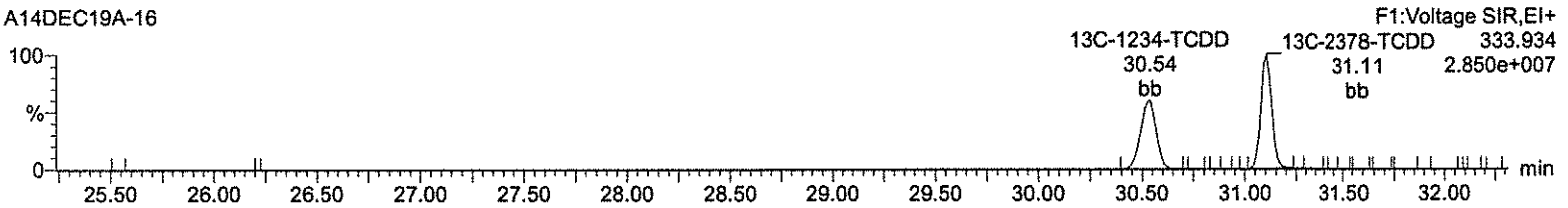
13C-2378-TCDD

A14DEC19A-16



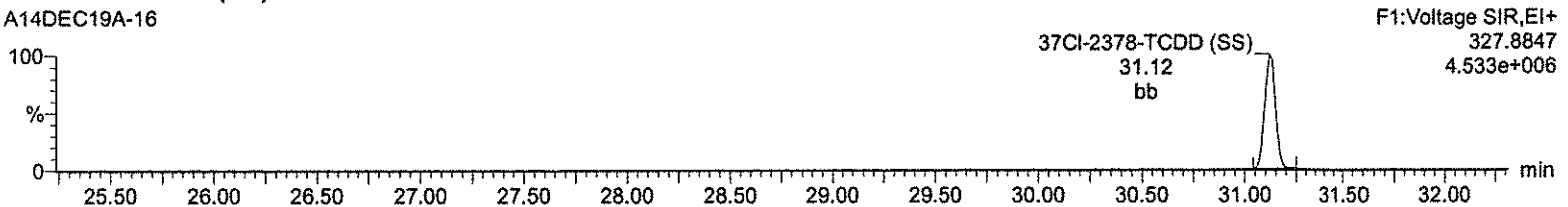
13C-2378-TCDD

A14DEC19A-16



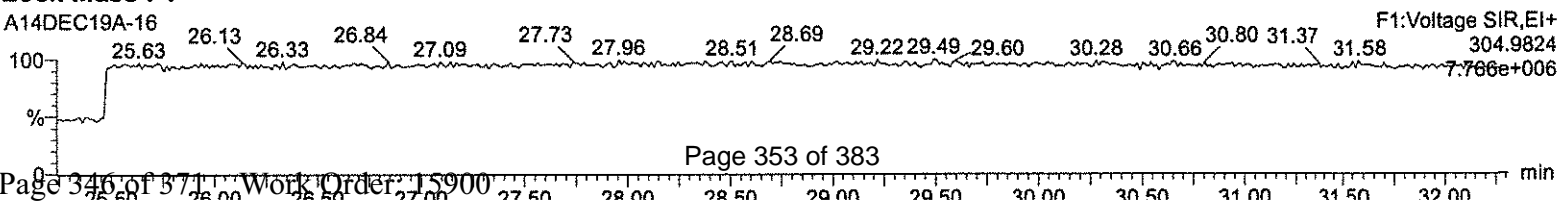
37Cl-2378-TCDD (SS)

A14DEC19A-16



Lock Mass F1

A14DEC19A-16

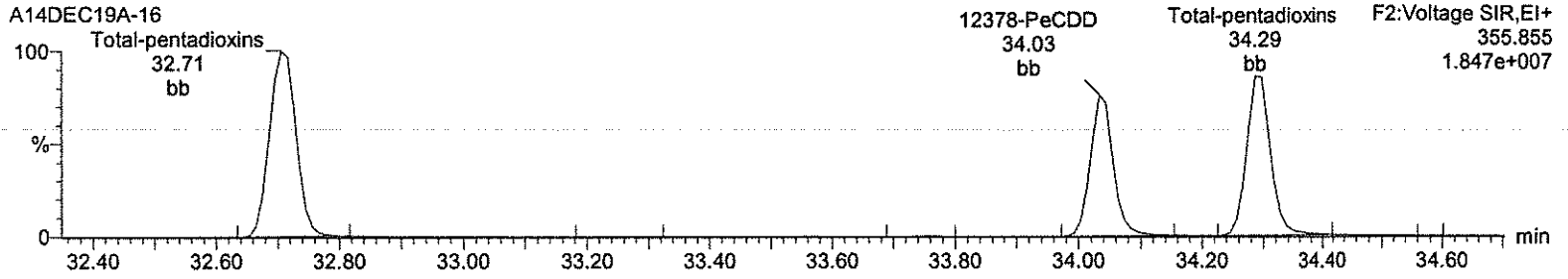


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

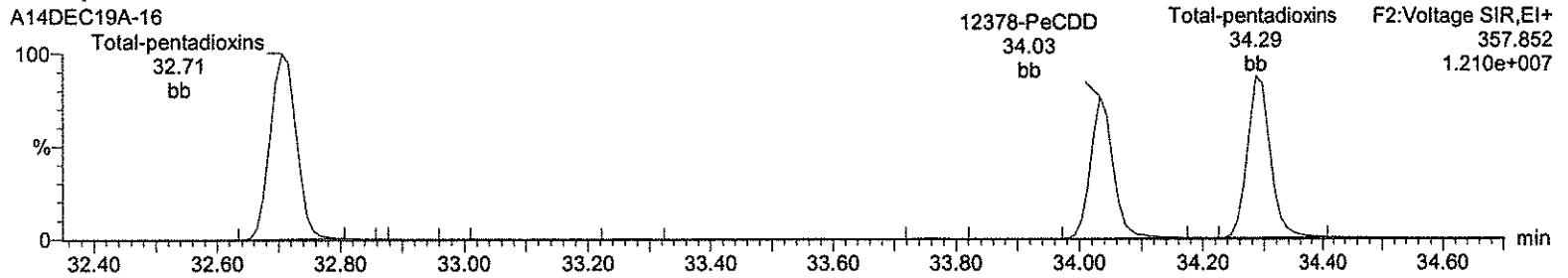
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

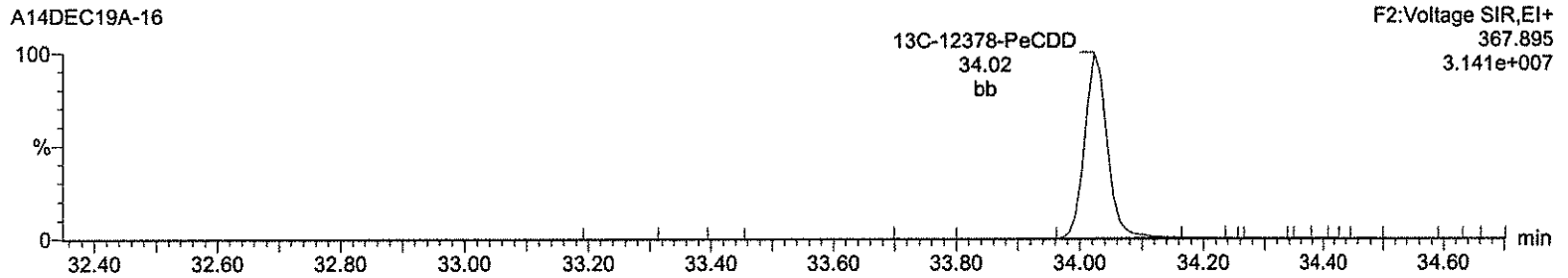
Total-pentadioxins



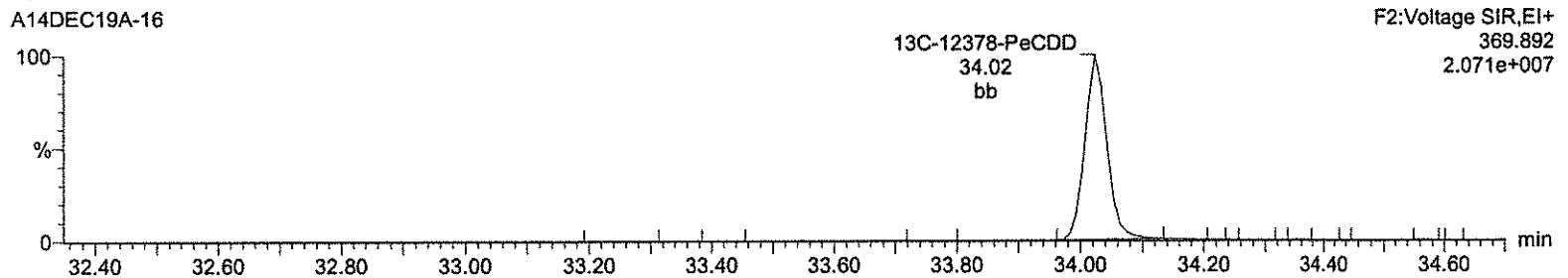
Total-pentadioxins



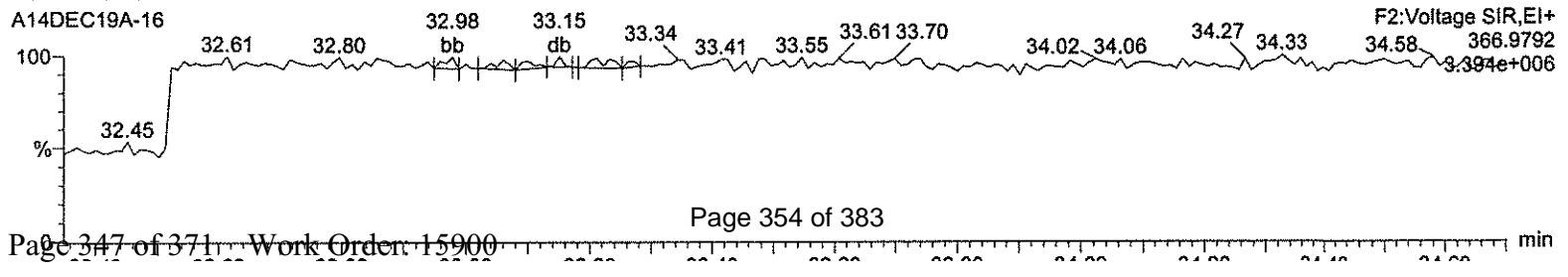
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time

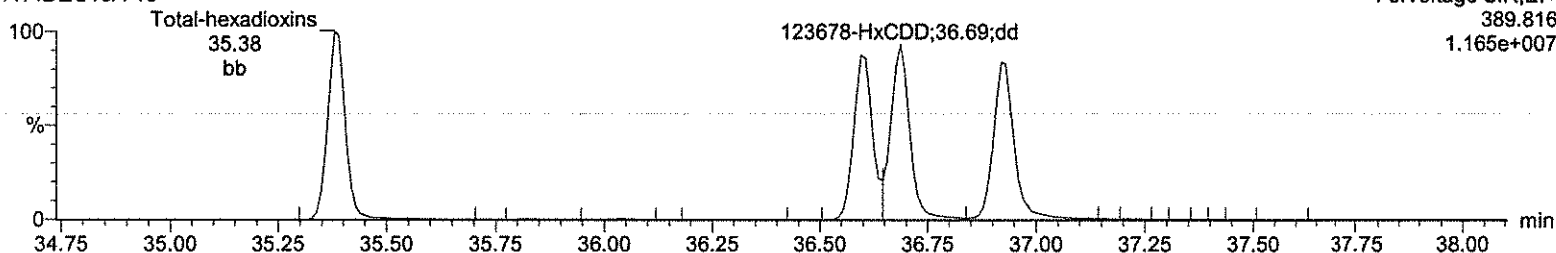
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

Total-hexadioxins

A14DEC19A-16

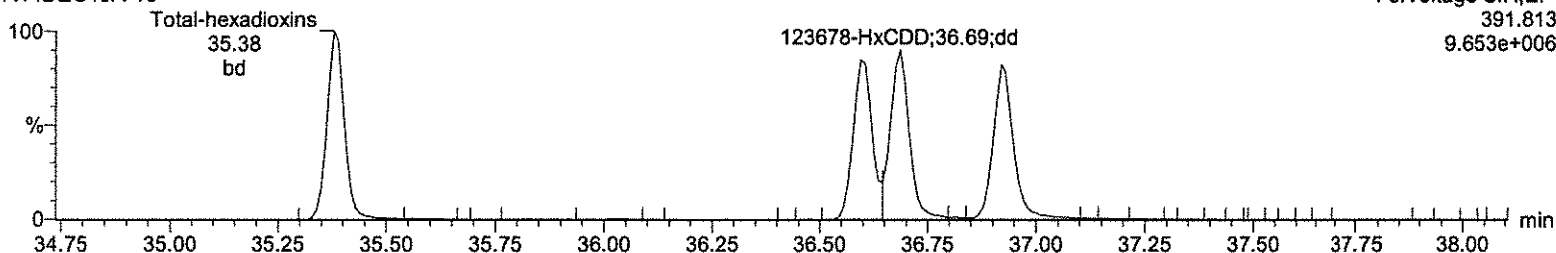
F3:Voltage SIR,EI+
389.816
1.165e+007



Total-hexadioxins

A14DEC19A-16

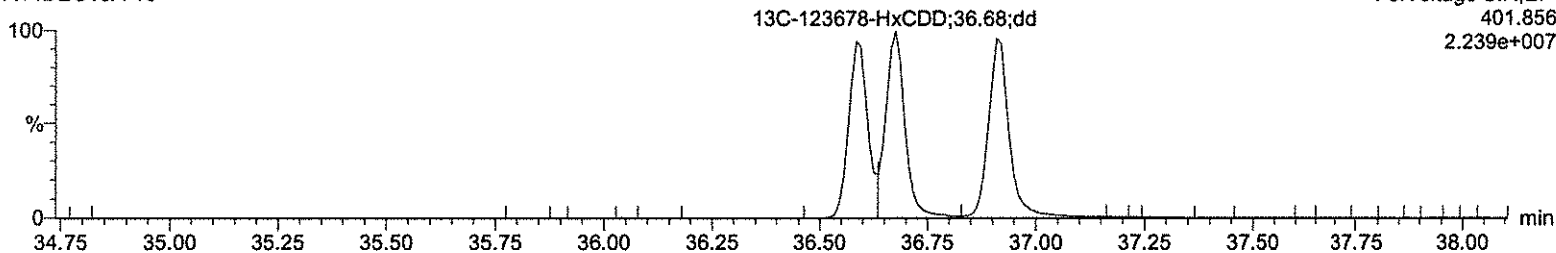
F3:Voltage SIR,EI+
391.813
9.653e+006



13C-123678-HxCDD

A14DEC19A-16

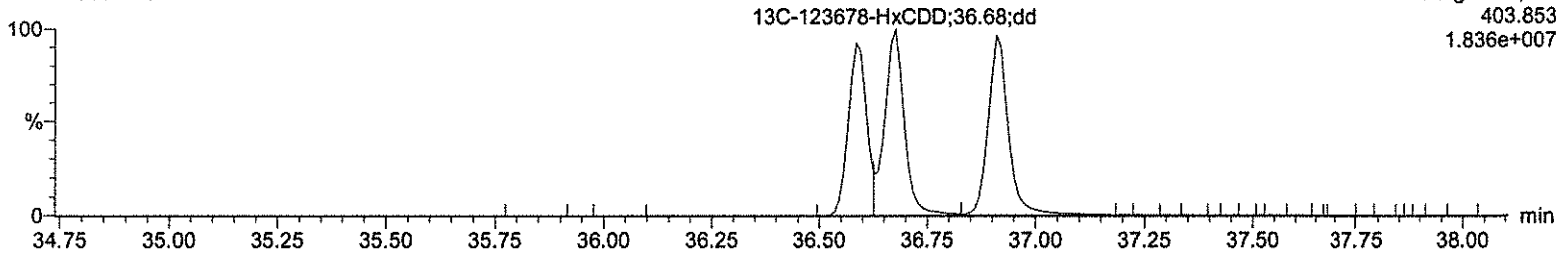
F3:Voltage SIR,EI+
401.856
2.239e+007



13C-123678-HxCDD

A14DEC19A-16

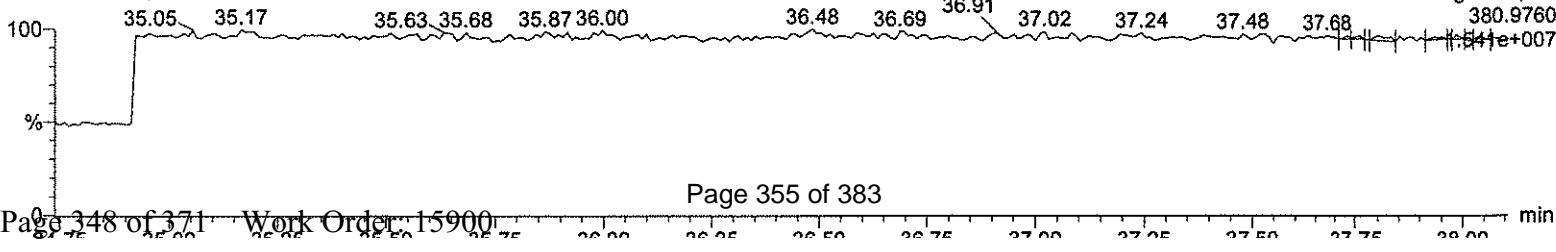
F3:Voltage SIR,EI+
403.853
1.836e+007



Lock Mass F3

A14DEC19A-16

F3:Voltage SIR,EI+
380.9760
1.141e+007

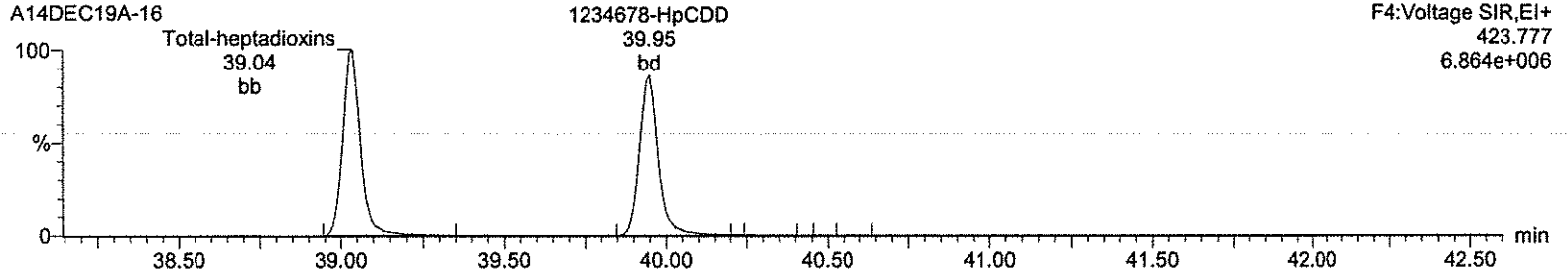


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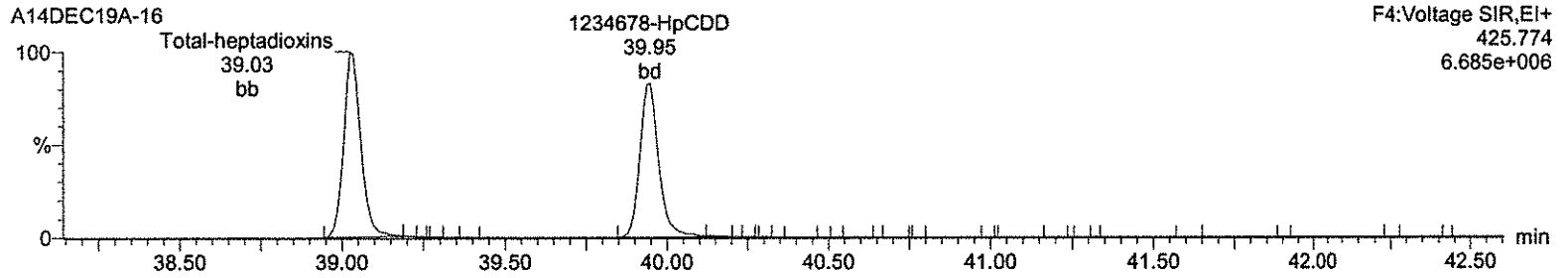
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

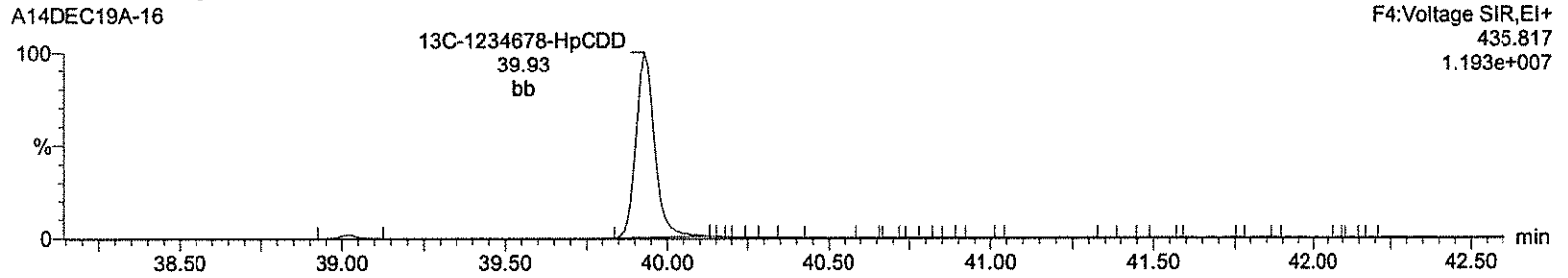
Total-heptadioxins



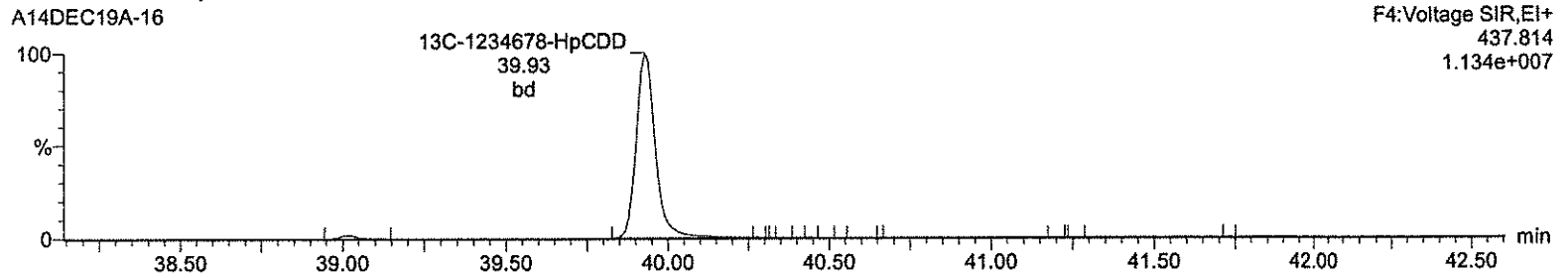
Total-heptadioxins



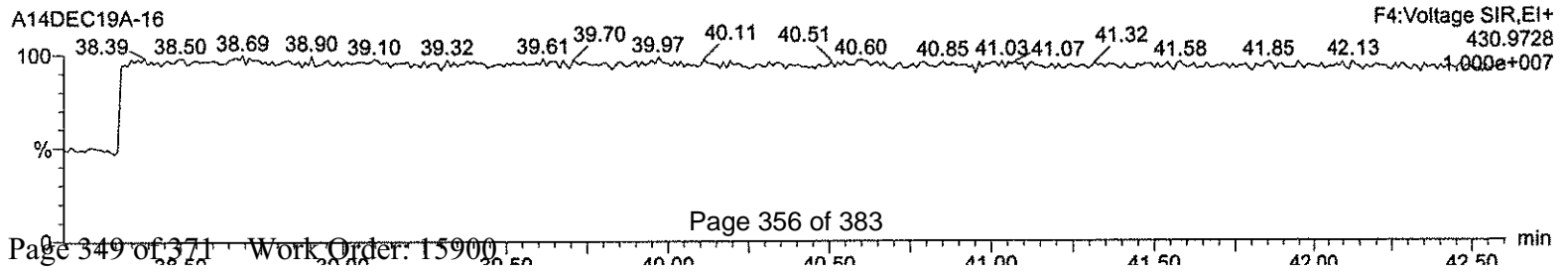
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

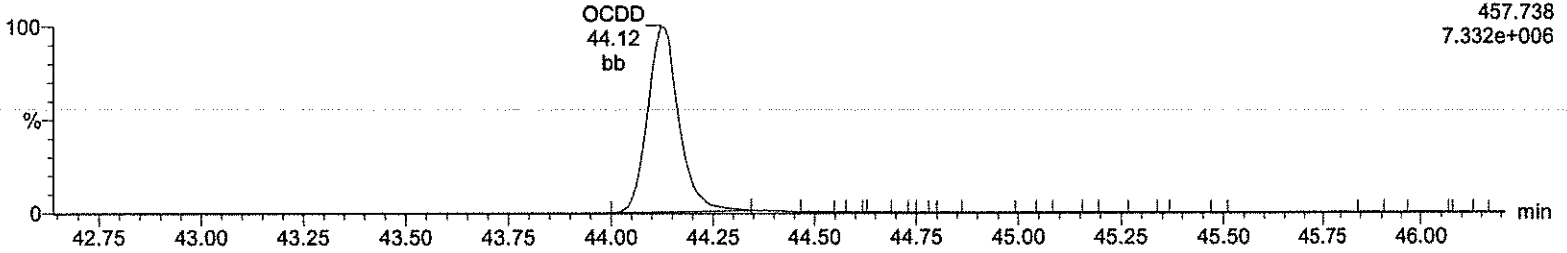
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

OCDD

A14DEC19A-16

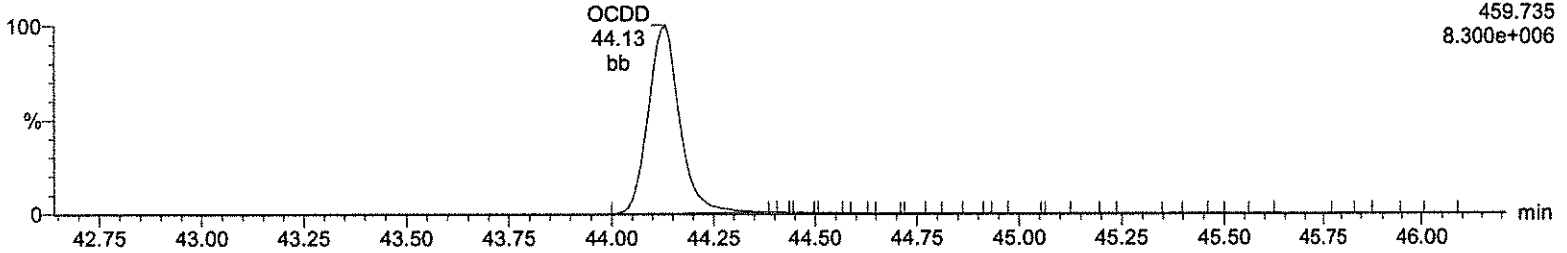
F5:Voltage SIR,EI+
457.738
7.332e+006



OCDD

A14DEC19A-16

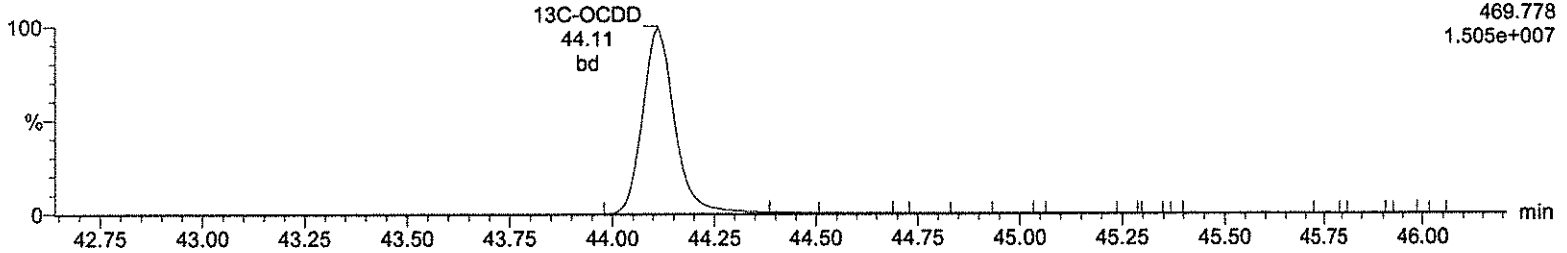
F5:Voltage SIR,EI+
459.735
8.300e+006



13C-OCDD

A14DEC19A-16

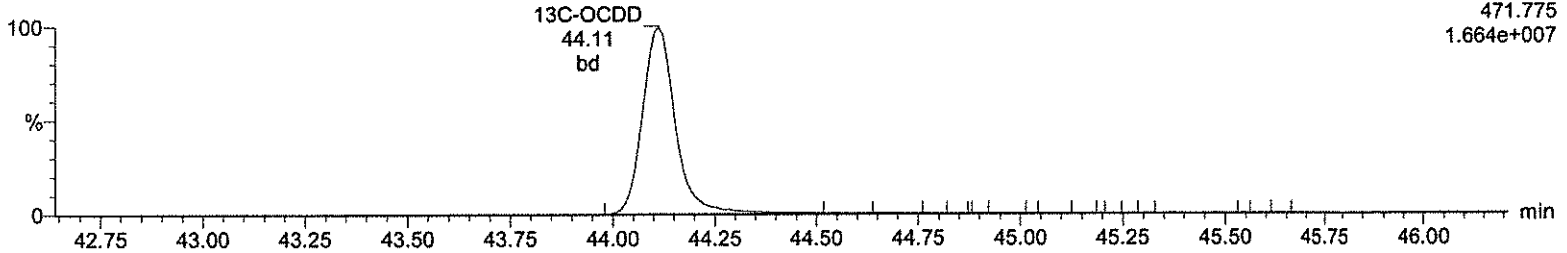
F5:Voltage SIR,EI+
469.778
1.505e+007



13C-OCDD

A14DEC19A-16

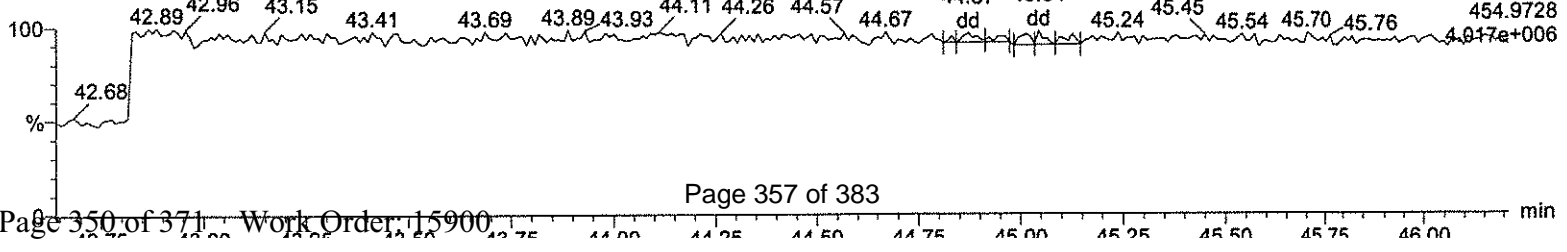
F5:Voltage SIR,EI+
471.775
1.664e+007



Lock Mass F5

A14DEC19A-16

F5:Voltage SIR,EI+
454.9728
4.017e+006

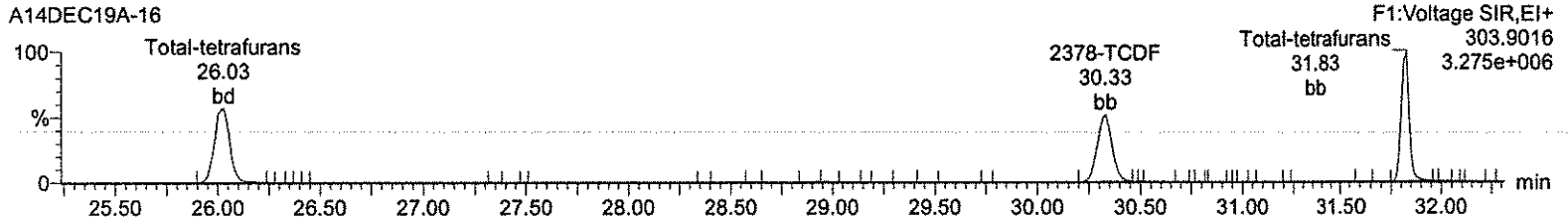


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

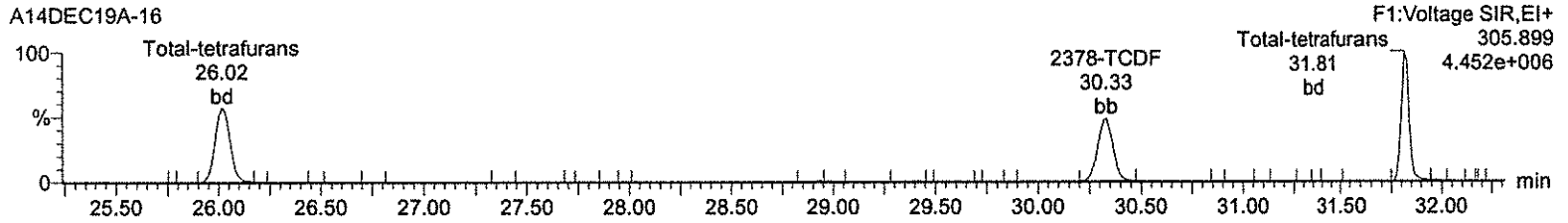
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

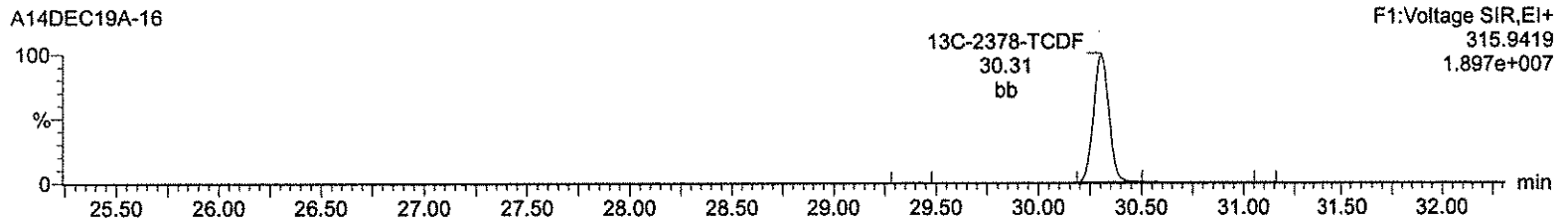
Total-tetrafurans



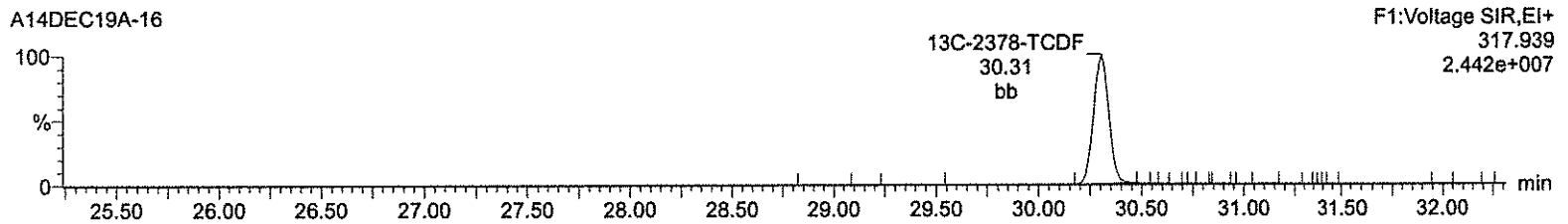
Total-tetrafurans



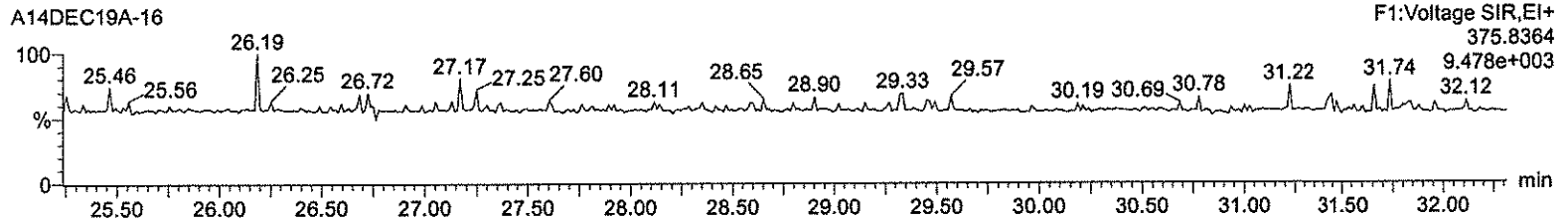
13C-2378-TCDF



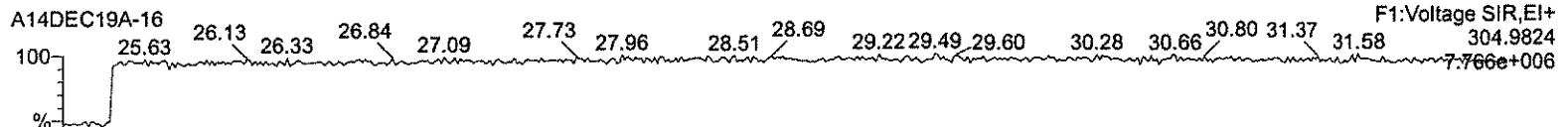
13C-2378-TCDF



HxDPE



Lock Mass F1



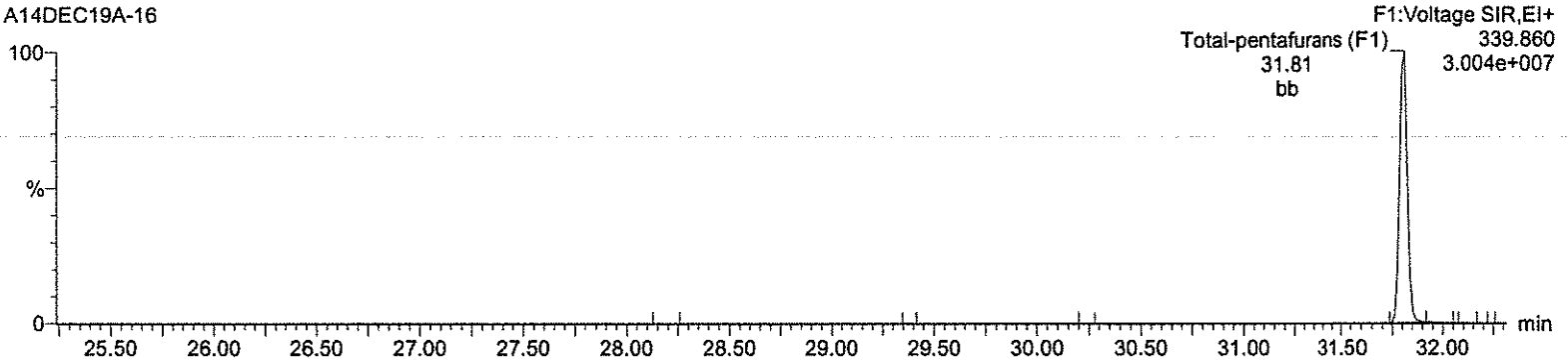
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

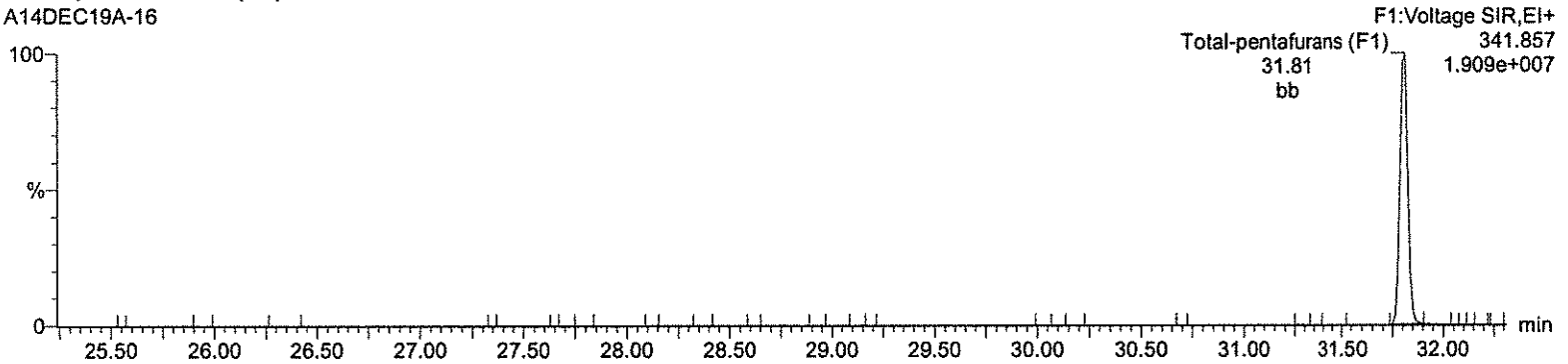
Total-pentafurans (F1)

A14DEC19A-16



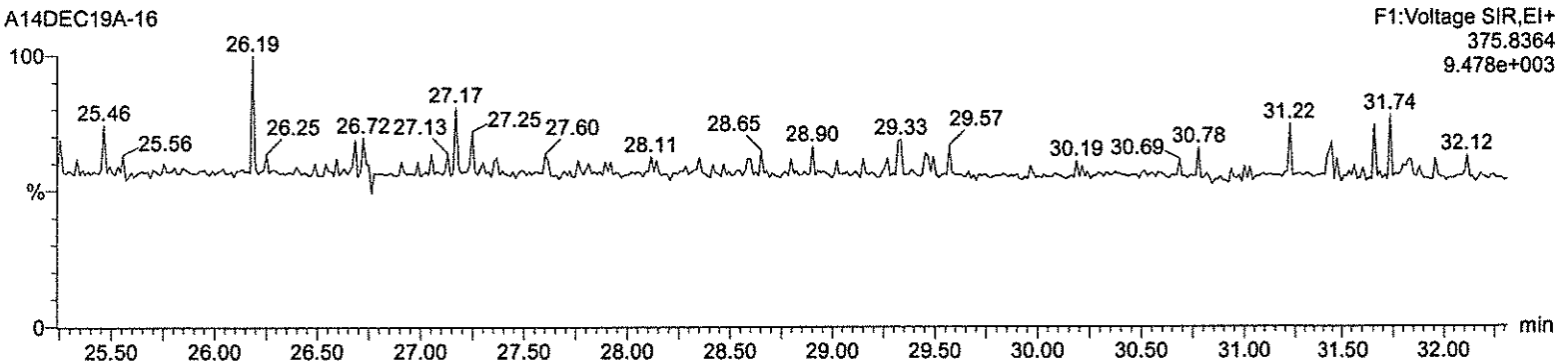
Total-pentafurans (F1)

A14DEC19A-16



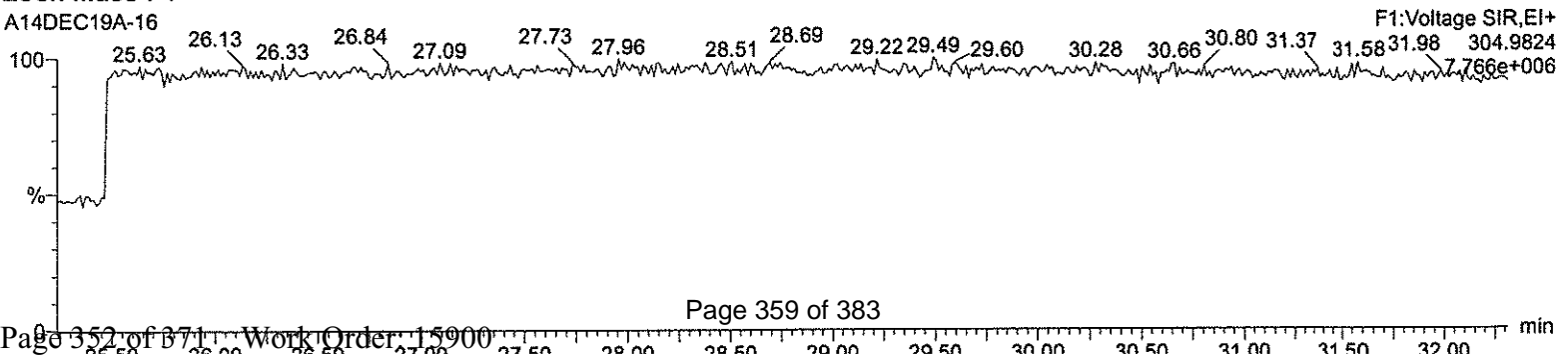
HxDPE

A14DEC19A-16



Lock Mass F1

A14DEC19A-16



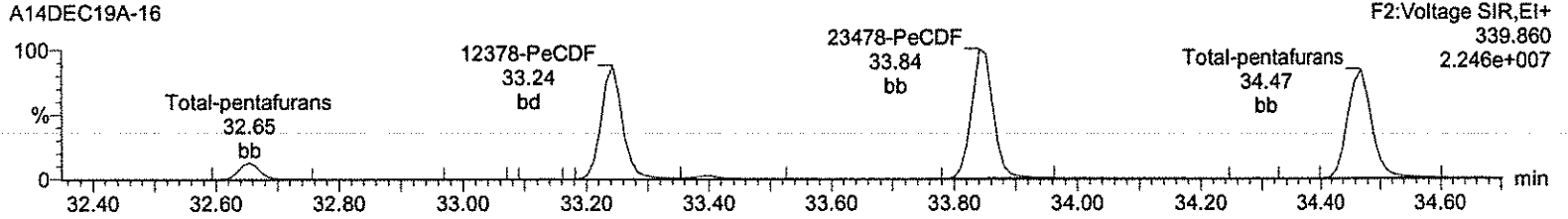
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time

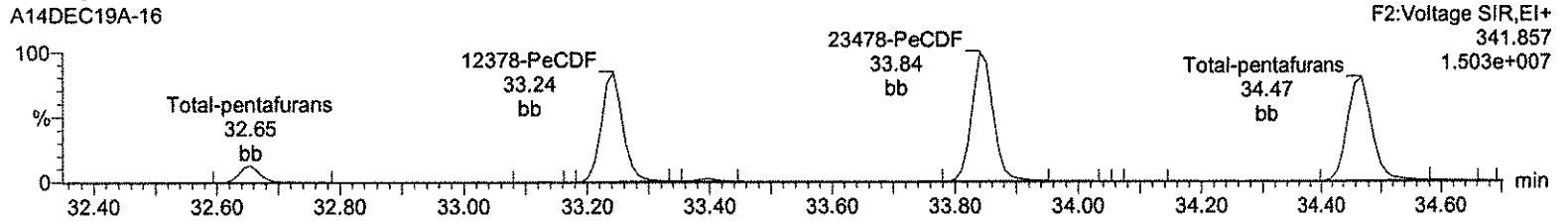
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A Task: HRP750_2, User: MJC

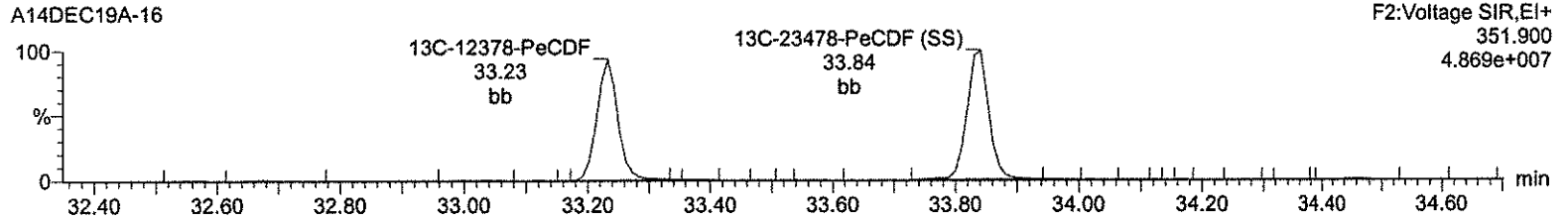
Total-pentafurans



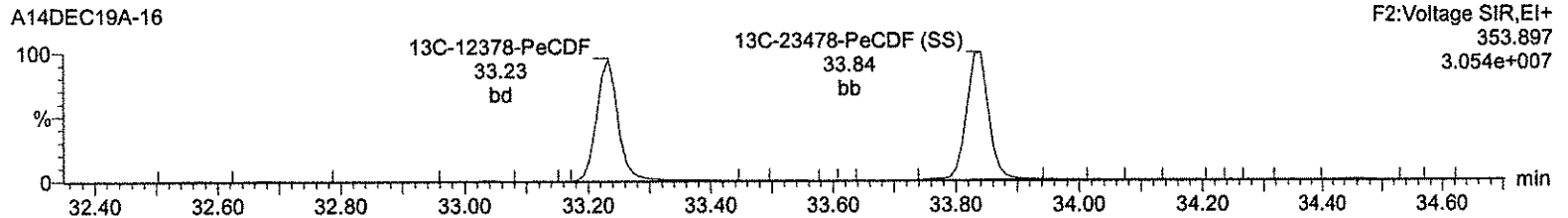
Total-pentafurans



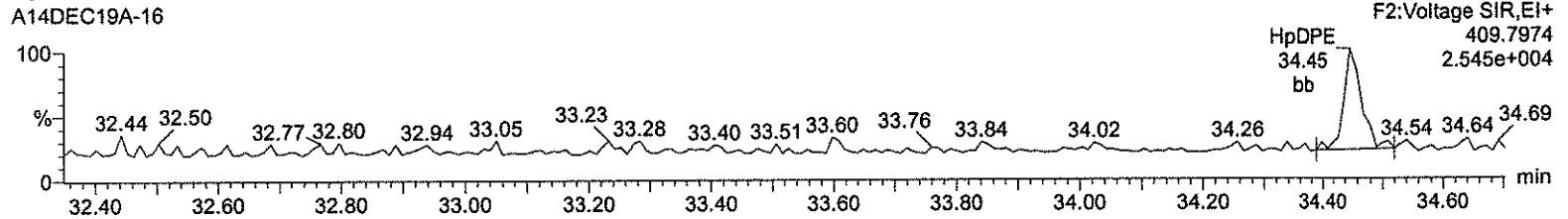
13C-12378-PeCDF



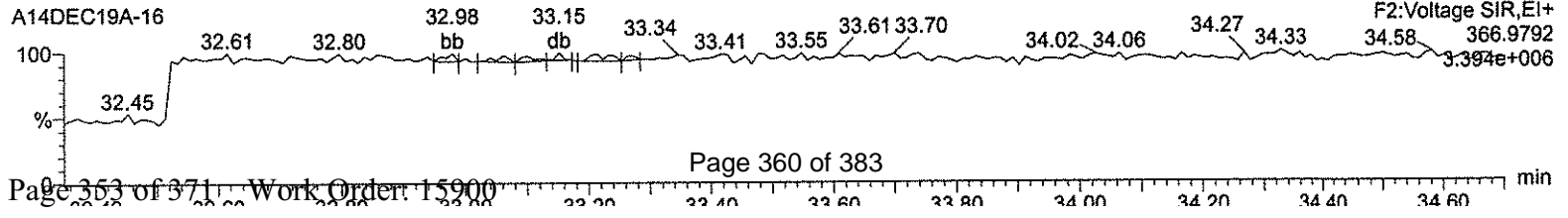
13C-12378-PeCDF



HpDPE



Lock Mass F2



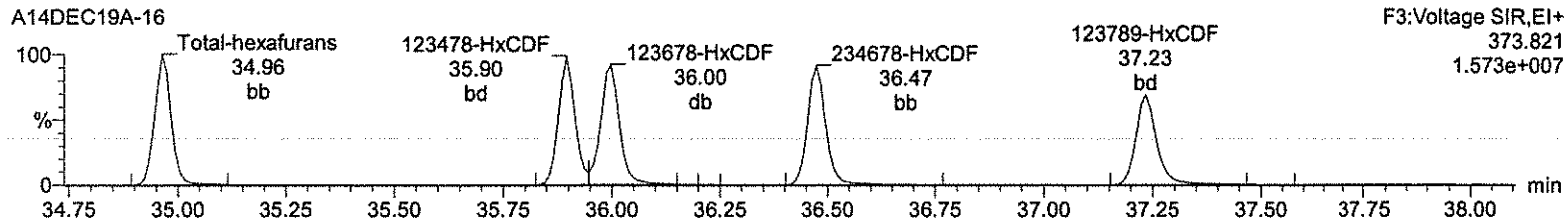
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time

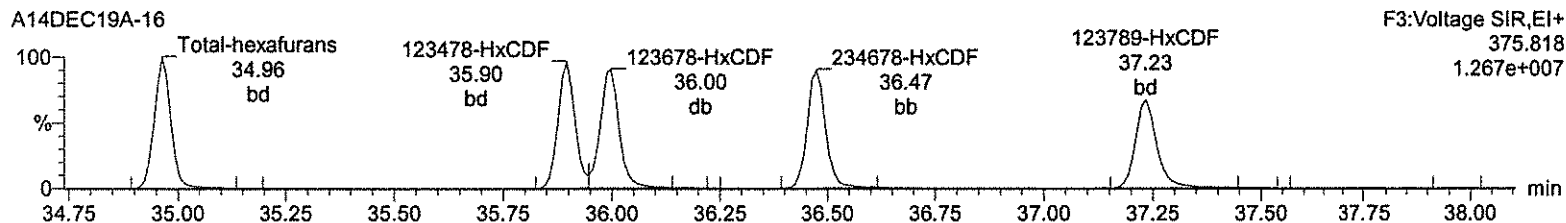
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

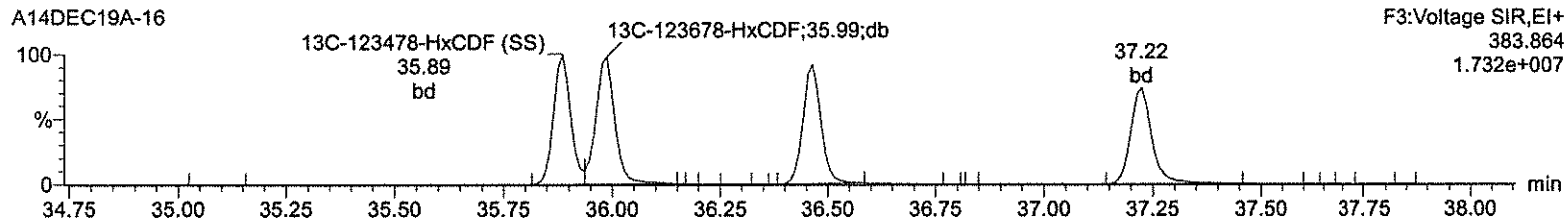
Total-hexafurans



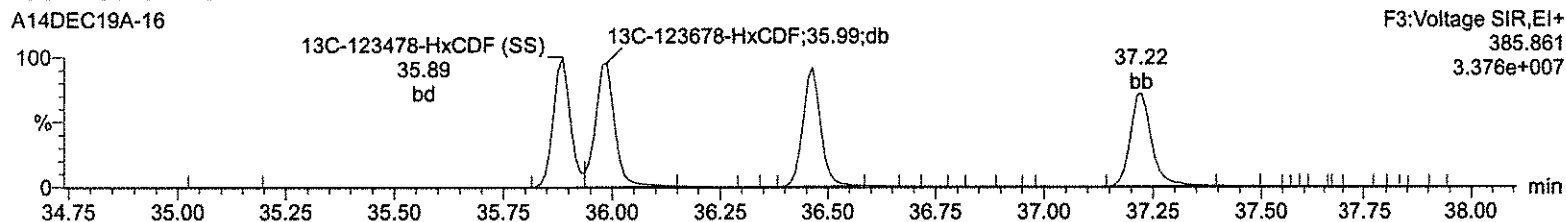
Total-hexafurans



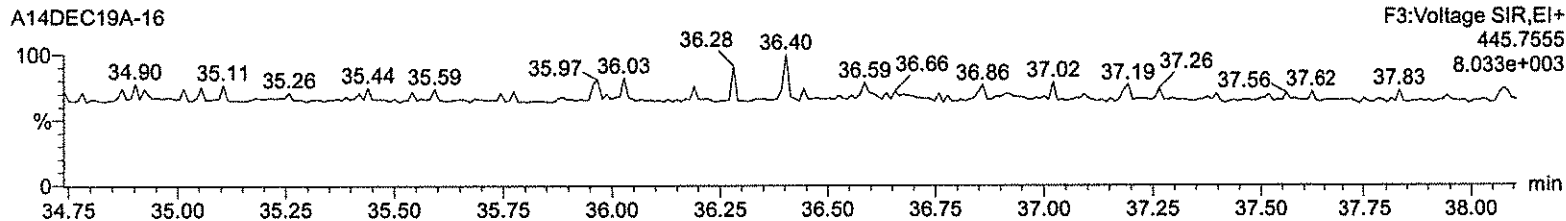
13C-123678-HxCDF



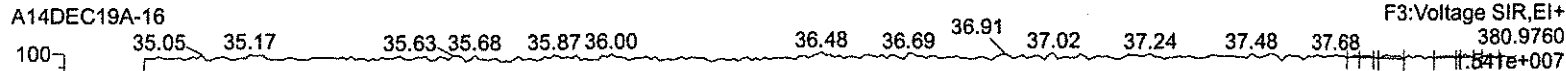
13C-123678-HxCDF



OcDPE



Lock Mass F3

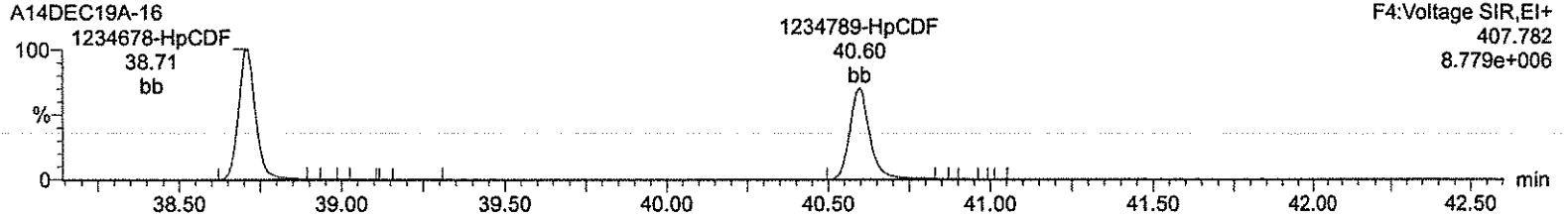


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

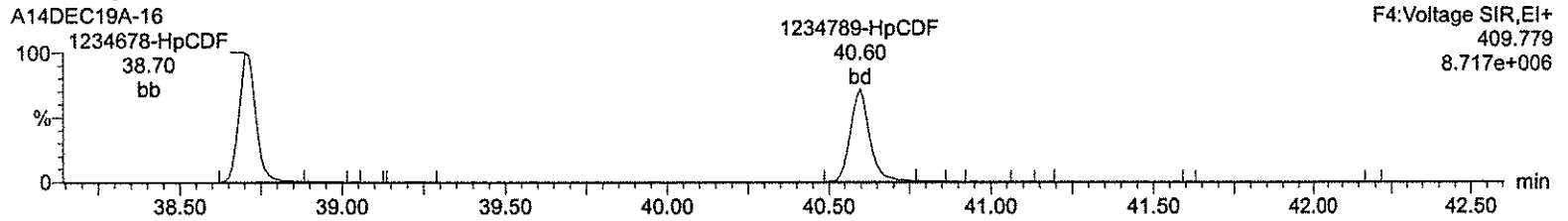
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

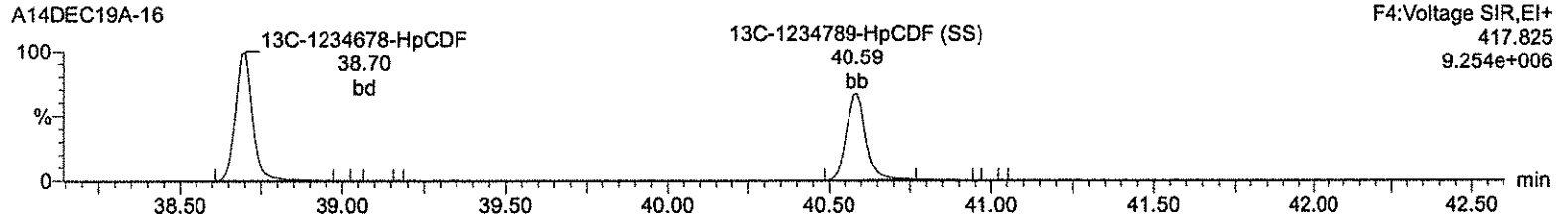
Total-heptafurans



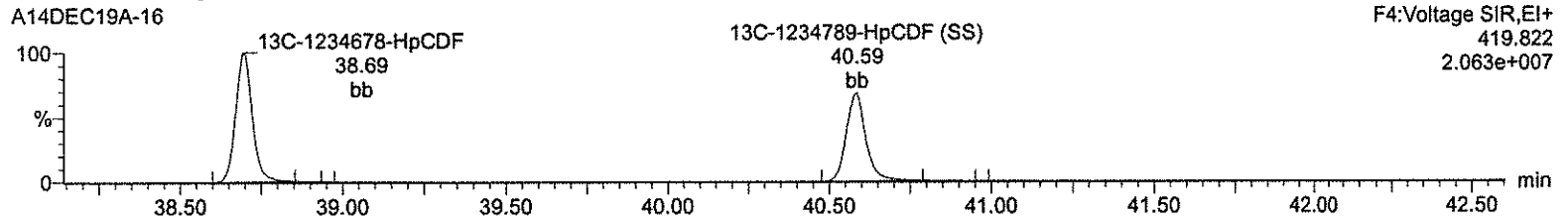
Total-heptafurans



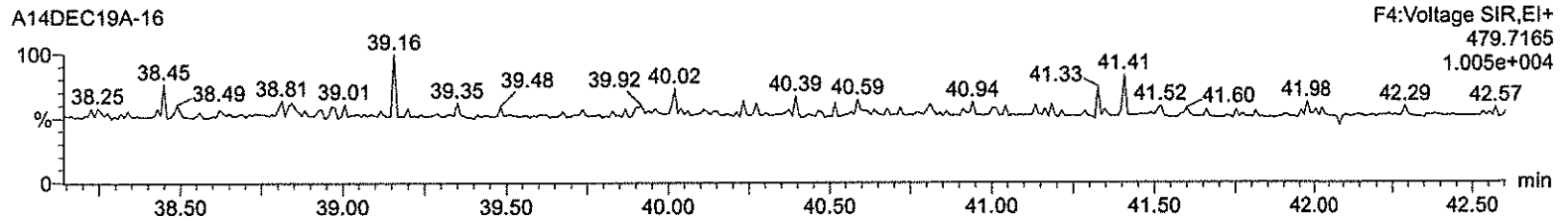
13C-1234678-HpCDF



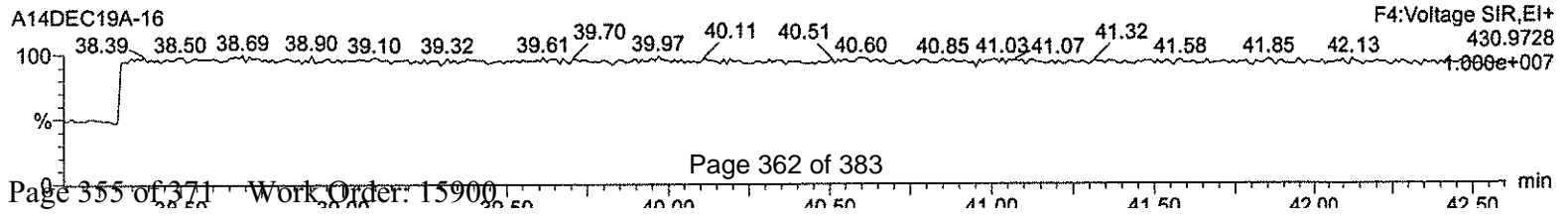
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time

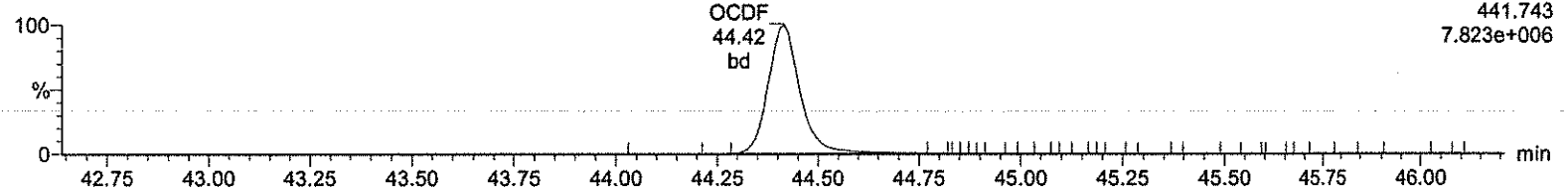
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

OCDF

A14DEC19A-16

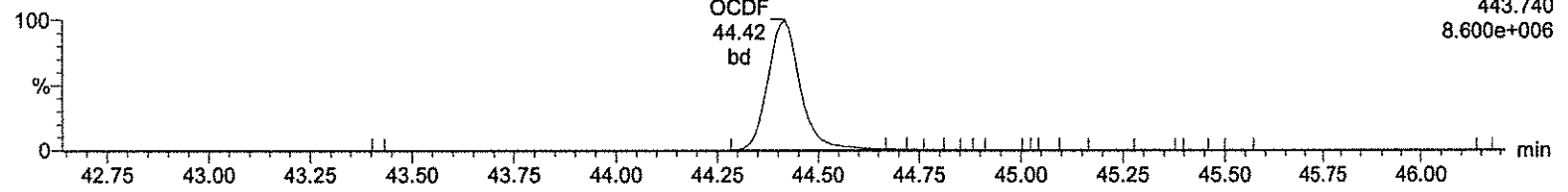
F5:Voltage SIR,EI+
441.743
7.823e+006



OCDF

A14DEC19A-16

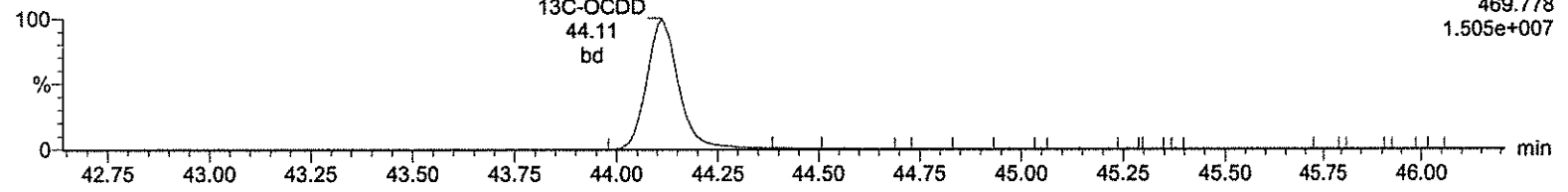
F5:Voltage SIR,EI+
443.740
8.600e+006



13C-OCDD

A14DEC19A-16

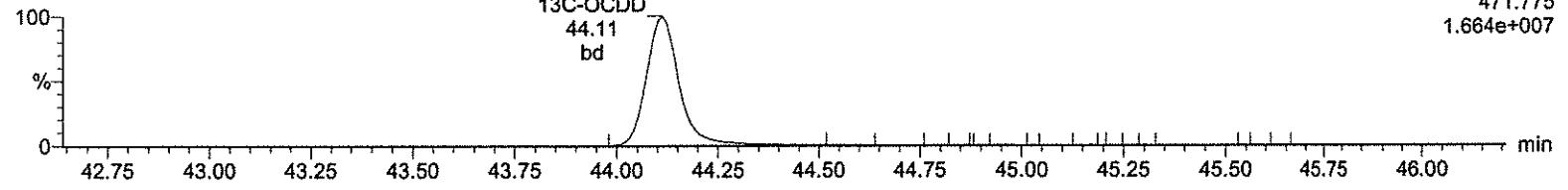
F5:Voltage SIR,EI+
469.778
1.505e+007



13C-OCDD

A14DEC19A-16

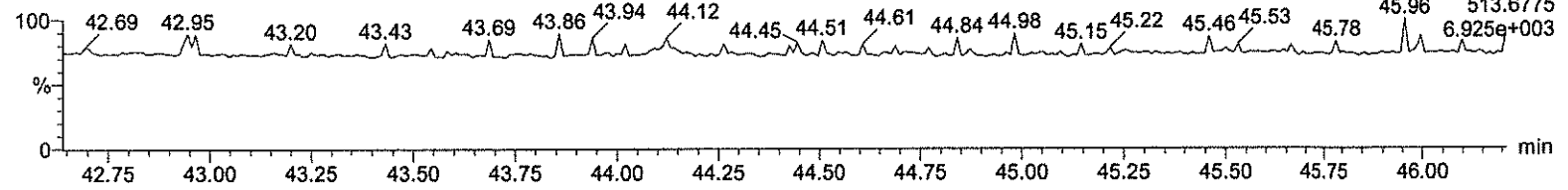
F5:Voltage SIR,EI+
471.775
1.664e+007



DeDPE

A14DEC19A-16

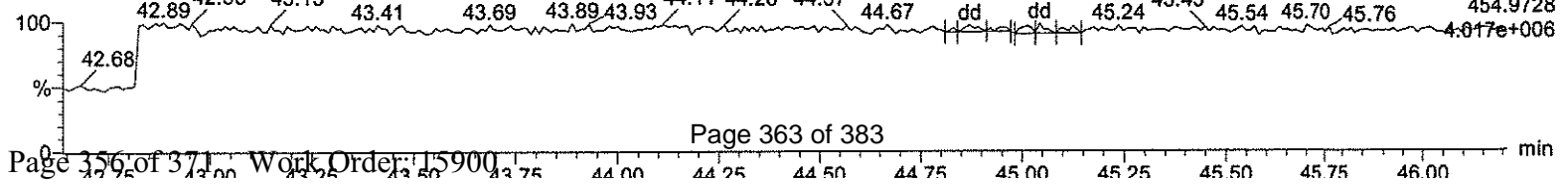
F5:Voltage SIR,EI+
513.6775
6.925e+003



Lock Mass F5

A14DEC19A-16

F5:Voltage SIR,EI+
454.9728
4.017e+006



Quantify Sample Summary Report
Method 8290 CCAL/Report

MassLynx 4.1
C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

Printed: Monday, December 16, 2019 16:39:11 Eastern Standard Time
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.47e5	1.84e5	3.31e5	31.12	1.001	0.80	NO	10.707	0.132	0.947	0.884	7.1	2.32e6	10553	219.9	3.00e6	15448	194.1	dd	db
2	12378-PeCDD	7.17e5	4.54e5	1.17e6	34.02	1.000	1.58	NO	54.095	0.0998	0.923	0.853	8.2	1.62e7	10998	1470.1	1.03e7	8332	1233.3	bb	bb
3	123478-HxCDD	6.21e5	4.98e5	1.12e6	36.60	0.998	1.25	NO	51.755	0.120	0.884	0.854	3.5	1.28e7	9418	1354.4	9.97e6	9480	1051.2	bd	bd
4	123678-HxCDD	7.04e5	5.63e5	1.27e6	36.66	1.000	1.25	NO	53.010	0.109	1.001	0.944	6.0	1.29e7	9418	1371.2	1.03e7	9480	1089.7	dd	dd
5	123789-HxCDD	6.81e5	5.40e5	1.22e6	36.92	1.007	1.26	NO	54.504	0.116	0.965	0.885	9.0	1.16e7	9418	1236.5	9.23e6	9480	973.7	dd	dd
6	1234678-HpCDD	4.81e5	4.76e5	9.57e5	39.94	1.000	1.01	NO	47.745	0.162	0.993	1.040	-4.5	6.86e6	7901	868.2	6.61e6	9332	708.6	bb	bd
7	OCDD	8.57e5	9.68e5	1.82e6	44.12	1.000	0.88	NO	102.270	0.221	0.993	0.971	2.3	9.09e6	11042	823.3	1.01e7	5031	2012.4	bd	bd
8	12378-TCDF	1.74e5	2.30e5	4.04e5	30.32	1.001	0.76	NO	9.621	0.0537	0.941	0.978	-3.8	1.99e6	4777	416.1	2.62e6	5542	473.3	bd	bd
9	12378-PeCDF	1.02e6	6.56e5	1.67e6	33.23	1.000	1.55	NO	47.561	0.0937	0.899	0.945	-4.9	2.44e7	12508	1948.7	1.59e7	17511	908.4	bd	bd
10	123478-PeCDF	1.14e6	7.43e5	1.88e6	33.84	1.019	1.54	NO	48.755	0.0854	1.011	1.037	-2.5	2.76e7	12508	2210.1	1.79e7	17511	1021.9	bb	bb
11	123478-HxCDF	8.49e5	6.79e5	1.53e6	35.89	0.997	1.25	NO	49.766	0.121	0.964	0.968	-0.5	1.82e7	13318	1367.6	1.47e7	14796	991.7	bd	bd
12	123678-HxCDF	9.35e5	7.50e5	1.68e6	35.99	1.000	1.25	NO	51.038	0.113	1.062	1.041	2.1	1.82e7	13318	1368.0	1.46e7	14796	984.1	db	db
13	1234678-HxCDF	8.74e5	7.28e5	1.60e6	36.46	1.014	1.20	NO	51.252	0.119	1.010	0.985	2.5	1.73e7	13318	1300.5	1.42e7	14796	983.0	bb	bb
14	123789-HxCDF	7.55e5	6.13e5	1.37e6	37.22	1.035	1.23	NO	52.411	0.143	0.862	0.823	4.8	1.28e7	13318	982.1	1.04e7	14796	700.2	bb	bb
15	1234678-HpCDF	7.09e5	6.84e5	1.39e6	38.70	1.000	1.04	NO	53.117	0.127	1.222	1.150	6.2	1.16e7	12183	953.5	1.13e7	9471	1191.9	bb	bb
16	1234789-HpCDF	5.86e5	5.73e5	1.16e6	40.59	1.049	1.02	NO	54.300	0.156	1.017	0.936	8.6	8.00e6	12183	656.4	7.50e6	9471	792.0	bd	bd
17	OCDF	9.77e5	1.09e6	2.07e6	44.41	1.007	0.89	NO	99.414	0.223	1.126	1.133	-0.6	9.78e6	10971	891.2	1.10e7	7994	1371.2	bd	bd
18	13C-2378-TCDD	1.52e6	1.98e6	3.50e6	31.09	1.019	0.76	NO	103.327	0.0991	1.166	1.128	3.3	2.41e7	7829	3072.2	3.17e7	7671	4136.2	bb	bb
19	13C-12378-PeCDD	1.55e6	9.89e5	2.54e6	34.01	1.115	1.56	NO	112.500	0.174	0.845	0.751	12.5	3.46e7	10443	3313.2	2.27e7	7620	2980.2	bb	bb
20	13C-123678-HxCDD	1.41e6	1.13e6	2.53e6	36.67	0.993	1.25	NO	98.341	0.108	0.969	0.986	-1.7	2.56e7	7046	3631.2	2.07e7	11460	1809.4	dd	dd
21	13C-1234678-HpCDD	1.00e6	9.23e5	1.93e6	39.93	1.082	1.09	NO	109.887	0.136	0.738	0.672	9.9	1.33e7	7502	1772.7	1.31e7	8277	1582.9	bd	bb
22	13C-OCDD	1.72e6	1.95e6	3.67e6	44.10	1.195	0.88	NO	219.108	0.153	0.703	0.642	9.6	1.76e7	8200	2146.0	1.98e7	8864	2238.3	bd	bd
23	13C-2378-TCDF	1.87e6	2.42e6	4.29e6	30.29	0.993	0.77	NO	114.311	0.136	1.429	1.250	14.3	2.14e7	12338	1734.2	2.76e7	11192	2463.5	bb	bd
24	13C-12378-PeCDF	2.28e6	1.45e6	3.72e6	33.22	1.089	1.57	NO	122.822	0.187	1.241	1.011	22.8	5.18e7	12322	4206.0	3.34e7	13922	2401.9	bb	bb
25	13C-123678-HxCDF	1.12e6	2.06e6	3.17e6	35.98	0.975	0.54	NO	97.436	0.135	1.215	1.247	-2.6	2.11e7	13225	1592.3	3.98e7	16049	2476.9	dd	db
26	13C-1234678-HpCDF	7.01e5	1.58e6	2.28e6	38.69	1.048	0.44	NO	100.392	0.157	0.873	0.870	0.4	1.14e7	8688	1309.7	2.54e7	14935	1698.3	bb	bb
27	13C-1234-TCDD	1.31e6	1.69e6	3.00e6	30.52	0.000	0.78	NO	100.000	0.112	1.000	1.000	0.0	1.52e7	7829	1935.7	1.95e7	7671	2536.4	bb	bb
28	13C-123789-HxCDD	1.45e6	1.17e6	2.61e6	36.91	0.000	1.24	NO	100.000	0.107	1.000	1.000	0.0	2.40e7	7046	3402.3	1.92e7	11460	1676.9	dd	dd
29	37Cl-2378-TCDD (SS)	3.20e5		3.20e5	31.12	1.001			9.716	0.0218	0.914	0.940	-2.8	5.17e6	4560	1132.9				bb	
30	13C-23478-PeCDF (SS)	2.37e6	1.51e6	3.89e6	33.83	1.018	1.57	NO	99.084	0.0736	1.042	1.052	-0.9	5.65e7	12322	4584.6	3.54e7	13922	2544.2	bb	bb

Plantify Sample Summary Report

Method 8290 CCAL Report

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Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Job Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

Peak Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31 13C-123478-HxCDF (SS)	9.51e5	1.82e6	2.77e6	35.88	0.997	0.52	NO	98.004	0.137	0.873	0.891	-2.0	2.06e7	13225	1560.9	3.89e7	16049	2420.8	bd	bd
32 13C-123478-HxCDD (SS)	1.25e6	1.00e6	2.25e6	36.59	0.998	1.25	NO	97.631	0.110	0.888	0.909	-2.4	2.48e7	7046	3522.1	1.97e7	11460	1721.7	bd	bd
33 13C-1234789-HpCDF (SS)	5.64e5	1.26e6	1.83e6	40.58	1.049	0.45	NO	102.907	0.205	0.801	0.779	2.9	7.59e6	8688	873.6	1.69e7	14935	1134.2	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

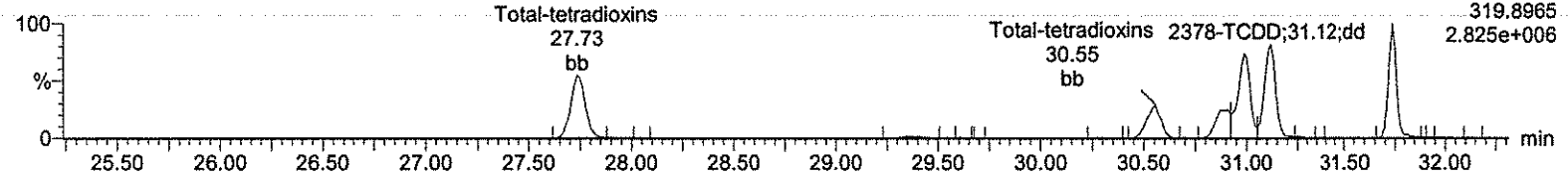
Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

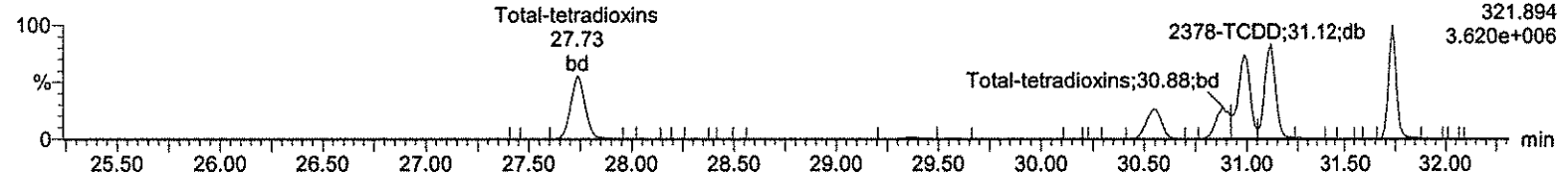
Total-tetradoxins

A14DEC19A_2-14



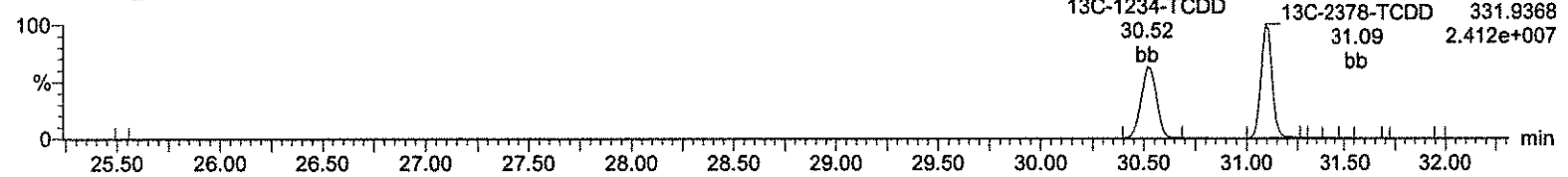
Total-tetradoxins

A14DEC19A_2-14



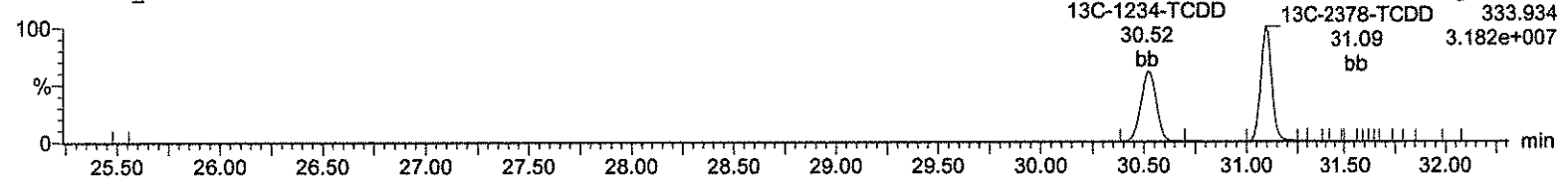
13C-2378-TCDD

A14DEC19A_2-14



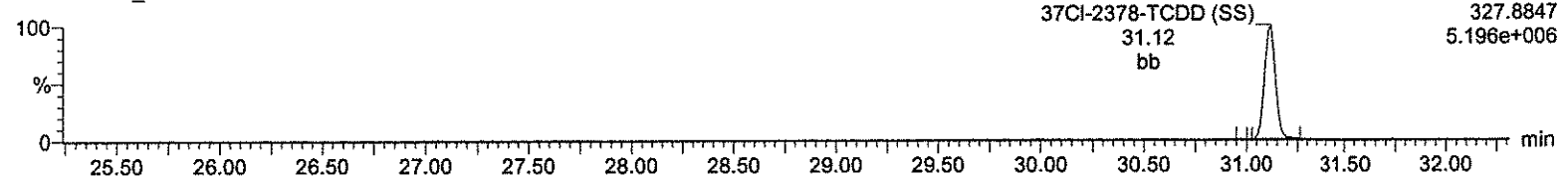
13C-2378-TCDD

A14DEC19A_2-14



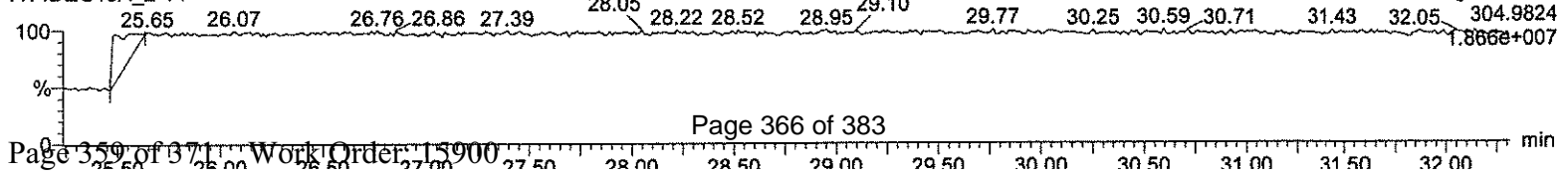
37Cl-2378-TCDD (SS)

A14DEC19A_2-14



Lock Mass F1

A14DEC19A_2-14



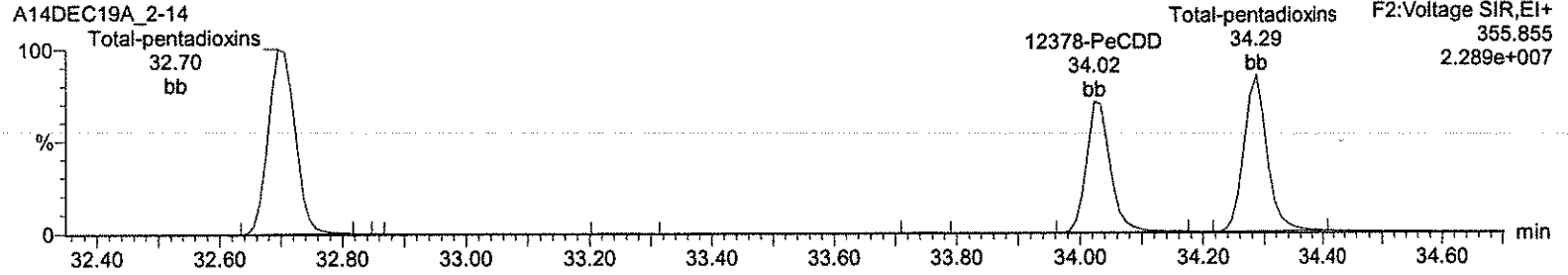
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Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

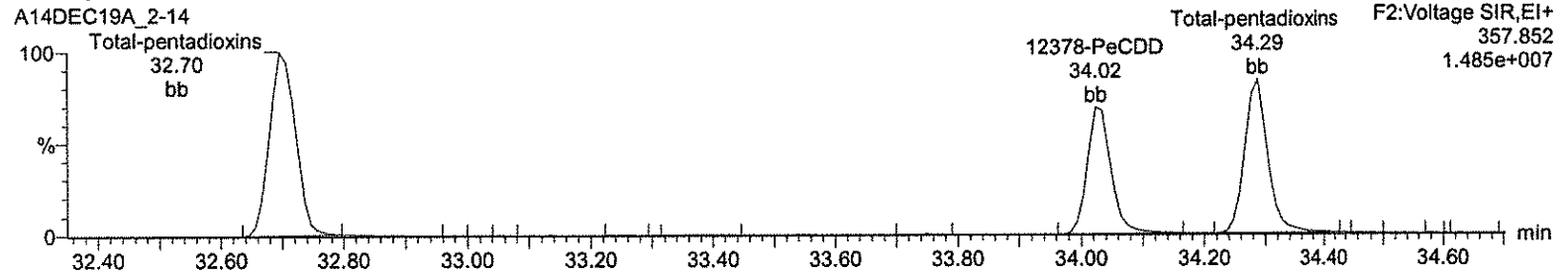
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

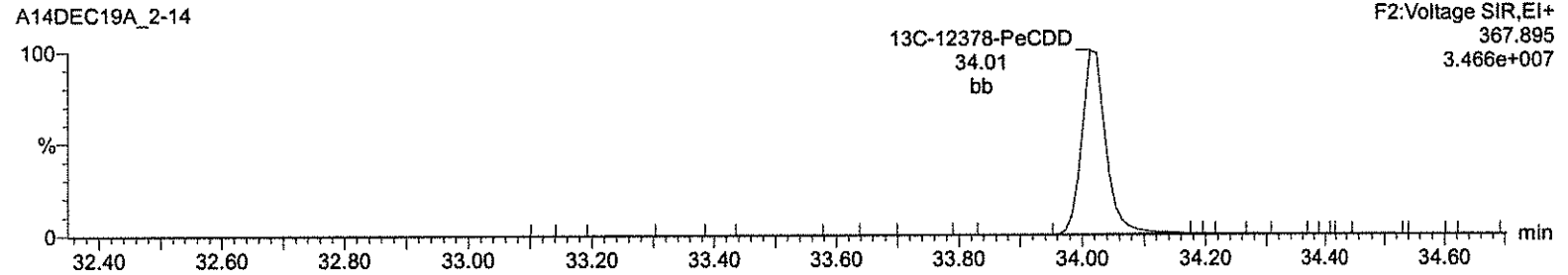
Total-pentadioxins



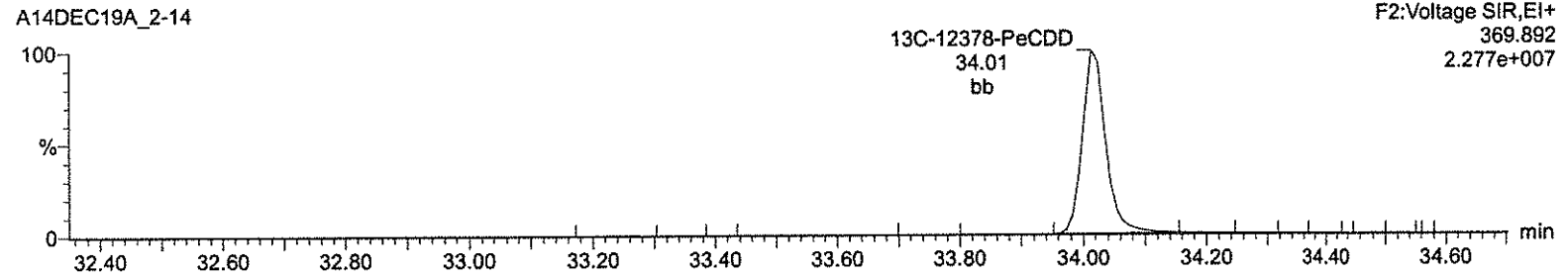
Total-pentadioxins



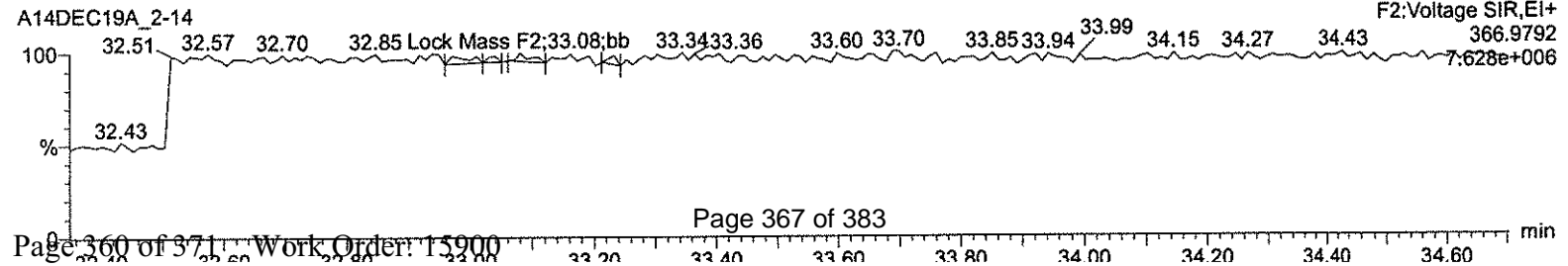
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



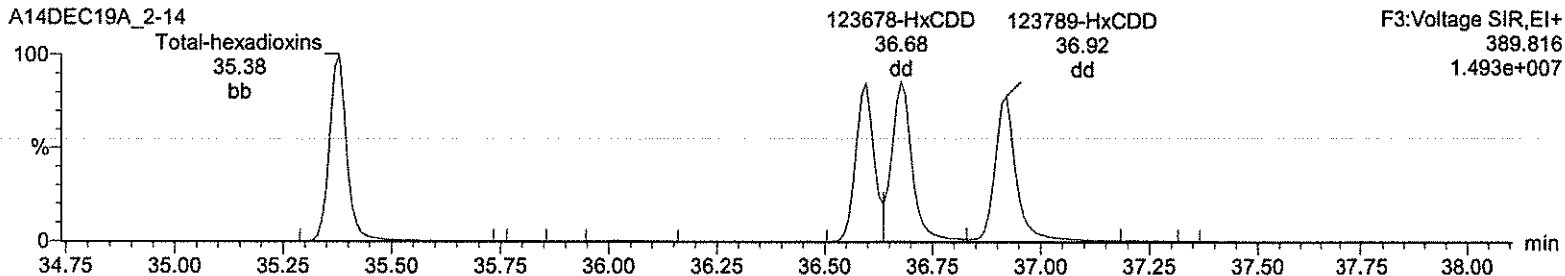
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Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

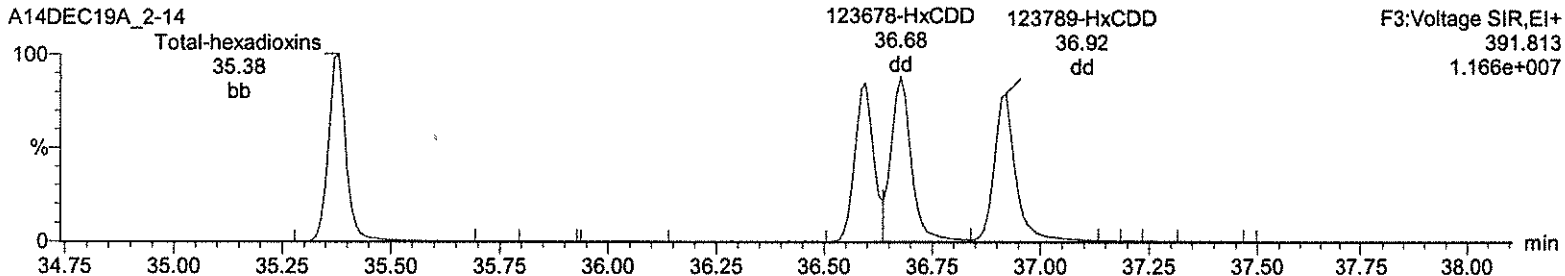
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

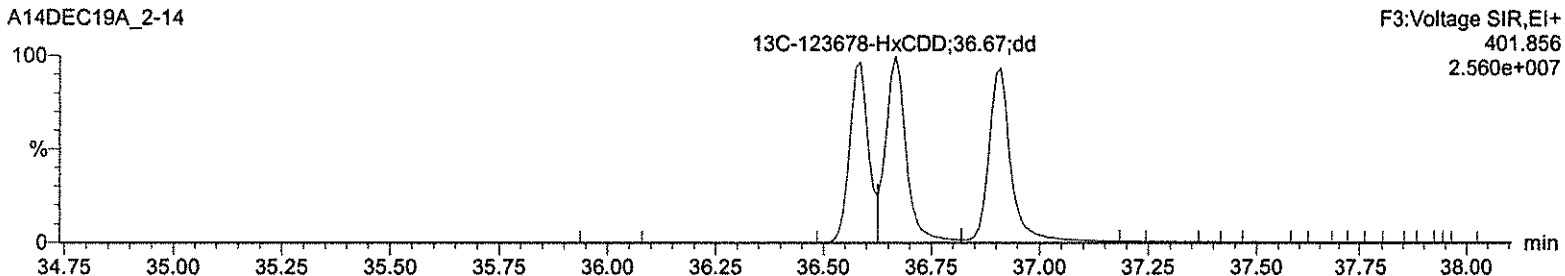
Total-hexadioxins



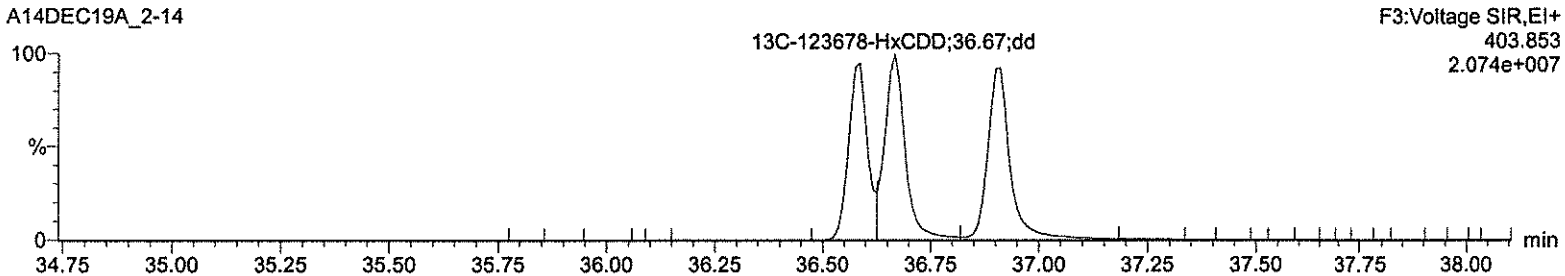
Total-hexadioxins



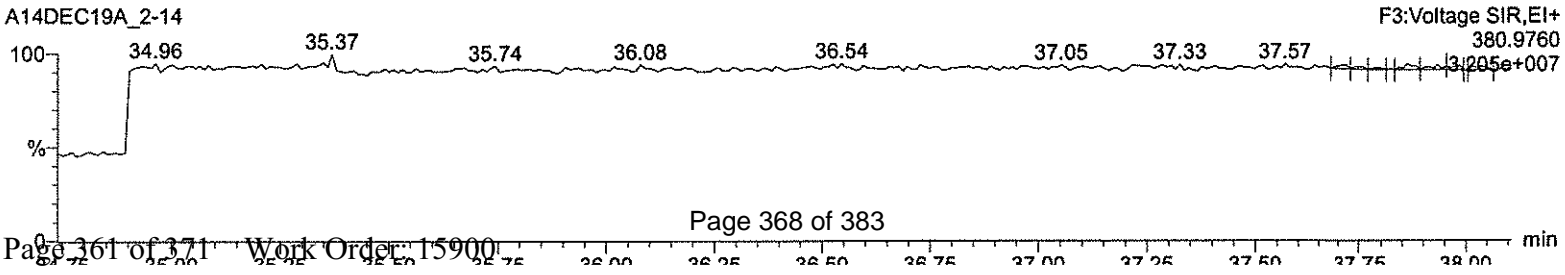
13C-123678-HxCDD



13C-123678-HxCDD



Lock Mass F3



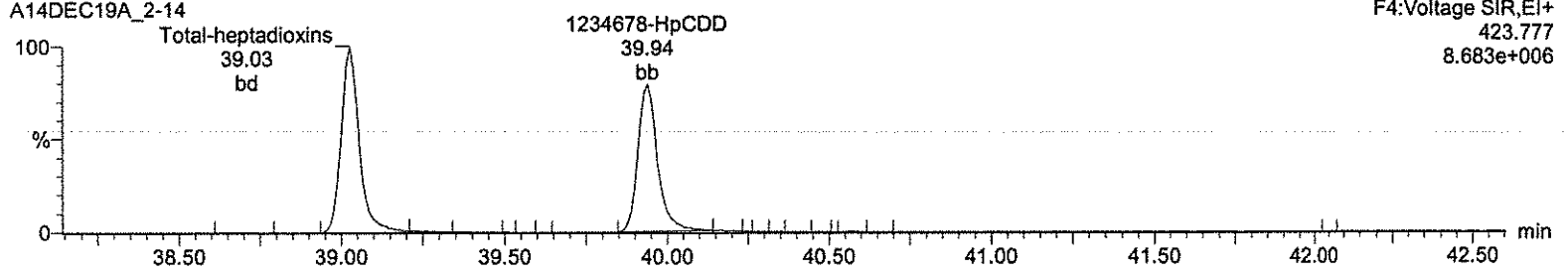
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Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

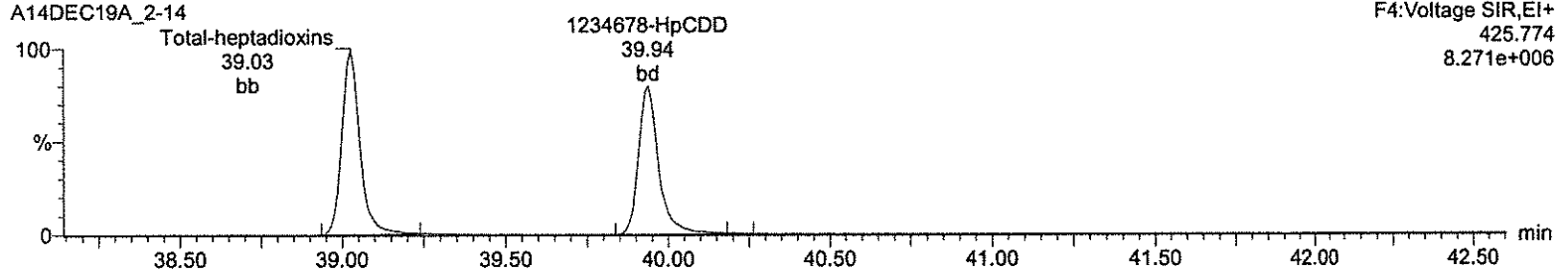
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

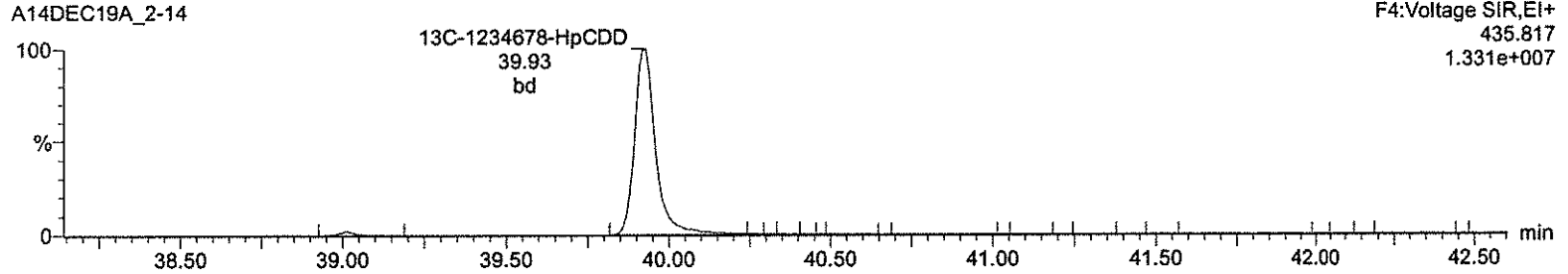
Total-heptadioxins



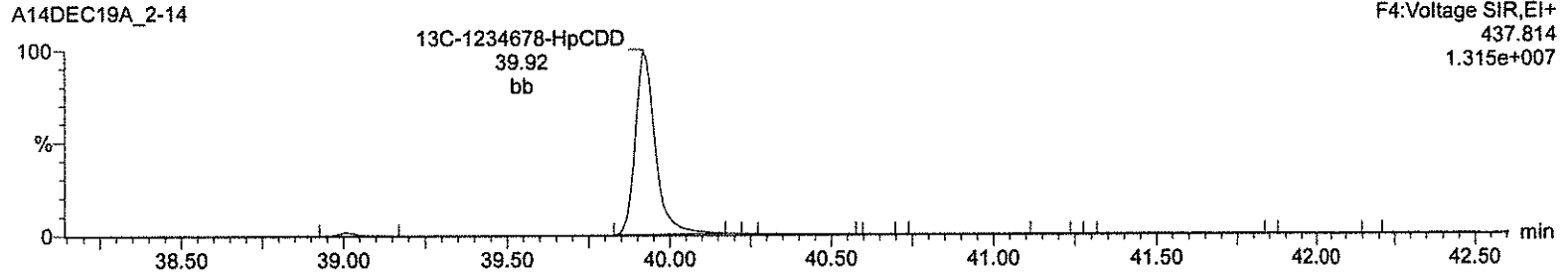
Total-heptadioxins



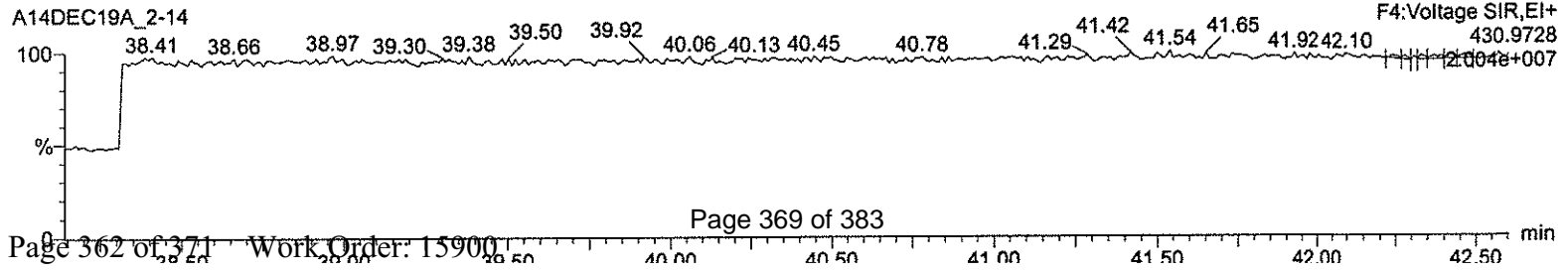
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

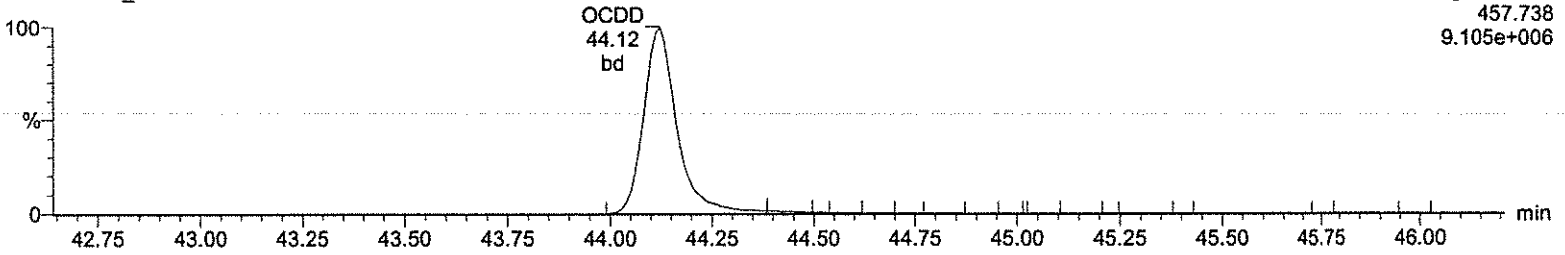
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

OCDD

A14DEC19A_2-14

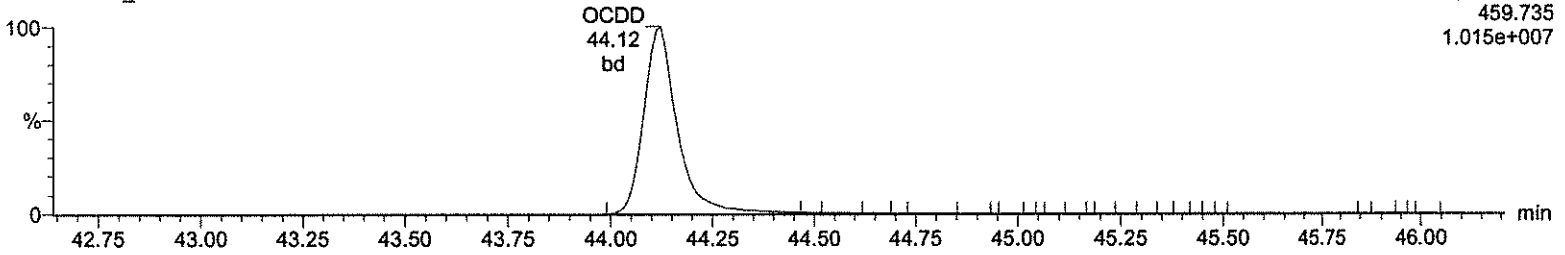
F5:Voltage SIR,EI+
457.738
9.105e+006



OCDD

A14DEC19A_2-14

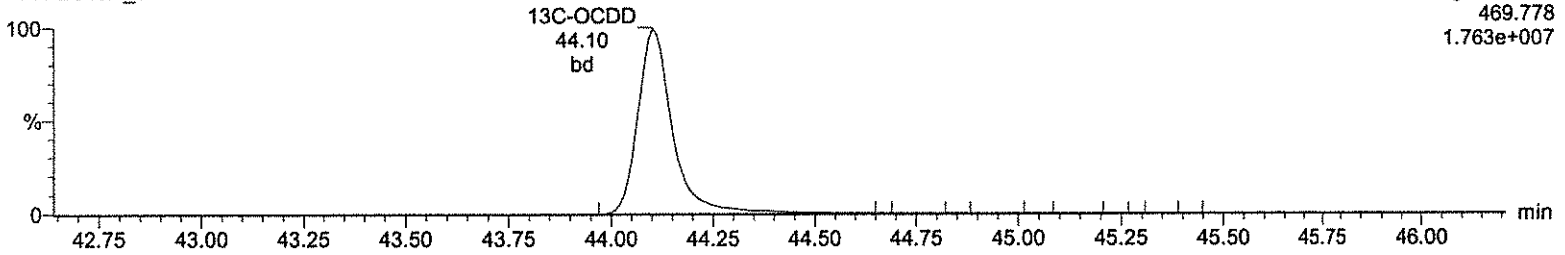
F5:Voltage SIR,EI+
459.735
1.015e+007



13C-OCDD

A14DEC19A_2-14

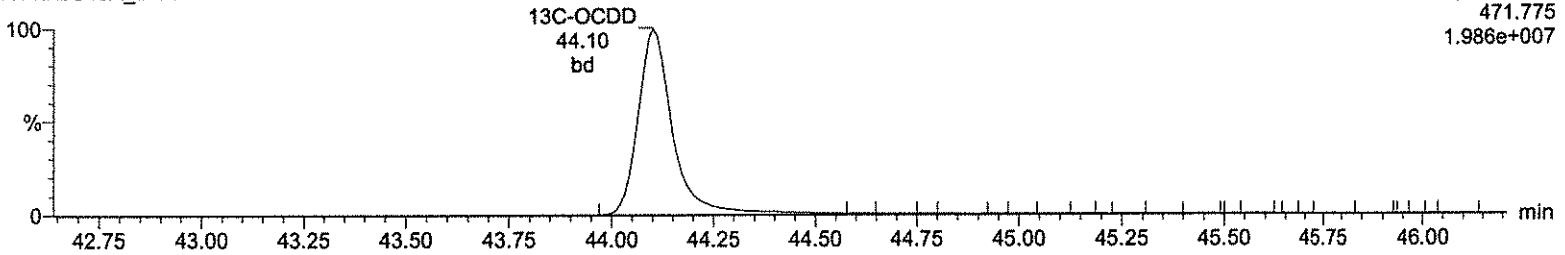
F5:Voltage SIR,EI+
469.778
1.763e+007



13C-OCDD

A14DEC19A_2-14

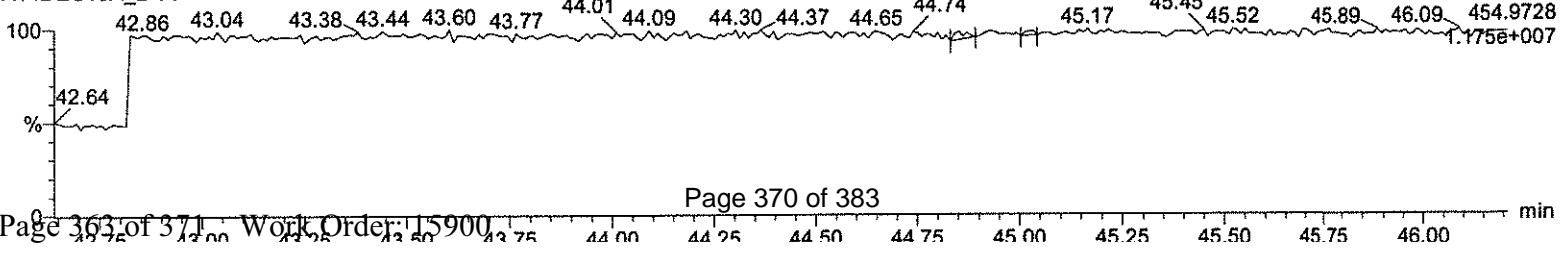
F5:Voltage SIR,EI+
471.775
1.986e+007



Lock Mass F5

A14DEC19A_2-14

F5:Voltage SIR,EI+
454.9728
1.175e+007



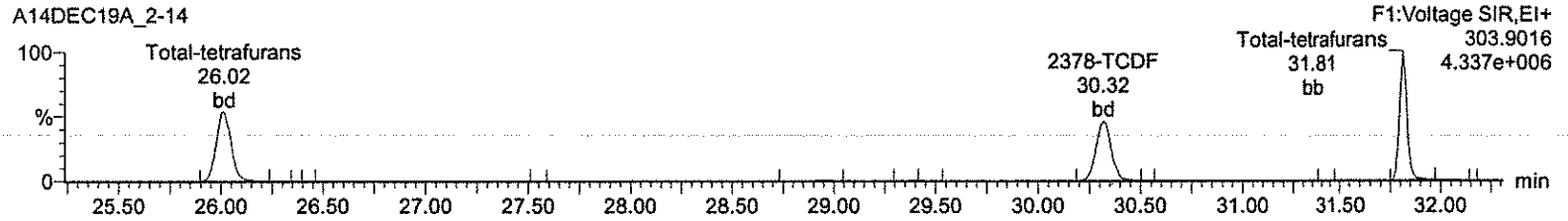
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Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

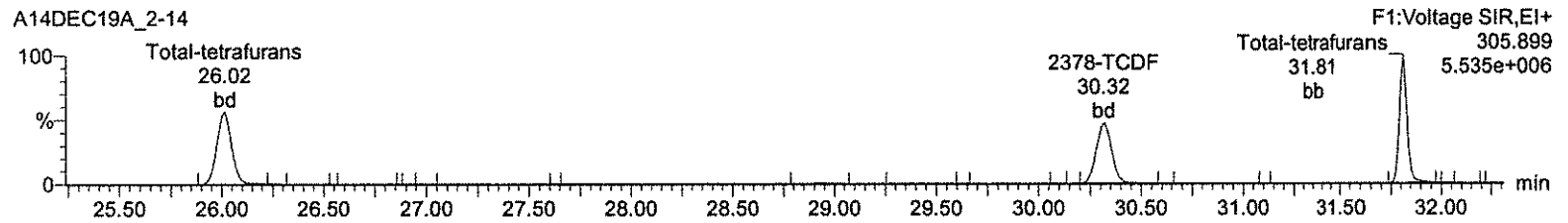
Total-tetrafurans

A14DEC19A_2-14



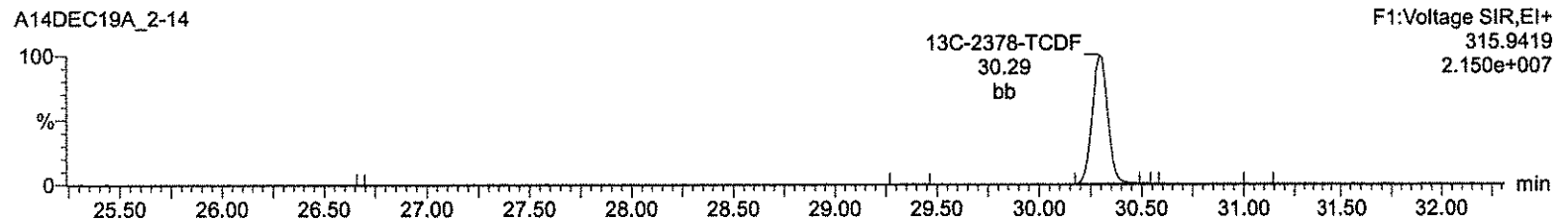
Total-tetrafurans

A14DEC19A_2-14



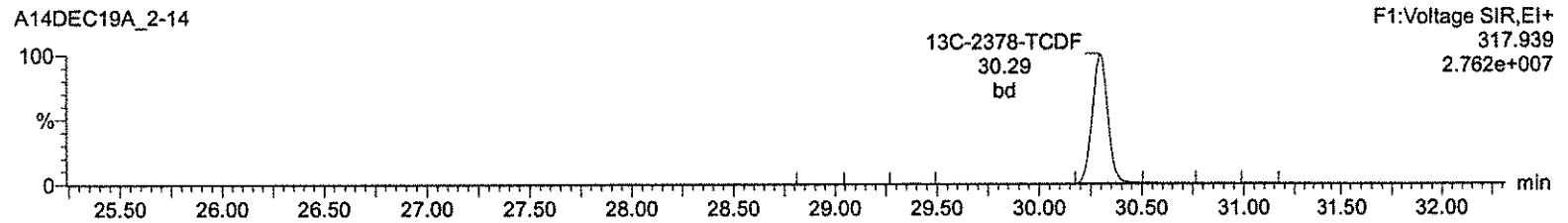
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A14DEC19A_2-14



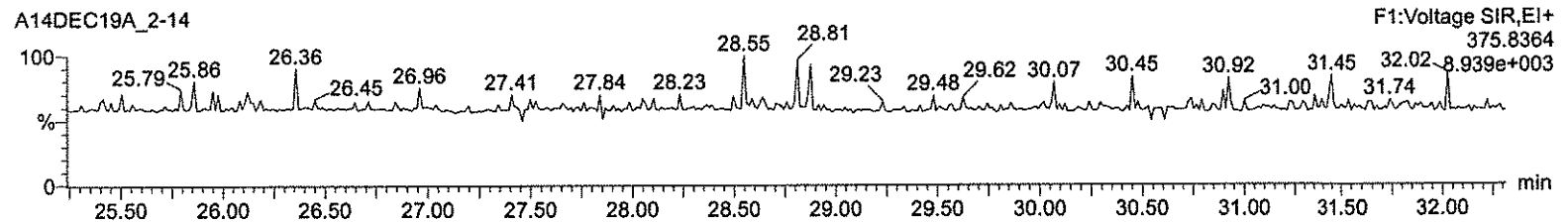
13C-2378-TCDF

A14DEC19A_2-14



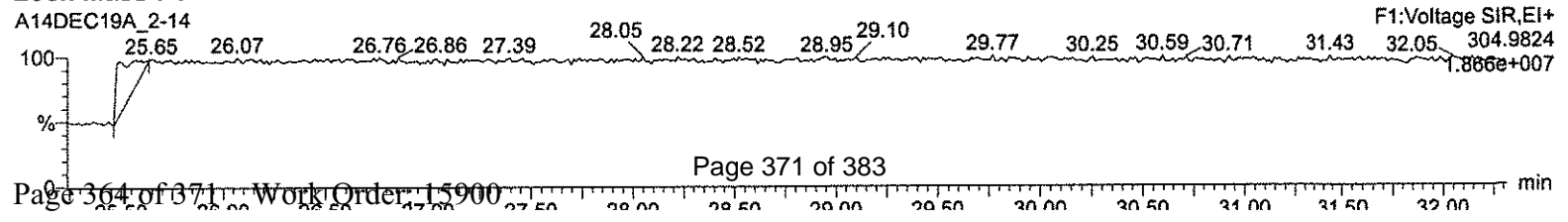
HxDPE

A14DEC19A_2-14



Lock Mass F1

A14DEC19A_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

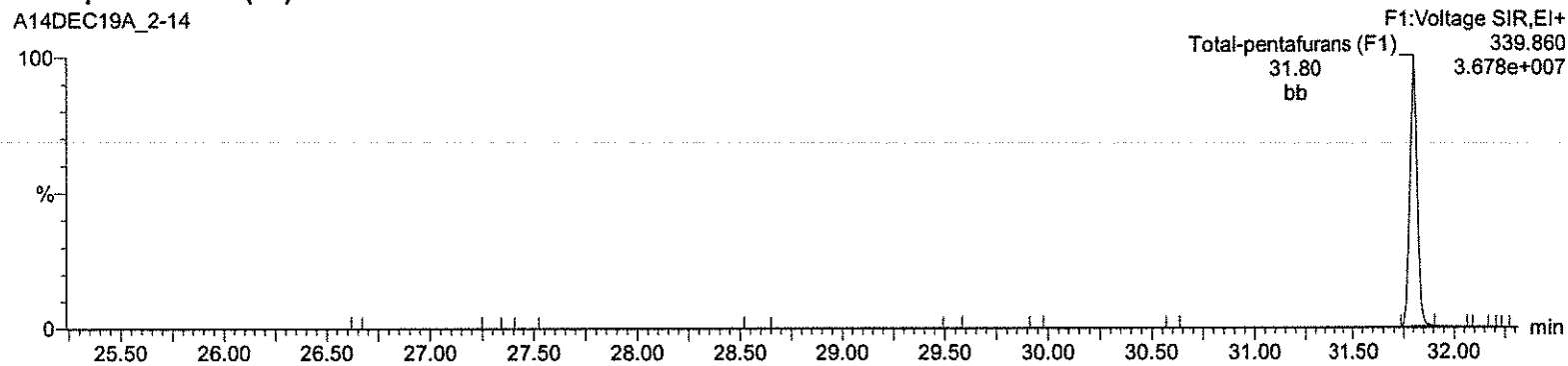
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Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

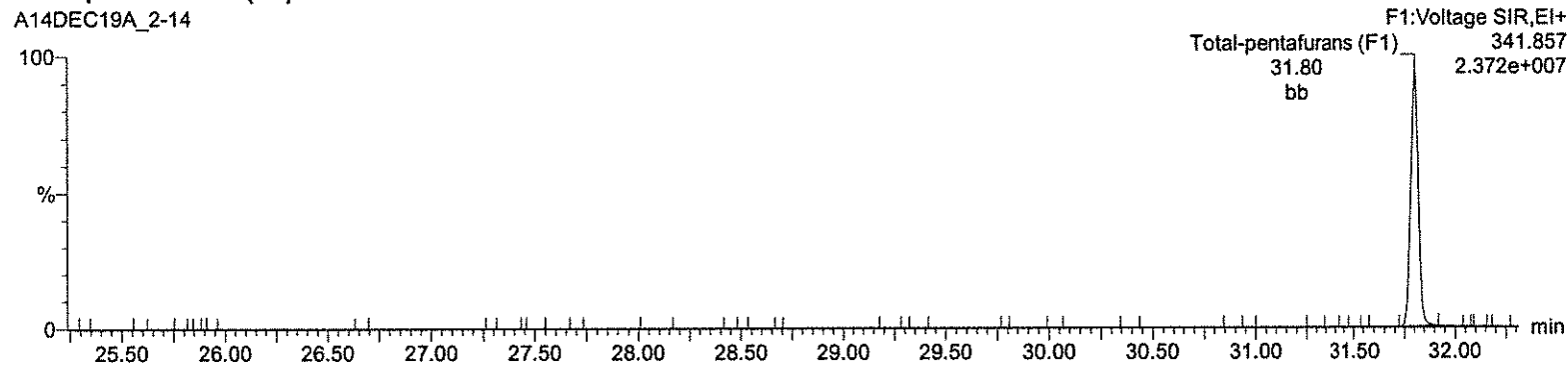
Total-pentafurans (F1)

A14DEC19A_2-14



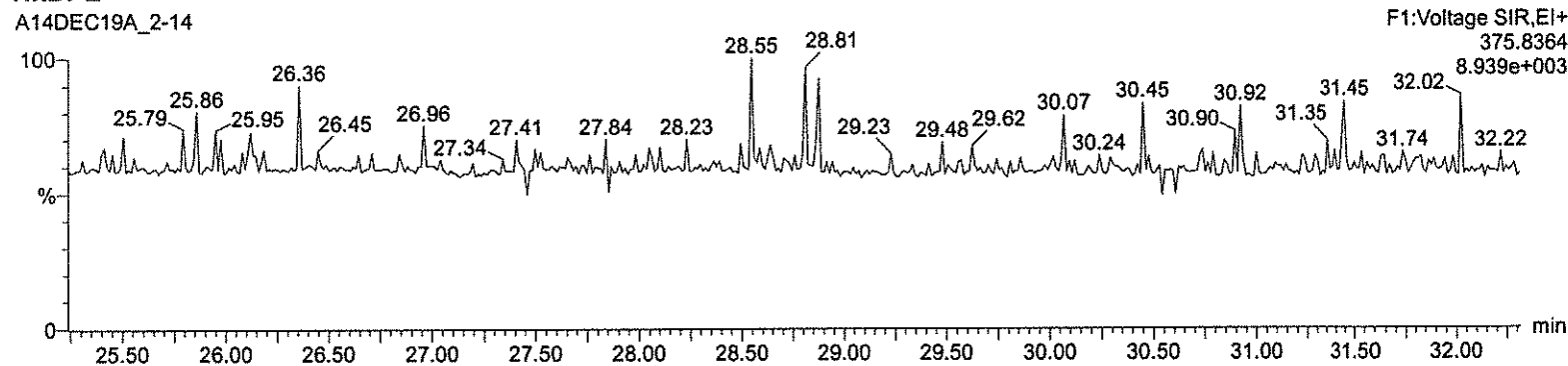
Total-pentafurans (F1)

A14DEC19A_2-14



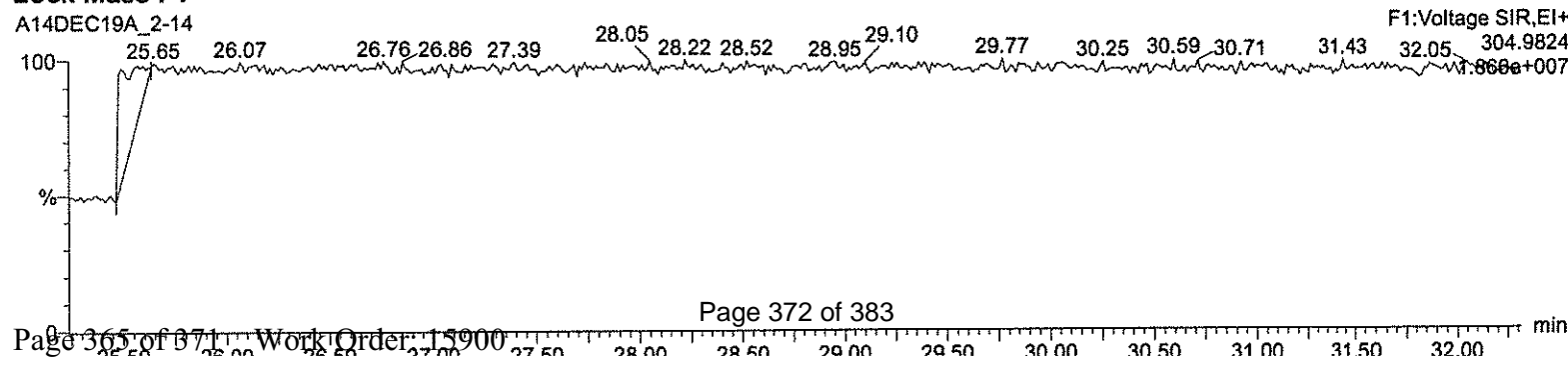
HxDPE

A14DEC19A_2-14



Lock Mass F1

A14DEC19A_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

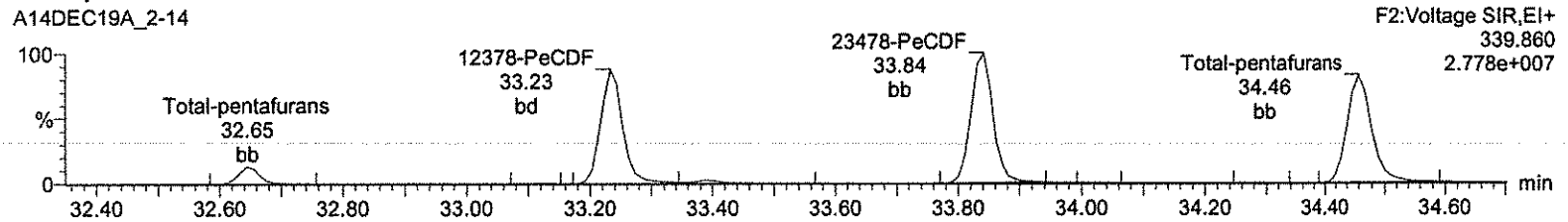
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Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

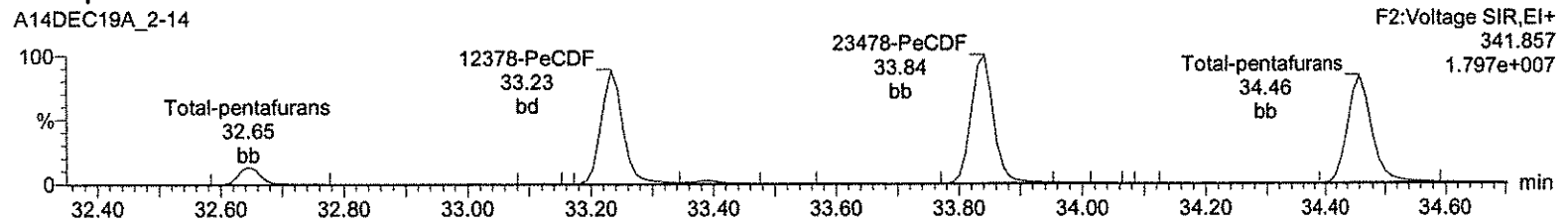
Total-pentafurans

A14DEC19A_2-14



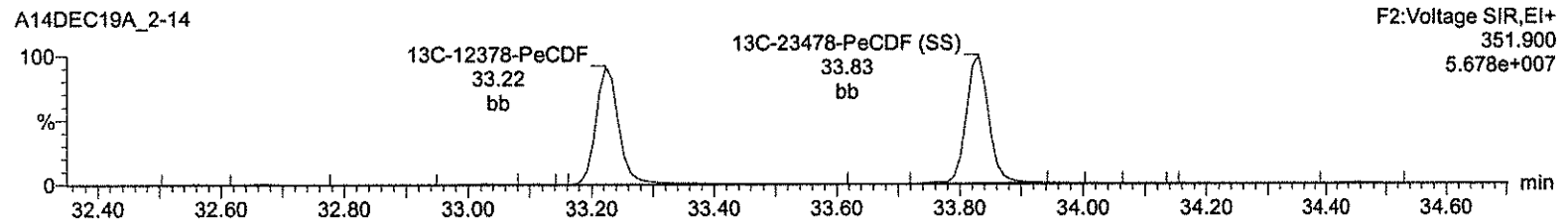
Total-pentafurans

A14DEC19A_2-14



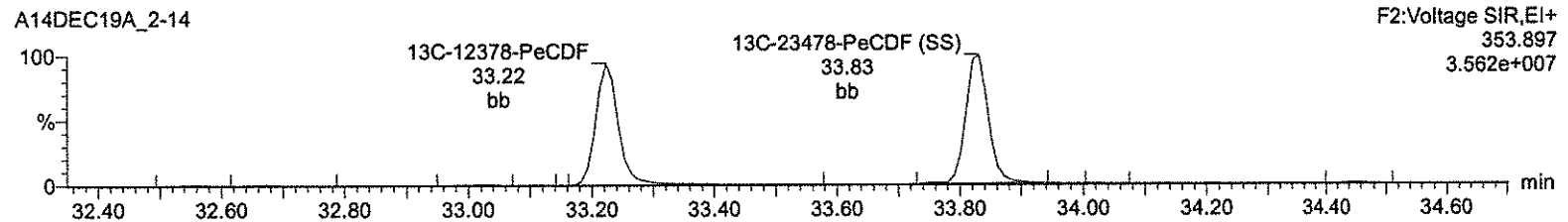
13C-12378-PeCDF

A14DEC19A_2-14



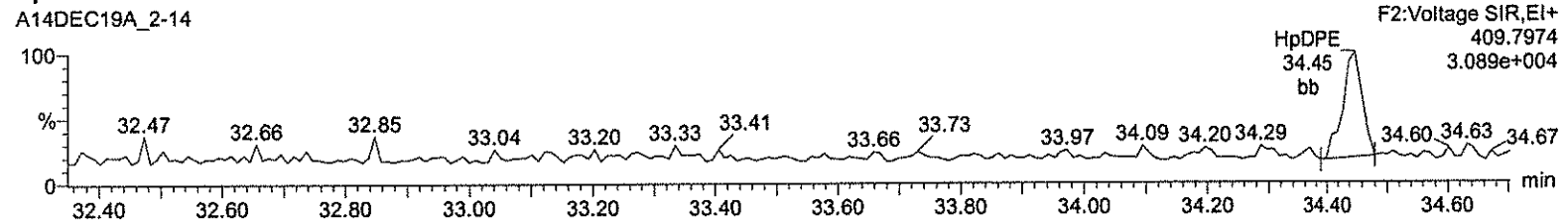
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A14DEC19A_2-14



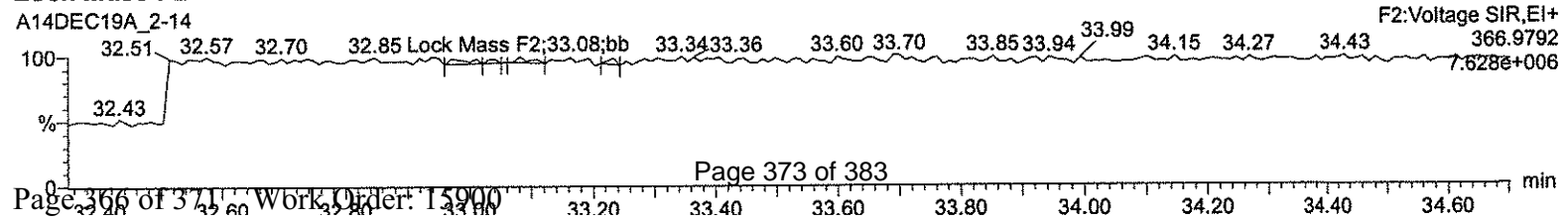
HpDPE

A14DEC19A_2-14



Lock Mass F2

A14DEC19A_2-14



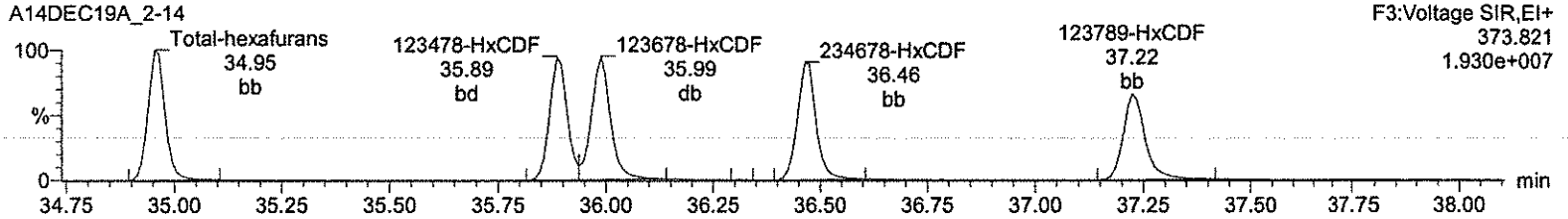
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Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

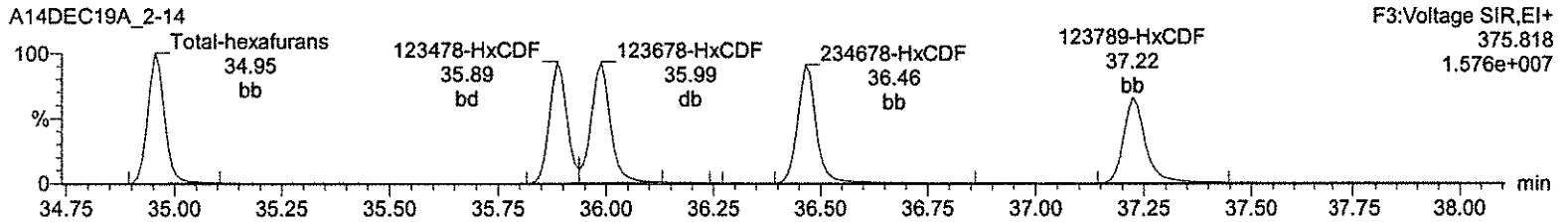
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

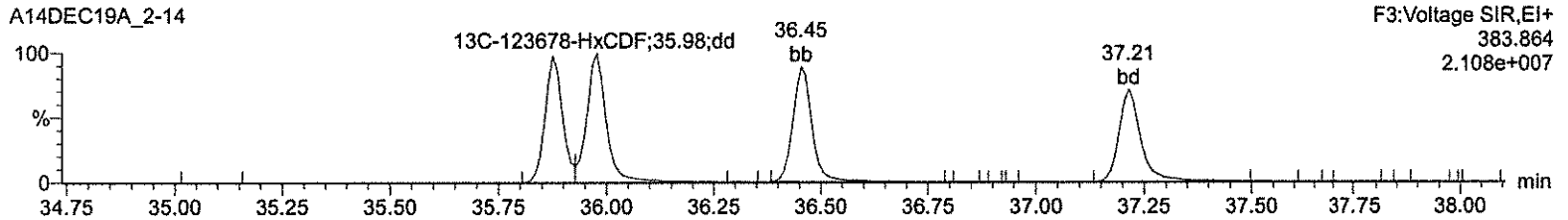
Total-hexafurans



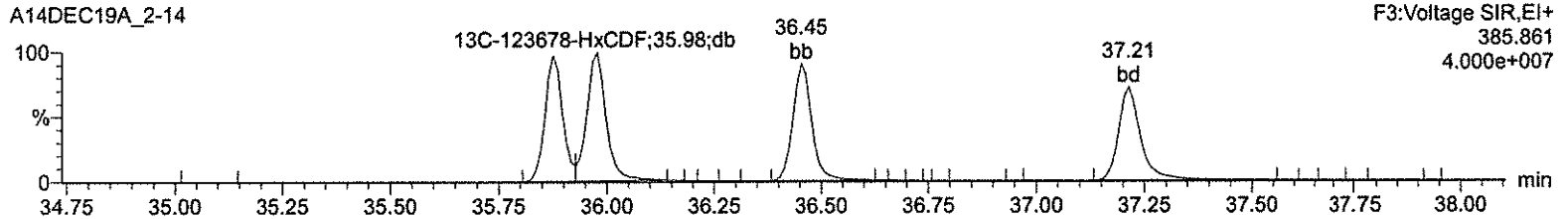
Total-hexafurans



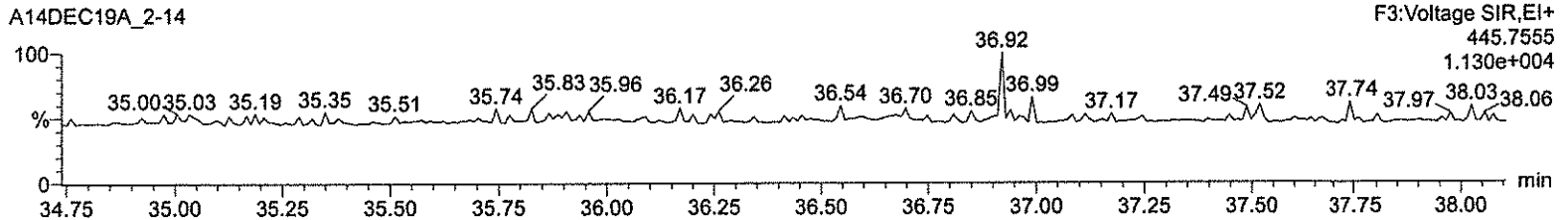
13C-123678-HxCDF



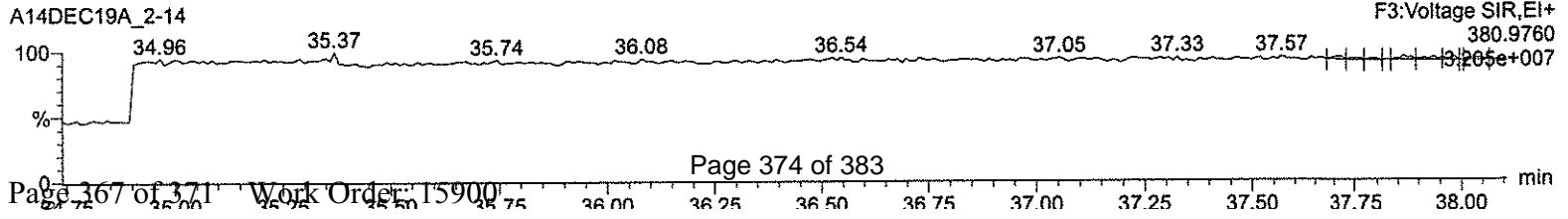
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OcDPE



Lock Mass F3



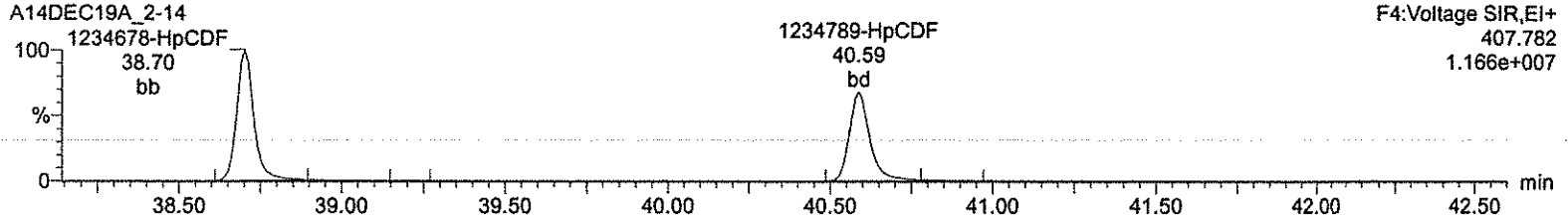
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Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

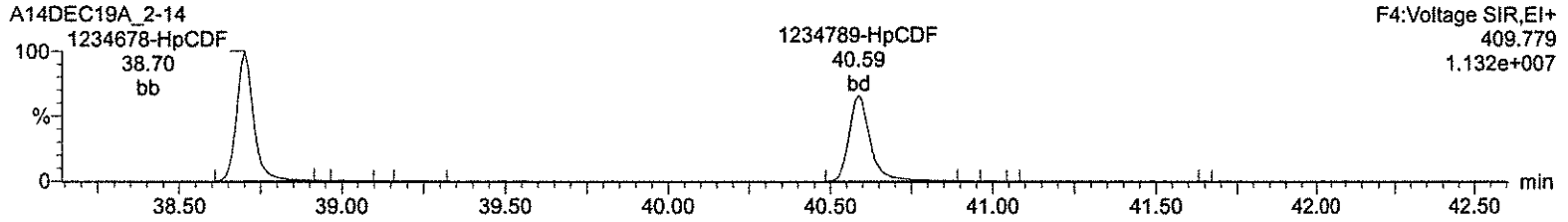
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

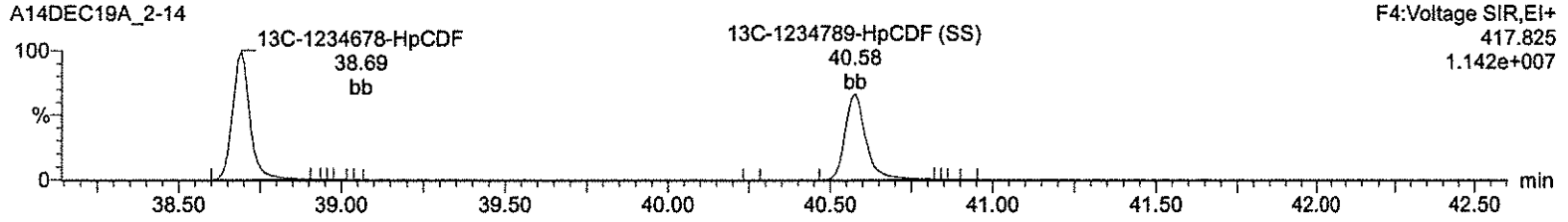
Total-heptafurans



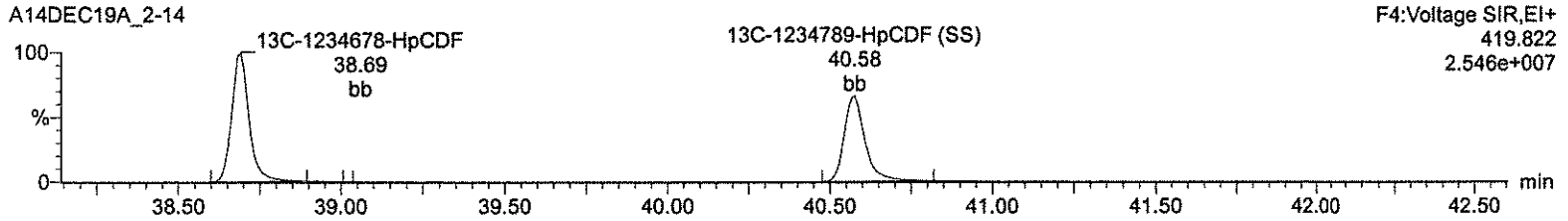
Total-heptafurans



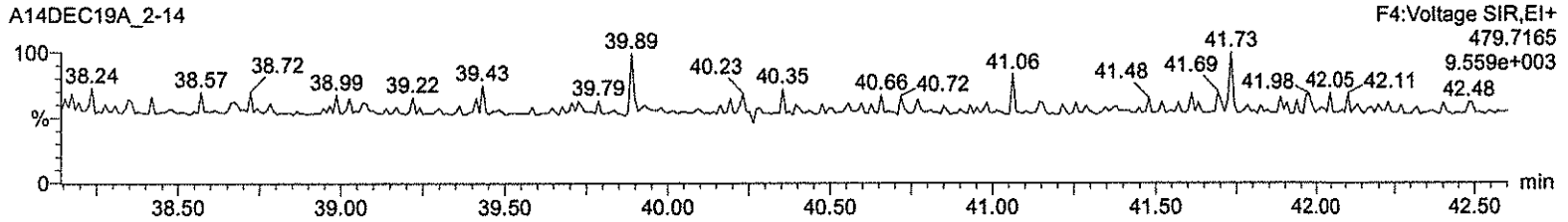
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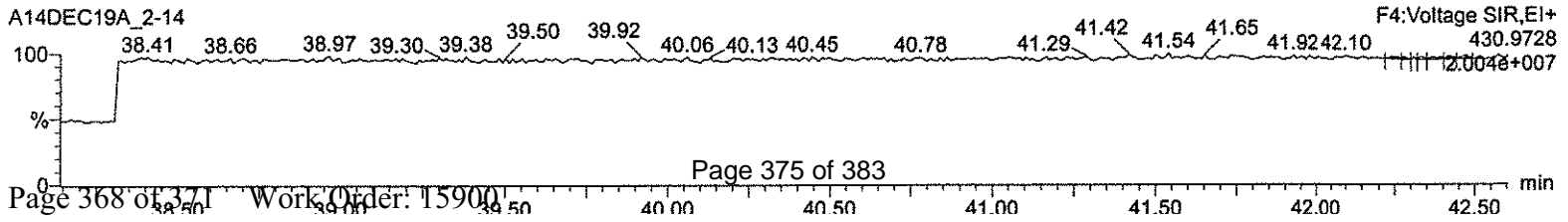
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

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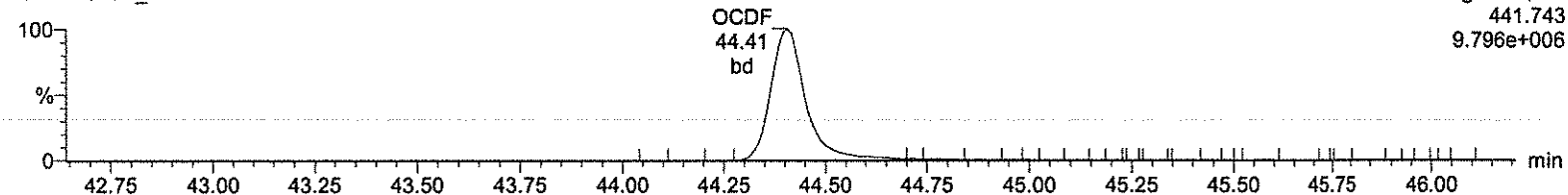
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OCDF

A14DEC19A_2-14

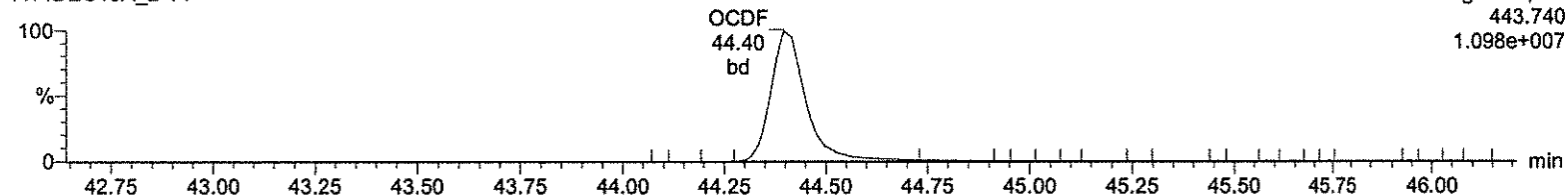
F5:Voltage SIR,EI+
441.743
9.796e+006



OCDF

A14DEC19A_2-14

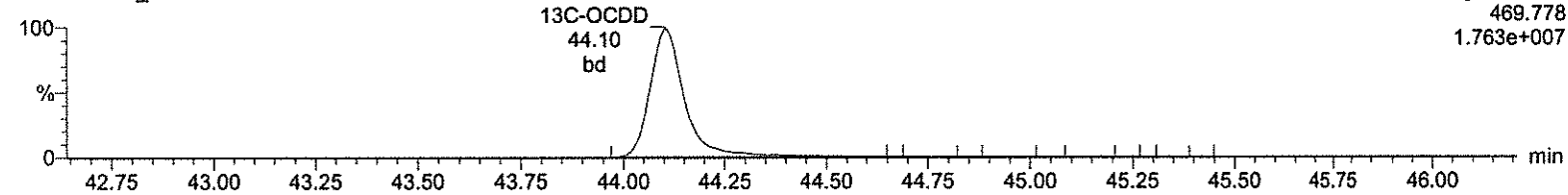
F5:Voltage SIR,EI+
443.740
1.098e+007



13C-OCDD

A14DEC19A_2-14

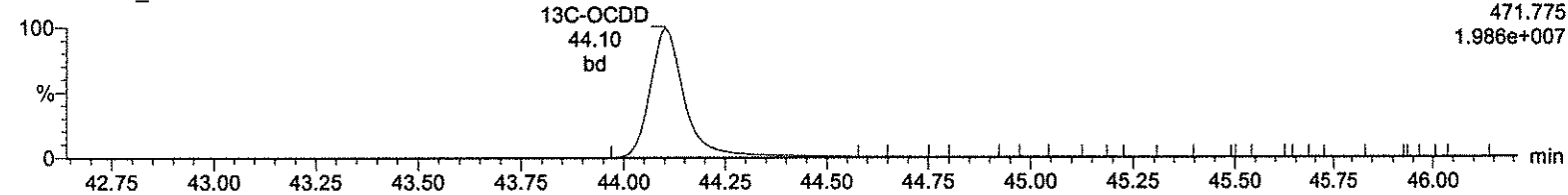
F5:Voltage SIR,EI+
469.778
1.763e+007



13C-OCDD

A14DEC19A_2-14

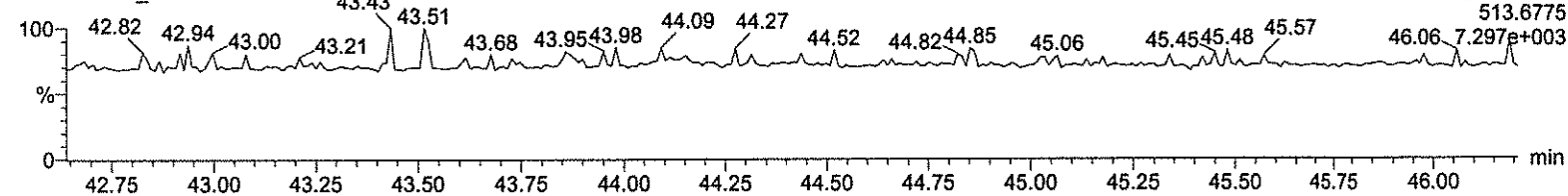
F5:Voltage SIR,EI+
471.775
1.986e+007



DeDPE

A14DEC19A_2-14

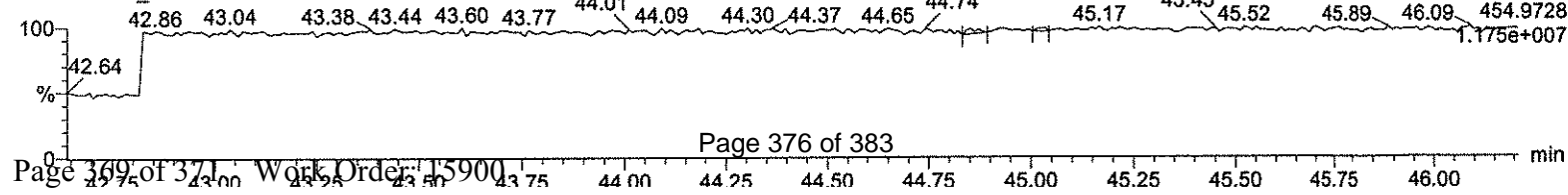
F5:Voltage SIR,EI+
513.6775
46.06_7.297e+003



Lock Mass F5

A14DEC19A_2-14

F5:Voltage SIR,EI+
454.9728
1.175e+007



Miscellaneous

No non conformance reports were generated for this work order

Subcontract Data

Shipping and Receiving Documents

14204

JACOBS CH2M

COC Number: **CALS11271901**

Chain of Custody Record

Project Name SSFL **Location** Santa Susana Field Lab
Project CH661 PO 100067108373
Project Number 692670.61.SW **Task Order** 661
Project Manager Randy Dean
Sample Manager Jamie Beckett
Turnaround Time 10 Days
PO Number 100067108373

Sample ID	Sample Date/Time	Type	Matrix	Preservative	Field Filtered	# Containers
FBQW1869Q001	11/27/19 0730 PM	EB	Water		<input type="checkbox"/>	2
				4°C	<input type="checkbox"/>	2
				HNO3, 4°C	<input type="checkbox"/>	2
				4°C	<input type="checkbox"/>	1
Total Containers:						5

SW8290/1613B
 SM2540
 ASTM D4464
 200.8/245.1F
 200.8/245.1
 180.1

MS = Matrix Spike SD = Matrix Spike Duplicate

Signatures	Date/Time	Shipping Details	Special Instructions:
Sampled by <i>Bryan Deason</i>	11/27/19 12:00	Shipment Method: FedEx	ATTN: Sample Custody and Report Copy to Mark Fesler (530) 229-3273
Relinquished by <i>[Signature]</i>	11/27/19 12:00	Airbill No:	
Received by <i>[Signature]</i>	11/27/19 12:00	Lab Name: Eurofins CalScience Lab	
Relinquished by <i>[Signature]</i>	11/27/19 14:45	Lab Phone: (949) 870-8766	
Received by <i>[Signature]</i>	11/27/19 2:45	On Ice: yes / no Cooler Temp _____	

[Signature] 11/27/19
[Signature] 11/27/19 7:10
 Numbered on 11/27/19 1:10

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-14206-2

Login Number: 14206

List Source: Eurofins Calscience

List Number: 1

Creator: Ramos, Maribel

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	


ANALYTICAL REPORT

Job Number: 570-14372-1

Job Description: CH661 / 692670.61.SW

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Ritu Sedha
Project Manager I
12/26/2019 2:08 PM

Designee for
Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
12/26/2019

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

Tel (714) 895-5494 Fax (714) 894-7501 www.EurofinsUS.com

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
H3	Sample was received and analyzed past holding time.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CH661 / 692670.61.SW

Report Number: 570-14372-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/02/2019 at 4:45 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.0 degrees Celsius.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 degrees Celsius of the required temperature or method specified range. For samples with a specified temperature of 4 degrees Celsius, samples with a temperature ranging from just above freezing temperature of water to 6 degrees Celsius shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

RECEIPT EXCEPTIONS

Method SM 2130B: The following sample was received outside of holding time: FBQW1870Q001 (570-14372-2).

DISSOLVED METALS (ICPMS)

Sample A2BMP0007S018 (570-14372-1) was analyzed for dissolved metals (ICPMS) in accordance with EPA Method 200.8. The sample was analyzed on 12/11/2019.

The following sample was not filtered within 15 minutes of sample collection as required by the method: A2BMP0007S018 (570-14372-1). The sample was filtered prior to analysis at the laboratory, and the results have been flagged.

Cadmium, Copper and Lead failed the recovery criteria low for the MS of sample A2BMP0007S018MS (570-14372-1) in batch 570-38471.

Cadmium, Copper and Lead failed the recovery criteria low for the MSD of sample A2BMP0007S018MSD (570-14372-1) in batch 570-38471. Cadmium, Copper and Lead exceeded the RPD limit.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Samples A2BMP0007S018 (570-14372-1) and FBQW1870Q001 (570-14372-2) were analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 12/10/2019 and analyzed on 12/11/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY

Sample A2BMP0007S018 (570-14372-1) was analyzed for dissolved mercury in accordance with EPA Method 245.1. The sample was prepared and analyzed on 12/10/2019.

The following sample was not filtered within 15 minutes of sample collection as required by the method: A2BMP0007S018 (570-14372-1). The sample was filtered prior to analysis at the laboratory, and the results have been flagged.

Mercury failed the recovery criteria low for the MSD of sample 570-14597-1 in batch 570-38034. Mercury exceeded the RPD limit.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples A2BMP0007S018 (570-14372-1) and FBQW1870Q001 (570-14372-2) were analyzed for total mercury in accordance with EPA Method 245.1. The samples were prepared on 12/08/2019 and analyzed on 12/09/2019.

Mercury failed the recovery criteria low for the MS of sample FBQW1870Q001MS (570-14372-2) in batch 570-37882.

Mercury exceeded the RPD limit for the MSD of sample FBQW1870Q001MSD (570-14372-2) in batch 570-37882.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS

Sample A2BMP0007S018 (570-14372-1) was analyzed for total suspended solids in accordance with SM 2540D. The sample was analyzed on 12/04/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PARTICLE SIZE

Sample A2BMP0007S018 (570-14372-1) was analyzed for Particle Size in accordance with ASTM D 4464. The sample was analyzed on 12/03/2019.

The sample duplicate precision for the following sample associated with analytical batch 570-36792 was outside control limits: (570-14206-D-2) and (570-14206-D-2 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TURBIDITY

Sample FBQW1870Q001 (570-14372-2) was analyzed for turbidity in accordance with SM 2130B. The samples were analyzed on 12/03/2019.

The following sample was received and analyzed outside of holding time: FBQW1870Q001 (570-14372-2). The data has been flagged.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Client Sample ID: A2BMP0007S018

Lab Sample ID: 570-14372-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00346		0.00100	0.000140	mg/L	1		200.8	Total Recoverable
Lead	0.000706	J	0.00100	0.0000898	mg/L	1		200.8	Total Recoverable
Copper	0.000538	J H F2 F1	0.00100	0.000140	mg/L	1		200.8	Dissolved
Total Suspended Solids	7.71		1.43	1.18	mg/L	1		SM 2540D	Total/NA
Clay(less than 0.00391 mm)	15.16		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	84.84		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%	1		D4464	Total/NA

Client Sample ID: FBQW1870Q001

Lab Sample ID: 570-14372-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Turbidity	0.0600	H H3	0.0500	0.0439	NTU	1		SM 2130B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: A2BMP0007S018
Date Collected: 11/28/19 08:13
Date Received: 12/02/19 16:45

Lab Sample ID: 570-14372-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L		12/10/19 13:00	12/11/19 16:27	1
Copper	0.00346		0.00100	0.000140	mg/L		12/10/19 13:00	12/11/19 16:27	1
Lead	0.000706	J	0.00100	0.0000898	mg/L		12/10/19 13:00	12/11/19 16:27	1

Client Sample ID: FBQW1870Q001
Date Collected: 11/28/19 07:00
Date Received: 12/02/19 16:45

Lab Sample ID: 570-14372-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L		12/10/19 13:00	12/11/19 16:30	1
Copper	ND		0.00100	0.000140	mg/L		12/10/19 13:00	12/11/19 16:30	1
Lead	ND		0.00100	0.0000898	mg/L		12/10/19 13:00	12/11/19 16:30	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Client Sample ID: A2BMP0007S018

Date Collected: 11/28/19 08:13

Date Received: 12/02/19 16:45

Lab Sample ID: 570-14372-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H F2 F1	0.00100	0.000128	mg/L			12/11/19 18:06	1
Copper	0.000538	J H F2 F1	0.00100	0.000140	mg/L			12/11/19 18:06	1
Lead	ND	H F2 F1	0.00100	0.0000898	mg/L			12/11/19 18:06	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: A2BMP0007S018

Date Collected: 11/28/19 08:13

Date Received: 12/02/19 16:45

Lab Sample ID: 570-14372-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/08/19 10:30	12/09/19 17:04	1

Client Sample ID: FBQW1870Q001

Date Collected: 11/28/19 07:00

Date Received: 12/02/19 16:45

Lab Sample ID: 570-14372-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	F1 F2	0.000200	0.0000453	mg/L		12/08/19 10:30	12/09/19 16:43	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: 245.1 - Mercury (CVAA) - Dissolved

Client Sample ID: A2BMP0007S018

Date Collected: 11/28/19 08:13

Date Received: 12/02/19 16:45

Lab Sample ID: 570-14372-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		12/10/19 17:50	12/10/19 22:16	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

General Chemistry

Client Sample ID: A2BMP0007S018

Date Collected: 11/28/19 08:13

Date Received: 12/02/19 16:45

Lab Sample ID: 570-14372-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	7.71		1.43	1.18	mg/L			12/04/19 15:00	1

Client Sample ID: FBQW1870Q001

Date Collected: 11/28/19 07:00

Date Received: 12/02/19 16:45

Lab Sample ID: 570-14372-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	0.0600	H H3	0.0500	0.0439	NTU			12/03/19 21:06	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Client Sample ID: A2BMP0007S018

Lab Sample ID: 570-14372-1

Date Collected: 11/28/19 08:13

Matrix: Water

Date Received: 12/02/19 16:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	15.16		0.01	0.01	%			12/03/19 19:44	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			12/03/19 19:44	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			12/03/19 19:44	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			12/03/19 19:44	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			12/03/19 19:44	1
Silt (0.00391 to 0.0625mm)	84.84		0.01	0.01	%			12/03/19 19:44	1
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%			12/03/19 19:44	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			12/03/19 19:44	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			12/03/19 19:44	1

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

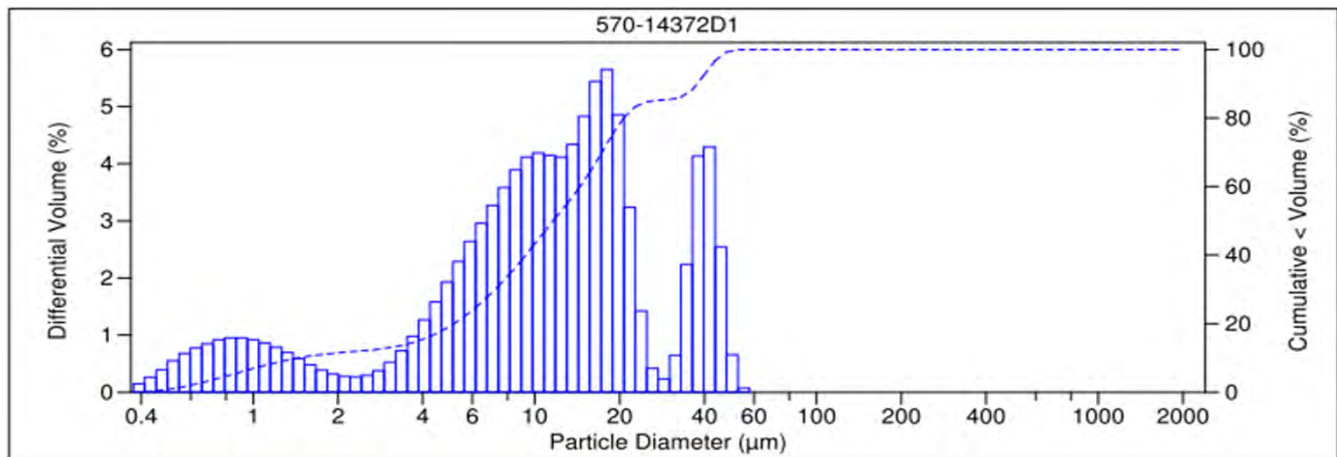
Date Sampled: 11/27/19
 Date Received: 11/27/19
 Work Order No: 570-14206
 Date Analyzed: 12/03/19
 Method: ASTM D4464M

Project: SSFL

Page 1 of 1

Sample ID	Depth ft	Description	Mean Grain Size mm
A2BMP0007S018		Silt	0.015

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	0.00	84.84	15.16	100.00



V.3.0

Default Detection Limits

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Prep: 200.8

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000128	mg/L
Copper	0.00100	0.000140	mg/L
Lead	0.00100	0.0000898	mg/L

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000128	mg/L
Copper	0.00100	0.000140	mg/L
Lead	0.00100	0.0000898	mg/L

Method: 245.1 - Mercury (CVAA)

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

Method: 245.1 - Mercury (CVAA) - Dissolved

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

General Chemistry

Analyte	RL	MDL	Units
Turbidity	0.0500	0.0439	NTU
Total Suspended Solids	1.00	0.829	mg/L

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	RL	MDL	Units
Clay(less than 0.00391 mm)	0.01	0.01	%
Coarse Sand (0.5mm to 1mm)	0.01	0.01	%
Fine Sand (0.125 to 0.25mm)	0.01	0.01	%
Gravel (greater than 2 mm)	0.01	0.01	%
Medium Sand (0.25 to 0.5 mm)	0.01	0.01	%
Silt (0.00391 to 0.0625mm)	0.01	0.01	%
Total Silt and Clay (0 to 0.0626mm)	0.01	0.01	%
Very Coarse Sand (1 to 2mm)	0.01	0.01	%
Very Fine Sand (0.0625 to 0.125 mm)	0.01	0.01	%

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 570-38088/1-A
Matrix: Water
Analysis Batch: 38398

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 38088

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		0.00100	0.000128	mg/L		12/10/19 13:00	12/11/19 15:19	1
Copper	ND		0.00100	0.000140	mg/L		12/10/19 13:00	12/11/19 15:19	1
Lead	ND		0.00100	0.0000898	mg/L		12/10/19 13:00	12/11/19 15:19	1

Lab Sample ID: LCS 570-38088/2-A
Matrix: Water
Analysis Batch: 38398

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 38088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Cadmium	0.100	0.1036		mg/L		104	80 - 120	
Copper	0.100	0.1007		mg/L		101	80 - 120	
Lead	0.100	0.09971		mg/L		100	80 - 120	

Lab Sample ID: LCSD 570-38088/3-A
Matrix: Water
Analysis Batch: 38398

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 38088

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits		RPD	Limit
Cadmium	0.100	0.1089		mg/L		109	80 - 120	5	20	
Copper	0.100	0.1044		mg/L		104	80 - 120	4	20	
Lead	0.100	0.1066		mg/L		107	80 - 120	7	20	

Lab Sample ID: 570-14349-A-1-B MS
Matrix: Water
Analysis Batch: 38398

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 38088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	
Cadmium	0.00118		0.100	0.1128		mg/L		112	80 - 120	
Copper	0.0315		0.100	0.1333		mg/L		102	80 - 120	
Lead	0.0239		0.100	0.1243		mg/L		100	80 - 120	

Lab Sample ID: 570-14349-A-1-C MSD
Matrix: Water
Analysis Batch: 38398

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 38088

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
									Limits		RPD	Limit
Cadmium	0.00118		0.100	0.1102		mg/L		109	80 - 120	2	20	
Copper	0.0315		0.100	0.1358		mg/L		104	80 - 120	2	20	
Lead	0.0239		0.100	0.1264		mg/L		102	80 - 120	2	20	

Lab Sample ID: MB 570-38288/1-A
Matrix: Water
Analysis Batch: 38471

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		0.00100	0.000128	mg/L			12/11/19 17:56	1
Copper	ND		0.00100	0.000140	mg/L			12/11/19 17:56	1
Lead	ND		0.00100	0.0000898	mg/L			12/11/19 17:56	1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 570-38288/2-A
Matrix: Water
Analysis Batch: 38471

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.1018		mg/L		102	80 - 120
Copper	0.100	0.1037		mg/L		104	80 - 120
Lead	0.100	0.1018		mg/L		102	80 - 120

Lab Sample ID: LCSD 570-38288/3-A
Matrix: Water
Analysis Batch: 38471

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.1037		mg/L		104	80 - 120	2	20
Copper	0.100	0.1021		mg/L		102	80 - 120	2	20
Lead	0.100	0.1006		mg/L		101	80 - 120	1	20

Lab Sample ID: 570-14372-1 MS
Matrix: Water
Analysis Batch: 38471

Client Sample ID: A2BMP0007S018
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND	H F2 F1	0.100	0.02837	F1	mg/L		28	80 - 120
Copper	0.000538	J H F2 F1	0.100	0.02811	F1	mg/L		28	80 - 120
Lead	ND	H F2 F1	0.100	0.02395	F1	mg/L		24	80 - 120

Lab Sample ID: 570-14372-1 MSD
Matrix: Water
Analysis Batch: 38471

Client Sample ID: A2BMP0007S018
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND	H F2 F1	0.100	0.04582	F2 F1	mg/L		46	80 - 120	47	20
Copper	0.000538	J H F2 F1	0.100	0.04611	F2 F1	mg/L		46	80 - 120	49	20
Lead	ND	H F2 F1	0.100	0.04242	F2 F1	mg/L		42	80 - 120	56	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 570-37642/1-A
Matrix: Water
Analysis Batch: 37882

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37642

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/08/19 10:30	12/09/19 16:36	1

Lab Sample ID: LCS 570-37642/2-A
Matrix: Water
Analysis Batch: 37882

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.009715		mg/L		97	85 - 121

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 570-37642/3-A
Matrix: Water
Analysis Batch: 37882

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 37642

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.009795		mg/L		98	85 - 121	1	10

Lab Sample ID: 570-14372-2 MS
Matrix: Water
Analysis Batch: 37882

Client Sample ID: FBQW1870Q001
Prep Type: Total/NA
Prep Batch: 37642

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F1 F2	0.0100	0.003906	F1	mg/L		39	57 - 141

Lab Sample ID: 570-14372-2 MSD
Matrix: Water
Analysis Batch: 37882

Client Sample ID: FBQW1870Q001
Prep Type: Total/NA
Prep Batch: 37642

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	F1 F2	0.0100	0.009746	F2	mg/L		97	57 - 141	86	10

Lab Sample ID: MB 570-38115/1-B
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 38121

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/10/19 17:50	12/10/19 21:55	1

Lab Sample ID: LCS 570-38115/2-B
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 38121

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.009138		mg/L		91	85 - 121

Lab Sample ID: LCSD 570-38115/3-B
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 38121

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.009187		mg/L		92	85 - 121	1	10

Lab Sample ID: 570-14597-G-1-E MS
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 38121

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F2 F1	0.0100	0.009343		mg/L		93	57 - 141

Lab Sample ID: 570-14597-G-1-F MSD
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 38121

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	F2 F1	0.0100	0.001019	F2 F1	mg/L		10	57 - 141	161	10

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: SM 2130B - Turbidity

Lab Sample ID: LCSSRM 570-36786/1
Matrix: Water
Analysis Batch: 36786

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	1000	992.0		NTU		99.2	99.0 - 101.0

Lab Sample ID: LCSSRM 570-36786/2
Matrix: Water
Analysis Batch: 36786

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	10.0	9.930		NTU		99.3	99.0 - 101.0

Lab Sample ID: LCSSRM 570-36786/3
Matrix: Water
Analysis Batch: 36786

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	0.0200	ND		NTU		200.0	0.0 - 200.0

Lab Sample ID: 570-14460-B-1 DU
Matrix: Water
Analysis Batch: 36786

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	0.320		0.2900		NTU		10	25

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 570-36808/1
Matrix: Water
Analysis Batch: 36808

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.00	0.829	mg/L			12/04/19 15:00	1

Lab Sample ID: LCS 570-36808/2
Matrix: Water
Analysis Batch: 36808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	102.0		mg/L		102	85 - 115

Lab Sample ID: LCSD 570-36808/3
Matrix: Water
Analysis Batch: 36808

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	104.0		mg/L		104	85 - 115	2	10

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: 570-14323-A-2 DU
Matrix: Water
Analysis Batch: 36808

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	33.0		34.75		mg/L		5	10

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Metals

Prep Batch: 37642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Total/NA	Water	245.1	
570-14372-2	FBQW1870Q001	Total/NA	Water	245.1	
MB 570-37642/1-A	Method Blank	Total/NA	Water	245.1	
LCS 570-37642/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 570-37642/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
570-14372-2 MS	FBQW1870Q001	Total/NA	Water	245.1	
570-14372-2 MSD	FBQW1870Q001	Total/NA	Water	245.1	

Analysis Batch: 37882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Total/NA	Water	245.1	37642
570-14372-2	FBQW1870Q001	Total/NA	Water	245.1	37642
MB 570-37642/1-A	Method Blank	Total/NA	Water	245.1	37642
LCS 570-37642/2-A	Lab Control Sample	Total/NA	Water	245.1	37642
LCSD 570-37642/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	37642
570-14372-2 MS	FBQW1870Q001	Total/NA	Water	245.1	37642
570-14372-2 MSD	FBQW1870Q001	Total/NA	Water	245.1	37642

Analysis Batch: 38034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Dissolved	Water	245.1	38121
MB 570-38115/1-B	Method Blank	Dissolved	Water	245.1	38121
LCS 570-38115/2-B	Lab Control Sample	Dissolved	Water	245.1	38121
LCSD 570-38115/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	38121
570-14597-G-1-E MS	Matrix Spike	Dissolved	Water	245.1	38121
570-14597-G-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	245.1	38121

Prep Batch: 38088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Total Recoverable	Water	200.8	
570-14372-2	FBQW1870Q001	Total Recoverable	Water	200.8	
MB 570-38088/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 570-38088/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 570-38088/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
570-14349-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
570-14349-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	

Filtration Batch: 38115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Dissolved	Water	Filtration	
MB 570-38115/1-B	Method Blank	Dissolved	Water	Filtration	
LCS 570-38115/2-B	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-38115/3-B	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-14597-G-1-E MS	Matrix Spike	Dissolved	Water	Filtration	
570-14597-G-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	Filtration	

Prep Batch: 38121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Dissolved	Water	245.1	38115
MB 570-38115/1-B	Method Blank	Dissolved	Water	245.1	38115
LCS 570-38115/2-B	Lab Control Sample	Dissolved	Water	245.1	38115

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Metals (Continued)

Prep Batch: 38121 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 570-38115/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	38115
570-14597-G-1-E MS	Matrix Spike	Dissolved	Water	245.1	38115
570-14597-G-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	245.1	38115

Filtration Batch: 38288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Dissolved	Water	Filtration	
MB 570-38288/1-A	Method Blank	Dissolved	Water	Filtration	
LCS 570-38288/2-A	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-38288/3-A	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-14372-1 MS	A2BMP0007S018	Dissolved	Water	Filtration	
570-14372-1 MSD	A2BMP0007S018	Dissolved	Water	Filtration	

Analysis Batch: 38398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Total Recoverable	Water	200.8	38088
570-14372-2	FBQW1870Q001	Total Recoverable	Water	200.8	38088
MB 570-38088/1-A	Method Blank	Total Recoverable	Water	200.8	38088
LCS 570-38088/2-A	Lab Control Sample	Total Recoverable	Water	200.8	38088
LCSD 570-38088/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	38088
570-14349-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	38088
570-14349-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	38088

Analysis Batch: 38471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Dissolved	Water	200.8	38288
MB 570-38288/1-A	Method Blank	Dissolved	Water	200.8	38288
LCS 570-38288/2-A	Lab Control Sample	Dissolved	Water	200.8	38288
LCSD 570-38288/3-A	Lab Control Sample Dup	Dissolved	Water	200.8	38288
570-14372-1 MS	A2BMP0007S018	Dissolved	Water	200.8	38288
570-14372-1 MSD	A2BMP0007S018	Dissolved	Water	200.8	38288

General Chemistry

Analysis Batch: 36786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-2	FBQW1870Q001	Total/NA	Water	SM 2130B	
LCSSRM 570-36786/1	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-36786/2	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-36786/3	Lab Control Sample	Total/NA	Water	SM 2130B	
570-14460-B-1 DU	Duplicate	Total/NA	Water	SM 2130B	

Analysis Batch: 36808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Total/NA	Water	SM 2540D	
MB 570-36808/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-36808/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-36808/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-14323-A-2 DU	Duplicate	Total/NA	Water	SM 2540D	

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Geotechnical

Analysis Batch: 36792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14372-1	A2BMP0007S018	Total/NA	Water	D4464	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Client Sample ID: A2BMP0007S018

Lab Sample ID: 570-14372-1

Date Collected: 11/28/19 08:13

Matrix: Water

Date Received: 12/02/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	38288	12/03/19 12:00	WL8G	ECL 1
Dissolved	Analysis	200.8		1			38471	12/11/19 18:06	ZHW5	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	38088	12/10/19 13:00	ZHW5	ECL 1
Total Recoverable	Analysis	200.8		1			38398	12/11/19 16:27	UFLE	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	38115	12/04/19 18:00	ZHW5	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	38121	12/10/19 17:50	ZHW5	ECL 1
Dissolved	Analysis	245.1		1			38034	12/10/19 22:16	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Prep	245.1			50 mL	100 mL	37642	12/08/19 10:30	WL8G	ECL 1
Total/NA	Analysis	245.1		1			37882	12/09/19 17:04	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2540D		1	700 mL	1000 mL	36808	12/04/19 15:00	XL6Z	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			36792	12/03/19 19:44	C4LT	ECL 1
Instrument ID: NOEQUIP										

Client Sample ID: FBQW1870Q001

Lab Sample ID: 570-14372-2

Date Collected: 11/28/19 07:00

Matrix: Water

Date Received: 12/02/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			50 mL	50 mL	38088	12/10/19 13:00	ZHW5	ECL 1
Total Recoverable	Analysis	200.8		1			38398	12/11/19 16:30	UFLE	ECL 1
Instrument ID: ICPMS05										
Total/NA	Prep	245.1			50 mL	100 mL	37642	12/08/19 10:30	WL8G	ECL 1
Total/NA	Analysis	245.1		1			37882	12/09/19 16:43	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2130B		1			36786	12/03/19 21:06	KZ4O	ECL 1
Instrument ID: NOEQUIP										

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	ECL 1
245.1	Mercury (CVAA)	EPA	ECL 1
SM 2130B	Turbidity	SM	ECL 1
SM 2540D	Solids, Total Suspended (TSS)	SM	ECL 1
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
200.8	Preparation, Total Recoverable Metals	EPA	ECL 1
245.1	Preparation, Mercury	EPA	ECL 1
Filtration	Sample Filtration	None	ECL 1

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- None = None
- SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

- ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-14372-1	A2BMP0007S018	Water	11/28/19 08:13	12/02/19 16:45	
570-14372-2	FBQW1870Q001	Water	11/28/19 07:00	12/02/19 16:45	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HG_1ppm ICV_00012	12/30/19	11/30/19	DI Water, Lot n/a	100 mL	MT-Hg-CS_00002	0.1 mL	Mercury	1 mg/L
.MT-Hg-CS_00002	12/31/20	High Purity Standards, Lot 1914918-100 Fisher Scientific, Lot 118110			MT: HNO3 Conc 00001	5 mL	Nitric acid	3.5 mg/L
.MT: HNO3 Conc 00001	11/11/20				(Purchased Reagent)	(Purchased Reagent)	Mercury	1000 ug/mL
HG_1ppm STD_00008	12/30/19	11/30/19	DI Water, Lot n/a	100 mL	MT-Hg-SS 00001	1 mL	Mercury	1 mg/L
.MT-Hg-SS 00001	07/14/22	AccuStandard, Lot 217075028 FISHER, Lot 1119040			MT HNO3 00014	5 mL	Nitric acid	34500 mg/L
.MT HNO3 00014	05/02/21				(Purchased Reagent)	(Purchased Reagent)	Mercury	100 ug/mL
Hg_H2SO4_00001	02/21/21		Fisher, Lot 3117052		(Purchased Reagent)		Sulfuric acid	98 mg/L
Hg_K2S2O3_00001	02/19/20	02/19/19	DI Water, Lot N/A	10 L	HG_7440K2S2O8_00001	500 g	Potassium persulfate	4950000 mg/L
.HG 7440K2S2O8_00001	02/27/22		AcrosOrganic, Lot A0379062		(Purchased Reagent)		Potassium persulfate	99 g/g
Hg_KMnO4_00002	02/19/20	02/19/19	DI Water, Lot N/A	10 L	HG_7471 KMNO4_00001	500 g	Potassium Permanganate	5000000 mg/L
.HG 7471 KMNO4_00001	08/22/23		VWR, Lot 0277-C094		(Purchased Reagent)		Potassium Permanganate	100 g/g
Hg_NaCl-NH2OH_00005	03/23/20	11/30/19	DI Water, Lot N/A	10 L	HG 7470 NH3OH_00002	1.2 Kg	Hydroxylamine hydrochloride	0.01188 L
.HG 7470 NH3OH_00002	10/02/20	VWR Chemicals, LLC, Lot 19F1856849 Fisher, Lot 176121			HG 7470 NaCl_00001	1.2 Kg	Sodium Chloride	11880 L
.HG 7470 NaCl_00001	03/23/20				(Purchased Reagent)	(Purchased Reagent)	Hydroxylamine hydrochloride	99 g
MT: 1:1 HCl_00002	03/02/20	06/05/19	DI Water, Lot Di water	500 mL	MT: HCl Conc. 00002	250 mL	Hydrogen Chloride	18.5 mL
.MT: HCl Conc. 00002	11/14/22		Fisher Scientific, Lot 4118110		(Purchased Reagent)		Hydrogen Chloride	37 mL
MT: 1:1 HNO3_00001	03/15/20	06/05/19	DI Water, Lot DI Water	500 mL	MT: H2NO3 Con_00001	250 mL	Nitric acid	35 mL
.MT: H2NO3 Con_00001	11/14/20		Fisher Chemical, Lot 1118101		(Purchased Reagent)		Nitric acid	70 mL
							Nitric acid	70 mL
MT_ICP_Spike1_00005	01/30/20	09/06/19	HNO3, Lot 1118092	1000 mL	MT-As-SpS_00001	10 mL	As	100 ug/mL
					MT-Be-SpS_00001	10 mL	Be	100 ug/mL
					MT-Bi-CS-SpS_00001	10 mL	Bi	100 ug/mL
					MT-Ca-SpS_00001	10 mL	Ca	100 ug/mL
					MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Co-SpS_00001	10 mL	Co	100 ug/mL
					MT-Cr-SpS_00001	10 mL	Cr	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Fe-SpS_00001	10 mL	Fe	100 ug/mL
					MT-Li-CS-SpS_00001	10 mL	Li	100 ug/mL
					MT-Mg-SpS_00001	10 mL	Mg	100 ug/mL
					MT-Mn-SpS_00001	10 mL	Mn	100 ug/mL
					MT-Mo-SpS_00001	10 mL	Mo	100 ug/mL
					MT-Ni-SpS_00001	10 mL	Ni	100 ug/mL
					MT-P-SpS_00001	10 mL	P	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
					MT-S-CS-SpS_00001	10 mL	Sulfur	100 ug/mL
					MT-Sb-SpS_00001	10 mL	Sb	100 ug/mL
					MT-Se-SpS_00001	10 mL	Se	100 ug/mL
					MT-Sn-SpS_00001	10 mL	Sn	100 ug/mL
					MT-Sr-SpS_00001	10 mL	Sr	100 ug/mL
					MT-Ti-SpS_00001	10 mL	Ti	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MT-Tl-SpS_00001	10 mL	Tl	100 ug/mL
					MT-V-SpS_00001	10 mL	V	100 ug/mL
					MT-Zn-SpS_00001	10 mL	Zn	100 ug/mL
.MT-As-SpS_00001	04/30/23		AccuStandard, Lot 218045118		(Purchased Reagent)		As	10000 ug/mL
.MT-Be-SpS_00001	02/28/23		Ultra, Lot CP-0170		(Purchased Reagent)		Be	10000 ug/mL
.MT-Bi-CS-SpS_00001	06/30/23		Ultra, Lot CP-2124		(Purchased Reagent)		Bi	10000 ug/mL
.MT-Ca-SpS_00001	04/30/23		Ultra, Lot CP-0877		(Purchased Reagent)		Ca	10000 ug/mL
.MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
.MT-Co-SpS_00001	05/31/23		Ultra, Lot CP-2011		(Purchased Reagent)		Co	10000 ug/mL
.MT-Cr-SpS_00001	05/31/23		Ultra, Lot CP-1768		(Purchased Reagent)		Cr	10000 ug/mL
.MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
.MT-Fe-SpS_00001	08/31/24		Ultra, Lot CR-3137		(Purchased Reagent)		Fe	10000 ug/mL
.MT-Li-CS-SpS_00001	05/31/21		Ultra, Lot T00356		(Purchased Reagent)		Li	10000 ug/mL
.MT-Mg-SpS_00001	09/30/22		Ultra, Lot CM-4445		(Purchased Reagent)		Mg	10000 ug/mL
.MT-Mn-SpS_00001	01/31/24		Ultra, Lot M00334A		(Purchased Reagent)		Mn	10000 ug/mL
.MT-Mo-SpS_00001	08/31/21		Ultra, Lot CL-2860		(Purchased Reagent)		Mo	10000 ug/mL
.MT-Ni-SpS_00001	02/28/23		Ultra, Lot CP-0006		(Purchased Reagent)		Ni	10000 ug/mL
.MT-P-SpS_00001	09/10/23		Ultra, Lot CP-4381		(Purchased Reagent)		P	10000 ug/mL
.MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
.MT-S-CS-SpS_00001	11/30/22		Ultra, Lot CM-5393		(Purchased Reagent)		Sulfur	10000 ug/mL
.MT-Sb-SpS_00001	06/30/23		Ultra, Lot CP-2412		(Purchased Reagent)		Sb	10000 ug/mL
.MT-Se-SpS_00001	11/30/22		Ultra, Lot CM-5316		(Purchased Reagent)		Se	10000 ug/mL
.MT-Sn-SpS_00001	07/31/21		Ultra, Lot T00753		(Purchased Reagent)		Sn	10000 ug/mL
.MT-Sr-SpS_00001	09/30/22		Ultra, Lot CM-4363		(Purchased Reagent)		Sr	10000 ug/mL
.MT-Ti-SpS_00001	04/30/22		Ultra, Lot CM-1138		(Purchased Reagent)		Ti	10000 ug/mL
.MT-Tl-SpS_00001	05/31/23		Ultra, Lot CP-2010		(Purchased Reagent)		Tl	10000 ug/mL
.MT-V-SpS_00001	08/31/23		Ultra, Lot CP-3591		(Purchased Reagent)		V	10000 ug/mL
.MT-Zn-SpS_00001	02/28/23		Ultra, Lot CP-0155		(Purchased Reagent)		Zn	10000 ug/mL
MT_ICP_Spike2_00003	01/30/20	07/04/19	HNO3, Lot 1118092	1000 mL	MT_ICP_Ag_SpS_00001	5 mL	Ag	50 ug/mL
					MT_ICP_Al_SpS_00001	10 mL	Al	100 ug/mL
					MT_ICP_B_SpS_00001	10 mL	B	100 ug/mL
					MT_ICP_Ba_SpS_00001	10 mL	Ba	100 ug/mL
					MT_ICP_K_SpS_00001	100 mL	K	1000 ug/mL
					MT_ICP_Na_SpS_00001	100 mL	Na	1000 ug/mL
					MT_ICP_Si_SpS_00004	10 mL	Si	100 ug/mL
							SiO2	214 ug/mL
.MT_ICP_Ag_SpS_00001	09/30/23		Ultra, Lot CP-4409		(Purchased Reagent)		Ag	10000 ug/mL
.MT_ICP_Al_SpS_00001	09/30/23		Ultra, Lot CP-3976		(Purchased Reagent)		Al	10000 ug/mL
.MT_ICP_B_SpS_00001	12/31/21		Ultra, Lot K00924A		(Purchased Reagent)		B	10000 ug/mL
.MT_ICP_Ba_SpS_00001	01/31/23		Ultra, Lot CM-6544		(Purchased Reagent)		Ba	10000 ug/mL
.MT_ICP_K_SpS_00001	04/30/24		Ultra, Lot CR-0917		(Purchased Reagent)		K	10000 ug/mL
.MT_ICP_Na_SpS_00001	09/30/23		Ultra, Lot CP-3978		(Purchased Reagent)		Na	10000 ug/mL
.MT_ICP_Si_SpS_00004	04/30/23		Ultra, Lot CP-1238		(Purchased Reagent)		Si	10000 ug/mL
							SiO2	21400 ug/mL
MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
..MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
.MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_ICS_A_00002	05/30/20	07/01/19	1% HNO3, Lot DIWATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
							Ti	20 mg/L
MT_MS_ICS_AB_00002	05/14/20	07/01/19	1% HNO3, Lot DIWAATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
					MT_MS_Int_B_00002	0.5 mL	Ag	0.005 mg/L
							As	0.01 mg/L
							Cadmium	0.01 mg/L
							Co	0.02 mg/L
							Copper	0.02 mg/L
							Cr	0.02 mg/L
							Mn	0.02 mg/L
							Ni	0.02 mg/L
							Se	0.01 mg/L
							V	0.02 mg/L
							Zn	0.01 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
.MT_MS_Int_B_00002	05/30/20		Spex, Lot CL6-114MKBY		(Purchased Reagent)		Ag	5 mg/L
							As	10 mg/L
							Cadmium	10 mg/L
							Co	20 mg/L
							Copper	20 mg/L
							Cr	20 mg/L
							Mn	20 mg/L
							Ni	20 mg/L
							Se	10 mg/L
							V	20 mg/L
							Zn	10 mg/L
MT_MS_ICV1_00002	01/11/20	10/03/19	1% Nitric Acid, Lot DIWATER	2000 mL	MT_MS_Spike1_00001	2 mL	Cadmium	0.1 ug/mL
							Copper	0.1 ug/mL
							Lead	0.1 ug/mL
.MT_MS_Spike1_00001	01/30/20	09/26/19	HNO3, Lot 1118092	1000 mL	MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
..MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
..MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
..MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
MT_MS_LL_00006	08/30/20	09/24/19	1% HNO3, Lot DIWATER	100 mL	MT_MS_CCV_00005	1 mL	Cadmium	0.001 mg/L
							Copper	0.001 mg/L
							Lead	0.001 mg/L
.MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
..MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
...MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_SPIKE_3_00002	12/31/22	07/09/19	2% Nitric Acid, Lot DIWATER	1000 mL	MT_MS_Ca10000_00001	100 mL	Ca	1000 mg/L
					MT_MS_Fe10000_00001	100 mL	Fe	1000 mg/L
					MT_MS_Mg10000_00001	100 mL	Mg	1000 mg/L
.MT_MS_Ca10000_00001	09/30/24		Ultra, Lot CR-3808		(Purchased Reagent)		Ca	10000 mg/L
.MT_MS_Fe10000_00001	08/31/24		Ultra, Lot ICP-126-L		(Purchased Reagent)		Fe	10000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT MS Mg10000 00001	04/20/23		Ultra, Lot ICP-112-L		(Purchased Reagent)		Mg	10000 mg/L
WC SSC STD 00001	02/05/20	08/05/19	DI Water, Lot 022619	2 L	WC TSS STK 00001	0.2 g	Total Suspended Solids	100 mg/L
.WC TSS STK 00001	11/04/21		FISHER, Lot 160676		(Purchased Reagent)		Total Suspended Solids	1 g/g
WC TUR STD 00008	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	10 NTU
WC TUR STD 00009	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	1000 NTU
WC TUR STD 00010	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	0.02 NTU
WC TUR STD2 00056	12/04/19	12/03/19	H2O, Lot 1	100 mL	WC_TUR_STD1_00001	2.5 mL	Turbidity	100 NTU
.WC TUR STD1 00001	11/27/20		HACH, Lot A8330		(Purchased Reagent)		Turbidity	4000 NTU

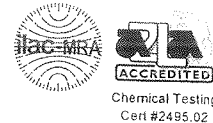
Reagent

MT_MS_ICs2_00002



SPEXertificate®

Certificate of Reference Material



Catalog Number: CL-CAL-2 **Lot No.** CL2-69WGY
Description: Instrument Calibration Standard 2
Matrix: 5% HNO₃ / Tr. Tart. Acid / Tr. HF

This CLARITAS PPT® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.6 µg/mL	±0.5 µg/mL	3151*	Mn	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3132*
Al	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3101a*	Mo	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3134*
As	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3103a*	Na	100 µg/mL	100 µg/mL	±0.5 µg/mL	3152a*
Ba	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3104a*	Ni	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3136*
Be	100 µg/mL	100 µg/mL	±0.5 µg/mL	3105a*	Pb	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3128*
Ca	100 µg/mL	100 µg/mL	±0.5 µg/mL	3109a*	Sb	100 µg/mL	100 µg/mL	±0.5 µg/mL	3102a*
Cd	100 µg/mL	99.0 µg/mL	±0.5 µg/mL	3108*	Se	100 µg/mL	100 µg/mL	±0.5 µg/mL	3149*
Co	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3113*	Sn	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3161a*
Cr	100 µg/mL	100 µg/mL	±0.5 µg/mL	3112a*	Sr	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3153a*
Cu	100 µg/mL	101 µg/mL	±0.5 µg/mL	3114*	Ti	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3162a*
Fe	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3126a*	Tl	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3158*
K	100 µg/mL	100 µg/mL	±0.5 µg/mL	3141a*	V	100 µg/mL	100 µg/mL	±0.5 µg/mL	3165*
Mg	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3131a*	Zn	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3168a*

* - indicates NIST SRM

† - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# CL5-135MKB, CL6-41MKB, CL-1-112YJ, CL1372YP

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.08	Eu	<0.1	In	<20	P	<400	Ru	2
B	<4	Ga	<0.01	Ir	<0.1	Pd	<50	Sc	<0.4
Bi	2	Gd	0.4	La	5	Pr	0.04	Si	<300
Ce	0.9	Ge	<0.7	Li	0.5	Pt	<0.1	Sm	3
Cs	0.3	Hf	0.07	Lu	<0.02	Rb	3	Ta	0.6
Dy	<0.01	Hg	<0.2	Nb	0.4	Re	1	Tb	<0.01
Er	<0.01	Ho	<0.01	Nd	0.1	Rh	4	Te	<1
								Zr	3



116696
 ID: MI_MS_JCS2_00002
 Exp: 08/30/20 Pppl U/LE Cph 08/13/19
 1000ppm Cal Std 2 SPEX

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: AUG -- 2019

Certifying Officer: Katherine Cullinan
 Katherine Cullinan, QC Manager

Page 1 of 2
 Rev. 0

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METALS

COVER PAGE
METALS

Lab Name: Eurofins Calscience Job Number: 570-14372-1

SDG No.: _____

Project: CH661 / 692670.61.SW

Client Sample ID
A2BMP0007S018
FBQW1870Q001

Lab Sample ID
570-14372-1
570-14372-2

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: A2BMP0007S018

Lab Sample ID: 570-14372-1

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/28/2019 08:13

Reporting Basis: WET

Date Received: 12/02/2019 16:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: A2BMP0007S018

Lab Sample ID: 570-14372-1

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/28/2019 08:13

Reporting Basis: WET

Date Received: 12/02/2019 16:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L			1	200.8
7440-50-8	Copper	0.00346	0.00100	0.000140	mg/L			1	200.8
7439-92-1	Lead	0.000706	0.00100	0.000089 8	mg/L	J		1	200.8

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: A2BMP0007S018

Lab Sample ID: 570-14372-1

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/28/2019 08:13

Reporting Basis: WET

Date Received: 12/02/2019 16:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L		H F2 F1	1	200.8
7440-50-8	Copper	0.000538	0.00100	0.000140	mg/L	J	H F2 F1	1	200.8
7439-92-1	Lead	ND	0.00100	0.000089 8	mg/L		H F2 F1	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: FBQW1870Q001

Lab Sample ID: 570-14372-2

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/28/2019 07:00

Reporting Basis: WET

Date Received: 12/02/2019 16:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		F1 F2	1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: FBQW1870Q001

Lab Sample ID: 570-14372-2

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/28/2019 07:00

Reporting Basis: WET

Date Received: 12/02/2019 16:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L			1	200.8
7440-50-8	Copper	ND	0.00100	0.000140	mg/L			1	200.8
7439-92-1	Lead	ND	0.00100	0.000089 8	mg/L			1	200.8

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-38297/4 12/11/2019 11:31				CCV 570-38297/8 12/11/2019 11:42							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<i>Cadmium</i>	102.7		100	103	100.3		100	100				
<i>Copper</i>	101.7		100	102	102.0		100	102				
<i>Lead</i>	105.0		100	105	102.0		100	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-38398/37 12/11/2019 11:31				CCV 570-38398/3 12/11/2019 15:09				CCV 570-38398/14 12/11/2019 15:42			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	102.7		100	103	105.6		100	106	102.9		100	103
Copper	101.7		100	102	107.7		100	108	102.7		100	103
Lead	105.0		100	105	104.0		100	104	102.0		100	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38398/27 12/11/2019 16:18				CCV 570-38398/34 12/11/2019 16:38							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.4		100	101	102.8		100	103				
Copper	100.3		100	100	100.8		100	101				
Lead	99.78		100	100	100.2		100	100				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-38471/35 12/11/2019 11:31				CCV 570-38471/15 12/11/2019 17:35				CCV 570-38471/25 12/11/2019 18:08			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	102.7		100	103	101.2		100	101	100.4		100	100
Copper	101.7		100	102	107.0		100	107	107.1		100	107
Lead	105.0		100	105	103.7		100	104	103.8		100	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38471/29 12/11/2019 18:34											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.5		100	102								
Copper	106.3		100	106								
Lead	101.8		100	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38297/8 12/11/2019 11:42				ICVL 570-38297/14 12/11/2019 11:58							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<i>Cadmium</i>	100.3		100	100	0.9898	J	1.00	99				
<i>Copper</i>	102.0		100	102	1.036		1.00	104				
<i>Lead</i>	102.0		100	102	0.9989	J	1.00	100				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38398/3 12/11/2019 15:09				ICVL 570-38398/5 12/11/2019 15:16				CCV 570-38398/14 12/11/2019 15:42			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	105.6		100	106	0.9807	J	1.00	98	102.9		100	103
Copper	107.7		100	108	1.083		1.00	108	102.7		100	103
Lead	104.0		100	104	0.9975	J	1.00	100	102.0		100	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38398/27 12/11/2019 16:18				CCV 570-38398/34 12/11/2019 16:38							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.4		100	101	102.8		100	103				
Copper	100.3		100	100	100.8		100	101				
Lead	99.78		100	100	100.2		100	100				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICVL 570-38471/5 12/11/2019 17:08				CCV 570-38471/15 12/11/2019 17:35				CCV 570-38471/25 12/11/2019 18:08			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	1.065		1.00	107	101.2		100	101	100.4		100	100
Copper	1.023		1.00	102	107.0		100	107	107.1		100	107
Lead	1.021		1.00	102	103.7		100	104	103.8		100	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38471/29 12/11/2019 18:34											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.5		100	102								
Copper	106.3		100	106								
Lead	101.8		100	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	ICV 570-37330/2-A 12/09/2019 16:21				CCV 570-37330/10-A 12/09/2019 16:28				CCV 570-37330/10-A 12/09/2019 16:59			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00994 8		0.0100	99	0.00400 0		0.00400	100	0.00397 4		0.00400	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	CCV 570-37330/10-A 12/09/2019 17:27											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00397 2		0.00400	99								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	ICV 570-38006/2-A 12/10/2019 12:36				CCV 570-38006/10-A 12/10/2019 20:32				CCV 570-38006/10-A 12/10/2019 22:05			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.01014		0.0100	101	0.00375 8		0.00400	94	0.00375 4		0.00400	94

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	CCV 570-38006/10-A 12/10/2019 22:32											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00372 8		0.00400	93								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Method: 245.1 Instrument ID: HG8
 Lab Sample ID: CRA 570-37769/12-A Concentration Units: mg/L
 CRQL Check Standard Source: HG_1ppm STD_00008

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0005427		109	65-135

Lab Sample ID: CRA 570-38006/12-A Concentration Units: mg/L
 CRQL Check Standard Source: HG_1ppm STD_00008

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0004955		99	65-135

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-38297/7 12/11/2019 11:39		CCB 570-38297/13 12/11/2019 11:56					
		Found	C	Found	C	Found	C	Found	C
<i>Cadmium</i>	1.00	ND		ND					
<i>Copper</i>	1.00	ND		ND					
<i>Lead</i>	1.00	ND		ND					

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-38398/39 12/11/2019 11:39		CCB 570-38398/4 12/11/2019 15:13		CCB 570-38398/15 12/11/2019 15:45		CCB 570-38398/28 12/11/2019 16:22	
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		ND		ND		ND	
Copper	1.00	ND		ND		ND		ND	
Lead	1.00	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 570-38398/35 12/11/2019 16:41							
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND							
Copper	1.00	ND							
Lead	1.00	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-38471/37 12/11/2019 11:39		CCB 570-38471/16 12/11/2019 17:39		CCB 570-38471/26 12/11/2019 18:12		CCB 570-38471/30 12/11/2019 18:39	
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		ND		ND		ND	
Copper	1.00	ND		ND		ND		ND	
Lead	1.00	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-37330/3-A 12/09/2019 16:24		CCB 570-37330/11-A 12/09/2019 16:31		CCB 570-37330/11-A 12/09/2019 17:01		CCB 570-37330/11-A 12/09/2019 17:29	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.000200	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-38006/3-A 12/10/2019 12:38		CCB 570-38006/11-A 12/10/2019 20:34		CCB 570-38006/11-A 12/10/2019 22:07		CCB 570-38006/11-A 12/10/2019 22:35	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.000200	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job No.: 570-14372-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-38088/1-A
Instrument Code: ICPMS05 Batch No.: 38398

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-14372-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-38288/1-A
Instrument Code: ICPMS05 Batch No.: 38471

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-37642/1-A
Instrument Code: HG8 Batch No.: 37882

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-14372-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-38115/1-B
Instrument Code: HG8 Batch No.: 38034

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.: _____

Lab Sample ID: ICSA 570-38297/10

Instrument ID: ICPMS05

Lab File ID: 191211E2_iCal.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Aluminum	10000	9800	98
Antimony		0.248	
Arsenic		0.136	
Barium		0.184	
Beryllium		0.0024	
Boron		0.808	
Cadmium		-0.0540	
Calcium	30000	30087	100
Chromium		0.0836	
Cobalt		0.0738	
Copper		0.0633	
Iron	25000	24594	98
Lead		0.0370	
Magnesium	10000	9841	98
Manganese		0.339	
Molybdenum	200	205	103
Nickel		0.320	
Potassium	10000	10313	103
Selenium		-0.114	
Silver		0.0608	
Sodium	25000	25243	101
Strontium		0.411	
Thallium		0.0189	
Tin		0.657	
Titanium	200	208	104
Vanadium		0.0870	
Zinc		0.371	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.: _____

Lab Sample ID: ICSAB 570-38297/11

Instrument ID: ICPMS05

Lab File ID: 191211E2_iCal.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Aluminum	10000	9621	96
Antimony		0.177	
Arsenic	10.0	10.8	108
Barium		0.196	
Beryllium		0.0031	
Boron		0.418	
Cadmium	10.0	9.85	99
Calcium	30000	29415	98
Chromium	20.0	20.2	101
Cobalt	20.0	20.1	100
Copper	20.0	19.5	98
Iron	25000	23438	94
Lead		0.0288	
Magnesium	10000	9612	96
Manganese	20.0	19.1	96
Molybdenum	200	204	102
Nickel	20.0	20.1	101
Potassium	10000	10083	101
Selenium	10.0	10.00	100
Silver	5.00	5.09	102
Sodium	25000	24751	99
Strontium		0.415	
Thallium		0.0157	
Tin		0.258	
Titanium	200	202	101
Vanadium	20.0	21.4	107
Zinc	10.0	9.91	99

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: A2BMP0007S018 MS

Lab ID: 570-14372-1 MS

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.: _____

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.02837	ND	0.100	28	80-120	F1	200.8
Copper	0.02811	0.000538	0.100	28	80-120	F1	200.8
Lead	0.02395	ND	0.100	24	80-120	F1	200.8

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS

Client ID: FBQW1870Q001 MS Lab ID: 570-14372-2 MS
 Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.003906	ND	0.0100	39	57-141	F1	245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-14349-A-1-B MS
 Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.1128	0.00118	0.100	112	80-120		200.8
Copper	0.1333	0.0315	0.100	102	80-120		200.8
Lead	0.1243	0.0239	0.100	100	80-120		200.8

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: _____ Lab ID: 570-14597-G-1-E MS
 Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.009343	ND	0.0100	93	57-141		245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: A2BMP0007S018 MSD

Lab ID: 570-14372-1 MSD

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.: _____

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.04582	0.100	46	80-120	47	20	F2 F1	200.8
Copper	0.04611	0.100	46	80-120	49	20	F2 F1	200.8
Lead	0.04242	0.100	42	80-120	56	20	F2 F1	200.8

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS

Client ID: FBQW1870Q001 MSD Lab ID: 570-14372-2 MSD
 Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009746	0.0100	97	57-141	86	10	F2	245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-14349-A-1-C MSD
 Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1102	0.100	109	80-120	2	20		200.8
Copper	0.1358	0.100	104	80-120	2	20		200.8
Lead	0.1264	0.100	102	80-120	2	20		200.8

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: _____ Lab ID: 570-14597-G-1-F MSD
 Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.001019	0.0100	10	57-141	161	10	F2 F1	245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 METALS - TOTAL RECOVERABLE

Lab ID: LCS 570-38088/2-A

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1036		104	80	120		200.8
Copper	0.100	0.1007		101	80	120		200.8
Lead	0.100	0.09971		100	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - TOTAL RECOVERABLE

Lab ID: LCSD 570-38088/3-A

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1089	0.100	109	80-120	5	20		200.8
Copper	0.1044	0.100	104	80-120	4	20		200.8
Lead	0.1066	0.100	107	80-120	7	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-38288/2-A

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1018		102	80	120		200.8
Copper	0.100	0.1037		104	80	120		200.8
Lead	0.100	0.1018		102	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-38288/3-A

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1037	0.100	104	80-120	2	20		200.8
Copper	0.1021	0.100	102	80-120	2	20		200.8
Lead	0.1006	0.100	101	80-120	1	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 570-37642/2-A

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.009715		97	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS

Lab ID: LCSD 570-37642/3-A

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009795	0.0100	98	85-121	1	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-38115/2-B

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.009138		91	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-38115/3-B

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009187	0.0100	92	85-121	1	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience

Job Number: 570-14372-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 06/04/2013 00:00

Prep Method: 200.8

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.000128
Copper	65	0.001	0.00014
Lead	207	0.001	0.0000898

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job Number: 570-14372-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 06/04/2013 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.128
Copper	65	1	0.14
Lead	207	1	0.09

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-14372-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 06/04/2013 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.000128
Copper	65	0.001	0.00014
Lead	207	0.001	0.0000898

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-14372-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

XMDL Date: 06/04/2013 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.128
Copper	65	1	0.14
Lead	207	1	0.09

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience

Job Number: 570-14372-1

SDG Number: _____

Matrix: Water

Instrument ID: HG8

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience Job Number: 570-14372-1
SDG Number: _____
Matrix: Water Instrument ID: HG8
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-14372-1

SDG Number: _____

Matrix: Water

Instrument ID: HG8

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-14372-1
SDG Number: _____
Matrix: Water Instrument ID: HG8
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-14372-1

SDG No.: _____

Instrument ID: ICPMS05

Date: 04/17/2017 06:04

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Cadmium		10	200.8
Copper		50	200.8
Lead		20	200.8

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-14372-1

SDG No.: _____

Instrument ID: HG8

Date: 04/17/2017 05:54

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Mercury		10	245.1

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.: _____

Prep Method: 200.8

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-38088/1-A	12/10/2019 13:00	38088		50	50
LCS 570-38088/2-A	12/10/2019 13:00	38088		50	50
LCSD 570-38088/3-A	12/10/2019 13:00	38088		50	50
570-14349-A-1-B MS	12/10/2019 13:00	38088		50	50
570-14349-A-1-C MSD	12/10/2019 13:00	38088		50	50
570-14372-1	12/10/2019 13:00	38088		50	50
570-14372-2	12/10/2019 13:00	38088		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-37642/1-A	12/08/2019 10:30	37642		50	100
LCS 570-37642/2-A	12/08/2019 10:30	37642		50	100
LCSD 570-37642/3-A	12/08/2019 10:30	37642		50	100
570-14372-2	12/08/2019 10:30	37642		50	100
570-14372-2 MS	12/08/2019 10:30	37642		50	100
570-14372-2 MSD	12/08/2019 10:30	37642		50	100
570-14372-1	12/08/2019 10:30	37642		50	100

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-38115/1-B	12/10/2019 17:50	38121		50	100
LCS 570-38115/2-B	12/10/2019 17:50	38121		50	100
LCSD 570-38115/3-B	12/10/2019 17:50	38121		50	100
570-14597-G-1-E MS	12/10/2019 17:50	38121		50	100
570-14597-G-1-F MSD	12/10/2019 17:50	38121		50	100
570-14372-1	12/10/2019 17:50	38121		50	100

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 12/11/2019 11:22 End Date: 12/11/2019 12:13

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICIS 570-38297/1	1		11:22	X	X	X																									
IC 570-38297/2	1		11:25	X	X	X																									
ZZZZZZ			11:28																												
ICV 570-38297/4	1		11:31	X	X	X																									
ZZZZZZ			11:33																												
ICV 570-38297/6	1		11:36	X	X	X																									
ICB 570-38297/7	1		11:39	X	X	X																									
CCV 570-38297/8	1		11:42	X	X	X																									
ZZZZZZ			11:44																												
ICSA 570-38297/10	1		11:47	X	X	X																									
ICSAB 570-38297/11	1		11:50	X	X	X																									
ZZZZZZ			11:53																												
CCB 570-38297/13	1		11:56	X	X	X																									
ICVL 570-38297/14	1		11:58	X	X	X																									
ZZZZZZ			12:01																												
ZZZZZZ			12:04																												
ZZZZZZ			12:07																												
CCV 570-38297/18			12:09																												
CCB 570-38297/19			12:13																												

Prep Types: _____
=

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.: _____

Instrument ID: ICPMS05

Analysis Method: 200.8

Start Date: 12/11/2019 11:31

End Date: 12/11/2019 16:44

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICV 570-38398/37	1		11:31	X	X	X																									
ICV 570-38398/38	1		11:36	X	X	X																									
ICB 570-38398/39	1		11:39	X	X	X																									
ICIS 570-38398/1			15:03	X	X	X																									
IC 570-38398/2	1		15:06	X	X	X																									
CCV 570-38398/3	1		15:09	X	X	X																									
CCB 570-38398/4	1		15:13	X	X	X																									
ICVL 570-38398/5	1		15:16	X	X	X																									
MB 570-38088/1-A	1	R	15:19	X	X	X																									
LCS 570-38088/2-A	1	R	15:21	X	X	X																									
LCSD 570-38088/3-A	1	R	15:24	X	X	X																									
ZZZZZZ			15:28																												
570-14349-A-1-B MS	1	R	15:31	X	X	X																									
570-14349-A-1-C MSD	1	R	15:34	X	X	X																									
ZZZZZZ			15:36																												
ZZZZZZ			15:39																												
CCV 570-38398/14	1		15:42	X	X	X																									
CCB 570-38398/15	1		15:45	X	X	X																									
CCB 570-38398/16			15:48																												
ZZZZZZ			15:50																												
ZZZZZZ			15:53																												
ZZZZZZ			15:56																												
ZZZZZZ			15:59																												
ZZZZZZ			16:01																												
ZZZZZZ			16:04																												
ZZZZZZ			16:07																												
ZZZZZZ			16:10																												
ZZZZZZ			16:12																												
ZZZZZZ			16:15																												
CCV 570-38398/27	1		16:18	X	X	X																									
CCB 570-38398/28	1		16:22	X	X	X																									
ZZZZZZ			16:24																												
570-14372-1	1	R	16:27	X	X	X																									
570-14372-2	1	R	16:30	X	X	X																									
ZZZZZZ			16:33																												
ZZZZZZ			16:35																												
CCV 570-38398/34	1		16:38	X	X	X																									
CCB 570-38398/35	1		16:41	X	X	X																									
CCB 570-38398/36			16:44																												

Prep Types: _____
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG No.: _____

Instrument ID: ICPMS05

Analysis Method: 200.8

Start Date: 12/11/2019 11:31

End Date: 12/11/2019 19:13

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICV 570-38471/35	1		11:31	X	X	X																									
ICV 570-38471/36	1		11:36	X	X	X																									
ICB 570-38471/37	1		11:39	X	X	X																									
ICIS 570-38471/1			16:54	X	X	X																									
IC 570-38471/2	1		16:57	X	X	X																									
CCV 570-38471/3			16:59																												
CCB 570-38471/4			17:05																												
ICVL 570-38471/5	1		17:08	X	X	X																									
ZZZZZZ			17:11																												
ZZZZZZ			17:13																												
ZZZZZZ			17:16																												
ZZZZZZ			17:19																												
ZZZZZZ			17:22																												
ZZZZZZ			17:24																												
ZZZZZZ			17:27																												
ZZZZZZ			17:30																												
ZZZZZZ			17:32																												
CCV 570-38471/15	1		17:35	X	X	X																									
CCB 570-38471/16	1		17:39	X	X	X																									
ZZZZZZ			17:42																												
ZZZZZZ			17:45																												
ZZZZZZ			17:47																												
ZZZZZZ			17:50																												
MB 570-38288/1-A	1	D	17:56	X	X	X																									
LCS 570-38288/2-A	1	D	17:58	X	X	X																									
LCSD 570-38288/3-A	1	D	18:01	X	X	X																									
570-14372-1	1	D	18:06	X	X	X																									
CCV 570-38471/25	1		18:08	X	X	X																									
CCB 570-38471/26	1		18:12	X	X	X																									
570-14372-1 MS	1	D	18:15	X	X	X																									
570-14372-1 MSD	1	D	18:18	X	X	X																									
CCV 570-38471/29	1		18:34	X	X	X																									
CCB 570-38471/30	1		18:39	X	X	X																									
ZZZZZZ			18:59																												
ZZZZZZ			19:02																												
CCV 570-38471/33			19:07																												
CCB 570-38471/34			19:13																												

Prep Types:

D = Dissolved

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Hg	Analytes																											
ZZZZZZ			15:15																													
ZZZZZZ			15:17																													
ICV 570-37769/2-A			15:57																													
IC 570-37769/4-A			15:59	X																												
IC 570-37769/5-A			16:01	X																												
ICIS 570-37769/1-A			16:03	X																												
ICIS 570-37769/1-A			16:04	X																												
IC 570-37769/4-A			16:06	X																												
IC 570-37769/5-A			16:08	X																												
IC 570-37769/6-A			16:11	X																												
IC 570-37769/7-A			16:13	X																												
IC 570-37769/8-A			16:15	X																												
IC 570-37769/9-A			16:17	X																												
ICV 570-37330/2-A	1		16:21	X																												
ICB 570-37330/3-A	1		16:24	X																												
CRA 570-37769/12-A	1		16:26	X																												
CCV 570-37330/10-A	1		16:28	X																												
CCB 570-37330/11-A	1		16:31	X																												
MB 570-37642/1-A	1	T	16:36	X																												
LCS 570-37642/2-A	1	T	16:39	X																												
LCSD 570-37642/3-A	1	T	16:41	X																												
570-14372-2	1	T	16:43	X																												
570-14372-2 MS	1	T	16:46	X																												
570-14372-2 MSD	1	T	16:48	X																												
ZZZZZZ			16:50																													
ZZZZZZ			16:52																													
ZZZZZZ			16:55																													
ZZZZZZ			16:57																													
CCV 570-37330/10-A	1		16:59	X																												
CCB 570-37330/11-A	1		17:01	X																												
570-14372-1	1	T	17:04	X																												
ZZZZZZ			17:06																													
ZZZZZZ			17:08																													
ZZZZZZ			17:11																													
ZZZZZZ			17:13																													
ZZZZZZ			17:15																													
ZZZZZZ			17:18																													
ZZZZZZ			17:20																													
ZZZZZZ			17:22																													
ZZZZZZ			17:24																													
CCV 570-37330/10-A	1		17:27	X																												
CCB 570-37330/11-A	1		17:29	X																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			17:31																												
ZZZZZZ			17:33																												
ZZZZZZ			17:36																												
ZZZZZZ			17:38																												
ZZZZZZ			17:40																												
CCV 570-37330/10-A			17:43																												
CCB 570-37330/11-A			17:45																												
ZZZZZZ			17:54																												
ZZZZZZ			17:56																												
ZZZZZZ			17:59																												
ZZZZZZ			18:01																												
ZZZZZZ			18:03																												
ZZZZZZ			18:06																												
ZZZZZZ			18:08																												
ZZZZZZ			18:10																												
ZZZZZZ			18:12																												
ZZZZZZ			18:15																												
CCV 570-37330/10-A			18:17																												
CCB 570-37330/11-A			18:19																												
ZZZZZZ			18:22																												
ZZZZZZ			18:24																												
ZZZZZZ			18:26																												
ZZZZZZ			18:28																												
ZZZZZZ			18:31																												
ZZZZZZ			18:33																												
ZZZZZZ			18:35																												
ZZZZZZ			18:38																												
ZZZZZZ			18:40																												
ZZZZZZ			18:42																												
CCV 570-37330/10-A			18:45																												
CCB 570-37330/11-A			18:47																												
ZZZZZZ			18:49																												
ZZZZZZ			18:51																												
ZZZZZZ			18:54																												
ZZZZZZ			18:56																												
ZZZZZZ			18:58																												
ZZZZZZ			19:01																												
ZZZZZZ			19:03																												
ZZZZZZ			19:05																												
ZZZZZZ			19:07																												
ZZZZZZ			19:10																												
CCV 570-37330/10-A			19:12																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
CCB 570-37330/11-A			19:14																												
ZZZZZZ			19:17																												
ZZZZZZ			19:19																												
ZZZZZZ			19:21																												
ZZZZZZ			19:24																												
ZZZZZZ			19:26																												
ZZZZZZ			19:28																												
ZZZZZZ			19:30																												
ZZZZZZ			19:33																												
ZZZZZZ			19:35																												
ZZZZZZ			19:37																												
CCV 570-37330/10-A			19:40																												
CCB 570-37330/11-A			19:42																												
ZZZZZZ			19:44																												
ZZZZZZ			19:46																												
ZZZZZZ			19:49																												
ZZZZZZ			19:51																												
ZZZZZZ			19:53																												
ZZZZZZ			19:56																												
ZZZZZZ			19:58																												
ZZZZZZ			20:00																												
ZZZZZZ			20:02																												
ZZZZZZ			20:05																												
CCV 570-37330/10-A			20:07																												
CCB 570-37330/11-A			20:09																												
ZZZZZZ			20:12																												
ZZZZZZ			20:14																												
ZZZZZZ			20:16																												
ZZZZZZ			20:19																												
ZZZZZZ			20:21																												
ZZZZZZ			20:23																												
ZZZZZZ			20:25																												
ZZZZZZ			20:28																												
ZZZZZZ			20:30																												
ZZZZZZ			20:32																												
CCV 570-37330/10-A			20:35																												
CCB 570-37330/11-A			20:37																												
ZZZZZZ			20:39																												
ZZZZZZ			20:42																												
ZZZZZZ			20:44																												
ZZZZZZ			20:46																												
ZZZZZZ			20:48																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			20:51																												
ZZZZZZ			20:53																												
ZZZZZZ			20:55																												
ZZZZZZ			20:58																												
CCV 570-37330/10-A			21:00																												
CCB 570-37330/11-A			21:02																												

Prep Types: _____
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/10/2019 12:17 End Date: 12/10/2019 23:51

Lab Sample Id	D/F	Type	Time	Hg	Analytes																											
ICIS 570-38006/1-A			12:17	X																												
IC 570-38006/4-A			12:19	X																												
IC 570-38006/5-A			12:22	X																												
IC 570-38006/6-A			12:24	X																												
IC 570-38006/7-A			12:26	X																												
IC 570-38006/8-A			12:29	X																												
IC 570-38006/9-A			12:31	X																												
ICV 570-38006/2-A	1		12:36	X																												
ICB 570-38006/3-A	1		12:38	X																												
CRA 570-38006/12-A	1		12:40	X																												
CCV 570-38006/10-A			12:42																													
CCB 570-38006/11-A			12:45																													
ZZZZZZ			13:11																													
ZZZZZZ			13:14																													
ZZZZZZ			13:16																													
ZZZZZZ			13:18																													
ZZZZZZ			13:21																													
ZZZZZZ			13:23																													
CCV 570-38006/10-A			13:25																													
CCB 570-38006/11-A			13:27																													
ZZZZZZ			15:10																													
ZZZZZZ			15:13																													
ZZZZZZ			15:15																													
ZZZZZZ			15:17																													
ZZZZZZ			15:20																													
ZZZZZZ			15:22																													
ZZZZZZ			15:24																													
ZZZZZZ			15:26																													
ZZZZZZ			15:29																													
ZZZZZZ			15:31																													
CCV 570-38006/10-A			15:33																													
CCB 570-38006/11-A			15:36																													
ZZZZZZ			15:38																													
ZZZZZZ			15:40																													
ZZZZZZ			15:42																													
ZZZZZZ			15:45																													
ZZZZZZ			15:47																													
CCV 570-38006/10-A			15:49																													
CCB 570-38006/11-A			15:51																													
ZZZZZZ			16:14																													
ZZZZZZ			16:16																													
ZZZZZZ			16:18																													

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/10/2019 12:17 End Date: 12/10/2019 23:51

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			16:21																												
ZZZZZZ			16:23																												
ZZZZZZ			16:25																												
ZZZZZZ			16:28																												
ZZZZZZ			16:30																												
ZZZZZZ			16:32																												
ZZZZZZ			16:34																												
CCV 570-38006/10-A			16:37																												
CCB 570-38006/11-A			16:39																												
CCB 570-38006/11-A			16:57																												
ZZZZZZ			16:59																												
ZZZZZZ			17:01																												
ZZZZZZ			17:03																												
ZZZZZZ			17:06																												
ZZZZZZ			17:08																												
ZZZZZZ			17:10																												
ZZZZZZ			17:12																												
ZZZZZZ			17:15																												
ZZZZZZ			17:17																												
ZZZZZZ			17:19																												
CCV 570-38006/10-A			17:21																												
CCB 570-38006/11-A			17:24																												
ZZZZZZ			17:26																												
ZZZZZZ			17:28																												
CCV 570-38006/10-A			17:31																												
CCB 570-38006/11-A			17:33																												
ZZZZZZ			18:10																												
ZZZZZZ			18:12																												
ZZZZZZ			18:14																												
ZZZZZZ			18:17																												
ZZZZZZ			18:19																												
ZZZZZZ			18:21																												
ZZZZZZ			18:23																												
ZZZZZZ			18:26																												
ZZZZZZ			18:28																												
ZZZZZZ			18:30																												
CCV 570-38006/10-A			18:33																												
CCB 570-38006/11-A			18:35																												
ZZZZZZ			18:37																												
ZZZZZZ			18:39																												
ZZZZZZ			18:42																												
ZZZZZZ			18:44																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Instrument ID: HG8 Analysis Method: 245.1
 Start Date: 12/10/2019 12:17 End Date: 12/10/2019 23:51

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			18:46																												
ZZZZZZ			18:49																												
ZZZZZZ			18:51																												
ZZZZZZ			18:53																												
ZZZZZZ			18:55																												
ZZZZZZ			18:58																												
CCV 570-38006/10-A			19:00																												
CCB 570-38006/11-A			19:02																												
ZZZZZZ			19:05																												
ZZZZZZ			19:07																												
ZZZZZZ			19:09																												
ZZZZZZ			19:12																												
ZZZZZZ			19:14																												
ZZZZZZ			19:16																												
ZZZZZZ			19:18																												
ZZZZZZ			19:21																												
ZZZZZZ			19:23																												
ZZZZZZ			19:25																												
CCV 570-38006/10-A			19:28																												
CCB 570-38006/11-A			19:30																												
ZZZZZZ			20:30																												
CCV 570-38006/10-A	1		20:32	X																											
CCB 570-38006/11-A	1		20:34	X																											
ZZZZZZ			21:42																												
ZZZZZZ			21:44																												
ZZZZZZ			21:46																												
ZZZZZZ			21:49																												
ZZZZZZ			21:51																												
ZZZZZZ			21:53																												
MB 570-38115/1-B	1	D	21:55	X																											
LCS 570-38115/2-B	1	D	21:58	X																											
LCSD 570-38115/3-B	1	D	22:00	X																											
ZZZZZZ			22:02																												
CCV 570-38006/10-A	1		22:05	X																											
CCB 570-38006/11-A	1		22:07	X																											
570-14597-G-1-E MS	1	D	22:09	X																											
570-14597-G-1-F MSD	1	D	22:12	X																											
ZZZZZZ			22:14																												
570-14372-1	1	D	22:16	X																											
ZZZZZZ			22:18																												
ZZZZZZ			22:21																												
ZZZZZZ			22:23																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/10/2019 12:17 End Date: 12/10/2019 23:51

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			22:25																												
ZZZZZZ			22:28																												
ZZZZZZ			22:30																												
CCV 570-38006/10-A	1		22:32	X																											
CCB 570-38006/11-A	1		22:35	X																											
ZZZZZZ			22:37																												
ZZZZZZ			22:39																												
ZZZZZZ			22:42																												
ZZZZZZ			22:44																												
ZZZZZZ			22:46																												
ZZZZZZ			22:49																												
ZZZZZZ			22:51																												
ZZZZZZ			22:53																												
ZZZZZZ			22:55																												
ZZZZZZ			22:58																												
CCV 570-38006/10-A			23:00																												
CCB 570-38006/11-A			23:02																												
ZZZZZZ			23:05																												
ZZZZZZ			23:07																												
ZZZZZZ			23:09																												
ZZZZZZ			23:12																												
ZZZZZZ			23:14																												
ZZZZZZ			23:16																												
ZZZZZZ			23:19																												
ZZZZZZ			23:21																												
ZZZZZZ			23:23																												
ZZZZZZ			23:26																												
CCV 570-38006/10-A			23:28																												
CCB 570-38006/11-A			23:30																												
ZZZZZZ			23:32																												
ZZZZZZ			23:35																												
ZZZZZZ			23:37																												
ZZZZZZ			23:39																												
ZZZZZZ			23:42																												
ZZZZZZ			23:44																												
ZZZZZZ			23:46																												
CCV 570-38006/10-A			23:49																												
CCB 570-38006/11-A			23:51																												

Prep Types: _____
D = Dissolved

15-IN
 ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/11/2019 End Date: 12/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICIS 570-38297/1	11:22										
IC 570-38297/2	11:25										
ICV 570-38297/4	11:31			97		97		95			
ICV 570-38297/6	11:36			98		98		95			
ICB 570-38297/7	11:39			96		97		95			
CCV 570-38297/8	11:42			96		95		93			
ICSA 570-38297/10	11:47			97		93		94			
ICSAB 570-38297/11	11:50			98		95		97			
CCB 570-38297/13	11:56			99		95		96			
ICVL 570-38297/14	11:58			99		96		97			

15-IN
 ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/11/2019 End Date: 12/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 570-38297/1	11:22										
IC 570-38297/2	11:25										
ICV 570-38297/4	11:31	97									
ICV 570-38297/6	11:36	96									
ICB 570-38297/7	11:39	96									
CCV 570-38297/8	11:42	95									
ICSA 570-38297/10	11:47	100									
ICSAB 570-38297/11	11:50	100									
CCB 570-38297/13	11:56	96									
ICVL 570-38297/14	11:58	99									

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/11/2019 End Date: 12/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICV 570-38398/37	11:31			97				97		95	
ICV 570-38398/38	11:36			98				98		95	
ICB 570-38398/39	11:39			96				97		95	
IC 570-38398/2	15:06										
CCV 570-38398/3	15:09			96				95		92	
CCB 570-38398/4	15:13			98				98		96	
ICVL 570-38398/5	15:16			99				100		98	
MB 570-38088/1-A	15:19			98				97		99	
LCS 570-38088/2-A	15:21			99				97		96	
LCSD 570-38088/3-A	15:24			98				96		93	
570-14349-A-1-B MS	15:31			100				96		94	
570-14349-A-1-C MSD	15:34			97				98		95	
CCV 570-38398/14	15:42			97				95		91	
CCB 570-38398/15	15:45			97				95		92	
CCV 570-38398/27	16:18			98				94		92	
CCB 570-38398/28	16:22			98				93		92	
570-14372-1	16:27			101				93		94	
570-14372-2	16:30			98				98		93	
CCV 570-38398/34	16:38			98				94		89	
CCB 570-38398/35	16:41			98				95		92	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/11/2019 End Date: 12/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-38398/37	11:31	97									
ICV 570-38398/38	11:36	96									
ICB 570-38398/39	11:39	96									
IC 570-38398/2	15:06										
CCV 570-38398/3	15:09	93									
CCB 570-38398/4	15:13	96									
ICVL 570-38398/5	15:16	97									
MB 570-38088/1-A	15:19	96									
LCS 570-38088/2-A	15:21	96									
LCSD 570-38088/3-A	15:24	94									
570-14349-A-1-B MS	15:31	97									
570-14349-A-1-C MSD	15:34	94									
CCV 570-38398/14	15:42	92									
CCB 570-38398/15	15:45	93									
CCV 570-38398/27	16:18	93									
CCB 570-38398/28	16:22	92									
570-14372-1	16:27	93									
570-14372-2	16:30	95									
CCV 570-38398/34	16:38	92									
CCB 570-38398/35	16:41	91									

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/11/2019 End Date: 12/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICV 570-38471/35	11:31			97				97		95	
ICV 570-38471/36	11:36			98				98		95	
ICB 570-38471/37	11:39			96				97		95	
IC 570-38471/2	16:57										
ICVL 570-38471/5	17:08			100				99		100	
CCV 570-38471/15	17:35			95				96		97	
CCB 570-38471/16	17:39			95				96		98	
MB 570-38288/1-A	17:56			93				98		98	
LCS 570-38288/2-A	17:58			94				98		97	
LCSD 570-38288/3-A	18:01			94				94		95	
570-14372-1	18:06			91				94		96	
CCV 570-38471/25	18:08			93				95		95	
CCB 570-38471/26	18:12			95				94		97	
570-14372-1 MS	18:15			95				96		97	
570-14372-1 MSD	18:18			95				95		97	
CCV 570-38471/29	18:34			95				94		96	
CCB 570-38471/30	18:39			95				95		97	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/11/2019 End Date: 12/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-38471/35	11:31	97									
ICV 570-38471/36	11:36	96									
ICB 570-38471/37	11:39	96									
IC 570-38471/2	16:57										
ICVL 570-38471/5	17:08	100									
CCV 570-38471/15	17:35	94									
CCB 570-38471/16	17:39	97									
MB 570-38288/1-A	17:56	95									
LCS 570-38288/2-A	17:58	96									
LCSD 570-38288/3-A	18:01	96									
570-14372-1	18:06	94									
CCV 570-38471/25	18:08	95									
CCB 570-38471/26	18:12	95									
570-14372-1 MS	18:15	97									
570-14372-1 MSD	18:18	95									
CCV 570-38471/29	18:34	96									
CCB 570-38471/30	18:39	96									

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 38088 Batch Start Date: 12/10/19 13:00 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: 12/10/19 15:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MT: 1:1 HCl 00002	MT: 1:1 HNO3 00001	MT_ICP_Spike1 00005
MB 570-38088/1		200.8, 200.8			50 mL	50 mL	1 mL	0.5 mL	
LCS 570-38088/2		200.8, 200.8			50 mL	50 mL	1 mL	0.5 mL	50 uL
LCSD 570-38088/3		200.8, 200.8			50 mL	50 mL	1 mL	0.5 mL	50 uL
570-14349-A-1 MS		200.8, 200.8	R	<2	50 mL	50 mL	1 mL	0.5 mL	50 uL
570-14349-A-1 MSD		200.8, 200.8	R	<2	50 mL	50 mL	1 mL	0.5 mL	50 uL
570-14372-F-1	A2BMP0007S018	200.8, 200.8	R	<2	50 mL	50 mL	1 mL	0.5 mL	
570-14372-E-2	FBQW1870Q001	200.8, 200.8	R	<2	50 mL	50 mL	1 mL	0.5 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00003	MT_MS_SPIKE_3 00002				
MB 570-38088/1		200.8, 200.8							
LCS 570-38088/2		200.8, 200.8		50 uL	0.25 mL				
LCSD 570-38088/3		200.8, 200.8		50 uL	0.25 mL				
570-14349-A-1 MS		200.8, 200.8	R	50 uL	0.25 mL				
570-14349-A-1 MSD		200.8, 200.8	R	50 uL	0.25 mL				
570-14372-F-1	A2BMP0007S018	200.8, 200.8	R						
570-14372-E-2	FBQW1870Q001	200.8, 200.8	R						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 38088 Batch Start Date: 12/10/19 13:00 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: 12/10/19 15:30

Batch Notes	
Batch Comment	DISPENSERS- D-30/MD-032
Lot # of hydrochloric acid	MR013019A
Lot # of Nitric Acid	MR013019B
Hot Block ID	12
Oven, Bath or Block Temperature 1	94.6 Degrees C
Oven, Bath or Block Temperature 2	94.6 Degrees C
pH Paper ID	M006-47-07
Pipette ID	P-116/P-069
Thermometer ID	31465640
Digestion Tube/Cup ID	J3330884566
Uncorrected Temperature	95 Degrees C
Uncorrected Temperature 2	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 38288 Batch Start Date: 12/03/19 12:00 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00001	MT_ICP_Spike1 00005
MB 570-38288/1		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-38288/2		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
LCSD 570-38288/3		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-14372-D-1	A2BMP0007S018	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14372-D-1 MS	A2BMP0007S018	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-14372-D-1 MSD	A2BMP0007S018	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00003	MT_MS_SPIKE_3 00002				
MB 570-38288/1		Filtration, 200.8							
LCS 570-38288/2		Filtration, 200.8		50 uL	0.25 mL				
LCSD 570-38288/3		Filtration, 200.8		50 uL	0.25 mL				
570-14372-D-1	A2BMP0007S018	Filtration, 200.8	D						
570-14372-D-1 MS	A2BMP0007S018	Filtration, 200.8	D	50 uL	0.25 mL				
570-14372-D-1 MSD	A2BMP0007S018	Filtration, 200.8	D	50 uL	0.25 mL				

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 38471 Batch Start Date: 12/11/19 11:31 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_BLK_1 00002	MT_MS_CCV 00005	MT_MS_IC 00008	MT_MS_ICV1 00002	MT_MS_ICV2 00003	MT_MS_LL 00006
IC 570-38471/2		200.8				# mL			
ICVL 570-38471/5		200.8							# mL
CCV 570-38471/15		200.8			# mL				
CCB 570-38471/16		200.8		# mL					
CCV 570-38471/25		200.8			# mL				
CCB 570-38471/26		200.8		# mL					
CCV 570-38471/29		200.8			# mL				
CCB 570-38471/30		200.8		# mL					
ICV 570-38471/35		200.8					# mL		
ICV 570-38471/36		200.8						# mL	
ICB 570-38471/37		200.8		# mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 37330 Batch Start Date: 12/06/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/06/19 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00012	HG_1ppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
ICV 570-37330/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-37330/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-37330/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-37330/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
ICV 570-37330/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-37330/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-37330/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-37330/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 37330 Batch Start Date: 12/06/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/06/19 12:00

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12:00
Digestion Start Time	10:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 37642 Batch Start Date: 12/08/19 10:30 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 12/08/19 12:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	HG_lppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
MB 570-37642/1		245.1, 245.1			50 mL	100 mL		2.5 mL	4 mL
LCS 570-37642/2		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-37642/3		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14372-E-2	FBQW1870Q001	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL
570-14372-E-2	FBQW1870Q001	245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
MS 570-14372-E-2	FBQW1870Q001	245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
MSD 570-14372-F-1	A2BMP0007S018	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
MB 570-37642/1		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-37642/2		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-37642/3		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-14372-E-2	FBQW1870Q001	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-14372-E-2	FBQW1870Q001	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
MS 570-14372-E-2	FBQW1870Q001	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
MSD 570-14372-F-1	A2BMP0007S018	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 37642 Batch Start Date: 12/08/19 10:30 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 12/08/19 12:30

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12/08/2019 12:30
Digestion Start Time	12/08/2019 10:30
Digestion Unit ID	Block 3
Sulfuric Acid Lot Number	022376
Nitric Acid ID	026291
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 37769 Batch Start Date: 12/09/19 11:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/09/19 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg_1ppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001	Hg_KMnO4 00002
CRA 570-37769/12		7470A, 245.1		50 mL	100 mL	25 uL	2.5 mL	4 mL	7.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001				
CRA 570-37769/12		7470A, 245.1		3 mL	1.25 mL				

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	13:00
Digestion Start Time	11:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 38006 Batch Start Date: 12/10/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/10/19 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00012	HG_1ppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
ICV 570-38006/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-38006/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-38006/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-38006/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CRA 570-38006/12		7470A, 245.1		50 mL	100 mL		25 uL	2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
ICV 570-38006/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-38006/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-38006/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-38006/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CRA 570-38006/12		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 38006 Batch Start Date: 12/10/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/10/19 12:00

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12:00
Digestion Start Time	10:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 38115 Batch Start Date: 12/04/19 18:00 Batch Analyst: Gonzales, Julian

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00001	
MB 570-38115/1		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-38115/2		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCSD 570-38115/3		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14597-G-1 MS		Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14597-G-1 MSD		Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14372-D-1	A2BMP0007S018	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 38121 Batch Start Date: 12/10/19 17:50 Batch Analyst: Gonzales, Julian

Batch Method: 245.1 Batch End Date: 12/13/19 12:03

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	HG_1ppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
MB 570-38115/1-A		245.1, 245.1			50 mL	100 mL		2.5 mL	4 mL
LCS 570-38115/2-A		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-38115/3-A		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14597-G-1-B MS		245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14597-G-1-C MSD		245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14372-D-1-A	A2BMP0007S018	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
MB 570-38115/1-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-38115/2-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-38115/3-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-14597-G-1-B MS		245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-14597-G-1-C MSD		245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-14372-D-1-A	A2BMP0007S018	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 38121 Batch Start Date: 12/10/19 17:50 Batch Analyst: Gonzales, Julian

Batch Method: 245.1 Batch End Date: 12/13/19 12:03

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12/10/2019 19:50
Digestion Start Time	12/10/2019 17:50
Digestion Unit ID	Block 3
Sulfuric Acid Lot Number	022376
Nitric Acid ID	026291
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Wednesday, December 11, 2019 10:08:27

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2019\191211E1\STD Performance Check.006

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode
Be	9.0		2435.8		2435.808		31.469		1.3	Standard
In	114.9		45553.1		45553.127		734.176		1.6	Standard
U	238.1		39078.9		39078.853		573.820		1.5	Standard
[CeO	155.9		983.3		0.024		0.001		2.7	Standard
> Ce	139.9		41719.5		41719.498		237.965		0.6	Standard
[Ce++	70.0		588.2		0.014		0.001		3.7	Standard
Bkgd	220.0		1.1		1.067		0.450		42.2	Standard

Current Conditions File Data

Current Value	Description
0.98	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.50	Deflector Voltage
1600.00	ICP RF Power
-2150.00	Analog Stage Voltage
1900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-13.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-17.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.50	DRC Mode QRO
-2.50	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-15.50	KED Mode CRO
-22.50	KED Mode QRO
-18.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Wednesday, December 11, 2019 10:13:27

Page 1

475.00 KED Mode Axial Field Voltage

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Wednesday, December 11, 2019 11:22:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICIS-23447.012

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		24972.922		ppb		1.253		
9	Be	|		10.000		ppb		0.000		
10	B	|		3700.479		ppb		1.450		
27	Al	|		2758.044		ppb		3.508		
43	Ca-2	|		65.000		ppb		23.077		
49	Ti	|		118.889		ppb		6.475		
52	Cr	|		12666.724		ppb		0.150		
55	Mn	|		475.563		ppb		6.662		
57	Fe	|		14389.466		ppb		0.465		
45	Sc-IS	|>		817473.585		ppb		2.850		
66	Zn	|		1103.376		ppb		8.901		
86	Sr	|		1.870		ppb	1573.537			
65	Cu	|		81.983		ppb		29.358		
69	Ga-IS	|		280345.243		ppb		2.596		
95	Mo	|		52.222		ppb		16.064		
115	In-IS	|>		167628.439		ppb		3.110		
111	Cd	|		13.224		ppb		25.340		
118	Sn	|		1115.599		ppb		4.858		
121	Sb	|		203.335		ppb		12.377		
135	Ba	|		36.667		ppb		15.746		
165	Ho-IS	|		161235.197		ppb		2.638		
159	Tb-IS	|>		193207.036		ppb		2.189		
207	Pb	|		86.667		ppb		10.176		
203	Tl	|		7.778		ppb		89.214		
209	Bi-IS	|		105080.785		ppb		2.631		
51	V	|		0.000		ppb				
59	Co	|		11.111		ppb		17.321		
60	Ni	|		41.111		ppb		56.950		
75	As	|		621.800		ppb		5.388		
71	Ga-ISK	|>		43972.179		ppb		6.043		
82	Se-2	|		4.232		ppb	130.644			
107	Ag-1	|		45.556		ppb		8.449		
115	In-ISK	|		47538.206		ppb		5.080		
45	Sc-ISK	|>		109157.608		ppb		6.168		
23	Na	|		1463.408		ppb		3.686		
39	K	|		94331.568		ppb		1.324		
24	Mg	|		71.667		ppb		34.416		
159	Tb-ISK	|		99911.551		ppb		5.591		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Wednesday, December 11, 2019 11:25:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\IC-210761.013

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	22367.502		ppb		2.071		24972.922
9	Be	|	219972.411	200.000000	ppb		2.454	2.471	10.000
10	B	|	171411.566	500.000000	ppb		2.563	1.256	3700.479
27	Al	|	1025504.871	200.000000	ppb		0.679	1.757	2758.044
43	Ca-2	|	188308.137	10200.000000	ppb		1.424	1.892	65.000
49	Ti	|	101546.320	200.000000	ppb		0.986	1.642	118.889
52	Cr	|	1458843.760	200.000000	ppb		2.336	0.525	12666.724
55	Mn	|	2643101.648	200.000000	ppb		0.606	2.146	475.563
57	Fe	|	2926745.754	10200.000000	ppb		0.996	3.214	14389.466
45	Sc-IS	>	796232.257		ppb		2.378		817473.585
66	Zn	|	277554.453	200.000000	ppb		2.118	0.760	1103.376
86	Sr	|	434675.853	200.000000	ppb		1.431	1.836	1.870
65	Cu	|	439244.907	200.000000	ppb		1.352	1.907	81.983
69	Ga-IS	|	294670.662		ppb		2.759		280345.243
95	Mo	|	425166.080	200.000000	ppb		2.244	1.327	52.222
115	In-IS	>	154090.339		ppb		0.458		167628.439
111	Cd	|	346506.581	200.000000	ppb		1.479	1.126	13.224
118	Sn	|	1076380.734	200.000000	ppb		1.154	0.828	1115.599
121	Sb	|	1110412.131	200.000000	ppb		1.466	1.008	203.335
135	Ba	|	279600.575	200.000000	ppb		2.272	2.707	36.667
165	Ho-IS	|	156081.467		ppb		1.443		161235.197
159	Tb-IS	>	186548.246		ppb		2.127		193207.036
207	Pb	|	3452229.483	200.000000	ppb		0.525	1.784	86.667
203	Tl	|	1113626.933	200.000000	ppb		1.239	1.924	7.778
209	Bi-IS	|	94660.614		ppb		3.474		105080.785
51	V	|	69723.226	200.000000	ppb		3.773	1.395	0.000
59	Co	|	235851.985	200.000000	ppb		2.823	0.370	11.111
60	Ni	|	174738.904	200.000000	ppb		0.887	2.271	41.111
75	As	|	63969.101	200.000000	ppb		0.408	2.225	621.800
71	Ga-ISK	>	42874.268		ppb		2.512		43972.179
82	Se-2	|	6189.907	200.000000	ppb		1.934	0.650	4.232
107	Ag-1	|	772784.915	200.000000	ppb		0.350	2.719	45.556
115	In-ISK	|	48496.433		ppb		1.595		47538.206
45	Sc-ISK	>	111014.303		ppb		2.531		109157.608
23	Na	|	4372567.104	10200.000000	ppb		0.570	2.186	1463.408
39	K	|	7829639.928	10200.000000	ppb		1.716	4.045	94331.568
24	Mg	|	4552155.956	10200.000000	ppb		0.587	2.862	71.667
159	Tb-ISK	|	102548.083		ppb		0.318		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 201

Sample Date/Time: Wednesday, December 11, 2019 11:28:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\b.014

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23006.289		ppb	0.754		24972.922
9	Be	40.000	0.027642	ppb	16.667	21.669	10.000
10	B	3750.492	0.478795	ppb	0.876	10.159	3700.479
27	Al	5544.410	0.562991	ppb	2.741	5.933	2758.044
43	Ca-2	116.667	2.922433	ppb	26.186	58.535	65.000
49	Ti	215.557	0.198045	ppb	13.152	26.915	118.889
52	Cr	10785.181	-0.208835	ppb	0.820	5.827	12666.724
55	Mn	1263.389	0.060900	ppb	3.111	3.832	475.563
57	Fe	14832.144	3.058035	ppb	2.548	38.988	14389.466
45	Sc-IS	> 793161.453		ppb	0.793		817473.585
66	Zn	1100.042	0.021462	ppb	2.891	115.786	1103.376
86	Sr	83.519	0.037737	ppb	82.568	84.165	1.870
65	Cu	248.829	0.077336	ppb	16.437	23.714	81.983
69	Ga-IS	267448.515		ppb	1.665		280345.243
95	Mo	4211.732	1.965223	ppb	3.588	3.928	52.222
115	In-IS	> 161779.753		ppb	2.315		167628.439
111	Cd	74.489	0.033912	ppb	15.076	17.373	13.224
118	Sn	13793.323	2.254058	ppb	1.261	3.828	1115.599
121	Sb	1128.934	0.160418	ppb	11.384	16.246	203.335
135	Ba	114.445	0.053803	ppb	11.027	14.054	36.667
165	Ho-IS	156678.040		ppb	1.941		161235.197
159	Tb-IS	> 189575.793		ppb	2.843		193207.036
207	Pb	1441.140	0.077398	ppb	5.858	8.646	86.667
203	Tl	360.005	0.062333	ppb	9.755	11.420	7.778
209	Bi-IS	100748.494		ppb	1.281		105080.785
51	V	23.333	0.067771	ppb	24.744	23.990	0.000
59	Co	58.889	0.041434	ppb	18.196	22.098	11.111
60	Ni	103.334	0.074485	ppb	38.032	63.238	41.111
75	As	668.536	0.225874	ppb	0.533	13.821	621.800
71	Ga-ISK	> 42290.291		ppb	1.506		43972.179
82	Se-2	14.896	0.354742	ppb	48.564	67.208	4.232
107	Ag-1	827.802	0.205548	ppb	5.240	4.114	45.556
115	In-ISK	47421.188		ppb	0.326		47538.206
45	Sc-ISK	> 106042.163		ppb	1.320		109157.608
23	Na	3897.199	6.047257	ppb	5.118	8.620	1463.408
39	K	98877.716	10.007562	ppb	1.361	28.547	94331.568
24	Mg	1485.077	3.319631	ppb	5.563	6.313	71.667
159	Tb-ISK	99168.397		ppb	1.499		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-235105

Autosampler Position: 206

Sample Date/Time: Wednesday, December 11, 2019 11:31:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICV-235105.015

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		22651.285		ppb		2.555		24972.922
9	Be	|		115094.145	105.245889	ppb		2.213	0.463	10.000
10	B	|		4218.401	1.906849	ppb		1.484	9.775	3700.479
27	Al	|		3611.568	0.184930	ppb		3.741	6.421	2758.044
43	Ca-2	|		94132.580	5126.140386	ppb		2.542	0.497	65.000
49	Ti	|		51317.595	101.539347	ppb		2.290	0.629	118.889
52	Cr	|		748603.591	102.451896	ppb		0.326	2.386	12666.724
55	Mn	|		1238121.879	94.211925	ppb		1.261	1.136	475.563
57	Fe	|		1450835.463	5061.026012	ppb		0.102	2.168	14389.466
45	Sc-IS	>		791486.098		ppb		2.075		817473.585
66	Zn	|		148535.010	107.319093	ppb		1.690	1.294	1103.376
86	Sr	|		217846.753	100.842529	ppb		0.407	2.271	1.870
65	Cu	|		222150.119	101.724633	ppb		1.519	1.029	81.983
69	Ga-IS	|		263547.785		ppb		0.814		280345.243
95	Mo	|		211647.447	100.159478	ppb		0.715	1.730	52.222
115	In-IS	>		159285.471		ppb		1.772		167628.439
111	Cd	|		183923.173	102.719287	ppb		0.245	1.988	13.224
118	Sn	|		544707.937	97.811730	ppb		2.154	0.881	1115.599
121	Sb	|		531594.320	92.616747	ppb		1.209	0.895	203.335
135	Ba	|		115.556	0.055776	ppb		11.658	14.442	36.667
165	Ho-IS	|		157300.680		ppb		2.998		161235.197
159	Tb-IS	>		187169.795		ppb		2.559		193207.036
207	Pb	|		1818560.165	104.996893	ppb		2.335	2.091	86.667
203	Tl	|		554501.413	99.242195	ppb		1.943	0.763	7.778
209	Bi-IS	|		100635.579		ppb		2.429		105080.785
51	V	|		34545.061	99.693430	ppb		1.905	0.970	0.000
59	Co	|		112787.964	96.226201	ppb		1.028	2.288	11.111
60	Ni	|		86821.944	99.909205	ppb		1.136	1.457	41.111
75	As	|		32933.635	102.619272	ppb		1.765	1.741	621.800
71	Ga-ISK	>		42623.501		ppb		1.458		43972.179
82	Se-2	|		3184.897	103.442972	ppb		1.380	1.241	4.232
107	Ag-1	|		260.002	0.056212	ppb		5.588	8.446	45.556
115	In-ISK	|		48330.815		ppb		2.464		47538.206
45	Sc-ISK	>		107322.806		ppb		1.588		109157.608
23	Na	|		2788.606	3.257137	ppb		4.719	9.322	1463.408
39	K	|		97014.969	5.840056	ppb		0.197	32.042	94331.568
24	Mg	|		2191635.166	5079.108710	ppb		2.061	3.600	71.667
159	Tb-ISK	|		100086.057		ppb		0.692		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Wednesday, December 11, 2019 11:33:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\b.016

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23039.675		ppb	0.440		24972.922
9	Be	82.223	0.065658	ppb	57.667	63.660	10.000
10	B	3683.809	0.257860	ppb	4.035	140.672	3700.479
27	Al	2780.271	0.019496	ppb	0.839	26.125	2758.044
43	Ca-2	135.001	3.893801	ppb	19.598	35.851	65.000
49	Ti	201.113	0.168794	ppb	12.659	28.519	118.889
52	Cr	10671.763	-0.227276	ppb	1.206	4.791	12666.724
55	Mn	1163.382	0.053016	ppb	16.789	25.299	475.563
57	Fe	13961.265	-0.091894	ppb	2.002	651.938	14389.466
45	Sc-IS	> 794628.623		ppb	1.511		817473.585
66	Zn	1537.861	0.337291	ppb	7.012	22.915	1103.376
86	Sr	125.779	0.056867	ppb	55.907	55.905	1.870
65	Cu	265.926	0.084756	ppb	19.506	25.655	81.983
69	Ga-IS	260905.534		ppb	0.950		280345.243
95	Mo	2890.292	1.338698	ppb	2.530	3.060	52.222
115	In-IS	> 159480.800		ppb	2.561		167628.439
111	Cd	130.598	0.066016	ppb	22.167	26.178	13.224
118	Sn	13794.439	2.290574	ppb	3.228	6.285	1115.599
121	Sb	17346.085	2.987890	ppb	2.631	4.887	203.335
135	Ba	73.334	0.026595	ppb	18.182	34.454	36.667
165	Ho-IS	158236.172		ppb	1.869		161235.197
159	Tb-IS	> 185184.855		ppb	1.086		193207.036
207	Pb	1730.044	0.095910	ppb	31.436	31.921	86.667
203	Tl	731.131	0.130661	ppb	27.517	26.665	7.778
209	Bi-IS	101089.756		ppb	0.754		105080.785
51	V	36.667	0.105929	ppb	31.492	31.004	0.000
59	Co	86.667	0.065024	ppb	11.538	14.848	11.111
60	Ni	104.445	0.074977	ppb	27.143	46.061	41.111
75	As	644.246	0.135612	ppb	5.773	58.455	621.800
71	Ga-ISK	> 42523.209		ppb	1.927		43972.179
82	Se-2	19.883	0.513305	ppb	31.495	38.363	4.232
107	Ag-1	285.558	0.063175	ppb	20.027	25.536	45.556
115	In-ISK	47189.078		ppb	2.538		47538.206
45	Sc-ISK	> 108025.795		ppb	0.579		109157.608
23	Na	3030.324	3.789876	ppb	10.324	18.620	1463.408
39	K	95652.522	3.111306	ppb	1.147	24.115	94331.568
24	Mg	2135.170	4.745681	ppb	30.715	31.178	71.667
159	Tb-ISK	99135.554		ppb	2.118		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-62207

Autosampler Position: 213

Sample Date/Time: Wednesday, December 11, 2019 11:36:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICV-62207.017

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		23051.919		ppb			1.408			24972.922
9	Be	|		21.111	0.010270	ppb	81.025	151.666				10.000
10	B	|		37677.406	100.823813	ppb	1.545	1.231				3700.479
27	Al	|		534495.543	103.314664	ppb	1.425	1.512				2758.044
43	Ca-2	|		55.000	-0.466535	ppb	24.052	155.263				65.000
49	Ti	|		151.112	0.067689	ppb	11.103	47.101				118.889
52	Cr	|		10750.711	-0.228551	ppb	0.753	8.139				12666.724
55	Mn	|		722.241	0.019249	ppb	6.549	17.127				475.563
57	Fe	|		12223.006	-6.541508	ppb	2.110	10.500				14389.466
45	Sc-IS	>		801195.637		ppb		0.505				817473.585
66	Zn	|		1044.483	-0.026641	ppb	7.615	206.079				1103.376
86	Sr	|		25.715	0.010869	ppb	132.557	142.771				1.870
65	Cu	|		161.633	0.036724	ppb	22.979	44.872				81.983
69	Ga-IS	|		287539.685		ppb		1.277				280345.243
95	Mo	|		687.794	0.297588	ppb	10.906	11.621				52.222
115	In-IS	>		159485.298		ppb		1.070				167628.439
111	Cd	|		44.111	0.017624	ppb	22.772	33.268				13.224
118	Sn	|		6007.930	0.889132	ppb	2.701	4.451				1115.599
121	Sb	|		5250.966	0.880506	ppb	4.479	5.335				203.335
135	Ba	|		148875.137	102.867530	ppb	1.343	0.463				36.667
165	Ho-IS	|		156547.756		ppb		2.037				161235.197
159	Tb-IS	>		186129.506		ppb		2.140				193207.036
207	Pb	|		426.669	0.019949	ppb	7.694	11.528				86.667
203	Tl	|		126.667	0.021418	ppb	13.925	12.951				7.778
209	Bi-IS	|		100635.648		ppb		2.969				105080.785
51	V	|		4.444	0.012742	ppb	43.301	42.843				0.000
59	Co	|		26.667	0.013424	ppb	25.000	41.492				11.111
60	Ni	|		90.000	0.057160	ppb	20.621	37.158				41.111
75	As	|		599.682	-0.020250	ppb	5.665	495.152				621.800
71	Ga-ISK	>		42856.410		ppb		0.408				43972.179
82	Se-2	|		3.898	-0.007232	ppb	44.607	782.020				4.232
107	Ag-1	|		200709.048	51.933603	ppb	0.736	0.374				45.556
115	In-ISK	|		46654.909		ppb		1.139				47538.206
45	Sc-ISK	>		108164.611		ppb		0.368				109157.608
23	Na	|		422184.454	1007.304746	ppb	0.770	0.887				1463.408
39	K	|		848964.785	1021.994094	ppb	1.494	1.488				94331.568
24	Mg	|		1263.390	2.740775	ppb	14.051	14.814				71.667
159	Tb-ISK	|		100135.069		ppb		0.815				99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Wednesday, December 11, 2019 11:39:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICB-23446.018

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		23174.337		ppb			0.535			24972.922
9	Be	|		17.778	0.007621	ppb	10.825	21.344				10.000
10	B	|		3714.928	0.549638	ppb	3.313	47.861				3700.479
27	Al	|		4298.425	0.332099	ppb	1.846	6.843				2758.044
43	Ca-2	|		71.667	0.525866	ppb	17.558	124.156				65.000
49	Ti	|		137.778	0.048317	ppb	24.234	133.030				118.889
52	Cr	|		10921.952	-0.165511	ppb	1.606	7.660				12666.724
55	Mn	|		757.798	0.023431	ppb	2.794	4.918				475.563
57	Fe	|		12317.535	-5.087748	ppb	3.727	23.133				14389.466
45	Sc-IS	>		780591.735		ppb	1.055					817473.585
66	Zn	|		963.366	-0.066512	ppb	9.291	100.075				1103.376
86	Sr	|		38.026	0.017011	ppb	45.779	48.197				1.870
65	Cu	|		156.293	0.036180	ppb	10.676	19.305				81.983
69	Ga-IS	|		267332.701		ppb	0.811					280345.243
95	Mo	|		367.783	0.152458	ppb	9.258	9.545				52.222
115	In-IS	>		159352.131		ppb	3.564					167628.439
111	Cd	|		29.228	0.009142	ppb	57.060	95.897				13.224
118	Sn	|		3617.125	0.460734	ppb	3.047	8.891				1115.599
121	Sb	|		2460.212	0.395589	ppb	4.936	8.426				203.335
135	Ba	|		86.667	0.036048	ppb	13.868	28.087				36.667
165	Ho-IS	|		153587.137		ppb	2.651					161235.197
159	Tb-IS	>		184426.583		ppb	2.333					193207.036
207	Pb	|		295.557	0.012496	ppb	7.922	14.172				86.667
203	Tl	|		86.667	0.014449	ppb	30.528	35.503				7.778
209	Bi-IS	|		99885.899		ppb	2.431					105080.785
51	V	|		10.000	0.028824	ppb	88.192	88.190				0.000
59	Co	|		23.333	0.010753	ppb	28.571	54.373				11.111
60	Ni	|		43.333	0.004052	ppb	40.704	501.218				41.111
75	As	|		584.453	-0.057311	ppb	4.470	121.836				621.800
71	Ga-ISK	>		42601.208		ppb	1.061					43972.179
82	Se-2	|		3.549	-0.017463	ppb	65.454	436.495				4.232
107	Ag-1	|		296.670	0.065749	ppb	5.149	5.875				45.556
115	In-ISK	|		48229.893		ppb	1.800					47538.206
45	Sc-ISK	>		106810.149		ppb	2.136					109157.608
23	Na	|		2406.870	2.370276	ppb	5.763	19.540				1463.408
39	K	|		94016.132	2.392552	ppb	0.381	134.107				94331.568
24	Mg	|		285.003	0.499476	ppb	17.805	21.940				71.667
159	Tb-ISK	|		98313.149		ppb	0.892					99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 11:42:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.019

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	22438.724		ppb	1.903			24972.922
9	Be	|	110218.028	101.898097	ppb	1.142	2.314		10.000
10	B	|	88275.289	256.749559	ppb	1.782	2.209		3700.479
27	Al	|	518675.301	102.597740	ppb	2.596	3.233		2758.044
43	Ca-2	|	92097.595	5070.103820	ppb	0.821	0.544		65.000
49	Ti	|	50777.928	101.557129	ppb	3.332	2.887		118.889
52	Cr	|	740349.039	102.398711	ppb	0.719	1.753		12666.724
55	Mn	|	1255984.354	96.610187	ppb	1.571	2.459		475.563
57	Fe	|	1405272.864	4952.976738	ppb	2.463	2.559		14389.466
45	Sc-IS	>	783005.674		ppb	1.186			817473.585
66	Zn	|	141679.120	103.439464	ppb	0.846	0.656		1103.376
86	Sr	|	219569.376	102.733260	ppb	1.887	3.051		1.870
65	Cu	|	220319.958	101.982188	ppb	0.734	1.747		81.983
69	Ga-IS	|	277450.516		ppb	2.464			280345.243
95	Mo	|	208031.538	99.501209	ppb	0.314	1.222		52.222
115	In-IS	>	155585.648		ppb	2.372			167628.439
111	Cd	|	175464.022	100.318257	ppb	1.363	1.125		13.224
118	Sn	|	534284.712	98.247758	ppb	1.519	1.952		1115.599
121	Sb	|	561788.939	100.241393	ppb	0.471	2.668		203.335
135	Ba	|	138626.091	98.211280	ppb	1.262	1.861		36.667
165	Ho-IS	|	155858.833		ppb	4.244			161235.197
159	Tb-IS	>	183593.403		ppb	3.955			193207.036
207	Pb	|	1731149.987	101.966228	ppb	1.206	3.438		86.667
203	Tl	|	565871.357	103.287717	ppb	2.345	2.031		7.778
209	Bi-IS	|	95653.620		ppb	0.597			105080.785
51	V	|	34904.822	102.749087	ppb	1.832	3.007		0.000
59	Co	|	116075.284	100.994336	ppb	1.447	2.947		11.111
60	Ni	|	84879.198	99.607511	ppb	0.783	1.789		41.111
75	As	|	31930.400	101.440658	ppb	0.559	1.272		621.800
71	Ga-ISK	>	41798.849		ppb	1.574			43972.179
82	Se-2	|	3134.217	103.822503	ppb	1.998	2.835		4.232
107	Ag-1	|	383263.926	101.722456	ppb	1.544	3.056		45.556
115	In-ISK	|	47426.571		ppb	2.282			47538.206
45	Sc-ISK	>	107722.435		ppb	1.205			109157.608
23	Na	|	2135514.201	5131.083306	ppb	0.939	2.125		1463.408
39	K	|	3897254.968	5167.811239	ppb	0.620	1.409		94331.568
24	Mg	|	2225599.681	5137.664413	ppb	1.017	2.195		71.667
159	Tb-ISK	|	99924.285		ppb	1.189			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Wednesday, December 11, 2019 11:44:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.020

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		22229.506		ppb		1.455		24972.922
9	Be	|		32.222	0.021415	ppb	11.945	18.557		10.000
10	B	|		3671.583	0.553846	ppb	1.563	8.520		3700.479
27	Al	|		2614.684	0.002450	ppb	5.768	1144.599		2758.044
43	Ca-2	|		75.000	0.766861	ppb	23.094	127.886		65.000
49	Ti	|		137.778	0.052367	ppb	10.910	64.665		118.889
52	Cr	|		10344.856	-0.229279	ppb	1.687	6.947		12666.724
55	Mn	|		672.238	0.017469	ppb	1.741	7.953		475.563
57	Fe	|		13226.121	-1.263703	ppb	1.988	75.784		14389.466
45	Sc-IS	>		771287.591		ppb	1.151			817473.585
66	Zn	|		755.576	-0.213500	ppb	9.067	21.122		1103.376
86	Sr	|		30.248	0.013498	ppb	31.339	32.518		1.870
65	Cu	|		140.381	0.029660	ppb	16.653	37.767		81.983
69	Ga-IS	|		261300.923		ppb	2.003			280345.243
95	Mo	|		2476.882	1.179427	ppb	4.723	5.873		52.222
115	In-IS	>		156498.040		ppb	1.925			167628.439
111	Cd	|		47.021	0.019672	ppb	15.869	19.828		13.224
118	Sn	|		10101.348	1.659530	ppb	0.871	2.279		1115.599
121	Sb	|		1506.746	0.233739	ppb	4.709	6.733		203.335
135	Ba	|		57.778	0.016589	ppb	21.842	53.881		36.667
165	Ho-IS	|		152303.226		ppb	1.411			161235.197
159	Tb-IS	>		183066.840		ppb	1.714			193207.036
207	Pb	|		838.899	0.044655	ppb	6.943	6.825		86.667
203	Tl	|		187.779	0.033037	ppb	17.423	18.698		7.778
209	Bi-IS	|		97854.073		ppb	1.865			105080.785
51	V	|		16.667	0.049947	ppb	20.000	19.335		0.000
59	Co	|		42.222	0.028162	ppb	24.119	29.845		11.111
60	Ni	|		50.000	0.014114	ppb	29.059	127.593		41.111
75	As	|		608.195	0.094030	ppb	0.716	49.657		621.800
71	Ga-ISK	>		41005.444		ppb	1.644			43972.179
82	Se-2	|		4.242	0.010026	ppb	13.565	194.703		4.232
107	Ag-1	|		517.787	0.128586	ppb	0.983	1.706		45.556
115	In-ISK	|		47293.084		ppb	1.303			47538.206
45	Sc-ISK	>		106735.157		ppb	2.220			109157.608
23	Na	|		2746.931	3.197577	ppb	2.583	9.948		1463.408
39	K	|		97450.151	7.187466	ppb	0.791	42.628		94331.568
24	Mg	|		695.017	1.456136	ppb	0.719	1.677		71.667
159	Tb-ISK	|		98545.485		ppb	2.053			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Wednesday, December 11, 2019 11:47:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICSA-30518.021

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20899.728		ppb			2.615			24972.922
9	Be	|		12.222	0.002380	ppb	41.660	204.866				10.000
10	B	|		3852.742	0.808088	ppb	3.861	85.164				3700.479
27	Al	|		49874903.221	9800.357148	ppb	2.764	2.743				2758.044
43	Ca-2	|		552464.194	30086.673533	ppb	2.515	3.400				65.000
49	Ti	|		105028.035	207.963967	ppb	1.167	3.271				118.889
52	Cr	|		12874.692	0.083564	ppb	3.340	69.216				12666.724
55	Mn	|		4917.513	0.338954	ppb	1.794	2.041				475.563
57	Fe	|		7002873.118	24593.657340	ppb	0.402	2.012				14389.466
45	Sc-IS	>		792208.741		ppb	2.222					817473.585
66	Zn	|		1578.976	0.370609	ppb	1.962	1.521				1103.376
86	Sr	|		890.373	0.410991	ppb	0.758	2.841				1.870
65	Cu	|		217.910	0.063335	ppb	4.548	4.404				81.983
69	Ga-IS	|		261947.622		ppb	0.731					280345.243
95	Mo	|		434110.202	205.340909	ppb	1.453	3.701				52.222
115	In-IS	>		157343.029		ppb	2.482					167628.439
111	Cd	|		-82.718	-0.054007	ppb	106.093	91.483				13.224
118	Sn	|		4654.092	0.657048	ppb	3.290	3.385				1115.599
121	Sb	|		1592.311	0.247515	ppb	4.645	7.521				203.335
135	Ba	|		296.670	0.184392	ppb	17.003	22.221				36.667
165	Ho-IS	|		160447.578		ppb	2.846					161235.197
159	Tb-IS	>		192450.659		ppb	3.085					193207.036
207	Pb	|		745.563	0.037031	ppb	0.931	2.415				86.667
203	Tl	|		116.667	0.018918	ppb	13.093	10.776				7.778
209	Bi-IS	|		96971.348		ppb	0.588					105080.785
51	V	|		28.889	0.087023	ppb	17.625	19.441				0.000
59	Co	|		93.334	0.073753	ppb	7.143	8.562				11.111
60	Ni	|		305.559	0.320283	ppb	11.665	12.575				41.111
75	As	|		619.493	0.136170	ppb	3.999	93.385				621.800
71	Ga-ISK	>		40934.136		ppb	2.149					43972.179
82	Se-2	|		0.518	-0.114278	ppb	1135.672	174.341				4.232
107	Ag-1	|		266.669	0.060840	ppb	6.960	10.295				45.556
115	In-ISK	|		46270.629		ppb	1.352					47538.206
45	Sc-ISK	>		106471.023		ppb	2.604					109157.608
23	Na	|		10375911.025	25242.672987	ppb	1.466	2.613				1463.408
39	K	|		7591942.800	10312.880486	ppb	1.490	3.502				94331.568
24	Mg	|		4211404.680	9840.521133	ppb	2.263	4.059				71.667
159	Tb-ISK	|		99861.828		ppb	0.669					99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Wednesday, December 11, 2019 11:50:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICSAB-30517.022

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		20928.654		ppb		1.343		24972.922
9	Be	|		13.333	0.003111	ppb	75.000	289.791		10.000
10	B	|		3779.389	0.417921	ppb	1.656	92.782		3700.479
27	Al	|		49686028.768	9620.729663	ppb	0.278	1.690		2758.044
43	Ca-2	|		548261.281	29414.953801	ppb	0.741	1.207		65.000
49	Ti	|		103614.407	202.110596	ppb	0.502	2.089		118.889
52	Cr	|		159734.818	20.173595	ppb	1.197	2.981		12666.724
55	Mn	|		256025.358	19.149707	ppb	1.655	1.106		475.563
57	Fe	|		6773851.339	23438.059444	ppb	0.318	2.130		14389.466
45	Sc-IS	>		803981.553		ppb	1.898			817473.585
66	Zn	|		14921.122	9.914296	ppb	0.747	2.301		1103.376
86	Sr	|		912.893	0.415189	ppb	4.004	4.767		1.870
65	Cu	|		43393.808	19.537169	ppb	0.984	2.833		81.983
69	Ga-IS	|		264904.124		ppb	1.925			280345.243
95	Mo	|		438637.984	204.382472	ppb	0.560	2.011		52.222
115	In-IS	>		163038.564		ppb	0.810			167628.439
111	Cd	|		18070.367	9.851891	ppb	1.786	2.193		13.224
118	Sn	|		2553.562	0.258297	ppb	6.030	11.821		1115.599
121	Sb	|		1237.831	0.177092	ppb	5.155	6.224		203.335
135	Ba	|		325.559	0.196137	ppb	13.363	15.728		36.667
165	Ho-IS	|		163070.116		ppb	1.977			161235.197
159	Tb-IS	>		193698.003		ppb	2.020			193207.036
207	Pb	|		603.338	0.028807	ppb	3.361	2.799		86.667
203	Tl	|		98.889	0.015696	ppb	27.246	27.224		7.778
209	Bi-IS	|		98142.763		ppb	2.421			105080.785
51	V	|		7248.507	21.426038	ppb	3.914	7.279		0.000
59	Co	|		23024.096	20.097921	ppb	1.264	5.027		11.111
60	Ni	|		17129.155	20.126020	ppb	2.162	2.715		41.111
75	As	|		3903.375	10.770843	ppb	2.338	6.719		621.800
71	Ga-ISK	>		41689.693		ppb	3.905			43972.179
82	Se-2	|		305.225	9.998253	ppb	10.691	7.387		4.232
107	Ag-1	|		19132.809	5.085328	ppb	2.394	5.309		45.556
115	In-ISK	|		47719.850		ppb	1.477			47538.206
45	Sc-ISK	>		106209.001		ppb	1.917			109157.608
23	Na	|		10148031.584	24751.182329	ppb	2.469	4.066		1463.408
39	K	|		7408108.495	10082.612072	ppb	0.894	2.507		94331.568
24	Mg	|		4105945.511	9612.282070	ppb	1.588	0.364		71.667
159	Tb-ISK	|		101176.362		ppb	0.636			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 11:53:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\b.023

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	21704.253		ppb	0.553		24972.922
9	Be	11.111	0.001300	ppb	17.321	142.758	10.000
10	B	3282.600	-0.918673	ppb	4.961	47.215	3700.479
27	Al	8323.540	1.108522	ppb	5.318	6.826	2758.044
43	Ca-2	186.668	6.728349	ppb	6.741	11.129	65.000
49	Ti	210.002	0.187858	ppb	11.984	28.958	118.889
52	Cr	10731.811	-0.215532	ppb	3.557	27.515	12666.724
55	Mn	773.354	0.023712	ppb	4.800	11.700	475.563
57	Fe	15977.822	7.118691	ppb	2.319	27.106	14389.466
45	Sc-IS	> 792886.587		ppb	1.135		817473.585
66	Zn	5824.522	3.454479	ppb	4.179	5.871	1103.376
86	Sr	14.105	0.005637	ppb	109.383	126.088	1.870
65	Cu	132.517	0.024228	ppb	11.515	28.566	81.983
69	Ga-IS	263881.619		ppb	0.723		280345.243
95	Mo	4143.936	1.934868	ppb	6.795	8.002	52.222
115	In-IS	> 159338.170		ppb	4.981		167628.439
111	Cd	23.520	0.006134	ppb	22.825	48.806	13.224
118	Sn	2021.254	0.174204	ppb	6.203	23.998	1115.599
121	Sb	588.901	0.069022	ppb	2.552	4.726	203.335
135	Ba	34.444	0.000067	ppb	40.290164	12.710	36.667
165	Ho-IS	156636.039		ppb	3.976		161235.197
159	Tb-IS	> 188922.941		ppb	3.169		193207.036
207	Pb	610.005	0.030081	ppb	2.382	6.303	86.667
203	Tl	48.889	0.007291	ppb	23.945	25.521	7.778
209	Bi-IS	100671.346		ppb	2.051		105080.785
51	V	7.778	0.022911	ppb	98.974	99.528	0.000
59	Co	26.667	0.013846	ppb	54.486	88.580	11.111
60	Ni	58.889	0.023114	ppb	13.072	42.061	41.111
75	As	604.325	0.037443	ppb	7.006	393.063	621.800
71	Ga-ISK	> 41928.111		ppb	1.127		43972.179
82	Se-2	5.229	0.037347	ppb	203.164	935.012	4.232
107	Ag-1	116.667	0.019324	ppb	24.412	37.233	45.556
115	In-ISK	48271.407		ppb	2.036		47538.206
45	Sc-ISK	> 105985.084		ppb	1.451		109157.608
23	Na	5601.101	10.218186	ppb	7.021	10.012	1463.408
39	K	94069.816	3.445108	ppb	0.246	64.302	94331.568
24	Mg	1108.377	2.440204	ppb	16.293	18.404	71.667
159	Tb-ISK	98719.289		ppb	1.303		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 11:56:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.024

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		21473.906		ppb		0.906		24972.922
9	Be	|		6.667	-0.002859	ppb	100.000	209.652		10.000
10	B	|		3269.263	-1.128630	ppb	1.022	12.346		3700.479
27	Al	|		5340.998	0.504924	ppb	0.687	0.829		2758.044
43	Ca-2	|		131.667	3.601244	ppb	25.849	49.396		65.000
49	Ti	|		166.668	0.095966	ppb	8.718	31.042		118.889
52	Cr	|		11014.244	-0.203371	ppb	0.240	4.992		12666.724
55	Mn	|		736.686	0.019939	ppb	5.986	16.008		475.563
57	Fe	|		12735.678	-5.077266	ppb	2.915	25.644		14389.466
45	Sc-IS	|>		807062.451		ppb	0.511			817473.585
66	Zn	|		5850.087	3.397454	ppb	1.020	1.219		1103.376
86	Sr	|		20.772	0.008582	ppb	55.070	60.433		1.870
65	Cu	|		140.559	0.026786	ppb	7.622	18.339		81.983
69	Ga-IS	|		265883.804		ppb	0.784			280345.243
95	Mo	|		931.142	0.408138	ppb	7.375	7.332		52.222
115	In-IS	|>		160906.625		ppb	2.777			167628.439
111	Cd	|		19.156	0.003673	ppb	49.623	148.741		13.224
118	Sn	|		1796.780	0.129581	ppb	5.661	17.805		1115.599
121	Sb	|		503.342	0.053359	ppb	15.658	28.476		203.335
135	Ba	|		37.778	0.001685	ppb	22.205	299.544		36.667
165	Ho-IS	|		155606.848		ppb	3.375			161235.197
159	Tb-IS	|>		184760.541		ppb	3.951			193207.036
207	Pb	|		635.561	0.032215	ppb	15.597	13.844		86.667
203	Tl	|		33.333	0.004707	ppb	36.056	47.932		7.778
209	Bi-IS	|		99470.669		ppb	0.668			105080.785
51	V	|		4.444	0.012963	ppb	43.301	40.230		0.000
59	Co	|		22.222	0.010230	ppb	22.913	50.695		11.111
60	Ni	|		60.000	0.024566	ppb	33.333	94.946		41.111
75	As	|		595.220	0.007694	ppb	8.134	1240.597		621.800
71	Ga-ISK	|>		41898.112		ppb	4.814			43972.179
82	Se-2	|		4.237	0.007446	ppb	49.104	929.137		4.232
107	Ag-1	|		71.111	0.007441	ppb	21.651	62.191		45.556
115	In-ISK	|		47426.717		ppb	0.877			47538.206
45	Sc-ISK	|>		105182.496		ppb	1.119			109157.608
23	Na	|		3008.651	3.935756	ppb	5.838	10.951		1463.408
39	K	|		92797.163	2.657535	ppb	1.961	116.313		94331.568
24	Mg	|		368.338	0.708162	ppb	11.545	15.318		71.667
159	Tb-ISK	|		98626.781		ppb	2.716			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Wednesday, December 11, 2019 11:58:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICVL-210771.025

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	22329.663		ppb	1.551		24972.922
9	Be	1153.380	1.026638	ppb	2.023	3.130	10.000
10	B	20168.673	48.595574	ppb	1.036	0.070	3700.479
27	Al	267605.508	51.130848	ppb	0.780	1.358	2758.044
43	Ca-2	986.701	49.317633	ppb	9.070	8.587	65.000
49	Ti	684.461	1.103880	ppb	5.539	6.356	118.889
52	Cr	18661.072	0.841866	ppb	2.018	6.608	12666.724
55	Mn	13732.154	0.991003	ppb	2.118	3.314	475.563
57	Fe	26782.862	43.509086	ppb	0.996	2.794	14389.466
45	Sc-IS	> 806417.678		ppb	1.080		817473.585
66	Zn	8479.183	5.279388	ppb	1.115	2.467	1103.376
86	Sr	2239.265	1.016106	ppb	3.377	2.580	1.870
65	Cu	2385.317	1.035948	ppb	4.813	4.844	81.983
69	Ga-IS	269134.314		ppb	1.887		280345.243
95	Mo	2653.580	1.208774	ppb	3.088	3.599	52.222
115	In-IS	> 163103.253		ppb	1.555		167628.439
111	Cd	1826.768	0.989826	ppb	6.408	7.752	13.224
118	Sn	6759.377	0.997219	ppb	0.584	2.512	1115.599
121	Sb	6054.616	0.997078	ppb	1.208	2.822	203.335
135	Ba	1485.633	0.980960	ppb	8.752	10.562	36.667
165	Ho-IS	156535.168		ppb	0.288		161235.197
159	Tb-IS	> 192015.586		ppb	2.227		193207.036
207	Pb	17834.382	0.998937	ppb	1.555	1.997	86.667
203	Tl	5707.808	0.994160	ppb	3.390	1.177	7.778
209	Bi-IS	100980.099		ppb	0.866		105080.785
51	V	354.449	1.032770	ppb	7.998	10.069	0.000
59	Co	1120.044	0.953873	ppb	4.092	1.850	11.111
60	Ni	826.691	0.913624	ppb	3.847	3.400	41.111
75	As	953.004	1.141172	ppb	7.902	26.888	621.800
71	Ga-ISK	> 42275.816		ppb	2.251		43972.179
82	Se-2	35.599	1.033656	ppb	3.238	1.629	4.232
107	Ag-1	3872.747	1.005342	ppb	2.798	5.075	45.556
115	In-ISK	47473.962		ppb	1.754		47538.206
45	Sc-ISK	> 107163.860		ppb	1.797		109157.608
23	Na	22098.751	49.938367	ppb	2.051	2.585	1463.408
39	K	128252.080	48.679499	ppb	1.284	2.341	94331.568
24	Mg	21699.803	50.197434	ppb	1.103	2.515	71.667
159	Tb-ISK	100928.643		ppb	1.201		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-37643_1-A

Autosampler Position: 301

Sample Date/Time: Wednesday, December 11, 2019 12:01:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\MB 570-37643_1-A.026

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		22045.887		ppb				0.405		24972.922
9	Be	|		8.889	-0.000776	ppb			57.282	592.759		10.000
10	B	|		3430.412	-0.536024	ppb			1.703	75.704		3700.479
27	Al	|		3896.089	0.234064	ppb			7.555	17.212		2758.044
43	Ca-2	|		66.667	0.165992	ppb			15.613	293.358		65.000
49	Ti	|		155.556	0.077526	ppb			11.802	43.031		118.889
52	Cr	|		11496.847	-0.119255	ppb			1.623	43.900		12666.724
55	Mn	|		475.563	0.000827	ppb			7.363	235.991		475.563
57	Fe	|		12295.290	-6.094645	ppb			1.764	29.271		14389.466
45	Sc-IS	|>		798109.195		ppb			2.335			817473.585
66	Zn	|		756.687	-0.231154	ppb			1.588	5.907		1103.376
86	Sr	|		11.833	0.004486	ppb			148.033	177.914		1.870
65	Cu	|		98.533	0.008402	ppb			7.149	36.068		81.983
69	Ga-IS	|		265010.232		ppb			1.401			280345.243
95	Mo	|		398.895	0.163762	ppb			14.017	18.949		52.222
115	In-IS	|>		157411.438		ppb			2.824			167628.439
111	Cd	|		20.273	0.004353	ppb			50.766	129.524		13.224
118	Sn	|		1628.982	0.106248	ppb			8.374	27.949		1115.599
121	Sb	|		395.561	0.036104	ppb			11.503	22.011		203.335
135	Ba	|		27.778	-0.004722	ppb			27.713	104.725		36.667
165	Ho-IS	|		154239.459		ppb			1.791			161235.197
159	Tb-IS	|>		186960.000		ppb			1.213			193207.036
207	Pb	|		171.112	0.005048	ppb			6.262	14.501		86.667
203	Tl	|		33.333	0.004617	ppb			17.321	21.259		7.778
209	Bi-IS	|		97673.899		ppb			0.933			105080.785
51	V	|		3.333	0.009677	ppb			100.000	100.821		0.000
59	Co	|		10.000	-0.000607	ppb			100.000	1426.149		11.111
60	Ni	|		35.556	-0.004603	ppb			23.593	194.634		41.111
75	As	|		592.477	-0.011615	ppb			3.881	444.303		621.800
71	Ga-ISK	|>		42149.885		ppb			2.061			43972.179
82	Se-2	|		3.560	-0.018302	ppb			127.125	800.670		4.232
107	Ag-1	|		67.778	0.006331	ppb			7.512	15.290		45.556
115	In-ISK	|		47052.574		ppb			1.351			47538.206
45	Sc-ISK	|>		106196.622		ppb			1.080			109157.608
23	Na	|		1843.452	1.023533	ppb			1.253	2.691		1463.408
39	K	|		91679.958	-0.103754	ppb			1.600	3244.413		94331.568
24	Mg	|		263.336	0.453441	ppb			25.285	34.494		71.667
159	Tb-ISK	|		98386.978		ppb			0.564			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-37651_1-A

Autosampler Position: 302

Sample Date/Time: Wednesday, December 11, 2019 12:04:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\MB 570-37651_1-A.027

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	22019.184		ppb	2.221		24972.922
9	Be	5.556	-0.003885	ppb	34.641	43.898	10.000
10	B	3478.201	-0.531169	ppb	2.410	54.479	3700.479
27	Al	3581.560	0.164434	ppb	3.171	12.954	2758.044
43	Ca-2	88.334	1.287641	ppb	48.802	180.271	65.000
49	Ti	145.556	0.054669	ppb	28.265	148.978	118.889
52	Cr	11604.712	-0.125477	ppb	0.857	13.670	12666.724
55	Mn	480.008	0.000730	ppb	7.048	362.316	475.563
57	Fe	12291.954	-6.683568	ppb	1.882	8.272	14389.466
45	Sc-IS	> 808420.733		ppb	0.621		817473.585
66	Zn	747.797	-0.244577	ppb	3.163	7.596	1103.376
86	Sr	2.470	0.000273	ppb	744.650	3062.391	1.870
65	Cu	86.329	0.002367	ppb	6.645	118.050	81.983
69	Ga-IS	264895.713		ppb	0.835		280345.243
95	Mo	251.113	0.092441	ppb	3.832	5.559	52.222
115	In-IS	> 161914.554		ppb	1.583		167628.439
111	Cd	15.028	0.001176	ppb	83.923	576.173	13.224
118	Sn	1456.741	0.067215	ppb	4.049	19.349	1115.599
121	Sb	318.892	0.021028	ppb	13.802	36.841	203.335
135	Ba	33.333	-0.001385	ppb	30.000	498.461	36.667
165	Ho-IS	155252.149		ppb	3.972		161235.197
159	Tb-IS	> 186504.291		ppb	1.966		193207.036
207	Pb	126.667	0.002473	ppb	29.656	83.186	86.667
203	Tl	41.111	0.006070	ppb	44.656	55.857	7.778
209	Bi-IS	99827.588		ppb	0.606		105080.785
51	V	3.333	0.009604	ppb	100.000	99.386	0.000
59	Co	14.444	0.003132	ppb	58.076	224.752	11.111
60	Ni	33.333	-0.007267	ppb	45.826	247.289	41.111
75	As	621.173	0.065492	ppb	2.309	70.702	621.800
71	Ga-ISK	> 42475.278		ppb	1.001		43972.179
82	Se-2	2.883	-0.038835	ppb	125.536	305.253	4.232
107	Ag-1	48.889	0.001264	ppb	48.372	488.478	45.556
115	In-ISK	47582.575		ppb	2.405		47538.206
45	Sc-ISK	> 106357.841		ppb	1.475		109157.608
23	Na	1698.435	0.665782	ppb	5.681	41.705	1463.408
39	K	92302.824	0.561458	ppb	1.338	520.824	94331.568
24	Mg	211.668	0.332286	ppb	19.094	30.209	71.667
159	Tb-ISK	98742.754		ppb	0.604		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-37904_1-A @20

Autosampler Position: 303

Sample Date/Time: Wednesday, December 11, 2019 12:07:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\MB 570-37904_1-A @20.028

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	22363.048		ppb	1.371		24972.922
9	Be	14.444	0.004192	ppb	26.647	85.338	10.000
10	B	3428.189	-0.609825	ppb	2.238	19.843	3700.479
27	Al	3550.442	0.163433	ppb	4.313	22.361	2758.044
43	Ca-2	75.000	0.610255	ppb	37.119	252.203	65.000
49	Ti	146.667	0.058350	ppb	6.818	28.321	118.889
52	Cr	11932.760	-0.069388	ppb	1.634	52.002	12666.724
55	Mn	464.452	-0.000180	ppb	16.959	3339.420	475.563
57	Fe	12330.875	-6.248145	ppb	0.825	10.898	14389.466
45	Sc-IS	> 802849.241		ppb	1.060		817473.585
66	Zn	980.034	-0.074128	ppb	3.245	39.764	1103.376
86	Sr	6.239	0.002074	ppb	417.989	577.980	1.870
65	Cu	111.922	0.014180	ppb	1.658	3.521	81.983
69	Ga-IS	270268.374		ppb	1.100		280345.243
95	Mo	211.113	0.074567	ppb	0.912	0.585	52.222
115	In-IS	> 158969.565		ppb	1.645		167628.439
111	Cd	18.446	0.003325	ppb	45.476	144.182	13.224
118	Sn	1294.503	0.042722	ppb	5.255	32.659	1115.599
121	Sb	312.226	0.020802	ppb	10.800	24.864	203.335
135	Ba	24.444	-0.007133	ppb	15.746	40.607	36.667
165	Ho-IS	156570.196		ppb	1.920		161235.197
159	Tb-IS	> 189522.492		ppb	1.864		193207.036
207	Pb	107.778	0.001316	ppb	23.213	117.244	86.667
203	Tl	17.778	0.001787	ppb	28.641	48.325	7.778
209	Bi-IS	100388.165		ppb	0.699		105080.785
51	V	10.000	0.029552	ppb	33.333	35.615	0.000
59	Co	25.556	0.012881	ppb	52.715	88.054	11.111
60	Ni	48.889	0.011387	ppb	14.193	63.798	41.111
75	As	611.154	0.061271	ppb	9.628	254.686	621.800
71	Ga-ISK	> 41844.552		ppb	2.445		43972.179
82	Se-2	4.903	0.031899	ppb	113.679	597.096	4.232
107	Ag-1	36.667	-0.001771	ppb	36.364	196.692	45.556
115	In-ISK	47549.519		ppb	2.319		47538.206
45	Sc-ISK	> 107160.564		ppb	2.361		109157.608
23	Na	1573.420	0.334334	ppb	8.906	117.079	1463.408
39	K	92164.154	-0.532667	ppb	1.327	847.666	94331.568
24	Mg	198.335	0.296189	ppb	13.885	18.039	71.667
159	Tb-ISK	99839.668		ppb	0.452		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 12:09:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.029

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	21697.576		ppb		0.511		24972.922
9	Be	|	111211.212	100.105200	ppb		0.680	1.414	10.000
10	B	|	85901.000	242.769330	ppb		3.217	4.440	3700.479
27	Al	|	526541.649	101.404203	ppb		0.693	1.569	2758.044
43	Ca-2	|	94108.981	5044.746656	ppb		1.010	1.154	65.000
49	Ti	|	52269.900	101.806161	ppb		0.926	1.363	118.889
52	Cr	|	752093.304	101.262937	ppb		1.032	1.202	12666.724
55	Mn	|	1272203.786	95.290930	ppb		1.409	2.740	475.563
57	Fe	|	1425558.860	4892.511429	ppb		0.290	2.225	14389.466
45	Sc-IS	>	804219.752		ppb		2.059		817473.585
66	Zn	|	144181.762	102.494874	ppb		0.959	1.159	1103.376
86	Sr	|	222425.573	101.330038	ppb		0.337	2.152	1.870
65	Cu	|	224391.841	101.125129	ppb		1.776	1.514	81.983
69	Ga-IS	|	279125.010		ppb		0.635		280345.243
95	Mo	|	211544.786	98.528040	ppb		0.238	1.842	52.222
115	In-IS	>	153344.738		ppb		2.207		167628.439
111	Cd	|	175524.052	101.836364	ppb		0.836	2.434	13.224
118	Sn	|	519806.988	96.940790	ppb		3.367	1.174	1115.599
121	Sb	|	567496.752	102.712726	ppb		1.249	1.080	203.335
135	Ba	|	139367.923	100.157351	ppb		2.559	1.538	36.667
165	Ho-IS	|	154031.565		ppb		4.641		161235.197
159	Tb-IS	>	184302.733		ppb		2.209		193207.036
207	Pb	|	1717270.427	100.698785	ppb		0.459	1.788	86.667
203	Tl	|	559615.977	101.718945	ppb		1.288	1.048	7.778
209	Bi-IS	|	96889.708		ppb		1.176		105080.785
51	V	|	35158.771	103.288642	ppb		1.150	1.471	0.000
59	Co	|	117842.966	102.318864	ppb		0.958	0.631	11.111
60	Ni	|	86763.809	101.625836	ppb		0.993	1.318	41.111
75	As	|	31769.346	100.726080	ppb		1.919	2.009	621.800
71	Ga-ISK	>	41874.621		ppb		1.172		43972.179
82	Se-2	|	3141.911	103.869587	ppb		1.889	1.770	4.232
107	Ag-1	|	385132.468	102.008222	ppb		0.460	0.879	45.556
115	In-ISK	|	47281.153		ppb		0.981		47538.206
45	Sc-ISK	>	108633.720		ppb		0.795		109157.608
23	Na	|	2100151.060	5003.189194	ppb		0.663	1.341	1463.408
39	K	|	3878104.374	5097.398354	ppb		1.485	1.879	94331.568
24	Mg	|	2187431.895	5006.416554	ppb		1.410	1.385	71.667
159	Tb-ISK	|	100576.167		ppb		1.151		99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 12:13:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.030

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		22368.615		ppb			2.088			24972.922
9	Be	|		20.000	0.009440	ppb			28.868	53.688		10.000
10	B	|		3437.080	-0.411096	ppb			3.758	122.927		3700.479
27	Al	|		3878.305	0.239132	ppb			4.624	13.808		2758.044
43	Ca-2	|		138.334	4.125839	ppb			4.174	7.984		65.000
49	Ti	|		162.223	0.094031	ppb			15.961	53.574		118.889
52	Cr	|		11323.375	-0.127272	ppb			0.700	22.502		12666.724
55	Mn	|		768.910	0.023558	ppb			11.149	24.835		475.563
57	Fe	|		12750.132	-4.064768	ppb			1.262	11.827		14389.466
45	Sc-IS	|>		789808.658		ppb			1.198			817473.585
66	Zn	|		5752.271	3.416518	ppb			5.624	6.136		1103.376
86	Sr	|		59.124	0.026492	ppb			48.060	48.958		1.870
65	Cu	|		121.756	0.019590	ppb			13.454	41.364		81.983
69	Ga-IS	|		264071.941		ppb			1.305			280345.243
95	Mo	|		924.475	0.414819	ppb			8.959	10.647		52.222
115	In-IS	|>		159803.515		ppb			1.475			167628.439
111	Cd	|		42.503	0.016718	ppb			38.278	56.363		13.224
118	Sn	|		5274.309	0.755312	ppb			5.475	7.179		1115.599
121	Sb	|		468.897	0.047824	ppb			6.211	12.296		203.335
135	Ba	|		40.000	0.003429	ppb			30.046	231.951		36.667
165	Ho-IS	|		155865.813		ppb			1.534			161235.197
159	Tb-IS	|>		183983.060		ppb			2.105			193207.036
207	Pb	|		768.897	0.040369	ppb			9.755	12.809		86.667
203	Tl	|		91.111	0.015257	ppb			14.786	17.124		7.778
209	Bi-IS	|		99215.640		ppb			1.862			105080.785
51	V	|		8.889	0.026084	ppb			78.062	77.685		0.000
59	Co	|		34.444	0.020841	ppb			33.986	50.225		11.111
60	Ni	|		72.222	0.038983	ppb			9.608	22.921		41.111
75	As	|		588.426	-0.007678	ppb			8.703	2206.335		621.800
71	Ga-ISK	|>		41786.584		ppb			0.905			43972.179
82	Se-2	|		4.573	0.018509	ppb			176.978	1444.123		4.232
107	Ag-1	|		171.112	0.033924	ppb			6.262	7.970		45.556
115	In-ISK	|		46613.537		ppb			0.612			47538.206
45	Sc-ISK	|>		105129.874		ppb			0.823			109157.608
23	Na	|		2128.492	1.770032	ppb			6.899	18.747		1463.408
39	K	|		95898.590	7.027405	ppb			0.703	9.488		94331.568
24	Mg	|		356.671	0.680371	ppb			4.506	5.855		71.667
159	Tb-ISK	|		98223.188		ppb			0.493			99911.551

QC Out of Limits

AnalyteMassOut of Limits Message

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Wednesday, December 11, 2019 10:01:02

File Name: Default.tun

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1247	2062	0.699	
Mg 24	23.985	24.025	4626	2062	0.705	
In 115	114.904	114.925	22804	2056	0.710	
U	238.050	238.025	47439	2047	0.704	

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Wednesday, December 11, 2019 15:03:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICIS-23447.075

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		21061.077		ppb			2.773	
9	Be	|		4.444		ppb			114.564	
10	B	|		3288.157		ppb			5.219	
27	Al	|		3153.682		ppb			5.709	
43	Ca-2	|		61.667		ppb			20.405	
49	Ti	|		153.334		ppb			25.071	
52	Cr	|		11165.475		ppb			2.777	
55	Mn	|		535.566		ppb			9.689	
57	Fe	|		11632.512		ppb			1.134	
45	Sc-IS	|>		773652.178		ppb			0.968	
66	Zn	|		977.811		ppb			4.968	
86	Sr	|		22.407		ppb			52.672	
65	Cu	|		84.088		ppb			4.552	
69	Ga-IS	|		250648.813		ppb			1.114	
95	Mo	|		215.557		ppb			4.971	
115	In-IS	|>		150384.769		ppb			1.499	
111	Cd	|		11.770		ppb			32.892	
118	Sn	|		3877.193		ppb			1.046	
121	Sb	|		916.696		ppb			7.354	
135	Ba	|		35.556		ppb			10.825	
165	Ho-IS	|		153745.503		ppb			2.680	
159	Tb-IS	|>		182794.545		ppb			1.888	
207	Pb	|		171.112		ppb			12.372	
203	Tl	|		38.889		ppb			13.093	
209	Bi-IS	|		94136.934		ppb			0.815	
51	V	|		6.667		ppb			86.603	
59	Co	|		14.444		ppb			35.251	
60	Ni	|		36.667		ppb			24.052	
75	As	|		587.801		ppb			4.383	
71	Ga-ISK	|>		39178.102		ppb			1.606	
82	Se-2	|		2.581		ppb			112.133	
107	Ag-1	|		57.778		ppb			14.519	
115	In-ISK	|		44832.300		ppb			0.158	
45	Sc-ISK	|>		99518.781		ppb			0.702	
23	Na	|		936.697		ppb			4.664	
39	K	|		90519.211		ppb			0.372	
24	Mg	|		190.001		ppb			5.263	
159	Tb-ISK	|		95131.715		ppb			0.826	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Wednesday, December 11, 2019 15:06:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\IC-210761.076

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	20089.676		ppb		2.284		21061.077
9	Be	|	211002.502	200.000000	ppb		0.981	0.592	4.444
10	B	|	160542.616	500.000000	ppb		0.479	0.816	3288.157
27	Al	|	980851.828	200.000000	ppb		1.116	1.017	3153.682
43	Ca-2	|	178129.010	10200.000000	ppb		2.170	2.791	61.667
49	Ti	|	98306.026	200.000000	ppb		1.554	0.578	153.334
52	Cr	|	1393176.890	200.000000	ppb		0.217	0.770	11165.475
55	Mn	|	2469406.889	200.000000	ppb		0.374	1.232	535.566
57	Fe	|	2734398.999	10200.000000	ppb		0.898	0.880	11632.512
45	Sc-IS	>	760296.315		ppb		0.977		773652.178
66	Zn	|	269794.934	200.000000	ppb		0.422	1.399	977.811
86	Sr	|	412170.783	200.000000	ppb		1.341	0.639	22.407
65	Cu	|	419247.600	200.000000	ppb		1.489	1.202	84.088
69	Ga-IS	|	274017.688		ppb		1.107		250648.813
95	Mo	|	388579.519	200.000000	ppb		0.492	0.849	215.557
115	In-IS	>	141342.012		ppb		1.502		150384.769
111	Cd	|	312445.886	200.000000	ppb		0.489	1.633	11.770
118	Sn	|	998117.594	200.000000	ppb		0.562	1.410	3877.193
121	Sb	|	1034721.666	200.000000	ppb		1.687	3.051	916.696
135	Ba	|	259596.399	200.000000	ppb		0.755	2.163	35.556
165	Ho-IS	|	146808.604		ppb		2.603		153745.503
159	Tb-IS	>	173676.390		ppb		2.344		182794.545
207	Pb	|	3201171.251	200.000000	ppb		0.514	1.837	171.112
203	Tl	|	1008016.836	200.000000	ppb		0.651	1.789	38.889
209	Bi-IS	|	87067.893		ppb		1.453		94136.934
51	V	|	64695.121	200.000000	ppb		2.725	3.435	6.667
59	Co	|	212422.481	200.000000	ppb		1.911	4.285	14.444
60	Ni	|	152749.112	200.000000	ppb		1.718	4.299	36.667
75	As	|	58816.179	200.000000	ppb		0.995	2.283	587.801
71	Ga-ISK	>	37572.709		ppb		3.078		39178.102
82	Se-2	|	5671.681	200.000000	ppb		1.702	2.810	2.581
107	Ag-1	|	699488.134	200.000000	ppb		2.095	1.172	57.778
115	In-ISK	|	43977.061		ppb		1.524		44832.300
45	Sc-ISK	>	101371.788		ppb		1.558		99518.781
23	Na	|	3949644.548	10200.000000	ppb		1.203	2.346	936.697
39	K	|	7239285.142	10200.000000	ppb		1.680	1.813	90519.211
24	Mg	|	4155864.239	10200.000000	ppb		1.855	0.316	190.001
159	Tb-ISK	|	94239.164		ppb		0.898		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 15:09:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.077

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19377.617		ppb			6.733		21061.077
9	Be	|		106075.836	103.516291	ppb			2.294	8.495	4.444
10	B	|		83715.747	263.441931	ppb			1.935	6.943	3288.157
27	Al	|		507347.051	106.246981	ppb			2.286	9.154	3153.682
43	Ca-2	|		88362.512	5199.787813	ppb			2.070	5.333	61.667
49	Ti	|		50916.164	106.561785	ppb			2.382	9.397	153.334
52	Cr	|		704424.000	103.362910	ppb			1.756	8.752	11165.475
55	Mn	|		1205430.371	100.547807	ppb			2.641	9.665	535.566
57	Fe	|		1351221.432	5171.824920	ppb			2.985	9.991	11632.512
45	Sc-IS	|>		741211.515		ppb			6.703		773652.178
66	Zn	|		136664.223	103.986278	ppb			2.654	9.179	977.811
86	Sr	|		207969.899	103.919341	ppb			1.944	8.870	22.407
65	Cu	|		219042.093	107.655397	ppb			3.359	10.236	84.088
69	Ga-IS	|		249904.353		ppb			4.623		250648.813
95	Mo	|		199969.179	105.911403	ppb			2.216	8.549	215.557
115	In-IS	|>		137884.274		ppb			6.624		150384.769
111	Cd	|		160266.832	105.566769	ppb			2.382	9.181	11.770
118	Sn	|		511662.698	105.024016	ppb			2.340	6.588	3877.193
121	Sb	|		519138.327	103.109621	ppb			1.726	8.022	916.696
135	Ba	|		132590.295	104.952308	ppb			1.147	5.941	35.556
165	Ho-IS	|		144083.346		ppb			7.400		153745.503
159	Tb-IS	|>		169423.422		ppb			7.378		182794.545
207	Pb	|		1617616.046	103.959751	ppb			0.846	7.724	171.112
203	Tl	|		520556.836	106.254423	ppb			0.261	7.868	38.889
209	Bi-IS	|		86784.499		ppb			5.781		94136.934
51	V	|		32035.881	99.974058	ppb			0.615	1.288	6.667
59	Co	|		105751.111	100.485558	ppb			1.039	2.124	14.444
60	Ni	|		76308.848	100.837231	ppb			1.477	3.357	36.667
75	As	|		29704.526	101.042854	ppb			0.675	2.531	587.801
71	Ga-ISK	|>		37205.062		ppb			1.867		39178.102
82	Se-2	|		2866.845	102.018473	ppb			0.818	1.583	2.581
107	Ag-1	|		352429.003	101.770255	ppb			1.056	2.908	57.778
115	In-ISK	|		43788.091		ppb			1.617		44832.300
45	Sc-ISK	|>		98998.520		ppb			0.772		99518.781
23	Na	|		1902273.138	5028.089453	ppb			2.245	2.139	936.697
39	K	|		3730890.714	5320.426003	ppb			0.733	1.328	90519.211
24	Mg	|		2064176.559	5188.391312	ppb			3.539	4.036	190.001
159	Tb-ISK	|		94747.158		ppb			0.218		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 15:13:28

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.078

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		20265.476		ppb		0.826		21061.077
9	Be	|		7.778	0.003150	ppb	65.465	145.936		4.444
10	B	|		3274.820	0.134682	ppb	2.499	232.152		3288.157
27	Al	|		3046.992	-0.011221	ppb	4.478	144.483		3153.682
43	Ca-2	|		136.667	4.346522	ppb	7.616	10.271		61.667
49	Ti	|		144.445	-0.012125	ppb	13.122	376.513		153.334
52	Cr	|		10424.914	-0.079491	ppb	1.270	57.631		11165.475
55	Mn	|		735.575	0.016896	ppb	8.311	26.295		535.566
57	Fe	|		11713.690	1.041334	ppb	1.284	81.094		11632.512
45	Sc-IS	|>		760772.090		ppb	2.559			773652.178
66	Zn	|		5700.026	3.524353	ppb	0.644	2.861		977.811
86	Sr	|		6.877	-0.007748	ppb	728.905	308.357		22.407
65	Cu	|		125.175	0.020313	ppb	5.502	21.110		84.088
69	Ga-IS	|		244116.363		ppb	1.934			250648.813
95	Mo	|		1314.505	0.567965	ppb	2.712	6.063		215.557
115	In-IS	|>		144178.304		ppb	3.560			150384.769
111	Cd	|		20.573	0.005804	ppb	16.443	32.036		11.770
118	Sn	|		6842.750	0.616990	ppb	1.846	6.703		3877.193
121	Sb	|		636.681	-0.045808	ppb	0.524	9.979		916.696
135	Ba	|		34.444	0.000047	ppb	39.1111	19691.686		35.556
165	Ho-IS	|		149364.560		ppb	0.157			153745.503
159	Tb-IS	|>		176031.542		ppb	2.059			182794.545
207	Pb	|		735.563	0.035169	ppb	5.154	5.454		171.112
203	Tl	|		117.778	0.015644	ppb	26.750	36.044		38.889
209	Bi-IS	|		94023.010		ppb	2.880			94136.934
51	V	|		0.000	-0.019758	ppb		0.000		6.667
59	Co	|		21.111	0.006450	ppb	18.232	49.314		14.444
60	Ni	|		68.889	0.042478	ppb	16.993	32.465		36.667
75	As	|		599.214	0.089058	ppb	4.007	139.334		587.801
71	Ga-ISK	|>		38214.395		ppb	2.285			39178.102
82	Se-2	|		2.888	0.014004	ppb	184.167	1326.518		2.581
107	Ag-1	|		228.891	0.048435	ppb	8.533	8.439		57.778
115	In-ISK	|		43935.352		ppb	0.583			44832.300
45	Sc-ISK	|>		99393.482		ppb	1.030			99518.781
23	Na	|		1586.755	1.716429	ppb	2.911	9.538		936.697
39	K	|		93049.846	3.856157	ppb	0.786	37.467		90519.211
24	Mg	|		230.002	0.099845	ppb	25.630	142.130		190.001
159	Tb-ISK	|		94449.908		ppb	1.444			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Wednesday, December 11, 2019 15:16:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICVL-210771.079

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		20502.483		ppb		1.761		21061.077
9	Be	|		1052.261	0.984049	ppb	6.648	6.745		4.444
10	B	|		19551.149	51.292093	ppb	1.224	1.355		3288.157
27	Al	|		256360.210	51.317565	ppb	1.728	1.777		3153.682
43	Ca-2	|		893.361	47.218252	ppb	7.043	7.444		61.667
49	Ti	|		593.346	0.890694	ppb	10.113	13.452		153.334
52	Cr	|		17623.094	0.938613	ppb	3.425	9.265		11165.475
55	Mn	|		12635.587	0.971387	ppb	1.608	1.658		535.566
57	Fe	|		24780.368	49.141188	ppb	1.979	3.719		11632.512
45	Sc-IS	>		767409.651		ppb	0.111			773652.178
66	Zn	|		8078.951	5.239207	ppb	1.977	2.124		977.811
86	Sr	|		2127.623	1.012166	ppb	9.086	9.110		22.407
65	Cu	|		2375.174	1.083308	ppb	7.023	7.203		84.088
69	Ga-IS	|		245033.996		ppb	1.728			250648.813
95	Mo	|		2515.777	1.174436	ppb	3.192	3.592		215.557
115	In-IS	>		147957.406		ppb	1.512			150384.769
111	Cd	|		1615.921	0.980720	ppb	9.503	9.119		11.770
118	Sn	|		9154.046	1.025405	ppb	3.813	4.702		3877.193
121	Sb	|		5838.972	0.912232	ppb	3.060	3.836		916.696
135	Ba	|		1318.950	0.944678	ppb	3.828	2.405		35.556
165	Ho-IS	|		149267.114		ppb	2.132			153745.503
159	Tb-IS	>		177559.378		ppb	2.668			182794.545
207	Pb	|		16490.435	0.997517	ppb	2.183	1.649		171.112
203	Tl	|		5454.375	1.051399	ppb	2.965	3.827		38.889
209	Bi-IS	|		91113.053		ppb	2.139			94136.934
51	V	|		380.005	1.111041	ppb	9.768	7.267		6.667
59	Co	|		1056.706	0.946571	ppb	4.383	6.981		14.444
60	Ni	|		784.466	0.943696	ppb	2.561	0.173		36.667
75	As	|		902.769	1.053150	ppb	3.761	10.800		587.801
71	Ga-ISK	>		38970.886		ppb	2.675			39178.102
82	Se-2	|		21.880	0.654706	ppb	19.881	20.454		2.581
107	Ag-1	|		3697.146	1.003847	ppb	4.419	5.755		57.778
115	In-ISK	|		44442.702		ppb	2.710			44832.300
45	Sc-ISK	>		98940.362		ppb	1.229			99518.781
23	Na	|		20129.181	50.812987	ppb	3.162	4.300		936.697
39	K	|		126173.633	52.916866	ppb	0.171	4.126		90519.211
24	Mg	|		20546.436	51.203703	ppb	2.055	2.639		190.001
159	Tb-ISK	|		94879.367		ppb	0.375			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-38088_1-A

Autosampler Position: 328

Sample Date/Time: Wednesday, December 11, 2019 15:19:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\MB 570-38088_1-A.080

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20139.744		ppb					1.363	21061.077
9	Be	|		7.778	0.003286	ppb					24.744 58.443	4.444
10	B	|		3274.820	0.195727	ppb					1.828 122.563	3288.157
27	Al	|		2835.837	-0.050936	ppb					4.762 36.763	3153.682
43	Ca-2	|		80.000	1.150203	ppb					22.535 97.200	61.667
49	Ti	|		135.556	-0.029464	ppb					5.119 29.862	153.334
52	Cr	|		10476.062	-0.063470	ppb					0.616 33.748	11165.475
55	Mn	|		552.233	0.002358	ppb					3.881 94.689	535.566
57	Fe	|		11549.111	0.679627	ppb					1.059 110.193	11632.512
45	Sc-IS	|>		756255.100		ppb					2.038	773652.178
66	Zn	|		711.129	-0.183634	ppb					12.659 31.612	977.811
86	Sr	|		20.198	-0.000742	ppb					78.753 1063.175	22.407
65	Cu	|		98.582	0.007774	ppb					16.966 91.450	84.088
69	Ga-IS	|		246309.940		ppb					1.330	250648.813
95	Mo	|		483.342	0.141206	ppb					7.586 13.999	215.557
115	In-IS	|>		148687.714		ppb					1.532	150384.769
111	Cd	|		21.207	0.005711	ppb					86.370 191.845	11.770
118	Sn	|		3435.969	-0.075572	ppb					4.537 52.725	3877.193
121	Sb	|		453.341	-0.083160	ppb					14.651 16.140	916.696
135	Ba	|		31.111	-0.002884	ppb					44.607 364.172	35.556
165	Ho-IS	|		147546.946		ppb					0.601	153745.503
159	Tb-IS	|>		174700.742		ppb					1.380	182794.545
207	Pb	|		213.334	0.003082	ppb					19.578 80.772	171.112
203	Tl	|		63.333	0.005180	ppb					36.842 89.678	38.889
209	Bi-IS	|		93959.095		ppb					0.537	94136.934
51	V	|		1.111	-0.016384	ppb					173.205 35.668	6.667
59	Co	|		18.889	0.004433	ppb					66.811 262.613	14.444
60	Ni	|		32.222	-0.004421	ppb					36.330 345.856	36.667
75	As	|		588.757	0.055239	ppb					3.440 174.001	587.801
71	Ga-ISK	|>		38170.937		ppb					1.679	39178.102
82	Se-2	|		1.567	-0.031726	ppb					206.746 355.106	2.581
107	Ag-1	|		78.889	0.006386	ppb					28.761 102.394	57.778
115	In-ISK	|		43754.040		ppb					0.637	44832.300
45	Sc-ISK	|>		97166.018		ppb					1.143	99518.781
23	Na	|		1058.373	0.387270	ppb					2.233 8.084	936.697
39	K	|		91887.958	5.230781	ppb					1.649 45.172	90519.211
24	Mg	|		100.000	-0.219027	ppb					5.000 4.821	190.001
159	Tb-ISK	|		93315.797		ppb					0.866	95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-38088_2-A

Autosampler Position: 329

Sample Date/Time: Wednesday, December 11, 2019 15:21:48

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\LCS 570-38088_2-A.081

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20512.498		ppb			2.090			21061.077
9	Be	|		108707.596	101.950891	ppb			0.209	1.581		4.444
10	B	|		33329.949	94.541076	ppb			0.937	1.569		3288.157
27	Al	|		507911.222	102.176332	ppb			1.294	2.858		3153.682
43	Ca-2	|		86195.952	4880.672333	ppb			1.236	0.439		61.667
49	Ti	|		49185.656	98.852073	ppb			1.765	1.655		153.334
52	Cr	|		701226.340	98.801202	ppb			1.298	1.856		11165.475
55	Mn	|		1159608.096	92.886856	ppb			1.959	1.538		535.566
57	Fe	|		1269716.020	4663.504840	ppb			1.099	2.399		11632.512
45	Sc-IS	>		768511.828		ppb			1.542			773652.178
66	Zn	|		141740.812	103.609954	ppb			0.355	1.220		977.811
86	Sr	|		203615.217	97.753752	ppb			0.920	1.520		22.407
65	Cu	|		213364.546	100.707678	ppb			1.612	3.107		84.088
69	Ga-IS	|		263359.828		ppb			0.273			250648.813
95	Mo	|		195843.407	99.665924	ppb			1.236	0.358		215.557
115	In-IS	>		143632.109		ppb			0.748			150384.769
111	Cd	|		164524.292	103.619511	ppb			0.356	0.929		11.770
118	Sn	|		515133.299	101.201044	ppb			1.992	1.842		3877.193
121	Sb	|		475753.337	90.372173	ppb			1.509	1.014		916.696
135	Ba	|		132859.477	100.697331	ppb			1.446	1.725		35.556
165	Ho-IS	|		146935.590		ppb			3.080			153745.503
159	Tb-IS	>		175194.572		ppb			1.656			182794.545
207	Pb	|		1610345.651	99.708677	ppb			1.604	1.079		171.112
203	Tl	|		500142.177	98.358000	ppb			0.272	1.465		38.889
209	Bi-IS	|		88845.463		ppb			1.587			94136.934
51	V	|		32677.357	99.438919	ppb			3.256	1.531		6.667
59	Co	|		105330.403	97.607105	ppb			2.714	2.182		14.444
60	Ni	|		77850.481	100.311321	ppb			1.766	1.195		36.667
75	As	|		30247.015	100.343072	ppb			0.698	2.235		587.801
71	Ga-ISK	>		38141.973		ppb			1.868			39178.102
82	Se-2	|		2864.188	99.415872	ppb			1.577	1.925		2.581
107	Ag-1	|		150868.147	42.489642	ppb			1.604	3.476		57.778
115	In-ISK	|		44144.009		ppb			2.393			44832.300
45	Sc-ISK	>		99532.198		ppb			0.269			99518.781
23	Na	|		372974.674	978.574640	ppb			0.851	0.841		936.697
39	K	|		757411.433	969.250769	ppb			1.076	1.338		90519.211
24	Mg	|		1904852.468	4761.600155	ppb			0.892	1.161		190.001
159	Tb-ISK	|		96976.802		ppb			2.048			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-38088_3-A

Autosampler Position: 330

Sample Date/Time: Wednesday, December 11, 2019 15:24:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\LCSD 570-38088_3-A.082

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	20080.780		ppb		3.254		21061.077
9	Be	|	112576.329	107.007562	ppb	1.371	1.226		4.444
10	B	|	33925.801	97.888656	ppb	1.899	3.580		3288.157
27	Al	|	512722.632	104.544535	ppb	0.968	1.305		3153.682
43	Ca-2	|	89039.975	5111.214344	ppb	1.039	1.907		61.667
49	Ti	|	50732.160	103.366013	ppb	1.626	1.783		153.334
52	Cr	|	726281.193	103.816902	ppb	1.469	2.748		11165.475
55	Mn	|	1198356.773	97.325572	ppb	1.393	2.867		535.566
57	Fe	|	1333507.908	4967.273851	ppb	0.615	2.181		11632.512
45	Sc-IS	>	758242.764		ppb	2.184			773652.178
66	Zn	|	144136.855	106.822870	ppb	0.811	1.786		977.811
86	Sr	|	205582.616	100.047531	ppb	0.442	1.730		22.407
65	Cu	|	218154.444	104.380484	ppb	1.328	3.295		84.088
69	Ga-IS	|	259138.901		ppb	2.267			250648.813
95	Mo	|	202358.811	104.398139	ppb	1.115	1.507		215.557
115	In-IS	>	140081.801		ppb	0.421			150384.769
111	Cd	|	168657.563	108.911826	ppb	0.464	0.632		11.770
118	Sn	|	540017.459	108.833737	ppb	0.454	0.282		3877.193
121	Sb	|	521185.880	101.536759	ppb	0.398	0.817		916.696
135	Ba	|	134501.372	104.519530	ppb	1.162	0.814		35.556
165	Ho-IS	|	144661.098		ppb	1.622			153745.503
159	Tb-IS	>	171369.723		ppb	1.759			182794.545
207	Pb	|	1684368.524	106.630819	ppb	0.626	1.243		171.112
203	Tl	|	517846.135	104.103982	ppb	1.791	1.531		38.889
209	Bi-IS	|	89804.764		ppb	1.529			94136.934
51	V	|	33955.871	105.296428	ppb	1.741	3.502		6.667
59	Co	|	107804.166	101.768376	ppb	1.297	2.657		14.444
60	Ni	|	78959.897	103.630249	ppb	2.090	2.504		36.667
75	As	|	30612.163	103.540580	ppb	2.573	5.285		587.801
71	Ga-ISK	>	37455.727		ppb	2.575			39178.102
82	Se-2	|	2958.546	104.648031	ppb	2.647	5.079		2.581
107	Ag-1	|	153671.287	44.089472	ppb	2.349	4.847		57.778
115	In-ISK	|	43534.722		ppb	2.125			44832.300
45	Sc-ISK	>	98354.101		ppb	0.999			99518.781
23	Na	|	379813.217	1008.607178	ppb	1.143	1.639		936.697
39	K	|	767197.830	997.039344	ppb	2.138	3.489		90519.211
24	Mg	|	2011933.759	5091.290437	ppb	4.518	5.530		190.001
159	Tb-ISK	|	94473.372		ppb	0.965			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-1-A

Autosampler Position: 331

Sample Date/Time: Wednesday, December 11, 2019 15:28:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-1-A.083

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20161.997		ppb			1.295			21061.077
9	Be	|		26.667	0.020973	ppb		25.000		28.475		4.444
10	B	|		4492.929	3.943672	ppb		3.815		9.633		3288.157
27	Al	|		1581686.532	321.469739	ppb		1.059		0.386		3153.682
43	Ca-2	|		36852.479	2098.359140	ppb		1.443		2.739		61.667
49	Ti	|		4490.706	8.803316	ppb		2.188		2.089		153.334
52	Cr	|		21540.673	1.515500	ppb		0.609		1.815		11165.475
55	Mn	|		517237.524	41.672671	ppb		0.725		1.102		535.566
57	Fe	|		136982.622	468.058456	ppb		1.659		2.003		11632.512
45	Sc-IS	>		763673.739		ppb			1.290			773652.178
66	Zn	>		1650263.577	1221.542010	ppb		0.711		0.875		977.811
86	Sr	|		31404.321	15.165354	ppb		1.917		3.112		22.407
65	Cu	|		66443.452	31.524436	ppb		0.981		0.842		84.088
69	Ga-IS	|		245891.911		ppb			1.781			250648.813
95	Mo	|		3284.822	1.575109	ppb		1.037		1.550		215.557
115	In-IS	>		140236.564		ppb		4.155				150384.769
111	Cd	|		1839.888	1.180114	ppb		5.405		4.447		11.770
118	Sn	|		5615.549	0.407786	ppb		4.458		23.143		3877.193
121	Sb	|		16163.584	2.988575	ppb		1.138		5.575		916.696
135	Ba	|		31201.822	24.229049	ppb		1.774		4.653		35.556
165	Ho-IS	|		146743.224		ppb			1.158			153745.503
159	Tb-IS	>		175242.873		ppb			1.353			182794.545
207	Pb	|		385989.260	23.887637	ppb		0.450		1.655		171.112
203	Tl	|		155.556	0.023271	ppb		8.660		12.581		38.889
209	Bi-IS	|		93505.089		ppb			1.930			94136.934
51	V	|		1227.831	3.765745	ppb		7.913		7.519		6.667
59	Co	|		1476.743	1.374064	ppb		2.291		4.698		14.444
60	Ni	|		4239.519	5.489016	ppb		5.806		5.459		36.667
75	As	|		720.614	0.534645	ppb		3.192		24.838		587.801
71	Ga-ISK	>		37660.705		ppb			2.331			39178.102
82	Se-2	|		10.239	0.277717	ppb		148.615		192.380		2.581
107	Ag-1	|		116.667	0.017432	ppb		14.286		26.440		57.778
115	In-ISK	|		43393.062		ppb			1.112			44832.300
45	Sc-ISK	>		98558.930		ppb			2.254			99518.781
23	Na	|		535737.880	1420.899217	ppb		0.958		1.421		936.697
39	K	|		368594.845	409.539451	ppb		0.875		1.847		90519.211
24	Mg	|		158219.799	399.087326	ppb		1.436		2.429		190.001
159	Tb-ISK	|		93501.660		ppb			0.320			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-1-B MS

Autosampler Position: 332

Sample Date/Time: Wednesday, December 11, 2019 15:31:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-1-B MS.084

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	58756.138		ppb		0.139		21061.077
9	Be	|	112453.142	105.191769	ppb		1.371	2.591	4.444
10	B	|	30996.942	86.946404	ppb		2.755	3.334	3288.157
27	Al	|	1924012.579	387.688242	ppb		2.737	2.501	3153.682
43	Ca-2	|	131191.348	7410.613125	ppb		1.054	0.502	61.667
49	Ti	|	54020.892	108.289212	ppb		2.886	1.482	153.334
52	Cr	|	761429.949	107.099468	ppb		2.995	1.518	11165.475
55	Mn	|	1726825.041	137.980287	ppb		0.916	0.742	535.566
57	Fe	|	1528915.409	5607.863469	ppb		1.703	0.553	11632.512
45	Sc-IS	>	770558.849		ppb		1.523		773652.178
66	Zn	>	1718526.271	1260.720104	ppb		1.056	0.730	977.811
86	Sr	|	243557.055	116.614465	ppb		0.927	0.857	22.407
65	Cu	|	283274.521	133.334279	ppb		0.770	1.110	84.088
69	Ga-IS	|	258008.209		ppb		1.368		250648.813
95	Mo	|	190724.915	96.796815	ppb		1.540	0.134	215.557
115	In-IS	>	141117.714		ppb		0.572		150384.769
111	Cd	|	175904.061	112.759440	ppb		0.291	0.762	11.770
118	Sn	|	330683.643	65.867330	ppb		3.086	2.991	3877.193
121	Sb	|	523375.625	101.210574	ppb		1.784	1.564	916.696
135	Ba	|	150674.913	116.233205	ppb		0.817	0.596	35.556
165	Ho-IS	|	145471.478		ppb		1.556		153745.503
159	Tb-IS	>	176534.547		ppb		2.617		182794.545
207	Pb	|	2022506.391	124.324447	ppb		1.114	2.490	171.112
203	Tl	|	532058.080	103.869860	ppb		0.400	2.547	38.889
209	Bi-IS	|	988952.656		ppb		1.508		94136.934
51	V	|	34644.183	107.388862	ppb		1.135	2.533	6.667
59	Co	|	114444.515	108.013196	ppb		2.242	3.347	14.444
60	Ni	|	81742.095	107.248724	ppb		0.855	0.911	36.667
75	As	|	32076.266	108.480779	ppb		1.446	1.228	587.801
71	Ga-ISK	>	37460.169		ppb		1.571		39178.102
82	Se-2	|	3304.950	116.809102	ppb		0.825	0.807	2.581
107	Ag-1	|	158356.244	45.394895	ppb		1.053	0.861	57.778
115	In-ISK	|	43523.806		ppb		0.863		44832.300
45	Sc-ISK	>	97999.489		ppb		1.606		99518.781
23	Na	|	870946.065	2324.761384	ppb		0.615	2.194	936.697
39	K	|	975818.970	1309.064763	ppb		0.607	1.625	90519.211
24	Mg	|	2369747.166	6017.079851	ppb		1.250	1.603	190.001
159	Tb-ISK	|	93995.619		ppb		1.827		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-1-C MSD

Autosampler Position: 333

Sample Date/Time: Wednesday, December 11, 2019 15:34:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-1-C MSD.085

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	57935.020		ppb		0.708		21061.077
9	Be	|	113189.174	109.075837	ppb	3.234	2.713		4.444
10	B	|	31168.414	90.452012	ppb	1.575	1.229		3288.157
27	Al	|	1925846.513	399.913307	ppb	0.933	1.034		3153.682
43	Ca-2	|	130400.867	7590.831849	ppb	1.463	1.768		61.667
49	Ti	|	52103.774	107.638717	ppb	2.524	1.995		153.334
52	Cr	|	747318.100	108.353805	ppb	1.502	0.984		11165.475
55	Mn	|	1719446.154	141.574376	ppb	0.808	0.274		535.566
57	Fe	|	1521634.225	5752.405815	ppb	2.107	1.702		11632.512
45	Sc-IS	>	747735.635		ppb	0.537			773652.178
66	Zn	|	1801342.994	1361.828836	ppb	0.874	1.169		977.811
86	Sr	|	239237.684	118.041994	ppb	1.331	1.869		22.407
65	Cu	|	280110.916	135.849861	ppb	2.673	2.316		84.088
69	Ga-IS	|	254770.756		ppb	1.045			250648.813
95	Mo	|	192317.190	100.585242	ppb	1.641	1.202		215.557
115	In-IS	>	142146.438		ppb	1.212			150384.769
111	Cd	|	173138.343	110.185784	ppb	0.740	0.782		11.770
118	Sn	|	326413.304	64.545703	ppb	1.793	2.829		3877.193
121	Sb	|	529516.239	101.682657	ppb	2.366	3.342		916.696
135	Ba	|	149412.224	114.450965	ppb	3.135	3.923		35.556
165	Ho-IS	|	144986.629		ppb	1.819			153745.503
159	Tb-IS	>	171139.012		ppb	0.490			182794.545
207	Pb	|	1993590.709	126.363104	ppb	0.934	1.106		171.112
203	Tl	|	516302.918	103.930863	ppb	2.279	2.521		38.889
209	Bi-IS	|	1097185.225		ppb	3.318			94136.934
51	V	|	34333.432	104.158661	ppb	0.896	1.068		6.667
59	Co	|	113658.217	104.991832	ppb	1.780	2.504		14.444
60	Ni	|	82819.406	106.359166	ppb	1.439	0.785		36.667
75	As	|	32425.955	107.323335	ppb	1.218	0.671		587.801
71	Ga-ISK	>	38266.741		ppb	0.741			39178.102
82	Se-2	|	3190.927	110.388689	ppb	2.210	2.123		2.581
107	Ag-1	|	160302.178	44.980945	ppb	0.715	0.160		57.778
115	In-ISK	|	43519.977		ppb	1.700			44832.300
45	Sc-ISK	>	98071.035		ppb	0.416			99518.781
23	Na	|	869005.146	2317.512969	ppb	2.617	2.984		936.697
39	K	|	981907.489	1316.852396	ppb	1.536	2.096		90519.211
24	Mg	|	2325554.256	5899.832624	ppb	0.465	0.060		190.001
159	Tb-ISK	|	94187.486		ppb	0.758			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-2-A

Autosampler Position: 334

Sample Date/Time: Wednesday, December 11, 2019 15:36:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-2-A.086

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		20030.705		ppb		2.354		21061.077
9	Be	|		48.889	0.042573	ppb	37.552	41.388		4.444
10	B	|		5405.470	7.037462	ppb	6.487	14.958		3288.157
27	Al	|		1230418.670	252.944198	ppb	2.528	2.246		3153.682
43	Ca-2	|		55126.204	3177.620039	ppb	2.597	2.242		61.667
49	Ti	|		3760.495	7.413936	ppb	1.819	2.025		153.334
52	Cr	|		19591.204	1.268566	ppb	1.515	3.553		11165.475
55	Mn	|		388770.233	31.688301	ppb	1.935	2.025		535.566
57	Fe	|		111771.137	379.043553	ppb	1.144	1.573		11632.512
45	Sc-IS	>		754565.395		ppb	0.435			773652.178
66	Zn	|		312542.377	233.543033	ppb	1.469	1.225		977.811
86	Sr	|		40583.595	19.833380	ppb	1.013	1.282		22.407
65	Cu	|		38358.207	18.401891	ppb	1.513	1.572		84.088
69	Ga-IS	|		243759.870		ppb	0.427			250648.813
95	Mo	|		9794.469	4.972920	ppb	2.049	2.087		215.557
115	In-IS	>		142272.160		ppb	1.096			150384.769
111	Cd	|		619.446	0.386817	ppb	8.836	8.978		11.770
118	Sn	|		20429.050	3.348005	ppb	3.016	2.799		3877.193
121	Sb	|		35065.233	6.570453	ppb	3.136	2.994		916.696
135	Ba	|		23049.694	17.614224	ppb	1.566	0.524		35.556
165	Ho-IS	|		143928.172		ppb	1.475			153745.503
159	Tb-IS	>		172471.672		ppb	1.356			182794.545
207	Pb	|		414522.837	26.066462	ppb	1.555	2.195		171.112
203	Tl	|		340.004	0.060569	ppb	4.273	3.418		38.889
209	Bi-IS	|		405940.840		ppb	2.828			94136.934
51	V	|		996.701	2.983615	ppb	0.669	1.172		6.667
59	Co	|		781.132	0.703593	ppb	1.372	2.022		14.444
60	Ni	|		1931.242	2.418346	ppb	3.454	3.899		36.667
75	As	|		841.810	0.881600	ppb	7.594	22.495		587.801
71	Ga-ISK	>		38534.125		ppb	0.699			39178.102
82	Se-2	|		25.565	0.791254	ppb	11.840	12.383		2.581
107	Ag-1	|		622.236	0.157615	ppb	2.951	3.361		57.778
115	In-ISK	|		44434.922		ppb	0.673			44832.300
45	Sc-ISK	>		96865.130		ppb	1.696			99518.781
23	Na	|		514558.393	1388.640447	ppb	0.797	2.510		936.697
39	K	|		1299169.471	1808.891231	ppb	0.547	1.378		90519.211
24	Mg	|		259531.548	666.401473	ppb	1.372	2.880		190.001
159	Tb-ISK	|		94147.915		ppb	1.267			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-3-A

Autosampler Position: 335

Sample Date/Time: Wednesday, December 11, 2019 15:39:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-3-A.087

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20402.342		ppb			2.433			21061.077
9	Be	|		28.889	0.022784	ppb		17.625	18.607			4.444
10	B	|		25195.543	68.664054	ppb		2.645	3.877			3288.157
27	Al	|		604008.033	121.120153	ppb		1.722	0.687			3153.682
43	Ca-2	|		73354.516	4138.069921	ppb		0.287	2.578			61.667
49	Ti	|		2132.382	3.972620	ppb		6.184	4.784			153.334
52	Cr	|		26840.748	2.240950	ppb		0.678	5.091			11165.475
55	Mn	|		244714.862	19.496861	ppb		0.227	2.220			535.566
57	Fe	|		63869.127	192.988426	ppb		0.659	2.155			11632.512
45	Sc-IS	>		771573.428		ppb			2.361			773652.178
66	Zn	>		576792.453	422.230526	ppb		1.145	2.500			977.811
86	Sr	|		38788.631	18.544973	ppb		1.735	3.169			22.407
65	Cu	|		63347.647	29.750917	ppb		2.165	2.383			84.088
69	Ga-IS	|		238712.414		ppb		0.726				250648.813
95	Mo	|		5288.758	2.576502	ppb		4.412	6.225			215.557
115	In-IS	>		141543.990		ppb		1.644				150384.769
111	Cd	|		836.697	0.527559	ppb		5.012	4.127			11.770
118	Sn	|		9952.359	1.266050	ppb		4.586	7.839			3877.193
121	Sb	|		13910.107	2.520038	ppb		3.095	3.551			916.696
135	Ba	|		20105.250	15.444354	ppb		0.834	2.335			35.556
165	Ho-IS	|		144096.569		ppb		1.768				153745.503
159	Tb-IS	>		170485.806		ppb		1.261				182794.545
207	Pb	|		159515.332	10.141916	ppb		1.106	2.290			171.112
203	Tl	|		100.000	0.012839	ppb		26.458	40.005			38.889
209	Bi-IS	|		153813.754		ppb		1.575				94136.934
51	V	|		503.342	1.529691	ppb		5.960	4.780			6.667
59	Co	|		702.240	0.645647	ppb		4.037	5.416			14.444
60	Ni	|		1563.419	1.992890	ppb		1.128	1.688			36.667
75	As	|		775.703	0.718035	ppb		8.945	32.509			587.801
71	Ga-ISK	>		37704.141		ppb		1.308				39178.102
82	Se-2	|		6.544	0.142369	ppb		17.404	25.869			2.581
107	Ag-1	|		205.557	0.042721	ppb		8.162	11.175			57.778
115	In-ISK	|		43242.660		ppb		0.550				44832.300
45	Sc-ISK	>		97980.458		ppb		1.427				99518.781
23	Na	|		970457.522	2590.805171	ppb		1.182	1.477			936.697
39	K	|		1567384.599	2182.731479	ppb		0.632	1.061			90519.211
24	Mg	|		213683.110	542.195399	ppb		1.352	0.936			190.001
159	Tb-ISK	|		93980.800		ppb		0.813				95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 15:42:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.088

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19933.901		ppb		1.912		21061.077
9	Be	|	105039.316	101.009667	ppb	2.187	1.855		4.444
10	B	|	82105.376	254.481793	ppb	2.613	2.348		3288.157
27	Al	|	488283.601	100.698129	ppb	1.572	1.128		3153.682
43	Ca-2	|	88654.246	5148.471513	ppb	0.808	1.306		61.667
49	Ti	|	49064.119	101.132522	ppb	1.221	1.456		153.334
52	Cr	|	697421.216	100.794529	ppb	0.853	0.319		11165.475
55	Mn	|	1171767.723	96.257434	ppb	1.547	1.218		535.566
57	Fe	|	1329551.904	5010.246102	ppb	0.512	0.696		11632.512
45	Sc-IS	>	749350.371		ppb	0.541			773652.178
66	Zn	|	135081.204	101.241477	ppb	0.517	1.011		977.811
86	Sr	|	201332.826	99.122724	ppb	1.394	1.834		22.407
65	Cu	|	212224.894	102.699443	ppb	1.925	1.808		84.088
69	Ga-IS	|	252288.337		ppb	0.860			250648.813
95	Mo	|	195870.306	102.229634	ppb	0.096	0.463		215.557
115	In-IS	>	136616.637		ppb	1.459			150384.769
111	Cd	|	155461.253	102.932614	ppb	1.691	0.247		11.770
118	Sn	|	497253.407	102.723969	ppb	1.086	1.183		3877.193
121	Sb	|	519757.634	103.855142	ppb	1.523	2.832		916.696
135	Ba	|	128594.005	102.476177	ppb	1.096	1.554		35.556
165	Ho-IS	|	142204.681		ppb	2.972			153745.503
159	Tb-IS	>	168530.709		ppb	1.861			182794.545
207	Pb	|	1584824.594	102.000961	ppb	2.133	0.290		171.112
203	Tl	|	509312.908	104.101574	ppb	2.653	1.546		38.889
209	Bi-IS	|	106033.249		ppb	1.819			94136.934
51	V	|	31685.100	99.208290	ppb	0.734	3.639		6.667
59	Co	|	102646.475	97.880745	ppb	2.363	5.212		14.444
60	Ni	|	75450.993	100.029879	ppb	1.857	4.746		36.667
75	As	|	28981.341	98.807422	ppb	1.745	1.170		587.801
71	Ga-ISK	>	37101.475		ppb	2.862			39178.102
82	Se-2	|	2868.494	102.387438	ppb	1.490	2.573		2.581
107	Ag-1	|	343144.643	99.371047	ppb	0.728	2.180		57.778
115	In-ISK	|	43097.167		ppb	2.069			44832.300
45	Sc-ISK	>	95955.775		ppb	2.627			99518.781
23	Na	|	1907582.877	5205.735099	ppb	1.386	4.034		936.697
39	K	|	3681632.767	5422.402628	ppb	1.435	3.981		90519.211
24	Mg	|	2036522.152	5280.271738	ppb	4.407	3.358		190.001
159	Tb-ISK	|	92068.423		ppb	1.198			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Wednesday, December 11, 2019 15:45:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.089

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	20007.335		ppb	0.968		21061.077
9	Be	20.000	0.015045	ppb	16.667	22.137	4.444
10	B	3519.323	1.045816	ppb	3.145	47.660	3288.157
27	Al	2696.929	-0.077006	ppb	21.056	141.824	3153.682
43	Ca-2	65.000	0.285024	ppb	26.647	330.500	61.667
49	Ti	205.557	0.116636	ppb	4.681	18.755	153.334
52	Cr	10641.741	-0.030592	ppb	2.167	41.349	11165.475
55	Mn	656.682	0.011156	ppb	3.553	13.636	535.566
57	Fe	12791.281	5.632592	ppb	1.951	7.813	11632.512
45	Sc-IS	> 751806.953		ppb	1.510		773652.178
66	Zn	747.797	-0.152297	ppb	7.596	27.278	977.811
86	Sr	24.705	0.001411	ppb	44.425	373.245	22.407
65	Cu	131.553	0.024076	ppb	16.023	43.168	84.088
69	Ga-IS	234464.056		ppb	0.858		250648.813
95	Mo	3157.018	1.536441	ppb	9.368	11.246	215.557
115	In-IS	> 138494.158		ppb	2.975		150384.769
111	Cd	35.593	0.016155	ppb	15.935	21.475	11.770
118	Sn	12138.498	1.761441	ppb	5.326	10.844	3877.193
121	Sb	4156.161	0.654708	ppb	3.780	8.270	916.696
135	Ba	44.445	0.009039	ppb	28.395	100.764	35.556
165	Ho-IS	143380.560		ppb	1.948		153745.503
159	Tb-IS	> 169234.537		ppb	1.951		182794.545
207	Pb	862.233	0.045124	ppb	0.805	1.446	171.112
203	Tl	197.779	0.032865	ppb	17.050	18.636	38.889
209	Bi-IS	95158.140		ppb	1.427		94136.934
51	V	15.556	0.028097	ppb	49.487	81.085	6.667
59	Co	28.889	0.014253	ppb	35.251	64.359	14.444
60	Ni	50.000	0.019793	ppb	11.547	35.555	36.667
75	As	575.163	0.048805	ppb	8.532	216.554	587.801
71	Ga-ISK	> 37349.910		ppb	3.369		39178.102
82	Se-2	13.252	0.374167	ppb	88.765	109.712	2.581
107	Ag-1	590.012	0.153993	ppb	6.516	8.265	57.778
115	In-ISK	43124.893		ppb	1.246		44832.300
45	Sc-ISK	> 95644.681		ppb	0.908		99518.781
23	Na	1675.098	2.121184	ppb	2.602	5.858	936.697
39	K	93444.624	9.765455	ppb	0.455	19.279	90519.211
24	Mg	386.672	0.530616	ppb	5.973	9.867	190.001
159	Tb-ISK	90916.459		ppb	1.961		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 15:48:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.090

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		19967.289		ppb		3.394		21061.077
9	Be	|		14.444	0.009839	ppb		35.251	52.361	4.444
10	B	|		3154.793	-0.071101	ppb		4.000	531.329	3288.157
27	Al	|		2876.957	-0.035362	ppb		4.618	72.810	3153.682
43	Ca-2	|		166.668	6.226681	ppb		33.046	50.507	61.667
49	Ti	|		168.890	0.042898	ppb		17.800	141.350	153.334
52	Cr	|		10613.942	-0.025347	ppb		1.471	110.194	11165.475
55	Mn	|		763.354	0.020247	ppb		6.723	18.482	535.566
57	Fe	|		11829.342	2.264944	ppb		2.340	70.733	11632.512
45	Sc-IS	|>		747453.934		ppb		1.532		773652.178
66	Zn	|		5598.875	3.521302	ppb		3.127	2.670	977.811
86	Sr	|		-3.761	-0.012523	ppb		132.458	19.579	22.407
65	Cu	|		131.756	0.024612	ppb		21.212	57.308	84.088
69	Ga-IS	|		237896.736		ppb		0.630		250648.813
95	Mo	|		970.033	0.399202	ppb		4.223	6.557	215.557
115	In-IS	|>		140357.736		ppb		3.421		150384.769
111	Cd	|		32.407	0.013795	ppb		6.201	4.207	11.770
118	Sn	|		5997.926	0.483438	ppb		2.712	15.076	3877.193
121	Sb	|		2705.812	0.361028	ppb		4.016	9.619	916.696
135	Ba	|		46.667	0.010388	ppb		46.839	163.882	35.556
165	Ho-IS	|		143564.981		ppb		3.376		153745.503
159	Tb-IS	|>		170356.603		ppb		1.773		182794.545
207	Pb	|		833.343	0.042919	ppb		4.850	6.097	171.112
203	Tl	|		85.556	0.009904	ppb		38.438	63.656	38.889
209	Bi-IS	|		91520.035		ppb		1.366		94136.934
51	V	|		6.667	0.001827	ppb		100.000	1200.805	6.667
59	Co	|		23.333	0.008909	ppb		42.857	94.656	14.444
60	Ni	|		74.445	0.053129	ppb		11.268	30.312	36.667
75	As	|		578.117	0.077394	ppb		0.472	140.344	587.801
71	Ga-ISK	|>		37117.125		ppb		4.999		39178.102
82	Se-2	|		-3.120	-0.195233	ppb		111.171	59.469	2.581
107	Ag-1	|		155.556	0.029283	ppb		8.921	17.597	57.778
115	In-ISK	|		43163.860		ppb		0.472		44832.300
45	Sc-ISK	|>		97813.722		ppb		0.265		99518.781
23	Na	|		1678.432	2.028544	ppb		6.028	13.744	936.697
39	K	|		92702.031	5.521886	ppb		0.372	6.777	90519.211
24	Mg	|		278.336	0.232875	ppb		28.080	85.237	190.001
159	Tb-ISK	|		92472.387		ppb		1.784		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-4-A

Autosampler Position: 336

Sample Date/Time: Wednesday, December 11, 2019 15:50:48

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-4-A.091

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19900.525		ppb		2.655		21061.077
9	Be	|		32.222	0.026965	ppb	33.254	39.591		4.444
10	B	|		4944.189	5.677893	ppb	1.935	1.098		3288.157
27	Al	|		1617054.049	335.091980	ppb	1.572	1.453		3153.682
43	Ca-2	|		82970.252	4819.993953	ppb	0.695	0.982		61.667
49	Ti	|		7210.710	14.611956	ppb	4.093	5.319		153.334
52	Cr	|		26081.566	2.242827	ppb	1.003	2.022		11165.475
55	Mn	|		291226.382	23.901953	ppb	0.749	0.939		535.566
57	Fe	|		272792.242	994.414651	ppb	0.793	1.602		11632.512
45	Sc-IS	>		749103.848		ppb	1.557			773652.178
66	Zn	|		586107.903	441.856425	ppb	0.994	1.626		977.811
86	Sr	|		45525.752	22.421134	ppb	2.627	4.124		22.407
65	Cu	|		28646.934	13.837271	ppb	1.414	2.856		84.088
69	Ga-IS	|		243753.140		ppb	0.742			250648.813
95	Mo	|		5756.716	2.900720	ppb	1.953	3.609		215.557
115	In-IS	>		141897.021		ppb	0.657			150384.769
111	Cd	|		374.583	0.231775	ppb	5.611	6.246		11.770
118	Sn	|		7818.807	0.833570	ppb	3.108	6.999		3877.193
121	Sb	|		13498.598	2.433795	ppb	1.937	2.194		916.696
135	Ba	|		38263.397	29.336449	ppb	0.375	0.709		35.556
165	Ho-IS	|		142516.378		ppb	1.701			153745.503
159	Tb-IS	>		170566.709		ppb	0.881			182794.545
207	Pb	|		105204.904	6.681455	ppb	0.405	1.186		171.112
203	Tl	|		81.111	0.009069	ppb	15.559	29.537		38.889
209	Bi-IS	|		89928.847		ppb	0.938			94136.934
51	V	|		650.015	2.049807	ppb	10.659	14.344		6.667
59	Co	|		505.565	0.476298	ppb	10.720	12.548		14.444
60	Ni	|		1505.635	1.982582	ppb	7.658	11.458		36.667
75	As	|		777.367	0.806768	ppb	3.865	14.732		587.801
71	Ga-ISK	>		36583.485		ppb	3.378			39178.102
82	Se-2	|		2.883	0.015925	ppb	124.708	792.974		2.581
107	Ag-1	|		117.778	0.018672	ppb	21.983	37.701		57.778
115	In-ISK	|		42667.984		ppb	3.090			44832.300
45	Sc-ISK	>		96507.107		ppb	0.514			99518.781
23	Na	|		1034115.534	2802.941008	ppb	0.582	1.094		936.697
39	K	|		1047403.276	1438.393490	ppb	1.355	1.027		90519.211
24	Mg	|		185884.972	478.812751	ppb	1.083	1.559		190.001
159	Tb-ISK	|		92866.224		ppb	1.097			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-5-A

Autosampler Position: 337

Sample Date/Time: Wednesday, December 11, 2019 15:53:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-5-A.092

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		20548.101		ppb		0.665		21061.077
9	Be	|		43.333	0.036580	ppb	26.647	28.600		4.444
10	B	|		13658.749	32.833389	ppb	0.496	1.721		3288.157
27	Al	|		1279327.723	259.181030	ppb	0.831	0.864		3153.682
43	Ca-2	|		160552.389	9126.219142	ppb	1.984	1.865		61.667
49	Ti	|		5362.118	10.543564	ppb	2.029	3.371		153.334
52	Cr	|		27093.448	2.304675	ppb	1.276	2.776		11165.475
55	Mn	|		476390.951	38.274855	ppb	0.707	1.927		535.566
57	Fe	|		123582.269	416.781752	ppb	0.940	0.533		11632.512
45	Sc-IS	>		765803.474		ppb	1.330			773652.178
66	Zn	|		1273659.374	939.982390	ppb	0.930	0.892		977.811
86	Sr	|		101122.101	48.723124	ppb	2.452	3.714		22.407
65	Cu	|		111561.826	52.811372	ppb	1.657	1.693		84.088
69	Ga-IS	|		246739.550		ppb	1.503			250648.813
95	Mo	|		51063.336	26.003386	ppb	1.601	2.885		215.557
115	In-IS	>		139231.145		ppb	1.981			150384.769
111	Cd	|		919.471	0.590473	ppb	0.359	1.800		11.770
118	Sn	|		5578.868	0.406689	ppb	3.689	14.345		3877.193
121	Sb	|		27137.976	5.162725	ppb	1.110	2.421		916.696
135	Ba	|		62662.715	48.989532	ppb	1.774	2.353		35.556
165	Ho-IS	|		143657.793		ppb	2.068			153745.503
159	Tb-IS	>		169852.825		ppb	1.527			182794.545
207	Pb	|		78763.862	5.021290	ppb	0.977	2.020		171.112
203	Tl	|		96.667	0.012292	ppb	9.123	16.156		38.889
209	Bi-IS	|		91175.649		ppb	1.832			94136.934
51	V	|		1486.744	4.528186	ppb	0.777	1.943		6.667
59	Co	|		1017.814	0.934509	ppb	4.069	3.047		14.444
60	Ni	|		10235.888	13.213122	ppb	1.157	2.355		36.667
75	As	|		1037.617	1.590225	ppb	3.909	9.346		587.801
71	Ga-ISK	>		37962.601		ppb	1.185			39178.102
82	Se-2	|		20.213	0.614646	ppb	64.344	72.612		2.581
107	Ag-1	|		138.890	0.023449	ppb	27.713	46.161		57.778
115	In-ISK	|		43502.728		ppb	1.431			44832.300
45	Sc-ISK	>		98166.281		ppb	2.631			99518.781
23	Na	|		3851663.012	10272.711568	ppb	2.483	2.878		936.697
39	K	|		5513785.335	7995.636855	ppb	1.499	1.662		90519.211
24	Mg	|		573375.970	1453.335196	ppb	1.826	2.456		190.001
159	Tb-ISK	|		93194.337		ppb	0.739			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-6-A

Autosampler Position: 338

Sample Date/Time: Wednesday, December 11, 2019 15:56:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-6-A.093

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		20464.663		ppb		4.015		21061.077
9	Be	|		27.778	0.021884	ppb	59.195	72.325		4.444
10	B	|		7249.617	12.370739	ppb	1.526	4.512		3288.157
27	Al	|		979716.025	196.267110	ppb	1.776	2.171		3153.682
43	Ca-2	|		82138.844	4618.684942	ppb	1.796	1.917		61.667
49	Ti	|		4941.966	9.586654	ppb	2.130	2.040		153.334
52	Cr	|		22366.387	1.592655	ppb	1.569	6.138		11165.475
55	Mn	|		209735.123	16.649840	ppb	0.815	1.391		535.566
57	Fe	|		102993.299	336.270119	ppb	1.154	2.553		11632.512
45	Sc-IS	>		773891.866		ppb	1.491			773652.178
66	Zn	|		593835.302	433.248949	ppb	1.996	0.551		977.811
86	Sr	|		41294.517	19.682011	ppb	1.665	3.076		22.407
65	Cu	|		27670.429	12.933986	ppb	0.682	2.175		84.088
69	Ga-IS	|		239893.052		ppb	0.696			250648.813
95	Mo	|		4345.105	2.089484	ppb	0.692	1.866		215.557
115	In-IS	>		138575.417		ppb	0.840			150384.769
111	Cd	|		115.320	0.068185	ppb	6.008	5.902		11.770
118	Sn	|		5205.393	0.334888	ppb	0.748	2.576		3877.193
121	Sb	|		9540.963	1.715493	ppb	0.831	1.465		916.696
135	Ba	|		20188.704	15.839602	ppb	2.137	2.850		35.556
165	Ho-IS	|		143027.306		ppb	3.059			153745.503
159	Tb-IS	>		174795.624		ppb	2.756			182794.545
207	Pb	|		51326.072	3.176913	ppb	1.564	3.242		171.112
203	Tl	|		55.556	0.003600	ppb	15.100	38.959		38.889
209	Bi-IS	|		90235.271		ppb	1.975			94136.934
51	V	|		1471.187	4.522790	ppb	0.916	0.274		6.667
59	Co	|		415.562	0.377699	ppb	16.485	17.193		14.444
60	Ni	|		1591.200	2.034351	ppb	3.545	3.384		36.667
75	As	|		917.815	1.212954	ppb	2.395	7.782		587.801
71	Ga-ISK	>		37603.873		ppb	0.644			39178.102
82	Se-2	|		16.583	0.498574	ppb	63.419	75.092		2.581
107	Ag-1	|		90.000	0.009868	ppb	9.799	25.568		57.778
115	In-ISK	|		43029.639		ppb	0.849			44832.300
45	Sc-ISK	>		97968.148		ppb	1.364			99518.781
23	Na	|		1956660.313	5226.617763	ppb	0.731	0.653		936.697
39	K	|		1022587.847	1378.560738	ppb	0.257	1.525		90519.211
24	Mg	|		156224.764	396.344787	ppb	1.858	2.086		190.001
159	Tb-ISK	|		93409.838		ppb	2.343			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-7-A

Autosampler Position: 339

Sample Date/Time: Wednesday, December 11, 2019 15:59:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-7-A.094

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		23553.850		ppb			1.821			21061.077
9	Be	|		36.667	0.030076	ppb			9.091	9.292		4.444
10	B	|		8628.161	16.742524	ppb			1.353	2.741		3288.157
27	Al	|		2546133.860	512.372274	ppb			0.759	0.999		3153.682
43	Ca-2	|		90775.961	5117.477299	ppb			2.626	2.360		61.667
49	Ti	|		7214.048	14.168977	ppb			6.036	5.532		153.334
52	Cr	|		29960.289	2.681802	ppb			2.806	3.174		11165.475
55	Mn	|		383669.446	30.571086	ppb			0.492	1.208		535.566
57	Fe	|		188040.599	651.001942	ppb			0.263	0.809		11632.512
45	Sc-IS	>		771882.394		ppb			0.962			773652.178
66	Zn	>		6814740.439	4992.487353	ppb			1.268	0.343		977.811
86	Sr	|		65402.228	31.250999	ppb			0.862	0.457		22.407
65	Cu	|		62683.393	29.421038	ppb			0.582	0.549		84.088
69	Ga-IS	|		250195.488		ppb			1.329			250648.813
95	Mo	|		2281.293	1.047902	ppb			3.125	2.560		215.557
115	In-IS	>		140989.790		ppb			1.496			150384.769
111	Cd	|		877.459	0.555751	ppb			6.160	5.251		11.770
118	Sn	|		5864.537	0.449419	ppb			1.774	0.737		3877.193
121	Sb	|		13273.942	2.407317	ppb			1.183	2.176		916.696
135	Ba	|		65054.477	50.216722	ppb			1.559	1.087		35.556
165	Ho-IS	|		142703.849		ppb			2.032			153745.503
159	Tb-IS	>		169651.727		ppb			2.180			182794.545
207	Pb	|		149423.317	9.547272	ppb			0.324	1.937		171.112
203	Tl	|		88.889	0.010766	ppb			20.653	37.557		38.889
209	Bi-IS	|		89569.922		ppb			0.399			94136.934
51	V	|		887.805	2.726713	ppb			5.821	4.338		6.667
59	Co	|		843.358	0.781976	ppb			3.087	4.729		14.444
60	Ni	|		3703.814	4.808777	ppb			2.144	2.858		36.667
75	As	|		835.766	0.940106	ppb			5.258	21.302		587.801
71	Ga-ISK	>		37518.101		ppb			1.780			39178.102
82	Se-2	|		15.872	0.470101	ppb			51.770	59.564		2.581
107	Ag-1	|		98.889	0.012484	ppb			10.298	24.245		57.778
115	In-ISK	|		42714.396		ppb			1.224			44832.300
45	Sc-ISK	>		97319.277		ppb			1.100			99518.781
23	Na	|		2904745.308	7812.521396	ppb			0.472	1.557		936.697
39	K	|		3762574.170	5461.799960	ppb			0.908	1.602		90519.211
24	Mg	|		313767.056	801.854328	ppb			1.358	2.108		190.001
159	Tb-ISK	|		93411.088		ppb			0.970			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-8-A

Autosampler Position: 340

Sample Date/Time: Wednesday, December 11, 2019 16:01:48

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-8-A.095

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	20567.018		ppb		1.061		21061.077
9	Be	|	68.889	0.059489	ppb	10.073	10.920		4.444
10	B	|	7306.313	12.359635	ppb	2.600	6.130		3288.157
27	Al	|	5549920.454	1105.580988	ppb	0.232	1.498		3153.682
43	Ca-2	|	122913.219	6856.172951	ppb	1.195	1.651		61.667
49	Ti	|	11990.586	23.500499	ppb	0.515	1.035		153.334
52	Cr	|	49587.023	5.403615	ppb	0.343	1.586		11165.475
55	Mn	|	603914.467	47.625350	ppb	0.723	1.493		535.566
57	Fe	|	340156.874	1198.863803	ppb	1.146	2.374		11632.512
45	Sc-IS	>	780327.545		ppb	1.308			773652.178
66	Zn	>	1548762.008	1121.839439	ppb	1.450	1.066		977.811
86	Sr	|	67299.375	31.810662	ppb	1.004	0.791		22.407
65	Cu	|	150308.078	69.843151	ppb	0.375	1.033		84.088
69	Ga-IS	|	251699.418		ppb	1.512			250648.813
95	Mo	|	2104.600	0.947656	ppb	7.473	9.734		215.557
115	In-IS	>	142061.905		ppb	2.403			150384.769
111	Cd	|	602.260	0.376952	ppb	6.686	8.983		11.770
118	Sn	|	2965.864	-0.138898	ppb	4.589	27.400		3877.193
121	Sb	|	10711.793	1.895321	ppb	1.179	3.045		916.696
135	Ba	|	86047.269	65.956265	ppb	0.902	2.956		35.556
165	Ho-IS	|	145616.545		ppb	2.807			153745.503
159	Tb-IS	>	175903.032		ppb	0.610			182794.545
207	Pb	|	385468.965	23.762224	ppb	1.073	0.750		171.112
203	Tl	|	115.556	0.015296	ppb	15.887	23.056		38.889
209	Bi-IS	|	90521.445		ppb	0.166			94136.934
51	V	|	1155.602	3.460203	ppb	1.921	0.563		6.667
59	Co	|	1257.833	1.140054	ppb	3.239	2.213		14.444
60	Ni	|	5392.129	6.830485	ppb	0.867	0.726		36.667
75	As	|	810.093	0.774370	ppb	4.425	13.365		587.801
71	Ga-ISK	>	38555.298		ppb	1.427			39178.102
82	Se-2	|	6.198	0.125199	ppb	33.663	55.513		2.581
107	Ag-1	|	75.556	0.005185	ppb	13.478	48.783		57.778
115	In-ISK	|	42824.770		ppb	2.752			44832.300
45	Sc-ISK	>	98876.593		ppb	1.282			99518.781
23	Na	|	1478458.535	3912.418304	ppb	1.840	2.002		936.697
39	K	|	1879780.385	2619.019458	ppb	0.553	1.895		90519.211
24	Mg	|	318384.349	800.918855	ppb	1.548	2.754		190.001
159	Tb-ISK	|	95057.214		ppb	0.585			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14344-A-1-A

Autosampler Position: 341

Sample Date/Time: Wednesday, December 11, 2019 16:04:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14344-A-1-A.096

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		25218.908		ppb			0.939			21061.077
9	Be	|		23.333	0.017207	ppb			37.796	49.329		4.444
10	B	|		12949.200	29.278555	ppb			0.915	2.421		3288.157
27	Al	|		817832.332	160.126733	ppb			0.696	2.158		3153.682
43	Ca-2	|		175110.037	9634.592556	ppb			0.506	2.090		61.667
49	Ti	|		3932.764	7.394079	ppb			2.798	3.584		153.334
52	Cr	|		25184.407	1.913353	ppb			1.845	1.232		11165.475
55	Mn	|		721995.735	56.154434	ppb			1.263	1.666		535.566
57	Fe	|		89325.096	278.767712	ppb			1.386	3.672		11632.512
45	Sc-IS	>		791347.532		ppb			1.849			773652.178
66	Zn	>		592256.132	422.612000	ppb			1.030	0.832		977.811
86	Sr	|		168937.460	78.748822	ppb			2.340	0.769		22.407
65	Cu	|		75149.771	34.415821	ppb			0.573	1.305		84.088
69	Ga-IS	|		245412.603		ppb			1.656			250648.813
95	Mo	|		19773.689	9.678972	ppb			3.818	5.261		215.557
115	In-IS	>		144713.281		ppb			2.577			150384.769
111	Cd	|		295.146	0.177134	ppb			18.598	18.020		11.770
118	Sn	|		5811.184	0.409536	ppb			4.922	18.520		3877.193
121	Sb	|		15942.227	2.847302	ppb			2.447	5.352		916.696
135	Ba	|		24237.213	18.219131	ppb			1.646	3.121		35.556
165	Ho-IS	|		149167.068		ppb			1.479			153745.503
159	Tb-IS	>		176834.907		ppb			2.647			182794.545
207	Pb	|		31528.019	1.924869	ppb			1.772	3.149		171.112
203	Tl	|		51.111	0.002569	ppb			37.653	133.957		38.889
209	Bi-IS	|		92113.814		ppb			0.929			94136.934
51	V	|		1615.647	4.936813	ppb			0.859	0.818		6.667
59	Co	|		1221.163	1.127777	ppb			2.223	3.424		14.444
60	Ni	|		8999.501	11.645276	ppb			0.946	1.325		36.667
75	As	|		938.297	1.263626	ppb			5.341	16.428		587.801
71	Ga-ISK	>		37848.966		ppb			1.197			39178.102
82	Se-2	|		7.909	0.188578	ppb			66.740	96.925		2.581
107	Ag-1	|		74.445	0.005286	ppb			22.537	90.533		57.778
115	In-ISK	|		44390.359		ppb			0.307			44832.300
45	Sc-ISK	>		101309.101		ppb			1.223			99518.781
23	Na	|		3299394.525	8523.775903	ppb			1.308	0.592		936.697
39	K	|		3585708.897	4988.387703	ppb			1.805	1.181		90519.211
24	Mg	|		443148.545	1087.981110	ppb			0.678	0.617		190.001
159	Tb-ISK	|		95837.740		ppb			0.717			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-9-A @5

Autosampler Position: 342

Sample Date/Time: Wednesday, December 11, 2019 16:07:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-9-A @5.097

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	20462.427		ppb	2.285		21061.077
9	Be	26.667	0.020573	ppb	25.000	30.406	4.444
10	B	4242.852	2.907335	ppb	2.038	7.666	3288.157
27	Al	233018.920	45.946453	ppb	2.085	2.363	3153.682
43	Ca-2	16255.912	906.406770	ppb	1.841	2.061	61.667
49	Ti	908.918	1.502753	ppb	3.204	3.431	153.334
52	Cr	15769.812	0.642099	ppb	1.667	4.545	11165.475
55	Mn	52274.365	4.095507	ppb	1.230	1.603	535.566
57	Fe	32342.131	75.569396	ppb	1.678	2.526	11632.512
45	Sc-IS	> 777999.045		ppb	0.365		773652.178
66	Zn	318385.540	230.739699	ppb	0.450	0.476	977.811
86	Sr	7095.386	3.354213	ppb	4.748	4.812	22.407
65	Cu	11185.827	5.176523	ppb	1.945	2.249	84.088
69	Ga-IS	241480.647		ppb	1.006		250648.813
95	Mo	1158.936	0.474266	ppb	9.353	11.959	215.557
115	In-IS	> 140695.496		ppb	2.508		150384.769
111	Cd	137.567	0.081239	ppb	12.825	11.693	11.770
118	Sn	2382.421	-0.251348	ppb	4.446	9.169	3877.193
121	Sb	2629.131	0.344675	ppb	3.432	8.744	916.696
135	Ba	2819.167	2.156365	ppb	2.484	2.189	35.556
165	Ho-IS	145541.296		ppb	2.646		153745.503
159	Tb-IS	> 173514.293		ppb	1.846		182794.545
207	Pb	17821.064	1.104550	ppb	2.426	4.093	171.112
203	Tl	34.444	-0.000515	ppb	48.709	628.126	38.889
209	Bi-IS	91106.271		ppb	0.907		94136.934
51	V	538.899	1.621409	ppb	5.944	6.271	6.667
59	Co	133.334	0.110556	ppb	2.500	1.032	14.444
60	Ni	768.910	0.944686	ppb	7.049	5.321	36.667
75	As	671.510	0.336161	ppb	1.809	8.930	587.801
71	Ga-ISK	> 38134.176		ppb	1.935		39178.102
82	Se-2	2.914	0.015596	ppb	124.112	811.755	2.581
107	Ag-1	60.000	0.001105	ppb	19.245	320.165	57.778
115	In-ISK	43848.151		ppb	1.398		44832.300
45	Sc-ISK	> 99380.222		ppb	2.884		99518.781
23	Na	190039.254	498.275806	ppb	1.740	1.270	936.697
39	K	381098.737	423.535455	ppb	0.694	4.661	90519.211
24	Mg	69190.487	172.861806	ppb	0.429	3.093	190.001
159	Tb-ISK	94372.696		ppb	0.500		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-9-B MS @5

Autosampler Position: 343

Sample Date/Time: Wednesday, December 11, 2019 16:10:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-9-B MS @5.098

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28316.927		ppb		0.903		21061.077
9	Be	|	23621.736	22.126456	ppb	0.658	0.034		4.444
10	B	|	9739.988	20.323929	ppb	3.049	3.606		3288.157
27	Al	|	310230.276	62.085923	ppb	0.915	0.338		3153.682
43	Ca-2	|	35961.899	2032.137765	ppb	2.898	2.318		61.667
49	Ti	|	11330.048	22.513118	ppb	2.293	2.528		153.334
52	Cr	|	166080.933	22.164591	ppb	0.124	0.779		11165.475
55	Mn	|	298900.169	23.888391	ppb	0.453	0.234		535.566
57	Fe	|	311588.148	1110.818030	ppb	0.635	0.829		11632.512
45	Sc-IS	>	769215.773		ppb	0.663			773652.178
66	Zn	|	86279.764	62.724776	ppb	0.340	0.642		977.811
86	Sr	|	50281.095	24.107644	ppb	1.517	1.896		22.407
65	Cu	|	55477.108	26.122707	ppb	2.730	2.416		84.088
69	Ga-IS	|	246345.993		ppb	0.964			250648.813
95	Mo	|	39569.200	20.029121	ppb	2.920	2.368		215.557
115	In-IS	>	139747.798		ppb	2.701			150384.769
111	Cd	|	33843.830	21.902810	ppb	2.756	1.592		11.770
118	Sn	|	93794.720	18.352530	ppb	1.393	3.216		3877.193
121	Sb	|	110120.732	21.375407	ppb	2.344	1.253		916.696
135	Ba	|	26224.049	20.417661	ppb	0.871	3.072		35.556
165	Ho-IS	|	144486.130		ppb	2.280			153745.503
159	Tb-IS	>	173550.708		ppb	3.082			182794.545
207	Pb	|	339265.306	21.206005	ppb	0.976	2.198		171.112
203	Tl	|	105516.022	20.950554	ppb	0.224	2.867		38.889
209	Bi-IS	|	326105.826		ppb	0.910			94136.934
51	V	|	7302.978	22.398902	ppb	1.588	2.341		6.667
59	Co	|	23441.446	21.895741	ppb	2.336	3.086		14.444
60	Ni	|	16578.505	21.503131	ppb	1.750	2.147		36.667
75	As	|	6764.971	21.126296	ppb	0.677	1.560		587.801
71	Ga-ISK	>	37827.796		ppb	0.760			39178.102
82	Se-2	|	623.918	21.762902	ppb	3.068	2.594		2.581
107	Ag-1	|	30469.144	8.636328	ppb	2.941	3.012		57.778
115	In-ISK	|	43214.317		ppb	0.210			44832.300
45	Sc-ISK	>	97981.615		ppb	1.938			99518.781
23	Na	|	258547.007	688.526343	ppb	0.416	1.964		936.697
39	K	|	500914.166	608.156194	ppb	0.467	2.444		90519.211
24	Mg	|	490245.774	1244.778182	ppb	1.181	2.114		190.001
159	Tb-ISK	|	92918.581		ppb	1.447			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14349-A-9-C MSD @5

Autosampler Position: 344

Sample Date/Time: Wednesday, December 11, 2019 16:12:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14349-A-9-C MSD @5.099

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		28860.261		ppb		3.726		21061.077
9	Be	|		24791.499	23.757427	ppb	2.015	6.047		4.444
10	B	|		10022.404	21.925911	ppb	1.948	7.079		3288.157
27	Al	|		327742.517	67.132371	ppb	0.526	4.881		3153.682
43	Ca-2	|		37312.017	2158.665617	ppb	2.533	7.583		61.667
49	Ti	|		12031.733	24.492642	ppb	2.243	7.091		153.334
52	Cr	|		175008.834	24.012064	ppb	0.785	5.550		11165.475
55	Mn	|		316655.985	25.903813	ppb	1.522	6.873		535.566
57	Fe	|		335783.573	1229.612737	ppb	1.902	7.394		11632.512
45	Sc-IS	>		753384.735		ppb	5.176			773652.178
66	Zn	|		87461.401	65.093539	ppb	1.519	6.743		977.811
86	Sr	|		52165.108	25.608189	ppb	2.809	8.215		22.407
65	Cu	|		58936.115	28.405087	ppb	1.352	6.732		84.088
69	Ga-IS	|		238759.547		ppb	3.905			250648.813
95	Mo	|		43064.901	22.346871	ppb	4.530	9.946		215.557
115	In-IS	>		137648.101		ppb	5.315			150384.769
111	Cd	|		36035.186	23.728747	ppb	0.940	6.340		11.770
118	Sn	|		102598.257	20.499618	ppb	1.283	6.647		3877.193
121	Sb	|		117679.477	23.260443	ppb	1.792	7.090		916.696
135	Ba	|		28049.733	22.210444	ppb	0.618	6.081		35.556
165	Ho-IS	|		139792.500		ppb	6.437			153745.503
159	Tb-IS	>		166528.027		ppb	5.515			182794.545
207	Pb	|		369384.540	24.108137	ppb	0.685	6.248		171.112
203	Tl	|		113145.308	23.466181	ppb	2.025	7.705		38.889
209	Bi-IS	|		353181.190		ppb	2.695			94136.934
51	V	|		7619.813	23.533133	ppb	5.236	6.519		6.667
59	Co	|		24487.647	23.021189	ppb	2.755	3.175		14.444
60	Ni	|		17508.501	22.859290	ppb	0.687	1.072		36.667
75	As	|		7018.310	22.140718	ppb	2.472	1.482		587.801
71	Ga-ISK	>		37584.938		ppb	1.336			39178.102
82	Se-2	|		632.254	22.200478	ppb	1.344	1.118		2.581
107	Ag-1	|		32367.738	9.235928	ppb	0.319	1.652		57.778
115	In-ISK	|		42838.678		ppb	0.127			44832.300
45	Sc-ISK	>		98290.321		ppb	0.750			99518.781
23	Na	|		265499.493	704.739541	ppb	0.605	1.149		936.697
39	K	|		519687.351	633.323379	ppb	0.657	1.590		90519.211
24	Mg	|		522991.444	1323.496888	ppb	0.735	0.596		190.001
159	Tb-ISK	|		93180.952		ppb	1.512			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14345-A-1-A @5

Autosampler Position: 345

Sample Date/Time: Wednesday, December 11, 2019 16:15:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14345-A-1-A @5.100

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	20456.859		ppb	0.236		21061.077
9	Be	17.778	0.012367	ppb	10.825	14.575	4.444
10	B	3998.338	2.177017	ppb	5.225	29.404	3288.157
27	Al	242276.162	47.907904	ppb	0.974	0.957	3153.682
43	Ca-2	10242.005	571.094597	ppb	2.638	2.438	61.667
49	Ti	1394.513	2.476078	ppb	8.090	8.906	153.334
52	Cr	17618.636	0.909375	ppb	0.958	2.153	11165.475
55	Mn	59521.527	4.680062	ppb	1.002	1.127	535.566
57	Fe	43082.649	115.254327	ppb	1.069	1.496	11632.512
45	Sc-IS	> 776190.013		ppb	0.301		773652.178
66	Zn	105339.208	76.040573	ppb	1.258	1.170	977.811
86	Sr	5708.111	2.702570	ppb	4.082	4.102	22.407
65	Cu	19225.593	8.945893	ppb	1.493	1.386	84.088
69	Ga-IS	240876.056		ppb	2.987		250648.813
95	Mo	1521.192	0.658305	ppb	8.477	10.105	215.557
115	In-IS	> 141785.250		ppb	2.776		150384.769
111	Cd	117.917	0.068203	ppb	8.505	9.978	11.770
118	Sn	7011.722	0.674184	ppb	3.768	12.661	3877.193
121	Sb	1657.874	0.153352	ppb	3.774	13.203	916.696
135	Ba	3810.509	2.901990	ppb	3.670	4.507	35.556
165	Ho-IS	144571.402		ppb	2.143		153745.503
159	Tb-IS	> 172282.637		ppb	0.513		182794.545
207	Pb	72405.583	4.549063	ppb	1.059	0.929	171.112
203	Tl	77.778	0.008222	ppb	6.547	11.983	38.889
209	Bi-IS	102251.341		ppb	1.331		94136.934
51	V	303.337	0.922404	ppb	11.420	15.072	6.667
59	Co	218.891	0.193852	ppb	10.366	14.381	14.444
60	Ni	457.785	0.554911	ppb	6.362	9.447	36.667
75	As	654.840	0.318296	ppb	5.610	49.418	587.801
71	Ga-ISK	> 37519.251		ppb	3.781		39178.102
82	Se-2	3.239	0.028542	ppb	77.689	316.845	2.581
107	Ag-1	127.778	0.020792	ppb	3.985	11.765	57.778
115	In-ISK	43406.985		ppb	3.045		44832.300
45	Sc-ISK	> 98071.037		ppb	0.493		99518.781
23	Na	311929.020	830.267698	ppb	1.184	1.613	936.697
39	K	1093866.365	1481.933602	ppb	0.428	0.229	90519.211
24	Mg	31052.049	78.306662	ppb	1.455	0.974	190.001
159	Tb-ISK	93319.157		ppb	1.000		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 16:18:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.101

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19517.771		ppb		1.695		21061.077
9	Be	|		105184.755	100.277607	ppb		1.436	2.378	4.444
10	B	|		81335.389	249.713386	ppb		1.996	2.162	3288.157
27	Al	|		491686.879	100.515955	ppb		1.216	1.604	3153.682
43	Ca-2	|		89251.351	5137.152103	ppb		2.118	1.669	61.667
49	Ti	|		48789.852	99.674897	ppb		1.428	1.114	153.334
52	Cr	|		691339.191	99.009750	ppb		2.204	2.034	11165.475
55	Mn	|		1151645.790	93.772529	ppb		1.076	0.491	535.566
57	Fe	|		1295914.198	4839.066081	ppb		0.623	0.325	11632.512
45	Sc-IS	>		756005.014		ppb		0.944		773652.178
66	Zn	|		134491.227	99.905501	ppb		0.388	1.076	977.811
86	Sr	|		203171.630	99.141902	ppb		1.281	0.879	22.407
65	Cu	|		209157.676	100.325157	ppb		1.611	1.446	84.088
69	Ga-IS	|		251474.084		ppb		0.397		250648.813
95	Mo	|		190756.288	98.687905	ppb		0.735	1.568	215.557
115	In-IS	>		138860.675		ppb		2.263		150384.769
111	Cd	|		155656.185	101.409392	ppb		1.552	0.748	11.770
118	Sn	|		480205.853	97.573165	ppb		1.050	1.247	3877.193
121	Sb	|		507220.162	99.700291	ppb		0.914	1.384	916.696
135	Ba	|		127609.764	100.043986	ppb		1.840	0.658	35.556
165	Ho-IS	|		141874.720		ppb		2.835		153745.503
159	Tb-IS	>		169838.178		ppb		1.371		182794.545
207	Pb	|		1562393.366	99.781740	ppb		1.868	0.503	171.112
203	Tl	|		502597.283	101.923062	ppb		3.475	2.129	38.889
209	Bi-IS	|		89062.318		ppb		0.290		94136.934
51	V	|		32338.788	101.677111	ppb		1.279	1.924	6.667
59	Co	|		104711.302	100.242262	ppb		1.518	2.435	14.444
60	Ni	|		75717.921	100.772511	ppb		0.946	0.540	36.667
75	As	|		29145.870	99.856450	ppb		1.102	2.329	587.801
71	Ga-ISK	>		36926.558		ppb		1.288		39178.102
82	Se-2	|		2813.178	100.863715	ppb		1.018	2.235	2.581
107	Ag-1	|		346472.308	100.777275	ppb		0.326	1.053	57.778
115	In-ISK	|		42617.811		ppb		0.828		44832.300
45	Sc-ISK	>		97945.768		ppb		1.272		99518.781
23	Na	|		1897367.943	5070.449551	ppb		2.051	3.335	936.697
39	K	|		3721462.583	5366.184392	ppb		2.901	3.900	90519.211
24	Mg	|		2031527.827	5162.826897	ppb		4.232	5.522	190.001
159	Tb-ISK	|		92043.580		ppb		0.755		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 16:22:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.102

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20535.861		ppb				0.147		21061.077
9	Be	|		18.889	0.013765	ppb				20.377	22.158	4.444
10	B	|		3221.475	0.004363	ppb				4.122	5519.201	3288.157
27	Al	|		2842.505	-0.050359	ppb				3.420	29.772	3153.682
43	Ca-2	|		108.334	2.779231	ppb				41.624	97.769	61.667
49	Ti	|		163.334	0.026753	ppb				6.122	38.689	153.334
52	Cr	|		10844.117	-0.012394	ppb				3.216	456.394	11165.475
55	Mn	|		757.798	0.019088	ppb				6.734	30.869	535.566
57	Fe	|		12157.393	2.912943	ppb				1.062	56.225	11632.512
45	Sc-IS	>		757619.185		ppb				3.245		773652.178
66	Zn	|		3874.970	2.181009	ppb				1.909	6.675	977.811
86	Sr	|		5.715	-0.007633	ppb				452.851	163.899	22.407
65	Cu	|		141.799	0.028280	ppb				18.350	37.816	84.088
69	Ga-IS	|		234903.565		ppb				1.401		250648.813
95	Mo	|		972.256	0.394230	ppb				10.271	15.368	215.557
115	In-IS	>		138847.813		ppb				1.943		150384.769
111	Cd	|		27.958	0.011115	ppb				52.443	84.879	11.770
118	Sn	|		5791.180	0.453957	ppb				9.175	27.936	3877.193
121	Sb	|		768.910	-0.015174	ppb				3.076	45.686	916.696
135	Ba	|		44.445	0.009113	ppb				4.330	15.877	35.556
165	Ho-IS	|		144424.360		ppb				2.093		153745.503
159	Tb-IS	>		168146.829		ppb				3.576		182794.545
207	Pb	|		612.227	0.029417	ppb				5.059	10.971	171.112
203	Tl	|		102.223	0.013681	ppb				9.962	20.719	38.889
209	Bi-IS	|		91110.908		ppb				3.054		94136.934
51	V	|		10.000	0.012139	ppb				57.735	153.304	6.667
59	Co	|		33.333	0.019238	ppb				26.458	43.372	14.444
60	Ni	|		52.222	0.024430	ppb				48.751	140.905	36.667
75	As	|		578.544	0.110460	ppb				1.913	39.414	587.801
71	Ga-ISK	>		36479.853		ppb				0.661		39178.102
82	Se-2	|		7.578	0.187806	ppb				88.267	129.184	2.581
107	Ag-1	|		208.890	0.045670	ppb				7.370	10.026	57.778
115	In-ISK	|		42883.835		ppb				2.422		44832.300
45	Sc-ISK	>		95946.743		ppb				1.727		99518.781
23	Na	|		1636.761	2.005497	ppb				5.206	15.465	936.697
39	K	|		94149.245	10.414307	ppb				1.008	36.154	90519.211
24	Mg	|		321.670	0.357748	ppb				16.328	34.053	190.001
159	Tb-ISK	|		91442.425		ppb				1.284		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14347-A-1-A

Autosampler Position: 346

Sample Date/Time: Wednesday, December 11, 2019 16:24:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14347-A-1-A.103

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20368.962		ppb				2.646		21061.077
9	Be	|		18.889	0.014189	ppb			61.974	83.504		4.444
10	B	|		19633.483	53.136952	ppb			0.715	4.681		3288.157
27	Al	|		157374.643	32.094583	ppb			2.418	6.330		3153.682
43	Ca-2	|		58615.035	3409.999382	ppb			1.961	6.190		61.667
49	Ti	|		482.231	0.684758	ppb			27.739	34.326		153.334
52	Cr	|		18385.160	1.115667	ppb			2.091	11.452		11165.475
55	Mn	|		107537.860	8.811534	ppb			2.593	5.666		535.566
57	Fe	|		42176.626	117.794103	ppb			1.772	7.876		11632.512
45	Sc-IS	|>		749045.467		ppb			4.256			773652.178
66	Zn	|>		855415.185	645.968906	ppb			0.179	4.344		977.811
86	Sr	|		25919.975	12.776713	ppb			1.647	5.656		22.407
65	Cu	|		28737.566	13.900416	ppb			2.006	5.855		84.088
69	Ga-IS	|		232252.414		ppb			2.563			250648.813
95	Mo	|		4699.663	2.349658	ppb			5.042	6.273		215.557
115	In-IS	|>		136451.481		ppb			4.322			150384.769
111	Cd	|		136.798	0.083733	ppb			13.019	14.854		11.770
118	Sn	|		3523.768	0.002238	ppb			4.549	2210.627		3877.193
121	Sb	|		15155.815	2.872965	ppb			1.877	4.611		916.696
135	Ba	|		8550.337	6.803484	ppb			2.380	3.810		35.556
165	Ho-IS	|		140075.642		ppb			0.798			153745.503
159	Tb-IS	|>		168260.392		ppb			3.606			182794.545
207	Pb	|		18030.006	1.154594	ppb			4.597	8.299		171.112
203	Tl	|		72.222	0.007584	ppb			38.707	80.385		38.889
209	Bi-IS	|		89300.738		ppb			3.852			94136.934
51	V	|		116.667	0.351673	ppb			12.454	17.383		6.667
59	Co	|		170.001	0.151001	ppb			5.188	1.760		14.444
60	Ni	|		4177.278	5.566443	ppb			3.531	4.730		36.667
75	As	|		745.633	0.689071	ppb			6.006	7.140		587.801
71	Ga-ISK	|>		36626.948		ppb			4.176			39178.102
82	Se-2	|		11.245	0.319997	ppb			5.164	8.698		2.581
107	Ag-1	|		55.556	0.000404	ppb			19.287	678.476		57.778
115	In-ISK	|		42991.613		ppb			1.470			44832.300
45	Sc-ISK	|>		95029.547		ppb			1.947			99518.781
23	Na	|		2075937.743	5720.429019	ppb			3.569	5.368		936.697
39	K	|		824870.153	1124.043353	ppb			2.245	0.514		90519.211
24	Mg	|		87151.762	227.722114	ppb			1.909	0.250		190.001
159	Tb-ISK	|		91963.066		ppb			0.832			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14372-F-1-B

Autosampler Position: 347

Sample Date/Time: Wednesday, December 11, 2019 16:27:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14372-F-1-B.104

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		20064.080		ppb		0.371		21061.077
9	Be	|		25.556	0.019415	ppb	37.653	42.960		4.444
10	B	|		8117.861	14.946225	ppb	0.203	4.629		3288.157
27	Al	|		918231.181	182.983426	ppb	1.550	4.287		3153.682
43	Ca-2	|		35647.771	1991.112577	ppb	2.366	0.420		61.667
49	Ti	|		1612.313	2.902762	ppb	1.954	0.861		153.334
52	Cr	|		17707.638	0.915561	ppb	2.115	3.094		11165.475
55	Mn	|		89203.312	7.016323	ppb	2.556	0.946		535.566
57	Fe	|		46206.831	126.360104	ppb	0.645	4.497		11632.512
45	Sc-IS	|>		778293.710		ppb	2.688			773652.178
66	Zn	|>		11447.919	7.608088	ppb	1.136	3.121		977.811
86	Sr	|		12906.635	6.108757	ppb	1.742	1.054		22.407
65	Cu	|		7502.984	3.460311	ppb	2.115	4.479		84.088
69	Ga-IS	|		236227.263		ppb	1.130			250648.813
95	Mo	|		2315.743	1.055933	ppb	2.478	1.331		215.557
115	In-IS	|>		140700.120		ppb	1.341			150384.769
111	Cd	|		38.470	0.017637	ppb	17.621	23.599		11.770
118	Sn	|		3477.090	-0.030219	ppb	4.961	127.756		3877.193
121	Sb	|		1268.945	0.079848	ppb	3.810	7.644		916.696
135	Ba	|		6389.207	4.920311	ppb	2.744	3.959		35.556
165	Ho-IS	|		142973.008		ppb	0.559			153745.503
159	Tb-IS	|>		170455.584		ppb	1.904			182794.545
207	Pb	|		11256.188	0.706421	ppb	0.474	2.275		171.112
203	Tl	|		68.889	0.006587	ppb	15.554	31.682		38.889
209	Bi-IS	|		87337.283		ppb	0.848			94136.934
51	V	|		612.235	1.935311	ppb	1.572	2.701		6.667
59	Co	|		143.334	0.126154	ppb	19.870	21.221		14.444
60	Ni	|		851.137	1.104506	ppb	4.897	4.517		36.667
75	As	|		1206.902	2.344306	ppb	5.903	10.320		587.801
71	Ga-ISK	|>		36367.347		ppb	1.140			39178.102
82	Se-2	|		6.237	0.140078	ppb	67.168	108.736		2.581
107	Ag-1	|		95.556	0.012418	ppb	31.653	72.785		57.778
115	In-ISK	|		42679.531		ppb	0.918			44832.300
45	Sc-ISK	|>		96575.353		ppb	0.821			99518.781
23	Na	|		4405268.503	11941.172061	ppb	1.779	2.586		936.697
39	K	|		838040.358	1123.680514	ppb	1.467	0.865		90519.211
24	Mg	|		159267.986	409.900625	ppb	1.224	1.698		190.001
159	Tb-ISK	|		94107.627		ppb	0.684			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14372-E-2-D

Autosampler Position: 348

Sample Date/Time: Wednesday, December 11, 2019 16:30:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14372-E-2-D.105

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20371.183		ppb				1.478		21061.077
9	Be	|		8.889	0.004391	ppb	114.564	221.668				4.444
10	B	|		2622.463	-1.908130	ppb	4.773	17.643				3288.157
27	Al	|		95320.293	18.935822	ppb	0.641	2.776				3153.682
43	Ca-2	|		223.335	9.366371	ppb	1.293	3.152				61.667
49	Ti	|		185.557	0.072667	ppb	11.549	65.212				153.334
52	Cr	|		15209.206	0.620268	ppb	2.437	3.424				11165.475
55	Mn	|		1068.929	0.044237	ppb	4.974	8.562				535.566
57	Fe	|		12279.720	3.340227	ppb	0.991	24.785				11632.512
45	Sc-IS	>		757779.223		ppb	2.206					773652.178
66	Zn	|		14518.486	10.122769	ppb	1.271	1.204				977.811
86	Sr	|		44.642	0.010973	ppb	32.567	61.550				22.407
65	Cu	|		318.505	0.113084	ppb	2.412	3.932				84.088
69	Ga-IS	|		235496.352		ppb	0.694					250648.813
95	Mo	|		362.227	0.078387	ppb	10.095	28.855				215.557
115	In-IS	>		139319.982		ppb	2.850					150384.769
111	Cd	|		25.906	0.009590	ppb	51.725	85.648				11.770
118	Sn	|		1182.271	-0.491232	ppb	4.804	3.723				3877.193
121	Sb	|		315.559	-0.104710	ppb	5.421	2.799				916.696
135	Ba	|		88.889	0.043983	ppb	16.910	30.991				35.556
165	Ho-IS	|		144464.656		ppb	1.459					153745.503
159	Tb-IS	>		174114.854		ppb	1.786					182794.545
207	Pb	|		543.337	0.023657	ppb	11.753	14.409				171.112
203	Tl	|		35.556	-0.000269	ppb	28.641	799.947				38.889
209	Bi-IS	|		88071.772		ppb	0.833					94136.934
51	V	|		5.556	-0.002926	ppb	69.282	405.973				6.667
59	Co	|		17.778	0.003282	ppb	10.825	57.471				14.444
60	Ni	|		64.445	0.036228	ppb	2.986	10.019				36.667
75	As	|		545.473	-0.110380	ppb	6.933	98.606				587.801
71	Ga-ISK	>		38544.162		ppb	1.837					39178.102
82	Se-2	|		-1.435	-0.137469	ppb	343.772	123.825				2.581
107	Ag-1	|		47.778	-0.002513	ppb	40.880	219.742				57.778
115	In-ISK	|		43387.086		ppb	1.745					44832.300
45	Sc-ISK	>		95796.792		ppb	0.353					99518.781
23	Na	|		30791.487	81.687719	ppb	1.499	1.819				936.697
39	K	|		92391.166	7.941167	ppb	1.262	24.521				90519.211
24	Mg	|		805.023	1.615439	ppb	10.225	12.764				190.001
159	Tb-ISK	|		92452.867		ppb	0.267					95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14476-B-1-B

Autosampler Position: 349

Sample Date/Time: Wednesday, December 11, 2019 16:33:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14476-B-1-B.106

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	20057.410		ppb	2.531			21061.077
9	Be	|	37.778	0.031036	ppb	28.364	30.117		4.444
10	B	|	3303.716	0.080457	ppb	4.041	693.202		3288.157
27	Al	|	1915667.902	385.450983	ppb	1.463	0.590		3153.682
43	Ca-2	|	37472.417	2111.573908	ppb	0.645	2.058		61.667
49	Ti	|	5240.962	10.220430	ppb	2.755	4.653		153.334
52	Cr	|	29209.833	2.577192	ppb	0.732	2.731		11165.475
55	Mn	|	293479.475	23.383952	ppb	0.248	1.613		535.566
57	Fe	|	198757.581	690.913466	ppb	0.563	2.443		11632.512
45	Sc-IS	>	771674.849		ppb	1.855			773652.178
66	Zn	>	585120.139	428.236962	ppb	0.229	2.030		977.811
86	Sr	|	24102.316	11.516045	ppb	0.727	2.259		22.407
65	Cu	|	79434.279	37.312453	ppb	0.720	2.211		84.088
69	Ga-IS	|	242620.759		ppb	0.667			250648.813
95	Mo	|	566.678	0.178623	ppb	7.371	13.506		215.557
115	In-IS	>	137642.183		ppb	1.531			150384.769
111	Cd	|	1223.307	0.796920	ppb	2.534	2.023		11.770
118	Sn	|	14388.355	2.238784	ppb	2.079	3.524		3877.193
121	Sb	|	2700.256	0.369574	ppb	5.203	6.821		916.696
135	Ba	|	37861.220	29.927171	ppb	1.121	0.972		35.556
165	Ho-IS	|	141228.495		ppb	3.312			153745.503
159	Tb-IS	>	169938.219		ppb	1.212			182794.545
207	Pb	|	320675.215	20.460631	ppb	1.550	0.989		171.112
203	Tl	|	64.445	0.005751	ppb	18.165	43.209		38.889
209	Bi-IS	|	89590.272		ppb	3.486			94136.934
51	V	|	751.131	2.338277	ppb	3.211	2.907		6.667
59	Co	|	711.129	0.666237	ppb	5.553	3.387		14.444
60	Ni	|	3857.188	5.080530	ppb	3.249	1.758		36.667
75	As	|	772.667	0.759269	ppb	8.974	32.049		587.801
71	Ga-ISK	>	36988.951		ppb	2.193			39178.102
82	Se-2	|	0.232	-0.080704	ppb	1753.693	179.679		2.581
107	Ag-1	|	432.229	0.109710	ppb	12.348	14.441		57.778
115	In-ISK	|	43024.506		ppb	1.543			44832.300
45	Sc-ISK	>	97527.563		ppb	3.256			99518.781
23	Na	|	592673.139	1589.434039	ppb	0.803	2.795		936.697
39	K	|	347201.042	383.683103	ppb	1.009	3.281		90519.211
24	Mg	|	158563.460	404.358232	ppb	0.050	3.301		190.001
159	Tb-ISK	|	93654.659		ppb	0.411			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14476-B-2-B

Autosampler Position: 350

Sample Date/Time: Wednesday, December 11, 2019 16:35:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14476-B-2-B.107

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	20024.024		ppb		0.391		21061.077
9	Be	|	33.333	0.027657	ppb		0.000	1.251	4.444
10	B	|	6859.424	11.669451	ppb		0.594	1.545	3288.157
27	Al	|	2849676.509	585.963275	ppb		1.279	1.451	3153.682
43	Ca-2	|	75442.044	4344.721717	ppb		1.574	1.437	61.667
49	Ti	|	7575.342	15.229593	ppb		1.879	2.996	153.334
52	Cr	|	26635.927	2.290316	ppb		2.122	1.751	11165.475
55	Mn	|	456125.563	37.139282	ppb		0.974	1.093	535.566
57	Fe	|	225790.508	808.341505	ppb		1.142	1.603	11632.512
45	Sc-IS	>	755531.289		ppb		1.094		773652.178
66	Zn	|	305050.577	227.656604	ppb		1.091	1.524	977.811
86	Sr	|	46280.361	22.589944	ppb		1.587	1.450	22.407
65	Cu	|	78540.983	37.676910	ppb		0.950	1.965	84.088
69	Ga-IS	|	246496.488		ppb		1.430		250648.813
95	Mo	|	1726.771	0.785917	ppb		2.276	3.667	215.557
115	In-IS	>	138731.057		ppb		2.463		150384.769
111	Cd	|	779.729	0.500654	ppb		12.314	10.363	11.770
118	Sn	|	37053.556	6.859790	ppb		1.646	1.668	3877.193
121	Sb	|	4223.958	0.665782	ppb		2.120	2.394	916.696
135	Ba	|	62015.441	48.667267	ppb		1.262	2.741	35.556
165	Ho-IS	|	141554.562		ppb		0.849		153745.503
159	Tb-IS	>	168635.044		ppb		0.300		182794.545
207	Pb	|	269993.134	17.358114	ppb		1.279	0.993	171.112
203	Tl	|	76.667	0.008339	ppb		21.739	41.245	38.889
209	Bi-IS	|	86958.303		ppb		0.229		94136.934
51	V	|	6097.969	19.185271	ppb		3.865	2.902	6.667
59	Co	|	772.243	0.727480	ppb		3.869	3.401	14.444
60	Ni	|	4731.896	6.271708	ppb		5.452	7.656	36.667
75	As	|	1322.329	2.695251	ppb		4.431	11.654	587.801
71	Ga-ISK	>	36871.999		ppb		3.182		39178.102
82	Se-2	|	11.903	0.341402	ppb		14.533	20.412	2.581
107	Ag-1	|	83.334	0.008435	ppb		34.176	96.144	57.778
115	In-ISK	|	42401.958		ppb		1.548		44832.300
45	Sc-ISK	>	96758.805		ppb		0.645		99518.781
23	Na	|	1123253.613	3036.664375	ppb		2.488	2.297	936.697
39	K	|	728190.376	957.113268	ppb		0.482	0.220	90519.211
24	Mg	|	218222.653	560.704233	ppb		1.402	1.326	190.001
159	Tb-ISK	|	92696.484		ppb		1.547		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 16:38:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.108

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19791.481		ppb		1.948		21061.077
9	Be	|		105237.349	99.772019	ppb		1.229	1.487	4.444
10	B	|		83016.072	253.642540	ppb		0.635	1.008	3288.157
27	Al	|		500884.344	101.843009	ppb		0.610	0.495	3153.682
43	Ca-2	|		88682.780	5077.150261	ppb		1.402	1.887	61.667
49	Ti	|		49272.647	100.109756	ppb		2.744	2.302	153.334
52	Cr	|		693455.885	98.769972	ppb		0.716	0.426	11165.475
55	Mn	|		1159373.395	93.890492	ppb		0.463	0.374	535.566
57	Fe	|		1312851.323	4875.999253	ppb		2.075	2.098	11632.512
45	Sc-IS	>		760132.917		ppb		0.692		773652.178
66	Zn	|		133332.687	98.497646	ppb		0.818	1.519	977.811
86	Sr	|		200237.143	97.168240	ppb		3.342	2.712	22.407
65	Cu	|		211314.523	100.804937	ppb		1.603	1.078	84.088
69	Ga-IS	|		248946.304		ppb		1.654		250648.813
95	Mo	|		189813.933	97.657031	ppb		1.193	0.997	215.557
115	In-IS	>		134337.394		ppb		1.094		150384.769
111	Cd	|		152710.985	102.841389	ppb		1.644	2.228	11.770
118	Sn	|		474310.462	99.616865	ppb		1.126	0.053	3877.193
121	Sb	|		506684.180	102.947532	ppb		2.305	2.918	916.696
135	Ba	|		125646.800	101.825196	ppb		0.296	1.385	35.556
165	Ho-IS	|		141159.141		ppb		3.960		153745.503
159	Tb-IS	>		168210.212		ppb		1.462		182794.545
207	Pb	|		1553429.663	100.170231	ppb		1.921	0.666	171.112
203	Tl	|		499425.013	102.274279	ppb		2.283	1.316	38.889
209	Bi-IS	|		85033.466		ppb		1.375		94136.934
51	V	|		32026.980	101.390460	ppb		1.931	1.892	6.667
59	Co	|		104704.634	100.923107	ppb		2.039	2.124	14.444
60	Ni	|		76556.813	102.600855	ppb		0.634	0.506	36.667
75	As	|		29154.026	100.579924	ppb		1.458	1.468	587.801
71	Ga-ISK	>		36669.224		ppb		0.177		39178.102
82	Se-2	|		2756.510	99.506083	ppb		0.242	0.398	2.581
107	Ag-1	|		340656.491	99.770682	ppb		1.363	1.196	57.778
115	In-ISK	|		43071.594		ppb		1.798		44832.300
45	Sc-ISK	>		97979.393		ppb		2.106		99518.781
23	Na	|		2013105.626	5375.058915	ppb		4.828	3.223	936.697
39	K	|		3836812.390	5534.902719	ppb		1.350	2.575	90519.211
24	Mg	|		2161509.552	5490.806273	ppb		0.633	2.672	190.001
159	Tb-ISK	|		92222.726		ppb		0.633		95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Wednesday, December 11, 2019 16:41:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.109

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		19657.992		ppb			5.921			21061.077
9	Be	|		16.667	0.011714	ppb			60.000	82.079		4.444
10	B	|		3373.732	0.467605	ppb			2.654	44.501		3288.157
27	Al	|		2831.393	-0.053821	ppb			7.466	83.146		3153.682
43	Ca-2	|		73.334	0.740750	ppb			21.917	128.758		61.667
49	Ti	|		187.779	0.075868	ppb			20.188	98.487		153.334
52	Cr	|		10688.446	-0.039046	ppb			4.162	138.175		11165.475
55	Mn	|		580.012	0.004448	ppb			10.488	119.772		535.566
57	Fe	|		13540.863	7.971595	ppb			3.038	15.015		11632.512
45	Sc-IS	>		759157.929		ppb			0.903			773652.178
66	Zn	|		825.579	-0.099692	ppb			2.836	20.166		977.811
86	Sr	|		25.216	0.001504	ppb			99.734	809.862		22.407
65	Cu	|		152.652	0.033494	ppb			10.936	22.888		84.088
69	Ga-IS	|		236400.144		ppb			1.312			250648.813
95	Mo	|		2461.324	1.160124	ppb			5.350	5.404		215.557
115	In-IS	>		138140.391		ppb			1.738			150384.769
111	Cd	|		20.387	0.006217	ppb			36.596	75.662		11.770
118	Sn	|		8230.148	0.960595	ppb			1.802	1.734		3877.193
121	Sb	|		872.249	0.005920	ppb			7.071	177.341		916.696
135	Ba	|		45.556	0.010369	ppb			47.042	170.530		35.556
165	Ho-IS	|		141416.634		ppb			1.667			153745.503
159	Tb-IS	>		165849.543		ppb			1.615			182794.545
207	Pb	|		793.342	0.041775	ppb			5.684	8.951		171.112
203	Tl	|		156.668	0.025219	ppb			14.894	19.107		38.889
209	Bi-IS	|		86989.740		ppb			2.791			94136.934
51	V	|		15.556	0.028873	ppb			61.859	103.958		6.667
59	Co	|		30.000	0.015544	ppb			38.490	70.918		14.444
60	Ni	|		38.889	0.005506	ppb			30.102	282.952		36.667
75	As	|		590.988	0.118243	ppb			5.857	101.535		587.801
71	Ga-ISK	>		37121.501		ppb			0.184			39178.102
82	Se-2	|		9.601	0.255314	ppb			93.731	125.688		2.581
107	Ag-1	|		505.565	0.130447	ppb			4.770	5.303		57.778
115	In-ISK	|		42304.319		ppb			0.834			44832.300
45	Sc-ISK	>		94876.278		ppb			1.486			99518.781
23	Na	|		1768.443	2.412539	ppb			8.207	13.797		936.697
39	K	|		91752.603	8.330443	ppb			0.668	13.956		90519.211
24	Mg	|		541.677	0.945176	ppb			4.646	5.132		190.001
159	Tb-ISK	|		91861.745		ppb			0.641			95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 16:44:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.110

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20162.002		ppb			2.725			21061.077
9	Be	|		11.111	0.006521	ppb	96.437	158.788				4.444
10	B	|		3193.691	-0.033133	ppb	4.445	1357.655				3288.157
27	Al	|		3095.893	0.005028	ppb	9.640	1306.700				3153.682
43	Ca-2	|		116.667	3.263374	ppb	13.093	25.298				61.667
49	Ti	|		173.334	0.048963	ppb	9.993	65.621				153.334
52	Cr	|		10967.543	0.013059	ppb	1.735	328.610				11165.475
55	Mn	|		746.687	0.018426	ppb	22.093	75.578				535.566
57	Fe	|		11831.565	1.875225	ppb	1.589	26.222				11632.512
45	Sc-IS	>		753866.354		ppb	0.960					773652.178
66	Zn	|		3924.985	2.230344	ppb	7.112	9.797				977.811
86	Sr	|		24.705	0.001467	ppb	105.421	877.916				22.407
65	Cu	|		135.206	0.025661	ppb	9.417	25.538				84.088
69	Ga-IS	|		234501.755		ppb	2.025					250648.813
95	Mo	|		574.456	0.189385	ppb	7.020	12.369				215.557
115	In-IS	>		140131.077		ppb	1.597					150384.769
111	Cd	|		13.238	0.001439	ppb	57.525	334.861				11.770
118	Sn	|		3650.467	0.007977	ppb	2.940	417.571				3877.193
121	Sb	|		472.230	-0.074480	ppb	10.620	13.398				916.696
135	Ba	|		32.222	-0.000693	ppb	5.973	250.921				35.556
165	Ho-IS	|		143917.135		ppb	2.458					153745.503
159	Tb-IS	>		171445.986		ppb	0.364					182794.545
207	Pb	|		490.003	0.020855	ppb	7.666	11.796				171.112
203	Tl	|		45.556	0.001833	ppb	40.299	203.313				38.889
209	Bi-IS	|		89114.938		ppb	1.992					94136.934
51	V	|		6.667	0.001227	ppb	50.000	857.078				6.667
59	Co	|		24.444	0.010394	ppb	61.490	138.957				14.444
60	Ni	|		46.667	0.016253	ppb	39.770	153.453				36.667
75	As	|		567.397	0.048541	ppb	8.351	320.650				587.801
71	Ga-ISK	>		36883.108		ppb	0.491					39178.102
82	Se-2	|		3.916	0.052876	ppb	143.169	379.710				2.581
107	Ag-1	|		121.112	0.019423	ppb	6.926	11.718				57.778
115	In-ISK	|		41752.595		ppb	1.187					44832.300
45	Sc-ISK	>		97318.167		ppb	1.277					99518.781
23	Na	|		1500.079	1.571995	ppb	4.164	11.686				936.697
39	K	|		90481.214	2.941202	ppb	1.113	98.012				90519.211
24	Mg	|		285.003	0.252953	ppb	19.771	54.499				190.001
159	Tb-ISK	|		90296.545		ppb	1.965					95131.715

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Wednesday, December 11, 2019 16:54:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICIS-23447.111

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19739.184		ppb		0.612		
9	Be	|		11.111		ppb		17.321		
10	B	|		3218.140		ppb		1.410		
27	Al	|		2849.173		ppb		4.313		
43	Ca-2	|		71.667		ppb		20.140		
49	Ti	|		160.001		ppb		5.512		
52	Cr	|		11520.199		ppb		1.106		
55	Mn	|		503.342		ppb		5.421		
57	Fe	|		12327.540		ppb		1.723		
45	Sc-IS	|>		752074.551		ppb		1.022		
66	Zn	|		991.146		ppb		5.571		
86	Sr	|		33.544		ppb	141.992			
65	Cu	|		114.089		ppb		24.424		
69	Ga-IS	|		238146.498		ppb		1.068		
95	Mo	|		253.336		ppb		13.737		
115	In-IS	|>		139332.016		ppb		2.401		
111	Cd	|		12.801		ppb		26.560		
118	Sn	|		3993.894		ppb		8.843		
121	Sb	|		568.900		ppb		13.481		
135	Ba	|		33.333		ppb		36.056		
165	Ho-IS	|		142888.964		ppb		1.716		
159	Tb-IS	|>		171774.519		ppb		1.659		
207	Pb	|		163.334		ppb		3.535		
203	Tl	|		36.667		ppb		63.636		
209	Bi-IS	|		89226.770		ppb		2.316		
51	V	|		0.000		ppb				
59	Co	|		12.222		ppb		56.773		
60	Ni	|		40.000		ppb		30.046		
75	As	|		564.984		ppb		7.189		
71	Ga-ISK	|>		37334.283		ppb		1.448		
82	Se-2	|		5.567		ppb		132.982		
107	Ag-1	|		60.000		ppb		27.778		
115	In-ISK	|		42798.316		ppb		0.804		
45	Sc-ISK	|>		96393.085		ppb		1.961		
23	Na	|		951.698		ppb		3.167		
39	K	|		90915.048		ppb		0.496		
24	Mg	|		103.334		ppb		7.391		
159	Tb-ISK	|		91906.032		ppb		0.761		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Wednesday, December 11, 2019 16:57:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\IC-210761.112

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19250.740		ppb		0.598		19739.184
9	Be	|	205062.505	200.000000	ppb		1.066	1.713	11.111
10	B	|	155101.887	500.000000	ppb		0.366	1.886	3218.140
27	Al	|	955269.939	200.000000	ppb		1.291	1.395	2849.173
43	Ca-2	|	175822.081	10200.000000	ppb		0.940	3.081	71.667
49	Ti	|	97467.049	200.000000	ppb		2.432	3.803	160.001
52	Cr	|	1354784.847	200.000000	ppb		0.998	2.866	11520.199
55	Mn	|	2478470.980	200.000000	ppb		2.666	4.076	503.342
57	Fe	|	2779374.384	10200.000000	ppb		1.525	3.687	12327.540
45	Sc-IS	>	744880.778		ppb		2.172		752074.551
66	Zn	|	255669.824	200.000000	ppb		0.558	2.492	991.146
86	Sr	|	392690.618	200.000000	ppb		1.677	3.821	33.544
65	Cu	|	401102.808	200.000000	ppb		1.864	3.462	114.089
69	Ga-IS	|	257561.367		ppb		1.377		238146.498
95	Mo	|	373154.296	200.000000	ppb		0.891	2.621	253.336
115	In-IS	>	131233.094		ppb		1.096		139332.016
111	Cd	|	294534.721	200.000000	ppb		1.523	2.246	12.801
118	Sn	|	926799.276	200.000000	ppb		3.520	3.620	3993.894
121	Sb	|	987992.323	200.000000	ppb		1.220	1.668	568.900
135	Ba	|	249172.341	200.000000	ppb		1.482	1.804	33.333
165	Ho-IS	|	138063.555		ppb		4.053		142888.964
159	Tb-IS	>	164671.767		ppb		2.340		171774.519
207	Pb	|	3034408.976	200.000000	ppb		1.301	1.829	163.334
203	Tl	|	991475.298	200.000000	ppb		3.023	1.898	36.667
209	Bi-IS	|	82145.557		ppb		1.927		89226.770
51	V	|	62497.556	200.000000	ppb		1.961	1.922	0.000
59	Co	|	205099.619	200.000000	ppb		0.555	0.543	12.222
60	Ni	|	144994.392	200.000000	ppb		1.179	1.149	40.000
75	As	|	56367.401	200.000000	ppb		0.627	0.895	564.984
71	Ga-ISK	>	35575.352		ppb		0.299		37334.283
82	Se-2	|	5496.647	200.000000	ppb		1.802	1.961	5.567
107	Ag-1	|	666777.300	200.000000	ppb		0.586	0.430	60.000
115	In-ISK	|	41243.706		ppb		1.321		42798.316
45	Sc-ISK	>	95187.258		ppb		1.940		96393.085
23	Na	|	3929221.506	10200.000000	ppb		1.554	0.612	951.698
39	K	|	7176886.679	10200.000000	ppb		1.287	0.768	90915.048
24	Mg	|	4100597.076	10200.000000	ppb		1.384	0.557	103.334
159	Tb-ISK	|	91358.565		ppb		1.419		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 16:59:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.113

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19642.390		ppb		2.718		19739.184
9	Be	|	104675.439	103.144141	ppb	0.689	1.176		11.111
10	B	|	81839.308	261.642270	ppb	0.442	0.661		3218.140
27	Al	|	485800.914	102.479666	ppb	0.258	0.764		2849.173
43	Ca-2	|	89781.252	5259.011804	ppb	0.820	0.245		71.667
49	Ti	|	48336.089	100.020827	ppb	1.352	0.954		160.001
52	Cr	|	683251.119	101.067244	ppb	2.155	2.854		11520.199
55	Mn	|	1141148.670	92.993202	ppb	0.727	1.197		503.342
57	Fe	|	1309771.802	4831.368921	ppb	0.548	0.898		12327.540
45	Sc-IS	>	737119.618		ppb	0.834			752074.551
66	Zn	|	133696.082	105.296149	ppb	1.102	1.912		991.146
86	Sr	|	200675.154	103.214845	ppb	1.429	1.001		33.544
65	Cu	|	207975.868	104.729718	ppb	0.813	1.618		114.089
69	Ga-IS	|	245409.238		ppb	1.712			238146.498
95	Mo	|	194311.600	105.137973	ppb	1.285	0.564		253.336
115	In-IS	>	133485.769		ppb	1.993			139332.016
111	Cd	|	152129.966	101.542338	ppb	1.907	0.112		12.801
118	Sn	|	485747.147	102.657405	ppb	1.626	0.553		3993.894
121	Sb	|	501224.704	99.712535	ppb	0.291	1.845		568.900
135	Ba	|	124612.411	98.346530	ppb	2.184	3.320		33.333
165	Ho-IS	|	138010.304		ppb	2.152			142888.964
159	Tb-IS	>	164733.635		ppb	2.504			171774.519
207	Pb	|	1545988.557	101.851292	ppb	1.964	2.009		163.334
203	Tl	|	496506.768	100.170462	ppb	0.883	3.336		36.667
209	Bi-IS	|	84474.888		ppb	4.325			89226.770
51	V	|	30912.308	98.376084	ppb	2.181	2.198		0.000
59	Co	|	102465.073	99.357163	ppb	1.093	0.905		12.222
60	Ni	|	72654.285	99.635718	ppb	0.280	0.348		40.000
75	As	|	28158.691	98.389868	ppb	1.128	1.568		564.984
71	Ga-ISK	>	35773.625		ppb	0.491			37334.283
82	Se-2	|	2726.156	98.548721	ppb	2.100	2.410		5.567
107	Ag-1	|	335910.057	100.190234	ppb	0.382	0.340		60.000
115	In-ISK	|	40802.216		ppb	1.783			42798.316
45	Sc-ISK	>	93458.058		ppb	0.924			96393.085
23	Na	|	1841930.562	4868.663315	ppb	0.320	0.765		951.698
39	K	|	3600321.075	5147.429303	ppb	2.376	1.503		90915.048
24	Mg	|	1957538.567	4959.167855	ppb	1.158	1.503		103.334
159	Tb-ISK	|	89906.705		ppb	0.833			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 17:05:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.115

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		19965.054		ppb			1.422			19739.184
9	Be	|		13.333	0.002356	ppb			25.000	146.529		11.111
10	B	|		3182.578	0.026301	ppb			6.110	1798.624		3218.140
27	Al	|		2733.595	-0.015466	ppb			5.415	270.308		2849.173
43	Ca-2	|		106.667	2.083680	ppb			19.516	52.162		71.667
49	Ti	|		150.001	-0.015770	ppb			17.638	359.846		160.001
52	Cr	|		10238.114	-0.167606	ppb			2.851	20.427		11520.199
55	Mn	|		766.687	0.021934	ppb			8.685	26.086		503.342
57	Fe	|		11282.236	-3.244210	ppb			4.188	28.636		12327.540
45	Sc-IS	>		741597.926		ppb			2.038			752074.551
66	Zn	|		3727.153	2.167890	ppb			4.334	4.639		991.146
86	Sr	|		14.629	-0.009348	ppb			82.511	68.050		33.544
65	Cu	|		106.286	-0.003063	ppb			5.527	126.512		114.089
69	Ga-IS	|		234023.386		ppb			2.838			238146.498
95	Mo	|		835.580	0.315829	ppb			5.922	10.809		253.336
115	In-IS	>		140310.273		ppb			0.514			139332.016
111	Cd	|		38.245	0.016120	ppb			26.413	40.522		12.801
118	Sn	|		5185.389	0.235669	ppb			7.855	34.066		3993.894
121	Sb	|		511.120	-0.011687	ppb			4.581	41.528		568.900
135	Ba	|		47.778	0.010667	ppb			4.028	12.778		33.333
165	Ho-IS	|		141490.293		ppb			4.276			142888.964
159	Tb-IS	>		168147.993		ppb			3.660			171774.519
207	Pb	|		601.116	0.028512	ppb			5.153	8.931		163.334
203	Tl	|		111.112	0.014899	ppb			18.083	28.790		36.667
209	Bi-IS	|		89119.350		ppb			0.841			89226.770
51	V	|		7.778	0.024424	ppb			65.465	64.601		0.000
59	Co	|		25.556	0.013164	ppb			41.929	77.983		12.222
60	Ni	|		62.222	0.031812	ppb			8.183	18.617		40.000
75	As	|		591.042	0.153701	ppb			4.150	41.560		564.984
71	Ga-ISK	>		36165.725		ppb			1.198			37334.283
82	Se-2	|		-0.107	-0.196656	ppb			4109.608	80.154		5.567
107	Ag-1	|		156.668	0.029137	ppb			14.894	25.540		60.000
115	In-ISK	|		42192.608		ppb			2.613			42798.316
45	Sc-ISK	>		93430.124		ppb			1.448			96393.085
23	Na	|		1673.431	1.988539	ppb			4.476	12.512		951.698
39	K	|		92121.644	5.897143	ppb			0.999	54.988		90915.048
24	Mg	|		255.002	0.392912	ppb			7.070	14.039		103.334
159	Tb-ISK	|		90715.125		ppb			0.844			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Wednesday, December 11, 2019 17:08:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\ICVL-210771.116

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20080.770		ppb			0.192			19739.184
9	Be	|		1062.262	1.012249	ppb			5.695	4.733		11.111
10	B	|		19627.925	53.324103	ppb			2.529	3.949		3218.140
27	Al	|		259839.857	53.301079	ppb			1.375	1.554		2849.173
43	Ca-2	|		1018.370	54.237135	ppb			7.155	7.482		71.667
49	Ti	|		578.901	0.848789	ppb			5.768	6.024		160.001
52	Cr	|		17076.868	0.812984	ppb			1.056	7.742		11520.199
55	Mn	|		12400.939	0.947775	ppb			3.232	1.188		503.342
57	Fe	|		24295.086	43.451276	ppb			0.604	4.163		12327.540
45	Sc-IS	>		754128.575		ppb			2.135			752074.551
66	Zn	|		7649.826	5.161733	ppb			1.904	2.179		991.146
86	Sr	|		2064.328	1.021549	ppb			1.011	3.198		33.544
65	Cu	|		2191.044	1.022986	ppb			1.848	3.234		114.089
69	Ga-IS	|		236306.252		ppb			0.812			238146.498
95	Mo	|		2413.537	1.144380	ppb			3.123	5.464		253.336
115	In-IS	>		139353.255		ppb			1.240			139332.016
111	Cd	|		1679.476	1.065087	ppb			9.020	8.002		12.801
118	Sn	|		7982.230	0.813883	ppb			0.904	3.853		3993.894
121	Sb	|		5621.106	0.963562	ppb			2.833	2.872		568.900
135	Ba	|		1291.169	0.950719	ppb			2.902	1.968		33.333
165	Ho-IS	|		142230.112		ppb			0.865			142888.964
159	Tb-IS	>		172341.098		ppb			0.161			171774.519
207	Pb	|		16377.024	1.020899	ppb			1.796	1.978		163.334
203	Tl	|		5345.445	1.023252	ppb			3.187	3.213		36.667
209	Bi-IS	|		89841.657		ppb			1.457			89226.770
51	V	|		323.337	0.992063	ppb			4.124	5.022		0.000
59	Co	|		1076.707	0.994988	ppb			1.724	0.427		12.222
60	Ni	|		823.357	1.036881	ppb			11.183	12.548		40.000
75	As	|		824.493	0.903155	ppb			7.409	24.547		564.984
71	Ga-ISK	>		37117.051		ppb			1.327			37334.283
82	Se-2	|		35.917	1.061576	ppb			9.670	12.687		5.567
107	Ag-1	|		3491.538	0.986696	ppb			2.292	1.664		60.000
115	In-ISK	|		42673.771		ppb			0.885			42798.316
45	Sc-ISK	>		95142.482		ppb			1.445			96393.085
23	Na	|		19665.193	48.646939	ppb			0.624	0.902		951.698
39	K	|		123408.528	48.509012	ppb			0.373	5.976		90915.048
24	Mg	|		19713.606	48.792868	ppb			3.877	2.554		103.334
159	Tb-ISK	|		91762.438		ppb			0.404			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-F-3-B @5

Autosampler Position: 125

Sample Date/Time: Wednesday, December 11, 2019 17:11:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14202-F-3-B @5.117

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		21394.902		ppb			1.944		19739.184
9	Be	|		25.556	0.012222	ppb		27.152	47.562		11.111
10	B	|		5449.929	6.084591	ppb		2.295	10.830		3218.140
27	Al	|		101297.228	19.062853	ppb		4.449	5.876		2849.173
43	Ca-2	|		76346.822	4088.063331	ppb		1.298	2.520		71.667
49	Ti	|		901.140	1.384368	ppb		4.335	4.480		160.001
52	Cr	|		17744.347	0.741697	ppb		0.930	5.938		11520.199
55	Mn	|		17812.211	1.287161	ppb		1.871	1.055		503.342
57	Fe	|		19571.176	21.623935	ppb		1.403	1.039		12327.540
45	Sc-IS	>		806385.115		ppb		1.727			752074.551
66	Zn	>		22158.284	15.300365	ppb		1.134	2.303		991.146
86	Sr	|		23481.329	11.025774	ppb		3.453	3.368		33.544
65	Cu	|		20155.313	9.226473	ppb		2.090	2.103		114.089
69	Ga-IS	|		245371.115		ppb		2.264			238146.498
95	Mo	|		2029.033	0.870222	ppb		3.102	1.990		253.336
115	In-IS	>		147377.296		ppb		1.202			139332.016
111	Cd	|		159.073	0.087935	ppb		13.695	14.129		12.801
118	Sn	|		2732.484	-0.287816	ppb		0.307	1.643		3993.894
121	Sb	|		1595.645	0.179216	ppb		4.389	6.362		568.900
135	Ba	|		2795.829	1.973155	ppb		2.865	2.591		33.333
165	Ho-IS	|		148279.103		ppb		2.030			142888.964
159	Tb-IS	>		177005.518		ppb		1.348			171774.519
207	Pb	|		2953.453	0.170795	ppb		3.621	4.633		163.334
203	Tl	|		131.112	0.017508	ppb		11.743	15.931		36.667
209	Bi-IS	|		96291.292		ppb		1.982			89226.770
51	V	|		382.227	1.148309	ppb		6.428	7.041		0.000
59	Co	|		64.445	0.047605	ppb		19.582	23.931		12.222
60	Ni	|		456.674	0.538402	ppb		13.380	13.875		40.000
75	As	|		748.392	0.588039	ppb		9.199	40.736		564.984
71	Ga-ISK	>		37905.780		ppb		0.719			37334.283
82	Se-2	|		5.927	0.008993	ppb		89.679	2012.335		5.567
107	Ag-1	|		141.112	0.022596	ppb		11.890	21.840		60.000
115	In-ISK	|		45049.901		ppb		2.345			42798.316
45	Sc-ISK	>		98554.354		ppb		0.771			96393.085
23	Na	|		661008.629	1655.144621	ppb		1.373	0.903		951.698
39	K	|		598604.530	702.859823	ppb		0.746	1.350		90915.048
24	Mg	|		109157.140	261.982275	ppb		0.963	0.805		103.334
159	Tb-ISK	|		94845.165		ppb		1.143			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-F-3-C MS @5

Autosampler Position: 126

Sample Date/Time: Wednesday, December 11, 2019 17:13:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14202-F-3-C MS @5.118

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27822.625		ppb			1.244		19739.184
9	Be	|		23374.667	22.690193	ppb			1.792	0.646	11.111
10	B	|		11525.759	27.287458	ppb			1.275	2.379	3218.140
27	Al	|		151978.663	31.188262	ppb			1.251	1.237	2849.173
43	Ca-2	|		88045.502	5083.412117	ppb			0.933	1.622	71.667
49	Ti	|		11038.709	22.259081	ppb			2.043	0.566	160.001
52	Cr	|		162426.478	22.372208	ppb			2.978	1.425	11520.199
55	Mn	|		259132.661	20.781801	ppb			1.176	1.445	503.342
57	Fe	|		281519.088	988.331994	ppb			0.650	3.158	12327.540
45	Sc-IS	|>		748002.196		ppb			2.375		752074.551
66	Zn	|		49107.606	37.624723	ppb			1.513	1.461	991.146
86	Sr	|		63232.473	32.049749	ppb			0.598	2.300	33.544
65	Cu	|		63153.024	31.305178	ppb			0.751	1.709	114.089
69	Ga-IS	|		235263.644		ppb			0.475		238146.498
95	Mo	|		37070.260	19.664390	ppb			1.015	2.495	253.336
115	In-IS	|>		138525.427		ppb			1.702		139332.016
111	Cd	|		34544.067	22.211074	ppb			2.007	0.556	12.801
118	Sn	|		112195.609	22.214435	ppb			1.769	1.028	3993.894
121	Sb	|		109900.047	20.978659	ppb			1.304	0.961	568.900
135	Ba	|		30127.292	22.888665	ppb			1.003	1.765	33.333
165	Ho-IS	|		142136.084		ppb			2.406		142888.964
159	Tb-IS	|>		170609.520		ppb			1.417		171774.519
207	Pb	|		337166.863	21.432753	ppb			2.632	1.215	163.334
203	Tl	|		106404.818	20.711835	ppb			0.854	0.589	36.667
209	Bi-IS	|		211932.454		ppb			2.930		89226.770
51	V	|		7141.789	22.545962	ppb			6.114	6.904	0.000
59	Co	|		22831.569	21.950387	ppb			2.121	3.450	12.222
60	Ni	|		16149.127	21.916929	ppb			2.596	1.705	40.000
75	As	|		7129.988	23.260586	ppb			0.802	1.706	564.984
71	Ga-ISK	|>		36077.726		ppb			1.325		37334.283
82	Se-2	|		665.912	23.736531	ppb			6.106	7.392	5.567
107	Ag-1	|		38080.707	11.249959	ppb			2.400	3.430	60.000
115	In-ISK	|		41402.695		ppb			1.459		42798.316
45	Sc-ISK	|>		93977.009		ppb			1.105		96393.085
23	Na	|		676272.243	1776.336464	ppb			1.916	2.708	951.698
39	K	|		676736.339	857.341547	ppb			0.644	1.785	90915.048
24	Mg	|		503077.660	1267.350224	ppb			1.473	2.240	103.334
159	Tb-ISK	|		91353.239		ppb			2.036		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-F-3-D MSD @5

Autosampler Position: 127

Sample Date/Time: Wednesday, December 11, 2019 17:16:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14202-F-3-D MSD @5.119

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		35354.809		ppb		1.064		19739.184
9	Be	|		45699.646	42.925285	ppb	0.228	1.424		11.111
10	B	|		12078.438	27.809219	ppb	1.838	4.336		3218.140
27	Al	|		154334.037	30.633727	ppb	2.726	4.177		2849.173
43	Ca-2	|		91874.537	5131.593504	ppb	1.618	2.982		71.667
49	Ti	|		22009.169	43.229276	ppb	2.234	0.961		160.001
52	Cr	|		303896.927	41.871277	ppb	1.959	1.777		11520.199
55	Mn	|		490181.429	38.058498	ppb	1.579	1.986		503.342
57	Fe	|		292037.417	991.566342	ppb	1.424	1.718		12327.540
45	Sc-IS	>		773224.381		ppb	1.345			752074.551
66	Zn	|		77585.679	57.903941	ppb	0.844	0.518		991.146
86	Sr	|		101295.969	49.664866	ppb	0.629	1.366		33.544
65	Cu	|		102823.802	49.336091	ppb	1.501	2.474		114.089
69	Ga-IS	|		241320.113		ppb	0.655			238146.498
95	Mo	|		73506.461	37.828663	ppb	2.132	1.140		253.336
115	In-IS	>		140841.913		ppb	0.405			139332.016
111	Cd	|		67512.195	42.704205	ppb	1.127	1.242		12.801
118	Sn	|		235593.683	46.747207	ppb	1.408	1.486		3993.894
121	Sb	|		208249.171	39.190254	ppb	0.788	1.022		568.900
135	Ba	|		29807.734	22.268994	ppb	0.951	0.837		33.333
165	Ho-IS	|		143521.188		ppb	3.301			142888.964
159	Tb-IS	>		172656.356		ppb	2.347			171774.519
207	Pb	|		645879.383	40.590387	ppb	1.305	1.030		163.334
203	Tl	|		205694.848	39.578451	ppb	1.138	1.857		36.667
209	Bi-IS	|		449183.961		ppb	0.864			89226.770
51	V	|		13307.308	40.148482	ppb	2.150	1.433		0.000
59	Co	|		44084.584	40.522547	ppb	0.631	0.220		12.222
60	Ni	|		31303.159	40.671407	ppb	2.207	2.534		40.000
75	As	|		12877.654	41.569974	ppb	1.016	1.783		564.984
71	Ga-ISK	>		37731.988		ppb	0.768			37334.283
82	Se-2	|		1256.619	42.953679	ppb	2.352	1.590		5.567
107	Ag-1	|		40157.510	11.339960	ppb	3.122	2.710		60.000
115	In-ISK	|		42878.011		ppb	1.008			42798.316
45	Sc-ISK	>		99364.397		ppb	1.135			96393.085
23	Na	|		708236.856	1758.982505	ppb	2.256	1.144		951.698
39	K	|		693122.534	826.372239	ppb	0.739	0.483		90915.048
24	Mg	|		529736.265	1262.086815	ppb	0.049	1.097		103.334
159	Tb-ISK	|		93528.510		ppb	0.709			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14202-F-4-B @5

Autosampler Position: 128

Sample Date/Time: Wednesday, December 11, 2019 17:19:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14202-F-4-B @5.120

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		21684.225		ppb			1.472			19739.184
9	Be	|		30.000	0.017259	ppb	48.432	78.433				11.111
10	B	|		7696.518	13.741322	ppb	1.676	4.037				3218.140
27	Al	|		165355.948	32.622190	ppb	0.564	1.765				2849.173
43	Ca-2	|		117329.898	6507.001723	ppb	1.223	0.629				71.667
49	Ti	|		1233.387	2.098107	ppb	2.822	2.169				160.001
52	Cr	|		17962.398	0.859106	ppb	1.305	0.399				11520.199
55	Mn	|		321078.213	24.739795	ppb	0.710	1.139				503.342
57	Fe	|		85084.869	254.883219	ppb	1.064	0.421				12327.540
45	Sc-IS	>		778667.890		ppb	1.172					752074.551
66	Zn	|		30231.966	21.931073	ppb	2.276	1.809				991.146
86	Sr	|		84742.552	41.248568	ppb	2.778	2.158				33.544
65	Cu	|		3981.731	1.842279	ppb	3.545	2.544				114.089
69	Ga-IS	|		239002.886		ppb	1.205					238146.498
95	Mo	|		4739.676	2.296244	ppb	3.739	3.591				253.336
115	In-IS	>		143940.008		ppb	0.536					139332.016
111	Cd	|		188.937	0.108794	ppb	8.007	8.977				12.801
118	Sn	|		17139.198	2.571124	ppb	7.028	9.701				3993.894
121	Sb	|		3148.125	0.472790	ppb	2.076	2.800				568.900
135	Ba	|		10789.632	7.871806	ppb	3.540	3.914				33.333
165	Ho-IS	|		147104.624		ppb	0.107					142888.964
159	Tb-IS	>		173604.216		ppb	1.643					171774.519
207	Pb	|		4435.825	0.266979	ppb	2.576	2.622				163.334
203	Tl	|		732.241	0.133043	ppb	4.825	5.218				36.667
209	Bi-IS	|		186688.935		ppb	2.066					89226.770
51	V	|		376.672	1.150442	ppb	6.195	3.317				0.000
59	Co	|		101.111	0.082676	ppb	10.597	8.723				12.222
60	Ni	|		292.225	0.331615	ppb	14.489	13.789				40.000
75	As	|		654.840	0.309677	ppb	10.611	61.764				564.984
71	Ga-ISK	>		37252.988		ppb	3.251					37334.283
82	Se-2	|		1.205	-0.153913	ppb	540.790	149.050				5.567
107	Ag-1	|		157.779	0.028076	ppb	4.879	8.965				60.000
115	In-ISK	|		43955.130		ppb	1.055					42798.316
45	Sc-ISK	>		100434.125		ppb	2.012					96393.085
23	Na	|		2776147.609	6830.976310	ppb	2.332	3.162				951.698
39	K	|		542616.846	611.076982	ppb	0.804	2.504				90915.048
24	Mg	|		319677.600	753.577769	ppb	1.309	2.605				103.334
159	Tb-ISK	|		93864.697		ppb	0.392					91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14181-A-3-A @5

Autosampler Position: 129

Sample Date/Time: Wednesday, December 11, 2019 17:22:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14181-A-3-A @5.121

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	20977.621		ppb	2.721		19739.184
9	Be	16.667	0.004895	ppb	40.000	123.664	11.111
10	B	5140.925	5.847723	ppb	3.170	12.836	3218.140
27	Al	215036.369	42.995882	ppb	0.590	2.149	2849.173
43	Ca-2	20606.518	1150.005800	ppb	0.492	2.064	71.667
49	Ti	1341.174	2.334539	ppb	0.287	2.060	160.001
52	Cr	19972.846	1.170904	ppb	2.200	2.010	11520.199
55	Mn	46300.492	3.565059	ppb	2.333	1.344	503.342
57	Fe	28530.693	56.471026	ppb	2.182	1.085	12327.540
45	Sc-IS	> 771687.674		ppb	1.590		752074.551
66	Zn	40956.405	30.268699	ppb	0.640	1.852	991.146
86	Sr	11963.084	5.862576	ppb	2.394	2.899	33.544
65	Cu	7387.427	3.499473	ppb	3.369	3.968	114.089
69	Ga-IS	236678.200		ppb	1.759		238146.498
95	Mo	2405.759	1.111031	ppb	6.584	8.231	253.336
115	In-IS	> 142529.836		ppb	1.023		139332.016
111	Cd	53.837	0.025430	ppb	30.703	39.605	12.801
118	Sn	7748.770	0.731235	ppb	4.076	10.519	3993.894
121	Sb	2608.016	0.377829	ppb	3.037	4.027	568.900
135	Ba	3430.412	2.510464	ppb	1.104	2.027	33.333
165	Ho-IS	144224.293		ppb	4.660		142888.964
159	Tb-IS	> 169870.773		ppb	1.305		171774.519
207	Pb	5500.417	0.341156	ppb	3.577	4.522	163.334
203	Tl	187.779	0.029627	ppb	8.389	10.050	36.667
209	Bi-IS	127262.136		ppb	0.809		89226.770
51	V	522.232	1.617085	ppb	2.878	3.831	0.000
59	Co	154.445	0.134226	ppb	10.647	10.151	12.222
60	Ni	832.247	1.059080	ppb	8.114	9.813	40.000
75	As	560.848	0.014834	ppb	2.082	133.546	564.984
71	Ga-ISK	> 36776.170		ppb	1.294		37334.283
82	Se-2	6.229	0.024133	ppb	161.692	1452.368	5.567
107	Ag-1	98.889	0.011520	ppb	11.838	26.374	60.000
115	In-ISK	42623.768		ppb	1.854		42798.316
45	Sc-ISK	> 97560.983		ppb	2.048		96393.085
23	Na	1357689.863	3437.870244	ppb	0.276	2.069	951.698
39	K	444694.712	495.319651	ppb	1.097	2.237	90915.048
24	Mg	73233.902	177.520696	ppb	0.490	2.121	103.334
159	Tb-ISK	91082.140		ppb	1.392		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14181-A-3-B MS @5

Autosampler Position: 130

Sample Date/Time: Wednesday, December 11, 2019 17:24:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14181-A-3-B MS @5.122

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		29016.113		ppb		2.066		19739.184
9	Be	|		24649.025	23.727773	ppb		0.184	1.827	11.111
10	B	|		11115.436	25.638955	ppb		2.496	5.338	3218.140
27	Al	|		388265.958	79.916470	ppb		1.131	2.425	2849.173
43	Ca-2	|		40368.626	2308.522428	ppb		0.873	1.526	71.667
49	Ti	|		13360.689	26.784185	ppb		0.645	2.456	160.001
52	Cr	|		172735.925	23.685873	ppb		1.232	0.637	11520.199
55	Mn	|		297942.280	23.692122	ppb		1.923	0.533	503.342
57	Fe	|		304636.094	1063.361931	ppb		0.370	1.466	12327.540
45	Sc-IS	>		754394.739		ppb		1.759		752074.551
66	Zn	|		72690.046	55.573820	ppb		1.444	0.644	991.146
86	Sr	|		55878.542	28.072821	ppb		1.248	1.044	33.544
65	Cu	|		52725.834	25.901450	ppb		1.168	1.377	114.089
69	Ga-IS	|		238788.410		ppb		1.678		238146.498
95	Mo	|		39559.161	20.816680	ppb		2.320	4.024	253.336
115	In-IS	>		140663.822		ppb		0.325		139332.016
111	Cd	|		36015.825	22.806460	ppb		2.118	2.180	12.801
118	Sn	|		124123.577	24.275275	ppb		0.524	0.875	3993.894
121	Sb	|		112299.685	21.110479	ppb		0.840	1.126	568.900
135	Ba	|		31006.950	23.195647	ppb		1.146	1.278	33.333
165	Ho-IS	|		141511.393		ppb		3.678		142888.964
159	Tb-IS	>		167305.156		ppb		0.991		171774.519
207	Pb	|		353124.875	22.894736	ppb		0.733	0.877	163.334
203	Tl	|		107814.418	21.397347	ppb		2.865	1.963	36.667
209	Bi-IS	|		311426.050		ppb		1.277		89226.770
51	V	|		7255.177	22.282132	ppb		4.005	1.941	0.000
59	Co	|		23766.422	22.242471	ppb		1.184	1.982	12.222
60	Ni	|		16630.787	21.982834	ppb		1.253	2.923	40.000
75	As	|		7034.653	22.272442	ppb		1.429	3.409	564.984
71	Ga-ISK	>		37059.131		ppb		2.078		37334.283
82	Se-2	|		653.919	22.669672	ppb		4.108	3.730	5.567
107	Ag-1	|		37392.209	10.752675	ppb		0.961	1.611	60.000
115	In-ISK	|		42495.762		ppb		0.800		42798.316
45	Sc-ISK	>		97355.110		ppb		1.682		96393.085
23	Na	|		1408523.231	3574.134330	ppb		1.050	2.440	951.698
39	K	|		577350.309	683.158900	ppb		1.847	0.684	90915.048
24	Mg	|		494481.742	1202.888744	ppb		2.851	4.489	103.334
159	Tb-ISK	|		92101.279		ppb		0.589		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14181-A-3-C MSD @5

Autosampler Position: 131

Sample Date/Time: Wednesday, December 11, 2019 17:27:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14181-A-3-C MSD @5.123

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29145.270		ppb			2.692			19739.184
9	Be	|		24330.713	23.335115	ppb			2.902	2.657		11.111
10	B	|		11090.972	25.420500	ppb			2.653	3.162		3218.140
27	Al	|		371196.636	76.093708	ppb			1.120	0.939		2849.173
43	Ca-2	|		39566.400	2254.616419	ppb			2.117	2.544		71.667
49	Ti	|		13030.385	26.017080	ppb			1.076	1.506		160.001
52	Cr	|		170608.428	23.285018	ppb			1.581	1.254		11520.199
55	Mn	|		299316.571	23.720306	ppb			0.638	0.553		503.342
57	Fe	|		305587.054	1062.847317	ppb			2.176	2.304		12327.540
45	Sc-IS	>		756985.155		ppb			0.419			752074.551
66	Zn	|		74131.883	56.490375	ppb			1.696	1.369		991.146
86	Sr	|		55211.497	27.640105	ppb			0.654	0.525		33.544
65	Cu	|		52456.038	25.677533	ppb			0.562	0.790		114.089
69	Ga-IS	|		238781.348		ppb			0.816			238146.498
95	Mo	|		39793.155	20.858649	ppb			2.928	2.837		253.336
115	In-IS	>		142272.448		ppb			0.738			139332.016
111	Cd	|		36294.932	22.722662	ppb			2.209	1.975		12.801
118	Sn	|		118020.408	22.768024	ppb			3.786	3.180		3993.894
121	Sb	|		112437.660	20.893825	ppb			2.926	2.262		568.900
135	Ba	|		28993.839	21.442139	ppb			0.986	0.537		33.333
165	Ho-IS	|		143429.866		ppb			1.489			142888.964
159	Tb-IS	>		169645.885		ppb			1.206			171774.519
207	Pb	|		351118.003	22.451013	ppb			0.985	1.290		163.334
203	Tl	|		110056.786	21.543770	ppb			1.051	0.155		36.667
209	Bi-IS	|		302057.114		ppb			2.800			89226.770
51	V	|		7295.199	22.103611	ppb			5.497	3.992		0.000
59	Co	|		23927.801	22.094135	ppb			0.798	2.079		12.222
60	Ni	|		17567.463	22.907016	ppb			1.552	1.707		40.000
75	As	|		7125.105	22.265306	ppb			2.957	5.924		564.984
71	Ga-ISK	>		37567.134		ppb			2.808			37334.283
82	Se-2	|		705.593	24.136190	ppb			4.639	2.471		5.567
107	Ag-1	|		36289.367	10.296675	ppb			0.217	2.610		60.000
115	In-ISK	|		42612.538		ppb			2.307			42798.316
45	Sc-ISK	>		97239.965		ppb			2.543			96393.085
23	Na	|		1452907.824	3689.817324	ppb			3.320	1.005		951.698
39	K	|		588193.652	699.587962	ppb			1.714	2.086		90915.048
24	Mg	|		508222.322	1237.428042	ppb			1.792	1.673		103.334
159	Tb-ISK	|		91490.057		ppb			1.176			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-C-5-A @5

Autosampler Position: 132

Sample Date/Time: Wednesday, December 11, 2019 17:30:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14182-C-5-A @5.124

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	20824.057		ppb	1.445		19739.184
9	Be	17.778	0.005242	ppb	43.301	130.268	11.111
10	B	3095098.028	9386.299958	ppb	0.825	0.195	3218.140
27	Al	125624.402	23.744430	ppb	0.807	1.269	2849.173
43	Ca-2	49967.238	2670.401942	ppb	0.929	0.446	71.667
49	Ti	987.812	1.547008	ppb	7.272	8.855	160.001
52	Cr	19074.950	0.921191	ppb	1.033	1.302	11520.199
55	Mn	138940.309	10.301183	ppb	1.816	0.939	503.342
57	Fe	36841.922	80.274438	ppb	3.213	5.951	12327.540
45	Sc-IS	> 807304.124		ppb	0.911		752074.551
66	Zn	641332.086	463.739571	ppb	1.193	0.529	991.146
86	Sr	14866.909	6.965991	ppb	1.327	0.470	33.544
65	Cu	6285.230	2.834758	ppb	1.926	1.456	114.089
69	Ga-IS	255425.797		ppb	1.483		238146.498
95	Mo	4012.787	1.850385	ppb	4.557	4.502	253.336
115	In-IS	> 151545.849		ppb	2.689		139332.016
111	Cd	99.351	0.050372	ppb	12.560	17.152	12.801
118	Sn	11334.501	1.314134	ppb	4.449	11.200	3993.894
121	Sb	2319.077	0.298393	ppb	2.581	5.074	568.900
135	Ba	13674.319	9.483137	ppb	0.807	1.912	33.333
165	Ho-IS	151019.220		ppb	3.744		142888.964
159	Tb-IS	> 179057.495		ppb	4.072		171774.519
207	Pb	26589.737	1.602392	ppb	2.321	3.572	163.334
203	Tl	610.013	0.106232	ppb	9.575	11.672	36.667
209	Bi-IS	158196.665		ppb	0.526		89226.770
51	V	955.588	2.812564	ppb	0.533	2.432	0.000
59	Co	123.334	0.099575	ppb	16.216	20.859	12.222
60	Ni	671.127	0.798800	ppb	4.721	4.641	40.000
75	As	764.168	0.587866	ppb	5.578	19.466	564.984
71	Ga-ISK	> 38695.693		ppb	2.585		37334.283
82	Se-2	-6.493	-0.411562	ppb	23.672	13.890	5.567
107	Ag-1	134.445	0.019955	ppb	7.970	16.398	60.000
115	In-ISK	43883.137		ppb	0.807		42798.316
45	Sc-ISK	> 100645.568		ppb	1.551		96393.085
23	Na	1685096.057	4135.550023	ppb	1.982	1.433	951.698
39	K	556162.067	627.734552	ppb	1.995	0.582	90915.048
24	Mg	69970.986	164.339867	ppb	2.040	0.493	103.334
159	Tb-ISK	95608.203		ppb	0.434		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14231-D-1-A @5

Autosampler Position: 133

Sample Date/Time: Wednesday, December 11, 2019 17:32:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14231-D-1-A @5.125

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		20811.816		ppb			0.705			19739.184
9	Be	|		14.444	0.002657	ppb	26.647	138.397				11.111
10	B	|		8753.794	16.835659	ppb	2.726	1.671				3218.140
27	Al	|		30385.619	5.460564	ppb	1.571	1.925				2849.173
43	Ca-2	|		212384.455	11683.336931	ppb	2.584	0.694				71.667
49	Ti	|		516.676	0.681174	ppb	5.734	6.799				160.001
52	Cr	|		65536.686	7.554717	ppb	1.904	0.126				11520.199
55	Mn	|		2630.242	0.161116	ppb	1.006	1.817				503.342
57	Fe	|		21599.651	30.538333	ppb	0.936	7.010				12327.540
45	Sc-IS	>		785163.455		ppb	1.902					752074.551
66	Zn	|		6701.572	4.221685	ppb	1.317	3.134				991.146
86	Sr	|		135396.339	65.383750	ppb	0.605	1.318				33.544
65	Cu	|		761.369	0.304026	ppb	3.757	6.757				114.089
69	Ga-IS	|		243336.497		ppb	1.817					238146.498
95	Mo	|		1922.352	0.843261	ppb	2.787	2.467				253.336
115	In-IS	>		148291.665		ppb	3.993					139332.016
111	Cd	|		31.519	0.010580	ppb	52.929	87.981				12.801
118	Sn	|		4586.293	0.066100	ppb	4.779	107.414				3993.894
121	Sb	|		712.240	0.019462	ppb	5.852	63.883				568.900
135	Ba	|		15487.281	10.984534	ppb	1.789	3.106				33.333
165	Ho-IS	|		146044.966		ppb	0.642					142888.964
159	Tb-IS	>		172509.808		ppb	0.641					171774.519
207	Pb	|		1151.129	0.062086	ppb	3.096	2.906				163.334
203	Tl	|		200.001	0.031411	ppb	10.408	12.232				36.667
209	Bi-IS	|		99465.221		ppb	2.608					89226.770
51	V	|		636.681	1.902668	ppb	7.854	6.812				0.000
59	Co	|		21.111	0.007961	ppb	32.868	83.692				12.222
60	Ni	|		150.001	0.140992	ppb	16.025	23.462				40.000
75	As	|		664.178	0.297652	ppb	9.983	88.872				564.984
71	Ga-ISK	>		38080.702		ppb	2.083					37334.283
82	Se-2	|		12.588	0.233196	ppb	37.673	65.395				5.567
107	Ag-1	|		63.333	0.000569	ppb	13.925	374.281				60.000
115	In-ISK	|		43016.550		ppb	0.340					42798.316
45	Sc-ISK	>		99770.517		ppb	0.128					96393.085
23	Na	|		1188085.758	2940.609117	ppb	0.458	0.474				951.698
39	K	|		377419.637	388.995121	ppb	0.691	0.890				90915.048
24	Mg	|		1138847.972	2702.284171	ppb	1.203	1.094				103.334
159	Tb-ISK	|		93330.577		ppb	1.269					91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 17:35:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.126

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	18525.338		ppb	0.992			19739.184
9	Be	|	100511.278	102.399248	ppb	1.321	1.416		11.111
10	B	|	79338.749	262.414552	ppb	3.295	5.320		3218.140
27	Al	|	461669.920	100.677082	ppb	1.375	0.720		2849.173
43	Ca-2	|	83374.284	5049.798451	ppb	1.382	2.113		71.667
49	Ti	|	46071.991	98.545898	ppb	2.885	1.164		160.001
52	Cr	|	670676.735	102.587621	ppb	1.544	1.588		11520.199
55	Mn	|	1118225.261	94.212668	ppb	1.703	1.475		503.342
57	Fe	|	1252959.444	4777.779527	ppb	1.550	0.812		12327.540
45	Sc-IS	>	712990.644		ppb	1.811			752074.551
66	Zn	>	128792.402	104.874833	ppb	0.144	1.740		991.146
86	Sr	|	198360.369	105.487087	ppb	1.382	1.015		33.544
65	Cu	|	205479.032	106.982056	ppb	1.888	2.182		114.089
69	Ga-IS	|	238061.836		ppb	1.282			238146.498
95	Mo	|	190014.389	106.301581	ppb	1.382	0.447		253.336
115	In-IS	>	134816.984		ppb	0.337			139332.016
111	Cd	|	153136.121	101.206385	ppb	1.054	1.369		12.801
118	Sn	|	484027.421	101.272041	ppb	3.176	3.395		3993.894
121	Sb	|	500061.351	98.476648	ppb	1.247	1.548		568.900
135	Ba	|	124532.921	97.280172	ppb	2.691	2.695		33.333
165	Ho-IS	|	138393.835		ppb	1.066			142888.964
159	Tb-IS	>	161994.838		ppb	2.652			171774.519
207	Pb	|	1548383.559	103.742297	ppb	1.234	1.807		163.334
203	Tl	|	508383.989	104.288785	ppb	1.768	3.063		36.667
209	Bi-IS	|	94303.620		ppb	1.546			89226.770
51	V	|	30608.317	97.542296	ppb	1.698	1.984		0.000
59	Co	|	101517.222	98.573256	ppb	0.926	1.252		12.222
60	Ni	|	73400.324	100.797061	ppb	1.223	1.555		40.000
75	As	|	28121.313	98.387185	ppb	0.837	0.869		564.984
71	Ga-ISK	>	35725.727		ppb	0.396			37334.283
82	Se-2	|	2732.826	98.911483	ppb	3.006	2.655		5.567
107	Ag-1	|	337897.197	100.918042	ppb	0.270	0.294		60.000
115	In-ISK	|	41863.315		ppb	3.669			42798.316
45	Sc-ISK	>	93445.793		ppb	1.636			96393.085
23	Na	|	1840452.143	4866.650036	ppb	1.634	3.000		951.698
39	K	|	3621228.168	5180.683722	ppb	0.957	2.585		90915.048
24	Mg	|	1918884.580	4862.568563	ppb	0.619	1.934		103.334
159	Tb-ISK	|	89940.278		ppb	1.509			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 17:39:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.127

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		19592.320		ppb			2.432			19739.184
9	Be	|		7.778	-0.002818	ppb			24.744	71.511		11.111
10	B	|		4100.589	3.575720	ppb			2.683	11.791		3218.140
27	Al	|		2730.261	0.004821	ppb			4.004	358.166		2849.173
43	Ca-2	|		110.000	2.539941	ppb			16.389	45.299		71.667
49	Ti	|		165.557	0.028776	ppb			6.151	61.387		160.001
52	Cr	|		10450.489	-0.077193	ppb			1.864	26.863		11520.199
55	Mn	|		646.681	0.014131	ppb			6.438	20.216		503.342
57	Fe	|		11705.908	-0.021430	ppb			2.924	8569.516		12327.540
45	Sc-IS	>		714723.201		ppb			1.211			752074.551
66	Zn	|		3539.328	2.125693	ppb			3.231	5.500		991.146
86	Sr	|		18.562	-0.007003	ppb			318.202	450.508		33.544
65	Cu	|		118.484	0.005265	ppb			8.641	111.601		114.089
69	Ga-IS	|		231075.138		ppb			1.182			238146.498
95	Mo	|		1096.709	0.478669	ppb			10.077	13.983		253.336
115	In-IS	>		136137.809		ppb			2.804			139332.016
111	Cd	|		22.141	0.006189	ppb			49.016	106.914		12.801
118	Sn	|		6577.073	0.560959	ppb			6.484	22.330		3993.894
121	Sb	|		628.903	0.014339	ppb			6.390	62.738		568.900
135	Ba	|		35.556	0.002489	ppb			60.273	692.349		33.333
165	Ho-IS	|		140526.040		ppb			3.253			142888.964
159	Tb-IS	>		167008.363		ppb			0.847			171774.519
207	Pb	|		613.338	0.029521	ppb			7.667	9.353		163.334
203	Tl	|		120.001	0.016777	ppb			7.349	10.363		36.667
209	Bi-IS	|		91213.621		ppb			0.941			89226.770
51	V	|		8.889	0.028174	ppb			43.301	44.048		0.000
59	Co	|		25.556	0.013252	ppb			7.531	10.395		12.222
60	Ni	|		57.778	0.026377	ppb			34.775	108.549		40.000
75	As	|		560.040	0.059235	ppb			9.591	428.552		564.984
71	Ga-ISK	>		36007.578		ppb			3.352			37334.283
82	Se-2	|		4.581	-0.034088	ppb			178.260	831.766		5.567
107	Ag-1	|		220.002	0.048300	ppb			16.035	25.214		60.000
115	In-ISK	|		41603.388		ppb			1.417			42798.316
45	Sc-ISK	>		91999.738		ppb			0.554			96393.085
23	Na	|		1405.069	1.334259	ppb			1.883	3.758		951.698
39	K	|		86791.739	0.033421	ppb			0.162	2559.884		90915.048
24	Mg	|		240.002	0.364158	ppb			16.667	28.981		103.334
159	Tb-ISK	|		89998.619		ppb			0.989			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14231-A-2-A @5

Autosampler Position: 134

Sample Date/Time: Wednesday, December 11, 2019 17:42:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14231-A-2-A @5.128

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		21458.336		ppb		3.079		19739.184
9	Be	|		17.778	0.005807	ppb	21.651	62.975		11.111
10	B	|		5436.590	6.564235	ppb	0.553	2.690		3218.140
27	Al	|		20262.138	3.462656	ppb	0.761	1.530		2849.173
43	Ca-2	|		212373.669	11739.098551	ppb	0.760	0.272		71.667
49	Ti	|		588.901	0.827800	ppb	7.517	10.818		160.001
52	Cr	|		15788.721	0.541727	ppb	0.862	4.851		11520.199
55	Mn	|		1781.222	0.096763	ppb	1.966	3.426		503.342
57	Fe	|		22217.264	33.042862	ppb	1.164	3.997		12327.540
45	Sc-IS	>		781458.405		ppb	0.550			752074.551
66	Zn	|		2016.809	0.738288	ppb	6.871	13.447		991.146
86	Sr	|		136092.397	66.024095	ppb	1.056	1.543		33.544
65	Cu	|		1577.569	0.693243	ppb	4.064	3.789		114.089
69	Ga-IS	|		241676.045		ppb	0.592			238146.498
95	Mo	|		358.893	0.048898	ppb	14.399	54.393		253.336
115	In-IS	>		146880.959		ppb	1.341			139332.016
111	Cd	|		33.691	0.012270	ppb	37.158	62.552		12.801
118	Sn	|		2664.693	-0.299074	ppb	1.666	4.863		3993.894
121	Sb	|		350.004	-0.045178	ppb	9.943	14.067		568.900
135	Ba	|		15867.700	11.354293	ppb	2.321	1.484		33.333
165	Ho-IS	|		147019.682		ppb	2.732			142888.964
159	Tb-IS	>		174171.196		ppb	2.171			171774.519
207	Pb	|		754.452	0.036713	ppb	1.786	4.953		163.334
203	Tl	|		98.889	0.011732	ppb	28.068	43.288		36.667
209	Bi-IS	|		95318.076		ppb	1.172			89226.770
51	V	|		314.448	0.942013	ppb	7.957	6.875		0.000
59	Co	|		23.333	0.009929	ppb	14.286	28.030		12.222
60	Ni	|		183.335	0.183982	ppb	14.201	15.853		40.000
75	As	|		558.898	-0.053379	ppb	12.874	447.303		564.984
71	Ga-ISK	>		37988.239		ppb	2.427			37334.283
82	Se-2	|		7.578	0.066915	ppb	42.545	171.531		5.567
107	Ag-1	|		150.001	0.025174	ppb	24.746	45.784		60.000
115	In-ISK	|		44705.791		ppb	1.393			42798.316
45	Sc-ISK	>		101517.271		ppb	1.698			96393.085
23	Na	|		1196008.747	2909.817832	ppb	2.376	2.950		951.698
39	K	|		393207.267	401.549579	ppb	1.104	3.679		90915.048
24	Mg	|		1186257.043	2767.214062	ppb	1.683	3.023		103.334
159	Tb-ISK	|		95040.650		ppb	3.240			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14231-A-3-A @5

Autosampler Position: 135

Sample Date/Time: Wednesday, December 11, 2019 17:45:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14231-A-3-A @5.129

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		21169.010		ppb		1.802		19739.184
9	Be	|		13.333	0.001644	ppb	66.144	503.271		11.111
10	B	|		5269.861	5.969198	ppb	2.229	7.220		3218.140
27	Al	|		15809.857	2.557376	ppb	1.868	1.579		2849.173
43	Ca-2	|		207783.556	11434.853794	ppb	0.657	0.454		71.667
49	Ti	|		556.678	0.759347	ppb	9.637	12.930		160.001
52	Cr	|		15923.318	0.550725	ppb	2.666	9.657		11520.199
55	Mn	|		1088.931	0.043179	ppb	7.588	15.993		503.342
57	Fe	|		20618.202	27.106531	ppb	0.742	2.912		12327.540
45	Sc-IS	>		784915.036		ppb	0.671			752074.551
66	Zn	|		1839.008	0.599312	ppb	7.391	16.535		991.146
86	Sr	|		134610.808	65.016310	ppb	0.915	1.194		33.544
65	Cu	|		263.002	0.068041	ppb	12.113	21.126		114.089
69	Ga-IS	|		239284.018		ppb	0.204			238146.498
95	Mo	|		904.473	0.325684	ppb	0.767	1.623		253.336
115	In-IS	>		146216.573		ppb	2.207			139332.016
111	Cd	|		22.545	0.005543	ppb	45.207	110.372		12.801
118	Sn	|		1944.577	-0.436507	ppb	5.316	6.307		3993.894
121	Sb	|		346.671	-0.045622	ppb	20.868	26.414		568.900
135	Ba	|		15060.158	10.826457	ppb	2.005	1.947		33.333
165	Ho-IS	|		146559.294		ppb	2.170			142888.964
159	Tb-IS	>		174939.356		ppb	2.060			171774.519
207	Pb	|		430.003	0.016359	ppb	3.101	5.169		163.334
203	Tl	|		76.667	0.007421	ppb	26.087	47.163		36.667
209	Bi-IS	|		94872.879		ppb	0.367			89226.770
51	V	|		481.119	1.465401	ppb	4.176	5.750		0.000
59	Co	|		20.000	0.007080	ppb	33.333	79.368		12.222
60	Ni	|		125.556	0.111823	ppb	20.102	27.421		40.000
75	As	|		595.595	0.100326	ppb	4.296	51.345		564.984
71	Ga-ISK	>		37407.832		ppb	3.055			37334.283
82	Se-2	|		4.565	-0.036198	ppb	49.997	211.830		5.567
107	Ag-1	|		77.778	0.005147	ppb	32.451	150.968		60.000
115	In-ISK	|		42874.442		ppb	0.696			42798.316
45	Sc-ISK	>		99902.572		ppb	1.068			96393.085
23	Na	|		1175029.734	2904.739215	ppb	0.581	1.586		951.698
39	K	|		381180.793	393.513122	ppb	1.901	3.009		90915.048
24	Mg	|		1132636.114	2684.050602	ppb	1.725	1.511		103.334
159	Tb-ISK	|		92033.594		ppb	2.136			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14231-A-4-A @5

Autosampler Position: 136

Sample Date/Time: Wednesday, December 11, 2019 17:47:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14231-A-4-A @5.130

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	20773.985		ppb	1.720		19739.184
9	Be	11.111	-0.000120	ppb	45.826	3961.984	11.111
10	B	4909.734	5.396458	ppb	4.485	17.347	3218.140
27	Al	16189.170	2.748683	ppb	1.721	3.914	2849.173
43	Ca-2	200495.685	11427.809095	ppb	1.504	2.498	71.667
49	Ti	447.785	0.577558	ppb	12.330	17.284	160.001
52	Cr	49735.353	5.576600	ppb	2.597	3.966	11520.199
55	Mn	2845.840	0.185496	ppb	7.620	10.134	503.342
57	Fe	19229.603	24.636573	ppb	1.783	3.050	12327.540
45	Sc-IS	> 758004.175		ppb	1.512		752074.551
66	Zn	2139.049	0.879555	ppb	2.772	4.900	991.146
86	Sr	131853.458	65.948353	ppb	1.074	1.047	33.544
65	Cu	221.166	0.052207	ppb	17.405	39.209	114.089
69	Ga-IS	238399.897		ppb	1.932		238146.498
95	Mo	750.020	0.260610	ppb	4.240	5.687	253.336
115	In-IS	> 142659.024		ppb	1.646		139332.016
111	Cd	27.314	0.008911	ppb	18.868	39.099	12.801
118	Sn	870.027	-0.641618	ppb	5.155	1.344	3993.894
121	Sb	241.113	-0.063496	ppb	23.189	17.243	568.900
135	Ba	14950.041	11.015202	ppb	0.890	1.139	33.333
165	Ho-IS	142840.760		ppb	2.018		142888.964
159	Tb-IS	> 172237.368		ppb	3.526		171774.519
207	Pb	473.337	0.019511	ppb	3.921	5.023	163.334
203	Tl	50.000	0.002501	ppb	48.074	177.780	36.667
209	Bi-IS	94264.432		ppb	0.629		89226.770
51	V	475.564	1.459406	ppb	11.331	9.777	0.000
59	Co	24.444	0.011425	ppb	47.889	93.535	12.222
60	Ni	130.001	0.119723	ppb	4.441	9.200	40.000
75	As	595.634	0.118912	ppb	6.069	82.487	564.984
71	Ga-ISK	> 37061.357		ppb	1.894		37334.283
82	Se-2	13.919	0.296410	ppb	94.477	155.436	5.567
107	Ag-1	60.000	0.000102	ppb	20.031	3193.366	60.000
115	In-ISK	41994.776		ppb	1.725		42798.316
45	Sc-ISK	> 97363.998		ppb	0.162		96393.085
23	Na	1147624.495	2910.621166	ppb	1.062	0.935	951.698
39	K	374698.319	397.977270	ppb	0.781	1.130	90915.048
24	Mg	1122204.401	2728.672883	ppb	1.770	1.890	103.334
159	Tb-ISK	91011.669		ppb	0.851		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14231-A-5-A @5

Autosampler Position: 137

Sample Date/Time: Wednesday, December 11, 2019 17:50:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14231-A-5-A @5.131

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		20948.686		ppb	2.100			19739.184
9	Be	|		16.667	0.005230	ppb	69.282	210.686		11.111
10	B	|		5164.267	6.212593	ppb	3.710	6.194		3218.140
27	Al	|		19794.827	3.493282	ppb	3.573	4.350		2849.173
43	Ca-2	|		212874.458	12135.395941	ppb	1.178	0.521		71.667
49	Ti	|		446.674	0.576803	ppb	1.974	5.509		160.001
52	Cr	|		14944.489	0.487609	ppb	4.258	12.817		11520.199
55	Mn	|		2282.405	0.140779	ppb	1.743	1.124		503.342
57	Fe	|		19672.425	26.272044	ppb	0.286	4.039		12327.540
45	Sc-IS	>		757777.693		ppb	1.672			752074.551
66	Zn	|		1789.001	0.610211	ppb	0.654	5.253		991.146
86	Sr	|		137239.603	68.656188	ppb	2.197	1.017		33.544
65	Cu	|		285.569	0.083546	ppb	5.866	7.052		114.089
69	Ga-IS	|		239504.643		ppb	1.548			238146.498
95	Mo	|		616.680	0.190156	ppb	10.440	15.065		253.336
115	In-IS	>		142099.660		ppb	1.308			139332.016
111	Cd	|		23.149	0.006356	ppb	30.498	71.137		12.801
118	Sn	|		982.256	-0.618366	ppb	5.601	2.199		3993.894
121	Sb	|		283.336	-0.055472	ppb	25.802	25.278		568.900
135	Ba	|		15496.180	11.461766	ppb	2.059	1.006		33.333
165	Ho-IS	|		145263.796		ppb	1.346			142888.964
159	Tb-IS	>		172602.255		ppb	1.941			171774.519
207	Pb	|		522.226	0.022420	ppb	40.118	56.448		163.334
203	Tl	|		93.334	0.010728	ppb	83.529	136.146		36.667
209	Bi-IS	|		93929.037		ppb	2.660			89226.770
51	V	|		353.338	1.093663	ppb	9.098	8.697		0.000
59	Co	|		18.889	0.006503	ppb	44.411	123.883		12.222
60	Ni	|		120.001	0.107442	ppb	18.215	26.133		40.000
75	As	|		634.052	0.268375	ppb	4.838	34.318		564.984
71	Ga-ISK	>		36773.939		ppb	0.863			37334.283
82	Se-2	|		3.570	-0.067232	ppb	64.247	120.656		5.567
107	Ag-1	|		54.445	-0.001398	ppb	56.887	636.631		60.000
115	In-ISK	|		43036.770		ppb	1.354			42798.316
45	Sc-ISK	>		99996.672		ppb	2.445			96393.085
23	Na	|		1205007.237	2977.670083	ppb	2.413	4.357		951.698
39	K	|		385046.808	398.332064	ppb	1.834	1.223		90915.048
24	Mg	|		1152408.597	2729.787444	ppb	0.943	3.342		103.334
159	Tb-ISK	|		90925.115		ppb	0.661			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-38288_1-A

Autosampler Position: 351

Sample Date/Time: Wednesday, December 11, 2019 17:56:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\MB 570-38288_1-A.133

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19848.226		ppb		1.741		19739.184
9	Be	|		11.111	0.000850	ppb	17.321	238.872		11.111
10	B	|		3321.497	1.192199	ppb	1.929	24.504		3218.140
27	Al	|		2304.631	-0.075306	ppb	5.859	43.435		2849.173
43	Ca-2	|		93.334	1.671833	ppb	21.651	76.835		71.667
49	Ti	|		166.668	0.040182	ppb	7.211	57.121		160.001
52	Cr	|		11832.677	0.183661	ppb	1.278	8.545		11520.199
55	Mn	|		447.785	-0.001626	ppb	13.365	309.594		503.342
57	Fe	|		11178.817	-0.967482	ppb	1.568	106.945		12327.540
45	Sc-IS	>		697075.041		ppb	0.918			752074.551
66	Zn	|		642.237	-0.231919	ppb	2.397	3.598		991.146
86	Sr	|		32.483	0.000743	ppb	14.745	328.290		33.544
65	Cu	|		80.816	-0.013309	ppb	12.549	37.898		114.089
69	Ga-IS	|		229235.800		ppb	0.962			238146.498
95	Mo	|		214.446	-0.011685	ppb	4.487	40.604		253.336
115	In-IS	>		136091.657		ppb	1.163			139332.016
111	Cd	|		11.772	-0.000488	ppb	16.435	243.297		12.801
118	Sn	|		2413.538	-0.310659	ppb	7.805	13.137		3993.894
121	Sb	|		264.447	-0.056836	ppb	8.393	8.730		568.900
135	Ba	|		30.000	-0.002004	ppb	29.397	334.441		33.333
165	Ho-IS	|		137909.793		ppb	3.869			142888.964
159	Tb-IS	>		162955.428		ppb	1.725			171774.519
207	Pb	|		160.000	0.000335	ppb	21.751	689.980		163.334
203	Tl	|		34.444	-0.000067	ppb	5.587	648.891		36.667
209	Bi-IS	|		88675.496		ppb	1.044			89226.770
51	V	|		10.000	0.031367	ppb	88.192	88.128		0.000
59	Co	|		11.111	-0.000787	ppb	45.826	631.196		12.222
60	Ni	|		41.111	0.002524	ppb	12.385	276.147		40.000
75	As	|		559.749	0.020655	ppb	6.666	750.706		564.984
71	Ga-ISK	>		36622.446		ppb	1.607			37334.283
82	Se-2	|		-0.433	-0.206953	ppb	968.453	70.978		5.567
107	Ag-1	|		40.000	-0.005483	ppb	8.333	20.838		60.000
115	In-ISK	|		41785.005		ppb	2.056			42798.316
45	Sc-ISK	>		94469.167		ppb	1.756			96393.085
23	Na	|		898.362	-0.090562	ppb	5.685	117.211		951.698
39	K	|		86793.983	-3.318784	ppb	0.718	71.524		90915.048
24	Mg	|		235.002	0.335018	ppb	9.274	15.340		103.334
159	Tb-ISK	|		89086.946		ppb	1.321			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-38288_2-A

Autosampler Position: 352

Sample Date/Time: Wednesday, December 11, 2019 17:58:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\LCS 570-38288_2-A.134

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		19882.718		ppb		1.577		19739.184
9	Be	|		104367.632	107.194169	ppb		0.209	1.208	11.111
10	B	|		33535.986	105.754320	ppb		0.834	2.125	3218.140
27	Al	|		501231.752	110.238663	ppb		2.081	0.972	2849.173
43	Ca-2	|		82051.643	5009.352830	ppb		0.951	0.170	71.667
49	Ti	|		46322.768	99.910182	ppb		1.305	0.936	160.001
52	Cr	|		655956.286	101.128454	ppb		0.289	1.078	11520.199
55	Mn	|		1071432.514	91.010712	ppb		1.238	2.070	503.342
57	Fe	|		1197656.520	4602.979091	ppb		0.997	1.985	12327.540
45	Sc-IS	>		707211.480		ppb		1.115		752074.551
66	Zn	|		130585.360	107.209441	ppb		1.789	2.268	991.146
86	Sr	|		190512.072	102.139238	ppb		0.371	0.929	33.544
65	Cu	|		197544.880	103.683193	ppb		0.737	1.381	114.089
69	Ga-IS	|		242114.647		ppb		1.238		238146.498
95	Mo	|		185752.215	104.778549	ppb		1.414	2.526	253.336
115	In-IS	>		135134.679		ppb		0.742		139332.016
111	Cd	|		154329.963	101.760562	ppb		0.938	1.624	12.801
118	Sn	|		489935.667	102.273095	ppb		0.922	1.017	3993.894
121	Sb	|		452369.996	88.857662	ppb		1.815	1.131	568.900
135	Ba	|		132491.706	103.250546	ppb		1.925	1.354	33.333
165	Ho-IS	|		139677.687		ppb		2.935		142888.964
159	Tb-IS	>		165560.543		ppb		0.828		171774.519
207	Pb	|		1552677.583	101.751867	ppb		2.205	1.372	163.334
203	Tl	|		481728.407	96.643595	ppb		1.977	1.183	36.667
209	Bi-IS	|		89281.509		ppb		1.705		89226.770
51	V	|		31777.535	98.562449	ppb		1.919	2.564	0.000
59	Co	|		101544.120	95.982175	ppb		1.607	3.284	12.222
60	Ni	|		73816.908	98.646386	ppb		1.246	0.598	40.000
75	As	|		28016.688	95.359453	ppb		0.969	2.845	564.984
71	Ga-ISK	>		36712.679		ppb		1.824		37334.283
82	Se-2	|		2590.784	91.258224	ppb		1.191	1.977	5.567
107	Ag-1	|		146839.733	42.674407	ppb		0.850	1.664	60.000
115	In-ISK	|		40995.585		ppb		1.751		42798.316
45	Sc-ISK	>		94262.200		ppb		0.773		96393.085
23	Na	|		369609.288	966.613165	ppb		1.436	0.910	951.698
39	K	|		761284.553	977.129842	ppb		0.917	0.829	90915.048
24	Mg	|		1877684.066	4716.525437	ppb		1.447	2.207	103.334
159	Tb-ISK	|		91214.948		ppb		0.354		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-38288_3-A

Autosampler Position: 353

Sample Date/Time: Wednesday, December 11, 2019 18:01:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\LCSD 570-38288_3-A.135

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19530.009		ppb		1.384		19739.184
9	Be	|	103401.765	105.973712	ppb		0.576	1.264	11.111
10	B	|	32128.325	100.638370	ppb		2.508	3.474	3218.140
27	Al	|	488323.726	107.164689	ppb		0.424	0.287	2849.173
43	Ca-2	|	81895.767	4989.041767	ppb		1.380	0.842	71.667
49	Ti	|	45319.557	97.530691	ppb		1.245	1.098	160.001
52	Cr	|	642569.482	98.816656	ppb		1.314	1.931	11520.199
55	Mn	|	1056742.033	89.570993	ppb		1.985	2.664	503.342
57	Fe	|	1203741.229	4616.181411	ppb		0.173	0.605	12327.540
45	Sc-IS	>	708713.527		ppb		0.694		752074.551
66	Zn	|	129616.483	106.175958	ppb		0.554	1.211	991.146
86	Sr	|	187838.809	100.493114	ppb		0.918	1.605	33.544
65	Cu	|	194914.208	102.084069	ppb		1.062	1.749	114.089
69	Ga-IS	|	235899.575		ppb		0.596		238146.498
95	Mo	|	182068.647	102.471963	ppb		1.716	2.392	253.336
115	In-IS	>	132588.895		ppb		1.135		139332.016
111	Cd	|	154266.967	103.669524	ppb		1.181	1.285	12.801
118	Sn	|	488882.790	104.029531	ppb		0.988	1.117	3993.894
121	Sb	|	472473.161	94.598499	ppb		1.810	1.237	568.900
135	Ba	|	128977.500	102.467008	ppb		1.669	2.751	33.333
165	Ho-IS	|	139839.163		ppb		2.556		142888.964
159	Tb-IS	>	165311.092		ppb		1.397		171774.519
207	Pb	|	1532711.677	100.598009	ppb		1.894	0.542	163.334
203	Tl	|	482064.802	96.865275	ppb		1.143	0.319	36.667
209	Bi-IS	|	87924.242		ppb		1.733		89226.770
51	V	|	30203.009	98.352393	ppb		1.383	1.250	0.000
59	Co	|	97551.960	96.799368	ppb		0.955	1.658	12.222
60	Ni	|	71590.046	100.474472	ppb		0.577	2.201	40.000
75	As	|	28035.228	100.296405	ppb		1.036	3.085	564.984
71	Ga-ISK	>	34968.320		ppb		2.607		37334.283
82	Se-2	|	2661.820	98.491629	ppb		2.534	4.168	5.567
107	Ag-1	|	145302.998	44.349070	ppb		0.348	2.868	60.000
115	In-ISK	|	40596.829		ppb		1.517		42798.316
45	Sc-ISK	>	92148.510		ppb		1.540		96393.085
23	Na	|	351731.616	940.992376	ppb		1.808	1.865	951.698
39	K	|	733043.956	960.798182	ppb		1.133	2.935	90915.048
24	Mg	|	1827166.110	4694.961251	ppb		0.345	1.223	103.334
159	Tb-ISK	|	88585.145		ppb		0.492		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14372-D-1-C

Autosampler Position: 354

Sample Date/Time: Wednesday, December 11, 2019 18:06:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14372-D-1-C.136

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18771.222		ppb	3.314		19739.184
9	Be	23.333	0.013916	ppb	37.796	66.694	11.111
10	B	4679.655	6.195081	ppb	1.070	1.101	3218.140
27	Al	51361.261	11.091464	ppb	5.838	6.268	2849.173
43	Ca-2	6764.935	421.105249	ppb	1.078	1.750	71.667
49	Ti	304.448	0.352190	ppb	6.030	12.155	160.001
52	Cr	12249.696	0.277332	ppb	2.045	19.091	11520.199
55	Mn	1843.454	0.121010	ppb	14.885	20.685	503.342
57	Fe	12655.605	5.530318	ppb	2.401	15.860	12327.540
45	Sc-IS	> 687503.776		ppb	0.665		752074.551
66	Zn	3448.194	2.162564	ppb	4.347	6.485	991.146
86	Sr	1867.585	1.013382	ppb	4.426	5.136	33.544
65	Cu	1100.164	0.538081	ppb	5.426	6.730	114.089
69	Ga-IS	221739.735		ppb	2.955		238146.498
95	Mo	192.224	-0.022831	ppb	6.565	35.272	253.336
115	In-IS	> 133801.235		ppb	2.700		139332.016
111	Cd	27.374	0.010015	ppb	25.334	44.071	12.801
118	Sn	516.676	-0.705080	ppb	5.734	1.277	3993.894
121	Sb	4644.088	0.814278	ppb	2.837	3.754	568.900
135	Ba	255.558	0.176186	ppb	13.130	16.100	33.333
165	Ho-IS	136722.496		ppb	2.382		142888.964
159	Tb-IS	> 161641.647		ppb	1.218		171774.519
207	Pb	437.780	0.019079	ppb	3.170	6.175	163.334
203	Tl	112.223	0.015987	ppb	6.860	11.563	36.667
209	Bi-IS	87017.716		ppb	3.064		89226.770
51	V	42.222	0.137483	ppb	12.059	12.360	0.000
59	Co	23.333	0.011790	ppb	14.286	27.946	12.222
60	Ni	195.557	0.221771	ppb	5.208	5.125	40.000
75	As	695.887	0.606786	ppb	3.721	13.023	564.984
71	Ga-ISK	> 34977.218		ppb	1.550		37334.283
82	Se-2	4.575	-0.022903	ppb	191.315	1407.356	5.567
107	Ag-1	45.556	-0.003292	ppb	32.995	134.219	60.000
115	In-ISK	41326.369		ppb	1.934		42798.316
45	Sc-ISK	> 89380.967		ppb	0.425		96393.085
23	Na	942583.547	2603.831317	ppb	3.159	3.053	951.698
39	K	245858.963	247.614370	ppb	1.400	2.554	90915.048
24	Mg	29906.274	78.963688	ppb	1.215	0.874	103.334
159	Tb-ISK	88446.964		ppb	0.699		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 18:08:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.137

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18495.299		ppb		1.119		19739.184
9	Be	|		101707.457	105.854518	ppb		0.915	1.713	11.111
10	B	|		77061.787	260.197247	ppb		1.981	3.153	3218.140
27	Al	|		471975.576	105.174412	ppb		0.422	1.147	2849.173
43	Ca-2	|		83444.680	5162.358154	ppb		1.041	0.643	71.667
49	Ti	|		45793.295	100.098657	ppb		1.868	2.690	160.001
52	Cr	|		660560.074	103.225840	ppb		1.059	1.239	11520.199
55	Mn	|		1097768.959	94.494596	ppb		2.213	2.981	503.342
57	Fe	|		1243632.515	4845.759869	ppb		1.153	2.238	12327.540
45	Sc-IS	|>		697923.184		ppb		1.115		752074.551
66	Zn	|		126272.334	105.031733	ppb		1.257	1.782	991.146
86	Sr	|		195100.276	106.020716	ppb		3.673	4.720	33.544
65	Cu	|		201424.059	107.132235	ppb		0.694	1.737	114.089
69	Ga-IS	|		235046.934		ppb		1.183		238146.498
95	Mo	|		185701.430	106.137717	ppb		0.578	1.567	253.336
115	In-IS	|>		132656.958		ppb		1.469		139332.016
111	Cd	|		149462.138	100.395821	ppb		2.267	2.587	12.801
118	Sn	|		471967.780	100.367180	ppb		0.805	2.271	3993.894
121	Sb	|		498361.574	99.750256	ppb		0.363	1.269	568.900
135	Ba	|		122810.109	97.519919	ppb		1.109	2.521	33.333
165	Ho-IS	|		139018.245		ppb		3.862		142888.964
159	Tb-IS	|>		163314.991		ppb		1.384		171774.519
207	Pb	|		1562800.781	103.833338	ppb		1.674	1.200	163.334
203	Tl	|		505589.347	102.851475	ppb		1.642	2.552	36.667
209	Bi-IS	|		84889.281		ppb		1.429		89226.770
51	V	|		30927.897	99.609486	ppb		2.099	1.064	0.000
59	Co	|		100673.529	98.800065	ppb		1.376	0.216	12.222
60	Ni	|		70993.777	98.537209	ppb		1.655	1.423	40.000
75	As	|		28190.253	99.704272	ppb		2.322	1.202	564.984
71	Ga-ISK	|>		35345.899		ppb		1.165		37334.283
82	Se-2	|		2684.168	98.211429	ppb		0.489	1.620	5.567
107	Ag-1	|		333536.719	100.697301	ppb		0.966	1.753	60.000
115	In-ISK	|		41478.071		ppb		0.611		42798.316
45	Sc-ISK	|>		91918.205		ppb		2.337		96393.085
23	Na	|		1803536.037	4848.244481	ppb		0.473	1.903	951.698
39	K	|		3536982.647	5142.713025	ppb		2.210	2.056	90915.048
24	Mg	|		1907869.172	4915.466090	ppb		0.976	2.083	103.334
159	Tb-ISK	|		89661.864		ppb		1.423		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 18:12:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.138

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18988.172		ppb	2.661		19739.184
9	Be	24.444	0.014185	ppb	47.889	83.372	11.111
10	B	3191.468	0.501251	ppb	2.369	56.049	3218.140
27	Al	3019.208	0.070917	ppb	4.404	44.611	2849.173
43	Ca-2	103.334	2.150445	ppb	22.349	63.567	71.667
49	Ti	142.223	-0.019990	ppb	15.606	229.944	160.001
52	Cr	9875.635	-0.160110	ppb	0.325	7.191	11520.199
55	Mn	634.459	0.013346	ppb	5.263	22.193	503.342
57	Fe	11354.511	-1.210787	ppb	1.614	41.285	12327.540
45	Sc-IS	> 711850.343		ppb	0.558		752074.551
66	Zn	3482.647	2.090093	ppb	0.884	0.703	991.146
86	Sr	38.013	0.003336	ppb	19.418	117.764	33.544
65	Cu	105.181	-0.001453	ppb	6.638	266.550	114.089
69	Ga-IS	226286.627		ppb	2.509		238146.498
95	Mo	1022.259	0.439083	ppb	4.906	7.071	253.336
115	In-IS	> 135418.334		ppb	2.285		139332.016
111	Cd	31.187	0.012535	ppb	65.189	111.733	12.801
118	Sn	6122.425	0.471282	ppb	4.647	16.040	3993.894
121	Sb	2306.853	0.344500	ppb	4.077	7.009	568.900
135	Ba	47.778	0.011866	ppb	20.140	56.968	33.333
165	Ho-IS	135892.185		ppb	0.708		142888.964
159	Tb-IS	> 162456.082		ppb	3.896		171774.519
207	Pb	675.562	0.034748	ppb	9.885	8.551	163.334
203	Tl	134.445	0.020454	ppb	18.609	27.104	36.667
209	Bi-IS	89127.174		ppb	0.776		89226.770
51	V	12.222	0.039467	ppb	62.984	62.398	0.000
59	Co	33.333	0.021573	ppb	26.458	38.551	12.222
60	Ni	68.889	0.044097	ppb	13.968	34.291	40.000
75	As	549.851	0.072068	ppb	0.800	36.391	564.984
71	Ga-ISK	> 35029.569		ppb	1.564		37334.283
82	Se-2	4.250	-0.038061	ppb	134.411	553.762	5.567
107	Ag-1	184.446	0.039082	ppb	6.347	11.185	60.000
115	In-ISK	41195.482		ppb	2.594		42798.316
45	Sc-ISK	> 90515.902		ppb	1.597		96393.085
23	Na	1160.047	0.725250	ppb	7.771	26.854	951.698
39	K	90454.360	7.708199	ppb	0.517	20.554	90915.048
24	Mg	445.007	0.910869	ppb	5.149	8.163	103.334
159	Tb-ISK	89834.952		ppb	1.517		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14372-D-1-D MS

Autosampler Position: 355

Sample Date/Time: Wednesday, December 11, 2019 18:15:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14372-D-1-D MS.139

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		28067.547		ppb		0.985		19739.184
9	Be	|		27733.562	28.097316	ppb		0.686	2.867	11.111
10	B	|		11403.440	28.511758	ppb		2.564	5.450	3218.140
27	Al	|		177781.683	38.193500	ppb		1.055	1.848	2849.173
43	Ca-2	|		23472.601	1410.970938	ppb		0.431	2.318	71.667
49	Ti	|		10249.234	21.550355	ppb		3.704	3.263	160.001
52	Cr	|		167609.882	24.220161	ppb		1.457	1.715	11520.199
55	Mn	|		290267.329	24.297693	ppb		1.212	3.145	503.342
57	Fe	|		157574.460	558.154585	ppb		1.812	0.579	12327.540
45	Sc-IS	|>		716996.752		ppb		2.200		752074.551
66	Zn	|		43557.421	34.768398	ppb		1.277	3.400	991.146
86	Sr	|		53318.765	28.191248	ppb		1.082	2.588	33.544
65	Cu	|		54369.103	28.110243	ppb		1.226	2.053	114.089
69	Ga-IS	|		227550.271		ppb		0.915		238146.498
95	Mo	|		28799.021	15.904886	ppb		3.336	2.016	253.336
115	In-IS	|>		134545.664		ppb		3.090		139332.016
111	Cd	|		42811.544	28.365136	ppb		1.529	3.896	12.801
118	Sn	|		110733.084	22.518527	ppb		17.754	15.096	3993.894
121	Sb	|		125447.908	24.667318	ppb		4.156	1.307	568.900
135	Ba	|		29439.192	23.035307	ppb		0.639	2.432	33.333
165	Ho-IS	|		138130.479		ppb		2.766		142888.964
159	Tb-IS	|>		165717.014		ppb		2.075		171774.519
207	Pb	|		365749.400	23.945353	ppb		1.716	2.333	163.334
203	Tl	|		134417.268	26.940629	ppb		1.309	0.879	36.667
209	Bi-IS	|		227556.483		ppb		3.872		89226.770
51	V	|		5282.088	16.798564	ppb		1.087	2.517	0.000
59	Co	|		27407.382	26.548104	ppb		1.683	2.330	12.222
60	Ni	|		19242.953	26.330320	ppb		1.382	2.070	40.000
75	As	|		8671.629	28.946701	ppb		2.268	3.934	564.984
71	Ga-ISK	|>		35805.933		ppb		1.450		37334.283
82	Se-2	|		870.595	31.325519	ppb		4.175	5.519	5.567
107	Ag-1	|		38580.922	11.484794	ppb		1.365	2.804	60.000
115	In-ISK	|		40930.996		ppb		2.309		42798.316
45	Sc-ISK	|>		90624.323		ppb		0.620		96393.085
23	Na	|		1033839.155	2817.139510	ppb		2.283	2.558	951.698
39	K	|		403646.601	480.952639	ppb		0.616	1.091	90915.048
24	Mg	|		377003.236	984.628758	ppb		2.346	1.795	103.334
159	Tb-ISK	|		89528.339		ppb		0.822		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14372-D-1-E MSD

Autosampler Position: 356

Sample Date/Time: Wednesday, December 11, 2019 18:18:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14372-D-1-E MSD.140

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34122.929		ppb		0.839		19739.184
9	Be	|	45740.902	46.736892	ppb	1.663	1.935		11.111
10	B	|	15929.991	44.439680	ppb	2.432	2.061		3218.140
27	Al	|	252695.362	55.010054	ppb	0.468	1.071		2849.173
43	Ca-2	|	36187.443	2195.968388	ppb	0.620	0.895		71.667
49	Ti	|	18711.152	39.959571	ppb	4.653	4.624		160.001
52	Cr	|	297388.206	44.682810	ppb	1.133	0.702		11520.199
55	Mn	|	475458.288	40.162171	ppb	0.495	1.874		503.342
57	Fe	|	325374.777	1211.122536	ppb	2.140	0.734		12327.540
45	Sc-IS	>	710805.568		ppb	1.473			752074.551
66	Zn	|	66174.053	53.672778	ppb	1.730	2.158		991.146
86	Sr	|	84688.271	45.169402	ppb	0.799	1.855		33.544
65	Cu	|	88353.951	46.113934	ppb	0.842	2.301		114.089
69	Ga-IS	|	229571.336		ppb	1.640			238146.498
95	Mo	|	63847.945	35.739577	ppb	1.712	1.504		253.336
115	In-IS	>	135142.984		ppb	1.414			139332.016
111	Cd	|	69501.910	45.818286	ppb	1.187	0.701		12.801
118	Sn	|	176354.372	36.310882	ppb	8.157	9.214		3993.894
121	Sb	|	203651.617	39.944012	ppb	1.782	1.520		568.900
135	Ba	|	49263.686	38.380379	ppb	0.494	1.670		33.333
165	Ho-IS	|	138234.559		ppb	1.369			142888.964
159	Tb-IS	>	163652.198		ppb	1.641			171774.519
207	Pb	|	639782.067	42.415663	ppb	1.347	0.979		163.334
203	Tl	|	219606.361	44.573447	ppb	1.284	1.205		36.667
209	Bi-IS	|	297556.750		ppb	2.121			89226.770
51	V	|	10182.517	32.592800	ppb	1.494	1.144		0.000
59	Co	|	43889.543	42.808691	ppb	0.891	2.598		12.222
60	Ni	|	30500.311	42.053973	ppb	2.008	3.729		40.000
75	As	|	13387.370	46.046126	ppb	0.106	1.788		564.984
71	Ga-ISK	>	35569.792		ppb	1.743			37334.283
82	Se-2	|	1339.267	48.603848	ppb	1.199	2.553		5.567
107	Ag-1	|	67263.541	20.167395	ppb	0.610	1.771		60.000
115	In-ISK	|	41106.158		ppb	0.985			42798.316
45	Sc-ISK	>	92715.481		ppb	1.286			96393.085
23	Na	|	1088164.480	2898.409402	ppb	2.444	2.533		951.698
39	K	|	504371.535	616.062103	ppb	0.400	1.345		90915.048
24	Mg	|	666389.645	1701.955816	ppb	2.180	3.446		103.334
159	Tb-ISK	|	90142.222		ppb	1.684			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 18:34:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.143

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18455.251		ppb		2.472		19739.184
9	Be	|		100401.648	102.162280	ppb		1.690	2.439	11.111
10	B	|		77661.747	256.180387	ppb		2.820	3.348	3218.140
27	Al	|		461698.898	100.564185	ppb		1.580	2.324	2849.173
43	Ca-2	|		84563.234	5115.198555	ppb		4.640	4.987	71.667
49	Ti	|		47596.948	101.705919	ppb		1.445	1.242	160.001
52	Cr	|		670506.816	102.419319	ppb		1.122	0.128	11520.199
55	Mn	|		1118902.821	94.142886	ppb		1.386	0.601	503.342
57	Fe	|		1244116.565	4737.765401	ppb		0.999	1.164	12327.540
45	Sc-IS	>		713882.463		ppb		1.125		752074.551
66	Zn	|		130482.102	106.120236	ppb		0.832	1.944	991.146
86	Sr	|		193705.701	102.888142	ppb		1.986	2.600	33.544
65	Cu	|		204479.893	106.305326	ppb		2.078	1.021	114.089
69	Ga-IS	|		243334.072		ppb		1.449		238146.498
95	Mo	|		187533.127	104.774416	ppb		1.764	1.302	253.336
115	In-IS	>		134075.328		ppb		0.654		139332.016
111	Cd	|		152776.478	101.519421	ppb		1.943	1.386	12.801
118	Sn	|		475471.029	100.017262	ppb		1.633	1.468	3993.894
121	Sb	|		500689.189	99.142182	ppb		1.045	0.562	568.900
135	Ba	|		124829.919	98.046333	ppb		2.570	2.165	33.333
165	Ho-IS	|		138265.002		ppb		2.305		142888.964
159	Tb-IS	>		165599.992		ppb		1.545		171774.519
207	Pb	|		1554365.308	101.845470	ppb		1.596	0.194	163.334
203	Tl	|		495735.376	99.428525	ppb		2.315	0.820	36.667
209	Bi-IS	|		85272.645		ppb		0.913		89226.770
51	V	|		30827.674	100.238553	ppb		1.278	3.324	0.000
59	Co	|		100600.789	99.663708	ppb		1.231	2.974	12.222
60	Ni	|		72569.481	101.660330	ppb		2.415	2.882	40.000
75	As	|		28002.790	99.969008	ppb		0.918	1.207	564.984
71	Ga-ISK	>		35028.460		ppb		2.091		37334.283
82	Se-2	|		2643.140	97.600074	ppb		0.435	2.018	5.567
107	Ag-1	|		334951.841	102.037902	ppb		1.536	0.707	60.000
115	In-ISK	|		40972.782		ppb		0.861		42798.316
45	Sc-ISK	>		92601.423		ppb		1.506		96393.085
23	Na	|		1826695.981	4872.509146	ppb		2.229	0.787	951.698
39	K	|		3565960.144	5144.593610	ppb		3.969	2.507	90915.048
24	Mg	|		1918148.898	4904.157263	ppb		1.287	0.347	103.334
159	Tb-ISK	|		90155.638		ppb		1.648		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 18:39:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.144

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		19008.196		ppb				1.861		19739.184
9	Be	|		16.667	0.006318	ppb		72.111	197.452			11.111
10	B	|		3030.322	-0.096378	ppb		4.685	609.998			3218.140
27	Al	|		2745.820	0.008273	ppb		3.555	324.283			2849.173
43	Ca-2	|		96.667	1.718475	ppb		14.932	47.434			71.667
49	Ti	|		158.890	0.014662	ppb		3.205	111.872			160.001
52	Cr	|		9954.578	-0.154502	ppb		1.018	19.269			11520.199
55	Mn	|		636.681	0.013282	ppb		6.173	22.931			503.342
57	Fe	|		11354.511	-1.393699	ppb		1.622	85.834			12327.540
45	Sc-IS	>		715044.550		ppb		1.654				752074.551
66	Zn	|		3603.788	2.176773	ppb		0.848	1.831			991.146
86	Sr	|		8.512	-0.012394	ppb		275.055	100.886			33.544
65	Cu	|		101.823	-0.003518	ppb		13.139	172.133			114.089
69	Ga-IS	|		226925.078		ppb		1.567				238146.498
95	Mo	|		580.012	0.189575	ppb		13.515	24.044			253.336
115	In-IS	>		134614.135		ppb		0.091				139332.016
111	Cd	|		23.226	0.007184	ppb		41.461	88.605			12.801
118	Sn	|		4427.354	0.120111	ppb		5.246	40.616			3993.894
121	Sb	|		872.249	0.063696	ppb		1.723	4.759			568.900
135	Ba	|		35.556	0.002626	ppb		32.924	349.321			33.333
165	Ho-IS	|		138761.166		ppb		3.396				142888.964
159	Tb-IS	>		165141.895		ppb		3.208				171774.519
207	Pb	|		604.450	0.029461	ppb		9.509	14.953			163.334
203	Tl	|		81.111	0.009246	ppb		19.421	35.913			36.667
209	Bi-IS	|		88174.670		ppb		1.775				89226.770
51	V	|		1.111	0.003533	ppb		173.205	173.205			0.000
59	Co	|		24.444	0.012577	ppb		34.317	64.684			12.222
60	Ni	|		45.556	0.010455	ppb		15.232	86.093			40.000
75	As	|		561.533	0.092312	ppb		4.776	152.198			564.984
71	Ga-ISK	>		35447.272		ppb		2.291				37334.283
82	Se-2	|		7.877	0.101989	ppb		166.717	481.050			5.567
107	Ag-1	|		122.223	0.019615	ppb		11.022	17.974			60.000
115	In-ISK	|		41491.769		ppb		1.496				42798.316
45	Sc-ISK	>		90275.883		ppb		4.777				96393.085
23	Na	|		1165.048	0.752727	ppb		2.146	14.971			951.698
39	K	|		92192.101	10.880358	ppb		1.107	55.209			90915.048
24	Mg	|		221.668	0.329705	ppb		14.502	30.704			103.334
159	Tb-ISK	|		89824.972		ppb		2.591				91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14182-D-2-A @5000

Autosampler Position: 459

Sample Date/Time: Wednesday, December 11, 2019 18:59:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-14182-D-2-A @5000.149

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	19345.313		ppb	1.070		19739.184
9	Be	4.444	-0.006430	ppb	86.603	57.943	11.111
10	B	240895.340	783.589988	ppb	1.033	3.180	3218.140
27	Al	4795.342	0.417278	ppb	41.673	102.050	2849.173
43	Ca-2	230.002	9.272538	ppb	20.965	32.600	71.667
49	Ti	136.667	-0.044614	ppb	21.951	136.120	160.001
52	Cr	10777.397	-0.091421	ppb	0.323	42.338	11520.199
55	Mn	1015.592	0.041914	ppb	8.864	20.073	503.342
57	Fe	11629.177	-2.076001	ppb	2.239	38.897	12327.540
45	Sc-IS	> 743872.198		ppb	2.130		752074.551
66	Zn	1658.985	0.533907	ppb	2.149	7.843	991.146
86	Sr	100.773	0.034325	ppb	24.148	33.787	33.544
65	Cu	138.632	0.012945	ppb	6.930	46.493	114.089
69	Ga-IS	237631.295		ppb	0.810		238146.498
95	Mo	107.778	-0.076732	ppb	18.642	13.113	253.336
115	In-IS	> 141482.994		ppb	1.376		139332.016
111	Cd	26.440	0.008489	ppb	21.852	44.448	12.801
118	Sn	1904.572	-0.432376	ppb	6.187	4.684	3993.894
121	Sb	571.123	-0.001272	ppb	14.654	1188.265	568.900
135	Ba	66.667	0.024402	ppb	8.660	14.979	33.333
165	Ho-IS	144409.596		ppb	0.895		142888.964
159	Tb-IS	> 170800.645		ppb	1.263		171774.519
207	Pb	168.889	0.000416	ppb	4.109	131.665	163.334
203	Tl	25.556	-0.002141	ppb	66.934	153.142	36.667
209	Bi-IS	92399.026		ppb	1.784		89226.770
51	V	12.222	0.037369	ppb	15.746	18.232	0.000
59	Co	16.667	0.004177	ppb	20.000	82.915	12.222
60	Ni	30.000	-0.013163	ppb	11.111	34.390	40.000
75	As	593.381	0.097729	ppb	4.423	141.745	564.984
71	Ga-ISK	> 37364.381		ppb	2.842		37334.283
82	Se-2	-2.425	-0.277032	ppb	87.197	26.658	5.567
107	Ag-1	45.556	-0.004107	ppb	11.177	43.267	60.000
115	In-ISK	43903.395		ppb	0.385		42798.316
45	Sc-ISK	> 95819.163		ppb	0.357		96393.085
23	Na	145094.989	371.788140	ppb	2.061	1.770	951.698
39	K	91582.621	1.729021	ppb	0.200	23.194	90915.048
24	Mg	560.011	1.129822	ppb	4.464	5.109	103.334
159	Tb-ISK	93164.924		ppb	2.466		91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-13603-J-4-B @10

Autosampler Position: 460

Sample Date/Time: Wednesday, December 11, 2019 19:02:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\570-13603-J-4-B @10.150

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		25178.837		ppb			0.671			19739.184
9	Be	|		18.889	0.007012	ppb	20.377	50.264				11.111
10	B	|		22906.129	62.160199	ppb	1.268	0.941				3218.140
27	Al	|		346645.093	69.552678	ppb	1.844	0.935				2849.173
43	Ca-2	|		538978.406	30130.170454	ppb	2.570	1.749				71.667
49	Ti	|		2662.470	4.946935	ppb	0.072	1.040				160.001
52	Cr	|		15208.092	0.483598	ppb	1.646	8.569				11520.199
55	Mn	|		98614.758	7.628224	ppb	0.346	0.803				503.342
57	Fe	|		60241.202	168.947138	ppb	1.081	1.700				12327.540
45	Sc-IS	>		772798.823		ppb	0.933					752074.551
66	Zn	|		2625.797	1.215555	ppb	5.901	8.165				991.146
86	Sr	|		444421.473	218.056404	ppb	1.739	1.699				33.544
65	Cu	|		897.108	0.374806	ppb	1.265	2.355				114.089
69	Ga-IS	|		246770.976		ppb	0.815					238146.498
95	Mo	|		673.349	0.213424	ppb	5.239	8.106				253.336
115	In-IS	>		150517.058		ppb	0.676					139332.016
111	Cd	|		35.253	0.012724	ppb	47.079	78.113				12.801
118	Sn	|		1645.650	-0.504119	ppb	2.758	2.033				3993.894
121	Sb	|		632.236	0.003163	ppb	8.071	307.477				568.900
135	Ba	|		2357.972	1.625084	ppb	1.485	1.608				33.333
165	Ho-IS	|		153781.695		ppb	3.434					142888.964
159	Tb-IS	>		184530.565		ppb	3.310					171774.519
207	Pb	|		1063.349	0.052229	ppb	2.990	2.833				163.334
203	Tl	|		35.556	-0.000666	ppb	14.321	166.705				36.667
209	Bi-IS	|		94118.042		ppb	2.562					89226.770
51	V	|		125.556	0.388184	ppb	22.265	25.485				0.000
59	Co	|		140.001	0.119995	ppb	15.613	19.396				12.222
60	Ni	|		556.678	0.684508	ppb	6.801	6.083				40.000
75	As	|		681.296	0.413580	ppb	6.002	25.710				564.984
71	Ga-ISK	>		37069.193		ppb	3.947					37334.283
82	Se-2	|		16.547	0.386013	ppb	28.669	44.317				5.567
107	Ag-1	|		33.333	-0.007664	ppb	50.000	57.674				60.000
115	In-ISK	|		43426.119		ppb	2.297					42798.316
45	Sc-ISK	>		97691.975		ppb	2.966					96393.085
23	Na	|		8639314.640	21854.886907	ppb	2.676	0.355				951.698
39	K	|		736995.056	904.578804	ppb	2.950	3.683				90915.048
24	Mg	|		6058527.749	14686.775032	ppb	2.318	2.129				103.334
159	Tb-ISK	|		93754.707		ppb	1.790					91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Wednesday, December 11, 2019 19:07:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCV-210770.152

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		19137.255		ppb			1.025			19739.184
9	Be	|		102908.220	102.527134	ppb			0.565	2.598		11.111
10	B	|		79896.203	258.153781	ppb			2.238	3.830		3218.140
27	Al	|		484916.334	103.409772	ppb			2.206	2.085		2849.173
43	Ca-2	|		86328.475	5111.640442	ppb			2.233	1.907		71.667
49	Ti	|		47351.685	99.055708	ppb			1.020	1.482		160.001
52	Cr	|		686489.008	102.674877	ppb			0.739	1.579		11520.199
55	Mn	|		1149419.851	94.697152	ppb			1.211	2.210		503.342
57	Fe	|		1291418.238	4815.612569	ppb			1.693	2.110		12327.540
45	Sc-IS	>		729258.686		ppb			2.082			752074.551
66	Zn	|		132583.535	105.566666	ppb			0.733	2.202		991.146
86	Sr	|		201260.877	104.664219	ppb			0.705	2.227		33.544
65	Cu	|		208286.674	106.024826	ppb			1.131	1.298		114.089
69	Ga-IS	|		250944.023		ppb			1.380			238146.498
95	Mo	|		190623.398	104.278116	ppb			0.517	1.584		253.336
115	In-IS	>		139613.273		ppb			1.366			139332.016
111	Cd	|		159544.557	101.833788	ppb			0.633	1.907		12.801
118	Sn	|		480556.427	97.078633	ppb			1.906	3.080		3993.894
121	Sb	|		521591.730	99.191595	ppb			0.833	0.818		568.900
135	Ba	|		131005.741	98.835190	ppb			0.664	1.722		33.333
165	Ho-IS	|		146586.117		ppb			1.530			142888.964
159	Tb-IS	>		173312.994		ppb			1.890			171774.519
207	Pb	|		1654787.933	103.613775	ppb			1.877	1.915		163.334
203	Tl	|		530367.266	101.666226	ppb			0.849	1.538		36.667
209	Bi-IS	|		89282.640		ppb			1.891			89226.770
51	V	|		32614.978	100.846092	ppb			2.184	2.180		0.000
59	Co	|		106748.583	100.571460	ppb			2.157	2.130		12.222
60	Ni	|		75844.170	101.051525	ppb			1.675	1.159		40.000
75	As	|		29301.578	99.492117	ppb			0.430	0.177		564.984
71	Ga-ISK	>		36819.611		ppb			0.589			37334.283
82	Se-2	|		2846.831	99.988552	ppb			0.724	1.120		5.567
107	Ag-1	|		349274.879	101.218832	ppb			0.302	0.666		60.000
115	In-ISK	|		42848.699		ppb			0.796			42798.316
45	Sc-ISK	>		94869.534		ppb			0.782			96393.085
23	Na	|		1898624.937	4943.962406	ppb			3.126	3.299		951.698
39	K	|		3684756.488	5191.543877	ppb			1.776	2.016		90915.048
24	Mg	|		1956655.573	4883.181002	ppb			1.337	1.721		103.334
159	Tb-ISK	|		92611.919		ppb			1.198			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Wednesday, December 11, 2019 19:13:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191211E1\CCB-23446.154

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		20052.954		ppb		0.630		19739.184
9	Be	|		11.111	0.000271	ppb	17.321	651.617		11.111
10	B	|		3227.032	0.312583	ppb	6.056	237.076		3218.140
27	Al	|		2992.536	0.046644	ppb	5.594	90.692		2849.173
43	Ca-2	|		90.000	1.190830	ppb	22.222	99.659		71.667
49	Ti	|		163.334	0.015216	ppb	16.705	347.634		160.001
52	Cr	|		10513.872	-0.107134	ppb	4.154	60.702		11520.199
55	Mn	|		610.013	0.009852	ppb	8.483	48.339		503.342
57	Fe	|		11850.471	-0.594182	ppb	2.527	144.331		12327.540
45	Sc-IS	>		732615.089		ppb	1.168			752074.551
66	Zn	|		3736.044	2.210841	ppb	3.410	3.254		991.146
86	Sr	|		25.204	-0.003969	ppb	170.538	558.988		33.544
65	Cu	|		101.903	-0.004761	ppb	26.452	276.554		114.089
69	Ga-IS	|		238930.666		ppb	1.448			238146.498
95	Mo	|		502.231	0.139397	ppb	8.404	18.165		253.336
115	In-IS	>		141663.374		ppb	1.710			139332.016
111	Cd	|		25.612	0.007910	ppb	34.088	68.079		12.801
118	Sn	|		3607.123	-0.091242	ppb	4.114	19.286		3993.894
121	Sb	|		356.671	-0.041570	ppb	13.184	21.732		568.900
135	Ba	|		33.333	-0.000455	ppb	26.458	1385.296		33.333
165	Ho-IS	|		149228.713		ppb	0.365			142888.964
159	Tb-IS	>		172828.241		ppb	1.716			171774.519
207	Pb	|		476.670	0.019651	ppb	10.490	18.520		163.334
203	Tl	|		57.778	0.004028	ppb	8.813	29.178		36.667
209	Bi-IS	|		94235.406		ppb	1.727			89226.770
51	V	|		6.667	0.020160	ppb	50.000	50.249		0.000
59	Co	|		18.889	0.005992	ppb	66.811	191.268		12.222
60	Ni	|		44.445	0.005392	ppb	18.875	209.016		40.000
75	As	|		611.064	0.140192	ppb	5.681	93.625		564.984
71	Ga-ISK	>		37654.005		ppb	0.706			37334.283
82	Se-2	|		4.583	-0.035666	ppb	49.996	220.164		5.567
107	Ag-1	|		101.111	0.011534	ppb	21.951	55.976		60.000
115	In-ISK	|		43719.591		ppb	0.754			42798.316
45	Sc-ISK	>		95470.220		ppb	1.547			96393.085
23	Na	|		1218.385	0.714050	ppb	2.334	8.629		951.698
39	K	|		91787.272	2.521133	ppb	0.760	88.686		90915.048
24	Mg	|		245.002	0.353399	ppb	33.596	57.127		103.334
159	Tb-ISK	|		92159.665		ppb	0.964			91906.032

QC Out of Limits

AnalyteMassOut of Limits Message

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: Manual FIAS Cycle
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
FIMS-400: Low gas pressure
Autosampler Location:
Date Collected: 12/9/2019 3:06:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

=====
Sequence No.: 1
Sample ID: Manual FIAS Cycle
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.
Autosampler Location:
Date Collected: 12/9/2019 3:10:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

=====
Sequence No.: 1
Sample ID: Manual FIAS Cycle
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location:
Date Collected: 12/9/2019 3:15:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: Manual FIAS Cycle				Analyte: Hg 253.7			
Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0001	0.0009	0.0001	3:16:17 PM	Yes

=====
Sequence No.: 2
Sample ID: Manual FIAS Cycle
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location:
Date Collected: 12/9/2019 3:17:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: Manual FIAS Cycle				Analyte: Hg 253.7			
Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0002	0.0020	0.0002	3:18:19 PM	Yes

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-37769_2-a
Analyst:
Autosampler Location: 1
Date Collected: 12/9/2019 3:29:32 PM
Data Type: Original

Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.

Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Sample ID: ic 570-37769_5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 4:01:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-37769_5-a

Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1				2.225e-308	2.225e-308	12:00:00 AM	Yes

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT Technique: AA FIMS-MHS
Spectrometer: FIMS-400, S/N B050-9560 Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1 Autosampler Location: 1
Sample ID: icis 570-37769_1-a Date Collected: 12/9/2019 4:03:17 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: icis 570-37769_1-a Analyte: Hg 253.7
Repl SampleConc StndConc BlkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Stored
1 2.225e-3082.225e-30812:00:00 AM Yes
User canceled analysis.

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-37769_6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0089	0.0445	0.0089	4:12:11 PM	Yes
2		[1.000]	0.0089	0.0441	0.0089	4:12:57 PM	Yes

Mean: [1.000] 0.0089
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.38
 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999930 Slope: 0.00893 Intercept: -0.00004

=====

Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-37769_7-a Date Collected: 12/9/2019 4:13:24 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-37769_7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0181	0.0911	0.0181	4:14:29 PM	Yes
2		[2.000]	0.0181	0.0910	0.0181	4:15:15 PM	Yes

Mean: [2.000] 0.0181
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.18
 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999957 Slope: 0.00906 Intercept: -0.00007

=====

Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-37769_8-a Date Collected: 12/9/2019 4:15:42 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-37769_8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0452	0.2293	0.0452	4:16:45 PM	Yes
2		[5.000]	0.0452	0.2312	0.0452	4:17:31 PM	Yes

Mean: [5.000] 0.0452
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.01
 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999993 Slope: 0.00905 Intercept: -0.00006

=====

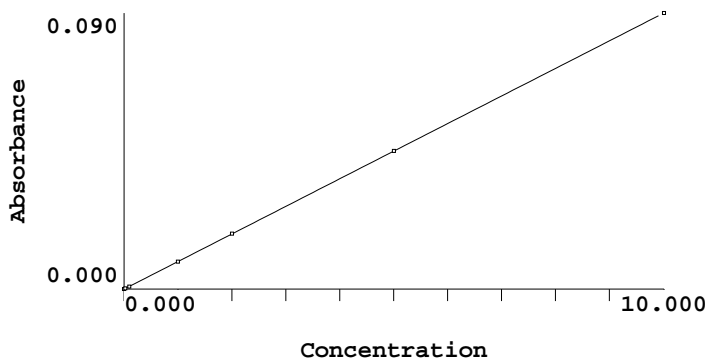
Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-37769_9-a Date Collected: 12/9/2019 4:17:57 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-37769_9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.0901	0.4648	0.0901	4:19:01 PM	Yes
2		[10.000]	0.0905	0.4711	0.0905	4:19:47 PM	Yes

Mean: [10.000] 0.0903
 SD: 0.00000 0.0002
 %RSD: 0.00% 0.27
 Standard number 6 applied. [10.000]

Correlation Coef.: 0.999998 Slope: 0.00903 Intercept: -0.00005



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-37769_1-a	0.0000	0	0.0054	0.00	101.82
ic 570-37769_4-a	0.0002	0.025	0.0278	0.00	34.92
ic 570-37769_5-a	0.0008	0.100	0.0914	0.00	7.01
ic 570-37769_6-a	0.0089	1.000	0.9902	0.00	0.38
ic 570-37769_7-a	0.0181	2.000	2.0092	0.00	0.18
ic 570-37769_8-a	0.0452	5.000	5.0034	0.00	0.01
ic 570-37769_9-a	0.0903	10.000	9.9975	0.00	0.27

Correlation Coef.: 0.999998 Slope: 0.00903 Intercept: -0.00005

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:

Results Data Set: 191209H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Sample ID: icv 570-37330_2-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 8

Date Collected: 12/9/2019 4:21:53 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: icv 570-37330_2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.97	0.0449	0.2326	0.0449	4:22:58 PM	Yes
2	0.0050	4.97	0.0449	0.2340	0.0449	4:23:44 PM	Yes
Mean:	0.0050	4.97	0.0449				
SD:	0.00000	0.001	0.0000				
%RSD:	0.01%	0.01%	0.01				

QC value within limits for Hg 253.7 Recovery = 99.48%

All analyte(s) passed QC.

=====
Sequence No.: 2

Sample ID: icb 570-37330_3-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 12/9/2019 4:24:10 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: icb 570-37330_3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0166	0.0001	0.0012	0.0001	4:25:14 PM	Yes
2	0.0000	0.0125	0.0001	0.0002	0.0001	4:26:00 PM	Yes
Mean:	0.0000	0.0146	0.0001				
SD:	0.00000	0.00286	0.0000				
%RSD:	19.64%	19.64%	31.19				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Sequence No.: 3

Sample ID: cra 570-37769_12-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution: 2X

Wash Time (before sample): 0

Autosampler Location: 9

Date Collected: 12/9/2019 4:26:25 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: cra 570-37769_12-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.272	0.0024	0.0127	0.0024	4:27:30 PM	Yes
2	0.0005	0.270	0.0024	0.0123	0.0024	4:28:16 PM	Yes
Mean:	0.0005	0.271	0.0024				
SD:	0.00000	0.0014	0.0000				
%RSD:	0.53%	0.53%	0.54				

=====
Sequence No.: 4

Sample ID: ccv 570-37330_10-a

Analyst: 1174 HG-8

Autosampler Location: 5

Date Collected: 12/9/2019 4:28:42 PM

Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.00	0.0180	0.0929	0.0180	4:29:48 PM	Yes
2	0.0020	2.00	0.0180	0.0923	0.0180	4:30:34 PM	Yes
Mean:	0.0020	2.00	0.0180				
SD:	0.00000	0.001	0.0000				
%RSD:	0.06%	0.06%	0.06				

QC value within limits for Hg 253.7 Recovery = 99.99%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-37330_11-a Date Collected: 12/9/2019 4:31:01 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0069	0.0000	-0.0005	0.0000	4:32:05 PM	Yes
2	0.0000	0.0055	0.0000	-0.0012	0.0000	4:32:51 PM	Yes
Mean:	0.0000	0.0062	0.0000				
SD:	0.00000	0.00101	0.0000				
%RSD:	16.24%	16.24%	123.54				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37642_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 12/9/2019 4:36:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37642_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0039	-0.0000	-0.0014	0.0000	4:37:57 PM	Yes
2	0.0000	0.0025	-0.0000	-0.0014	-0.0000	4:38:43 PM	Yes
Mean:	0.0000	0.0032	-0.0000				
SD:	0.00000	0.00098	0.0000				
%RSD:	30.85%	30.85%	44.10				

=====
Sequence No.: 2
Sample ID: lcs 570-37642_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 11
Date Collected: 12/9/2019 4:39:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37642_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0437	0.2283	0.0437	4:40:15 PM	Yes
2	0.0049	4.87	0.0440	0.2307	0.0440	4:41:00 PM	Yes
Mean:	0.0049	4.86	0.0438				
SD:	0.00002	0.021	0.0002				
%RSD:	0.44%	0.44%	0.44				

=====
Sequence No.: 3
Sample ID: lcsd 570-37642_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 12
Date Collected: 12/9/2019 4:41:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37642_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.90	0.0442	0.2317	0.0442	4:42:33 PM	Yes
2	0.0049	4.90	0.0442	0.2311	0.0442	4:43:19 PM	Yes
Mean:	0.0049	4.90	0.0442				
SD:	0.00000	0.000	0.0000				
%RSD:	0.01%	0.01%	0.01				

=====
Sequence No.: 4
Sample ID: 570-14372-e-2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 13
Date Collected: 12/9/2019 4:43:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14372-e-2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0110	0.0001	-0.0002	0.0001	4:44:52 PM	Yes
2	0.0000	0.0116	0.0001	-0.0006	0.0001	4:45:37 PM	Yes
Mean:	0.0000	0.0113	0.0001				
SD:	0.00000	0.00044	0.0000				
%RSD:	3.92%	3.92%	7.48				

Sequence No.: 5

Autosampler Location: 14

Sample ID: 570-14372-e-2-b ms

Date Collected: 12/9/2019 4:46:05 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14372-e-2-b ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.94	0.0174	0.0889	0.0175	4:47:09 PM	Yes
2	0.0020	1.97	0.0178	0.0913	0.0178	4:47:55 PM	Yes
Mean:	0.0020	1.95	0.0176				
SD:	0.00002	0.025	0.0002				
%RSD:	1.27%	1.27%	1.27				

Sequence No.: 6

Autosampler Location: 15

Sample ID: 570-14372-e-2-c msd

Date Collected: 12/9/2019 4:48:20 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14372-e-2-c msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0437	0.2286	0.0437	4:49:24 PM	Yes
2	0.0049	4.90	0.0443	0.2336	0.0443	4:50:10 PM	Yes
Mean:	0.0049	4.87	0.0440				
SD:	0.00004	0.043	0.0004				
%RSD:	0.89%	0.89%	0.89				

Sequence No.: 7

Autosampler Location: 16

Sample ID: 570-14597-f-1-b

Date Collected: 12/9/2019 4:50:36 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14597-f-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0211	0.0001	0.0002	0.0002	4:51:40 PM	Yes
2	0.0000	0.0191	0.0001	0.0000	0.0001	4:52:26 PM	Yes
Mean:	0.0000	0.0201	0.0001				
SD:	0.00000	0.00144	0.0000				
%RSD:	7.18%	7.18%	9.80				

Sequence No.: 8

Autosampler Location: 17

Sample ID: 570-14206-b-1-b

Date Collected: 12/9/2019 4:52:52 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14206-b-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0780	0.0007	0.0028	0.0007	4:53:56 PM	Yes
2	0.0001	0.0724	0.0006	0.0017	0.0006	4:54:42 PM	Yes
Mean:	0.0001	0.0752	0.0006				
SD:	0.00000	0.00401	0.0000				
%RSD:	5.33%	5.33%	5.74				

Sequence No.: 9
 Sample ID: 570-14206-a-2-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 18
 Date Collected: 12/9/2019 4:55:08 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14206-a-2-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0126	0.0001	-0.0005	0.0001	4:56:12 PM	Yes
2	0.0000	0.0140	0.0001	-0.0004	0.0001	4:56:58 PM	Yes
Mean:	0.0000	0.0133	0.0001				
SD:	0.00000	0.00100	0.0000				
%RSD:	7.57%	7.57%	12.74				

Sequence No.: 10
 Sample ID: 570-14206-a-3-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 19
 Date Collected: 12/9/2019 4:57:24 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14206-a-3-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0129	0.0001	0.0001	0.0001	4:58:29 PM	Yes
2	0.0000	0.0096	0.0000	-0.0005	0.0001	4:59:14 PM	Yes
Mean:	0.0000	0.0113	0.0001				
SD:	0.00000	0.00234	0.0000				
%RSD:	20.71%	20.71%	39.66				

Sequence No.: 11
 Sample ID: ccv 570-37330_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 12/9/2019 4:59:40 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	1.99	0.0179	0.0923	0.0179	5:00:46 PM	Yes
2	0.0020	1.99	0.0179	0.0914	0.0179	5:01:32 PM	Yes
Mean:	0.0020	1.99	0.0179				
SD:	0.00000	0.002	0.0000				
%RSD:	0.10%	0.10%	0.10				

QC value within limits for Hg 253.7 Recovery = 99.35%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-37330_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 12/9/2019 5:01:59 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0000	0.0075	0.0000	-0.0005	0.0000	5:03:03 PM	Yes
2	0.0000	0.0022	-0.0000	-0.0018	-0.0000	5:03:49 PM	Yes
Mean:	0.0000	0.0049	-0.0000				
SD:	0.00000	0.00377	0.0000				
%RSD:	77.39%	77.39%	733.61				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 20
Sample ID: 570-14372-f-1-a                    Date Collected: 12/9/2019 5:04:14 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14372-f-1-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0000      0.0128   0.0001    -0.0002  0.0001    5:05:19 PM  Yes
2      0.0000      0.0135   0.0001    0.0001   0.0001    5:06:05 PM  Yes
Mean:  0.0000      0.0132   0.0001
SD:    0.00000      0.00050   0.0000
%RSD:  3.81%       3.81%     6.45
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 21
Sample ID: 570-14597-f-2-b                    Date Collected: 12/9/2019 5:06:31 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14597-f-2-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0000      0.0100   0.0000    0.0000   0.0001    5:07:36 PM  Yes
2      0.0000      0.0118   0.0001    -0.0002  0.0001    5:08:21 PM  Yes
Mean:  0.0000      0.0109   0.0000
SD:    0.00000      0.00130   0.0000
%RSD:  11.87%      11.87%    23.44
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 22
Sample ID: 570-14506-a-1-a                    Date Collected: 12/9/2019 5:08:47 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14506-a-1-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0003      0.301    0.0027    0.0135   0.0027    5:09:52 PM  Yes
2      0.0003      0.297    0.0026    0.0131   0.0026    5:10:38 PM  Yes
Mean:  0.0003      0.299    0.0027
SD:    0.00000      0.0029   0.0000
%RSD:  0.98%       0.98%     0.99
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 23
Sample ID: 570-14506-a-2-a                    Date Collected: 12/9/2019 5:11:05 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14506-a-2-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0005      0.503    0.0045    0.0233   0.0045    5:12:10 PM  Yes
=====
  
```

2 0.0005 0.499 0.0045 0.0228 0.0045 5:12:56 PM Yes
 Mean: 0.0005 0.501 0.0045
 SD: 0.00000 0.0028 0.0000
 %RSD: 0.56% 0.56% 0.56

=====
 Sequence No.: 17 Autosampler Location: 24
 Sample ID: 570-14506-a-3-a Date Collected: 12/9/2019 5:13:23 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14506-a-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0569	0.0005	0.0021	0.0005	5:14:28 PM	Yes
2	0.0001	0.0538	0.0004	0.0016	0.0005	5:15:14 PM	Yes
Mean:	0.0001	0.0554	0.0005				
SD:	0.00000	0.00223	0.0000				
%RSD:	4.03%	4.03%	4.46				

=====
 Sequence No.: 18 Autosampler Location: 25
 Sample ID: 570-14559-f-1-a Date Collected: 12/9/2019 5:15:41 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14559-f-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.114	0.0010	0.0047	0.0010	5:16:47 PM	Yes
2	0.0001	0.117	0.0010	0.0047	0.0010	5:17:33 PM	Yes
Mean:	0.0001	0.115	0.0010				
SD:	0.00000	0.0017	0.0000				
%RSD:	1.48%	1.48%	1.56				

=====
 Sequence No.: 19 Autosampler Location: 26
 Sample ID: 570-14559-f-1-b ms Date Collected: 12/9/2019 5:18:00 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14559-f-1-b ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.96	0.0448	0.2343	0.0448	5:19:04 PM	Yes
2	0.0050	5.00	0.0451	0.2373	0.0452	5:19:50 PM	Yes
Mean:	0.0050	4.98	0.0449				
SD:	0.00003	0.030	0.0003				
%RSD:	0.61%	0.61%	0.61				

=====
 Sequence No.: 20 Autosampler Location: 27
 Sample ID: 570-14559-f-1-c msd Date Collected: 12/9/2019 5:20:16 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14559-f-1-c msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.96	0.0447	0.2369	0.0448	5:21:21 PM	Yes
2	0.0050	4.96	0.0448	0.2380	0.0448	5:22:06 PM	Yes
Mean:	0.0050	4.96	0.0448				
SD:	0.00000	0.005	0.0000				

%RSD: 0.09% 0.09% 0.09

```

=====
Sequence No.: 21                               Autosampler Location: 28
Sample ID: 570-14559-f-2-a                   Date Collected: 12/9/2019 5:22:32 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14559-f-2-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area     Height
1      0.0006       0.614    0.0055    0.0294   0.0055    5:23:37 PM  Yes
2      0.0006       0.603    0.0054    0.0277   0.0054    5:24:22 PM  Yes
Mean:  0.0006       0.608    0.0054
SD:    0.00001      0.0078   0.0001
%RSD:  1.28%       1.28%    1.29

```

```

=====
Sequence No.: 22                               Autosampler Location: 29
Sample ID: 570-14559-f-3-a                   Date Collected: 12/9/2019 5:24:48 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14559-f-3-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area     Height
1      0.0004       0.389    0.0035    0.0186   0.0035    5:25:53 PM  Yes
2      0.0004       0.378    0.0034    0.0165   0.0034    5:26:39 PM  Yes
Mean:  0.0004       0.384    0.0034
SD:    0.00001      0.0079   0.0001
%RSD:  2.05%       2.05%    2.08

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                Date Collected: 12/9/2019 5:27:05 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccv 570-37330_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area     Height
1      0.0020       1.99     0.0179    0.0948   0.0180    5:28:10 PM  Yes
2      0.0020       1.98     0.0178    0.0922   0.0179    5:28:56 PM  Yes
Mean:  0.0020       1.99     0.0179
SD:    0.00001      0.008    0.0001
%RSD:  0.39%       0.39%    0.40

```

QC value within limits for Hg 253.7 Recovery = 99.31%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                Date Collected: 12/9/2019 5:29:23 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-37330_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area     Height
1      0.0000       0.0094   0.0000    0.0001   0.0001    5:30:27 PM  Yes
2      0.0000       0.0045  -0.0000   -0.0008  0.0000    5:31:13 PM  Yes
Mean:  0.0000       0.0069   0.0000
SD:    0.00000      0.00341  0.0000
%RSD:  49.13%       49.13%   218.77

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 30
Sample ID: 570-14559-f-4-a Date Collected: 12/9/2019 5:31:39 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14559-f-4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.142	0.0012	0.0062	0.0012	5:32:43 PM	Yes
2	0.0001	0.139	0.0012	0.0059	0.0012	5:33:29 PM	Yes
Mean:	0.0001	0.141	0.0012				
SD:	0.00000	0.0019	0.0000				
%RSD:	1.33%	1.33%	1.39				

Sequence No.: 26 Autosampler Location: 31
Sample ID: 570-14631-g-1-a Date Collected: 12/9/2019 5:33:55 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14631-g-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0145	0.0001	0.0000	0.0001	5:35:00 PM	Yes
2	0.0000	0.0129	0.0001	-0.0002	0.0001	5:35:45 PM	Yes
Mean:	0.0000	0.0137	0.0001				
SD:	0.00000	0.00115	0.0000				
%RSD:	8.41%	8.41%	13.85				

Sequence No.: 27 Autosampler Location: 32
Sample ID: 570-14631-g-2-a Date Collected: 12/9/2019 5:36:11 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14631-g-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0134	0.0001	-0.0000	0.0001	5:37:16 PM	Yes
2	0.0000	0.0121	0.0001	-0.0002	0.0001	5:38:02 PM	Yes
Mean:	0.0000	0.0128	0.0001				
SD:	0.00000	0.00091	0.0000				
%RSD:	7.15%	7.15%	12.37				

Sequence No.: 28 Autosampler Location: 33
Sample ID: 570-14631-g-3-a Date Collected: 12/9/2019 5:38:28 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14631-g-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0153	0.0001	-0.0001	0.0001	5:39:33 PM	Yes
2	0.0000	0.0156	0.0001	-0.0003	0.0001	5:40:19 PM	Yes
Mean:	0.0000	0.0154	0.0001				
SD:	0.00000	0.00025	0.0000				
%RSD:	1.64%	1.64%	2.53				

```

=====
Sequence No.: 29                               Autosampler Location: 34
Sample ID: 570-14862-b-1-a                   Date Collected: 12/9/2019 5:40:45 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14862-b-1-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0000       0.0139   0.0001   -0.0000 0.0001   5:41:51 PM  Yes
2      0.0000       0.0106   0.0000   -0.0002 0.0001   5:42:36 PM  Yes
Mean:  0.0000       0.0123   0.0001
SD:    0.00000      0.00233  0.0000
%RSD:  18.97%      18.97%   33.79
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                Date Collected: 12/9/2019 5:43:03 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-37330_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0020       1.96     0.0176   0.0918  0.0177   5:44:09 PM  Yes
2      0.0020       1.98     0.0178   0.0923  0.0178   5:44:54 PM  Yes
Mean:  0.0020       1.97     0.0177
SD:    0.00001      0.012    0.0001
%RSD:  0.61%       0.61%    0.61
QC value within limits for Hg 253.7 Recovery = 98.35%
All analyte(s) passed QC.
=====

```

```

=====
Sequence No.: 31                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                Date Collected: 12/9/2019 5:45:21 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-37330_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0000       0.0066   0.0000   -0.0005 0.0000   5:46:26 PM  Yes
2      0.0000       0.0056   0.0000   -0.0007 0.0000   5:47:11 PM  Yes
Mean:  0.0000       0.0061   0.0000
SD:    0.00000      0.00068  0.0000
%RSD:  11.26%      11.26%   98.98
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.
=====

```


=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37401_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 35
Date Collected: 12/9/2019 5:54:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37401_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0059	0.0000	-0.0002	0.0000	5:55:39 PM	Yes
2	0.0000	0.0074	0.0000	-0.0001	0.0000	5:56:25 PM	Yes
Mean:	0.0000	0.0067	0.0000				
SD:	0.00000	0.00104	0.0000				
%RSD:	15.69%	15.69%	82.44				

=====
Sequence No.: 2
Sample ID: lcs 570-37401_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 36
Date Collected: 12/9/2019 5:56:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37401_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.77	0.0430	0.2261	0.0430	5:57:58 PM	Yes
2	0.0048	4.79	0.0432	0.2290	0.0432	5:58:43 PM	Yes
Mean:	0.0048	4.78	0.0431				
SD:	0.00001	0.012	0.0001				
%RSD:	0.26%	0.26%	0.26				

=====
Sequence No.: 3
Sample ID: lcsd 570-37401_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 37
Date Collected: 12/9/2019 5:59:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37401_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.83	0.0436	0.2305	0.0436	6:00:17 PM	Yes
2	0.0048	4.80	0.0433	0.2301	0.0433	6:01:02 PM	Yes
Mean:	0.0048	4.81	0.0434				
SD:	0.00002	0.022	0.0002				
%RSD:	0.45%	0.45%	0.45				

=====
Sequence No.: 4
Sample ID: 570-14509-a-1-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 38
Date Collected: 12/9/2019 6:01:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14509-a-1-f Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0888	0.0008	0.0043	0.0008	6:02:35 PM	Yes
2	0.0001	0.0786	0.0007	0.0031	0.0007	6:03:21 PM	Yes
Mean:	0.0001	0.0837	0.0007				
SD:	0.00001	0.00721	0.0001				
%RSD:	8.62%	8.62%	9.21				

=====

Sequence No.: 5 Autosampler Location: 39
 Sample ID: 570-14509-a-1-g ms Date Collected: 12/9/2019 6:03:47 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-1-g ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.85	0.0438	0.2500	0.0438	6:04:52 PM	Yes
2	0.0049	4.93	0.0445	0.2557	0.0445	6:05:38 PM	Yes
Mean:	0.0049	4.89	0.0442				
SD:	0.00005	0.054	0.0005				
%RSD:	1.11%	1.11%	1.11				

=====

Sequence No.: 6 Autosampler Location: 40
 Sample ID: 570-14509-a-1-h msd Date Collected: 12/9/2019 6:06:04 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-1-h msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.88	0.0440	0.2519	0.0440	6:07:09 PM	Yes
2	0.0049	4.87	0.0440	0.2505	0.0440	6:07:55 PM	Yes
Mean:	0.0049	4.87	0.0440				
SD:	0.00000	0.003	0.0000				
%RSD:	0.07%	0.07%	0.07				

=====

Sequence No.: 7 Autosampler Location: 41
 Sample ID: 570-14509-a-2-h Date Collected: 12/9/2019 6:08:22 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-2-h Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0533	0.0004	0.0024	0.0004	6:09:26 PM	Yes
2	0.0000	0.0195	0.0001	-0.0003	0.0001	6:10:12 PM	Yes
Mean:	0.0000	0.0364	0.0003				
SD:	0.00002	0.02388	0.0002				
%RSD:	65.59%	65.59%	76.98				

=====

Sequence No.: 8 Autosampler Location: 42
 Sample ID: 570-14509-a-3-d Date Collected: 12/9/2019 6:10:39 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-3-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0403	0.0003	0.0020	0.0003	6:11:44 PM	Yes
2	0.0000	0.0379	0.0003	0.0015	0.0003	6:12:30 PM	Yes
Mean:	0.0000	0.0391	0.0003				
SD:	0.00000	0.00175	0.0000				
%RSD:	4.47%	4.47%	5.18				

Sequence No.: 9
Sample ID: 570-14509-a-4-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 43
Date Collected: 12/9/2019 6:12:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14509-a-4-d Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0772	0.0006	0.0040	0.0007	6:14:01 PM	Yes
2	0.0001	0.0702	0.0006	0.0031	0.0006	6:14:47 PM	Yes
Mean:	0.0001	0.0737	0.0006				
SD:	0.00000	0.00494	0.0000				
%RSD:	6.71%	6.71%	7.24				

Sequence No.: 10
Sample ID: 570-14509-a-5-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 44
Date Collected: 12/9/2019 6:15:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14509-a-5-d Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0302	0.0002	0.0014	0.0002	6:16:18 PM	Yes
2	0.0000	0.0294	0.0002	0.0012	0.0002	6:17:04 PM	Yes
Mean:	0.0000	0.0298	0.0002				
SD:	0.00000	0.00057	0.0000				
%RSD:	1.92%	1.92%	2.35				

Sequence No.: 11
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/9/2019 6:17:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	1.96	0.0177	0.0934	0.0177	6:18:36 PM	Yes
2	0.0020	1.98	0.0178	0.0931	0.0178	6:19:22 PM	Yes
Mean:	0.0020	1.97	0.0178				
SD:	0.00001	0.010	0.0001				
%RSD:	0.49%	0.49%	0.49				

QC value within limits for Hg 253.7 Recovery = 98.53%
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: ccb 570-37330_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/9/2019 6:19:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0000	0.0090	0.0000	0.0004	0.0000	6:20:53 PM	Yes
2	0.0000	0.0097	0.0000	0.0003	0.0001	6:21:39 PM	Yes
Mean:	0.0000	0.0094	0.0000				
SD:	0.00000	0.00045	0.0000				
%RSD:	4.85%	4.85%	11.42				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 45
Sample ID: 570-14509-a-6-d                    Date Collected: 12/9/2019 6:22:05 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-6-d                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0280   0.0002   0.0015 0.0002 6:23:10 PM  Yes
2      0.0000     0.0256   0.0002   0.0010 0.0002 6:23:56 PM  Yes
Mean:  0.0000     0.0268   0.0002
SD:    0.00000     0.00165  0.0000
%RSD:  6.16%      6.16%    7.71
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 46
Sample ID: 570-14509-a-7-d                    Date Collected: 12/9/2019 6:24:22 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-7-d                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0461   0.0004   0.0024 0.0004 6:25:27 PM  Yes
2      0.0000     0.0428   0.0003   0.0019 0.0004 6:26:13 PM  Yes
Mean:  0.0000     0.0444   0.0004
SD:    0.00000     0.00233  0.0000
%RSD:  5.25%      5.25%    5.97
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 47
Sample ID: 570-14509-a-8-d                    Date Collected: 12/9/2019 6:26:40 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-8-d                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0170   0.0001   0.0008 0.0001 6:27:45 PM  Yes
2      0.0000     0.0144   0.0001   0.0005 0.0001 6:28:31 PM  Yes
Mean:  0.0000     0.0157   0.0001
SD:    0.00000     0.00187  0.0000
%RSD:  11.93%     11.93%   18.18
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 48
Sample ID: 570-14509-a-9-d                    Date Collected: 12/9/2019 6:28:58 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-9-d                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0270   0.0002   0.0010 0.0002 6:30:03 PM  Yes
=====
  
```

2 0.0000 0.0268 0.0002 0.0010 0.0002 6:30:49 PM Yes
 Mean: 0.0000 0.0269 0.0002
 SD: 0.00000 0.00019 0.0000
 %RSD: 0.72% 0.72% 0.90

=====
 Sequence No.: 17 Autosampler Location: 49
 Sample ID: 570-14509-a-10-d Date Collected: 12/9/2019 6:31:16 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-10-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0307	0.0002	0.0016	0.0002	6:32:22 PM	Yes
2	0.0000	0.0287	0.0002	0.0010	0.0002	6:33:07 PM	Yes
Mean:	0.0000	0.0297	0.0002				
SD:	0.00000	0.00137	0.0000				
%RSD:	4.61%	4.61%	5.63				

=====
 Sequence No.: 18 Autosampler Location: 50
 Sample ID: 570-14509-a-11-d Date Collected: 12/9/2019 6:33:35 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-11-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0338	0.0003	0.0019	0.0003	6:34:40 PM	Yes
2	0.0000	0.0322	0.0002	0.0014	0.0003	6:35:25 PM	Yes
Mean:	0.0000	0.0330	0.0002				
SD:	0.00000	0.00113	0.0000				
%RSD:	3.42%	3.42%	4.08				

=====
 Sequence No.: 19 Autosampler Location: 51
 Sample ID: 570-14509-a-12-d Date Collected: 12/9/2019 6:35:52 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-12-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0207	0.0001	0.0009	0.0002	6:36:57 PM	Yes
2	0.0000	0.0196	0.0001	0.0006	0.0001	6:37:43 PM	Yes
Mean:	0.0000	0.0201	0.0001				
SD:	0.00000	0.00084	0.0000				
%RSD:	4.15%	4.15%	5.67				

=====
 Sequence No.: 20 Autosampler Location: 52
 Sample ID: 570-14509-a-13-d Date Collected: 12/9/2019 6:38:09 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-13-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0239	0.0002	0.0008	0.0002	6:39:14 PM	Yes
2	0.0000	0.0229	0.0002	0.0008	0.0002	6:39:59 PM	Yes
Mean:	0.0000	0.0234	0.0002				
SD:	0.00000	0.00070	0.0000				

%RSD: 3.00% 3.00% 3.90

```

=====
Sequence No.: 21                               Autosampler Location: 53
Sample ID: 570-14509-a-14-d                   Date Collected: 12/9/2019 6:40:26 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14509-a-14-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0287   0.0002   0.0013 0.0002 6:41:31 PM Yes
2      0.0000     0.0255   0.0002   0.0009 0.0002 6:42:17 PM Yes
Mean:  0.0000     0.0271   0.0002
SD:    0.00000    0.00223  0.0000
%RSD:  8.24%     8.24%   10.29
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 54
Sample ID: 570-14509-a-15-d                   Date Collected: 12/9/2019 6:42:44 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14509-a-15-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0635   0.0005   0.0029 0.0005 6:43:49 PM Yes
2      0.0001     0.0655   0.0005   0.0034 0.0006 6:44:35 PM Yes
Mean:  0.0001     0.0645   0.0005
SD:    0.00000    0.00144  0.0000
%RSD:  2.23%     2.23%   2.43
=====

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                 Date Collected: 12/9/2019 6:45:01 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-37330_10-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0020     1.96     0.0176   0.0929 0.0177 6:46:07 PM Yes
2      0.0020     1.95     0.0176   0.0927 0.0176 6:46:52 PM Yes
Mean:  0.0020     1.96     0.0176
SD:    0.00000    0.002    0.0000
%RSD:  0.12%     0.12%   0.12
=====

```

QC value within limits for Hg 253.7 Recovery = 97.78%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                 Date Collected: 12/9/2019 6:47:20 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-37330_11-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0116   0.0001   0.0004 0.0001 6:48:24 PM Yes
2      0.0000     0.0065   0.0000   -0.0000 0.0000 6:49:10 PM Yes
Mean:  0.0000     0.0090   0.0000
SD:    0.00000    0.00363  0.0000
%RSD:  40.20%     40.20%  99.55
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 55
Sample ID: 570-14509-a-16-d Date Collected: 12/9/2019 6:49:35 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-16-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0266	0.0002	0.0013	0.0002	6:50:40 PM	Yes
2	0.0000	0.0230	0.0002	0.0005	0.0002	6:51:26 PM	Yes
Mean:	0.0000	0.0248	0.0002				
SD:	0.00000	0.00250	0.0000				
%RSD:	10.10%	10.10%	12.90				

Sequence No.: 26 Autosampler Location: 56
Sample ID: 570-14509-a-17-d Date Collected: 12/9/2019 6:51:52 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-17-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0353	0.0003	0.0016	0.0003	6:52:57 PM	Yes
2	0.0000	0.0363	0.0003	0.0017	0.0003	6:53:43 PM	Yes
Mean:	0.0000	0.0358	0.0003				
SD:	0.00000	0.00070	0.0000				
%RSD:	1.96%	1.96%	2.31				

Sequence No.: 27 Autosampler Location: 57
Sample ID: 570-14509-a-18-d Date Collected: 12/9/2019 6:54:09 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-18-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0345	0.0003	0.0020	0.0003	6:55:14 PM	Yes
2	0.0000	0.0264	0.0002	0.0004	0.0002	6:55:59 PM	Yes
Mean:	0.0000	0.0304	0.0002				
SD:	0.00001	0.00577	0.0001				
%RSD:	18.95%	18.95%	23.02				

Sequence No.: 28 Autosampler Location: 58
Sample ID: 570-14621-a-1-d Date Collected: 12/9/2019 6:56:26 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14621-a-1-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.159	0.0014	0.0084	0.0014	6:57:31 PM	Yes
2	0.0002	0.154	0.0013	0.0071	0.0014	6:58:17 PM	Yes
Mean:	0.0002	0.157	0.0014				
SD:	0.00000	0.0036	0.0000				
%RSD:	2.30%	2.30%	2.38				

```

=====
Sequence No.: 29                               Autosampler Location: 59
Sample ID: 570-14626-a-1-f                   Date Collected: 12/9/2019 6:58:44 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14626-a-1-f               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#     mg/L        ug/L      Signal    Area    Height             Stored
1     0.0010      1.00     0.0090    0.0540  0.0090   6:59:50 PM  Yes
2     0.0010      0.998    0.0090    0.0528  0.0090   7:00:35 PM  Yes
Mean: 0.0010      1.00     0.0090
SD:   0.00000    0.004    0.0000
%RSD: 0.44%      0.44%    0.44
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 60
Sample ID: 570-14202-g-6-b                   Date Collected: 12/9/2019 7:01:02 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-g-6-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#     mg/L        ug/L      Signal    Area    Height             Stored
1     0.0000      0.0111   0.0001   -0.0003 0.0001   7:02:09 PM  Yes
2     0.0000      0.0094   0.0000   -0.0006 0.0001   7:02:54 PM  Yes
Mean: 0.0000      0.0102   0.0000
SD:   0.00000    0.00117  0.0000
%RSD: 11.43%     11.43%   24.14
=====

```

```

=====
Sequence No.: 31                               Autosampler Location: 61
Sample ID: 570-14202-g-7-b                   Date Collected: 12/9/2019 7:03:22 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14202-g-7-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#     mg/L        ug/L      Signal    Area    Height             Stored
1     0.0000      0.0153   0.0001    0.0002  0.0001   7:04:28 PM  Yes
2     0.0000      0.0104   0.0000    0.0002  0.0001   7:05:14 PM  Yes
Mean: 0.0000      0.0128   0.0001
SD:   0.00000    0.00348  0.0000
%RSD: 27.14%     27.14%   46.78
=====

```

```

=====
Sequence No.: 32                               Autosampler Location: 62
Sample ID: lb4 570-37344_1-c                 Date Collected: 12/9/2019 7:05:41 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lb4 570-37344_1-c             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#     mg/L        ug/L      Signal    Area    Height             Stored
1     0.0000      0.0089   0.0000    0.0002  0.0000   7:06:46 PM  Yes
2     0.0000      0.0100   0.0000    0.0002  0.0001   7:07:31 PM  Yes
Mean: 0.0000      0.0094   0.0000
SD:   0.00000    0.00080  0.0000
%RSD: 8.48%      8.48%    19.83
=====

```

```

=====
Sequence No.: 33                               Autosampler Location: 63
Sample ID: lcs 570-37344_2-c                 Date Collected: 12/9/2019 7:07:58 PM
=====

```


Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37344_2-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.78	0.0431	0.2295	0.0431	7:09:04 PM	Yes
2	0.0048	4.79	0.0432	0.2338	0.0433	7:09:49 PM	Yes
Mean:	0.0048	4.78	0.0432				
SD:	0.00001	0.011	0.0001				
%RSD:	0.23%	0.23%	0.23				

=====
Sequence No.: 34
Sample ID: lcsd 570-37344_3-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 64
Date Collected: 12/9/2019 7:10:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37344_3-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.80	0.0433	0.2335	0.0434	7:11:21 PM	Yes
2	0.0048	4.80	0.0433	0.2343	0.0433	7:12:06 PM	Yes
Mean:	0.0048	4.80	0.0433				
SD:	0.00000	0.005	0.0000				
%RSD:	0.10%	0.10%	0.10				

=====
Sequence No.: 35
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/9/2019 7:12:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.97	0.0177	0.0944	0.0177	7:13:39 PM	Yes
2	0.0020	1.97	0.0178	0.0947	0.0178	7:14:25 PM	Yes
Mean:	0.0020	1.97	0.0177				
SD:	0.00000	0.004	0.0000				
%RSD:	0.19%	0.19%	0.19				

QC value within limits for Hg 253.7 Recovery = 98.44%
All analyte(s) passed QC.

=====
Sequence No.: 36
Sample ID: ccb 570-37330_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/9/2019 7:14:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0115	0.0001	0.0006	0.0001	7:15:56 PM	Yes
2	0.0000	0.0101	0.0000	-0.0000	0.0001	7:16:42 PM	Yes
Mean:	0.0000	0.0108	0.0000				
SD:	0.00000	0.00095	0.0000				
%RSD:	8.83%	8.83%	17.62				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 37

Autosampler Location: 65

Sample ID: 570-14434-a-1-j
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 7:17:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14434-a-1-j

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0057	0.0000	-0.0002	0.0000	7:18:14 PM	Yes
2	0.0000	0.0032	-0.0000	-0.0006	-0.0000	7:19:00 PM	Yes
Mean:	0.0000	0.0044	-0.0000				
SD:	0.00000	0.00178	0.0000				
%RSD:	40.26%	40.26%	181.93				

=====

Sequence No.: 38
Sample ID: 570-14434-a-1-m ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 66
Date Collected: 12/9/2019 7:19:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14434-a-1-m ms

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0011	1.09	0.0098	0.0523	0.0098	7:20:32 PM	Yes
2	0.0011	1.09	0.0098	0.0518	0.0098	7:21:17 PM	Yes
Mean:	0.0011	1.09	0.0098				
SD:	0.00000	0.002	0.0000				
%RSD:	0.20%	0.20%	0.20				

Analyte: Hg 253.7

=====

Sequence No.: 39
Sample ID: 570-14434-a-1-n msd
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 67
Date Collected: 12/9/2019 7:21:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14434-a-1-n msd

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0883	0.0007	0.0038	0.0008	7:22:49 PM	Yes
2	0.0001	0.0851	0.0007	0.0036	0.0007	7:23:35 PM	Yes
Mean:	0.0001	0.0867	0.0007				
SD:	0.00000	0.00224	0.0000				
%RSD:	2.59%	2.59%	2.76				

Analyte: Hg 253.7

=====

Sequence No.: 40
Sample ID: mb 570-37796_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 68
Date Collected: 12/9/2019 7:24:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37796_1-a

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0112	0.0001	0.0004	0.0001	7:25:07 PM	Yes
2	0.0000	0.0070	0.0000	0.0000	0.0000	7:25:52 PM	Yes
Mean:	0.0000	0.0091	0.0000				
SD:	0.00000	0.00299	0.0000				
%RSD:	32.87%	32.87%	80.62				

Analyte: Hg 253.7

=====

Sequence No.: 41
Sample ID: lcs 570-37796_2-a
Analyst: 1174 HG-8
Initial Sample Wt:

Autosampler Location: 69
Date Collected: 12/9/2019 7:26:19 PM
Data Type: Original
Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37796_2-a

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicates and summary statistics (Mean, SD, %RSD).

Sequence No.: 42

Autosampler Location: 70

Sample ID: lcsd 570-37796_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 7:28:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37796_3-a

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicates and summary statistics (Mean, SD, %RSD).

Sequence No.: 43

Autosampler Location: 71

Sample ID: 570-15011-a-1-i
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 7:30:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15011-a-1-i

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicates and summary statistics (Mean, SD, %RSD).

Sequence No.: 44

Autosampler Location: 72

Sample ID: 570-15011-a-1-j ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 7:33:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15011-a-1-j ms

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicates and summary statistics (Mean, SD, %RSD).

Sequence No.: 45

Autosampler Location: 73

Sample ID: 570-15011-a-1-k msd
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 7:35:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15011-a-1-k msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.97	0.0448	0.2688	0.0448	7:36:36 PM	Yes
2	0.0049	4.92	0.0444	0.2676	0.0444	7:37:22 PM	Yes
Mean:	0.0049	4.95	0.0446				
SD:	0.00003	0.031	0.0003				
%RSD:	0.63%	0.63%	0.63				

Sequence No.: 46

Autosampler Location: 74

Sample ID: 570-15097-a-1-b

Date Collected: 12/9/2019 7:37:49 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15097-a-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.132	0.0011	0.0064	0.0012	7:38:55 PM	Yes
2	0.0001	0.0901	0.0008	0.0039	0.0008	7:39:41 PM	Yes
Mean:	0.0001	0.111	0.0010				
SD:	0.00003	0.0296	0.0003				
%RSD:	26.63%	26.63%	27.99				

Sequence No.: 47

Autosampler Location: 5

Sample ID: ccv 570-37330_10-a

Date Collected: 12/9/2019 7:40:08 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.95	0.0176	0.0946	0.0176	7:41:13 PM	Yes
2	0.0020	1.96	0.0176	0.0944	0.0176	7:41:59 PM	Yes
Mean:	0.0020	1.95	0.0176				
SD:	0.00000	0.003	0.0000				
%RSD:	0.15%	0.15%	0.15				

QC value within limits for Hg 253.7 Recovery = 97.67%

All analyte(s) passed QC.

Sequence No.: 48

Autosampler Location: 1

Sample ID: ccb 570-37330_11-a

Date Collected: 12/9/2019 7:42:26 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0163	0.0001	0.0013	0.0001	7:43:31 PM	Yes
2	0.0000	0.0045	-0.0000	-0.0008	0.0000	7:44:16 PM	Yes
Mean:	0.0000	0.0104	0.0000				
SD:	0.00001	0.00838	0.0001				
%RSD:	80.75%	80.75%	167.96				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 49

Autosampler Location: 75

Sample ID: mb 570-37499_1-a

Date Collected: 12/9/2019 7:44:42 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.62	0.0417	0.2432	0.0417	7:54:53 PM	Yes
2	0.0047	4.70	0.0424	0.2485	0.0424	7:55:38 PM	Yes
Mean:	0.0047	4.66	0.0421				
SD:	0.00005	0.051	0.0005				
%RSD:	1.10%	1.10%	1.10				

Sequence No.: 54
Sample ID: 570-14854-a-1-d msd
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 80
Date Collected: 12/9/2019 7:56:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14854-a-1-d msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.63	0.0418	0.2469	0.0418	7:57:09 PM	Yes
2	0.0046	4.61	0.0416	0.2467	0.0416	7:57:54 PM	Yes
Mean:	0.0046	4.62	0.0417				
SD:	0.00001	0.014	0.0001				
%RSD:	0.30%	0.30%	0.30				

Sequence No.: 55
Sample ID: 570-14854-a-2-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 81
Date Collected: 12/9/2019 7:58:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14854-a-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0744	0.0006	0.0032	0.0006	7:59:26 PM	Yes
2	0.0000	0.0250	0.0002	0.0006	0.0002	8:00:11 PM	Yes
Mean:	0.0000	0.0497	0.0004				
SD:	0.00003	0.03495	0.0003				
%RSD:	70.36%	70.36%	78.93				

Sequence No.: 56
Sample ID: 570-14854-a-3-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 82
Date Collected: 12/9/2019 8:00:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14854-a-3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.158	0.0014	0.0072	0.0014	8:01:42 PM	Yes
2	0.0002	0.159	0.0014	0.0069	0.0014	8:02:27 PM	Yes
Mean:	0.0002	0.158	0.0014				
SD:	0.00000	0.0005	0.0000				
%RSD:	0.34%	0.34%	0.35				

Sequence No.: 57
Sample ID: 570-14837-a-1-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 83
Date Collected: 12/9/2019 8:02:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14837-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0155	0.0001	0.0010	0.0001	8:03:58 PM	Yes

2 0.0000 0.0081 0.0000 -0.0001 0.0000 8:04:44 PM Yes
 Mean: 0.0000 0.0118 0.0001
 SD: 0.00001 0.00525 0.0000
 %RSD: 44.51% 44.51% 81.96

=====
 Sequence No.: 58 Autosampler Location: 84
 Sample ID: 570-14836-a-1-b Date Collected: 12/9/2019 8:05:11 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14836-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0048	-0.0000	-0.0005	0.0000	8:06:17 PM	Yes
2	0.0000	0.0123	0.0001	0.0003	0.0001	8:07:03 PM	Yes
Mean:	0.0000	0.0085	0.0000				
SD:	0.00001	0.00531	0.0000				
%RSD:	62.19%	62.19%	168.46				

=====
 Sequence No.: 59 Autosampler Location: 5
 Sample ID: ccv 570-37330_10-a Date Collected: 12/9/2019 8:07:30 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.92	0.0173	0.0934	0.0173	8:08:36 PM	Yes
2	0.0019	1.93	0.0174	0.0939	0.0174	8:09:21 PM	Yes
Mean:	0.0019	1.92	0.0173				
SD:	0.00001	0.009	0.0001				
%RSD:	0.47%	0.47%	0.47				

QC value within limits for Hg 253.7 Recovery = 96.20%
 All analyte(s) passed QC.

=====
 Sequence No.: 60 Autosampler Location: 1
 Sample ID: ccb 570-37330_11-a Date Collected: 12/9/2019 8:09:49 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0063	0.0000	-0.0005	0.0000	8:10:53 PM	Yes
2	0.0000	0.0053	-0.0000	-0.0005	0.0000	8:11:38 PM	Yes
Mean:	0.0000	0.0058	0.0000				
SD:	0.00000	0.00066	0.0000				
%RSD:	11.31%	11.31%	163.20				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
 Sequence No.: 61 Autosampler Location: 85
 Sample ID: 570-14768-a-1-b Date Collected: 12/9/2019 8:12:04 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14768-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0063	0.0000	-0.0005	0.0000	8:10:53 PM	Yes
2	0.0000	0.0053	-0.0000	-0.0005	0.0000	8:11:38 PM	Yes

1	0.0000	0.0433	0.0003	0.0023	0.0004	8:13:10 PM	Yes
2	0.0000	0.0394	0.0003	0.0016	0.0003	8:13:56 PM	Yes
Mean:	0.0000	0.0414	0.0003				
SD:	0.00000	0.00279	0.0000				
%RSD:	6.75%	6.75%	7.76				

```

=====
Sequence No.: 62
Sample ID: 570-14696-a-1-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 86
Date Collected: 12/9/2019 8:14:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14696-a-1-d
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0058 5.84 0.0527 0.3168 0.0527 8:15:29 PM Yes
2 0.0060 5.99 0.0540 0.3229 0.0540 8:16:14 PM Yes
Mean: 0.0059 5.91 0.0534
SD: 0.00010 0.103 0.0009
%RSD: 1.74% 1.74% 1.74
=====

```

```

=====
Sequence No.: 63
Sample ID: 570-14869-a-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 87
Date Collected: 12/9/2019 8:16:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-1-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0001 0.106 0.0009 0.0049 0.0009 8:17:47 PM Yes
2 0.0001 0.0644 0.0005 0.0026 0.0005 8:18:33 PM Yes
Mean: 0.0001 0.0853 0.0007
SD: 0.00003 0.02955 0.0003
%RSD: 34.64% 34.64% 36.97
=====

```

```

=====
Sequence No.: 64
Sample ID: 570-14869-a-2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 88
Date Collected: 12/9/2019 8:19:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0001 0.0752 0.0006 0.0037 0.0006 8:20:05 PM Yes
2 0.0001 0.0764 0.0006 0.0040 0.0007 8:20:51 PM Yes
Mean: 0.0001 0.0758 0.0006
SD: 0.00000 0.00088 0.0000
%RSD: 1.16% 1.16% 1.25
=====

```

```

=====
Sequence No.: 65
Sample ID: 570-14869-a-3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 89
Date Collected: 12/9/2019 8:21:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0001 0.0826 0.0007 0.0048 0.0007 8:22:23 PM Yes
2 0.0001 0.0760 0.0006 0.0033 0.0007 8:23:09 PM Yes
Mean: 0.0001 0.0793 0.0007
=====

```


SD: 0.00000 0.00464 0.0000
%RSD: 5.85% 5.85% 6.28

Sequence No.: 66 Autosampler Location: 90
Sample ID: 570-14869-a-4-a Date Collected: 12/9/2019 8:23:36 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14869-a-4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0858	0.0007	0.0044	0.0007	8:24:42 PM	Yes
2	0.0001	0.0839	0.0007	0.0042	0.0007	8:25:27 PM	Yes
Mean:	0.0001	0.0848	0.0007				
SD:	0.00000	0.00132	0.0000				
%RSD:	1.55%	1.55%	1.66				

Sequence No.: 67 Autosampler Location: 91
Sample ID: 570-14869-a-5-a Date Collected: 12/9/2019 8:25:54 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14869-a-5-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.106	0.0009	0.0059	0.0009	8:27:00 PM	Yes
2	0.0001	0.106	0.0009	0.0059	0.0009	8:27:46 PM	Yes
Mean:	0.0001	0.106	0.0009				
SD:	0.00000	0.0005	0.0000				
%RSD:	0.48%	0.48%	0.50				

Sequence No.: 68 Autosampler Location: 92
Sample ID: 570-14869-a-6-a Date Collected: 12/9/2019 8:28:13 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14869-a-6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0996	0.0009	0.0057	0.0009	8:29:19 PM	Yes
2	0.0001	0.105	0.0009	0.0056	0.0009	8:30:05 PM	Yes
Mean:	0.0001	0.102	0.0009				
SD:	0.00000	0.0039	0.0000				
%RSD:	3.81%	3.81%	4.02				

Sequence No.: 69 Autosampler Location: 93
Sample ID: 570-14869-a-7-a Date Collected: 12/9/2019 8:30:32 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14869-a-7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0472	0.0004	0.0025	0.0004	8:31:37 PM	Yes
2	0.0000	0.0436	0.0003	0.0019	0.0004	8:32:23 PM	Yes
Mean:	0.0000	0.0454	0.0004				
SD:	0.00000	0.00259	0.0000				
%RSD:	5.70%	5.70%	6.47				

```

=====
Sequence No.: 70                               Autosampler Location: 94
Sample ID: 570-14869-a-8-a                    Date Collected: 12/9/2019 8:32:50 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-8-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0905   0.0008   0.0050 0.0008 8:33:56 PM  Yes
2      0.0001     0.0902   0.0008   0.0047 0.0008 8:34:42 PM  Yes
Mean:  0.0001     0.0904   0.0008
SD:    0.00000    0.00022  0.0000
%RSD:  0.25%     0.25%    0.26
=====

```

```

=====
Sequence No.: 71                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                 Date Collected: 12/9/2019 8:35:09 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-37330_10-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0019     1.92     0.0173   0.0933 0.0173 8:36:15 PM  Yes
2      0.0019     1.91     0.0172   0.0937 0.0173 8:37:01 PM  Yes
Mean:  0.0019     1.91     0.0173
SD:    0.00000    0.001    0.0000
%RSD:  0.05%     0.05%    0.05
=====

```

QC value within limits for Hg 253.7 Recovery = 95.75%
All analyte(s) passed QC.

```

=====
Sequence No.: 72                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                 Date Collected: 12/9/2019 8:37:28 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-37330_11-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0110   0.0001   0.0007 0.0001 8:38:32 PM  Yes
2      0.0000     0.0054   0.0000   -0.0003 0.0000 8:39:17 PM  Yes
Mean:  0.0000     0.0082   0.0000
SD:    0.00000    0.00396  0.0000
%RSD:  48.05%     48.05%  138.85
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 73                               Autosampler Location: 95
Sample ID: 570-14869-a-9-a                    Date Collected: 12/9/2019 8:39:43 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-9-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0002     0.191    0.0017   0.0101 0.0017 8:40:49 PM  Yes
2      0.0002     0.185    0.0016   0.0093 0.0016 8:41:34 PM  Yes
Mean:  0.0002     0.188    0.0016
SD:    0.00000    0.0039   0.0000
%RSD:  2.07%     2.07%    2.13
=====

```

```

=====
Sequence No.: 74                               Autosampler Location: 96
Sample ID: 570-14869-a-10-a                 Date Collected: 12/9/2019 8:42:02 PM
Analyst: 1174 HG-8                          Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-10-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/L        ug/L      Signal   Area   Height  Time    Stored
1      0.0001       0.0851   0.0007   0.0044 0.0007  8:43:07 PM  Yes
2      0.0001       0.0798   0.0007   0.0035 0.0007  8:43:53 PM  Yes
Mean:  0.0001       0.0825   0.0007
SD:     0.00000     0.00374  0.0000
%RSD:  4.53%       4.53%    4.85
=====

```

```

=====
Sequence No.: 75                               Autosampler Location: 97
Sample ID: 570-14869-a-11-a                 Date Collected: 12/9/2019 8:44:20 PM
Analyst: 1174 HG-8                          Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-11-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/L        ug/L      Signal   Area   Height  Time    Stored
1      0.0001       0.0712   0.0006   0.0035 0.0006  8:45:26 PM  Yes
2      0.0001       0.0703   0.0006   0.0032 0.0006  8:46:11 PM  Yes
Mean:  0.0001       0.0707   0.0006
SD:     0.00000     0.00066  0.0000
%RSD:  0.93%       0.93%    1.01
=====

```

```

=====
Sequence No.: 76                               Autosampler Location: 98
Sample ID: 720-96376-b-1-a                 Date Collected: 12/9/2019 8:46:38 PM
Analyst: 1174 HG-8                          Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 720-96376-b-1-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/L        ug/L      Signal   Area   Height  Time    Stored
1      0.0003       0.329    0.0029   0.0173 0.0029  8:47:44 PM  Yes
2      0.0003       0.326    0.0029   0.0165 0.0029  8:48:30 PM  Yes
Mean:  0.0003       0.328    0.0029
SD:     0.00000     0.0025   0.0000
%RSD:  0.75%       0.75%    0.76
=====

```

```

=====
Sequence No.: 77                               Autosampler Location: 99
Sample ID: 720-96377-b-1-a                 Date Collected: 12/9/2019 8:48:57 PM
Analyst: 1174 HG-8                          Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 720-96377-b-1-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/L        ug/L      Signal   Area   Height  Time    Stored
1      0.0004       0.383    0.0034   0.0201 0.0034  8:50:03 PM  Yes
2      0.0004       0.376    0.0034   0.0193 0.0034  8:50:49 PM  Yes
Mean:  0.0004       0.380    0.0034
SD:     0.00000     0.0043   0.0000
%RSD:  1.14%       1.14%    1.16
=====

```

```

=====
Sequence No.: 78                               Autosampler Location: 100
=====

```


Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.90	0.0172	0.0952	0.0172	9:01:37 PM	Yes
2	0.0019	1.91	0.0172	0.0950	0.0172	9:02:23 PM	Yes
Mean:	0.0019	1.91	0.0172				
SD:	0.00000	0.004	0.0000				
%RSD:	0.19%	0.19%	0.19				

QC value within limits for Hg 253.7 Recovery = 95.38%
All analyte(s) passed QC.

=====

Sequence No.: 83
Sample ID: ccb 570-37330_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/9/2019 9:02:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0042	-0.0000	-0.0005	0.0000	9:03:54 PM	Yes
2	0.0000	0.0102	0.0000	0.0005	0.0001	9:04:40 PM	Yes
Mean:	0.0000	0.0072	0.0000				
SD:	0.00000	0.00421	0.0000				
%RSD:	58.32%	58.32%	229.73				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-38006_6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0104	0.0439	0.0104	12:25:31 PM	Yes
2		[1.000]	0.0104	0.0443	0.0105	12:26:17 PM	Yes
Mean:		[1.000]	0.0104				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.35				

Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999950 Slope: 0.01046 Intercept: -0.00006

=====

Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-38006_7-a Date Collected: 12/10/2019 12:26:44 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-38006_7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0208	0.0896	0.0208	12:27:49 PM	Yes
2		[2.000]	0.0209	0.0901	0.0209	12:28:35 PM	Yes
Mean:		[2.000]	0.0208				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.42				

Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999989 Slope: 0.01045 Intercept: -0.00006

=====

Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-38006_8-a Date Collected: 12/10/2019 12:29:02 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-38006_8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0504	0.2190	0.0504	12:30:06 PM	Yes
2		[5.000]	0.0506	0.2215	0.0506	12:30:51 PM	Yes
Mean:		[5.000]	0.0505				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.29				

Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999897 Slope: 0.01013 Intercept: 0.00010

=====

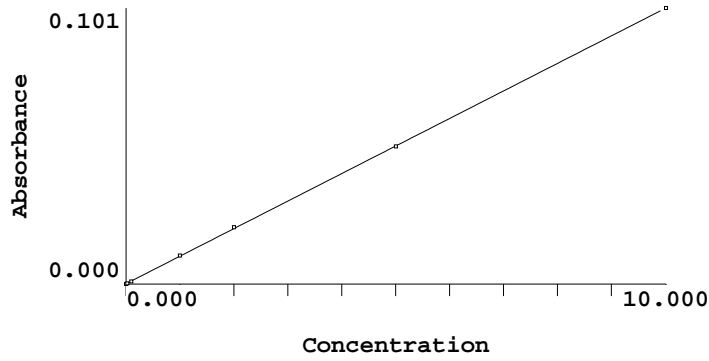
Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-38006_9-a Date Collected: 12/10/2019 12:31:17 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-38006_9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.1012	0.4473	0.1012	12:32:22 PM	Yes
2		[10.000]	0.1014	0.4548	0.1015	12:33:07 PM	Yes
Mean:		[10.000]	0.1013				
SD:		0.00000	0.0002				
%RSD:		0.00%	0.18				

Standard number 6 applied. [10.000]

Correlation Coef.: 0.999976 Slope: 0.01012 Intercept: 0.00010



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-38006_1-a	0.0000	0	-0.0101	0.00	135.25
ic 570-38006_4-a	0.0002	0.025	0.0089	0.00	4.79
ic 570-38006_5-a	0.0009	0.100	0.0811	0.00	0.22
ic 570-38006_6-a	0.0104	1.000	1.0178	0.00	0.35
ic 570-38006_7-a	0.0208	2.000	2.0494	0.00	0.42
ic 570-38006_8-a	0.0505	5.000	4.9789	0.00	0.29
ic 570-38006_9-a	0.1013	10.000	9.9991	0.00	0.18

Correlation Coef.: 0.999976 Slope: 0.01012 Intercept: 0.00010

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-38006_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 12/10/2019 12:36:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-38006_2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0051 5.07 0.0514 0.2276 0.0515 12:37:13 PM Yes
2 0.0051 5.07 0.0514 0.2281 0.0514 12:37:59 PM Yes
Mean: 0.0051 5.07 0.0514
SD: 0.00000 0.005 0.0000
%RSD: 0.09% 0.09% 0.09
QC value within limits for Hg 253.7 Recovery = 101.38%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-38006_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/10/2019 12:38:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-38006_3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 -0.0000 -0.0104 -0.0000 -0.0003 0.0000 12:39:29 PM Yes
2 -0.0000 -0.0131 -0.0000 -0.0008 -0.0000 12:40:15 PM Yes
Mean: -0.0000 -0.0118 -0.0000
SD: 0.00000 0.00192 0.0000
%RSD: 16.33% 16.33% 115.84
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-38006_12-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 12/10/2019 12:40:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-38006_12-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0005 0.249 0.0026 0.0114 0.0026 12:41:45 PM Yes
2 0.0005 0.247 0.0026 0.0109 0.0026 12:42:31 PM Yes
Mean: 0.0005 0.248 0.0026
SD: 0.00000 0.0015 0.0000
%RSD: 0.60% 0.60% 0.58

=====
Sequence No.: 4
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Autosampler Location: 5
Date Collected: 12/10/2019 12:42:58 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.06	0.0209	0.0905	0.0210	12:44:04 PM	Yes
2	0.0021	2.06	0.0210	0.0905	0.0210	12:44:49 PM	Yes
Mean:	0.0021	2.06	0.0210				
SD:	0.00000	0.003	0.0000				
%RSD:	0.14%	0.14%	0.14				

QC value within limits for Hg 253.7 Recovery = 103.02%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-38006_11-a Date Collected: 12/10/2019 12:45:16 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0115	-0.0000	-0.0003	0.0000	12:46:21 PM	Yes
2	-0.0000	-0.0094	0.0000	0.0001	0.0000	12:47:06 PM	Yes
Mean:	-0.0000	-0.0105	-0.0000				
SD:	0.00000	0.00153	0.0000				
%RSD:	14.67%	14.67%	430.98				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis BegunLogged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:

Results Data Set: 191210H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-38022_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 12/10/2019 1:11:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: mb 570-38022_1-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 -0.0000 -0.0036 0.0001 0.0008 0.0001 1:12:54 PM Yes
2 -0.0000 -0.0129 -0.0000 -0.0013 -0.0000 1:13:40 PM Yes
Mean: -0.0000 -0.0083 0.0000
SD: 0.00001 0.00655 0.0001
%RSD: 79.26% 79.26% 355.70=====
Sequence No.: 2
Sample ID: lcs 570-38022_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 11
Date Collected: 12/10/2019 1:14:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: lcs 570-38022_2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0047 4.68 0.0475 0.2117 0.0475 1:15:12 PM Yes
2 0.0047 4.74 0.0481 0.2141 0.0481 1:15:58 PM Yes
Mean: 0.0047 4.71 0.0478
SD: 0.00004 0.045 0.0005
%RSD: 0.95% 0.95% 0.95=====
Sequence No.: 3
Sample ID: lcsd 570-38022_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 12
Date Collected: 12/10/2019 1:16:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: lcsd 570-38022_3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0047 4.73 0.0480 0.2168 0.0480 1:17:30 PM Yes
2 0.0048 4.77 0.0484 0.2199 0.0485 1:18:16 PM Yes
Mean: 0.0048 4.75 0.0482
SD: 0.00003 0.029 0.0003
%RSD: 0.61% 0.61% 0.61=====
Sequence No.: 4
Sample ID: 570-15141-e-1-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 13
Date Collected: 12/10/2019 1:18:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15141-e-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0071	0.0002	0.0017	0.0002	1:19:49 PM	Yes
2	-0.0000	-0.0005	0.0001	0.0001	0.0001	1:20:35 PM	Yes
Mean:	0.0000	0.0033	0.0001				
SD:	0.00001	0.00538	0.0001				
%RSD:	164.17%	164.17%	40.21				

Sequence No.: 5

Autosampler Location: 14

Sample ID: 570-15141-e-1-c ms

Date Collected: 12/10/2019 1:21:02 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15141-e-1-c ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0027	2.67	0.0271	0.1243	0.0272	1:22:06 PM	Yes
2	0.0027	2.67	0.0272	0.1251	0.0272	1:22:52 PM	Yes
Mean:	0.0027	2.67	0.0272				
SD:	0.00000	0.002	0.0000				
%RSD:	0.09%	0.09%	0.09				

Sequence No.: 6

Autosampler Location: 15

Sample ID: 570-15141-e-1-d msd

Date Collected: 12/10/2019 1:23:18 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15141-e-1-d msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0026	2.58	0.0262	0.1197	0.0262	1:24:22 PM	Yes
2	0.0026	2.61	0.0266	0.1210	0.0266	1:25:08 PM	Yes
Mean:	0.0026	2.60	0.0264				
SD:	0.00002	0.025	0.0002				
%RSD:	0.95%	0.95%	0.95				

Sequence No.: 7

Autosampler Location: 5

Sample ID: ccv 570-38006_10-a

Date Collected: 12/10/2019 1:25:34 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.07	0.0211	0.0956	0.0211	1:26:39 PM	Yes
2	0.0021	2.07	0.0210	0.0944	0.0211	1:27:25 PM	Yes
Mean:	0.0021	2.07	0.0211				
SD:	0.00000	0.004	0.0000				
%RSD:	0.20%	0.20%	0.20				

QC value within limits for Hg 253.7 Recovery = 103.52%

All analyte(s) passed QC.

Sequence No.: 8

Autosampler Location: 1

Sample ID: ccb 570-38006_11-a

Date Collected: 12/10/2019 1:27:52 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0081	0.0002	0.0010	0.0002	1:28:56 PM	Yes
2	0.0000	0.0043	0.0001	0.0006	0.0002	1:29:42 PM	Yes
Mean:	0.0000	0.0062	0.0002				
SD:	0.00000	0.00273	0.0000				
%RSD:	44.02%	44.02%	16.75				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:

Results Data Set: 191210H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Sample ID: lb4 570-37767_1-c

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 16

Date Collected: 12/10/2019 3:10:59 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: lb4 570-37767_1-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0138	-0.0000	-0.0011	-0.0000	3:12:03 PM	Yes
2	-0.0000	-0.0138	-0.0000	-0.0019	-0.0000	3:12:49 PM	Yes
Mean:	-0.0000	-0.0138	-0.0000				
SD:	0.00000	0.00003	0.0000				
%RSD:	0.25%	0.25%	0.92				

=====
Sequence No.: 2

Sample ID: lcs 570-37767_2-c

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 17

Date Collected: 12/10/2019 3:13:15 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: lcs 570-37767_2-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.76	0.0483	0.2153	0.0483	3:14:19 PM	Yes
2	0.0047	4.75	0.0482	0.2200	0.0482	3:15:05 PM	Yes
Mean:	0.0048	4.76	0.0482				
SD:	0.00001	0.008	0.0001				
%RSD:	0.17%	0.17%	0.17				

=====
Sequence No.: 3

Sample ID: lcsd 570-37767_3-c

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 18

Date Collected: 12/10/2019 3:15:31 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: lcsd 570-37767_3-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.82	0.0489	0.2221	0.0489	3:16:35 PM	Yes
2	0.0006	0.559	0.0058	0.0199	0.0058	3:17:21 PM	Yes
Mean:	0.0027	2.69	0.0273				
SD:	0.00301	3.010	0.0305				
%RSD:	112.00%	112.00%	111.58				

=====
Sequence No.: 4

Sample ID: 570-14836-a-1-f

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 19

Date Collected: 12/10/2019 3:17:47 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 570-14836-a-1-f

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0040	0.0001	0.0002	0.0001	3:18:51 PM	Yes
2	-0.0000	-0.0126	-0.0000	-0.0003	0.0000	3:19:37 PM	Yes
Mean:	-0.0000	-0.0083	0.0000				
SD:	0.00001	0.00607	0.0001				
%RSD:	73.16%	73.16%	335.13				

Sequence No.: 5

Autosampler Location: 20

Sample ID: 570-14836-a-1-g ms

Date Collected: 12/10/2019 3:20:03 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14836-a-1-g ms

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.124	0.0014	0.0064	0.0014	3:21:08 PM	Yes
2	0.0001	0.124	0.0014	0.0061	0.0014	3:21:54 PM	Yes
Mean:	0.0001	0.124	0.0014				
SD:	0.00000	0.0001	0.0000				
%RSD:	0.04%	0.04%	0.04				

Sequence No.: 6

Autosampler Location: 21

Sample ID: 570-14836-a-1-h msd

Date Collected: 12/10/2019 3:22:20 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14836-a-1-h msd

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.85	0.0188	0.0872	0.0189	3:23:25 PM	Yes
2	0.0019	1.88	0.0192	0.0890	0.0192	3:24:11 PM	Yes
Mean:	0.0019	1.87	0.0190				
SD:	0.00002	0.023	0.0002				
%RSD:	1.23%	1.23%	1.22				

Sequence No.: 7

Autosampler Location: 22

Sample ID: 570-14837-a-1-f

Date Collected: 12/10/2019 3:24:37 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14837-a-1-f

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0032	0.0001	0.0003	0.0001	3:25:43 PM	Yes
2	-0.0000	-0.0053	0.0000	0.0004	0.0001	3:26:28 PM	Yes
Mean:	-0.0000	-0.0043	0.0001				
SD:	0.00000	0.00145	0.0000				
%RSD:	33.98%	33.98%	24.96				

Sequence No.: 8

Autosampler Location: 23

Sample ID: lb 570-37819_1-c

Date Collected: 12/10/2019 3:26:55 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lb 570-37819_1-c

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	------------------	----------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0175	0.0003	0.0022	0.0003	3:28:00 PM	Yes
2	0.0000	0.0183	0.0003	0.0015	0.0003	3:28:46 PM	Yes
Mean:	0.0000	0.0179	0.0003				
SD:	0.00000	0.00060	0.0000				
%RSD:	3.36%	3.36%	2.15				

```

=====
Sequence No.: 9                               Autosampler Location: 24
Sample ID: lcs 570-37819_2-c                 Date Collected: 12/10/2019 3:29:13 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lcs 570-37819_2-c           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0048     4.80      0.0487   0.2226 0.0487  3:30:18 PM  Yes
2      0.0048     4.83      0.0490   0.2261 0.0490  3:31:04 PM  Yes
Mean:  0.0048     4.81      0.0488
SD:    0.00002    0.024     0.0002
%RSD:  0.50%     0.50%     0.50
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 25
Sample ID: lcsd 570-37819_3-c                Date Collected: 12/10/2019 3:31:31 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lcsd 570-37819_3-c         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0049     4.86      0.0493   0.2280 0.0493  3:32:37 PM  Yes
2      0.0042     4.18      0.0424   0.1382 0.0424  3:33:22 PM  Yes
Mean:  0.0045     4.52      0.0458
SD:    0.00048    0.480     0.0049
%RSD:  10.62%    10.62%    10.60
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-38006_10-a                Date Collected: 12/10/2019 3:33:50 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-38006_10-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0021     2.06      0.0210   0.0946 0.0210  3:34:56 PM  Yes
2      0.0020     2.04      0.0208   0.0932 0.0208  3:35:41 PM  Yes
Mean:  0.0021     2.05      0.0209
SD:    0.00001    0.014     0.0001
%RSD:  0.69%     0.69%     0.68
=====

```

QC value within limits for Hg 253.7 Recovery = 102.73%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-38006_11-a                Date Collected: 12/10/2019 3:36:08 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-38006_11-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
=====

```

1	0.0000	0.0043	0.0001	0.0003	0.0002	3:37:12 PM	Yes
2	-0.0000	-0.0004	0.0001	-0.0002	0.0001	3:37:58 PM	Yes
Mean:	0.0000	0.0020	0.0001				
SD:	0.00000	0.00328	0.0000				
%RSD:	166.92%	166.92%	27.20				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 26
Sample ID: 570-14700-b-2-i                    Date Collected: 12/10/2019 3:38:23 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14700-b-2-i                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      -0.0000     -0.0032  0.0001   -0.0003  0.0001   3:39:27 PM  Yes
2      -0.0000     -0.0033  0.0001   -0.0006  0.0001   3:40:12 PM  Yes
Mean:  -0.0000     -0.0032  0.0001
SD:     0.00000     0.00008  0.0000
%RSD:   2.57%      2.57%    1.20
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 27
Sample ID: 570-14700-b-2-j ms                 Date Collected: 12/10/2019 3:40:38 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14700-b-2-j ms            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0023      2.27     0.0231   0.1052   0.0231   3:41:42 PM  Yes
2      0.0023      2.31     0.0235   0.1066   0.0235   3:42:28 PM  Yes
Mean:  0.0023      2.29     0.0233
SD:     0.00002     0.025    0.0002
%RSD:   1.08%      1.08%    1.07
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 28
Sample ID: 570-14700-b-2-k msd                Date Collected: 12/10/2019 3:42:53 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14700-b-2-k msd            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0015      1.45     0.0148   0.0673   0.0149   3:43:58 PM  Yes
2      0.0015      1.47     0.0149   0.0671   0.0150   3:44:43 PM  Yes
Mean:  0.0015      1.46     0.0149
SD:     0.00001     0.008    0.0001
%RSD:   0.56%      0.56%    0.56
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 29
Sample ID: 570-14836-a-1-j                    Date Collected: 12/10/2019 3:45:09 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14836-a-1-j                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0000      0.0101  0.0002   0.0008   0.0002   3:46:13 PM  Yes
=====
  
```

2 0.0000 0.0076 0.0002 0.0008 0.0002 3:46:58 PM Yes
 Mean: 0.0000 0.0088 0.0002
 SD: 0.00000 0.00176 0.0000
 %RSD: 19.91% 19.91% 9.28

=====
 Sequence No.: 17 Autosampler Location: 30
 Sample ID: 570-14837-a-1-h Date Collected: 12/10/2019 3:47:24 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14837-a-1-h Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0004	0.0001	-0.0003	0.0001	3:48:28 PM	Yes
2	0.0000	0.0020	0.0001	0.0003	0.0002	3:49:13 PM	Yes
Mean:	0.0000	0.0012	0.0001				
SD:	0.00000	0.00117	0.0000				
%RSD:	97.13%	97.13%	10.35				

=====
 Sequence No.: 18 Autosampler Location: 5
 Sample ID: ccv 570-38006_10-a Date Collected: 12/10/2019 3:49:39 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.03	0.0207	0.0936	0.0207	3:50:44 PM	Yes
2	0.0020	2.02	0.0205	0.0926	0.0205	3:51:29 PM	Yes
Mean:	0.0020	2.02	0.0206				
SD:	0.00001	0.013	0.0001				
%RSD:	0.66%	0.66%	0.66				

QC value within limits for Hg 253.7 Recovery = 101.23%
 All analyte(s) passed QC.

=====
 Sequence No.: 19 Autosampler Location: 1
 Sample ID: ccb 570-38006_11-a Date Collected: 12/10/2019 3:51:56 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0294	0.0004	0.0025	0.0004	3:52:59 PM	Yes
2	0.0000	0.0258	0.0004	0.0013	0.0004	3:53:45 PM	Yes
Mean:	0.0000	0.0276	0.0004				
SD:	0.00000	0.00257	0.0000				
%RSD:	9.30%	9.30%	6.81				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

Replicate Data: 570-14872-f-2-i

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0683	0.0008	0.0042	0.0008	4:22:14 PM	Yes
2	0.0001	0.0686	0.0008	0.0043	0.0008	4:23:00 PM	Yes
Mean:	0.0001	0.0685	0.0008				
SD:	0.00000	0.00021	0.0000				
%RSD:	0.30%	0.30%	0.26				

Sequence No.: 5

Autosampler Location: 35

Sample ID: 570-14872-f-2-j ms

Date Collected: 12/10/2019 4:23:27 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14872-f-2-j ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0043	4.35	0.0441	0.2258	0.0441	4:24:33 PM	Yes
2	0.0044	4.41	0.0447	0.2291	0.0447	4:25:18 PM	Yes
Mean:	0.0044	4.38	0.0444				
SD:	0.00004	0.044	0.0004				
%RSD:	1.00%	1.00%	1.00				

Sequence No.: 6

Autosampler Location: 36

Sample ID: 570-14872-f-2-k msd

Date Collected: 12/10/2019 4:25:45 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14872-f-2-k msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.72	0.0479	0.2448	0.0479	4:26:51 PM	Yes
2	0.0047	4.74	0.0480	0.2447	0.0481	4:27:36 PM	Yes
Mean:	0.0047	4.73	0.0480				
SD:	0.00001	0.010	0.0001				
%RSD:	0.21%	0.21%	0.21				

Sequence No.: 7

Autosampler Location: 37

Sample ID: 570-14872-f-3-e

Date Collected: 12/10/2019 4:28:03 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14872-f-3-e

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0332	0.0004	0.0025	0.0005	4:29:09 PM	Yes
2	0.0000	0.0155	0.0003	0.0005	0.0003	4:29:54 PM	Yes
Mean:	0.0000	0.0243	0.0003				
SD:	0.00001	0.01251	0.0001				
%RSD:	51.39%	51.39%	36.32				

Sequence No.: 8

Autosampler Location: 38

Sample ID: 570-14872-f-4-c

Date Collected: 12/10/2019 4:30:21 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14872-f-4-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0883	0.0010	0.0051	0.0010	4:31:26 PM	Yes
2	0.0001	0.0833	0.0009	0.0044	0.0010	4:32:12 PM	Yes
Mean:	0.0001	0.0858	0.0010				
SD:	0.00000	0.00351	0.0000				
%RSD:	4.09%	4.09%	3.66				

```

=====
Sequence No.: 9                               Autosampler Location: 39
Sample ID: 570-14872-f-5-c                 Date Collected: 12/10/2019 4:32:39 PM
Analyst: 1174 HG-8                         Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                  Sample Prep Vol:
Wash Time (before sample): 0                Auto Dilution Factor: 1
=====
    
```

Replicate Data: 570-14872-f-5-c Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0649	0.0008	0.0039	0.0008	4:33:44 PM	Yes
2	0.0001	0.0630	0.0007	0.0035	0.0008	4:34:29 PM	Yes
Mean:	0.0001	0.0640	0.0007				
SD:	0.00000	0.00139	0.0000				
%RSD:	2.18%	2.18%	1.88				

```

=====
Sequence No.: 10                              Autosampler Location: 40
Sample ID: 570-14872-f-6-c                 Date Collected: 12/10/2019 4:34:55 PM
Analyst: 1174 HG-8                         Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                  Sample Prep Vol:
Wash Time (before sample): 0                Auto Dilution Factor: 1
=====
    
```

Replicate Data: 570-14872-f-6-c Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0002	0.218	0.0023	0.0124	0.0023	4:36:00 PM	Yes
2	0.0002	0.216	0.0023	0.0119	0.0023	4:36:46 PM	Yes
Mean:	0.0002	0.217	0.0023				
SD:	0.00000	0.0008	0.0000				
%RSD:	0.37%	0.37%	0.36				

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-38006_10-a             Date Collected: 12/10/2019 4:37:12 PM
Analyst: 1174 HG-8                         Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                  Sample Prep Vol:
Wash Time (before sample): 0                Auto Dilution Factor: 1.0000
=====
    
```

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	1.96	0.0200	0.0922	0.0200	4:38:18 PM	Yes
2	0.0020	1.97	0.0201	0.0915	0.0201	4:39:03 PM	Yes
Mean:	0.0020	1.97	0.0200				
SD:	0.00001	0.007	0.0001				
%RSD:	0.34%	0.34%	0.33				

QC value within limits for Hg 253.7 Recovery = 98.47%
 All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-38006_11-a             Date Collected: 12/10/2019 4:39:31 PM
Analyst: 1174 HG-8                         Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                  Sample Prep Vol:
Wash Time (before sample): 0                Auto Dilution Factor: 1.0000
=====
    
```

Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1 -0.0000 -0.0059 0.0000 0.0002 0.0001 4:40:35 PM Yes
User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/10/2019 4:57:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 -0.0000 -0.0065 0.0000 0.0004 0.0001 4:58:05 PM Yes
2 -0.0000 -0.0120 -0.0000 -0.0006 0.0000 4:58:50 PM Yes
Mean: -0.0000 -0.0092 0.0000
SD: 0.00000 0.00388 0.0000
%RSD: 41.93% 41.93% 454.81
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: 570-14872-f-7-e
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 41
Date Collected: 12/10/2019 4:59:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14872-f-7-e
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0001 0.0519 0.0006 0.0030 0.0007 5:00:20 PM Yes
2 0.0001 0.0537 0.0006 0.0034 0.0007 5:01:06 PM Yes
Mean: 0.0001 0.0528 0.0006
SD: 0.00000 0.00131 0.0000
%RSD: 2.49% 2.49% 2.09

=====
Sequence No.: 3
Sample ID: 570-14886-a-1-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 42
Date Collected: 12/10/2019 5:01:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14886-a-1-c
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0005 0.486 0.0050 0.0263 0.0050 5:02:36 PM Yes
2 0.0005 0.484 0.0050 0.0255 0.0050 5:03:21 PM Yes
Mean: 0.0005 0.485 0.0050
SD: 0.00000 0.0012 0.0000
%RSD: 0.24% 0.24% 0.24

=====
Sequence No.: 4
Sample ID: 570-14971-a-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Autosampler Location: 43
Date Collected: 12/10/2019 5:03:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14971-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.331	0.0034	0.0175	0.0035	5:04:52 PM	Yes
2	0.0003	0.326	0.0034	0.0171	0.0034	5:05:38 PM	Yes
Mean:	0.0003	0.328	0.0034				
SD:	0.00000	0.0036	0.0000				
%RSD:	1.09%	1.09%	1.06				

Sequence No.: 5

Autosampler Location: 44

Sample ID: 570-14971-a-2-a

Date Collected: 12/10/2019 5:06:04 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14971-a-2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.147	0.0016	0.0082	0.0016	5:07:08 PM	Yes
2	0.0001	0.141	0.0015	0.0077	0.0016	5:07:54 PM	Yes
Mean:	0.0001	0.144	0.0016				
SD:	0.00000	0.0042	0.0000				
%RSD:	2.93%	2.93%	2.74				

Sequence No.: 6

Autosampler Location: 45

Sample ID: 720-96409-b-1-a

Date Collected: 12/10/2019 5:08:20 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 720-96409-b-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.451	0.0047	0.0238	0.0047	5:09:25 PM	Yes
2	0.0005	0.454	0.0047	0.0238	0.0047	5:10:10 PM	Yes
Mean:	0.0005	0.452	0.0047				
SD:	0.00000	0.0018	0.0000				
%RSD:	0.41%	0.41%	0.40				

Sequence No.: 7

Autosampler Location: 46

Sample ID: 570-14967-a-1-b

Date Collected: 12/10/2019 5:10:36 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14967-a-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.137	0.0015	0.0081	0.0015	5:11:41 PM	Yes
2	0.0001	0.132	0.0014	0.0075	0.0015	5:12:26 PM	Yes
Mean:	0.0001	0.135	0.0015				
SD:	0.00000	0.0038	0.0000				
%RSD:	2.81%	2.81%	2.61				

Sequence No.: 8

Autosampler Location: 47

Sample ID: 570-14967-a-2-d

Date Collected: 12/10/2019 5:12:53 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14967-a-2-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0187	18.7	0.1892	0.9801	0.1893	5:13:57 PM	Yes
Sample concentration is greater than that of the highest standard.							
2	0.0191	19.1	0.1932	1.0098	0.1932	5:14:43 PM	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	0.0189	18.9	0.1912				
SD:	0.00028	0.28	0.0028				
%RSD:	1.46%	1.46%	1.46				
Sample concentration is greater than that of the highest standard.							

Sequence No.: 9

Autosampler Location: 48

Sample ID: 570-14893-a-1-b

Date Collected: 12/10/2019 5:15:09 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14893-a-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0017	1.69	0.0172	0.0916	0.0172	5:16:15 PM	Yes
2	0.0015	1.53	0.0156	0.0811	0.0156	5:17:00 PM	Yes
Mean:	0.0016	1.61	0.0164				
SD:	0.00011	0.111	0.0011				
%RSD:	6.88%	6.88%	6.84				

Sequence No.: 10

Autosampler Location: 49

Sample ID: 570-14921-a-1-a

Date Collected: 12/10/2019 5:17:27 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14921-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0017	1.69	0.0173	0.0905	0.0173	5:18:32 PM	Yes
2	0.0016	1.64	0.0167	0.0860	0.0167	5:19:17 PM	Yes
Mean:	0.0017	1.67	0.0170				
SD:	0.00004	0.041	0.0004				
%RSD:	2.44%	2.44%	2.42				

Sequence No.: 11

Autosampler Location: 50

Sample ID: 570-14723-a-4-f

Date Collected: 12/10/2019 5:19:44 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14723-a-4-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0624	0.0007	0.0047	0.0008	5:20:48 PM	Yes
2	0.0001	0.0519	0.0006	0.0028	0.0007	5:21:33 PM	Yes
Mean:	0.0001	0.0572	0.0007				
SD:	0.00001	0.00741	0.0001				
%RSD:	12.97%	12.97%	11.02				

Sequence No.: 12

Autosampler Location: 5

Sample ID: ccv 570-38006_10-a

Date Collected: 12/10/2019 5:21:59 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.96	0.0200	0.0919	0.0200	5:23:05 PM	Yes
2	0.0020	1.96	0.0200	0.0915	0.0200	5:23:51 PM	Yes
Mean:	0.0020	1.96	0.0200				
SD:	0.00000	0.001	0.0000				
%RSD:	0.05%	0.05%	0.05				

QC value within limits for Hg 253.7 Recovery = 98.15%

All analyte(s) passed QC.

Sequence No.: 13

Autosampler Location: 1

Sample ID: ccb 570-38006_11-a

Date Collected: 12/10/2019 5:24:17 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0053	0.0000	0.0005	0.0001	5:25:21 PM	Yes
2	-0.0000	-0.0121	-0.0000	-0.0007	0.0000	5:26:06 PM	Yes
Mean:	-0.0000	-0.0087	0.0000				
SD:	0.00000	0.00485	0.0000				
%RSD:	55.84%	55.84%	340.69				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 14

Autosampler Location: 51

Sample ID: 570-14827-a-1-c

Date Collected: 12/10/2019 5:26:31 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14827-a-1-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0035	0.0001	0.0005	0.0001	5:27:36 PM	Yes
2	-0.0000	-0.0041	0.0001	0.0002	0.0001	5:28:21 PM	Yes
Mean:	-0.0000	-0.0038	0.0001				
SD:	0.00000	0.00037	0.0000				
%RSD:	9.68%	9.68%	5.85				

Sequence No.: 15

Autosampler Location: 52

Sample ID: 570-14941-a-1-a

Date Collected: 12/10/2019 5:28:47 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14941-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0282	0.0004	0.0023	0.0004	5:29:51 PM	Yes
2	0.0000	0.0179	0.0003	0.0012	0.0003	5:30:37 PM	Yes
Mean:	0.0000	0.0230	0.0003				
SD:	0.00001	0.00731	0.0001				
%RSD:	31.75%	31.75%	22.07				

Sequence No.: 16

Autosampler Location: 5

Sample ID: ccv 570-38006_10-a

Date Collected: 12/10/2019 5:31:04 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-14967-a-2-d@10
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 47
Date Collected: 12/10/2019 6:10:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14967-a-2-d@10
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.83	0.0187	0.0912	0.0187	6:11:18 PM	Yes
2	0.0019	1.85	0.0189	0.0930	0.0189	6:12:04 PM	Yes
Mean:	0.0018	1.84	0.0188				
SD:	0.00001	0.015	0.0002				
%RSD:	0.81%	0.81%	0.80				

=====
Sequence No.: 2
Sample ID: mb 570-38063_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 53
Date Collected: 12/10/2019 6:12:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-38063_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0061	0.0000	0.0007	0.0001	6:13:36 PM	Yes
2	-0.0000	-0.0040	0.0001	0.0008	0.0001	6:14:21 PM	Yes
Mean:	-0.0000	-0.0051	0.0001				
SD:	0.00000	0.00152	0.0000				
%RSD:	30.09%	30.09%	30.09				

=====
Sequence No.: 3
Sample ID: lcs 570-38063_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 54
Date Collected: 12/10/2019 6:14:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-38063_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.56	0.0463	0.2203	0.0463	6:15:52 PM	Yes
2	0.0046	4.57	0.0463	0.2239	0.0463	6:16:38 PM	Yes
Mean:	0.0046	4.56	0.0463				
SD:	0.00000	0.001	0.0000				
%RSD:	0.03%	0.03%	0.03				

=====
Sequence No.: 4
Sample ID: lcsd 570-38063_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 55
Date Collected: 12/10/2019 6:17:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-38063_3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.62	0.0469	0.2252	0.0469	6:18:09 PM	Yes
2	0.0046	4.60	0.0466	0.2257	0.0467	6:18:55 PM	Yes
Mean:	0.0046	4.61	0.0468				
SD:	0.00002	0.017	0.0002				
%RSD:	0.36%	0.36%	0.36				

Sequence No.: 5

Autosampler Location: 56

Sample ID: 570-14547-c-6-a

Date Collected: 12/10/2019 6:19:22 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14547-c-6-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0072	0.0002	0.0015	0.0002	6:20:27 PM	Yes
2	0.0000	0.0005	0.0001	0.0005	0.0001	6:21:12 PM	Yes
Mean:	0.0000	0.0038	0.0001				
SD:	0.00000	0.00470	0.0000				
%RSD:	122.31%	122.31%	33.72				

Sequence No.: 6

Autosampler Location: 57

Sample ID: 570-14547-c-6-b ms

Date Collected: 12/10/2019 6:21:39 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14547-c-6-b ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.87	0.0190	0.0911	0.0191	6:22:44 PM	Yes
2	0.0019	1.91	0.0195	0.0933	0.0195	6:23:30 PM	Yes
Mean:	0.0019	1.89	0.0192				
SD:	0.00003	0.030	0.0003				
%RSD:	1.60%	1.60%	1.59				

Sequence No.: 7

Autosampler Location: 58

Sample ID: 570-14547-c-6-c msd

Date Collected: 12/10/2019 6:23:56 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14547-c-6-c msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0013	1.34	0.0137	0.0654	0.0137	6:25:01 PM	Yes
2	0.0014	1.36	0.0138	0.0661	0.0139	6:25:47 PM	Yes
Mean:	0.0014	1.35	0.0138				
SD:	0.00001	0.009	0.0001				
%RSD:	0.67%	0.67%	0.66				

Sequence No.: 8

Autosampler Location: 59

Sample ID: 720-96438-i-1-b

Date Collected: 12/10/2019 6:26:13 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 720-96438-i-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0003	0.286	0.0030	0.0150	0.0030	6:27:18 PM	Yes
2	0.0001	0.145	0.0016	0.0085	0.0016	6:28:04 PM	Yes
Mean:	0.0002	0.216	0.0023				
SD:	0.00010	0.0998	0.0010				
%RSD:	46.24%	46.24%	44.17				

```

=====
Sequence No.: 9                               Autosampler Location: 60
Sample ID: 570-14986-g-1-b                   Date Collected: 12/10/2019 6:28:30 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14986-g-1-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0000      0.0105   0.0002   0.0018 0.0002 6:29:35 PM  Yes
2      0.0000      0.0014   0.0001   0.0008 0.0001 6:30:21 PM  Yes
Mean:  0.0000      0.0060   0.0002
SD:    0.00001     0.00646  0.0001
%RSD:  108.60%    108.60%  40.26
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 61
Sample ID: 570-14986-g-2-b                   Date Collected: 12/10/2019 6:30:47 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14986-g-2-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0000      0.0020   0.0001   0.0011 0.0002 6:31:53 PM  Yes
2      0.0000      0.0012   0.0001   0.0011 0.0001 6:32:38 PM  Yes
Mean:  0.0000      0.0016   0.0001
SD:    0.00000     0.00056  0.0000
%RSD:  33.92%    33.92%   4.73
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-38006_10-a                Date Collected: 12/10/2019 6:33:05 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-38006_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0019      1.95     0.0198   0.0916 0.0198 6:34:10 PM  Yes
2      0.0020      1.96     0.0199   0.0924 0.0199 6:34:56 PM  Yes
Mean:  0.0020      1.95     0.0198
SD:    0.00001     0.007    0.0001
%RSD:  0.34%     0.34%    0.34
=====

```

QC value within limits for Hg 253.7 Recovery = 97.54%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-38006_11-a                Date Collected: 12/10/2019 6:35:22 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-38006_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
=====

```


1 -0.0000 -0.0062 0.0000 0.0005 0.0001 6:36:26 PM Yes
 2 -0.0000 -0.0101 0.0000 -0.0005 0.0000 6:37:12 PM Yes
 Mean: -0.0000 -0.0081 0.0000
 SD: 0.00000 0.00277 0.0000
 %RSD: 34.01% 34.01% 141.27

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
 Sequence No.: 13 Autosampler Location: 62
 Sample ID: 570-14501-e-7-a Date Collected: 12/10/2019 6:37:38 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14501-e-7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0013	0.0001	0.0003	0.0001	6:38:43 PM	Yes
2	-0.0000	-0.0002	0.0001	0.0006	0.0001	6:39:28 PM	Yes
Mean:	-0.0000	-0.0007	0.0001				
SD:	0.00000	0.00079	0.0000				
%RSD:	108.40%	108.40%	8.43				

=====
 Sequence No.: 14 Autosampler Location: 63
 Sample ID: 570-14501-e-8-a Date Collected: 12/10/2019 6:39:55 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14501-e-8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0004	0.0001	0.0003	0.0001	6:41:00 PM	Yes
2	0.0000	0.0009	0.0001	0.0003	0.0001	6:41:46 PM	Yes
Mean:	0.0000	0.0007	0.0001				
SD:	0.00000	0.00037	0.0000				
%RSD:	55.57%	55.57%	3.45				

=====
 Sequence No.: 15 Autosampler Location: 64
 Sample ID: 570-14774-d-23-a Date Collected: 12/10/2019 6:42:13 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14774-d-23-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0209	0.0003	0.0019	0.0003	6:43:17 PM	Yes
2	0.0000	0.0174	0.0003	0.0013	0.0003	6:44:03 PM	Yes
Mean:	0.0000	0.0191	0.0003				
SD:	0.00000	0.00245	0.0000				
%RSD:	12.82%	12.82%	8.39				

=====
 Sequence No.: 16 Autosampler Location: 65
 Sample ID: 570-14748-i-1-a Date Collected: 12/10/2019 6:44:30 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14748-i-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0054	0.0002	0.0011	0.0002	6:45:35 PM	Yes

2 0.0000 0.0039 0.0001 0.0004 0.0002 6:46:21 PM Yes
 Mean: 0.0000 0.0047 0.0001
 SD: 0.00000 0.00104 0.0000
 %RSD: 22.31% 22.31% 7.04

=====
 Sequence No.: 17 Autosampler Location: 66
 Sample ID: 570-14748-i-2-a Date Collected: 12/10/2019 6:46:48 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14748-i-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0003	0.0001	0.0003	0.0001	6:47:53 PM	Yes
2	-0.0000	-0.0012	0.0001	0.0003	0.0001	6:48:38 PM	Yes
Mean:	-0.0000	-0.0005	0.0001				
SD:	0.00000	0.00107	0.0000				
%RSD:	221.31%	221.31%	11.15				

=====
 Sequence No.: 18 Autosampler Location: 67
 Sample ID: 570-14748-i-3-a Date Collected: 12/10/2019 6:49:05 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14748-i-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0081	0.0002	0.0012	0.0002	6:50:10 PM	Yes
2	0.0000	0.0067	0.0002	0.0006	0.0002	6:50:56 PM	Yes
Mean:	0.0000	0.0074	0.0002				
SD:	0.00000	0.00099	0.0000				
%RSD:	13.37%	13.37%	5.64				

=====
 Sequence No.: 19 Autosampler Location: 68
 Sample ID: 570-14796-a-2-a Date Collected: 12/10/2019 6:51:23 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14796-a-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0056	0.0002	0.0009	0.0002	6:52:28 PM	Yes
2	-0.0000	-0.0002	0.0001	-0.0000	0.0001	6:53:13 PM	Yes
Mean:	0.0000	0.0027	0.0001				
SD:	0.00000	0.00405	0.0000				
%RSD:	150.03%	150.03%	31.62				

=====
 Sequence No.: 20 Autosampler Location: 69
 Sample ID: 570-14633-g-1-b Date Collected: 12/10/2019 6:53:40 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14633-g-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0041	0.0001	-0.0005	0.0001	6:54:45 PM	Yes
2	-0.0000	-0.0042	0.0001	-0.0004	0.0001	6:55:31 PM	Yes
Mean:	-0.0000	-0.0042	0.0001				
SD:	0.00000	0.00008	0.0000				

%RSD: 2.01% 2.01% 1.41

```

=====
Sequence No.: 21                               Autosampler Location: 70
Sample ID: 570-14633-g-2-b                    Date Collected: 12/10/2019 6:55:58 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14633-g-2-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0000       0.0001    0.0001    0.0003    0.0001    6:57:03 PM  Yes
2      -0.0000      -0.0031   0.0001    -0.0001   0.0001    6:57:49 PM  Yes
Mean:  -0.0000    -0.0015   0.0001
SD:     0.00000   0.00226   0.0000
%RSD:  151.32%  151.32%  26.26

```

```

=====
Sequence No.: 22                               Autosampler Location: 71
Sample ID: 570-14633-g-3-b                    Date Collected: 12/10/2019 6:58:15 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14633-g-3-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      -0.0000      -0.0036   0.0001    0.0002    0.0001    6:59:21 PM  Yes
2      -0.0000      -0.0087   0.0000    -0.0003   0.0000    7:00:07 PM  Yes
Mean:  -0.0000    -0.0061   0.0000
SD:     0.00000   0.00363   0.0000
%RSD:  59.27%  59.27%  91.50

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-38006_10-a                 Date Collected: 12/10/2019 7:00:33 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccv 570-38006_10-a          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0019       1.93      0.0196    0.0907    0.0196    7:01:39 PM  Yes
2      0.0019       1.95      0.0198    0.0913    0.0198    7:02:25 PM  Yes
Mean:  0.0019     1.94      0.0197
SD:     0.00001    0.014     0.0001
%RSD:  0.72%     0.72%    0.72

```

QC value within limits for Hg 253.7 Recovery = 96.79%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-38006_11-a                 Date Collected: 12/10/2019 7:02:52 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-38006_11-a          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      -0.0000      -0.0088   0.0000    -0.0003   0.0000    7:03:56 PM  Yes
2      -0.0000      -0.0100   0.0000    -0.0004   0.0000    7:04:41 PM  Yes
Mean:  -0.0000    -0.0094   0.0000
SD:     0.00000   0.00087   0.0000
%RSD:  9.23%     9.23%   124.47

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 72
Sample ID: 570-14633-g-4-b                   Date Collected: 12/10/2019 7:05:07 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

=====
Replicate Data: 570-14633-g-4-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#     mg/L        ug/L      Signal    Area    Height             Stored
1     -0.0000     -0.0049  0.0001    0.0002  0.0001   7:06:13 PM  Yes
2     -0.0000     -0.0077  0.0000   -0.0002  0.0001   7:06:58 PM  Yes
Mean: -0.0000     -0.0063  0.0000
SD:    0.00000    0.00200  0.0000
%RSD:  31.69%    31.69%   52.88
=====

```

```

=====
Sequence No.: 26                               Autosampler Location: 73
Sample ID: 570-14633-g-5-b                   Date Collected: 12/10/2019 7:07:25 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

=====
Replicate Data: 570-14633-g-5-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#     mg/L        ug/L      Signal    Area    Height             Stored
1     0.0000      0.0022  0.0001    0.0009  0.0002   7:08:31 PM  Yes
2     0.0000      0.0006  0.0001    0.0006  0.0001   7:09:17 PM  Yes
Mean: 0.0000      0.0014  0.0001
SD:    0.00000    0.00112  0.0000
%RSD:  80.24%    80.24%   9.72
=====

```

```

=====
Sequence No.: 27                               Autosampler Location: 74
Sample ID: 570-14633-g-6-b                   Date Collected: 12/10/2019 7:09:44 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

=====
Replicate Data: 570-14633-g-6-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#     mg/L        ug/L      Signal    Area    Height             Stored
1     -0.0000     -0.0022  0.0001    0.0006  0.0001   7:10:49 PM  Yes
2     -0.0000     -0.0040  0.0001    0.0001  0.0001   7:11:35 PM  Yes
Mean: -0.0000     -0.0031  0.0001
SD:    0.00000    0.00127  0.0000
%RSD:  40.46%    40.46%  18.27
=====

```

```

=====
Sequence No.: 28                               Autosampler Location: 75
Sample ID: mb 570-38069_1-a                   Date Collected: 12/10/2019 7:12:02 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

=====
Replicate Data: mb 570-38069_1-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#     mg/L        ug/L      Signal    Area    Height             Stored
1     -0.0000     -0.0097  0.0000    0.0000  0.0000   7:13:07 PM  Yes
2     -0.0000     -0.0101  0.0000   -0.0002  0.0000   7:13:53 PM  Yes
Mean: -0.0000     -0.0099  0.0000
SD:    0.00000    0.00029  0.0000
%RSD:  2.98%     2.98%  123.81
=====

```

```

=====
Sequence No.: 29                               Autosampler Location: 76
Sample ID: lcs 570-38069_2-a                 Date Collected: 12/10/2019 7:14:20 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lcs 570-38069_2-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0046     4.62     0.0469   0.2202 0.0469  7:15:25 PM  Yes
2      0.0043     4.30     0.0436   0.1743 0.0436  7:16:11 PM  Yes
Mean:  0.0045     4.46     0.0452
SD:    0.00023    0.232    0.0023
%RSD:  5.20%     5.20%    5.19
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 77
Sample ID: lcsd 570-38069_3-a                Date Collected: 12/10/2019 7:16:38 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lcsd 570-38069_3-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0047     4.66     0.0473   0.2258 0.0473  7:17:44 PM  Yes
2      0.0046     4.59     0.0466   0.2248 0.0466  7:18:29 PM  Yes
Mean:  0.0046     4.63     0.0469
SD:    0.00005    0.049    0.0005
%RSD:  1.05%     1.05%    1.05
=====

```

```

=====
Sequence No.: 31                               Autosampler Location: 78
Sample ID: 570-15172-c-1-a                  Date Collected: 12/10/2019 7:18:56 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15172-c-1-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0511   0.0006   0.0031 0.0006  7:20:01 PM  Yes
2      0.0000     0.0453   0.0006   0.0021 0.0006  7:20:47 PM  Yes
Mean:  0.0000     0.0482   0.0006
SD:    0.00000    0.00411  0.0000
%RSD:  8.52%     8.52%    7.05
=====

```

```

=====
Sequence No.: 32                               Autosampler Location: 79
Sample ID: 570-15172-c-1-b ms               Date Collected: 12/10/2019 7:21:14 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15172-c-1-b ms         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0046     4.62     0.0469   0.2429 0.0469  7:22:19 PM  Yes
2      0.0047     4.68     0.0475   0.2459 0.0475  7:23:05 PM  Yes
Mean:  0.0047     4.65     0.0472
SD:    0.00004    0.039    0.0004
%RSD:  0.83%     0.83%    0.83
=====

```

```

=====
Sequence No.: 33                               Autosampler Location: 80
Sample ID: 570-15172-c-1-c msd              Date Collected: 12/10/2019 7:23:32 PM
=====

```

Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15172-c-1-c msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0045	4.53	0.0460	0.2399	0.0460	7:24:38 PM	Yes
2	0.0045	4.51	0.0458	0.2379	0.0458	7:25:23 PM	Yes
Mean:	0.0045	4.52	0.0459				
SD:	0.00002	0.016	0.0002				
%RSD:	0.36%	0.36%	0.36				

=====
Sequence No.: 34
Sample ID: 570-15152-b-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 81
Date Collected: 12/10/2019 7:25:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15152-b-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.162	0.0017	0.0105	0.0018	7:26:55 PM	Yes
2	0.0001	0.134	0.0015	0.0076	0.0015	7:27:41 PM	Yes
Mean:	0.0001	0.148	0.0016				
SD:	0.00002	0.0203	0.0002				
%RSD:	13.71%	13.71%	12.83				

=====
Sequence No.: 35
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/10/2019 7:28:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.93	0.0196	0.0948	0.0196	7:29:14 PM	Yes
2	0.0019	1.92	0.0196	0.0940	0.0196	7:29:59 PM	Yes
Mean:	0.0019	1.92	0.0196				
SD:	0.00000	0.002	0.0000				
%RSD:	0.10%	0.10%	0.10				

QC value within limits for Hg 253.7 Recovery = 96.25%
All analyte(s) passed QC.

=====
Sequence No.: 36
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/10/2019 7:30:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0095	0.0000	-0.0002	0.0000	7:31:30 PM	Yes
2	-0.0000	-0.0126	-0.0000	-0.0007	0.0000	7:32:16 PM	Yes
Mean:	-0.0000	-0.0110	-0.0000				
SD:	0.00000	0.00222	0.0000				
%RSD:	20.15%	20.15%	239.49				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:

Results Data Set: 191210H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: lcs 570-37767_2-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 82
Date Collected: 12/10/2019 8:27:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37767_2-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0062	0.0000	0.0006	0.0001	8:29:03 PM	Yes
2	0.0045	4.51	0.0457	0.2292	0.0458	8:29:48 PM	Yes
Mean:	0.0023	2.25	0.0229				
SD:	0.00319	3.193	0.0323				
%RSD:	141.81%	141.81%	141.18				

=====
Sequence No.: 2
Sample ID: 570-14836-a-1-g ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 83
Date Collected: 12/10/2019 8:30:15 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14836-a-1-g ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0023	2.33	0.0237	0.1179	0.0238	8:31:20 PM	Yes
2	0.0023	2.33	0.0237	0.1183	0.0237	8:32:06 PM	Yes
Mean:	0.0023	2.33	0.0237				
SD:	0.00000	0.002	0.0000				
%RSD:	0.07%	0.07%	0.07				

=====
Sequence No.: 3
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 12/10/2019 8:32:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.89	0.0192	0.0951	0.0192	8:33:39 PM	Yes
2	0.0019	1.87	0.0190	0.0932	0.0191	8:34:24 PM	Yes
Mean:	0.0019	1.88	0.0191				
SD:	0.00001	0.011	0.0001				
%RSD:	0.57%	0.57%	0.57				

QC value within limits for Hg 253.7 Recovery = 93.94%
All analyte(s) passed QC.

=====
Sequence No.: 4
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Autosampler Location: 1
Date Collected: 12/10/2019 8:34:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0039	0.0001	0.0019	0.0002	8:35:56 PM	Yes
2	0.0000	0.0022	0.0001	0.0011	0.0002	8:36:42 PM	Yes
Mean:	0.0000	0.0031	0.0001				
SD:	0.00000	0.00119	0.0000				
%RSD:	38.78%	38.78%	9.01				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:

Results Data Set: 191210H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: lcs 570-37767_2-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 89
Date Collected: 12/10/2019 9:42:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37767_2-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0045	4.52	0.0459	0.2339	0.0459	9:43:12 PM	Yes
2	0.0046	4.55	0.0462	0.2362	0.0462	9:43:58 PM	Yes
Mean:	0.0045	4.54	0.0460				
SD:	0.00002	0.019	0.0002				
%RSD:	0.42%	0.42%	0.41				

=====
Sequence No.: 2
Sample ID: 570-15071-a-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 84
Date Collected: 12/10/2019 9:44:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15071-a-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0155	0.0003	0.0013	0.0003	9:45:31 PM	Yes
2	0.0000	0.0101	0.0002	0.0011	0.0002	9:46:17 PM	Yes
Mean:	0.0000	0.0128	0.0002				
SD:	0.00000	0.00386	0.0000				
%RSD:	30.14%	30.14%	16.85				

=====
Sequence No.: 3
Sample ID: 570-15071-a-2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 85
Date Collected: 12/10/2019 9:46:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15071-a-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0011	0.0001	0.0001	0.0001	9:47:49 PM	Yes
2	-0.0000	-0.0027	0.0001	0.0003	0.0001	9:48:35 PM	Yes
Mean:	-0.0000	-0.0008	0.0001				
SD:	0.00000	0.00271	0.0000				
%RSD:	341.17%	341.17%	29.15				

=====
Sequence No.: 4
Sample ID: 570-14793-g-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 86
Date Collected: 12/10/2019 9:49:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14793-g-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0018	0.0001	0.0011	0.0001	9:50:08 PM	Yes
2	-0.0000	-0.0035	0.0001	0.0006	0.0001	9:50:54 PM	Yes
Mean:	-0.0000	-0.0027	0.0001				
SD:	0.00000	0.00122	0.0000				
%RSD:	45.91%	45.91%	16.46				

Sequence No.: 5

Autosampler Location: 87

Sample ID: 570-14793-g-2-a

Date Collected: 12/10/2019 9:51:21 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14793-g-2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0001	0.0001	0.0009	0.0001	9:52:27 PM	Yes
2	-0.0000	-0.0055	0.0000	0.0002	0.0001	9:53:13 PM	Yes
Mean:	-0.0000	-0.0028	0.0001				
SD:	0.00000	0.00383	0.0000				
%RSD:	137.97%	137.97%	52.24				

Sequence No.: 6

Autosampler Location: 88

Sample ID: 570-14736-a-1-a

Date Collected: 12/10/2019 9:53:40 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14736-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0007	0.0001	0.0006	0.0001	9:54:45 PM	Yes
2	-0.0000	-0.0030	0.0001	0.0007	0.0001	9:55:30 PM	Yes
Mean:	-0.0000	-0.0018	0.0001				
SD:	0.00000	0.00161	0.0000				
%RSD:	88.23%	88.23%	19.50				

Sequence No.: 7

Autosampler Location: 90

Sample ID: mb 570-38115_1-b

Date Collected: 12/10/2019 9:55:58 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: mb 570-38115_1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0067	0.0000	0.0006	0.0001	9:57:03 PM	Yes
2	-0.0000	-0.0087	0.0000	0.0000	0.0000	9:57:49 PM	Yes
Mean:	-0.0000	-0.0077	0.0000				
SD:	0.00000	0.00146	0.0000				
%RSD:	18.91%	18.91%	61.05				

Sequence No.: 8

Autosampler Location: 91

Sample ID: lcs 570-38115_2-b

Date Collected: 12/10/2019 9:58:16 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcs 570-38115_2-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0045	4.54	0.0461	0.2218	0.0461	9:59:22 PM	Yes
2	0.0046	4.60	0.0466	0.2288	0.0466	10:00:07 PM	Yes
Mean:	0.0046	4.57	0.0463				
SD:	0.00004	0.037	0.0004				
%RSD:	0.82%	0.82%	0.82				

Sequence No.: 9
 Sample ID: lcsd 570-38115_3-b
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 92
 Date Collected: 12/10/2019 10:00:34 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: lcsd 570-38115_3-b Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0046	4.60	0.0467	0.2285	0.0467	10:01:40 PM	Yes
2	0.0046	4.59	0.0465	0.2300	0.0466	10:02:26 PM	Yes
Mean:	0.0046	4.59	0.0466				
SD:	0.00001	0.010	0.0001				
%RSD:	0.22%	0.22%	0.22				

Sequence No.: 10
 Sample ID: 570-14597-g-1-d
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 93
 Date Collected: 12/10/2019 10:02:53 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14597-g-1-d Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	-0.0000	-0.0019	0.0001	0.0005	0.0001	10:03:58 PM	Yes
2	-0.0000	-0.0057	0.0000	-0.0002	0.0001	10:04:44 PM	Yes
Mean:	-0.0000	-0.0038	0.0001				
SD:	0.00000	0.00265	0.0000				
%RSD:	69.32%	69.32%	42.18				

Sequence No.: 11
 Sample ID: ccv 570-38006_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 12/10/2019 10:05:11 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0019	1.87	0.0191	0.0923	0.0191	10:06:17 PM	Yes
2	0.0019	1.88	0.0191	0.0932	0.0192	10:07:02 PM	Yes
Mean:	0.0019	1.88	0.0191				
SD:	0.00001	0.006	0.0001				
%RSD:	0.30%	0.30%	0.30				

QC value within limits for Hg 253.7 Recovery = 93.84%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-38006_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 12/10/2019 10:07:30 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1 -0.0000 -0.0073 0.0000 0.0001 0.0001 10:08:34 PM Yes
 2 -0.0000 -0.0128 -0.0000 -0.0010 0.0000 10:09:20 PM Yes
 Mean: -0.0000 -0.0100 0.0000
 SD: 0.00000 0.00388 0.0000
 %RSD: 38.74% 38.74% >999.9%

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

Sequence No.: 13 Autosampler Location: 94
 Sample ID: 570-14597-g-1-e ms Date Collected: 12/10/2019 10:09:45 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14597-g-1-e ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.66	0.0473	0.2329	0.0473	10:10:51 PM	Yes
2	0.0047	4.68	0.0475	0.2375	0.0475	10:11:37 PM	Yes
Mean:	0.0047	4.67	0.0474				
SD:	0.00001	0.011	0.0001				
%RSD:	0.23%	0.23%	0.23				

Sequence No.: 14 Autosampler Location: 95
 Sample ID: 570-14597-g-1-f msd Date Collected: 12/10/2019 10:12:04 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14597-g-1-f msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.508	0.0052	0.0252	0.0053	10:13:10 PM	Yes
2	0.0005	0.511	0.0053	0.0257	0.0053	10:13:55 PM	Yes
Mean:	0.0005	0.509	0.0053				
SD:	0.00000	0.0024	0.0000				
%RSD:	0.46%	0.46%	0.45				

Sequence No.: 15 Autosampler Location: 96
 Sample ID: 570-14597-g-2-b Date Collected: 12/10/2019 10:14:22 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14597-g-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0028	0.0001	-0.0002	0.0001	10:15:28 PM	Yes
2	-0.0000	-0.0019	0.0001	0.0001	0.0001	10:16:13 PM	Yes
Mean:	-0.0000	-0.0023	0.0001				
SD:	0.00000	0.00064	0.0000				
%RSD:	27.47%	27.47%	8.30				

Sequence No.: 16 Autosampler Location: 97
 Sample ID: 570-14372-d-1-b Date Collected: 12/10/2019 10:16:40 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14372-d-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0030	0.0001	-0.0001	0.0001	10:17:46 PM	Yes

2 -0.0000 -0.0046 0.0001 0.0003 0.0001 10:18:32 PM Yes
 Mean: -0.0000 -0.0038 0.0001
 SD: 0.00000 0.00111 0.0000
 %RSD: 29.00% 29.00% 17.68

=====
 Sequence No.: 17 Autosampler Location: 98
 Sample ID: 570-14631-d-1-b Date Collected: 12/10/2019 10:18:59 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14631-d-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0053	0.0000	0.0002	0.0001	10:20:05 PM	Yes
2	-0.0000	-0.0041	0.0001	0.0001	0.0001	10:20:51 PM	Yes
Mean:	-0.0000	-0.0047	0.0001				
SD:	0.00000	0.00084	0.0000				
%RSD:	17.88%	17.88%	15.40				

=====
 Sequence No.: 18 Autosampler Location: 99
 Sample ID: 570-14631-c-2-b Date Collected: 12/10/2019 10:21:18 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14631-c-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0015	0.0001	0.0007	0.0001	10:22:24 PM	Yes
2	-0.0000	-0.0034	0.0001	-0.0002	0.0001	10:23:10 PM	Yes
Mean:	-0.0000	-0.0025	0.0001				
SD:	0.00000	0.00130	0.0000				
%RSD:	52.71%	52.71%	16.94				

=====
 Sequence No.: 19 Autosampler Location: 100
 Sample ID: 570-14631-c-3-b Date Collected: 12/10/2019 10:23:37 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14631-c-3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0034	0.0001	0.0006	0.0002	10:24:43 PM	Yes
2	-0.0000	-0.0034	0.0001	-0.0007	0.0001	10:25:29 PM	Yes
Mean:	0.0000	0.0000	0.0001				
SD:	0.00000	0.00478	0.0000				
%RSD:	>999.9%	>999.9%	47.19				

=====
 Sequence No.: 20 Autosampler Location: 101
 Sample ID: 1b 570-38004_1-b Date Collected: 12/10/2019 10:25:56 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 1b 570-38004_1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0040	0.0001	-0.0003	0.0001	10:27:02 PM	Yes
2	-0.0000	-0.0016	0.0001	0.0003	0.0001	10:27:48 PM	Yes
Mean:	-0.0000	-0.0028	0.0001				
SD:	0.00000	0.00175	0.0000				

%RSD: 62.68% 62.68% 24.00

```

=====
Sequence No.: 21                               Autosampler Location: 102
Sample ID: lcs 570-38004_2-b                 Date Collected: 12/10/2019 10:28:16 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: lcs 570-38004_2-b           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#    mg/L        ug/L      Signal   Area  Height
1    0.0045      4.55     0.0461   0.2287 0.0462 10:29:22 PM  Yes
2    0.0046      4.61     0.0468   0.2343 0.0468 10:30:07 PM  Yes
Mean: 0.0046    4.58     0.0465
SD:   0.00005   0.047    0.0005
%RSD: 1.03%    1.03%    1.02

```

```

=====
Sequence No.: 22                               Autosampler Location: 103
Sample ID: lcsd 570-38004_3-b              Date Collected: 12/10/2019 10:30:34 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: lcsd 570-38004_3-b         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#    mg/L        ug/L      Signal   Area  Height
1    0.0046      4.65     0.0472   0.2367 0.0472 10:31:40 PM  Yes
2    0.0046      4.64     0.0471   0.2374 0.0471 10:32:26 PM  Yes
Mean: 0.0046    4.65     0.0471
SD:   0.00001   0.006    0.0001
%RSD: 0.12%    0.12%    0.12

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-38006_10-a             Date Collected: 12/10/2019 10:32:53 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccv 570-38006_10-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#    mg/L        ug/L      Signal   Area  Height
1    0.0019      1.87     0.0191   0.0942 0.0191 10:33:59 PM  Yes
2    0.0019      1.85     0.0189   0.0926 0.0189 10:34:44 PM  Yes
Mean: 0.0019    1.86     0.0190
SD:   0.00001   0.013    0.0001
%RSD: 0.67%    0.67%    0.67

```

QC value within limits for Hg 253.7 Recovery = 93.19%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-38006_11-a             Date Collected: 12/10/2019 10:35:12 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-38006_11-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#    mg/L        ug/L      Signal   Area  Height
1    -0.0000     -0.0035  0.0001   0.0003 0.0001 10:36:16 PM  Yes
2    -0.0000     -0.0042  0.0001  -0.0003 0.0001 10:37:01 PM  Yes
Mean: -0.0000   -0.0038  0.0001
SD:   0.00000   0.00052  0.0000
%RSD: 13.52%   13.52%   8.26

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 104
Sample ID: 570-15057-a-1-e                   Date Collected: 12/10/2019 10:37:27 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15057-a-1-e              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#     mg/L        ug/L      Signal   Area  Height
1     0.0000      0.0025   0.0001   0.0009 0.0002  10:38:33 PM  Yes
2     0.0000      0.0010   0.0001   0.0003 0.0001  10:39:18 PM  Yes
Mean: 0.0000      0.0017   0.0001
SD:   0.00000     0.00103  0.0000
%RSD: 59.63%     59.63%   8.70
-----

```

```

=====
Sequence No.: 26                               Autosampler Location: 105
Sample ID: 570-15057-a-1-f ms                Date Collected: 12/10/2019 10:39:46 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15057-a-1-f ms          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#     mg/L        ug/L      Signal   Area  Height
1     0.0045      4.53     0.0459   0.2280 0.0459  10:40:51 PM  Yes
2     0.0045      4.55     0.0461   0.2333 0.0462  10:41:36 PM  Yes
Mean: 0.0045      4.54     0.0460
SD:   0.00002     0.017    0.0002
%RSD: 0.37%      0.37%    0.37
-----

```

```

=====
Sequence No.: 27                               Autosampler Location: 106
Sample ID: 570-15057-a-1-g msd               Date Collected: 12/10/2019 10:42:04 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15057-a-1-g msd        Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#     mg/L        ug/L      Signal   Area  Height
1     0.0009      0.895    0.0092   0.0452 0.0092  10:43:10 PM  Yes
2     0.0009      0.898    0.0092   0.0448 0.0092  10:43:55 PM  Yes
Mean: 0.0009      0.896    0.0092
SD:   0.00000     0.0020   0.0000
%RSD: 0.22%      0.22%    0.22
-----

```

```

=====
Sequence No.: 28                               Autosampler Location: 107
Sample ID: mb 570-37902_1-a                 Date Collected: 12/10/2019 10:44:23 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: mb 570-37902_1-a          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#     mg/L        ug/L      Signal   Area  Height
1     0.0000      0.0038   0.0001   0.0007 0.0002  10:45:29 PM  Yes
2     0.0000      0.0069   0.0002   0.0015 0.0002  10:46:14 PM  Yes
Mean: 0.0000      0.0053   0.0002
SD:   0.00000     0.00224  0.0000
%RSD: 41.91%     41.91%   14.50
-----

```

```

=====
Sequence No.: 29                               Autosampler Location: 108
Sample ID: lcs 570-37902_2-a                 Date Collected: 12/10/2019 10:46:42 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lcs 570-37902_2-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      0.0046      4.60     0.0466   0.2332 0.0467  10:47:48 PM  Yes
2      0.0046      4.61     0.0468   0.2364 0.0468  10:48:34 PM  Yes
Mean:  0.0046      4.60     0.0467
SD:    0.00001     0.009    0.0001
%RSD:  0.20%      0.20%    0.20
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 109
Sample ID: lcsd 570-37902_3-a                Date Collected: 12/10/2019 10:49:01 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lcsd 570-37902_3-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      0.0046      4.63     0.0470   0.2381 0.0470  10:50:07 PM  Yes
2      0.0047      4.68     0.0474   0.2392 0.0475  10:50:53 PM  Yes
Mean:  0.0047      4.65     0.0472
SD:    0.00003     0.030    0.0003
%RSD:  0.65%      0.65%    0.65
=====

```

```

=====
Sequence No.: 31                               Autosampler Location: 110
Sample ID: 570-15048-a-1-f                   Date Collected: 12/10/2019 10:51:20 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15048-a-1-f             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      0.0001      0.0829   0.0009   0.0049 0.0010  10:52:26 PM  Yes
2      0.0001      0.0788   0.0009   0.0042 0.0009  10:53:12 PM  Yes
Mean:  0.0001      0.0809   0.0009
SD:    0.00000     0.00294  0.0000
%RSD:  3.63%      3.63%    3.23
=====

```

```

=====
Sequence No.: 32                               Autosampler Location: 111
Sample ID: 570-15048-a-1-g ms                 Date Collected: 12/10/2019 10:53:40 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15048-a-1-g ms           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      0.0044      4.35     0.0442   0.2418 0.0442  10:54:46 PM  Yes
2      0.0044      4.39     0.0445   0.2439 0.0445  10:55:31 PM  Yes
Mean:  0.0044      4.37     0.0443
SD:    0.00002     0.024    0.0002
%RSD:  0.56%      0.56%    0.56
=====

```

```

=====
Sequence No.: 33                               Autosampler Location: 112
Sample ID: 570-15048-a-1-h msd                 Date Collected: 12/10/2019 10:55:59 PM
=====

```


Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-1-h msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0044	4.44	0.0451	0.2487	0.0451	10:57:05 PM	Yes
2	0.0044	4.45	0.0451	0.2490	0.0451	10:57:51 PM	Yes
Mean:	0.0044	4.44	0.0451				
SD:	0.00000	0.005	0.0000				
%RSD:	0.11%	0.11%	0.11				

=====
Sequence No.: 34
Sample ID: 570-15048-a-2-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 113
Date Collected: 12/10/2019 10:58:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-2-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0595	0.0007	0.0042	0.0007	10:59:25 PM	Yes
2	0.0000	0.0424	0.0005	0.0026	0.0006	11:00:10 PM	Yes
Mean:	0.0001	0.0510	0.0006				
SD:	0.00001	0.01205	0.0001				
%RSD:	23.64%	23.64%	19.73				

=====
Sequence No.: 35
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/10/2019 11:00:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.86	0.0189	0.0938	0.0190	11:01:43 PM	Yes
2	0.0019	1.85	0.0188	0.0920	0.0189	11:02:29 PM	Yes
Mean:	0.0019	1.86	0.0189				
SD:	0.00001	0.006	0.0001				
%RSD:	0.35%	0.35%	0.35				

QC value within limits for Hg 253.7 Recovery = 92.80%
All analyte(s) passed QC.

=====
Sequence No.: 36
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/10/2019 11:02:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0001	0.0001	0.0010	0.0001	11:04:00 PM	Yes
2	-0.0000	-0.0071	0.0000	0.0003	0.0001	11:04:46 PM	Yes
Mean:	-0.0000	-0.0035	0.0001				
SD:	0.00001	0.00514	0.0001				
%RSD:	147.26%	147.26%	77.80				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 37

Autosampler Location: 114

Sample ID: 570-15048-a-3-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/10/2019 11:05:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-3-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.129	0.0014	0.0076	0.0014	11:06:18 PM	Yes
2	0.0001	0.128	0.0014	0.0069	0.0014	11:07:04 PM	Yes
Mean:	0.0001	0.128	0.0014				
SD:	0.00000	0.0004	0.0000				
%RSD:	0.29%	0.29%	0.27				

=====

Sequence No.: 38
Sample ID: 570-15048-a-4-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 115
Date Collected: 12/10/2019 11:07:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-4-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.283	0.0030	0.0161	0.0030	11:08:37 PM	Yes
2	0.0003	0.281	0.0029	0.0152	0.0030	11:09:23 PM	Yes
Mean:	0.0003	0.282	0.0030				
SD:	0.00000	0.0015	0.0000				
%RSD:	0.55%	0.55%	0.53				

=====

Sequence No.: 39
Sample ID: 570-15048-a-5-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 116
Date Collected: 12/10/2019 11:09:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-5-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0966	0.0011	0.0063	0.0011	11:10:56 PM	Yes
2	0.0001	0.0934	0.0010	0.0055	0.0011	11:11:42 PM	Yes
Mean:	0.0001	0.0950	0.0011				
SD:	0.00000	0.00231	0.0000				
%RSD:	2.43%	2.43%	2.20				

=====

Sequence No.: 40
Sample ID: 570-15048-a-6-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 117
Date Collected: 12/10/2019 11:12:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-6-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.123	0.0013	0.0082	0.0014	11:13:15 PM	Yes
2	0.0001	0.130	0.0014	0.0082	0.0014	11:14:01 PM	Yes
Mean:	0.0001	0.127	0.0014				
SD:	0.00001	0.0050	0.0001				
%RSD:	3.96%	3.96%	3.66				

=====

Sequence No.: 41
Sample ID: 570-15048-a-7-d
Analyst: 1174 HG-8
Initial Sample Wt:

Autosampler Location: 118
Date Collected: 12/10/2019 11:14:29 PM
Data Type: Original
Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-7-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.124	0.0014	0.0087	0.0014	11:15:35 PM	Yes
2	0.0001	0.118	0.0013	0.0073	0.0013	11:16:20 PM	Yes
Mean:	0.0001	0.121	0.0013				
SD:	0.00000	0.0042	0.0000				
%RSD:	3.49%	3.49%	3.22				

Sequence No.: 42
Sample ID: 570-15048-a-8-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 119
Date Collected: 12/10/2019 11:16:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-8-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.111	0.0012	0.0074	0.0013	11:17:54 PM	Yes
2	0.0001	0.107	0.0012	0.0061	0.0012	11:18:39 PM	Yes
Mean:	0.0001	0.109	0.0012				
SD:	0.00000	0.0028	0.0000				
%RSD:	2.55%	2.55%	2.33				

Sequence No.: 43
Sample ID: 570-15048-a-9-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 120
Date Collected: 12/10/2019 11:19:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-9-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0516	0.0006	0.0032	0.0007	11:20:13 PM	Yes
2	0.0001	0.0511	0.0006	0.0034	0.0006	11:20:59 PM	Yes
Mean:	0.0001	0.0514	0.0006				
SD:	0.00000	0.00035	0.0000				
%RSD:	0.69%	0.69%	0.57				

Sequence No.: 44
Sample ID: 570-15048-a-10-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 121
Date Collected: 12/10/2019 11:21:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-10-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0789	0.0009	0.0059	0.0009	11:22:32 PM	Yes
2	0.0001	0.0803	0.0009	0.0057	0.0009	11:23:18 PM	Yes
Mean:	0.0001	0.0796	0.0009				
SD:	0.00000	0.00096	0.0000				
%RSD:	1.21%	1.21%	1.07				

Sequence No.: 45
Sample ID: 570-15048-a-11-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 122
Date Collected: 12/10/2019 11:23:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-11-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0948	0.0011	0.0062	0.0011	11:24:52 PM	Yes
2	0.0001	0.0925	0.0010	0.0056	0.0011	11:25:38 PM	Yes
Mean:	0.0001	0.0936	0.0011				
SD:	0.00000	0.00167	0.0000				
%RSD:	1.78%	1.78%	1.61				

=====

Sequence No.: 46 Autosampler Location: 123
 Sample ID: 570-15048-a-12-f Date Collected: 12/10/2019 11:26:06 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-15048-a-12-f Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0435	0.0005	0.0034	0.0006	11:27:11 PM	Yes
2	0.0000	0.0374	0.0005	0.0027	0.0005	11:27:57 PM	Yes
Mean:	0.0000	0.0404	0.0005				
SD:	0.00000	0.00431	0.0000				
%RSD:	10.66%	10.66%	8.53				

=====

Sequence No.: 47 Autosampler Location: 5
 Sample ID: ccv 570-38006_10-a Date Collected: 12/10/2019 11:28:25 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.85	0.0188	0.0912	0.0188	11:29:31 PM	Yes
2	0.0019	1.87	0.0190	0.0919	0.0191	11:30:17 PM	Yes
Mean:	0.0019	1.86	0.0189				
SD:	0.00001	0.015	0.0001				
%RSD:	0.80%	0.80%	0.79				

QC value within limits for Hg 253.7 Recovery = 92.95%
 All analyte(s) passed QC.

=====

Sequence No.: 48 Autosampler Location: 1
 Sample ID: ccb 570-38006_11-a Date Collected: 12/10/2019 11:30:44 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0009	0.0001	0.0010	0.0001	11:31:48 PM	Yes
2	-0.0000	-0.0084	0.0000	-0.0005	0.0000	11:32:34 PM	Yes
Mean:	-0.0000	-0.0047	0.0001				
SD:	0.00001	0.00534	0.0001				
%RSD:	114.35%	114.35%	98.32				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====

Sequence No.: 49 Autosampler Location: 124
 Sample ID: 570-15048-a-13-d Date Collected: 12/10/2019 11:32:59 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-15048-a-13-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0630	0.0007	0.0039	0.0008	11:34:06 PM	Yes
2	0.0001	0.0664	0.0008	0.0043	0.0008	11:34:52 PM	Yes
Mean:	0.0001	0.0647	0.0008				
SD:	0.00000	0.00241	0.0000				
%RSD:	3.73%	3.73%	3.22				

Sequence No.: 50

Autosampler Location: 125

Sample ID: 570-15048-a-14-d

Date Collected: 12/10/2019 11:35:19 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15048-a-14-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0282	0.0004	0.0019	0.0004	11:36:26 PM	Yes
2	0.0000	0.0289	0.0004	0.0022	0.0004	11:37:12 PM	Yes
Mean:	0.0000	0.0285	0.0004				
SD:	0.00000	0.00048	0.0000				
%RSD:	1.68%	1.68%	1.24				

Sequence No.: 51

Autosampler Location: 126

Sample ID: 570-15048-a-15-d

Date Collected: 12/10/2019 11:37:39 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15048-a-15-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0471	0.0006	0.0029	0.0006	11:38:46 PM	Yes
2	0.0000	0.0485	0.0006	0.0027	0.0006	11:39:31 PM	Yes
Mean:	0.0000	0.0478	0.0006				
SD:	0.00000	0.00099	0.0000				
%RSD:	2.06%	2.06%	1.70				

Sequence No.: 52

Autosampler Location: 127

Sample ID: 570-15048-a-16-d

Date Collected: 12/10/2019 11:39:58 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15048-a-16-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0142	0.0002	0.0017	0.0003	11:41:05 PM	Yes
2	0.0000	0.0098	0.0002	0.0011	0.0002	11:41:50 PM	Yes
Mean:	0.0000	0.0120	0.0002				
SD:	0.00000	0.00309	0.0000				
%RSD:	25.79%	25.79%	13.99				

Sequence No.: 53

Autosampler Location: 128

Sample ID: 570-15068-a-2-c

Date Collected: 12/10/2019 11:42:18 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15068-a-2-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.126	0.0014	0.0075	0.0014	11:43:24 PM	Yes
2	0.0001	0.126	0.0014	0.0067	0.0014	11:44:10 PM	Yes
Mean:	0.0001	0.126	0.0014				
SD:	0.00000	0.0004	0.0000				
%RSD:	0.33%	0.33%	0.30				

Sequence No.: 54
Sample ID: 570-15053-c-1-i
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 129
Date Collected: 12/10/2019 11:44:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15053-c-1-i Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.229	0.0024	0.0128	0.0024	11:45:44 PM	Yes
2	0.0002	0.232	0.0024	0.0128	0.0025	11:46:29 PM	Yes
Mean:	0.0002	0.230	0.0024				
SD:	0.00000	0.0019	0.0000				
%RSD:	0.83%	0.83%	0.79				

Sequence No.: 55
Sample ID: 570-15072-a-1-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 130
Date Collected: 12/10/2019 11:46:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15072-a-1-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0071	7.06	0.0716	0.4012	0.0716	11:48:03 PM	Yes
2	0.0068	6.78	0.0687	0.3835	0.0688	11:48:49 PM	Yes
Mean:	0.0069	6.92	0.0702				
SD:	0.00020	0.201	0.0020				
%RSD:	2.90%	2.90%	2.90				

Sequence No.: 56
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/10/2019 11:49:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.83	0.0186	0.0921	0.0186	11:50:22 PM	Yes
2	0.0018	1.83	0.0186	0.0919	0.0186	11:51:08 PM	Yes
Mean:	0.0018	1.83	0.0186				
SD:	0.00000	0.000	0.0000				
%RSD:	0.01%	0.01%	0.01				

QC value within limits for Hg 253.7 Recovery = 91.45%
All analyte(s) passed QC.

Sequence No.: 57
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/10/2019 11:51:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	-0.0000	-0.0116	-0.0000	-0.0008	0.0000	11:52:39 PM	Yes
2	-0.0000	-0.0089	0.0000	0.0001	0.0000	11:53:25 PM	Yes
Mean:	-0.0000	-0.0103	-0.0000				
SD:	0.00000	0.00189	0.0000				
%RSD:	18.40%	18.40%	>999.9%				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience _____ Job Number: 570-14372-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID
A2BMP0007S018
FBQW1870Q001

Lab Sample ID
570-14372-1
570-14372-2

Comments:

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: A2BMP0007S018

Lab Sample ID: 570-14372-1

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/28/2019 08:13

Reporting Basis: WET

Date Received: 12/02/2019 16:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Suspended Solids	7.71	1.43	1.18	mg/L			1	SM 2540D

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: FBQW1870Q001

Lab Sample ID: 570-14372-2

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/28/2019 07:00

Reporting Basis: WET

Date Received: 12/02/2019 16:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Turbidity	0.0600	0.0500	0.0439	NTU		H H3	1	SM 2130B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14372-1
SDG No.: _____
Analyst: KZ40 Batch Start Date: 12/03/2019
Reporting Units: NTU Analytical Batch No.: 36786

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
4	CCV	21:06	Turbidity	96.00	100	96	95-105		WC_TUR_STD2_00056
16	CCV	21:06	Turbidity	95.10	100	95	95-105		WC_TUR_STD2_00056

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 36808 Date: 12/04/2019 15:00							
SM 2540D	MB 570-36808/1	Total Suspended Solids	ND		mg/L	1.00	1

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 36786 Date: 12/03/2019 21:06								
SM 2130B		570-14460-B-1	Turbidity	0.320	NTU			
SM 2130B		570-14460-B-1 DU	Turbidity	0.2900	NTU	10	25	
Batch ID: 36808 Date: 12/04/2019 15:00								
SM 2540D		570-14323-A-2	Total Suspended Solids	33.0	mg/L			
SM 2540D		570-14323-A-2 DU	Total Suspended Solids	34.75	mg/L	5	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 36808		Date: 12/04/2019 15:00									
						LCS Source: WC_SSC_STD_00001					
SM 2540D	LCS 570-36808/2	Total Suspended Solids	102.0		mg/L	100	102	85-115	2	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE DUPLICATE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14372-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 36808		Date: 12/04/2019 15:00									
						LCSD Source: WC_SSC_STD_00001					
SM 2540D	LCSD 570-36808/3	Total Suspended Solids	104.0		mg/L	100	104	85-115	2	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LCS-CERTIFIED REFERENCE MATERIAL
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 36786 Date: 12/03/2019 21:06											
LCS Source: WC_TUR_STD_00009											
SM	LCSSRM	Turbidity	992.0		NTU	1000	99.2	99.0-10			
2130B	570-36786/1							1.0			
Batch ID: 36786 Date: 12/03/2019 21:06											
LCS Source: WC_TUR_STD_00008											
SM	LCSSRM	Turbidity	9.930		NTU	10.0	99.3	99.0-10			
2130B	570-36786/2							1.0			
Batch ID: 36786 Date: 12/03/2019 21:06											
LCS Source: WC_TUR_STD_00010											
SM	LCSSRM	Turbidity	ND		NTU	0.0200	200.0	0.0-200			
2130B	570-36786/3							.0			

Calculations are performed before rounding to avoid round-off errors in calculated results.

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience

Job Number: 570-14372-1

SDG Number: _____

Matrix: Water

Instrument ID: NOEQUIP

Method: SM 2130B

MDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	RL (NTU)	MDL (NTU)
Turbidity		0.05	0.04392

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-14372-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2130B XMDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	XRL (NTU)	XMDL (NTU)
Turbidity		0.05	0.04391639

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience

Job Number: 570-14372-1

SDG Number: _____

Matrix: Water

Instrument ID: NOEQUIP

Method: SM 2540D

MDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Suspended Solids		1	0.82873

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-14372-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2540D XMDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Suspended Solids		1	0.82873

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 36786 Batch Start Date: 12/03/19 21:06 Batch Analyst: DeVera, Christopher A

Batch Method: SM 2130B Batch End Date: 12/03/19 21:58

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	WC_TUR_STD 00008	WC_TUR_STD 00009	WC_TUR_STD 00010	WC_TUR_STD2 00056	
LCSSRM 570-36786/1		SM 2130B		30 mL		30 mL			
LCSSRM 570-36786/2		SM 2130B		30 mL	30 mL				
LCSSRM 570-36786/3		SM 2130B		30 mL			30 mL		
CCV 570-36786/4		SM 2130B		30 mL				30 mL	
570-14372-C-2	FBQW1870Q001	SM 2130B	T	30 mL					
570-14460-B-1 DU		SM 2130B	T	30 mL					
CCV 570-36786/16		SM 2130B		30 mL				30 mL	

Batch Notes	
Calibration Date	10-01-2019
Instrument ID	TUR04
Pipette/Syringe/Dispenser ID	P-121

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 36808 Batch Start Date: 12/04/19 15:00 Batch Analyst: Luu, Kieu Linh

Batch Method: SM 2540D Batch End Date: 12/04/19 20:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	CrucibleID	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 570-36808/1		SM 2540D		C0627665	0.3943 g	1000 mL	0.3942 g	0.3942 g	0 g
LCS 570-36808/2		SM 2540D		C0627664	0.3966 g	100 mL	0.4067 g	0.4068 g	0 g
LCSD 570-36808/3		SM 2540D		C0627663	0.3936 g	100 mL	0.4040 g	0.4040 g	0 g
570-14323-A-2 DU		SM 2540D	T	C0627661	0.3926 g	400 mL	0.4067 g	0.4065 g	0 g
570-14372-C-1	A2BMP0007S018	SM 2540D	T	C0627658	0.3943 g	700 mL	0.3998 g	0.3997 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	Residue	Residue2	FinalAmount	ResDishWt	DishWeight
MB 570-36808/1		SM 2540D		PASS <0.5mg	-0.0001 g	-0.0001 g	1000 mL	0.3942 g	0.3943 g
LCS 570-36808/2		SM 2540D		PASS <0.5mg	0.0101 g	0.0102 g	1000 mL	0.4068 g	0.3966 g
LCSD 570-36808/3		SM 2540D		PASS <0.5mg	0.0104 g	0.0104 g	1000 mL	0.404 g	0.3936 g
570-14323-A-2 DU		SM 2540D	T	PASS <0.5mg	0.0141 g	0.0139 g	1000 mL	0.4065 g	0.3926 g
570-14372-C-1	A2BMP0007S018	SM 2540D	T	PASS <0.5mg	0.0055 g	0.0054 g	1000 mL	0.3997 g	0.3943 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC_SSC_STD 00001					
MB 570-36808/1		SM 2540D							
LCS 570-36808/2		SM 2540D		100 mL					
LCSD 570-36808/3		SM 2540D		100 mL					
570-14323-A-2 DU		SM 2540D	T						
570-14372-C-1	A2BMP0007S018	SM 2540D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14372-1

SDG No.: _____

Batch Number: 36808 Batch Start Date: 12/04/19 15:00 Batch Analyst: Luu, Kieu Linh

Batch Method: SM 2540D Batch End Date: 12/04/19 20:00

Batch Notes	
Balance ID	71
Date/Time - In - CW (WT2)	12/04/2019 18:00
Date/Time - Out - CW (WT2)	12/04/2019 19:00
Temperature - Start - CW (WT2) - Correct	104 Celsius
Temperature - End - CW (WT2) - Correct	104 Celsius
Temperature - Start-CW(WT2) -Uncorrected	104 Celsius
Temperature - End-CW(WT2) -Uncorrected	104 Celsius
Temperature - Start - Corrected	104 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	12/04/2019 16:00
Date/Time - Out	12/04/2019 17:00
Filter ID	37634
Nominal Amount Used	1000 mL
Oven ID	io7a
Perform Calculation (0=No, 1=Yes)	1
Thermometer ID	tss io7a
Temperature - Start - Uncorrected	104 Celsius
Temperature - End - Uncorrected	104 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
GEOTECHNICAL

Lab Name: Eurofins Calscience _____ Job Number: 570-14372-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID
A2BMP0007S018 _____

Lab Sample ID
570-14372-1 _____

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: A2BMP0007S018

Lab Sample ID: 570-14372-1

Lab Name: Eurofins Calscience

Job No.: 570-14372-1

SDG ID.: _____

Matrix: Water

Date Sampled: 11/28/2019 08:13

Reporting Basis: WET

Date Received: 12/02/2019 16:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	15.16	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	ND	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	ND	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	84.84	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	100.00	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	ND	0.01	0.01	%			1	D4464

Shipping and Receiving Documents

Virendra Patel

From: Fesler, Mark/RDD <Mark.Fesler@jacobs.com>
Sent: Tuesday, December 03, 2019 9:26 AM
To: Virendra Patel; Dean, Randy/SFL
Subject: RE: [EXTERNAL] Eurofins Calscience files from 570-14372-1 CH661 / 692670.61.SW <Response Requested>

EXTERNAL EMAIL*

Yes, please proceed ASAP.

Mark Fesler

Associate Scientist
Ext. 33273
mark.fesler@jacobs.com

From: Virendra Patel [<mailto:noreply@eurofinslimsservices.com>]
Sent: Tuesday, December 03, 2019 9:06 AM
To: Fesler, Mark/RDD <Mark.Fesler@jacobs.com>; Dean, Randy/SFL <Randy.Dean@jacobs.com>; Patel Virendra <virendrapatel@eurofinsus.com>
Subject: [EXTERNAL] Eurofins Calscience files from 570-14372-1 CH661 / 692670.61.SW <Response Requested>
Importance: High

Hello,

Attached please find the files for job 570-14372-1; CH661 / 692670.61.SW.

Please note:

Method SM 2130B (Turbidity): The following sample was received outside of holding time: FBQW1870Q001 (570-14372-2).

Continue with the analyses and flag the results for the above sample? Please advise.

Please feel free to contact me if you have any questions.

Thank you.

Virendra Patel
Project Manager

Eurofins Calscience LLC
Phone: 714-895-5494

E-mail: virendrapatel@eurofinsus.com
www.EurofinsUS.com



Reference: [570-046165]
Attachments: 1

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Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-14372-1

Login Number: 14372

List Source: Eurofins Calscience

List Number: 1

Creator: Le, Danny

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

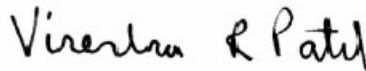
ANALYTICAL REPORT

Job Number: 570-14372-2

Job Description: CH661 / 692670.61.SW

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Virendra Patel
Project Manager I
1/6/2020 12:12 PM

Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
01/06/2020

cc: Mark Fesler

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

Tel (714) 895-5494 Fax (714) 894-7501 www.EurofinsUS.com

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
570-14372-2

Comments

No additional comments.

Receipt

The samples were received on 12/2/2019 4:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0° C.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Method EPA 1613B - Dioxins/Furans - Report with J - Level IV: This method was subcontracted to Cape Fear Analytical, LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-2

Client Sample ID: A2BMP0007S018

Lab Sample ID: 570-14372-1

No Detections.

Client Sample ID: FBQW1870Q001

Lab Sample ID: 570-14372-2

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-2

Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-2

Method	Method Description	Protocol	Laboratory
1613B	EPA 1613B Dioxin/Furan	EPA	CFAnalytic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

CFAnalytic = Cape Fear Analytical, LLC, 3306 Kitty Hawk Road, Wilmington, NC 28405

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14372-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-14372-1	A2BMP0007S018	Water	11/28/19 08:13	12/02/19 16:45	
570-14372-2	FBQW1870Q001	Water	11/28/19 07:00	12/02/19 16:45	

December 27, 2019

Mr. Virendra Patel
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, California 92841-1432

Re: Stormwater RFP Boeing SSFL MECX DXN
Work Order: 15901
SDG: 570-14372

Dear Mr. Patel:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 04, 2019. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421 Ext. 2.

Sincerely,



Cynde Larkins
Project Manager

Chain of Custody: 570-12883.1
Enclosures

SAMPLE RECEIPT CHECKLIST
Cape Fear Analytical

15901

Client: CALS	Work Order: 15900 ^{CO} _{04DEC19}
Shipping Company: FedEx	Date/Time Received: 04DEC19 1100

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?			✓
Samples identified as Foreign Soil?			✓

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?		✓	
Samples < 2x background?		✓	

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?			✓

Air Witness: _____

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other(describe)
2 Custody seal/s present on cooler?	✓			Seal intact? <u>Yes</u> No
3 Chain of Custody documents included with shipment?	✓			
4 Samples requiring cold preservation within 0-6°C?	✓			Preservation Method: <u>ice bags</u> blue ice dry ice none other (describe) Temperature Blank present: <u>Yes</u> No 1.6° + 0.1 = 1.7°C
5 Aqueous samples found to have visible solids?			✓	Sample IDs, containers affected:
5 Samples requiring chemical preservation at proper pH?		✓		Sample IDs, containers affected and pH observed: pH = 7 on all If preservative added, Lot#:
7 Samples requiring preservation have no residual chlorine?	✓			Sample IDs, containers affected: If preservative added, Lot#:
8 Samples received within holding time?	✓			Sample IDs, tests affected:
9 Sample IDs on COC match IDs on containers?	✓			Sample IDs, containers affected:
10 Date & time of COC match date & time on containers?	✓			Sample IDs, containers affected:
11 Number of containers received match number indicated on COC?	✓			List type and number of containers / Sample IDs, containers affected: 1 4oz. clear glass soil jar per soil sample 8 total ^{CO} _{04DEC19} 4 total - 1L NMA6 bottles
12 COC form is properly signed in relinquished/received sections?	✓			

Comments:

Checklist performed by: Initials: CF Date: 04DEC19

High Resolution Dioxins and Furans Analysis

Case Narrative

**HDOX Case Narrative
Eurofins Calscience (CALs)
SDG 570-14372
Work Order 15901**

Method/Analysis Information

Product: Dioxins/Furans by EPA Method 1613B in Liquids
Analytical Method: EPA Method 1613B
Extraction Method: SW846 3520C
Analytical Batch Number: 42571
Clean Up Batch Number: 42568
Extraction Batch Number: 42567

Sample Analysis

Samples were received at 1.7°C (15901001, 15901002). The following samples were analyzed using the analytical protocol as established in EPA Method 1613B:

Sample ID	Client ID
12025525	Method Blank (MB)
12025526	Laboratory Control Sample (LCS)
12025527	Laboratory Control Sample Duplicate (LCSD)
15901001	A2BMP0007S018
15901002	FBQW1870Q001

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 15.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement

The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement

The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery

The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement

The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation

A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation

A NCR was not required for this SDG.

Manual Integrations

Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

System Configuration

This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP750_2	Primary Dioxin Analysis	Dioxin Analysis	DB-5MS	60m x 0.25mm, 0.25um

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report for

CALS001 Eurofins Calscience

Client SDG: 570-14372 CFA Work Order: 15901

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- J Value is estimated
- K Estimated Maximum Possible Concentration
- U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: 

Name: Heather Patterson

Date: 27 DEC 2019

Title: Group Leader

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-14372
Lab Sample ID: 15901001
Client Sample: 1613B Water
Client ID: A2BMP0007S018
Batch ID: 42571
Run Date: 12/14/2019 21:52
Data File: A14DEC19A-14
Prep Batch: 42567
Prep Date: 10-DEC-19

Client: CALS001
Date Collected: 11/28/2019 08:13
Date Received: 12/04/2019 11:00
Method: EPA Method 1613B
Analyst: MJC
Prep Method: SW846 3520C
Prep Aliquot: 794.7 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.000652	ng/L	0.000652	0.0126
40321-76-4	1,2,3,7,8-PeCDD	U	0.000702	ng/L	0.000702	0.0629
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00103	ng/L	0.00103	0.0629
57653-85-7	1,2,3,6,7,8-HxCDD	JK	0.00131	ng/L	0.000982	0.0629
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.00131	ng/L	0.00102	0.0629
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	0.0215	ng/L	0.00118	0.0629
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.199	ng/L	0.00249	0.126
51207-31-9	2,3,7,8-TCDF	U	0.000549	ng/L	0.000549	0.0126
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.000453	ng/L	0.000367	0.0629
57117-31-4	2,3,4,7,8-PeCDF	U	0.00038	ng/L	0.00038	0.0629
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000415	ng/L	0.000415	0.0629
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000433	ng/L	0.000433	0.0629
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000408	ng/L	0.000408	0.0629
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000574	ng/L	0.000574	0.0629
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.0034	ng/L	0.000574	0.0629
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00073	ng/L	0.00073	0.0629
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	0.00571	ng/L	0.00132	0.126
41903-57-5	Total TeCDD	U	0.000652	ng/L	0.000652	0.0126
36088-22-9	Total PeCDD	U	0.000702	ng/L	0.000702	0.0629
34465-46-8	Total HxCDD	JK	0.00617	ng/L	0.000982	0.0629
37871-00-4	Total HpCDD	J	0.0406	ng/L	0.00118	0.0629
30402-14-3	Total TeCDF	U	0.000549	ng/L	0.000549	0.0126
30402-15-4	Total PeCDF	BJK	0.000453	ng/L	0.000365	0.0629
55684-94-1	Total HxCDF	BJ	0.00148	ng/L	0.000408	0.0629
38998-75-3	Total HpCDF	BJ	0.00657	ng/L	0.000574	0.0629
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000585	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00149	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		2.43	2.52	ng/L	96.5	(25%-164%)
13C-1,2,3,7,8-PeCDD		2.43	2.52	ng/L	96.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		2.19	2.52	ng/L	87.2	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		2.17	2.52	ng/L	86.3	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		2.33	2.52	ng/L	92.7	(23%-140%)
13C-OCDD		3.92	5.03	ng/L	77.9	(17%-157%)
13C-2,3,7,8-TCDF		2.47	2.52	ng/L	98.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		2.72	2.52	ng/L	108	(24%-185%)
13C-2,3,4,7,8-PeCDF		2.43	2.52	ng/L	96.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		2.12	2.52	ng/L	84.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		2.11	2.52	ng/L	83.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		2.26	2.52	ng/L	89.9	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		2.26	2.52	ng/L	89.8	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372	Client: CALS001	Project: CALS00214
Lab Sample ID: 15901001	Date Collected: 11/28/2019 08:13	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: A2BMP0007S018		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 21:52	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-14		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 794.7 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			2.00	2.52	ng/L	79.5 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			2.21	2.52	ng/L	87.7 (26%-138%)
37Cl-2,3,7,8-TCDD			0.247	0.252	ng/L	98.0 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-14372
Lab Sample ID: 15901002
Client Sample: 1613B Water
Client ID: FBQW1870Q001
Batch ID: 42571
Run Date: 12/14/2019 22:41
Data File: A14DEC19A-15
Prep Batch: 42567
Prep Date: 10-DEC-19

Client: CALS001
Date Collected: 11/28/2019 07:00
Date Received: 12/04/2019 11:00
Method: EPA Method 1613B
Analyst: MJC
Prep Method: SW846 3520C
Prep Aliquot: 941.2 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.000542	ng/L	0.000542	0.0106
40321-76-4	1,2,3,7,8-PeCDD	U	0.000491	ng/L	0.000491	0.0531
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.000867	ng/L	0.000867	0.0531
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.000801	ng/L	0.000801	0.0531
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.000846	ng/L	0.000846	0.0531
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.000948	ng/L	0.000948	0.0531
3268-87-9	1,2,3,4,6,7,8,9-OCDD	U	0.00112	ng/L	0.00112	0.106
51207-31-9	2,3,7,8-TCDF	U	0.00048	ng/L	0.00048	0.0106
57117-41-6	1,2,3,7,8-PeCDF	U	0.000359	ng/L	0.000359	0.0531
57117-31-4	2,3,4,7,8-PeCDF	U	0.000374	ng/L	0.000374	0.0531
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000368	ng/L	0.000368	0.0531
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.00037	ng/L	0.00037	0.0531
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000344	ng/L	0.000344	0.0531
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000482	ng/L	0.000482	0.0531
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.000387	ng/L	0.000387	0.0531
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000525	ng/L	0.000525	0.0531
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.000569	ng/L	0.000569	0.106
41903-57-5	Total TeCDD	U	0.000542	ng/L	0.000542	0.0106
36088-22-9	Total PeCDD	U	0.000491	ng/L	0.000491	0.0531
34465-46-8	Total HxCDD	U	0.000801	ng/L	0.000801	0.0531
37871-00-4	Total HpCDD	U	0.000948	ng/L	0.000948	0.0531
30402-14-3	Total TeCDF	U	0.00048	ng/L	0.00048	0.0106
30402-15-4	Total PeCDF	U	0.000232	ng/L	0.000232	0.0531
55684-94-1	Total HxCDF	U	0.000344	ng/L	0.000344	0.0531
38998-75-3	Total HpCDF	U	0.000387	ng/L	0.000387	0.0531
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.00	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.000815	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.96	2.12	ng/L	92.1	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.98	2.12	ng/L	93.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.77	2.12	ng/L	83.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.80	2.12	ng/L	84.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.94	2.12	ng/L	91.2	(23%-140%)
13C-OCDD		3.36	4.25	ng/L	79.1	(17%-157%)
13C-2,3,7,8-TCDF		1.99	2.12	ng/L	93.8	(24%-169%)
13C-1,2,3,7,8-PeCDF		2.22	2.12	ng/L	104	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.96	2.12	ng/L	92.3	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.74	2.12	ng/L	81.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.71	2.12	ng/L	80.7	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.85	2.12	ng/L	86.9	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.86	2.12	ng/L	87.3	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372	Client: CALS001	Project: CALS00214
Lab Sample ID: 15901002	Date Collected: 11/28/2019 07:00	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: FBQW1870Q001		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 22:41	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-15		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 941.2 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.68	2.12	ng/L	79.1 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.81	2.12	ng/L	85.2 (26%-138%)
37Cl-2,3,7,8-TCDD			0.197	0.212	ng/L	92.8 (35%-197%)

Comments:
 U Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-14372

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12025526	LCS for batch 42567	13C-2,3,7,8-TCDD		90.9	(20%-175%)
		13C-1,2,3,7,8-PeCDD		95.4	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		85.7	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		86.0	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		98.6	(22%-166%)
		13C-OCDD		83.8	(13%-199%)
		13C-2,3,7,8-TCDF		92.3	(22%-152%)
		13C-1,2,3,7,8-PeCDF		105	(21%-192%)
		13C-2,3,4,7,8-PeCDF		93.7	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		84.4	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		83.4	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		87.6	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		91.4	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		82.2	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		94.3	(20%-186%)
		37Cl-2,3,7,8-TCDD		97.6	(31%-191%)
		12025527	LCSD for batch 42567	13C-2,3,7,8-TCDD		82.3	(20%-175%)
13C-1,2,3,7,8-PeCDD				85.3	(21%-227%)
13C-1,2,3,4,7,8-HxCDD				76.2	(21%-193%)
13C-1,2,3,6,7,8-HxCDD				76.0	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD				88.3	(22%-166%)
13C-OCDD				74.9	(13%-199%)
13C-2,3,7,8-TCDF				82.7	(22%-152%)
13C-1,2,3,7,8-PeCDF				93.7	(21%-192%)
13C-2,3,4,7,8-PeCDF				83.6	(13%-328%)
13C-1,2,3,4,7,8-HxCDF				73.7	(19%-202%)
13C-1,2,3,6,7,8-HxCDF				72.4	(21%-159%)
13C-2,3,4,6,7,8-HxCDF				77.4	(22%-176%)
13C-1,2,3,7,8,9-HxCDF				79.9	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF				72.4	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF				83.7	(20%-186%)
37Cl-2,3,7,8-TCDD				88.0	(31%-191%)
12025525	MB for batch 42567			13C-2,3,7,8-TCDD		85.2	(25%-164%)
		13C-1,2,3,7,8-PeCDD		87.4	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		79.6	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		75.7	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		87.9	(23%-140%)
		13C-OCDD		74.7	(17%-157%)
		13C-2,3,7,8-TCDF		85.3	(24%-169%)
		13C-1,2,3,7,8-PeCDF		95.4	(24%-185%)
		13C-2,3,4,7,8-PeCDF		84.9	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		77.3	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		74.8	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		79.2	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		82.7	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		74.4	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		83.7	(26%-138%)
		37Cl-2,3,7,8-TCDD		93.9	(35%-197%)
		15901001	A2BMP0007S018	13C-2,3,7,8-TCDD		96.5	(25%-164%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-14372

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
15901001	A2BMP0007S018	13C-1,2,3,7,8-PeCDD		96.5	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		87.2	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		86.3	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		92.7	(23%-140%)
		13C-OCDD		77.9	(17%-157%)
		13C-2,3,7,8-TCDF		98.1	(24%-169%)
		13C-1,2,3,7,8-PeCDF		108	(24%-185%)
		13C-2,3,4,7,8-PeCDF		96.4	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		84.3	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		83.8	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		89.9	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		89.8	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		79.5	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		87.7	(26%-138%)
		37Cl-2,3,7,8-TCDD		98.0	(35%-197%)
		15901002	FBQW1870Q001	13C-2,3,7,8-TCDD		92.1	(25%-164%)
13C-1,2,3,7,8-PeCDD				93.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD				83.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD				84.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD				91.2	(23%-140%)
13C-OCDD				79.1	(17%-157%)
13C-2,3,7,8-TCDF				93.8	(24%-169%)
13C-1,2,3,7,8-PeCDF				104	(24%-185%)
13C-2,3,4,7,8-PeCDF				92.3	(21%-178%)
13C-1,2,3,4,7,8-HxCDF				81.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF				80.7	(26%-123%)
13C-2,3,4,6,7,8-HxCDF				86.9	(28%-136%)
13C-1,2,3,7,8,9-HxCDF				87.3	(29%-147%)
13C-1,2,3,4,6,7,8-HpCDF				79.1	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF				85.2	(26%-138%)
37Cl-2,3,7,8-TCDD				92.8	(35%-197%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-14372

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 42567

Matrix: WATER

Lab Sample ID: 12025526

Instrument: HRP750

Analysis Date: 12/14/2019 12:15

Dilution: 1

Analyst: MJC

Prep Batch ID:42567

Batch ID: 42571

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits
1746-01-6	LCS 2,3,7,8-TCDD	0.200	0.206	103	67-158
40321-76-4	LCS 1,2,3,7,8-PeCDD	1.00	1.06	106	70-142
39227-28-6	LCS 1,2,3,4,7,8-HxCDD	1.00	1.02	102	70-164
57653-85-7	LCS 1,2,3,6,7,8-HxCDD	1.00	1.02	102	74-134
19408-74-3	LCS 1,2,3,7,8,9-HxCDD	1.00	1.09	109	64-162
35822-46-9	LCS 1,2,3,4,6,7,8-HpCDD	1.00	0.934	93.4	70-140
3268-87-9	LCS 1,2,3,4,6,7,8,9-OCDD	2.00	2.00	100	78-144
51207-31-9	LCS 2,3,7,8-TCDF	0.200	0.179	89.4	75-158
57117-41-6	LCS 1,2,3,7,8-PeCDF	1.00	0.919	91.9	80-134
57117-31-4	LCS 2,3,4,7,8-PeCDF	1.00	0.995	99.5	68-160
70648-26-9	LCS 1,2,3,4,7,8-HxCDF	1.00	0.973	97.3	72-134
57117-44-9	LCS 1,2,3,6,7,8-HxCDF	1.00	0.976	97.6	84-130
60851-34-5	LCS 2,3,4,6,7,8-HxCDF	1.00	0.951	95.1	70-156
72918-21-9	LCS 1,2,3,7,8,9-HxCDF	1.00	0.959	95.9	78-130
67562-39-4	LCS 1,2,3,4,6,7,8-HpCDF	1.00	1.02	102	82-122
55673-89-7	LCS 1,2,3,4,7,8,9-HpCDF	1.00	0.962	96.2	78-138
39001-02-0	LCS 1,2,3,4,6,7,8,9-OCDF	2.00	1.90	95.1	63-170

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-14372

Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 42567

Matrix: WATER

Lab Sample ID: 12025527

Instrument: HRP750

Analysis Date: 12/14/2019 13:03

Dilution: 1

Analyst: MJC

Prep Batch ID:42567

Batch ID: 42571

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD 2,3,7,8-TCDD	0.200	0.207	104	67-158	0.668	0-20
40321-76-4	LCSD 1,2,3,7,8-PeCDD	1.00	1.06	106	70-142	0.287	0-20
39227-28-6	LCSD 1,2,3,4,7,8-HxCDD	1.00	1.02	102	70-164	0.592	0-20
57653-85-7	LCSD 1,2,3,6,7,8-HxCDD	1.00	1.03	103	74-134	0.614	0-20
19408-74-3	LCSD 1,2,3,7,8,9-HxCDD	1.00	1.09	109	64-162	0.366	0-20
35822-46-9	LCSD 1,2,3,4,6,7,8-HpCDD	1.00	0.921	92.1	70-140	1.41	0-20
3268-87-9	LCSD 1,2,3,4,6,7,8,9-OCDD	2.00	2.02	101	78-144	0.901	0-20
51207-31-9	LCSD 2,3,7,8-TCDF	0.200	0.174	87	75-158	2.73	0-20
57117-41-6	LCSD 1,2,3,7,8-PeCDF	1.00	0.906	90.6	80-134	1.42	0-20
57117-31-4	LCSD 2,3,4,7,8-PeCDF	1.00	1.01	101	68-160	1.29	0-20
70648-26-9	LCSD 1,2,3,4,7,8-HxCDF	1.00	0.969	96.9	72-134	0.443	0-20
57117-44-9	LCSD 1,2,3,6,7,8-HxCDF	1.00	0.993	99.3	84-130	1.69	0-20
60851-34-5	LCSD 2,3,4,6,7,8-HxCDF	1.00	0.948	94.8	70-156	0.305	0-20
72918-21-9	LCSD 1,2,3,7,8,9-HxCDF	1.00	0.957	95.7	78-130	0.242	0-20
67562-39-4	LCSD 1,2,3,4,6,7,8-HpCDF	1.00	1.01	101	82-122	1.18	0-20
55673-89-7	LCSD 1,2,3,4,7,8,9-HpCDF	1.00	0.923	92.3	78-138	4.16	0-20
39001-02-0	LCSD 1,2,3,4,6,7,8,9-OCDF	2.00	1.89	94.5	63-170	0.580	0-20

Method Blank Summary

Page 1 of 1

SDG Number: 570-14372
Client ID: MB for batch 42567
Lab Sample ID: 12025525
Column:

Client: CALS001
Instrument ID: HRP750
Prep Date: 10-DEC-19

Matrix: WATER
Data File: A14DEC19A-4
Analyzed: 12/14/19 13:51

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 42567	12025526	A12DEC19A_2-1	12/13/19	0025
02 LCSD for batch 42567	12025527	A12DEC19A_2-2	12/13/19	0112
03 LCS for batch 42567	12025526	A14DEC19A-2	12/14/19	1215
04 LCSD for batch 42567	12025527	A14DEC19A-3	12/14/19	1303
05 A2BMP0007S018	15901001	A14DEC19A-14	12/14/19	2152
06 FBQW1870Q001	15901002	A14DEC19A-15	12/14/19	2241

Sample Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372	Client: CALS001	Project: CALS00214
Lab Sample ID: 15901001	Date Collected: 11/28/2019 08:13	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: A2BMP0007S018		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 21:52	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-14		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 794.7 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.000652	ng/L	0.000652	0.0126
40321-76-4	1,2,3,7,8-PeCDD	U	0.000702	ng/L	0.000702	0.0629
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00103	ng/L	0.00103	0.0629
57653-85-7	1,2,3,6,7,8-HxCDD	JK	0.00131	ng/L	0.000982	0.0629
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.00131	ng/L	0.00102	0.0629
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	0.0215	ng/L	0.00118	0.0629
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.199	ng/L	0.00249	0.126
51207-31-9	2,3,7,8-TCDF	U	0.000549	ng/L	0.000549	0.0126
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.000453	ng/L	0.000367	0.0629
57117-31-4	2,3,4,7,8-PeCDF	U	0.00038	ng/L	0.00038	0.0629
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000415	ng/L	0.000415	0.0629
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000433	ng/L	0.000433	0.0629
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000408	ng/L	0.000408	0.0629
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000574	ng/L	0.000574	0.0629
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.0034	ng/L	0.000574	0.0629
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00073	ng/L	0.00073	0.0629
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	0.00571	ng/L	0.00132	0.126
41903-57-5	Total TeCDD	U	0.000652	ng/L	0.000652	0.0126
36088-22-9	Total PeCDD	U	0.000702	ng/L	0.000702	0.0629
34465-46-8	Total HxCDD	JK	0.00617	ng/L	0.000982	0.0629
37871-00-4	Total HpCDD	J	0.0406	ng/L	0.00118	0.0629
30402-14-3	Total TeCDF	U	0.000549	ng/L	0.000549	0.0126
30402-15-4	Total PeCDF	BJK	0.000453	ng/L	0.000365	0.0629
55684-94-1	Total HxCDF	BJ	0.00148	ng/L	0.000408	0.0629
38998-75-3	Total HpCDF	BJ	0.00657	ng/L	0.000574	0.0629
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000585	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00149	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		2.43	2.52	ng/L	96.5	(25%-164%)
13C-1,2,3,7,8-PeCDD		2.43	2.52	ng/L	96.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		2.19	2.52	ng/L	87.2	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		2.17	2.52	ng/L	86.3	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		2.33	2.52	ng/L	92.7	(23%-140%)
13C-OCDD		3.92	5.03	ng/L	77.9	(17%-157%)
13C-2,3,7,8-TCDF		2.47	2.52	ng/L	98.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		2.72	2.52	ng/L	108	(24%-185%)
13C-2,3,4,7,8-PeCDF		2.43	2.52	ng/L	96.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		2.12	2.52	ng/L	84.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		2.11	2.52	ng/L	83.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		2.26	2.52	ng/L	89.9	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		2.26	2.52	ng/L	89.8	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372	Client: CALS001	Project: CALS00214
Lab Sample ID: 15901001	Date Collected: 11/28/2019 08:13	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: A2BMP0007S018		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 21:52	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-14		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 794.7 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			2.00	2.52	ng/L	79.5 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			2.21	2.52	ng/L	87.7 (26%-138%)
37Cl-2,3,7,8-TCDD			0.247	0.252	ng/L	98.0 (35%-197%)

Comments:
B The target analyte was detected in the associated blank.
J Value is estimated
K Estimated Maximum Possible Concentration
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld
 Last Altered: Tuesday, December 17, 2019 13:59:19 Eastern Standard Time
 Printed: Tuesday, December 17, 2019 13:59:47 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.11e2	1.17e2	2.27e2	31.01	0.997	0.95	YES	0.010	0.0259	2.45e3	2067	1.2	6.25e3	1660	3.8	db	bd
2	12378-PeCDD	7.96e1	5.76e1	1.37e2	34.01	1.000	1.38	NO	0.010	0.0279	2.07e3	2023	1.0	2.62e3	1594	1.6	bb	bb
3	123478-HxCDD	1.92e2	2.23e2	4.15e2	36.58	1.000	0.86	YES	0.030	0.0409	4.70e3	2491	1.9	4.42e3	1943	2.3	dd	dd
4	123678-HxCDD	4.97e2	2.95e2	7.91e2	36.69	1.001	1.68	YES	0.052	0.0390	1.20e4	2491	4.8	5.06e3	1943	2.6	MM	db
5	123789-HxCDD	4.20e2	3.27e2	7.47e2	36.91	1.007	1.28	NO	0.052	0.0405	8.11e3	2491	3.3	7.35e3	1943	3.8	MM	db
6	1234678-HpCDD	5.58e3	4.82e3	1.04e4	39.94	1.000	1.16	NO	0.854	0.0470	8.20e4	1606	51.1	8.61e4	1715	50.2	bb	bd
7	OCDD	3.47e4	3.75e4	7.22e4	44.12	1.000	0.92	NO	7.888	0.0989	4.45e5	2101	211.8	4.29e5	1917	223.6	bd	bb
8	2378-TCDF	3.01e2	1.39e2	4.41e2	33.24	1.001	2.16	YES	0.018	0.0146	1.04e4	1520	6.9	4.77e3	1891	2.5	bb	bb
9	12378-PeCDF							NO	0.0151			1520			1891			
10	23478-PeCDF							NO	0.0165			1270			1454			
11	123478-HxCDF							NO	0.0172			1270			1454			
12	123678-HxCDF							NO	0.0162			1270			1454			
13	234678-HxCDF							NO	0.0228			1270			1454			
14	123789-HxCDF							NO	0.0228	1.56e4		1509	10.4	2.69e4	741	36.2	bb	bb
15	1234678-HpCDF	1.03e3	9.87e2	2.02e3	38.70	1.000	1.05	NO	0.135	0.0228	1.56e4	1509	10.4	2.69e4	741	36.2	bb	bb
16	1234789-HpCDF							NO	0.0290			1509			741			
17	OCDF	1.21e3	1.21e3	2.42e3	44.42	1.007	0.99	NO	0.227	0.0523	1.54e4	1222	12.6	1.36e4	1254	10.8	bb	MM
18	13C-2378-TCDD	1.10e6	1.43e6	2.53e6	31.09	1.019	0.77	NO	96.541	0.0927	1.77e7	6641	2666.0	2.30e7	4704	4892.8	bb	bb
19	13C-12378-PeCDD	1.03e6	6.59e5	1.69e6	34.02	1.115	1.56	NO	96.524	0.0985	2.32e7	4512	5130.8	1.50e7	3515	4268.6	bb	bb
20	13C-123478-HxCDD	8.20e5	6.51e5	1.47e6	36.58	0.991	1.26	NO	87.173	0.144	1.61e7	8593	1872.4	1.29e7	8190	1572.6	bd	bd
21	13C-123678-HxCDD	8.90e5	7.11e5	1.60e6	36.67	0.993	1.25	NO	86.264	0.131	1.67e7	8593	1948.6	1.35e7	8190	1653.1	dd	dd
22	13C-1234678-HpCDD	6.01e5	5.71e5	1.17e6	39.93	1.082	1.05	NO	92.660	0.148	8.70e6	6744	1290.5	8.30e6	6208	1336.5	bb	bb
23	13C-OCDD	8.85e5	9.99e5	1.88e6	44.10	1.195	0.89	NO	155.777	0.160	9.89e6	7526	1305.7	1.10e7	5844	1879.6	bb	bb
24	13C-2378-TCDF	1.25e6	1.60e6	2.85e6	30.29	0.993	0.78	NO	98.055	0.113	1.46e7	9946	1472.4	1.87e7	5402	3460.1	bd	bb
25	13C-12378-PeCDF	1.55e6	9.88e5	2.54e6	33.22	1.089	1.57	NO	108.004	0.229	3.77e7	14060	2681.9	2.45e7	11001	2227.9	bd	bd
26	13C-23478-PeCDF	1.46e6	9.26e5	2.38e6	33.83	1.109	1.57	NO	96.402	0.217	3.50e7	14060	2486.9	2.19e7	11001	1994.4	bb	bb
27	13C-123478-HxCDF	6.00e5	1.16e6	1.76e6	35.88	0.972	0.52	NO	84.324	0.199	1.30e7	13878	933.3	2.51e7	14961	1674.5	bd	bd
28	13C-123678-HxCDF	6.71e5	1.30e6	1.97e6	35.98	0.975	0.52	NO	83.773	0.178	1.30e7	13878	937.2	2.47e7	14961	1653.3	dd	db
29	13C-234678-HxCDF	6.33e5	1.20e6	1.83e6	36.45	0.988	0.53	NO	89.892	0.205	1.28e7	13878	922.7	2.45e7	14961	1637.9	bd	bb
30	13C-123789-HxCDF	5.67e5	1.07e6	1.64e6	37.21	1.008	0.53	NO	89.845	0.229	9.75e6	13878	702.5	1.91e7	14961	1274.3	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld
 Last Altered: Tuesday, December 17, 2019 13:59:19 Eastern Standard Time
 Printed: Tuesday, December 17, 2019 13:59:47 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.98e5	9.04e5	1.30e6	38.69	1.048	0.44	NO	79.475	0.167	6.57e6	7702	853.0	1.47e7	11220	1309.4	bb	bb
32	13C-1234789-HpCDF	3.38e5	7.81e5	1.12e6	40.58	1.099	0.43	NO	87.733	0.215	4.87e6	7702	632.3	1.11e7	11220	988.8	bb	bb
33	13C-1234-TCDD	1.02e6	1.31e6	2.33e6	30.51	0.000	0.77	NO	100.000	0.105	1.18e7	6641	1782.7	1.52e7	4704	3224.7	bb	bb
34	13C-123789-HxCDD	1.05e6	8.34e5	1.88e6	36.91	0.000	1.26	NO	100.000	0.129	1.81e7	8593	2109.9	1.46e7	8190	1783.6	dd	dd
35	37Cl-2378-TCDD	2.42e5		2.42e5	31.12	1.020			9.801	0.0160	3.80e6	1848	2058.0				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Tuesday, December 17, 2019 13:59:19 Eastern Standard Time
Printed: Tuesday, December 17, 2019 13:59:47 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraiodoxins	5.73e1	5.92e1	1.17e2	29.39	0.97	YES	0.005	0.0259	2.24e3	2067	1.1	4.26e3	1660	2.6	bb	bb
2	Total-tetraiodoxins	6.76e1	5.74e1	1.25e2	29.24	1.18	YES	0.006	0.0259	2.86e3	2067	1.4	2.59e3	1660	1.6	bb	bb
3	Total-tetraiodoxins	6.19e1	6.45e1	1.26e2	27.80	0.96	YES	0.006	0.0259	3.88e3	2067	1.9	1.73e3	1660	1.0	bb	bb
4	Total-tetraiodoxins	8.07e1	5.47e1	1.35e2	26.42	1.48	YES	0.006	0.0259	2.56e3	2067	1.2	2.85e3	1660	1.7	bb	bb
5	Total-tetraiodoxins	9.09e1	5.28e1	1.44e2	26.24	1.72	YES	0.006	0.0259	2.76e3	2067	1.3	1.83e3	1660	1.1	bb	bb
6	Total-tetraiodoxins	5.82e1	4.10e2	4.68e2	31.15	0.14	YES	0.021	0.0259	1.92e3	2067	0.9	7.81e3	1660	4.7	bb	db
7	2378-TCDD	1.11e2	1.17e2	2.27e2	31.01	0.95	YES	0.010	0.0259	2.45e3	2067	1.2	6.25e3	1660	3.8	db	bd
8	Total-tetraiodoxins	3.75e2	8.76e1	4.62e2	30.29	4.28	YES	0.021	0.0259	6.67e3	2067	3.2	2.16e3	1660	1.3	db	bb

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	2.09e2	8.97e1	2.98e2	33.23	2.32	YES	0.021	0.0279	6.74e3	2023	3.3	4.22e3	1594	2.6	bd	bb
2	12378-PeCDD	7.96e1	5.76e1	1.37e2	34.01	1.38	NO	0.010	0.0279	2.07e3	2023	1.0	2.62e3	1594	1.6	bb	bb
3	Total-pentadioxins	6.75e1	9.71e1	1.65e2	33.76	0.69	YES	0.011	0.0279	3.52e3	2023	1.7	5.98e3	1594	3.7	bd	bb

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	2.48e2	1.14e2	3.62e2	37.22	2.18	YES	0.025	0.0401	6.41e3	2491	2.6	3.35e3	1943	1.7	db	bb
2	123789-HxCDD	4.20e2	3.27e2	7.47e2	36.91	1.28	NO	0.052	0.0405	8.11e3	2491	3.3	7.35e3	1943	3.8	MM	db
3	123678-HxCDD	4.97e2	2.95e2	7.91e2	36.69	1.68	YES	0.052	0.0390	1.20e4	2491	4.8	5.06e3	1943	2.6	MM	db
4	123478-HxCDD	1.92e2	2.23e2	4.15e2	36.58	0.86	YES	0.030	0.0409	4.70e3	2491	1.9	4.42e3	1943	2.3	dd	dd
5	Total-hexadioxins	7.19e2	6.00e2	1.32e3	36.04	1.20	NO	0.092	0.0401	1.32e4	2491	5.3	1.17e4	1943	6.0	dd	db
6	Total-hexadioxins	3.76e2	7.51e1	4.51e2	35.99	5.01	YES	0.031	0.0401	1.22e4	2491	4.9	3.10e3	1943	1.6	dd	bd
7	Total-hexadioxins	4.13e2	1.03e2	5.16e2	35.88	4.01	YES	0.036	0.0401	8.41e3	2491	3.4	3.94e3	1943	2.0	dd	db
8	Total-hexadioxins	6.90e1	6.46e1	1.34e2	35.83	1.07	NO	0.009	0.0401	3.32e3	2491	1.3	4.14e3	1943	2.1	bd	bd
9	Total-hexadioxins	4.05e2	2.98e2	7.03e2	35.37	1.36	NO	0.049	0.0401	9.85e3	2491	4.0	5.76e3	1943	3.0	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Tuesday, December 17, 2019 13:59:19 Eastern Standard Time
Printed: Tuesday, December 17, 2019 13:59:47 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	4.53e2	1.93e2	6.46e2	40.56	2.35	YES	0.053	0.0470	1.02e4	1606	6.3	5.20e3	1715	3.0	bb	bd
2	1234678-HpCDD	5.58e3	4.82e3	1.04e4	39.94	1.16	NO	0.854	0.0470	8.20e4	1606	51.1	8.61e4	1715	50.2	bb	bd
3	Total-heptadioxins	4.85e3	4.40e3	9.25e3	39.03	1.10	NO	0.759	0.0470	8.58e4	1606	53.4	7.08e4	1715	41.3	bb	bd
4	Total-heptadioxins	4.22e2	2.26e2	6.48e2	38.67	1.87	YES	0.053	0.0470	1.26e4	1606	7.9	4.41e3	1715	2.6	bb	bb

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	5.36e1	7.29e1	1.26e2	31.75	0.74	NO	0.005	0.0218	1.70e3	1335	1.3	2.10e3	1509	1.4	bb	dd
2	Total-tetrafurans	7.28e1	7.32e1	1.46e2	28.94	0.99	YES	0.005	0.0218	3.56e3	1335	2.7	2.81e3	1509	1.9	bb	db
3	Total-tetrafurans	7.98e1	5.06e1	1.30e2	27.56	1.58	YES	0.005	0.0218	2.61e3	1335	2.0	1.69e3	1509	1.1	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	2.93e2	1.18e2	4.11e2	31.79	2.47	YES	0.017	0.0145	6.01e3	1230	4.9	4.05e3	2105	1.9	bb	bd
2	Total-pentafurans (F1)	8.57e1	1.20e2	2.06e2	31.47	0.71	YES	0.009	0.0145	2.75e3	1230	2.2	5.07e3	2105	2.4	bb	bb
3	Total-pentafurans (F1)	8.10e2	1.33e2	9.43e2	30.92	6.11	YES	0.040	0.0145	1.33e4	1230	10.8	2.97e3	2105	1.4	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	7.56e1	7.79e1	1.54e2	34.15	0.97	YES	0.006	0.0149	4.21e3	1520	2.8	3.35e3	1891	1.8	bb	bb
2	12378-PeCDF	3.01e2	1.39e2	4.41e2	33.24	2.16	YES	0.018	0.0146	1.04e4	1520	6.9	4.77e3	1891	2.5	bb	bb
3	Total-pentafurans	8.52e1	1.65e2	2.50e2	32.67	0.52	YES	0.011	0.0149	4.43e3	1520	2.9	3.89e3	1891	2.1	bb	bb

HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	7.02e1	5.56e1	1.26e2	36.83	1.26	NO	0.006	0.0180	5.61e3	1270	4.4	3.90e3	1454	2.7	bb	bb
2	Total-hexafurans	3.09e2	2.62e2	5.72e2	35.51	1.18	NO	0.029	0.0180	5.55e3	1270	4.4	6.62e3	1454	4.6	MM	bb
3	Total-hexafurans	3.07e2	2.80e2	5.87e2	35.08	1.10	NO	0.030	0.0180	8.19e3	1270	6.4	7.11e3	1454	4.9	bb	bb
4	Total-hexafurans	1.38e2	1.19e2	2.57e2	34.94	1.16	NO	0.013	0.0180	4.33e3	1270	3.4	4.35e3	1454	3.0	bb	bb

Quantify Totals Report MassLynx 4.1
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Tuesday, December 17, 2019 13:59:19 Eastern Standard Time
 Printed: Tuesday, December 17, 2019 13:59:47 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

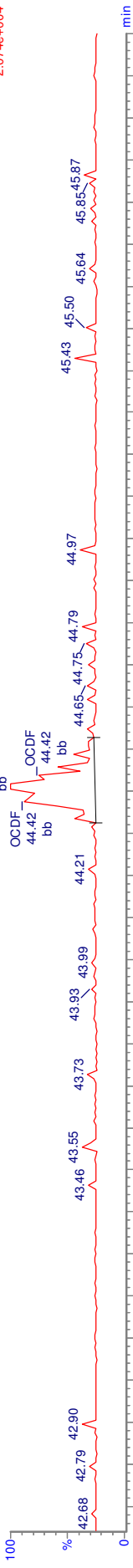
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	9.08e2	8.82e2	1.79e3	39.22	1.03	NO	0.126	0.0257	1.74e4	1509	11.5	1.37e4	741	18.5	bb	bb
2	1234678-HpCDF	1.03e3	9.87e2	2.02e3	38.70	1.05	NO	0.135	0.0228	1.56e4	1509	10.4	2.69e4	741	36.2	bb	bb

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

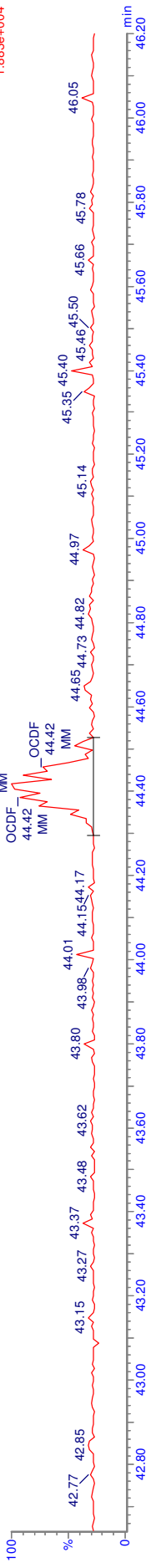
A14DEC19A-14
 42571 15901001-1

F5:Voltage SIR,EI+
 441.743
 2.074e+004

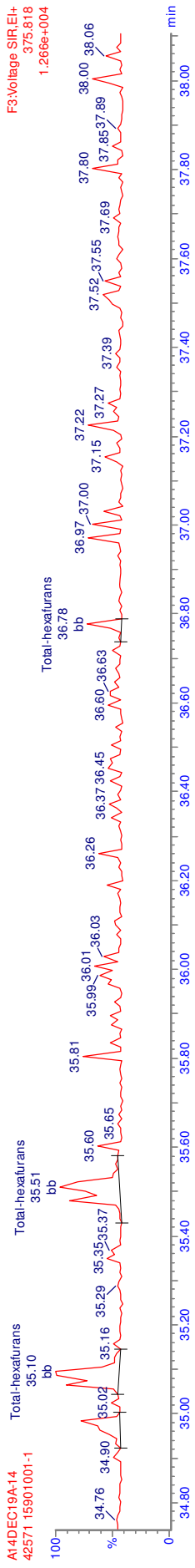
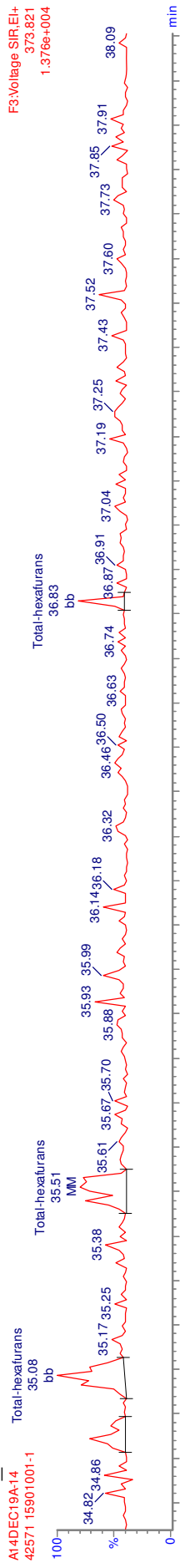


A14DEC19A-14
 42571 15901001-1

F5:Voltage SIR,EI+
 443.740
 1.883e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2



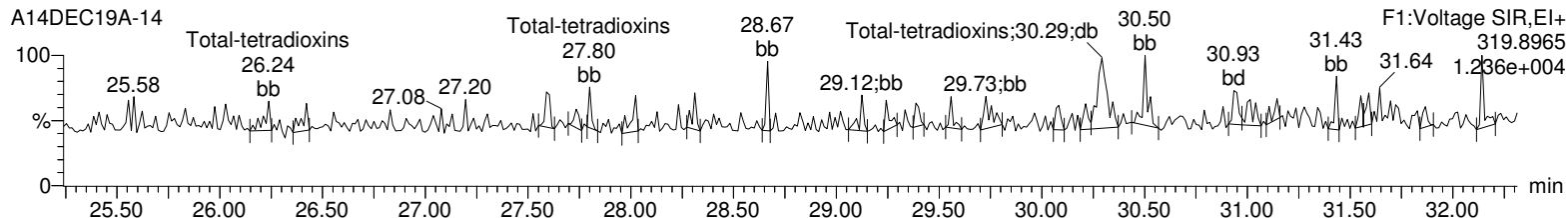
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

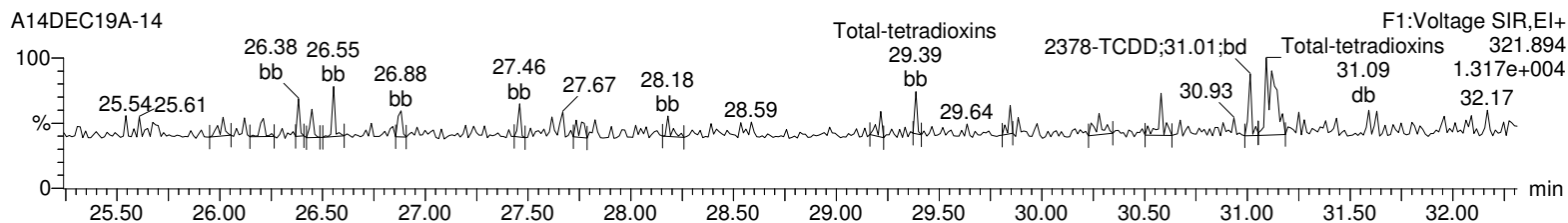
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

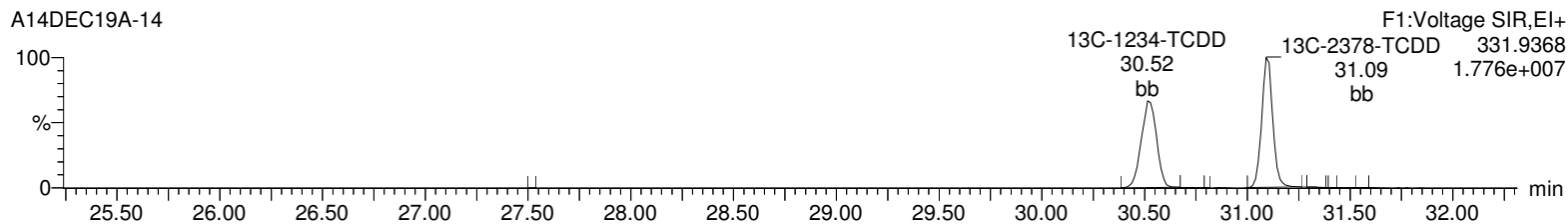
Total-tetradoxins



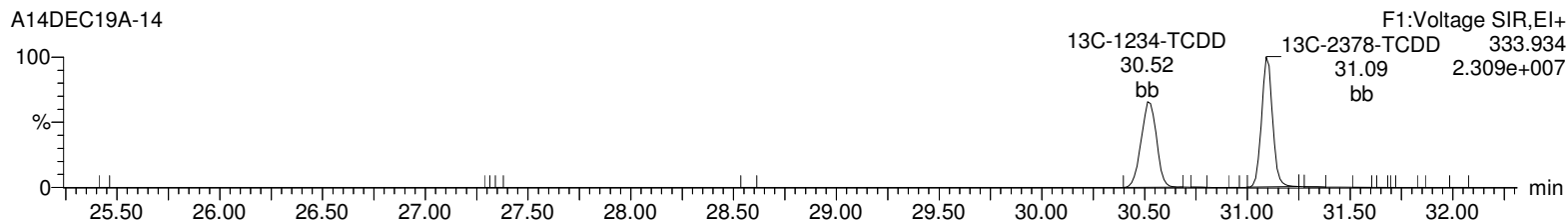
Total-tetradoxins



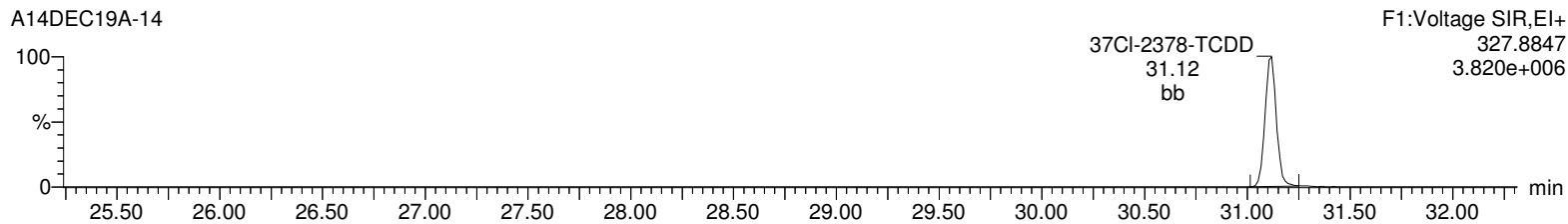
13C-2378-TCDD



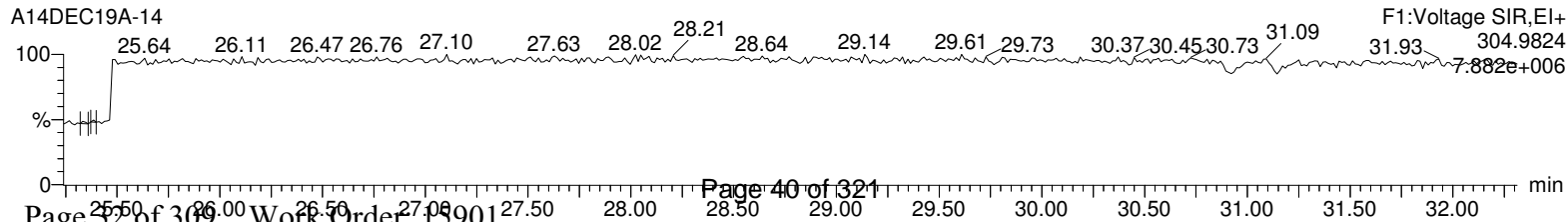
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



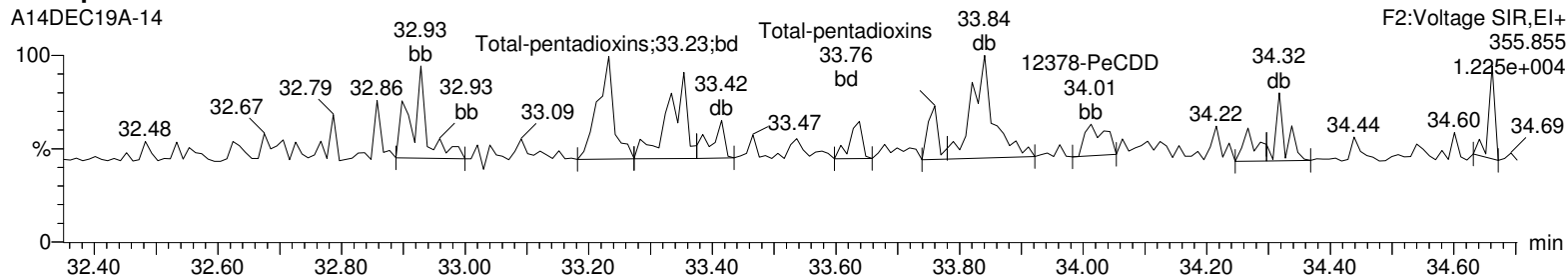
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

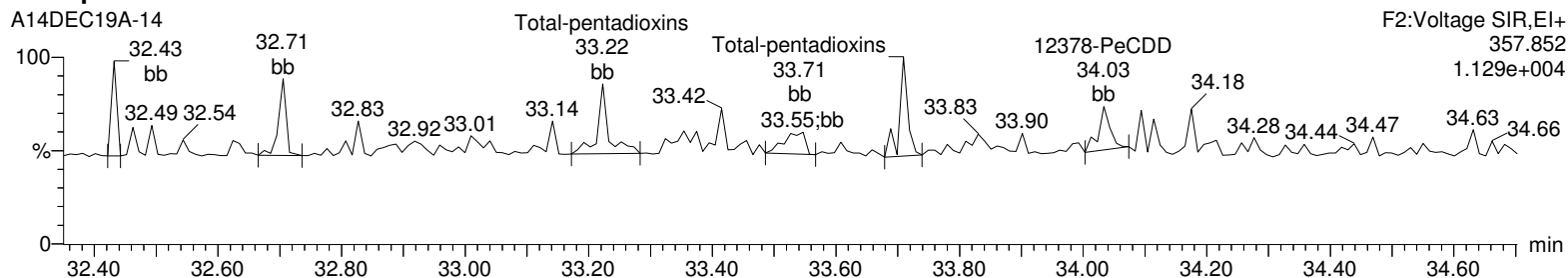
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

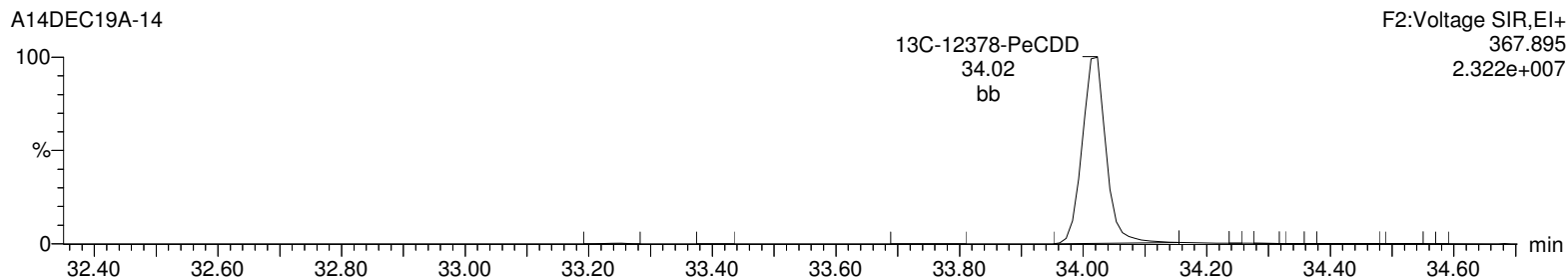
Total-pentadioxins



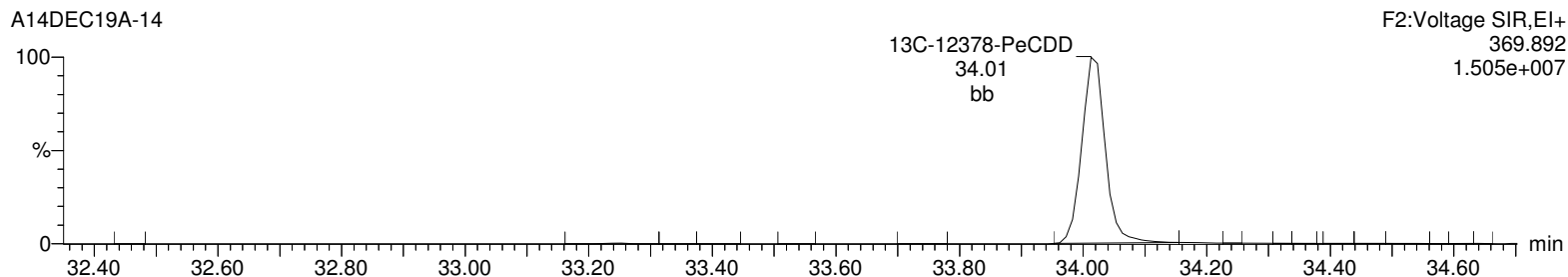
Total-pentadioxins



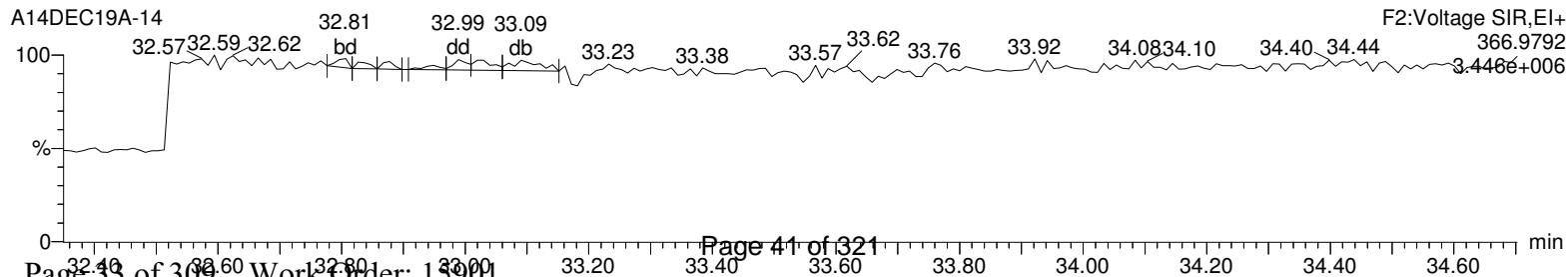
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



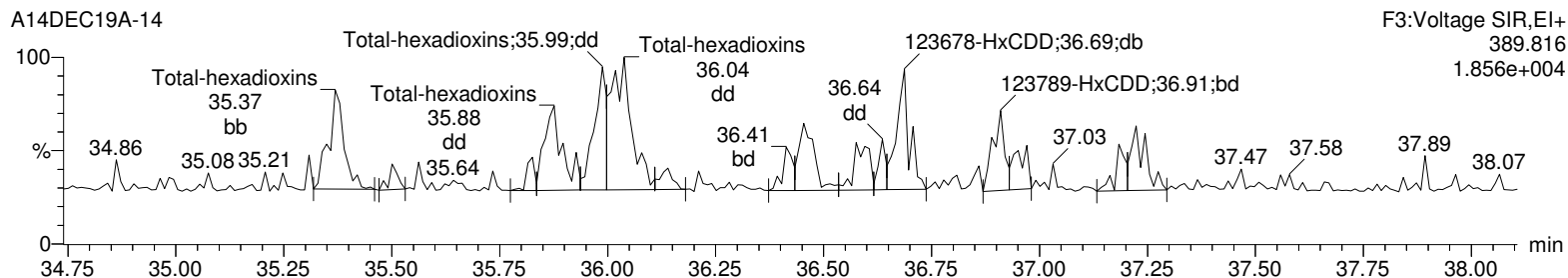
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

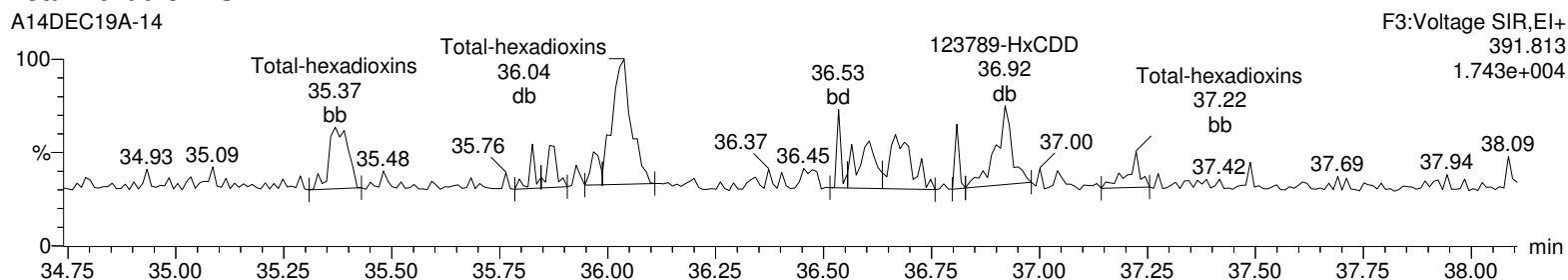
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

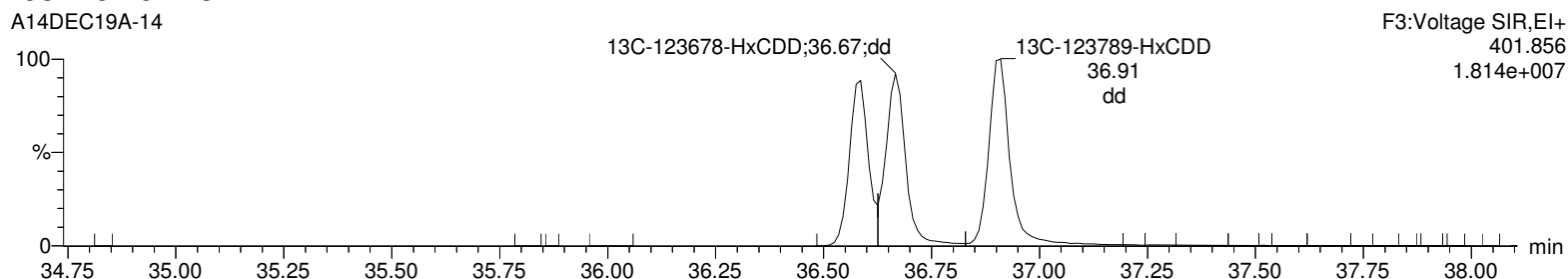
Total-hexadioxins



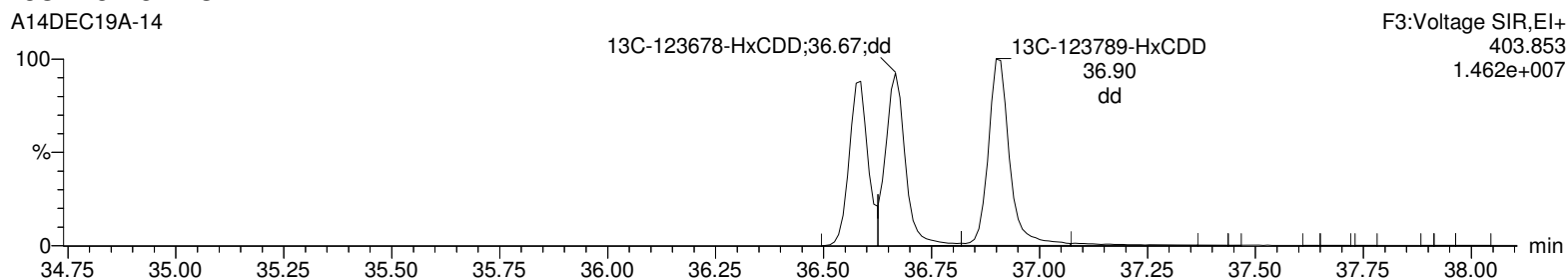
Total-hexadioxins



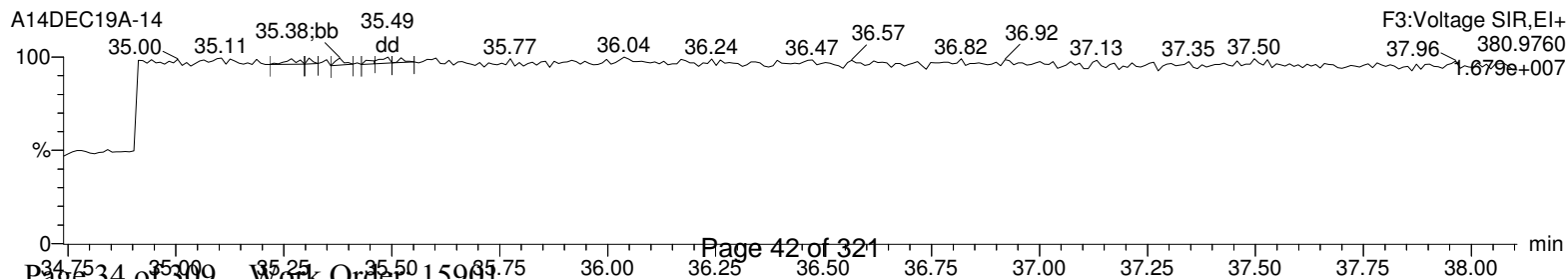
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



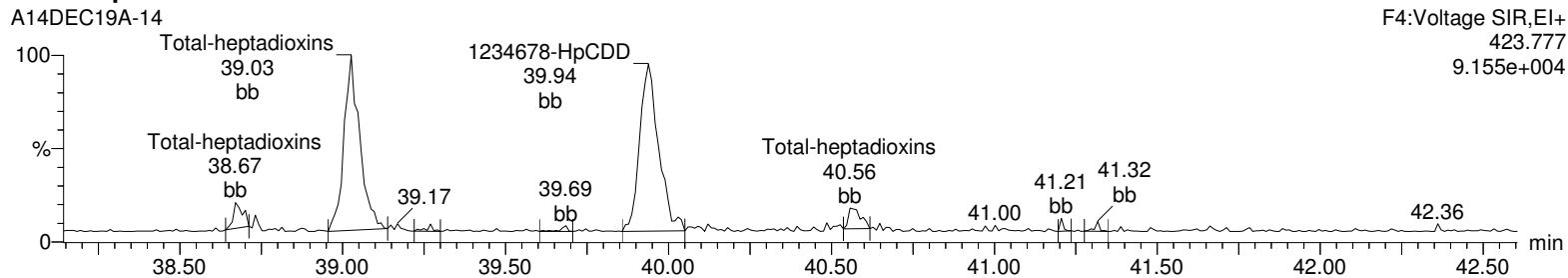
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

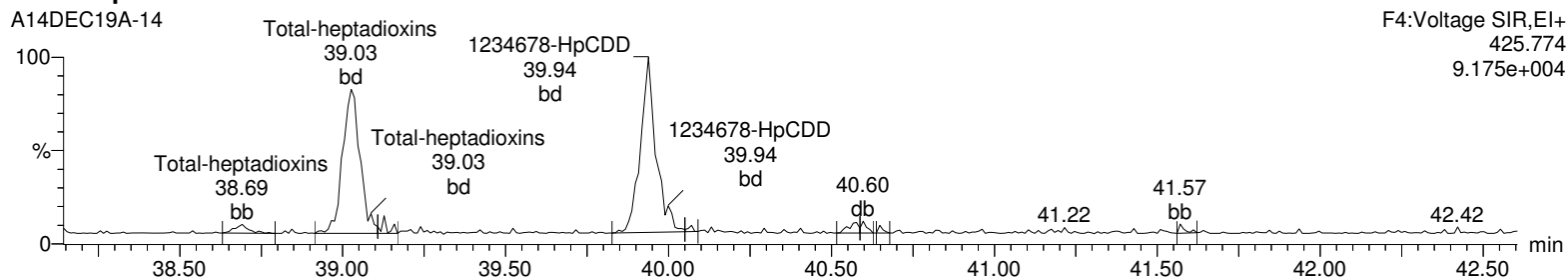
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

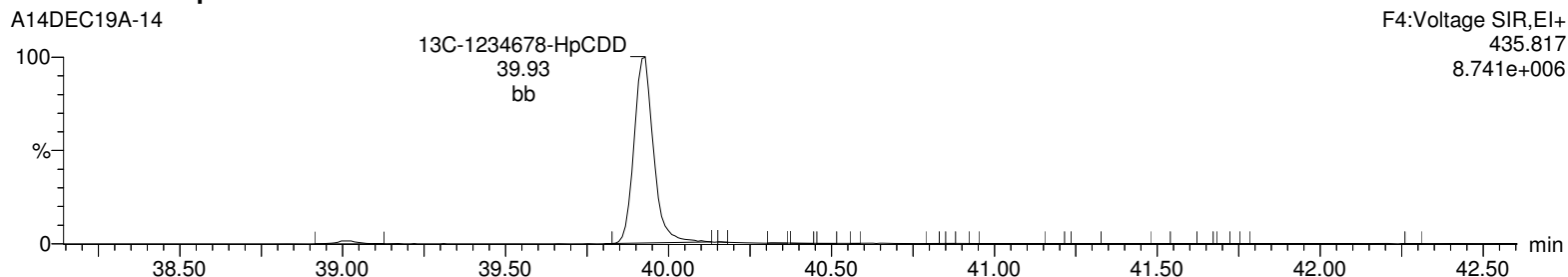
Total-heptadioxins



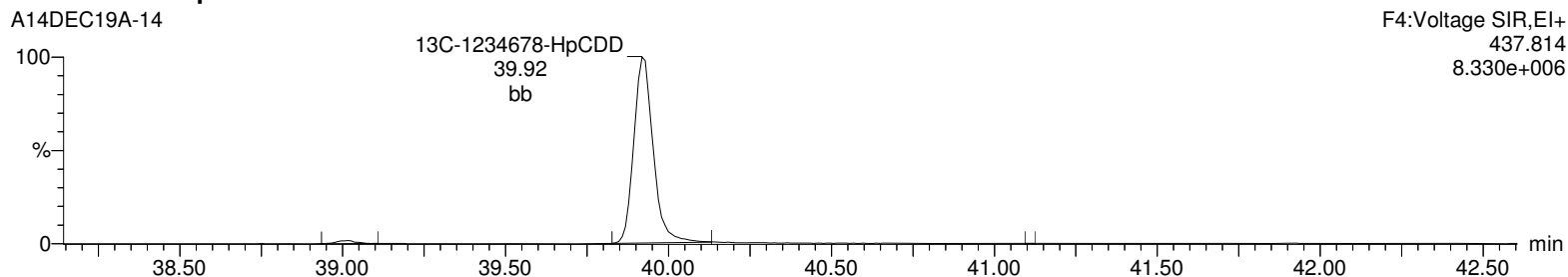
Total-heptadioxins



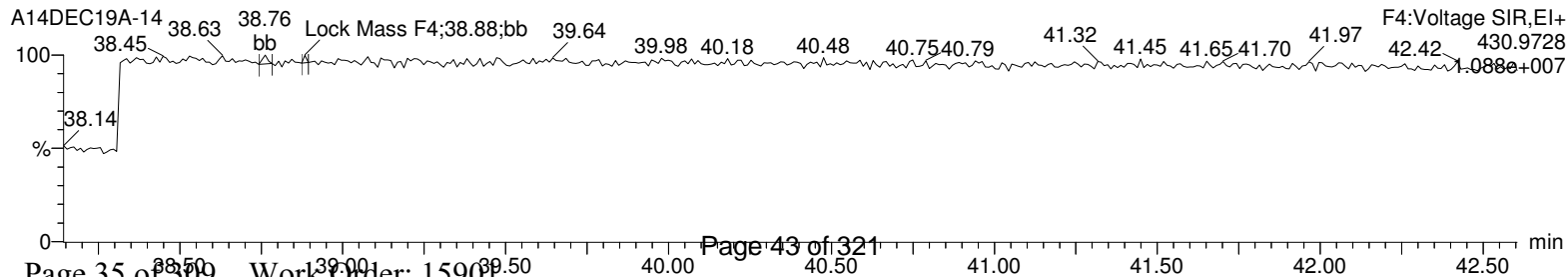
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

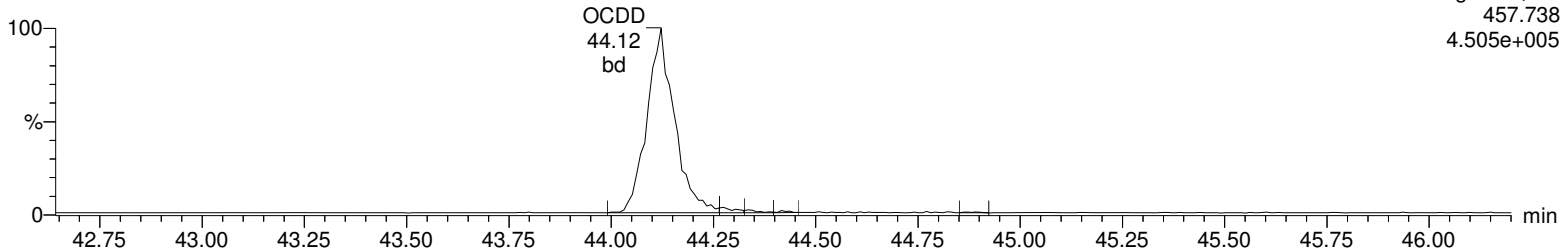
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDD

A14DEC19A-14

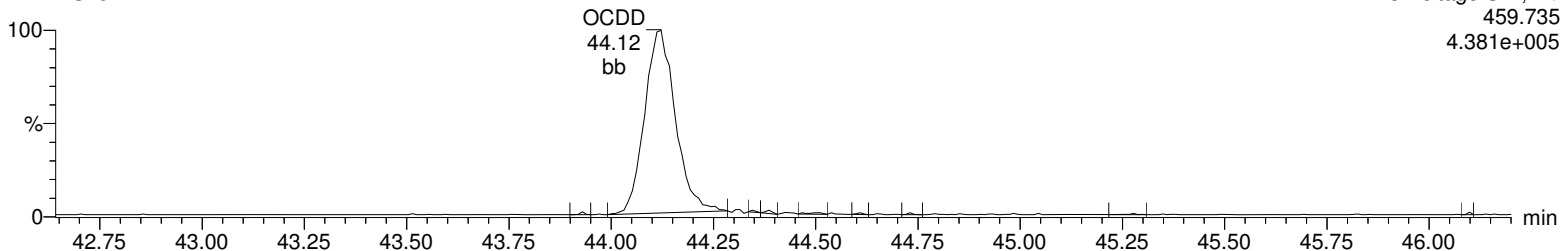
F5:Voltage SIR,EI+
457.738
4.505e+005



OCDD

A14DEC19A-14

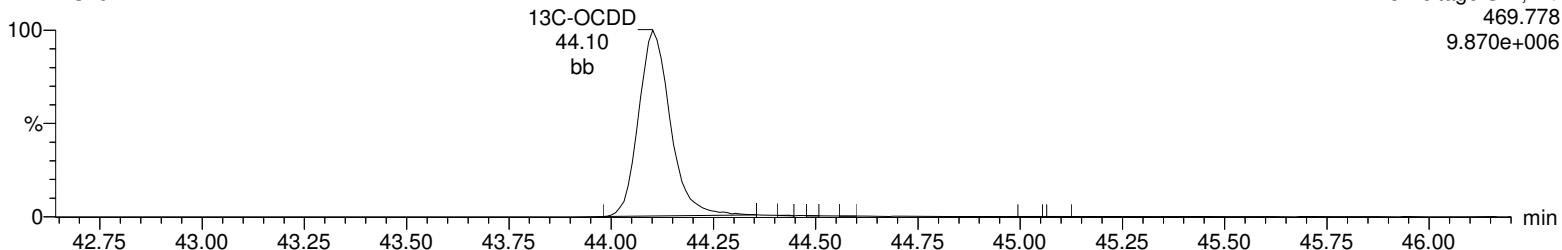
F5:Voltage SIR,EI+
459.735
4.381e+005



13C-OCDD

A14DEC19A-14

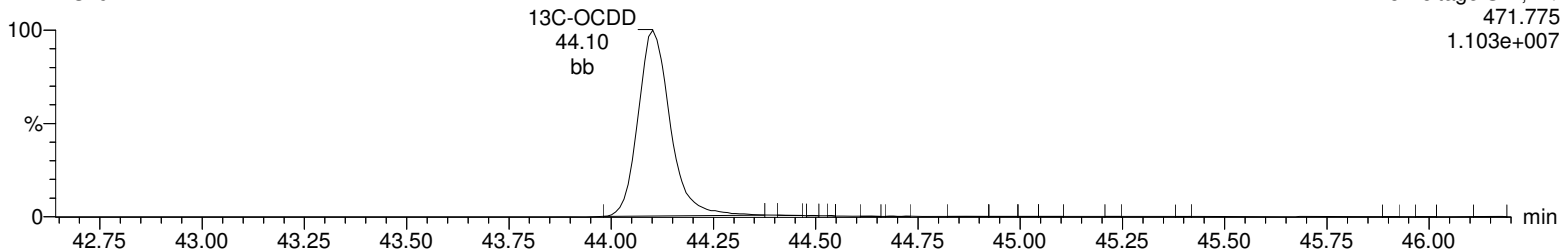
F5:Voltage SIR,EI+
469.778
9.870e+006



13C-OCDD

A14DEC19A-14

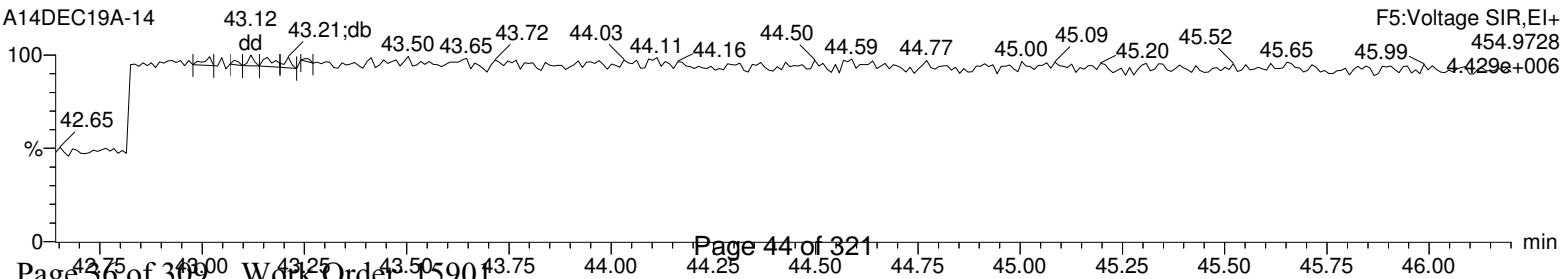
F5:Voltage SIR,EI+
471.775
1.103e+007



Lock Mass F5

A14DEC19A-14

F5:Voltage SIR,EI+
454.9728
4.429e+006



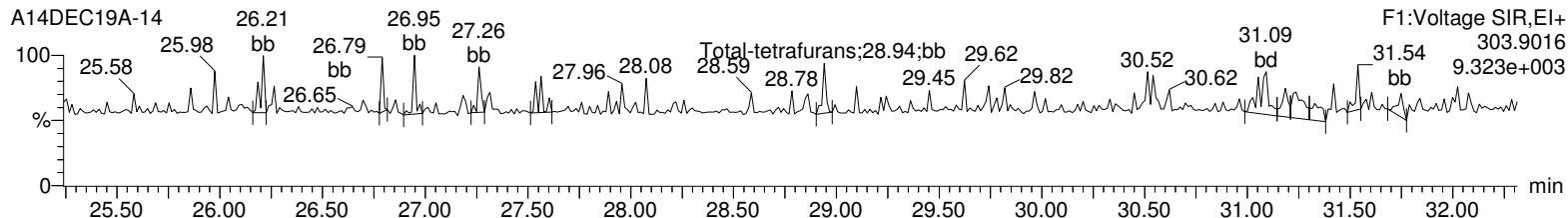
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

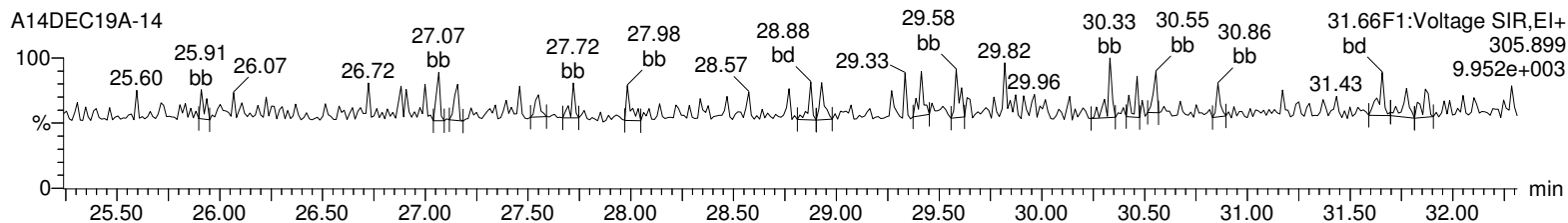
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

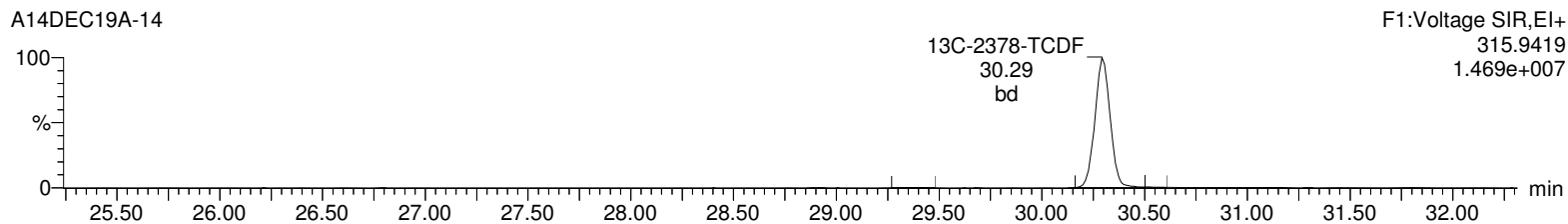
Total-tetrafurans



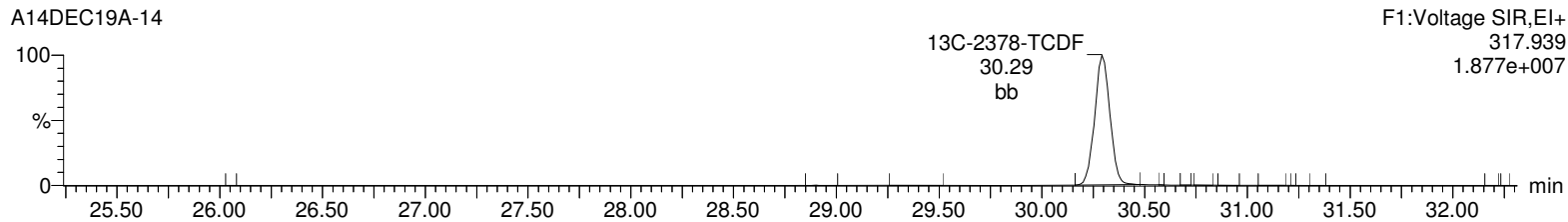
Total-tetrafurans



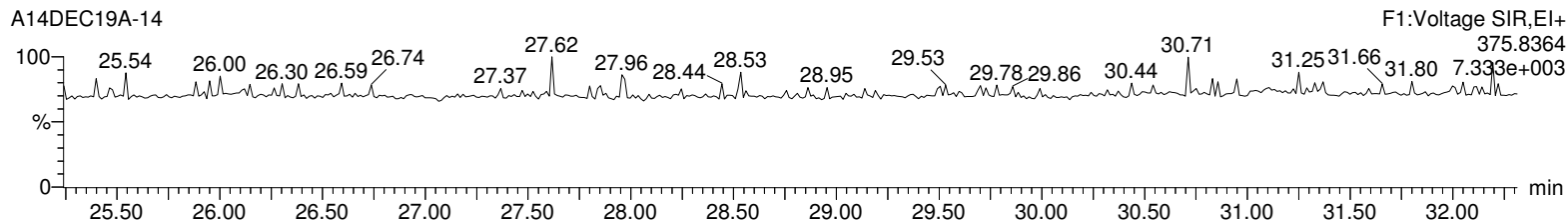
13C-2378-TCDF



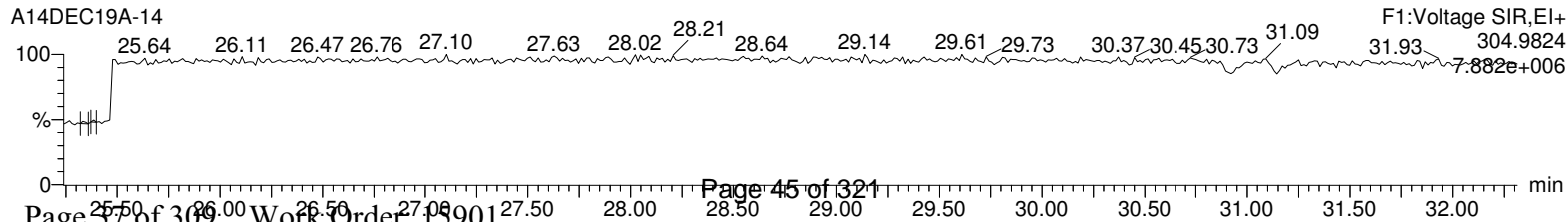
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

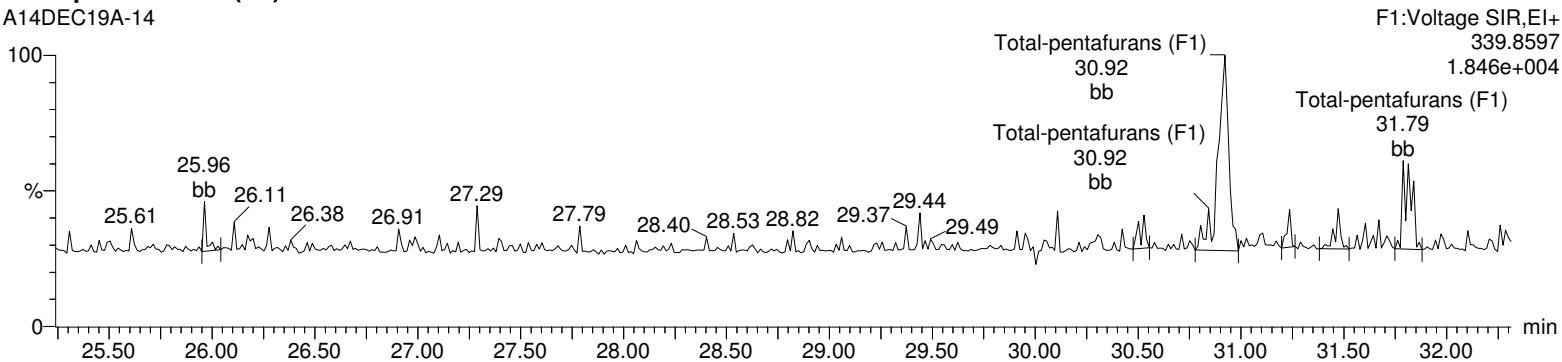
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

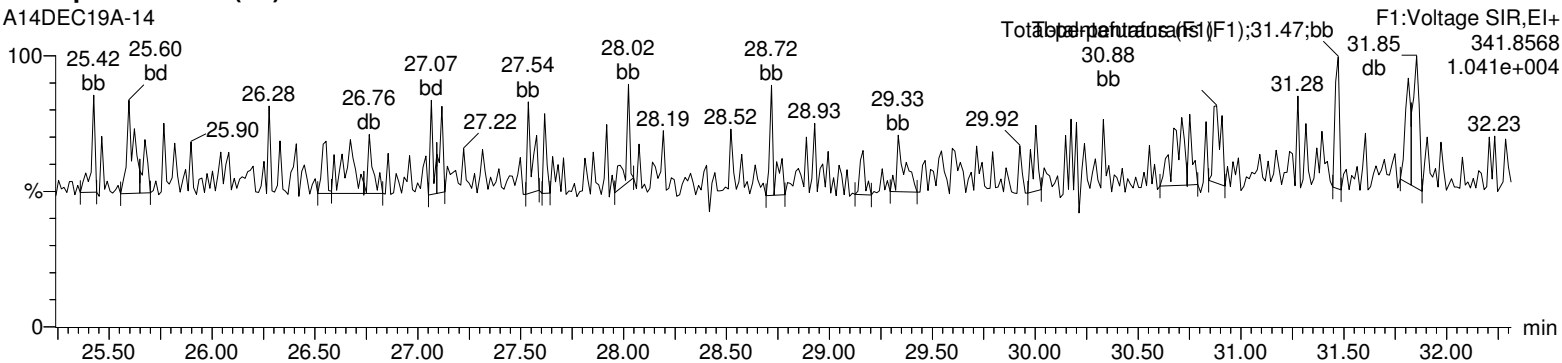
Total-pentafurans (F1)

A14DEC19A-14



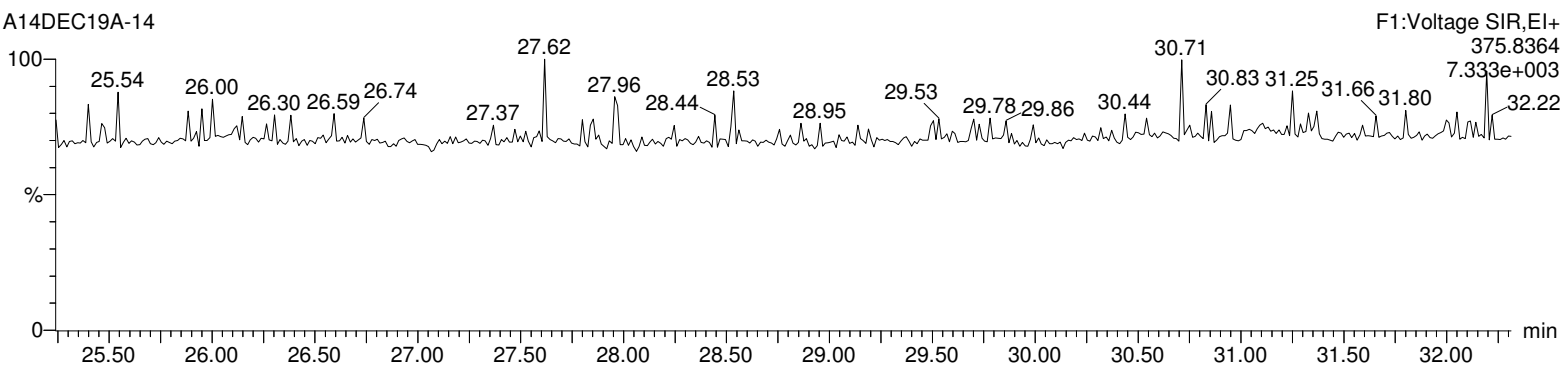
Total-pentafurans (F1)

A14DEC19A-14



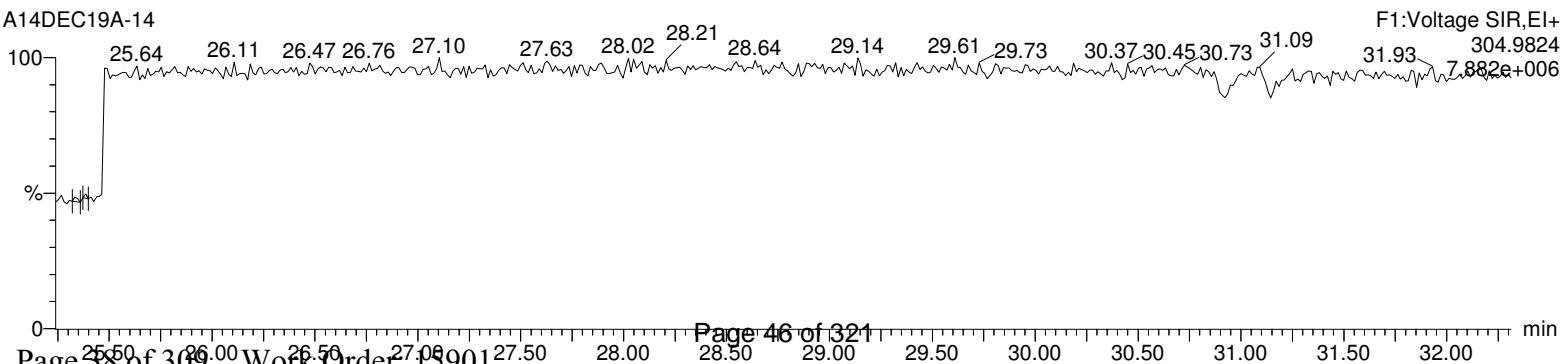
HxDPE

A14DEC19A-14



Lock Mass F1

A14DEC19A-14



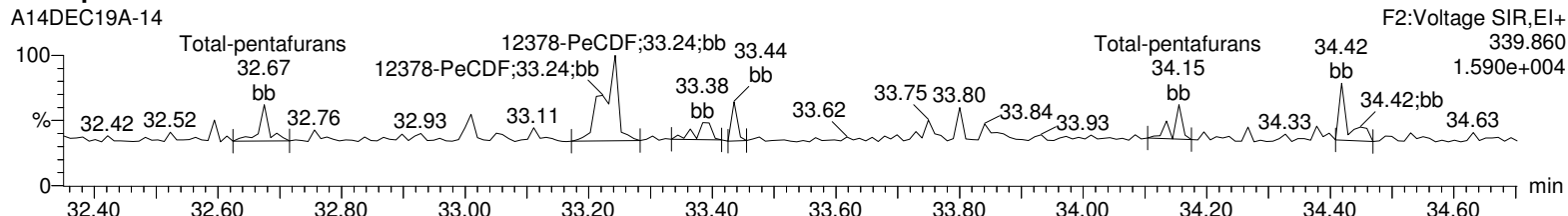
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

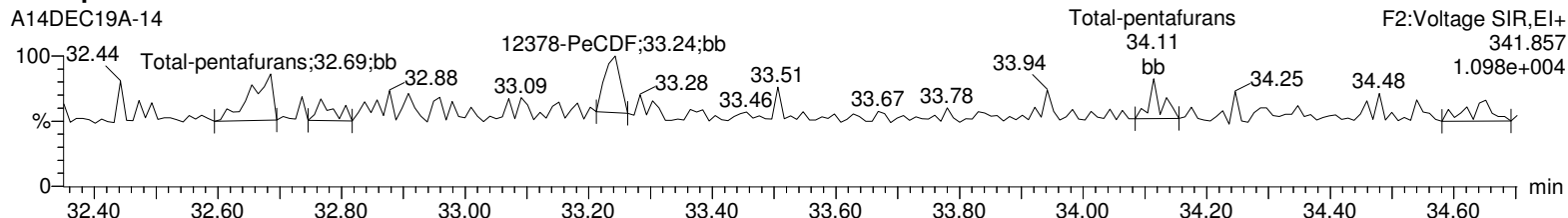
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

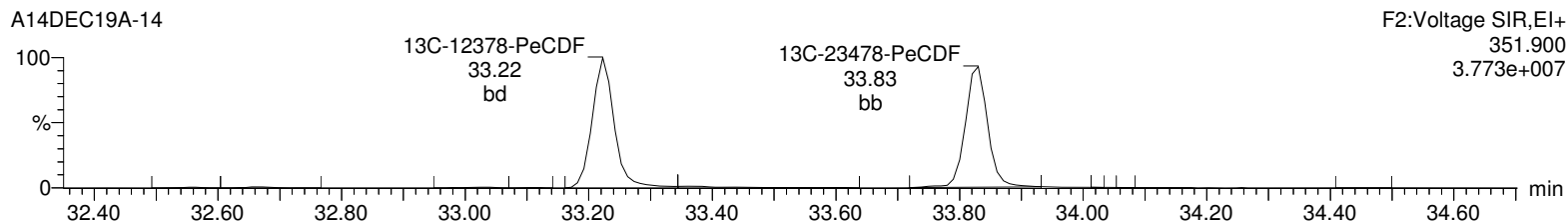
Total-pentafurans



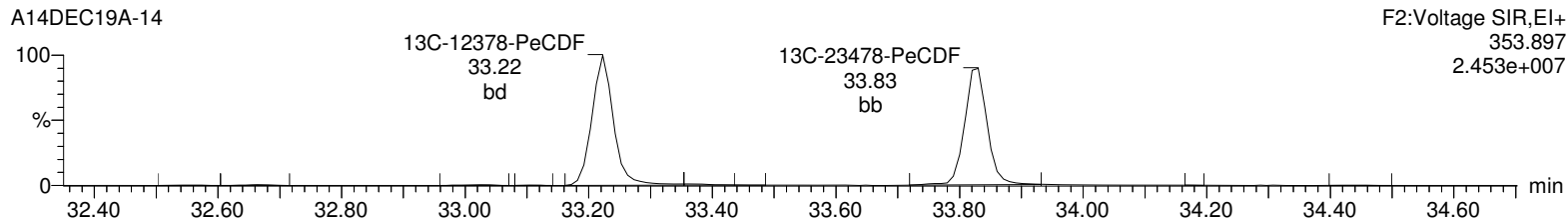
Total-pentafurans



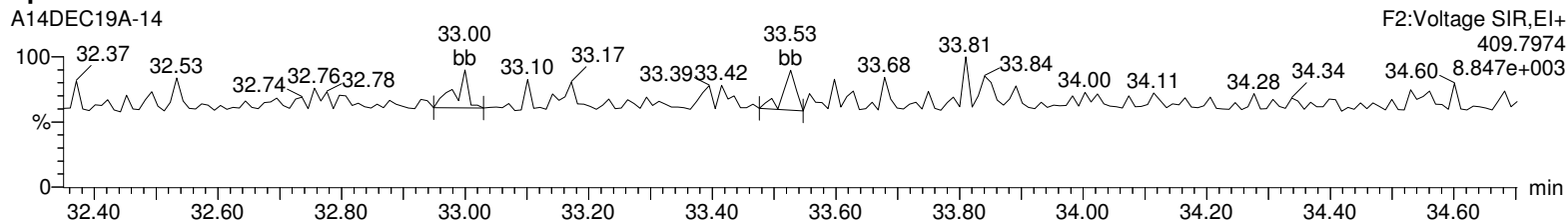
13C-12378-PeCDF



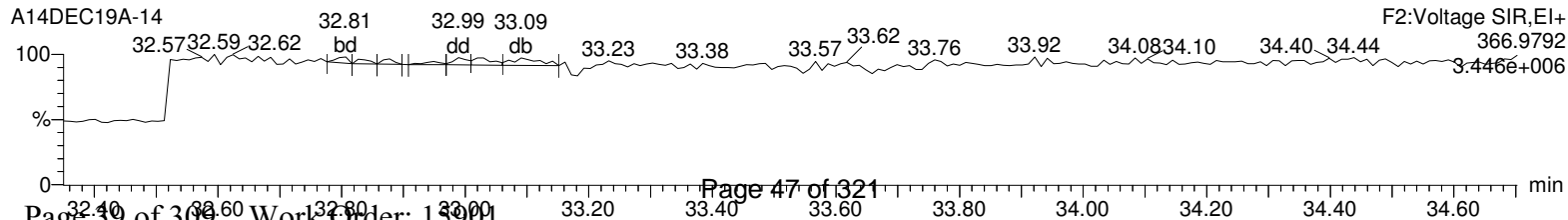
13C-12378-PeCDF



HpDPE



Lock Mass F2



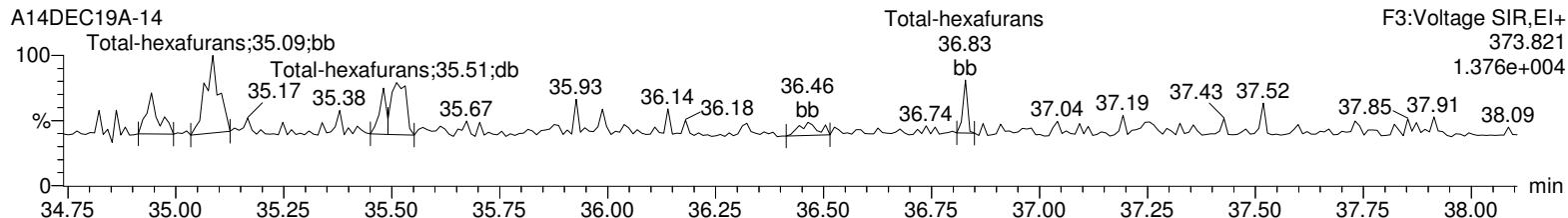
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

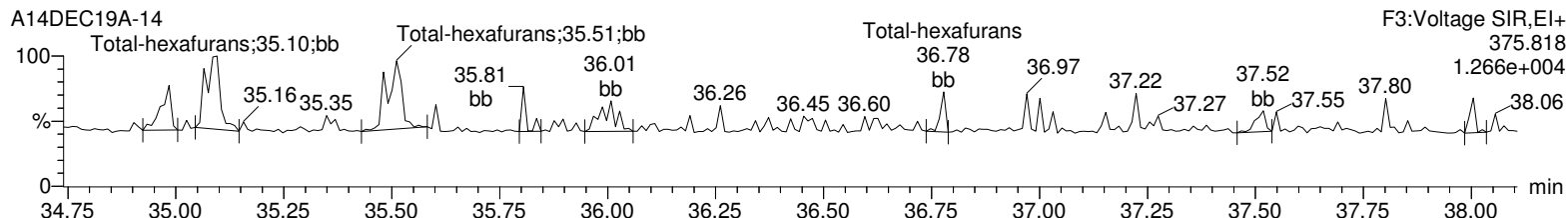
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

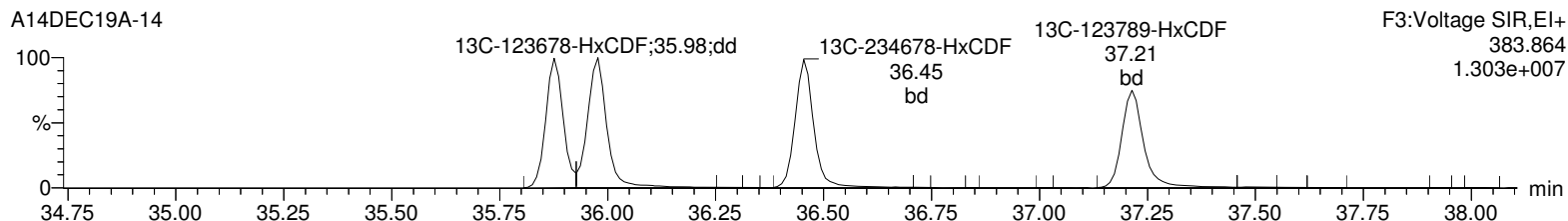
Total-hexafurans



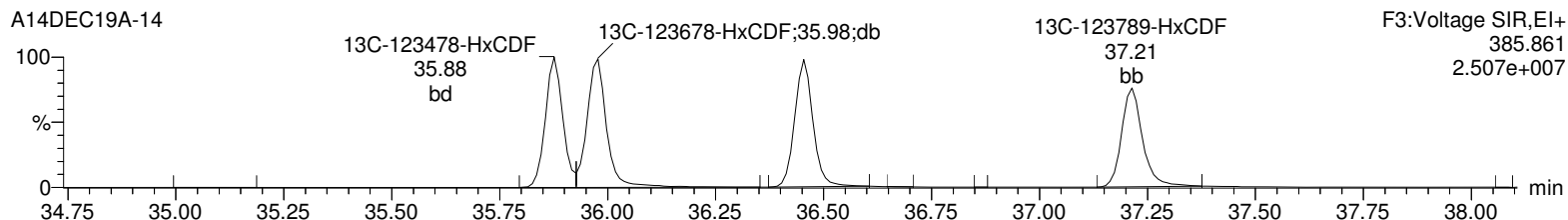
Total-hexafurans



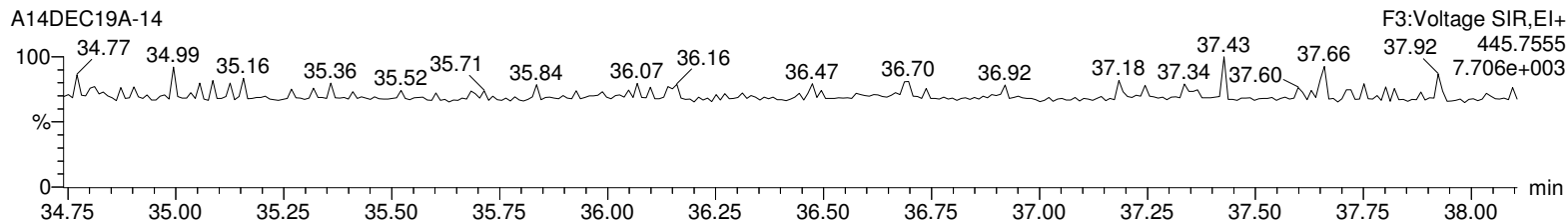
13C-123478-HxCDF



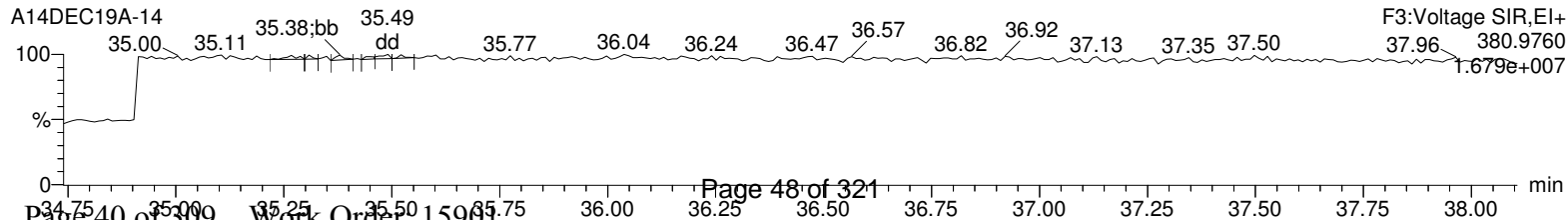
13C-123478-HxCDF



OcDPE



Lock Mass F3



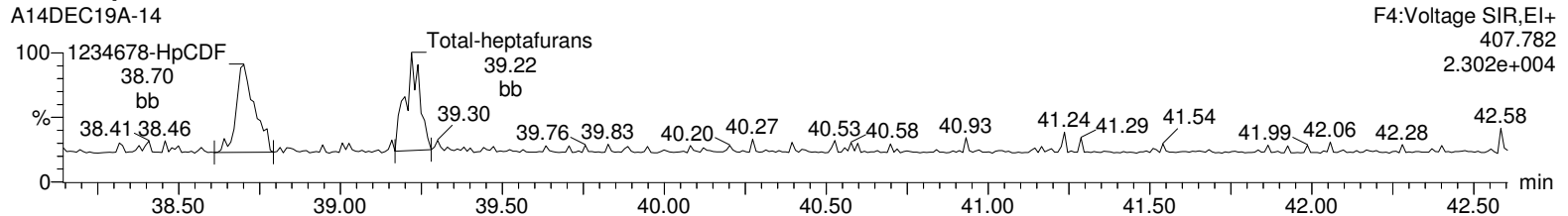
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

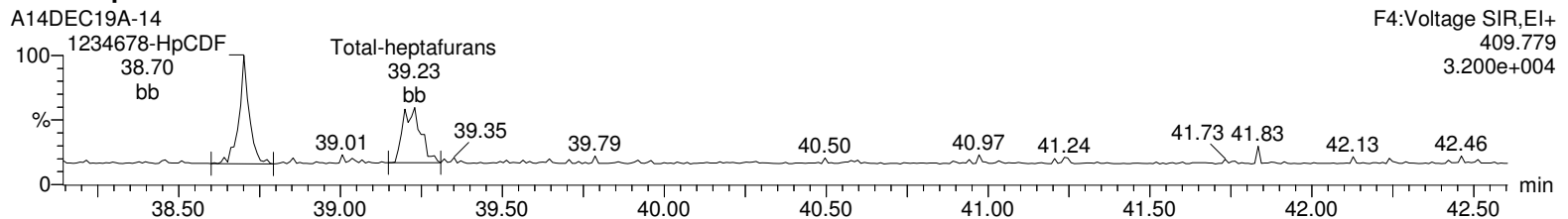
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

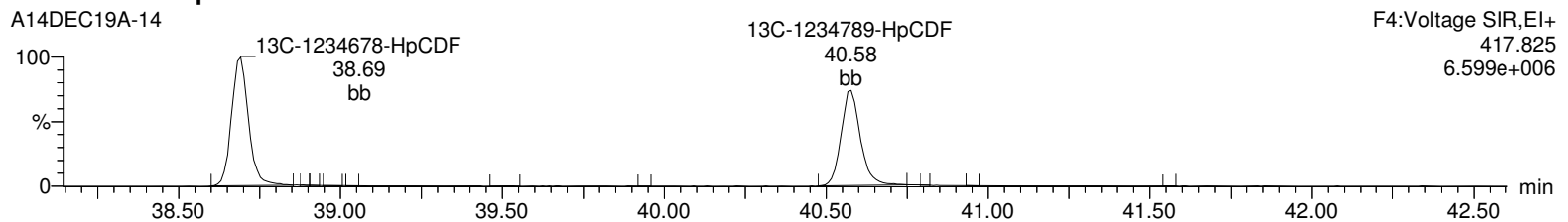
Total-heptafurans



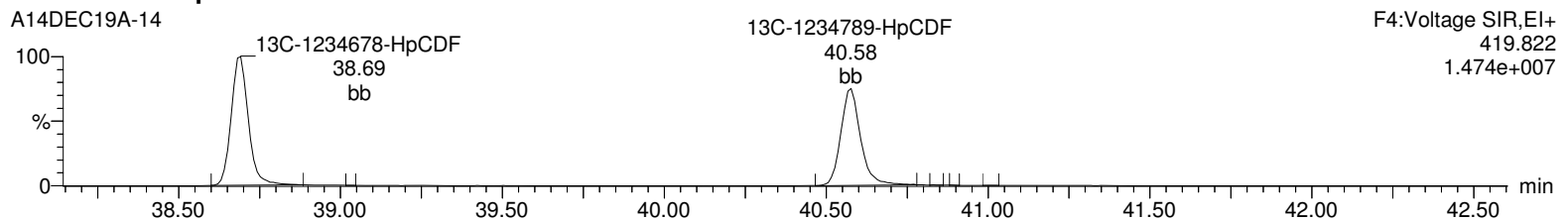
Total-heptafurans



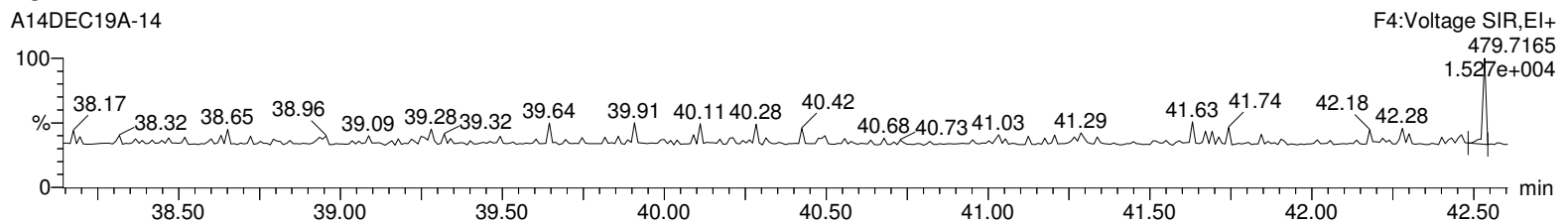
13C-1234678-HpCDF



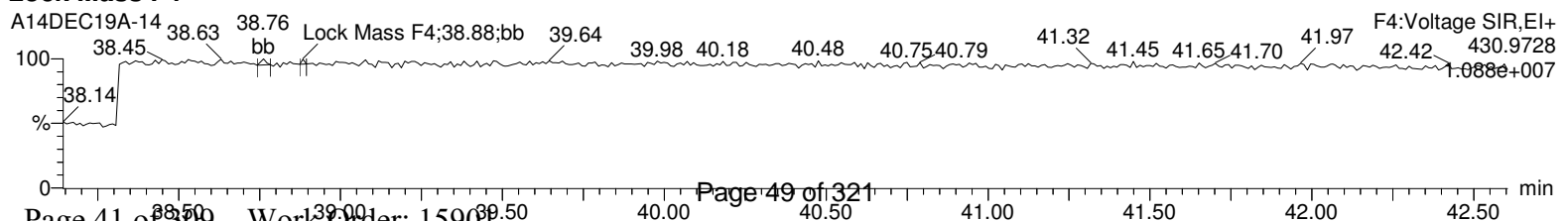
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-14, Date: 14-Dec-2019, Time: 21:52:51, ID: 15901001-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

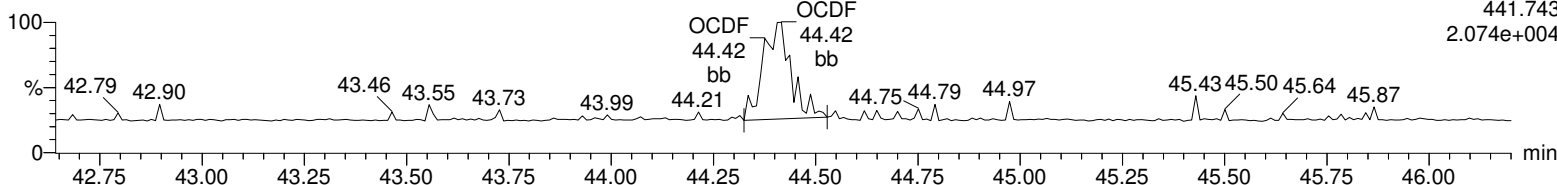
OCDF

A14DEC19A-14

F5:Voltage SIR,EI+

441.743

2.074e+004



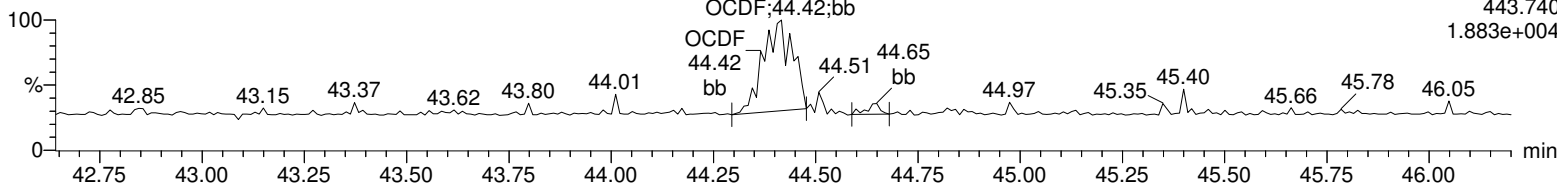
OCDF

A14DEC19A-14

F5:Voltage SIR,EI+

443.740

1.883e+004



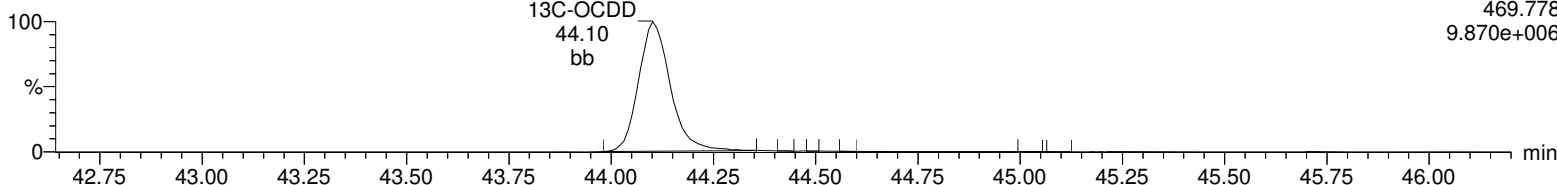
13C-OCDD

A14DEC19A-14

F5:Voltage SIR,EI+

469.778

9.870e+006



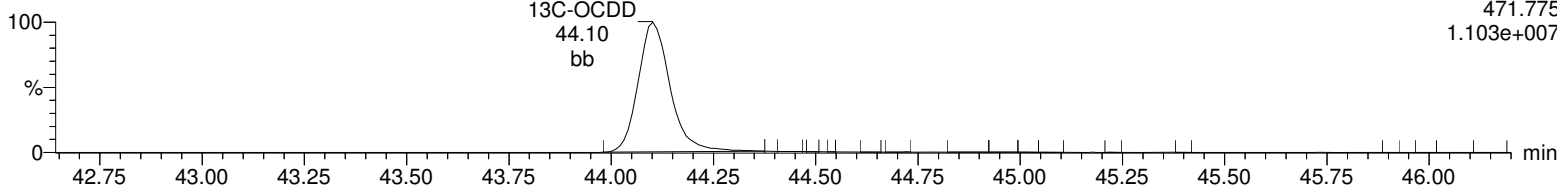
13C-OCDD

A14DEC19A-14

F5:Voltage SIR,EI+

471.775

1.103e+007



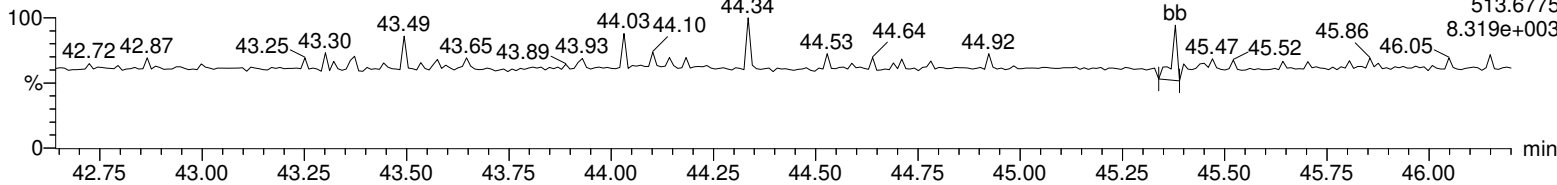
DeDPE

A14DEC19A-14

F5:Voltage SIR,EI+

513.6775

8.319e+003



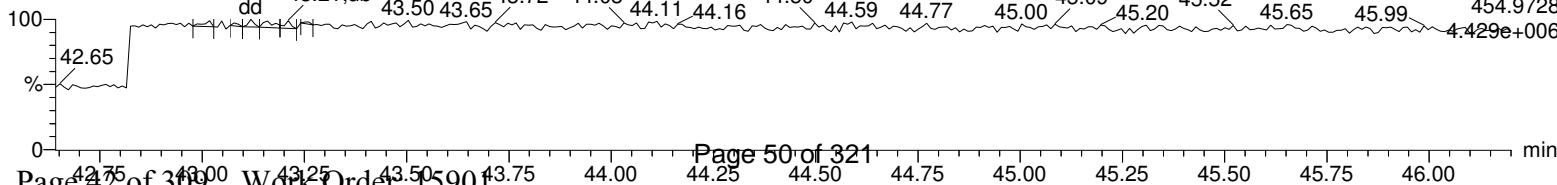
Lock Mass F5

A14DEC19A-14

F5:Voltage SIR,EI+

454.9728

4.429e+006



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372
Lab Sample ID: 15901002
Client Sample: 1613B Water
Client ID: FBQW1870Q001
Batch ID: 42571
Run Date: 12/14/2019 22:41
Data File: A14DEC19A-15
Prep Batch: 42567
Prep Date: 10-DEC-19

Client: CALS001
Date Collected: 11/28/2019 07:00
Date Received: 12/04/2019 11:00

Method: EPA Method 1613B
Analyst: MJC

Prep Method: SW846 3520C
Prep Aliquot: 941.2 mL

Project: CALS00214
Matrix: WATER

Prep Basis: As Received

Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.000542	ng/L	0.000542	0.0106
40321-76-4	1,2,3,7,8-PeCDD	U	0.000491	ng/L	0.000491	0.0531
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.000867	ng/L	0.000867	0.0531
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.000801	ng/L	0.000801	0.0531
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.000846	ng/L	0.000846	0.0531
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.000948	ng/L	0.000948	0.0531
3268-87-9	1,2,3,4,6,7,8,9-OCDD	U	0.00112	ng/L	0.00112	0.106
51207-31-9	2,3,7,8-TCDF	U	0.00048	ng/L	0.00048	0.0106
57117-41-6	1,2,3,7,8-PeCDF	U	0.000359	ng/L	0.000359	0.0531
57117-31-4	2,3,4,7,8-PeCDF	U	0.000374	ng/L	0.000374	0.0531
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000368	ng/L	0.000368	0.0531
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.00037	ng/L	0.00037	0.0531
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000344	ng/L	0.000344	0.0531
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000482	ng/L	0.000482	0.0531
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.000387	ng/L	0.000387	0.0531
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000525	ng/L	0.000525	0.0531
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.000569	ng/L	0.000569	0.106
41903-57-5	Total TeCDD	U	0.000542	ng/L	0.000542	0.0106
36088-22-9	Total PeCDD	U	0.000491	ng/L	0.000491	0.0531
34465-46-8	Total HxCDD	U	0.000801	ng/L	0.000801	0.0531
37871-00-4	Total HpCDD	U	0.000948	ng/L	0.000948	0.0531
30402-14-3	Total TeCDF	U	0.00048	ng/L	0.00048	0.0106
30402-15-4	Total PeCDF	U	0.000232	ng/L	0.000232	0.0531
55684-94-1	Total HxCDF	U	0.000344	ng/L	0.000344	0.0531
38998-75-3	Total HpCDF	U	0.000387	ng/L	0.000387	0.0531
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.00	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.000815	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.96	2.12	ng/L	92.1	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.98	2.12	ng/L	93.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.77	2.12	ng/L	83.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.80	2.12	ng/L	84.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.94	2.12	ng/L	91.2	(23%-140%)
13C-OCDD		3.36	4.25	ng/L	79.1	(17%-157%)
13C-2,3,7,8-TCDF		1.99	2.12	ng/L	93.8	(24%-169%)
13C-1,2,3,7,8-PeCDF		2.22	2.12	ng/L	104	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.96	2.12	ng/L	92.3	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.74	2.12	ng/L	81.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.71	2.12	ng/L	80.7	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.85	2.12	ng/L	86.9	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.86	2.12	ng/L	87.3	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372	Client: CALS001	Project: CALS00214
Lab Sample ID: 15901002	Date Collected: 11/28/2019 07:00	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/04/2019 11:00	
Client ID: FBQW1870Q001		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 22:41	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-15		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 941.2 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.68	2.12	ng/L	79.1 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.81	2.12	ng/L	85.2 (26%-138%)
37Cl-2,3,7,8-TCDD			0.197	0.212	ng/L	92.8 (35%-197%)

Comments:
 U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report **MassLynx 4.1**

Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Tuesday, December 17, 2019 14:21:26 Eastern Standard Time
 Printed: Tuesday, December 17, 2019 14:22:11 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.0255		2024			1391			
2	12378-PeCDD							NO		0.0231		2010			1009			
3	123478-HxCDD							NO		0.0408		2147			2074			
4	123678-HxCDD							NO		0.0377		2147			2074			
5	123789-HxCDD							NO		0.0398		2147			2074			
6	1234678-HpCDD	1.64e2	1.85e2	3.50e2	44.14	1.001	0.89	NO	0.038	0.0527	4.97e3	1037	4.8	4.72e3	1032	4.6	bb	MM
7	OCDD							NO		0.0226		893			1903			
8	2378-TCDF							NO		0.0169	6.75e3	1691	4.0	5.22e3	2086		2.5	bd
9	12378-PeCDF	2.17e2	8.56e1	3.03e2	33.25	1.001	2.54	YES	0.013	0.0176		1691			2086			
10	23478-PeCDF							NO		0.0173		1320			1339			
11	123478-HxCDF							NO		0.0174		1320			1339			
12	123678-HxCDF							NO		0.0162		1320			1339			
13	234678-HxCDF							NO		0.0227		1320			1339			
14	123789-HxCDF							NO		0.0182		892			907			
15	1234678-HpCDF							NO		0.0247		892			907			
16	1234789-HpCDF							NO		0.0268		401			826			
17	OCDF							NO		0.106	1.64e7	8236	1993.0	2.15e7	4406	4887.9	bb	bb
18	13C-2378-TCDD	1.05e6	1.37e6	2.42e6	31.10	1.018	0.77	NO	92.130	0.106		8236	1993.0	2.15e7	4406	4887.9	bb	bb
19	13C-12378-PeCDD	9.88e5	6.39e5	1.63e6	34.03	1.114	1.55	NO	92.985	0.119	2.32e7	7163	3239.5	1.47e7	2279	6469.0	bb	bb
20	13C-123478-HxCDD	7.76e5	6.20e5	1.40e6	36.60	0.991	1.25	NO	83.383	0.0875	1.53e7	5968	2563.8	1.21e7	4260	2839.4	bd	bd
21	13C-123678-HxCDD	8.66e5	6.98e5	1.56e6	36.68	0.993	1.24	NO	84.922	0.0795	1.64e7	5968	2751.7	1.36e7	4260	3198.2	dd	dd
22	13C-1234678-HpCDD	5.80e5	5.65e5	1.15e6	39.94	1.082	1.03	NO	91.249	0.145	8.50e6	6084	1396.9	8.18e6	6582	1243.0	bb	bd
23	13C-OCDD	9.05e5	9.92e5	1.90e6	44.11	1.195	0.91	NO	158.134	0.163	9.64e6	6451	1494.6	1.08e7	7203	1501.7	bd	bd
24	13C-2378-TCDF	1.20e6	1.53e6	2.73e6	30.31	0.992	0.78	NO	93.791	0.108	1.39e7	8765	1583.1	1.79e7	5474	3264.4	bb	bb
25	13C-12378-PeCDF	1.50e6	9.52e5	2.45e6	33.23	1.088	1.58	NO	104.255	0.160	3.62e7	9839	3675.6	2.30e7	7258	3168.3	bd	bd
26	13C-23478-PeCDF	1.39e6	8.91e5	2.29e6	33.84	1.108	1.56	NO	92.322	0.152	3.33e7	9839	3379.9	2.11e7	7258	2901.5	bb	bb
27	13C-123478-HxCDF	5.78e5	1.12e6	1.70e6	35.89	0.972	0.52	NO	81.905	0.203	1.20e7	12414	967.8	2.33e7	16938	1377.5	bd	bd
28	13C-123678-HxCDF	6.56e5	1.22e6	1.88e6	35.99	0.975	0.54	NO	80.669	0.180	1.28e7	12414	1032.3	2.47e7	16938	1458.6	db	db
29	13C-234678-HxCDF	6.03e5	1.15e6	1.76e6	36.46	0.988	0.52	NO	86.925	0.208	1.24e7	12414	998.3	2.40e7	16938	1416.1	bd	bb
30	13C-123789-HxCDF	5.42e5	1.04e6	1.58e6	37.22	1.008	0.52	NO	87.341	0.233	9.47e6	12414	762.6	1.88e7	16938	1111.6	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Tuesday, December 17, 2019 14:21:26 Eastern Standard Time
 Printed: Tuesday, December 17, 2019 14:22:11 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.92e5	8.93e5	1.29e6	38.70	1.048	0.44	NO	79.062	0.130	6.54e6	5645	1159.3	1.45e7	9124	1588.0	bd	bd
32	13C-1234789-HpCDF	3.33e5	7.45e5	1.08e6	40.59	1.099	0.45	NO	85.185	0.167	4.68e6	5645	829.1	1.07e7	9124	1169.3	bd	bb
33	13C-1234-TCDD	1.01e6	1.32e6	2.33e6	30.54	0.000	0.77	NO	100.000	0.120	1.15e7	8236	1391.0	1.51e7	4406	3429.3	bb	bd
34	13C-123789-HxCDD	1.03e6	8.37e5	1.87e6	36.92	0.000	1.23	NO	100.000	0.0784	1.80e7	5968	3017.3	1.45e7	4260	3392.4	dd	dd
35	37Cl+2378-TCDD	2.29e5		2.29e5	31.12	1.019			9.284	0.0234	3.75e6	2625	1427.6				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Tuesday, December 17, 2019 14:21:26 Eastern Standard Time
Printed: Tuesday, December 17, 2019 14:22:11 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	5.88e1	1.01e2	1.60e2	28.50	0.58	YES	0.007	0.0255	3.03e3	2024	1.5	2.61e3	1391	1.9	bb	bb
2	Total-tetradioxins	1.27e2	5.68e1	1.84e2	26.61	2.24	YES	0.009	0.0255	3.42e3	2024	1.7	3.16e3	1391	2.3	bb	bb
3	Total-tetradioxins	1.07e2	9.26e1	1.99e2	31.93	1.15	YES	0.009	0.0255	5.26e3	2024	2.6	3.08e3	1391	2.2	bb	db
4	Total-tetradioxins	7.10e1	8.29e1	1.54e2	31.88	0.86	NO	0.007	0.0255	3.05e3	2024	1.5	1.87e3	1391	1.3	bb	bd
5	Total-tetradioxins	9.46e1	3.43e2	4.37e2	31.17	0.28	YES	0.020	0.0255	3.44e3	2024	1.7	5.21e3	1391	3.7	bb	bb
6	Total-tetradioxins	1.60e2	7.81e1	2.38e2	30.11	2.05	YES	0.011	0.0255	3.83e3	2024	1.9	2.52e3	1391	1.8	dd	bb

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PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	8.47e1	6.96e1	1.54e2	34.21	1.22	YES	0.011	0.0231	4.66e3	2010	2.3	3.17e3	1009	3.1	bb	bb

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	7.51e1	5.42e1	1.29e2	36.08	1.39	NO	0.009	0.0394	4.06e3	2147	1.9	1.95e3	2074	0.9	db	db
2	Total-hexadioxins	5.66e2	1.34e2	7.00e2	35.98	4.23	YES	0.051	0.0394	1.20e4	2147	5.6	5.33e3	2074	2.6	MM	dd
3	Total-hexadioxins	3.61e2	7.40e1	4.35e2	35.91	4.88	YES	0.031	0.0394	6.39e3	2147	3.0	4.10e3	2074	2.0	bd	bd
4	Total-hexadioxins	3.57e2	2.26e2	5.83e2	37.22	1.58	YES	0.042	0.0394	6.29e3	2147	2.9	9.47e3	2074	4.6	bb	bd
5	Total-hexadioxins	4.70e2	5.68e1	5.27e2	36.46	8.26	YES	0.038	0.0394	1.43e4	2147	6.6	1.82e3	2074	0.9	bb	bb

HPD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	4.52e2	1.86e2	6.39e2	40.61	2.42	YES	0.054	0.0446	8.78e3	1489	5.9	4.63e3	1625	2.9	MM	MM
2	Total-heptadioxins	5.46e2	1.50e2	6.96e2	38.69	3.64	YES	0.058	0.0446	1.10e4	1489	7.4	3.12e3	1625	1.9	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Tuesday, December 17, 2019 14:21:26 Eastern Standard Time
Printed: Tuesday, December 17, 2019 14:22:11 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	5.12e1	6.68e1	1.18e2	30.59	0.77	NO	0.004	0.0226	1.98e3	893	2.2	1.69e3	1903	0.9	db	db
2	Total-tetrafurans	6.47e1	8.57e1	1.50e2	30.50	0.76	NO	0.006	0.0226	1.32e3	893	1.5	2.58e3	1903	1.4	bd	bd
3	Total-tetrafurans	6.52e1	6.11e1	1.26e2	28.86	1.07	YES	0.005	0.0226	3.03e3	893	3.4	2.14e3	1903	1.1	bb	db

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.05e3	1.20e2	1.17e3	30.93	8.73	YES	0.051	0.0109	1.84e4	827	22.3	3.88e3	1561	2.5	bb	bd
2	Total-pentafurans (F1)	8.70e1	9.46e1	1.82e2	30.74	0.92	YES	0.008	0.0109	4.26e3	827	5.1	4.39e3	1561	2.8	bb	bb

PF2

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	5.07e1	5.56e1	1.06e2	34.15	0.91	YES	0.005	0.0172	2.88e3	1691	1.7	1.84e3	2086	0.9	db	bb
2	12378-PeCDF	2.17e2	8.56e1	3.03e2	33.25	2.54	YES	0.013	0.0169	6.75e3	1691	4.0	5.22e3	2086	2.5	bd	bb
3	Total-pentafurans	6.86e1	8.12e1	1.50e2	33.09	0.84	YES	0.007	0.0172	3.11e3	1691	1.8	4.18e3	2086	2.0	bb	bb

HF

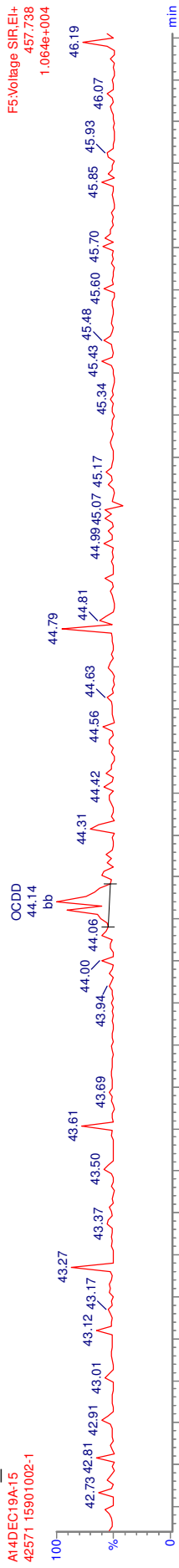
	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	5.67e1	6.09e1	1.18e2	37.36	0.93	YES	0.006	0.0183	2.21e3	1320	1.7	3.23e3	1339	2.4	bb	db

HPF

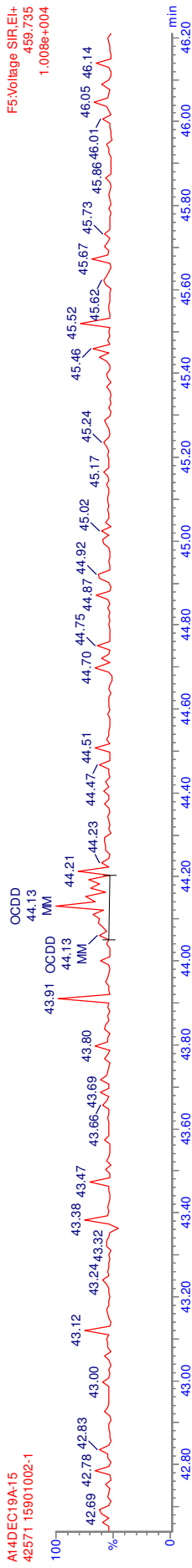
	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	5.12e1	5.72e1	1.08e2	40.44	0.90	NO	0.008	0.0212	2.54e3	892	2.9	3.35e3	907	3.7	bb	bb

MANUAL INTEGRATION
METHOD 1613
HRP750_2

A14DEC19A-15
42571 15901002-1



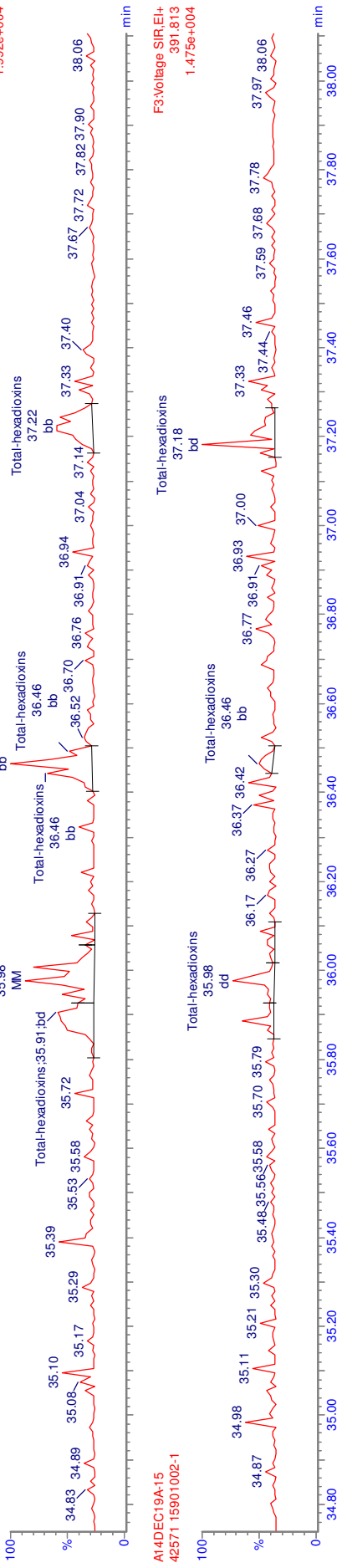
A14DEC19A-15
42571 15901002-1



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

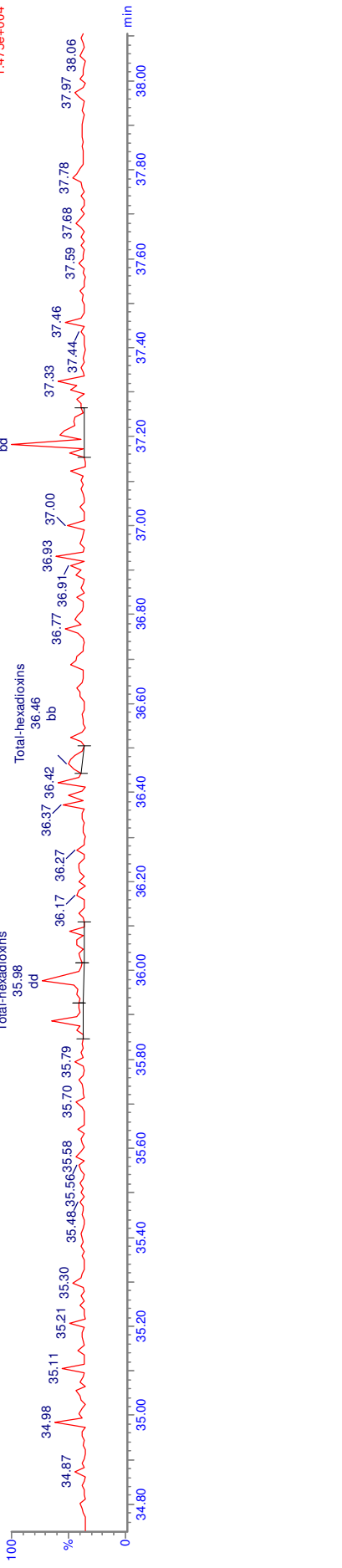
A14DEC19A-15
 42571 15901002-1

F3:Voltage SIR.EI+
 389.816
 1.992e+004

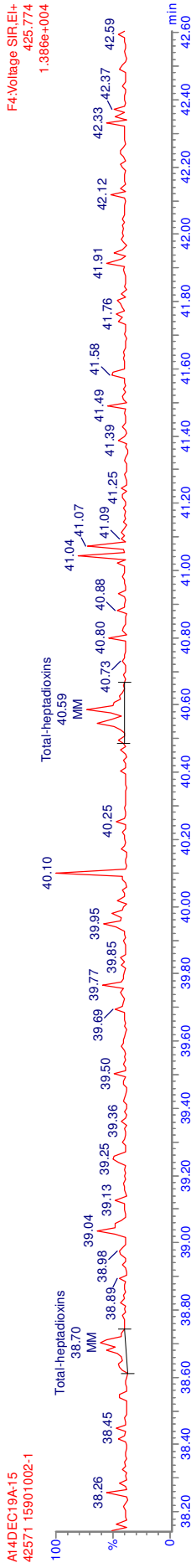
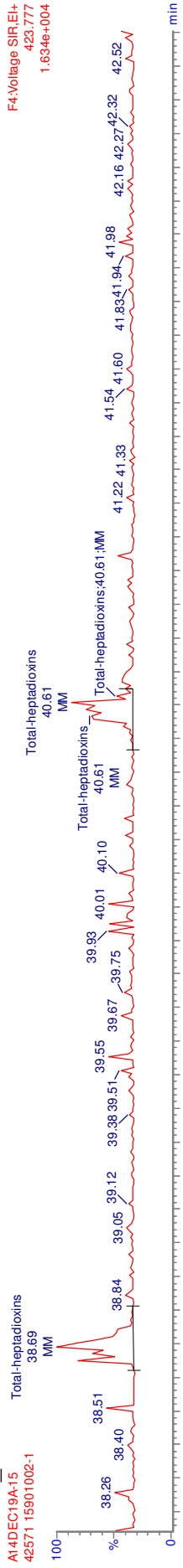


A14DEC19A-15
 42571 15901002-1

F3:Voltage SIR.EI+
 391.813
 1.475e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2



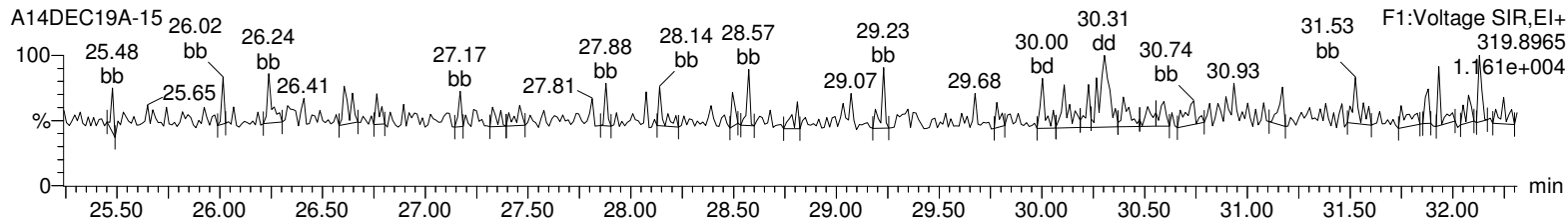
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

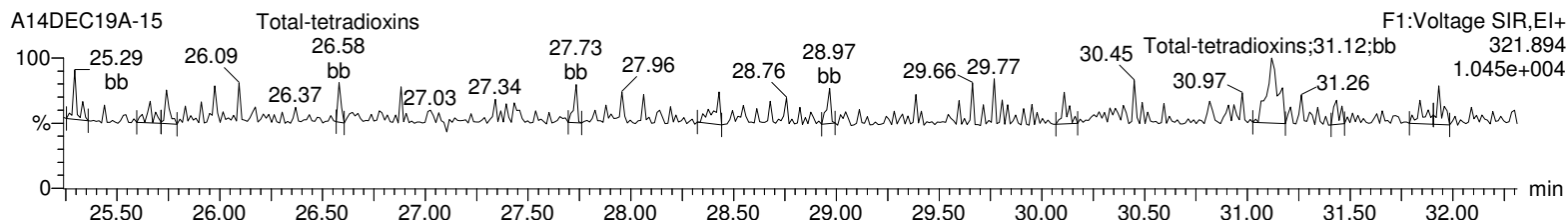
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

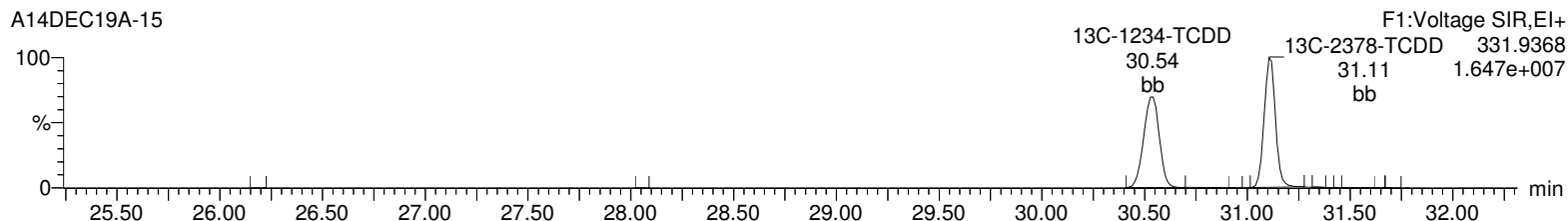
Total-tetradoxins



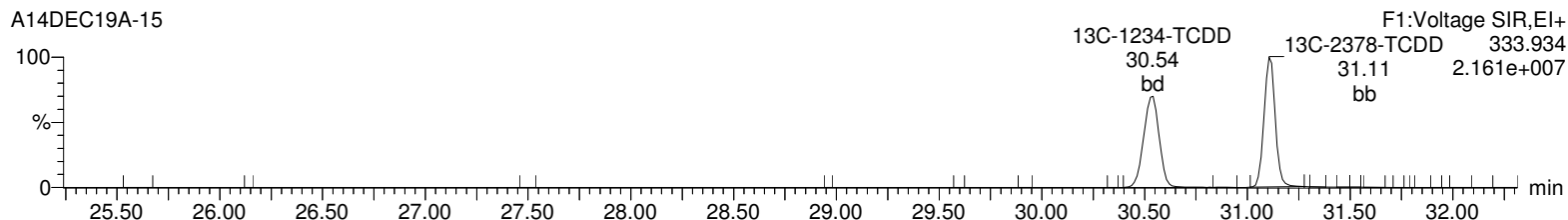
Total-tetradoxins



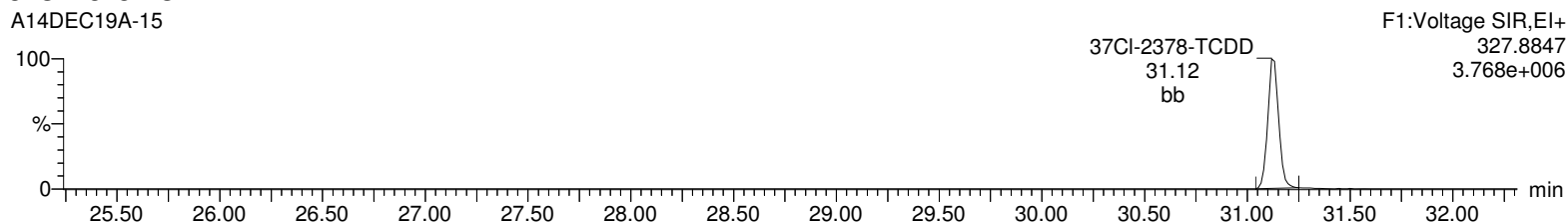
13C-2378-TCDD



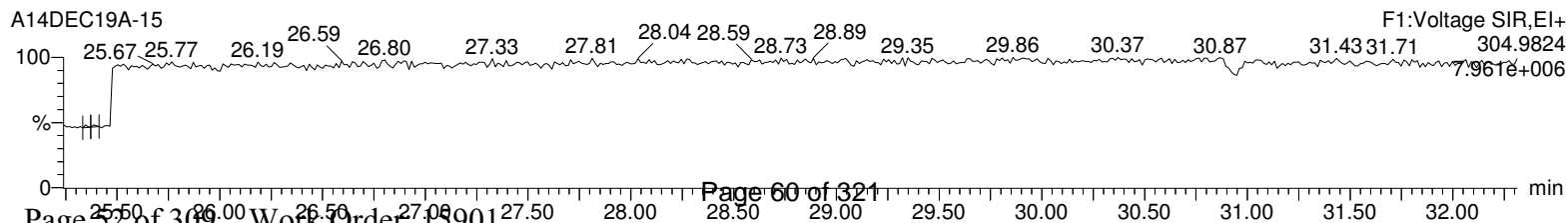
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



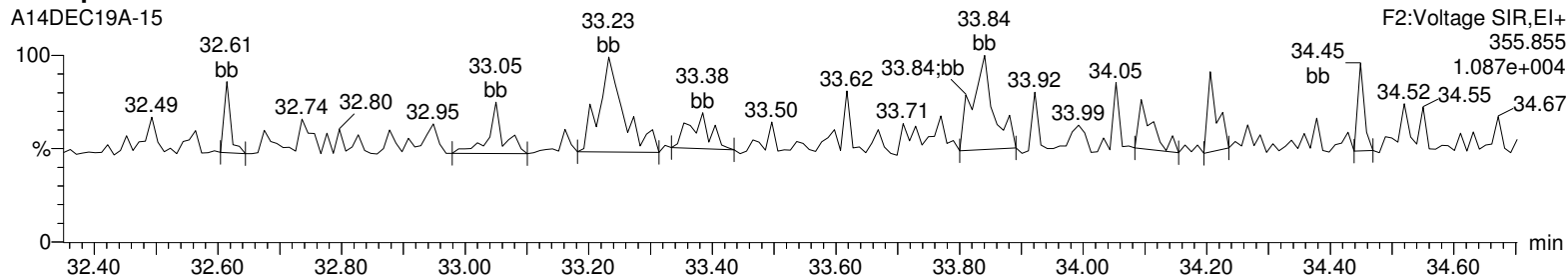
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

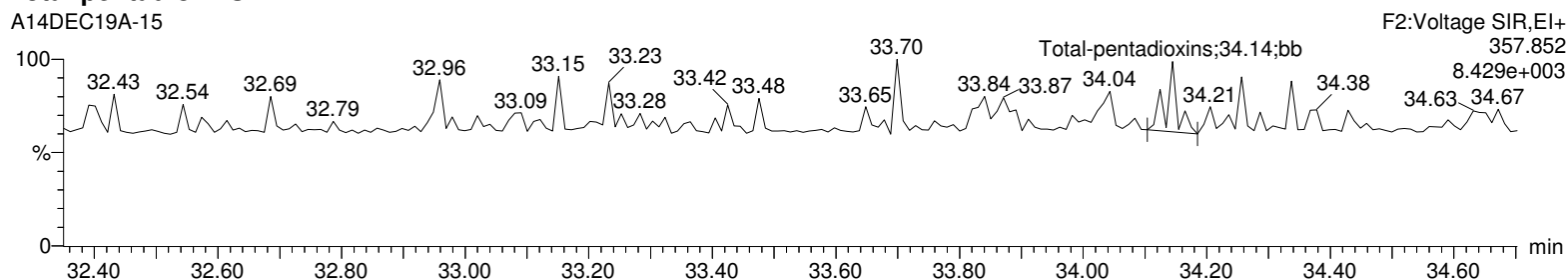
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

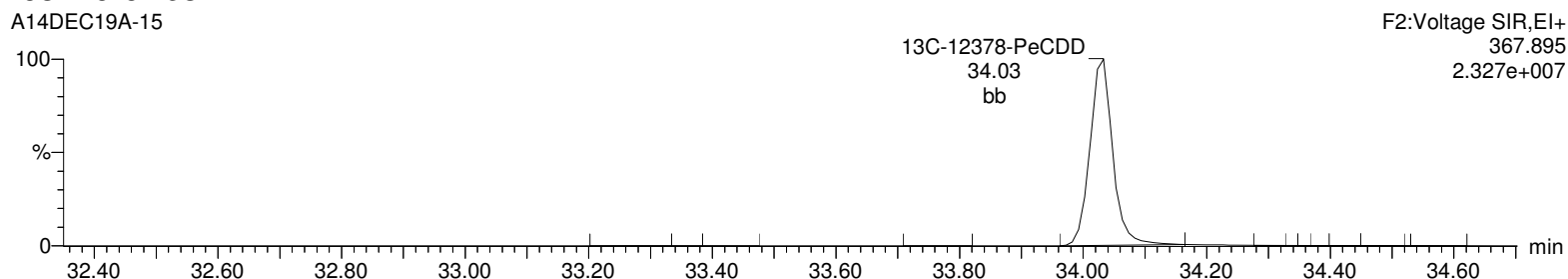
Total-pentadioxins



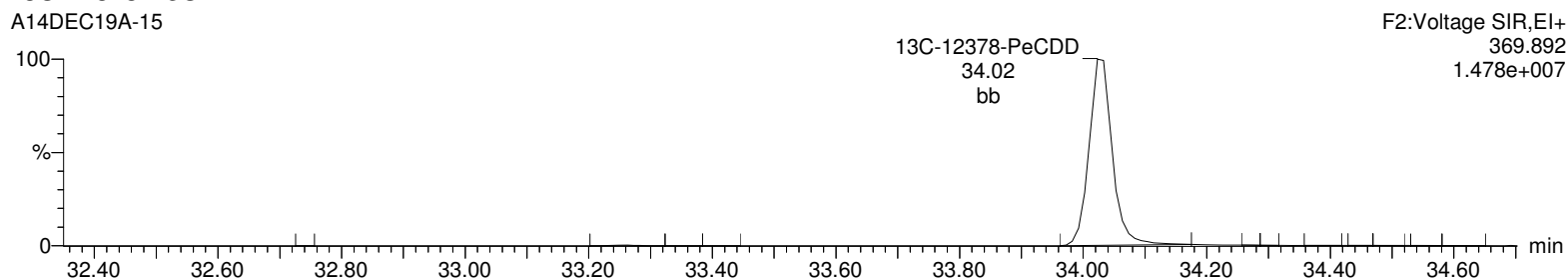
Total-pentadioxins



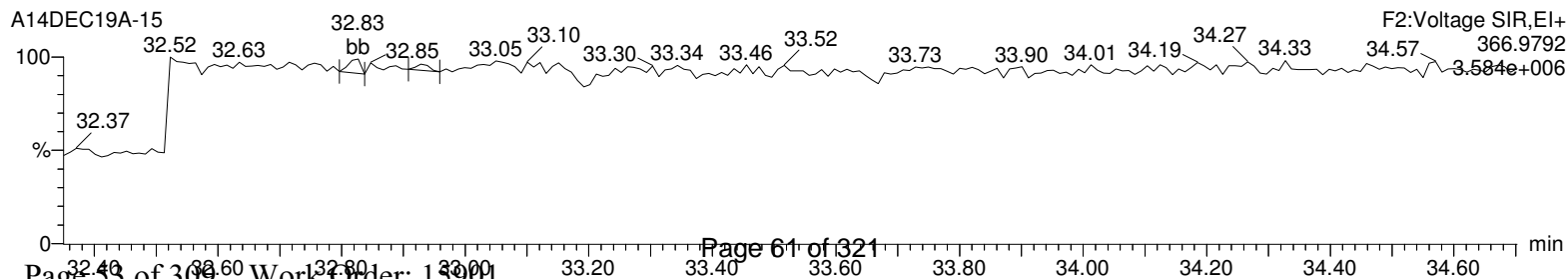
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

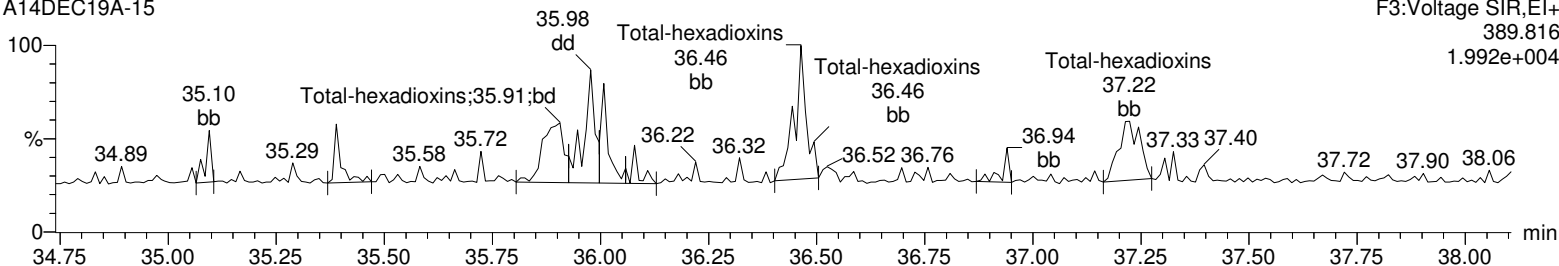
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-hexadioxins

A14DEC19A-15

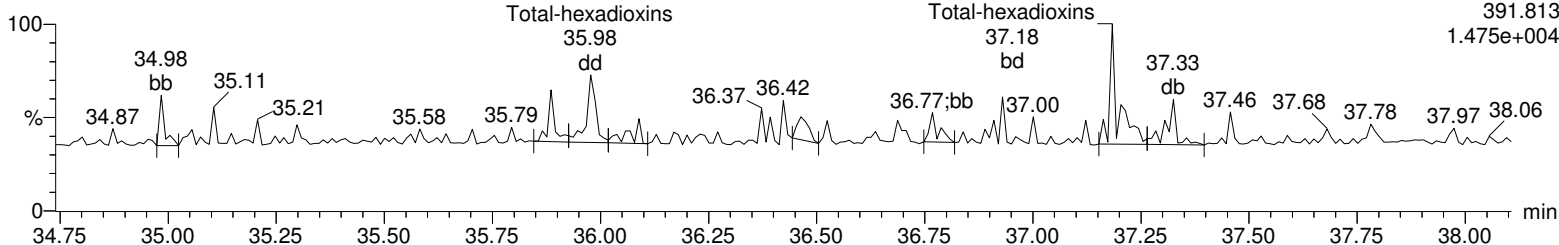
F3:Voltage SIR,EI+
389.816
1.992e+004



Total-hexadioxins

A14DEC19A-15

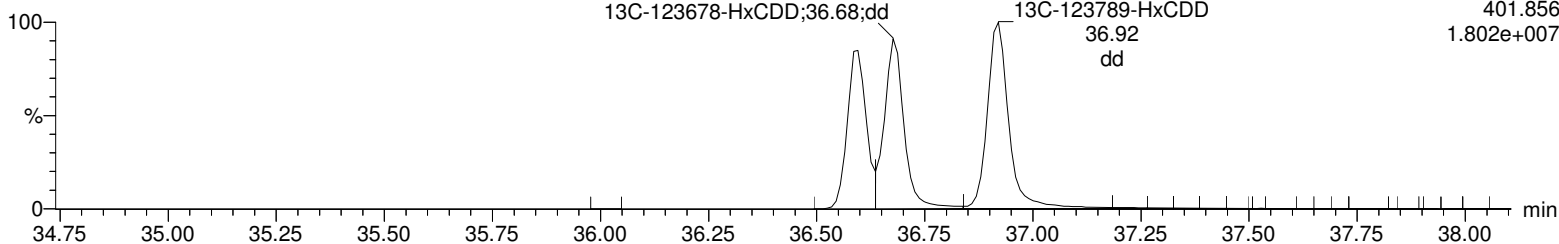
F3:Voltage SIR,EI+
391.813
1.475e+004



13C-123478-HxCDD

A14DEC19A-15

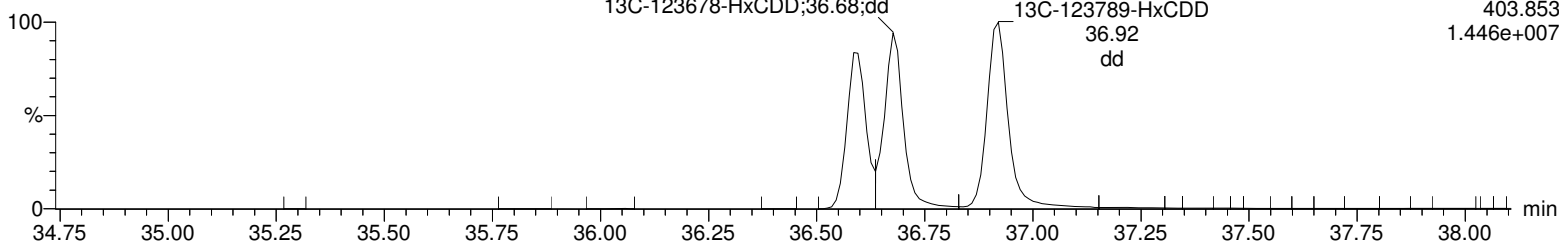
F3:Voltage SIR,EI+
401.856
1.802e+007



13C-123478-HxCDD

A14DEC19A-15

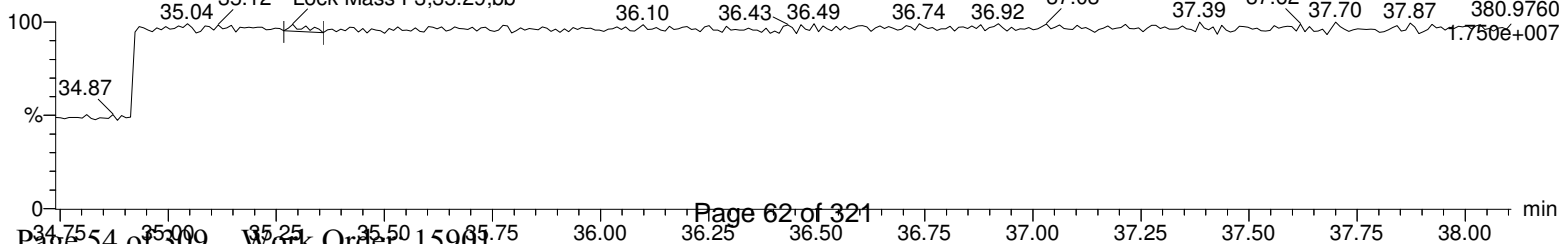
F3:Voltage SIR,EI+
403.853
1.446e+007



Lock Mass F3

A14DEC19A-15

F3:Voltage SIR,EI+
380.9760
1.750e+007



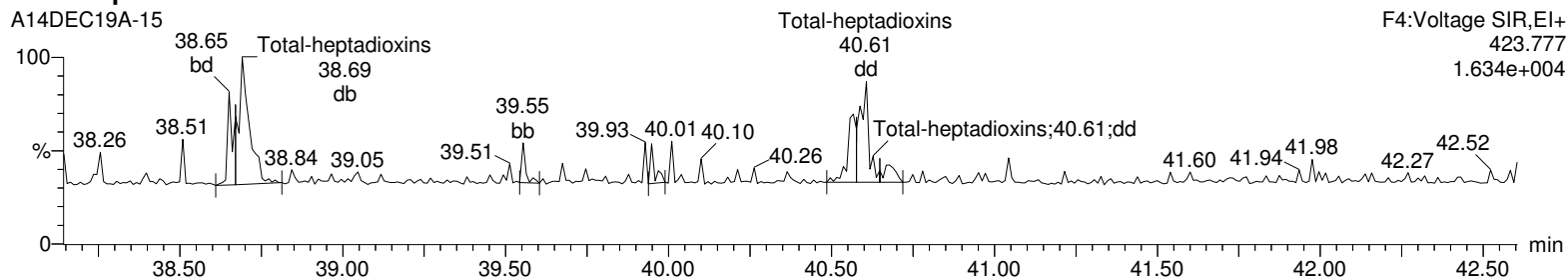
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

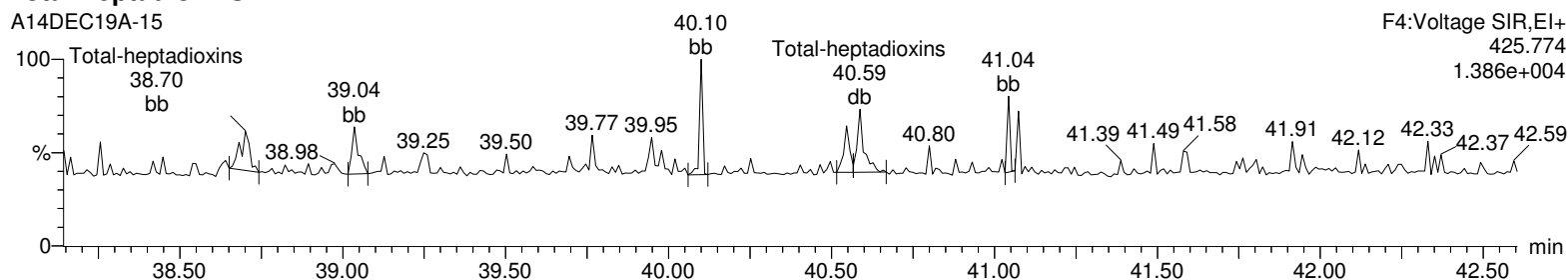
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

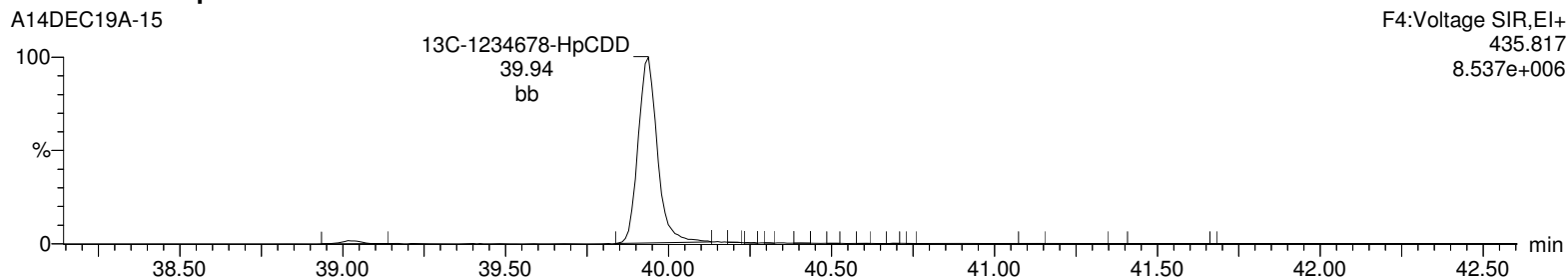
Total-heptadioxins



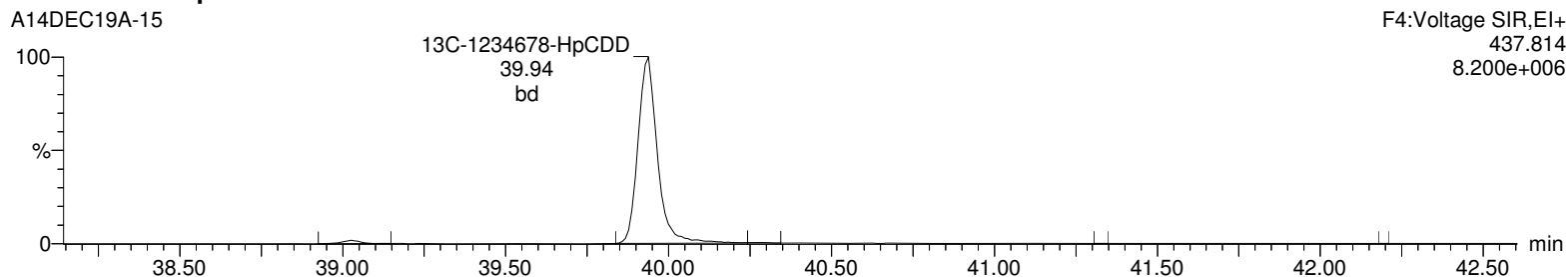
Total-heptadioxins



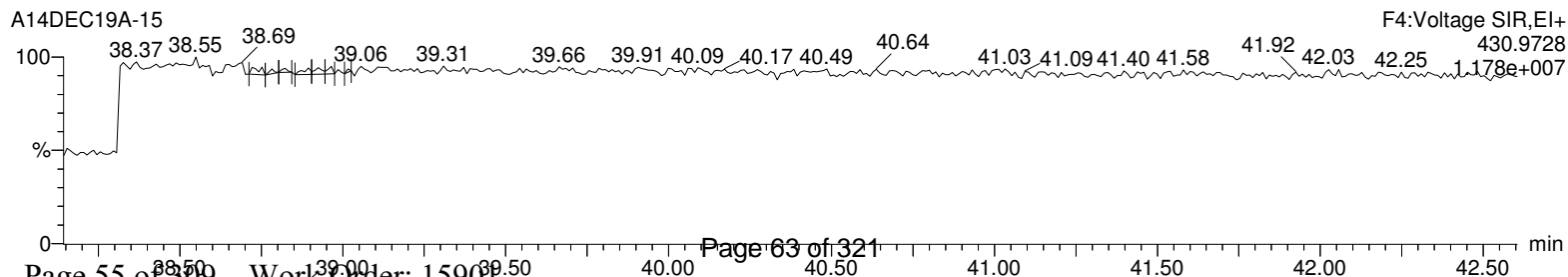
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



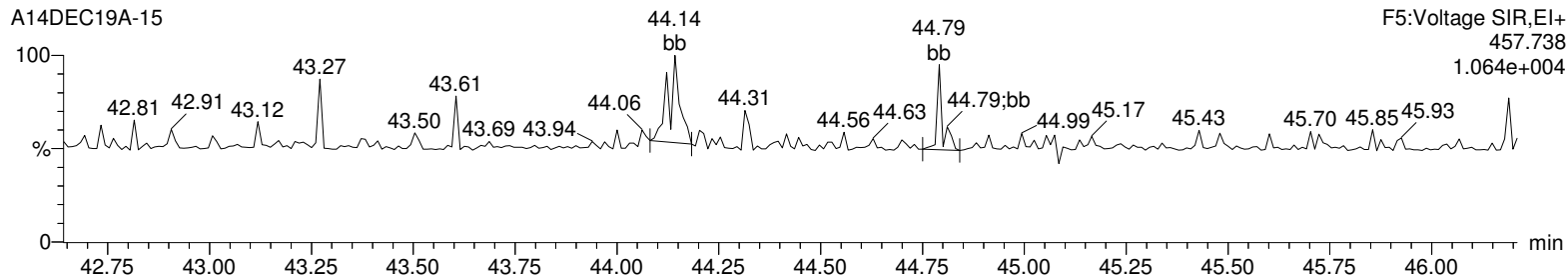
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

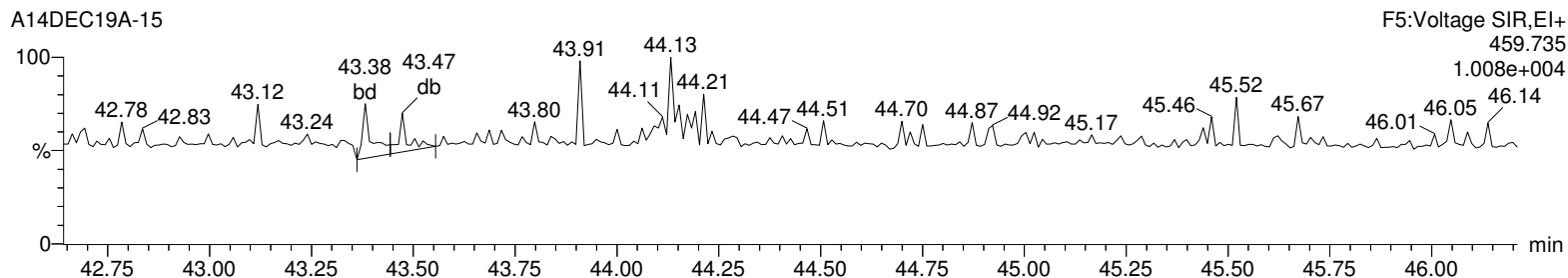
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

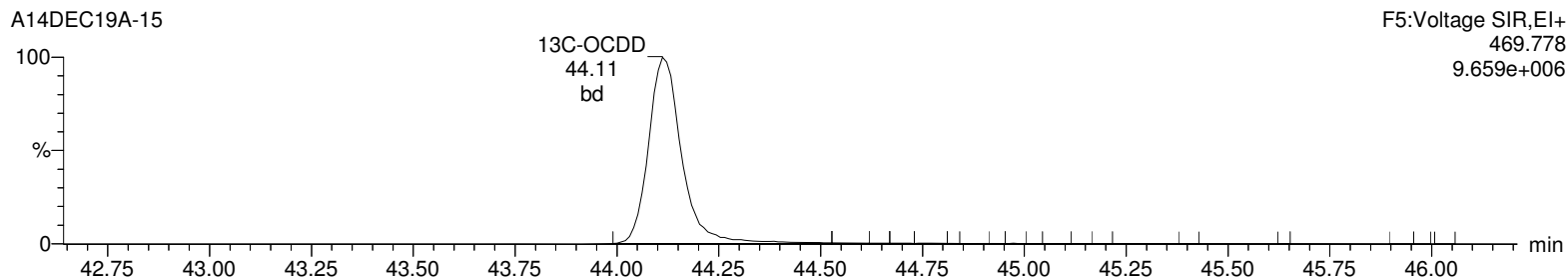
OCDD



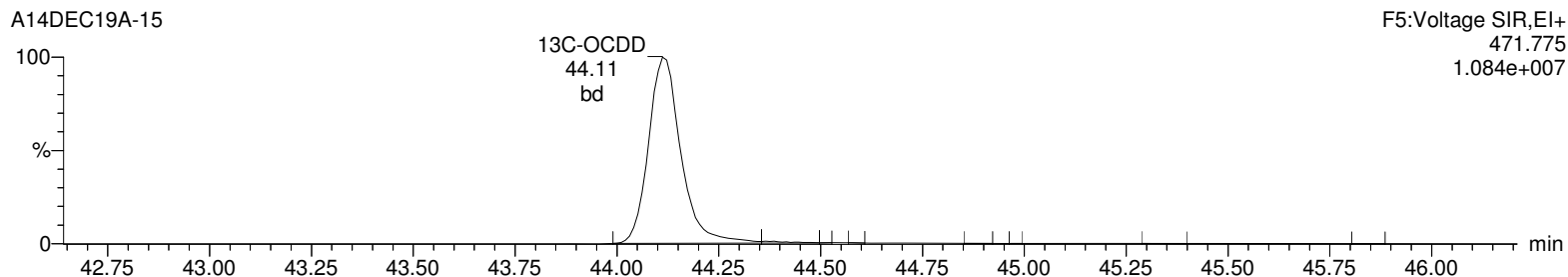
OCDD



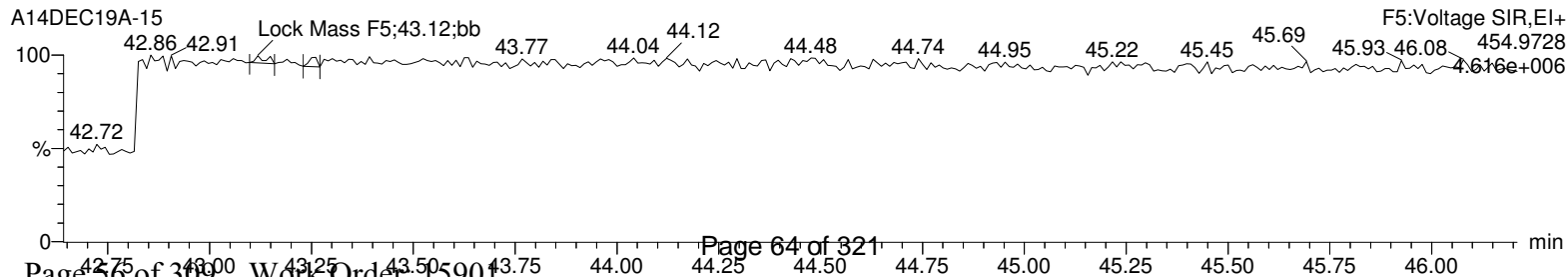
13C-OCDD



13C-OCDD



Lock Mass F5



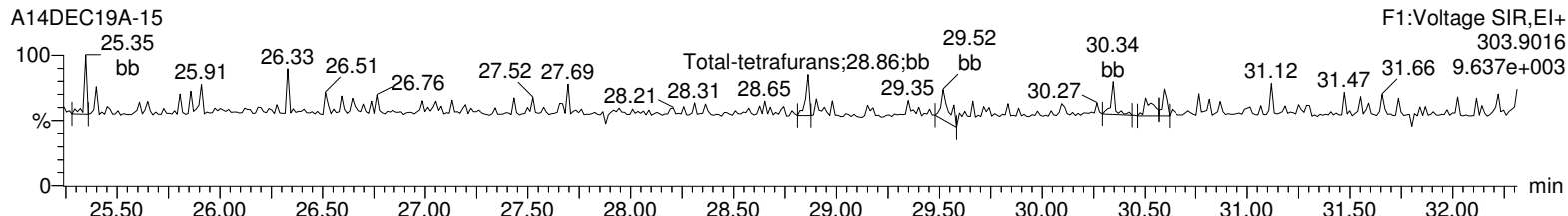
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

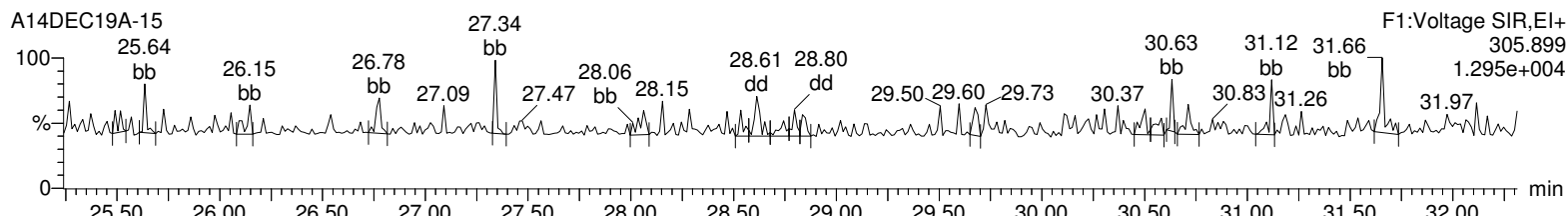
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

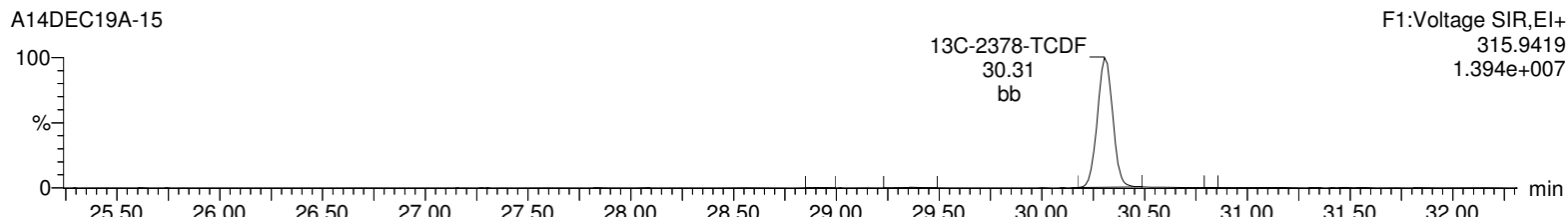
Total-tetrafurans



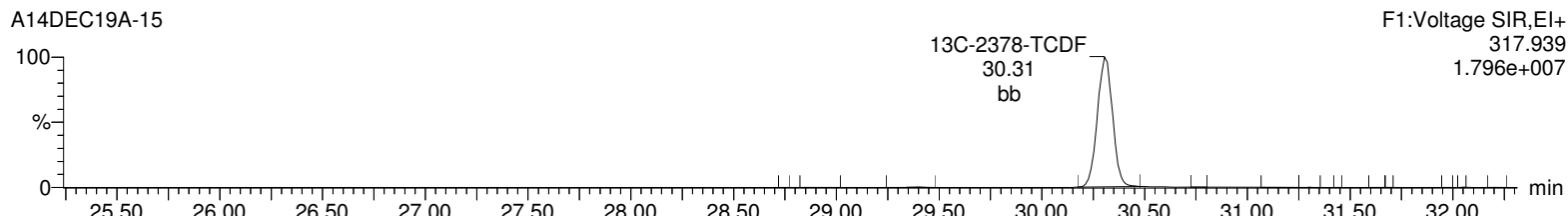
Total-tetrafurans



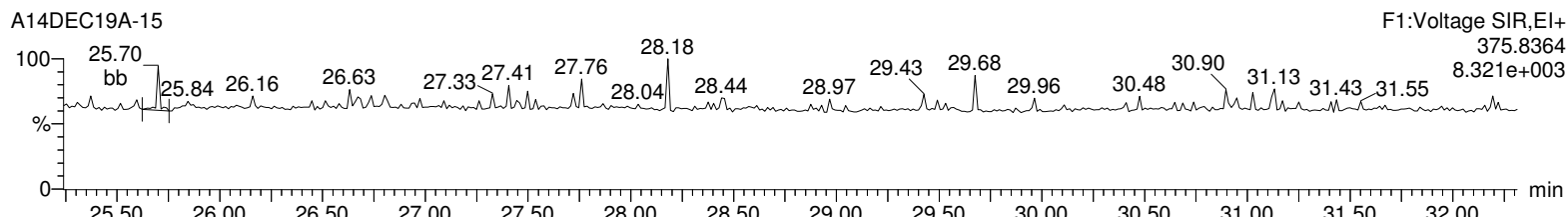
13C-2378-TCDF



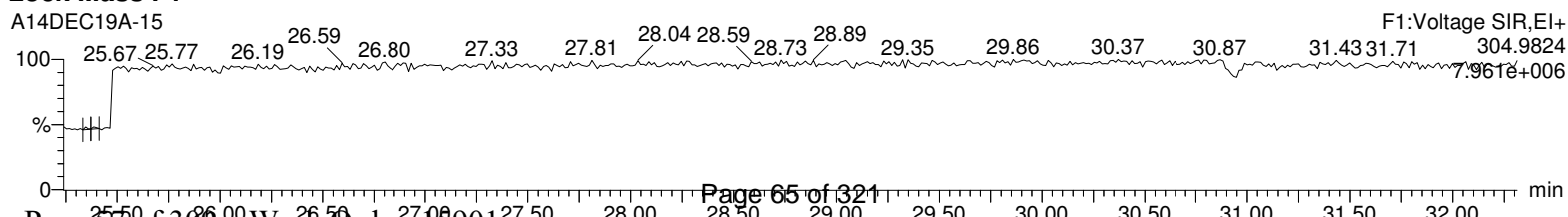
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

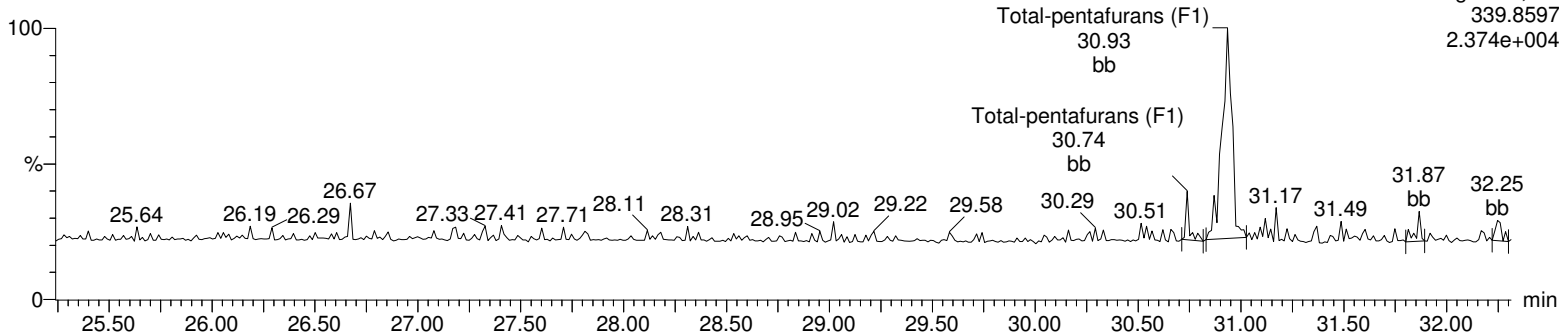
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-pentafurans (F1)

A14DEC19A-15

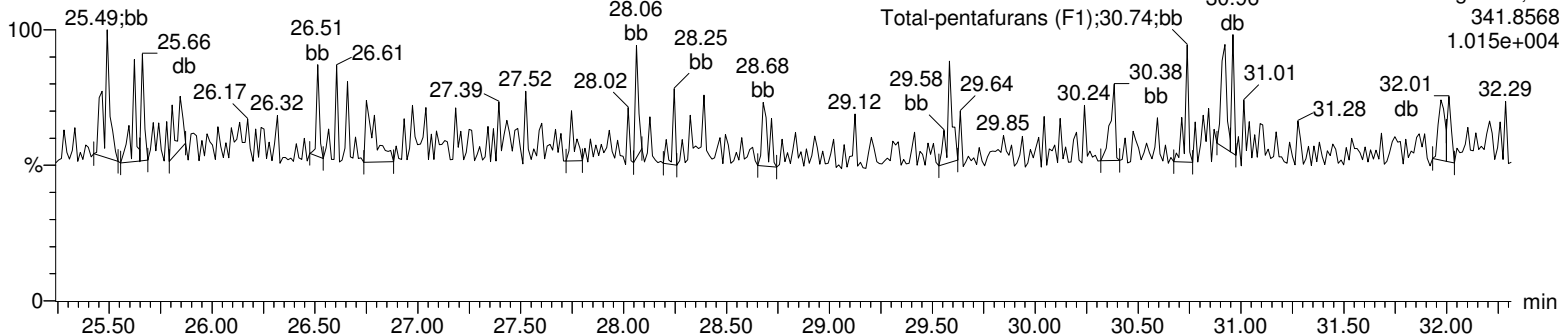
F1:Voltage SIR,EI+
339.8597
2.374e+004



Total-pentafurans (F1)

A14DEC19A-15

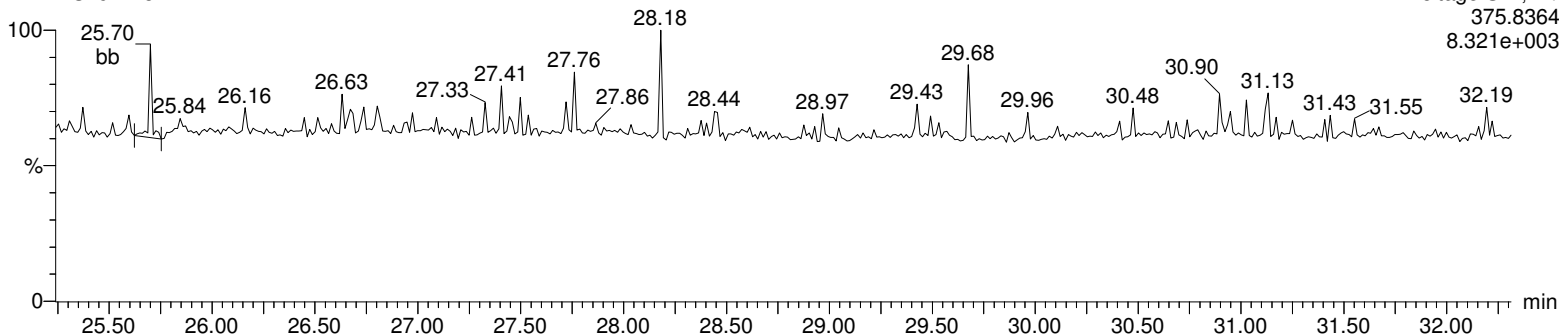
F1:Voltage SIR,EI+
341.8568
1.015e+004



HxDPE

A14DEC19A-15

F1:Voltage SIR,EI+
375.8364
8.321e+003



Lock Mass F1

A14DEC19A-15

F1:Voltage SIR,EI+
304.9824
7.961e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

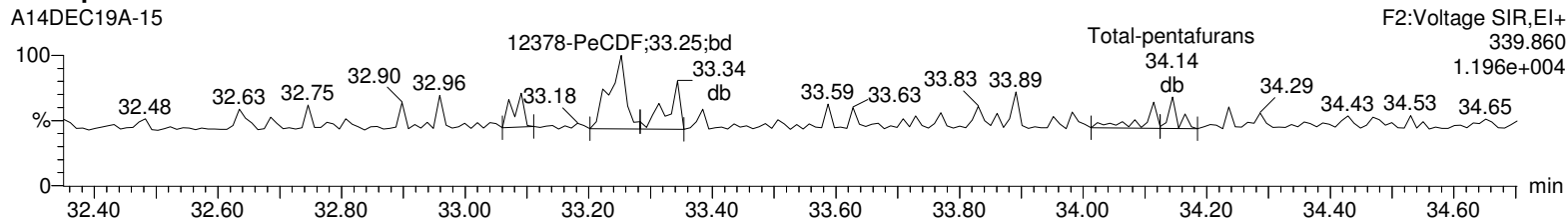
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

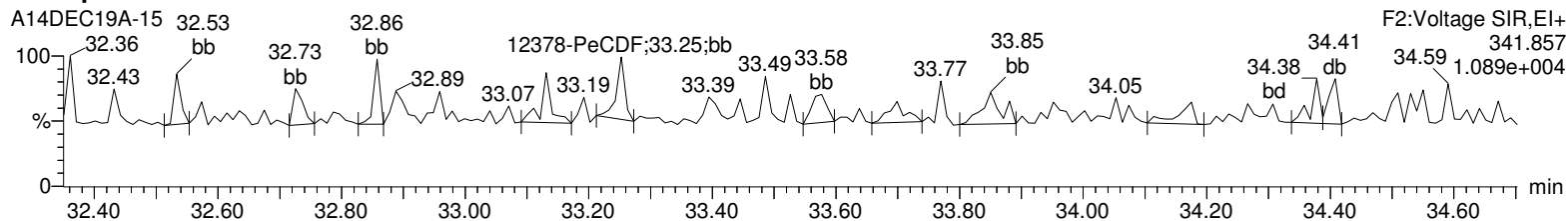
Total-pentafurans

A14DEC19A-15



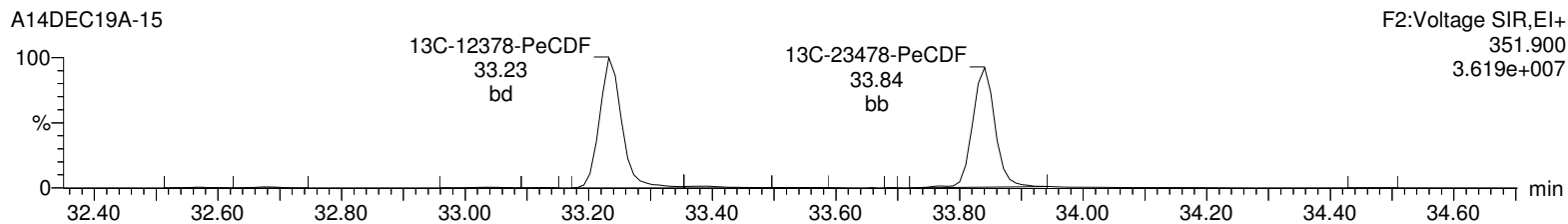
Total-pentafurans

A14DEC19A-15



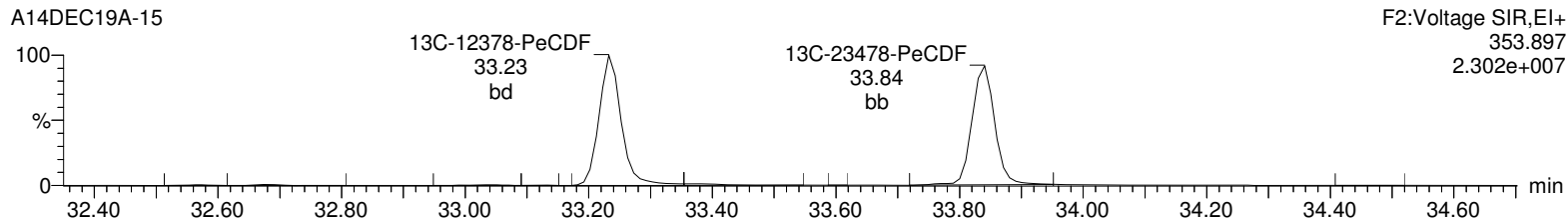
13C-12378-PeCDF

A14DEC19A-15



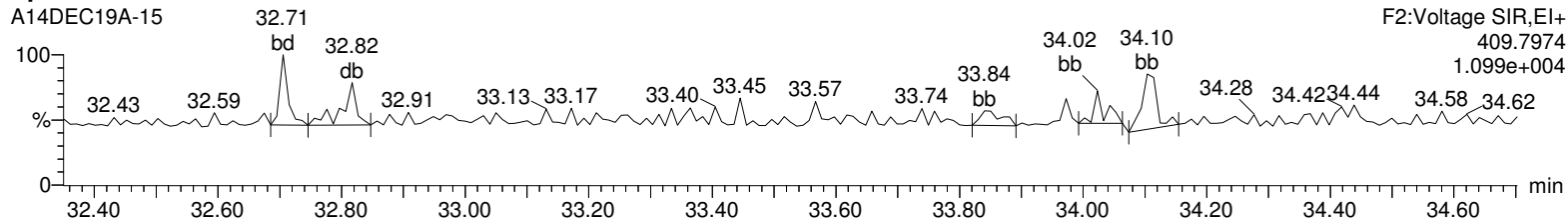
13C-12378-PeCDF

A14DEC19A-15



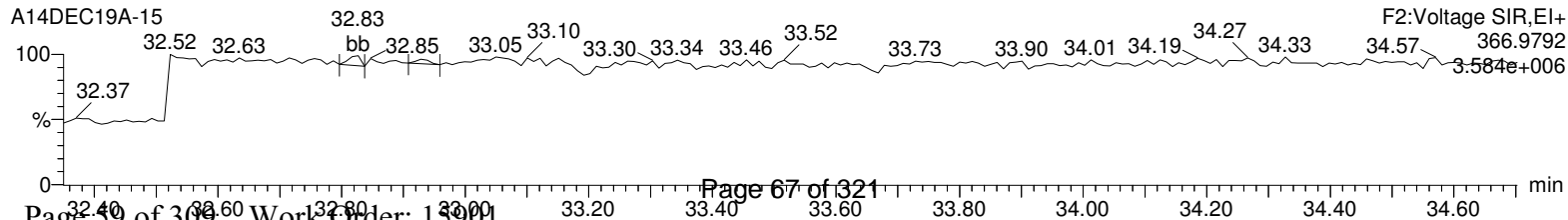
HpDPE

A14DEC19A-15



Lock Mass F2

A14DEC19A-15



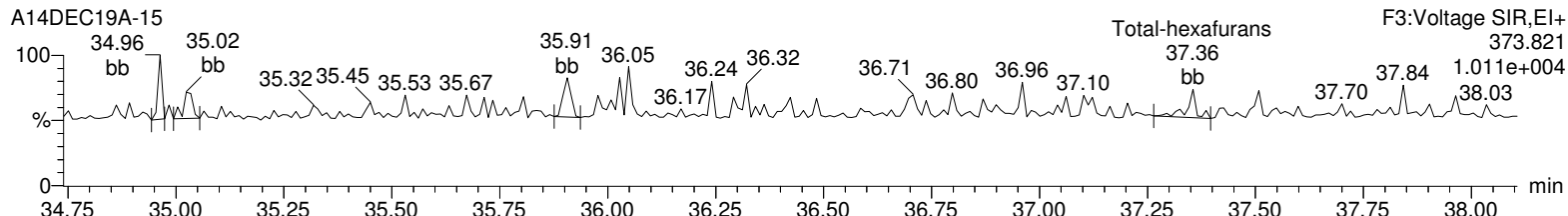
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

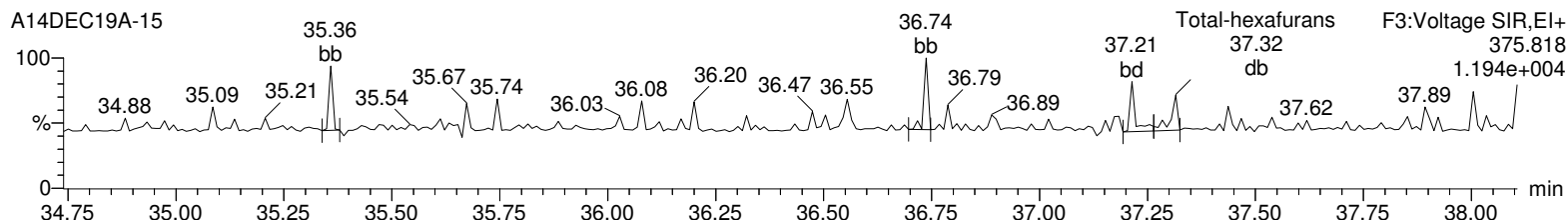
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

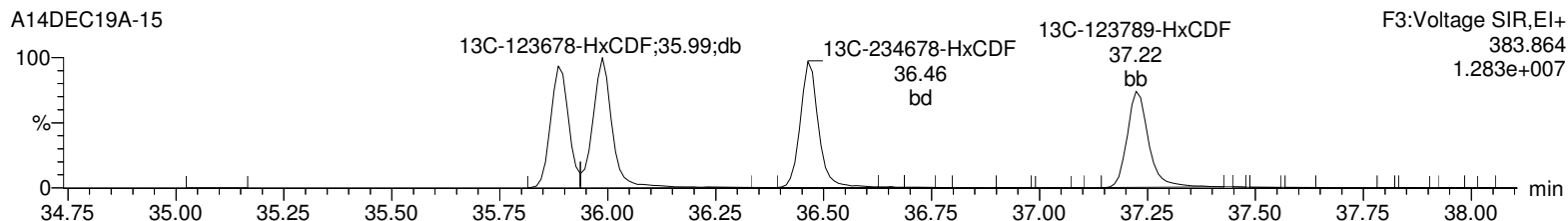
Total-hexafurans



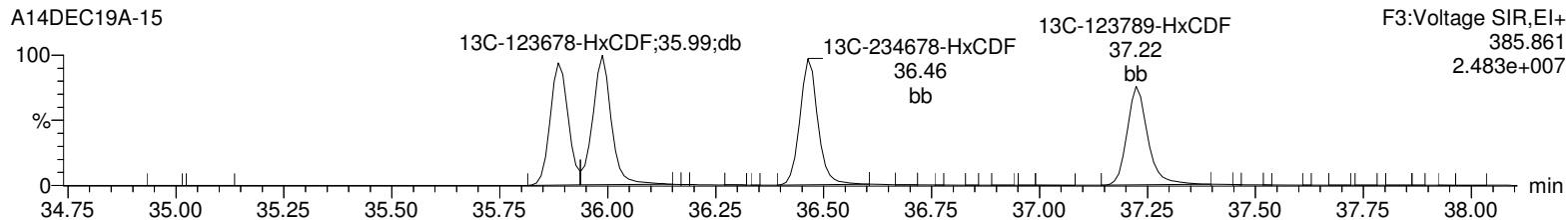
Total-hexafurans



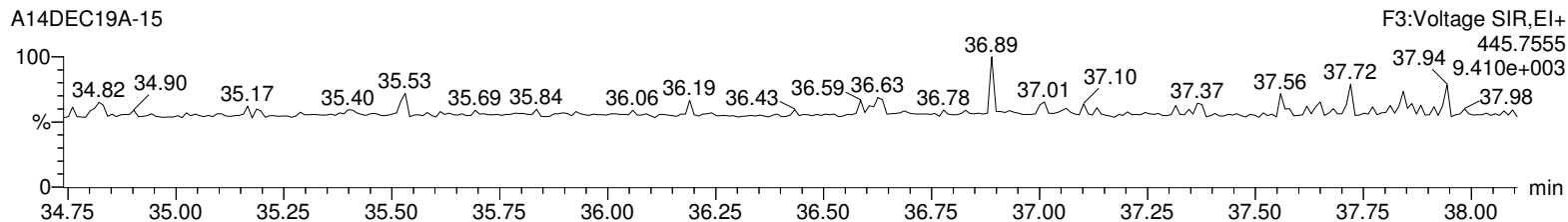
13C-123478-HxCDF



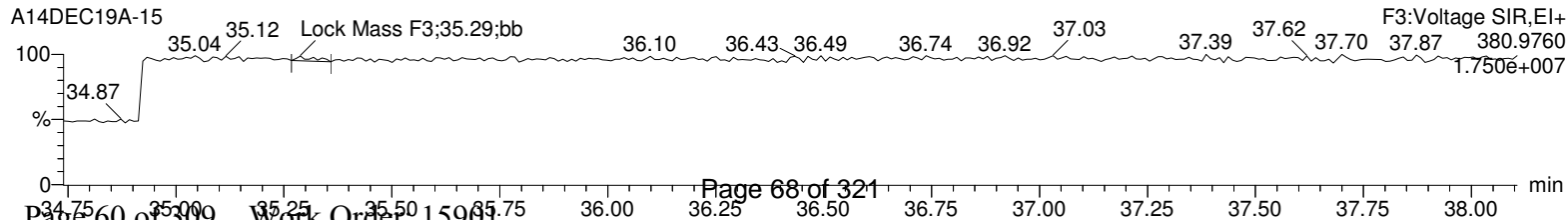
13C-123478-HxCDF



OcDPE



Lock Mass F3



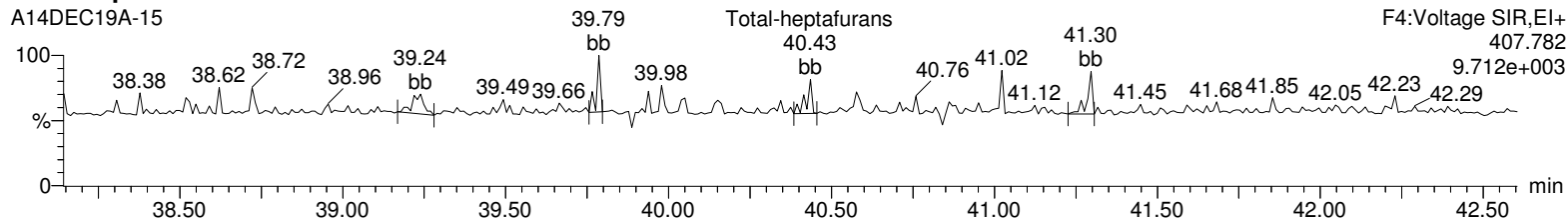
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

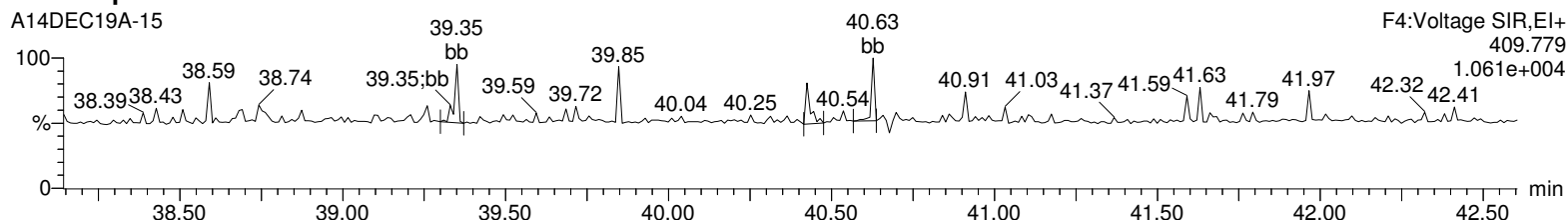
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

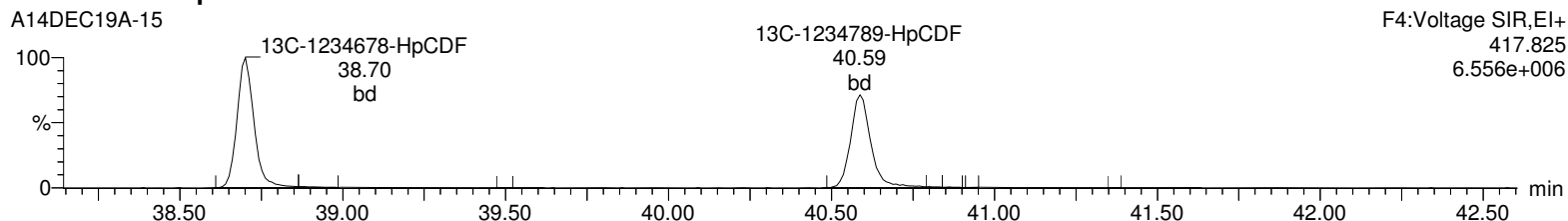
Total-heptafurans



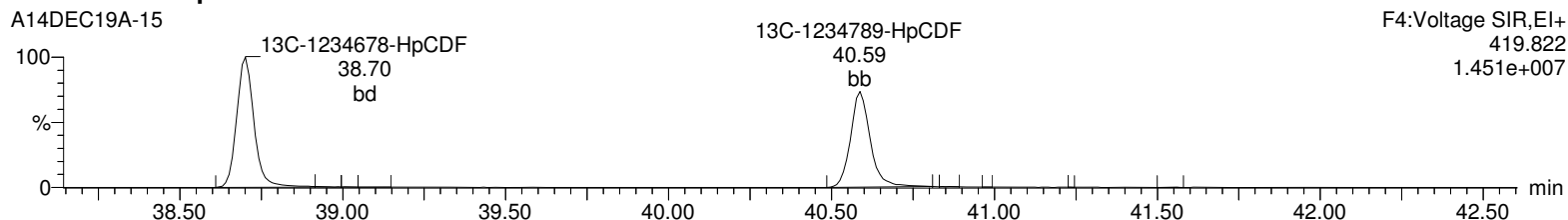
Total-heptafurans



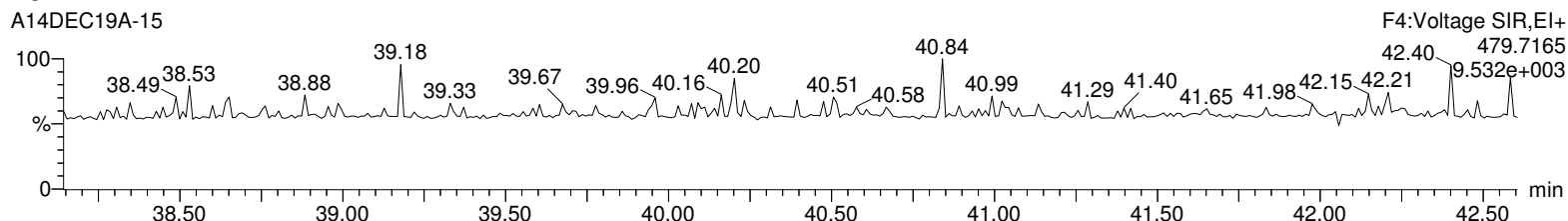
13C-1234678-HpCDF



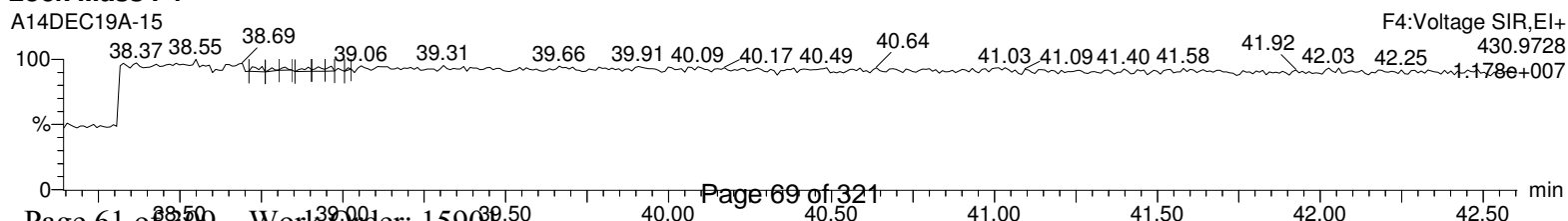
13C-1234678-HpCDF



NoDPE



Lock Mass F4



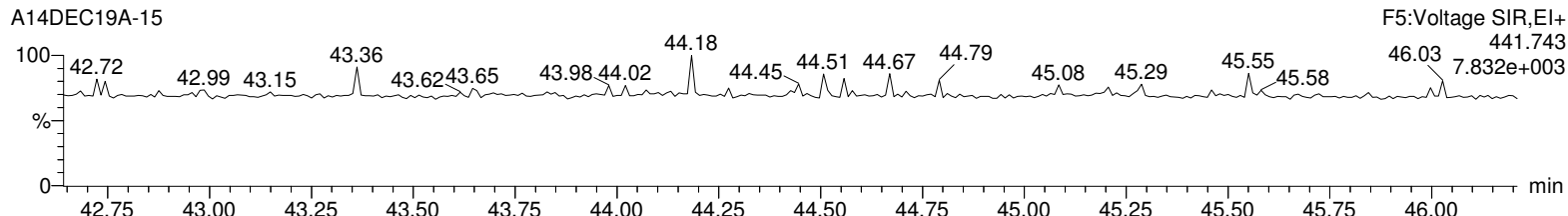
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

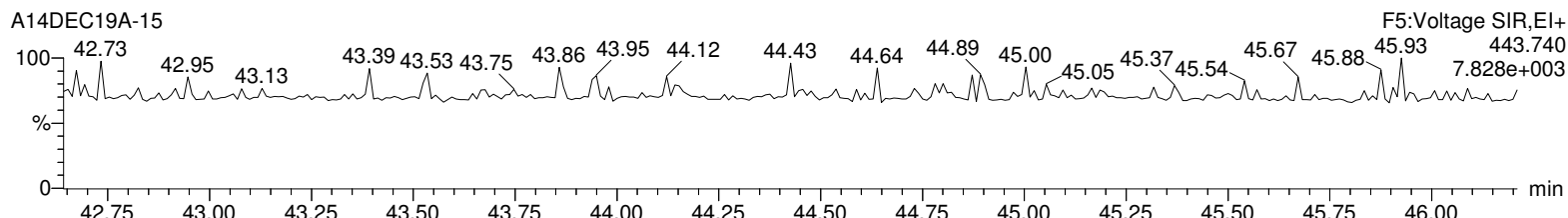
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-15, Date: 14-Dec-2019, Time: 22:41:00, ID: 15901002-1, Description: 42571, Job: HMS1613_1L, Task: HRP750_2, User: MJC

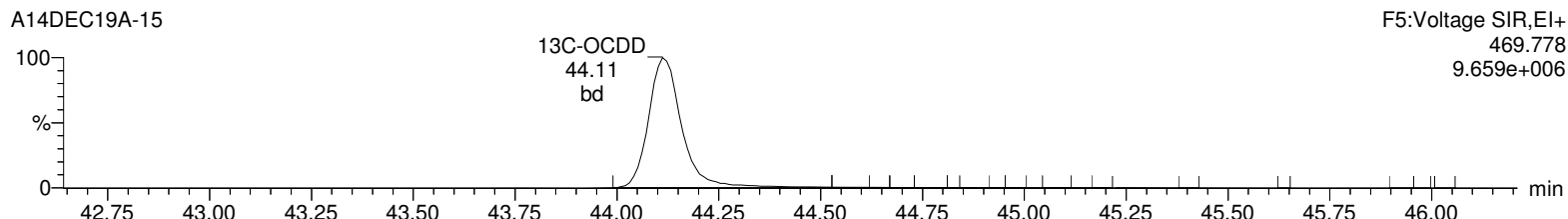
OCDF



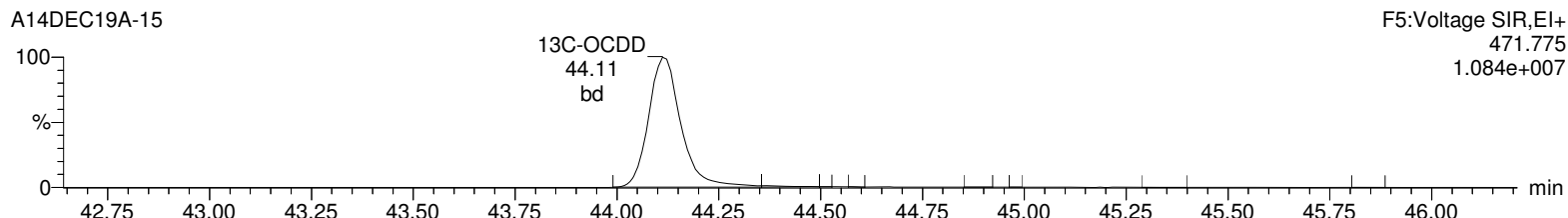
OCDF



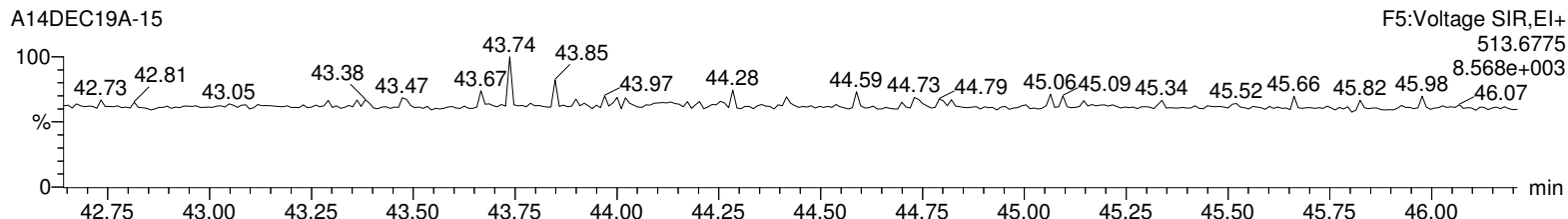
13C-OCDD



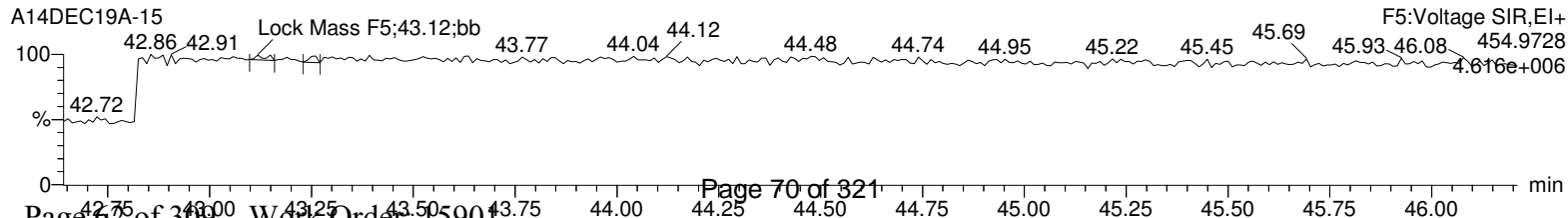
13C-OCDD



DeDPE



Lock Mass F5



Quality Control Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025525		Matrix: WATER
Client Sample: QC for batch 42567		
Client ID: MB for batch 42567		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 13:51	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-4		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK	0.0005	ng/L	0.00047	0.010
40321-76-4	1,2,3,7,8-PeCDD	J	0.00088	ng/L	0.000564	0.050
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00088	ng/L	0.00088	0.050
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.000848	ng/L	0.000848	0.050
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.000878	ng/L	0.000878	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD	JK	0.00116	ng/L	0.000904	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	0.00276	ng/L	0.000914	0.100
51207-31-9	2,3,7,8-TCDF	U	0.000588	ng/L	0.000588	0.010
57117-41-6	1,2,3,7,8-PeCDF	JK	0.00082	ng/L	0.000454	0.050
57117-31-4	2,3,4,7,8-PeCDF	JK	0.00086	ng/L	0.000476	0.050
70648-26-9	1,2,3,4,7,8-HxCDF	J	0.0009	ng/L	0.000444	0.050
57117-44-9	1,2,3,6,7,8-HxCDF	JK	0.00078	ng/L	0.000456	0.050
60851-34-5	2,3,4,6,7,8-HxCDF	J	0.00102	ng/L	0.00045	0.050
72918-21-9	1,2,3,7,8,9-HxCDF	J	0.00112	ng/L	0.000582	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF	JK	0.0005	ng/L	0.000478	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	0.0008	ng/L	0.000598	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.00208	ng/L	0.000798	0.100
41903-57-5	Total TeCDD	JK	0.0005	ng/L	0.00047	0.010
36088-22-9	Total PeCDD	J	0.00088	ng/L	0.000564	0.050
34465-46-8	Total HxCDD	U	0.000848	ng/L	0.000848	0.050
37871-00-4	Total HpCDD	JK	0.00116	ng/L	0.000904	0.050
30402-14-3	Total TeCDF	U	0.000588	ng/L	0.000588	0.010
30402-15-4	Total PeCDF	JK	0.00168	ng/L	0.000296	0.050
55684-94-1	Total HxCDF	JK	0.00382	ng/L	0.000444	0.050
38998-75-3	Total HpCDF	JK	0.0013	ng/L	0.000478	0.050
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.00207	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00223	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.70	2.00	ng/L	85.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.75	2.00	ng/L	87.4	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.59	2.00	ng/L	79.6	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.51	2.00	ng/L	75.7	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.76	2.00	ng/L	87.9	(23%-140%)
13C-OCDD		2.99	4.00	ng/L	74.7	(17%-157%)
13C-2,3,7,8-TCDF		1.71	2.00	ng/L	85.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.91	2.00	ng/L	95.4	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.70	2.00	ng/L	84.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.55	2.00	ng/L	77.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.50	2.00	ng/L	74.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.58	2.00	ng/L	79.2	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.65	2.00	ng/L	82.7	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025525		Matrix: WATER
Client Sample: QC for batch 42567		
Client ID: MB for batch 42567		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 13:51	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-4		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.49	2.00	ng/L	74.4 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.67	2.00	ng/L	83.7 (26%-138%)
37Cl-2,3,7,8-TCDD			0.188	0.200	ng/L	93.9 (35%-197%)

Comments:
J Value is estimated
K Estimated Maximum Possible Concentration
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report
 Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:18:33 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:19:05 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\ICFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %61.3%, Task: HRP750_2, User: MJC

-3 FOR BATCH 425 H

2020 DEC 19

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#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	Height	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.91e2	3.64e2	5.55e2	31.13	1.000	0.53	YES	0.025	0.0235	6.35e3	2030	3.1	8.79e3	1355	6.5	bb	bd
2	12378-PeCDD	3.76e2	2.63e2	6.39e2	34.06	1.001	1.43	NO	0.044	0.0282	8.88e3	2501	3.6	5.78e3	1488	3.9	db	bb
3	123478-HxCDD	3.07e2	1.84e2	4.92e2	36.63	1.001	1.66	YES	0.035	0.0440	8.98e3	3570	2.5	3.83e3	1512	2.5	bd	bd
4	123678-HxCDD	3.16e2	2.51e2	5.67e2	36.69	1.000	1.26	NO	0.038	0.0424	1.02e4	3570	2.9	9.84e3	1512	6.5	db	db
5	123789-HxCDD	2.71e2	2.65e2	5.36e2	36.95	1.007	1.02	YES	0.037	0.0439	8.71e3	3570	2.4	6.57e3	1512	4.3	bb	bb
6	1234678-HpCDD	3.30e2	4.20e2	7.50e2	39.93	1.000	0.79	YES	0.058	0.0452	5.14e3	1962	2.6	9.67e3	1553	6.2	MM	bd
7	OCDD	6.86e2	6.74e2	1.36e3	44.16	1.001	1.02	NO	0.138	0.0457	1.30e4	866	15.0	9.30e3	1208	7.7	MM	MM
8	2378-TCDF	1.00e2	6.98e1	1.70e2	30.38	1.002	1.44	YES	0.006	0.0294	3.21e3	1468	2.2	2.38e3	2219	1.1	dd	bb
9	12378-PeCDF	4.98e2	4.80e2	9.77e2	33.25	1.000	1.04	YES	0.041	0.0227	1.72e4	3400	5.1	1.33e4	1887	7.1	bb	bb
10	23478-PeCDF	5.52e2	4.56e2	1.01e3	33.85	1.000	1.21	YES	0.043	0.0238	2.05e4	3400	6.0	1.12e4	1887	5.9	db	bb
11	123478-HxCDF	5.08e2	3.86e2	8.94e2	35.90	1.000	1.31	NO	0.045	0.0222	1.68e4	1957	8.6	7.83e3	1810	4.3	bd	bd
12	123678-HxCDF	5.24e2	2.82e2	8.06e2	36.00	1.000	1.86	YES	0.039	0.0228	1.17e4	1957	6.0	7.47e3	1810	4.1	db	dd
13	234678-HxCDF	5.78e2	4.81e2	1.06e3	36.48	1.000	1.20	NO	0.051	0.0225	6.89e3	1957	3.5	1.02e4	1810	5.6	MM	MM
14	123789-HxCDF	5.23e2	4.75e2	9.98e2	37.24	1.000	1.10	NO	0.056	0.0291	8.15e3	1957	4.2	7.73e3	1810	4.3	db	MM
15	1234678-HpCDF	7.43e1	3.15e2	3.89e2	38.71	1.000	0.24	YES	0.025	0.0239	4.62e3	1489	3.1	8.13e3	1079	7.5	dd	bb
16	1234789-HpCDF	3.12e2	2.81e2	5.73e2	40.60	1.000	1.20	NO	0.040	0.0299	6.20e3	1489	4.2	5.07e3	1079	4.7	bb	bd
17	OCDF	5.71e2	6.22e2	1.19e3	44.40	1.006	0.92	NO	0.104	0.0399	1.06e4	726	14.7	1.33e4	1384	9.6	MM	MM
18	13C-2378-TCDD	1.09e6	1.43e6	2.51e6	31.12	1.018	0.76	NO	85.179	0.0764	1.76e7	5986	2943.4	2.30e7	4729	4855.2	bb	bb
19	13C-12378-PeCDD	1.05e6	6.71e5	1.72e6	34.03	1.114	1.56	NO	87.404	0.0931	2.53e7	4766	5304.8	1.65e7	3931	4201.5	bb	bb
20	13C-123478-HxCDD	8.38e5	6.71e5	1.51e6	36.60	0.991	1.25	NO	79.556	0.120	1.71e7	9278	1838.8	1.35e7	7007	1928.3	bd	bd
21	13C-123678-HxCDD	8.77e5	7.03e5	1.58e6	36.69	0.994	1.25	NO	75.745	0.110	1.76e7	9278	1897.9	1.40e7	7007	2003.9	dd	dd
22	13C-1234678-HpCDD	6.36e5	6.14e5	1.25e6	39.94	1.082	1.03	NO	87.897	0.131	9.50e6	6913	1374.1	9.22e6	6373	1447.3	bb	bd
23	13C-OCDD	9.60e5	1.07e6	2.03e6	44.13	1.195	0.90	NO	149.410	0.114	1.10e7	5127	2154.3	1.23e7	5939	2067.2	bb	bb
24	13C-2378-TCDF	1.22e6	1.57e6	2.79e6	30.32	0.992	0.78	NO	85.309	0.109	1.41e7	8784	1600.8	1.76e7	8122	2167.2	bb	bb
25	13C-12378-PeCDF	1.55e6	9.77e5	2.52e6	33.24	1.088	1.58	NO	95.380	0.184	3.78e7	13958	2706.7	2.38e7	9217	2577.3	bd	bd
26	13C-23478-PeCDF	1.44e6	9.23e5	2.36e6	33.84	1.108	1.56	NO	84.868	0.175	3.43e7	13958	2455.1	2.23e7	9217	2423.3	bb	bb
27	13C-123478-HxCDF	6.19e5	1.20e6	1.82e6	35.90	0.972	0.52	NO	77.328	0.172	1.33e7	11012	1204.9	2.57e7	17848	1437.2	bd	bd
28	13C-123678-HxCDF	6.71e5	1.30e6	1.97e6	36.00	0.975	0.52	NO	74.777	0.153	1.35e7	11012	1228.4	2.62e7	17848	1467.1	dd	dd
29	13C-234678-HxCDF	6.32e5	1.18e6	1.81e6	36.47	0.988	0.53	NO	79.196	0.177	1.29e7	11012	1168.1	2.45e7	17848	1375.3	bd	bb
30	13C-123789-HxCDF	5.72e5	1.12e6	1.69e6	37.23	1.009	0.51	NO	82.709	0.198	1.03e7	11012	935.6	1.97e7	17848	1101.9	bb	bd

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:18:33 Eastern Standard Time

Printed: Monday, December 16, 2019 17:19:05 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	ppb/L	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	4.25e5	9.45e5	1.37e6	38.71	1.049	0.45	NO	74.388	0.118	7.26e6	6815	1065.3	1.61e7	8649	1865.6	bd	bb
32	13C-1234789-HpCDF	3.69e5	8.31e5	1.20e6	40.60	1.100	0.44	NO	83.676	0.151	5.49e6	6815	805.3	1.19e7	8649	1376.3	bb	bb
33	13C-1234-TCDD	1.14e6	1.47e6	2.62e6	30.55	0.000	0.78	NO	100.000	0.0882	1.36e7	5986	2268.8	1.74e7	4729	3673.2	bb	bb
34	13C-123789-HxCDD	1.17e6	9.47e5	2.12e6	36.92	0.000	1.24	NO	100.000	0.108	2.08e7	9278	2246.5	1.71e7	7007	2441.7	dd	dd
35	37Cl-2378-TCDD	2.61e5		2.61e5	31.13	1.019			9.388	0.0156	4.28e6	2059	2077.9				bb	bb

Quantify Totals Report MassLynx 4.1
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:18:33 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:19:05 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethdBICFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

JTD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-tetradioxins	5.21e1	5.52e1	1.07e2	27.80	0.94	YES	0.005	0.0235	2.69e3	2030	1.3	2.73e3	1355	2.0	bb	bb
Total-tetradioxins	6.39e1	6.77e1	1.32e2	27.31	0.94	YES	0.006	0.0235	1.81e3	2030	0.9	1.52e3	1355	1.1	bb	bb
Total-tetradioxins	1.44e2	6.75e1	2.12e2	27.01	2.14	YES	0.010	0.0235	5.48e3	2030	2.7	2.24e3	1355	1.7	bd	bb
Total-tetradioxins	5.92e1	6.25e1	1.22e2	26.34	0.95	YES	0.005	0.0235	1.72e3	2030	0.8	2.38e3	1355	1.8	bb	bb
2378-TCDD	1.91e2	3.64e2	5.55e2	31.13	0.53	YES	0.025	0.0235	6.35e3	2030	3.1	8.79e3	1355	6.5	bb	bd
Total-tetradioxins	5.22e1	7.14e1	1.24e2	30.93	0.73	NO	0.006	0.0235	1.90e3	2030	0.9	2.29e3	1355	1.7	bb	bb
Total-tetradioxins	1.56e2	1.02e2	2.57e2	30.31	1.53	YES	0.012	0.0235	4.44e3	2030	2.2	2.13e3	1355	1.6	bb	db
Total-tetradioxins	5.82e1	6.88e1	1.27e2	29.64	0.85	NO	0.006	0.0235	2.32e3	2030	1.1	2.21e3	1355	1.6	db	bb
Total-tetradioxins	8.68e1	6.34e1	1.50e2	28.74	1.37	YES	0.007	0.0235	2.81e3	2030	1.4	2.89e3	1355	2.1	bb	bb
Total-tetradioxins	7.94e1	9.13e1	1.71e2	32.05	0.87	NO	0.008	0.0235	2.50e3	2030	1.2	3.48e3	1355	2.6	bb	bb
Total-tetradioxins	1.30e2	7.20e1	2.02e2	31.89	1.81	YES	0.009	0.0235	2.32e3	2030	1.1	1.69e3	1355	1.2	bb	db
Total-tetradioxins	6.79e1	9.97e1	1.68e2	31.72	0.68	NO	0.008	0.0235	4.69e3	2030	2.3	2.09e3	1355	1.5	bb	bd

PD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentadioxins	6.47e1	7.26e1	1.37e2	32.55	0.89	YES	0.009	0.0282	1.86e3	2501	0.7	2.60e3	1488	1.7	bb	bb
Total-pentadioxins	7.13e1	6.35e1	1.35e2	34.34	1.12	YES	0.009	0.0282	2.24e3	2501	0.9	5.23e3	1488	3.5	dd	bb
12378-PeCDD	3.76e2	2.63e2	6.39e2	34.06	1.43	NO	0.044	0.0282	8.88e3	2501	3.6	5.78e3	1488	3.9	db	bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 17:18:33 Eastern Standard Time
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Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

HD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	SIN1	Height2	Noise2	SIN2	M	M2
Total-hexadioxins	7.18e1	5.91e1	1.31e2	38.08	1.22	NO	0.009	0.0434	2.67e3	3570	0.7	2.35e3	1512	1.6	bb	bb
Total-hexadioxins	8.64e1	6.69e1	1.53e2	37.67	1.29	NO	0.011	0.0434	5.58e3	3570	1.6	4.90e3	1512	3.2	bb	bb
Total-hexadioxins	3.96e2	1.39e2	5.36e2	37.24	2.84	YES	0.037	0.0434	6.83e3	3570	1.9	2.95e3	1512	1.9	bb	bb
123789-HxCDD	2.71e2	2.65e2	5.36e2	36.95	1.02	YES	0.037	0.0439	8.71e3	3570	2.4	6.57e3	1512	4.3	bb	bb
123678-HxCDD	3.16e2	2.51e2	5.67e2	36.69	1.26	NO	0.038	0.0424	1.02e4	3570	2.9	9.84e3	1512	6.5	db	db
123478-HxCDD	3.07e2	1.84e2	4.92e2	36.63	1.66	YES	0.035	0.0440	8.98e3	3570	2.5	3.83e3	1512	2.5	bd	bd
Total-hexadioxins	5.24e2	8.52e1	6.09e2	35.99	6.15	YES	0.042	0.0434	2.05e4	3570	5.7	3.22e3	1512	2.1	db	bb
Total-hexadioxins	9.56e1	1.06e2	2.02e2	35.95	0.90	YES	0.014	0.0434	5.88e3	3570	1.6	4.63e3	1512	3.1	dd	bb

HPD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	SIN1	Height2	Noise2	SIN2	M	M2
Total-heptadioxins	7.29e2	2.43e2	9.71e2	38.69	3.01	YES	0.075	0.0452	1.44e4	1962	7.4	4.46e3	1553	2.9	bb	bb
Total-heptadioxins	4.10e2	1.69e2	5.79e2	40.58	2.43	YES	0.045	0.0452	8.25e3	1962	4.2	6.47e3	1553	4.2	MM	bb
Total-heptadioxins	7.08e1	7.89e1	1.50e2	40.08	0.90	NO	0.012	0.0452	2.53e3	1962	1.3	3.95e3	1553	2.5	db	db
1234678-HpCDD	3.30e2	4.20e2	7.50e2	39.93	0.79	YES	0.058	0.0452	5.14e3	1962	2.6	9.67e3	1553	6.2	MM	bd

TF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	SIN1	Height2	Noise2	SIN2	M	M2
Total-tetrafurans	6.03e1	9.33e1	1.54e2	28.18	0.65	YES	0.006	0.0294	2.39e3	1468	1.6	4.15e3	2219	1.9	bb	bb
Total-tetrafurans	7.92e1	6.19e1	1.41e2	27.85	1.28	YES	0.005	0.0294	2.90e3	1468	2.0	2.21e3	2219	1.0	bb	bb
Total-tetrafurans	5.12e1	6.90e1	1.20e2	26.84	0.74	NO	0.004	0.0294	1.88e3	1468	1.3	4.41e3	2219	2.0	bb	bb
Total-tetrafurans	6.51e1	1.17e2	1.82e2	26.46	0.56	YES	0.007	0.0294	4.30e3	1468	2.9	3.65e3	2219	1.6	bb	dd
Total-tetrafurans	5.62e1	8.75e1	1.44e2	25.39	0.64	YES	0.005	0.0294	3.63e3	1468	2.5	5.00e3	2219	2.3	bb	bb
Total-tetrafurans	1.53e2	1.57e2	3.10e2	31.68	0.97	YES	0.011	0.0294	4.51e3	1468	3.1	5.94e3	2219	2.7	bb	bb
Total-tetrafurans	7.69e1	1.05e2	1.82e2	30.58	0.73	NO	0.007	0.0294	3.33e3	1468	2.3	3.72e3	2219	1.7	db	bb
2378-TCDF	1.00e2	6.98e1	1.70e2	30.38	1.44	YES	0.006	0.0294	3.21e3	1468	2.2	2.38e3	2219	1.1	dd	bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

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 Printed: Monday, December 16, 2019 17:19:05 Eastern Standard Time

Handwritten signature: J. J. O'Connell

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

PF1

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentafurans (F1)	6.39e1	1.80e2	2.44e2	30.08	0.35	YES	0.010	0.0148	4.37e3	1229	3.6	3.08e3	2130	1.4	bb	db
Total-pentafurans (F1)	6.94e1	2.11e2	2.81e2	31.80	0.33	YES	0.012	0.0148	2.66e3	1229	2.2	7.82e3	2130	3.7	bb	bb

PF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentafurans	5.13e1	9.17e1	1.43e2	34.50	0.56	YES	0.006	0.0232	1.10e3	3400	0.3	3.85e3	1887	2.0	bb	bb
23478-PeCDF	5.52e2	4.56e2	1.01e3	33.85	1.21	YES	0.043	0.0238	2.05e4	3400	6.0	1.12e4	1887	5.9	db	bb
12378-PeCDF	4.98e2	4.80e2	9.77e2	33.25	1.04	YES	0.041	0.0227	1.72e4	3400	5.1	1.39e4	1887	7.1	bb	bb

HPF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
234678-HxCDF	5.78e2	4.81e2	1.06e3	36.48	1.20	NO	0.051	0.0225	6.89e3	1957	3.5	1.02e4	1810	5.6	MM	MM
123678-HxCDF	5.24e2	2.82e2	8.06e2	36.00	1.86	YES	0.039	0.0228	1.17e4	1957	6.0	7.47e3	1810	4.1	db	dd
123478-HxCDF	5.08e2	3.86e2	8.94e2	35.90	1.31	NO	0.045	0.0222	1.68e4	1957	8.6	7.83e3	1810	4.3	bd	bd
123789-HxCDF	5.23e2	4.75e2	9.98e2	37.24	1.10	NO	0.056	0.0291	8.15e3	1957	4.2	7.73e3	1810	4.3	db	MM

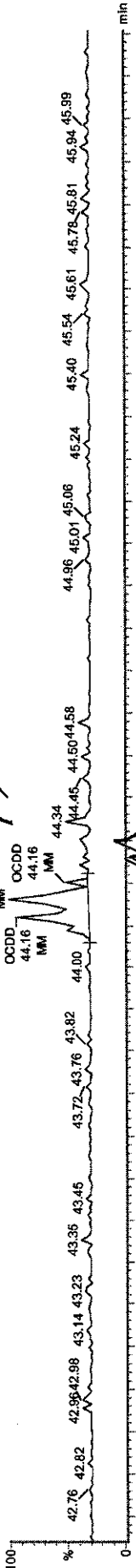
HPF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1234789-HpCDF	3.12e2	2.61e2	5.73e2	40.60	1.20	NO	0.040	0.0299	6.20e3	1489	4.2	5.07e3	1079	4.7	bb	bd
Total-heptafurans	5.02e1	7.71e1	1.27e2	39.23	0.65	YES	0.008	0.0267	1.12e3	1489	0.8	2.16e3	1079	2.0	bb	db
Total-heptafurans	5.35e1	6.95e1	1.23e2	39.15	0.77	YES	0.008	0.0267	2.40e3	1489	1.6	2.95e3	1079	2.7	bb	bd
Total-heptafurans	5.06e1	5.88e1	1.09e2	38.82	0.86	YES	0.007	0.0267	2.99e3	1489	2.0	4.00e3	1079	3.7	db	bb
1234678-HpCDF	7.43e1	3.15e2	3.89e2	38.71	0.24	YES	0.025	0.0239	4.62e3	1489	3.1	8.13e3	1079	7.5	dd	bb
Total-heptafurans	5.93e1	6.87e1	1.28e2	41.05	0.86	YES	0.008	0.0267	4.51e3	1489	3.0	4.02e3	1079	3.7	bb	bb

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

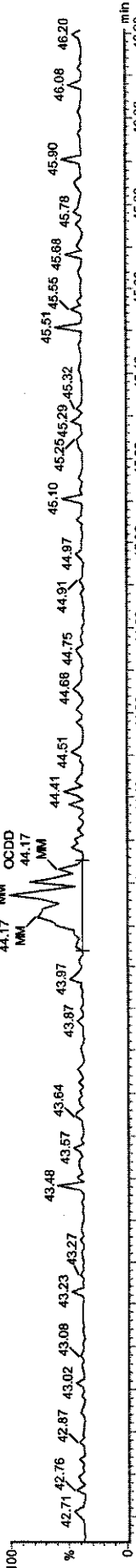
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 12025525-2.MB

F5:Voltage SIR.EI+
 457.738
 1.872e+004



A14DEC19A-4
 12025525-2.MB

F5:Voltage SIR.EI+
 459.735
 1.476e+004

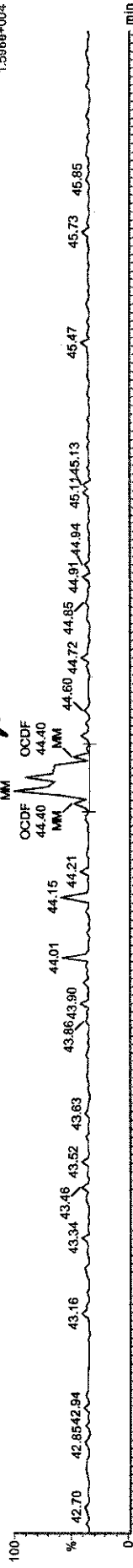


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MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

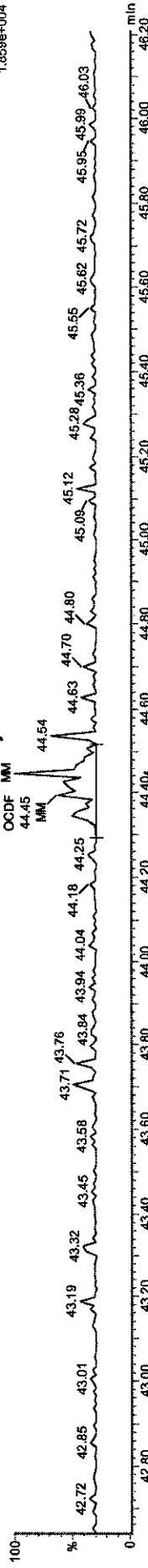
A14DEC19A-4
 12025525-2.MB

F5:Voltage SIR,EI+
 441.743
 1.596e+004



A14DEC19A-4
 12025525-2.MB

F5:Voltage SIR,EI+
 443.740
 1.859e+004

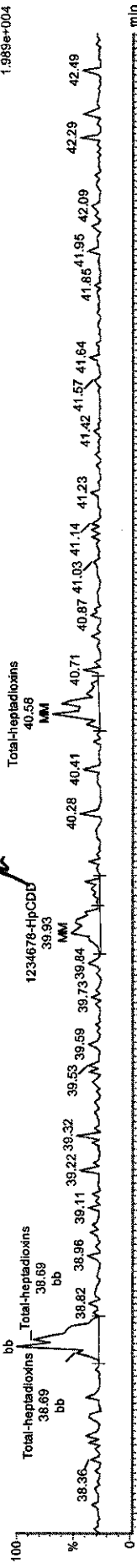


Handwritten signature and initials

MANUAL INTEGRATION
METHOD 1613
HRP750_2

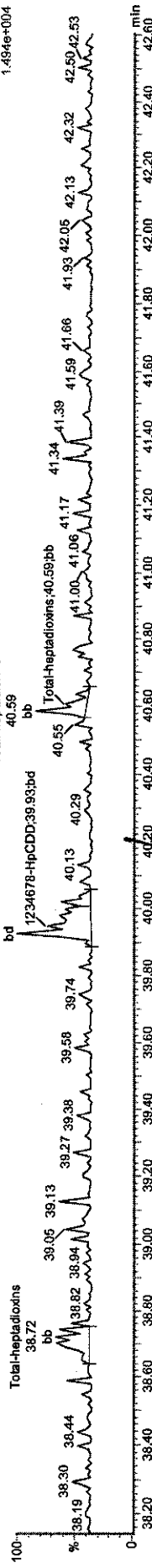
A14DEC19A-4
12025525-2.ME

F4-Voltage SIR.EI+
423.777
1.989e+004



A14DEC19A-4
12025525-2.ME

F4-Voltage SIR.EI+
425.774
1.484e+004

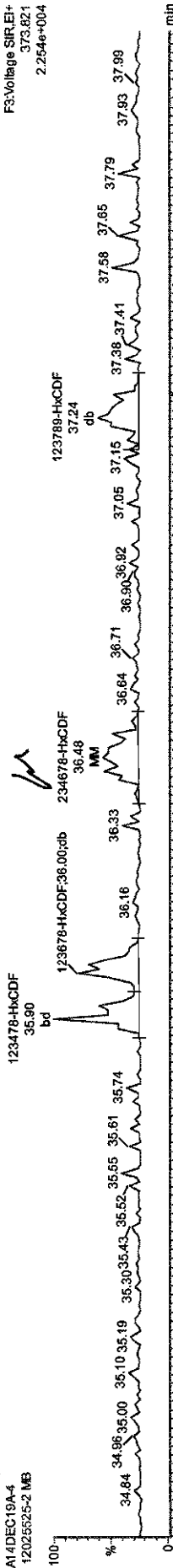


Handwritten signature
12/16/19
Handwritten signature

MANUAL INTEGRATION
METHOD 1613
HRP750_2

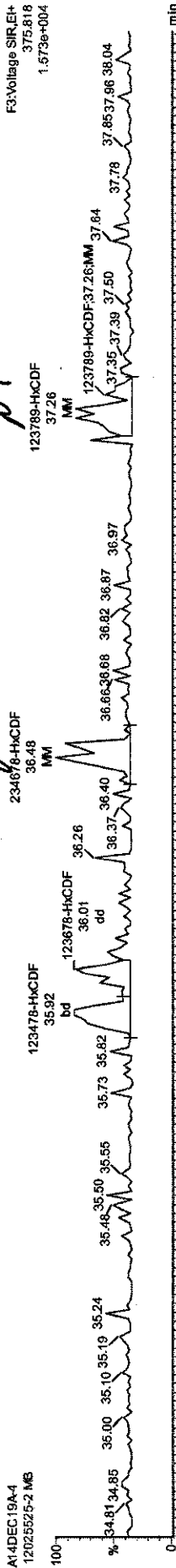
A14DEC19A-4
12025525-2.MS

F3:Voltage SIRLEI+
373.821
2.264e+004



A14DEC19A-4
12025525-2.MS

F3:Voltage SIRLEI+
375.818
1.573e+004



Handwritten signature/initials

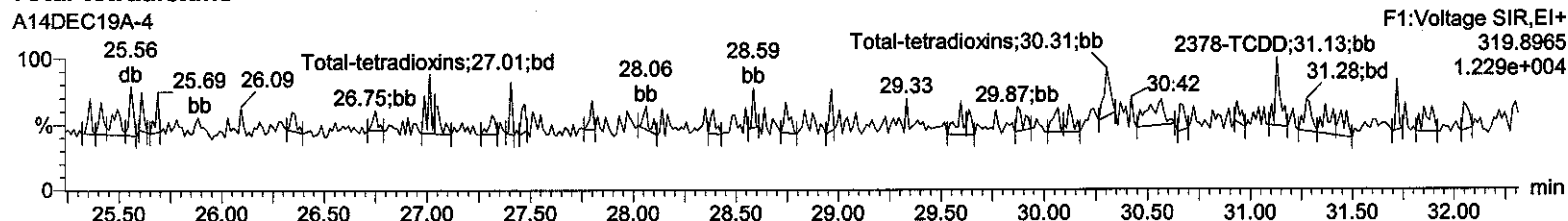
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Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

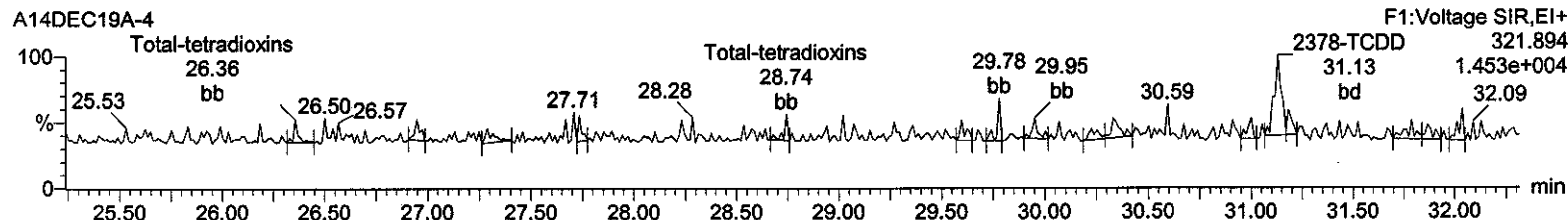
Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2,
User: MJC

-3 FOR BATCH 42571

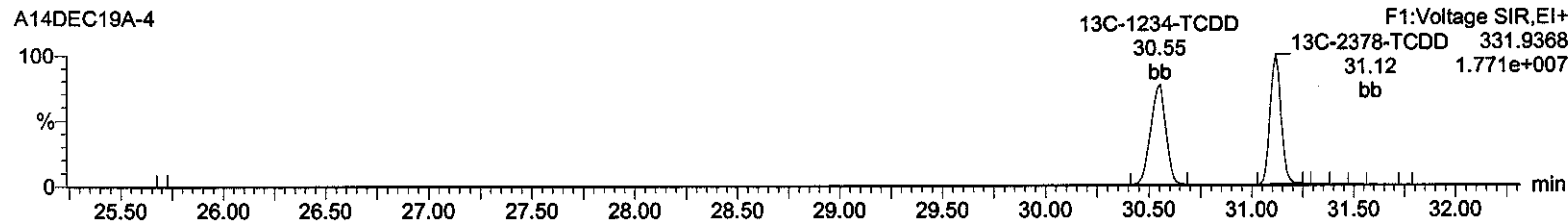
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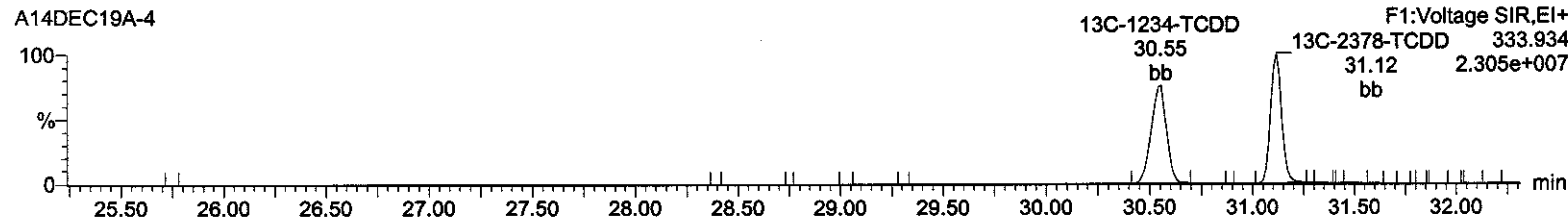
Total-tetradoxins



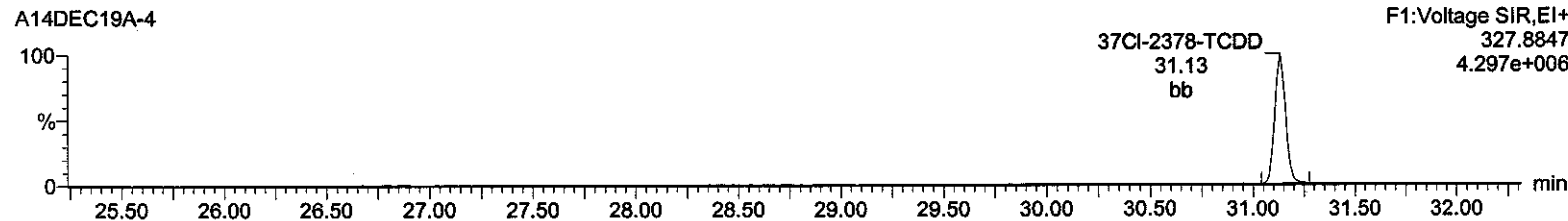
13C-2378-TCDD



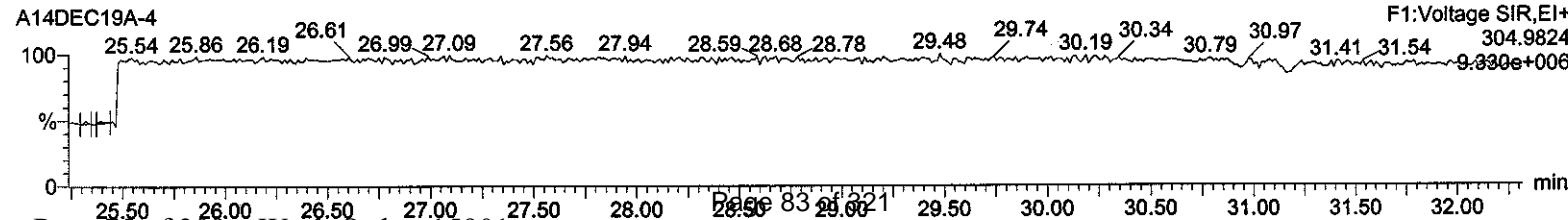
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1

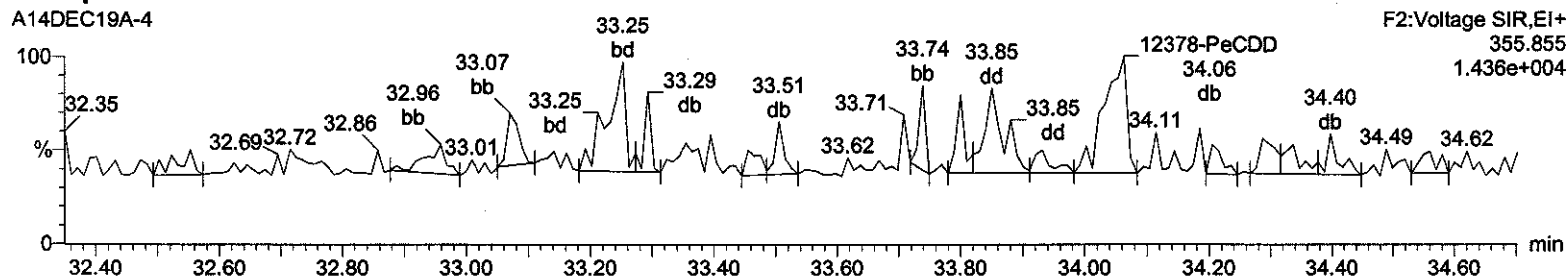


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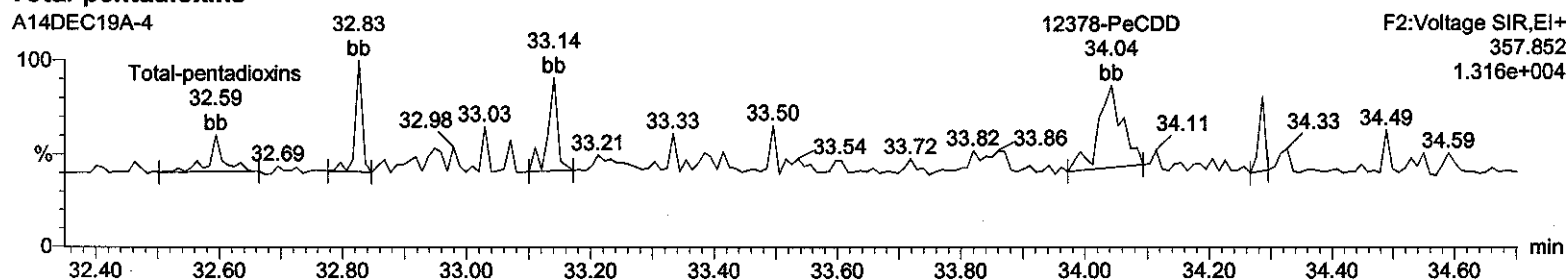
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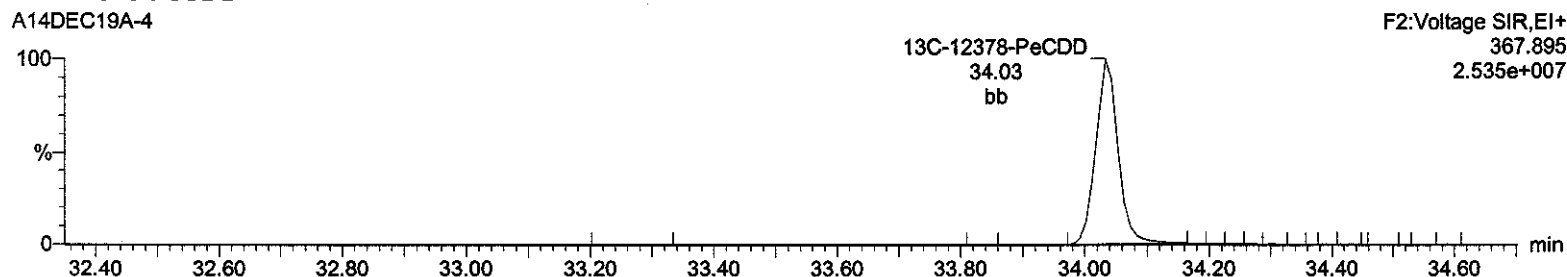
Total-pentadioxins



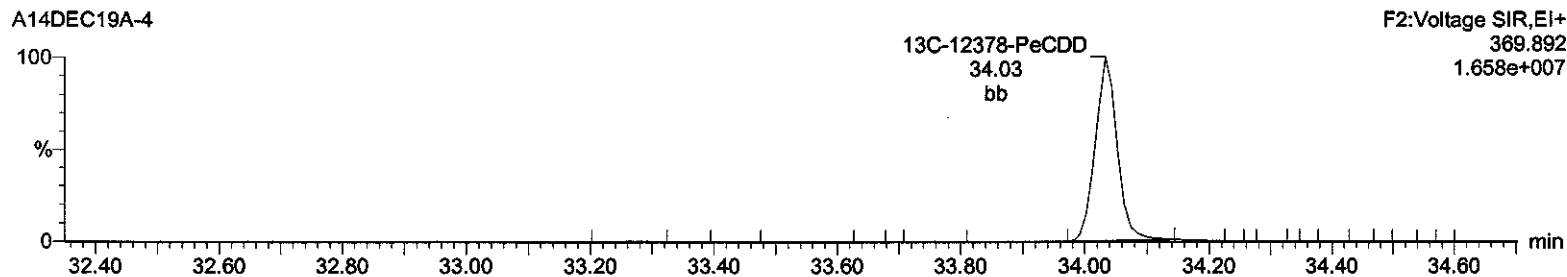
Total-pentadioxins



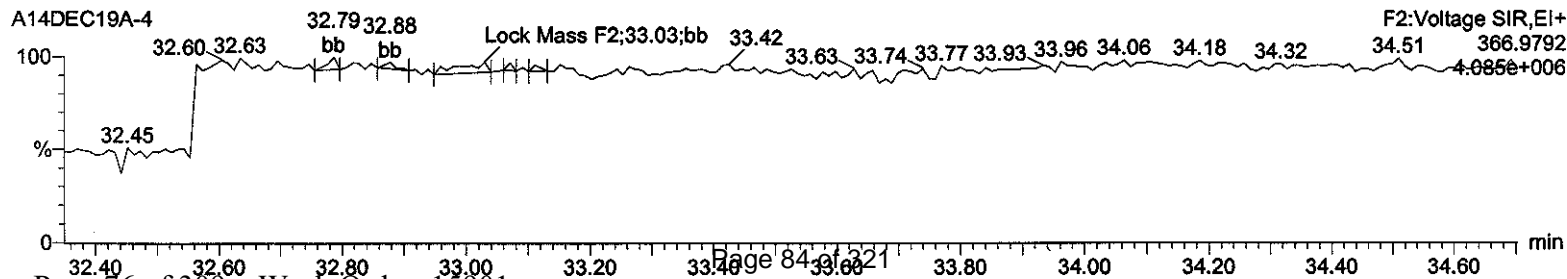
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2

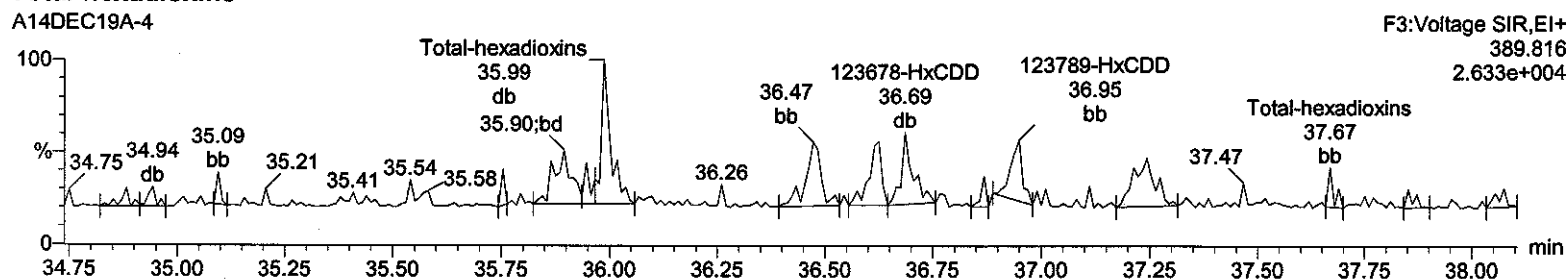


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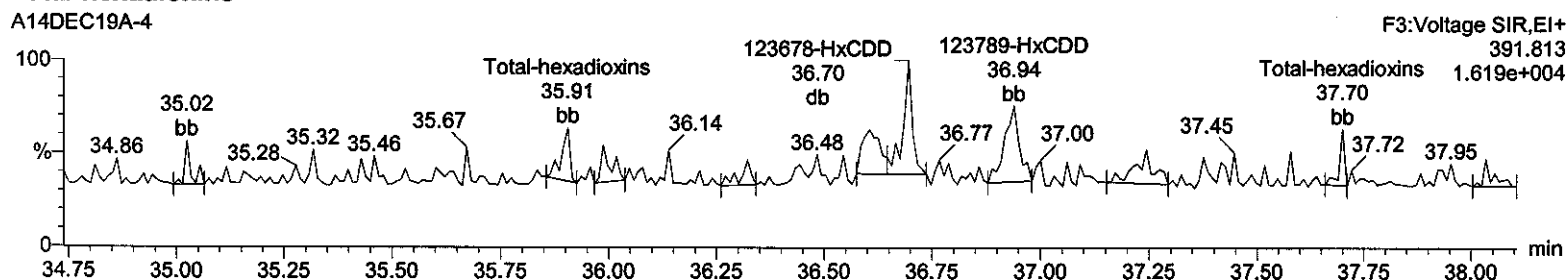
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Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

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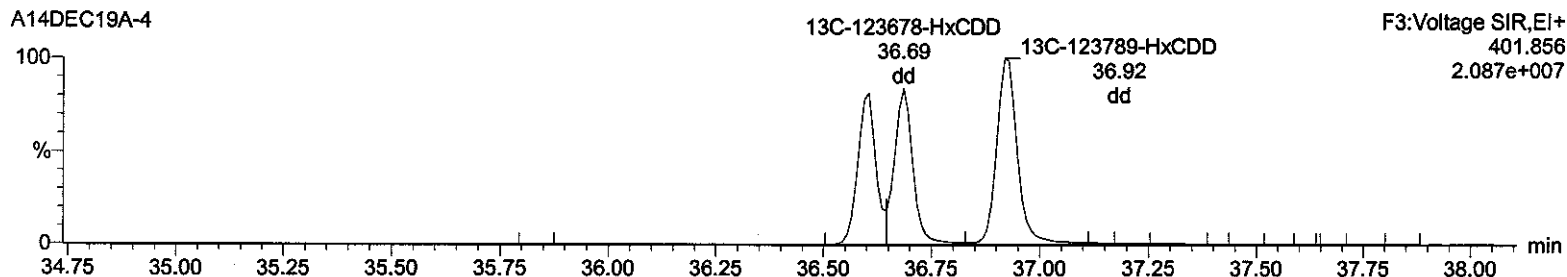
Total-hexadioxins



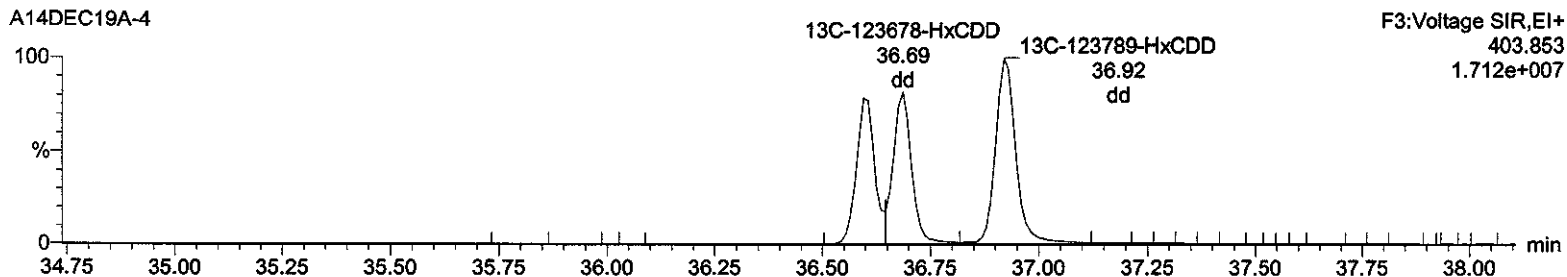
Total-hexadioxins



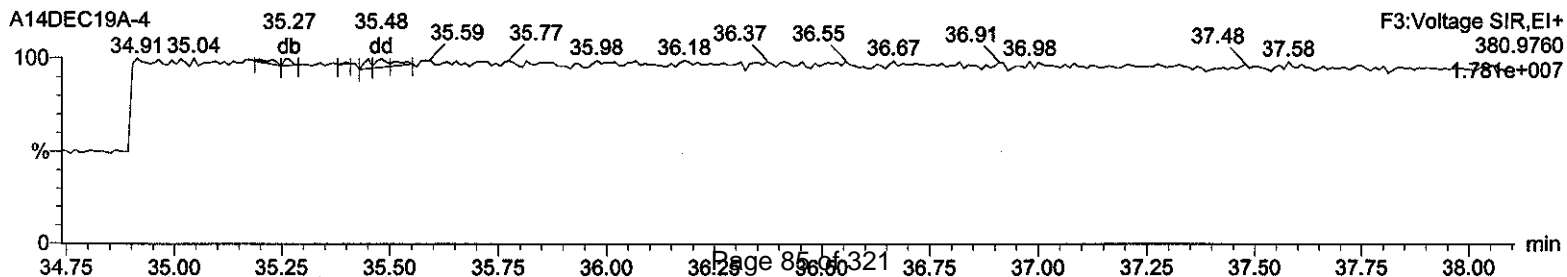
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

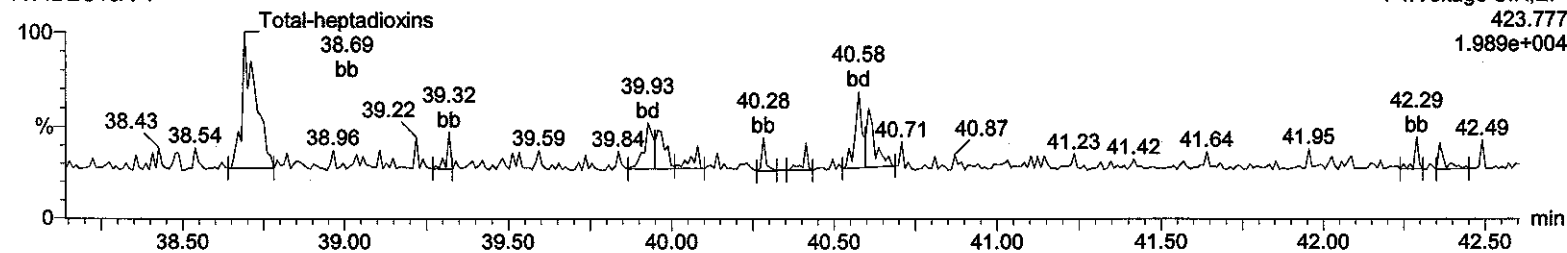
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Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

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Total-heptadioxins

A14DEC19A-4

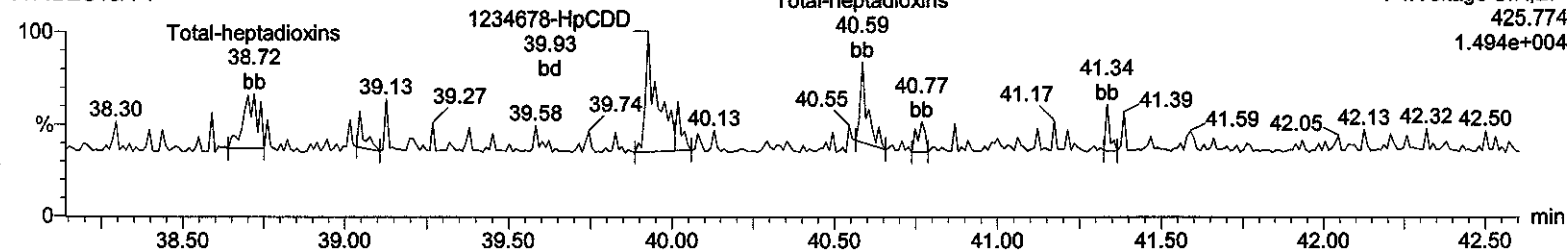
F4:Voltage SIR,EI+
423.777
1.989e+004



Total-heptadioxins

A14DEC19A-4

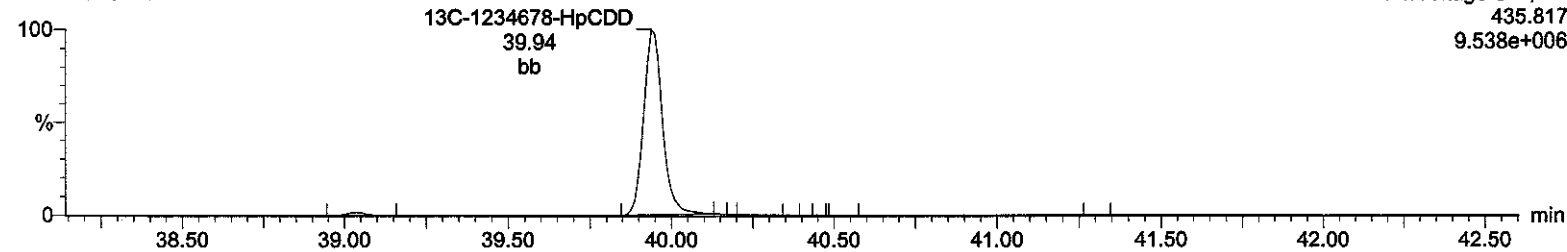
F4:Voltage SIR,EI+
425.774
1.494e+004



13C-1234678-HpCDD

A14DEC19A-4

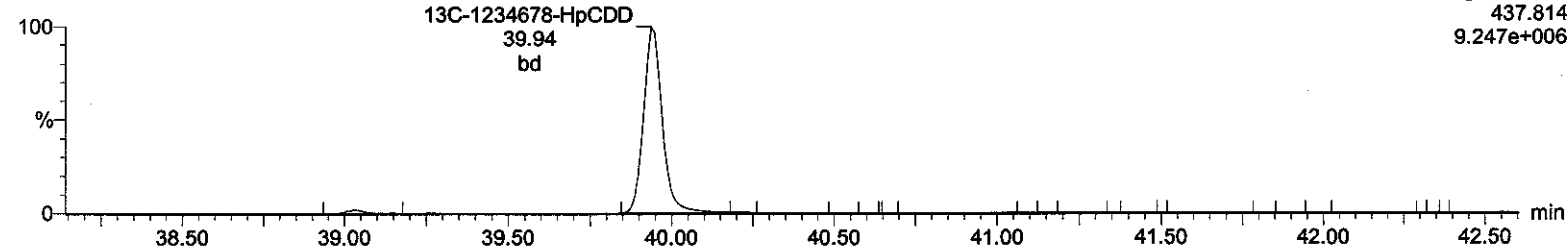
F4:Voltage SIR,EI+
435.817
9.538e+006



13C-1234678-HpCDD

A14DEC19A-4

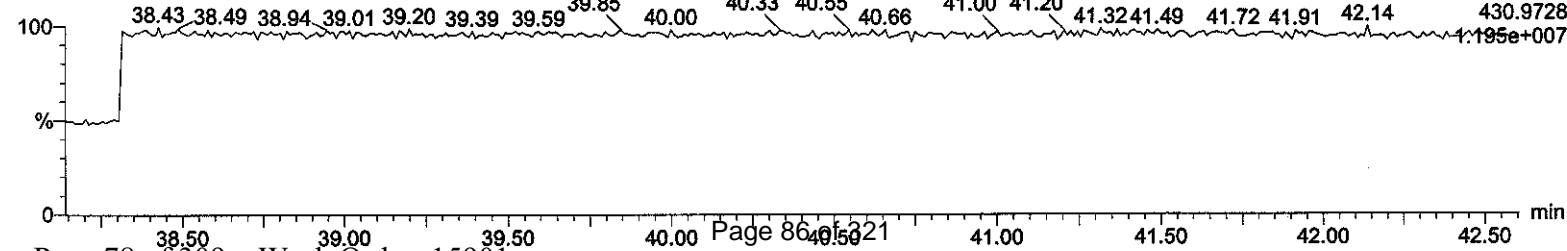
F4:Voltage SIR,EI+
437.814
9.247e+006



Lock Mass F4

A14DEC19A-4

F4:Voltage SIR,EI+
430.9728
1.195e+007



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

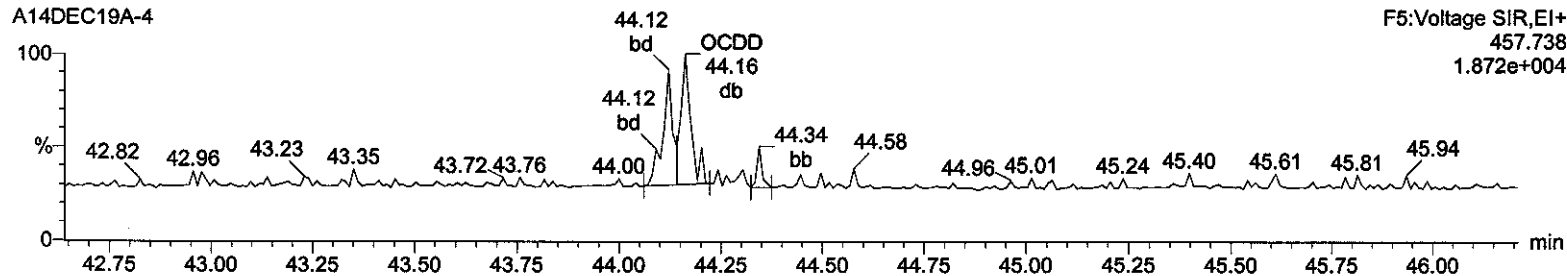
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Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

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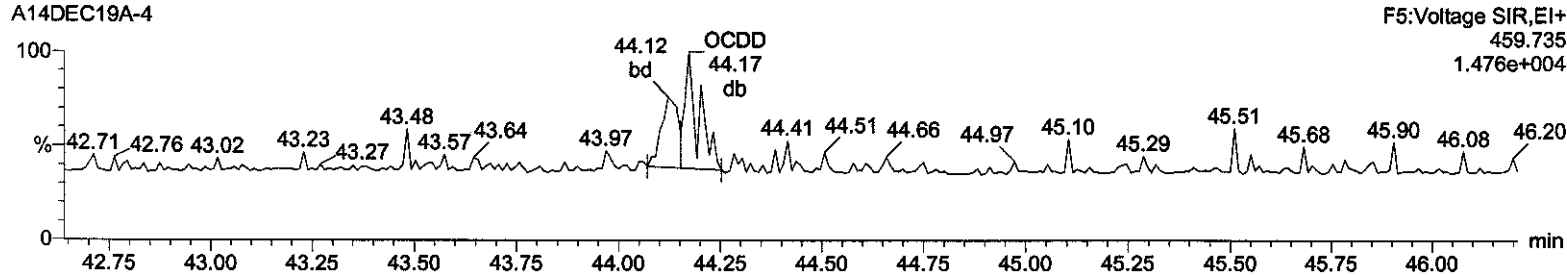
OCDD

A14DEC19A-4



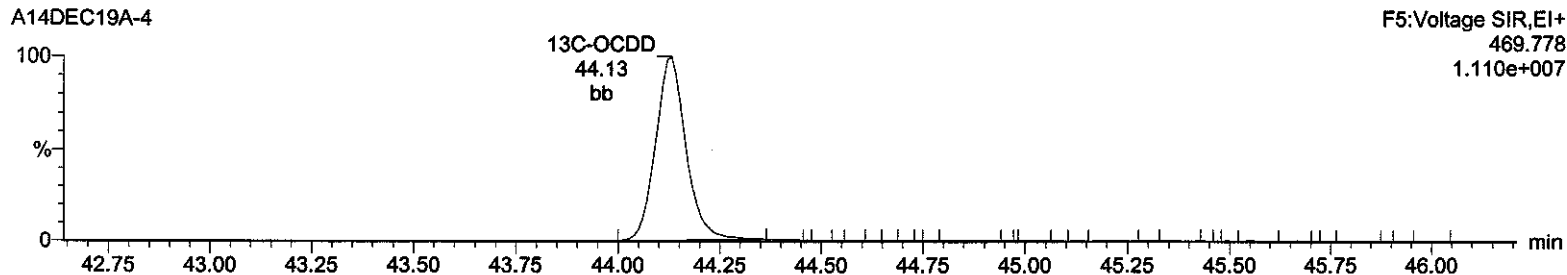
OCDD

A14DEC19A-4



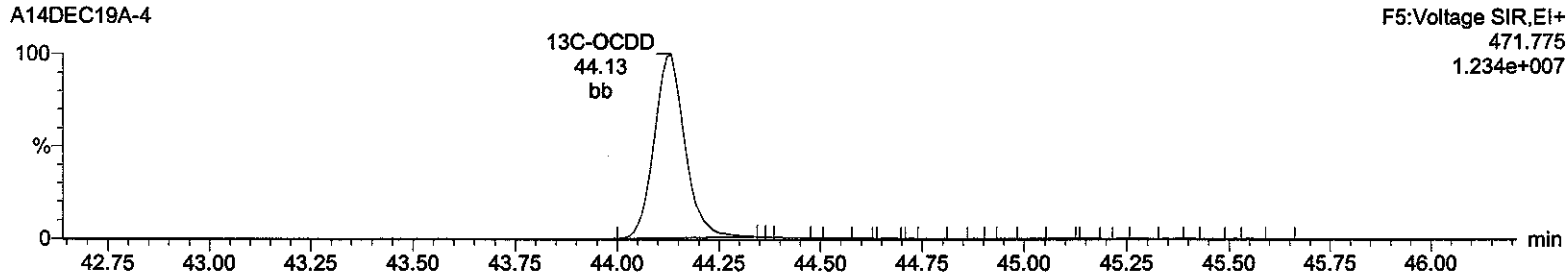
13C-OCDD

A14DEC19A-4



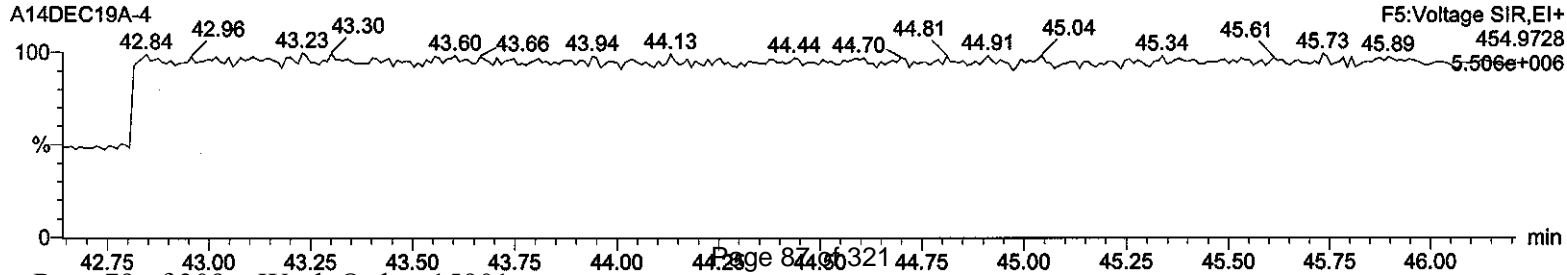
13C-OCDD

A14DEC19A-4



Lock Mass F5

A14DEC19A-4

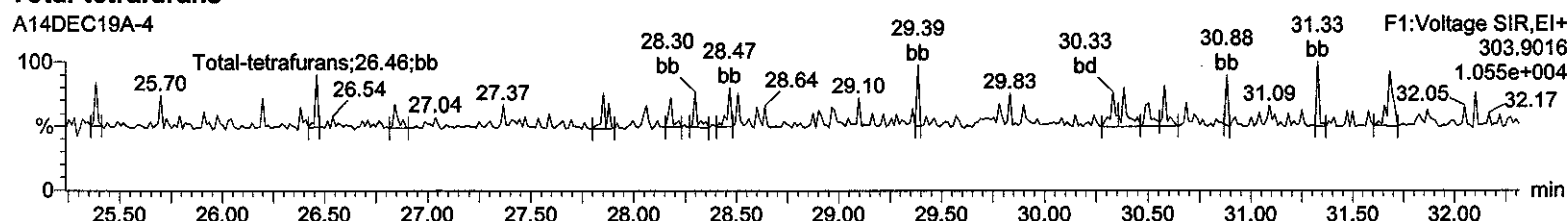


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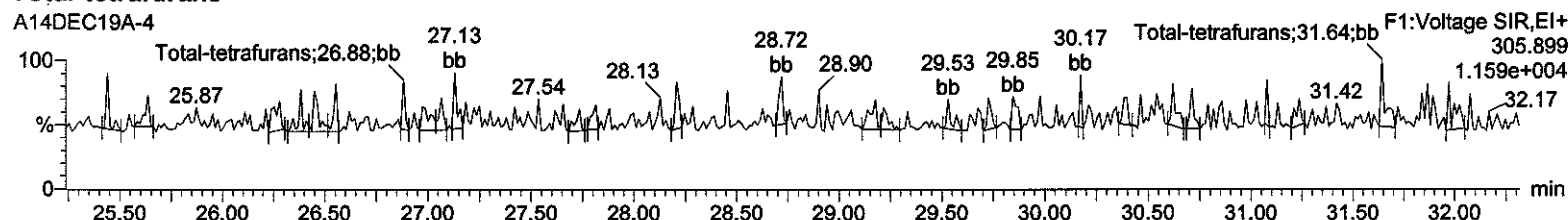
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Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

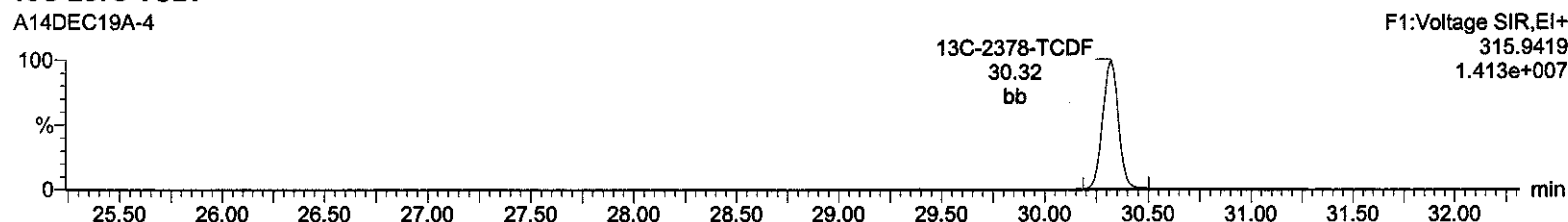
Total-tetrafurans



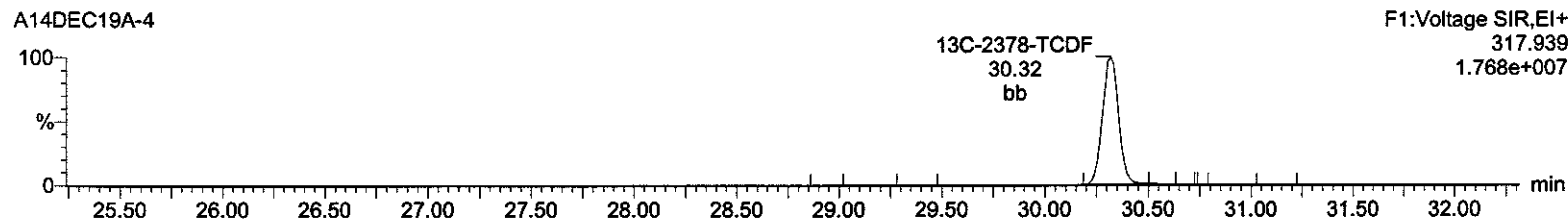
Total-tetrafurans



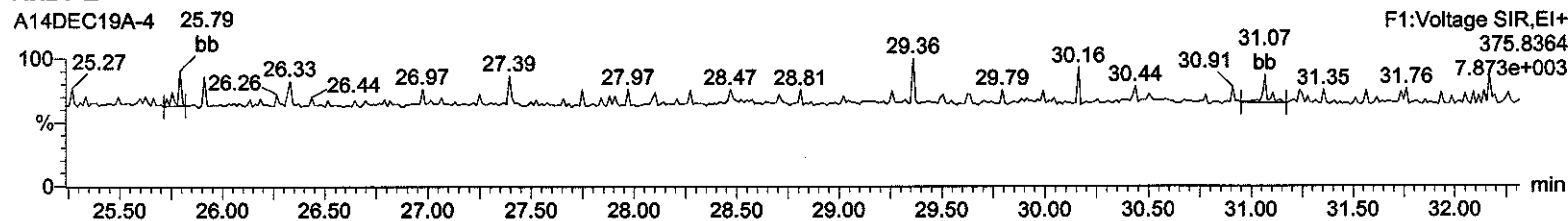
13C-2378-TCDF



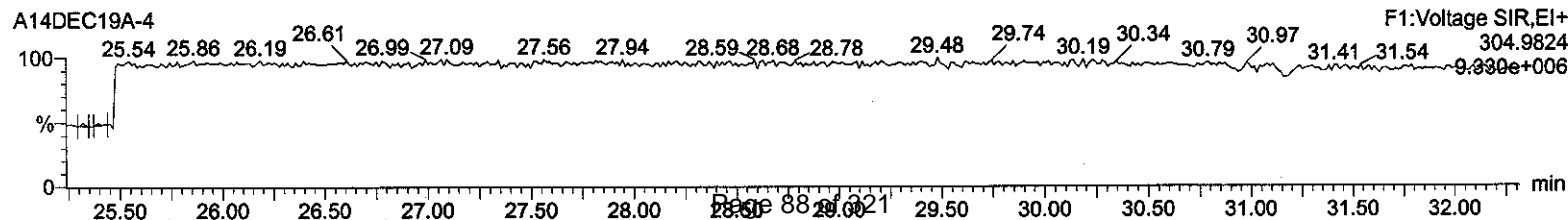
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

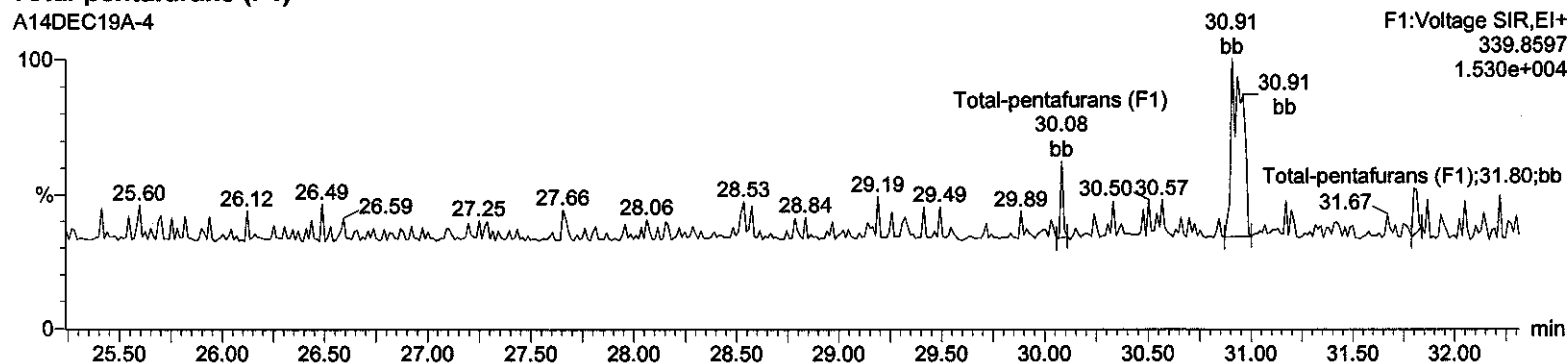
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Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

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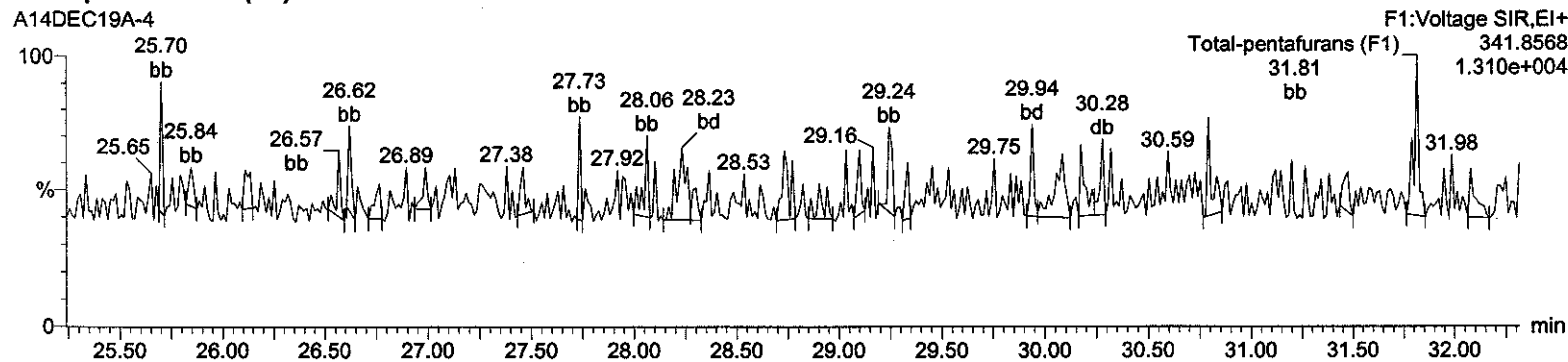
Total-pentafurans (F1)

A14DEC19A-4



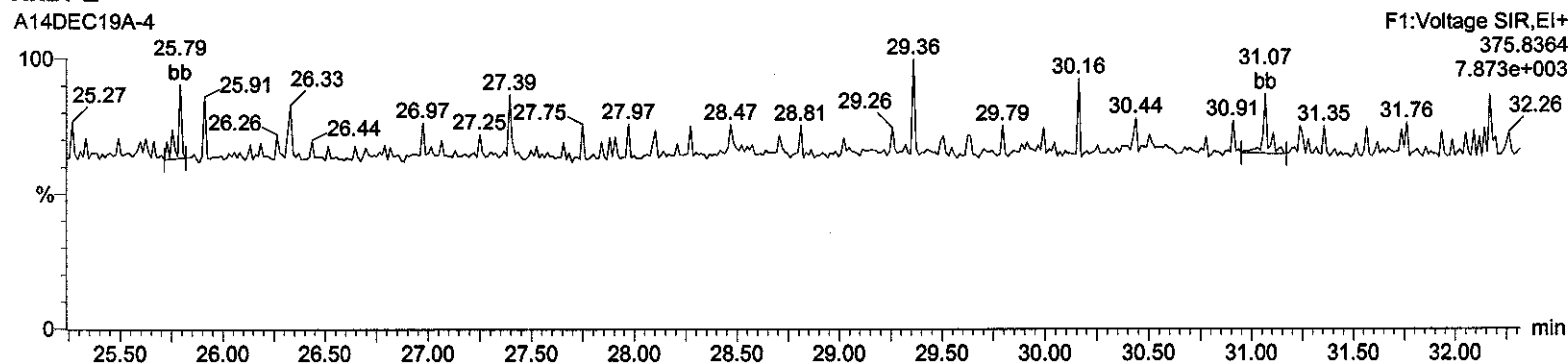
Total-pentafurans (F1)

A14DEC19A-4



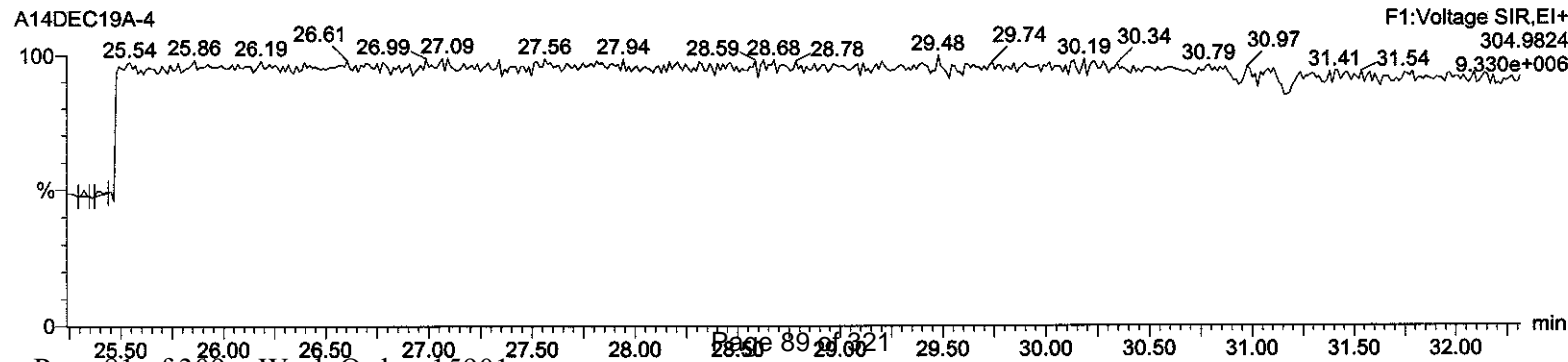
HxDPE

A14DEC19A-4



Lock Mass F1

A14DEC19A-4

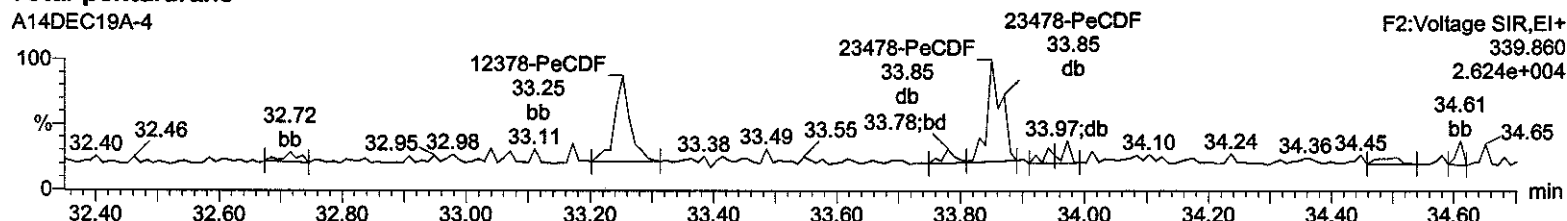


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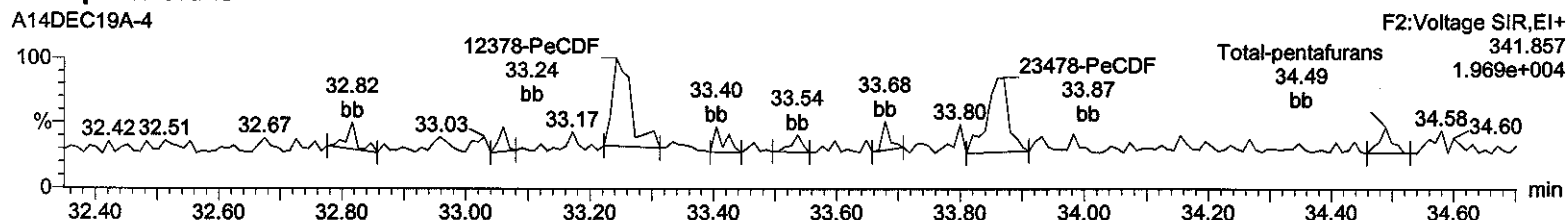
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Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

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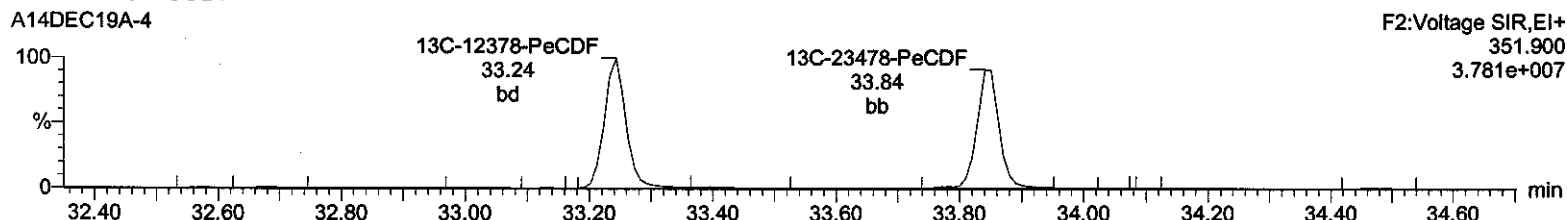
Total-pentafurans



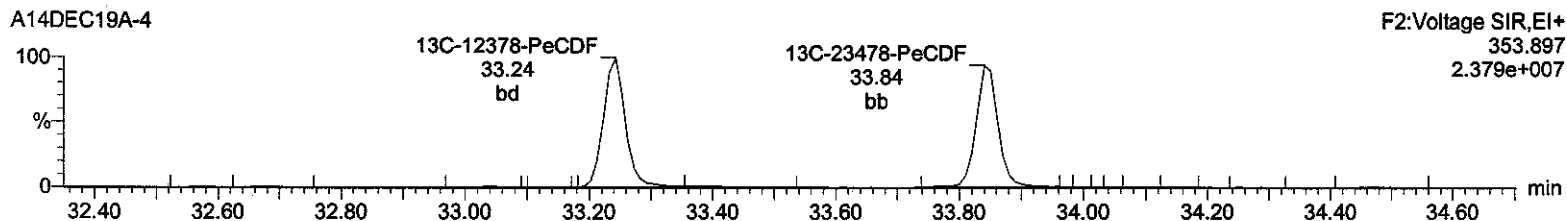
Total-pentafurans



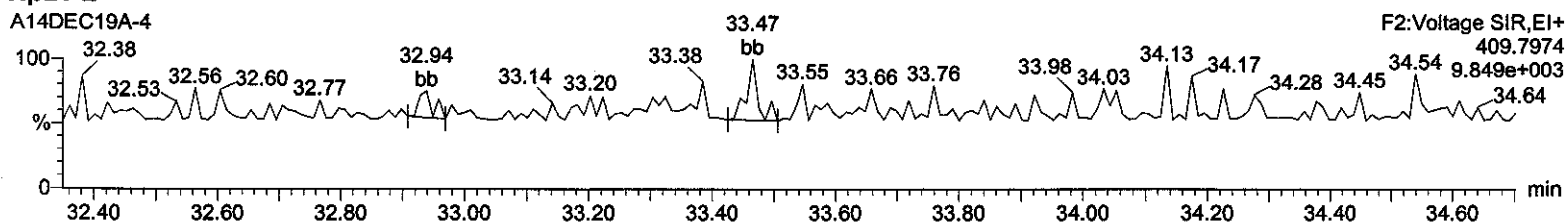
13C-12378-PeCDF



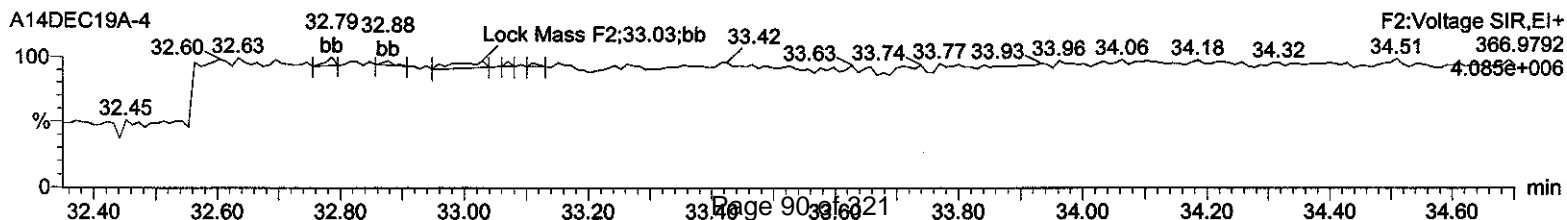
13C-12378-PeCDF



HpDPE



Lock Mass F2

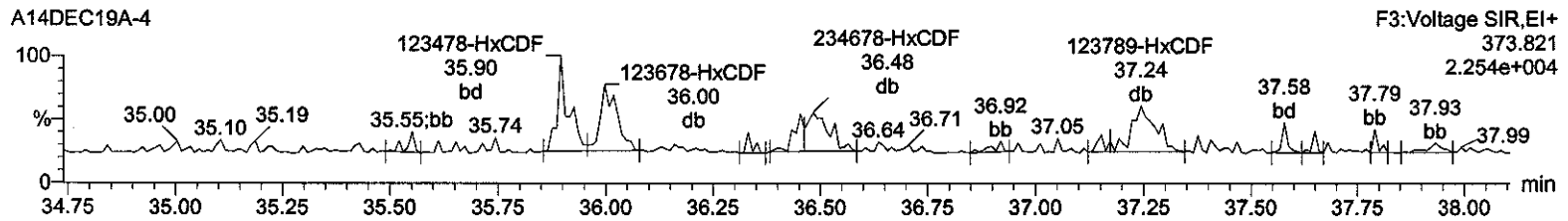


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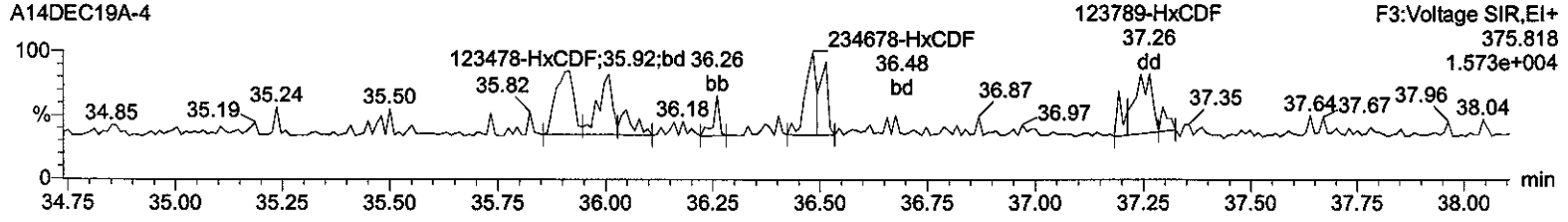
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Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

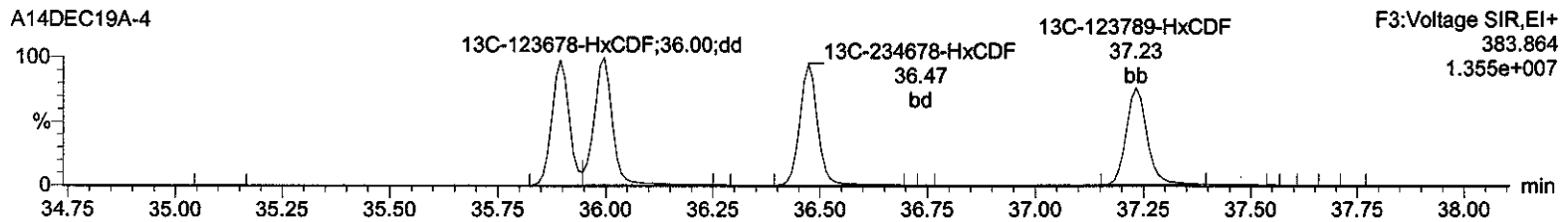
Total-hexafurans



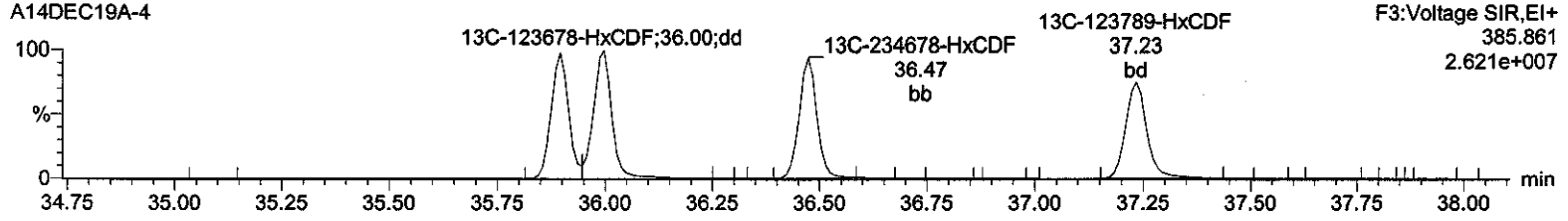
Total-hexafurans



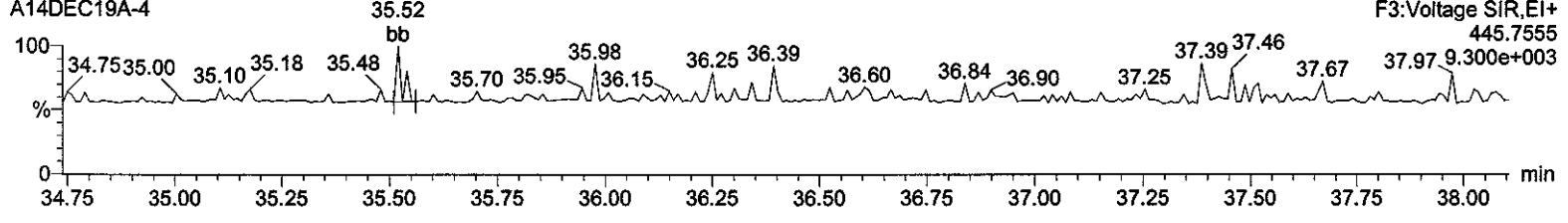
13C-123478-HxCDF



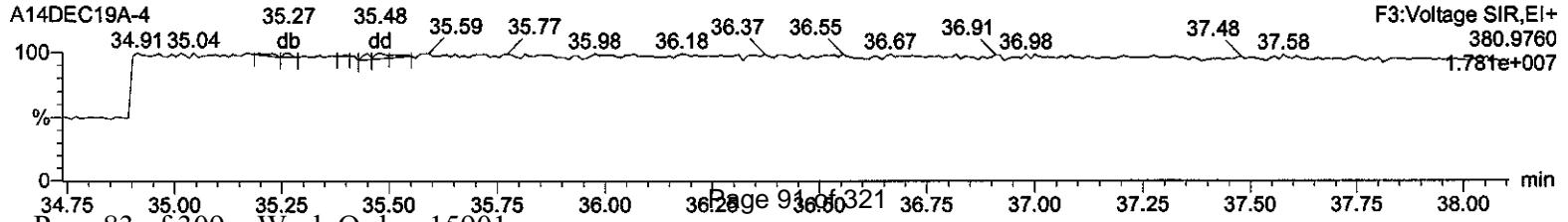
13C-123478-HxCDF



OcDPE



Lock Mass F3



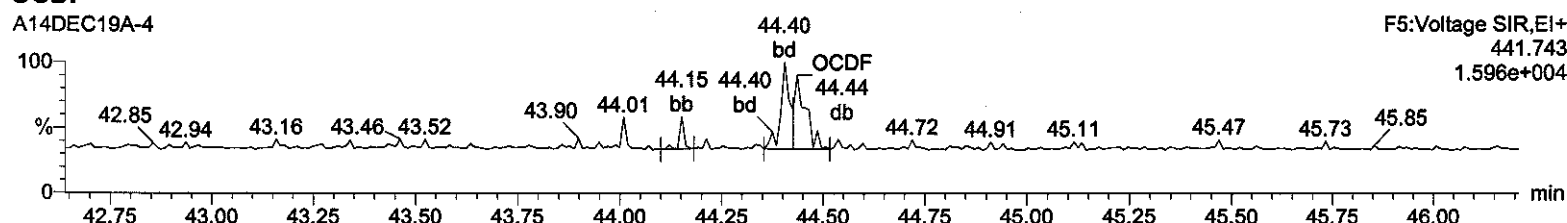
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

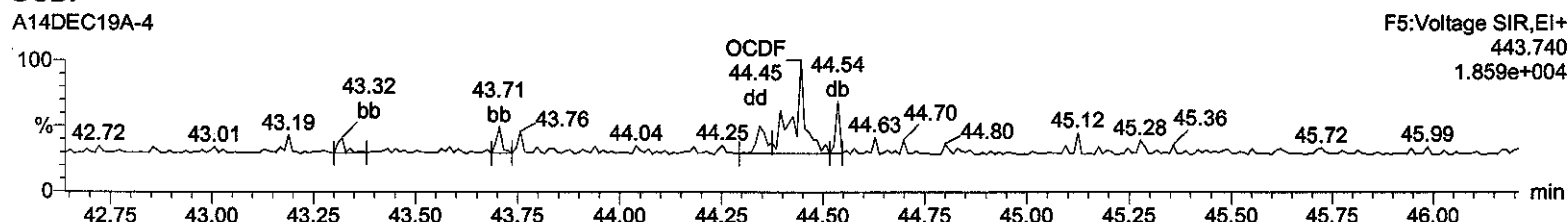
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-4, Date: 14-Dec-2019, Time: 13:51:15, ID: 12025525-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

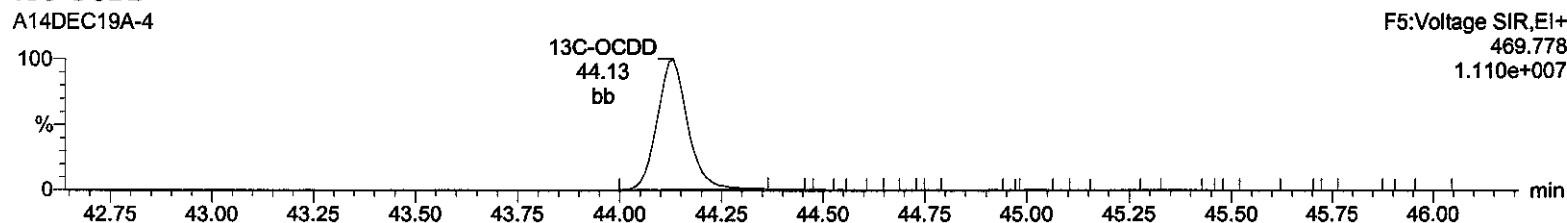
OCDF



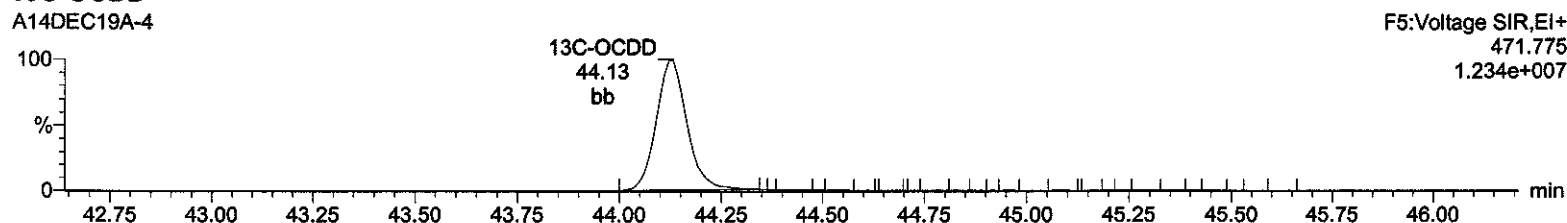
OCDF



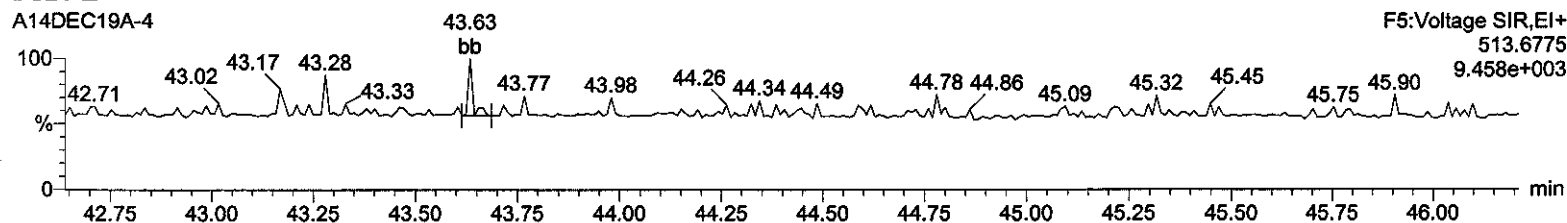
13C-OCDD



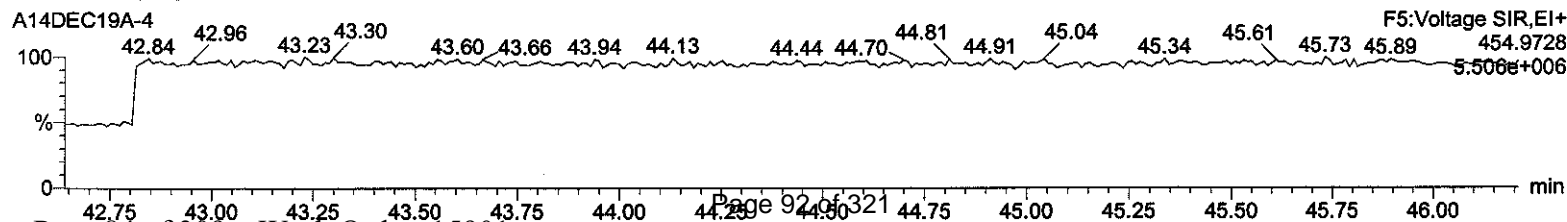
13C-OCDD



DeDPE



Lock Mass F5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025526		Matrix: WATER
Client Sample: QC for batch 42567		
Client ID: LCS for batch 42567		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 12:15	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-2		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.206	ng/L	0.00064	0.010
40321-76-4	1,2,3,7,8-PeCDD		1.06	ng/L	0.000926	0.050
39227-28-6	1,2,3,4,7,8-HxCDD		1.02	ng/L	0.00199	0.050
57653-85-7	1,2,3,6,7,8-HxCDD		1.02	ng/L	0.00196	0.050
19408-74-3	1,2,3,7,8,9-HxCDD		1.09	ng/L	0.002	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.934	ng/L	0.00214	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2.00	ng/L	0.00424	0.100
51207-31-9	2,3,7,8-TCDF		0.179	ng/L	0.000778	0.010
57117-41-6	1,2,3,7,8-PeCDF		0.919	ng/L	0.00128	0.050
57117-31-4	2,3,4,7,8-PeCDF		0.995	ng/L	0.0013	0.050
70648-26-9	1,2,3,4,7,8-HxCDF		0.973	ng/L	0.0026	0.050
57117-44-9	1,2,3,6,7,8-HxCDF		0.976	ng/L	0.00272	0.050
60851-34-5	2,3,4,6,7,8-HxCDF		0.951	ng/L	0.00272	0.050
72918-21-9	1,2,3,7,8,9-HxCDF		0.959	ng/L	0.00346	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.02	ng/L	0.00244	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.962	ng/L	0.00318	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.90	ng/L	0.00482	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.82	2.00	ng/L	90.9	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.91	2.00	ng/L	95.4	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.71	2.00	ng/L	85.7	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.72	2.00	ng/L	86.0	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.97	2.00	ng/L	98.6	(22%-166%)
13C-OCDD		3.35	4.00	ng/L	83.8	(13%-199%)
13C-2,3,7,8-TCDF		1.85	2.00	ng/L	92.3	(22%-152%)
13C-1,2,3,7,8-PeCDF		2.11	2.00	ng/L	105	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.87	2.00	ng/L	93.7	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.69	2.00	ng/L	84.4	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.67	2.00	ng/L	83.4	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.75	2.00	ng/L	87.6	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.83	2.00	ng/L	91.4	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.64	2.00	ng/L	82.2	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.89	2.00	ng/L	94.3	(20%-186%)
37Cl-2,3,7,8-TCDD		0.195	0.200	ng/L	97.6	(31%-191%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:14:29 Eastern Standard Time

20 DEC 19

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: . Job: %613%, Task: HRP750_2, User: MJC

FOR BATCH 42571

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	ppb/L	EDL	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	9.82e4	1.27e5	2.25e5	31.13	1.000	0.77	NO	10.290	0.0320	1.67e6	2483	672.1	2.16e6	2096	1029.6	bb	bb
2	12378-PeCDD	4.74e5	3.06e5	7.80e5	34.04	1.000	1.55	NO	52.833	0.0463	1.19e7	4362	2732.1	7.79e6	2468	3157.2	bb	bb
3	123478-HxCDD	4.08e5	3.28e5	7.37e5	36.61	1.000	1.24	NO	51.134	0.0995	8.81e6	6440	1367.3	7.06e6	5868	1204.0	bd	bd
4	123678-HxCDD	4.50e5	3.64e5	8.14e5	36.69	1.000	1.24	NO	50.959	0.0979	8.81e6	6440	1367.4	7.20e6	5868	1226.3	dd	dd
5	123789-HxCDD	4.49e5	3.65e5	8.14e5	36.93	1.007	1.23	NO	54.462	0.100	8.68e6	6440	1347.5	7.03e6	5868	1197.4	dd	db
6	1234678-HpCDD	3.26e5	6.43e5	3.95e5	39.95	1.000	1.03	NO	46.720	0.107	5.06e6	4439	1139.0	4.95e6	4913	1007.9	bd	bd
7	OCDD	4.86e5	5.57e5	1.04e6	44.14	1.000	0.87	NO	99.966	0.212	5.63e6	5563	1012.4	6.26e6	4645	1346.8	bd	bb
8	2378-TCDF	1.02e5	1.41e5	2.43e5	30.34	1.001	0.72	NO	8.939	0.0389	1.18e6	2069	571.6	1.67e6	2847	587.4	bb	bd
9	12378-PeCDF	6.78e5	4.37e5	1.12e6	33.24	1.000	1.55	NO	45.936	0.0641	1.70e7	6757	2514.2	1.11e7	8716	1270.9	bd	bd
10	23478-PeCDF	7.17e5	4.63e5	1.18e6	33.85	1.000	1.55	NO	49.759	0.0649	1.91e7	6757	2833.3	1.24e7	8716	1420.8	bb	bb
11	123478-HxCDF	5.46e5	4.45e5	9.91e5	35.91	1.000	1.23	NO	48.667	0.130	1.23e7	12965	948.8	9.96e6	10872	915.9	bd	bd
12	123678-HxCDF	5.85e5	4.70e5	1.05e6	36.00	1.000	1.25	NO	48.805	0.136	1.23e7	12965	945.6	9.79e6	10872	900.4	db	db
13	234678-HxCDF	5.62e5	4.59e5	1.02e6	36.48	1.000	1.22	NO	47.557	0.136	1.18e7	12965	911.6	9.56e6	10872	879.0	bb	bb
14	123789-HxCDF	4.97e5	4.01e5	8.98e5	37.24	1.000	1.24	NO	47.953	0.173	9.26e6	12965	714.4	7.30e6	10872	671.4	bb	bb
15	1234678-HpCDF	4.24e5	4.16e5	8.40e5	38.72	1.000	1.02	NO	51.199	0.122	7.33e6	7143	1026.1	6.94e6	6925	1002.7	bb	bd
16	1234789-HpCDF	3.73e5	3.64e5	7.37e5	40.61	1.000	1.03	NO	48.114	0.159	5.61e6	7143	785.1	5.30e6	6925	765.0	bd	bd
17	OCDF	5.44e5	6.13e5	1.16e6	44.43	1.007	0.89	NO	95.053	0.241	6.21e6	5655	1097.8	6.98e6	7890	884.5	bd	bd
18	13C-2378-TCDD	1.07e6	1.40e6	2.47e6	31.12	1.019	0.76	NO	90.897	0.0758	1.75e7	6100	2873.6	2.28e7	3747	6077.3	bb	bb
19	13C-12378-PeCDD	1.05e6	6.80e5	1.73e6	34.03	1.114	1.54	NO	95.415	0.165	2.62e7	8806	2974.9	1.69e7	5477	3090.4	bb	bb
20	13C-123478-HxCDD	8.54e5	6.79e5	1.53e6	36.60	0.991	1.26	NO	85.681	0.114	1.84e7	6492	2826.5	1.48e7	9203	1603.1	bd	bd
21	13C-123678-HxCDD	9.40e5	7.51e5	1.69e6	36.69	0.994	1.25	NO	85.953	0.104	1.85e7	6492	2849.2	1.49e7	9203	1617.7	dd	dd
22	13C-1234678-HpCDD	6.72e5	6.50e5	1.32e6	39.94	1.082	1.03	NO	98.640	0.134	1.07e7	6556	1633.2	1.05e7	7224	1448.3	bb	bd
23	13C-OCDD	9.97e5	1.15e6	2.15e6	44.12	1.195	0.87	NO	167.574	0.126	1.15e7	6240	1847.4	1.31e7	6118	2133.2	bb	bd
24	13C-2378-TCDF	1.22e6	1.58e6	2.78e6	30.32	0.993	0.78	NO	92.315	0.0997	1.41e7	8874	1594.1	1.81e7	5483	3303.2	bb	bb
25	13C-12378-PeCDF	1.57e6	9.94e5	2.57e6	33.23	1.088	1.58	NO	105.327	0.168	3.91e7	11263	3472.7	2.51e7	8269	3033.9	bd	bd
26	13C-23478-PeCDF	1.47e6	9.37e5	2.40e6	33.84	1.108	1.56	NO	93.697	0.159	3.69e7	11263	3273.0	2.38e7	8269	2881.6	bb	bb
27	13C-123478-HxCDF	6.41e5	1.23e6	1.87e6	35.90	0.972	0.52	NO	84.435	0.167	1.44e7	12052	1193.4	2.77e7	16457	1684.6	bd	bd
28	13C-123678-HxCDF	7.07e5	1.37e6	2.08e6	35.99	0.975	0.52	NO	83.444	0.149	1.44e7	12052	1193.1	2.79e7	16457	1692.8	dd	dd
29	13C-234678-HxCDF	6.52e5	1.24e6	1.89e6	36.47	0.988	0.53	NO	87.588	0.172	1.33e7	12052	1104.6	2.57e7	16457	1560.6	bd	bb
30	13C-123789-HxCDF	6.07e5	1.16e6	1.77e6	37.22	1.008	0.52	NO	91.438	0.192	1.12e7	12052	927.8	2.18e7	16457	1325.2	bd	bb

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 17:14:29 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height	Noise1	S/N1	Height2	Noise2	S/N2	M
31	13C-1234678-HpCDF	4.40e5	9.87e5	1.43e6	38.70	1.048	0.45	NO	82.187	0.109	7.72e6	5617	1373.7	1.72e7	8898	1931.4	bb
32	13C-1234789-HpCDF	3.84e5	8.91e5	1.27e6	40.59	1.099	0.43	NO	94.266	0.140	5.54e6	5617	986.8	1.30e7	8898	1461.7	bb
33	13C-1234-TCDD	1.05e6	1.36e6	2.41e6	30.54	0.000	0.77	NO	100.000	0.0855	1.25e7	6100	2051.9	1.63e7	3747	4348.6	bb
34	13C-123789-HxCDD	1.11e6	8.87e5	2.00e6	36.92	0.000	1.25	NO	100.000	0.102	2.13e7	6492	3281.4	1.69e7	9203	1838.7	dd
35	37Cl-2378-TCDD	2.50e5	2.50e5	2.50e5	31.13	1.019			9.758	0.0210	4.16e6	2562	1622.7				bb

Quantify Sample Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

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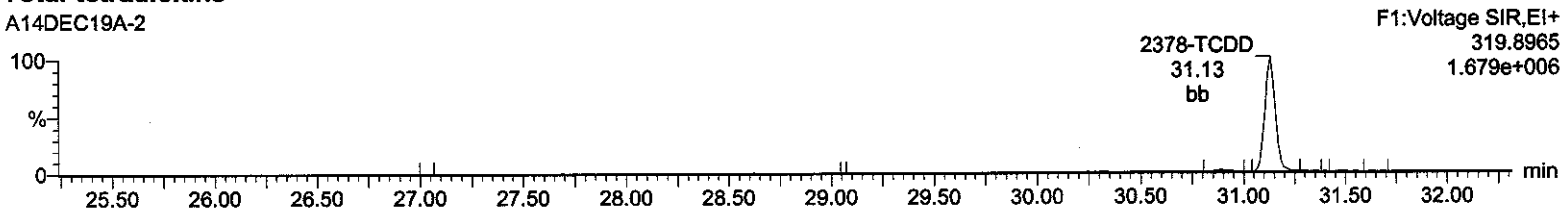
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Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2,
User: MJC

-3 FOR 42571

Total-tetradoxins

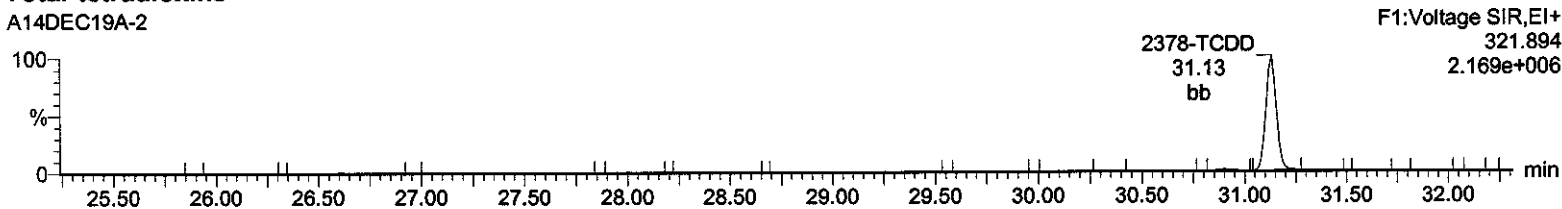
A14DEC19A-2



F1:Voltage SIR,EI+
319.8965
1.679e+006

Total-tetradoxins

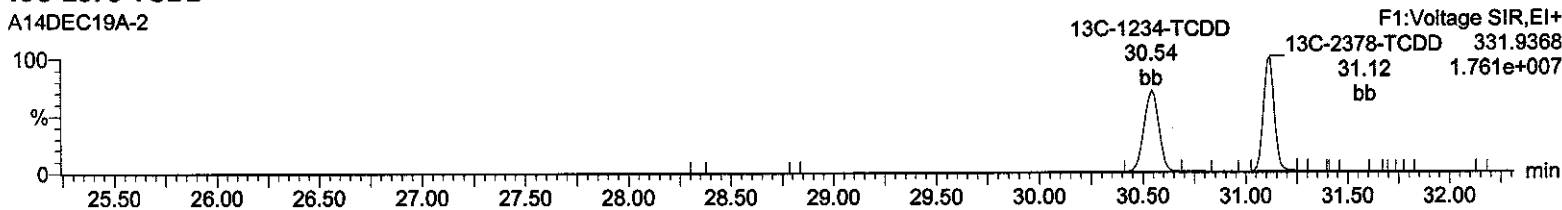
A14DEC19A-2



F1:Voltage SIR,EI+
321.894
2.169e+006

13C-2378-TCDD

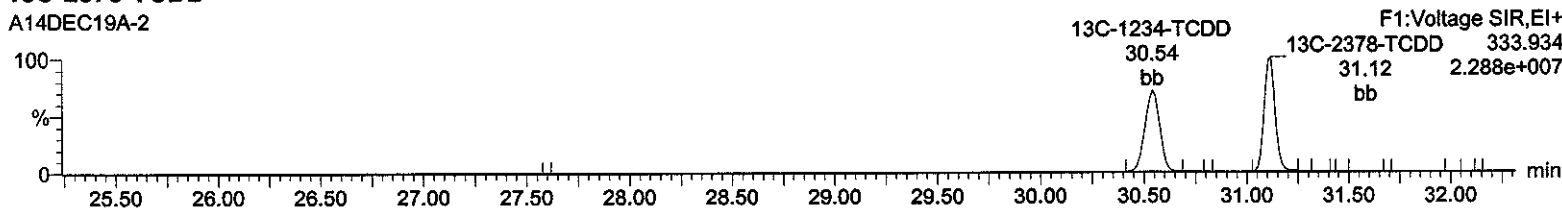
A14DEC19A-2



F1:Voltage SIR,EI+
331.9368
1.761e+007

13C-2378-TCDD

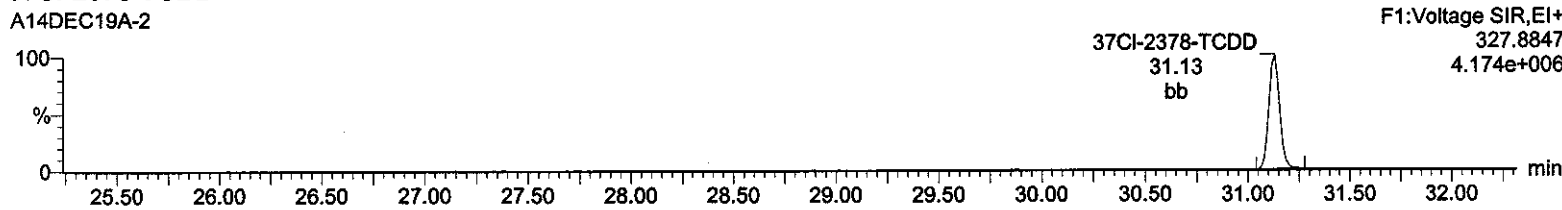
A14DEC19A-2



F1:Voltage SIR,EI+
333.934
2.288e+007

37Cl-2378-TCDD

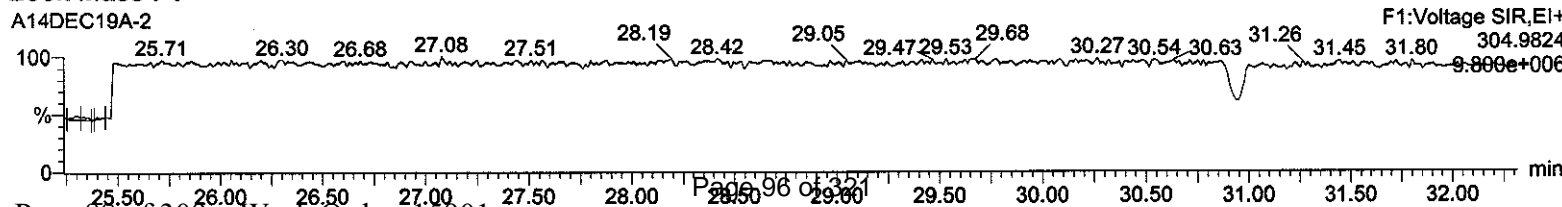
A14DEC19A-2



F1:Voltage SIR,EI+
327.8847
4.174e+006

Lock Mass F1

A14DEC19A-2



F1:Voltage SIR,EI+
304.9824
9.880e+006

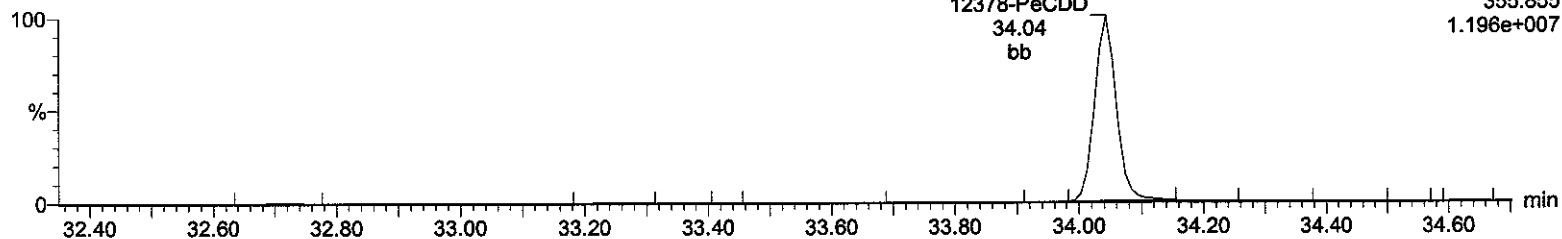
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Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2,
User: MJC

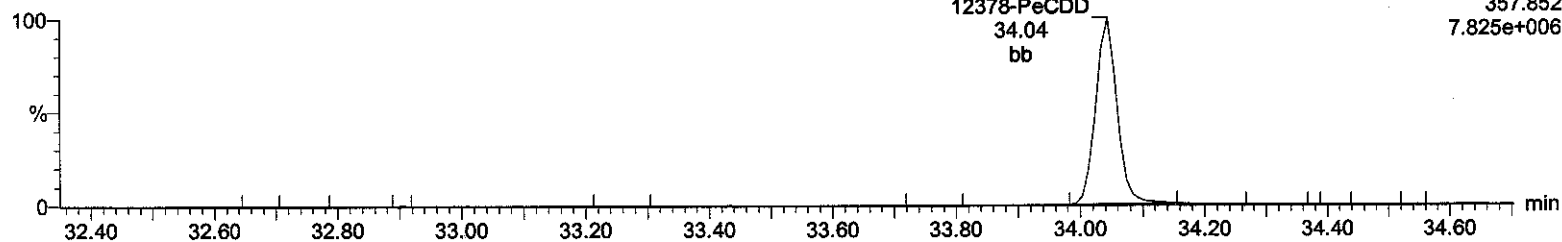
Total-pentadioxins

A14DEC19A-2



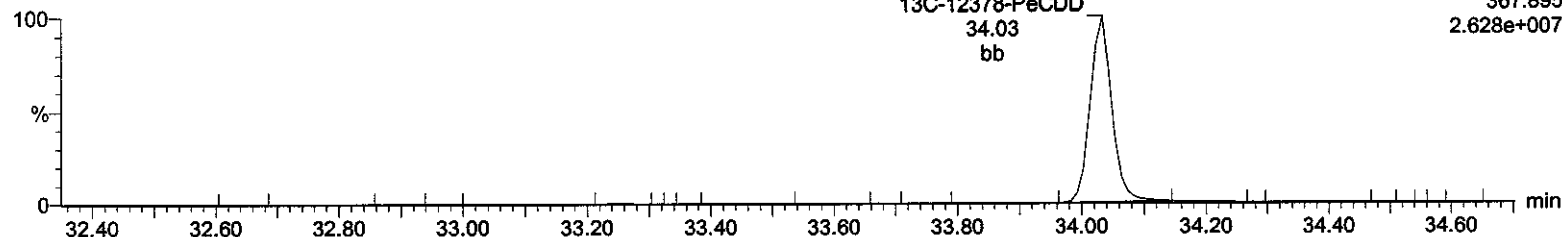
Total-pentadioxins

A14DEC19A-2



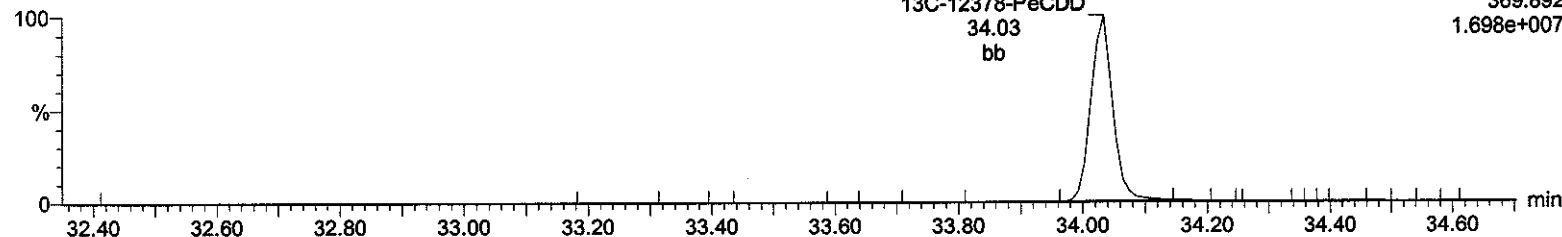
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A14DEC19A-2



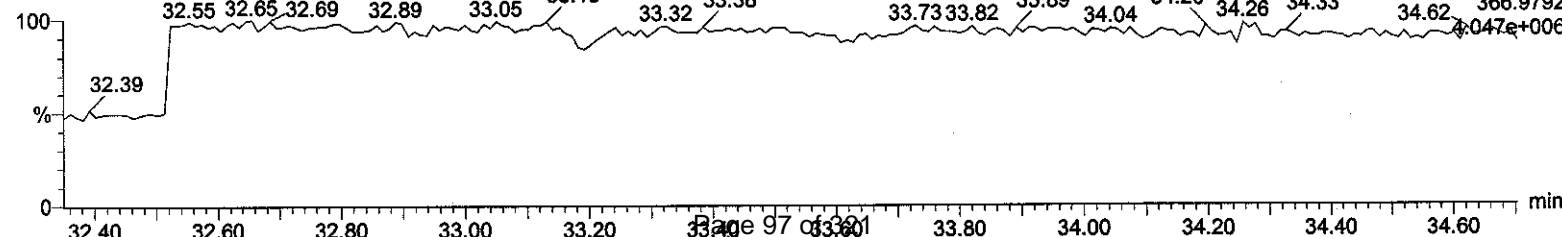
13C-12378-PeCDD

A14DEC19A-2



Lock Mass F2

A14DEC19A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

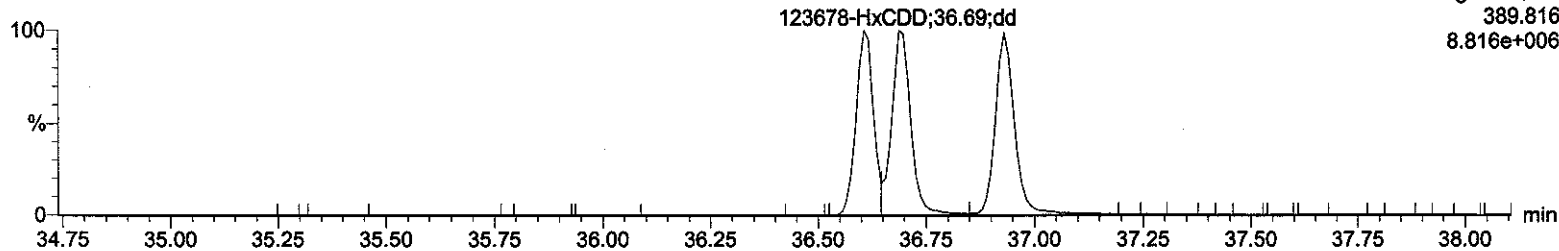
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2,
User: MJC

Total-hexadioxins

A14DEC19A-2

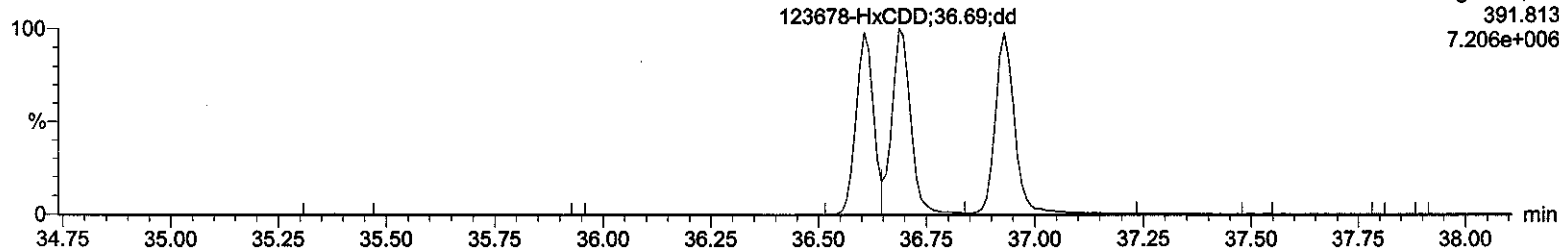
F3:Voltage SIR,EI+
389.816
8.816e+006



Total-hexadioxins

A14DEC19A-2

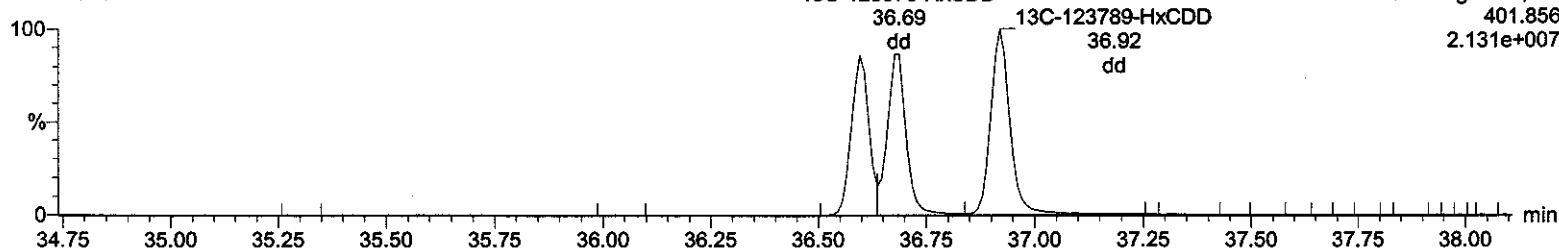
F3:Voltage SIR,EI+
391.813
7.206e+006



13C-123478-HxCDD

A14DEC19A-2

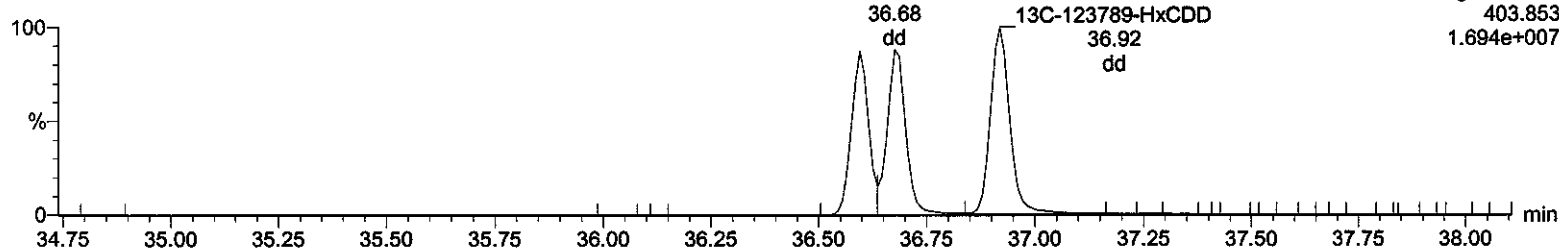
F3:Voltage SIR,EI+
401.856
2.131e+007



13C-123478-HxCDD

A14DEC19A-2

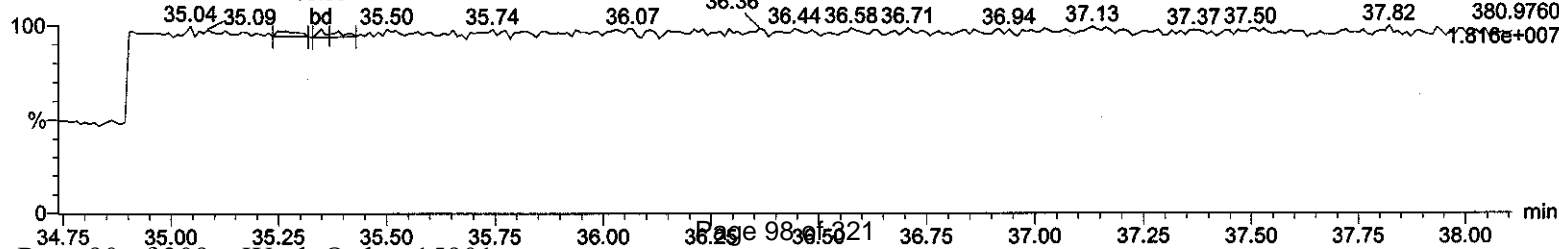
F3:Voltage SIR,EI+
403.853
1.694e+007



Lock Mass F3

A14DEC19A-2

F3:Voltage SIR,EI+
380.9760
1.816e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

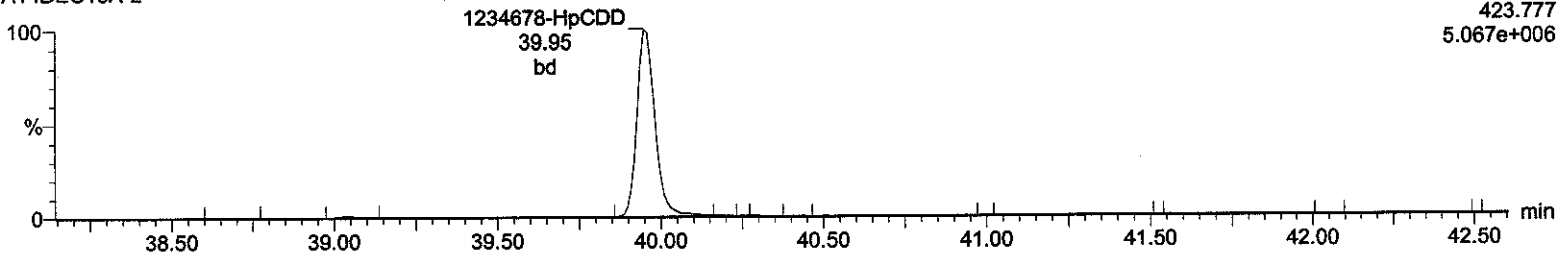
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-heptadioxins

A14DEC19A-2

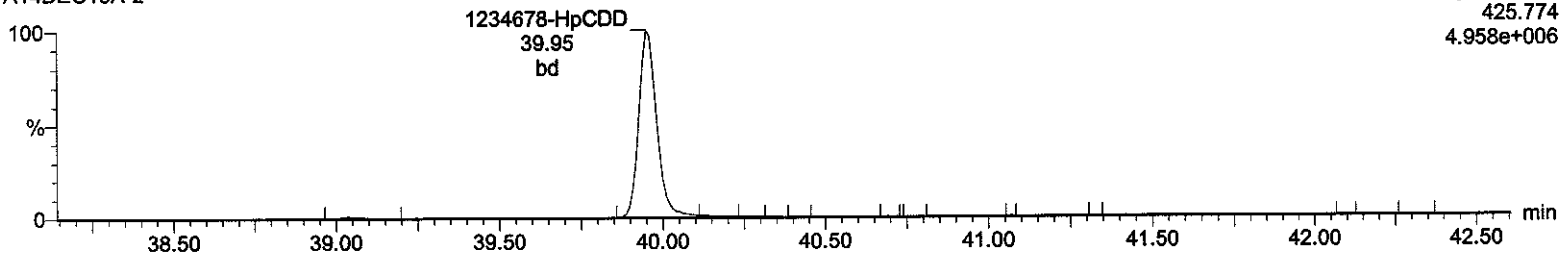
F4:Voltage SIR,EI+
423.777
5.067e+006



Total-heptadioxins

A14DEC19A-2

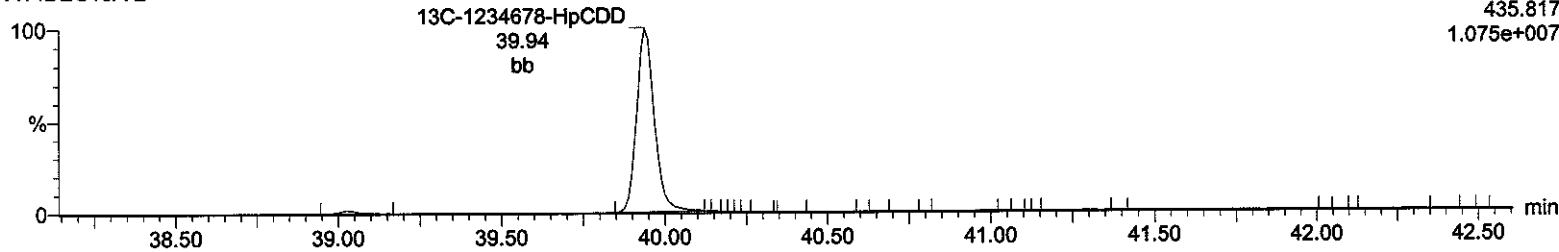
F4:Voltage SIR,EI+
425.774
4.958e+006



13C-1234678-HpCDD

A14DEC19A-2

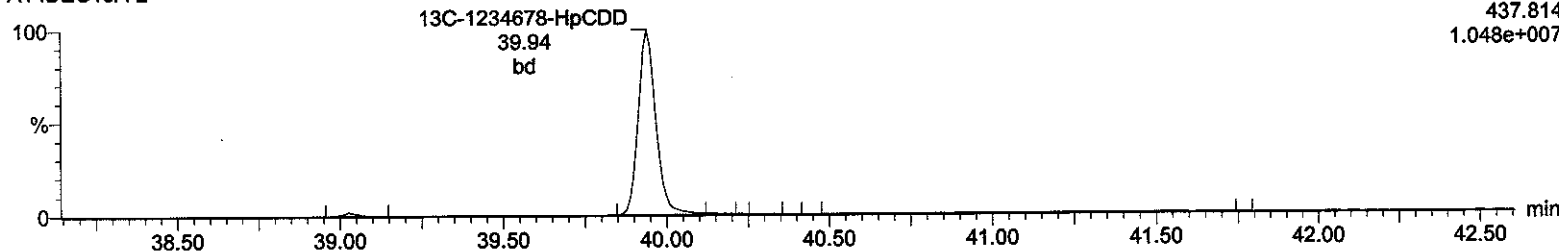
F4:Voltage SIR,EI+
435.817
1.075e+007



13C-1234678-HpCDD

A14DEC19A-2

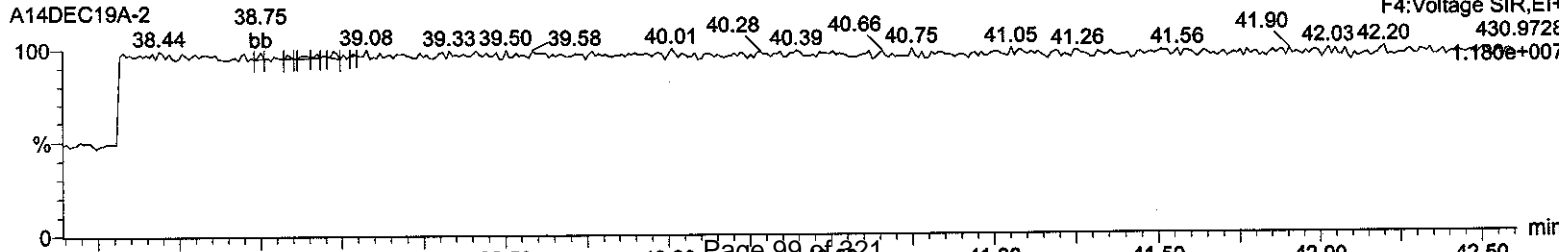
F4:Voltage SIR,EI+
437.814
1.048e+007



Lock Mass F4

A14DEC19A-2

F4:Voltage SIR,EI+
430.9728
1.180e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

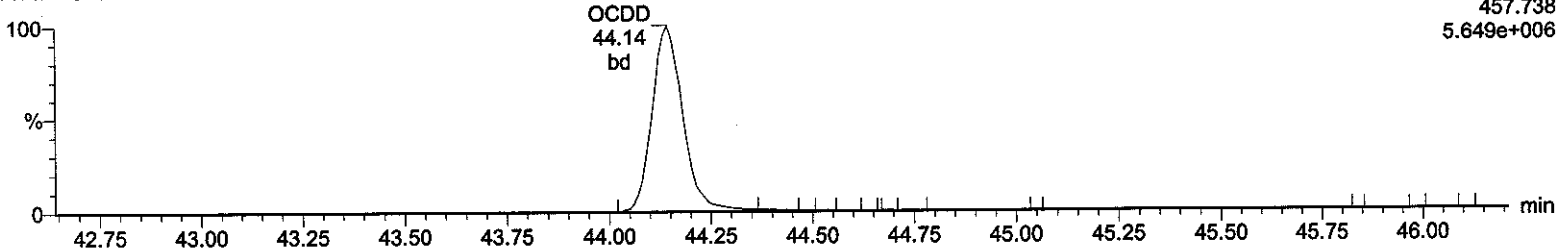
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDD

A14DEC19A-2

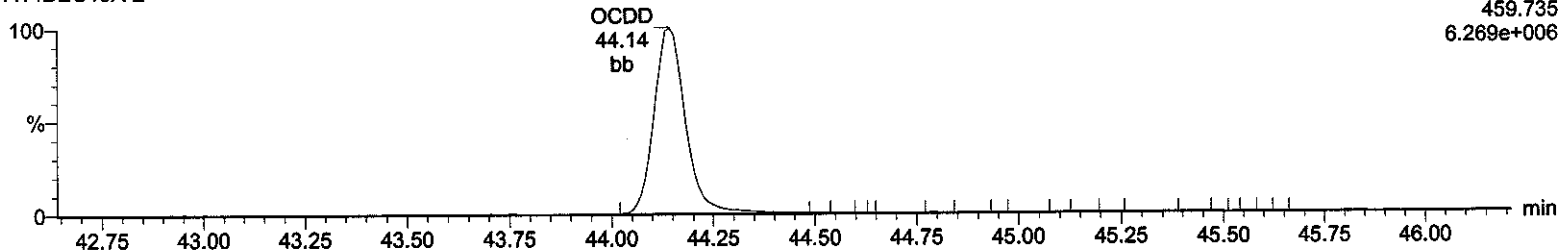
F5:Voltage SIR,EI+
457.738
5.649e+006



OCDD

A14DEC19A-2

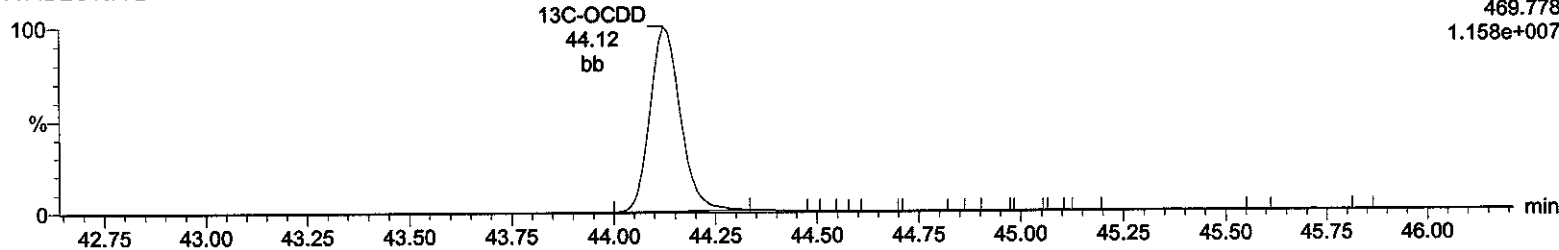
F5:Voltage SIR,EI+
459.735
6.269e+006



13C-OCDD

A14DEC19A-2

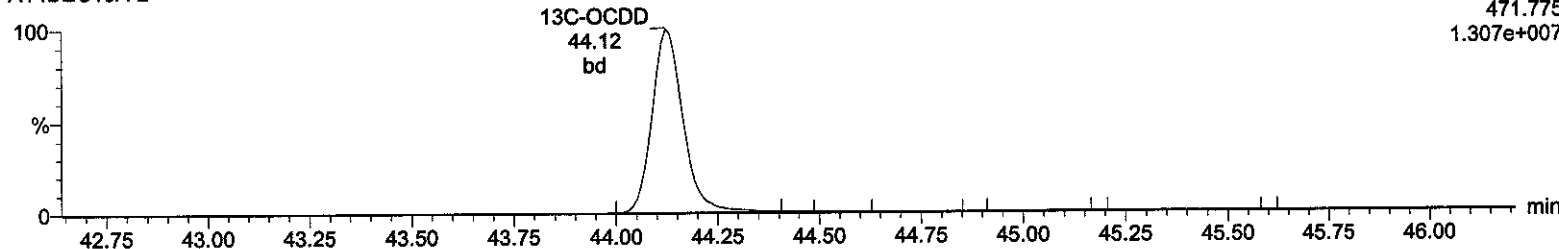
F5:Voltage SIR,EI+
469.778
1.158e+007



13C-OCDD

A14DEC19A-2

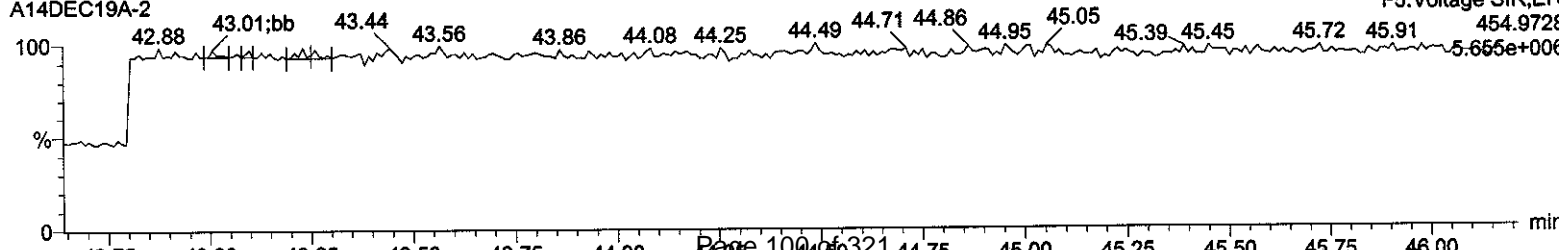
F5:Voltage SIR,EI+
471.775
1.307e+007



Lock Mass F5

A14DEC19A-2

F5:Voltage SIR,EI+
454.9728
5.655e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

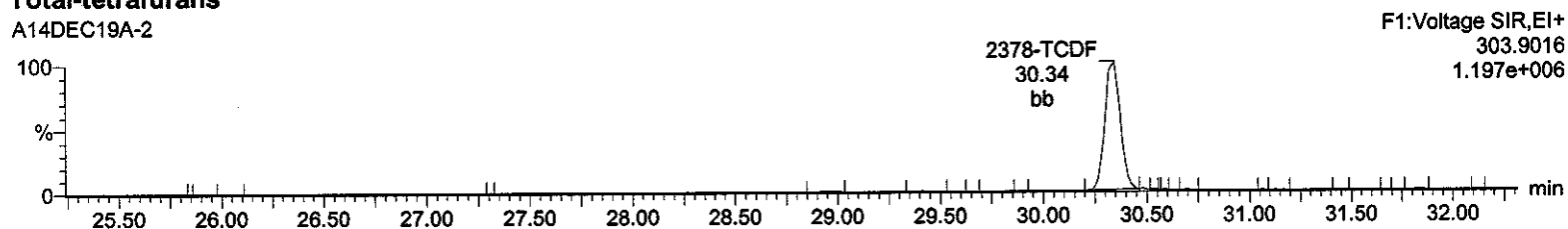
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

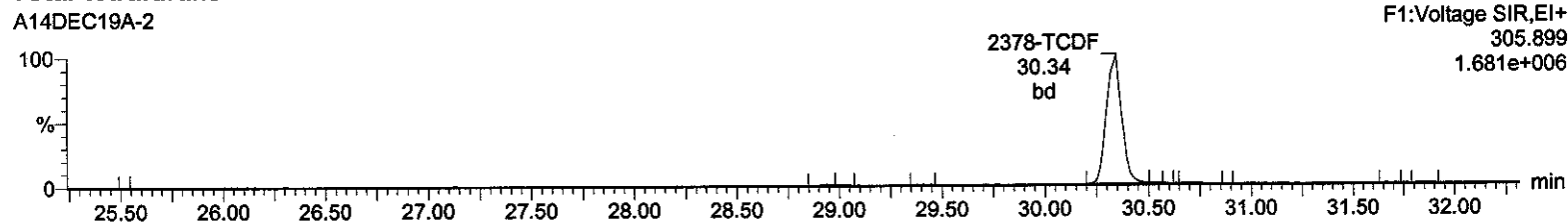
Total-tetrafurans

A14DEC19A-2



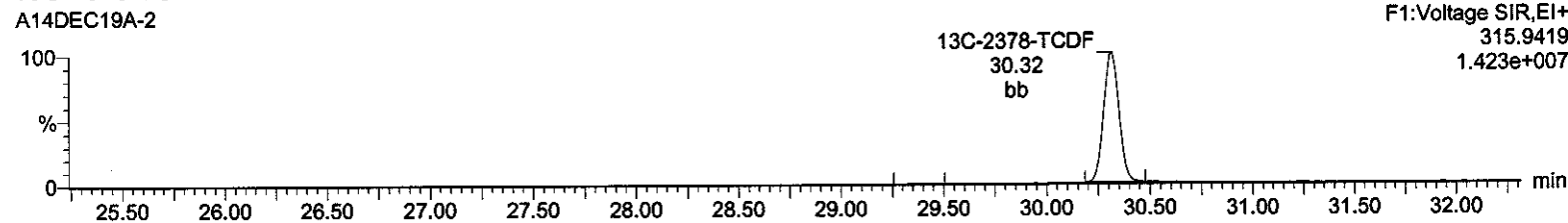
Total-tetrafurans

A14DEC19A-2



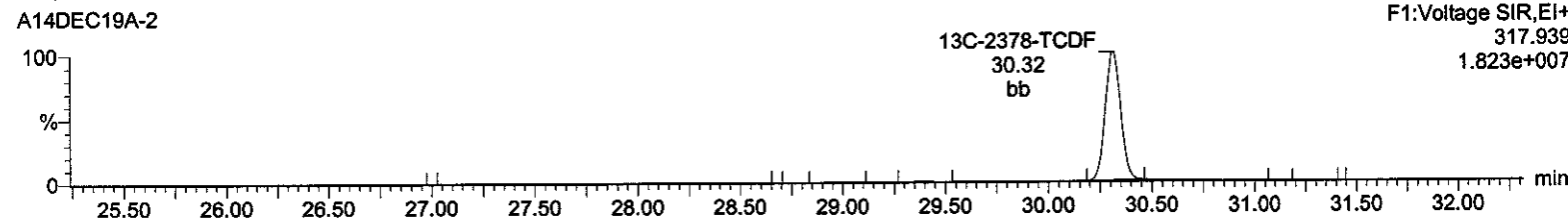
13C-2378-TCDF

A14DEC19A-2



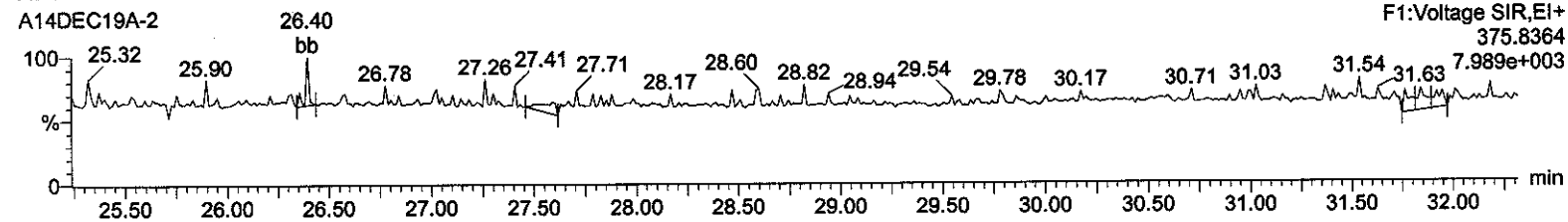
13C-2378-TCDF

A14DEC19A-2



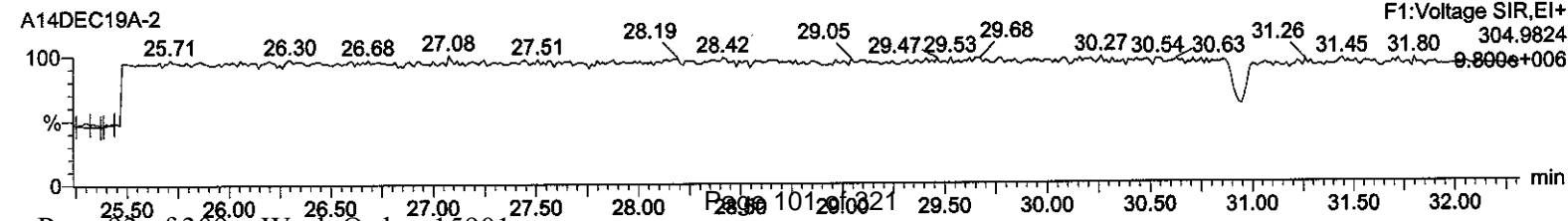
HxDPE

A14DEC19A-2



Lock Mass F1

A14DEC19A-2



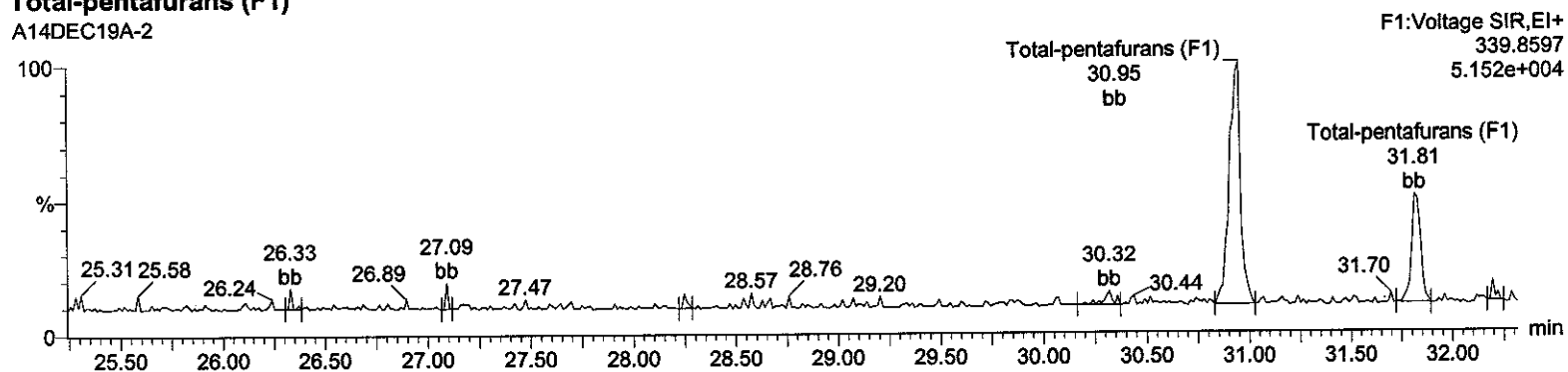
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2,
User: MJC

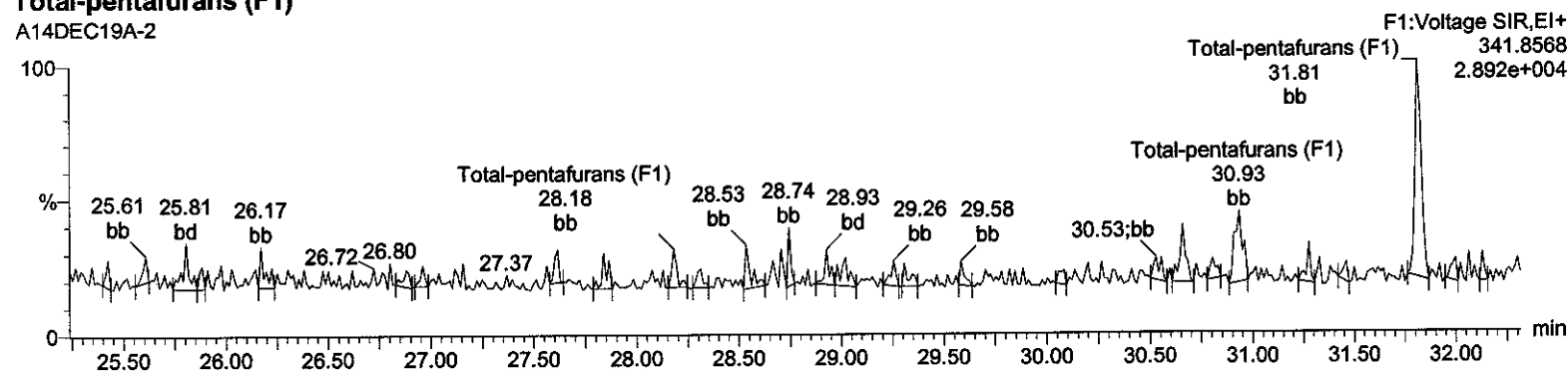
Total-pentafurans (F1)

A14DEC19A-2



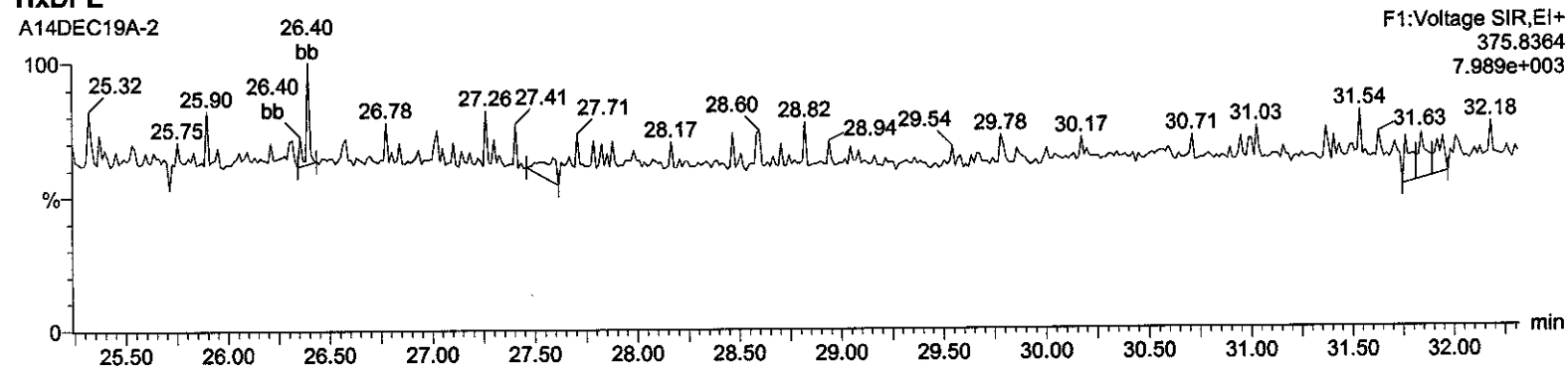
Total-pentafurans (F1)

A14DEC19A-2



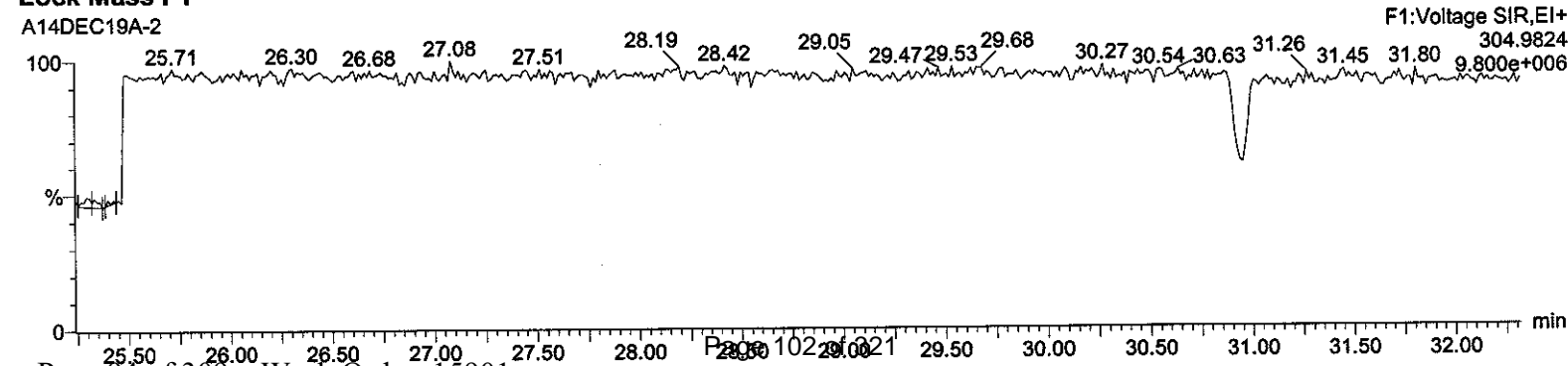
HxDPE

A14DEC19A-2



Lock Mass F1

A14DEC19A-2



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

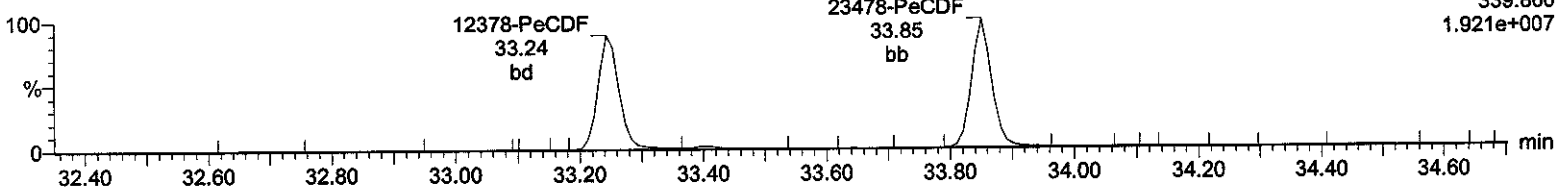
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentafurans

A14DEC19A-2

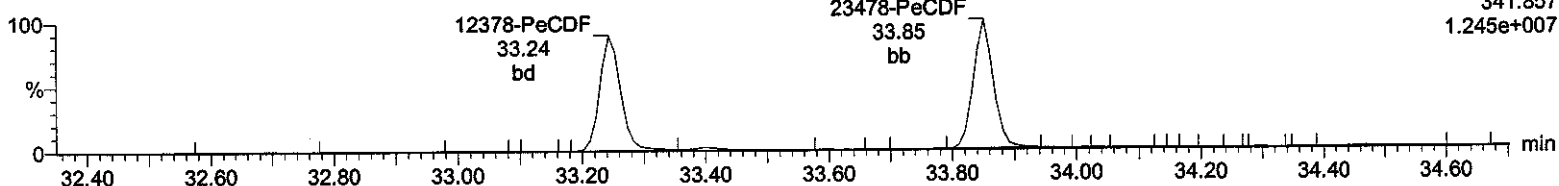
F2:Voltage SIR,EI+
339.860
1.921e+007



Total-pentafurans

A14DEC19A-2

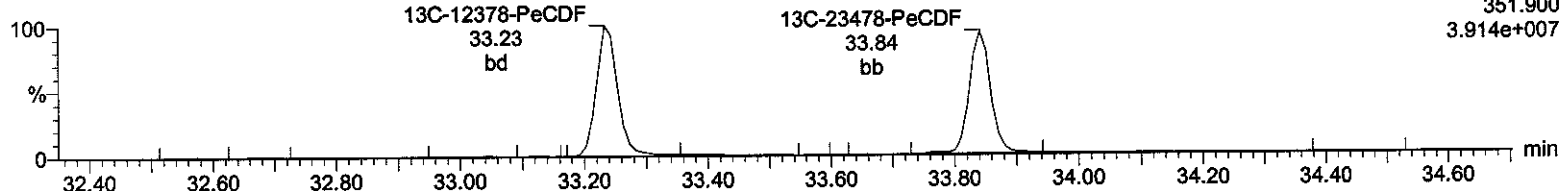
F2:Voltage SIR,EI+
341.857
1.245e+007



13C-12378-PeCDF

A14DEC19A-2

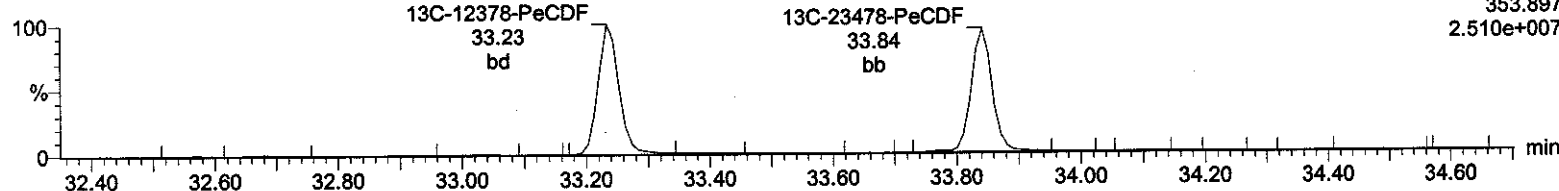
F2:Voltage SIR,EI+
351.900
3.914e+007



13C-12378-PeCDF

A14DEC19A-2

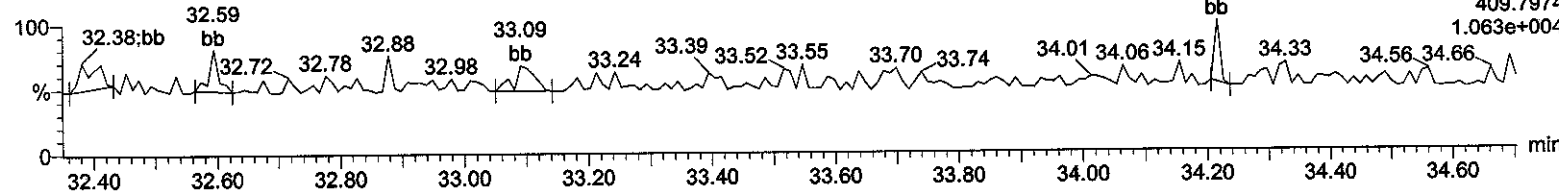
F2:Voltage SIR,EI+
353.897
2.510e+007



HpDPE

A14DEC19A-2

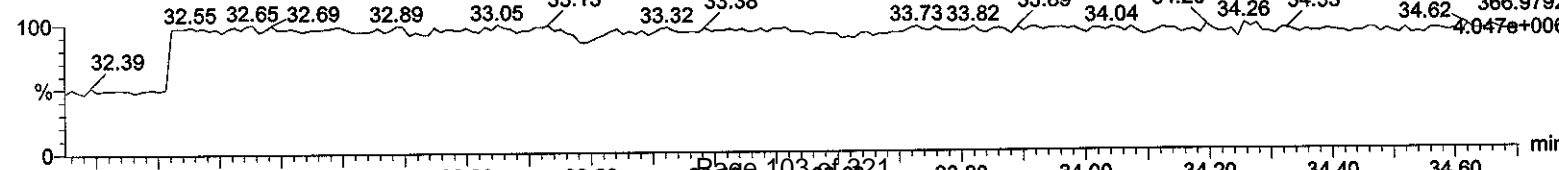
F2:Voltage SIR,EI+
409.7974
1.063e+004



Lock Mass F2

A14DEC19A-2

F2:Voltage SIR,EI+
366.9792
4.047e+006



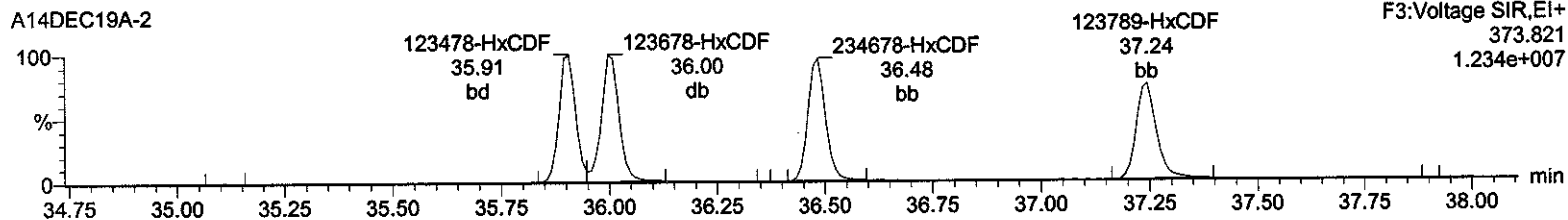
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

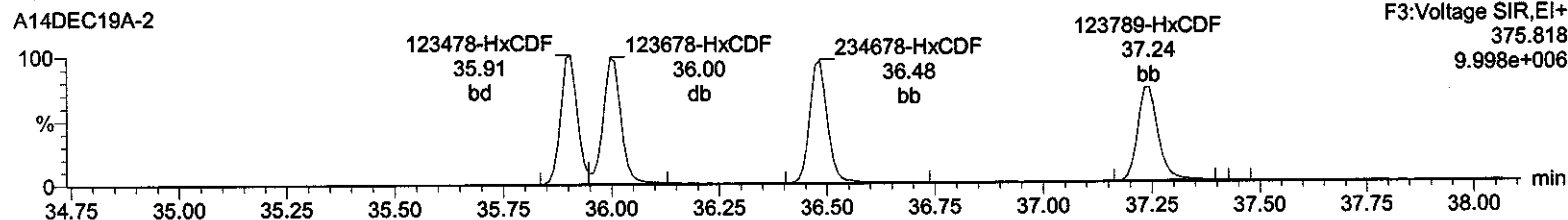
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

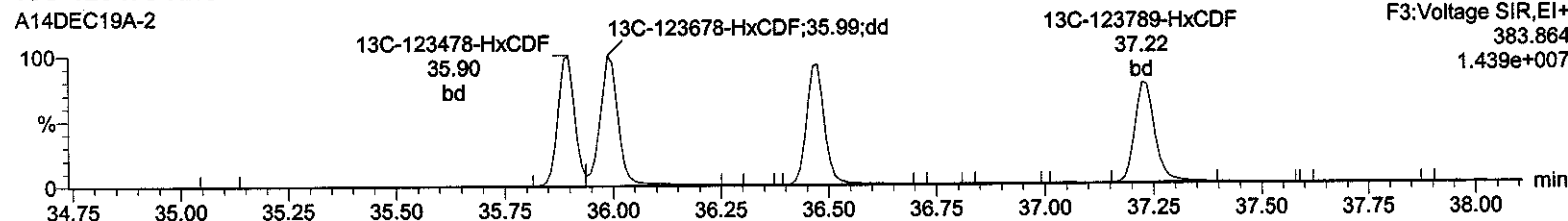
Total-hexafurans



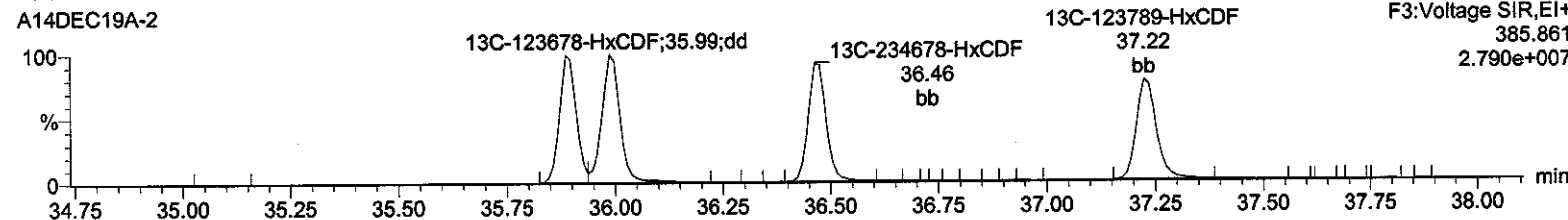
Total-hexafurans



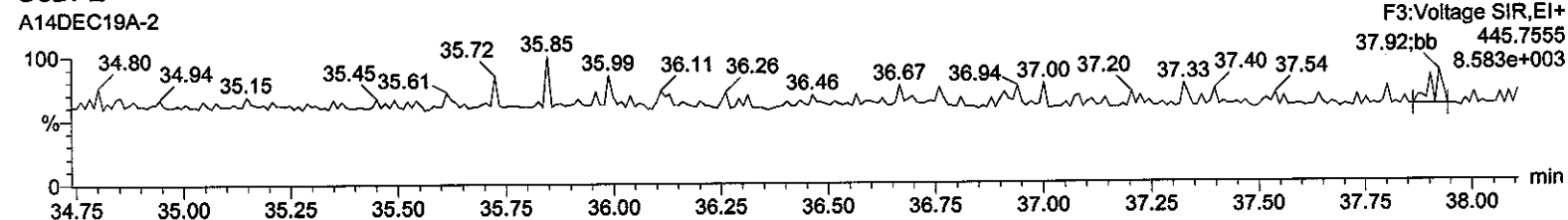
13C-123478-HxCDF



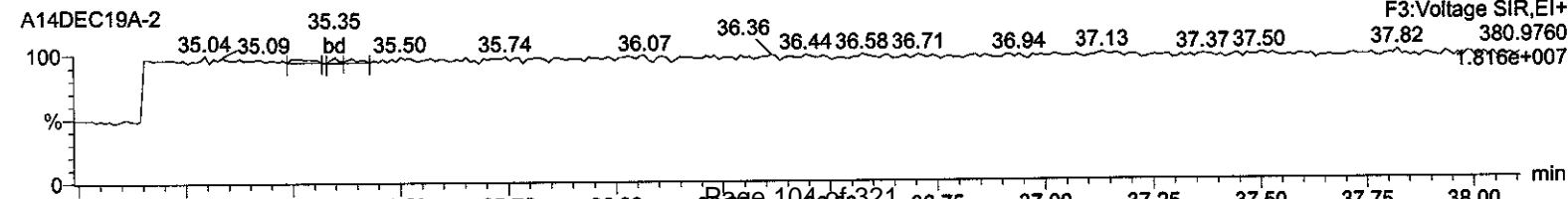
13C-123478-HxCDF



OcDPE



Lock Mass F3



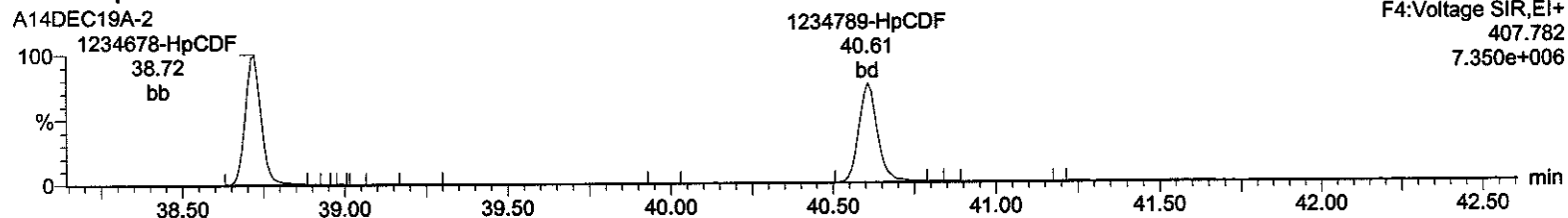
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

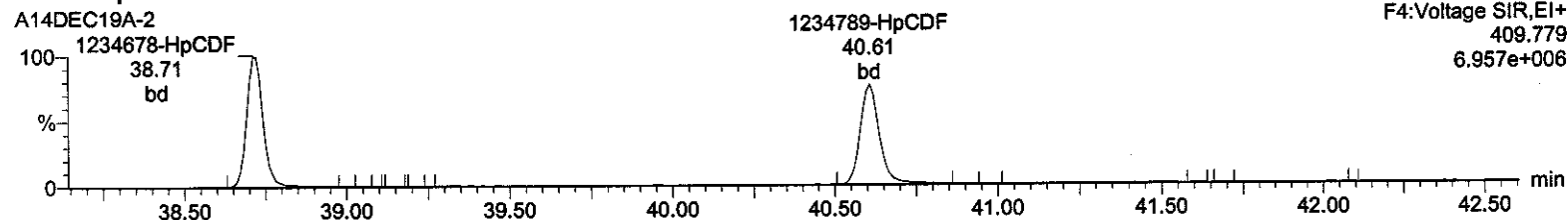
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

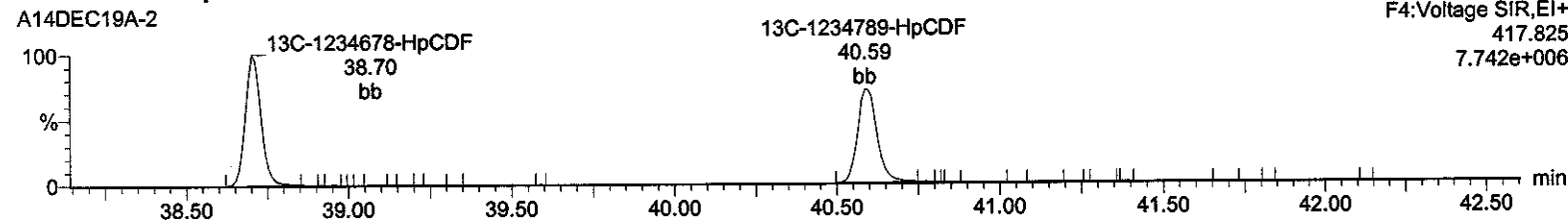
Total-heptafurans



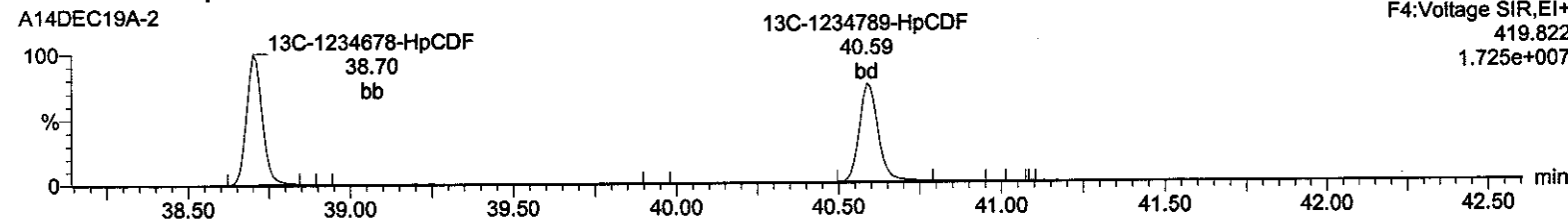
Total-heptafurans



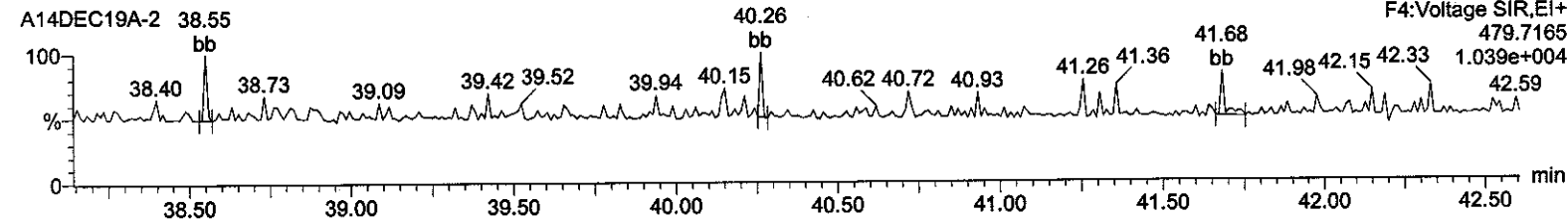
13C-1234678-HpCDF



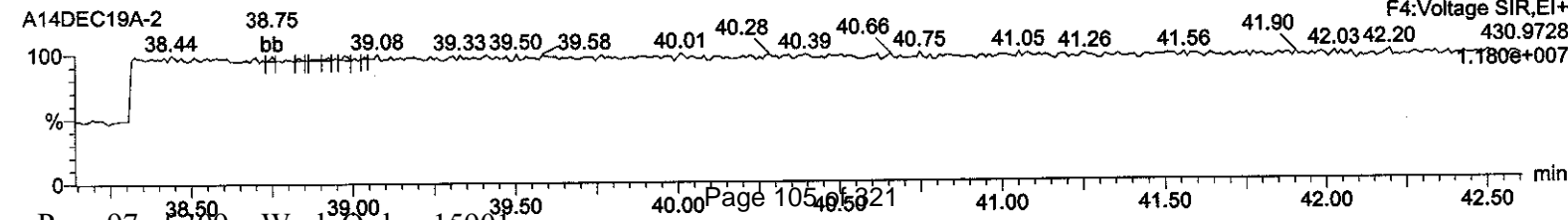
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Quantify Sample Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

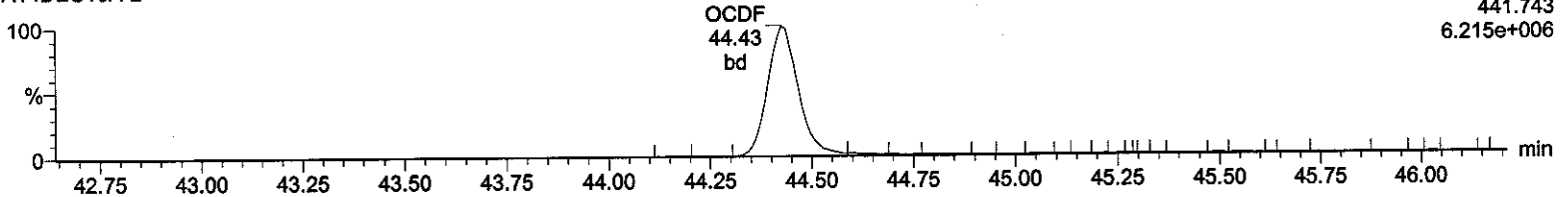
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-2, Date: 14-Dec-2019, Time: 12:15:47, ID: 12025526-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDF

A14DEC19A-2

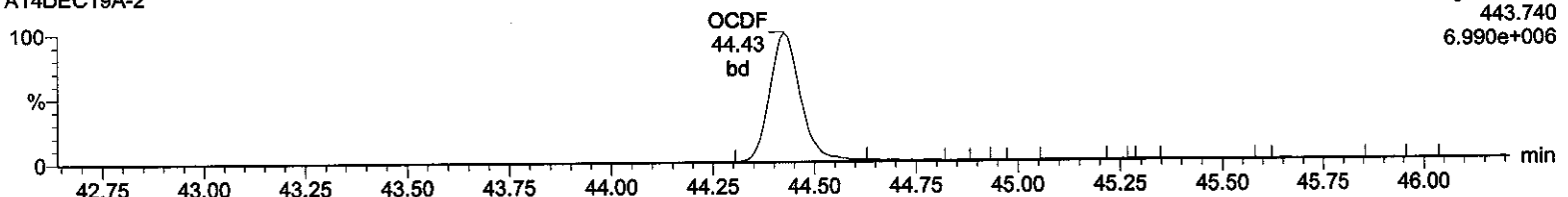
F5:Voltage SIR,EI+
441.743
6.215e+006



OCDF

A14DEC19A-2

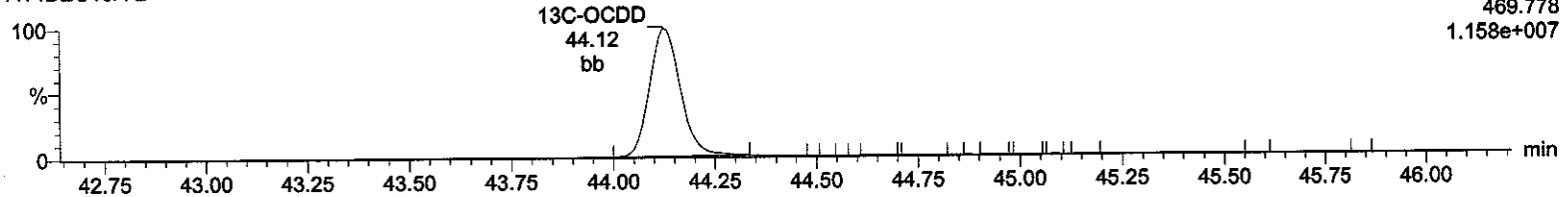
F5:Voltage SIR,EI+
443.740
6.990e+006



13C-OCDD

A14DEC19A-2

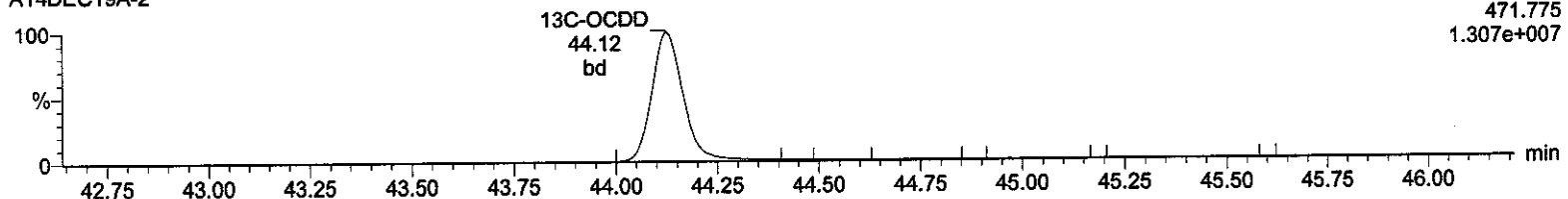
F5:Voltage SIR,EI+
469.778
1.158e+007



13C-OCDD

A14DEC19A-2

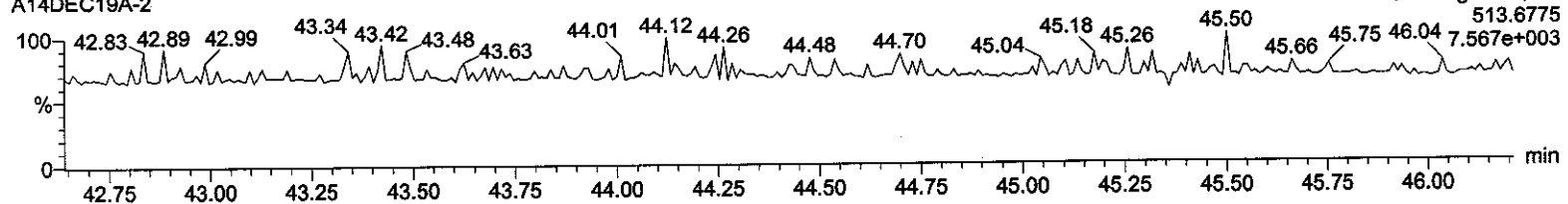
F5:Voltage SIR,EI+
471.775
1.307e+007



DeDPE

A14DEC19A-2

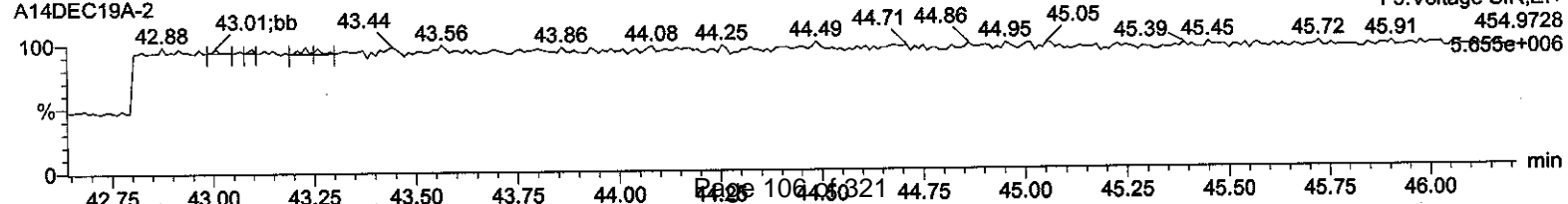
F5:Voltage SIR,EI+
513.6775
7.567e+003



Lock Mass F5

A14DEC19A-2

F5:Voltage SIR,EI+
454.9728
5.655e+006



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14372	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025527		Matrix: WATER
Client Sample: QC for batch 42567		
Client ID: LCSD for batch 42567		Prep Basis: As Received
Batch ID: 42571	Method: EPA Method 1613B	
Run Date: 12/14/2019 13:03	Analyst: MJC	Instrument: HRP750
Data File: A14DEC19A-3		Dilution: 1
Prep Batch: 42567	Prep Method: SW846 3520C	
Prep Date: 10-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.207	ng/L	0.00062	0.010
40321-76-4	1,2,3,7,8-PeCDD		1.06	ng/L	0.0018	0.050
39227-28-6	1,2,3,4,7,8-HxCDD		1.02	ng/L	0.00174	0.050
57653-85-7	1,2,3,6,7,8-HxCDD		1.03	ng/L	0.00173	0.050
19408-74-3	1,2,3,7,8,9-HxCDD		1.09	ng/L	0.00176	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.921	ng/L	0.00242	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2.02	ng/L	0.0053	0.100
51207-31-9	2,3,7,8-TCDF		0.174	ng/L	0.00084	0.010
57117-41-6	1,2,3,7,8-PeCDF		0.906	ng/L	0.00133	0.050
57117-31-4	2,3,4,7,8-PeCDF		1.01	ng/L	0.00132	0.050
70648-26-9	1,2,3,4,7,8-HxCDF		0.969	ng/L	0.0024	0.050
57117-44-9	1,2,3,6,7,8-HxCDF		0.993	ng/L	0.00252	0.050
60851-34-5	2,3,4,6,7,8-HxCDF		0.948	ng/L	0.00246	0.050
72918-21-9	1,2,3,7,8,9-HxCDF		0.957	ng/L	0.0033	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.01	ng/L	0.00244	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.923	ng/L	0.00316	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.89	ng/L	0.00402	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.65	2.00	ng/L	82.3	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.71	2.00	ng/L	85.3	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.52	2.00	ng/L	76.2	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.52	2.00	ng/L	76.0	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.77	2.00	ng/L	88.3	(22%-166%)
13C-OCDD		3.00	4.00	ng/L	74.9	(13%-199%)
13C-2,3,7,8-TCDF		1.65	2.00	ng/L	82.7	(22%-152%)
13C-1,2,3,7,8-PeCDF		1.87	2.00	ng/L	93.7	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.67	2.00	ng/L	83.6	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.47	2.00	ng/L	73.7	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.45	2.00	ng/L	72.4	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.55	2.00	ng/L	77.4	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.60	2.00	ng/L	79.9	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.45	2.00	ng/L	72.4	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.67	2.00	ng/L	83.7	(20%-186%)
37Cl-2,3,7,8-TCDD		0.176	0.200	ng/L	88.0	(31%-191%)

Comments:
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:15:44 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PROMETHD\BICFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A06JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: Job: %61.3%, Task: HRP750_2, User: MJC

-3 FOR BATCH 4257

Handwritten signature

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	NO	ppb/ul	EDL	Height	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	9.41e4	1.20e5	2.14e5	31.13	1.000	0.79	NO	10.359	0.0310	1.53e6	1724	657.2	1.99e6	1724	1156.4	bb	bb	
2	12378-PeCDD	4.43e5	2.86e5	7.28e5	34.04	1.000	1.55	NO	52.985	0.0902	1.05e7	5864	1839.3	6.77e6	5864	1154.6	bb	bb	
3	123478-HxCDD	3.83e5	3.06e5	6.88e5	36.60	1.000	1.25	NO	50.832	0.0869	8.03e6	4209	1907.0	6.30e6	5516	1141.4	bd	bd	
4	123678-HxCDD	4.24e5	3.41e5	7.64e5	36.69	1.000	1.24	NO	51.273	0.0866	7.95e6	4209	1888.0	6.49e6	5516	1177.1	dd	dd	
5	123789-HxCDD	4.22e5	3.37e5	7.60e5	36.93	1.007	1.25	NO	54.263	0.0881	7.77e6	4209	1846.9	6.13e6	5516	1111.9	dd	dd	
6	1234678-HpCDD	3.05e5	2.94e5	6.00e5	39.95	1.000	1.04	NO	46.068	0.121	4.54e6	4805	944.8	4.38e6	4929	889.2	bd	bd	
7	OCDD	4.68e5	5.26e5	9.94e5	44.14	1.000	0.89	NO	100.871	0.265	5.29e6	7448	710.7	6.00e6	4629	1296.4	bd	bd	
8	2378-TCDF	9.41e4	1.27e5	2.21e5	30.34	1.001	0.74	NO	8.698	0.0420	1.08e6	1953	553.6	1.52e6	2900	524.2	bb	bb	
9	12378-PeCDF	6.21e5	3.99e5	1.02e6	33.24	1.000	1.56	NO	45.288	0.0866	1.47e7	7643	1924.0	9.67e6	6583	1468.8	bd	bb	
10	23478-PeCDF	6.72e5	4.40e5	1.11e6	33.85	1.000	1.53	NO	50.404	0.0661	1.66e7	7643	2171.1	1.07e7	6583	1620.2	bb	bb	
11	123478-HxCDF	5.02e5	4.08e5	9.09e5	35.91	1.001	1.23	NO	48.452	0.120	1.08e7	10699	1005.6	8.61e6	8901	967.8	bd	bd	
12	123678-HxCDF	5.37e5	4.48e5	9.83e5	36.00	1.000	1.21	NO	49.638	0.126	1.09e7	10699	1016.9	8.89e6	8901	998.2	db	db	
13	234678-HxCDF	5.32e5	4.20e5	9.51e5	36.48	1.001	1.27	NO	47.412	0.123	1.05e7	10699	977.0	8.45e6	8901	949.0	bd	bb	
14	123789-HxCDF	4.60e5	3.67e5	8.27e5	37.24	1.000	1.25	NO	47.837	0.165	8.33e6	10699	778.4	6.52e6	8901	732.7	bb	bb	
15	1234678-HpCDF	3.98e5	3.75e5	7.73e5	38.71	1.000	1.06	NO	50.597	0.122	6.53e6	6629	984.8	6.20e6	6433	964.1	bb	bb	
16	1234789-HpCDF	3.41e5	3.23e5	6.64e5	40.61	1.000	1.06	NO	46.153	0.158	4.79e6	6629	722.3	4.68e6	6433	726.8	bb	bb	
17	OCDF	5.09e5	5.77e5	1.09e6	44.42	1.007	0.88	NO	94.503	0.201	5.64e6	5292	1066.2	6.25e6	5407	1155.8	bd	bd	
18	13C-2378-TCDD	1.01e6	1.32e6	2.33e6	31.12	1.019	0.76	NO	82.291	0.0774	1.60e7	6277	2550.1	2.06e7	3962	5186.7	bb	bb	
19	13C-12378-PeCDD	9.79e5	6.32e5	1.61e6	34.03	1.114	1.55	NO	85.303	0.124	2.28e7	4707	4851.1	1.46e7	6248	2335.6	bb	bb	
20	13C-123478-HxCDD	8.03e5	6.38e5	1.44e6	36.60	0.991	1.26	NO	76.224	0.116	1.66e7	7019	2362.2	1.31e7	9451	1383.5	bd	bd	
21	13C-123678-HxCDD	8.75e5	7.05e5	1.58e6	36.68	0.993	1.24	NO	75.961	0.106	1.65e7	7019	2346.4	1.37e7	9451	1444.4	dd	dd	
22	13C-1234678-HpCDD	6.39e5	6.13e5	1.25e6	39.94	1.082	1.04	NO	88.349	0.122	9.84e6	8374	1175.2	9.36e6	4595	2036.3	bd	bd	
23	13C-OCDD	9.47e5	1.08e6	2.03e6	44.12	1.195	0.88	NO	149.820	0.117	1.09e7	5713	1914.9	1.22e7	6140	1993.6	bb	bb	
24	13C-2378-TCDF	1.14e6	1.46e6	2.60e6	30.32	0.993	0.78	NO	82.665	0.0977	1.29e7	8452	1532.1	1.68e7	5851	2872.3	bb	bb	
25	13C-12378-PeCDF	1.45e6	9.27e5	2.38e6	33.23	1.088	1.57	NO	93.705	0.229	3.45e7	12017	2871.5	2.26e7	15167	1489.0	bd	bd	
26	13C-23478-PeCDF	1.36e6	8.72e5	2.23e6	33.84	1.108	1.56	NO	83.633	0.218	3.33e7	12017	2767.7	2.12e7	15167	1397.8	bb	bb	
27	13C-123478-HxCDF	5.91e5	1.14e6	1.73e6	35.89	0.972	0.52	NO	73.694	0.157	1.28e7	10559	1211.9	2.44e7	16922	1442.4	bd	bd	
28	13C-123678-HxCDF	6.57e5	1.25e6	1.90e6	35.99	0.975	0.53	NO	72.365	0.139	1.29e7	10559	1218.9	2.53e7	16922	1494.3	db	db	
29	13C-234678-HxCDF	6.11e5	1.16e6	1.77e6	36.46	0.988	0.53	NO	77.423	0.161	1.22e7	10559	1154.1	2.26e7	16922	1337.2	bd	bb	
30	13C-123789-HxCDF	5.66e5	1.06e6	1.63e6	37.23	1.008	0.53	NO	79.902	0.180	9.72e6	10559	920.8	1.89e7	16922	1109.9	bd	bb	

Quantify Sample Summary Report
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
 Printed: Monday, December 16, 2019 17:15:44 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	ppb/ul	EDL	Height	Noise1	S/N1	Height2	Noise2	S/N2	M
31	13C-1234678-HpCDF	4.09e5	9.20e5	1.33e6	38.70	1.048	0.44	NO	72.395	0.0957	7.18e6	6468	1109.9	1.62e7	6689	2415.0	bb
32	13C-1234789-HpCDF	3.65e5	8.31e5	1.20e6	40.59	1.099	0.44	NO	83.721	0.123	5.26e6	6468	813.3	1.17e7	6689	1748.0	bd
33	13C-1234-TCDD	1.10e6	1.42e6	2.51e6	30.54	0.000	0.77	NO	100.000	0.0874	1.28e7	6277	2037.8	1.64e7	3962	4150.8	bb
34	13C-123789-HxCDD	1.17e6	9.38e5	2.11e6	36.92	0.000	1.25	NO	100.000	0.104	2.19e7	7019	3124.9	1.76e7	9451	1861.1	dd
35	37Cl-2378-TCDD	2.35e5	2.35e5	2.35e5	31.13	1.019			8.883	0.0194	3.91e6	2418	1616.4				bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

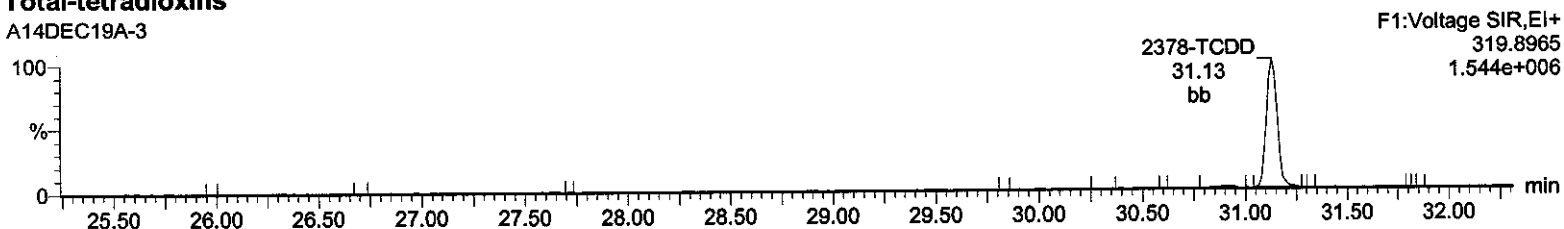
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2,
User: MJC

-3 FOR BATCH 42571

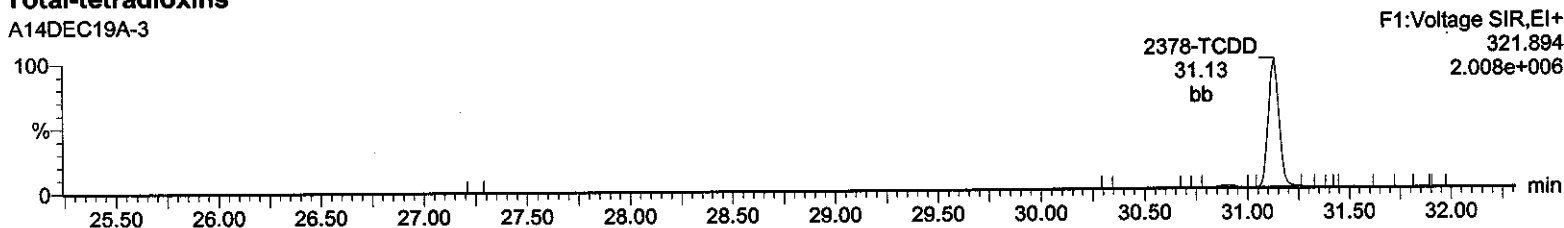
Total-tetradoxins

A14DEC19A-3



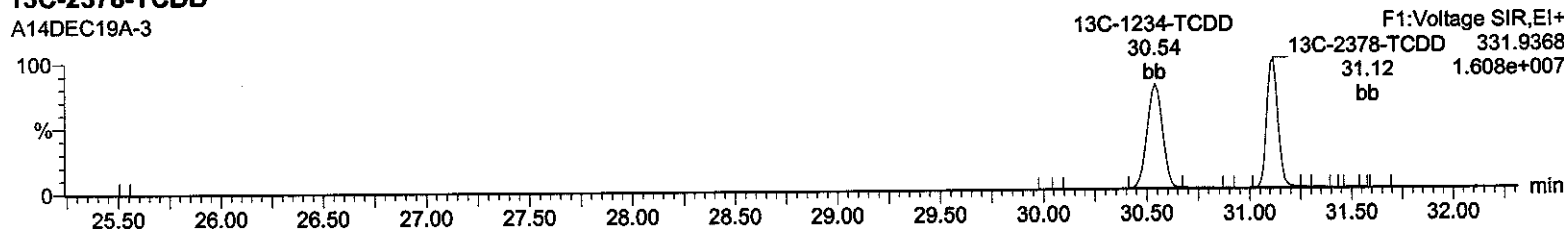
Total-tetradoxins

A14DEC19A-3



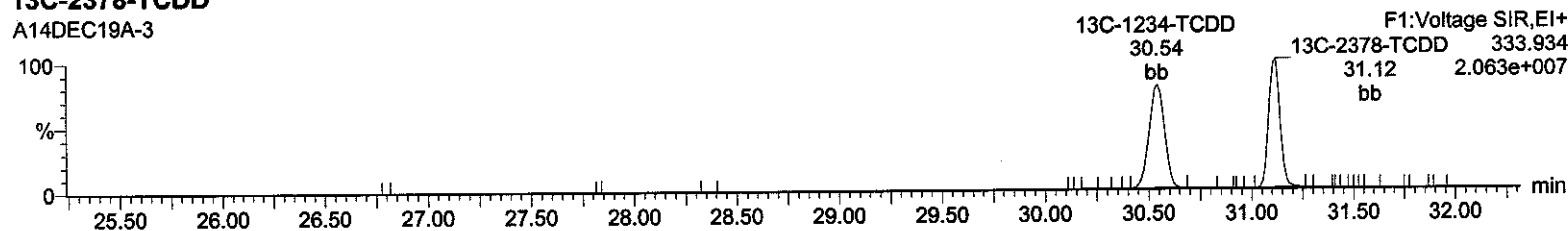
13C-2378-TCDD

A14DEC19A-3



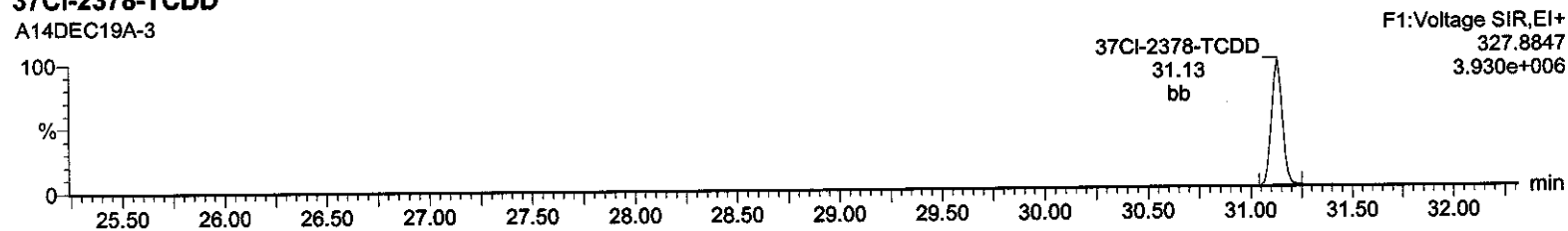
13C-2378-TCDD

A14DEC19A-3



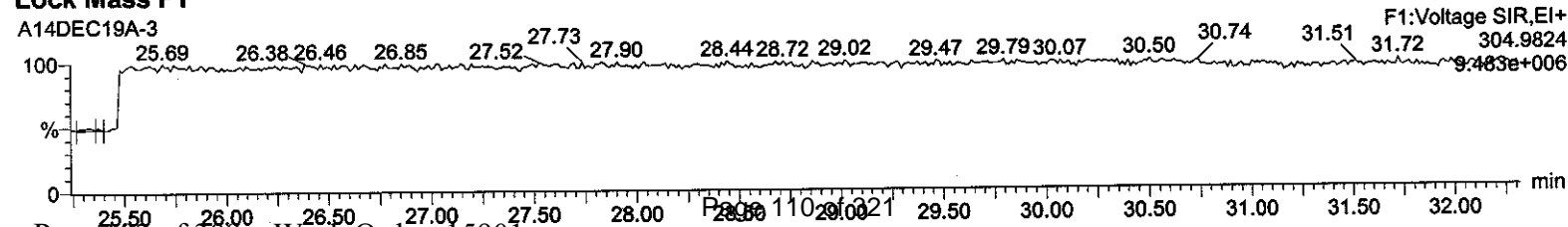
37Cl-2378-TCDD

A14DEC19A-3



Lock Mass F1

A14DEC19A-3



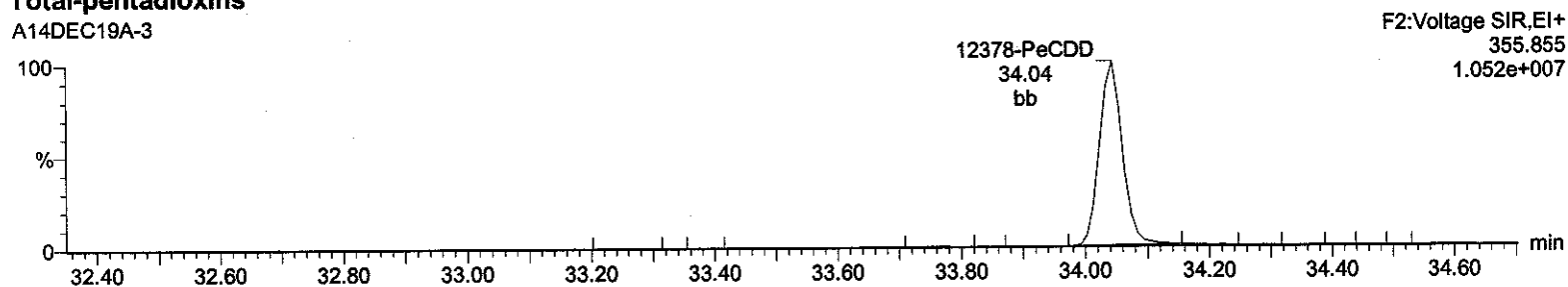
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Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2,
User: MJC

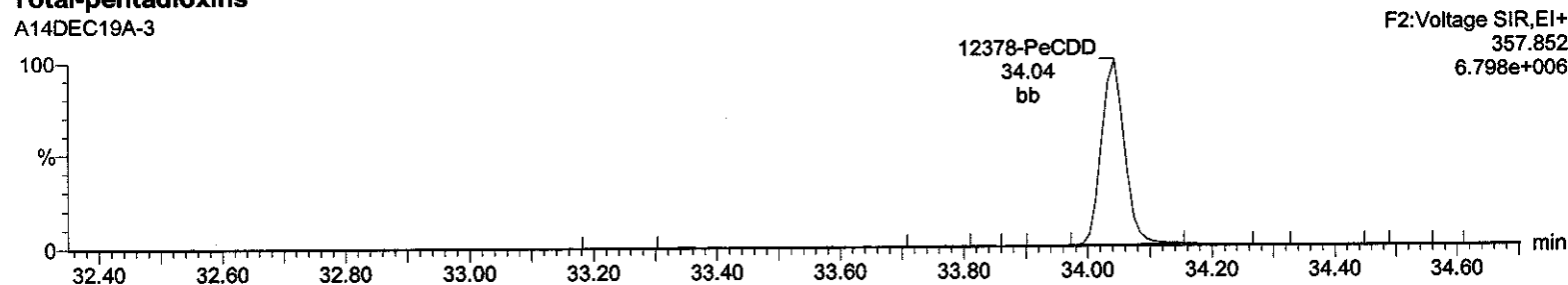
Total-pentadioxins

A14DEC19A-3



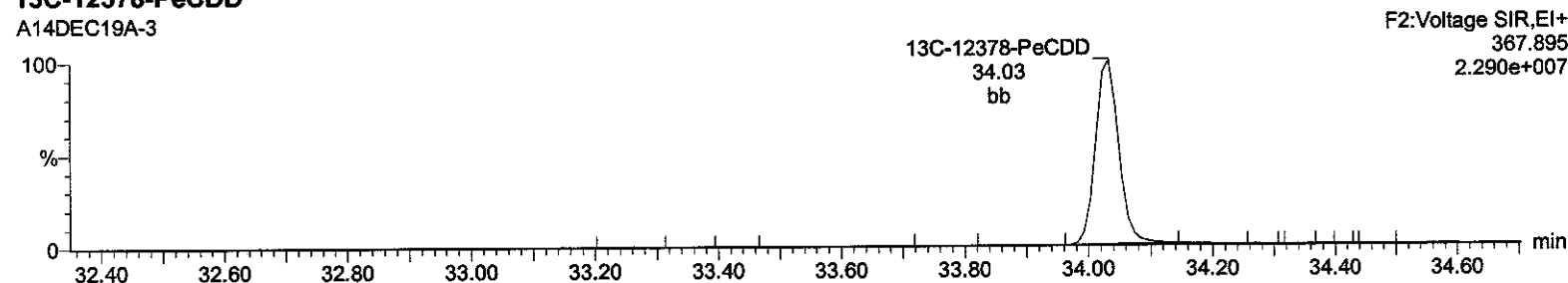
Total-pentadioxins

A14DEC19A-3



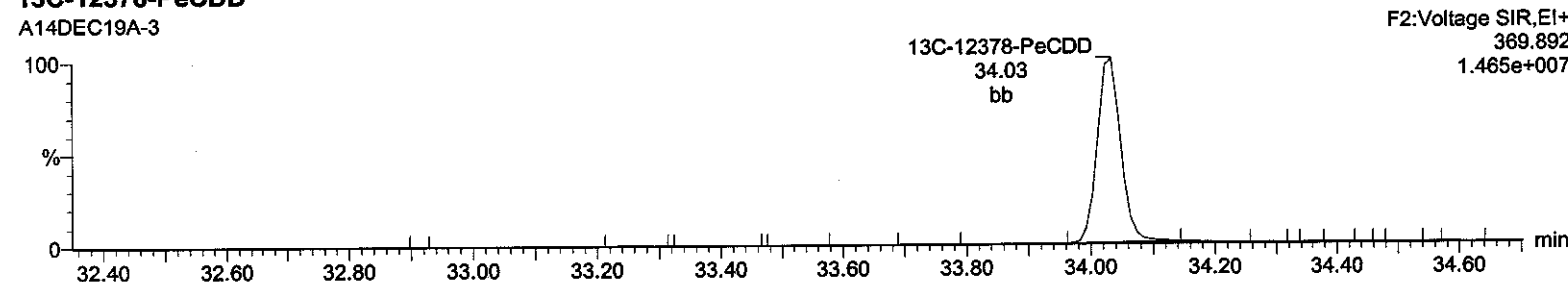
13C-12378-PeCDD

A14DEC19A-3



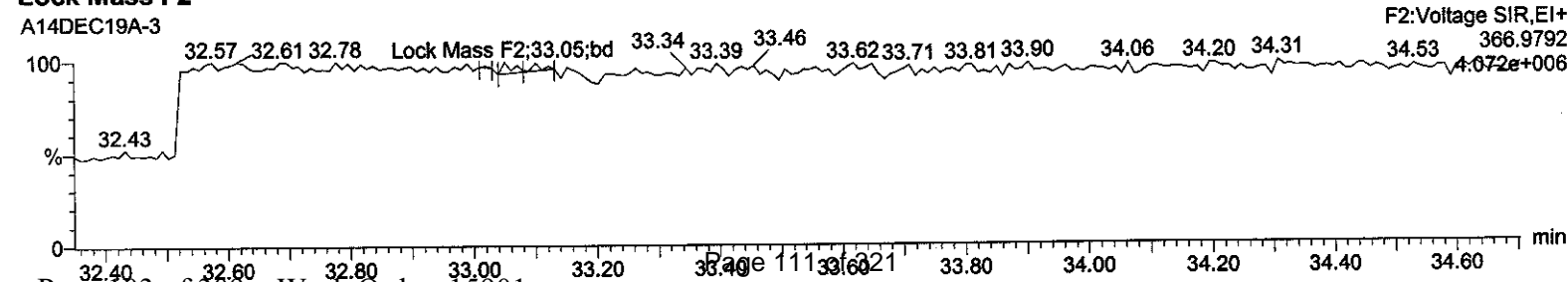
13C-12378-PeCDD

A14DEC19A-3



Lock Mass F2

A14DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

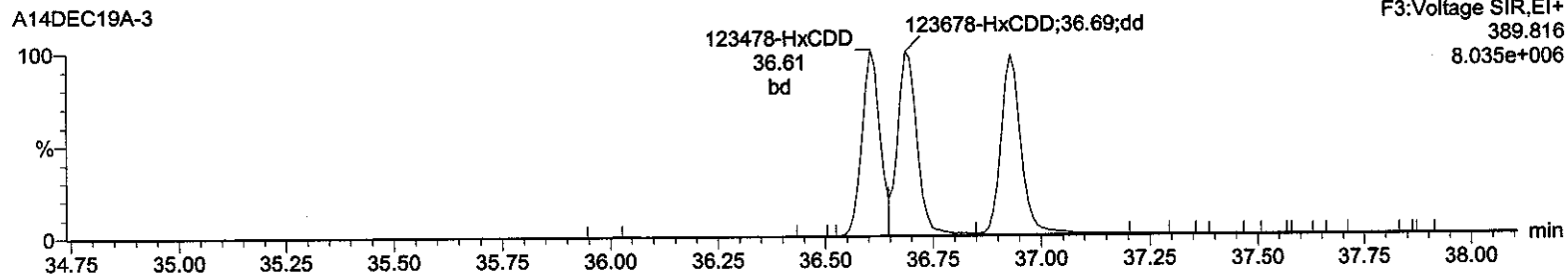
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

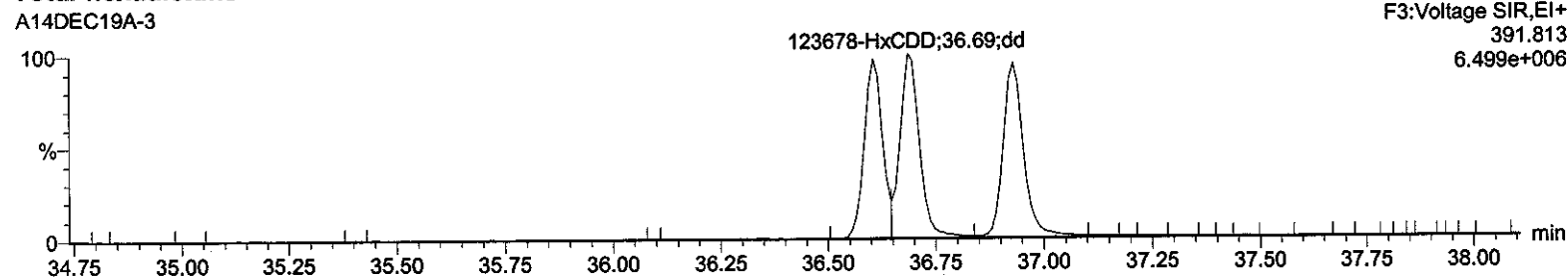
Total-hexadioxins

A14DEC19A-3



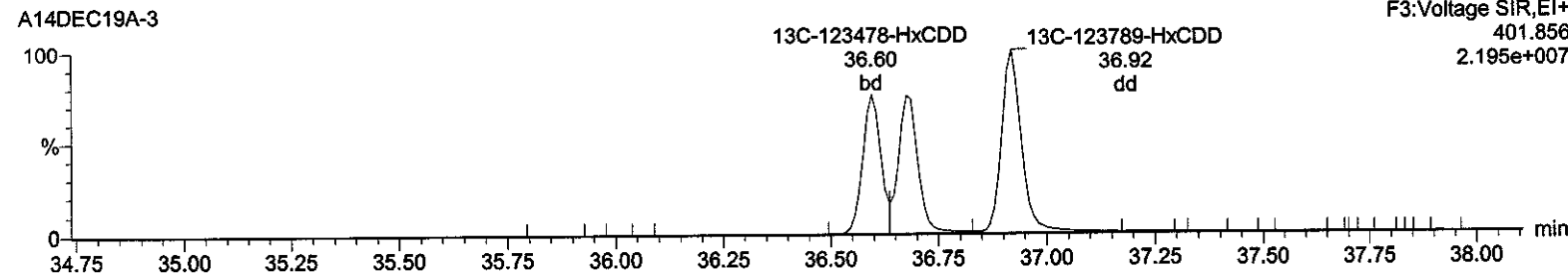
Total-hexadioxins

A14DEC19A-3



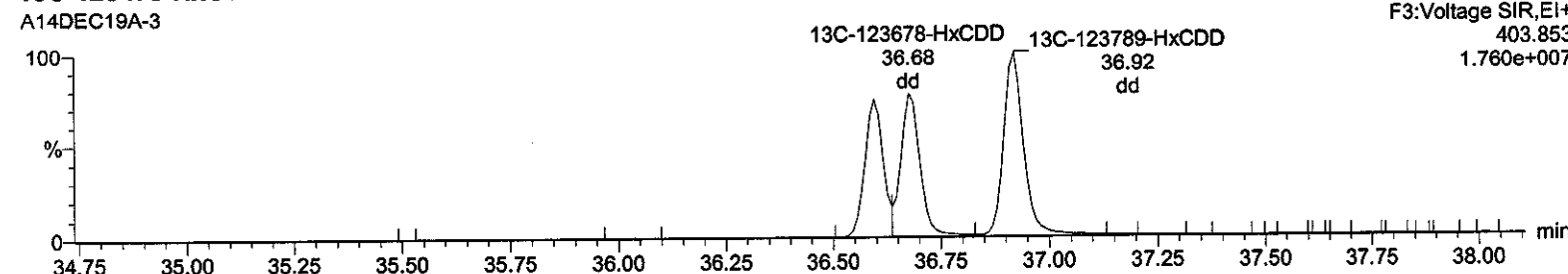
13C-123478-HxCDD

A14DEC19A-3



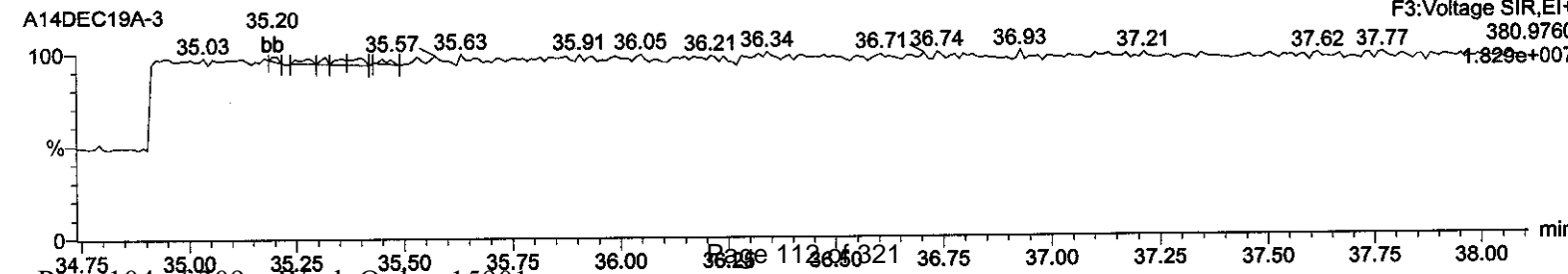
13C-123478-HxCDD

A14DEC19A-3



Lock Mass F3

A14DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

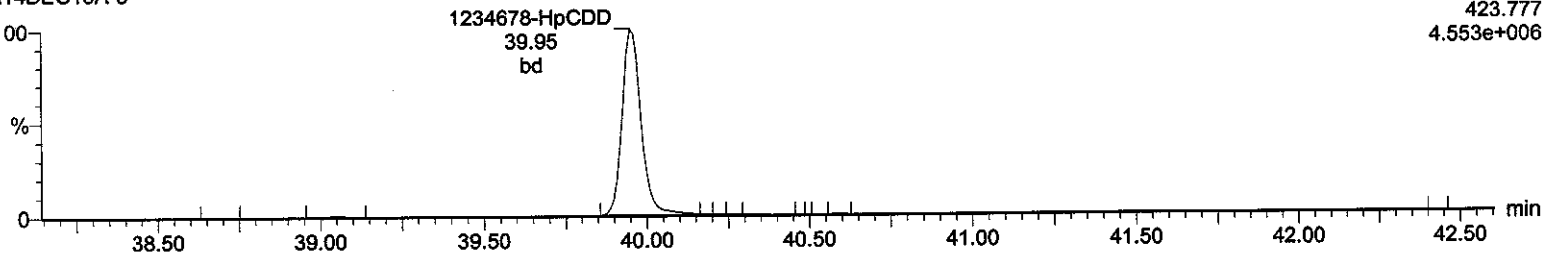
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-heptadioxins

A14DEC19A-3

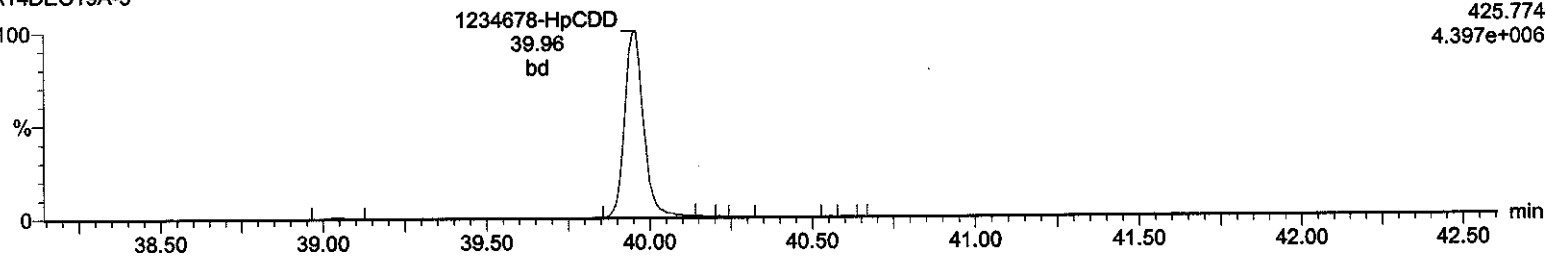
F4:Voltage SIR,EI+
423.777
4.553e+006



Total-heptadioxins

A14DEC19A-3

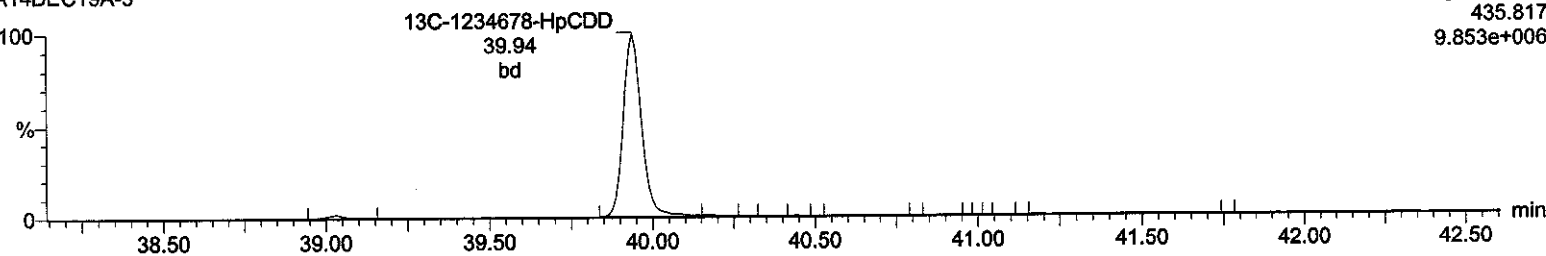
F4:Voltage SIR,EI+
425.774
4.397e+006



13C-1234678-HpCDD

A14DEC19A-3

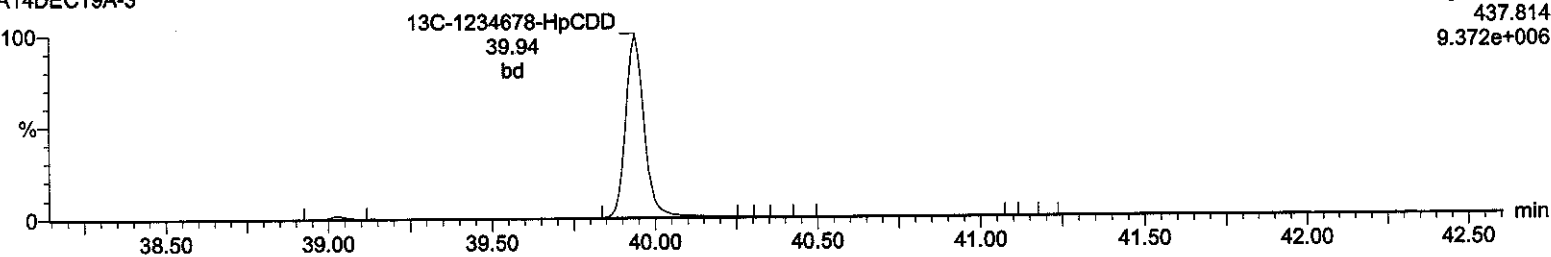
F4:Voltage SIR,EI+
435.817
9.853e+006



13C-1234678-HpCDD

A14DEC19A-3

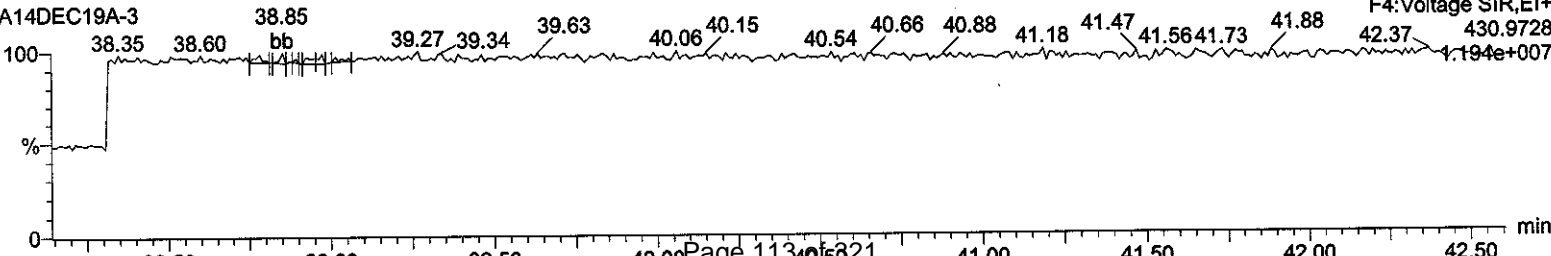
F4:Voltage SIR,EI+
437.814
9.372e+006



Lock Mass F4

A14DEC19A-3

F4:Voltage SIR,EI+
430.9728
4.194e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

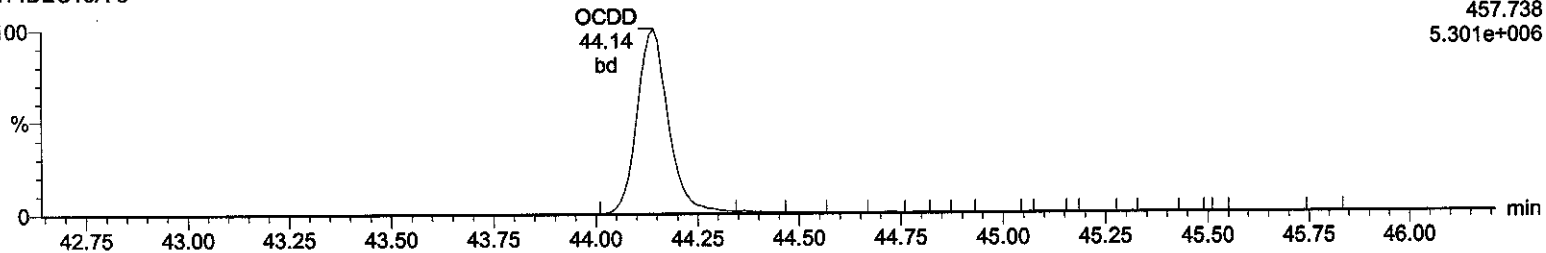
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Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDD

A14DEC19A-3

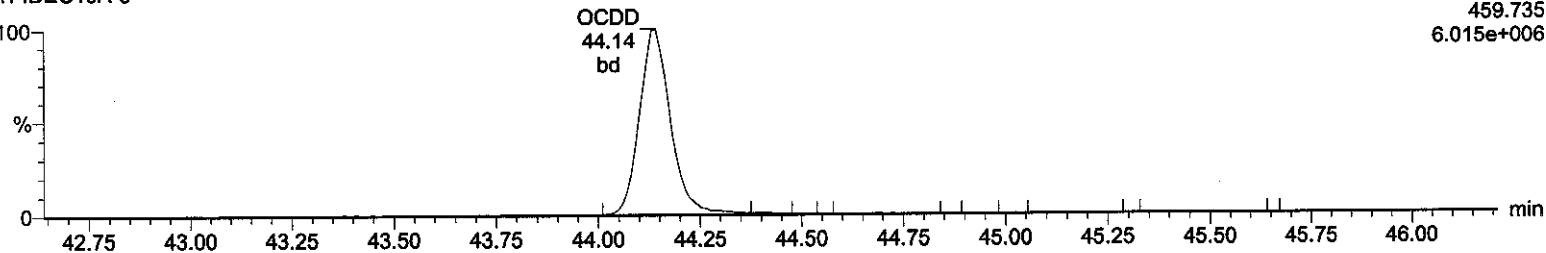
F5:Voltage SIR,EI+
457.738
5.301e+006



OCDD

A14DEC19A-3

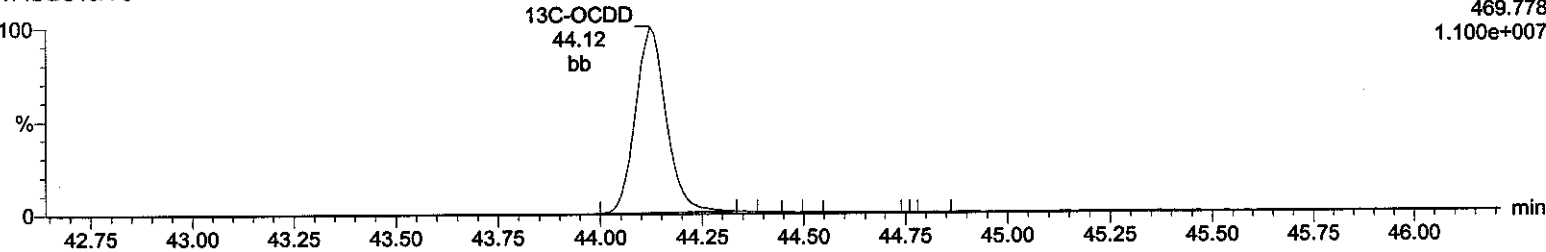
F5:Voltage SIR,EI+
459.735
6.015e+006



13C-OCDD

A14DEC19A-3

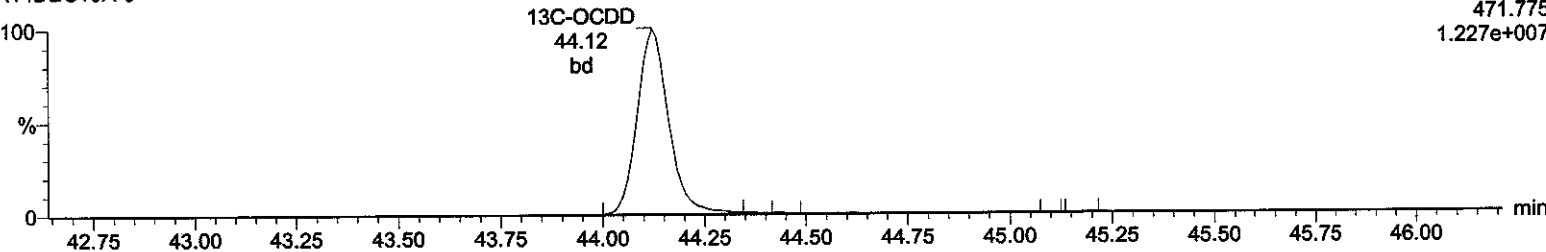
F5:Voltage SIR,EI+
469.778
1.100e+007



13C-OCDD

A14DEC19A-3

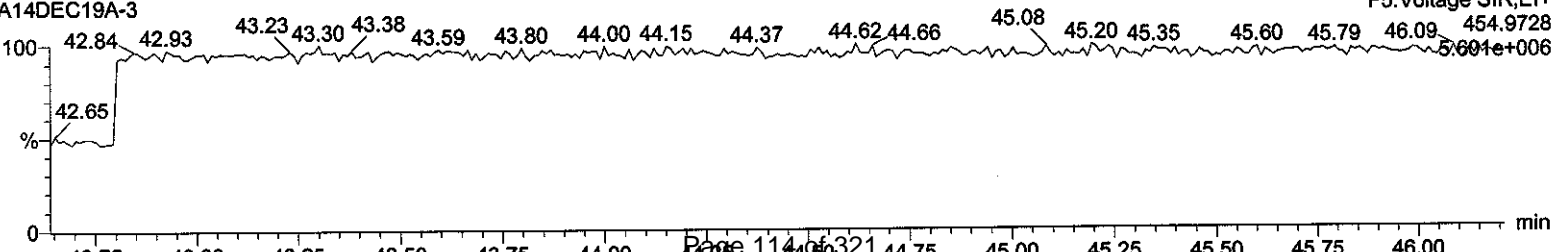
F5:Voltage SIR,EI+
471.775
1.227e+007



Lock Mass F5

A14DEC19A-3

F5:Voltage SIR,EI+
454.9728
5.601e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

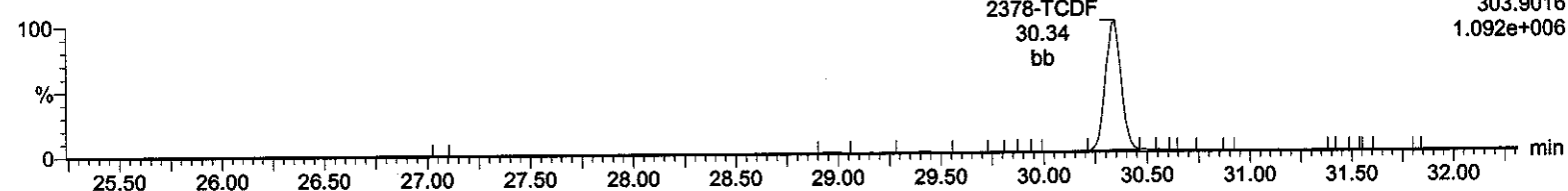
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

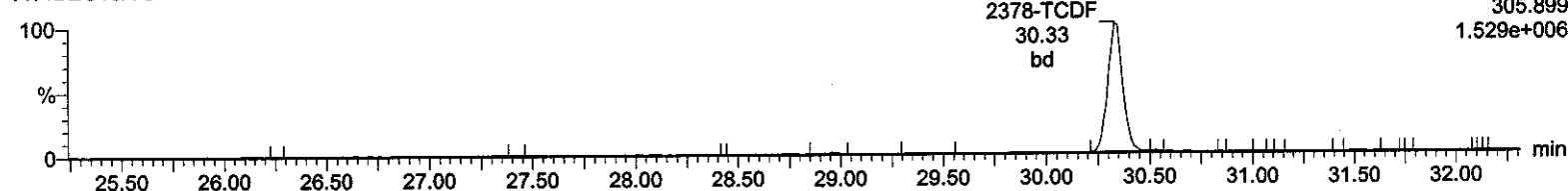
Total-tetrafurans

A14DEC19A-3



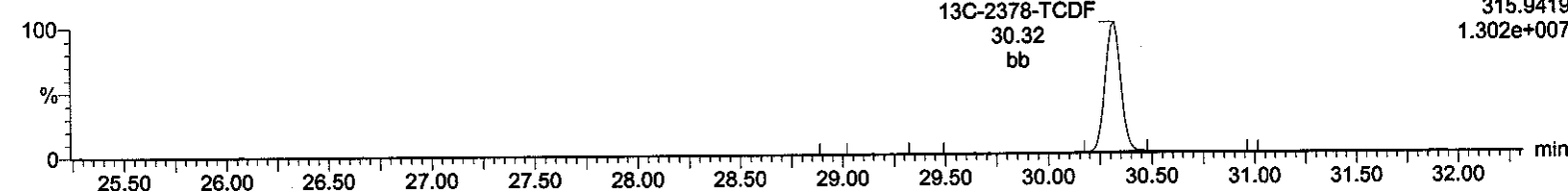
Total-tetrafurans

A14DEC19A-3



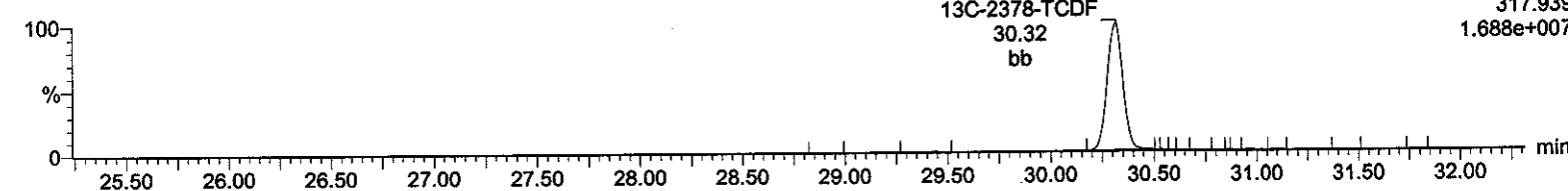
13C-2378-TCDF

A14DEC19A-3



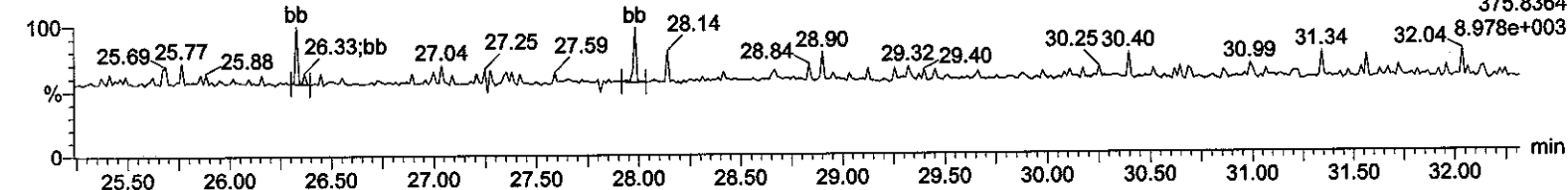
13C-2378-TCDF

A14DEC19A-3



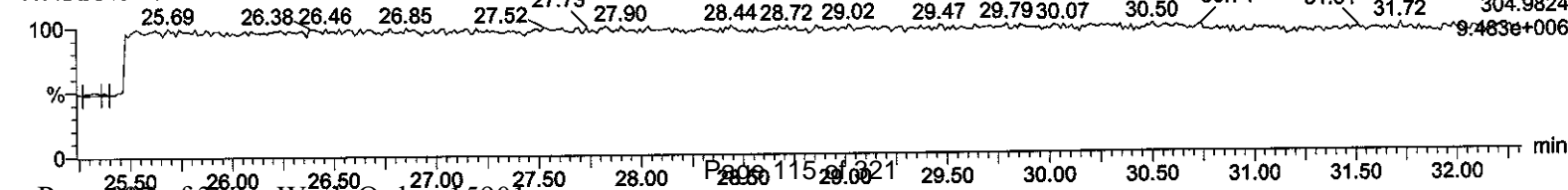
HxDPE

A14DEC19A-3



Lock Mass F1

A14DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

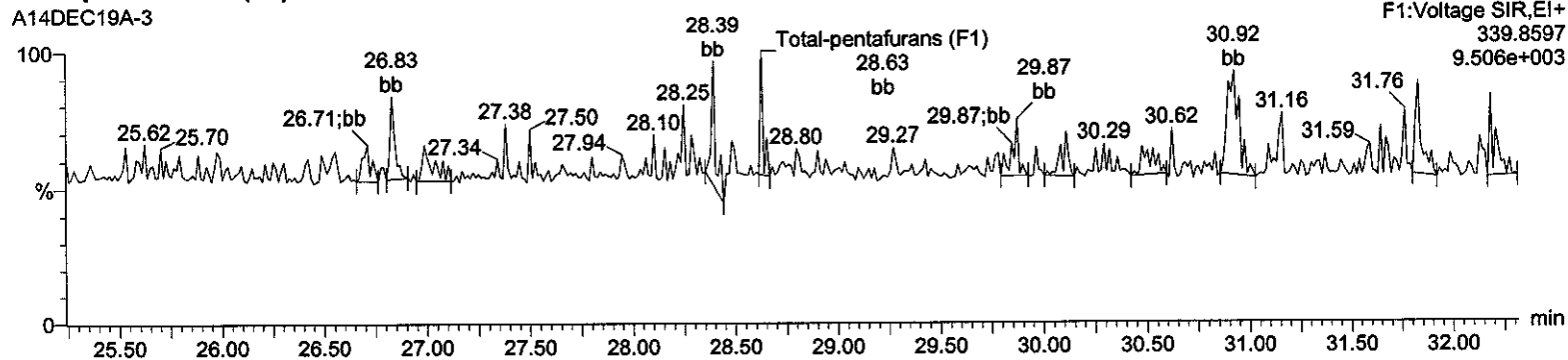
Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

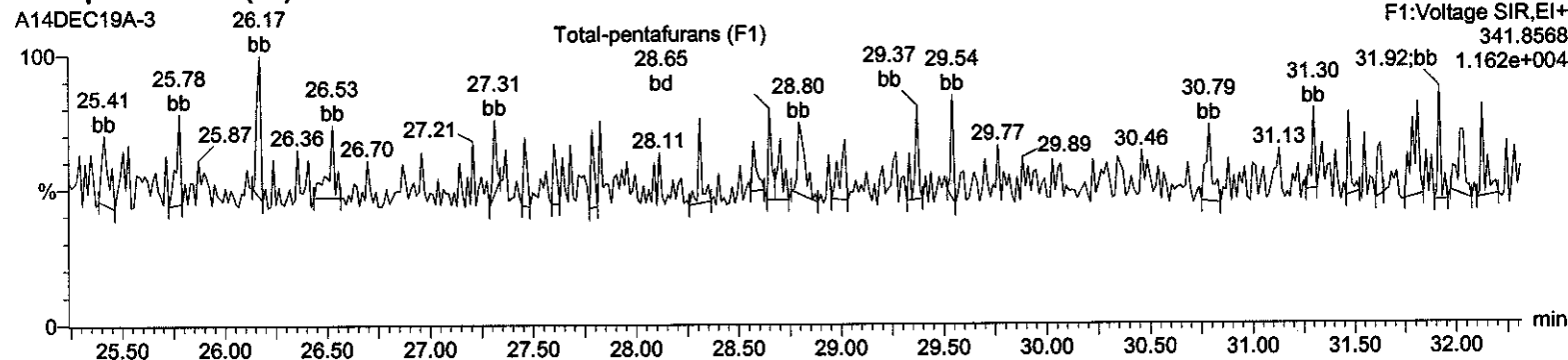
Total-pentafurans (F1)

A14DEC19A-3



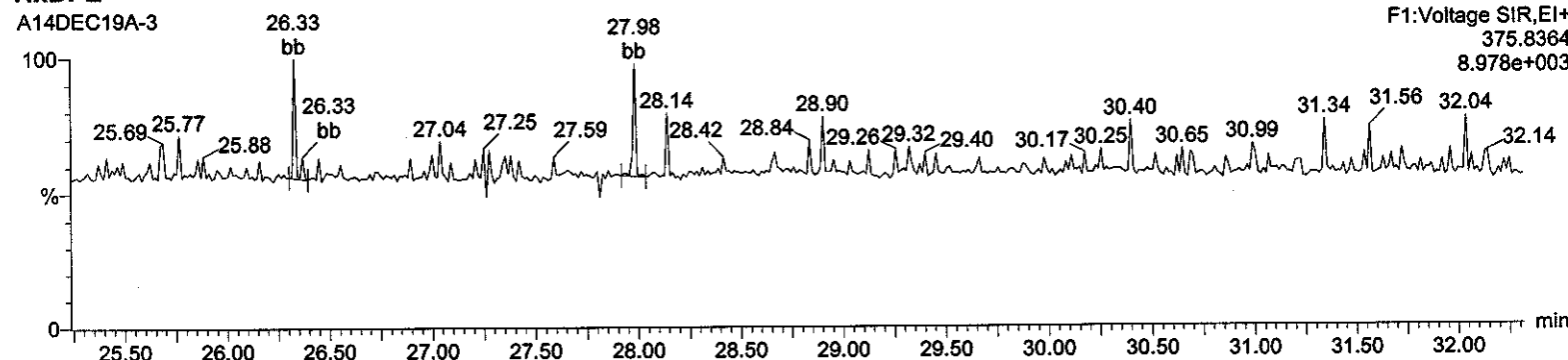
Total-pentafurans (F1)

A14DEC19A-3



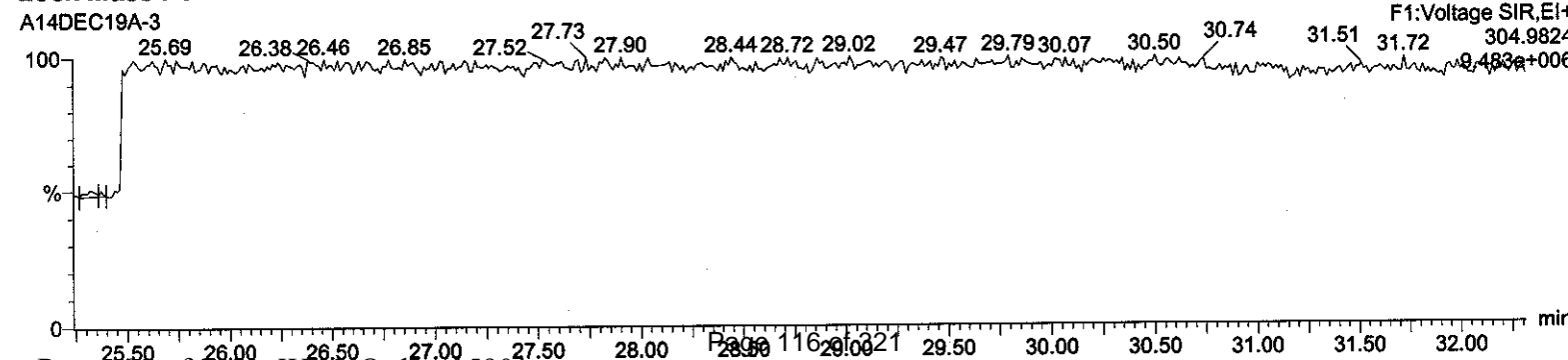
HxDPE

A14DEC19A-3



Lock Mass F1

A14DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

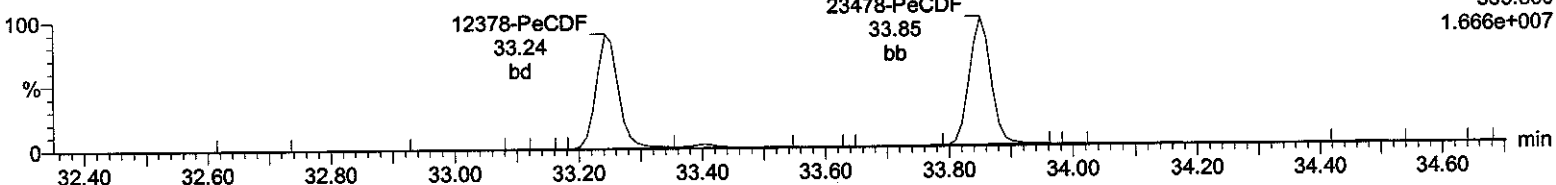
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User: MJC

Total-pentafurans

A14DEC19A-3

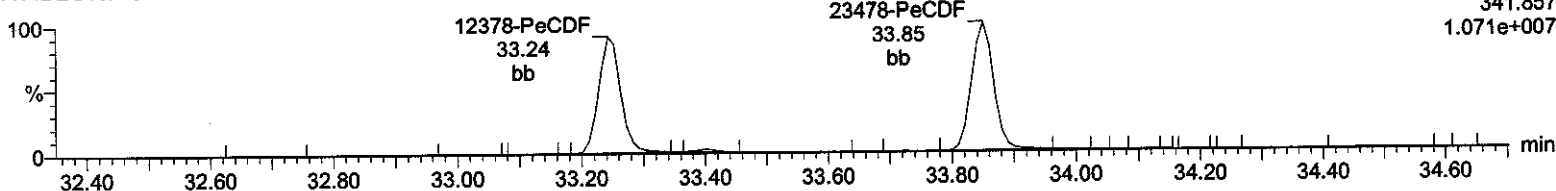
F2:Voltage SIR,EI+
339.860
1.666e+007



Total-pentafurans

A14DEC19A-3

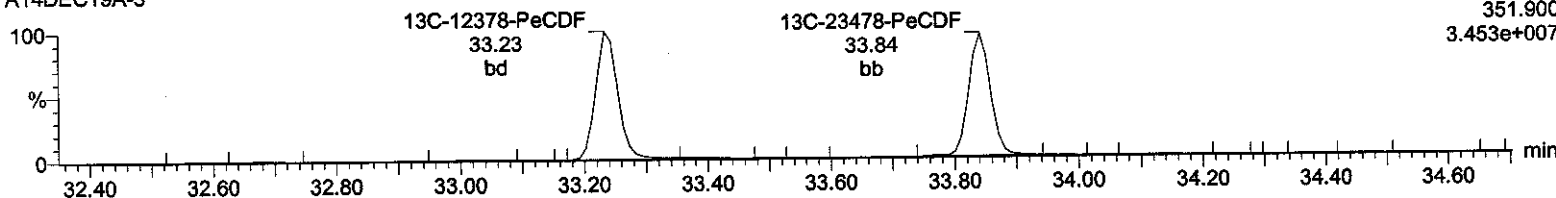
F2:Voltage SIR,EI+
341.857
1.071e+007



13C-12378-PeCDF

A14DEC19A-3

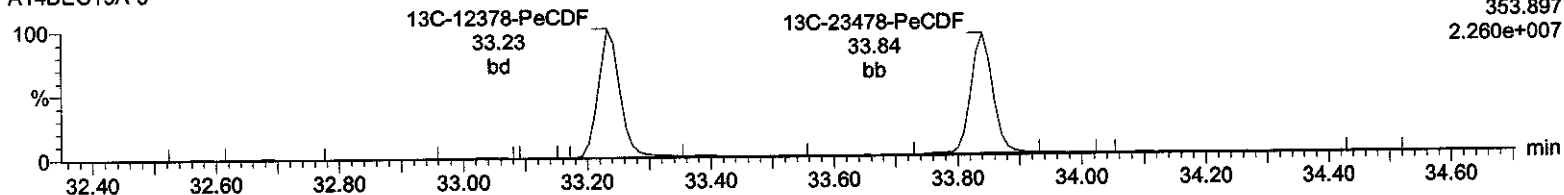
F2:Voltage SIR,EI+
351.900
3.453e+007



13C-12378-PeCDF

A14DEC19A-3

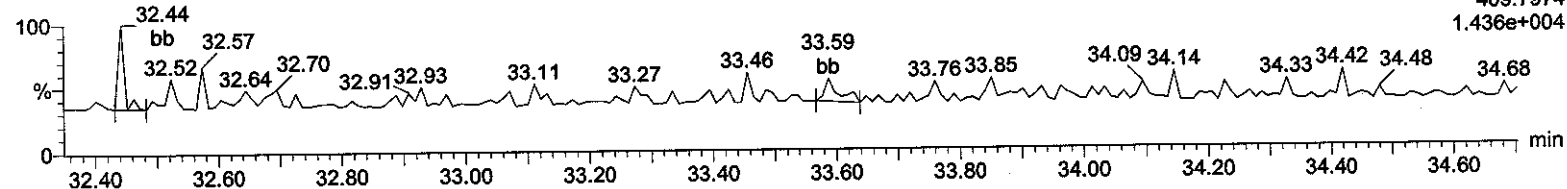
F2:Voltage SIR,EI+
353.897
2.260e+007



HpDPE

A14DEC19A-3

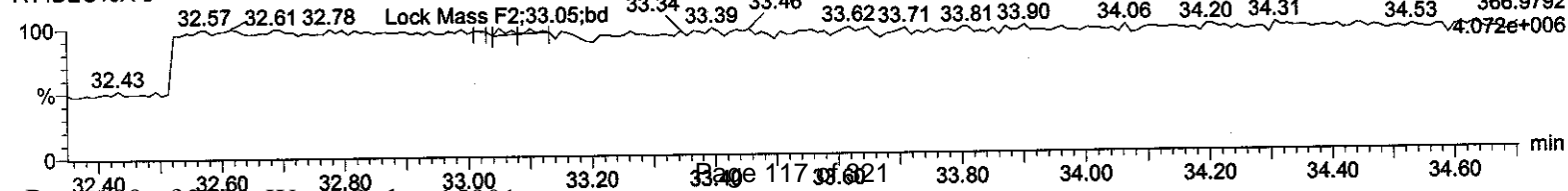
F2:Voltage SIR,EI+
409.7974
1.436e+004



Lock Mass F2

A14DEC19A-3

F2:Voltage SIR,EI+
366.9792
4.072e+006



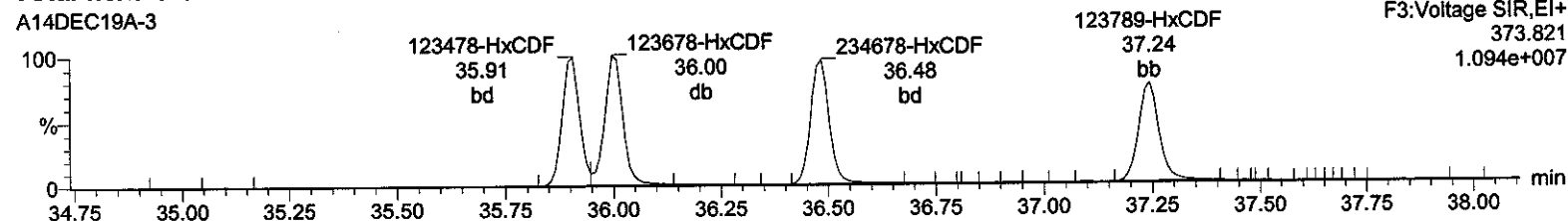
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

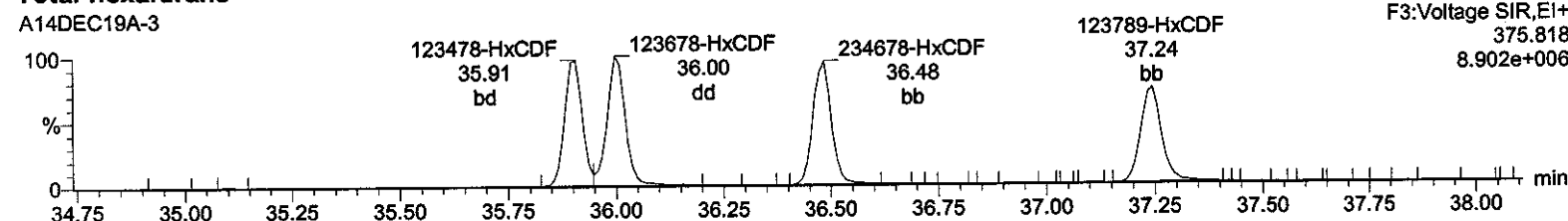
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

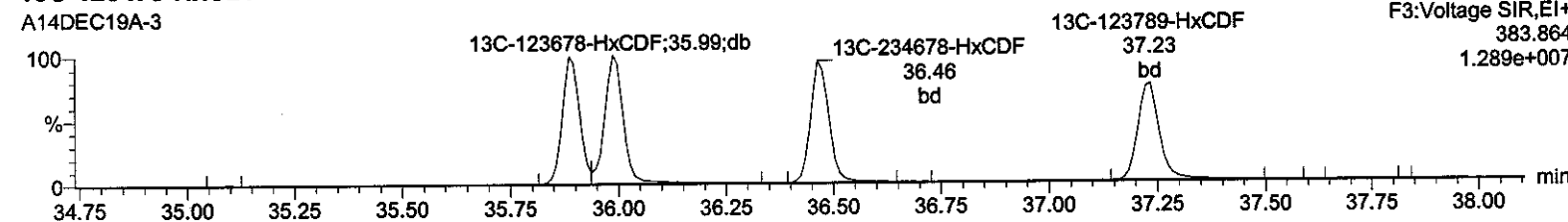
Total-hexafurans



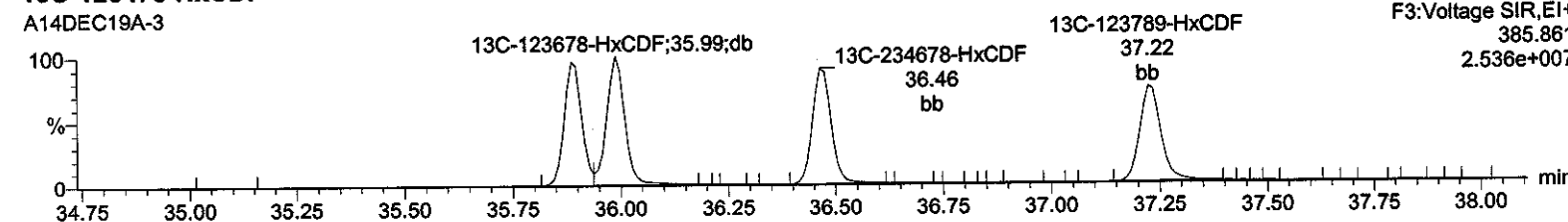
Total-hexafurans



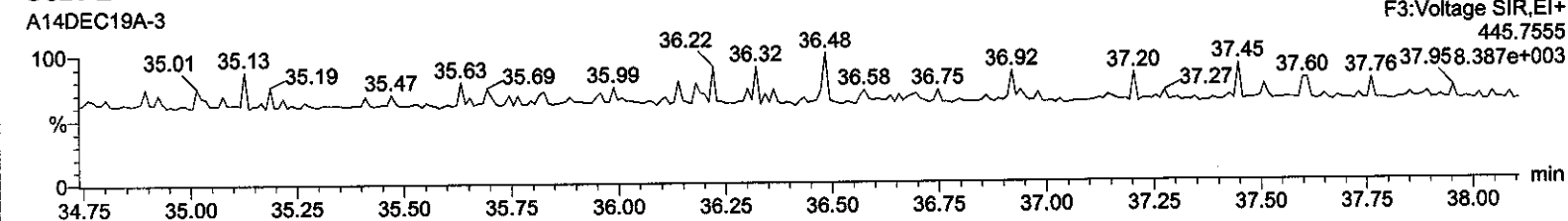
¹³C-123478-HxCDF



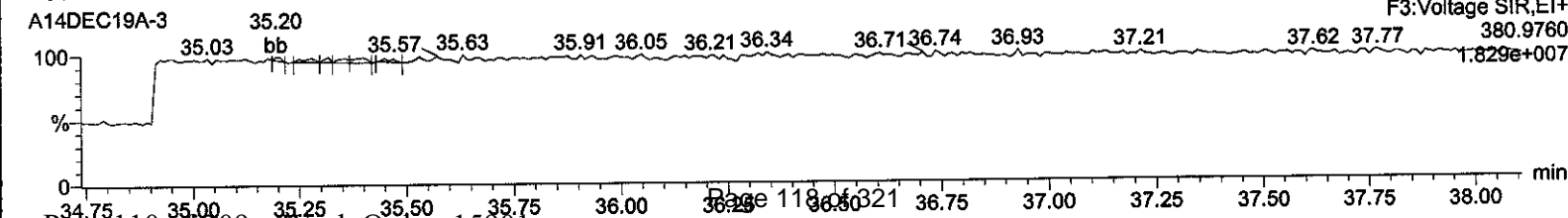
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OcDPE



Lock Mass F3



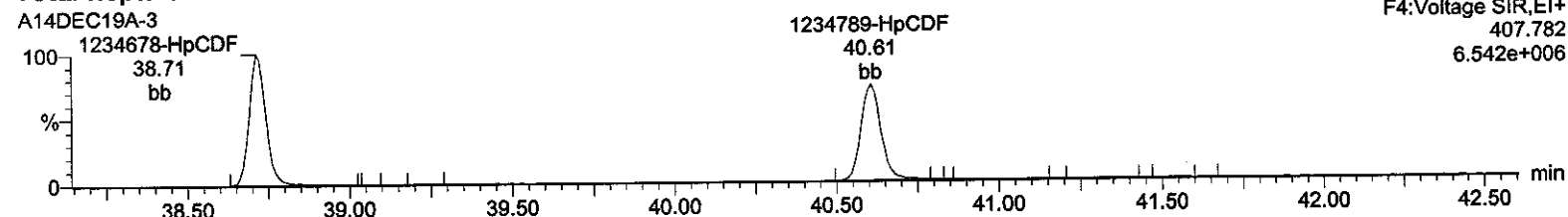
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Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time

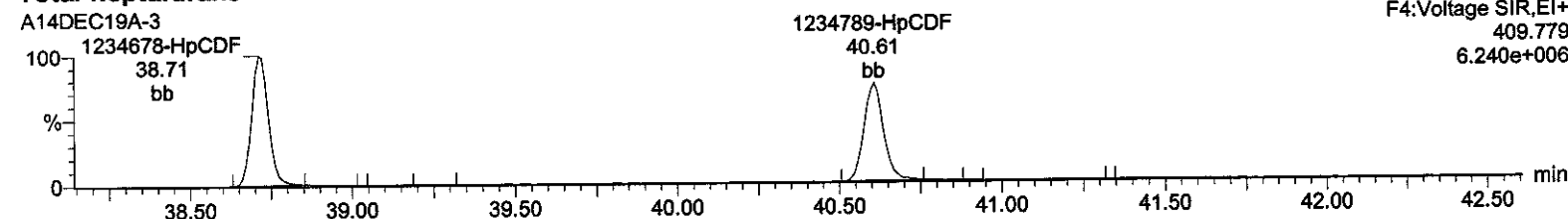
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Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

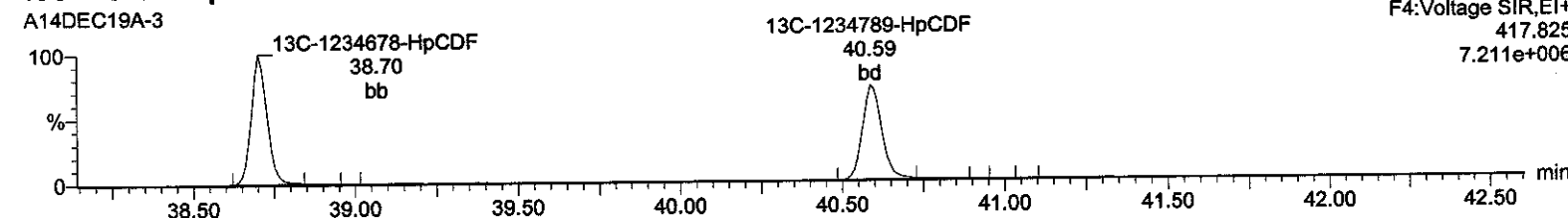
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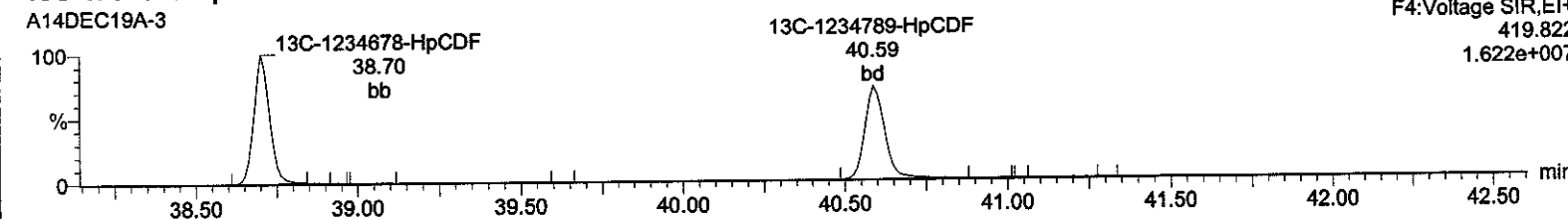
Total-heptafurans



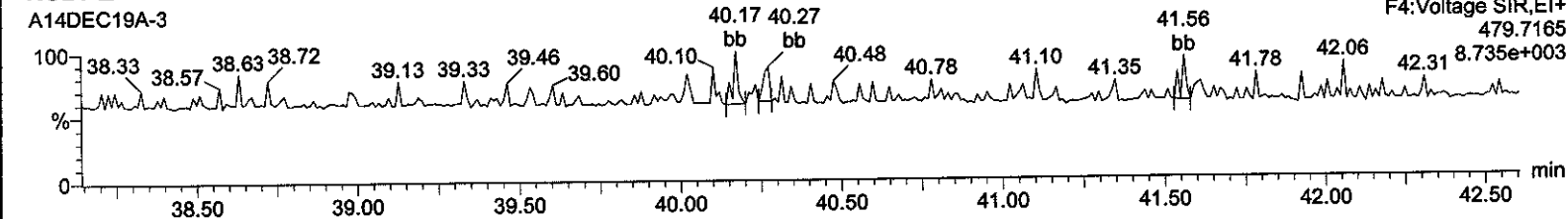
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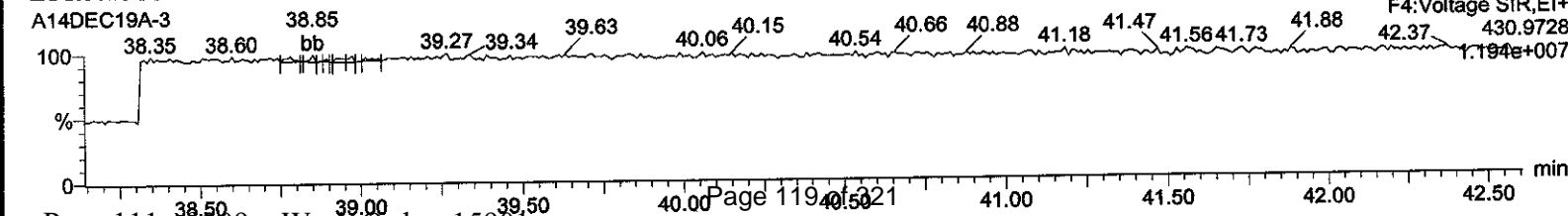
¹³C-1234678-HpCDF



NoDPE



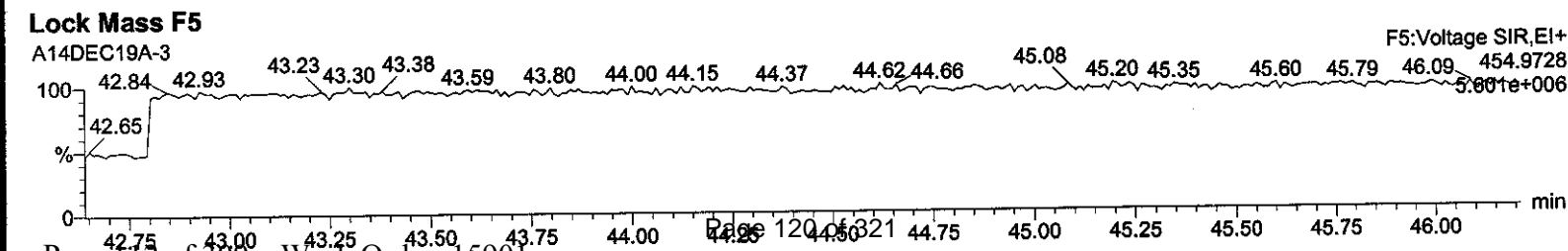
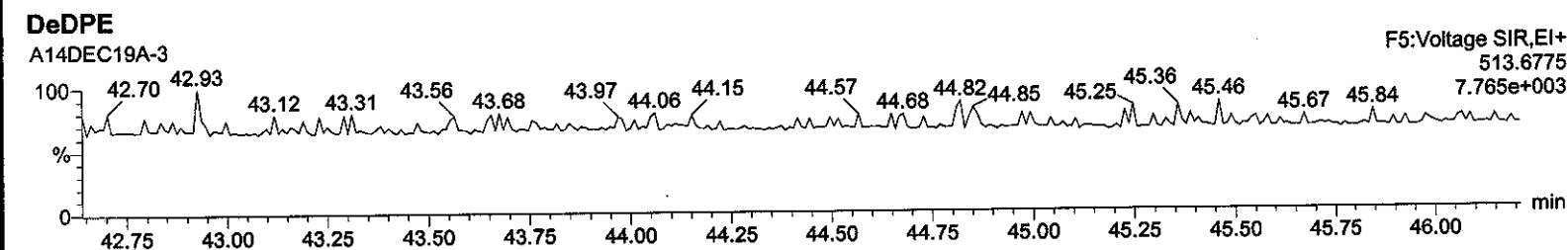
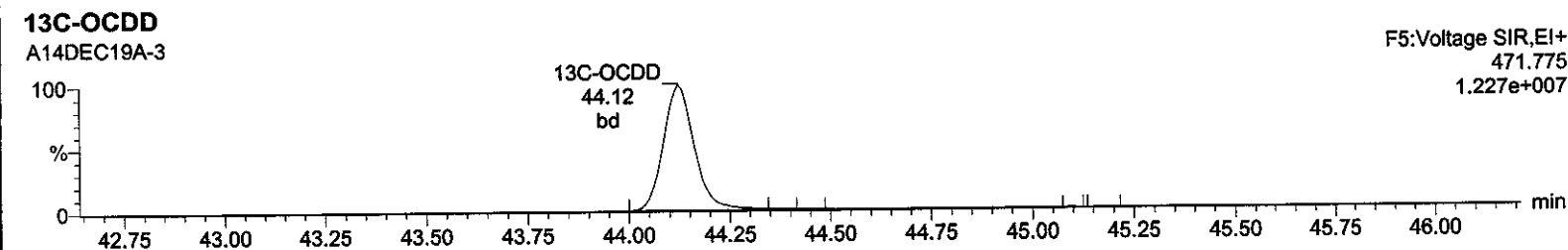
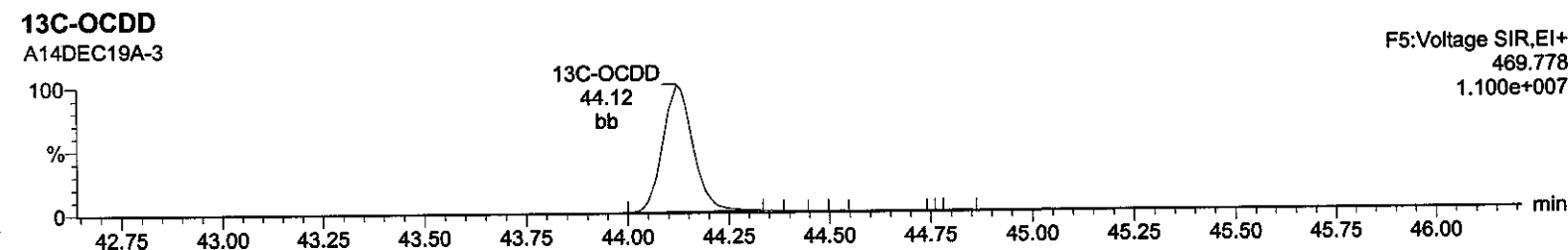
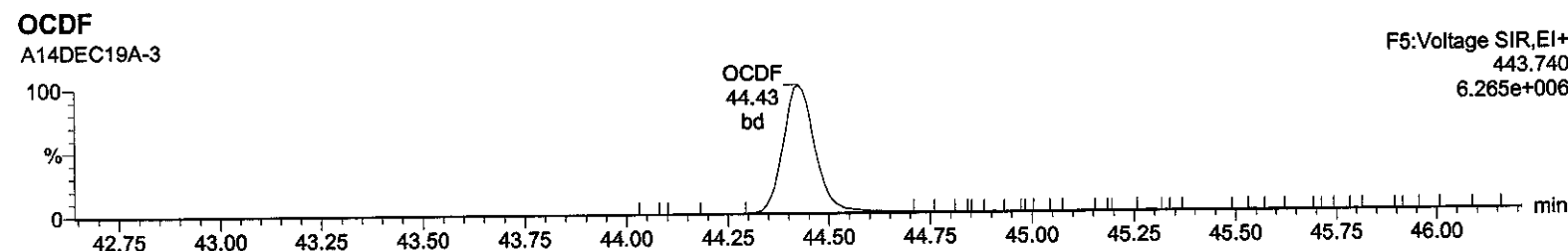
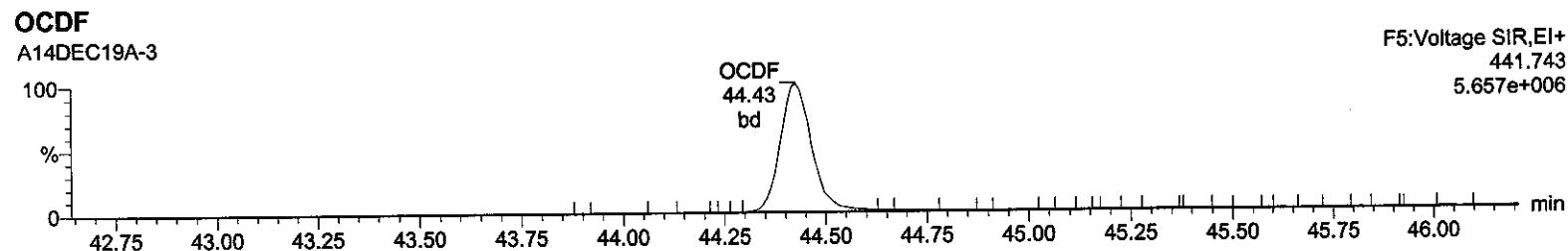
Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14DEC19A.qld

Last Altered: Monday, December 16, 2019 10:42:19 Eastern Standard Time
Printed: Monday, December 16, 2019 10:43:31 Eastern Standard Time

Name: A14DEC19A-3, Date: 14-Dec-2019, Time: 13:03:09, ID: 12025527-2 LCSD, Description: , Job: %613%, Task: HRP750_2,
User: MJC



Logbooks

Prep Logbook

3520C Aqueous Extraction for Method 1613B

Batch ID: 42567 **Verified by:** _____
Analyst: Andrea Scarpello **Lab SOP:** CF-OA-E-002 REV# 15
Method: SW846 3520C **Instrument:** Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
12025525 MB	10-DEC-2019 12:11	1400	400	1000	5	40			WD191203 N -01.2	
12025525 MB	10-DEC-2019 12:11	1400	400	1000	5	40			.05 ng/uL WD191203 N -01.2	
12025526 LCS	10-DEC-2019 12:11	1400	400	1000	5	40	40	WD191209 -01	.05 ng/uL WD191203 N -01.2	
12025526 LCS	10-DEC-2019 12:11	1400	400	1000	5	40	40	WD191209 -01	.05 ng/uL WD191203 N -01.2	
12025527 LCSD	10-DEC-2019 12:11	1400	400	1000	5	40	40	WD191209 -01	.05 ng/uL WD191203 N -01.2	
12025527 LCSD	10-DEC-2019 12:11	1400	400	1000	5	40	40	WD191209 -01	.05 ng/uL WD191203 N -01.2	
15896001	10-DEC-2019 12:11	1571.5	514.6	1056.9	7	40		.005 ng/uL WD191203 N -01.2		
15897001	10-DEC-2019 12:11	1172.3	397.6	774.7	7	40		.05 ng/uL WD191203 N -01.2		
15900001	10-DEC-2019 12:11	1534.6	510.5	1024.1	7	40		.05 ng/uL WD191203 N -01.2		
15900002	10-DEC-2019 12:11	1557.5	512.4	1045.1	7	40		.05 ng/uL WD191203 N -01.2		
15900003	10-DEC-2019 12:11	1483	510.3	972.7	7	40		.05 ng/uL WD191203 N -01.2		
15901001	10-DEC-2019 12:11	1299.1	504.4	794.7	7	40		.05 ng/uL WD191210 N -02		
15901002	10-DEC-2019 12:11	1447.3	506.1	941.2	7	40		.05 ng/uL WD191210 N -02		
15903001	10-DEC-2019 12:11	1195.8	394.4	801.4	8	40		.05 ng/uL WD191210 N -02		
15903002	10-DEC-2019 12:11	1295.1	397.6	897.5	8	40		.05 ng/uL WD191210 N -02		
15903003	10-DEC-2019 12:11	1221	392.9	828.1	8	40		.05 ng/uL WD191210 N -02		

Prep Logbook

Batch ID: 42567 Verified by: _____
Analyst: Andrea Scarpello **Lab SOP:** CF-OA-E-002 REV# 15
Method: SW846 3520C **Instrument:** Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
15903004	10-DEC-2019 12:11	1237.6	394.3	843.3	8	40			WD191210 N -02	
15903005	10-DEC-2019 12:11	1115.8	394.7	721.1	7	40			.05 ng/uL WD191210 N -02	
15904001	10-DEC-2019 12:11	1345.2	409.5	935.7	8	40			.05 ng/uL WD191210 N -02	
15918001	10-DEC-2019 12:11	1468.1	476.4	991.7	7	40			.05 ng/uL WD191210 N -02	
15919001	10-DEC-2019 12:11	1448	476.9	971.1	7	40			.05 ng/uL WD191210 N -02	
15920001	10-DEC-2019 12:11	1432.7	478.4	954.3	7	40			.05 ng/uL WD191210 N -02	
15925001	10-DEC-2019 12:11	1306.4	475	831.4	8	40			.05 ng/uL WD191210 N -02	
15931001	10-DEC-2019 12:11	1464.9	457.7	1007.2	7	40			.05 ng/uL WD191210 N -02	
15931002	10-DEC-2019 12:11	1477.4	447	1030.4	7	40			.05 ng/uL WD191210 N -02	

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Salt	1152107	10	g	Finish Time: 11-DEC-2019 08:05:00
REAGENT		Acetone	1152234-A.6	100	uL	
REAGENT		Methylene Chloride	1152286-A	250	mL	

Prep Logbook

Cleanup Procedure for Liquids

Batch ID: 42568
 Analyst: Mike Medwedeff

Verified by: _____
 Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
12025525 MB	11-DEC-2019 10:00	AB Siltica Florisil	148	100	20	WD191210-04 .01 ng/uL
12025525 MB	11-DEC-2019 10:00	AB Siltica Florisil	148	100	20	WD191210-04 .01 ng/uL
12025526 LCS	11-DEC-2019 10:00	AB Siltica Florisil	30	100	20	WD191210-04 .01 ng/uL
12025526 LCS	11-DEC-2019 10:00	AB Siltica Florisil	30	100	20	WD191210-04 .01 ng/uL
12025527 LCSD	11-DEC-2019 10:00	AB Siltica Florisil	85	100	20	WD191210-04 .01 ng/uL
12025527 LCSD	11-DEC-2019 10:00	AB Siltica Florisil	85	100	20	WD191210-04 .01 ng/uL
15896001	11-DEC-2019 10:00	AB Siltica Florisil	106	100	20	WD191210-04 .01 ng/uL
15897001	11-DEC-2019 10:00	AB Siltica Florisil	1	100	20	WD191210-04 .01 ng/uL
15900001	11-DEC-2019 10:00	AB Siltica Florisil	156	100	20	WD191210-04 .01 ng/uL
15900002	11-DEC-2019 10:00	AB Siltica Florisil	102	100	20	WD191210-04 .01 ng/uL
15900003	11-DEC-2019 10:00	AB Siltica Florisil	126	100	20	WD191210-04 .01 ng/uL
15901001	11-DEC-2019 10:00	AB Siltica Florisil	191	100	20	WD191210-04 .01 ng/uL
15901002	11-DEC-2019 10:00	AB Siltica Florisil	88	100	20	WD191210-04 .01 ng/uL
15903001	11-DEC-2019 10:00	AB Siltica Florisil	70	100	20	WD191210-04 .01 ng/uL
15903002	11-DEC-2019 10:00	AB Siltica Florisil	166	100	20	WD191210-04 .01 ng/uL
15903003	11-DEC-2019 10:00	AB Siltica Florisil	50	100	20	WD191210-04 .01 ng/uL
15903004	11-DEC-2019 10:00	AB Siltica Florisil	28	100	20	WD191210-04 .01 ng/uL
15903005	11-DEC-2019 10:00	AB Siltica Florisil	177	100	20	WD191210-04 .01 ng/uL
15904001	11-DEC-2019 10:00	AB Siltica Florisil	7	100	20	WD191210-04 .01 ng/uL
15918001	11-DEC-2019 10:00	AB Siltica Florisil	77	100	20	WD191210-04 .01 ng/uL
15919001	11-DEC-2019 10:00	AB Siltica Florisil	171	100	20	WD191210-04 .01 ng/uL
15920001	11-DEC-2019 10:00	AB Siltica Florisil	180	100	20	WD191210-04 .01 ng/uL
15925001	11-DEC-2019 10:00	AB Siltica Florisil	6	100	20	WD191210-04 .01 ng/uL
15931001	11-DEC-2019 10:00	AB Siltica Florisil	149	100	20	WD191210-04 .01 ng/uL

Prep Logbook

Batch ID: 42568

Verified by: _____

Analyst: Mike Medwedeff

Lab SOP:

Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
15931002	11-DEC-2019 10:00	AB Silica Florisil	38	100	20	WD191210-04 .01 ng/uL

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Activated Florisil	1149228	1	g	
REAGENT		Silica Gel	1151237-A	2	g	
REAGENT		Glass Wool	1151781-A.3	1	each	
REAGENT		Salt	1152107	1	g	
REAGENT		Hexane	1152192-A.11	130	mL	
REAGENT		Hexane	1152194-A.12	130	mL	
REAGENT		Methylene Chloride	1152286-A	100	mL	
REAGENT		Hexane	1152498-A.1	130	mL	
REAGENT		Base silica	1152566-C	3	g	
REAGENT		Acid silica	1152569	7	g	

Prep Logbook

Method 1613B HRMS Aqueous Analysis

Batch ID: 42571 **Verified by:** _____
Analyst: Matt Cash
Method: EPA Method 1613B
Lab SOP: CF-OA-E-002 REV# 15
Instrument: Waters Autospec Premier
High-Resolution GC/MS

Sample ID	Start Run Date	Final Volume (uL)	Prep Factor (Final Volume /Aliquot) (uL/uL)	Dilution	Dilution Type	Injection Volume (uL)	Vial Prep Date
12025526 - 3 LCS	14-DEC-2019 12:15	20	2.00E-05	1	Internal	1	12-DEC-2019
12025527 - 3 LCSD	14-DEC-2019 13:03	20	2.00E-05	1	Internal	1	12-DEC-2019
12025525 - 3 MB	14-DEC-2019 13:51	20	2.00E-05	1	Internal	1	12-DEC-2019
15900001	14-DEC-2019 19:28	20	1.95E-05	1	Internal	1	12-DEC-2019
15900002	14-DEC-2019 20:16	20	1.91E-05	1	Internal	1	12-DEC-2019
15900003	14-DEC-2019 21:04	20	2.06E-05	1	Internal	1	12-DEC-2019
15901001	14-DEC-2019 21:52	20	2.52E-05	1	Internal	1	12-DEC-2019
15901002	14-DEC-2019 22:41	20	2.12E-05	1	Internal	1	12-DEC-2019

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		8290 Injection Standard	WD191211-04	20	uL	
STANDARE		8290 Injection Standard	WD191211-04	20	uL	

Initial Calibration Data

Runlog Information

16131CA

Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
• A08JUL19A-1	HRP750_2	08-JUL-2019 09:40	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYQ	1 uL
• A08JUL19A-2	HRP750_2	08-JUL-2019 10:28	A08JUL19A	Matt Cash		SB DIBLK2M	1 uL
• A08JUL19A-3	HRP750_2	08-JUL-2019 11:16	A08JUL19A	Matt Cash		CS0.5 UD190207-01	1 uL
• A08JUL19A-4	HRP750_2	08-JUL-2019 12:03	A08JUL19A	Matt Cash		CS1 UD190207-02 CS143	1 uL
• A08JUL19A-5	HRP750_2	08-JUL-2019 12:51	A08JUL19A	Matt Cash		CS2 UD190207-03 CS243	1 uL
• A08JUL19A-6	HRP750_2	08-JUL-2019 13:39	A08JUL19A	Matt Cash		CS3 UD190207-04 CS3KG	1 uL
• A08JUL19A-7	HRP750_2	08-JUL-2019 14:27	A08JUL19A	Matt Cash		CS4 UD190207-05 CS442	1 uL
• A08JUL19A-8	HRP750_2	08-JUL-2019 15:15	A08JUL19A	Matt Cash		CS5 UD190207-06 CS543	1 uL
• A08JUL19A-9	HRP750_2	08-JUL-2019 16:03	A08JUL19A	Matt Cash		SB DIBLK2N	1 uL
• A08JUL19A-10	HRP750_2	08-JUL-2019 16:51	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYR	1 uL

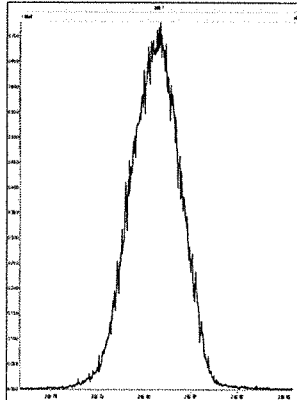
Experiment Calibration Report

MassLynx 4.1

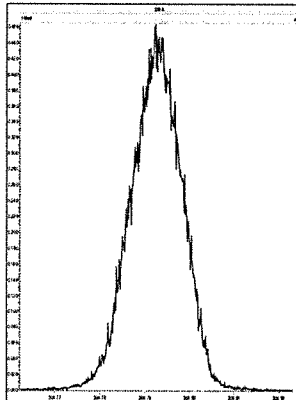
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Printed: Monday, July 08, 2019 09:38:33 Eastern Standard Time

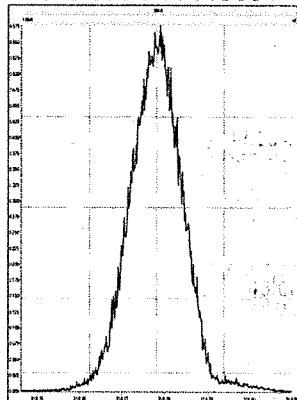
M 292.9824 R 12382



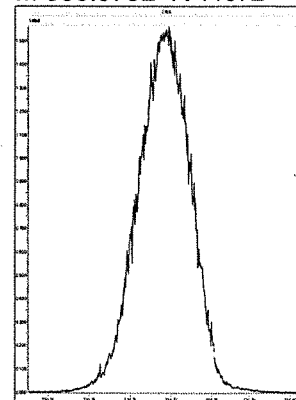
M 304.9824 R 11789



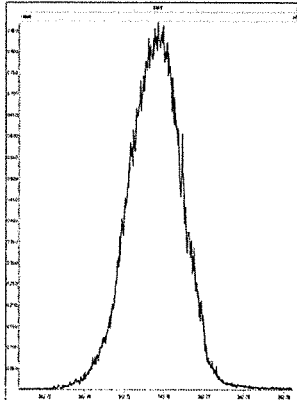
M 318.9792 R 11905



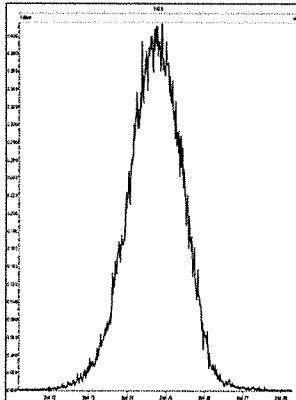
M 330.9792 R 11572



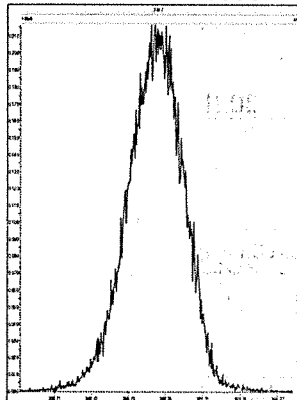
M 342.9792 R 10961



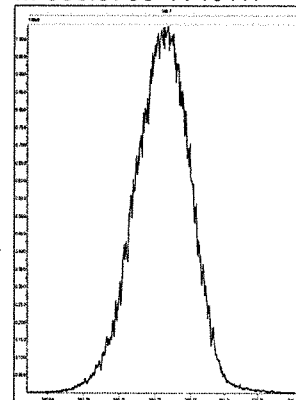
M 354.9792 R 10868



M 366.9792 R 10506



M 380.9760 R 10417



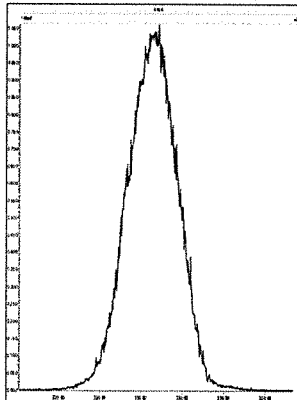
Experiment Calibration Report

MassLynx 4.1

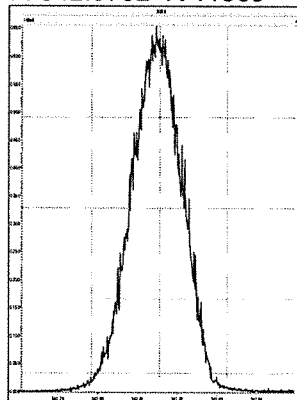
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 08, 2019 09:38:55 Eastern Standard Time

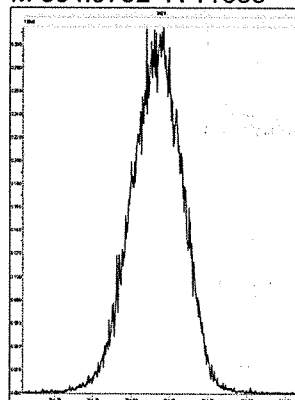
M 330.9792 R 12136



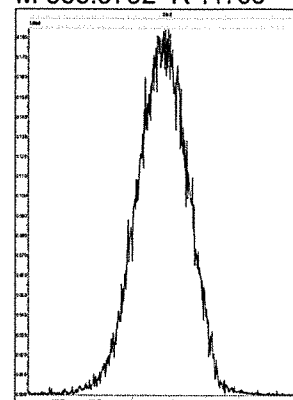
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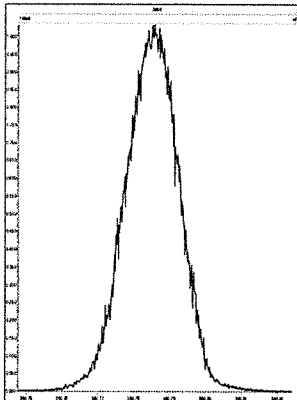
M 354.9792 R 11683



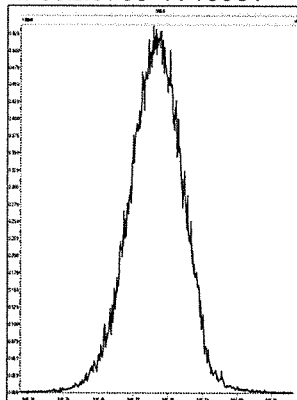
M 366.9792 R 11736



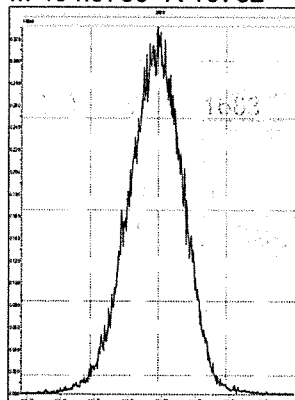
M 380.9760 R 11158



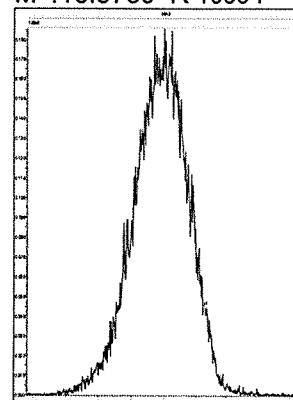
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M 404.9760 R 10732



M 416.9760 R 10594



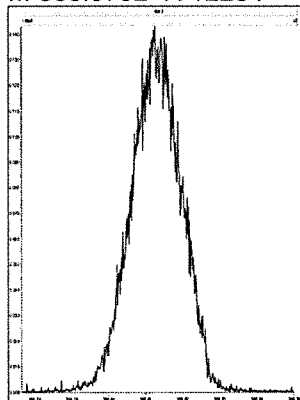
Experiment Calibration Report

MassLynx 4.1

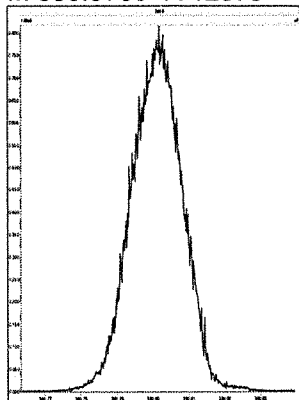
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 08, 2019 09:39:18 Eastern Standard Time

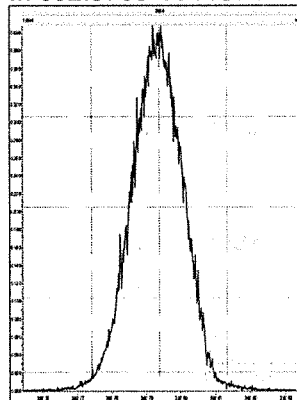
M 366.9792 R 12254



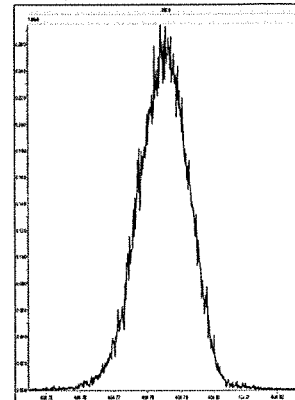
M 380.9760 R 12379



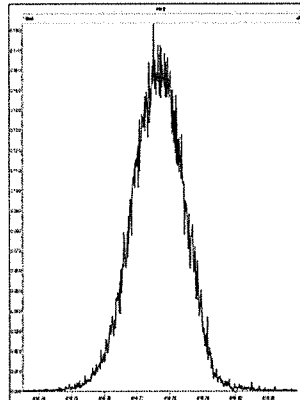
M 392.9760 R 11574



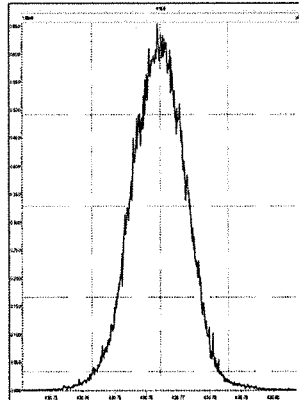
M 404.9760 R 11740



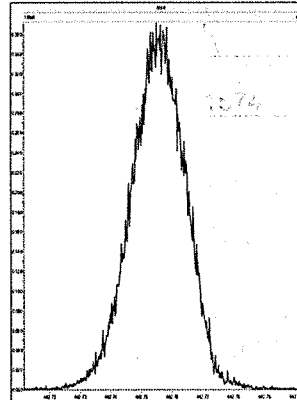
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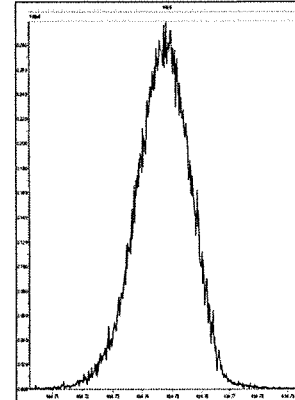
M 430.9728 R 10869



M 442.9728 R 11466



M 454.9728 R 10730



PFKQQ

Inst: HRP750-2

Anal: MJC

Experiment Calibration Report

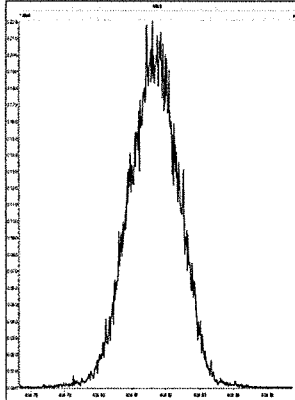
MassLynx 4.1

Page 1 of 1

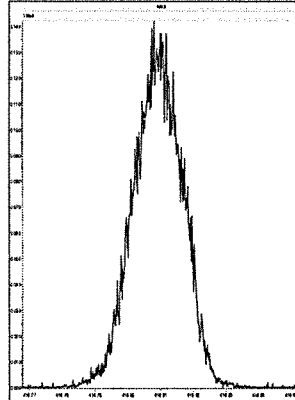
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Printed: Monday, July 08, 2019 09:39:46 Eastern Standard Time

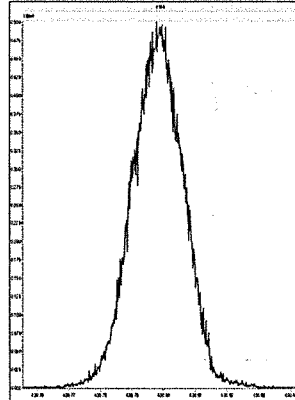
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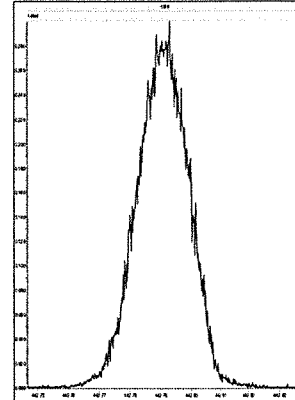
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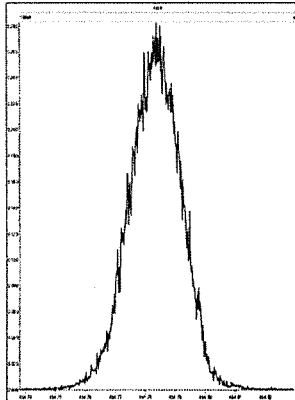
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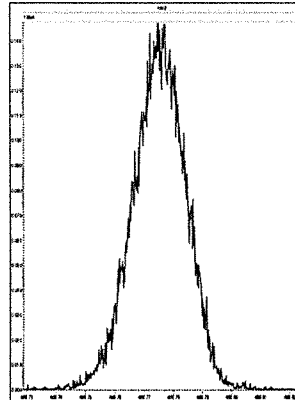
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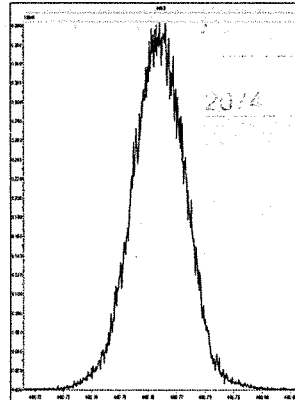
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M 466.9728 R 11160



M 480.9696 R 10682



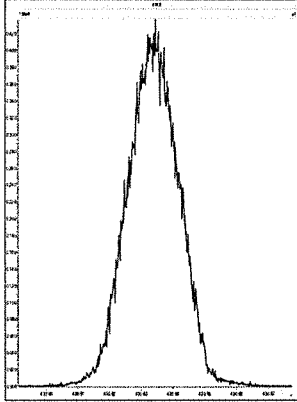
Experiment Calibration Report

MassLynx 4.1

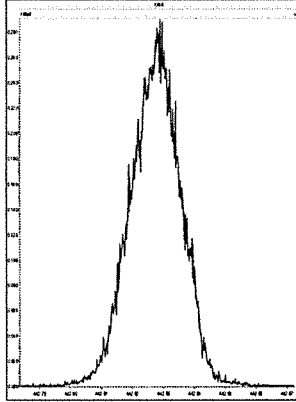
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, July 08, 2019 09:40:08 Eastern Standard Time

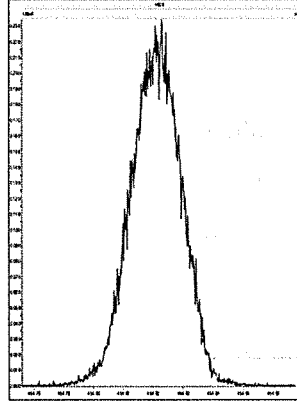
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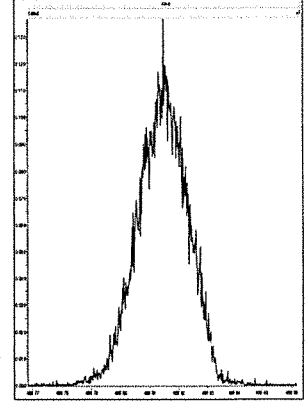
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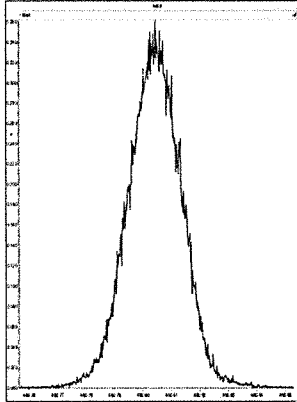
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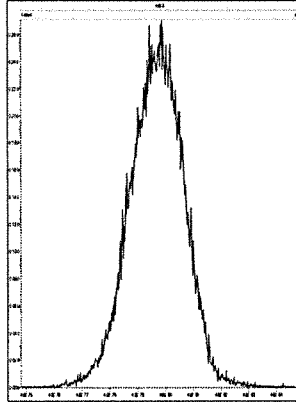
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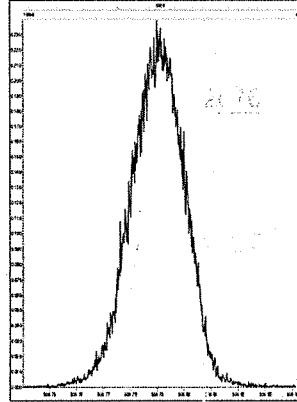
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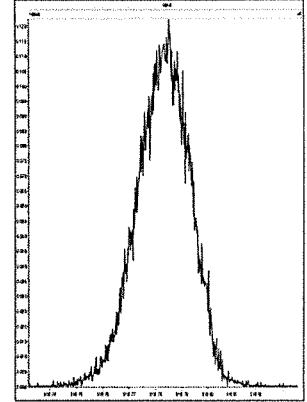
M 492.9696 R 11159



M 504.9696 R 11737



M 516.9697 R 11418

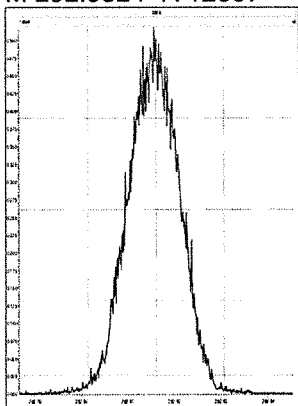


Resolution Check Report

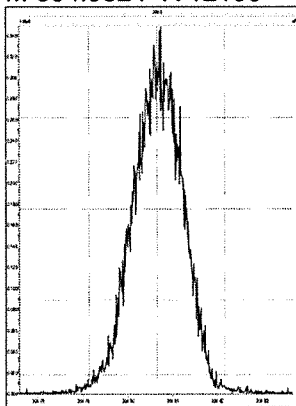
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

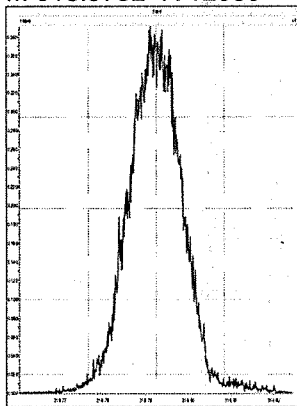
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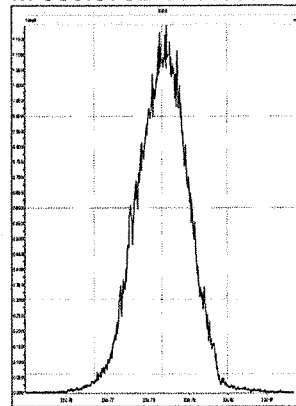
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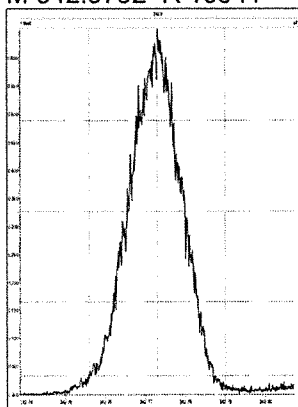
M 318.9792 R 12059



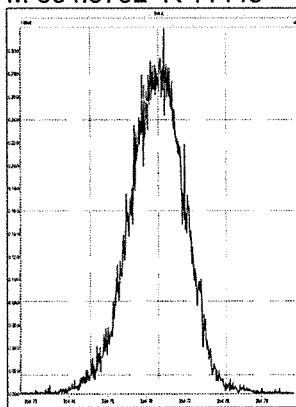
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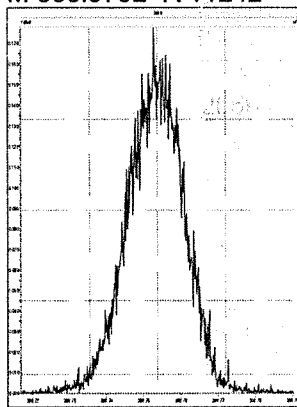
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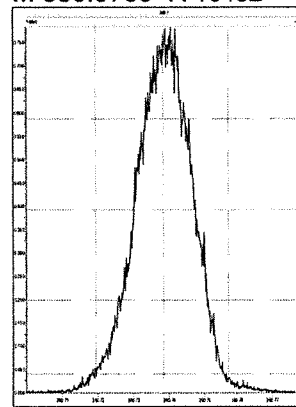
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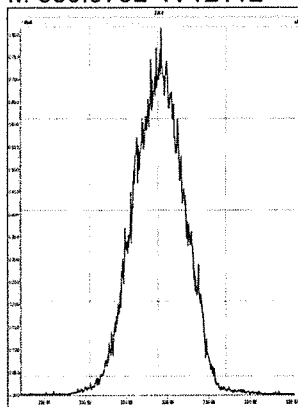
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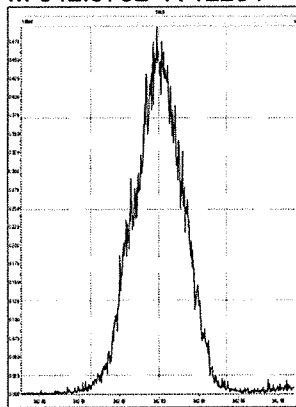
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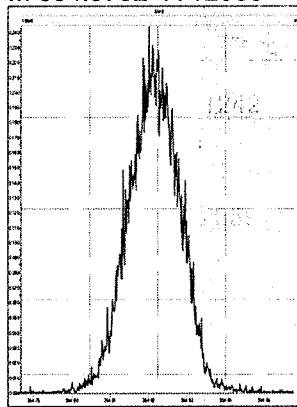
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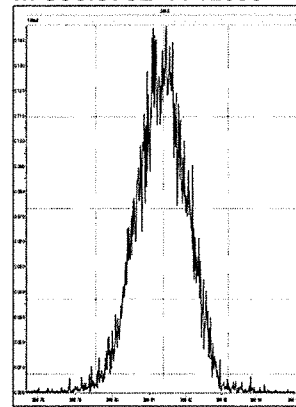
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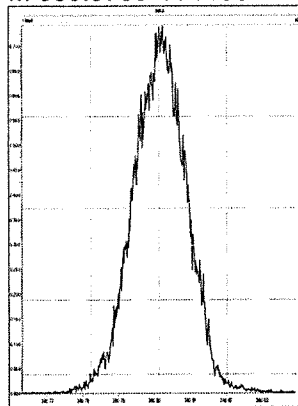
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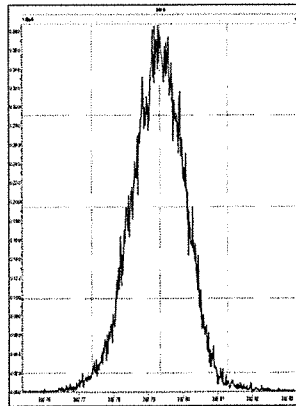
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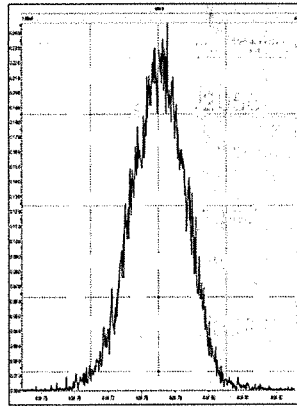
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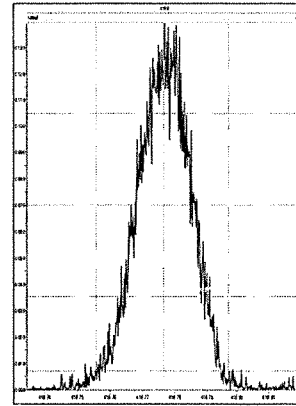
M 392.9760 R 11441



M 404.9760 R 11289



M 416.9760 R 11443

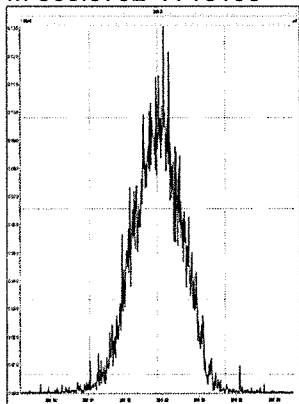


Resolution Check Report

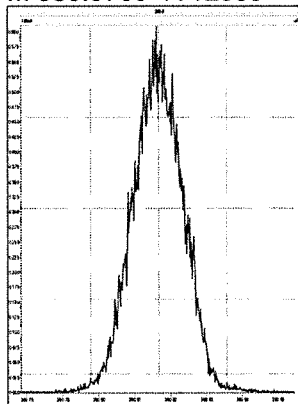
MassLynx 4.1

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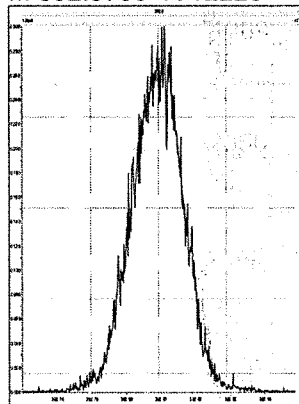
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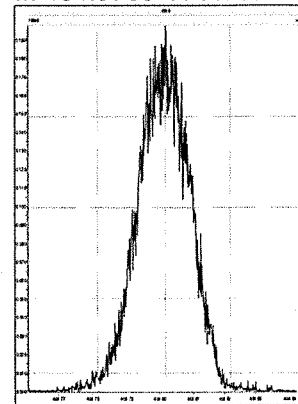
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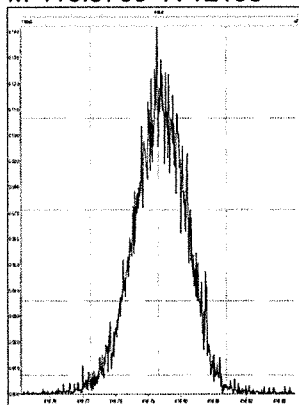
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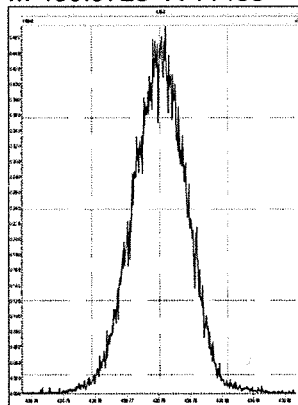
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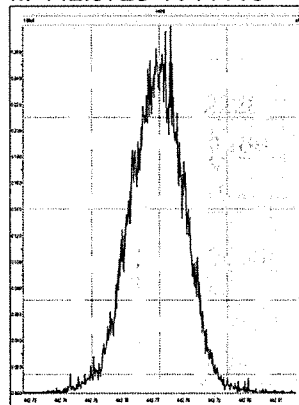
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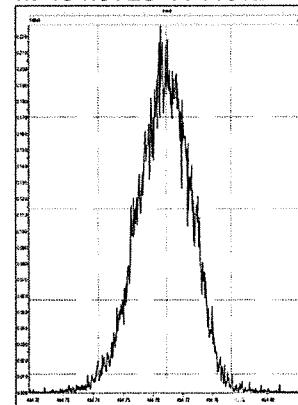
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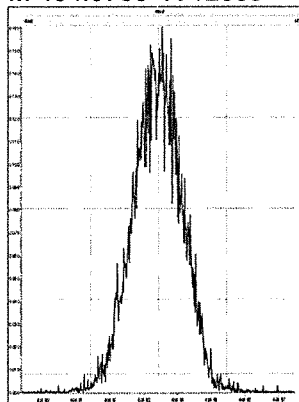
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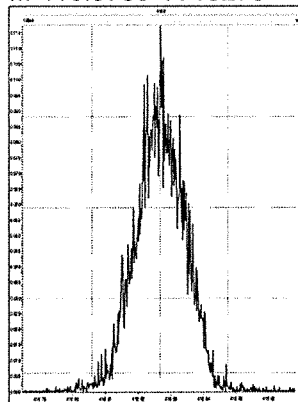
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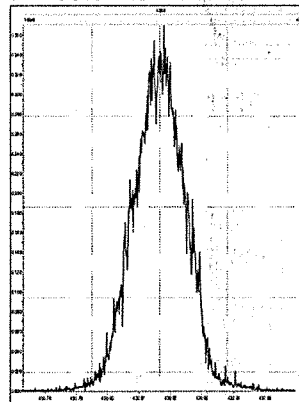
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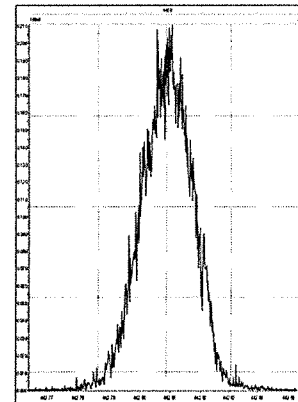
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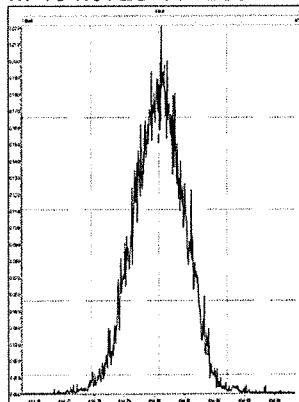
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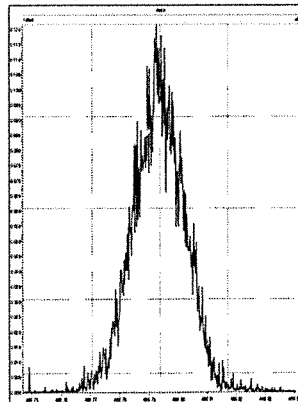
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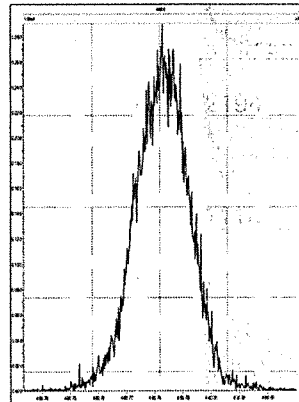
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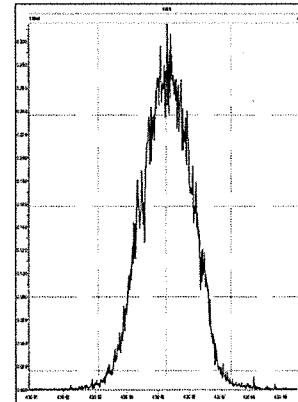
M 466.9728 R 12524



M 480.9696 R 11467



M 430.9728 R 11914

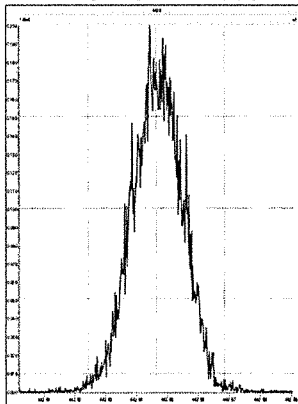


Resolution Check Report

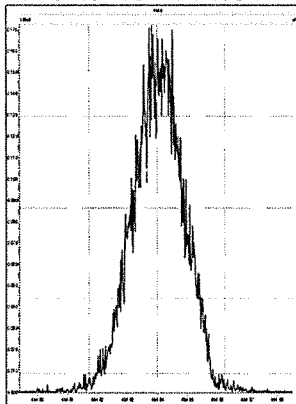
MassLynx 4.1

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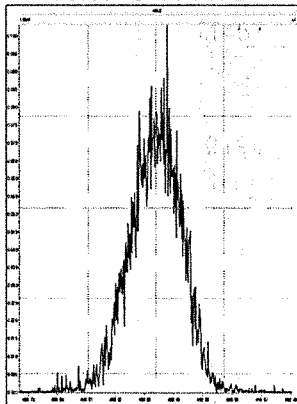
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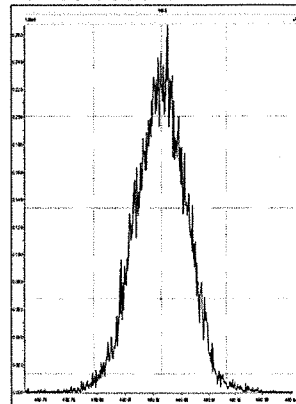
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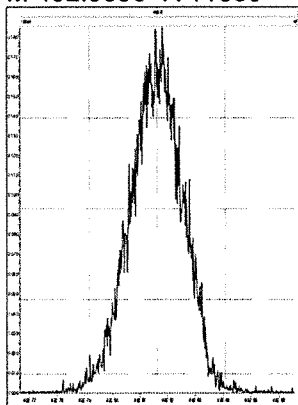
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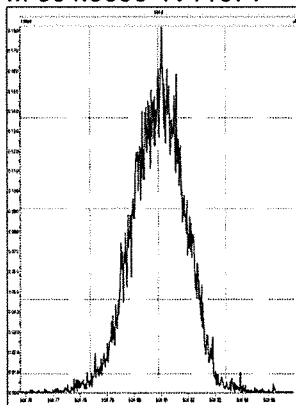
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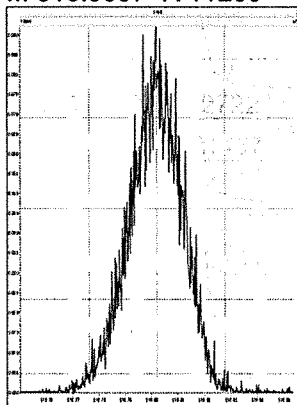
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M 504.9696 R 11371



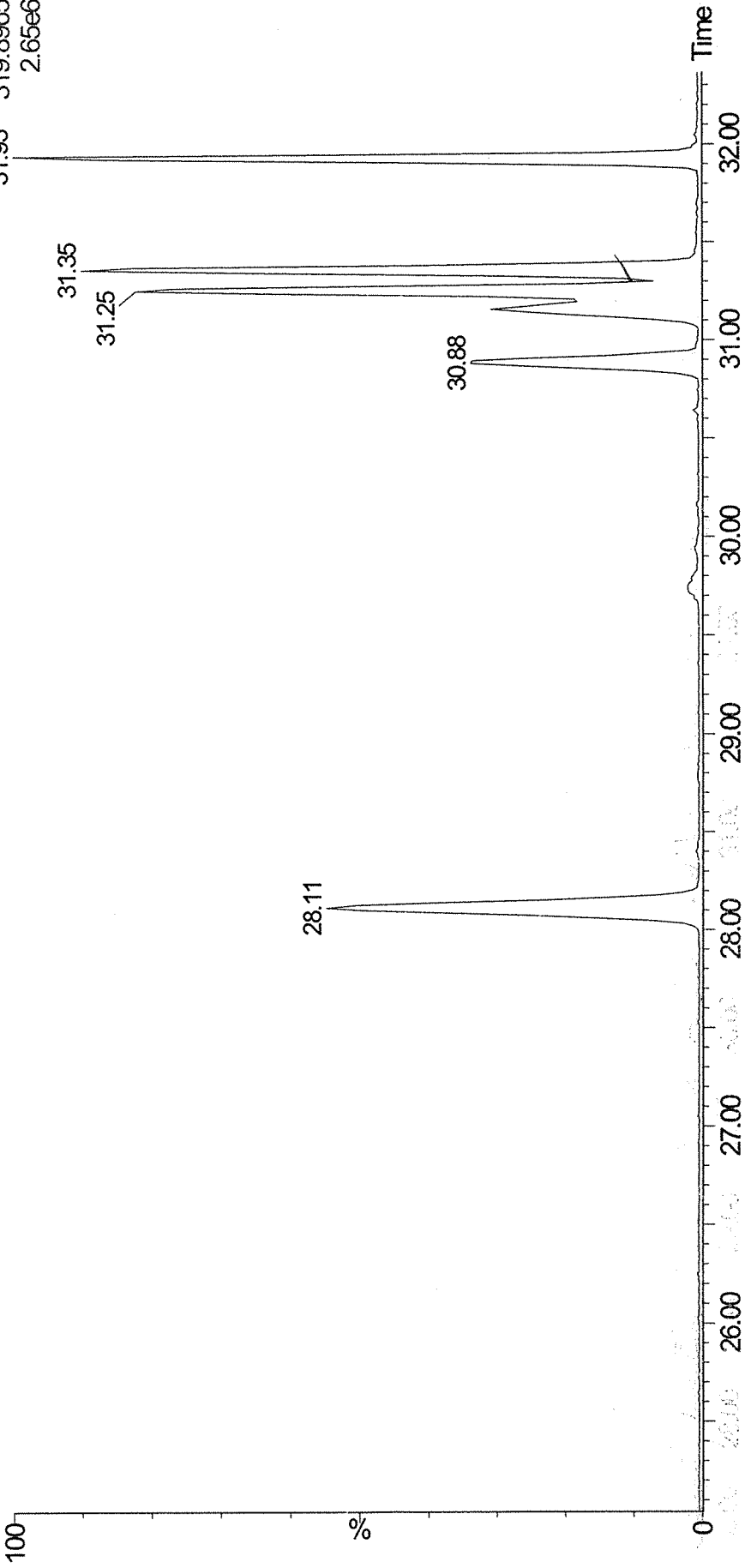
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COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYQ
A08JUL19A-1

HRP750_2

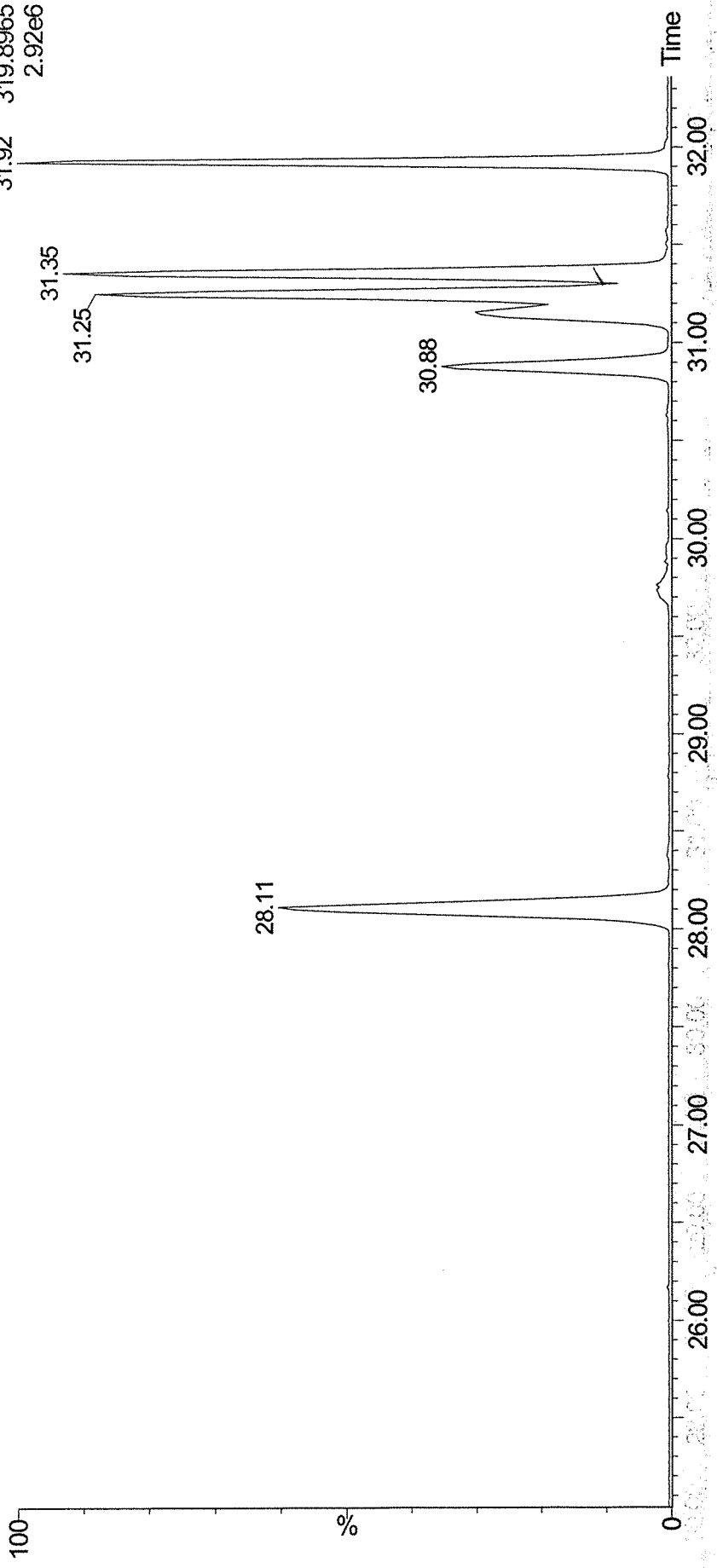
08-Jul-2019 09:40:54
1: Voltage SIR 13 Channels EI+
31.93 319.8965
2.65e6



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYR
A08JUL19A-10 ✓

HRP750_2

08-Jul-2019 16:51:30
1: Voltage SIR 13 Channels EI+
31.92 319.8965
2.92e6



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methodb\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.38
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.48
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.93
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.32
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

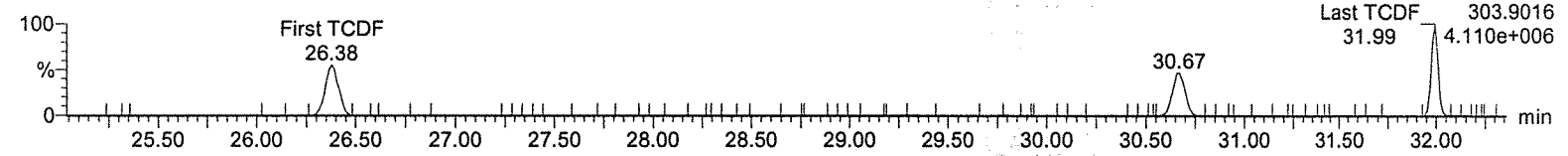
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

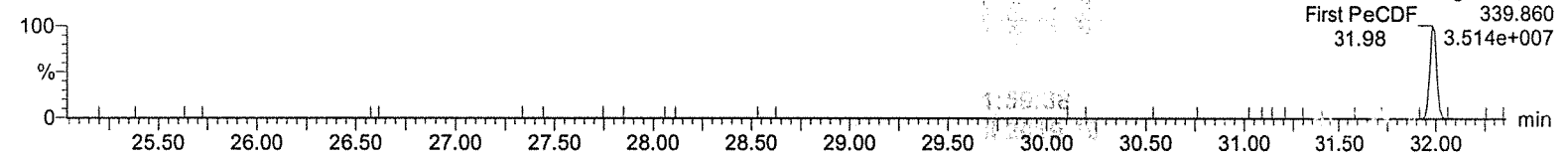
First TCDF

A08JUL19A-1



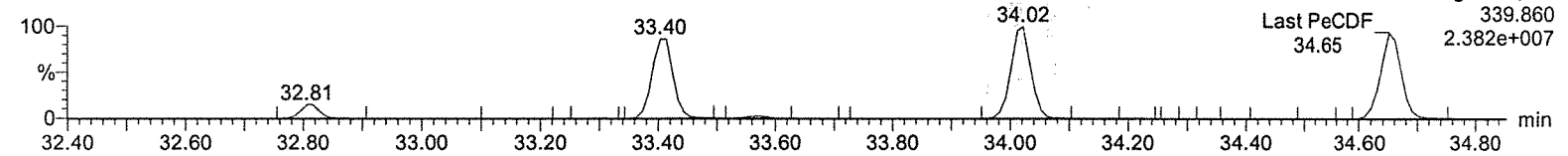
First PeCDF

A08JUL19A-1



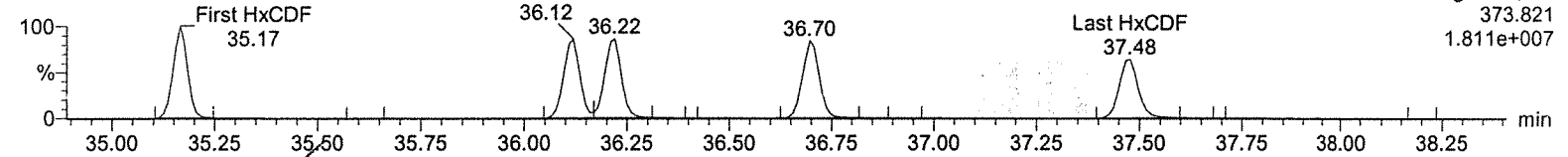
Last PeCDF

A08JUL19A-1



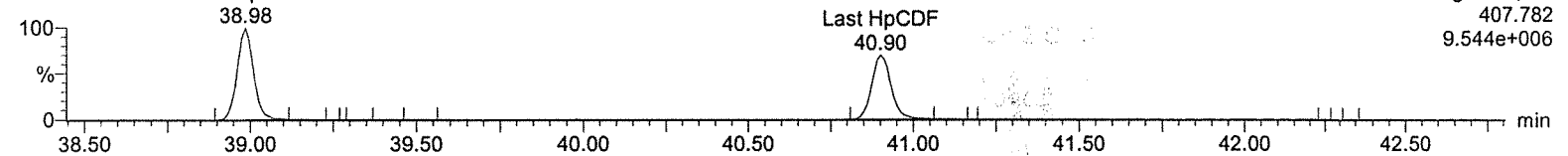
First HxCDF

A08JUL19A-1



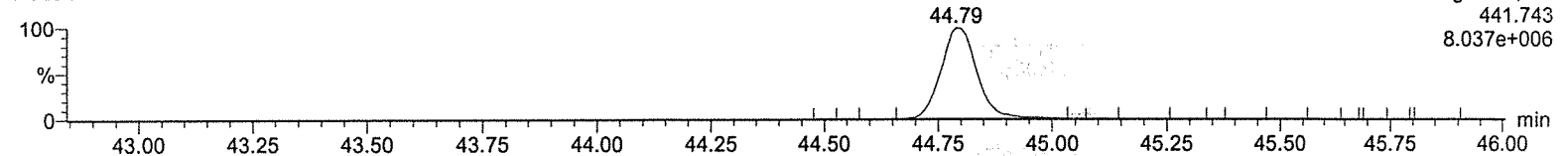
First HpCDF

A08JUL19A-1



OCDF

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

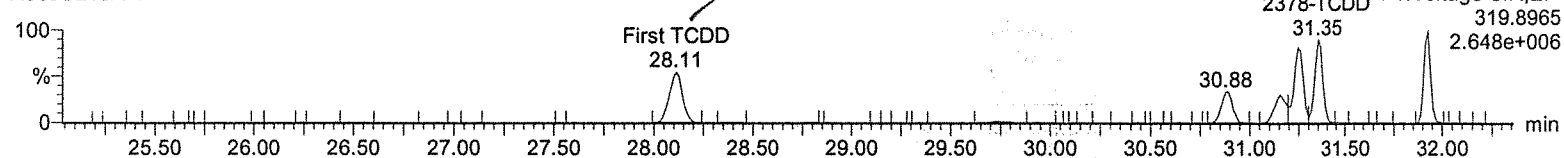
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

23209 JUL 19

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

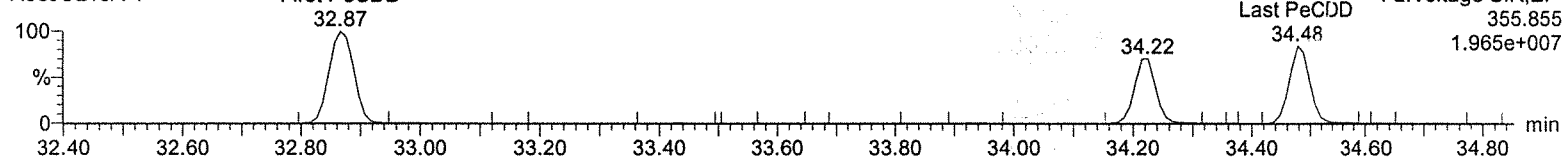
First TCDD

A08JUL19A-1



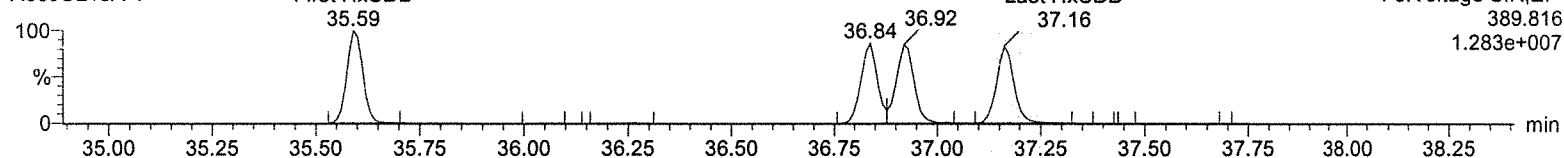
First PeCDD

A08JUL19A-1



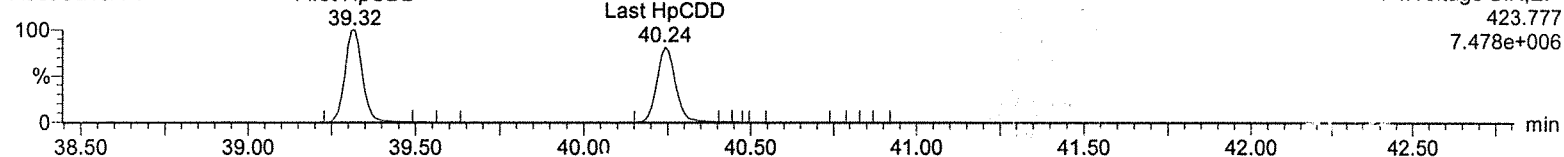
First HxCDD

A08JUL19A-1



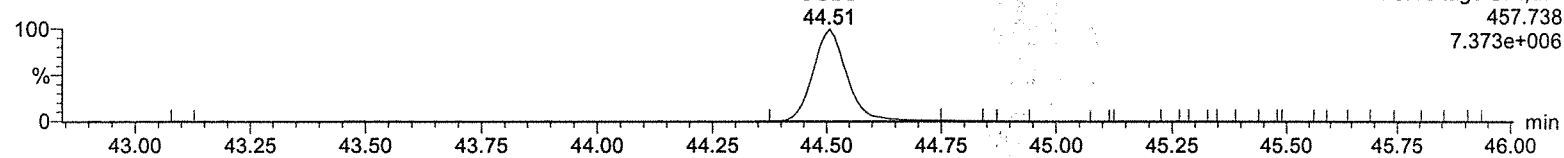
First HpCDD

A08JUL19A-1



OCDD

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.37
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.47
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.92
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.31
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

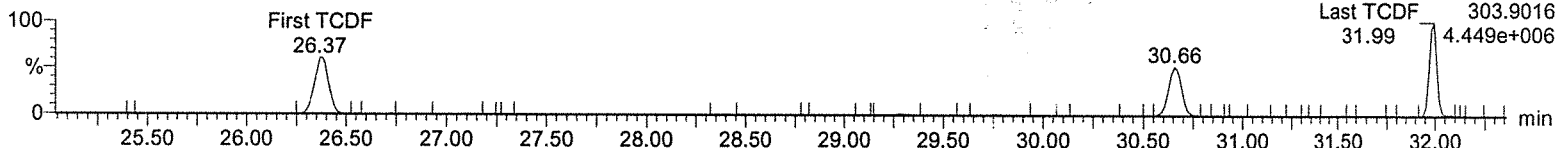
Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

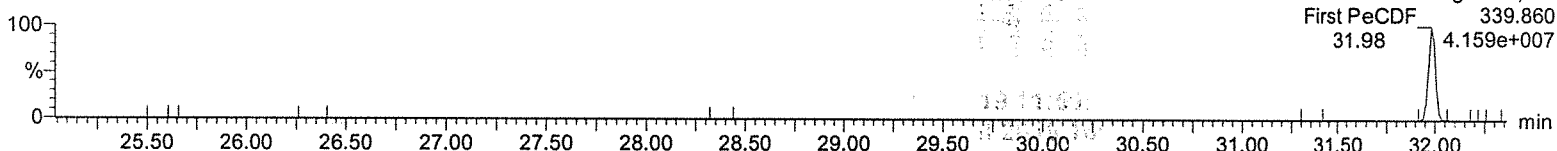
First TCDF

A08JUL19A-10



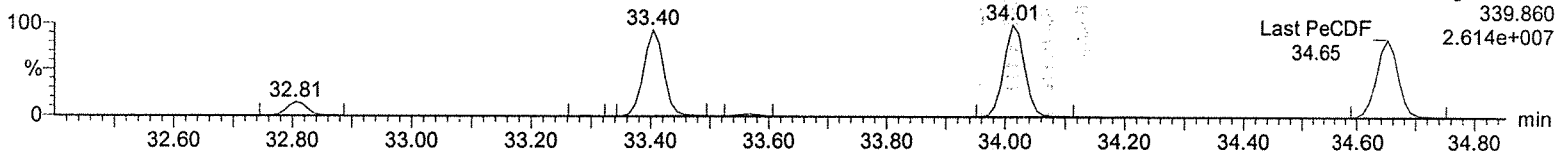
First PeCDF

A08JUL19A-10



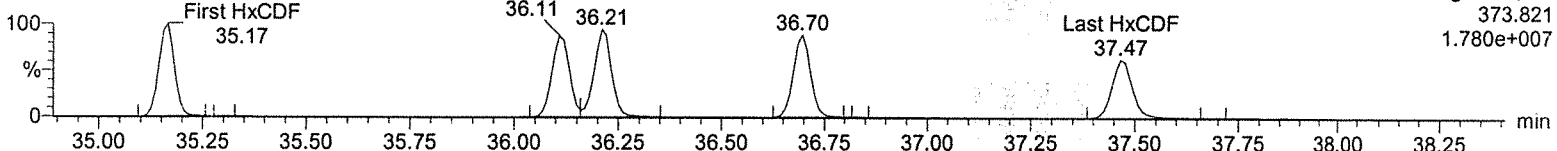
Last PeCDF

A08JUL19A-10



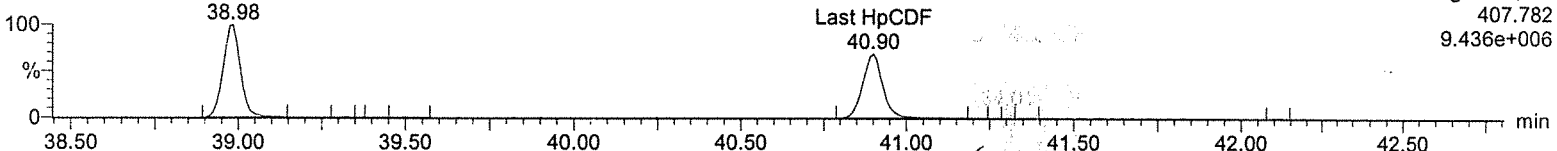
First HxCDF

A08JUL19A-10



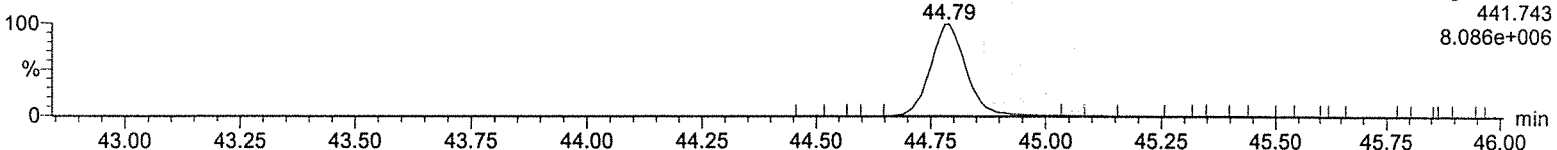
First HpCDF

A08JUL19A-10



OCDF

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

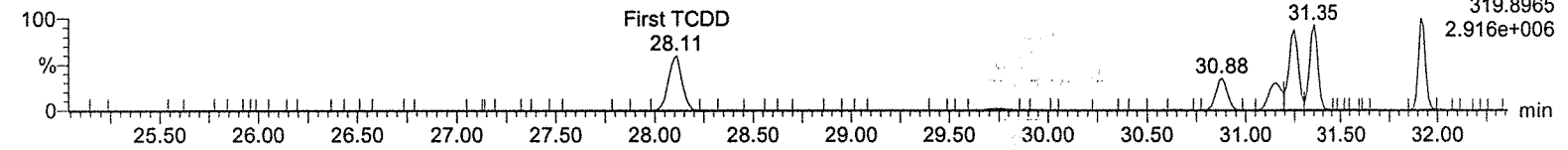
0809 JUL 19

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

LAST

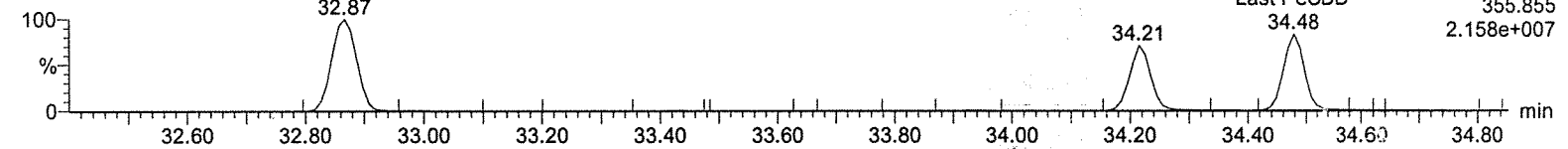
First TCDD

A08JUL19A-10



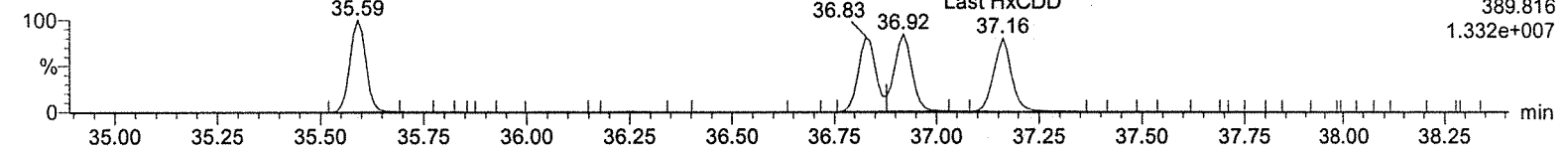
First PeCDD

A08JUL19A-10



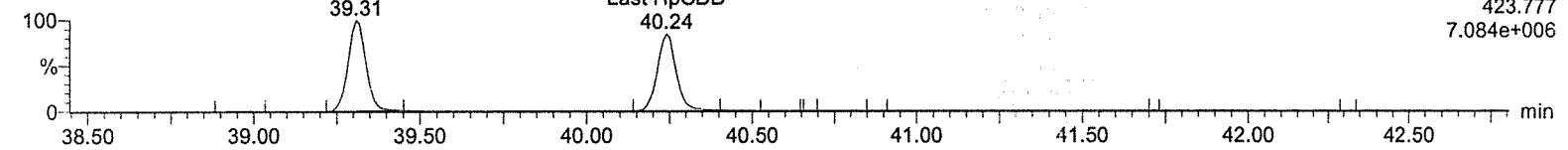
First HxCDD

A08JUL19A-10



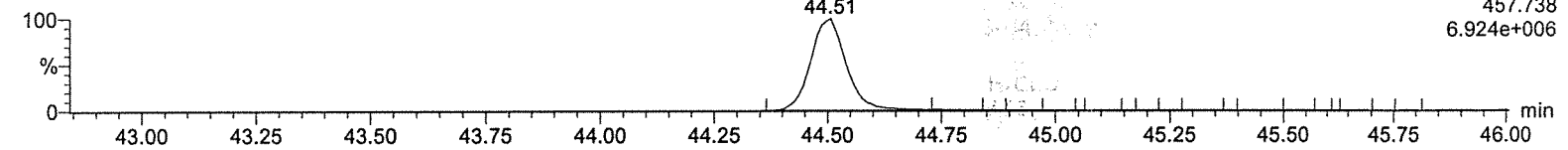
First HpCDD

A08JUL19A-10



OCDD

A08JUL19A-10



Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07_JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Date: 08-Jul-2019, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

	Name	ICAL RRF
1	2378-TCDD	0.884
2	12378-PeCDD	0.853
3	123478-HxCDD	0.940
4	123678-HxCDD	0.944
5	123789-HxCDD	0.927
6	1234678-HpCDD	1.040
7	OCDD	0.971
8	2378-TCDF	0.978
9	12378-PeCDF	0.945
10	23478-PeCDF	0.987
11	123478-HxCDF	1.087
12	123678-HxCDF	1.041
13	234678-HxCDF	1.136
14	123789-HxCDF	1.061
15	1234678-HpCDF	1.150
16	1234789-HpCDF	1.202
17	OCDF	1.133
18	13C-2378-TCDD	1.128
19	13C-12378-PeCDD	0.751
20	13C-123478-HxCDD	0.896
21	13C-123678-HxCDD	0.986
22	13C-1234678-HpCDD	0.672
23	13C-OCDD	0.642
24	13C-2378-TCDF	1.250
25	13C-12378-PeCDF	1.011
26	13C-23478-PeCDF	1.063
27	13C-123478-HxCDF	1.111
28	13C-123678-HxCDF	1.247
29	13C-234678-HxCDF	1.082
30	13C-123789-HxCDF	0.967
31	13C-1234678-HpCDF	0.870
32	13C-1234789-HpCDF	0.677
33	13C-1234-TCDD	1.000
34	13C-123789-HxCDD	1.000
35	37Cl-2378-TCDD	1.061

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

12 July 19

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36

Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Compound name: 2378-TCDD

Response Factor: 0.884458

RRF SD: 0.0448767, Relative SD: 5.07393

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

$$CS0.5 RRF = \frac{(5.2423)(100)}{(2.20124)(0.25)} = 0.952$$

$$RRFSD = \sqrt{\frac{0.010119}{5}} = 0.04499 \times 100 = 5.09$$

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.36	0.27	0.952	0.884	bd
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.36	0.47	0.823	0.884	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.93	0.852	0.884	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.35	9.94	0.879	0.884	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.31	0.891	0.884	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	205.76	0.910	0.884	bb

Compound name: 12378-PeCDD

Response Factor: 0.853475

RRF SD: 0.0140917, Relative SD: 1.65109

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.21	1.28	0.873	0.853	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.22	2.44	0.834	0.853	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.21	9.86	0.841	0.853	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.21	50.22	0.857	0.853	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.21	199.88	0.853	0.853	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.22	1009.56	0.862	0.853	bb

Compound name: 123478-HxCDD

Response Factor: 0.939643

RRF SD: 0.0292523, Relative SD: 3.11313

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.83	1.22	0.917	0.940	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.84	2.37	0.892	0.940	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.83	10.13	0.952	0.940	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.83	50.56	0.950	0.940	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.84	204.08	0.959	0.940	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.84	1030.90	0.969	0.940	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123678-HxCDD

Response Factor: 0.944066

RRF SD: 0.0242859, Relative SD: 2.57248

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.92	1.21	0.916	0.944	db
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.92	2.46	0.930	0.944	dd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.92	9.76	0.922	0.944	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.92	51.25	0.968	0.944	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.92	203.46	0.960	0.944	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.92	1026.32	0.969	0.944	dd

Compound name: 123789-HxCDD

Response Factor: 0.927099

RRF SD: 0.0305511, Relative SD: 3.29534

Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.15	1.21	0.900	0.927	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.16	2.38	0.881	0.927	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.16	10.00	0.927	0.927	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.16	51.43	0.954	0.927	db
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.16	204.71	0.949	0.927	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.16	1026.76	0.952	0.927	dd

Compound name: 1234678-HpCDD

Response Factor: 1.03994

RRF SD: 0.0299236, Relative SD: 2.87742

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.24	1.23	1.027	1.040	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.25	2.38	0.991	1.040	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.24	10.00	1.040	1.040	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.23	51.50	1.071	1.040	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.25	200.19	1.041	1.040	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.24	1029.04	1.070	1.040	bb

Compound name: OCDD

Response Factor: 0.971418

RRF SD: 0.0232154, Relative SD: 2.38985

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.49	2.48	0.962	0.971	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.49	4.97	0.946	0.971	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: OCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.49	19.47	0.945	0.971	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.49	102.63	0.997	0.971	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.51	407.18	0.989	0.971	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.51	2036.59	0.989	0.971	bb

Compound name: 2378-TCDF

Response Factor: 0.978424

RRF SD: 0.0546693, Relative SD: 5.58748

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	30.67	0.28	1.077	0.978	MM
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	30.67	0.47	0.916	0.978	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	30.66	1.93	0.944	0.978	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	30.67	9.95	0.973	0.978	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	30.67	39.70	0.971	0.978	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	30.67	202.19	0.989	0.978	bb

Compound name: 12378-PeCDF

Response Factor: 0.945213

RRF SD: 0.032234, Relative SD: 3.41024

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	33.40	1.28	0.969	0.945	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	33.41	2.35	0.888	0.945	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	33.40	9.78	0.925	0.945	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	33.40	50.77	0.960	0.945	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	33.40	204.22	0.965	0.945	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	33.40	1020.23	0.964	0.945	bb

Compound name: 23478-PeCDF

Response Factor: 0.986747

RRF SD: 0.0368449, Relative SD: 3.73397

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.01	1.18	0.933	0.987	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.02	2.46	0.973	0.987	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.01	9.78	0.965	0.987	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.01	50.78	1.002	0.987	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.02	205.34	1.013	0.987	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.02	1048.35	1.034	0.987	bb

Quantify Compound Summary Report **MassLynx 4.1**

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123478-HxCDF

Response Factor: 1.08717

RRF SD: 0.0419813, Relative SD: 3.86151

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.11	1.19	1.039	1.087	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.11	2.41	1.049	1.087	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.11	9.76	1.061	1.087	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.11	51.25	1.114	1.087	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.12	208.35	1.133	1.087	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.12	1036.34	1.127	1.087	bd

Compound name: 123678-HxCDF

Response Factor: 1.04051

RRF SD: 0.0335945, Relative SD: 3.22866

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.21	1.26	1.052	1.041	dd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.22	2.35	0.977	1.041	db
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.21	9.95	1.035	1.041	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.21	51.61	1.074	1.041	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.21	202.58	1.054	1.041	db
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.22	1010.63	1.052	1.041	db

Compound name: 234678-HxCDF

Response Factor: 1.13575

RRF SD: 0.0360558, Relative SD: 3.17463

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.69	1.19	1.084	1.136	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.69	2.44	1.107	1.136	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.69	9.95	1.130	1.136	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.69	50.73	1.152	1.136	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.69	207.52	1.178	1.136	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.69	1024.66	1.164	1.136	bd

Compound name: 123789-HxCDF

Response Factor: 1.06073

RRF SD: 0.0242888, Relative SD: 2.28983

Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.46	1.21	1.029	1.061	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.47	2.44	1.034	1.061	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123789-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.48	10.04	1.065	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.47	51.19	1.086	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.48	201.24	1.067	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.48	1021.59	1.084	1.061	bb

Compound name: 1234678-HpCDF

Response Factor: 1.14983

RRF SD: 0.0443867, Relative SD: 3.8603

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	38.97	1.17	1.074	1.150	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	38.98	2.45	1.126	1.150	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	38.98	9.98	1.148	1.150	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	38.97	51.63	1.187	1.150	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	38.98	205.56	1.182	1.150	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	38.98	1028.22	1.182	1.150	bb

Compound name: 1234789-HpCDF

Response Factor: 1.20215

RRF SD: 0.0229239, Relative SD: 1.90691

Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.90	1.25	1.200	1.202	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.89	2.47	1.188	1.202	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.90	9.74	1.171	1.202	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.89	49.74	1.196	1.202	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.91	204.32	1.228	1.202	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.91	1022.70	1.229	1.202	bb

Compound name: OCDF

Response Factor: 1.13283

RRF SD: 0.076827, Relative SD: 6.78187

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.78	2.31	1.049	1.133	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.81	4.64	1.052	1.133	bd
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.78	19.91	1.128	1.133	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.78	100.46	1.138	1.133	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.80	416.81	1.180	1.133	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.80	2206.18	1.250	1.133	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-2378-TCDD

Response Factor: 1.12834

RRF SD: 0.0266676, Relative SD: 2.36343

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	31.34	100.14	1.130	1.128	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	31.34	96.74	1.092	1.128	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	31.34	99.09	1.118	1.128	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	31.34	102.35	1.155	1.128	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	31.34	98.65	1.113	1.128	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	31.34	103.02	1.162	1.128	bb

Compound name: 13C-12378-PeCDD

Response Factor: 0.75125

RRF SD: 0.0377537, Relative SD: 5.02545

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.20	103.04	0.774	0.751	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.21	93.93	0.706	0.751	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.20	96.78	0.727	0.751	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.20	99.64	0.749	0.751	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.20	98.42	0.739	0.751	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.21	108.20	0.813	0.751	bb

Compound name: 13C-123478-HxCDD

Response Factor: 0.896281

RRF SD: 0.0124016, Relative SD: 1.38367

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.82	99.03	0.888	0.896	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.83	101.29	0.908	0.896	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.82	99.74	0.894	0.896	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.82	97.87	0.877	0.896	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.83	100.73	0.903	0.896	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.83	101.35	0.908	0.896	bd

Compound name: 13C-123678-HxCDD

Response Factor: 0.985774

RRF SD: 0.00823518, Relative SD: 0.835403

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.91	98.89	0.975	0.986	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.91	100.38	0.990	0.986	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-123678-HxCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.91	98.98	0.976	0.986	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.91	100.62	0.992	0.986	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.91	100.68	0.993	0.986	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.91	100.46	0.990	0.986	dd

Compound name: 13C-1234678-HpCDD

Response Factor: 0.671678

RRF SD: 0.00864315, Relative SD: 1.2868

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.22	99.85	0.671	0.672	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.23	101.04	0.679	0.672	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.23	101.05	0.679	0.672	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.22	99.38	0.667	0.672	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.23	100.89	0.678	0.672	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.23	97.79	0.657	0.672	bb

Compound name: 13C-OCDD

Response Factor: 0.64212

RRF SD: 0.0312445, Relative SD: 4.86583

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	200.000	44.47	190.01	0.610	0.642	bb
A08JUL19A-4	CS1 UD190207-02 CS143	200.000	44.49	195.03	0.626	0.642	bd
A08JUL19A-5	CS2 UD190207-03 CS243	200.000	44.49	191.09	0.614	0.642	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	200.000	44.47	212.75	0.683	0.642	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	44.49	210.31	0.675	0.642	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	44.49	200.81	0.645	0.642	bd

Compound name: 13C-2378-TCDF

Response Factor: 1.24989

RRF SD: 0.0235442, Relative SD: 1.8837

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.64	102.21	1.277	1.250	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.64	97.12	1.214	1.250	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.64	99.85	1.248	1.250	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.64	101.40	1.267	1.250	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.64	98.61	1.233	1.250	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.64	100.81	1.260	1.250	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-12378-PeCDF

Response Factor: 1.0108

RRF SD: 0.042891, Relative SD: 4.24328

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	33.39	101.65	1.028	1.011	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	33.40	95.18	0.962	1.011	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	33.39	98.01	0.991	1.011	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	33.39	100.21	1.013	1.011	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	33.39	97.58	0.986	1.011	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	33.39	107.36	1.085	1.011	bb

Compound name: 13C-23478-PeCDF

Response Factor: 1.06317

RRF SD: 0.056146, Relative SD: 5.28101

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.00	105.12	1.118	1.063	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.01	92.69	0.985	1.063	db
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.00	98.16	1.044	1.063	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.00	99.71	1.060	1.063	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.01	97.32	1.035	1.063	db
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.01	107.01	1.138	1.063	db

Compound name: 13C-123478-HxCDF

Response Factor: 1.11071

RRF SD: 0.0157984, Relative SD: 1.42237

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.10	100.10	1.112	1.111	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.11	102.58	1.139	1.111	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.10	100.42	1.115	1.111	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.10	99.09	1.101	1.111	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.10	98.72	1.097	1.111	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.11	99.08	1.101	1.111	bd

Compound name: 13C-123678-HxCDF

Response Factor: 1.24684

RRF SD: 0.0132688, Relative SD: 1.0642

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.20	98.41	1.227	1.247	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.21	99.91	1.246	1.247	dd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-123678-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.20	101.24	1.262	1.247	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.20	99.13	1.236	1.247	db
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.20	100.72	1.256	1.247	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.21	100.59	1.254	1.247	dd

Compound name: 13C-234678-HxCDF

Response Factor: 1.08201

RRF SD: 0.0109147, Relative SD: 1.00875

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.69	101.62	1.100	1.082	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.69	100.88	1.092	1.082	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.69	99.61	1.078	1.082	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.67	99.46	1.076	1.082	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.69	99.28	1.074	1.082	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.69	99.15	1.073	1.082	bb

Compound name: 13C-123789-HxCDF

Response Factor: 0.967011

RRF SD: 0.010414, Relative SD: 1.07693

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.46	101.72	0.984	0.967	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.46	99.20	0.959	0.967	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.46	100.57	0.973	0.967	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.46	100.32	0.970	0.967	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.47	99.37	0.961	0.967	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.47	98.82	0.956	0.967	bb

Compound name: 13C-1234678-HpCDF

Response Factor: 0.869967

RRF SD: 0.00962967, Relative SD: 1.1069

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	38.96	100.76	0.877	0.870	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	38.97	101.06	0.879	0.870	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	38.96	101.10	0.880	0.870	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	38.96	99.47	0.865	0.870	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	38.97	99.00	0.861	0.870	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	38.97	98.61	0.858	0.870	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 13C-1234789-HpCDF

Response Factor: 0.677351

RRF SD: 0.00683684, Relative SD: 1.00935

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.88	100.25	0.679	0.677	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.89	100.10	0.678	0.677	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.88	101.11	0.685	0.677	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.88	100.56	0.681	0.677	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.89	99.85	0.676	0.677	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.89	98.14	0.665	0.677	bb

Compound name: 13C-1234-TCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.87	100.00	1.000	1.000	bb

Compound name: 13C-123789-HxCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.15	100.00	1.000	1.000	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.15	100.00	1.000	1.000	dd

Compound name: 37Cl-2378-TCDD

Response Factor: 1.06124

RRF SD: 0.0481575, Relative SD: 4.53786

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.35	0.24	1.038	1.061	bb
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.35	0.48	1.012	1.061	bb

Quantify Compound Summary Report **MassLynx 4.1**

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 37CI-2378-TCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.92	1.018	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.34	10.43	1.107	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.07	1.063	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	212.93	1.130	1.061	bb

Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methd\ICFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	2.36e3	2.88e3	5.24e3	31.36	1.001	0.82	NO	0.269	0.952	0.884	5.07	0.0280	5.51e4	2748	20.1	4.64e4	1441	32.2	bd	bb
2	12378-PeCDD	1.02e4	6.32e3	1.65e4	34.21	1.000	1.61	NO	1.279	0.873	0.853	1.65	0.0287	2.62e5	2362	110.9	1.76e5	1093	161.1	bd	bb
3	123478-HxCDD	8.05e3	6.32e3	1.44e4	36.83	1.000	1.27	NO	1.220	0.917	0.940	3.11	0.0368	1.82e5	1603	113.3	1.13e5	1951	57.9	bd	bd
4	123678-HxCDD	8.50e3	7.26e3	1.58e4	36.92	1.000	1.17	NO	1.212	0.916	0.944	2.57	0.0376	1.59e5	1603	99.1	1.28e5	1951	65.8	db	db
5	123789-HxCDD	8.04e3	6.76e3	1.48e4	37.15	1.007	1.19	NO	1.214	0.900	0.927	3.30	0.0378	1.53e5	1603	95.3	1.15e5	1951	58.8	bd	bb
6	1234678-HpCDD	6.04e3	6.12e3	1.22e4	40.24	1.000	0.99	NO	1.235	1.027	1.040	2.88	0.0649	1.03e5	1757	58.6	9.52e4	1920	49.6	bd	bd
7	OCDD	9.77e3	1.10e4	2.07e4	44.49	1.000	0.89	NO	2.477	0.962	0.971	2.39	0.0920	1.23e5	1257	98.1	1.39e5	1991	69.6	bd	bd
8	2378-TCDF	2.70e3	4.01e3	6.71e3	30.67	1.001	0.67	NO	0.275	1.077	0.978	5.59	0.0419	3.94e4	1747	22.5	4.74e4	3466	13.7	M...	db
9	12378-PeCDF	1.47e4	9.62e3	2.43e4	33.40	1.000	1.52	NO	1.281	0.969	0.945	3.41	0.0370	3.34e5	2702	123.5	2.39e5	4145	57.8	bb	bb
10	23478-PeCDF	1.50e4	1.04e4	2.54e4	34.01	1.000	1.45	NO	1.181	0.933	0.987	3.73	0.0321	3.89e5	2702	144.0	2.53e5	4145	61.0	bb	bb
11	123478-HxCDF	1.08e4	9.59e3	2.04e4	36.11	1.000	1.13	NO	1.194	1.039	1.087	3.86	0.0268	2.15e5	2156	99.8	2.06e5	1702	120.8	bd	bd
12	123678-HxCDF	1.26e4	1.02e4	2.28e4	36.21	1.000	1.24	NO	1.263	1.052	1.041	3.23	0.0263	2.63e5	2156	122.0	2.03e5	1702	119.1	dd	dd
13	234678-HxCDF	1.13e4	9.70e3	2.10e4	36.69	1.000	1.17	NO	1.192	1.084	1.136	3.17	0.0290	2.25e5	2156	104.4	1.97e5	1702	115.7	bd	bd
14	123789-HxCDF	9.32e3	8.55e3	1.79e4	37.46	1.000	1.09	NO	1.213	1.029	1.061	2.29	0.0371	1.72e5	2156	79.6	1.49e5	1702	87.4	bd	bd
15	1234678-HpCDF	8.42e3	8.19e3	1.66e4	38.97	1.000	1.03	NO	1.167	1.074	1.150	3.86	0.0282	1.38e5	1549	89.3	1.35e5	1086	124.8	bd	bd
16	1234789-HpCDF	7.33e3	7.06e3	1.44e4	40.90	1.000	1.04	NO	1.248	1.200	1.202	1.91	0.0417	1.12e5	1549	72.2	9.77e4	1086	90.0	bd	bd
17	OCDF	1.05e4	1.21e4	2.26e4	44.78	1.007	0.86	NO	2.315	1.049	1.133	6.78	0.102	1.13e5	2106	53.7	1.39e5	2087	66.4	bb	bb
18	13C-2378-TCDD	9.61e5	1.24e6	2.20e6	31.34	1.015	0.77	NO	100.141	1.130	1.128	2.36	0.101	1.84e7	8503	2165.5	2.38e7	4565	5220.0	bb	bb
19	13C-12378-PeCDD	9.14e5	5.96e5	1.51e6	34.20	1.108	1.53	NO	103.043	0.774	0.751	5.03	0.106	2.14e7	3266	6548.1	1.41e7	5905	2388.5	bb	bb
20	13C-123478-HxCDD	6.92e5	5.62e5	1.25e6	36.82	0.991	1.23	NO	99.030	0.888	0.896	1.38	0.123	1.42e7	5998	2362.3	1.14e7	4559	2506.6	bd	bd
21	13C-123678-HxCDD	7.61e5	6.16e5	1.38e6	36.91	0.994	1.24	NO	98.887	0.975	0.986	0.84	0.112	1.38e7	5998	2308.3	1.11e7	4559	2432.5	dd	dd
22	13C-1234678-HpCDD	4.84e5	4.64e5	9.47e5	40.22	1.083	1.04	NO	99.853	0.671	0.672	1.29	0.246	6.95e6	9910	701.2	6.93e6	5863	1181.6	bd	bb
23	13C-OCDD	7.96e5	9.26e5	1.72e6	44.47	1.197	0.86	NO	190.015	0.610	0.642	4.87	0.239	8.40e6	9103	923.0	9.66e6	5539	1744.6	bb	bd
24	13C-2378-TCDF	1.09e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	102.207	1.277	1.250	1.88	0.156	1.39e7	14607	949.6	1.80e7	7808	2301.1	bb	bb
25	13C-12378-PeCDF	1.23e6	7.70e5	2.00e6	33.39	1.082	1.60	NO	101.654	1.028	1.011	4.24	0.175	3.01e7	14002	2152.1	1.18e7	6379	2945.5	bb	bb
26	13C-23478-PeCDF	1.34e6	8.44e5	2.18e6	34.00	1.102	1.58	NO	105.121	1.118	1.063	5.28	0.166	3.31e7	14002	2361.9	2.10e7	6379	3289.0	bb	bb
27	13C-123478-HxCDF	5.36e5	1.03e6	1.57e6	36.10	0.972	0.52	NO	100.103	1.112	1.111	1.42	0.208	1.13e7	10560	1068.6	2.15e7	11523	1868.6	bd	bd
28	13C-123678-HxCDF	5.97e5	1.14e6	1.73e6	36.20	0.975	0.53	NO	98.415	1.227	1.247	1.06	0.185	1.21e7	10560	1148.5	2.26e7	11523	1961.5	dd	dd
29	13C-234678-HxCDF	5.42e5	1.01e6	1.55e6	36.69	0.988	0.54	NO	101.678	1.100	1.082	1.01	0.214	1.02e7	10560	967.2	1.97e7	11523	1710.4	bd	bd
30	13C-123789-HxCDF	4.77e5	9.12e5	1.39e6	37.46	1.008	0.52	NO	107.717	0.984	0.967	1.08	0.239	8.42e6	10560	797.3	1.58e7	11523	1371.7	bd	bd

Handwritten signature and date: 7/9/19

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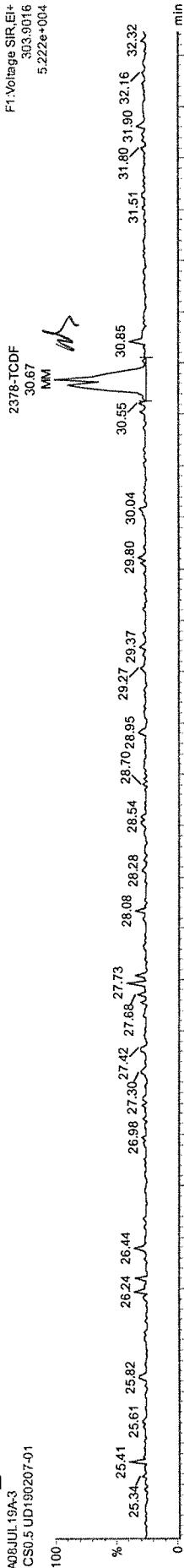
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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

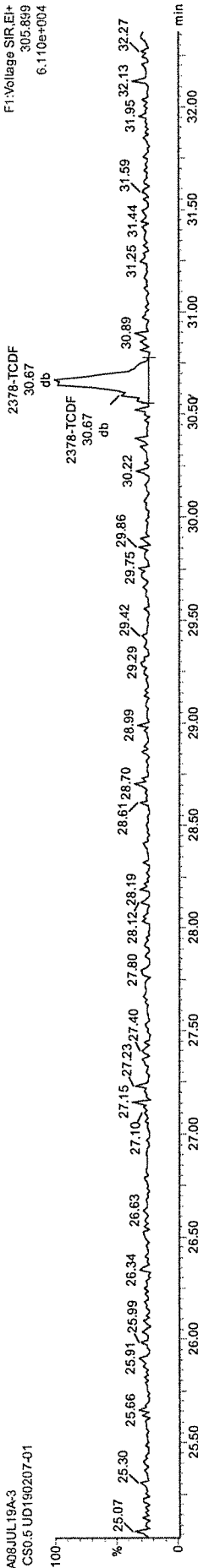
#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.76e5	8.62e5	1.24e6	38.96	1.049	0.44	NO	100.757	0.877	0.870	1.11	0.166	6.16e6	6681	922.6	1.42e7	7130	1992.4	bb	bb
32	13C-1234789-HpCDF	2.94e5	6.65e5	9.59e5	40.88	1.101	0.44	NO	100.246	0.679	0.677	1.01	0.213	4.03e6	6681	603.9	9.12e6	7130	1278.8	bd	bd
33	13C-1234-TCDD	8.61e5	1.09e6	1.95e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.113	1.27e7	8503	1493.6	1.61e7	4565	3518.9	bb	bb
34	13C-123789-HxCDD	7.78e5	6.34e5	1.41e6	37.14	0.000	1.23	NO	100.000	1.000	1.000	0.00	0.111	1.32e7	5998	2193.3	1.10e7	4559	2409.9	dd	dd
35	37Cl-2378-TCDD	5.06e3		5.06e3	31.35	1.016			0.244	1.038	1.061	4.54	0.0287	1.02e5	3507	29.0				bb	bb

MANUAL INTEGRATION
METHOD 1613
HRP750_2

A08JUL19A-3
CS0.5 UD190207-01



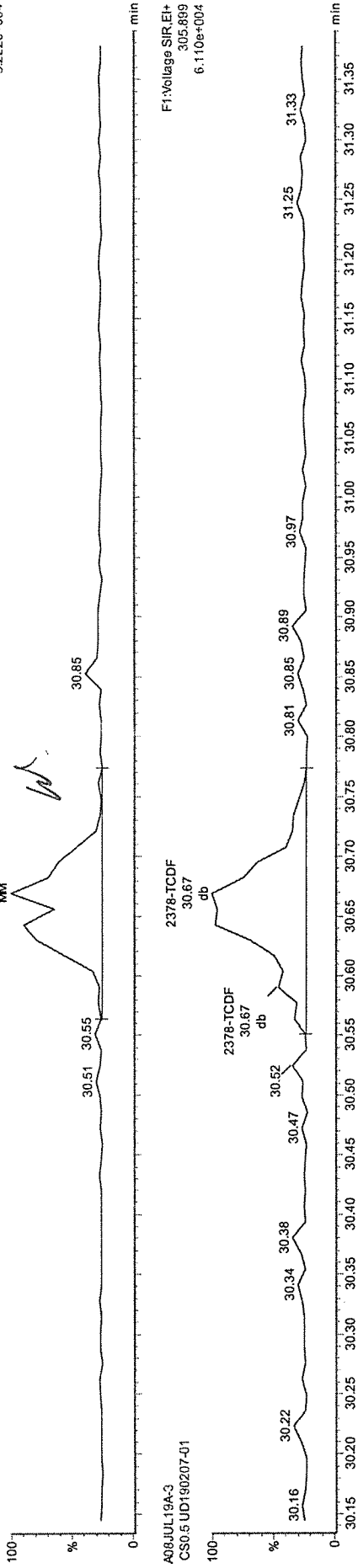
A08JUL19A-3
CS0.5 UD190207-01



MANUAL INTEGRATION
METHOD 1613
HRP750_2

A08JUL19A-3
CS0.5 UD190207-01

F1:Voltage SFR.EI+
303.9016
5.222e+004



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

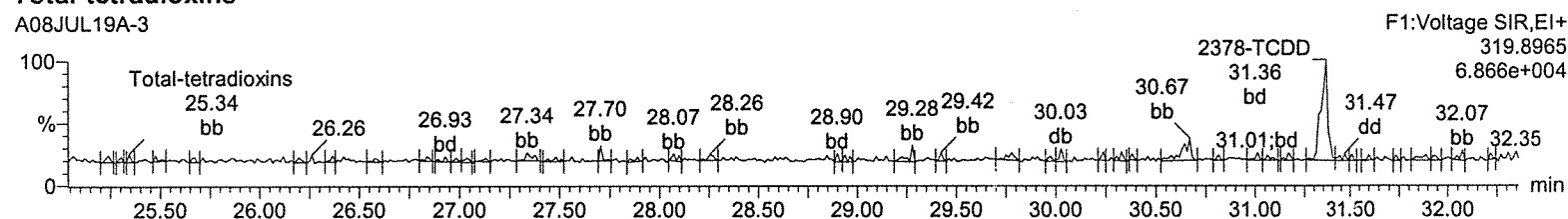
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Calibration: 09 Jul 2019 08:43:27

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

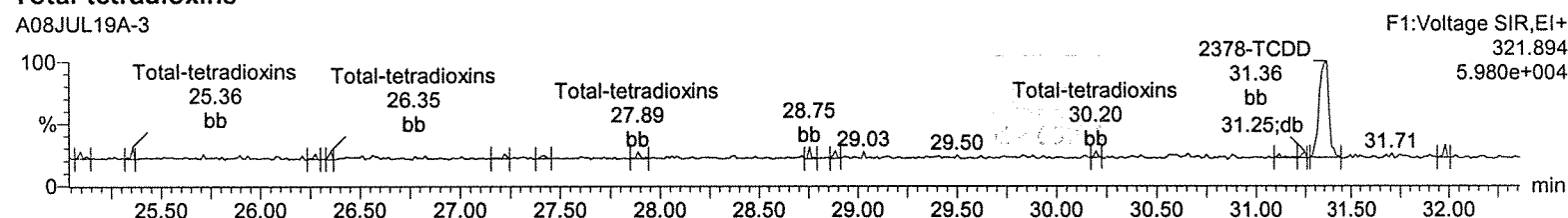
Total-tetradoxins

A08JUL19A-3



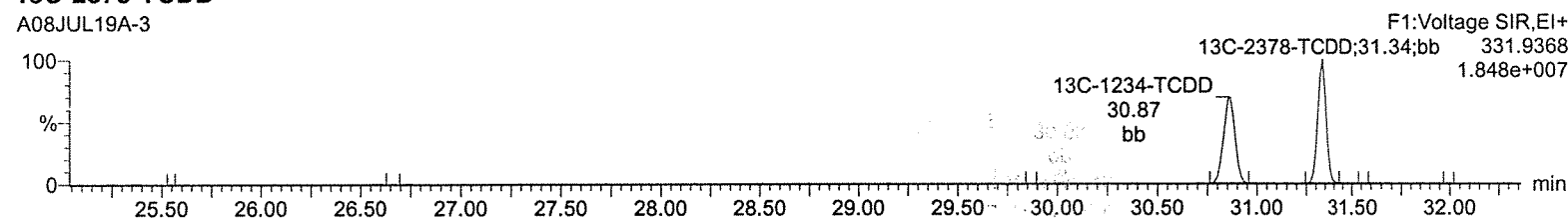
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A08JUL19A-3



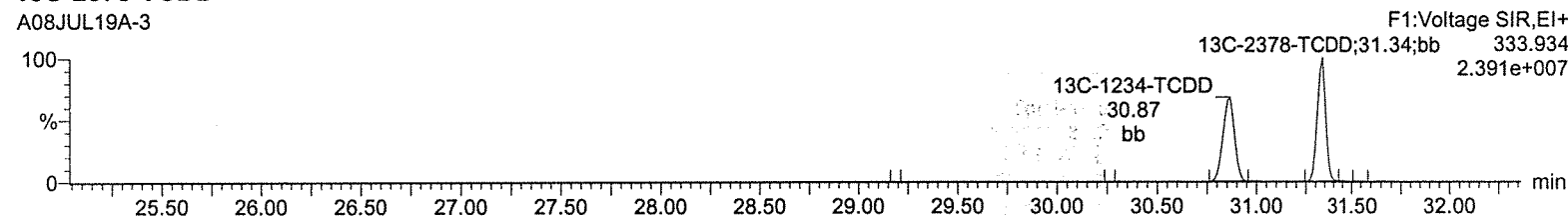
13C-2378-TCDD

A08JUL19A-3



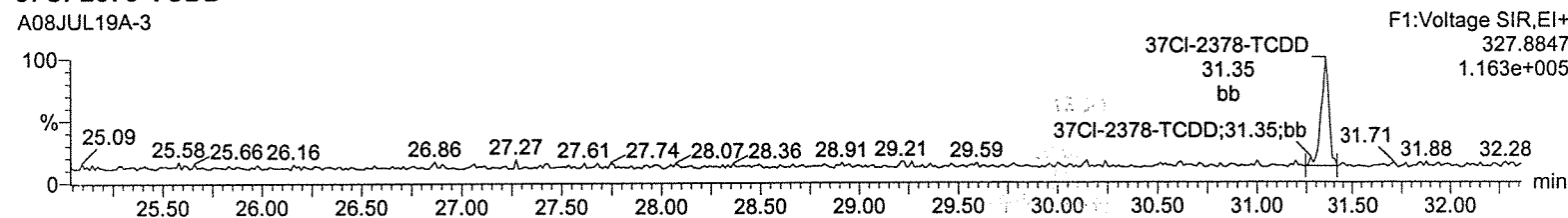
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A08JUL19A-3



37Cl-2378-TCDD

A08JUL19A-3



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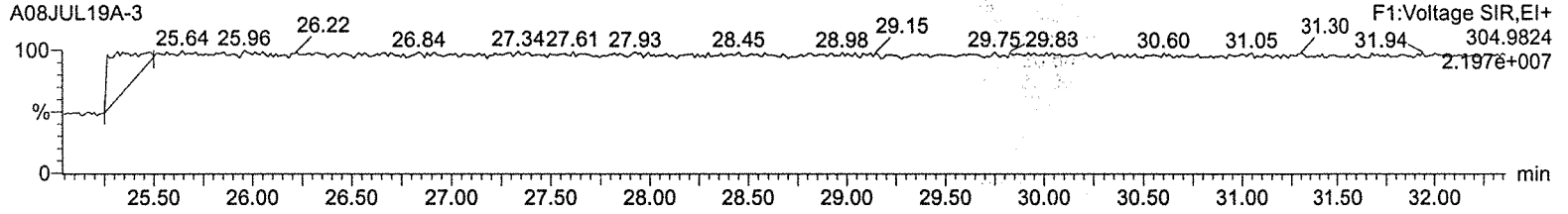
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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Lock Mass F1

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

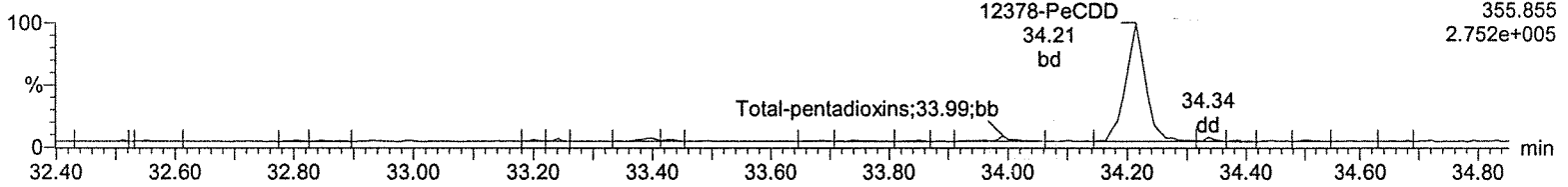
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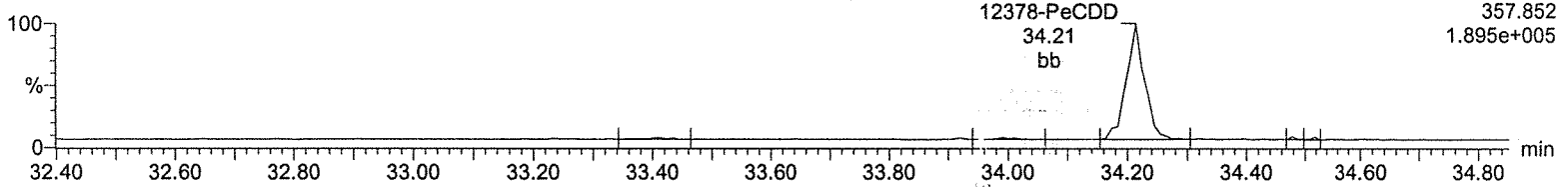
Total-pentadioxins

A08JUL19A-3



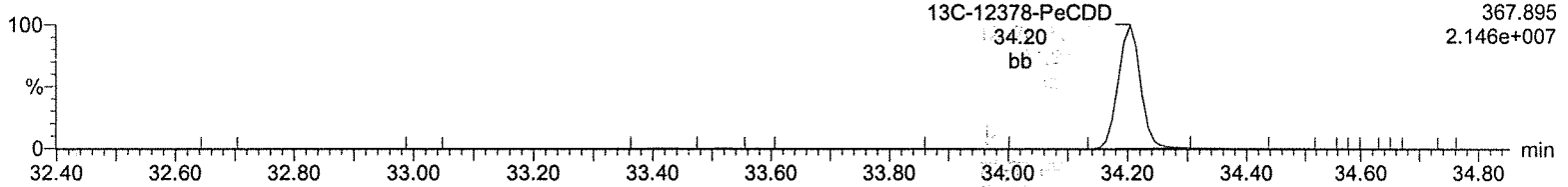
Total-pentadioxins

A08JUL19A-3



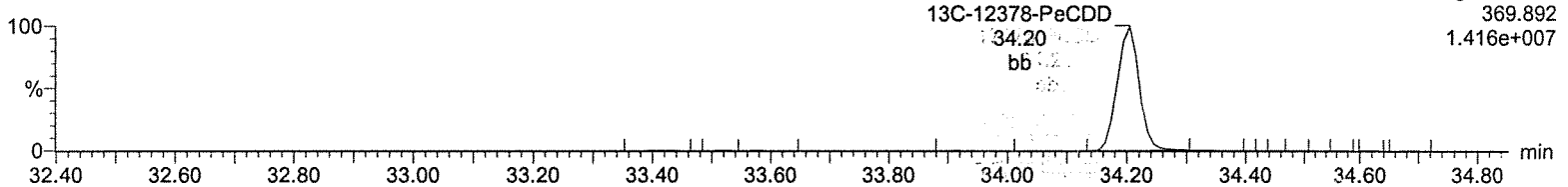
13C-12378-PeCDD

A08JUL19A-3



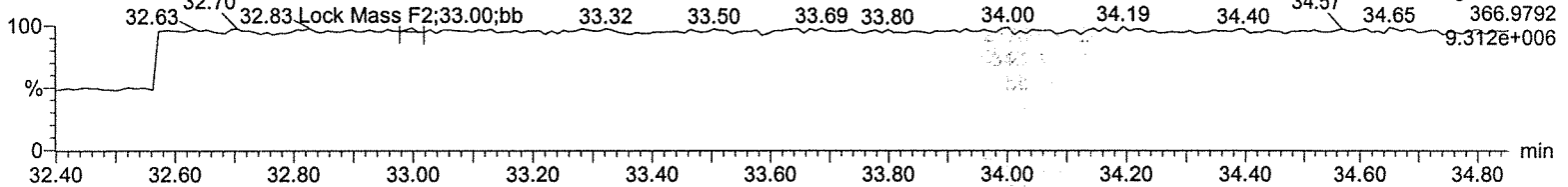
13C-12378-PeCDD

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



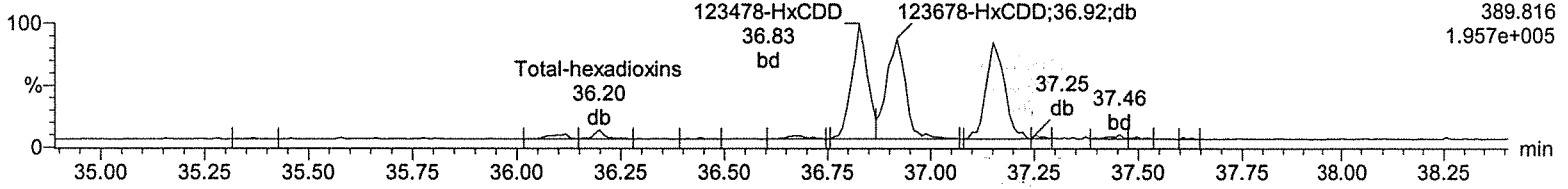
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

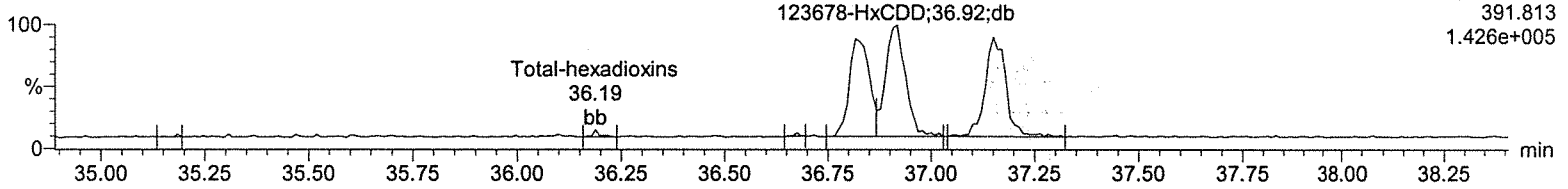
Total-hexadioxins

A08JUL19A-3



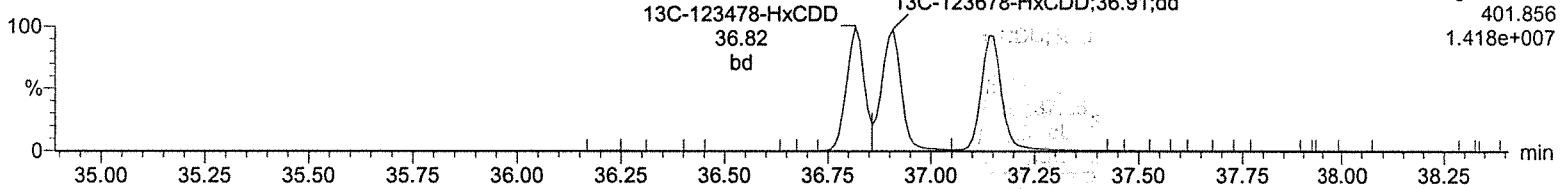
Total-hexadioxins

A08JUL19A-3



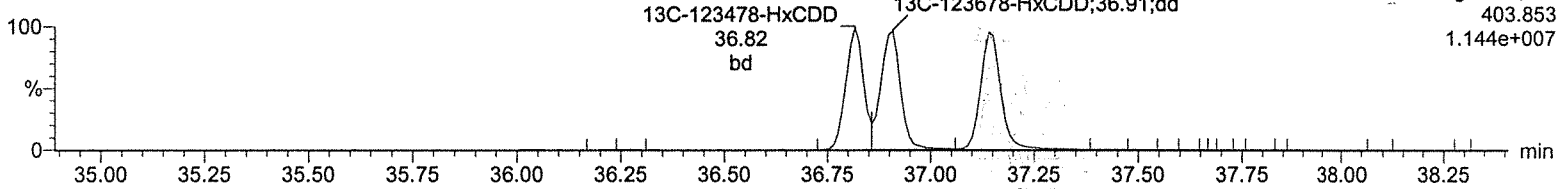
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A08JUL19A-3



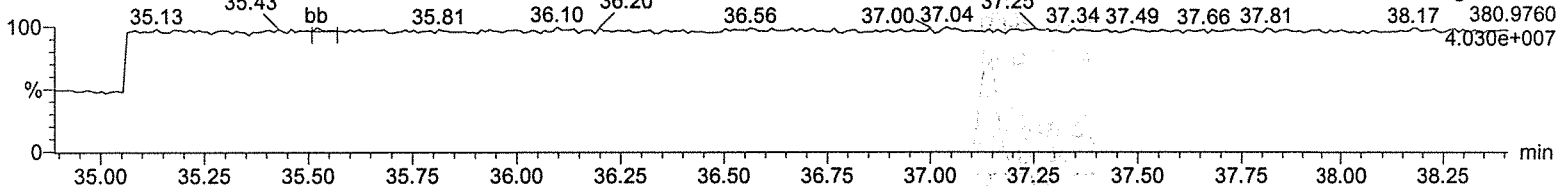
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A08JUL19A-3



Lock Mass F3

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

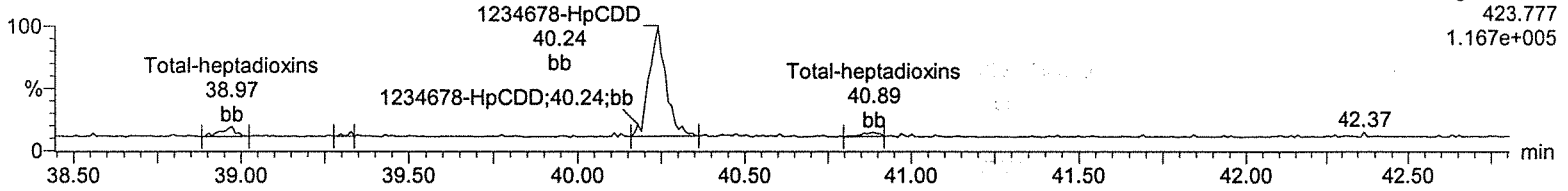
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Total-heptadioxins

A08JUL19A-3

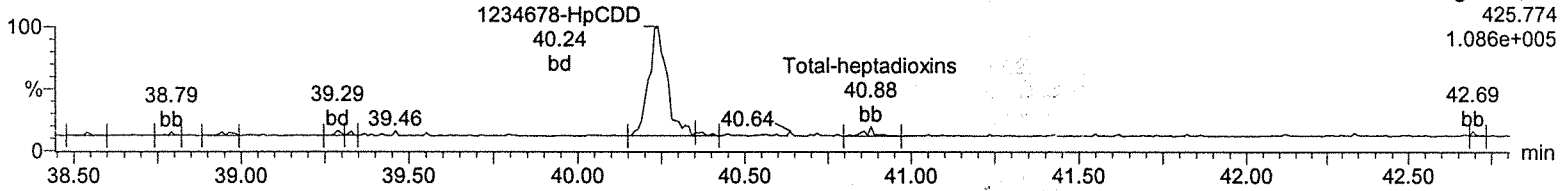
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1.167e+005



Total-heptadioxins

A08JUL19A-3

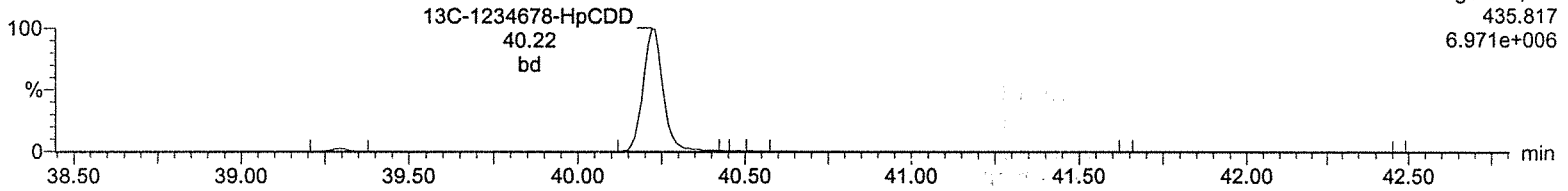
F4:Voltage SIR,EI+
425.774
1.086e+005



13C-1234678-HpCDD

A08JUL19A-3

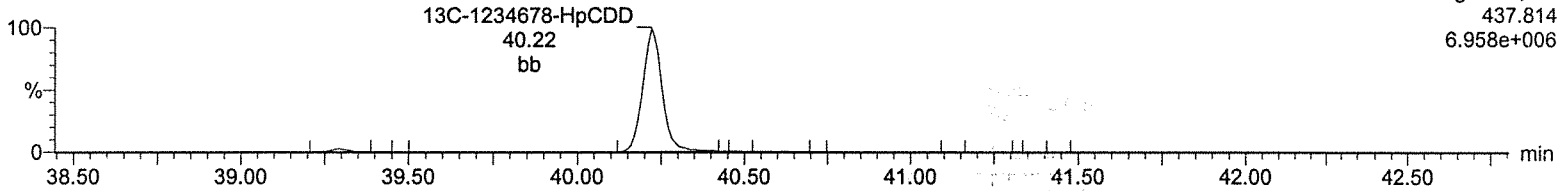
F4:Voltage SIR,EI+
435.817
6.971e+006



13C-1234678-HpCDD

A08JUL19A-3

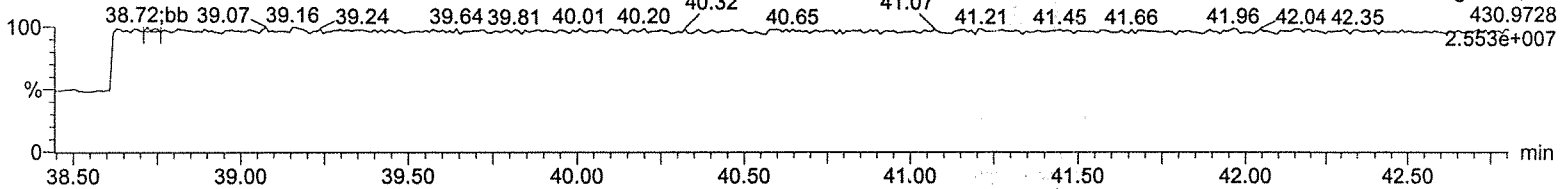
F4:Voltage SIR,EI+
437.814
6.958e+006



Lock Mass F4

A08JUL19A-3

F4:Voltage SIR,EI+
430.9728
2.553e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

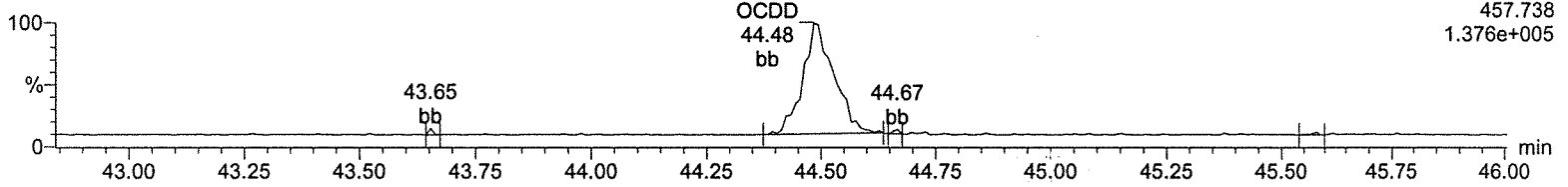
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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

OCDD

A08JUL19A-3

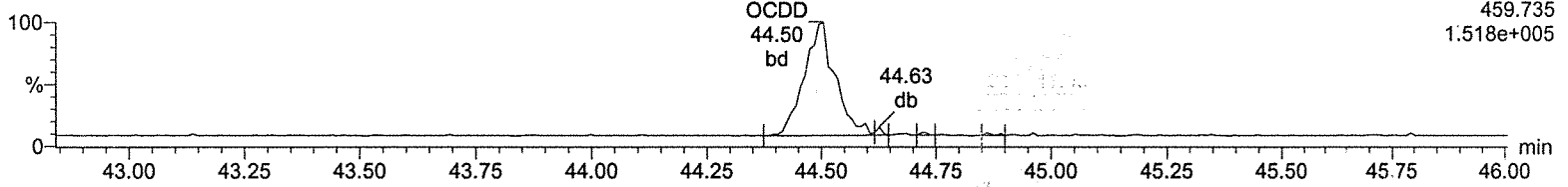
F5:Voltage SIR,EI+
457.738
1.376e+005



OCDD

A08JUL19A-3

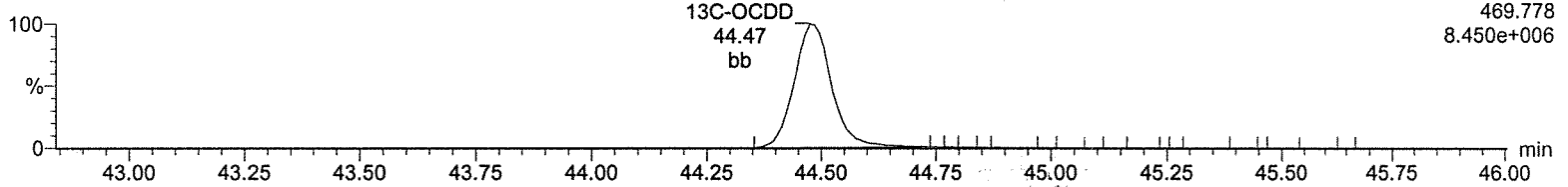
F5:Voltage SIR,EI+
459.735
1.518e+005



13C-OCDD

A08JUL19A-3

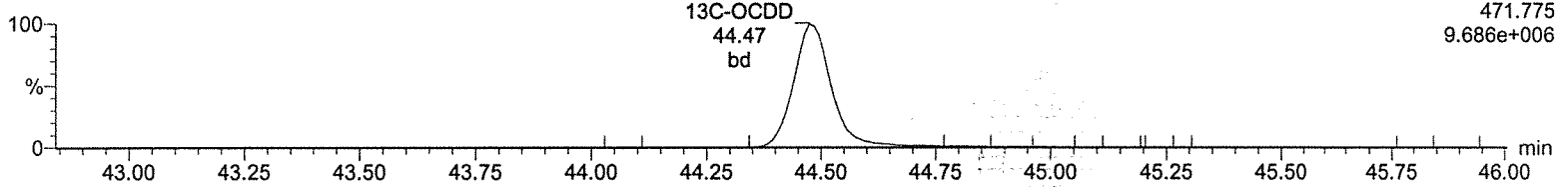
F5:Voltage SIR,EI+
469.778
8.450e+006



13C-OCDD

A08JUL19A-3

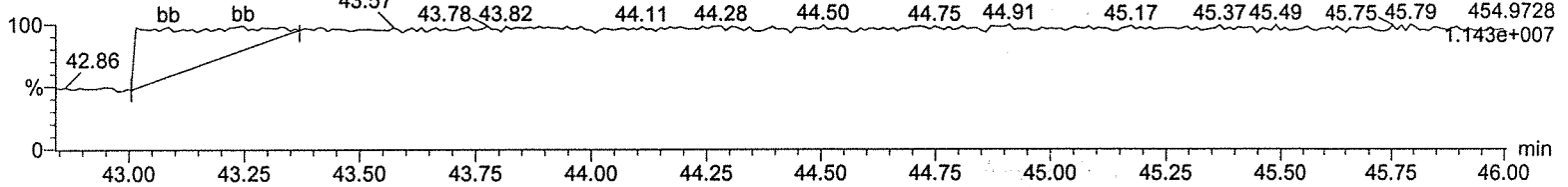
F5:Voltage SIR,EI+
471.775
9.686e+006



Lock Mass F5

A08JUL19A-3

F5:Voltage SIR,EI+
454.9728
1.143e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

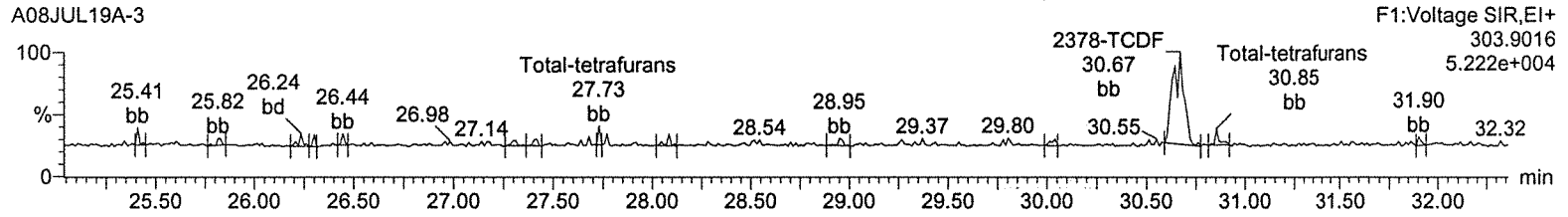
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

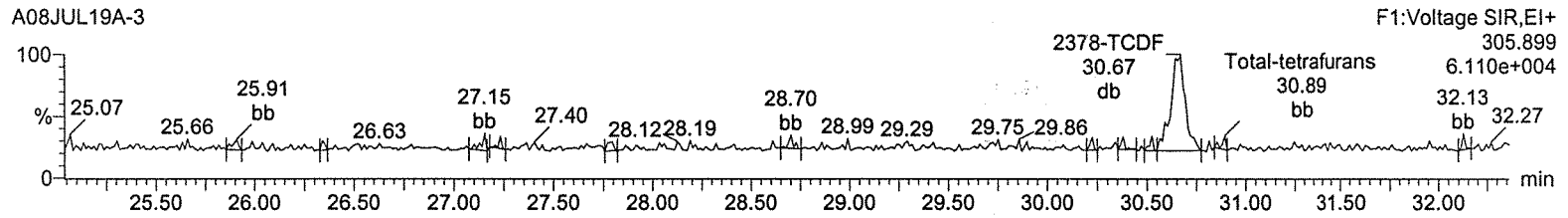
Total-tetrafurans

A08JUL19A-3



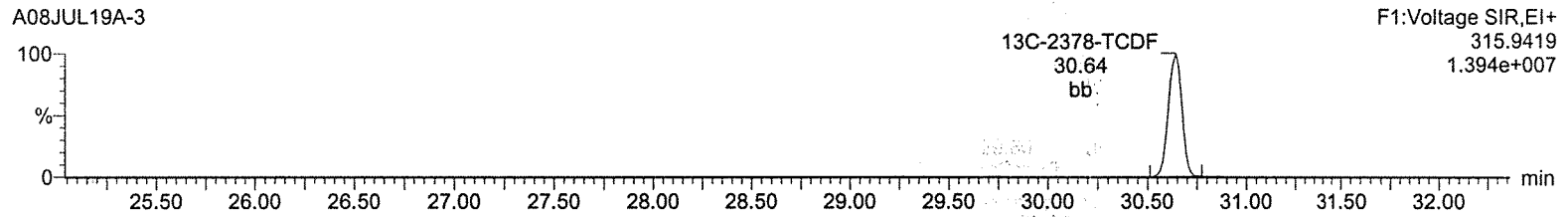
Total-tetrafurans

A08JUL19A-3



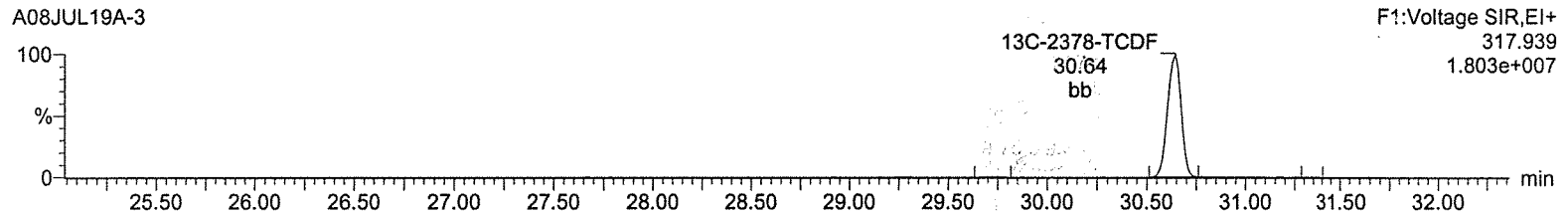
13C-2378-TCDF

A08JUL19A-3



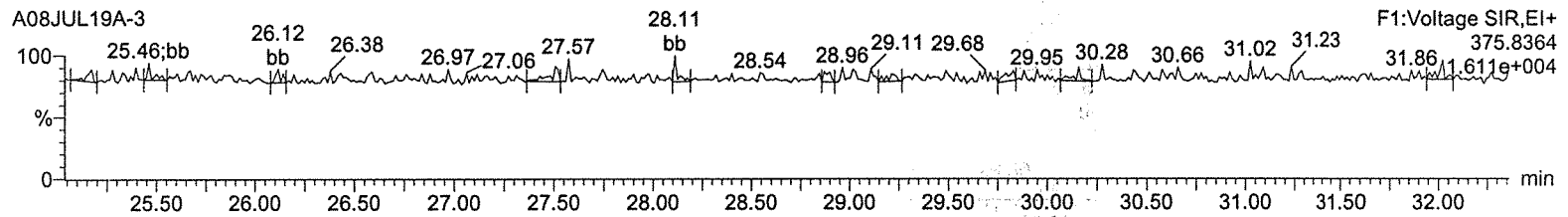
13C-2378-TCDF

A08JUL19A-3



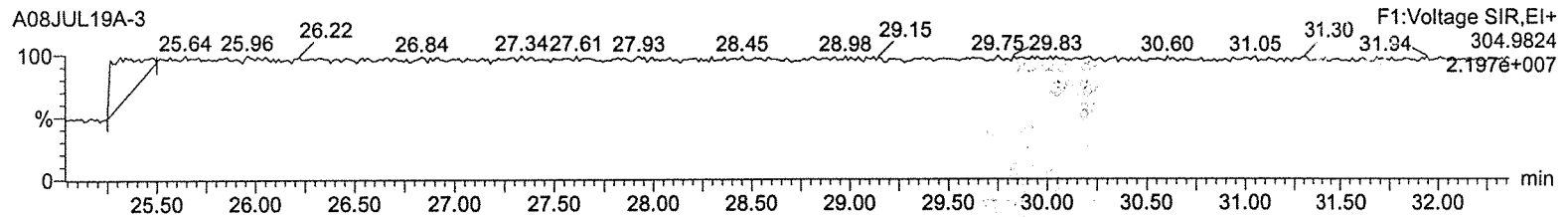
HxDPE

A08JUL19A-3



Lock Mass F1

A08JUL19A-3



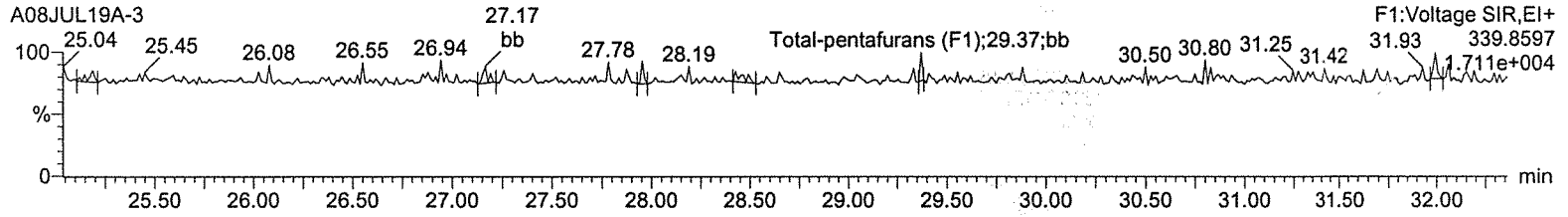
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

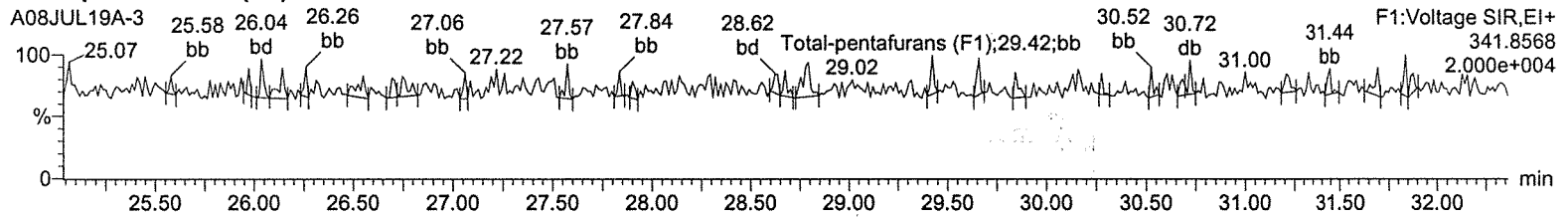
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

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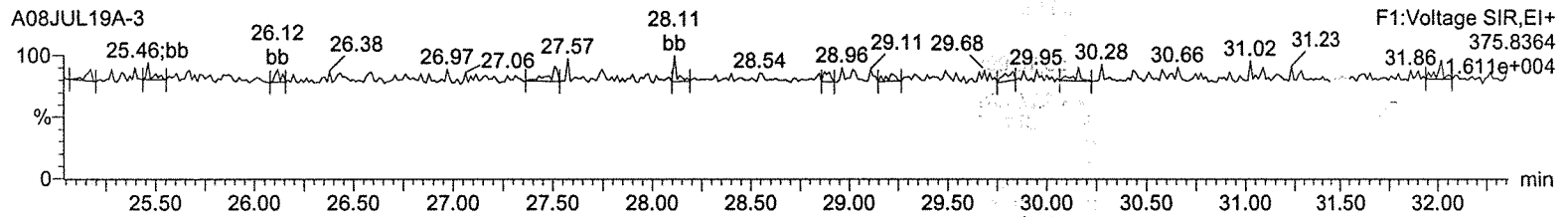
Total-pentafurans (F1)



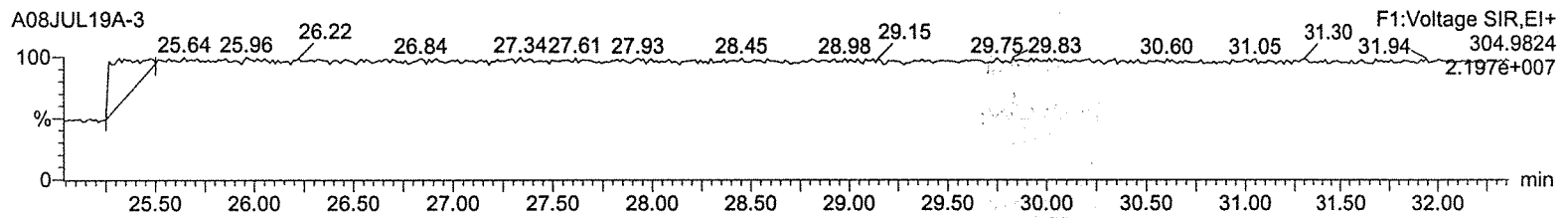
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

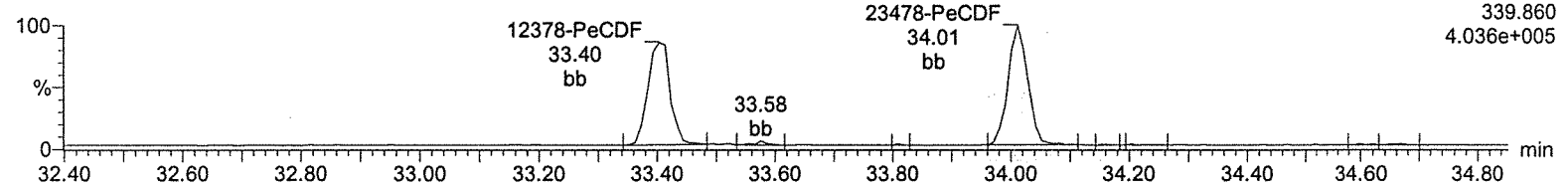
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

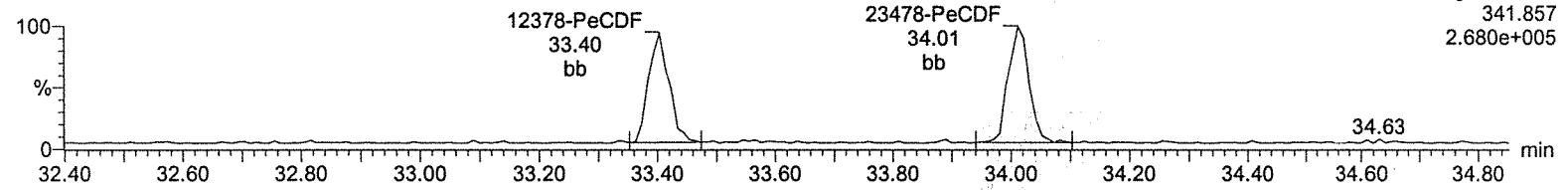
Total-pentafurans

A08JUL19A-3



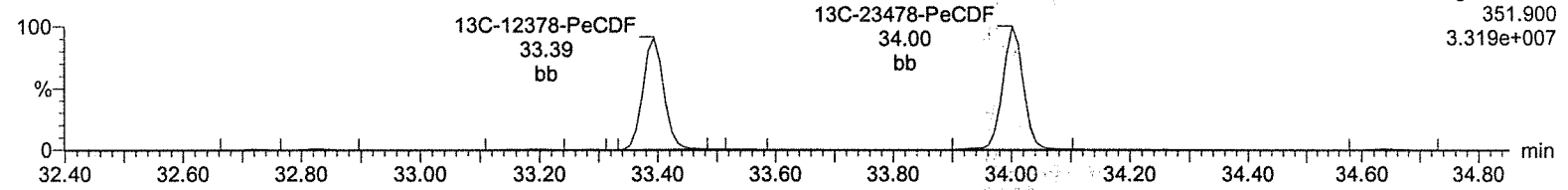
Total-pentafurans

A08JUL19A-3



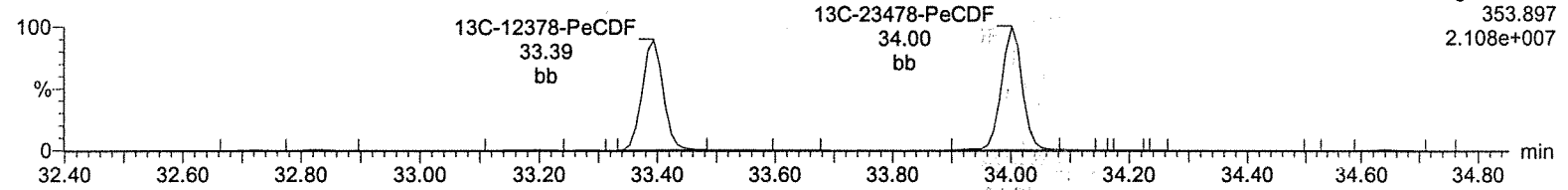
13C-12378-PeCDF

A08JUL19A-3



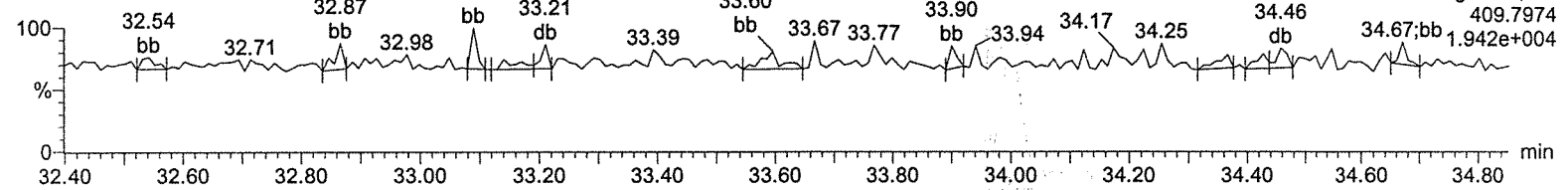
13C-12378-PeCDF

A08JUL19A-3



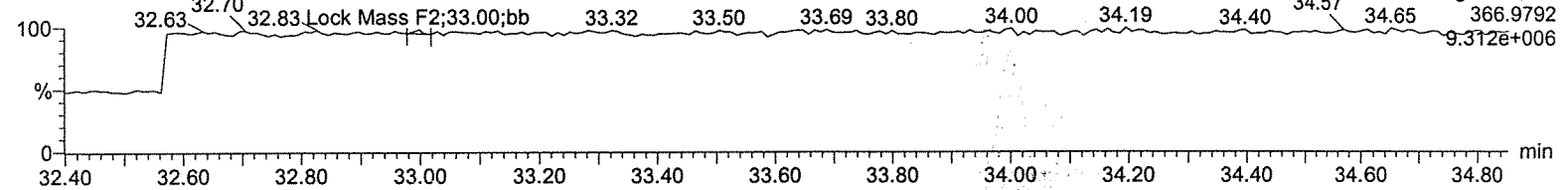
HpDPE

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

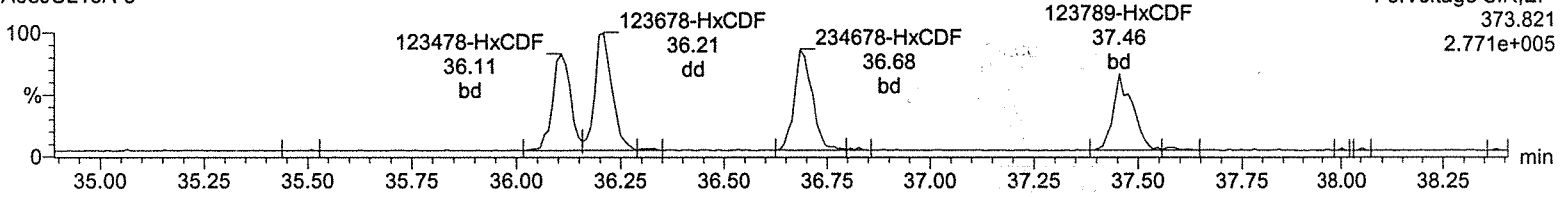
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

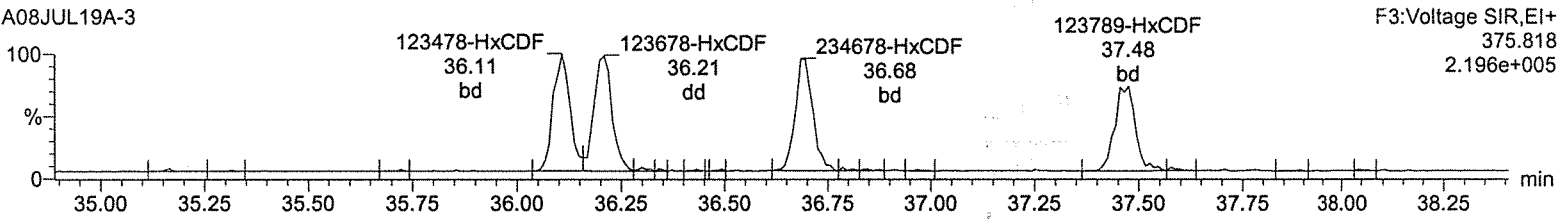
Total-hexafurans

A08JUL19A-3



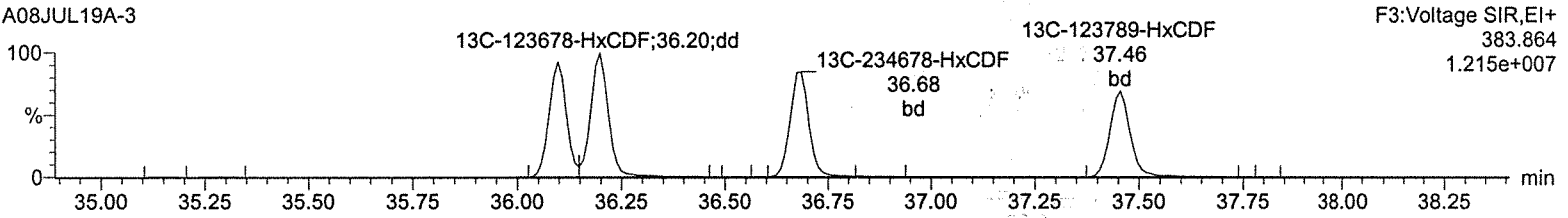
Total-hexafurans

A08JUL19A-3



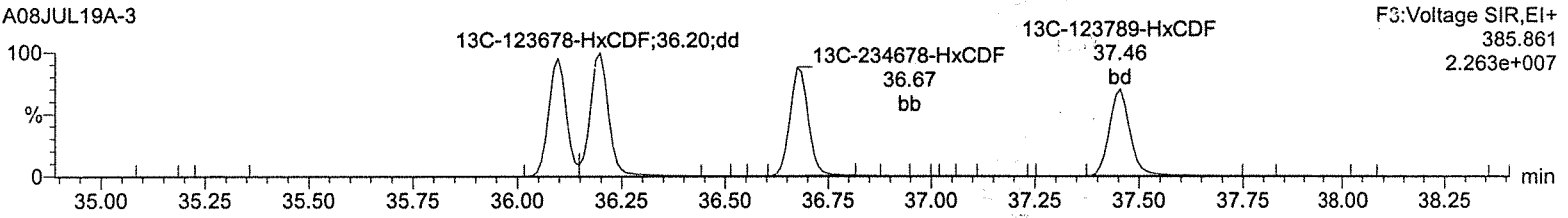
13C-123478-HxCDF

A08JUL19A-3



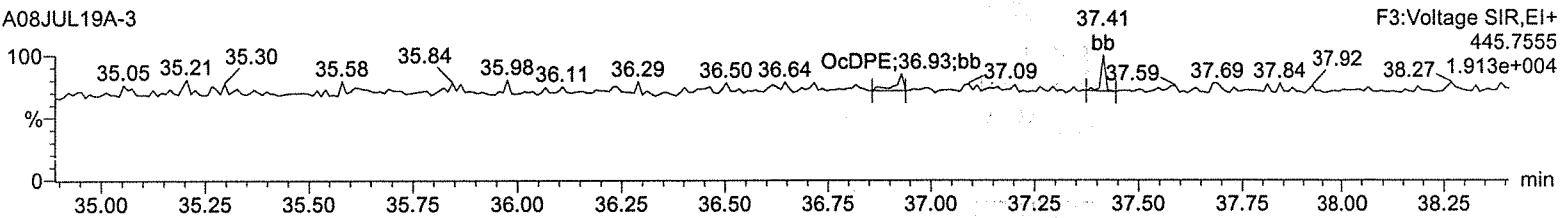
13C-123478-HxCDF

A08JUL19A-3



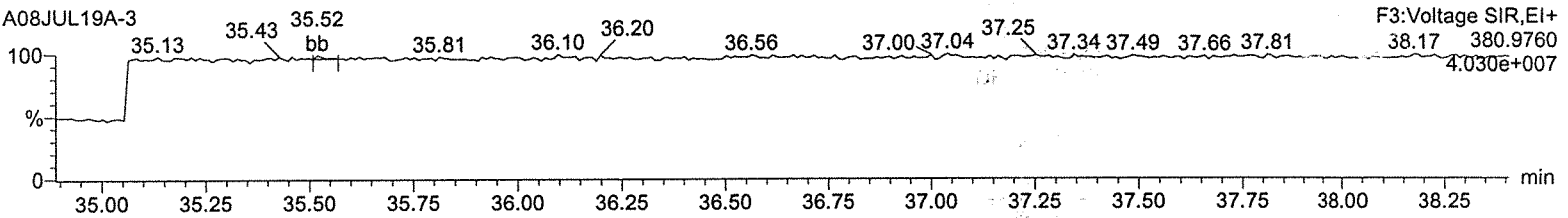
OcDPE

A08JUL19A-3



Lock Mass F3

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

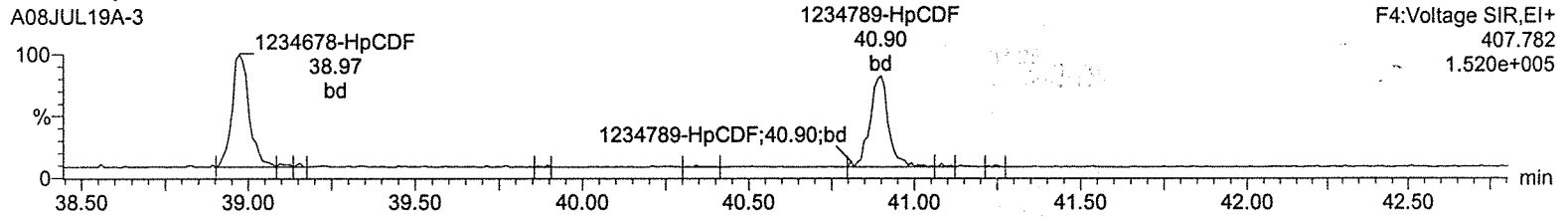
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

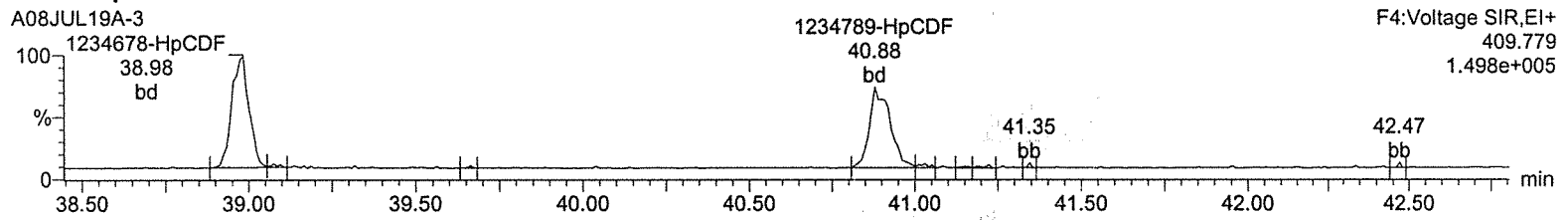
Total-heptafurans

A08JUL19A-3



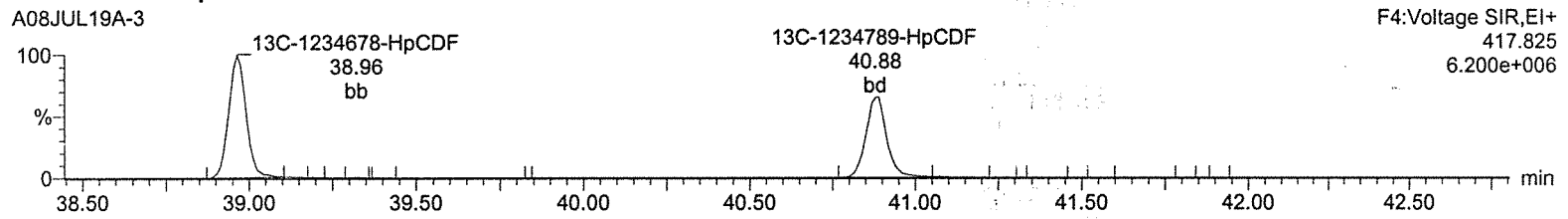
Total-heptafurans

A08JUL19A-3



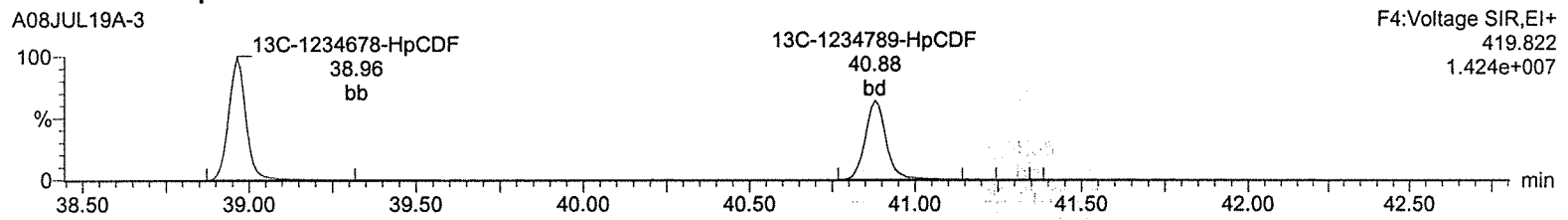
¹³C-1234678-HpCDF

A08JUL19A-3



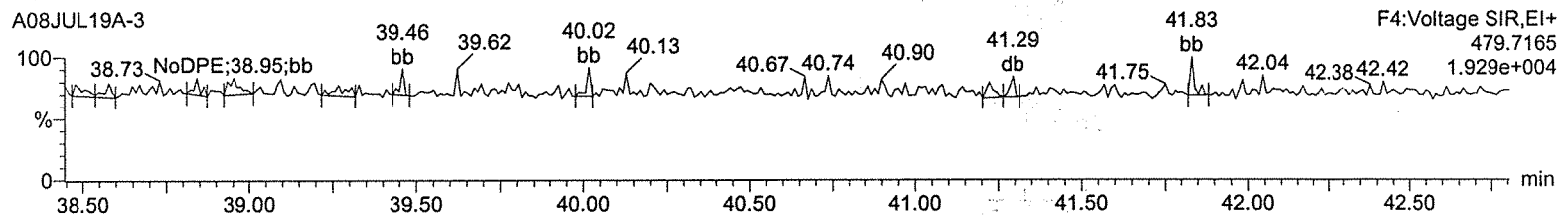
¹³C-1234678-HpCDF

A08JUL19A-3



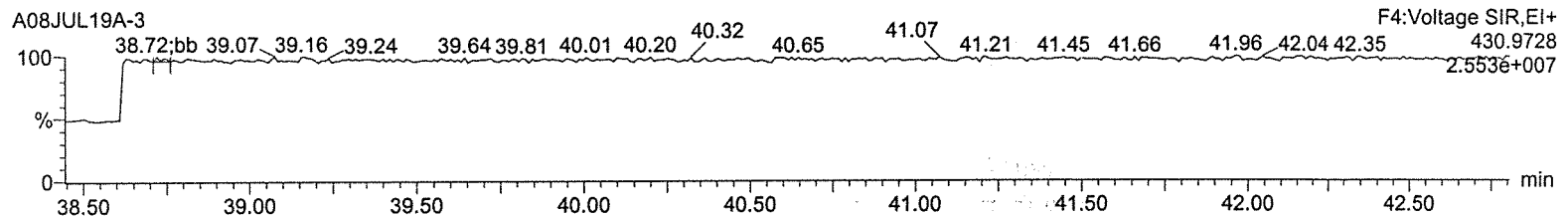
NoDPE

A08JUL19A-3



Lock Mass F4

A08JUL19A-3



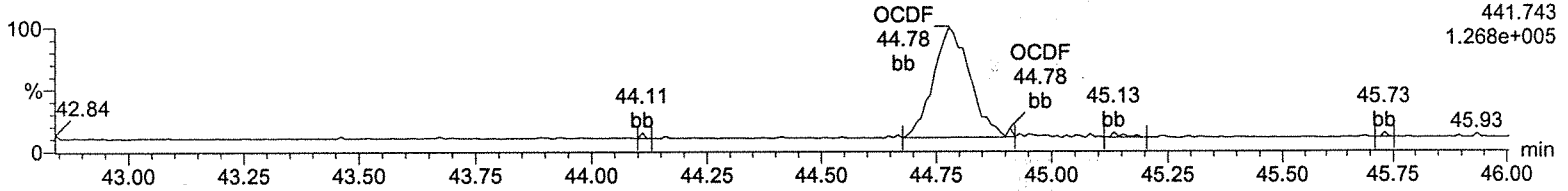
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

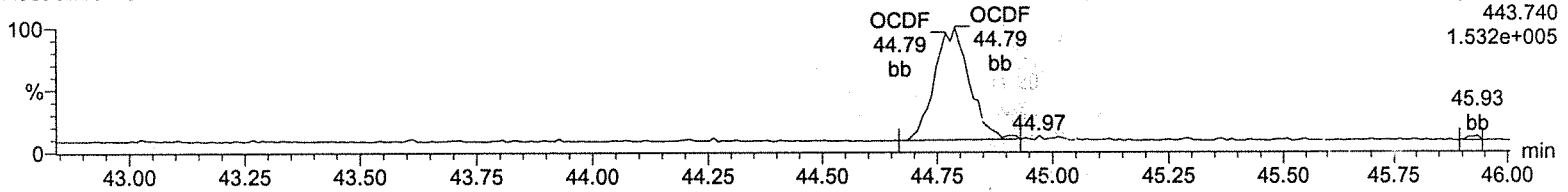
OCDF

A08JUL19A-3



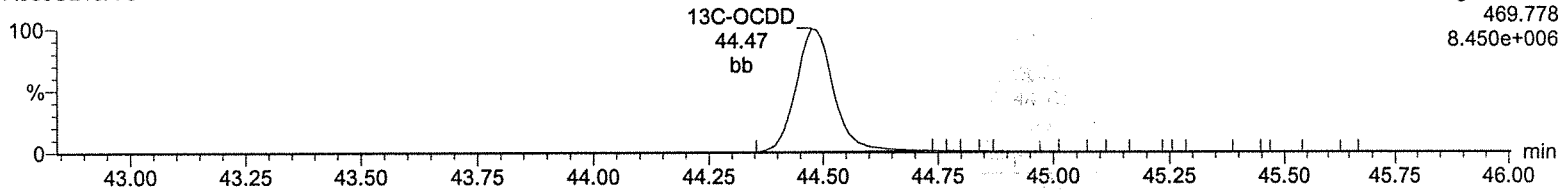
OCDF

A08JUL19A-3



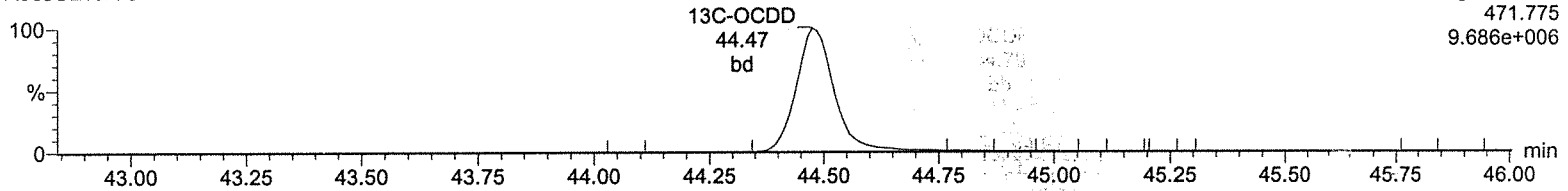
13C-OCDD

A08JUL19A-3



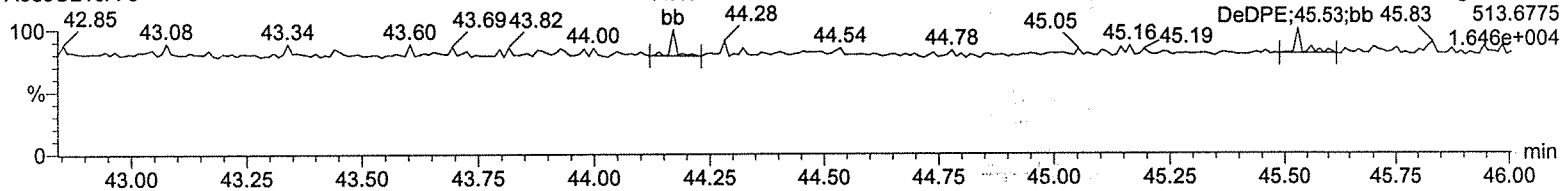
13C-OCDD

A08JUL19A-3



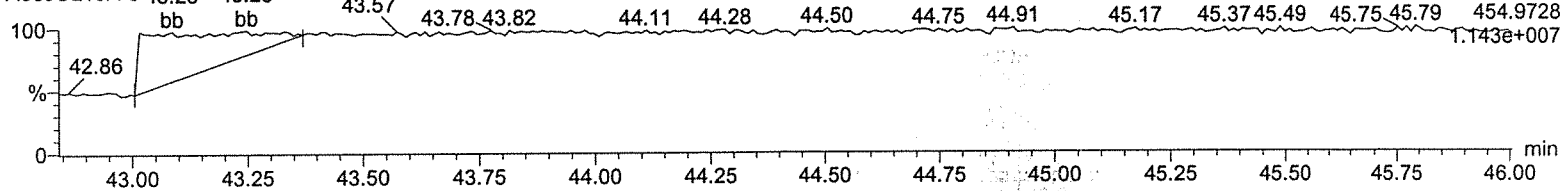
DeDPE

A08JUL19A-3



Lock Mass F5

A08JUL19A-3



Quantify Sample Summary Report

Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

7/28/19

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.57e3	4.22e3	7.80e3	31.36	1.001	0.85	NO	0.465	0.823	0.884	5.07	0.0381	8.65e4	2341	36.9	7.83e4	1703	45.9	bb	bd
2	12378-PeCDD	1.58e4	9.75e3	2.55e4	34.22	1.000	1.62	NO	2.444	0.834	0.853	1.65	0.0498	3.90e5	2742	142.4	2.48e5	1479	167.7	bd	bb
3	123478-HxCDD	1.23e4	1.02e4	2.25e4	36.84	1.000	1.21	NO	2.373	0.892	0.940	3.11	0.0590	2.55e5	2027	125.9	2.33e5	1848	125.8	bd	bd
4	123678-HxCDD	1.38e4	1.18e4	2.56e4	36.92	1.000	1.16	NO	2.463	0.930	0.944	2.57	0.0565	2.81e5	2027	138.8	2.54e5	1848	137.3	dd	dd
5	123789-HxCDD	1.28e4	1.04e4	2.32e4	37.16	1.007	1.24	NO	2.375	0.881	0.927	3.30	0.0586	2.66e5	2027	131.4	2.12e5	1848	114.5	bd	dd
6	1234678-HpCDD	9.30e3	9.39e3	1.87e4	40.25	1.000	0.99	NO	2.381	0.991	1.040	2.88	0.0813	1.41e5	1799	78.5	1.51e5	1462	103.4	bb	bd
7	OCDD	1.59e4	1.70e4	3.29e4	44.49	1.000	0.93	NO	4.867	0.946	0.971	2.39	0.153	1.93e5	1820	106.0	1.82e5	1858	97.7	bd	bb
8	2378-TCDF	4.46e3	5.19e3	9.65e3	30.67	1.001	0.86	NO	0.468	0.916	0.978	5.59	0.0667	7.01e4	2698	26.0	7.50e4	3399	22.1	bb	bb
9	12378-PeCDF	2.14e4	1.57e4	3.71e4	33.41	1.000	1.36	NO	2.350	0.888	0.945	3.41	0.0418	5.52e5	2463	223.9	3.85e5	3187	120.8	bd	bb
10	23478-PeCDF	2.55e4	1.61e4	4.16e4	34.02	1.000	1.58	NO	2.465	0.973	0.987	3.73	0.0389	6.39e5	2463	259.3	4.09e5	3187	128.4	bb	bd
11	123478-HxCDF	1.80e4	1.52e4	3.32e4	36.11	1.000	1.18	NO	2.413	1.049	1.087	3.86	0.0490	3.72e5	2602	143.0	3.37e5	2286	147.4	bd	bd
12	123678-HxCDF	1.83e4	1.55e4	3.38e4	36.22	1.000	1.18	NO	2.347	0.977	1.041	3.23	0.0513	4.45e5	2602	170.9	3.20e5	2286	139.8	db	db
13	234678-HxCDF	1.88e4	1.48e4	3.36e4	36.69	1.000	1.27	NO	2.436	1.107	1.136	3.17	0.0512	3.63e5	2602	139.4	3.00e5	2286	131.3	bd	bd
14	123789-HxCDF	1.51e4	1.25e4	2.76e4	37.47	1.000	1.21	NO	2.437	1.034	1.061	2.29	0.0691	2.81e5	2602	108.0	2.34e5	2286	102.5	bb	bd
15	1234678-HpCDF	1.32e4	1.44e4	2.75e4	38.98	1.000	0.92	NO	2.449	1.126	1.150	3.86	0.0571	2.36e5	1436	164.0	2.50e5	2218	112.8	bb	bd
16	1234789-HpCDF	1.11e4	1.12e4	2.24e4	40.89	1.000	0.99	NO	2.471	1.188	1.202	1.91	0.0865	1.56e5	1436	108.6	1.54e5	2218	69.5	bd	bd
17	OCDF	1.74e4	1.92e4	3.66e4	44.81	1.007	0.90	NO	4.644	1.052	1.133	6.78	0.201	1.76e5	3765	46.8	2.08e5	1885	110.1	bd	bb
18	13C-2378-TCDD	8.21e5	1.07e6	1.89e6	31.34	1.015	0.77	NO	96.744	1.092	1.128	2.36	0.138	1.56e7	9025	1728.5	2.08e7	4935	4206.5	bb	bb
19	13C-2378-PeCDD	7.37e5	4.88e5	1.22e6	34.21	1.109	1.51	NO	93.933	0.706	0.751	5.03	0.138	1.79e7	3968	4522.8	1.17e7	5328	2187.5	bb	bb
20	13C-123478-HxCDD	5.54e5	4.55e5	1.01e6	36.83	0.991	1.22	NO	101.285	0.908	0.896	1.38	0.180	1.15e7	5441	2114.1	9.33e6	5749	1623.8	bd	bd
21	13C-123678-HxCDD	6.06e5	4.95e5	1.10e6	36.91	0.993	1.22	NO	100.379	0.990	0.986	0.84	0.163	1.20e7	5441	2206.7	9.90e6	5749	1721.4	dd	dd
22	13C-1234678-HpCDD	3.80e5	3.75e5	7.55e5	40.23	1.083	1.01	NO	101.038	0.679	0.672	1.29	0.265	5.82e6	6152	946.8	5.53e6	6204	892.2	bb	bd
23	13C-OCDD	6.49e5	7.44e5	1.39e6	44.49	1.197	0.87	NO	195.027	0.626	0.642	4.87	0.267	6.93e6	5999	1155.6	8.01e6	5912	1355.8	bd	bd
24	13C-2378-TCDF	9.11e5	1.20e6	2.11e6	30.64	0.993	0.76	NO	97.118	1.214	1.250	1.88	0.194	1.21e7	14708	823.8	1.61e7	7000	2294.6	bb	bb
25	13C-12378-PeCDF	1.02e6	6.53e5	1.67e6	33.40	1.082	1.56	NO	95.178	0.962	1.011	4.24	0.227	2.62e7	15253	1715.1	1.64e7	5304	3093.6	bb	bd
26	13C-23478-PeCDF	1.05e6	6.60e5	1.71e6	34.01	1.102	1.59	NO	92.689	0.985	1.063	5.28	0.216	2.71e7	15253	1776.2	1.71e7	5304	3222.8	db	db
27	13C-123478-HxCDF	4.33e5	8.34e5	1.27e6	36.11	0.972	0.52	NO	102.576	1.139	1.111	1.42	0.257	9.40e6	8141	1154.2	1.76e7	11678	1502.8	bd	bd
28	13C-123678-HxCDF	4.78e5	9.08e5	1.39e6	36.21	0.975	0.53	NO	99.908	1.246	1.247	1.06	0.229	9.47e6	8141	1163.6	1.83e7	11678	1564.1	dd	db
29	13C-234678-HxCDF	4.19e5	7.95e5	1.21e6	36.69	0.988	0.53	NO	100.882	1.092	1.082	1.01	0.263	8.70e6	8141	1069.1	1.65e7	11678	1414.7	bb	bb
30	13C-123789-HxCDF	3.73e5	6.94e5	1.07e6	37.46	1.008	0.54	NO	99.201	0.959	0.967	1.08	0.295	6.99e6	8141	859.2	1.29e7	11678	1106.7	bd	bb
31	13C-1234678-HpCDF	3.03e5	6.75e5	9.78e5	38.97	1.049	0.45	NO	101.064	0.879	0.870	1.11	0.205	5.17e6	5374	961.9	1.14e7	7011	1632.7	bb	bb
32	13C-1234789-HpCDF	2.33e5	5.21e5	7.54e5	40.89	1.101	0.45	NO	100.102	0.678	0.677	1.01	0.263	3.26e6	5374	606.3	7.49e6	7011	1069.0	bd	bb
33	13C-1234-TCDD	7.57e5	9.78e5	1.74e6	30.87	0.000	0.77	NO	100.000	1.000	1.000	0.00	0.156	1.17e7	9025	1300.0	1.53e7	4935	3106.6	bb	bb
34	13C-123789-HxCDD	6.11e5	5.01e5	1.11e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.161	1.15e7	5441	2105.6	9.54e6	5749	1659.5	dd	dd

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Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Sample #	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37CI-2378-TCDD	8.78e3	8.78e3	8.78e3	31.35	1.016			0.477	1.012	1.061	4.54	0.0460	1.91e5	4378	43.7				M	M2	
																						bb

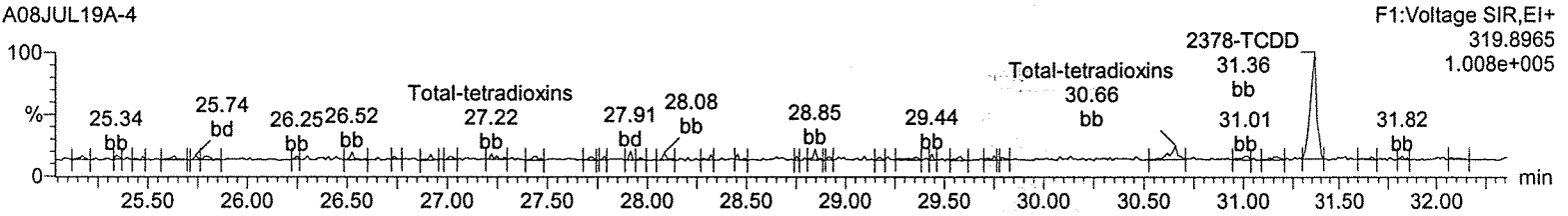
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

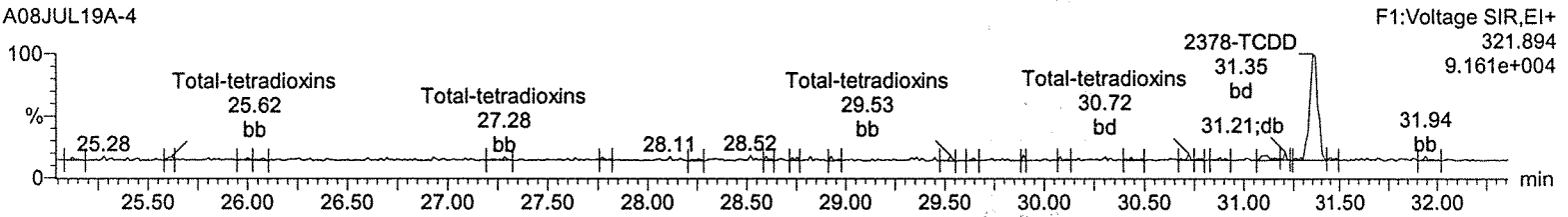
Total-tetradoxins

A08JUL19A-4



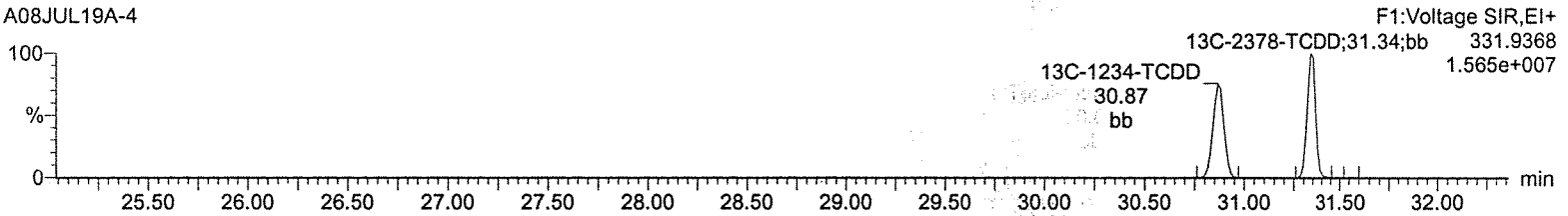
Total-tetradoxins

A08JUL19A-4



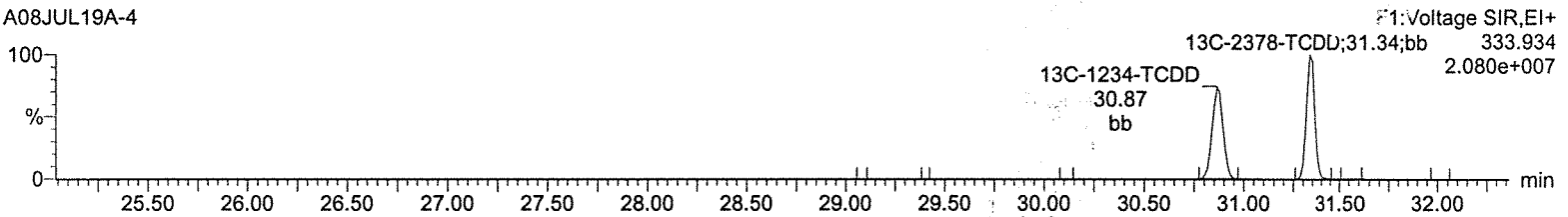
13C-2378-TCDD

A08JUL19A-4



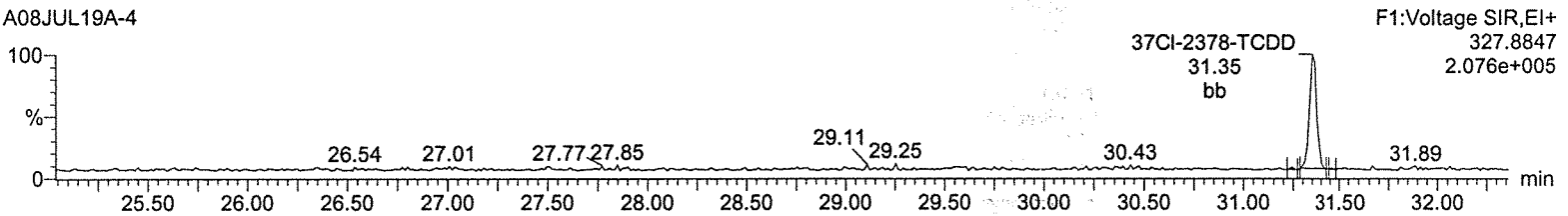
13C-2378-TCDD

A08JUL19A-4



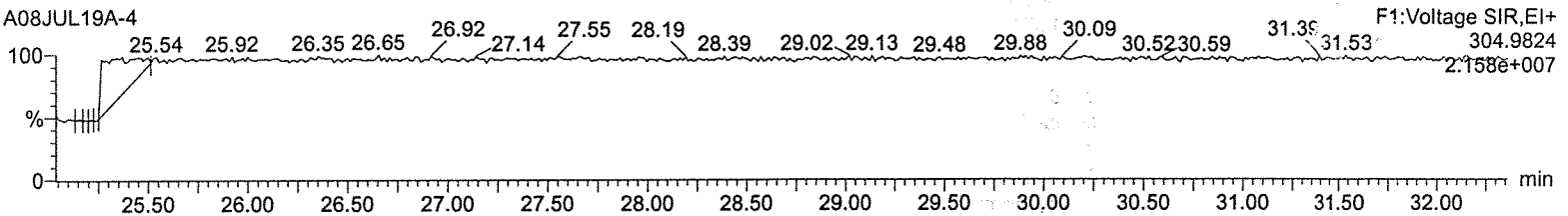
37Cl-2378-TCDD

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

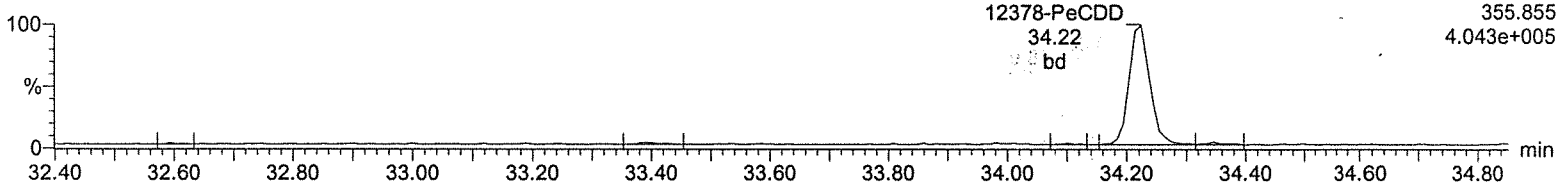
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

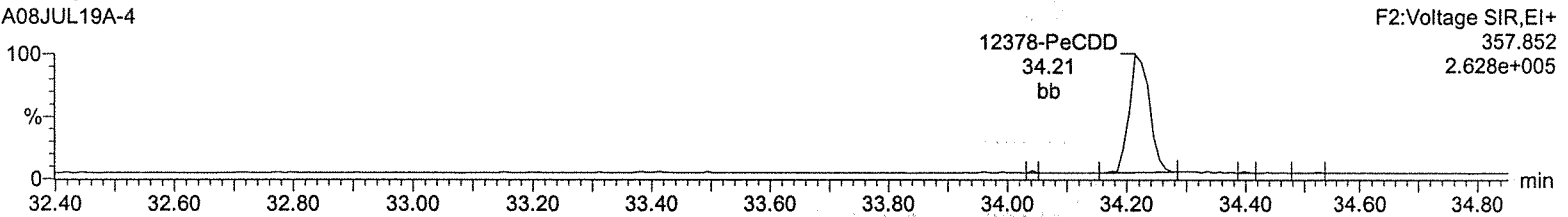
Total-pentadioxins

A08JUL19A-4



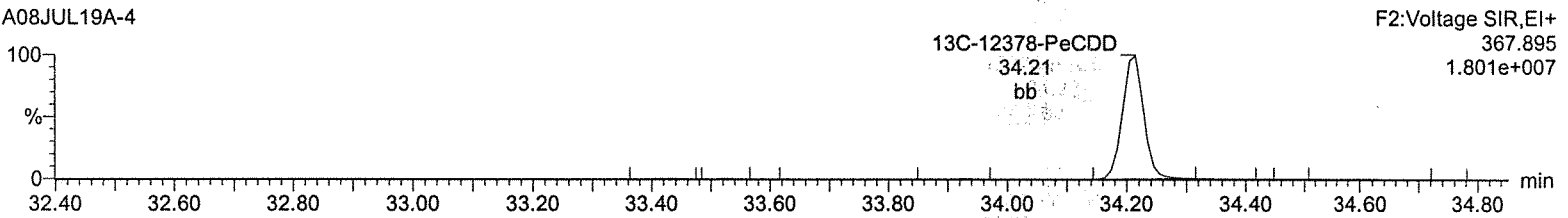
Total-pentadioxins

A08JUL19A-4



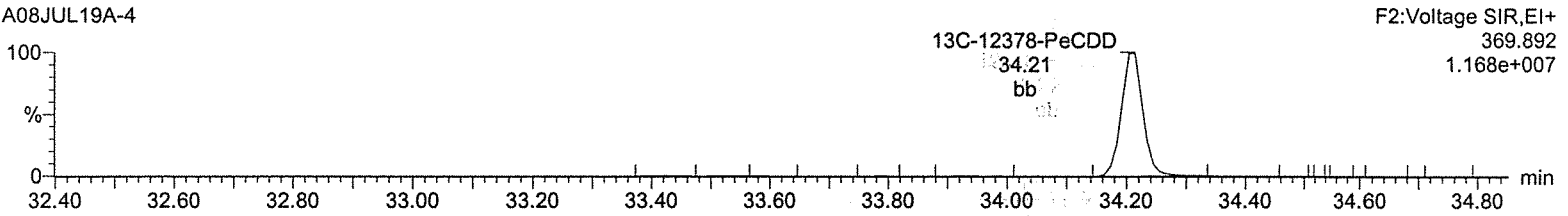
13C-12378-PeCDD

A08JUL19A-4



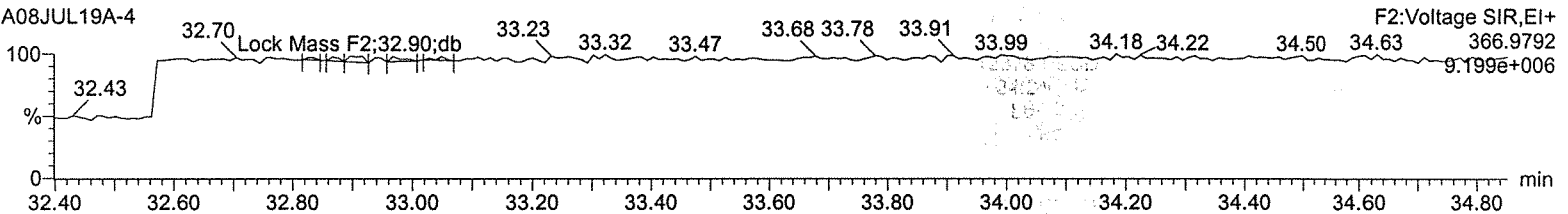
13C-12378-PeCDD

A08JUL19A-4



Lock Mass F2

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

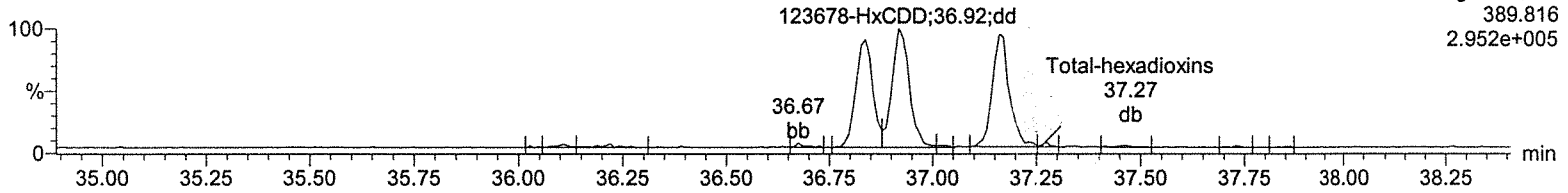
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexadioxins

A08JUL19A-4

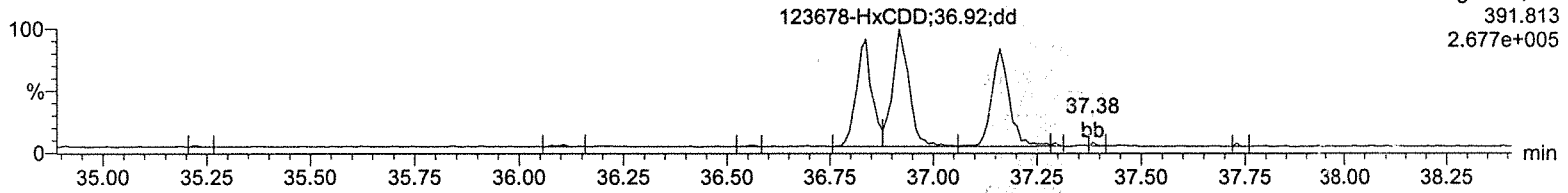
F3:Voltage SIR,EI+
389.816
2.952e+005



Total-hexadioxins

A08JUL19A-4

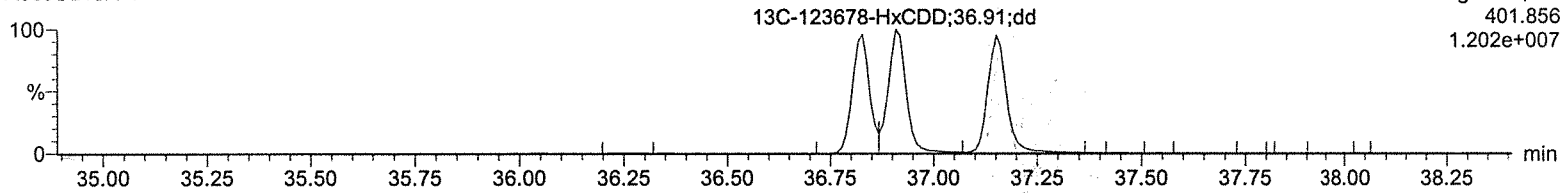
F3:Voltage SIR,EI+
391.813
2.677e+005



13C-123478-HxCDD

A08JUL19A-4

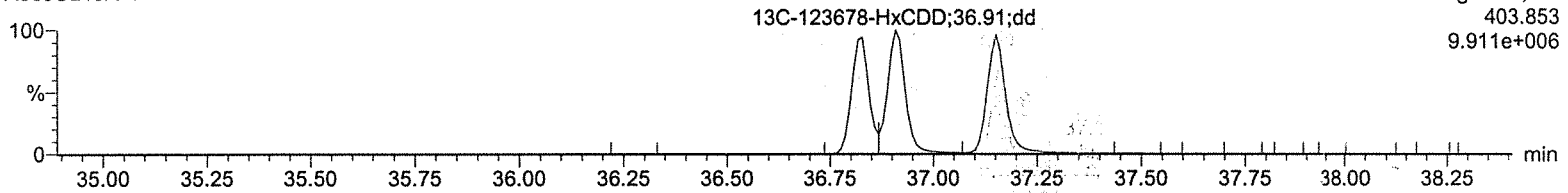
F3:Voltage SIR,EI+
401.856
1.202e+007



13C-123478-HxCDD

A08JUL19A-4

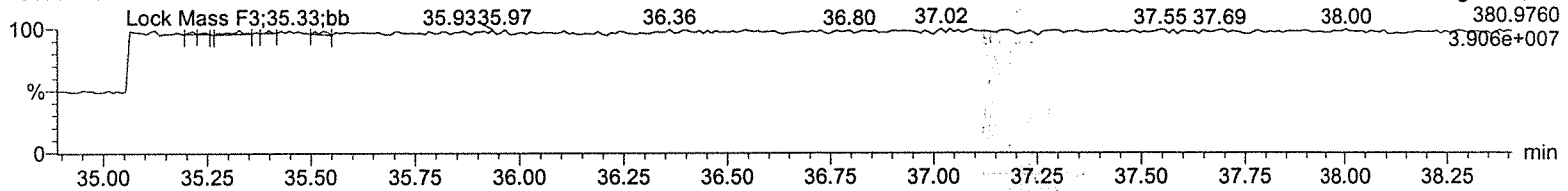
F3:Voltage SIR,EI+
403.853
9.911e+006



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

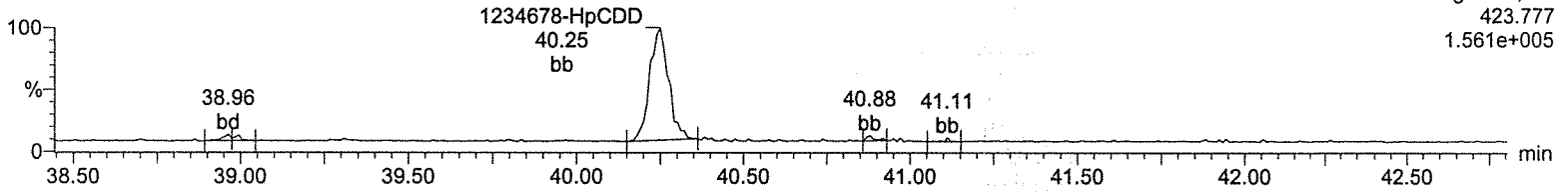
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptadioxins

A08JUL19A-4

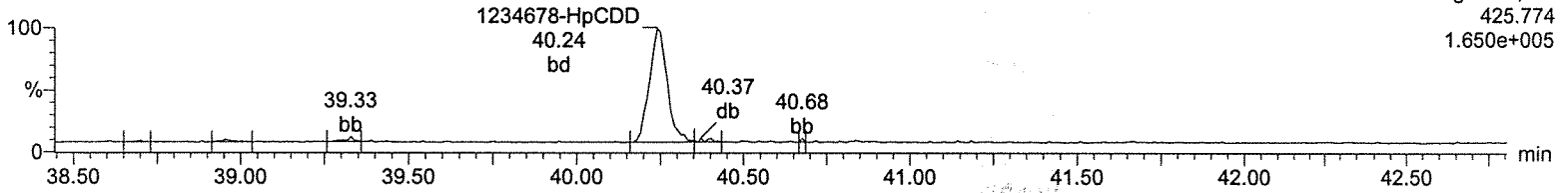
F4:Voltage SIR,EI+
423.777
1.561e+005



Total-heptadioxins

A08JUL19A-4

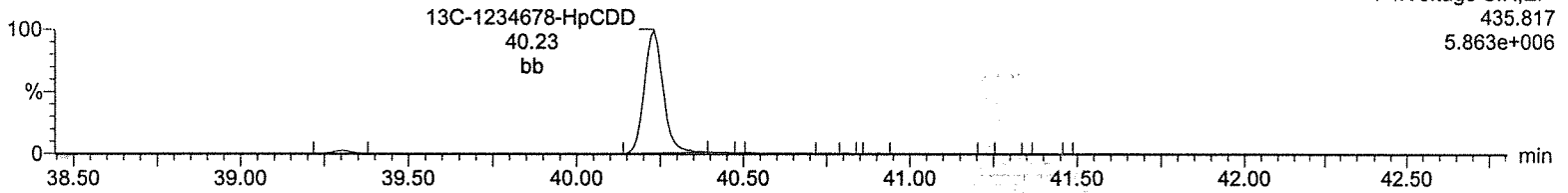
F4:Voltage SIR,EI+
425.774
1.650e+005



13C-1234678-HpCDD

A08JUL19A-4

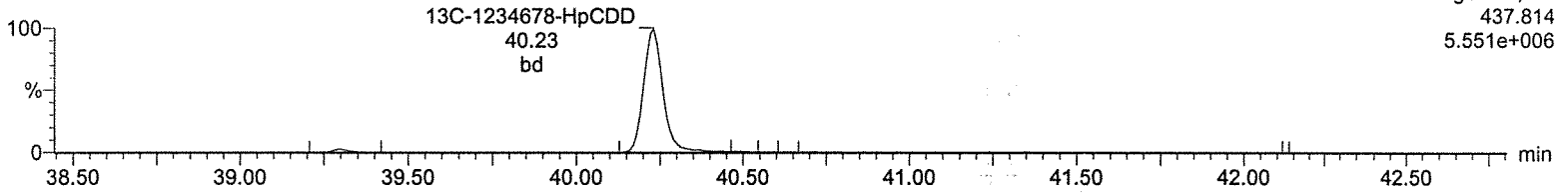
F4:Voltage SIR,EI+
435.817
5.863e+006



13C-1234678-HpCDD

A08JUL19A-4

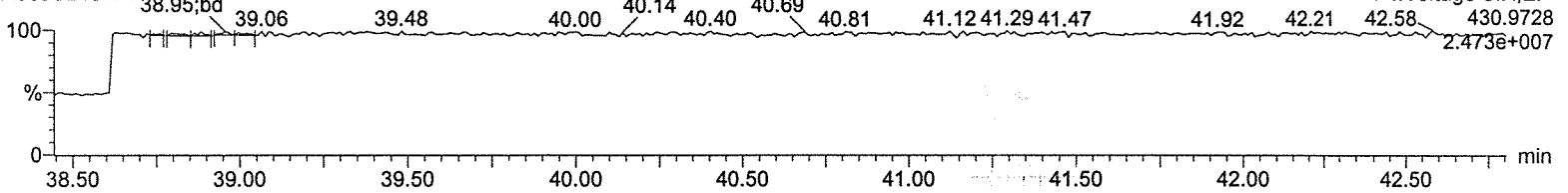
F4:Voltage SIR,EI+
437.814
5.551e+006



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

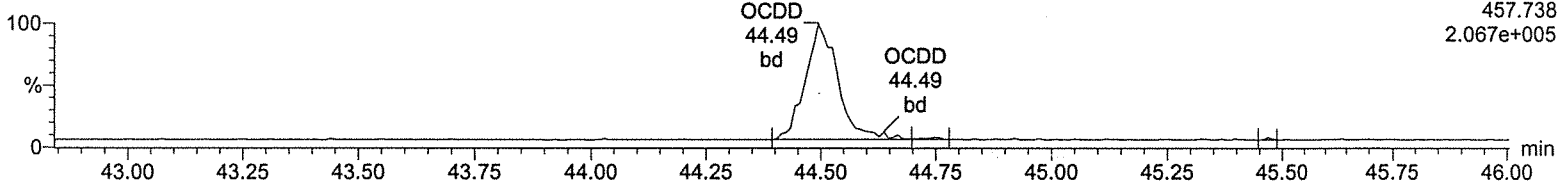
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

OCDD

A08JUL19A-4

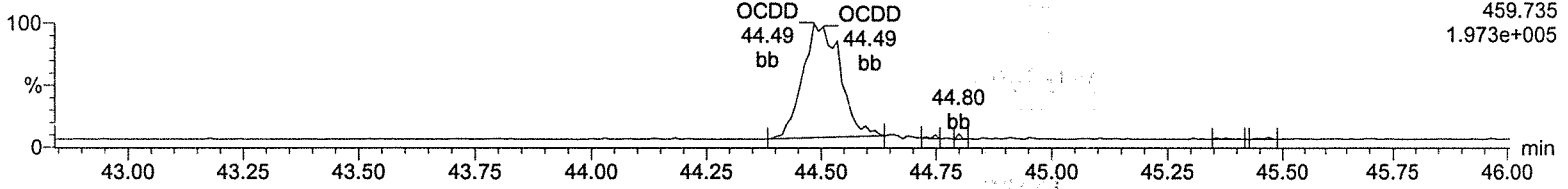
F5:Voltage SIR,EI+
457.738
2.067e+005



OCDD

A08JUL19A-4

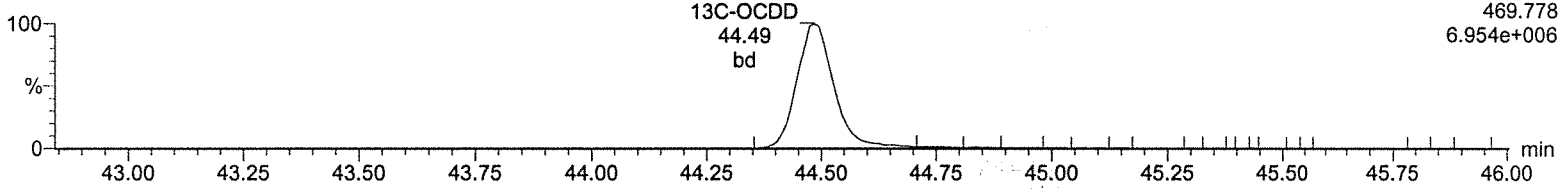
F5:Voltage SIR,EI+
459.735
1.973e+005



13C-OCDD

A08JUL19A-4

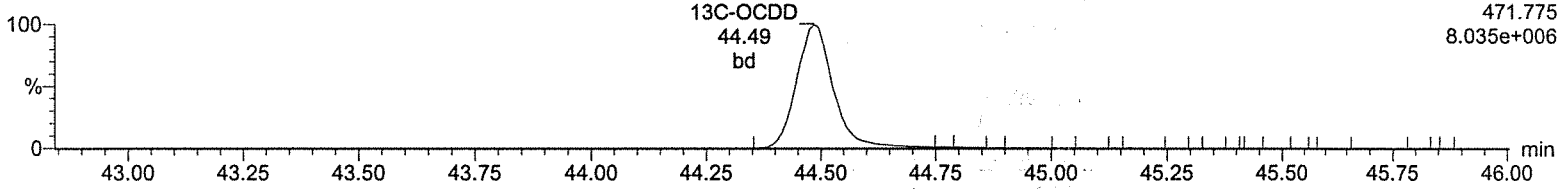
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

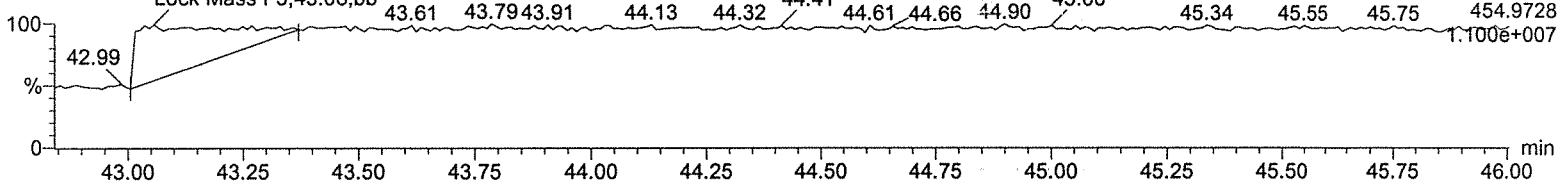
F5:Voltage SIR,EI+
471.775
8.035e+006



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
454.9728
1.100e+007



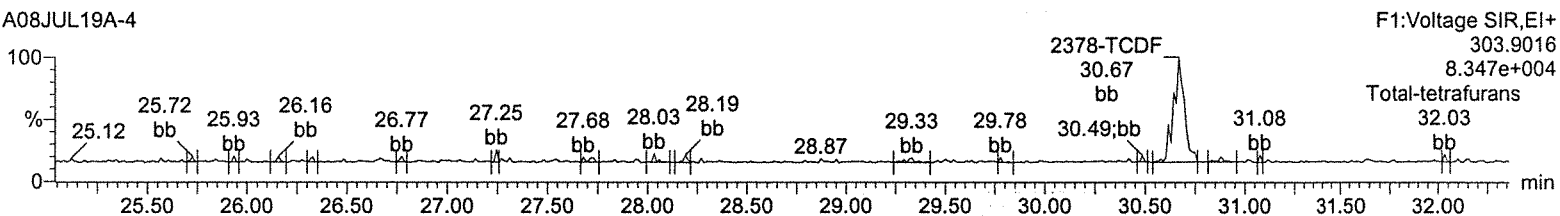
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

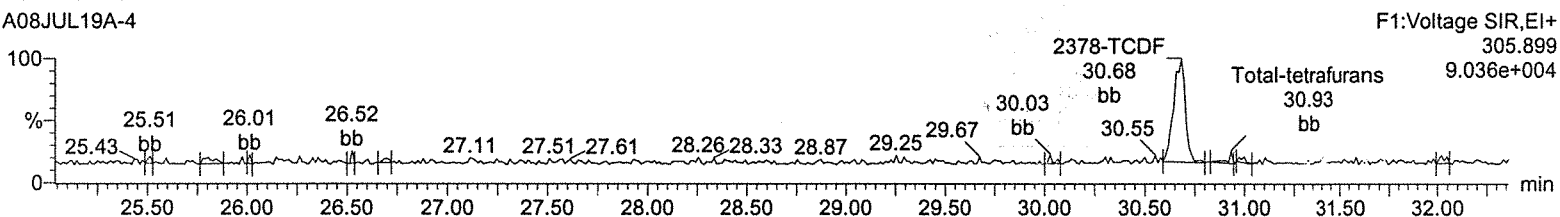
Total-tetrafurans

A08JUL19A-4



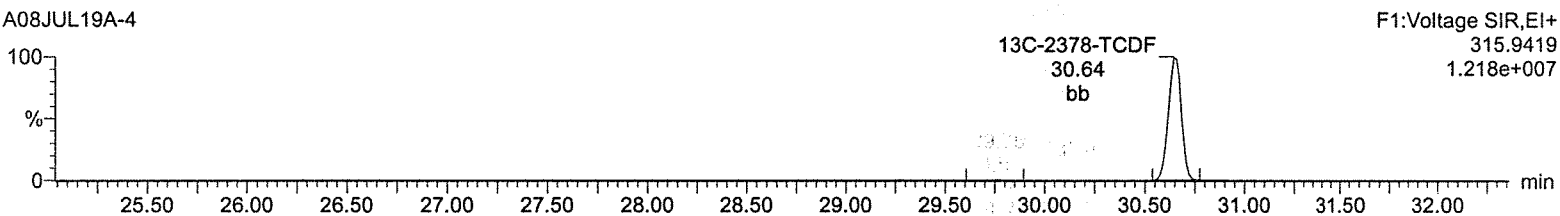
Total-tetrafurans

A08JUL19A-4



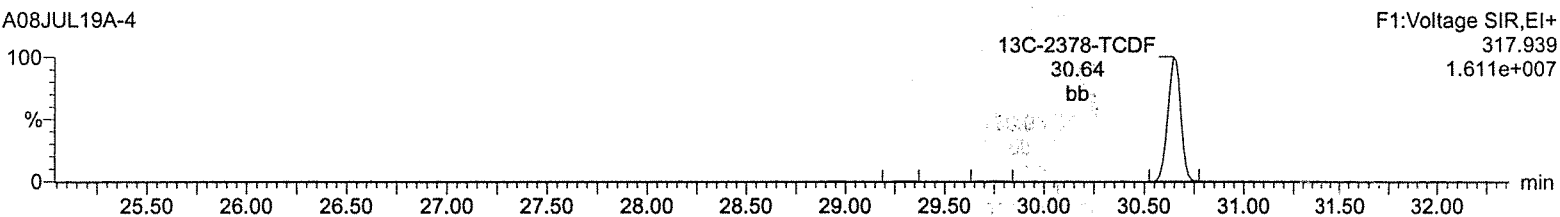
13C-2378-TCDF

A08JUL19A-4



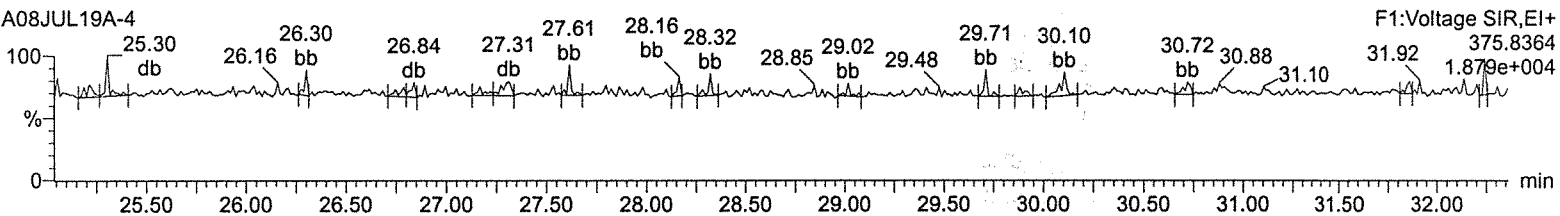
13C-2378-TCDF

A08JUL19A-4



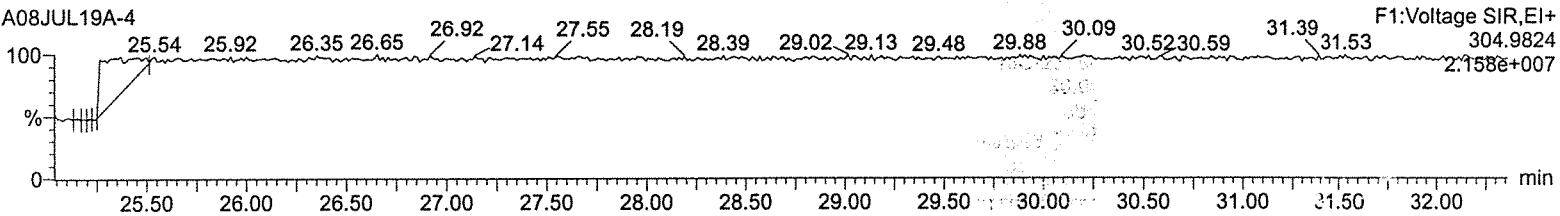
HxDPE

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

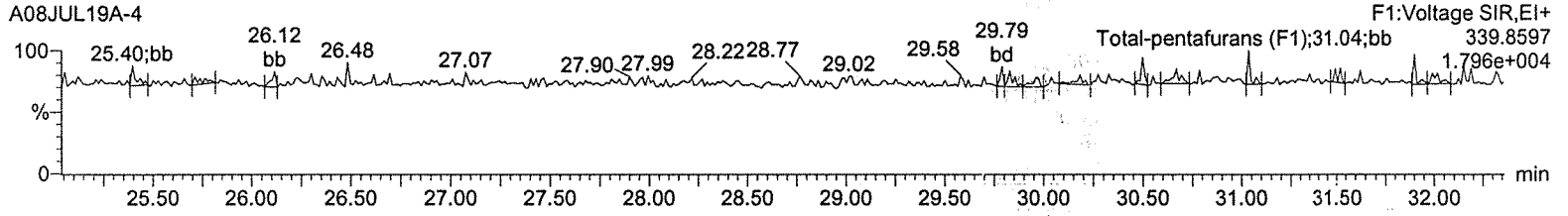
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

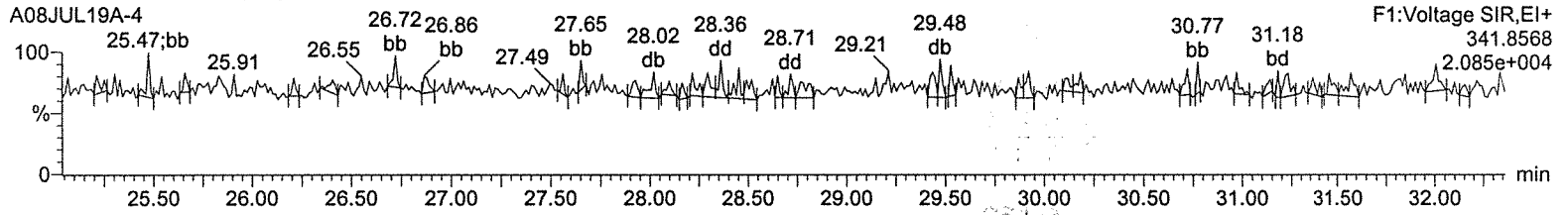
Total-pentafurans (F1)

A08JUL19A-4



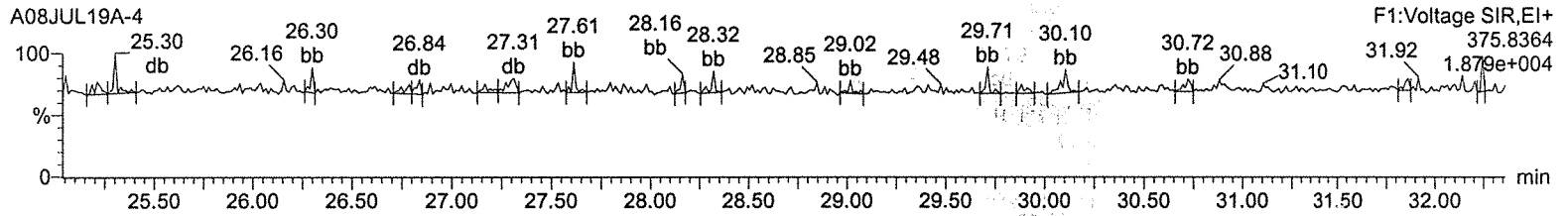
Total-pentafurans (F1)

A08JUL19A-4



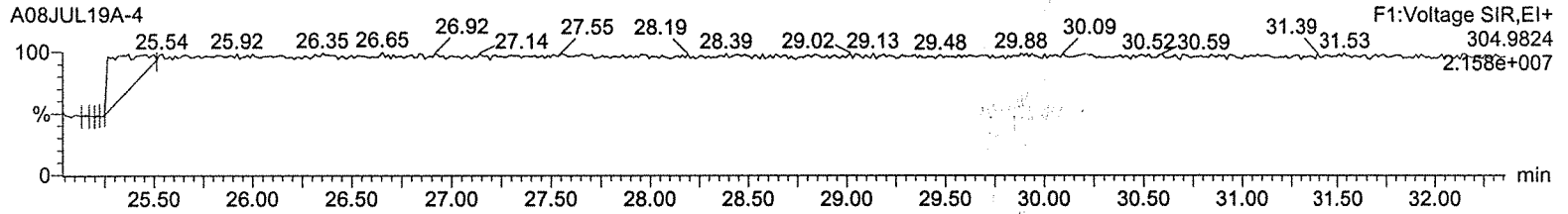
HxDPE

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

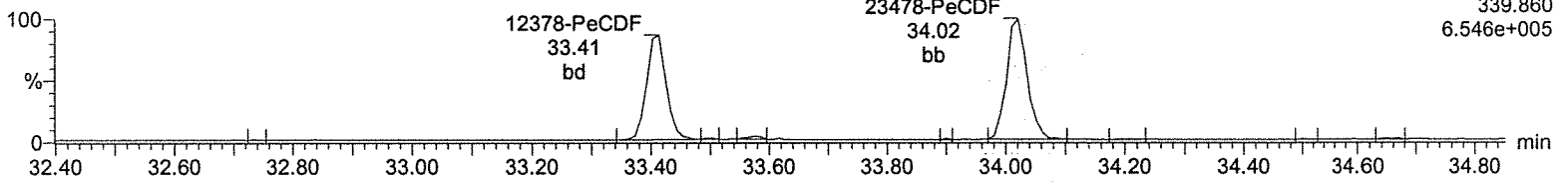
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-pentafurans

A08JUL19A-4

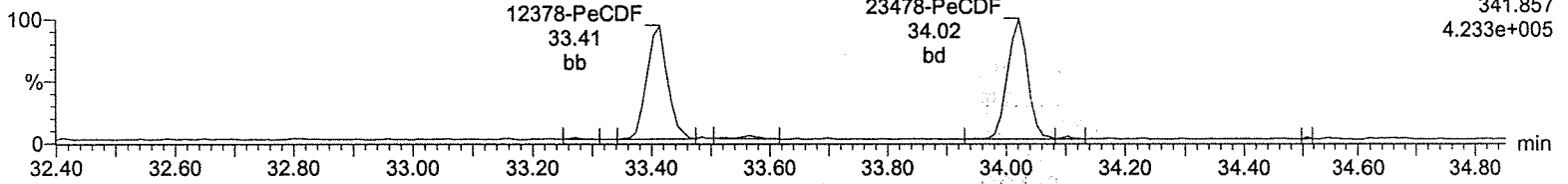
F2:Voltage SIR,EI+
339.860
6.546e+005



Total-pentafurans

A08JUL19A-4

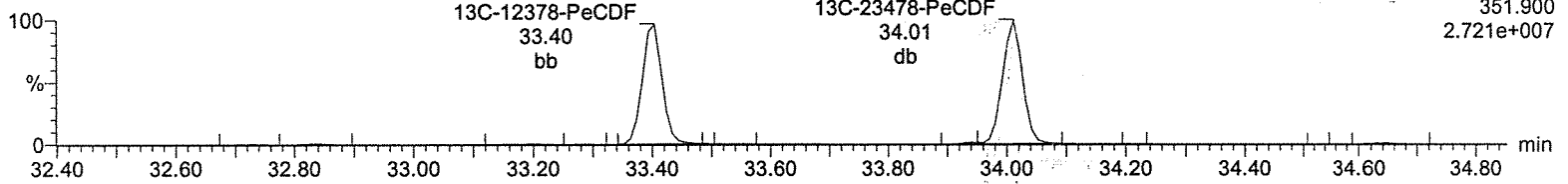
F2:Voltage SIR,EI+
341.857
4.233e+005



13C-12378-PeCDF

A08JUL19A-4

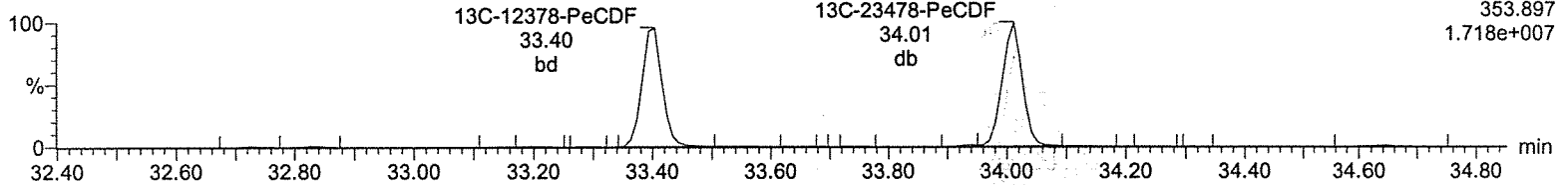
F2:Voltage SIR,EI+
351.900
2.721e+007



13C-12378-PeCDF

A08JUL19A-4

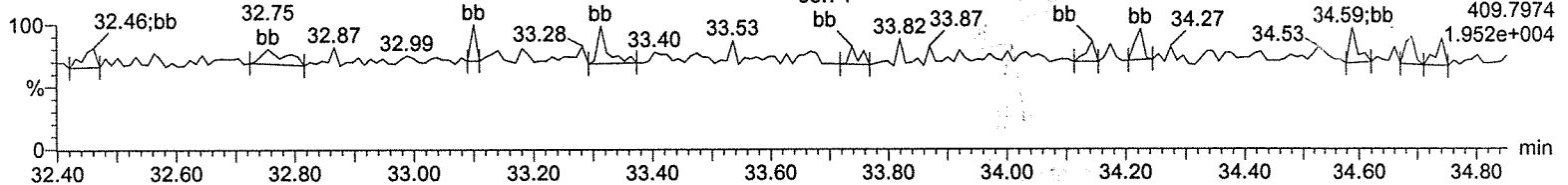
F2:Voltage SIR,EI+
353.897
1.718e+007



HpDPE

A08JUL19A-4

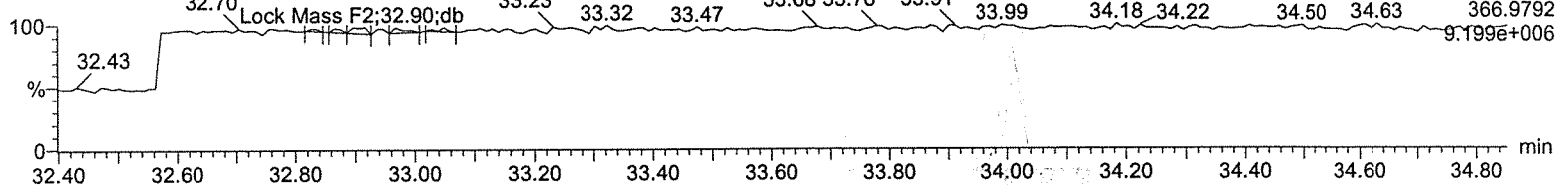
F2:Voltage SIR,EI+
409.7974
1.952e+004



Lock Mass F2

A08JUL19A-4

F2:Voltage SIR,EI+
366.9792
9.199e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

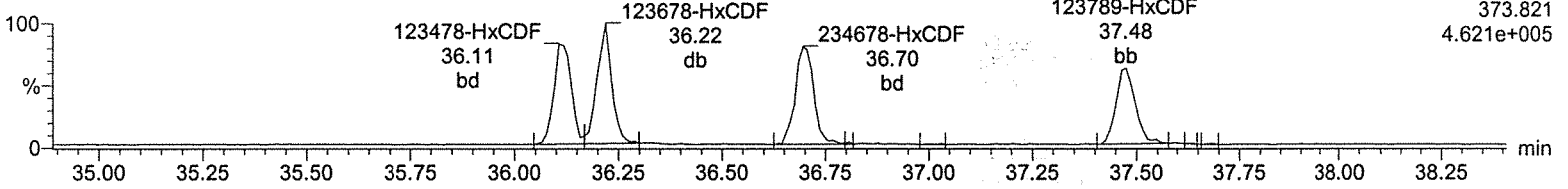
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexafurans

A08JUL19A-4

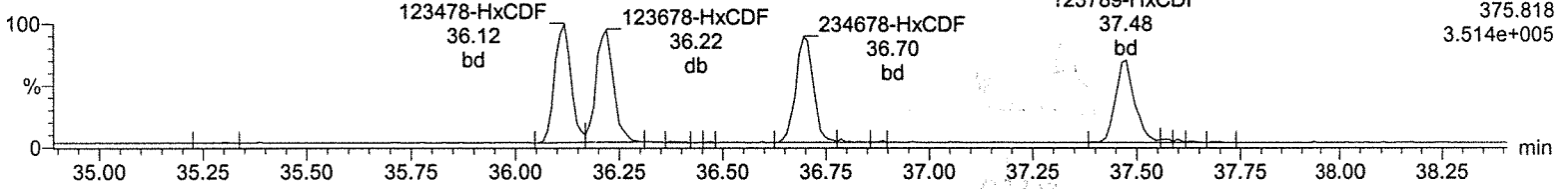
F3:Voltage SIR,EI+
373.821
4.621e+005



Total-hexafurans

A08JUL19A-4

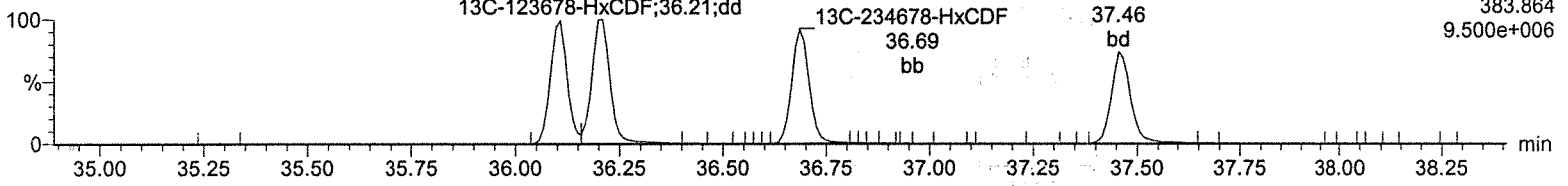
F3:Voltage SIR,EI+
375.818
3.514e+005



13C-123478-HxCDF

A08JUL19A-4

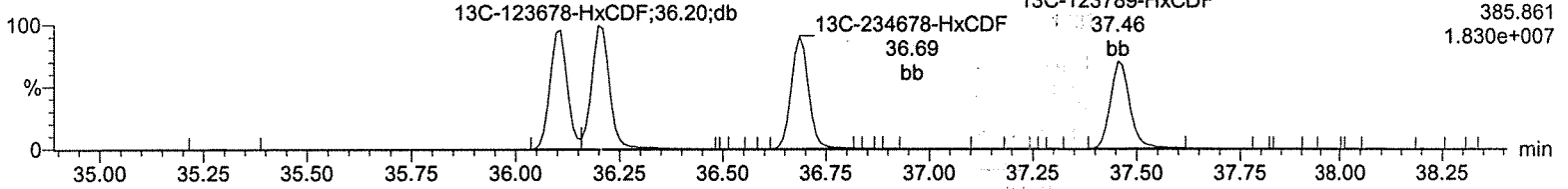
F3:Voltage SIR,EI+
383.864
9.500e+006



13C-123478-HxCDF

A08JUL19A-4

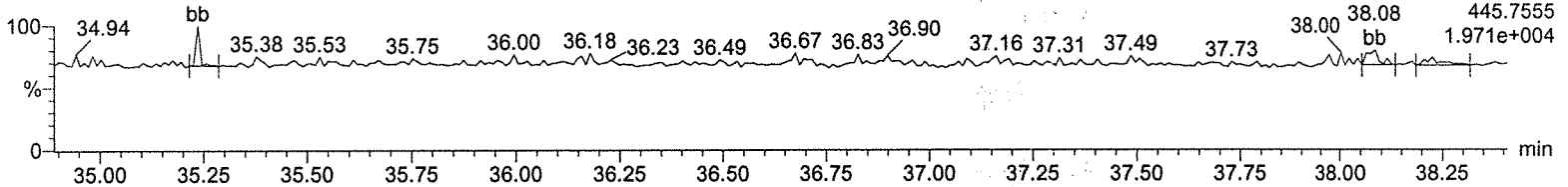
F3:Voltage SIR,EI+
385.861
1.830e+007



OcDPE

A08JUL19A-4

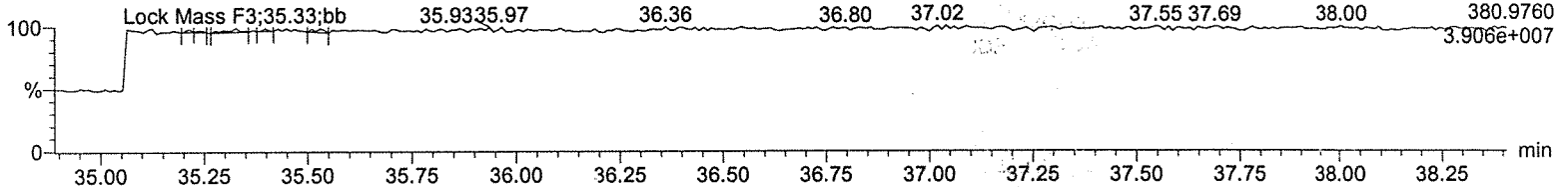
F3:Voltage SIR,EI+
445.7555
1.971e+004



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

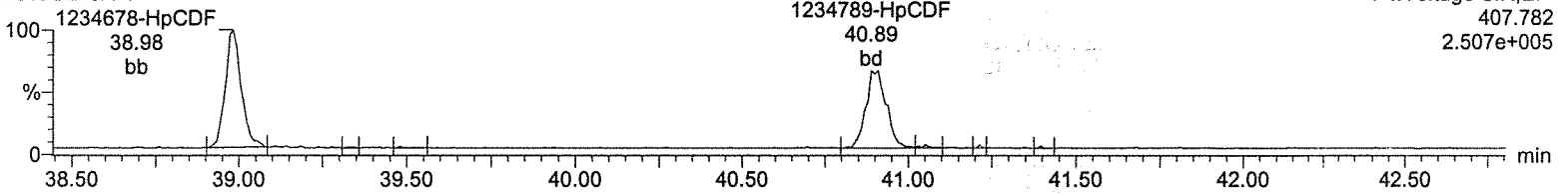
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptafurans

A08JUL19A-4

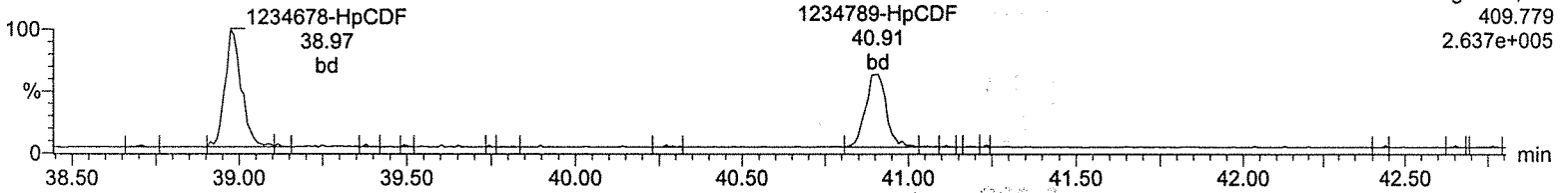
F4:Voltage SIR,EI+
407.782
2.507e+005



Total-heptafurans

A08JUL19A-4

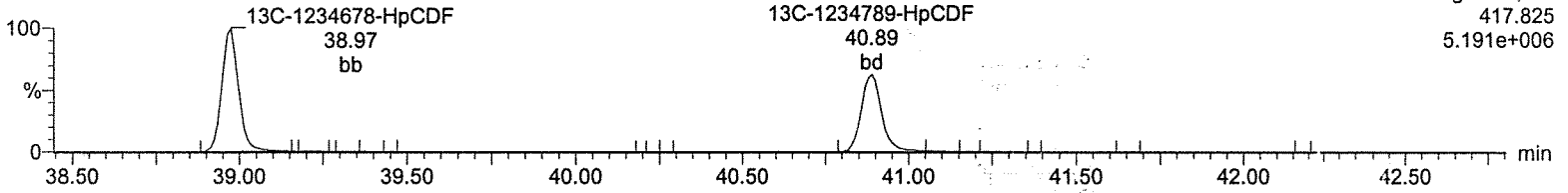
F4:Voltage SIR,EI+
409.779
2.637e+005



13C-1234678-HpCDF

A08JUL19A-4

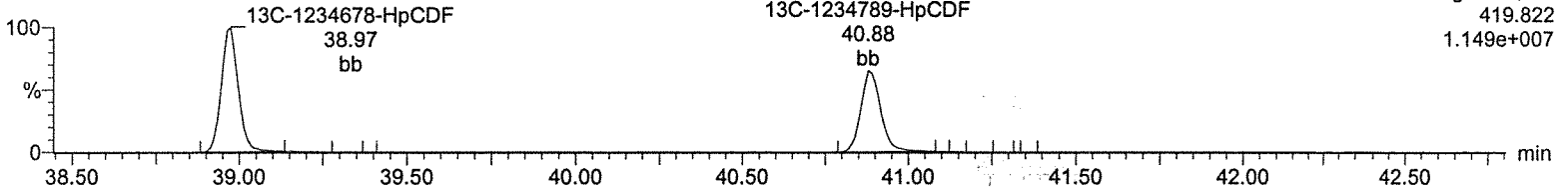
F4:Voltage SIR,EI+
417.825
5.191e+006



13C-1234678-HpCDF

A08JUL19A-4

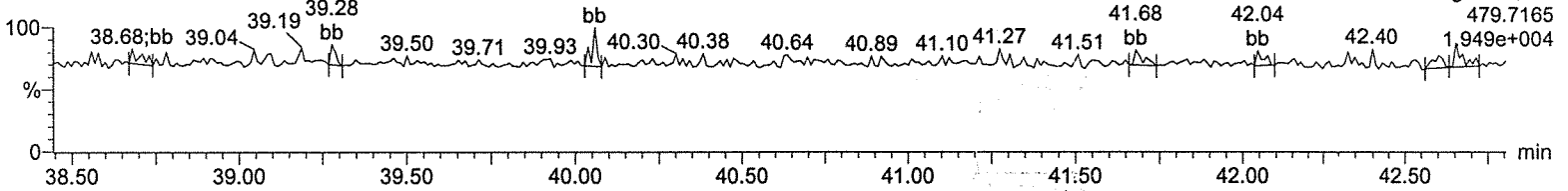
F4:Voltage SIR,EI+
419.822
1.149e+007



NoDPE

A08JUL19A-4

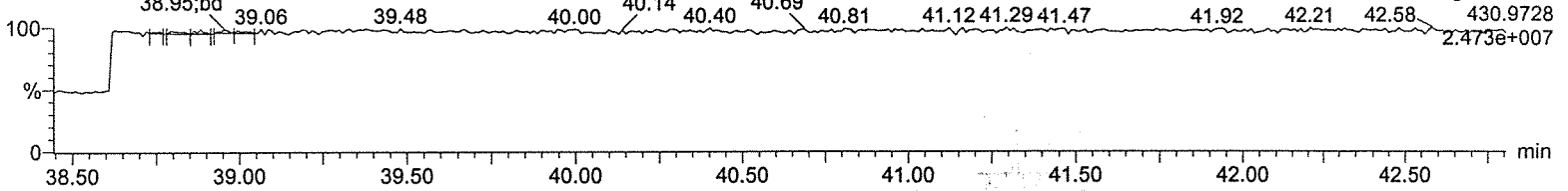
F4:Voltage SIR,EI+
479.7165
1.949e+004



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

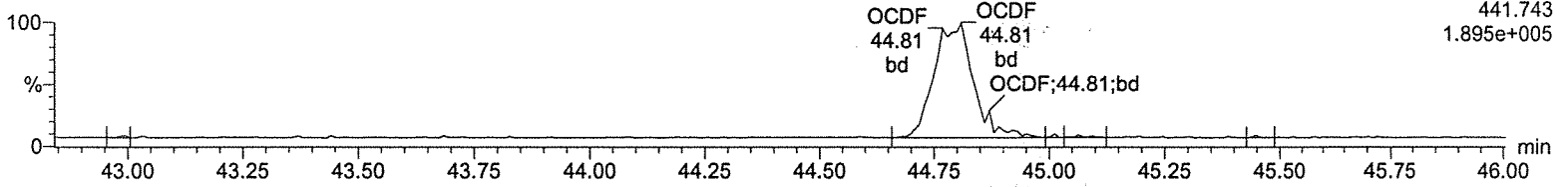
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

OCDF

A08JUL19A-4

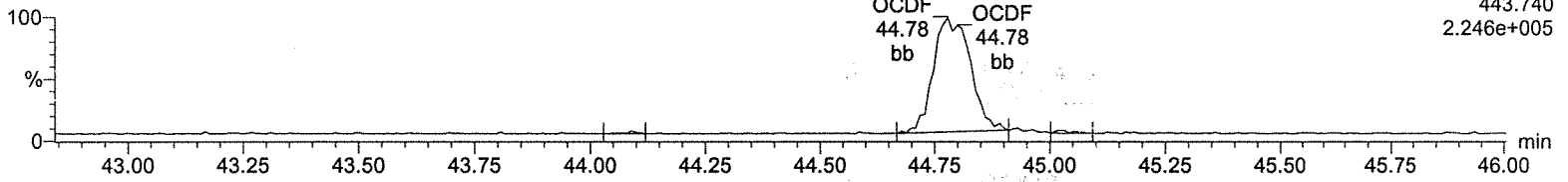
F5:Voltage SIR,EI+
441.743
1.895e+005



OCDF

A08JUL19A-4

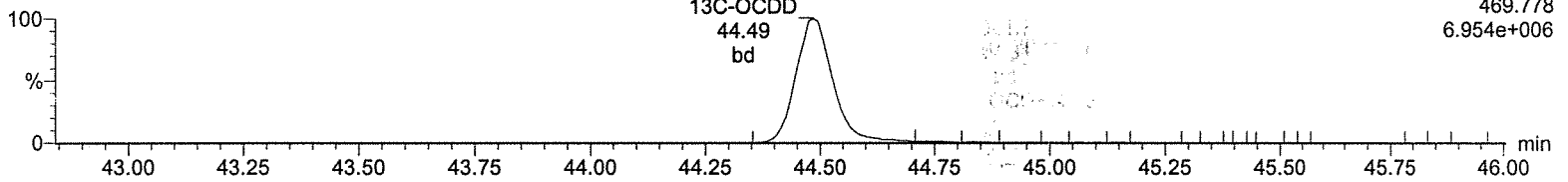
F5:Voltage SIR,EI+
443.740
2.246e+005



13C-OCDD

A08JUL19A-4

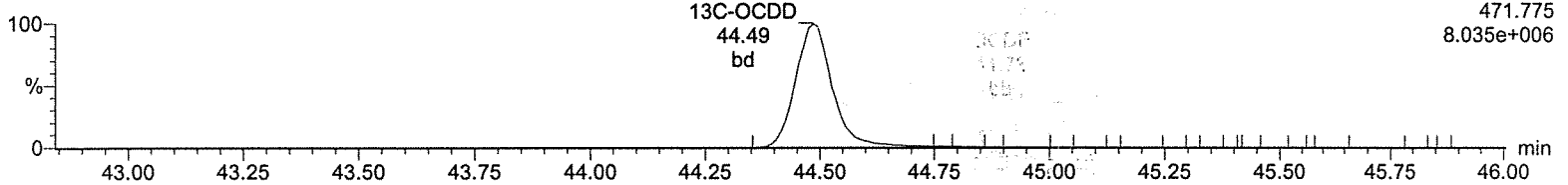
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

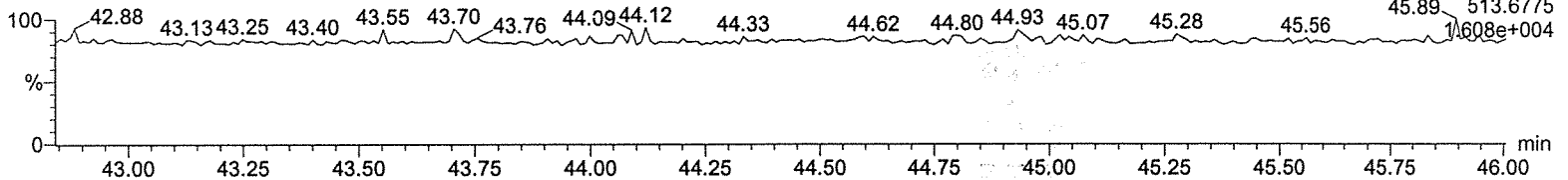
F5:Voltage SIR,EI+
471.775
8.035e+006



DeDPE

A08JUL19A-4

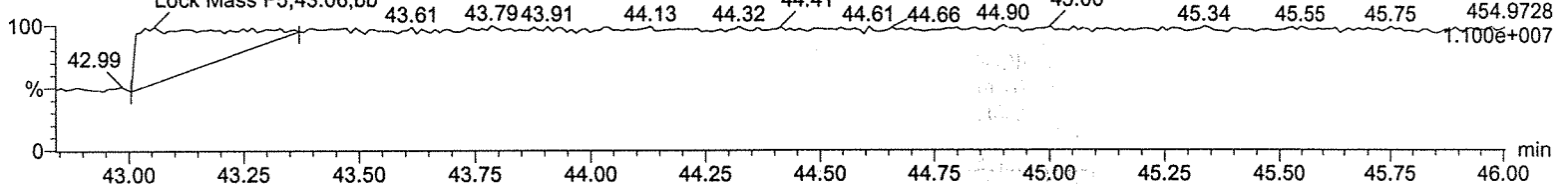
F5:Voltage SIR,EI+
45.89 513.6775
1.608e+004



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
45.75 454.9728
1.100e+007



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2019 July 9

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	SM2	M	M2
1	2378-TCDD	1.64e4	1.96e4	3.60e4	31.35	1.000	0.84	NO	1.926	0.852	0.884	5.07	0.0366	3.15e5	2708	116.2	3.71e5	1865	198.8	bd	bb
2	12378-PeCDD	7.01e4	4.54e4	1.16e5	34.21	1.000	1.54	NO	9.858	0.841	0.853	1.65	0.0620	1.64e6	4036	407.1	1.04e6	1793	580.0	bd	bd
3	123478-HxCDD	6.07e4	4.76e4	1.08e5	36.83	1.000	1.27	NO	10.128	0.952	0.940	3.11	0.0942	1.22e6	2456	497.4	9.73e5	4175	232.9	bd	bd
4	123678-HxCDD	6.34e4	5.11e4	1.15e5	36.92	1.000	1.24	NO	9.763	0.922	0.944	2.57	0.0868	1.18e6	2456	481.4	1.03e6	4175	246.2	dd	db
5	123789-HxCDD	6.39e4	4.66e4	1.10e5	37.16	1.007	1.37	NO	10.002	0.927	0.927	3.30	0.0918	1.18e6	2456	480.1	9.15e5	4175	219.1	dd	bb
6	1234678-HpCDD	4.59e4	4.40e4	8.99e4	40.24	1.000	1.04	NO	9.996	1.040	1.040	2.88	0.110	6.56e5	2814	233.2	6.28e5	2050	306.2	bd	bd
7	OCDD	7.02e4	7.76e4	1.48e5	44.49	1.000	0.90	NO	19.465	0.945	0.971	2.39	0.188	8.27e5	1894	436.6	8.97e5	3432	261.3	bb	bd
8	2378-TCDF	1.89e4	2.56e4	4.45e4	30.66	1.000	0.74	NO	1.930	0.944	0.978	5.59	0.0473	2.49e5	1586	157.1	3.39e5	3348	101.3	bb	bb
9	12378-PeCDF	1.06e5	6.71e4	1.73e5	33.40	1.000	1.58	NO	9.783	0.925	0.945	3.41	0.0636	2.70e6	3895	693.8	1.78e6	5562	320.5	bd	bb
10	123478-PeCDF	1.18e5	7.25e4	1.90e5	34.01	1.000	1.63	NO	9.783	0.965	0.987	3.73	0.0611	2.97e6	3895	763.7	1.80e6	5562	323.0	bb	bb
11	123478-HxCDF	8.27e4	6.81e4	1.51e5	36.11	1.000	1.21	NO	9.763	1.061	1.087	3.86	0.0759	1.84e6	4254	433.3	1.52e6	3988	381.2	bd	bd
12	123678-HxCDF	9.22e4	7.42e4	1.66e5	36.21	1.000	1.24	NO	9.951	1.035	1.041	3.23	0.0734	1.84e6	4254	432.3	1.62e6	3988	407.3	db	db
13	1234678-HxCDF	8.43e4	7.08e4	1.55e5	36.69	1.000	1.19	NO	9.949	1.130	1.136	3.17	0.0789	1.74e6	4254	408.5	1.48e6	3988	370.3	bd	bd
14	123789-HxCDF	7.38e4	5.81e4	1.32e5	37.48	1.000	1.27	NO	10.037	1.065	1.061	2.29	0.105	1.25e6	4254	294.9	1.09e6	3988	272.3	bb	bb
15	1234678-HpCDF	6.54e4	6.32e4	1.29e5	38.98	1.000	1.03	NO	9.981	1.148	1.150	3.86	0.0875	1.11e6	3400	327.0	1.11e6	2921	379.1	bd	bd
16	1234789-HpCDF	5.22e4	4.99e4	1.02e5	40.90	1.000	1.04	NO	9.741	1.171	1.202	1.91	0.129	7.25e5	3400	213.2	7.43e5	2921	254.5	bd	bd
17	OCDF	8.37e4	9.25e4	1.76e5	44.78	1.007	0.90	NO	19.911	1.128	1.133	6.78	0.224	8.60e5	5124	167.8	1.02e6	2272	447.0	bd	bd
18	13C-2378-TCDD	9.19e5	1.19e6	2.11e6	31.34	1.015	0.77	NO	99.089	1.118	1.128	2.36	0.123	1.85e7	8904	2075.2	2.42e7	4676	5171.3	bb	bb
19	13C-12378-PeCDD	8.32e5	5.41e5	1.37e6	34.20	1.108	1.54	NO	96.776	0.727	0.751	5.03	0.0911	2.00e7	3434	5827.9	1.32e7	3264	4047.5	bb	bb
20	13C-123478-HxCDD	6.41e5	4.98e5	1.14e6	36.82	0.991	1.29	NO	99.739	0.894	0.896	1.38	0.237	1.27e7	7585	1668.3	1.03e7	8736	1182.7	bd	bd
21	13C-123678-HxCDD	6.70e5	5.73e5	1.24e6	36.91	0.993	1.17	NO	98.976	0.976	0.986	0.84	0.216	1.31e7	7585	1725.4	1.07e7	8736	1227.3	dd	dd
22	13C-1234678-HpCDD	4.39e5	4.25e5	8.65e5	40.23	1.093	1.03	NO	101.051	0.679	0.672	1.29	0.236	6.46e6	6562	985.2	6.05e6	5587	1082.0	bb	bd
23	13C-OCDD	7.21e5	8.42e5	1.56e6	44.49	1.197	0.86	NO	191.086	0.614	0.642	4.87	0.302	8.07e6	5375	1501.9	8.99e6	9504	945.8	bb	bd
24	13C-2378-TCDF	1.03e6	1.33e6	2.36e6	30.64	0.993	0.77	NO	99.848	1.248	1.250	1.88	0.185	1.40e7	15077	925.5	1.82e7	7573	2401.2	bb	bb
25	13C-12378-PeCDF	1.14e6	7.27e5	1.87e6	33.39	1.082	1.57	NO	98.012	0.991	1.011	4.24	0.186	2.88e7	10165	2836.7	1.87e7	8269	2257.4	bb	bb
26	13C-23478-PeCDF	1.20e6	7.67e5	1.97e6	34.00	1.102	1.57	NO	98.156	1.044	1.063	5.28	0.177	2.88e7	10165	2830.5	1.86e7	8269	2249.2	bb	bb
27	13C-123478-HxCDF	4.84e5	9.37e5	1.42e6	36.10	0.972	0.52	NO	100.421	1.115	1.111	1.42	0.255	1.02e7	10424	978.9	1.98e7	11320	1746.0	bd	bd
28	13C-123678-HxCDF	5.51e5	1.06e6	1.61e6	36.20	0.974	0.52	NO	101.235	1.262	1.247	1.06	0.227	1.11e7	10424	1065.6	2.11e7	11320	1864.5	dd	dd
29	13C-234678-HxCDF	4.74e5	8.99e5	1.37e6	36.69	0.987	0.53	NO	99.614	1.078	1.082	1.01	0.262	9.53e6	10424	914.6	1.83e7	11320	1619.4	bb	bb
30	13C-123789-HxCDF	4.34e5	8.05e5	1.24e6	37.46	1.008	0.54	NO	100.569	0.973	0.967	1.08	0.293	7.78e6	10424	746.4	1.45e7	11320	1279.8	bd	bb
31	13C-1234678-HpCDF	3.48e5	7.72e5	1.12e6	38.96	1.049	0.45	NO	101.100	0.880	0.870	1.11	0.203	5.86e6	7080	827.3	1.29e7	6451	1996.6	bd	bb
32	13C-1234789-HpCDF	2.69e5	6.03e5	8.72e5	40.88	1.100	0.45	NO	101.106	0.685	0.677	1.01	0.260	3.78e6	7080	534.3	8.61e6	6451	1355.0	bd	bb
33	13C-1234-TCDD	8.25e5	1.06e6	1.89e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.139	1.28e7	8904	1440.8	1.64e7	4676	3505.8	bb	bb
34	13C-123789-HxCDD	7.00e5	5.74e5	1.27e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.213	1.26e7	7585	1667.6	1.04e7	8736	1189.4	db	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Co#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	3.85e4		3.85e4	31.35	1.016			1.919	1.018	1.061	4.54	0.0384	7.43e5	3989	186.2						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

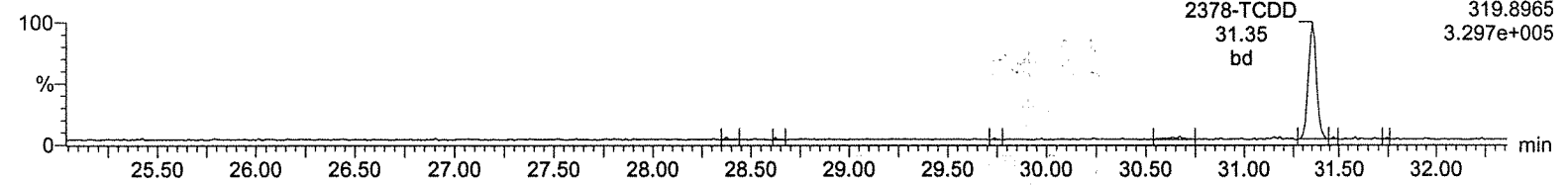
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

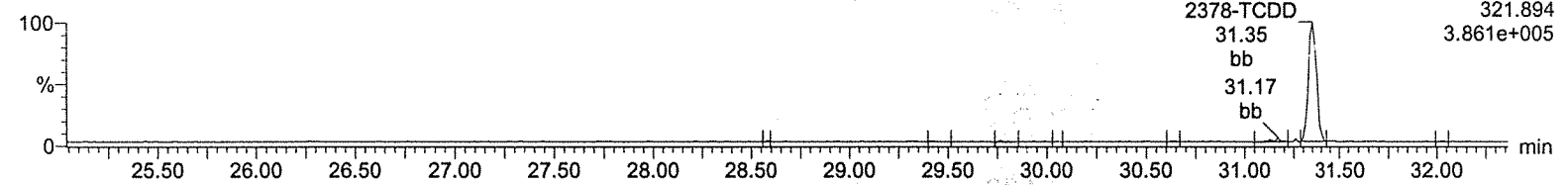
Total-tetradoxins

A08JUL19A-5



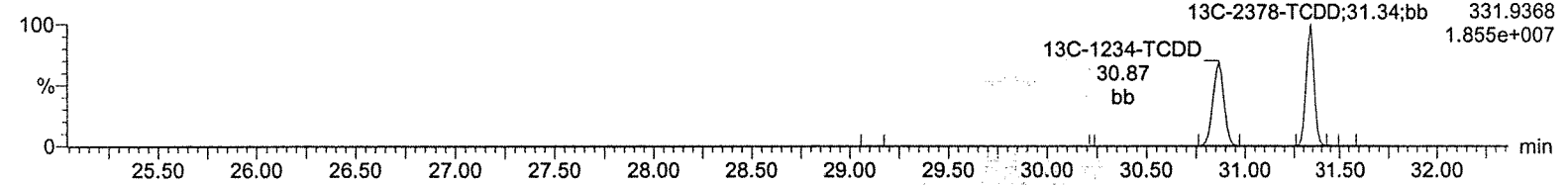
Total-tetradoxins

A08JUL19A-5



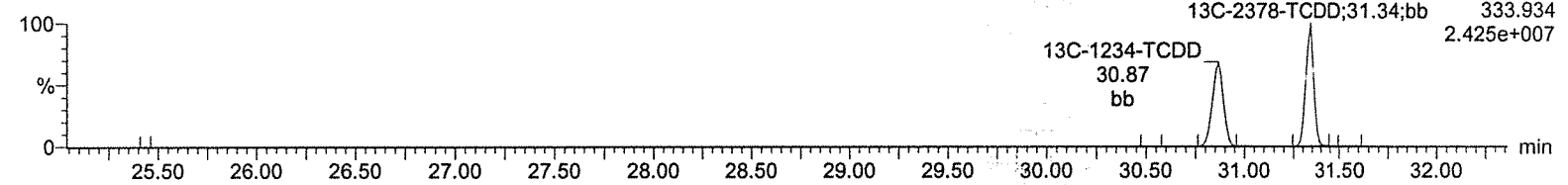
13C-2378-TCDD

A08JUL19A-5



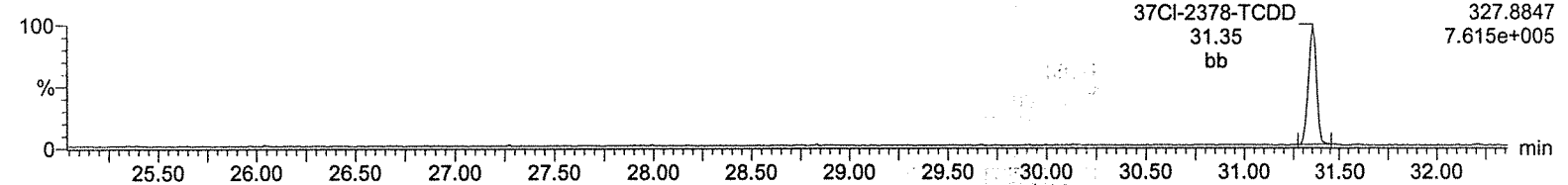
13C-2378-TCDD

A08JUL19A-5



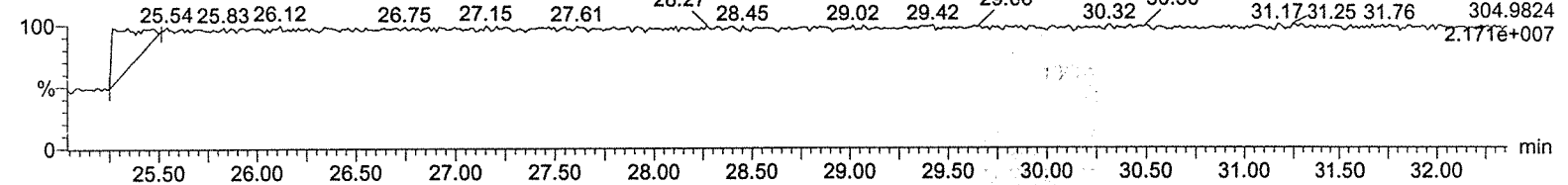
37Cl-2378-TCDD

A08JUL19A-5



Lock Mass F1

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

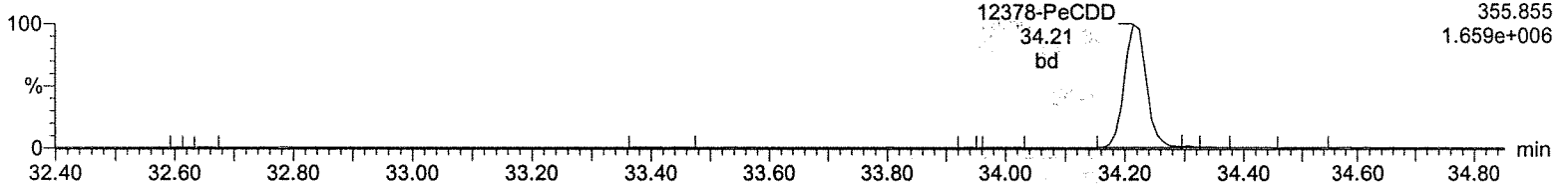
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-pentadioxins

A08JUL19A-5

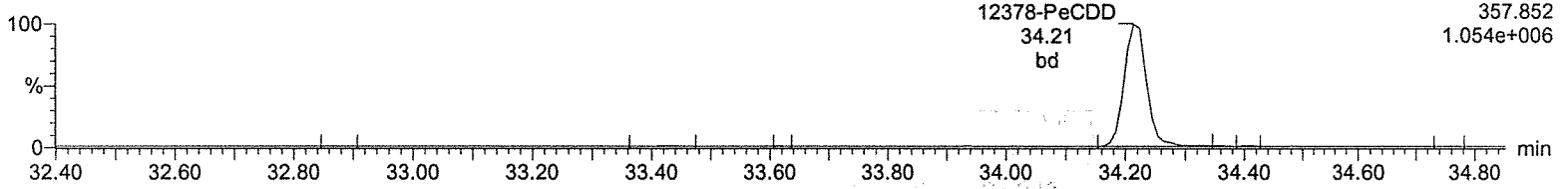
F2:Voltage SIR,EI+
355.855
1.659e+006



Total-pentadioxins

A08JUL19A-5

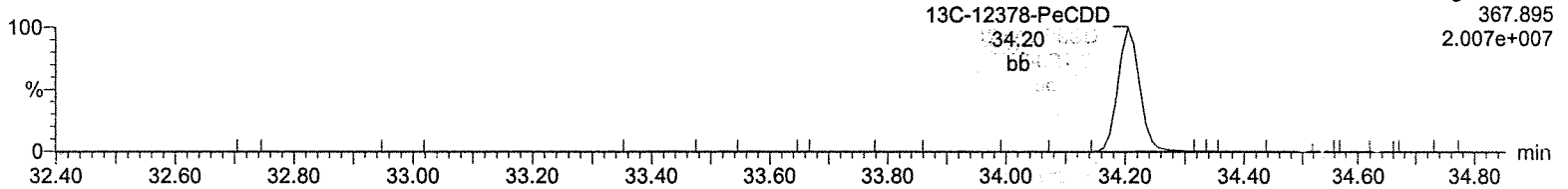
F2:Voltage SIR,EI+
357.852
1.054e+006



13C-12378-PeCDD

A08JUL19A-5

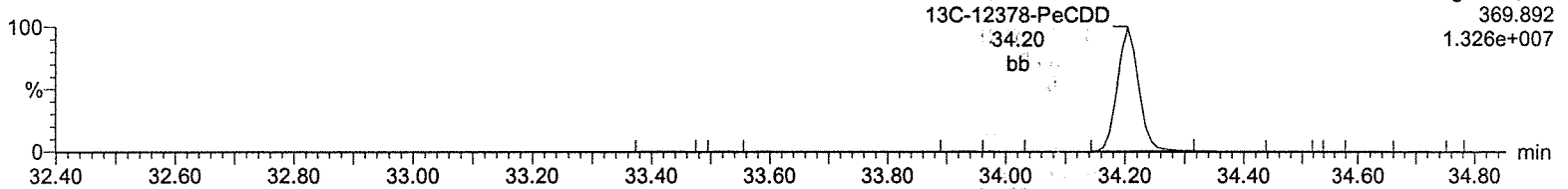
F2:Voltage SIR,EI+
367.895
2.007e+007



13C-12378-PeCDD

A08JUL19A-5

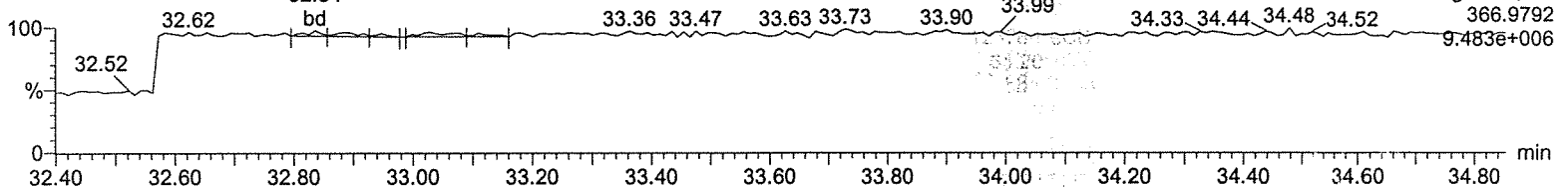
F2:Voltage SIR,EI+
369.892
1.326e+007



Lock Mass F2

A08JUL19A-5

F2:Voltage SIR,EI+
366.9792
9.483e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

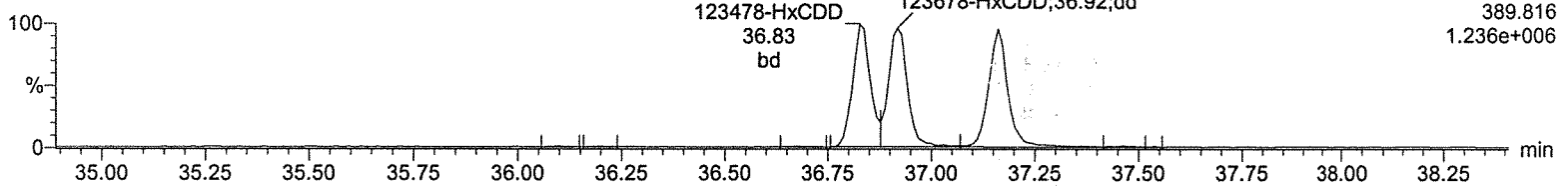
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

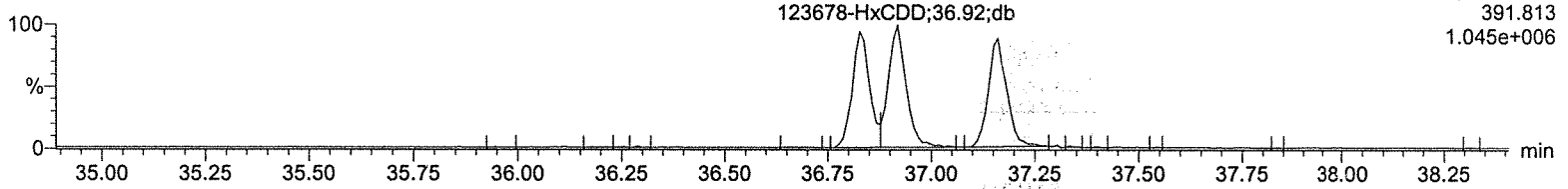
Total-hexadioxins

A08JUL19A-5



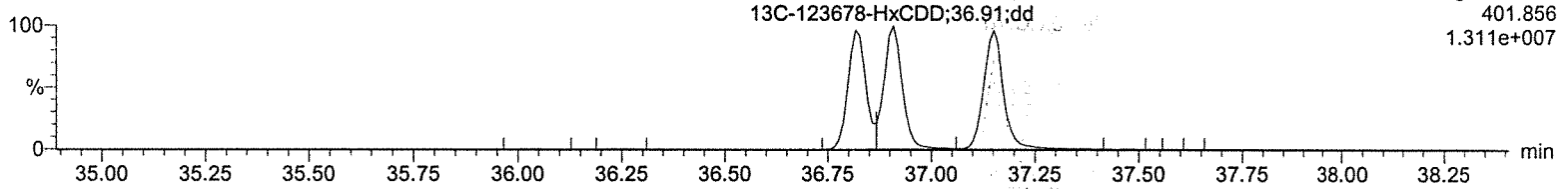
Total-hexadioxins

A08JUL19A-5



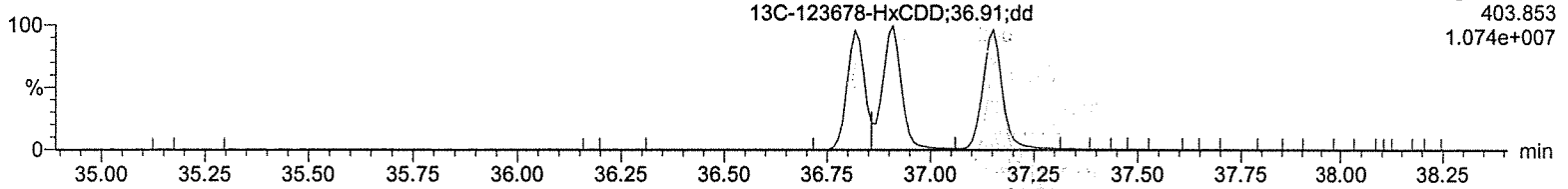
13C-123478-HxCDD

A08JUL19A-5



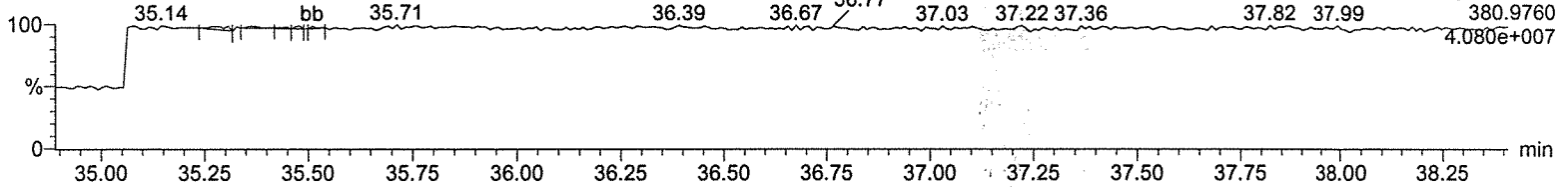
13C-123478-HxCDD

A08JUL19A-5



Lock Mass F3

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

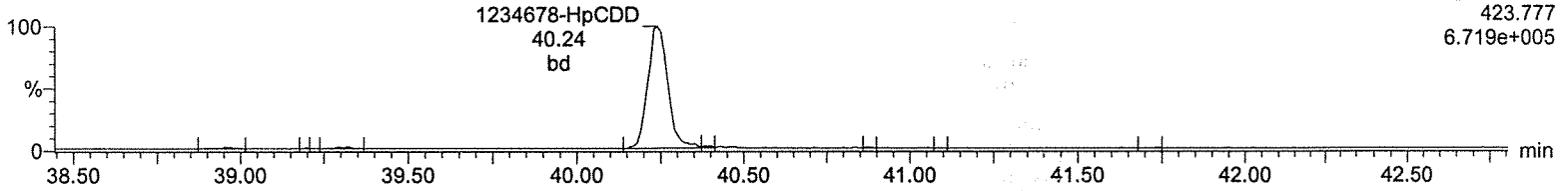
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-heptadioxins

A08JUL19A-5

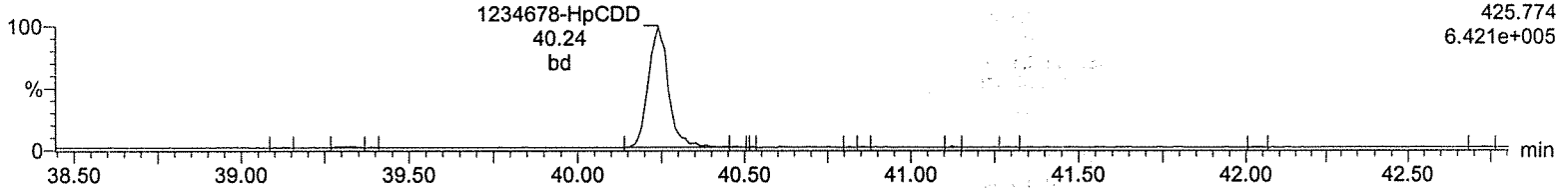
F4:Voltage SIR,EI+
423.777
6.719e+005



Total-heptadioxins

A08JUL19A-5

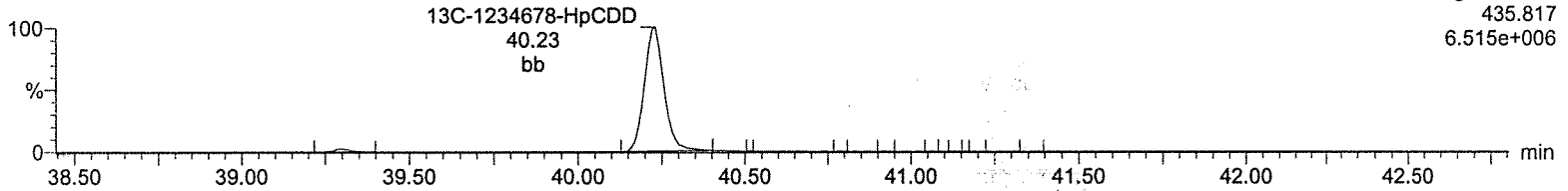
F4:Voltage SIR,EI+
425.774
6.421e+005



13C-1234678-HpCDD

A08JUL19A-5

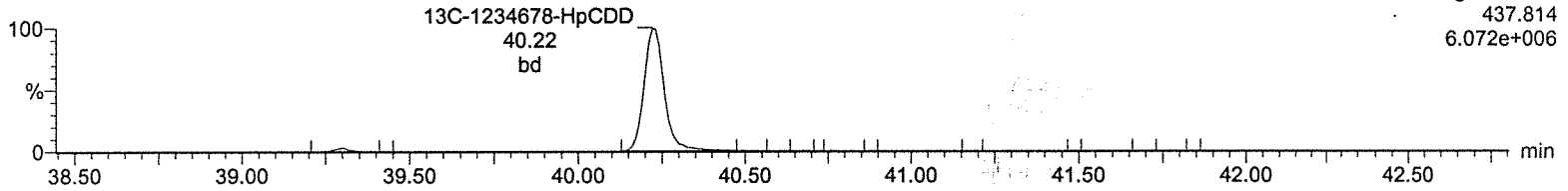
F4:Voltage SIR,EI+
435.817
6.515e+006



13C-1234678-HpCDD

A08JUL19A-5

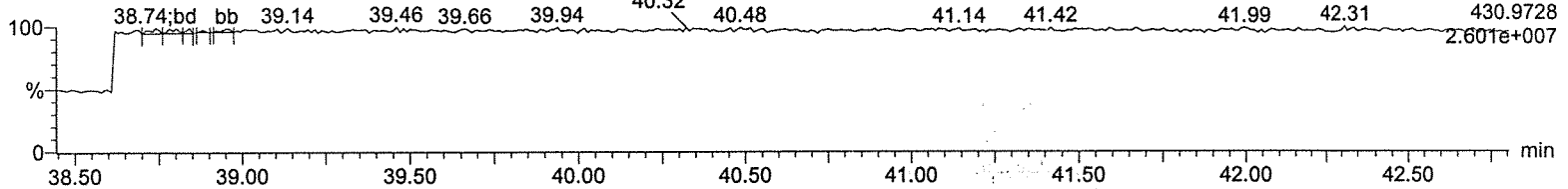
F4:Voltage SIR,EI+
437.814
6.072e+006



Lock Mass F4

A08JUL19A-5

F4:Voltage SIR,EI+
430.9728
2.601e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

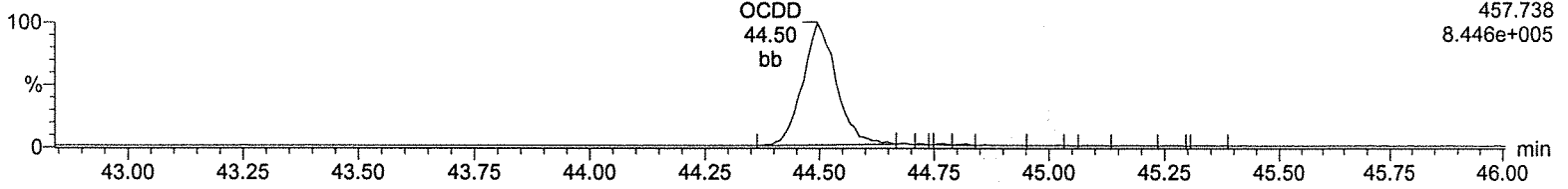
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

OCDD

A08JUL19A-5

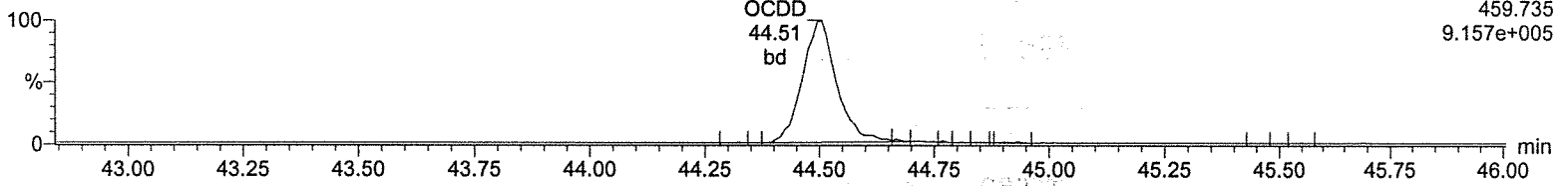
F5:Voltage SIR,EI+
457.738
8.446e+005



OCDD

A08JUL19A-5

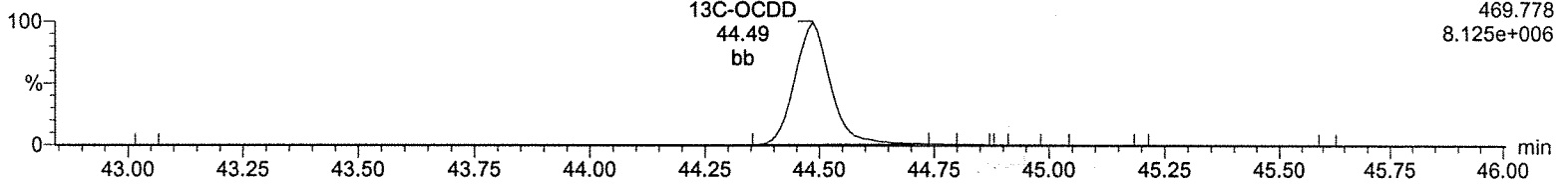
F5:Voltage SIR,EI+
459.735
9.157e+005



13C-OCDD

A08JUL19A-5

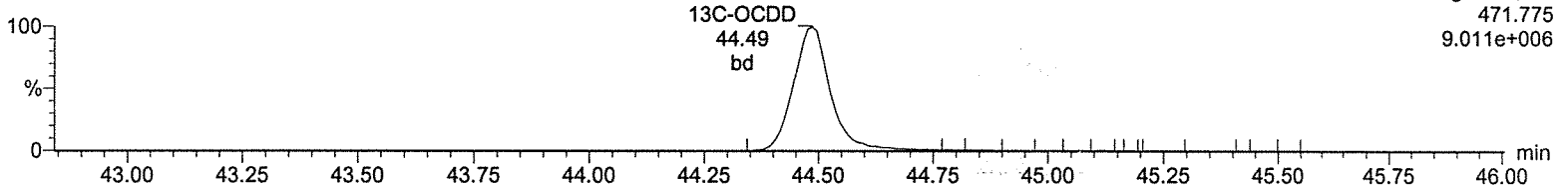
F5:Voltage SIR,EI+
469.778
8.125e+006



13C-OCDD

A08JUL19A-5

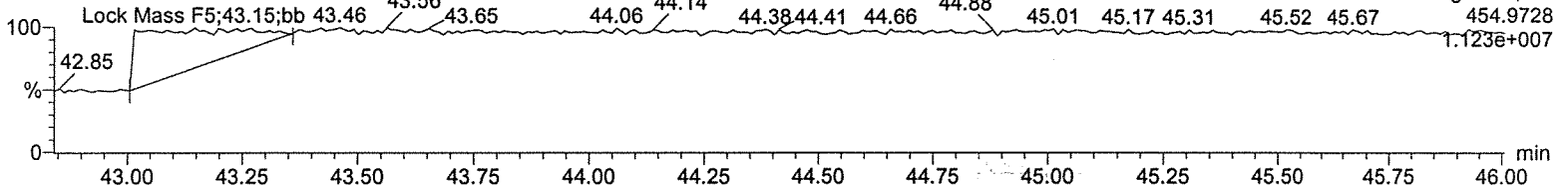
F5:Voltage SIR,EI+
471.775
9.011e+006



Lock Mass F5

A08JUL19A-5

F5:Voltage SIR,EI+
454.9728
1.123e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

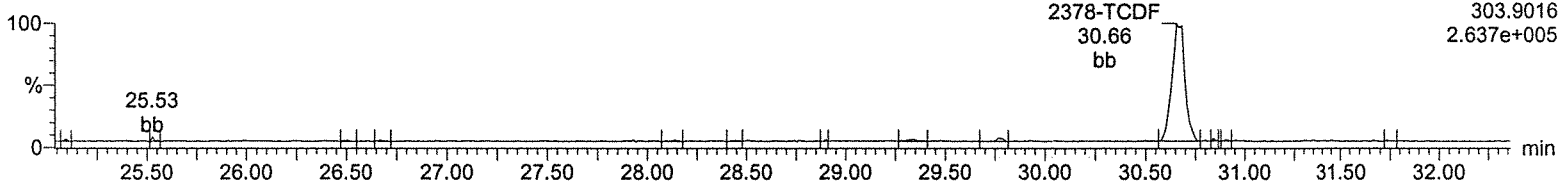
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-tetrafurans

A08JUL19A-5

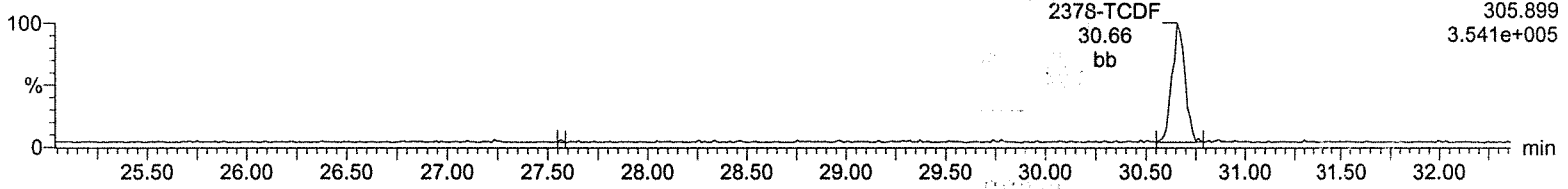
F1:Voltage SIR,EI+
303.9016
2.637e+005



Total-tetrafurans

A08JUL19A-5

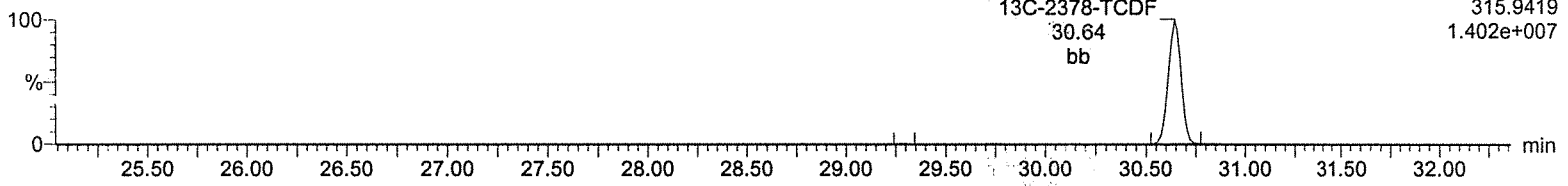
F1:Voltage SIR,EI+
305.899
3.541e+005



13C-2378-TCDF

A08JUL19A-5

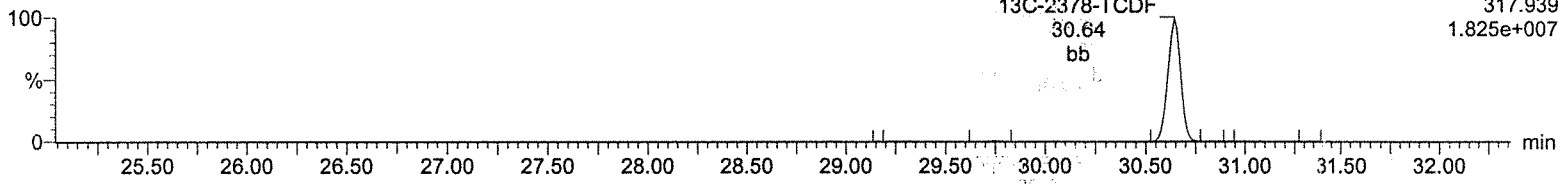
F1:Voltage SIR,EI+
315.9419
1.402e+007



13C-2378-TCDF

A08JUL19A-5

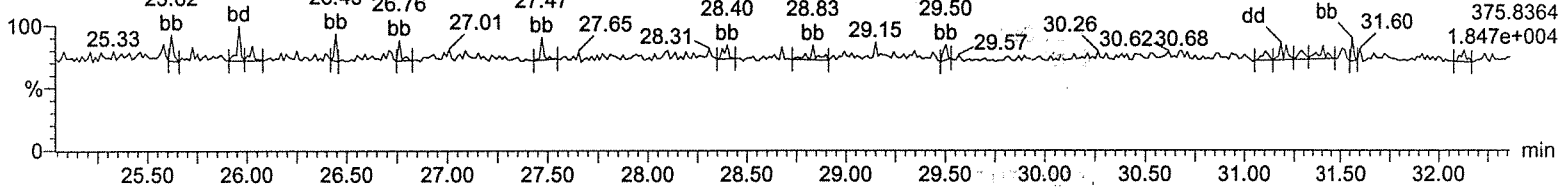
F1:Voltage SIR,EI+
317.939
1.825e+007



HxDPE

A08JUL19A-5

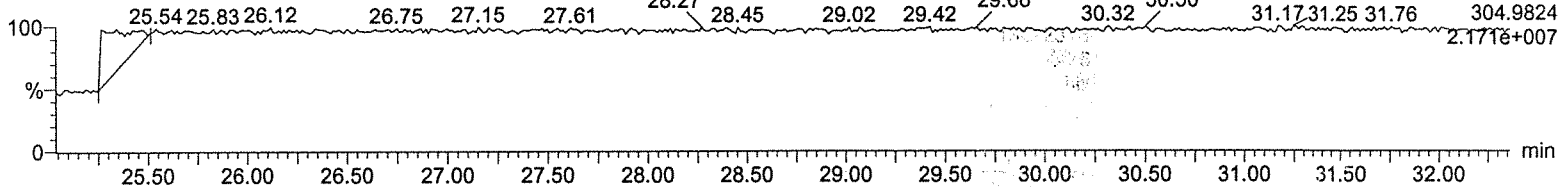
F1:Voltage SIR,EI+
375.8364
1.847e+004



Lock Mass F1

A08JUL19A-5

F1:Voltage SIR,EI+
304.9824
2.171e+007



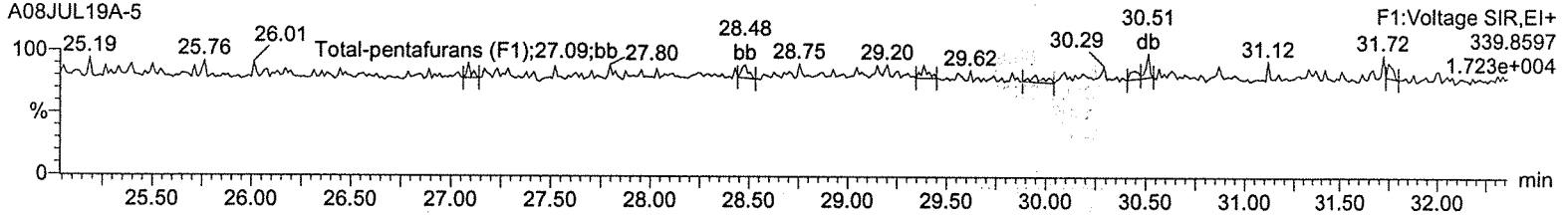
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

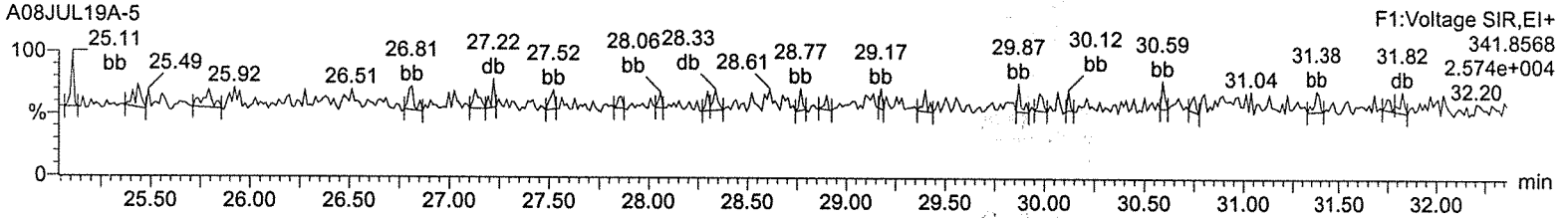
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

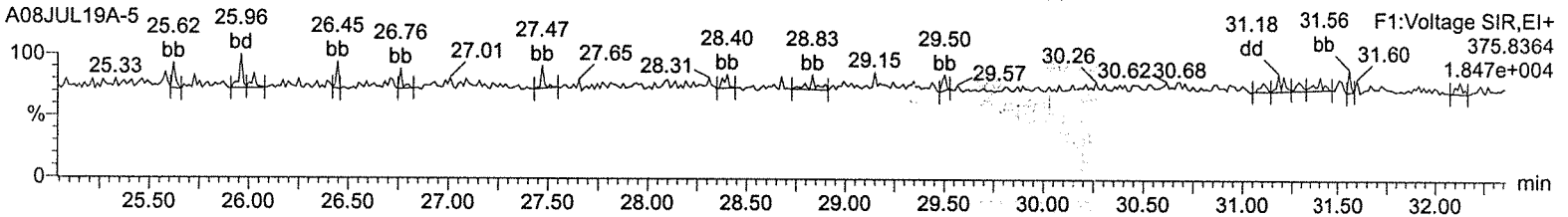
Total-pentafurans (F1)



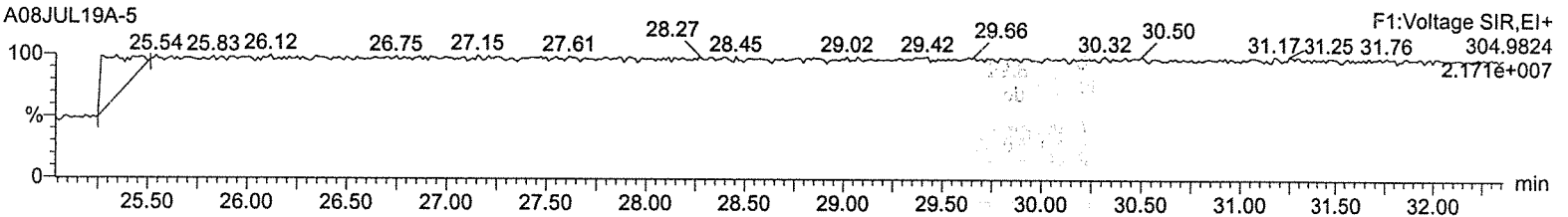
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

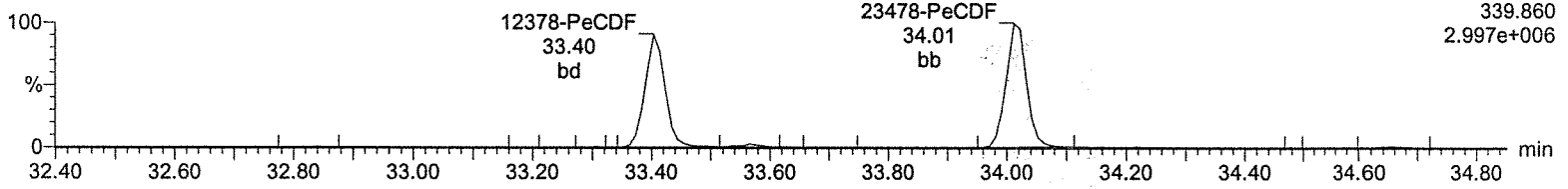
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-pentafurans

A08JUL19A-5

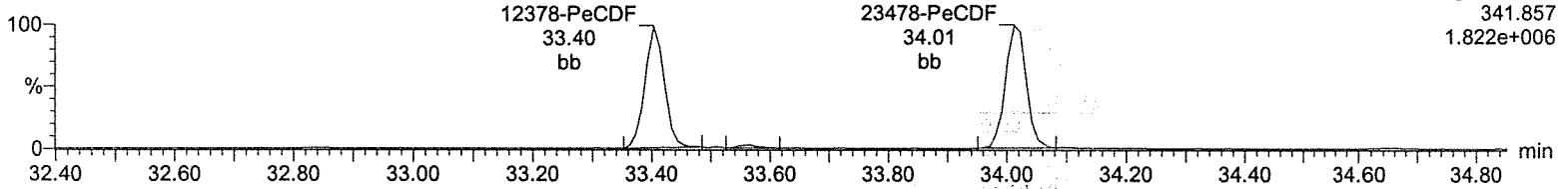
F2:Voltage SIR,EI+
339.860
2.997e+006



Total-pentafurans

A08JUL19A-5

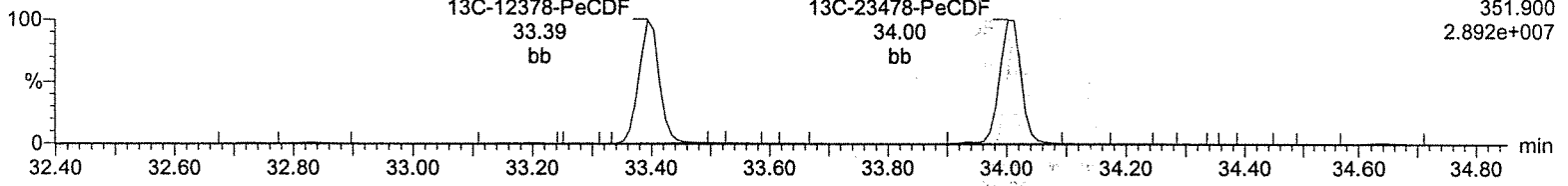
F2:Voltage SIR,EI+
341.857
1.822e+006



13C-12378-PeCDF

A08JUL19A-5

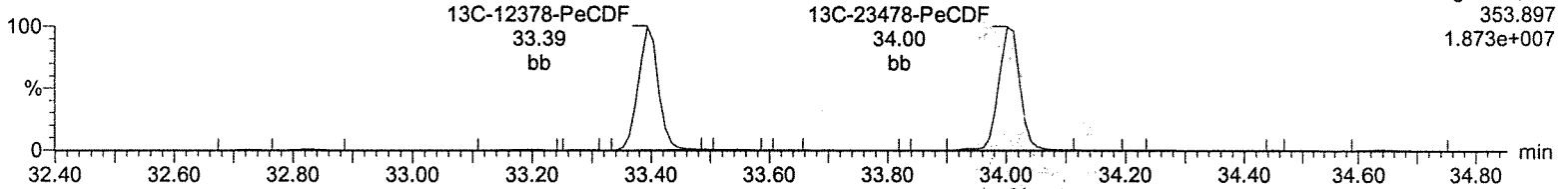
F2:Voltage SIR,EI+
351.900
2.892e+007



13C-12378-PeCDF

A08JUL19A-5

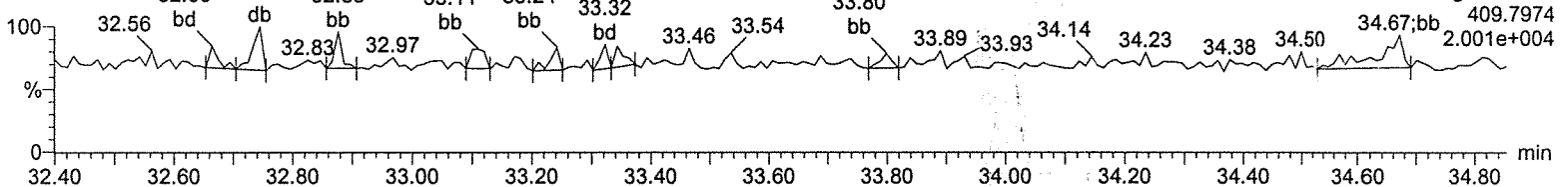
F2:Voltage SIR,EI+
353.897
1.873e+007



HpDPE

A08JUL19A-5

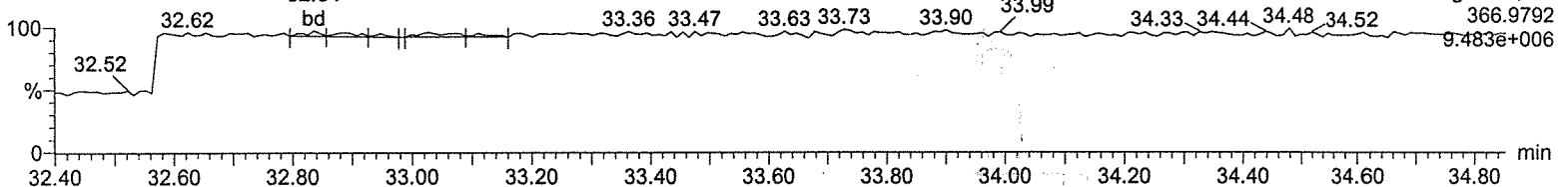
F2:Voltage SIR,EI+
409.7974
2.001e+004



Lock Mass F2

A08JUL19A-5

F2:Voltage SIR,EI+
366.9792
9.483e+006



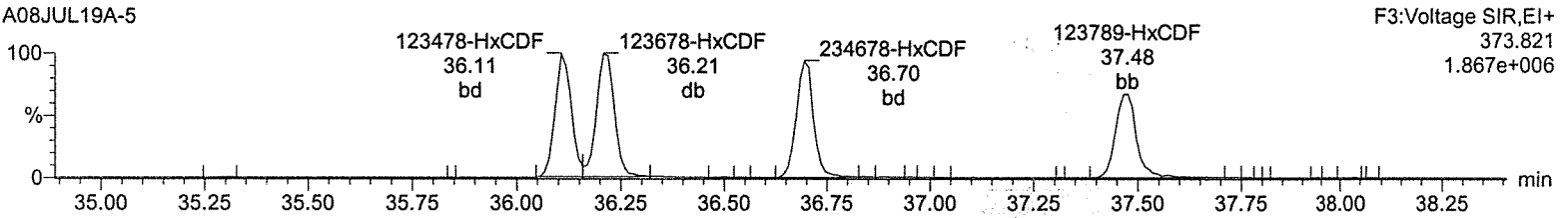
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Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

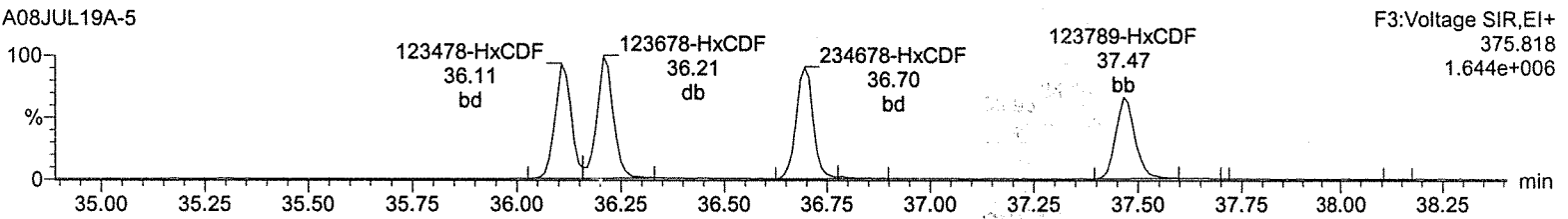
Total-hexafurans

A08JUL19A-5



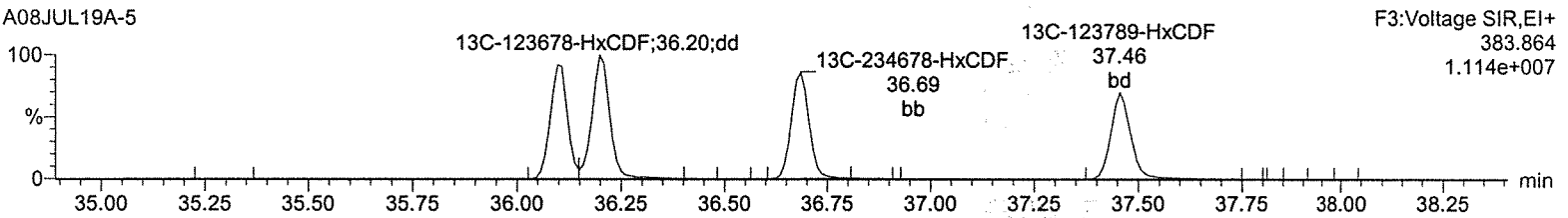
Total-hexafurans

A08JUL19A-5



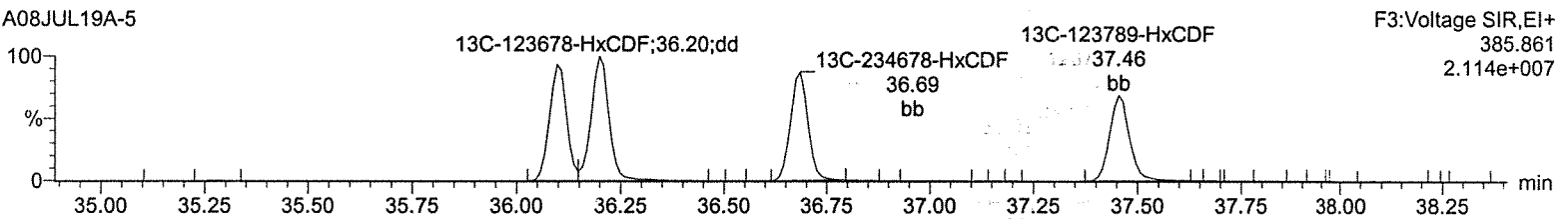
¹³C-123478-HxCDF

A08JUL19A-5



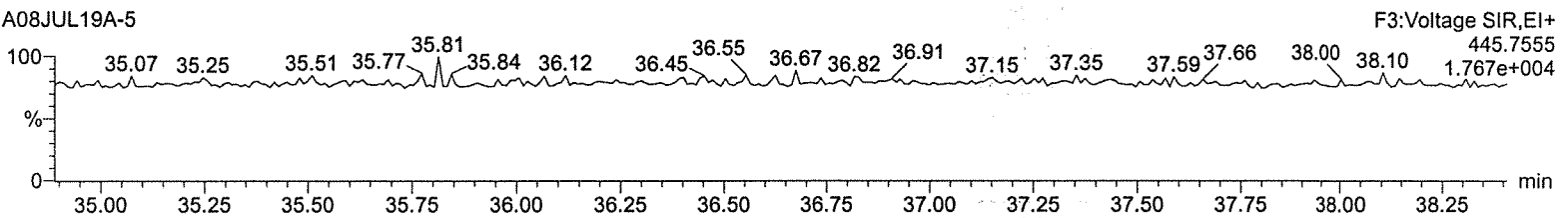
¹³C-123478-HxCDF

A08JUL19A-5



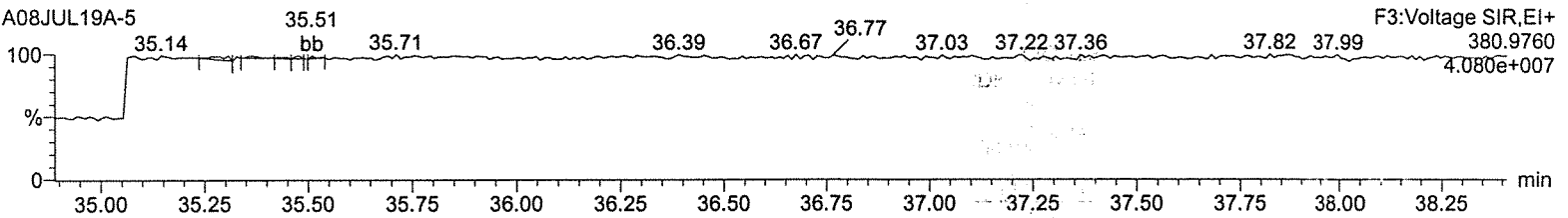
OcDPE

A08JUL19A-5



Lock Mass F3

A08JUL19A-5



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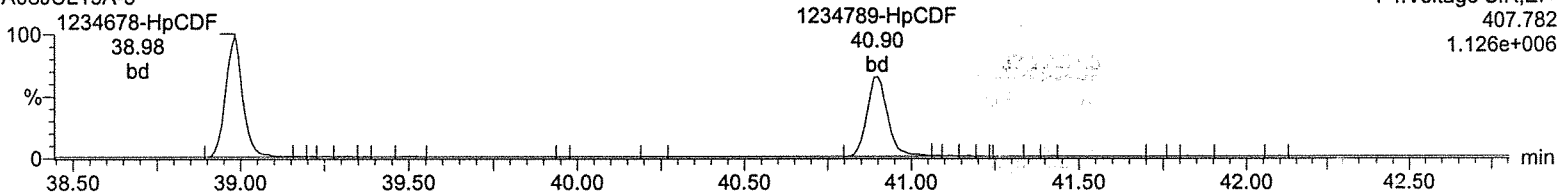
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-heptafurans

A08JUL19A-5

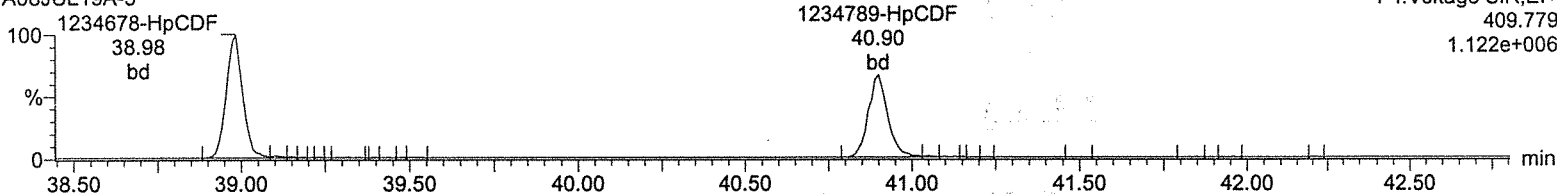
F4:Voltage SIR,EI+
407.782
1.126e+006



Total-heptafurans

A08JUL19A-5

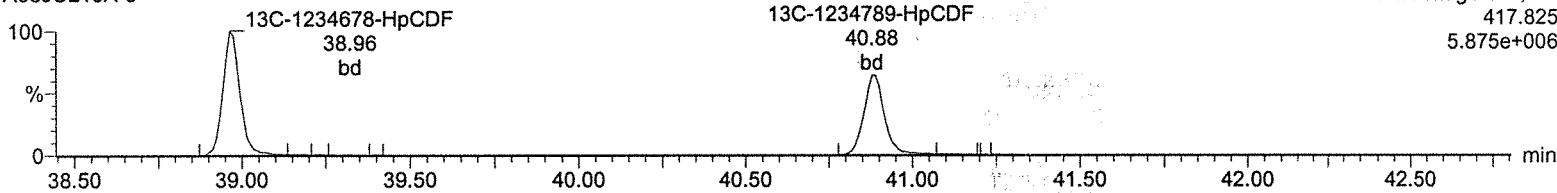
F4:Voltage SIR,EI+
409.779
1.122e+006



13C-1234678-HpCDF

A08JUL19A-5

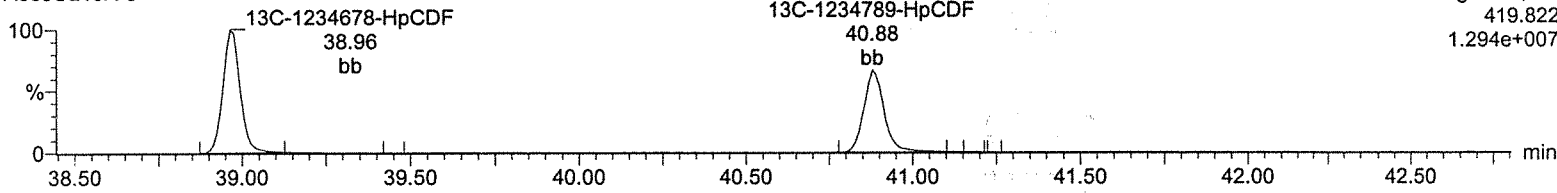
F4:Voltage SIR,EI+
417.825
5.875e+006



13C-1234678-HpCDF

A08JUL19A-5

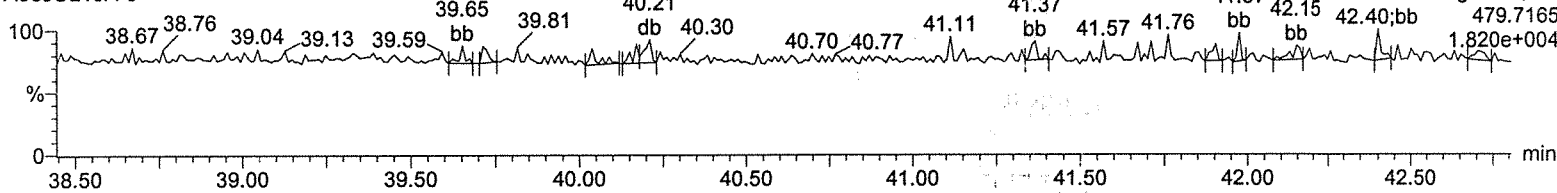
F4:Voltage SIR,EI+
419.822
1.294e+007



NoDPE

A08JUL19A-5

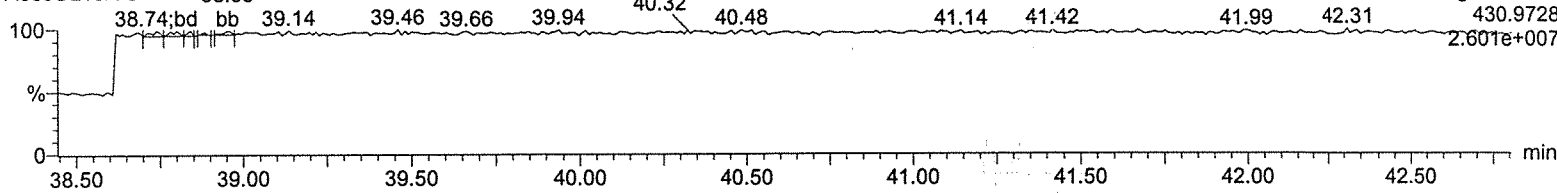
F4:Voltage SIR,EI+
479.7165
1.820e+004



Lock Mass F4

A08JUL19A-5

F4:Voltage SIR,EI+
430.9728
2.601e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

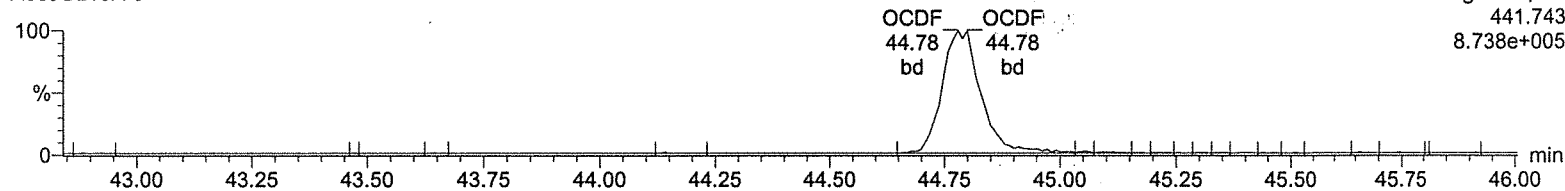
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

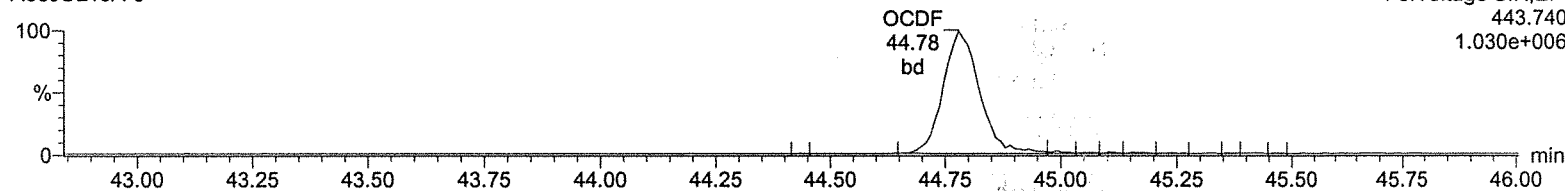
OCDF

A08JUL19A-5



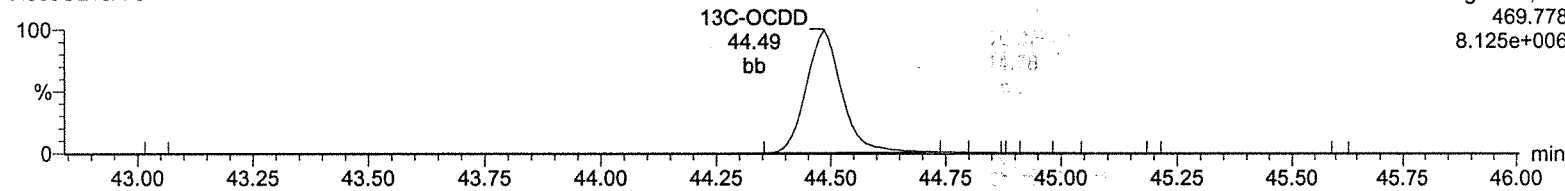
OCDF

A08JUL19A-5



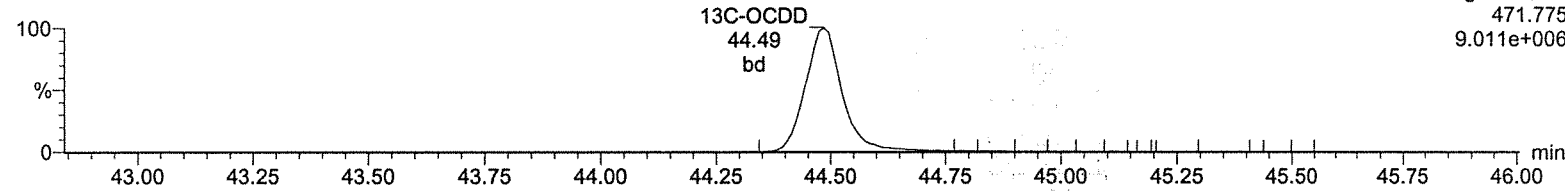
13C-OCDD

A08JUL19A-5



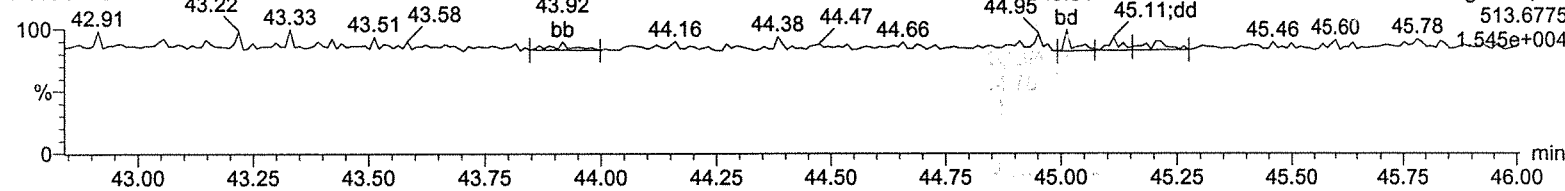
13C-OCDD

A08JUL19A-5



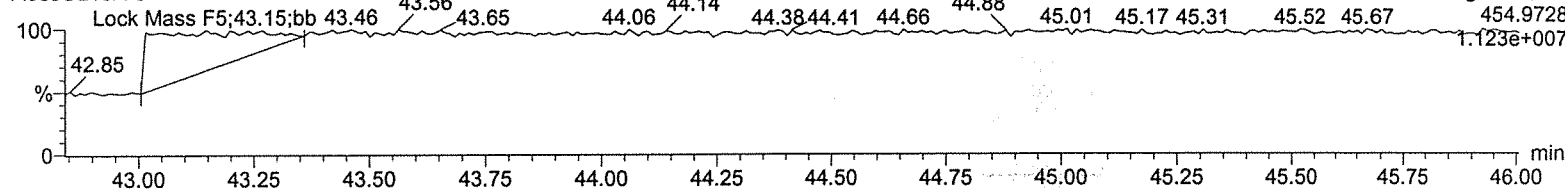
DeDPE

A08JUL19A-5



Lock Mass F5

A08JUL19A-5



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Dataset: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Handwritten signature

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	8.68e4	1.13e5	2.00e5	31.35	1.000	0.77	NO	9.942	0.879	0.884	5.07	0.0390	1.57e6	2450	641.8	2.15e6	2611	823.3	bb	bb
2	12378-PeCDD	3.84e5	2.47e5	6.31e5	34.21	1.000	1.55	NO	50.221	0.857	0.853	1.65	0.0618	9.31e6	2979	3125.8	6.05e6	3309	1827.4	bb	bb
3	123478-HxCDD	3.18e5	2.55e5	5.73e5	36.83	1.000	1.25	NO	50.558	0.950	0.940	3.11	0.139	6.71e6	4648	1442.7	5.39e6	6081	886.4	bd	bd
4	123678-HxCDD	3.66e5	2.94e5	6.60e5	36.92	1.000	1.25	NO	51.250	0.968	0.944	2.57	0.135	6.98e6	4648	1501.3	5.54e6	6081	911.6	dd	dd
5	123789-HxCDD	3.38e5	2.74e5	6.12e5	37.16	1.007	1.24	NO	51.427	0.954	0.927	3.30	0.139	6.19e6	4648	1331.0	5.01e6	6081	823.3	dd	dd
6	1234678-HpCDD	2.49e5	2.42e5	4.91e5	40.23	1.000	1.03	NO	51.498	1.071	1.040	2.88	0.178	3.60e6	4071	884.4	3.45e6	4114	898.4	bd	bd
7	OCDD	4.42e5	4.94e5	9.36e5	44.49	1.000	0.90	NO	102.635	0.997	0.971	2.39	0.414	4.83e6	5533	872.8	5.28e6	7922	666.2	bd	bd
8	2378-TCDF	1.06e5	1.37e5	2.43e5	30.67	1.001	0.77	NO	9.949	0.973	0.978	5.59	0.0625	1.36e6	2841	478.3	1.75e6	3684	475.9	bb	bb
9	12378-PeCDF	5.82e5	3.75e5	9.56e5	33.40	1.000	1.55	NO	50.773	0.960	0.945	3.41	0.103	1.43e7	8482	1685.4	9.31e6	7788	1195.1	bd	bb
10	123478-PeCDF	6.27e5	4.19e5	1.05e6	34.01	1.000	1.50	NO	50.780	1.002	0.987	3.73	0.0954	1.57e7	8482	1848.3	1.04e7	7788	1331.7	bb	bb
11	123478-HxCDF	4.65e5	3.78e5	8.43e5	36.11	1.000	1.23	NO	51.251	1.114	1.087	3.86	0.106	1.00e7	5453	1833.5	8.26e6	7295	1131.6	bd	bd
12	123678-HxCDF	5.03e5	4.09e5	9.12e5	36.21	1.000	1.23	NO	51.606	1.074	1.041	3.23	0.109	1.03e7	5453	1882.3	8.37e6	7295	1147.0	dd	db
13	1234678-HxCDF	4.63e5	3.89e5	8.52e5	36.69	1.001	1.19	NO	50.727	1.152	1.136	3.17	0.117	9.28e6	5453	1701.9	7.55e6	7295	1035.1	bb	bd
14	123789-HxCDF	3.95e5	3.29e5	7.24e5	37.47	1.000	1.20	NO	51.190	1.086	1.061	2.29	0.151	7.02e6	5453	1288.2	5.96e6	7295	817.0	bb	bb
15	1234678-HpCDF	3.50e5	3.56e5	7.06e5	38.97	1.000	0.98	NO	51.632	1.187	1.150	3.86	0.160	6.00e6	6270	956.4	6.00e6	6223	963.4	bb	bd
16	1234789-HpCDF	2.81e5	2.79e5	5.60e5	40.89	1.000	1.01	NO	49.736	1.196	1.202	1.91	0.237	4.07e6	6270	648.8	3.95e6	6223	634.8	bb	bb
17	OCDF	4.97e5	5.71e5	1.07e6	44.78	1.007	0.87	NO	100.464	1.138	1.133	6.78	0.245	5.22e6	4930	1059.5	5.92e6	4365	1356.2	bd	bb
18	13C-2378-TCDD	9.90e5	1.28e6	2.27e6	31.34	1.015	0.77	NO	102.354	1.155	1.128	2.36	0.127	1.92e7	8469	2264.4	2.44e7	5255	4640.6	bb	bb
19	13C-12378-PeCDD	8.92e5	5.81e5	1.47e6	34.20	1.108	1.54	NO	99.635	0.749	0.751	5.03	0.124	2.17e7	5732	3778.6	1.40e7	3222	4330.4	bb	bb
20	13C-123478-HxCDD	6.63e5	5.43e5	1.21e6	36.82	0.991	1.22	NO	97.866	0.877	0.896	1.38	0.150	1.36e7	6280	2158.5	1.10e7	4593	2391.6	bd	bd
21	13C-123678-HxCDD	7.53e5	6.11e5	1.36e6	36.91	0.994	1.23	NO	100.617	0.992	0.986	0.84	0.137	1.39e7	6280	2215.9	1.16e7	4593	2523.5	dd	dd
22	13C-1234678-HpCDD	4.70e5	4.47e5	9.17e5	40.22	1.083	1.05	NO	99.377	0.667	0.672	1.29	0.265	6.78e6	6524	1039.1	6.60e6	7834	842.1	bb	bb
23	13C-OCDD	8.79e5	9.99e5	1.88e6	44.47	1.197	0.88	NO	212.754	0.683	0.642	4.87	0.207	9.40e6	5805	1618.6	1.06e7	4926	2154.4	bb	bd
24	13C-2378-TCDF	1.08e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	101.401	1.267	1.250	1.88	0.189	1.39e7	15695	887.2	1.76e7	6952	2535.5	bb	bb
25	13C-12378-PeCDF	1.22e6	7.73e5	1.99e6	33.39	1.082	1.58	NO	100.209	1.013	1.011	4.24	0.182	3.06e7	12046	2538.6	1.95e7	5629	3457.2	bb	bb
26	13C-23478-PeCDF	1.28e6	8.10e5	2.09e6	34.00	1.102	1.57	NO	99.710	1.060	1.063	5.28	0.173	3.17e7	12046	2632.4	2.00e7	5629	3558.0	bb	bb
27	13C-123478-HxCDF	5.20e5	9.92e5	1.51e6	36.10	0.972	0.52	NO	99.093	1.101	1.111	1.42	0.219	1.14e7	8433	1357.0	2.19e7	11233	1938.7	bd	bd
28	13C-123678-HxCDF	5.84e5	1.11e6	1.70e6	36.20	0.975	0.52	NO	99.133	1.236	1.247	1.06	0.196	1.17e7	8433	1381.4	2.19e7	11233	1948.6	db	dd
29	13C-234678-HxCDF	5.07e5	9.72e5	1.48e6	36.67	0.987	0.52	NO	99.455	1.076	1.082	1.01	0.225	9.88e6	8433	1171.9	1.91e7	11233	1703.9	bb	bb
30	13C-123789-HxCDF	4.66e5	8.67e5	1.33e6	37.46	1.008	0.54	NO	100.322	0.970	0.967	1.08	0.252	8.35e6	8433	990.6	1.57e7	11233	1400.3	bd	bb
31	13C-1234678-HpCDF	3.65e5	8.24e5	1.19e6	38.96	1.049	0.44	NO	99.467	0.865	0.870	1.11	0.193	6.26e6	5883	1064.8	1.38e7	7684	1800.2	bb	bd
32	13C-1234789-HpCDF	2.84e5	6.52e5	9.36e5	40.88	1.101	0.44	NO	100.559	0.681	0.677	1.01	0.248	4.00e6	5883	679.7	9.16e6	7684	1192.4	bd	bd
33	13C-1234-TCDD	8.63e5	1.10e6	1.97e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.143	1.26e7	8469	1491.7	1.63e7	5255	3108.4	bb	bb
34	13C-123789-HxCDD	7.56e5	6.18e5	1.37e6	37.14	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.135	1.33e7	6280	2120.3	1.08e7	4593	2349.2	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Ch	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	2.18e5	2.18e5	2.18e5	31.34	1.015			10.427	1.107	1.061	4.54	0.0452	3.98e6	4599	864.6				M	M2	
																					bb	

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

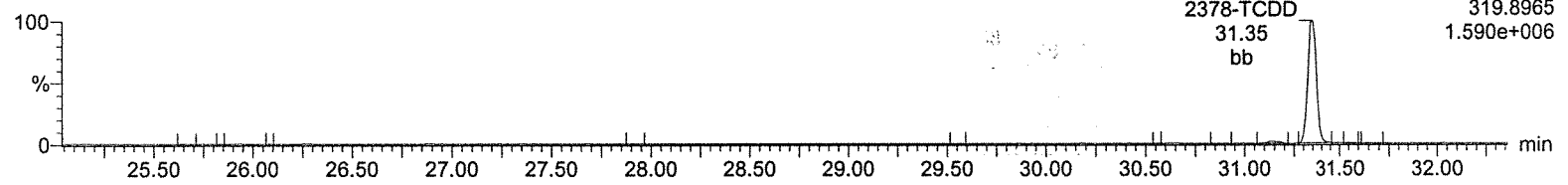
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

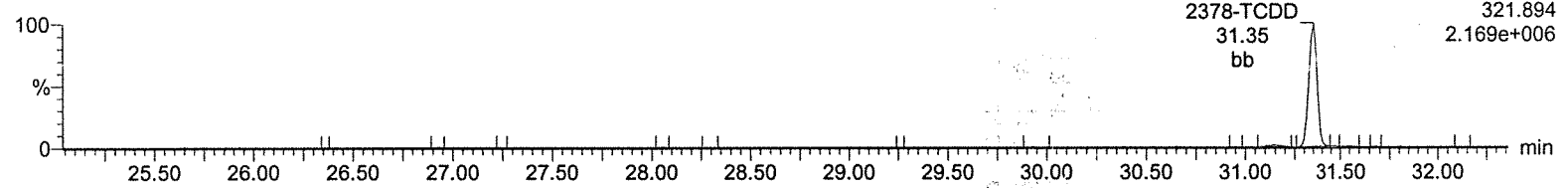
Total-tetradoxins

A08JUL19A-6



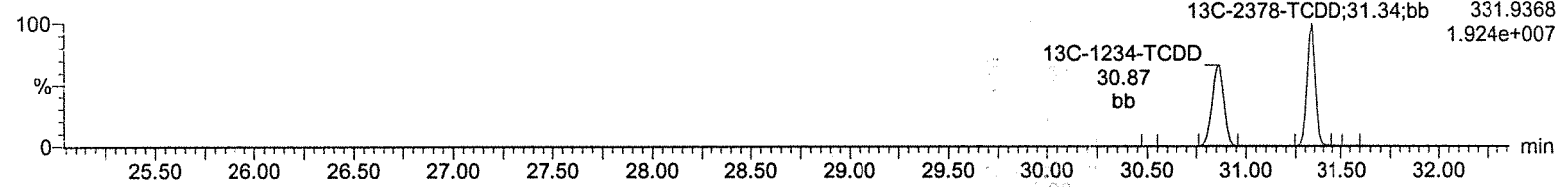
Total-tetradoxins

A08JUL19A-6



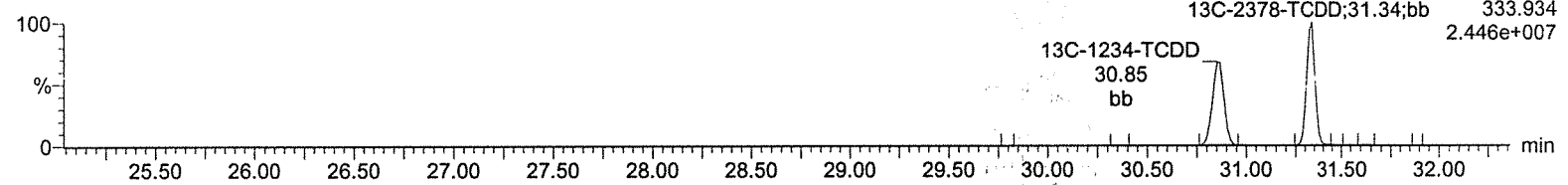
13C-2378-TCDD

A08JUL19A-6



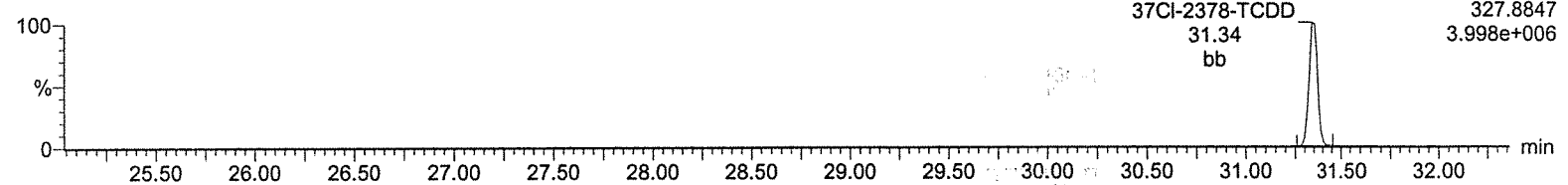
13C-2378-TCDD

A08JUL19A-6



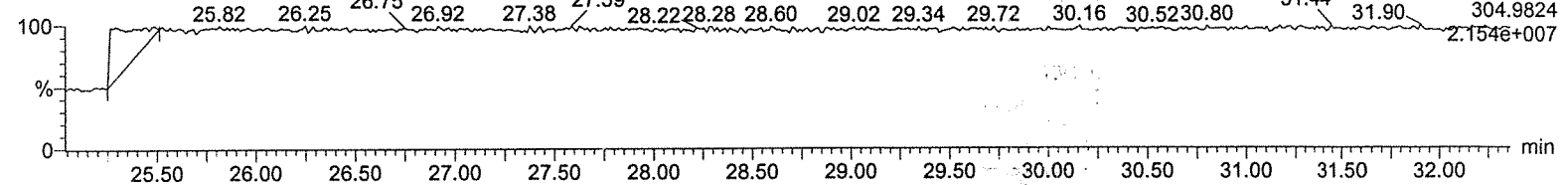
37Cl-2378-TCDD

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

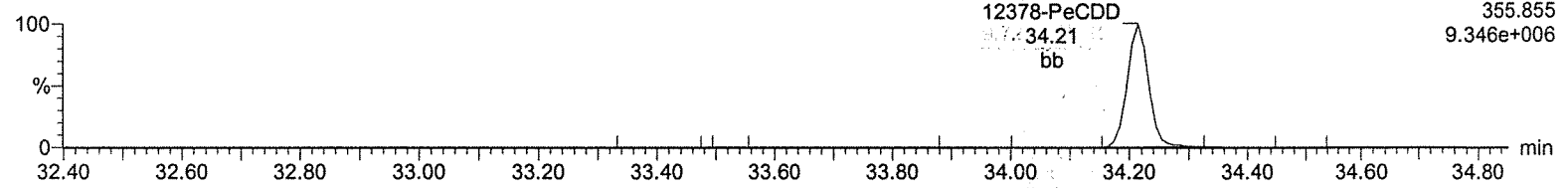
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

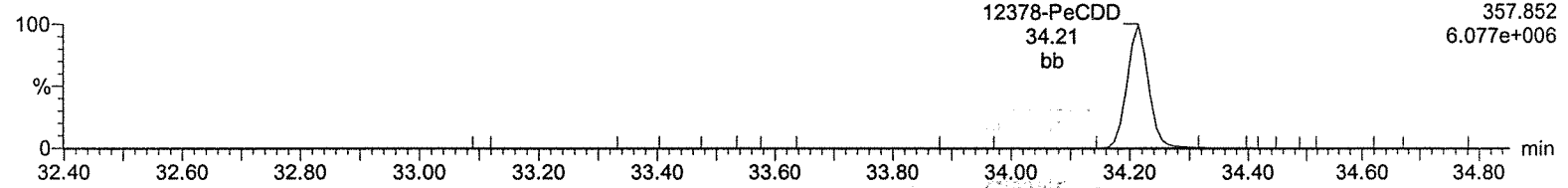
Total-pentadioxins

A08JUL19A-6



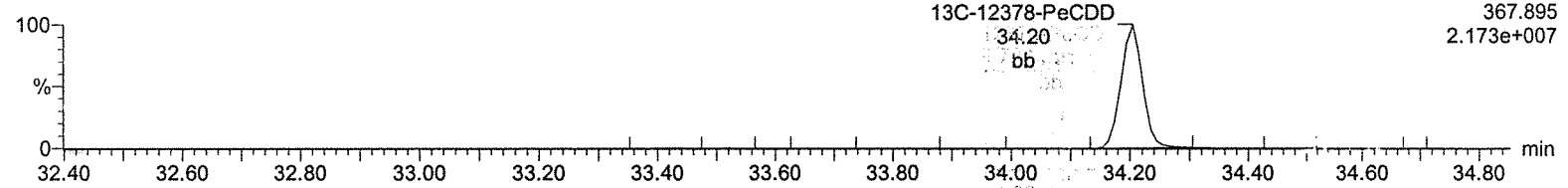
Total-pentadioxins

A08JUL19A-6



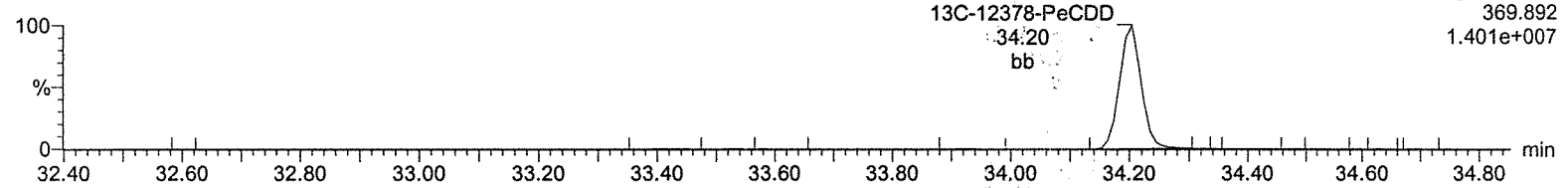
13C-12378-PeCDD

A08JUL19A-6



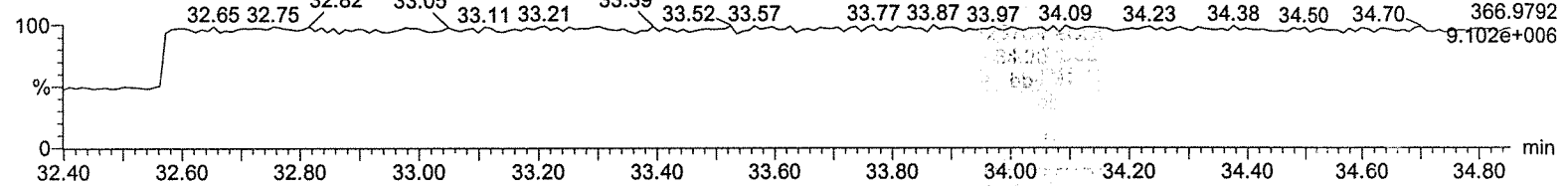
13C-12378-PeCDD

A08JUL19A-6



Lock Mass F2

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

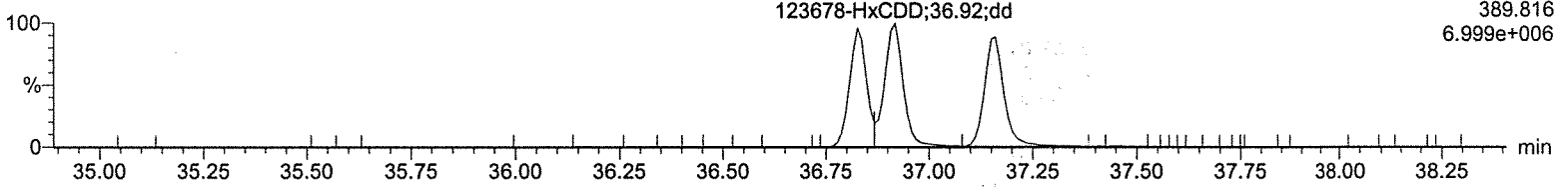
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

Total-hexadioxins

A08JUL19A-6

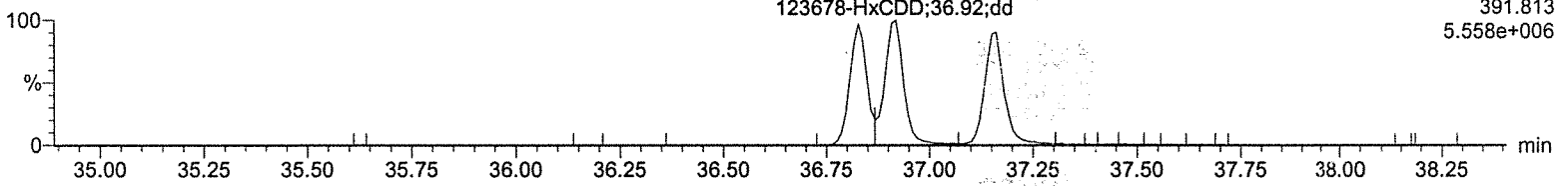
F3:Voltage SIR,EI+
389.816
6.999e+006



Total-hexadioxins

A08JUL19A-6

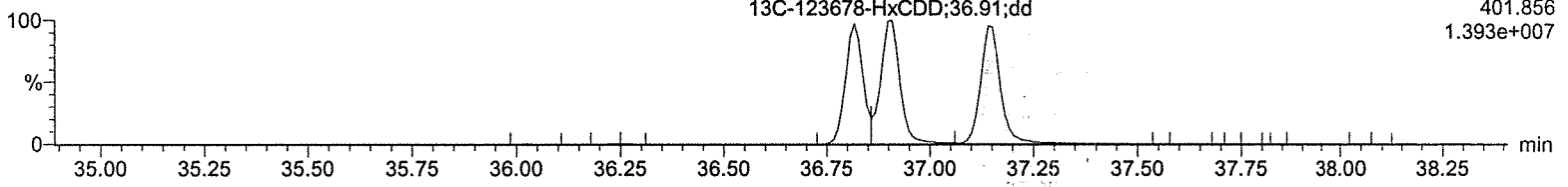
F3:Voltage SIR,EI+
391.813
5.558e+006



13C-123478-HxCDD

A08JUL19A-6

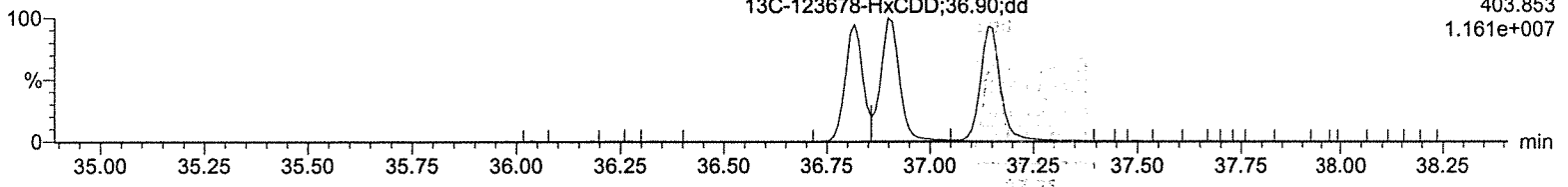
F3:Voltage SIR,EI+
401.856
1.393e+007



13C-123478-HxCDD

A08JUL19A-6

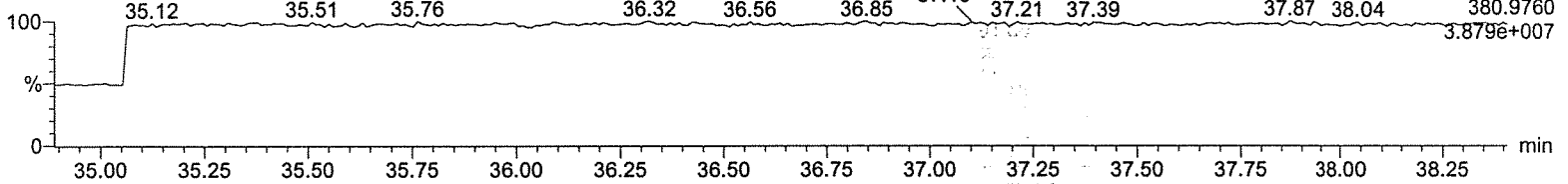
F3:Voltage SIR,EI+
403.853
1.161e+007



Lock Mass F3

A08JUL19A-6

F3:Voltage SIR,EI+
380.9760
3.879e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

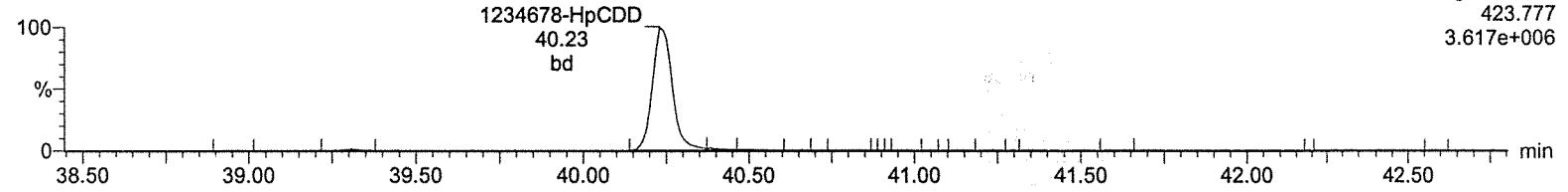
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

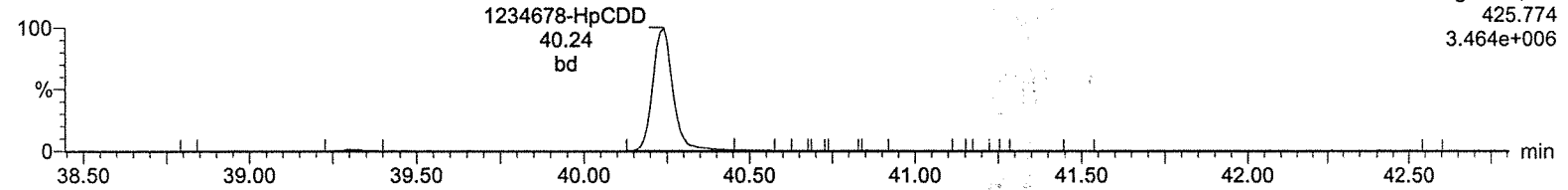
Total-heptadioxins

A08JUL19A-6



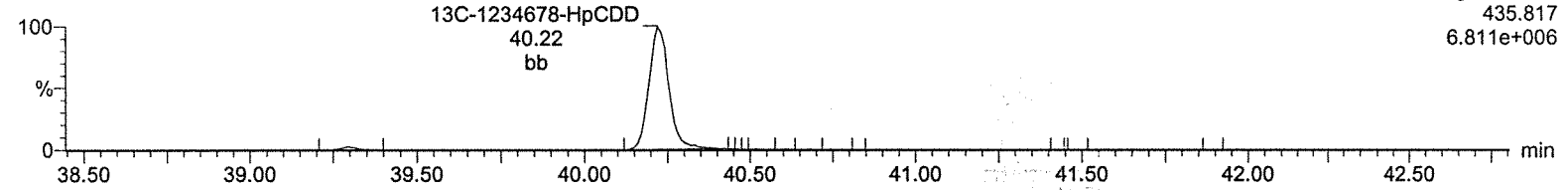
Total-heptadioxins

A08JUL19A-6



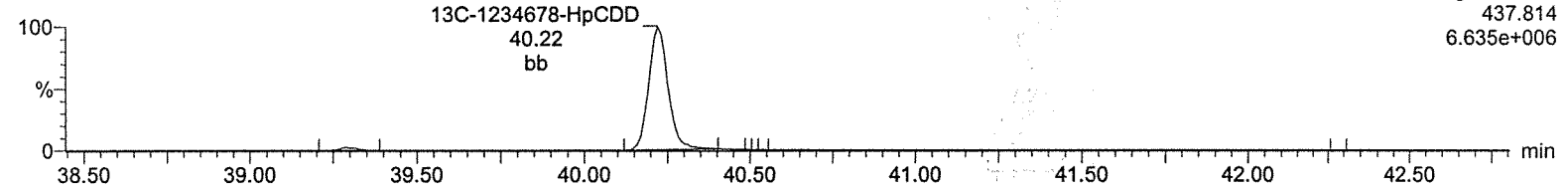
13C-1234678-HpCDD

A08JUL19A-6



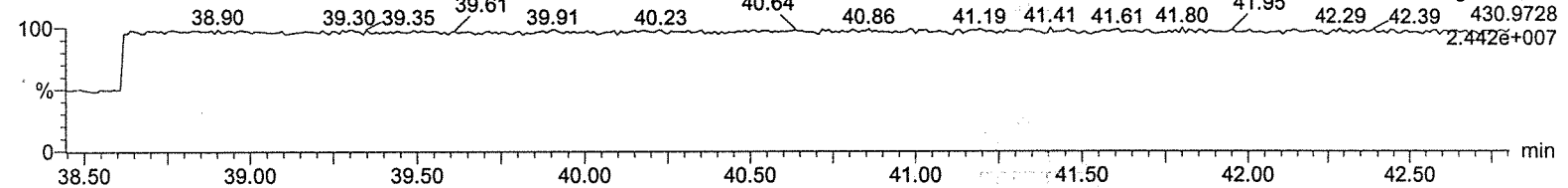
13C-1234678-HpCDD

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

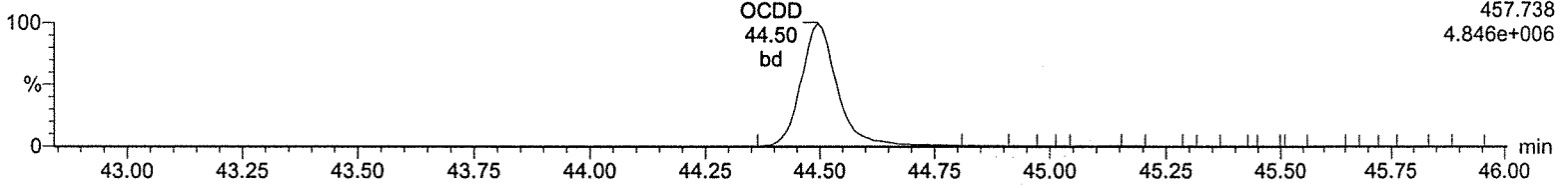
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

OCDD

A08JUL19A-6

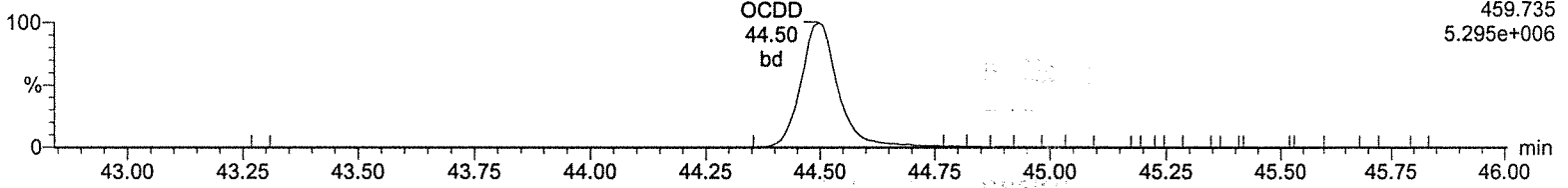
F5:Voltage SIR,EI+
457.738
4.846e+006



OCDD

A08JUL19A-6

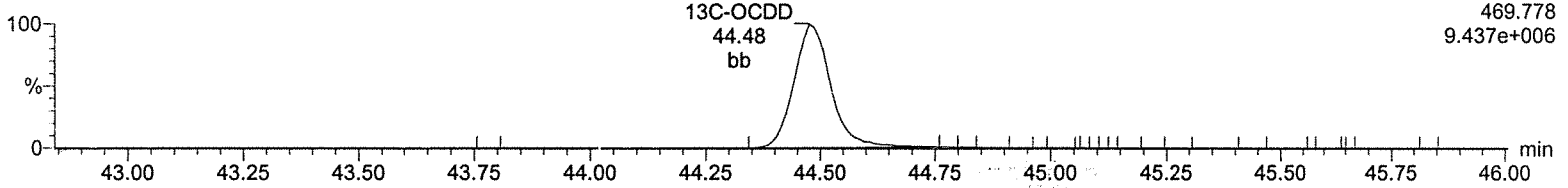
F5:Voltage SIR,EI+
459.735
5.295e+006



13C-OCDD

A08JUL19A-6

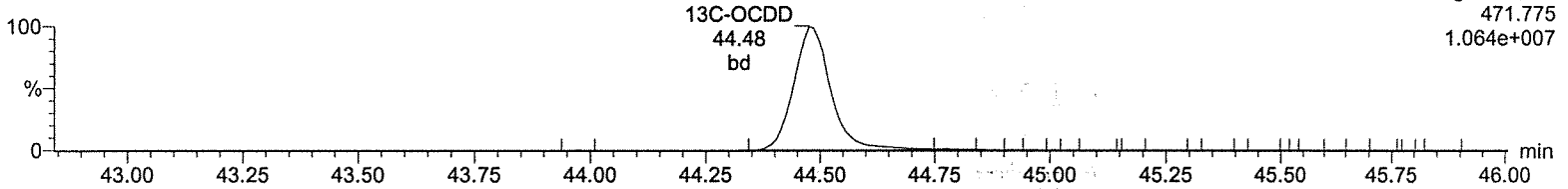
F5:Voltage SIR,EI+
469.778
9.437e+006



13C-OCDD

A08JUL19A-6

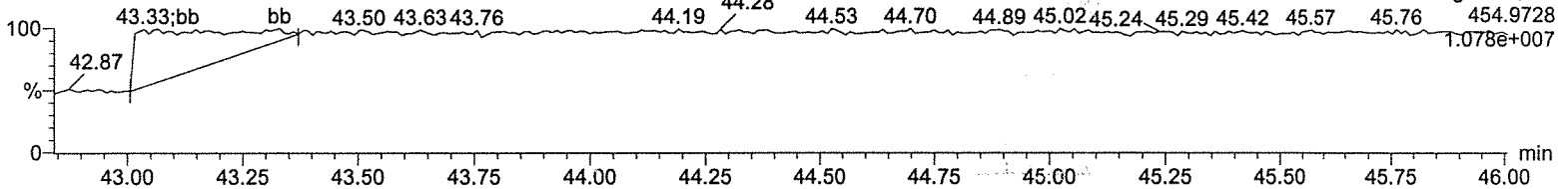
F5:Voltage SIR,EI+
471.775
1.064e+007



Lock Mass F5

A08JUL19A-6

F5:Voltage SIR,EI+
454.9728
1.078e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

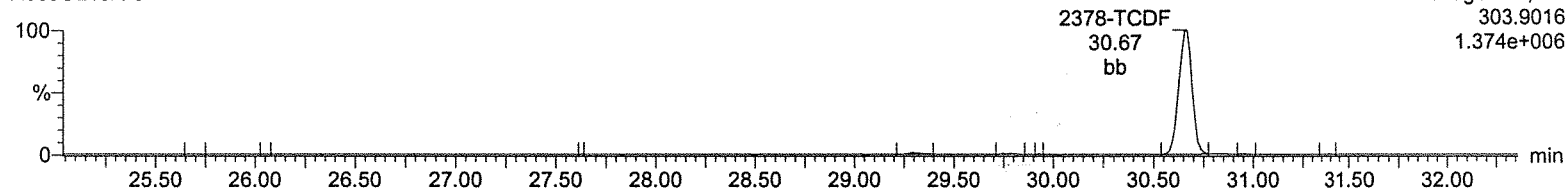
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

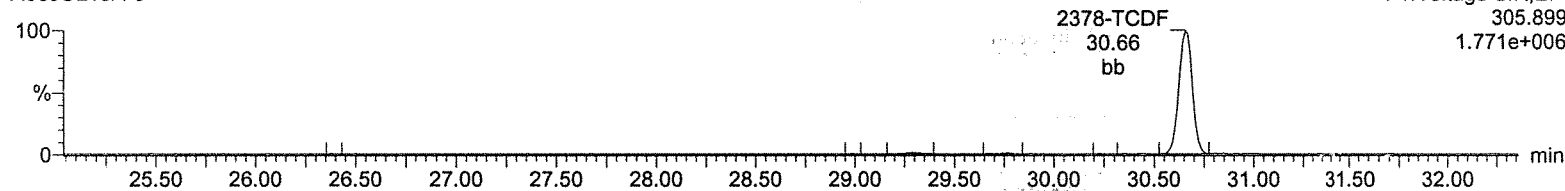
Total-tetrafurans

A08JUL19A-6



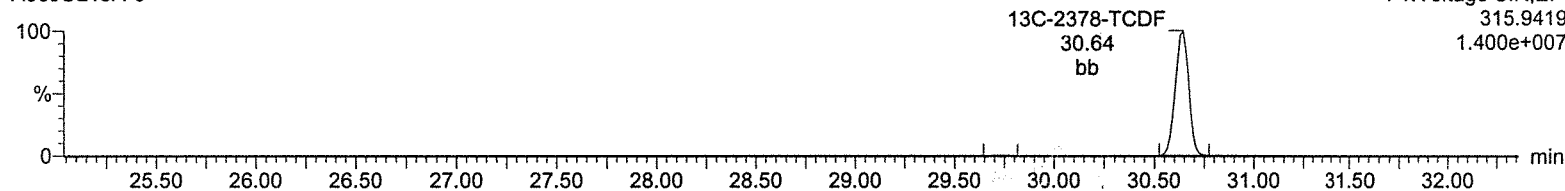
Total-tetrafurans

A08JUL19A-6



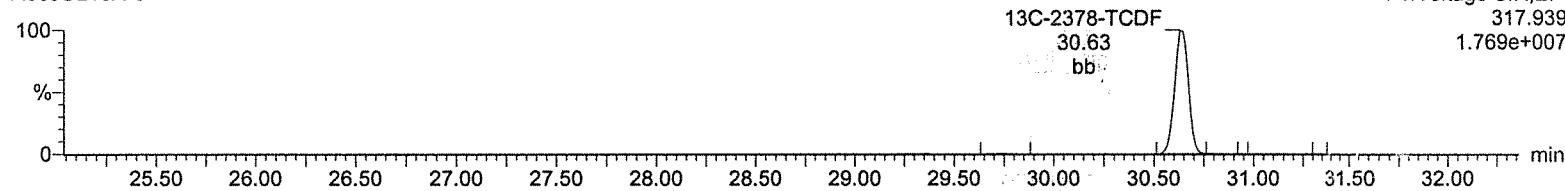
13C-2378-TCDF

A08JUL19A-6



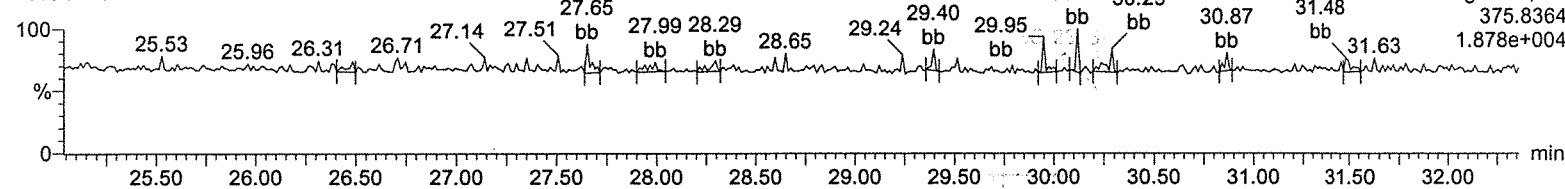
13C-2378-TCDF

A08JUL19A-6



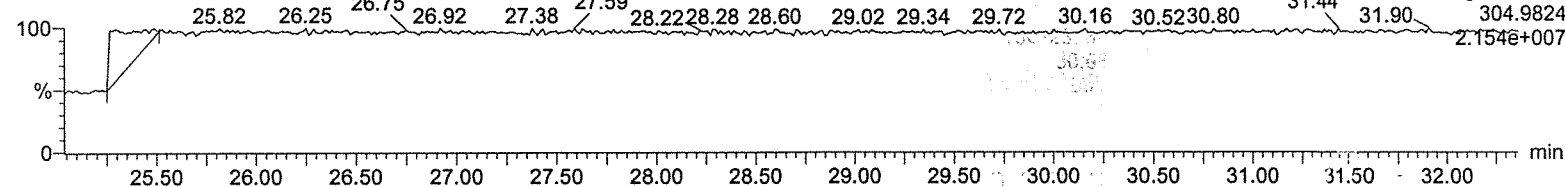
HxDPE

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



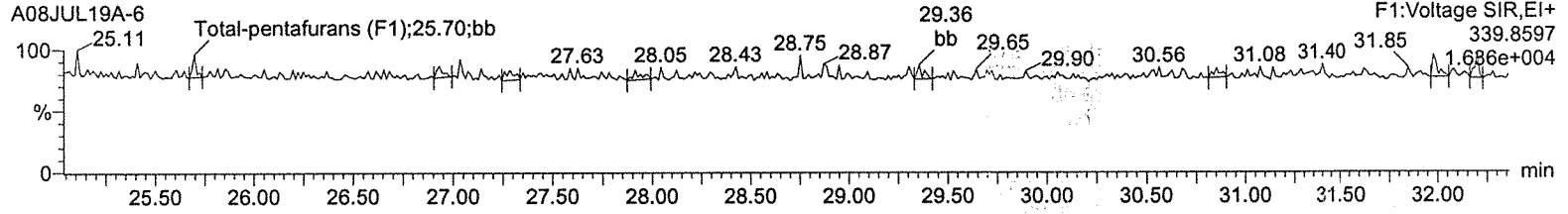
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

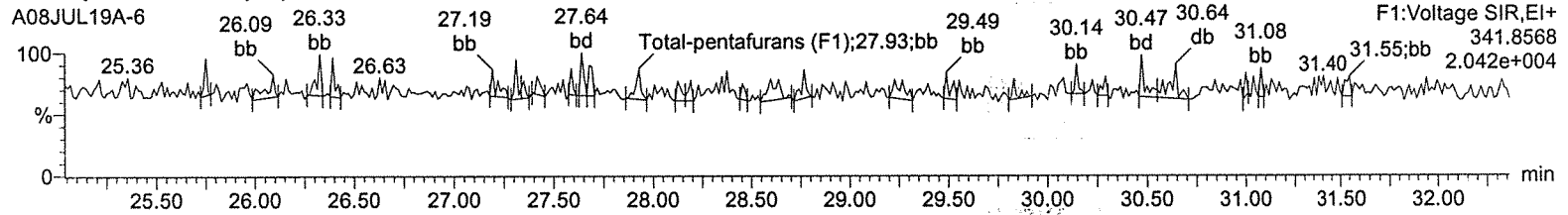
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

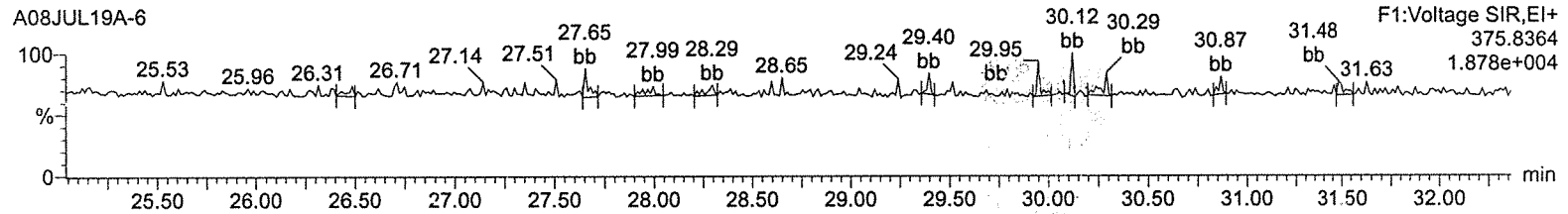
Total-pentafurans (F1)



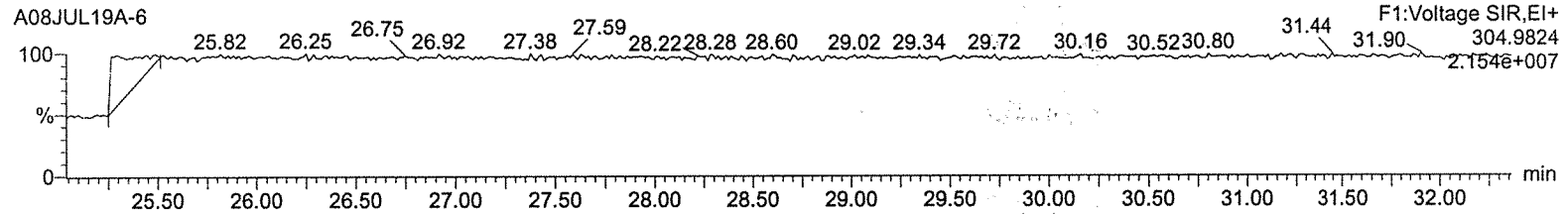
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

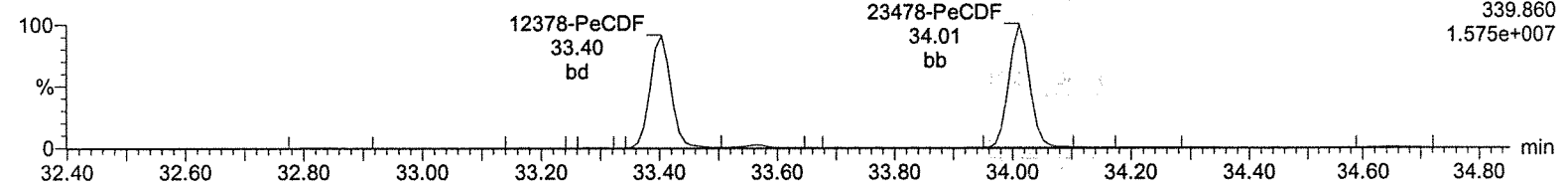
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

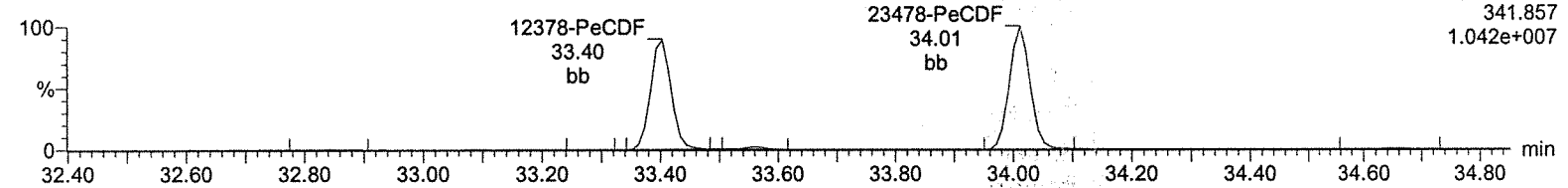
Total-pentafurans

A08JUL19A-6



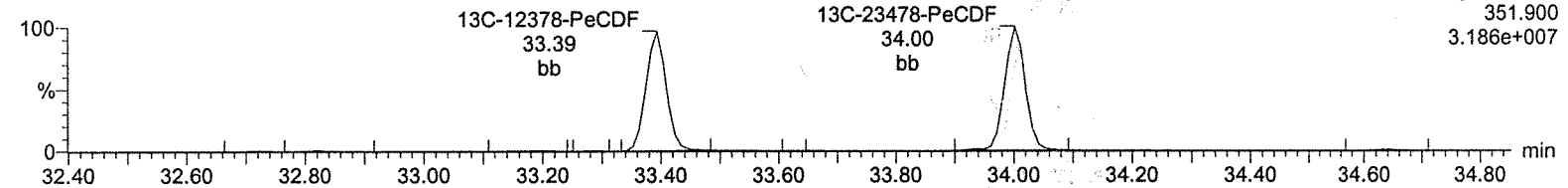
Total-pentafurans

A08JUL19A-6



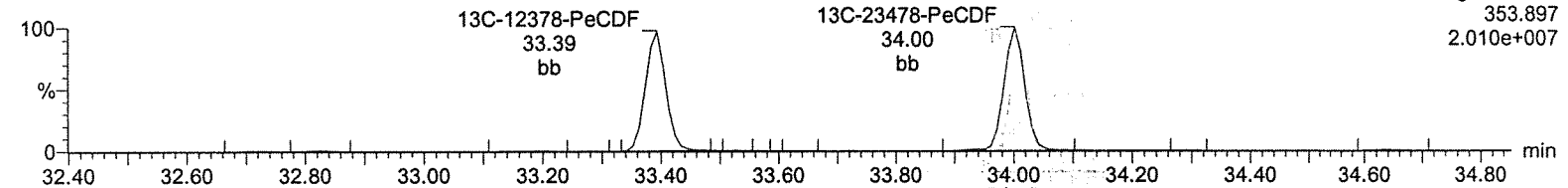
13C-12378-PeCDF

A08JUL19A-6



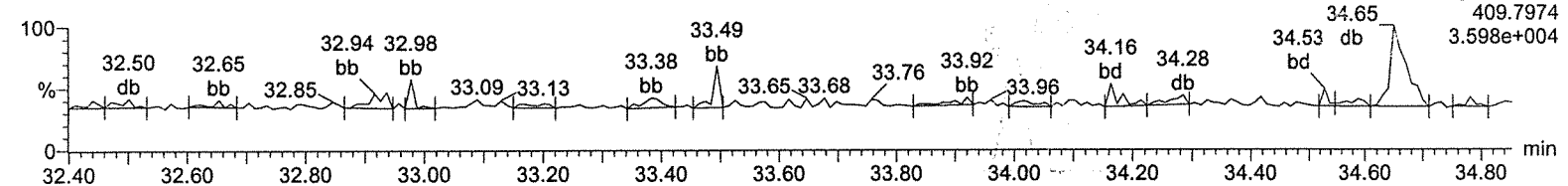
13C-12378-PeCDF

A08JUL19A-6



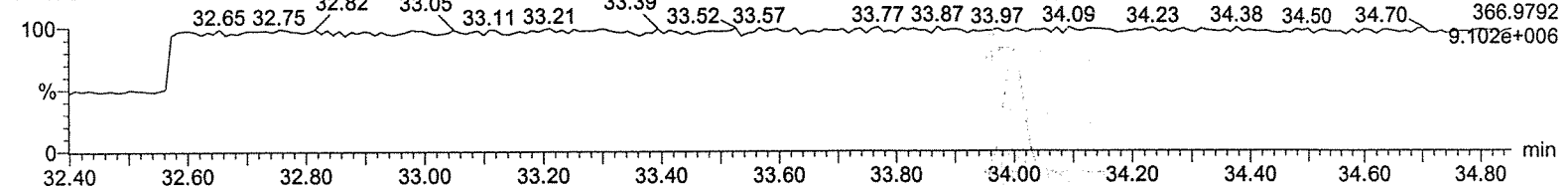
HpDPE

A08JUL19A-6



Lock Mass F2

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

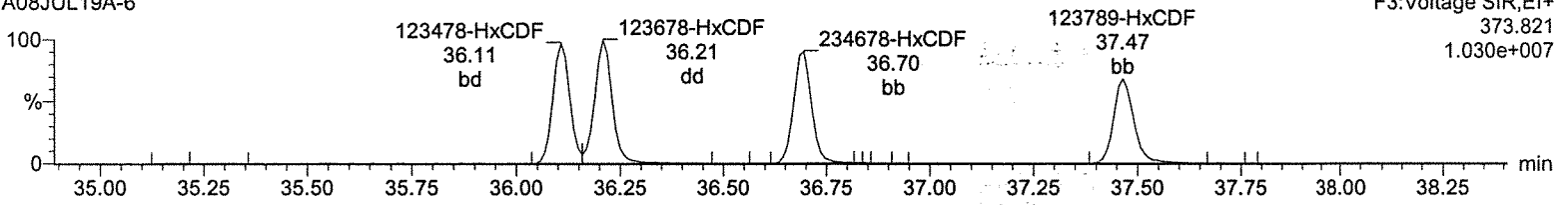
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

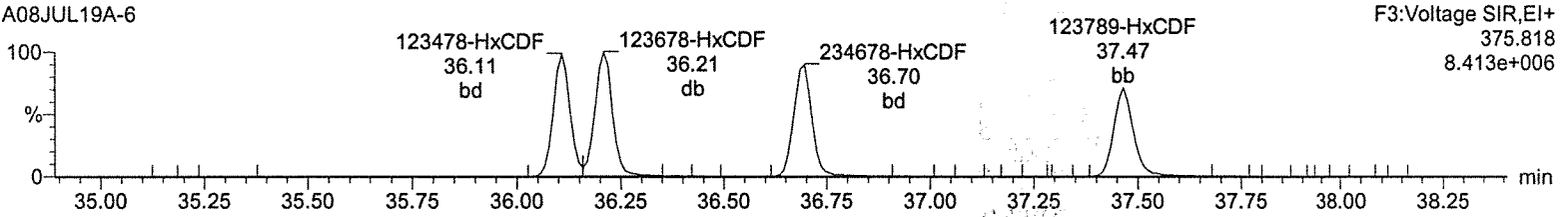
Total-hexafurans

A08JUL19A-6



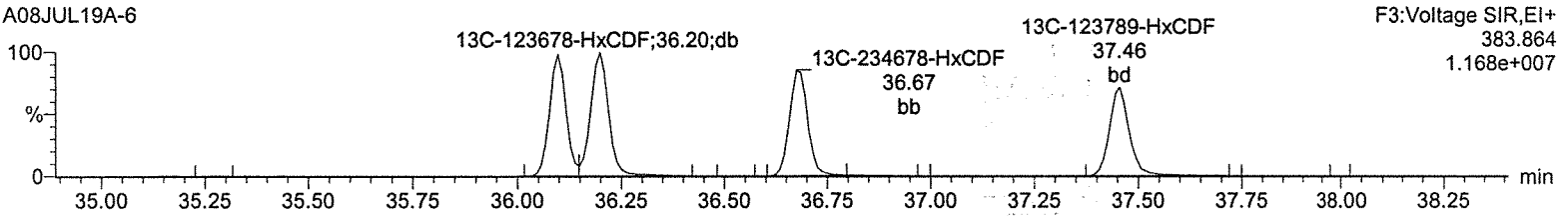
Total-hexafurans

A08JUL19A-6



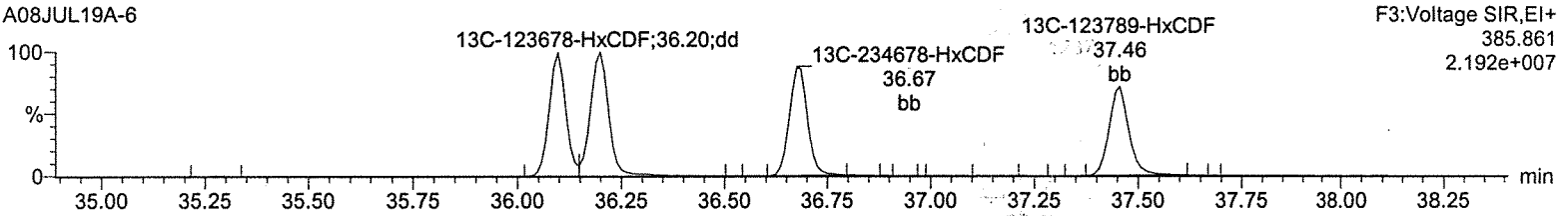
13C-123478-HxCDF

A08JUL19A-6



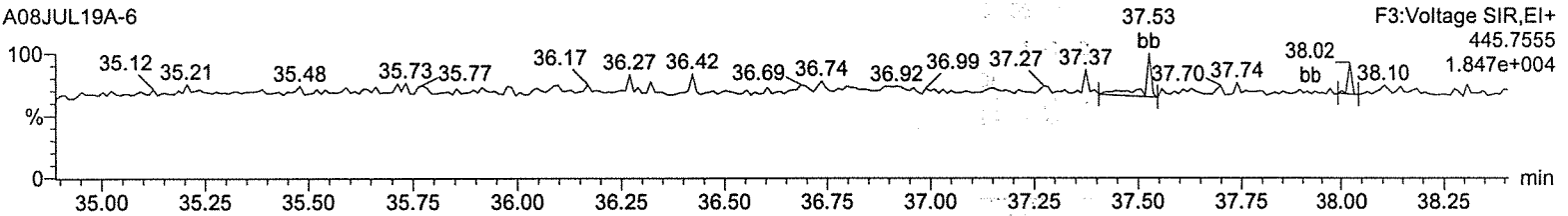
13C-123478-HxCDF

A08JUL19A-6



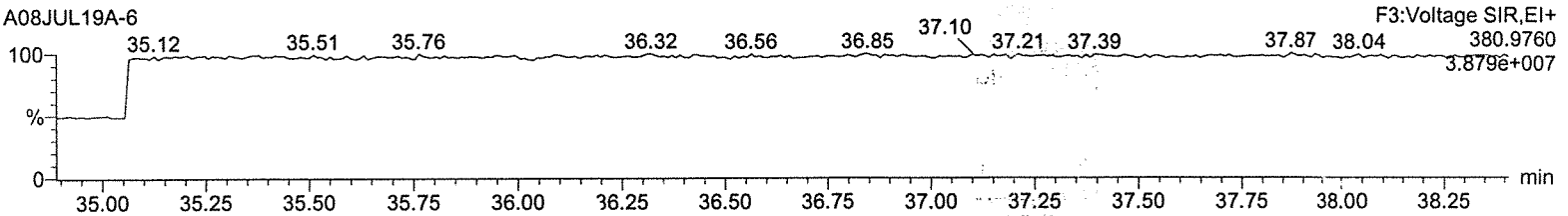
OcDPE

A08JUL19A-6



Lock Mass F3

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

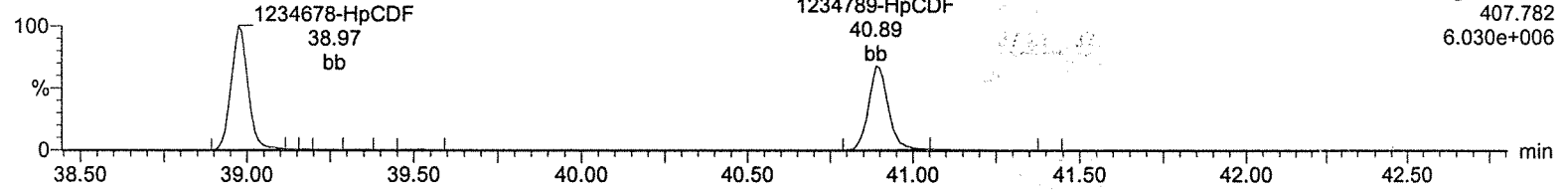
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

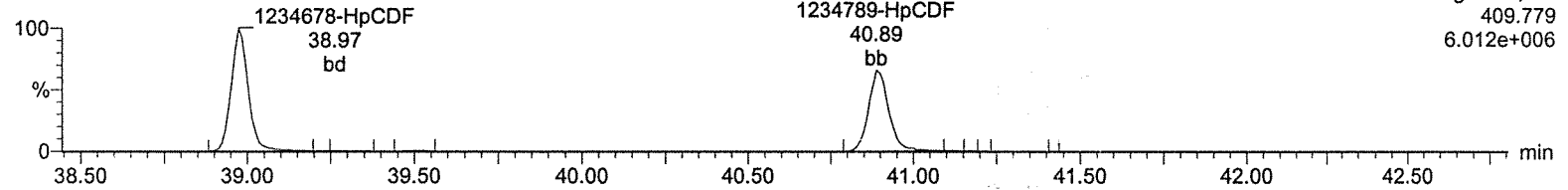
Total-heptafurans

A08JUL19A-6



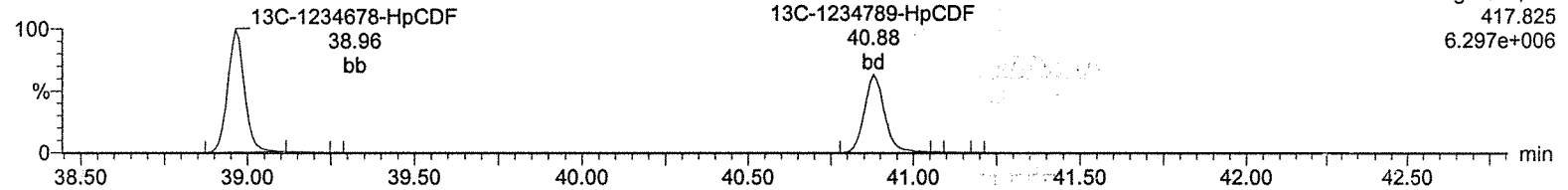
Total-heptafurans

A08JUL19A-6



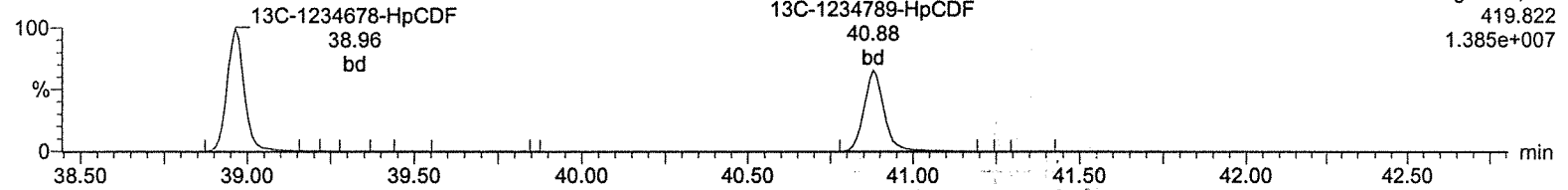
13C-1234678-HpCDF

A08JUL19A-6



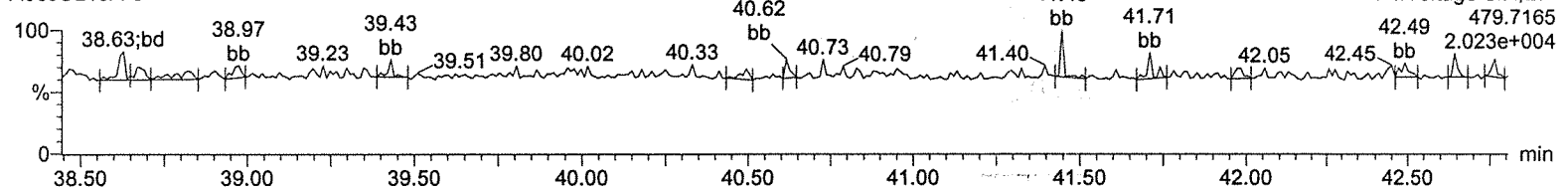
13C-1234678-HpCDF

A08JUL19A-6



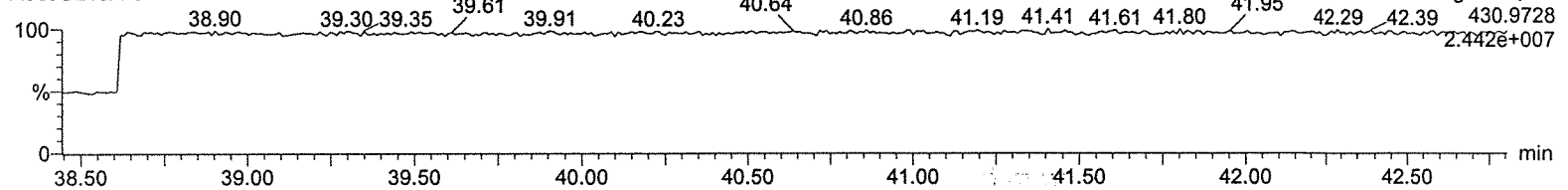
NoDPE

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

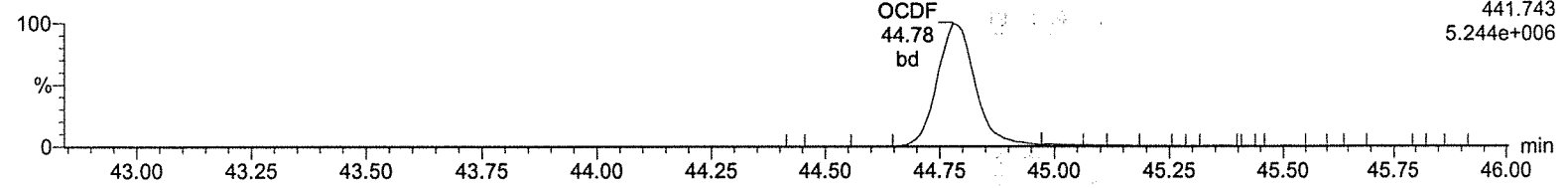
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

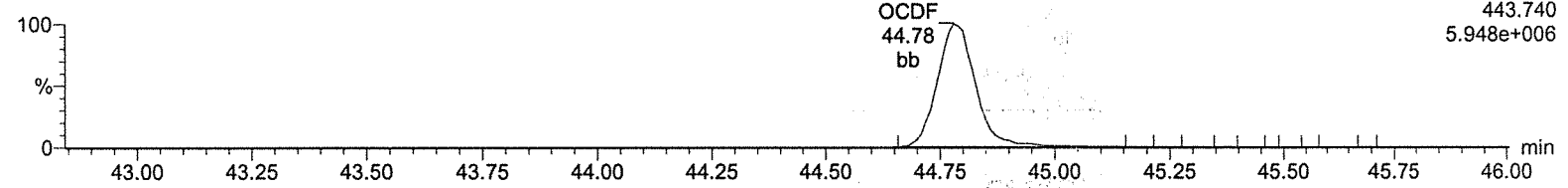
OCDF

A08JUL19A-6



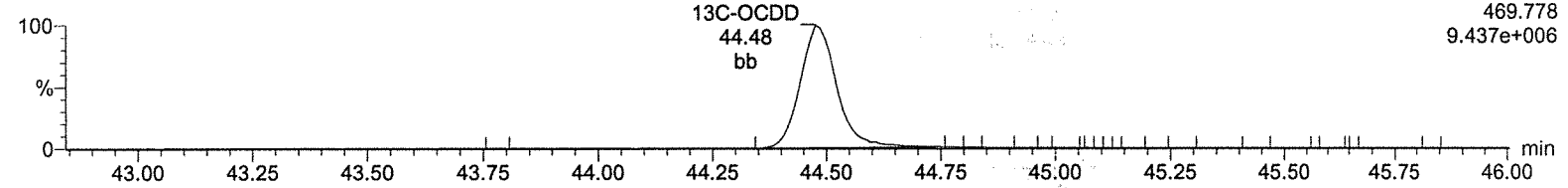
OCDF

A08JUL19A-6



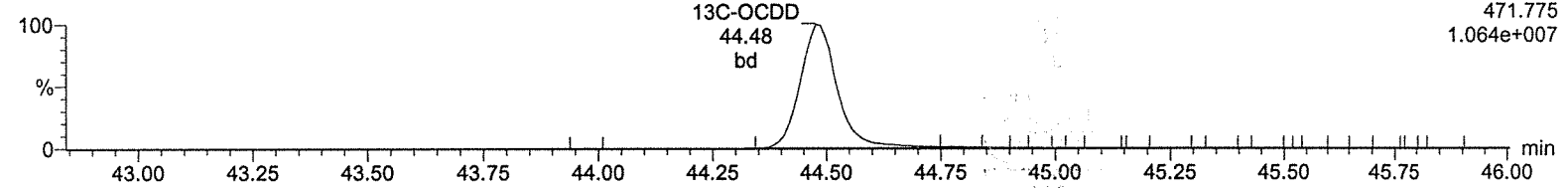
13C-OCDD

A08JUL19A-6



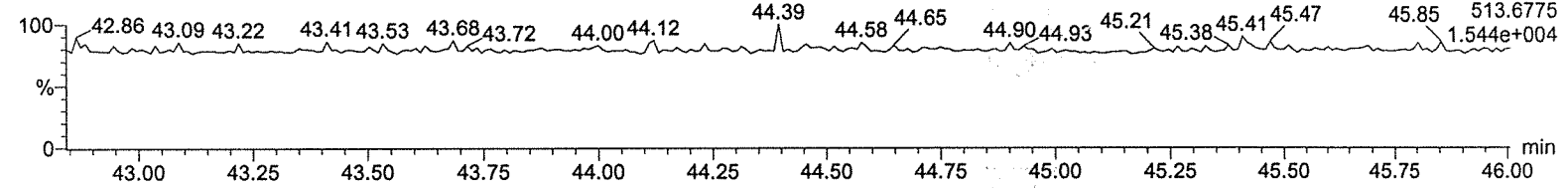
13C-OCDD

A08JUL19A-6



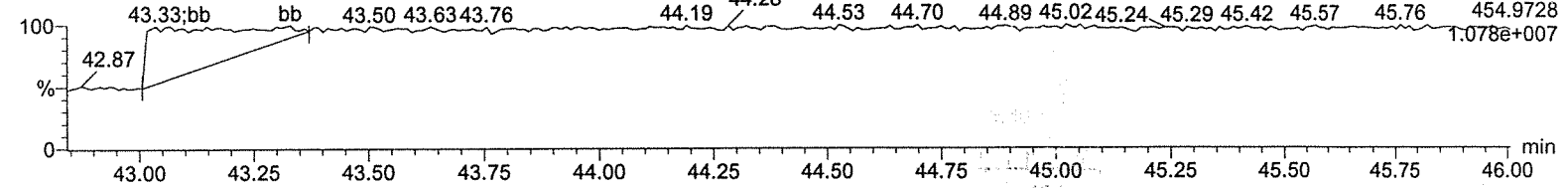
DeDPE

A08JUL19A-6



Lock Mass F5

A08JUL19A-6



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Dataset: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2011/8/19

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.20e5	4.23e5	7.43e5	31.35	1.000	0.76	NO	40.313	0.891	0.884	5.07	0.0467	6.28e6	2669	2351.7	8.28e6	3196	2591.3	bb	bd
2	12378-PeCDD	1.43e6	9.27e5	2.36e6	34.21	1.000	1.55	NO	199.882	0.853	0.853	1.65	0.134	3.45e7	7066	4888.6	2.27e7	5786	3925.7	bb	bb
3	123478-HxCDD	1.20e6	9.61e5	2.16e6	36.84	1.000	1.25	NO	204.080	0.959	0.940	3.11	0.210	2.48e7	6620	3745.7	1.94e7	8330	2329.2	dd	bd
4	123678-HxCDD	1.32e6	1.06e6	2.38e6	36.92	1.000	1.25	NO	203.463	0.960	0.944	2.57	0.193	2.62e7	6620	3954.5	2.14e7	8330	2574.5	dd	dd
5	123789-HxCDD	1.25e6	9.97e5	2.25e6	37.16	1.007	1.25	NO	204.709	0.949	0.927	3.30	0.204	2.37e7	6620	3578.2	1.91e7	8330	2291.3	dd	dd
6	1234678-HpCDD	8.98e5	8.65e5	1.76e6	40.25	1.000	1.04	NO	200.188	1.041	1.040	2.88	0.324	1.35e7	6485	2081.7	1.29e7	7778	1662.5	bb	bd
7	OCDD	1.60e6	1.73e6	3.34e6	44.51	1.000	0.93	NO	407.176	0.989	0.971	2.39	0.535	1.76e7	8985	1960.9	1.94e7	7406	2624.3	bd	bb
8	2378-TCDF	3.91e5	5.06e5	8.96e5	30.67	1.001	0.77	NO	39.698	0.971	0.978	5.59	0.0830	5.42e6	3365	1611.9	6.79e6	5160	1315.9	bb	bb
9	12378-PeCDF	2.15e6	1.42e6	3.56e6	33.40	1.000	1.51	NO	204.220	0.965	0.945	3.41	0.104	5.57e7	6926	8041.1	3.68e7	8542	4302.7	bb	bd
10	123478-PeCDF	2.37e6	1.56e6	3.92e6	34.02	1.000	1.52	NO	205.338	1.013	0.987	3.73	0.0933	6.14e7	6926	8866.5	3.90e7	8542	4567.7	bb	bb
11	123478-HxCDF	1.70e6	1.40e6	3.10e6	36.12	1.001	1.22	NO	208.354	1.133	1.087	3.86	0.274	3.75e7	14090	2658.9	3.03e7	15421	1963.2	bd	bd
12	123678-HxCDF	1.82e6	1.49e6	3.31e6	36.21	1.000	1.22	NO	202.580	1.054	1.041	3.23	0.271	3.78e7	14090	2683.1	3.11e7	15421	2019.8	db	db
13	1234678-HxCDF	1.73e6	1.43e6	3.16e6	36.69	1.000	1.21	NO	207.523	1.178	1.136	3.17	0.277	3.67e7	14090	2608.0	3.05e7	15421	1976.9	bd	bd
14	123789-HxCDF	1.41e6	1.15e6	2.56e6	37.48	1.000	1.22	NO	201.238	1.067	1.061	2.29	0.378	2.64e7	14090	1872.9	2.13e7	15421	1383.0	bb	bb
15	1234678-HpCDF	1.28e6	1.26e6	2.54e6	38.98	1.000	1.01	NO	205.556	1.182	1.150	3.86	0.276	2.27e7	10691	2125.0	2.21e7	9042	2443.4	bb	bb
16	1234789-HpCDF	1.04e6	1.03e6	2.08e6	40.91	1.000	1.01	NO	204.324	1.228	1.202	1.91	0.419	1.49e7	10691	1395.5	1.48e7	9042	1631.4	bd	bd
17	OCDF	1.90e6	2.09e6	3.98e6	44.80	1.007	0.91	NO	416.811	1.180	1.133	6.78	0.402	2.07e7	8487	2437.5	2.34e7	5859	3990.3	bd	bb
18	13C-2378-TCDD	9.08e5	1.18e6	2.08e6	31.34	1.015	0.77	NO	98.652	1.113	1.128	2.36	0.112	1.86e7	7944	2339.0	2.37e7	4559	5208.0	bb	bb
19	13C-12378-PeCDD	8.37e5	5.47e5	1.38e6	34.20	1.108	1.53	NO	98.417	0.739	0.751	5.03	0.104	2.04e7	4338	4692.3	1.34e7	3347	4003.3	bb	bb
20	13C-123478-HxCDD	6.25e5	5.03e5	1.13e6	36.83	0.991	1.24	NO	100.728	0.903	0.896	1.38	0.172	1.26e7	6951	1815.9	1.00e7	5143	1950.2	bd	bd
21	13C-123678-HxCDD	6.83e5	5.57e5	1.24e6	36.91	0.993	1.23	NO	100.685	0.993	0.986	0.84	0.156	1.36e7	6951	1953.6	1.11e7	5143	2156.6	dd	dd
22	13C-1234678-HpCDD	4.33e5	4.13e5	8.47e5	40.23	1.083	1.05	NO	100.892	0.678	0.672	1.29	0.183	6.49e6	4520	1436.4	6.16e6	5151	1196.0	bd	bd
23	13C-OCDD	7.80e5	9.07e5	1.69e6	44.49	1.197	0.86	NO	210.311	0.675	0.642	4.87	0.272	8.74e6	8904	981.8	9.98e6	4818	2071.9	bb	bd
24	13C-2378-TCDF	1.01e6	1.30e6	2.31e6	30.64	0.993	0.77	NO	98.614	1.233	1.250	1.88	0.165	1.37e7	13730	999.5	1.79e7	6681	2683.0	bb	bb
25	13C-12378-PeCDF	1.13e6	7.17e5	1.85e6	33.39	1.082	1.58	NO	97.584	0.986	1.011	4.24	0.190	2.89e7	13181	2193.7	1.86e7	5800	3205.6	bb	bb
26	13C-23478-PeCDF	1.19e6	7.44e5	1.94e6	34.01	1.102	1.60	NO	97.318	1.035	1.063	5.28	0.181	3.10e7	13181	2355.2	1.88e7	5800	3248.7	db	bb
27	13C-123478-HxCDF	4.71e5	8.99e5	1.37e6	36.10	0.972	0.52	NO	98.724	1.097	1.111	1.42	0.276	1.02e7	10993	928.5	1.98e7	13101	1511.7	bd	bd
28	13C-123678-HxCDF	5.42e5	1.03e6	1.57e6	36.20	0.974	0.53	NO	100.717	1.256	1.247	1.06	0.246	1.08e7	10993	985.4	2.09e7	13101	1591.5	dd	dd
29	13C-234678-HxCDF	4.70e5	8.72e5	1.34e6	36.69	0.987	0.54	NO	99.282	1.074	1.082	1.01	0.284	9.85e6	10993	896.3	1.88e7	13101	1435.8	bd	bb
30	13C-123789-HxCDF	4.17e5	7.84e5	1.20e6	37.47	1.008	0.53	NO	99.370	0.961	0.967	1.08	0.317	7.67e6	10993	697.3	1.47e7	13101	1123.3	bd	bb
31	13C-1234678-HpCDF	3.30e5	7.46e5	1.08e6	38.97	1.049	0.44	NO	99.003	0.861	0.870	1.11	0.194	5.71e6	6045	944.3	1.31e7	7193	1816.3	bb	bb
32	13C-1234789-HpCDF	2.66e5	5.79e5	8.45e5	40.89	1.101	0.46	NO	99.849	0.676	0.677	1.01	0.249	3.70e6	6045	611.9	8.36e6	7193	1162.3	bd	bb
33	13C-1234-TCDD	8.26e5	1.05e6	1.87e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.127	1.31e7	7944	1645.5	1.65e7	4559	3617.1	bb	bb
34	13C-123789-HxCDD	6.86e5	5.64e5	1.25e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.154	1.29e7	6951	1859.3	1.06e7	5143	2053.6	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Ch#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	7.96e5	7.96e5	7.96e5	31.35	1.016			40.065	1.063	1.061	4.54	0.0384	1.57e7	4023	3910.2						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

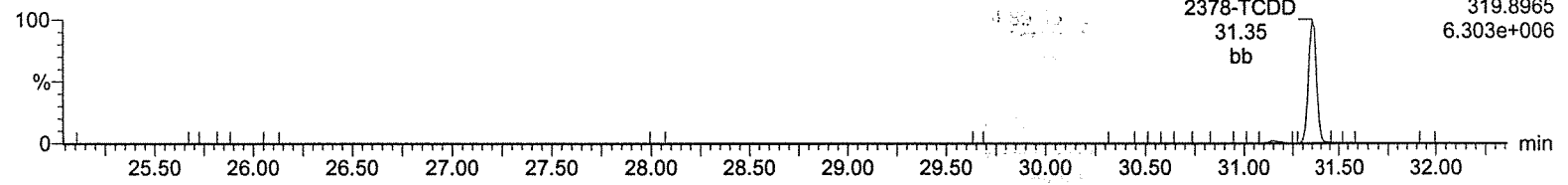
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

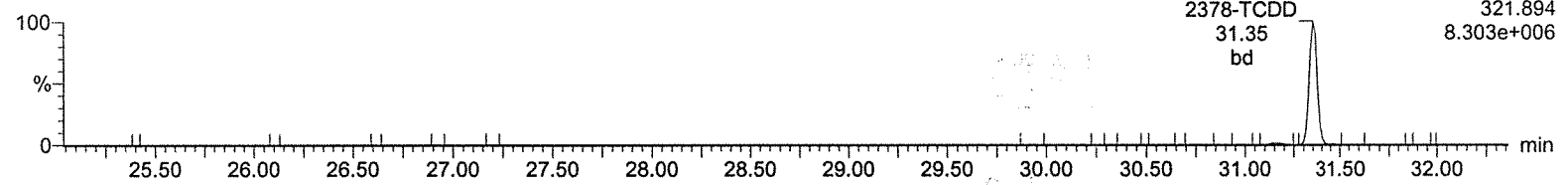
Total-tetradoxins

A08JUL19A-7



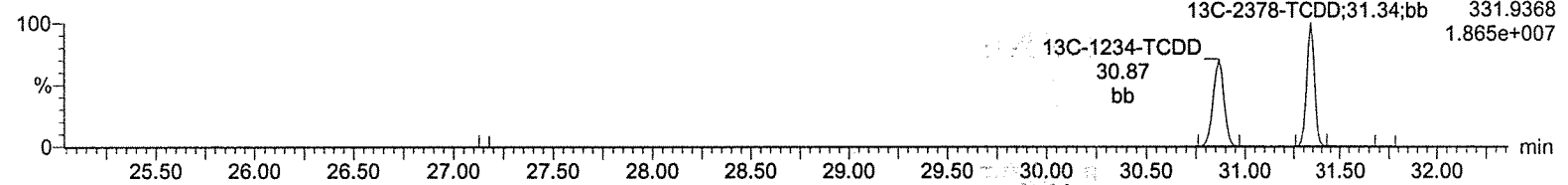
Total-tetradoxins

A08JUL19A-7



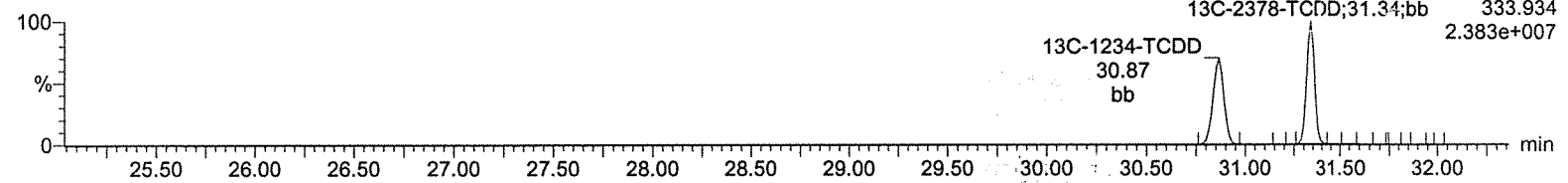
13C-2378-TCDD

A08JUL19A-7



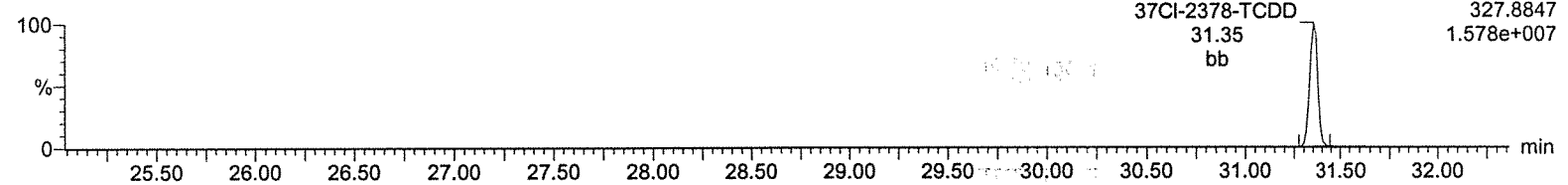
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A08JUL19A-7



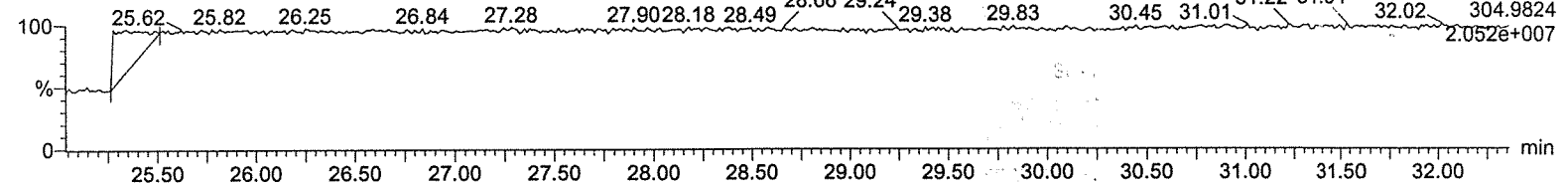
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A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

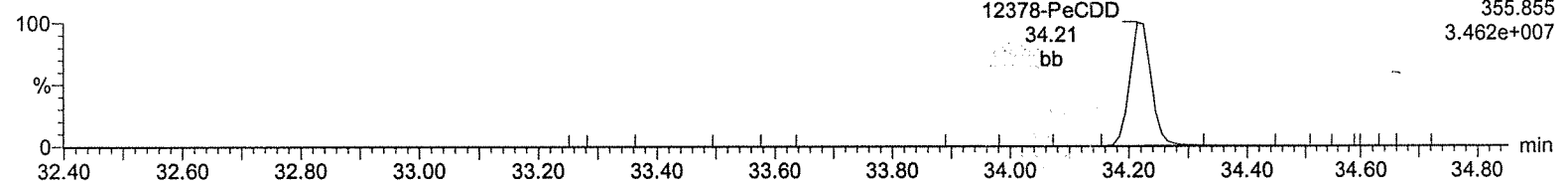
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

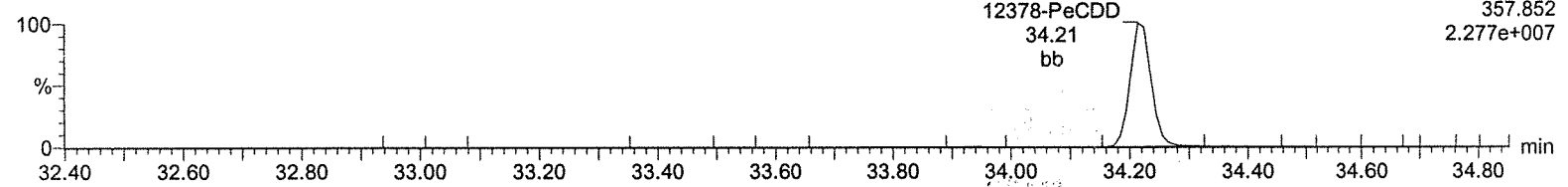
Total-pentadioxins

A08JUL19A-7



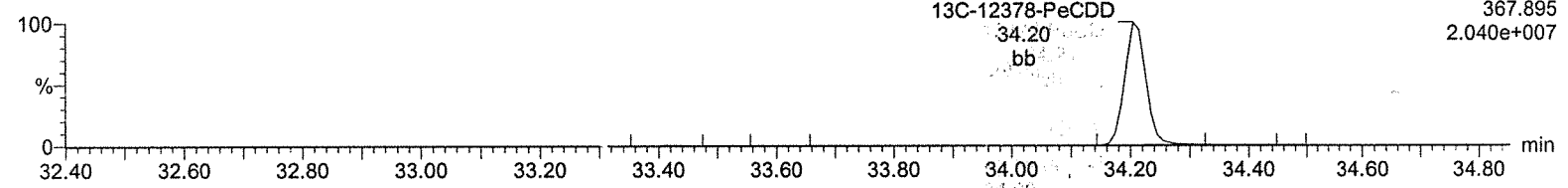
Total-pentadioxins

A08JUL19A-7



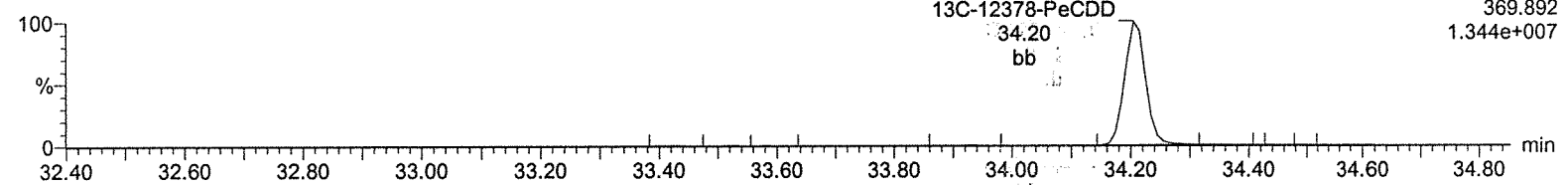
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A08JUL19A-7



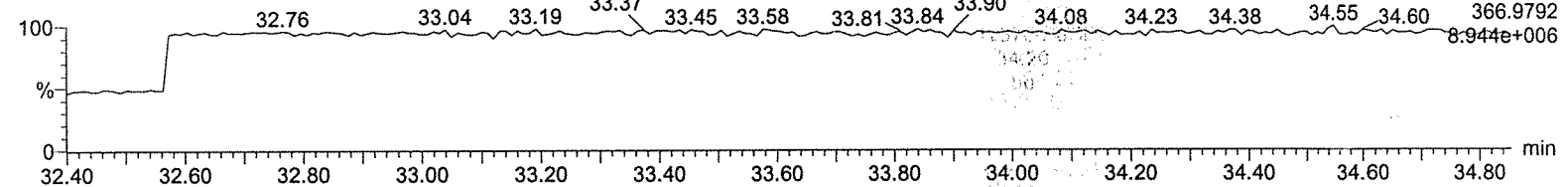
13C-12378-PeCDD

A08JUL19A-7



Lock Mass F2

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

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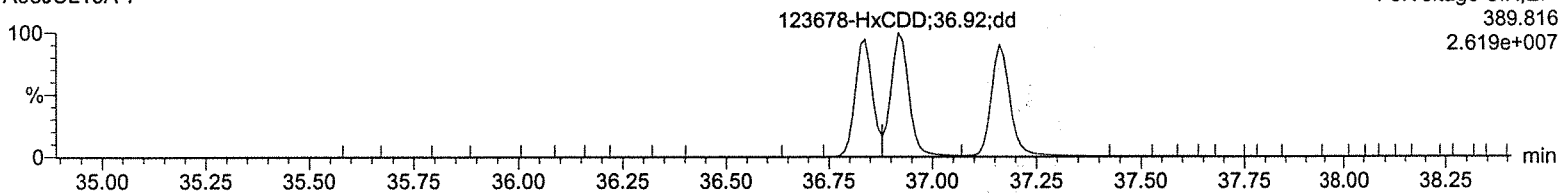
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

Total-hexadioxins

A08JUL19A-7

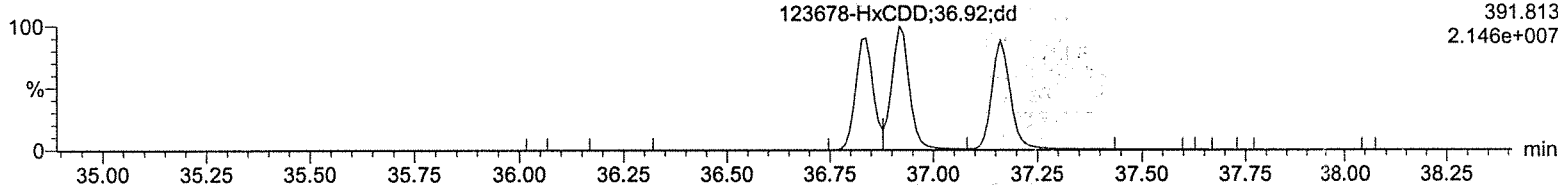
F3:Voltage SIR,EI+
389.816
2.619e+007



Total-hexadioxins

A08JUL19A-7

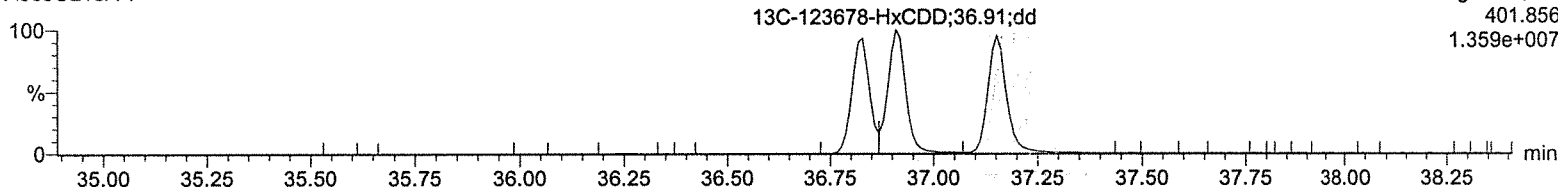
F3:Voltage SIR,EI+
391.813
2.146e+007



13C-123478-HxCDD

A08JUL19A-7

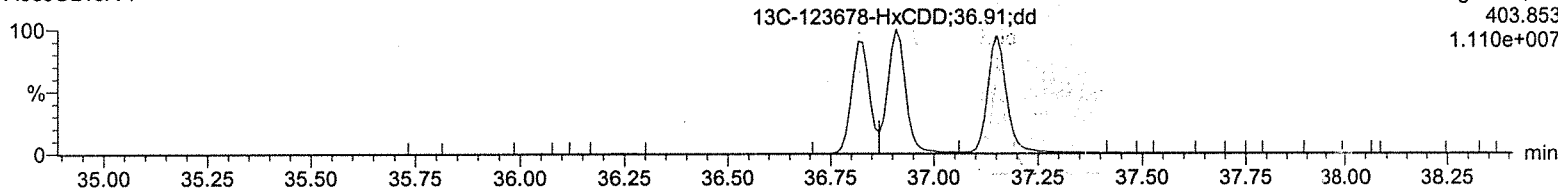
F3:Voltage SIR,EI+
401.856
1.359e+007



13C-123478-HxCDD

A08JUL19A-7

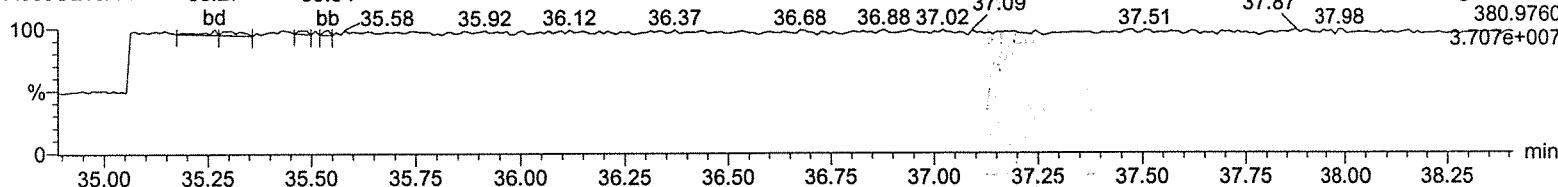
F3:Voltage SIR,EI+
403.853
1.110e+007



Lock Mass F3

A08JUL19A-7

F3:Voltage SIR,EI+
380.9760
3.707e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

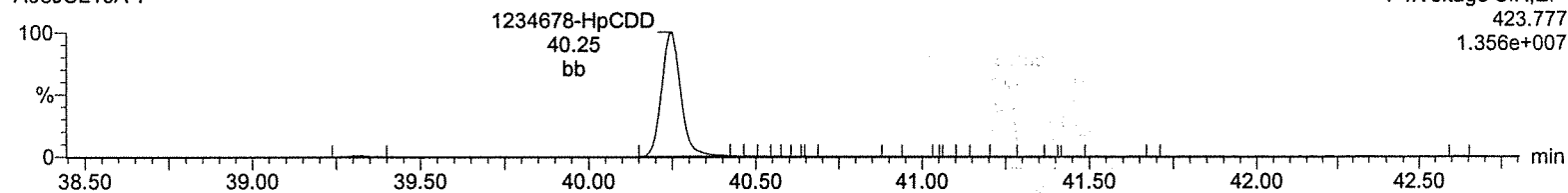
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

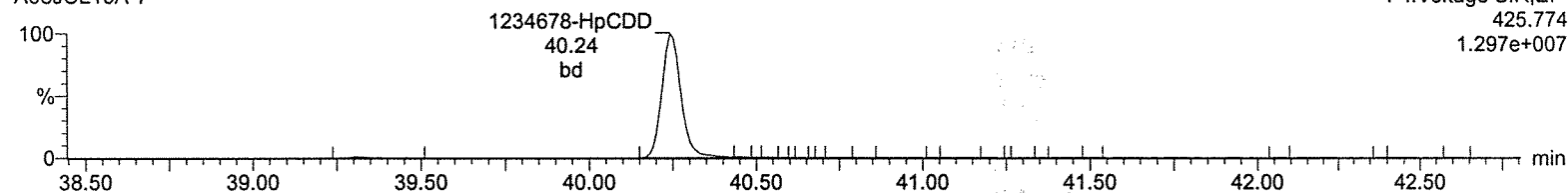
Total-heptadioxins

A08JUL19A-7



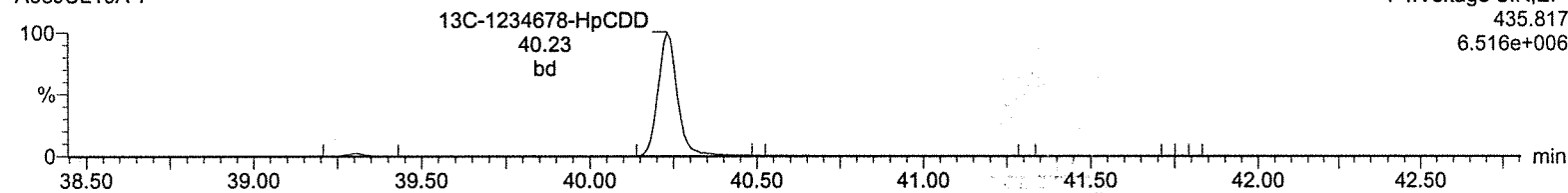
Total-heptadioxins

A08JUL19A-7



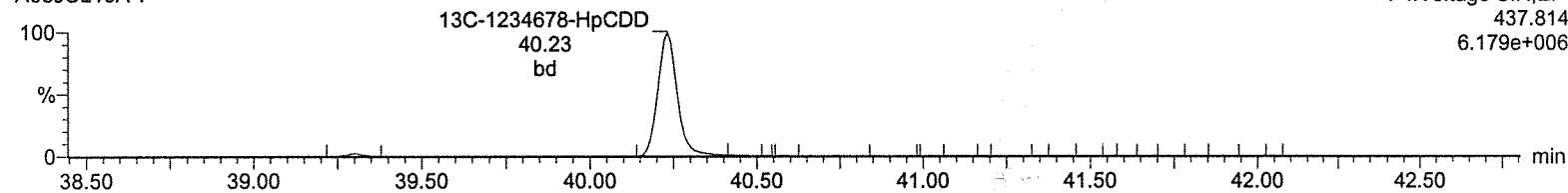
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A08JUL19A-7



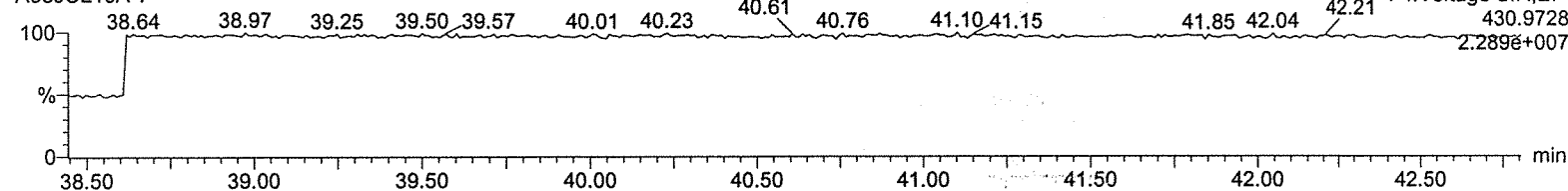
13C-1234678-HpCDD

A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

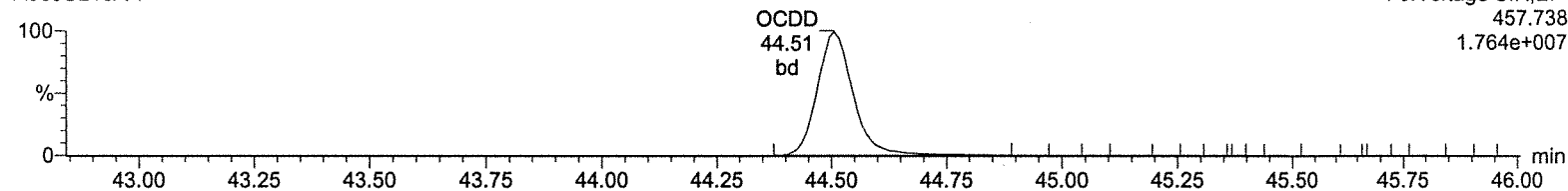
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Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

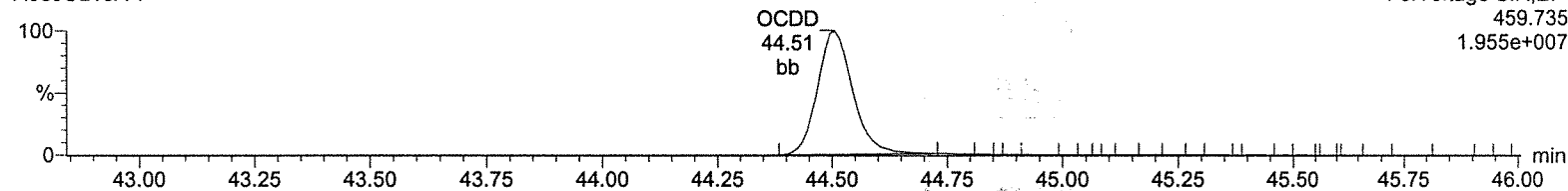
OCDD

A08JUL19A-7



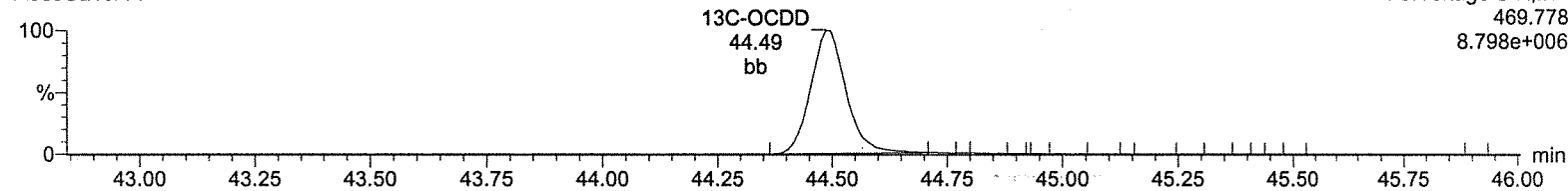
OCDD

A08JUL19A-7



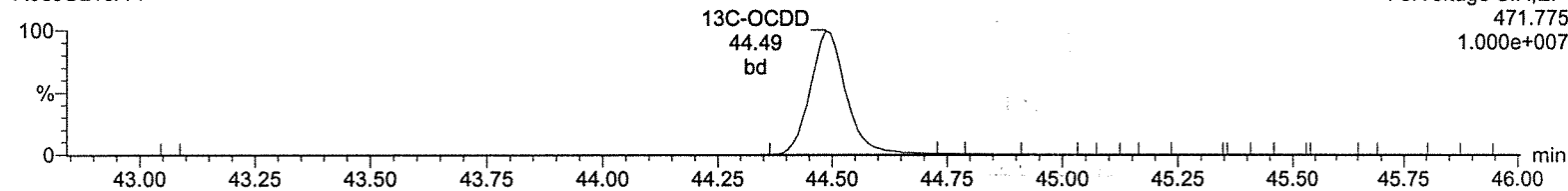
13C-OCDD

A08JUL19A-7



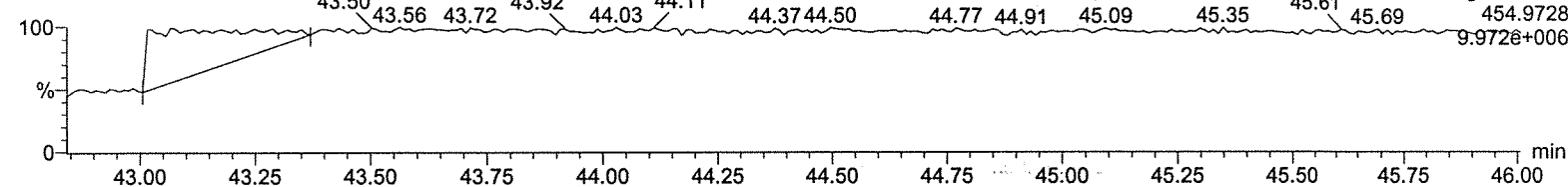
13C-OCDD

A08JUL19A-7



Lock Mass F5

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qid

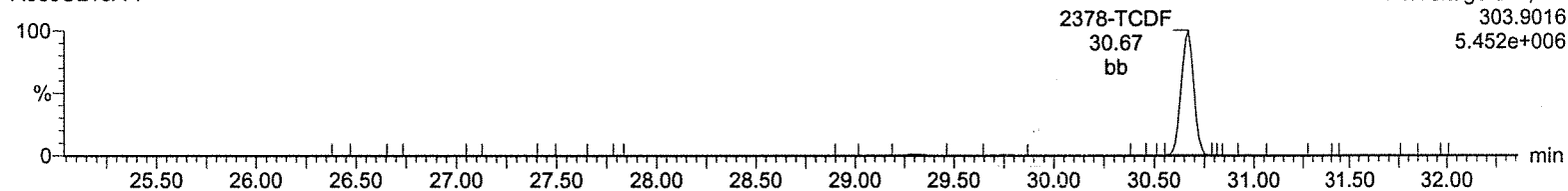
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

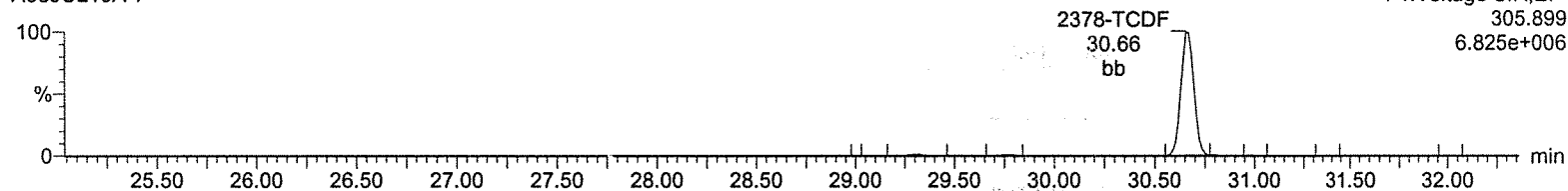
Total-tetrafurans

A08JUL19A-7



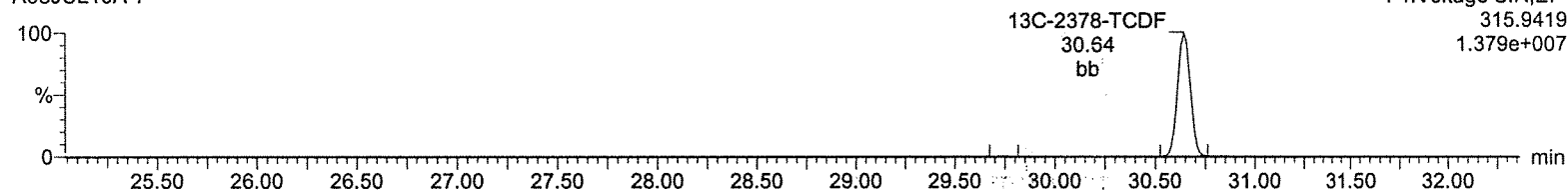
Total-tetrafurans

A08JUL19A-7



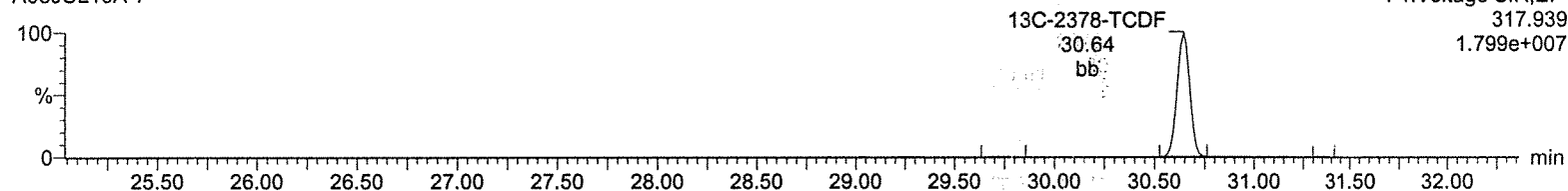
13C-2378-TCDF

A08JUL19A-7



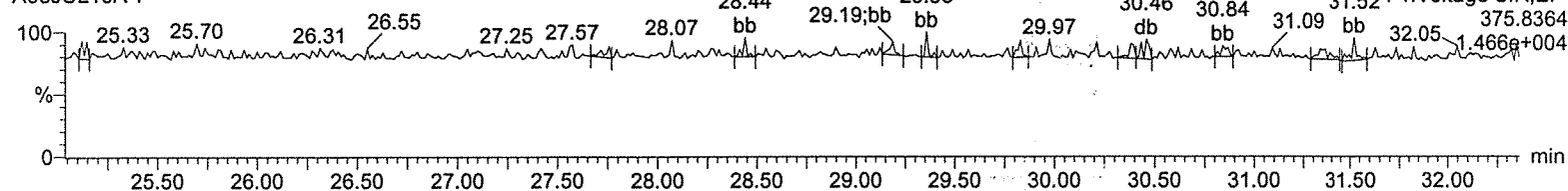
13C-2378-TCDF

A08JUL19A-7



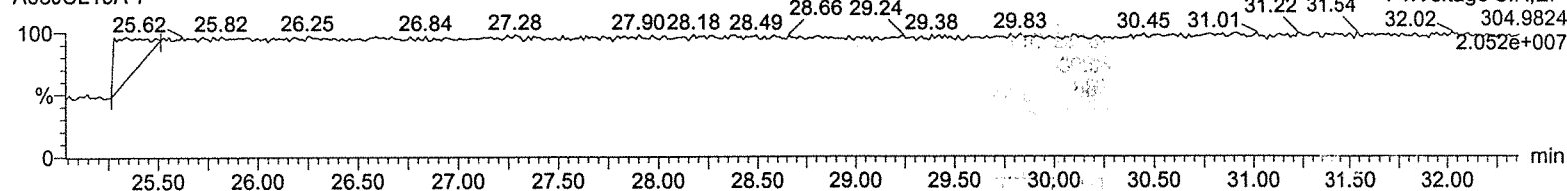
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

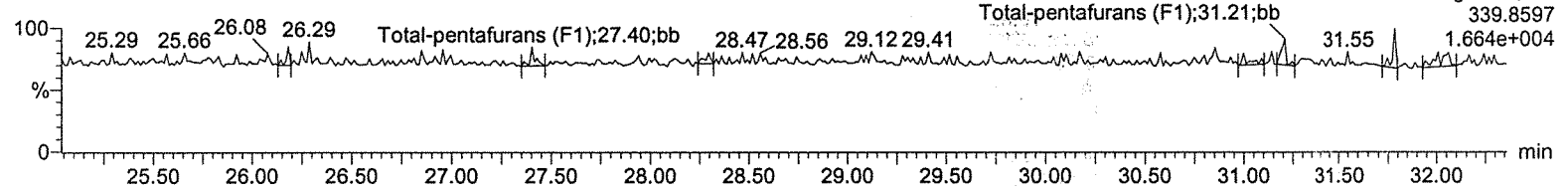
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

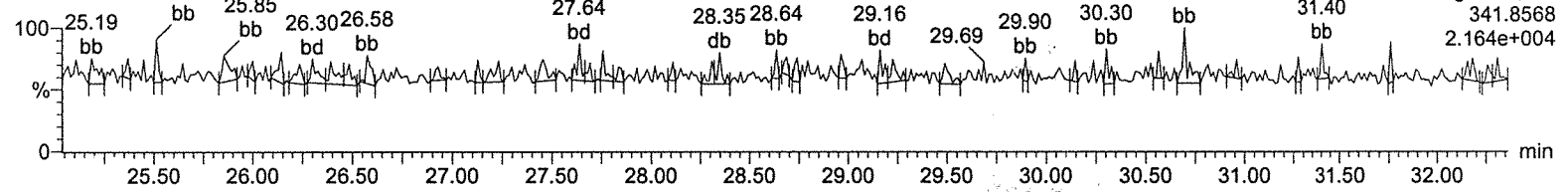
Total-pentafurans (F1)

A08JUL19A-7



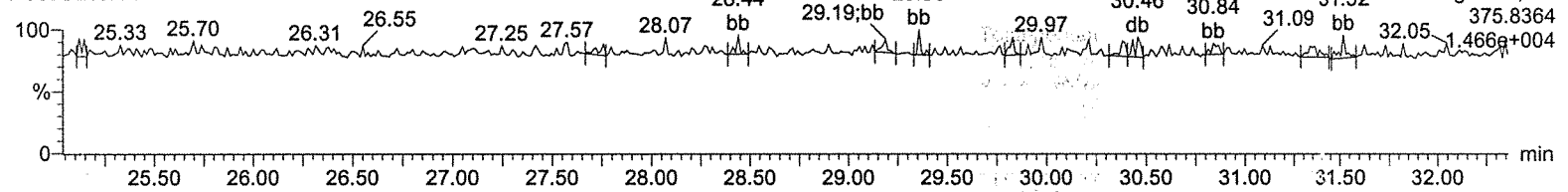
Total-pentafurans (F1)

A08JUL19A-7



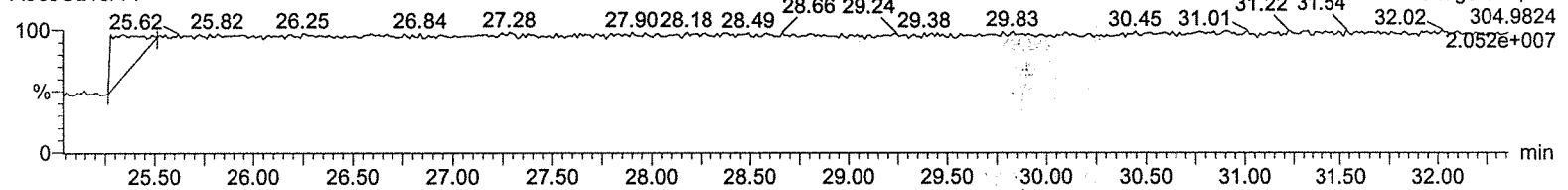
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

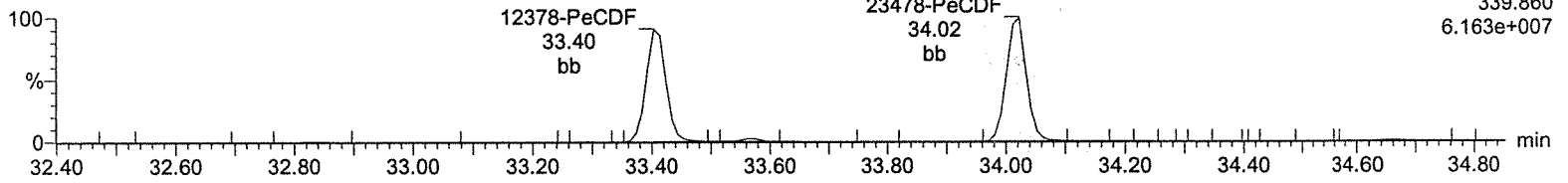
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Total-pentafurans

A08JUL19A-7

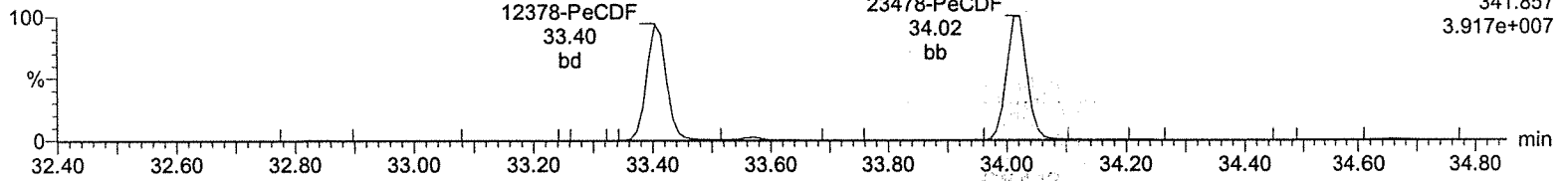
F2:Voltage SIR,EI+
339.860
6.163e+007



Total-pentafurans

A08JUL19A-7

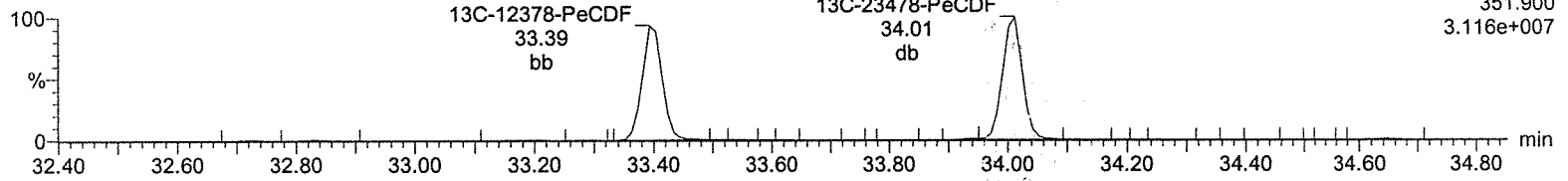
F2:Voltage SIR,EI+
341.857
3.917e+007



13C-12378-PeCDF

A08JUL19A-7

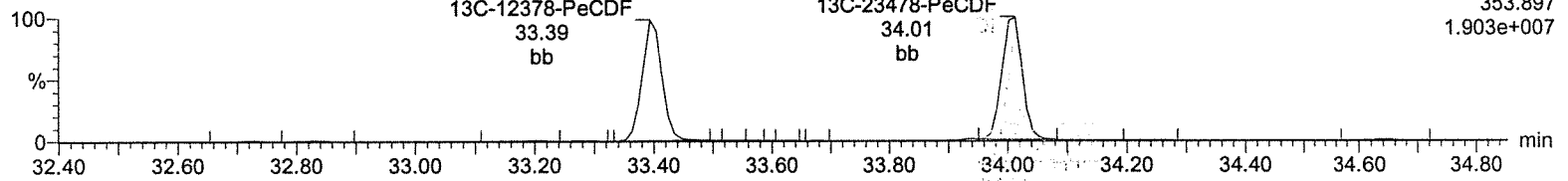
F2:Voltage SIR,EI+
351.900
3.116e+007



13C-12378-PeCDF

A08JUL19A-7

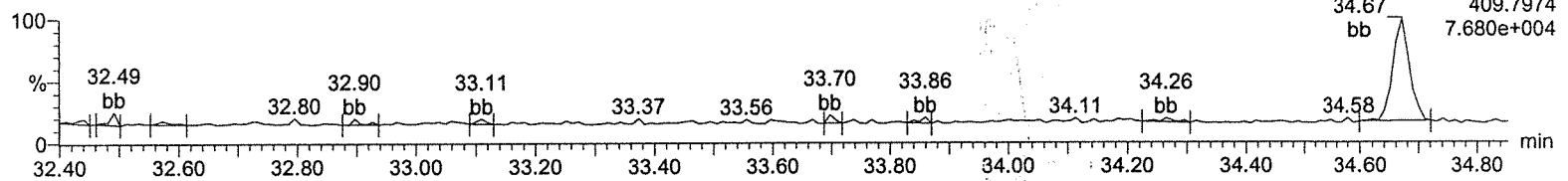
F2:Voltage SIR,EI+
353.897
1.903e+007



HpDPE

A08JUL19A-7

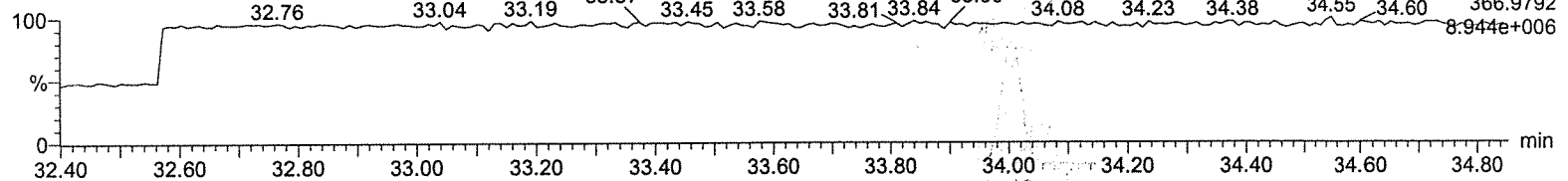
F2:Voltage SIR,EI+
34.67
409.7974
7.680e+004



Lock Mass F2

A08JUL19A-7

F2:Voltage SIR,EI+
366.9792
8.944e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

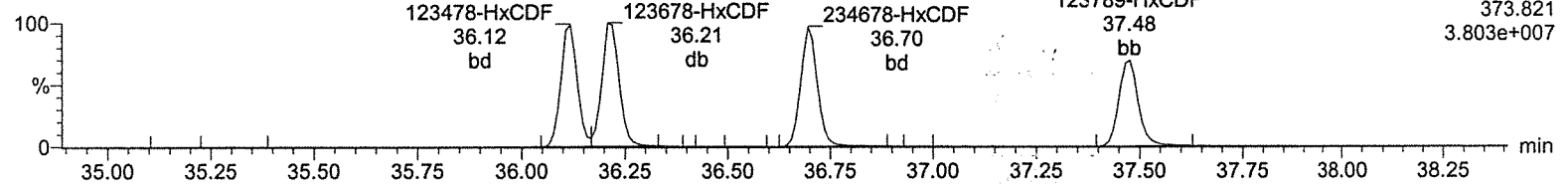
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

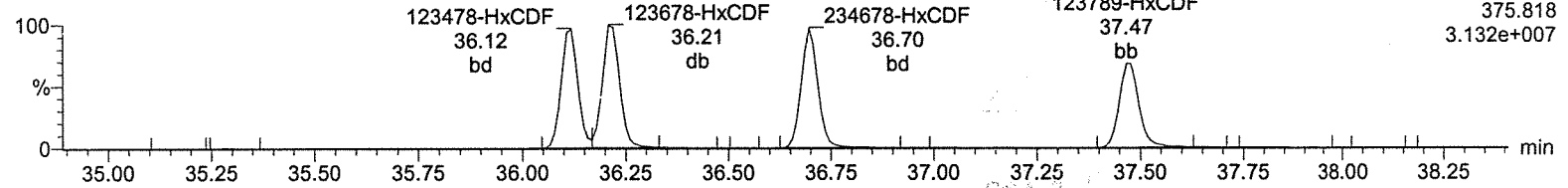
Total-hexafurans

A08JUL19A-7



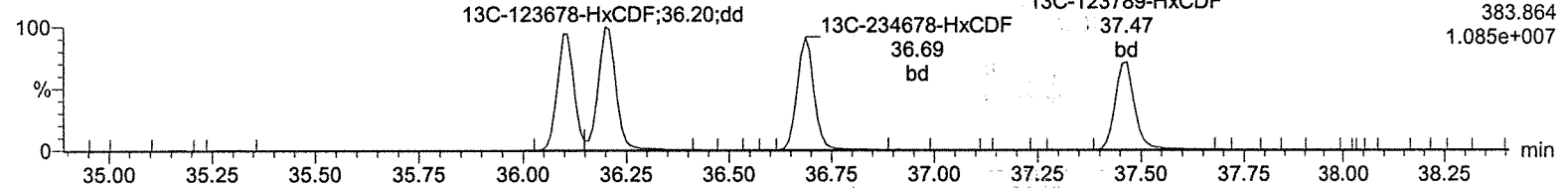
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A08JUL19A-7



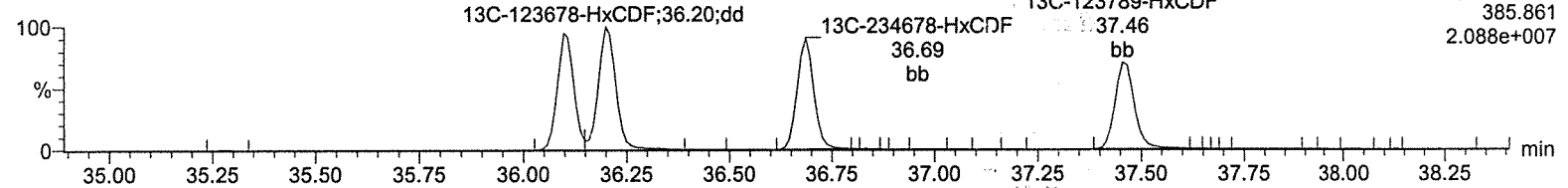
13C-123478-HxCDF

A08JUL19A-7



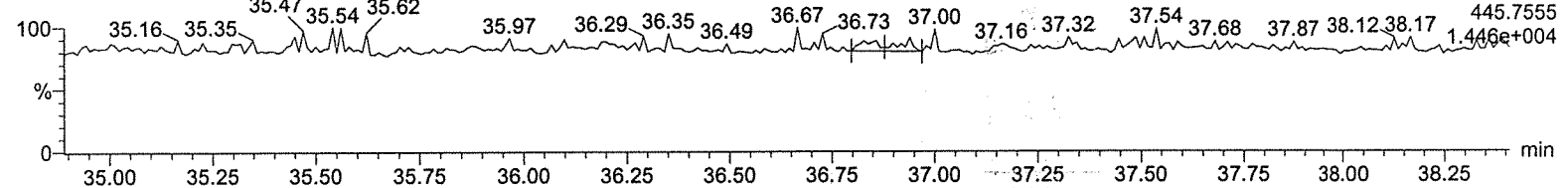
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A08JUL19A-7



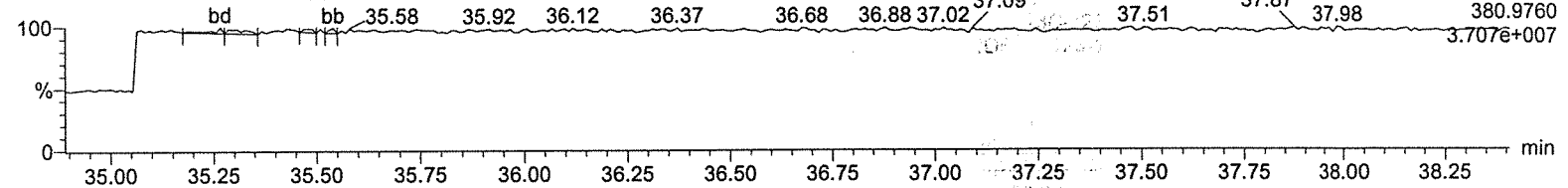
OcDPE

A08JUL19A-7



Lock Mass F3

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

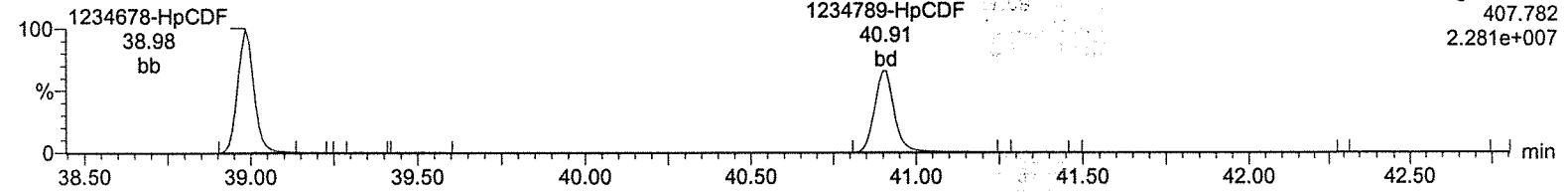
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

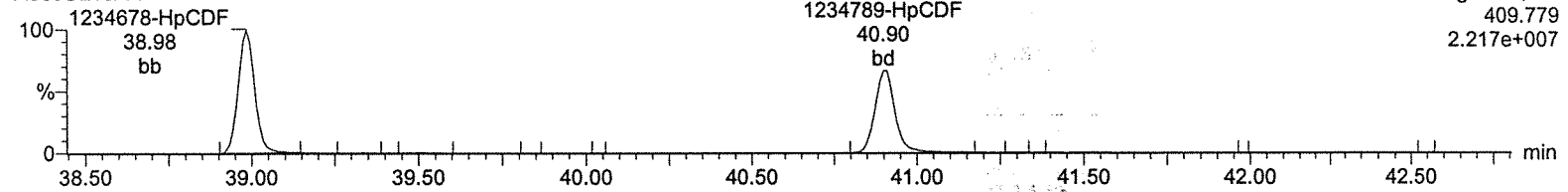
Total-heptafurans

A08JUL19A-7



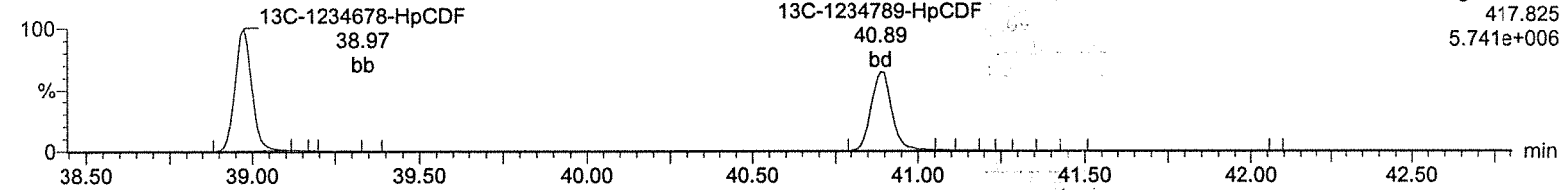
Total-heptafurans

A08JUL19A-7



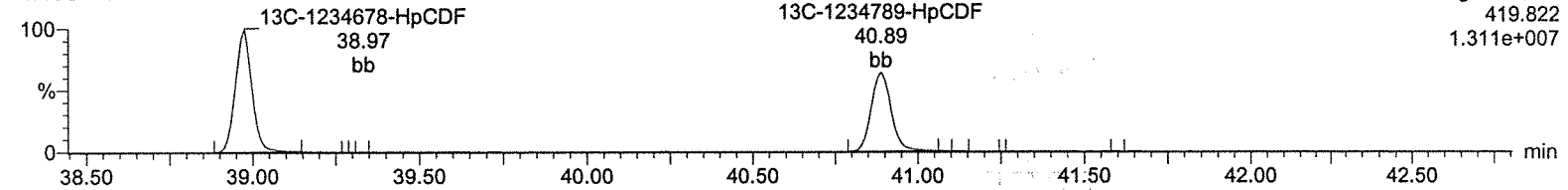
13C-1234678-HpCDF

A08JUL19A-7



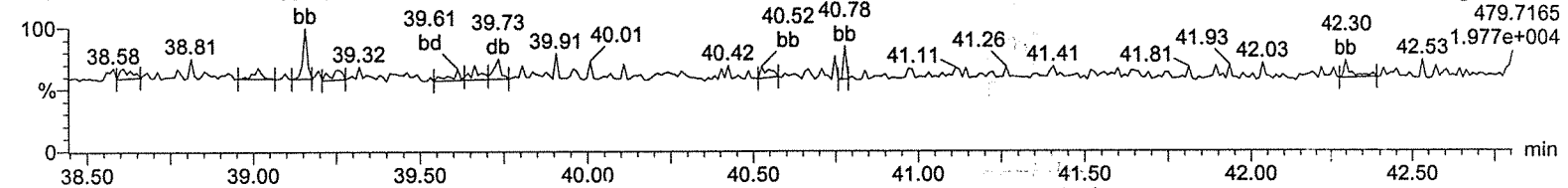
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A08JUL19A-7



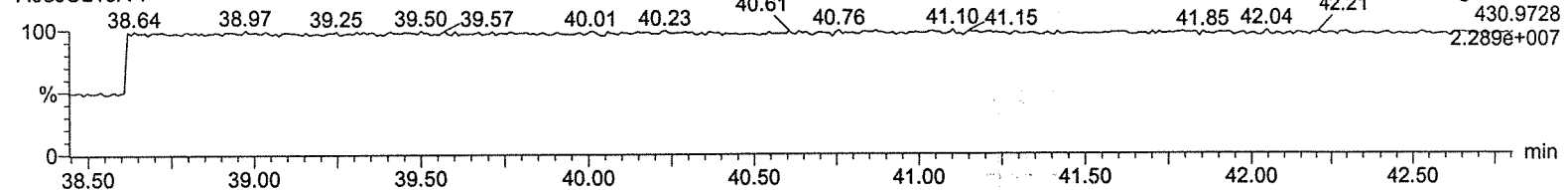
NoDPE

A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

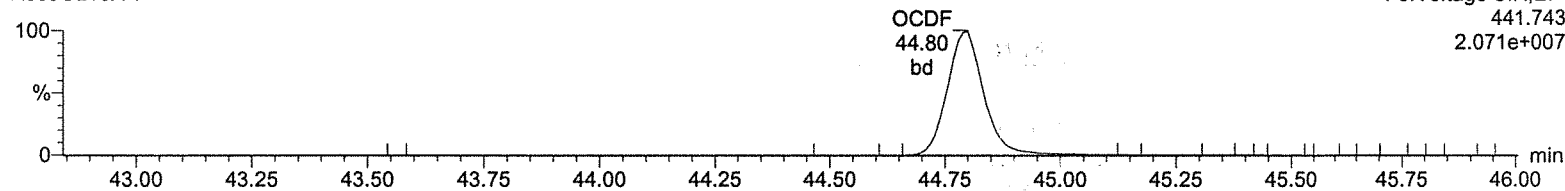
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

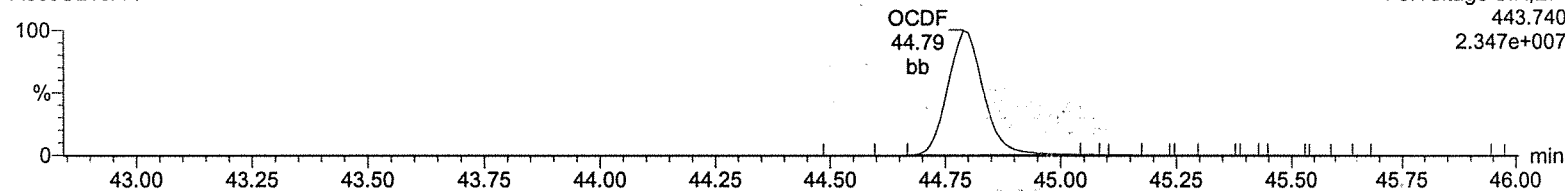
OCDF

A08JUL19A-7



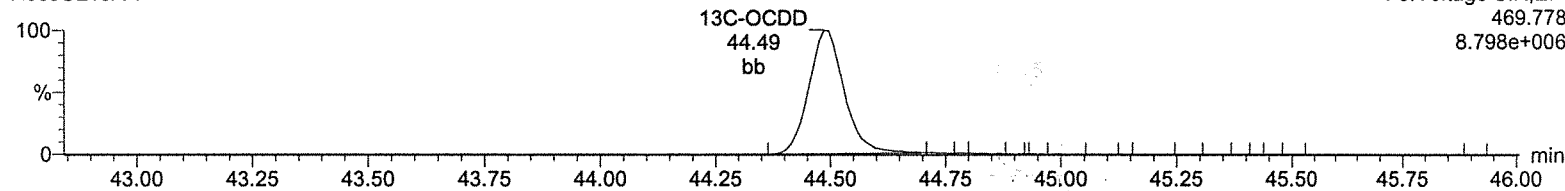
OCDF

A08JUL19A-7



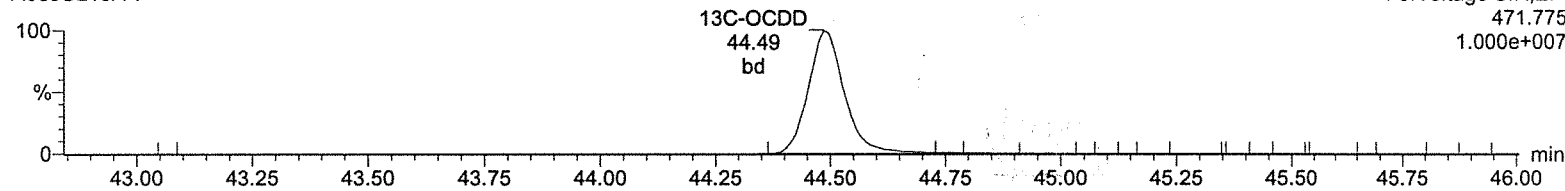
13C-OCDD

A08JUL19A-7



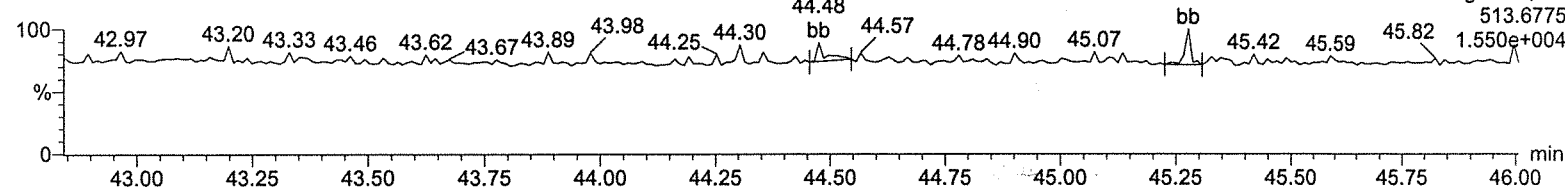
13C-OCDD

A08JUL19A-7



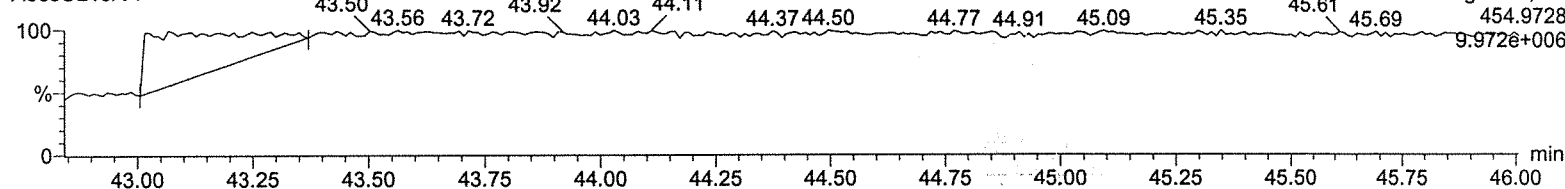
DeDPE

A08JUL19A-7



Lock Mass F5

A08JUL19A-7



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Dataset: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

221/8/19

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.78e6	2.34e6	4.12e6	31.35	1.000	0.76	NO	205.757	0.910	0.884	5.07	0.0469	3.47e7	3058	11358.0	4.56e7	3176	14350.1	bb	bb
2	12378-PeCDD	8.29e6	5.35e6	1.36e7	34.22	1.000	1.55	NO	1009.561	0.862	0.853	1.65	0.130	2.10e8	4103	51087.5	1.33e8	10010	13303.8	bb	bb
3	123478-HxCDD	7.14e6	5.72e6	1.29e7	36.84	1.000	1.25	NO	1030.901	0.969	0.940	3.11	0.258	1.49e8	10705	13935.4	1.18e8	11148	10602.9	bd	bd
4	123678-HxCDD	7.78e6	6.24e6	1.40e7	36.92	1.000	1.25	NO	1026.323	0.969	0.944	2.57	0.240	1.53e8	10705	14298.1	1.25e8	11148	1183.8	dd	dd
5	123789-HxCDD	7.35e6	5.86e6	1.32e7	37.16	1.007	1.25	NO	1026.758	0.952	0.927	3.30	0.253	1.43e8	10705	13389.8	1.15e8	11148	10340.8	dd	dd
6	1234678-HpCDD	5.26e6	5.01e6	1.03e7	40.24	1.000	1.05	NO	1029.037	1.070	1.040	2.88	0.612	8.19e7	13310	6152.6	7.83e7	18608	4207.3	bb	bb
7	OCDD	8.83e6	9.80e6	1.86e7	44.51	1.000	0.90	NO	2036.586	0.989	0.971	2.39	0.715	1.05e8	11377	9196.2	1.17e8	13516	8665.0	bb	bb
8	2378-TCDF	2.10e6	2.75e6	4.85e6	30.67	1.001	0.76	NO	202.186	0.989	0.978	5.59	0.0956	2.82e7	4854	5802.8	3.67e7	5522	6647.2	bb	bb
9	12378-PeCDF	1.23e7	8.04e6	2.04e7	33.40	1.000	1.54	NO	1020.233	0.964	0.945	3.41	0.271	3.19e8	31922	9979.2	2.11e8	13143	16048.5	bb	bb
10	123478-PeCDF	1.38e7	9.07e6	2.29e7	34.02	1.000	1.53	NO	1048.349	1.034	0.987	3.73	0.236	3.64e8	31922	11387.7	2.33e8	13143	17714.6	bb	bb
11	123478-HxCDF	9.95e6	8.17e6	1.81e7	36.12	1.000	1.22	NO	1036.336	1.127	1.087	3.86	0.482	2.21e8	28521	7761.7	1.79e8	32460	5528.1	bd	bd
12	123678-HxCDF	1.06e7	8.66e6	1.93e7	36.22	1.000	1.23	NO	1010.825	1.052	1.041	3.23	0.454	2.29e8	28521	8033.9	1.86e8	32460	5739.4	db	db
13	1234678-HxCDF	1.01e7	8.11e6	1.82e7	36.69	1.000	1.25	NO	1024.664	1.164	1.136	3.17	0.472	2.17e8	28521	7620.3	1.80e8	32460	5559.1	bd	bd
14	123789-HxCDF	8.33e6	6.80e6	1.51e7	37.48	1.000	1.23	NO	1021.587	1.084	1.061	2.29	0.652	1.66e8	28521	5836.8	1.34e8	32460	4119.4	bb	bb
15	1234678-HpCDF	7.47e6	7.34e6	1.48e7	38.98	1.000	1.02	NO	1028.218	1.182	1.150	3.86	0.526	1.33e8	22716	5841.8	1.30e8	21882	5933.2	bb	bb
16	1234789-HpCDF	6.03e6	5.91e6	1.19e7	40.91	1.000	1.02	NO	1022.696	1.229	1.202	1.91	0.765	8.92e7	22716	3925.2	8.80e7	21882	4023.5	bb	bb
17	OCDF	1.11e7	1.25e7	2.35e7	44.80	1.007	0.89	NO	2206.183	1.250	1.133	6.78	0.605	1.31e8	9724	13509.9	1.47e8	14872	9854.1	bb	bb
18	13C-2378-TCDD	9.90e5	1.27e6	2.26e6	31.34	1.015	0.78	NO	103.020	1.162	1.128	2.36	0.109	1.97e7	8334	2369.3	2.52e7	4305	5853.2	bb	bb
19	13C-12378-PeCDD	9.58e5	6.25e5	1.58e6	34.21	1.109	1.53	NO	108.196	0.813	0.751	5.03	0.0899	2.31e7	4492	5145.4	1.50e7	2453	6119.5	bb	bb
20	13C-123478-HxCDD	7.35e5	5.93e5	1.33e6	36.83	0.991	1.24	NO	101.352	0.908	0.896	1.38	0.166	1.50e7	7897	1897.6	1.22e7	6151	1976.9	bd	bd
21	13C-123678-HxCDD	7.98e5	6.49e5	1.45e6	36.91	0.993	1.23	NO	100.457	0.990	0.986	0.84	0.151	1.60e7	7897	2020.5	1.31e7	6151	2136.4	dd	dd
22	13C-1234678-HpCDD	4.87e5	4.73e5	9.60e5	40.23	1.083	1.03	NO	97.789	0.657	0.672	1.29	0.151	7.63e6	4493	1698.8	7.17e6	5124	1399.8	bb	bb
23	13C-OCDD	8.91e5	9.93e5	1.88e6	44.49	1.198	0.90	NO	200.806	0.645	0.642	4.87	0.183	1.02e7	6392	1591.5	1.14e7	4751	2406.3	bd	bd
24	13C-2378-TCDF	1.07e6	1.39e6	2.45e6	30.64	0.993	0.77	NO	100.812	1.260	1.250	1.88	0.164	1.45e7	13730	1053.1	1.91e7	7393	2582.1	bb	bb
25	13C-12378-PeCDF	1.29e6	8.22e5	2.11e6	33.39	1.082	1.57	NO	107.363	1.085	1.011	4.24	0.205	3.23e7	11309	2852.5	2.12e7	10040	2107.4	bb	bb
26	13C-23478-PeCDF	1.36e6	8.59e5	2.22e6	34.01	1.102	1.58	NO	107.006	1.138	1.063	5.28	0.195	3.55e7	11309	3143.2	2.23e7	10040	2223.5	db	bb
27	13C-123478-HxCDF	5.56e5	1.05e6	1.61e6	36.11	0.972	0.53	NO	99.083	1.101	1.111	1.42	0.196	1.21e7	11074	1089.3	2.33e7	9505	2456.5	bd	bd
28	13C-123678-HxCDF	6.26e5	1.21e6	1.83e6	36.21	0.975	0.52	NO	100.592	1.254	1.247	1.06	0.174	1.32e7	11074	1193.6	2.46e7	9505	2583.0	dd	dd
29	13C-234678-HxCDF	5.29e5	1.04e6	1.57e6	36.69	0.987	0.51	NO	99.147	1.073	1.082	1.01	0.201	1.15e7	11074	1041.6	2.24e7	9505	2355.3	bb	bd
30	13C-123789-HxCDF	4.81e5	9.15e5	1.40e6	37.47	1.008	0.53	NO	98.821	0.956	0.967	1.08	0.225	9.11e6	11074	822.3	1.74e7	9505	1832.5	bb	bb
31	13C-1234678-HpCDF	3.85e5	8.69e5	1.25e6	38.97	1.049	0.44	NO	98.609	0.858	0.870	1.11	0.141	6.80e6	5478	1240.5	1.53e7	6127	2499.4	bb	bb
32	13C-1234789-HpCDF	2.97e5	6.74e5	9.71e5	40.89	1.101	0.44	NO	98.139	0.665	0.677	1.01	0.181	4.44e6	5478	811.4	9.75e6	6127	1591.7	bb	bb
33	13C-1234-TCDD	8.51e5	1.10e6	1.95e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.123	1.35e7	8334	1618.7	1.69e7	4305	3920.6	bb	bb
34	13C-123789-HxCDD	8.04e5	6.57e5	1.46e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.148	1.56e7	7897	1978.2	1.28e7	6151	2088.1	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

List Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	4.40e6	4.40e6	4.40e6	31.35	1.016			212.931	1.130	1.061	4.54	0.0449	8.48e7	4902	17292.5				M	M2	
																					bb	

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

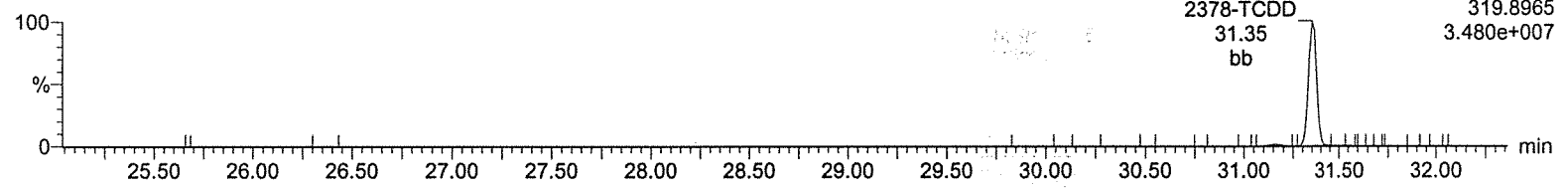
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

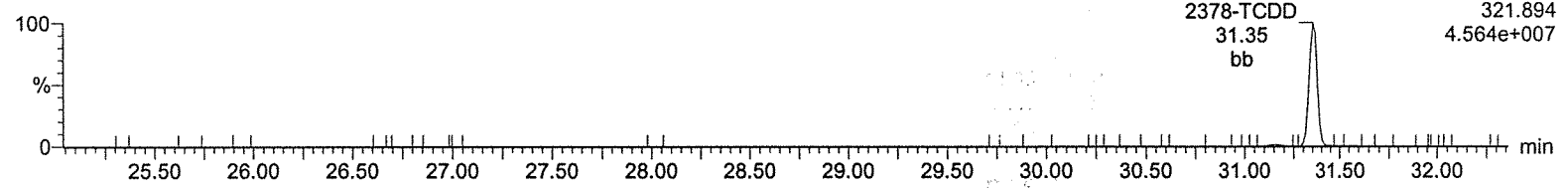
Total-tetradoxins

A08JUL19A-8



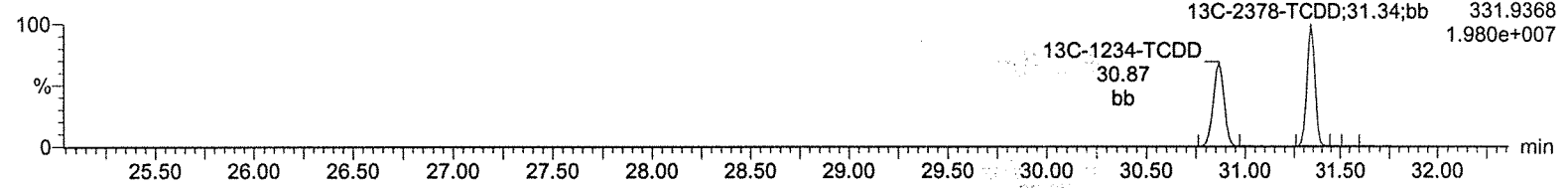
Total-tetradoxins

A08JUL19A-8



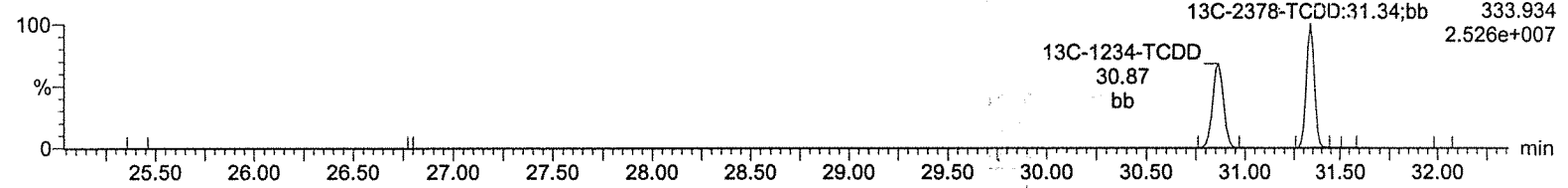
13C-2378-TCDD

A08JUL19A-8



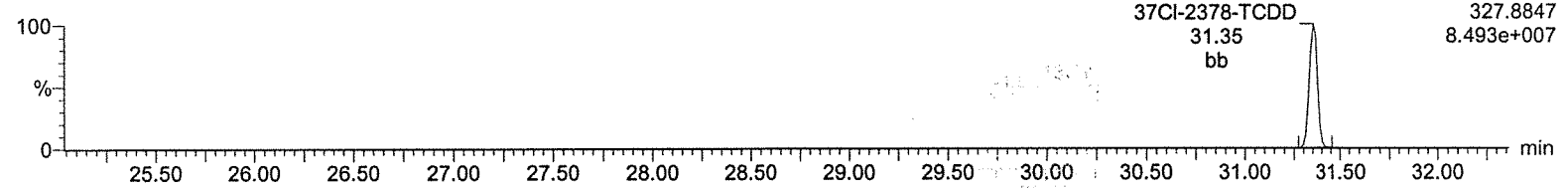
13C-2378-TCDD

A08JUL19A-8



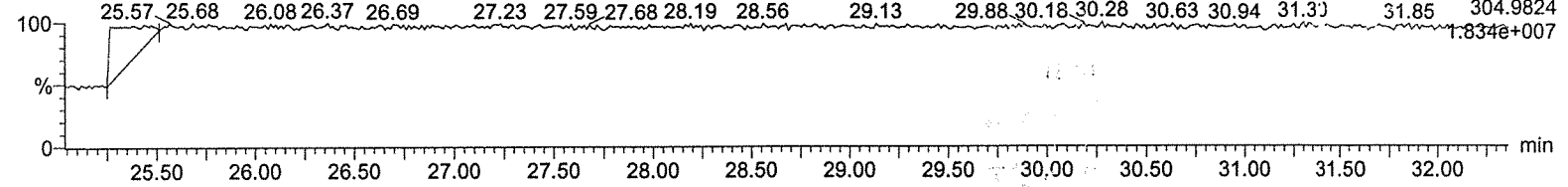
37Cl-2378-TCDD

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

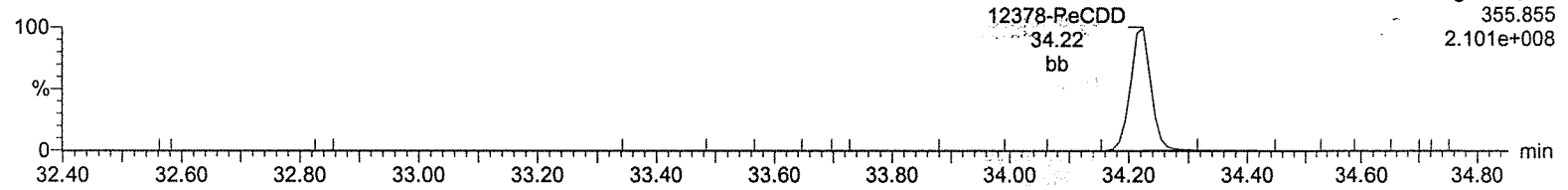
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

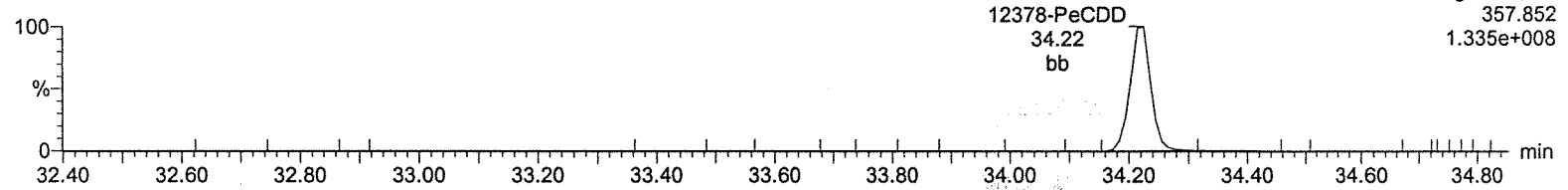
Total-pentadioxins

A08JUL19A-8



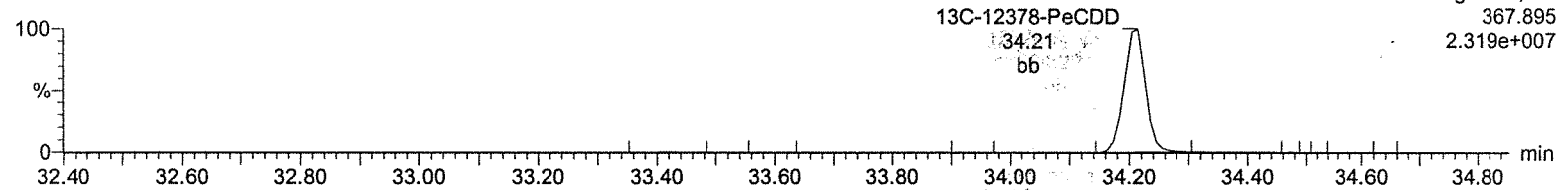
Total-pentadioxins

A08JUL19A-8



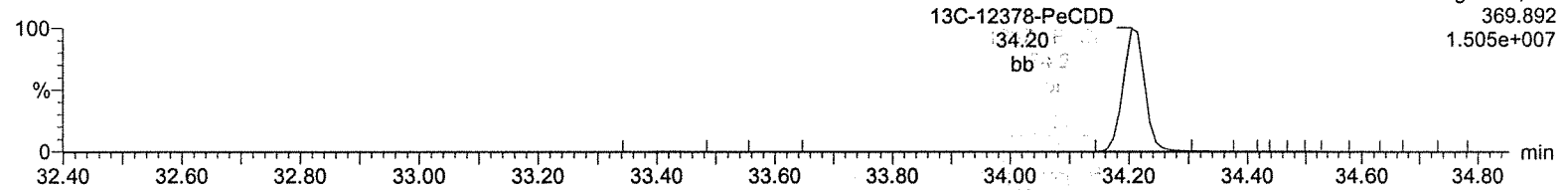
¹³C-12378-PeCDD

A08JUL19A-8



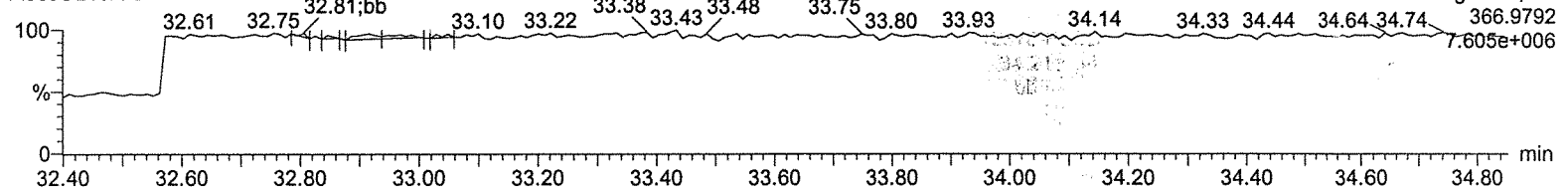
¹³C-12378-PeCDD

A08JUL19A-8



Lock Mass F2

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

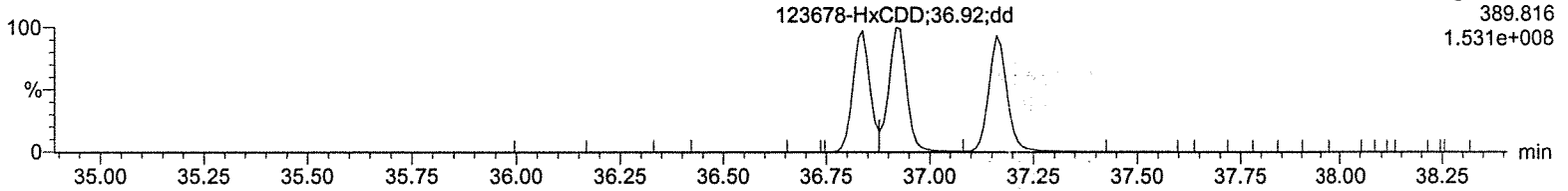
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Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-hexadioxins

A08JUL19A-8

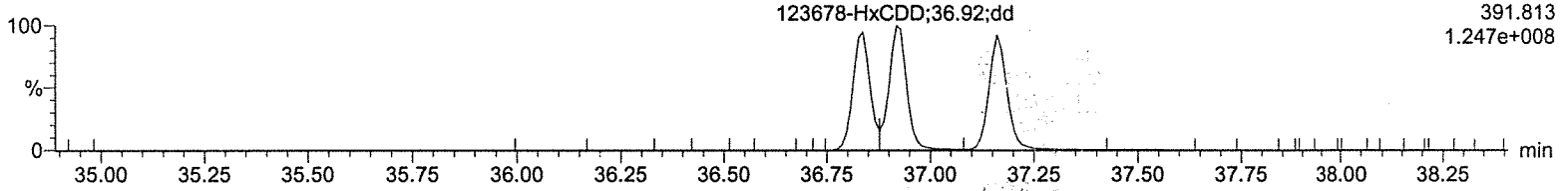
F3:Voltage SIR,EI+
389.816
1.531e+008



Total-hexadioxins

A08JUL19A-8

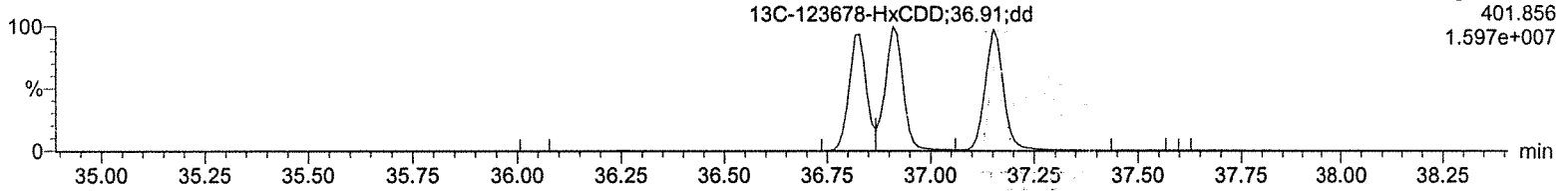
F3:Voltage SIR,EI+
391.813
1.247e+008



13C-123478-HxCDD

A08JUL19A-8

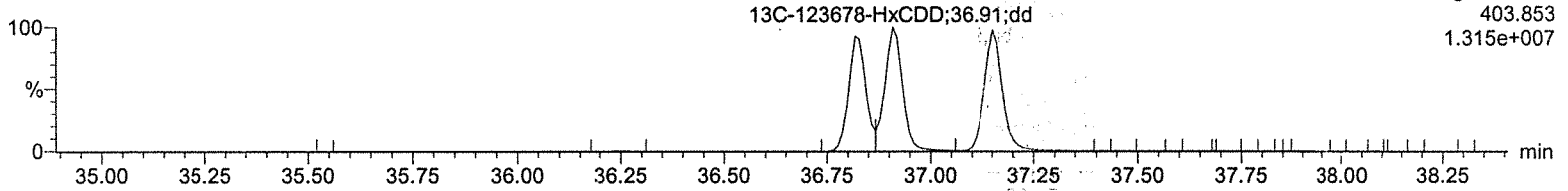
F3:Voltage SIR,EI+
401.856
1.597e+007



13C-123478-HxCDD

A08JUL19A-8

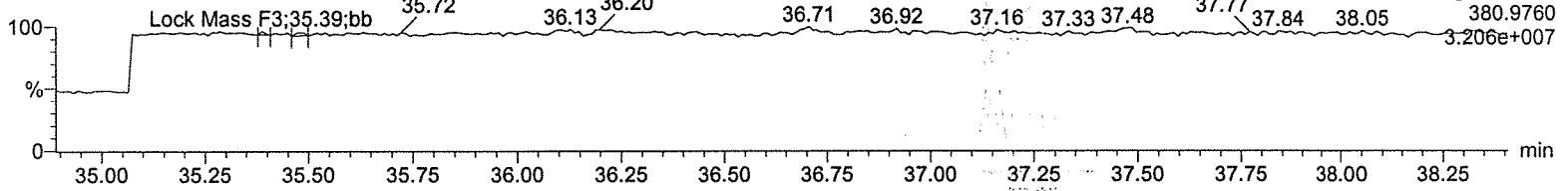
F3:Voltage SIR,EI+
403.853
1.315e+007



Lock Mass F3

A08JUL19A-8

F3:Voltage SIR,EI+
380.9760
3.206e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

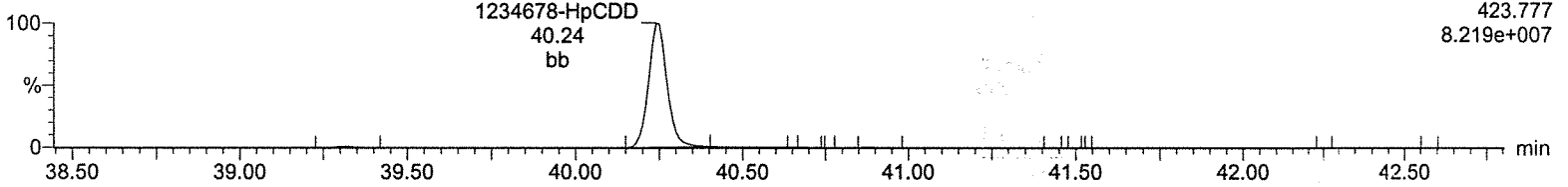
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-heptadioxins

A08JUL19A-8

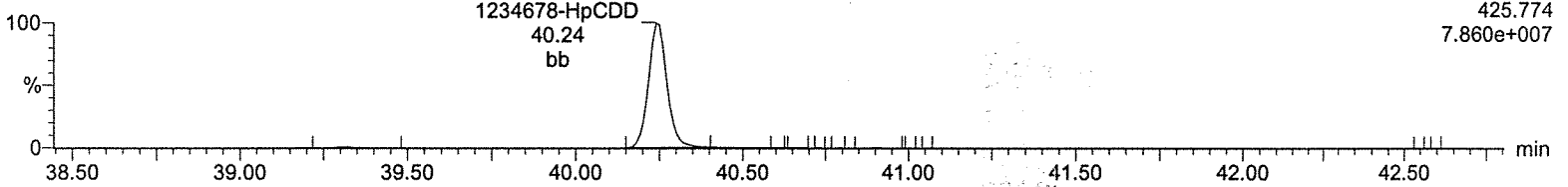
F4:Voltage SIR,EI+
423.777
8.219e+007



Total-heptadioxins

A08JUL19A-8

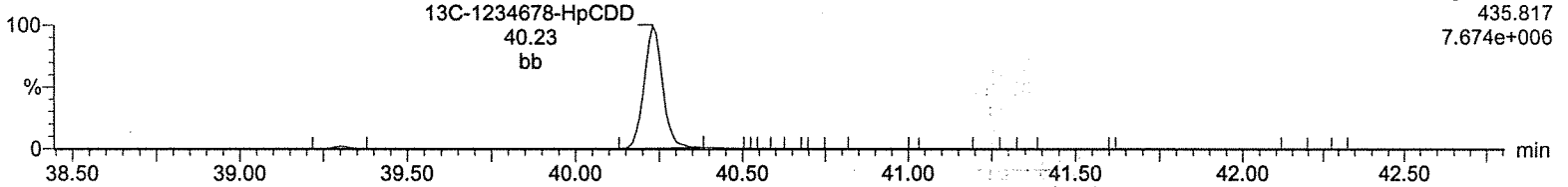
F4:Voltage SIR,EI+
425.774
7.860e+007



13C-1234678-HpCDD

A08JUL19A-8

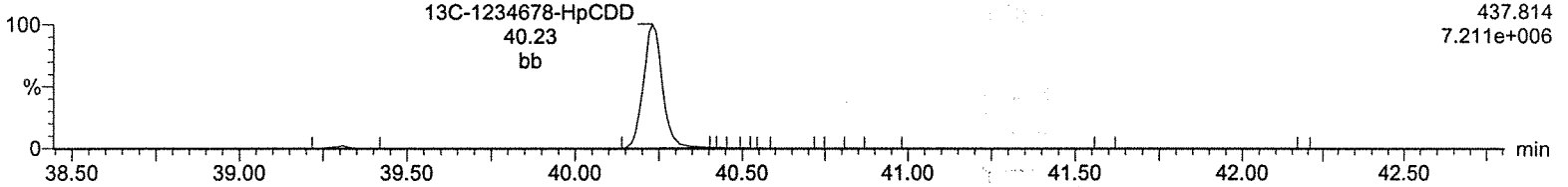
F4:Voltage SIR,EI+
435.817
7.674e+006



13C-1234678-HpCDD

A08JUL19A-8

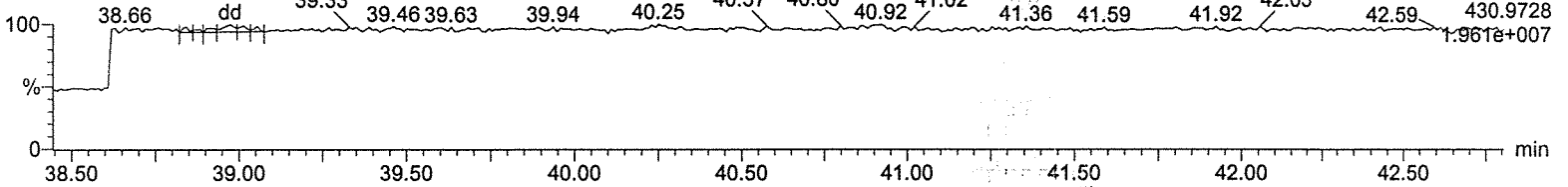
F4:Voltage SIR,EI+
437.814
7.211e+006



Lock Mass F4

A08JUL19A-8

F4:Voltage SIR,EI+
430.9728
1.961e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

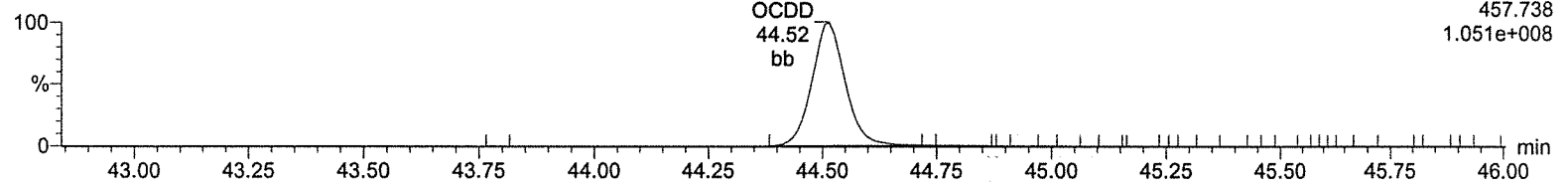
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDD

A08JUL19A-8

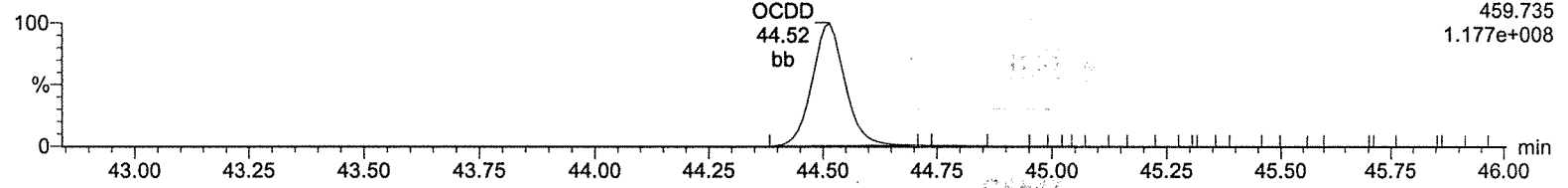
F5:Voltage SIR,EI+
457.738
1.051e+008



OCDD

A08JUL19A-8

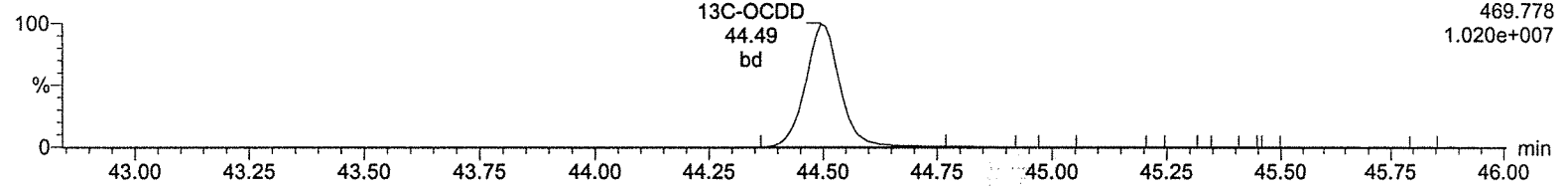
F5:Voltage SIR,EI+
459.735
1.177e+008



13C-OCDD

A08JUL19A-8

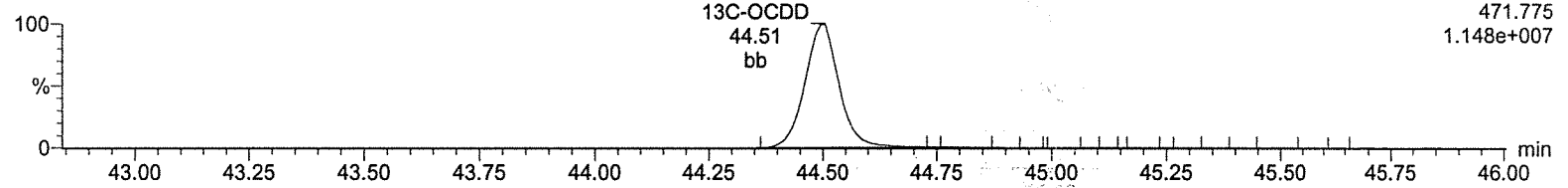
F5:Voltage SIR,EI+
469.778
1.020e+007



13C-OCDD

A08JUL19A-8

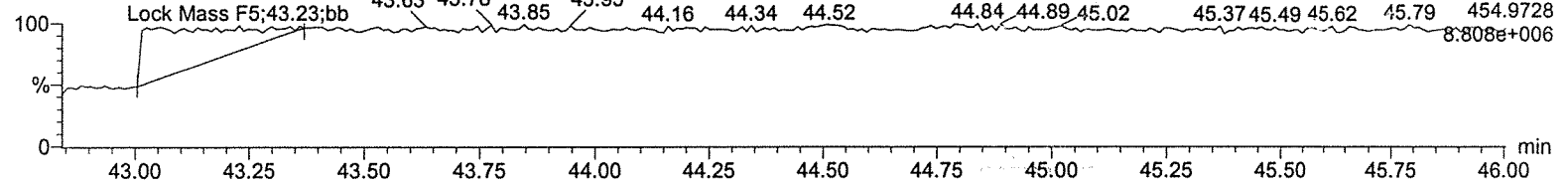
F5:Voltage SIR,EI+
471.775
1.148e+007



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
8.808e+006



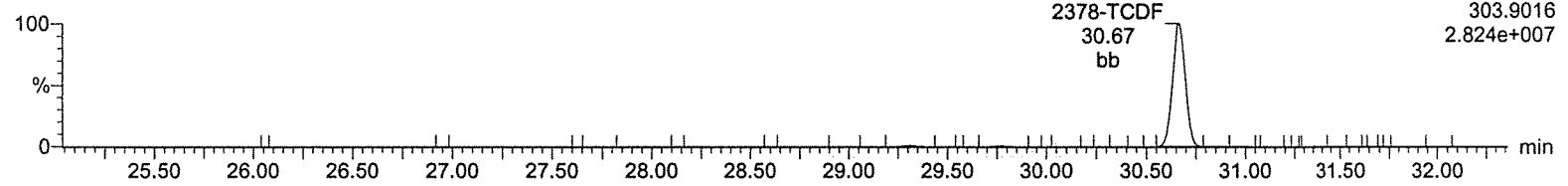
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

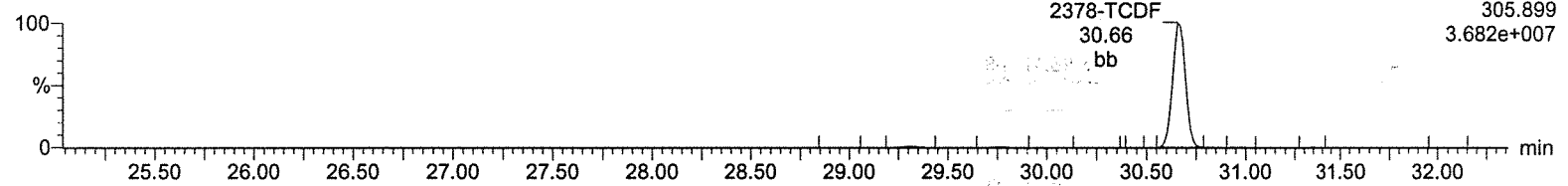
Total-tetrafurans

A08JUL19A-8



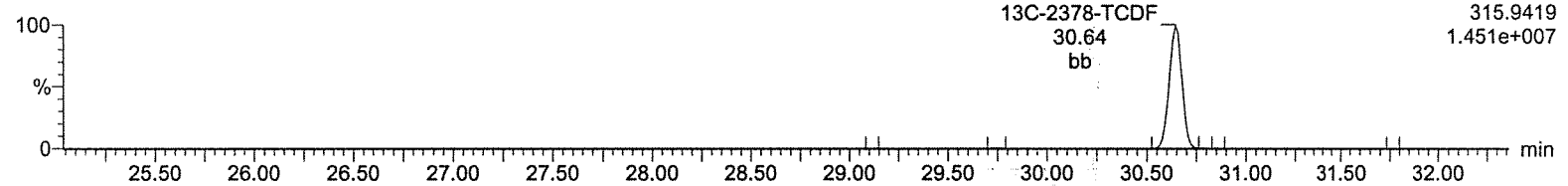
Total-tetrafurans

A08JUL19A-8



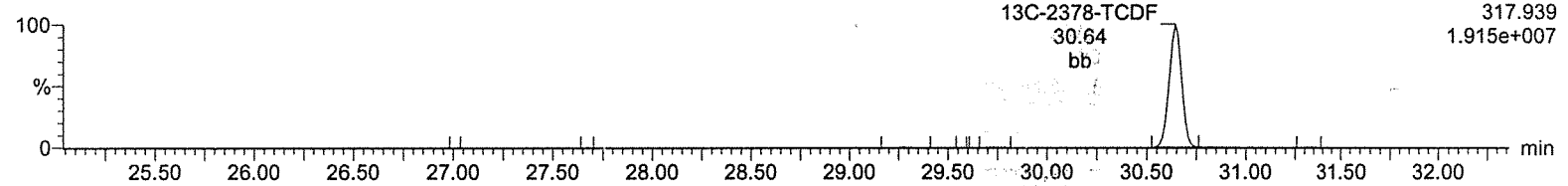
13C-2378-TCDF

A08JUL19A-8



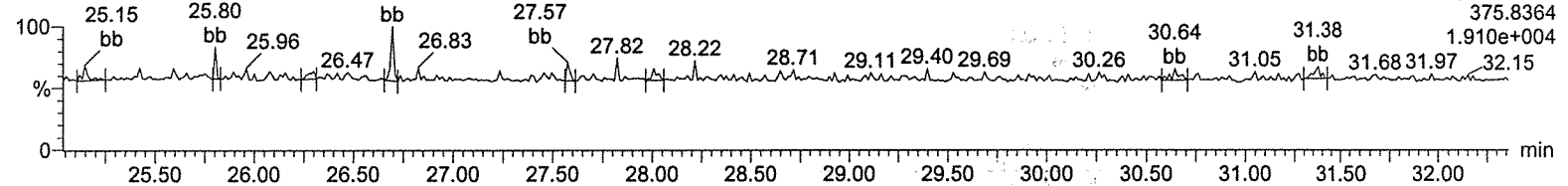
13C-2378-TCDF

A08JUL19A-8



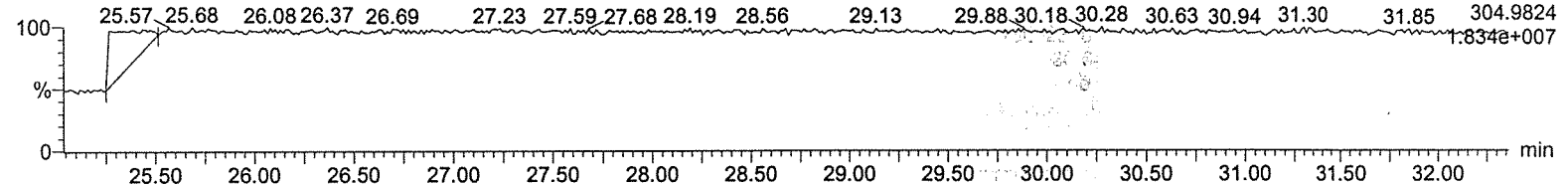
HxDPE

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

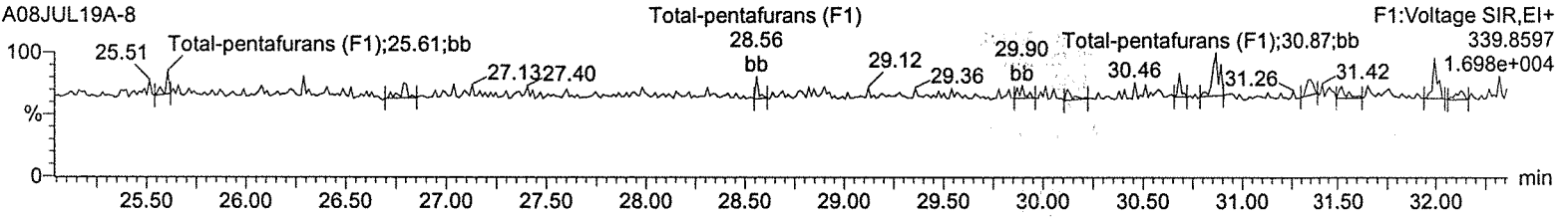
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

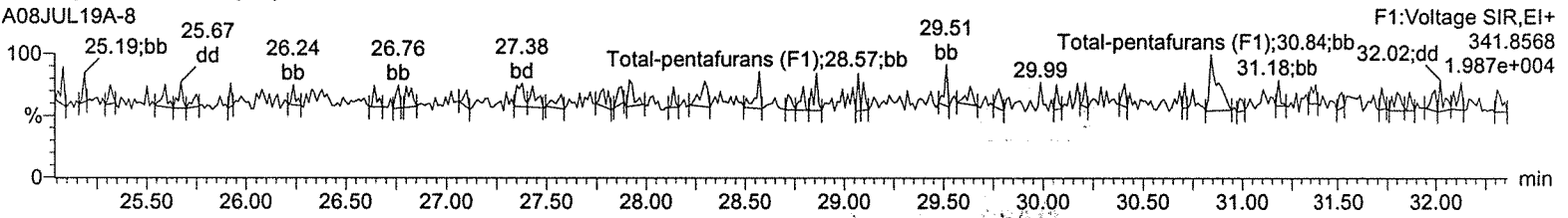
Total-pentafurans (F1)

A08JUL19A-8



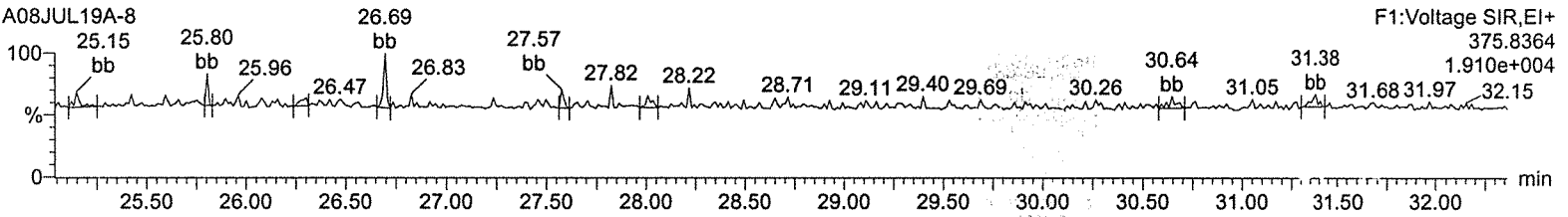
Total-pentafurans (F1)

A08JUL19A-8



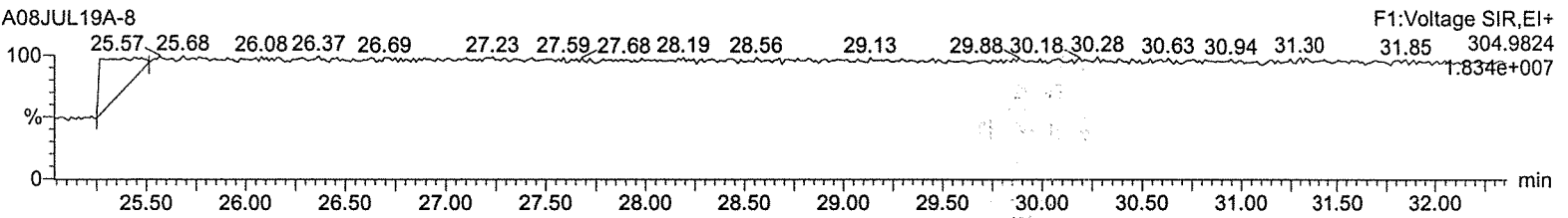
HxDPE

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

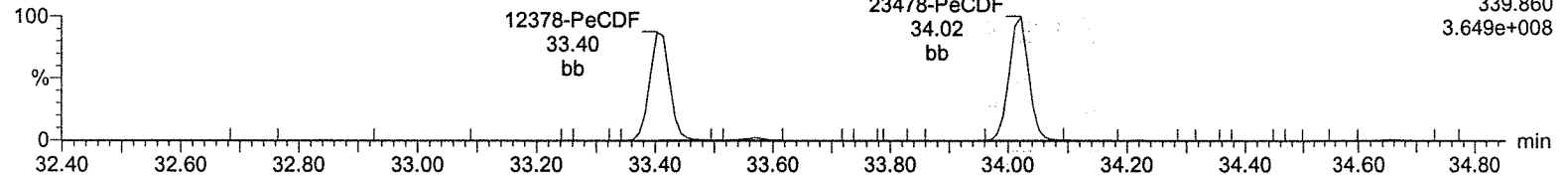
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-pentafurans

A08JUL19A-8

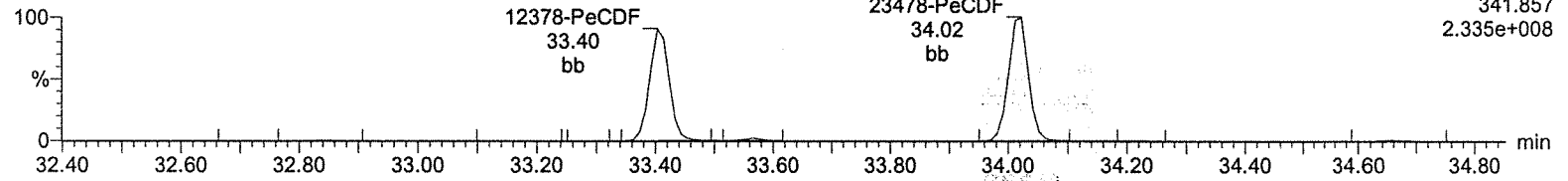
F2:Voltage SIR,EI+
339.860
3.649e+008



Total-pentafurans

A08JUL19A-8

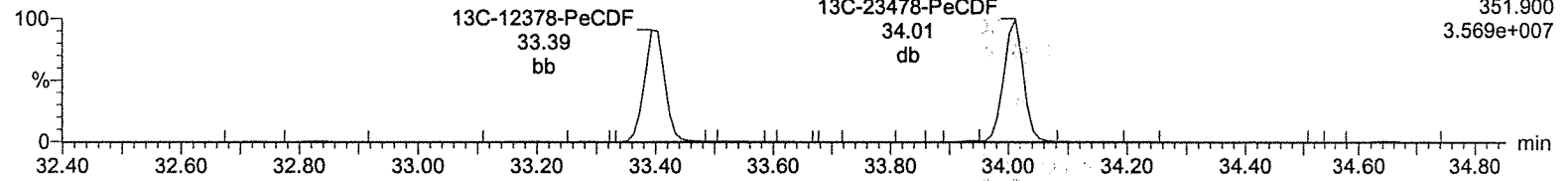
F2:Voltage SIR,EI+
341.857
2.335e+008



13C-12378-PeCDF

A08JUL19A-8

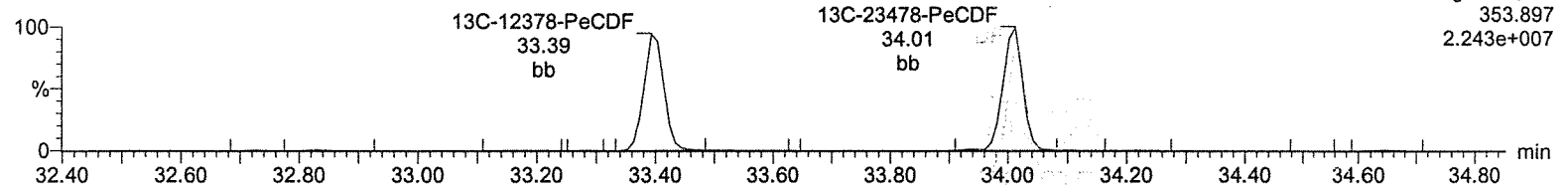
F2:Voltage SIR,EI+
351.900
3.569e+007



13C-12378-PeCDF

A08JUL19A-8

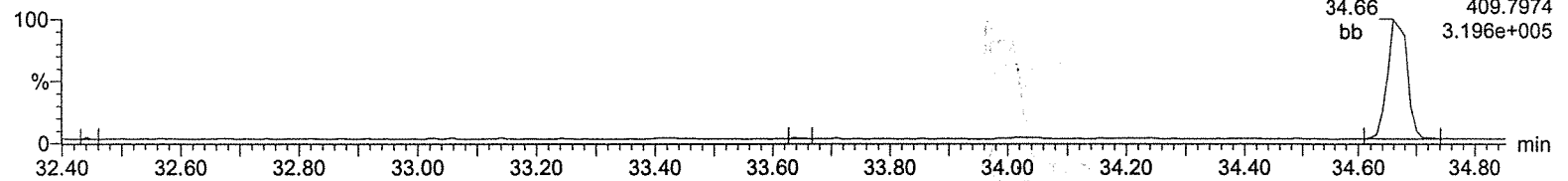
F2:Voltage SIR,EI+
353.897
2.243e+007



HpDPE

A08JUL19A-8

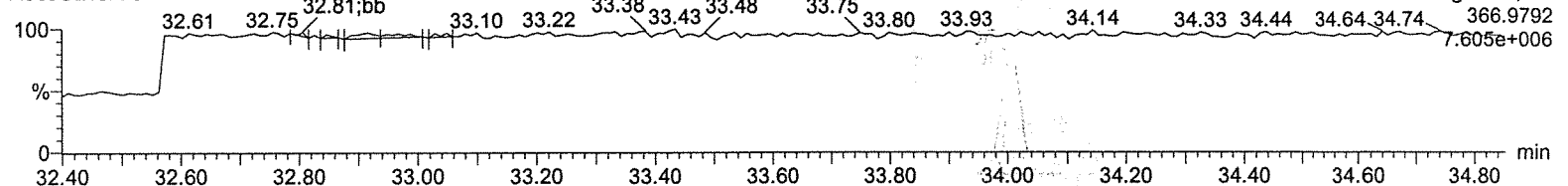
F2:Voltage SIR,EI+
34.66
409.7974
3.196e+005



Lock Mass F2

A08JUL19A-8

F2:Voltage SIR,EI+
366.9792
7.605e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

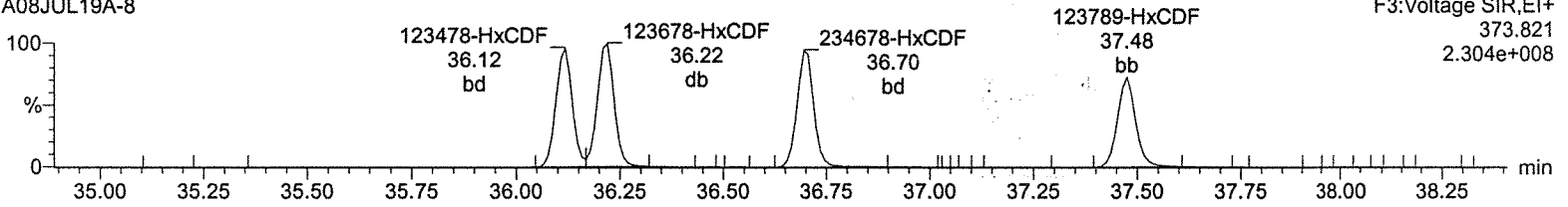
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

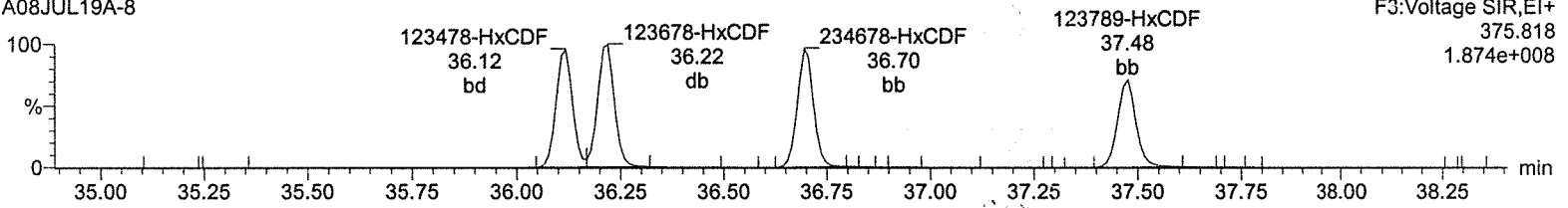
Total-hexafurans

A08JUL19A-8



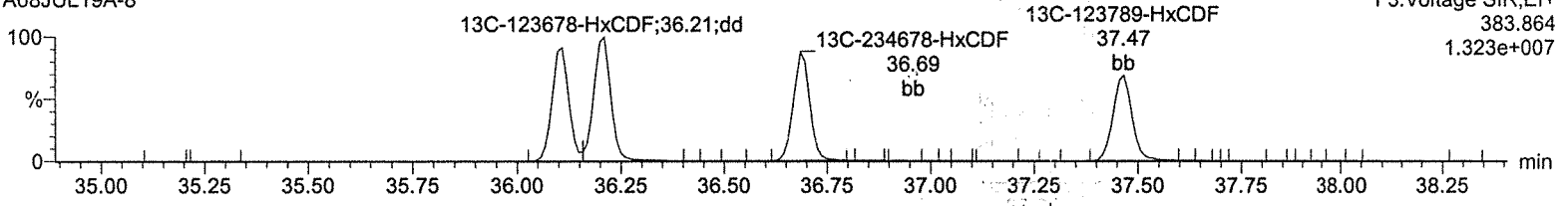
Total-hexafurans

A08JUL19A-8



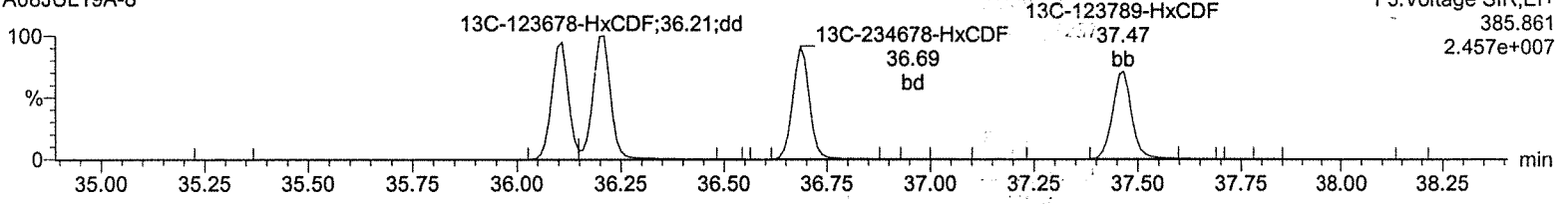
13C-123478-HxCDF

A08JUL19A-8



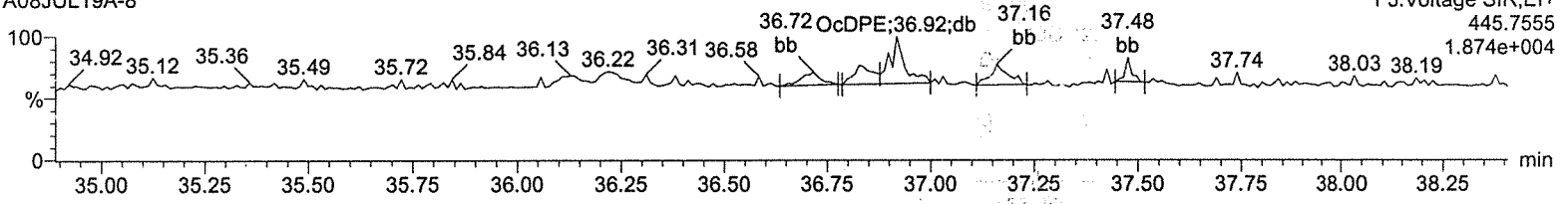
13C-123478-HxCDF

A08JUL19A-8



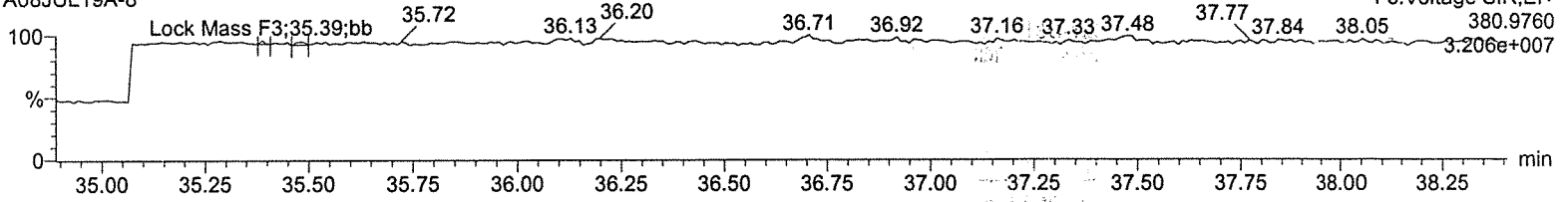
OcDPE

A08JUL19A-8



Lock Mass F3

A08JUL19A-8



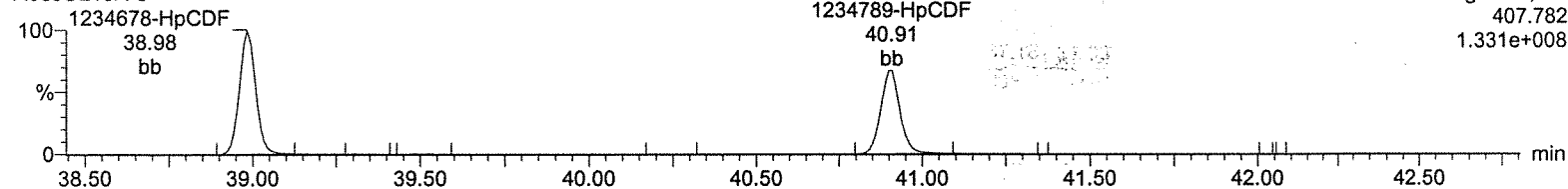
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

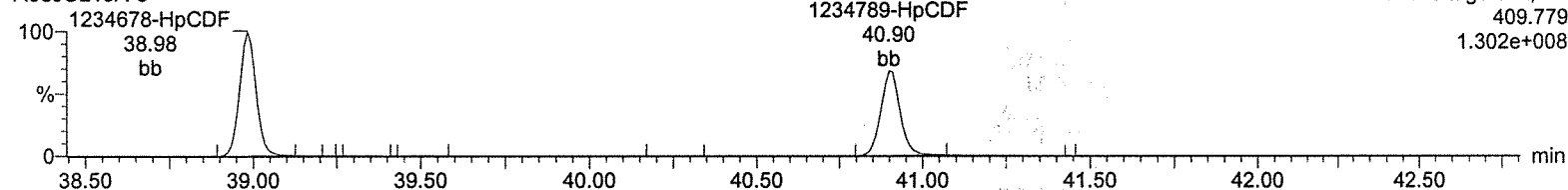
Total-heptafurans

A08JUL19A-8



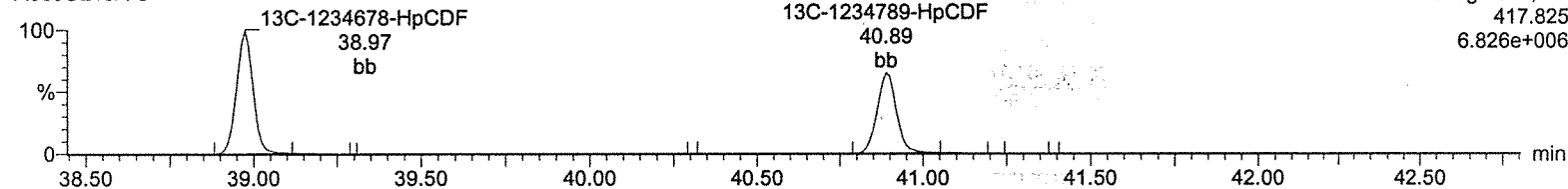
Total-heptafurans

A08JUL19A-8



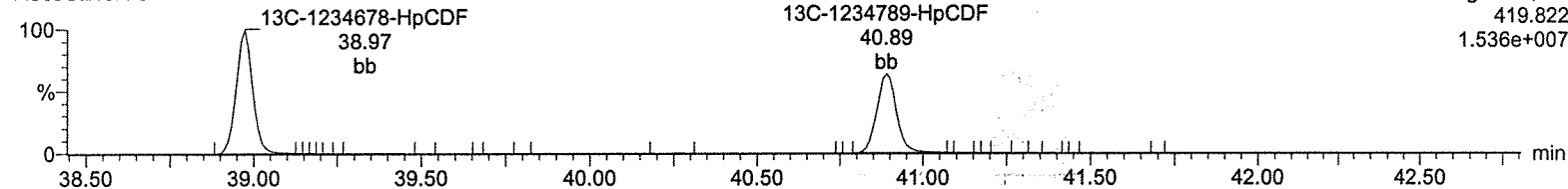
13C-1234678-HpCDF

A08JUL19A-8



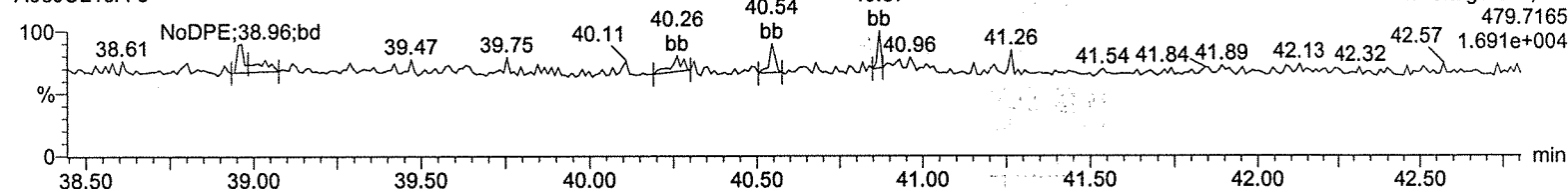
13C-1234678-HpCDF

A08JUL19A-8



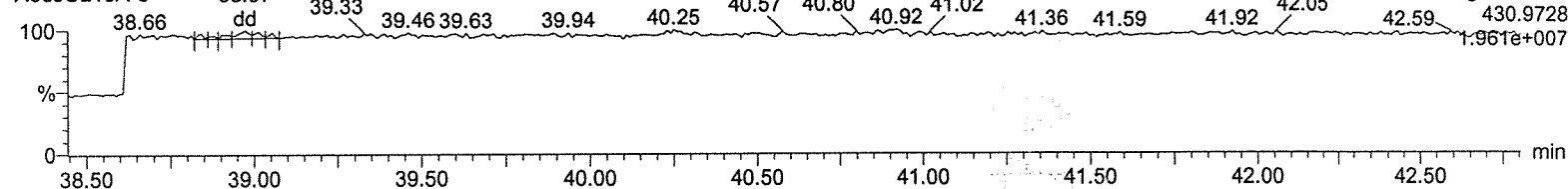
NoDPE

A08JUL19A-8



Lock Mass F4

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

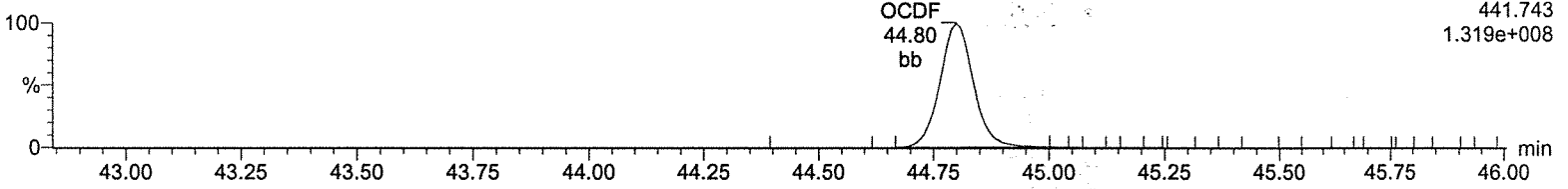
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDF

A08JUL19A-8

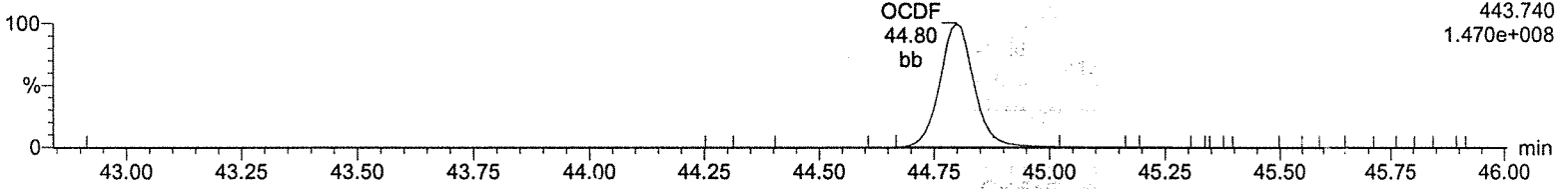
F5:Voltage SIR,EI+
441.743
1.319e+008



OCDF

A08JUL19A-8

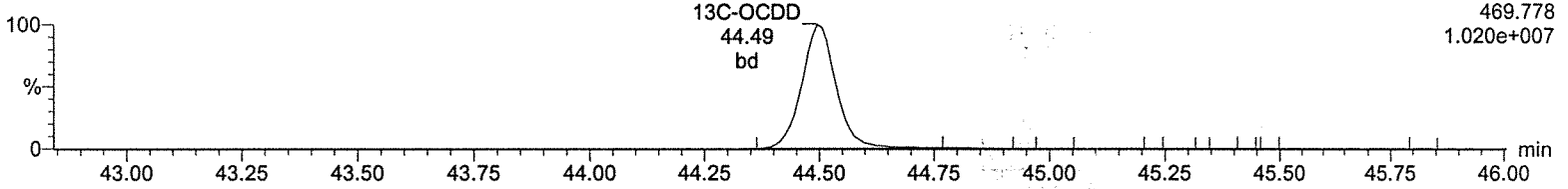
F5:Voltage SIR,EI+
443.740
1.470e+008



13C-OCDD

A08JUL19A-8

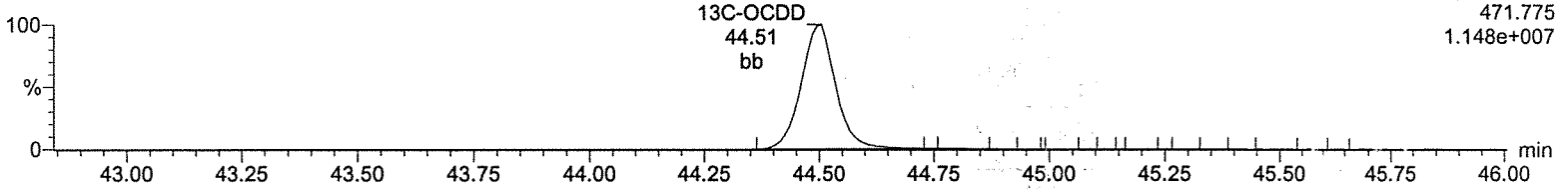
F5:Voltage SIR,EI+
469.778
1.020e+007



13C-OCDD

A08JUL19A-8

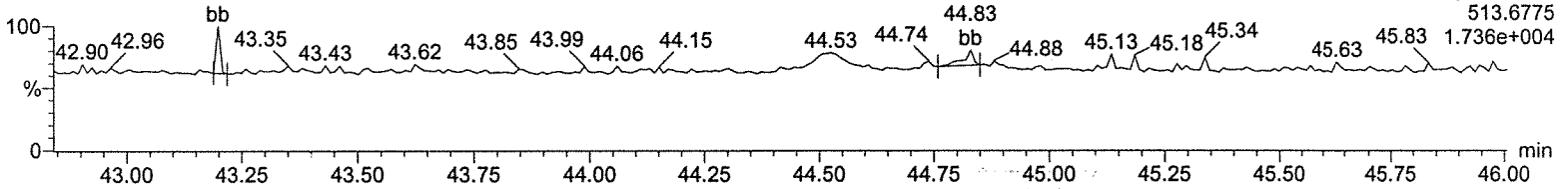
F5:Voltage SIR,EI+
471.775
1.148e+007



DeDPE

A08JUL19A-8

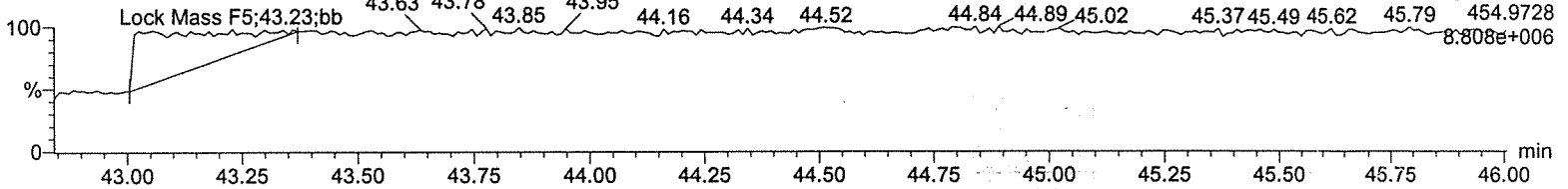
F5:Voltage SIR,EI+
513.6775
1.736e+004



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
454.9728
8.808e+006



Quantify Sample Summary Report
 Method 1613 CCAL Report
 MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Bill GUY

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.41e5	1.82e5	3.24e5	31.35	1.000	0.77	NO	9.832	0.0339	0.870	0.884	-1.7	2.69e6	3060	878.9	3.53e6	5470	645.8	db	db
2	12378-PeCDD	6.28e5	4.05e5	1.03e6	34.21	1.000	1.55	NO	49.971	0.0946	0.853	0.853	-0.1	1.53e7	12457	1224.5	9.64e6	6367	1513.5	bb	bb
3	123478-HxCDD	5.43e5	4.16e5	9.59e5	36.83	1.003	1.31	NO	51.806	0.105	0.974	0.940	3.6	1.08e7	8144	1328.2	8.57e6	8244	1039.0	bd	bd
4	123678-HxCDD	5.67e5	4.68e5	1.03e6	36.92	1.000	1.21	NO	49.386	0.103	0.932	0.944	-1.2	1.12e7	8144	1379.0	9.12e6	8244	1106.7	dd	dd
5	123789-HxCDD	5.58e5	4.36e5	9.94e5	37.16	1.007	1.28	NO	51.189	0.106	0.949	0.927	2.4	1.07e7	8144	1312.0	8.23e6	8244	998.2	dd	db
6	1234678-HpCDD	3.98e5	3.76e5	7.74e5	40.24	1.000	1.06	NO	49.581	0.150	1.031	1.040	-0.8	5.98e6	7083	844.3	5.67e6	6641	854.3	bd	bd
7	OCDD	6.28e5	7.01e5	1.33e6	44.51	1.000	0.90	NO	102.285	0.401	0.994	0.971	2.3	6.90e6	17082	404.1	7.71e6	5735	1344.7	bd	bd
8	2378-TCDF	1.72e5	2.22e5	3.94e5	30.66	1.000	0.77	NO	9.823	0.0430	0.961	0.978	-1.8	2.30e6	3145	731.2	2.96e6	5788	511.5	bb	bb
9	12378-PeCDF	9.44e5	6.09e5	1.55e6	33.40	1.000	1.55	NO	50.062	0.0563	0.946	0.945	0.1	2.45e7	10653	2295.4	1.55e7	7239	2135.3	bb	bb
10	23478-PeCDF	1.04e6	6.88e5	1.73e6	34.01	1.000	1.51	NO	50.564	0.0527	0.998	0.987	1.1	2.61e7	10653	2446.1	1.76e7	7239	2425.8	bb	bb
11	123478-HxCDF	7.43e5	6.15e5	1.36e6	36.11	1.000	1.21	NO	50.445	0.0894	1.097	1.087	0.9	1.57e7	9481	1652.2	1.28e7	11235	1143.5	bd	bd
12	123678-HxCDF	8.06e5	6.66e5	1.47e6	36.21	1.000	1.21	NO	50.994	0.0885	1.061	1.041	2.0	1.68e7	9481	1768.9	1.39e7	11235	1235.2	db	db
13	234678-HxCDF	7.55e5	6.18e5	1.37e6	36.70	1.000	1.22	NO	50.671	0.0922	1.151	1.136	1.3	1.58e7	9481	1664.0	1.25e7	11235	1111.0	bb	bb
14	123789-HxCDF	6.33e5	5.14e5	1.15e6	37.47	1.000	1.23	NO	50.766	0.123	1.077	1.061	1.5	1.12e7	9481	1180.5	9.35e6	11235	832.1	bd	bb
15	1234678-HpCDF	5.58e5	5.57e5	1.12e6	38.98	1.001	1.00	NO	50.942	0.0954	1.171	1.150	1.9	9.40e6	6651	1412.9	9.27e6	7143	1297.6	bb	bd
16	1234789-HpCDF	4.59e5	4.46e5	9.05e5	40.90	1.000	1.03	NO	50.253	0.138	1.208	1.202	0.5	6.56e6	6651	985.8	6.41e6	7143	896.9	bb	bd
17	OCDF	7.28e5	8.04e5	1.53e6	44.79	1.007	0.91	NO	101.154	0.168	1.146	1.133	1.2	8.07e6	4510	1788.9	8.87e6	6658	1332.1	bd	bb
18	13C-2378-TCDD	1.62e6	2.10e6	3.72e6	31.34	1.015	0.77	NO	100.391	0.0536	1.133	1.128	0.4	3.09e7	7595	4072.7	4.03e7	4391	9166.0	bb	bb
19	13C-12378-PeCDD	1.47e6	9.56e5	2.42e6	34.20	1.108	1.53	NO	98.091	0.0648	0.737	0.751	-1.9	3.53e7	4920	7177.0	2.29e7	4727	4839.8	bb	bb
20	13C-123478-HxCDD	1.09e6	8.81e5	1.97e6	36.82	0.991	1.24	NO	99.188	0.128	0.889	0.896	-0.8	2.29e7	5728	3998.3	1.85e7	12292	1505.5	bd	bd
21	13C-123678-HxCDD	1.22e6	9.99e5	2.22e6	36.91	0.993	1.22	NO	101.615	0.116	1.002	0.986	1.6	2.32e7	5728	4044.5	1.91e7	12292	1555.2	dd	dd
22	13C-1234678-HpCDD	7.66e5	7.34e5	1.50e6	40.23	1.083	1.04	NO	100.813	0.141	0.677	0.672	0.8	1.12e7	8086	1388.7	1.07e7	6816	1575.1	bd	bd
23	13C-OCDD	1.26e6	1.42e6	2.67e6	44.49	1.197	0.89	NO	187.951	0.195	0.603	0.642	-6.0	1.38e7	9703	1418.2	1.56e7	10005	1564.1	bb	bb
24	13C-2378-TCDF	1.79e6	2.31e6	4.10e6	30.64	0.993	0.78	NO	99.787	0.0758	1.247	1.250	-0.2	2.32e7	12127	1915.0	3.00e7	6648	4519.7	bb	bb
25	13C-12378-PeCDF	2.01e6	1.27e6	3.28e6	33.39	1.082	1.58	NO	98.830	0.132	0.999	1.011	-1.2	5.15e7	10054	5118.1	3.27e7	16300	2004.3	bb	bb
26	13C-23478-PeCDF	2.12e6	1.34e6	3.48e6	34.00	1.102	1.58	NO	99.016	0.125	1.053	1.063	-1.0	5.26e7	10054	5234.8	3.35e7	16300	2054.1	bb	bb
27	13C-123478-HxCDF	8.52e5	1.62e6	2.48e6	36.10	0.972	0.53	NO	100.589	0.156	1.117	1.111	0.6	1.83e7	10145	1807.7	3.44e7	17090	2014.8	bd	bd
28	13C-123678-HxCDF	9.54e5	1.82e6	2.77e6	36.20	0.974	0.52	NO	100.412	0.139	1.252	1.247	0.4	1.93e7	10145	1906.8	3.71e7	17090	2170.1	dd	dd
29	13C-234678-HxCDF	8.17e5	1.57e6	2.39e6	36.69	0.987	0.52	NO	99.533	0.160	1.077	1.082	-0.5	1.69e7	10145	1670.0	3.21e7	17090	1878.8	bb	bb
30	13C-123789-HxCDF	7.27e5	1.40e6	2.13e6	37.46	1.008	0.52	NO	99.456	0.179	0.962	0.967	-0.5	1.36e7	10145	1338.3	2.55e7	17090	1490.9	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	5.97e5	1.31e6	1.90e6	38.96	1.049	0.46	NO	98.762	0.113	0.859	0.870	-1.2	9.86e6	5992	1645.9	2.20e7	9443	2325.7	bd	bb
32	13C-1234789-HpCDF	4.61e5	1.04e6	1.50e6	40.88	1.100	0.44	NO	99.800	0.145	0.676	0.677	-0.2	6.40e6	5992	1068.7	1.42e7	9443	1505.6	bd	bb
33	13C-1234-TCDD	1.43e6	1.85e6	3.29e6	30.87	0.000	0.77	NO	100.000	0.0605	1.000	1.000	0.0	2.16e7	7595	2846.5	2.76e7	4391	6279.9	bb	bb
34	13C-123789-HxCDD	1.22e6	9.94e5	2.22e6	37.15	0.000	1.23	NO	100.000	0.114	1.000	1.000	0.0	2.17e7	5728	3793.8	1.77e7	12292	1436.7	dd	dd
35	37Cl-2378-TCDD	3.41e5		3.41e5	31.35	1.016			9.764	0.0169	1.036	1.061	-2.4	6.62e6	3545	1868.0				db	

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

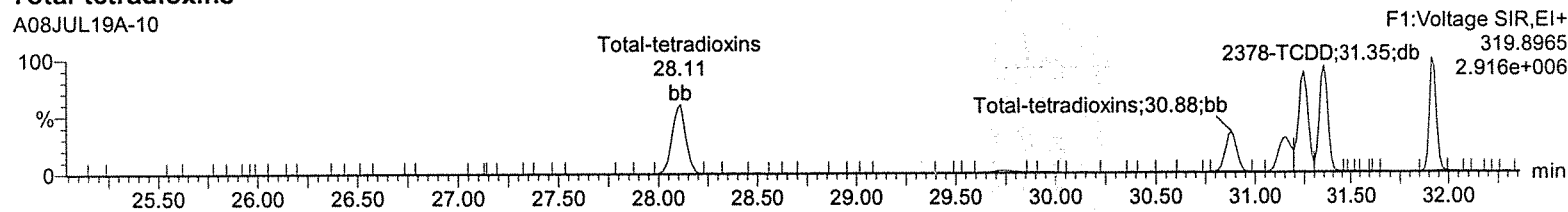
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Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

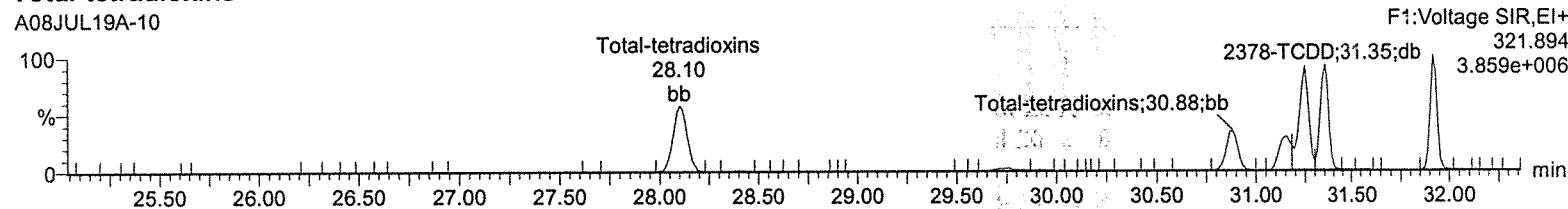
Total-tetradoxins

A08JUL19A-10



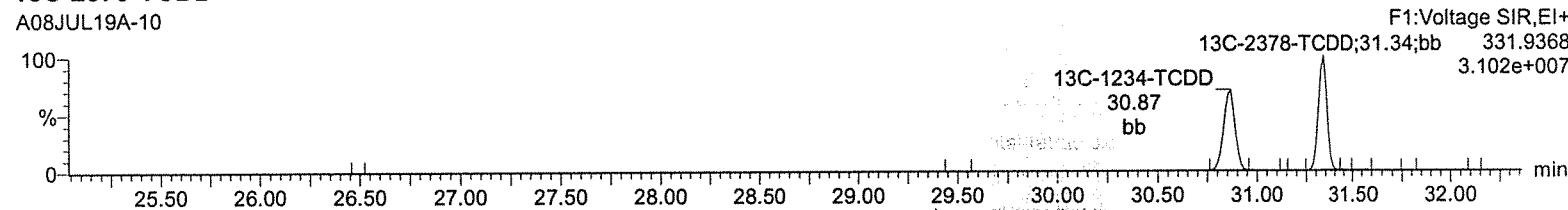
Total-tetradoxins

A08JUL19A-10



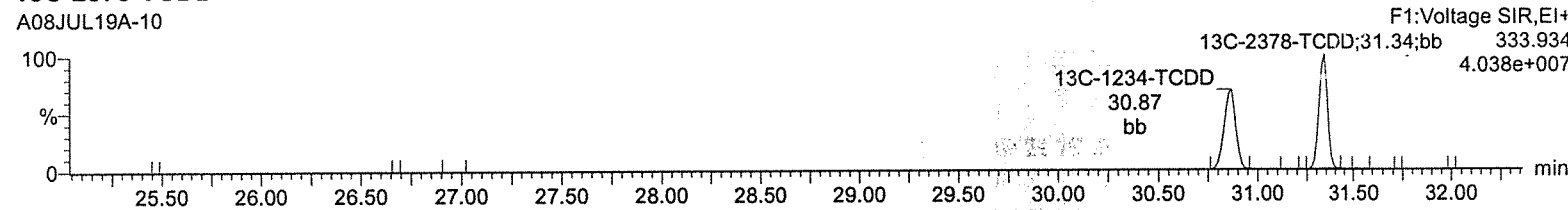
13C-2378-TCDD

A08JUL19A-10



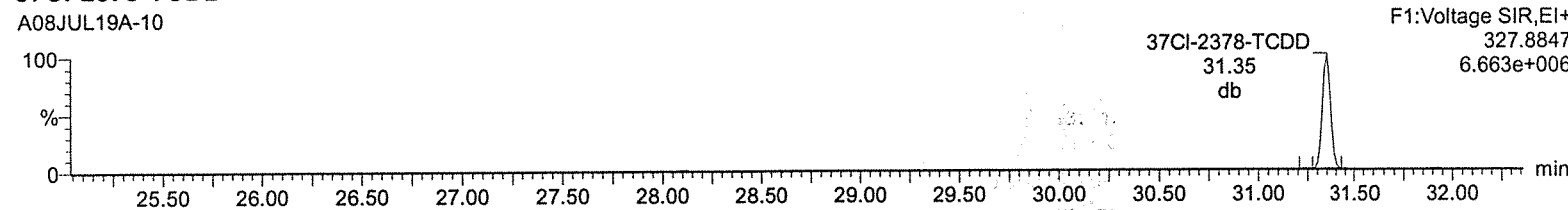
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A08JUL19A-10



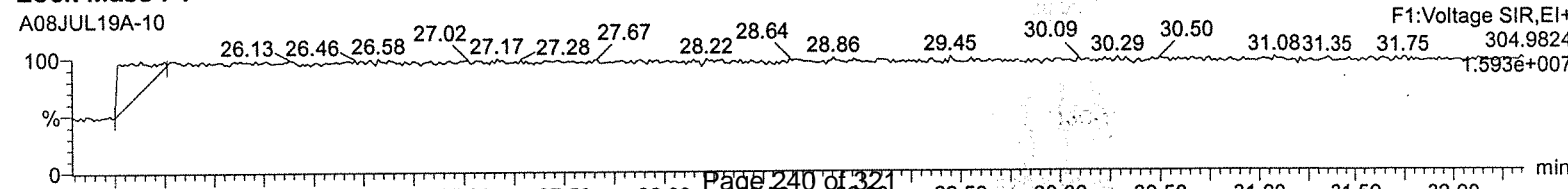
37Cl-2378-TCDD

A08JUL19A-10



Lock Mass F1

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

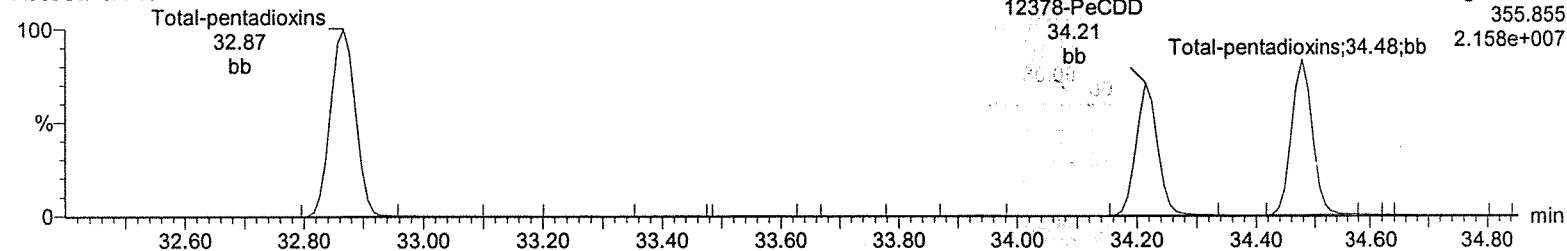
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

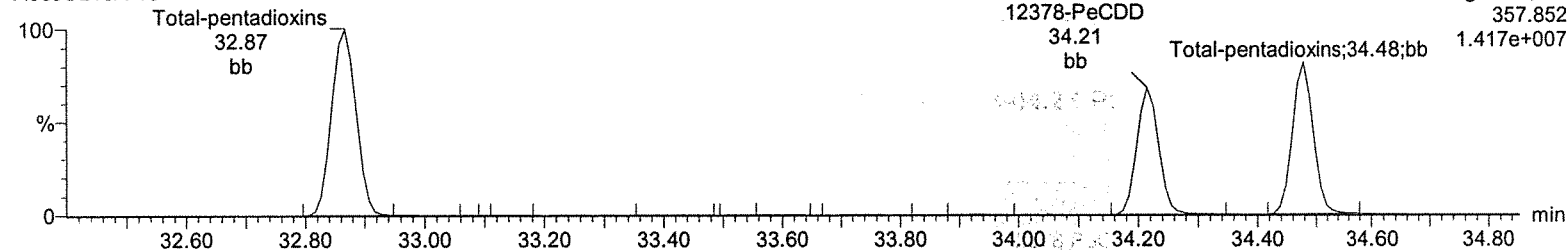
Total-pentadioxins

A08JUL19A-10



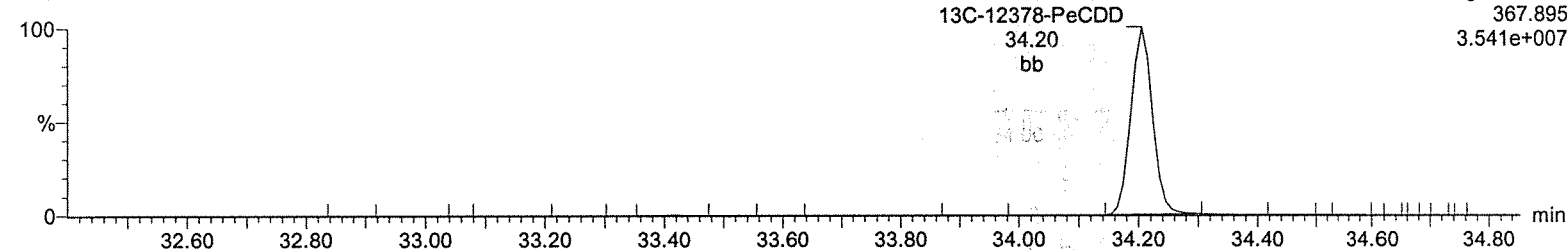
Total-pentadioxins

A08JUL19A-10



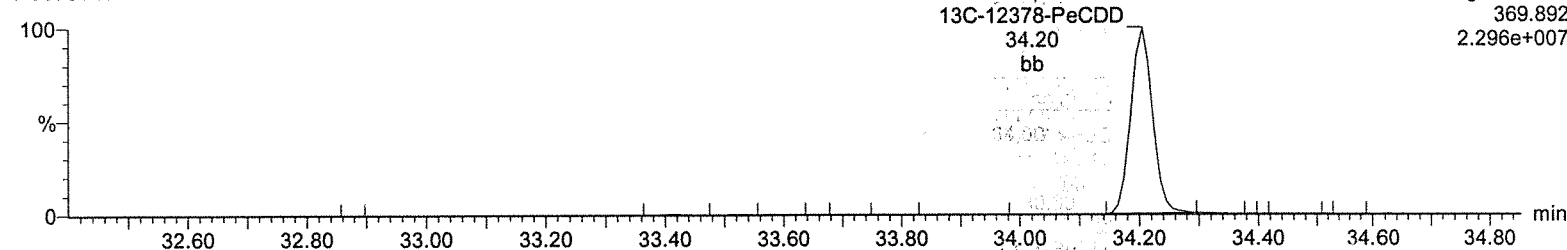
13C-12378-PeCDD

A08JUL19A-10



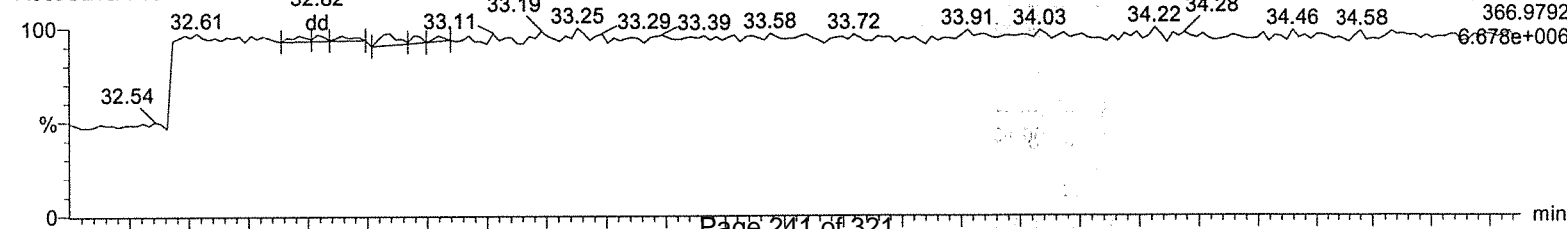
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A08JUL19A-10



Lock Mass F2

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

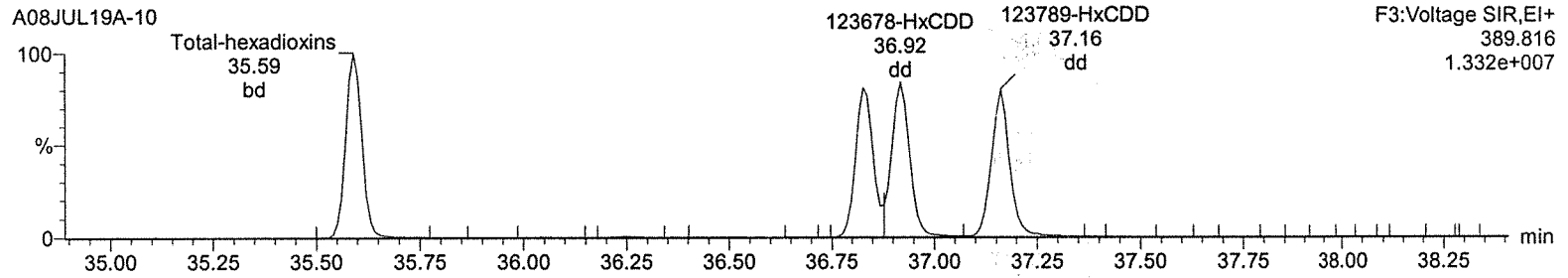
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

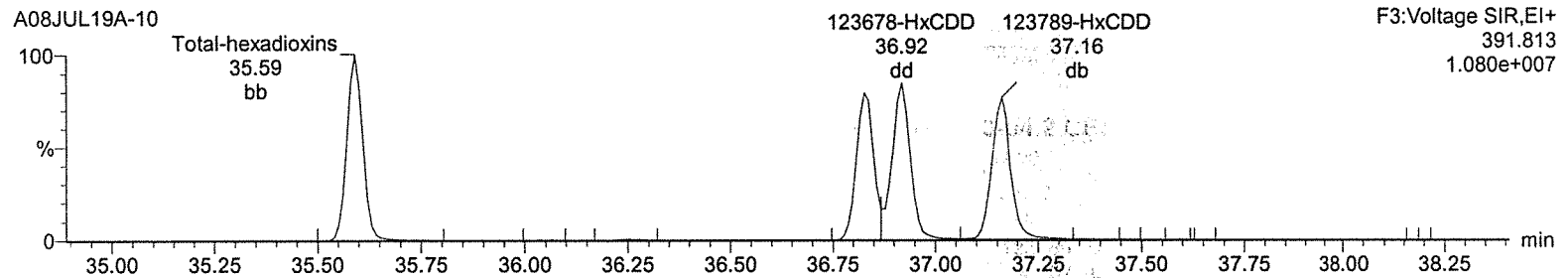
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A08JUL19A-10



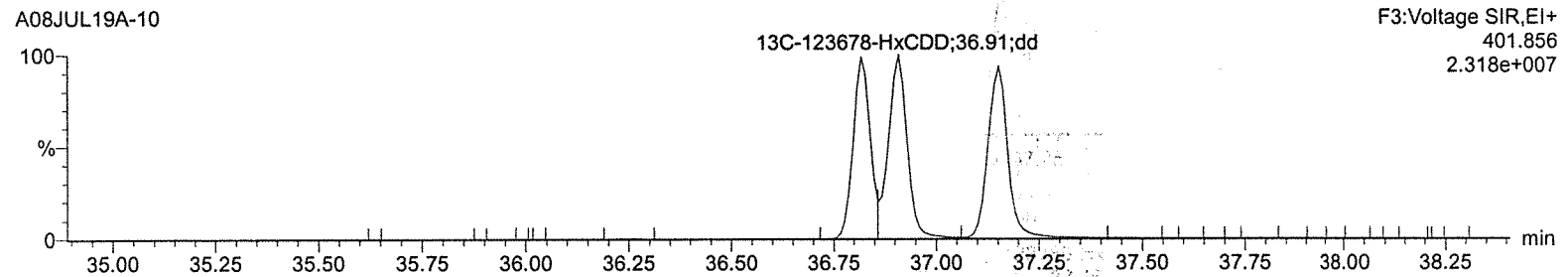
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A08JUL19A-10



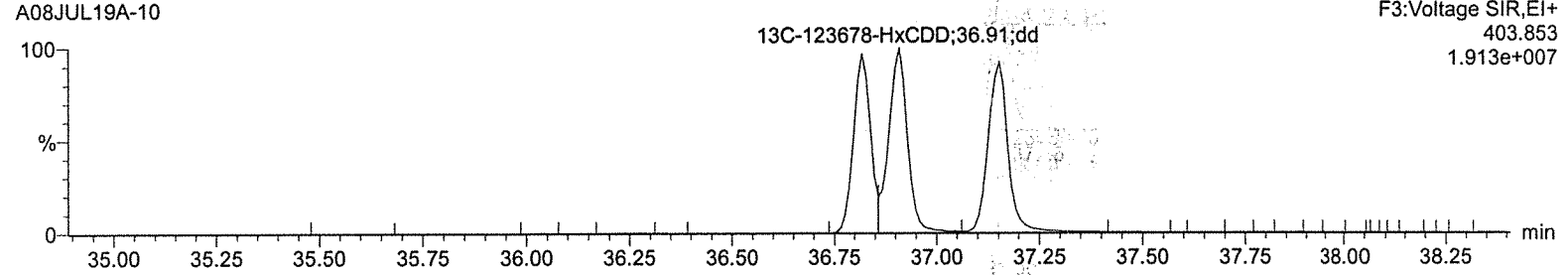
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A08JUL19A-10



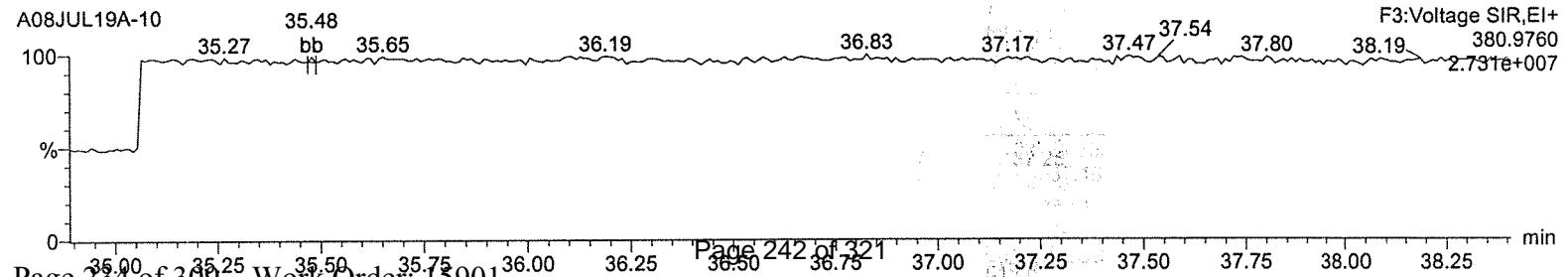
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A08JUL19A-10



Lock Mass F3

A08JUL19A-10



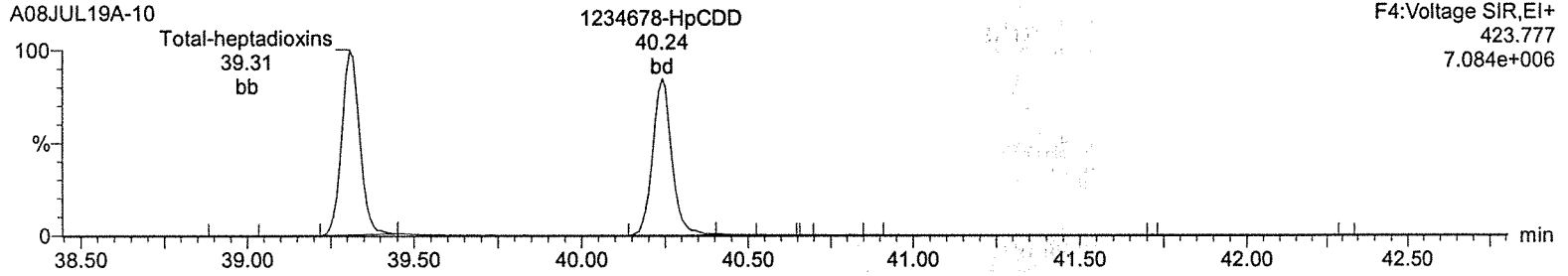
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Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

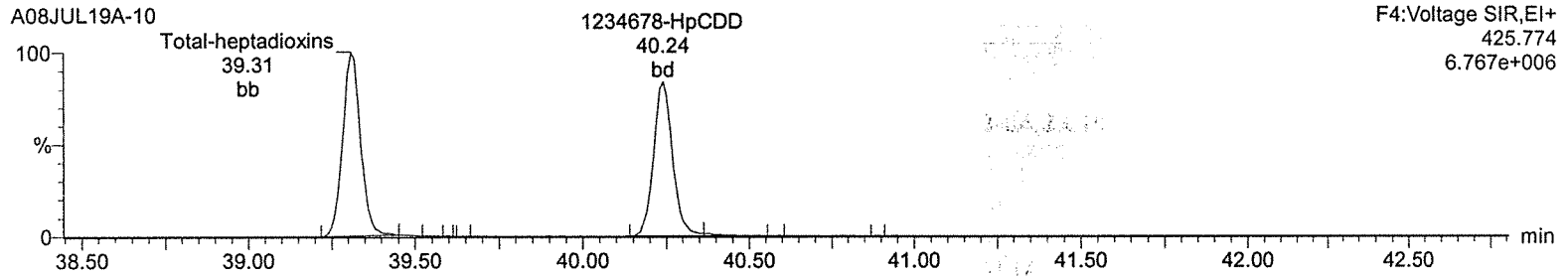
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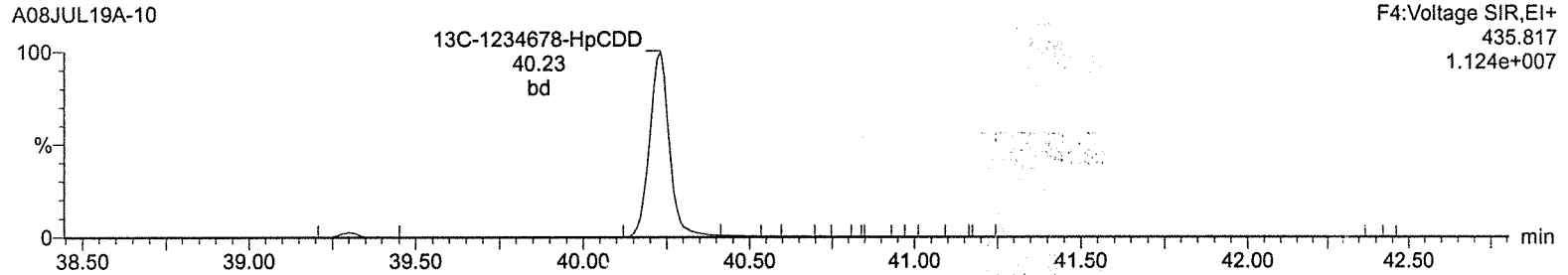
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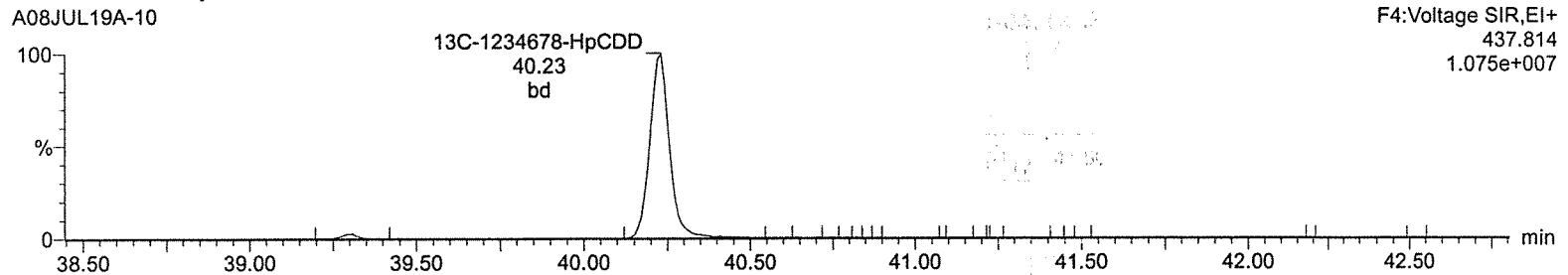
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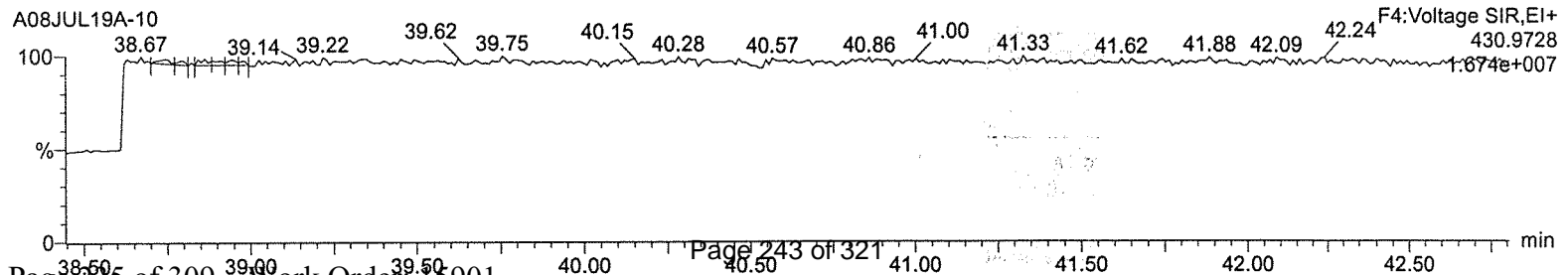
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

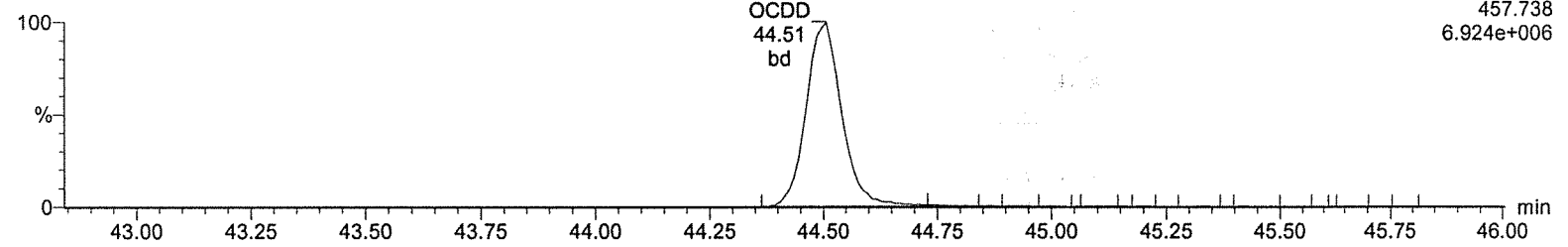
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

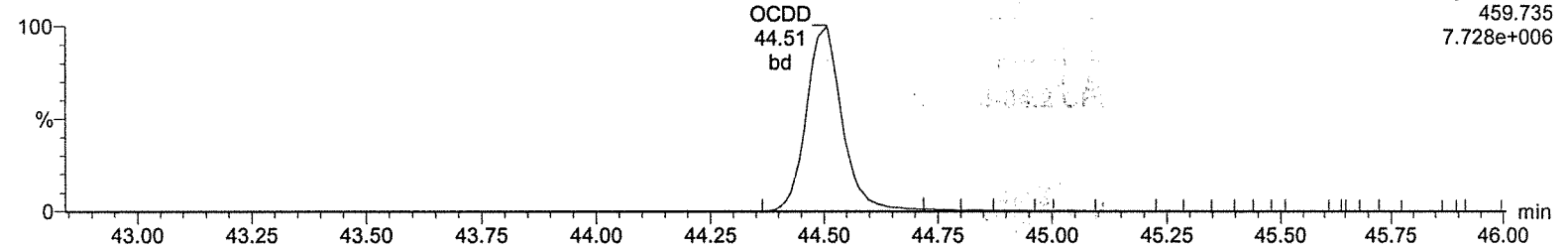
OCDD

A08JUL19A-10



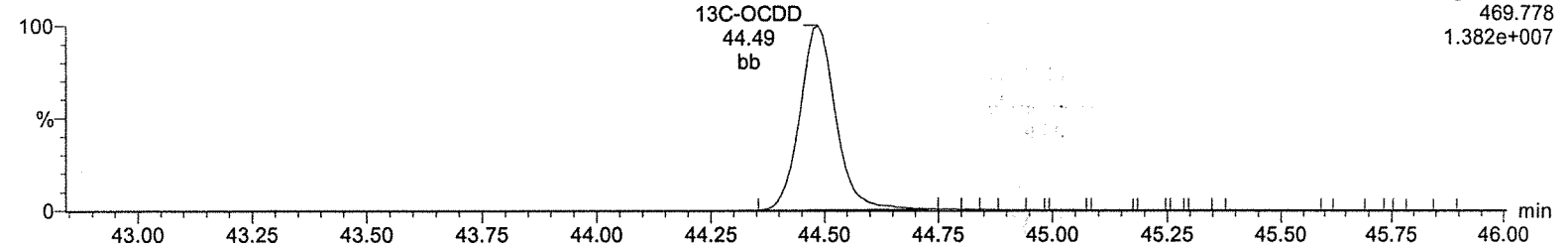
OCDD

A08JUL19A-10



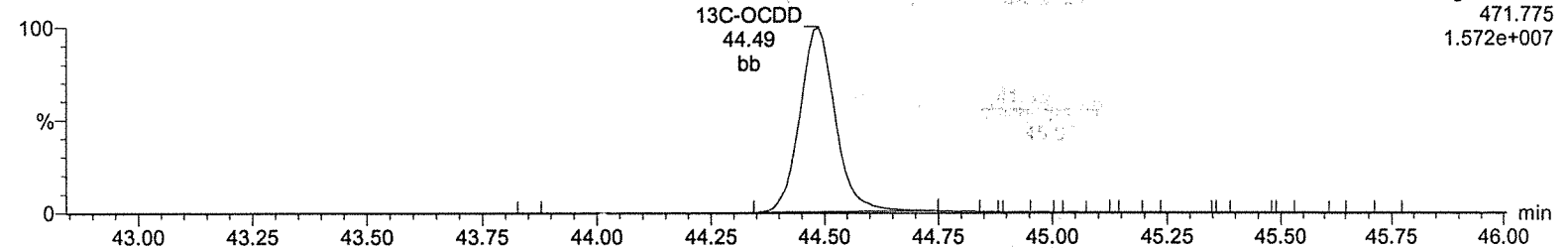
13C-OCDD

A08JUL19A-10



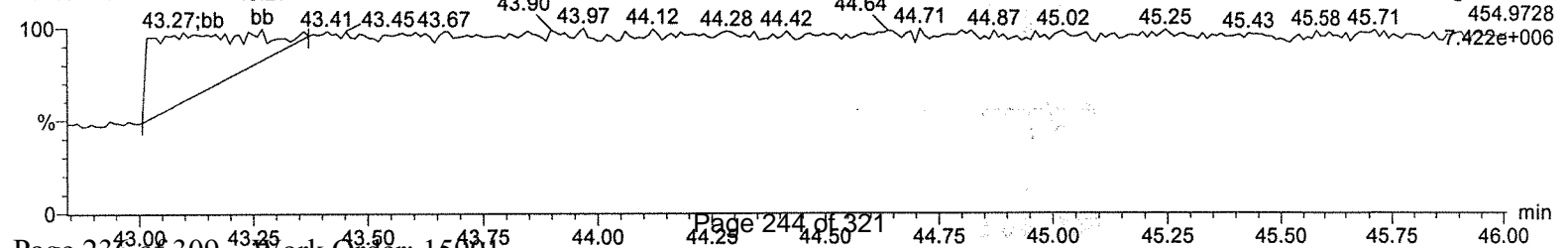
13C-OCDD

A08JUL19A-10



Lock Mass F5

A08JUL19A-10



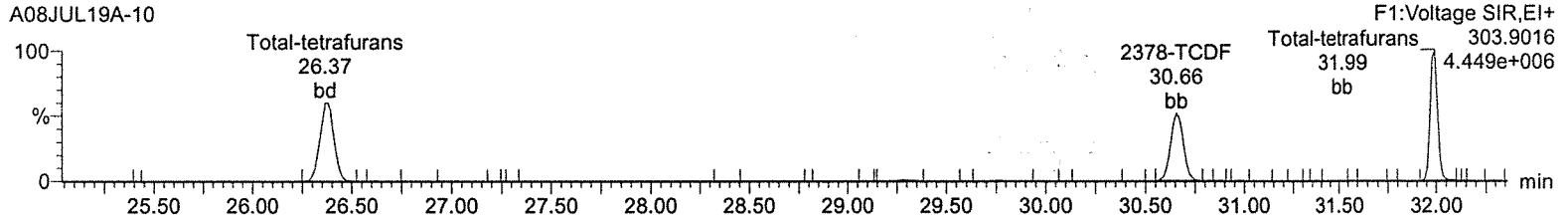
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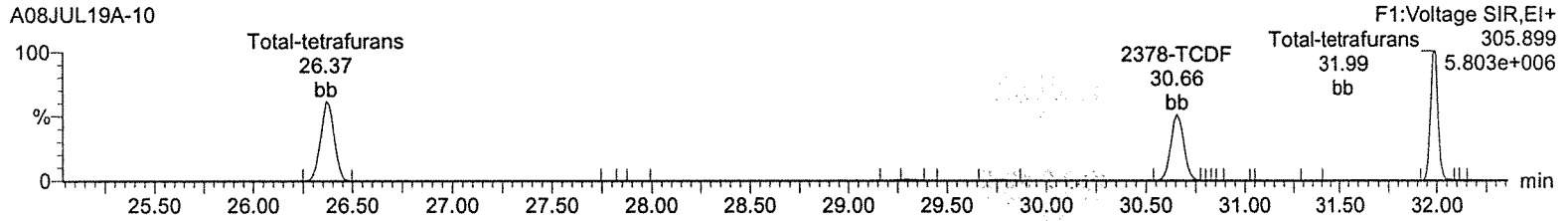
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Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

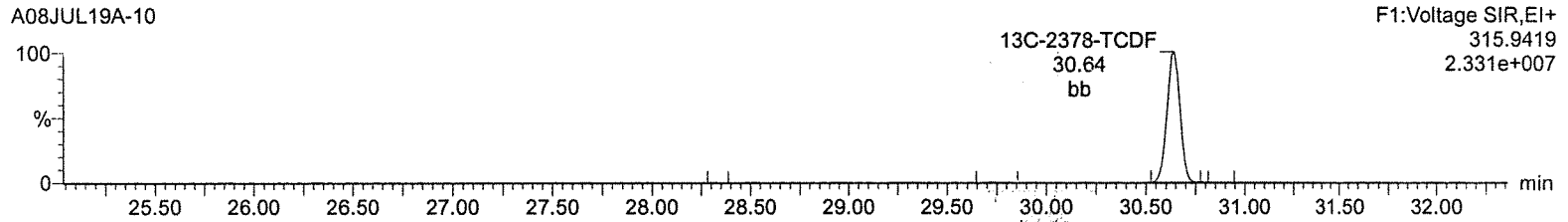
Total-tetrafurans



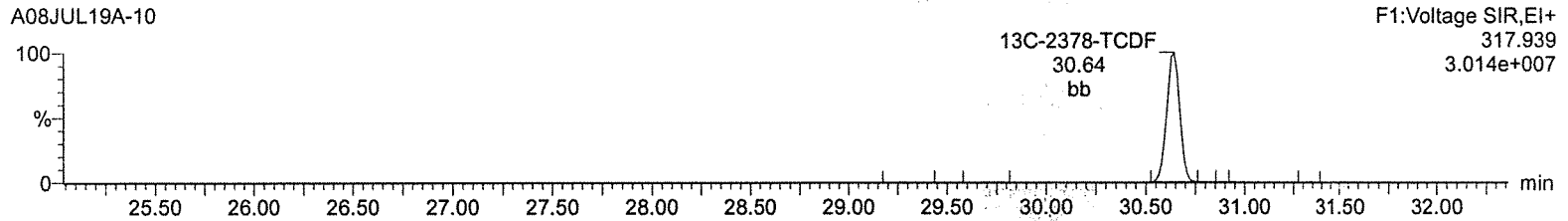
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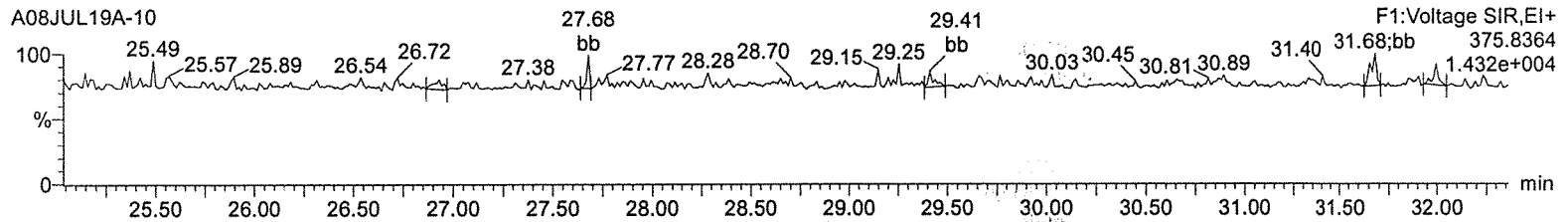
13C-2378-TCDF



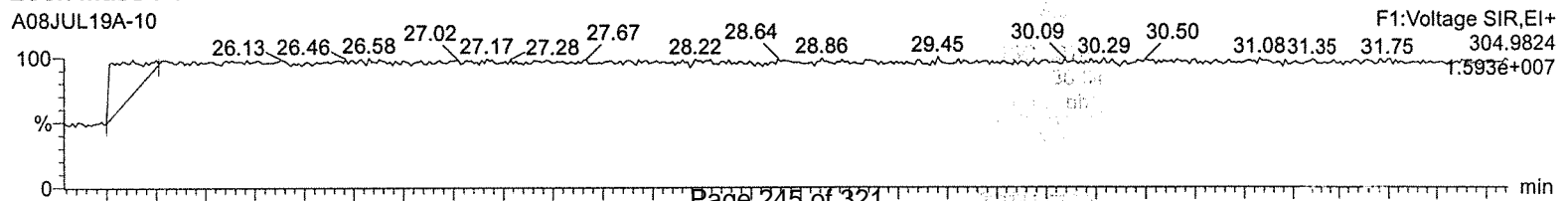
13C-2378-TCDF



HxDPE



Lock Mass F1



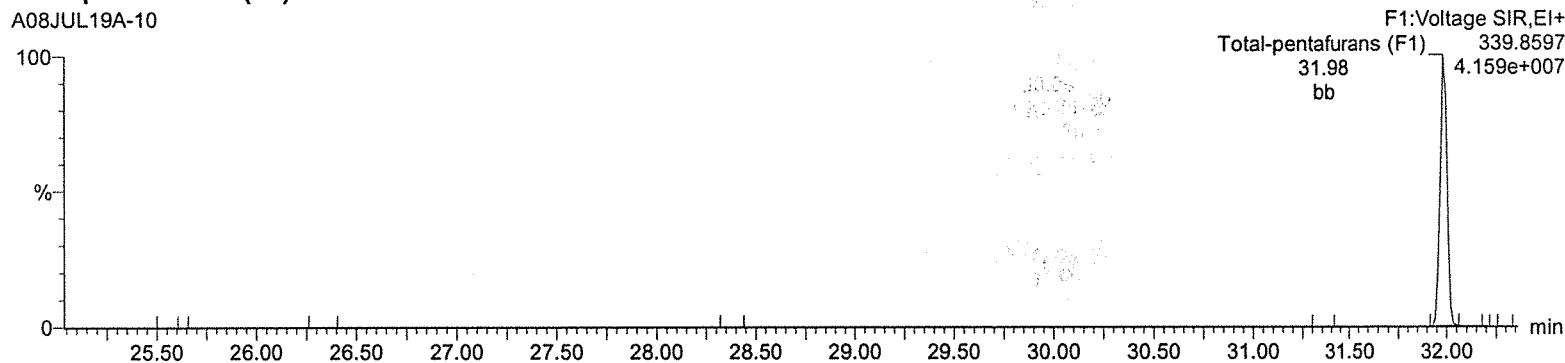
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Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

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Task: HRP750_2, User: MJC

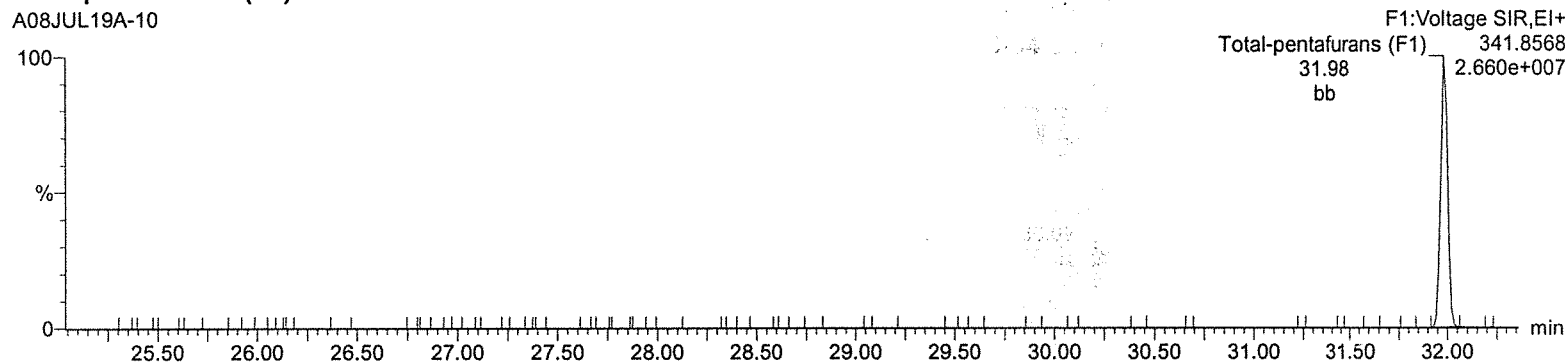
Total-pentafurans (F1)

A08JUL19A-10



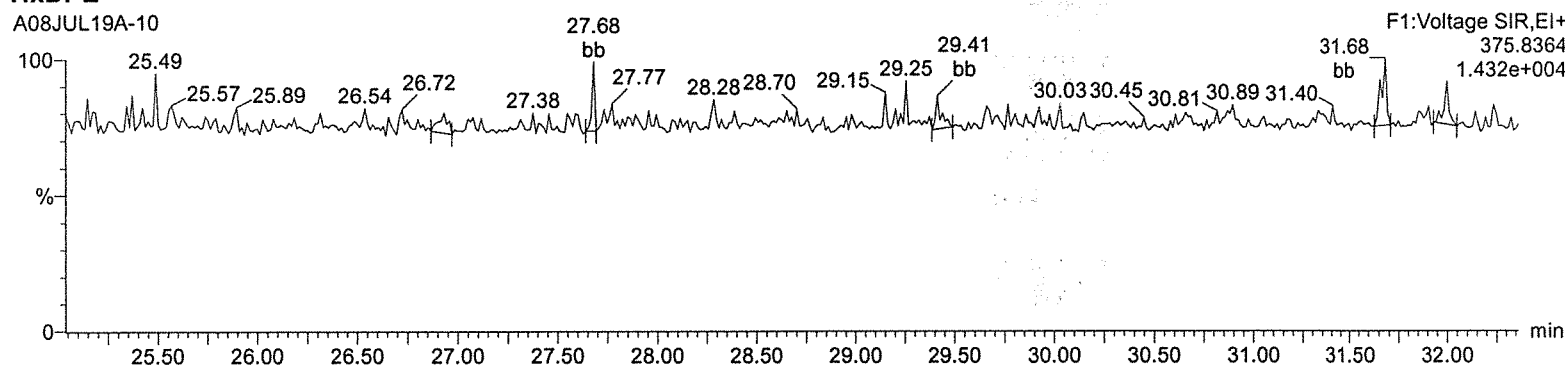
Total-pentafurans (F1)

A08JUL19A-10



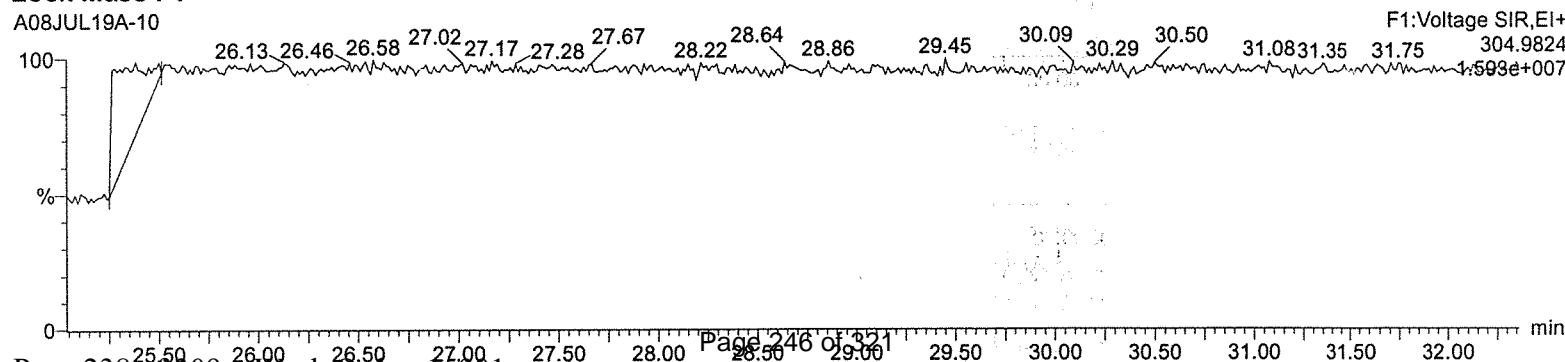
HxDPE

A08JUL19A-10



Lock Mass F1

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

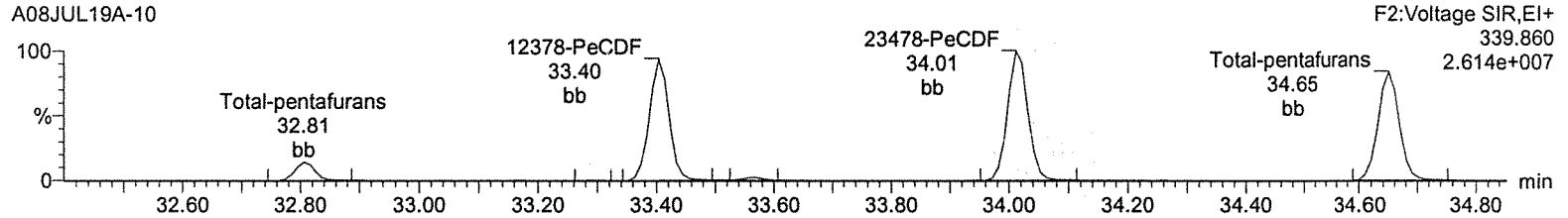
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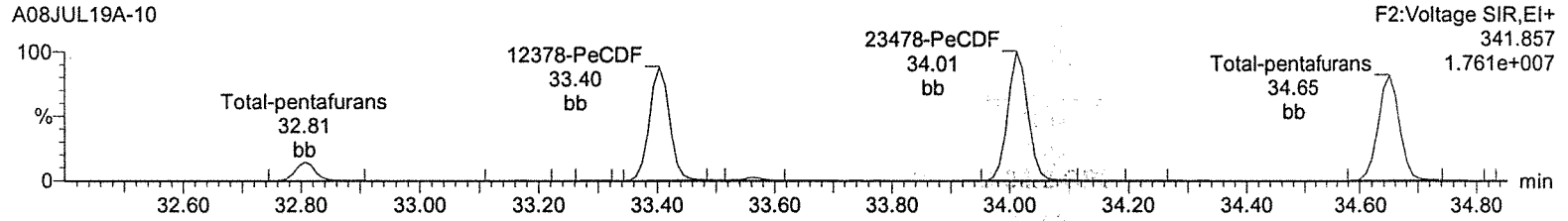
Total-pentafurans

A08JUL19A-10



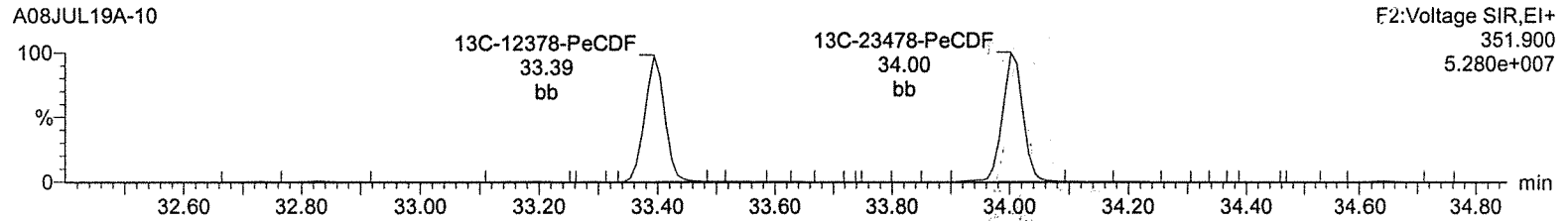
Total-pentafurans

A08JUL19A-10



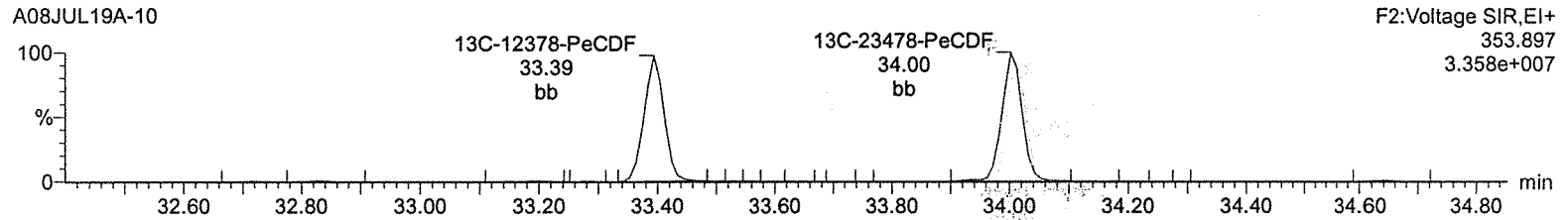
13C-12378-PeCDF

A08JUL19A-10



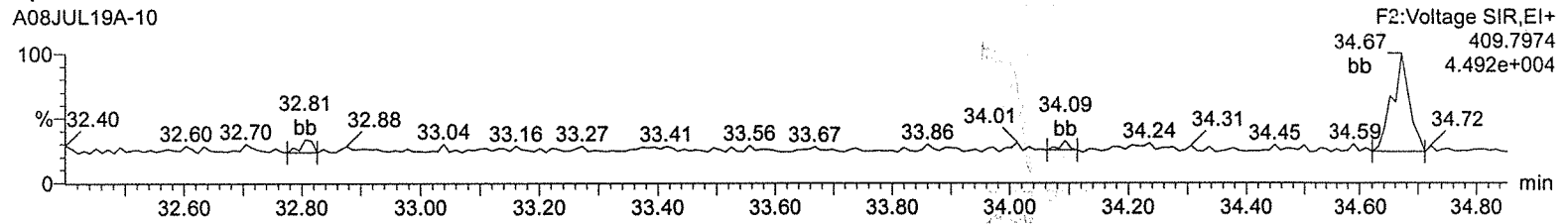
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A08JUL19A-10



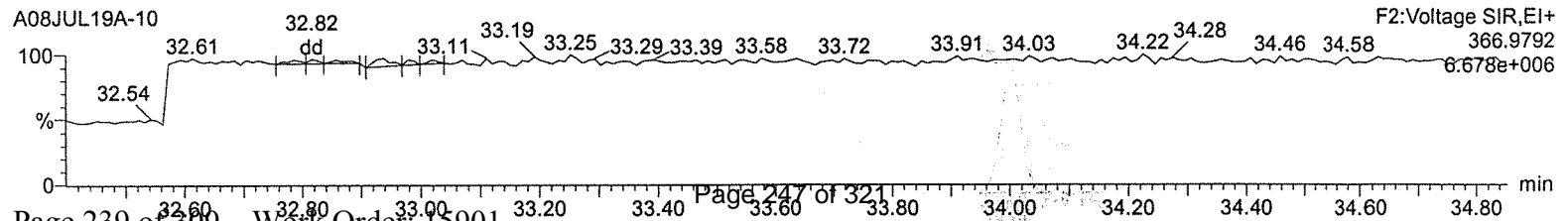
HpdPE

A08JUL19A-10



Lock Mass F2

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

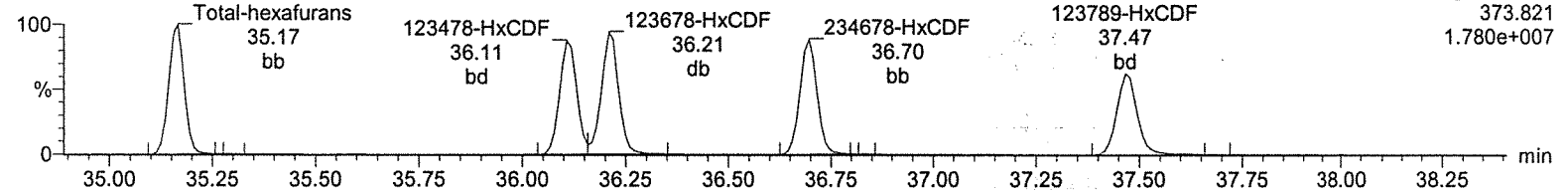
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

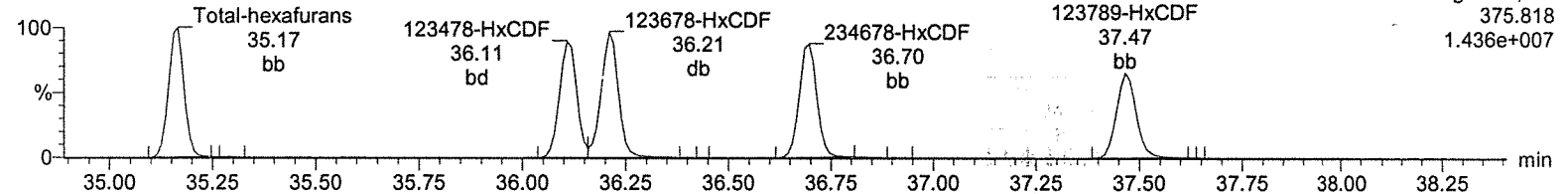
Total-hexafurans

A08JUL19A-10



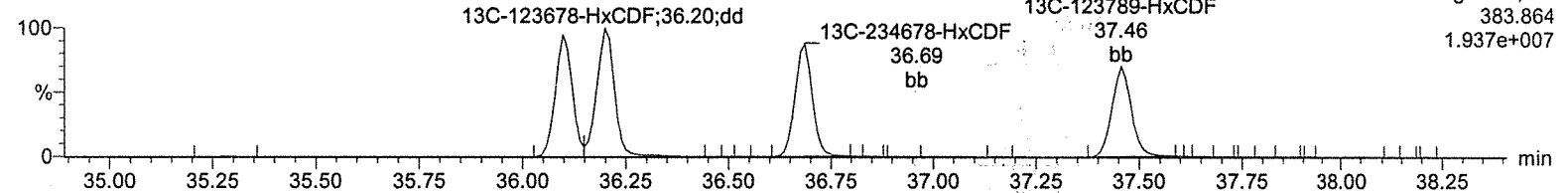
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A08JUL19A-10



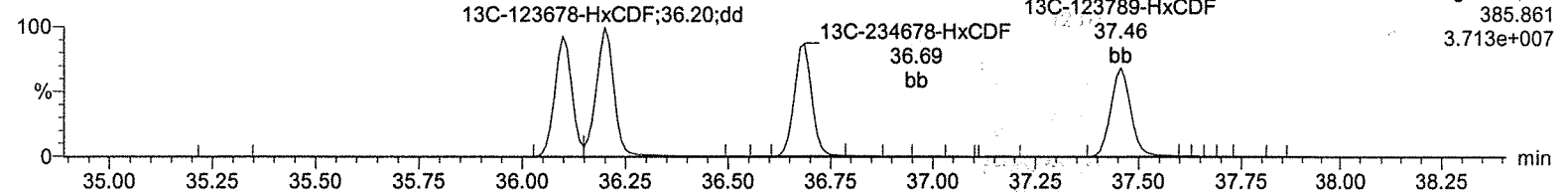
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A08JUL19A-10



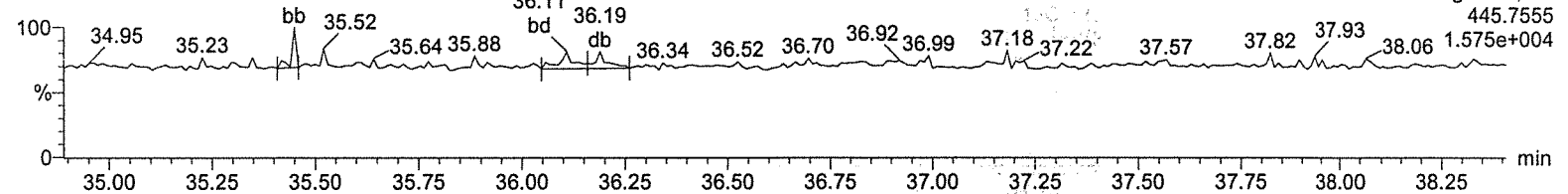
13C-123478-HxCDF

A08JUL19A-10



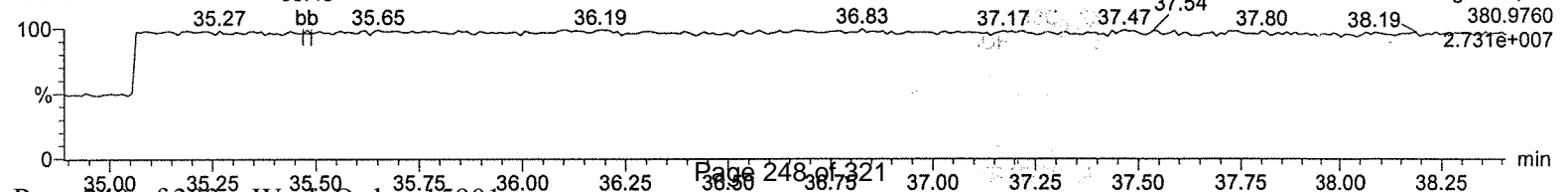
OcDPE

A08JUL19A-10



Lock Mass F3

A08JUL19A-10



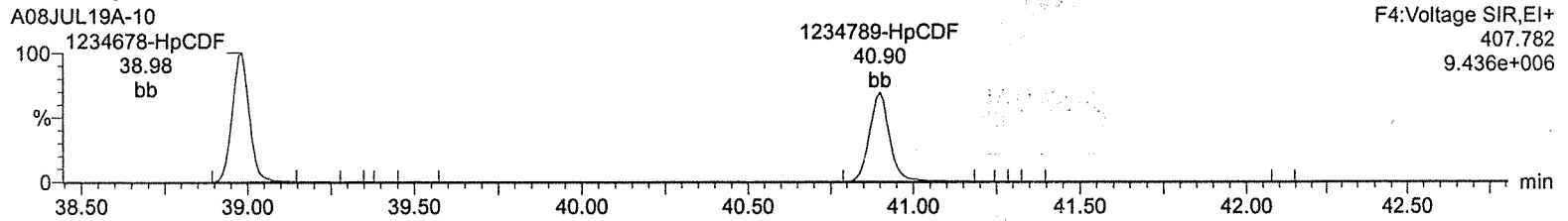
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

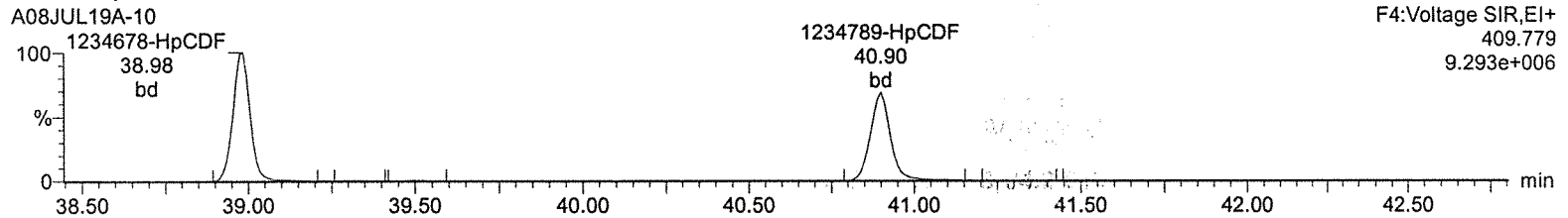
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

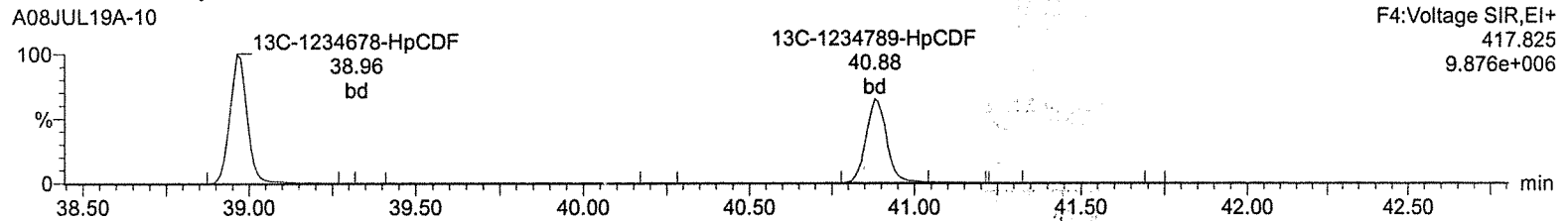
Total-heptafurans



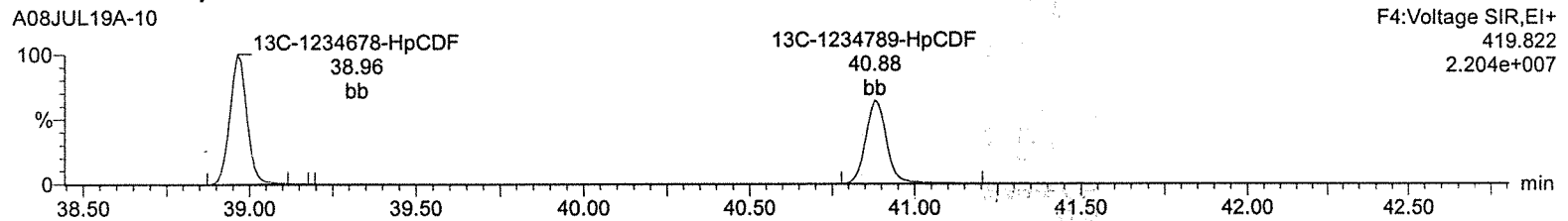
Total-heptafurans



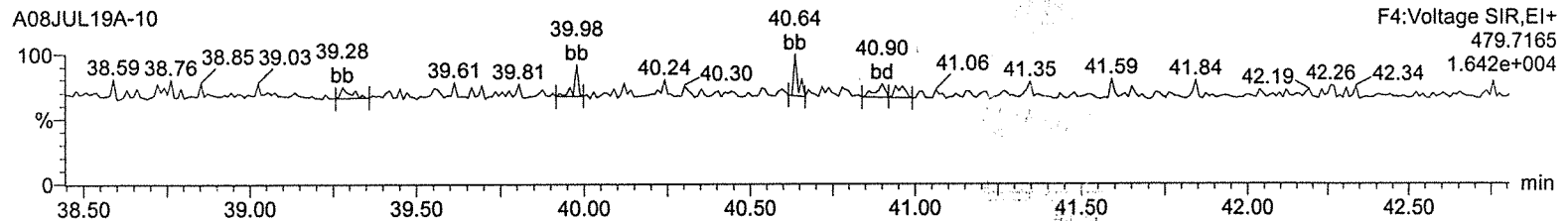
13C-1234678-HpCDF



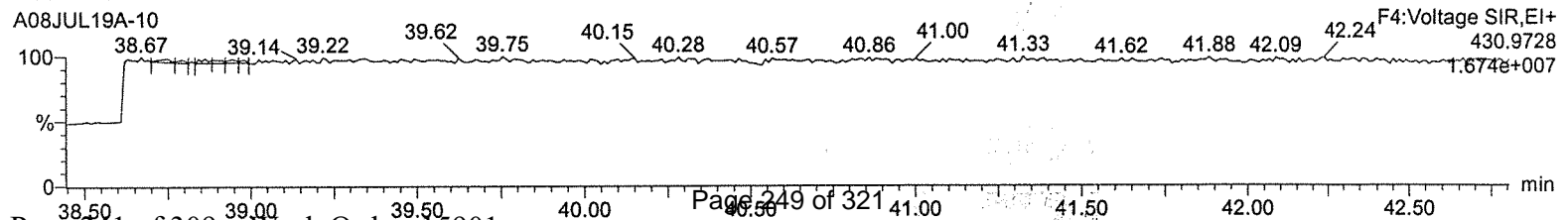
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

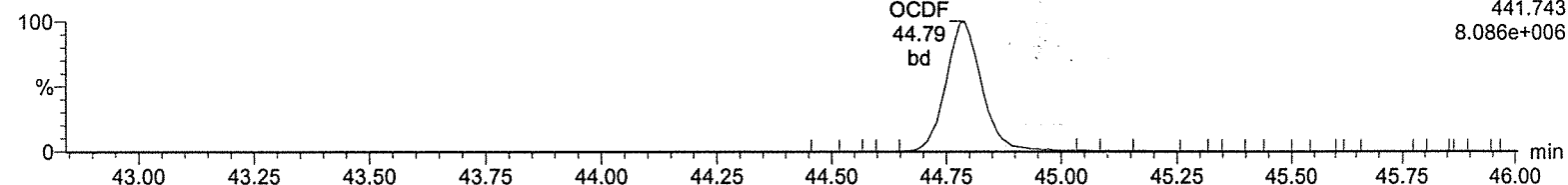
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

OCDF

A08JUL19A-10

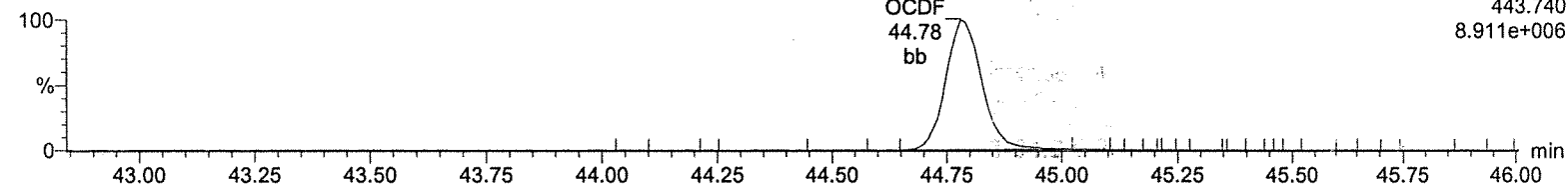
F5:Voltage SIR,EI+
441.743
8.086e+006



OCDF

A08JUL19A-10

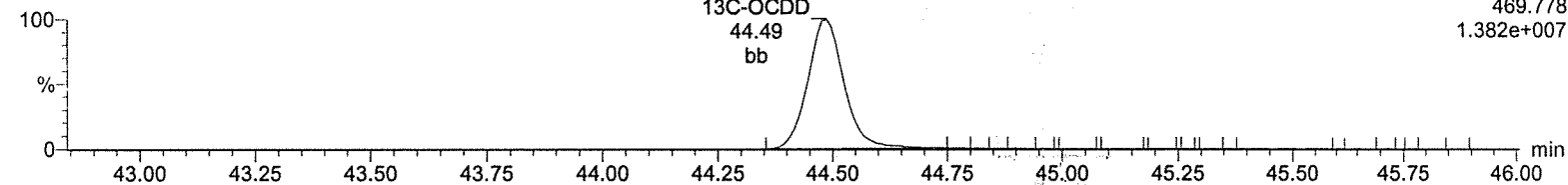
F5:Voltage SIR,EI+
443.740
8.911e+006



13C-OCDD

A08JUL19A-10

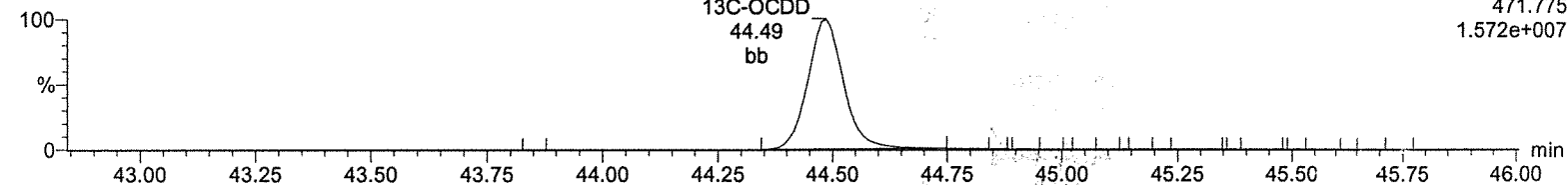
F5:Voltage SIR,EI+
469.778
1.382e+007



13C-OCDD

A08JUL19A-10

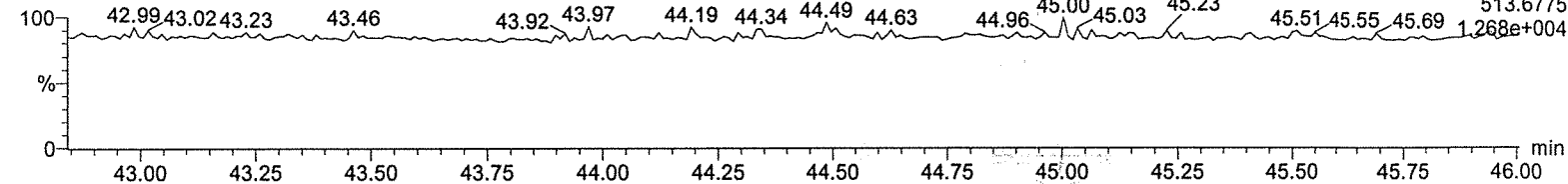
F5:Voltage SIR,EI+
471.775
1.572e+007



DeDPE

A08JUL19A-10

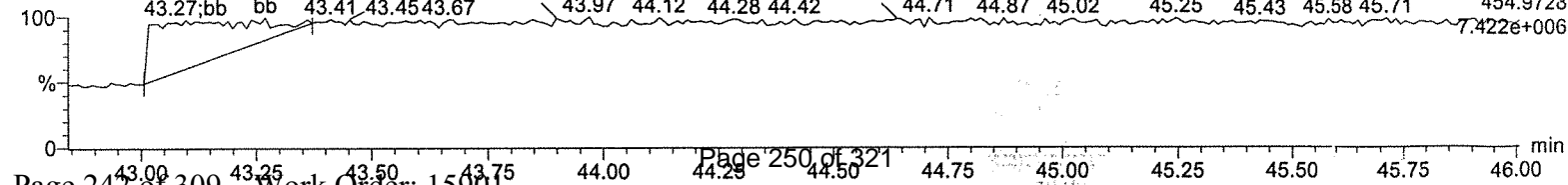
F5:Voltage SIR,EI+
513.6775
1.268e+004



Lock Mass F5

A08JUL19A-10

F5:Voltage SIR,EI+
454.9728
7.422e+006



Continuing Calibration Data

Runlog Information

G24DEC19

Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
• A14DEC19A-1	HRP750_2	14- DEC-2019 11:20	A14DEC19A	Matt Cash		CS3WT UD191018-02.1 CPS5G	1 uL
• A14DEC19A-2	HRP750_2	14- DEC-2019 12:15	%613%	Matt Cash		12025526-2 LCS	1 uL
• A14DEC19A-3	HRP750_2	14- DEC-2019 13:03	%613%	Matt Cash		12025527-2 LCSD	1 uL
• A14DEC19A-4	HRP750_2	14- DEC-2019 13:51	%613%	Matt Cash		12025525-2 MB	1 uL
• A14DEC19A-5	HRP750_2	14- DEC-2019 14:39	HMS1613_1L	Matt Cash	42570	15897001-1	1 uL
• A14DEC19A-6	HRP750_2	14- DEC-2019 15:27	HMS1613_1L	Matt Cash	42570	15903001-1	1 uL
• A14DEC19A-7	HRP750_2	14- DEC-2019 16:15	HMS1613_1L	Matt Cash	42570	15903002-1	1 uL
• A14DEC19A-8	HRP750_2	14- DEC-2019 17:03	HMS1613_1L	Matt Cash	42570	15903003-1	1 uL
• A14DEC19A-9	HRP750_2	14- DEC-2019 17:52	HMS1613_1L	Matt Cash	42570	15903004-1	1 uL
• A14DEC19A-10	HRP750_2	14- DEC-2019 18:40	HMS1613_1L	Matt Cash	42570	15903005-1	1 uL
• A14DEC19A-11	HRP750_2	14- DEC-2019 19:28	HMS1613_1L	Matt Cash	42571	15900001-1	1 uL
• A14DEC19A-12	HRP750_2	14- DEC-2019 20:16	HMS1613_1L	Matt Cash	42571	15900002-1	1 uL
• A14DEC19A-13	HRP750_2	14- DEC-2019 21:04	HMS1613_1L	Matt Cash	42571	15900003-1	1 uL

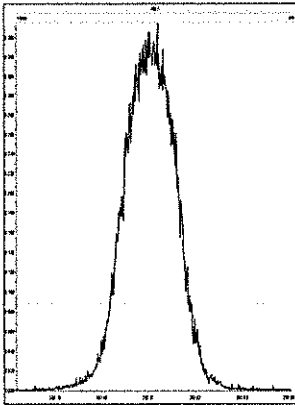
• A14DEC19A-14	HRP750_2	14- DEC-2019 21:52	HMS1613_1L	Matt Cash	42571	15901001-1	1 uL
• A14DEC19A-15	HRP750_2	14- DEC-2019 22:41	HMS1613_1L	Matt Cash	42571	15901002-1	1 uL
• A14DEC19A-16	HRP750_2	14- DEC-2019 23:29	A14DEC19A	Matt Cash		CS3WT UD191018-02.1 CPS5G	1 uL
• <u>A14DEC19A_2-1</u>	HRP750_2	15- DEC-2019 00:25	%8290%	Matt Cash		12025516-1 LCS	1 uL
Corrected Instance							
• A14DEC19A_2-2	HRP750_2	15- DEC-2019 01:12	%8290%	Matt Cash		12025517-1 LCSD	1 uL
Corrected Instance							
• A14DEC19A_2-3	HRP750_2	15- DEC-2019 02:00	%8290%	Matt Cash		12025515-1 MB	1 uL
Corrected Instance							
• A14DEC19A_2-4	HRP750_2	15- DEC-2019 02:49	HMS8290_1S	Matt Cash	42553	15902001-1	1 uL
• A14DEC19A_2-5	HRP750_2	15- DEC-2019 03:37	HMS8290_1S	Matt Cash	42553	15902002-1	1 uL
• A14DEC19A_2-6	HRP750_2	15- DEC-2019 04:25	HMS8290_1S	Matt Cash	42553	15902003-1	1 uL
• A14DEC19A_2-7	HRP750_2	15- DEC-2019 05:13	HMS8290_1S	Matt Cash	42553	15902004-1	1 uL
• A14DEC19A_2-8	HRP750_2	15- DEC-2019 06:01	HMS8290_1S	Matt Cash	42553	15902005-1	1 uL
• A14DEC19A_2-9	HRP750_2	15- DEC-2019 06:49	HMS8290_1S	Matt Cash	42553	15902006-1	1 uL
• A14DEC19A_2-10	HRP750_2	15- DEC-2019 07:38	HMS8290_1S	Matt Cash	42553	15902007-1	1 uL
• A14DEC19A_2-11	HRP750_2	15- DEC-2019 08:26	HMS8290_1S	Matt Cash	42553	15902008-1	1 uL

• A14DEC19A_2-12	HRP750_2	15- DEC-2019 09:14	HMS8290_1S	Matt Cash	42553	15902009-1	1 uL
• A14DEC19A_2-13	HRP750_2	15- DEC-2019 10:02	HMS8290_1S	Matt Cash	42553	15902010-1	1 uL
• A14DEC19A_2-14	HRP750_2	15- DEC-2019 10:50	A14DEC19A_2	Matt Cash		CS3WT UD191018-02.1 CPS5G	1 uL
• <u>A14DEC19A_3-1</u>	HRP750_2	15- DEC-2019 11:47	A14DEC19A_3	Matt Cash		SB	1 uL
• A14DEC19A_3-2	HRP750_2	15- DEC-2019 12:34	A14DEC19A_3	Matt Cash		D271 A	1 uL
Instrument paused, restart with seq 3							

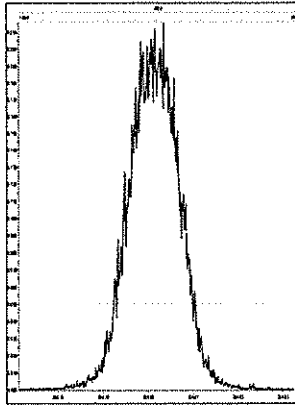
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Saturday, December 14, 2019 11:16:32 Eastern Standard Time

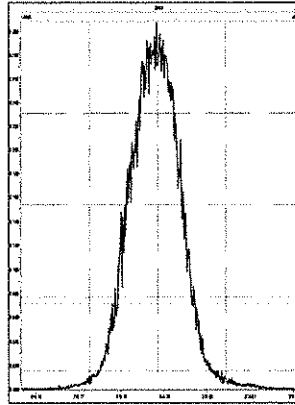
M 292.9824 R 12254



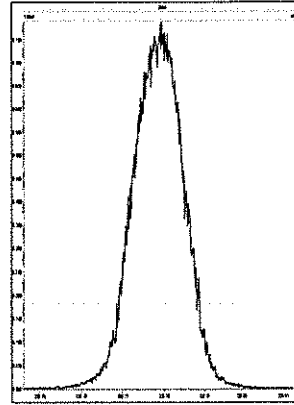
M 304.9824 R 12192



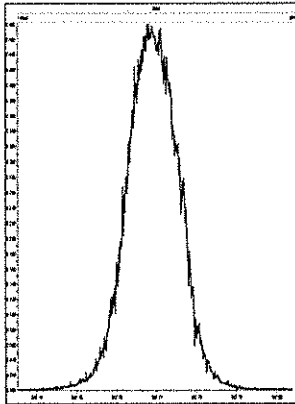
M 318.9792 R 12316



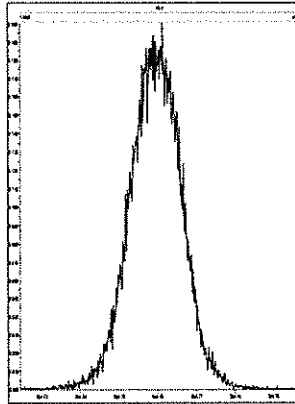
M 330.9792 R 11681



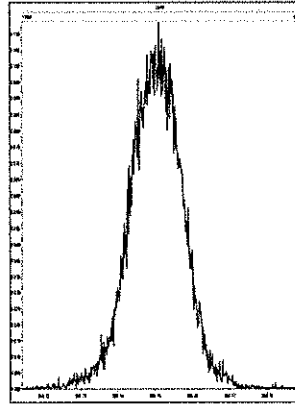
M 342.9792 R 12191



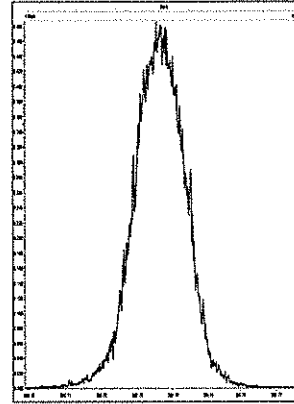
M 354.9792 R 11961



M 366.9792 R 11679



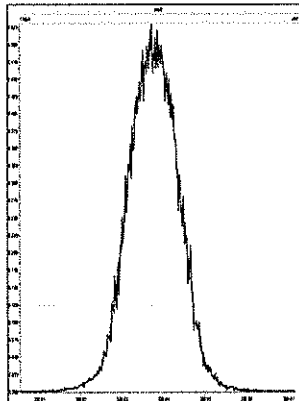
M 380.9760 R 11574



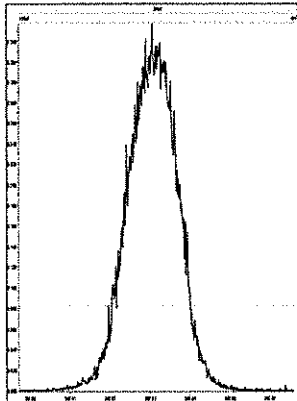
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Saturday, December 14, 2019 11:16:59 Eastern Standard Time

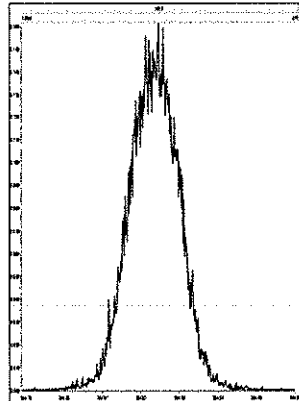
M 330.9792 R 11962



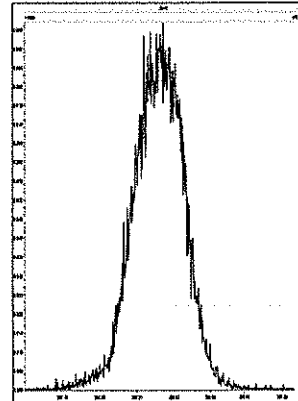
M 342.9792 R 12567



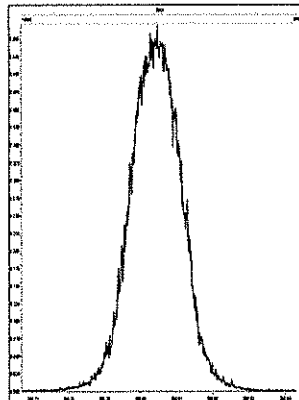
M 354.9792 R 12501



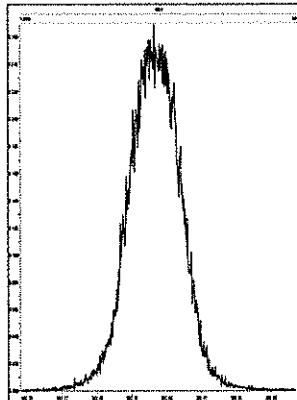
M 366.9792 R 12254



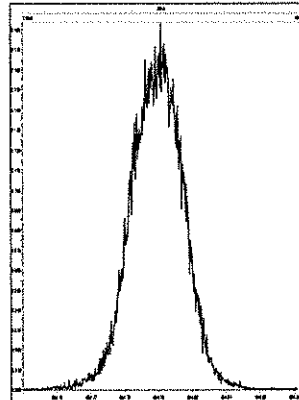
M 380.9760 R 12134



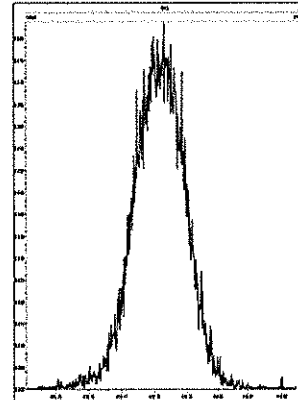
M 392.9760 R 11905



M 404.9760 R 11847



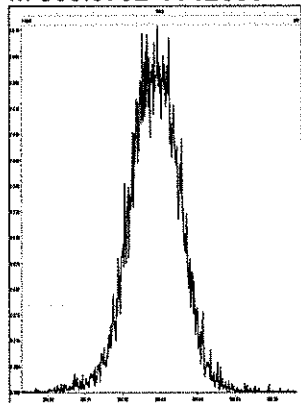
M 416.9760 R 12079



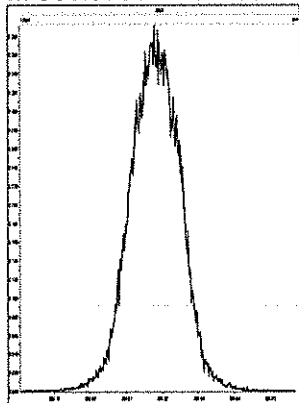
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Saturday, December 14, 2019 11:17:22 Eastern Standard Time

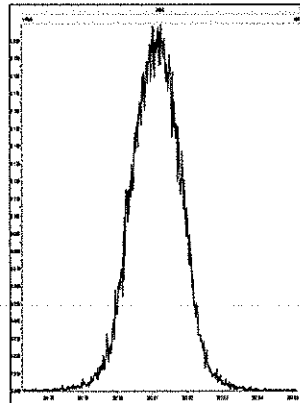
M 366.9792 R 12500



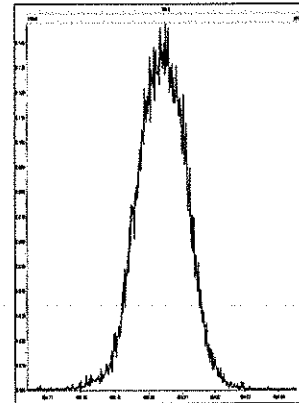
M 380.9760 R 12436



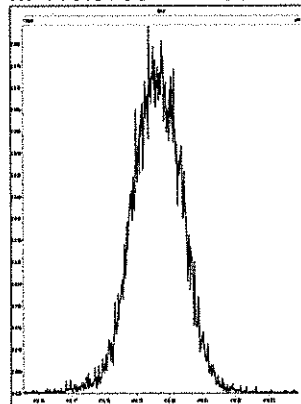
M 392.9760 R 12191



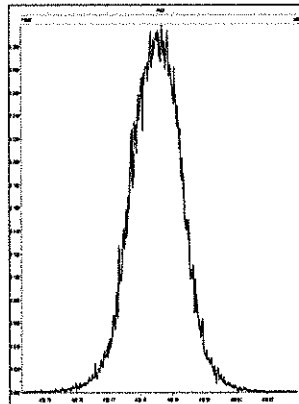
M 404.9760 R 12375



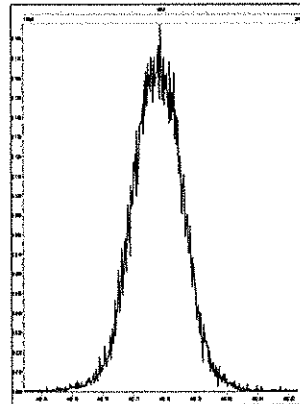
M 416.9760 R 11907



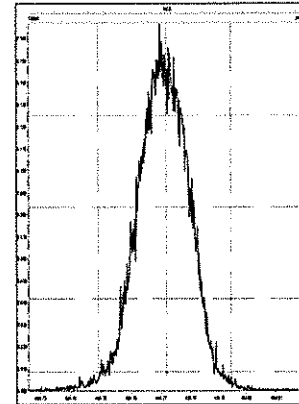
M 430.9728 R 11789



M 442.9728 R 11736



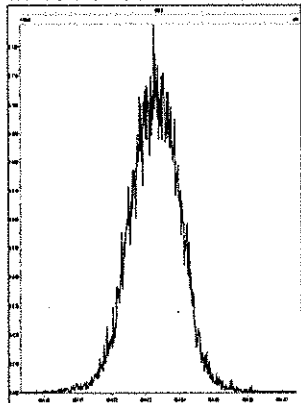
M 454.9728 R 11683



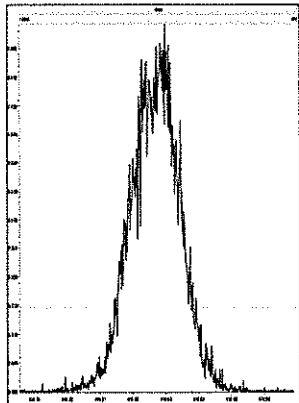
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Saturday, December 14, 2019 11:17:42 Eastern Standard Time

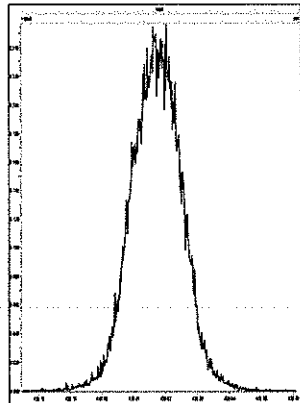
M 404.9760 R 12438



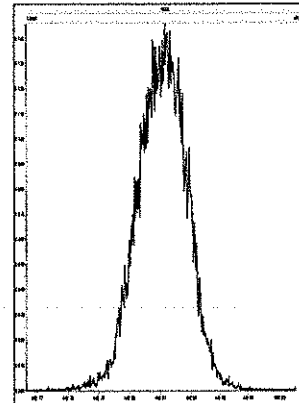
M 416.9760 R 13087



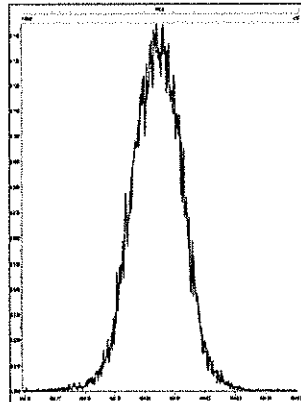
M 430.9728 R 12256



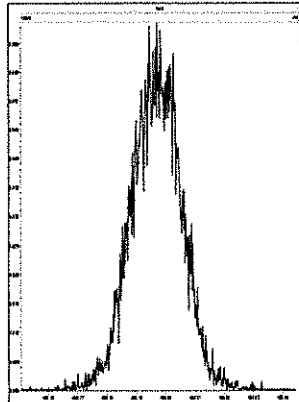
M 442.9728 R 12437



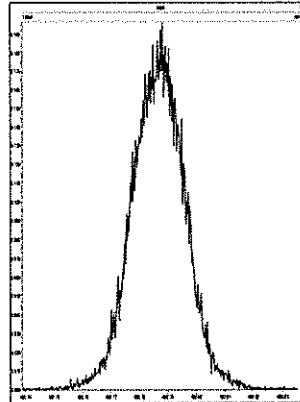
M 454.9728 R 12440



M 466.9728 R 12078



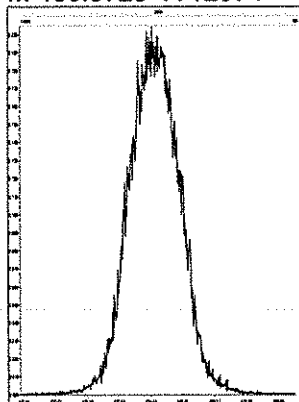
M 480.9696 R 12375



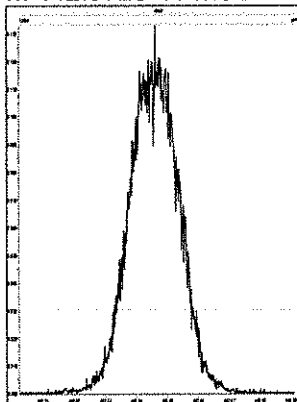
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Saturday, December 14, 2019 11:18:04 Eastern Standard Time

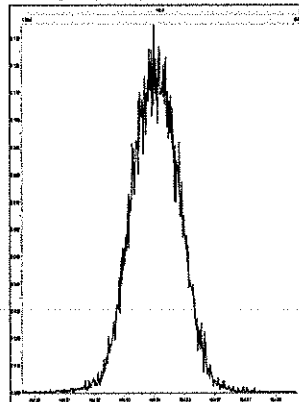
M 430.9728 R 12374



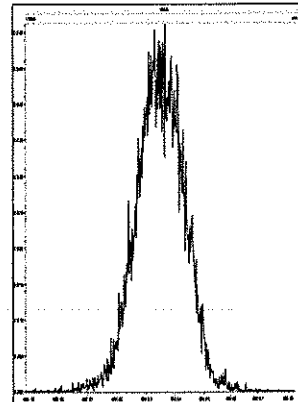
M 442.9728 R 12821



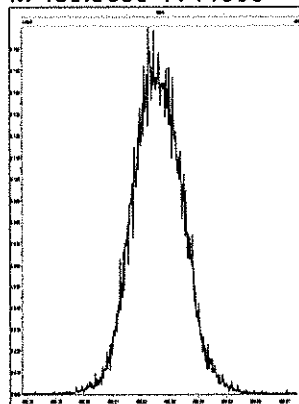
M 454.9728 R 12754



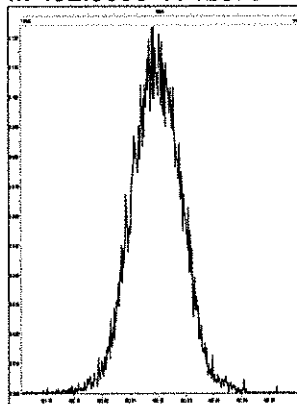
M 466.9728 R 12884



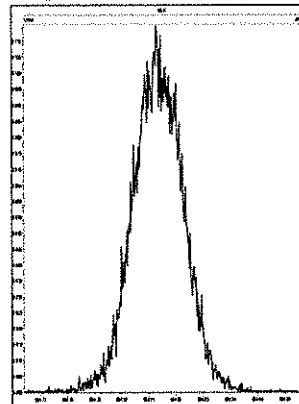
M 480.9696 R 11905



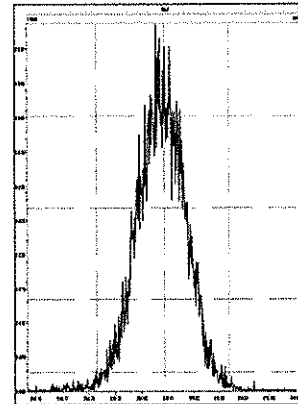
M 492.9696 R 12375



M 504.9696 R 12691

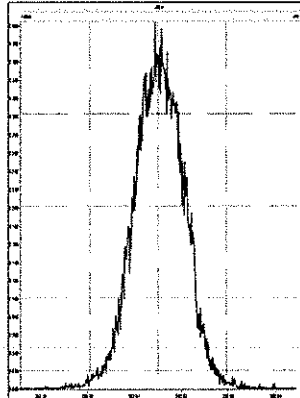


M 516.9697 R 12191

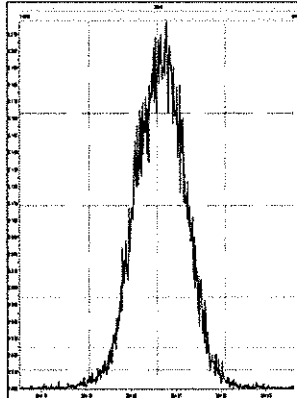


Printed: Saturday, December 14, 2019 12:15:45 Eastern Standard Time

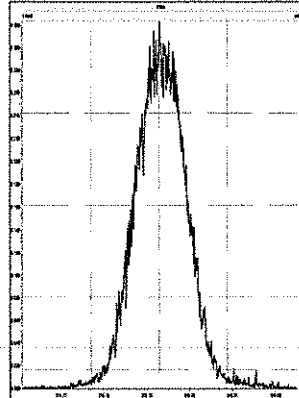
M 292.9824 R 12226



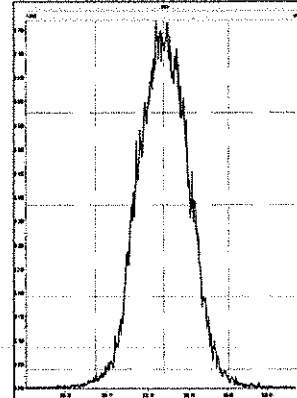
M 304.9824 R 12419



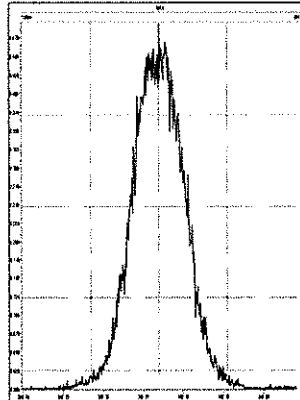
M 318.9792 R 12437



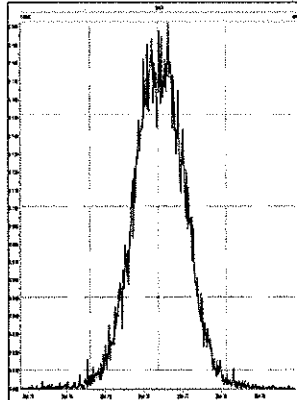
M 330.9792 R 11820



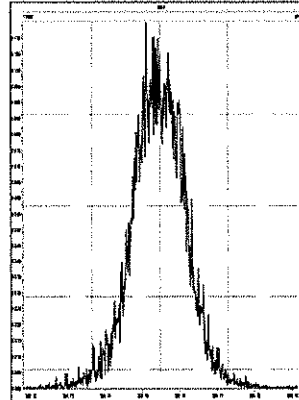
M 342.9792 R 11848



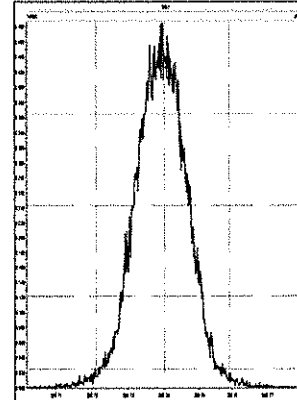
M 354.9792 R 12317



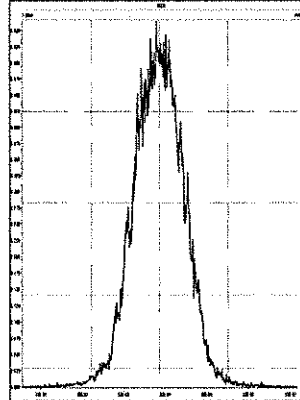
M 366.9792 R 12562



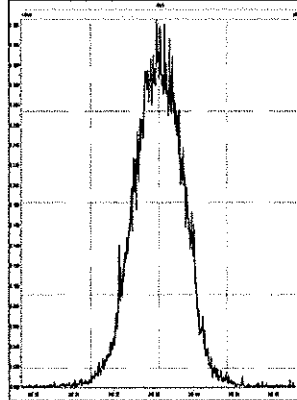
M 380.9760 R 11312



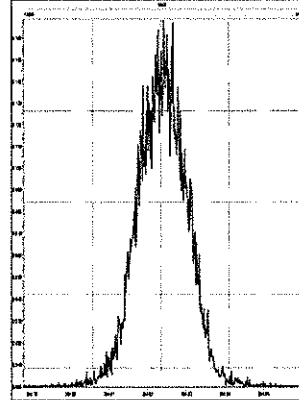
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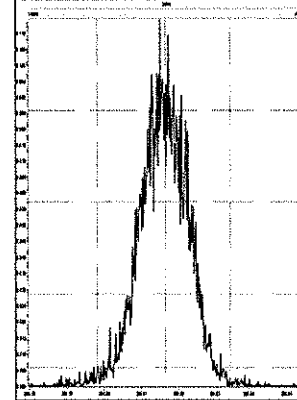
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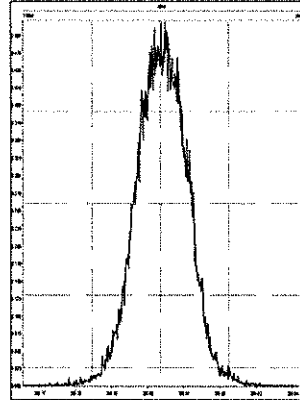
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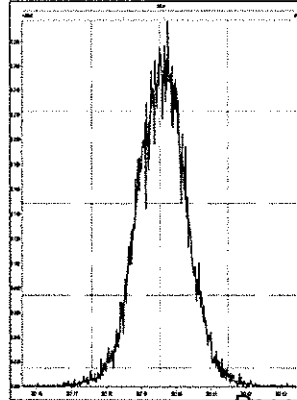
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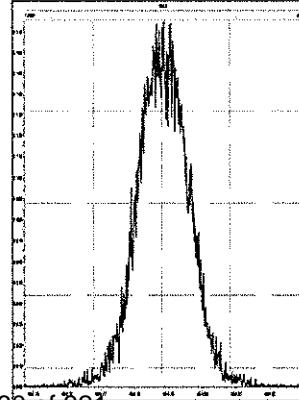
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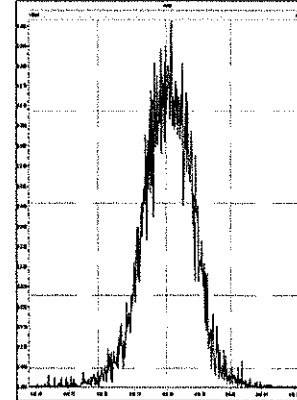
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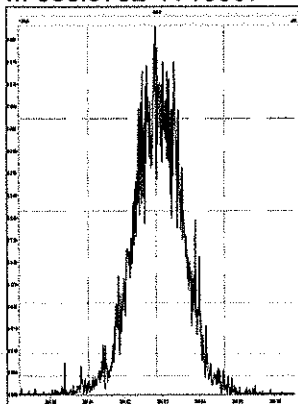


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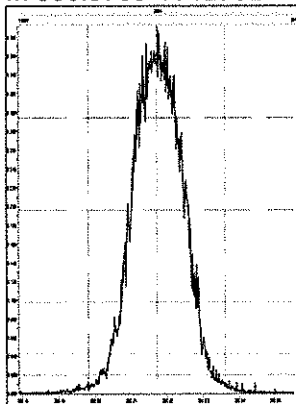


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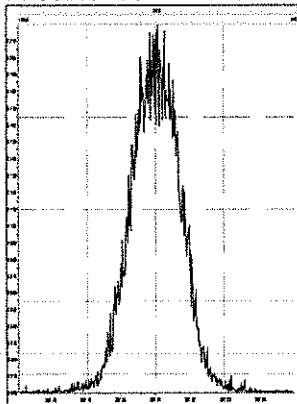
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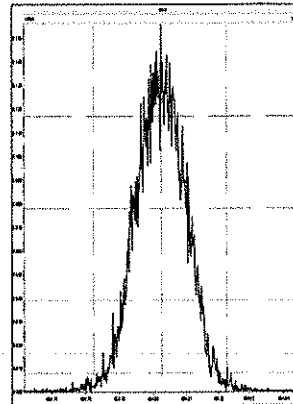
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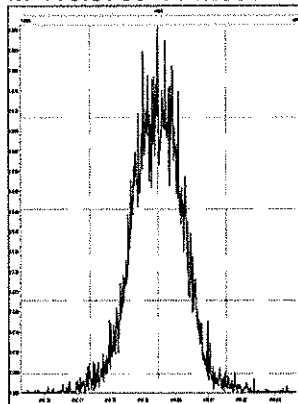
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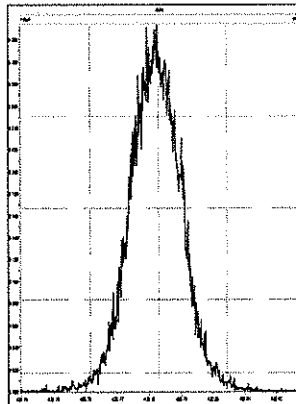
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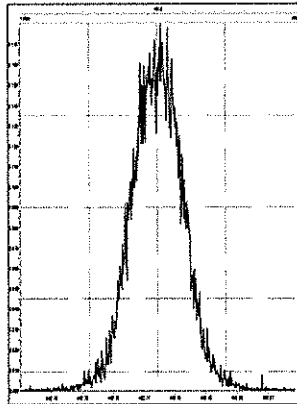
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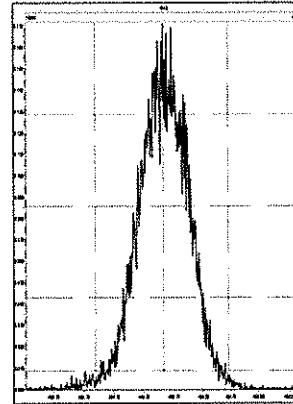
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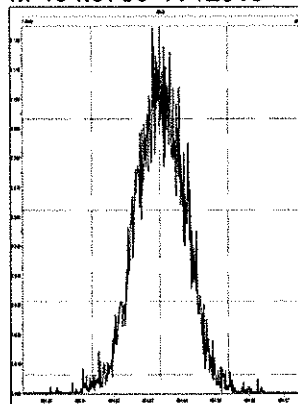
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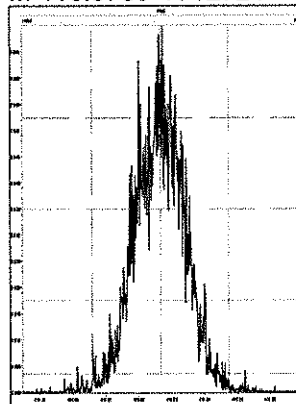
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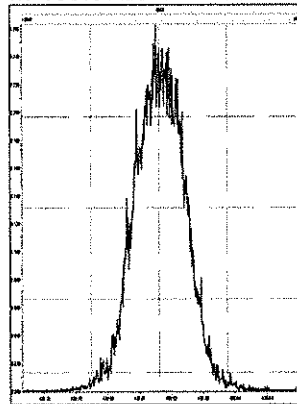
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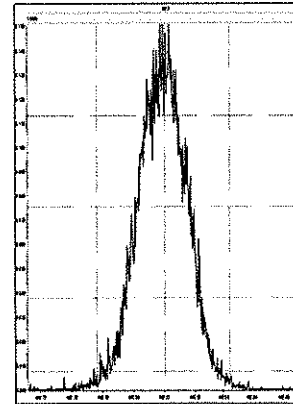
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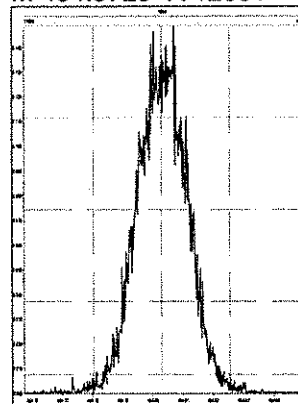
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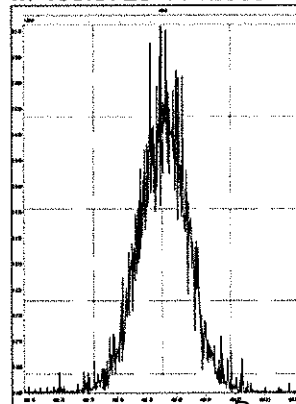
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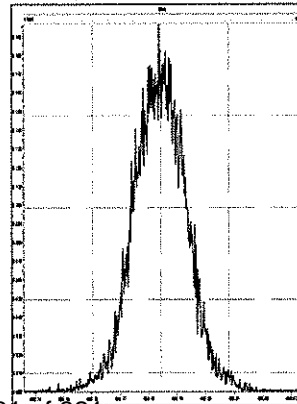
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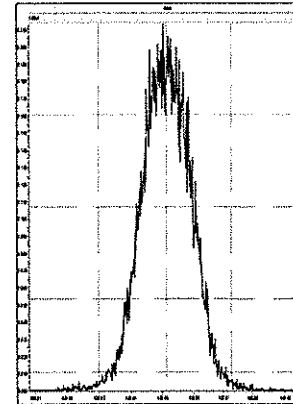
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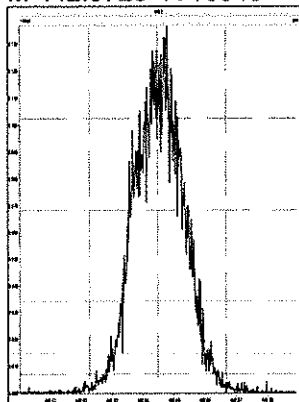
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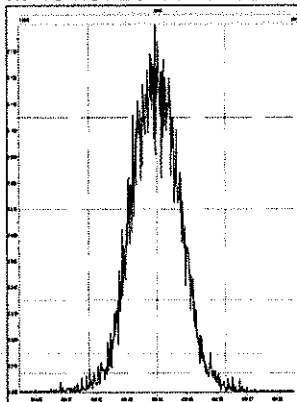
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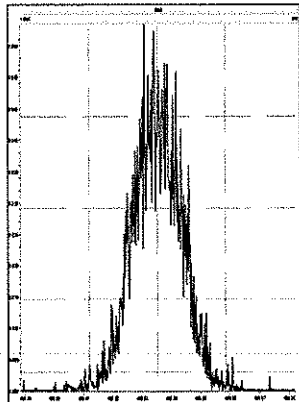
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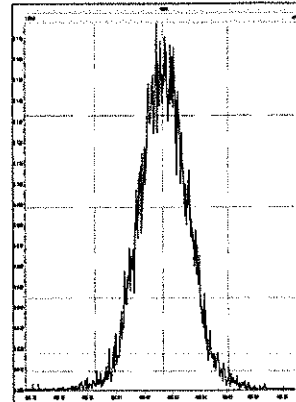
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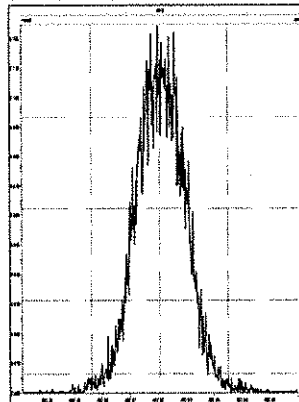
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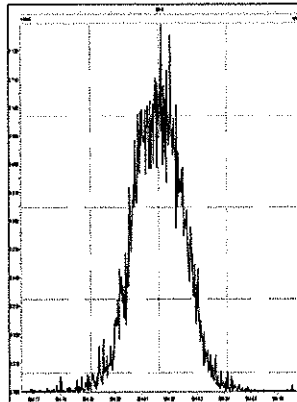
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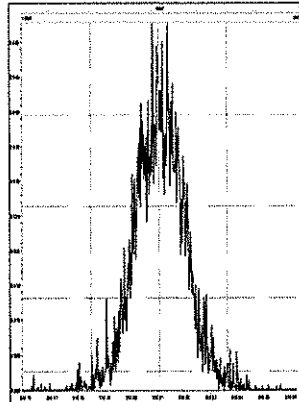
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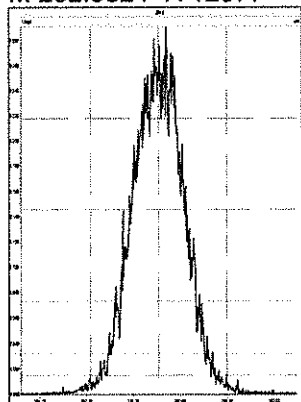


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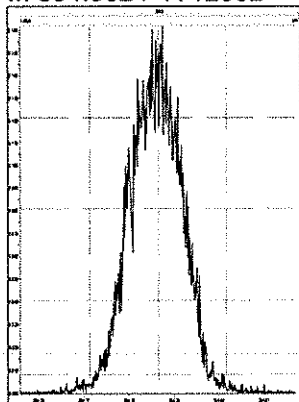


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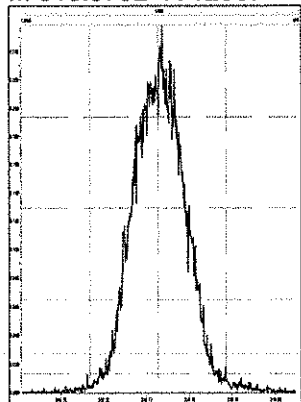
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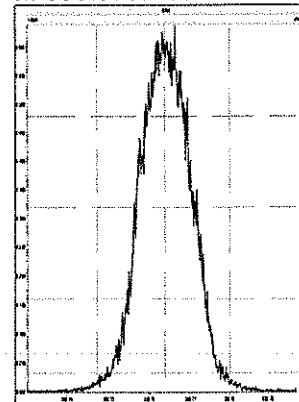
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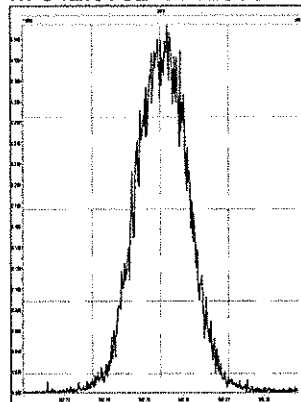
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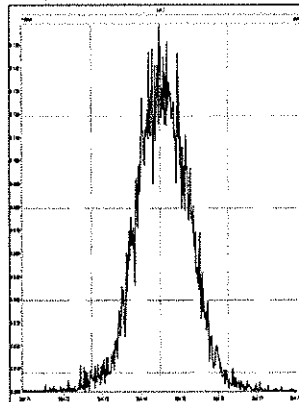
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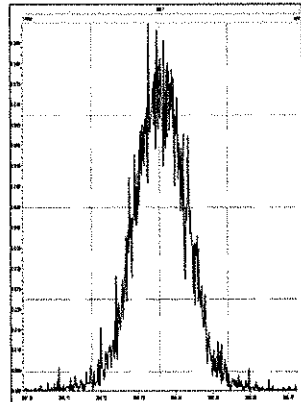
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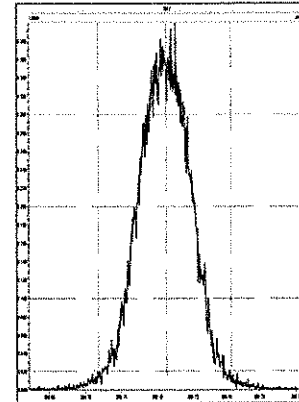
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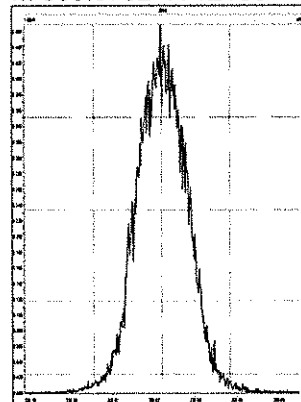
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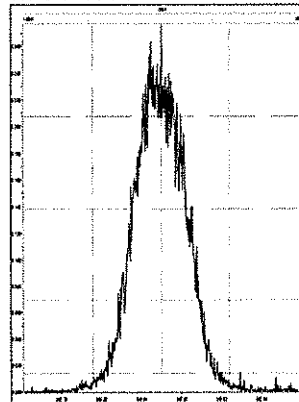
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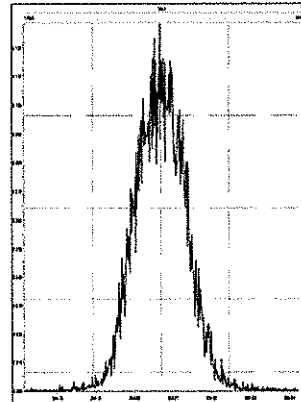
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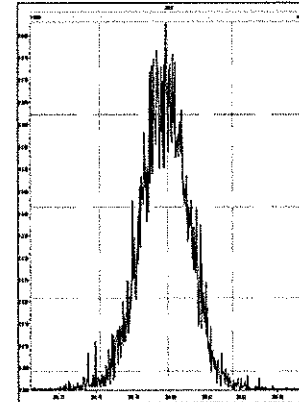
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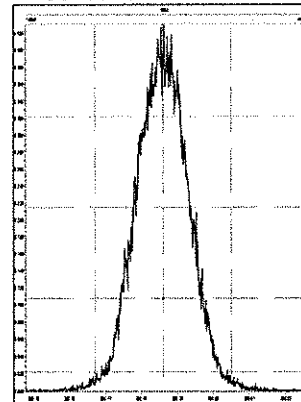
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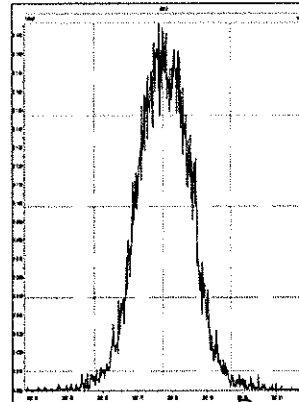
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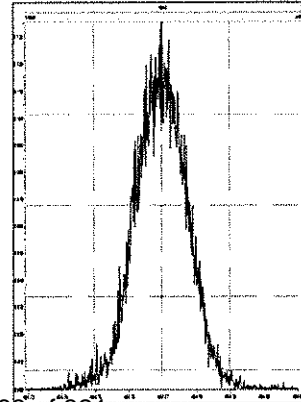
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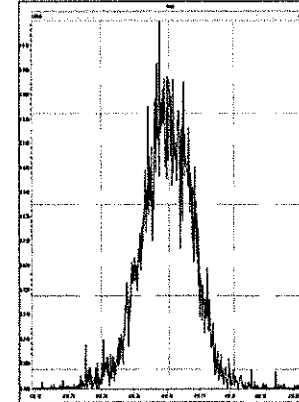
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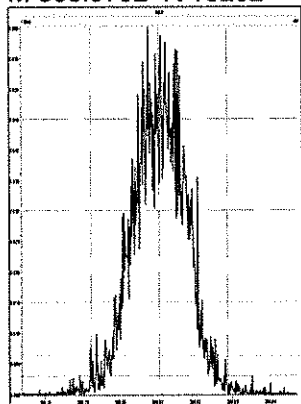


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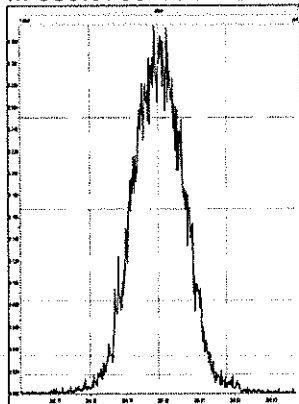


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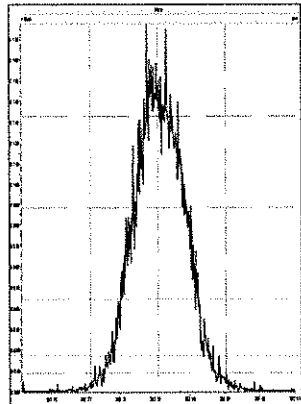
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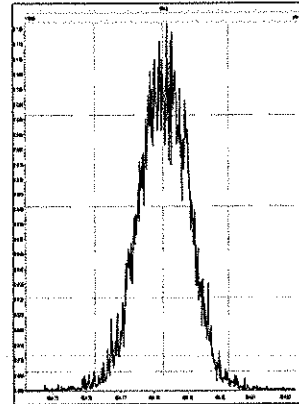
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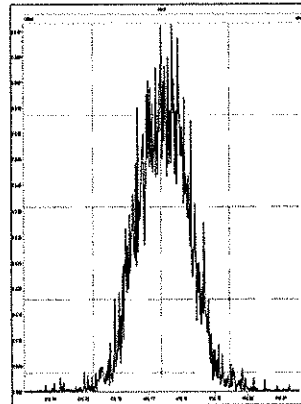
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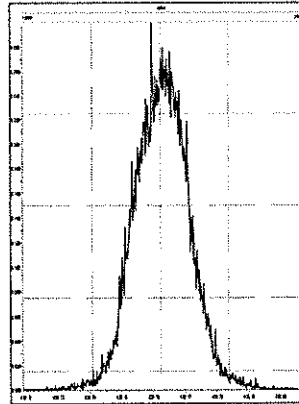
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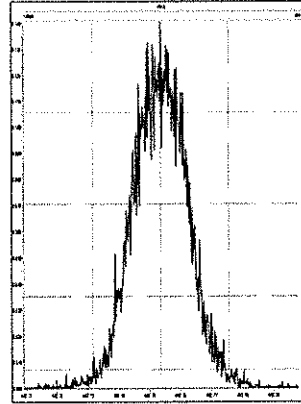
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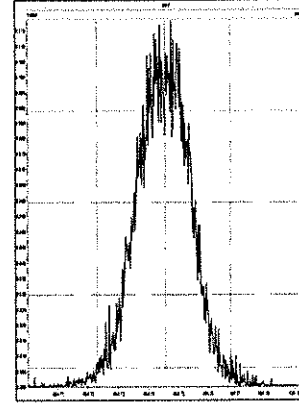
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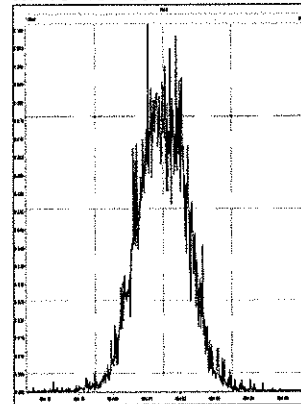
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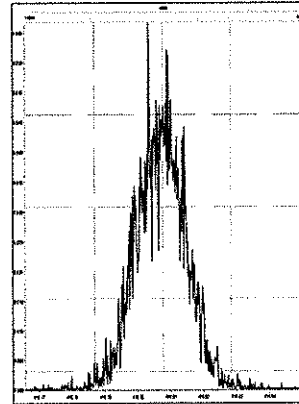
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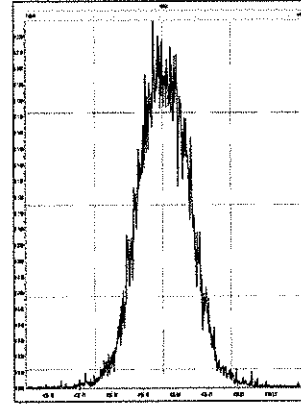
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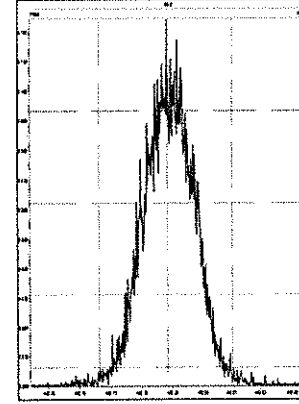
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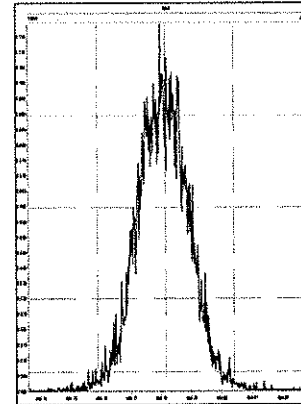
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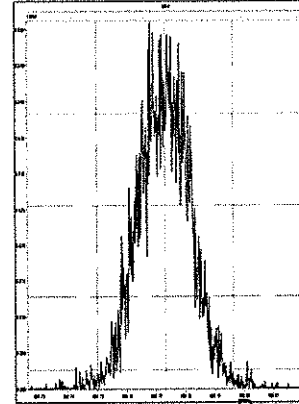
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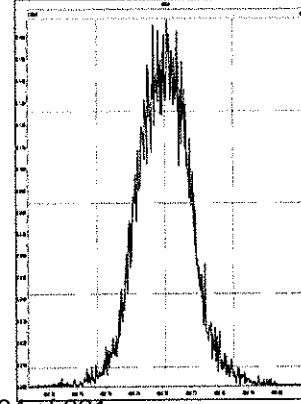
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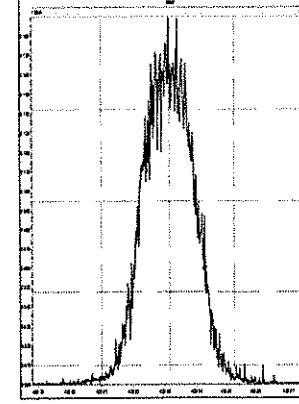
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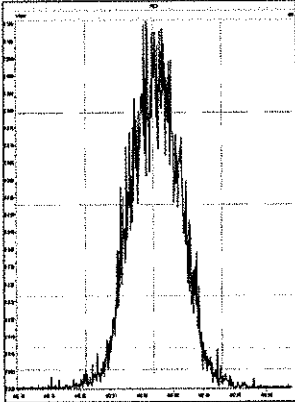
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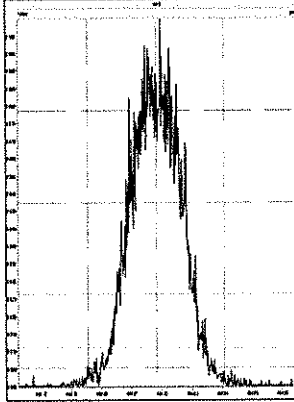
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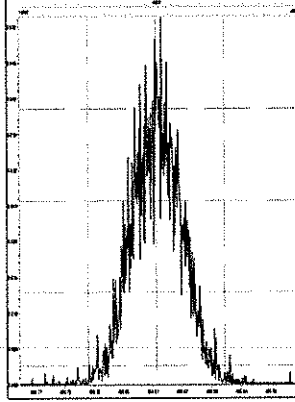
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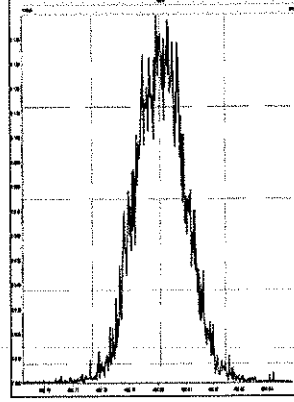
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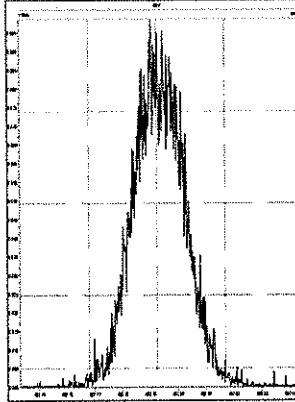
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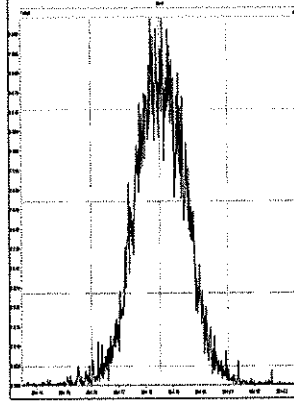
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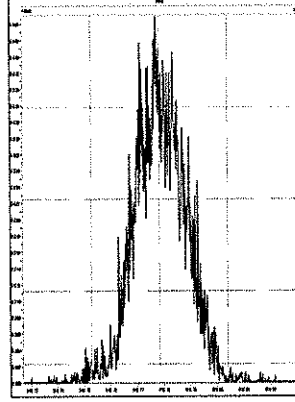
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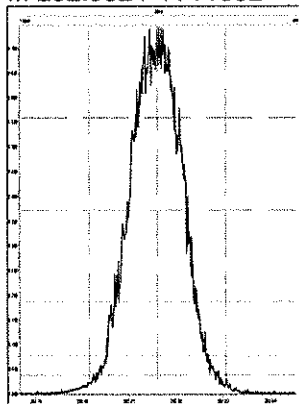


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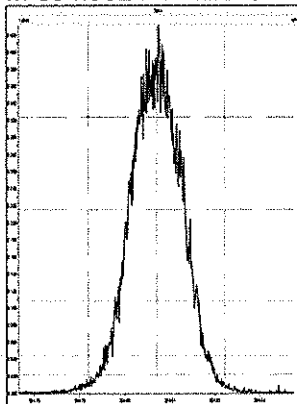


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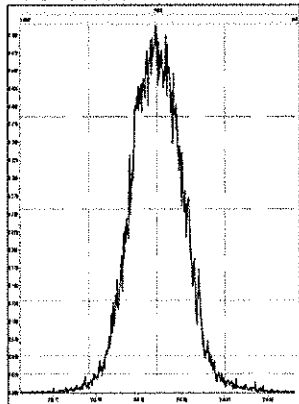
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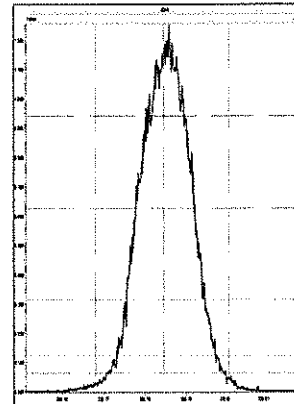
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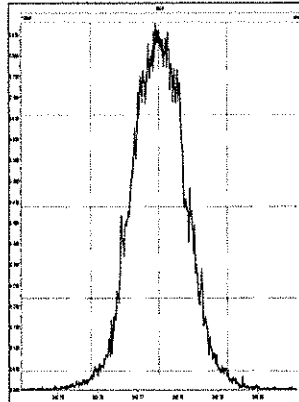
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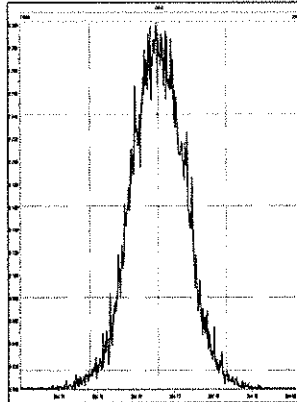
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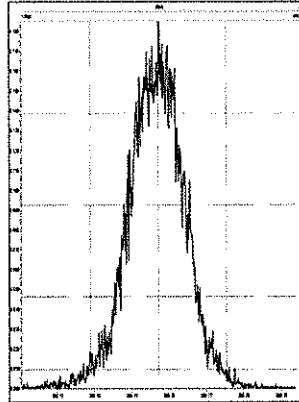
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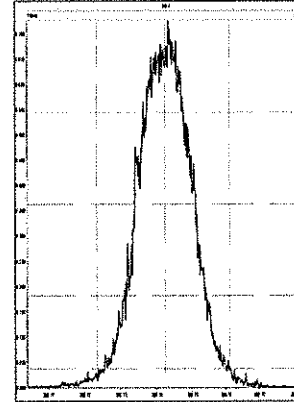
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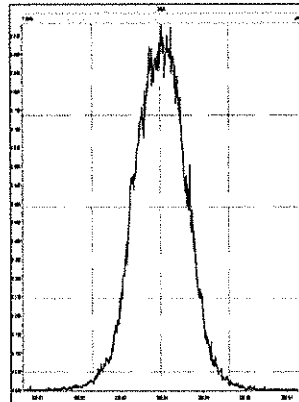
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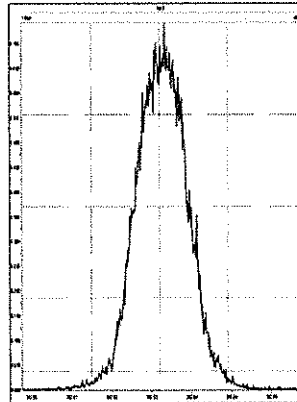
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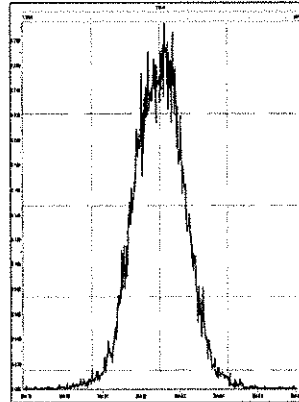
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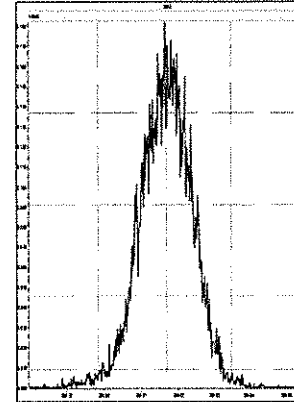
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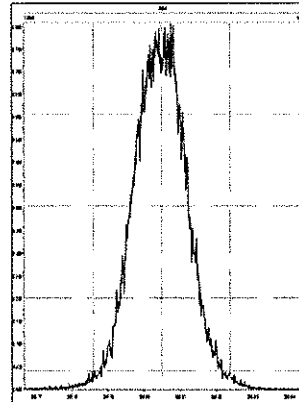
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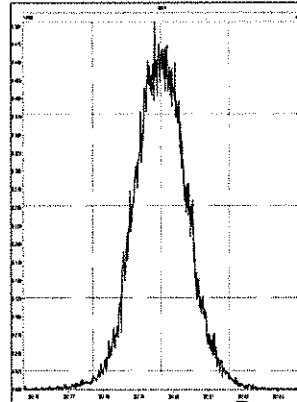
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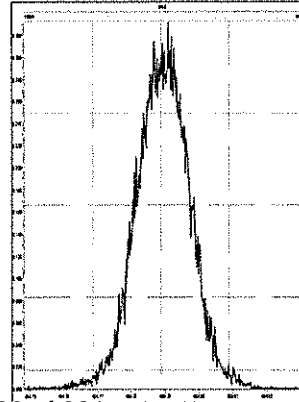
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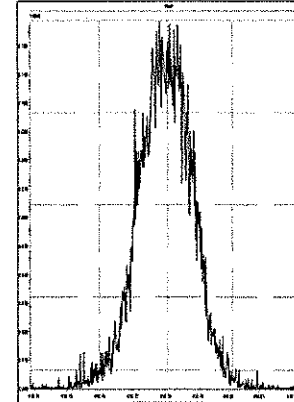
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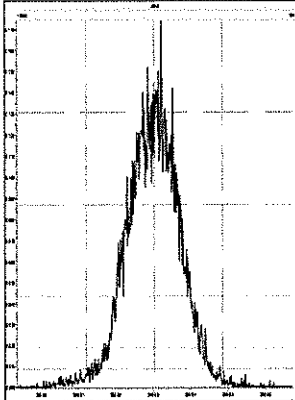


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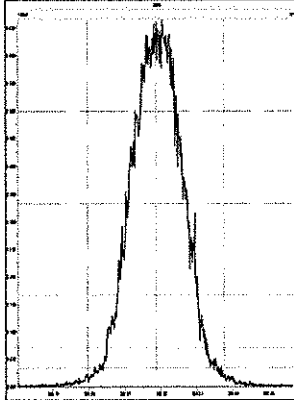


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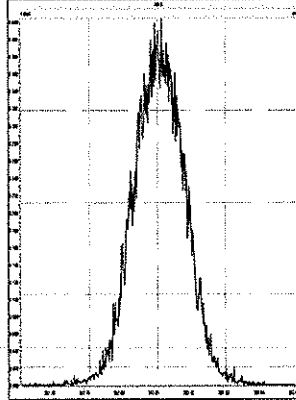
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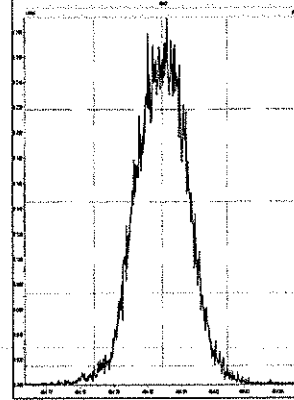
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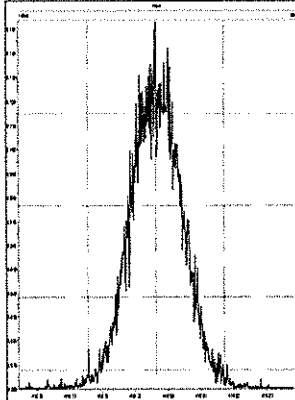
M 392.9760 R 11717



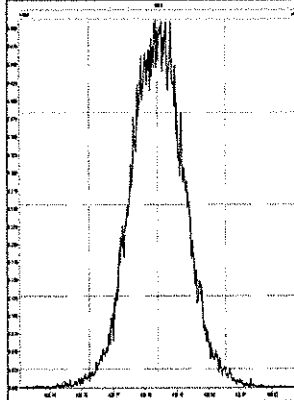
M 404.9760 R 11820



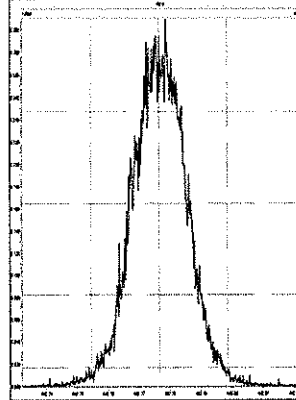
M 416.9760 R 11757



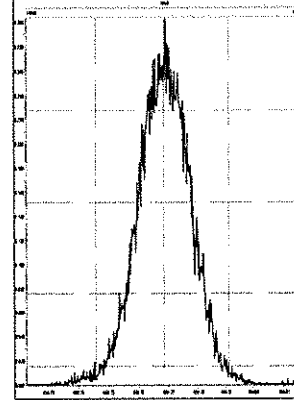
M 430.9728 R 11210



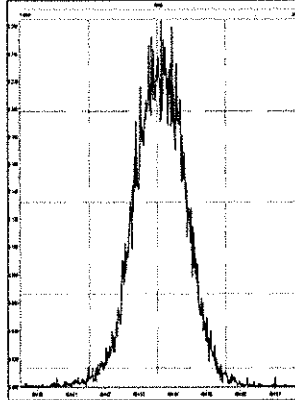
M 442.9728 R 11290



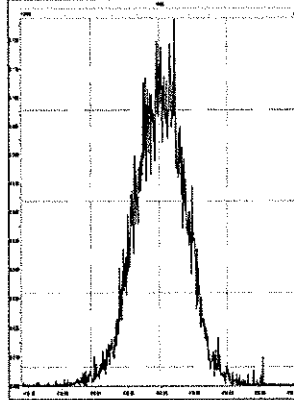
M 454.9728 R 11090



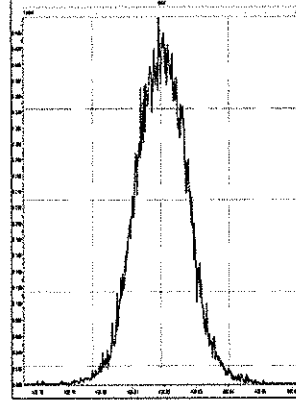
M 404.9760 R 11879



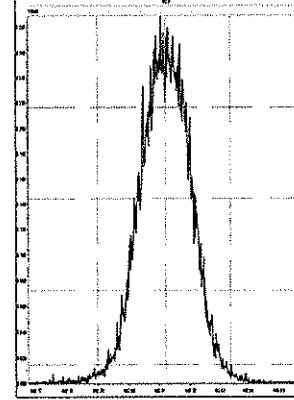
M 416.9760 R 12269



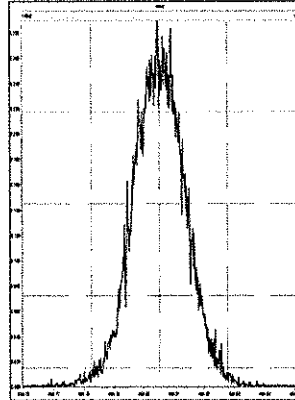
M 430.9728 R 11672



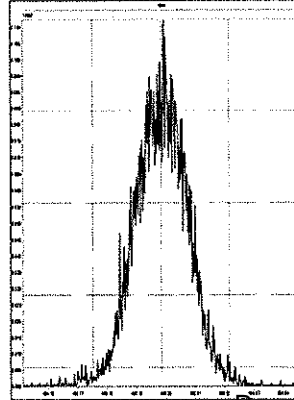
M 442.9728 R 11550



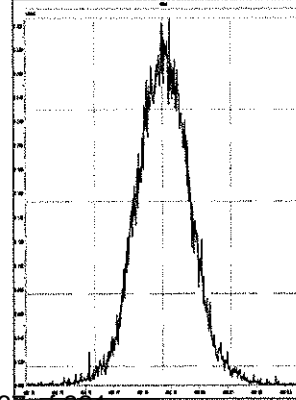
M 454.9728 R 11682



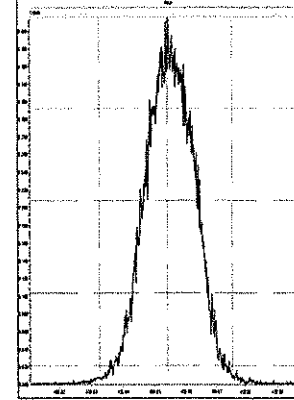
M 466.9728 R 12315



M 480.9696 R 11237

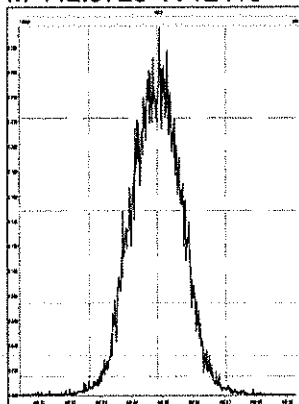


M 430.9728 R 12195

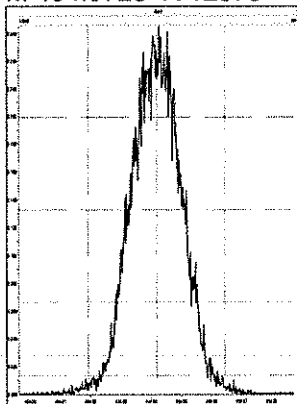


Printed: Sunday, December 15, 2019 11:46:59 Eastern Standard Time

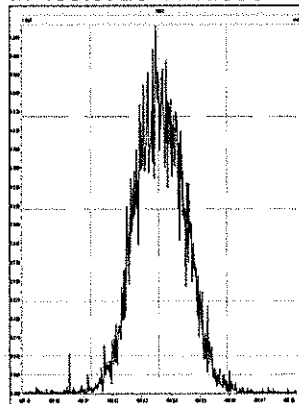
M 442.9728 R 12410



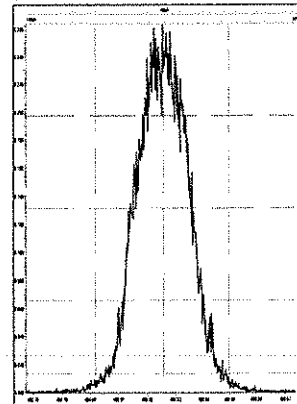
M 454.9728 R 12378



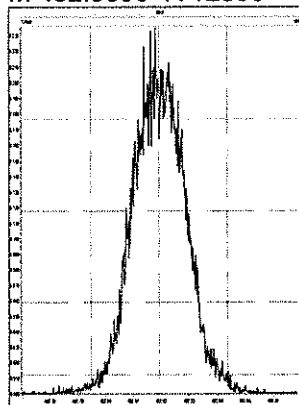
M 466.9728 R 12956



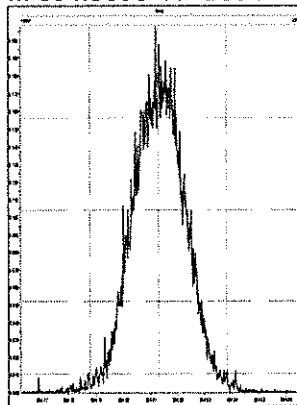
M 480.9696 R 12448



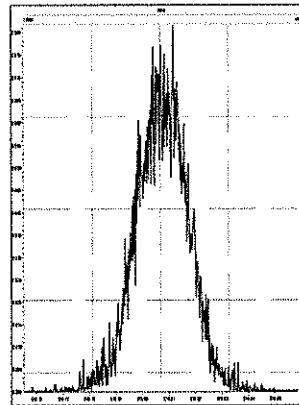
M 492.9696 R 12306



M 504.9696 R 12094



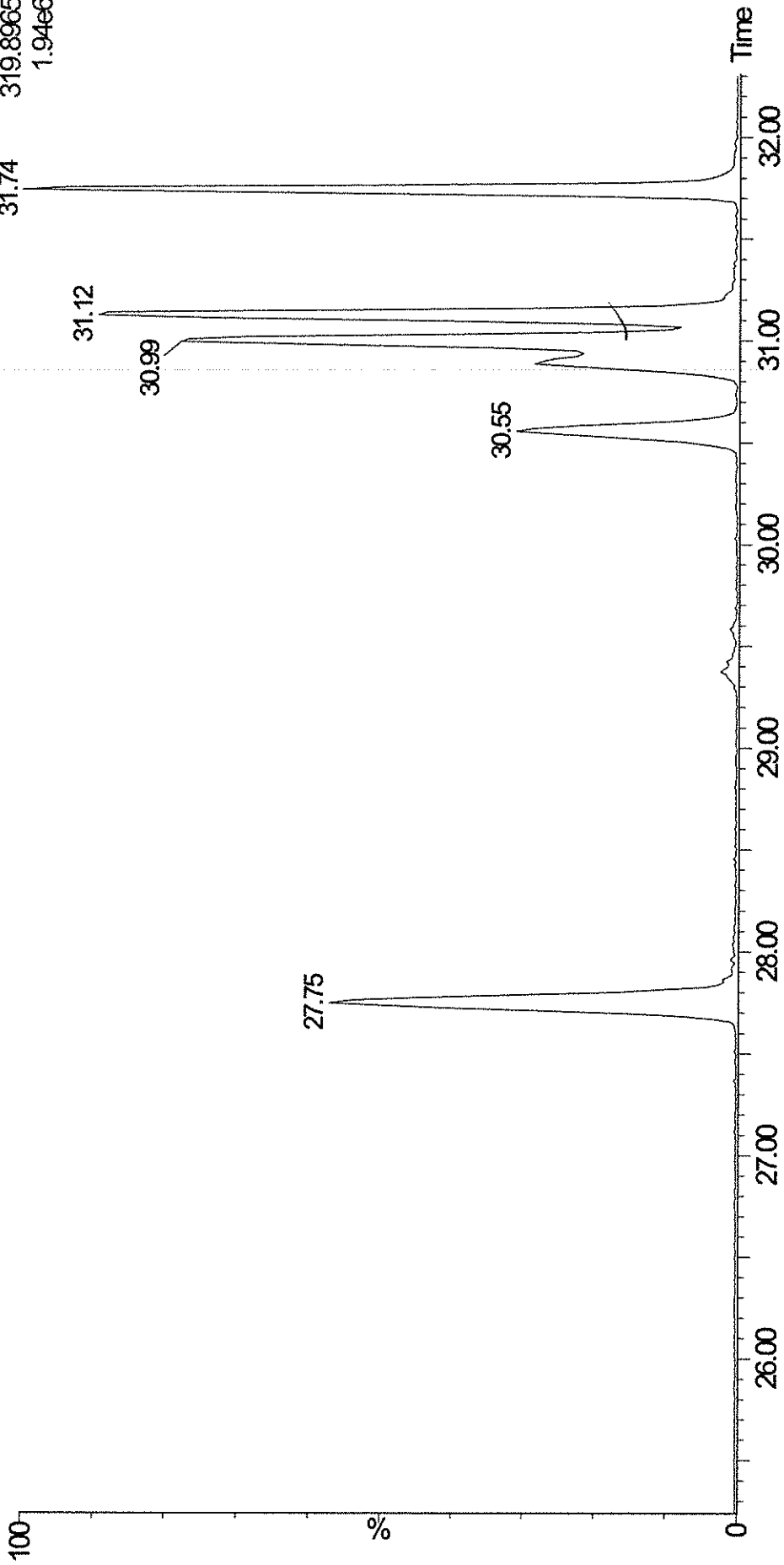
M 516.9697 R 12853



COLUMN CHECK (2378-TCDD 10%)
CS3WT UD191018-02.1 CPS5G
A14DEC19A-1

HRP750_2

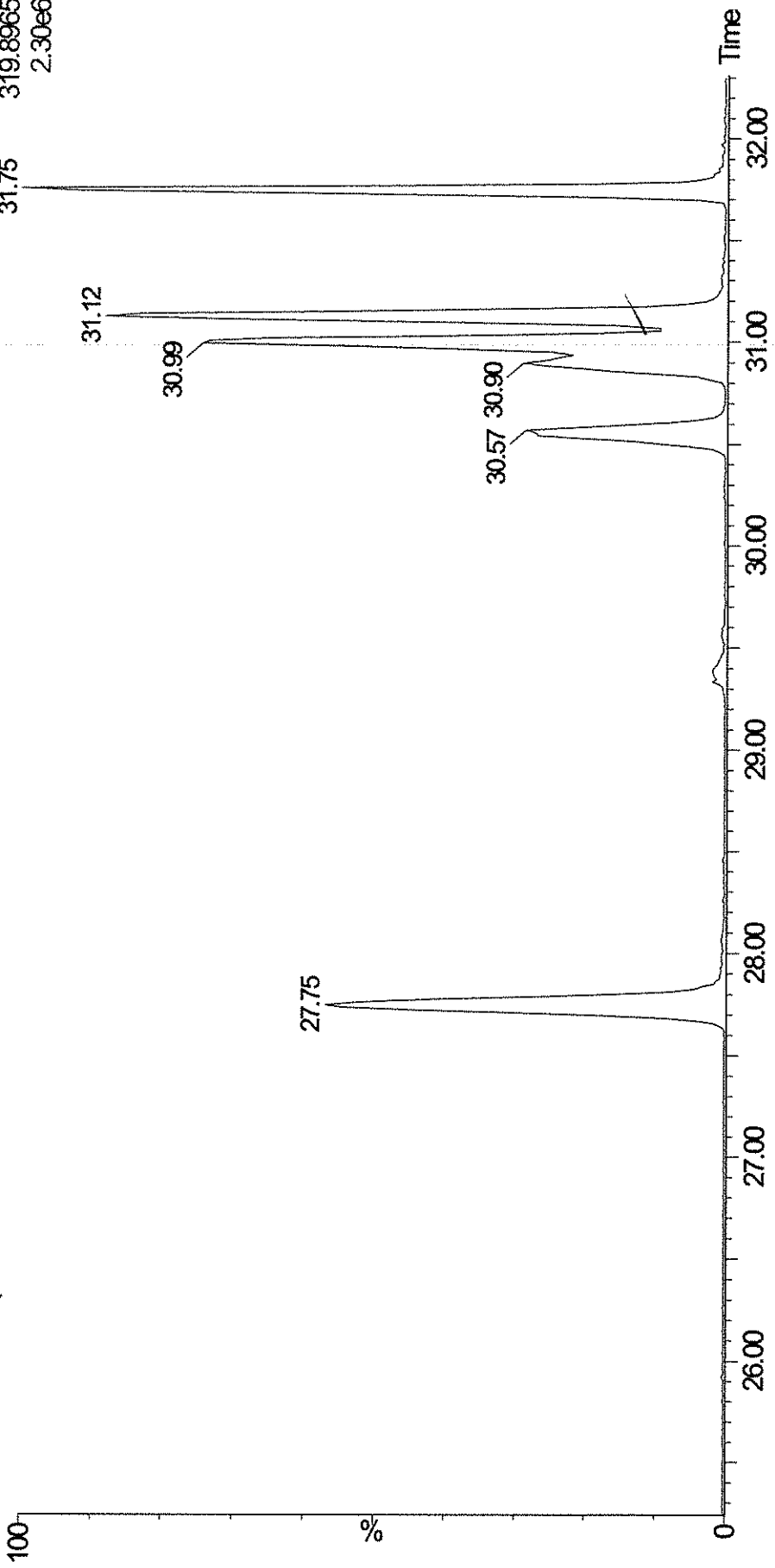
14-Dec-2019 11:20:17
1: Voltage SIR 13 Channels EI+
31.74 319.8965
1.94e6



COLUMN CHECK (2378-TCDD 13%)
CS3WT UD191018-02.1 CPS5G
A14DEC19A-16 ✓

HRP750_2

14-Dec-2019 23:29:10
1: Voltage SIR 13 Channels EI+
31.75 319.8965
2.30e6



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-1.qld

Not Altered: Monday, December 16, 2019 10:34:15 Eastern Standard Time
Printed: Monday, December 16, 2019 10:34:57 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

Name	RT
First TCDF	26.03
Last TCDF	31.81
First PeCDF	31.80
Last PeCDF	34.47
First HxCDF	34.96
Last HxCDF	37.23
First HpCDF	38.71
Last HpCDF	40.60
OCDF	44.43
First TCDD	27.75
2378-TCDD	31.12
Last TCDD	31.74
First PeCDD	32.71
Last PeCDD	34.29
First HxCDD	35.38
Last HxCDD	36.93
First HpCDD	39.04
Last HpCDD	39.95
OCDD	44.14

Quantify Sample Report **MassLynx 4.1**

Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:34:15 Eastern Standard Time

Printed: Monday, December 16, 2019 10:34:57 Eastern Standard Time

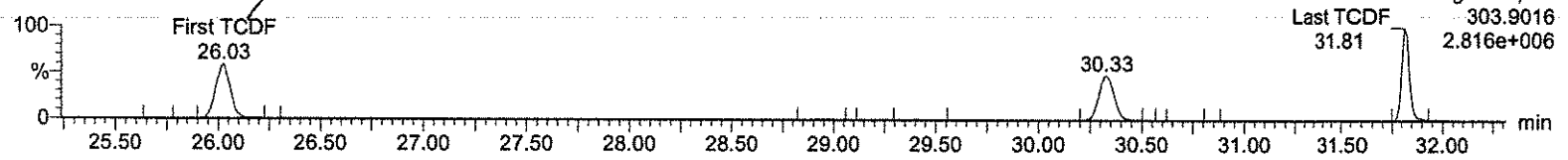
Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

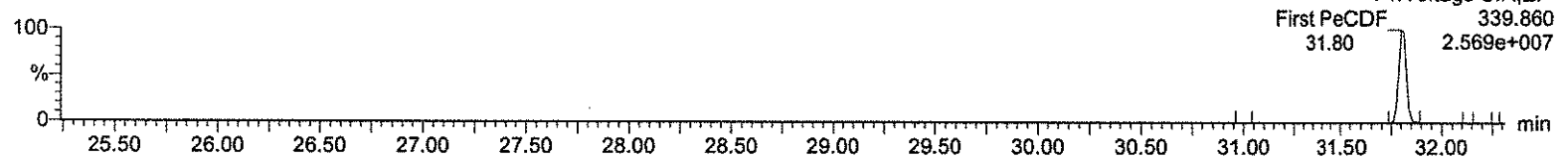
First TCDF

A14DEC19A-1



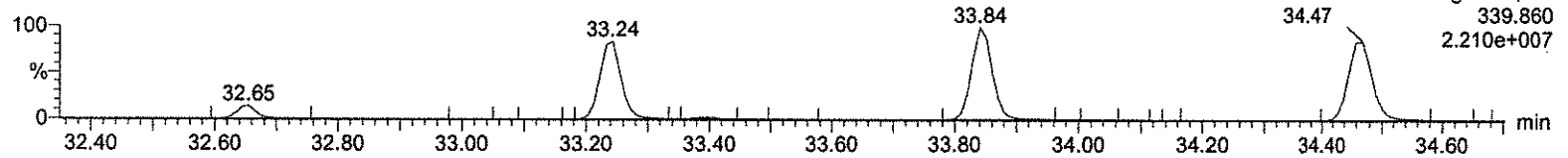
First PeCDF

A14DEC19A-1



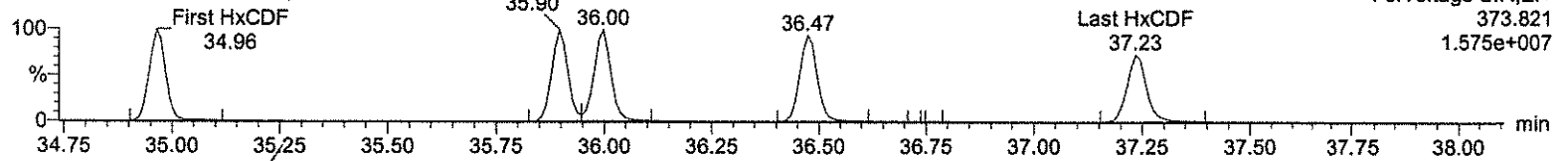
Last PeCDF

A14DEC19A-1



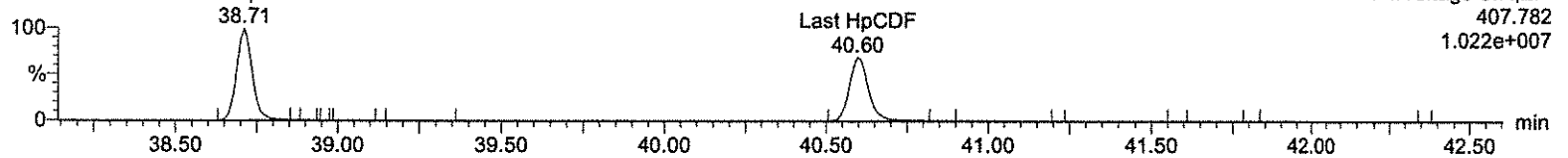
First HxCDF

A14DEC19A-1



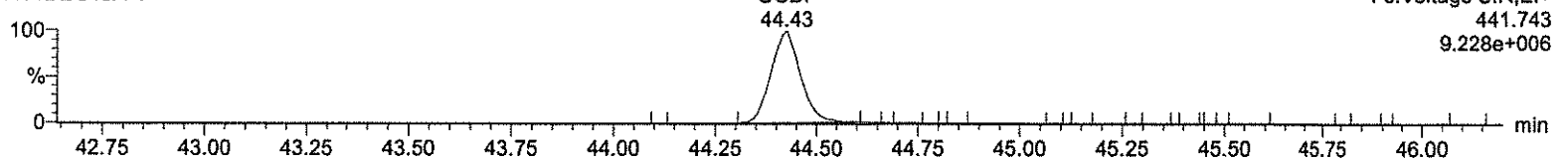
First HpCDF

A14DEC19A-1



OCDF

A14DEC19A-1



Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

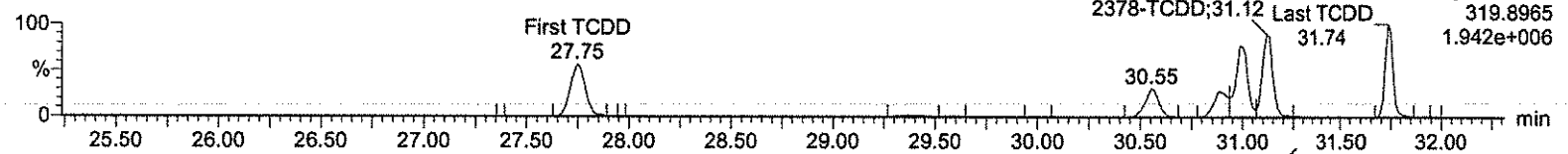
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:34:15 Eastern Standard Time
Printed: Monday, December 16, 2019 10:34:57 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

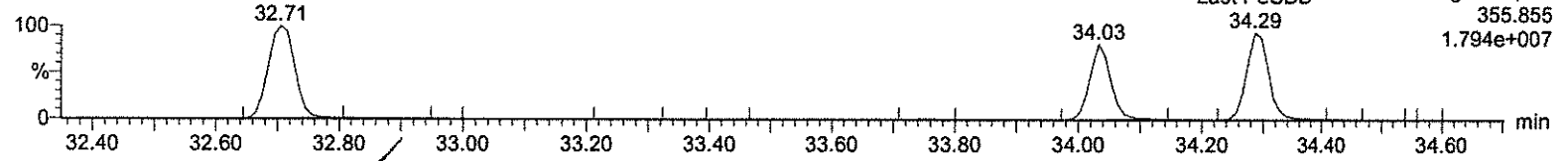
First TCDD

A14DEC19A-1



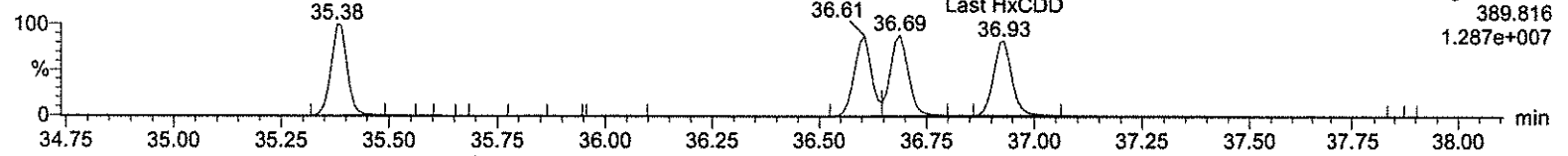
First PeCDD

A14DEC19A-1



First HxCDD

A14DEC19A-1



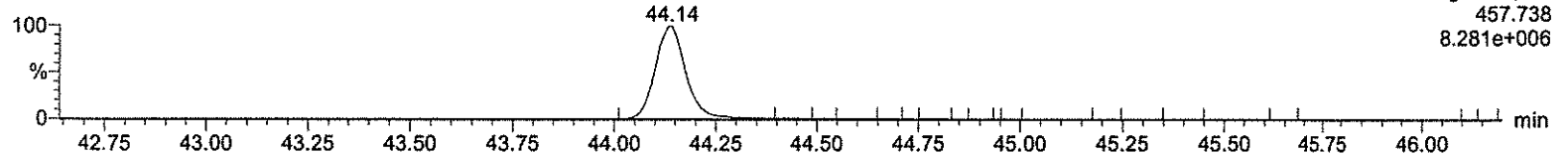
First HpCDD

A14DEC19A-1



OCDD

A14DEC19A-1



Identify Sample Summary Report
Method Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 10:35:13 Eastern Standard Time
Printed: Monday, December 16, 2019 10:35:42 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

Name	RT
First TCDF	26.03
Last TCDF	31.83
First PeCDF	31.81
Last PeCDF	34.47
First HxCDF	34.96
Last HxCDF	37.23
First HpCDF	38.71
Last HpCDF	40.60
OCDF	44.42
First TCDD	27.75
2378-TCDD	31.12
Last TCDD	31.75
First PeCDD	32.71
Last PeCDD	34.29
First HxCDD	35.38
Last HxCDD	36.92
First HpCDD	39.04
Last HpCDD	39.95
OCDD	44.12

Quantify Sample Report **MassLynx 4.1**

Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 10:35:13 Eastern Standard Time

Printed: Monday, December 16, 2019 10:35:42 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53

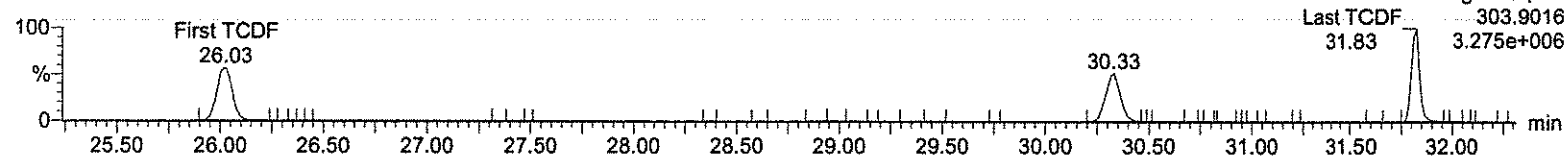
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A

Task: HRP750_2, User: MJC

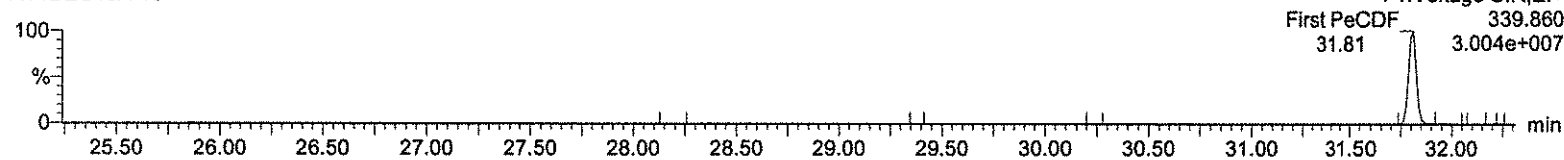
First TCDF

A14DEC19A-16



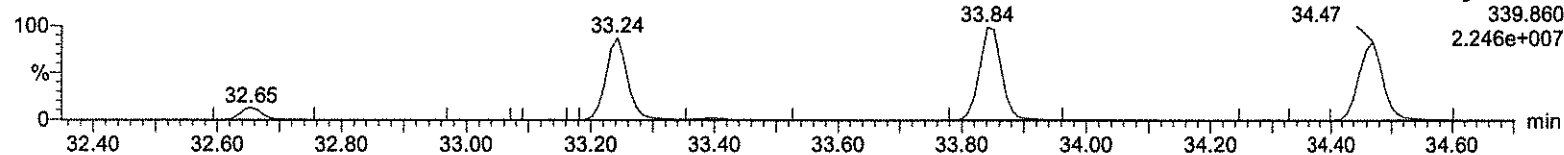
First PeCDF

A14DEC19A-16



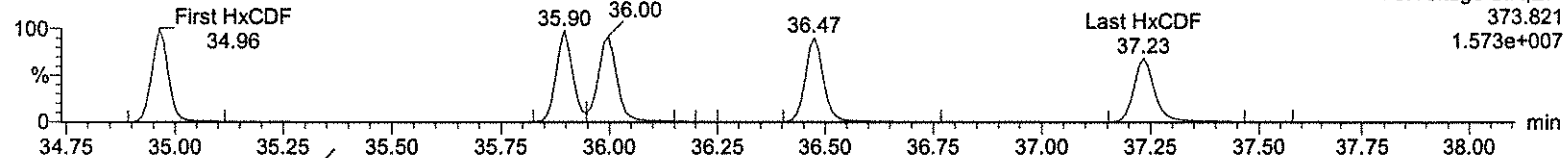
Last PeCDF

A14DEC19A-16



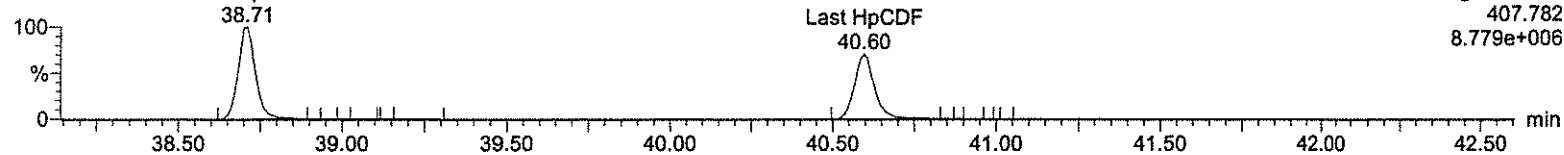
First HxCDF

A14DEC19A-16



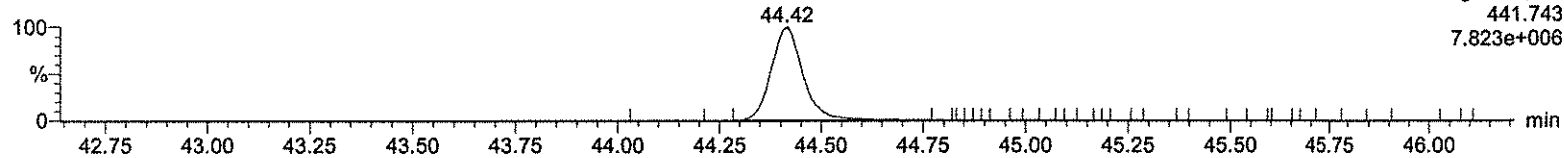
First HpCDF

A14DEC19A-16



OCDF

A14DEC19A-16



Quantify Sample Report **MassLynx 4.1**

Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14DEC19A-16.qld

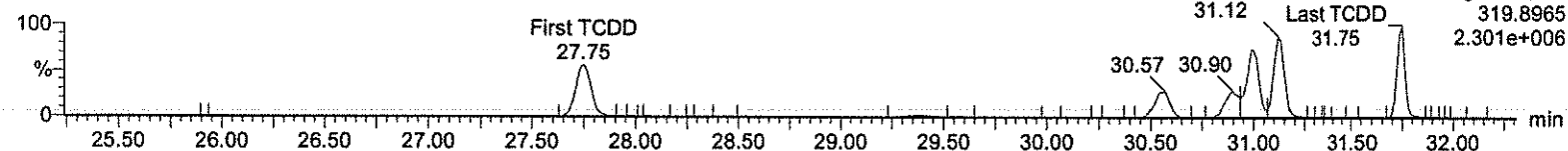
Last Altered: Monday, December 16, 2019 10:35:13 Eastern Standard Time

Printed: Monday, December 16, 2019 10:35:42 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

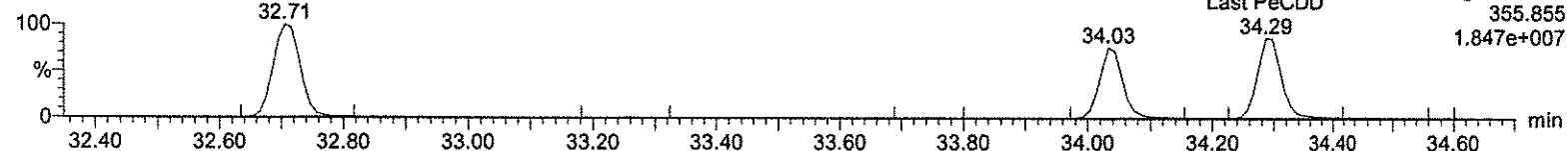
First TCDD

A14DEC19A-16



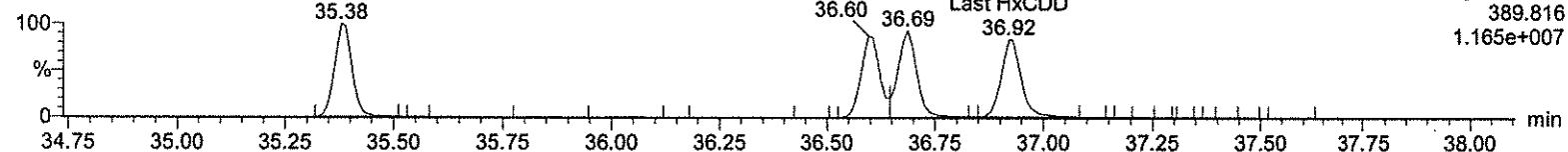
First PeCDD

A14DEC19A-16



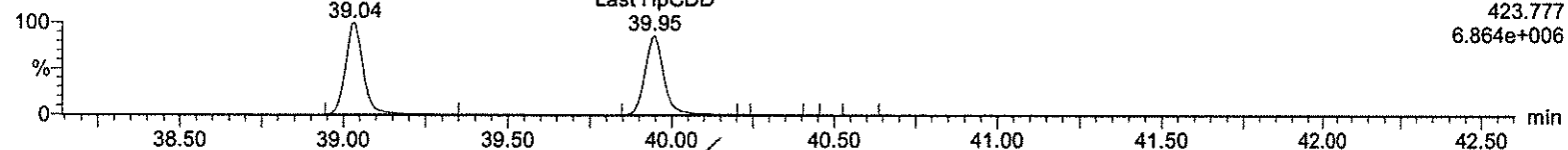
First HxCDD

A14DEC19A-16



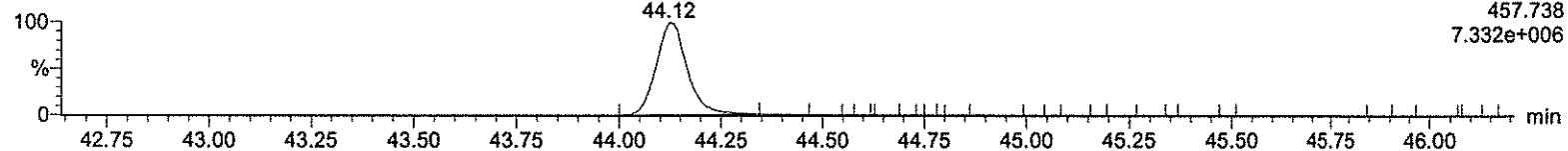
First HpCDD

A14DEC19A-16



OCDD

A14DEC19A-16



Quantify Sample Summary Report

Method 1613 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Acq. Date: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\Default.pro\Methdb\CF_A_1613_A10DEC19.mdb 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.04e5	1.34e5	2.38e5	31.12	1.000	0.77	NO	10.326	0.0447	0.913	0.884	3.3	1.72e6	3185	540.3	2.32e6	4019	578.3	db	db
2	12378-PeCDD	5.69e5	3.62e5	9.31e5	34.03	1.000	1.57	NO	53.075	0.102	0.906	0.853	6.1	1.46e7	7933	1838.5	9.55e6	10025	952.7	bb	bb
3	123478-HxCDD	5.24e5	4.22e5	9.46e5	36.61	1.000	1.24	NO	51.827	0.117	0.974	0.940	3.7	1.13e7	8695	1296.0	8.73e6	8410	1038.0	bd	bd
4	123678-HxCDD	5.63e5	4.46e5	1.01e6	36.69	1.000	1.26	NO	51.804	0.106	0.978	0.944	3.6	1.14e7	8695	1314.9	9.18e6	8410	1091.3	dd	dd
5	123789-HxCDD	5.62e5	4.47e5	1.01e6	36.93	1.007	1.26	NO	54.333	0.113	1.007	0.927	8.7	1.06e7	8695	1223.9	8.61e6	8410	1023.8	db	db
6	1234678-HpCDD	4.11e5	3.98e5	8.08e5	39.95	1.000	1.03	NO	46.789	0.116	0.973	1.040	-6.4	6.51e6	6059	1074.6	6.43e6	6341	1014.0	bb	bb
7	OCDD	7.31e5	8.11e5	1.54e6	44.14	1.000	0.90	NO	101.262	0.193	0.984	0.971	1.3	8.27e6	4995	1655.0	9.26e6	8314	1113.2	bd	bb
8	2378-TCDF	1.15e5	1.55e5	2.71e5	30.33	1.001	0.74	NO	9.022	0.0546	0.883	0.978	-9.8	1.36e6	2739	495.2	1.81e6	5138	352.2	bb	bb
9	2378-PeCDF	7.37e5	4.76e5	1.21e6	33.24	1.000	1.55	NO	46.116	0.0802	0.872	0.945	-7.8	1.85e7	10936	1694.5	1.16e7	10129	1147.6	bb	bb
10	23478-PeCDF	8.50e5	5.60e5	1.41e6	33.84	1.000	1.52	NO	47.182	0.0685	0.931	0.987	-5.6	2.20e7	10936	2014.4	1.46e7	10129	1445.8	bb	bb
11	23478-HxCDF	6.77e5	5.47e5	1.22e6	35.90	1.000	1.24	NO	49.166	0.0995	1.069	1.087	-1.7	1.56e7	12026	1299.3	1.27e7	10736	1180.9	bd	bd
12	123678-HxCDF	7.07e5	5.75e5	1.28e6	36.00	1.000	1.23	NO	49.223	0.101	1.024	1.041	-1.6	1.56e7	12026	1300.8	1.26e7	10736	1173.7	db	db
13	234678-HxCDF	6.97e5	5.65e5	1.26e6	36.47	1.000	1.23	NO	49.106	0.101	1.115	1.136	-1.8	1.48e7	12026	1228.1	1.20e7	10736	1121.6	bb	bb
14	123789-HxCDF	6.06e5	4.93e5	1.10e6	37.23	1.000	1.23	NO	49.168	0.135	1.043	1.061	-1.7	1.16e7	12026	960.9	9.54e6	10736	888.3	bb	bb
15	1234678-HpCDF	5.57e5	5.39e5	1.10e6	38.71	1.000	1.03	NO	51.809	0.108	1.191	1.150	3.6	1.02e7	6974	1459.1	9.72e6	9248	1050.8	bb	bb
16	1234789-HpCDF	4.80e5	4.58e5	9.38e5	40.60	1.000	1.05	NO	51.172	0.150	1.230	1.202	2.3	7.04e6	6974	1009.4	6.90e6	9248	745.6	bd	bb
17	OCDF	7.70e5	8.63e5	1.63e6	44.43	1.007	0.89	NO	91.964	0.120	1.042	1.133	-8.0	9.17e6	4114	2228.0	9.87e6	5554	1776.7	bb	bb
18	13C-2378-TCDD	1.12e6	1.48e6	2.61e6	31.11	1.018	0.76	NO	104.513	0.0825	1.179	1.128	4.5	1.97e7	6149	3200.1	2.55e7	4009	6371.6	bb	bb
19	13C-12378-PeCDD	1.24e6	8.14e5	2.05e6	34.02	1.114	1.52	NO	123.749	0.153	0.930	0.751	23.7	3.12e7	7861	3967.0	2.04e7	4701	4342.7	bb	bb
20	13C-123478-HxCDD	1.08e6	8.66e5	1.94e6	36.60	0.991	1.24	NO	97.755	0.0954	0.876	0.896	-2.2	2.16e7	7057	3062.5	1.74e7	7277	2394.1	bd	bd
21	13C-123678-HxCDD	1.14e6	9.20e5	2.06e6	36.68	0.994	1.24	NO	94.443	0.0868	0.931	0.986	-5.6	2.37e7	7057	3351.2	1.88e7	7277	2589.2	dd	dd
22	13C-1234678-HpCDD	8.51e5	8.11e5	1.66e6	39.94	1.082	1.05	NO	111.562	0.136	0.749	0.672	11.6	1.31e7	8011	1641.1	1.24e7	7330	1698.3	bb	bb
23	13C-OCDD	1.46e6	1.67e6	3.13e6	44.12	1.195	0.87	NO	220.206	0.138	0.707	0.642	10.1	1.65e7	5348	3086.1	1.87e7	9476	1975.8	bb	bd
24	13C-2378-TCDF	1.34e6	1.73e6	3.07e6	30.31	0.992	0.78	NO	111.035	0.118	1.388	1.250	11.0	1.61e7	9465	1702.0	2.04e7	6636	3080.4	bb	bb
25	13C-12378-PeCDF	1.70e6	1.08e6	2.78e6	33.23	1.088	1.57	NO	124.562	0.256	1.259	1.011	24.6	4.24e7	14837	2857.3	2.69e7	13348	2014.6	bb	bb
26	13C-23478-PeCDF	1.85e6	1.18e6	3.03e6	33.83	1.108	1.57	NO	128.897	0.243	1.370	1.063	28.9	4.76e7	14837	3205.1	3.07e7	13348	2300.1	bb	bb
27	13C-123478-HxCDF	7.81e5	1.51e6	2.29e6	35.89	0.972	0.52	NO	92.938	0.141	1.032	1.111	-7.1	1.79e7	13279	1351.8	3.47e7	12982	2669.6	bd	bd
28	13C-123678-HxCDF	8.53e5	1.65e6	2.50e6	35.99	0.975	0.52	NO	90.536	0.126	1.129	1.247	-9.5	1.84e7	13279	1386.2	3.48e7	12982	2681.9	dd	db
29	13C-234678-HxCDF	7.73e5	1.49e6	2.26e6	36.46	0.988	0.52	NO	94.304	0.145	1.020	1.082	-5.7	1.70e7	13279	1277.6	3.24e7	12982	2494.4	bb	bb
30	13C-123789-HxCDF	7.34e5	1.37e6	2.11e6	37.22	1.009	0.53	NO	98.342	0.162	0.951	0.967	-1.7	1.39e7	13279	1045.2	2.59e7	12982	1998.0	bd	bb

Quantify Sample Summary Report

Method 1613 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
 Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRE	ICRRF	%D	Height1	Noise1	SN1	Height2	Noise2	S/N2	M	M2
31 13C-1234678-HpCDF	5.70e5	1.27e6	1.84e6	38.70	1.049	0.45	NO	95.464	0.113	0.831	0.870	-4.5	1.01e7	7355	1369.4	2.25e7	9157	2455.9	bb	bb
32 13C-1234789-HpCDF	4.79e5	1.05e6	1.52e6	40.59	1.100	0.46	NO	101.519	0.145	0.688	0.677	1.5	7.06e6	7355	959.3	1.57e7	9157	1714.8	bd	bb
33 13C-1234-TCDD	9.64e5	1.25e6	2.21e6	30.54	0.000	0.77	NO	100.000	0.0931	1.000	1.000	0.0	1.19e7	6149	1934.0	1.52e7	4009	3798.2	bb	bb
34 13C-123789-HxCDD	1.23e6	9.90e5	2.22e6	36.91	0.000	1.24	NO	100.000	0.0855	1.000	1.000	0.0	2.32e7	7057	3285.6	1.87e7	7277	2571.5	dd	dd
35 37Cl-2378-TCDD	2.39e5		2.39e5	31.12	1.019			10.294	0.0279	1.083	1.061	2.0	4.11e6	3226	1272.7				bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

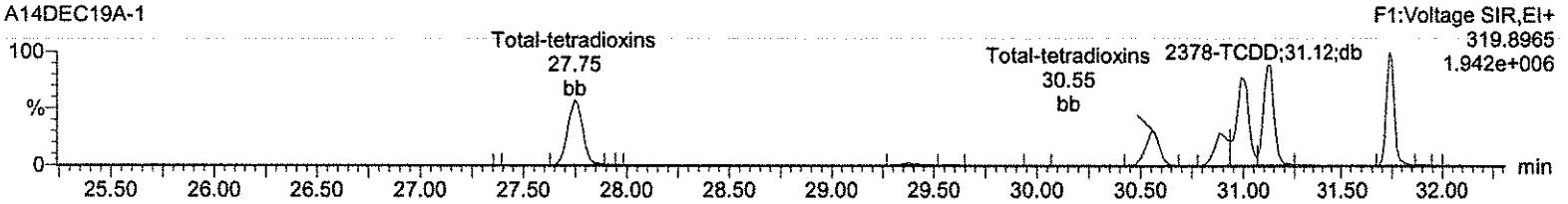
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

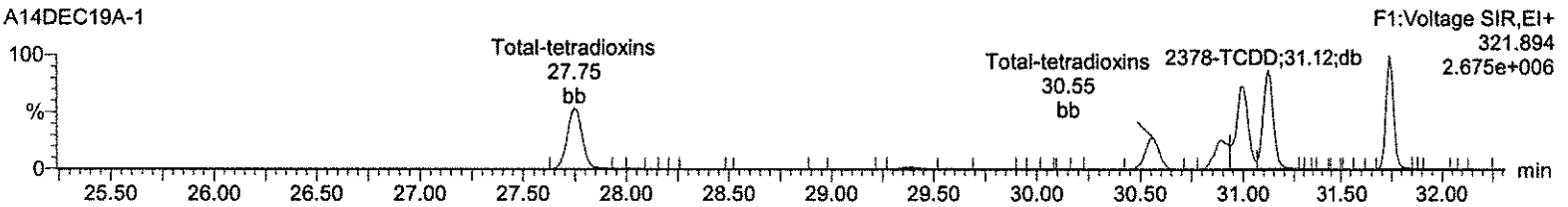
Total-tetradoxins

A14DEC19A-1



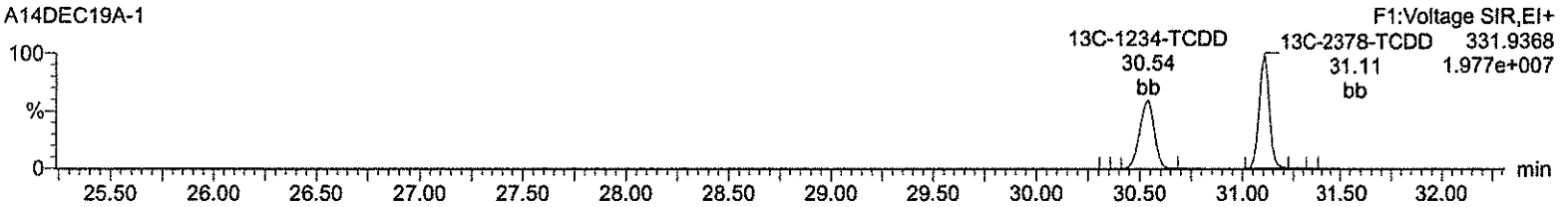
Total-tetradoxins

A14DEC19A-1



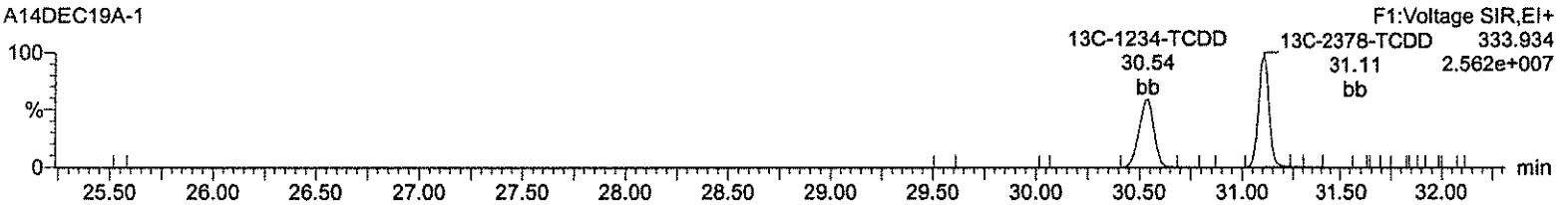
13C-2378-TCDD

A14DEC19A-1



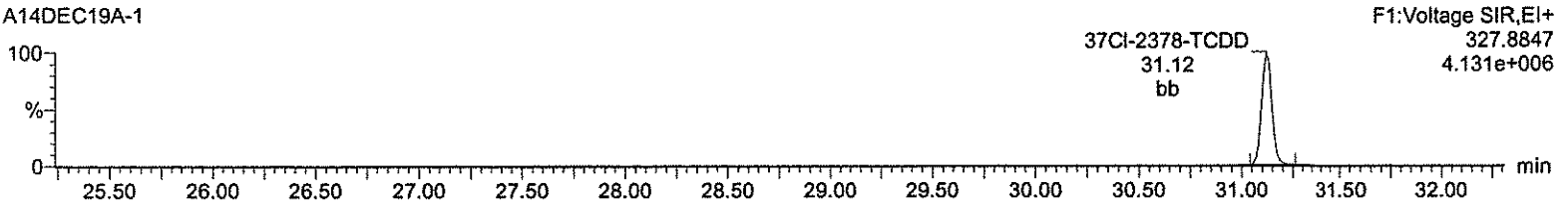
13C-2378-TCDD

A14DEC19A-1



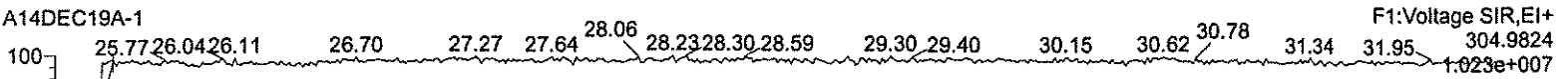
37Cl-2378-TCDD

A14DEC19A-1



Lock Mass F1

A14DEC19A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

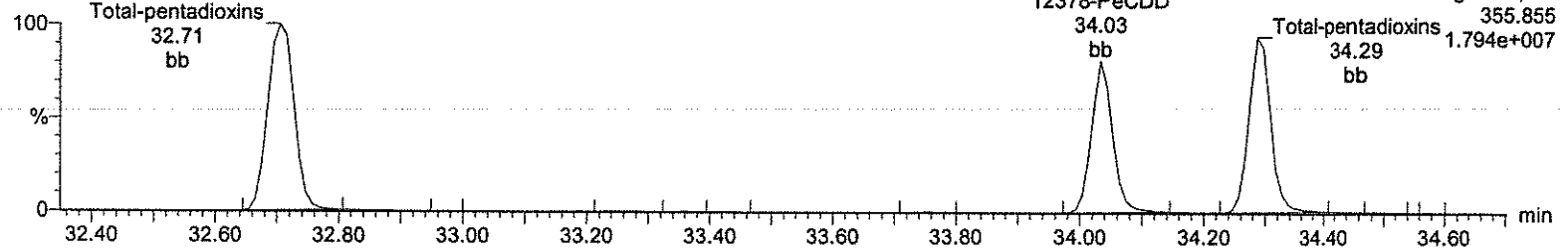
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

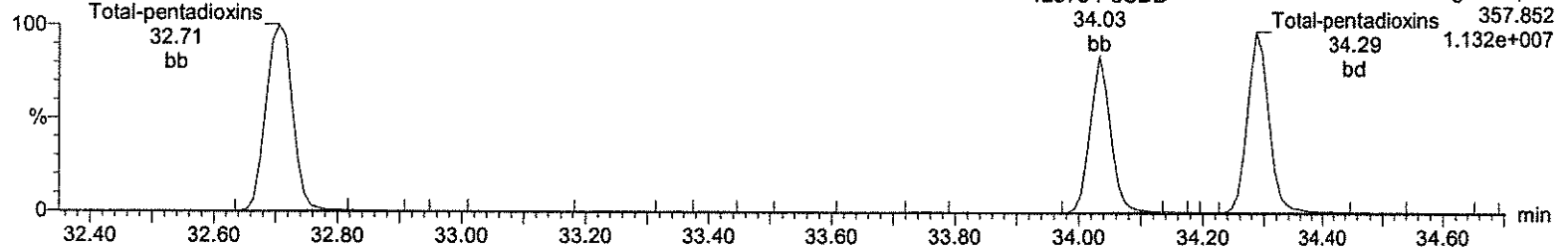
Total-pentadioxins

A14DEC19A-1



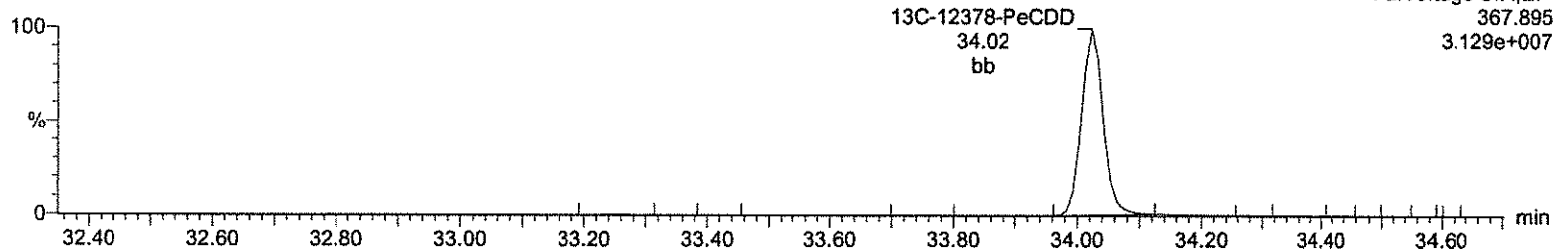
Total-pentadioxins

A14DEC19A-1



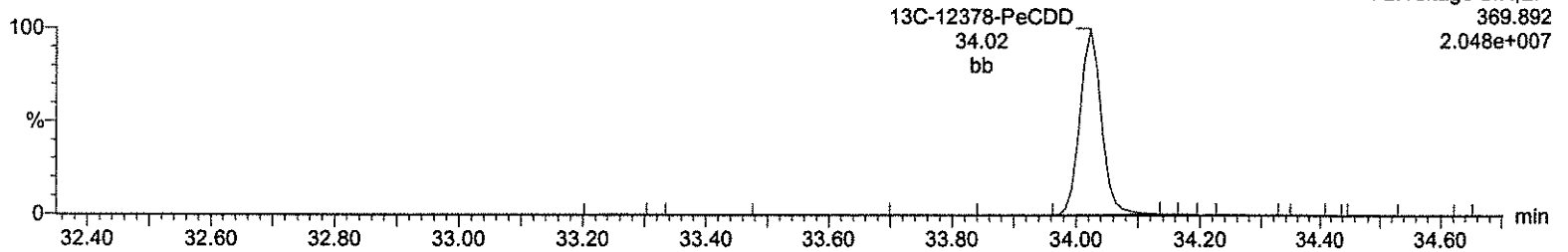
13C-12378-PeCDD

A14DEC19A-1



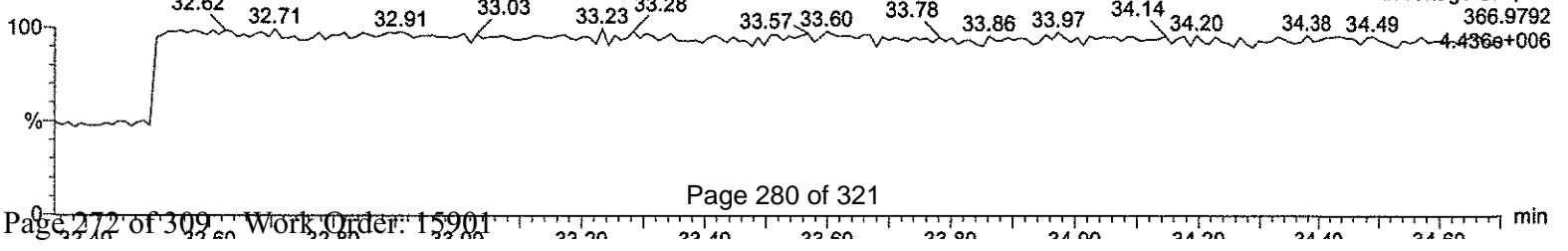
13C-12378-PeCDD

A14DEC19A-1



Lock Mass F2

A14DEC19A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

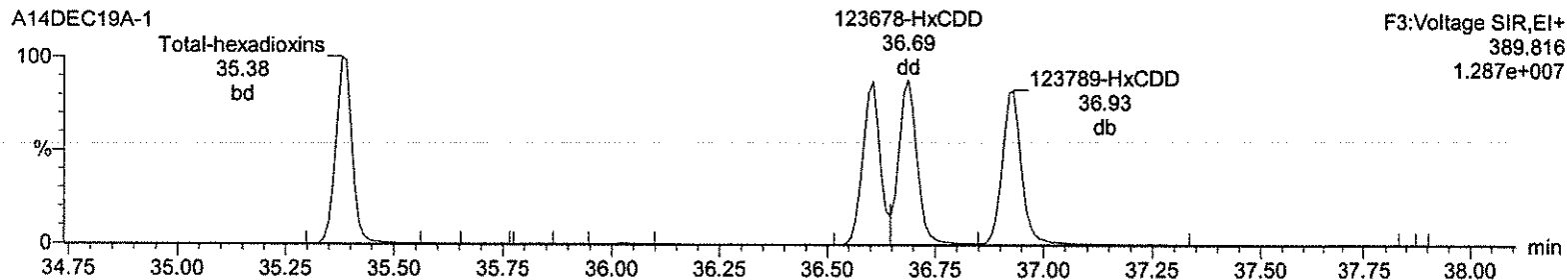
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

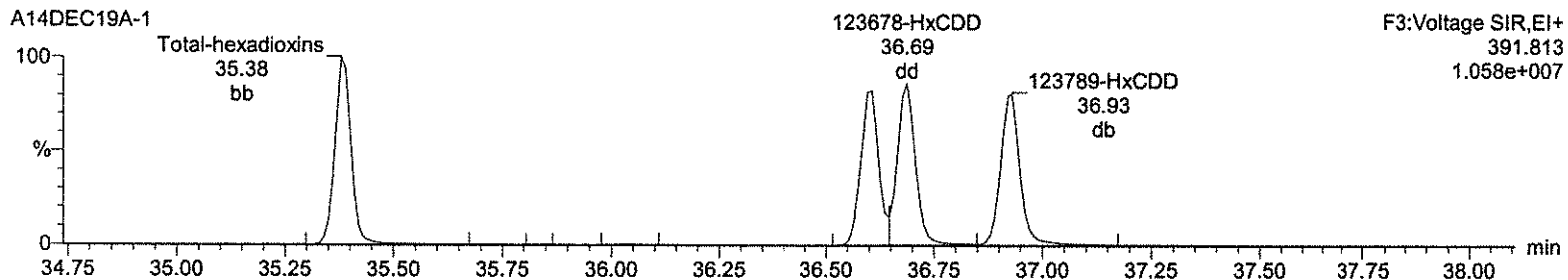
Total-hexadioxins

A14DEC19A-1



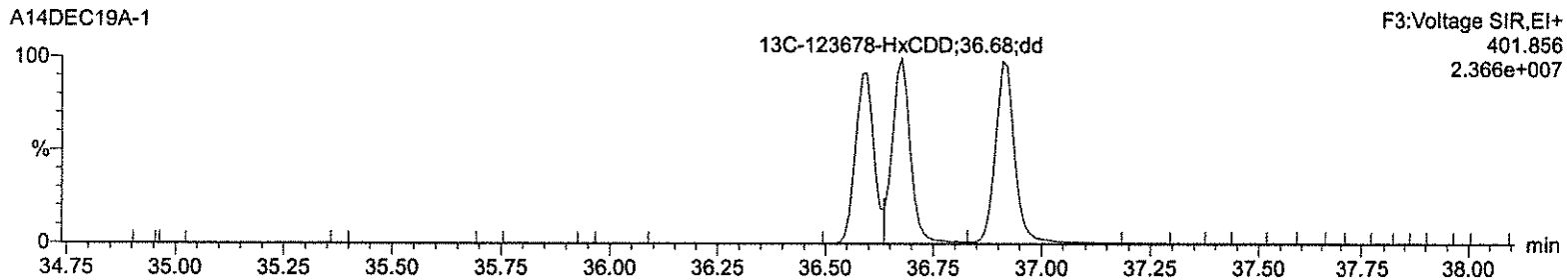
Total-hexadioxins

A14DEC19A-1



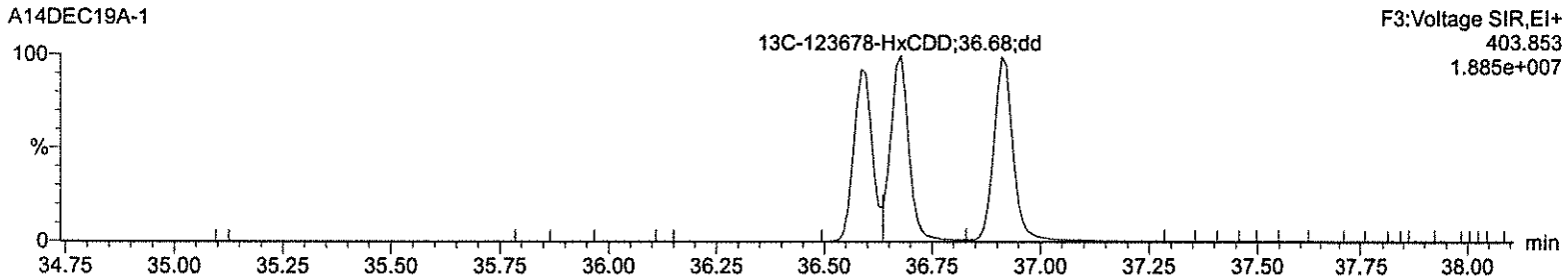
13C-123478-HxCDD

A14DEC19A-1



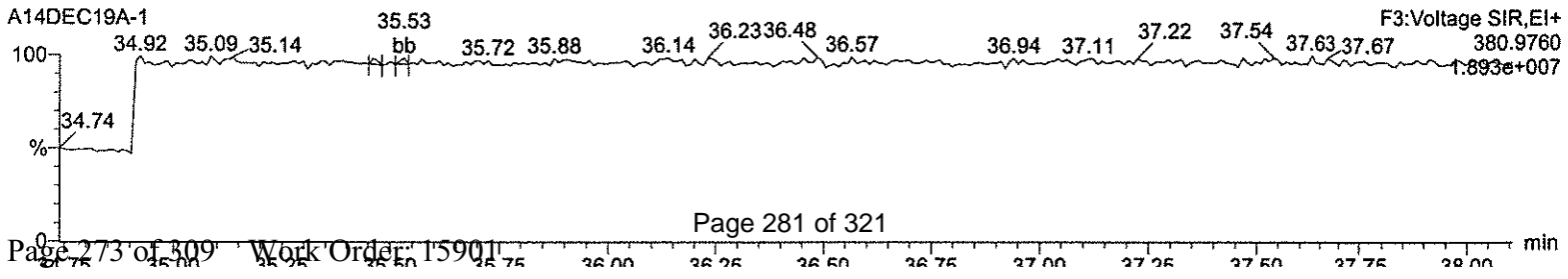
13C-123478-HxCDD

A14DEC19A-1



Lock Mass F3

A14DEC19A-1



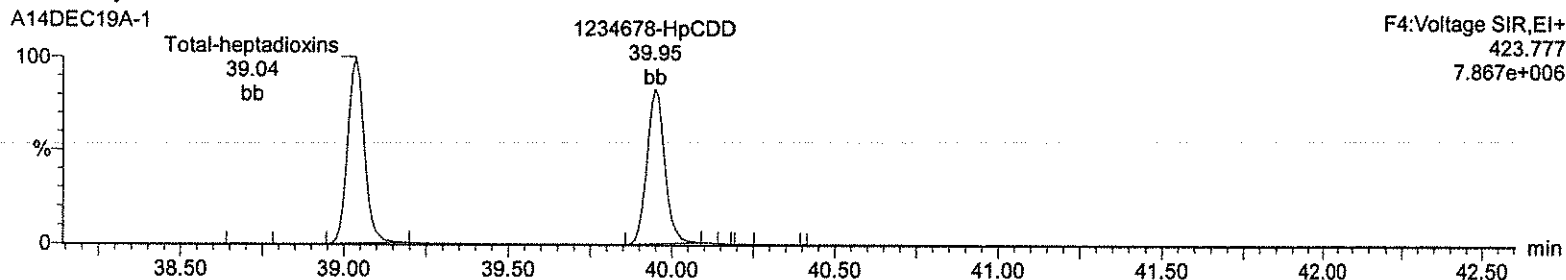
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

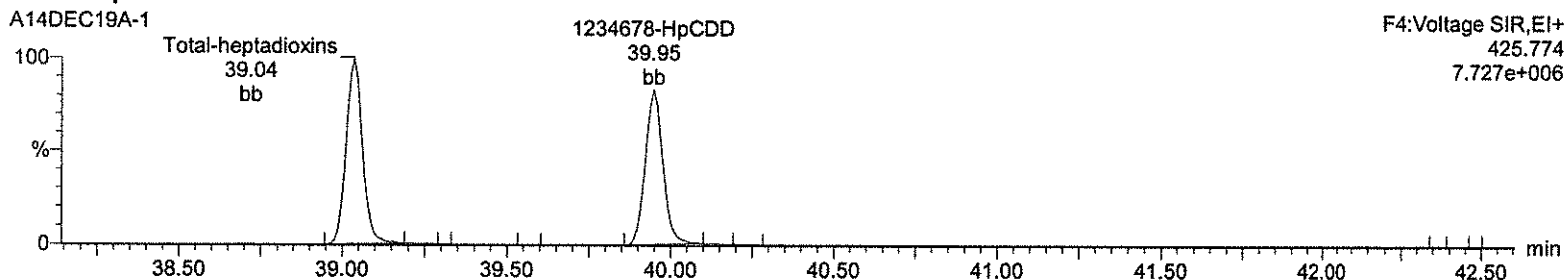
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

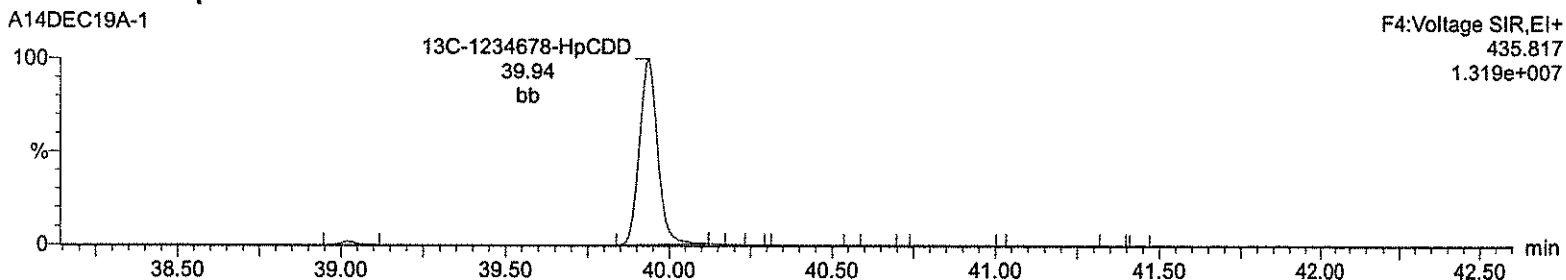
Total-heptadioxins



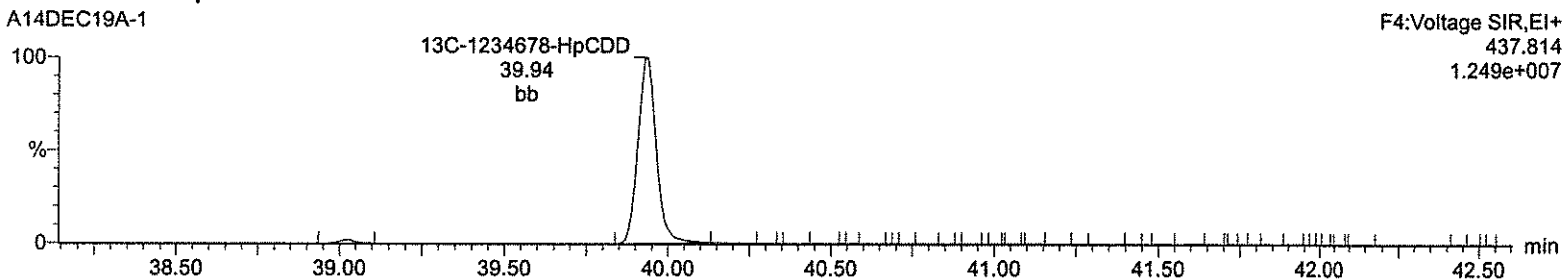
Total-heptadioxins



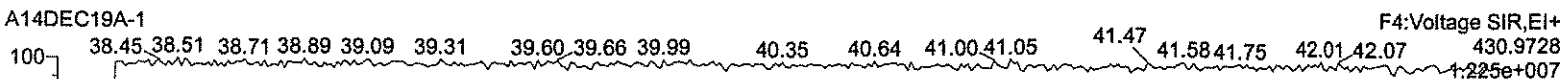
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

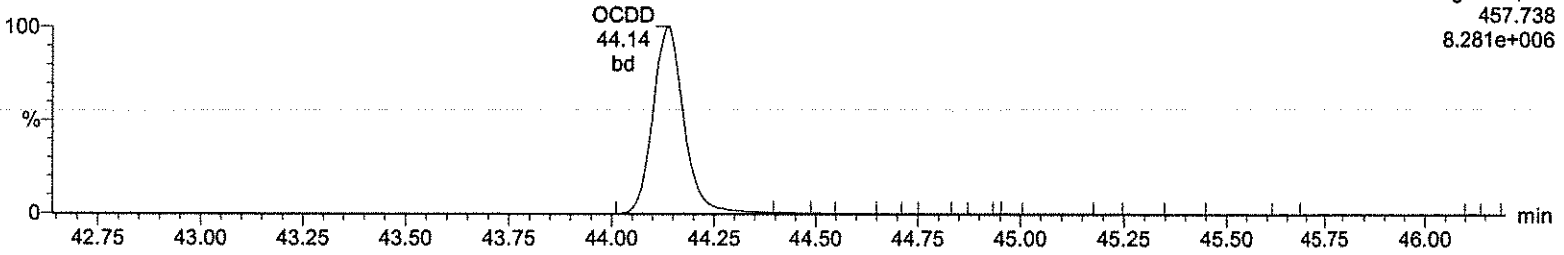
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

OCDD

A14DEC19A-1

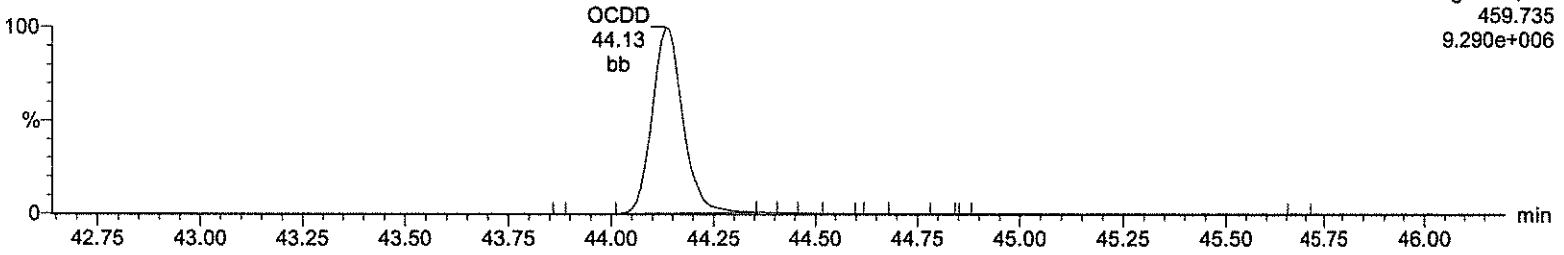
F5:Voltage SIR,EI+
457.738
8.281e+006



OCDD

A14DEC19A-1

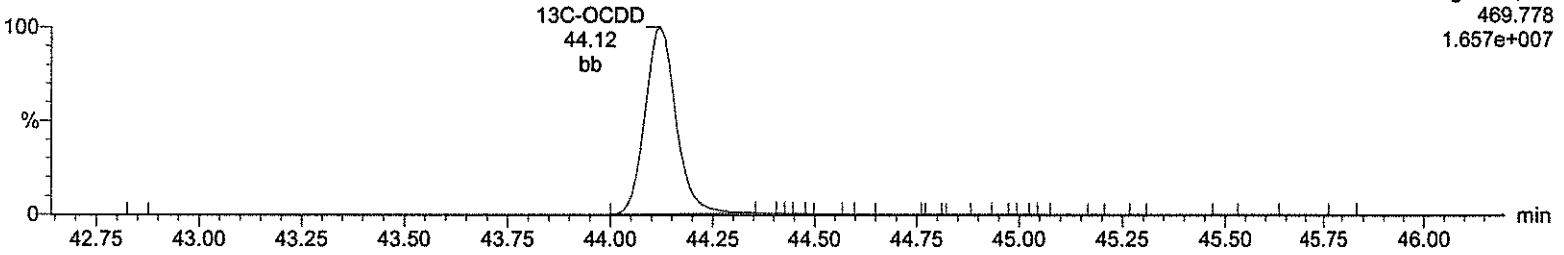
F5:Voltage SIR,EI+
459.735
9.290e+006



13C-OCDD

A14DEC19A-1

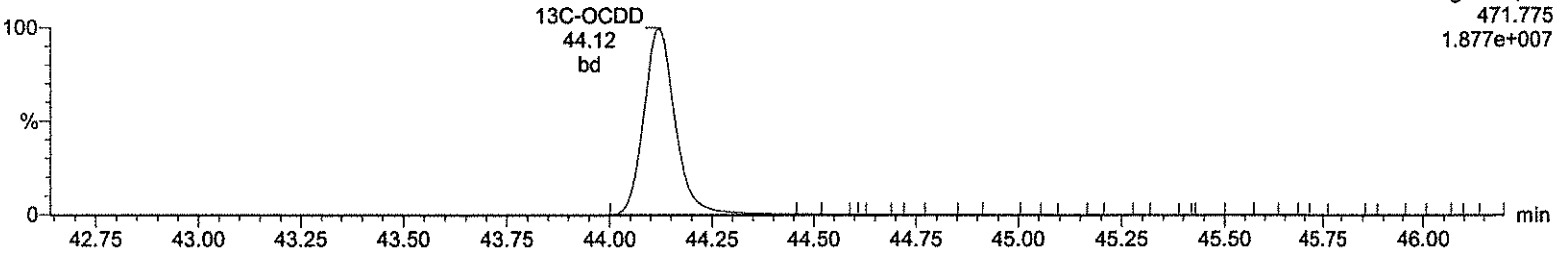
F5:Voltage SIR,EI+
469.778
1.657e+007



13C-OCDD

A14DEC19A-1

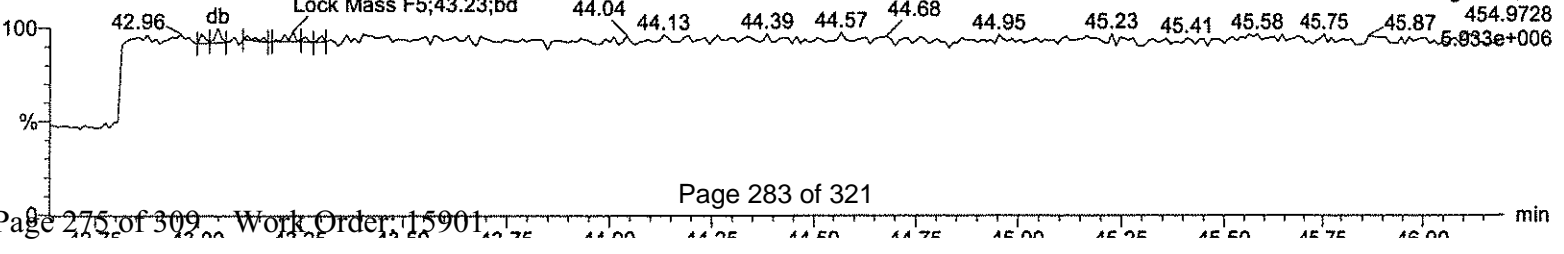
F5:Voltage SIR,EI+
471.775
1.877e+007



Lock Mass F5

A14DEC19A-1

F5:Voltage SIR,EI+
454.9728
5.833e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

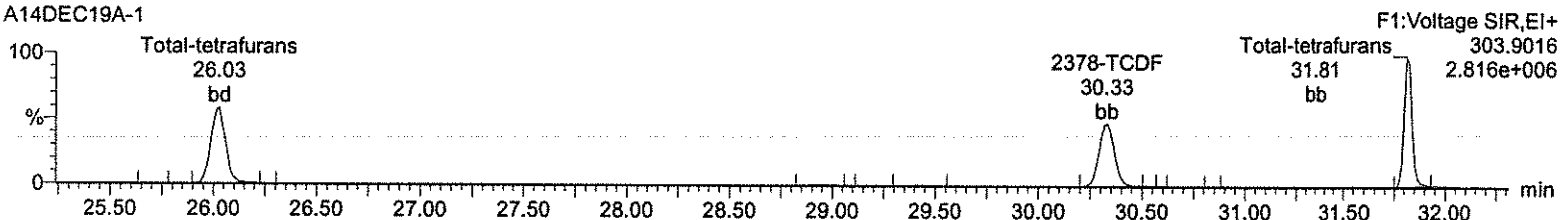
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

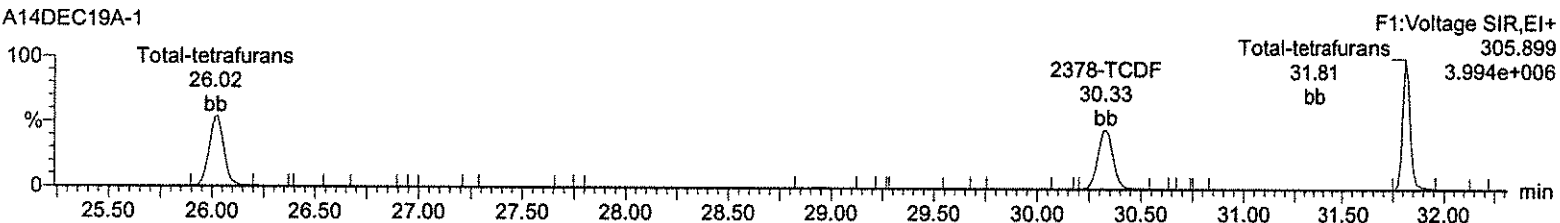
Total-tetrafurans

A14DEC19A-1



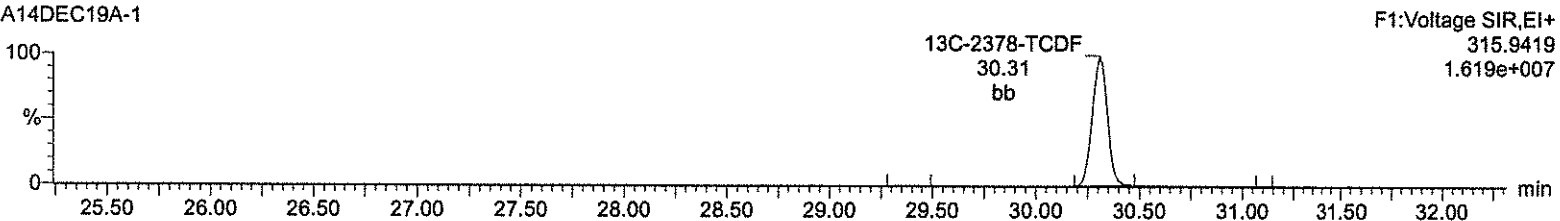
Total-tetrafurans

A14DEC19A-1



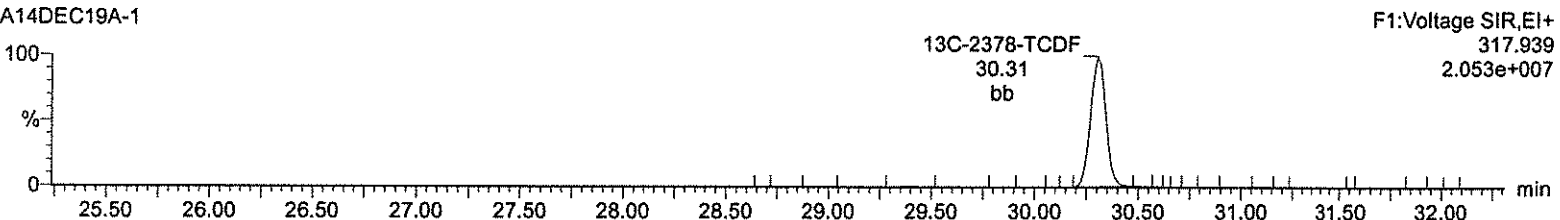
13C-2378-TCDF

A14DEC19A-1



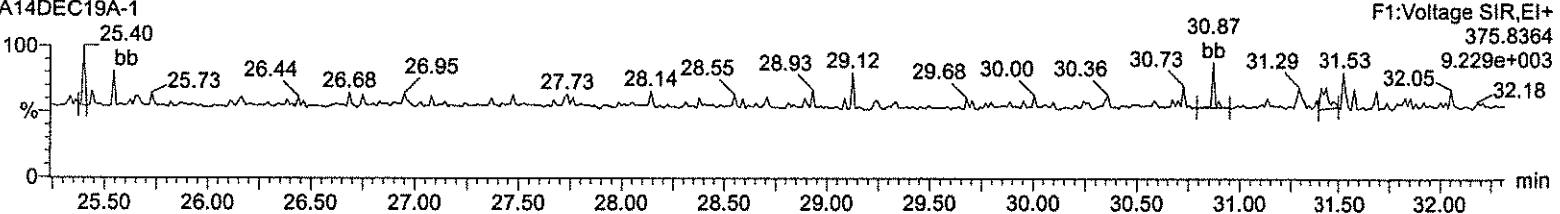
13C-2378-TCDF

A14DEC19A-1



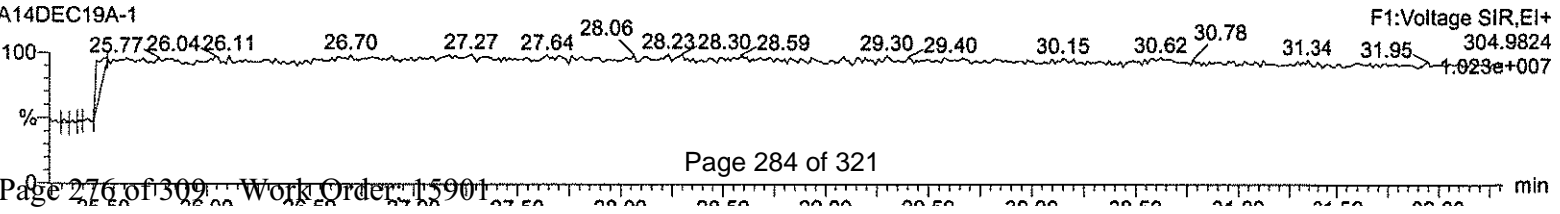
HxDPE

A14DEC19A-1



Lock Mass F1

A14DEC19A-1



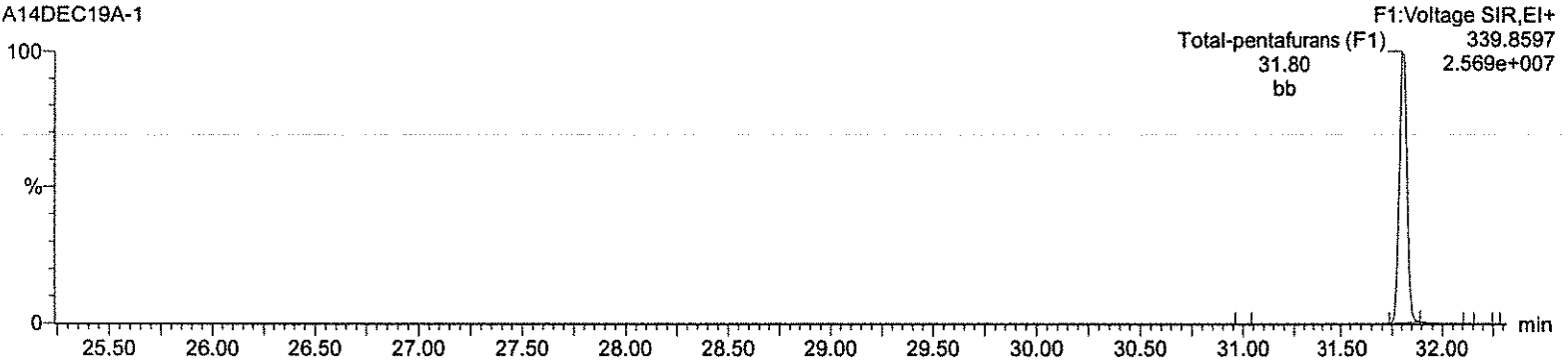
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

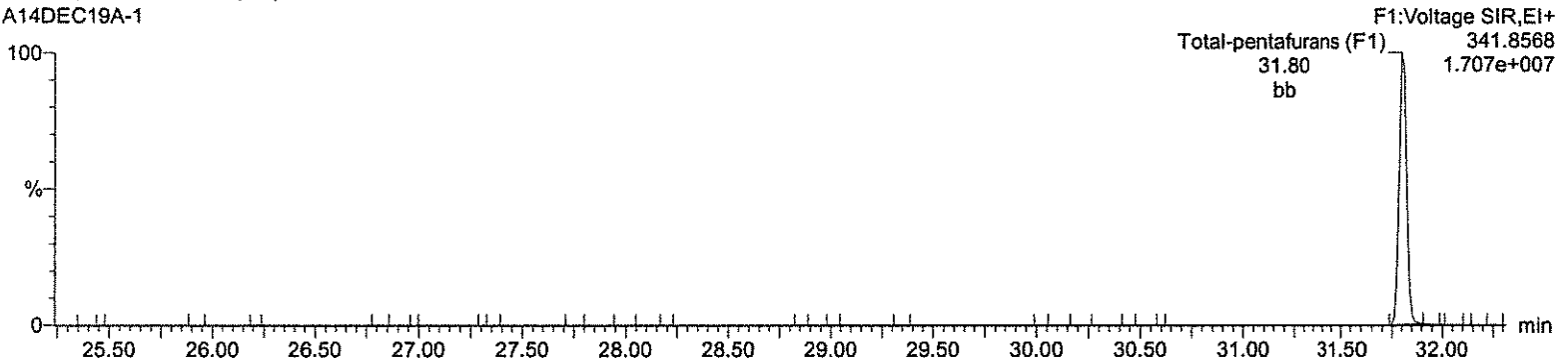
Total-pentafurans (F1)

A14DEC19A-1



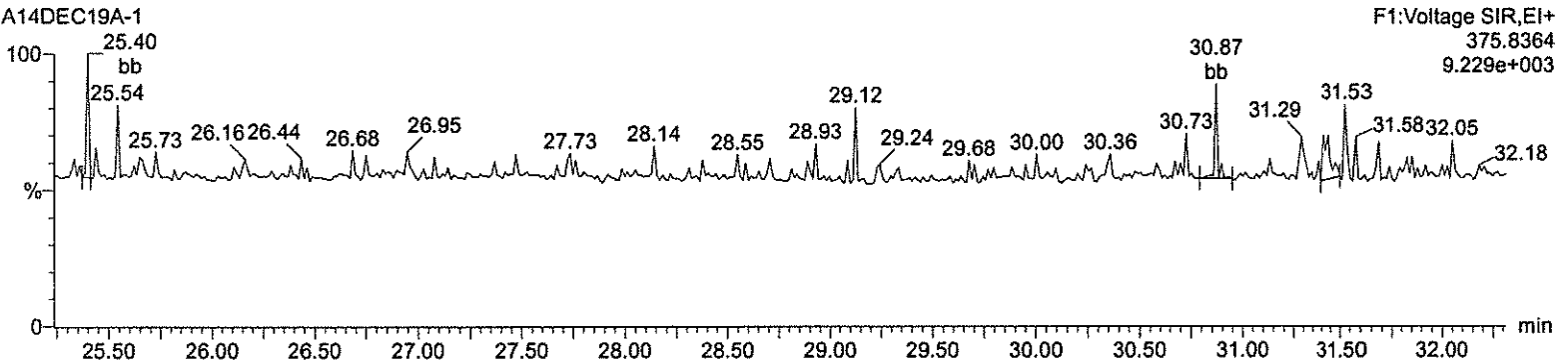
Total-pentafurans (F1)

A14DEC19A-1



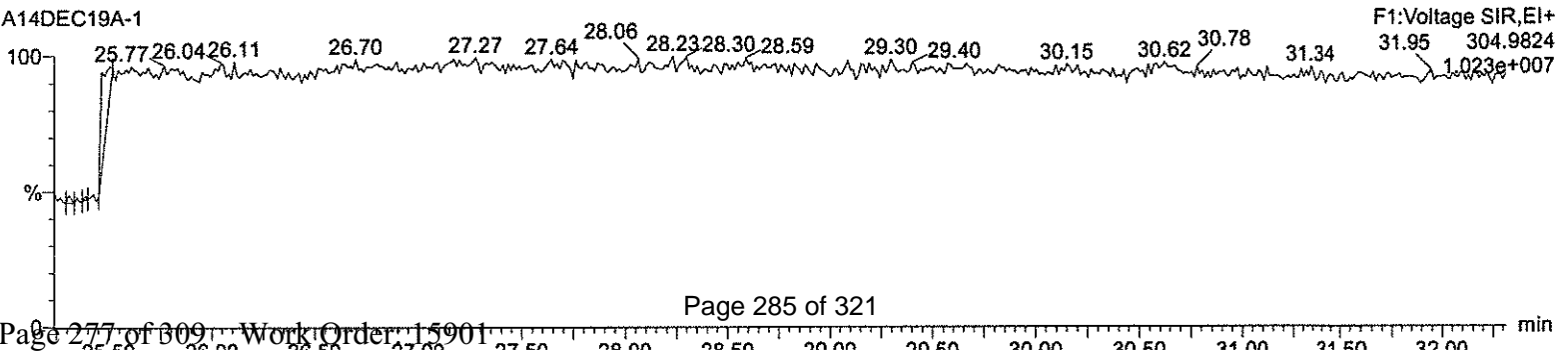
HxDPE

A14DEC19A-1



Lock Mass F1

A14DEC19A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

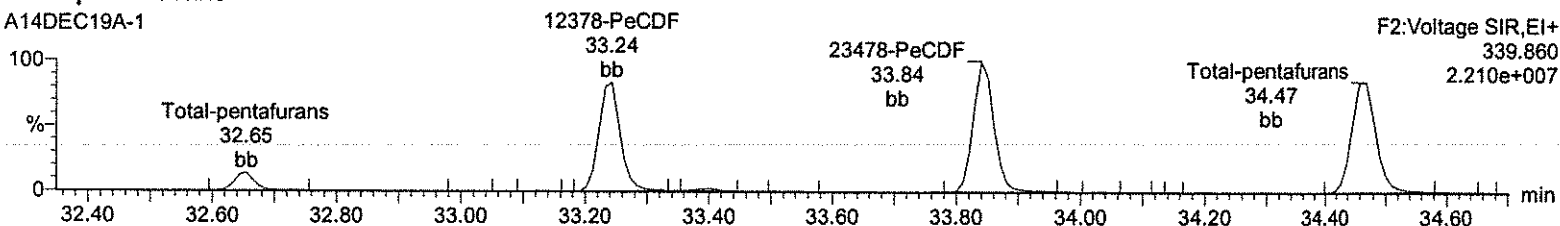
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

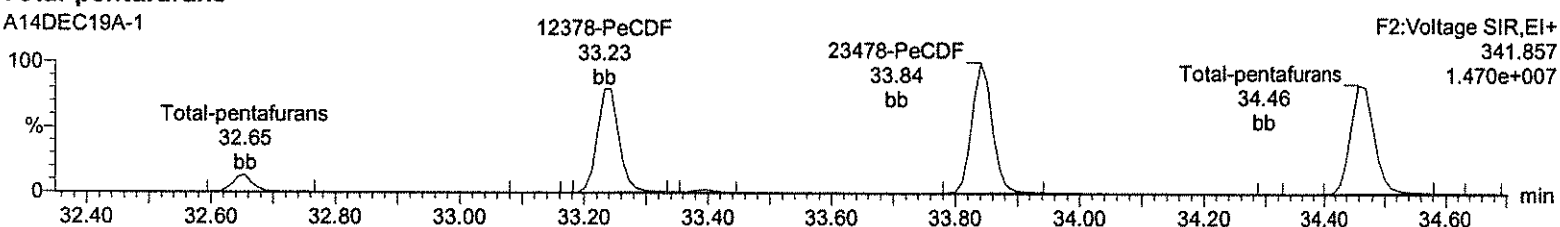
Total-pentafulurans

A14DEC19A-1



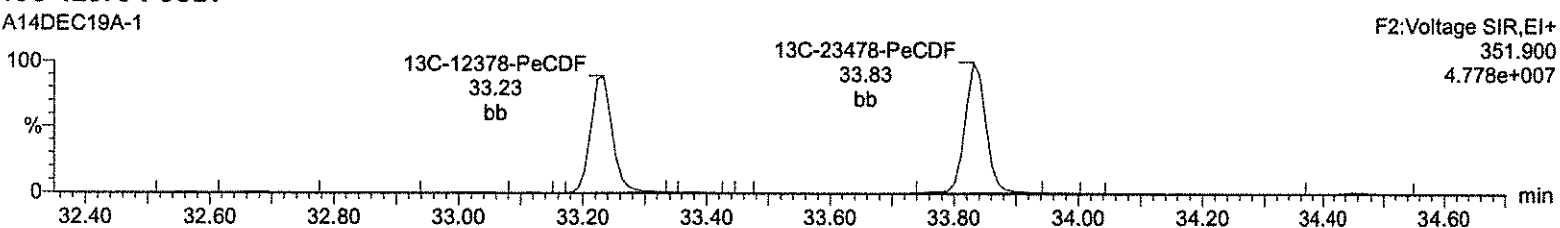
Total-pentafulurans

A14DEC19A-1



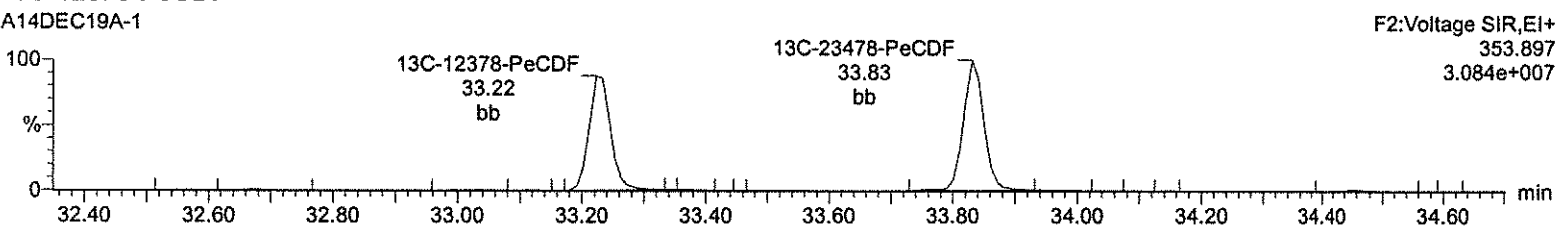
13C-12378-PeCDF

A14DEC19A-1



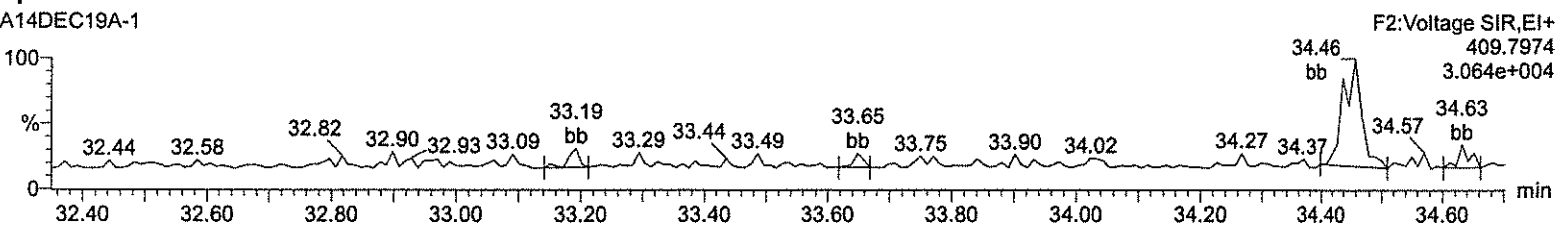
13C-12378-PeCDF

A14DEC19A-1



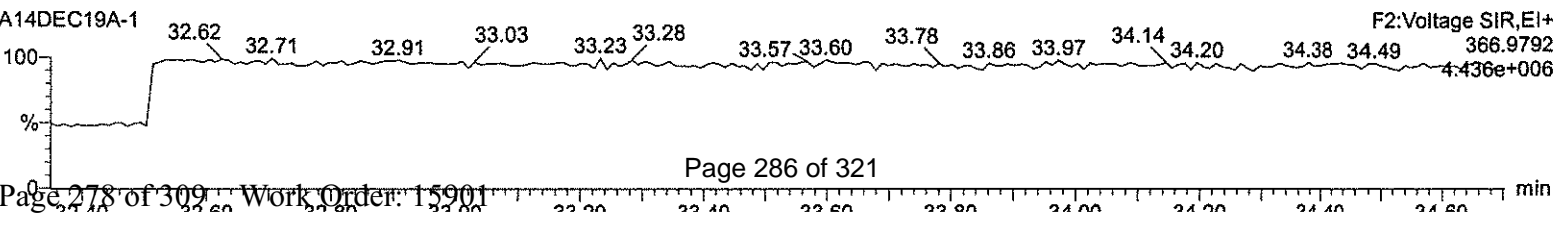
HpDPE

A14DEC19A-1



Lock Mass F2

A14DEC19A-1

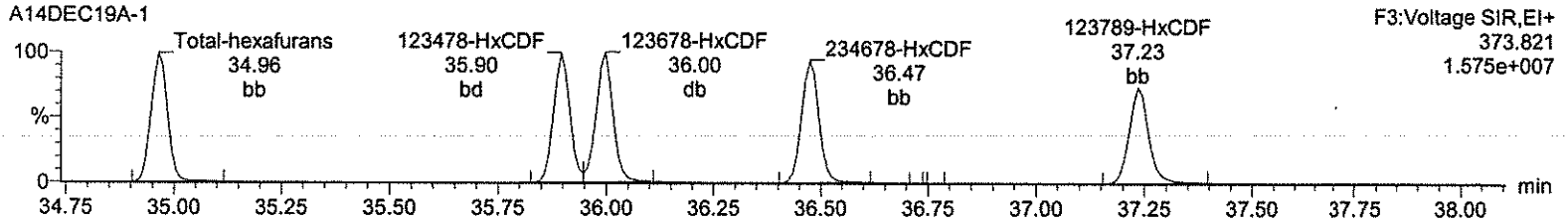


Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

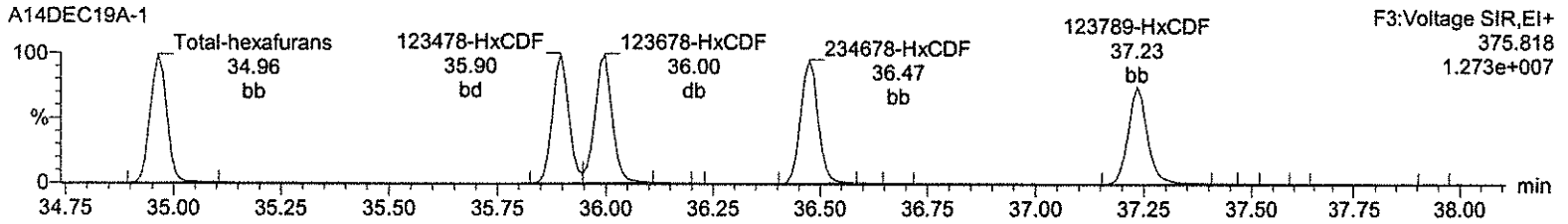
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

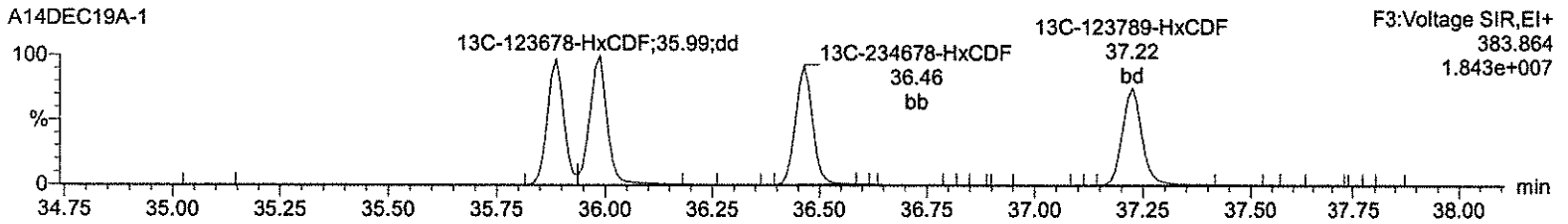
Total-hexafurans



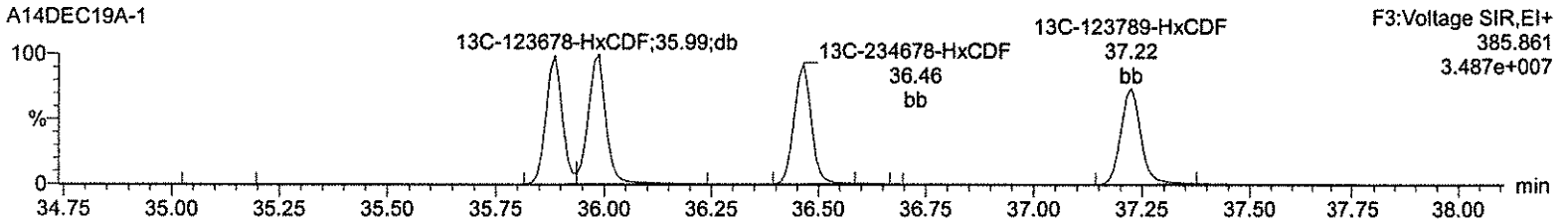
Total-hexafurans



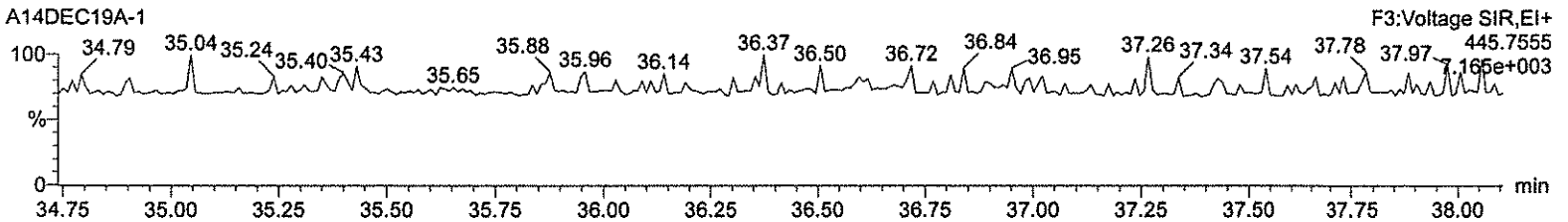
13C-123478-HxCDF



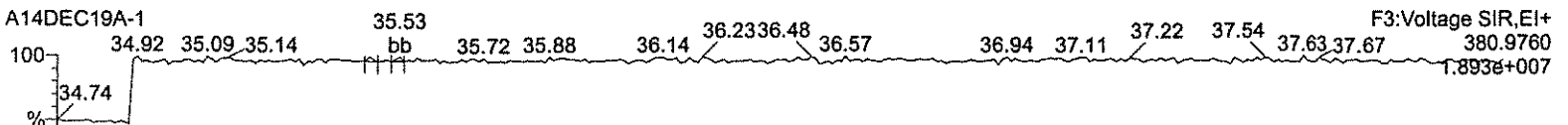
13C-123478-HxCDF



OcDPE



Lock Mass F3

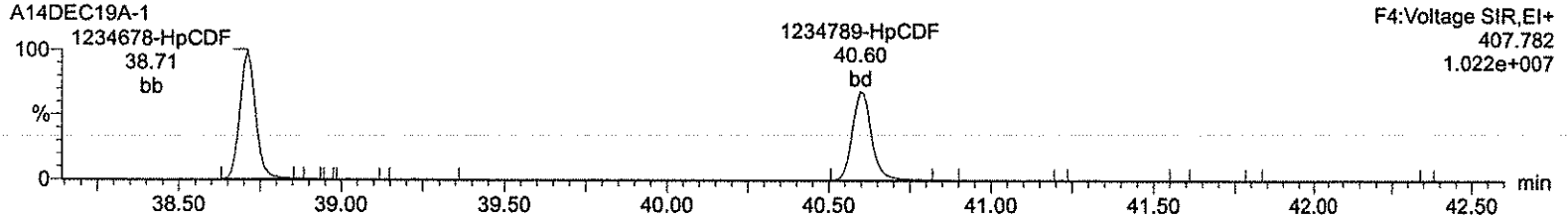


Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

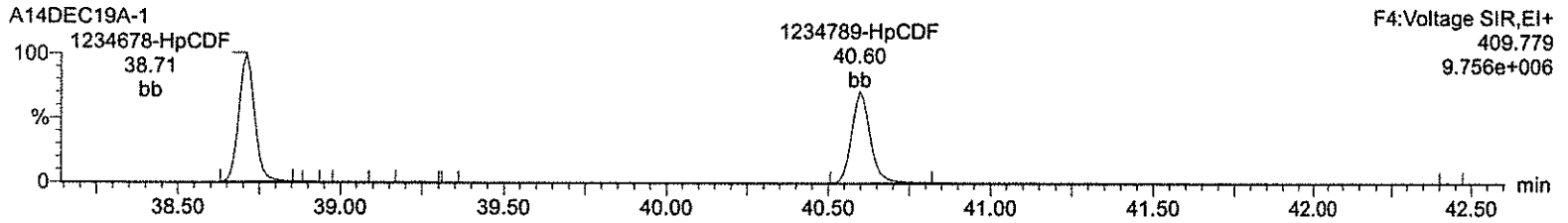
Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A,
Task: HRP750_2, User: MJC

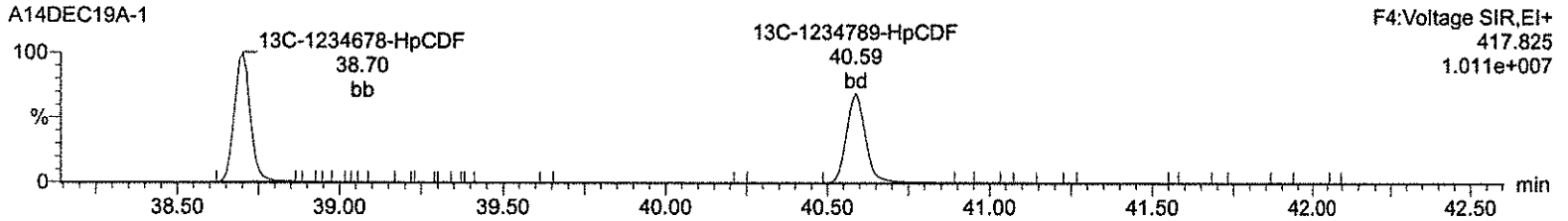
Total-heptafurans



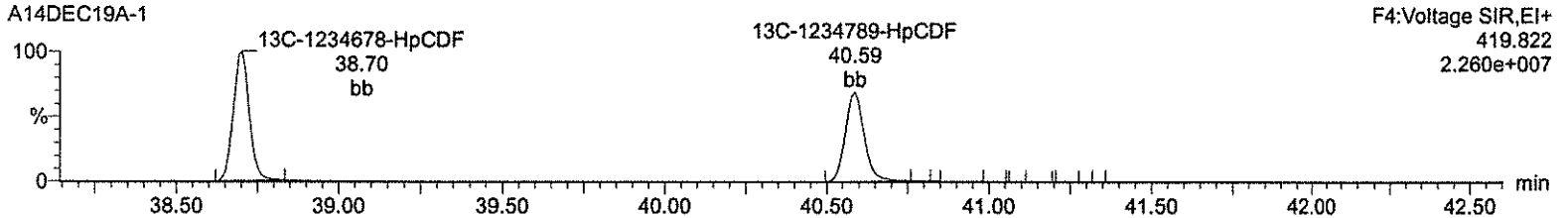
Total-heptafurans



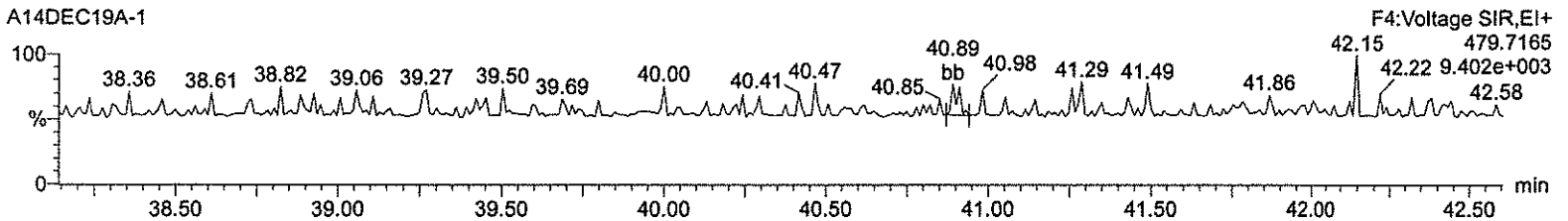
13C-1234678-HpCDF



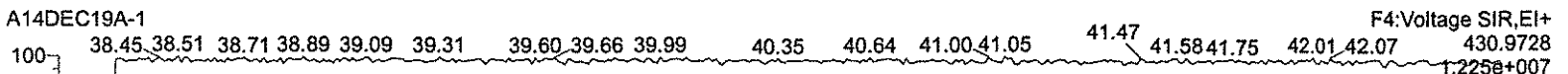
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Quantify Sample Report MassLynx 4.1

Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14DEC19A-1.qld

Last Altered: Monday, December 16, 2019 10:37:02 Eastern Standard Time

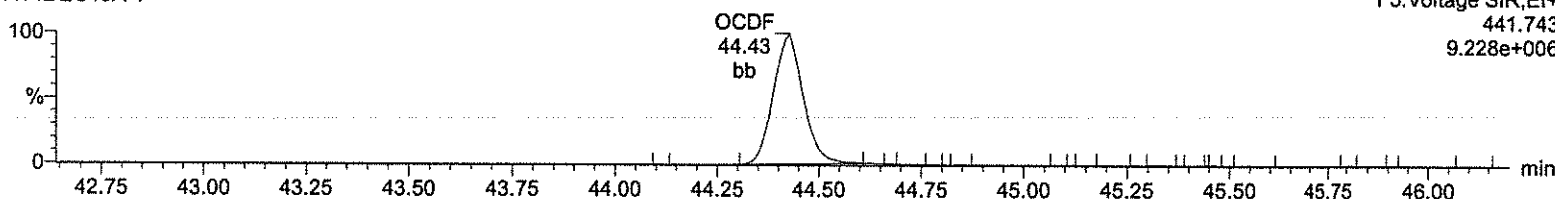
Printed: Monday, December 16, 2019 10:41:01 Eastern Standard Time

Name: A14DEC19A-1, Date: 14-Dec-2019, Time: 11:20:17, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

OCDF

A14DEC19A-1

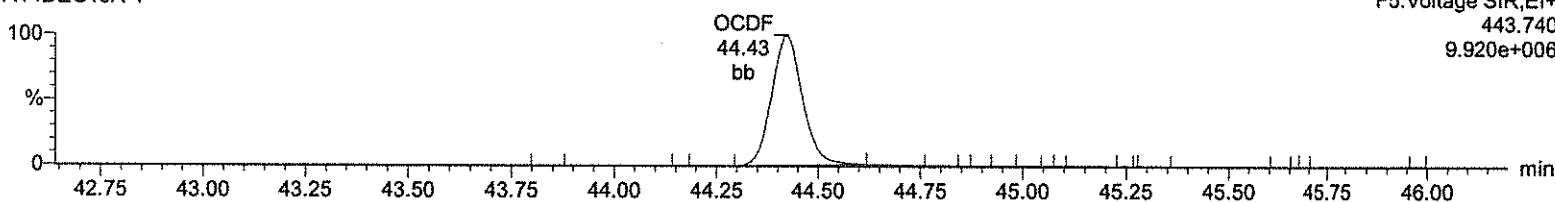
F5:Voltage SIR,EI+
441.743
9.228e+006



OCDF

A14DEC19A-1

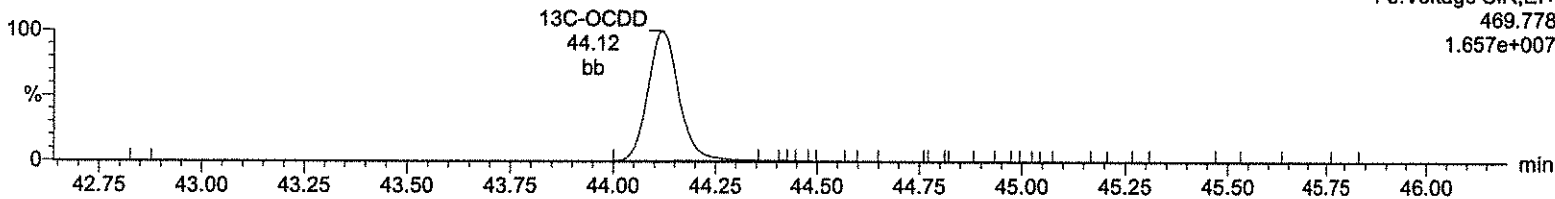
F5:Voltage SIR,EI+
443.740
9.920e+006



13C-OCDD

A14DEC19A-1

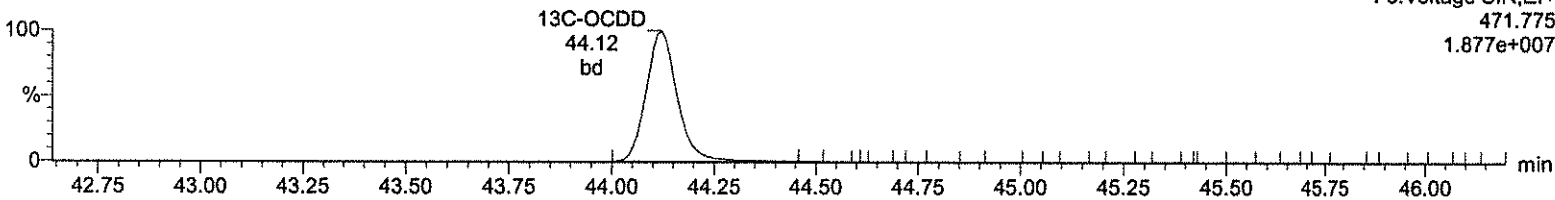
F5:Voltage SIR,EI+
469.778
1.657e+007



13C-OCDD

A14DEC19A-1

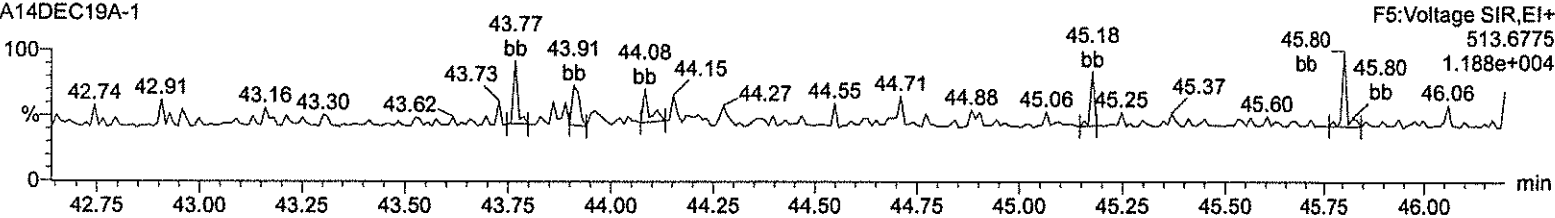
F5:Voltage SIR,EI+
471.775
1.877e+007



DeDPE

A14DEC19A-1

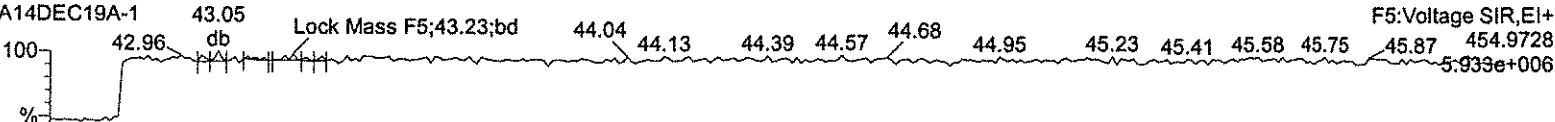
F5:Voltage SIR,EI+
513.6775
1.188e+004



Lock Mass F5

A14DEC19A-1

F5:Voltage SIR,EI+
454.9728
5.933e+006



Quantify Sample Summary Report

Method 8290 CCAL Report

28 of 28

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 25 Nov 2019 10:50:22
Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08.JUL19A.cdb 09 Jul 2019 09:23:09

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean ²	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.22e5	1.61e5	2.84e5	31.12	1.000	0.76	NO	10.542	0.0936	0.932	0.884	5.4	2.01e6	3371	596.0	2.58e6	13329	193.4	db	db
2	12378-PeCDD	5.97e5	3.85e5	9.82e5	34.03	1.000	1.55	NO	53.508	0.114	0.913	0.853	7.0	1.40e7	14331	978.5	9.21e6	5738	1605.4	bb	bb
3	123478-HxCDD	5.17e5	4.21e5	9.38e5	36.60	0.998	1.23	NO	51.858	0.109	0.886	0.854	3.7	1.02e7	8284	1232.3	8.23e6	7069	1163.6	dd	bd
4	123678-HxCDD	5.52e5	4.40e5	9.93e5	36.69	1.000	1.25	NO	49.664	0.0985	0.938	0.944	-0.7	1.09e7	8284	1314.6	8.75e6	7069	1238.3	dd	dd
5	123789-HxCDD	5.54e5	4.36e5	9.90e5	36.92	1.007	1.27	NO	52.852	0.105	0.935	0.885	5.7	9.79e6	8284	1182.2	7.96e6	7069	1125.5	dd	dd
6	1234678-HpCDD	3.95e5	3.73e5	7.68e5	39.95	1.001	1.06	NO	47.137	0.150	0.980	1.040	-5.7	5.91e6	7744	763.1	5.54e6	7003	790.5	bd	bd
7	OCDD	6.49e5	7.42e5	1.39e6	44.12	1.000	0.87	NO	97.995	0.200	0.952	0.971	-2.0	7.29e6	6108	1194.0	8.26e6	6369	1297.6	bb	bb
8	12378-TCDF	1.39e5	1.83e5	3.21e5	30.33	1.001	0.76	NO	8.947	0.0512	0.875	0.978	-10.5	1.69e6	3722	454.3	2.14e6	4927	433.5	bb	bb
9	12378-PeCDF	7.94e5	5.05e5	1.30e6	33.24	1.000	1.57	NO	46.242	0.0797	0.874	0.945	-7.5	1.97e7	14213	1387.1	1.26e7	8546	1477.5	bd	bb
10	123478-PeCDF	9.13e5	5.93e5	1.51e6	33.84	1.018	1.54	NO	48.854	0.0726	1.013	1.037	-2.3	2.24e7	14213	1574.9	1.50e7	8546	1751.0	bb	bb
11	123478-HxCDF	6.74e5	5.50e5	1.22e6	35.90	0.997	1.23	NO	50.802	0.134	0.984	0.968	1.6	1.54e7	12378	1248.2	1.22e7	13417	909.5	bd	bd
12	123678-HxCDF	7.22e5	5.77e5	1.30e6	36.00	1.000	1.25	NO	50.167	0.125	1.044	1.041	0.3	1.44e7	12378	1164.0	1.14e7	13417	851.0	db	db
13	234678-HxCDF	7.03e5	5.59e5	1.26e6	36.47	1.014	1.26	NO	51.468	0.132	1.014	0.985	2.9	1.43e7	12378	1156.3	1.14e7	13417	848.9	bb	bb
14	123789-HxCDF	6.07e5	4.90e5	1.10e6	37.23	1.035	1.24	NO	53.562	0.158	0.881	0.823	7.1	1.09e7	12378	876.6	8.57e6	13417	638.5	bd	bd
15	1234678-HpCDF	5.34e5	5.23e5	1.06e6	38.71	1.000	1.02	NO	51.237	0.107	1.178	1.150	2.5	8.75e6	6766	1293.7	8.69e6	7815	1111.7	bb	bb
16	1234789-HpCDF	4.36e5	4.33e5	8.69e5	40.60	1.049	1.01	NO	51.739	0.132	0.969	0.936	3.5	6.20e6	6766	916.5	6.28e6	7815	803.7	bb	bd
17	OCDF	7.12e5	7.88e5	1.50e6	44.42	1.007	0.90	NO	90.592	0.179	1.026	1.133	-9.4	7.80e6	6571	1187.2	8.57e6	6482	1321.6	bd	bd
18	13C-2378-TCDD	1.33e6	1.72e6	3.04e6	31.11	1.018	0.77	NO	103.299	0.0875	1.166	1.128	3.3	2.20e7	6043	3637.2	2.84e7	5819	4878.3	bb	bb
19	13C-12378-PeCDD	1.31e6	8.41e5	2.15e6	34.02	1.114	1.56	NO	109.658	0.134	0.824	0.751	9.7	3.13e7	7133	4394.1	2.06e7	4996	4130.2	bb	bb
20	13C-123678-HxCDD	1.15e6	9.69e5	2.12e6	36.68	0.994	1.19	NO	98.676	0.109	0.973	0.986	-1.3	2.24e7	10373	2158.4	1.84e7	6240	2940.6	dd	dd
21	13C-1234678-HpCDD	7.86e5	7.80e5	1.57e6	39.93	1.082	1.01	NO	107.098	0.137	0.719	0.672	7.1	1.19e7	6987	1700.2	1.13e7	7265	1557.8	bb	bd
22	13C-OCDD	1.37e6	1.56e6	2.92e6	44.11	1.195	0.88	NO	209.169	0.206	0.672	0.642	4.6	1.50e7	9665	1555.9	1.66e7	10897	1525.4	bd	bd
23	13C-2378-TCDF	1.61e6	2.06e6	3.67e6	30.31	0.992	0.78	NO	112.597	0.100	1.407	1.250	12.6	1.89e7	8248	2291.4	2.43e7	6796	3579.4	bb	bb
24	13C-12378-PeCDF	1.78e6	1.19e6	2.97e6	33.23	1.088	1.50	NO	112.679	0.210	1.139	1.011	12.7	4.53e7	13916	3255.8	2.91e7	11546	2519.6	bb	bd
25	13C-123678-HxCDF	8.50e5	1.64e6	2.49e6	35.99	0.975	0.52	NO	91.704	0.127	1.143	1.247	-8.3	1.69e7	8326	2032.5	3.22e7	16260	1980.8	db	db
26	13C-1234678-HpCDF	5.59e5	1.23e6	1.79e6	38.70	1.049	0.45	NO	94.715	0.140	0.824	0.870	-5.3	9.23e6	7877	1172.2	2.06e7	11064	1858.0	bd	bb
27	13C-1234-TCDD	1.14e6	1.47e6	2.61e6	30.54	0.000	0.77	NO	100.000	0.0987	1.000	1.000	0.0	1.31e7	6043	2169.5	1.69e7	5819	2901.4	bb	bb
28	13C-123789-HxCDD	1.21e6	9.71e5	2.18e6	36.91	0.000	1.24	NO	100.000	0.107	1.000	1.000	0.0	2.15e7	10373	2073.3	1.77e7	6240	2836.5	dd	dd
29	37Cl-2378-TCDD (SS)	2.77e5		2.77e5	31.12	1.000			9.684	0.0182	0.910	0.940	-3.2	4.50e6	3458	1301.9				bb	bb
30	13C-23478-PeCDF (SS)	1.98e6	1.26e6	3.25e6	33.84	1.018	1.57	NO	103.904	0.0801	1.093	1.052	3.9	4.85e7	13916	3482.7	3.04e7	11546	2629.3	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time

Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-123478-HxCDF (SS)	7.79e5	1.52e6	2.30e6	35.89	0.997	0.51	NO	103.618	0.139	0.923	0.891	3.6	1.73e7	8326	2074.5	3.37e7	16260	2070.5	bd	bd
32	13C-123478-HxCDD (SS)	1.08e6	8.21e5	1.90e6	36.59	0.998	1.31	NO	98.501	0.111	0.896	0.909	-1.5	2.11e7	10373	2035.5	1.70e7	6240	2717.8	bd	bd
33	13C-1234789-HpCDF (SS)	4.34e5	9.91e5	1.42e6	40.59	1.049	0.44	NO	102.011	0.205	0.794	0.779	2.0	6.16e6	7877	782.0	1.42e7	11064	1283.1	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

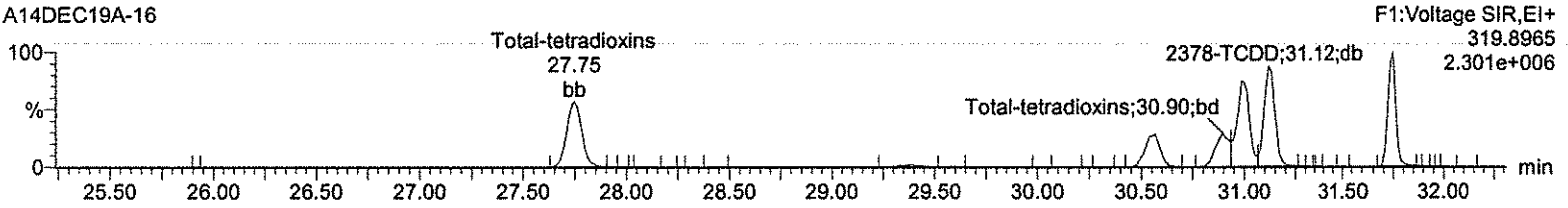
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 25 Nov 2019 10:50:22
Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

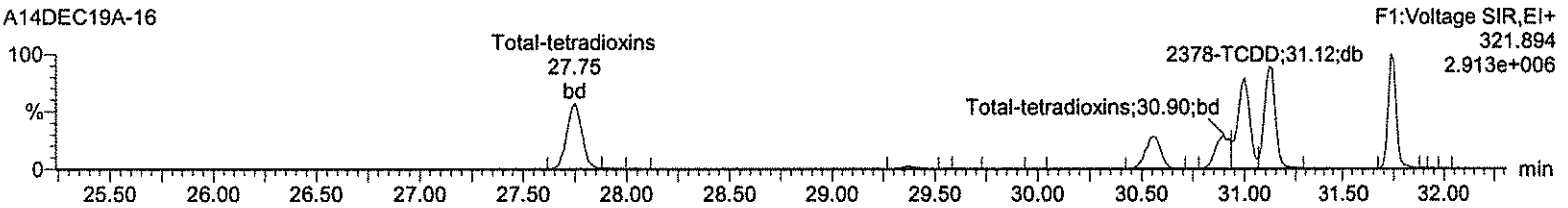
Total-tetradoxins

A14DEC19A-16



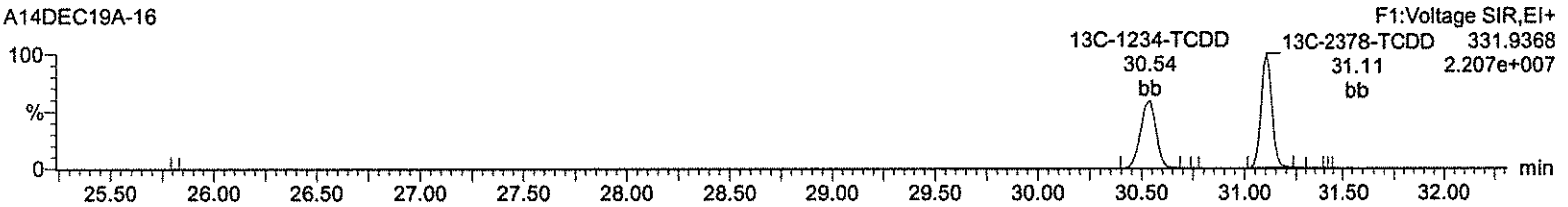
Total-tetradoxins

A14DEC19A-16



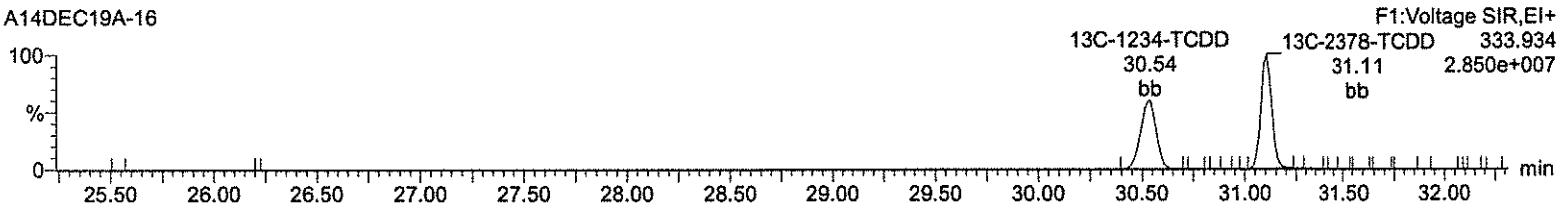
13C-2378-TCDD

A14DEC19A-16



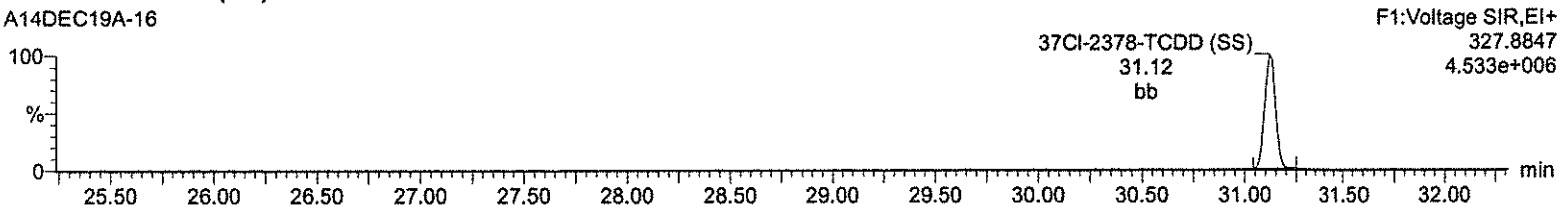
13C-2378-TCDD

A14DEC19A-16



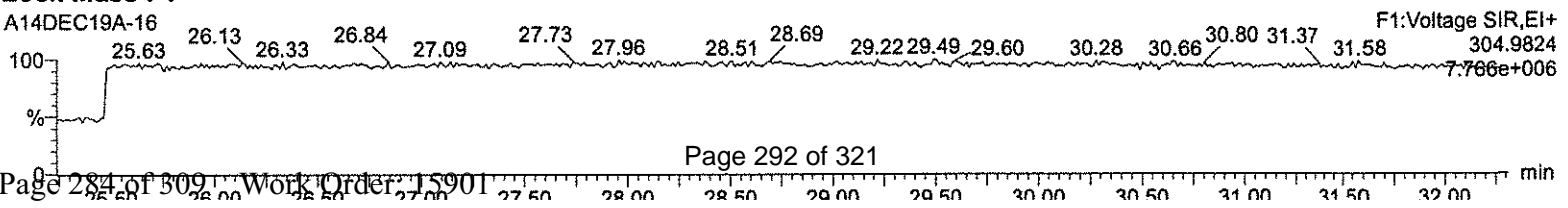
37Cl-2378-TCDD (SS)

A14DEC19A-16



Lock Mass F1

A14DEC19A-16

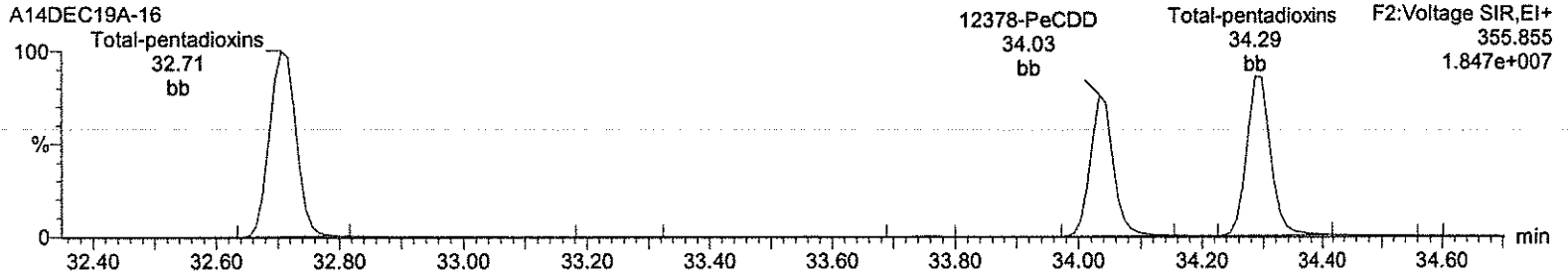


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

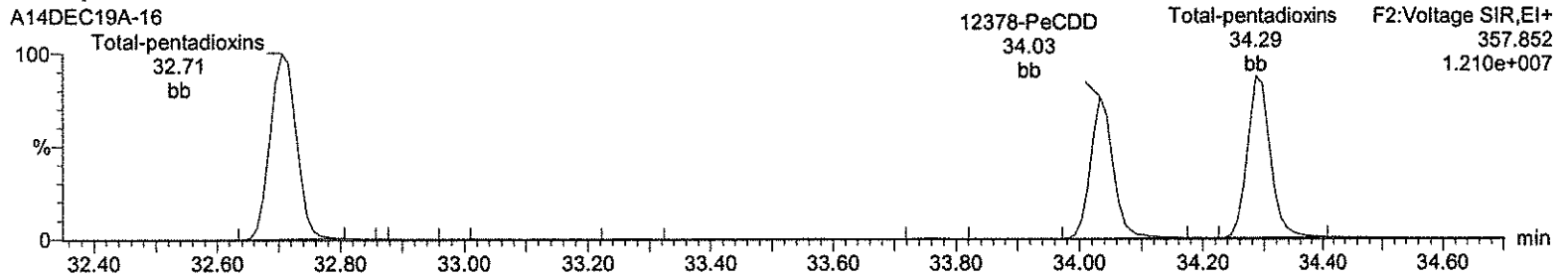
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

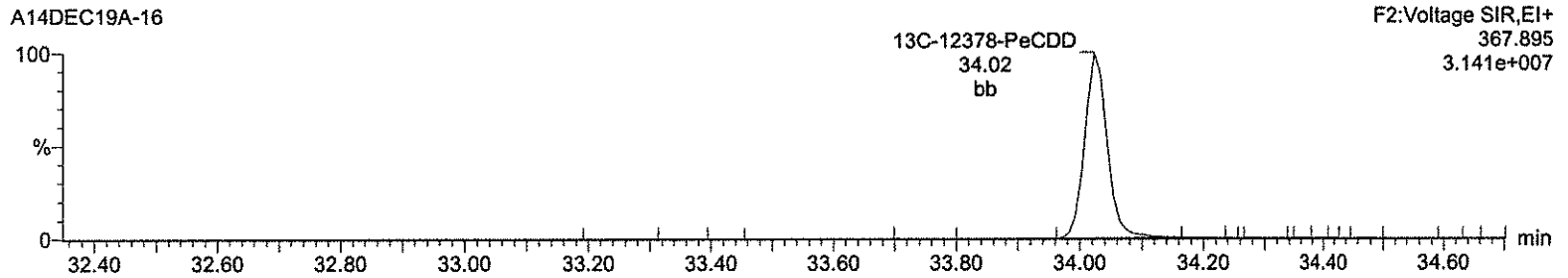
Total-pentadioxins



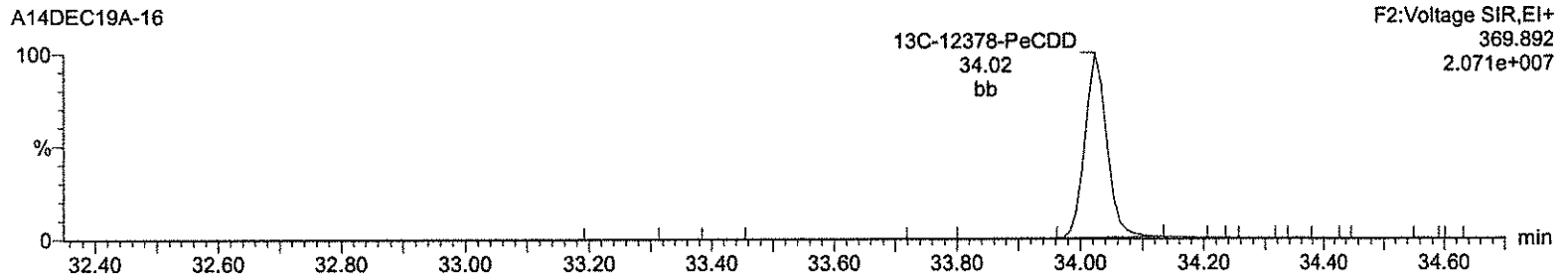
Total-pentadioxins



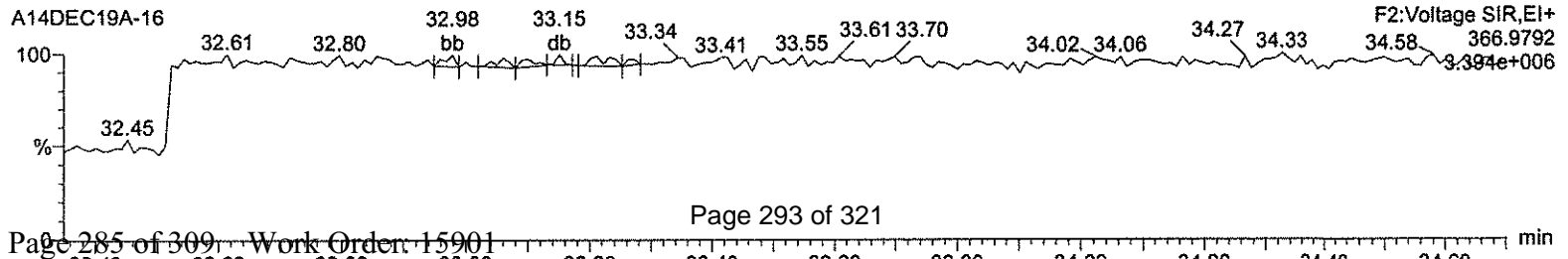
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2

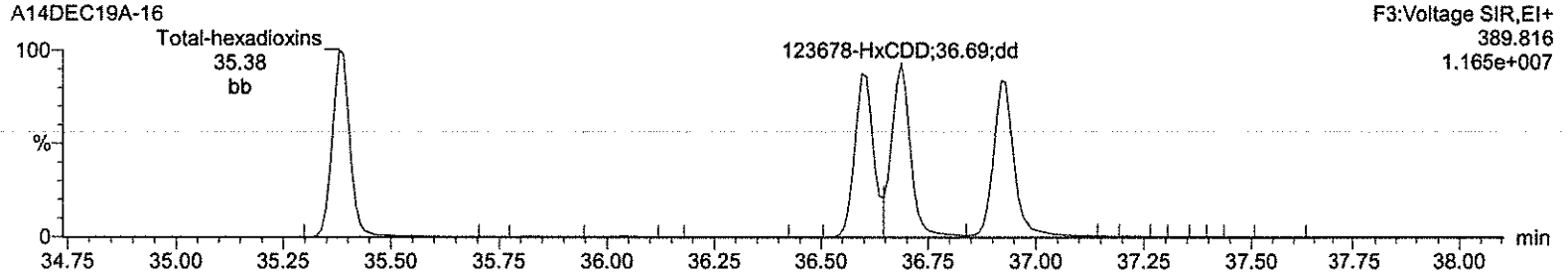


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

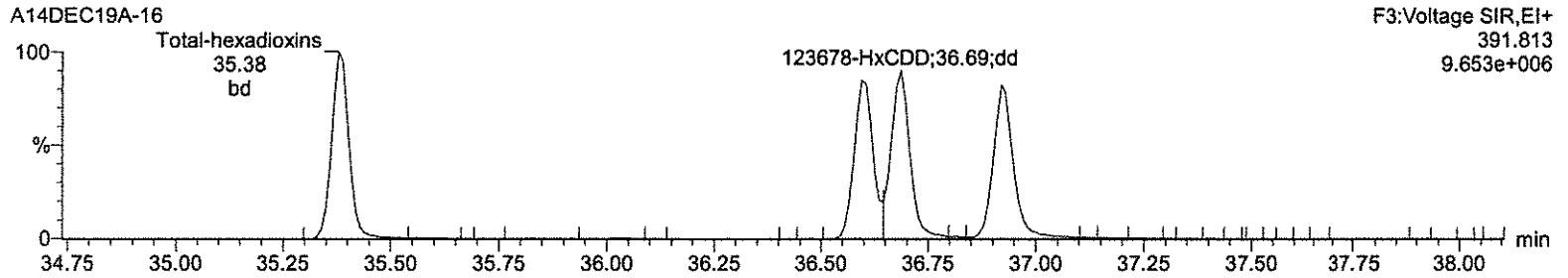
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

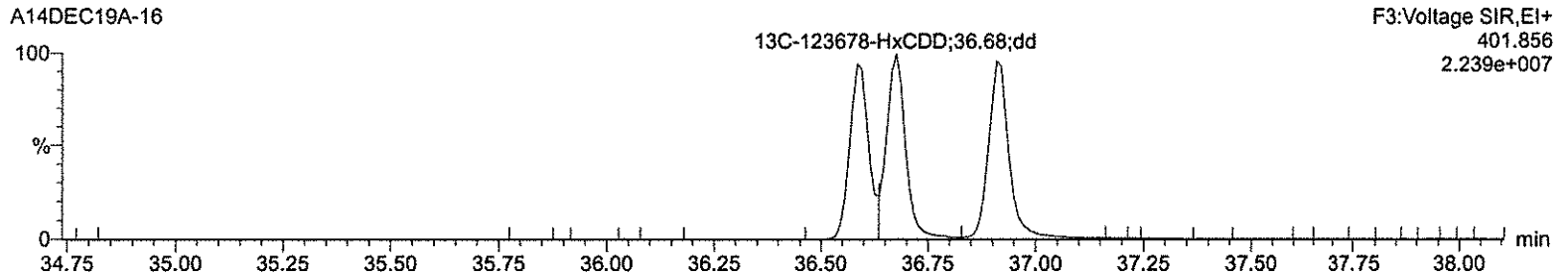
Total-hexadioxins



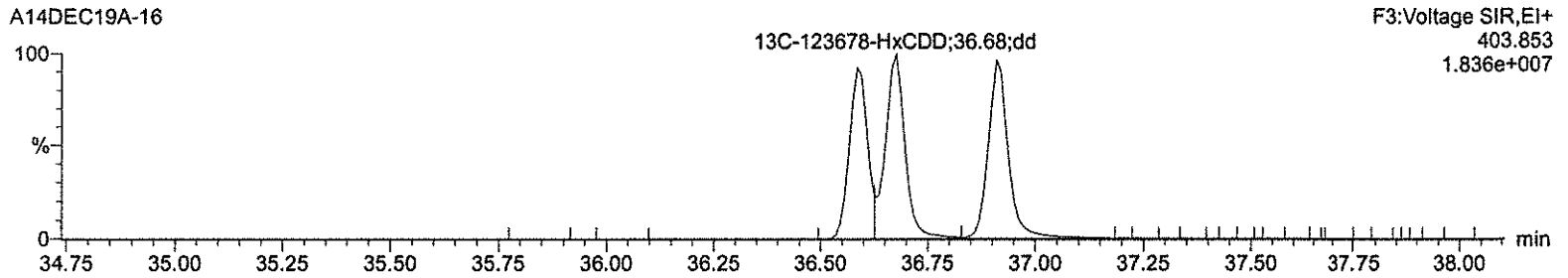
Total-hexadioxins



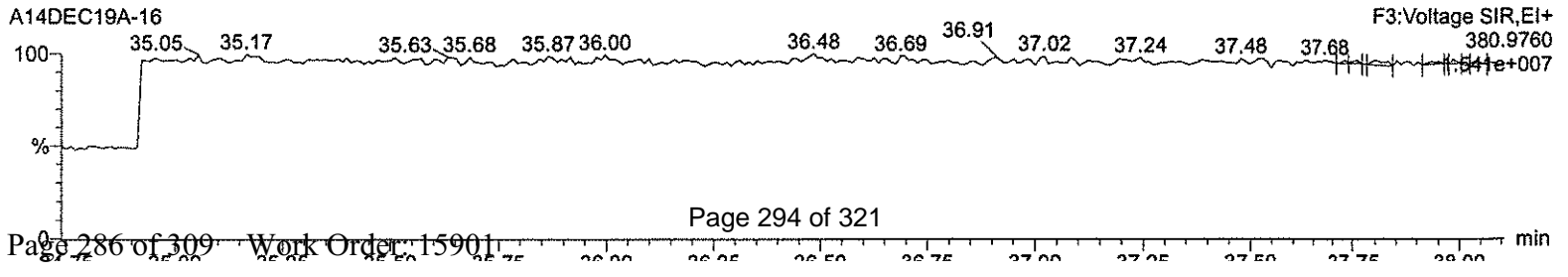
13C-123678-HxCDD



13C-123678-HxCDD



Lock Mass F3

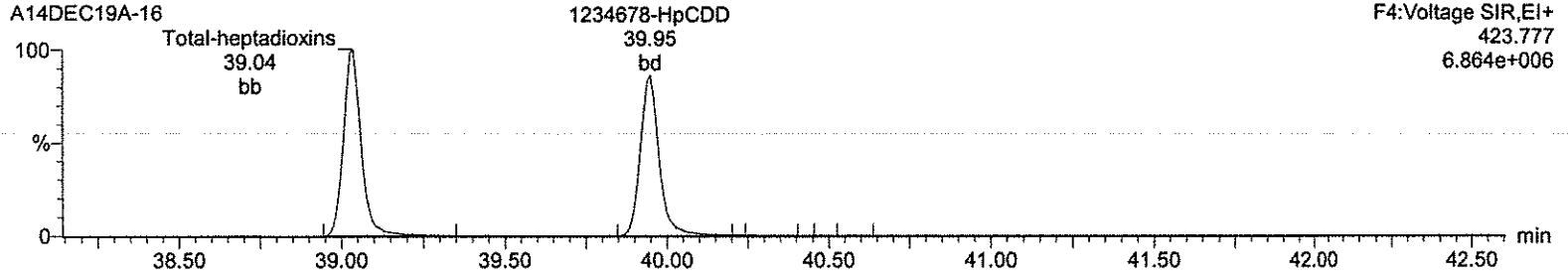


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

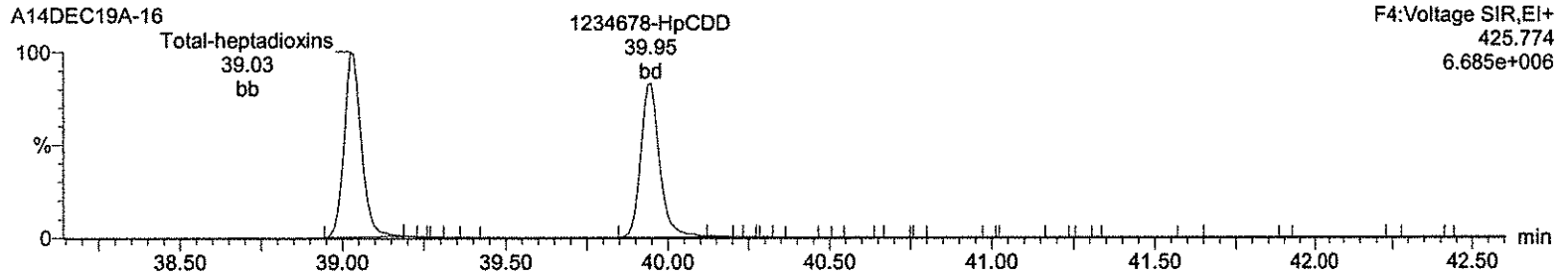
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

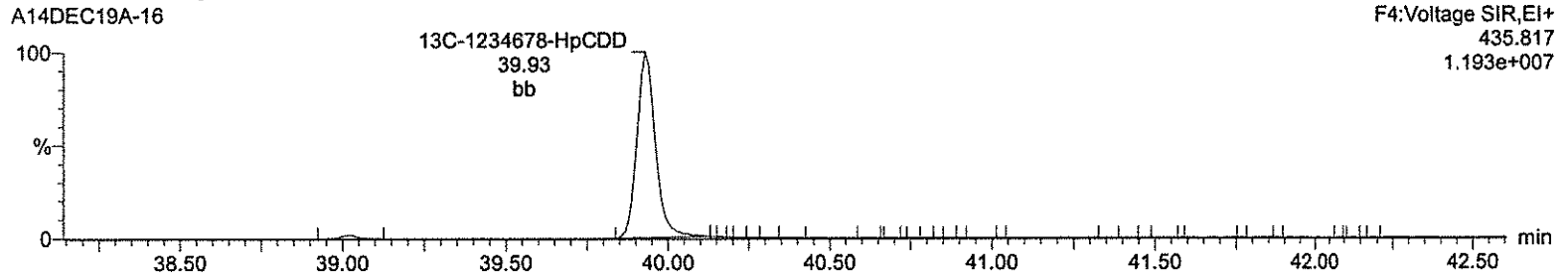
Total-heptadioxins



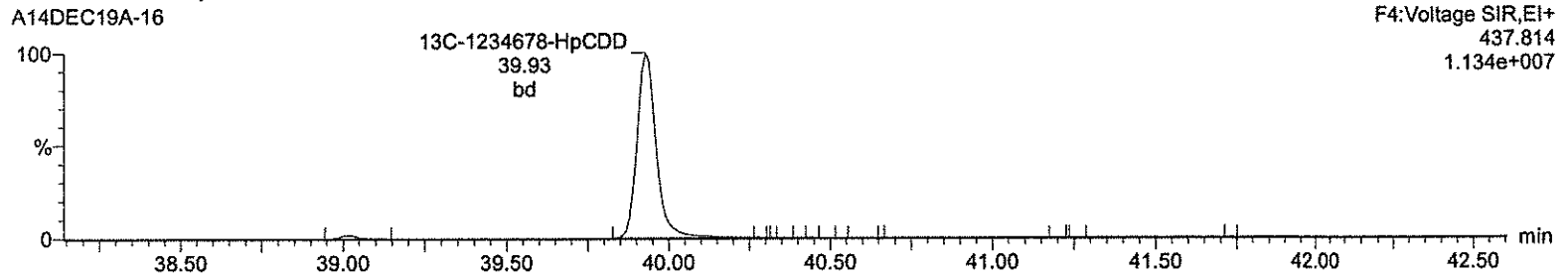
Total-heptadioxins



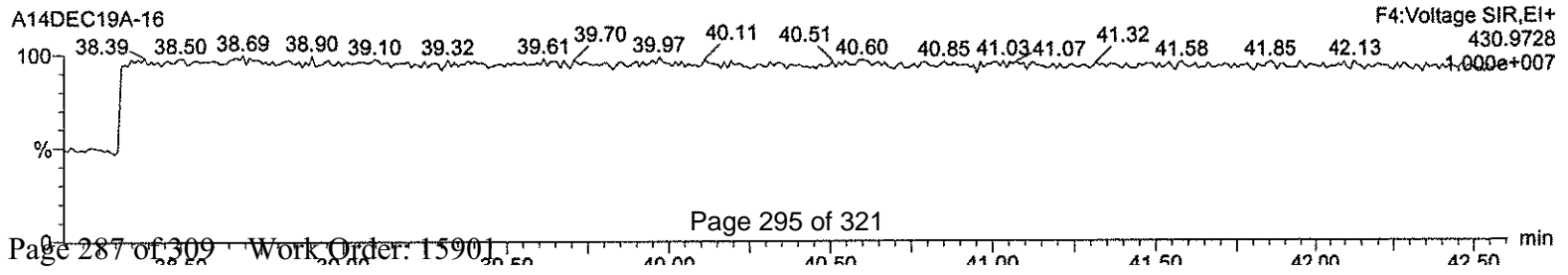
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

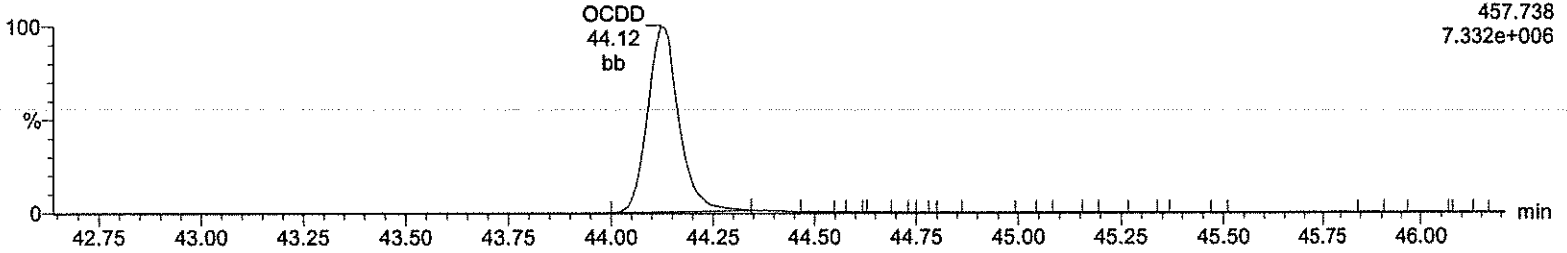
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

OCDD

A14DEC19A-16

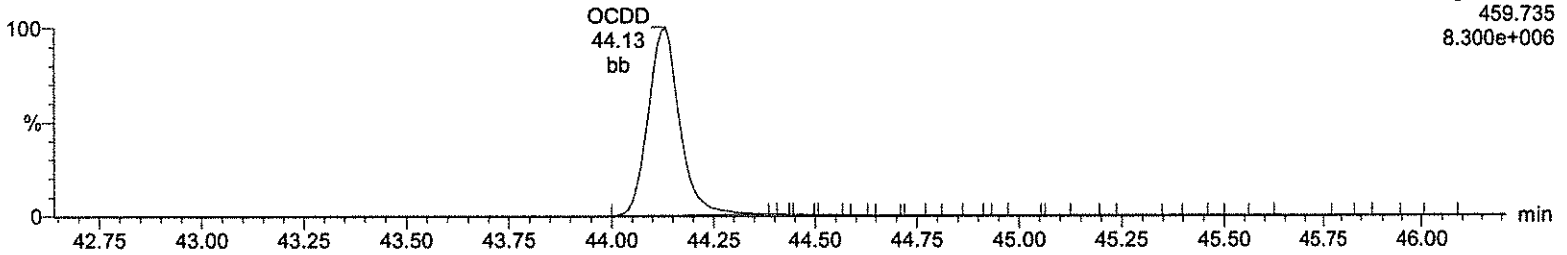
F5:Voltage SIR,EI+
457.738
7.332e+006



OCDD

A14DEC19A-16

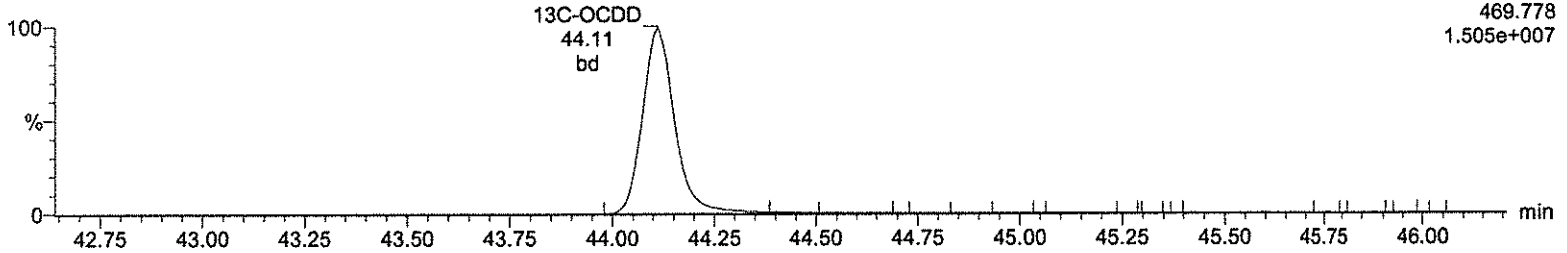
F5:Voltage SIR,EI+
459.735
8.300e+006



13C-OCDD

A14DEC19A-16

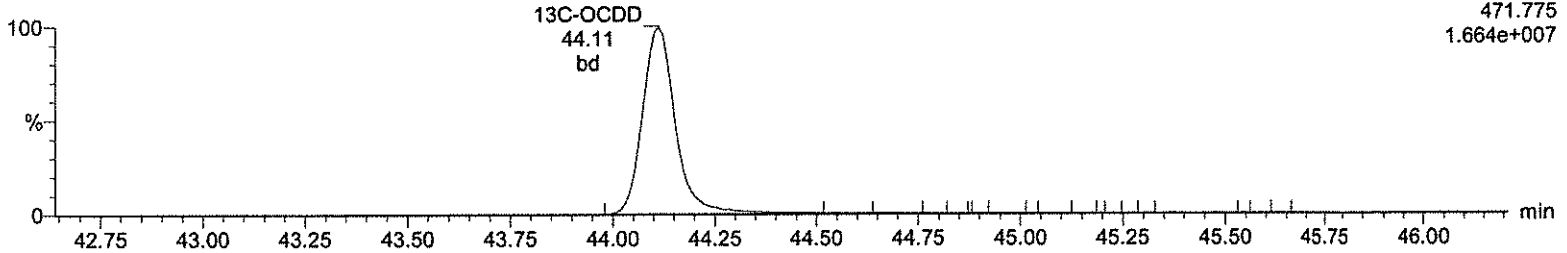
F5:Voltage SIR,EI+
469.778
1.505e+007



13C-OCDD

A14DEC19A-16

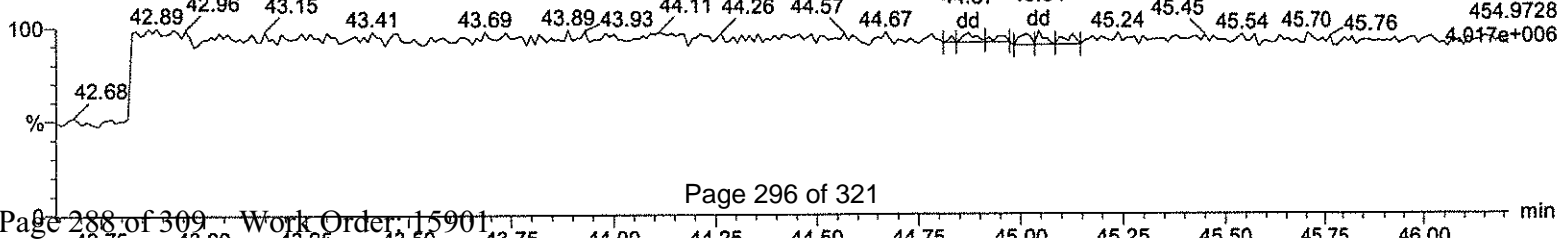
F5:Voltage SIR,EI+
471.775
1.664e+007



Lock Mass F5

A14DEC19A-16

F5:Voltage SIR,EI+
454.9728
4.017e+006

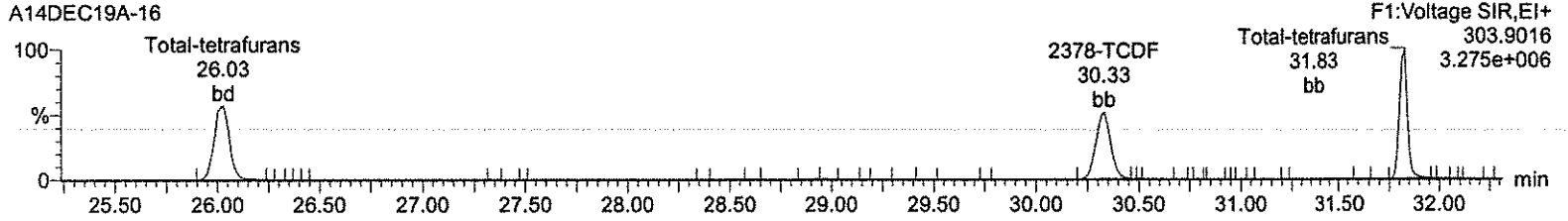


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

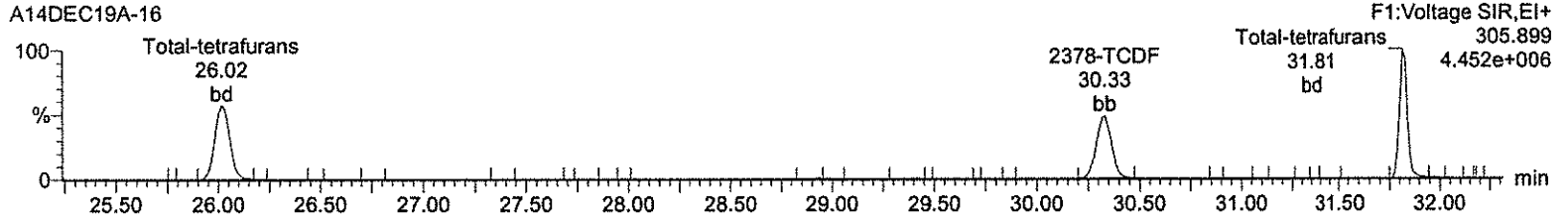
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

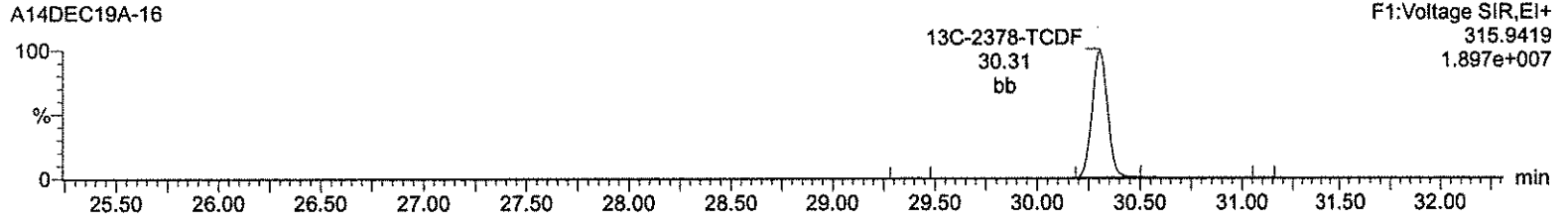
Total-tetrafurans



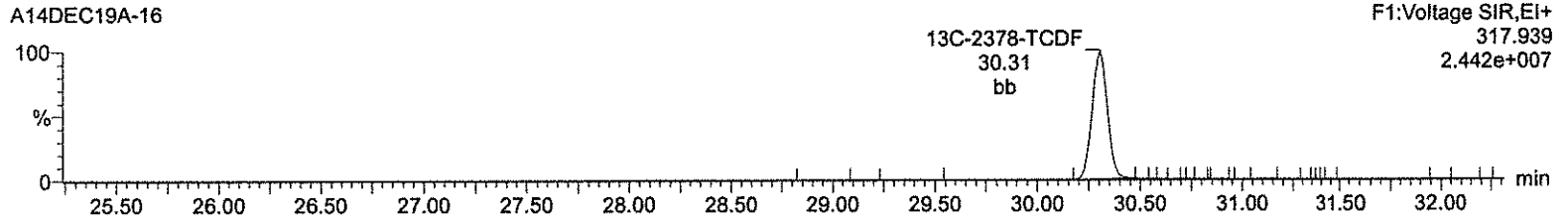
Total-tetrafurans



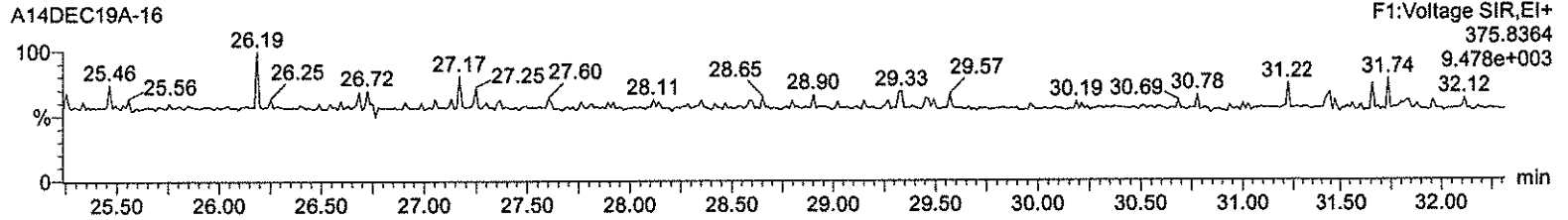
13C-2378-TCDF



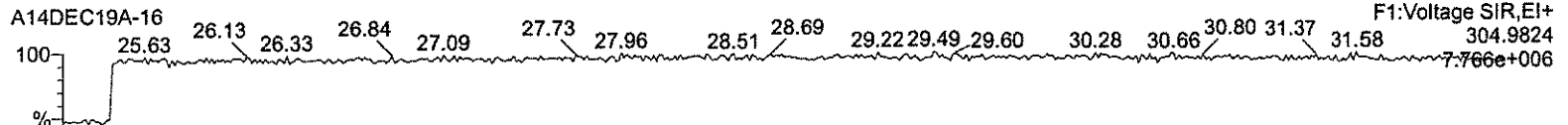
13C-2378-TCDF



HxDPE



Lock Mass F1



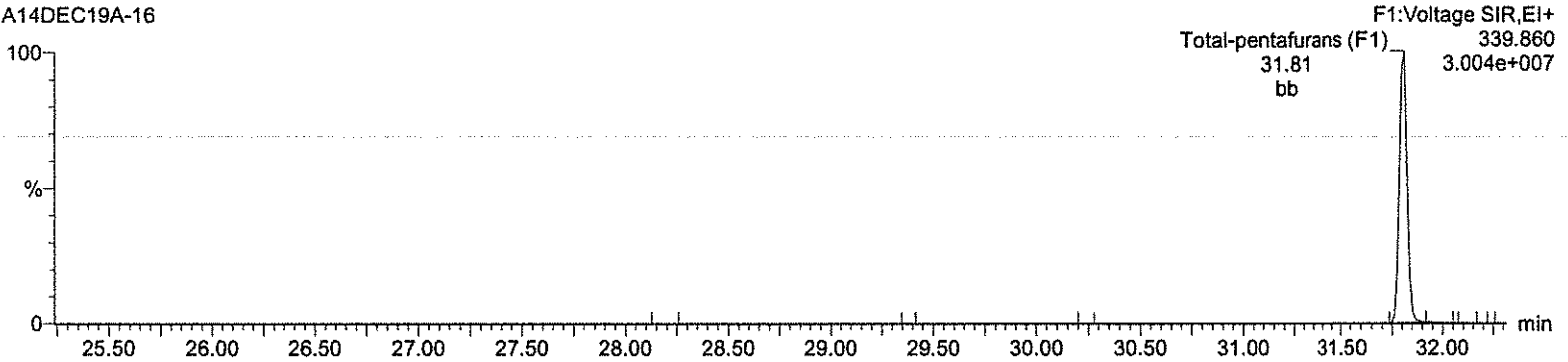
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

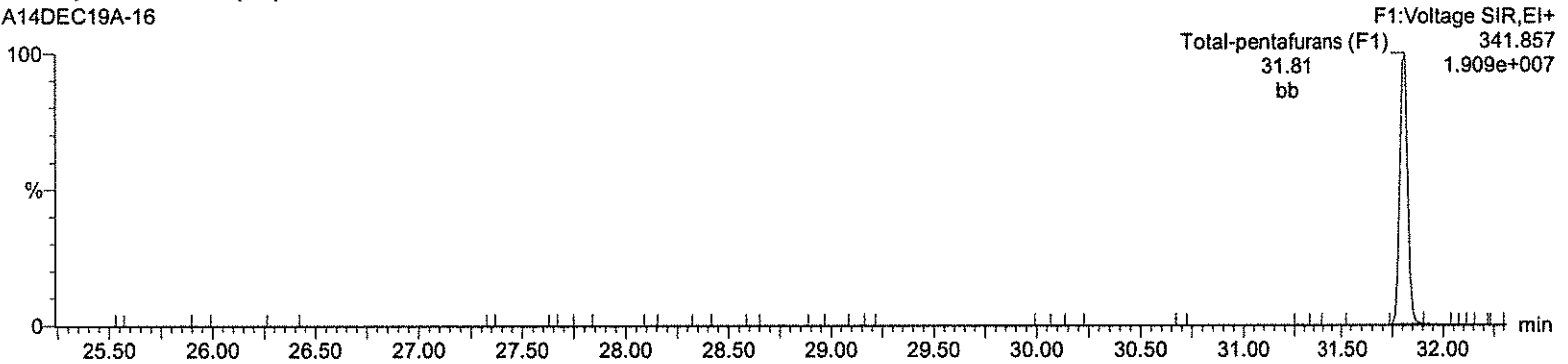
Total-pentafurans (F1)

A14DEC19A-16



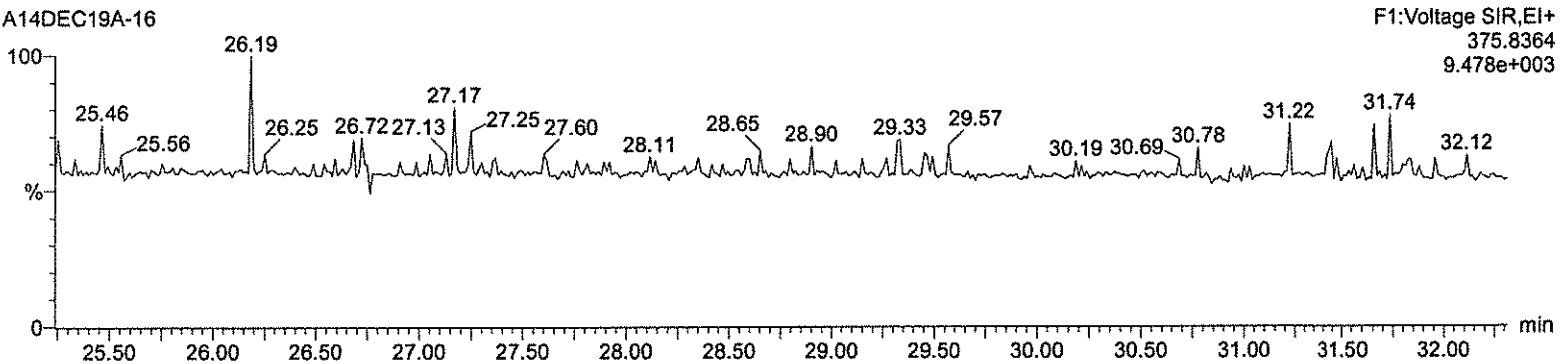
Total-pentafurans (F1)

A14DEC19A-16



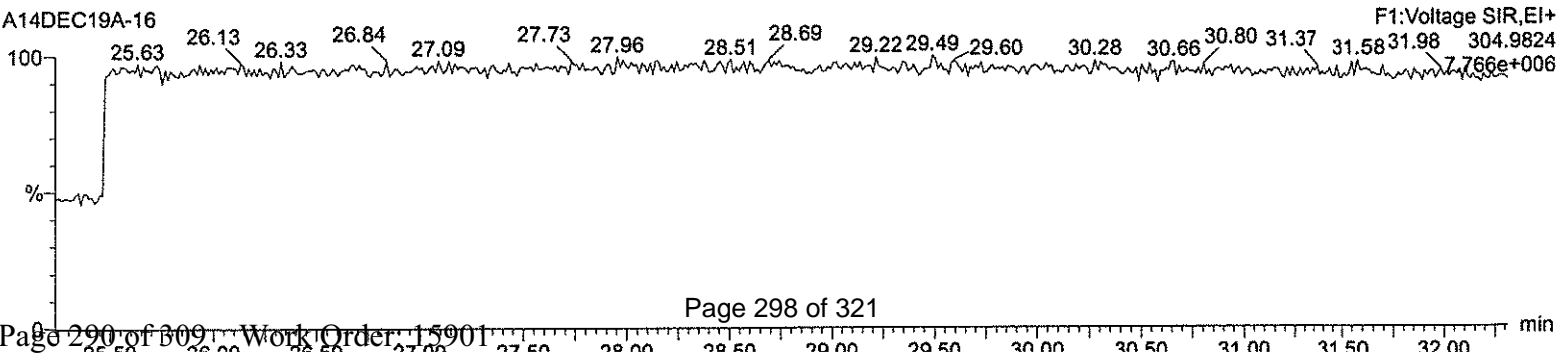
HxDPE

A14DEC19A-16



Lock Mass F1

A14DEC19A-16

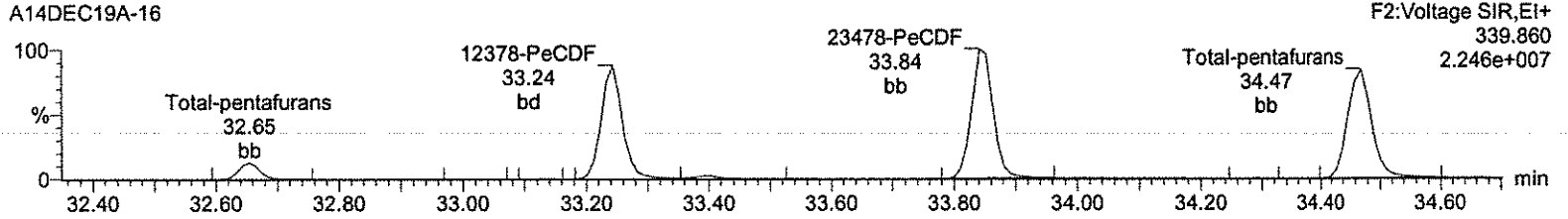


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

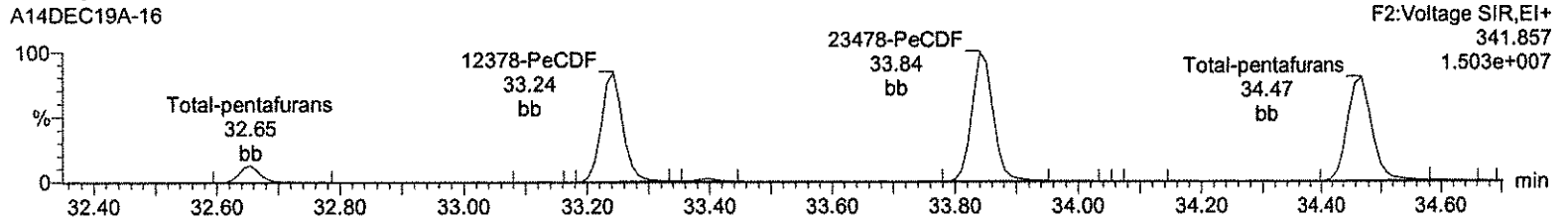
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

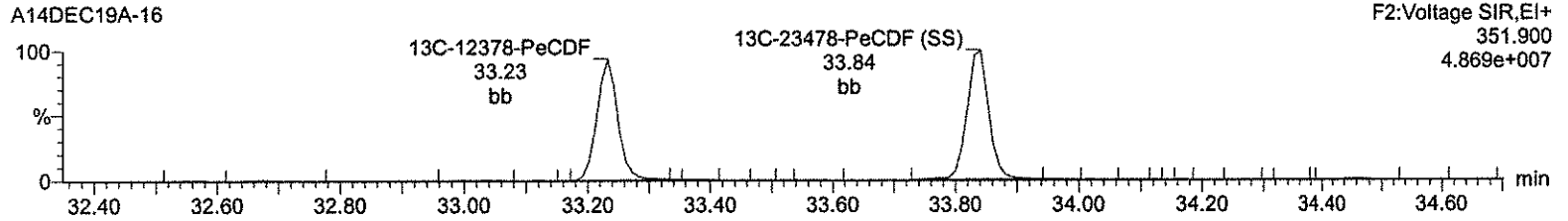
Total-pentafurans



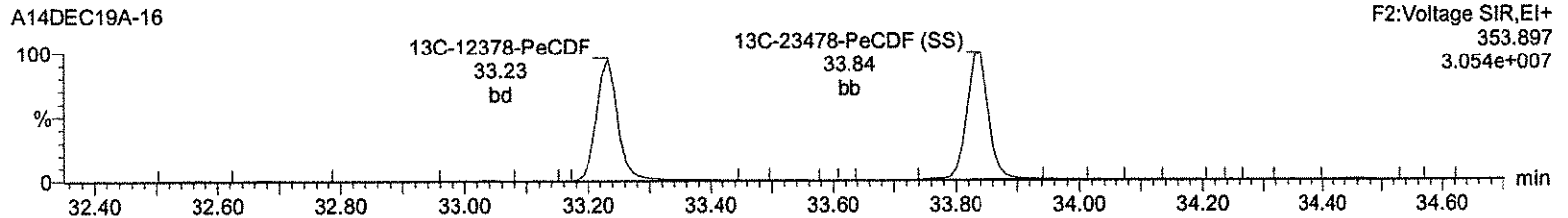
Total-pentafurans



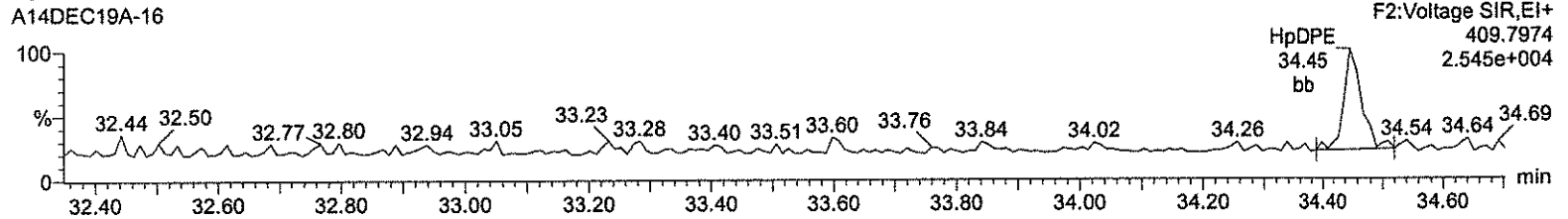
13C-12378-PeCDF



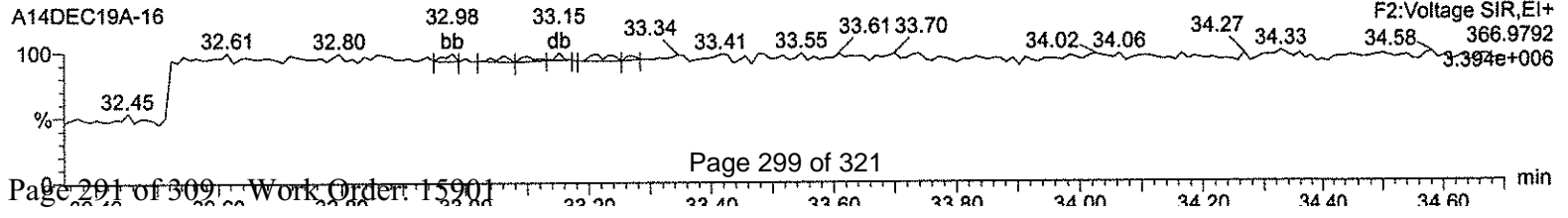
13C-12378-PeCDF



HpDPE



Lock Mass F2

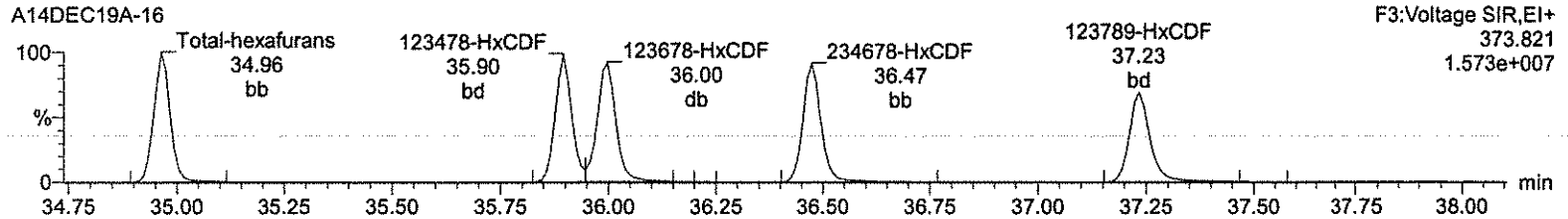


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

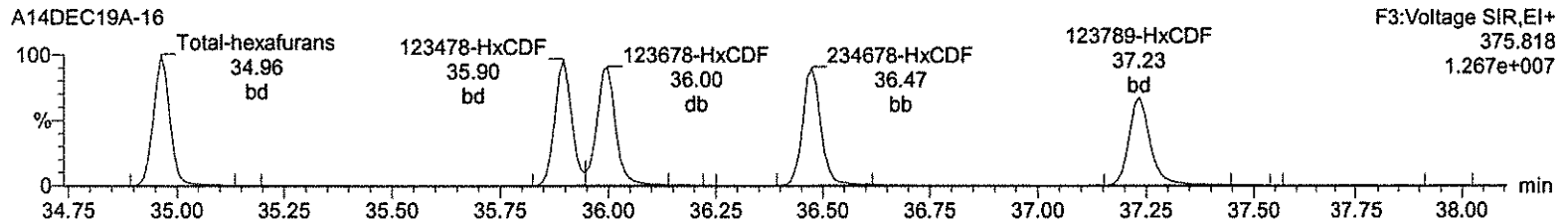
Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

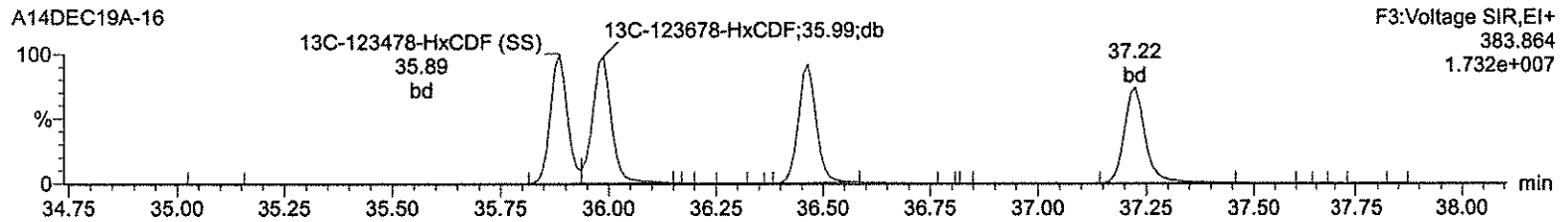
Total-hexafurans



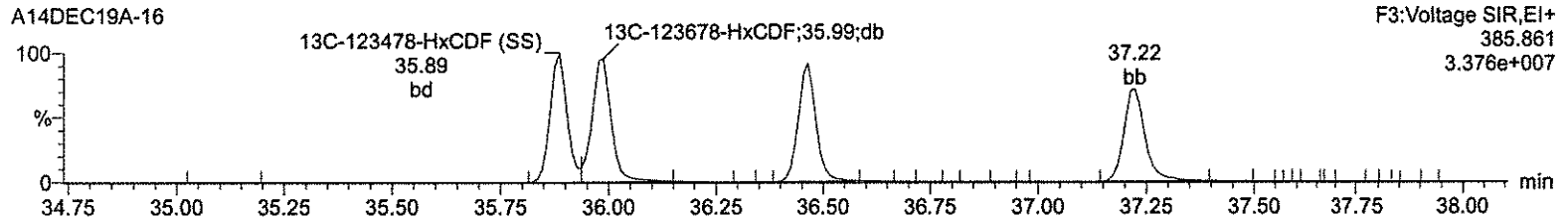
Total-hexafurans



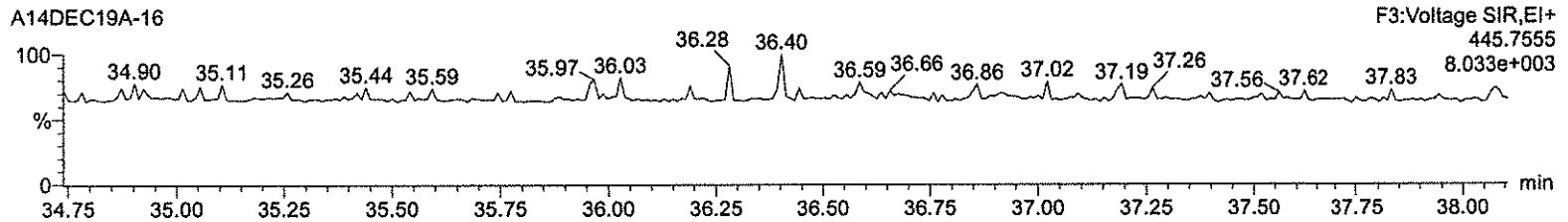
13C-123678-HxCDF



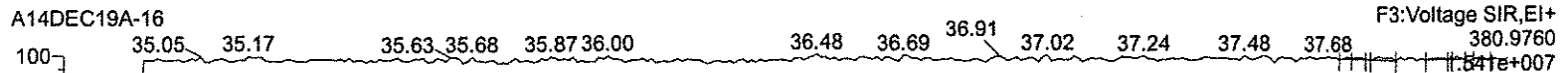
13C-123678-HxCDF



OcDPE



Lock Mass F3



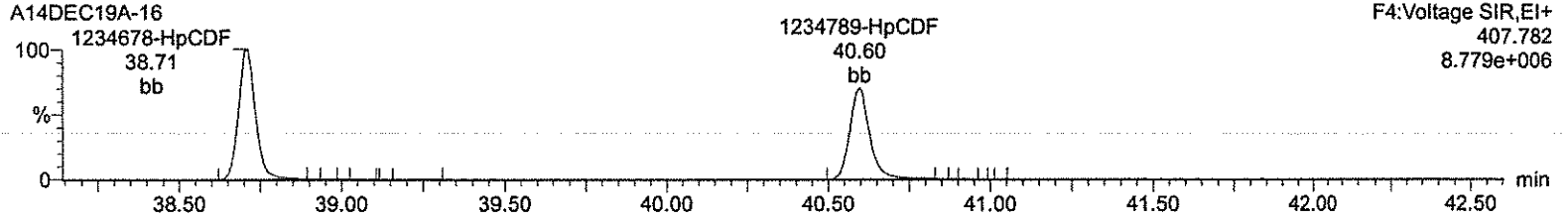
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time

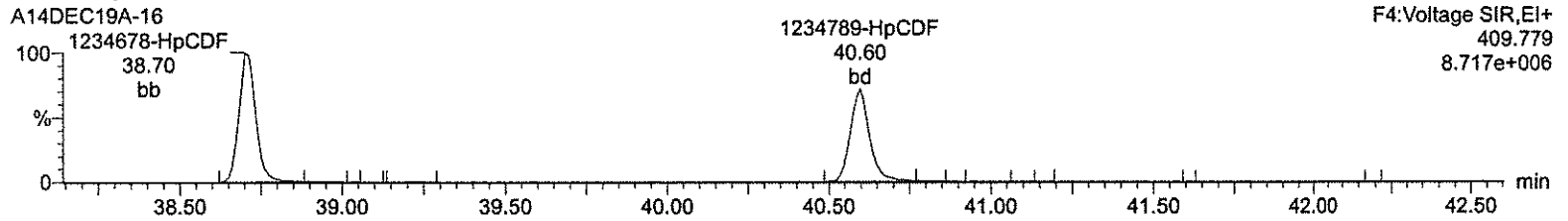
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A
Task: HRP750_2, User: MJC

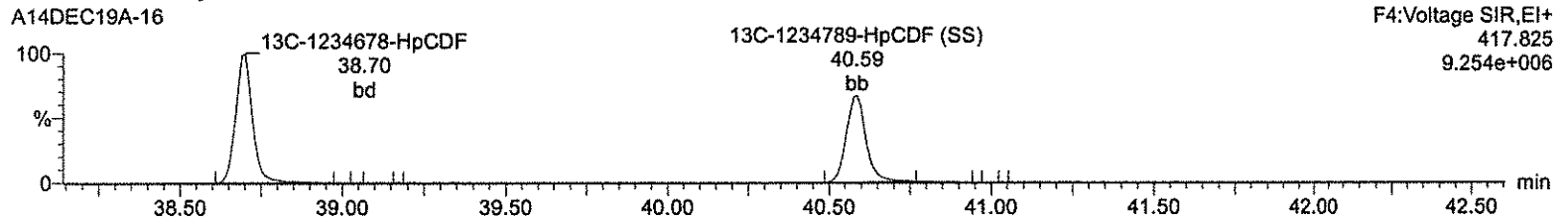
Total-heptafurans



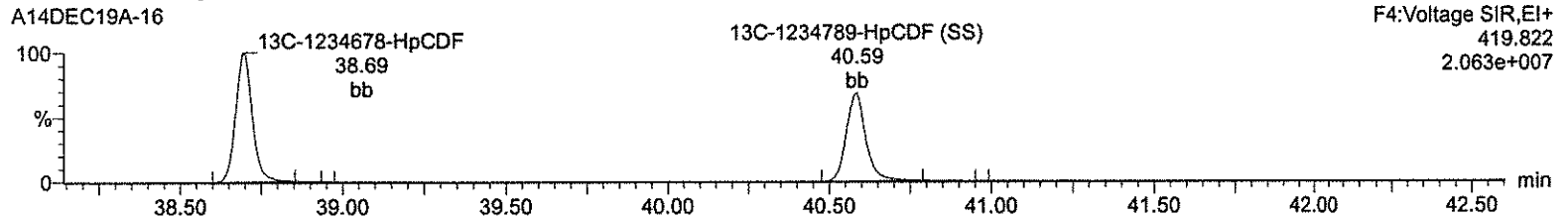
Total-heptafurans



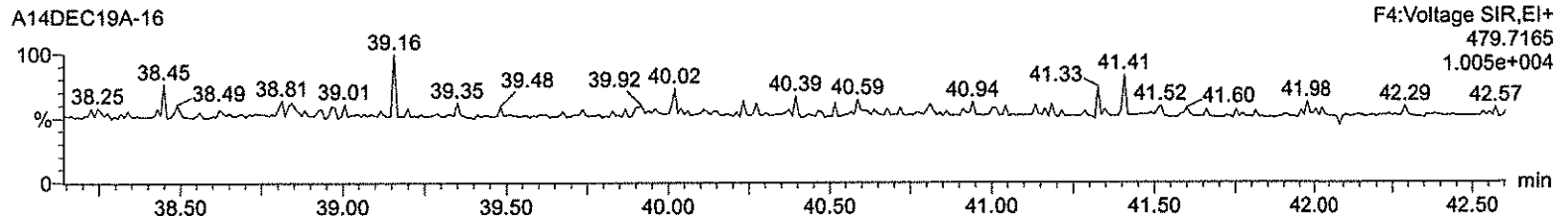
13C-1234678-HpCDF



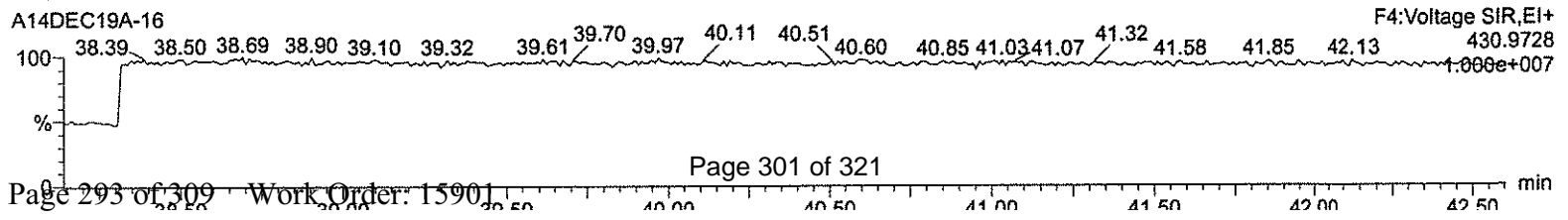
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A-16.qld

Last Altered: Monday, December 16, 2019 16:33:32 Eastern Standard Time

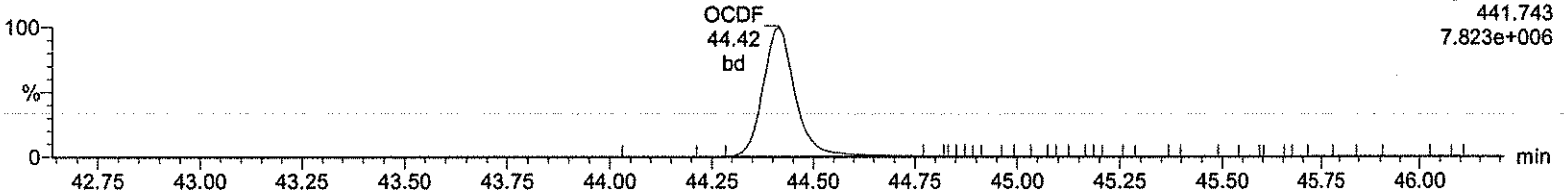
Printed: Monday, December 16, 2019 16:35:12 Eastern Standard Time

Name: A14DEC19A-16, Date: 14-Dec-2019, Time: 23:29:10, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A Task: HRP750_2, User: MJC

OCDF

A14DEC19A-16

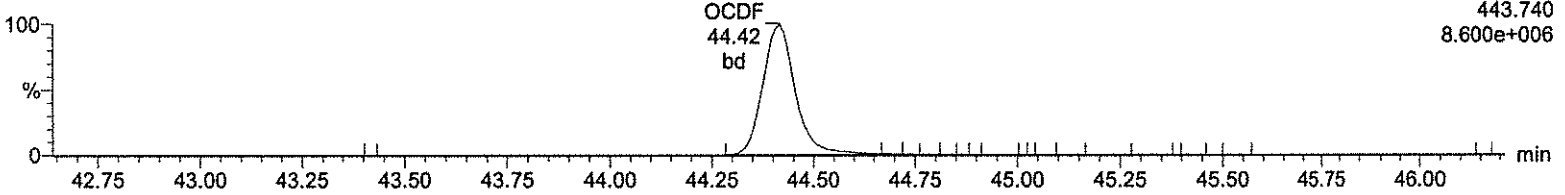
F5:Voltage SIR,EI+
441.743
7.823e+006



OCDF

A14DEC19A-16

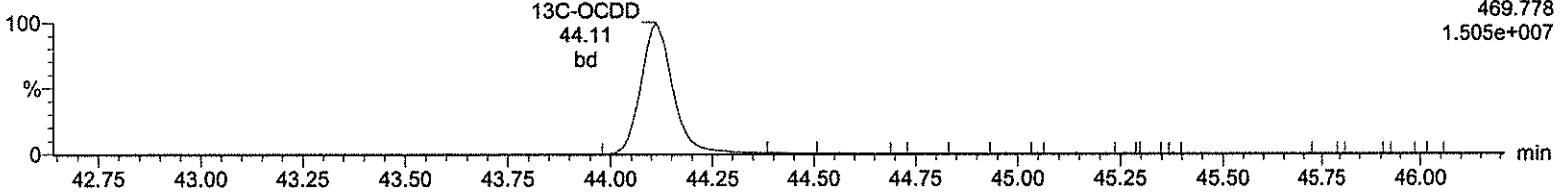
F5:Voltage SIR,EI+
443.740
8.600e+006



13C-OCDD

A14DEC19A-16

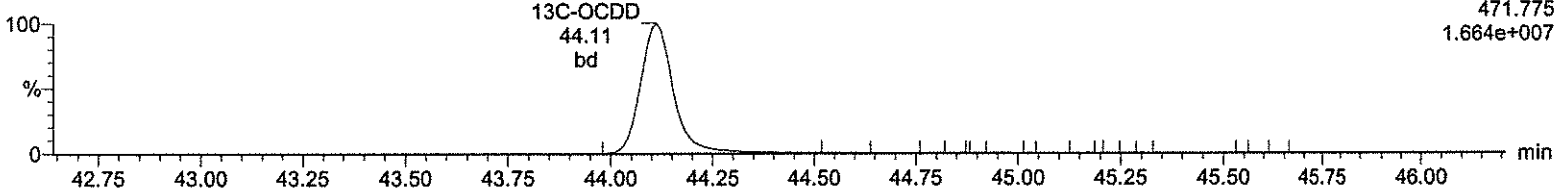
F5:Voltage SIR,EI+
469.778
1.505e+007



13C-OCDD

A14DEC19A-16

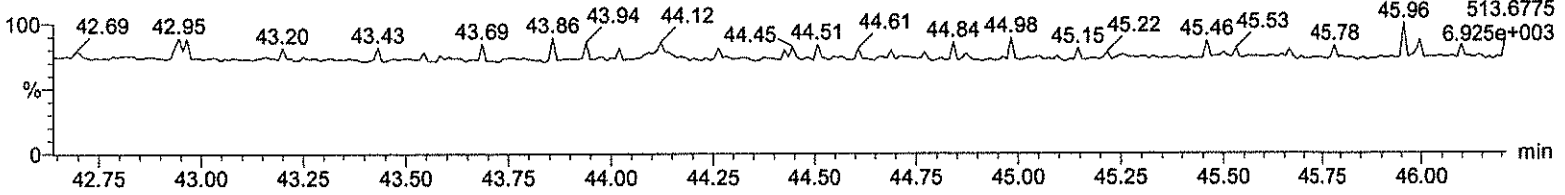
F5:Voltage SIR,EI+
471.775
1.664e+007



DeDPE

A14DEC19A-16

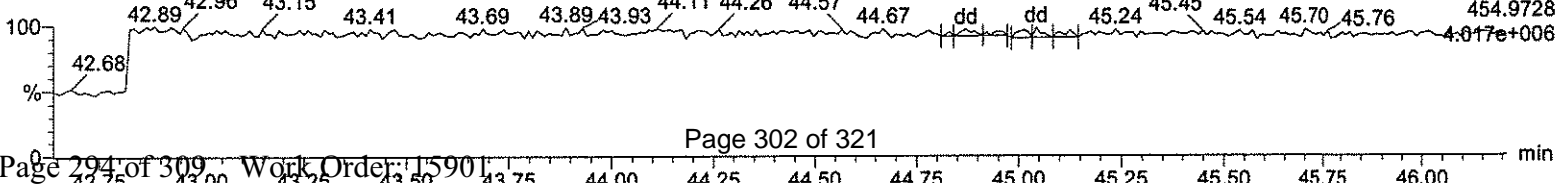
F5:Voltage SIR,EI+
513.6775
6.925e+003



Lock Mass F5

A14DEC19A-16

F5:Voltage SIR,EI+
454.9728
4.017e+006



Quantify Sample Summary Report
Method 8290 CCAL/Report

MassLynx 4.1
C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

Printed: Monday, December 16, 2019 16:39:11 Eastern Standard Time
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.47e5	1.84e5	3.31e5	31.12	1.001	0.80	NO	10.707	0.132	0.947	0.884	7.1	2.32e6	10553	219.9	3.00e6	15448	194.1	dd	db
2	12378-PeCDD	7.17e5	4.54e5	1.17e6	34.02	1.000	1.58	NO	54.095	0.0998	0.923	0.853	8.2	1.62e7	10998	1470.1	1.03e7	8332	1233.3	bb	bb
3	123478-HxCDD	6.21e5	4.98e5	1.12e6	36.60	0.998	1.25	NO	51.755	0.120	0.884	0.854	3.5	1.28e7	9418	1354.4	9.97e6	9480	1051.2	bd	bd
4	123678-HxCDD	7.04e5	5.63e5	1.27e6	36.66	1.000	1.25	NO	53.010	0.109	1.001	0.944	6.0	1.29e7	9418	1371.2	1.03e7	9480	1089.7	dd	dd
5	123789-HxCDD	6.81e5	5.40e5	1.22e6	36.92	1.007	1.26	NO	54.504	0.116	0.965	0.885	9.0	1.16e7	9418	1236.5	9.23e6	9480	973.7	dd	dd
6	1234678-HpCDD	4.81e5	4.76e5	9.57e5	39.94	1.000	1.01	NO	47.745	0.162	0.993	1.040	-4.5	6.86e6	7901	868.2	6.61e6	9332	708.6	bb	bd
7	OCDD	8.57e5	9.68e5	1.82e6	44.12	1.000	0.88	NO	102.270	0.221	0.993	0.971	2.3	9.09e6	11042	823.3	1.01e7	5031	2012.4	bd	bd
8	12378-TCDF	1.74e5	2.30e5	4.04e5	30.32	1.001	0.76	NO	9.621	0.0537	0.941	0.978	-3.8	1.99e6	4777	416.1	2.62e6	5542	473.3	bd	bd
9	12378-PeCDF	1.02e6	6.56e5	1.67e6	33.23	1.000	1.55	NO	47.561	0.0937	0.899	0.945	-4.9	2.44e7	12508	1948.7	1.59e7	17511	908.4	bd	bd
10	123478-PeCDF	1.14e6	7.43e5	1.88e6	33.84	1.019	1.54	NO	48.755	0.0854	1.011	1.037	-2.5	2.76e7	12508	2210.1	1.79e7	17511	1021.9	bb	bb
11	123478-HxCDF	8.49e5	6.79e5	1.53e6	35.89	0.997	1.25	NO	49.766	0.121	0.964	0.968	-0.5	1.82e7	13318	1367.6	1.47e7	14796	991.7	bd	bd
12	123678-HxCDF	9.35e5	7.50e5	1.68e6	35.99	1.000	1.25	NO	51.038	0.113	1.062	1.041	2.1	1.82e7	13318	1368.0	1.46e7	14796	984.1	db	db
13	234678-HxCDF	8.74e5	7.28e5	1.60e6	36.46	1.014	1.20	NO	51.252	0.119	1.010	0.985	2.5	1.73e7	13318	1300.5	1.42e7	14796	983.0	bb	bb
14	123789-HxCDF	7.55e5	6.13e5	1.37e6	37.22	1.035	1.23	NO	52.411	0.143	0.862	0.823	4.8	1.28e7	13318	982.1	1.04e7	14796	700.2	bb	bb
15	1234678-HpCDF	7.09e5	6.84e5	1.39e6	38.70	1.000	1.04	NO	53.117	0.127	1.222	1.150	6.2	1.16e7	12183	953.5	1.13e7	9471	1191.9	bb	bb
16	1234789-HpCDF	5.86e5	5.73e5	1.16e6	40.59	1.049	1.02	NO	54.300	0.156	1.017	0.936	8.6	8.00e6	12183	656.4	7.50e6	9471	792.0	bd	bd
17	OCDF	9.77e5	1.09e6	2.07e6	44.41	1.007	0.89	NO	99.414	0.223	1.126	1.133	-0.6	9.78e6	10971	891.2	1.10e7	7994	1371.2	bd	bd
18	13C-2378-TCDD	1.52e6	1.98e6	3.50e6	31.09	1.019	0.76	NO	103.327	0.0991	1.166	1.128	3.3	2.41e7	7829	3072.2	3.17e7	7671	4136.2	bb	bb
19	13C-12378-PeCDD	1.55e6	9.89e5	2.54e6	34.01	1.115	1.56	NO	112.500	0.174	0.845	0.751	12.5	3.46e7	10443	3313.2	2.27e7	7620	2980.2	bb	bb
20	13C-123678-HxCDD	1.41e6	1.13e6	2.53e6	36.67	0.993	1.25	NO	98.341	0.108	0.969	0.986	-1.7	2.56e7	7046	3631.2	2.07e7	11460	1809.4	dd	dd
21	13C-1234678-HpCDD	1.00e6	9.23e5	1.93e6	39.93	1.082	1.09	NO	109.887	0.136	0.738	0.672	9.9	1.33e7	7502	1772.7	1.31e7	8277	1582.9	bd	bb
22	13C-OCDD	1.72e6	1.95e6	3.67e6	44.10	1.195	0.88	NO	219.108	0.153	0.703	0.642	9.6	1.76e7	8200	2146.0	1.98e7	8864	2238.3	bd	bd
23	13C-2378-TCDF	1.87e6	2.42e6	4.29e6	30.29	0.993	0.77	NO	114.311	0.136	1.429	1.250	14.3	2.14e7	12338	1734.2	2.76e7	11192	2463.5	bb	bd
24	13C-12378-PeCDF	2.28e6	1.45e6	3.72e6	33.22	1.089	1.57	NO	122.822	0.187	1.241	1.011	22.8	5.18e7	12322	4206.0	3.34e7	13922	2401.9	bb	bb
25	13C-123678-HxCDF	1.12e6	2.06e6	3.17e6	35.98	0.975	0.54	NO	97.436	0.135	1.215	1.247	-2.6	2.11e7	13225	1592.3	3.98e7	16049	2476.9	dd	db
26	13C-1234678-HpCDF	7.01e5	1.58e6	2.28e6	38.69	1.048	0.44	NO	100.392	0.157	0.873	0.870	0.4	1.14e7	8688	1309.7	2.54e7	14935	1698.3	bb	bb
27	13C-1234-TCDD	1.31e6	1.69e6	3.00e6	30.52	0.000	0.78	NO	100.000	0.112	1.000	1.000	0.0	1.52e7	7829	1935.7	1.95e7	7671	2536.4	bb	bb
28	13C-123789-HxCDD	1.45e6	1.17e6	2.61e6	36.91	0.000	1.24	NO	100.000	0.107	1.000	1.000	0.0	2.40e7	7046	3402.3	1.92e7	11460	1676.9	dd	dd
29	37Cl-2378-TCDD (SS)	3.20e5		3.20e5	31.12	1.001			9.716	0.0218	0.914	0.940	-2.8	5.17e6	4560	1132.9				bb	
30	13C-23478-PeCDF (SS)	2.37e6	1.51e6	3.89e6	33.83	1.018	1.57	NO	99.084	0.0736	1.042	1.052	-0.9	5.65e7	12322	4584.6	3.54e7	13922	2544.2	bb	bb

Plantify Sample Summary Report

Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

Not Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time
 Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Sample Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

Peak Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31 13C-123478-HxCDF (SS)	9.51e5	1.82e6	2.77e6	35.88	0.997	0.52	NO	98.004	0.137	0.873	0.891	-2.0	2.06e7	13225	1560.9	3.89e7	16049	2420.8	bd	bd
32 13C-123478-HxCDD (SS)	1.25e6	1.00e6	2.25e6	36.59	0.998	1.25	NO	97.631	0.110	0.888	0.909	-2.4	2.48e7	7046	3522.1	1.97e7	11460	1721.7	bd	bd
33 13C-1234789-HpCDF (SS)	5.64e5	1.26e6	1.83e6	40.58	1.049	0.45	NO	102.907	0.205	0.801	0.779	2.9	7.59e6	8688	873.6	1.69e7	14935	1134.2	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

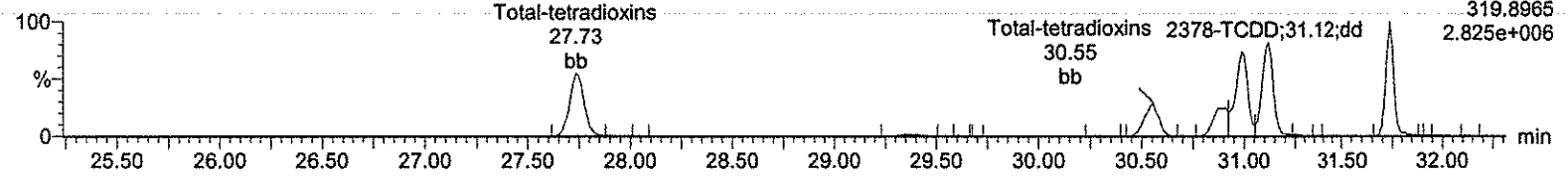
Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

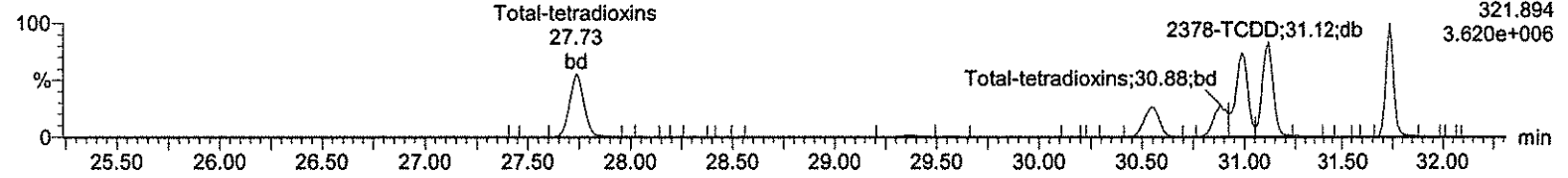
Total-tetradoxins

A14DEC19A_2-14



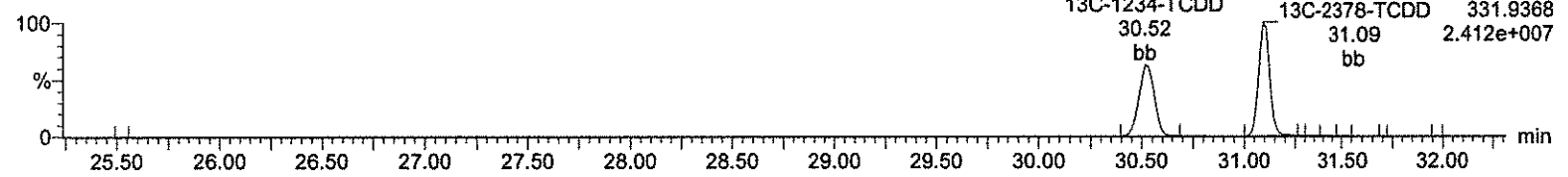
Total-tetradoxins

A14DEC19A_2-14



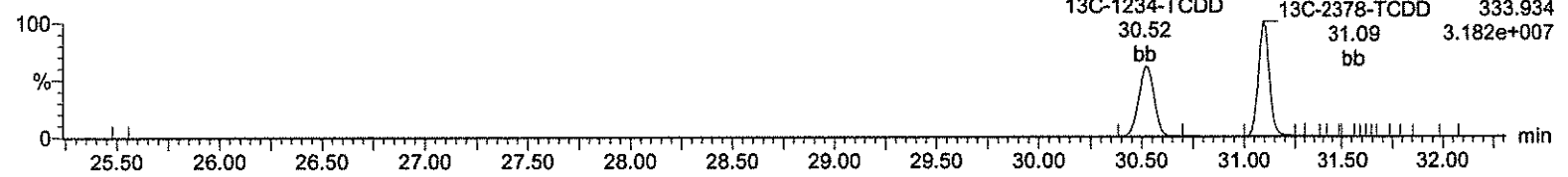
13C-2378-TCDD

A14DEC19A_2-14



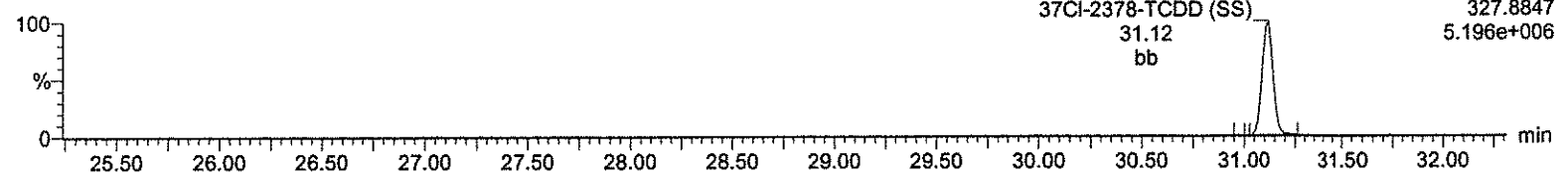
13C-2378-TCDD

A14DEC19A_2-14



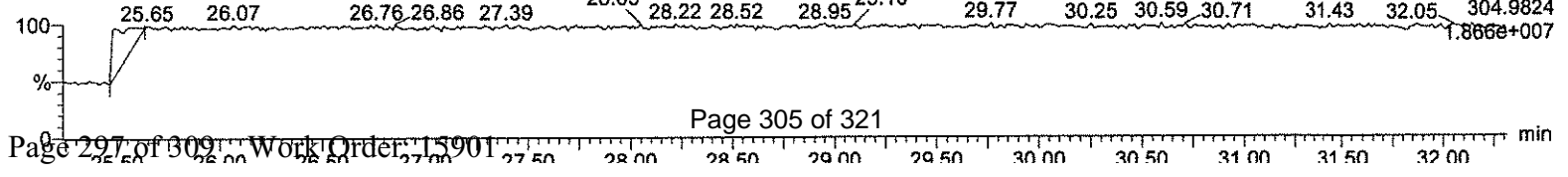
37Cl-2378-TCDD (SS)

A14DEC19A_2-14



Lock Mass F1

A14DEC19A_2-14



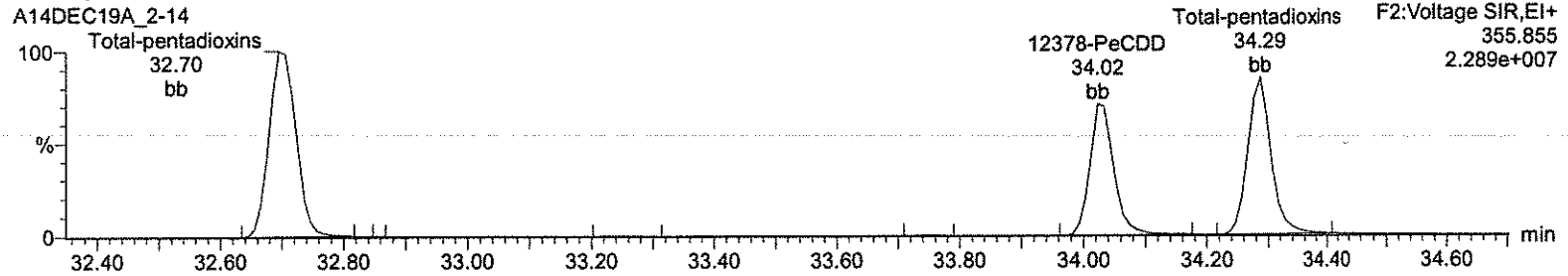
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

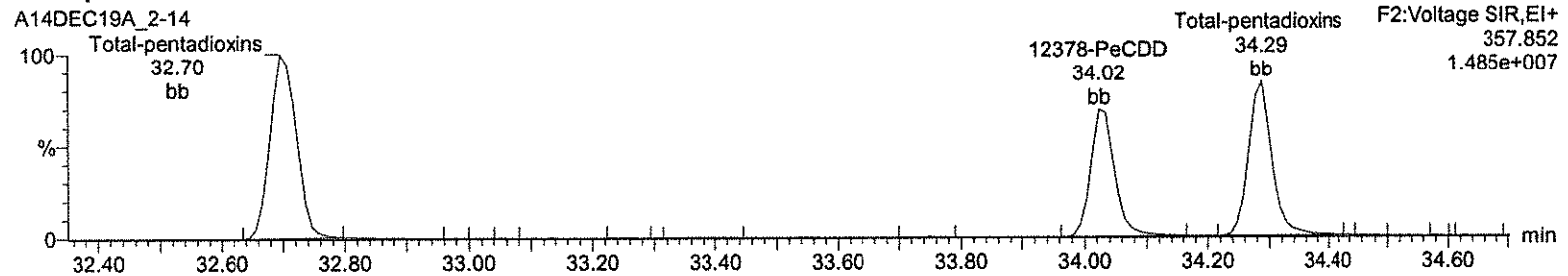
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

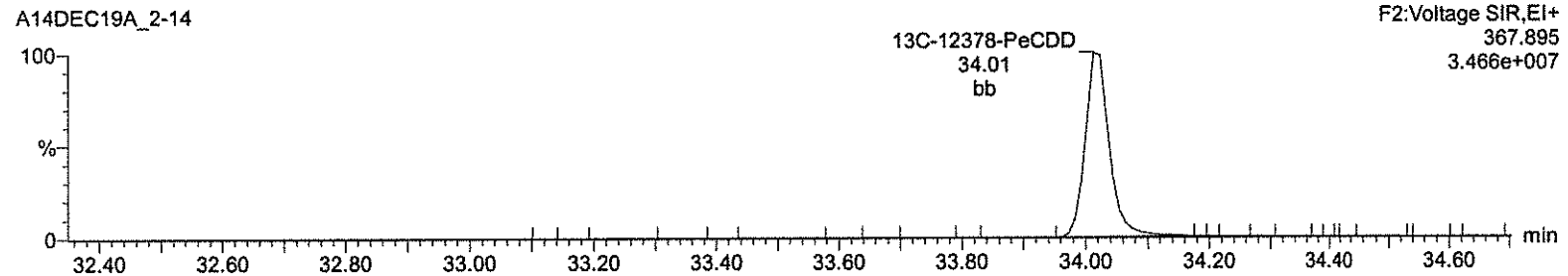
Total-pentadioxins



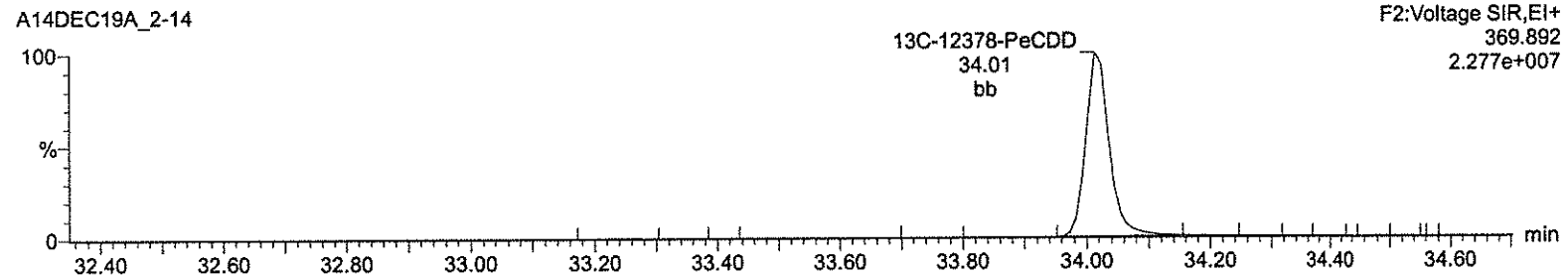
Total-pentadioxins



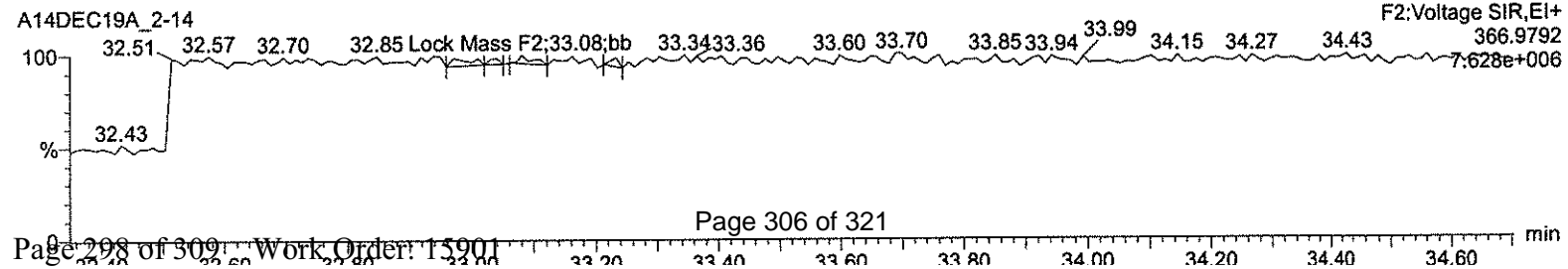
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



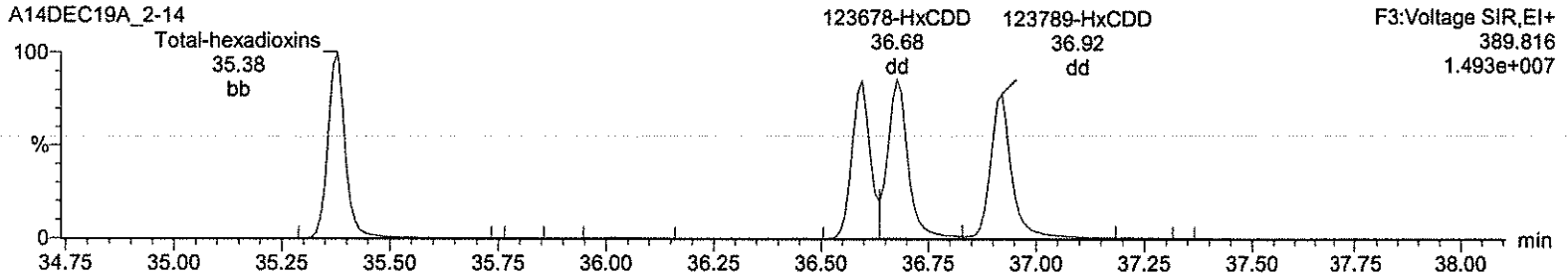
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Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

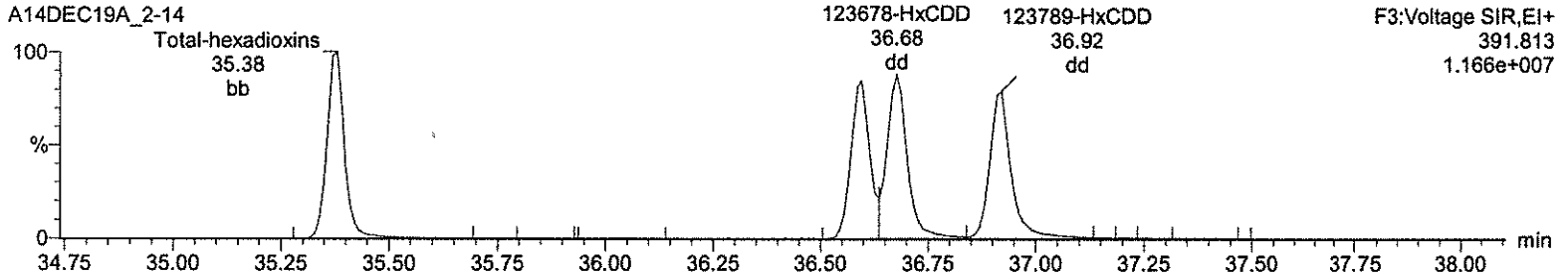
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

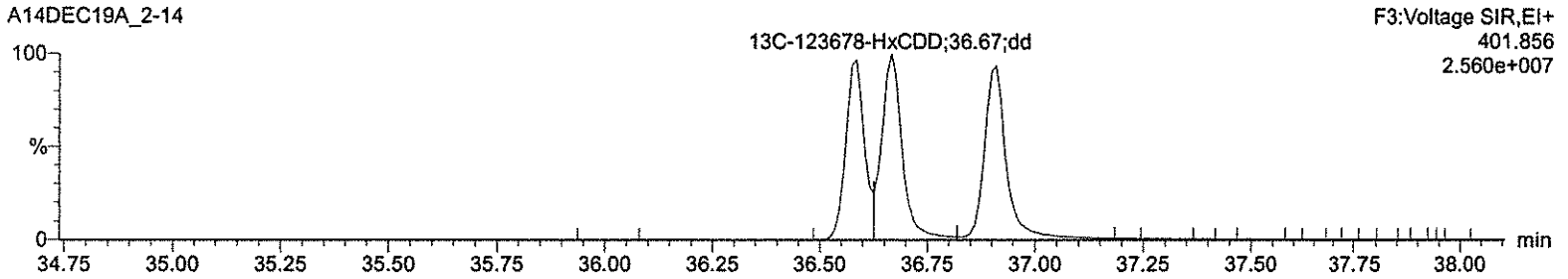
Total-hexadioxins



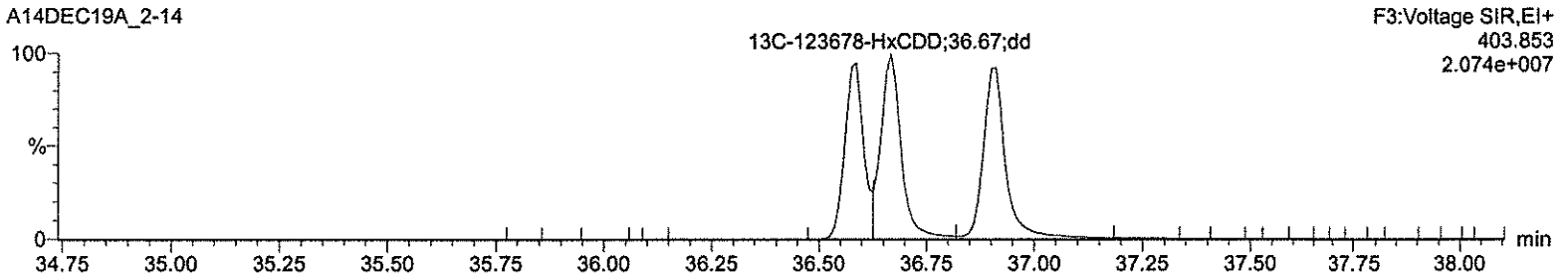
Total-hexadioxins



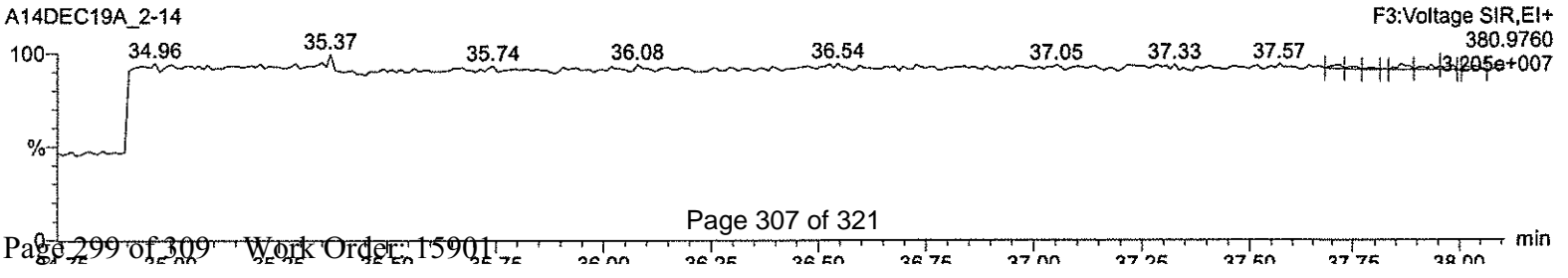
13C-123678-HxCDD



13C-123678-HxCDD



Lock Mass F3

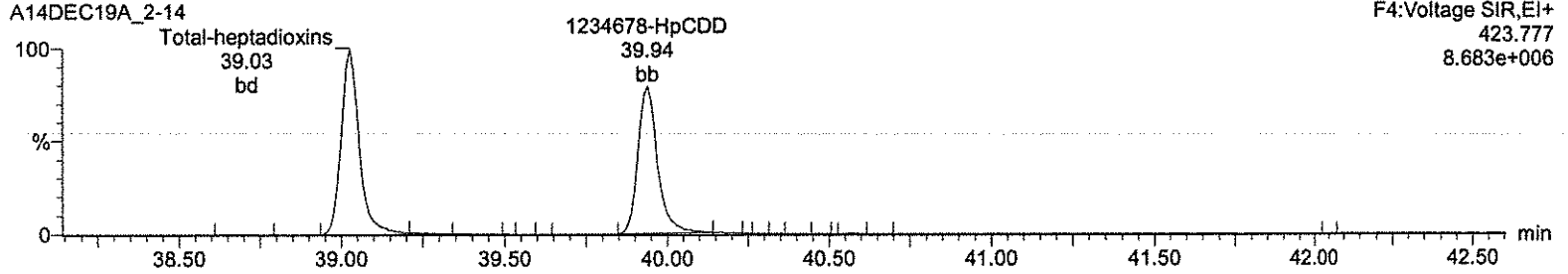


Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

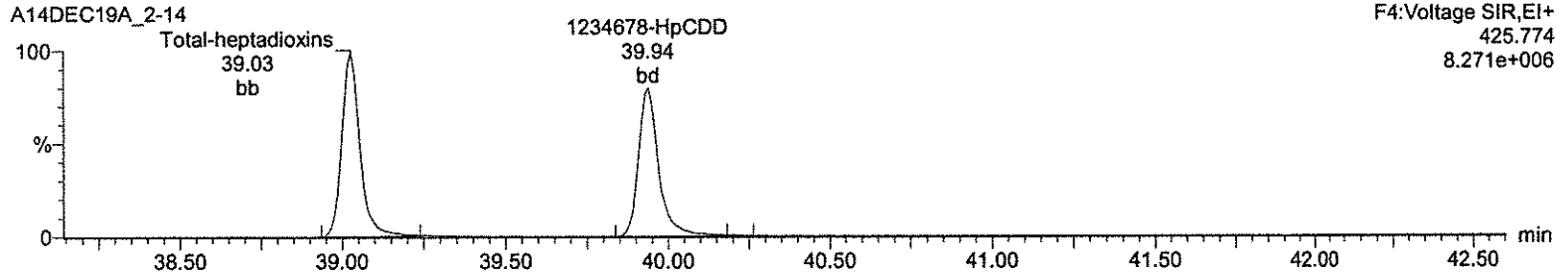
Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

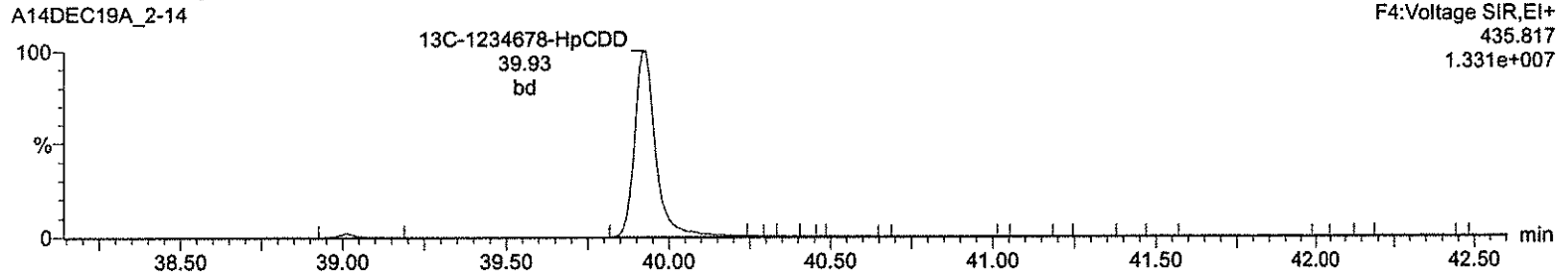
Total-heptadioxins



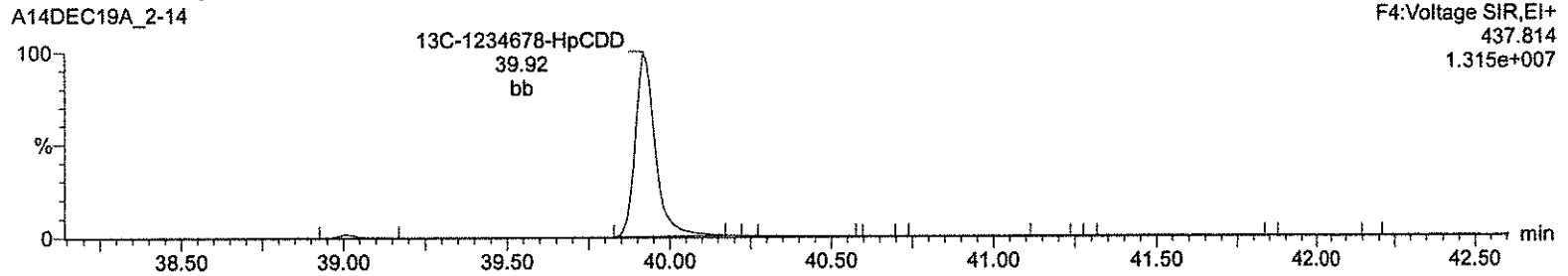
Total-heptadioxins



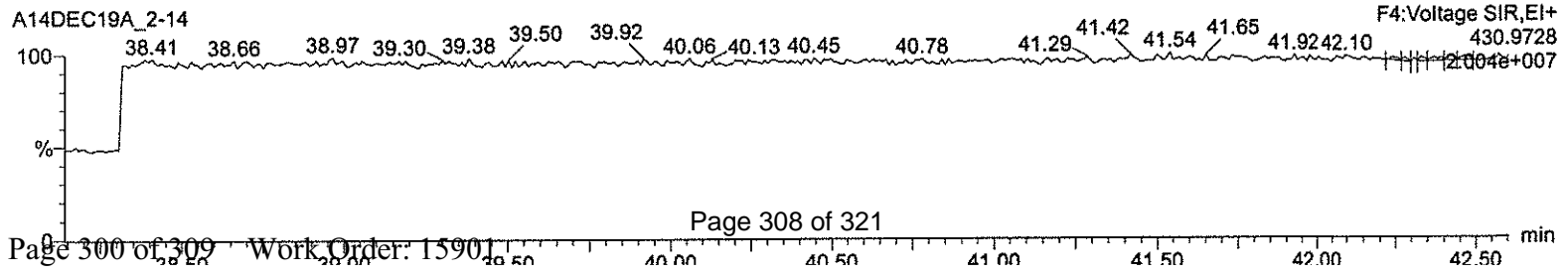
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

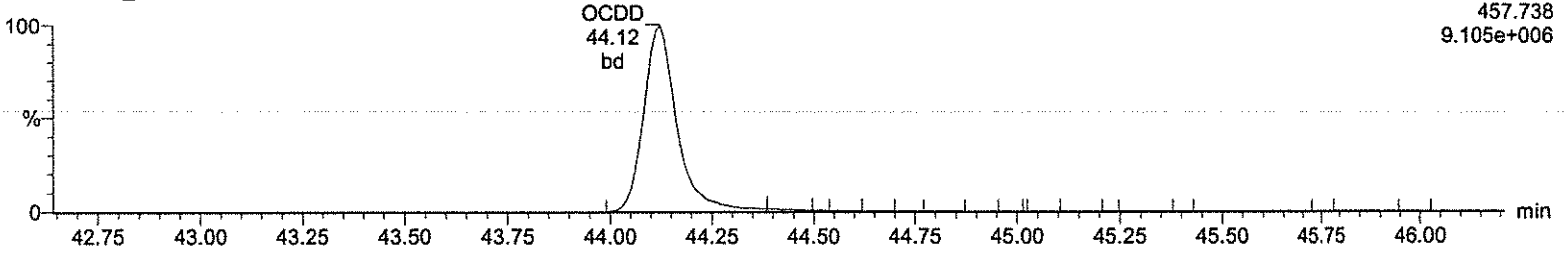
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

OCDD

A14DEC19A_2-14

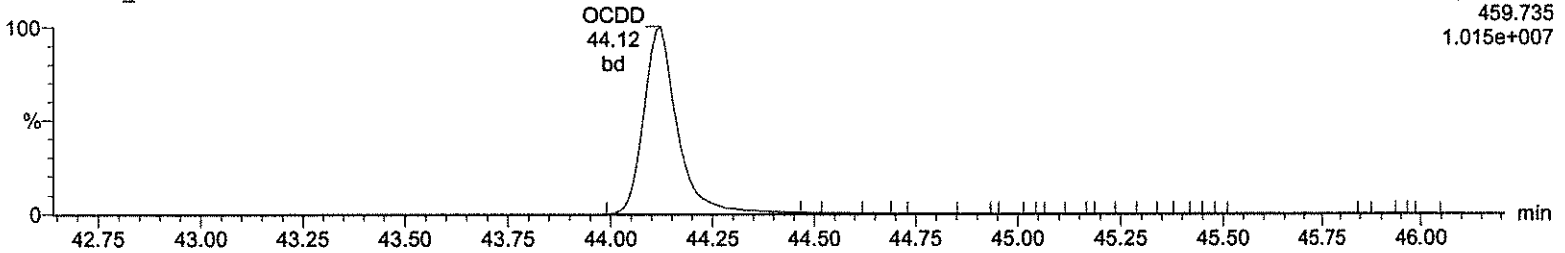
F5:Voltage SIR,EI+
457.738
9.105e+006



OCDD

A14DEC19A_2-14

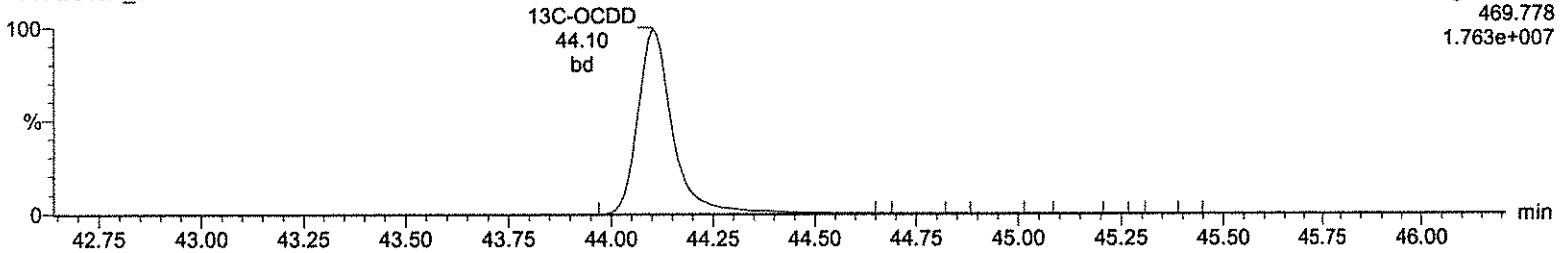
F5:Voltage SIR,EI+
459.735
1.015e+007



13C-OCDD

A14DEC19A_2-14

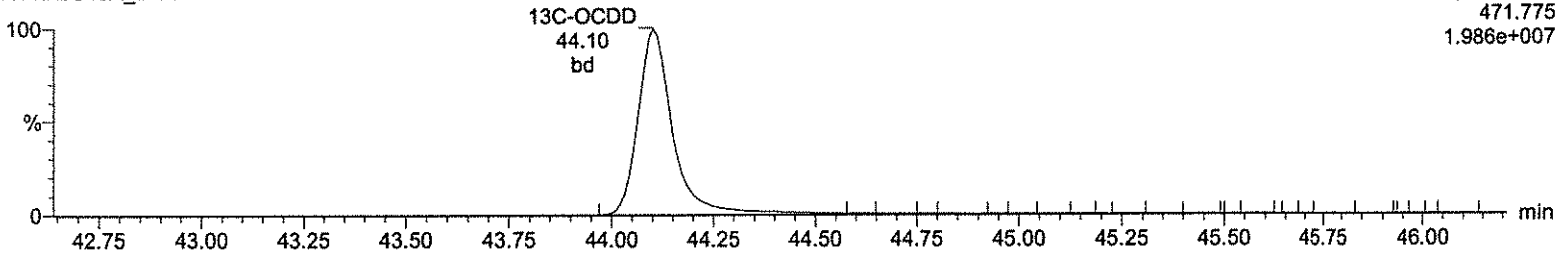
F5:Voltage SIR,EI+
469.778
1.763e+007



13C-OCDD

A14DEC19A_2-14

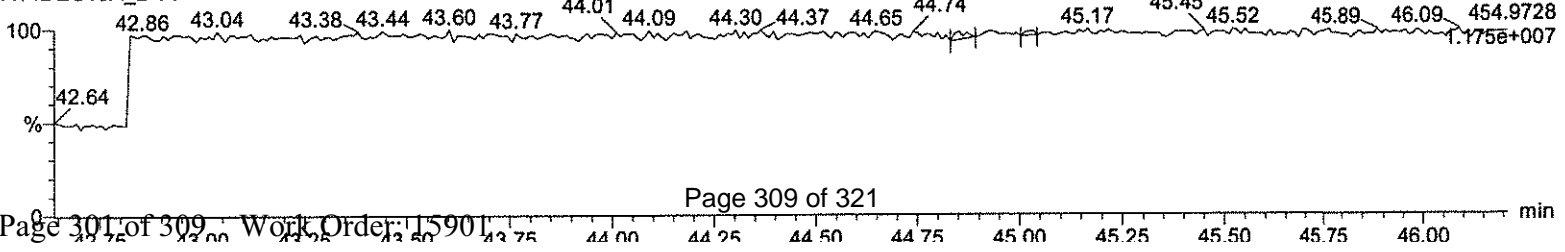
F5:Voltage SIR,EI+
471.775
1.986e+007



Lock Mass F5

A14DEC19A_2-14

F5:Voltage SIR,EI+
454.9728
1.175e+007



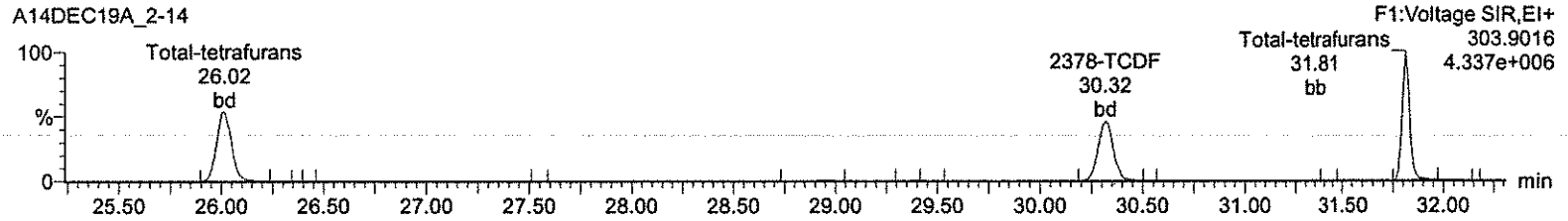
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

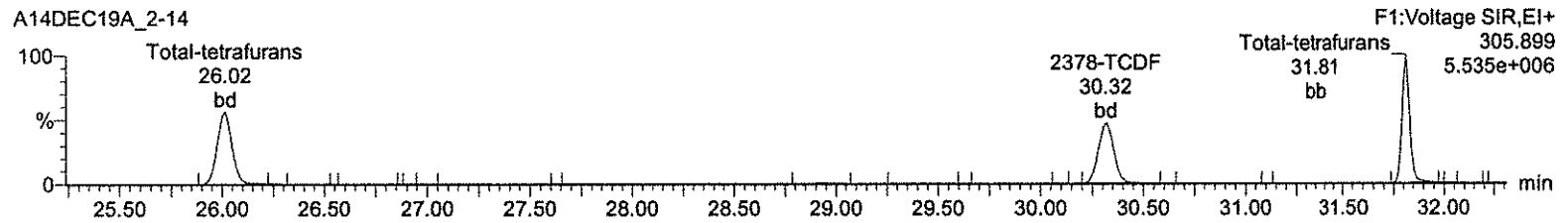
Total-tetrafurans

A14DEC19A_2-14



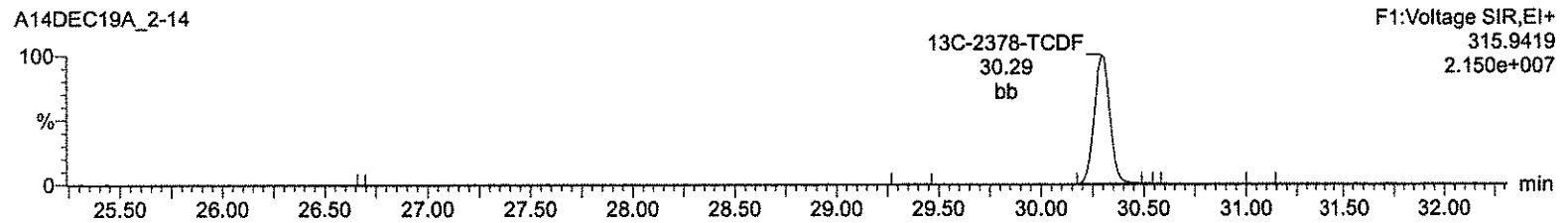
Total-tetrafurans

A14DEC19A_2-14



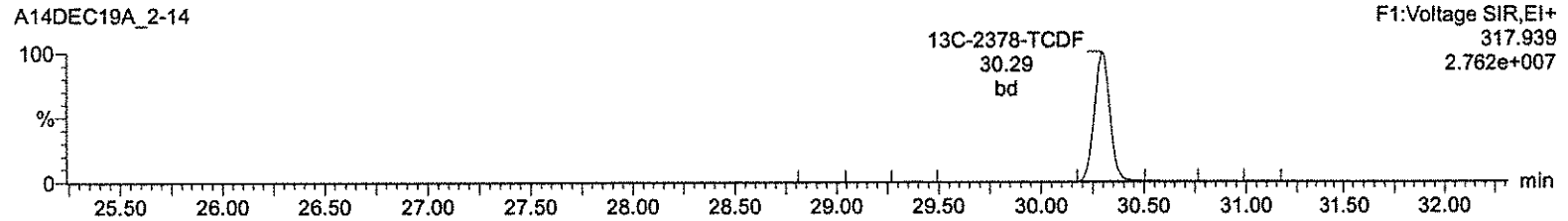
13C-2378-TCDF

A14DEC19A_2-14



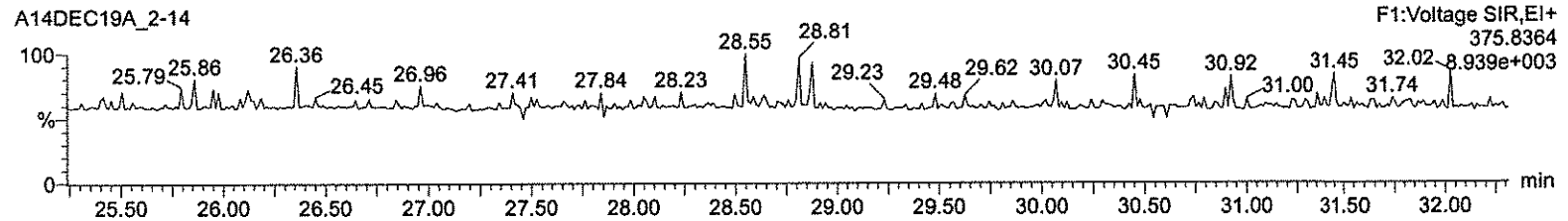
13C-2378-TCDF

A14DEC19A_2-14



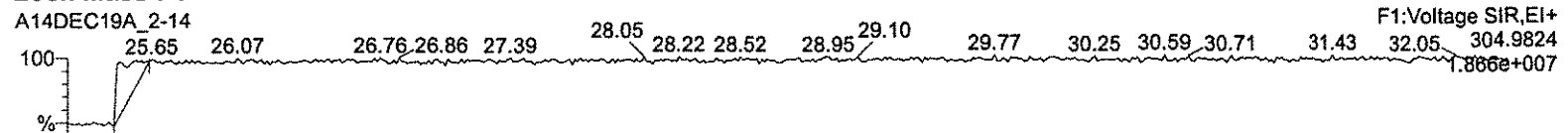
HxDPE

A14DEC19A_2-14



Lock Mass F1

A14DEC19A_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

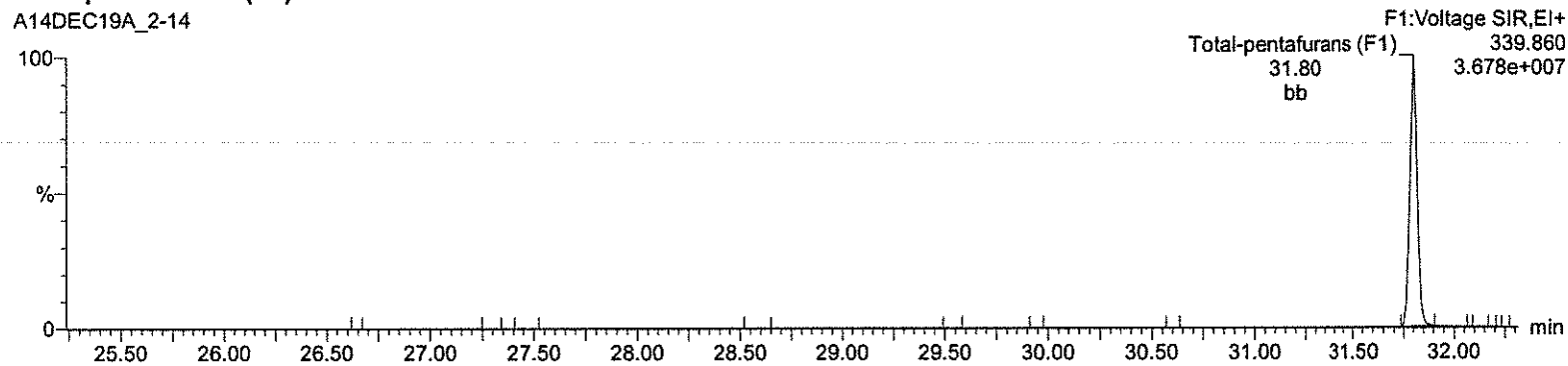
Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: ,
Job: A14DEC19A_2, Task: HRP750_2, User: MJC

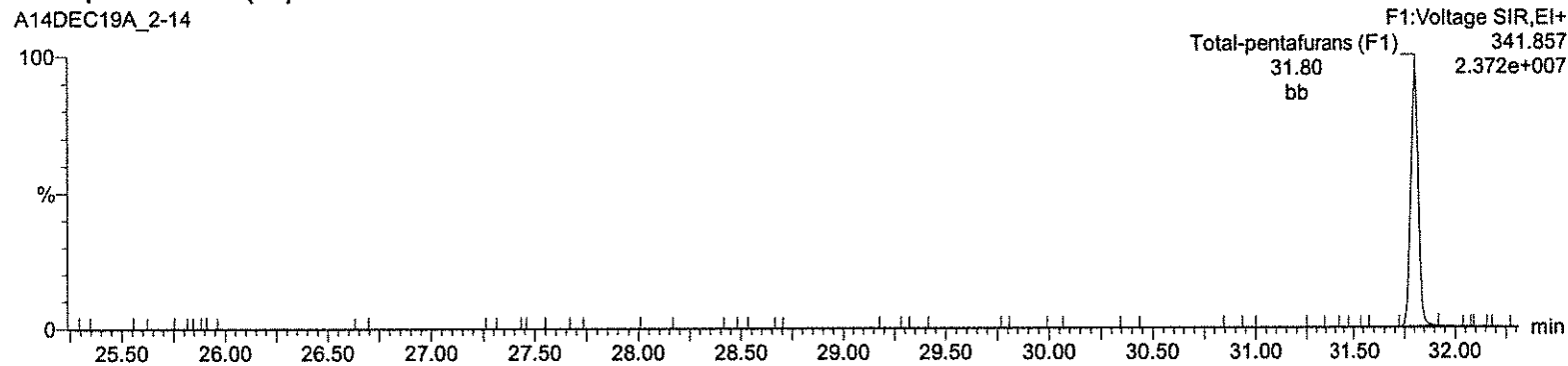
Total-pentafurans (F1)

A14DEC19A_2-14



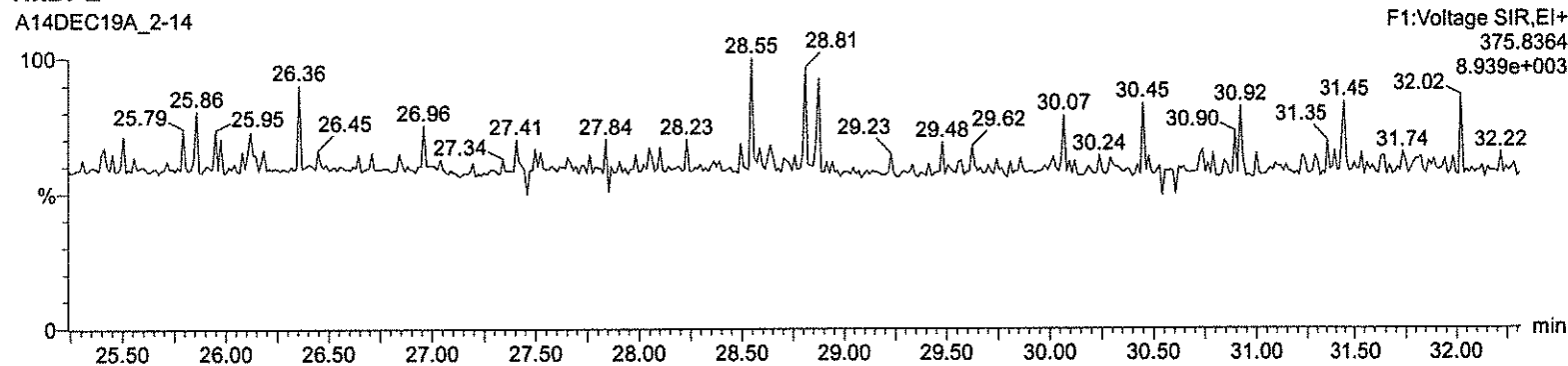
Total-pentafurans (F1)

A14DEC19A_2-14



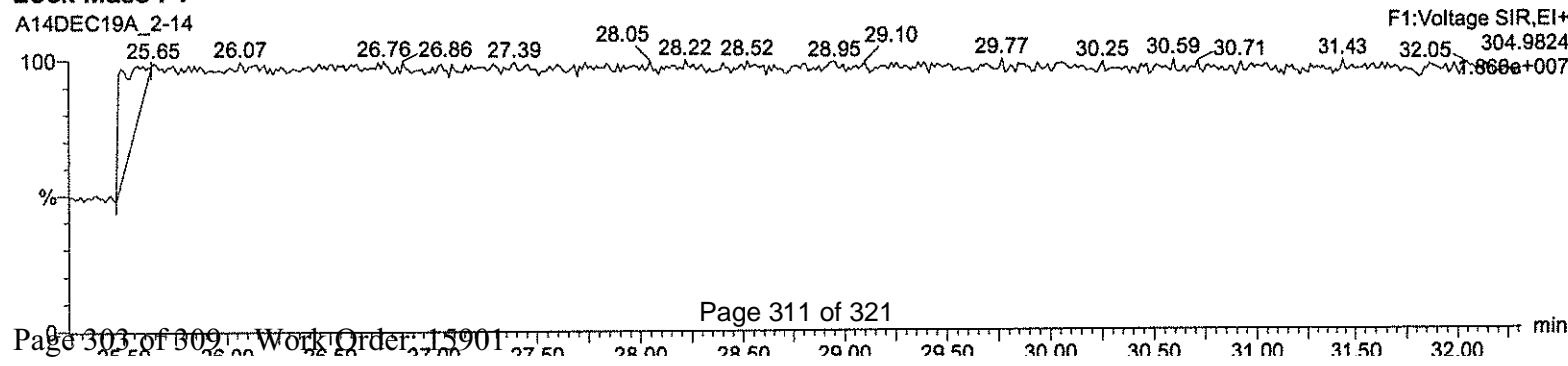
HxDPE

A14DEC19A_2-14



Lock Mass F1

A14DEC19A_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

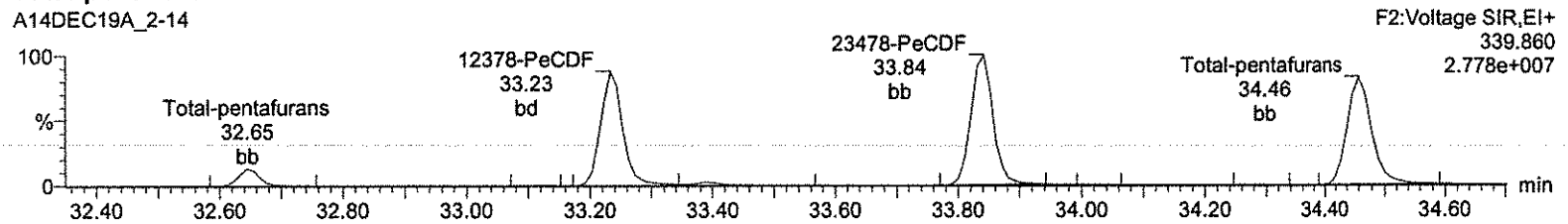
Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

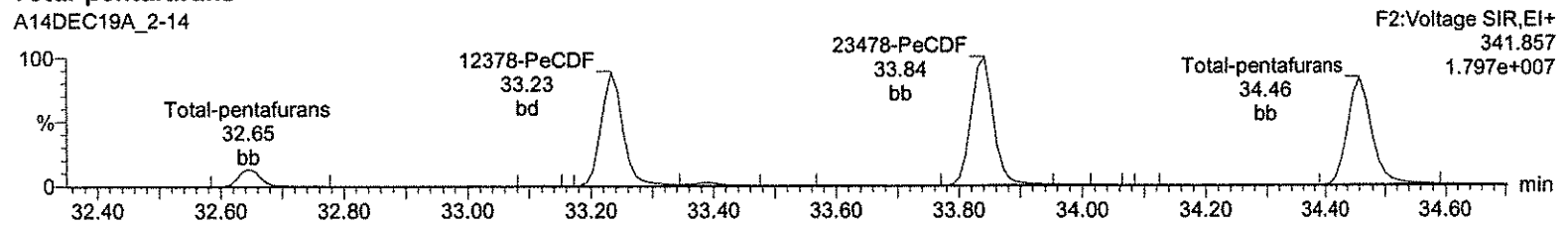
Total-pentafurans

A14DEC19A_2-14



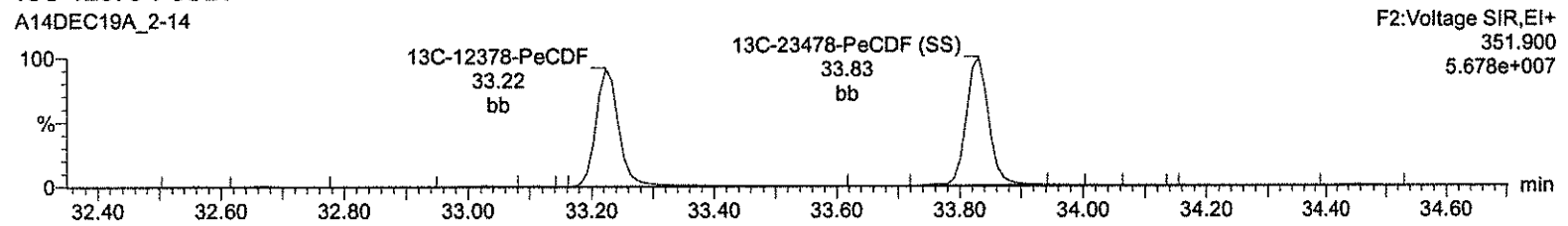
Total-pentafurans

A14DEC19A_2-14



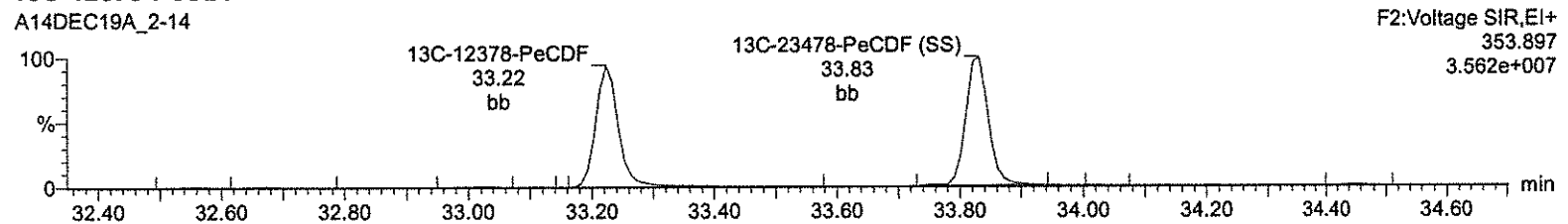
13C-12378-PeCDF

A14DEC19A_2-14



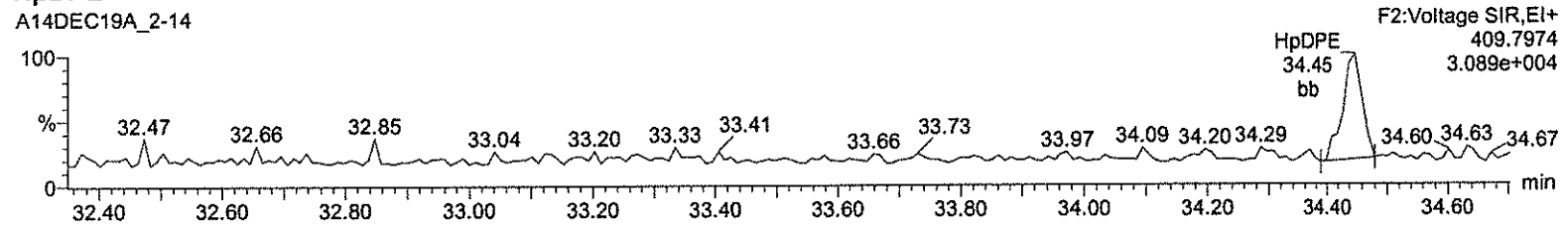
13C-12378-PeCDF

A14DEC19A_2-14



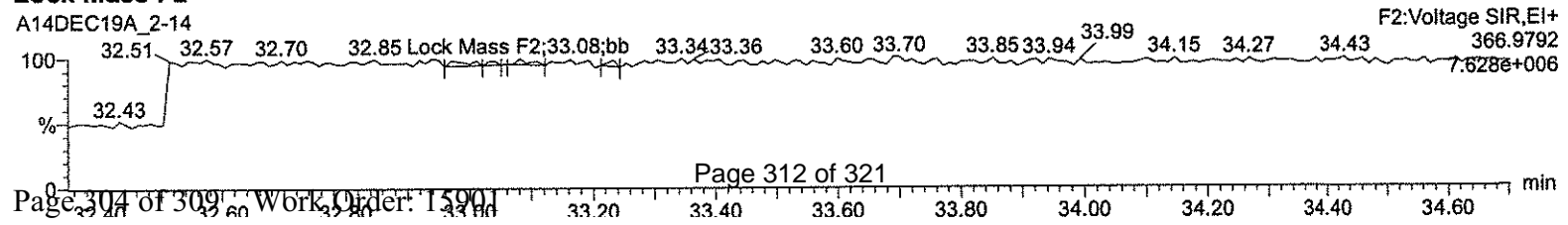
HpDPE

A14DEC19A_2-14



Lock Mass F2

A14DEC19A_2-14



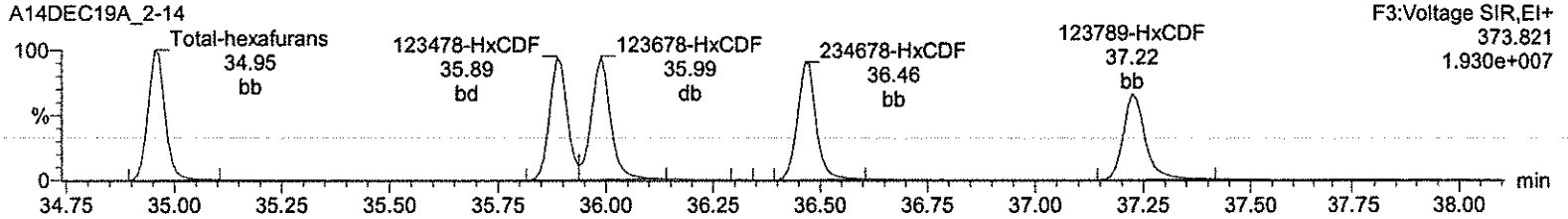
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Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

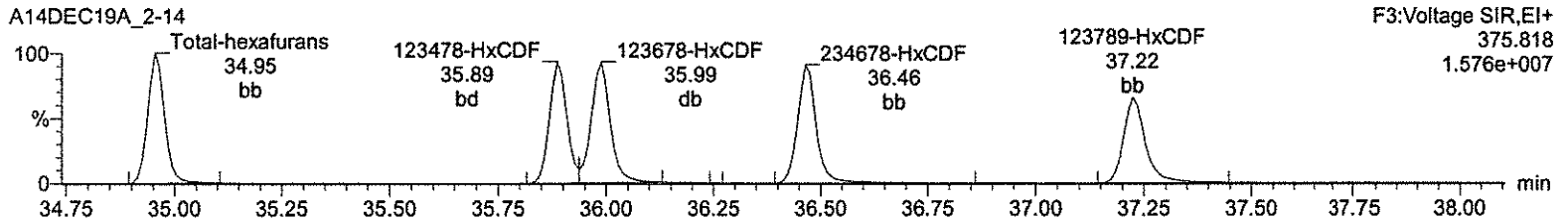
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

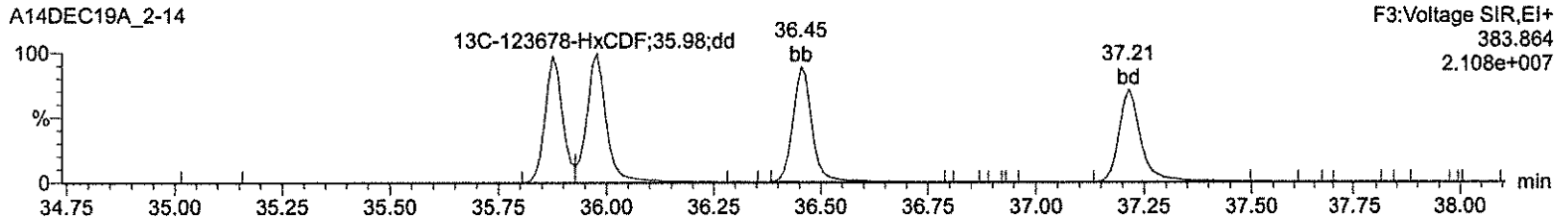
Total-hexafurans



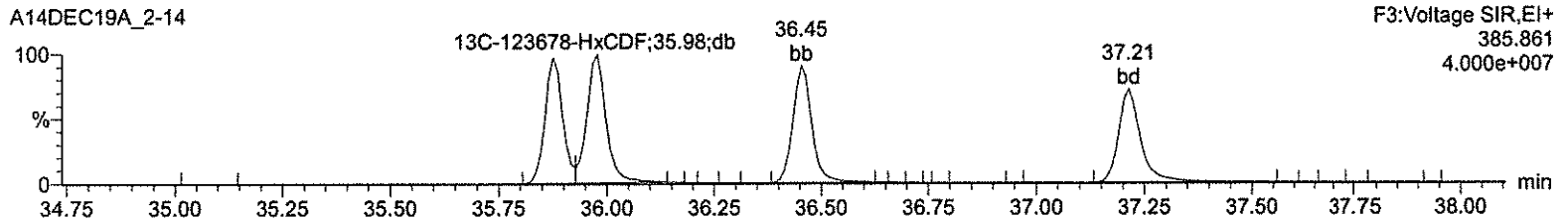
Total-hexafurans



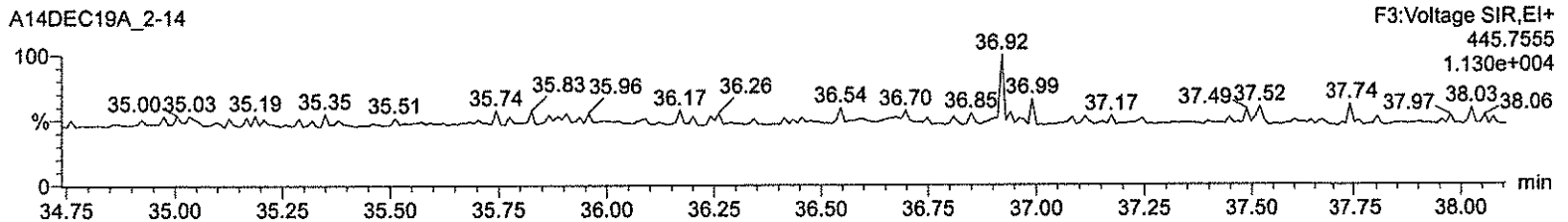
13C-123678-HxCDF



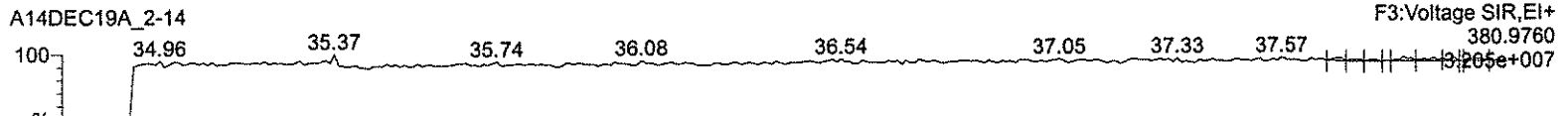
13C-123678-HxCDF



OcDPE



Lock Mass F3



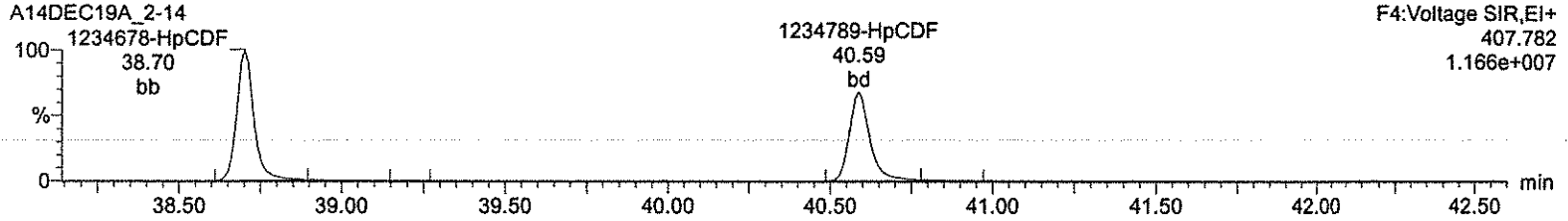
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Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

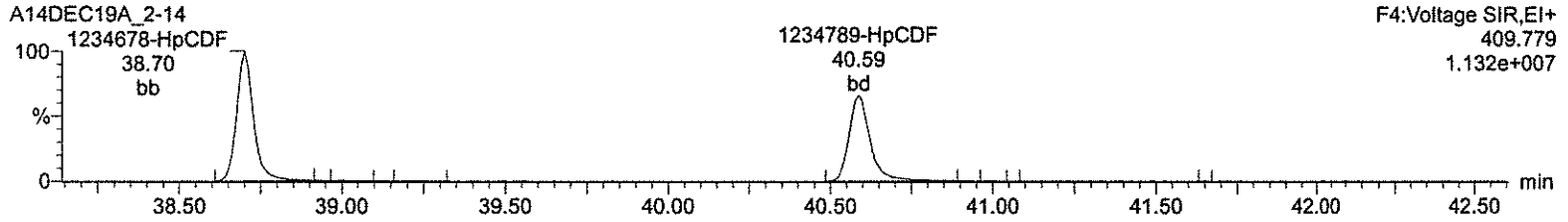
Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

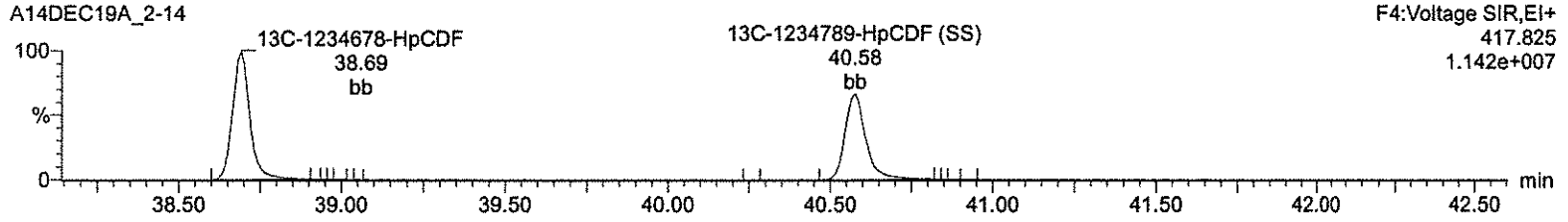
Total-heptafurans



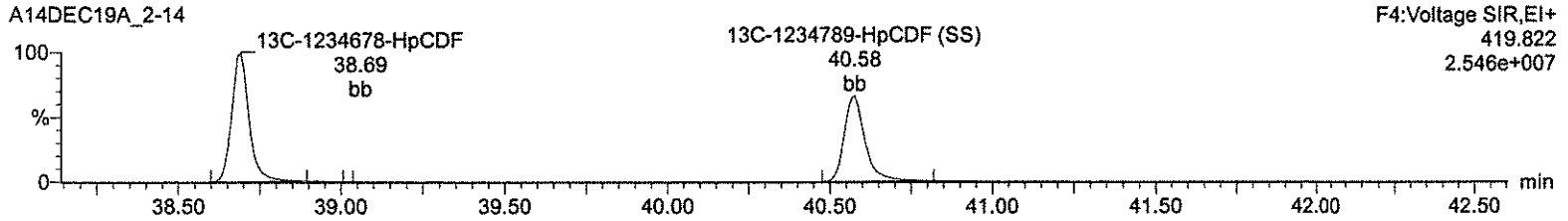
Total-heptafurans



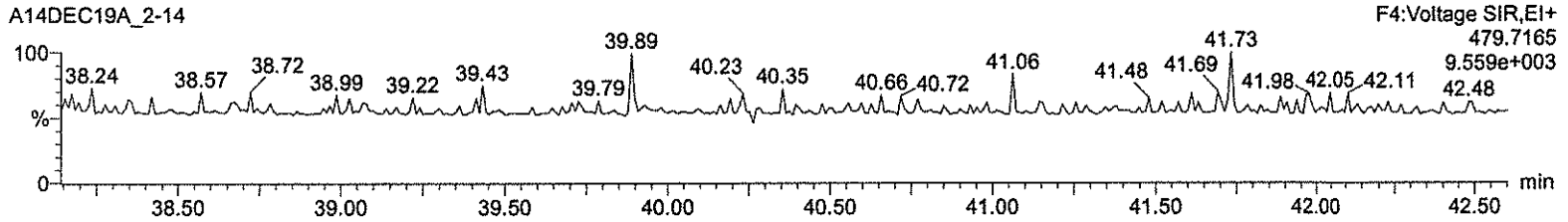
13C-1234678-HpCDF



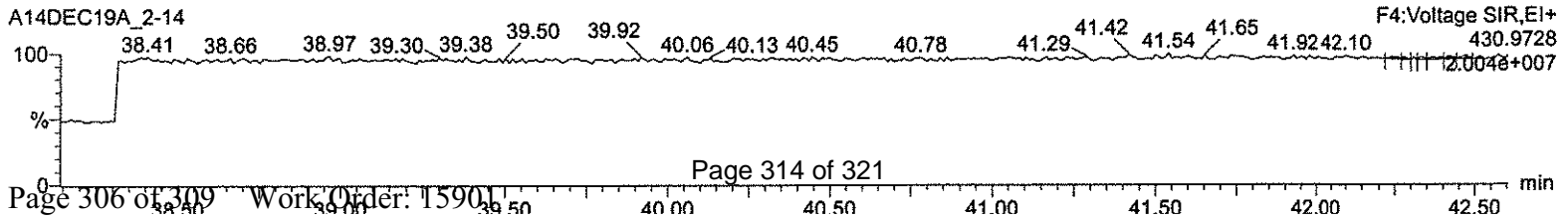
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A14DEC19A_2-14.qld

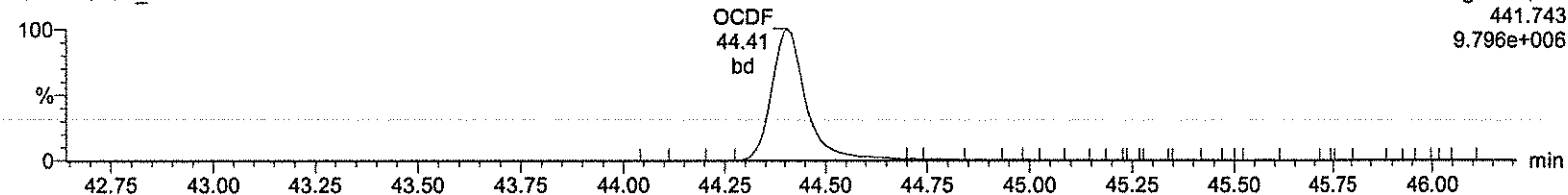
Last Altered: Monday, December 16, 2019 16:39:11 Eastern Standard Time

Printed: Monday, December 16, 2019 16:41:35 Eastern Standard Time

Name: A14DEC19A_2-14, Date: 15-Dec-2019, Time: 10:50:43, ID: CS3WT UD191018-02.1 CPS5G, Description: , Job: A14DEC19A_2, Task: HRP750_2, User: MJC

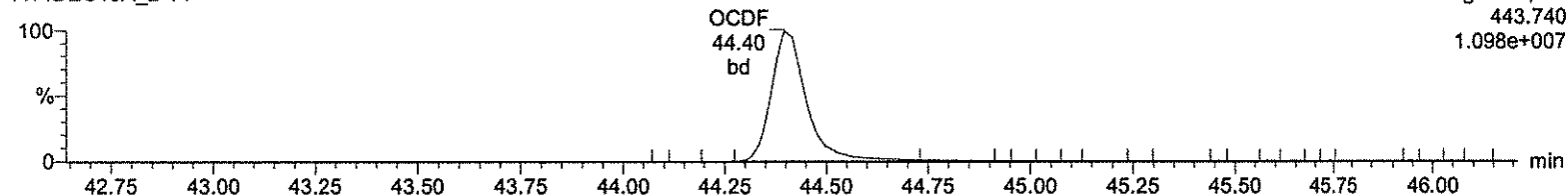
OCDF

A14DEC19A_2-14



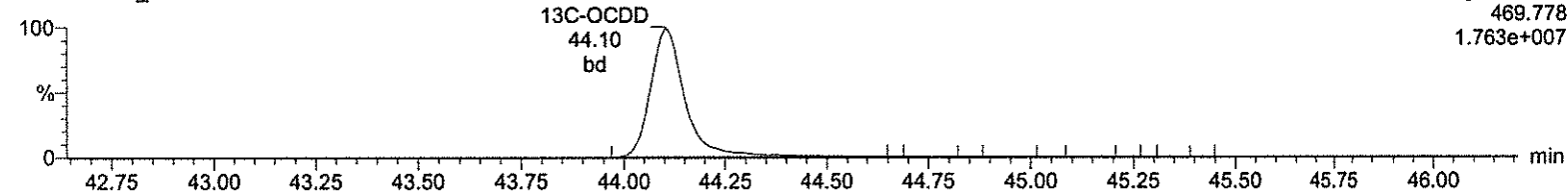
OCDF

A14DEC19A_2-14



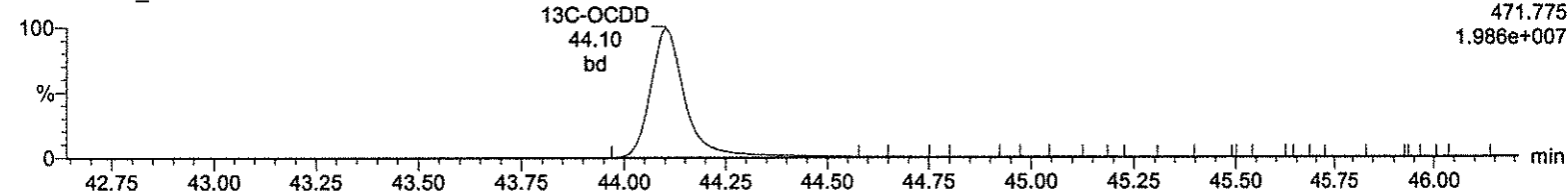
13C-OCDD

A14DEC19A_2-14



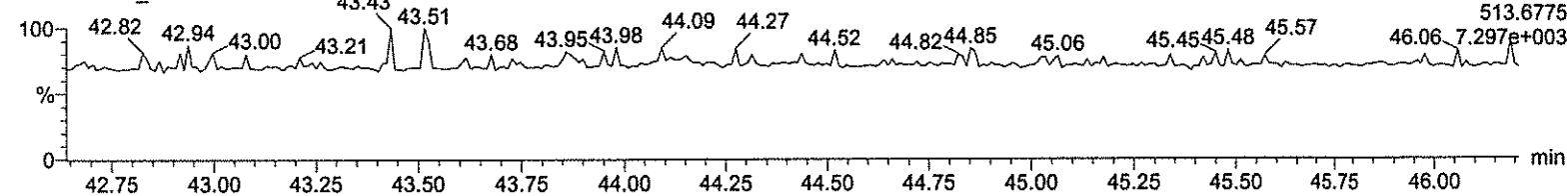
13C-OCDD

A14DEC19A_2-14



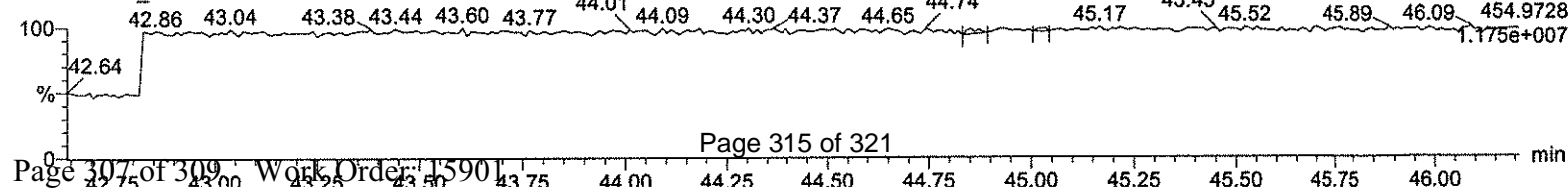
DeDPE

A14DEC19A_2-14



Lock Mass F5

A14DEC19A_2-14



Miscellaneous

No non conformance reports were generated for this work order

Subcontract Data

Shipping and Receiving Documents

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-14372-2

Login Number: 14372

List Source: Eurofins Calscience

List Number: 1

Creator: Le, Danny

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 570-14631-1

Job Description: CH661 / 692670.61.SW

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Jimmy Jin
Project Manager I
12/24/2019 10:50 AM

Designee for
Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
12/24/2019

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Geotechnical

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CH661 / 692670.61.SW

Report Number: 570-14631-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/04/2019 at 4:10 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.6 degrees Celsius.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 degrees Celsius of the required temperature or method specified range. For samples with a specified temperature of 4 degrees Celsius, samples with a temperature ranging from just above freezing temperature of water to 6 degrees Celsius shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DISSOLVED METALS (ICPMS)

Samples A2BMP0007S019 (570-14631-1), A2BMP0012S008 (570-14631-2) and EVBMP0003S030 (570-14631-3) were analyzed for dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were analyzed on 12/13/2019.

The following samples were not filtered within 15 minutes of sample collection as required by the method: A2BMP0007S019 (570-14631-1), A2BMP0012S008 (570-14631-2) and EVBMP0003S030 (570-14631-3). The sample(s) was filtered prior to analysis at the laboratory, and the results have been reported.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Samples A2BMP0007S019 (570-14631-1), A2BMP0012S008 (570-14631-2) and EVBMP0003S030 (570-14631-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 12/12/2019 and analyzed on 12/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples A2BMP0007S019 (570-14631-1), A2BMP0012S008 (570-14631-2) and EVBMP0003S030 (570-14631-3) were analyzed for dissolved mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 12/10/2019.

The following samples were not filtered within 15 minutes of sample collection as required by the method: A2BMP0007S019 (570-14631-1), A2BMP0012S008 (570-14631-2) and EVBMP0003S030 (570-14631-3). The sample(s) was filtered prior to analysis at the laboratory, and the results have been reported.

Mercury failed the recovery criteria low for the MSD of sample 570-14597-1 in batch 570-38034. Mercury exceeded the RPD limit.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Samples A2BMP0007S019 (570-14631-1), A2BMP0012S008 (570-14631-2) and EVBMP0003S030 (570-14631-3) were analyzed for total

mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared on 12/08/2019 and analyzed on 12/09/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS

Samples A2BMP0007S019 (570-14631-1), A2BMP0012S008 (570-14631-2) and EVBMP0003S030 (570-14631-3) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 12/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PARTICLE SIZE

Samples A2BMP0007S019 (570-14631-1), A2BMP0012S008 (570-14631-2) and EVBMP0003S030 (570-14631-3) were analyzed for Particle Size in accordance with ASTM D 4464. The samples were analyzed on 12/09/2019.

The sample duplicate precision for the following sample associated with analytical batch 570-37903 was outside control limits: EVBMP0003S030 (570-14631-3) and (570-14631-D-3 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TURBIDITY

Sample A2BMP0012S008 (570-14631-2) was analyzed for turbidity in accordance with SM 2130B. The samples were analyzed on 12/04/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Client Sample ID: A2BMP0007S019

Lab Sample ID: 570-14631-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00198		0.00100	0.000140	mg/L	1		200.8	Total Recoverable
Lead	0.000503	J	0.00100	0.0000898	mg/L	1		200.8	Total Recoverable
Total Suspended Solids	4.60		1.00	0.829	mg/L	1		SM 2540D	Total/NA
Fine Sand (0.125 to 0.25mm)	22.48		0.01	0.01	%	1		D4464	Total/NA
Medium Sand (0.25 to 0.5 mm)	47.69		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	11.24		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	11.24		0.01	0.01	%	1		D4464	Total/NA
Very Fine Sand (0.0625 to 0.125 mm)	18.59		0.01	0.01	%	1		D4464	Total/NA

Client Sample ID: A2BMP0012S008

Lab Sample ID: 570-14631-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00269		0.00100	0.000140	mg/L	1		200.8	Total Recoverable
Lead	0.00101		0.00100	0.0000898	mg/L	1		200.8	Total Recoverable
Copper	0.000341	J H	0.00100	0.000140	mg/L	1		200.8	Dissolved
Turbidity	5.73		0.0500	0.0439	NTU	1		SM 2130B	Total/NA
Total Suspended Solids	4.00		1.00	0.829	mg/L	1		SM 2540D	Total/NA
Fine Sand (0.125 to 0.25mm)	30.79		0.01	0.01	%	1		D4464	Total/NA
Medium Sand (0.25 to 0.5 mm)	23.99		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	16.64		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	16.64		0.01	0.01	%	1		D4464	Total/NA
Very Fine Sand (0.0625 to 0.125 mm)	28.58		0.01	0.01	%	1		D4464	Total/NA

Client Sample ID: EVBMP0003S030

Lab Sample ID: 570-14631-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00531		0.00100	0.000140	mg/L	1		200.8	Total Recoverable
Lead	0.00428		0.00100	0.0000898	mg/L	1		200.8	Total Recoverable
Total Suspended Solids	63.0		2.50	2.07	mg/L	1		SM 2540D	Total/NA
Clay(less than 0.00391 mm)	1.44		0.01	0.01	%	1		D4464	Total/NA
Fine Sand (0.125 to 0.25mm)	35.99		0.01	0.01	%	1		D4464	Total/NA
Medium Sand (0.25 to 0.5 mm)	6.84		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	29.27		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	30.71		0.01	0.01	%	1		D4464	Total/NA
Very Fine Sand (0.0625 to 0.125 mm)	26.46		0.01	0.01	%	1		D4464	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: A2BMP0007S019
Date Collected: 12/04/19 07:52
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L		12/12/19 08:00	12/14/19 00:51	1
Copper	0.00198		0.00100	0.000140	mg/L		12/12/19 08:00	12/14/19 00:51	1
Lead	0.000503	J	0.00100	0.0000898	mg/L		12/12/19 08:00	12/14/19 00:51	1

Client Sample ID: A2BMP0012S008
Date Collected: 12/04/19 07:40
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L		12/12/19 08:00	12/14/19 00:53	1
Copper	0.00269		0.00100	0.000140	mg/L		12/12/19 08:00	12/14/19 00:53	1
Lead	0.00101		0.00100	0.0000898	mg/L		12/12/19 08:00	12/14/19 00:53	1

Client Sample ID: EVBMP0003S030
Date Collected: 12/04/19 07:32
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L		12/12/19 08:00	12/14/19 00:56	1
Copper	0.00531		0.00100	0.000140	mg/L		12/12/19 08:00	12/14/19 00:56	1
Lead	0.00428		0.00100	0.0000898	mg/L		12/12/19 08:00	12/14/19 00:56	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Client Sample ID: A2BMP0007S019
Date Collected: 12/04/19 07:52
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000128	mg/L			12/13/19 02:20	1
Copper	ND	H	0.00100	0.000140	mg/L			12/13/19 02:20	1
Lead	ND	H	0.00100	0.0000898	mg/L			12/13/19 02:20	1

Client Sample ID: A2BMP0012S008
Date Collected: 12/04/19 07:40
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000128	mg/L			12/13/19 02:23	1
Copper	0.000341	J H	0.00100	0.000140	mg/L			12/13/19 02:23	1
Lead	ND	H	0.00100	0.0000898	mg/L			12/13/19 02:23	1

Client Sample ID: EVBMP0003S030
Date Collected: 12/04/19 07:32
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000128	mg/L			12/13/19 02:25	1
Copper	ND	H	0.00100	0.000140	mg/L			12/13/19 02:25	1
Lead	ND	H	0.00100	0.0000898	mg/L			12/13/19 02:25	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: A2BMP0007S019

Date Collected: 12/04/19 07:52

Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/08/19 10:30	12/09/19 17:33	1

Client Sample ID: A2BMP0012S008

Date Collected: 12/04/19 07:40

Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/08/19 10:30	12/09/19 17:36	1

Client Sample ID: EVBMP0003S030

Date Collected: 12/04/19 07:32

Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/08/19 10:30	12/09/19 17:38	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: 245.1 - Mercury (CVAA) - Dissolved

Client Sample ID: A2BMP0007S019

Date Collected: 12/04/19 07:52

Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		12/10/19 17:50	12/10/19 22:18	1

Client Sample ID: A2BMP0012S008

Date Collected: 12/04/19 07:40

Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		12/10/19 17:50	12/10/19 22:21	1

Client Sample ID: EVBMP0003S030

Date Collected: 12/04/19 07:32

Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		12/10/19 17:50	12/10/19 22:23	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

General Chemistry

Client Sample ID: A2BMP0007S019
Date Collected: 12/04/19 07:52
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.60		1.00	0.829	mg/L			12/07/19 10:00	1

Client Sample ID: A2BMP0012S008
Date Collected: 12/04/19 07:40
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	5.73		0.0500	0.0439	NTU			12/04/19 20:20	1
Total Suspended Solids	4.00		1.00	0.829	mg/L			12/07/19 10:00	1

Client Sample ID: EVBMP0003S030
Date Collected: 12/04/19 07:32
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	63.0		2.50	2.07	mg/L			12/07/19 10:00	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Client Sample ID: A2BMP0007S019
Date Collected: 12/04/19 07:52
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	ND		0.01	0.01	%			12/09/19 18:43	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			12/09/19 18:43	1
Fine Sand (0.125 to 0.25mm)	22.48		0.01	0.01	%			12/09/19 18:43	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			12/09/19 18:43	1
Medium Sand (0.25 to 0.5 mm)	47.69		0.01	0.01	%			12/09/19 18:43	1
Silt (0.00391 to 0.0625mm)	11.24		0.01	0.01	%			12/09/19 18:43	1
Total Silt and Clay (0 to 0.0626mm)	11.24		0.01	0.01	%			12/09/19 18:43	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			12/09/19 18:43	1
Very Fine Sand (0.0625 to 0.125 mm)	18.59		0.01	0.01	%			12/09/19 18:43	1

Client Sample ID: A2BMP0012S008
Date Collected: 12/04/19 07:40
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	ND		0.01	0.01	%			12/09/19 18:50	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			12/09/19 18:50	1
Fine Sand (0.125 to 0.25mm)	30.79		0.01	0.01	%			12/09/19 18:50	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			12/09/19 18:50	1
Medium Sand (0.25 to 0.5 mm)	23.99		0.01	0.01	%			12/09/19 18:50	1
Silt (0.00391 to 0.0625mm)	16.64		0.01	0.01	%			12/09/19 18:50	1
Total Silt and Clay (0 to 0.0626mm)	16.64		0.01	0.01	%			12/09/19 18:50	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			12/09/19 18:50	1
Very Fine Sand (0.0625 to 0.125 mm)	28.58		0.01	0.01	%			12/09/19 18:50	1

Client Sample ID: EVBMP0003S030
Date Collected: 12/04/19 07:32
Date Received: 12/04/19 16:10

Lab Sample ID: 570-14631-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	1.44		0.01	0.01	%			12/09/19 19:04	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			12/09/19 19:04	1
Fine Sand (0.125 to 0.25mm)	35.99		0.01	0.01	%			12/09/19 19:04	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			12/09/19 19:04	1
Medium Sand (0.25 to 0.5 mm)	6.84		0.01	0.01	%			12/09/19 19:04	1
Silt (0.00391 to 0.0625mm)	29.27		0.01	0.01	%			12/09/19 19:04	1
Total Silt and Clay (0 to 0.0626mm)	30.71		0.01	0.01	%			12/09/19 19:04	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			12/09/19 19:04	1
Very Fine Sand (0.0625 to 0.125 mm)	26.46		0.01	0.01	%			12/09/19 19:04	1

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

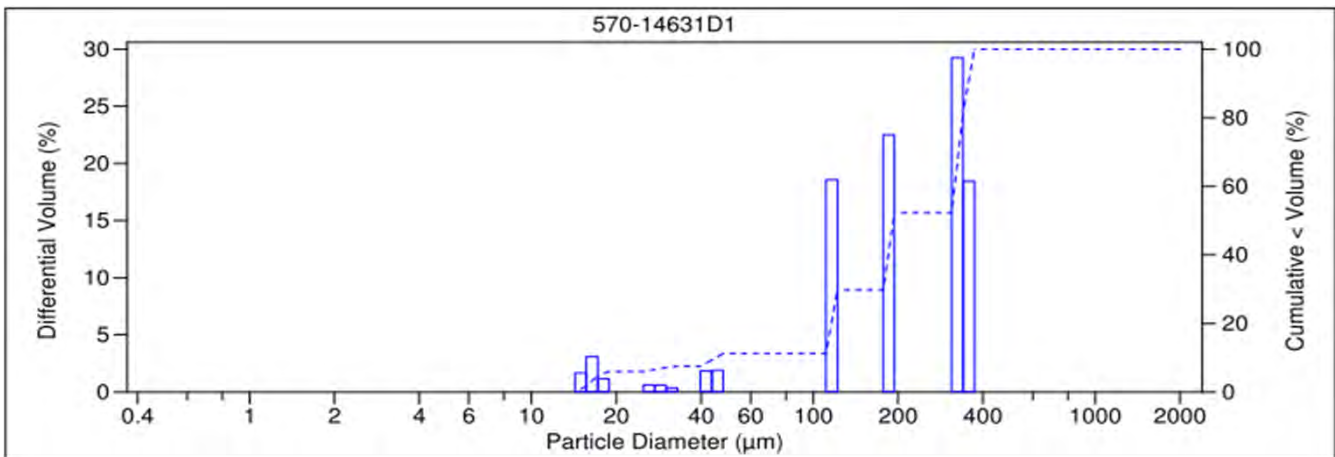
Date Sampled: 12/04/19
 Date Received: 12/04/19
 Work Order No: 570-14631
 Date Analyzed: 12/09/19
 Method: ASTM D4464M

Project: SSFL

Page 1 of 4

Sample ID	Depth ft	Description	Mean Grain Size mm
A2BMP0007S019		Fine Sand	0.227

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	47.69	22.48	18.59	11.24	0.00	11.24



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

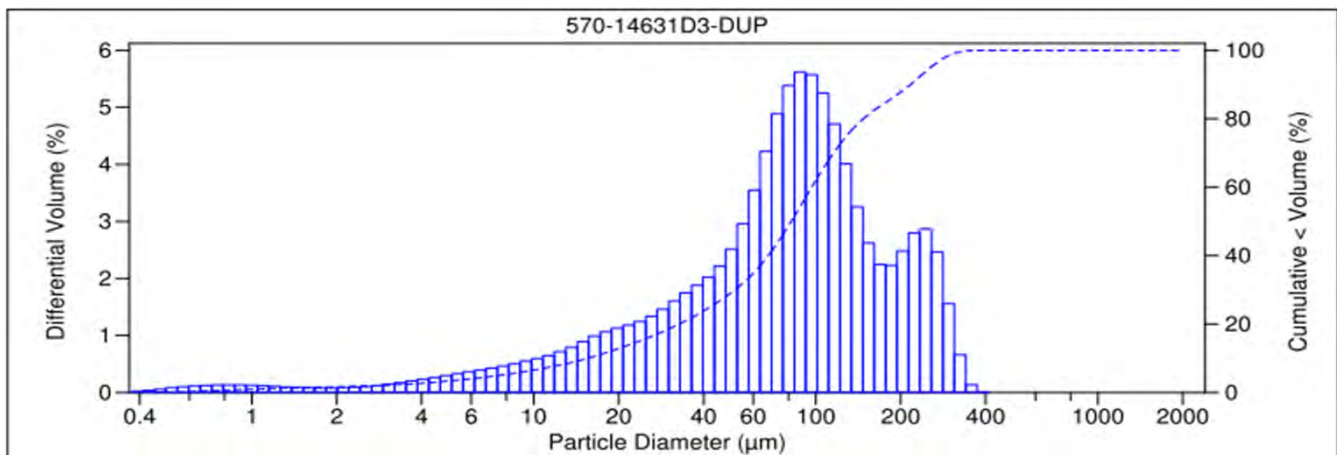
Date Sampled: 12/04/19
 Date Received: 12/04/19
 Work Order No: 570-14631
 Date Analyzed: 12/09/19
 Method: ASTM D4464M

Project: SSFL

Page 4 of 4

Sample ID	Depth ft	Description	Mean Grain Size mm
EVBMP0003S030		Very Fine Sand	0.097

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	5.71	20.58	37.28	33.77	2.66	36.43



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

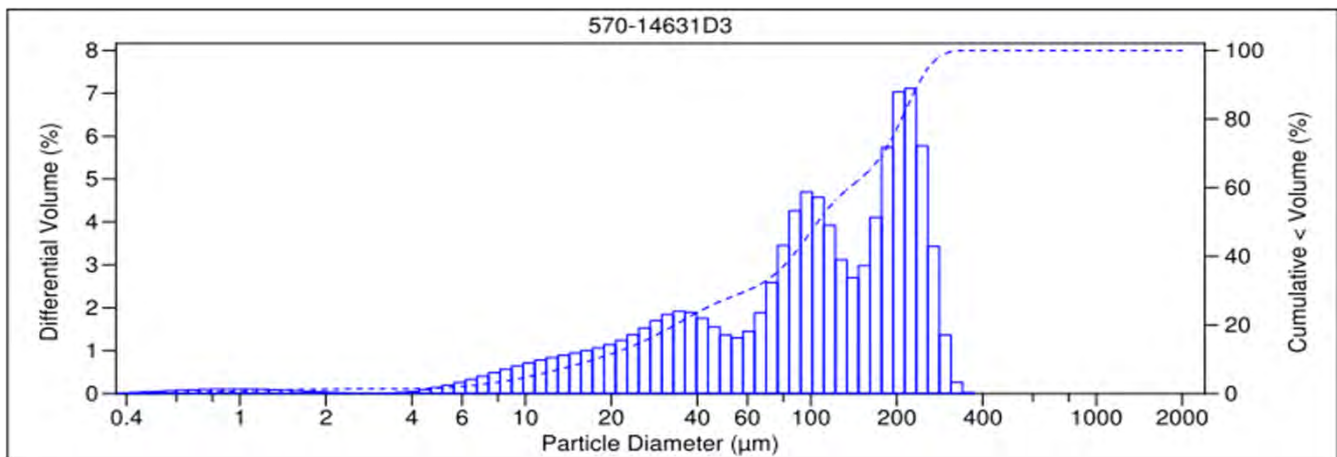
Date Sampled: 12/04/19
 Date Received: 12/04/19
 Work Order No: 570-14631
 Date Analyzed: 12/09/19
 Method: ASTM D4464M

Project: SSFL

Page 3 of 4

Sample ID	Depth ft	Description	Mean Grain Size mm
EVBMP0003S030		Very Fine Sand	0.121

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	6.84	35.99	26.46	29.27	1.44	30.71



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

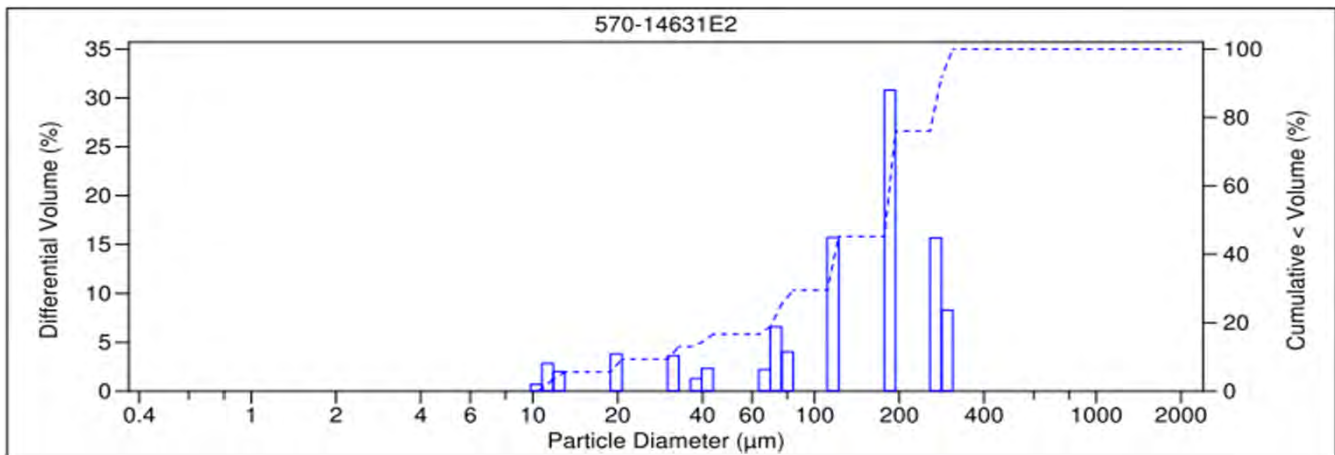
Date Sampled: 12/04/19
 Date Received: 12/04/19
 Work Order No: 570-14631
 Date Analyzed: 12/09/19
 Method: ASTM D4464M

Project: SSFL

Page 2 of 4

Sample ID	Depth ft	Description	Mean Grain Size mm
A2BMP0012S008		Fine Sand	0.156

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	23.99	30.79	28.58	16.64	0.00	16.64



V 3.0

Default Detection Limits

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Prep: 200.8

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000128	mg/L
Copper	0.00100	0.000140	mg/L
Lead	0.00100	0.0000898	mg/L

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000128	mg/L
Copper	0.00100	0.000140	mg/L
Lead	0.00100	0.0000898	mg/L

Method: 245.1 - Mercury (CVAA)

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

Method: 245.1 - Mercury (CVAA) - Dissolved

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

General Chemistry

Analyte	RL	MDL	Units
Turbidity	0.0500	0.0439	NTU
Total Suspended Solids	1.00	0.829	mg/L

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	RL	MDL	Units
Clay(less than 0.00391 mm)	0.01	0.01	%
Coarse Sand (0.5mm to 1mm)	0.01	0.01	%
Fine Sand (0.125 to 0.25mm)	0.01	0.01	%
Gravel (greater than 2 mm)	0.01	0.01	%
Medium Sand (0.25 to 0.5 mm)	0.01	0.01	%
Silt (0.00391 to 0.0625mm)	0.01	0.01	%
Total Silt and Clay (0 to 0.0626mm)	0.01	0.01	%
Very Coarse Sand (1 to 2mm)	0.01	0.01	%
Very Fine Sand (0.0625 to 0.125 mm)	0.01	0.01	%

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 570-38560/1-A
Matrix: Water
Analysis Batch: 39098

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 38560

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L		12/12/19 08:00	12/13/19 23:33	1
Copper	ND		0.00100	0.000140	mg/L		12/12/19 08:00	12/13/19 23:33	1
Lead	ND		0.00100	0.0000898	mg/L		12/12/19 08:00	12/13/19 23:33	1

Lab Sample ID: LCS 570-38560/2-A
Matrix: Water
Analysis Batch: 39098

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 38560

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.09996		mg/L		100	80 - 120
Copper	0.100	0.09967		mg/L		100	80 - 120
Lead	0.100	0.09470		mg/L		95	80 - 120

Lab Sample ID: LCSD 570-38560/3-A
Matrix: Water
Analysis Batch: 39098

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 38560

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.1014		mg/L		101	80 - 120	1	20
Copper	0.100	0.09949		mg/L		99	80 - 120	0	20
Lead	0.100	0.09451		mg/L		95	80 - 120	0	20

Lab Sample ID: 570-14207-B-1-B MS
Matrix: Water
Analysis Batch: 39098

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 38560

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.000205	J	0.100	0.1079		mg/L		108	80 - 120
Copper	0.0210		0.100	0.1269		mg/L		106	80 - 120
Lead	0.00436		0.100	0.1086		mg/L		104	80 - 120

Lab Sample ID: 570-14207-B-1-C MSD
Matrix: Water
Analysis Batch: 39098

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 38560

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.000205	J	0.100	0.1005		mg/L		100	80 - 120	7	20
Copper	0.0210		0.100	0.1181		mg/L		97	80 - 120	7	20
Lead	0.00436		0.100	0.1008		mg/L		96	80 - 120	7	20

Lab Sample ID: MB 570-38411/1-A
Matrix: Water
Analysis Batch: 38885

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000128	mg/L			12/13/19 01:44	1
Copper	ND		0.00100	0.000140	mg/L			12/13/19 01:44	1
Lead	ND		0.00100	0.0000898	mg/L			12/13/19 01:44	1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 570-38411/2-A
Matrix: Water
Analysis Batch: 38885

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.1059		mg/L		106	80 - 120
Copper	0.100	0.1021		mg/L		102	80 - 120
Lead	0.100	0.1032		mg/L		103	80 - 120

Lab Sample ID: LCSD 570-38411/3-A
Matrix: Water
Analysis Batch: 38885

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.1046		mg/L		105	80 - 120	1	20
Copper	0.100	0.1017		mg/L		102	80 - 120	0	20
Lead	0.100	0.1019		mg/L		102	80 - 120	1	20

Lab Sample ID: 570-14476-A-1-E MS
Matrix: Water
Analysis Batch: 38885

Client Sample ID: Matrix Spike
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		0.100	0.1020		mg/L		102	80 - 120
Copper	0.00158		0.100	0.09712		mg/L		96	80 - 120
Lead	ND		0.100	0.09324		mg/L		93	80 - 120

Lab Sample ID: 570-14476-A-1-F MSD
Matrix: Water
Analysis Batch: 38885

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		0.100	0.1085		mg/L		109	80 - 120	6	20
Copper	0.00158		0.100	0.1029		mg/L		101	80 - 120	6	20
Lead	ND		0.100	0.1013		mg/L		101	80 - 120	8	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 570-37642/1-A
Matrix: Water
Analysis Batch: 37882

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37642

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/08/19 10:30	12/09/19 16:36	1

Lab Sample ID: LCS 570-37642/2-A
Matrix: Water
Analysis Batch: 37882

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.009715		mg/L		97	85 - 121

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 570-37642/3-A
Matrix: Water
Analysis Batch: 37882

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 37642

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.009795		mg/L		98	85 - 121	1	10

Lab Sample ID: 570-14559-F-1-B MS
Matrix: Water
Analysis Batch: 37882

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 37642

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000231		0.0100	0.009961		mg/L		97	57 - 141

Lab Sample ID: 570-14559-F-1-C MSD
Matrix: Water
Analysis Batch: 37882

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 37642

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000231		0.0100	0.009923		mg/L		97	57 - 141	0	10

Lab Sample ID: MB 570-38115/1-B
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 38121

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		12/10/19 17:50	12/10/19 21:55	1

Lab Sample ID: LCS 570-38115/2-B
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 38121

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.009138		mg/L		91	85 - 121

Lab Sample ID: LCSD 570-38115/3-B
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 38121

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.009187		mg/L		92	85 - 121	1	10

Lab Sample ID: 570-14597-G-1-E MS
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 38121

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F2 F1	0.0100	0.009343		mg/L		93	57 - 141

Lab Sample ID: 570-14597-G-1-F MSD
Matrix: Water
Analysis Batch: 38034

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 38121

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	F2 F1	0.0100	0.001019	F2 F1	mg/L		10	57 - 141	161	10

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: SM 2130B - Turbidity

Lab Sample ID: LCSSRM 570-37098/1
Matrix: Water
Analysis Batch: 37098

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	1000	998.0		NTU		99.8	99.0 - 101.0

Lab Sample ID: LCSSRM 570-37098/2
Matrix: Water
Analysis Batch: 37098

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	10.0	9.920		NTU		99.2	99.0 - 101.0

Lab Sample ID: LCSSRM 570-37098/3
Matrix: Water
Analysis Batch: 37098

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	0.0200	ND		NTU		200.0	0.0 - 200.0

Lab Sample ID: 570-14631-2 DU
Matrix: Water
Analysis Batch: 37098

Client Sample ID: A2BMP0012S008
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	5.73		5.560		NTU		3	25

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 570-37548/1
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.00	0.829	mg/L			12/07/19 10:00	1

Lab Sample ID: LCS 570-37548/2
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	101.0		mg/L		101	85 - 115

Lab Sample ID: LCSD 570-37548/3
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	101.0		mg/L		101	85 - 115	0	10

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: 570-14533-C-2 DU
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	59.8		58.00		mg/L		3	10

Lab Sample ID: 570-14630-B-1 DU
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	21.8		22.25		mg/L		2	10

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Lab Sample ID: 570-14631-3 DU
Matrix: Water
Analysis Batch: 37903

Client Sample ID: EVBMP0003S030
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Clay(less than 0.00391 mm)	1.44		2.66	F3	%		60	20
Coarse Sand (0.5mm to 1mm)	ND		ND		%		NC	20
Fine Sand (0.125 to 0.25mm)	35.99		20.58	F3	%		54	20
Gravel (greater than 2 mm)	ND		ND		%		NC	20
Medium Sand (0.25 to 0.5 mm)	6.84		5.71		%		18	20
Silt (0.00391 to 0.0625mm)	29.27		33.77		%		14	20
Total Silt and Clay (0 to 0.0626mm)	30.71		36.43		%		17	20
Very Coarse Sand (1 to 2mm)	ND		ND		%		NC	20
Very Fine Sand (0.0625 to 0.125 mm)	26.46		37.28	F3	%		34	20

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Metals

Prep Batch: 37642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Total/NA	Water	245.1	
570-14631-2	A2BMP0012S008	Total/NA	Water	245.1	
570-14631-3	EVBMP0003S030	Total/NA	Water	245.1	
MB 570-37642/1-A	Method Blank	Total/NA	Water	245.1	
LCS 570-37642/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 570-37642/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
570-14559-F-1-B MS	Matrix Spike	Total/NA	Water	245.1	
570-14559-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 37882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Total/NA	Water	245.1	37642
570-14631-2	A2BMP0012S008	Total/NA	Water	245.1	37642
570-14631-3	EVBMP0003S030	Total/NA	Water	245.1	37642
MB 570-37642/1-A	Method Blank	Total/NA	Water	245.1	37642
LCS 570-37642/2-A	Lab Control Sample	Total/NA	Water	245.1	37642
LCSD 570-37642/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	37642
570-14559-F-1-B MS	Matrix Spike	Total/NA	Water	245.1	37642
570-14559-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	37642

Analysis Batch: 38034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Dissolved	Water	245.1	38121
570-14631-2	A2BMP0012S008	Dissolved	Water	245.1	38121
570-14631-3	EVBMP0003S030	Dissolved	Water	245.1	38121
MB 570-38115/1-B	Method Blank	Dissolved	Water	245.1	38121
LCS 570-38115/2-B	Lab Control Sample	Dissolved	Water	245.1	38121
LCSD 570-38115/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	38121
570-14597-G-1-E MS	Matrix Spike	Dissolved	Water	245.1	38121
570-14597-G-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	245.1	38121

Filtration Batch: 38115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Dissolved	Water	Filtration	
570-14631-2	A2BMP0012S008	Dissolved	Water	Filtration	
570-14631-3	EVBMP0003S030	Dissolved	Water	Filtration	
MB 570-38115/1-B	Method Blank	Dissolved	Water	Filtration	
LCS 570-38115/2-B	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-38115/3-B	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-14597-G-1-E MS	Matrix Spike	Dissolved	Water	Filtration	
570-14597-G-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	Filtration	

Prep Batch: 38121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Dissolved	Water	245.1	38115
570-14631-2	A2BMP0012S008	Dissolved	Water	245.1	38115
570-14631-3	EVBMP0003S030	Dissolved	Water	245.1	38115
MB 570-38115/1-B	Method Blank	Dissolved	Water	245.1	38115
LCS 570-38115/2-B	Lab Control Sample	Dissolved	Water	245.1	38115
LCSD 570-38115/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	38115
570-14597-G-1-E MS	Matrix Spike	Dissolved	Water	245.1	38115

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Metals (Continued)

Prep Batch: 38121 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14597-G-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	245.1	38115

Filtration Batch: 38411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Dissolved	Water	Filtration	
570-14631-2	A2BMP0012S008	Dissolved	Water	Filtration	
570-14631-3	EVBMP0003S030	Dissolved	Water	Filtration	
MB 570-38411/1-A	Method Blank	Dissolved	Water	Filtration	
LCS 570-38411/2-A	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-38411/3-A	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-14476-A-1-E MS	Matrix Spike	Dissolved	Water	Filtration	
570-14476-A-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	Filtration	

Prep Batch: 38560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Total Recoverable	Water	200.8	
570-14631-2	A2BMP0012S008	Total Recoverable	Water	200.8	
570-14631-3	EVBMP0003S030	Total Recoverable	Water	200.8	
MB 570-38560/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 570-38560/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 570-38560/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
570-14207-B-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
570-14207-B-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	

Analysis Batch: 38885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Dissolved	Water	200.8	38411
570-14631-2	A2BMP0012S008	Dissolved	Water	200.8	38411
570-14631-3	EVBMP0003S030	Dissolved	Water	200.8	38411
MB 570-38411/1-A	Method Blank	Dissolved	Water	200.8	38411
LCS 570-38411/2-A	Lab Control Sample	Dissolved	Water	200.8	38411
LCSD 570-38411/3-A	Lab Control Sample Dup	Dissolved	Water	200.8	38411
570-14476-A-1-E MS	Matrix Spike	Dissolved	Water	200.8	38411
570-14476-A-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	200.8	38411

Analysis Batch: 39098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Total Recoverable	Water	200.8	38560
570-14631-2	A2BMP0012S008	Total Recoverable	Water	200.8	38560
570-14631-3	EVBMP0003S030	Total Recoverable	Water	200.8	38560
MB 570-38560/1-A	Method Blank	Total Recoverable	Water	200.8	38560
LCS 570-38560/2-A	Lab Control Sample	Total Recoverable	Water	200.8	38560
LCSD 570-38560/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	38560
570-14207-B-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	38560
570-14207-B-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	38560

General Chemistry

Analysis Batch: 37098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-2	A2BMP0012S008	Total/NA	Water	SM 2130B	

Eurofins Calscience LLC

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

General Chemistry (Continued)

Analysis Batch: 37098 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSSRM 570-37098/1	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-37098/2	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-37098/3	Lab Control Sample	Total/NA	Water	SM 2130B	
570-14631-2 DU	A2BMP0012S008	Total/NA	Water	SM 2130B	

Analysis Batch: 37548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Total/NA	Water	SM 2540D	
570-14631-2	A2BMP0012S008	Total/NA	Water	SM 2540D	
570-14631-3	EVBMP0003S030	Total/NA	Water	SM 2540D	
MB 570-37548/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-37548/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-37548/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-14533-C-2 DU	Duplicate	Total/NA	Water	SM 2540D	
570-14630-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Geotechnical

Analysis Batch: 37903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-14631-1	A2BMP0007S019	Total/NA	Water	D4464	
570-14631-2	A2BMP0012S008	Total/NA	Water	D4464	
570-14631-3	EVBMP0003S030	Total/NA	Water	D4464	
570-14631-3 DU	EVBMP0003S030	Total/NA	Water	D4464	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Client Sample ID: A2BMP0007S019

Lab Sample ID: 570-14631-1

Date Collected: 12/04/19 07:52

Matrix: Water

Date Received: 12/04/19 16:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	38411	12/04/19 20:00	WL8G	ECL 1
Dissolved	Analysis	200.8		1			38885	12/13/19 02:20	ZHW5	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	38560	12/12/19 08:00	WL8G	ECL 1
Total Recoverable	Analysis	200.8		1			39098	12/14/19 00:51	ZHW5	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	38115	12/04/19 18:00	ZHW5	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	38121	12/10/19 17:50	ZHW5	ECL 1
Dissolved	Analysis	245.1		1			38034	12/10/19 22:18	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Prep	245.1			50 mL	100 mL	37642	12/08/19 10:30	WL8G	ECL 1
Total/NA	Analysis	245.1		1			37882	12/09/19 17:33	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	37548	12/07/19 10:00	KAP4	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			37903	12/09/19 18:43	C4LT	ECL 1
Instrument ID: NOEQUIP										

Client Sample ID: A2BMP0012S008

Lab Sample ID: 570-14631-2

Date Collected: 12/04/19 07:40

Matrix: Water

Date Received: 12/04/19 16:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	38411	12/04/19 20:00	WL8G	ECL 1
Dissolved	Analysis	200.8		1			38885	12/13/19 02:23	ZHW5	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	38560	12/12/19 08:00	WL8G	ECL 1
Total Recoverable	Analysis	200.8		1			39098	12/14/19 00:53	ZHW5	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	38115	12/04/19 18:00	ZHW5	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	38121	12/10/19 17:50	ZHW5	ECL 1
Dissolved	Analysis	245.1		1			38034	12/10/19 22:21	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Prep	245.1			50 mL	100 mL	37642	12/08/19 10:30	WL8G	ECL 1
Total/NA	Analysis	245.1		1			37882	12/09/19 17:36	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2130B		1			37098	12/04/19 20:20	KZ4O	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	37548	12/07/19 10:00	KAP4	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			37903	12/09/19 18:50	C4LT	ECL 1
Instrument ID: NOEQUIP										

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Client Sample ID: EVBMP0003S030

Lab Sample ID: 570-14631-3

Date Collected: 12/04/19 07:32

Matrix: Water

Date Received: 12/04/19 16:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	38411	12/04/19 20:00	WL8G	ECL 1
Dissolved	Analysis	200.8		1			38885	12/13/19 02:25	ZHW5	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	38560	12/12/19 08:00	WL8G	ECL 1
Total Recoverable	Analysis	200.8		1			39098	12/14/19 00:56	ZHW5	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	38115	12/04/19 18:00	ZHW5	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	38121	12/10/19 17:50	ZHW5	ECL 1
Dissolved	Analysis	245.1		1			38034	12/10/19 22:23	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Prep	245.1			50 mL	100 mL	37642	12/08/19 10:30	WL8G	ECL 1
Total/NA	Analysis	245.1		1			37882	12/09/19 17:38	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2540D		1	400 mL	1000 mL	37548	12/07/19 10:00	KAP4	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			37903	12/09/19 19:04	C4LT	ECL 1
Instrument ID: NOEQUIP										

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	ECL 1
245.1	Mercury (CVAA)	EPA	ECL 1
SM 2130B	Turbidity	SM	ECL 1
SM 2540D	Solids, Total Suspended (TSS)	SM	ECL 1
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
200.8	Preparation, Total Recoverable Metals	EPA	ECL 1
245.1	Preparation, Mercury	EPA	ECL 1
Filtration	Sample Filtration	None	ECL 1

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-14631-1	A2BMP0007S019	Water	12/04/19 07:52	12/04/19 16:10	
570-14631-2	A2BMP0012S008	Water	12/04/19 07:40	12/04/19 16:10	
570-14631-3	EVBMP0003S030	Water	12/04/19 07:32	12/04/19 16:10	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HG_1ppm ICV_00012	12/30/19	11/30/19	DI Water, Lot n/a	100 mL	MT-Hg-CS_00002	0.1 mL	Mercury	1 mg/L
.MT-Hg-CS_00002	12/31/20	High Purity Standards, Lot 1914918-100 Fisher Scientific, Lot 118110			MT: HNO3 Conc 00001	5 mL	Nitric acid	3.5 mg/L
.MT: HNO3 Conc 00001	11/11/20				(Purchased Reagent)	(Purchased Reagent)	Nitric acid	1000 ug/mL	70 mL
HG_1ppm STD_00008	12/30/19	11/30/19	DI Water, Lot n/a	100 mL	MT-Hg-SS 00001	1 mL	Mercury	1 mg/L
.MT-Hg-SS 00001	07/14/22	AccuStandard, Lot 217075028 FISHER, Lot 1119040			MT HNO3 00014	5 mL	Nitric acid	34500 mg/L
.MT HNO3 00014	05/02/21				(Purchased Reagent)	(Purchased Reagent)	Mercury	100 ug/mL	69 %
Hg_H2SO4_00001	02/21/21		Fisher, Lot 3117052		(Purchased Reagent)		Sulfuric acid	98 mg/L
Hg_K2S2O3_00001	02/19/20	02/19/19	DI Water, Lot N/A	10 L	HG_7440K2S2O8_00001	500 g	Potassium persulfate	4950000 mg/L
.HG 7440K2S2O8_00001	02/27/22		AcrosOrganic, Lot A0379062		(Purchased Reagent)		Potassium persulfate	99 g/g
Hg_KMnO4_00002	02/19/20	02/19/19	DI Water, Lot N/A	10 L	HG_7471 KMNO4_00001	500 g	Potassium Permanganate	5000000 mg/L
.HG 7471 KMNO4_00001	08/22/23		VWR, Lot 0277-C094		(Purchased Reagent)		Potassium Permanganate	100 g/g
Hg_NaCl-NH2OH_00005	03/23/20	11/30/19	DI Water, Lot N/A	10 L	HG 7470 NH3OH_00002	1.2 Kg	Hydroxylamine hydrochloride	0.01188 L
.HG 7470 NH3OH_00002	10/02/20	VWR Chemicals, LLC, Lot 19F1856849 Fisher, Lot 176121			HG 7470 NaCl_00001	1.2 Kg	Sodium Chloride	11880 L
.HG 7470 NaCl_00001	03/23/20				(Purchased Reagent)	(Purchased Reagent)	Hydroxylamine hydrochloride	99 g
MT: 1:1 HCl_00002	03/02/20	06/05/19	DI Water, Lot Di water	500 mL	MT: HCl Conc. 00002	250 mL	Hydrogen Chloride	18.5 mL
.MT: HCl Conc. 00002	11/14/22		Fisher Scientific, Lot 4118110		(Purchased Reagent)		Hydrogen Chloride	37 mL
MT: 1:1 HNO3_00001	03/15/20	06/05/19	DI Water, Lot DI Water	500 mL	MT: H2NO3 Con_00001	250 mL	Nitric acid	35 mL
.MT: H2NO3 Con_00001	11/14/20		Fisher Chemical, Lot 1118101		(Purchased Reagent)		Nitric acid	70 mL
							Nitric acid	70 mL
MT_ICP_Spike1_00005	01/30/20	09/06/19	HNO3, Lot 1118092	1000 mL	MT-As-SpS_00001	10 mL	As	100 ug/mL
					MT-Be-SpS_00001	10 mL	Be	100 ug/mL
					MT-Bi-CS-SpS_00001	10 mL	Bi	100 ug/mL
					MT-Ca-SpS_00001	10 mL	Ca	100 ug/mL
					MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Co-SpS_00001	10 mL	Co	100 ug/mL
					MT-Cr-SpS_00001	10 mL	Cr	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Fe-SpS_00001	10 mL	Fe	100 ug/mL
					MT-Li-CS-SpS_00001	10 mL	Li	100 ug/mL
					MT-Mg-SpS_00001	10 mL	Mg	100 ug/mL
					MT-Mn-SpS_00001	10 mL	Mn	100 ug/mL
					MT-Mo-SpS_00001	10 mL	Mo	100 ug/mL
					MT-Ni-SpS_00001	10 mL	Ni	100 ug/mL
					MT-P-SpS_00001	10 mL	P	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
					MT-S-CS-SpS_00001	10 mL	Sulfur	100 ug/mL
					MT-Sb-SpS_00001	10 mL	Sb	100 ug/mL
					MT-Se-SpS_00001	10 mL	Se	100 ug/mL
					MT-Sn-SpS_00001	10 mL	Sn	100 ug/mL
					MT-Sr-SpS_00001	10 mL	Sr	100 ug/mL
					MT-Ti-SpS_00001	10 mL	Ti	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MT-Tl-SpS_00001	10 mL	Tl	100 ug/mL
					MT-V-SpS_00001	10 mL	V	100 ug/mL
					MT-Zn-SpS_00001	10 mL	Zn	100 ug/mL
.MT-As-SpS_00001	04/30/23		AccuStandard, Lot 218045118		(Purchased Reagent)		As	10000 ug/mL
.MT-Be-SpS_00001	02/28/23		Ultra, Lot CP-0170		(Purchased Reagent)		Be	10000 ug/mL
.MT-Bi-CS-SpS_00001	06/30/23		Ultra, Lot CP-2124		(Purchased Reagent)		Bi	10000 ug/mL
.MT-Ca-SpS_00001	04/30/23		Ultra, Lot CP-0877		(Purchased Reagent)		Ca	10000 ug/mL
.MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
.MT-Co-SpS_00001	05/31/23		Ultra, Lot CP-2011		(Purchased Reagent)		Co	10000 ug/mL
.MT-Cr-SpS_00001	05/31/23		Ultra, Lot CP-1768		(Purchased Reagent)		Cr	10000 ug/mL
.MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
.MT-Fe-SpS_00001	08/31/24		Ultra, Lot CR-3137		(Purchased Reagent)		Fe	10000 ug/mL
.MT-Li-CS-SpS_00001	05/31/21		Ultra, Lot T00356		(Purchased Reagent)		Li	10000 ug/mL
.MT-Mg-SpS_00001	09/30/22		Ultra, Lot CM-4445		(Purchased Reagent)		Mg	10000 ug/mL
.MT-Mn-SpS_00001	01/31/24		Ultra, Lot M00334A		(Purchased Reagent)		Mn	10000 ug/mL
.MT-Mo-SpS_00001	08/31/21		Ultra, Lot CL-2860		(Purchased Reagent)		Mo	10000 ug/mL
.MT-Ni-SpS_00001	02/28/23		Ultra, Lot CP-0006		(Purchased Reagent)		Ni	10000 ug/mL
.MT-P-SpS_00001	09/10/23		Ultra, Lot CP-4381		(Purchased Reagent)		P	10000 ug/mL
.MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
.MT-S-CS-SpS_00001	11/30/22		Ultra, Lot CM-5393		(Purchased Reagent)		Sulfur	10000 ug/mL
.MT-Sb-SpS_00001	06/30/23		Ultra, Lot CP-2412		(Purchased Reagent)		Sb	10000 ug/mL
.MT-Se-SpS_00001	11/30/22		Ultra, Lot CM-5316		(Purchased Reagent)		Se	10000 ug/mL
.MT-Sn-SpS_00001	07/31/21		Ultra, Lot T00753		(Purchased Reagent)		Sn	10000 ug/mL
.MT-Sr-SpS_00001	09/30/22		Ultra, Lot CM-4363		(Purchased Reagent)		Sr	10000 ug/mL
.MT-Ti-SpS_00001	04/30/22		Ultra, Lot CM-1138		(Purchased Reagent)		Ti	10000 ug/mL
.MT-Tl-SpS_00001	05/31/23		Ultra, Lot CP-2010		(Purchased Reagent)		Tl	10000 ug/mL
.MT-V-SpS_00001	08/31/23		Ultra, Lot CP-3591		(Purchased Reagent)		V	10000 ug/mL
.MT-Zn-SpS_00001	02/28/23		Ultra, Lot CP-0155		(Purchased Reagent)		Zn	10000 ug/mL
MT_ICP_Spike2_00003	01/30/20	07/04/19	HNO3, Lot 1118092	1000 mL	MT_ICP_Ag_SpS_00001	5 mL	Ag	50 ug/mL
					MT_ICP_Al_SpS_00001	10 mL	Al	100 ug/mL
					MT_ICP_B_SpS_00001	10 mL	B	100 ug/mL
					MT_ICP_Ba_SpS_00001	10 mL	Ba	100 ug/mL
					MT_ICP_K_SpS_00001	100 mL	K	1000 ug/mL
					MT_ICP_Na_SpS_00001	100 mL	Na	1000 ug/mL
					MT_ICP_Si_SpS_00004	10 mL	Si	100 ug/mL
							SiO2	214 ug/mL
.MT_ICP_Ag_SpS_00001	09/30/23		Ultra, Lot CP-4409		(Purchased Reagent)		Ag	10000 ug/mL
.MT_ICP_Al_SpS_00001	09/30/23		Ultra, Lot CP-3976		(Purchased Reagent)		Al	10000 ug/mL
.MT_ICP_B_SpS_00001	12/31/21		Ultra, Lot K00924A		(Purchased Reagent)		B	10000 ug/mL
.MT_ICP_Ba_SpS_00001	01/31/23		Ultra, Lot CM-6544		(Purchased Reagent)		Ba	10000 ug/mL
.MT_ICP_K_SpS_00001	04/30/24		Ultra, Lot CR-0917		(Purchased Reagent)		K	10000 ug/mL
.MT_ICP_Na_SpS_00001	09/30/23		Ultra, Lot CP-3978		(Purchased Reagent)		Na	10000 ug/mL
.MT_ICP_Si_SpS_00004	04/30/23		Ultra, Lot CP-1238		(Purchased Reagent)		Si	10000 ug/mL
							SiO2	21400 ug/mL
MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
..MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
.MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_ICS_A_00002	05/30/20	07/01/19	1% HNO3, Lot DIWATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
							Ti	20 mg/L
MT_MS_ICS_AB_00002	05/14/20	07/01/19	1% HNO3, Lot DIWAATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
					MT_MS_Int_B_00002	0.5 mL	Ag	0.005 mg/L
							As	0.01 mg/L
							Cadmium	0.01 mg/L
							Co	0.02 mg/L
							Copper	0.02 mg/L
							Cr	0.02 mg/L
							Mn	0.02 mg/L
							Ni	0.02 mg/L
							Se	0.01 mg/L
							V	0.02 mg/L
							Zn	0.01 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
.MT_MS_Int_B_00002	05/30/20		Spex, Lot CL6-114MKBY		(Purchased Reagent)		Ag	5 mg/L
							As	10 mg/L
							Cadmium	10 mg/L
							Co	20 mg/L
							Copper	20 mg/L
							Cr	20 mg/L
							Mn	20 mg/L
							Ni	20 mg/L
							Se	10 mg/L
							V	20 mg/L
							Zn	10 mg/L
MT_MS_ICV1_00002	01/11/20	10/03/19	1% Nitric Acid, Lot DIWATER	2000 mL	MT_MS_Spike1_00001	2 mL	Cadmium	0.1 ug/mL
							Copper	0.1 ug/mL
							Lead	0.1 ug/mL
.MT_MS_Spike1_00001	01/30/20	09/26/19	HNO3, Lot 1118092	1000 mL	MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
..MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
..MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
..MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
MT_MS_LL_00006	08/30/20	09/24/19	1% HNO3, Lot DIWATER	100 mL	MT_MS_CCV_00005	1 mL	Cadmium	0.001 mg/L
							Copper	0.001 mg/L
							Lead	0.001 mg/L
.MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
..MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
...MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_SP1_10_00001	01/30/20	06/05/19	2% Nitric Acid, Lot DIWATER	50 mL	MT_ICP_Spike1_00002	5 mL	Cadmium	10 mg/L
							Copper	10 mg/L
							Lead	10 mg/L
.MT_ICP_Spike1_00002	01/30/20	05/20/19	HNO3, Lot 1118092	1000 mL	MT_ICP_Cd_SpS_00001	10 mL	Cadmium	100 ug/mL
					MT_ICP_Cu_SpS_00001	10 mL	Copper	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MT ICP Cd SpS 00001	02/28/23		Ultra, Lot CP-0156		MT ICP Pb SpS 00001	10 mL	Lead	100 ug/mL
..MT ICP Cu SpS 00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Cadmium	10000 ug/mL
..MT ICP Pb SpS 00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Copper	10000 ug/mL
MT_MS_SPIKE_3_00002	12/31/22	07/09/19	2% Nitric Acid, Lot DIWATER	1000 mL	MT_MS_Ca10000_00001	100 mL	Ca	1000 mg/L
					MT_MS_Fe10000_00001	100 mL	Fe	1000 mg/L
					MT_MS_Mg10000_00001	100 mL	Mg	1000 mg/L
.MT MS Ca10000 00001	09/30/24		Ultra, Lot CR-3808		(Purchased Reagent)		Ca	10000 mg/L
.MT MS Fe10000 00001	08/31/24		Ultra, Lot ICP-126-L		(Purchased Reagent)		Fe	10000 mg/L
.MT MS Mg10000 00001	04/20/23		Ultra, Lot ICP-112-L		(Purchased Reagent)		Mg	10000 mg/L
WC SSC STD 00001	02/05/20	08/05/19	DI Water, Lot 022619	2 L	WC TSS STK 00001	0.2 g	Total Suspended Solids	100 mg/L
.WC TSS STK 00001	11/04/21		FISHER, Lot 160676		(Purchased Reagent)		Total Suspended Solids	1 g/g
WC TUR STD 00008	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	10 NTU
WC TUR STD 00009	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	1000 NTU
WC TUR STD 00010	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	0.02 NTU
WC TUR STD2 00057	12/05/19	12/04/19	H2O, Lot 1	100 mL	WC TUR STD1_00001	2.5 mL	Turbidity	100 NTU
.WC TUR STD1_00001	11/27/20		HACH, Lot A8330		(Purchased Reagent)		Turbidity	4000 NTU

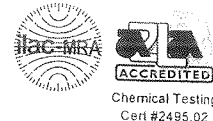
Reagent

MT_MS_ICCS2_00002



SPEXertificate®

Certificate of Reference Material



Catalog Number: CL-CAL-2 **Lot No.** CL2-69WGY
Description: Instrument Calibration Standard 2
Matrix: 5% HNO₃ / Tr. Tart. Acid / Tr. HF

This CLARITAS PPT® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.6 µg/mL	±0.5 µg/mL	3151*	Mn	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3132*
Al	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3101a*	Mo	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3134*
As	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3103a*	Na	100 µg/mL	100 µg/mL	±0.5 µg/mL	3152a*
Ba	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3104a*	Ni	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3136*
Be	100 µg/mL	100 µg/mL	±0.5 µg/mL	3105a*	Pb	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3128*
Ca	100 µg/mL	100 µg/mL	±0.5 µg/mL	3109a*	Sb	100 µg/mL	100 µg/mL	±0.5 µg/mL	3102a*
Cd	100 µg/mL	99.0 µg/mL	±0.5 µg/mL	3108*	Se	100 µg/mL	100 µg/mL	±0.5 µg/mL	3149*
Co	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3113*	Sn	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3161a*
Cr	100 µg/mL	100 µg/mL	±0.5 µg/mL	3112a*	Sr	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3153a*
Cu	100 µg/mL	101 µg/mL	±0.5 µg/mL	3114*	Ti	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3162a*
Fe	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3126a*	Tl	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3158*
K	100 µg/mL	100 µg/mL	±0.5 µg/mL	3141a*	V	100 µg/mL	100 µg/mL	±0.5 µg/mL	3165*
Mg	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3131a*	Zn	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3168a*

* - indicates NIST SRM

† - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# CL5-135MKB, CL6-41MKB, CL-1-112YJ, CL1372YP

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.08	Eu	<0.1	In	<20	P	<400	Ru	2
B	<4	Ga	<0.01	Ir	<0.1	Pd	<50	Sc	<0.4
Bi	2	Gd	0.4	La	5	Pr	0.04	Si	<300
Ce	0.9	Ge	<0.7	Li	0.5	Pt	<0.1	Sm	3
Cs	0.3	Hf	0.07	Lu	<0.02	Rb	3	Ta	0.6
Dy	<0.01	Hg	<0.2	Nb	0.4	Re	1	Tb	<0.01
Er	<0.01	Ho	<0.01	Nd	0.1	Rh	4	Te	<1
								Zr	3



116696

ID MI_MS JCS2_00002

Exp 08/30/20 Pppl U/LE Cph 08/13/19

1000ppm Cal Std 2 SPEX

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: AUG -- 2019

Certifying Officer: Katherine Cullinan
 Katherine Cullinan, QC Manager

Page 1 of 2
 Rev. 0

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METALS

COVER PAGE
METALS

Lab Name: Eurofins Calscience _____ Job Number: 570-14631-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID	Lab Sample ID
A2BMP0007S019	570-14631-1
A2BMP0012S008	570-14631-2
EVBMP0003S030	570-14631-3

Comments:

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: A2BMP0007S019

Lab Sample ID: 570-14631-1

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:52

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: A2BMP0007S019

Lab Sample ID: 570-14631-1

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:52

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L			1	200.8
7440-50-8	Copper	0.00198	0.00100	0.000140	mg/L			1	200.8
7439-92-1	Lead	0.000503	0.00100	0.000089 8	mg/L	J		1	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: A2BMP0007S019

Lab Sample ID: 570-14631-1

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:52

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L		H	1	200.8
7440-50-8	Copper	ND	0.00100	0.000140	mg/L		H	1	200.8
7439-92-1	Lead	ND	0.00100	0.000089 8	mg/L		H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: A2BMP0012S008

Lab Sample ID: 570-14631-2

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:40

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: A2BMP0012S008

Lab Sample ID: 570-14631-2

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:40

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L			1	200.8
7440-50-8	Copper	0.00269	0.00100	0.000140	mg/L			1	200.8
7439-92-1	Lead	0.00101	0.00100	0.000089 8	mg/L			1	200.8

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: A2BMP0012S008

Lab Sample ID: 570-14631-2

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:40

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L		H	1	200.8
7440-50-8	Copper	0.000341	0.00100	0.000140	mg/L	J	H	1	200.8
7439-92-1	Lead	ND	0.00100	0.000089 8	mg/L		H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: EV BMP0003S030

Lab Sample ID: 570-14631-3

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:32

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: EV BMP0003S030

Lab Sample ID: 570-14631-3

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:32

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L			1	200.8
7440-50-8	Copper	0.00531	0.00100	0.000140	mg/L			1	200.8
7439-92-1	Lead	0.00428	0.00100	0.000089 8	mg/L			1	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: EVBMP0003S030

Lab Sample ID: 570-14631-3

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:32

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000128	mg/L		H	1	200.8
7440-50-8	Copper	ND	0.00100	0.000140	mg/L		H	1	200.8
7439-92-1	Lead	ND	0.00100	0.000089 8	mg/L		H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-38578/4 12/12/2019 10:43				CCV 570-38578/8 12/12/2019 10:54							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<i>Cadmium</i>	104.1		100	104	100.1		100	100				
<i>Copper</i>	107.0		100	107	101.4		100	101				
<i>Lead</i>	97.91		100	98	94.23		100	94				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-38885/33 12/12/2019 10:43				CCV 570-38885/3 12/13/2019 01:33				CCV 570-38885/17 12/13/2019 02:12			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	104.1		100	104	100.3		100	100	100.9		100	101
Copper	107.0		100	107	100.6		100	101	100.8		100	101
Lead	97.91		100	98	101.4		100	101	100.6		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38885/30 12/13/2019 02:47											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	100.8		100	101								
Copper	99.90		100	100								
Lead	102.0		100	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38578/8 12/12/2019 10:54				ICVL 570-38578/14 12/12/2019 11:10							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<i>Cadmium</i>	100.1		100	100	0.9777	J	1.00	98				
<i>Copper</i>	101.4		100	101	1.088		1.00	109				
<i>Lead</i>	94.23		100	94	0.9367	J	1.00	94				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38885/3 12/13/2019 01:33				ICVL 570-38885/6 12/13/2019 01:41				CCV 570-38885/17 12/13/2019 02:12			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	100.3		100	100	1.040		1.00	104	100.9		100	101
Copper	100.6		100	101	1.002		1.00	100	100.8		100	101
Lead	101.4		100	101	1.057		1.00	106	100.6		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38885/30 12/13/2019 02:47											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	100.8		100	101								
Copper	99.90		100	100								
Lead	102.0		100	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-38951/3 12/13/2019 12:38				CCV 570-38951/6 12/13/2019 12:49							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<i>Cadmium</i>	103.4		100	103	100.2		100	100				
<i>Copper</i>	102.7		100	103	100.4		100	100				
<i>Lead</i>	102.8		100	103	100.7		100	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-39098/39 12/13/2019 12:38				CCV 570-39098/3 12/13/2019 23:22				CCV 570-39098/15 12/14/2019 00:01			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	103.4		100	103	99.74		100	100	100.2		100	100
Copper	102.7		100	103	102.3		100	102	101.0		100	101
Lead	102.8		100	103	96.20		100	96	96.47		100	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-39098/27 12/14/2019 00:37				CCV 570-39098/37 12/14/2019 01:13							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	99.46		100	99	99.60		100	100				
Copper	101.9		100	102	101.7		100	102				
Lead	96.40		100	96	95.77		100	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-38951/6 12/13/2019 12:49				ICVL 570-38951/12 12/13/2019 13:05							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<i>Cadmium</i>	100.2		100	100	1.044		1.00	104				
<i>Copper</i>	100.4		100	100	1.009		1.00	101				
<i>Lead</i>	100.7		100	101	0.9945	J	1.00	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-39098/3 12/13/2019 23:22				ICVL 570-39098/5 12/13/2019 23:30				CCV 570-39098/15 12/14/2019 00:01			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	99.74		100	100	1.016		1.00	102	100.2		100	100
Copper	102.3		100	102	1.286		1.00	129	101.0		100	101
Lead	96.20		100	96	0.9432	J	1.00	94	96.47		100	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-39098/27 12/14/2019 00:37				CCV 570-39098/37 12/14/2019 01:13							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	99.46		100	99	99.60		100	100				
Copper	101.9		100	102	101.7		100	102				
Lead	96.40		100	96	95.77		100	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	ICV 570-37330/2-A 12/09/2019 16:21				CCV 570-37330/10-A 12/09/2019 16:28				CCV 570-37330/10-A 12/09/2019 16:59			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00994 8		0.0100	99	0.00400 0		0.00400	100	0.00397 4		0.00400	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	CCV 570-37330/10-A 12/09/2019 17:27				CCV 570-37330/10-A 12/09/2019 17:43							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00397 2		0.00400	99	0.00393 4		0.00400	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	ICV 570-38006/2-A 12/10/2019 12:36				CCV 570-38006/10-A 12/10/2019 20:32				CCV 570-38006/10-A 12/10/2019 22:05			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.01014		0.0100	101	0.00375 8		0.00400	94	0.00375 4		0.00400	94

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00012 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00008

Analyte	CCV 570-38006/10-A 12/10/2019 22:32											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00372 8		0.00400	93								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Method: 245.1 Instrument ID: HG8
 Lab Sample ID: CRA 570-37769/12-A Concentration Units: mg/L
 CRQL Check Standard Source: HG_1ppm STD_00008

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0005427		109	65-135

Lab Sample ID: CRA 570-38006/12-A Concentration Units: mg/L
 CRQL Check Standard Source: HG_1ppm STD_00008

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0004955		99	65-135

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-38578/7 12/12/2019 10:51		CCB 570-38578/9 12/12/2019 10:56		CCB 570-38578/13 12/12/2019 11:07		Found	C
		Found	C	Found	C	Found	C		
<i>Cadmium</i>	1.00	ND		ND		ND			
<i>Copper</i>	1.00	ND		ND		ND			
<i>Lead</i>	1.00	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-38885/35 12/12/2019 10:51		CCB 570-38885/5 12/13/2019 01:38		CCB 570-38885/18 12/13/2019 02:14		CCB 570-38885/19 12/13/2019 02:17	
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		ND		ND		ND	
Copper	1.00	ND		ND		ND		ND	
Lead	1.00	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 570-38885/31 12/13/2019 02:50							
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND							
Copper	1.00	ND							
Lead	1.00	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-38951/5 12/13/2019 12:46		CCB 570-38951/7 12/13/2019 12:51		CCB 570-38951/11 12/13/2019 13:02		Found	C
		Found	C	Found	C	Found	C		
<i>Cadmium</i>	1.00	ND		ND		ND			
<i>Copper</i>	1.00	ND		ND		ND			
<i>Lead</i>	1.00	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-39098/41 12/13/2019 12:46		CCB 570-39098/4 12/13/2019 23:28		CCB 570-39098/16 12/14/2019 00:06		CCB 570-39098/28 12/14/2019 00:42	
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		ND		ND		ND	
Copper	1.00	ND		ND		ND		ND	
Lead	1.00	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 570-39098/38 12/14/2019 01:18							
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND							
Copper	1.00	ND							
Lead	1.00	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-37330/3-A 12/09/2019 16:24		CCB 570-37330/11-A 12/09/2019 16:31		CCB 570-37330/11-A 12/09/2019 17:01		CCB 570-37330/11-A 12/09/2019 17:29	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.000200	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	CCB 570-37330/11-A 12/09/2019 17:45							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.000200	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-38006/3-A 12/10/2019 12:38		CCB 570-38006/11-A 12/10/2019 20:34		CCB 570-38006/11-A 12/10/2019 22:07		CCB 570-38006/11-A 12/10/2019 22:35	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.000200	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-14631-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-38411/1-A
Instrument Code: ICPMS05 Batch No.: 38885

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job No.: 570-14631-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-38560/1-A
Instrument Code: ICPMS05 Batch No.: 39098

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-37642/1-A
Instrument Code: HG8 Batch No.: 37882

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-14631-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-38115/1-B
Instrument Code: HG8 Batch No.: 38034

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.: _____

Lab Sample ID: ICSA 570-38578/10

Instrument ID: ICPMS05

Lab File ID: 191212E1_iCal.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Aluminum	10000	10588	106
Antimony		0.212	
Arsenic		0.135	
Barium		0.196	
Beryllium		0.0211	
Boron		-0.0146	
Cadmium		-0.0102	
Calcium	30000	30657	102
Chromium		0.0987	
Cobalt		0.0575	
Copper		-0.0225	
Iron	25000	25134	101
Lead		0.0317	
Magnesium	10000	9733	97
Manganese		0.344	
Molybdenum	200	214	107
Nickel		0.308	
Potassium	10000	10040	100
Selenium		0.106	
Silver		0.154	
Sodium	25000	25353	101
Strontium		0.454	
Thallium		0.0245	
Tin		0.583	
Titanium	200	210	105
Vanadium		0.172	
Zinc		0.670	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.: _____

Lab Sample ID: ICSAB 570-38578/11

Instrument ID: ICPMS05

Lab File ID: 191212E1_iCal.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Aluminum	10000	10649	106
Antimony		0.162	
Arsenic	10.0	10.4	104
Barium		0.212	
Beryllium		0.0012	
Boron		-0.0176	
Cadmium	10.0	9.85	99
Calcium	30000	31235	104
Chromium	20.0	21.0	105
Cobalt	20.0	20.6	103
Copper	20.0	20.9	104
Iron	25000	25472	102
Lead		0.0244	
Magnesium	10000	9600	96
Manganese	20.0	19.8	99
Molybdenum	200	219	110
Nickel	20.0	20.6	103
Potassium	10000	9890	99
Selenium	10.0	9.76	98
Silver	5.00	4.90	98
Sodium	25000	24782	99
Strontium		0.433	
Thallium		0.0135	
Tin		0.281	
Titanium	200	214	107
Vanadium	20.0	21.1	105
Zinc	10.0	11.0	110

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.: _____

Lab Sample ID: ICSA 570-38951/8

Instrument ID: ICPMS05

Lab File ID: 191213E1_iCal.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Aluminum	10000	9870	99
Antimony		0.219	
Arsenic		0.0513	
Barium		0.181	
Beryllium		0.0059	
Boron		1.15	
Cadmium		-0.146	
Calcium	30000	29793	99
Chromium		0.179	
Cobalt		0.0663	
Copper		0.0210	
Iron	25000	24368	97
Lead		0.0518	
Magnesium	10000	9712	97
Manganese		0.522	
Molybdenum	200	206	103
Nickel		0.281	
Potassium	10000	10133	101
Selenium		0.172	
Silver		0.0419	
Sodium	25000	24817	99
Strontium		0.437	
Thallium		0.0347	
Tin		0.573	
Titanium	200	204	102
Vanadium		0.258	
Zinc		0.552	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.: _____

Lab Sample ID: ICSAB 570-38951/9

Instrument ID: ICPMS05

Lab File ID: 191213E1_iCal.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Aluminum	10000	9906	99
Antimony		0.169	
Arsenic	10.0	10.7	107
Barium		0.175	
Beryllium		0.0048	
Boron		0.776	
Cadmium	10.0	9.76	98
Calcium	30000	29820	99
Chromium	20.0	20.2	101
Cobalt	20.0	20.4	102
Copper	20.0	19.8	99
Iron	25000	24110	96
Lead		0.0353	
Magnesium	10000	9717	97
Manganese	20.0	20.3	101
Molybdenum	200	211	106
Nickel	20.0	20.1	101
Potassium	10000	10180	102
Selenium	10.0	10.1	101
Silver	5.00	4.27	85
Sodium	25000	24807	99
Strontium		0.439	
Thallium		0.0239	
Tin		0.214	
Titanium	200	204	102
Vanadium	20.0	20.9	105
Zinc	10.0	10.2	102

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS

Client ID: _____ Lab ID: 570-14559-F-1-B MS
 Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.009961	0.000231	0.0100	97	57-141		245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: _____ Lab ID: 570-14597-G-1-E MS
 Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.009343	ND	0.0100	93	57-141		245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-14207-B-1-B MS
 Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA) J	%R	Control Limit %R	Q	Method
Cadmium	0.1079	0.000205	0.100	108	80-120		200.8
Copper	0.1269	0.0210	0.100	106	80-120		200.8
Lead	0.1086	0.00436	0.100	104	80-120		200.8

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: _____ Lab ID: 570-14476-A-1-E MS
 Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.1020	ND	0.100	102	80-120		200.8
Copper	0.09712	0.00158	0.100	96	80-120		200.8
Lead	0.09324	ND	0.100	93	80-120		200.8

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS

Client ID: _____ Lab ID: 570-14559-F-1-C MSD
 Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009923	0.0100	97	57-141	0	10		245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: _____ Lab ID: 570-14597-G-1-F MSD
 Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.001019	0.0100	10	57-141	161	10	F2 F1	245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-14207-B-1-C MSD
 Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1005	0.100	100	80-120	7	20		200.8
Copper	0.1181	0.100	97	80-120	7	20		200.8
Lead	0.1008	0.100	96	80-120	7	20		200.8

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: _____ Lab ID: 570-14476-A-1-F MSD
 Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1085	0.100	109	80-120	6	20		200.8
Copper	0.1029	0.100	101	80-120	6	20		200.8
Lead	0.1013	0.100	101	80-120	8	20		200.8

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5B-IN
 POST DIGESTION SPIKE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: _____ Lab ID: 570-14476-A-1-D PDS
 Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.1099	ND	0.100	110	75-125		200.8
Copper	0.1050	0.00158	0.100	103	75-125		200.8
Lead	0.1024	ND	0.100	102	75-125		200.8

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-38411/2-A

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1059		106	80	120		200.8
Copper	0.100	0.1021		102	80	120		200.8
Lead	0.100	0.1032		103	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-38411/3-A

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1046	0.100	105	80-120	1	20		200.8
Copper	0.1017	0.100	102	80-120	0	20		200.8
Lead	0.1019	0.100	102	80-120	1	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - TOTAL RECOVERABLE

Lab ID: LCS 570-38560/2-A

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.09996		100	80	120		200.8
Copper	0.100	0.09967		100	80	120		200.8
Lead	0.100	0.09470		95	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - TOTAL RECOVERABLE

Lab ID: LCSD 570-38560/3-A

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1014	0.100	101	80-120	1	20		200.8
Copper	0.09949	0.100	99	80-120	0	20		200.8
Lead	0.09451	0.100	95	80-120	0	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 570-37642/2-A

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.009715		97	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS

Lab ID: LCSD 570-37642/3-A

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009795	0.0100	98	85-121	1	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-38115/2-B

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.009138		91	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-38115/3-B

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009187	0.0100	92	85-121	1	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

8-IN
 ICP-AES AND ICP-MS SERIAL DILUTIONS
 METALS - DISSOLVED

Lab ID: 570-14476-A-1-D SD ^5

SDG No: _____

Lab Name: Eurofins Calscience

Job No: 570-14631-1

Matrix: Water

Concentration Units: mg/L

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Difference	Q	Method
Cadmium	ND	ND	NC		200.8
Copper	0.00158	0.001322 J	NC		200.8
Lead	ND	ND	NC		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job Number: 570-14631-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 MDL Date: 06/04/2013 00:00
Prep Method: 200.8

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.000128
Copper	65	0.001	0.00014
Lead	207	0.001	0.0000898

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job Number: 570-14631-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 06/04/2013 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.128
Copper	65	1	0.14
Lead	207	1	0.09

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-14631-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 06/04/2013 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.000128
Copper	65	0.001	0.00014
Lead	207	0.001	0.0000898

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-14631-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 06/04/2013 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.128
Copper	65	1	0.14
Lead	207	1	0.09

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience

Job Number: 570-14631-1

SDG Number: _____

Matrix: Water

Instrument ID: HG8

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience Job Number: 570-14631-1
SDG Number: _____
Matrix: Water Instrument ID: HG8
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-14631-1

SDG Number: _____

Matrix: Water

Instrument ID: HG8

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-14631-1
SDG Number: _____
Matrix: Water Instrument ID: HG8
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-14631-1

SDG No.: _____

Instrument ID: ICPMS05

Date: 04/17/2017 06:04

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Cadmium		10	200.8
Copper		50	200.8
Lead		20	200.8

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-14631-1

SDG No.: _____

Instrument ID: HG8

Date: 04/17/2017 05:54

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Mercury		10	245.1

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Prep Method: 200.8

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-38560/1-A	12/12/2019 08:00	38560		50	50
LCS 570-38560/2-A	12/12/2019 08:00	38560		50	50
LCSD 570-38560/3-A	12/12/2019 08:00	38560		50	50
570-14207-B-1-B MS	12/12/2019 08:00	38560		50	50
570-14207-B-1-C MSD	12/12/2019 08:00	38560		50	50
570-14631-1	12/12/2019 08:00	38560		50	50
570-14631-2	12/12/2019 08:00	38560		50	50
570-14631-3	12/12/2019 08:00	38560		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-37642/1-A	12/08/2019 10:30	37642		50	100
LCS 570-37642/2-A	12/08/2019 10:30	37642		50	100
LCSD 570-37642/3-A	12/08/2019 10:30	37642		50	100
570-14559-F-1-B MS	12/08/2019 10:30	37642		50	100
570-14559-F-1-C MSD	12/08/2019 10:30	37642		50	100
570-14631-1	12/08/2019 10:30	37642		50	100
570-14631-2	12/08/2019 10:30	37642		50	100
570-14631-3	12/08/2019 10:30	37642		50	100

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-38115/1-B	12/10/2019 17:50	38121		50	100
LCS 570-38115/2-B	12/10/2019 17:50	38121		50	100
LCSD 570-38115/3-B	12/10/2019 17:50	38121		50	100
570-14597-G-1-E MS	12/10/2019 17:50	38121		50	100
570-14597-G-1-F MSD	12/10/2019 17:50	38121		50	100
570-14631-1	12/10/2019 17:50	38121		50	100
570-14631-2	12/10/2019 17:50	38121		50	100
570-14631-3	12/10/2019 17:50	38121		50	100

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 12/12/2019 10:34 End Date: 12/12/2019 11:50

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICIS 570-38578/1	1		10:34	X	X	X																									
IC 570-38578/2	1		10:37	X	X	X																									
ZZZZZZ			10:40																												
ICV 570-38578/4	1		10:43	X	X	X																									
ZZZZZZ			10:45																												
ICV 570-38578/6	1		10:48	X	X	X																									
ICB 570-38578/7	1		10:51	X	X	X																									
CCV 570-38578/8	1		10:54	X	X	X																									
CCB 570-38578/9	1		10:56	X	X	X																									
ICSA 570-38578/10	1		10:59	X	X	X																									
ICSAB 570-38578/11	1		11:02	X	X	X																									
ZZZZZZ			11:05																												
CCB 570-38578/13	1		11:07	X	X	X																									
ICVL 570-38578/14	1		11:10	X	X	X																									
ZZZZZZ			11:13																												
ZZZZZZ			11:16																												
ZZZZZZ			11:24																												
ZZZZZZ			11:27																												
ZZZZZZ			11:29																												
ZZZZZZ			11:32																												
ZZZZZZ			11:35																												
ZZZZZZ			11:38																												
ZZZZZZ			11:40																												
ZZZZZZ			11:43																												
CCV 570-38578/25			11:46																												
CCB 570-38578/26			11:50																												

Prep Types: _____
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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.: _____

Instrument ID: ICPMS05

Analysis Method: 200.8

Start Date: 12/12/2019 10:43

End Date: 12/13/2019 02:53

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICV 570-38885/33	1		10:43	X	X	X																									
ICV 570-38885/34	1		10:48	X	X	X																									
ICB 570-38885/35	1		10:51	X	X	X																									
ICIS 570-38885/1			01:27	X	X	X																									
IC 570-38885/2	1		01:30	X	X	X																									
CCV 570-38885/3	1		01:33	X	X	X																									
CCB 570-38885/4			01:36																												
CCB 570-38885/5	1		01:38	X	X	X																									
ICVL 570-38885/6	1		01:41	X	X	X																									
MB 570-38411/1-A	1	D	01:44	X	X	X																									
LCS 570-38411/2-A	1	D	01:47	X	X	X																									
LCSD 570-38411/3-A	1	D	01:49	X	X	X																									
ZZZZZZ			01:52																												
570-14476-A-1-D SD ^5	5	D	01:55	X	X	X																									
ZZZZZZ			01:58																												
570-14476-A-1-E MS	1	D	02:00	X	X	X																									
570-14476-A-1-F MSD	1	D	02:03	X	X	X																									
570-14476-A-1-D PDS	1	D	02:06	X	X	X																									
ZZZZZZ			02:09																												
CCV 570-38885/17	1		02:12	X	X	X																									
CCB 570-38885/18	1		02:14	X	X	X																									
CCB 570-38885/19	1		02:17	X	X	X																									
570-14631-1	1	D	02:20	X	X	X																									
570-14631-2	1	D	02:23	X	X	X																									
570-14631-3	1	D	02:25	X	X	X																									
ZZZZZZ			02:28																												
ZZZZZZ			02:31																												
ZZZZZZ			02:34																												
ZZZZZZ			02:36																												
ZZZZZZ			02:39																												
ZZZZZZ			02:42																												
ZZZZZZ			02:45																												
CCV 570-38885/30	1		02:47	X	X	X																									
CCB 570-38885/31	1		02:50	X	X	X																									
CCB 570-38885/32			02:53																												

Prep Types:

D = Dissolved

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 12/13/2019 12:31 End Date: 12/13/2019 14:18

Lab Sample Id	D/F	Type	Time	Analytes																											
				C	C	P																									
ICIS 570-38951/1	1		12:31	X	X	X																									
IC 570-38951/2	1		12:33	X	X	X																									
ICV 570-38951/3	1		12:38	X	X	X																									
ICV 570-38951/4	1		12:43	X	X	X																									
ICB 570-38951/5	1		12:46	X	X	X																									
CCV 570-38951/6	1		12:49	X	X	X																									
CCB 570-38951/7	1		12:51	X	X	X																									
ICSA 570-38951/8	1		12:54	X	X	X																									
ICSAB 570-38951/9	1		12:57	X	X	X																									
ZZZZZZ			13:00																												
CCB 570-38951/11	1		13:02	X	X	X																									
ICVL 570-38951/12	1		13:05	X	X	X																									
ZZZZZZ			13:08																												
ZZZZZZ			13:11																												
ZZZZZZ			13:13																												
ZZZZZZ			13:16																												
ZZZZZZ			13:19																												
ZZZZZZ			13:22																												
ZZZZZZ			13:24																												
ZZZZZZ			13:27																												
CCV 570-38951/21			13:30																												
CCB 570-38951/22			13:33																												
CCB 570-38951/23			13:35																												
ZZZZZZ			13:38																												
ZZZZZZ			13:41																												
ZZZZZZ			13:44																												
ZZZZZZ			13:46																												
ZZZZZZ			13:49																												
ZZZZZZ			13:52																												
CCV 570-38951/30			13:56																												
CCB 570-38951/31			14:00																												
ZZZZZZ			14:08																												
CCV 570-38951/33			14:12																												
CCB 570-38951/34			14:15																												
CCB 570-38951/35			14:18																												

Prep Types: _____
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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG No.: _____

Instrument ID: ICPMS05

Analysis Method: 200.8

Start Date: 12/13/2019 12:38

End Date: 12/14/2019 01:18

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICV 570-39098/39	1		12:38	X	X	X																									
ICV 570-39098/40	1		12:43	X	X	X																									
ICB 570-39098/41	1		12:46	X	X	X																									
ICIS 570-39098/1			23:16	X	X	X																									
IC 570-39098/2	1		23:19	X	X	X																									
CCV 570-39098/3	1		23:22	X	X	X																									
CCB 570-39098/4	1		23:28	X	X	X																									
ICVL 570-39098/5	1		23:30	X	X	X																									
MB 570-38560/1-A	1	R	23:33	X	X	X																									
LCS 570-38560/2-A	1	R	23:36	X	X	X																									
LCSD 570-38560/3-A	1	R	23:39	X	X	X																									
ZZZZZZ			23:44																												
ZZZZZZ			23:47																												
ZZZZZZ			23:50																												
ZZZZZZ			23:52																												
ZZZZZZ			23:55																												
ZZZZZZ			23:58																												
CCV 570-39098/15	1		00:01	X	X	X																									
CCB 570-39098/16	1		00:06	X	X	X																									
ZZZZZZ			00:09																												
ZZZZZZ			00:12																												
ZZZZZZ			00:15																												
ZZZZZZ			00:17																												
ZZZZZZ			00:20																												
570-14207-B-1-B MS	1	R	00:23	X	X	X																									
570-14207-B-1-C MSD	1	R	00:26	X	X	X																									
ZZZZZZ			00:28																												
ZZZZZZ			00:31																												
ZZZZZZ			00:34																												
CCV 570-39098/27	1		00:37	X	X	X																									
CCB 570-39098/28	1		00:42	X	X	X																									
ZZZZZZ			00:45																												
ZZZZZZ			00:48																												
570-14631-1	1	R	00:51	X	X	X																									
570-14631-2	1	R	00:53	X	X	X																									
570-14631-3	1	R	00:56	X	X	X																									
ZZZZZZ			00:59																												
ZZZZZZ			01:02																												
ZZZZZZ			01:04																												
CCV 570-39098/37	1		01:13	X	X	X																									
CCB 570-39098/38	1		01:18	X	X	X																									

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Instrument ID: ICPMS05 Analysis Method: 200.8
 Start Date: 12/13/2019 12:38 End Date: 12/14/2019 01:18

Lab Sample Id	D/F	T y p e	Time	Analytes																			
				C d	C u	P b																	

Prep Types: _____
 R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Instrument ID: HG8 Analysis Method: 245.1
 Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	H g	Analytes																								
ZZZZZZ			15:15																										
ZZZZZZ			15:17																										
ICV 570-37769/2-A			15:57																										
IC 570-37769/4-A			15:59	X																									
IC 570-37769/5-A			16:01	X																									
ICIS 570-37769/1-A			16:03	X																									
ICIS 570-37769/1-A			16:04	X																									
IC 570-37769/4-A			16:06	X																									
IC 570-37769/5-A			16:08	X																									
IC 570-37769/6-A			16:11	X																									
IC 570-37769/7-A			16:13	X																									
IC 570-37769/8-A			16:15	X																									
IC 570-37769/9-A			16:17	X																									
ICV 570-37330/2-A	1		16:21	X																									
ICB 570-37330/3-A	1		16:24	X																									
CRA 570-37769/12-A	1		16:26	X																									
CCV 570-37330/10-A	1		16:28	X																									
CCB 570-37330/11-A	1		16:31	X																									
MB 570-37642/1-A	1	T	16:36	X																									
LCS 570-37642/2-A	1	T	16:39	X																									
LCSD 570-37642/3-A	1	T	16:41	X																									
ZZZZZZ			16:43																										
ZZZZZZ			16:46																										
ZZZZZZ			16:48																										
ZZZZZZ			16:50																										
ZZZZZZ			16:52																										
ZZZZZZ			16:55																										
ZZZZZZ			16:57																										
CCV 570-37330/10-A	1		16:59	X																									
CCB 570-37330/11-A	1		17:01	X																									
ZZZZZZ			17:04																										
ZZZZZZ			17:06																										
ZZZZZZ			17:08																										
ZZZZZZ			17:11																										
ZZZZZZ			17:13																										
ZZZZZZ			17:15																										
570-14559-F-1-B MS	1	T	17:18	X																									
570-14559-F-1-C MSD	1	T	17:20	X																									
ZZZZZZ			17:22																										
ZZZZZZ			17:24																										
CCV 570-37330/10-A	1		17:27	X																									
CCB 570-37330/11-A	1		17:29	X																									

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	T y p e	Time	Analytes																			
				H g																			
ZZZZZZ			17:31																				
570-14631-1	1	T	17:33	X																			
570-14631-2	1	T	17:36	X																			
570-14631-3	1	T	17:38	X																			
ZZZZZZ			17:40																				
CCV 570-37330/10-A	1		17:43	X																			
CCB 570-37330/11-A	1		17:45	X																			
ZZZZZZ			17:54																				
ZZZZZZ			17:56																				
ZZZZZZ			17:59																				
ZZZZZZ			18:01																				
ZZZZZZ			18:03																				
ZZZZZZ			18:06																				
ZZZZZZ			18:08																				
ZZZZZZ			18:10																				
ZZZZZZ			18:12																				
ZZZZZZ			18:15																				
CCV 570-37330/10-A			18:17																				
CCB 570-37330/11-A			18:19																				
ZZZZZZ			18:22																				
ZZZZZZ			18:24																				
ZZZZZZ			18:26																				
ZZZZZZ			18:28																				
ZZZZZZ			18:31																				
ZZZZZZ			18:33																				
ZZZZZZ			18:35																				
ZZZZZZ			18:38																				
ZZZZZZ			18:40																				
ZZZZZZ			18:42																				
CCV 570-37330/10-A			18:45																				
CCB 570-37330/11-A			18:47																				
ZZZZZZ			18:49																				
ZZZZZZ			18:51																				
ZZZZZZ			18:54																				
ZZZZZZ			18:56																				
ZZZZZZ			18:58																				
ZZZZZZ			19:01																				
ZZZZZZ			19:03																				
ZZZZZZ			19:05																				
ZZZZZZ			19:07																				
ZZZZZZ			19:10																				
CCV 570-37330/10-A			19:12																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
CCB 570-37330/11-A			19:14																												
ZZZZZZ			19:17																												
ZZZZZZ			19:19																												
ZZZZZZ			19:21																												
ZZZZZZ			19:24																												
ZZZZZZ			19:26																												
ZZZZZZ			19:28																												
ZZZZZZ			19:30																												
ZZZZZZ			19:33																												
ZZZZZZ			19:35																												
ZZZZZZ			19:37																												
CCV 570-37330/10-A			19:40																												
CCB 570-37330/11-A			19:42																												
ZZZZZZ			19:44																												
ZZZZZZ			19:46																												
ZZZZZZ			19:49																												
ZZZZZZ			19:51																												
ZZZZZZ			19:53																												
ZZZZZZ			19:56																												
ZZZZZZ			19:58																												
ZZZZZZ			20:00																												
ZZZZZZ			20:02																												
ZZZZZZ			20:05																												
CCV 570-37330/10-A			20:07																												
CCB 570-37330/11-A			20:09																												
ZZZZZZ			20:12																												
ZZZZZZ			20:14																												
ZZZZZZ			20:16																												
ZZZZZZ			20:19																												
ZZZZZZ			20:21																												
ZZZZZZ			20:23																												
ZZZZZZ			20:25																												
ZZZZZZ			20:28																												
ZZZZZZ			20:30																												
ZZZZZZ			20:32																												
CCV 570-37330/10-A			20:35																												
CCB 570-37330/11-A			20:37																												
ZZZZZZ			20:39																												
ZZZZZZ			20:42																												
ZZZZZZ			20:44																												
ZZZZZZ			20:46																												
ZZZZZZ			20:48																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Instrument ID: HG8 Analysis Method: 245.1
 Start Date: 12/09/2019 15:15 End Date: 12/09/2019 21:02

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			20:51																												
ZZZZZZ			20:53																												
ZZZZZZ			20:55																												
ZZZZZZ			20:58																												
CCV 570-37330/10-A			21:00																												
CCB 570-37330/11-A			21:02																												

Prep Types: _____
 T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/10/2019 12:17 End Date: 12/10/2019 23:51

Lab Sample Id	D/F	Type	Time	Hg	Analytes																			
ICIS 570-38006/1-A			12:17	X																				
IC 570-38006/4-A			12:19	X																				
IC 570-38006/5-A			12:22	X																				
IC 570-38006/6-A			12:24	X																				
IC 570-38006/7-A			12:26	X																				
IC 570-38006/8-A			12:29	X																				
IC 570-38006/9-A			12:31	X																				
ICV 570-38006/2-A	1		12:36	X																				
ICB 570-38006/3-A	1		12:38	X																				
CRA 570-38006/12-A	1		12:40	X																				
CCV 570-38006/10-A			12:42																					
CCB 570-38006/11-A			12:45																					
ZZZZZZ			13:11																					
ZZZZZZ			13:14																					
ZZZZZZ			13:16																					
ZZZZZZ			13:18																					
ZZZZZZ			13:21																					
ZZZZZZ			13:23																					
CCV 570-38006/10-A			13:25																					
CCB 570-38006/11-A			13:27																					
ZZZZZZ			15:10																					
ZZZZZZ			15:13																					
ZZZZZZ			15:15																					
ZZZZZZ			15:17																					
ZZZZZZ			15:20																					
ZZZZZZ			15:22																					
ZZZZZZ			15:24																					
ZZZZZZ			15:26																					
ZZZZZZ			15:29																					
ZZZZZZ			15:31																					
CCV 570-38006/10-A			15:33																					
CCB 570-38006/11-A			15:36																					
ZZZZZZ			15:38																					
ZZZZZZ			15:40																					
ZZZZZZ			15:42																					
ZZZZZZ			15:45																					
ZZZZZZ			15:47																					
CCV 570-38006/10-A			15:49																					
CCB 570-38006/11-A			15:51																					
ZZZZZZ			16:14																					
ZZZZZZ			16:16																					
ZZZZZZ			16:18																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/10/2019 12:17 End Date: 12/10/2019 23:51

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			16:21																												
ZZZZZZ			16:23																												
ZZZZZZ			16:25																												
ZZZZZZ			16:28																												
ZZZZZZ			16:30																												
ZZZZZZ			16:32																												
ZZZZZZ			16:34																												
CCV 570-38006/10-A			16:37																												
CCB 570-38006/11-A			16:39																												
CCB 570-38006/11-A			16:57																												
ZZZZZZ			16:59																												
ZZZZZZ			17:01																												
ZZZZZZ			17:03																												
ZZZZZZ			17:06																												
ZZZZZZ			17:08																												
ZZZZZZ			17:10																												
ZZZZZZ			17:12																												
ZZZZZZ			17:15																												
ZZZZZZ			17:17																												
ZZZZZZ			17:19																												
CCV 570-38006/10-A			17:21																												
CCB 570-38006/11-A			17:24																												
ZZZZZZ			17:26																												
ZZZZZZ			17:28																												
CCV 570-38006/10-A			17:31																												
CCB 570-38006/11-A			17:33																												
ZZZZZZ			18:10																												
ZZZZZZ			18:12																												
ZZZZZZ			18:14																												
ZZZZZZ			18:17																												
ZZZZZZ			18:19																												
ZZZZZZ			18:21																												
ZZZZZZ			18:23																												
ZZZZZZ			18:26																												
ZZZZZZ			18:28																												
ZZZZZZ			18:30																												
CCV 570-38006/10-A			18:33																												
CCB 570-38006/11-A			18:35																												
ZZZZZZ			18:37																												
ZZZZZZ			18:39																												
ZZZZZZ			18:42																												
ZZZZZZ			18:44																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/10/2019 12:17 End Date: 12/10/2019 23:51

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			18:46																												
ZZZZZZ			18:49																												
ZZZZZZ			18:51																												
ZZZZZZ			18:53																												
ZZZZZZ			18:55																												
ZZZZZZ			18:58																												
CCV 570-38006/10-A			19:00																												
CCB 570-38006/11-A			19:02																												
ZZZZZZ			19:05																												
ZZZZZZ			19:07																												
ZZZZZZ			19:09																												
ZZZZZZ			19:12																												
ZZZZZZ			19:14																												
ZZZZZZ			19:16																												
ZZZZZZ			19:18																												
ZZZZZZ			19:21																												
ZZZZZZ			19:23																												
ZZZZZZ			19:25																												
CCV 570-38006/10-A			19:28																												
CCB 570-38006/11-A			19:30																												
ZZZZZZ			20:30																												
CCV 570-38006/10-A		1	20:32	X																											
CCB 570-38006/11-A		1	20:34	X																											
ZZZZZZ			21:42																												
ZZZZZZ			21:44																												
ZZZZZZ			21:46																												
ZZZZZZ			21:49																												
ZZZZZZ			21:51																												
ZZZZZZ			21:53																												
MB 570-38115/1-B		1 D	21:55	X																											
LCS 570-38115/2-B		1 D	21:58	X																											
LCSD 570-38115/3-B		1 D	22:00	X																											
ZZZZZZ			22:02																												
CCV 570-38006/10-A		1	22:05	X																											
CCB 570-38006/11-A		1	22:07	X																											
570-14597-G-1-E MS		1 D	22:09	X																											
570-14597-G-1-F MSD		1 D	22:12	X																											
ZZZZZZ			22:14																												
ZZZZZZ			22:16																												
570-14631-1		1 D	22:18	X																											
570-14631-2		1 D	22:21	X																											
570-14631-3		1 D	22:23	X																											

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 12/10/2019 12:17 End Date: 12/10/2019 23:51

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			22:25																												
ZZZZZZ			22:28																												
ZZZZZZ			22:30																												
CCV 570-38006/10-A	1		22:32	X																											
CCB 570-38006/11-A	1		22:35	X																											
ZZZZZZ			22:37																												
ZZZZZZ			22:39																												
ZZZZZZ			22:42																												
ZZZZZZ			22:44																												
ZZZZZZ			22:46																												
ZZZZZZ			22:49																												
ZZZZZZ			22:51																												
ZZZZZZ			22:53																												
ZZZZZZ			22:55																												
ZZZZZZ			22:58																												
CCV 570-38006/10-A			23:00																												
CCB 570-38006/11-A			23:02																												
ZZZZZZ			23:05																												
ZZZZZZ			23:07																												
ZZZZZZ			23:09																												
ZZZZZZ			23:12																												
ZZZZZZ			23:14																												
ZZZZZZ			23:16																												
ZZZZZZ			23:19																												
ZZZZZZ			23:21																												
ZZZZZZ			23:23																												
ZZZZZZ			23:26																												
CCV 570-38006/10-A			23:28																												
CCB 570-38006/11-A			23:30																												
ZZZZZZ			23:32																												
ZZZZZZ			23:35																												
ZZZZZZ			23:37																												
ZZZZZZ			23:39																												
ZZZZZZ			23:42																												
ZZZZZZ			23:44																												
ZZZZZZ			23:46																												
CCV 570-38006/10-A			23:49																												
CCB 570-38006/11-A			23:51																												

Prep Types: _____
D = Dissolved

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/12/2019 End Date: 12/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICIS 570-38578/1	10:34										
IC 570-38578/2	10:37										
ICV 570-38578/4	10:43			103		98		98			
ICV 570-38578/6	10:48			105		99		98			
ICB 570-38578/7	10:51			104		99		98			
CCV 570-38578/8	10:54			105		96		96			
CCB 570-38578/9	10:56			103		98		98			
ICSA 570-38578/10	10:59			106		98		101			
ICSAB 570-38578/11	11:02			105		98		102			
CCB 570-38578/13	11:07			102		98		99			
ICVL 570-38578/14	11:10			105		100		99			

15-IN
 ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/12/2019 End Date: 12/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 570-38578/1	10:34										
IC 570-38578/2	10:37										
ICV 570-38578/4	10:43	99									
ICV 570-38578/6	10:48	98									
ICB 570-38578/7	10:51	99									
CCV 570-38578/8	10:54	98									
CCB 570-38578/9	10:56	100									
ICSA 570-38578/10	10:59	105									
ICSAB 570-38578/11	11:02	105									
CCB 570-38578/13	11:07	99									
ICVL 570-38578/14	11:10	99									

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/12/2019 End Date: 12/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICV 570-38885/33	10:43			103				98		98	
ICV 570-38885/34	10:48			105				99		98	
ICB 570-38885/35	10:51			104				99		98	
IC 570-38885/2	01:30										
CCV 570-38885/3	01:33			100				96		98	
CCB 570-38885/5	01:38			99				97		98	
ICVL 570-38885/6	01:41			99				98		99	
MB 570-38411/1-A	01:44			99				97		100	
LCS 570-38411/2-A	01:47			99				96		97	
LCSD 570-38411/3-A	01:49			98				95		98	
570-14476-A-1-D SD ^5	01:55			97				96		99	
570-14476-A-1-E MS	02:00			97				94		96	
570-14476-A-1-F MSD	02:03			97				94		95	
570-14476-A-1-D PDS	02:06			96				94		95	
CCV 570-38885/17	02:12			98				95		96	
CCB 570-38885/18	02:14			93				97		94	
CCB 570-38885/19	02:17			97				94		97	
570-14631-1	02:20			97				95		96	
570-14631-2	02:23			97				95		98	
570-14631-3	02:25			97				95		97	
CCV 570-38885/30	02:47			99				97		97	
CCB 570-38885/31	02:50			99				97		99	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/12/2019 End Date: 12/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-38885/33	10:43	99									
ICV 570-38885/34	10:48	98									
ICB 570-38885/35	10:51	99									
IC 570-38885/2	01:30										
CCV 570-38885/3	01:33	98									
CCB 570-38885/5	01:38	98									
ICVL 570-38885/6	01:41	100									
MB 570-38411/1-A	01:44	98									
LCS 570-38411/2-A	01:47	98									
LCSD 570-38411/3-A	01:49	98									
570-14476-A-1-D SD ^5	01:55	98									
570-14476-A-1-E MS	02:00	97									
570-14476-A-1-F MSD	02:03	96									
570-14476-A-1-D PDS	02:06	96									
CCV 570-38885/17	02:12	97									
CCB 570-38885/18	02:14	93									
CCB 570-38885/19	02:17	97									
570-14631-1	02:20	96									
570-14631-2	02:23	97									
570-14631-3	02:25	97									
CCV 570-38885/30	02:47	98									
CCB 570-38885/31	02:50	99									

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/13/2019 End Date: 12/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICIS 570-38951/1	12:31										
IC 570-38951/2	12:33										
ICV 570-38951/3	12:38			100		95		97			
ICV 570-38951/4	12:43			100		95		98			
ICB 570-38951/5	12:46			101		96		99			
CCV 570-38951/6	12:49			100		93		96			
CCB 570-38951/7	12:51			101		94		98			
ICSA 570-38951/8	12:54			98		92		97			
ICSAB 570-38951/9	12:57			98		92		98			
CCB 570-38951/11	13:02			101		93		100			
ICVL 570-38951/12	13:05			102		95		101			

15-IN
 ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
 METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/13/2019 End Date: 12/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 570-38951/1	12:31										
IC 570-38951/2	12:33										
ICV 570-38951/3	12:38	97									
ICV 570-38951/4	12:43	98									
ICB 570-38951/5	12:46	99									
CCV 570-38951/6	12:49	97									
CCB 570-38951/7	12:51	98									
ICSA 570-38951/8	12:54	100									
ICSAB 570-38951/9	12:57	102									
CCB 570-38951/11	13:02	101									
ICVL 570-38951/12	13:05	101									

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/13/2019 End Date: 12/14/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICV 570-39098/39	12:38			100				95		97	
ICV 570-39098/40	12:43			100				95		98	
ICB 570-39098/41	12:46			101				96		99	
IC 570-39098/2	23:19										
CCV 570-39098/3	23:22			99				98		97	
CCB 570-39098/4	23:28			100				100		100	
ICVL 570-39098/5	23:30			101				101		100	
MB 570-38560/1-A	23:33			100				102		99	
LCS 570-38560/2-A	23:36			100				100		98	
LCSD 570-38560/3-A	23:39			98				100		97	
CCV 570-39098/15	00:01			99				98		97	
CCB 570-39098/16	00:06			100				99		99	
570-14207-B-1-B MS	00:23			100				100		96	
570-14207-B-1-C MSD	00:26			100				100		96	
CCV 570-39098/27	00:37			98				98		97	
CCB 570-39098/28	00:42			99				101		98	
570-14631-1	00:51			100				100		97	
570-14631-2	00:53			100				101		98	
570-14631-3	00:56			101				99		98	
CCV 570-39098/37	01:13			100				102		98	
CCB 570-39098/38	01:18			100				101		100	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 12/13/2019 End Date: 12/14/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-39098/39	12:38	97									
ICV 570-39098/40	12:43	98									
ICB 570-39098/41	12:46	99									
IC 570-39098/2	23:19										
CCV 570-39098/3	23:22	98									
CCB 570-39098/4	23:28	99									
ICVL 570-39098/5	23:30	100									
MB 570-38560/1-A	23:33	100									
LCS 570-38560/2-A	23:36	98									
LCSD 570-38560/3-A	23:39	98									
CCV 570-39098/15	00:01	97									
CCB 570-39098/16	00:06	98									
570-14207-B-1-B MS	00:23	97									
570-14207-B-1-C MSD	00:26	97									
CCV 570-39098/27	00:37	96									
CCB 570-39098/28	00:42	97									
570-14631-1	00:51	98									
570-14631-2	00:53	98									
570-14631-3	00:56	97									
CCV 570-39098/37	01:13	99									
CCB 570-39098/38	01:18	101									

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38411 Batch Start Date: 12/04/19 14:00 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00001	MT_ICP_Spike1 00005
MB 570-38411/1		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-38411/2		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
LCSD 570-38411/3		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-14476-A-1 MSD		Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-14476-A-1 MSD		Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-14631-D-1	A2BMP0007S019	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14631-C-2	A2BMP0012S008	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14631-C-3	EVBMP0003S030	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00003	MT_MS_SPIKE_3 00002				
MB 570-38411/1		Filtration, 200.8							
LCS 570-38411/2		Filtration, 200.8		50 uL	0.25 mL				
LCSD 570-38411/3		Filtration, 200.8		50 uL	0.25 mL				
570-14476-A-1 MSD		Filtration, 200.8	D	50 uL	0.25 mL				
570-14476-A-1 MSD		Filtration, 200.8	D	50 uL	0.25 mL				
570-14631-D-1	A2BMP0007S019	Filtration, 200.8	D						
570-14631-C-2	A2BMP0012S008	Filtration, 200.8	D						
570-14631-C-3	EVBMP0003S030	Filtration, 200.8	D						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38411 Batch Start Date: 12/04/19 14:00 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38560 Batch Start Date: 12/12/19 08:00 Batch Analyst: Rolin, Randy

Batch Method: 200.8 Batch End Date: 12/12/19 10:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MT: 1:1 HCl 00002	MT: 1:1 HNO3 00001	MT_ICP_Spike1 00005
MB 570-38560/1		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	
LCS 570-38560/2		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
LCSD 570-38560/3		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
570-14207-B-1 MS		200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	50 uL
570-14207-B-1 MSD		200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	50 uL
570-14631-F-1	A2BMP0007S019	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	
570-14631-H-2	A2BMP0012S008	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	
570-14631-F-3	EV BMP0003S030	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00003	MT_MS_SPIKE_3 00002				
MB 570-38560/1		200.8, 200.8							
LCS 570-38560/2		200.8, 200.8		50 uL	0.25 mL				
LCSD 570-38560/3		200.8, 200.8		50 uL	0.25 mL				
570-14207-B-1 MS		200.8, 200.8	R	50 uL	0.25 mL				
570-14207-B-1 MSD		200.8, 200.8	R	50 uL	0.25 mL				
570-14631-F-1	A2BMP0007S019	200.8, 200.8	R						
570-14631-H-2	A2BMP0012S008	200.8, 200.8	R						
570-14631-F-3	EV BMP0003S030	200.8, 200.8	R						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38560 Batch Start Date: 12/12/19 08:00 Batch Analyst: Rolin, Randy

Batch Method: 200.8 Batch End Date: 12/12/19 10:30

Batch Notes	
Batch Comment	DISPENSERS- D-30/MD-032
Lot # of hydrochloric acid	MR013019A
Lot # of Nitric Acid	MR013019B
Hot Block ID	12
Oven, Bath or Block Temperature 1	94.6 Degrees C
Oven, Bath or Block Temperature 2	94.6 Degrees C
pH Paper ID	M006-47-07
Pipette ID	P-116/P-069
Thermometer ID	31465640
Digestion Tube/Cup ID	J3330884566
Uncorrected Temperature	95 Degrees C
Uncorrected Temperature 2	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38885 Batch Start Date: 12/12/19 10:43 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MT_MS_BLK_1 00002	MT_MS_CCV 00005	MT_MS_IC 00008	MT_MS_ICV1 00002
IC 570-38885/2		200.8						# mL	
CCV 570-38885/3		200.8					# mL		
CCB 570-38885/5		200.8				# mL			
ICVL 570-38885/6		200.8							
570-14476-A-1-D PDS		200.8	D	10 mL	10 mL				
CCV 570-38885/17		200.8					# mL		
CCB 570-38885/18		200.8				# mL			
CCB 570-38885/19		200.8				# mL			
CCV 570-38885/30		200.8					# mL		
CCB 570-38885/31		200.8				# mL			
ICV 570-38885/33		200.8							# mL
ICV 570-38885/34		200.8							
ICB 570-38885/35		200.8				# mL			

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_ICV2 00003	MT_MS_LL 00006	MT_MS_SP1_10 00001	MT_MS_SP2_10 00001	MT_MS_SPIKE_3 00002
IC 570-38885/2		200.8						
CCV 570-38885/3		200.8						
CCB 570-38885/5		200.8						
ICVL 570-38885/6		200.8			# mL			
570-14476-A-1-D PDS		200.8	D			0.1 mL	0.1 mL	0.05 mL
CCV 570-38885/17		200.8						
CCB 570-38885/18		200.8						
CCB 570-38885/19		200.8						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38885 Batch Start Date: 12/12/19 10:43 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_ICV2 00003	MT_MS_LL 00006	MT_MS_SP1_10 00001	MT_MS_SP2_10 00001	MT_MS_SPIKE_3 00002	
CCV 570-38885/30		200.8							
CCB 570-38885/31		200.8							
ICV 570-38885/33		200.8							
ICV 570-38885/34		200.8		# mL					
ICB 570-38885/35		200.8							

Batch Notes	

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 37330 Batch Start Date: 12/06/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/06/19 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00012	HG_1ppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
ICV 570-37330/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-37330/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-37330/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-37330/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
ICV 570-37330/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-37330/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-37330/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-37330/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 37330 Batch Start Date: 12/06/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/06/19 12:00

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12:00
Digestion Start Time	10:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 37642 Batch Start Date: 12/08/19 10:30 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 12/08/19 12:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	HG_lppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
MB 570-37642/1		245.1, 245.1			50 mL	100 mL		2.5 mL	4 mL
LCS 570-37642/2		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-37642/3		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14559-F-1 MS		245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14559-F-1 MSD		245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14631-G-1	A2BMP0007S019	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL
570-14631-G-2	A2BMP0012S008	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL
570-14631-G-3	EV BMP0003S030	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
MB 570-37642/1		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-37642/2		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-37642/3		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-14559-F-1 MS		245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-14559-F-1 MSD		245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-14631-G-1	A2BMP0007S019	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-14631-G-2	A2BMP0012S008	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-14631-G-3	EV BMP0003S030	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 37642 Batch Start Date: 12/08/19 10:30 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 12/08/19 12:30

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12/08/2019 12:30
Digestion Start Time	12/08/2019 10:30
Digestion Unit ID	Block 3
Sulfuric Acid Lot Number	022376
Nitric Acid ID	026291
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 37769 Batch Start Date: 12/09/19 11:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/09/19 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg_1ppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001	Hg_KMnO4 00002
CRA 570-37769/12		7470A, 245.1		50 mL	100 mL	25 uL	2.5 mL	4 mL	7.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001				
CRA 570-37769/12		7470A, 245.1		3 mL	1.25 mL				

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	13:00
Digestion Start Time	11:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38006 Batch Start Date: 12/10/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/10/19 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00012	HG_1ppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
ICV 570-38006/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-38006/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-38006/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-38006/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CRA 570-38006/12		7470A, 245.1		50 mL	100 mL		25 uL	2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
ICV 570-38006/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-38006/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-38006/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-38006/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CRA 570-38006/12		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38006 Batch Start Date: 12/10/19 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 12/10/19 12:00

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12:00
Digestion Start Time	10:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38115 Batch Start Date: 12/04/19 18:00 Batch Analyst: Gonzales, Julian

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00001	
MB 570-38115/1		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-38115/2		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCSD 570-38115/3		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14597-G-1 MS		Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14597-G-1 MSD		Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14631-D-1	A2BMP0007S019	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14631-C-2	A2BMP0012S008	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-14631-C-3	EVBMP0003S030	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38121 Batch Start Date: 12/10/19 17:50 Batch Analyst: Gonzales, Julian

Batch Method: 245.1 Batch End Date: 12/13/19 12:03

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg_lppm STD 00008	Hg_H2SO4 00001	Hg_K2S2O3 00001
MB 570-38115/1-A		245.1, 245.1			50 mL	100 mL		2.5 mL	4 mL
LCS 570-38115/2-A		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-38115/3-A		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14597-G-1-B MS		245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14597-G-1-C MSD		245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-14631-D-1-A	A2BMP0007S019	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL
570-14631-C-2-A	A2BMP0012S008	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL
570-14631-C-3-A	EVBMP0003S030	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
MB 570-38115/1-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-38115/2-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-38115/3-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-14597-G-1-B MS		245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-14597-G-1-C MSD		245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-14631-D-1-A	A2BMP0007S019	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-14631-C-2-A	A2BMP0012S008	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-14631-C-3-A	EVBMP0003S030	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 38121 Batch Start Date: 12/10/19 17:50 Batch Analyst: Gonzales, Julian

Batch Method: 245.1 Batch End Date: 12/13/19 12:03

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12/10/2019 19:50
Digestion Start Time	12/10/2019 17:50
Digestion Unit ID	Block 3
Sulfuric Acid Lot Number	022376
Nitric Acid ID	026291
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Thursday, December 12, 2019 10:05:43

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2019\191212E1\STD Performance Check.006

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode	
Be	9.0		2951.7		2951.705		39.622		1.3	Standard	
In	114.9		61626.3		61626.309		457.899		0.7	Standard	
U	238.1		55207.1		55207.139		395.637		0.7	Standard	
[	CeO	155.9		1272.1		0.022		0.000		2.0	Standard
>	Ce	139.9		58059.9		58059.880		293.193		0.5	Standard
[	Ce++	70.0		596.9		0.010		0.000		3.0	Standard
	Bkgd	220.0		1.1		1.133		0.492		43.4	Standard

Current Conditions File Data

Current Value	Description
0.96	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.50	Deflector Voltage
1600.00	ICP RF Power
-2150.00	Analog Stage Voltage
1900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-13.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-17.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.50	DRC Mode QRO
-2.50	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-15.50	KED Mode CRO
-22.50	KED Mode QRO
-18.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Thursday, December 12, 2019 10:07:48

Page 1

475.00 KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer\Syngis\stix\ICPMS\Wizard\SmartTune\Full.swz

Start Time: 12/12/2019 10:05:42 AM

End Time: 12/12/2019 10:07:57 AM

STD Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 2951.70

Obtained Intensity (In 115): 61626.31

Obtained Intensity (U 238): 55207.14

Obtained Intensity (Bkgd 220): 1.13

Obtained Formula (Ce++ 70 / Ce 140): 0.010 (=596.95 / 58059.88)

Obtained Formula (Ce0 156 / Ce 140): 0.022 (=1272.12 / 58059.88)

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer\Syngis\stx\ICPMS\Wizard\SmartTune\Full.swz

Optimization Status

Start Time: 12/12/2019 10:05:42 AM

STD Performance Check

Optimization Settings:

Method: STD Performance Check.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: In 115 > 30000
Intensity Criterion: U 238 > 30000
Intensity Criterion: Bkgd 220 <= 10
Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
Formula Criterion: Ce0 156 / Ce 140 <= 0.03

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 2951.70
Obtained Intensity (In 115): 61626.31
Obtained Intensity (U 238): 55207.14
Obtained Intensity (Bkgd 220): 1.13
Obtained Formula (Ce++ 70 / Ce 140): 0.010 (=596.95 / 58059.88)
Obtained Formula (Ce0 156 / Ce 140): 0.022 (=1272.12 / 58059.88)

[Passed] Optimum value(s): N/A

End Time: 12/12/2019 10:07:57 AM

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, December 12, 2019 10:34:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\ICIS-23447.012

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		52891.202		ppb		4.610		
9	Be	|		10.000		ppb		0.000		
10	B	|		4209.509		ppb		3.123		
27	Al	|		3160.350		ppb		0.460		
43	Ca-2	|		66.667		ppb		15.613		
49	Ti	|		176.668		ppb		22.245		
52	Cr	|		13038.170		ppb		1.189		
55	Mn	|		556.678		ppb		18.708		
57	Fe	|		14488.455		ppb		1.236		
45	Sc-IS	[>		2166046.251		ppb		7.687		
66	Zn	|		690.017		ppb		6.280		
86	Sr	|		25.665		ppb	177.490			
65	Cu	|		161.861		ppb		7.214		
69	Ga-IS	|		689942.162		ppb		4.380		
95	Mo	[		102.223		ppb		16.734		
115	In-IS	[>		442186.499		ppb		4.037		
111	Cd	|		15.341		ppb		12.600		
118	Sn	|		1292.281		ppb		8.611		
121	Sb	|		277.780		ppb		7.233		
135	Ba	|		37.778		ppb		30.987		
165	Ho-IS	[		450691.879		ppb		5.355		
159	Tb-IS	[>		535383.499		ppb		4.995		
207	Pb	|		167.778		ppb		12.773		
203	Tl	|		21.111		ppb		24.119		
209	Bi-IS	[		304067.524		ppb		4.022		
51	V	[		2.222		ppb	173.205			
59	Co	|		16.667		ppb		20.000		
60	Ni	|		48.889		ppb		27.555		
75	As	|		579.095		ppb		0.734		
71	Ga-ISK	[>		116336.232		ppb		0.687		
82	Se-2	|		3.570		ppb	159.308			
107	Ag-1	|		477.786		ppb		15.050		
115	In-ISK	[		123482.418		ppb		0.498		
45	Sc-ISK	[>		273934.831		ppb		0.416		
23	Na	|		3645.465		ppb		0.598		
39	K	|		91362.356		ppb		1.213		
24	Mg	|		73.334		ppb		7.873		
159	Tb-ISK	[		259306.913		ppb		0.258		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, December 12, 2019 10:37:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\IC-210761.013

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	49937.136		ppb		1.191		52891.202
9	Be	|	276307.888	200.000000	ppb		1.222	0.505	10.000
10	B	|	190150.877	500.000000	ppb		2.208	1.526	4209.509
27	Al	|	1372631.833	200.000000	ppb		1.146	0.820	3160.350
43	Ca-2	|	236952.396	10200.000000	ppb		0.888	0.507	66.667
49	Ti	|	133228.440	200.000000	ppb		1.397	0.624	176.668
52	Cr	|	1881092.221	200.000000	ppb		0.601	0.755	13038.170
55	Mn	|	3410265.896	200.000000	ppb		0.621	0.798	556.678
57	Fe	|	3653426.936	10200.000000	ppb		0.410	0.989	14488.455
45	Sc-IS	>	2260354.136		ppb		0.779		2166046.251
66	Zn	|	347553.632	200.000000	ppb		0.091	0.859	690.017
86	Sr	|	546454.317	200.000000	ppb		0.647	1.401	25.665
65	Cu	|	542942.024	200.000000	ppb		0.587	1.077	161.861
69	Ga-IS	|	701464.999		ppb		0.503		689942.162
95	Mo	|	538414.174	200.000000	ppb		0.463	1.128	102.223
115	In-IS	>	416262.528		ppb		1.789		442186.499
111	Cd	|	464066.170	200.000000	ppb		1.091	1.127	15.341
118	Sn	|	1386845.856	200.000000	ppb		0.872	0.989	1292.281
121	Sb	|	1497326.900	200.000000	ppb		1.040	1.200	277.780
135	Ba	|	386448.362	200.000000	ppb		0.270	2.022	37.778
165	Ho-IS	|	440434.205		ppb		0.522		450691.879
159	Tb-IS	>	525246.873		ppb		1.764		535383.499
207	Pb	|	5352423.700	200.000000	ppb		1.113	1.350	167.778
203	Tl	|	1619859.301	200.000000	ppb		1.206	2.437	21.111
209	Bi-IS	|	284517.669		ppb		0.816		304067.524
51	V	|	86590.606	200.000000	ppb		2.183	2.361	2.222
59	Co	|	283521.597	200.000000	ppb		2.713	2.883	16.667
60	Ni	|	207411.691	200.000000	ppb		1.388	1.277	48.889
75	As	|	80679.373	200.000000	ppb		0.265	0.440	579.095
71	Ga-ISK	>	113752.201		ppb		0.179		116336.232
82	Se-2	|	7661.947	200.000000	ppb		1.190	1.089	3.570
107	Ag-1	|	914757.147	200.000000	ppb		0.991	0.814	477.786
115	In-ISK	|	118652.221		ppb		0.532		123482.418
45	Sc-ISK	>	270351.997		ppb		0.500		273934.831
23	Na	|	4746781.013	10200.000000	ppb		0.308	0.436	3645.465
39	K	|	9596441.214	10200.000000	ppb		0.639	1.147	91362.356
24	Mg	|	5220424.058	10200.000000	ppb		1.183	1.680	73.334
159	Tb-ISK	|	256103.490		ppb		1.345		259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 201

Sample Date/Time: Thursday, December 12, 2019 10:40:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\b.014

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		51026.527		ppb		0.811		52891.202
9	Be	|		43.333	0.024118	ppb	42.829	57.188		10.000
10	B	|		4115.038	-0.668766	ppb	4.750	72.947		4209.509
27	Al	|		8883.873	0.825434	ppb	1.557	4.018		3160.350
43	Ca-2	|		125.001	2.426333	ppb	8.000	18.390		66.667
49	Ti	|		304.448	0.183756	ppb	3.520	6.427		176.668
52	Cr	|		11503.520	-0.216330	ppb	2.178	8.386		13038.170
55	Mn	|		1613.425	0.061271	ppb	3.439	6.818		556.678
57	Fe	|		15527.326	1.460286	ppb	2.232	72.378		14488.455
45	Sc-IS	>		2244178.136		ppb	0.998			2166046.251
66	Zn	|		1150.046	0.252792	ppb	5.218	14.434		690.017
86	Sr	|		53.481	0.009904	ppb	42.502	84.650		25.665
65	Cu	|		345.332	0.066007	ppb	12.588	25.787		161.861
69	Ga-IS	|		678058.574		ppb	1.001			689942.162
95	Mo	|		6049.059	2.223888	ppb	3.164	3.093		102.223
115	In-IS	>		433967.508		ppb	1.595			442186.499
111	Cd	|		81.742	0.027493	ppb	27.020	31.460		15.341
118	Sn	|		19558.960	2.533333	ppb	5.245	6.668		1292.281
121	Sb	|		1618.981	0.172618	ppb	4.286	6.764		277.780
135	Ba	|		196.668	0.079261	ppb	20.339	25.651		37.778
165	Ho-IS	|		448329.797		ppb	1.686			450691.879
159	Tb-IS	>		525966.269		ppb	1.337			535383.499
207	Pb	|		1812.268	0.061490	ppb	2.300	3.971		167.778
203	Tl	|		743.353	0.089144	ppb	7.464	9.031		21.111
209	Bi-IS	|		299892.066		ppb	1.334			304067.524
51	V	|		23.333	0.048959	ppb	14.286	16.331		2.222
59	Co	|		50.000	0.023776	ppb	24.037	34.644		16.667
60	Ni	|		132.223	0.081435	ppb	28.670	44.192		48.889
75	As	|		612.279	0.116380	ppb	3.769	44.904		579.095
71	Ga-ISK	>		113637.976		ppb	0.665			116336.232
82	Se-2	|		15.213	0.306699	ppb	27.536	36.105		3.570
107	Ag-1	|		1618.981	0.252443	ppb	7.738	11.738		477.786
115	In-ISK	|		117310.395		ppb	0.932			123482.418
45	Sc-ISK	>		270370.189		ppb	0.838			273934.831
23	Na	|		5979.588	5.116998	ppb	6.457	14.183		3645.465
39	K	|		98696.436	9.152046	ppb	0.614	16.253		91362.356
24	Mg	|		1035.038	1.879786	ppb	14.741	15.337		73.334
159	Tb-ISK	|		253095.203		ppb	1.231			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-235105

Autosampler Position: 206

Sample Date/Time: Thursday, December 12, 2019 10:43:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\ICV-235105.015

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		51549.510		ppb			0.777			52891.202
9	Be	|		146050.677	106.737117	ppb			1.552	1.657		10.000
10	B	|		4778.577	1.163247	ppb			2.025	25.528		4209.509
27	Al	|		6208.016	0.433817	ppb			2.433	5.458		3160.350
43	Ca-2	|		120405.374	5231.666897	ppb			1.662	1.699		66.667
49	Ti	|		68430.170	103.588077	ppb			0.299	0.047		176.668
52	Cr	|		976230.593	104.100330	ppb			0.177	0.190		13038.170
55	Mn	|		1590146.449	94.138468	ppb			1.171	1.395		556.678
57	Fe	|		1788508.607	5019.953918	ppb			0.528	0.772		14488.455
45	Sc-IS	>		2238731.313		ppb			0.262			2166046.251
66	Zn	|		188734.413	109.468148	ppb			1.968	2.238		690.017
86	Sr	|		278425.996	102.876774	ppb			1.065	1.277		25.665
65	Cu	|		287856.190	107.027279	ppb			0.630	0.857		161.861
69	Ga-IS	|		677256.594		ppb			1.557			689942.162
95	Mo	|		278365.510	104.379288	ppb			2.041	2.250		102.223
115	In-IS	>		431877.410		ppb			1.554			442186.499
111	Cd	|		250533.913	104.050058	ppb			2.035	0.487		15.341
118	Sn	|		730648.548	101.455639	ppb			2.153	0.831		1292.281
121	Sb	|		740100.238	95.253446	ppb			1.621	0.727		277.780
135	Ba	|		257.780	0.110333	ppb			11.662	15.266		37.778
165	Ho-IS	|		446600.608		ppb			2.501			450691.879
159	Tb-IS	>		530010.861		ppb			2.750			535383.499
207	Pb	|		2644218.256	97.914924	ppb			1.981	0.769		167.778
203	Tl	|		822983.155	100.709084	ppb			0.953	2.147		21.111
209	Bi-IS	|		295012.265		ppb			1.747			304067.524
51	V	|		44469.107	102.237689	ppb			0.626	1.215		2.222
59	Co	|		143925.899	101.050086	ppb			1.254	1.009		16.667
60	Ni	|		106429.432	102.134996	ppb			0.499	0.885		48.889
75	As	|		41702.654	102.208643	ppb			2.287	1.704		579.095
71	Ga-ISK	>		114278.610		ppb			0.622			116336.232
82	Se-2	|		3827.379	99.405338	ppb			0.475	1.101		3.570
107	Ag-1	|		1056.706	0.127986	ppb			12.099	22.609		477.786
115	In-ISK	|		119408.373		ppb			0.436			123482.418
45	Sc-ISK	>		270410.885		ppb			0.563			273934.831
23	Na	|		5019.215	3.054920	ppb			1.360	6.280		3645.465
39	K	|		94784.516	4.933856	ppb			0.227	12.525		91362.356
24	Mg	|		2624819.373	5127.136546	ppb			0.215	0.362		73.334
159	Tb-ISK	|		251038.537		ppb			0.503			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, December 12, 2019 10:45:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\b.016

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		50945.124		ppb		0.602		52891.202
9	Be	|		22.222	0.008769	ppb	48.218	88.823		10.000
10	B	|		4013.897	-0.818597	ppb	1.634	44.269		4209.509
27	Al	|		3743.824	0.075373	ppb	3.740	37.512		3160.350
43	Ca-2	|		88.334	0.878155	ppb	18.196	81.033		66.667
49	Ti	|		210.002	0.044052	ppb	17.676	124.541		176.668
52	Cr	|		11134.337	-0.242720	ppb	0.338	6.973		13038.170
55	Mn	|		917.807	0.020742	ppb	4.945	12.159		556.678
57	Fe	|		14409.488	-1.253876	ppb	2.087	18.544		14488.455
45	Sc-IS	>		2219827.064		ppb	1.702			2166046.251
66	Zn	|		854.470	0.086574	ppb	1.370	10.751		690.017
86	Sr	|		95.817	0.026048	ppb	33.464	48.011		25.665
65	Cu	|		208.773	0.016031	ppb	9.706	39.664		161.861
69	Ga-IS	|		675609.276		ppb	1.241			689942.162
95	Mo	|		4101.700	1.512528	ppb	2.307	3.542		102.223
115	In-IS	>		438240.039		ppb	1.750			442186.499
111	Cd	|		49.164	0.013964	ppb	25.395	38.782		15.341
118	Sn	|		20600.407	2.649837	ppb	3.055	4.878		1292.281
121	Sb	|		25109.834	3.152167	ppb	2.348	3.679		277.780
135	Ba	|		44.445	0.003455	ppb	4.330	36.248		37.778
165	Ho-IS	|		450544.053		ppb	2.591			450691.879
159	Tb-IS	>		533970.838		ppb	2.689			535383.499
207	Pb	|		1322.246	0.042481	ppb	1.388	4.628		167.778
203	Tl	|		686.683	0.080936	ppb	9.550	11.431		21.111
209	Bi-IS	|		298712.311		ppb	1.569			304067.524
51	V	|		21.111	0.043330	ppb	77.888	86.047		2.222
59	Co	|		50.000	0.023619	ppb	35.277	52.230		16.667
60	Ni	|		87.778	0.038183	ppb	5.801	12.103		48.889
75	As	|		586.482	0.044951	ppb	7.450	270.654		579.095
71	Ga-ISK	>		114243.905		ppb	0.938			116336.232
82	Se-2	|		12.877	0.243033	ppb	54.633	74.854		3.570
107	Ag-1	|		713.351	0.053215	ppb	12.221	36.419		477.786
115	In-ISK	|		118863.357		ppb	0.705			123482.418
45	Sc-ISK	>		270577.780		ppb	1.732			273934.831
23	Na	|		4217.291	1.329509	ppb	6.347	49.398		3645.465
39	K	|		92860.846	2.836124	ppb	0.822	89.743		91362.356
24	Mg	|		600.013	1.029479	ppb	8.458	8.533		73.334
159	Tb-ISK	|		254869.495		ppb	0.583			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-62207

Autosampler Position: 213

Sample Date/Time: Thursday, December 12, 2019 10:48:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\ICV-62207.017

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		51245.115		ppb		2.358		52891.202
9	Be	|		7.778	-0.001954	ppb	24.744	66.496		10.000
10	B	|		41148.072	98.594090	ppb	1.385	1.054		4209.509
27	Al	|		717723.399	104.020315	ppb	1.088	0.716		3160.350
43	Ca-2	|		105.000	1.515004	ppb	33.333	100.629		66.667
49	Ti	|		177.779	-0.010710	ppb	14.321	359.746		176.668
52	Cr	|		11533.543	-0.225508	ppb	1.327	14.933		13038.170
55	Mn	|		1140.046	0.032606	ppb	3.295	8.817		556.678
57	Fe	|		12559.966	-7.272662	ppb	2.584	19.149		14488.455
45	Sc-IS	>		2267513.370		ppb	1.429			2166046.251
66	Zn	|		1350.064	0.361216	ppb	6.203	15.536		690.017
86	Sr	|		53.544	0.009796	ppb	34.424	71.104		25.665
65	Cu	|		295.785	0.046505	ppb	9.289	24.531		161.861
69	Ga-IS	|		712087.549		ppb	0.738			689942.162
95	Mo	|		843.358	0.272713	ppb	6.649	7.600		102.223
115	In-IS	>		435004.215		ppb	1.468			442186.499
111	Cd	|		36.007	0.008618	ppb	14.466	24.063		15.341
118	Sn	|		8266.839	0.966624	ppb	4.282	6.384		1292.281
121	Sb	|		6500.370	0.796517	ppb	5.225	6.999		277.780
135	Ba	|		207443.334	102.700326	ppb	1.648	0.841		37.778
165	Ho-IS	|		444321.999		ppb	1.766			450691.879
159	Tb-IS	>		525014.810		ppb	2.462			535383.499
207	Pb	|		593.339	0.016066	ppb	8.918	15.170		167.778
203	Tl	|		152.223	0.016222	ppb	10.802	10.481		21.111
209	Bi-IS	|		296845.806		ppb	2.440			304067.524
51	V	|		12.222	0.022971	ppb	31.492	39.565		2.222
59	Co	|		23.333	0.004811	ppb	42.857	147.340		16.667
60	Ni	|		72.222	0.022780	ppb	16.209	46.806		48.889
75	As	|		571.399	-0.002097	ppb	6.842	4392.167		579.095
71	Ga-ISK	>		114949.547		ppb	1.177			116336.232
82	Se-2	|		7.552	0.103404	ppb	40.274	73.526		3.570
107	Ag-1	|		244404.057	52.808228	ppb	0.291	0.884		477.786
115	In-ISK	|		119028.731		ppb	0.997			123482.418
45	Sc-ISK	>		272996.240		ppb	1.246			273934.831
23	Na	|		466475.723	985.721281	ppb	0.927	0.922		3645.465
39	K	|		1007925.173	974.250736	ppb	0.979	0.580		91362.356
24	Mg	|		358.338	0.551237	ppb	17.052	20.266		73.334
159	Tb-ISK	|		254833.582		ppb	0.836			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Thursday, December 12, 2019 10:51:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\ICB-23446.018

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		51080.047		ppb			0.238			52891.202
9	Be	|		14.444	0.002954	ppb			35.251	121.449		10.000
10	B	|		4032.792	-0.890502	ppb			3.153	25.810		4209.509
27	Al	|		6159.105	0.424553	ppb			0.735	0.754		3160.350
43	Ca-2	|		110.000	1.773001	ppb			19.813	52.255		66.667
49	Ti	|		164.445	-0.028070	ppb			10.402	94.431		176.668
52	Cr	|		11715.916	-0.193132	ppb			2.975	18.360		13038.170
55	Mn	|		964.477	0.022913	ppb			2.794	5.858		556.678
57	Fe	|		12714.545	-6.476982	ppb			1.559	8.499		14488.455
45	Sc-IS	>		2243791.150		ppb			1.070			2166046.251
66	Zn	|		1054.483	0.197404	ppb			1.559	7.095		690.017
86	Sr	|		40.709	0.005227	ppb			53.129	154.482		25.665
65	Cu	|		179.325	0.004338	ppb			18.834	292.247		161.861
69	Ga-IS	|		686307.280		ppb			1.290			689942.162
95	Mo	|		478.897	0.139580	ppb			6.430	7.821		102.223
115	In-IS	>		434185.863		ppb			1.652			442186.499
111	Cd	|		37.883	0.009422	ppb			5.168	6.119		15.341
118	Sn	|		4662.984	0.469974	ppb			5.028	8.517		1292.281
121	Sb	|		3168.130	0.371187	ppb			7.101	9.627		277.780
135	Ba	|		177.779	0.069753	ppb			5.728	5.183		37.778
165	Ho-IS	|		450885.264		ppb			1.824			450691.879
159	Tb-IS	>		531741.133		ppb			2.375			535383.499
207	Pb	|		461.114	0.010875	ppb			4.921	8.536		167.778
203	Tl	|		115.556	0.011561	ppb			10.921	16.172		21.111
209	Bi-IS	|		299925.250		ppb			1.770			304067.524
51	V	|		10.000	0.017704	ppb			145.297	186.269		2.222
59	Co	|		27.778	0.007820	ppb			24.980	62.414		16.667
60	Ni	|		57.778	0.008809	ppb			16.654	104.920		48.889
75	As	|		612.310	0.092301	ppb			8.523	136.103		579.095
71	Ga-ISK	>		115459.150		ppb			0.417			116336.232
82	Se-2	|		1.877	-0.043419	ppb			417.242	464.812		3.570
107	Ag-1	|		967.811	0.106355	ppb			6.556	12.174		477.786
115	In-ISK	|		120648.204		ppb			0.665			123482.418
45	Sc-ISK	>		272505.707		ppb			0.661			273934.831
23	Na	|		4148.936	1.115596	ppb			3.769	32.646		3645.465
39	K	|		91937.109	1.122259	ppb			0.216	65.251		91362.356
24	Mg	|		353.338	0.542898	ppb			21.242	25.913		73.334
159	Tb-ISK	|		254731.211		ppb			1.167			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, December 12, 2019 10:54:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCV-210770.019

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		51020.951		ppb		0.717		52891.202
9	Be	|		137877.762	99.171775	ppb		0.978	0.478	10.000
10	B	|		98027.445	250.423783	ppb		1.410	2.230	4209.509
27	Al	|		701085.826	101.277278	ppb		1.091	1.243	3160.350
43	Ca-2	|		117839.017	5039.615408	ppb		0.242	1.355	66.667
49	Ti	|		66805.854	99.521251	ppb		1.085	0.426	176.668
52	Cr	|		953884.160	100.064784	ppb		0.141	1.420	13038.170
55	Mn	|		1581503.662	92.158040	ppb		0.853	1.957	556.678
57	Fe	|		1718737.229	4746.370673	ppb		0.953	2.232	14488.455
45	Sc-IS	>		2274740.327		ppb		1.450		2166046.251
66	Zn	|		174396.968	99.524177	ppb		0.730	1.689	690.017
86	Sr	|		277495.411	100.911257	ppb		1.109	0.403	25.665
65	Cu	|		276981.273	101.363083	ppb		1.040	1.765	161.861
69	Ga-IS	|		685430.798		ppb		0.521		689942.162
95	Mo	|		273511.621	100.936865	ppb		1.476	1.316	102.223
115	In-IS	>		422524.185		ppb		0.379		442186.499
111	Cd	|		235824.506	100.114321	ppb		0.826	0.831	15.341
118	Sn	|		707485.825	100.418035	ppb		0.588	0.656	1292.281
121	Sb	|		755665.901	99.409854	ppb		0.534	0.186	277.780
135	Ba	|		196673.524	100.242210	ppb		0.915	0.580	37.778
165	Ho-IS	|		439990.451		ppb		3.110		450691.879
159	Tb-IS	>		526995.231		ppb		1.826		535383.499
207	Pb	|		2530587.102	94.228822	ppb		2.114	0.845	167.778
203	Tl	|		820721.000	100.972859	ppb		1.863	1.089	21.111
209	Bi-IS	|		287674.640		ppb		1.389		304067.524
51	V	|		43279.915	101.690357	ppb		1.480	1.711	2.222
59	Co	|		142573.565	102.310632	ppb		1.381	1.992	16.667
60	Ni	|		102706.771	100.735398	ppb		0.219	1.557	48.889
75	As	|		39600.581	99.156260	ppb		1.047	0.897	579.095
71	Ga-ISK	>		111827.159		ppb		1.539		116336.232
82	Se-2	|		3653.692	96.994026	ppb		1.418	2.768	3.570
107	Ag-1	|		455610.158	101.305662	ppb		1.540	2.814	477.786
115	In-ISK	|		117313.529		ppb		1.179		123482.418
45	Sc-ISK	>		272972.225		ppb		0.443		273934.831
23	Na	|		2429152.157	5165.963427	ppb		0.447	0.839	3645.465
39	K	|		4899276.305	5109.382272	ppb		0.577	0.143	91362.356
24	Mg	|		2650403.372	5128.525860	ppb		0.113	0.421	73.334
159	Tb-ISK	|		251879.127		ppb		0.400		259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, December 12, 2019 10:56:54

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCB-23446.020

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		50441.121		ppb			0.880			52891.202
9	Be	|		34.444	0.017660	ppb		39.111	56.368			10.000
10	B	|		4285.087	-0.170632	ppb		1.910	121.533			4209.509
27	Al	|		3273.715	0.001601	ppb		16.766	5170.652			3160.350
43	Ca-2	|		70.000	0.049795	ppb		0.000	32.132			66.667
49	Ti	|		182.223	-0.000202	ppb		17.767	25034.828			176.668
52	Cr	|		11152.131	-0.250495	ppb		2.457	9.341			13038.170
55	Mn	|		838.914	0.015642	ppb		0.827	1.256			556.678
57	Fe	|		13154.945	-5.124991	ppb		2.291	16.396			14488.455
45	Sc-IS	>		2237202.719		ppb		0.527				2166046.251
66	Zn	|		645.570	-0.039147	ppb		4.174	34.996			690.017
86	Sr	|		26.202	-0.000099	ppb		105.077	10308.811			25.665
65	Cu	|		195.777	0.010639	ppb		4.587	28.784			161.861
69	Ga-IS	|		687257.445		ppb		0.078				689942.162
95	Mo	|		2813.611	1.016677	ppb		5.298	5.992			102.223
115	In-IS	>		433316.421		ppb		2.044				442186.499
111	Cd	|		42.980	0.011506	ppb		31.685	45.803			15.341
118	Sn	|		12885.809	1.611676	ppb		0.990	3.320			1292.281
121	Sb	|		2093.487	0.233977	ppb		6.051	9.022			277.780
135	Ba	|		75.556	0.019387	ppb		50.751	101.056			37.778
165	Ho-IS	|		447445.221		ppb		3.316				450691.879
159	Tb-IS	>		534840.052		ppb		2.269				535383.499
207	Pb	|		1028.904	0.031579	ppb		6.721	5.358			167.778
203	Tl	|		422.228	0.048680	ppb		4.626	7.172			21.111
209	Bi-IS	|		296695.560		ppb		1.849				304067.524
51	V	|		16.667	0.033361	ppb		20.000	22.608			2.222
59	Co	|		45.556	0.020633	ppb		27.702	45.427			16.667
60	Ni	|		66.667	0.018030	ppb		18.028	64.245			48.889
75	As	|		631.642	0.159772	ppb		6.277	72.341			579.095
71	Ga-ISK	>		114070.334		ppb		1.375				116336.232
82	Se-2	|		9.192	0.147402	ppb		53.948	85.677			3.570
107	Ag-1	|		1150.047	0.148525	ppb		9.618	14.471			477.786
115	In-ISK	|		119375.194		ppb		0.829				123482.418
45	Sc-ISK	>		272368.689		ppb		0.670				273934.831
23	Na	|		4087.253	0.987769	ppb		7.117	63.367			3645.465
39	K	|		92131.696	1.376440	ppb		0.595	28.210			91362.356
24	Mg	|		523.343	0.873635	ppb		6.912	8.276			73.334
159	Tb-ISK	|		253142.583		ppb		0.851				259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Thursday, December 12, 2019 10:59:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\ICSA-30518.021

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		50180.206		ppb			1.077			52891.202
9	Be	|		40.000	0.021084	ppb			30.046	42.173		10.000
10	B	|		4448.472	-0.014643	ppb			5.410	3901.698		4209.509
27	Al	|		73492425.387	10588.252600	ppb			0.740	0.729		3160.350
43	Ca-2	|		721856.578	30657.298240	ppb			1.206	0.163		66.667
49	Ti	|		141586.006	209.681100	ppb			1.118	0.368		176.668
52	Cr	|		14726.476	0.098654	ppb			0.733	9.889		13038.170
55	Mn	|		6527.046	0.343607	ppb			1.052	1.838		556.678
57	Fe	|		9102971.080	25133.588639	ppb			1.029	2.001		14488.455
45	Sc-IS	>		2291516.155		ppb			1.365			2166046.251
66	Zn	|		1909.017	0.670202	ppb			6.581	8.903		690.017
86	Sr	|		1284.414	0.453966	ppb			6.036	6.493		25.665
65	Cu	|		109.397	-0.022464	ppb			55.690	99.457		161.861
69	Ga-IS	|		686350.865		ppb			1.010			689942.162
95	Mo	|		584112.596	214.037032	ppb			1.360	1.743		102.223
115	In-IS	>		445754.799		ppb			1.030			442186.499
111	Cd	|		-9.918	-0.010233	ppb			1159.439	449.601		15.341
118	Sn	|		5626.664	0.582890	ppb			1.618	3.430		1292.281
121	Sb	|		1980.138	0.212195	ppb			6.049	8.285		277.780
135	Ba	|		443.340	0.195535	ppb			21.960	23.071		37.778
165	Ho-IS	|		480792.099		ppb			1.986			450691.879
159	Tb-IS	>		562527.451		ppb			1.493			535383.499
207	Pb	|		1085.571	0.031736	ppb			3.960	5.886		167.778
203	Tl	|		234.446	0.024499	ppb			25.047	28.624		21.111
209	Bi-IS	|		294815.710		ppb			2.644			304067.524
51	V	|		76.667	0.172343	ppb			28.511	28.682		2.222
59	Co	|		97.778	0.057490	ppb			38.318	45.063		16.667
60	Ni	|		366.671	0.308419	ppb			3.636	3.678		48.889
75	As	|		618.858	0.135453	ppb			1.476	23.780		579.095
71	Ga-ISK	>		113464.397		ppb			0.965			116336.232
82	Se-2	|		7.552	0.106480	ppb			7.409	12.204		3.570
107	Ag-1	|		1170.048	0.154222	ppb			13.251	20.532		477.786
115	In-ISK	|		118774.799		ppb			1.293			123482.418
45	Sc-ISK	>		278819.059		ppb			0.218			273934.831
23	Na	|		12162859.714	25353.216358	ppb			0.905	0.774		3645.465
39	K	|		9743949.207	10040.310990	ppb			0.817	0.613		91362.356
24	Mg	|		5137920.216	9733.470003	ppb			0.456	0.625		73.334
159	Tb-ISK	|		259698.741		ppb			0.990			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Thursday, December 12, 2019 11:02:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\ICSAB-30517.022

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	50616.193		ppb	1.601		52891.202
9	Be	12.222	0.001237	ppb	68.635	487.078	10.000
10	B	4392.898	-0.017565	ppb	3.398	2580.759	4209.509
27	Al	73035369.979	10648.914977	ppb	1.733	1.024	3160.350
43	Ca-2	726642.755	31235.262745	ppb	0.815	0.890	66.667
49	Ti	142599.349	213.749292	ppb	1.157	1.248	176.668
52	Cr	209762.355	20.969443	ppb	1.535	0.853	13038.170
55	Mn	337997.607	19.762914	ppb	1.109	2.647	556.678
57	Fe	9114979.433	25472.413770	ppb	0.954	2.209	14488.455
45	Sc-IS	> 2264214.317		ppb	1.651		2166046.251
66	Zn	19778.127	10.971427	ppb	0.793	1.525	690.017
86	Sr	1211.537	0.432983	ppb	8.039	8.633	25.665
65	Cu	56922.919	20.875167	ppb	2.213	1.110	161.861
69	Ga-IS	686547.220		ppb	0.710		689942.162
95	Mo	591552.673	219.373068	ppb	1.239	1.067	102.223
115	In-IS	> 450118.246		ppb	0.601		442186.499
111	Cd	24739.125	9.853580	ppb	1.415	1.871	15.341
118	Sn	3417.076	0.280516	ppb	4.663	7.721	1292.281
121	Sb	1593.422	0.161903	ppb	1.465	1.250	277.780
135	Ba	481.119	0.211886	ppb	7.343	8.485	37.778
165	Ho-IS	479933.073		ppb	2.576		450691.879
159	Tb-IS	> 564142.162		ppb	1.774		535383.499
207	Pb	877.788	0.024409	ppb	4.898	8.291	167.778
203	Tl	138.890	0.013451	ppb	28.023	34.644	21.111
209	Bi-IS	296363.709		ppb	0.532		304067.524
51	V	9185.175	21.079270	ppb	2.329	0.517	2.222
59	Co	29383.524	20.591790	ppb	1.146	0.766	16.667
60	Ni	21551.801	20.620410	ppb	0.877	2.717	48.889
75	As	4760.431	10.400936	ppb	1.758	3.018	579.095
71	Ga-ISK	> 114451.185		ppb	1.837		116336.232
82	Se-2	379.224	9.759032	ppb	4.933	6.592	3.570
107	Ag-1	23011.854	4.902084	ppb	1.012	2.186	477.786
115	In-ISK	120117.928		ppb	1.015		123482.418
45	Sc-ISK	> 278588.164		ppb	1.116		273934.831
23	Na	11878593.052	24782.288663	ppb	0.727	0.808	3645.465
39	K	9590668.502	9889.671605	ppb	0.964	1.063	91362.356
24	Mg	5063107.190	9599.856082	ppb	0.825	0.436	73.334
159	Tb-ISK	262000.737		ppb	0.313		259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 1

Sample Date/Time: Thursday, December 12, 2019 11:05:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\b.023

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		48766.428		ppb		0.394		52891.202
9	Be	|		7.778	-0.001818	ppb	65.465	206.011		10.000
10	B	|		3927.207	-1.031459	ppb	2.462	24.414		4209.509
27	Al	|		11089.860	1.172071	ppb	2.640	3.674		3160.350
43	Ca-2	|		131.667	2.799022	ppb	19.487	42.155		66.667
49	Ti	|		208.890	0.043422	ppb	3.322	18.472		176.668
52	Cr	|		11353.400	-0.215784	ppb	1.950	6.871		13038.170
55	Mn	|		685.572	0.006970	ppb	5.842	28.974		556.678
57	Fe	|		16469.493	4.750122	ppb	2.874	22.831		14488.455
45	Sc-IS	>		2213925.533		ppb		0.958		2166046.251
66	Zn	|		716.685	0.006809	ppb	3.050	238.298		690.017
86	Sr	|		-22.126	-0.018080	ppb	118.854	54.181		25.665
65	Cu	|		182.253	0.006321	ppb	14.356	154.253		161.861
69	Ga-IS	|		686197.313		ppb		0.404		689942.162
95	Mo	|		4562.951	1.691359	ppb	1.906	2.667		102.223
115	In-IS	>		433730.781		ppb		1.814		442186.499
111	Cd	|		17.084	0.000856	ppb	66.907	556.933		15.341
118	Sn	|		1368.955	0.014147	ppb	4.142	73.269		1292.281
121	Sb	|		491.120	0.028036	ppb	4.416	9.826		277.780
135	Ba	|		30.000	-0.003514	ppb	11.111	41.937		37.778
165	Ho-IS	|		447251.083		ppb		2.252		450691.879
159	Tb-IS	>		525951.585		ppb		2.019		535383.499
207	Pb	|		237.779	0.002723	ppb	7.194	23.542		167.778
203	Tl	|		52.222	0.003870	ppb	19.500	29.628		21.111
209	Bi-IS	|		290752.434		ppb		0.769		304067.524
51	V	|		11.111	0.020524	ppb	124.900	155.630		2.222
59	Co	|		16.667	0.000204	ppb	80.000	4575.811		16.667
60	Ni	|		51.111	0.003027	ppb	13.576	227.046		48.889
75	As	|		651.861	0.207697	ppb	1.914	14.378		579.095
71	Ga-ISK	>		114177.803		ppb		0.455		116336.232
82	Se-2	|		4.883	0.035916	ppb	54.886	194.653		3.570
107	Ag-1	|		774.466	0.066510	ppb	16.250	40.149		477.786
115	In-ISK	|		118419.401		ppb		0.408		123482.418
45	Sc-ISK	>		269211.855		ppb		0.332		273934.831
23	Na	|		8018.917	9.580502	ppb	1.395	2.601		3645.465
39	K	|		88031.527	-1.889054	ppb	0.907	62.284		91362.356
24	Mg	|		665.016	1.163795	ppb	16.930	19.306		73.334
159	Tb-ISK	|		252462.845		ppb		1.283		259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, December 12, 2019 11:07:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCB-23446.024

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		49096.465		ppb			1.973			52891.202
9	Be	|		7.778	-0.001840	ppb	89.214	276.080				10.000
10	B	|		4161.717	-0.362977	ppb	2.135	84.958				4209.509
27	Al	|		7893.292	0.697558	ppb	2.868	3.303				3160.350
43	Ca-2	|		90.000	0.970352	ppb	28.868	118.726				66.667
49	Ti	|		155.556	-0.037651	ppb	10.786	77.712				176.668
52	Cr	|		11515.752	-0.195535	ppb	2.141	9.115				13038.170
55	Mn	|		673.349	0.006327	ppb	10.230	64.643				556.678
57	Fe	|		13131.589	-4.719060	ppb	1.843	21.821				14488.455
45	Sc-IS	>		2209620.317		ppb	1.466					2166046.251
66	Zn	|		730.019	0.015215	ppb	8.370	207.053				690.017
86	Sr	|		42.957	0.006396	ppb	80.885	205.088				25.665
65	Cu	|		191.695	0.009939	ppb	13.546	88.982				161.861
69	Ga-IS	|		693501.826		ppb	0.974					689942.162
95	Mo	|		1402.291	0.493614	ppb	8.576	10.118				102.223
115	In-IS	>		436762.425		ppb	1.661					442186.499
111	Cd	|		15.944	0.000350	ppb	44.024	855.232				15.341
118	Sn	|		1336.729	0.008391	ppb	4.151	119.705				1292.281
121	Sb	|		407.784	0.017060	ppb	18.027	57.677				277.780
135	Ba	|		33.333	-0.001900	ppb	43.589	385.028				37.778
165	Ho-IS	|		446549.119		ppb	2.538					450691.879
159	Tb-IS	>		531241.881		ppb	1.937					535383.499
207	Pb	|		240.001	0.002715	ppb	7.733	23.484				167.778
203	Tl	|		43.333	0.002713	ppb	33.530	62.514				21.111
209	Bi-IS	|		292490.847		ppb	1.116					304067.524
51	V	|		10.000	0.017994	ppb	33.333	42.812				2.222
59	Co	|		17.778	0.000995	ppb	28.641	360.311				16.667
60	Ni	|		40.000	-0.007693	ppb	25.000	123.910				48.889
75	As	|		606.654	0.094770	ppb	1.556	22.286				579.095
71	Ga-ISK	>		114213.639		ppb	0.207					116336.232
82	Se-2	|		2.232	-0.033238	ppb	212.413	370.732				3.570
107	Ag-1	|		385.561	-0.018197	ppb	17.470	80.584				477.786
115	In-ISK	|		118204.336		ppb	0.630					123482.418
45	Sc-ISK	>		271128.809		ppb	0.834					273934.831
23	Na	|		5982.919	5.093449	ppb	1.454	5.259				3645.465
39	K	|		87901.871	-2.703857	ppb	1.541	30.668				91362.356
24	Mg	|		505.009	0.842589	ppb	4.951	6.221				73.334
159	Tb-ISK	|		255735.400		ppb	0.359					259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, December 12, 2019 11:10:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\ICVL-210771.025

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		50054.223		ppb			1.855			52891.202
9	Be	|		1346.730	0.966417	ppb			2.678	3.025		10.000
10	B	|		23356.858	50.985428	ppb			1.197	0.906		4209.509
27	Al	|		366608.956	53.012815	ppb			0.327	0.858		3160.350
43	Ca-2	|		1378.400	56.290816	ppb			4.205	3.846		66.667
49	Ti	|		823.357	0.959661	ppb			7.388	10.077		176.668
52	Cr	|		21739.866	0.868942	ppb			1.771	5.764		13038.170
55	Mn	|		16548.468	0.935621	ppb			0.625	0.508		556.678
57	Fe	|		30924.548	44.223535	ppb			0.839	1.700		14488.455
45	Sc-IS	>		2262588.978		ppb			0.592			2166046.251
66	Zn	|		10309.275	5.523662	ppb			1.835	2.162		690.017
86	Sr	|		2795.473	1.012596	ppb			7.171	7.809		25.665
65	Cu	|		3124.274	1.087796	ppb			0.731	0.376		161.861
69	Ga-IS	|		692905.642		ppb			0.689			689942.162
95	Mo	|		3858.299	1.392462	ppb			1.148	1.766		102.223
115	In-IS	>		436838.324		ppb			1.602			442186.499
111	Cd	|		2395.433	0.977669	ppb			2.435	3.254		15.341
118	Sn	|		8570.349	1.003107	ppb			3.126	3.409		1292.281
121	Sb	|		8326.872	1.024965	ppb			2.504	1.923		277.780
135	Ba	|		1959.023	0.947432	ppb			2.998	1.570		37.778
165	Ho-IS	|		449961.002		ppb			2.297			450691.879
159	Tb-IS	>		531104.013		ppb			2.503			535383.499
207	Pb	|		25505.597	0.936652	ppb			1.053	2.473		167.778
203	Tl	|		8165.667	0.994562	ppb			1.893	2.450		21.111
209	Bi-IS	|		295970.298		ppb			1.082			304067.524
51	V	|		416.673	0.935260	ppb			2.400	3.501		2.222
59	Co	|		1415.626	0.963697	ppb			5.459	4.693		16.667
60	Ni	|		1027.815	0.921835	ppb			6.618	5.910		48.889
75	As	|		984.389	0.985728	ppb			7.965	16.833		579.095
71	Ga-ISK	>		116457.236		ppb			1.104			116336.232
82	Se-2	|		51.221	1.217387	ppb			19.660	22.174		3.570
107	Ag-1	|		4612.968	0.883278	ppb			5.483	5.432		477.786
115	In-ISK	|		121454.104		ppb			0.537			123482.418
45	Sc-ISK	>		274677.856		ppb			0.770			273934.831
23	Na	|		26608.092	48.586659	ppb			1.227	2.304		3645.465
39	K	|		131334.295	41.953247	ppb			0.709	2.523		91362.356
24	Mg	|		24793.163	47.538240	ppb			0.764	1.143		73.334
159	Tb-ISK	|		256684.663		ppb			1.798			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15071-A-1-B @10

Autosampler Position: 401

Sample Date/Time: Thursday, December 12, 2019 11:13:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-15071-A-1-B @10.026

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	63332.301		ppb	0.754		52891.202
9	Be	12.222	-0.000026	ppb	41.660119	84.583	10.000
10	B	136077.266	299.757164	ppb	0.686	1.055	4209.509
27	Al	7328.567	0.429017	ppb	12.811	27.864	3160.350
43	Ca-2	967264.806	35424.177074	ppb	0.731	0.714	66.667
49	Ti	2773.603	3.269567	ppb	1.322	1.648	176.668
52	Cr	32083.774	1.465431	ppb	1.924	3.268	13038.170
55	Mn	58386.858	2.878921	ppb	0.959	0.778	556.678
57	Fe	58190.514	96.370828	ppb	1.493	1.883	14488.455
45	Sc-IS	> 2657372.385		ppb	0.356		2166046.251
66	Zn	5290.980	2.179873	ppb	0.928	1.017	690.017
86	Sr	1821810.891	567.131779	ppb	0.588	0.262	25.665
65	Cu	7373.480	2.248760	ppb	4.548	4.754	161.861
69	Ga-IS	673811.491		ppb	0.428		689942.162
95	Mo	6883.881	2.135804	ppb	1.600	1.858	102.223
115	In-IS	> 413441.610		ppb	1.888		442186.499
111	Cd	25.544	0.004887	ppb	21.807	52.605	15.341
118	Sn	357.782	-0.123494	ppb	12.684	6.053	1292.281
121	Sb	1071.151	0.109076	ppb	4.835	3.971	277.780
135	Ba	1934.576	0.990035	ppb	4.306	5.651	37.778
165	Ho-IS	463520.668		ppb	1.385		450691.879
159	Tb-IS	> 544753.764		ppb	0.872		535383.499
207	Pb	1097.794	0.033393	ppb	4.843	5.162	167.778
203	Tl	94.445	0.008673	ppb	20.681	25.731	21.111
209	Bi-IS	247845.925		ppb	0.182		304067.524
51	V	374.449	0.943137	ppb	7.140	6.819	2.222
59	Co	57.778	0.033192	ppb	3.331	4.063	16.667
60	Ni	512.231	0.495540	ppb	5.833	5.998	48.889
75	As	1019.576	1.377256	ppb	3.917	7.679	579.095
71	Ga-ISK	> 103743.113		ppb	0.483		116336.232
82	Se-2	364.237	10.341109	ppb	8.096	8.602	3.570
107	Ag-1	1190.050	0.183179	ppb	10.787	16.302	477.786
115	In-ISK	107104.110		ppb	0.731		123482.418
45	Sc-ISK	> 283512.348		ppb	0.519		273934.831
23	Na	409805198.461	840332.858023	ppb	1.569	1.359	3645.465
39	K	30877934.654	31494.710846	ppb	1.262	0.822	91362.356
24	Mg	51866989.859	96634.038143	ppb	0.621	0.723	73.334
159	Tb-ISK	243556.070		ppb	0.865		259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15071-A-2-B @10

Autosampler Position: 402

Sample Date/Time: Thursday, December 12, 2019 11:16:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-15071-A-2-B @10.027

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		48099.743		ppb		1.674		52891.202
9	Be	|		16.667	0.004267	ppb	20.000	56.379		10.000
10	B	|		33672.990	76.964995	ppb	2.586	2.921		4209.509
27	Al	|		23783.115	2.921120	ppb	0.662	1.354		3160.350
43	Ca-2	|		158352.835	6676.481839	ppb	0.674	1.275		66.667
49	Ti	|		435.562	0.364545	ppb	3.852	9.346		176.668
52	Cr	|		15607.413	0.180553	ppb	2.292	31.048		13038.170
55	Mn	|		83833.098	4.782086	ppb	1.930	0.320		556.678
57	Fe	|		34208.704	51.547760	ppb	2.492	3.601		14488.455
45	Sc-IS	>		2307721.179		ppb	1.687			2166046.251
66	Zn	|		9732.204	5.083571	ppb	2.164	3.991		690.017
86	Sr	|		152242.834	54.567753	ppb	1.342	0.436		25.665
65	Cu	|		5796.851	2.030536	ppb	2.194	3.574		161.861
69	Ga-IS	|		656994.381		ppb	1.006			689942.162
95	Mo	|		1015.592	0.330183	ppb	4.528	6.855		102.223
115	In-IS	>		405413.306		ppb	1.858			442186.499
111	Cd	|		34.534	0.009043	ppb	9.916	13.931		15.341
118	Sn	|		901.140	-0.042001	ppb	5.553	19.044		1292.281
121	Sb	|		793.355	0.073972	ppb	5.462	10.505		277.780
135	Ba	|		1911.239	0.996564	ppb	6.574	5.104		37.778
165	Ho-IS	|		433494.927		ppb	1.988			450691.879
159	Tb-IS	>		513979.747		ppb	1.577			535383.499
207	Pb	|		856.677	0.026558	ppb	2.166	1.118		167.778
203	Tl	|		81.111	0.007651	ppb	24.080	29.901		21.111
209	Bi-IS	|		270713.451		ppb	1.347			304067.524
51	V	|		101.111	0.242324	ppb	11.578	12.917		2.222
59	Co	|		81.111	0.049134	ppb	18.531	24.189		16.667
60	Ni	|		483.342	0.447409	ppb	5.645	7.314		48.889
75	As	|		855.033	0.844925	ppb	2.939	5.809		579.095
71	Ga-ISK	>		107499.647		ppb	1.065			116336.232
82	Se-2	|		-14.681	-0.497298	ppb	51.476	42.011		3.570
107	Ag-1	|		277.780	-0.037906	ppb	3.464	4.236		477.786
115	In-ISK	|		110828.788		ppb	0.627			123482.418
45	Sc-ISK	>		268730.856		ppb	1.023			273934.831
23	Na	|		11785223.566	25490.087706	ppb	1.143	1.484		3645.465
39	K	|		3012207.013	3154.711499	ppb	1.683	1.562		91362.356
24	Mg	|		1590384.143	3125.907355	ppb	1.674	1.456		73.334
159	Tb-ISK	|		251967.512		ppb	1.186			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15071-A-1-B @50

Autosampler Position: 401

Sample Date/Time: Thursday, December 12, 2019 11:24:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-15071-A-1-B @50.028

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		53392.926		ppb		0.218		52891.202
9	Be	|		7.778	-0.002495	ppb	24.744	48.168		10.000
10	B	|		31028.104	63.336701	ppb	0.286	1.122		4209.509
27	Al	|		4934.186	0.166859	ppb	2.095	9.783		3160.350
43	Ca-2	|		184323.261	7139.814693	ppb	1.072	2.110		66.667
49	Ti	|		856.692	0.881768	ppb	1.403	1.968		176.668
52	Cr	|		20662.712	0.534341	ppb	1.308	7.937		13038.170
55	Mn	|		12706.761	0.636650	ppb	1.781	2.394		556.678
57	Fe	|		30156.240	33.692301	ppb	0.195	2.783		14488.455
45	Sc-IS	>		2511981.877		ppb	1.039			2166046.251
66	Zn	|		2650.246	0.959709	ppb	3.175	3.141		690.017
86	Sr	|		364400.703	120.005612	ppb	0.891	1.380		25.665
65	Cu	|		2124.742	0.642322	ppb	1.040	2.229		161.861
69	Ga-IS	|		686409.810		ppb	0.759			689942.162
95	Mo	|		1168.937	0.351145	ppb	2.588	2.651		102.223
115	In-IS	>		424978.248		ppb	1.447			442186.499
111	Cd	|		11.990	-0.001200	ppb	112.293	466.842		15.341
118	Sn	|		3510.431	0.320786	ppb	2.907	5.593		1292.281
121	Sb	|		622.236	0.046514	ppb	6.255	12.102		277.780
135	Ba	|		444.451	0.206977	ppb	4.265	6.050		37.778
165	Ho-IS	|		464172.148		ppb	1.153			450691.879
159	Tb-IS	>		544172.338		ppb	0.969			535383.499
207	Pb	|		383.335	0.007673	ppb	6.087	10.353		167.778
203	Tl	|		68.889	0.005646	ppb	15.554	21.717		21.111
209	Bi-IS	|		263521.781		ppb	0.906			304067.524
51	V	|		140.001	0.325080	ppb	21.822	20.624		2.222
59	Co	|		28.889	0.009370	ppb	6.662	17.397		16.667
60	Ni	|		232.224	0.182859	ppb	14.732	17.148		48.889
75	As	|		714.992	0.412321	ppb	4.887	16.419		579.095
71	Ga-ISK	>		111174.334		ppb	1.743			116336.232
82	Se-2	|		71.086	1.812073	ppb	15.570	18.298		3.570
107	Ag-1	|		523.343	0.014623	ppb	24.923	187.527		477.786
115	In-ISK	|		115011.943		ppb	0.919			123482.418
45	Sc-ISK	>		287724.431		ppb	1.214			273934.831
23	Na	|		82399675.111	166495.802532	ppb	0.975	0.918		3645.465
39	K	|		6348977.183	6304.276596	ppb	0.780	0.693		91362.356
24	Mg	|		10622265.474	19501.909287	ppb	0.708	1.177		73.334
159	Tb-ISK	|		254646.257		ppb	0.711			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, December 12, 2019 11:27:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\b.029

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		49818.957		ppb				1.814		52891.202
9	Be	|		10.000	-0.000675	ppb	57.735	584.542				10.000
10	B	|		4071.691	-1.395042	ppb	0.883	9.152				4209.509
27	Al	|		4816.367	0.187692	ppb	1.366	4.493				3160.350
43	Ca-2	|		113.334	1.649593	ppb	17.830	50.948				66.667
49	Ti	|		254.447	0.086904	ppb	8.422	36.640				176.668
52	Cr	|		16510.649	0.225426	ppb	2.017	14.924				13038.170
55	Mn	|		864.471	0.014176	ppb	5.403	18.441				556.678
57	Fe	|		18407.408	6.717328	ppb	1.306	8.085				14488.455
45	Sc-IS	>		2375433.992		ppb	0.345					2166046.251
66	Zn	|		1070.040	0.171810	ppb	8.118	26.516				690.017
86	Sr	|		-50.431	-0.027327	ppb	99.215	63.444				25.665
65	Cu	|		522.059	0.120835	ppb	7.553	11.918				161.861
69	Ga-IS	|		695393.517		ppb	1.291					689942.162
95	Mo	|		258.891	0.051885	ppb	5.361	9.056				102.223
115	In-IS	>		413290.376		ppb	2.135					442186.499
111	Cd	|		15.012	0.000324	ppb	34.091	723.932				15.341
118	Sn	|		3175.909	0.286239	ppb	3.651	6.983				1292.281
121	Sb	|		604.457	0.046474	ppb	4.818	12.229				277.780
135	Ba	|		57.778	0.011784	ppb	43.301	111.462				37.778
165	Ho-IS	|		440882.828		ppb	1.335					450691.879
159	Tb-IS	>		520350.192		ppb	1.751					535383.499
207	Pb	|		166.667	0.000145	ppb	10.392	522.350				167.778
203	Tl	|		33.333	0.001583	ppb	45.826	117.035				21.111
209	Bi-IS	|		282520.867		ppb	0.893					304067.524
51	V	|		12.222	0.023377	ppb	78.730	95.530				2.222
59	Co	|		16.667	0.000350	ppb	87.178	2954.157				16.667
60	Ni	|		55.556	0.007799	ppb	30.199	207.845				48.889
75	As	|		646.836	0.211280	ppb	6.191	46.036				579.095
71	Ga-ISK	>		113038.794		ppb	0.219					116336.232
82	Se-2	|		3.547	0.002037	ppb	70.862	3237.277				3.570
107	Ag-1	|		1004.480	0.118972	ppb	15.627	29.450				477.786
115	In-ISK	|		116046.011		ppb	1.132					123482.418
45	Sc-ISK	>		281884.164		ppb	1.246					273934.831
23	Na	|		55204.950	106.095247	ppb	4.704	4.026				3645.465
39	K	|		99242.424	5.397053	ppb	0.713	36.778				91362.356
24	Mg	|		2951.972	5.388855	ppb	4.745	3.864				73.334
159	Tb-ISK	|		258147.321		ppb	1.764					259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14457-G-1-A

Autosampler Position: 403

Sample Date/Time: Thursday, December 12, 2019 11:29:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14457-G-1-A.030

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		55488.676		ppb		1.094		52891.202
9	Be	|		5.556	-0.003991	ppb	34.641	31.273		10.000
10	B	|		169151.211	391.094783	ppb	1.376	1.924		4209.509
27	Al	|		7187.499	0.446597	ppb	33.563	69.185		3160.350
43	Ca-2	|		6352926.080	242048.807915	ppb	0.307	0.465		66.667
49	Ti	|		2879.180	3.553680	ppb	5.284	6.439		176.668
52	Cr	|		168369.858	14.497372	ppb	1.485	1.342		13038.170
55	Mn	|		8835862.795	458.537089	ppb	0.958	0.199		556.678
57	Fe	|		253991.504	587.632010	ppb	1.034	0.293		14488.455
45	Sc-IS	>		2554569.648		ppb	0.764			2166046.251
66	Zn	|		1861.232	0.534363	ppb	1.898	2.041		690.017
86	Sr	|		6859085.114	2221.234571	ppb	0.564	0.294		25.665
65	Cu	|		1725.958	0.500554	ppb	4.462	5.476		161.861
69	Ga-IS	|		700501.666		ppb	0.531			689942.162
95	Mo	|		10084.670	3.275319	ppb	1.645	0.915		102.223
115	In-IS	>		406400.963		ppb	1.342			442186.499
111	Cd	|		19.933	0.002600	ppb	63.275	215.171		15.341
118	Sn	|		1657.874	0.069434	ppb	5.745	16.881		1292.281
121	Sb	|		1897.904	0.224761	ppb	1.794	2.192		277.780
135	Ba	|		373623.293	198.008627	ppb	1.333	0.504		37.778
165	Ho-IS	|		469109.920		ppb	2.972			450691.879
159	Tb-IS	>		542395.935		ppb	2.896			535383.499
207	Pb	|		488.892	0.011554	ppb	3.755	8.678		167.778
203	Tl	|		77.778	0.006725	ppb	27.885	37.582		21.111
209	Bi-IS	|		255659.819		ppb	1.210			304067.524
51	V	|		362.227	0.885984	ppb	5.988	8.414		2.222
59	Co	|		291.114	0.206404	ppb	17.378	16.085		16.667
60	Ni	|		2839.171	2.867258	ppb	1.778	2.485		48.889
75	As	|		2376.589	4.897174	ppb	2.225	1.239		579.095
71	Ga-ISK	>		106955.747		ppb	2.685			116336.232
82	Se-2	|		182.329	4.974821	ppb	1.573	2.545		3.570
107	Ag-1	|		62.222	-0.087807	ppb	36.465	5.650		477.786
115	In-ISK	|		111994.700		ppb	0.586			123482.418
45	Sc-ISK	>		289786.037		ppb	2.095			273934.831
23	Na	|		80216727.936	160969.209056	ppb	0.147	2.001		3645.465
39	K	|		17871700.357	17793.495505	ppb	1.692	0.417		91362.356
24	Mg	|		29807766.010	54342.519698	ppb	1.227	1.679		73.334
159	Tb-ISK	|		256282.392		ppb	0.186			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14457-G-2-A

Autosampler Position: 404

Sample Date/Time: Thursday, December 12, 2019 11:32:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14457-G-2-A.031

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		55807.696		ppb			1.307			52891.202
9	Be	|		6.667	-0.003268	ppb	50.000	64.499				10.000
10	B	|		375774.995	889.305230	ppb	0.880	1.258				4209.509
27	Al	|		4670.764	0.125929	ppb	3.320	11.519				3160.350
43	Ca-2	|		6382665.091	244842.301670	ppb	0.945	1.690				66.667
49	Ti	|		3657.135	4.620959	ppb	2.121	2.890				176.668
52	Cr	|		121518.014	10.135572	ppb	1.045	0.375				13038.170
55	Mn	|		9339594.598	487.982688	ppb	0.679	0.989				556.678
57	Fe	|		233796.700	541.481709	ppb	1.293	1.372				14488.455
45	Sc-IS	>		2537426.184		ppb	0.942					2166046.251
66	Zn	|		8294.630	3.845092	ppb	2.171	1.448				690.017
86	Sr	|		6986791.901	2277.916338	ppb	0.748	0.731				25.665
65	Cu	|		2127.018	0.636000	ppb	1.576	2.583				161.861
69	Ga-IS	|		679311.091		ppb	1.958					689942.162
95	Mo	|		24839.354	8.181402	ppb	0.332	1.067				102.223
115	In-IS	>		418265.039		ppb	1.372					442186.499
111	Cd	|		54.504	0.017117	ppb	18.156	22.957				15.341
118	Sn	|		847.803	-0.053730	ppb	7.485	19.270				1292.281
121	Sb	|		1613.425	0.179592	ppb	5.116	6.414				277.780
135	Ba	|		170651.021	87.869634	ppb	0.706	0.879				37.778
165	Ho-IS	|		475746.184		ppb	3.258					450691.879
159	Tb-IS	>		554273.589		ppb	1.808					535383.499
207	Pb	|		317.779	0.005100	ppb	12.293	26.530				167.778
203	Tl	|		78.889	0.006679	ppb	21.683	30.894				21.111
209	Bi-IS	|		259163.502		ppb	1.810					304067.524
51	V	|		226.668	0.545285	ppb	10.189	8.834				2.222
59	Co	|		137.778	0.090901	ppb	11.934	15.322				16.667
60	Ni	|		4356.220	4.375541	ppb	2.475	3.656				48.889
75	As	|		911.894	0.983478	ppb	6.938	20.728				579.095
71	Ga-ISK	>		108128.890		ppb	1.993					116336.232
82	Se-2	|		244.426	6.625141	ppb	3.779	3.983				3.570
107	Ag-1	|		65.556	-0.087137	ppb	26.093	4.368				477.786
115	In-ISK	|		113171.492		ppb	1.731					123482.418
45	Sc-ISK	>		286644.060		ppb	1.009					273934.831
23	Na	|		67955923.484	137827.577005	ppb	1.000	1.202				3645.465
39	K	|		7165645.081	7155.215173	ppb	0.835	1.582				91362.356
24	Mg	|		29698233.702	54731.689423	ppb	0.850	1.713				73.334
159	Tb-ISK	|		256669.263		ppb	0.394					259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14457-G-3-A

Autosampler Position: 405

Sample Date/Time: Thursday, December 12, 2019 11:35:28

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14457-G-3-A.032

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	56160.202		ppb	2.001			52891.202
9	Be	|	7.778	-0.002565	ppb	24.744	47.368		10.000
10	B	|	173651.423	402.612381	ppb	1.511	1.944		4209.509
27	Al	|	6754.932	0.393031	ppb	3.925	9.041		3160.350
43	Ca-2	|	7073208.667	270022.042033	ppb	1.682	1.928		66.667
49	Ti	|	4001.672	5.056620	ppb	2.849	3.426		176.668
52	Cr	|	145944.007	12.399298	ppb	1.322	1.293		13038.170
55	Mn	|	12202072.747	634.475820	ppb	1.072	0.798		556.678
57	Fe	|	278310.961	649.287942	ppb	1.791	1.479		14488.455
45	Sc-IS	>	2549596.882		ppb	0.520			2166046.251
66	Zn	|	3694.923	1.473461	ppb	5.868	7.144		690.017
86	Sr	|	7635482.037	2477.508805	ppb	0.168	0.627		25.665
65	Cu	|	1899.822	0.558268	ppb	4.820	4.793		161.861
69	Ga-IS	|	729728.294		ppb	1.141			689942.162
95	Mo	|	6452.568	2.085678	ppb	0.623	0.873		102.223
115	In-IS	>	413444.895		ppb	1.010			442186.499
111	Cd	|	16.450	0.000949	ppb	73.570	558.529		15.341
118	Sn	|	1030.037	-0.025834	ppb	6.046	40.483		1292.281
121	Sb	|	953.365	0.093280	ppb	5.777	7.653		277.780
135	Ba	|	697099.884	363.157092	ppb	1.080	0.075		37.778
165	Ho-IS	|	477638.698		ppb	1.166			450691.879
159	Tb-IS	>	554350.063		ppb	1.416			535383.499
207	Pb	|	432.225	0.009157	ppb	6.186	11.503		167.778
203	Tl	|	82.222	0.007074	ppb	26.377	36.671		21.111
209	Bi-IS	|	256875.610		ppb	0.543			304067.524
51	V	|	377.783	0.900571	ppb	5.391	4.848		2.222
59	Co	|	173.334	0.115483	ppb	10.176	11.890		16.667
60	Ni	|	4910.844	4.869876	ppb	2.929	2.144		48.889
75	As	|	639.502	0.246432	ppb	30.367	209.563		579.095
71	Ga-ISK	>	109586.513		ppb	0.822			116336.232
82	Se-2	|	957.760	25.875461	ppb	6.064	6.412		3.570
107	Ag-1	|	96.667	-0.080247	ppb	9.123	2.444		477.786
115	In-ISK	|	112701.422		ppb	1.207			123482.418
45	Sc-ISK	>	291026.830		ppb	0.780			273934.831
23	Na	|	83691637.959	167185.237116	ppb	0.563	0.830		3645.465
39	K	|	8745858.631	8620.968038	ppb	0.699	1.418		91362.356
24	Mg	|	33776317.901	61309.106761	ppb	1.650	2.227		73.334
159	Tb-ISK	|	260659.896		ppb	0.484			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14457-G-4-A @10

Autosampler Position: 406

Sample Date/Time: Thursday, December 12, 2019 11:38:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14457-G-4-A @10.033

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		48469.874		ppb			1.294			52891.202
9	Be	|		8.889	-0.001312	ppb	57.282	274.923				10.000
10	B	|		24842.697	52.974827	ppb	1.734	2.959				4209.509
27	Al	|		61415.271	8.212467	ppb	4.866	6.199				3160.350
43	Ca-2	|		517087.533	21570.771043	ppb	1.012	1.487				66.667
49	Ti	|		475.564	0.416254	ppb	16.203	28.387				176.668
52	Cr	|		25344.686	1.172690	ppb	0.764	0.615				13038.170
55	Mn	|		1312892.825	74.578186	ppb	1.225	1.186				556.678
57	Fe	|		42179.972	72.182396	ppb	1.980	3.004				14488.455
45	Sc-IS	>		2332991.341		ppb	1.038					2166046.251
66	Zn	|		15074.618	8.006736	ppb	2.058	2.116				690.017
86	Sr	|		481027.558	170.545279	ppb	2.211	1.178				25.665
65	Cu	|		2464.975	0.817752	ppb	2.132	2.191				161.861
69	Ga-IS	|		669518.793		ppb	1.900					689942.162
95	Mo	|		10549.449	3.757905	ppb	0.816	1.391				102.223
115	In-IS	>		408445.614		ppb	1.405					442186.499
111	Cd	|		17.846	0.001649	ppb	56.862	274.453				15.341
118	Sn	|		12020.617	1.593386	ppb	4.216	6.167				1292.281
121	Sb	|		981.145	0.098647	ppb	4.053	5.535				277.780
135	Ba	|		57265.721	30.178123	ppb	2.856	1.764				37.778
165	Ho-IS	|		447689.713		ppb	1.339					450691.879
159	Tb-IS	>		524035.482		ppb	1.611					535383.499
207	Pb	|		1314.468	0.043089	ppb	3.171	4.550				167.778
203	Tl	|		73.334	0.006519	ppb	7.873	11.587				21.111
209	Bi-IS	|		268965.475		ppb	1.631					304067.524
51	V	|		113.334	0.268330	ppb	10.605	11.219				2.222
59	Co	|		177.779	0.119363	ppb	8.455	8.407				16.667
60	Ni	|		2519.111	2.489739	ppb	4.430	3.840				48.889
75	As	|		591.427	0.128109	ppb	5.658	75.860				579.095
71	Ga-ISK	>		108971.837		ppb	0.823					116336.232
82	Se-2	|		27.864	0.667970	ppb	57.861	65.345				3.570
107	Ag-1	|		104.445	-0.078343	ppb	4.875	1.531				477.786
115	In-ISK	|		113032.226		ppb	0.502					123482.418
45	Sc-ISK	>		272712.920		ppb	0.568					273934.831
23	Na	|		7542407.174	16072.183870	ppb	1.316	1.770				3645.465
39	K	|		12052521.448	12723.580223	ppb	0.947	1.506				91362.356
24	Mg	|		2550995.352	4941.061602	ppb	0.871	1.425				73.334
159	Tb-ISK	|		256095.151		ppb	0.723					259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14457-G-5-A

Autosampler Position: 407

Sample Date/Time: Thursday, December 12, 2019 11:40:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14457-G-5-A.034

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		54040.934		ppb		1.838		52891.202
9	Be	|		5.556	-0.003961	ppb	124.900	113.136		10.000
10	B	|		156790.347	363.993433	ppb	1.814	2.327		4209.509
27	Al	|		124414.633	15.692420	ppb	9.166	8.807		3160.350
43	Ca-2	|		5930076.766	227355.155157	ppb	0.630	0.860		66.667
49	Ti	|		4602.965	5.885719	ppb	5.320	6.290		176.668
52	Cr	|		167259.735	14.493871	ppb	3.361	4.293		13038.170
55	Mn	|		12405733.199	647.864108	ppb	0.403	0.503		556.678
57	Fe	|		249396.536	580.166229	ppb	2.134	2.696		14488.455
45	Sc-IS	>		2538683.887		ppb	0.905			2166046.251
66	Zn	|		7746.547	3.561948	ppb	4.615	5.121		690.017
86	Sr	|		6618184.158	2156.733454	ppb	0.784	1.251		25.665
65	Cu	|		6391.709	2.035276	ppb	6.217	7.070		161.861
69	Ga-IS	|		678109.991		ppb	0.249			689942.162
95	Mo	|		48049.564	15.854594	ppb	0.884	0.649		102.223
115	In-IS	>		416930.328		ppb	0.525			442186.499
111	Cd	|		9.096	-0.002321	ppb	284.688	478.541		15.341
118	Sn	|		1117.822	-0.014458	ppb	7.392	88.307		1292.281
121	Sb	|		677.794	0.055443	ppb	7.167	10.861		277.780
135	Ba	|		200690.087	103.660902	ppb	1.622	1.253		37.778
165	Ho-IS	|		477505.811		ppb	1.422			450691.879
159	Tb-IS	>		550690.605		ppb	1.573			535383.499
207	Pb	|		883.345	0.025346	ppb	4.082	6.813		167.778
203	Tl	|		76.667	0.006474	ppb	4.348	7.903		21.111
209	Bi-IS	|		257605.380		ppb	1.099			304067.524
51	V	|		345.560	0.860815	ppb	7.857	6.096		2.222
59	Co	|		974.479	0.731312	ppb	24.512	21.341		16.667
60	Ni	|		8817.168	9.211078	ppb	4.275	10.085		48.889
75	As	|		1085.642	1.531568	ppb	1.076	10.588		579.095
71	Ga-ISK	>		104924.942		ppb	6.361			116336.232
82	Se-2	|		158.412	4.396158	ppb	6.322	3.793		3.570
107	Ag-1	|		110.000	-0.076369	ppb	29.845	8.356		477.786
115	In-ISK	|		109241.654		ppb	5.416			123482.418
45	Sc-ISK	>		279551.987		ppb	7.055			273934.831
23	Na	|		89472597.647	186956.042951	ppb	2.799	10.166		3645.465
39	K	|		7209975.335	7411.461420	ppb	1.030	7.795		91362.356
24	Mg	|		28944937.193	54933.894371	ppb	2.130	9.439		73.334
159	Tb-ISK	|		251662.315		ppb	5.475			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15174-H-2-A

Autosampler Position: 342

Sample Date/Time: Thursday, December 12, 2019 11:43:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-15174-H-2-A.035

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		46600.330		ppb		0.879		52891.202
9	Be	|		20.000	0.006386	ppb	44.096	94.747		10.000
10	B	|		48462.062	114.008815	ppb	0.454	1.220		4209.509
27	Al	|		76885.305	10.349421	ppb	2.335	2.129		3160.350
43	Ca-2	|		1952035.198	81070.672967	ppb	0.532	0.493		66.667
49	Ti	|		773.354	0.844710	ppb	9.325	13.222		176.668
52	Cr	|		18177.117	0.420517	ppb	2.444	10.388		13038.170
55	Mn	|		16379.386	0.892678	ppb	1.724	2.406		556.678
57	Fe	|		81446.018	177.852222	ppb	2.028	2.785		14488.455
45	Sc-IS	>		2343449.629		ppb		0.663		2166046.251
66	Zn	|		4308.428	1.981363	ppb	3.144	4.442		690.017
86	Sr	|		1396808.943	493.099045	ppb	0.576	1.087		25.665
65	Cu	|		1788.290	0.573228	ppb	4.438	4.307		161.861
69	Ga-IS	|		654849.399		ppb		1.117		689942.162
95	Mo	|		10261.466	3.637305	ppb	4.099	3.918		102.223
115	In-IS	>		413700.271		ppb		0.961		442186.499
111	Cd	|		24.007	0.004159	ppb	45.714	112.576		15.341
118	Sn	|		2955.862	0.253677	ppb	4.535	7.568		1292.281
121	Sb	|		690.017	0.057882	ppb	11.715	20.273		277.780
135	Ba	|		83296.602	43.351359	ppb	1.162	0.849		37.778
165	Ho-IS	|		454963.836		ppb		2.407		450691.879
159	Tb-IS	>		533781.676		ppb		1.354		535383.499
207	Pb	|		436.669	0.009898	ppb	6.785	9.113		167.778
203	Tl	|		63.333	0.005135	ppb	10.526	15.389		21.111
209	Bi-IS	|		271006.774		ppb		1.478		304067.524
51	V	|		1726.771	4.233433	ppb	2.554	4.434		2.222
59	Co	|		44.445	0.021653	ppb	42.647	63.675		16.667
60	Ni	|		853.359	0.827645	ppb	9.472	8.814		48.889
75	As	|		748.719	0.569374	ppb	11.665	34.666		579.095
71	Ga-ISK	>		107097.816		ppb		1.836		116336.232
82	Se-2	|		28.859	0.712381	ppb	30.258	36.378		3.570
107	Ag-1	|		223.335	-0.050279	ppb	3.949	5.346		477.786
115	In-ISK	|		112409.182		ppb		0.530		123482.418
45	Sc-ISK	>		270337.692		ppb		1.643		273934.831
23	Na	|		11902695.921	25592.083869	ppb	0.736	0.913		3645.465
39	K	|		1320641.447	1320.634989	ppb	0.896	2.472		91362.356
24	Mg	|		12995734.422	25397.968880	ppb	0.517	2.138		73.334
159	Tb-ISK	|		253511.670		ppb		0.681		259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, December 12, 2019 11:46:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCV-210770.036

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	45029.754		ppb		1.270		52891.202
9	Be	|	128821.638	92.748667	ppb		1.504	1.669	10.000
10	B	|	90255.330	229.863384	ppb		0.576	1.960	4209.509
27	Al	|	684384.480	98.949284	ppb		0.388	1.129	3160.350
43	Ca-2	|	120680.939	5166.136852	ppb		0.639	1.556	66.667
49	Ti	|	67278.128	100.323438	ppb		2.731	2.653	176.668
52	Cr	|	952405.062	100.007704	ppb		0.903	2.070	13038.170
55	Mn	|	1585319.662	92.467657	ppb		0.567	1.861	556.678
57	Fe	|	1736950.553	4801.209210	ppb		0.685	1.260	14488.455
45	Sc-IS	>	2272611.906		ppb		1.507		2166046.251
66	Zn	>	178419.655	101.926527	ppb		1.535	2.204	690.017
86	Sr	|	280638.430	102.180528	ppb		1.894	3.382	25.665
65	Cu	|	287147.959	105.184356	ppb		1.370	1.928	161.861
69	Ga-IS	|	689392.202		ppb		1.014		689942.162
95	Mo	|	270687.694	100.010157	ppb		1.872	3.086	102.223
115	In-IS	>	413863.363		ppb		0.435		442186.499
111	Cd	|	229223.915	99.350057	ppb		0.692	0.945	15.341
118	Sn	|	677676.774	98.193461	ppb		1.500	1.230	1292.281
121	Sb	|	744163.749	99.946198	ppb		0.339	0.096	277.780
135	Ba	|	192832.779	100.341733	ppb		0.742	0.311	37.778
165	Ho-IS	|	451303.544		ppb		0.693		450691.879
159	Tb-IS	>	531519.633		ppb		0.253		535383.499
207	Pb	|	2442402.112	90.173741	ppb		0.937	1.191	167.778
203	Tl	|	797839.501	97.319095	ppb		0.037	0.268	21.111
209	Bi-IS	|	277923.165		ppb		1.091		304067.524
51	V	|	43930.794	103.398449	ppb		1.972	3.125	2.222
59	Co	|	145298.596	104.432085	ppb		1.382	2.219	16.667
60	Ni	|	99861.173	98.094510	ppb		1.066	1.790	48.889
75	As	|	39523.078	99.121829	ppb		1.290	1.827	579.095
71	Ga-ISK	>	111650.202		ppb		1.221		116336.232
82	Se-2	|	3669.353	97.563611	ppb		2.009	3.196	3.570
107	Ag-1	|	437197.065	97.342191	ppb		0.629	0.960	477.786
115	In-ISK	|	115768.193		ppb		1.805		123482.418
45	Sc-ISK	>	271901.129		ppb		1.053		273934.831
23	Na	|	2318622.409	4950.260176	ppb		0.262	1.095	3645.465
39	K	|	4824060.141	5050.326131	ppb		0.854	1.888	91362.356
24	Mg	|	2534065.147	4922.943096	ppb		0.691	1.040	73.334
159	Tb-ISK	|	256853.899		ppb		0.590		259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, December 12, 2019 11:50:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCB-23446.037

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		43833.816		ppb			0.847			52891.202
9	Be	|		7.778	-0.001740	ppb	65.465	221.680				10.000
10	B	|		4070.580	-0.528831	ppb	3.148	84.797				4209.509
27	Al	|		2941.415	-0.038738	ppb	7.547	93.847				3160.350
43	Ca-2	|		413.339	15.363864	ppb	9.703	12.961				66.667
49	Ti	|		173.334	-0.008073	ppb	18.546	660.278				176.668
52	Cr	|		12152.947	-0.115848	ppb	2.318	10.112				13038.170
55	Mn	|		1442.295	0.053097	ppb	5.549	7.843				556.678
57	Fe	|		14133.657	-1.551841	ppb	2.353	35.369				14488.455
45	Sc-IS	>		2193202.451		ppb			1.515			2166046.251
66	Zn	|		818.912	0.071574	ppb	2.710	23.818				690.017
86	Sr	|		421.780	0.149033	ppb	17.866	17.354				25.665
65	Cu	|		181.695	0.006792	ppb	13.533	142.384				161.861
69	Ga-IS	|		663867.404		ppb			0.516			689942.162
95	Mo	|		703.351	0.229648	ppb	9.153	10.481				102.223
115	In-IS	>		410003.005		ppb			1.000			442186.499
111	Cd	|		19.634	0.002379	ppb	19.739	74.443				15.341
118	Sn	|		3334.834	0.313101	ppb	4.147	6.690				1292.281
121	Sb	|		293.336	0.004863	ppb	3.409	35.670				277.780
135	Ba	|		60.000	0.013120	ppb	20.031	48.334				37.778
165	Ho-IS	|		444404.397		ppb			3.603			450691.879
159	Tb-IS	>		524721.117		ppb			2.851			535383.499
207	Pb	|		234.445	0.002637	ppb	9.141	38.792				167.778
203	Tl	|		81.111	0.007478	ppb	6.278	11.022				21.111
209	Bi-IS	|		278937.646		ppb			2.073			304067.524
51	V	|		8.889	0.016303	ppb	21.651	29.620				2.222
59	Co	|		21.111	0.003988	ppb	32.868	131.687				16.667
60	Ni	|		38.889	-0.007126	ppb	35.686	198.751				48.889
75	As	|		594.718	0.124659	ppb	8.096	83.696				579.095
71	Ga-ISK	>		109728.739		ppb			1.317			116336.232
82	Se-2	|		5.224	0.050582	ppb	77.609	219.429				3.570
107	Ag-1	|		471.119	0.004620	ppb	6.100	126.339				477.786
115	In-ISK	|		115485.873		ppb			0.316			123482.418
45	Sc-ISK	>		266613.835		ppb			0.526			273934.831
23	Na	|		9481.480	12.940703	ppb	2.730	5.187				3645.465
39	K	|		91494.287	2.801395	ppb	0.627	25.800				91362.356
24	Mg	|		2451.877	4.716418	ppb	3.007	3.284				73.334
159	Tb-ISK	|		253991.352		ppb			0.232			259306.913

QC Out of Limits

AnalyteMassOut of Limits Message

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Thursday, December 12, 2019 09:56:26

File Name:

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1248	2062	0.692	
Mg 24	23.985	23.975	4624	2062	0.701	
In 115	114.904	114.925	22808	2056	0.714	
U	238.050	238.075	47443	2047	0.712	

Report Date/Time: Thursday, December 12, 2019 10:04:32

Page 1

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Friday, December 13, 2019 01:27:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\ICIS-23447.216

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		49212.403		ppb		1.037		
9	Be	|		22.222		ppb		48.218		
10	B	|		3607.122		ppb		2.417		
27	Al	|		3343.725		ppb		1.225		
43	Ca-2	|		95.000		ppb		24.119		
49	Ti	|		178.890		ppb		12.407		
52	Cr	|		12290.841		ppb		0.996		
55	Mn	|		884.472		ppb		6.011		
57	Fe	|		11981.689		ppb		0.321		
45	Sc-IS	|>		1810825.491		ppb		0.930		
66	Zn	|		866.693		ppb		4.819		
86	Sr	|		27.313		ppb	104.989			
65	Cu	|		249.474		ppb		1.289		
69	Ga-IS	|		655762.288		ppb		1.202		
95	Mo	|		611.124		ppb		8.386		
115	In-IS	|>		481027.951		ppb		1.075		
111	Cd	|		39.828		ppb		25.493		
118	Sn	|		9445.349		ppb		4.875		
121	Sb	|		1748.996		ppb		3.358		
135	Ba	|		73.334		ppb		16.389		
165	Ho-IS	|		576332.643		ppb		0.609		
159	Tb-IS	|>		637324.013		ppb		0.269		
207	Pb	|		476.670		ppb		7.097		
203	Tl	|		125.556		ppb		13.624		
209	Bi-IS	|		344445.843		ppb		1.477		
51	V	|		16.667		ppb		52.915		
59	Co	|		31.111		ppb		22.304		
60	Ni	|		70.000		ppb		20.757		
75	As	|		1134.791		ppb		2.856		
71	Ga-ISK	|>		133018.683		ppb		1.015		
82	Se-2	|		2.481		ppb	361.614			
107	Ag-1	|		813.357		ppb		9.310		
115	In-ISK	|		142506.264		ppb		0.955		
45	Sc-ISK	|>		302669.441		ppb		0.607		
23	Na	|		1463.408		ppb		2.519		
39	K	|		97927.832		ppb		0.152		
24	Mg	|		773.354		ppb		10.670		
159	Tb-ISK	|		255472.141		ppb		0.711		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Friday, December 13, 2019 01:30:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\IC-210761.217

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47486.590		ppb		1.905		49212.403
9	Be	|	227511.894	200.000000	ppb		0.935	1.101	22.222
10	B	|	168479.988	500.000000	ppb		1.219	0.839	3607.122
27	Al	|	1262144.850	200.000000	ppb		0.403	1.158	3343.725
43	Ca-2	|	214109.336	10200.000000	ppb		1.006	0.529	95.000
49	Ti	|	120602.633	200.000000	ppb		2.065	0.961	178.890
52	Cr	|	1765616.100	200.000000	ppb		0.908	1.874	12290.841
55	Mn	|	3092827.092	200.000000	ppb		0.834	2.100	884.472
57	Fe	|	3284369.129	10200.000000	ppb		0.424	1.477	11981.689
45	Sc-IS	>	1791459.369		ppb		1.482		1810825.491
66	Zn	|	315827.794	200.000000	ppb		1.276	0.504	866.693
86	Sr	|	559496.690	200.000000	ppb		1.316	0.255	27.313
65	Cu	|	492013.371	200.000000	ppb		0.700	1.244	249.474
69	Ga-IS	|	681167.825		ppb		0.882		655762.288
95	Mo	|	531285.472	200.000000	ppb		1.849	0.514	611.124
115	In-IS	>	464361.432		ppb		0.362		481027.951
111	Cd	|	499008.031	200.000000	ppb		0.064	0.321	39.828
118	Sn	|	1648253.028	200.000000	ppb		1.210	0.856	9445.349
121	Sb	|	1727725.979	200.000000	ppb		0.681	0.999	1748.996
135	Ba	|	421163.700	200.000000	ppb		0.418	0.573	73.334
165	Ho-IS	|	563133.406		ppb		2.145		576332.643
159	Tb-IS	>	628533.672		ppb		1.584		637324.013
207	Pb	|	5954320.896	200.000000	ppb		1.995	0.858	476.670
203	Tl	|	1904769.445	200.000000	ppb		1.948	0.404	125.556
209	Bi-IS	|	320516.025		ppb		2.506		344445.843
51	V	|	153692.358	200.000000	ppb		0.803	1.146	16.667
59	Co	|	364094.875	200.000000	ppb		0.701	1.648	31.111
60	Ni	|	255099.983	200.000000	ppb		1.319	0.387	70.000
75	As	|	97355.730	200.000000	ppb		0.415	1.360	1134.791
71	Ga-ISK	>	127656.757		ppb		0.992		133018.683
82	Se-2	|	10483.711	200.000000	ppb		0.589	0.794	2.481
107	Ag-1	|	1027357.884	200.000000	ppb		1.219	2.217	813.357
115	In-ISK	|	138653.452		ppb		1.233		142506.264
45	Sc-ISK	>	300734.812		ppb		0.737		302669.441
23	Na	|	6208838.016	10200.000000	ppb		0.797	1.532	1463.408
39	K	|	11540866.156	10200.000000	ppb		0.492	1.067	97927.832
24	Mg	|	6272912.500	10200.000000	ppb		0.213	0.845	773.354
159	Tb-ISK	|	249976.167		ppb		0.614		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, December 13, 2019 01:33:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCV-210770.218

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47037.319		ppb		1.303		49212.403
9	Be	|	113141.893	98.432908	ppb		1.503	0.905	22.222
10	B	|	87376.507	251.377025	ppb		2.486	1.530	3607.122
27	Al	|	635163.951	99.362391	ppb		0.989	1.623	3343.725
43	Ca-2	|	108772.589	5126.702567	ppb		1.460	0.468	95.000
49	Ti	|	60649.587	99.417653	ppb		0.789	0.744	178.890
52	Cr	|	901131.115	100.341595	ppb		0.769	0.639	12290.841
55	Mn	|	1538052.474	98.409235	ppb		0.162	0.878	884.472
57	Fe	|	1660241.012	5085.163491	ppb		0.727	1.577	11981.689
45	Sc-IS	>	1809800.428		ppb		1.029		1810825.491
66	Zn	|	159600.024	99.773421	ppb		1.415	1.541	866.693
86	Sr	|	280730.075	99.327187	ppb		1.410	0.938	27.313
65	Cu	|	250268.783	100.648344	ppb		1.203	1.618	249.474
69	Ga-IS	|	658775.381		ppb		1.289		655762.288
95	Mo	|	270860.740	100.820794	ppb		1.538	1.082	611.124
115	In-IS	>	470493.821		ppb		0.946		481027.951
111	Cd	|	253577.496	100.304806	ppb		0.341	0.900	39.828
118	Sn	|	839141.811	99.942012	ppb		1.355	0.751	9445.349
121	Sb	|	865445.470	98.776516	ppb		0.913	0.069	1748.996
135	Ba	|	210888.647	98.826518	ppb		1.122	1.269	73.334
165	Ho-IS	|	569207.750		ppb		1.482		576332.643
159	Tb-IS	>	625015.371		ppb		1.119		637324.013
207	Pb	|	3000368.557	101.350053	ppb		1.346	1.765	476.670
203	Tl	|	969043.204	102.314700	ppb		2.025	1.201	125.556
209	Bi-IS	|	329738.507		ppb		1.923		344445.843
51	V	|	77448.344	101.098518	ppb		2.467	1.850	16.667
59	Co	|	183275.310	100.987750	ppb		2.531	2.061	31.111
60	Ni	|	129877.799	102.151827	ppb		1.451	2.058	70.000
75	As	|	50017.056	101.990595	ppb		0.705	0.107	1134.791
71	Ga-ISK	>	127229.617		ppb		0.642		133018.683
82	Se-2	|	5363.169	102.636558	ppb		1.829	2.117	2.481
107	Ag-1	|	515191.543	100.542674	ppb		1.130	1.186	813.357
115	In-ISK	|	140078.522		ppb		0.618		142506.264
45	Sc-ISK	>	300867.462		ppb		0.244		302669.441
23	Na	|	3114934.925	5113.410472	ppb		1.560	1.474	1463.408
39	K	|	5842933.756	5118.691860	ppb		1.424	1.374	97927.832
24	Mg	|	3124285.489	5077.185512	ppb		0.464	0.662	773.354
159	Tb-ISK	|	250799.091		ppb		0.721		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, December 13, 2019 01:36:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCB-23446.219

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		47875.653		ppb		1.261		49212.403
9	Be	|		26.667	0.004045	ppb	12.500	68.971		22.222
10	B	|		3836.071	0.784773	ppb	3.354	70.464		3607.122
27	Al	|		3395.959	0.012456	ppb	2.593	44.655		3343.725
43	Ca-2	|		85.000	-0.445680	ppb	21.209	182.783		95.000
49	Ti	|		228.891	0.084909	ppb	10.535	41.197		178.890
52	Cr	|		11444.583	-0.084785	ppb	1.196	35.467		12290.841
55	Mn	|		1021.148	0.009339	ppb	8.676	72.278		884.472
57	Fe	|		12712.326	2.590024	ppb	3.775	81.122		11981.689
45	Sc-IS	>		1796336.979		ppb		1.565		1810825.491
66	Zn	|		772.243	-0.055609	ppb	6.494	46.132		866.693
86	Sr	|		59.024	0.011448	ppb	54.462	102.148		27.313
65	Cu	|		148.097	-0.040306	ppb	26.068	38.615		249.474
69	Ga-IS	|		646307.442		ppb		1.476		655762.288
95	Mo	|		4229.515	1.362227	ppb	1.730	3.217		611.124
115	In-IS	>		477176.048		ppb		1.861		481027.951
111	Cd	|		40.007	0.000174	ppb	37.197	3313.342		39.828
118	Sn	|		21171.246	1.402897	ppb	3.705	9.578		9445.349
121	Sb	|		2417.982	0.077079	ppb	2.409	11.034		1748.996
135	Ba	|		95.556	0.010671	ppb	23.227	102.358		73.334
165	Ho-IS	|		565243.060		ppb		1.093		576332.643
159	Tb-IS	>		628755.164		ppb		1.015		637324.013
207	Pb	|		1730.039	0.042303	ppb	2.272	2.651		476.670
203	Tl	|		455.563	0.034820	ppb	8.060	11.078		125.556
209	Bi-IS	|		339059.130		ppb		1.330		344445.843
51	V	|		31.111	0.019120	ppb	37.627	77.977		16.667
59	Co	|		36.667	0.003489	ppb	18.182	107.612		31.111
60	Ni	|		80.000	0.009289	ppb	29.167	197.834		70.000
75	As	|		1185.100	0.166832	ppb	0.734	14.079		1134.791
71	Ga-ISK	>		129379.921		ppb		0.798		133018.683
82	Se-2	|		21.843	0.365594	ppb	24.469	27.052		2.481
107	Ag-1	|		3172.576	0.457909	ppb	6.648	9.695		813.357
115	In-ISK	|		140730.838		ppb		0.619		142506.264
45	Sc-ISK	>		299161.276		ppb		1.024		302669.441
23	Na	|		2015.142	0.940621	ppb	4.844	20.635		1463.408
39	K	|		99402.431	2.338595	ppb	0.991	10.004		97927.832
24	Mg	|		895.028	0.214407	ppb	9.693	71.926		773.354
159	Tb-ISK	|		251189.145		ppb		0.468		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, December 13, 2019 01:38:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCB-23446.220

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	47197.840		ppb	0.537		49212.403
9	Be	22.222	0.000221	ppb	60.622	5354.467	22.222
10	B	3667.137	0.314553	ppb	2.126	60.989	3607.122
27	Al	3108.116	-0.031031	ppb	1.802	27.727	3343.725
43	Ca-2	91.667	-0.104817	ppb	6.298	245.878	95.000
49	Ti	161.112	-0.025968	ppb	19.112	196.870	178.890
52	Cr	11191.049	-0.108508	ppb	1.297	20.861	12290.841
55	Mn	940.031	0.004272	ppb	14.444	199.971	884.472
57	Fe	10861.906	-3.040464	ppb	0.599	10.095	11981.689
45	Sc-IS	> 1788862.022		ppb	0.474		1810825.491
66	Zn	718.907	-0.087360	ppb	12.953	66.909	866.693
86	Sr	35.640	0.003146	ppb	113.866	464.282	27.313
65	Cu	132.885	-0.046250	ppb	4.996	5.614	249.474
69	Ga-IS	636400.473		ppb	2.162		655762.288
95	Mo	1178.938	0.217169	ppb	9.050	18.924	611.124
115	In-IS	> 473297.273		ppb	0.407		481027.951
111	Cd	47.524	0.003270	ppb	18.911	105.870	39.828
118	Sn	8086.738	-0.144374	ppb	5.692	39.741	9445.349
121	Sb	1113.377	-0.069071	ppb	6.077	10.830	1748.996
135	Ba	76.667	0.002105	ppb	4.348	76.612	73.334
165	Ho-IS	563876.944		ppb	0.834		576332.643
159	Tb-IS	> 625084.161		ppb	0.573		637324.013
207	Pb	783.342	0.010669	ppb	5.177	12.907	476.670
203	Tl	251.113	0.013507	ppb	7.548	14.033	125.556
209	Bi-IS	337545.992		ppb	2.349		344445.843
51	V	15.556	-0.000669	ppb	32.733	999.944	16.667
59	Co	33.333	0.001845	ppb	40.000	405.088	31.111
60	Ni	45.556	-0.017225	ppb	22.354	44.309	70.000
75	As	1134.001	0.077853	ppb	2.873	58.743	1134.791
71	Ga-ISK	> 128489.739		ppb	1.088		133018.683
82	Se-2	10.526	0.153757	ppb	38.783	49.141	2.481
107	Ag-1	1171.159	0.074628	ppb	7.314	22.579	813.357
115	In-ISK	139981.640		ppb	1.826		142506.264
45	Sc-ISK	> 297853.078		ppb	0.437		302669.441
23	Na	1718.437	0.462254	ppb	6.106	40.248	1463.408
39	K	97873.023	1.352612	ppb	0.630	16.440	97927.832
24	Mg	805.023	0.072017	ppb	13.437	243.354	773.354
159	Tb-ISK	248653.534		ppb	1.205		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, December 13, 2019 01:41:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\ICVL-210771.221

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		47599.193		ppb			2.229			49212.403
9	Be	|		1237.831	1.066076	ppb			4.589	4.838		22.222
10	B	|		20312.209	50.610915	ppb			0.735	2.430		3607.122
27	Al	|		335363.468	52.615523	ppb			1.420	2.019		3343.725
43	Ca-2	|		1273.390	56.045653	ppb			2.947	2.690		95.000
49	Ti	|		751.131	0.950848	ppb			5.910	9.028		178.890
52	Cr	|		20649.358	0.962092	ppb			0.763	1.274		12290.841
55	Mn	|		16597.420	1.013837	ppb			3.086	2.302		884.472
57	Fe	|		27634.485	48.972698	ppb			1.614	4.971		11981.689
45	Sc-IS	>		1796205.532		ppb			1.270			1810825.491
66	Zn	|		8852.742	5.063038	ppb			1.284	2.762		866.693
86	Sr	|		2947.690	1.041225	ppb			2.321	1.457		27.313
65	Cu	|		2717.918	1.002045	ppb			5.887	6.523		249.474
69	Ga-IS	|		644748.036		ppb			0.895			655762.288
95	Mo	|		3698.257	1.162413	ppb			2.142	2.910		611.124
115	In-IS	>		476562.306		ppb			1.900			481027.951
111	Cd	|		2701.380	1.039828	ppb			2.344	2.729		39.828
118	Sn	|		16625.227	0.865026	ppb			2.142	8.965		9445.349
121	Sb	|		10189.188	0.955058	ppb			0.627	2.583		1748.996
135	Ba	|		2300.185	1.031464	ppb			4.960	6.352		73.334
165	Ho-IS	|		570360.988		ppb			1.326			576332.643
159	Tb-IS	>		634228.892		ppb			1.743			637324.013
207	Pb	|		32212.031	1.056624	ppb			1.441	0.690		476.670
203	Tl	|		10089.122	1.036769	ppb			4.392	3.427		125.556
209	Bi-IS	|		343643.942		ppb			1.924			344445.843
51	V	|		818.912	1.027610	ppb			6.718	6.618		16.667
59	Co	|		1987.916	1.058071	ppb			2.137	2.825		31.111
60	Ni	|		1427.849	1.049151	ppb			7.037	7.590		70.000
75	As	|		1610.806	1.029262	ppb			5.310	14.905		1134.791
71	Ga-ISK	>		129748.792		ppb			0.661			133018.683
82	Se-2	|		69.208	1.254131	ppb			23.552	24.479		2.481
107	Ag-1	|		5323.214	0.868201	ppb			0.289	1.102		813.357
115	In-ISK	|		140759.108		ppb			2.222			142506.264
45	Sc-ISK	>		297904.404		ppb			1.243			302669.441
23	Na	|		31668.402	50.141599	ppb			1.708	1.781		1463.408
39	K	|		153888.882	51.758517	ppb			0.530	4.686		97927.832
24	Mg	|		31763.614	50.902495	ppb			1.795	2.588		773.354
159	Tb-ISK	|		251533.903		ppb			0.972			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-38411_1-A

Autosampler Position: 401

Sample Date/Time: Friday, December 13, 2019 01:44:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\MB 570-38411_1-A.222

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		46736.336		ppb		1.459		49212.403
9	Be	|		11.111	-0.009565	ppb	17.321	17.191		22.222
10	B	|		3528.214	-0.123504	ppb	2.280	210.905		3607.122
27	Al	|		3153.685	-0.024492	ppb	12.363	257.392		3343.725
43	Ca-2	|		81.667	-0.586790	ppb	19.681	131.755		95.000
49	Ti	|		164.445	-0.020913	ppb	9.140	114.125		178.890
52	Cr	|		11440.135	-0.082147	ppb	1.637	31.898		12290.841
55	Mn	|		768.910	-0.006867	ppb	6.012	44.377		884.472
57	Fe	|		10719.581	-3.534861	ppb	4.477	45.650		11981.689
45	Sc-IS	>		1791718.811		ppb	0.441			1810825.491
66	Zn	|		871.138	0.008758	ppb	9.630	629.710		866.693
86	Sr	|		26.776	-0.000139	ppb	187.8211	2839.407		27.313
65	Cu	|		115.224	-0.053512	ppb	8.828	7.817		249.474
69	Ga-IS	|		644421.099		ppb	1.239			655762.288
95	Mo	|		710.018	0.039756	ppb	7.686	54.418		611.124
115	In-IS	>		480935.129		ppb	1.601			481027.951
111	Cd	|		34.065	-0.002241	ppb	11.620	58.732		39.828
118	Sn	|		6699.350	-0.322938	ppb	4.529	13.695		9445.349
121	Sb	|		991.146	-0.084718	ppb	8.144	11.146		1748.996
135	Ba	|		74.445	0.000599	ppb	26.236	1575.304		73.334
165	Ho-IS	|		566881.971		ppb	1.783			576332.643
159	Tb-IS	>		624224.033		ppb	1.577			637324.013
207	Pb	|		662.228	0.006619	ppb	3.426	16.808		476.670
203	Tl	|		183.335	0.006379	ppb	6.556	18.321		125.556
209	Bi-IS	|		338943.098		ppb	1.341			344445.843
51	V	|		15.556	-0.000789	ppb	24.744	665.550		16.667
59	Co	|		31.111	0.000448	ppb	16.366	572.373		31.111
60	Ni	|		52.222	-0.012296	ppb	36.295	118.707		70.000
75	As	|		1162.893	0.122530	ppb	3.769	89.865		1134.791
71	Ga-ISK	>		129351.963		ppb	1.575			133018.683
82	Se-2	|		6.883	0.082997	ppb	87.576	134.306		2.481
107	Ag-1	|		907.807	0.022485	ppb	1.484	13.139		813.357
115	In-ISK	|		140578.019		ppb	1.316			142506.264
45	Sc-ISK	>		297548.178		ppb	1.187			302669.441
23	Na	|		1365.066	-0.122268	ppb	10.848	200.479		1463.408
39	K	|		97336.056	0.965808	ppb	1.074	125.054		97927.832
24	Mg	|		390.005	-0.609098	ppb	13.507	13.079		773.354
159	Tb-ISK	|		249986.327		ppb	0.517			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-38411_2-A

Autosampler Position: 402

Sample Date/Time: Friday, December 13, 2019 01:47:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\LCS 570-38411_2-A.223

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47845.545		ppb		0.574		49212.403
9	Be	|	117929.349	103.567349	ppb	2.154	2.598		22.222
10	B	|	36289.379	99.120893	ppb	1.967	3.087		3607.122
27	Al	|	678783.804	107.214558	ppb	1.366	1.678		3343.725
43	Ca-2	|	95934.420	4563.354036	ppb	1.453	0.879		95.000
49	Ti	|	61108.209	101.106565	ppb	1.200	0.959		178.890
52	Cr	|	914052.856	102.763775	ppb	1.229	1.359		12290.841
55	Mn	|	1527200.355	98.624594	ppb	0.573	0.833		884.472
57	Fe	|	1466267.756	4528.847759	ppb	0.421	1.354		11981.689
45	Sc-IS	>	1793083.663		ppb	1.008			1810825.491
66	Zn	|	170607.174	107.689294	ppb	0.758	0.545		866.693
86	Sr	|	277434.064	99.076849	ppb	1.226	0.815		27.313
65	Cu	|	251628.962	102.135088	ppb	0.650	0.362		249.474
69	Ga-IS	|	662722.726		ppb	1.199			655762.288
95	Mo	|	265951.752	99.917164	ppb	0.907	0.707		611.124
115	In-IS	>	467123.918		ppb	0.784			481027.951
111	Cd	|	265764.498	105.878907	ppb	0.833	0.116		39.828
118	Sn	|	860765.456	103.295070	ppb	1.586	1.375		9445.349
121	Sb	|	795164.741	91.393755	ppb	1.117	0.463		1748.996
135	Ba	|	218789.455	103.264939	ppb	1.012	0.355		73.334
165	Ho-IS	|	564605.750		ppb	0.569			576332.643
159	Tb-IS	>	627126.613		ppb	0.777			637324.013
207	Pb	|	3064534.501	103.158583	ppb	1.400	0.886		476.670
203	Tl	|	935710.625	98.462963	ppb	1.586	0.860		125.556
209	Bi-IS	|	338653.814		ppb	0.745			344445.843
51	V	|	79358.711	103.134087	ppb	0.797	0.359		16.667
59	Co	|	185313.138	101.658547	ppb	0.878	0.863		31.111
60	Ni	|	133088.193	104.202095	ppb	0.690	1.085		70.000
75	As	|	51046.325	103.663192	ppb	1.152	1.616		1134.791
71	Ga-ISK	>	127803.587		ppb	0.439			133018.683
82	Se-2	|	5637.321	107.396494	ppb	0.160	0.420		2.481
107	Ag-1	|	225566.970	43.738251	ppb	0.945	1.390		813.357
115	In-ISK	|	139189.517		ppb	0.547			142506.264
45	Sc-ISK	>	298709.643		ppb	0.723			302669.441
23	Na	|	592626.630	978.094179	ppb	2.758	3.424		1463.408
39	K	|	1202200.476	992.122689	ppb	0.904	1.683		97927.832
24	Mg	|	2736898.070	4479.808084	ppb	0.724	1.204		773.354
159	Tb-ISK	|	251250.228		ppb	0.613			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-38411_3-A

Autosampler Position: 403

Sample Date/Time: Friday, December 13, 2019 01:49:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\LCSD 570-38411_3-A.224

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47075.217		ppb		0.922		49212.403
9	Be	|	117315.329	103.875078	ppb	1.158	1.097		22.222
10	B	|	35150.986	96.537760	ppb	2.348	2.350		3607.122
27	Al	|	666766.803	106.184208	ppb	1.211	1.476		3343.725
43	Ca-2	|	95187.855	4565.551545	ppb	2.349	2.281		95.000
49	Ti	|	61013.370	101.793769	ppb	1.605	1.869		178.890
52	Cr	|	906648.136	102.777317	ppb	0.935	1.144		12290.841
55	Mn	|	1500664.795	97.713784	ppb	0.328	0.581		884.472
57	Fe	|	1458358.260	4541.656241	ppb	0.345	0.520		11981.689
45	Sc-IS	>	1778278.311		ppb	0.267			1810825.491
66	Zn	|	169061.187	107.599132	ppb	0.832	0.845		866.693
86	Sr	|	278877.325	100.423006	ppb	0.911	1.166		27.313
65	Cu	|	248476.332	101.694398	ppb	1.822	1.975		249.474
69	Ga-IS	|	657115.040		ppb	0.858			655762.288
95	Mo	|	269487.247	102.092794	ppb	1.328	1.496		611.124
115	In-IS	>	471150.744		ppb	0.952			481027.951
111	Cd	|	264793.828	104.592345	ppb	0.790	0.463		39.828
118	Sn	|	881807.609	104.928591	ppb	1.691	0.763		9445.349
121	Sb	|	838757.715	95.590615	ppb	1.548	1.231		1748.996
135	Ba	|	220029.655	102.957976	ppb	1.831	0.898		73.334
165	Ho-IS	|	563675.338		ppb	1.226			576332.643
159	Tb-IS	>	626894.544		ppb	0.788			637324.013
207	Pb	|	3027069.116	101.937427	ppb	1.620	1.463		476.670
203	Tl	|	937651.341	98.708362	ppb	0.652	0.223		125.556
209	Bi-IS	|	333968.236		ppb	1.707			344445.843
51	V	|	78757.620	103.358586	ppb	0.785	1.009		16.667
59	Co	|	180457.057	99.964538	ppb	0.033	0.388		31.111
60	Ni	|	131991.499	104.353557	ppb	1.553	1.577		70.000
75	As	|	50433.199	103.412085	ppb	2.921	2.996		1134.791
71	Ga-ISK	>	126563.732		ppb	0.379			133018.683
82	Se-2	|	5449.233	104.827599	ppb	0.527	0.195		2.481
107	Ag-1	|	225233.184	44.101084	ppb	1.885	1.897		813.357
115	In-ISK	|	137431.572		ppb	1.704			142506.264
45	Sc-ISK	>	294968.879		ppb	1.273			302669.441
23	Na	|	584713.164	977.223433	ppb	0.673	1.394		1463.408
39	K	|	1189824.442	994.642532	ppb	0.562	1.932		97927.832
24	Mg	|	2724118.079	4515.913842	ppb	0.640	1.830		773.354
159	Tb-ISK	|	246725.116		ppb	0.951			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, December 13, 2019 01:52:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\b.225

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	45978.364		ppb	3.119		49212.403
9	Be	22.222	0.000602	ppb	45.826	1462.881	22.222
10	B	3354.839	-0.389099	ppb	4.289	121.359	3607.122
27	Al	3195.915	-0.005289	ppb	8.191	673.630	3343.725
43	Ca-2	73.334	-0.887797	ppb	30.745	127.119	95.000
49	Ti	205.557	0.055476	ppb	17.340	99.139	178.890
52	Cr	11080.966	-0.091266	ppb	3.294	23.991	12290.841
55	Mn	783.355	-0.004674	ppb	7.005	62.515	884.472
57	Fe	12548.843	3.159903	ppb	1.036	16.598	11981.689
45	Sc-IS	> 1747308.904		ppb	1.741		1810825.491
66	Zn	807.801	-0.018445	ppb	1.906	73.067	866.693
86	Sr	22.869	-0.001381	ppb	120.604	727.940	27.313
65	Cu	127.004	-0.047387	ppb	4.053	5.979	249.474
69	Ga-IS	627008.080		ppb	2.858		655762.288
95	Mo	4853.046	1.647961	ppb	0.933	2.961	611.124
115	In-IS	> 469244.741		ppb	2.416		481027.951
111	Cd	46.475	0.002994	ppb	12.627	62.218	39.828
118	Sn	26186.205	2.051066	ppb	1.710	5.611	9445.349
121	Sb	47213.461	5.218980	ppb	1.743	1.619	1748.996
135	Ba	58.889	-0.005904	ppb	11.783	62.199	73.334
165	Ho-IS	556788.957		ppb	3.673		576332.643
159	Tb-IS	> 618510.399		ppb	3.094		637324.013
207	Pb	1654.483	0.040599	ppb	10.929	11.323	476.670
203	Tl	464.452	0.036491	ppb	14.252	16.575	125.556
209	Bi-IS	332505.564		ppb	4.446		344445.843
51	V	22.222	0.008026	ppb	43.301	153.081	16.667
59	Co	38.889	0.004957	ppb	21.571	94.746	31.111
60	Ni	53.333	-0.010949	ppb	31.250	116.783	70.000
75	As	1163.051	0.151498	ppb	0.814	5.546	1134.791
71	Ga-ISK	> 127774.448		ppb	0.645		133018.683
82	Se-2	19.869	0.333218	ppb	30.453	34.555	2.481
107	Ag-1	2389.089	0.312785	ppb	7.623	10.555	813.357
115	In-ISK	140542.594		ppb	1.038		142506.264
45	Sc-ISK	> 297730.771		ppb	1.097		302669.441
23	Na	1331.729	-0.179582	ppb	8.109	91.118	1463.408
39	K	97133.548	0.730820	ppb	0.140	138.189	97927.832
24	Mg	626.681	-0.220732	ppb	10.625	46.001	773.354
159	Tb-ISK	252038.076		ppb	1.193		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14476-A-1-D SD @5

Autosampler Position: 404

Sample Date/Time: Friday, December 13, 2019 01:55:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14476-A-1-D SD @5.226

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		46770.888		ppb			1.025			49212.403
9	Be	|		14.444	-0.006524	ppb	87.368	171.166				22.222
10	B	|		3544.884	0.094722	ppb	2.583	334.475				3607.122
27	Al	|		5057.563	0.290363	ppb	4.939	14.169				3343.725
43	Ca-2	|		1513.413	68.764063	ppb	0.191	1.454				95.000
49	Ti	|		130.001	-0.074531	ppb	11.750	37.445				178.890
52	Cr	|		10925.288	-0.121401	ppb	1.263	21.883				12290.841
55	Mn	|		3551.553	0.176772	ppb	5.666	9.238				884.472
57	Fe	|		10669.539	-3.172340	ppb	0.887	23.388				11981.689
45	Sc-IS	>		1764350.446		ppb	1.361					1810825.491
66	Zn	|		11158.801	6.650804	ppb	0.091	1.568				866.693
86	Sr	|		1058.559	0.374503	ppb	5.553	5.094				27.313
65	Cu	|		882.900	0.264322	ppb	6.608	10.106				249.474
69	Ga-IS	|		635372.657		ppb	1.388					655762.288
95	Mo	|		1172.270	0.220973	ppb	6.874	15.750				611.124
115	In-IS	>		474068.454		ppb	0.857					481027.951
111	Cd	|		44.205	0.001929	ppb	30.543	269.567				39.828
118	Sn	|		10430.478	0.134412	ppb	4.270	46.766				9445.349
121	Sb	|		12673.404	1.242922	ppb	4.374	5.381				1748.996
135	Ba	|		925.586	0.397082	ppb	4.445	5.502				73.334
165	Ho-IS	|		560450.410		ppb	1.512					576332.643
159	Tb-IS	>		621781.336		ppb	1.310					637324.013
207	Pb	|		696.674	0.007863	ppb	4.995	13.404				476.670
203	Tl	|		156.668	0.003632	ppb	2.128	15.037				125.556
209	Bi-IS	|		334656.064		ppb	1.436					344445.843
51	V	|		47.778	0.041480	ppb	32.971	49.122				16.667
59	Co	|		32.222	0.001354	ppb	26.034	344.348				31.111
60	Ni	|		115.556	0.038174	ppb	12.010	28.630				70.000
75	As	|		1140.496	0.112922	ppb	1.917	32.650				1134.791
71	Ga-ISK	>		127327.137		ppb	0.369					133018.683
82	Se-2	|		8.226	0.111816	ppb	77.995	109.556				2.481
107	Ag-1	|		846.692	0.013340	ppb	10.092	128.412				813.357
115	In-ISK	|		139670.705		ppb	1.482					142506.264
45	Sc-ISK	>		294167.998		ppb	0.860					302669.441
23	Na	|		37494.141	60.595812	ppb	0.789	1.342				1463.408
39	K	|		109816.054	13.349534	ppb	1.029	14.189				97927.832
24	Mg	|		5737.820	8.288839	ppb	3.322	3.366				773.354
159	Tb-ISK	|		247210.627		ppb	0.352					255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14476-A-1-D

Autosampler Position: 405

Sample Date/Time: Friday, December 13, 2019 01:58:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14476-A-1-D.227

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		46845.594		ppb			2.130			49212.403
9	Be	|		14.444	-0.006520	ppb		48.038	92.305			22.222
10	B	|		3629.351	0.331639	ppb		5.835	204.510			3607.122
27	Al	|		11482.399	1.322954	ppb		5.208	7.576			3343.725
43	Ca-2	|		7370.235	351.373973	ppb		2.724	1.486			95.000
49	Ti	|		371.120	0.336490	ppb	109.602	207.473				178.890
52	Cr	|		11570.240	-0.049722	ppb		1.749	35.063			12290.841
55	Mn	|		16015.640	0.993004	ppb		1.011	1.943			884.472
57	Fe	|		10166.955	-4.831673	ppb		4.774	33.927			11981.689
45	Sc-IS	>		1768123.064		ppb		1.577				1810825.491
66	Zn	|		62122.576	39.422653	ppb		1.463	0.620			866.693
86	Sr	|		5474.079	1.973027	ppb		4.859	4.659			27.313
65	Cu	|		4082.339	1.581869	ppb		3.310	3.761			249.474
69	Ga-IS	|		627357.014		ppb		0.142				655762.288
95	Mo	|		506.676	-0.034380	ppb	10.870	60.609				611.124
115	In-IS	>		462917.637		ppb		0.989				481027.951
111	Cd	|		167.826	0.052091	ppb		8.898	12.259			39.828
118	Sn	|		3771.609	-0.650935	ppb		1.105	0.095			9445.349
121	Sb	|		4718.557	0.352857	ppb		1.149	2.668			1748.996
135	Ba	|		4291.756	2.010869	ppb		3.271	2.566			73.334
165	Ho-IS	|		555978.953		ppb		1.192				576332.643
159	Tb-IS	>		616410.002		ppb		1.148				637324.013
207	Pb	|		725.563	0.009047	ppb		8.793	21.002			476.670
203	Tl	|		150.001	0.003065	ppb		12.373	66.794			125.556
209	Bi-IS	|		338186.914		ppb		2.708				344445.843
51	V	|		71.111	0.072887	ppb		29.770	38.444			16.667
59	Co	|		54.445	0.013860	ppb		35.874	77.944			31.111
60	Ni	|		441.118	0.297461	ppb		8.324	9.731			70.000
75	As	|		1193.032	0.246330	ppb		2.410	27.175			1134.791
71	Ga-ISK	>		126119.829		ppb		0.257				133018.683
82	Se-2	|		11.549	0.177638	ppb		13.095	16.554			2.481
107	Ag-1	|		454.452	-0.062454	ppb		9.573	13.539			813.357
115	In-ISK	|		138606.626		ppb		0.906				142506.264
45	Sc-ISK	>		292064.165		ppb		2.327				302669.441
23	Na	|		179472.078	301.313238	ppb		1.108	1.340			1463.408
39	K	|		161935.997	61.960847	ppb		0.607	7.116			97927.832
24	Mg	|		27376.212	44.593346	ppb		1.939	0.434			773.354
159	Tb-ISK	|		245784.436		ppb		0.935				255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14476-A-1-E MS

Autosampler Position: 406

Sample Date/Time: Friday, December 13, 2019 02:00:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14476-A-1-E MS.228

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	87131.581		ppb	0.557			49212.403
9	Be	|	110105.000	98.746802	ppb	1.865	1.546		22.222
10	B	|	27879.411	75.434749	ppb	2.479	2.992		3607.122
27	Al	|	540026.552	87.016117	ppb	0.066	0.397		3343.725
43	Ca-2	|	114448.287	5561.411246	ppb	0.416	0.749		95.000
49	Ti	|	53711.915	90.736087	ppb	1.708	1.739		178.890
52	Cr	|	864984.224	99.273447	ppb	0.292	0.051		12290.841
55	Mn	|	1442534.610	95.141728	ppb	0.517	0.802		884.472
57	Fe	|	1494794.920	4716.835882	ppb	1.471	1.775		11981.689
45	Sc-IS	>	1755589.317		ppb	0.333			1810825.491
66	Zn	|	230540.958	148.834367	ppb	0.773	1.039		866.693
86	Sr	|	266917.461	97.359042	ppb	1.420	1.662		27.313
65	Cu	|	234276.898	97.117368	ppb	1.098	1.282		249.474
69	Ga-IS	|	646628.672		ppb	0.544			655762.288
95	Mo	|	214755.883	82.366638	ppb	1.923	2.102		611.124
115	In-IS	>	459578.867		ppb	0.995			481027.951
111	Cd	|	251960.552	102.030372	ppb	0.586	0.552		39.828
118	Sn	|	568362.662	68.958572	ppb	9.128	9.156		9445.349
121	Sb	|	711879.785	83.142659	ppb	2.366	1.626		1748.996
135	Ba	|	170562.402	81.813691	ppb	1.899	1.017		73.334
165	Ho-IS	|	559688.467		ppb	1.127			576332.643
159	Tb-IS	>	618736.309		ppb	1.631			637324.013
207	Pb	|	2732518.955	93.236641	ppb	1.727	1.575		476.670
203	Tl	|	891029.975	95.052351	ppb	1.253	2.009		125.556
209	Bi-IS	|	892674.619		ppb	6.394			344445.843
51	V	|	65950.814	87.358415	ppb	2.060	2.123		16.667
59	Co	|	178940.414	100.055517	ppb	0.678	1.208		31.111
60	Ni	|	120819.928	96.416685	ppb	1.308	1.825		70.000
75	As	|	48469.763	100.250295	ppb	0.321	0.738		1134.791
71	Ga-ISK	>	125390.122		ppb	0.548			133018.683
82	Se-2	|	5549.949	107.770405	ppb	0.985	1.379		2.481
107	Ag-1	|	197989.389	39.111107	ppb	1.381	0.893		813.357
115	In-ISK	|	135747.239		ppb	1.707			142506.264
45	Sc-ISK	>	292684.678		ppb	0.917			302669.441
23	Na	|	637917.874	1074.607425	ppb	1.092	0.901		1463.408
39	K	|	1007395.000	835.895483	ppb	0.925	1.331		97927.832
24	Mg	|	3104194.734	5185.672259	ppb	1.129	1.069		773.354
159	Tb-ISK	|	245617.097		ppb	1.451			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14476-A-1-F MSD

Autosampler Position: 407

Sample Date/Time: Friday, December 13, 2019 02:03:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14476-A-1-F MSD.229

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	89365.315		ppb		0.505		49212.403
9	Be	|	116990.458	104.993169	ppb	1.141	0.891		22.222
10	B	|	29395.775	80.186852	ppb	1.825	2.447		3607.122
27	Al	|	575024.084	92.751937	ppb	0.959	1.334		3343.725
43	Ca-2	|	124431.243	6050.790816	ppb	0.675	0.825		95.000
49	Ti	|	60336.076	102.025329	ppb	2.179	1.959		178.890
52	Cr	|	923020.059	106.097342	ppb	0.775	0.840		12290.841
55	Mn	|	1536934.501	101.437306	ppb	0.699	0.945		884.472
57	Fe	|	1647045.819	5204.221418	ppb	0.615	0.448		11981.689
45	Sc-IS	>	1754455.409		ppb	0.381			1810825.491
66	Zn	|	269687.524	174.306521	ppb	1.027	0.717		866.693
86	Sr	|	285688.071	104.268533	ppb	2.127	1.941		27.313
65	Cu	|	248122.427	102.929159	ppb	0.272	0.644		249.474
69	Ga-IS	|	636826.729		ppb	1.878			655762.288
95	Mo	|	246142.421	94.491827	ppb	2.865	2.578		611.124
115	In-IS	>	458044.297		ppb	1.881			481027.951
111	Cd	|	267137.525	108.542473	ppb	1.429	0.487		39.828
118	Sn	|	705891.211	86.221416	ppb	3.306	3.555		9445.349
121	Sb	|	813908.857	95.418277	ppb	1.491	0.707		1748.996
135	Ba	|	178690.632	86.027956	ppb	0.462	2.088		73.334
165	Ho-IS	|	553758.353		ppb	1.697			576332.643
159	Tb-IS	>	612114.803		ppb	0.653			637324.013
207	Pb	|	2937890.039	101.316951	ppb	2.007	1.396		476.670
203	Tl	|	946873.449	102.080812	ppb	1.891	1.314		125.556
209	Bi-IS	|	1057533.077		ppb	7.990			344445.843
51	V	|	70806.190	93.770946	ppb	1.837	1.743		16.667
59	Co	|	183954.855	102.834723	ppb	1.885	1.770		31.111
60	Ni	|	127442.600	101.679305	ppb	0.192	0.333		70.000
75	As	|	50842.163	105.239506	ppb	1.774	1.288		1134.791
71	Ga-ISK	>	125414.781		ppb	0.523			133018.683
82	Se-2	|	5811.377	112.832785	ppb	2.172	2.702		2.481
107	Ag-1	|	208370.026	41.163989	ppb	1.696	1.886		813.357
115	In-ISK	|	136475.179		ppb	0.366			142506.264
45	Sc-ISK	>	289252.481		ppb	0.895			302669.441
23	Na	|	736489.956	1255.793283	ppb	0.800	0.776		1463.408
39	K	|	1078115.862	912.329646	ppb	0.981	0.280		97927.832
24	Mg	|	3270666.924	5528.656725	ppb	0.619	0.385		773.354
159	Tb-ISK	|	242743.019		ppb	0.593			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14476-A-1-D PDS

Autosampler Position: 408

Sample Date/Time: Friday, December 13, 2019 02:06:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14476-A-1-D PDS.230

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	45630.540		ppb		0.763		49212.403
9	Be	|	118138.745	107.577116	ppb	1.212	1.596		22.222
10	B	|	34709.910	98.209246	ppb	2.439	3.119		3607.122
27	Al	|	647210.640	105.991051	ppb	0.307	0.411		3343.725
43	Ca-2	|	97696.281	4819.100698	ppb	1.089	1.040		95.000
49	Ti	|	60652.940	104.064339	ppb	1.162	0.776		178.890
52	Cr	|	898841.277	104.806507	ppb	1.140	0.794		12290.841
55	Mn	|	1488474.790	99.668470	ppb	1.231	0.983		884.472
57	Fe	|	1399249.176	4480.644885	ppb	0.720	0.397		11981.689
45	Sc-IS	>	1729223.844		ppb	0.457			1810825.491
66	Zn	|	233512.449	153.056034	ppb	2.104	1.662		866.693
86	Sr	|	276464.114	102.377518	ppb	1.864	1.900		27.313
65	Cu	|	249406.253	104.972038	ppb	0.425	0.281		249.474
69	Ga-IS	|	645027.332		ppb	1.132			655762.288
95	Mo	|	260698.924	101.561986	ppb	1.945	1.876		611.124
115	In-IS	>	458693.725		ppb	0.708			481027.951
111	Cd	|	270971.893	109.940311	ppb	0.352	0.390		39.828
118	Sn	|	737368.673	89.963140	ppb	2.876	2.263		9445.349
121	Sb	|	822570.782	96.282494	ppb	3.221	2.557		1748.996
135	Ba	|	219079.883	105.297702	ppb	2.310	1.736		73.334
165	Ho-IS	|	549230.978		ppb	1.275			576332.643
159	Tb-IS	>	612381.843		ppb	0.954			637324.013
207	Pb	|	2969877.880	102.382194	ppb	0.820	0.244		476.670
203	Tl	|	918707.043	99.007162	ppb	1.337	1.206		125.556
209	Bi-IS	|	417880.480		ppb	0.430			344445.843
51	V	|	79834.687	106.001486	ppb	0.883	2.797		16.667
59	Co	|	178994.398	100.311019	ppb	0.451	2.259		31.111
60	Ni	|	132194.427	105.716454	ppb	1.126	1.070		70.000
75	As	|	52139.028	108.251856	ppb	1.523	2.215		1134.791
71	Ga-ISK	>	125142.563		ppb	2.130			133018.683
82	Se-2	|	5917.749	115.164952	ppb	1.509	2.166		2.481
107	Ag-1	|	219370.469	43.451354	ppb	0.928	2.282		813.357
115	In-ISK	|	135217.351		ppb	0.526			142506.264
45	Sc-ISK	>	291885.529		ppb	1.527			302669.441
23	Na	|	743931.873	1257.003083	ppb	2.021	1.251		1463.408
39	K	|	1226761.192	1040.000682	ppb	0.067	1.680		97927.832
24	Mg	|	2651578.130	4441.847481	ppb	0.920	1.240		773.354
159	Tb-ISK	|	245477.195		ppb	0.831			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14476-A-2-B

Autosampler Position: 409

Sample Date/Time: Friday, December 13, 2019 02:09:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14476-A-2-B.231

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	45758.731		ppb		1.261		49212.403
9	Be	|	33.333	0.010789	ppb	20.000	58.119		22.222
10	B	|	3587.117	0.344402	ppb	3.221	72.624		3607.122
27	Al	|	8543.669	0.868440	ppb	4.663	9.159		3343.725
43	Ca-2	|	4712.444	226.071056	ppb	3.188	2.642		95.000
49	Ti	|	267.780	0.162883	ppb	10.139	30.124		178.890
52	Cr	|	11568.015	-0.032217	ppb	0.250	36.997		12290.841
55	Mn	|	16651.924	1.048940	ppb	1.860	0.877		884.472
57	Fe	|	12007.268	1.478480	ppb	2.440	67.797		11981.689
45	Sc-IS	>	1744972.438		ppb		1.031		1810825.491
66	Zn	|	13346.233	8.155405	ppb	2.039	1.538		866.693
86	Sr	|	3252.777	1.183982	ppb	6.097	5.757		27.313
65	Cu	|	1995.461	0.732763	ppb	3.664	4.258		249.474
69	Ga-IS	|	625637.168		ppb		1.556		655762.288
95	Mo	|	10538.331	3.849653	ppb	1.979	1.665		611.124
115	In-IS	>	466384.983		ppb		1.438		481027.951
111	Cd	|	110.092	0.028512	ppb	18.477	28.247		39.828
118	Sn	|	10880.809	0.209521	ppb	0.974	11.597		9445.349
121	Sb	|	56255.008	6.296218	ppb	1.617	3.119		1748.996
135	Ba	|	2314.632	1.060933	ppb	2.787	2.433		73.334
165	Ho-IS	|	551860.794		ppb		1.389		576332.643
159	Tb-IS	>	617480.238		ppb		1.101		637324.013
207	Pb	|	6346.111	0.201244	ppb	1.350	2.601		476.670
203	Tl	|	1498.968	0.147200	ppb	6.169	6.218		125.556
209	Bi-IS	|	336805.371		ppb		2.259		344445.843
51	V	|	330.004	0.418281	ppb	13.363	13.737		16.667
59	Co	|	81.111	0.029173	ppb	36.834	57.594		31.111
60	Ni	|	380.005	0.252103	ppb	6.326	7.666		70.000
75	As	|	1212.779	0.314364	ppb	1.144	12.107		1134.791
71	Ga-ISK	>	124820.718		ppb		0.346		133018.683
82	Se-2	|	51.544	0.960343	ppb	7.844	8.058		2.481
107	Ag-1	|	2913.632	0.428272	ppb	10.040	13.154		813.357
115	In-ISK	|	135986.151		ppb		1.162		142506.264
45	Sc-ISK	>	289038.131		ppb		0.632		302669.441
23	Na	|	102417.499	172.708629	ppb	0.836	1.284		1463.408
39	K	|	149676.704	52.081241	ppb	0.537	1.297		97927.832
24	Mg	|	13032.611	20.799820	ppb	2.307	1.792		773.354
159	Tb-ISK	|	244825.546		ppb		1.057		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, December 13, 2019 02:12:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCV-210770.232

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	45988.355		ppb		1.176		49212.403
9	Be	|	109803.717	97.545660	ppb	0.562	1.109		22.222
10	B	|	83289.893	244.414954	ppb	1.080	1.549		3607.122
27	Al	|	631142.666	100.820000	ppb	1.906	2.438		3343.725
43	Ca-2	|	106173.085	5109.823076	ppb	0.181	0.635		95.000
49	Ti	|	59615.252	99.779929	ppb	1.142	1.255		178.890
52	Cr	|	881395.716	100.210358	ppb	0.529	1.092		12290.841
55	Mn	|	1512758.655	98.825560	ppb	0.817	0.965		884.472
57	Fe	|	1678707.230	5250.980914	ppb	0.985	1.536		11981.689
45	Sc-IS	>	1772470.018		ppb	0.553			1810825.491
66	Zn	|	155875.853	99.490657	ppb	1.061	0.794		866.693
86	Sr	|	278066.471	100.456302	ppb	0.845	0.400		27.313
65	Cu	|	245479.044	100.797942	ppb	1.373	1.672		249.474
69	Ga-IS	|	644579.497		ppb	0.850			655762.288
95	Mo	|	277920.892	105.636969	ppb	1.073	0.555		611.124
115	In-IS	>	460675.624		ppb	1.145			481027.951
111	Cd	|	249836.622	100.931947	ppb	0.385	0.767		39.828
118	Sn	|	909441.124	110.751302	ppb	0.612	1.080		9445.349
121	Sb	|	894987.020	104.338004	ppb	1.177	0.802		1748.996
135	Ba	|	206955.141	99.044743	ppb	1.391	0.433		73.334
165	Ho-IS	|	559787.795		ppb	1.694			576332.643
159	Tb-IS	>	620741.692		ppb	1.635			637324.013
207	Pb	|	2958299.435	100.611722	ppb	1.716	1.134		476.670
203	Tl	|	949485.548	100.954590	ppb	1.181	1.330		125.556
209	Bi-IS	|	823033.213		ppb	1.157			344445.843
51	V	|	77980.032	102.529029	ppb	0.447	1.003		16.667
59	Co	|	182460.257	101.260143	ppb	1.691	1.578		31.111
60	Ni	|	127309.400	100.821104	ppb	2.331	0.961		70.000
75	As	|	49012.385	100.624641	ppb	0.756	0.676		1134.791
71	Ga-ISK	>	126337.364		ppb	1.410			133018.683
82	Se-2	|	5316.843	102.482906	ppb	1.158	2.256		2.481
107	Ag-1	|	511675.739	100.572274	ppb	2.045	2.406		813.357
115	In-ISK	|	138356.484		ppb	0.481			142506.264
45	Sc-ISK	>	291089.240		ppb	0.922			302669.441
23	Na	|	3022776.777	5129.417021	ppb	1.743	2.349		1463.408
39	K	|	5738018.552	5197.540735	ppb	1.839	2.453		97927.832
24	Mg	|	3102616.274	5211.717269	ppb	2.075	2.402		773.354
159	Tb-ISK	|	248129.961		ppb	1.424			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Sn 118

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, December 13, 2019 02:14:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCB-23446.233

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		44899.596		ppb			7.433			49212.403
9	Be	|		26.667	0.005630	ppb	66.144	283.496				22.222
10	B	|		3509.320	0.546661	ppb	0.198	171.190				3607.122
27	Al	|		4521.925	0.259951	ppb	45.387	163.094				3343.725
43	Ca-2	|		96.667	0.380925	ppb	39.165	430.666				95.000
49	Ti	|		455.565	0.542154	ppb	67.502	116.731				178.890
52	Cr	|		10851.899	-0.065822	ppb	1.884	131.960				12290.841
55	Mn	|		871.138	0.003785	ppb	7.223	238.264				884.472
57	Fe	|		17341.632	20.819937	ppb	1.745	25.546				11981.689
45	Sc-IS	>		1684172.992		ppb			7.771			1810825.491
66	Zn	|		715.574	-0.060224	ppb	4.849	33.866				866.693
86	Sr	|		36.726	0.004599	ppb	170.568	502.195				27.313
65	Cu	|		162.676	-0.030666	ppb	30.602	54.560				249.474
69	Ga-IS	|		603369.152		ppb			7.048			655762.288
95	Mo	|		5253.189	1.890277	ppb	3.955	12.634				611.124
115	In-IS	>		449929.911		ppb			9.406			481027.951
111	Cd	|		46.746	0.003920	ppb	17.398	66.336				39.828
118	Sn	|		39491.753	4.000606	ppb	32.846	55.776				9445.349
121	Sb	|		17090.225	1.864713	ppb	3.543	14.335				1748.996
135	Ba	|		104.445	0.018021	ppb	12.083	50.738				73.334
165	Ho-IS	|		541405.312		ppb			9.004			576332.643
159	Tb-IS	>		592353.109		ppb			9.792			637324.013
207	Pb	|		2764.550	0.083529	ppb	2.510	14.510				476.670
203	Tl	|		1105.598	0.111578	ppb	6.497	19.094				125.556
209	Bi-IS	|		371394.022		ppb			6.128			344445.843
51	V	|		96.667	0.104002	ppb	5.973	7.350				16.667
59	Co	|		51.111	0.011458	ppb	15.061	37.033				31.111
60	Ni	|		52.222	-0.012061	ppb	31.487	105.815				70.000
75	As	|		1184.208	0.178213	ppb	6.828	92.108				1134.791
71	Ga-ISK	>		128669.078		ppb			0.300			133018.683
82	Se-2	|		26.862	0.462907	ppb	20.712	22.485				2.481
107	Ag-1	|		3273.709	0.480585	ppb	6.463	8.285				813.357
115	In-ISK	|		137774.890		ppb			0.594			142506.264
45	Sc-ISK	>		291682.031		ppb			2.331			302669.441
23	Na	|		1220.053	-0.320265	ppb	11.476	79.468				1463.408
39	K	|		96630.163	2.110719	ppb	0.715	114.656				97927.832
24	Mg	|		528.343	-0.363074	ppb	10.969	28.230				773.354
159	Tb-ISK	|		245671.811		ppb			0.732			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, December 13, 2019 02:17:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCB-23446.234

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		46242.505		ppb		1.061		49212.403
9	Be	|		21.111	-0.000400	ppb	74.618	3509.358		22.222
10	B	|		3461.530	-0.058557	ppb	0.819	338.683		3607.122
27	Al	|		3170.352	-0.009176	ppb	1.318	15.262		3343.725
43	Ca-2	|		66.667	-1.229036	ppb	30.311	77.428		95.000
49	Ti	|		156.668	-0.027346	ppb	15.343	143.987		178.890
52	Cr	|		10764.054	-0.128194	ppb	1.483	9.336		12290.841
55	Mn	|		811.134	-0.002801	ppb	0.856	38.816		884.472
57	Fe	|		12279.720	2.294965	ppb	0.939	20.912		11981.689
45	Sc-IS	>		1747431.761		ppb	1.179			1810825.491
66	Zn	|		780.021	-0.036740	ppb	3.338	32.251		866.693
86	Sr	|		56.802	0.011163	ppb	34.461	64.647		27.313
65	Cu	|		135.022	-0.044015	ppb	18.252	24.527		249.474
69	Ga-IS	|		631664.642		ppb	0.821			655762.288
95	Mo	[		1550.084	0.371061	ppb	2.608	3.709		611.124
115	In-IS	>		466062.600		ppb	0.520			481027.951
111	Cd	|		37.856	-0.000296	ppb	13.331	671.286		39.828
118	Sn	|		13179.420	0.489899	ppb	5.061	17.759		9445.349
121	Sb	|		7298.534	0.647104	ppb	5.253	7.443		1748.996
135	Ba	|		80.000	0.004234	ppb	11.024	98.244		73.334
165	Ho-IS	[		560911.154		ppb	1.436			576332.643
159	Tb-IS	>		619829.623		ppb	1.491			637324.013
207	Pb	|		1142.240	0.023100	ppb	6.241	8.041		476.670
203	Tl	|		383.339	0.027821	ppb	10.028	14.904		125.556
209	Bi-IS	[		346143.292		ppb	1.991			344445.843
51	V	|		33.333	0.023659	ppb	30.000	59.344		16.667
59	Co	|		44.445	0.008529	ppb	4.330	7.549		31.111
60	Ni	|		65.556	-0.000030	ppb	24.03044642	694		70.000
75	As	|		1183.732	0.251097	ppb	5.670	70.619		1134.791
71	Ga-ISK	>		124978.874		ppb	1.829			133018.683
82	Se-2	|		12.539	0.201107	ppb	99.872	122.020		2.481
107	Ag-1	|		1125.600	0.071805	ppb	8.926	24.564		813.357
115	In-ISK	[		139409.841		ppb	0.383			142506.264
45	Sc-ISK	>		290249.088		ppb	0.976			302669.441
23	Na	|		1261.722	-0.240351	ppb	4.778	51.218		1463.408
39	K	|		95277.783	1.271208	ppb	0.386	90.777		97927.832
24	Mg	|		440.007	-0.508646	ppb	11.364	15.313		773.354
159	Tb-ISK	[		245062.771		ppb	0.455			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14631-D-1-C

Autosampler Position: 410

Sample Date/Time: Friday, December 13, 2019 02:20:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14631-D-1-C.235

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46234.715		ppb	1.910		49212.403
9	Be	23.333	0.001628	ppb	42.857	565.591	22.222
10	B	3591.563	0.268471	ppb	1.948	125.469	3607.122
27	Al	10036.878	1.099038	ppb	9.285	15.529	3343.725
43	Ca-2	788.355	33.771922	ppb	10.428	11.822	95.000
49	Ti	118.889	-0.092934	ppb	5.836	11.869	178.890
52	Cr	11077.628	-0.100631	ppb	2.244	22.341	12290.841
55	Mn	1056.706	0.013014	ppb	5.212	33.939	884.472
57	Fe	10073.551	-4.977028	ppb	1.990	16.732	11981.689
45	Sc-IS	> 1759755.062		ppb	1.199		1810825.491
66	Zn	1243.387	0.259228	ppb	3.021	6.964	866.693
86	Sr	272.898	0.089538	ppb	15.623	16.064	27.313
65	Cu	163.886	-0.032511	ppb	2.307	5.574	249.474
69	Ga-IS	621365.073		ppb	1.797		655762.288
95	Mo	456.674	-0.052603	ppb	2.920	12.697	611.124
115	In-IS	> 461687.014		ppb	0.997		481027.951
111	Cd	51.263	0.005277	ppb	29.345	116.311	39.828
118	Sn	1121.155	-0.975000	ppb	3.472	0.353	9445.349
121	Sb	4182.835	0.291978	ppb	4.248	8.508	1748.996
135	Ba	73.334	0.001442	ppb	46.131	1123.482	73.334
165	Ho-IS	556640.011		ppb	1.941		576332.643
159	Tb-IS	> 613608.428		ppb	1.519		637324.013
207	Pb	577.782	0.004089	ppb	4.406	20.026	476.670
203	Tl	195.557	0.008058	ppb	11.603	33.667	125.556
209	Bi-IS	334555.884		ppb	1.296		344445.843
51	V	17.778	0.002580	ppb	10.825	122.072	16.667
59	Co	46.667	0.009370	ppb	24.744	62.630	31.111
60	Ni	77.778	0.009003	ppb	28.536	204.487	70.000
75	As	1170.806	0.193751	ppb	3.524	72.033	1134.791
71	Ga-ISK	> 126527.013		ppb	2.740		133018.683
82	Se-2	-1.815	-0.079463	ppb	647.082	285.727	2.481
107	Ag-1	518.898	-0.050171	ppb	10.698	18.212	813.357
115	In-ISK	138126.215		ppb	0.926		142506.264
45	Sc-ISK	> 289022.257		ppb	0.623		302669.441
23	Na	89952.388	151.401720	ppb	2.025	2.067	1463.408
39	K	120966.668	25.464506	ppb	0.490	3.672	97927.832
24	Mg	4789.136	6.853210	ppb	3.099	2.976	773.354
159	Tb-ISK	245664.464		ppb	1.160		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14631-C-2-C

Autosampler Position: 411

Sample Date/Time: Friday, December 13, 2019 02:23:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14631-C-2-C.236

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46177.867		ppb	2.038		49212.403
9	Be	17.778	-0.003413	ppb	70.986	331.092	22.222
10	B	3781.612	0.890089	ppb	1.710	17.670	3607.122
27	Al	47142.178	7.121268	ppb	3.902	2.963	3343.725
43	Ca-2	12917.505	624.358300	ppb	1.736	2.677	95.000
49	Ti	377.783	0.347865	ppb	16.278	32.286	178.890
52	Cr	11958.337	0.006362	ppb	1.401	546.785	12290.841
55	Mn	9126.248	0.546163	ppb	1.714	0.915	884.472
57	Fe	12075.102	1.491410	ppb	1.759	33.980	11981.689
45	Sc-IS	> 1754154.404		ppb	1.382		1810825.491
66	Zn	9603.227	5.683232	ppb	1.556	1.535	866.693
86	Sr	6874.615	2.500018	ppb	2.049	1.105	27.313
65	Cu	1062.856	0.341122	ppb	5.458	7.532	249.474
69	Ga-IS	626099.202		ppb	0.280		655762.288
95	Mo	395.561	-0.075697	ppb	7.830	12.943	611.124
115	In-IS	> 470769.848		ppb	1.651		481027.951
111	Cd	38.058	-0.000346	ppb	13.394	637.283	39.828
118	Sn	927.808	-1.000858	ppb	2.105	0.419	9445.349
121	Sb	3188.134	0.168882	ppb	2.197	7.927	1748.996
135	Ba	1787.890	0.803808	ppb	6.760	6.275	73.334
165	Ho-IS	557859.692		ppb	1.522		576332.643
159	Tb-IS	> 620098.138		ppb	0.498		637324.013
207	Pb	1084.460	0.021132	ppb	2.327	3.340	476.670
203	Tl	163.334	0.004388	ppb	10.204	42.399	125.556
209	Bi-IS	337354.676		ppb	2.170		344445.843
51	V	141.112	0.165046	ppb	5.945	6.947	16.667
59	Co	42.222	0.007060	ppb	35.599	117.901	31.111
60	Ni	315.559	0.197783	ppb	18.184	23.124	70.000
75	As	1202.004	0.264671	ppb	0.628	6.659	1134.791
71	Ga-ISK	> 126141.128		ppb	0.326		133018.683
82	Se-2	9.198	0.132058	ppb	43.997	58.990	2.481
107	Ag-1	310.003	-0.090929	ppb	15.054	10.201	813.357
115	In-ISK	138690.851		ppb	0.785		142506.264
45	Sc-ISK	> 288265.168		ppb	1.208		302669.441
23	Na	169327.619	287.894292	ppb	0.501	1.359	1463.408
39	K	404128.718	289.088569	ppb	0.236	1.591	97927.832
24	Mg	93916.050	158.085907	ppb	1.003	0.751	773.354
159	Tb-ISK	246883.129		ppb	0.892		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14631-C-3-C

Autosampler Position: 412

Sample Date/Time: Friday, December 13, 2019 02:25:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14631-C-3-C.237

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		46711.803		ppb			0.736			49212.403
9	Be	|		16.667	-0.004424	ppb	20.000		66.865			22.222
10	B	|		3641.576	0.412481	ppb	4.534	134.712				3607.122
27	Al	|		11769.301	1.375703	ppb	5.765		6.865			3343.725
43	Ca-2	|		2298.518	106.942047	ppb	0.764		0.327			95.000
49	Ti	|		161.112	-0.021538	ppb	20.412	264.800				178.890
52	Cr	|		11612.497	-0.039486	ppb	1.710		85.376			12290.841
55	Mn	|		37017.914	2.378313	ppb	2.150		1.524			884.472
57	Fe	|		10213.650	-4.564601	ppb	1.225		7.464			11981.689
45	Sc-IS	>		1761268.228		ppb			0.874			1810825.491
66	Zn	|		2306.853	0.945800	ppb	4.270		7.827			866.693
86	Sr	|		1101.334	0.390858	ppb	9.139		9.575			27.313
65	Cu	|		437.219	0.080475	ppb	3.121		6.363			249.474
69	Ga-IS	|		621391.329		ppb			1.197			655762.288
95	Mo	|		364.449	-0.088100	ppb	5.281		9.806			611.124
115	In-IS	>		467079.976		ppb			2.064			481027.951
111	Cd	|		32.568	-0.002380	ppb	30.598	178.103				39.828
118	Sn	|		1185.605	-0.968935	ppb	12.276		1.551			9445.349
121	Sb	|		2427.984	0.084320	ppb	4.727		22.707			1748.996
135	Ba	|		581.123	0.240683	ppb	5.452		4.490			73.334
165	Ho-IS	|		559990.585		ppb			1.942			576332.643
159	Tb-IS	>		617262.351		ppb			1.166			637324.013
207	Pb	|		930.012	0.016010	ppb	5.633		8.938			476.670
203	Tl	|		141.112	0.002076	ppb	13.010		88.999			125.556
209	Bi-IS	|		338719.973		ppb			1.107			344445.843
51	V	|		71.111	0.073142	ppb	35.801		46.175			16.667
59	Co	|		40.000	0.005850	ppb	33.333	124.157				31.111
60	Ni	|		98.889	0.026000	ppb	22.945		69.455			70.000
75	As	|		1171.837	0.207384	ppb	5.619		69.006			1134.791
71	Ga-ISK	>		125839.619		ppb			0.827			133018.683
82	Se-2	|		10.547	0.159266	ppb	71.338		91.881			2.481
107	Ag-1	|		255.558	-0.101508	ppb	15.118		7.952			813.357
115	In-ISK	|		137293.947		ppb			1.278			142506.264
45	Sc-ISK	>		288436.091		ppb			0.334			302669.441
23	Na	|		12452.092	18.943584	ppb	1.046		1.477			1463.408
39	K	|		145551.063	48.535216	ppb	0.425		0.415			97927.832
24	Mg	|		17771.048	28.881401	ppb	1.564		1.575			773.354
159	Tb-ISK	|		243900.540		ppb			0.867			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14597-D-1-A

Autosampler Position: 413

Sample Date/Time: Friday, December 13, 2019 02:28:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14597-D-1-A.238

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		46659.417		ppb			1.393			49212.403
9	Be	|		20.000	-0.001587	ppb			16.667	182.908		22.222
10	B	|		3943.878	1.248177	ppb			1.407	13.163		3607.122
27	Al	|		13944.591	1.710604	ppb			4.788	7.055		3343.725
43	Ca-2	|		51711.763	2482.663459	ppb			0.865	0.149		95.000
49	Ti	|		157.779	-0.029275	ppb			23.272	215.091		178.890
52	Cr	|		18330.644	0.723021	ppb			1.498	3.706		12290.841
55	Mn	|		1658.985	0.051703	ppb			5.585	12.331		884.472
57	Fe	|		11978.353	0.733096	ppb			0.658	27.229		11981.689
45	Sc-IS	>		1775118.935		ppb			0.754			1810825.491
66	Zn	|		74974.169	47.495903	ppb			3.576	3.169		866.693
86	Sr	|		18275.330	6.582986	ppb			4.019	3.656		27.313
65	Cu	|		6623.881	2.617834	ppb			4.501	4.296		249.474
69	Ga-IS	|		629129.581		ppb			1.349			655762.288
95	Mo	|		476.675	-0.046552	ppb			2.422	9.348		611.124
115	In-IS	>		472370.429		ppb			0.509			481027.951
111	Cd	|		300.113	0.102864	ppb			5.126	6.457		39.828
118	Sn	|		746.686	-1.023014	ppb			2.788	0.200		9445.349
121	Sb	|		3284.823	0.178579	ppb			4.427	10.181		1748.996
135	Ba	|		2893.627	1.317360	ppb			3.998	3.948		73.334
165	Ho-IS	|		566569.005		ppb			1.862			576332.643
159	Tb-IS	>		625320.823		ppb			1.261			637324.013
207	Pb	|		531.115	0.002123	ppb			14.150	109.272		476.670
203	Tl	|		148.890	0.002708	ppb			7.862	41.616		125.556
209	Bi-IS	|		339130.729		ppb			2.405			344445.843
51	V	|		88.889	0.095255	ppb			39.390	47.577		16.667
59	Co	|		52.222	0.012382	ppb			7.370	16.097		31.111
60	Ni	|		330.004	0.206959	ppb			8.018	9.236		70.000
75	As	|		1246.296	0.337120	ppb			5.160	48.931		1134.791
71	Ga-ISK	>		127206.119		ppb			1.247			133018.683
82	Se-2	|		2.198	-0.002868	ppb			160.536	2383.491		2.481
107	Ag-1	|		174.446	-0.117957	ppb			14.469	4.074		813.357
115	In-ISK	|		137463.624		ppb			0.959			142506.264
45	Sc-ISK	>		295724.023		ppb			0.675			302669.441
23	Na	|		469892.171	782.740412	ppb			1.372	0.726		1463.408
39	K	|		455081.155	325.745877	ppb			1.302	0.819		97927.832
24	Mg	|		76058.634	124.528231	ppb			1.571	1.219		773.354
159	Tb-ISK	|		250075.383		ppb			1.249			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14597-D-2-A

Autosampler Position: 414

Sample Date/Time: Friday, December 13, 2019 02:31:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14597-D-2-A.239

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	46483.281		ppb	0.572			49212.403
9	Be	|	15.556	-0.005564	ppb	24.744	58.225		22.222
10	B	|	3822.734	0.865733	ppb	0.430	12.385		3607.122
27	Al	|	3609.345	0.052699	ppb	2.503	39.606		3343.725
43	Ca-2	|	8867.756	421.771201	ppb	4.820	6.007		95.000
49	Ti	|	122.223	-0.089504	ppb	20.470	45.146		178.890
52	Cr	|	12874.688	0.093671	ppb	0.309	21.178		12290.841
55	Mn	|	882.249	0.000931	ppb	4.347	256.003		884.472
57	Fe	|	10324.842	-4.497848	ppb	1.891	18.244		11981.689
45	Sc-IS	>	1776998.214		ppb	1.150			1810825.491
66	Zn	|	10975.326	6.481751	ppb	0.893	1.457		866.693
86	Sr	|	3074.432	1.098514	ppb	2.461	3.188		27.313
65	Cu	|	1826.740	0.648438	ppb	4.187	4.116		249.474
69	Ga-IS	|	627661.253		ppb	0.493			655762.288
95	Mo	|	396.672	-0.077032	ppb	11.644	24.590		611.124
115	In-IS	>	469874.095		ppb	0.704			481027.951
111	Cd	|	93.612	0.021688	ppb	27.558	47.452		39.828
118	Sn	|	787.800	-1.017635	ppb	17.754	1.598		9445.349
121	Sb	|	2501.330	0.090780	ppb	2.005	4.589		1748.996
135	Ba	|	548.899	0.224094	ppb	8.268	10.108		73.334
165	Ho-IS	|	559303.837		ppb	1.129			576332.643
159	Tb-IS	>	626357.935		ppb	0.223			637324.013
207	Pb	|	365.557	-0.003467	ppb	12.040	43.430		476.670
203	Tl	|	131.112	0.000813	ppb	5.292	89.529		125.556
209	Bi-IS	|	339934.577		ppb	1.981			344445.843
51	V	|	27.778	0.015728	ppb	30.199	67.499		16.667
59	Co	|	43.333	0.007761	ppb	26.647	87.034		31.111
60	Ni	|	132.223	0.052633	ppb	31.521	65.793		70.000
75	As	|	1131.355	0.117275	ppb	4.617	65.961		1134.791
71	Ga-ISK	>	126043.682		ppb	1.466			133018.683
82	Se-2	|	-1.829	-0.079975	ppb	443.596	197.329		2.481
107	Ag-1	|	153.334	-0.121842	ppb	22.063	5.179		813.357
115	In-ISK	|	138517.952		ppb	0.650			142506.264
45	Sc-ISK	>	289864.701		ppb	0.884			302669.441
23	Na	|	73192.051	122.381134	ppb	1.628	1.390		1463.408
39	K	|	164165.711	65.093395	ppb	0.976	3.644		97927.832
24	Mg	|	18061.419	29.223782	ppb	3.423	3.589		773.354
159	Tb-ISK	|	249509.433		ppb	0.528			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14623-A-1-A

Autosampler Position: 415

Sample Date/Time: Friday, December 13, 2019 02:34:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\570-14623-A-1-A.240

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46311.615		ppb	0.828		49212.403
9	Be	10.000	-0.010510	ppb	33.333	28.587	22.222
10	B	5436.590	5.697653	ppb	0.851	6.741	3607.122
27	Al	9910.103	1.051842	ppb	1.030	1.788	3343.725
43	Ca-2	25976.938	1235.689112	ppb	2.287	0.459	95.000
49	Ti	134.445	-0.070103	ppb	11.180	38.059	178.890
52	Cr	14624.150	0.284121	ppb	1.695	0.859	12290.841
55	Mn	193412.904	12.475041	ppb	1.474	0.873	884.472
57	Fe	14625.262	8.727748	ppb	1.808	11.765	11981.689
45	Sc-IS	> 1788236.900		ppb	1.842		1810825.491
66	Zn	144049.338	91.099557	ppb	1.093	1.472	866.693
86	Sr	33590.975	12.018629	ppb	2.810	1.137	27.313
65	Cu	149040.550	60.630686	ppb	0.582	1.971	249.474
69	Ga-IS	634605.695		ppb	1.097		655762.288
95	Mo	512.231	-0.034500	ppb	6.047	29.447	611.124
115	In-IS	> 474303.608		ppb	0.845		481027.951
111	Cd	125.592	0.033894	ppb	11.604	17.561	39.828
118	Sn	1122.267	-0.978420	ppb	15.654	2.225	9445.349
121	Sb	2540.226	0.092570	ppb	2.860	10.566	1748.996
135	Ba	18590.980	8.610645	ppb	1.737	0.908	73.334
165	Ho-IS	562494.122		ppb	1.571		576332.643
159	Tb-IS	> 627529.598		ppb	0.975		637324.013
207	Pb	2495.643	0.068211	ppb	5.334	7.702	476.670
203	Tl	125.556	0.000204	ppb	14.622	951.106	125.556
209	Bi-IS	338590.583		ppb	1.534		344445.843
51	V	51.111	0.046399	ppb	18.827	29.118	16.667
59	Co	311.115	0.155963	ppb	13.651	15.023	31.111
60	Ni	977.811	0.721416	ppb	6.525	8.889	70.000
75	As	1221.578	0.296067	ppb	6.941	51.957	1134.791
71	Ga-ISK	> 126581.784		ppb	1.810		133018.683
82	Se-2	10.523	0.157415	ppb	154.541	198.527	2.481
107	Ag-1	76.667	-0.136984	ppb	7.531	0.880	813.357
115	In-ISK	136990.288		ppb	0.031		142506.264
45	Sc-ISK	> 291991.696		ppb	0.430		302669.441
23	Na	3418117.704	5782.146987	ppb	0.316	0.744	1463.408
39	K	514209.809	385.311407	ppb	0.453	0.579	97927.832
24	Mg	367801.481	614.761497	ppb	0.930	0.593	773.354
159	Tb-ISK	246029.860		ppb	0.539		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, December 13, 2019 02:36:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\b.241

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		46600.348		ppb			2.077			49212.403
9	Be	|		11.111	-0.009590	ppb	69.282	69.378				22.222
10	B	|		3415.964	-0.454639	ppb	3.202	74.231				3607.122
27	Al	|		8682.639	0.855178	ppb	2.943	6.376				3343.725
43	Ca-2	|		78.334	-0.734926	ppb	35.155	184.161				95.000
49	Ti	|		257.780	0.134466	ppb	6.509	19.617				178.890
52	Cr	|		12977.003	0.094376	ppb	0.360	10.141				12290.841
55	Mn	|		975.589	0.006551	ppb	5.762	55.231				884.472
57	Fe	|		15445.014	11.238013	ppb	2.321	14.203				11981.689
45	Sc-IS	>		1790164.878		ppb			1.006			1810825.491
66	Zn	|		965.588	0.069122	ppb	10.615	93.818				866.693
86	Sr	|		28.986	0.000711	ppb	63.113	921.142				27.313
65	Cu	|		2613.904	0.963660	ppb	3.368	4.791				249.474
69	Ga-IS	|		638412.376		ppb			0.581			655762.288
95	Mo	|		1994.584	0.524519	ppb	1.772	3.594				611.124
115	In-IS	>		476052.948		ppb			1.348			481027.951
111	Cd	|		23.589	-0.006170	ppb	32.592	50.227				39.828
118	Sn	|		20117.507	1.283000	ppb	4.491	10.678				9445.349
121	Sb	|		4203.955	0.279775	ppb	8.619	16.099				1748.996
135	Ba	|		223.335	0.069868	ppb	7.463	11.616				73.334
165	Ho-IS	|		569055.964		ppb			1.804			576332.643
159	Tb-IS	>		629830.306		ppb			1.669			637324.013
207	Pb	|		1546.699	0.036053	ppb	2.851	1.931				476.670
203	Tl	|		768.910	0.067581	ppb	7.154	8.583				125.556
209	Bi-IS	|		360339.947		ppb			1.723			344445.843
51	V	|		161.112	0.187320	ppb	13.462	14.693				16.667
59	Co	|		24.444	-0.003083	ppb	28.386	120.331				31.111
60	Ni	|		56.667	-0.008534	ppb	15.563	82.736				70.000
75	As	|		1198.291	0.209558	ppb	1.259	22.429				1134.791
71	Ga-ISK	>		128564.825		ppb			0.644			133018.683
82	Se-2	|		5.185	0.052262	ppb	129.017	241.692				2.481
107	Ag-1	|		335.560	-0.087171	ppb	21.406	15.781				813.357
115	In-ISK	|		139442.851		ppb			1.905			142506.264
45	Sc-ISK	>		295557.388		ppb			0.967			302669.441
23	Na	|		1440.073	0.019622	ppb	9.337	1227.059				1463.408
39	K	|		94861.760	-0.680180	ppb	1.807	337.442				97927.832
24	Mg	|		325.004	-0.711143	ppb	18.905	15.073				773.354
159	Tb-ISK	|		251395.550		ppb			1.140			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, December 13, 2019 02:39:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\b.242

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		47736.300		ppb		1.342		49212.403
9	Be	|		14.444	-0.006648	ppb	35.251	65.731		22.222
10	B	|		3483.758	-0.255028	ppb	2.329	71.096		3607.122
27	Al	|		4370.669	0.168978	ppb	1.356	2.535		3343.725
43	Ca-2	|		86.667	-0.346846	ppb	3.331	48.558		95.000
49	Ti	|		168.890	-0.013287	ppb	4.109	103.642		178.890
52	Cr	|		12797.952	0.073204	ppb	0.776	7.898		12290.841
55	Mn	|		805.578	-0.004472	ppb	1.723	27.417		884.472
57	Fe	|		13172.740	4.121453	ppb	2.479	23.151		11981.689
45	Sc-IS	|>		1791004.307		ppb	0.810			1810825.491
66	Zn	|		882.249	0.015864	ppb	3.631	112.916		866.693
86	Sr	|		63.569	0.013031	ppb	48.878	83.914		27.313
65	Cu	|		361.705	0.046812	ppb	5.533	19.950		249.474
69	Ga-IS	|		646476.323		ppb	1.174			655762.288
95	Mo	|		845.581	0.090900	ppb	8.366	29.062		611.124
115	In-IS	|>		477249.071		ppb	0.975			481027.951
111	Cd	|		17.113	-0.008736	ppb	30.602	23.294		39.828
118	Sn	|		10312.618	0.111623	ppb	5.685	57.639		9445.349
121	Sb	|		3411.519	0.188989	ppb	3.644	7.243		1748.996
135	Ba	|		74.445	0.000797	ppb	6.840	338.215		73.334
165	Ho-IS	|		573613.395		ppb	1.530			576332.643
159	Tb-IS	|>		636918.913		ppb	0.501			637324.013
207	Pb	|		568.893	0.003065	ppb	4.319	23.876		476.670
203	Tl	|		428.895	0.031443	ppb	4.419	6.257		125.556
209	Bi-IS	|		352579.634		ppb	2.493			344445.843
51	V	|		35.556	0.024796	ppb	23.593	44.644		16.667
59	Co	|		22.222	-0.004368	ppb	37.749	106.010		31.111
60	Ni	|		54.445	-0.010568	ppb	21.501	91.199		70.000
75	As	|		1140.940	0.070388	ppb	5.906	184.166		1134.791
71	Ga-ISK	|>		129696.155		ppb	1.413			133018.683
82	Se-2	|		10.205	0.146014	ppb	67.095	88.053		2.481
107	Ag-1	|		320.004	-0.090711	ppb	14.014	9.224		813.357
115	In-ISK	|		141125.672		ppb	1.644			142506.264
45	Sc-ISK	|>		296747.405		ppb	1.333			302669.441
23	Na	|		1195.050	-0.399360	ppb	4.369	19.137		1463.408
39	K	|		94181.664	-1.640163	ppb	0.509	90.254		97927.832
24	Mg	|		228.335	-0.873220	ppb	14.248	6.217		773.354
159	Tb-ISK	|		252599.398		ppb	1.682			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, December 13, 2019 02:42:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\b.243

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		47361.722		ppb			1.279			49212.403
9	Be	|		5.556	-0.014418	ppb	91.652	31.084				22.222
10	B	|		3367.064	-0.498601	ppb	4.379	93.192				3607.122
27	Al	|		5364.458	0.333597	ppb	41.801	104.678				3343.725
43	Ca-2	|		68.333	-1.189690	ppb	15.232	39.396				95.000
49	Ti	|		178.890	0.006291	ppb	9.192	401.369				178.890
52	Cr	|		12905.828	0.101142	ppb	1.689	9.095				12290.841
55	Mn	|		784.466	-0.005318	ppb	6.777	56.669				884.472
57	Fe	|		12389.815	2.098575	ppb	0.895	36.367				11981.689
45	Sc-IS	>		1772096.074		ppb		1.070				1810825.491
66	Zn	|		824.468	-0.015424	ppb	7.337	218.048				866.693
86	Sr	|		9.636	-0.006239	ppb	330.786	184.914				27.313
65	Cu	|		246.202	0.001005	ppb	21.001	2217.062				249.474
69	Ga-IS	|		645714.286		ppb		0.598				655762.288
95	Mo	|		625.569	0.010627	ppb	8.261	205.871				611.124
115	In-IS	>		477974.609		ppb		1.093				481027.951
111	Cd	|		15.353	-0.009417	ppb	64.473	41.092				39.828
118	Sn	|		8056.721	-0.157015	ppb	6.018	43.222				9445.349
121	Sb	|		2630.243	0.100594	ppb	5.524	19.458				1748.996
135	Ba	|		70.000	-0.001267	ppb	35.952	928.534				73.334
165	Ho-IS	|		577115.726		ppb		1.911				576332.643
159	Tb-IS	>		636242.448		ppb		2.136				637324.013
207	Pb	|		505.559	0.000998	ppb	4.993	109.136				476.670
203	Tl	|		322.226	0.020436	ppb	10.617	17.671				125.556
209	Bi-IS	|		346028.612		ppb		0.920				344445.843
51	V	|		15.556	-0.000801	ppb	53.927	1332.251				16.667
59	Co	|		30.000	-0.000035	ppb	29.3971	3863.223				31.111
60	Ni	|		53.333	-0.011210	ppb	32.476	118.167				70.000
75	As	|		1129.370	0.065379	ppb	5.457	150.806				1134.791
71	Ga-ISK	>		128619.809		ppb		1.292				133018.683
82	Se-2	|		2.536	0.002179	ppb	217.400	4772.963				2.481
107	Ag-1	|		302.225	-0.093616	ppb	7.176	4.448				813.357
115	In-ISK	|		140918.714		ppb		0.691				142506.264
45	Sc-ISK	>		294331.271		ppb		0.735				302669.441
23	Na	|		1203.384	-0.368221	ppb	5.940	36.418				1463.408
39	K	|		94988.092	-0.218898	ppb	0.668	251.061				97927.832
24	Mg	|		203.335	-0.911460	ppb	18.126	6.972				773.354
159	Tb-ISK	|		253564.564		ppb		0.490				255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, December 13, 2019 02:45:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\b.244

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		47318.242		ppb			1.031			49212.403
9	Be	|		12.222	-0.008577	ppb	83.320	105.411				22.222
10	B	|		3322.609	-0.825832	ppb	5.247	45.736				3607.122
27	Al	|		3673.806	0.053686	ppb	2.203	19.167				3343.725
43	Ca-2	|		80.000	-0.690867	ppb	12.500	75.125				95.000
49	Ti	|		176.668	-0.003099	ppb	13.208	1083.288				178.890
52	Cr	|		13002.582	0.084895	ppb	1.604	14.818				12290.841
55	Mn	|		782.244	-0.006376	ppb	5.208	43.356				884.472
57	Fe	|		11884.942	-0.176208	ppb	0.413	430.032				11981.689
45	Sc-IS	>		1805226.552		ppb	1.669					1810825.491
66	Zn	|		828.913	-0.021943	ppb	2.586	89.147				866.693
86	Sr	|		27.975	0.000270	ppb	17.873	676.276				27.313
65	Cu	|		156.360	-0.037088	ppb	23.989	43.238				249.474
69	Ga-IS	|		638402.382		ppb	1.824					655762.288
95	Mo	|		500.009	-0.040699	ppb	11.719	57.898				611.124
115	In-IS	>		479835.089		ppb	1.240					481027.951
111	Cd	|		12.283	-0.010642	ppb	26.984	12.212				39.828
118	Sn	|		6706.022	-0.320273	ppb	6.438	18.458				9445.349
121	Sb	|		2254.623	0.057347	ppb	6.993	35.950				1748.996
135	Ba	|		53.333	-0.009117	ppb	16.536	43.605				73.334
165	Ho-IS	|		573390.157		ppb	3.810					576332.643
159	Tb-IS	>		635114.998		ppb	1.427					637324.013
207	Pb	|		453.336	-0.000705	ppb	9.892	240.749				476.670
203	Tl	|		272.225	0.015274	ppb	9.821	16.432				125.556
209	Bi-IS	|		351078.549		ppb	3.006					344445.843
51	V	|		14.444	-0.002270	ppb	70.501	579.343				16.667
59	Co	|		31.111	0.000398	ppb	43.301	1824.009				31.111
60	Ni	|		33.333	-0.027012	ppb	36.056	33.704				70.000
75	As	|		1141.214	0.069067	ppb	4.741	186.060				1134.791
71	Ga-ISK	>		129845.223		ppb	0.766					133018.683
82	Se-2	|		6.872	0.082976	ppb	88.280	136.710				2.481
107	Ag-1	|		300.003	-0.094602	ppb	8.389	4.953				813.357
115	In-ISK	|		140663.697		ppb	1.143					142506.264
45	Sc-ISK	>		297891.523		ppb	2.262					302669.441
23	Na	|		1103.376	-0.560675	ppb	9.335	23.349				1463.408
39	K	|		94031.788	-2.085122	ppb	0.086	93.949				97927.832
24	Mg	|		195.001	-0.929390	ppb	6.784	2.344				773.354
159	Tb-ISK	|		248870.605		ppb	1.224					255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, December 13, 2019 02:47:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCV-210770.245

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47198.958		ppb		0.896		49212.403
9	Be	|	112409.436	98.874152	ppb		0.908	0.228	22.222
10	B	|	86704.551	252.261742	ppb		0.611	0.821	3607.122
27	Al	|	647546.707	102.423901	ppb		0.586	0.293	3343.725
43	Ca-2	|	107513.069	5123.330750	ppb		0.830	0.338	95.000
49	Ti	|	60608.335	100.436885	ppb		2.144	1.297	178.890
52	Cr	|	894198.596	100.665096	ppb		1.611	1.017	12290.841
55	Mn	|	1527432.480	98.798956	ppb		1.257	0.592	884.472
57	Fe	|	1644495.880	5092.059731	ppb		0.655	0.495	11981.689
45	Sc-IS	>	1790079.978		ppb		0.846		1810825.491
66	Zn	|	157700.303	99.662071	ppb		1.907	1.267	866.693
86	Sr	|	283343.359	101.355753	ppb		1.010	0.233	27.313
65	Cu	|	245748.023	99.904864	ppb		1.924	1.091	249.474
69	Ga-IS	|	653264.369		ppb		0.887		655762.288
95	Mo	|	263202.613	99.046310	ppb		0.790	0.058	611.124
115	In-IS	>	465569.336		ppb		1.938		481027.951
111	Cd	|	252205.990	100.829581	ppb		0.625	1.337	39.828
118	Sn	|	812560.753	97.783623	ppb		1.722	1.064	9445.349
121	Sb	|	859639.444	99.166200	ppb		1.976	2.101	1748.996
135	Ba	|	210433.123	99.667119	ppb		1.162	1.437	73.334
165	Ho-IS	|	567306.791		ppb		0.988		576332.643
159	Tb-IS	>	626003.528		ppb		2.445		637324.013
207	Pb	|	3024165.297	102.013472	ppb		1.233	2.064	476.670
203	Tl	|	964912.458	101.739700	ppb		1.515	1.213	125.556
209	Bi-IS	|	339510.846		ppb		1.419		344445.843
51	V	|	76926.576	99.569283	ppb		0.953	0.705	16.667
59	Co	|	181600.560	99.212946	ppb		1.857	1.230	31.111
60	Ni	|	129689.409	101.123440	ppb		1.235	0.657	70.000
75	As	|	49309.261	99.648675	ppb		1.279	1.981	1134.791
71	Ga-ISK	>	128322.663		ppb		0.653		133018.683
82	Se-2	|	5329.168	101.121706	ppb		1.854	2.470	2.481
107	Ag-1	|	517883.798	100.204836	ppb		0.879	0.571	813.357
115	In-ISK	|	140212.526		ppb		1.638		142506.264
45	Sc-ISK	>	297831.844		ppb		1.323		302669.441
23	Na	|	3111691.209	5160.695554	ppb		0.515	1.167	1463.408
39	K	|	5838886.400	5168.831363	ppb		0.726	1.694	97927.832
24	Mg	|	3140554.708	5156.775628	ppb		1.285	2.572	773.354
159	Tb-ISK	|	250657.307		ppb		0.748		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, December 13, 2019 02:50:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCB-23446.246

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		46905.773		ppb		1.023		49212.403
9	Be	|		33.333	0.010062	ppb	30.000	88.202		22.222
10	B	|		3532.659	-0.085053	ppb	1.841	195.068		3607.122
27	Al	|		3678.257	0.060517	ppb	13.442	137.324		3343.725
43	Ca-2	|		68.333	-1.214881	ppb	16.898	45.579		95.000
49	Ti	|		186.668	0.016869	ppb	13.482	252.420		178.890
52	Cr	|		11163.251	-0.110594	ppb	2.905	39.464		12290.841
55	Mn	|		861.137	-0.000766	ppb	3.491	284.372		884.472
57	Fe	|		12220.782	1.235182	ppb	2.265	93.127		11981.689
45	Sc-IS	>		1787469.340		ppb		0.750		1810825.491
66	Zn	|		763.354	-0.058682	ppb	2.727	18.350		866.693
86	Sr	|		34.579	0.002769	ppb	101.835	459.479		27.313
65	Cu	|		167.048	-0.032265	ppb	21.456	45.678		249.474
69	Ga-IS	|		638802.267		ppb		1.115		655762.288
95	Mo	|		3212.584	0.985558	ppb	5.603	6.645		611.124
115	In-IS	>		478060.858		ppb		1.123		481027.951
111	Cd	|		53.254	0.005306	ppb	16.100	59.641		39.828
118	Sn	|		14433.961	0.598755	ppb	3.512	13.300		9445.349
121	Sb	|		2465.768	0.081956	ppb	2.320	11.601		1748.996
135	Ba	|		73.334	0.000270	ppb	25.308	3321.663		73.334
165	Ho-IS	|		568472.742		ppb		0.862		576332.643
159	Tb-IS	>		629396.184		ppb		1.653		637324.013
207	Pb	|		1390.027	0.030821	ppb	5.619	6.178		476.670
203	Tl	|		552.233	0.044968	ppb	9.589	14.211		125.556
209	Bi-IS	|		344921.022		ppb		0.459		344445.843
51	V	|		37.778	0.027896	ppb	30.987	53.363		16.667
59	Co	|		53.333	0.012645	ppb	10.825	23.945		31.111
60	Ni	|		73.334	0.004375	ppb	34.318	450.652		70.000
75	As	|		1181.077	0.170643	ppb	3.209	39.612		1134.791
71	Ga-ISK	>		128724.019		ppb		0.446		133018.683
82	Se-2	|		15.166	0.241405	ppb	36.228	42.908		2.481
107	Ag-1	|		2875.845	0.403476	ppb	4.946	6.573		813.357
115	In-ISK	|		141090.914		ppb		0.777		142506.264
45	Sc-ISK	>		295443.026		ppb		1.376		302669.441
23	Na	|		1773.443	0.577126	ppb	0.861	3.177		1463.408
39	K	|		97464.693	1.717827	ppb	0.755	107.834		97927.832
24	Mg	|		880.027	0.207547	ppb	3.164	28.356		773.354
159	Tb-ISK	|		247485.343		ppb		0.518		255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, December 13, 2019 02:53:28

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191212E1\CCB-23446.247

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		46846.702		ppb			1.788			49212.403
9	Be	|		14.444	-0.006319	ppb			35.251	73.818		22.222
10	B	|		3457.085	-0.093472	ppb			4.194	449.808		3607.122
27	Al	|		3272.597	0.006607	ppb			0.848	159.064		3343.725
43	Ca-2	|		76.667	-0.742962	ppb			13.576	63.538		95.000
49	Ti	|		136.667	-0.061510	ppb			12.674	50.328		178.890
52	Cr	|		11204.392	-0.078858	ppb			0.567	31.409		12290.841
55	Mn	|		701.128	-0.010169	ppb			3.166	20.099		884.472
57	Fe	|		10302.603	-4.077000	ppb			1.003	18.767		11981.689
45	Sc-IS	>		1750590.367		ppb			1.343			1810825.491
66	Zn	|		766.687	-0.046401	ppb			7.729	75.116		866.693
86	Sr	|		27.975	0.000660	ppb			101.617	1590.483		27.313
65	Cu	|		147.392	-0.039038	ppb			3.508	3.667		249.474
69	Ga-IS	|		626280.697		ppb			1.382			655762.288
95	Mo	|		754.465	0.063441	ppb			11.932	60.171		611.124
115	In-IS	>		473977.316		ppb			0.767			481027.951
111	Cd	|		45.082	0.002267	ppb			32.572	248.285		39.828
118	Sn	|		5465.491	-0.459165	ppb			4.740	6.961		9445.349
121	Sb	|		1321.172	-0.045637	ppb			3.283	12.352		1748.996
135	Ba	|		64.445	-0.003612	ppb			19.582	166.680		73.334
165	Ho-IS	|		564493.991		ppb			2.349			576332.643
159	Tb-IS	>		627748.465		ppb			1.738			637324.013
207	Pb	|		505.559	0.001210	ppb			5.530	67.907		476.670
203	Tl	|		191.112	0.007068	ppb			12.374	30.400		125.556
209	Bi-IS	|		339414.444		ppb			1.773			344445.843
51	V	|		18.889	0.004052	ppb			36.735	231.063		16.667
59	Co	|		33.333	0.002093	ppb			10.000	98.105		31.111
60	Ni	|		52.222	-0.011405	ppb			31.487	112.468		70.000
75	As	|		1109.214	0.062479	ppb			5.580	178.545		1134.791
71	Ga-ISK	>		126497.645		ppb			1.233			133018.683
82	Se-2	|		6.534	0.080243	ppb			35.140	54.539		2.481
107	Ag-1	|		875.583	0.020211	ppb			8.801	84.834		813.357
115	In-ISK	|		138891.876		ppb			0.853			142506.264
45	Sc-ISK	>		291901.100		ppb			0.887			302669.441
23	Na	|		1181.716	-0.388599	ppb			5.635	29.430		1463.408
39	K	|		96229.731	1.640525	ppb			1.470	67.339		97927.832
24	Mg	|		373.338	-0.624134	ppb			3.371	2.876		773.354
159	Tb-ISK	|		249684.567		ppb			1.041			255472.141

QC Out of Limits

AnalyteMassOut of Limits Message

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Friday, December 13, 2019 11:24:04

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2019\191213E1\STD Performance Check.005

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode	
Be	9.0		2036.7		2036.679		35.327		1.7	Standard	
In	114.9		48601.8		48601.802		182.418		0.4	Standard	
U	238.1		50483.9		50483.852		515.525		1.0	Standard	
[	CeO	155.9		779.8		0.020		0.000		1.9	Standard
>	Ce	139.9		38430.0		38429.958		396.125		1.0	Standard
[	Ce++	70.0		355.9		0.009		0.000		2.8	Standard
	Bkgd	220.0		0.5		0.500		0.333		66.7	Standard

Current Conditions File Data

Current Value	Description
0.96	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.50	Deflector Voltage
1600.00	ICP RF Power
-2112.00	Analog Stage Voltage
2000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-12.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-16.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.50	DRC Mode QRO
-2.50	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-14.00	KED Mode CRO
-22.50	KED Mode QRO
-20.00	KED Mode Cell Entrance Voltage
-36.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Friday, December 13, 2019 11:26:08

Page 1

475.00 KED Mode Axial Field Voltage

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Friday, December 13, 2019 12:31:09

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\ICIS-23447.012

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		37254.114		ppb			3.799	
9	Be	|		7.778		ppb			65.465	
10	B	|		3055.883		ppb			6.431	
27	Al	|		1737.888		ppb			24.338	
43	Ca-2	|		48.333		ppb			11.945	
49	Ti	|		91.111		ppb			11.761	
52	Cr	|		8210.136		ppb			1.009	
55	Mn	|		370.005		ppb			4.129	
57	Fe	|		8777.141		ppb			2.544	
45	Sc-IS	|>		878130.917		ppb			3.187	
66	Zn	|		567.789		ppb			2.373	
86	Sr	|		15.304		ppb			22.887	
65	Cu	|		54.236		ppb			9.370	
69	Ga-IS	|		384193.801		ppb			3.457	
95	Mo	|		67.778		ppb			10.238	
115	In-IS	|>		281831.362		ppb			3.802	
111	Cd	|		15.413		ppb			54.413	
118	Sn	|		2073.484		ppb			2.978	
121	Sb	|		340.004		ppb			7.402	
135	Ba	|		25.556		ppb			7.531	
165	Ho-IS	|		285300.656		ppb			4.218	
159	Tb-IS	|>		337118.831		ppb			2.755	
207	Pb	|		110.000		ppb			12.121	
203	Tl	|		21.111		ppb			32.868	
209	Bi-IS	|		224574.816		ppb			5.436	
51	V	|		5.556		ppb			34.641	
59	Co	|		15.556		ppb			32.733	
60	Ni	|		43.333		ppb			20.352	
75	As	|		792.311		ppb			4.505	
71	Ga-ISK	|>		78469.372		ppb			0.703	
82	Se-2	|		-1.477		ppb			437.556	
107	Ag-1	|		142.223		ppb			8.231	
115	In-ISK	|		95060.025		ppb			0.901	
45	Sc-ISK	|>		195110.036		ppb			0.574	
23	Na	|		658.349		ppb			7.608	
39	K	|		73472.919		ppb			1.271	
24	Mg	|		55.000		ppb			47.238	
159	Tb-ISK	|		176260.088		ppb			0.883	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Friday, December 13, 2019 12:33:55

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\IC-210761.013

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35065.207		ppb		0.972		37254.114
9	Be	|	199013.457	200.000000	ppb	1.314	0.819		7.778
10	B	|	136079.828	500.000000	ppb	2.807	1.953		3055.883
27	Al	|	798039.111	200.000000	ppb	0.131	0.912		1737.888
43	Ca-2	|	136122.169	10200.000000	ppb	1.121	0.281		48.333
49	Ti	|	77139.973	200.000000	ppb	1.729	0.837		91.111
52	Cr	|	1165531.013	200.000000	ppb	1.608	0.758		8210.136
55	Mn	|	2010905.406	200.000000	ppb	2.812	2.224		370.005
57	Fe	|	2113613.768	10200.000000	ppb	0.632	0.302		8777.141
45	Sc-IS	>	874551.238		ppb	0.908			878130.917
66	Zn	|	224446.187	200.000000	ppb	0.932	1.244		567.789
86	Sr	|	419587.703	200.000000	ppb	0.134	1.020		15.304
65	Cu	|	332728.531	200.000000	ppb	0.335	0.642		54.236
69	Ga-IS	|	390682.539		ppb	0.820			384193.801
95	Mo	|	422163.907	200.000000	ppb	0.843	0.180		67.778
115	In-IS	>	266425.893		ppb	1.354			281831.362
111	Cd	|	352773.796	200.000000	ppb	1.536	1.635		15.413
118	Sn	|	1195459.783	200.000000	ppb	0.351	1.182		2073.484
121	Sb	|	1271052.550	200.000000	ppb	1.192	0.830		340.004
135	Ba	|	282825.713	200.000000	ppb	0.936	0.806		25.556
165	Ho-IS	|	278697.527		ppb	2.149			285300.656
159	Tb-IS	>	325375.392		ppb	1.563			337118.831
207	Pb	|	4725505.481	200.000000	ppb	0.797	0.981		110.000
203	Tl	|	1534566.012	200.000000	ppb	2.139	2.459		21.111
209	Bi-IS	|	209877.406		ppb	1.679			224574.816
51	V	|	123182.344	200.000000	ppb	2.418	2.767		5.556
59	Co	|	284202.488	200.000000	ppb	3.494	3.785		15.556
60	Ni	|	212637.512	200.000000	ppb	0.456	0.172		43.333
75	As	|	74341.296	200.000000	ppb	0.877	1.402		792.311
71	Ga-ISK	>	74268.110		ppb	0.546			78469.372
82	Se-2	|	8256.919	200.000000	ppb	0.611	1.088		-1.477
107	Ag-1	|	839432.566	200.000000	ppb	1.343	1.688		142.223
115	In-ISK	|	91578.603		ppb	2.281			95060.025
45	Sc-ISK	>	188313.075		ppb	0.685			195110.036
23	Na	|	5277839.301	10200.000000	ppb	0.525	0.698		658.349
39	K	|	9396562.909	10200.000000	ppb	1.175	0.917		73472.919
24	Mg	|	5480636.135	10200.000000	ppb	0.484	0.685		55.000
159	Tb-ISK	|	172419.614		ppb	0.593			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-235105

Autosampler Position: 206

Sample Date/Time: Friday, December 13, 2019 12:38:31

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\ICV-235105.014

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34488.249		ppb		0.857		37254.114
9	Be	|		102908.216	102.547243	ppb		0.413	0.820	7.778
10	B	|		3610.456	2.016579	ppb		1.730	8.354	3055.883
27	Al	|		3192.579	0.360394	ppb		0.575	2.284	1737.888
43	Ca-2	|		68793.588	5109.743805	ppb		1.095	0.953	48.333
49	Ti	|		38625.488	99.183941	ppb		1.499	1.019	91.111
52	Cr	|		599112.801	101.250864	ppb		0.592	0.291	8210.136
55	Mn	|		999353.596	98.542385	ppb		1.285	0.783	370.005
57	Fe	|		1088116.496	5185.993411	ppb		0.994	0.592	8777.141
45	Sc-IS	|>		881976.606		ppb		0.509		878130.917
66	Zn	|>		119162.716	105.045640	ppb		0.574	0.402	567.789
86	Sr	|		209555.186	99.034464	ppb		0.922	0.518	15.304
65	Cu	|		172321.408	102.687999	ppb		0.883	0.454	54.236
69	Ga-IS	|		373367.781		ppb		1.245		384193.801
95	Mo	|		214175.030	100.590023	ppb		1.909	1.411	67.778
115	In-IS	|>		272915.329		ppb		1.664		281831.362
111	Cd	|		186864.898	103.417874	ppb		1.507	1.333	15.413
118	Sn	|		610821.846	99.592439	ppb		1.110	0.744	2073.484
121	Sb	|		616753.177	94.707688	ppb		1.979	0.945	340.004
135	Ba	|		82.222	0.039762	ppb		30.428	43.997	25.556
165	Ho-IS	|		282658.730		ppb		4.138		285300.656
159	Tb-IS	|>		328517.262		ppb		3.437		337118.831
207	Pb	|		2451543.653	102.796650	ppb		1.612	1.813	110.000
203	Tl	|		759356.854	98.049342	ppb		1.580	1.968	21.111
209	Bi-IS	|		217383.697		ppb		0.371		224574.816
51	V	|		62100.274	100.578277	ppb		1.985	2.380	5.556
59	Co	|		141535.672	99.364512	ppb		2.178	3.078	15.556
60	Ni	|		106833.551	100.222034	ppb		0.735	0.636	43.333
75	As	|		37745.578	100.293089	ppb		1.541	1.717	792.311
71	Ga-ISK	|>		74450.175		ppb		1.045		78469.372
82	Se-2	|		4151.465	100.336577	ppb		0.829	1.792	-1.477
107	Ag-1	|		755.576	0.147692	ppb		12.805	16.811	142.223
115	In-ISK	|		90875.467		ppb		0.899		95060.025
45	Sc-ISK	|>		185898.530		ppb		1.347		195110.036
23	Na	|		1558.418	1.823981	ppb		1.880	5.362	658.349
39	K	|		77759.947	8.602183	ppb		0.288	11.852	73472.919
24	Mg	|		2754842.673	5194.207278	ppb		0.416	1.643	55.000
159	Tb-ISK	|		170508.457		ppb		2.002		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-62207

Autosampler Position: 213

Sample Date/Time: Friday, December 13, 2019 12:43:27

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\ICV-62207.015

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		35499.613		ppb			1.247			37254.114
9	Be	|		15.556	0.007750	ppb	32.733	65.603				7.778
10	B	|		29923.531	100.387245	ppb	0.884	0.651				3055.883
27	Al	|		413068.766	102.723692	ppb	1.501	2.638				1737.888
43	Ca-2	|		66.667	1.361127	ppb	18.875	69.872				48.333
49	Ti	|		81.111	-0.026050	ppb	24.080	198.290				91.111
52	Cr	|		6972.813	-0.214883	ppb	2.302	15.825				8210.136
55	Mn	|		438.896	0.006721	ppb	10.028	57.172				370.005
57	Fe	|		7332.995	-7.036322	ppb	3.861	15.197				8777.141
45	Sc-IS	>		879664.568		ppb	1.205					878130.917
66	Zn	|		545.566	-0.020655	ppb	4.068	84.051				567.789
86	Sr	|		17.988	0.001280	ppb	98.058	659.087				15.304
65	Cu	|		93.026	0.023050	ppb	18.998	42.698				54.236
69	Ga-IS	|		389085.263		ppb	0.581					384193.801
95	Mo	|		872.249	0.379252	ppb	10.378	12.371				67.778
115	In-IS	>		275173.641		ppb	0.908					281831.362
111	Cd	|		34.835	0.010842	ppb	17.074	28.377				15.413
118	Sn	|		7849.937	0.945461	ppb	4.503	7.212				2073.484
121	Sb	|		6383.650	0.922425	ppb	4.119	5.185				340.004
135	Ba	|		152507.700	104.397294	ppb	1.904	0.992				25.556
165	Ho-IS	|		285863.283		ppb	2.840					285300.656
159	Tb-IS	>		331002.198		ppb	2.405					337118.831
207	Pb	|		660.006	0.022969	ppb	1.336	1.365				110.000
203	Tl	|		232.224	0.027093	ppb	8.411	8.905				21.111
209	Bi-IS	|		220383.572		ppb	0.210					224574.816
51	V	|		12.222	0.011235	ppb	41.660	74.298				5.556
59	Co	|		41.111	0.018406	ppb	20.405	30.777				15.556
60	Ni	|		36.667	-0.004352	ppb	39.626	305.740				43.333
75	As	|		711.832	-0.113082	ppb	2.297	21.095				792.311
71	Ga-ISK	>		74634.469		ppb	1.135					78469.372
82	Se-2	|		2.544	0.096149	ppb	231.547	147.734				-1.477
107	Ag-1	|		222387.637	52.705686	ppb	0.574	1.659				142.223
115	In-ISK	|		92119.614		ppb	0.751					95060.025
45	Sc-ISK	>		186357.872		ppb	1.681					195110.036
23	Na	|		515032.630	1004.570838	ppb	2.811	1.487				658.349
39	K	|		989657.933	1016.352835	ppb	0.801	0.966				73472.919
24	Mg	|		400.006	0.654057	ppb	5.728	8.438				55.000
159	Tb-ISK	|		170648.733		ppb	1.799					176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Friday, December 13, 2019 12:46:14

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\ICB-23446.016

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		34046.082		ppb		1.392		37254.114
9	Be	|		7.778	-0.000046	ppb	24.744	4223.321		7.778
10	B	|		3139.234	0.240616	ppb	1.694	98.485		3055.883
27	Al	|		4848.613	0.770928	ppb	15.131	24.020		1737.888
43	Ca-2	|		70.000	1.592781	ppb	28.571	95.444		48.333
49	Ti	|		132.223	0.104224	ppb	13.885	45.640		91.111
52	Cr	|		7205.150	-0.180479	ppb	1.024	11.634		8210.136
55	Mn	|		625.569	0.024918	ppb	8.087	18.136		370.005
57	Fe	|		7415.258	-6.787868	ppb	2.183	14.667		8777.141
45	Sc-IS	|>		883552.340		ppb	0.737			878130.917
66	Zn	|		848.914	0.245356	ppb	4.235	10.938		567.789
86	Sr	|		39.212	0.011255	ppb	70.263	116.330		15.304
65	Cu	|		145.268	0.053990	ppb	4.808	8.775		54.236
69	Ga-IS	|		377426.699		ppb	1.068			384193.801
95	Mo	|		470.008	0.188528	ppb	12.099	14.696		67.778
115	In-IS	|>		278680.963		ppb	0.609			281831.362
111	Cd	|		24.569	0.005054	ppb	63.012	165.907		15.413
118	Sn	|		4918.625	0.459594	ppb	4.062	7.832		2073.484
121	Sb	|		3240.368	0.437005	ppb	5.938	6.800		340.004
135	Ba	|		168.890	0.097084	ppb	6.030	6.656		25.556
165	Ho-IS	|		284001.282		ppb	2.993			285300.656
159	Tb-IS	|>		332199.174		ppb	3.653			337118.831
207	Pb	|		492.226	0.015931	ppb	6.817	10.402		110.000
203	Tl	|		155.556	0.017294	ppb	19.444	25.454		21.111
209	Bi-IS	|		219852.251		ppb	0.999			224574.816
51	V	|		13.333	0.012787	ppb	75.000	123.239		5.556
59	Co	|		28.889	0.009723	ppb	40.522	81.403		15.556
60	Ni	|		62.222	0.019499	ppb	24.744	76.601		43.333
75	As	|		726.678	-0.080632	ppb	2.994	106.011		792.311
71	Ga-ISK	|>		74965.094		ppb	1.466			78469.372
82	Se-2	|		2.885	0.102010	ppb	251.147	169.614		-1.477
107	Ag-1	|		1480.077	0.317428	ppb	8.603	9.943		142.223
115	In-ISK	|		90707.896		ppb	1.284			95060.025
45	Sc-ISK	|>		184900.027		ppb	0.613			195110.036
23	Na	|		1586.755	1.895558	ppb	1.819	3.624		658.349
39	K	|		75734.671	6.805594	ppb	0.681	13.720		73472.919
24	Mg	|		401.672	0.662784	ppb	13.655	16.085		55.000
159	Tb-ISK	|		169677.098		ppb	0.892			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, December 13, 2019 12:49:00

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCV-210770.017

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34349.031		ppb	1.732			37254.114
9	Be	|	100253.900	100.340220	ppb	0.859	1.114		7.778
10	B	|	70006.672	250.645045	ppb	0.474	1.294		3055.883
27	Al	|	394957.754	98.373428	ppb	0.876	2.576		1737.888
43	Ca-2	|	68778.520	5130.860881	ppb	1.273	0.495		48.333
49	Ti	|	38325.792	98.848520	ppb	1.324	1.249		91.111
52	Cr	|	588886.392	99.934556	ppb	1.509	0.292		8210.136
55	Mn	|	1001485.714	99.186952	ppb	1.336	1.021		370.005
57	Fe	|	1066061.623	5102.778507	ppb	0.616	1.210		8777.141
45	Sc-IS	>	878203.283		ppb	1.710			878130.917
66	Zn	|	114829.661	101.666170	ppb	0.333	1.914		567.789
86	Sr	|	211496.051	100.392920	ppb	1.035	1.145		15.304
65	Cu	|	167656.440	100.358824	ppb	0.282	1.861		54.236
69	Ga-IS	|	382405.902		ppb	1.616			384193.801
95	Mo	|	210862.695	99.478433	ppb	1.044	1.579		67.778
115	In-IS	>	270615.425		ppb	1.404			281831.362
111	Cd	|	179592.494	100.228490	ppb	1.589	0.379		15.413
118	Sn	|	595548.963	97.918477	ppb	1.080	0.471		2073.484
121	Sb	|	642517.112	99.513008	ppb	0.625	0.781		340.004
135	Ba	|	142368.131	99.109597	ppb	0.688	0.711		25.556
165	Ho-IS	|	279169.166		ppb	3.582			285300.656
159	Tb-IS	>	328104.230		ppb	2.398			337118.831
207	Pb	|	2398641.581	100.692560	ppb	0.565	1.838		110.000
203	Tl	|	782895.085	101.192822	ppb	1.078	1.314		21.111
209	Bi-IS	|	212204.506		ppb	0.691			224574.816
51	V	|	60443.189	99.571760	ppb	2.040	1.374		5.556
59	Co	|	140057.813	100.000392	ppb	1.831	0.739		15.556
60	Ni	|	104020.757	99.260227	ppb	1.856	0.937		43.333
75	As	|	37228.990	100.647128	ppb	1.259	2.374		792.311
71	Ga-ISK	>	73188.133		ppb	1.385			78469.372
82	Se-2	|	4061.441	99.845324	ppb	1.131	0.700		-1.477
107	Ag-1	|	420181.258	101.588457	ppb	0.975	2.262		142.223
115	In-ISK	|	90137.047		ppb	0.773			95060.025
45	Sc-ISK	>	185928.847		ppb	0.935			195110.036
23	Na	|	2633805.567	5154.493789	ppb	1.474	0.546		658.349
39	K	|	4800724.408	5240.375991	ppb	1.821	1.059		73472.919
24	Mg	|	2730321.152	5146.484729	ppb	0.775	0.553		55.000
159	Tb-ISK	|	168868.257		ppb	0.821			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, December 13, 2019 12:51:46

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.018

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34778.951		ppb		0.592		37254.114
9	Be	|		26.667	0.018680	ppb	21.651	32.194		7.778
10	B	|		3197.026	0.407664	ppb	7.109	197.316		3055.883
27	Al	|		1593.422	-0.040067	ppb	2.214	24.785		1737.888
43	Ca-2	|		50.000	0.073356	ppb	43.589	2111.222		48.333
49	Ti	|		116.667	0.062732	ppb	13.093	55.324		91.111
52	Cr	|		6690.455	-0.272927	ppb	0.424	4.624		8210.136
55	Mn	|		533.343	0.015641	ppb	4.719	11.612		370.005
57	Fe	|		8227.925	-3.046119	ppb	1.549	12.274		8777.141
45	Sc-IS	>		886982.345		ppb	1.424			878130.917
66	Zn	|		574.456	0.000637	ppb	10.418	7807.389		567.789
86	Sr	|		49.212	0.015940	ppb	78.225	114.398		15.304
65	Cu	|		102.848	0.028361	ppb	28.860	59.710		54.236
69	Ga-IS	|		375815.859		ppb	0.418			384193.801
95	Mo	|		2609.128	1.187388	ppb	7.194	8.037		67.778
115	In-IS	>		276074.188		ppb	1.254			281831.362
111	Cd	|		45.632	0.016693	ppb	11.675	16.240		15.413
118	Sn	|		12372.030	1.673108	ppb	4.806	7.171		2073.484
121	Sb	|		1985.694	0.251092	ppb	2.429	4.260		340.004
135	Ba	|		46.667	0.014745	ppb	14.286	29.512		25.556
165	Ho-IS	|		281071.599		ppb	3.647			285300.656
159	Tb-IS	>		329769.317		ppb	2.947			337118.831
207	Pb	|		1348.914	0.051851	ppb	2.349	2.731		110.000
203	Tl	|		396.672	0.048339	ppb	10.729	10.670		21.111
209	Bi-IS	|		220947.111		ppb	2.107			224574.816
51	V	|		30.000	0.040302	ppb	0.000	1.563		5.556
59	Co	|		68.889	0.038207	ppb	14.783	17.782		15.556
60	Ni	|		67.778	0.025249	ppb	18.619	44.206		43.333
75	As	|		744.823	-0.009874	ppb	11.520	2175.418		792.311
71	Ga-ISK	>		74076.023		ppb	1.281			78469.372
82	Se-2	|		9.888	0.275080	ppb	56.267	50.446		-1.477
107	Ag-1	|		1909.017	0.424255	ppb	5.415	7.247		142.223
115	In-ISK	|		90405.597		ppb	1.354			95060.025
45	Sc-ISK	>		184704.370		ppb	1.649			195110.036
23	Na	|		1976.804	2.670369	ppb	5.956	10.992		658.349
39	K	|		77409.166	8.768520	ppb	0.699	10.093		73472.919
24	Mg	|		940.031	1.686727	ppb	11.977	13.811		55.000
159	Tb-ISK	|		168781.267		ppb	1.061			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Friday, December 13, 2019 12:54:32

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\ICSA-30518.019

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32073.747		ppb	1.304		37254.114
9	Be	13.333	0.005859	ppb	50.000	118.160	7.778
10	B	3297.047	1.145278	ppb	1.496	16.855	3055.883
27	Al	38698732.635	9869.702774	ppb	1.094	1.770	1737.888
43	Ca-2	391456.491	29792.821423	ppb	1.370	0.547	48.333
49	Ti	77542.100	204.175133	ppb	0.154	0.819	91.111
52	Cr	9071.768	0.179008	ppb	0.349	8.690	8210.136
55	Mn	5531.073	0.522071	ppb	5.274	5.421	370.005
57	Fe	4960639.751	24367.635847	ppb	1.205	0.854	8777.141
45	Sc-IS	> 861235.222		ppb	0.836		878130.917
66	Zn	1164.492	0.551670	ppb	7.603	16.208	567.789
86	Sr	918.035	0.437137	ppb	4.591	4.987	15.304
65	Cu	87.761	0.021019	ppb	32.337	80.902	54.236
69	Ga-IS	363831.098		ppb	1.578		384193.801
95	Mo	428901.403	206.335448	ppb	0.953	0.693	67.778
115	In-IS	> 272014.048		ppb	0.081		281831.362
111	Cd	-247.345	-0.145596	ppb	14.737	13.839	15.413
118	Sn	5494.391	0.573258	ppb	4.221	6.533	2073.484
121	Sb	1745.662	0.218508	ppb	5.335	6.560	340.004
135	Ba	286.670	0.181469	ppb	11.452	12.489	25.556
165	Ho-IS	291312.043		ppb	1.930		285300.656
159	Tb-IS	> 335497.561		ppb	1.254		337118.831
207	Pb	1372.249	0.051831	ppb	2.204	2.267	110.000
203	Tl	295.559	0.034721	ppb	10.234	11.786	21.111
209	Bi-IS	213803.835		ppb	1.517		224574.816
51	V	158.890	0.257677	ppb	10.766	11.356	5.556
59	Co	105.556	0.066286	ppb	25.329	29.288	15.556
60	Ni	328.893	0.280680	ppb	3.837	4.658	43.333
75	As	745.042	0.051285	ppb	6.830	281.521	792.311
71	Ga-ISK	> 71979.772		ppb	0.267		78469.372
82	Se-2	5.539	0.172233	ppb	20.770	16.614	-1.477
107	Ag-1	301.114	0.041931	ppb	24.287	42.477	142.223
115	In-ISK	89249.840		ppb	0.118		95060.025
45	Sc-ISK	> 186643.654		ppb	1.064		195110.036
23	Na	12725999.054	24816.755512	ppb	0.387	0.681	658.349
39	K	9251214.929	10133.048911	ppb	1.206	2.183	73472.919
24	Mg	5171534.815	9712.261871	ppb	1.414	2.451	55.000
159	Tb-ISK	173917.113		ppb	1.701		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Friday, December 13, 2019 12:57:17

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\ICSAB-30517.020

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		32885.609		ppb		3.034		37254.114
9	Be	|		12.222	0.004829	ppb	62.984	166.411		7.778
10	B	|		3191.468	0.776156	ppb	3.258	45.078		3055.883
27	Al	|		38737438.094	9906.046017	ppb	2.054	0.580		1737.888
43	Ca-2	|		390708.477	29820.037909	ppb	1.734	0.368		48.333
49	Ti	|		77120.988	203.656927	ppb	1.851	2.299		91.111
52	Cr	|		122723.872	20.184598	ppb	1.677	1.193		8210.136
55	Mn	|		200536.622	20.281879	ppb	0.468	1.537		370.005
57	Fe	|		4893135.336	24109.862932	ppb	0.471	2.445		8777.141
45	Sc-IS	|>		858863.934		ppb	2.014			878130.917
66	Zn	|		11820.445	10.249617	ppb	1.851	2.828		567.789
86	Sr	|		918.647	0.438536	ppb	3.468	1.916		15.304
65	Cu	|		32357.845	19.782309	ppb	0.991	2.753		54.236
69	Ga-IS	|		367511.873		ppb	0.788			384193.801
95	Mo	|		437691.916	211.185513	ppb	0.698	1.508		67.778
115	In-IS	|>		275937.976		ppb	1.114			281831.362
111	Cd	|		17844.276	9.759009	ppb	2.110	1.549		15.413
118	Sn	|		3351.505	0.213891	ppb	4.279	12.263		2073.484
121	Sb	|		1445.629	0.169172	ppb	3.923	6.567		340.004
135	Ba	|		281.114	0.175015	ppb	13.328	15.558		25.556
165	Ho-IS	|		300693.233		ppb	2.812			285300.656
159	Tb-IS	|>		345228.143		ppb	1.933			337118.831
207	Pb	|		996.680	0.035281	ppb	2.676	4.812		110.000
203	Tl	|		216.668	0.023927	ppb	10.659	9.654		21.111
209	Bi-IS	|		219351.446		ppb	1.508			224574.816
51	V	|		12525.491	20.944046	ppb	2.754	5.928		5.556
59	Co	|		28210.054	20.425084	ppb	1.806	2.126		15.556
60	Ni	|		20827.394	20.136274	ppb	0.713	3.120		43.333
75	As	|		4559.317	10.721586	ppb	2.222	4.920		792.311
71	Ga-ISK	|>		72183.185		ppb	3.746			78469.372
82	Se-2	|		404.540	10.144058	ppb	8.681	12.445		-1.477
107	Ag-1	|		17549.663	4.274921	ppb	1.018	4.226		142.223
115	In-ISK	|		87282.565		ppb	3.461			95060.025
45	Sc-ISK	|>		180024.031		ppb	1.487			195110.036
23	Na	|		12270348.559	24807.064463	ppb	2.048	1.483		658.349
39	K	|		8963506.059	10179.738011	ppb	1.722	2.578		73472.919
24	Mg	|		4991064.173	9717.377270	ppb	0.739	1.264		55.000
159	Tb-ISK	|		168557.238		ppb	3.198			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 1

Sample Date/Time: Friday, December 13, 2019 13:00:05

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\b.021

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33285.399		ppb	0.538		37254.114
9	Be	13.333	0.005571	ppb	25.000	60.842	7.778
10	B	2763.601	-1.089845	ppb	3.363	33.065	3055.883
27	Al	6800.511	1.266709	ppb	5.646	7.131	1737.888
43	Ca-2	80.000	2.364369	ppb	6.250	13.489	48.333
49	Ti	138.890	0.123642	ppb	9.992	28.959	91.111
52	Cr	6628.204	-0.271636	ppb	1.383	10.821	8210.136
55	Mn	457.785	0.008727	ppb	12.535	67.110	370.005
57	Fe	10509.420	8.385549	ppb	0.733	11.694	8777.141
45	Sc-IS	> 877827.740		ppb	1.217		878130.917
66	Zn	604.457	0.032880	ppb	1.274	33.520	567.789
86	Sr	28.613	0.006358	ppb	39.876	87.392	15.304
65	Cu	83.824	0.017796	ppb	15.133	45.686	54.236
69	Ga-IS	381129.399		ppb	0.229		384193.801
95	Mo	4549.614	2.115707	ppb	2.962	2.820	67.778
115	In-IS	> 280574.988		ppb	0.731		281831.362
111	Cd	17.113	0.000999	ppb	107.173	997.678	15.413
118	Sn	2682.474	0.098449	ppb	3.393	17.850	2073.484
121	Sb	775.577	0.065302	ppb	4.474	6.770	340.004
135	Ba	37.778	0.008287	ppb	26.956	82.405	25.556
165	Ho-IS	287560.851		ppb	4.182		285300.656
159	Tb-IS	> 332425.521		ppb	2.156		337118.831
207	Pb	314.446	0.008525	ppb	8.234	10.324	110.000
203	Tl	87.778	0.008538	ppb	17.946	22.988	21.111
209	Bi-IS	227050.302		ppb	1.345		224574.816
51	V	44.445	0.064849	ppb	69.282	79.462	5.556
59	Co	22.222	0.005460	ppb	17.321	46.786	15.556
60	Ni	36.667	-0.003650	ppb	9.091	84.595	43.333
75	As	778.969	0.106833	ppb	6.834	146.818	792.311
71	Ga-ISK	> 73325.495		ppb	1.156		78469.372
82	Se-2	2.213	0.088102	ppb	69.868	43.174	-1.477
107	Ag-1	2001.253	0.450726	ppb	11.864	12.051	142.223
115	In-ISK	89800.769		ppb	1.823		95060.025
45	Sc-ISK	> 178942.641		ppb	0.390		195110.036
23	Na	6341.419	11.666986	ppb	11.197	11.960	658.349
39	K	73820.249	7.408209	ppb	0.892	10.848	73472.919
24	Mg	1930.132	3.680366	ppb	12.584	12.563	55.000
159	Tb-ISK	168166.705		ppb	0.664		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, December 13, 2019 13:02:50

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.022

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33209.667		ppb	0.265		37254.114
9	Be	8.889	0.001040	ppb	57.282	484.699	7.778
10	B	2818.056	-0.981171	ppb	2.552	24.370	3055.883
27	Al	4003.896	0.558534	ppb	5.670	11.619	1737.888
43	Ca-2	55.000	0.466490	ppb	15.746	146.053	48.333
49	Ti	107.778	0.040768	ppb	11.709	81.226	91.111
52	Cr	6839.415	-0.245806	ppb	2.396	15.729	8210.136
55	Mn	455.563	0.008069	ppb	9.149	46.308	370.005
57	Fe	7714.306	-5.445616	ppb	2.869	21.972	8777.141
45	Sc-IS	> 885748.282		ppb	0.906		878130.917
66	Zn	561.122	-0.010066	ppb	4.614	270.652	567.789
86	Sr	19.187	0.001765	ppb	69.755	355.007	15.304
65	Cu	65.224	0.006197	ppb	20.703	124.362	54.236
69	Ga-IS	385696.461		ppb	0.885		384193.801
95	Mo	1121.155	0.492441	ppb	7.947	8.022	67.778
115	In-IS	> 283094.697		ppb	1.280		281831.362
111	Cd	10.979	-0.002426	ppb	54.281	129.192	15.413
118	Sn	2483.549	0.063304	ppb	3.900	28.968	2073.484
121	Sb	653.348	0.046162	ppb	4.176	6.161	340.004
135	Ba	36.667	0.007358	ppb	24.052	82.355	25.556
165	Ho-IS	289817.307		ppb	2.790		285300.656
159	Tb-IS	> 339195.024		ppb	1.925		337118.831
207	Pb	290.001	0.007277	ppb	8.046	11.947	110.000
203	Tl	70.000	0.006108	ppb	12.599	20.055	21.111
209	Bi-IS	223065.002		ppb	1.617		224574.816
51	V	30.000	0.041099	ppb	33.333	41.434	5.556
59	Co	21.111	0.004743	ppb	9.116	27.509	15.556
60	Ni	32.222	-0.007826	ppb	48.888	189.801	43.333
75	As	730.681	-0.018862	ppb	5.380	538.392	792.311
71	Ga-ISK	> 73036.238		ppb	1.061		78469.372
82	Se-2	-4.802	-0.084482	ppb	53.000	73.973	-1.477
107	Ag-1	543.344	0.099637	ppb	10.100	14.070	142.223
115	In-ISK	89899.212		ppb	0.993		95060.025
45	Sc-ISK	> 182316.052		ppb	0.879		195110.036
23	Na	1981.805	2.727924	ppb	8.965	12.760	658.349
39	K	72147.288	3.950147	ppb	0.816	26.765	73472.919
24	Mg	571.678	1.000511	ppb	11.875	13.503	55.000
159	Tb-ISK	169703.383		ppb	0.649		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, December 13, 2019 13:05:37

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\ICVL-210771.023

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33723.093		ppb	1.017		37254.114
9	Be	985.590	0.963250	ppb	3.388	5.027	7.778
10	B	16126.883	47.961478	ppb	3.669	4.793	3055.883
27	Al	210611.199	51.404549	ppb	0.777	2.443	1737.888
43	Ca-2	795.022	54.767476	ppb	4.748	3.672	48.333
49	Ti	492.231	1.016815	ppb	4.757	6.776	91.111
52	Cr	12805.738	0.755366	ppb	1.781	3.973	8210.136
55	Mn	10849.674	1.021056	ppb	0.279	1.475	370.005
57	Fe	18129.275	43.723546	ppb	1.017	1.438	8777.141
45	Sc-IS	> 892590.927		ppb	1.715		878130.917
66	Zn	6742.702	5.396961	ppb	0.935	1.222	567.789
86	Sr	2173.783	1.008154	ppb	3.119	3.738	15.304
65	Cu	1766.136	1.008601	ppb	5.777	7.522	54.236
69	Ga-IS	386779.698		ppb	1.021		384193.801
95	Mo	2770.269	1.254138	ppb	2.248	1.753	67.778
115	In-IS	> 283800.803		ppb	0.311		281831.362
111	Cd	1977.654	1.044322	ppb	2.451	2.749	15.413
118	Sn	8270.171	0.972457	ppb	1.151	1.538	2073.484
121	Sb	7245.170	1.019863	ppb	1.518	1.413	340.004
135	Ba	1457.852	0.950912	ppb	7.789	8.228	25.556
165	Ho-IS	293800.440		ppb	2.423		285300.656
159	Tb-IS	> 341025.726		ppb	2.884		337118.831
207	Pb	24735.102	0.994487	ppb	3.071	2.817	110.000
203	Tl	8214.584	1.018972	ppb	1.524	1.432	21.111
209	Bi-IS	225014.956		ppb	0.473		224574.816
51	V	617.791	0.993058	ppb	9.178	11.196	5.556
59	Co	1478.965	1.027717	ppb	1.065	2.124	15.556
60	Ni	1151.158	1.040665	ppb	7.247	5.757	43.333
75	As	1109.623	0.970476	ppb	1.486	10.718	792.311
71	Ga-ISK	> 74479.260		ppb	2.130		78469.372
82	Se-2	43.211	1.078438	ppb	5.292	7.273	-1.477
107	Ag-1	3932.763	0.902742	ppb	0.636	2.824	142.223
115	In-ISK	90118.775		ppb	1.143		95060.025
45	Sc-ISK	> 184255.135		ppb	0.849		195110.036
23	Na	26305.874	50.736890	ppb	2.452	2.532	658.349
39	K	115398.667	51.441745	ppb	0.511	2.338	73472.919
24	Mg	25759.872	48.902239	ppb	0.788	1.576	55.000
159	Tb-ISK	171114.710		ppb	0.177		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-38842_1-A

Autosampler Position: 351

Sample Date/Time: Friday, December 13, 2019 13:08:23

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\MB 570-38842_1-A.024

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33795.491		ppb	1.726		37254.114
9	Be	8.889	0.000943	ppb	21.651	201.295	7.778
10	B	2999.204	-0.427854	ppb	3.724	88.555	3055.883
27	Al	2814.722	0.255912	ppb	4.797	13.520	1737.888
43	Ca-2	46.667	-0.192341	ppb	16.366	284.849	48.333
49	Ti	103.334	0.026492	ppb	23.262	229.887	91.111
52	Cr	6977.259	-0.235151	ppb	1.203	7.444	8210.136
55	Mn	451.118	0.007198	ppb	15.681	97.972	370.005
57	Fe	7354.117	-7.549889	ppb	4.603	19.991	8777.141
45	Sc-IS	> 895274.319		ppb	0.380		878130.917
66	Zn	566.678	-0.010706	ppb	6.784	299.051	567.789
86	Sr	19.212	0.001645	ppb	158.721	862.259	15.304
65	Cu	62.038	0.003979	ppb	20.386	190.483	54.236
69	Ga-IS	386884.385		ppb	0.329		384193.801
95	Mo	493.342	0.196341	ppb	4.431	4.759	67.778
115	In-IS	> 281522.299		ppb	0.444		281831.362
111	Cd	15.631	0.000118	ppb	42.831	3024.372	15.413
118	Sn	2351.305	0.044434	ppb	5.601	47.867	2073.484
121	Sb	477.786	0.020589	ppb	11.723	41.079	340.004
135	Ba	23.333	-0.001487	ppb	42.857	445.832	25.556
165	Ho-IS	290175.926		ppb	1.925		285300.656
159	Tb-IS	> 335620.628		ppb	1.570		337118.831
207	Pb	260.001	0.006163	ppb	11.750	17.539	110.000
203	Tl	54.445	0.004225	ppb	3.535	6.696	21.111
209	Bi-IS	225175.529		ppb	1.666		224574.816
51	V	10.000	0.007855	ppb	57.735	121.593	5.556
59	Co	24.444	0.006986	ppb	47.889	120.981	15.556
60	Ni	40.000	-0.000776	ppb	25.000	1219.742	43.333
75	As	775.897	0.079654	ppb	10.462	252.292	792.311
71	Ga-ISK	> 73908.490		ppb	1.218		78469.372
82	Se-2	-1.097	0.007967	ppb	556.629	1868.195	-1.477
107	Ag-1	448.896	0.075418	ppb	1.134	1.964	142.223
115	In-ISK	91623.298		ppb	2.096		95060.025
45	Sc-ISK	> 182411.774		ppb	1.285		195110.036
23	Na	1275.057	1.315895	ppb	6.938	13.019	658.349
39	K	72506.881	4.317669	ppb	0.875	29.621	73472.919
24	Mg	365.005	0.602915	ppb	7.249	9.627	55.000
159	Tb-ISK	170463.028		ppb	0.799		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: LCS 570-38842_2-A
 Autosampler Position: 352
 Sample Date/Time: Friday, December 13, 2019 13:11:08
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2019\191213E1\LCS 570-38842_2-A.025
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34287.768		ppb		1.041		37254.114
9	Be	|	103154.468	101.863116	ppb	1.359	0.751		7.778
10	B	|	28912.563	95.353523	ppb	0.753	0.364		3055.883
27	Al	|	425905.711	104.678530	ppb	0.528	0.836		1737.888
43	Ca-2	|	61497.091	4526.265444	ppb	0.999	0.455		48.333
49	Ti	|	39898.977	101.540950	ppb	1.026	0.595		91.111
52	Cr	|	615313.134	103.085959	ppb	1.173	1.721		8210.136
55	Mn	|	1028056.507	100.470057	ppb	0.641	1.251		370.005
57	Fe	|	967878.429	4566.621986	ppb	0.592	0.817		8777.141
45	Sc-IS	|>	889975.160		ppb	0.615			878130.917
66	Zn	|>	125180.619	109.377775	ppb	1.751	1.523		567.789
86	Sr	|	215284.686	100.832010	ppb	0.113	0.724		15.304
65	Cu	|	175835.284	103.839457	ppb	1.819	1.516		54.236
69	Ga-IS	|	395460.154		ppb	0.684			384193.801
95	Mo	|	218487.501	101.691954	ppb	2.153	1.540		67.778
115	In-IS	|>	279637.153		ppb	1.527			281831.362
111	Cd	|	193315.708	104.409646	ppb	1.857	1.214		15.413
118	Sn	|	651616.368	103.703121	ppb	1.528	1.403		2073.484
121	Sb	|	619743.363	92.882451	ppb	1.315	0.717		340.004
135	Ba	|	154054.407	103.777529	ppb	2.834	2.288		25.556
165	Ho-IS	|	285557.661		ppb	4.032			285300.656
159	Tb-IS	|>	333877.354		ppb	2.778			337118.831
207	Pb	|	2493401.038	102.835102	ppb	2.595	0.569		110.000
203	Tl	|	777703.700	98.760525	ppb	2.957	0.585		21.111
209	Bi-IS	|	219407.997		ppb	1.876			224574.816
51	V	|	62296.663	100.670595	ppb	1.364	1.644		5.556
59	Co	|	141143.858	98.860677	ppb	0.804	1.522		15.556
60	Ni	|	110031.008	102.999151	ppb	0.457	1.174		43.333
75	As	|	38646.472	102.522276	ppb	2.282	3.378		792.311
71	Ga-ISK	|>	74615.482		ppb	1.135			78469.372
82	Se-2	|	4236.505	102.166801	ppb	1.926	2.591		-1.477
107	Ag-1	|	177311.375	42.024306	ppb	0.326	0.837		142.223
115	In-ISK	|	90454.939		ppb	0.759			95060.025
45	Sc-ISK	|>	184115.649		ppb	1.288			195110.036
23	Na	|	496526.873	980.429961	ppb	0.861	1.390		658.349
39	K	|	969336.513	1006.952443	ppb	0.376	1.466		73472.919
24	Mg	|	2294582.997	4367.930964	ppb	1.154	1.294		55.000
159	Tb-ISK	|	169775.692		ppb	1.515			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-38842_3-A

Autosampler Position: 353

Sample Date/Time: Friday, December 13, 2019 13:13:54

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\LCSD 570-38842_3-A.026

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34323.412		ppb		1.491		37254.114
9	Be	|	101729.872	101.132992	ppb		1.502	2.307	7.778
10	B	|	28593.031	94.876745	ppb		0.126	1.438	3055.883
27	Al	|	425917.056	105.378846	ppb		0.196	1.346	1737.888
43	Ca-2	|	60176.481	4458.283360	ppb		0.799	0.622	48.333
49	Ti	|	39472.235	101.126309	ppb		0.415	1.595	91.111
52	Cr	|	603975.194	101.841379	ppb		1.048	2.040	8210.136
55	Mn	|	1001461.507	98.521980	ppb		0.746	1.942	370.005
57	Fe	|	958792.702	4553.693739	ppb		0.337	1.438	8777.141
45	Sc-IS	>	884178.584		ppb		1.188		878130.917
66	Zn	>	122831.365	108.034149	ppb		0.404	1.260	567.789
86	Sr	|	212569.208	100.213812	ppb		1.070	0.949	15.304
65	Cu	|	173158.054	102.948745	ppb		1.022	2.215	54.236
69	Ga-IS	|	393863.545		ppb		0.535		384193.801
95	Mo	|	218384.494	102.320451	ppb		1.233	1.058	67.778
115	In-IS	>	277421.009		ppb		0.870		281831.362
111	Cd	|	187863.456	102.277213	ppb		0.508	0.672	15.413
118	Sn	|	656193.948	105.273268	ppb		0.746	1.579	2073.484
121	Sb	|	633568.131	95.722609	ppb		1.260	2.127	340.004
135	Ba	|	151528.398	102.906639	ppb		1.500	2.370	25.556
165	Ho-IS	|	289203.924		ppb		2.770		285300.656
159	Tb-IS	>	336662.483		ppb		2.599		337118.831
207	Pb	|	2457993.314	100.560843	ppb		0.954	1.697	110.000
203	Tl	|	766759.017	96.598070	ppb		0.763	1.831	21.111
209	Bi-IS	|	218154.242		ppb		0.731		224574.816
51	V	|	60993.275	101.184437	ppb		1.225	1.842	5.556
59	Co	|	138418.487	99.526237	ppb		0.686	1.528	15.556
60	Ni	|	106842.541	102.662380	ppb		1.363	0.980	43.333
75	As	|	37547.556	102.220380	ppb		1.691	1.125	792.311
71	Ga-ISK	>	72684.445		ppb		0.836		78469.372
82	Se-2	|	4030.443	99.756953	ppb		2.785	2.077	-1.477
107	Ag-1	|	172267.012	41.909438	ppb		1.410	0.603	142.223
115	In-ISK	|	88899.720		ppb		1.330		95060.025
45	Sc-ISK	>	182670.620		ppb		1.356		195110.036
23	Na	|	495698.953	986.487668	ppb		0.963	0.425	658.349
39	K	|	962654.602	1008.093397	ppb		0.906	2.407	73472.919
24	Mg	|	2307127.604	4427.021024	ppb		0.869	2.021	55.000
159	Tb-ISK	|	169214.354		ppb		1.120		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, December 13, 2019 13:16:39

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\b.027

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34645.295		ppb	0.913		37254.114
9	Be	23.333	0.015621	ppb	14.286	21.533	7.778
10	B	2954.750	-0.355371	ppb	1.735	55.974	3055.883
27	Al	2555.785	0.205924	ppb	5.575	17.508	1737.888
43	Ca-2	41.667	-0.491555	ppb	18.330	115.574	48.333
49	Ti	115.556	0.063841	ppb	13.632	64.264	91.111
52	Cr	6813.847	-0.237868	ppb	0.796	3.432	8210.136
55	Mn	564.456	0.019385	ppb	14.709	42.660	370.005
57	Fe	8460.283	-1.443526	ppb	2.183	62.961	8777.141
45	Sc-IS	> 876297.769		ppb	0.103		878130.917
66	Zn	633.347	0.059483	ppb	5.342	49.760	567.789
86	Sr	68.001	0.025088	ppb	60.004	77.448	15.304
65	Cu	86.114	0.019201	ppb	27.922	75.324	54.236
69	Ga-IS	378198.980		ppb	1.113		384193.801
95	Mo	3238.145	1.499290	ppb	2.185	2.334	67.778
115	In-IS	> 277954.224		ppb	0.893		281831.362
111	Cd	53.200	0.020644	ppb	6.010	7.659	15.413
118	Sn	16585.183	2.335873	ppb	2.939	4.359	2073.484
121	Sb	31148.380	4.649299	ppb	2.532	3.453	340.004
135	Ba	84.445	0.040140	ppb	12.059	16.617	25.556
165	Ho-IS	285525.703		ppb	3.011		285300.656
159	Tb-IS	> 332924.610		ppb	2.047		337118.831
207	Pb	1331.137	0.050534	ppb	7.049	5.833	110.000
203	Tl	483.342	0.058880	ppb	7.772	7.063	21.111
209	Bi-IS	220241.481		ppb	0.854		224574.816
51	V	32.222	0.044672	ppb	41.808	50.028	5.556
59	Co	74.445	0.042913	ppb	18.642	24.293	15.556
60	Ni	115.556	0.071794	ppb	7.259	9.465	43.333
75	As	750.886	0.034853	ppb	5.006	278.716	792.311
71	Ga-ISK	> 73112.182		ppb	1.127		78469.372
82	Se-2	13.872	0.374577	ppb	78.077	71.104	-1.477
107	Ag-1	1520.081	0.335803	ppb	4.744	4.469	142.223
115	In-ISK	90345.748		ppb	0.420		95060.025
45	Sc-ISK	> 181390.302		ppb	2.378		195110.036
23	Na	1285.058	1.352956	ppb	3.832	11.920	658.349
39	K	74724.939	7.325436	ppb	1.087	34.128	73472.919
24	Mg	1138.379	2.103498	ppb	9.475	11.582	55.000
159	Tb-ISK	167093.583		ppb	0.932		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14788-C-1-B

Autosampler Position: 354

Sample Date/Time: Friday, December 13, 2019 13:19:25

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14788-C-1-B.028

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		37671.844		ppb		2.241		37254.114
9	Be	|		48.889	0.038735	ppb	21.917	26.818		7.778
10	B	|		30249.777	96.145547	ppb	1.741	1.722		3055.883
27	Al	|		2607788.767	619.315160	ppb	0.932	1.716		1737.888
43	Ca-2	|		525136.793	37242.009705	ppb	1.113	0.330		48.333
49	Ti	|		5832.302	14.090293	ppb	2.778	2.915		91.111
52	Cr	|		21747.666	2.143541	ppb	3.543	6.657		8210.136
55	Mn	|		399665.940	37.585293	ppb	0.733	1.000		370.005
57	Fe	|		180160.017	783.739875	ppb	0.301	1.211		8777.141
45	Sc-IS	>		924288.599		ppb	0.885			878130.917
66	Zn	|		551858.538	465.950792	ppb	0.590	0.709		567.789
86	Sr	|		779206.142	351.418963	ppb	0.783	0.605		15.304
65	Cu	|		43144.430	24.509124	ppb	0.672	0.312		54.236
69	Ga-IS	|		365224.138		ppb	0.226			384193.801
95	Mo	|		22771.468	10.177874	ppb	0.465	1.361		67.778
115	In-IS	>		265365.805		ppb	0.734			281831.362
111	Cd	|		625.529	0.347854	ppb	3.460	4.300		15.413
118	Sn	|		3921.650	0.331445	ppb	4.394	10.157		2073.484
121	Sb	|		9487.596	1.448869	ppb	3.366	4.229		340.004
135	Ba	|		70294.756	49.894637	ppb	0.974	1.421		25.556
165	Ho-IS	|		284309.143		ppb	2.604			285300.656
159	Tb-IS	>		331481.673		ppb	2.980			337118.831
207	Pb	|		164628.492	6.837644	ppb	0.604	2.460		110.000
203	Tl	|		252.224	0.029673	ppb	8.599	12.080		21.111
209	Bi-IS	|		200071.274		ppb	0.442			224574.816
51	V	|		4821.925	8.466460	ppb	3.087	3.048		5.556
59	Co	|		1215.607	0.915629	ppb	4.356	4.150		15.556
60	Ni	|		4684.101	4.732036	ppb	2.436	2.781		43.333
75	As	|		1476.480	2.305843	ppb	3.045	5.755		792.311
71	Ga-ISK	>		68604.336		ppb	0.323			78469.372
82	Se-2	|		58.799	1.575752	ppb	31.611	31.054		-1.477
107	Ag-1	|		244.447	0.030973	ppb	9.578	19.068		142.223
115	In-ISK	|		83525.481		ppb	1.637			95060.025
45	Sc-ISK	>		182188.917		ppb	1.059			195110.036
23	Na	|		50869505.578	101636.083861	ppb	0.894	1.781		658.349
39	K	|		4426899.638	4928.026179	ppb	1.415	2.498		73472.919
24	Mg	|		7195273.388	13843.143016	ppb	1.202	2.256		55.000
159	Tb-ISK	|		164881.495		ppb	1.353			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-14788-C-1-C MS
 Autosampler Position: 355
 Sample Date/Time: Friday, December 13, 2019 13:22:10
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2019\191213E1\570-14788-C-1-C MS.029
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	62528.774		ppb	0.806		37254.114
9	Be	67312.665	64.418639	ppb	0.885	1.776	7.778
10	B	54896.387	185.065781	ppb	0.555	1.228	3055.883
27	Al	2777123.928	663.750336	ppb	0.733	0.895	1737.888
43	Ca-2	594796.227	42453.909648	ppb	1.322	1.075	48.333
49	Ti	26543.528	65.379464	ppb	1.209	1.110	91.111
52	Cr	425397.222	68.592705	ppb	1.482	1.337	8210.136
55	Mn	1045852.640	99.040480	ppb	1.229	0.890	370.005
57	Fe	1226112.649	5615.766119	ppb	0.705	1.105	8777.141
45	Sc-IS	> 918402.278		ppb	0.937		878130.917
66	Zn	623695.658	530.071786	ppb	0.791	1.399	567.789
86	Sr	902040.214	409.471758	ppb	1.172	2.107	15.304
65	Cu	148146.044	84.779488	ppb	0.552	0.922	54.236
69	Ga-IS	377017.985		ppb	0.185		384193.801
95	Mo	148728.059	67.081509	ppb	1.325	2.048	67.778
115	In-IS	> 261311.466		ppb	1.501		281831.362
111	Cd	118329.523	68.392035	ppb	1.939	1.807	15.413
118	Sn	52107.083	8.575349	ppb	0.762	2.337	2073.484
121	Sb	288625.548	46.267608	ppb	0.903	1.099	340.004
135	Ba	212843.883	153.466258	ppb	0.433	1.368	25.556
165	Ho-IS	283508.343		ppb	1.765		285300.656
159	Tb-IS	> 325709.525		ppb	1.536		337118.831
207	Pb	1675966.989	70.855022	ppb	1.271	1.072	110.000
203	Tl	487271.199	63.430041	ppb	1.686	0.327	21.111
209	Bi-IS	768216.247		ppb	1.464		224574.816
51	V	44182.681	77.570685	ppb	2.005	3.670	5.556
59	Co	93851.763	71.412102	ppb	1.438	3.167	15.556
60	Ni	69761.036	70.921431	ppb	0.882	1.904	43.333
75	As	26284.402	75.188333	ppb	0.923	0.868	792.311
71	Ga-ISK	> 68700.383		ppb	1.739		78469.372
82	Se-2	2793.487	73.188557	ppb	2.009	3.169	-1.477
107	Ag-1	178295.751	45.904010	ppb	0.560	1.577	142.223
115	In-ISK	83980.175		ppb	0.993		95060.025
45	Sc-ISK	> 184040.143		ppb	0.634		195110.036
23	Na	51559122.145	101967.459766	ppb	0.388	0.476	658.349
39	K	5316940.651	5873.027228	ppb	0.544	0.669	73472.919
24	Mg	9872314.577	18799.686717	ppb	0.525	0.251	55.000
159	Tb-ISK	165842.498		ppb	1.192		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14788-C-1-D MSD

Autosampler Position: 356

Sample Date/Time: Friday, December 13, 2019 13:24:55

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14788-C-1-D MSD.030

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	62161.657		ppb	2.140			37254.114
9	Be	|	66706.503	65.040236	ppb	1.122	4.806		7.778
10	B	|	53158.726	182.351328	ppb	0.878	3.238		3055.883
27	Al	|	2693864.794	655.894239	ppb	0.453	4.077		1737.888
43	Ca-2	|	596254.837	43359.689464	ppb	1.138	4.534		48.333
49	Ti	|	27028.881	67.842242	ppb	1.113	4.796		91.111
52	Cr	|	428846.407	70.518017	ppb	2.492	6.273		8210.136
55	Mn	|	1050898.251	101.427248	ppb	2.125	5.818		370.005
57	Fe	|	1165284.604	5437.676918	ppb	1.971	5.694		8777.141
45	Sc-IS	>	902380.135		ppb	3.609			878130.917
66	Zn	|	638765.854	553.109345	ppb	0.895	4.581		567.789
86	Sr	|	922253.792	426.605222	ppb	1.961	5.658		15.304
65	Cu	|	149001.826	86.883974	ppb	1.455	5.035		54.236
69	Ga-IS	|	371700.226		ppb	2.691			384193.801
95	Mo	|	158339.605	72.777968	ppb	2.185	5.707		67.778
115	In-IS	>	257707.315		ppb	2.514			281831.362
111	Cd	|	120203.910	70.483719	ppb	1.134	3.515		15.413
118	Sn	|	59923.205	10.056374	ppb	1.207	2.975		2073.484
121	Sb	|	295494.237	48.051146	ppb	1.657	3.213		340.004
135	Ba	|	209627.005	153.322957	ppb	1.358	3.420		25.556
165	Ho-IS	|	279340.665		ppb	2.982			285300.656
159	Tb-IS	>	319347.889		ppb	2.349			337118.831
207	Pb	|	1680427.775	72.486155	ppb	1.459	3.141		110.000
203	Tl	|	490269.079	65.123474	ppb	0.960	3.117		21.111
209	Bi-IS	|	897647.318		ppb	1.126			224574.816
51	V	|	45363.033	80.263037	ppb	1.647	3.280		5.556
59	Co	|	97616.907	74.860268	ppb	1.918	3.489		15.556
60	Ni	|	69148.083	70.837099	ppb	1.492	0.469		43.333
75	As	|	25939.387	74.784645	ppb	0.894	2.494		792.311
71	Ga-ISK	>	68167.847		ppb	1.884			78469.372
82	Se-2	|	2782.783	73.467833	ppb	2.474	2.759		-1.477
107	Ag-1	|	176575.723	45.814458	ppb	0.837	1.085		142.223
115	In-ISK	|	83743.279		ppb	0.532			95060.025
45	Sc-ISK	>	180116.137		ppb	0.336			195110.036
23	Na	|	50985180.664	103029.609102	ppb	0.738	1.023		658.349
39	K	|	5226349.211	5898.884988	ppb	1.318	1.126		73472.919
24	Mg	|	9666228.568	18808.065220	ppb	0.733	0.550		55.000
159	Tb-ISK	|	163867.145		ppb	0.188			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, December 13, 2019 13:27:41

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\b.031

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34283.319		ppb	1.793		37254.114
9	Be	16.667	0.008086	ppb	20.000	38.905	7.778
10	B	3097.002	-0.407387	ppb	1.811	45.124	3055.883
27	Al	2439.097	0.145832	ppb	5.140	19.893	1737.888
43	Ca-2	148.334	6.928376	ppb	10.298	15.403	48.333
49	Ti	190.001	0.231831	ppb	9.283	18.325	91.111
52	Cr	8432.488	-0.031970	ppb	1.653	72.721	8210.136
55	Mn	680.016	0.027456	ppb	8.919	20.968	370.005
57	Fe	14036.896	22.107346	ppb	2.685	8.362	8777.141
45	Sc-IS	> 922795.184		ppb	0.187		878130.917
66	Zn	748.909	0.128965	ppb	10.153	50.789	567.789
86	Sr	162.983	0.066363	ppb	6.113	6.934	15.304
65	Cu	159.006	0.058133	ppb	27.410	42.844	54.236
69	Ga-IS	382680.059		ppb	0.345		384193.801
95	Mo	10054.651	4.483260	ppb	3.539	3.732	67.778
115	In-IS	> 276138.720		ppb	0.940		281831.362
111	Cd	45.552	0.016643	ppb	8.943	12.015	15.413
118	Sn	8331.321	1.018861	ppb	4.361	6.946	2073.484
121	Sb	19540.023	2.916714	ppb	1.531	1.845	340.004
135	Ba	84.445	0.040553	ppb	6.030	9.701	25.556
165	Ho-IS	283387.076		ppb	1.754		285300.656
159	Tb-IS	> 327453.401		ppb	1.822		337118.831
207	Pb	2084.504	0.083176	ppb	0.789	1.234	110.000
203	Tl	331.115	0.040275	ppb	9.135	11.599	21.111
209	Bi-IS	378363.100		ppb	2.063		224574.816
51	V	54.445	0.082112	ppb	24.744	27.044	5.556
59	Co	41.111	0.019407	ppb	46.105	71.943	15.556
60	Ni	78.889	0.037673	ppb	23.271	49.328	43.333
75	As	794.910	0.177819	ppb	2.143	25.326	792.311
71	Ga-ISK	> 72410.847		ppb	1.161		78469.372
82	Se-2	4.523	0.145809	ppb	64.173	48.576	-1.477
107	Ag-1	6064.632	1.448951	ppb	11.577	10.786	142.223
115	In-ISK	87365.793		ppb	1.269		95060.025
45	Sc-ISK	> 181851.269		ppb	0.649		195110.036
23	Na	22202.383	43.197599	ppb	11.181	11.068	658.349
39	K	76159.141	8.697523	ppb	0.698	2.362	73472.919
24	Mg	3638.801	6.912144	ppb	11.298	11.060	55.000
159	Tb-ISK	164587.433		ppb	1.142		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, December 13, 2019 13:30:26

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCV-210770.032

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		33342.201		ppb		1.146		37254.114
9	Be	|		96796.851	94.191449	ppb	0.991	0.786		7.778
10	B	|		67091.646	232.765380	ppb	1.569	1.899		3055.883
27	Al	|		393342.858	95.223809	ppb	0.621	0.797		1737.888
43	Ca-2	|		68991.208	5004.230378	ppb	1.231	1.307		48.333
49	Ti	|		39041.068	97.897276	ppb	2.148	1.914		91.111
52	Cr	|		588832.984	97.122392	ppb	0.778	0.551		8210.136
55	Mn	|		1002786.585	96.563201	ppb	0.785	0.571		370.005
57	Fe	|		1070852.156	4982.406090	ppb	0.699	0.441		8777.141
45	Sc-IS	>		903155.582		ppb	0.262			878130.917
66	Zn	|		116086.425	99.910124	ppb	0.394	0.607		567.789
86	Sr	|		210518.237	97.158707	ppb	0.512	0.755		15.304
65	Cu	|		172134.461	100.171242	ppb	0.541	0.404		54.236
69	Ga-IS	|		385033.510		ppb	1.088			384193.801
95	Mo	|		211477.496	96.994824	ppb	1.899	1.663		67.778
115	In-IS	>		267178.392		ppb	0.133			281831.362
111	Cd	|		175745.774	99.344890	ppb	0.707	0.735		15.413
118	Sn	|		595779.168	99.216740	ppb	0.944	0.819		2073.484
121	Sb	|		642648.147	100.806669	ppb	1.174	1.119		340.004
135	Ba	|		142409.702	100.407042	ppb	1.231	1.178		25.556
165	Ho-IS	|		278730.435		ppb	3.351			285300.656
159	Tb-IS	>		322483.384		ppb	2.877			337118.831
207	Pb	|		2330658.318	99.559146	ppb	1.228	2.585		110.000
203	Tl	|		757039.163	99.582406	ppb	0.540	2.480		21.111
209	Bi-IS	|		231685.286		ppb	2.130			224574.816
51	V	|		58736.073	101.780145	ppb	1.494	2.222		5.556
59	Co	|		136825.499	102.754899	ppb	1.038	1.145		15.556
60	Ni	|		99450.621	99.808707	ppb	2.110	1.579		43.333
75	As	|		35927.080	102.158810	ppb	1.876	1.070		792.311
71	Ga-ISK	>		69586.855		ppb	0.835			78469.372
82	Se-2	|		3914.100	101.210158	ppb	1.220	2.045		-1.477
107	Ag-1	|		394973.506	100.420453	ppb	0.331	1.006		142.223
115	In-ISK	|		85333.983		ppb	0.969			95060.025
45	Sc-ISK	>		179885.532		ppb	0.901			195110.036
23	Na	|		2521962.773	5101.743499	ppb	0.653	0.754		658.349
39	K	|		4555191.634	5138.639953	ppb	0.770	1.640		73472.919
24	Mg	|		2611133.543	5087.390892	ppb	1.321	1.672		55.000
159	Tb-ISK	|		163497.029		ppb	1.218			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, December 13, 2019 13:33:11

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.033

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32999.183		ppb	0.953		37254.114
9	Be	25.556	0.016931	ppb	27.152	38.114	7.778
10	B	3025.876	-0.474503	ppb	1.378	44.744	3055.883
27	Al	2092.379	0.072409	ppb	18.993	138.778	1737.888
43	Ca-2	70.000	1.446192	ppb	25.754	88.334	48.333
49	Ti	125.556	0.078577	ppb	13.096	51.294	91.111
52	Cr	6948.356	-0.255468	ppb	0.628	3.375	8210.136
55	Mn	704.462	0.030852	ppb	11.748	23.478	370.005
57	Fe	9160.716	0.443052	ppb	3.389	398.557	8777.141
45	Sc-IS	> 907220.780		ppb	0.986		878130.917
66	Zn	553.344	-0.028506	ppb	13.895	237.772	567.789
86	Sr	81.460	0.030149	ppb	12.789	15.322	15.304
65	Cu	97.238	0.023912	ppb	14.280	35.168	54.236
69	Ga-IS	374337.034		ppb	1.152		384193.801
95	Mo	3124.787	1.395660	ppb	5.417	6.169	67.778
115	In-IS	> 272433.631		ppb	0.283		281831.362
111	Cd	51.216	0.020161	ppb	52.430	74.105	15.413
118	Sn	11018.702	1.477219	ppb	5.905	7.385	2073.484
121	Sb	4311.763	0.613117	ppb	5.253	5.968	340.004
135	Ba	82.222	0.039781	ppb	2.341	3.719	25.556
165	Ho-IS	280605.613		ppb	2.341		285300.656
159	Tb-IS	> 323785.561		ppb	2.777		337118.831
207	Pb	1354.470	0.053121	ppb	1.847	1.333	110.000
203	Tl	410.006	0.051001	ppb	8.604	7.258	21.111
209	Bi-IS	220317.273		ppb	1.570		224574.816
51	V	38.889	0.059344	ppb	17.843	22.995	5.556
59	Co	64.445	0.038311	ppb	15.802	20.940	15.556
60	Ni	57.778	0.019851	ppb	18.546	61.106	43.333
75	As	809.063	0.320277	ppb	2.168	27.200	792.311
71	Ga-ISK	> 69276.506		ppb	2.117		78469.372
82	Se-2	16.922	0.472012	ppb	36.972	33.387	-1.477
107	Ag-1	2402.425	0.581349	ppb	5.350	3.450	142.223
115	In-ISK	85770.958		ppb	1.110		95060.025
45	Sc-ISK	> 175609.443		ppb	0.485		195110.036
23	Na	4402.347	7.897902	ppb	6.704	8.166	658.349
39	K	76206.058	11.818006	ppb	0.770	3.073	73472.919
24	Mg	1220.052	2.336268	ppb	4.337	4.791	55.000
159	Tb-ISK	161309.036		ppb	1.255		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, December 13, 2019 13:35:57

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.034

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33364.473		ppb	0.835		37254.114
9	Be	11.111	0.003117	ppb	17.321	59.741	7.778
10	B	2928.078	-0.694249	ppb	3.832	45.221	3055.883
27	Al	1905.683	0.032597	ppb	4.458	54.166	1737.888
43	Ca-2	61.667	0.907519	ppb	23.406	117.569	48.333
49	Ti	108.889	0.040431	ppb	6.372	40.841	91.111
52	Cr	7048.406	-0.223691	ppb	2.865	12.470	8210.136
55	Mn	538.899	0.015696	ppb	4.724	16.210	370.005
57	Fe	7608.694	-6.352237	ppb	3.048	18.910	8777.141
45	Sc-IS	> 895606.546		ppb	0.931		878130.917
66	Zn	635.570	0.049267	ppb	9.817	109.566	567.789
86	Sr	59.212	0.020247	ppb	35.690	47.792	15.304
65	Cu	71.885	0.009680	ppb	34.114	145.774	54.236
69	Ga-IS	373426.789		ppb	0.803		384193.801
95	Mo	982.256	0.422621	ppb	9.966	11.133	67.778
115	In-IS	> 269514.701		ppb	0.705		281831.362
111	Cd	31.271	0.009264	ppb	0.657	0.510	15.413
118	Sn	4561.842	0.427443	ppb	7.136	13.846	2073.484
121	Sb	2566.898	0.348907	ppb	6.556	8.311	340.004
135	Ba	54.445	0.020983	ppb	3.535	7.563	25.556
165	Ho-IS	278680.263		ppb	3.070		285300.656
159	Tb-IS	> 320165.935		ppb	2.379		337118.831
207	Pb	464.447	0.015480	ppb	13.737	17.499	110.000
203	Tl	147.779	0.016866	ppb	18.917	18.986	21.111
209	Bi-IS	214533.340		ppb	0.631		224574.816
51	V	18.889	0.024222	ppb	20.377	25.906	5.556
59	Co	21.111	0.005552	ppb	24.119	71.110	15.556
60	Ni	34.444	-0.003902	ppb	24.354	220.368	43.333
75	As	765.134	0.186650	ppb	0.171	14.618	792.311
71	Ga-ISK	> 69426.083		ppb	1.135		78469.372
82	Se-2	-0.115	0.029960	ppb	5740.623	569.007	-1.477
107	Ag-1	713.351	0.149680	ppb	6.978	7.060	142.223
115	In-ISK	85696.361		ppb	1.510		95060.025
45	Sc-ISK	> 176743.305		ppb	0.570		195110.036
23	Na	2965.309	4.877609	ppb	6.702	8.004	658.349
39	K	74433.414	9.181679	ppb	0.714	9.324	73472.919
24	Mg	516.676	0.926226	ppb	15.434	17.547	55.000
159	Tb-ISK	163008.163		ppb	1.262		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15471-A-1-A

Autosampler Position: 360

Sample Date/Time: Friday, December 13, 2019 13:38:43

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-15471-A-1-A.035

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	40077.249		ppb	0.242			37254.114
9	Be	|	83.334	0.071505	ppb	31.749	34.874		7.778
10	B	|	34166.373	110.228024	ppb	1.825	1.976		3055.883
27	Al	|	531658.189	126.067970	ppb	0.629	1.183		1737.888
43	Ca-2	|	1531062.574	108727.836463	ppb	0.204	0.591		48.333
49	Ti	|	1328.951	3.032727	ppb	2.133	2.291		91.111
52	Cr	|	17746.574	1.492327	ppb	1.714	2.375		8210.136
55	Mn	|	774624.425	72.973660	ppb	0.689	1.280		370.005
57	Fe	|	106606.309	447.072211	ppb	0.786	1.385		8777.141
45	Sc-IS	>	923129.706		ppb	0.597			878130.917
66	Zn	|	38954.150	32.462460	ppb	0.652	1.204		567.789
86	Sr	|	1047503.210	473.031804	ppb	1.381	1.770		15.304
65	Cu	|	911.918	0.486925	ppb	3.142	3.604		54.236
69	Ga-IS	|	383632.852		ppb	0.121			384193.801
95	Mo	|	1984.583	0.859047	ppb	6.380	7.058		67.778
115	In-IS	>	256040.956		ppb	0.115			281831.362
111	Cd	|	33.610	0.011565	ppb	15.389	26.262		15.413
118	Sn	|	1598.978	-0.049655	ppb	3.708	20.279		2073.484
121	Sb	|	256.669	-0.008554	ppb	8.998	43.855		340.004
135	Ba	|	463892.681	341.340915	ppb	0.255	0.303		25.556
165	Ho-IS	|	285377.267		ppb	3.050			285300.656
159	Tb-IS	>	324206.252		ppb	1.961			337118.831
207	Pb	|	827.787	0.030692	ppb	4.490	7.158		110.000
203	Tl	|	130.001	0.014345	ppb	13.324	15.542		21.111
209	Bi-IS	|	145180.701		ppb	1.055			224574.816
51	V	|	252.224	0.446351	ppb	8.075	8.188		5.556
59	Co	|	514.454	0.392327	ppb	10.128	12.400		15.556
60	Ni	|	2595.792	2.674001	ppb	4.827	4.845		43.333
75	As	|	896.336	0.669414	ppb	11.472	49.234		792.311
71	Ga-ISK	>	66870.643		ppb	2.300			78469.372
82	Se-2	|	140.193	3.801201	ppb	10.930	9.175		-1.477
107	Ag-1	|	1101.154	0.258852	ppb	13.204	12.348		142.223
115	In-ISK	|	82318.209		ppb	0.828			95060.025
45	Sc-ISK	>	182119.264		ppb	1.627			195110.036
23	Na	|	52138086.153	104208.819816	ppb	0.863	1.040		658.349
39	K	|	1962215.537	2141.615434	ppb	1.783	0.665		73472.919
24	Mg	|	27861128.045	53622.175937	ppb	0.683	1.363		55.000
159	Tb-ISK	|	162125.467		ppb	0.675			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15471-A-2-A

Autosampler Position: 401

Sample Date/Time: Friday, December 13, 2019 13:41:28

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-15471-A-2-A.036

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		40351.369		ppb		2.095		37254.114
9	Be	|		6.667	-0.001657	ppb	50.000	181.975		7.778
10	B	|		33200.761	103.002784	ppb	1.102	0.173		3055.883
27	Al	|		76883.022	17.274806	ppb	1.361	2.279		1737.888
43	Ca-2	|		1522431.553	104649.582839	ppb	1.281	0.440		48.333
49	Ti	|		893.361	1.890491	ppb	10.348	11.120		91.111
52	Cr	|		16906.666	1.266316	ppb	1.221	1.684		8210.136
55	Mn	|		663441.530	60.493458	ppb	0.414	1.095		370.005
57	Fe	|		137675.795	569.479268	ppb	0.453	0.878		8777.141
45	Sc-IS	>		953658.146		ppb	0.947			878130.917
66	Zn	|		1869.011	1.025701	ppb	6.015	8.272		567.789
86	Sr	|		1018080.617	445.025208	ppb	0.601	0.948		15.304
65	Cu	|		724.454	0.366910	ppb	1.380	0.629		54.236
69	Ga-IS	|		389720.094		ppb	0.788			384193.801
95	Mo	|		12812.412	5.535260	ppb	2.331	2.163		67.778
115	In-IS	>		254027.610		ppb	1.719			281831.362
111	Cd	|		6.427	-0.004512	ppb	177.433	150.251		15.413
118	Sn	|		1395.624	-0.082994	ppb	6.161	22.376		2073.484
121	Sb	|		550.011	0.040255	ppb	5.845	15.787		340.004
135	Ba	|		486772.674	361.041067	ppb	1.115	0.614		25.556
165	Ho-IS	|		278702.633		ppb	2.796			285300.656
159	Tb-IS	>		317757.661		ppb	1.261			337118.831
207	Pb	|		717.785	0.026618	ppb	4.878	6.175		110.000
203	Tl	|		103.334	0.011119	ppb	32.738	39.670		21.111
209	Bi-IS	|		176586.967		ppb	0.793			224574.816
51	V	|		147.779	0.269590	ppb	22.594	25.376		5.556
59	Co	|		534.454	0.424251	ppb	3.655	6.013		15.556
60	Ni	|		1914.573	2.041018	ppb	2.077	0.553		43.333
75	As	|		807.857	0.498283	ppb	8.780	48.270		792.311
71	Ga-ISK	>		64329.023		ppb	2.617			78469.372
82	Se-2	|		73.232	2.086427	ppb	12.186	14.266		-1.477
107	Ag-1	|		167.779	0.014074	ppb	13.955	45.079		142.223
115	In-ISK	|		79617.944		ppb	1.426			95060.025
45	Sc-ISK	>		177106.717		ppb	1.102			195110.036
23	Na	|		48488055.858	99654.726785	ppb	0.088	1.149		658.349
39	K	|		2266794.373	2558.982181	ppb	1.338	2.160		73472.919
24	Mg	|		26005758.584	51465.088685	ppb	0.360	1.163		55.000
159	Tb-ISK	|		159306.048		ppb	1.034			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15471-A-3-A

Autosampler Position: 402

Sample Date/Time: Friday, December 13, 2019 13:44:14

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-15471-A-3-A.037

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		38441.666		ppb		2.009		37254.114
9	Be	|		8.889	0.000444	ppb	43.301	806.525		7.778
10	B	|		32019.180	99.363040	ppb	1.307	1.784		3055.883
27	Al	|		77691.803	17.528262	ppb	0.548	0.584		1737.888
43	Ca-2	|		1507265.840	104012.654699	ppb	0.370	0.660		48.333
49	Ti	|		861.137	1.822564	ppb	4.536	5.422		91.111
52	Cr	|		15067.945	0.984273	ppb	2.126	5.713		8210.136
55	Mn	|		656997.013	60.134000	ppb	1.151	1.024		370.005
57	Fe	|		137642.244	571.661943	ppb	1.603	1.404		8777.141
45	Sc-IS	>		949969.231		ppb	0.294			878130.917
66	Zn	|		5805.624	4.269178	ppb	0.979	0.778		567.789
86	Sr	|		1011992.891	444.064050	ppb	0.344	0.504		15.304
65	Cu	|		727.407	0.370083	ppb	5.953	6.338		54.236
69	Ga-IS	|		378973.334		ppb	0.760			384193.801
95	Mo	|		13531.962	5.870853	ppb	0.886	1.126		67.778
115	In-IS	>		250631.233		ppb	0.411			281831.362
111	Cd	|		11.583	-0.001258	ppb	133.984	744.062		15.413
118	Sn	|		1241.165	-0.107358	ppb	0.559	1.948		2073.484
121	Sb	|		674.460	0.062239	ppb	8.791	15.583		340.004
135	Ba	|		481848.491	362.216027	ppb	0.846	1.157		25.556
165	Ho-IS	|		276515.905		ppb	3.470			285300.656
159	Tb-IS	>		314271.935		ppb	1.471			337118.831
207	Pb	|		531.115	0.018795	ppb	8.475	11.755		110.000
203	Tl	|		87.778	0.009214	ppb	21.593	29.473		21.111
209	Bi-IS	|		180034.069		ppb	1.018			224574.816
51	V	|		145.556	0.269078	ppb	13.804	14.097		5.556
59	Co	|		580.012	0.469351	ppb	3.041	5.165		15.556
60	Ni	|		1864.566	2.021195	ppb	3.422	1.281		43.333
75	As	|		812.758	0.560350	ppb	9.172	52.321		792.311
71	Ga-ISK	>		63237.491		ppb	2.497			78469.372
82	Se-2	|		61.195	1.779726	ppb	30.327	30.841		-1.477
107	Ag-1	|		53.333	-0.017196	ppb	38.017	31.682		142.223
115	In-ISK	|		78022.038		ppb	1.573			95060.025
45	Sc-ISK	>		171900.355		ppb	1.070			195110.036
23	Na	|		47125721.437	99787.951876	ppb	0.626	1.301		658.349
39	K	|		2231540.581	2596.694719	ppb	1.286	2.419		73472.919
24	Mg	|		25378805.180	51750.510788	ppb	1.431	2.503		55.000
159	Tb-ISK	|		156601.019		ppb	0.719			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-15472-A-1-A @5
 Autosampler Position: 403
 Sample Date/Time: Friday, December 13, 2019 13:46:58
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2019\191213E1\570-15472-A-1-A @5.038
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33782.119		ppb	0.548		37254.114
9	Be	27.778	0.019012	ppb	38.575	54.065	7.778
10	B	9503.161	22.861985	ppb	2.244	3.159	3055.883
27	Al	107487.542	25.489050	ppb	2.988	3.147	1737.888
43	Ca-2	313694.239	22577.029628	ppb	1.936	1.840	48.333
49	Ti	413.339	0.794658	ppb	6.601	8.088	91.111
52	Cr	10885.257	0.393430	ppb	1.020	5.868	8210.136
55	Mn	181421.451	17.295068	ppb	0.976	0.979	370.005
57	Fe	32881.137	110.654068	ppb	1.523	2.404	8777.141
45	Sc-IS	> 910716.026		ppb	0.403		878130.917
66	Zn	874.472	0.245224	ppb	12.907	40.512	567.789
86	Sr	215420.272	98.594899	ppb	0.296	0.115	15.304
65	Cu	325.367	0.155379	ppb	3.591	4.803	54.236
69	Ga-IS	365352.014		ppb	0.892		384193.801
95	Mo	3752.715	1.675566	ppb	3.511	3.639	67.778
115	In-IS	> 258532.833		ppb	0.888		281831.362
111	Cd	24.342	0.005957	ppb	16.880	39.543	15.413
118	Sn	2910.297	0.174252	ppb	4.474	15.528	2073.484
121	Sb	427.784	0.018800	ppb	2.737	10.798	340.004
135	Ba	92365.449	67.297187	ppb	1.331	1.337	25.556
165	Ho-IS	274901.127		ppb	3.799		285300.656
159	Tb-IS	> 312898.272		ppb	2.049		337118.831
207	Pb	421.114	0.014016	ppb	13.063	14.928	110.000
203	Tl	91.111	0.009685	ppb	20.803	26.225	21.111
209	Bi-IS	168427.077		ppb	0.643		224574.816
51	V	77.778	0.137647	ppb	6.547	7.395	5.556
59	Co	162.223	0.121831	ppb	20.582	22.697	15.556
60	Ni	550.011	0.560187	ppb	7.925	8.160	43.333
75	As	772.592	0.392074	ppb	1.648	6.924	792.311
71	Ga-ISK	> 64168.240		ppb	0.634		78469.372
82	Se-2	30.901	0.899511	ppb	14.827	13.697	-1.477
107	Ag-1	21.111	-0.026251	ppb	24.119	5.417	142.223
115	In-ISK	79180.177		ppb	0.566		95060.025
45	Sc-ISK	> 168203.898		ppb	2.953		195110.036
23	Na	10087367.152	21840.300355	ppb	0.952	3.343	658.349
39	K	442451.912	464.613726	ppb	0.718	4.201	73472.919
24	Mg	5566620.690	11605.280317	ppb	0.669	3.118	55.000
159	Tb-ISK	159079.486		ppb	0.243		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15472-A-2-A

Autosampler Position: 404

Sample Date/Time: Friday, December 13, 2019 13:49:43

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-15472-A-2-A.039

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	37997.141		ppb	1.661		37254.114
9	Be	26.667	0.016703	ppb	21.651	31.257	7.778
10	B	32088.221	98.817361	ppb	0.793	1.168	3055.883
27	Al	190435.436	43.285883	ppb	1.086	1.383	1737.888
43	Ca-2	1531097.912	104912.339648	ppb	0.278	0.674	48.333
49	Ti	903.362	1.908145	ppb	2.420	2.942	91.111
52	Cr	20101.914	1.762676	ppb	1.695	3.762	8210.136
55	Mn	1065054.222	96.819062	ppb	0.286	0.473	370.005
57	Fe	150409.896	623.901841	ppb	0.453	0.275	8777.141
45	Sc-IS	> 956719.369		ppb	0.401		878130.917
66	Zn	5394.352	3.900063	ppb	2.495	3.275	567.789
86	Sr	1007150.733	438.822094	ppb	0.298	0.466	15.304
65	Cu	904.545	0.464629	ppb	7.609	8.219	54.236
69	Ga-IS	372780.127		ppb	0.579		384193.801
95	Mo	16813.227	7.249829	ppb	2.856	2.469	67.778
115	In-IS	> 248684.078		ppb	0.766		281831.362
111	Cd	19.137	0.003391	ppb	49.104	170.861	15.413
118	Sn	1101.154	-0.130687	ppb	7.696	12.674	2073.484
121	Sb	537.788	0.040151	ppb	13.066	31.005	340.004
135	Ba	405799.816	307.429911	ppb	0.889	0.740	25.556
165	Ho-IS	274997.590		ppb	1.599		285300.656
159	Tb-IS	> 310433.538		ppb	0.983		337118.831
207	Pb	495.559	0.017482	ppb	5.877	6.297	110.000
203	Tl	74.445	0.007498	ppb	22.977	29.728	21.111
209	Bi-IS	169382.822		ppb	1.388		224574.816
51	V	568.900	1.111809	ppb	4.239	3.957	5.556
59	Co	666.682	0.558700	ppb	2.784	2.389	15.556
60	Ni	2851.396	3.215285	ppb	2.400	2.258	43.333
75	As	881.120	0.866436	ppb	4.414	13.337	792.311
71	Ga-ISK	> 61224.249		ppb	0.442		78469.372
82	Se-2	75.909	2.264331	ppb	14.700	14.730	-1.477
107	Ag-1	23.333	-0.025336	ppb	28.571	7.494	142.223
115	In-ISK	77677.527		ppb	0.538		95060.025
45	Sc-ISK	> 168934.115		ppb	0.542		195110.036
23	Na	45987386.509	99083.820957	ppb	0.811	1.314	658.349
39	K	2154498.097	2549.342754	ppb	0.357	0.869	73472.919
24	Mg	25643931.147	53203.253299	ppb	1.467	1.951	55.000
159	Tb-ISK	154726.082		ppb	0.650		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15472-A-3-A

Autosampler Position: 405

Sample Date/Time: Friday, December 13, 2019 13:52:28

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-15472-A-3-A.040

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		37930.292		ppb		1.116		37254.114
9	Be	|		6.667	-0.001776	ppb	50.000	168.088		7.778
10	B	|		31802.036	95.808437	ppb	2.186	1.739		3055.883
27	Al	|		74506.011	16.355341	ppb	0.539	1.229		1737.888
43	Ca-2	|		1515134.334	101903.880876	ppb	0.142	0.679		48.333
49	Ti	|		891.139	1.839984	ppb	9.058	10.120		91.111
52	Cr	|		18063.637	1.388057	ppb	1.358	3.816		8210.136
55	Mn	|		649572.363	57.947927	ppb	0.643	1.290		370.005
57	Fe	|		137635.519	556.080039	ppb	1.651	1.862		8777.141
45	Sc-IS	>		974704.513		ppb	0.656			878130.917
66	Zn	|		1618.981	0.792611	ppb	4.365	7.583		567.789
86	Sr	|		1007087.593	430.722202	ppb	1.357	1.840		15.304
65	Cu	|		669.460	0.328626	ppb	5.411	5.838		54.236
69	Ga-IS	|		384576.657		ppb	0.375			384193.801
95	Mo	|		14130.321	5.975332	ppb	2.291	2.201		67.778
115	In-IS	>		250468.716		ppb	0.640			281831.362
111	Cd	|		5.882	-0.004733	ppb	175.042	131.258		15.413
118	Sn	|		900.028	-0.168008	ppb	1.482	2.023		2073.484
121	Sb	|		616.680	0.052671	ppb	4.222	9.395		340.004
135	Ba	|		472618.154	355.493751	ppb	1.290	0.932		25.556
165	Ho-IS	|		272623.155		ppb	3.427			285300.656
159	Tb-IS	>		311505.332		ppb	2.408			337118.831
207	Pb	|		323.335	0.009801	ppb	3.571	4.398		110.000
203	Tl	|		52.222	0.004436	ppb	22.416	32.894		21.111
209	Bi-IS	|		178849.425		ppb	1.540			224574.816
51	V	|		162.223	0.311231	ppb	15.422	17.342		5.556
59	Co	|		561.122	0.469010	ppb	9.075	11.821		15.556
60	Ni	|		1732.328	1.936082	ppb	6.328	5.700		43.333
75	As	|		751.691	0.438852	ppb	4.829	32.730		792.311
71	Ga-ISK	>		61289.020		ppb	2.424			78469.372
82	Se-2	|		66.562	1.986454	ppb	4.825	2.572		-1.477
107	Ag-1	|		20.000	-0.026271	ppb	28.868	6.974		142.223
115	In-ISK	|		77422.384		ppb	0.379			95060.025
45	Sc-ISK	>		167615.371		ppb	0.302			195110.036
23	Na	|		45677206.198	99182.739961	ppb	2.393	2.209		658.349
39	K	|		2148962.294	2563.100353	ppb	1.616	1.524		73472.919
24	Mg	|		24600693.421	51438.002690	ppb	1.371	1.522		55.000
159	Tb-ISK	|		154499.653		ppb	0.676			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, December 13, 2019 13:56:48

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCV-210770.041

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		29668.563		ppb		2.117		37254.114
9	Be	|		90861.446	87.297472	ppb		1.984	3.328	7.778
10	B	|		62161.663	211.878868	ppb		2.302	1.779	3055.883
27	Al	|		377127.481	90.106380	ppb		0.133	1.768	1737.888
43	Ca-2	|		69691.268	4990.299010	ppb		1.478	2.285	48.333
49	Ti	|		38686.760	95.765586	ppb		0.921	1.956	91.111
52	Cr	|		576768.545	93.864702	ppb		0.536	1.337	8210.136
55	Mn	|		979083.390	93.072431	ppb		0.517	1.666	370.005
57	Fe	|		1051803.851	4830.163827	ppb		0.541	2.190	8777.141
45	Sc-IS	>		915055.311		ppb		1.859		878130.917
66	Zn	|		113966.122	96.811472	ppb		0.395	1.543	567.789
86	Sr	|		204050.704	92.974347	ppb		0.477	2.319	15.304
65	Cu	|		169950.778	97.631252	ppb		0.517	1.490	54.236
69	Ga-IS	|		371044.897		ppb		0.974		384193.801
95	Mo	|		200986.333	91.000786	ppb		1.252	1.867	67.778
115	In-IS	>		257555.407		ppb		1.626		281831.362
111	Cd	|		169837.731	99.595927	ppb		1.271	0.381	15.413
118	Sn	|		574431.198	99.239279	ppb		2.086	1.614	2073.484
121	Sb	|		620201.687	100.920206	ppb		1.804	0.622	340.004
135	Ba	|		139961.271	102.379690	ppb		1.516	1.731	25.556
165	Ho-IS	|		274983.946		ppb		2.955		285300.656
159	Tb-IS	>		313876.107		ppb		2.113		337118.831
207	Pb	|		2257635.128	99.051179	ppb		1.534	1.091	110.000
203	Tl	|		730790.148	98.719086	ppb		2.188	0.591	21.111
209	Bi-IS	|		226538.562		ppb		2.844		224574.816
51	V	|		54036.475	103.698211	ppb		1.952	2.193	5.556
59	Co	|		126366.662	105.107436	ppb		2.470	2.703	15.556
60	Ni	|		88659.920	98.548379	ppb		2.290	2.045	43.333
75	As	|		31820.506	100.182193	ppb		1.857	2.110	792.311
71	Ga-ISK	>		62830.086		ppb		0.249		78469.372
82	Se-2	|		3449.626	98.783408	ppb		0.600	0.849	-1.477
107	Ag-1	|		273419.055	76.981707	ppb		4.124	4.199	142.223
115	In-ISK	|		77386.880		ppb		1.913		95060.025
45	Sc-ISK	>		161166.476		ppb		2.012		195110.036
23	Na	|		2244350.414	5067.807467	ppb		1.349	0.824	658.349
39	K	|		4126783.636	5196.924977	ppb		1.861	1.486	73472.919
24	Mg	|		2361667.565	5136.964618	ppb		0.548	2.247	55.000
159	Tb-ISK	|		154525.298		ppb		1.060		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Be 9
B 10
Ag-1 107

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, December 13, 2019 14:00:57

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.042

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28937.057		ppb	0.735		37254.114
9	Be	13.333	0.005112	ppb	43.301	107.628	7.778
10	B	2644.689	-1.843007	ppb	1.360	11.578	3055.883
27	Al	1632.316	-0.038639	ppb	12.665	139.800	1737.888
43	Ca-2	125.001	5.423048	ppb	28.000	45.536	48.333
49	Ti	124.445	0.076432	ppb	20.458	84.481	91.111
52	Cr	7304.091	-0.194736	ppb	4.197	24.061	8210.136
55	Mn	478.897	0.009320	ppb	3.503	13.015	370.005
57	Fe	8161.223	-4.171038	ppb	4.670	52.409	8777.141
45	Sc-IS	> 906046.459		ppb	1.026		878130.917
66	Zn	585.568	0.000147	ppb	10.12538527	895	567.789
86	Sr	76.953	0.028131	ppb	39.103	48.797	15.304
65	Cu	89.712	0.019533	ppb	22.758	58.621	54.236
69	Ga-IS	357547.288		ppb	1.194		384193.801
95	Mo	1037.816	0.442927	ppb	7.664	9.287	67.778
115	In-IS	> 259767.560		ppb	1.556		281831.362
111	Cd	23.376	0.005287	ppb	43.524	107.917	15.413
118	Sn	5236.516	0.571957	ppb	4.213	8.867	2073.484
121	Sb	996.701	0.110269	ppb	4.718	5.457	340.004
135	Ba	91.111	0.049053	ppb	30.682	41.817	25.556
165	Ho-IS	274989.554		ppb	3.861		285300.656
159	Tb-IS	> 313636.884		ppb	2.496		337118.831
207	Pb	544.449	0.019459	ppb	11.228	16.735	110.000
203	Tl	163.334	0.019396	ppb	10.799	9.604	21.111
209	Bi-IS	204989.242		ppb	1.067		224574.816
51	V	22.222	0.033605	ppb	22.913	29.402	5.556
59	Co	42.222	0.024274	ppb	22.790	31.427	15.556
60	Ni	60.000	0.027320	ppb	24.216	59.408	43.333
75	As	678.169	0.113381	ppb	6.780	141.307	792.311
71	Ga-ISK	> 63647.028		ppb	0.702		78469.372
82	Se-2	3.562	0.134920	ppb	207.591	155.642	-1.477
107	Ag-1	2892.515	0.772083	ppb	4.220	3.852	142.223
115	In-ISK	78624.454		ppb	0.450		95060.025
45	Sc-ISK	> 160230.318		ppb	1.170		195110.036
23	Na	3875.526	7.573982	ppb	3.140	2.278	658.349
39	K	70846.353	13.514543	ppb	0.622	7.530	73472.919
24	Mg	1641.761	3.490857	ppb	6.867	6.070	55.000
159	Tb-ISK	154992.983		ppb	0.988		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-15472-A-1-A

Autosampler Position: 417

Sample Date/Time: Friday, December 13, 2019 14:08:31

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-15472-A-1-A .043

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	36617.985		ppb	0.953			37254.114
9	Be	|	65.556	0.053303	ppb	48.327	56.513		7.778
10	B	|	32334.330	100.862072	ppb	0.579	1.539		3055.883
27	Al	|	498402.750	115.239110	ppb	3.133	3.923		1737.888
43	Ca-2	|	1549760.194	107330.851713	ppb	1.217	1.081		48.333
49	Ti	|	1552.307	3.489130	ppb	4.964	6.511		91.111
52	Cr	|	17937.923	1.451185	ppb	1.158	2.628		8210.136
55	Mn	|	865451.135	79.526764	ppb	1.669	2.814		370.005
57	Fe	|	116825.776	480.760018	ppb	1.004	2.227		8777.141
45	Sc-IS	>	946574.682		ppb	1.131			878130.917
66	Zn	|	2025.699	1.167289	ppb	3.539	6.654		567.789
86	Sr	|	1032674.660	454.831466	ppb	1.255	2.230		15.304
65	Cu	|	1136.937	0.599030	ppb	1.777	1.752		54.236
69	Ga-IS	|	373844.066		ppb	0.590			384193.801
95	Mo	|	3284.825	1.407305	ppb	11.365	12.789		67.778
115	In-IS	>	249867.764		ppb	0.895			281831.362
111	Cd	|	19.769	0.003723	ppb	69.628	225.803		15.413
118	Sn	|	2394.645	0.099497	ppb	3.526	18.626		2073.484
121	Sb	|	230.002	-0.011992	ppb	5.020	15.205		340.004
135	Ba	|	451564.034	340.483569	ppb	0.990	0.835		25.556
165	Ho-IS	|	280161.988		ppb	1.456			285300.656
159	Tb-IS	>	315892.395		ppb	1.009			337118.831
207	Pb	|	393.336	0.012652	ppb	8.969	11.982		110.000
203	Tl	|	73.334	0.007198	ppb	20.830	29.238		21.111
209	Bi-IS	|	142306.459		ppb	1.234			224574.816
51	V	|	274.447	0.531860	ppb	3.057	4.447		5.556
59	Co	|	555.566	0.463533	ppb	6.158	5.815		15.556
60	Ni	|	2568.009	2.892023	ppb	2.562	4.985		43.333
75	As	|	908.134	0.953681	ppb	2.901	6.013		792.311
71	Ga-ISK	>	61270.048		ppb	2.389			78469.372
82	Se-2	|	101.865	3.023766	ppb	5.480	4.519		-1.477
107	Ag-1	|	46.667	-0.018598	ppb	37.796	27.152		142.223
115	In-ISK	|	77238.180		ppb	0.949			95060.025
45	Sc-ISK	>	168126.929		ppb	0.882			195110.036
23	Na	|	48341800.904	104653.686047	ppb	0.919	0.747		658.349
39	K	|	1899859.107	2250.051418	ppb	0.083	0.971		73472.919
24	Mg	|	25992826.286	54183.572267	ppb	0.568	0.360		55.000
159	Tb-ISK	|	156450.748		ppb	1.011			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, December 13, 2019 14:12:31

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCV-210770.044

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29028.358		ppb		1.869		37254.114
9	Be	|	89098.114	87.282680	ppb		1.047	1.935	7.778
10	B	|	61311.294	213.223576	ppb		0.939	2.151	3055.883
27	Al	|	379705.736	92.528387	ppb		0.762	1.934	1737.888
43	Ca-2	|	68436.876	4997.466681	ppb		0.887	2.071	48.333
49	Ti	|	38282.340	96.635701	ppb		1.031	1.588	91.111
52	Cr	|	580075.255	96.310929	ppb		0.663	1.875	8210.136
55	Mn	|	984799.263	95.463331	ppb		0.934	1.373	370.005
57	Fe	|	1054050.187	4936.682069	ppb		0.742	1.524	8777.141
45	Sc-IS	>	897258.068		ppb		1.310		878130.917
66	Zn	|	112981.691	97.877959	ppb		0.686	1.567	567.789
86	Sr	|	206646.083	96.001561	ppb		1.408	1.283	15.304
65	Cu	|	168637.125	98.799300	ppb		1.667	2.597	54.236
69	Ga-IS	|	368398.692		ppb		0.715		384193.801
95	Mo	|	203232.241	93.827055	ppb		1.332	0.136	67.778
115	In-IS	>	258111.366		ppb		0.812		281831.362
111	Cd	|	170309.687	99.654790	ppb		0.672	0.344	15.413
118	Sn	|	571975.191	98.596879	ppb		0.902	0.154	2073.484
121	Sb	|	623908.642	101.303712	ppb		1.176	0.363	340.004
135	Ba	|	140607.522	102.618304	ppb		1.100	0.397	25.556
165	Ho-IS	|	276982.595		ppb		2.370		285300.656
159	Tb-IS	>	314114.323		ppb		1.804		337118.831
207	Pb	|	2290950.209	100.429652	ppb		1.482	0.376	110.000
203	Tl	|	740947.931	100.027551	ppb		1.246	1.392	21.111
209	Bi-IS	|	217645.942		ppb		2.225		224574.816
51	V	|	54489.287	102.215555	ppb		1.267	1.648	5.556
59	Co	|	125498.882	102.032213	ppb		1.103	0.915	15.556
60	Ni	|	89459.368	97.183028	ppb		2.732	1.074	43.333
75	As	|	32390.187	99.675556	ppb		1.706	2.248	792.311
71	Ga-ISK	>	64284.351		ppb		2.026		78469.372
82	Se-2	|	3593.664	100.645294	ppb		3.077	5.018	-1.477
107	Ag-1	|	224736.734	61.854860	ppb		2.239	3.185	142.223
115	In-ISK	|	78370.516		ppb		1.081		95060.025
45	Sc-ISK	>	164027.829		ppb		2.590		195110.036
23	Na	|	2296550.693	5095.611294	ppb		1.611	1.033	658.349
39	K	|	4196995.569	5192.716957	ppb		2.821	1.367	73472.919
24	Mg	|	2424252.137	5181.286590	ppb		0.725	1.895	55.000
159	Tb-ISK	|	156281.529		ppb		0.409		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Be 9
B 10
Ag-1 107

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, December 13, 2019 14:15:16

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.045

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29677.466		ppb	1.628		37254.114
9	Be	18.889	0.010635	ppb	26.956	45.610	7.778
10	B	2623.574	-1.858755	ppb	1.009	7.222	3055.883
27	Al	1517.859	-0.064428	ppb	9.448	52.228	1737.888
43	Ca-2	131.667	5.980043	ppb	7.905	12.556	48.333
49	Ti	128.889	0.089445	ppb	12.222	43.697	91.111
52	Cr	7096.207	-0.221558	ppb	1.494	11.526	8210.136
55	Mn	554.455	0.016925	ppb	1.736	3.565	370.005
57	Fe	9425.331	2.016605	ppb	1.772	50.665	8777.141
45	Sc-IS	> 900208.786		ppb	0.711		878130.917
66	Zn	480.008	-0.088567	ppb	9.028	42.292	567.789
86	Sr	83.607	0.031536	ppb	69.443	85.498	15.304
65	Cu	90.571	0.020378	ppb	21.604	54.308	54.236
69	Ga-IS	361446.719		ppb	0.826		384193.801
95	Mo	2853.619	1.281889	ppb	4.799	5.574	67.778
115	In-IS	> 265443.818		ppb	0.969		281831.362
111	Cd	50.674	0.020607	ppb	17.100	25.156	15.413
118	Sn	11350.069	1.581074	ppb	4.731	6.835	2073.484
121	Sb	1083.375	0.120621	ppb	6.177	9.983	340.004
135	Ba	64.445	0.028692	ppb	10.767	18.615	25.556
165	Ho-IS	278553.854		ppb	2.401		285300.656
159	Tb-IS	> 316037.599		ppb	2.272		337118.831
207	Pb	1238.910	0.049496	ppb	3.142	3.361	110.000
203	Tl	302.225	0.037966	ppb	13.702	16.553	21.111
209	Bi-IS	198713.990		ppb	2.028		224574.816
51	V	33.333	0.054517	ppb	52.915	61.901	5.556
59	Co	48.889	0.029670	ppb	3.936	6.491	15.556
60	Ni	60.000	0.027062	ppb	5.556	11.838	43.333
75	As	717.040	0.230183	ppb	9.532	102.314	792.311
71	Ga-ISK	> 63846.809		ppb	0.911		78469.372
82	Se-2	12.935	0.398123	ppb	48.199	44.202	-1.477
107	Ag-1	1792.336	0.465078	ppb	12.628	14.338	142.223
115	In-ISK	79402.916		ppb	1.194		95060.025
45	Sc-ISK	> 159915.691		ppb	1.020		195110.036
23	Na	4745.789	9.573569	ppb	4.038	4.503	658.349
39	K	70704.543	13.513185	ppb	0.675	10.312	73472.919
24	Mg	2591.903	5.579718	ppb	7.003	6.288	55.000
159	Tb-ISK	156480.358		ppb	0.472		176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, December 13, 2019 14:18:02

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.046

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		29743.156		ppb		1.259		37254.114
9	Be	|		11.111	0.003098	ppb	62.450	221.469		7.778
10	B	|		2525.779	-2.253129	ppb	5.094	13.719		3055.883
27	Al	|		1482.300	-0.074629	ppb	9.585	38.346		1737.888
43	Ca-2	|		118.334	5.010452	ppb	31.714	56.727		48.333
49	Ti	|		101.111	0.018706	ppb	16.262	229.690		91.111
52	Cr	|		7122.887	-0.221526	ppb	1.852	1.525		8210.136
55	Mn	|		511.120	0.012519	ppb	9.503	30.597		370.005
57	Fe	|		8325.759	-3.298768	ppb	0.244	17.412		8777.141
45	Sc-IS	>		903470.731		ppb	1.721			878130.917
66	Zn	|		520.009	-0.055650	ppb	5.007	26.339		567.789
86	Sr	|		64.194	0.022323	ppb	11.749	13.562		15.304
65	Cu	|		88.533	0.019058	ppb	15.376	42.200		54.236
69	Ga-IS	|		362445.946		ppb	0.687			384193.801
95	Mo	|		597.790	0.242201	ppb	2.576	2.346		67.778
115	In-IS	>		261761.133		ppb	0.706			281831.362
111	Cd	|		30.967	0.009618	ppb	27.173	51.200		15.413
118	Sn	|		4417.351	0.425147	ppb	5.986	11.834		2073.484
121	Sb	|		503.342	0.030010	ppb	10.022	25.068		340.004
135	Ba	|		48.889	0.018072	ppb	20.830	39.158		25.556
165	Ho-IS	|		281424.696		ppb	4.138			285300.656
159	Tb-IS	>		316819.240		ppb	3.283			337118.831
207	Pb	|		398.891	0.012836	ppb	5.564	3.288		110.000
203	Tl	|		105.556	0.011457	ppb	18.504	21.766		21.111
209	Bi-IS	|		200426.375		ppb	1.452			224574.816
51	V	|		14.444	0.018336	ppb	13.323	20.491		5.556
59	Co	|		21.111	0.006571	ppb	63.812	161.514		15.556
60	Ni	|		23.333	-0.013410	ppb	42.857	82.104		43.333
75	As	|		738.498	0.260474	ppb	1.097	8.759		792.311
71	Ga-ISK	>		64858.042		ppb	1.887			78469.372
82	Se-2	|		5.245	0.181711	ppb	162.898	132.176		-1.477
107	Ag-1	|		388.894	0.073763	ppb	22.586	29.559		142.223
115	In-ISK	|		79031.349		ppb	0.110			95060.025
45	Sc-ISK	>		162809.207		ppb	0.973			195110.036
23	Na	|		3021.987	5.530536	ppb	5.399	7.826		658.349
39	K	|		68432.411	9.018045	ppb	0.919	14.256		73472.919
24	Mg	|		1280.058	2.656832	ppb	7.842	8.143		55.000
159	Tb-ISK	|		155492.330		ppb	0.582			176260.088

QC Out of Limits

AnalyteMassOut of Limits Message

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Friday, December 13, 2019 11:16:30

File Name: Default.tun

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1242	2062	0.708	
Mg 24	23.985	23.975	4618	2062	0.699	
In 115	114.904	114.875	22800	2056	0.715	
U	238.050	238.025	47437	2047	0.723	

Report Date/Time: Friday, December 13, 2019 11:17:49

Page 1

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Friday, December 13, 2019 23:16:54

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\ICIS-23447.252

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30381.191		ppb			3.784	
9	Be	|		3.333		ppb			100.000	
10	B	|		2497.996		ppb			1.700	
27	Al	|		1598.978		ppb			4.424	
43	Ca-2	|		53.333		ppb			30.136	
49	Ti	|		87.778		ppb			24.708	
52	Cr	|		8025.629		ppb			16.653	
55	Mn	|		505.565		ppb			4.488	
57	Fe	|		7066.192		ppb			1.686	
45	Sc-IS	|>		914486.958		ppb			0.886	
66	Zn	|		540.010		ppb			8.351	
86	Sr	|		25.904		ppb			121.431	
65	Cu	|		46.446		ppb			21.432	
69	Ga-IS	|		359905.341		ppb			1.090	
95	Mo	|		548.900		ppb			12.873	
115	In-IS	|>		261415.993		ppb			1.493	
111	Cd	|		6.625		ppb			104.523	
118	Sn	|		2825.836		ppb			7.095	
121	Sb	|		494.453		ppb			9.301	
135	Ba	|		48.889		ppb			7.873	
165	Ho-IS	|		278426.605		ppb			1.928	
159	Tb-IS	|>		316501.167		ppb			0.921	
207	Pb	|		284.446		ppb			6.454	
203	Tl	|		57.778		ppb			17.625	
209	Bi-IS	|		207142.422		ppb			1.866	
51	V	|		8.889		ppb			57.282	
59	Co	|		15.556		ppb			65.465	
60	Ni	|		38.889		ppb			26.186	
75	As	|		746.103		ppb			2.395	
71	Ga-ISK	|>		63152.627		ppb			1.155	
82	Se-2	|		2.914		ppb			182.616	
107	Ag-1	|		863.359		ppb			3.803	
115	In-ISK	|		78772.262		ppb			2.401	
45	Sc-ISK	|>		160691.004		ppb			1.166	
23	Na	|		1161.714		ppb			5.601	
39	K	|		71564.393		ppb			1.692	
24	Mg	|		131.667		ppb			9.557	
159	Tb-ISK	|		150615.908		ppb			1.326	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Friday, December 13, 2019 23:19:41

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\IC-210761.253

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29117.426		ppb	1.579			30381.191
9	Be	|	177961.792	200.000000	ppb	1.617	1.729		3.333
10	B	|	121406.119	500.000000	ppb	2.419	2.702		2497.996
27	Al	|	758487.375	200.000000	ppb	2.716	2.642		1598.978
43	Ca-2	|	140379.788	10200.000000	ppb	1.487	1.683		53.333
49	Ti	|	77577.863	200.000000	ppb	1.024	0.762		87.778
52	Cr	|	1144929.178	200.000000	ppb	0.643	0.285		8025.629
55	Mn	|	1965751.927	200.000000	ppb	0.732	1.103		505.565
57	Fe	|	2213601.762	10200.000000	ppb	1.319	1.705		7066.192
45	Sc-IS	>	904746.291		ppb	0.424			914486.958
66	Zn	|	221258.232	200.000000	ppb	1.301	1.728		540.010
86	Sr	|	412408.287	200.000000	ppb	1.249	1.670		25.904
65	Cu	|	326153.625	200.000000	ppb	0.574	0.967		46.446
69	Ga-IS	|	374798.960		ppb	1.216			359905.341
95	Mo	|	406531.687	200.000000	ppb	1.354	1.700		548.900
115	In-IS	>	251119.706		ppb	1.222			261415.993
111	Cd	|	338805.153	200.000000	ppb	1.577	1.547		6.625
118	Sn	|	1146720.695	200.000000	ppb	1.854	1.573		2825.836
121	Sb	|	1228004.051	200.000000	ppb	0.915	1.493		494.453
135	Ba	|	281567.793	200.000000	ppb	0.564	1.589		48.889
165	Ho-IS	|	272566.904		ppb	2.702			278426.605
159	Tb-IS	>	308031.207		ppb	0.864			316501.167
207	Pb	|	4660586.068	200.000000	ppb	1.851	1.284		284.446
203	Tl	|	1447095.500	200.000000	ppb	1.374	0.518		57.778
209	Bi-IS	|	196052.014		ppb	2.005			207142.422
51	V	|	109273.101	200.000000	ppb	1.954	3.286		8.889
59	Co	|	246246.691	200.000000	ppb	1.459	2.793		15.556
60	Ni	|	177083.048	200.000000	ppb	0.762	0.592		38.889
75	As	|	64186.151	200.000000	ppb	1.113	1.927		746.103
71	Ga-ISK	>	61935.095		ppb	1.339			63152.627
82	Se-2	|	7001.243	200.000000	ppb	1.081	1.165		2.914
107	Ag-1	|	706259.239	200.000000	ppb	1.049	2.263		863.359
115	In-ISK	|	77401.113		ppb	0.470			78772.262
45	Sc-ISK	>	164680.837		ppb	2.592			160691.004
23	Na	|	4750042.291	10200.000000	ppb	1.364	1.280		1161.714
39	K	|	8819493.605	10200.000000	ppb	0.457	3.023		71564.393
24	Mg	|	5053413.360	10200.000000	ppb	0.473	2.165		131.667
159	Tb-ISK	|	151067.402		ppb	1.897			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, December 13, 2019 23:22:28

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCV-210770.254

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29615.117		ppb			1.966			30381.191
9	Be	|		88641.945	99.669388	ppb			0.721	2.021		3.333
10	B	|		62553.333	252.715479	ppb			1.224	2.370		2497.996
27	Al	|		379977.400	100.044754	ppb			1.003	2.439		1598.978
43	Ca-2	|		70738.062	5140.341357	ppb			1.487	2.087		53.333
49	Ti	|		38480.648	99.147691	ppb			0.808	2.103		87.778
52	Cr	|		576814.989	100.112566	ppb			0.729	1.091		8025.629
55	Mn	|		987492.595	100.491926	ppb			0.917	1.790		505.565
57	Fe	|		1056117.175	4851.828275	ppb			0.379	1.652		7066.192
45	Sc-IS	|>		904424.541		ppb			1.432			914486.958
66	Zn	|>		114024.387	102.885851	ppb			1.008	2.181		540.010
86	Sr	|		205869.165	99.876318	ppb			0.200	1.496		25.904
65	Cu	|		166833.247	102.345545	ppb			0.886	2.286		46.446
69	Ga-IS	|		362482.861		ppb			1.401			359905.341
95	Mo	|		206825.462	101.656371	ppb			1.223	0.873		548.900
115	In-IS	|>		252511.075		ppb			0.612			261415.993
111	Cd	|		169917.696	99.741703	ppb			1.421	0.843		6.625
118	Sn	|		588786.231	101.893714	ppb			0.168	0.766		2825.836
121	Sb	|		625565.402	101.276825	ppb			0.138	0.714		494.453
135	Ba	|		141900.200	100.207929	ppb			0.997	0.667		48.889
165	Ho-IS	|		273422.522		ppb			2.074			278426.605
159	Tb-IS	|>		309891.020		ppb			1.346			316501.167
207	Pb	|		2255299.982	96.199487	ppb			1.202	0.201		284.446
203	Tl	|		727434.944	99.937714	ppb			0.829	0.574		57.778
209	Bi-IS	|		197182.722		ppb			1.072			207142.422
51	V	|		54788.203	100.864361	ppb			1.144	2.415		8.889
59	Co	|		125950.857	102.916207	ppb			2.813	4.086		15.556
60	Ni	|		86879.013	98.678964	ppb			2.132	0.888		38.889
75	As	|		32448.776	100.585161	ppb			1.433	2.281		746.103
71	Ga-ISK	|>		61564.608		ppb			1.282			63152.627
82	Se-2	|>		3541.679	101.750925	ppb			1.532	2.321		2.914
107	Ag-1	|		357430.166	101.693523	ppb			1.456	1.296		863.359
115	In-ISK	|		76378.934		ppb			1.542			78772.262
45	Sc-ISK	|>		160780.985		ppb			1.686			160691.004
23	Na	|		2354767.542	5177.214996	ppb			1.099	0.927		1161.714
39	K	|		4423525.142	5197.183568	ppb			1.769	2.987		71564.393
24	Mg	|		2532099.753	5233.870990	ppb			1.351	2.300		131.667
159	Tb-ISK	|		150533.626		ppb			0.231			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, December 13, 2019 23:28:00

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.256

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29523.822		ppb	2.459		30381.191
9	Be	6.667	0.003652	ppb	100.000	199.106	3.333
10	B	2655.802	0.723955	ppb	2.333	67.499	2497.996
27	Al	1765.665	0.046361	ppb	2.514	42.325	1598.978
43	Ca-2	36.667	-1.190081	ppb	28.386	60.345	53.333
49	Ti	96.667	0.025045	ppb	31.035	323.225	87.778
52	Cr	6962.809	-0.178491	ppb	3.701	14.419	8025.629
55	Mn	656.682	0.015604	ppb	4.155	21.138	505.565
57	Fe	6670.446	-1.633986	ppb	1.830	49.109	7066.192
45	Sc-IS	> 909495.531		ppb	2.190		914486.958
66	Zn	606.680	0.063378	ppb	12.384	117.072	540.010
86	Sr	30.847	0.002446	ppb	68.573	421.334	25.904
65	Cu	70.810	0.014887	ppb	23.322	60.608	46.446
69	Ga-IS	353186.030		ppb	0.580		359905.341
95	Mo	1323.395	0.380610	ppb	6.328	6.973	548.900
115	In-IS	> 261728.951		ppb	0.986		261415.993
111	Cd	18.332	0.006641	ppb	26.864	43.147	6.625
118	Sn	5909.007	0.517264	ppb	9.799	20.503	2825.836
121	Sb	591.123	0.015084	ppb	10.585	70.229	494.453
135	Ba	28.889	-0.013687	ppb	17.625	24.297	48.889
165	Ho-IS	278641.239		ppb	3.595		278426.605
159	Tb-IS	> 311816.948		ppb	1.711		316501.167
207	Pb	465.558	0.007853	ppb	8.837	21.150	284.446
203	Tl	145.556	0.012064	ppb	22.243	34.370	57.778
209	Bi-IS	207610.069		ppb	1.281		207142.422
51	V	12.222	0.005974	ppb	41.660	152.107	8.889
59	Co	23.333	0.006192	ppb	24.744	72.974	15.556
60	Ni	37.778	-0.001164	ppb	25.471	931.361	38.889
75	As	746.752	0.003807	ppb	0.850	866.072	746.103
71	Ga-ISK	> 63106.860		ppb	0.587		63152.627
82	Se-2	0.213	-0.076420	ppb	3832.813	300.888	2.914
107	Ag-1	1376.733	0.143132	ppb	8.475	24.252	863.359
115	In-ISK	77970.348		ppb	1.279		78772.262
45	Sc-ISK	> 160664.027		ppb	1.097		160691.004
23	Na	1400.069	0.524586	ppb	4.119	19.524	1161.714
39	K	72187.486	0.767811	ppb	0.538	167.428	71564.393
24	Mg	208.335	0.158849	ppb	9.992	29.152	131.667
159	Tb-ISK	150021.008		ppb	1.155		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, December 13, 2019 23:30:47

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\ICVL-210771.257

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30186.310		ppb	1.770		30381.191
9	Be	867.804	0.954398	ppb	4.231	2.803	3.333
10	B	14508.484	49.523409	ppb	4.397	3.138	2497.996
27	Al	196596.152	50.650539	ppb	2.188	3.920	1598.978
43	Ca-2	786.688	52.319766	ppb	7.030	5.748	53.333
49	Ti	455.563	0.931003	ppb	7.402	8.452	87.778
52	Cr	12552.180	0.773294	ppb	1.733	6.356	8025.629
55	Mn	10304.827	0.979857	ppb	0.845	2.655	505.565
57	Fe	16981.199	44.832530	ppb	1.380	4.193	7066.192
45	Sc-IS	> 920743.488		ppb	1.784		914486.958
66	Zn	6061.286	4.914181	ppb	1.207	3.105	540.010
86	Sr	2053.227	0.966300	ppb	1.067	2.636	25.904
65	Cu	2180.730	1.285910	ppb	2.924	2.009	46.446
69	Ga-IS	355527.514		ppb	0.639		359905.341
95	Mo	2796.940	1.086477	ppb	1.669	2.068	548.900
115	In-IS	> 261074.333		ppb	1.090		261415.993
111	Cd	1795.351	1.015711	ppb	1.316	1.815	6.625
118	Sn	9499.825	1.123051	ppb	2.384	3.913	2825.836
121	Sb	6605.974	0.957774	ppb	4.569	4.732	494.453
135	Ba	1404.514	0.926224	ppb	2.614	2.051	48.889
165	Ho-IS	277424.844		ppb	1.360		278426.605
159	Tb-IS	> 316328.330		ppb	0.205		316501.167
207	Pb	22853.796	0.943219	ppb	1.745	1.823	284.446
203	Tl	7187.364	0.959594	ppb	2.728	2.774	57.778
209	Bi-IS	207363.028		ppb	0.183		207142.422
51	V	596.679	1.041517	ppb	10.347	10.123	8.889
59	Co	1254.500	0.974418	ppb	2.260	1.731	15.556
60	Ni	874.471	0.913969	ppb	2.298	3.100	38.889
75	As	1128.170	1.138466	ppb	3.079	10.006	746.103
71	Ga-ISK	> 63933.861		ppb	0.775		63152.627
82	Se-2	27.888	0.689310	ppb	28.729	31.318	2.914
107	Ag-1	3311.495	0.669545	ppb	3.692	6.031	863.359
115	In-ISK	78590.203		ppb	1.207		78772.262
45	Sc-ISK	> 161126.939		ppb	0.766		160691.004
23	Na	22691.342	47.250701	ppb	1.099	1.945	1161.714
39	K	111082.446	46.847883	ppb	0.839	1.146	71564.393
24	Mg	22856.610	46.864261	ppb	2.223	2.191	131.667
159	Tb-ISK	152424.959		ppb	1.408		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-38560_1-A

Autosampler Position: 309

Sample Date/Time: Friday, December 13, 2019 23:33:34

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\MB 570-38560_1-A.258

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29528.266		ppb	1.073		30381.191
9	Be	8.889	0.006164	ppb	43.301	70.924	3.333
10	B	2588.012	0.333377	ppb	3.644	126.819	2497.996
27	Al	2326.911	0.190279	ppb	65.643	212.916	1598.978
43	Ca-2	41.667	-0.847473	ppb	30.199	108.897	53.333
49	Ti	97.778	0.024432	ppb	7.873	68.322	87.778
52	Cr	6789.391	-0.219791	ppb	1.802	6.809	8025.629
55	Mn	411.117	-0.009681	ppb	6.086	22.602	505.565
57	Fe	6651.548	-2.011309	ppb	1.182	31.061	7066.192
45	Sc-IS	> 918090.783		ppb	1.184		914486.958
66	Zn	486.675	-0.049230	ppb	7.534	76.630	540.010
86	Sr	11.397	-0.006973	ppb	29.580	23.613	25.904
65	Cu	67.563	0.012601	ppb	17.329	52.234	46.446
69	Ga-IS	357006.957		ppb	0.178		359905.341
95	Mo	825.579	0.133188	ppb	5.145	13.375	548.900
115	In-IS	> 259422.835		ppb	1.380		261415.993
111	Cd	12.711	0.003481	ppb	39.569	79.425	6.625
118	Sn	3432.635	0.106564	ppb	5.294	33.431	2825.836
121	Sb	452.229	-0.006109	ppb	12.275	134.144	494.453
135	Ba	23.333	-0.017363	ppb	51.508	47.169	48.889
165	Ho-IS	280142.047		ppb	2.149		278426.605
159	Tb-IS	> 315300.547		ppb	0.766		316501.167
207	Pb	298.890	0.000647	ppb	7.591	133.968	284.446
203	Tl	77.778	0.002727	ppb	13.093	49.053	57.778
209	Bi-IS	207553.742		ppb	1.425		207142.422
51	V	8.889	-0.000356	ppb	78.062	3383.252	8.889
59	Co	15.556	-0.000244	ppb	24.744	1180.226	15.556
60	Ni	21.111	-0.020086	ppb	24.119	28.687	38.889
75	As	774.670	0.043448	ppb	7.766	366.363	746.103
71	Ga-ISK	> 64330.082		ppb	0.992		63152.627
82	Se-2	2.581	-0.010212	ppb	195.470	1370.042	2.914
107	Ag-1	1074.485	0.053230	ppb	9.793	53.913	863.359
115	In-ISK	77752.026		ppb	1.450		78772.262
45	Sc-ISK	> 162487.872		ppb	1.454		160691.004
23	Na	1113.377	-0.132874	ppb	1.130	46.731	1161.714
39	K	71088.668	-1.493692	ppb	0.856	105.562	71564.393
24	Mg	158.334	0.051503	ppb	4.824	27.929	131.667
159	Tb-ISK	152587.273		ppb	0.806		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-38560_2-A

Autosampler Position: 310

Sample Date/Time: Friday, December 13, 2019 23:36:20

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\LCS 570-38560_2-A.259

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		29592.846		ppb		1.484		30381.191
9	Be	|		90041.776	100.664160	ppb		0.909	1.604	3.333
10	B	|		26142.791	98.947554	ppb		1.352	2.615	2497.996
27	Al	|		394340.904	103.242313	ppb		0.568	1.559	1598.978
43	Ca-2	|		65781.104	4752.688419	ppb		0.391	1.323	53.333
49	Ti	|		38283.458	98.065841	ppb		1.491	1.432	87.778
52	Cr	|		575771.674	99.353607	ppb		0.446	0.589	8025.629
55	Mn	|		951836.542	96.317515	ppb		1.365	2.377	505.565
57	Fe	|		976640.936	4458.572951	ppb		0.446	1.365	7066.192
45	Sc-IS	|>		909544.110		ppb		1.021		914486.958
66	Zn	|>		114854.368	103.046198	ppb		1.504	2.296	540.010
86	Sr	|		200634.523	96.788825	ppb		1.674	2.480	25.904
65	Cu	|		163416.915	99.673636	ppb		0.726	1.616	46.446
69	Ga-IS	|		368400.481		ppb		1.608		359905.341
95	Mo	|		198721.639	97.105983	ppb		1.232	0.262	548.900
115	In-IS	|>		257311.276		ppb		0.651		261415.993
111	Cd	|		173518.680	99.961345	ppb		1.650	1.775	6.625
118	Sn	|		598488.543	101.636811	ppb		0.590	0.296	2825.836
121	Sb	|		559770.442	88.921442	ppb		1.105	0.729	494.453
135	Ba	|		147425.720	102.169702	ppb		0.829	0.676	48.889
165	Ho-IS	|		276214.724		ppb		2.514		278426.605
159	Tb-IS	|>		311103.578		ppb		1.272		316501.167
207	Pb	|		2228950.974	94.701781	ppb		1.600	0.614	284.446
203	Tl	|		692400.452	94.747050	ppb		1.802	1.034	57.778
209	Bi-IS	|		199512.462		ppb		0.751		207142.422
51	V	|		53855.783	96.844811	ppb		1.421	1.899	8.889
59	Co	|		119704.013	95.526611	ppb		2.087	2.465	15.556
60	Ni	|		87756.561	97.377541	ppb		1.931	1.508	38.889
75	As	|		32216.544	97.478390	ppb		0.226	0.793	746.103
71	Ga-ISK	|>		63019.813		ppb		0.770		63152.627
82	Se-2	|		3514.670	98.631904	ppb		2.259	2.548	2.914
107	Ag-1	|		149883.334	41.518747	ppb		0.986	1.608	863.359
115	In-ISK	|		77484.986		ppb		2.157		78772.262
45	Sc-ISK	|>		162570.916		ppb		0.459		160691.004
23	Na	|		436255.026	946.432046	ppb		1.308	1.296	1161.714
39	K	|		874864.213	947.512029	ppb		2.245	2.443	71564.393
24	Mg	|		2325169.130	4752.270806	ppb		1.521	1.587	131.667
159	Tb-ISK	|		153108.138		ppb		0.842		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-38560_3-A

Autosampler Position: 311

Sample Date/Time: Friday, December 13, 2019 23:39:06

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\LCSD 570-38560_3-A.260

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29563.895		ppb		1.035		30381.191
9	Be	|	88157.848	99.566195	ppb	0.533	0.639		3.333
10	B	|	25556.185	97.597522	ppb	2.893	4.048		2497.996
27	Al	|	395691.628	104.659746	ppb	1.615	1.608		1598.978
43	Ca-2	|	66035.615	4819.918703	ppb	0.933	0.837		53.333
49	Ti	|	37941.433	98.187475	ppb	1.146	0.686		87.778
52	Cr	|	567002.255	98.840848	ppb	0.408	0.841		8025.629
55	Mn	|	952242.485	97.338551	ppb	0.467	0.650		505.565
57	Fe	|	961938.264	4436.369154	ppb	0.201	1.044		7066.192
45	Sc-IS	>	900290.529		ppb	1.114			914486.958
66	Zn	>	114323.401	103.620527	ppb	0.276	1.006		540.010
86	Sr	|	198815.279	96.887450	ppb	0.600	0.710		25.904
65	Cu	|	161462.455	99.494205	ppb	1.066	1.788		46.446
69	Ga-IS	|	365855.568		ppb	0.354			359905.341
95	Mo	|	199991.357	98.745978	ppb	1.034	1.619		548.900
115	In-IS	>	253677.663		ppb	2.157			261415.993
111	Cd	|	173498.993	101.399247	ppb	0.764	1.418		6.625
118	Sn	|	605602.682	104.335315	ppb	1.835	0.484		2825.836
121	Sb	|	586784.350	94.565260	ppb	1.345	0.937		494.453
135	Ba	|	145435.455	102.257500	ppb	0.530	1.643		48.889
165	Ho-IS	|	273331.017		ppb	2.369			278426.605
159	Tb-IS	>	310901.324		ppb	0.979			316501.167
207	Pb	|	2222963.285	94.510756	ppb	0.954	0.128		284.446
203	Tl	|	685959.962	93.930435	ppb	0.687	0.371		57.778
209	Bi-IS	|	200655.380		ppb	2.240			207142.422
51	V	|	54841.772	98.270491	ppb	2.394	2.194		8.889
59	Co	|	122483.964	97.402862	ppb	0.617	0.476		15.556
60	Ni	|	88089.681	97.413210	ppb	1.371	1.068		38.889
75	As	|	32245.978	97.228781	ppb	2.168	2.529		746.103
71	Ga-ISK	>	63236.318		ppb	0.303			63152.627
82	Se-2	|	3465.989	96.924833	ppb	2.046	2.025		2.914
107	Ag-1	|	151805.685	41.907304	ppb	0.873	1.129		863.359
115	In-ISK	|	76550.660		ppb	1.662			78772.262
45	Sc-ISK	>	160031.366		ppb	0.350			160691.004
23	Na	|	428009.145	943.253132	ppb	0.984	0.708		1161.714
39	K	|	856190.820	941.507667	ppb	0.885	1.042		71564.393
24	Mg	|	2259510.714	4691.233061	ppb	0.915	0.593		131.667
159	Tb-ISK	|	150829.414		ppb	0.744			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-14140-B-1-B @5
 Autosampler Position: 312
 Sample Date/Time: Friday, December 13, 2019 23:44:40
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2019\191213E1\570-14140-B-1-B.262
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29523.811		ppb	0.892		30381.191
9	Be	17.778	0.016209	ppb	60.273	74.337	3.333
10	B	4127.263	6.895505	ppb	1.254	3.365	2497.996
27	Al	1961635.060	515.978275	ppb	1.205	1.626	1598.978
43	Ca-2	28914.235	2089.860634	ppb	1.408	1.394	53.333
49	Ti	4469.589	11.270027	ppb	4.814	5.400	87.778
52	Cr	44359.896	6.376780	ppb	2.027	2.344	8025.629
55	Mn	265633.924	26.880592	ppb	1.495	1.940	505.565
57	Fe	154344.986	678.458040	ppb	1.524	2.139	7066.192
45	Sc-IS	> 908187.045		ppb	0.527		914486.958
66	Zn	260815.085	234.941282	ppb	1.162	1.325	540.010
86	Sr	26845.087	12.956862	ppb	1.966	1.721	25.904
65	Cu	11242.348	6.840773	ppb	1.218	1.705	46.446
69	Ga-IS	352760.703		ppb	1.512		359905.341
95	Mo	1792.335	0.611890	ppb	5.976	7.817	548.900
115	In-IS	> 255905.475		ppb	0.602		261415.993
111	Cd	164.015	0.091241	ppb	3.190	2.778	6.625
118	Sn	6580.406	0.654198	ppb	4.214	6.470	2825.836
121	Sb	9768.895	1.484293	ppb	1.418	0.925	494.453
135	Ba	26169.507	18.209535	ppb	1.540	2.043	48.889
165	Ho-IS	275987.344		ppb	2.825		278426.605
159	Tb-IS	> 313497.213		ppb	1.133		316501.167
207	Pb	64995.474	2.728906	ppb	1.125	0.161	284.446
203	Tl	204.446	0.020024	ppb	20.774	30.011	57.778
209	Bi-IS	201149.676		ppb	1.044		207142.422
51	V	1014.480	1.792424	ppb	1.868	1.672	8.889
59	Co	738.908	0.571669	ppb	12.184	11.395	15.556
60	Ni	1433.405	1.534084	ppb	3.512	3.090	38.889
75	As	873.850	0.376859	ppb	3.852	28.520	746.103
71	Ga-ISK	> 63580.070		ppb	1.049		63152.627
82	Se-2	4.578	0.045169	ppb	88.698	246.627	2.914
107	Ag-1	1028.926	0.044067	ppb	3.372	16.254	863.359
115	In-ISK	76201.011		ppb	0.249		78772.262
45	Sc-ISK	> 161606.756		ppb	0.743		160691.004
23	Na	448771.587	979.495270	ppb	0.386	0.359	1161.714
39	K	514045.205	525.101791	ppb	0.543	0.650	71564.393
24	Mg	204486.568	420.210950	ppb	1.111	1.761	131.667
159	Tb-ISK	151506.523		ppb	0.753		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-14140-B-1-C MS @5
 Autosampler Position: 313
 Sample Date/Time: Friday, December 13, 2019 23:47:26
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2019\191213E1\570-14140-B-1-C MS.263
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	36738.296		ppb		1.333		30381.191
9	Be	|	18367.359	20.515346	ppb	2.088	1.208		3.333
10	B	|	7942.207	22.803368	ppb	0.660	1.477		2497.996
27	Al	|	1723295.135	452.363601	ppb	2.933	3.837		1598.978
43	Ca-2	|	42931.078	3098.464989	ppb	0.088	1.025		53.333
49	Ti	|	8466.953	21.498823	ppb	1.975	1.065		87.778
52	Cr	|	161295.483	26.810180	ppb	0.666	1.015		8025.629
55	Mn	|	435682.842	44.027502	ppb	0.365	0.753		505.565
57	Fe	|	324980.495	1461.109447	ppb	0.578	1.355		7066.192
45	Sc-IS	>	910100.978		ppb	0.931			914486.958
66	Zn	>	279603.217	251.392010	ppb	0.987	1.861		540.010
86	Sr	|	69139.747	33.322288	ppb	0.163	0.844		25.904
65	Cu	|	43909.144	26.744352	ppb	0.676	1.529		46.446
69	Ga-IS	|	353193.961		ppb	0.441			359905.341
95	Mo	|	33522.624	16.148457	ppb	1.430	0.834		548.900
115	In-IS	>	255981.589		ppb	0.950			261415.993
111	Cd	|	35623.030	20.627345	ppb	1.146	2.004		6.625
118	Sn	|	12364.238	1.645887	ppb	1.863	1.896		2825.836
121	Sb	|	90738.396	14.425113	ppb	1.166	1.451		494.453
135	Ba	|	49572.547	34.510611	ppb	1.848	1.423		48.889
165	Ho-IS	|	275040.503		ppb	1.356			278426.605
159	Tb-IS	>	312430.878		ppb	1.098			316501.167
207	Pb	|	509967.191	21.567791	ppb	0.222	1.006		284.446
203	Tl	|	144097.592	19.629637	ppb	1.029	1.244		57.778
209	Bi-IS	|	415784.710		ppb	1.445			207142.422
51	V	|	11660.315	21.109512	ppb	2.818	4.629		8.889
59	Co	|	27002.179	21.696705	ppb	3.223	4.849		15.556
60	Ni	|	18842.425	21.016064	ppb	2.817	1.028		38.889
75	As	|	6913.666	19.259142	ppb	0.570	2.309		746.103
71	Ga-ISK	>	62590.178		ppb	1.835			63152.627
82	Se-2	|	679.561	19.143982	ppb	5.081	6.097		2.914
107	Ag-1	|	27781.433	7.554624	ppb	0.794	2.229		863.359
115	In-ISK	|	76865.041		ppb	1.309			78772.262
45	Sc-ISK	>	160605.539		ppb	0.457			160691.004
23	Na	|	515467.463	1132.516209	ppb	1.216	1.677		1161.714
39	K	|	615275.741	649.874360	ppb	1.020	0.645		71564.393
24	Mg	|	651902.037	1348.456828	ppb	1.203	0.937		131.667
159	Tb-ISK	|	151174.426		ppb	1.308			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-14140-B-1-D MSD @5
 Autosampler Position: 314
 Sample Date/Time: Friday, December 13, 2019 23:50:12
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2019\191213E1\570-14140-B-1-D MSD.264
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	36577.893		ppb	2.089		30381.191
9	Be	17851.150	20.032138	ppb	2.202	2.257	3.333
10	B	8006.690	23.221079	ppb	3.661	4.452	2497.996
27	Al	1760562.601	464.279494	ppb	1.402	2.900	1598.978
43	Ca-2	43527.898	3155.452750	ppb	2.049	0.365	53.333
49	Ti	7941.095	20.245541	ppb	0.721	1.240	87.778
52	Cr	158555.058	26.462123	ppb	0.649	2.473	8025.629
55	Mn	435294.643	44.193986	ppb	0.468	1.862	505.565
57	Fe	321231.704	1450.561983	ppb	0.961	0.888	7066.192
45	Sc-IS	> 906024.449		ppb	1.792		914486.958
66	Zn	280864.189	253.670401	ppb	0.752	1.076	540.010
86	Sr	68113.177	32.977634	ppb	0.725	1.077	25.904
65	Cu	43530.482	26.634545	ppb	0.522	1.285	46.446
69	Ga-IS	357782.730		ppb	0.478		359905.341
95	Mo	32946.843	15.942869	ppb	1.441	2.351	548.900
115	In-IS	> 256738.528		ppb	1.337		261415.993
111	Cd	35088.468	20.257005	ppb	1.011	1.259	6.625
118	Sn	11312.257	1.460328	ppb	2.385	4.643	2825.836
121	Sb	87257.951	13.826515	ppb	1.716	0.402	494.453
135	Ba	49152.192	34.119656	ppb	0.552	0.793	48.889
165	Ho-IS	273194.047		ppb	2.440		278426.605
159	Tb-IS	> 311386.985		ppb	2.156		316501.167
207	Pb	509261.191	21.613866	ppb	0.670	1.769	284.446
203	Tl	141792.488	19.382187	ppb	1.156	1.150	57.778
209	Bi-IS	422019.613		ppb	1.787		207142.422
51	V	11558.007	20.790785	ppb	0.907	1.099	8.889
59	Co	26845.201	21.432943	ppb	0.984	0.849	15.556
60	Ni	18565.392	20.587412	ppb	1.762	1.565	38.889
75	As	6799.500	18.773969	ppb	2.216	2.371	746.103
71	Ga-ISK	> 62957.311		ppb	0.213		63152.627
82	Se-2	670.230	18.759471	ppb	2.379	2.215	2.914
107	Ag-1	28214.505	7.627877	ppb	1.470	1.299	863.359
115	In-ISK	76970.883		ppb	1.258		78772.262
45	Sc-ISK	> 161561.979		ppb	1.843		160691.004
23	Na	518755.066	1133.144614	ppb	1.267	1.949	1161.714
39	K	611282.740	641.003624	ppb	0.842	2.810	71564.393
24	Mg	657577.629	1352.582784	ppb	0.719	2.535	131.667
159	Tb-ISK	151724.868		ppb	1.198		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14140-B-2-B

Autosampler Position: 315

Sample Date/Time: Friday, December 13, 2019 23:52:57

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14140-B-2-B.265

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28458.331		ppb	2.728			30381.191
9	Be	|	11.111	0.008803	ppb	62.450	87.811		3.333
10	B	|	4112.814	7.026074	ppb	1.014	0.945		2497.996
27	Al	|	563225.421	149.490975	ppb	0.920	0.424		1598.978
43	Ca-2	|	30961.874	2262.837356	ppb	3.330	2.763		53.333
49	Ti	|	1839.007	4.555268	ppb	4.672	3.519		87.778
52	Cr	|	10869.690	0.529349	ppb	1.888	7.625		8025.629
55	Mn	|	142092.094	14.514971	ppb	0.995	1.140		505.565
57	Fe	|	34561.765	128.637874	ppb	1.679	3.639		7066.192
45	Sc-IS	>	898234.552		ppb	1.334			914486.958
66	Zn	>	2938230.978	2681.229277	ppb	0.649	0.845		540.010
86	Sr	|	32486.193	15.858509	ppb	0.194	1.493		25.904
65	Cu	|	25850.385	15.941206	ppb	1.079	1.103		46.446
69	Ga-IS	|	351725.088		ppb	0.587			359905.341
95	Mo	|	1731.216	0.591515	ppb	0.868	0.795		548.900
115	In-IS	>	253898.119		ppb	1.305			261415.993
111	Cd	|	383.036	0.219689	ppb	19.608	19.372		6.625
118	Sn	|	2550.228	-0.033399	ppb	4.334	73.059		2825.836
121	Sb	|	4451.805	0.639892	ppb	2.321	1.431		494.453
135	Ba	|	15813.196	11.075029	ppb	2.835	1.561		48.889
165	Ho-IS	|	271208.423		ppb	3.071			278426.605
159	Tb-IS	>	307732.158		ppb	1.917			316501.167
207	Pb	|	33108.312	1.410193	ppb	3.158	1.288		284.446
203	Tl	|	157.779	0.014039	ppb	8.538	10.293		57.778
209	Bi-IS	|	217007.072		ppb	1.232			207142.422
51	V	|	373.338	0.666419	ppb	12.500	13.938		8.889
59	Co	|	510.009	0.400686	ppb	5.105	3.831		15.556
60	Ni	|	974.478	1.054918	ppb	4.670	3.548		38.889
75	As	|	795.723	0.196964	ppb	4.440	67.810		746.103
71	Ga-ISK	>	62074.590		ppb	1.448			63152.627
82	Se-2	|	13.573	0.305077	ppb	15.310	18.545		2.914
107	Ag-1	|	1986.805	0.321539	ppb	8.435	12.367		863.359
115	In-ISK	|	76129.129		ppb	0.858			78772.262
45	Sc-ISK	>	161306.706		ppb	0.458			160691.004
23	Na	|	273364.046	596.762683	ppb	0.370	0.714		1161.714
39	K	|	268609.676	234.170337	ppb	0.884	1.813		71564.393
24	Mg	|	109484.638	225.267991	ppb	1.076	1.416		131.667
159	Tb-ISK	|	150298.613		ppb	1.466			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14140-B-3-B

Autosampler Position: 316

Sample Date/Time: Friday, December 13, 2019 23:55:43

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14140-B-3-B.266

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		29641.839		ppb		1.840		30381.191
9	Be	|		25.556	0.024951	ppb	19.924	21.778		3.333
10	B	|		8444.718	25.075853	ppb	1.913	1.254		2497.996
27	Al	|		1316694.888	347.195230	ppb	0.602	0.775		1598.978
43	Ca-2	|		102865.698	7466.746999	ppb	0.709	1.405		53.333
49	Ti	|		5365.452	13.611888	ppb	0.353	0.782		87.778
52	Cr	|		616550.906	106.963480	ppb	1.415	1.647		8025.629
55	Mn	|		295808.175	30.026402	ppb	1.240	1.580		505.565
57	Fe	|		116934.411	507.715188	ppb	0.420	0.719		7066.192
45	Sc-IS	|>		905583.080		ppb	1.086			914486.958
66	Zn	|>		916827.920	829.521442	ppb	0.434	1.203		540.010
86	Sr	|		52748.311	25.546755	ppb	0.225	0.997		25.904
65	Cu	|		20397.756	12.471534	ppb	1.180	2.123		46.446
69	Ga-IS	|		346546.421		ppb	0.756			359905.341
95	Mo	|		2437.986	0.932518	ppb	0.989	2.627		548.900
115	In-IS	|>		254573.066		ppb	0.319			261415.993
111	Cd	|		153.770	0.085790	ppb	12.483	13.140		6.625
118	Sn	|		2147.939	-0.104112	ppb	4.291	16.387		2825.836
121	Sb	|		4941.966	0.716807	ppb	0.609	0.440		494.453
135	Ba	|		28663.181	20.050414	ppb	2.332	2.108		48.889
165	Ho-IS	|		272963.936		ppb	2.161			278426.605
159	Tb-IS	|>		311273.793		ppb	2.497			316501.167
207	Pb	|		74433.908	3.149925	ppb	1.590	1.391		284.446
203	Tl	|		202.224	0.019880	ppb	4.148	2.337		57.778
209	Bi-IS	|		200821.913		ppb	1.596			207142.422
51	V	|		1720.104	3.134381	ppb	1.909	4.058		8.889
59	Co	|		827.802	0.661561	ppb	14.387	16.911		15.556
60	Ni	|		1430.072	1.572146	ppb	7.543	6.451		38.889
75	As	|		1115.141	1.210651	ppb	2.606	10.418		746.103
71	Ga-ISK	|>		61916.148		ppb	2.101			63152.627
82	Se-2	|		10.922	0.231992	ppb	32.824	47.368		2.914
107	Ag-1	|		1057.817	0.059982	ppb	3.812	19.199		863.359
115	In-ISK	|		76051.983		ppb	0.905			78772.262
45	Sc-ISK	|>		160713.483		ppb	1.204			160691.004
23	Na	|		3359403.834	7388.758579	ppb	2.613	1.410		1161.714
39	K	|		2644238.315	3072.736374	ppb	1.773	1.213		71564.393
24	Mg	|		221719.491	458.135228	ppb	2.090	1.551		131.667
159	Tb-ISK	|		148668.254		ppb	0.502			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14140-B-4-D

Autosampler Position: 317

Sample Date/Time: Friday, December 13, 2019 23:58:29

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14140-B-4-D.267

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29779.896		ppb				0.296		30381.191
9	Be	|		15.556	0.013765	ppb				24.744	32.765	3.333
10	B	|		5428.811	12.382026	ppb				4.805	9.232	2497.996
27	Al	|		1688075.404	444.635342	ppb				0.778	1.247	1598.978
43	Ca-2	|		68443.622	4959.004835	ppb				2.249	0.772	53.333
49	Ti	|		6996.158	17.789405	ppb				2.296	1.159	87.778
52	Cr	|		213686.388	36.106916	ppb				0.911	1.163	8025.629
55	Mn	|		235588.974	23.869672	ppb				0.704	0.840	505.565
57	Fe	|		129133.269	563.234301	ppb				0.938	1.305	7066.192
45	Sc-IS	|>		906870.747		ppb				1.511		914486.958
66	Zn	|		781687.422	706.179817	ppb				0.737	0.985	540.010
86	Sr	|		37732.462	18.244570	ppb				0.971	0.545	25.904
65	Cu	|		20230.128	12.350351	ppb				1.286	1.256	46.446
69	Ga-IS	|		350061.936		ppb				1.186		359905.341
95	Mo	|		1560.085	0.499305	ppb				2.591	4.567	548.900
115	In-IS	|>		255452.109		ppb				1.048		261415.993
111	Cd	|		145.613	0.080762	ppb				3.466	4.521	6.625
118	Sn	|		1981.249	-0.133960	ppb				3.618	11.782	2825.836
121	Sb	|		5155.375	0.748135	ppb				3.130	2.294	494.453
135	Ba	|		26796.224	18.678154	ppb				1.670	1.254	48.889
165	Ho-IS	|		278043.181		ppb				3.675		278426.605
159	Tb-IS	|>		314179.678		ppb				2.446		316501.167
207	Pb	|		71117.414	2.981353	ppb				1.253	1.950	284.446
203	Tl	|		137.778	0.010895	ppb				5.036	6.340	57.778
209	Bi-IS	|		203046.169		ppb				0.707		207142.422
51	V	|		1134.490	2.029218	ppb				6.716	6.508	8.889
59	Co	|		930.030	0.731842	ppb				0.948	2.479	15.556
60	Ni	|		1326.728	1.433785	ppb				4.571	5.275	38.889
75	As	|		996.093	0.786396	ppb				3.653	11.325	746.103
71	Ga-ISK	|>		62865.821		ppb				1.575		63152.627
82	Se-2	|		7.924	0.142412	ppb				45.596	73.789	2.914
107	Ag-1	|		714.462	-0.040242	ppb				10.332	58.532	863.359
115	In-ISK	|		76273.765		ppb				2.049		78772.262
45	Sc-ISK	|>		162203.467		ppb				0.803		160691.004
23	Na	|		1419577.165	3092.482887	ppb				0.955	0.842	1161.714
39	K	|		1200819.410	1335.638318	ppb				0.444	0.845	71564.393
24	Mg	|		189559.414	388.052390	ppb				0.829	0.383	131.667
159	Tb-ISK	|		150260.183		ppb				1.264		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Saturday, December 14, 2019 00:01:16

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCV-210770.268

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29007.199		ppb			0.795			30381.191
9	Be	|		88249.620	99.336261	ppb			2.380	1.891		3.333
10	B	|		63349.074	256.345538	ppb			2.001	1.139		2497.996
27	Al	|		384159.382	101.280999	ppb			2.167	3.145		1598.978
43	Ca-2	|		70009.496	5093.134241	ppb			1.778	1.019		53.333
49	Ti	|		38865.022	100.252602	ppb			1.073	0.339		87.778
52	Cr	|		576886.208	100.261189	ppb			1.192	1.999		8025.629
55	Mn	|		980007.210	99.854018	ppb			0.628	1.314		505.565
57	Fe	|		1046100.090	4811.722845	ppb			1.071	1.986		7066.192
45	Sc-IS	>		903236.406		ppb			0.967			914486.958
66	Zn	|		111016.365	100.279737	ppb			0.460	1.248		540.010
86	Sr	|		204809.221	99.489645	ppb			0.948	1.815		25.904
65	Cu	|		164499.856	101.029649	ppb			1.034	1.271		46.446
69	Ga-IS	|		355944.342		ppb			0.556			359905.341
95	Mo	|		201148.610	98.982913	ppb			1.322	0.470		548.900
115	In-IS	>		252698.570		ppb			1.001			261415.993
111	Cd	|		170771.815	100.169266	ppb			1.399	0.453		6.625
118	Sn	|		577613.207	99.877067	ppb			0.934	0.968		2825.836
121	Sb	|		618275.245	100.016584	ppb			1.386	0.605		494.453
135	Ba	|		140577.247	99.198423	ppb			1.293	0.336		48.889
165	Ho-IS	|		270607.281		ppb			1.836			278426.605
159	Tb-IS	>		305871.724		ppb			1.926			316501.167
207	Pb	|		2232144.907	96.470320	ppb			1.248	0.744		284.446
203	Tl	|		726093.484	101.074169	ppb			1.575	1.789		57.778
209	Bi-IS	|		198890.635		ppb			1.240			207142.422
51	V	|		54981.166	101.138940	ppb			1.289	1.107		8.889
59	Co	|		126282.452	103.089632	ppb			1.547	1.326		15.556
60	Ni	|		87499.419	99.331465	ppb			1.681	1.482		38.889
75	As	|		32544.654	100.812481	ppb			1.077	0.896		746.103
71	Ga-ISK	>		61600.304		ppb			0.280			63152.627
82	Se-2	|		3544.662	101.761001	ppb			1.475	1.388		2.914
107	Ag-1	|		351779.720	100.020054	ppb			0.515	0.445		863.359
115	In-ISK	|		75786.588		ppb			0.353			78772.262
45	Sc-ISK	>		160679.692		ppb			0.300			160691.004
23	Na	|		2390618.448	5258.896627	ppb			0.881	0.617		1161.714
39	K	|		4471583.667	5256.502602	ppb			0.378	0.537		71564.393
24	Mg	|		2533248.983	5238.295397	ppb			2.358	2.144		131.667
159	Tb-ISK	|		148757.908		ppb			1.211			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Saturday, December 14, 2019 00:06:48

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.270

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29401.348		ppb			2.472			30381.191
9	Be	|		6.667	0.003685	ppb			0.000	1.746		3.333
10	B	|		2613.573	0.447214	ppb			4.720	103.163		2497.996
27	Al	|		2055.703	0.117878	ppb			1.808	11.517		1598.978
43	Ca-2	|		56.667	0.220752	ppb			53.186	974.609		53.333
49	Ti	|		101.111	0.033399	ppb			20.143	157.201		87.778
52	Cr	|		7100.653	-0.164630	ppb			1.509	9.383		8025.629
55	Mn	|		602.235	0.009497	ppb			19.502	119.876		505.565
57	Fe	|		7027.284	-0.272345	ppb			1.046	117.379		7066.192
45	Sc-IS	>		917201.831		ppb			0.871			914486.958
66	Zn	|		678.905	0.122703	ppb			2.471	11.334		540.010
86	Sr	|		23.044	-0.001412	ppb			94.839	738.786		25.904
65	Cu	|		63.057	0.009932	ppb			18.287	67.017		46.446
69	Ga-IS	|		353253.204		ppb			0.541			359905.341
95	Mo	|		916.696	0.177813	ppb			5.503	11.768		548.900
115	In-IS	>		258144.957		ppb			1.434			261415.993
111	Cd	|		36.964	0.017421	ppb			31.389	37.126		6.625
118	Sn	|		4121.707	0.226596	ppb			5.278	18.155		2825.836
121	Sb	|		1186.716	0.110688	ppb			4.800	7.671		494.453
135	Ba	|		44.445	-0.002633	ppb			26.339	307.598		48.889
165	Ho-IS	|		276403.429		ppb			1.931			278426.605
159	Tb-IS	>		310441.571		ppb			1.162			316501.167
207	Pb	|		426.669	0.006286	ppb			3.405	7.430		284.446
203	Tl	|		108.889	0.007170	ppb			13.804	30.110		57.778
209	Bi-IS	|		203808.154		ppb			1.397			207142.422
51	V	|		8.889	0.000047	ppb			78.062	26793.226		8.889
59	Co	|		18.889	0.002757	ppb			36.735	201.291		15.556
60	Ni	|		51.111	0.013842	ppb			77.258	316.371		38.889
75	As	|		759.709	0.056025	ppb			7.960	298.132		746.103
71	Ga-ISK	>		62755.339		ppb			1.670			63152.627
82	Se-2	|		1.573	-0.037353	ppb			242.115	286.244		2.914
107	Ag-1	|		1274.501	0.116577	ppb			2.225	6.910		863.359
115	In-ISK	|		76858.771		ppb			2.270			78772.262
45	Sc-ISK	>		158279.846		ppb			1.035			160691.004
23	Na	|		1368.399	0.500803	ppb			5.862	35.786		1161.714
39	K	|		69774.428	-0.863995	ppb			0.431	83.001		71564.393
24	Mg	|		260.002	0.273566	ppb			12.611	25.224		131.667
159	Tb-ISK	|		150480.471		ppb			1.167			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-14140-B-5-B @5
 Autosampler Position: 318
 Sample Date/Time: Saturday, December 14, 2019 00:09:35
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2019\191213E1\570-14140-B-5-B.271
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30121.726		ppb	1.285		30381.191
9	Be	20.000	0.018609	ppb	28.868	34.379	3.333
10	B	3694.922	5.037388	ppb	0.445	1.348	2497.996
27	Al	962834.280	252.255430	ppb	1.007	0.696	1598.978
43	Ca-2	19575.071	1409.264165	ppb	1.490	1.459	53.333
49	Ti	2931.412	7.289824	ppb	1.961	1.747	87.778
52	Cr	26840.748	3.292360	ppb	0.944	0.835	8025.629
55	Mn	157977.605	15.915804	ppb	0.688	0.511	505.565
57	Fe	80676.058	338.041840	ppb	0.738	0.542	7066.192
45	Sc-IS	> 910972.723		ppb	0.381		914486.958
66	Zn	230924.911	207.321314	ppb	0.999	1.104	540.010
86	Sr	17562.844	8.446475	ppb	1.475	1.118	25.904
65	Cu	7066.290	4.275521	ppb	2.997	2.647	46.446
69	Ga-IS	353217.910		ppb	0.564		359905.341
95	Mo	1208.940	0.323882	ppb	6.168	10.729	548.900
115	In-IS	> 254586.526		ppb	0.438		261415.993
111	Cd	83.017	0.044591	ppb	19.755	21.583	6.625
118	Sn	2962.529	0.036336	ppb	1.884	32.563	2825.836
121	Sb	2002.363	0.244437	ppb	4.806	6.903	494.453
135	Ba	12177.410	8.499249	ppb	0.924	1.326	48.889
165	Ho-IS	275665.730		ppb	1.384		278426.605
159	Tb-IS	> 312111.549		ppb	0.343		316501.167
207	Pb	31892.691	1.338973	ppb	0.473	0.500	284.446
203	Tl	110.000	0.007233	ppb	24.243	50.380	57.778
209	Bi-IS	200483.697		ppb	0.759		207142.422
51	V	683.350	1.200248	ppb	2.535	1.555	8.889
59	Co	440.007	0.335262	ppb	4.546	5.474	15.556
60	Ni	845.581	0.885973	ppb	4.961	4.972	38.889
75	As	800.284	0.148888	ppb	7.551	143.690	746.103
71	Ga-ISK	> 63673.822		ppb	1.180		63152.627
82	Se-2	5.562	0.073006	ppb	58.071	123.511	2.914
107	Ag-1	765.576	-0.028818	ppb	6.536	55.435	863.359
115	In-ISK	78025.966		ppb	0.888		78772.262
45	Sc-ISK	> 161867.702		ppb	2.129		160691.004
23	Na	303275.744	660.282099	ppb	3.145	4.141	1161.714
39	K	413791.593	405.450847	ppb	1.610	4.226	71564.393
24	Mg	121469.245	249.165745	ppb	0.631	2.468	131.667
159	Tb-ISK	152733.511		ppb	1.016		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-14140-B-6-B @5
 Autosampler Position: 319
 Sample Date/Time: Saturday, December 14, 2019 00:12:21
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2019\191213E1\570-14140-B-6-B.272
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29994.793		ppb	1.307		30381.191
9	Be	23.333	0.022021	ppb	28.571	32.070	3.333
10	B	4252.855	7.190281	ppb	1.451	4.760	2497.996
27	Al	1211718.327	314.413632	ppb	0.587	1.444	1598.978
43	Ca-2	20135.856	1434.953426	ppb	3.023	1.920	53.333
49	Ti	3345.948	8.270423	ppb	4.796	6.092	87.778
52	Cr	17728.772	1.669883	ppb	0.972	3.584	8025.629
55	Mn	186529.980	18.615688	ppb	1.170	2.320	505.565
57	Fe	93171.774	391.176267	ppb	1.385	2.424	7066.192
45	Sc-IS	> 920210.865		ppb	1.178		914486.958
66	Zn	117288.403	104.011963	ppb	0.270	1.373	540.010
86	Sr	17786.453	8.468935	ppb	0.563	0.916	25.904
65	Cu	7242.983	4.340233	ppb	4.065	4.820	46.446
69	Ga-IS	353378.560		ppb	0.782		359905.341
95	Mo	1136.712	0.282991	ppb	7.488	14.166	548.900
115	In-IS	> 257469.204		ppb	0.706		261415.993
111	Cd	56.502	0.028769	ppb	6.513	6.977	6.625
118	Sn	2279.071	-0.085960	ppb	6.871	30.621	2825.836
121	Sb	1810.115	0.210249	ppb	1.473	2.237	494.453
135	Ba	12027.283	8.299513	ppb	0.755	0.691	48.889
165	Ho-IS	274350.357		ppb	2.455		278426.605
159	Tb-IS	> 310364.734		ppb	2.849		316501.167
207	Pb	38010.955	1.608284	ppb	1.429	3.812	284.446
203	Tl	112.223	0.007635	ppb	1.715	8.781	57.778
209	Bi-IS	201938.697		ppb	1.881		207142.422
51	V	863.359	1.538452	ppb	6.564	5.528	8.889
59	Co	508.898	0.394288	ppb	5.944	5.543	15.556
60	Ni	978.923	1.045397	ppb	6.104	6.411	38.889
75	As	904.148	0.498308	ppb	3.371	14.795	746.103
71	Ga-ISK	> 62923.841		ppb	1.096		63152.627
82	Se-2	-0.787	-0.102969	ppb	528.370	113.731	2.914
107	Ag-1	630.014	-0.064234	ppb	3.815	10.015	863.359
115	In-ISK	76794.242		ppb	0.545		78772.262
45	Sc-ISK	> 160686.609		ppb	1.735		160691.004
23	Na	311920.250	684.056168	ppb	0.520	1.812	1161.714
39	K	539730.490	559.390318	ppb	0.765	2.045	71564.393
24	Mg	138794.505	286.802864	ppb	2.095	2.802	131.667
159	Tb-ISK	150815.934		ppb	0.667		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-14140-B-7-B @5
 Autosampler Position: 320
 Sample Date/Time: Saturday, December 14, 2019 00:15:06
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2019\191213E1\570-14140-B-7-B.273
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29806.638		ppb	3.100		30381.191
9	Be	11.111	0.008513	ppb	34.641	48.540	3.333
10	B	3143.679	2.574573	ppb	2.580	1.813	2497.996
27	Al	321015.665	82.825021	ppb	0.519	2.464	1598.978
43	Ca-2	14549.076	1033.739261	ppb	2.972	2.907	53.333
49	Ti	1407.847	3.343010	ppb	2.961	5.324	87.778
52	Cr	51679.979	7.524493	ppb	0.619	2.855	8025.629
55	Mn	64778.789	6.416786	ppb	1.724	0.999	505.565
57	Fe	34904.817	125.991581	ppb	1.346	1.985	7066.192
45	Sc-IS	> 922256.357		ppb	2.217		914486.958
66	Zn	254012.850	225.360361	ppb	0.342	1.864	540.010
86	Sr	9125.489	4.329689	ppb	2.163	2.029	25.904
65	Cu	5401.939	3.221286	ppb	3.380	1.258	46.446
69	Ga-IS	354054.886		ppb	0.454		359905.341
95	Mo	1150.046	0.288679	ppb	3.068	10.040	548.900
115	In-IS	> 255171.981		ppb	1.597		261415.993
111	Cd	58.696	0.030432	ppb	28.460	33.149	6.625
118	Sn	2131.270	-0.107718	ppb	3.211	15.730	2825.836
121	Sb	1661.208	0.189016	ppb	1.176	3.393	494.453
135	Ba	6218.020	4.313923	ppb	0.565	1.185	48.889
165	Ho-IS	277184.964		ppb	1.837		278426.605
159	Tb-IS	> 311811.325		ppb	1.781		316501.167
207	Pb	15397.715	0.641051	ppb	0.782	1.715	284.446
203	Tl	78.889	0.002998	ppb	12.909	45.681	57.778
209	Bi-IS	203303.396		ppb	1.844		207142.422
51	V	276.669	0.480353	ppb	9.096	9.874	8.889
59	Co	240.002	0.178566	ppb	4.811	4.134	15.556
60	Ni	437.785	0.441912	ppb	10.338	12.361	38.889
75	As	806.397	0.186261	ppb	10.351	150.376	746.103
71	Ga-ISK	> 63197.264		ppb	0.971		63152.627
82	Se-2	3.596	0.020243	ppb	186.443	927.650	2.914
107	Ag-1	522.232	-0.094891	ppb	5.429	9.382	863.359
115	In-ISK	76573.666		ppb	0.412		78772.262
45	Sc-ISK	> 161039.329		ppb	1.093		160691.004
23	Na	293831.199	642.699015	ppb	0.937	0.158	1161.714
39	K	294477.554	265.542645	ppb	0.667	1.313	71564.393
24	Mg	50751.659	104.454560	ppb	0.542	1.128	131.667
159	Tb-ISK	149706.355		ppb	0.679		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14862-B-1-B

Autosampler Position: 321

Sample Date/Time: Saturday, December 14, 2019 00:17:52

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14862-B-1-B.274

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29442.541		ppb	2.196		30381.191
9	Be	31.111	0.031922	ppb	32.733	39.038	3.333
10	B	3499.318	4.541574	ppb	2.711	17.074	2497.996
27	Al	2051161.408	550.308017	ppb	5.960	9.513	1598.978
43	Ca-2	62062.855	4574.215749	ppb	0.386	3.951	53.333
49	Ti	11996.146	31.187630	ppb	1.200	2.766	87.778
52	Cr	43613.141	6.387424	ppb	0.705	3.837	8025.629
55	Mn	263209.389	27.129295	ppb	0.733	3.547	505.565
57	Fe	161313.488	724.421059	ppb	0.935	4.373	7066.192
45	Sc-IS	> 892338.878		ppb	3.545		914486.958
66	Zn	183802.782	168.480927	ppb	1.350	3.035	540.010
86	Sr	42333.137	20.816870	ppb	0.825	2.823	25.904
65	Cu	39680.299	24.672380	ppb	2.865	5.393	46.446
69	Ga-IS	347289.414		ppb	3.988		359905.341
95	Mo	2706.923	1.085711	ppb	0.326	4.824	548.900
115	In-IS	> 253356.661		ppb	3.778		261415.993
111	Cd	1962.229	1.145845	ppb	1.615	5.385	6.625
118	Sn	7176.247	0.770569	ppb	2.207	8.909	2825.836
121	Sb	6126.869	0.913295	ppb	1.868	5.951	494.453
135	Ba	25649.673	18.043587	ppb	0.197	3.931	48.889
165	Ho-IS	271428.370		ppb	3.324		278426.605
159	Tb-IS	> 305845.562		ppb	4.384		316501.167
207	Pb	178616.830	7.720062	ppb	0.804	5.083	284.446
203	Tl	132.223	0.010656	ppb	13.885	24.739	57.778
209	Bi-IS	200609.754		ppb	3.338		207142.422
51	V	1640.094	2.873471	ppb	5.691	4.761	8.889
59	Co	938.920	0.721403	ppb	11.296	10.581	15.556
60	Ni	5846.752	6.317531	ppb	2.922	2.866	38.889
75	As	1084.793	0.987700	ppb	5.726	21.952	746.103
71	Ga-ISK	> 64311.109		ppb	1.039		63152.627
82	Se-2	16.903	0.383314	ppb	52.762	63.675	2.914
107	Ag-1	2057.927	0.322116	ppb	7.396	14.735	863.359
115	In-ISK	76651.662		ppb	0.326		78772.262
45	Sc-ISK	> 163534.125		ppb	1.270		160691.004
23	Na	450750.762	972.264297	ppb	0.292	0.978	1161.714
39	K	473858.192	470.815911	ppb	1.949	3.188	71564.393
24	Mg	226276.738	459.593315	ppb	1.952	2.930	131.667
159	Tb-ISK	149535.922		ppb	0.749		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14207-B-1-A

Autosampler Position: 322

Sample Date/Time: Saturday, December 14, 2019 00:20:38

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14207-B-1-A.275

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29593.962		ppb	1.833		30381.191
9	Be	41.111	0.042438	ppb	58.656	63.820	3.333
10	B	7931.092	22.895713	ppb	3.732	5.276	2497.996
27	Al	3418878.163	901.479997	ppb	0.856	0.726	1598.978
43	Ca-2	120859.125	8766.326188	ppb	1.040	0.912	53.333
49	Ti	8966.147	22.878781	ppb	2.300	2.223	87.778
52	Cr	18564.277	1.863454	ppb	0.571	1.002	8025.629
55	Mn	549556.512	55.782780	ppb	0.079	0.093	505.565
57	Fe	254378.526	1141.546652	ppb	1.615	1.575	7066.192
45	Sc-IS	> 906238.503		ppb	0.136		914486.958
66	Zn	110093.718	99.104450	ppb	0.703	0.837	540.010
86	Sr	94707.016	45.841540	ppb	0.749	0.792	25.904
65	Cu	34339.705	20.996803	ppb	0.943	0.825	46.446
69	Ga-IS	348703.393		ppb	0.307		359905.341
95	Mo	1576.754	0.507962	ppb	4.844	7.606	548.900
115	In-IS	> 252299.452		ppb	0.698		261415.993
111	Cd	354.471	0.204560	ppb	6.106	6.772	6.625
118	Sn	1138.934	-0.276400	ppb	3.516	2.113	2825.836
121	Sb	8674.856	1.329215	ppb	1.559	1.053	494.453
135	Ba	47495.492	33.547940	ppb	0.768	1.064	48.889
165	Ho-IS	272860.457		ppb	1.479		278426.605
159	Tb-IS	> 309513.959		ppb	1.106		316501.167
207	Pb	102263.725	4.356531	ppb	1.170	2.024	284.446
203	Tl	108.889	0.007197	ppb	10.751	20.569	57.778
209	Bi-IS	198942.407		ppb	0.977		207142.422
51	V	2683.585	4.894635	ppb	2.594	2.465	8.889
59	Co	1096.709	0.878019	ppb	7.761	7.442	15.556
60	Ni	2758.044	3.073363	ppb	4.885	5.839	38.889
75	As	1275.271	1.712663	ppb	2.293	3.882	746.103
71	Ga-ISK	> 61936.202		ppb	0.881		63152.627
82	Se-2	10.221	0.210193	ppb	14.979	19.683	2.914
107	Ag-1	654.459	-0.054497	ppb	5.725	19.383	863.359
115	In-ISK	75939.365		ppb	1.495		78772.262
45	Sc-ISK	> 161020.179		ppb	0.635		160691.004
23	Na	2962741.878	6504.298404	ppb	1.096	0.759	1161.714
39	K	2576065.351	2985.541315	ppb	0.791	0.901	71564.393
24	Mg	860371.873	1775.241927	ppb	0.735	0.911	131.667
159	Tb-ISK	151480.231		ppb	0.520		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14207-B-1-B MS

Autosampler Position: 323

Sample Date/Time: Saturday, December 14, 2019 00:23:24

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14207-B-1-B MS.276

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	66614.961		ppb		0.874		30381.191
9	Be	|	93688.453	104.057942	ppb	1.024	1.203		3.333
10	B	|	24006.825	89.349189	ppb	1.675	1.645		2497.996
27	Al	|	2650568.484	691.771520	ppb	0.470	0.300		1598.978
43	Ca-2	|	140184.515	10066.703090	ppb	1.189	1.443		53.333
49	Ti	|	55387.165	141.058851	ppb	0.523	0.658		87.778
52	Cr	|	669423.740	114.982726	ppb	0.750	0.906		8025.629
55	Mn	|	1306158.065	131.317131	ppb	0.591	0.529		505.565
57	Fe	|	1302067.164	5915.830529	ppb	0.474	0.174		7066.192
45	Sc-IS	>	915445.397		ppb	0.302			914486.958
66	Zn	|	298625.597	266.930490	ppb	0.242	0.520		540.010
86	Sr	|	261011.962	125.091803	ppb	0.887	1.115		25.904
65	Cu	|	209376.023	126.878596	ppb	0.884	1.048		46.446
69	Ga-IS	|	361839.662		ppb	0.403			359905.341
95	Mo	|	210027.621	101.987086	ppb	2.310	2.491		548.900
115	In-IS	>	251204.635		ppb	0.277			261415.993
111	Cd	|	182931.676	107.942969	ppb	0.383	0.247		6.625
118	Sn	|	624460.897	108.658416	ppb	0.291	0.514		2825.836
121	Sb	|	572834.896	93.214366	ppb	0.506	0.698		494.453
135	Ba	|	152431.217	108.209756	ppb	1.189	1.360		48.889
165	Ho-IS	|	271137.892		ppb	0.917			278426.605
159	Tb-IS	>	305924.595		ppb	1.227			316501.167
207	Pb	|	2513682.041	108.622344	ppb	0.053	1.282		284.446
203	Tl	|	766096.355	106.618898	ppb	0.138	1.122		57.778
209	Bi-IS	|	2307814.141		ppb	1.273			207142.422
51	V	|	59597.423	106.765399	ppb	2.019	2.179		8.889
59	Co	|	137752.077	109.520562	ppb	0.358	1.587		15.556
60	Ni	|	99130.531	109.603838	ppb	0.320	1.511		38.889
75	As	|	34843.918	105.206591	ppb	0.930	0.523		746.103
71	Ga-ISK	>	63259.769		ppb	1.298			63152.627
82	Se-2	|	3778.722	105.661160	ppb	1.526	2.654		2.914
107	Ag-1	|	156923.855	43.314245	ppb	0.558	0.813		863.359
115	In-ISK	|	76880.574		ppb	0.575			78772.262
45	Sc-ISK	>	166495.770		ppb	0.893			160691.004
23	Na	|	867092.769	1839.169790	ppb	0.948	0.478		1161.714
39	K	|	1199418.619	1297.398683	ppb	0.391	0.894		71564.393
24	Mg	|	3040488.625	6068.015630	ppb	1.251	1.414		131.667
159	Tb-ISK	|	151529.401		ppb	0.052			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14207-B-1-C MSD

Autosampler Position: 324

Sample Date/Time: Saturday, December 14, 2019 00:26:09

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14207-B-1-C MSD.277

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	64416.019		ppb	0.705		30381.191
9	Be	87592.220	97.157732	ppb	1.870	1.236	3.333
10	B	22524.411	83.072878	ppb	1.030	0.453	2497.996
27	Al	2499294.571	651.484777	ppb	0.776	1.394	1598.978
43	Ca-2	132678.284	9515.649622	ppb	0.447	1.035	53.333
49	Ti	54813.850	139.419531	ppb	0.649	0.186	87.778
52	Cr	620508.572	106.346352	ppb	0.248	0.948	8025.629
55	Mn	1217743.295	122.274293	ppb	0.237	0.739	505.565
57	Fe	1200910.234	5447.138741	ppb	0.550	1.242	7066.192
45	Sc-IS	> 916600.032		ppb	0.687		914486.958
66	Zn	285881.147	255.203519	ppb	0.790	1.178	540.010
86	Sr	244141.275	116.857066	ppb	0.513	0.226	25.904
65	Cu	195094.601	118.077176	ppb	1.024	1.392	46.446
69	Ga-IS	359566.724		ppb	0.581		359905.341
95	Mo	197555.614	95.793737	ppb	1.150	1.337	548.900
115	In-IS	> 251503.974		ppb	1.115		261415.993
111	Cd	170473.446	100.472932	ppb	1.017	0.379	6.625
118	Sn	719459.476	125.105166	ppb	1.705	0.709	2825.836
121	Sb	552410.622	89.778241	ppb	1.534	0.701	494.453
135	Ba	142600.481	101.108058	ppb	1.238	0.853	48.889
165	Ho-IS	270849.138		ppb	2.720		278426.605
159	Tb-IS	> 307038.411		ppb	1.704		316501.167
207	Pb	2341854.562	100.827248	ppb	1.082	0.905	284.446
203	Tl	706608.446	97.975281	ppb	1.861	1.057	57.778
209	Bi-IS	1914164.103		ppb	0.780		207142.422
51	V	55307.989	99.667905	ppb	1.701	0.751	8.889
59	Co	126681.593	101.307777	ppb	2.098	1.211	15.556
60	Ni	90911.711	101.127230	ppb	1.085	2.344	38.889
75	As	32409.248	98.290943	ppb	1.702	0.528	746.103
71	Ga-ISK	> 62880.321		ppb	1.297		63152.627
82	Se-2	3483.657	97.978961	ppb	2.301	2.456	2.914
107	Ag-1	147950.107	41.068200	ppb	1.745	1.057	863.359
115	In-ISK	75285.792		ppb	2.075		78772.262
45	Sc-ISK	> 163070.086		ppb	1.850		160691.004
23	Na	809968.669	1754.197854	ppb	1.525	1.666	1161.714
39	K	1139340.122	1255.939758	ppb	0.229	1.771	71564.393
24	Mg	2820778.011	5749.982631	ppb	1.651	3.483	131.667
159	Tb-ISK	148647.367		ppb	0.408		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14208-A-1-A

Autosampler Position: 325

Sample Date/Time: Saturday, December 14, 2019 00:28:55

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14208-A-1-A.278

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29473.721		ppb	2.652			30381.191
9	Be	|	183.335	0.202182	ppb	23.637	23.880		3.333
10	B	|	8983.935	27.358830	ppb	0.461	0.887		2497.996
27	Al	|	9194646.781	2427.920398	ppb	0.346	0.075		1598.978
43	Ca-2	|	164975.590	11981.372931	ppb	1.458	1.335		53.333
49	Ti	|	8356.889	21.333103	ppb	2.250	1.983		87.778
52	Cr	|	24516.576	2.913639	ppb	0.961	0.936		8025.629
55	Mn	|	2545488.765	258.865234	ppb	0.696	0.914		505.565
57	Fe	|	698064.732	3192.708411	ppb	0.775	0.696		7066.192
45	Sc-IS	>	905201.529		ppb	0.378			914486.958
66	Zn	>	134188.396	121.038861	ppb	0.251	0.302		540.010
86	Sr	|	142720.585	69.168169	ppb	1.883	1.971		25.904
65	Cu	|	34558.692	21.155747	ppb	1.981	2.115		46.446
69	Ga-IS	|	352109.949		ppb	0.576			359905.341
95	Mo	|	2163.497	0.797600	ppb	4.195	5.101		548.900
115	In-IS	>	252064.871		ppb	0.847			261415.993
111	Cd	|	258.792	0.148463	ppb	13.559	14.117		6.625
118	Sn	|	6332.514	0.628396	ppb	1.113	2.371		2825.836
121	Sb	|	19996.207	3.168208	ppb	0.155	0.899		494.453
135	Ba	|	84720.511	59.926631	ppb	1.526	2.064		48.889
165	Ho-IS	|	278563.269		ppb	1.186			278426.605
159	Tb-IS	>	316168.545		ppb	1.281			316501.167
207	Pb	|	210330.552	8.783733	ppb	0.271	1.547		284.446
203	Tl	|	468.897	0.055389	ppb	6.757	8.372		57.778
209	Bi-IS	|	256465.505		ppb	1.907			207142.422
51	V	|	5371.010	9.876329	ppb	3.549	2.310		8.889
59	Co	|	4386.229	3.573380	ppb	1.863	1.721		15.556
60	Ni	|	3723.819	4.191715	ppb	3.441	3.477		38.889
75	As	|	1241.298	1.632178	ppb	1.548	2.954		746.103
71	Ga-ISK	>	61523.320		ppb	1.273			63152.627
82	Se-2	|	16.198	0.383118	ppb	31.674	36.861		2.914
107	Ag-1	|	2544.671	0.486372	ppb	3.156	6.325		863.359
115	In-ISK	|	73664.335		ppb	1.653			78772.262
45	Sc-ISK	>	160813.500		ppb	1.287			160691.004
23	Na	|	2663443.711	5854.916340	ppb	0.685	0.877		1161.714
39	K	|	3766895.226	4411.392300	ppb	0.893	1.663		71564.393
24	Mg	|	1489624.780	3078.284788	ppb	1.661	2.647		131.667
159	Tb-ISK	|	147960.963		ppb	0.396			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14201-C-1-A

Autosampler Position: 326

Sample Date/Time: Saturday, December 14, 2019 00:31:41

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14201-C-1-A.279

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29086.253		ppb	1.726		30381.191
9	Be	55.556	0.058844	ppb	39.039	41.231	3.333
10	B	8232.374	24.300636	ppb	3.723	5.377	2497.996
27	Al	4296383.824	1137.558335	ppb	0.699	0.973	1598.978
43	Ca-2	125357.699	9129.194733	ppb	1.593	1.234	53.333
49	Ti	12541.059	32.222575	ppb	1.928	2.311	87.778
52	Cr	24752.548	2.967898	ppb	2.795	4.409	8025.629
55	Mn	713416.421	72.722815	ppb	0.114	0.269	505.565
57	Fe	328008.575	1487.432544	ppb	0.710	0.695	7066.192
45	Sc-IS	> 902604.700		ppb	0.379		914486.958
66	Zn	273660.394	248.056047	ppb	2.140	2.048	540.010
86	Sr	82844.700	40.258677	ppb	1.497	1.200	25.904
65	Cu	44028.178	27.037490	ppb	1.190	1.169	46.446
69	Ga-IS	353173.544		ppb	2.106		359905.341
95	Mo	2445.765	0.940110	ppb	2.069	2.334	548.900
115	In-IS	> 252838.295		ppb	0.904		261415.993
111	Cd	328.201	0.188753	ppb	7.138	8.154	6.625
118	Sn	4888.617	0.374263	ppb	6.717	15.115	2825.836
121	Sb	15230.338	2.387287	ppb	1.582	2.415	494.453
135	Ba	53143.128	37.463106	ppb	1.778	2.250	48.889
165	Ho-IS	274261.509		ppb	1.760		278426.605
159	Tb-IS	> 309629.076		ppb	1.804		316501.167
207	Pb	188520.353	8.037016	ppb	1.936	0.355	284.446
203	Tl	198.890	0.019562	ppb	6.773	7.197	57.778
209	Bi-IS	221787.417		ppb	1.164		207142.422
51	V	3271.486	5.880196	ppb	2.501	2.132	8.889
59	Co	1690.100	1.339216	ppb	6.159	5.825	15.556
60	Ni	4380.672	4.830857	ppb	2.344	2.228	38.889
75	As	1116.621	1.160257	ppb	6.469	19.611	746.103
71	Ga-ISK	> 62880.307		ppb	0.384		63152.627
82	Se-2	12.573	0.272332	ppb	12.252	16.401	2.914
107	Ag-1	994.479	0.037684	ppb	4.709	37.464	863.359
115	In-ISK	75552.386		ppb	1.745		78772.262
45	Sc-ISK	> 160221.251		ppb	0.247		160691.004
23	Na	1548631.941	3415.534552	ppb	1.047	0.816	1161.714
39	K	3380235.140	3964.240127	ppb	1.468	1.470	71564.393
24	Mg	773671.154	1604.261753	ppb	0.488	0.696	131.667
159	Tb-ISK	149543.331		ppb	0.736		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14201-B-2-A

Autosampler Position: 327

Sample Date/Time: Saturday, December 14, 2019 00:34:27

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14201-B-2-A.280

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30130.630		ppb		0.215		30381.191
9	Be	|		91.111	0.097472	ppb	10.561	10.647		3.333
10	B	|		9052.868	27.223785	ppb	1.978	2.631		2497.996
27	Al	|		5443862.736	1421.319203	ppb	0.618	0.843		1598.978
43	Ca-2	|		138040.489	9912.968983	ppb	1.492	1.564		53.333
49	Ti	|		13150.495	33.322893	ppb	0.562	1.140		87.778
52	Cr	|		25753.195	3.080528	ppb	1.428	1.576		8025.629
55	Mn	|		921938.555	92.671600	ppb	1.481	0.134		505.565
57	Fe	|		405575.692	1820.572516	ppb	0.692	0.977		7066.192
45	Sc-IS	>		915456.969		ppb	1.351			914486.958
66	Zn	>		258296.417	230.842764	ppb	0.354	1.552		540.010
86	Sr	|		93881.058	44.987278	ppb	1.301	1.486		25.904
65	Cu	|		57239.653	34.668968	ppb	0.861	1.548		46.446
69	Ga-IS	|		355693.818		ppb	0.686			359905.341
95	Mo	|		2041.257	0.726389	ppb	2.479	3.965		548.900
115	In-IS	>		254526.753		ppb	0.706			261415.993
111	Cd	|		329.051	0.187895	ppb	0.981	1.721		6.625
118	Sn	|		3598.231	0.146041	ppb	2.287	7.863		2825.836
121	Sb	|		12565.526	1.942357	ppb	2.622	2.770		494.453
135	Ba	|		79621.289	55.766603	ppb	1.202	0.606		48.889
165	Ho-IS	|		276596.898		ppb	1.563			278426.605
159	Tb-IS	>		314633.705		ppb	2.204			316501.167
207	Pb	|		299657.533	12.582328	ppb	1.028	2.212		284.446
203	Tl	|		181.112	0.016692	ppb	19.680	26.924		57.778
209	Bi-IS	|		208266.198		ppb	1.334			207142.422
51	V	|		3470.422	6.258455	ppb	0.916	0.704		8.889
59	Co	|		2065.705	1.645201	ppb	1.075	2.294		15.556
60	Ni	|		4173.944	4.616339	ppb	4.154	4.900		38.889
75	As	|		1151.859	1.280045	ppb	3.346	7.181		746.103
71	Ga-ISK	>		62688.368		ppb	1.220			63152.627
82	Se-2	|		16.252	0.378700	ppb	58.286	71.677		2.914
107	Ag-1	|		595.568	-0.073298	ppb	7.843	15.389		863.359
115	In-ISK	|		75715.919		ppb	1.407			78772.262
45	Sc-ISK	>		160169.728		ppb	1.674			160691.004
23	Na	|		1705783.501	3764.602784	ppb	0.931	2.385		1161.714
39	K	|		3880435.274	4566.854040	ppb	1.958	3.655		71564.393
24	Mg	|		922615.781	1914.138801	ppb	0.155	1.791		131.667
159	Tb-ISK	|		150596.311		ppb	0.786			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Saturday, December 14, 2019 00:37:13

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCV-210770.281

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29444.764		ppb	1.711			30381.191
9	Be	|	88777.231	100.665034	ppb	0.873	1.373		3.333
10	B	|	63368.042	258.372005	ppb	1.877	1.552		2497.996
27	Al	|	382795.562	101.645393	ppb	2.063	2.629		1598.978
43	Ca-2	|	70975.905	5201.276887	ppb	1.518	1.474		53.333
49	Ti	|	39764.159	103.322114	ppb	1.250	0.782		87.778
52	Cr	|	580296.506	101.592852	ppb	1.536	1.400		8025.629
55	Mn	|	992175.643	101.821391	ppb	0.642	0.183		505.565
57	Fe	|	1049020.300	4860.078488	ppb	0.672	1.024		7066.192
45	Sc-IS	>	896721.241		ppb	0.548			914486.958
66	Zn	>	111613.233	101.555481	ppb	0.978	1.536		540.010
86	Sr	|	205390.038	100.490328	ppb	0.813	1.321		25.904
65	Cu	|	164753.753	101.921159	ppb	1.017	1.508		46.446
69	Ga-IS	|	354609.659		ppb	0.864			359905.341
95	Mo	|	201665.694	99.966029	ppb	0.582	0.978		548.900
115	In-IS	>	253059.935		ppb	0.144			261415.993
111	Cd	|	169795.753	99.457145	ppb	0.730	0.745		6.625
118	Sn	|	581603.177	100.422629	ppb	0.505	0.552		2825.836
121	Sb	|	612903.437	99.007630	ppb	0.904	0.979		494.453
135	Ba	|	140039.827	98.680403	ppb	1.617	1.673		48.889
165	Ho-IS	|	269602.798		ppb	2.985			278426.605
159	Tb-IS	>	303566.672		ppb	1.948			316501.167
207	Pb	|	2213484.299	96.400498	ppb	0.773	1.649		284.446
203	Tl	|	714021.398	100.159331	ppb	0.527	2.040		57.778
209	Bi-IS	|	200069.117		ppb	1.111			207142.422
51	V	|	55354.831	101.905106	ppb	1.453	3.974		8.889
59	Co	|	125803.811	102.736829	ppb	1.534	2.000		15.556
60	Ni	|	87577.671	99.465980	ppb	1.614	2.625		38.889
75	As	|	32371.209	100.338293	ppb	1.357	3.888		746.103
71	Ga-ISK	>	61595.900		ppb	2.611			63152.627
82	Se-2	|	3597.334	103.350051	ppb	2.130	4.187		2.914
107	Ag-1	|	352859.150	100.372084	ppb	2.022	2.930		863.359
115	In-ISK	|	76217.145		ppb	2.607			78772.262
45	Sc-ISK	>	161496.631		ppb	0.737			160691.004
23	Na	|	2383633.996	5217.088721	ppb	1.036	0.894		1161.714
39	K	|	4496764.947	5259.422138	ppb	1.499	1.429		71564.393
24	Mg	|	2552813.584	5252.228803	ppb	0.882	0.626		131.667
159	Tb-ISK	|	149289.584		ppb	2.199			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Saturday, December 14, 2019 00:42:45

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.283

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		29583.944		ppb		2.184		30381.191
9	Be	|		6.667	0.003759	ppb	100.000	197.818		3.333
10	B	|		2487.995	0.030598	ppb	2.661	683.614		2497.996
27	Al	|		2283.516	0.183315	ppb	7.404	25.712		1598.978
43	Ca-2	|		38.333	-1.060068	ppb	27.152	70.387		53.333
49	Ti	|		110.000	0.058534	ppb	16.872	78.687		87.778
52	Cr	|		7244.059	-0.126949	ppb	2.798	33.449		8025.629
55	Mn	|		600.013	0.009938	ppb	2.222	14.187		505.565
57	Fe	|		6867.206	-0.687822	ppb	1.886	83.873		7066.192
45	Sc-IS	>		908071.479		ppb	0.684			914486.958
66	Zn	|		623.347	0.078813	ppb	6.701	52.065		540.010
86	Sr	|		39.749	0.006826	ppb	54.524	155.953		25.904
65	Cu	|		64.015	0.010941	ppb	3.048	13.391		46.446
69	Ga-IS	|		352845.473		ppb	0.274			359905.341
95	Mo	|		1057.817	0.251850	ppb	9.114	19.914		548.900
115	In-IS	>		256688.480		ppb	0.764			261415.993
111	Cd	|		21.112	0.008418	ppb	28.091	39.755		6.625
118	Sn	|		4953.081	0.372702	ppb	2.534	7.525		2825.836
121	Sb	|		2289.072	0.287488	ppb	2.482	3.754		494.453
135	Ba	|		35.556	-0.008698	ppb	47.187	132.484		48.889
165	Ho-IS	|		271331.319		ppb	2.515			278426.605
159	Tb-IS	>		307301.432		ppb	1.177			316501.167
207	Pb	|		390.002	0.004887	ppb	8.418	25.123		284.446
203	Tl	|		88.889	0.004536	ppb	9.437	22.784		57.778
209	Bi-IS	|		201625.156		ppb	0.799			207142.422
51	V	|		6.667	-0.004025	ppb	50.000	152.180		8.889
59	Co	|		13.333	-0.001782	ppb	75.000	449.348		15.556
60	Ni	|		38.889	-0.000196	ppb	35.686	8157.024		38.889
75	As	|		785.646	0.099062	ppb	3.555	90.526		746.103
71	Ga-ISK	>		63772.066		ppb	2.110			63152.627
82	Se-2	|		4.562	0.046116	ppb	121.044	338.392		2.914
107	Ag-1	|		1385.623	0.142086	ppb	11.539	35.830		863.359
115	In-ISK	|		76668.243		ppb	1.085			78772.262
45	Sc-ISK	>		161688.887		ppb	1.484			160691.004
23	Na	|		1268.390	0.216709	ppb	4.535	39.323		1161.714
39	K	|		67963.506	-4.787847	ppb	0.355	31.007		71564.393
24	Mg	|		316.670	0.378795	ppb	3.974	8.900		131.667
159	Tb-ISK	|		148286.443		ppb	1.661			150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14198-C-1-A

Autosampler Position: 328

Sample Date/Time: Saturday, December 14, 2019 00:45:32

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14198-C-1-A.284

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28583.056		ppb	4.895		30381.191
9	Be	31.111	0.031528	ppb	6.186	9.802	3.333
10	B	15481.727	55.150521	ppb	4.088	6.753	2497.996
27	Al	3362920.461	894.349701	ppb	1.321	3.885	1598.978
43	Ca-2	200279.627	14657.120181	ppb	2.295	4.910	53.333
49	Ti	9000.613	23.161855	ppb	2.391	3.515	87.778
52	Cr	23431.433	2.753343	ppb	2.823	6.622	8025.629
55	Mn	585533.785	59.956106	ppb	1.929	4.535	505.565
57	Fe	255175.900	1155.419121	ppb	1.627	4.321	7066.192
45	Sc-IS	> 899112.281		ppb	2.575		914486.958
66	Zn	238834.371	217.358498	ppb	0.304	2.339	540.010
86	Sr	176936.656	86.399202	ppb	1.924	4.499	25.904
65	Cu	45092.587	27.818605	ppb	1.426	4.023	46.446
69	Ga-IS	336851.518		ppb	3.453		359905.341
95	Mo	1748.996	0.600131	ppb	2.002	6.614	548.900
115	In-IS	> 246050.721		ppb	2.276		261415.993
111	Cd	198.551	0.116024	ppb	14.273	15.993	6.625
118	Sn	1912.351	-0.132974	ppb	12.023	33.334	2825.836
121	Sb	7086.202	1.101524	ppb	1.579	4.133	494.453
135	Ba	45350.784	32.866568	ppb	2.267	4.491	48.889
165	Ho-IS	267076.090		ppb	4.064		278426.605
159	Tb-IS	> 303269.016		ppb	2.757		316501.167
207	Pb	148069.757	6.446489	ppb	0.763	3.318	284.446
203	Tl	137.778	0.011605	ppb	12.177	22.957	57.778
209	Bi-IS	192314.229		ppb	2.750		207142.422
51	V	2858.064	5.351756	ppb	1.553	2.398	8.889
59	Co	1325.617	1.092526	ppb	2.689	3.692	15.556
60	Ni	2994.758	3.428561	ppb	0.680	0.861	38.889
75	As	1233.367	1.682786	ppb	1.398	2.738	746.103
71	Ga-ISK	> 60356.138		ppb	1.441		63152.627
82	Se-2	19.239	0.481252	ppb	24.710	27.464	2.914
107	Ag-1	326.670	-0.144912	ppb	12.745	8.874	863.359
115	In-ISK	73822.432		ppb	1.328		78772.262
45	Sc-ISK	> 158742.682		ppb	0.679		160691.004
23	Na	5312473.813	11833.420117	ppb	1.789	2.342	1161.714
39	K	5270136.093	6287.651340	ppb	1.158	1.652	71564.393
24	Mg	1639467.393	3431.485790	ppb	0.717	0.113	131.667
159	Tb-ISK	148399.592		ppb	1.556		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14197-A-1-A

Autosampler Position: 329

Sample Date/Time: Saturday, December 14, 2019 00:48:18

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14197-A-1-A.285

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30583.818		ppb	1.396		30381.191
9	Be	65.556	0.068671	ppb	12.796	13.697	3.333
10	B	10411.574	32.603380	ppb	3.856	5.496	2497.996
27	Al	5499401.315	1426.943991	ppb	2.484	2.814	1598.978
43	Ca-2	165429.026	11806.732640	ppb	0.767	1.165	53.333
49	Ti	17891.196	45.131117	ppb	0.385	0.690	87.778
52	Cr	26049.291	3.103772	ppb	2.159	2.787	8025.629
55	Mn	729996.809	72.916327	ppb	0.347	0.768	505.565
57	Fe	377279.324	1680.514826	ppb	0.663	0.300	7066.192
45	Sc-IS	> 921146.175		ppb	0.420		914486.958
66	Zn	208004.481	184.628080	ppb	0.304	0.491	540.010
86	Sr	154771.303	73.713944	ppb	1.994	2.346	25.904
65	Cu	46058.290	27.715547	ppb	0.648	0.569	46.446
69	Ga-IS	355203.108		ppb	1.025		359905.341
95	Mo	2553.562	0.968100	ppb	3.395	4.767	548.900
115	In-IS	> 256235.520		ppb	0.699		261415.993
111	Cd	354.642	0.201484	ppb	8.318	9.121	6.625
118	Sn	2247.955	-0.089403	ppb	3.616	15.843	2825.836
121	Sb	13952.366	2.150239	ppb	0.924	0.246	494.453
135	Ba	87018.752	60.543275	ppb	2.176	1.789	48.889
165	Ho-IS	276276.452		ppb	3.083		278426.605
159	Tb-IS	> 312941.163		ppb	1.744		316501.167
207	Pb	354649.871	14.972069	ppb	0.976	1.525	284.446
203	Tl	184.446	0.017313	ppb	4.548	4.066	57.778
209	Bi-IS	200338.402		ppb	1.085		207142.422
51	V	3071.441	5.535587	ppb	3.080	3.047	8.889
59	Co	1635.649	1.299591	ppb	2.414	2.550	15.556
60	Ni	4185.058	4.626309	ppb	2.710	2.531	38.889
75	As	1239.192	1.551457	ppb	5.239	13.017	746.103
71	Ga-ISK	> 62702.862		ppb	0.239		63152.627
82	Se-2	12.547	0.272335	ppb	32.449	41.957	2.914
107	Ag-1	356.671	-0.140156	ppb	8.915	6.263	863.359
115	In-ISK	75722.074		ppb	0.743		78772.262
45	Sc-ISK	> 162201.278		ppb	1.265		160691.004
23	Na	3493246.344	7613.583554	ppb	1.626	0.999	1161.714
39	K	3561988.931	4130.282335	ppb	0.596	1.237	71564.393
24	Mg	1186170.467	2429.952439	ppb	0.166	1.251	131.667
159	Tb-ISK	149329.125		ppb	0.931		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14631-F-1-A

Autosampler Position: 330

Sample Date/Time: Saturday, December 14, 2019 00:51:04

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14631-F-1-A.286

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30205.235		ppb	1.145		30381.191
9	Be	20.000	0.018559	ppb	60.093	72.970	3.333
10	B	5857.868	13.872138	ppb	2.013	1.603	2497.996
27	Al	708032.764	183.958244	ppb	1.456	2.744	1598.978
43	Ca-2	25449.317	1818.776414	ppb	1.045	0.639	53.333
49	Ti	1508.969	3.613297	ppb	1.350	1.366	87.778
52	Cr	11724.810	0.635422	ppb	1.267	2.815	8025.629
55	Mn	53000.359	5.263746	ppb	0.601	1.206	505.565
57	Fe	40345.783	151.448338	ppb	0.680	1.708	7066.192
45	Sc-IS	> 918272.595		ppb	1.332		914486.958
66	Zn	6045.724	4.913533	ppb	1.422	1.870	540.010
86	Sr	11468.750	5.468172	ppb	0.699	1.416	25.904
65	Cu	3324.788	1.981674	ppb	5.147	6.188	46.446
69	Ga-IS	347233.990		ppb	0.891		359905.341
95	Mo	1001.146	0.218356	ppb	5.495	11.344	548.900
115	In-IS	> 253646.525		ppb	0.793		261415.993
111	Cd	17.898	0.006681	ppb	48.633	75.255	6.625
118	Sn	1045.594	-0.293517	ppb	6.629	4.557	2825.836
121	Sb	1642.317	0.187572	ppb	3.859	6.527	494.453
135	Ba	5733.372	3.998899	ppb	0.121	0.905	48.889
165	Ho-IS	269072.400		ppb	2.382		278426.605
159	Tb-IS	> 308823.084		ppb	1.889		316501.167
207	Pb	12024.195	0.502901	ppb	2.088	2.168	284.446
203	Tl	61.111	0.000614	ppb	40.939	535.005	57.778
209	Bi-IS	198941.214		ppb	0.483		207142.422
51	V	895.584	1.601037	ppb	7.631	9.720	8.889
59	Co	158.890	0.114497	ppb	16.957	16.663	15.556
60	Ni	704.462	0.740533	ppb	8.336	7.156	38.889
75	As	1152.590	1.272643	ppb	8.952	24.127	746.103
71	Ga-ISK	> 62856.913		ppb	2.167		63152.627
82	Se-2	8.581	0.160484	ppb	24.612	39.366	2.914
107	Ag-1	396.672	-0.129149	ppb	17.547	15.476	863.359
115	In-ISK	76831.414		ppb	0.519		78772.262
45	Sc-ISK	> 161360.800		ppb	1.676		160691.004
23	Na	2671278.330	5853.409793	ppb	0.830	2.433	1161.714
39	K	806237.795	873.782955	ppb	1.630	2.498	71564.393
24	Mg	180025.606	370.517079	ppb	0.843	1.911	131.667
159	Tb-ISK	149489.430		ppb	0.618		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14631-H-2-A

Autosampler Position: 331

Sample Date/Time: Saturday, December 14, 2019 00:53:49

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14631-H-2-A.287

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30020.411		ppb	2.433		30381.191
9	Be	14.444	0.012287	ppb	48.038	61.695	3.333
10	B	3503.764	4.161370	ppb	4.864	17.795	2497.996
27	Al	479201.230	124.661855	ppb	1.447	1.491	1598.978
43	Ca-2	38842.743	2784.935912	ppb	1.523	0.965	53.333
49	Ti	1993.473	4.861721	ppb	10.401	11.796	87.778
52	Cr	11571.353	0.613907	ppb	2.654	8.390	8025.629
55	Mn	116126.751	11.622965	ppb	0.426	0.829	505.565
57	Fe	40841.633	154.173891	ppb	0.735	1.563	7066.192
45	Sc-IS	> 915939.646		ppb	1.051		914486.958
66	Zn	30080.526	26.438619	ppb	0.611	0.482	540.010
86	Sr	23339.446	11.168974	ppb	0.271	1.223	25.904
65	Cu	4489.347	2.691715	ppb	1.031	1.896	46.446
69	Ga-IS	350162.976		ppb	0.624		359905.341
95	Mo	968.922	0.204006	ppb	4.646	11.372	548.900
115	In-IS	> 254946.022		ppb	0.470		261415.993
111	Cd	80.188	0.042853	ppb	13.453	14.299	6.625
118	Sn	1041.149	-0.295286	ppb	2.487	1.230	2825.836
121	Sb	1682.321	0.192571	ppb	2.784	3.629	494.453
135	Ba	7619.810	5.298395	ppb	1.657	2.116	48.889
165	Ho-IS	273281.115		ppb	2.278		278426.605
159	Tb-IS	> 308895.421		ppb	1.453		316501.167
207	Pb	23782.250	1.005852	ppb	2.293	0.974	284.446
203	Tl	97.778	0.005700	ppb	22.181	51.364	57.778
209	Bi-IS	200448.765		ppb	0.742		207142.422
51	V	1488.967	2.642140	ppb	6.046	5.459	8.889
59	Co	281.114	0.210516	ppb	5.849	7.891	15.556
60	Ni	994.479	1.052981	ppb	1.687	0.125	38.889
75	As	921.049	0.526908	ppb	1.327	14.414	746.103
71	Ga-ISK	> 63477.408		ppb	1.650		63152.627
82	Se-2	7.898	0.139604	ppb	76.017	122.347	2.914
107	Ag-1	300.003	-0.157047	ppb	2.940	1.027	863.359
115	In-ISK	76182.582		ppb	0.382		78772.262
45	Sc-ISK	> 163490.239		ppb	0.852		160691.004
23	Na	533516.518	1151.509147	ppb	0.344	0.579	1161.714
39	K	1043668.152	1140.005114	ppb	1.067	1.933	71564.393
24	Mg	344449.968	699.832630	ppb	0.787	1.148	131.667
159	Tb-ISK	149347.950		ppb	0.393		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14631-F-3-A

Autosampler Position: 332

Sample Date/Time: Saturday, December 14, 2019 00:56:35

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14631-F-3-A.288

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc.	Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29900.148			ppb				0.758		30381.191
9	Be	|		37.778	0.038100		ppb	26.956	29.759				3.333
10	B	|		3145.902	2.629811		ppb	2.152	8.368				2497.996
27	Al	|		3117733.909	810.603641		ppb	1.466	1.029				1598.978
43	Ca-2	|		29518.800	2108.537175		ppb	0.266	0.769				53.333
49	Ti	|		8687.086	21.850709		ppb	2.397	2.753				87.778
52	Cr	|		17016.797	1.550147		ppb	1.192	1.400				8025.629
55	Mn	|		468191.078	46.857701		ppb	0.959	1.352				505.565
57	Fe	|		217936.484	959.448995		ppb	0.528	0.842				7066.192
45	Sc-IS	>		918996.559			ppb	0.536					914486.958
66	Zn	|		46796.523	41.259327		ppb	0.464	0.264				540.010
86	Sr	|		18562.391	8.850364		ppb	1.234	1.501				25.904
65	Cu	|		8833.129	5.305185		ppb	0.961	1.337				46.446
69	Ga-IS	|		352564.485			ppb	1.017					359905.341
95	Mo	|		637.792	0.041773		ppb	4.352	30.039				548.900
115	In-IS	>		255303.488			ppb	0.577					261415.993
111	Cd	|		115.328	0.063168		ppb	17.306	17.859				6.625
118	Sn	|		1118.933	-0.282152		ppb	9.097	6.164				2825.836
121	Sb	|		1482.299	0.160147		ppb	2.467	3.468				494.453
135	Ba	|		25359.158	17.684719		ppb	1.406	1.043				48.889
165	Ho-IS	|		270741.286			ppb	2.390					278426.605
159	Tb-IS	>		307731.563			ppb	0.978					316501.167
207	Pb	|		99886.802	4.279429		ppb	0.229	1.041				284.446
203	Tl	|		151.112	0.013134		ppb	12.149	19.213				57.778
209	Bi-IS	|		195668.813			ppb	1.217					207142.422
51	V	|		2414.649	4.343586		ppb	7.374	7.648				8.889
59	Co	|		967.811	0.763486		ppb	7.145	8.660				15.556
60	Ni	|		1746.774	1.904927		ppb	4.870	7.011				38.889
75	As	|		867.973	0.390668		ppb	7.101	38.003				746.103
71	Ga-ISK	>		62803.383			ppb	2.974					63152.627
82	Se-2	|		3.562	0.019313		ppb	42.644	233.111				2.914
107	Ag-1	|		333.337	-0.146695		ppb	9.849	7.218				863.359
115	In-ISK	|		77046.114			ppb	1.091					78772.262
45	Sc-ISK	>		163704.855			ppb	0.174					160691.004
23	Na	|		140127.297	300.148662		ppb	1.238	1.175				1161.714
39	K	|		816517.421	871.919756		ppb	1.553	1.529				71564.393
24	Mg	|		309102.114	627.123698		ppb	1.562	1.393				131.667
159	Tb-ISK	|		149285.304			ppb	0.479					150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14124-A-1-B

Autosampler Position: 333

Sample Date/Time: Saturday, December 14, 2019 00:59:21

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14124-A-1-B.289

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	36792.875		ppb	0.332		30381.191
9	Be	6.667	0.002701	ppb	0.000	2.356	3.333
10	B	56093.385	191.225521	ppb	4.398	3.659	2497.996
27	Al	79316.267	17.507126	ppb	1.246	1.968	1598.978
43	Ca-2	19875.489	1231.777719	ppb	2.529	3.034	53.333
49	Ti	540.010	0.968681	ppb	11.332	15.129	87.778
52	Cr	11748.164	0.370838	ppb	2.357	14.208	8025.629
55	Mn	215031.857	18.663513	ppb	0.583	0.418	505.565
57	Fe	115760.480	425.322408	ppb	0.855	1.771	7066.192
45	Sc-IS	> 1057948.611		ppb	0.994		914486.958
66	Zn	22286.259	16.785404	ppb	0.599	0.910	540.010
86	Sr	15499.318	6.416530	ppb	0.986	1.974	25.904
65	Cu	3485.501	1.800099	ppb	1.403	2.269	46.446
69	Ga-IS	341486.671		ppb	0.563		359905.341
95	Mo	1137.823	0.211999	ppb	6.035	15.355	548.900
115	In-IS	> 251960.874		ppb	1.188		261415.993
111	Cd	368.727	0.213272	ppb	16.078	16.820	6.625
118	Sn	1584.532	-0.198347	ppb	4.640	8.072	2825.836
121	Sb	1024.481	0.088965	ppb	2.805	4.808	494.453
135	Ba	2283.516	1.583285	ppb	1.517	0.860	48.889
165	Ho-IS	275093.573		ppb	2.717		278426.605
159	Tb-IS	> 310271.937		ppb	2.093		316501.167
207	Pb	10086.953	0.417994	ppb	0.592	1.723	284.446
203	Tl	42.222	-0.001967	ppb	12.059	41.428	57.778
209	Bi-IS	190700.288		ppb	2.023		207142.422
51	V	355.560	0.644695	ppb	8.861	7.798	8.889
59	Co	166.668	0.125105	ppb	12.166	13.002	15.556
60	Ni	7617.587	8.699186	ppb	3.021	2.168	38.889
75	As	784.261	0.205457	ppb	2.438	30.127	746.103
71	Ga-ISK	> 60956.457		ppb	1.459		63152.627
82	Se-2	10.901	0.234137	ppb	48.611	64.251	2.914
107	Ag-1	335.560	-0.143435	ppb	16.151	10.403	863.359
115	In-ISK	75481.000		ppb	0.660		78772.262
45	Sc-ISK	> 171875.586		ppb	0.846		160691.004
23	Na	39184059.120	80622.448192	ppb	1.264	1.347	1161.714
39	K	4210014.393	4616.468987	ppb	0.551	0.521	71564.393
24	Mg	197725.623	382.014726	ppb	0.479	1.330	131.667
159	Tb-ISK	149536.592		ppb	0.696		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14658-B-1-A

Autosampler Position: 334

Sample Date/Time: Saturday, December 14, 2019 01:02:07

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14658-B-1-A.290

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34908.163		ppb			1.820			30381.191
9	Be	|		12.222	0.009207	ppb	31.492	45.227				3.333
10	B	|		49962.784	186.775689	ppb	1.371	1.197				2497.996
27	Al	|		28113.199	6.556113	ppb	2.147	2.838				1598.978
43	Ca-2	|		101489.274	6920.831315	ppb	1.409	0.837				53.333
49	Ti	|		342.226	0.604857	ppb	4.998	5.916				87.778
52	Cr	|		17270.438	1.455455	ppb	2.590	6.136				8025.629
55	Mn	|		165986.544	15.805912	ppb	0.713	0.236				505.565
57	Fe	|		53040.528	197.822467	ppb	1.857	1.440				7066.192
45	Sc-IS	|>		963792.510		ppb	0.695					914486.958
66	Zn	|>		121687.233	103.021397	ppb	1.185	1.419				540.010
86	Sr	|		117671.301	53.558287	ppb	1.448	1.381				25.904
65	Cu	|		2060.748	1.158005	ppb	4.393	3.809				46.446
69	Ga-IS	|		357418.031		ppb	1.861					359905.341
95	Mo	|		1766.776	0.549321	ppb	7.555	10.576				548.900
115	In-IS	|>		264531.737		ppb	1.018					261415.993
111	Cd	|		14.068	0.004149	ppb	71.681	136.528				6.625
118	Sn	|		2309.076	-0.091392	ppb	6.073	23.771				2825.836
121	Sb	|		2385.755	0.291542	ppb	3.126	2.922				494.453
135	Ba	|		10751.823	7.218236	ppb	1.799	2.831				48.889
165	Ho-IS	|		283089.601		ppb	3.504					278426.605
159	Tb-IS	|>		321973.318		ppb	2.034					316501.167
207	Pb	|		846.676	0.022885	ppb	6.188	9.280				284.446
203	Tl	|		37.778	-0.002759	ppb	43.526	81.585				57.778
209	Bi-IS	|		197368.532		ppb	0.663					207142.422
51	V	|		210.002	0.361119	ppb	24.947	27.404				8.889
59	Co	|		212.224	0.156349	ppb	7.083	8.951				15.556
60	Ni	|		2060.149	2.234478	ppb	0.647	2.749				38.889
75	As	|		1554.988	2.490191	ppb	27.876	54.015				746.103
71	Ga-ISK	|>		63306.666		ppb	2.049					63152.627
82	Se-2	|		3063.563	85.590167	ppb	1.112	2.326				2.914
107	Ag-1	|		190.001	-0.187227	ppb	11.504	3.802				863.359
115	In-ISK	|		76835.594		ppb	2.490					78772.262
45	Sc-ISK	|>		171954.408		ppb	1.500					160691.004
23	Na	|		28999942.916	59639.947074	ppb	2.120	1.732				1161.714
39	K	|		2607353.346	2825.418745	ppb	1.309	1.580				71564.393
24	Mg	|		1665274.721	3218.644386	ppb	1.484	2.982				131.667
159	Tb-ISK	|		151986.911		ppb	0.640					150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-14662-B-1-A

Autosampler Position: 335

Sample Date/Time: Saturday, December 14, 2019 01:04:52

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\570-14662-B-1-A.291

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	62768.722		ppb	1.319		30381.191
9	Be	10.000	0.006016	ppb	88.192	142.291	3.333
10	B	317555.173	1151.505653	ppb	0.594	0.663	2497.996
27	Al	828902.495	190.234942	ppb	1.043	2.018	1598.978
43	Ca-2	876924.343	55473.672750	ppb	0.763	0.864	53.333
49	Ti	2032.367	4.341464	ppb	2.616	2.856	87.778
52	Cr	18963.691	1.506795	ppb	1.245	3.193	8025.629
55	Mn	7392123.780	654.760422	ppb	1.425	2.236	505.565
57	Fe	89223.344	326.644976	ppb	1.235	1.525	7066.192
45	Sc-IS	> 1039534.861		ppb	1.099		914486.958
66	Zn	94586.603	74.115465	ppb	1.697	2.430	540.010
86	Sr	1228157.341	518.417231	ppb	1.278	1.768	25.904
65	Cu	3927.714	2.068831	ppb	6.547	7.173	46.446
69	Ga-IS	353825.678		ppb	1.757		359905.341
95	Mo	62487.484	26.523984	ppb	0.875	0.891	548.900
115	In-IS	> 245779.544		ppb	1.900		261415.993
111	Cd	-21.223	-0.016558	ppb	19.600	15.270	6.625
118	Sn	2694.700	0.006402	ppb	9.585	601.601	2825.836
121	Sb	11810.437	1.888938	ppb	2.087	2.859	494.453
135	Ba	137547.924	99.817235	ppb	0.803	1.920	48.889
165	Ho-IS	273764.960		ppb	0.458		278426.605
159	Tb-IS	> 308539.650		ppb	0.357		316501.167
207	Pb	9496.787	0.395029	ppb	1.320	1.494	284.446
203	Tl	33.333	-0.003174	ppb	34.641	50.087	57.778
209	Bi-IS	179322.945		ppb	0.688		207142.422
51	V	1251.166	2.340226	ppb	6.539	6.297	8.889
59	Co	1207.829	0.997454	ppb	8.919	9.610	15.556
60	Ni	13565.328	15.727686	ppb	1.708	0.990	38.889
75	As	3241.054	8.208402	ppb	10.434	13.673	746.103
71	Ga-ISK	> 60175.365		ppb	0.764		63152.627
82	Se-2	1422.560	41.758586	ppb	0.776	0.414	2.914
107	Ag-1	307.781	-0.150287	ppb	24.941	14.565	863.359
115	In-ISK	73582.072		ppb	1.418		78772.262
45	Sc-ISK	> 177682.796		ppb	1.619		160691.004
23	Na	232931143.696	463561.304079	ppb	2.530	1.189	1161.714
39	K	32281972.990	34793.711511	ppb	0.699	1.224	71564.393
24	Mg	13907648.654	26013.418749	ppb	0.834	1.989	131.667
159	Tb-ISK	152018.790		ppb	2.083		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Saturday, December 14, 2019 01:13:11

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCV-210770.294

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30796.495		ppb		1.162		30381.191
9	Be	|		90281.096	100.811102	ppb		1.693	1.191	3.333
10	B	|		64369.159	258.477360	ppb		1.506	0.593	2497.996
27	Al	|		393873.799	103.004261	ppb		0.467	1.243	1598.978
43	Ca-2	|		71022.782	5125.897226	ppb		0.633	0.831	53.333
49	Ti	|		39775.306	101.785875	ppb		1.674	1.702	87.778
52	Cr	|		587949.540	101.378013	ppb		0.340	1.367	8025.629
55	Mn	|		1003001.501	101.382928	ppb		1.191	1.989	505.565
57	Fe	|		1063512.407	4852.813407	ppb		0.443	1.571	7066.192
45	Sc-IS	|>		910550.709		ppb		1.262		914486.958
66	Zn	|>		113313.202	101.537934	ppb		0.928	1.207	540.010
86	Sr	|		209832.854	101.106392	ppb		0.554	0.745	25.904
65	Cu	|		166946.164	101.709001	ppb		0.762	0.765	46.446
69	Ga-IS	|		368465.802		ppb		0.197		359905.341
95	Mo	|		206917.946	101.022152	ppb		1.411	1.893	548.900
115	In-IS	|>		257327.303		ppb		0.992		261415.993
111	Cd	|		172904.130	99.599952	ppb		0.810	0.450	6.625
118	Sn	|		580340.957	98.532403	ppb		1.226	0.278	2825.836
121	Sb	|		626872.729	99.585176	ppb		0.938	0.061	494.453
135	Ba	|		144066.305	99.828180	ppb		1.982	1.097	48.889
165	Ho-IS	|		271858.918		ppb		2.429		278426.605
159	Tb-IS	|>		311921.095		ppb		2.562		316501.167
207	Pb	|		2259008.340	95.766950	ppb		0.843	2.456	284.446
203	Tl	|		726639.729	99.216497	ppb		0.303	2.534	57.778
209	Bi-IS	|		199982.465		ppb		1.542		207142.422
51	V	|		55896.955	98.654197	ppb		2.185	2.288	8.889
59	Co	|		127569.282	99.917184	ppb		0.322	0.518	15.556
60	Ni	|		91073.837	99.195643	ppb		0.702	0.496	38.889
75	As	|		33904.444	100.770503	ppb		1.164	1.862	746.103
71	Ga-ISK	|>		64206.189		ppb		0.709		63152.627
82	Se-2	|		3675.329	101.228219	ppb		1.276	0.763	2.914
107	Ag-1	|		358829.564	97.882935	ppb		0.250	0.948	863.359
115	In-ISK	|		77058.111		ppb		1.265		78772.262
45	Sc-ISK	|>		168261.937		ppb		1.515		160691.004
23	Na	|		2514599.016	5282.428123	ppb		1.538	0.272	1161.714
39	K	|		4646751.584	5214.863663	ppb		2.862	1.367	71564.393
24	Mg	|		2630407.376	5194.362395	ppb		1.448	0.699	131.667
159	Tb-ISK	|		151252.586		ppb		1.351		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Saturday, December 14, 2019 01:18:43

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2019\191213E1\CCB-23446.296

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30970.204		ppb	1.304		30381.191
9	Be	6.667	0.003689	ppb	50.000	99.512	3.333
10	B	2731.372	0.949356	ppb	2.744	45.373	2497.996
27	Al	2481.346	0.228556	ppb	37.080	103.366	1598.978
43	Ca-2	45.000	-0.605609	ppb	22.222	118.239	53.333
49	Ti	98.889	0.027787	ppb	22.444	201.040	87.778
52	Cr	7450.832	-0.102776	ppb	1.494	16.159	8025.629
55	Mn	914.474	0.040981	ppb	2.197	5.561	505.565
57	Fe	7605.358	2.387696	ppb	2.612	23.199	7066.192
45	Sc-IS	> 916445.160		ppb	1.089		914486.958
66	Zn	605.568	0.057466	ppb	8.779	77.583	540.010
86	Sr	45.891	0.009602	ppb	68.522	157.846	25.904
65	Cu	85.236	0.023442	ppb	19.964	44.177	46.446
69	Ga-IS	358784.230		ppb	0.922		359905.341
95	Mo	2297.963	0.850179	ppb	5.335	7.327	548.900
115	In-IS	> 260617.796		ppb	0.683		261415.993
111	Cd	18.508	0.006781	ppb	29.877	47.022	6.625
118	Sn	4210.621	0.234718	ppb	1.428	3.664	2825.836
121	Sb	666.682	0.027237	ppb	8.675	30.963	494.453
135	Ba	42.222	-0.004436	ppb	27.725	184.017	48.889
165	Ho-IS	278651.261		ppb	2.375		278426.605
159	Tb-IS	> 317972.158		ppb	0.849		316501.167
207	Pb	260.001	-0.001062	ppb	14.276	153.409	284.446
203	Tl	83.334	0.003396	ppb	31.749	105.615	57.778
209	Bi-IS	205351.189		ppb	1.601		207142.422
51	V	8.889	-0.000219	ppb	78.062	5622.384	8.889
59	Co	23.333	0.005906	ppb	51.508	157.714	15.556
60	Ni	47.778	0.009101	ppb	20.140	113.286	38.889
75	As	945.648	0.576924	ppb	3.749	16.603	746.103
71	Ga-ISK	> 64018.682		ppb	0.590		63152.627
82	Se-2	0.232	-0.075262	ppb	2541.153	216.468	2.914
107	Ag-1	1396.735	0.143082	ppb	4.355	12.863	863.359
115	In-ISK	79236.134		ppb	0.668		78772.262
45	Sc-ISK	> 167322.016		ppb	0.965		160691.004
23	Na	6859.981	11.943036	ppb	2.662	3.457	1161.714
39	K	81235.880	7.712872	ppb	0.592	13.099	71564.393
24	Mg	331.671	0.386268	ppb	15.176	25.613	131.667
159	Tb-ISK	151729.005		ppb	1.788		150615.908

QC Out of Limits

AnalyteMassOut of Limits Message

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:

Results Data Set: 191209H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Sample ID: Manual FIAS Cycle

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

FIMS-400: Low gas pressure

Autosampler Location:

Date Collected: 12/9/2019 3:06:05 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

=====
Sequence No.: 1

Sample ID: Manual FIAS Cycle

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

User canceled analysis.

Autosampler Location:

Date Collected: 12/9/2019 3:10:49 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

=====
Sequence No.: 1

Sample ID: Manual FIAS Cycle

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location:

Date Collected: 12/9/2019 3:15:18 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: Manual FIAS Cycle

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0001	0.0009	0.0001	3:16:17 PM	Yes

=====
Sequence No.: 2

Sample ID: Manual FIAS Cycle

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location:

Date Collected: 12/9/2019 3:17:21 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: Manual FIAS Cycle

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0002	0.0020	0.0002	3:18:19 PM	Yes

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:

Results Data Set: 191209H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Sample ID: icv 570-37769_2-a

Analyst:

Autosampler Location: 1

Date Collected: 12/9/2019 3:29:32 PM

Data Type: Original

Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.

Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-37769_2-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.
Autosampler Location: 1
Date Collected: 12/9/2019 3:30:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

=====
Sequence No.: 3
Sample ID: Manual FIAS Cycle
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.
Autosampler Location:
Date Collected: 12/9/2019 3:31:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-37769_2-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/9/2019 3:57:28 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icv 570-37769_2-a				Analyte: Hg 253.7			
Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Peak Time	Peak Stored
1				2.225e-3082	2.225e-3082	12:00:00 AM	Yes
2				2.225e-3082	2.225e-3082	12:00:00 AM	Yes

=====
Sequence No.: 2
Sample ID: ic 570-37769_4-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 12/9/2019 3:59:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-37769_4-a				Analyte: Hg 253.7			
Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Peak Time	Peak Stored
1				2.225e-3082	2.225e-3082	12:00:00 AM	Yes
2				2.225e-3082	2.225e-3082	12:00:00 AM	Yes

=====
Sequence No.: 3
Autosampler Location: 3

Sample ID: ic 570-37769_5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 4:01:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-37769_5-a

Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1				2.225e-308	2.225e-308	12:00:00 AM	Yes

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icis 570-37769_1-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/9/2019 4:03:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icis 570-37769_1-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Stored
1 2.225e-3082.225e-30812:00:00 AM Yes

User canceled analysis.

=====
Analysis BegunLogged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:

Results Data Set: 191209H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

Sequence No.: 1

Sample ID: icis 570-37769_1-a

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 12/9/2019 4:04:13 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: icis 570-37769_1-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	-0.0011	0.0000	4:05:18 PM	Yes
2		[0.00]	0.0000	-0.0007	0.0000	4:06:04 PM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	101.82				

Auto-zero performed.

Sequence No.: 2

Sample ID: ic 570-37769_4-a

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 2

Date Collected: 12/9/2019 4:06:30 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: ic 570-37769_4-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0003	0.0004	0.0003	4:07:35 PM	Yes
2		[0.025]	0.0002	-0.0001	0.0002	4:08:21 PM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0001				
%RSD:		0.00%	34.92				

Standard number 1 applied. [0.025]

Correlation Coef.: 1.000000 Slope: 0.00812 Intercept: 0.00000

Sequence No.: 3

Sample ID: ic 570-37769_5-a

Analyst:

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 3

Date Collected: 12/9/2019 4:08:47 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: ic 570-37769_5-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0008	0.0031	0.0008	4:09:52 PM	Yes
2		[0.100]	0.0007	0.0030	0.0008	4:10:38 PM	Yes
Mean:		[0.100]	0.0008				
SD:		0.00000	0.0001				
%RSD:		0.00%	7.01				

Standard number 2 applied. [0.100]

Correlation Coef.: 0.999931 Slope: 0.00775 Intercept: 0.00000

Sequence No.: 4

Sample ID: ic 570-37769_6-a

Autosampler Location: 4

Date Collected: 12/9/2019 4:11:05 PM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-37769_6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0089	0.0445	0.0089	4:12:11 PM	Yes
2		[1.000]	0.0089	0.0441	0.0089	4:12:57 PM	Yes

Mean: [1.000] 0.0089
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.38
 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999930 Slope: 0.00893 Intercept: -0.00004

=====

Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-37769_7-a Date Collected: 12/9/2019 4:13:24 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-37769_7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0181	0.0911	0.0181	4:14:29 PM	Yes
2		[2.000]	0.0181	0.0910	0.0181	4:15:15 PM	Yes

Mean: [2.000] 0.0181
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.18
 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999957 Slope: 0.00906 Intercept: -0.00007

=====

Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-37769_8-a Date Collected: 12/9/2019 4:15:42 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-37769_8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0452	0.2293	0.0452	4:16:45 PM	Yes
2		[5.000]	0.0452	0.2312	0.0452	4:17:31 PM	Yes

Mean: [5.000] 0.0452
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.01
 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999993 Slope: 0.00905 Intercept: -0.00006

=====

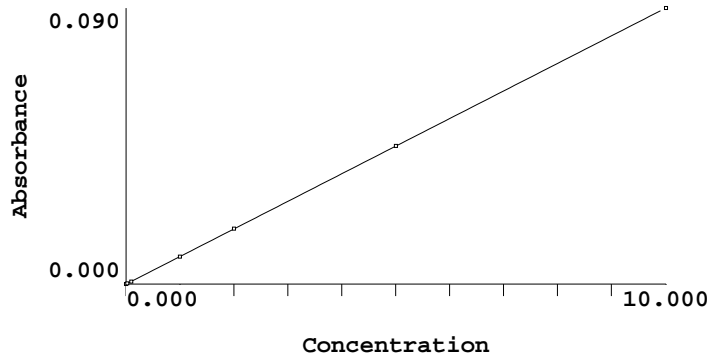
Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-37769_9-a Date Collected: 12/9/2019 4:17:57 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-37769_9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.0901	0.4648	0.0901	4:19:01 PM	Yes
2		[10.000]	0.0905	0.4711	0.0905	4:19:47 PM	Yes

Mean: [10.000] 0.0903
 SD: 0.00000 0.0002
 %RSD: 0.00% 0.27
 Standard number 6 applied. [10.000]

Correlation Coef.: 0.999998 Slope: 0.00903 Intercept: -0.00005



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-37769_1-a	0.0000	0	0.0054	0.00	101.82
ic 570-37769_4-a	0.0002	0.025	0.0278	0.00	34.92
ic 570-37769_5-a	0.0008	0.100	0.0914	0.00	7.01
ic 570-37769_6-a	0.0089	1.000	0.9902	0.00	0.38
ic 570-37769_7-a	0.0181	2.000	2.0092	0.00	0.18
ic 570-37769_8-a	0.0452	5.000	5.0034	0.00	0.01
ic 570-37769_9-a	0.0903	10.000	9.9975	0.00	0.27

Correlation Coef.: 0.999998 Slope: 0.00903 Intercept: -0.00005

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-37330_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 12/9/2019 4:21:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-37330_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.97	0.0449	0.2326	0.0449	4:22:58 PM	Yes
2	0.0050	4.97	0.0449	0.2340	0.0449	4:23:44 PM	Yes
Mean:	0.0050	4.97	0.0449				
SD:	0.00000	0.001	0.0000				
%RSD:	0.01%	0.01%	0.01				

QC value within limits for Hg 253.7 Recovery = 99.48%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-37330_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/9/2019 4:24:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-37330_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0166	0.0001	0.0012	0.0001	4:25:14 PM	Yes
2	0.0000	0.0125	0.0001	0.0002	0.0001	4:26:00 PM	Yes
Mean:	0.0000	0.0146	0.0001				
SD:	0.00000	0.00286	0.0000				
%RSD:	19.64%	19.64%	31.19				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-37769_12-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 12/9/2019 4:26:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-37769_12-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.272	0.0024	0.0127	0.0024	4:27:30 PM	Yes
2	0.0005	0.270	0.0024	0.0123	0.0024	4:28:16 PM	Yes
Mean:	0.0005	0.271	0.0024				
SD:	0.00000	0.0014	0.0000				
%RSD:	0.53%	0.53%	0.54				

=====
Sequence No.: 4
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Autosampler Location: 5
Date Collected: 12/9/2019 4:28:42 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.00	0.0180	0.0929	0.0180	4:29:48 PM	Yes
2	0.0020	2.00	0.0180	0.0923	0.0180	4:30:34 PM	Yes
Mean:	0.0020	2.00	0.0180				
SD:	0.00000	0.001	0.0000				
%RSD:	0.06%	0.06%	0.06				

QC value within limits for Hg 253.7 Recovery = 99.99%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-37330_11-a Date Collected: 12/9/2019 4:31:01 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0069	0.0000	-0.0005	0.0000	4:32:05 PM	Yes
2	0.0000	0.0055	0.0000	-0.0012	0.0000	4:32:51 PM	Yes
Mean:	0.0000	0.0062	0.0000				
SD:	0.00000	0.00101	0.0000				
%RSD:	16.24%	16.24%	123.54				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```
=====  
Analysis Begun
```

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

```
=====  
Sequence No.: 1  
Sample ID: icv 570-37330_2-a  
Analyst: 1174 HG-8  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0  
User canceled analysis.
```

Autosampler Location: 8
Date Collected: 12/9/2019 4:36:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37642_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 12/9/2019 4:36:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37642_1-a				Analyte: Hg 253.7			
Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0039	-0.0000	-0.0014	0.0000	4:37:57 PM	Yes
2	0.0000	0.0025	-0.0000	-0.0014	-0.0000	4:38:43 PM	Yes
Mean:	0.0000	0.0032	-0.0000				
SD:	0.00000	0.00098	0.0000				
%RSD:	30.85%	30.85%	44.10				

=====
Sequence No.: 2
Sample ID: lcs 570-37642_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 11
Date Collected: 12/9/2019 4:39:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37642_2-a				Analyte: Hg 253.7			
Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0437	0.2283	0.0437	4:40:15 PM	Yes
2	0.0049	4.87	0.0440	0.2307	0.0440	4:41:00 PM	Yes
Mean:	0.0049	4.86	0.0438				
SD:	0.00002	0.021	0.0002				
%RSD:	0.44%	0.44%	0.44				

=====
Sequence No.: 3
Sample ID: lcsd 570-37642_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 12
Date Collected: 12/9/2019 4:41:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37642_3-a				Analyte: Hg 253.7			
Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.90	0.0442	0.2317	0.0442	4:42:33 PM	Yes
2	0.0049	4.90	0.0442	0.2311	0.0442	4:43:19 PM	Yes
Mean:	0.0049	4.90	0.0442				
SD:	0.00000	0.000	0.0000				
%RSD:	0.01%	0.01%	0.01				

=====
Sequence No.: 4
Sample ID: 570-14372-e-2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 13
Date Collected: 12/9/2019 4:43:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14372-e-2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0110	0.0001	-0.0002	0.0001	4:44:52 PM	Yes
2	0.0000	0.0116	0.0001	-0.0006	0.0001	4:45:37 PM	Yes
Mean:	0.0000	0.0113	0.0001				
SD:	0.00000	0.00044	0.0000				
%RSD:	3.92%	3.92%	7.48				

Sequence No.: 5

Autosampler Location: 14

Sample ID: 570-14372-e-2-b ms

Date Collected: 12/9/2019 4:46:05 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14372-e-2-b ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.94	0.0174	0.0889	0.0175	4:47:09 PM	Yes
2	0.0020	1.97	0.0178	0.0913	0.0178	4:47:55 PM	Yes
Mean:	0.0020	1.95	0.0176				
SD:	0.00002	0.025	0.0002				
%RSD:	1.27%	1.27%	1.27				

Sequence No.: 6

Autosampler Location: 15

Sample ID: 570-14372-e-2-c msd

Date Collected: 12/9/2019 4:48:20 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14372-e-2-c msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0437	0.2286	0.0437	4:49:24 PM	Yes
2	0.0049	4.90	0.0443	0.2336	0.0443	4:50:10 PM	Yes
Mean:	0.0049	4.87	0.0440				
SD:	0.00004	0.043	0.0004				
%RSD:	0.89%	0.89%	0.89				

Sequence No.: 7

Autosampler Location: 16

Sample ID: 570-14597-f-1-b

Date Collected: 12/9/2019 4:50:36 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14597-f-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0211	0.0001	0.0002	0.0002	4:51:40 PM	Yes
2	0.0000	0.0191	0.0001	0.0000	0.0001	4:52:26 PM	Yes
Mean:	0.0000	0.0201	0.0001				
SD:	0.00000	0.00144	0.0000				
%RSD:	7.18%	7.18%	9.80				

Sequence No.: 8

Autosampler Location: 17

Sample ID: 570-14206-b-1-b

Date Collected: 12/9/2019 4:52:52 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14206-b-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0780	0.0007	0.0028	0.0007	4:53:56 PM	Yes
2	0.0001	0.0724	0.0006	0.0017	0.0006	4:54:42 PM	Yes
Mean:	0.0001	0.0752	0.0006				
SD:	0.00000	0.00401	0.0000				
%RSD:	5.33%	5.33%	5.74				

Sequence No.: 9
 Sample ID: 570-14206-a-2-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 18
 Date Collected: 12/9/2019 4:55:08 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14206-a-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0126	0.0001	-0.0005	0.0001	4:56:12 PM	Yes
2	0.0000	0.0140	0.0001	-0.0004	0.0001	4:56:58 PM	Yes
Mean:	0.0000	0.0133	0.0001				
SD:	0.00000	0.00100	0.0000				
%RSD:	7.57%	7.57%	12.74				

Sequence No.: 10
 Sample ID: 570-14206-a-3-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 19
 Date Collected: 12/9/2019 4:57:24 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-14206-a-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0129	0.0001	0.0001	0.0001	4:58:29 PM	Yes
2	0.0000	0.0096	0.0000	-0.0005	0.0001	4:59:14 PM	Yes
Mean:	0.0000	0.0113	0.0001				
SD:	0.00000	0.00234	0.0000				
%RSD:	20.71%	20.71%	39.66				

Sequence No.: 11
 Sample ID: ccv 570-37330_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 12/9/2019 4:59:40 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.99	0.0179	0.0923	0.0179	5:00:46 PM	Yes
2	0.0020	1.99	0.0179	0.0914	0.0179	5:01:32 PM	Yes
Mean:	0.0020	1.99	0.0179				
SD:	0.00000	0.002	0.0000				
%RSD:	0.10%	0.10%	0.10				

QC value within limits for Hg 253.7 Recovery = 99.35%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-37330_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 12/9/2019 5:01:59 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.99	0.0179	0.0923	0.0179	5:00:46 PM	Yes
2	0.0020	1.99	0.0179	0.0914	0.0179	5:01:32 PM	Yes

1	0.0000	0.0075	0.0000	-0.0005	0.0000	5:03:03 PM	Yes
2	0.0000	0.0022	-0.0000	-0.0018	-0.0000	5:03:49 PM	Yes
Mean:	0.0000	0.0049	-0.0000				
SD:	0.00000	0.00377	0.0000				
%RSD:	77.39%	77.39%	733.61				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 20
Sample ID: 570-14372-f-1-a                     Date Collected: 12/9/2019 5:04:14 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14372-f-1-a                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0128   0.0001   -0.0002 0.0001  5:05:19 PM  Yes
2      0.0000     0.0135   0.0001   0.0001  0.0001  5:06:05 PM  Yes
Mean:  0.0000     0.0132   0.0001
SD:    0.00000     0.00050  0.0000
%RSD:  3.81%      3.81%    6.45
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 21
Sample ID: 570-14597-f-2-b                     Date Collected: 12/9/2019 5:06:31 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14597-f-2-b                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0100   0.0000   0.0000  0.0001  5:07:36 PM  Yes
2      0.0000     0.0118   0.0001   -0.0002 0.0001  5:08:21 PM  Yes
Mean:  0.0000     0.0109   0.0000
SD:    0.00000     0.00130  0.0000
%RSD:  11.87%     11.87%   23.44
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 22
Sample ID: 570-14506-a-1-a                     Date Collected: 12/9/2019 5:08:47 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14506-a-1-a                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0003     0.301    0.0027   0.0135  0.0027  5:09:52 PM  Yes
2      0.0003     0.297    0.0026   0.0131  0.0026  5:10:38 PM  Yes
Mean:  0.0003     0.299    0.0027
SD:    0.00000     0.0029   0.0000
%RSD:  0.98%      0.98%    0.99
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 23
Sample ID: 570-14506-a-2-a                     Date Collected: 12/9/2019 5:11:05 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14506-a-2-a                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0005     0.503    0.0045   0.0233  0.0045  5:12:10 PM  Yes
=====
  
```

2 0.0005 0.499 0.0045 0.0228 0.0045 5:12:56 PM Yes
 Mean: 0.0005 0.501 0.0045
 SD: 0.00000 0.0028 0.0000
 %RSD: 0.56% 0.56% 0.56

=====
 Sequence No.: 17 Autosampler Location: 24
 Sample ID: 570-14506-a-3-a Date Collected: 12/9/2019 5:13:23 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14506-a-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0569	0.0005	0.0021	0.0005	5:14:28 PM	Yes
2	0.0001	0.0538	0.0004	0.0016	0.0005	5:15:14 PM	Yes
Mean:	0.0001	0.0554	0.0005				
SD:	0.00000	0.00223	0.0000				
%RSD:	4.03%	4.03%	4.46				

=====
 Sequence No.: 18 Autosampler Location: 25
 Sample ID: 570-14559-f-1-a Date Collected: 12/9/2019 5:15:41 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14559-f-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.114	0.0010	0.0047	0.0010	5:16:47 PM	Yes
2	0.0001	0.117	0.0010	0.0047	0.0010	5:17:33 PM	Yes
Mean:	0.0001	0.115	0.0010				
SD:	0.00000	0.0017	0.0000				
%RSD:	1.48%	1.48%	1.56				

=====
 Sequence No.: 19 Autosampler Location: 26
 Sample ID: 570-14559-f-1-b ms Date Collected: 12/9/2019 5:18:00 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14559-f-1-b ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.96	0.0448	0.2343	0.0448	5:19:04 PM	Yes
2	0.0050	5.00	0.0451	0.2373	0.0452	5:19:50 PM	Yes
Mean:	0.0050	4.98	0.0449				
SD:	0.00003	0.030	0.0003				
%RSD:	0.61%	0.61%	0.61				

=====
 Sequence No.: 20 Autosampler Location: 27
 Sample ID: 570-14559-f-1-c msd Date Collected: 12/9/2019 5:20:16 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14559-f-1-c msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.96	0.0447	0.2369	0.0448	5:21:21 PM	Yes
2	0.0050	4.96	0.0448	0.2380	0.0448	5:22:06 PM	Yes
Mean:	0.0050	4.96	0.0448				
SD:	0.00000	0.005	0.0000				

%RSD: 0.09% 0.09% 0.09

```

=====
Sequence No.: 21                               Autosampler Location: 28
Sample ID: 570-14559-f-2-a                   Date Collected: 12/9/2019 5:22:32 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14559-f-2-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0006       0.614     0.0055   0.0294   0.0055   5:23:37 PM  Yes
2      0.0006       0.603     0.0054   0.0277   0.0054   5:24:22 PM  Yes
Mean:  0.0006       0.608     0.0054
SD:    0.00001      0.0078    0.0001
%RSD:  1.28%       1.28%     1.29

```

```

=====
Sequence No.: 22                               Autosampler Location: 29
Sample ID: 570-14559-f-3-a                   Date Collected: 12/9/2019 5:24:48 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14559-f-3-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0004       0.389     0.0035   0.0186   0.0035   5:25:53 PM  Yes
2      0.0004       0.378     0.0034   0.0165   0.0034   5:26:39 PM  Yes
Mean:  0.0004       0.384     0.0034
SD:    0.00001      0.0079    0.0001
%RSD:  2.05%       2.05%     2.08

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                Date Collected: 12/9/2019 5:27:05 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccv 570-37330_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0020       1.99      0.0179   0.0948   0.0180   5:28:10 PM  Yes
2      0.0020       1.98      0.0178   0.0922   0.0179   5:28:56 PM  Yes
Mean:  0.0020       1.99      0.0179
SD:    0.00001      0.008     0.0001
%RSD:  0.39%       0.39%     0.40

```

QC value within limits for Hg 253.7 Recovery = 99.31%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                Date Collected: 12/9/2019 5:29:23 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-37330_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area     Height
1      0.0000       0.0094    0.0000   0.0001   0.0001   5:30:27 PM  Yes
2      0.0000       0.0045    -0.0000  -0.0008  0.0000   5:31:13 PM  Yes
Mean:  0.0000       0.0069    0.0000
SD:    0.00000      0.00341   0.0000
%RSD:  49.13%       49.13%   218.77

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 30
Sample ID: 570-14559-f-4-a Date Collected: 12/9/2019 5:31:39 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14559-f-4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.142	0.0012	0.0062	0.0012	5:32:43 PM	Yes
2	0.0001	0.139	0.0012	0.0059	0.0012	5:33:29 PM	Yes
Mean:	0.0001	0.141	0.0012				
SD:	0.00000	0.0019	0.0000				
%RSD:	1.33%	1.33%	1.39				

Sequence No.: 26 Autosampler Location: 31
Sample ID: 570-14631-g-1-a Date Collected: 12/9/2019 5:33:55 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14631-g-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0145	0.0001	0.0000	0.0001	5:35:00 PM	Yes
2	0.0000	0.0129	0.0001	-0.0002	0.0001	5:35:45 PM	Yes
Mean:	0.0000	0.0137	0.0001				
SD:	0.00000	0.00115	0.0000				
%RSD:	8.41%	8.41%	13.85				

Sequence No.: 27 Autosampler Location: 32
Sample ID: 570-14631-g-2-a Date Collected: 12/9/2019 5:36:11 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14631-g-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0134	0.0001	-0.0000	0.0001	5:37:16 PM	Yes
2	0.0000	0.0121	0.0001	-0.0002	0.0001	5:38:02 PM	Yes
Mean:	0.0000	0.0128	0.0001				
SD:	0.00000	0.00091	0.0000				
%RSD:	7.15%	7.15%	12.37				

Sequence No.: 28 Autosampler Location: 33
Sample ID: 570-14631-g-3-a Date Collected: 12/9/2019 5:38:28 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14631-g-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0153	0.0001	-0.0001	0.0001	5:39:33 PM	Yes
2	0.0000	0.0156	0.0001	-0.0003	0.0001	5:40:19 PM	Yes
Mean:	0.0000	0.0154	0.0001				
SD:	0.00000	0.00025	0.0000				
%RSD:	1.64%	1.64%	2.53				

```

=====
Sequence No.: 29                               Autosampler Location: 34
Sample ID: 570-14862-b-1-a                    Date Collected: 12/9/2019 5:40:45 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14862-b-1-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0139   0.0001   -0.0000 0.0001  5:41:51 PM  Yes
2      0.0000     0.0106   0.0000   -0.0002 0.0001  5:42:36 PM  Yes
Mean:  0.0000     0.0123   0.0001
SD:     0.00000    0.00233   0.0000
%RSD:  18.97%     18.97%    33.79
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                 Date Collected: 12/9/2019 5:43:03 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-37330_10-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0020     1.96     0.0176   0.0918 0.0177  5:44:09 PM  Yes
2      0.0020     1.98     0.0178   0.0923 0.0178  5:44:54 PM  Yes
Mean:  0.0020     1.97     0.0177
SD:     0.00001    0.012     0.0001
%RSD:  0.61%     0.61%    0.61
QC value within limits for Hg 253.7 Recovery = 98.35%
All analyte(s) passed QC.
=====

```

```

=====
Sequence No.: 31                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                 Date Collected: 12/9/2019 5:45:21 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-37330_11-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0066   0.0000   -0.0005 0.0000  5:46:26 PM  Yes
2      0.0000     0.0056   0.0000   -0.0007 0.0000  5:47:11 PM  Yes
Mean:  0.0000     0.0061   0.0000
SD:     0.00000    0.00068   0.0000
%RSD:  11.26%     11.26%    98.98
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.
=====

```

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191209H1.sifx

Batch ID:
Results Data Set: 191209H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37401_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 35
Date Collected: 12/9/2019 5:54:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37401_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0059	0.0000	-0.0002	0.0000	5:55:39 PM	Yes
2	0.0000	0.0074	0.0000	-0.0001	0.0000	5:56:25 PM	Yes
Mean:	0.0000	0.0067	0.0000				
SD:	0.00000	0.00104	0.0000				
%RSD:	15.69%	15.69%	82.44				

=====
Sequence No.: 2
Sample ID: lcs 570-37401_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 36
Date Collected: 12/9/2019 5:56:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37401_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.77	0.0430	0.2261	0.0430	5:57:58 PM	Yes
2	0.0048	4.79	0.0432	0.2290	0.0432	5:58:43 PM	Yes
Mean:	0.0048	4.78	0.0431				
SD:	0.00001	0.012	0.0001				
%RSD:	0.26%	0.26%	0.26				

=====
Sequence No.: 3
Sample ID: lcsd 570-37401_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 37
Date Collected: 12/9/2019 5:59:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37401_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.83	0.0436	0.2305	0.0436	6:00:17 PM	Yes
2	0.0048	4.80	0.0433	0.2301	0.0433	6:01:02 PM	Yes
Mean:	0.0048	4.81	0.0434				
SD:	0.00002	0.022	0.0002				
%RSD:	0.45%	0.45%	0.45				

=====
Sequence No.: 4
Sample ID: 570-14509-a-1-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 38
Date Collected: 12/9/2019 6:01:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14509-a-1-f

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0888	0.0008	0.0043	0.0008	6:02:35 PM	Yes
2	0.0001	0.0786	0.0007	0.0031	0.0007	6:03:21 PM	Yes
Mean:	0.0001	0.0837	0.0007				
SD:	0.00001	0.00721	0.0001				
%RSD:	8.62%	8.62%	9.21				

Sequence No.: 5

Autosampler Location: 39

Sample ID: 570-14509-a-1-g ms

Date Collected: 12/9/2019 6:03:47 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14509-a-1-g ms

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.85	0.0438	0.2500	0.0438	6:04:52 PM	Yes
2	0.0049	4.93	0.0445	0.2557	0.0445	6:05:38 PM	Yes
Mean:	0.0049	4.89	0.0442				
SD:	0.00005	0.054	0.0005				
%RSD:	1.11%	1.11%	1.11				

Sequence No.: 6

Autosampler Location: 40

Sample ID: 570-14509-a-1-h msd

Date Collected: 12/9/2019 6:06:04 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14509-a-1-h msd

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.88	0.0440	0.2519	0.0440	6:07:09 PM	Yes
2	0.0049	4.87	0.0440	0.2505	0.0440	6:07:55 PM	Yes
Mean:	0.0049	4.87	0.0440				
SD:	0.00000	0.003	0.0000				
%RSD:	0.07%	0.07%	0.07				

Sequence No.: 7

Autosampler Location: 41

Sample ID: 570-14509-a-2-h

Date Collected: 12/9/2019 6:08:22 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14509-a-2-h

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0533	0.0004	0.0024	0.0004	6:09:26 PM	Yes
2	0.0000	0.0195	0.0001	-0.0003	0.0001	6:10:12 PM	Yes
Mean:	0.0000	0.0364	0.0003				
SD:	0.00002	0.02388	0.0002				
%RSD:	65.59%	65.59%	76.98				

Sequence No.: 8

Autosampler Location: 42

Sample ID: 570-14509-a-3-d

Date Collected: 12/9/2019 6:10:39 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14509-a-3-d

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	------------------	----------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0403	0.0003	0.0020	0.0003	6:11:44 PM	Yes
2	0.0000	0.0379	0.0003	0.0015	0.0003	6:12:30 PM	Yes
Mean:	0.0000	0.0391	0.0003				
SD:	0.00000	0.00175	0.0000				
%RSD:	4.47%	4.47%	5.18				

Sequence No.: 9
Sample ID: 570-14509-a-4-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 43
Date Collected: 12/9/2019 6:12:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14509-a-4-d Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0772	0.0006	0.0040	0.0007	6:14:01 PM	Yes
2	0.0001	0.0702	0.0006	0.0031	0.0006	6:14:47 PM	Yes
Mean:	0.0001	0.0737	0.0006				
SD:	0.00000	0.00494	0.0000				
%RSD:	6.71%	6.71%	7.24				

Sequence No.: 10
Sample ID: 570-14509-a-5-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 44
Date Collected: 12/9/2019 6:15:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14509-a-5-d Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0302	0.0002	0.0014	0.0002	6:16:18 PM	Yes
2	0.0000	0.0294	0.0002	0.0012	0.0002	6:17:04 PM	Yes
Mean:	0.0000	0.0298	0.0002				
SD:	0.00000	0.00057	0.0000				
%RSD:	1.92%	1.92%	2.35				

Sequence No.: 11
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/9/2019 6:17:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	1.96	0.0177	0.0934	0.0177	6:18:36 PM	Yes
2	0.0020	1.98	0.0178	0.0931	0.0178	6:19:22 PM	Yes
Mean:	0.0020	1.97	0.0178				
SD:	0.00001	0.010	0.0001				
%RSD:	0.49%	0.49%	0.49				

QC value within limits for Hg 253.7 Recovery = 98.53%
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: ccb 570-37330_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/9/2019 6:19:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0000	0.0090	0.0000	0.0004	0.0000	6:20:53 PM	Yes
2	0.0000	0.0097	0.0000	0.0003	0.0001	6:21:39 PM	Yes
Mean:	0.0000	0.0094	0.0000				
SD:	0.00000	0.00045	0.0000				
%RSD:	4.85%	4.85%	11.42				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 45
Sample ID: 570-14509-a-6-d                   Date Collected: 12/9/2019 6:22:05 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-6-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0280   0.0002   0.0015 0.0002 6:23:10 PM  Yes
2      0.0000     0.0256   0.0002   0.0010 0.0002 6:23:56 PM  Yes
Mean:  0.0000     0.0268   0.0002
SD:    0.00000     0.00165  0.0000
%RSD:  6.16%      6.16%    7.71
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 46
Sample ID: 570-14509-a-7-d                   Date Collected: 12/9/2019 6:24:22 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-7-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0461   0.0004   0.0024 0.0004 6:25:27 PM  Yes
2      0.0000     0.0428   0.0003   0.0019 0.0004 6:26:13 PM  Yes
Mean:  0.0000     0.0444   0.0004
SD:    0.00000     0.00233  0.0000
%RSD:  5.25%      5.25%    5.97
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 47
Sample ID: 570-14509-a-8-d                   Date Collected: 12/9/2019 6:26:40 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-8-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0170   0.0001   0.0008 0.0001 6:27:45 PM  Yes
2      0.0000     0.0144   0.0001   0.0005 0.0001 6:28:31 PM  Yes
Mean:  0.0000     0.0157   0.0001
SD:    0.00000     0.00187  0.0000
%RSD:  11.93%     11.93%   18.18
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 48
Sample ID: 570-14509-a-9-d                   Date Collected: 12/9/2019 6:28:58 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14509-a-9-d               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0270   0.0002   0.0010 0.0002 6:30:03 PM  Yes
=====
  
```

2 0.0000 0.0268 0.0002 0.0010 0.0002 6:30:49 PM Yes
 Mean: 0.0000 0.0269 0.0002
 SD: 0.00000 0.00019 0.0000
 %RSD: 0.72% 0.72% 0.90

=====
 Sequence No.: 17 Autosampler Location: 49
 Sample ID: 570-14509-a-10-d Date Collected: 12/9/2019 6:31:16 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-10-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0307	0.0002	0.0016	0.0002	6:32:22 PM	Yes
2	0.0000	0.0287	0.0002	0.0010	0.0002	6:33:07 PM	Yes
Mean:	0.0000	0.0297	0.0002				
SD:	0.00000	0.00137	0.0000				
%RSD:	4.61%	4.61%	5.63				

=====
 Sequence No.: 18 Autosampler Location: 50
 Sample ID: 570-14509-a-11-d Date Collected: 12/9/2019 6:33:35 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-11-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0338	0.0003	0.0019	0.0003	6:34:40 PM	Yes
2	0.0000	0.0322	0.0002	0.0014	0.0003	6:35:25 PM	Yes
Mean:	0.0000	0.0330	0.0002				
SD:	0.00000	0.00113	0.0000				
%RSD:	3.42%	3.42%	4.08				

=====
 Sequence No.: 19 Autosampler Location: 51
 Sample ID: 570-14509-a-12-d Date Collected: 12/9/2019 6:35:52 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-12-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0207	0.0001	0.0009	0.0002	6:36:57 PM	Yes
2	0.0000	0.0196	0.0001	0.0006	0.0001	6:37:43 PM	Yes
Mean:	0.0000	0.0201	0.0001				
SD:	0.00000	0.00084	0.0000				
%RSD:	4.15%	4.15%	5.67				

=====
 Sequence No.: 20 Autosampler Location: 52
 Sample ID: 570-14509-a-13-d Date Collected: 12/9/2019 6:38:09 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14509-a-13-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0239	0.0002	0.0008	0.0002	6:39:14 PM	Yes
2	0.0000	0.0229	0.0002	0.0008	0.0002	6:39:59 PM	Yes
Mean:	0.0000	0.0234	0.0002				
SD:	0.00000	0.00070	0.0000				

%RSD: 3.00% 3.00% 3.90

```

=====
Sequence No.: 21                               Autosampler Location: 53
Sample ID: 570-14509-a-14-d                   Date Collected: 12/9/2019 6:40:26 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14509-a-14-d              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0000     0.0287    0.0002   0.0013 0.0002 6:41:31 PM Yes
2      0.0000     0.0255    0.0002   0.0009 0.0002 6:42:17 PM Yes
Mean:  0.0000     0.0271    0.0002
SD:    0.00000    0.00223   0.0000
%RSD:  8.24%     8.24%    10.29

```

```

=====
Sequence No.: 22                               Autosampler Location: 54
Sample ID: 570-14509-a-15-d                   Date Collected: 12/9/2019 6:42:44 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14509-a-15-d              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0001     0.0635    0.0005   0.0029 0.0005 6:43:49 PM Yes
2      0.0001     0.0655    0.0005   0.0034 0.0006 6:44:35 PM Yes
Mean:  0.0001     0.0645    0.0005
SD:    0.00000    0.00144   0.0000
%RSD:  2.23%     2.23%    2.43

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                 Date Collected: 12/9/2019 6:45:01 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccv 570-37330_10-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0020     1.96      0.0176   0.0929 0.0177 6:46:07 PM Yes
2      0.0020     1.95      0.0176   0.0927 0.0176 6:46:52 PM Yes
Mean:  0.0020     1.96      0.0176
SD:    0.00000    0.002     0.0000
%RSD:  0.12%     0.12%    0.12

```

QC value within limits for Hg 253.7 Recovery = 97.78%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                 Date Collected: 12/9/2019 6:47:20 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-37330_11-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0000     0.0116    0.0001   0.0004 0.0001 6:48:24 PM Yes
2      0.0000     0.0065    0.0000   -0.0000 0.0000 6:49:10 PM Yes
Mean:  0.0000     0.0090    0.0000
SD:    0.00000    0.00363   0.0000
%RSD:  40.20%     40.20%   99.55

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 55
Sample ID: 570-14509-a-16-d Date Collected: 12/9/2019 6:49:35 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-16-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0266	0.0002	0.0013	0.0002	6:50:40 PM	Yes
2	0.0000	0.0230	0.0002	0.0005	0.0002	6:51:26 PM	Yes
Mean:	0.0000	0.0248	0.0002				
SD:	0.00000	0.00250	0.0000				
%RSD:	10.10%	10.10%	12.90				

Sequence No.: 26 Autosampler Location: 56
Sample ID: 570-14509-a-17-d Date Collected: 12/9/2019 6:51:52 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-17-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0353	0.0003	0.0016	0.0003	6:52:57 PM	Yes
2	0.0000	0.0363	0.0003	0.0017	0.0003	6:53:43 PM	Yes
Mean:	0.0000	0.0358	0.0003				
SD:	0.00000	0.00070	0.0000				
%RSD:	1.96%	1.96%	2.31				

Sequence No.: 27 Autosampler Location: 57
Sample ID: 570-14509-a-18-d Date Collected: 12/9/2019 6:54:09 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14509-a-18-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0345	0.0003	0.0020	0.0003	6:55:14 PM	Yes
2	0.0000	0.0264	0.0002	0.0004	0.0002	6:55:59 PM	Yes
Mean:	0.0000	0.0304	0.0002				
SD:	0.00001	0.00577	0.0001				
%RSD:	18.95%	18.95%	23.02				

Sequence No.: 28 Autosampler Location: 58
Sample ID: 570-14621-a-1-d Date Collected: 12/9/2019 6:56:26 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14621-a-1-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.159	0.0014	0.0084	0.0014	6:57:31 PM	Yes
2	0.0002	0.154	0.0013	0.0071	0.0014	6:58:17 PM	Yes
Mean:	0.0002	0.157	0.0014				
SD:	0.00000	0.0036	0.0000				
%RSD:	2.30%	2.30%	2.38				

```

=====
Sequence No.: 29                               Autosampler Location: 59
Sample ID: 570-14626-a-1-f                   Date Collected: 12/9/2019 6:58:44 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14626-a-1-f               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0010      1.00     0.0090    0.0540  0.0090   6:59:50 PM  Yes
2      0.0010      0.998    0.0090    0.0528  0.0090   7:00:35 PM  Yes
Mean:  0.0010      1.00     0.0090
SD:    0.00000     0.004    0.0000
%RSD:  0.44%      0.44%    0.44

```

```

=====
Sequence No.: 30                               Autosampler Location: 60
Sample ID: 570-14202-g-6-b                   Date Collected: 12/9/2019 7:01:02 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14202-g-6-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0000      0.0111   0.0001   -0.0003 0.0001   7:02:09 PM  Yes
2      0.0000      0.0094   0.0000   -0.0006 0.0001   7:02:54 PM  Yes
Mean:  0.0000      0.0102   0.0000
SD:    0.00000     0.00117  0.0000
%RSD:  11.43%     11.43%   24.14

```

```

=====
Sequence No.: 31                               Autosampler Location: 61
Sample ID: 570-14202-g-7-b                   Date Collected: 12/9/2019 7:03:22 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14202-g-7-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0000      0.0153   0.0001    0.0002  0.0001   7:04:28 PM  Yes
2      0.0000      0.0104   0.0000    0.0002  0.0001   7:05:14 PM  Yes
Mean:  0.0000      0.0128   0.0001
SD:    0.00000     0.00348  0.0000
%RSD:  27.14%     27.14%   46.78

```

```

=====
Sequence No.: 32                               Autosampler Location: 62
Sample ID: lb4 570-37344_1-c                 Date Collected: 12/9/2019 7:05:41 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: lb4 570-37344_1-c             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0000      0.0089   0.0000    0.0002  0.0000   7:06:46 PM  Yes
2      0.0000      0.0100   0.0000    0.0002  0.0001   7:07:31 PM  Yes
Mean:  0.0000      0.0094   0.0000
SD:    0.00000     0.00080  0.0000
%RSD:  8.48%      8.48%    19.83

```

```

=====
Sequence No.: 33                               Autosampler Location: 63
Sample ID: lcs 570-37344_2-c                 Date Collected: 12/9/2019 7:07:58 PM

```

Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37344_2-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.78	0.0431	0.2295	0.0431	7:09:04 PM	Yes
2	0.0048	4.79	0.0432	0.2338	0.0433	7:09:49 PM	Yes
Mean:	0.0048	4.78	0.0432				
SD:	0.00001	0.011	0.0001				
%RSD:	0.23%	0.23%	0.23				

=====

Sequence No.: 34 Autosampler Location: 64
Sample ID: lcsd 570-37344_3-c Date Collected: 12/9/2019 7:10:16 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: lcsd 570-37344_3-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.80	0.0433	0.2335	0.0434	7:11:21 PM	Yes
2	0.0048	4.80	0.0433	0.2343	0.0433	7:12:06 PM	Yes
Mean:	0.0048	4.80	0.0433				
SD:	0.00000	0.005	0.0000				
%RSD:	0.10%	0.10%	0.10				

=====

Sequence No.: 35 Autosampler Location: 5
Sample ID: ccv 570-37330_10-a Date Collected: 12/9/2019 7:12:33 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.97	0.0177	0.0944	0.0177	7:13:39 PM	Yes
2	0.0020	1.97	0.0178	0.0947	0.0178	7:14:25 PM	Yes
Mean:	0.0020	1.97	0.0177				
SD:	0.00000	0.004	0.0000				
%RSD:	0.19%	0.19%	0.19				

QC value within limits for Hg 253.7 Recovery = 98.44%
All analyte(s) passed QC.

=====

Sequence No.: 36 Autosampler Location: 1
Sample ID: ccb 570-37330_11-a Date Collected: 12/9/2019 7:14:52 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0115	0.0001	0.0006	0.0001	7:15:56 PM	Yes
2	0.0000	0.0101	0.0000	-0.0000	0.0001	7:16:42 PM	Yes
Mean:	0.0000	0.0108	0.0000				
SD:	0.00000	0.00095	0.0000				
%RSD:	8.83%	8.83%	17.62				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====

Sequence No.: 37 Autosampler Location: 65

Sample ID: 570-14434-a-1-j
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 7:17:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14434-a-1-j

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0057	0.0000	-0.0002	0.0000	7:18:14 PM	Yes
2	0.0000	0.0032	-0.0000	-0.0006	-0.0000	7:19:00 PM	Yes
Mean:	0.0000	0.0044	-0.0000				
SD:	0.00000	0.00178	0.0000				
%RSD:	40.26%	40.26%	181.93				

=====

Sequence No.: 38
Sample ID: 570-14434-a-1-m ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 66
Date Collected: 12/9/2019 7:19:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14434-a-1-m ms

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0011	1.09	0.0098	0.0523	0.0098	7:20:32 PM	Yes
2	0.0011	1.09	0.0098	0.0518	0.0098	7:21:17 PM	Yes
Mean:	0.0011	1.09	0.0098				
SD:	0.00000	0.002	0.0000				
%RSD:	0.20%	0.20%	0.20				

Analyte: Hg 253.7

=====

Sequence No.: 39
Sample ID: 570-14434-a-1-n msd
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 67
Date Collected: 12/9/2019 7:21:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14434-a-1-n msd

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0883	0.0007	0.0038	0.0008	7:22:49 PM	Yes
2	0.0001	0.0851	0.0007	0.0036	0.0007	7:23:35 PM	Yes
Mean:	0.0001	0.0867	0.0007				
SD:	0.00000	0.00224	0.0000				
%RSD:	2.59%	2.59%	2.76				

Analyte: Hg 253.7

=====

Sequence No.: 40
Sample ID: mb 570-37796_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 68
Date Collected: 12/9/2019 7:24:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37796_1-a

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0112	0.0001	0.0004	0.0001	7:25:07 PM	Yes
2	0.0000	0.0070	0.0000	0.0000	0.0000	7:25:52 PM	Yes
Mean:	0.0000	0.0091	0.0000				
SD:	0.00000	0.00299	0.0000				
%RSD:	32.87%	32.87%	80.62				

Analyte: Hg 253.7

=====

Sequence No.: 41
Sample ID: lcs 570-37796_2-a
Analyst: 1174 HG-8
Initial Sample Wt:

Autosampler Location: 69
Date Collected: 12/9/2019 7:26:19 PM
Data Type: Original
Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37796_2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.73	0.0426	0.2304	0.0427	7:27:24 PM	Yes
2	0.0048	4.77	0.0431	0.2324	0.0431	7:28:10 PM	Yes
Mean:	0.0047	4.75	0.0428				
SD:	0.00003	0.032	0.0003				
%RSD:	0.68%	0.68%	0.68				

Sequence No.: 42
Sample ID: lcsd 570-37796_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 70
Date Collected: 12/9/2019 7:28:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37796_3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.79	0.0432	0.2342	0.0432	7:29:42 PM	Yes
2	0.0048	4.80	0.0433	0.2350	0.0433	7:30:28 PM	Yes
Mean:	0.0048	4.79	0.0433				
SD:	0.00001	0.008	0.0001				
%RSD:	0.17%	0.17%	0.17				

Sequence No.: 43
Sample ID: 570-15011-a-1-i
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 71
Date Collected: 12/9/2019 7:30:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15011-a-1-i

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.175	0.0015	0.0116	0.0015	7:32:00 PM	Yes
2	0.0002	0.158	0.0014	0.0096	0.0014	7:32:45 PM	Yes
Mean:	0.0002	0.166	0.0015				
SD:	0.00001	0.0117	0.0001				
%RSD:	7.06%	7.06%	7.29				

Sequence No.: 44
Sample ID: 570-15011-a-1-j ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 72
Date Collected: 12/9/2019 7:33:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15011-a-1-j ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.78	0.0431	0.2570	0.0431	7:34:18 PM	Yes
2	0.0048	4.82	0.0435	0.2615	0.0436	7:35:04 PM	Yes
Mean:	0.0048	4.80	0.0433				
SD:	0.00003	0.035	0.0003				
%RSD:	0.72%	0.72%	0.72				

Sequence No.: 45
Sample ID: 570-15011-a-1-k msd
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 73
Date Collected: 12/9/2019 7:35:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15011-a-1-k msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.97	0.0448	0.2688	0.0448	7:36:36 PM	Yes
2	0.0049	4.92	0.0444	0.2676	0.0444	7:37:22 PM	Yes
Mean:	0.0049	4.95	0.0446				
SD:	0.00003	0.031	0.0003				
%RSD:	0.63%	0.63%	0.63				

Sequence No.: 46

Autosampler Location: 74

Sample ID: 570-15097-a-1-b

Date Collected: 12/9/2019 7:37:49 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15097-a-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.132	0.0011	0.0064	0.0012	7:38:55 PM	Yes
2	0.0001	0.0901	0.0008	0.0039	0.0008	7:39:41 PM	Yes
Mean:	0.0001	0.111	0.0010				
SD:	0.00003	0.0296	0.0003				
%RSD:	26.63%	26.63%	27.99				

Sequence No.: 47

Autosampler Location: 5

Sample ID: ccv 570-37330_10-a

Date Collected: 12/9/2019 7:40:08 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.95	0.0176	0.0946	0.0176	7:41:13 PM	Yes
2	0.0020	1.96	0.0176	0.0944	0.0176	7:41:59 PM	Yes
Mean:	0.0020	1.95	0.0176				
SD:	0.00000	0.003	0.0000				
%RSD:	0.15%	0.15%	0.15				

QC value within limits for Hg 253.7 Recovery = 97.67%

All analyte(s) passed QC.

Sequence No.: 48

Autosampler Location: 1

Sample ID: ccb 570-37330_11-a

Date Collected: 12/9/2019 7:42:26 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0163	0.0001	0.0013	0.0001	7:43:31 PM	Yes
2	0.0000	0.0045	-0.0000	-0.0008	0.0000	7:44:16 PM	Yes
Mean:	0.0000	0.0104	0.0000				
SD:	0.00001	0.00838	0.0001				
%RSD:	80.75%	80.75%	167.96				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 49

Autosampler Location: 75

Sample ID: mb 570-37499_1-a

Date Collected: 12/9/2019 7:44:42 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

```

-----
Replicate Data: mb 570-37499_1-a          Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height      Stored
1 0.0000 0.0105 0.0000 0.0005 0.0001 7:45:47 PM Yes
2 0.0000 0.0052 -0.0000 -0.0003 0.0000 7:46:32 PM Yes
Mean: 0.0000 0.0079 0.0000
SD: 0.00000 0.00378 0.0000
%RSD: 48.07% 48.07% 152.91

```

```

=====
Sequence No.: 50                        Autosampler Location: 76
Sample ID: lcs 570-37499_2-a           Date Collected: 12/9/2019 7:46:59 PM
Analyst: 1174 HG-8                    Data Type: Original
Initial Sample Wt:                     Initial Sample Vol:
Dilution:                              Sample Prep Vol:
Wash Time (before sample): 0           Auto Dilution Factor: 1

```

```

-----
Replicate Data: lcs 570-37499_2-a          Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height      Stored
1 0.0047 4.75 0.0428 0.2320 0.0428 7:48:04 PM Yes
2 0.0048 4.80 0.0433 0.2359 0.0433 7:48:49 PM Yes
Mean: 0.0048 4.77 0.0431
SD: 0.00004 0.039 0.0004
%RSD: 0.82% 0.82% 0.82

```

```

=====
Sequence No.: 51                        Autosampler Location: 77
Sample ID: lcsd 570-37499_3-a          Date Collected: 12/9/2019 7:49:15 PM
Analyst: 1174 HG-8                    Data Type: Original
Initial Sample Wt:                     Initial Sample Vol:
Dilution:                              Sample Prep Vol:
Wash Time (before sample): 0           Auto Dilution Factor: 1

```

```

-----
Replicate Data: lcsd 570-37499_3-a          Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height      Stored
1 0.0048 4.80 0.0433 0.2359 0.0433 7:50:20 PM Yes
2 0.0048 4.79 0.0432 0.2366 0.0432 7:51:05 PM Yes
Mean: 0.0048 4.79 0.0433
SD: 0.00001 0.009 0.0001
%RSD: 0.18% 0.18% 0.18

```

```

=====
Sequence No.: 52                        Autosampler Location: 78
Sample ID: 570-14854-a-1-b             Date Collected: 12/9/2019 7:51:32 PM
Analyst: 1174 HG-8                    Data Type: Original
Initial Sample Wt:                     Initial Sample Vol:
Dilution:                              Sample Prep Vol:
Wash Time (before sample): 0           Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14854-a-1-b          Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height      Stored
1 0.0000 0.0286 0.0002 0.0008 0.0002 7:52:36 PM Yes
2 0.0000 0.0198 0.0001 0.0005 0.0001 7:53:21 PM Yes
Mean: 0.0000 0.0242 0.0002
SD: 0.00001 0.00621 0.0001
%RSD: 25.69% 25.69% 33.06

```

```

=====
Sequence No.: 53                        Autosampler Location: 79
Sample ID: 570-14854-a-1-c ms          Date Collected: 12/9/2019 7:53:48 PM
Analyst: 1174 HG-8                    Data Type: Original
Initial Sample Wt:                     Initial Sample Vol:
Dilution:                              Sample Prep Vol:
Wash Time (before sample): 0           Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-14854-a-1-c ms          Analyte: Hg 253.7

```

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.62	0.0417	0.2432	0.0417	7:54:53 PM	Yes
2	0.0047	4.70	0.0424	0.2485	0.0424	7:55:38 PM	Yes
Mean:	0.0047	4.66	0.0421				
SD:	0.00005	0.051	0.0005				
%RSD:	1.10%	1.10%	1.10				

Sequence No.: 54
Sample ID: 570-14854-a-1-d msd
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 80
Date Collected: 12/9/2019 7:56:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14854-a-1-d msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.63	0.0418	0.2469	0.0418	7:57:09 PM	Yes
2	0.0046	4.61	0.0416	0.2467	0.0416	7:57:54 PM	Yes
Mean:	0.0046	4.62	0.0417				
SD:	0.00001	0.014	0.0001				
%RSD:	0.30%	0.30%	0.30				

Sequence No.: 55
Sample ID: 570-14854-a-2-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 81
Date Collected: 12/9/2019 7:58:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14854-a-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0744	0.0006	0.0032	0.0006	7:59:26 PM	Yes
2	0.0000	0.0250	0.0002	0.0006	0.0002	8:00:11 PM	Yes
Mean:	0.0000	0.0497	0.0004				
SD:	0.00003	0.03495	0.0003				
%RSD:	70.36%	70.36%	78.93				

Sequence No.: 56
Sample ID: 570-14854-a-3-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 82
Date Collected: 12/9/2019 8:00:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14854-a-3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.158	0.0014	0.0072	0.0014	8:01:42 PM	Yes
2	0.0002	0.159	0.0014	0.0069	0.0014	8:02:27 PM	Yes
Mean:	0.0002	0.158	0.0014				
SD:	0.00000	0.0005	0.0000				
%RSD:	0.34%	0.34%	0.35				

Sequence No.: 57
Sample ID: 570-14837-a-1-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 83
Date Collected: 12/9/2019 8:02:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14837-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0155	0.0001	0.0010	0.0001	8:03:58 PM	Yes

2 0.0000 0.0081 0.0000 -0.0001 0.0000 8:04:44 PM Yes
 Mean: 0.0000 0.0118 0.0001
 SD: 0.00001 0.00525 0.0000
 %RSD: 44.51% 44.51% 81.96

Sequence No.: 58 Autosampler Location: 84
 Sample ID: 570-14836-a-1-b Date Collected: 12/9/2019 8:05:11 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14836-a-1-b Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height 8:06:17 PM Stored
 1 0.0000 0.0048 -0.0000 -0.0005 0.0000 8:06:17 PM Yes
 2 0.0000 0.0123 0.0001 0.0003 0.0001 8:07:03 PM Yes
 Mean: 0.0000 0.0085 0.0000
 SD: 0.00001 0.00531 0.0000
 %RSD: 62.19% 62.19% 168.46

Sequence No.: 59 Autosampler Location: 5
 Sample ID: ccv 570-37330_10-a Date Collected: 12/9/2019 8:07:30 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height 8:08:36 PM Stored
 1 0.0019 1.92 0.0173 0.0934 0.0173 8:08:36 PM Yes
 2 0.0019 1.93 0.0174 0.0939 0.0174 8:09:21 PM Yes
 Mean: 0.0019 1.92 0.0173
 SD: 0.00001 0.009 0.0001
 %RSD: 0.47% 0.47% 0.47

QC value within limits for Hg 253.7 Recovery = 96.20%

All analyte(s) passed QC.

Sequence No.: 60 Autosampler Location: 1
 Sample ID: ccb 570-37330_11-a Date Collected: 12/9/2019 8:09:49 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-37330_11-a Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height 8:10:53 PM Stored
 1 0.0000 0.0063 0.0000 -0.0005 0.0000 8:10:53 PM Yes
 2 0.0000 0.0053 -0.0000 -0.0005 0.0000 8:11:38 PM Yes
 Mean: 0.0000 0.0058 0.0000
 SD: 0.00000 0.00066 0.0000
 %RSD: 11.31% 11.31% 163.20

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 61 Autosampler Location: 85
 Sample ID: 570-14768-a-1-b Date Collected: 12/9/2019 8:12:04 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14768-a-1-b Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height 8:12:04 PM Stored

1	0.0000	0.0433	0.0003	0.0023	0.0004	8:13:10 PM	Yes
2	0.0000	0.0394	0.0003	0.0016	0.0003	8:13:56 PM	Yes
Mean:	0.0000	0.0414	0.0003				
SD:	0.00000	0.00279	0.0000				
%RSD:	6.75%	6.75%	7.76				

```

=====
Sequence No.: 62
Sample ID: 570-14696-a-1-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 86
Date Collected: 12/9/2019 8:14:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14696-a-1-d
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0058 5.84 0.0527 0.3168 0.0527 8:15:29 PM Yes
2 0.0060 5.99 0.0540 0.3229 0.0540 8:16:14 PM Yes
Mean: 0.0059 5.91 0.0534
SD: 0.00010 0.103 0.0009
%RSD: 1.74% 1.74% 1.74
=====

```

```

=====
Sequence No.: 63
Sample ID: 570-14869-a-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 87
Date Collected: 12/9/2019 8:16:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-1-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0001 0.106 0.0009 0.0049 0.0009 8:17:47 PM Yes
2 0.0001 0.0644 0.0005 0.0026 0.0005 8:18:33 PM Yes
Mean: 0.0001 0.0853 0.0007
SD: 0.00003 0.02955 0.0003
%RSD: 34.64% 34.64% 36.97
=====

```

```

=====
Sequence No.: 64
Sample ID: 570-14869-a-2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 88
Date Collected: 12/9/2019 8:19:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0001 0.0752 0.0006 0.0037 0.0006 8:20:05 PM Yes
2 0.0001 0.0764 0.0006 0.0040 0.0007 8:20:51 PM Yes
Mean: 0.0001 0.0758 0.0006
SD: 0.00000 0.00088 0.0000
%RSD: 1.16% 1.16% 1.25
=====

```

```

=====
Sequence No.: 65
Sample ID: 570-14869-a-3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 89
Date Collected: 12/9/2019 8:21:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height
1 0.0001 0.0826 0.0007 0.0048 0.0007 8:22:23 PM Yes
2 0.0001 0.0760 0.0006 0.0033 0.0007 8:23:09 PM Yes
Mean: 0.0001 0.0793 0.0007
=====

```

SD: 0.00000 0.00464 0.00000
%RSD: 5.85% 5.85% 6.28

Sequence No.: 66 Autosampler Location: 90
Sample ID: 570-14869-a-4-a Date Collected: 12/9/2019 8:23:36 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-14869-a-4-a.

Sequence No.: 67 Autosampler Location: 91
Sample ID: 570-14869-a-5-a Date Collected: 12/9/2019 8:25:54 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-14869-a-5-a.

Sequence No.: 68 Autosampler Location: 92
Sample ID: 570-14869-a-6-a Date Collected: 12/9/2019 8:28:13 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-14869-a-6-a.

Sequence No.: 69 Autosampler Location: 93
Sample ID: 570-14869-a-7-a Date Collected: 12/9/2019 8:30:32 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-14869-a-7-a.


```

=====
Sequence No.: 70                               Autosampler Location: 94
Sample ID: 570-14869-a-8-a                    Date Collected: 12/9/2019 8:32:50 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-8-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      0.0001      0.0905   0.0008   0.0050 0.0008  8:33:56 PM  Yes
2      0.0001      0.0902   0.0008   0.0047 0.0008  8:34:42 PM  Yes
Mean:  0.0001      0.0904   0.0008
SD:     0.00000    0.00022  0.0000
%RSD:  0.25%      0.25%    0.26
=====

```

```

=====
Sequence No.: 71                               Autosampler Location: 5
Sample ID: ccv 570-37330_10-a                 Date Collected: 12/9/2019 8:35:09 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-37330_10-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      0.0019      1.92     0.0173   0.0933 0.0173  8:36:15 PM  Yes
2      0.0019      1.91     0.0172   0.0937 0.0173  8:37:01 PM  Yes
Mean:  0.0019      1.91     0.0173
SD:     0.00000    0.001    0.0000
%RSD:  0.05%      0.05%    0.05
=====

```

QC value within limits for Hg 253.7 Recovery = 95.75%
All analyte(s) passed QC.

```

=====
Sequence No.: 72                               Autosampler Location: 1
Sample ID: ccb 570-37330_11-a                 Date Collected: 12/9/2019 8:37:28 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-37330_11-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      0.0000      0.0110   0.0001   0.0007 0.0001  8:38:32 PM  Yes
2      0.0000      0.0054   0.0000   -0.0003 0.0000  8:39:17 PM  Yes
Mean:  0.0000      0.0082   0.0000
SD:     0.00000    0.00396  0.0000
%RSD:  48.05%      48.05%   138.85
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 73                               Autosampler Location: 95
Sample ID: 570-14869-a-9-a                    Date Collected: 12/9/2019 8:39:43 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-9-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      0.0002      0.191    0.0017   0.0101 0.0017  8:40:49 PM  Yes
2      0.0002      0.185    0.0016   0.0093 0.0016  8:41:34 PM  Yes
Mean:  0.0002      0.188    0.0016
SD:     0.00000    0.0039   0.0000
%RSD:  2.07%      2.07%    2.13
=====

```

```

=====
Sequence No.: 74                               Autosampler Location: 96
Sample ID: 570-14869-a-10-a                   Date Collected: 12/9/2019 8:42:02 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-10-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      0.0001       0.0851   0.0007   0.0044 0.0007  8:43:07 PM Yes
2      0.0001       0.0798   0.0007   0.0035 0.0007  8:43:53 PM Yes
Mean:  0.0001       0.0825   0.0007
SD:    0.00000      0.00374  0.0000
%RSD:  4.53%       4.53%    4.85
=====

```

```

=====
Sequence No.: 75                               Autosampler Location: 97
Sample ID: 570-14869-a-11-a                   Date Collected: 12/9/2019 8:44:20 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14869-a-11-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      0.0001       0.0712   0.0006   0.0035 0.0006  8:45:26 PM Yes
2      0.0001       0.0703   0.0006   0.0032 0.0006  8:46:11 PM Yes
Mean:  0.0001       0.0707   0.0006
SD:    0.00000      0.00066  0.0000
%RSD:  0.93%       0.93%    1.01
=====

```

```

=====
Sequence No.: 76                               Autosampler Location: 98
Sample ID: 720-96376-b-1-a                   Date Collected: 12/9/2019 8:46:38 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 720-96376-b-1-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      0.0003       0.329    0.0029   0.0173 0.0029  8:47:44 PM Yes
2      0.0003       0.326    0.0029   0.0165 0.0029  8:48:30 PM Yes
Mean:  0.0003       0.328    0.0029
SD:    0.00000      0.0025   0.0000
%RSD:  0.75%       0.75%    0.76
=====

```

```

=====
Sequence No.: 77                               Autosampler Location: 99
Sample ID: 720-96377-b-1-a                   Date Collected: 12/9/2019 8:48:57 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 720-96377-b-1-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      0.0004       0.383    0.0034   0.0201 0.0034  8:50:03 PM Yes
2      0.0004       0.376    0.0034   0.0193 0.0034  8:50:49 PM Yes
Mean:  0.0004       0.380    0.0034
SD:    0.00000      0.0043   0.0000
%RSD:  1.14%       1.14%    1.16
=====

```

```

=====
Sequence No.: 78                               Autosampler Location: 100
=====

```

Sample ID: mb 570-37593_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/9/2019 8:51:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate mb 570-37593_1-a.

Sequence No.: 79
Sample ID: lcs 570-37593_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 101
Date Collected: 12/9/2019 8:53:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate lcs 570-37593_2-a.

Sequence No.: 80
Sample ID: lcsd 570-37593_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 102
Date Collected: 12/9/2019 8:55:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate lcsd 570-37593_3-a.

Sequence No.: 81
Sample ID: 570-14172-a-1-g
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 103
Date Collected: 12/9/2019 8:58:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-14172-a-1-g.

Sequence No.: 82
Sample ID: ccv 570-37330_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Autosampler Location: 5
Date Collected: 12/9/2019 9:00:31 PM
Data Type: Original
Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-37330_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.90	0.0172	0.0952	0.0172	9:01:37 PM	Yes
2	0.0019	1.91	0.0172	0.0950	0.0172	9:02:23 PM	Yes
Mean:	0.0019	1.91	0.0172				
SD:	0.00000	0.004	0.0000				
%RSD:	0.19%	0.19%	0.19				

QC value within limits for Hg 253.7 Recovery = 95.38%
All analyte(s) passed QC.

=====

Sequence No.: 83

Autosampler Location: 1
Date Collected: 12/9/2019 9:02:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Sample ID: ccb 570-37330_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Replicate Data: ccb 570-37330_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0042	-0.0000	-0.0005	0.0000	9:03:54 PM	Yes
2	0.0000	0.0102	0.0000	0.0005	0.0001	9:04:40 PM	Yes
Mean:	0.0000	0.0072	0.0000				
SD:	0.00000	0.00421	0.0000				
%RSD:	58.32%	58.32%	229.73				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: icis 570-38006_1-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/10/2019 12:17:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icis 570-38006_1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	-0.0001	0.0001	12:18:42 PM	Yes
2		[0.00]	0.0000	-0.0006	0.0000	12:19:27 PM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	135.25				

Auto-zero performed.

Sequence No.: 2
Sample ID: ic 570-38006_4-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 12/10/2019 12:19:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-38006_4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0002	0.0002	0.0002	12:20:57 PM	Yes
2		[0.025]	0.0002	0.0004	0.0002	12:21:43 PM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0000				
%RSD:		0.00%	4.79				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00768 Intercept: 0.00000

Sequence No.: 3
Sample ID: ic 570-38006_5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 12/10/2019 12:22:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-38006_5-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0009	0.0037	0.0010	12:23:14 PM	Yes
2		[0.100]	0.0009	0.0036	0.0009	12:24:00 PM	Yes
Mean:		[0.100]	0.0009				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.22				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.999026 Slope: 0.00935 Intercept: -0.00002

Sequence No.: 4
Sample ID: ic 570-38006_6-a
Autosampler Location: 4
Date Collected: 12/10/2019 12:24:26 PM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-38006_6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0104	0.0439	0.0104	12:25:31 PM	Yes
2		[1.000]	0.0104	0.0443	0.0105	12:26:17 PM	Yes

Mean: [1.000] 0.0104
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.35
 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999950 Slope: 0.01046 Intercept: -0.00006

=====

Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-38006_7-a Date Collected: 12/10/2019 12:26:44 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-38006_7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0208	0.0896	0.0208	12:27:49 PM	Yes
2		[2.000]	0.0209	0.0901	0.0209	12:28:35 PM	Yes

Mean: [2.000] 0.0208
 SD: 0.00000 0.0001
 %RSD: 0.00% 0.42
 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999989 Slope: 0.01045 Intercept: -0.00006

=====

Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-38006_8-a Date Collected: 12/10/2019 12:29:02 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-38006_8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0504	0.2190	0.0504	12:30:06 PM	Yes
2		[5.000]	0.0506	0.2215	0.0506	12:30:51 PM	Yes

Mean: [5.000] 0.0505
 SD: 0.00000 0.0001
 %RSD: 0.00% 0.29
 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999897 Slope: 0.01013 Intercept: 0.00010

=====

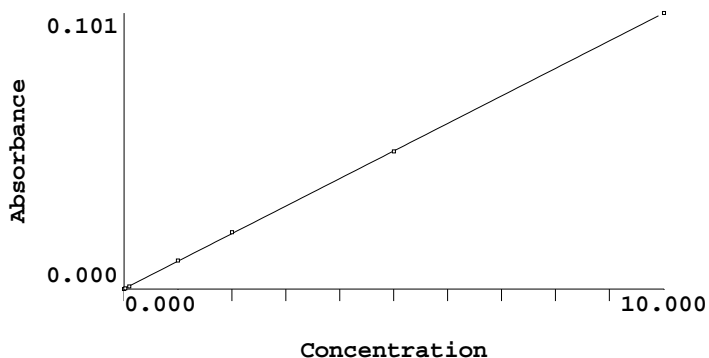
Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-38006_9-a Date Collected: 12/10/2019 12:31:17 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-38006_9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.1012	0.4473	0.1012	12:32:22 PM	Yes
2		[10.000]	0.1014	0.4548	0.1015	12:33:07 PM	Yes

Mean: [10.000] 0.1013
 SD: 0.00000 0.0002
 %RSD: 0.00% 0.18
 Standard number 6 applied. [10.000]

Correlation Coef.: 0.999976 Slope: 0.01012 Intercept: 0.00010



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-38006_1-a	0.0000	0	-0.0101	0.00	135.25
ic 570-38006_4-a	0.0002	0.025	0.0089	0.00	4.79
ic 570-38006_5-a	0.0009	0.100	0.0811	0.00	0.22
ic 570-38006_6-a	0.0104	1.000	1.0178	0.00	0.35
ic 570-38006_7-a	0.0208	2.000	2.0494	0.00	0.42
ic 570-38006_8-a	0.0505	5.000	4.9789	0.00	0.29
ic 570-38006_9-a	0.1013	10.000	9.9991	0.00	0.18

Correlation Coef.: 0.999976 Slope: 0.01012 Intercept: 0.00010

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-38006_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 12/10/2019 12:36:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-38006_2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0051 5.07 0.0514 0.2276 0.0515 12:37:13 PM Yes
2 0.0051 5.07 0.0514 0.2281 0.0514 12:37:59 PM Yes
Mean: 0.0051 5.07 0.0514
SD: 0.00000 0.005 0.0000
%RSD: 0.09% 0.09% 0.09
QC value within limits for Hg 253.7 Recovery = 101.38%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-38006_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/10/2019 12:38:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-38006_3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 -0.0000 -0.0104 -0.0000 -0.0003 0.0000 12:39:29 PM Yes
2 -0.0000 -0.0131 -0.0000 -0.0008 -0.0000 12:40:15 PM Yes
Mean: -0.0000 -0.0118 -0.0000
SD: 0.00000 0.00192 0.0000
%RSD: 16.33% 16.33% 115.84
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-38006_12-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 12/10/2019 12:40:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-38006_12-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0005 0.249 0.0026 0.0114 0.0026 12:41:45 PM Yes
2 0.0005 0.247 0.0026 0.0109 0.0026 12:42:31 PM Yes
Mean: 0.0005 0.248 0.0026
SD: 0.00000 0.0015 0.0000
%RSD: 0.60% 0.60% 0.58

=====
Sequence No.: 4
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Autosampler Location: 5
Date Collected: 12/10/2019 12:42:58 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.06	0.0209	0.0905	0.0210	12:44:04 PM	Yes
2	0.0021	2.06	0.0210	0.0905	0.0210	12:44:49 PM	Yes
Mean:	0.0021	2.06	0.0210				
SD:	0.00000	0.003	0.0000				
%RSD:	0.14%	0.14%	0.14				

QC value within limits for Hg 253.7 Recovery = 103.02%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-38006_11-a Date Collected: 12/10/2019 12:45:16 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0115	-0.0000	-0.0003	0.0000	12:46:21 PM	Yes
2	-0.0000	-0.0094	0.0000	0.0001	0.0000	12:47:06 PM	Yes
Mean:	-0.0000	-0.0105	-0.0000				
SD:	0.00000	0.00153	0.0000				
%RSD:	14.67%	14.67%	430.98				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT Technique: AA FIMS-MHS
Spectrometer: FIMS-400, S/N B050-9560 Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
 191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1 Autosampler Location: 10
Sample ID: mb 570-38022_1-a Date Collected: 12/10/2019 1:10:54 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1
User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-38022_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 12/10/2019 1:11:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-38022_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0036	0.0001	0.0008	0.0001	1:12:54 PM	Yes
2	-0.0000	-0.0129	-0.0000	-0.0013	-0.0000	1:13:40 PM	Yes
Mean:	-0.0000	-0.0083	0.0000				
SD:	0.00001	0.00655	0.0001				
%RSD:	79.26%	79.26%	355.70				

=====
Sequence No.: 2
Sample ID: lcs 570-38022_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 11
Date Collected: 12/10/2019 1:14:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-38022_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.68	0.0475	0.2117	0.0475	1:15:12 PM	Yes
2	0.0047	4.74	0.0481	0.2141	0.0481	1:15:58 PM	Yes
Mean:	0.0047	4.71	0.0478				
SD:	0.00004	0.045	0.0005				
%RSD:	0.95%	0.95%	0.95				

=====
Sequence No.: 3
Sample ID: lcsd 570-38022_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 12
Date Collected: 12/10/2019 1:16:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-38022_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.73	0.0480	0.2168	0.0480	1:17:30 PM	Yes
2	0.0048	4.77	0.0484	0.2199	0.0485	1:18:16 PM	Yes
Mean:	0.0048	4.75	0.0482				
SD:	0.00003	0.029	0.0003				
%RSD:	0.61%	0.61%	0.61				

=====
Sequence No.: 4
Sample ID: 570-15141-e-1-b
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 13
Date Collected: 12/10/2019 1:18:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15141-e-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0071	0.0002	0.0017	0.0002	1:19:49 PM	Yes
2	-0.0000	-0.0005	0.0001	0.0001	0.0001	1:20:35 PM	Yes
Mean:	0.0000	0.0033	0.0001				
SD:	0.00001	0.00538	0.0001				
%RSD:	164.17%	164.17%	40.21				

Sequence No.: 5

Autosampler Location: 14

Sample ID: 570-15141-e-1-c ms

Date Collected: 12/10/2019 1:21:02 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15141-e-1-c ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0027	2.67	0.0271	0.1243	0.0272	1:22:06 PM	Yes
2	0.0027	2.67	0.0272	0.1251	0.0272	1:22:52 PM	Yes
Mean:	0.0027	2.67	0.0272				
SD:	0.00000	0.002	0.0000				
%RSD:	0.09%	0.09%	0.09				

Sequence No.: 6

Autosampler Location: 15

Sample ID: 570-15141-e-1-d msd

Date Collected: 12/10/2019 1:23:18 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15141-e-1-d msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0026	2.58	0.0262	0.1197	0.0262	1:24:22 PM	Yes
2	0.0026	2.61	0.0266	0.1210	0.0266	1:25:08 PM	Yes
Mean:	0.0026	2.60	0.0264				
SD:	0.00002	0.025	0.0002				
%RSD:	0.95%	0.95%	0.95				

Sequence No.: 7

Autosampler Location: 5

Sample ID: ccv 570-38006_10-a

Date Collected: 12/10/2019 1:25:34 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.07	0.0211	0.0956	0.0211	1:26:39 PM	Yes
2	0.0021	2.07	0.0210	0.0944	0.0211	1:27:25 PM	Yes
Mean:	0.0021	2.07	0.0211				
SD:	0.00000	0.004	0.0000				
%RSD:	0.20%	0.20%	0.20				

QC value within limits for Hg 253.7 Recovery = 103.52%

All analyte(s) passed QC.

Sequence No.: 8

Autosampler Location: 1

Sample ID: ccb 570-38006_11-a

Date Collected: 12/10/2019 1:27:52 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0081	0.0002	0.0010	0.0002	1:28:56 PM	Yes
2	0.0000	0.0043	0.0001	0.0006	0.0002	1:29:42 PM	Yes
Mean:	0.0000	0.0062	0.0002				
SD:	0.00000	0.00273	0.0000				
%RSD:	44.02%	44.02%	16.75				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:

Results Data Set: 191210H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: lb4 570-37767_1-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 16
Date Collected: 12/10/2019 3:10:59 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lb4 570-37767_1-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0138	-0.0000	-0.0011	-0.0000	3:12:03 PM	Yes
2	-0.0000	-0.0138	-0.0000	-0.0019	-0.0000	3:12:49 PM	Yes
Mean:	-0.0000	-0.0138	-0.0000				
SD:	0.00000	0.00003	0.0000				
%RSD:	0.25%	0.25%	0.92				

=====
Sequence No.: 2
Sample ID: lcs 570-37767_2-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 17
Date Collected: 12/10/2019 3:13:15 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37767_2-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.76	0.0483	0.2153	0.0483	3:14:19 PM	Yes
2	0.0047	4.75	0.0482	0.2200	0.0482	3:15:05 PM	Yes
Mean:	0.0048	4.76	0.0482				
SD:	0.00001	0.008	0.0001				
%RSD:	0.17%	0.17%	0.17				

=====
Sequence No.: 3
Sample ID: lcsd 570-37767_3-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 18
Date Collected: 12/10/2019 3:15:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37767_3-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.82	0.0489	0.2221	0.0489	3:16:35 PM	Yes
2	0.0006	0.559	0.0058	0.0199	0.0058	3:17:21 PM	Yes
Mean:	0.0027	2.69	0.0273				
SD:	0.00301	3.010	0.0305				
%RSD:	112.00%	112.00%	111.58				

=====
Sequence No.: 4
Sample ID: 570-14836-a-1-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 19
Date Collected: 12/10/2019 3:17:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14836-a-1-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0040	0.0001	0.0002	0.0001	3:18:51 PM	Yes
2	-0.0000	-0.0126	-0.0000	-0.0003	0.0000	3:19:37 PM	Yes
Mean:	-0.0000	-0.0083	0.0000				
SD:	0.00001	0.00607	0.0001				
%RSD:	73.16%	73.16%	335.13				

Sequence No.: 5

Autosampler Location: 20

Sample ID: 570-14836-a-1-g ms

Date Collected: 12/10/2019 3:20:03 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14836-a-1-g ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.124	0.0014	0.0064	0.0014	3:21:08 PM	Yes
2	0.0001	0.124	0.0014	0.0061	0.0014	3:21:54 PM	Yes
Mean:	0.0001	0.124	0.0014				
SD:	0.00000	0.0001	0.0000				
%RSD:	0.04%	0.04%	0.04				

Sequence No.: 6

Autosampler Location: 21

Sample ID: 570-14836-a-1-h msd

Date Collected: 12/10/2019 3:22:20 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14836-a-1-h msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.85	0.0188	0.0872	0.0189	3:23:25 PM	Yes
2	0.0019	1.88	0.0192	0.0890	0.0192	3:24:11 PM	Yes
Mean:	0.0019	1.87	0.0190				
SD:	0.00002	0.023	0.0002				
%RSD:	1.23%	1.23%	1.22				

Sequence No.: 7

Autosampler Location: 22

Sample ID: 570-14837-a-1-f

Date Collected: 12/10/2019 3:24:37 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14837-a-1-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0032	0.0001	0.0003	0.0001	3:25:43 PM	Yes
2	-0.0000	-0.0053	0.0000	0.0004	0.0001	3:26:28 PM	Yes
Mean:	-0.0000	-0.0043	0.0001				
SD:	0.00000	0.00145	0.0000				
%RSD:	33.98%	33.98%	24.96				

Sequence No.: 8

Autosampler Location: 23

Sample ID: lb 570-37819_1-c

Date Collected: 12/10/2019 3:26:55 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lb 570-37819_1-c

Analyte: Hg 253.7

Repl #	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
--------	------------	----------	---------	------	------	------	------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0175	0.0003	0.0022	0.0003	3:28:00 PM	Yes
2	0.0000	0.0183	0.0003	0.0015	0.0003	3:28:46 PM	Yes
Mean:	0.0000	0.0179	0.0003				
SD:	0.00000	0.00060	0.0000				
%RSD:	3.36%	3.36%	2.15				

Sequence No.: 9
 Sample ID: lcs 570-37819_2-c
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 24
 Date Collected: 12/10/2019 3:29:13 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: lcs 570-37819_2-c Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0048	4.80	0.0487	0.2226	0.0487	3:30:18 PM	Yes
2	0.0048	4.83	0.0490	0.2261	0.0490	3:31:04 PM	Yes
Mean:	0.0048	4.81	0.0488				
SD:	0.00002	0.024	0.0002				
%RSD:	0.50%	0.50%	0.50				

Sequence No.: 10
 Sample ID: lcsd 570-37819_3-c
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 25
 Date Collected: 12/10/2019 3:31:31 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: lcsd 570-37819_3-c Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0049	4.86	0.0493	0.2280	0.0493	3:32:37 PM	Yes
2	0.0042	4.18	0.0424	0.1382	0.0424	3:33:22 PM	Yes
Mean:	0.0045	4.52	0.0458				
SD:	0.00048	0.480	0.0049				
%RSD:	10.62%	10.62%	10.60				

Sequence No.: 11
 Sample ID: ccv 570-38006_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 12/10/2019 3:33:50 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0021	2.06	0.0210	0.0946	0.0210	3:34:56 PM	Yes
2	0.0020	2.04	0.0208	0.0932	0.0208	3:35:41 PM	Yes
Mean:	0.0021	2.05	0.0209				
SD:	0.00001	0.014	0.0001				
%RSD:	0.69%	0.69%	0.68				

QC value within limits for Hg 253.7 Recovery = 102.73%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-38006_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 12/10/2019 3:36:08 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0000	0.0043	0.0001	0.0003	0.0002	3:37:12 PM	Yes
2	-0.0000	-0.0004	0.0001	-0.0002	0.0001	3:37:58 PM	Yes
Mean:	0.0000	0.0020	0.0001				
SD:	0.00000	0.00328	0.0000				
%RSD:	166.92%	166.92%	27.20				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 26
Sample ID: 570-14700-b-2-i                   Date Collected: 12/10/2019 3:38:23 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14700-b-2-i              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      -0.0000     -0.0032  0.0001    -0.0003  0.0001    3:39:27 PM  Yes
2      -0.0000     -0.0033  0.0001    -0.0006  0.0001    3:40:12 PM  Yes
Mean:  -0.0000     -0.0032  0.0001
SD:     0.00000     0.00008  0.0000
%RSD:   2.57%      2.57%    1.20
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 27
Sample ID: 570-14700-b-2-j ms                Date Collected: 12/10/2019 3:40:38 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14700-b-2-j ms          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0023      2.27     0.0231    0.1052   0.0231    3:41:42 PM  Yes
2      0.0023      2.31     0.0235    0.1066   0.0235    3:42:28 PM  Yes
Mean:  0.0023      2.29     0.0233
SD:     0.00002     0.025    0.0002
%RSD:   1.08%      1.08%    1.07
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 28
Sample ID: 570-14700-b-2-k msd               Date Collected: 12/10/2019 3:42:53 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14700-b-2-k msd        Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0015      1.45     0.0148    0.0673   0.0149    3:43:58 PM  Yes
2      0.0015      1.47     0.0149    0.0671   0.0150    3:44:43 PM  Yes
Mean:  0.0015      1.46     0.0149
SD:     0.00001     0.008    0.0001
%RSD:   0.56%      0.56%    0.56
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 29
Sample ID: 570-14836-a-1-j                   Date Collected: 12/10/2019 3:45:09 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-14836-a-1-j            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0000      0.0101  0.0002    0.0008   0.0002    3:46:13 PM  Yes
=====
  
```

2 0.0000 0.0076 0.0002 0.0008 0.0002 3:46:58 PM Yes
 Mean: 0.0000 0.0088 0.0002
 SD: 0.00000 0.00176 0.0000
 %RSD: 19.91% 19.91% 9.28

=====
 Sequence No.: 17 Autosampler Location: 30
 Sample ID: 570-14837-a-1-h Date Collected: 12/10/2019 3:47:24 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14837-a-1-h Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0004	0.0001	-0.0003	0.0001	3:48:28 PM	Yes
2	0.0000	0.0020	0.0001	0.0003	0.0002	3:49:13 PM	Yes
Mean:	0.0000	0.0012	0.0001				
SD:	0.00000	0.00117	0.0000				
%RSD:	97.13%	97.13%	10.35				

=====
 Sequence No.: 18 Autosampler Location: 5
 Sample ID: ccv 570-38006_10-a Date Collected: 12/10/2019 3:49:39 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.03	0.0207	0.0936	0.0207	3:50:44 PM	Yes
2	0.0020	2.02	0.0205	0.0926	0.0205	3:51:29 PM	Yes
Mean:	0.0020	2.02	0.0206				
SD:	0.00001	0.013	0.0001				
%RSD:	0.66%	0.66%	0.66				

QC value within limits for Hg 253.7 Recovery = 101.23%
 All analyte(s) passed QC.

=====
 Sequence No.: 19 Autosampler Location: 1
 Sample ID: ccb 570-38006_11-a Date Collected: 12/10/2019 3:51:56 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0294	0.0004	0.0025	0.0004	3:52:59 PM	Yes
2	0.0000	0.0258	0.0004	0.0013	0.0004	3:53:45 PM	Yes
Mean:	0.0000	0.0276	0.0004				
SD:	0.00000	0.00257	0.0000				
%RSD:	9.30%	9.30%	6.81				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:

Results Data Set: 191210H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-37550_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 31
Date Collected: 12/10/2019 4:14:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-37550_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0009	0.0001	0.0009	0.0001	4:15:24 PM	Yes
2	-0.0000	-0.0045	0.0001	0.0003	0.0001	4:16:09 PM	Yes
Mean:	-0.0000	-0.0027	0.0001				
SD:	0.00000	0.00260	0.0000				
%RSD:	96.56%	96.56%	35.08				

=====
Sequence No.: 2
Sample ID: lcs 570-37550_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 32
Date Collected: 12/10/2019 4:16:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37550_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.62	0.0468	0.2170	0.0469	4:17:40 PM	Yes
2	0.0046	4.62	0.0469	0.2203	0.0469	4:18:26 PM	Yes
Mean:	0.0046	4.62	0.0469				
SD:	0.00000	0.004	0.0000				
%RSD:	0.09%	0.09%	0.09				

=====
Sequence No.: 3
Sample ID: lcsd 570-37550_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 33
Date Collected: 12/10/2019 4:18:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-37550_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.67	0.0474	0.2233	0.0474	4:19:57 PM	Yes
2	0.0047	4.67	0.0474	0.2231	0.0474	4:20:43 PM	Yes
Mean:	0.0047	4.67	0.0474				
SD:	0.00000	0.003	0.0000				
%RSD:	0.05%	0.05%	0.05				

=====
Sequence No.: 4
Sample ID: 570-14872-f-2-i
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 34
Date Collected: 12/10/2019 4:21:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14872-f-2-i

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0683	0.0008	0.0042	0.0008	4:22:14 PM	Yes
2	0.0001	0.0686	0.0008	0.0043	0.0008	4:23:00 PM	Yes
Mean:	0.0001	0.0685	0.0008				
SD:	0.00000	0.00021	0.0000				
%RSD:	0.30%	0.30%	0.26				

Sequence No.: 5

Autosampler Location: 35

Sample ID: 570-14872-f-2-j ms

Date Collected: 12/10/2019 4:23:27 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14872-f-2-j ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0043	4.35	0.0441	0.2258	0.0441	4:24:33 PM	Yes
2	0.0044	4.41	0.0447	0.2291	0.0447	4:25:18 PM	Yes
Mean:	0.0044	4.38	0.0444				
SD:	0.00004	0.044	0.0004				
%RSD:	1.00%	1.00%	1.00				

Sequence No.: 6

Autosampler Location: 36

Sample ID: 570-14872-f-2-k msd

Date Collected: 12/10/2019 4:25:45 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14872-f-2-k msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.72	0.0479	0.2448	0.0479	4:26:51 PM	Yes
2	0.0047	4.74	0.0480	0.2447	0.0481	4:27:36 PM	Yes
Mean:	0.0047	4.73	0.0480				
SD:	0.00001	0.010	0.0001				
%RSD:	0.21%	0.21%	0.21				

Sequence No.: 7

Autosampler Location: 37

Sample ID: 570-14872-f-3-e

Date Collected: 12/10/2019 4:28:03 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14872-f-3-e

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0332	0.0004	0.0025	0.0005	4:29:09 PM	Yes
2	0.0000	0.0155	0.0003	0.0005	0.0003	4:29:54 PM	Yes
Mean:	0.0000	0.0243	0.0003				
SD:	0.00001	0.01251	0.0001				
%RSD:	51.39%	51.39%	36.32				

Sequence No.: 8

Autosampler Location: 38

Sample ID: 570-14872-f-4-c

Date Collected: 12/10/2019 4:30:21 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14872-f-4-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0883	0.0010	0.0051	0.0010	4:31:26 PM	Yes
2	0.0001	0.0833	0.0009	0.0044	0.0010	4:32:12 PM	Yes
Mean:	0.0001	0.0858	0.0010				
SD:	0.00000	0.00351	0.0000				
%RSD:	4.09%	4.09%	3.66				

```

=====
Sequence No.: 9                               Autosampler Location: 39
Sample ID: 570-14872-f-5-c                   Date Collected: 12/10/2019 4:32:39 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14872-f-5-c               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0001       0.0649   0.0008   0.0039   0.0008   4:33:44 PM  Yes
2      0.0001       0.0630   0.0007   0.0035   0.0008   4:34:29 PM  Yes
Mean:  0.0001       0.0640   0.0007
SD:    0.00000     0.00139  0.0000
%RSD:  2.18%      2.18%    1.88
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 40
Sample ID: 570-14872-f-6-c                   Date Collected: 12/10/2019 4:34:55 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14872-f-6-c               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0002       0.218    0.0023   0.0124   0.0023   4:36:00 PM  Yes
2      0.0002       0.216    0.0023   0.0119   0.0023   4:36:46 PM  Yes
Mean:  0.0002       0.217    0.0023
SD:    0.00000     0.0008   0.0000
%RSD:  0.37%      0.37%    0.36
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-38006_10-a                Date Collected: 12/10/2019 4:37:12 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-38006_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0020       1.96     0.0200   0.0922   0.0200   4:38:18 PM  Yes
2      0.0020       1.97     0.0201   0.0915   0.0201   4:39:03 PM  Yes
Mean:  0.0020       1.97     0.0200
SD:    0.00001     0.007    0.0001
%RSD:  0.34%      0.34%    0.33
=====

```

QC value within limits for Hg 253.7 Recovery = 98.47%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-38006_11-a                Date Collected: 12/10/2019 4:39:31 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-38006_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
=====

```

1 -0.0000 -0.0059 0.0000 0.0002 0.0001 4:40:35 PM Yes
User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: Calib blank_868
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.

Autosampler Location: 1
Date Collected: 12/10/2019 4:50:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 12/10/2019 4:57:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 -0.0000 -0.0065 0.0000 0.0004 0.0001 4:58:05 PM Yes
2 -0.0000 -0.0120 -0.0000 -0.0006 0.0000 4:58:50 PM Yes
Mean: -0.0000 -0.0092 0.0000
SD: 0.00000 0.00388 0.0000
%RSD: 41.93% 41.93% 454.81
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: 570-14872-f-7-e
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 41
Date Collected: 12/10/2019 4:59:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14872-f-7-e
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0001 0.0519 0.0006 0.0030 0.0007 5:00:20 PM Yes
2 0.0001 0.0537 0.0006 0.0034 0.0007 5:01:06 PM Yes
Mean: 0.0001 0.0528 0.0006
SD: 0.00000 0.00131 0.0000
%RSD: 2.49% 2.49% 2.09

=====
Sequence No.: 3
Sample ID: 570-14886-a-1-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 42
Date Collected: 12/10/2019 5:01:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14886-a-1-c
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0005 0.486 0.0050 0.0263 0.0050 5:02:36 PM Yes
2 0.0005 0.484 0.0050 0.0255 0.0050 5:03:21 PM Yes
Mean: 0.0005 0.485 0.0050
SD: 0.00000 0.0012 0.0000
%RSD: 0.24% 0.24% 0.24

=====
Sequence No.: 4
Sample ID: 570-14971-a-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Autosampler Location: 43
Date Collected: 12/10/2019 5:03:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14971-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.331	0.0034	0.0175	0.0035	5:04:52 PM	Yes
2	0.0003	0.326	0.0034	0.0171	0.0034	5:05:38 PM	Yes
Mean:	0.0003	0.328	0.0034				
SD:	0.00000	0.0036	0.0000				
%RSD:	1.09%	1.09%	1.06				

Sequence No.: 5

Autosampler Location: 44

Sample ID: 570-14971-a-2-a

Date Collected: 12/10/2019 5:06:04 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14971-a-2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.147	0.0016	0.0082	0.0016	5:07:08 PM	Yes
2	0.0001	0.141	0.0015	0.0077	0.0016	5:07:54 PM	Yes
Mean:	0.0001	0.144	0.0016				
SD:	0.00000	0.0042	0.0000				
%RSD:	2.93%	2.93%	2.74				

Sequence No.: 6

Autosampler Location: 45

Sample ID: 720-96409-b-1-a

Date Collected: 12/10/2019 5:08:20 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 720-96409-b-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.451	0.0047	0.0238	0.0047	5:09:25 PM	Yes
2	0.0005	0.454	0.0047	0.0238	0.0047	5:10:10 PM	Yes
Mean:	0.0005	0.452	0.0047				
SD:	0.00000	0.0018	0.0000				
%RSD:	0.41%	0.41%	0.40				

Sequence No.: 7

Autosampler Location: 46

Sample ID: 570-14967-a-1-b

Date Collected: 12/10/2019 5:10:36 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14967-a-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.137	0.0015	0.0081	0.0015	5:11:41 PM	Yes
2	0.0001	0.132	0.0014	0.0075	0.0015	5:12:26 PM	Yes
Mean:	0.0001	0.135	0.0015				
SD:	0.00000	0.0038	0.0000				
%RSD:	2.81%	2.81%	2.61				

Sequence No.: 8

Autosampler Location: 47

Sample ID: 570-14967-a-2-d

Date Collected: 12/10/2019 5:12:53 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14967-a-2-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0187	18.7	0.1892	0.9801	0.1893	5:13:57 PM	Yes
Sample concentration is greater than that of the highest standard.							
2	0.0191	19.1	0.1932	1.0098	0.1932	5:14:43 PM	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	0.0189	18.9	0.1912				
SD:	0.00028	0.28	0.0028				
%RSD:	1.46%	1.46%	1.46				
Sample concentration is greater than that of the highest standard.							

Sequence No.: 9

Autosampler Location: 48

Sample ID: 570-14893-a-1-b

Date Collected: 12/10/2019 5:15:09 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14893-a-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0017	1.69	0.0172	0.0916	0.0172	5:16:15 PM	Yes
2	0.0015	1.53	0.0156	0.0811	0.0156	5:17:00 PM	Yes
Mean:	0.0016	1.61	0.0164				
SD:	0.00011	0.111	0.0011				
%RSD:	6.88%	6.88%	6.84				

Sequence No.: 10

Autosampler Location: 49

Sample ID: 570-14921-a-1-a

Date Collected: 12/10/2019 5:17:27 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14921-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0017	1.69	0.0173	0.0905	0.0173	5:18:32 PM	Yes
2	0.0016	1.64	0.0167	0.0860	0.0167	5:19:17 PM	Yes
Mean:	0.0017	1.67	0.0170				
SD:	0.00004	0.041	0.0004				
%RSD:	2.44%	2.44%	2.42				

Sequence No.: 11

Autosampler Location: 50

Sample ID: 570-14723-a-4-f

Date Collected: 12/10/2019 5:19:44 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14723-a-4-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0624	0.0007	0.0047	0.0008	5:20:48 PM	Yes
2	0.0001	0.0519	0.0006	0.0028	0.0007	5:21:33 PM	Yes
Mean:	0.0001	0.0572	0.0007				
SD:	0.00001	0.00741	0.0001				
%RSD:	12.97%	12.97%	11.02				

Sequence No.: 12

Autosampler Location: 5

Sample ID: ccv 570-38006_10-a

Date Collected: 12/10/2019 5:21:59 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.96	0.0200	0.0919	0.0200	5:23:05 PM	Yes
2	0.0020	1.96	0.0200	0.0915	0.0200	5:23:51 PM	Yes
Mean:	0.0020	1.96	0.0200				
SD:	0.00000	0.001	0.0000				
%RSD:	0.05%	0.05%	0.05				

QC value within limits for Hg 253.7 Recovery = 98.15%

All analyte(s) passed QC.

Sequence No.: 13

Autosampler Location: 1

Sample ID: ccb 570-38006_11-a

Date Collected: 12/10/2019 5:24:17 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0053	0.0000	0.0005	0.0001	5:25:21 PM	Yes
2	-0.0000	-0.0121	-0.0000	-0.0007	0.0000	5:26:06 PM	Yes
Mean:	-0.0000	-0.0087	0.0000				
SD:	0.00000	0.00485	0.0000				
%RSD:	55.84%	55.84%	340.69				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 14

Autosampler Location: 51

Sample ID: 570-14827-a-1-c

Date Collected: 12/10/2019 5:26:31 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14827-a-1-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0035	0.0001	0.0005	0.0001	5:27:36 PM	Yes
2	-0.0000	-0.0041	0.0001	0.0002	0.0001	5:28:21 PM	Yes
Mean:	-0.0000	-0.0038	0.0001				
SD:	0.00000	0.00037	0.0000				
%RSD:	9.68%	9.68%	5.85				

Sequence No.: 15

Autosampler Location: 52

Sample ID: 570-14941-a-1-a

Date Collected: 12/10/2019 5:28:47 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14941-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0282	0.0004	0.0023	0.0004	5:29:51 PM	Yes
2	0.0000	0.0179	0.0003	0.0012	0.0003	5:30:37 PM	Yes
Mean:	0.0000	0.0230	0.0003				
SD:	0.00001	0.00731	0.0001				
%RSD:	31.75%	31.75%	22.07				

Sequence No.: 16

Autosampler Location: 5

Sample ID: ccv 570-38006_10-a

Date Collected: 12/10/2019 5:31:04 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.96	0.0199	0.0911	0.0199	5:32:09 PM	Yes
2	0.0020	1.96	0.0200	0.0908	0.0200	5:32:55 PM	Yes
Mean:	0.0020	1.96	0.0199				
SD:	0.00000	0.003	0.0000				
%RSD:	0.16%	0.16%	0.16				

QC value within limits for Hg 253.7 Recovery = 97.93%
All analyte(s) passed QC.

=====

Sequence No.: 17

Autosampler Location: 1

Sample ID: ccb 570-38006_11-a

Date Collected: 12/10/2019 5:33:22 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0065	0.0000	0.0003	0.0001	5:34:27 PM	Yes
2	-0.0000	-0.0134	-0.0000	-0.0007	-0.0000	5:35:12 PM	Yes
Mean:	-0.0000	-0.0099	0.0000				
SD:	0.00000	0.00491	0.0000				
%RSD:	49.40%	49.40%	>999.9%				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-14967-a-2-d@10
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 47
Date Collected: 12/10/2019 6:10:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14967-a-2-d@10
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.83	0.0187	0.0912	0.0187	6:11:18 PM	Yes
2	0.0019	1.85	0.0189	0.0930	0.0189	6:12:04 PM	Yes
Mean:	0.0018	1.84	0.0188				
SD:	0.00001	0.015	0.0002				
%RSD:	0.81%	0.81%	0.80				

=====
Sequence No.: 2
Sample ID: mb 570-38063_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 53
Date Collected: 12/10/2019 6:12:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-38063_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0061	0.0000	0.0007	0.0001	6:13:36 PM	Yes
2	-0.0000	-0.0040	0.0001	0.0008	0.0001	6:14:21 PM	Yes
Mean:	-0.0000	-0.0051	0.0001				
SD:	0.00000	0.00152	0.0000				
%RSD:	30.09%	30.09%	30.09				

=====
Sequence No.: 3
Sample ID: lcs 570-38063_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 54
Date Collected: 12/10/2019 6:14:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-38063_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.56	0.0463	0.2203	0.0463	6:15:52 PM	Yes
2	0.0046	4.57	0.0463	0.2239	0.0463	6:16:38 PM	Yes
Mean:	0.0046	4.56	0.0463				
SD:	0.00000	0.001	0.0000				
%RSD:	0.03%	0.03%	0.03				

=====
Sequence No.: 4
Sample ID: lcsd 570-38063_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 55
Date Collected: 12/10/2019 6:17:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-38063_3-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.62	0.0469	0.2252	0.0469	6:18:09 PM	Yes
2	0.0046	4.60	0.0466	0.2257	0.0467	6:18:55 PM	Yes
Mean:	0.0046	4.61	0.0468				
SD:	0.00002	0.017	0.0002				
%RSD:	0.36%	0.36%	0.36				

Sequence No.: 5

Autosampler Location: 56

Sample ID: 570-14547-c-6-a

Date Collected: 12/10/2019 6:19:22 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14547-c-6-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0072	0.0002	0.0015	0.0002	6:20:27 PM	Yes
2	0.0000	0.0005	0.0001	0.0005	0.0001	6:21:12 PM	Yes
Mean:	0.0000	0.0038	0.0001				
SD:	0.00000	0.00470	0.0000				
%RSD:	122.31%	122.31%	33.72				

Sequence No.: 6

Autosampler Location: 57

Sample ID: 570-14547-c-6-b ms

Date Collected: 12/10/2019 6:21:39 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14547-c-6-b ms

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.87	0.0190	0.0911	0.0191	6:22:44 PM	Yes
2	0.0019	1.91	0.0195	0.0933	0.0195	6:23:30 PM	Yes
Mean:	0.0019	1.89	0.0192				
SD:	0.00003	0.030	0.0003				
%RSD:	1.60%	1.60%	1.59				

Sequence No.: 7

Autosampler Location: 58

Sample ID: 570-14547-c-6-c msd

Date Collected: 12/10/2019 6:23:56 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14547-c-6-c msd

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0013	1.34	0.0137	0.0654	0.0137	6:25:01 PM	Yes
2	0.0014	1.36	0.0138	0.0661	0.0139	6:25:47 PM	Yes
Mean:	0.0014	1.35	0.0138				
SD:	0.00001	0.009	0.0001				
%RSD:	0.67%	0.67%	0.66				

Sequence No.: 8

Autosampler Location: 59

Sample ID: 720-96438-i-1-b

Date Collected: 12/10/2019 6:26:13 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 720-96438-i-1-b

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	------------------	----------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0003	0.286	0.0030	0.0150	0.0030	6:27:18 PM	Yes
2	0.0001	0.145	0.0016	0.0085	0.0016	6:28:04 PM	Yes
Mean:	0.0002	0.216	0.0023				
SD:	0.00010	0.0998	0.0010				
%RSD:	46.24%	46.24%	44.17				

```

=====
Sequence No.: 9                               Autosampler Location: 60
Sample ID: 570-14986-g-1-b                   Date Collected: 12/10/2019 6:28:30 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14986-g-1-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0000      0.0105   0.0002   0.0018 0.0002 6:29:35 PM  Yes
2      0.0000      0.0014   0.0001   0.0008 0.0001 6:30:21 PM  Yes
Mean:  0.0000      0.0060   0.0002
SD:    0.00001     0.00646 0.0001
%RSD:  108.60%    108.60% 40.26
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 61
Sample ID: 570-14986-g-2-b                   Date Collected: 12/10/2019 6:30:47 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14986-g-2-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0000      0.0020   0.0001   0.0011 0.0002 6:31:53 PM  Yes
2      0.0000      0.0012   0.0001   0.0011 0.0001 6:32:38 PM  Yes
Mean:  0.0000      0.0016   0.0001
SD:    0.00000     0.00056 0.0000
%RSD:  33.92%    33.92%  4.73
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-38006_10-a                 Date Collected: 12/10/2019 6:33:05 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-38006_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0019      1.95     0.0198   0.0916 0.0198 6:34:10 PM  Yes
2      0.0020      1.96     0.0199   0.0924 0.0199 6:34:56 PM  Yes
Mean:  0.0020      1.95     0.0198
SD:    0.00001     0.007    0.0001
%RSD:  0.34%     0.34%   0.34
=====

```

QC value within limits for Hg 253.7 Recovery = 97.54%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-38006_11-a                 Date Collected: 12/10/2019 6:35:22 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-38006_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
=====

```

1 -0.0000 -0.0062 0.0000 0.0005 0.0001 6:36:26 PM Yes
 2 -0.0000 -0.0101 0.0000 -0.0005 0.0000 6:37:12 PM Yes
 Mean: -0.0000 -0.0081 0.0000
 SD: 0.00000 0.00277 0.0000
 %RSD: 34.01% 34.01% 141.27

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

Sequence No.: 13 Autosampler Location: 62
 Sample ID: 570-14501-e-7-a Date Collected: 12/10/2019 6:37:38 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14501-e-7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0013	0.0001	0.0003	0.0001	6:38:43 PM	Yes
2	-0.0000	-0.0002	0.0001	0.0006	0.0001	6:39:28 PM	Yes
Mean:	-0.0000	-0.0007	0.0001				
SD:	0.00000	0.00079	0.0000				
%RSD:	108.40%	108.40%	8.43				

Sequence No.: 14 Autosampler Location: 63
 Sample ID: 570-14501-e-8-a Date Collected: 12/10/2019 6:39:55 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14501-e-8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0004	0.0001	0.0003	0.0001	6:41:00 PM	Yes
2	0.0000	0.0009	0.0001	0.0003	0.0001	6:41:46 PM	Yes
Mean:	0.0000	0.0007	0.0001				
SD:	0.00000	0.00037	0.0000				
%RSD:	55.57%	55.57%	3.45				

Sequence No.: 15 Autosampler Location: 64
 Sample ID: 570-14774-d-23-a Date Collected: 12/10/2019 6:42:13 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14774-d-23-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0209	0.0003	0.0019	0.0003	6:43:17 PM	Yes
2	0.0000	0.0174	0.0003	0.0013	0.0003	6:44:03 PM	Yes
Mean:	0.0000	0.0191	0.0003				
SD:	0.00000	0.00245	0.0000				
%RSD:	12.82%	12.82%	8.39				

Sequence No.: 16 Autosampler Location: 65
 Sample ID: 570-14748-i-1-a Date Collected: 12/10/2019 6:44:30 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14748-i-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0054	0.0002	0.0011	0.0002	6:45:35 PM	Yes

2 0.0000 0.0039 0.0001 0.0004 0.0002 6:46:21 PM Yes
 Mean: 0.0000 0.0047 0.0001
 SD: 0.00000 0.00104 0.0000
 %RSD: 22.31% 22.31% 7.04

=====
 Sequence No.: 17 Autosampler Location: 66
 Sample ID: 570-14748-i-2-a Date Collected: 12/10/2019 6:46:48 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14748-i-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0003	0.0001	0.0003	0.0001	6:47:53 PM	Yes
2	-0.0000	-0.0012	0.0001	0.0003	0.0001	6:48:38 PM	Yes
Mean:	-0.0000	-0.0005	0.0001				
SD:	0.00000	0.00107	0.0000				
%RSD:	221.31%	221.31%	11.15				

=====
 Sequence No.: 18 Autosampler Location: 67
 Sample ID: 570-14748-i-3-a Date Collected: 12/10/2019 6:49:05 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14748-i-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0081	0.0002	0.0012	0.0002	6:50:10 PM	Yes
2	0.0000	0.0067	0.0002	0.0006	0.0002	6:50:56 PM	Yes
Mean:	0.0000	0.0074	0.0002				
SD:	0.00000	0.00099	0.0000				
%RSD:	13.37%	13.37%	5.64				

=====
 Sequence No.: 19 Autosampler Location: 68
 Sample ID: 570-14796-a-2-a Date Collected: 12/10/2019 6:51:23 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14796-a-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0056	0.0002	0.0009	0.0002	6:52:28 PM	Yes
2	-0.0000	-0.0002	0.0001	-0.0000	0.0001	6:53:13 PM	Yes
Mean:	0.0000	0.0027	0.0001				
SD:	0.00000	0.00405	0.0000				
%RSD:	150.03%	150.03%	31.62				

=====
 Sequence No.: 20 Autosampler Location: 69
 Sample ID: 570-14633-g-1-b Date Collected: 12/10/2019 6:53:40 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14633-g-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0041	0.0001	-0.0005	0.0001	6:54:45 PM	Yes
2	-0.0000	-0.0042	0.0001	-0.0004	0.0001	6:55:31 PM	Yes
Mean:	-0.0000	-0.0042	0.0001				
SD:	0.00000	0.00008	0.0000				

%RSD: 2.01% 2.01% 1.41

```

=====
Sequence No.: 21                               Autosampler Location: 70
Sample ID: 570-14633-g-2-b                    Date Collected: 12/10/2019 6:55:58 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14633-g-2-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0000       0.0001   0.0001   0.0003   0.0001   6:57:03 PM  Yes
2      -0.0000      -0.0031  0.0001   -0.0001  0.0001   6:57:49 PM  Yes
Mean:  -0.0000    -0.0015  0.0001
SD:     0.00000   0.00226  0.0000
%RSD:  151.32%  151.32%  26.26
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 71
Sample ID: 570-14633-g-3-b                    Date Collected: 12/10/2019 6:58:15 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14633-g-3-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      -0.0000      -0.0036  0.0001   0.0002   0.0001   6:59:21 PM  Yes
2      -0.0000      -0.0087  0.0000   -0.0003  0.0000   7:00:07 PM  Yes
Mean:  -0.0000    -0.0061  0.0000
SD:     0.00000   0.00363  0.0000
%RSD:  59.27%  59.27%  91.50
=====

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-38006_10-a                 Date Collected: 12/10/2019 7:00:33 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-38006_10-a          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0019       1.93     0.0196   0.0907   0.0196   7:01:39 PM  Yes
2      0.0019       1.95     0.0198   0.0913   0.0198   7:02:25 PM  Yes
Mean:  0.0019     1.94     0.0197
SD:     0.00001    0.014    0.0001
%RSD:  0.72%    0.72%    0.72
=====

```

QC value within limits for Hg 253.7 Recovery = 96.79%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-38006_11-a                 Date Collected: 12/10/2019 7:02:52 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-38006_11-a          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      -0.0000      -0.0088  0.0000   -0.0003  0.0000   7:03:56 PM  Yes
2      -0.0000      -0.0100  0.0000   -0.0004  0.0000   7:04:41 PM  Yes
Mean:  -0.0000    -0.0094  0.0000
SD:     0.00000   0.00087  0.0000
%RSD:  9.23%    9.23%   124.47
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 72
Sample ID: 570-14633-g-4-b                    Date Collected: 12/10/2019 7:05:07 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14633-g-4-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      -0.0000    -0.0049  0.0001   0.0002 0.0001  7:06:13 PM  Yes
2      -0.0000    -0.0077  0.0000   -0.0002 0.0001  7:06:58 PM  Yes
Mean:  -0.0000    -0.0063  0.0000
SD:     0.00000    0.00200  0.0000
%RSD:   31.69%    31.69%   52.88
=====

```

```

=====
Sequence No.: 26                               Autosampler Location: 73
Sample ID: 570-14633-g-5-b                    Date Collected: 12/10/2019 7:07:25 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14633-g-5-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0022  0.0001   0.0009 0.0002  7:08:31 PM  Yes
2      0.0000     0.0006  0.0001   0.0006 0.0001  7:09:17 PM  Yes
Mean:  0.0000     0.0014  0.0001
SD:     0.00000    0.00112  0.0000
%RSD:   80.24%    80.24%   9.72
=====

```

```

=====
Sequence No.: 27                               Autosampler Location: 74
Sample ID: 570-14633-g-6-b                    Date Collected: 12/10/2019 7:09:44 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14633-g-6-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      -0.0000    -0.0022  0.0001   0.0006 0.0001  7:10:49 PM  Yes
2      -0.0000    -0.0040  0.0001   0.0001 0.0001  7:11:35 PM  Yes
Mean:  -0.0000    -0.0031  0.0001
SD:     0.00000    0.00127  0.0000
%RSD:   40.46%    40.46%  18.27
=====

```

```

=====
Sequence No.: 28                               Autosampler Location: 75
Sample ID: mb 570-38069_1-a                    Date Collected: 12/10/2019 7:12:02 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: mb 570-38069_1-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      -0.0000    -0.0097  0.0000   0.0000 0.0000  7:13:07 PM  Yes
2      -0.0000    -0.0101  0.0000   -0.0002 0.0000  7:13:53 PM  Yes
Mean:  -0.0000    -0.0099  0.0000
SD:     0.00000    0.00029  0.0000
%RSD:   2.98%    2.98%   123.81
=====

```

```

=====
Sequence No.: 29                               Autosampler Location: 76
Sample ID: lcs 570-38069_2-a                 Date Collected: 12/10/2019 7:14:20 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

-----
Replicate Data: lcs 570-38069_2-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0046     4.62      0.0469   0.2202 0.0469  7:15:25 PM  Yes
2      0.0043     4.30      0.0436   0.1743 0.0436  7:16:11 PM  Yes
Mean:  0.0045     4.46      0.0452
SD:    0.00023    0.232     0.0023
%RSD:  5.20%     5.20%     5.19
    
```

```

=====
Sequence No.: 30                               Autosampler Location: 77
Sample ID: lcsd 570-38069_3-a              Date Collected: 12/10/2019 7:16:38 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

-----
Replicate Data: lcsd 570-38069_3-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0047     4.66      0.0473   0.2258 0.0473  7:17:44 PM  Yes
2      0.0046     4.59      0.0466   0.2248 0.0466  7:18:29 PM  Yes
Mean:  0.0046     4.63      0.0469
SD:    0.00005    0.049     0.0005
%RSD:  1.05%     1.05%     1.05
    
```

```

=====
Sequence No.: 31                               Autosampler Location: 78
Sample ID: 570-15172-c-1-a                 Date Collected: 12/10/2019 7:18:56 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

-----
Replicate Data: 570-15172-c-1-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0001     0.0511    0.0006   0.0031 0.0006  7:20:01 PM  Yes
2      0.0000     0.0453    0.0006   0.0021 0.0006  7:20:47 PM  Yes
Mean:  0.0000     0.0482    0.0006
SD:    0.00000    0.00411   0.0000
%RSD:  8.52%     8.52%     7.05
    
```

```

=====
Sequence No.: 32                               Autosampler Location: 79
Sample ID: 570-15172-c-1-b ms             Date Collected: 12/10/2019 7:21:14 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

-----
Replicate Data: 570-15172-c-1-b ms         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0046     4.62      0.0469   0.2429 0.0469  7:22:19 PM  Yes
2      0.0047     4.68      0.0475   0.2459 0.0475  7:23:05 PM  Yes
Mean:  0.0047     4.65      0.0472
SD:    0.00004    0.039     0.0004
%RSD:  0.83%     0.83%     0.83
    
```

```

=====
Sequence No.: 33                               Autosampler Location: 80
Sample ID: 570-15172-c-1-c msd            Date Collected: 12/10/2019 7:23:32 PM
    
```

Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15172-c-1-c msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0045	4.53	0.0460	0.2399	0.0460	7:24:38 PM	Yes
2	0.0045	4.51	0.0458	0.2379	0.0458	7:25:23 PM	Yes
Mean:	0.0045	4.52	0.0459				
SD:	0.00002	0.016	0.0002				
%RSD:	0.36%	0.36%	0.36				

Sequence No.: 34
Sample ID: 570-15152-b-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 81
Date Collected: 12/10/2019 7:25:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15152-b-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.162	0.0017	0.0105	0.0018	7:26:55 PM	Yes
2	0.0001	0.134	0.0015	0.0076	0.0015	7:27:41 PM	Yes
Mean:	0.0001	0.148	0.0016				
SD:	0.00002	0.0203	0.0002				
%RSD:	13.71%	13.71%	12.83				

Sequence No.: 35
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/10/2019 7:28:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.93	0.0196	0.0948	0.0196	7:29:14 PM	Yes
2	0.0019	1.92	0.0196	0.0940	0.0196	7:29:59 PM	Yes
Mean:	0.0019	1.92	0.0196				
SD:	0.00000	0.002	0.0000				
%RSD:	0.10%	0.10%	0.10				

QC value within limits for Hg 253.7 Recovery = 96.25%
All analyte(s) passed QC.

Sequence No.: 36
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/10/2019 7:30:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0095	0.0000	-0.0002	0.0000	7:31:30 PM	Yes
2	-0.0000	-0.0126	-0.0000	-0.0007	0.0000	7:32:16 PM	Yes
Mean:	-0.0000	-0.0110	-0.0000				
SD:	0.00000	0.00222	0.0000				
%RSD:	20.15%	20.15%	239.49				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: lcs 570-37767_2-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 82
Date Collected: 12/10/2019 8:27:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37767_2-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0062	0.0000	0.0006	0.0001	8:29:03 PM	Yes
2	0.0045	4.51	0.0457	0.2292	0.0458	8:29:48 PM	Yes
Mean:	0.0023	2.25	0.0229				
SD:	0.00319	3.193	0.0323				
%RSD:	141.81%	141.81%	141.18				

=====
Sequence No.: 2
Sample ID: 570-14836-a-1-g ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 83
Date Collected: 12/10/2019 8:30:15 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14836-a-1-g ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0023	2.33	0.0237	0.1179	0.0238	8:31:20 PM	Yes
2	0.0023	2.33	0.0237	0.1183	0.0237	8:32:06 PM	Yes
Mean:	0.0023	2.33	0.0237				
SD:	0.00000	0.002	0.0000				
%RSD:	0.07%	0.07%	0.07				

=====
Sequence No.: 3
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 12/10/2019 8:32:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.89	0.0192	0.0951	0.0192	8:33:39 PM	Yes
2	0.0019	1.87	0.0190	0.0932	0.0191	8:34:24 PM	Yes
Mean:	0.0019	1.88	0.0191				
SD:	0.00001	0.011	0.0001				
%RSD:	0.57%	0.57%	0.57				

QC value within limits for Hg 253.7 Recovery = 93.94%
All analyte(s) passed QC.

=====
Sequence No.: 4
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Autosampler Location: 1
Date Collected: 12/10/2019 8:34:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0039	0.0001	0.0019	0.0002	8:35:56 PM	Yes
2	0.0000	0.0022	0.0001	0.0011	0.0002	8:36:42 PM	Yes
Mean:	0.0000	0.0031	0.0001				
SD:	0.00000	0.00119	0.0000				
%RSD:	38.78%	38.78%	9.01				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
191210H1.sifx

Batch ID:
Results Data Set: 191210H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: lcs 570-37767_2-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 89
Date Collected: 12/10/2019 9:42:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-37767_2-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0045	4.52	0.0459	0.2339	0.0459	9:43:12 PM	Yes
2	0.0046	4.55	0.0462	0.2362	0.0462	9:43:58 PM	Yes
Mean:	0.0045	4.54	0.0460				
SD:	0.00002	0.019	0.0002				
%RSD:	0.42%	0.42%	0.41				

=====
Sequence No.: 2
Sample ID: 570-15071-a-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 84
Date Collected: 12/10/2019 9:44:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15071-a-1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0155	0.0003	0.0013	0.0003	9:45:31 PM	Yes
2	0.0000	0.0101	0.0002	0.0011	0.0002	9:46:17 PM	Yes
Mean:	0.0000	0.0128	0.0002				
SD:	0.00000	0.00386	0.0000				
%RSD:	30.14%	30.14%	16.85				

=====
Sequence No.: 3
Sample ID: 570-15071-a-2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 85
Date Collected: 12/10/2019 9:46:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15071-a-2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0011	0.0001	0.0001	0.0001	9:47:49 PM	Yes
2	-0.0000	-0.0027	0.0001	0.0003	0.0001	9:48:35 PM	Yes
Mean:	-0.0000	-0.0008	0.0001				
SD:	0.00000	0.00271	0.0000				
%RSD:	341.17%	341.17%	29.15				

=====
Sequence No.: 4
Sample ID: 570-14793-g-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 86
Date Collected: 12/10/2019 9:49:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-14793-g-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0018	0.0001	0.0011	0.0001	9:50:08 PM	Yes
2	-0.0000	-0.0035	0.0001	0.0006	0.0001	9:50:54 PM	Yes
Mean:	-0.0000	-0.0027	0.0001				
SD:	0.00000	0.00122	0.0000				
%RSD:	45.91%	45.91%	16.46				

Sequence No.: 5

Autosampler Location: 87

Sample ID: 570-14793-g-2-a

Date Collected: 12/10/2019 9:51:21 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14793-g-2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0001	0.0001	0.0009	0.0001	9:52:27 PM	Yes
2	-0.0000	-0.0055	0.0000	0.0002	0.0001	9:53:13 PM	Yes
Mean:	-0.0000	-0.0028	0.0001				
SD:	0.00000	0.00383	0.0000				
%RSD:	137.97%	137.97%	52.24				

Sequence No.: 6

Autosampler Location: 88

Sample ID: 570-14736-a-1-a

Date Collected: 12/10/2019 9:53:40 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-14736-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0007	0.0001	0.0006	0.0001	9:54:45 PM	Yes
2	-0.0000	-0.0030	0.0001	0.0007	0.0001	9:55:30 PM	Yes
Mean:	-0.0000	-0.0018	0.0001				
SD:	0.00000	0.00161	0.0000				
%RSD:	88.23%	88.23%	19.50				

Sequence No.: 7

Autosampler Location: 90

Sample ID: mb 570-38115_1-b

Date Collected: 12/10/2019 9:55:58 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: mb 570-38115_1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0067	0.0000	0.0006	0.0001	9:57:03 PM	Yes
2	-0.0000	-0.0087	0.0000	0.0000	0.0000	9:57:49 PM	Yes
Mean:	-0.0000	-0.0077	0.0000				
SD:	0.00000	0.00146	0.0000				
%RSD:	18.91%	18.91%	61.05				

Sequence No.: 8

Autosampler Location: 91

Sample ID: lcs 570-38115_2-b

Date Collected: 12/10/2019 9:58:16 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcs 570-38115_2-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0045	4.54	0.0461	0.2218	0.0461	9:59:22 PM	Yes
2	0.0046	4.60	0.0466	0.2288	0.0466	10:00:07 PM	Yes
Mean:	0.0046	4.57	0.0463				
SD:	0.00004	0.037	0.0004				
%RSD:	0.82%	0.82%	0.82				

```

=====
Sequence No.: 9                               Autosampler Location: 92
Sample ID: lcsd 570-38115_3-b                Date Collected: 12/10/2019 10:00:34 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lcsd 570-38115_3-b           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0046      4.60     0.0467   0.2285 0.0467 10:01:40 PM  Yes
2      0.0046      4.59     0.0465   0.2300 0.0466 10:02:26 PM  Yes
Mean:  0.0046      4.59     0.0466
SD:    0.00001     0.010    0.0001
%RSD:  0.22%      0.22%    0.22
=====

```

```

=====
Sequence No.: 10                             Autosampler Location: 93
Sample ID: 570-14597-g-1-d                  Date Collected: 12/10/2019 10:02:53 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-14597-g-1-d           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      -0.0000     -0.0019  0.0001   0.0005 0.0001 10:03:58 PM  Yes
2      -0.0000     -0.0057  0.0000   -0.0002 0.0001 10:04:44 PM  Yes
Mean:  -0.0000     -0.0038  0.0001
SD:    0.00000     0.00265  0.0000
%RSD:  69.32%      69.32%   42.18
=====

```

```

=====
Sequence No.: 11                             Autosampler Location: 5
Sample ID: ccv 570-38006_10-a                Date Collected: 12/10/2019 10:05:11 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-38006_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0019      1.87     0.0191   0.0923 0.0191 10:06:17 PM  Yes
2      0.0019      1.88     0.0191   0.0932 0.0192 10:07:02 PM  Yes
Mean:  0.0019      1.88     0.0191
SD:    0.00001     0.006    0.0001
%RSD:  0.30%      0.30%    0.30
=====

```

QC value within limits for Hg 253.7 Recovery = 93.84%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                             Autosampler Location: 1
Sample ID: ccb 570-38006_11-a                Date Collected: 12/10/2019 10:07:30 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-38006_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
=====

```

1 -0.0000 -0.0073 0.0000 0.0001 0.0001 10:08:34 PM Yes
 2 -0.0000 -0.0128 -0.0000 -0.0010 0.0000 10:09:20 PM Yes
 Mean: -0.0000 -0.0100 0.0000
 SD: 0.00000 0.00388 0.0000
 %RSD: 38.74% 38.74% >999.9%

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

Sequence No.: 13 Autosampler Location: 94
 Sample ID: 570-14597-g-1-e ms Date Collected: 12/10/2019 10:09:45 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14597-g-1-e ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.66	0.0473	0.2329	0.0473	10:10:51 PM	Yes
2	0.0047	4.68	0.0475	0.2375	0.0475	10:11:37 PM	Yes
Mean:	0.0047	4.67	0.0474				
SD:	0.00001	0.011	0.0001				
%RSD:	0.23%	0.23%	0.23				

Sequence No.: 14 Autosampler Location: 95
 Sample ID: 570-14597-g-1-f msd Date Collected: 12/10/2019 10:12:04 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14597-g-1-f msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.508	0.0052	0.0252	0.0053	10:13:10 PM	Yes
2	0.0005	0.511	0.0053	0.0257	0.0053	10:13:55 PM	Yes
Mean:	0.0005	0.509	0.0053				
SD:	0.00000	0.0024	0.0000				
%RSD:	0.46%	0.46%	0.45				

Sequence No.: 15 Autosampler Location: 96
 Sample ID: 570-14597-g-2-b Date Collected: 12/10/2019 10:14:22 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14597-g-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0028	0.0001	-0.0002	0.0001	10:15:28 PM	Yes
2	-0.0000	-0.0019	0.0001	0.0001	0.0001	10:16:13 PM	Yes
Mean:	-0.0000	-0.0023	0.0001				
SD:	0.00000	0.00064	0.0000				
%RSD:	27.47%	27.47%	8.30				

Sequence No.: 16 Autosampler Location: 97
 Sample ID: 570-14372-d-1-b Date Collected: 12/10/2019 10:16:40 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-14372-d-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0030	0.0001	-0.0001	0.0001	10:17:46 PM	Yes

2 -0.0000 -0.0046 0.0001 0.0003 0.0001 10:18:32 PM Yes
 Mean: -0.0000 -0.0038 0.0001
 SD: 0.00000 0.00111 0.0000
 %RSD: 29.00% 29.00% 17.68

=====
 Sequence No.: 17 Autosampler Location: 98
 Sample ID: 570-14631-d-1-b Date Collected: 12/10/2019 10:18:59 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14631-d-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0053	0.0000	0.0002	0.0001	10:20:05 PM	Yes
2	-0.0000	-0.0041	0.0001	0.0001	0.0001	10:20:51 PM	Yes
Mean:	-0.0000	-0.0047	0.0001				
SD:	0.00000	0.00084	0.0000				
%RSD:	17.88%	17.88%	15.40				

=====
 Sequence No.: 18 Autosampler Location: 99
 Sample ID: 570-14631-c-2-b Date Collected: 12/10/2019 10:21:18 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14631-c-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0015	0.0001	0.0007	0.0001	10:22:24 PM	Yes
2	-0.0000	-0.0034	0.0001	-0.0002	0.0001	10:23:10 PM	Yes
Mean:	-0.0000	-0.0025	0.0001				
SD:	0.00000	0.00130	0.0000				
%RSD:	52.71%	52.71%	16.94				

=====
 Sequence No.: 19 Autosampler Location: 100
 Sample ID: 570-14631-c-3-b Date Collected: 12/10/2019 10:23:37 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-14631-c-3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0034	0.0001	0.0006	0.0002	10:24:43 PM	Yes
2	-0.0000	-0.0034	0.0001	-0.0007	0.0001	10:25:29 PM	Yes
Mean:	0.0000	0.0000	0.0001				
SD:	0.00000	0.00478	0.0000				
%RSD:	>999.9%	>999.9%	47.19				

=====
 Sequence No.: 20 Autosampler Location: 101
 Sample ID: 1b 570-38004_1-b Date Collected: 12/10/2019 10:25:56 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 1b 570-38004_1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0040	0.0001	-0.0003	0.0001	10:27:02 PM	Yes
2	-0.0000	-0.0016	0.0001	0.0003	0.0001	10:27:48 PM	Yes
Mean:	-0.0000	-0.0028	0.0001				
SD:	0.00000	0.00175	0.0000				

%RSD: 62.68% 62.68% 24.00

```

=====
Sequence No.: 21                               Autosampler Location: 102
Sample ID: lcs 570-38004_2-b                 Date Collected: 12/10/2019 10:28:16 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: lcs 570-38004_2-b             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0045       4.55      0.0461    0.2287    0.0462    10:29:22 PM  Yes
2      0.0046       4.61      0.0468    0.2343    0.0468    10:30:07 PM  Yes
Mean:  0.0046       4.58      0.0465
SD:    0.00005      0.047     0.0005
%RSD:  1.03%      1.03%     1.02

```

```

=====
Sequence No.: 22                               Autosampler Location: 103
Sample ID: lcsd 570-38004_3-b                Date Collected: 12/10/2019 10:30:34 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: lcsd 570-38004_3-b           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0046       4.65      0.0472    0.2367    0.0472    10:31:40 PM  Yes
2      0.0046       4.64      0.0471    0.2374    0.0471    10:32:26 PM  Yes
Mean:  0.0046       4.65      0.0471
SD:    0.00001      0.006     0.0001
%RSD:  0.12%      0.12%     0.12

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-38006_10-a                Date Collected: 12/10/2019 10:32:53 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccv 570-38006_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0019       1.87      0.0191    0.0942    0.0191    10:33:59 PM  Yes
2      0.0019       1.85      0.0189    0.0926    0.0189    10:34:44 PM  Yes
Mean:  0.0019       1.86      0.0190
SD:    0.00001      0.013     0.0001
%RSD:  0.67%      0.67%     0.67

```

QC value within limits for Hg 253.7 Recovery = 93.19%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-38006_11-a                Date Collected: 12/10/2019 10:35:12 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-38006_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      -0.0000       -0.0035   0.0001    0.0003    0.0001    10:36:16 PM  Yes
2      -0.0000       -0.0042   0.0001    -0.0003   0.0001    10:37:01 PM  Yes
Mean:  -0.0000       -0.0038   0.0001
SD:    0.00000      0.00052   0.0000
%RSD:  13.52%     13.52%    8.26

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 104
Sample ID: 570-15057-a-1-e                   Date Collected: 12/10/2019 10:37:27 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15057-a-1-e              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0025   0.0001   0.0009 0.0002 10:38:33 PM Yes
2      0.0000     0.0010   0.0001   0.0003 0.0001 10:39:18 PM Yes
Mean:  0.0000     0.0017   0.0001
SD:    0.00000    0.00103  0.0000
%RSD:  59.63%    59.63%   8.70
-----

```

```

=====
Sequence No.: 26                               Autosampler Location: 105
Sample ID: 570-15057-a-1-f ms                Date Collected: 12/10/2019 10:39:46 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15057-a-1-f ms          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0045     4.53     0.0459   0.2280 0.0459 10:40:51 PM Yes
2      0.0045     4.55     0.0461   0.2333 0.0462 10:41:36 PM Yes
Mean:  0.0045     4.54     0.0460
SD:    0.00002    0.017    0.0002
%RSD:  0.37%    0.37%   0.37
-----

```

```

=====
Sequence No.: 27                               Autosampler Location: 106
Sample ID: 570-15057-a-1-g msd               Date Collected: 12/10/2019 10:42:04 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-15057-a-1-g msd        Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0009     0.895    0.0092   0.0452 0.0092 10:43:10 PM Yes
2      0.0009     0.898    0.0092   0.0448 0.0092 10:43:55 PM Yes
Mean:  0.0009     0.896    0.0092
SD:    0.00000    0.0020   0.0000
%RSD:  0.22%    0.22%   0.22
-----

```

```

=====
Sequence No.: 28                               Autosampler Location: 107
Sample ID: mb 570-37902_1-a                 Date Collected: 12/10/2019 10:44:23 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: mb 570-37902_1-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0038   0.0001   0.0007 0.0002 10:45:29 PM Yes
2      0.0000     0.0069   0.0002   0.0015 0.0002 10:46:14 PM Yes
Mean:  0.0000     0.0053   0.0002
SD:    0.00000    0.00224  0.0000
%RSD:  41.91%    41.91%  14.50
-----

```

```

=====
Sequence No.: 29                               Autosampler Location: 108
Sample ID: lcs 570-37902_2-a                 Date Collected: 12/10/2019 10:46:42 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: lcs 570-37902_2-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0046      4.60     0.0466   0.2332 0.0467 10:47:48 PM Yes
2      0.0046      4.61     0.0468   0.2364 0.0468 10:48:34 PM Yes
Mean:  0.0046      4.60     0.0467
SD:    0.00001     0.009    0.0001
%RSD:  0.20%      0.20%    0.20

```

```

=====
Sequence No.: 30                               Autosampler Location: 109
Sample ID: lcsd 570-37902_3-a              Date Collected: 12/10/2019 10:49:01 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: lcsd 570-37902_3-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0046      4.63     0.0470   0.2381 0.0470 10:50:07 PM Yes
2      0.0047      4.68     0.0474   0.2392 0.0475 10:50:53 PM Yes
Mean:  0.0047      4.65     0.0472
SD:    0.00003     0.030    0.0003
%RSD:  0.65%      0.65%    0.65

```

```

=====
Sequence No.: 31                               Autosampler Location: 110
Sample ID: 570-15048-a-1-f                 Date Collected: 12/10/2019 10:51:20 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-15048-a-1-f           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0001      0.0829   0.0009   0.0049 0.0010 10:52:26 PM Yes
2      0.0001      0.0788   0.0009   0.0042 0.0009 10:53:12 PM Yes
Mean:  0.0001      0.0809   0.0009
SD:    0.00000     0.00294  0.0000
%RSD:  3.63%      3.63%    3.23

```

```

=====
Sequence No.: 32                               Autosampler Location: 111
Sample ID: 570-15048-a-1-g ms             Date Collected: 12/10/2019 10:53:40 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-15048-a-1-g ms         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0044      4.35     0.0442   0.2418 0.0442 10:54:46 PM Yes
2      0.0044      4.39     0.0445   0.2439 0.0445 10:55:31 PM Yes
Mean:  0.0044      4.37     0.0443
SD:    0.00002     0.024    0.0002
%RSD:  0.56%      0.56%    0.56

```

```

=====
Sequence No.: 33                               Autosampler Location: 112
Sample ID: 570-15048-a-1-h msd            Date Collected: 12/10/2019 10:55:59 PM

```

Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-1-h msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0044	4.44	0.0451	0.2487	0.0451	10:57:05 PM	Yes
2	0.0044	4.45	0.0451	0.2490	0.0451	10:57:51 PM	Yes
Mean:	0.0044	4.44	0.0451				
SD:	0.00000	0.005	0.0000				
%RSD:	0.11%	0.11%	0.11				

Sequence No.: 34
Sample ID: 570-15048-a-2-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 113
Date Collected: 12/10/2019 10:58:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-2-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0595	0.0007	0.0042	0.0007	10:59:25 PM	Yes
2	0.0000	0.0424	0.0005	0.0026	0.0006	11:00:10 PM	Yes
Mean:	0.0001	0.0510	0.0006				
SD:	0.00001	0.01205	0.0001				
%RSD:	23.64%	23.64%	19.73				

Sequence No.: 35
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/10/2019 11:00:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.86	0.0189	0.0938	0.0190	11:01:43 PM	Yes
2	0.0019	1.85	0.0188	0.0920	0.0189	11:02:29 PM	Yes
Mean:	0.0019	1.86	0.0189				
SD:	0.00001	0.006	0.0001				
%RSD:	0.35%	0.35%	0.35				

QC value within limits for Hg 253.7 Recovery = 92.80%
All analyte(s) passed QC.

Sequence No.: 36
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/10/2019 11:02:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0001	0.0001	0.0010	0.0001	11:04:00 PM	Yes
2	-0.0000	-0.0071	0.0000	0.0003	0.0001	11:04:46 PM	Yes
Mean:	-0.0000	-0.0035	0.0001				
SD:	0.00001	0.00514	0.0001				
%RSD:	147.26%	147.26%	77.80				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 37

Autosampler Location: 114

Sample ID: 570-15048-a-3-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/10/2019 11:05:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-3-d

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 38

Autosampler Location: 115

Sample ID: 570-15048-a-4-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/10/2019 11:07:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-4-d

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 39

Autosampler Location: 116

Sample ID: 570-15048-a-5-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/10/2019 11:09:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-5-d

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 40

Autosampler Location: 117

Sample ID: 570-15048-a-6-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 12/10/2019 11:12:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-6-d

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 41

Autosampler Location: 118

Sample ID: 570-15048-a-7-d
Analyst: 1174 HG-8
Initial Sample Wt:

Date Collected: 12/10/2019 11:14:29 PM
Data Type: Original
Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-7-d

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 42
Sample ID: 570-15048-a-8-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 119
Date Collected: 12/10/2019 11:16:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-8-d

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 43
Sample ID: 570-15048-a-9-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 120
Date Collected: 12/10/2019 11:19:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-9-d

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 44
Sample ID: 570-15048-a-10-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 121
Date Collected: 12/10/2019 11:21:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-10-d

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 45
Sample ID: 570-15048-a-11-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 122
Date Collected: 12/10/2019 11:23:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15048-a-11-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0948	0.0011	0.0062	0.0011	11:24:52 PM	Yes
2	0.0001	0.0925	0.0010	0.0056	0.0011	11:25:38 PM	Yes
Mean:	0.0001	0.0936	0.0011				
SD:	0.00000	0.00167	0.0000				
%RSD:	1.78%	1.78%	1.61				

=====

Sequence No.: 46 Autosampler Location: 123
 Sample ID: 570-15048-a-12-f Date Collected: 12/10/2019 11:26:06 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-15048-a-12-f Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0435	0.0005	0.0034	0.0006	11:27:11 PM	Yes
2	0.0000	0.0374	0.0005	0.0027	0.0005	11:27:57 PM	Yes
Mean:	0.0000	0.0404	0.0005				
SD:	0.00000	0.00431	0.0000				
%RSD:	10.66%	10.66%	8.53				

=====

Sequence No.: 47 Autosampler Location: 5
 Sample ID: ccv 570-38006_10-a Date Collected: 12/10/2019 11:28:25 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.85	0.0188	0.0912	0.0188	11:29:31 PM	Yes
2	0.0019	1.87	0.0190	0.0919	0.0191	11:30:17 PM	Yes
Mean:	0.0019	1.86	0.0189				
SD:	0.00001	0.015	0.0001				
%RSD:	0.80%	0.80%	0.79				

QC value within limits for Hg 253.7 Recovery = 92.95%
 All analyte(s) passed QC.

=====

Sequence No.: 48 Autosampler Location: 1
 Sample ID: ccb 570-38006_11-a Date Collected: 12/10/2019 11:30:44 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0009	0.0001	0.0010	0.0001	11:31:48 PM	Yes
2	-0.0000	-0.0084	0.0000	-0.0005	0.0000	11:32:34 PM	Yes
Mean:	-0.0000	-0.0047	0.0001				
SD:	0.00001	0.00534	0.0001				
%RSD:	114.35%	114.35%	98.32				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====

Sequence No.: 49 Autosampler Location: 124
 Sample ID: 570-15048-a-13-d Date Collected: 12/10/2019 11:32:59 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-15048-a-13-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0630	0.0007	0.0039	0.0008	11:34:06 PM	Yes
2	0.0001	0.0664	0.0008	0.0043	0.0008	11:34:52 PM	Yes
Mean:	0.0001	0.0647	0.0008				
SD:	0.00000	0.00241	0.0000				
%RSD:	3.73%	3.73%	3.22				

Sequence No.: 50

Autosampler Location: 125

Sample ID: 570-15048-a-14-d

Date Collected: 12/10/2019 11:35:19 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15048-a-14-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0282	0.0004	0.0019	0.0004	11:36:26 PM	Yes
2	0.0000	0.0289	0.0004	0.0022	0.0004	11:37:12 PM	Yes
Mean:	0.0000	0.0285	0.0004				
SD:	0.00000	0.00048	0.0000				
%RSD:	1.68%	1.68%	1.24				

Sequence No.: 51

Autosampler Location: 126

Sample ID: 570-15048-a-15-d

Date Collected: 12/10/2019 11:37:39 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15048-a-15-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0471	0.0006	0.0029	0.0006	11:38:46 PM	Yes
2	0.0000	0.0485	0.0006	0.0027	0.0006	11:39:31 PM	Yes
Mean:	0.0000	0.0478	0.0006				
SD:	0.00000	0.00099	0.0000				
%RSD:	2.06%	2.06%	1.70				

Sequence No.: 52

Autosampler Location: 127

Sample ID: 570-15048-a-16-d

Date Collected: 12/10/2019 11:39:58 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15048-a-16-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0142	0.0002	0.0017	0.0003	11:41:05 PM	Yes
2	0.0000	0.0098	0.0002	0.0011	0.0002	11:41:50 PM	Yes
Mean:	0.0000	0.0120	0.0002				
SD:	0.00000	0.00309	0.0000				
%RSD:	25.79%	25.79%	13.99				

Sequence No.: 53

Autosampler Location: 128

Sample ID: 570-15068-a-2-c

Date Collected: 12/10/2019 11:42:18 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15068-a-2-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.126	0.0014	0.0075	0.0014	11:43:24 PM	Yes
2	0.0001	0.126	0.0014	0.0067	0.0014	11:44:10 PM	Yes
Mean:	0.0001	0.126	0.0014				
SD:	0.00000	0.0004	0.0000				
%RSD:	0.33%	0.33%	0.30				

Sequence No.: 54
Sample ID: 570-15053-c-1-i
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 129
Date Collected: 12/10/2019 11:44:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15053-c-1-i Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.229	0.0024	0.0128	0.0024	11:45:44 PM	Yes
2	0.0002	0.232	0.0024	0.0128	0.0025	11:46:29 PM	Yes
Mean:	0.0002	0.230	0.0024				
SD:	0.00000	0.0019	0.0000				
%RSD:	0.83%	0.83%	0.79				

Sequence No.: 55
Sample ID: 570-15072-a-1-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 130
Date Collected: 12/10/2019 11:46:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-15072-a-1-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0071	7.06	0.0716	0.4012	0.0716	11:48:03 PM	Yes
2	0.0068	6.78	0.0687	0.3835	0.0688	11:48:49 PM	Yes
Mean:	0.0069	6.92	0.0702				
SD:	0.00020	0.201	0.0020				
%RSD:	2.90%	2.90%	2.90				

Sequence No.: 56
Sample ID: ccv 570-38006_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 12/10/2019 11:49:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-38006_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.83	0.0186	0.0921	0.0186	11:50:22 PM	Yes
2	0.0018	1.83	0.0186	0.0919	0.0186	11:51:08 PM	Yes
Mean:	0.0018	1.83	0.0186				
SD:	0.00000	0.000	0.0000				
%RSD:	0.01%	0.01%	0.01				

QC value within limits for Hg 253.7 Recovery = 91.45%
All analyte(s) passed QC.

Sequence No.: 57
Sample ID: ccb 570-38006_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 12/10/2019 11:51:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-38006_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	-0.0000	-0.0116	-0.0000	-0.0008	0.0000	11:52:39 PM	Yes
2	-0.0000	-0.0089	0.0000	0.0001	0.0000	11:53:25 PM	Yes
Mean:	-0.0000	-0.0103	-0.0000				
SD:	0.00000	0.00189	0.0000				
%RSD:	18.40%	18.40%	>999.9%				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience _____ Job Number: 570-14631-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID	Lab Sample ID
A2BMP0007S019	570-14631-1
A2BMP0012S008	570-14631-2
EVBMP0003S030	570-14631-3

Comments:

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: A2BMP0007S019

Lab Sample ID: 570-14631-1

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:52

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Suspended Solids	4.60	1.00	0.829	mg/L			1	SM 2540D

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: A2BMP0012S008

Lab Sample ID: 570-14631-2

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:40

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Turbidity	5.73	0.0500	0.0439	NTU			1	SM 2130B
	Total Suspended Solids	4.00	1.00	0.829	mg/L			1	SM 2540D

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: EV BMP0003S030

Lab Sample ID: 570-14631-3

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:32

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Suspended Solids	63.0	2.50	2.07	mg/L			1	SM 2540D

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14631-1
SDG No.: _____
Analyst: KZ40 Batch Start Date: 12/04/2019
Reporting Units: NTU Analytical Batch No.: 37098

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
4	CCV	20:20	Turbidity	98.60	100	99	95-105		WC_TUR_STD2_00057
7	CCV	20:20	Turbidity	98.20	100	98	95-105		WC_TUR_STD2_00057

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 37548 Date: 12/07/2019 10:00							
SM 2540D	MB 570-37548/1	Total Suspended Solids	ND		mg/L	1.00	1

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 37098 Date: 12/04/2019 20:20								
SM 2130B	A2BMP0012S008	570-14631-2	Turbidity	5.73	NTU			
SM 2130B	A2BMP0012S008	570-14631-2 DU	Turbidity	5.560	NTU	3	25	
Batch ID: 37548 Date: 12/07/2019 10:00								
SM 2540D		570-14630-B-1	Total Suspended Solids	21.8	mg/L			
SM 2540D		570-14630-B-1 DU	Total Suspended Solids	22.25	mg/L	2	10	
Batch ID: 37548 Date: 12/07/2019 10:00								
SM 2540D		570-14533-C-2	Total Suspended Solids	59.8	mg/L			
SM 2540D		570-14533-C-2 DU	Total Suspended Solids	58.00	mg/L	3	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 37548		Date: 12/07/2019 10:01									
						LCS Source: WC_SSC_STD_00001					
SM 2540D	LCS 570-37548/2	Total Suspended Solids	101.0		mg/L	100	101	85-115	0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE DUPLICATE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 37548		Date: 12/07/2019 10:00									
						LCSD Source: WC_SSC_STD_00001					
SM 2540D	LCSD 570-37548/3	Total Suspended Solids	101.0		mg/L	100	101	85-115	0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LCS-CERTIFIED REFERENCE MATERIAL
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 37098 Date: 12/04/2019 20:20											
LCS Source: WC_TUR_STD_00009											
SM	LCSSRM	Turbidity	998.0		NTU	1000	99.8	99.0-10			
2130B	570-37098/1							1.0			
Batch ID: 37098 Date: 12/04/2019 20:20											
LCS Source: WC_TUR_STD_00008											
SM	LCSSRM	Turbidity	9.920		NTU	10.0	99.2	99.0-10			
2130B	570-37098/2							1.0			
Batch ID: 37098 Date: 12/04/2019 20:20											
LCS Source: WC_TUR_STD_00010											
SM	LCSSRM	Turbidity	ND		NTU	0.0200	200.0	0.0-200			
2130B	570-37098/3							.0			

Calculations are performed before rounding to avoid round-off errors in calculated results.

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-14631-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2130B MDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	RL (NTU)	MDL (NTU)
Turbidity		0.05	0.04392

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-14631-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2130B XMDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	XRL (NTU)	XMDL (NTU)
Turbidity		0.05	0.04391639

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience

Job Number: 570-14631-1

SDG Number: _____

Matrix: Water

Instrument ID: NOEQUIP

Method: SM 2540D

MDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Suspended Solids		1	0.82873

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-14631-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2540D XMDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Suspended Solids		1	0.82873

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Instrument ID: NOEQUIP Analysis Method: SM 2130B
 Start Date: 12/04/2019 20:20 End Date: 12/04/2019 20:20

Lab Sample Id	D/F	T y p e	Time	T u r b	Analytes																			
LCSSRM 570-37098/1	1	T	20:20	X																				
LCSSRM 570-37098/2	1	T	20:20	X																				
LCSSRM 570-37098/3	1	T	20:20	X																				
CCV 570-37098/4	1		20:20	X																				
570-14631-2	1	T	20:20	X																				
570-14631-2 DU	1	T	20:20	X																				
CCV 570-37098/7	1		20:20	X																				

Prep Types: _____
 T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-14631-1
 SDG No.: _____
 Instrument ID: NOEQUIP Analysis Method: SM 2540D
 Start Date: 12/07/2019 10:00 End Date: 12/07/2019 10:01

Lab Sample Id	D/F	Type	Time	T S S	Analytes																			
MB 570-37548/1	1	T	10:00	X																				
LCSD 570-37548/3	1	T	10:00	X																				
ZZZZZZ			10:00																					
570-14630-B-1 DU	1	T	10:00	X																				
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
570-14631-3	1	T	10:00	X																				
570-14631-2	1	T	10:00	X																				
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
570-14533-C-2 DU	1	T	10:00	X																				
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
570-14631-1	1	T	10:00	X																				
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
ZZZZZZ			10:00																					
LCS 570-37548/2	1	T	10:01	X																				

Prep Types: _____
 T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 37098 Batch Start Date: 12/04/19 20:20 Batch Analyst: DeVera, Christopher A

Batch Method: SM 2130B Batch End Date: 12/04/19 20:33

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	WC_TUR_STD 00008	WC_TUR_STD 00009	WC_TUR_STD 00010	WC_TUR_STD2 00057	
LCSSRM 570-37098/1		SM 2130B		30 mL		30 mL			
LCSSRM 570-37098/2		SM 2130B		30 mL	30 mL				
LCSSRM 570-37098/3		SM 2130B		30 mL			30 mL		
CCV 570-37098/4		SM 2130B		30 mL				30 mL	
570-14631-C-2	A2BMP0012S008	SM 2130B	T	30 mL					
570-14631-C-2 DU	A2BMP0012S008	SM 2130B	T	30 mL					
CCV 570-37098/7		SM 2130B		30 mL				30 mL	

Batch Notes	
Calibration Date	10-01-2019
Instrument ID	TUR04
Pipette/Syringe/Dispenser ID	P-121

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 37548 Batch Start Date: 12/07/19 10:00 Batch Analyst: Ali, Farhanah M

Batch Method: SM 2540D Batch End Date: 12/07/19 15:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	CrucibleID	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 570-37548/1		SM 2540D		B0770509	0.4172 g	1000 mL	0.4172 g	0.4173 g	0 g
LCS 570-37548/2		SM 2540D		B0770510	0.4187 g	100 mL	0.4288 g	0.4288 g	0 g
LCSD 570-37548/3		SM 2540D		B0770511	0.4153 g	100 mL	0.4253 g	0.4254 g	0 g
570-14630-B-1 DU		SM 2540D	T	B0770513	0.4147 g	400 mL	0.4237 g	0.4236 g	0 g
570-14631-C-3	EV BMP0003S030	SM 2540D	T	B0770518	0.4155 g	400 mL	0.4409 g	0.4407 g	0 g
570-14631-D-2	A2BMP0012S008	SM 2540D	T	B0770519	0.4155 g	1000 mL	0.4196 g	0.4195 g	0 g
570-14533-C-2 DU		SM 2540D	T	B0770524	0.4195 g	400 mL	0.4428 g	0.4427 g	0 g
570-14631-C-1	A2BMP0007S019	SM 2540D	T	B0770528	0.4175 g	1000 mL	0.4222 g	0.4221 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	Residue	Residue2	FinalAmount	ResDishWt	DishWeight
MB 570-37548/1		SM 2540D		PASS <0.5mg	0 g	0.0001 g	1000 mL	0.4173 g	0.4172 g
LCS 570-37548/2		SM 2540D		PASS <0.5mg	0.0101 g	0.0101 g	1000 mL	0.4288 g	0.4187 g
LCSD 570-37548/3		SM 2540D		PASS <0.5mg	0.01 g	0.0101 g	1000 mL	0.4254 g	0.4153 g
570-14630-B-1 DU		SM 2540D	T	PASS <0.5mg	0.009 g	0.0089 g	1000 mL	0.4236 g	0.4147 g
570-14631-C-3	EV BMP0003S030	SM 2540D	T	PASS <0.5mg	0.0254 g	0.0252 g	1000 mL	0.4407 g	0.4155 g
570-14631-D-2	A2BMP0012S008	SM 2540D	T	PASS <0.5mg	0.0041 g	0.004 g	1000 mL	0.4195 g	0.4155 g
570-14533-C-2 DU		SM 2540D	T	PASS <0.5mg	0.0233 g	0.0232 g	1000 mL	0.4427 g	0.4195 g
570-14631-C-1	A2BMP0007S019	SM 2540D	T	PASS <0.5mg	0.0047 g	0.0046 g	1000 mL	0.4221 g	0.4175 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC_SSC_STD 00001					
MB 570-37548/1		SM 2540D							
LCS 570-37548/2		SM 2540D		100 mL					
LCSD 570-37548/3		SM 2540D		100 mL					
570-14630-B-1 DU		SM 2540D	T						
570-14631-C-3	EV BMP0003S030	SM 2540D	T						
570-14631-D-2	A2BMP0012S008	SM 2540D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Batch Number: 37548 Batch Start Date: 12/07/19 10:00 Batch Analyst: Ali, Farhanah M

Batch Method: SM 2540D Batch End Date: 12/07/19 15:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC_SSC_STD 00001				
570-14533-C-2 DU		SM 2540D	T					
570-14631-C-1	A2BMP0007S019	SM 2540D	T					

Batch Notes	
Balance ID	87
Date/Time - In - CW (WT2)	12/07/2019 13:00
Date/Time - Out - CW (WT2)	12/07/2019 14:00
Temperature - Start - CW (WT2) - Correct	104 Celsius
Temperature - End - CW (WT2) - Correct	104 Celsius
Temperature - Start-CW(WT2) -Uncorrected	104 Celsius
Temperature - End-CW(WT2) -Uncorrected	104 Celsius
Temperature - Start - Corrected	104 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	12/07/2019 11:00
Date/Time - Out	12/07/2019 12:00
Filter ID	37634
Nominal Amount Used	1000 mL
Oven ID	io 07
Perform Calculation (0=No, 1=Yes)	1
Thermometer ID	tss io 7a
Temperature - Start - Uncorrected	104 Celsius
Temperature - End - Uncorrected	104 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
GEOTECHNICAL

Lab Name: Eurofins Calscience _____ Job Number: 570-14631-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID	Lab Sample ID
A2BMP0007S019	570-14631-1
A2BMP0012S008	570-14631-2
EVBMP0003S030	570-14631-3

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: A2BMP0007S019

Lab Sample ID: 570-14631-1

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:52

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	ND	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	22.48	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	47.69	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	11.24	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	11.24	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	18.59	0.01	0.01	%			1	D4464

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: A2BMP0012S008

Lab Sample ID: 570-14631-2

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:40

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	ND	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	30.79	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	23.99	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	16.64	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	16.64	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	28.58	0.01	0.01	%			1	D4464

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: EV BMP0003S030

Lab Sample ID: 570-14631-3

Lab Name: Eurofins Calscience

Job No.: 570-14631-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/04/2019 07:32

Reporting Basis: WET

Date Received: 12/04/2019 16:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	1.44	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	35.99	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	6.84	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	29.27	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	30.71	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	26.46	0.01	0.01	%			1	D4464

6-IN
DUPLICATE
GEOTECHNICAL

Lab Name: Eurofins Calscience Job No.: 570-14631-1

SDG No.: _____

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 37903 Date: 12/09/2019 20:45								
D4464	EVBMP0003S030	570-14631-3	Clay(less than 0.00391 mm)	1.44	%			
D4464	EVBMP0003S030	570-14631-3 DU	Clay(less than 0.00391 mm)	2.66	%	60	20	F3
D4464	EVBMP0003S030	570-14631-3	Coarse Sand (0.5mm to 1mm)	ND	%			
D4464	EVBMP0003S030	570-14631-3 DU	Coarse Sand (0.5mm to 1mm)	ND	%	NC	20	
D4464	EVBMP0003S030	570-14631-3	Fine Sand (0.125 to 0.25mm)	35.99	%			
D4464	EVBMP0003S030	570-14631-3 DU	Fine Sand (0.125 to 0.25mm)	20.58	%	54	20	F3
D4464	EVBMP0003S030	570-14631-3	Gravel (greater than 2 mm)	ND	%			
D4464	EVBMP0003S030	570-14631-3 DU	Gravel (greater than 2 mm)	ND	%	NC	20	
D4464	EVBMP0003S030	570-14631-3	Medium Sand (0.25 to 0.5 mm)	6.84	%			
D4464	EVBMP0003S030	570-14631-3 DU	Medium Sand (0.25 to 0.5 mm)	5.71	%	18	20	
D4464	EVBMP0003S030	570-14631-3	Silt (0.00391 to 0.0625mm)	29.27	%			
D4464	EVBMP0003S030	570-14631-3 DU	Silt (0.00391 to 0.0625mm)	33.77	%	14	20	
D4464	EVBMP0003S030	570-14631-3	Total Silt and Clay (0 to 0.0626mm)	30.71	%			
D4464	EVBMP0003S030	570-14631-3 DU	Total Silt and Clay (0 to 0.0626mm)	36.43	%	17	20	
D4464	EVBMP0003S030	570-14631-3	Very Coarse Sand (1 to 2mm)	ND	%			
D4464	EVBMP0003S030	570-14631-3 DU	Very Coarse Sand (1 to 2mm)	ND	%	NC	20	
D4464	EVBMP0003S030	570-14631-3	Very Fine Sand (0.0625 to 0.125 mm)	26.46	%			
D4464	EVBMP0003S030	570-14631-3 DU	Very Fine Sand (0.0625 to 0.125 mm)	37.28	%	34	20	F3

Calculations are performed before rounding to avoid round-off errors in calculated results.

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

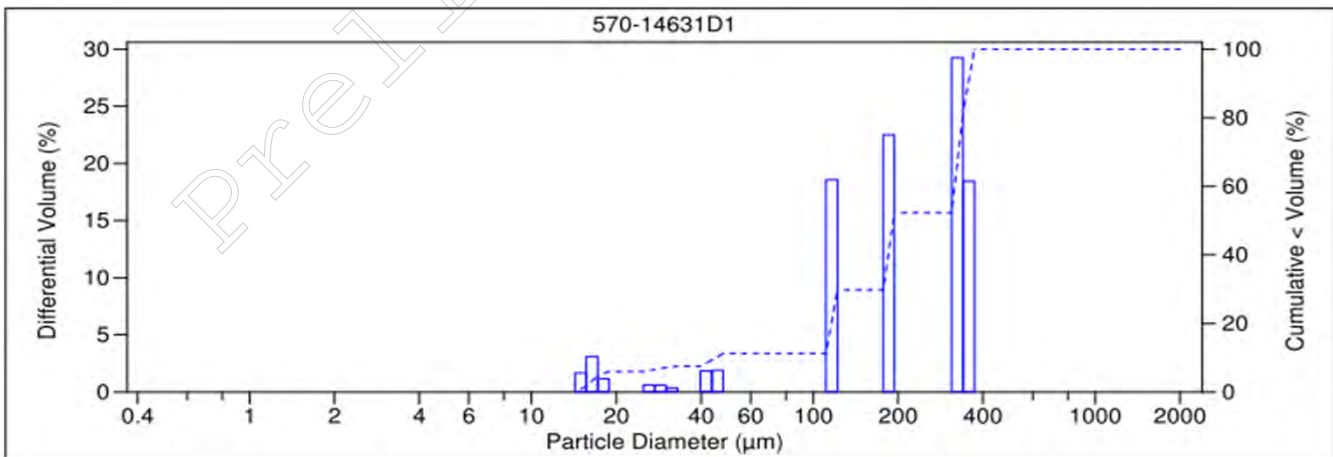
Date Sampled: 12/04/19
 Date Received: 12/04/19
 Work Order No: 570-14631
 Date Analyzed: 12/09/19
 Method: ASTM D4464M

Project: SSFL

Page 1 of 4

Sample ID	Depth ft	Description	Mean Grain Size mm
A2BMP0007S019		Fine Sand	0.227

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	47.69	22.48	18.59	11.24	0.00	11.24



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

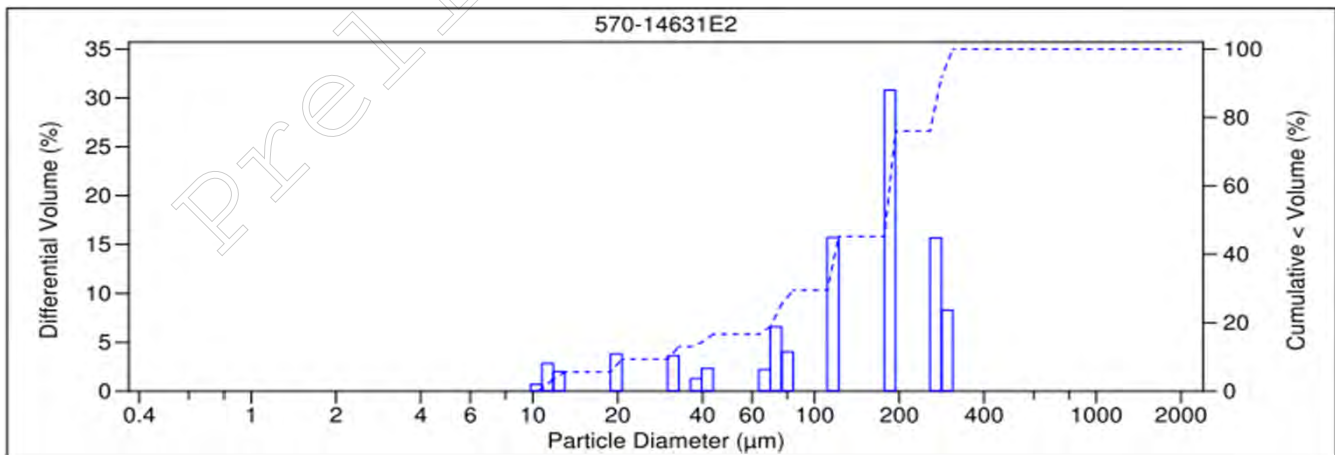
Date Sampled: 12/04/19
 Date Received: 12/04/19
 Work Order No: 570-14631
 Date Analyzed: 12/09/19
 Method: ASTM D4464M

Project: SSFL

Page 2 of 4

Sample ID	Depth ft	Description	Mean Grain Size mm
A2BMP0012S008		Fine Sand	0.156

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	23.99	30.79	28.58	16.64	0.00	16.64



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

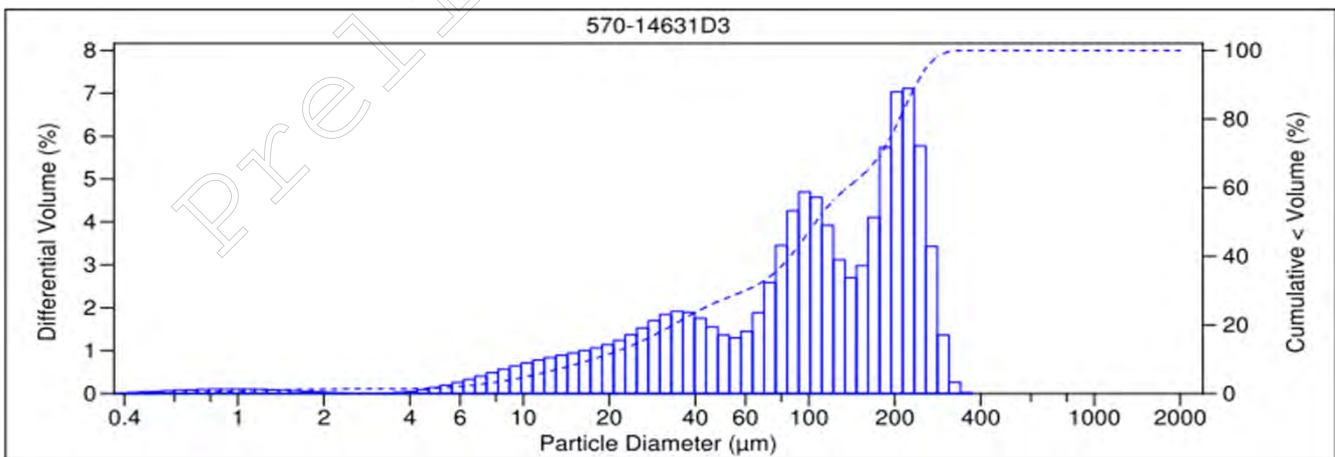
Date Sampled: 12/04/19
 Date Received: 12/04/19
 Work Order No: 570-14631
 Date Analyzed: 12/09/19
 Method: ASTM D4464M

Project: SSFL

Page 3 of 4

Sample ID	Depth ft	Description	Mean Grain Size mm
EVBMP0003S030		Very Fine Sand	0.121

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	6.84	35.99	26.46	29.27	1.44	30.71



V.3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Jacobs Engineering Group, Inc.

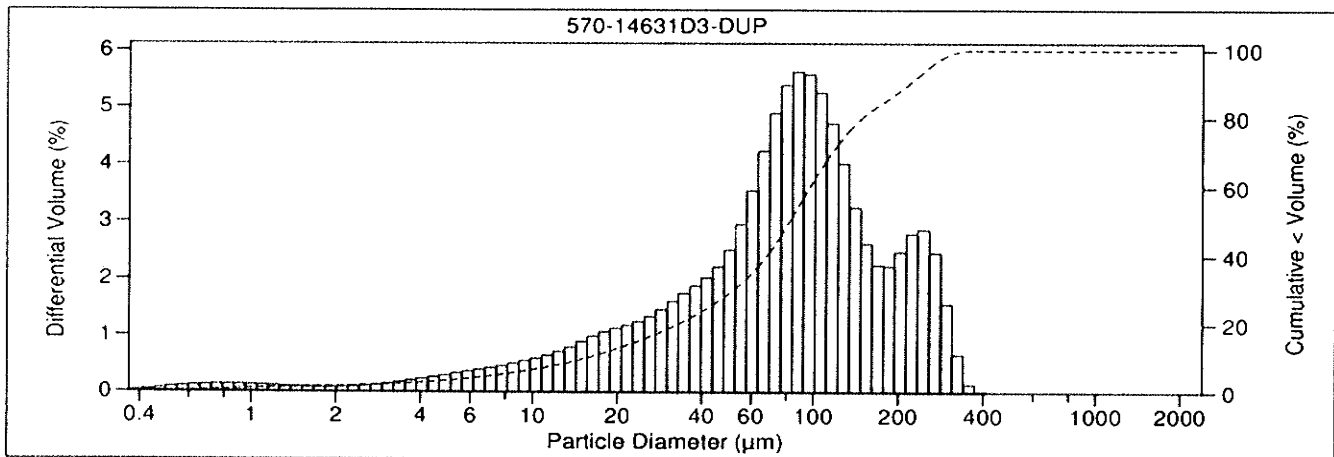
Date Sampled: 12/04/19
 Date Received: 12/04/19
 Work Order No: 570-14631
 Date Analyzed: 12/09/19
 Method: ASTM D4464M

Project: SSFL

Page 4 of 4

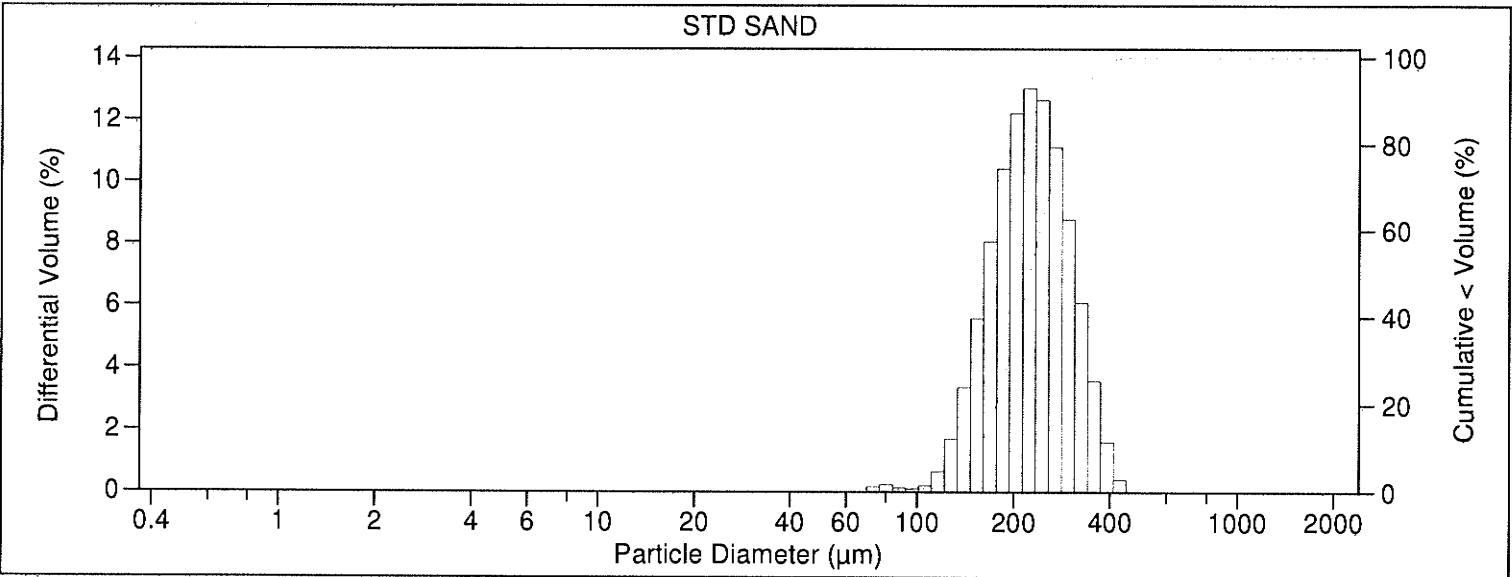
Sample ID	Depth ft	Description	Mean Grain Size mm
EVBMP00035030		Very Fine Sand	0.097

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	5.71	20.58	37.28	33.77	2.66	36.43



V3.0

File name:	C:\LS13320\STD SAND_ 9 Dec 2019_18.33.26.\$ls		
	STD SAND_ 9 Dec 2019_18.33.26.\$ls		
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	1106		
Run number:	1		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	316865 , BATCH#028A		
Optical model:	Fraunhofer.rf780d		
Residual:	0.68%		
LS 13 320	Aqueous Liquid Module		
Start time:	18:32 9 Dec 2019	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

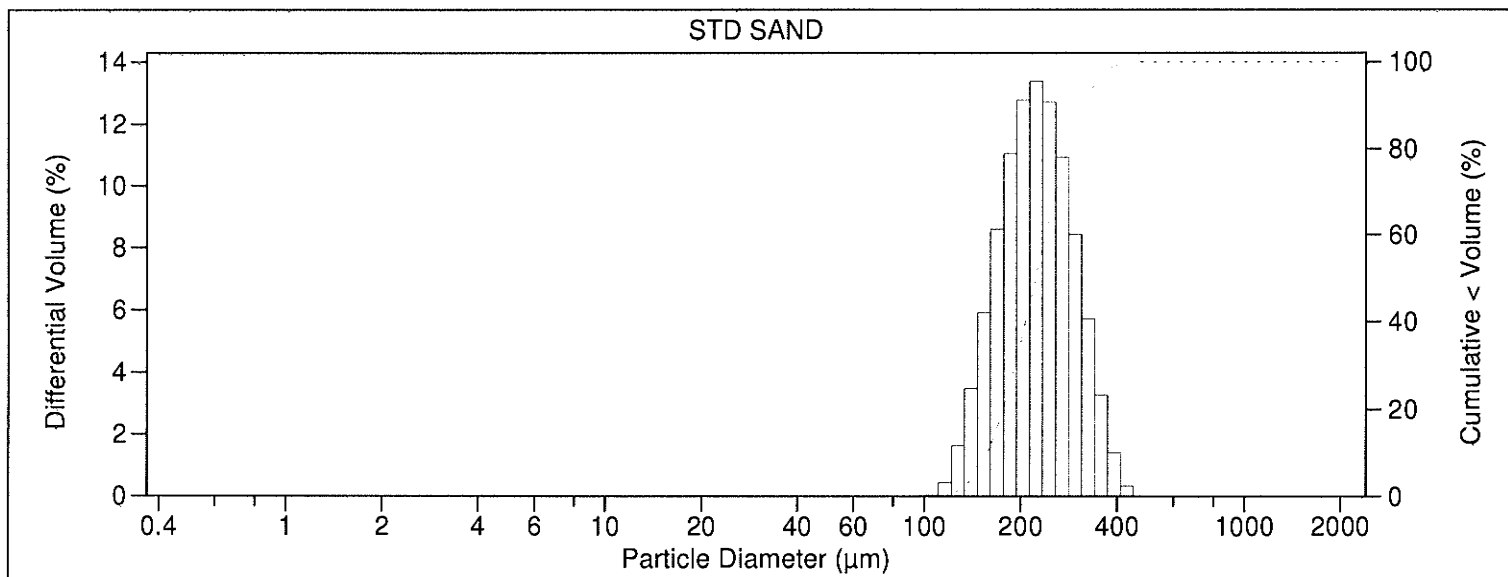


Volume Statistics (Arithmetic)	STD SAND_ 9 Dec 2019_18.33.26.\$ls		
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	62.46 µm
Mean:	231.1 µm	Variance:	3901 µm ²
Median:	224.8 µm	Skewness:	0.459 Right skewed
Mean/Median ratio:	1.028	Kurtosis:	-0.021 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	155.7 µm	d ₅₀ :	224.8 µm
		d ₉₀ :	317.9 µm
Folk and Ward Statistics (Phi)			
Mean:	2.16	Median:	2.15
Skewness:	0.03	Deviation:	0.40
		Kurtosis:	0.96
<5%	<16%	<25%	<40%
140.7 µm	168.8 µm	185.0 µm	208.9 µm
<50%	<75%	<84%	<95%
224.8 µm	271.7 µm	296.0 µm	345.5 µm

Particle Diameter µm	STD SAND_ 9 Dec 2019 _20.54.01 .\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0.90
125	64.2
250	34.9
500	0
1000	0
2000	0

STD SAND_ 9 Dec 2019_20.54.01.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0.030		
1.669	0	111.0	0.44		
1.832	0	121.8	1.61		
2.011	0	133.7	3.39		
2.208	0	146.8	5.75		
2.423	0	161.2	8.37		
2.660	0	176.9	10.8		
2.920	0	194.2	12.6		
3.206	0	213.2	13.3		
3.519	0	234.1	12.7		
3.863	0	256.9	11.0		
4.241	0	282.1	8.61		
4.656	0	309.6	5.93		
5.111	0	339.9	3.48		
5.611	0	373.1	1.59		
6.159	0	409.6	0.40		
6.761	0	449.7	0.025		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name: C:\LS13320\STD SAND_ 9 Dec 2019_20.29.02.\$ls
 STD SAND_ 9 Dec 2019_20.29.02.\$ls
 File ID: STD SAND
 Sample ID: STD SAND
 Operator: 1106
 Run number: 8
 Control Sample
 Comment 1: ASTM D4464M , LPSA 1
 Comment 2: 316865 , BATCH#028A
 Optical model: Fraunhofer.rf780d
 Residual: 3.63%
 LS 13 320 Aqueous Liquid Module
 Start time: 20:27 9 Dec 2019 Run length: 60 seconds
 Pump speed: 49
 Obscuration: 9%
 Fluid: Water
 Software: 6.01 Firmware: 4.00


Volume Statistics (Arithmetic) STD SAND_ 9 Dec 2019_20.29.02.\$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%	S.D.:	59.86 µm
Mean:	229.9 µm	Variance:	3583 µm ²
Median:	222.8 µm	Skewness:	0.580 Right skewed
Mean/Median ratio:	1.032	Kurtosis:	-0.0070 Platykurtic
Mode:	223.4 µm		

d ₁₀ :	157.6 µm	d ₅₀ :	222.8 µm	d ₉₀ :	313.4 µm
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Folk and Ward Statistics (Phi)

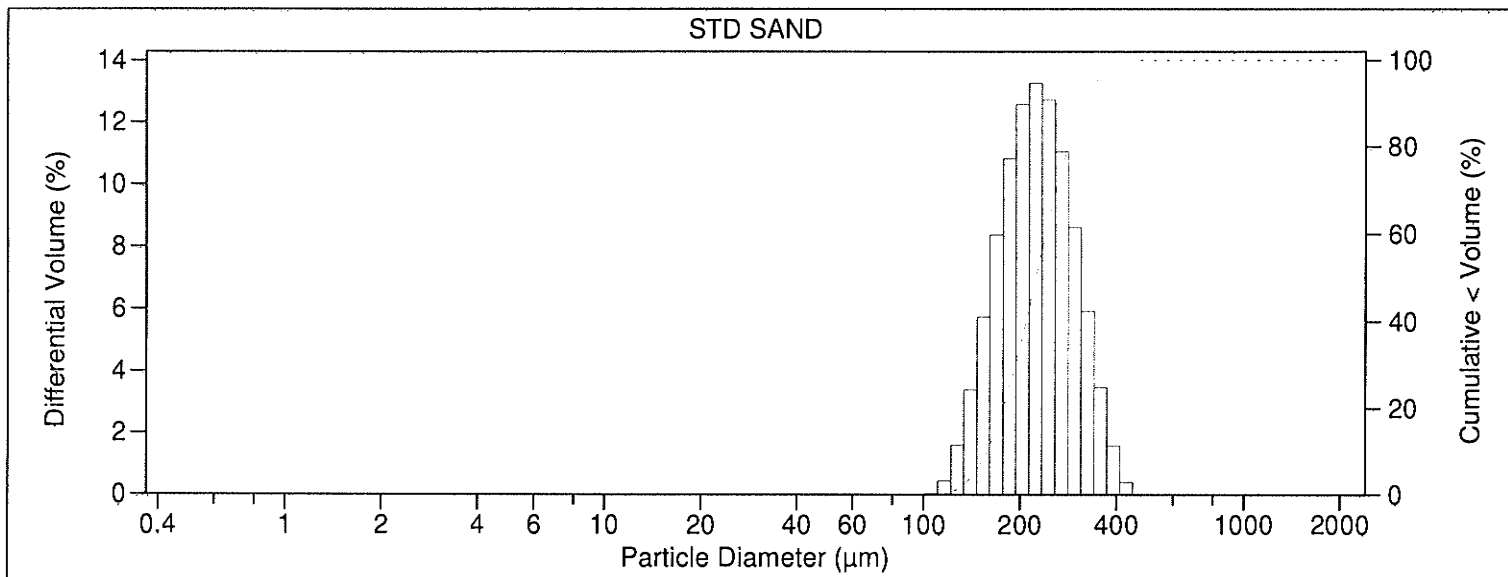
Mean:	2.17	Median:	2.17	Deviation:	0.38
Skewness:	0.01	Kurtosis:	0.94		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
144.6 µm	169.5 µm	184.7 µm	207.5 µm	222.8 µm	268.5 µm	292.3 µm	340.1 µm

Particle Diameter µm	STD SAND_ 9 Dec 2019 _20.29.02 .\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0.91
125	65.2
250	33.9
500	0
1000	0
2000	0

STD SAND_ 9 Dec 2019_20.29.02.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0.030		
1.669	0	111.0	0.45		
1.832	0	121.8	1.64		
2.011	0	133.7	3.48		
2.208	0	146.8	5.90		
2.423	0	161.2	8.58		
2.660	0	176.9	11.0		
2.920	0	194.2	12.8		
3.206	0	213.2	13.4		
3.519	0	234.1	12.7		
3.863	0	256.9	10.9		
4.241	0	282.1	8.41		
4.656	0	309.6	5.69		
5.111	0	339.9	3.26		
5.611	0	373.1	1.41		
6.159	0	409.6	0.33		
6.761	0	449.7	0.018		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name: C:\LS13320\STD SAND_ 9 Dec 2019_20.54.01.\$ls
 STD SAND_ 9 Dec 2019_20.54.01.\$ls
 File ID: STD SAND
 Sample ID: STD SAND
 Operator: 1106
 Run number: 10
 Control Sample
 Comment 1: ASTM D4464M , LPSA 1
 Comment 2: 316865 , BATCH#028A
 Optical model: Fraunhofer.rf780d
 Residual: 3.46%
 LS 13 320 Aqueous Liquid Module
 Start time: 20:52 9 Dec 2019 Run length: 60 seconds
 Pump speed: 49
 Obscuration: 9%
 Fluid: Water
 Software: 6.01 Firmware: 4.00


Volume Statistics (Arithmetic) STD SAND_ 9 Dec 2019_20.54.01.\$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%	S.D.:	60.79 µm
Mean:	231.6 µm	Variance:	3695 µm ²
Median:	224.3 µm	Skewness:	0.579 Right skewed
Mean/Median ratio:	1.032	Kurtosis:	-0.015 Platykurtic
Mode:	223.4 µm		

d ₁₀ :	158.1 µm	d ₅₀ :	224.3 µm	d ₉₀ :	316.9 µm
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Folk and Ward Statistics (Phi)

Mean:	2.16	Median:	2.16	Deviation:	0.39
Skewness:	0.01	Kurtosis:	0.94		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
145.0 µm	170.2 µm	185.6 µm	208.7 µm	224.3 µm	270.8 µm	295.0 µm	344.7 µm

Particle Diameter µm	STD SAND_ 9 Dec 2019 _18.33.26 .\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	1.96
125	62.7
250	35.4
500	0
1000	0
2000	0

STD SAND_ 9 Dec 2019_18.33.26.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.017		
1.047	0	69.62	0.16		
1.149	0	76.43	0.23		
1.261	0	83.90	0.13		
1.385	0	92.10	0.098		
1.520	0	101.1	0.20		
1.669	0	111.0	0.66		
1.832	0	121.8	1.71		
2.011	0	133.7	3.36		
2.208	0	146.8	5.56		
2.423	0	161.2	8.04		
2.660	0	176.9	10.4		
2.920	0	194.2	12.2		
3.206	0	213.2	13.0		
3.519	0	234.1	12.6		
3.863	0	256.9	11.1		
4.241	0	282.1	8.77		
4.656	0	309.6	6.07		
5.111	0	339.9	3.56		
5.611	0	373.1	1.61		
6.159	0	409.6	0.40		
6.761	0	449.7	0.024		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

Shipping and Receiving Documents

Project Name SSFL Location Santa Susana Field Lab
 Project CH661 PO 100067108373
 Project Number 692670.61.SW Task Order 661
 Project Manager Randy Dean
 Sample Manager Jamie Beckett 530 570 5084
 Turnaround Time 10 Days
 PO Number 100067108373

Sample ID	Sample Date/Time	Type	Matrix	Preservative	# Containers	Field Filtered
A2BMP0007S019	04-Dec-19 7:52	N	Water			
Dioxins		4°C			2	<input checked="" type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg		4°C			1	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg		HNO3, 4°C			2	<input type="checkbox"/>
Particle Size Distribution TSS		4°C			2	<input checked="" type="checkbox"/>
Total Containers: 7						
A2BMP0012S008	04-Dec-19 7:40	N	Water			
Dioxins		4°C			2	<input checked="" type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg		4°C			1	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg		HNO3, 4°C			2	<input type="checkbox"/>
Particle Size Distribution TSS		4°C			2	<input checked="" type="checkbox"/>
Turbidity		4°C			1	<input checked="" type="checkbox"/>
Total Containers: 8						



570-14631 Chain of Custody

MS = Matrix Spike SD = Matrix Spike Duplicate

Signatures Date/Time
 Sampled by *Ben Westervelt* 12/4/19
 Relinquished by *Randy Dean* 12/4/19
 Received by *Randy Dean* 12-4-19
 Relinquished by *Randy Dean* 12-4-19
 Received by *Randy Dean* 12/4/19

Shipping Details
 Shipment Method: FedEx
 Airbill No: 1100
 Lab Name: Eurofins Calscience Lab
 Lab Phone: (949) 870-8766
 On ice: yes / no Cooler Temp _____

ATTN: Sample Custody and
 Special Instructions: Report Copy to Mark Fesler (530) 229-3273

Handwritten signatures and dates:
 12/4/19 16:10
 12/4/19 16:00
 4.1/4.0 SWL

Project Name	SSFL	Location	Santa Susana Field Lab
Project	CH661 PO 100067108373	Task Order	661
Project Number	692670.61.SW	Sample Manager	Randy Dean
Project Manager	Randy Dean	Sample Manager	Jamie Beckett
Sample Manager	Jamie Beckett	Turnaround Time	10 Days
Turnaround Time	10 Days	PO Number	100067108373
PO Number	100067108373	Sample ID	EVBMP0003S030
Sample ID	EVBMP0003S030	Sample Date/Time	04-Dec-19 7:32
		Type	N Water
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		# Containers	2
		Temperature	4°C
		Temperature	4°C
		Temperature	HNO3, 4°C
		Temperature	4°C
		Total Containers:	7
Dioxins			<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg			<input type="checkbox"/>
Include Cd, Cu, Pb, Hg			<input type="checkbox"/>
Particle Size Distribution TSS			<input type="checkbox"/>

MS = Matrix Spike SD = Matrix Spike Duplicate

Sampled by	Ben Westerman	Date/Time	12/4/19	Shipping Method:	FedEx
Relinquished by	Randy Dean	Date/Time	12/4/19	Shipment Method:	FedEx
Received by	Randy Dean	Date/Time	12-4-19/10:35	Airbill No:	
Relinquished by	Randy Dean	Date/Time	12-4-19/10:35	Lab Name:	Eurofins Calscience Lab
Received by	Randy Dean	Date/Time	12/4/19 1610	Lab Phone:	(949) 870-8766
		Date/Time	12/4/19 1610	On Ice:	yes / no
		Date/Time	12/4/19 1610	Cooler Temp:	

Special Instructions: Report Copy to Mark Fesler (530) 229-3273

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-14631-1

Login Number: 14631

List Source: Eurofins Calscience

List Number: 1

Creator: Le, Danny

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

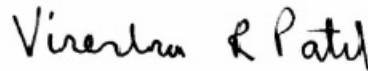
ANALYTICAL REPORT

Job Number: 570-14631-2

Job Description: CH661 / 692670.61.SW

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Virendra Patel
Project Manager I
1/14/2020 11:35 AM

Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
01/14/2020

cc: Mark Fesler

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

Tel (714) 895-5494 Fax (714) 894-7501 www.EurofinsUS.com

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
570-14631-2

Comments

No additional comments.

Receipt

The samples were received on 12/4/2019 4:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.6° C.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Method EPA 1613B - Dioxins/Furans - Report with J - Level IV: This method was subcontracted to Cape Fear Analytical, LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-2

Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-20

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-14631-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-14631-1	A2BMP0007S019	Water	12/04/19 07:52	12/04/19 16:10	
570-14631-2	A2BMP0012S008	Water	12/04/19 07:40	12/04/19 16:10	
570-14631-3	EVBMP0003S030	Water	12/04/19 07:32	12/04/19 16:10	

Subcontract Data

December 30, 2019

Mr. Virendra Patel
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, California 92841-1432

Re: Stormwater RFP Boeing SSFL MECX DXN
Work Order: 15926
SDG: 570-14631

Dear Mr. Patel:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 06, 2019. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421 Ext. 2.

Sincerely,



Cynde Larkins
Project Manager

Chain of Custody: 570-13462.1
Enclosures

Chain of Custody Record

CFA WO # 15926
eurofins Calscience



Client Information (Sub Contract Lab)		Lab PM: Patel, Virendra	Carrier Tracking No(s):						
Shipping/Receiving		E-Mail: virendrapatel@eurofins.com	State of Origin: California						
Company: Cape Fear Analytical, LLC		Accreditations Required (See note):							
Address: 3306 Kity Hawk Road, Wilmington, NC, 28405		Due Date Requested: 12/31/2019							
City: Wilmington, State, Zip: NC, 28405		TAT Requested (days):							
Phone:		PO #:							
Email:		WO #:							
Project Name: CH661 / 692670.61.SW		Project #: 570-14631							
Site:		SSOW#:							
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastefall, BT=TISSUE, A=air)	Field Filtered Sample (Yes or No)	Perform M/MSD (Yes or No)	SUB (EPA 1613B - Dioxins/Furans - Report with J - Level IV/ EPA 1613B - Dioxins/Furans)	Total Number of Containers	Special Instructions/Note:
AZBMP0007S019 (570-14631-1)	12/4/19	07:52 Pacific	Water	Water	X	X	X	2	Ch2m Hill Lab Spec 7 EDD. Standard TAT
AZBMP0012S008 (570-14631-2)	12/4/19	07:40 Pacific	Water	Water	X	X	X	2	Ch2m Hill Lab Spec 7 EDD. Standard TAT
EVBMP0003S030 (570-14631-3)	12/4/19	07:32 Pacific	Water	Water	X	X	X	2	Ch2m Hill Lab Spec 7 EDD. Standard TAT
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>									
<p>Possible Hazard Identification</p> <p>Unconfirmed <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p>									
Deliverable Requested: I, II, III, IV, Other (specify) _____									
Special Instructions/QC Requirements:									
Empty Kit Relinquished by: _____ Date: _____									
Relinquished by: _____ Date/Time: 12/5/19 1444 Company									
Relinquished by: _____ Date/Time: _____ Company									
Relinquished by: _____ Date/Time: _____ Company									
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No _____ Custody Seal No.:									
Cooler Temperature(s) °C and Other Remarks: 3.2°C									

SAMPLE RECEIPT CHECKLIST
Cape Fear Analytical

Client: <u>CALS</u>	Work Order: <u>15926</u>
Shipping Company: <u>FedEx</u>	Date/Time Received: <u>06 DEC 19 1000</u>

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Samples < 2x background?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Air Witness: _____

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle-Applicable: Seals broken damaged container leaking container other(describe) <u>Tape was not sealed @ cooler lid</u>
2 Custody seal/s present on cooler?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Seal intact? <u>Yes</u> No <u>seal was rolled up in loose tape @ lid.</u>
3 Chain of Custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Samples requiring cold preservation within 0-6°C?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>ice bags</u> blue ice dry ice none other (describe) Temperature Blank present <u>Yes</u> No <u>3.1° + 0.1 = 3.2° C</u>
5 Aqueous samples found to have visible solids?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: <u>Minimal visible solids (<1%) in all except AZBMP00075019</u>
5 Samples requiring chemical preservation at proper pH?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected and pH observed: <u>pH = 7 on all</u> If preservative added, Lot#:
7 Samples requiring preservation have no residual chlorine?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: If preservative added, Lot#:
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, tests affected:
9 Sample IDs on COC match IDs on containers?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
10 Date & time of COC match date & time on containers?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	List type and number of containers / Sample IDs, containers affected: <u>2-ILNMA6 bottles per sample. 6 total</u>
12 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Comments:

High Resolution Dioxins and Furans Analysis

Case Narrative

**HDOX Case Narrative
Eurofins Calscience (CALs)
SDG 570-14631
Work Order 15926**

Method/Analysis Information

Product: Dioxins/Furans by EPA Method 1613B in Liquids
Analytical Method: EPA Method 1613B
Extraction Method: SW846 3520C
Analytical Batch Number: 42649
Clean Up Batch Number: 42648
Extraction Batch Number: 42647

Sample Analysis

Samples were received at 3.2°C (15926001, 15926002, 15926003). The following samples were analyzed using the analytical protocol as established in EPA Method 1613B:

Sample ID	Client ID
12025596	Method Blank (MB)
12025597	Laboratory Control Sample (LCS)
12025598	Laboratory Control Sample Duplicate (LCSD)
15926001	A2BMP0007S019
15926002	A2BMP0012S008
15926003	EVBMP0003S030

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 15.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement

The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement

The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery

The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement

The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation

A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation

A NCR was not required for this SDG.

Manual Integrations

Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

System Configuration

This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP750_2	Primary Dioxin Analysis	Dioxin Analysis	DB-5MS	60m x 0.25mm, 0.25um

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report for

CALS001 Eurofins Calscience

Client SDG: 570-14631 CFA Work Order: 15926

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- J Value is estimated
- K Estimated Maximum Possible Concentration
- U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: 

Name: Heather Patterson

Date: 30 DEC 2019

Title: Group Leader

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-14631
Lab Sample ID: 15926001
Client Sample: 1613B Water
Client ID: A2BMP0007S019
Batch ID: 42649
Run Date: 12/23/2019 20:40
Data File: A23DEC19A-5
Prep Batch: 42647
Prep Date: 18-DEC-19

Client: CALS001
Date Collected: 12/04/2019 07:52
Date Received: 12/06/2019 10:00
Method: EPA Method 1613B
Analyst: MJC
Prep Method: SW846 3520C
Prep Aliquot: 1036.3 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0017	ng/L	0.0017	0.00965
40321-76-4	1,2,3,7,8-PeCDD	U	0.000849	ng/L	0.000849	0.0482
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00156	ng/L	0.00156	0.0482
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.00178	ng/L	0.00152	0.0482
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.00181	ng/L	0.00156	0.0482
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	0.0252	ng/L	0.00214	0.0482
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.221	ng/L	0.00311	0.0965
51207-31-9	2,3,7,8-TCDF	U	0.00158	ng/L	0.00158	0.00965
57117-41-6	1,2,3,7,8-PeCDF	U	0.000664	ng/L	0.000664	0.0482
57117-31-4	2,3,4,7,8-PeCDF	U	0.000631	ng/L	0.000631	0.0482
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000647	ng/L	0.000647	0.0482
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000672	ng/L	0.000672	0.0482
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000623	ng/L	0.000623	0.0482
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000905	ng/L	0.000905	0.0482
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJK	0.00448	ng/L	0.0017	0.0482
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.0023	ng/L	0.0023	0.0482
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.00807	ng/L	0.00371	0.0965
41903-57-5	Total TeCDD	U	0.0017	ng/L	0.0017	0.00965
36088-22-9	Total PeCDD	U	0.000849	ng/L	0.000849	0.0482
34465-46-8	Total HxCDD	JK	0.00697	ng/L	0.00152	0.0482
37871-00-4	Total HpCDD	J	0.0446	ng/L	0.00214	0.0482
30402-14-3	Total TeCDF	U	0.00158	ng/L	0.00158	0.00965
30402-15-4	Total PeCDF	U	0.000631	ng/L	0.000631	0.0482
55684-94-1	Total HxCDF	BJK	0.00239	ng/L	0.000623	0.0482
38998-75-3	Total HpCDF	BJK	0.00965	ng/L	0.0017	0.0482
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000725	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00241	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.40	1.93	ng/L	72.8	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.50	1.93	ng/L	77.6	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.32	1.93	ng/L	68.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.38	1.93	ng/L	71.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.50	1.93	ng/L	77.7	(23%-140%)
13C-OCDD		2.66	3.86	ng/L	68.9	(17%-157%)
13C-2,3,7,8-TCDF		1.42	1.93	ng/L	73.4	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.63	1.93	ng/L	84.6	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.42	1.93	ng/L	73.7	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.27	1.93	ng/L	65.6	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.32	1.93	ng/L	68.6	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.35	1.93	ng/L	70.2	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.35	1.93	ng/L	69.8	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 2 of 2

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926001	Date Collected: 12/04/2019 07:52	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: A2BMP0007S019		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 20:40	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-5		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1036.3 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.28	1.93	ng/L	66.3 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.38	1.93	ng/L	71.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.186	0.193	ng/L	96.5 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926002	Date Collected: 12/04/2019 07:40	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: A2BMP0012S008		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 21:28	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-6		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1046.8 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00153	ng/L	0.00153	0.00955
40321-76-4	1,2,3,7,8-PeCDD	JK	0.00191	ng/L	0.000877	0.0478
39227-28-6	1,2,3,4,7,8-HxCDD	JK	0.00285	ng/L	0.00185	0.0478
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.0048	ng/L	0.00179	0.0478
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.00384	ng/L	0.00184	0.0478
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.0641	ng/L	0.00168	0.0478
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.314	ng/L	0.00478	0.0955
51207-31-9	2,3,7,8-TCDF	U	0.00137	ng/L	0.00137	0.00955
57117-41-6	1,2,3,7,8-PeCDF	U	0.000766	ng/L	0.000766	0.0478
57117-31-4	2,3,4,7,8-PeCDF	U	0.00078	ng/L	0.00078	0.0478
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.00123	ng/L	0.00123	0.0478
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.00121	ng/L	0.00121	0.0478
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.00118	ng/L	0.00118	0.0478
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.0016	ng/L	0.0016	0.0478
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.0137	ng/L	0.00124	0.0478
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.0016	ng/L	0.0016	0.0478
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.0182	ng/L	0.00292	0.0955
41903-57-5	Total TeCDD	U	0.00153	ng/L	0.00153	0.00955
36088-22-9	Total PeCDD	JK	0.00191	ng/L	0.000877	0.0478
34465-46-8	Total HxCDD	JK	0.0225	ng/L	0.00179	0.0478
37871-00-4	Total HpCDD	J	0.100	ng/L	0.00168	0.0478
30402-14-3	Total TeCDF	U	0.00137	ng/L	0.00137	0.00955
30402-15-4	Total PeCDF	JK	0.00145	ng/L	0.000621	0.0478
55684-94-1	Total HxCDF	BJK	0.0114	ng/L	0.00118	0.0478
38998-75-3	Total HpCDF	J	0.0331	ng/L	0.00124	0.0478
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.00394	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00517	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.53	1.91	ng/L	80.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.83	1.91	ng/L	95.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.43	1.91	ng/L	74.7	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.55	1.91	ng/L	81.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.67	1.91	ng/L	87.3	(23%-140%)
13C-OCDD		2.74	3.82	ng/L	71.7	(17%-157%)
13C-2,3,7,8-TCDF		1.64	1.91	ng/L	85.6	(24%-169%)
13C-1,2,3,7,8-PeCDF		2.00	1.91	ng/L	104	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.80	1.91	ng/L	94.2	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.38	1.91	ng/L	72.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.45	1.91	ng/L	75.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.50	1.91	ng/L	78.6	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.50	1.91	ng/L	78.6	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926002	Date Collected: 12/04/2019 07:40	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: A2BMP0012S008		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 21:28	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-6		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1046.8 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.37	1.91	ng/L	71.9 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.54	1.91	ng/L	80.6 (26%-138%)
37Cl-2,3,7,8-TCDD			0.170	0.191	ng/L	89.2 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926003	Date Collected: 12/04/2019 07:32	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: EVBMP0003S030		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 22:16	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-7		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1048 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00155	ng/L	0.00155	0.00954
40321-76-4	1,2,3,7,8-PeCDD	JK	0.00384	ng/L	0.00127	0.0477
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.00632	ng/L	0.00157	0.0477
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.0137	ng/L	0.00163	0.0477
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.0119	ng/L	0.00163	0.0477
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.261	ng/L	0.00412	0.0477
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2.71	ng/L	0.00815	0.0954
51207-31-9	2,3,7,8-TCDF	U	0.00169	ng/L	0.00169	0.00954
57117-41-6	1,2,3,7,8-PeCDF	U	0.000987	ng/L	0.000987	0.0477
57117-31-4	2,3,4,7,8-PeCDF	JK	0.00128	ng/L	0.000941	0.0477
70648-26-9	1,2,3,4,7,8-HxCDF	JK	0.00237	ng/L	0.00109	0.0477
57117-44-9	1,2,3,6,7,8-HxCDF	J	0.0025	ng/L	0.00103	0.0477
60851-34-5	2,3,4,6,7,8-HxCDF	BJK	0.0025	ng/L	0.00102	0.0477
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00139	ng/L	0.00139	0.0477
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.0474	ng/L	0.00138	0.0477
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	0.00273	ng/L	0.00173	0.0477
39001-02-0	1,2,3,4,6,7,8,9-OCDF		0.0958	ng/L	0.00391	0.0954
41903-57-5	Total TeCDD	U	0.00155	ng/L	0.00155	0.00954
36088-22-9	Total PeCDD	JK	0.00836	ng/L	0.00127	0.0477
34465-46-8	Total HxCDD	JK	0.0874	ng/L	0.00157	0.0477
37871-00-4	Total HpCDD		0.625	ng/L	0.00412	0.0477
30402-14-3	Total TeCDF	U	0.00169	ng/L	0.00169	0.00954
30402-15-4	Total PeCDF	JK	0.0111	ng/L	0.000706	0.0477
55684-94-1	Total HxCDF	JK	0.0496	ng/L	0.00102	0.0477
38998-75-3	Total HpCDF	J	0.116	ng/L	0.00138	0.0477
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0121	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.013	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.53	1.91	ng/L	80.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.74	1.91	ng/L	91.1	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.36	1.91	ng/L	71.0	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.50	1.91	ng/L	78.7	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.59	1.91	ng/L	83.4	(23%-140%)
13C-OCDD		2.73	3.82	ng/L	71.5	(17%-157%)
13C-2,3,7,8-TCDF		1.63	1.91	ng/L	85.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.85	1.91	ng/L	97.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.70	1.91	ng/L	89.0	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.36	1.91	ng/L	71.4	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.41	1.91	ng/L	74.1	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.45	1.91	ng/L	75.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.52	1.91	ng/L	79.6	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926003	Date Collected: 12/04/2019 07:32	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: EVBMP0003S030		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 22:16	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-7		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1048 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.35	1.91	ng/L	70.6 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.55	1.91	ng/L	81.1 (26%-138%)
37Cl-2,3,7,8-TCDD			0.168	0.191	ng/L	88.3 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-14631

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12025597	LCS for batch 42647	13C-2,3,7,8-TCDD		76.9	(20%-175%)
		13C-1,2,3,7,8-PeCDD		86.6	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		72.8	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		77.3	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		83.6	(22%-166%)
		13C-OCDD		73.7	(13%-199%)
		13C-2,3,7,8-TCDF		84.0	(22%-152%)
		13C-1,2,3,7,8-PeCDF		88.3	(21%-192%)
		13C-2,3,4,7,8-PeCDF		82.1	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		70.5	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		73.2	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		74.7	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		75.2	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		71.3	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		80.4	(20%-186%)
		37Cl-2,3,7,8-TCDD		87.3	(31%-191%)
		12025598	LCSD for batch 42647	13C-2,3,7,8-TCDD		73.6	(20%-175%)
13C-1,2,3,7,8-PeCDD				82.3	(21%-227%)
13C-1,2,3,4,7,8-HxCDD				72.5	(21%-193%)
13C-1,2,3,6,7,8-HxCDD				77.8	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD				81.2	(22%-166%)
13C-OCDD				74.7	(13%-199%)
13C-2,3,7,8-TCDF				76.4	(22%-152%)
13C-1,2,3,7,8-PeCDF				87.5	(21%-192%)
13C-2,3,4,7,8-PeCDF				79.9	(13%-328%)
13C-1,2,3,4,7,8-HxCDF				72.2	(19%-202%)
13C-1,2,3,6,7,8-HxCDF				71.6	(21%-159%)
13C-2,3,4,6,7,8-HxCDF				75.9	(22%-176%)
13C-1,2,3,7,8,9-HxCDF				74.6	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF				68.7	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF				77.1	(20%-186%)
37Cl-2,3,7,8-TCDD				83.6	(31%-191%)
12025596	MB for batch 42647			13C-2,3,7,8-TCDD		77.7	(25%-164%)
		13C-1,2,3,7,8-PeCDD		81.5	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		69.7	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		71.7	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		78.8	(23%-140%)
		13C-OCDD		68.3	(17%-157%)
		13C-2,3,7,8-TCDF		77.5	(24%-169%)
		13C-1,2,3,7,8-PeCDF		87.7	(24%-185%)
		13C-2,3,4,7,8-PeCDF		78.2	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		66.0	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		68.4	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		70.8	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		71.7	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		64.5	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		73.3	(26%-138%)
		37Cl-2,3,7,8-TCDD		84.1	(35%-197%)
		15926001	A2BMP0007S019	13C-2,3,7,8-TCDD		72.8	(25%-164%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-14631

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
15926001	A2BMP0007S019	13C-1,2,3,7,8-PeCDD		77.6	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		68.4	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		71.4	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		77.7	(23%-140%)
		13C-OCDD		68.9	(17%-157%)
		13C-2,3,7,8-TCDF		73.4	(24%-169%)
		13C-1,2,3,7,8-PeCDF		84.6	(24%-185%)
		13C-2,3,4,7,8-PeCDF		73.7	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		65.6	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		68.6	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		70.2	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		69.8	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		66.3	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		71.3	(26%-138%)
		37Cl-2,3,7,8-TCDD		96.5	(35%-197%)
		15926002	A2BMP0012S008	13C-2,3,7,8-TCDD		80.2	(25%-164%)
13C-1,2,3,7,8-PeCDD				95.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD				74.7	(32%-141%)
13C-1,2,3,6,7,8-HxCDD				81.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD				87.3	(23%-140%)
13C-OCDD				71.7	(17%-157%)
13C-2,3,7,8-TCDF				85.6	(24%-169%)
13C-1,2,3,7,8-PeCDF				104	(24%-185%)
13C-2,3,4,7,8-PeCDF				94.2	(21%-178%)
13C-1,2,3,4,7,8-HxCDF				72.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF				75.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF				78.6	(28%-136%)
13C-1,2,3,7,8,9-HxCDF				78.6	(29%-147%)
13C-1,2,3,4,6,7,8-HpCDF				71.9	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF				80.6	(26%-138%)
37Cl-2,3,7,8-TCDD				89.2	(35%-197%)
15926003	EVBMP0003S030	13C-2,3,7,8-TCDD		80.3	(25%-164%)
		13C-1,2,3,7,8-PeCDD		91.1	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		71.0	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		78.7	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		83.4	(23%-140%)
		13C-OCDD		71.5	(17%-157%)
		13C-2,3,7,8-TCDF		85.3	(24%-169%)
		13C-1,2,3,7,8-PeCDF		97.2	(24%-185%)
		13C-2,3,4,7,8-PeCDF		89.0	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		71.4	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		74.1	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		75.8	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		79.6	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		70.6	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		81.1	(26%-138%)
		37Cl-2,3,7,8-TCDD		88.3	(35%-197%)

* Recovery outside Acceptance Limits

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-14631

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
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* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-14631

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 42647

Matrix: WATER

Lab Sample ID: 12025597

Instrument: HRP750

Analysis Date: 12/23/2019 18:15

Dilution: 1

Analyst: MJC

Prep Batch ID: 42647

Batch ID: 42649

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits
1746-01-6	LCS 2,3,7,8-TCDD	0.200	0.198	99.1	67-158
40321-76-4	LCS 1,2,3,7,8-PeCDD	1.00	1.03	103	70-142
39227-28-6	LCS 1,2,3,4,7,8-HxCDD	1.00	1.05	105	70-164
57653-85-7	LCS 1,2,3,6,7,8-HxCDD	1.00	0.999	99.9	74-134
19408-74-3	LCS 1,2,3,7,8,9-HxCDD	1.00	1.07	107	64-162
35822-46-9	LCS 1,2,3,4,6,7,8-HpCDD	1.00	0.937	93.7	70-140
3268-87-9	LCS 1,2,3,4,6,7,8,9-OCDD	2.00	1.97	98.5	78-144
51207-31-9	LCS 2,3,7,8-TCDF	0.200	0.176	87.9	75-158
57117-41-6	LCS 1,2,3,7,8-PeCDF	1.00	0.916	91.6	80-134
57117-31-4	LCS 2,3,4,7,8-PeCDF	1.00	1.01	101	68-160
70648-26-9	LCS 1,2,3,4,7,8-HxCDF	1.00	0.997	99.7	72-134
57117-44-9	LCS 1,2,3,6,7,8-HxCDF	1.00	0.951	95.1	84-130
60851-34-5	LCS 2,3,4,6,7,8-HxCDF	1.00	0.968	96.8	70-156
72918-21-9	LCS 1,2,3,7,8,9-HxCDF	1.00	0.971	97.1	78-130
67562-39-4	LCS 1,2,3,4,6,7,8-HpCDF	1.00	1.00	100	82-122
55673-89-7	LCS 1,2,3,4,7,8,9-HpCDF	1.00	0.942	94.2	78-138
39001-02-0	LCS 1,2,3,4,6,7,8,9-OCDF	2.00	1.76	87.9	63-170

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-14631

Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 42647

Matrix: WATER

Lab Sample ID: 12025598

Instrument: HRP750

Analysis Date: 12/23/2019 19:03

Dilution: 1

Analyst: MJC

Prep Batch ID: 42647

Batch ID: 42649

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD 2,3,7,8-TCDD	0.200	0.197	98.4	67-158	0.658	0-20
40321-76-4	LCSD 1,2,3,7,8-PeCDD	1.00	1.04	104	70-142	0.954	0-20
39227-28-6	LCSD 1,2,3,4,7,8-HxCDD	1.00	1.04	104	70-164	0.103	0-20
57653-85-7	LCSD 1,2,3,6,7,8-HxCDD	1.00	0.973	97.3	74-134	2.63	0-20
19408-74-3	LCSD 1,2,3,7,8,9-HxCDD	1.00	1.03	103	64-162	3.52	0-20
35822-46-9	LCSD 1,2,3,4,6,7,8-HpCDD	1.00	0.913	91.3	70-140	2.61	0-20
3268-87-9	LCSD 1,2,3,4,6,7,8,9-OCDD	2.00	1.95	97.3	78-144	1.23	0-20
51207-31-9	LCSD 2,3,7,8-TCDF	0.200	0.166	83.1	75-158	5.62	0-20
57117-41-6	LCSD 1,2,3,7,8-PeCDF	1.00	0.879	87.9	80-134	4.14	0-20
57117-31-4	LCSD 2,3,4,7,8-PeCDF	1.00	0.978	97.8	68-160	3.48	0-20
70648-26-9	LCSD 1,2,3,4,7,8-HxCDF	1.00	0.951	95.1	72-134	4.71	0-20
57117-44-9	LCSD 1,2,3,6,7,8-HxCDF	1.00	0.995	99.5	84-130	4.46	0-20
60851-34-5	LCSD 2,3,4,6,7,8-HxCDF	1.00	0.946	94.6	70-156	2.33	0-20
72918-21-9	LCSD 1,2,3,7,8,9-HxCDF	1.00	0.940	94	78-130	3.23	0-20
67562-39-4	LCSD 1,2,3,4,6,7,8-HpCDF	1.00	0.985	98.5	82-122	1.88	0-20
55673-89-7	LCSD 1,2,3,4,7,8,9-HpCDF	1.00	0.927	92.7	78-138	1.56	0-20
39001-02-0	LCSD 1,2,3,4,6,7,8,9-OCDF	2.00	1.82	90.8	63-170	3.25	0-20

Method Blank Summary

Page 1 of 1

SDG Number: 570-14631
Client ID: MB for batch 42647
Lab Sample ID: 12025596
Column:

Client: CALS001
Instrument ID: HRP750
Prep Date: 18-DEC-19

Matrix: WATER
Data File: A23DEC19A-4
Analyzed: 12/23/19 19:51

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 42647	12025597	A23DEC19A-2	12/23/19	1815
02 LCSD for batch 42647	12025598	A23DEC19A-3	12/23/19	1903
03 A2BMP0007S019	15926001	A23DEC19A-5	12/23/19	2040
04 A2BMP0012S008	15926002	A23DEC19A-6	12/23/19	2128
05 EVBMP0003S030	15926003	A23DEC19A-7	12/23/19	2216

Sample Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926001	Date Collected: 12/04/2019 07:52	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: A2BMP0007S019		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 20:40	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-5		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1036.3 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0017	ng/L	0.0017	0.00965
40321-76-4	1,2,3,7,8-PeCDD	U	0.000849	ng/L	0.000849	0.0482
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00156	ng/L	0.00156	0.0482
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.00178	ng/L	0.00152	0.0482
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.00181	ng/L	0.00156	0.0482
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	0.0252	ng/L	0.00214	0.0482
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.221	ng/L	0.00311	0.0965
51207-31-9	2,3,7,8-TCDF	U	0.00158	ng/L	0.00158	0.00965
57117-41-6	1,2,3,7,8-PeCDF	U	0.000664	ng/L	0.000664	0.0482
57117-31-4	2,3,4,7,8-PeCDF	U	0.000631	ng/L	0.000631	0.0482
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000647	ng/L	0.000647	0.0482
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000672	ng/L	0.000672	0.0482
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000623	ng/L	0.000623	0.0482
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000905	ng/L	0.000905	0.0482
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJK	0.00448	ng/L	0.0017	0.0482
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.0023	ng/L	0.0023	0.0482
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.00807	ng/L	0.00371	0.0965
41903-57-5	Total TeCDD	U	0.0017	ng/L	0.0017	0.00965
36088-22-9	Total PeCDD	U	0.000849	ng/L	0.000849	0.0482
34465-46-8	Total HxCDD	JK	0.00697	ng/L	0.00152	0.0482
37871-00-4	Total HpCDD	J	0.0446	ng/L	0.00214	0.0482
30402-14-3	Total TeCDF	U	0.00158	ng/L	0.00158	0.00965
30402-15-4	Total PeCDF	U	0.000631	ng/L	0.000631	0.0482
55684-94-1	Total HxCDF	BJK	0.00239	ng/L	0.000623	0.0482
38998-75-3	Total HpCDF	BJK	0.00965	ng/L	0.0017	0.0482
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000725	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00241	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.40	1.93	ng/L	72.8	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.50	1.93	ng/L	77.6	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.32	1.93	ng/L	68.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.38	1.93	ng/L	71.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.50	1.93	ng/L	77.7	(23%-140%)
13C-OCDD		2.66	3.86	ng/L	68.9	(17%-157%)
13C-2,3,7,8-TCDF		1.42	1.93	ng/L	73.4	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.63	1.93	ng/L	84.6	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.42	1.93	ng/L	73.7	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.27	1.93	ng/L	65.6	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.32	1.93	ng/L	68.6	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.35	1.93	ng/L	70.2	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.35	1.93	ng/L	69.8	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926001	Date Collected: 12/04/2019 07:52	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: A2BMP0007S019		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 20:40	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-5		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1036.3 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.28	1.93	ng/L	66.3 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.38	1.93	ng/L	71.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.186	0.193	ng/L	96.5 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:10:11 Eastern Standard Time
 Printed: Tuesday, December 24, 2019 09:10:37 Eastern Standard Time

Method: Untitled 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	7.59e1	2.51e2	3.27e2	31.14	1.000	0.30	YES	0.035	0.0880	3.65e3	3428	1.1	4.33e3	1803	2.4	bb	db
2	12378-PeCDD							NO		0.0440		2044			723			
3	123478-HxCDD	1.39e2	1.35e2	2.73e2	36.65	1.001	1.03	YES	0.043	0.0807	4.31e3	2017	2.1	5.44e3	2305	2.4	bd	MM
4	123678-HxCDD	3.59e2	3.10e2	6.69e2	36.71	1.000	1.16	NO	0.092	0.0786	1.50e4	2017	7.4	6.65e3	2305	2.9	db	MM
5	123789-HxCDD	3.27e2	3.03e2	6.30e2	36.95	1.007	1.08	NO	0.094	0.0809	6.90e3	2017	3.4	6.07e3	2305	2.6	db	db
6	1234678-HpCDD	3.93e3	3.83e3	7.75e3	39.97	1.000	1.03	NO	1.306	0.111	6.54e4	2121	30.8	6.57e4	1834	35.8	bd	bd
7	OCDD	2.60e4	2.80e4	5.40e4	44.15	1.000	0.93	NO	11.477	0.161	3.06e5	1192	256.4	3.21e5	2193	146.5	bd	bb
8	2378-TCDF							NO		0.0817		1133			3496			
9	12378-PeCDF	1.14e2	5.92e1	1.73e2	33.26	1.000	1.93	YES	0.017	0.0344	4.43e3	1257	3.5	3.33e3	2139	1.6	bb	bb
10	23478-PeCDF							NO		0.0327		1257			2139			
11	123478-HxCDF	1.09e2	9.09e1	2.00e2	35.92	1.000	1.20	NO	0.023	0.0335	2.39e3	1368	1.7	3.87e3	1287	3.0	bb	bd
12	123678-HxCDF	9.31e1	6.66e1	1.60e2	36.00	1.000	1.40	NO	0.016	0.0348	2.33e3	1368	1.7	1.79e3	1287	1.4	bb	db
13	234678-HxCDF							NO		0.0323		1368			1287			
14	123789-HxCDF							NO		0.0469		1368			1287			
15	1234678-HpCDF	7.11e2	9.74e2	1.68e3	38.74	1.001	0.73	YES	0.232	0.0879	1.18e4	1473	8.0	2.82e4	2959	9.5	bd	bb
16	1234789-HpCDF							NO		0.119		1473			2959			
17	OCDF	1.03e3	1.26e3	2.29e3	44.43	1.006	0.81	NO	0.418	0.192	1.25e4	2321	5.4	1.73e4	2380	7.3	MM	bd
18	13C-2378-TCDD	4.63e5	5.89e5	1.05e6	31.13	1.019	0.79	NO	72.790	0.178	7.39e6	7914	984.2	9.45e6	5655	1671.9	bd	bb
19	13C-12378-PeCDD	4.52e5	2.95e5	7.47e5	34.04	1.114	1.54	NO	77.574	0.149	1.12e7	4219	2646.6	7.08e6	3358	2109.2	bb	bb
20	13C-123478-HxCDD	3.75e5	2.96e5	6.71e5	36.62	0.991	1.27	NO	68.439	0.182	7.97e6	6783	1174.5	6.21e6	5981	1038.1	bd	bd
21	13C-123678-HxCDD	4.30e5	3.40e5	7.70e5	36.70	0.993	1.26	NO	71.430	0.165	8.13e6	6783	1198.2	6.38e6	5981	1066.5	dd	dd
22	13C-1234678-HpCDD	2.93e5	2.78e5	5.71e5	39.96	1.082	1.05	NO	77.729	0.183	4.40e6	4444	989.5	4.24e6	5175	819.7	bd	bd
23	13C-OCDD	4.58e5	5.10e5	9.68e5	44.14	1.195	0.90	NO	137.862	0.201	5.12e6	5429	942.8	5.89e6	4661	1264.5	bd	bd
24	13C-2378-TCDF	5.09e5	6.66e5	1.18e6	30.33	0.993	0.76	NO	73.378	0.250	6.27e6	13753	456.1	8.05e6	7352	1094.5	bb	bb
25	13C-12378-PeCDF	6.69e5	4.27e5	1.10e6	33.25	1.088	1.57	NO	84.613	0.375	1.59e7	15367	1035.7	1.05e7	10240	1021.9	bd	bd
26	13C-23478-PeCDF	6.17e5	3.87e5	1.00e6	33.85	1.108	1.59	NO	73.728	0.357	1.62e7	15367	1051.8	1.01e7	10240	982.0	bb	bb
27	13C-123478-HxCDF	2.69e5	5.27e5	7.96e5	35.91	0.972	0.51	NO	65.565	0.252	6.17e6	12261	503.2	1.17e7	9621	1221.0	bd	bd
28	13C-123678-HxCDF	3.16e5	6.19e5	9.35e5	36.01	0.975	0.51	NO	68.589	0.224	6.19e6	12261	504.6	1.17e7	9621	1220.9	dd	db
29	13C-234678-HxCDF	2.84e5	5.47e5	8.31e5	36.48	0.988	0.52	NO	70.207	0.258	6.19e6	12261	504.6	1.15e7	9621	1196.5	bd	bb
30	13C-123789-HxCDF	2.49e5	4.89e5	7.38e5	37.24	1.008	0.51	NO	69.800	0.289	4.50e6	12261	367.4	8.81e6	9621	916.0	bb	bb

MassLynx 4.1

Quantify Sample Summary Report
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:10:11 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:10:37 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	1.91e5	4.39e5	6.30e5	38.72	1.048	0.44	NO	66.268	0.190	3.33e6	5478	607.9	7.37e6	7422	993.4	bd	bd
32	13C-1234789-HpCDF	1.63e5	3.64e5	5.28e5	40.61	1.099	0.45	NO	71.254	0.243	2.39e6	5478	436.9	5.27e6	7422	710.3	bd	bb
33	13C-1234-TCDD	5.54e5	7.27e5	1.28e6	30.55	0.000	0.76	NO	100.000	0.201	7.30e6	7914	922.8	9.29e6	5655	1643.7	bb	bb
34	13C-123789-HxCDD	6.09e5	4.85e5	1.09e6	36.94	0.000	1.26	NO	100.000	0.163	1.09e7	6783	1605.6	8.69e6	5981	1453.6	dd	dd
35	37Cl+2378-TCDD	1.31e5		1.31e5	31.14	1.019			9.654	0.0406	2.19e6	2907	754.5				bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:10:11 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:10:37 Eastern Standard Time

Method: Untitled 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradoxins	7.35e1	5.54e1	1.29e2	26.03	1.33	YES	0.014	0.0880	3.66e3	3428	1.1	3.41e3	1803	1.9	bb	bb
2	Total-tetradoxins	2.75e2	1.05e2	3.80e2	27.33	2.61	YES	0.041	0.0880	6.52e3	3428	1.9	4.91e3	1803	2.7	bb	bb
3	Total-tetradoxins	1.42e2	5.43e1	1.97e2	30.07	2.62	YES	0.021	0.0880	6.07e3	3428	1.8	4.15e3	1803	2.3	bb	bb
4	Total-tetradoxins	1.02e2	6.41e1	1.66e2	30.34	1.59	YES	0.018	0.0880	4.27e3	3428	1.2	4.59e3	1803	2.5	bb	bb
5	Total-tetradoxins	2.47e2	6.19e1	3.09e2	30.91	3.99	YES	0.033	0.0880	5.00e3	3428	1.5	2.57e3	1803	1.4	db	bb
6	2378-TCDD	7.59e1	2.51e2	3.27e2	31.14	0.30	YES	0.035	0.0880	3.65e3	3428	1.1	4.33e3	1803	2.4	bb	db
7	Total-tetradoxins	2.37e2	1.11e2	3.48e2	31.42	2.14	YES	0.037	0.0880	7.82e3	3428	2.3	2.23e3	1803	1.2	bd	bb
8	Total-tetradoxins	1.52e2	1.54e2	3.06e2	31.68	0.99	YES	0.033	0.0880	5.19e3	3428	1.5	5.19e3	1803	2.9	bb	db
9	Total-tetradoxins	1.06e2	5.12e1	1.57e2	32.19	2.07	YES	0.017	0.0880	5.07e3	3428	1.5	2.23e3	1803	1.2	bb	bb

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadoxins	9.30e1	9.43e1	1.87e2	33.36	0.99	YES	0.029	0.0440	2.78e3	2044	1.4	2.22e3	723	3.1	bb	bb

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadoxins	3.07e2	1.76e2	4.82e2	35.41	1.75	YES	0.071	0.0800	1.13e4	2017	5.6	4.70e3	2305	2.0	bb	bb
2	Total-hexadoxins	8.98e1	1.11e2	2.01e2	35.87	0.81	YES	0.030	0.0800	3.56e3	2017	1.8	3.50e3	2305	1.5	bd	bd
3	Total-hexadoxins	7.80e1	7.31e1	1.51e2	35.91	1.07	NO	0.022	0.0800	2.50e3	2017	1.2	2.89e3	2305	1.3	db	dd
4	Total-hexadoxins	6.04e2	5.80e2	1.18e3	36.06	1.04	YES	0.175	0.0800	1.22e4	2017	6.0	1.01e4	2305	4.4	bb	MM
5	123478-HxCDD	1.39e2	1.35e2	2.73e2	36.65	1.03	YES	0.043	0.0807	4.31e3	2017	2.1	5.44e3	2305	2.4	bd	MM
6	123678-HxCDD	3.59e2	3.10e2	6.69e2	36.71	1.16	NO	0.092	0.0786	1.50e4	2017	7.4	6.65e3	2305	2.9	db	MM
7	Total-hexadoxins	1.02e2	5.02e1	1.53e2	36.86	2.04	YES	0.023	0.0800	7.69e3	2017	3.8	1.41e3	2305	0.6	bd	bd
8	123789-HxCDD	3.27e2	3.03e2	6.30e2	36.95	1.08	NO	0.094	0.0809	6.90e3	2017	3.4	6.07e3	2305	2.6	db	db
9	Total-hexadoxins	6.73e1	6.88e1	1.36e2	37.09	0.98	YES	0.020	0.0800	6.35e3	2017	3.1	2.34e3	2305	1.0	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:10:11 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:10:37 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HPD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-heptadioxins	3.11e3	2.86e3	5.96e3	39.05	1.09	NO	1.004	0.111	4.93e4	2121	23.2	5.59e4	1834	30.5	bd	bb
2 1234678-HpCDD	3.93e3	3.83e3	7.75e3	39.97	1.03	NO	1.306	0.111	6.54e4	2121	30.8	6.57e4	1834	35.8	bd	bd
3 Total-heptadioxins	1.47e2	1.47e2	2.95e2	40.09	1.00	NO	0.050	0.111	5.04e3	2121	2.4	4.81e3	1834	2.6	db	db
4 Total-heptadioxins	5.71e1	7.42e1	1.31e2	40.26	0.77	YES	0.022	0.111	3.01e3	2121	1.4	3.70e3	1834	2.0	bd	bb

TF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-tetrafurans	7.40e1	1.98e2	2.72e2	26.46	0.37	YES	0.024	0.0817	1.99e3	1133	1.8	7.47e3	3496	2.1	bb	db
2 Total-tetrafurans	6.35e1	1.30e2	1.93e2	27.35	0.49	YES	0.017	0.0817	4.06e3	1133	3.6	6.14e3	3496	1.8	bb	bb
3 Total-tetrafurans	7.29e1	7.81e1	1.51e2	27.48	0.93	YES	0.013	0.0817	1.87e3	1133	1.7	4.60e3	3496	1.3	bb	bd
4 Total-tetrafurans	7.13e1	2.74e2	3.45e2	28.76	0.26	YES	0.030	0.0817	2.80e3	1133	2.5	5.31e3	3496	1.5	bb	bb
5 Total-tetrafurans	5.49e1	9.32e1	1.48e2	29.92	0.59	YES	0.013	0.0817	3.02e3	1133	2.7	3.40e3	3496	1.0	bb	bd
6 Total-tetrafurans	5.05e1	1.79e2	2.29e2	30.55	0.28	YES	0.020	0.0817	1.18e3	1133	1.0	4.47e3	3496	1.3	bb	bb
7 Total-tetrafurans	8.22e1	9.88e1	1.81e2	30.96	0.83	NO	0.016	0.0817	5.92e3	1133	5.2	3.55e3	3496	1.0	bb	bb
8 Total-tetrafurans	1.01e2	1.35e2	2.37e2	31.66	0.75	NO	0.021	0.0817	4.03e3	1133	3.6	5.58e3	3496	1.6	bb	bb
9 Total-tetrafurans	5.38e1	1.18e2	1.72e2	32.13	0.45	YES	0.015	0.0817	2.56e3	1133	2.3	5.43e3	3496	1.6	bb	bb

PF1

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-pentafurans (F1)	5.86e1	8.93e1	1.48e2	26.20	0.66	YES	0.015	0.0389	2.17e3	1061	2.0	2.61e3	2870	0.9	bb	bb
2 Total-pentafurans (F1)	5.58e1	6.40e1	1.20e2	26.33	0.87	YES	0.012	0.0389	2.24e3	1061	2.1	2.30e3	2870	0.8	bb	bb
3 Total-pentafurans (F1)	3.01e2	3.07e2	6.09e2	31.85	0.98	YES	0.060	0.0389	5.87e3	1061	5.5	6.01e3	2870	2.1	bd	bb
4 Total-pentafurans (F1)	5.92e1	6.26e1	1.22e2	31.93	0.95	YES	0.012	0.0389	1.87e3	1061	1.8	2.09e3	2870	0.7	db	bb

PF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 12378-PeCDF	1.14e2	5.92e1	1.73e2	33.26	1.93	YES	0.017	0.0344	4.43e3	1257	3.5	3.33e3	2139	1.6	bb	bb
2 Total-pentafurans	5.66e1	6.38e1	1.20e2	33.41	0.89	YES	0.012	0.0336	1.91e3	1257	1.5	2.29e3	2139	1.0	bb	bb
3 Total-pentafurans	6.01e1	1.32e2	1.92e2	33.81	0.46	YES	0.019	0.0336	2.03e3	1257	1.6	5.11e3	2139	2.4	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:10:11 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:10:37 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HIF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	Total-hexafurans	1.39e2	1.12e2	2.51e2	34.98	1.25	NO	0.028	0.0365	4.26e3	1368	3.1	5.73e3	1287	4.5	bb	db
2	Total-hexafurans	3.89e2	2.11e2	5.99e2	35.10	1.85	YES	0.067	0.0365	1.09e4	1368	8.0	1.04e4	1287	8.1	bb	bb
3	Total-hexafurans	2.29e2	2.83e2	5.12e2	35.54	0.81	YES	0.057	0.0365	5.71e3	1368	4.2	8.16e3	1287	6.3	bb	bb
4	123478-HxCDF	1.09e2	9.09e1	2.00e2	35.92	1.20	NO	0.023	0.0335	2.39e3	1368	1.7	3.87e3	1287	3.0	bb	bd
5	123678-HxCDF	9.31e1	6.66e1	1.60e2	36.00	1.40	NO	0.016	0.0348	2.33e3	1368	1.7	1.79e3	1287	1.4	bb	db

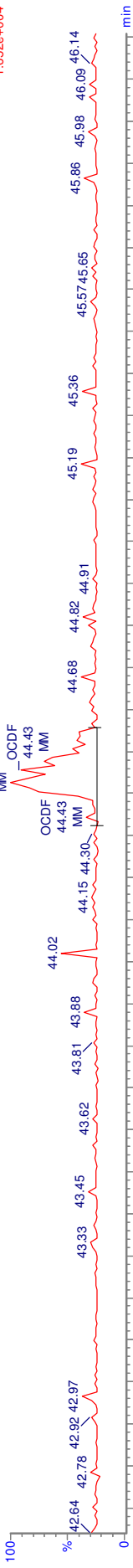
HPF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	1234678-HpCDF	7.11e2	9.74e2	1.68e3	38.74	0.73	YES	0.232	0.0879	1.18e4	1473	8.0	2.82e4	2959	9.5	bd	bb
2	Total-heptafurans	9.80e2	8.47e2	1.83e3	39.26	1.16	NO	0.268	0.102	2.08e4	1473	14.1	1.73e4	2959	5.8	bd	MM

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

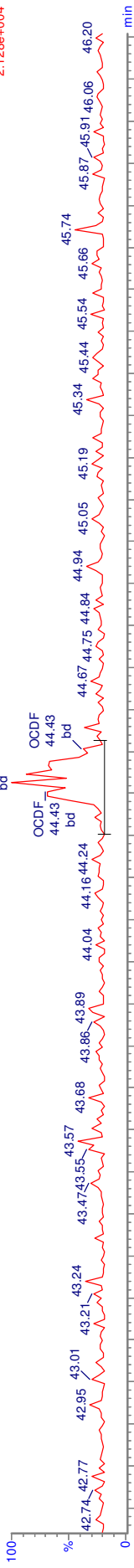
A23DEC19A-5
 42649 15926001-1

F5:Voltage SIR.EI+
 441.743
 1.652e+004



A23DEC19A-5
 42649 15926001-1

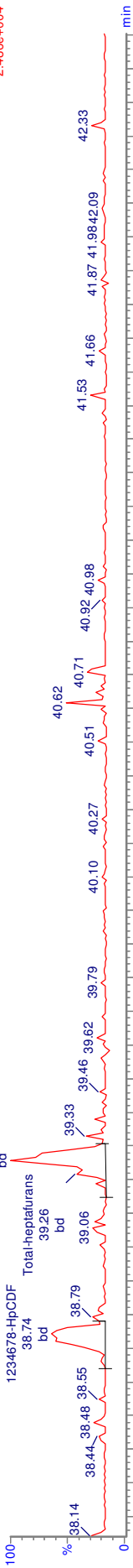
F5:Voltage SIR.EI+
 443.740
 2.128e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

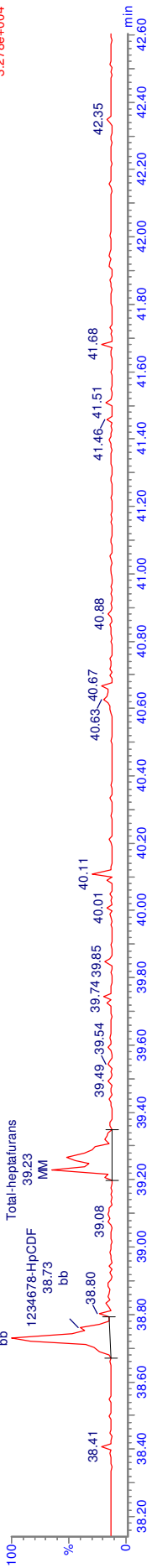
A23DEC19A-5
 42649 15926001-1

F4:Voltage SIR.EI+
 407.782
 2.486e+004



A23DEC19A-5
 42649 15926001-1

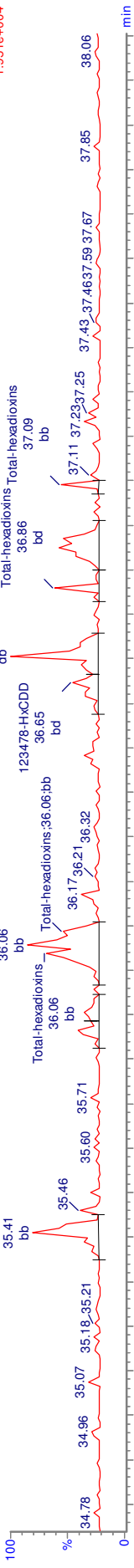
F4:Voltage SIR.EI+
 409.779
 3.278e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

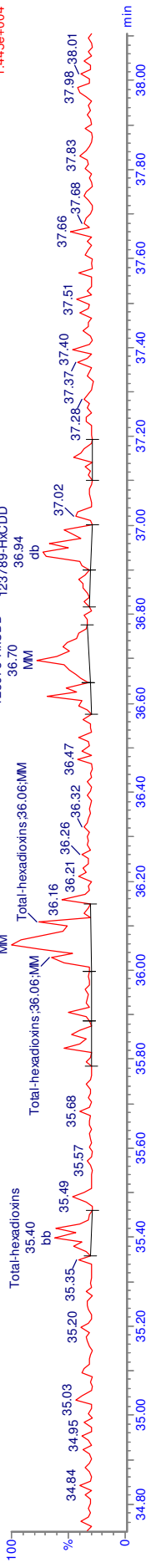
A23DEC19A-5
 42649 15926001-1

F3:Voltage SIR,El+
 389.816
 1.951e+004



A23DEC19A-5
 42649 15926001-1

F3:Voltage SIR,El+
 391.813
 1.445e+004



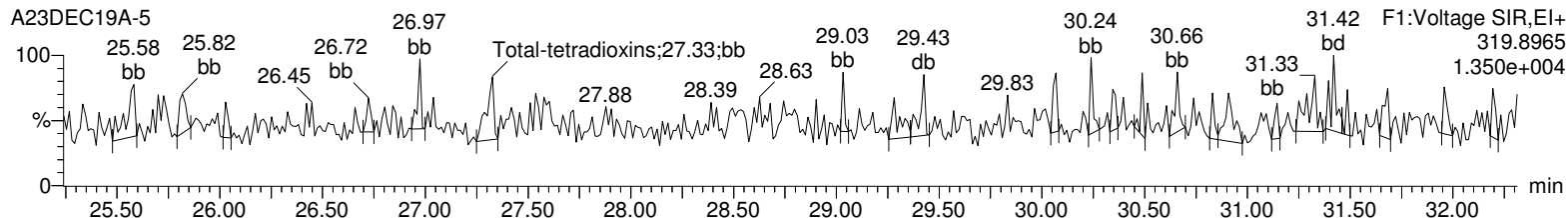
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

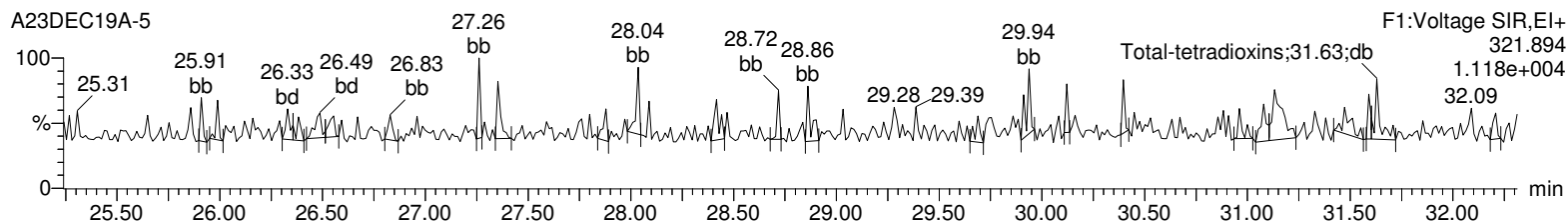
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

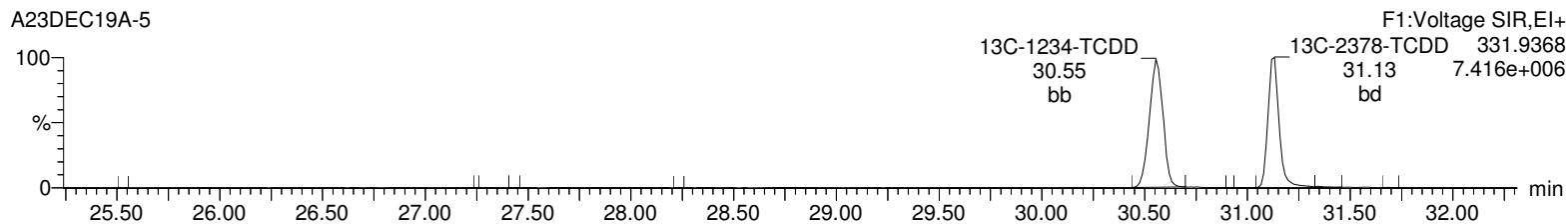
Total-tetradoxins



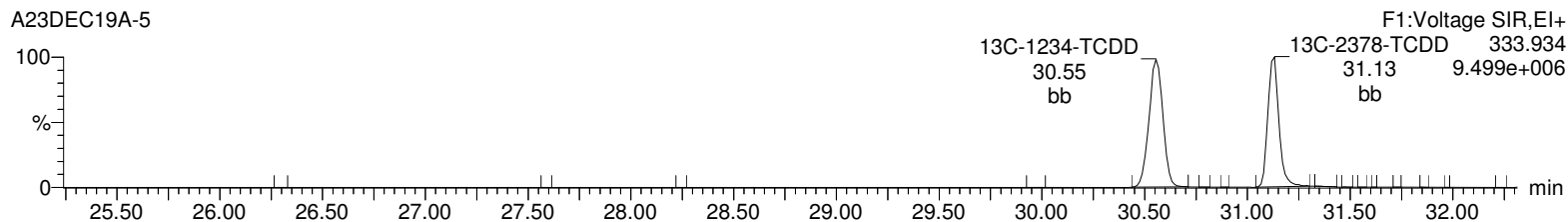
Total-tetradoxins



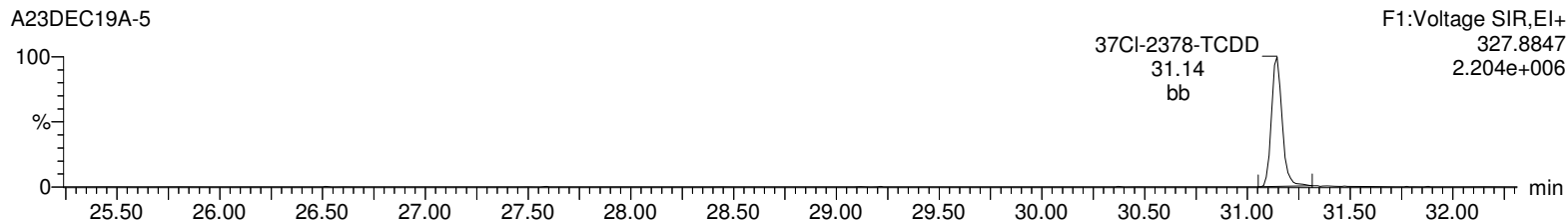
13C-2378-TCDD



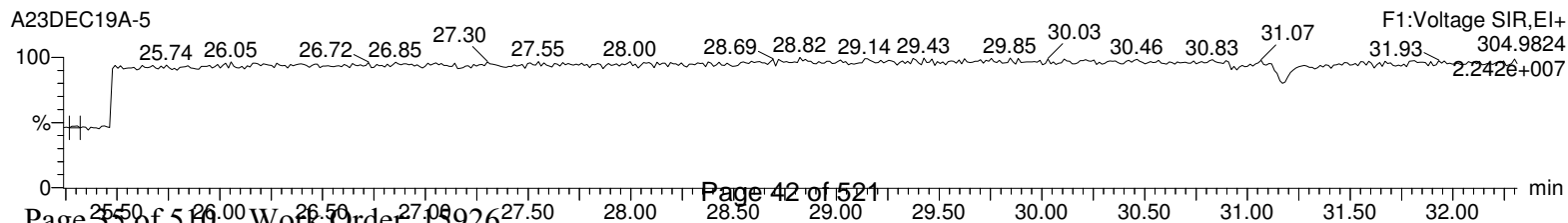
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



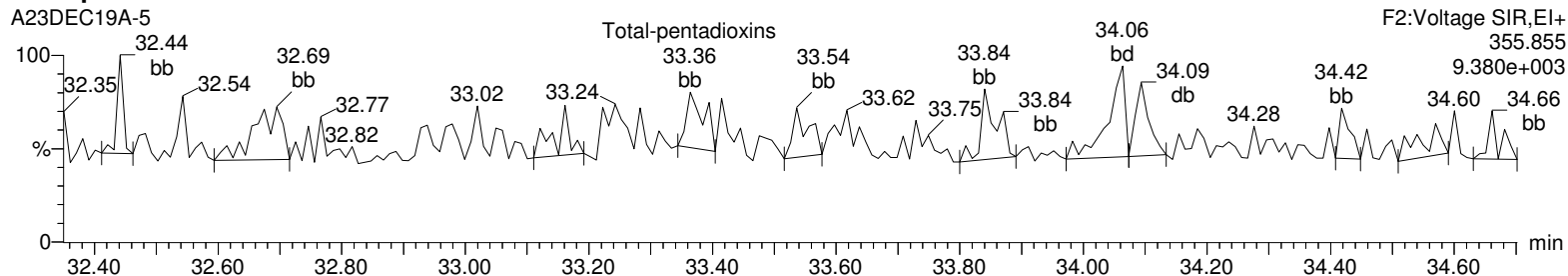
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

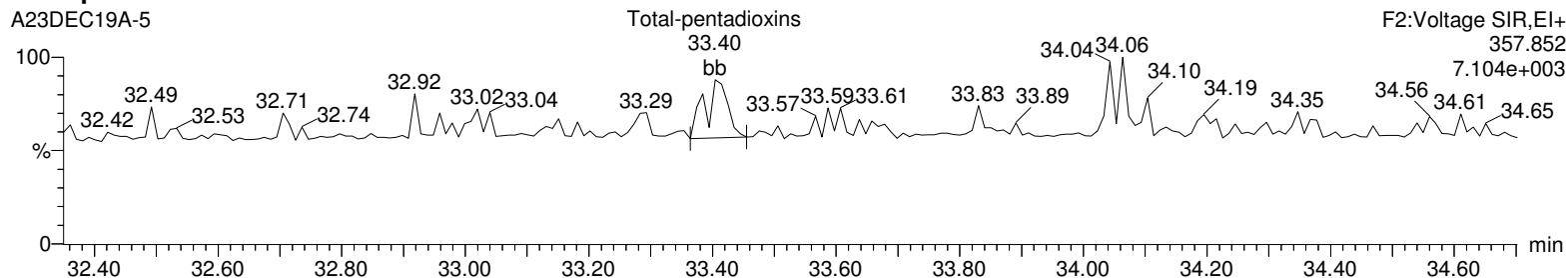
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

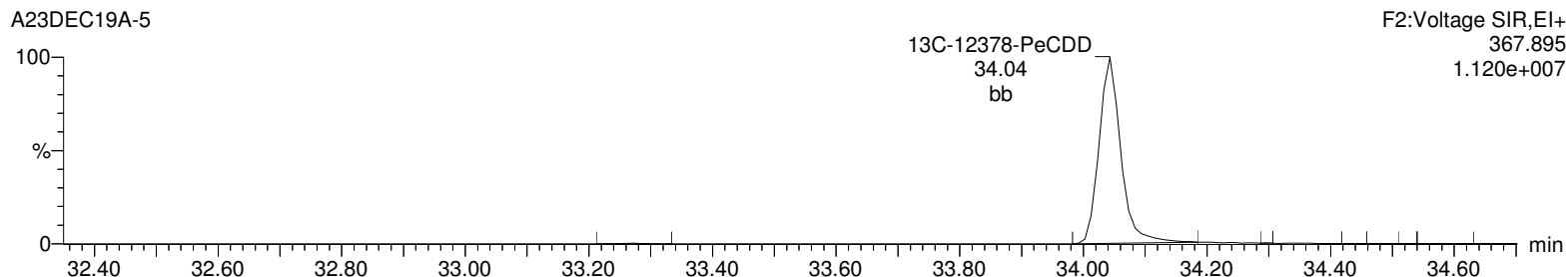
Total-pentadioxins



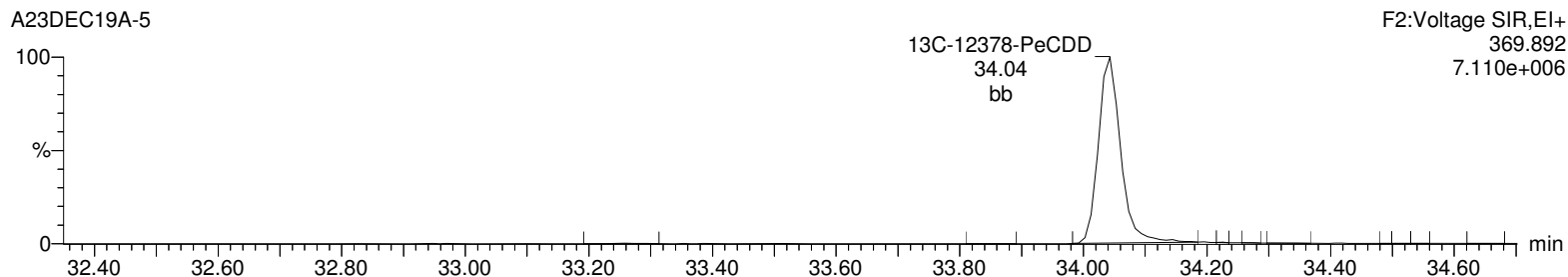
Total-pentadioxins



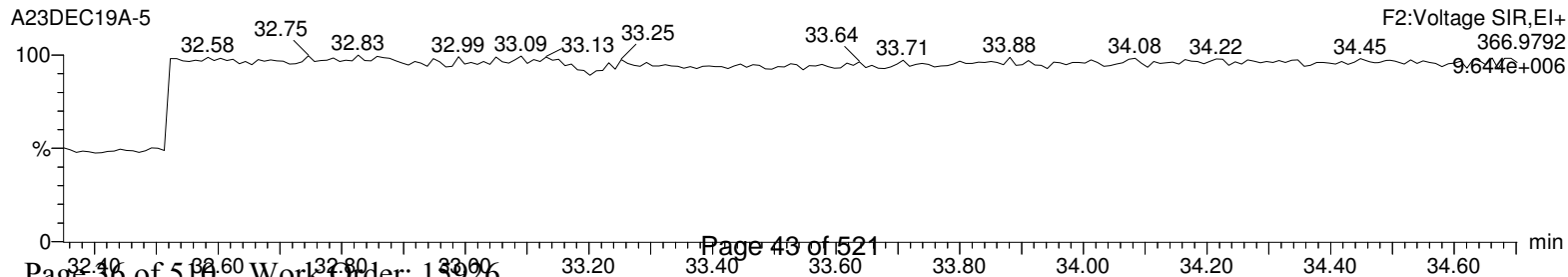
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



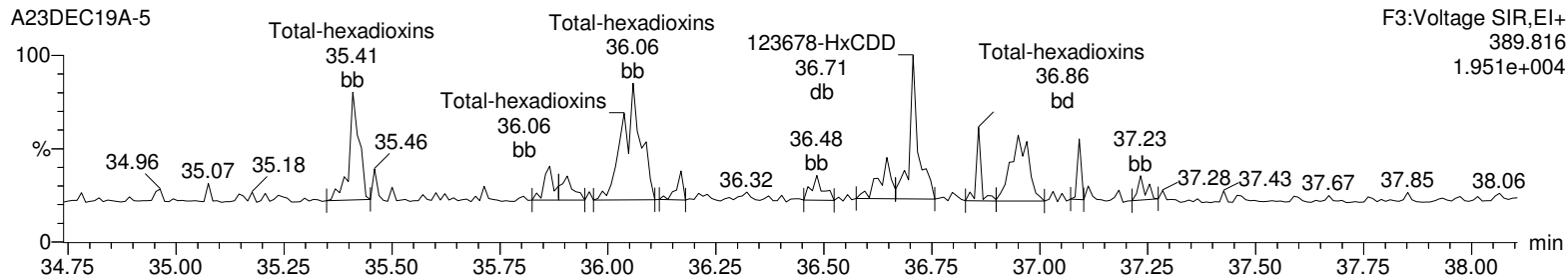
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

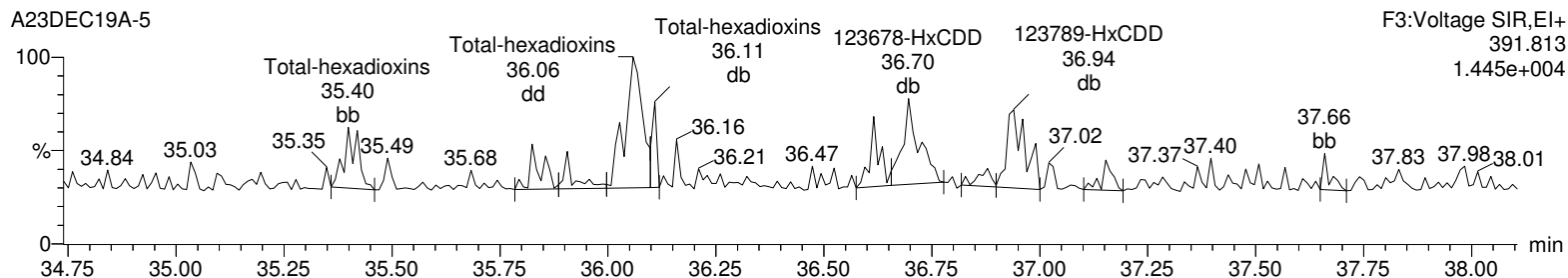
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

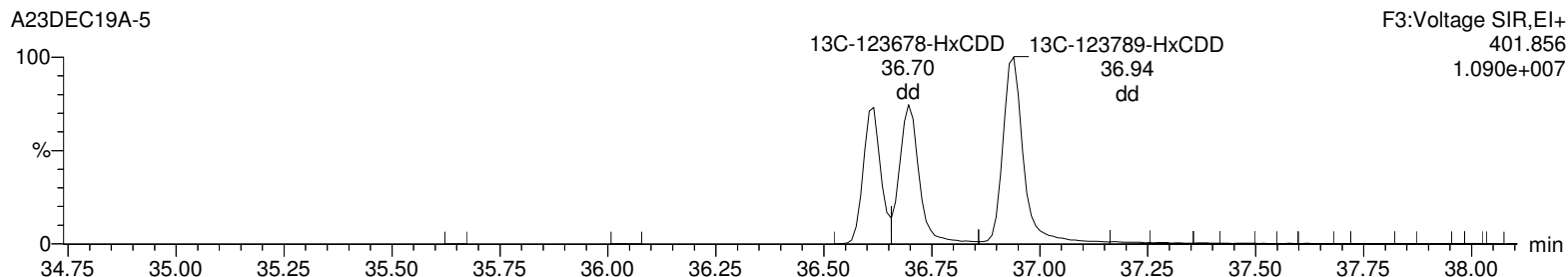
Total-hexadioxins



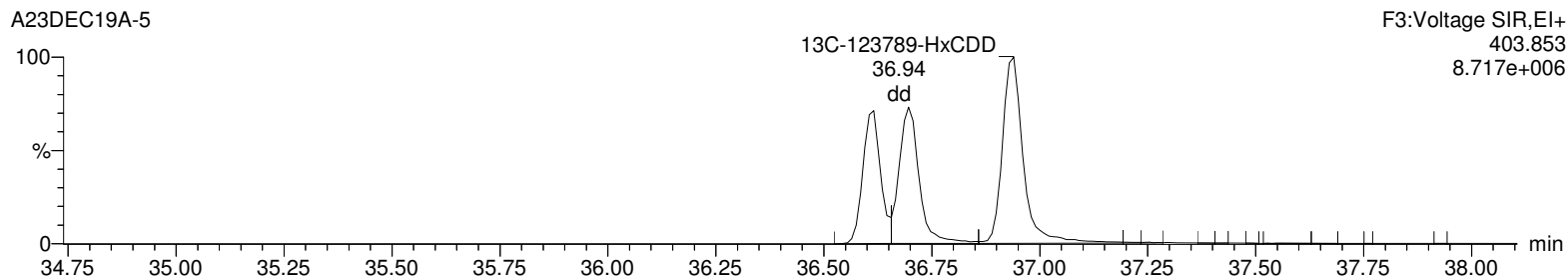
Total-hexadioxins



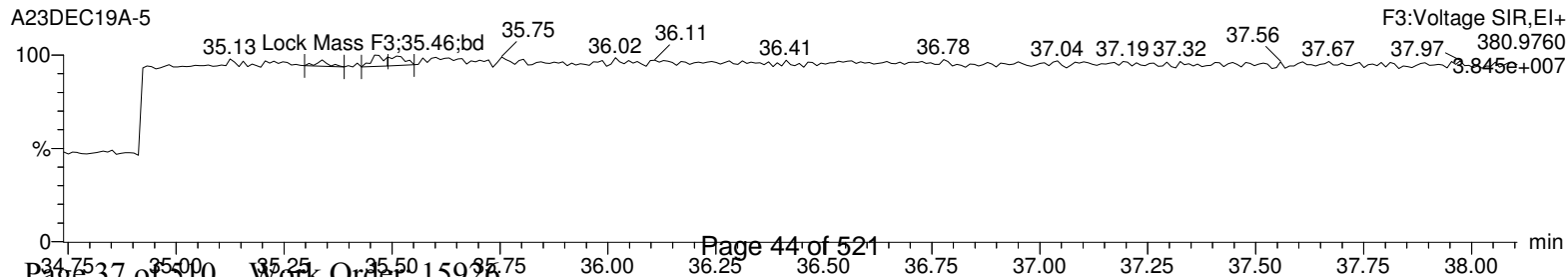
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



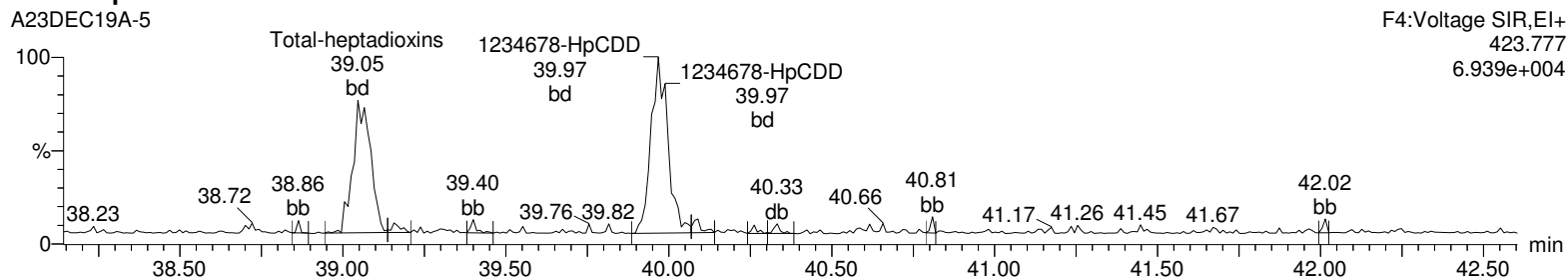
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

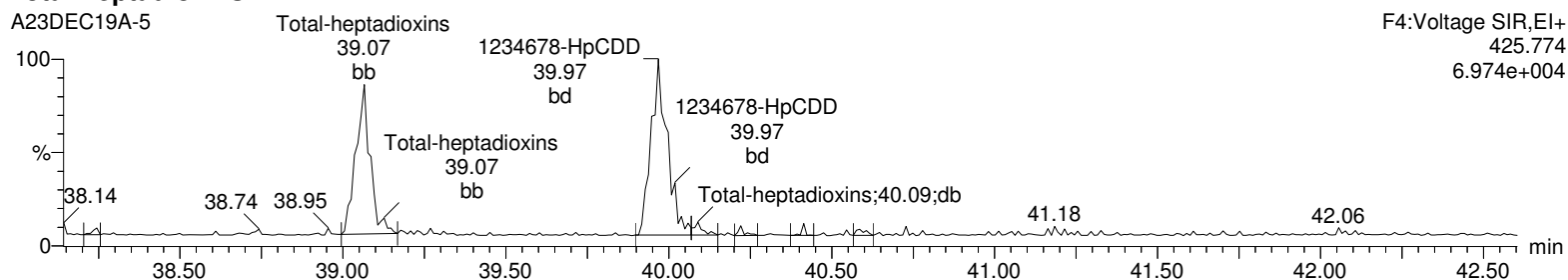
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

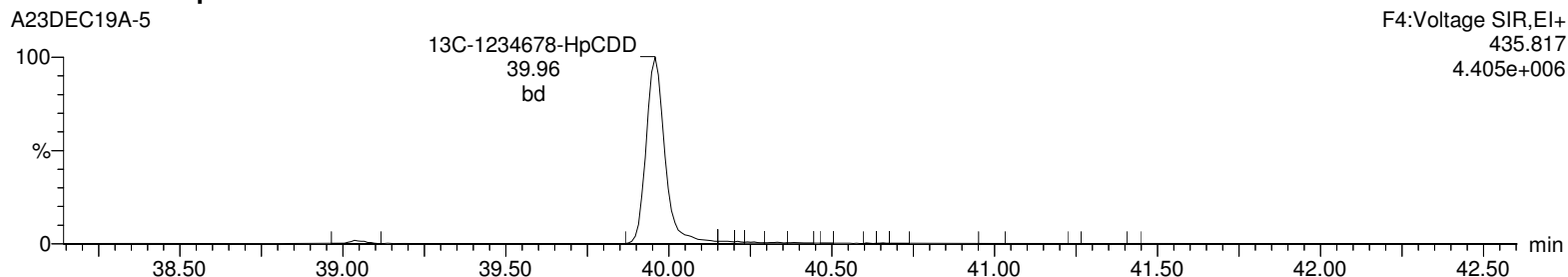
Total-heptadioxins



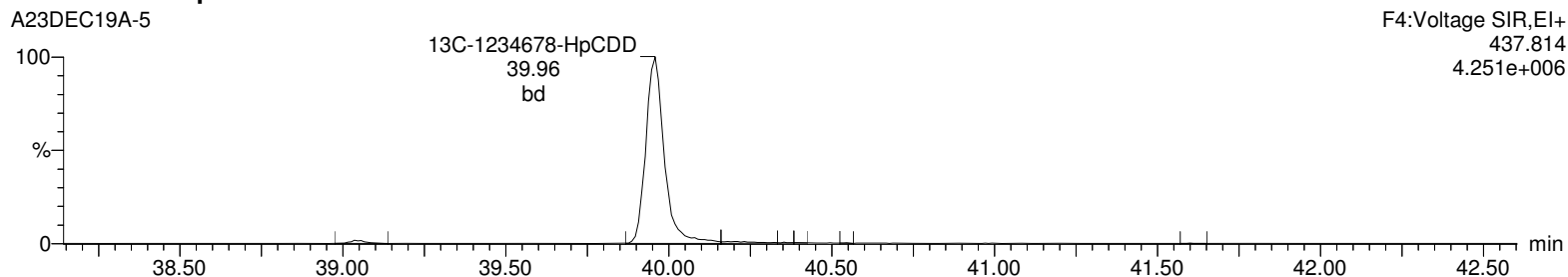
Total-heptadioxins



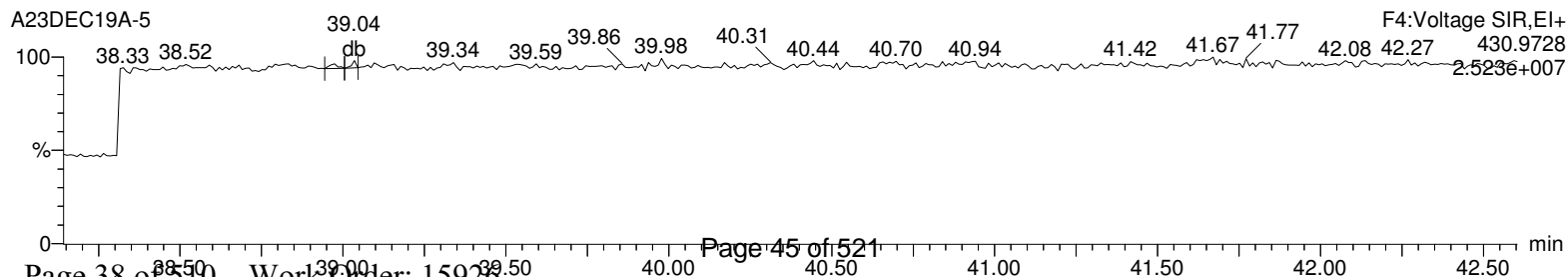
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

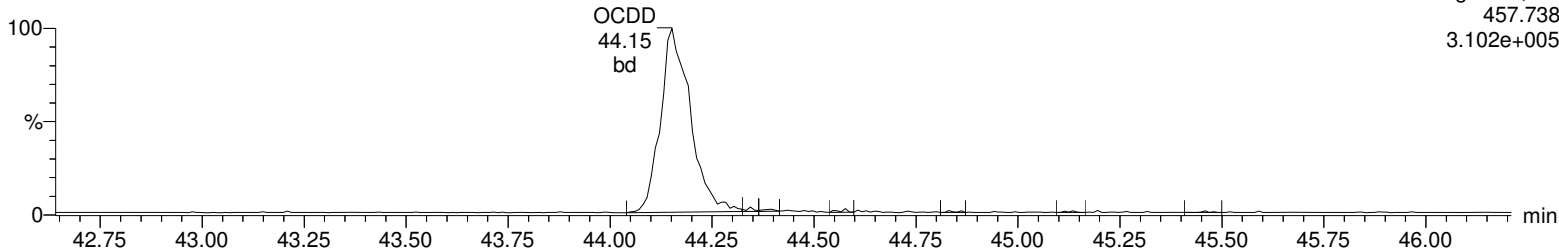
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDD

A23DEC19A-5

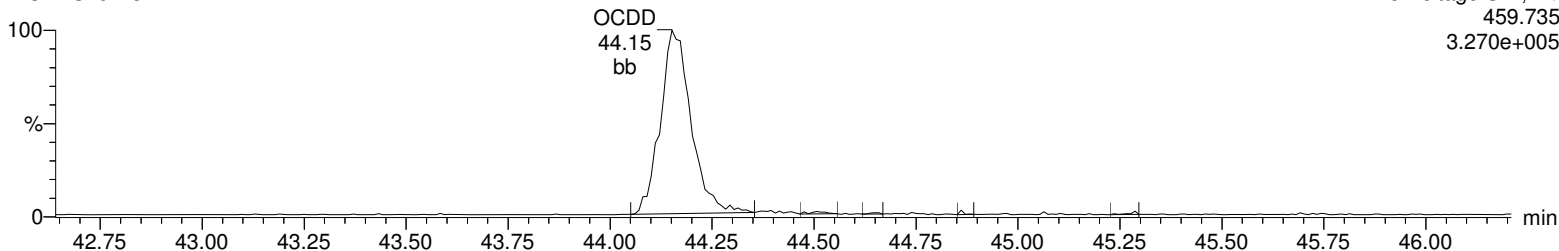
F5:Voltage SIR,EI+
457.738
3.102e+005



OCDD

A23DEC19A-5

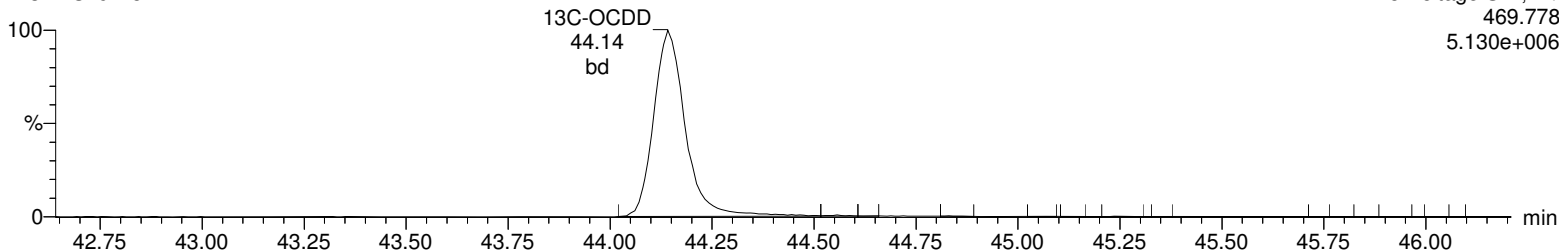
F5:Voltage SIR,EI+
459.735
3.270e+005



13C-OCDD

A23DEC19A-5

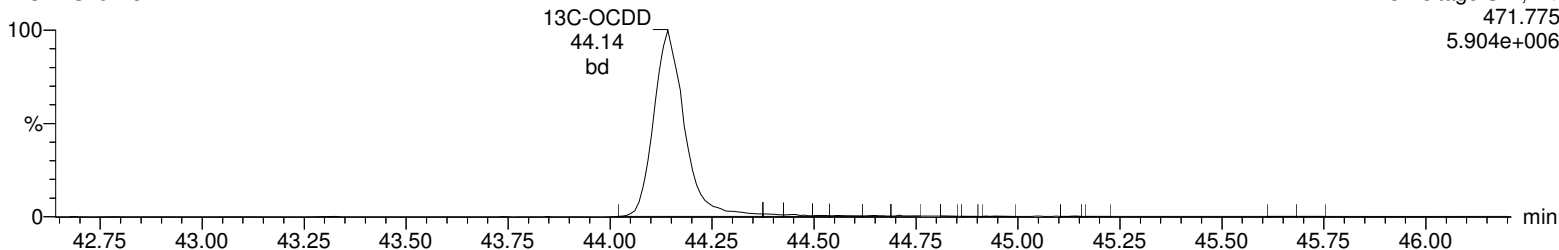
F5:Voltage SIR,EI+
469.778
5.130e+006



13C-OCDD

A23DEC19A-5

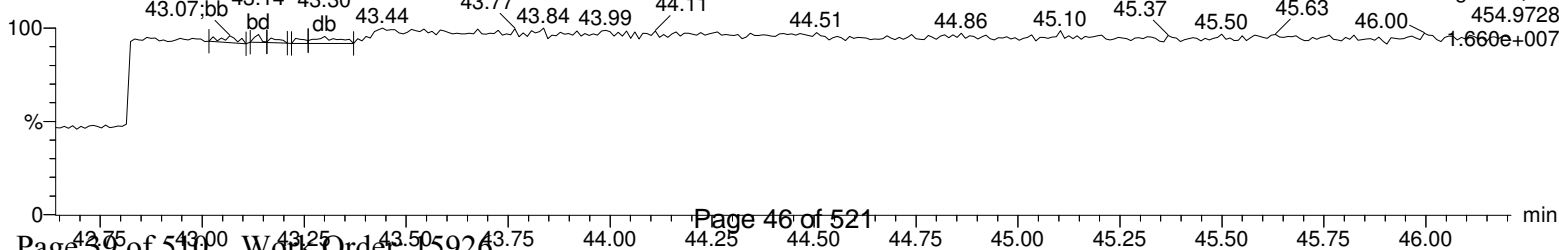
F5:Voltage SIR,EI+
471.775
5.904e+006



Lock Mass F5

A23DEC19A-5

F5:Voltage SIR,EI+
454.9728
1.660e+007



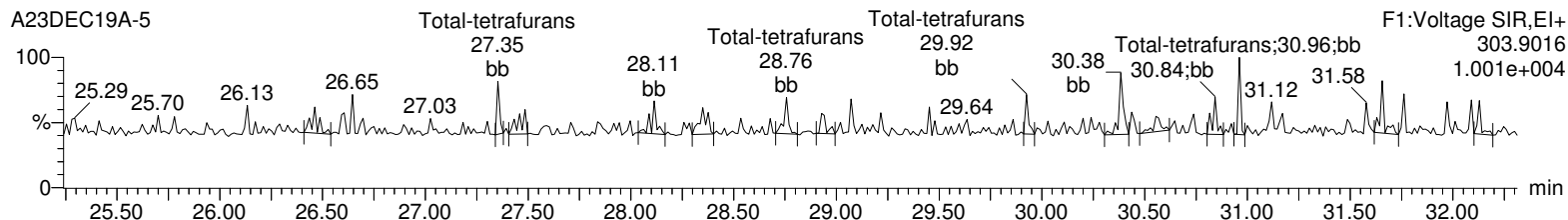
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

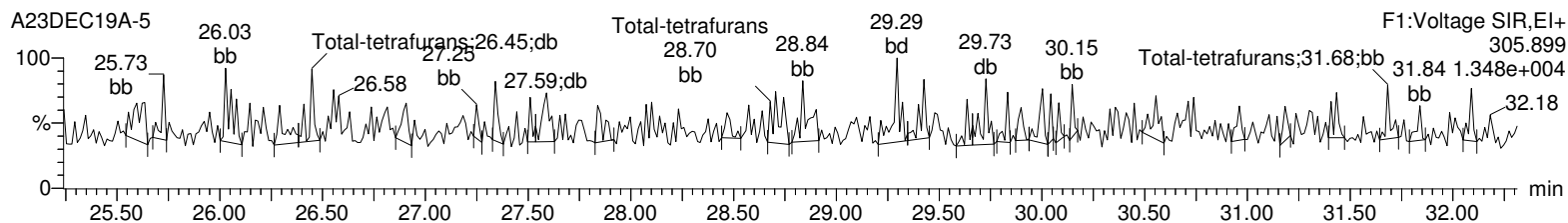
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

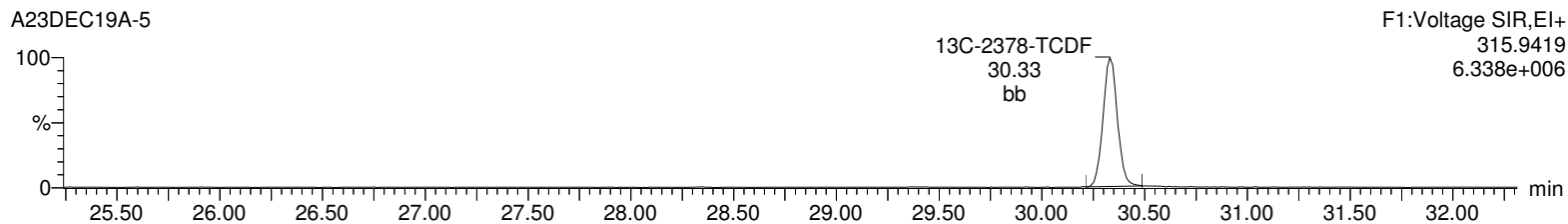
Total-tetrafurans



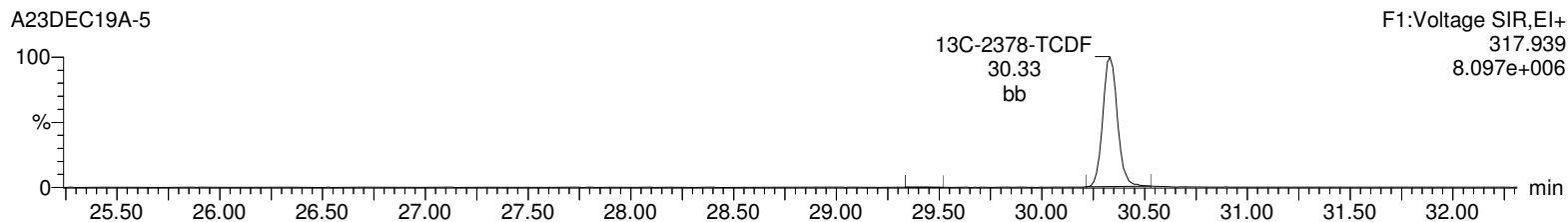
Total-tetrafurans



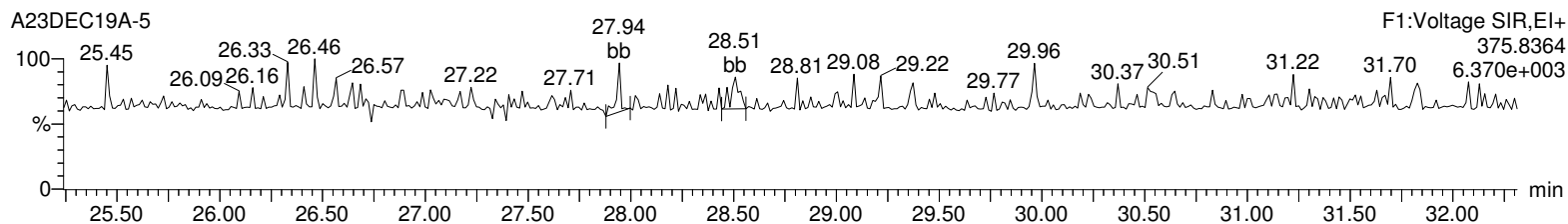
13C-2378-TCDF



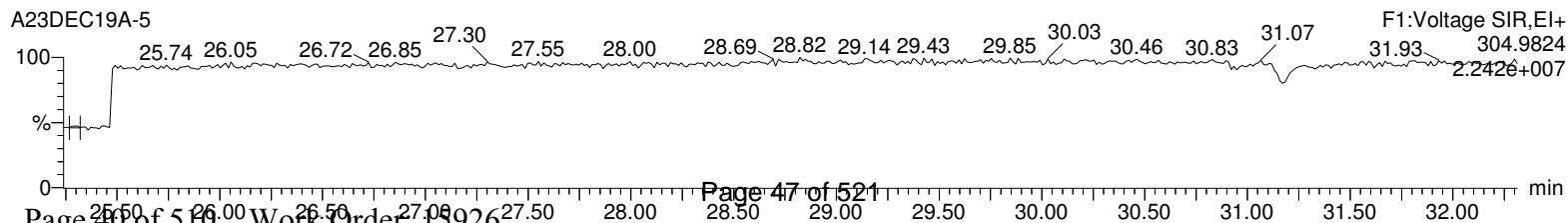
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

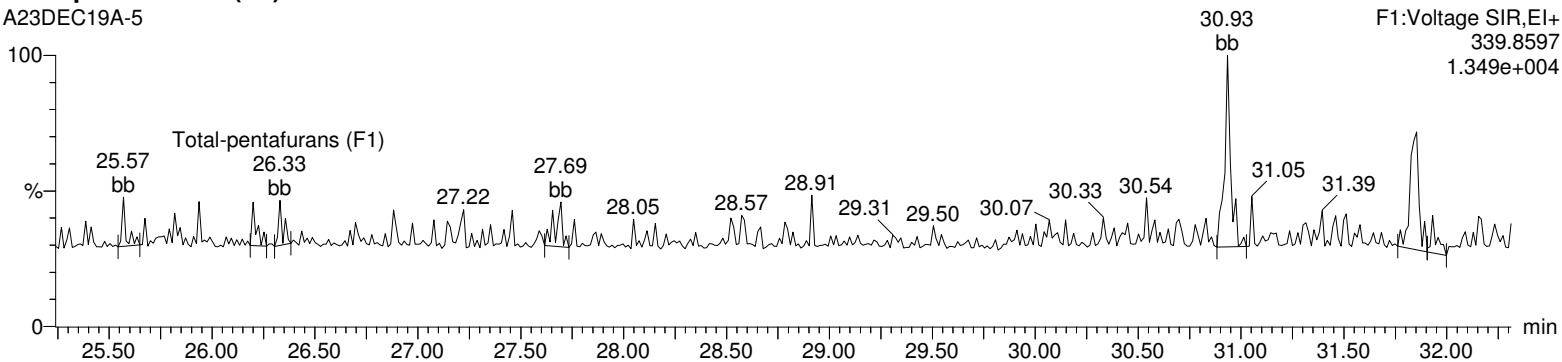
Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

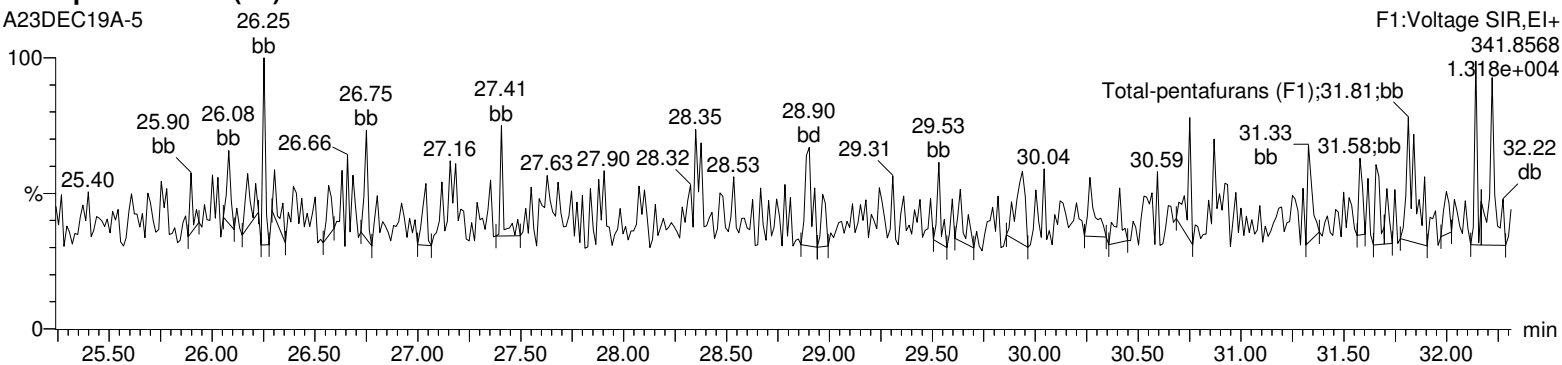
Total-pentafurans (F1)

A23DEC19A-5



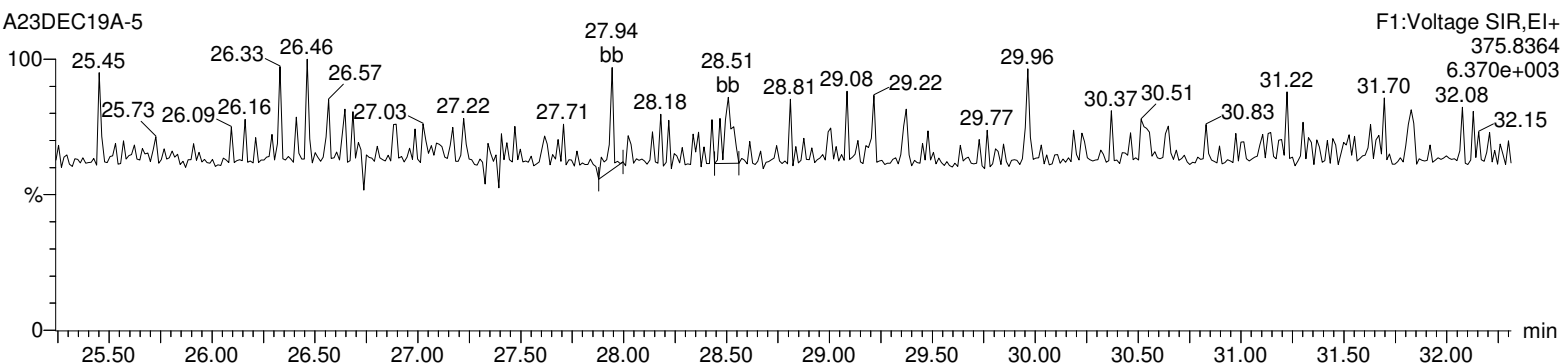
Total-pentafurans (F1)

A23DEC19A-5



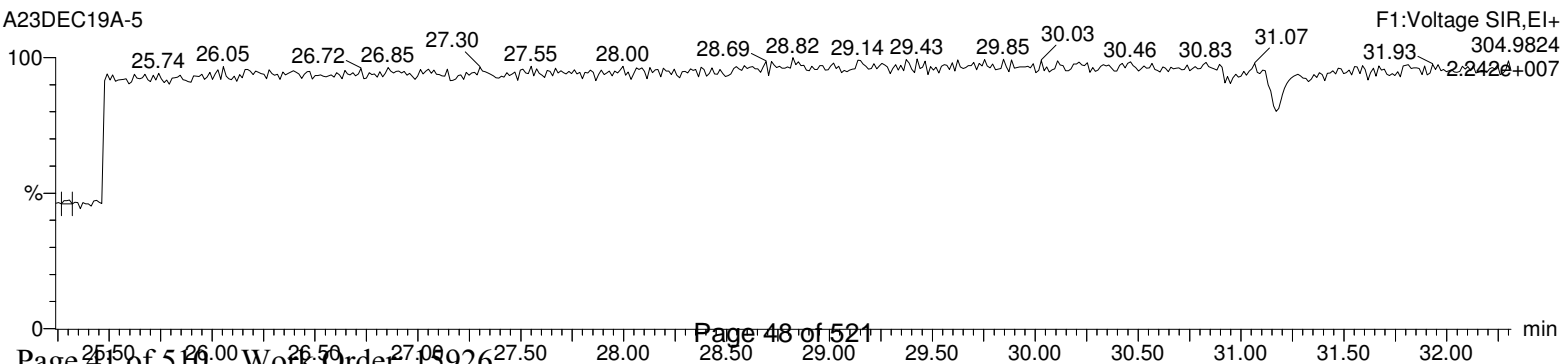
HxDPE

A23DEC19A-5



Lock Mass F1

A23DEC19A-5



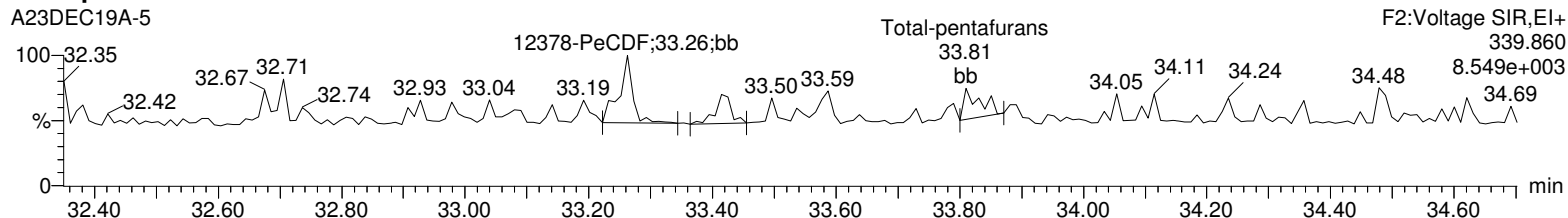
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

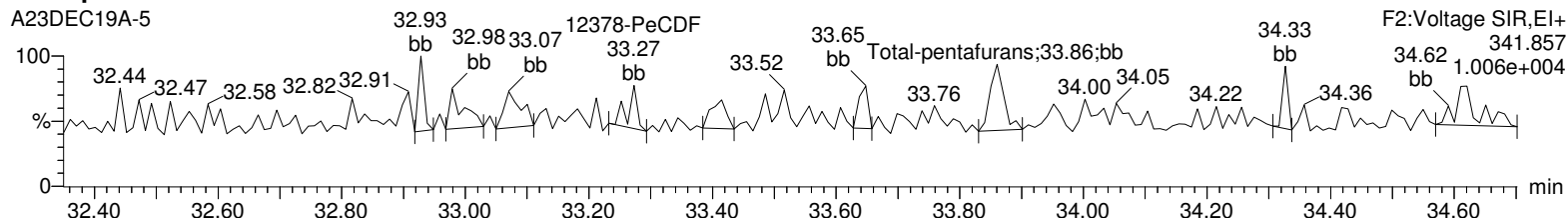
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

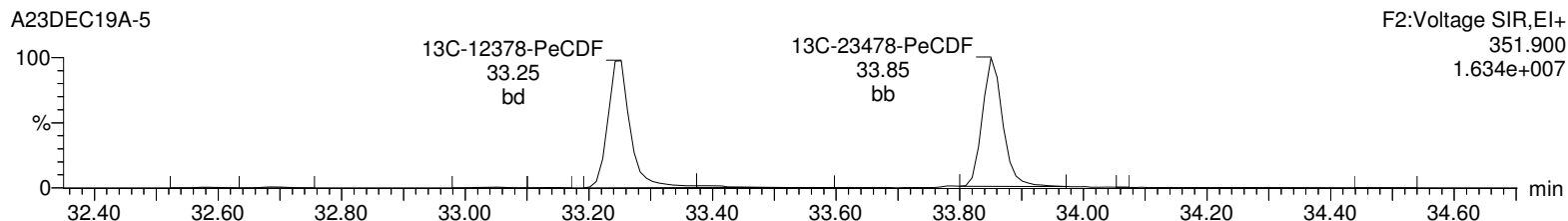
Total-pentafurans



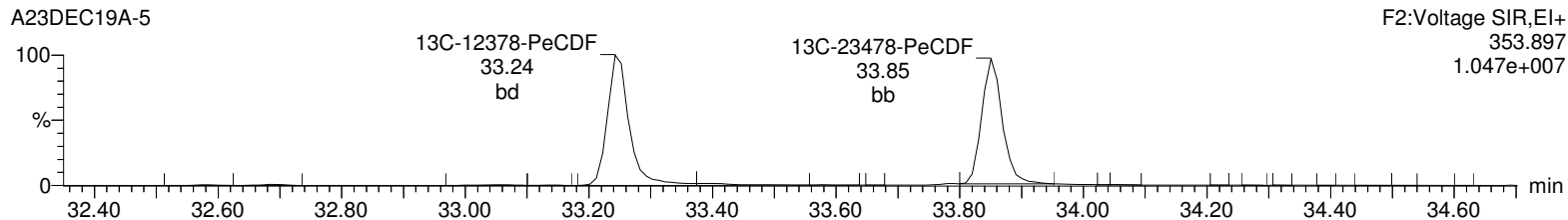
Total-pentafurans



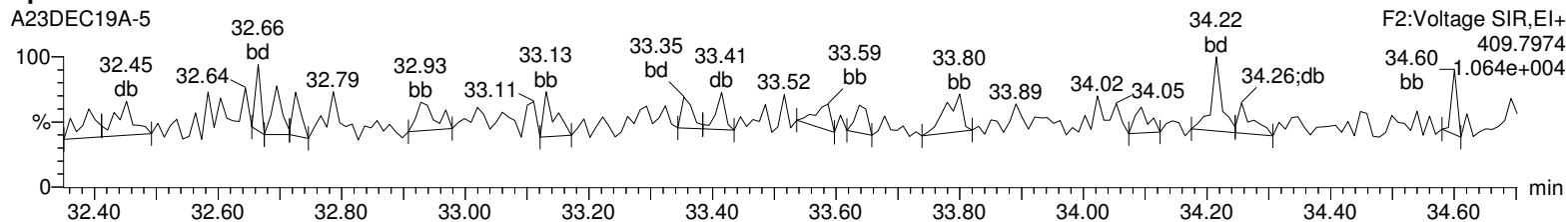
13C-12378-PeCDF



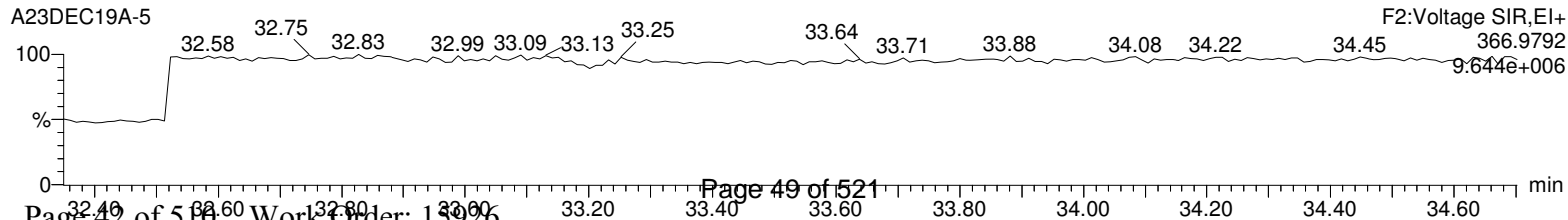
13C-12378-PeCDF



HpDPE



Lock Mass F2



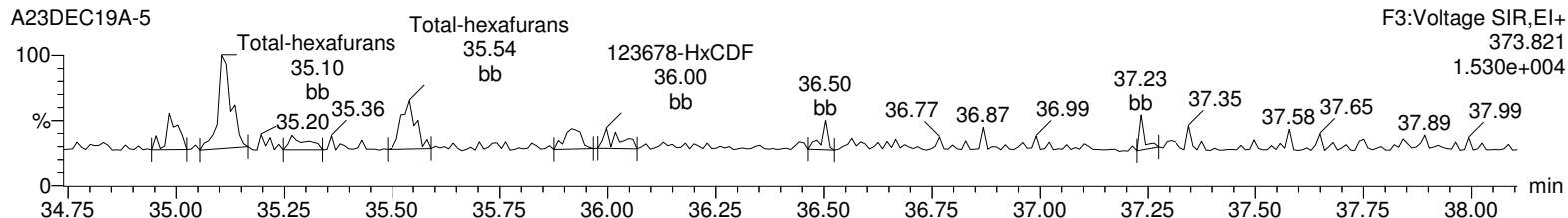
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

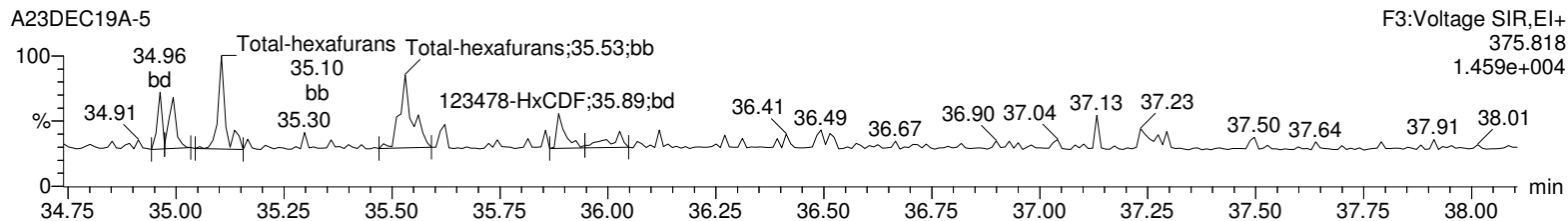
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

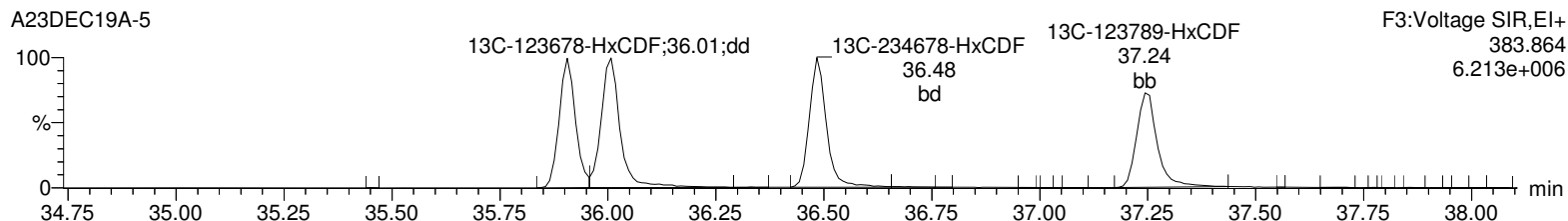
Total-hexafurans



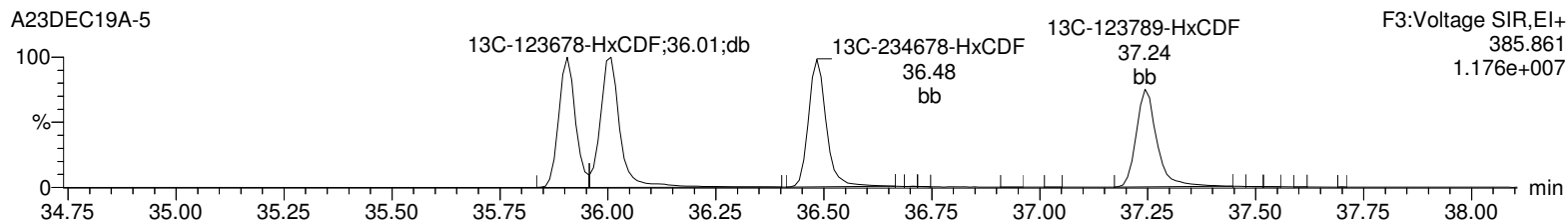
Total-hexafurans



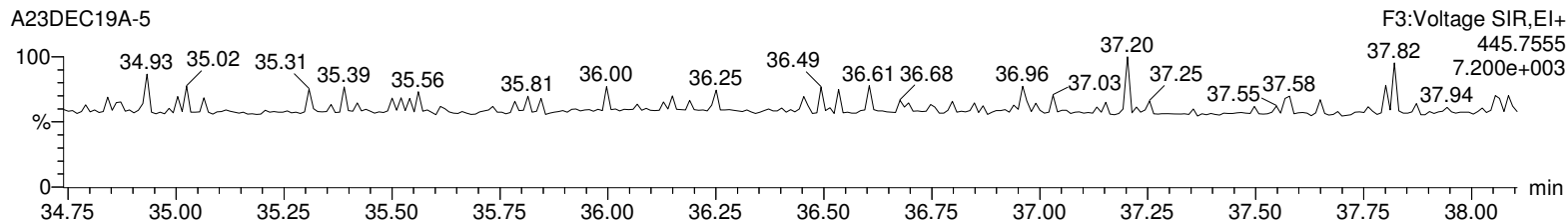
13C-123478-HxCDF



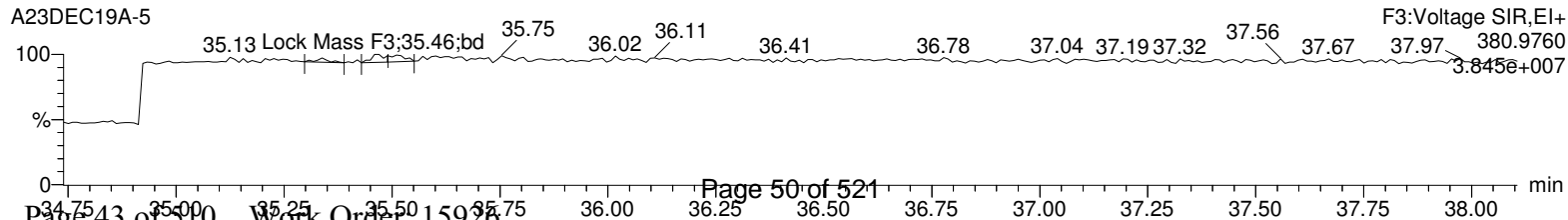
13C-123478-HxCDF



OcDPE



Lock Mass F3



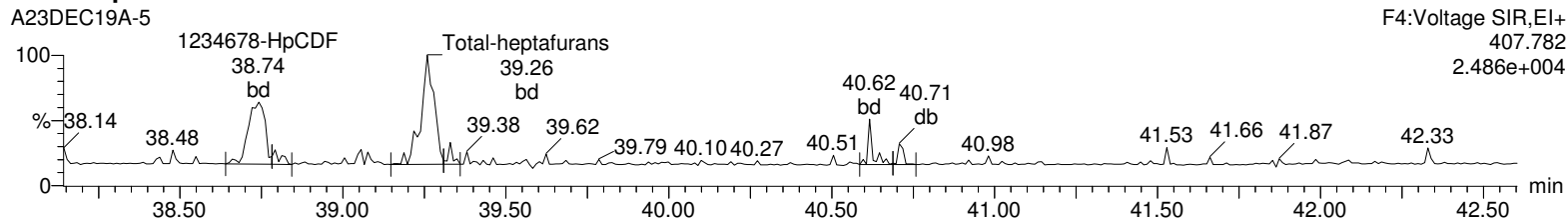
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Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

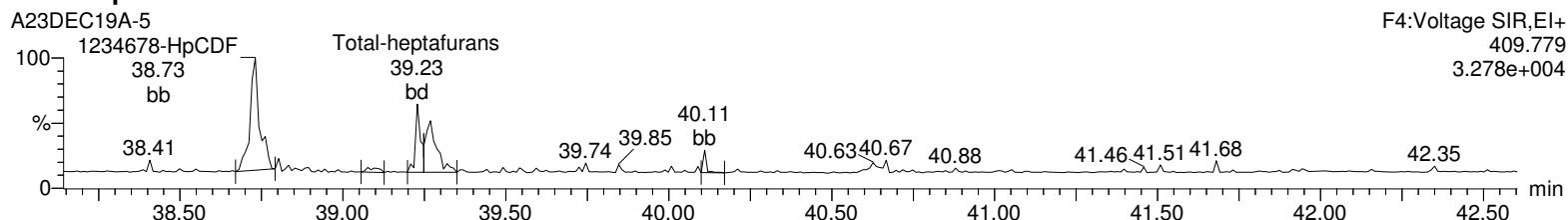
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

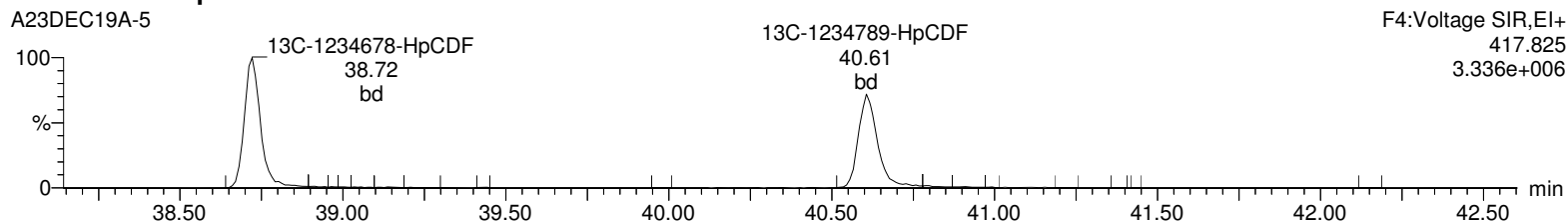
Total-heptafurans



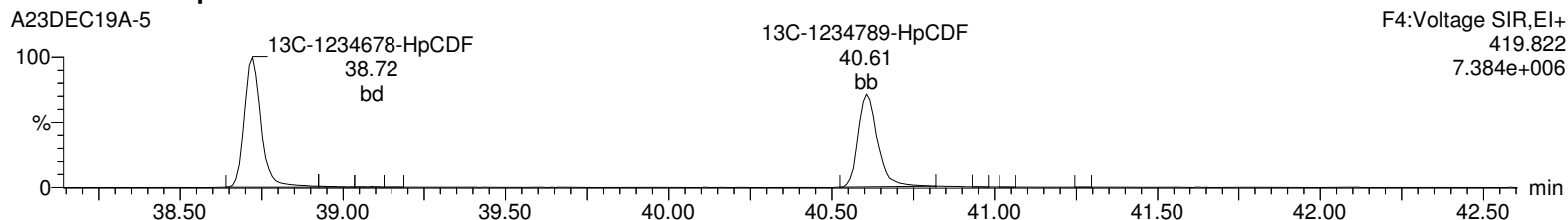
Total-heptafurans



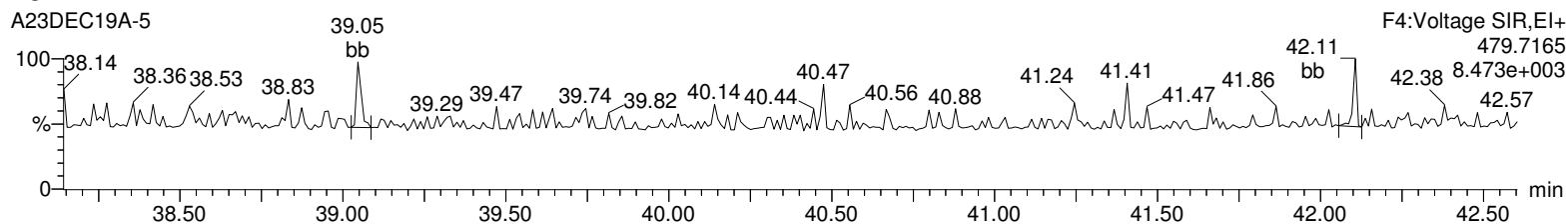
13C-1234678-HpCDF



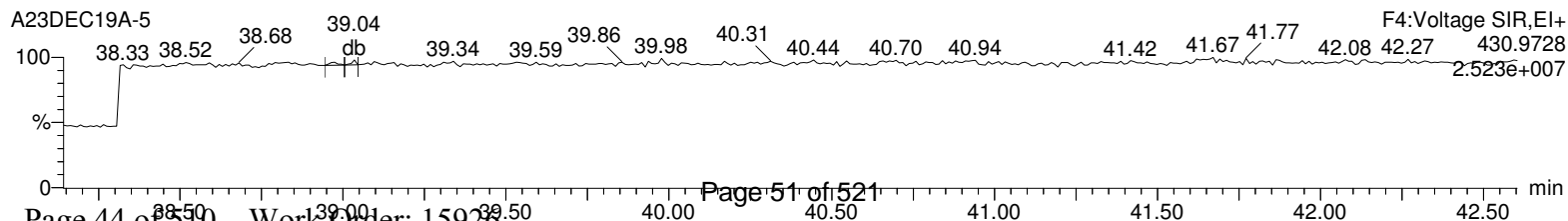
13C-1234678-HpCDF



NoDPE



Lock Mass F4



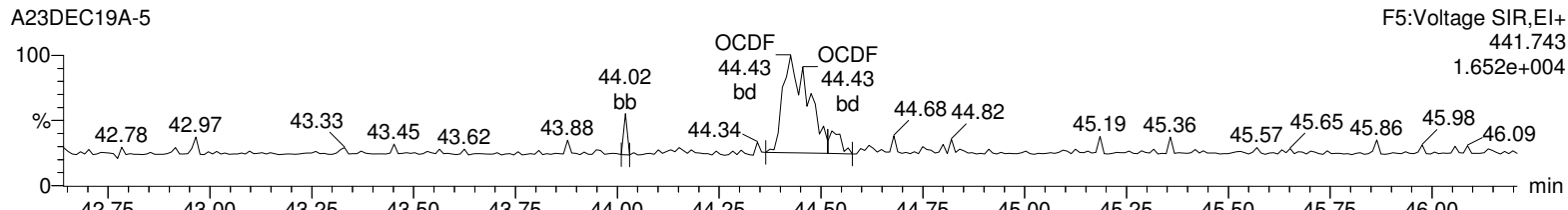
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

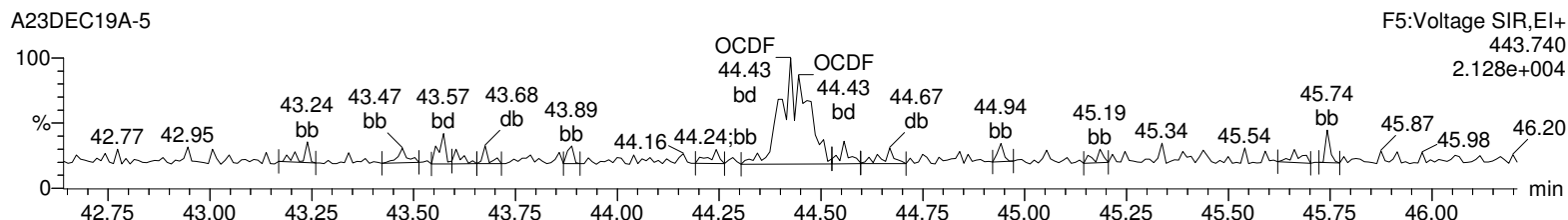
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-5, Date: 23-Dec-2019, Time: 20:40:03, ID: 15926001-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

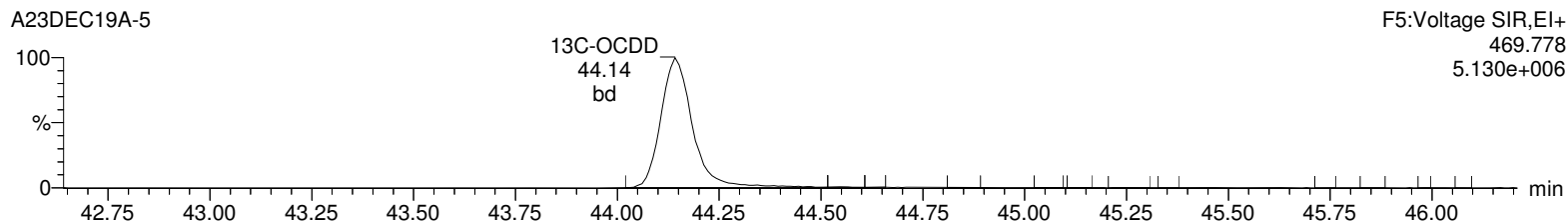
OCDF



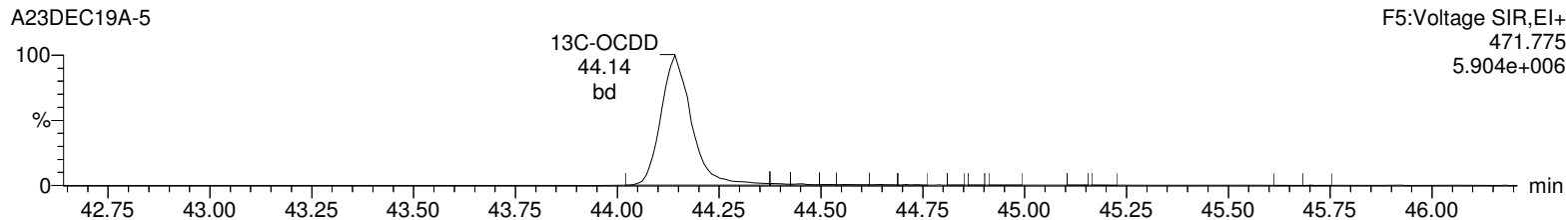
OCDF



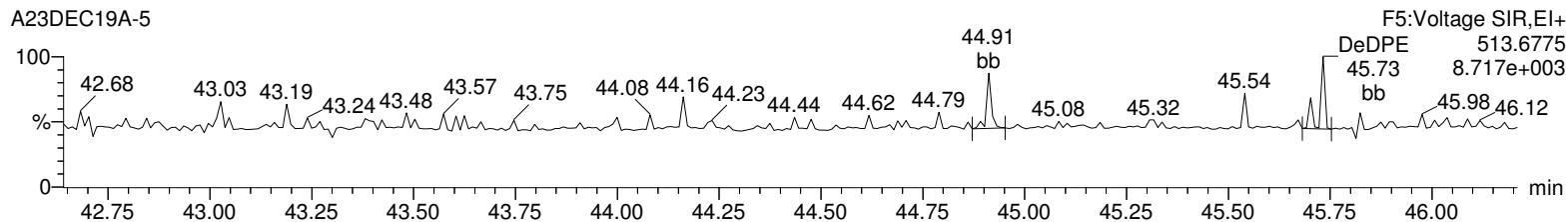
13C-OCDD



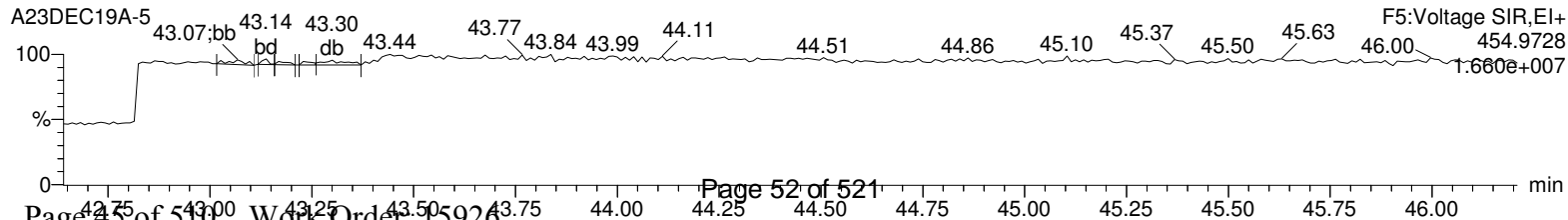
13C-OCDD



DeDPE



Lock Mass F5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926002	Date Collected: 12/04/2019 07:40	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: A2BMP0012S008		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 21:28	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-6		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1046.8 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00153	ng/L	0.00153	0.00955
40321-76-4	1,2,3,7,8-PeCDD	JK	0.00191	ng/L	0.000877	0.0478
39227-28-6	1,2,3,4,7,8-HxCDD	JK	0.00285	ng/L	0.00185	0.0478
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.0048	ng/L	0.00179	0.0478
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.00384	ng/L	0.00184	0.0478
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.0641	ng/L	0.00168	0.0478
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.314	ng/L	0.00478	0.0955
51207-31-9	2,3,7,8-TCDF	U	0.00137	ng/L	0.00137	0.00955
57117-41-6	1,2,3,7,8-PeCDF	U	0.000766	ng/L	0.000766	0.0478
57117-31-4	2,3,4,7,8-PeCDF	U	0.00078	ng/L	0.00078	0.0478
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.00123	ng/L	0.00123	0.0478
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.00121	ng/L	0.00121	0.0478
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.00118	ng/L	0.00118	0.0478
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.0016	ng/L	0.0016	0.0478
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.0137	ng/L	0.00124	0.0478
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.0016	ng/L	0.0016	0.0478
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.0182	ng/L	0.00292	0.0955
41903-57-5	Total TeCDD	U	0.00153	ng/L	0.00153	0.00955
36088-22-9	Total PeCDD	JK	0.00191	ng/L	0.000877	0.0478
34465-46-8	Total HxCDD	JK	0.0225	ng/L	0.00179	0.0478
37871-00-4	Total HpCDD	J	0.100	ng/L	0.00168	0.0478
30402-14-3	Total TeCDF	U	0.00137	ng/L	0.00137	0.00955
30402-15-4	Total PeCDF	JK	0.00145	ng/L	0.000621	0.0478
55684-94-1	Total HxCDF	BJK	0.0114	ng/L	0.00118	0.0478
38998-75-3	Total HpCDF	J	0.0331	ng/L	0.00124	0.0478
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.00394	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00517	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.53	1.91	ng/L	80.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.83	1.91	ng/L	95.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.43	1.91	ng/L	74.7	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.55	1.91	ng/L	81.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.67	1.91	ng/L	87.3	(23%-140%)
13C-OCDD		2.74	3.82	ng/L	71.7	(17%-157%)
13C-2,3,7,8-TCDF		1.64	1.91	ng/L	85.6	(24%-169%)
13C-1,2,3,7,8-PeCDF		2.00	1.91	ng/L	104	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.80	1.91	ng/L	94.2	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.38	1.91	ng/L	72.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.45	1.91	ng/L	75.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.50	1.91	ng/L	78.6	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.50	1.91	ng/L	78.6	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 2 of 2

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926002	Date Collected: 12/04/2019 07:40	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: A2BMP0012S008		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 21:28	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-6		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1046.8 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.37	1.91	ng/L	71.9 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.54	1.91	ng/L	80.6 (26%-138%)
37Cl-2,3,7,8-TCDD			0.170	0.191	ng/L	89.2 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
J Value is estimated
K Estimated Maximum Possible Concentration
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:15:21 Eastern Standard Time
 Printed: Tuesday, December 24, 2019 09:15:46 Eastern Standard Time

Method: Untitled 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.0802		3051			2060			
2	12378-PeCDD	4.99e2	2.37e2	7.36e2	34.03	1.000	2.11	YES	0.100	0.0459	1.88e4	2091	9.0	7.15e3	1100	6.5	bb	bd
3	123478-HxCDD	4.66e2	5.32e2	9.98e2	36.60	1.000	0.88	YES	0.149	0.0966	1.28e4	3022	4.2	1.26e4	2544	5.0	MM	MM
4	123678-HxCDD	1.05e3	9.69e2	2.02e3	36.69	1.000	1.08	NO	0.251	0.0936	1.96e4	3022	6.5	1.82e4	2544	7.2	MM	db
5	123789-HxCDD	8.16e2	6.45e2	1.46e3	36.94	1.007	1.27	NO	0.201	0.0965	1.60e4	3022	5.3	1.65e4	2544	6.5	bb	bb
6	1234678-HpCDD	1.12e4	1.06e4	2.18e4	39.96	1.001	1.06	NO	3.353	0.0881	1.53e5	1589	96.3	1.72e5	1863	92.4	bd	bd
7	OCDD	3.61e4	4.22e4	7.83e4	44.15	1.000	0.86	NO	16.422	0.250	4.26e5	2642	161.3	4.91e5	2524	194.5	bd	bd
8	2378-TCDF	8.16e1	8.37e1	1.65e2	30.38	1.003	0.98	YES	0.013	0.0718	2.81e3	1324	2.1	3.29e3	2987	1.1	bd	bb
9	12378-PeCDF							NO		0.0401		2008			2573			
10	23478-PeCDF							NO		0.0408		2008			2573			
11	123478-HxCDF	1.59e2	1.85e2	3.44e2	35.90	1.000	0.86	YES	0.037	0.0642	4.89e3	2413	2.0	5.44e3	2686	2.0	MM	bb
12	123678-HxCDF	2.27e2	2.13e2	4.40e2	36.01	1.001	1.06	NO	0.042	0.0632	5.94e3	2413	2.5	4.89e3	2686	1.8	bb	bb
13	234678-HxCDF	2.65e2	1.88e2	4.53e2	36.49	1.001	1.41	NO	0.044	0.0620	9.76e3	2413	4.0	4.38e3	2686	1.6	bb	MM
14	123789-HxCDF							NO		0.0839		2413			2686			
15	1234678-HpCDF	2.67e3	2.82e3	5.49e3	38.72	1.001	0.94	NO	0.717	0.0647	4.75e4	2304	20.6	4.99e4	1027	48.6	bb	bd
16	1234789-HpCDF	1.33e2	1.19e2	2.51e2	40.61	1.000	1.12	NO	0.036	0.0836	3.46e3	2304	1.5	4.53e3	1027	4.4	bb	bd
17	OCDF	2.48e3	2.82e3	5.30e3	44.46	1.007	0.88	NO	0.954	0.153	3.06e4	960	31.9	4.07e4	2726	14.9	bd	bd
18	13C-2378-TCDD	4.69e5	6.14e5	1.08e6	31.11	1.018	0.76	NO	80.197	0.182	7.80e6	8052	968.8	1.01e7	4054	2492.8	bb	bb
19	13C-12378-PeCDD	5.26e5	3.35e5	8.61e5	34.02	1.114	1.57	NO	95.793	0.243	1.24e7	7473	1662.8	8.00e6	3315	2411.8	bb	bb
20	13C-123478-HxCDD	3.99e5	3.15e5	7.13e5	36.60	0.991	1.27	NO	74.667	0.183	8.56e6	8594	996.6	6.81e6	4036	1686.3	bd	bd
21	13C-123678-HxCDD	4.75e5	3.76e5	8.52e5	36.68	0.993	1.26	NO	81.052	0.166	8.79e6	8594	1022.6	7.06e6	4036	1748.7	dd	dd
22	13C-1234678-HpCDD	3.20e5	3.05e5	6.25e5	39.94	1.082	1.05	NO	87.274	0.175	4.83e6	4955	974.4	4.55e6	4102	1108.8	bd	bd
23	13C-OCDD	4.63e5	5.18e5	9.81e5	44.13	1.195	0.90	NO	143.347	0.252	5.03e6	7116	706.2	5.68e6	5378	1055.5	bd	bd
24	13C-2378-TCDF	5.58e5	7.22e5	1.28e6	30.31	0.992	0.77	NO	85.643	0.277	6.69e6	13220	506.0	8.69e6	7262	1196.6	bb	bb
25	13C-12378-PeCDF	7.74e5	4.89e5	1.26e6	33.23	1.088	1.58	NO	104.439	0.425	1.85e7	14507	1276.1	1.16e7	10883	1066.8	bd	bd
26	13C-23478-PeCDF	7.28e5	4.71e5	1.20e6	33.83	1.108	1.55	NO	94.188	0.404	1.73e7	14507	1191.1	1.12e7	10883	1030.8	bb	bb
27	13C-123478-HxCDF	2.91e5	5.64e5	8.55e5	35.89	0.972	0.52	NO	72.262	0.248	6.22e6	10234	607.9	1.22e7	11014	1108.8	bd	bd
28	13C-123678-HxCDF	3.42e5	6.65e5	1.01e6	35.99	0.975	0.51	NO	75.771	0.221	6.58e6	10234	642.5	1.26e7	11014	1145.8	dd	dd
29	13C-234678-HxCDF	3.05e5	6.02e5	9.07e5	36.47	0.988	0.51	NO	78.639	0.255	6.09e6	10234	594.9	1.15e7	11014	1047.8	bb	bd
30	13C-123789-HxCDF	2.67e5	5.43e5	8.10e5	37.22	1.008	0.49	NO	78.620	0.285	4.73e6	10234	462.0	9.51e6	11014	863.3	bb	bd

Quantify Sample Summary Report
 Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:15:21 Eastern Standard Time
 Printed: Tuesday, December 24, 2019 09:15:46 Eastern Standard Time

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	2.03e5	4.63e5	6.67e5	38.70	1.048	0.44	NO	71.890	0.184	3.41e6	4979	685.0	8.02e6	7369	1088.0	bb	bb
32	13C-1234789-HpCDF	1.74e5	4.07e5	5.82e5	40.60	1.100	0.43	NO	80.554	0.236	2.48e6	4979	498.5	5.70e6	7369	773.7	bb	bd
33	13C-1234-TCDD	5.22e5	6.75e5	1.20e6	30.54	0.000	0.77	NO	100.000	0.205	6.44e6	8052	800.0	8.24e6	4054	2032.8	bb	bb
34	13C-123789-HxCDD	5.93e5	4.73e5	1.07e6	36.92	0.000	1.25	NO	100.000	0.164	1.07e7	8594	1247.3	8.57e6	4036	2123.1	dd	dd
35	37Cl+2378-TCDD	1.13e5		1.13e5	31.12	1.019			8.922	0.0473	1.90e6	2966	641.4				bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:15:21 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:15:46 Eastern Standard Time

Method: Untitled 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraoxins	2.13e2	5.90e1	2.72e2	25.33	3.61	YES	0.028	0.0802	8.46e3	3051	2.8	3.77e3	2060	1.8	bb	bb
2	Total-tetraoxins	8.72e1	5.43e1	1.41e2	27.72	1.61	YES	0.015	0.0802	5.08e3	3051	1.7	1.67e3	2060	0.8	bb	db
3	Total-tetraoxins	1.31e2	5.43e1	1.85e2	28.04	2.41	YES	0.019	0.0802	4.74e3	3051	1.6	3.80e3	2060	1.8	bd	bb
4	Total-tetraoxins	1.14e2	5.41e1	1.68e2	28.32	2.10	YES	0.018	0.0802	4.08e3	3051	1.3	1.54e3	2060	0.7	bb	bb
5	Total-tetraoxins	1.11e2	1.28e2	2.39e2	29.60	0.87	NO	0.025	0.0802	4.51e3	3051	1.5	2.71e3	2060	1.3	bb	bd
6	Total-tetraoxins	1.87e2	6.96e1	2.56e2	29.87	2.69	YES	0.027	0.0802	4.22e3	3051	1.4	3.66e3	2060	1.8	bb	bb
7	Total-tetraoxins	6.94e1	1.20e2	1.89e2	31.26	0.58	YES	0.020	0.0802	3.71e3	3051	1.2	6.84e3	2060	3.3	db	bd
8	Total-tetraoxins	2.01e2	7.32e1	2.74e2	31.88	2.75	YES	0.029	0.0802	6.98e3	3051	2.3	3.03e3	2060	1.5	bb	bd

52
PB

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	1.22e2	1.52e2	2.74e2	33.36	0.80	YES	0.037	0.0459	5.15e3	2091	2.5	4.28e3	1100	3.9	bd	bd
2	Total-pentadioxins	8.83e1	6.05e1	1.49e2	33.42	1.46	NO	0.020	0.0459	3.13e3	2091	1.5	1.85e3	1100	1.7	db	dd
3	Total-pentadioxins	5.11e1	7.74e1	1.28e2	33.56	0.66	YES	0.017	0.0459	2.29e3	2091	1.1	2.23e3	1100	2.0	bb	db
4	12378-PeCDD	4.99e2	2.37e2	7.36e2	34.03	2.11	YES	0.100	0.0459	1.88e4	2091	9.0	7.15e3	1100	6.5	bb	bd

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	6.14e2	5.20e2	1.13e3	35.38	1.18	NO	0.155	0.0955	1.35e4	3022	4.5	1.17e4	2544	4.6	bb	bb
2	Total-hexadioxins	3.35e2	1.10e2	4.45e2	35.88	3.06	YES	0.061	0.0955	6.77e3	3022	2.2	3.83e3	2544	1.5	MM	MM
3	Total-hexadioxins	1.85e3	1.25e3	3.10e3	36.04	1.49	YES	0.423	0.0955	3.13e4	3022	10.3	2.10e4	2544	8.2	bd	MM
4	123478-HxCDD	4.66e2	5.32e2	9.99e2	36.60	0.88	YES	0.149	0.0966	1.28e4	3022	4.2	1.26e4	2544	5.0	MM	MM
5	123678-HxCDD	1.05e3	9.69e2	2.02e3	36.69	1.08	NO	0.251	0.0936	1.96e4	3022	6.5	1.82e4	2544	7.2	MM	db
6	123789-HxCDD	8.16e2	6.45e2	1.46e3	36.94	1.27	NO	0.201	0.0965	1.60e4	3022	5.3	1.65e4	2544	6.5	bb	bb
7	Total-hexadioxins	5.41e1	5.28e1	1.07e2	37.66	1.02	YES	0.015	0.0955	4.75e3	3022	1.6	2.35e3	2544	0.9	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:15:21 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:15:46 Eastern Standard Time

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HPD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-heptadioxins	6.34e3	5.96e3	1.29e4	39.05	1.06	NO	1.894	0.0881	1.05e5	1589	66.2	9.76e4	1863	52.4	bb	bd
2 1234678-HpCDD	1.12e4	1.06e4	2.18e4	39.96	1.06	NO	3.353	0.0881	1.53e5	1589	96.3	1.72e5	1863	92.4	bd	bd
3 Total-heptadioxins	2.71e2	6.12e2	8.83e2	40.11	0.44	YES	0.136	0.0881	7.74e3	1589	4.9	1.40e4	1863	7.5	dd	dd
4 Total-heptadioxins	1.65e2	1.00e2	2.65e2	40.15	1.65	YES	0.041	0.0881	6.33e3	1589	4.0	4.09e3	1863	2.2	dd	db

TF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-tetrafurans	7.16e1	8.29e1	1.55e2	26.11	0.86	NO	0.012	0.0718	1.18e3	1324	0.9	4.12e3	2987	1.4	bb	bb
2 Total-tetrafurans	8.21e1	1.57e2	2.39e2	26.97	0.52	YES	0.019	0.0718	1.80e3	1324	1.4	4.97e3	2987	1.7	bb	bb
3 Total-tetrafurans	6.30e1	7.90e1	1.42e2	27.50	0.80	NO	0.011	0.0718	3.73e3	1324	2.8	2.72e3	2987	0.9	bb	bb
4 Total-tetrafurans	5.72e1	6.29e1	1.20e2	28.09	0.91	YES	0.010	0.0718	1.25e3	1324	0.9	3.04e3	2987	1.0	bb	bb
5 Total-tetrafurans	5.64e1	8.68e1	1.43e2	28.40	0.65	YES	0.011	0.0718	2.93e3	1324	2.2	3.58e3	2987	1.2	bb	db
6 Total-tetrafurans	5.04e1	1.44e2	1.94e2	28.77	0.35	YES	0.015	0.0718	1.93e3	1324	1.5	2.88e3	2987	1.0	bb	bb
7 Total-tetrafurans	5.29e1	6.20e1	1.15e2	29.66	0.85	NO	0.009	0.0718	1.87e3	1324	1.4	4.71e3	2987	1.6	bb	bb
8 2378-TCDF	8.16e1	8.37e1	1.65e2	30.38	0.98	YES	0.013	0.0718	2.81e3	1324	2.1	3.29e3	2987	1.1	bd	bb
9 Total-tetrafurans	5.93e1	8.21e1	1.41e2	30.75	0.72	NO	0.011	0.0718	3.16e3	1324	2.4	3.28e3	2987	1.1	bb	bb
10 Total-tetrafurans	5.41e1	1.93e2	2.47e2	31.63	0.28	YES	0.020	0.0718	1.26e3	1324	0.9	6.92e3	2987	2.3	bb	dd
11 Total-tetrafurans	5.65e1	6.53e1	1.22e2	32.00	0.87	NO	0.010	0.0718	3.73e3	1324	2.8	2.38e3	2987	0.8	bb	bb

PF1

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-pentafurans (F1)	4.98e2	4.08e2	9.06e2	31.84	1.22	YES	0.076	0.0325	1.11e4	1079	10.3	1.15e4	2598	4.4	bb	bb
2 Total-pentafurans (F1)	5.72e1	5.79e1	1.15e2	32.13	0.99	YES	0.010	0.0325	3.80e3	1079	3.5	3.02e3	2598	1.2	bb	bb

PF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1 Total-pentafurans	1.57e2	1.53e2	3.10e2	32.63	1.03	YES	0.026	0.0404	6.35e3	2008	3.2	4.90e3	2573	1.9	dd	bd
2 Total-pentafurans	1.13e2	9.74e1	2.11e2	32.69	1.16	YES	0.018	0.0404	5.36e3	2008	2.7	3.46e3	2573	1.3	db	dd
3 Total-pentafurans	1.08e2	1.68e2	2.75e2	33.03	0.64	YES	0.023	0.0404	2.95e3	2008	1.5	5.22e3	2573	2.0	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:15:21 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:15:46 Eastern Standard Time

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HIF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	Total-hexaturans	5.68e2	4.49e2	1.02e3	34.97	1.26	NO	0.105	0.0677	1.49e4	2413	6.2	8.90e3	2686	3.3	bd	bb
	Total-hexaturans	1.63e3	1.12e3	2.76e3	35.09	1.46	YES	0.285	0.0677	3.77e4	2413	15.6	2.65e4	2686	9.9	db	bb
	Total-hexaturans	6.71e1	8.27e1	1.50e2	35.31	0.81	YES	0.015	0.0677	5.43e3	2413	2.2	7.61e3	2686	2.8	bb	bd
	Total-hexaturans	1.13e3	8.89e2	2.02e3	35.51	1.28	NO	0.209	0.0677	2.33e4	2413	9.6	1.53e4	2686	5.7	bb	bb
	Total-hexaturans	6.48e1	8.11e1	1.46e2	35.81	0.80	YES	0.015	0.0677	3.45e3	2413	1.4	3.53e3	2686	1.3	bb	bb
	123478-HxCDF	1.59e2	1.85e2	3.44e2	35.90	0.86	YES	0.037	0.0642	4.89e3	2413	2.0	5.44e3	2686	2.0	MM	bb
	123678-HxCDF	2.27e2	2.13e2	4.40e2	36.01	1.06	NO	0.042	0.0632	5.94e3	2413	2.5	4.89e3	2686	1.8	bb	bb
	234678-HxCDF	2.65e2	1.88e2	4.53e2	36.49	1.41	NO	0.044	0.0620	9.76e3	2413	4.0	4.38e3	2686	1.6	bb	MM

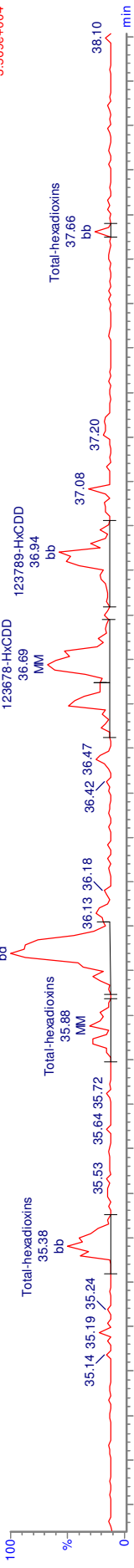
HIF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	1234678-HpCDF	2.67e3	2.82e3	5.49e3	38.72	0.94	NO	0.717	0.0647	4.75e4	2304	20.6	4.99e4	1027	48.6	bb	bd
	Total-heptaturans	3.88e3	3.56e3	7.44e3	39.23	1.09	NO	1.014	0.0736	6.30e4	2304	27.4	6.02e4	1027	58.7	bb	bd
	Total-heptaturans	1.12e2	1.14e2	2.27e2	39.43	0.99	NO	0.031	0.0736	2.44e3	2304	1.1	5.58e3	1027	5.4	bb	db
	1234789-HpCDF	1.33e2	1.19e2	2.51e2	40.61	1.12	NO	0.036	0.0836	3.46e3	2304	1.5	4.53e3	1027	4.4	bb	bd

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

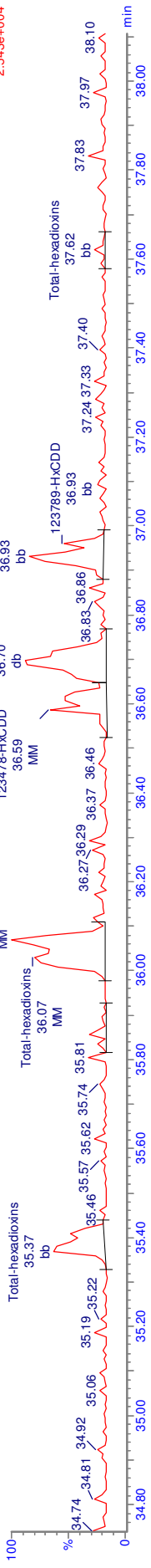
A23DEC19A6
 42649 15926002-1

F3:Voltage SIR,El+
 389.816
 3.569e+004

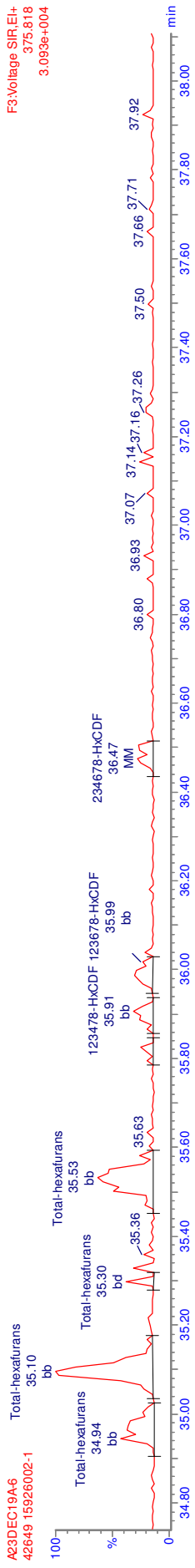
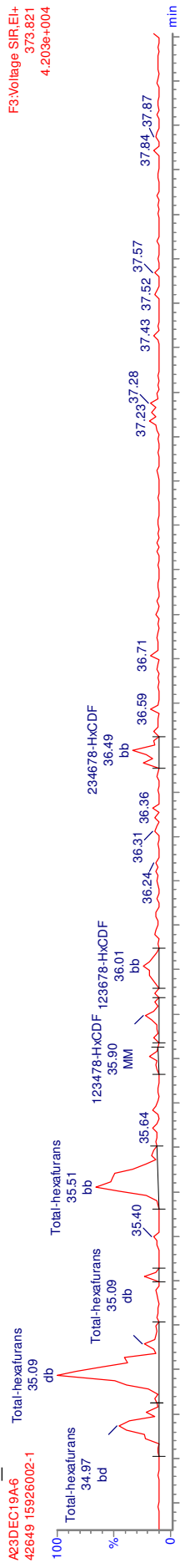


A23DEC19A6
 42649 15926002-1

F3:Voltage SIR,El+
 391.813
 2.543e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2



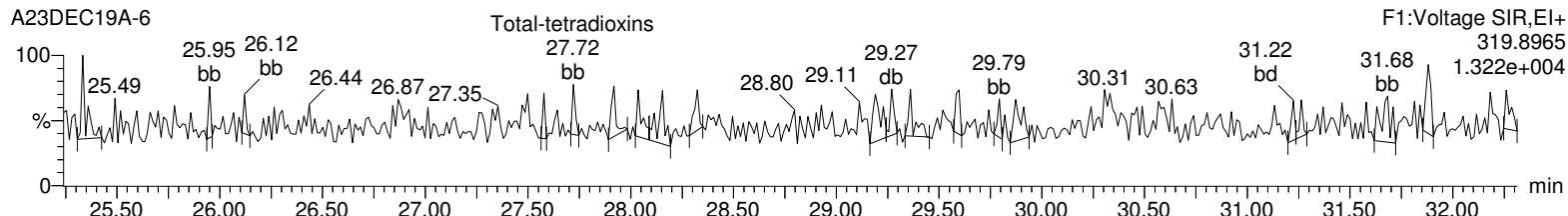
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Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

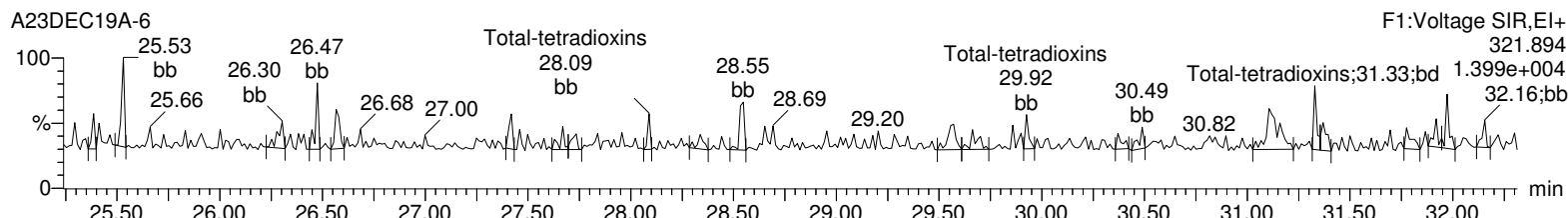
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Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

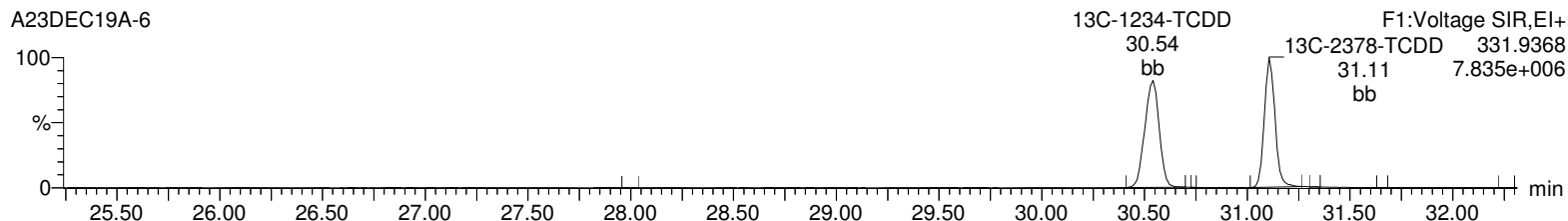
Total-tetradoxins



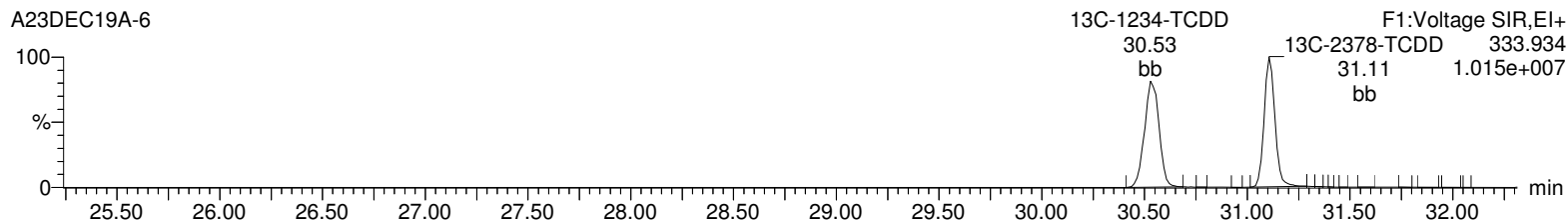
Total-tetradoxins



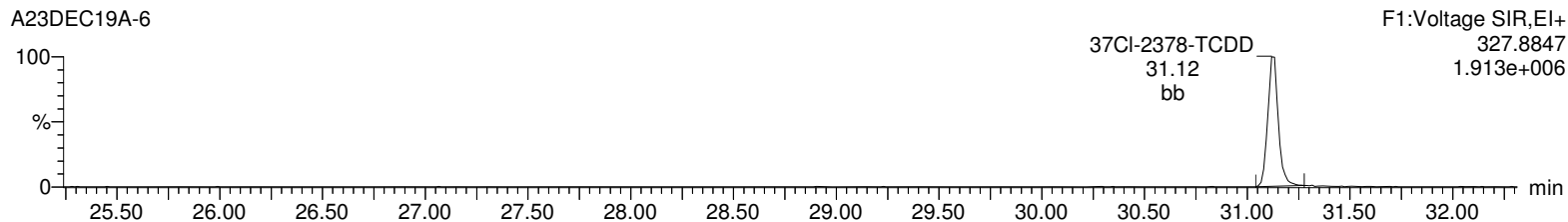
13C-2378-TCDD



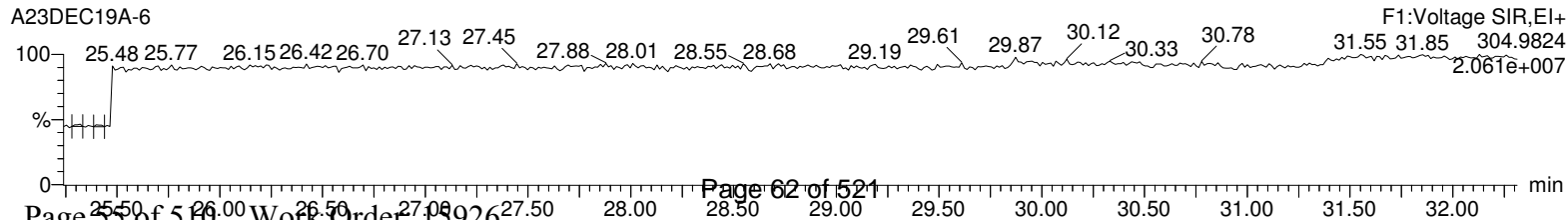
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

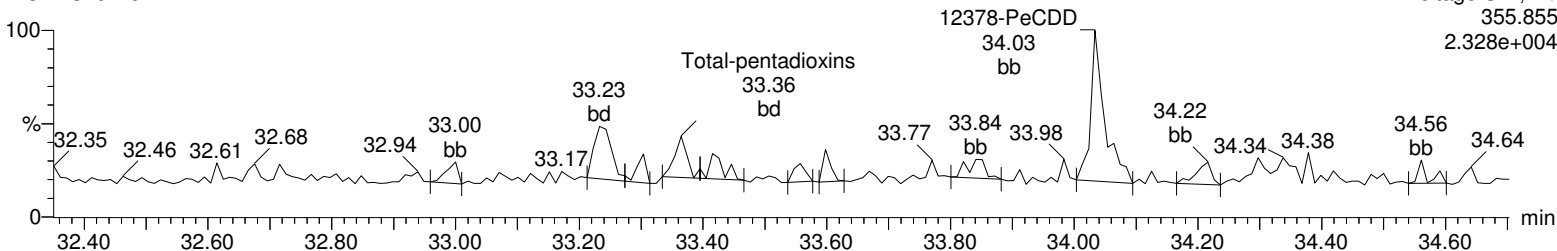
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-pentadioxins

A23DEC19A-6

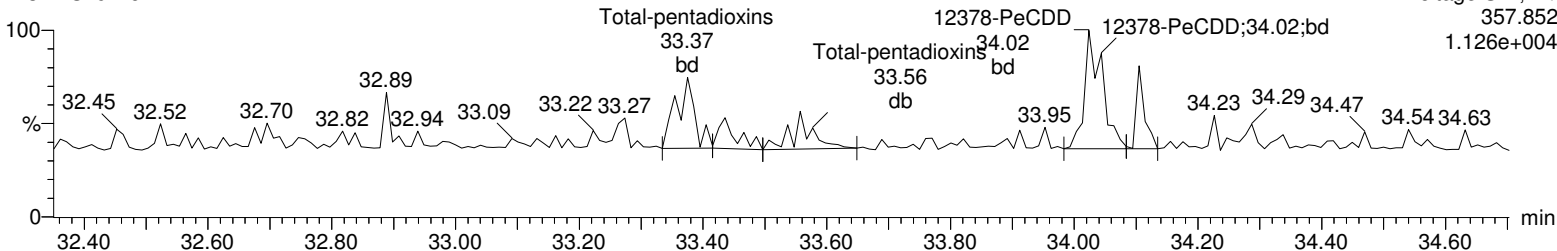
F2:Voltage SIR,EI+
355.855
2.328e+004



Total-pentadioxins

A23DEC19A-6

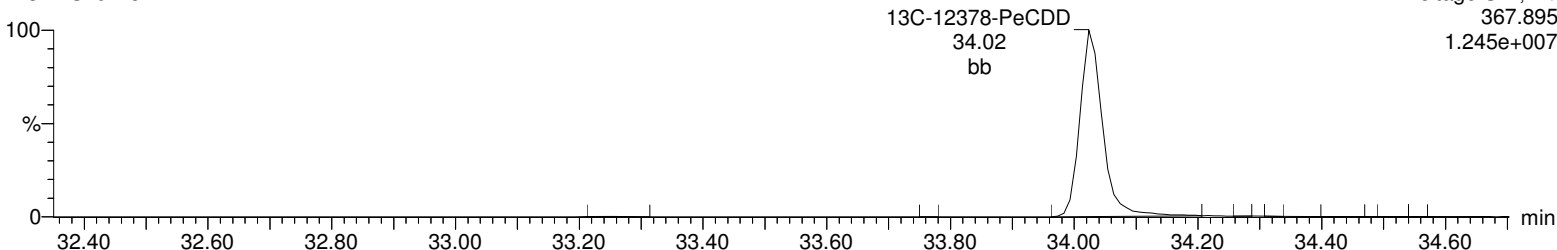
F2:Voltage SIR,EI+
357.852
1.126e+004



13C-12378-PeCDD

A23DEC19A-6

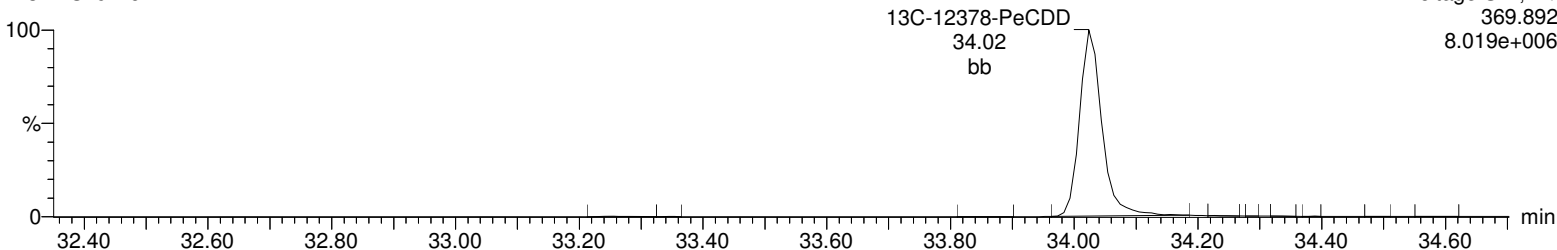
F2:Voltage SIR,EI+
367.895
1.245e+007



13C-12378-PeCDD

A23DEC19A-6

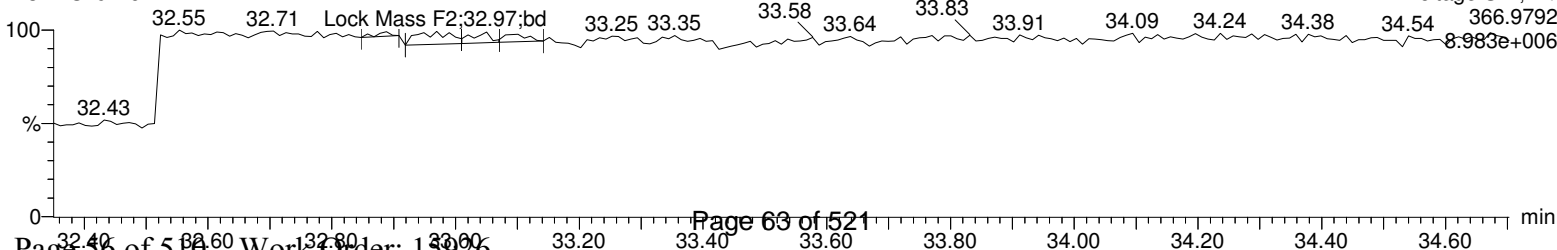
F2:Voltage SIR,EI+
369.892
8.019e+006



Lock Mass F2

A23DEC19A-6

F2:Voltage SIR,EI+
366.9792
8.983e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

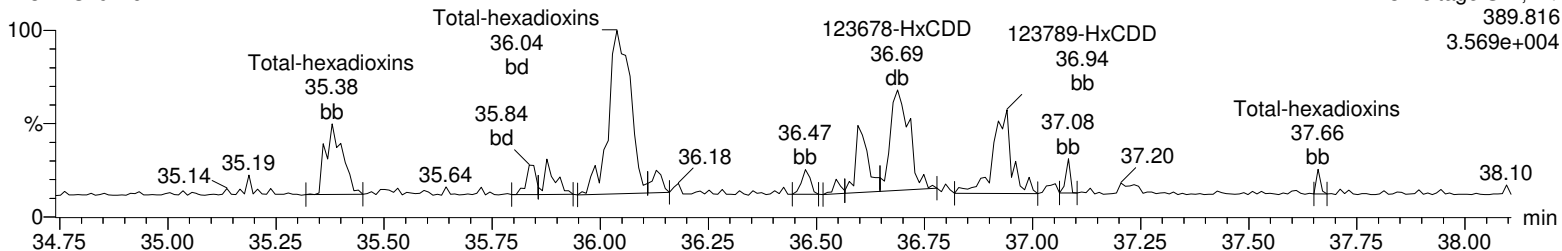
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Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A-6

F3:Voltage SIR,EI+

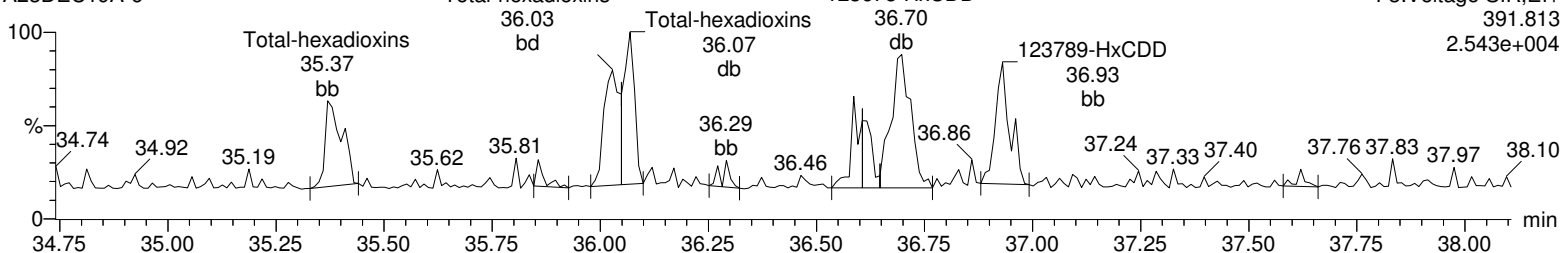


389.816
3.569e+004

Total-hexadioxins

A23DEC19A-6

F3:Voltage SIR,EI+

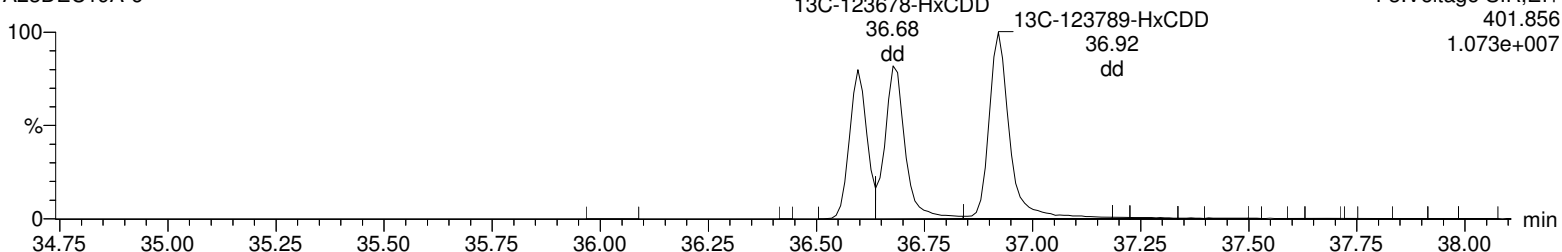


391.813
2.543e+004

13C-123478-HxCDD

A23DEC19A-6

F3:Voltage SIR,EI+

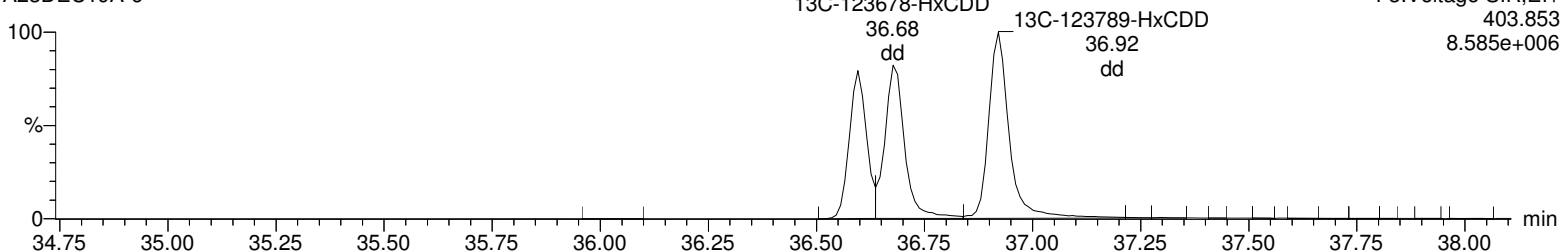


401.856
1.073e+007

13C-123478-HxCDD

A23DEC19A-6

F3:Voltage SIR,EI+

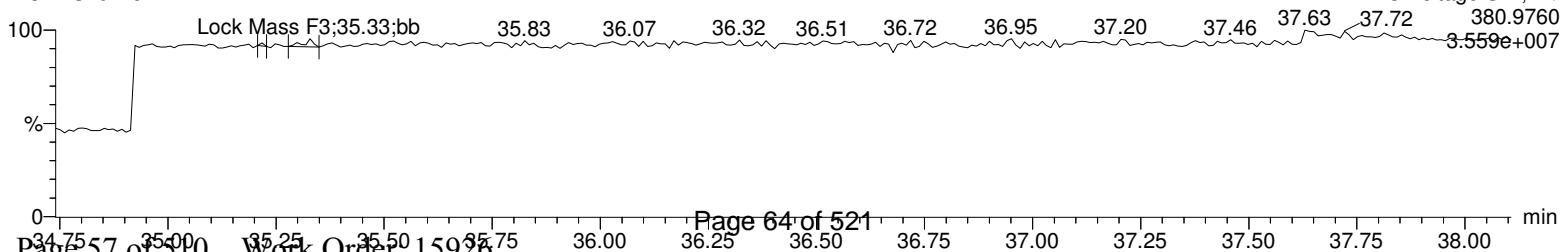


403.853
8.585e+006

Lock Mass F3

A23DEC19A-6

F3:Voltage SIR,EI+



380.9760
3.559e+007

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

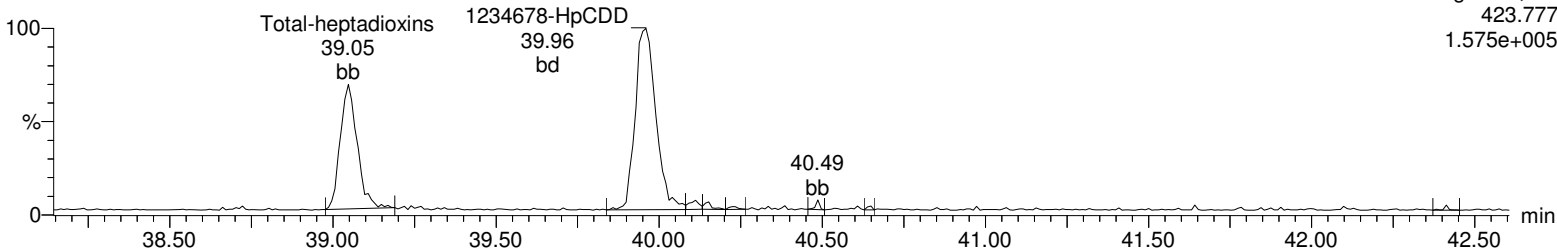
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Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-heptadioxins

A23DEC19A-6

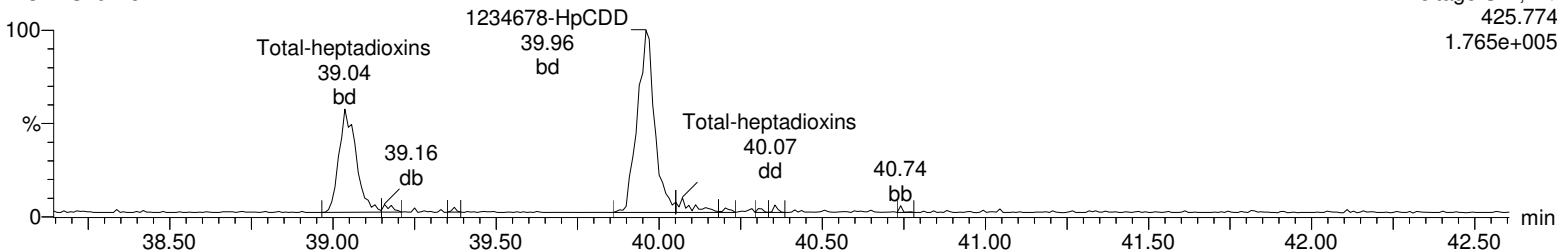
F4:Voltage SIR,EI+
423.777
1.575e+005



Total-heptadioxins

A23DEC19A-6

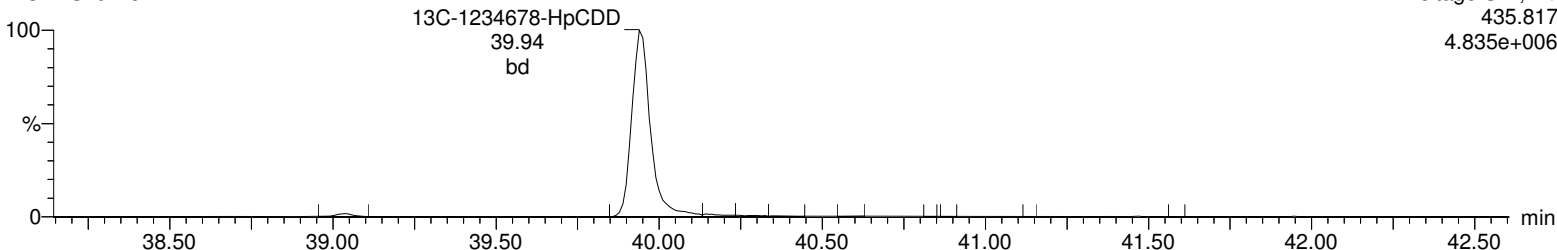
F4:Voltage SIR,EI+
425.774
1.765e+005



13C-1234678-HpCDD

A23DEC19A-6

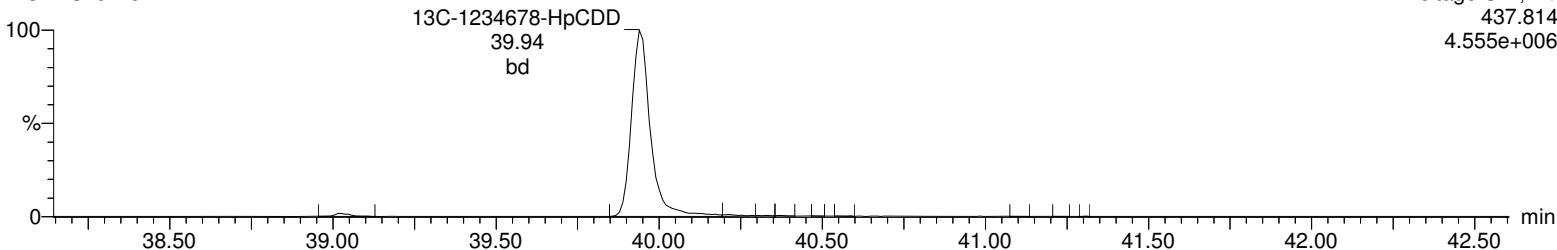
F4:Voltage SIR,EI+
435.817
4.835e+006



13C-1234678-HpCDD

A23DEC19A-6

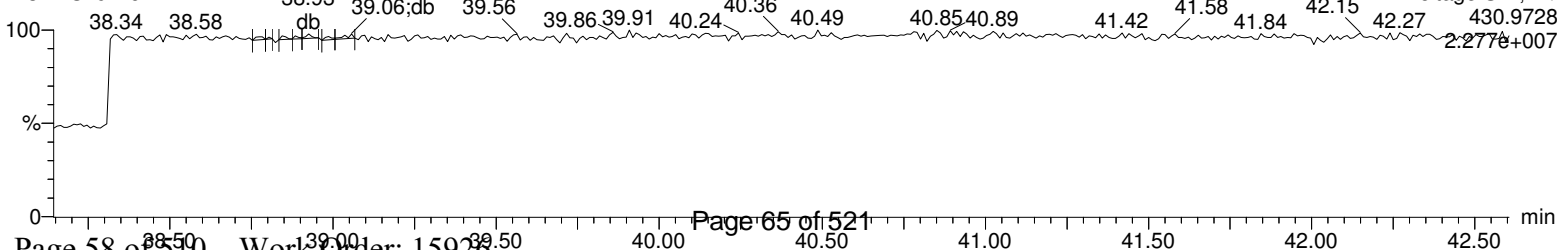
F4:Voltage SIR,EI+
437.814
4.555e+006



Lock Mass F4

A23DEC19A-6

F4:Voltage SIR,EI+
430.9728
2.277e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

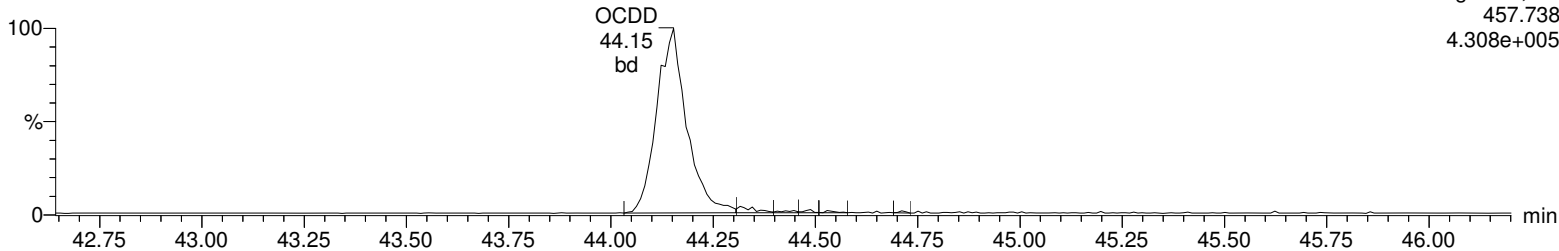
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OCDD

A23DEC19A-6

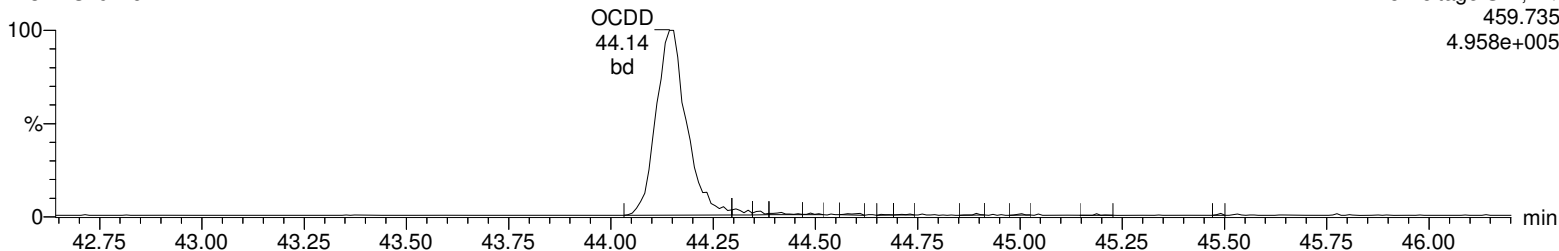
F5:Voltage SIR,EI+
457.738
4.308e+005



OCDD

A23DEC19A-6

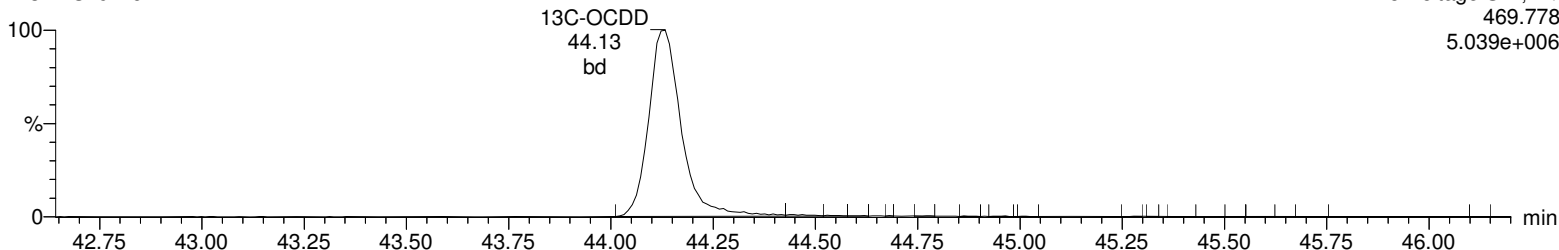
F5:Voltage SIR,EI+
459.735
4.958e+005



13C-OCDD

A23DEC19A-6

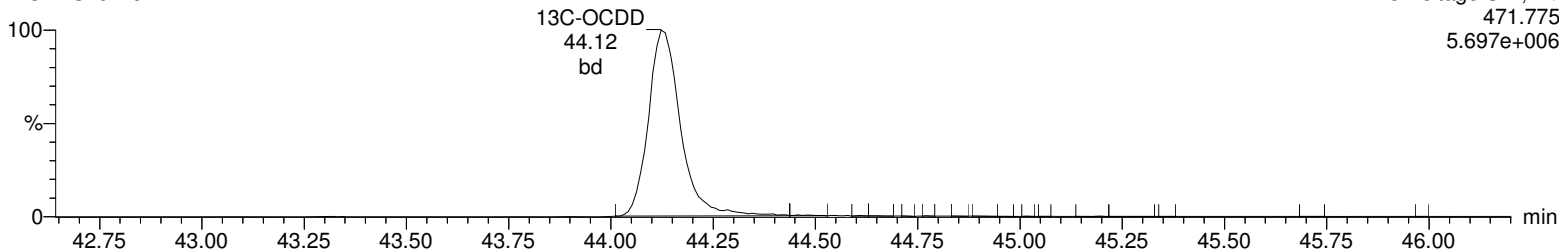
F5:Voltage SIR,EI+
469.778
5.039e+006



13C-OCDD

A23DEC19A-6

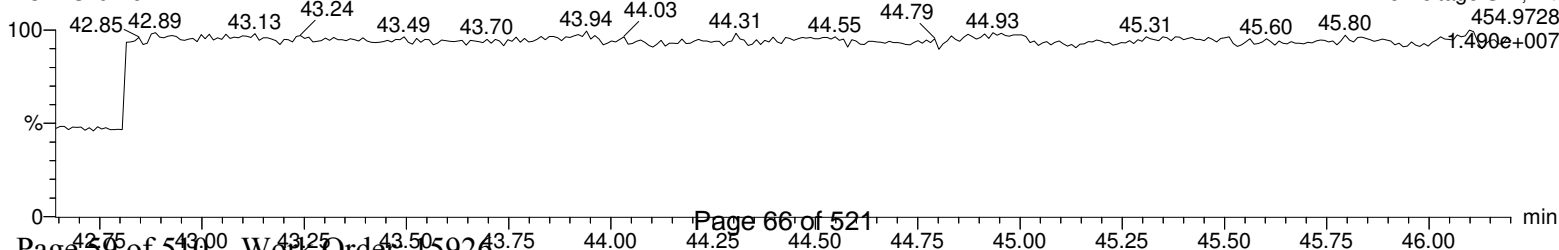
F5:Voltage SIR,EI+
471.775
5.697e+006



Lock Mass F5

A23DEC19A-6

F5:Voltage SIR,EI+
454.9728
1.490e+007



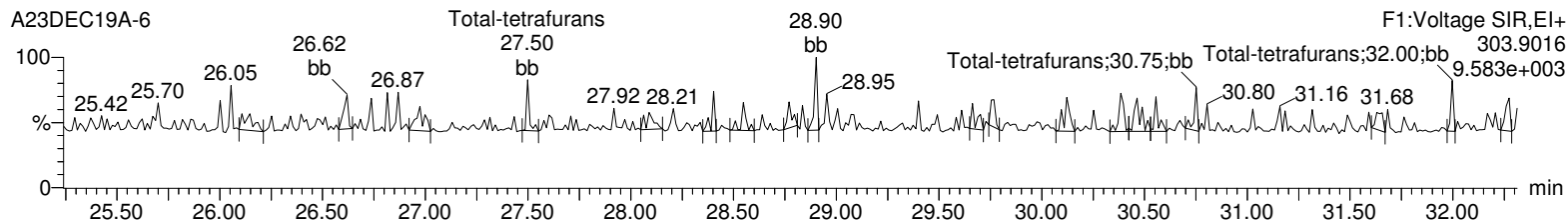
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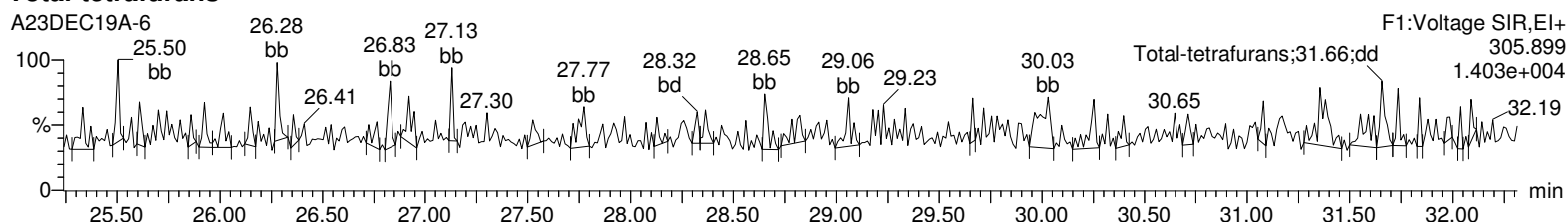
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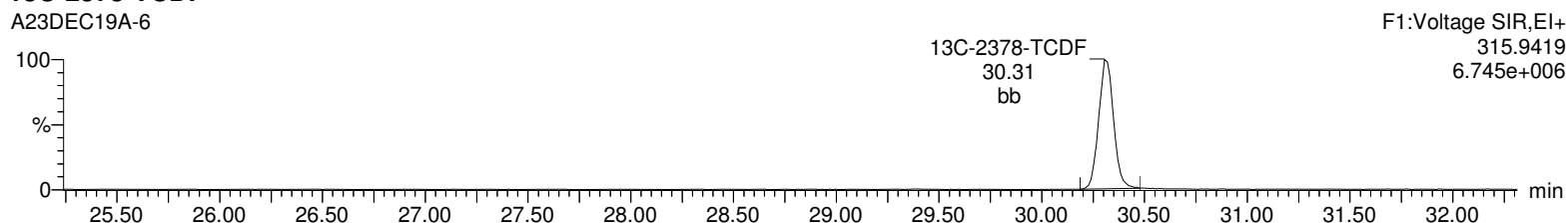
Total-tetrafurans



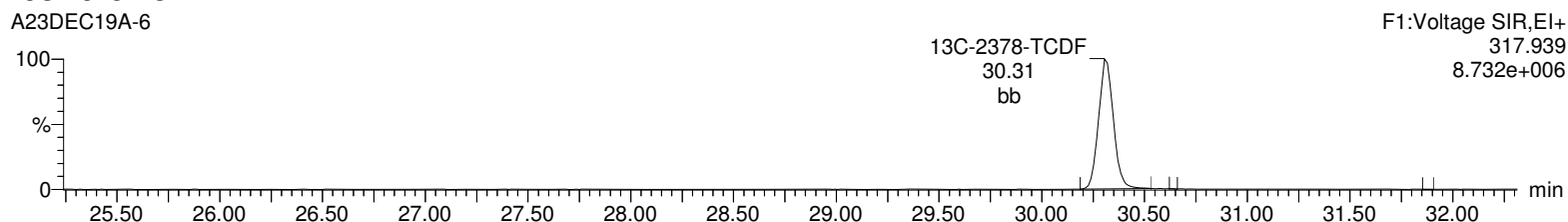
Total-tetrafurans



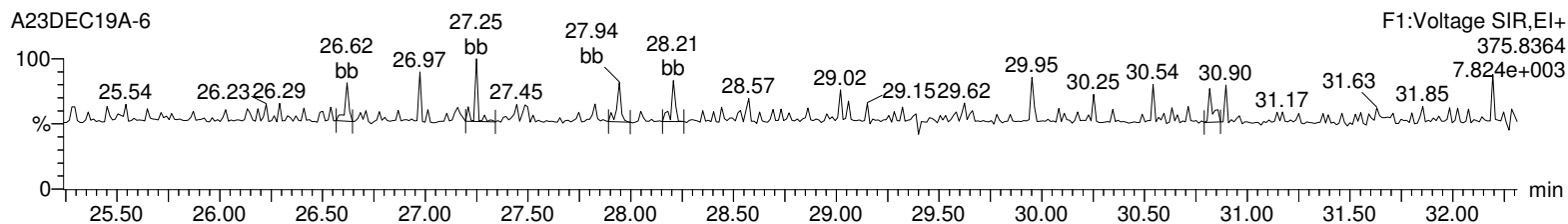
13C-2378-TCDF



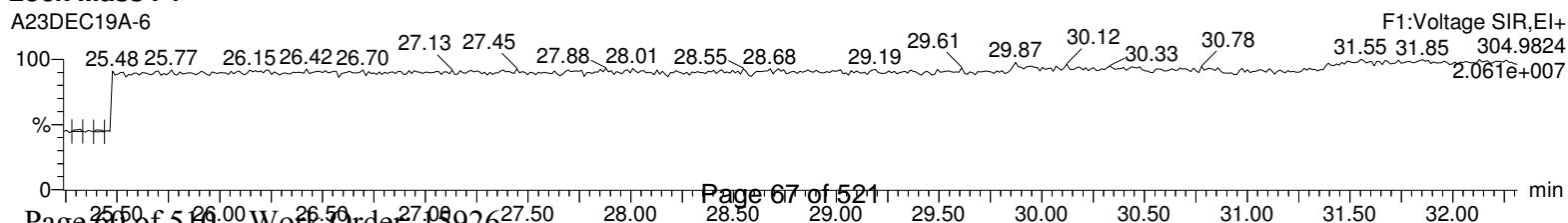
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

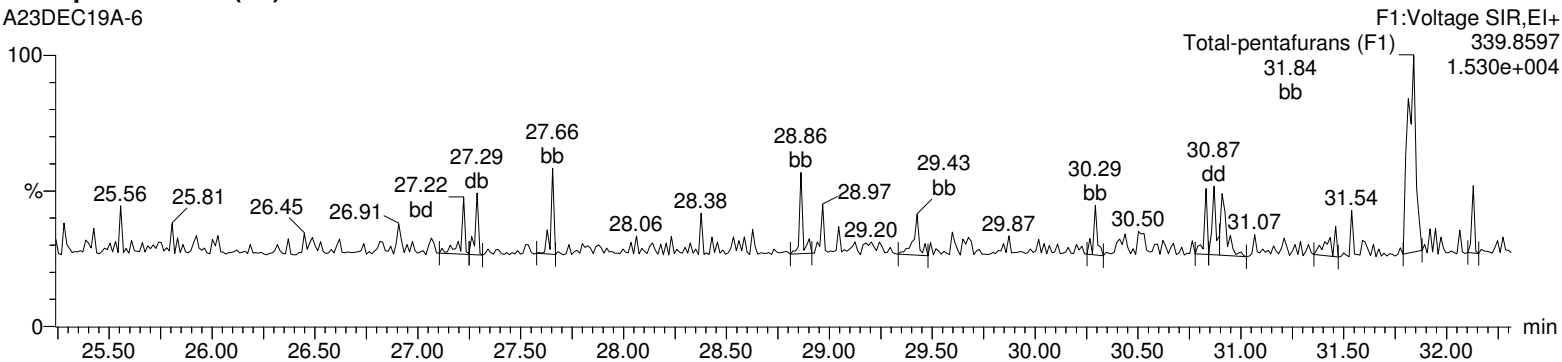
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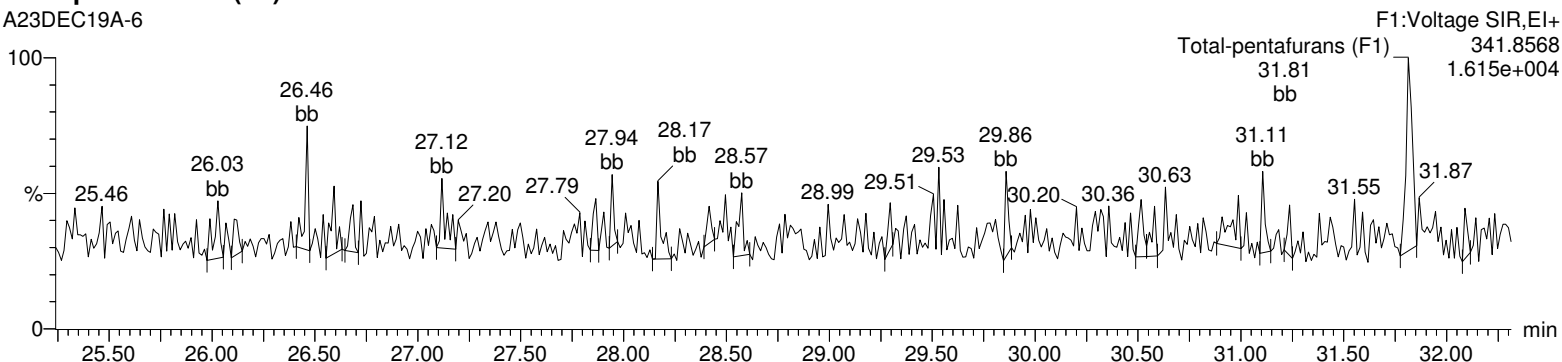
Total-pentafurans (F1)

A23DEC19A-6



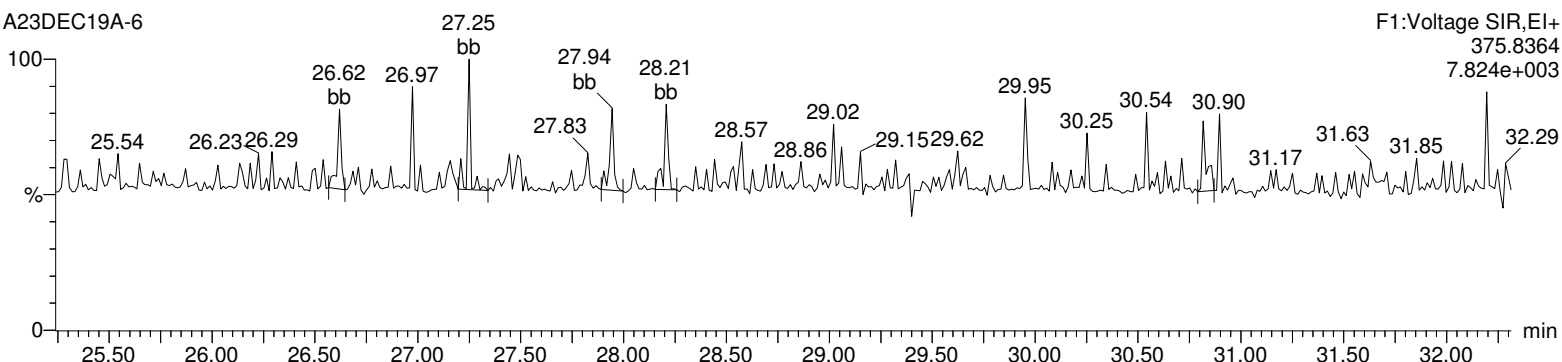
Total-pentafurans (F1)

A23DEC19A-6



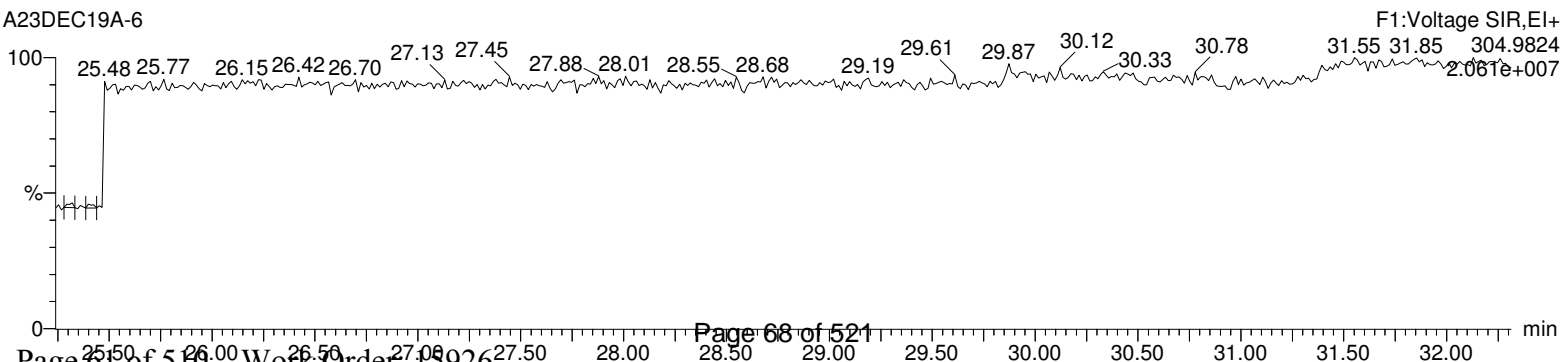
HxDPE

A23DEC19A-6



Lock Mass F1

A23DEC19A-6



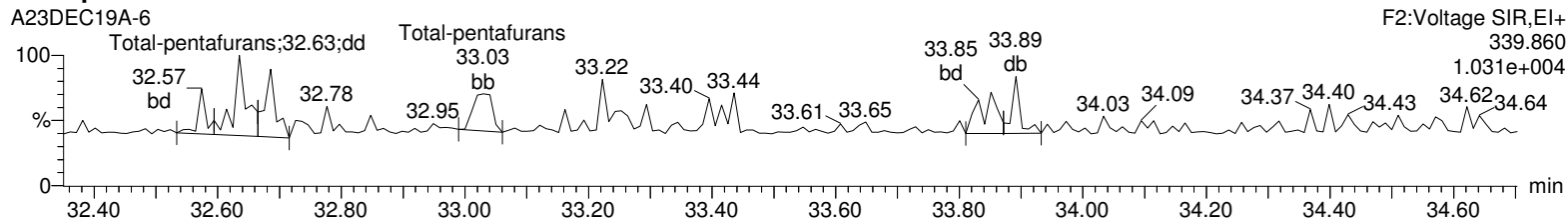
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

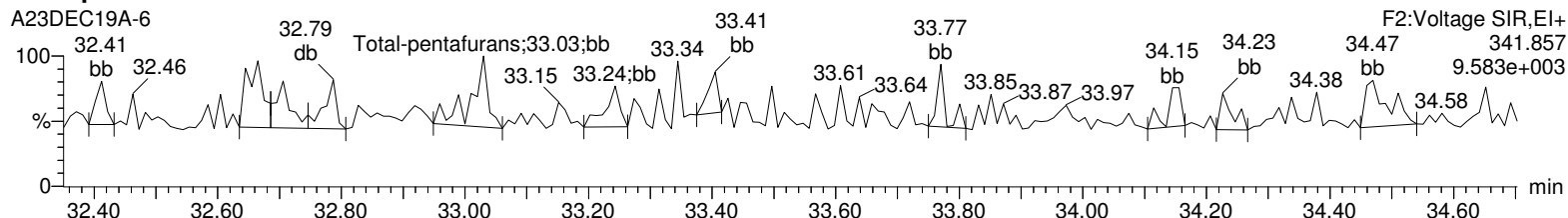
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

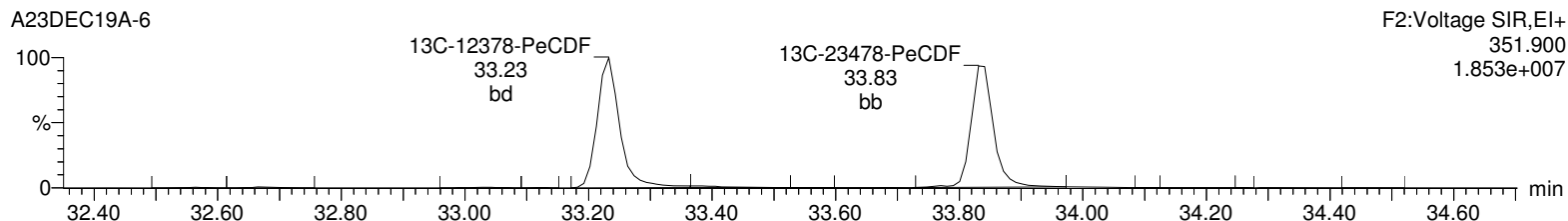
Total-pentafurans



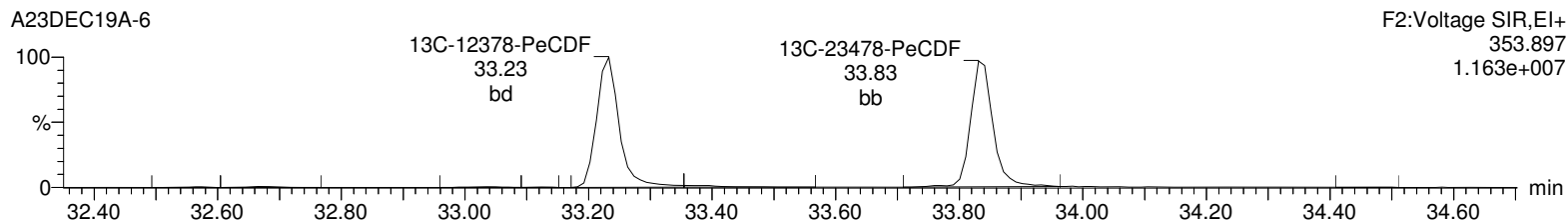
Total-pentafurans



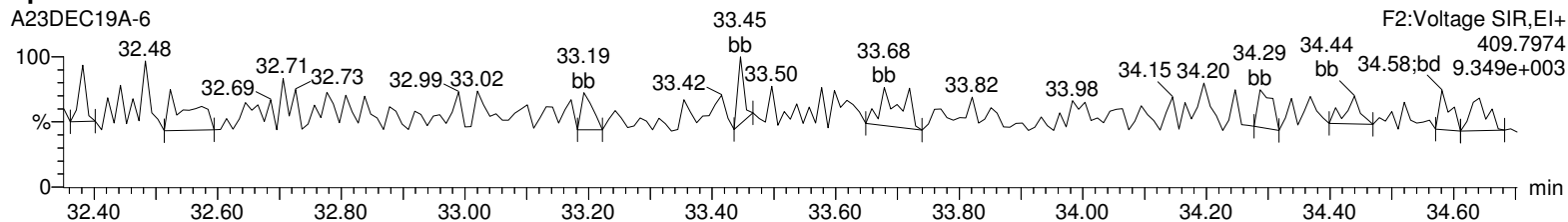
13C-12378-PeCDF



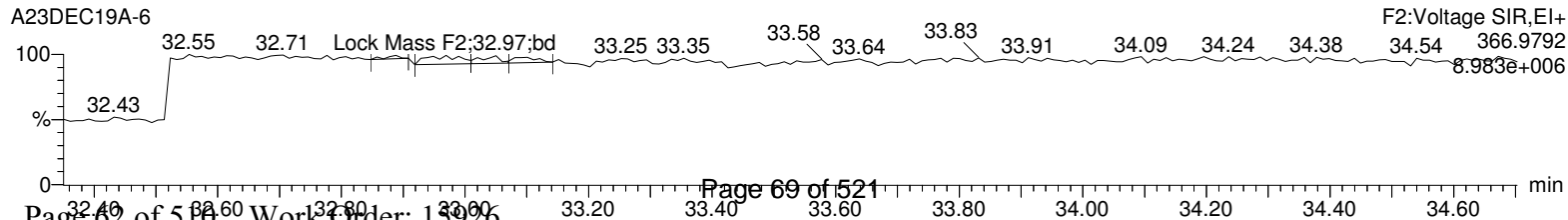
13C-12378-PeCDF



HpDPE



Lock Mass F2



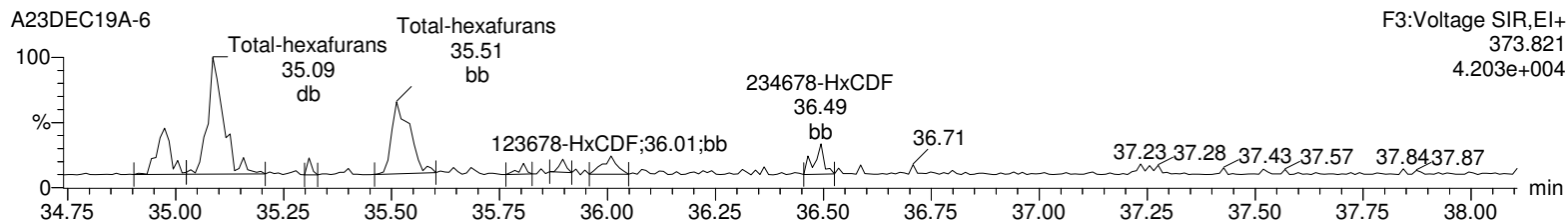
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

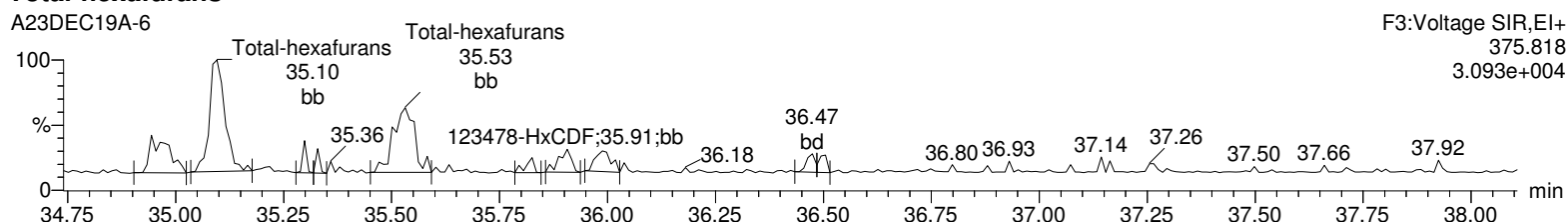
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

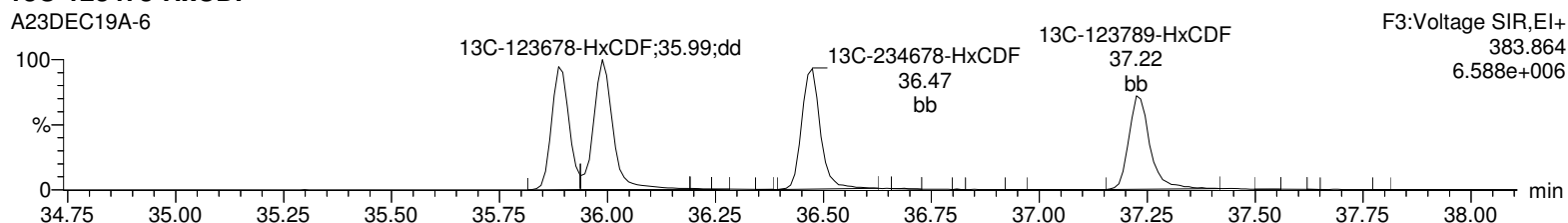
Total-hexafurans



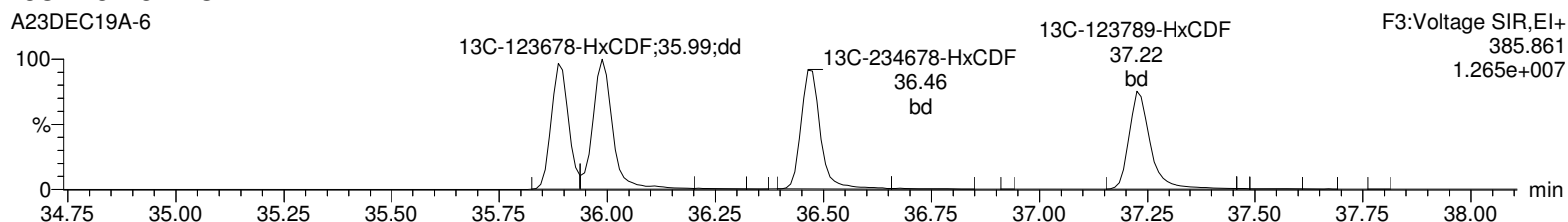
Total-hexafurans



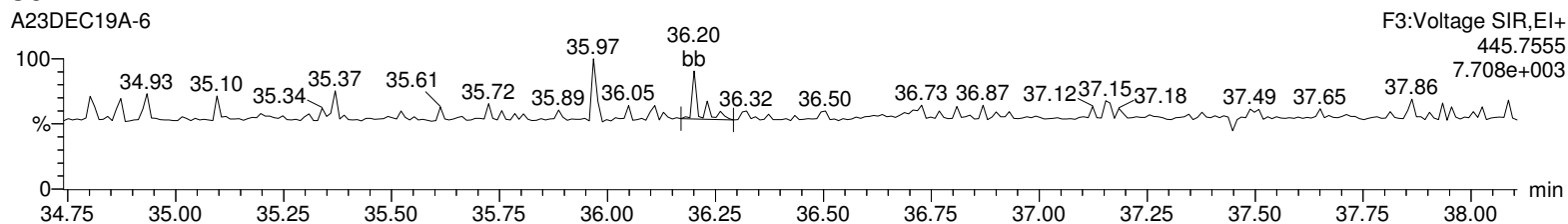
13C-123478-HxCDF



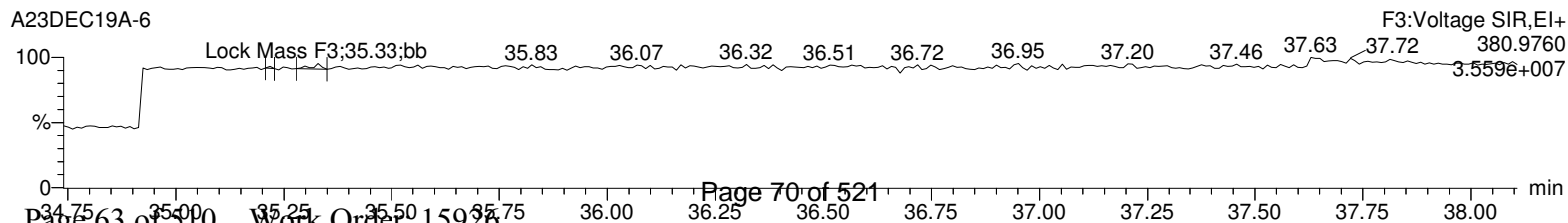
13C-123478-HxCDF



OcdPE



Lock Mass F3



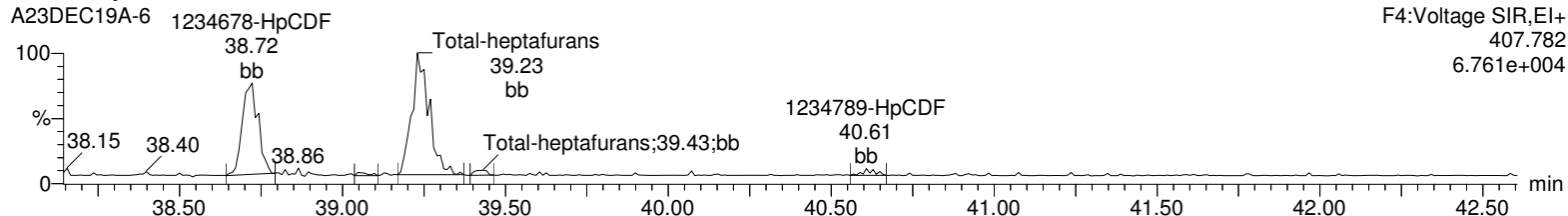
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

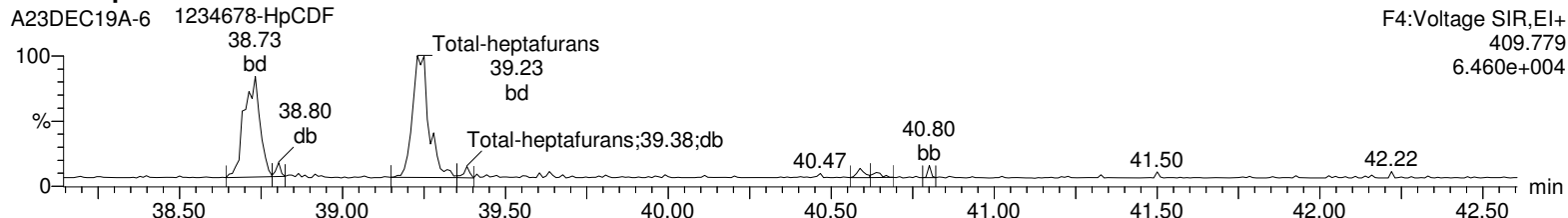
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

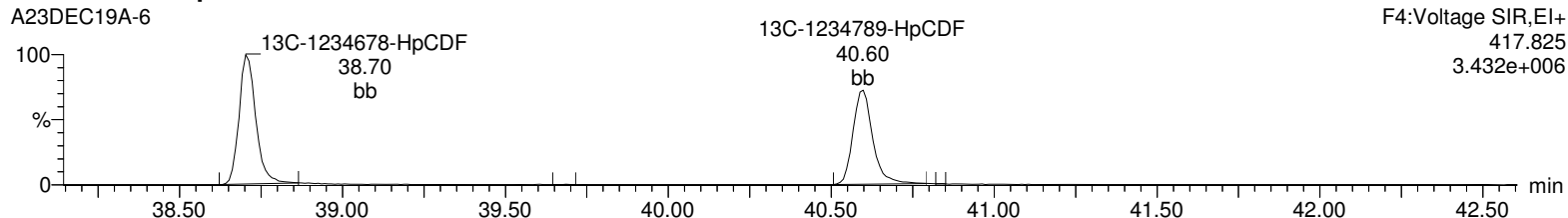
Total-heptafurans



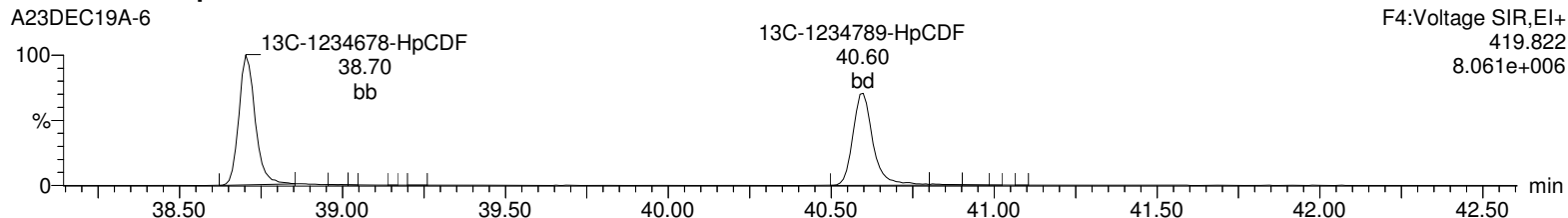
Total-heptafurans



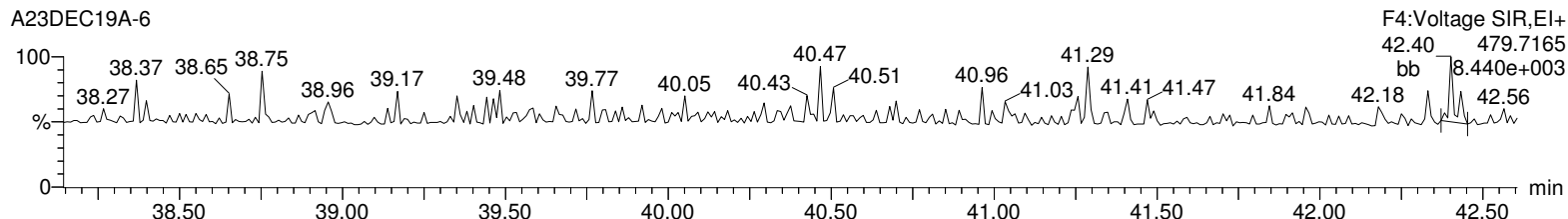
13C-1234678-HpCDF



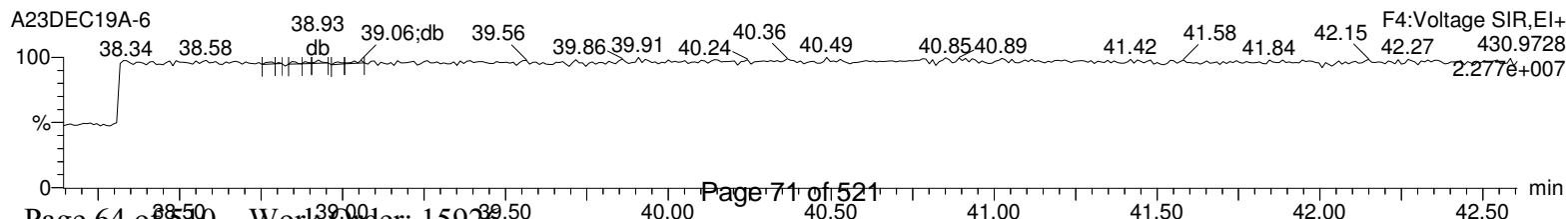
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

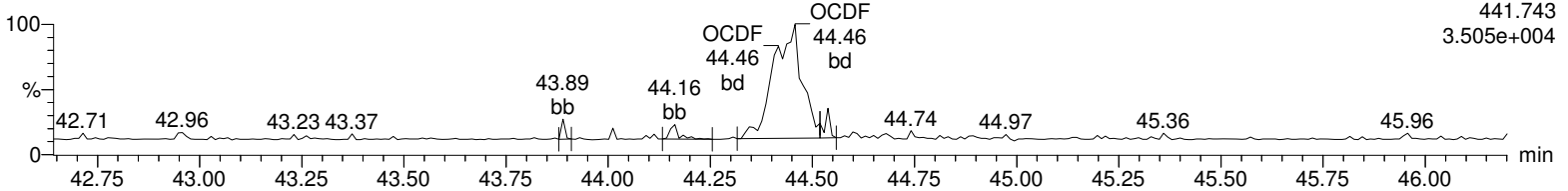
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-6, Date: 23-Dec-2019, Time: 21:28:15, ID: 15926002-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDF

A23DEC19A-6

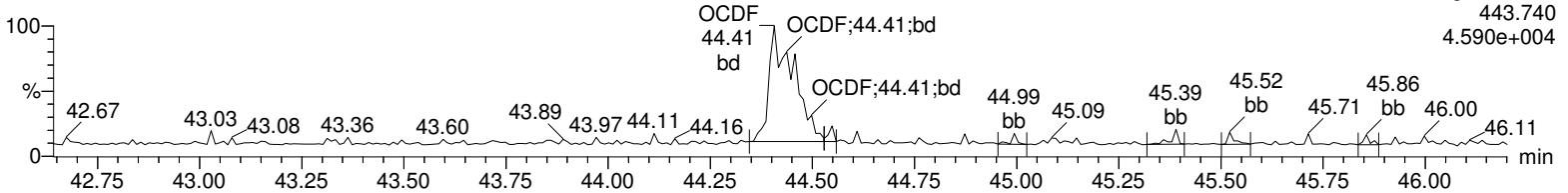
F5:Voltage SIR,EI+
441.743
3.505e+004



OCDF

A23DEC19A-6

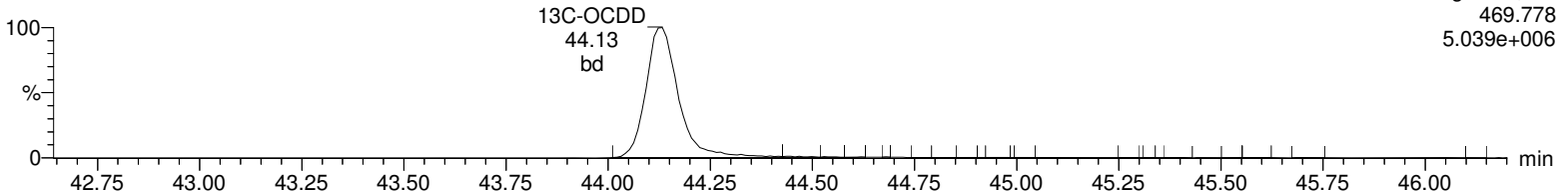
F5:Voltage SIR,EI+
443.740
4.590e+004



13C-OCDD

A23DEC19A-6

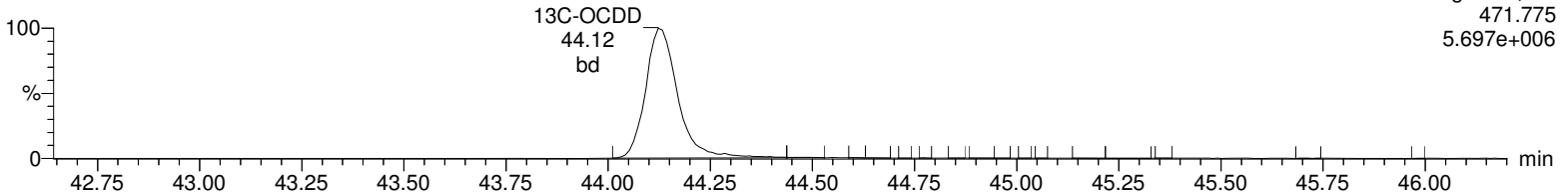
F5:Voltage SIR,EI+
469.778
5.039e+006



13C-OCDD

A23DEC19A-6

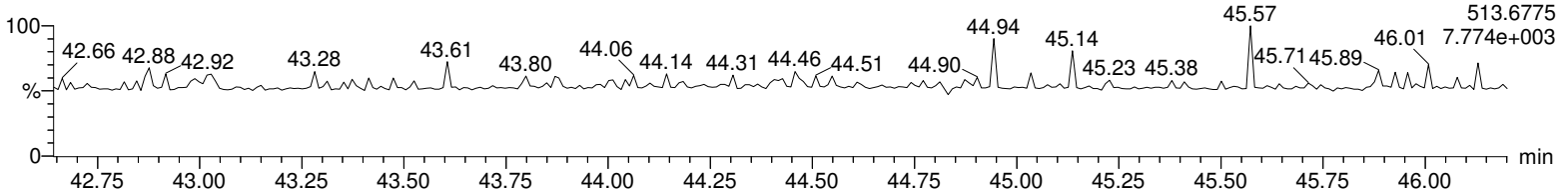
F5:Voltage SIR,EI+
471.775
5.697e+006



DeDPE

A23DEC19A-6

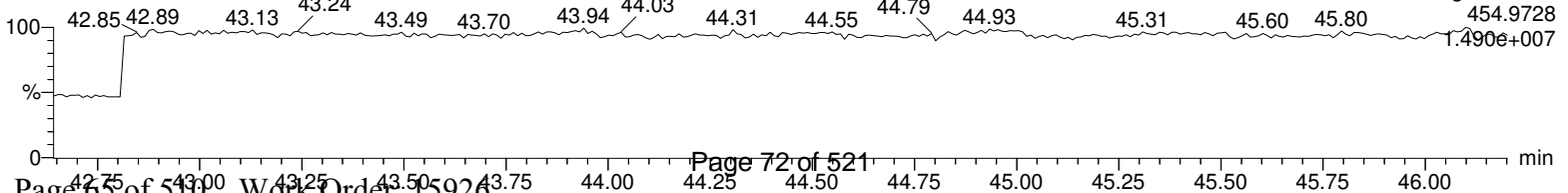
F5:Voltage SIR,EI+
513.6775
7.774e+003



Lock Mass F5

A23DEC19A-6

F5:Voltage SIR,EI+
454.9728
1.490e+007



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926003	Date Collected: 12/04/2019 07:32	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: EVBMP0003S030		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 22:16	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-7		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1048 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00155	ng/L	0.00155	0.00954
40321-76-4	1,2,3,7,8-PeCDD	JK	0.00384	ng/L	0.00127	0.0477
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.00632	ng/L	0.00157	0.0477
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.0137	ng/L	0.00163	0.0477
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.0119	ng/L	0.00163	0.0477
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.261	ng/L	0.00412	0.0477
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2.71	ng/L	0.00815	0.0954
51207-31-9	2,3,7,8-TCDF	U	0.00169	ng/L	0.00169	0.00954
57117-41-6	1,2,3,7,8-PeCDF	U	0.000987	ng/L	0.000987	0.0477
57117-31-4	2,3,4,7,8-PeCDF	JK	0.00128	ng/L	0.000941	0.0477
70648-26-9	1,2,3,4,7,8-HxCDF	JK	0.00237	ng/L	0.00109	0.0477
57117-44-9	1,2,3,6,7,8-HxCDF	J	0.0025	ng/L	0.00103	0.0477
60851-34-5	2,3,4,6,7,8-HxCDF	BJK	0.0025	ng/L	0.00102	0.0477
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00139	ng/L	0.00139	0.0477
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.0474	ng/L	0.00138	0.0477
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	0.00273	ng/L	0.00173	0.0477
39001-02-0	1,2,3,4,6,7,8,9-OCDF		0.0958	ng/L	0.00391	0.0954
41903-57-5	Total TeCDD	U	0.00155	ng/L	0.00155	0.00954
36088-22-9	Total PeCDD	JK	0.00836	ng/L	0.00127	0.0477
34465-46-8	Total HxCDD	JK	0.0874	ng/L	0.00157	0.0477
37871-00-4	Total HpCDD		0.625	ng/L	0.00412	0.0477
30402-14-3	Total TeCDF	U	0.00169	ng/L	0.00169	0.00954
30402-15-4	Total PeCDF	JK	0.0111	ng/L	0.000706	0.0477
55684-94-1	Total HxCDF	JK	0.0496	ng/L	0.00102	0.0477
38998-75-3	Total HpCDF	J	0.116	ng/L	0.00138	0.0477
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0121	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.013	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.53	1.91	ng/L	80.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.74	1.91	ng/L	91.1	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.36	1.91	ng/L	71.0	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.50	1.91	ng/L	78.7	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.59	1.91	ng/L	83.4	(23%-140%)
13C-OCDD		2.73	3.82	ng/L	71.5	(17%-157%)
13C-2,3,7,8-TCDF		1.63	1.91	ng/L	85.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.85	1.91	ng/L	97.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.70	1.91	ng/L	89.0	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.36	1.91	ng/L	71.4	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.41	1.91	ng/L	74.1	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.45	1.91	ng/L	75.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.52	1.91	ng/L	79.6	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 15926003	Date Collected: 12/04/2019 07:32	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/06/2019 10:00	
Client ID: EVBMP0003S030		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 22:16	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-7		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1048 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.35	1.91	ng/L	70.6 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.55	1.91	ng/L	81.1 (26%-138%)
37Cl-2,3,7,8-TCDD			0.168	0.191	ng/L	88.3 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:20:46 Eastern Standard Time
 Printed: Tuesday, December 24, 2019 09:22:03 Eastern Standard Time

Method: Untitled 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	2.42e2	1.28e2	3.70e2	31.13	1.001	1.89	YES	0.042	0.0812	4.44e3	2838	1.6	3.58e3	1965	1.8	bb	dd
2	12378-PeCDD	8.37e2	4.66e2	1.30e3	34.03	1.000	1.80	YES	0.201	0.0666	2.00e4	2748	7.3	1.14e4	1284	8.9	MM	MM
3	123478-HxCDD	1.01e3	8.96e2	1.91e3	36.61	1.000	1.13	NO	0.331	0.0822	2.79e4	2271	12.3	2.00e4	1996	10.0	bd	bd
4	123678-HxCDD	2.91e3	2.16e3	5.07e3	36.69	1.000	1.35	NO	0.717	0.0854	6.21e4	2271	27.4	3.94e4	1996	19.8	dd	dd
5	123789-HxCDD	2.08e3	1.86e3	3.94e3	36.94	1.007	1.12	NO	0.624	0.0853	4.47e4	2271	19.7	2.73e4	1996	13.7	db	db
6	1234678-HpCDD	3.94e4	3.76e4	7.69e4	39.96	1.001	1.05	NO	13.689	0.216	5.83e5	3780	154.3	6.16e5	3311	186.0	bb	bd
7	OCDD	2.85e5	3.25e5	6.10e5	44.15	1.000	0.88	NO	141.794	0.427	3.09e6	4549	679.6	3.71e6	3649	1017.2	bd	bd
8	2378-TCDF							NO	0.0885			1528						
9	12378-PeCDF	1.88e2	1.90e2	3.78e2	33.25	1.001	0.99	YES	0.037	0.0517	6.62e3	1584	4.2	4.15e3	3583	1.2	bb	bd
10	23478-PeCDF	3.26e2	3.63e2	6.89e2	33.85	1.000	0.90	YES	0.067	0.0493	1.32e4	1584	8.3	1.06e4	3583	3.0	bd	bb
11	123478-HxCDF	6.45e2	3.90e2	1.04e3	35.90	1.000	1.66	YES	0.124	0.0573	1.97e4	1758	11.2	7.94e3	2286	3.5	dd	dd
12	123678-HxCDF	6.38e2	5.76e2	1.21e3	36.00	1.000	1.11	NO	0.131	0.0541	1.68e4	1758	9.5	1.67e4	2286	7.3	db	dd
13	234678-HxCDF	7.08e2	4.69e2	1.18e3	36.48	1.000	1.51	YES	0.131	0.0535	2.05e4	1758	11.7	1.17e4	2286	5.1	bb	MM
14	123789-HxCDF	8.61e1	1.24e2	2.10e2	37.25	1.001	0.69	YES	0.027	0.0727	2.38e3	1758	1.4	2.75e3	2286	1.2	bb	bb
15	1234678-HpCDF	8.76e3	8.16e3	1.69e4	38.72	1.000	1.07	NO	2.484	0.0723	1.54e5	1563	98.6	1.36e5	1754	77.6	bd	bd
16	1234789-HpCDF	4.95e2	4.18e2	9.12e2	40.65	1.001	1.19	NO	0.143	0.0909	1.31e4	1563	8.4	8.71e3	1754	5.0	MM	MM
17	OCDF	1.23e4	1.29e4	2.52e4	44.44	1.007	0.96	NO	5.020	0.205	1.49e5	2490	59.8	1.48e5	2115	70.0	bd	bb
18	13C-2378-TCDD	4.38e5	5.65e5	1.00e6	31.11	1.018	0.77	NO	80.343	0.188	7.30e6	7290	1000.9	9.54e6	4479	2129.6	bd	bb
19	13C-12378-PeCDD	4.62e5	2.96e5	7.58e5	34.02	1.114	1.56	NO	91.145	0.246	1.08e7	5195	2079.3	6.99e6	5096	1370.6	bd	bb
20	13C-123478-HxCDD	3.42e5	2.72e5	6.14e5	36.60	0.991	1.26	NO	71.020	0.221	7.70e6	7827	983.5	6.21e6	6246	994.6	bd	bd
21	13C-123678-HxCDD	4.16e5	3.33e5	7.49e5	36.69	0.994	1.25	NO	78.744	0.200	7.35e6	7827	939.4	5.96e6	6246	954.4	dd	dd
22	13C-1234678-HpCDD	2.76e5	2.65e5	5.41e5	39.94	1.082	1.04	NO	83.373	0.201	4.03e6	4919	819.6	3.89e6	4714	825.8	bd	bd
23	13C-OCDD	4.17e5	4.69e5	8.86e5	44.13	1.195	0.89	NO	142.980	0.273	4.65e6	5040	923.2	5.07e6	7441	681.9	bd	bd
24	13C-2378-TCDF	5.14e5	6.66e5	1.18e6	30.32	0.993	0.77	NO	85.305	0.286	6.31e6	13264	475.6	8.07e6	6641	1215.4	bb	bb
25	13C-12378-PeCDF	6.65e5	4.22e5	1.09e6	33.23	1.088	1.57	NO	97.194	0.459	1.62e7	18325	882.8	1.04e7	7490	1383.2	bd	bd
26	13C-23478-PeCDF	6.43e5	4.04e5	1.05e6	33.84	1.108	1.59	NO	88.971	0.437	1.63e7	18325	889.4	1.03e7	7490	1369.8	bb	db
27	13C-123478-HxCDF	2.62e5	5.03e5	7.65e5	35.90	0.972	0.52	NO	71.363	0.300	5.55e6	9314	595.9	1.09e7	14436	752.6	bd	bd
28	13C-123678-HxCDF	2.97e5	5.95e5	8.91e5	35.99	0.975	0.50	NO	74.060	0.268	5.98e6	9314	641.7	1.17e7	14436	810.4	dd	dd
29	13C-234678-HxCDF	2.63e5	5.28e5	7.91e5	36.47	0.988	0.50	NO	75.771	0.308	5.53e6	9314	594.2	1.06e7	14436	736.5	bb	bd
30	13C-123789-HxCDF	2.50e5	4.93e5	7.43e5	37.23	1.009	0.51	NO	79.589	0.345	4.41e6	9314	473.8	8.34e6	14436	578.0	bd	bd

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld
 Last Altered: Tuesday, December 24, 2019 09:20:46 Eastern Standard Time
 Printed: Tuesday, December 24, 2019 09:22:03 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	1.78e5	4.14e5	5.93e5	38.71	1.049	0.43	NO	70.588	0.251	3.00e6	6272	478.2	6.75e6	9293	726.5	bb	bd
32	13C-1234789-HpCDF	1.58e5	3.72e5	5.30e5	40.60	1.100	0.43	NO	81.058	0.323	2.27e6	6272	361.5	5.21e6	9293	560.6	bd	bd
33	13C-1234-TCDD	4.87e5	6.20e5	1.11e6	30.54	0.000	0.79	NO	100.000	0.212	6.11e6	7290	838.6	7.87e6	4479	1757.9	bb	bb
34	13C-123789-HxCDD	5.35e5	4.30e5	9.65e5	36.92	0.000	1.24	NO	100.000	0.198	9.87e6	7827	1260.9	8.02e6	6246	1283.2	dd	dd
35	37Cl+2378-TCDD	1.04e5		1.04e5	31.13	1.019			8.826	0.0438	1.73e6	2581	668.8				bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:20:46 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:22:03 Eastern Standard Time

Method: Untitled 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraiodoxins	9.94e1	7.11e1	1.71e2	25.57	1.40	YES	0.019	0.0812	3.93e3	2838	1.4	1.55e3	1965	0.8	dd	bb
2	Total-tetraiodoxins	5.07e1	5.21e1	1.03e2	26.85	0.97	YES	0.012	0.0812	2.90e3	2838	1.0	1.08e3	1965	0.5	bb	bb
3	Total-tetraiodoxins	7.77e1	8.30e1	1.61e2	27.68	0.94	YES	0.018	0.0812	3.22e3	2838	1.1	2.61e3	1965	1.3	bb	bb
4	Total-tetraiodoxins	6.95e1	5.25e1	1.22e2	28.09	1.32	YES	0.014	0.0812	2.43e3	2838	0.9	2.07e3	1965	1.1	bb	bb
5	Total-tetraiodoxins	6.04e1	9.20e1	1.52e2	28.50	0.66	NO	0.017	0.0812	2.79e3	2838	1.0	3.19e3	1965	1.6	bb	dd
6	Total-tetraiodoxins	7.21e1	5.22e1	1.24e2	28.76	1.38	YES	0.014	0.0812	2.92e3	2838	1.0	1.61e3	1965	0.8	bb	bb
7	Total-tetraiodoxins	7.40e1	5.10e1	1.25e2	28.99	1.45	YES	0.014	0.0812	4.53e3	2838	1.6	1.35e3	1965	0.7	bb	dd
8	Total-tetraiodoxins	7.34e1	7.33e1	1.47e2	29.14	1.00	YES	0.017	0.0812	2.37e3	2838	0.8	2.45e3	1965	1.2	bb	dd
9	Total-tetraiodoxins	6.45e1	1.07e2	1.71e2	30.00	0.60	YES	0.019	0.0812	3.24e3	2838	1.1	3.10e3	1965	1.6	db	bb
10	Total-tetraiodoxins	1.04e2	5.04e1	1.54e2	30.19	2.07	YES	0.017	0.0812	3.12e3	2838	1.1	1.71e3	1965	0.9	bb	bb
11	Total-tetraiodoxins	2.04e2	5.80e1	2.62e2	30.31	3.51	YES	0.029	0.0812	5.44e3	2838	1.9	3.31e3	1965	1.7	bb	bd
12	Total-tetraiodoxins	1.85e2	5.92e1	2.44e2	30.46	3.13	YES	0.028	0.0812	4.75e3	2838	1.7	1.31e3	1965	0.7	bb	bb
13	Total-tetraiodoxins	9.14e1	5.96e1	1.51e2	30.65	1.53	YES	0.017	0.0812	5.38e3	2838	1.9	1.79e3	1965	0.9	bd	db
14	Total-tetraiodoxins	1.43e2	5.43e1	1.97e2	30.90	2.63	YES	0.022	0.0812	3.95e3	2838	1.4	2.18e3	1965	1.1	db	bb
15	2378-TCDD	2.42e2	1.28e2	3.70e2	31.13	1.89	YES	0.042	0.0812	4.44e3	2838	1.6	3.58e3	1965	1.8	bb	dd
16	Total-tetraiodoxins	1.02e2	8.40e1	1.86e2	31.74	1.22	YES	0.021	0.0812	3.71e3	2838	1.3	3.62e3	1965	1.8	bb	bb
17	Total-tetraiodoxins	1.24e2	7.80e1	2.02e2	32.10	1.60	YES	0.023	0.0812	4.73e3	2838	1.7	3.01e3	1965	1.5	bb	bb

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadiiodoxins	3.63e2	2.01e2	5.64e2	32.71	1.80	YES	0.087	0.0666	8.51e3	2748	3.1	6.63e3	1284	5.2	bb	MM
2	Total-pentadiiodoxins	2.31e2	1.42e2	3.73e2	33.27	1.63	NO	0.058	0.0666	4.92e3	2748	1.8	2.98e3	1284	2.3	bd	bd
3	Total-pentadiiodoxins	6.14e2	3.55e2	9.69e2	33.35	1.73	NO	0.150	0.0666	1.66e4	2748	6.0	1.02e4	1284	7.9	MM	dd
4	Total-pentadiiodoxins	2.54e2	1.48e2	4.03e2	33.43	1.72	NO	0.062	0.0666	6.06e3	2748	2.2	5.42e3	1284	4.2	MM	db
5	Total-pentadiiodoxins	2.08e2	1.00e2	3.09e2	33.57	2.08	YES	0.048	0.0666	4.88e3	2748	1.8	3.10e3	1284	2.4	bb	bb
6	12378-PeCDD	8.37e2	4.66e2	1.30e3	34.03	1.80	YES	0.201	0.0666	2.00e4	2748	7.3	1.14e4	1284	8.9	MM	MM
7	Total-pentadiiodoxins	2.35e2	4.72e1	2.82e2	34.08	4.98	YES	0.044	0.0666	7.13e3	2748	2.6	1.41e3	1284	1.1	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:20:46 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:22:03 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	2.88e3	2.83e3	5.70e3	35.40	1.02	YES	0.893	0.0844	6.69e4	2271	29.5	6.49e4	1996	32.5	bd	bd
2	Total-hexadioxins	1.22e2	1.06e2	2.27e2	35.45	1.15	NO	0.036	0.0844	5.29e3	2271	2.3	4.85e3	1996	2.4	dd	db
3	Total-hexadioxins	6.63e2	6.89e2	1.35e3	35.85	0.96	YES	0.212	0.0844	2.00e4	2271	8.8	1.29e4	1996	6.5	bb	MM
4	Total-hexadioxins	5.77e3	4.37e3	1.01e4	36.06	1.32	NO	1.587	0.0844	9.30e4	2271	41.0	7.97e4	1996	40.0	bd	bd
5	Total-hexadioxins	3.84e2	3.97e2	7.81e2	36.16	0.97	YES	0.122	0.0844	1.03e4	2271	4.5	8.39e3	1996	4.2	db	db
6	123478-HxCDD	1.01e3	8.96e2	1.91e3	36.61	1.13	NO	0.331	0.0822	2.79e4	2271	12.3	2.00e4	1996	10.0	bd	bd
7	123678-HxCDD	2.91e3	2.16e3	5.07e3	36.69	1.35	NO	0.717	0.0854	6.21e4	2271	27.4	3.94e4	1996	19.8	dd	dd
8	Total-hexadioxins	3.61e2	2.29e2	5.90e2	36.85	1.58	YES	0.092	0.0844	7.77e3	2271	3.4	8.13e3	1996	4.1	dd	dd
9	123789-HxCDD	2.08e3	1.86e3	3.94e3	36.94	1.12	NO	0.624	0.0853	4.47e4	2271	19.7	2.73e4	1996	13.7	db	db

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	5.37e4	5.34e4	1.07e5	39.05	1.01	NO	19.050	0.216	8.92e5	3780	235.8	8.88e5	3311	288.2	bb	bd
2	1234678-HpCDD	3.94e4	3.76e4	7.69e4	39.96	1.05	NO	13.689	0.216	5.83e5	3780	154.3	6.16e5	3311	186.0	bb	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:20:46 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:22:03 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	5.97e1	1.66e2	2.25e2	26.50	0.36	YES	0.020	0.0885	3.31e3	1528	2.2	6.18e3	3490	1.8	bb	bb
2	Total-tetrafurans	9.75e1	1.66e2	2.63e2	27.00	0.59	YES	0.023	0.0885	2.38e3	1528	1.6	5.35e3	3490	1.5	bd	db
3	Total-tetrafurans	6.64e1	8.41e1	1.51e2	27.09	0.79	NO	0.013	0.0885	3.30e3	1528	2.2	2.88e3	3490	0.8	db	bb
4	Total-tetrafurans	5.58e1	9.71e1	1.53e2	27.30	0.57	YES	0.013	0.0885	2.98e3	1528	2.0	3.57e3	3490	1.0	bb	bd
5	Total-tetrafurans	5.74e1	1.59e2	2.17e2	27.60	0.36	YES	0.019	0.0885	1.14e3	1528	0.7	3.81e3	3490	1.1	bd	bd
6	Total-tetrafurans	8.39e1	1.51e2	2.35e2	27.72	0.56	YES	0.020	0.0885	1.93e3	1528	1.3	3.84e3	3490	1.1	db	db
7	Total-tetrafurans	9.62e1	2.78e2	3.75e2	28.00	0.35	YES	0.032	0.0885	1.64e3	1528	1.1	6.10e3	3490	1.7	bd	bb
8	Total-tetrafurans	8.67e1	1.24e2	2.11e2	28.90	0.70	NO	0.018	0.0885	3.16e3	1528	2.1	5.05e3	3490	1.4	bd	bd
9	Total-tetrafurans	6.84e1	1.07e2	1.75e2	28.95	0.64	YES	0.015	0.0885	2.95e3	1528	1.9	3.91e3	3490	1.1	dd	dd
10	Total-tetrafurans	8.91e1	1.44e2	2.33e2	29.02	0.62	YES	0.020	0.0885	2.41e3	1528	1.6	3.90e3	3490	1.1	db	dd
11	Total-tetrafurans	9.72e1	1.27e2	2.24e2	29.16	0.77	NO	0.019	0.0885	6.75e3	1528	4.4	4.76e3	3490	1.4	bb	bd
12	Total-tetrafurans	1.05e2	8.96e1	1.95e2	29.53	1.17	YES	0.017	0.0885	2.86e3	1528	1.9	4.71e3	3490	1.3	bb	db
13	Total-tetrafurans	7.97e1	1.99e2	2.79e2	29.74	0.40	YES	0.024	0.0885	3.38e3	1528	2.2	6.63e3	3490	1.9	bb	bd
14	Total-tetrafurans	1.00e2	7.12e1	1.71e2	29.83	1.40	YES	0.015	0.0885	3.23e3	1528	2.1	4.37e3	3490	1.3	bb	bb
15	Total-tetrafurans	6.10e1	8.09e1	1.42e2	30.16	0.75	NO	0.012	0.0885	1.53e3	1528	1.0	2.95e3	3490	0.8	bb	bb
16	Total-tetrafurans	7.17e1	8.13e1	1.53e2	31.05	0.88	NO	0.013	0.0885	1.94e3	1528	1.3	2.78e3	3490	0.8	bd	bb
17	Total-tetrafurans	2.22e2	2.47e2	4.69e2	31.71	0.90	YES	0.041	0.0885	6.34e3	1528	4.1	5.97e3	3490	1.7	bb	bd
18	Total-tetrafurans	8.93e1	1.33e2	2.23e2	32.12	0.67	NO	0.019	0.0885	2.03e3	1528	1.3	6.66e3	3490	1.9	bb	bb
19	Total-tetrafurans	7.21e1	5.42e1	1.26e2	32.26	1.33	YES	0.011	0.0885	3.32e3	1528	2.2	2.60e3	3490	0.7	bb	bb

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	6.47e1	8.10e1	1.46e2	27.52	0.80	YES	0.014	0.0370	1.79e3	1212	1.5	3.22e3	2581	1.2	bb	bd
2	Total-pentafurans (F1)	5.48e1	1.02e2	1.57e2	28.82	0.54	YES	0.015	0.0370	2.75e3	1212	2.3	3.61e3	2581	1.4	bb	bd
3	Total-pentafurans (F1)	7.60e1	7.33e1	1.49e2	30.27	1.04	YES	0.014	0.0370	3.97e3	1212	3.3	3.10e3	2581	1.2	bb	bb
4	Total-pentafurans (F1)	7.20e1	1.16e2	1.88e2	30.67	0.62	YES	0.018	0.0370	2.85e3	1212	2.3	5.75e3	2581	2.2	bb	bb
5	Total-pentafurans (F1)	2.55e2	7.32e1	3.29e2	30.90	3.49	YES	0.032	0.0370	6.72e3	1212	5.5	3.78e3	2581	1.5	bb	bb
6	Total-pentafurans (F1)	5.82e1	5.70e1	1.15e2	31.37	1.02	YES	0.011	0.0370	2.87e3	1212	2.4	2.58e3	2581	1.0	bb	bb
7	Total-pentafurans (F1)	1.04e2	2.08e2	3.12e2	31.68	0.50	YES	0.030	0.0370	6.31e3	1212	5.2	4.59e3	2581	1.8	bb	bb
8	Total-pentafurans (F1)	2.27e3	1.66e3	3.94e3	31.83	1.37	NO	0.382	0.0370	5.52e4	1212	45.6	4.22e4	2581	16.4	bd	bb
9	Total-pentafurans (F1)	9.80e1	5.23e1	1.50e2	32.04	1.87	YES	0.015	0.0370	3.81e3	1212	3.1	2.68e3	2581	1.0	db	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:20:46 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:22:03 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

PF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	Total-pentafurans	1.53e2	1.57e2	3.09e2	32.60	0.98	YES	0.030	0.0505	5.11e3	1584	3.2	6.77e3	3583	1.9	bd	bd
2	Total-pentafurans	7.00e2	6.57e2	1.36e3	32.70	1.07	YES	0.132	0.0505	1.48e4	1584	9.4	1.66e4	3583	4.6	db	MM
3	Total-pentafurans	3.13e2	2.54e2	5.67e2	33.04	1.23	YES	0.055	0.0505	6.26e3	1584	4.0	4.84e3	3583	1.4	bb	MM
4	12378-PeCDF	1.88e2	1.90e2	3.78e2	33.25	0.99	YES	0.037	0.0517	6.62e3	1584	4.2	4.15e3	3583	1.2	bb	bd
5	Total-pentafurans	4.53e2	2.16e2	6.68e2	33.43	2.10	YES	0.065	0.0505	1.32e4	1584	8.4	6.54e3	3583	1.8	bb	db
6	Total-pentafurans	7.38e1	8.08e1	1.55e2	33.55	0.91	YES	0.015	0.0505	2.29e3	1584	1.4	4.28e3	3583	1.2	bd	bb
7	23478-PeCDF	3.26e2	3.63e2	6.89e2	33.85	0.90	YES	0.067	0.0493	1.32e4	1584	8.3	1.06e4	3583	3.0	bd	bb

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1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	Total-hexafurans	1.60e3	1.32e3	2.92e3	34.97	1.22	NO	0.339	0.0589	3.46e4	1758	19.7	3.16e4	2286	13.8	bd	bd
2	Total-hexafurans	5.61e3	4.10e3	9.71e3	35.10	1.37	NO	1.127	0.0589	1.26e5	1758	71.8	9.86e4	2286	43.1	dd	dd
3	Total-hexafurans	7.48e1	8.02e1	1.55e2	35.35	0.93	YES	0.018	0.0589	2.61e3	1758	1.5	2.38e3	2286	1.0	bd	bd
4	Total-hexafurans	9.64e1	6.67e1	1.63e2	35.39	1.45	YES	0.019	0.0589	4.85e3	1758	2.8	5.18e3	2286	2.3	db	db
5	Total-hexafurans	3.65e3	2.80e3	6.45e3	35.52	1.30	NO	0.748	0.0589	7.05e4	1758	40.1	5.76e4	2286	25.2	bd	bd
6	Total-hexafurans	1.41e2	9.31e1	2.34e2	35.61	1.51	YES	0.027	0.0589	6.98e3	1758	4.0	8.57e3	2286	3.7	db	db
7	Total-hexafurans	8.75e1	1.12e2	1.99e2	35.69	0.78	YES	0.023	0.0589	3.97e3	1758	2.3	5.73e3	2286	2.5	bb	bb
8	Total-hexafurans	9.63e1	1.38e2	2.34e2	35.82	0.70	YES	0.027	0.0589	2.39e3	1758	1.4	1.02e4	2286	4.5	bd	bd
9	123478-HxCDF	6.45e2	3.90e2	1.04e3	35.90	1.66	YES	0.124	0.0573	1.97e4	1758	11.2	7.94e3	2286	3.5	dd	dd
10	123678-HxCDF	6.38e2	5.76e2	1.21e3	36.00	1.11	NO	0.131	0.0541	1.68e4	1758	9.5	1.67e4	2286	7.3	db	dd
11	Total-hexafurans	1.34e2	1.35e2	2.70e2	36.33	0.99	YES	0.031	0.0589	4.28e3	1758	2.4	4.13e3	2286	1.8	bb	bb
12	234678-HxCDF	7.08e2	4.69e2	1.18e3	36.48	1.51	YES	0.131	0.0535	2.05e4	1758	11.7	1.17e4	2286	5.1	bb	MM
13	123789-HxCDF	8.61e1	1.24e2	2.10e2	37.25	0.69	YES	0.027	0.0727	2.38e3	1758	1.4	2.75e3	2286	1.2	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:20:46 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:22:03 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

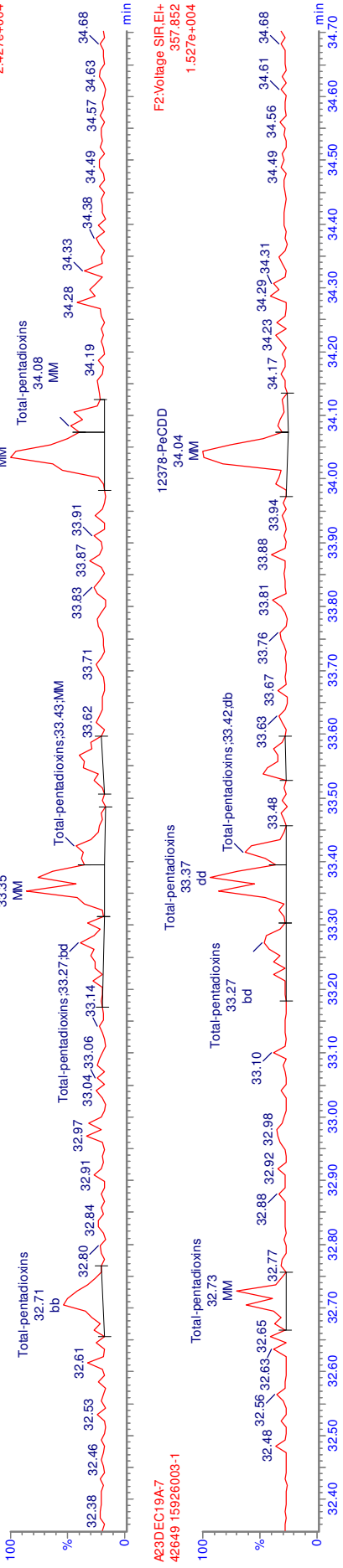
HPF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	8.76e3	8.16e3	1.69e4	38.72	1.07	NO	2.484	0.0723	1.54e5	1563	98.6	1.36e5	1754	77.6	bd	bd
2	Total-heptafurans	1.52e2	2.18e2	3.70e2	38.82	0.70	YES	0.056	0.0812	4.68e3	1563	3.0	1.06e4	1754	6.0	dd	dd
3	Total-heptafurans	7.94e1	1.69e2	2.49e2	38.90	0.47	YES	0.038	0.0812	3.83e3	1563	2.4	6.24e3	1754	3.6	dd	db
4	Total-heptafurans	8.21e1	6.59e1	1.48e2	39.00	1.25	YES	0.022	0.0812	5.70e3	1563	3.6	2.27e3	1754	1.3	dd	bd
5	Total-heptafurans	1.62e2	7.04e1	2.33e2	39.06	2.31	YES	0.035	0.0812	3.70e3	1563	2.4	3.82e3	1754	2.2	db	db
6	Total-heptafurans	1.15e4	1.11e4	2.26e4	39.24	1.03	NO	3.428	0.0812	1.84e5	1563	117.9	1.85e5	1754	105.3	bd	bd
7	Total-heptafurans	1.74e2	2.67e2	4.41e2	39.36	0.65	YES	0.067	0.0812	7.79e3	1563	5.0	8.95e3	1754	5.1	db	dd
8	Total-heptafurans	6.14e1	1.59e2	2.21e2	39.44	0.39	YES	0.033	0.0812	3.29e3	1563	2.1	3.41e3	1754	1.9	bb	dd
9	1234789-HpCDF	4.95e2	4.18e2	9.12e2	40.65	1.19	NO	0.143	0.0909	1.31e4	1563	8.4	8.71e3	1754	5.0	MM	MM

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

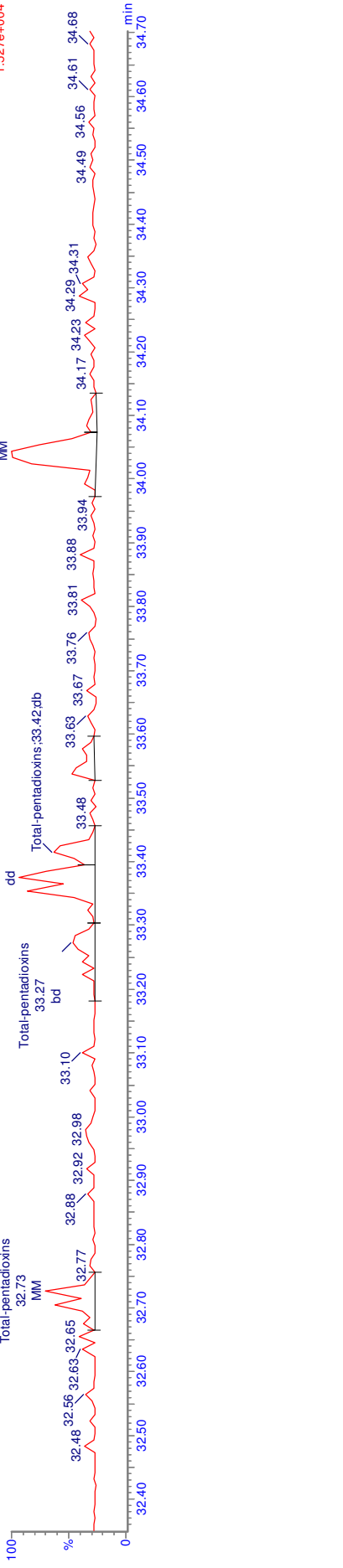
A23DEC19A-7
 42649 15926003-1

F2:Voltage SIR,EI+
 355.855
 2.427e+004



A23DEC19A-7
 42649 15926003-1

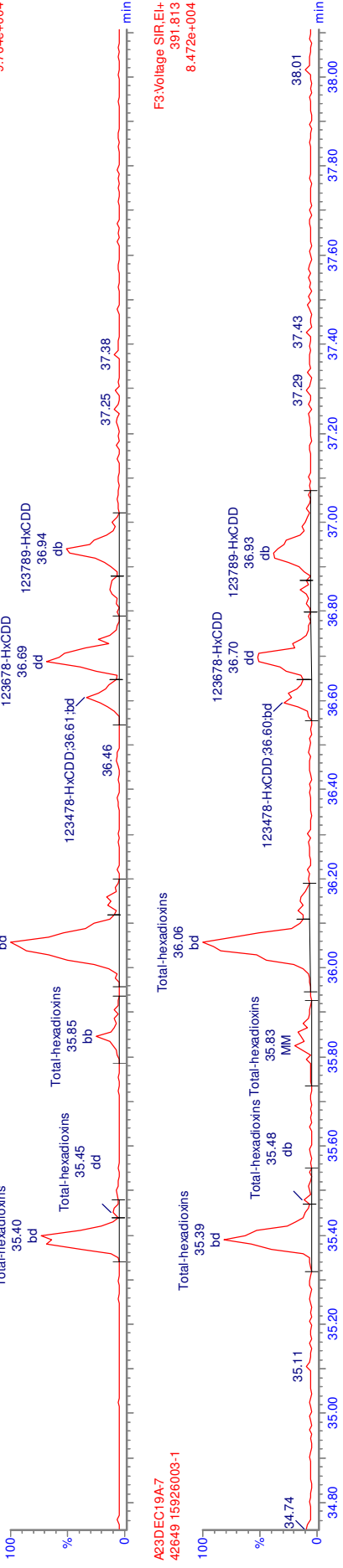
F2:Voltage SIR,EI+
 357.852
 1.527e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

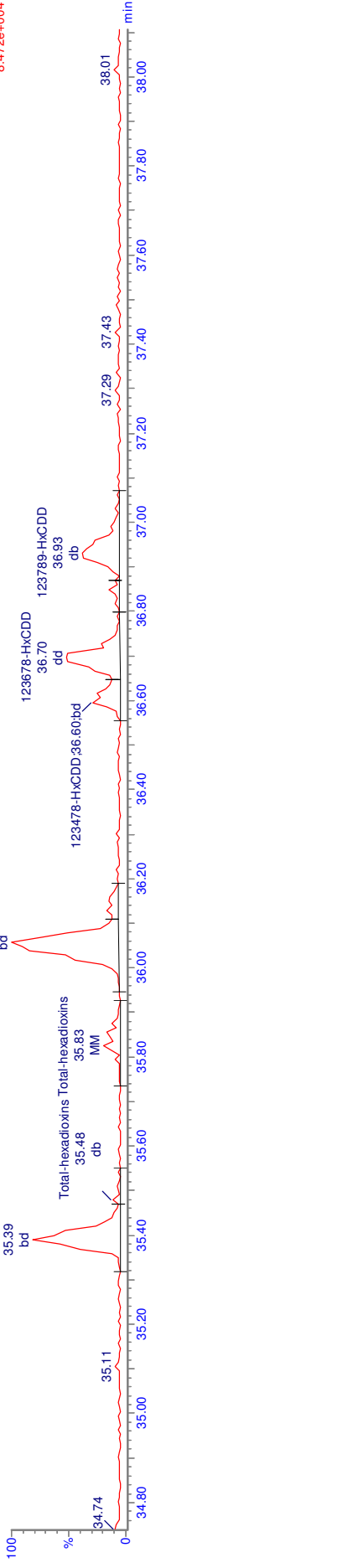
A23DEC19A-7
 42649 15926003-1

F3:Voltage SIR,El+
 389.816
 9.764e+004



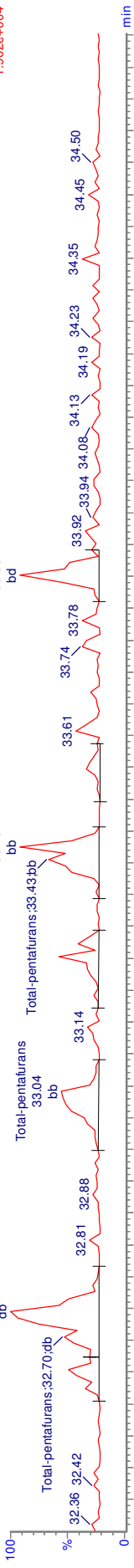
A23DEC19A-7
 42649 15926003-1

F3:Voltage SIR,El+
 391.813
 8.472e+004

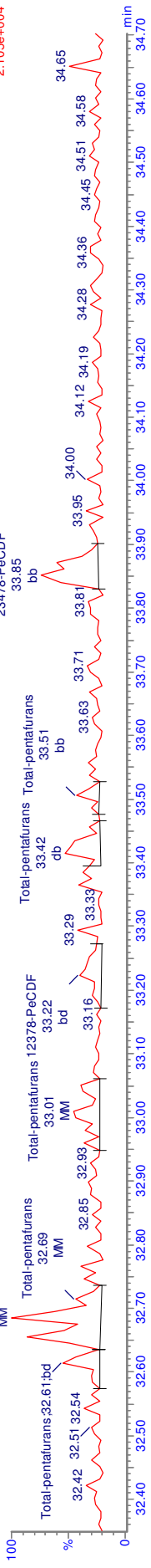


MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

A23DEC19A-7
 42649 15926003-1
 F2:Voltage SIR.EI+
 339.860
 1.902e+004

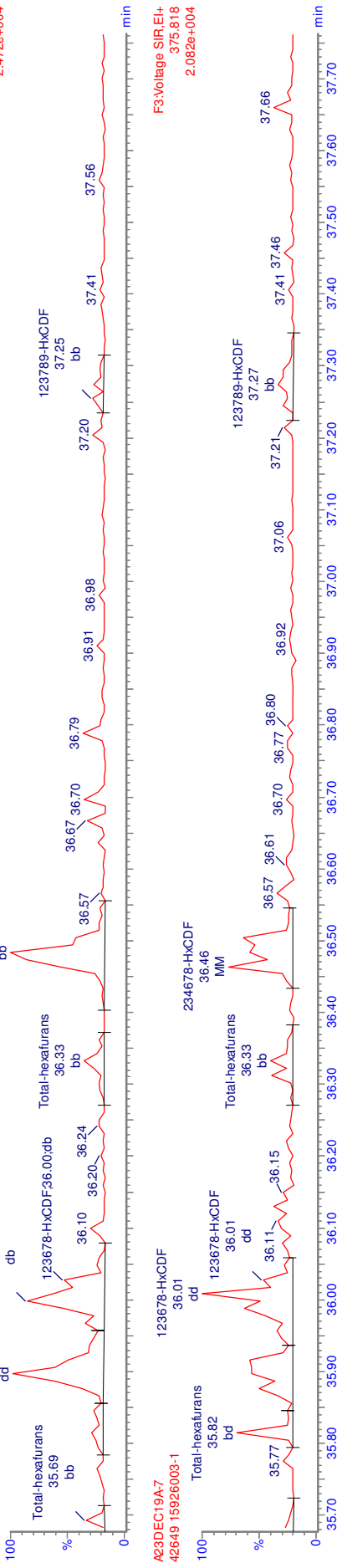


A23DEC19A-7
 42649 15926003-1
 F2:Voltage SIR.EI+
 341.857
 2.105e+004

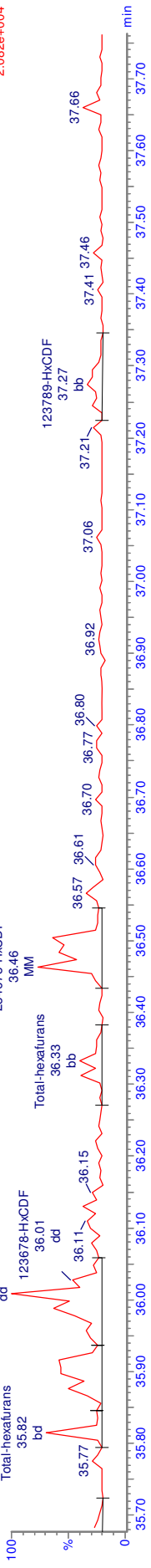


MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

A23DEC19A-7 123478-HxCDF 35.90 dd 123678-HxCDF 36.00 db 234678-HxCDF 36.48 bb
 42649 15926003-1 123678-HxCDF:36.00:db 36.10 36.20 36.24 36.57 36.67 36.70 36.79 36.91 36.98 37.20 37.25 37.41 37.56
 F3:Voltage SIR.EI+ 373.821 2.472e+004



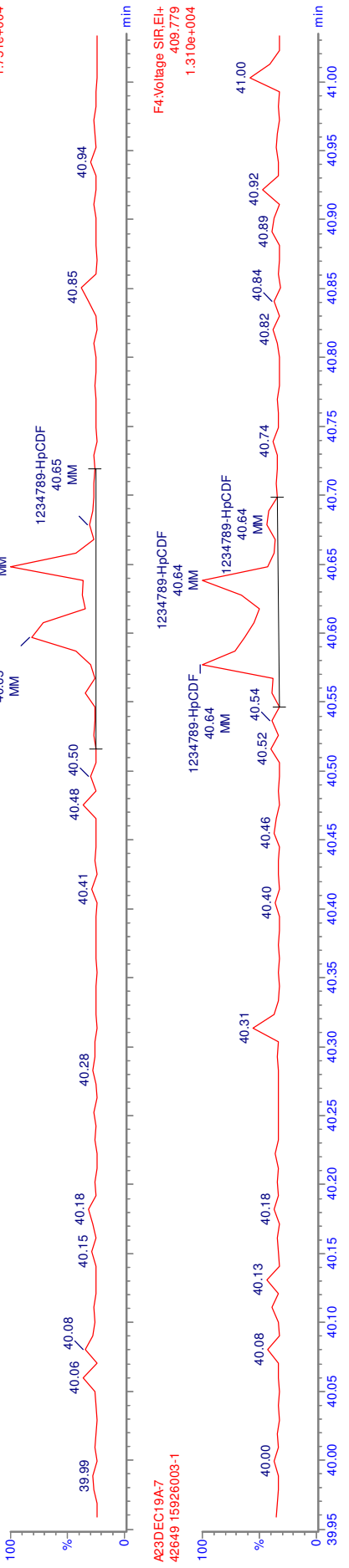
A23DEC19A-7 123678-HxCDF 36.01 dd 234678-HxCDF 36.46 MM
 42649 15926003-1 123678-HxCDF 36.01 dd 123789-HxCDF 37.21 bb 37.27 37.41 37.46 37.66
 F3:Voltage SIR.EI+ 375.818 2.082e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

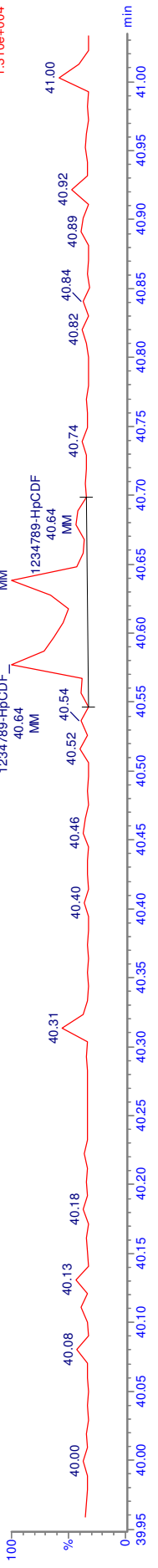
A23DEC19A-7
 42649 15926003-1

F4:Voltage SIR.EI+
 407.782
 1.751e+004



A23DEC19A-7
 42649 15926003-1

F4:Voltage SIR.EI+
 409.779
 1.310e+004



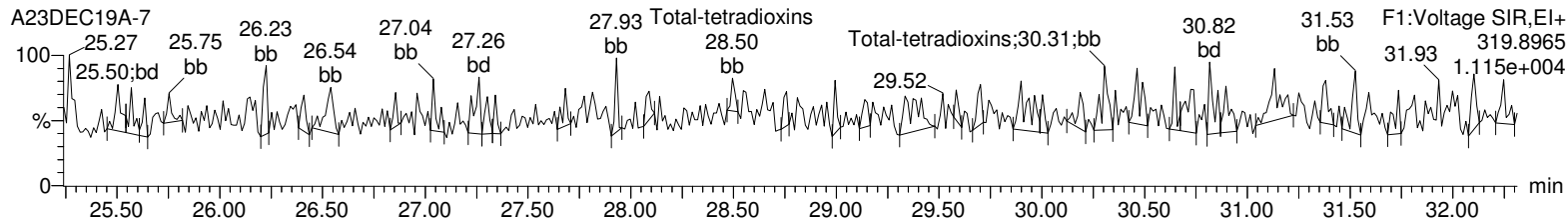
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

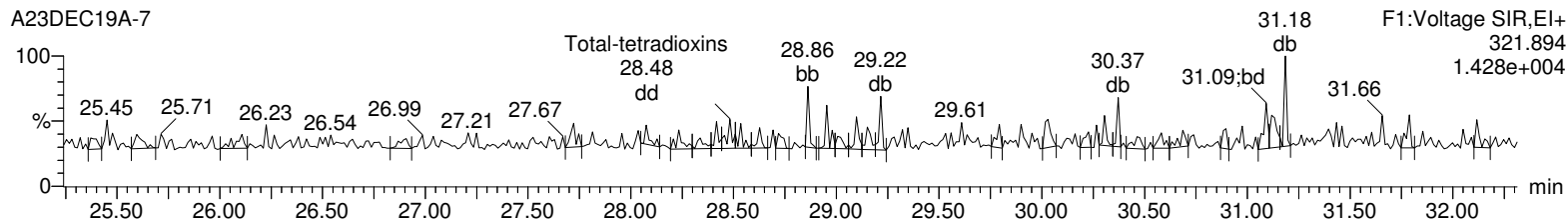
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

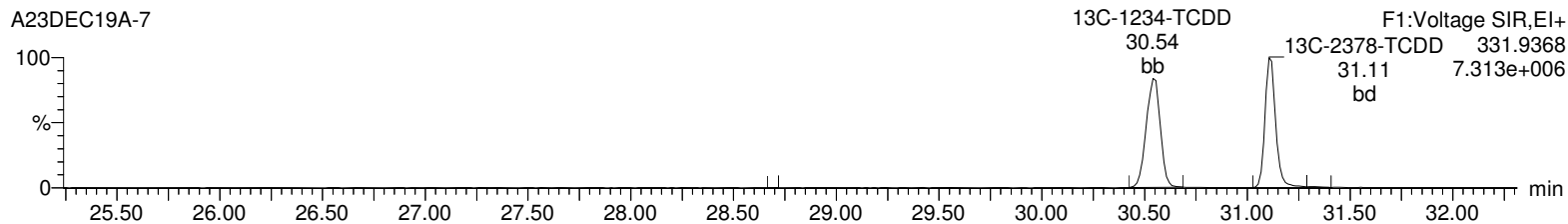
Total-tetradoxins



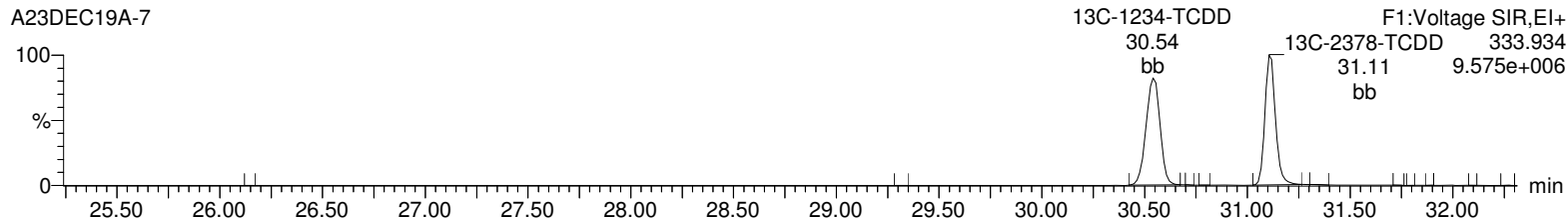
Total-tetradoxins



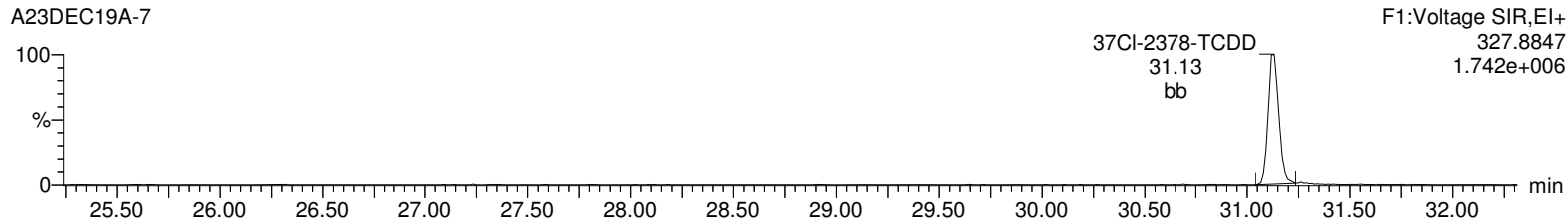
13C-2378-TCDD



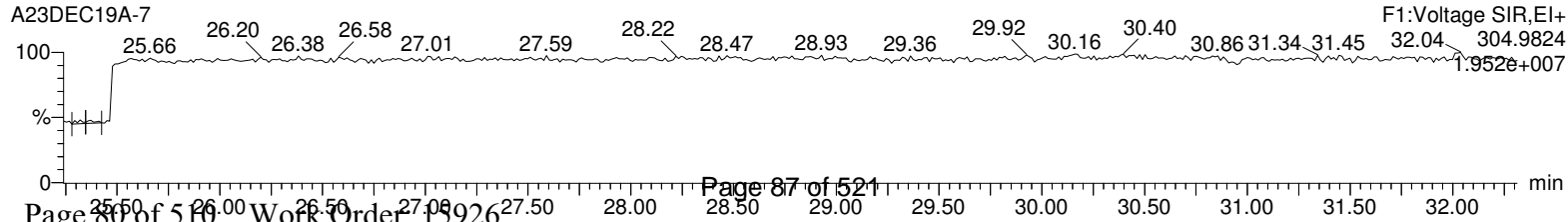
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



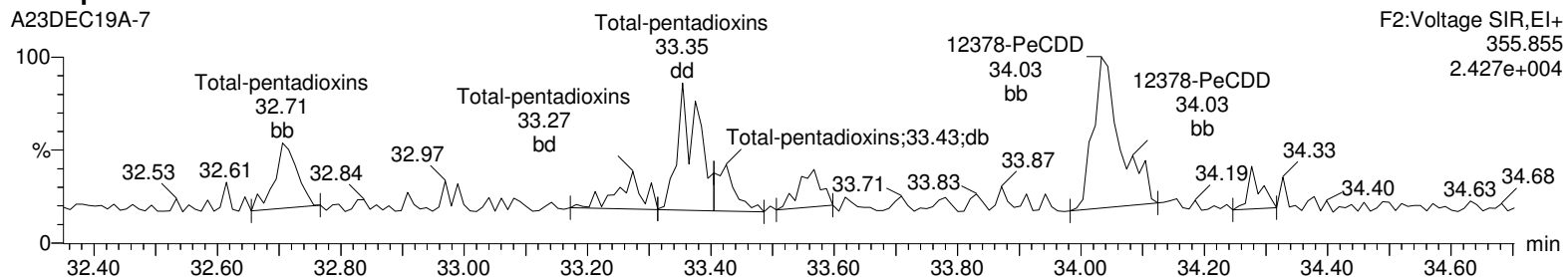
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

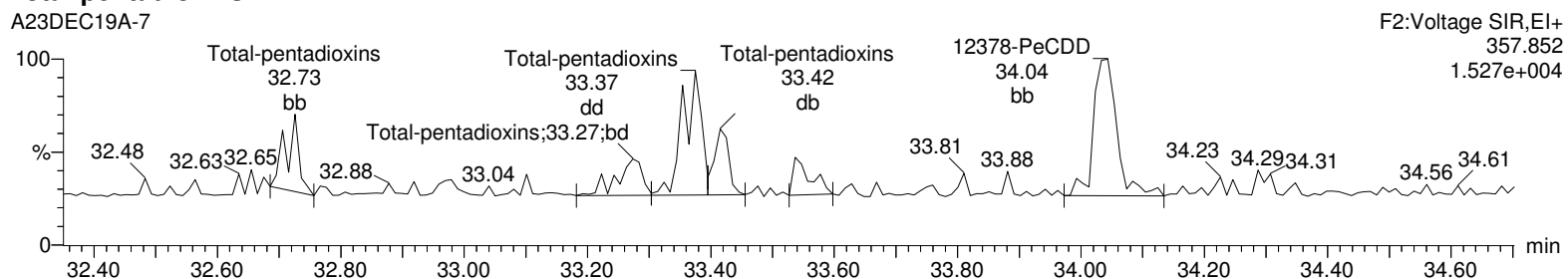
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

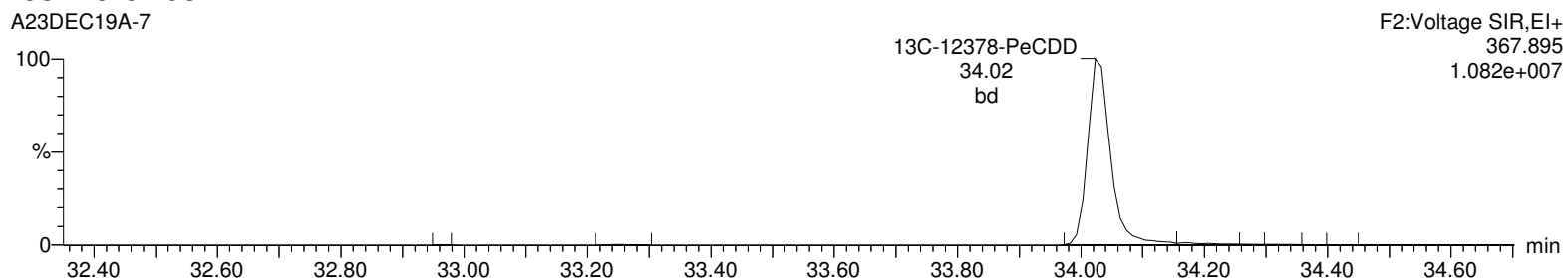
Total-pentadioxins



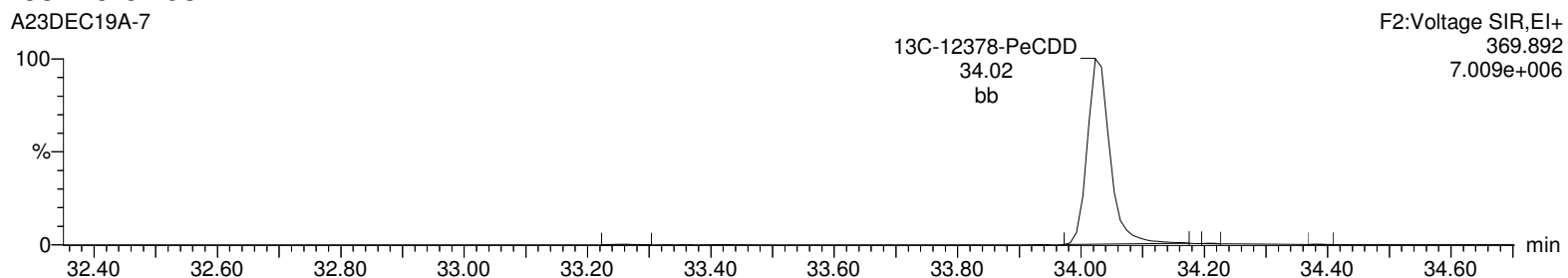
Total-pentadioxins



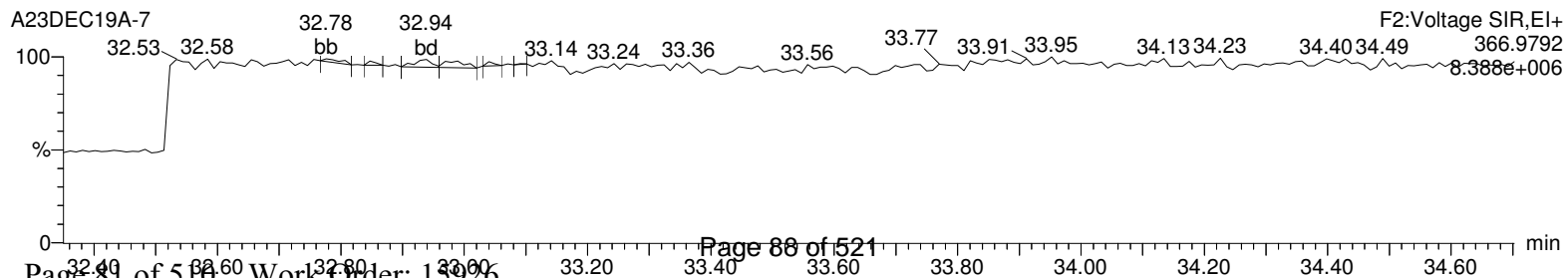
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

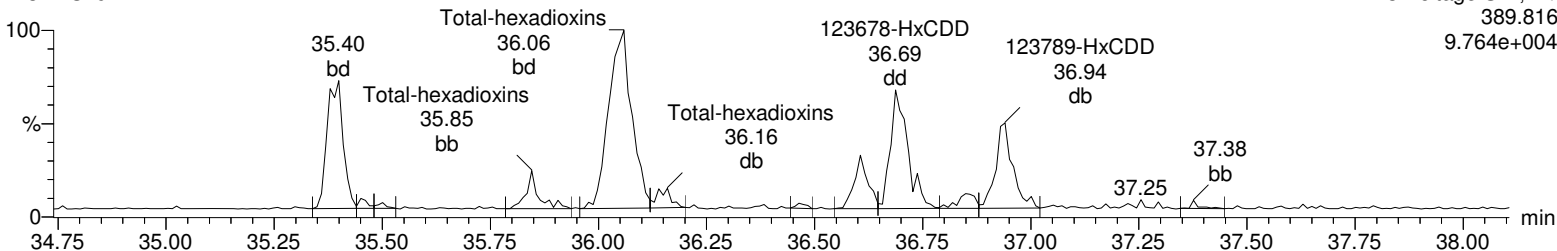
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A-7

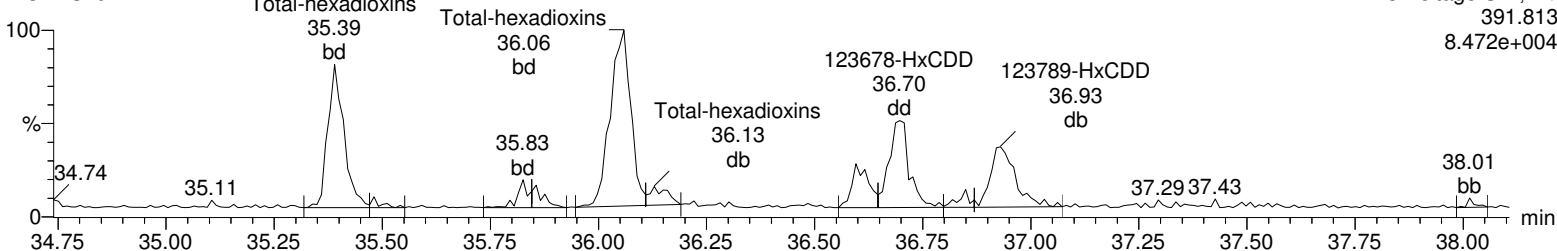
F3:Voltage SIR,EI+
389.816
9.764e+004



Total-hexadioxins

A23DEC19A-7

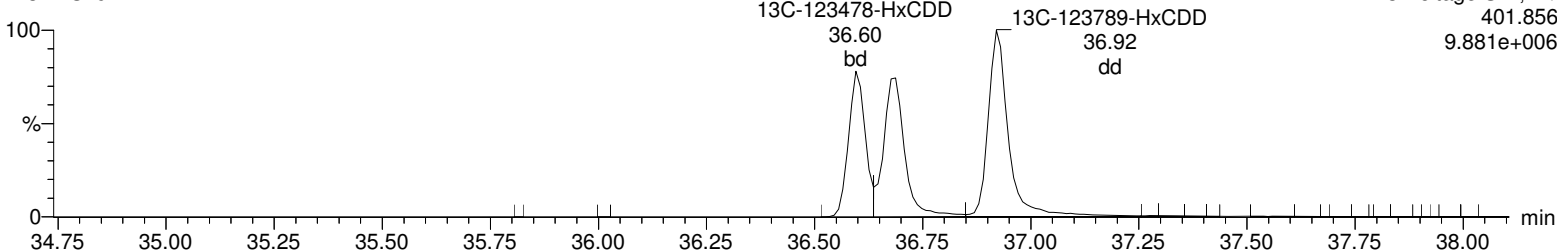
F3:Voltage SIR,EI+
391.813
8.472e+004



13C-123478-HxCDD

A23DEC19A-7

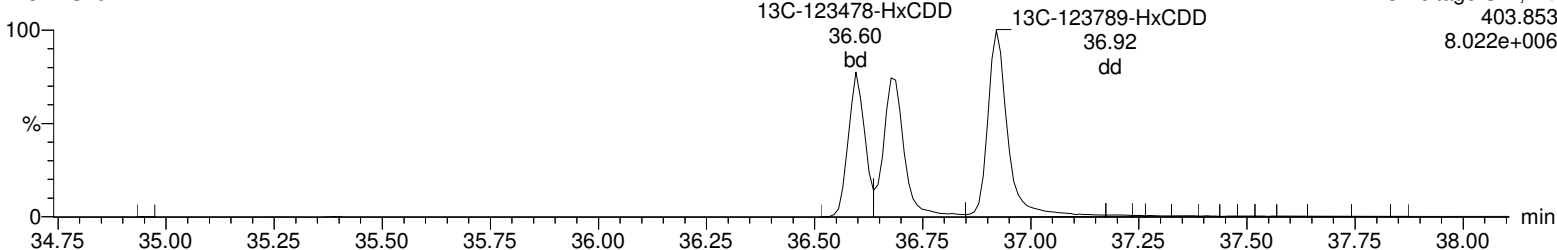
F3:Voltage SIR,EI+
401.856
9.881e+006



13C-123478-HxCDD

A23DEC19A-7

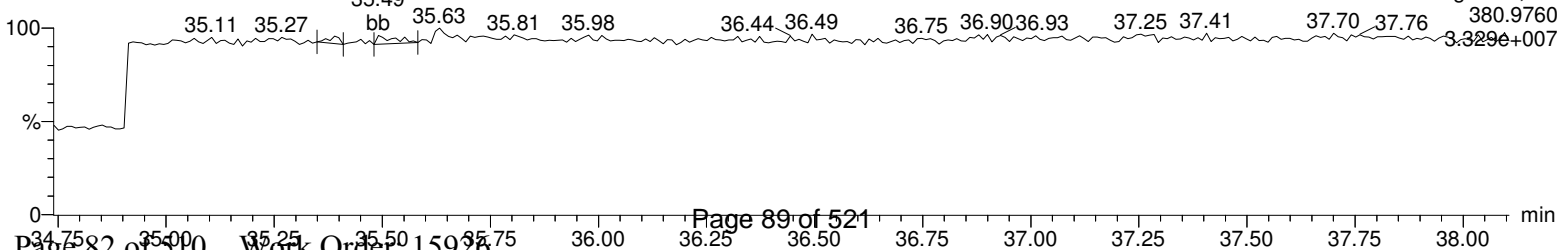
F3:Voltage SIR,EI+
403.853
8.022e+006



Lock Mass F3

A23DEC19A-7

F3:Voltage SIR,EI+
380.9760
3.329e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

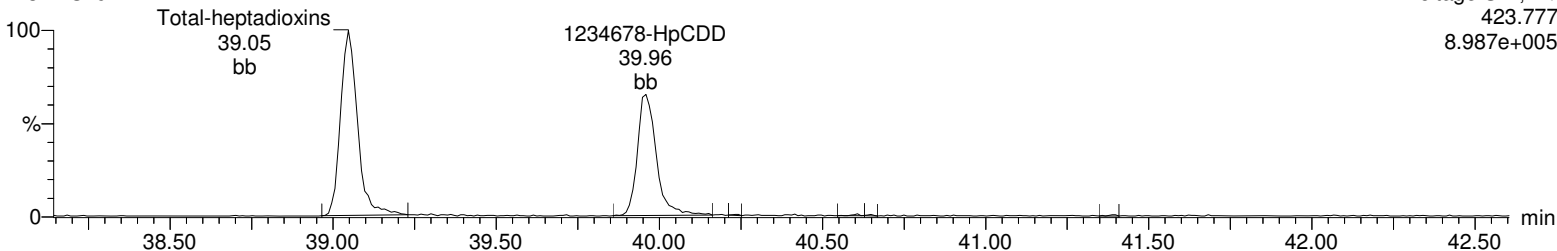
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-heptadioxins

A23DEC19A-7

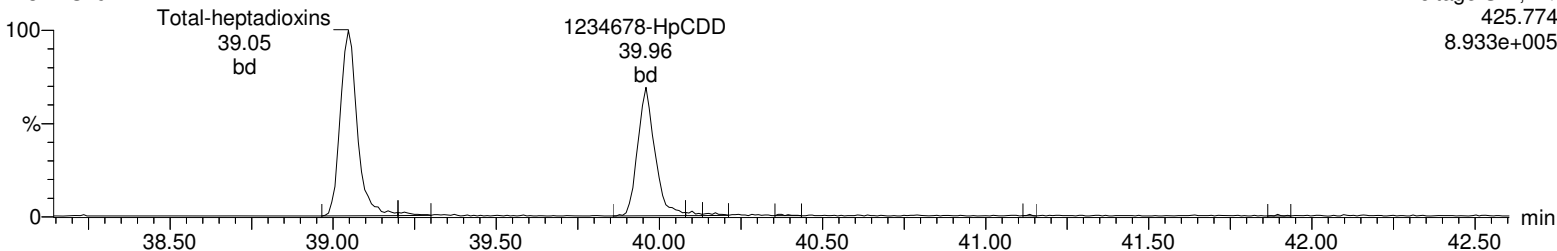
F4:Voltage SIR,EI+
423.777
8.987e+005



Total-heptadioxins

A23DEC19A-7

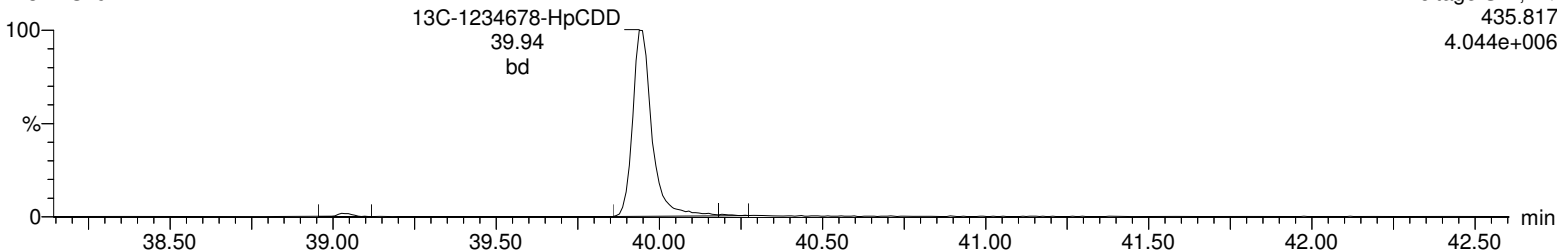
F4:Voltage SIR,EI+
425.774
8.933e+005



13C-1234678-HpCDD

A23DEC19A-7

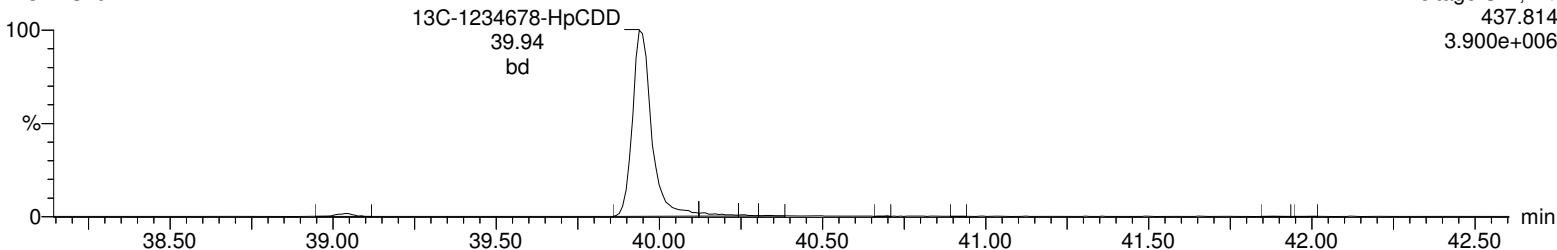
F4:Voltage SIR,EI+
435.817
4.044e+006



13C-1234678-HpCDD

A23DEC19A-7

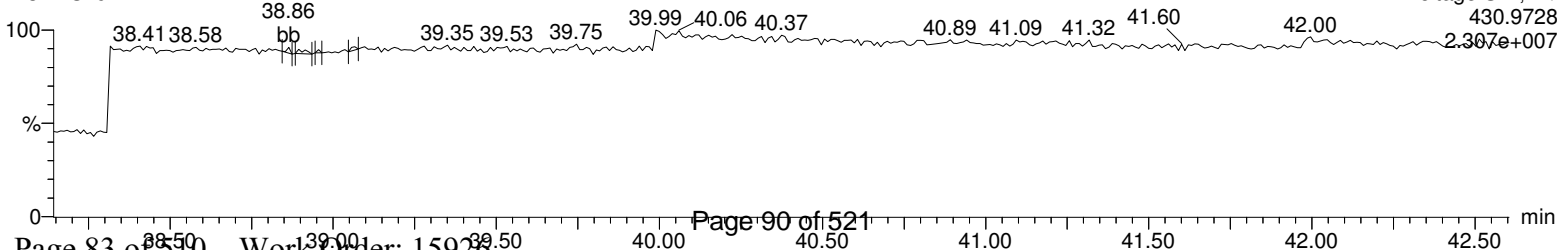
F4:Voltage SIR,EI+
437.814
3.900e+006



Lock Mass F4

A23DEC19A-7

F4:Voltage SIR,EI+
430.9728
2.307e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

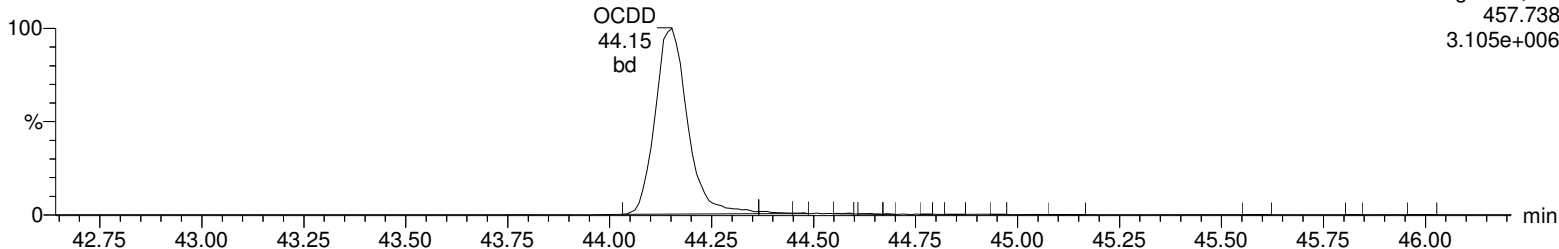
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDD

A23DEC19A-7

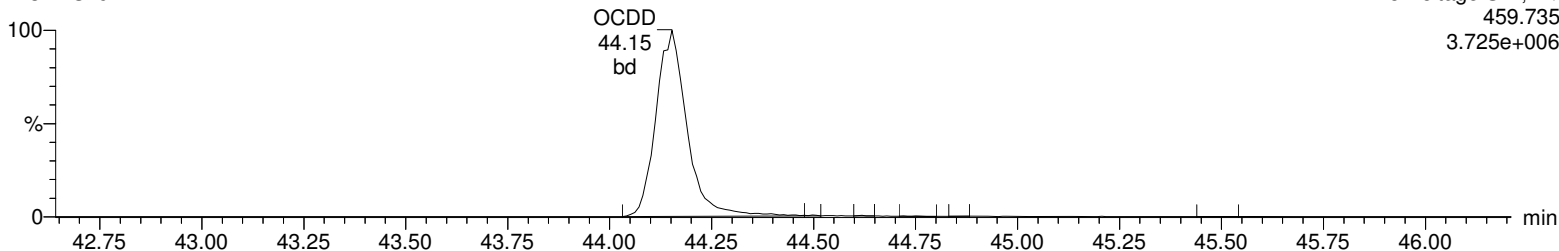
F5:Voltage SIR,EI+
457.738
3.105e+006



OCDD

A23DEC19A-7

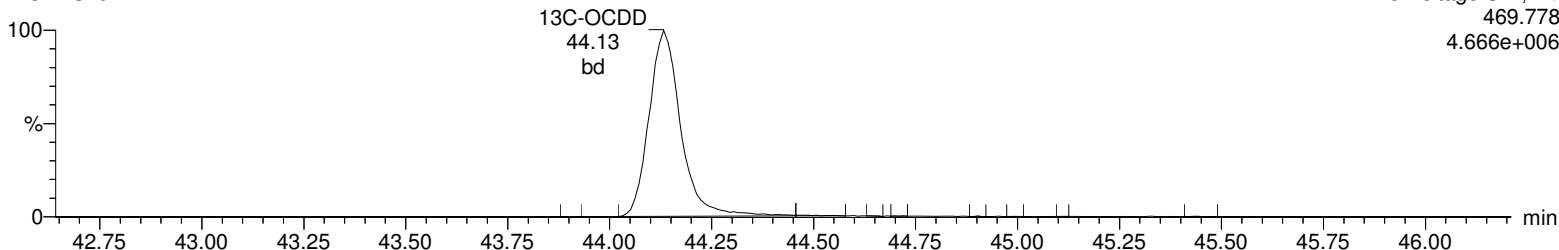
F5:Voltage SIR,EI+
459.735
3.725e+006



13C-OCDD

A23DEC19A-7

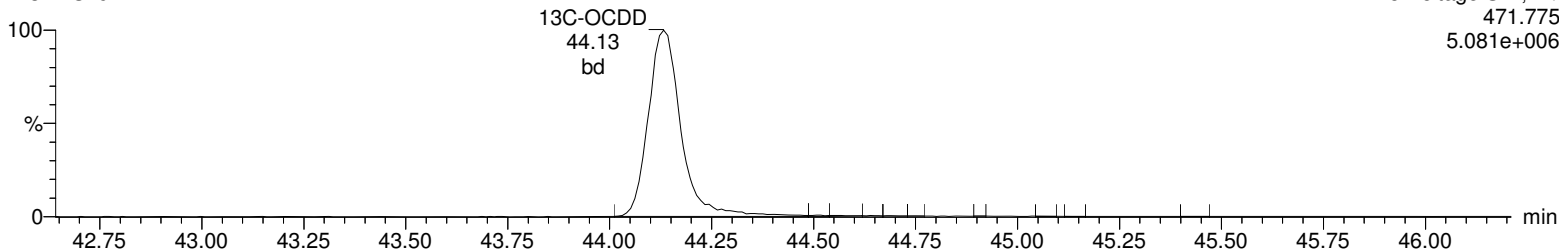
F5:Voltage SIR,EI+
469.778
4.666e+006



13C-OCDD

A23DEC19A-7

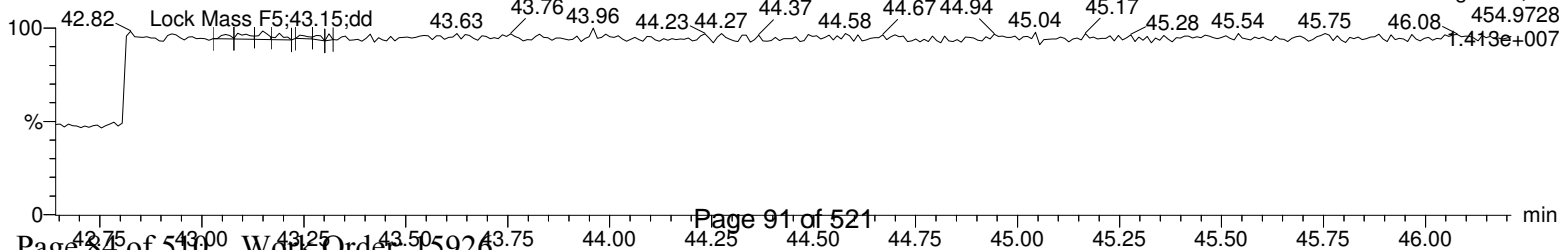
F5:Voltage SIR,EI+
471.775
5.081e+006



Lock Mass F5

A23DEC19A-7

F5:Voltage SIR,EI+
454.9728
1.413e+007



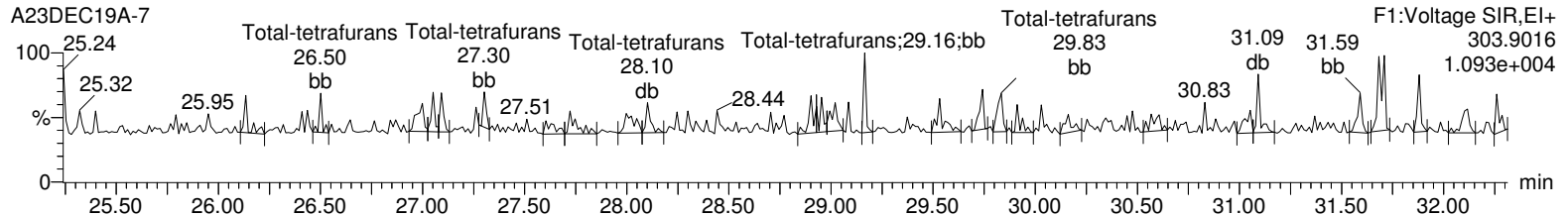
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

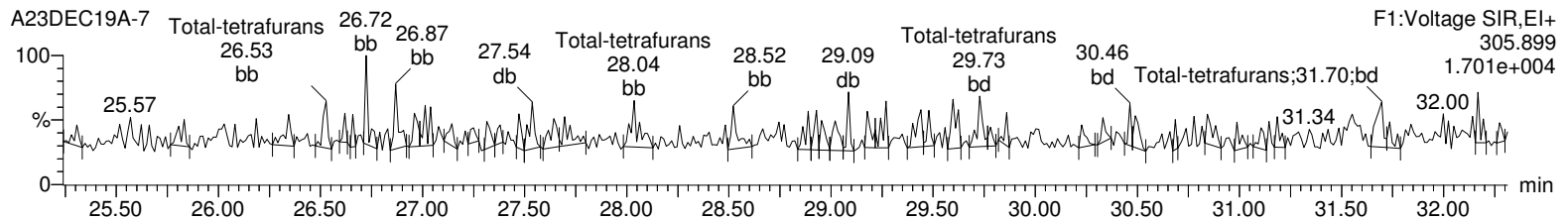
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

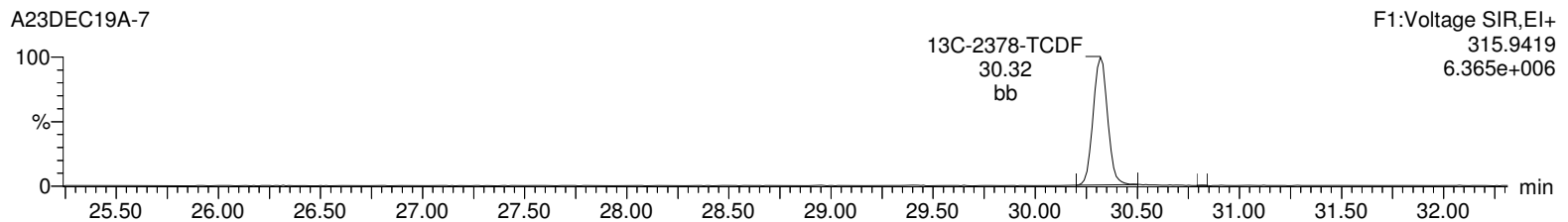
Total-tetrafurans



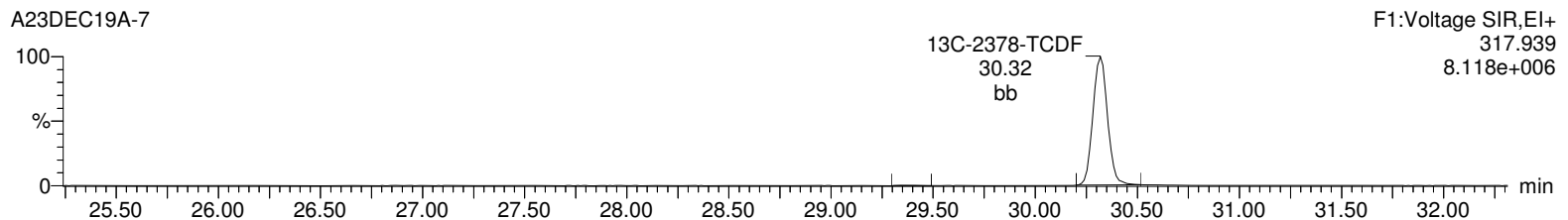
Total-tetrafurans



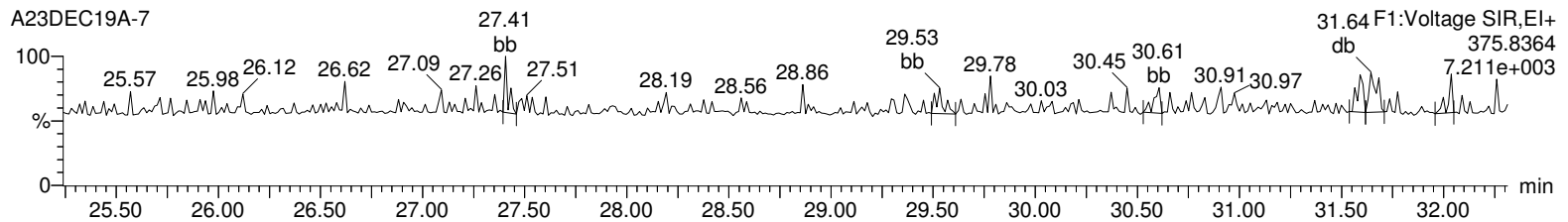
13C-2378-TCDF



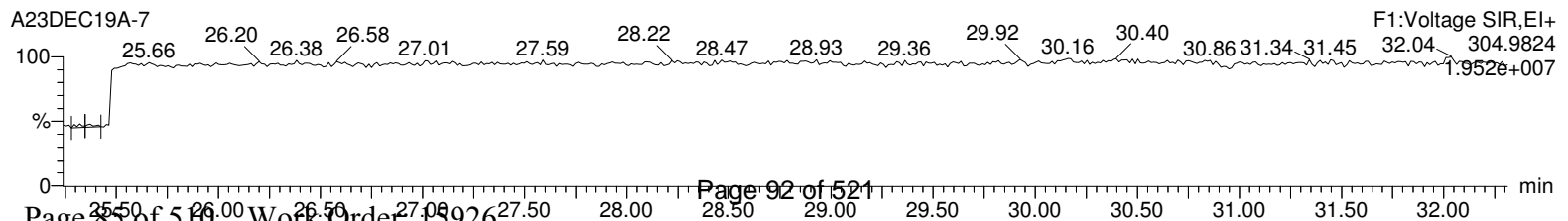
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

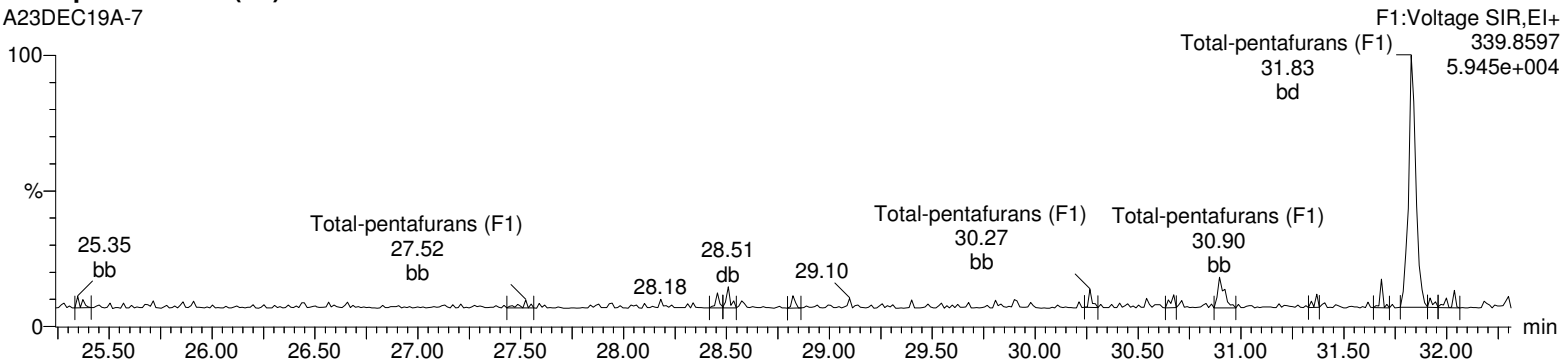
Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

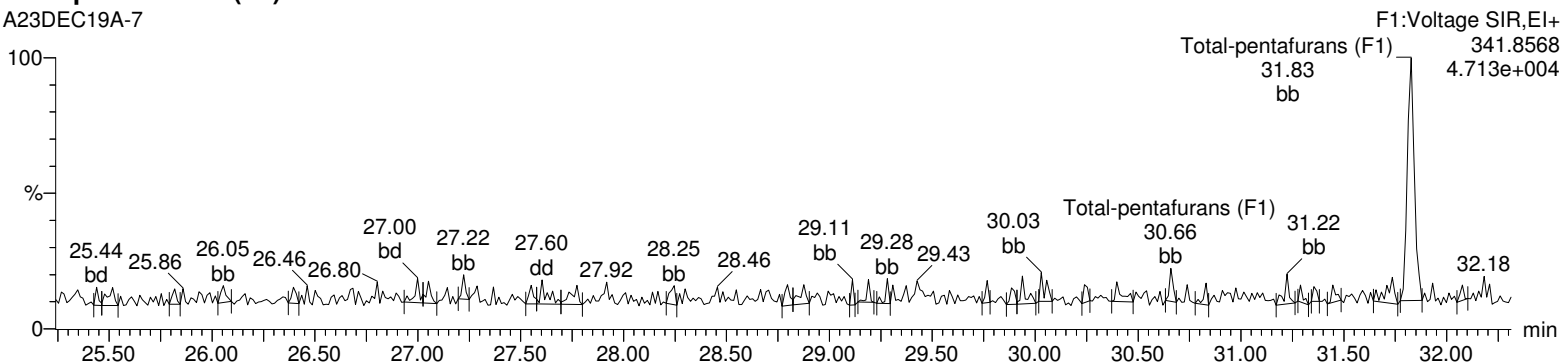
Total-pentafurans (F1)

A23DEC19A-7



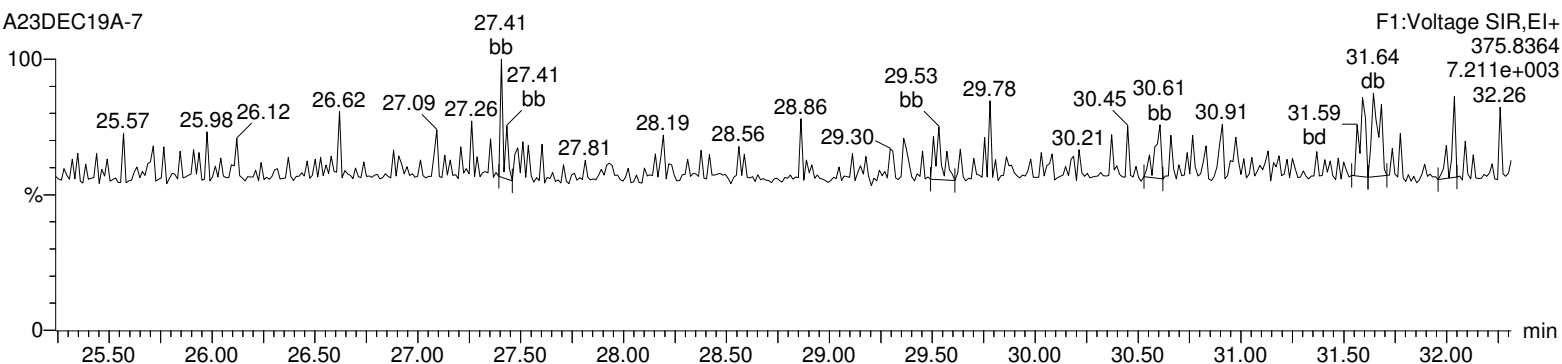
Total-pentafurans (F1)

A23DEC19A-7



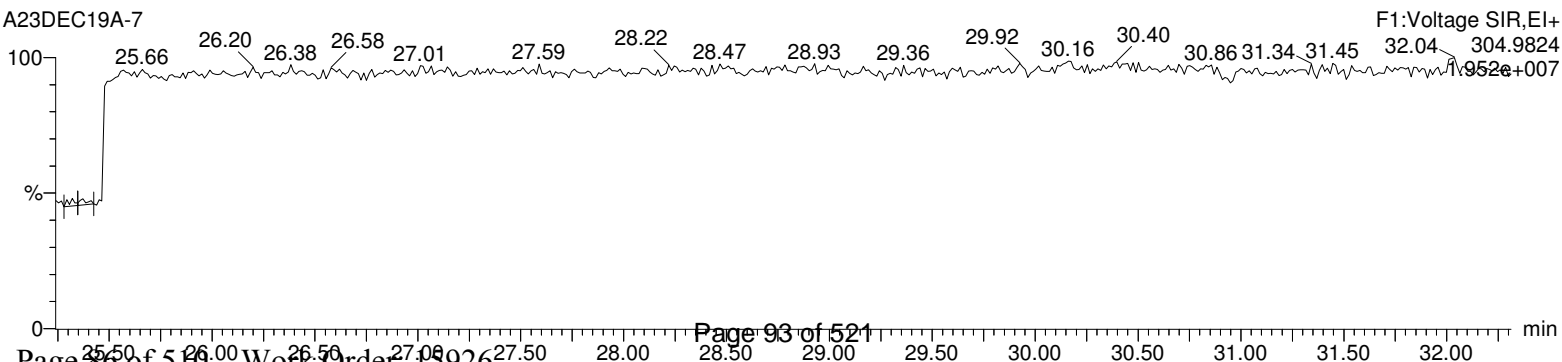
HxDPE

A23DEC19A-7



Lock Mass F1

A23DEC19A-7



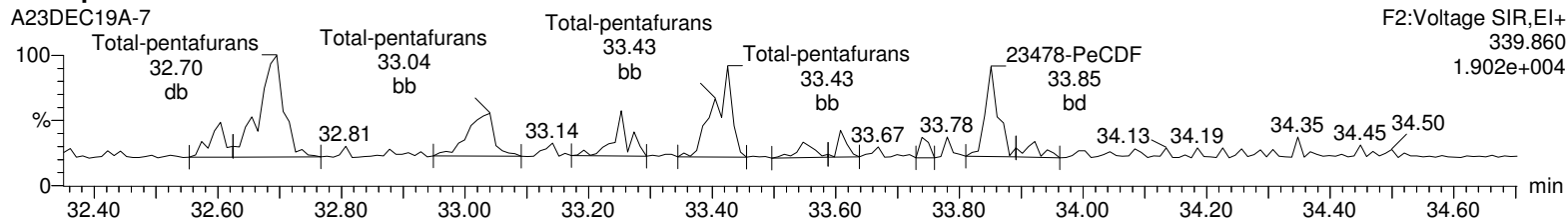
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

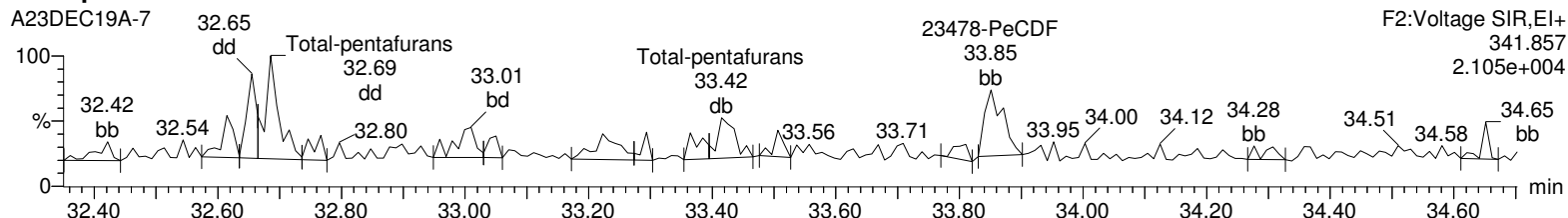
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

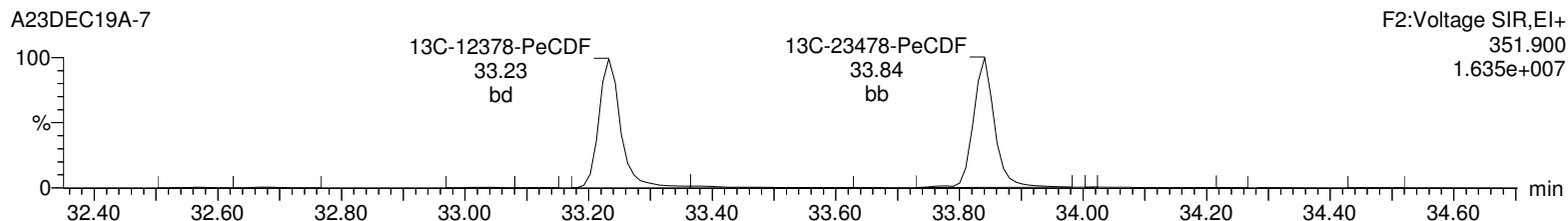
Total-pentafurans



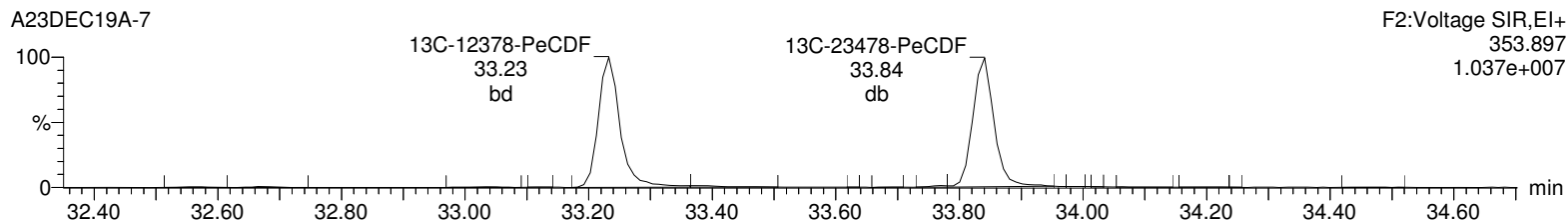
Total-pentafurans



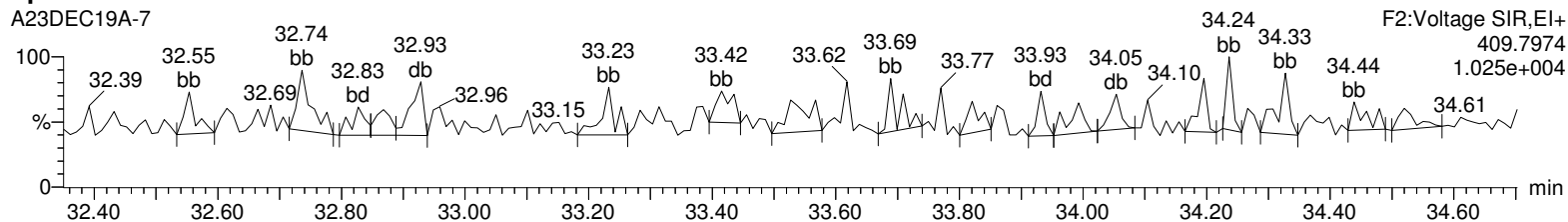
13C-12378-PeCDF



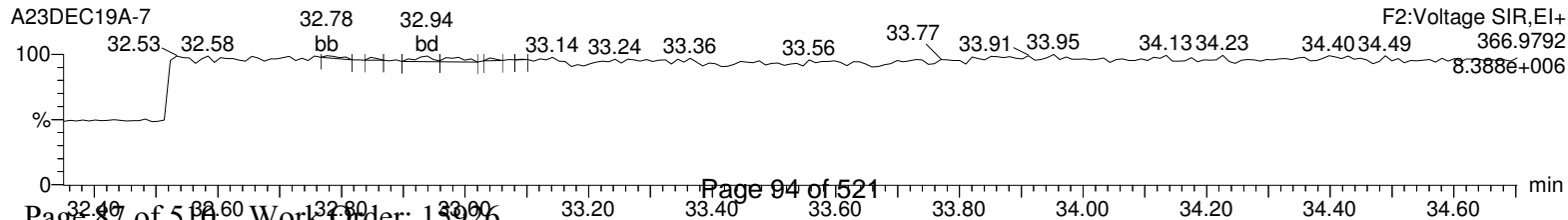
13C-12378-PeCDF



HpDPE



Lock Mass F2



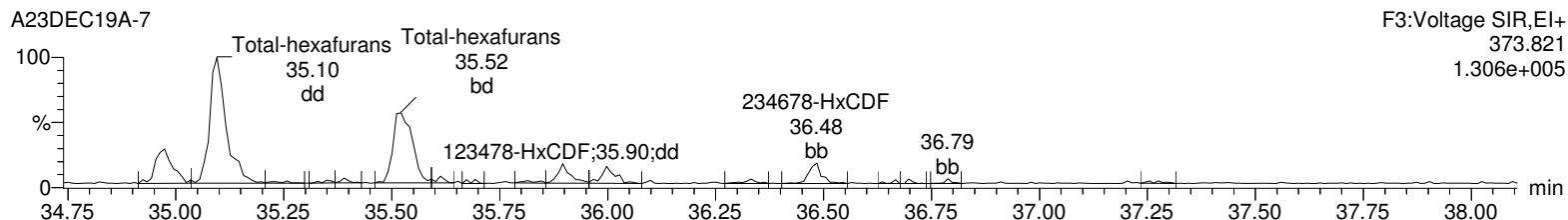
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

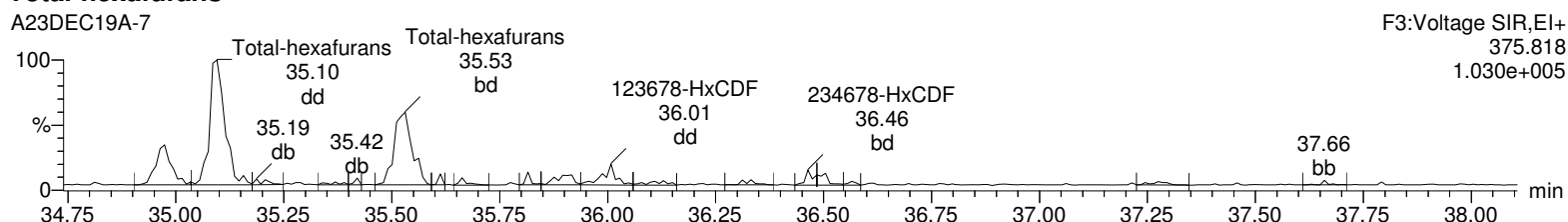
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

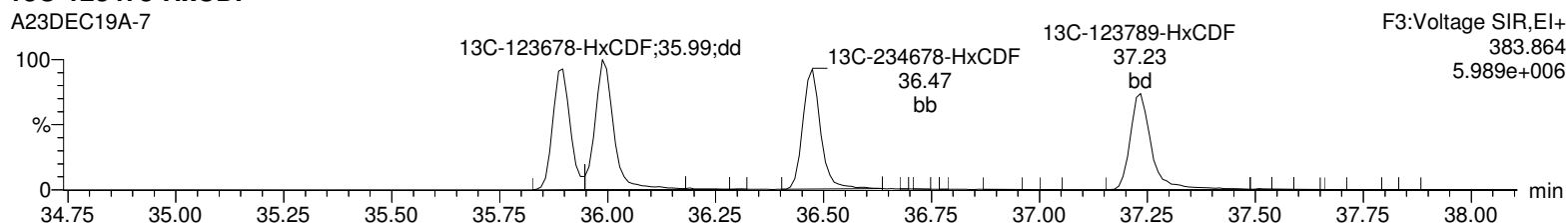
Total-hexafurans



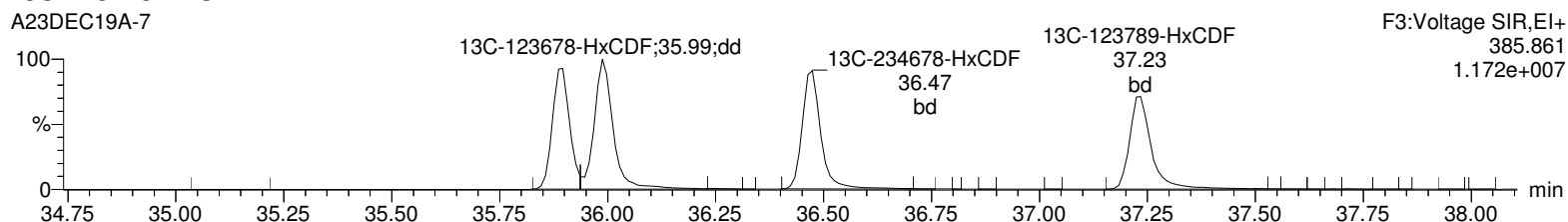
Total-hexafurans



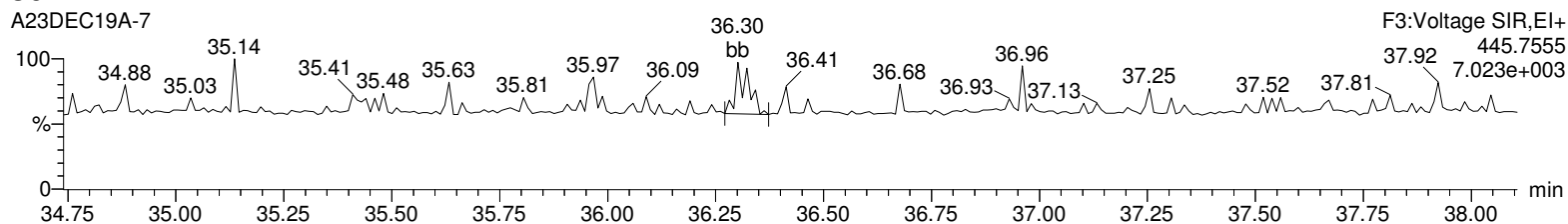
13C-123478-HxCDF



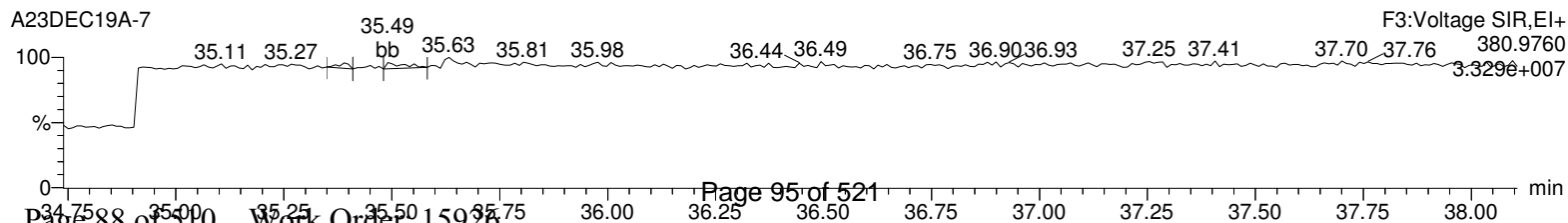
13C-123478-HxCDF



OcDPE



Lock Mass F3



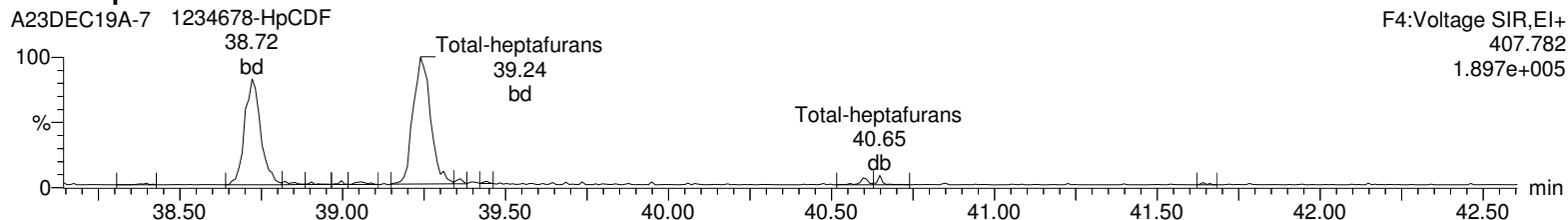
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

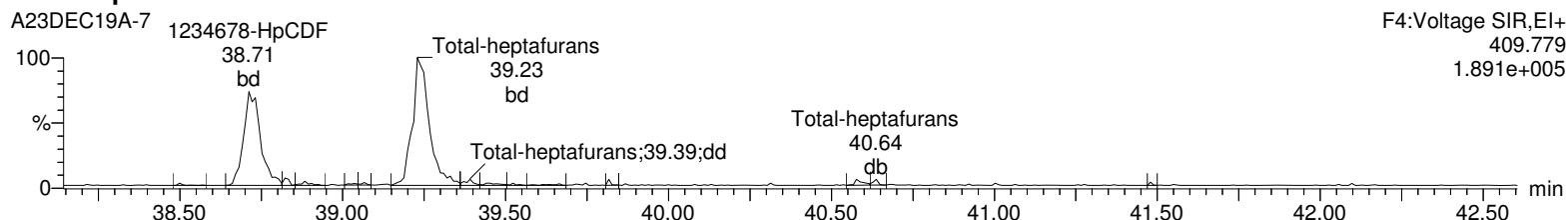
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

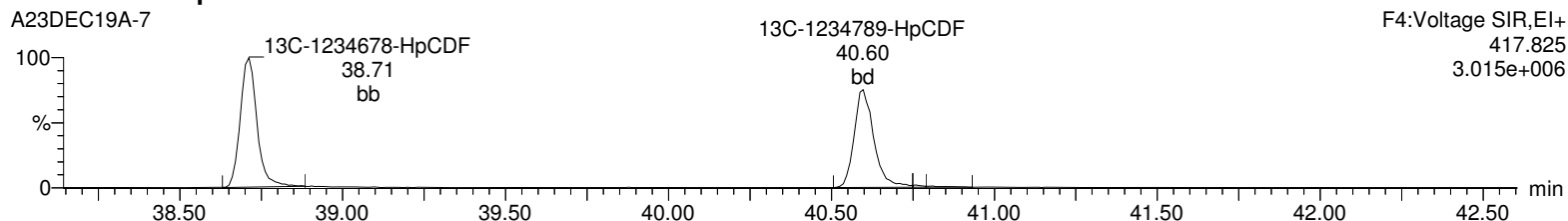
Total-heptafurans



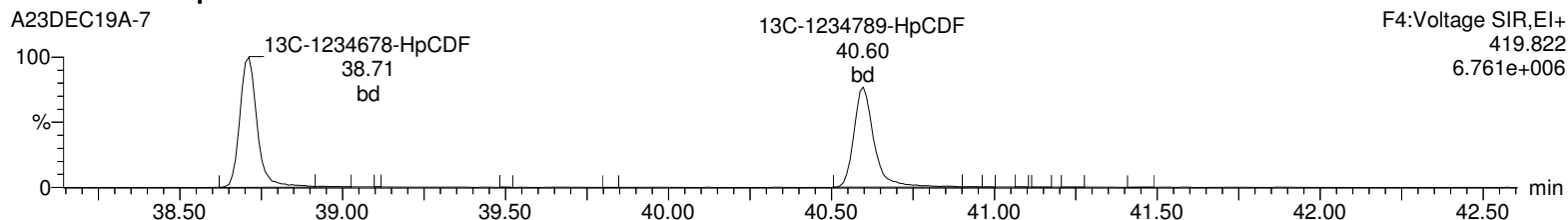
Total-heptafurans



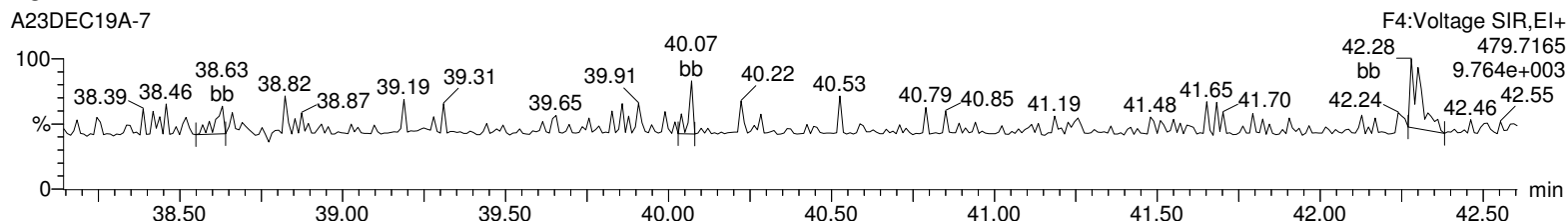
13C-1234678-HpCDF



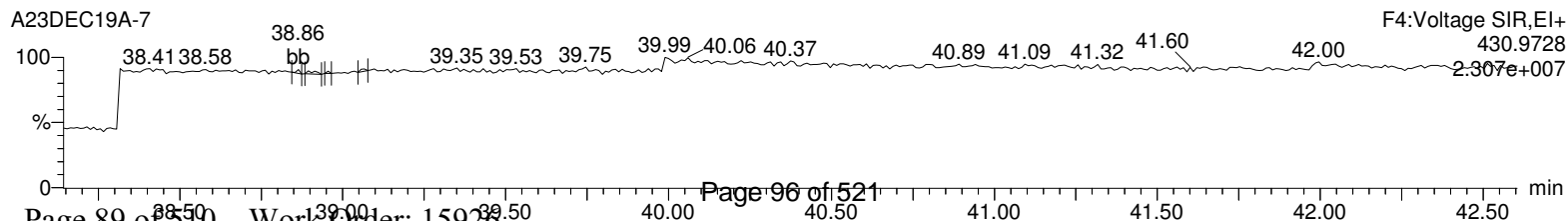
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

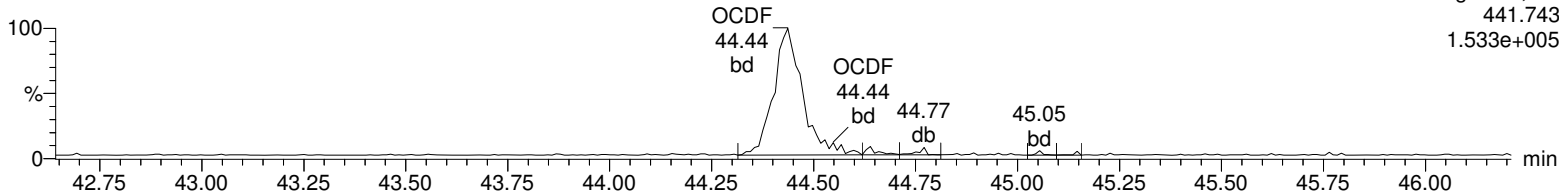
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-7, Date: 23-Dec-2019, Time: 22:16:25, ID: 15926003-1, Description: 42649, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDF

A23DEC19A-7

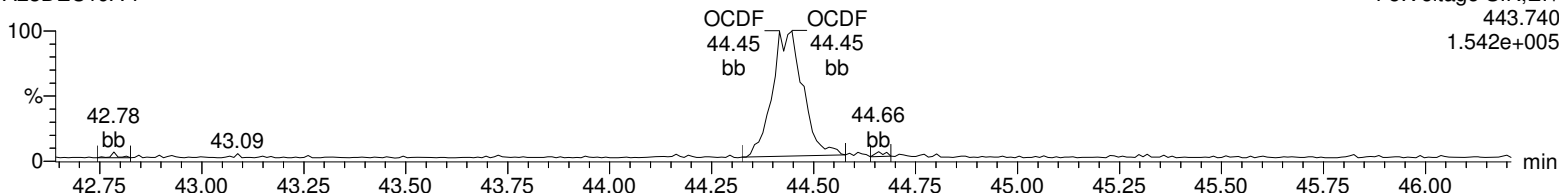
F5:Voltage SIR,EI+
441.743
1.533e+005



OCDF

A23DEC19A-7

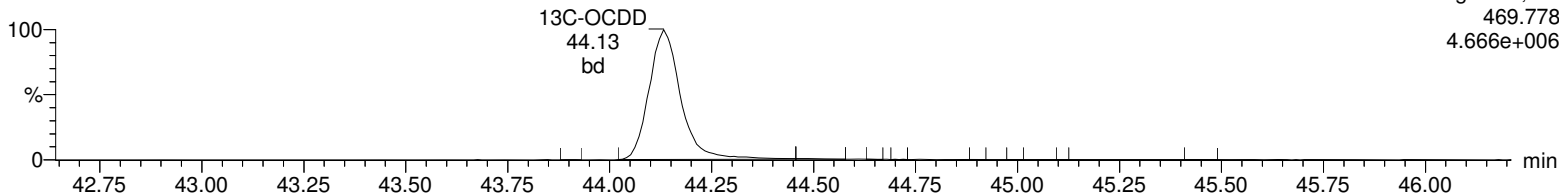
F5:Voltage SIR,EI+
443.740
1.542e+005



13C-OCDD

A23DEC19A-7

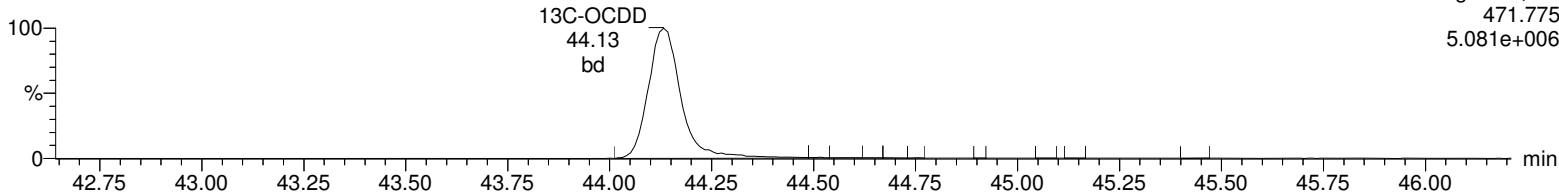
F5:Voltage SIR,EI+
469.778
4.666e+006



13C-OCDD

A23DEC19A-7

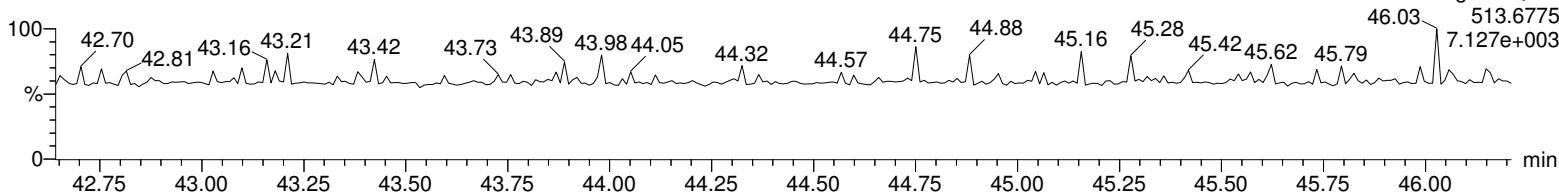
F5:Voltage SIR,EI+
471.775
5.081e+006



DeDPE

A23DEC19A-7

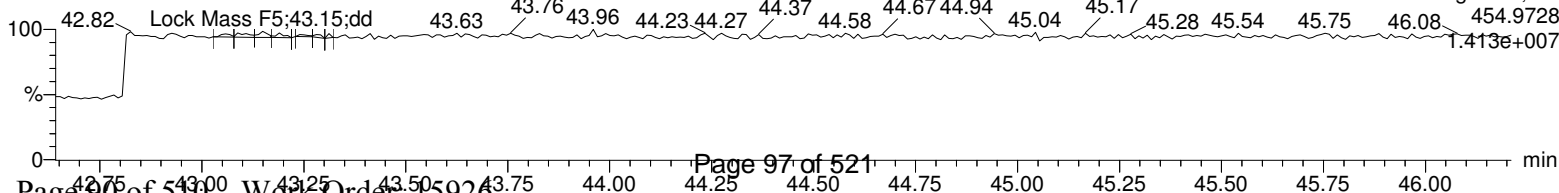
F5:Voltage SIR,EI+
513.6775
7.127e+003



Lock Mass F5

A23DEC19A-7

F5:Voltage SIR,EI+
454.9728
1.413e+007



Quality Control Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025596		Matrix: WATER
Client Sample: QC for batch 42647		
Client ID: MB for batch 42647		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 19:51	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-4		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00175	ng/L	0.00175	0.010
40321-76-4	1,2,3,7,8-PeCDD	U	0.00095	ng/L	0.00095	0.050
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00105	ng/L	0.00105	0.050
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00101	ng/L	0.00101	0.050
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00104	ng/L	0.00104	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD	JK	0.00136	ng/L	0.00123	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	0.00296	ng/L	0.00113	0.100
51207-31-9	2,3,7,8-TCDF	U	0.00148	ng/L	0.00148	0.010
57117-41-6	1,2,3,7,8-PeCDF	U	0.00092	ng/L	0.00092	0.050
57117-31-4	2,3,4,7,8-PeCDF	U	0.000896	ng/L	0.000896	0.050
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000874	ng/L	0.000874	0.050
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000898	ng/L	0.000898	0.050
60851-34-5	2,3,4,6,7,8-HxCDF	J	0.0011	ng/L	0.000824	0.050
72918-21-9	1,2,3,7,8,9-HxCDF	J	0.00138	ng/L	0.00115	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.00106	ng/L	0.000588	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF	JK	0.0011	ng/L	0.000762	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00254	ng/L	0.00254	0.100
41903-57-5	Total TeCDD	U	0.00175	ng/L	0.00175	0.010
36088-22-9	Total PeCDD	U	0.00095	ng/L	0.00095	0.050
34465-46-8	Total HxCDD	U	0.00101	ng/L	0.00101	0.050
37871-00-4	Total HpCDD	JK	0.00136	ng/L	0.00123	0.050
30402-14-3	Total TeCDF	U	0.00148	ng/L	0.00148	0.010
30402-15-4	Total PeCDF	U	0.000782	ng/L	0.000782	0.050
55684-94-1	Total HxCDF	J	0.00248	ng/L	0.000824	0.050
38998-75-3	Total HpCDF	JK	0.00216	ng/L	0.000588	0.050
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000284	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.0021	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.55	2.00	ng/L	77.7	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.63	2.00	ng/L	81.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.39	2.00	ng/L	69.7	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.43	2.00	ng/L	71.7	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.58	2.00	ng/L	78.8	(23%-140%)
13C-OCDD		2.73	4.00	ng/L	68.3	(17%-157%)
13C-2,3,7,8-TCDF		1.55	2.00	ng/L	77.5	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.75	2.00	ng/L	87.7	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.56	2.00	ng/L	78.2	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.32	2.00	ng/L	66.0	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.37	2.00	ng/L	68.4	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.42	2.00	ng/L	70.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.43	2.00	ng/L	71.7	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025596		Matrix: WATER
Client Sample: QC for batch 42647		
Client ID: MB for batch 42647		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 19:51	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-4		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery% Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.29	2.00	ng/L	64.5 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.47	2.00	ng/L	73.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.168	0.200	ng/L	84.1 (35%-197%)

Comments:

- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:04:22 Eastern Standard Time
 Printed: Tuesday, December 24, 2019 09:05:20 Eastern Standard Time

Method: Untitled 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.0877		3583			1966			
2	12378-PeCDD	1.56e2	6.23e1	2.19e2	34.05	1.000	2.51	YES	0.034	0.0475	5.63e3	2378	2.4	1.98e3	618	3.2	bb	bb
3	123478-HxCDD	6.20e1	1.04e2	1.66e2	36.64	1.001	0.60	YES	0.027	0.0526	1.89e3	1402	1.3	4.01e3	1349	3.0	bd	bd
4	123678-HxCDD	2.21e2	1.14e2	3.35e2	36.71	1.000	1.95	YES	0.048	0.0504	9.70e3	1402	6.9	4.66e3	1349	3.5	dd	db
5	123789-HxCDD	1.31e2	1.19e2	2.50e2	36.95	1.007	1.11	NO	0.039	0.0522	5.08e3	1402	3.6	2.67e3	1349	2.0	bb	bb
6	1234678-HpCDD	1.66e2	2.22e2	3.88e2	39.98	1.001	0.75	YES	0.068	0.0615	2.75e3	1071	2.6	5.93e3	1116	5.3	MM	MM
7	OCDD	2.96e2	3.62e2	6.58e2	44.15	1.000	0.82	NO	0.148	0.0567	3.71e3	517	7.2	5.80e3	647	9.0	MM	MM
8	2378-TCDF							NO		0.0742		1376			2833			
9	12378-PeCDF	2.24e2	2.35e2	4.59e2	33.26	1.001	0.95	YES	0.045	0.0460	6.03e3	1631	3.7	6.13e3	2961	2.1	bb	bd
10	23478-PeCDF	3.98e2	1.61e2	5.59e2	33.87	1.001	2.47	YES	0.055	0.0448	1.10e4	1631	6.8	4.11e3	2961	1.4	bb	dd
11	123478-HxCDF	8.94e1	1.99e2	2.88e2	35.94	1.001	0.45	YES	0.035	0.0437	2.51e3	1856	1.4	8.10e3	1388	5.8	MM	bb
12	123678-HxCDF	1.71e2	1.26e2	2.97e2	36.00	1.000	1.35	NO	0.032	0.0449	8.48e3	1856	4.6	2.93e3	1388	2.1	MM	bd
13	234678-HxCDF	2.92e2	2.11e2	5.03e2	36.48	1.000	1.38	NO	0.055	0.0412	6.97e3	1856	3.8	7.59e3	1388	5.5	bb	bb
14	123789-HxCDF	3.04e2	2.26e2	5.30e2	37.25	1.000	1.34	NO	0.069	0.0575	7.68e3	1856	4.1	8.22e3	1388	5.9	bb	MM
15	1234678-HpCDF	1.78e2	1.81e2	3.58e2	38.76	1.001	0.98	NO	0.053	0.0294	3.84e3	620	6.2	4.23e3	776	5.5	MM	bb
16	1234789-HpCDF	2.09e2	1.32e2	3.40e2	40.59	0.999	1.58	YES	0.055	0.0381	5.43e3	620	8.8	3.16e3	776	4.1	MM	MM
17	OCDF	1.51e2	1.82e2	3.33e2	44.45	1.007	0.83	NO	0.064	0.127	3.82e3	927	4.1	4.86e3	2097	2.3	bb	dd
18	13C-2378-TCDD	4.68e5	6.09e5	1.08e6	31.12	1.018	0.77	NO	77.745	0.153	7.76e6	7200	1078.4	9.93e6	3643	2727.2	bb	bd
19	13C-12378-PeCDD	4.58e5	2.94e5	7.52e5	34.04	1.114	1.56	NO	81.521	0.187	1.12e7	5017	2240.4	7.13e6	3799	1877.7	bb	bb
20	13C-123478-HxCDD	3.66e5	2.87e5	6.53e5	36.61	0.991	1.27	NO	69.679	0.206	7.80e6	8101	962.9	6.13e6	6213	986.8	bd	bd
21	13C-123678-HxCDD	4.09e5	3.30e5	7.39e5	36.70	0.994	1.24	NO	71.742	0.188	8.00e6	8101	988.0	6.71e6	6213	1079.8	dd	dd
22	13C-1234678-HpCDD	2.82e5	2.71e5	5.53e5	39.96	1.082	1.04	NO	78.802	0.227	4.36e6	6966	626.4	4.06e6	4826	840.8	bb	bd
23	13C-OCDD	4.30e5	4.87e5	9.17e5	44.14	1.195	0.88	NO	136.682	0.237	4.95e6	5475	903.8	5.44e6	6313	861.3	bd	bd
24	13C-2378-TCDF	5.21e5	6.68e5	1.19e6	30.33	0.993	0.78	NO	77.480	0.275	6.36e6	14095	450.9	8.12e6	7515	1079.9	bb	bb
25	13C-12378-PeCDF	6.72e5	4.17e5	1.09e6	33.24	1.088	1.61	NO	87.742	0.376	1.63e7	17014	957.5	1.05e7	6874	1534.1	bb	bd
26	13C-23478-PeCDF	6.24e5	3.96e5	1.02e6	33.85	1.108	1.58	NO	78.172	0.358	1.59e7	17014	933.3	1.01e7	6874	1475.0	db	bb
27	13C-123478-HxCDF	2.62e5	5.04e5	7.66e5	35.91	0.972	0.52	NO	65.966	0.232	5.85e6	7720	757.2	1.11e7	12214	911.8	bd	bd
28	13C-123678-HxCDF	3.06e5	5.86e5	8.92e5	36.01	0.975	0.52	NO	68.404	0.207	5.96e6	7720	771.8	1.12e7	12214	913.5	db	dd
29	13C-234678-HxCDF	2.73e5	5.28e5	8.01e5	36.48	0.988	0.52	NO	70.776	0.238	5.91e6	7720	765.0	1.12e7	12214	916.6	bd	bd
30	13C-123789-HxCDF	2.40e5	4.84e5	7.24e5	37.24	1.009	0.50	NO	71.651	0.266	4.41e6	7720	571.4	8.92e6	12214	730.2	bd	bd

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:04:22 Eastern Standard Time

Printed: Tuesday, December 24, 2019 09:05:20 Eastern Standard Time

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	1.77e5	4.10e5	5.87e5	38.72	1.049	0.43	NO	64.532	0.210	3.11e6	5617	552.9	7.27e6	8524	853.3	bb	bb
32	13C-1234789-HpCDF	1.54e5	3.65e5	5.19e5	40.61	1.100	0.42	NO	73.337	0.270	2.26e6	5617	402.0	5.38e6	8524	630.7	bd	bb
33	13C-1234-TCDD	5.30e5	6.98e5	1.23e6	30.55	0.000	0.76	NO	100.000	0.173	6.78e6	7200	941.5	9.10e6	3643	2498.5	bb	bb
34	13C-123789-HxCDD	5.77e5	4.69e5	1.05e6	36.93	0.000	1.23	NO	100.000	0.185	1.07e7	8101	1316.5	8.49e6	6213	1366.2	dd	dd
35	37Cl+2378-TCDD	1.10e5		1.10e5	31.14	1.019			8.414	0.0413	1.83e6	2751	666.4				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:04:22 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:05:20 Eastern Standard Time

Method: Untitled 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraiodoxins	1.54e2	6.28e1	2.17e2	25.57	2.45	YES	0.023	0.0877	5.06e3	3583	1.4	2.04e3	1966	1.0	bb	bb
2	Total-tetraiodoxins	2.40e2	5.55e1	2.95e2	25.90	4.32	YES	0.031	0.0877	8.09e3	3583	2.3	2.24e3	1966	1.1	bb	bb
3	Total-tetraiodoxins	8.06e1	6.11e1	1.42e2	29.30	1.32	YES	0.015	0.0877	3.75e3	3583	1.0	1.67e3	1966	0.8	bb	db
4	Total-tetraiodoxins	1.37e2	1.24e2	2.62e2	29.75	1.11	YES	0.027	0.0877	6.94e3	3583	1.9	3.14e3	1966	1.6	bb	bb
5	Total-tetraiodoxins	7.77e1	1.05e2	1.82e2	30.04	0.74	NO	0.019	0.0877	2.96e3	3583	0.8	3.83e3	1966	1.9	bb	bb
6	Total-tetraiodoxins	8.87e1	6.11e1	1.50e2	30.50	1.45	YES	0.016	0.0877	4.92e3	3583	1.4	1.95e3	1966	1.0	bb	bb
7	Total-tetraiodoxins	9.36e1	6.76e1	1.61e2	30.74	1.38	YES	0.017	0.0877	5.82e3	3583	1.6	4.31e3	1966	2.2	bb	bd
8	Total-tetraiodoxins	7.37e1	5.00e1	1.24e2	30.80	1.47	YES	0.013	0.0877	5.30e3	3583	1.5	3.88e3	1966	2.0	bb	db
9	Total-tetraiodoxins	1.98e2	8.99e1	2.88e2	31.60	2.21	YES	0.030	0.0877	4.41e3	3583	1.2	2.81e3	1966	1.4	bd	bb
10	Total-tetraiodoxins	8.50e1	1.07e2	1.92e2	31.64	0.79	NO	0.020	0.0877	4.84e3	3583	1.4	3.13e3	1966	1.6	db	bd
11	Total-tetraiodoxins	5.49e1	5.80e1	1.13e2	31.98	0.95	YES	0.012	0.0877	3.14e3	3583	0.9	1.98e3	1966	1.0	dd	bd
12	Total-tetraiodoxins	1.37e2	5.23e1	1.90e2	32.04	2.63	YES	0.020	0.0877	2.95e3	3583	0.8	3.16e3	1966	1.6	db	db

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDD	1.56e2	6.23e1	2.19e2	34.05	2.51	YES	0.034	0.0475	5.63e3	2378	2.4	1.98e3	618	3.2	bb	bb

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123478-HxCDD	6.20e1	1.04e2	1.66e2	36.64	0.60	YES	0.027	0.0526	1.89e3	1402	1.3	4.01e3	1349	3.0	bd	bd
2	123678-HxCDD	2.21e2	1.14e2	3.35e2	36.71	1.95	YES	0.048	0.0504	9.70e3	1402	6.9	4.66e3	1349	3.5	dd	db
3	123789-HxCDD	1.31e2	1.19e2	2.50e2	36.95	1.11	NO	0.039	0.0522	5.08e3	1402	3.6	2.67e3	1349	2.0	bb	bb

HPD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	1.66e2	2.22e2	3.88e2	39.98	0.75	YES	0.068	0.0615	2.75e3	1071	2.6	5.93e3	1116	5.3	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:04:22 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:05:20 Eastern Standard Time

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

TF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	5.40e1	1.25e2	1.79e2	26.13	0.43	YES	0.015	0.0742	1.74e3	1376	1.3	7.57e3	2833	2.7	bb	bb
2	Total-tetrafurans	6.63e1	1.06e2	1.72e2	27.01	0.63	YES	0.015	0.0742	2.77e3	1376	2.0	4.27e3	2833	1.5	bd	bb
3	Total-tetrafurans	5.01e1	8.11e1	1.31e2	27.93	0.62	YES	0.011	0.0742	2.23e3	1376	1.6	3.08e3	2833	1.1	bd	db
4	Total-tetrafurans	8.29e1	5.64e1	1.39e2	28.18	1.47	YES	0.012	0.0742	5.19e3	1376	3.8	2.71e3	2833	1.0	bb	bd
5	Total-tetrafurans	8.01e1	6.81e1	1.48e2	28.55	1.18	YES	0.013	0.0742	3.64e3	1376	2.6	2.75e3	2833	1.0	bb	bb
6	Total-tetrafurans	5.78e1	1.04e2	1.61e2	28.61	0.56	YES	0.014	0.0742	3.33e3	1376	2.4	4.44e3	2833	1.6	bb	bd
7	Total-tetrafurans	5.22e1	9.20e1	1.44e2	28.99	0.57	YES	0.012	0.0742	3.13e3	1376	2.3	3.86e3	2833	1.4	bb	bd
8	Total-tetrafurans	2.25e2	1.91e2	4.16e2	29.74	1.18	YES	0.036	0.0742	2.90e3	1376	2.1	5.62e3	2833	2.0	bb	dd
9	Total-tetrafurans	7.11e1	1.70e2	2.41e2	29.90	0.42	YES	0.021	0.0742	3.89e3	1376	2.8	2.55e3	2833	0.9	bb	dd
10	Total-tetrafurans	7.19e1	7.84e1	1.50e2	30.34	0.92	YES	0.013	0.0742	3.44e3	1376	2.5	4.10e3	2833	1.4	bb	db
11	Total-tetrafurans	6.01e1	8.17e1	1.42e2	30.74	0.74	NO	0.012	0.0742	4.56e3	1376	3.3	3.38e3	2833	1.2	bb	bb
12	Total-tetrafurans	5.14e1	1.51e2	2.02e2	31.89	0.34	YES	0.017	0.0742	1.55e3	1376	1.1	5.36e3	2833	1.9	bb	bb

PF1

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	9.27e1	5.10e1	1.44e2	26.03	1.82	YES	0.014	0.0391	1.79e3	1166	1.5	3.41e3	2789	1.2	bb	bb
2	Total-pentafurans (F1)	9.43e1	8.73e1	1.82e2	27.55	1.08	YES	0.018	0.0391	1.34e3	1166	1.2	5.71e3	2789	2.0	bb	db
3	Total-pentafurans (F1)	5.96e1	5.85e1	1.18e2	28.28	1.02	YES	0.012	0.0391	1.91e3	1166	1.6	3.02e3	2789	1.1	bb	bb
4	Total-pentafurans (F1)	1.40e2	6.42e1	2.04e2	30.25	2.18	YES	0.020	0.0391	2.09e3	1166	1.8	2.59e3	2789	0.9	bb	bd
5	Total-pentafurans (F1)	7.01e1	1.32e2	2.02e2	30.50	0.53	YES	0.020	0.0391	1.67e3	1166	1.4	2.88e3	2789	1.0	bb	bb
6	Total-pentafurans (F1)	1.84e2	1.17e2	3.01e2	30.93	1.58	NO	0.030	0.0391	3.71e3	1166	3.2	4.07e3	2789	1.5	bb	bb
7	Total-pentafurans (F1)	9.29e1	8.84e1	1.81e2	32.22	1.05	YES	0.018	0.0391	1.39e3	1166	1.2	3.29e3	2789	1.2	bb	bb

PF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDF	2.24e2	2.35e2	4.59e2	33.26	0.95	YES	0.045	0.0460	6.03e3	1631	3.7	6.13e3	2961	2.1	bb	bd
2	Total-pentafurans	5.27e1	5.80e1	1.11e2	33.56	0.91	YES	0.011	0.0454	2.85e3	1631	1.7	4.75e3	2961	1.6	bb	dd
3	23478-PeCDF	3.98e2	1.61e2	5.59e2	33.87	2.47	YES	0.055	0.0448	1.10e4	1631	6.8	4.11e3	2961	1.4	bb	dd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 09:04:22 Eastern Standard Time
Printed: Tuesday, December 24, 2019 09:05:20 Eastern Standard Time

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

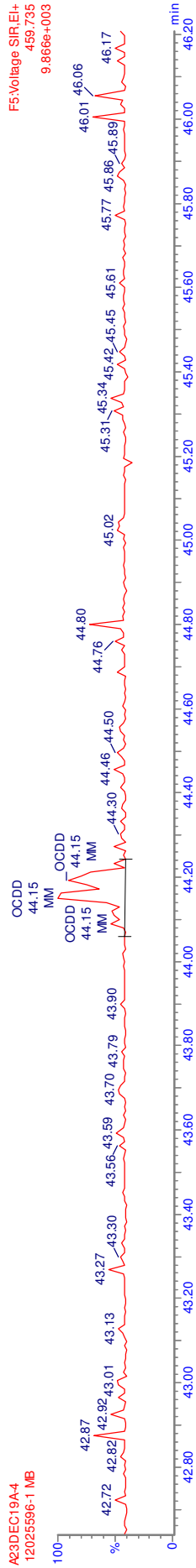
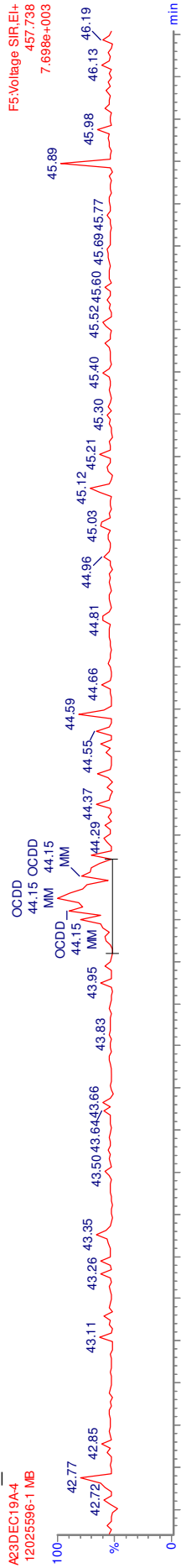
HIF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123678-HxCDF	1.71e2	1.26e2	2.97e2	36.00	1.35	NO	0.032	0.0449	8.48e3	1856	4.6	2.93e3	1388	2.1	MM	bd
2	234678-HxCDF	2.92e2	2.11e2	5.03e2	36.48	1.38	NO	0.055	0.0412	6.97e3	1856	3.8	7.59e3	1388	5.5	bb	bb
3	123789-HxCDF	3.04e2	2.26e2	5.30e2	37.25	1.34	NO	0.069	0.0575	7.68e3	1856	4.1	8.22e3	1388	5.9	bb	MM
4	123478-HxCDF	8.94e1	1.99e2	2.88e2	35.94	0.45	YES	0.035	0.0437	2.51e3	1856	1.4	8.10e3	1388	5.8	MM	bb

HPF

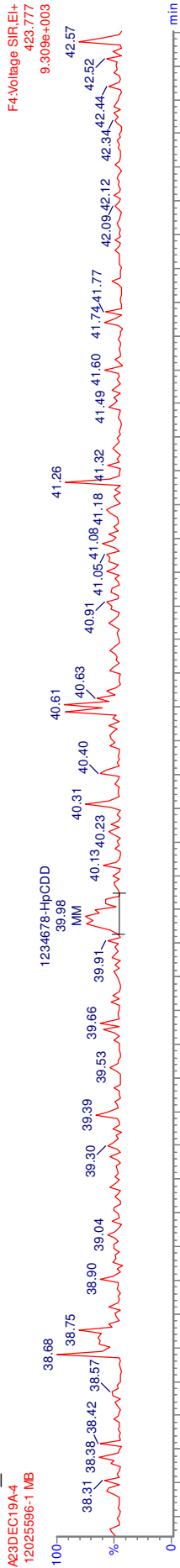
	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	1.78e2	1.81e2	3.58e2	38.76	0.98	NO	0.053	0.0294	3.84e3	620	6.2	4.23e3	776	5.5	MM	bb
2	1234789-HpCDF	2.09e2	1.32e2	3.40e2	40.59	1.58	YES	0.055	0.0381	5.43e3	620	8.8	3.16e3	776	4.1	MM	MM

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

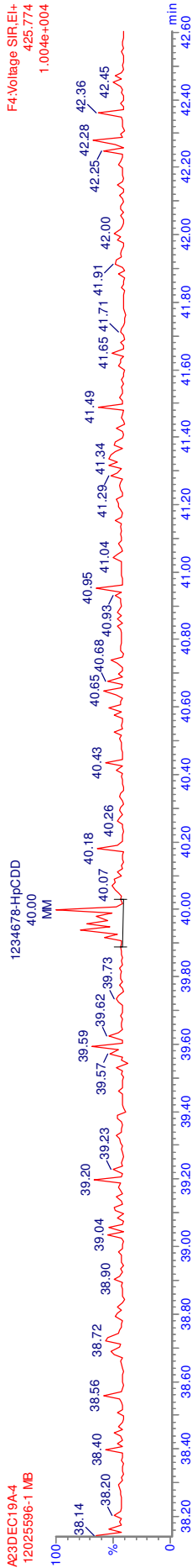


MANUAL INTEGRATION
METHOD 1613
HRP750_2

A23DEC19A-4
12025596-1 MB



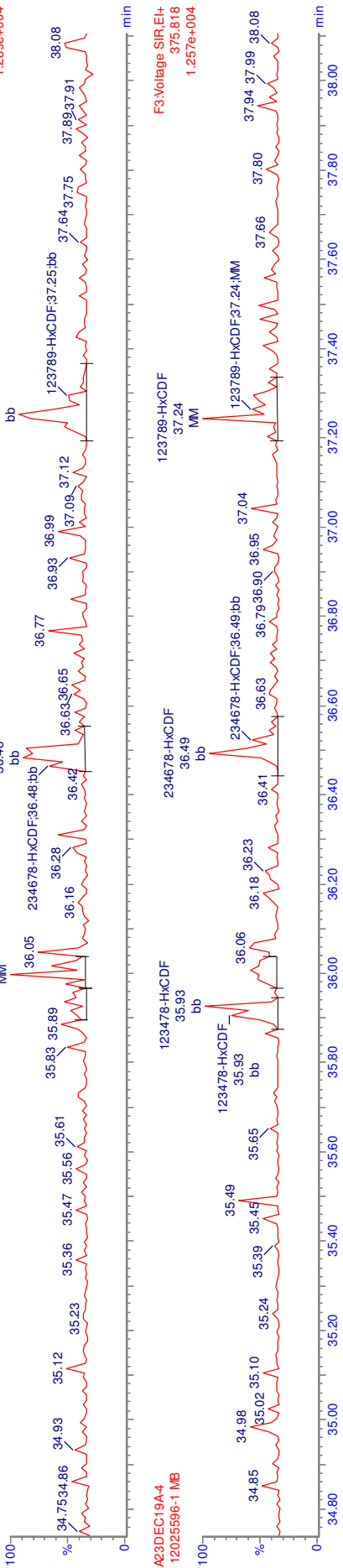
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12025596-1 MB



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

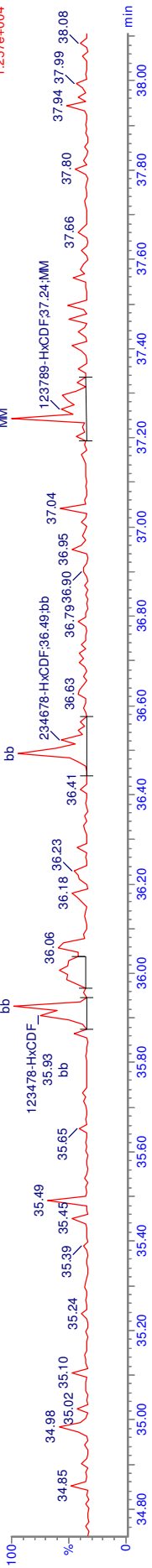
A23DEC19A4
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F3:Voltage SIR,EI+
 373.821
 1.289e+004

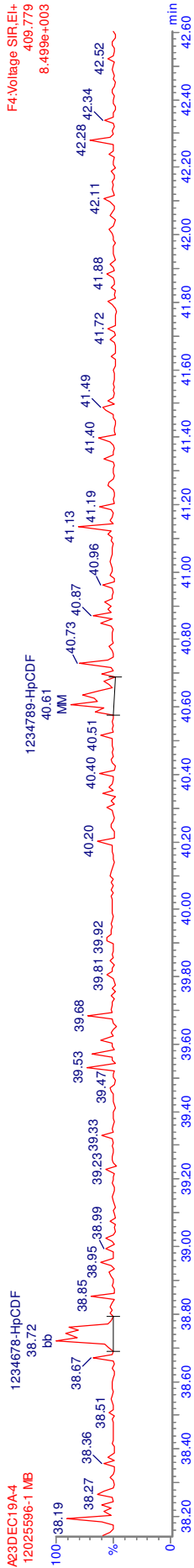
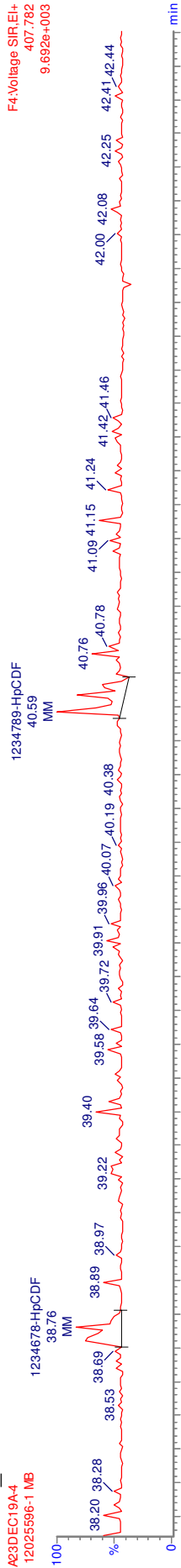


A23DEC19A4
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F3:Voltage SIR,EI+
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 1.257e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2



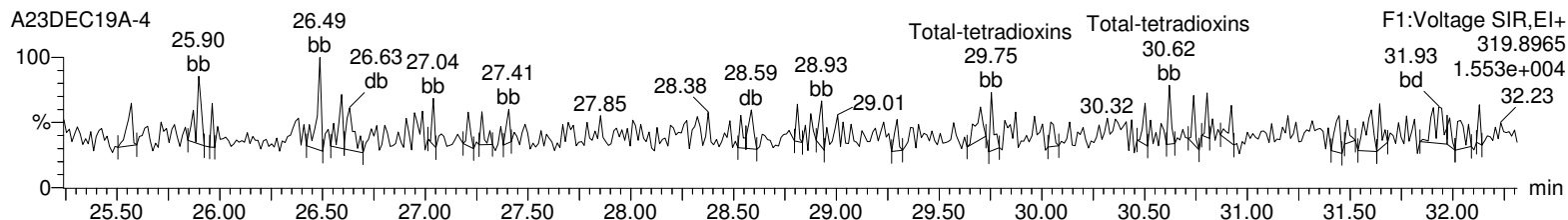
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Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

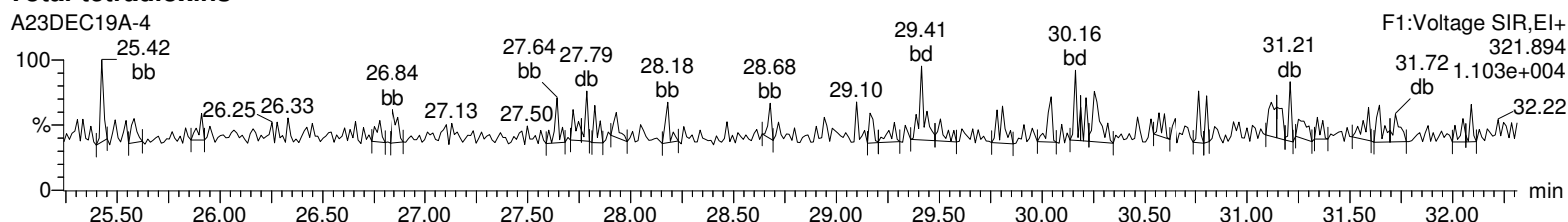
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Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

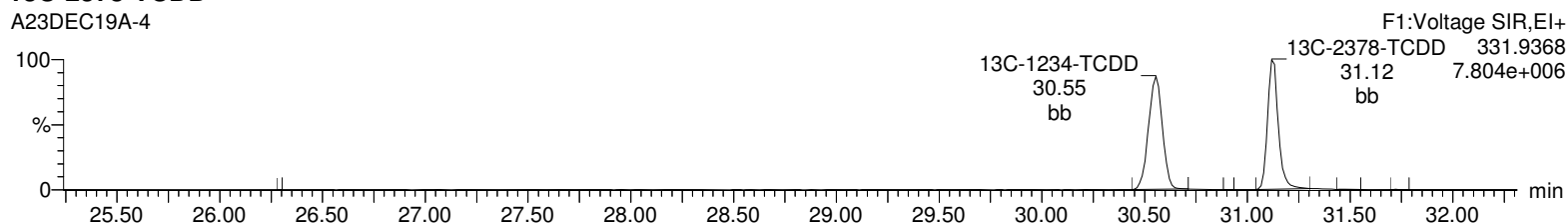
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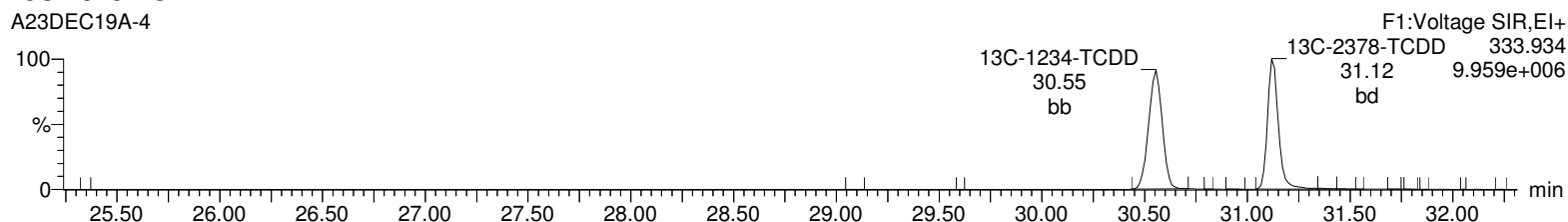
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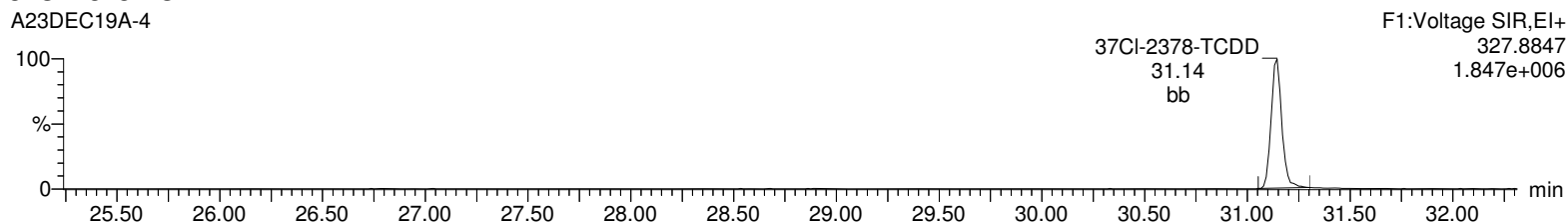
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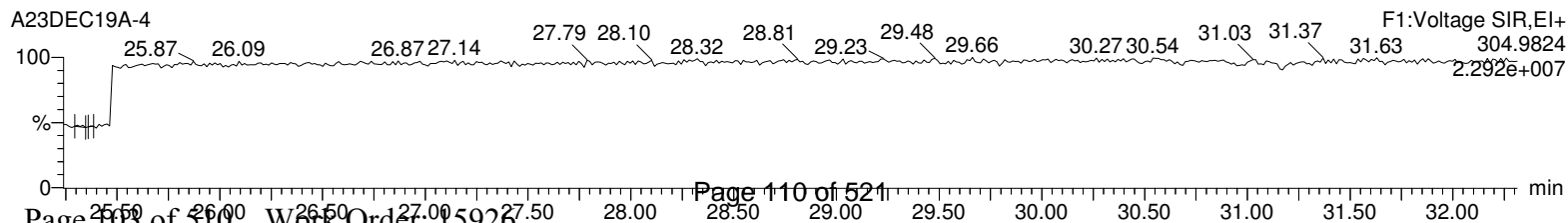
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



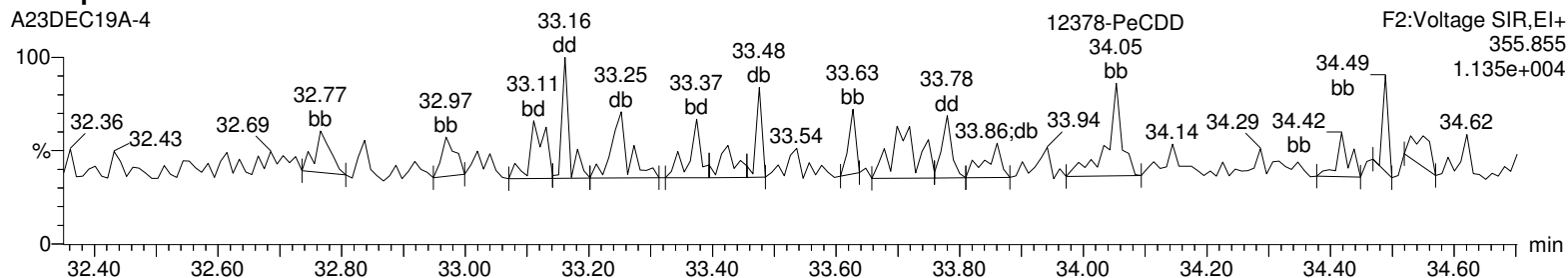
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Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

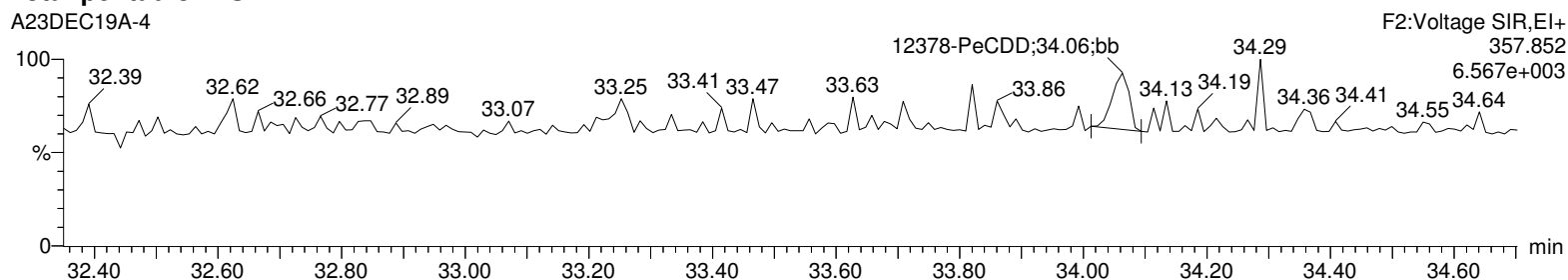
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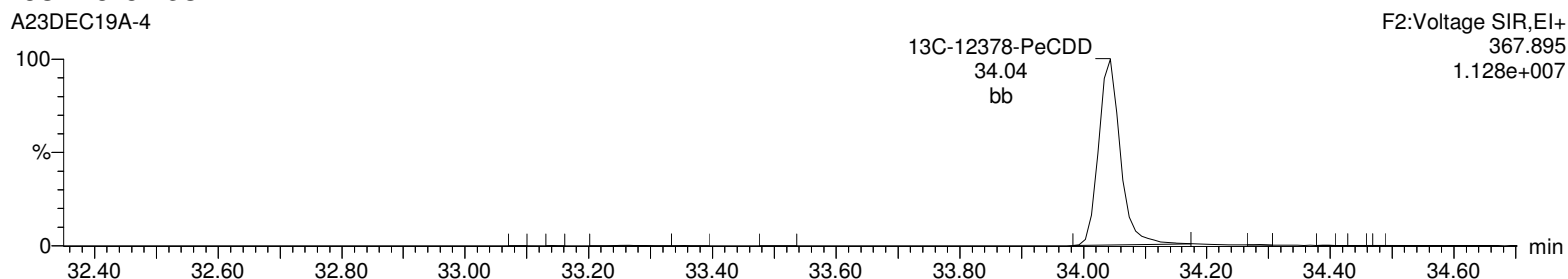
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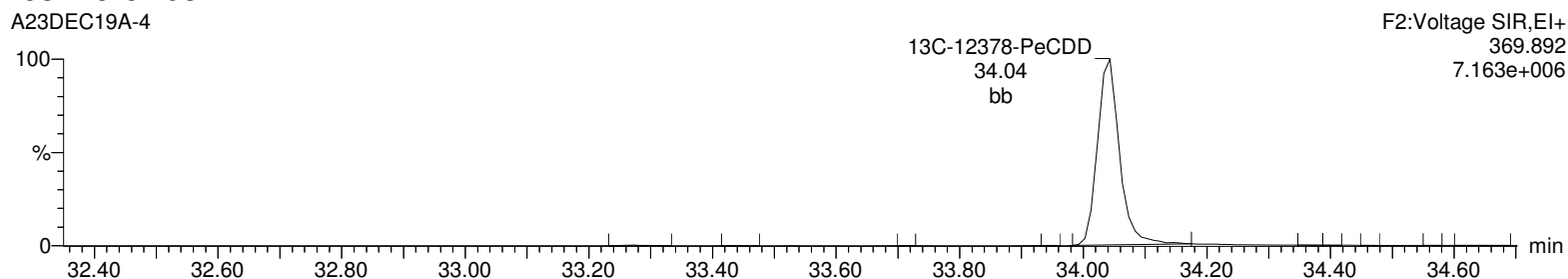
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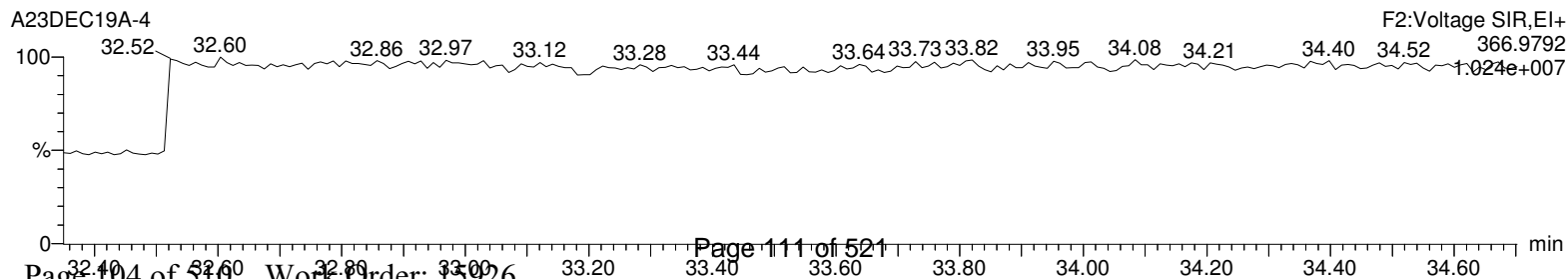
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



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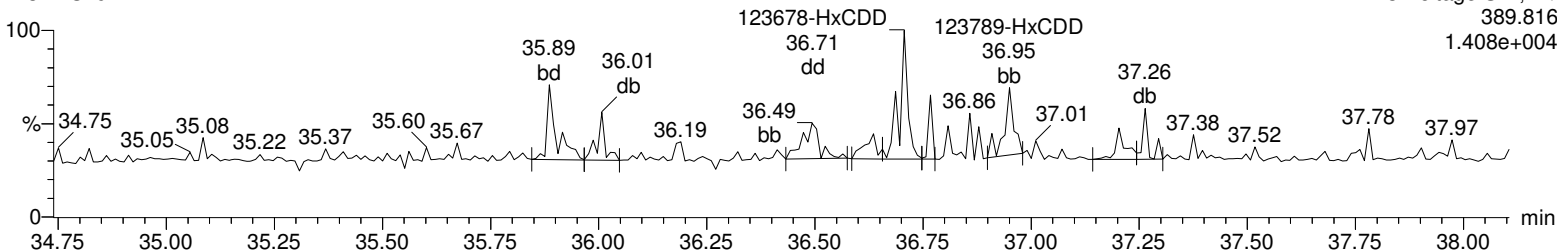
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Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A-4

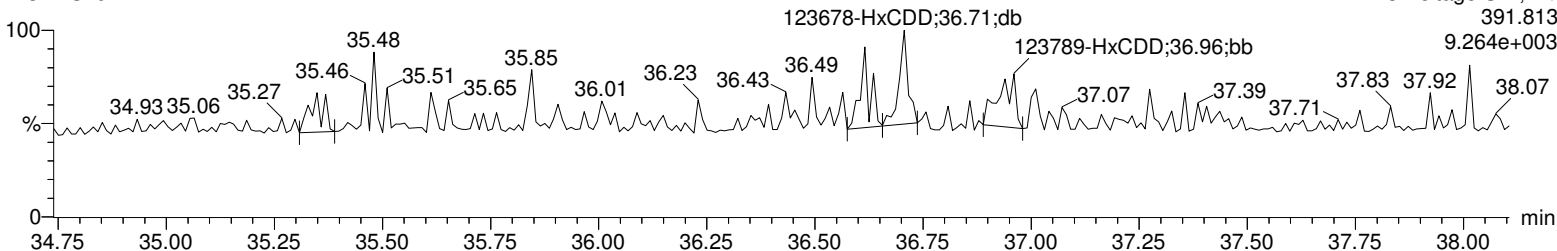
F3:Voltage SIR,EI+
389.816
1.408e+004



Total-hexadioxins

A23DEC19A-4

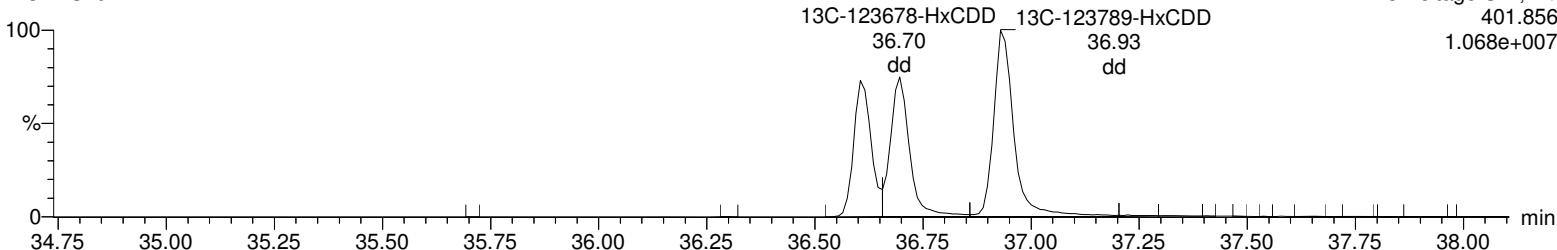
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391.813
9.264e+003



13C-123478-HxCDD

A23DEC19A-4

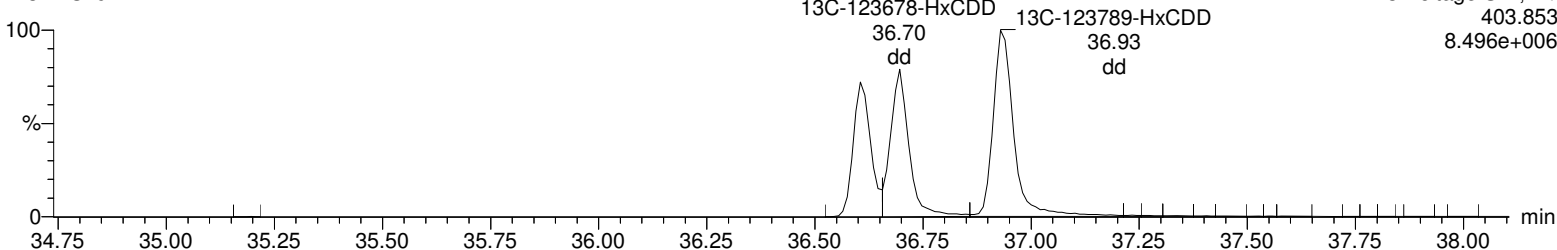
F3:Voltage SIR,EI+
401.856
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13C-123478-HxCDD

A23DEC19A-4

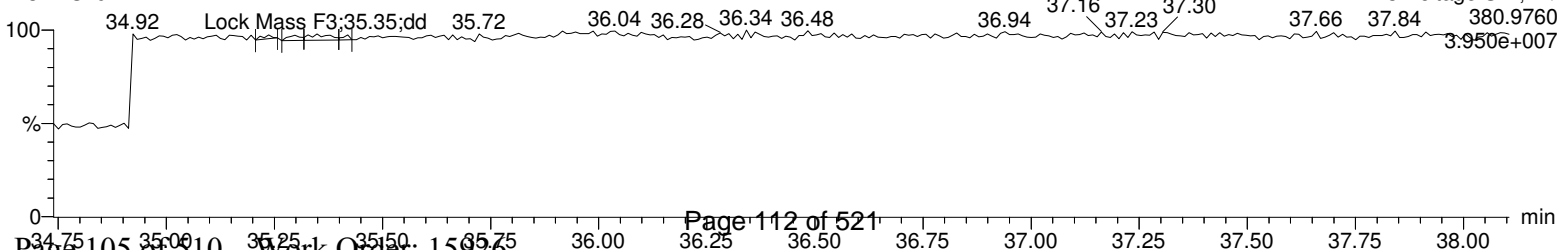
F3:Voltage SIR,EI+
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Lock Mass F3

A23DEC19A-4

F3:Voltage SIR,EI+
380.9760
3.950e+007



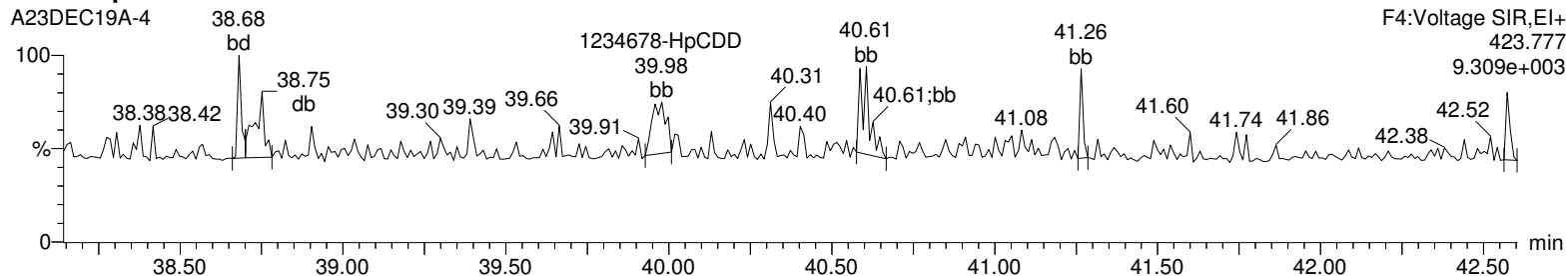
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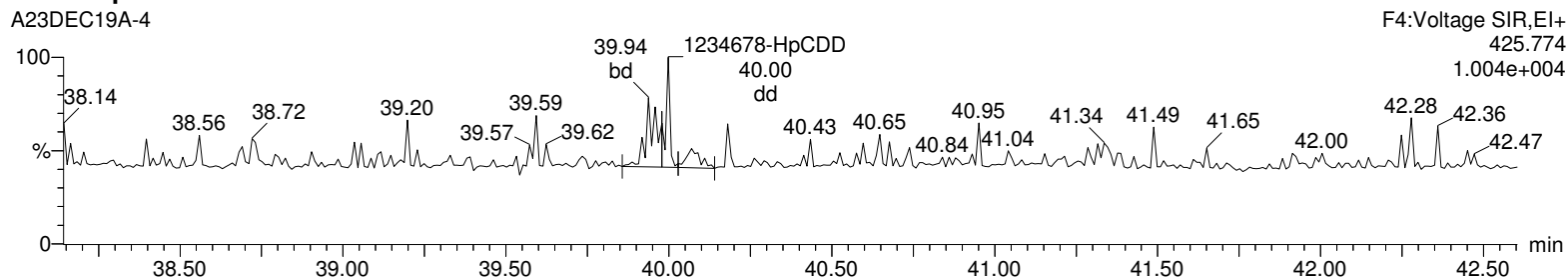
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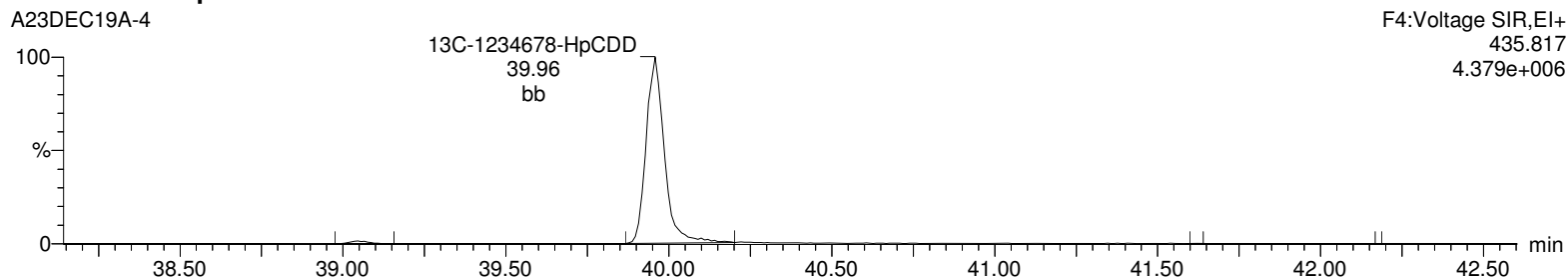
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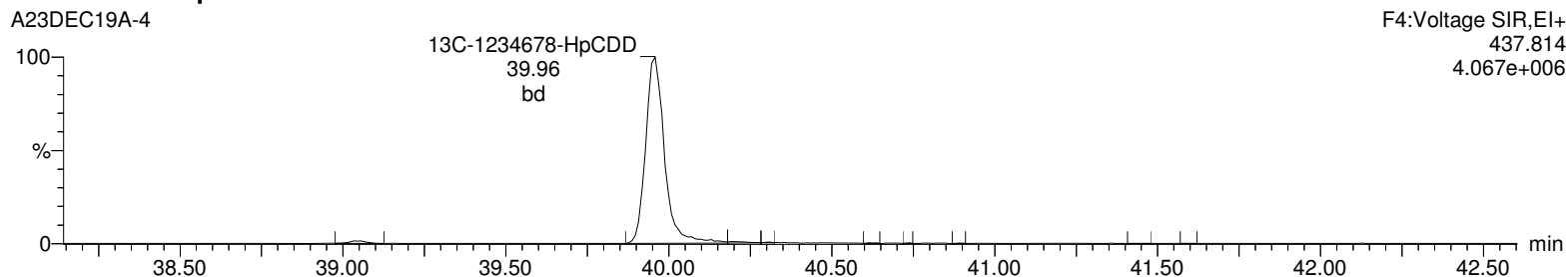
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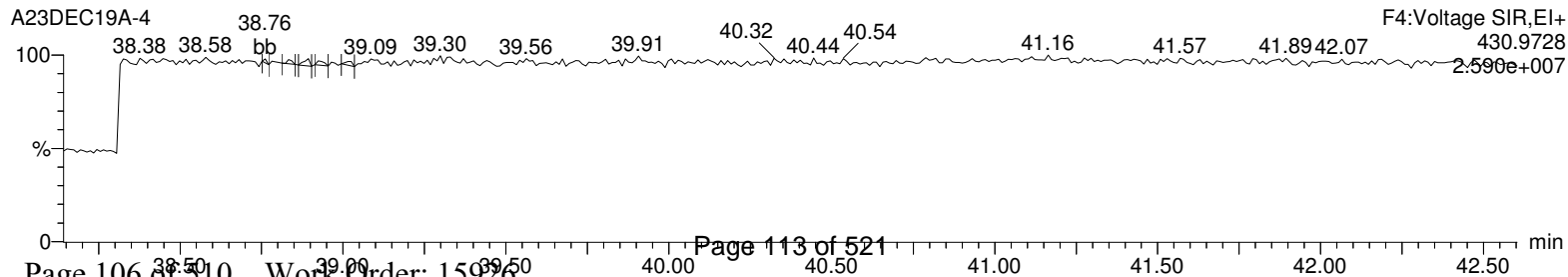
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

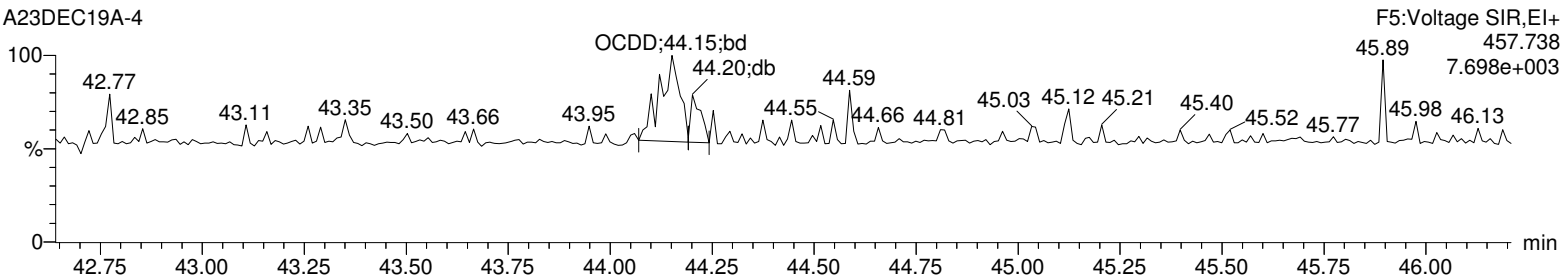
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Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

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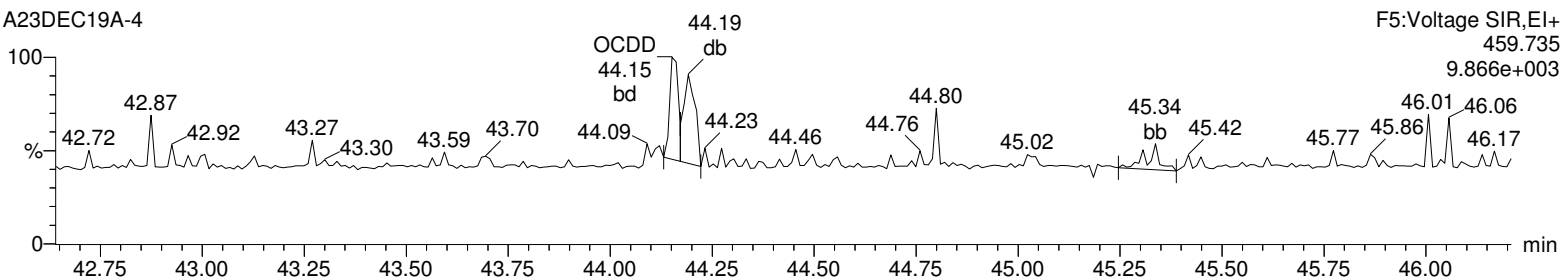
OCDD

A23DEC19A-4



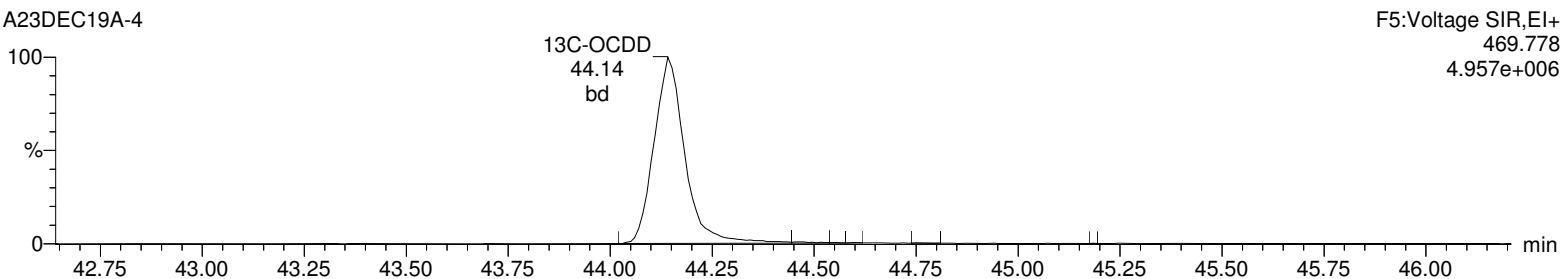
OCDD

A23DEC19A-4



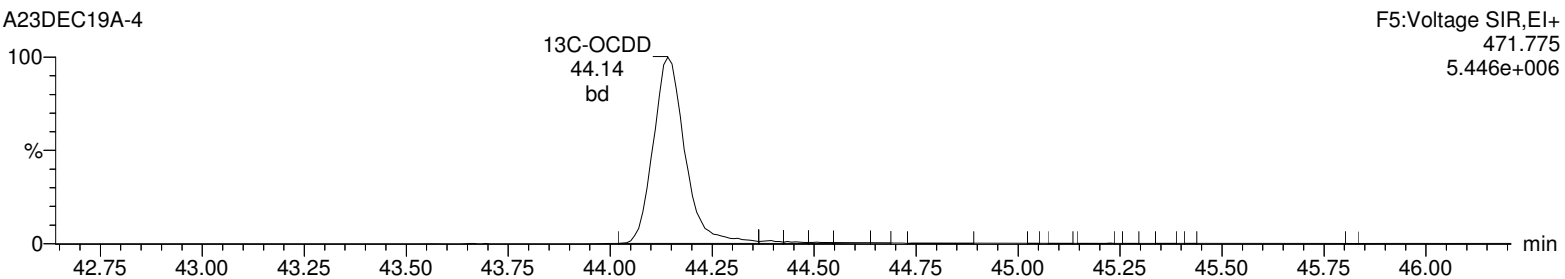
13C-OCDD

A23DEC19A-4



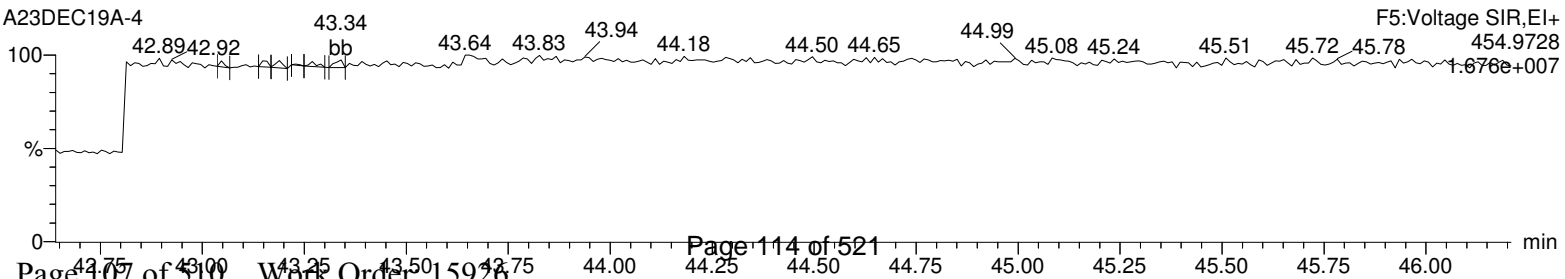
13C-OCDD

A23DEC19A-4



Lock Mass F5

A23DEC19A-4



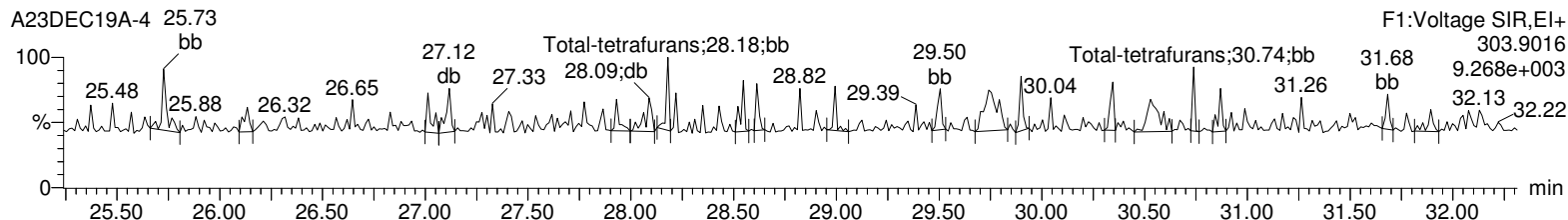
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

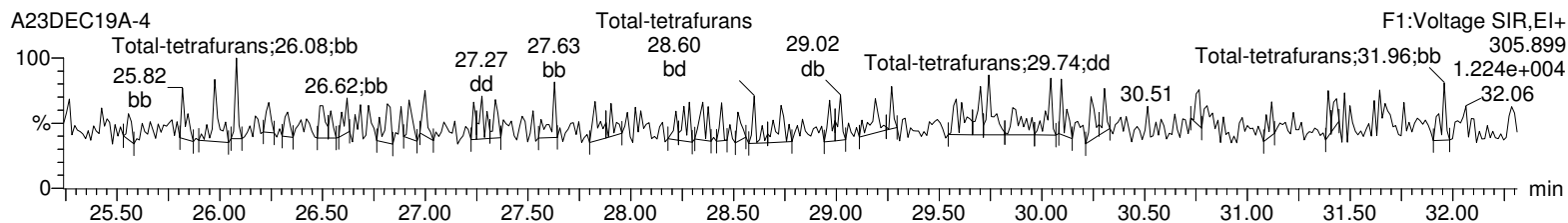
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

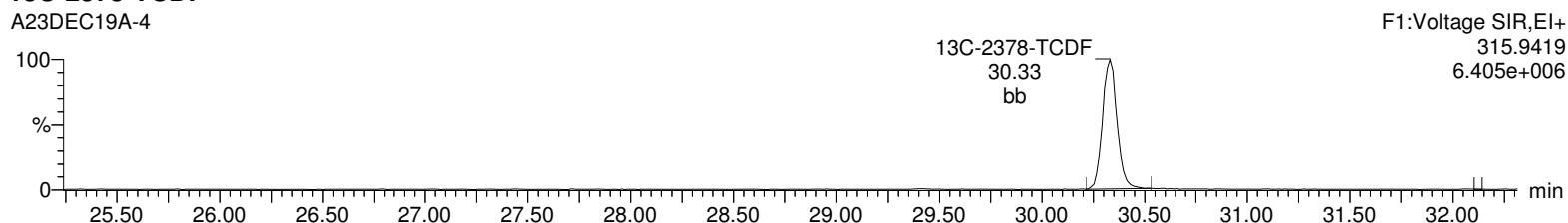
Total-tetrafurans



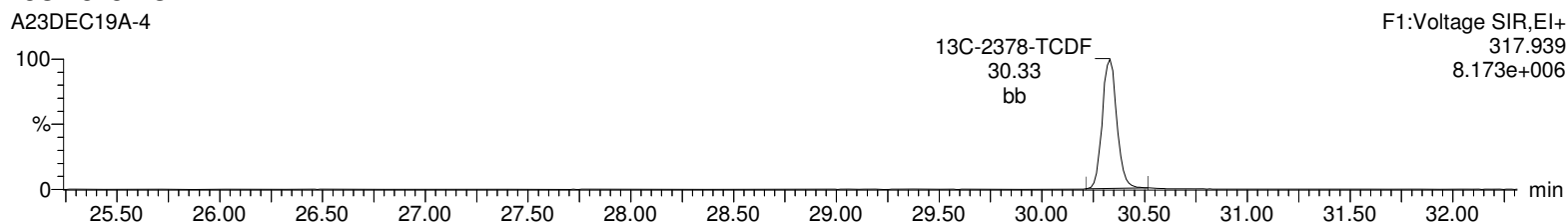
Total-tetrafurans



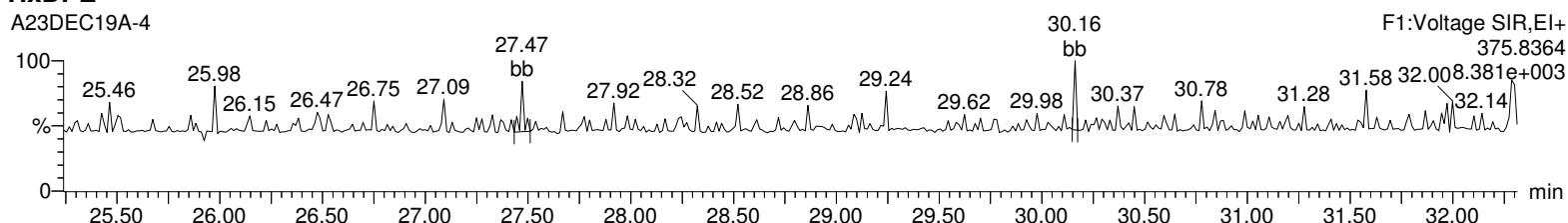
13C-2378-TCDF



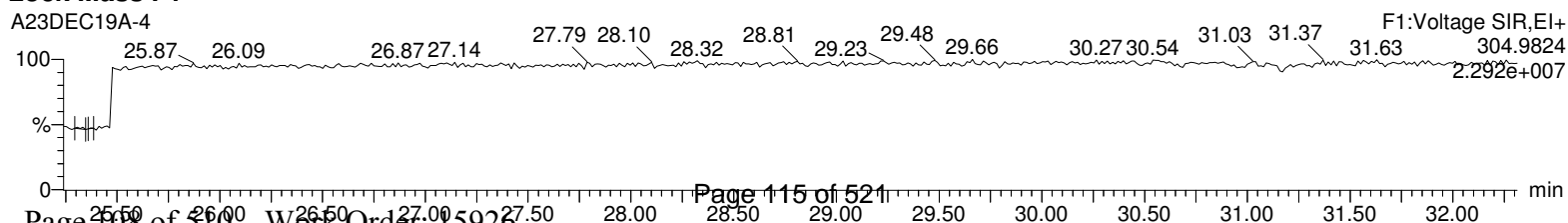
13C-2378-TCDF



HxDPE



Lock Mass F1



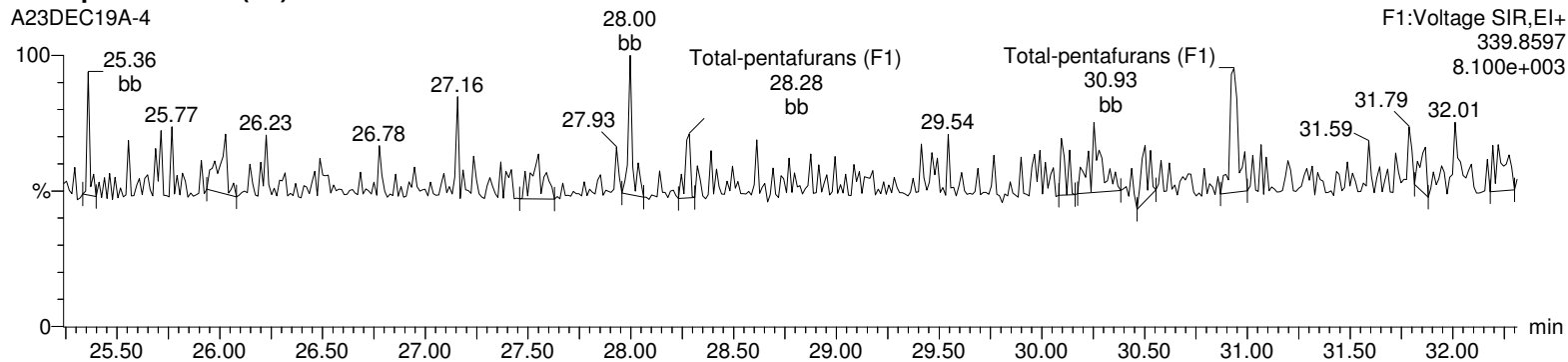
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

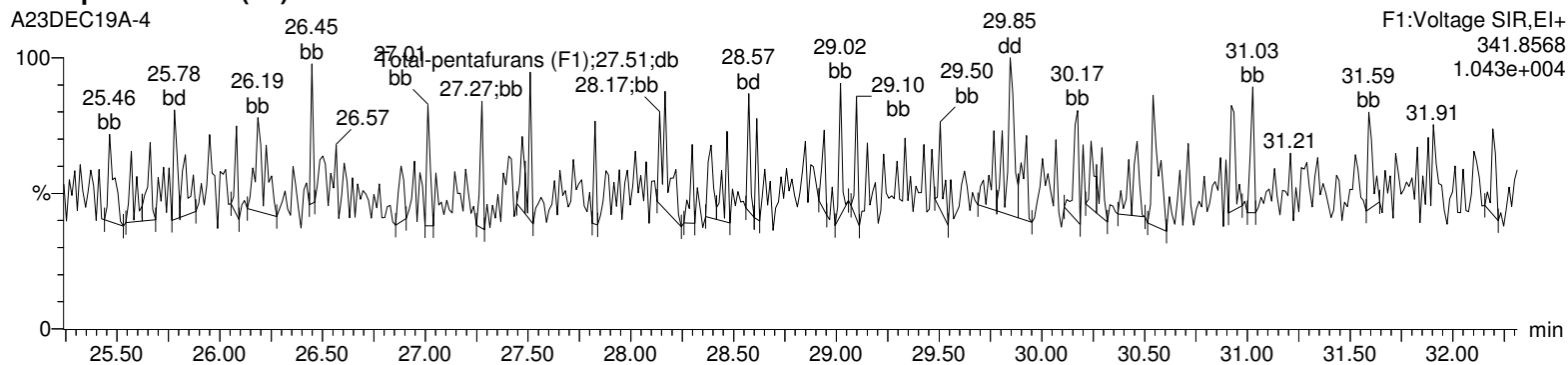
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

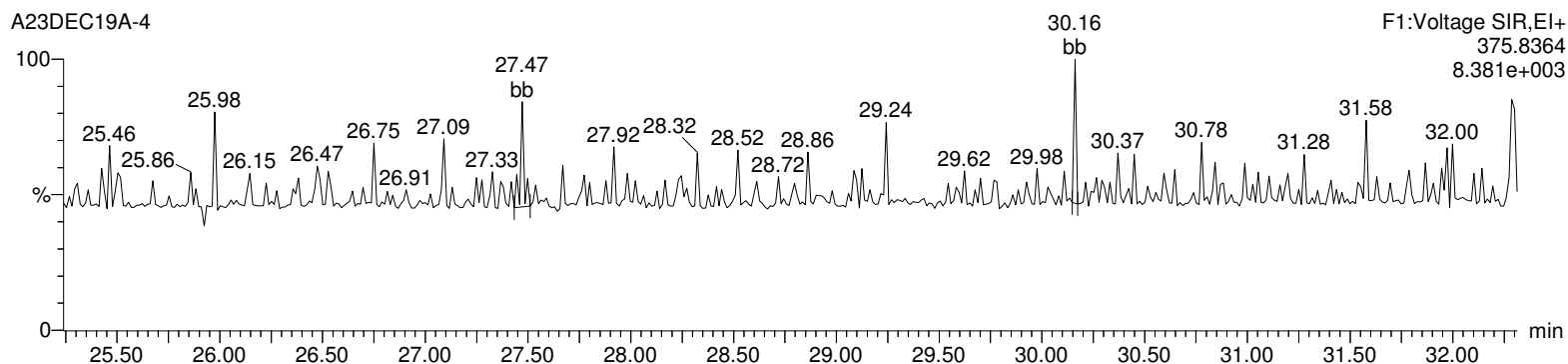
Total-pentafurans (F1)



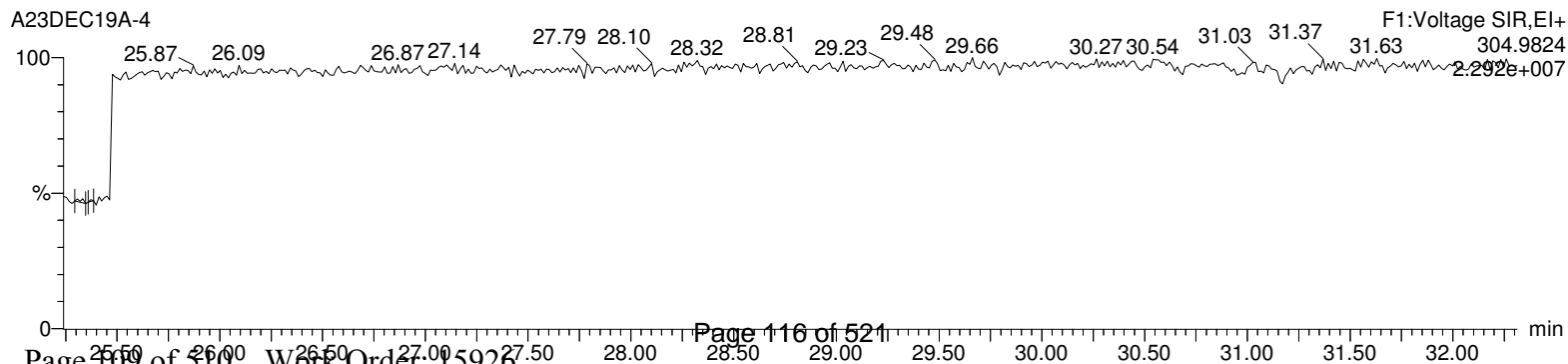
Total-pentafurans (F1)



HxDPE



Lock Mass F1



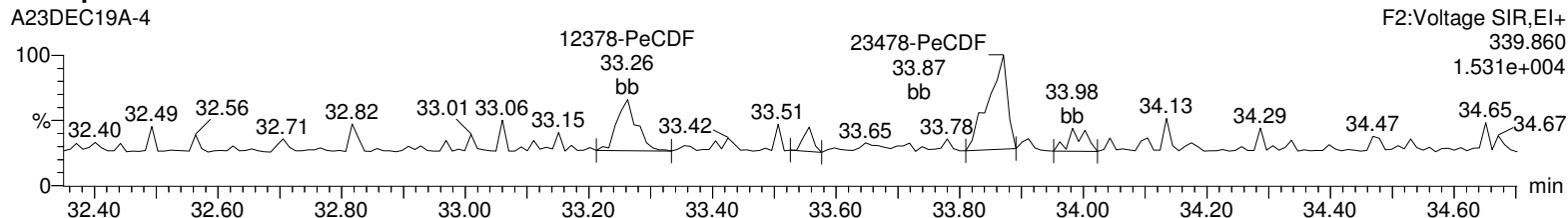
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

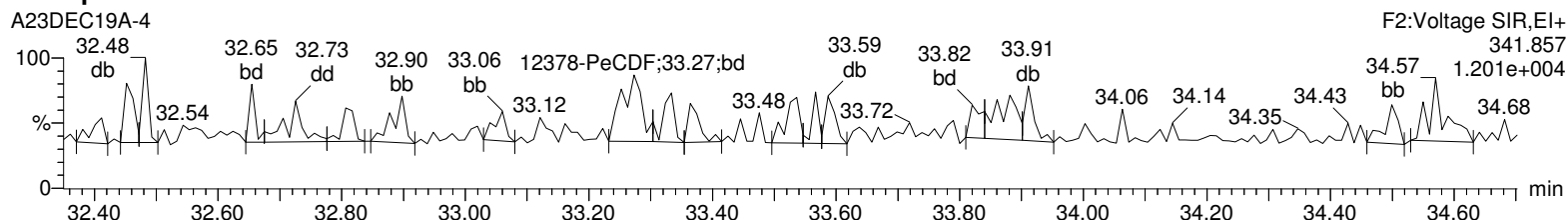
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

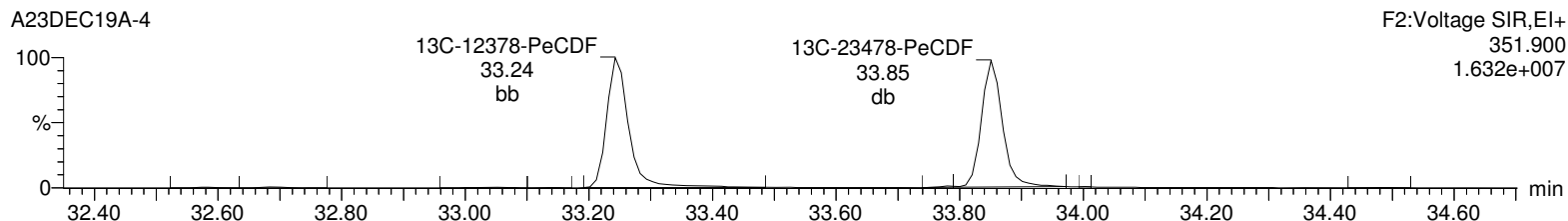
Total-pentafurans



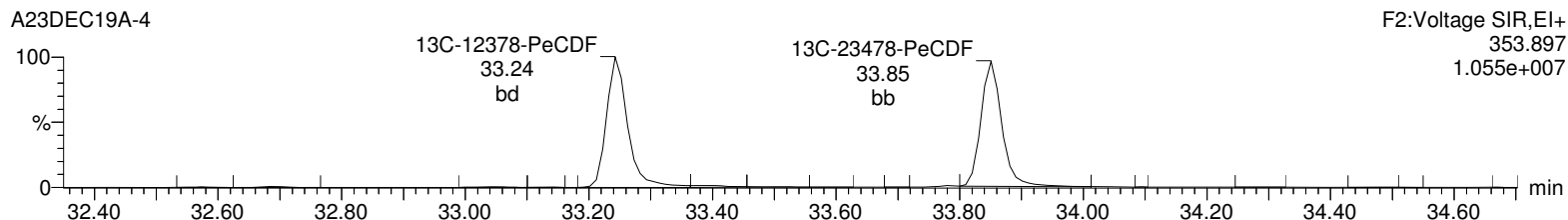
Total-pentafurans



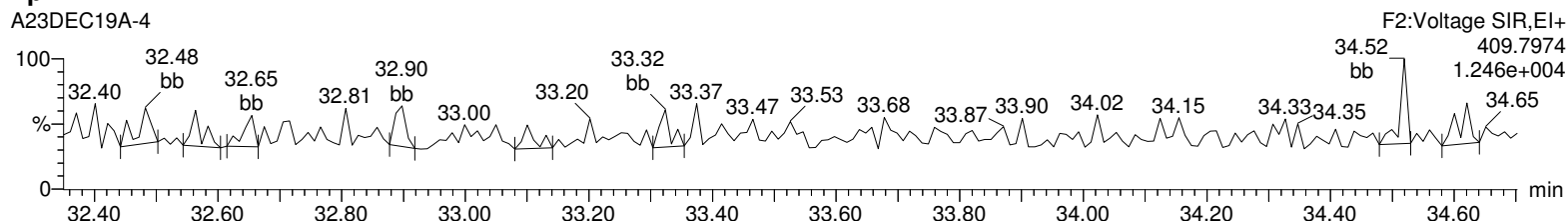
13C-12378-PeCDF



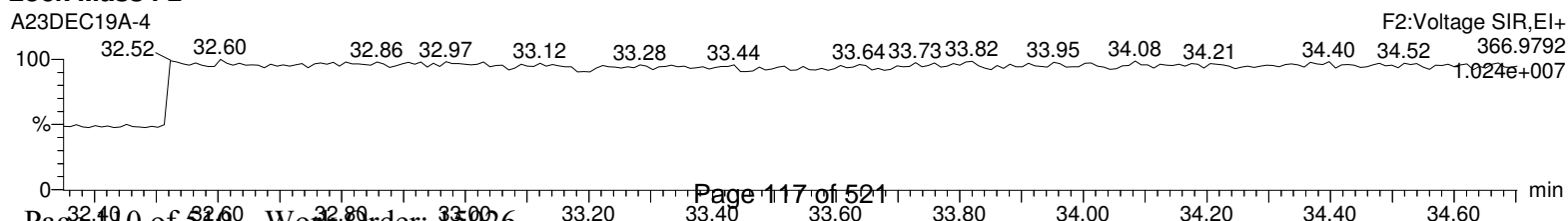
13C-12378-PeCDF



HpDPE



Lock Mass F2



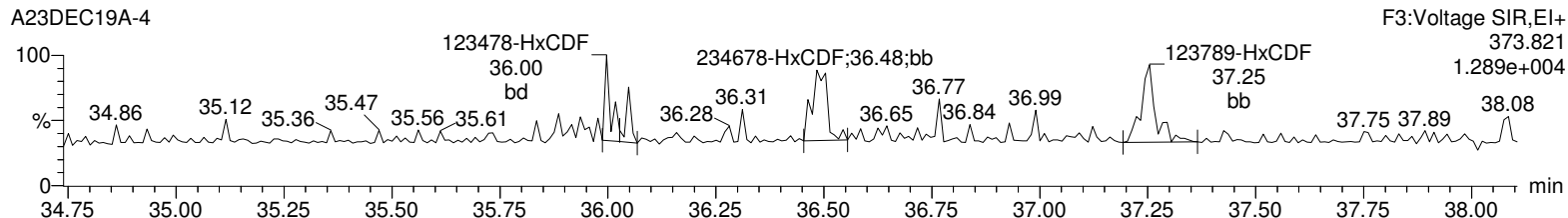
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

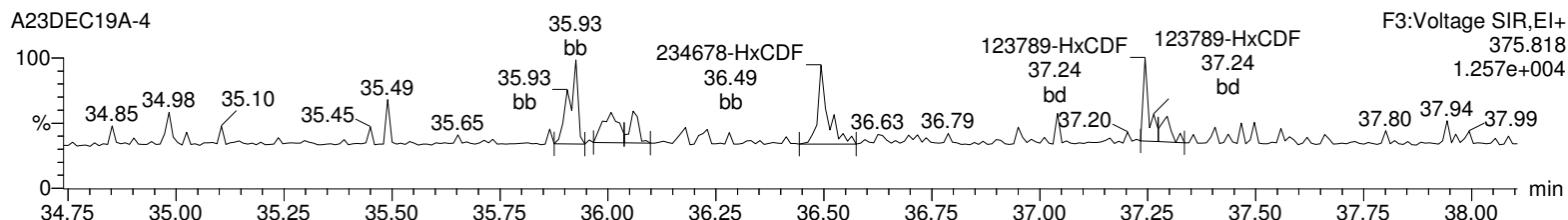
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

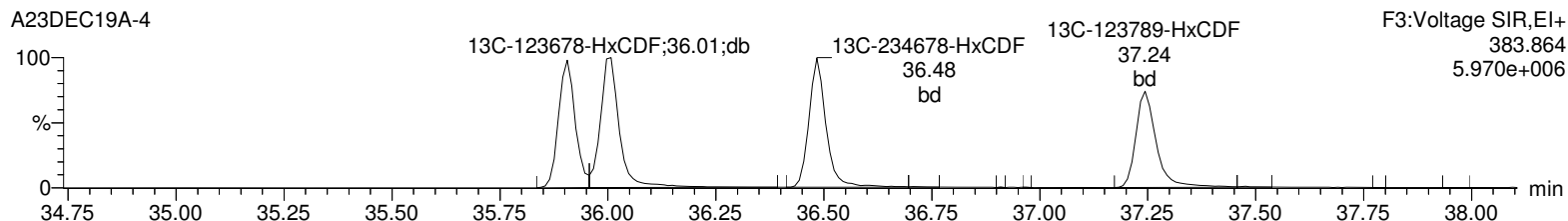
Total-hexafurans



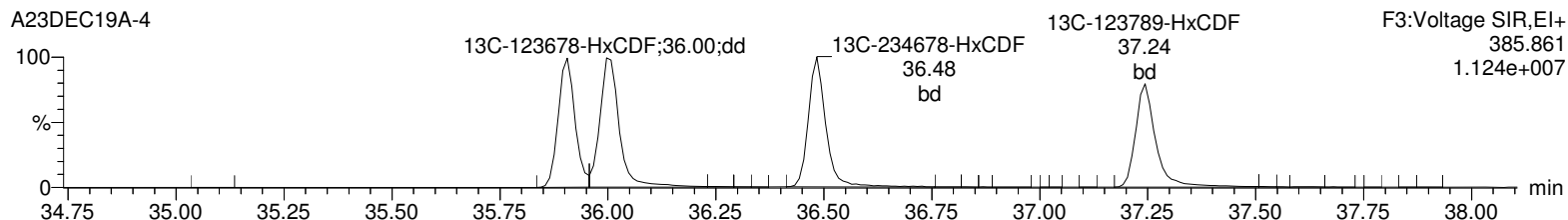
Total-hexafurans



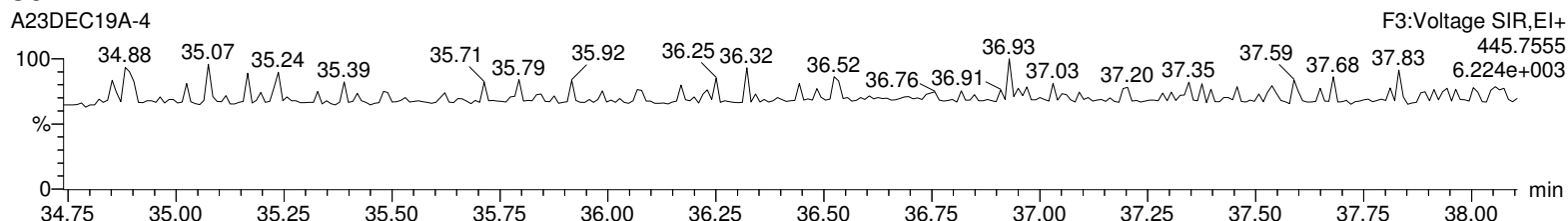
13C-123478-HxCDF



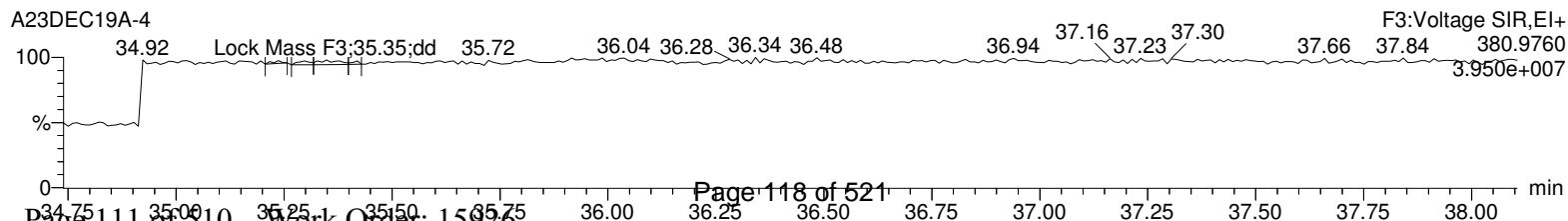
13C-123478-HxCDF



OcDPE



Lock Mass F3



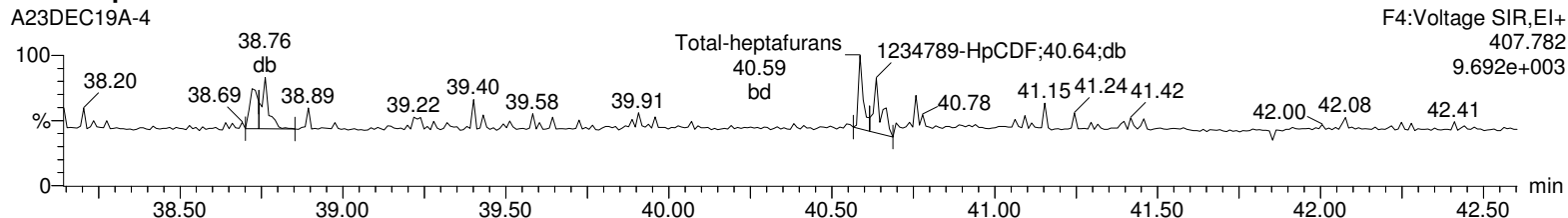
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

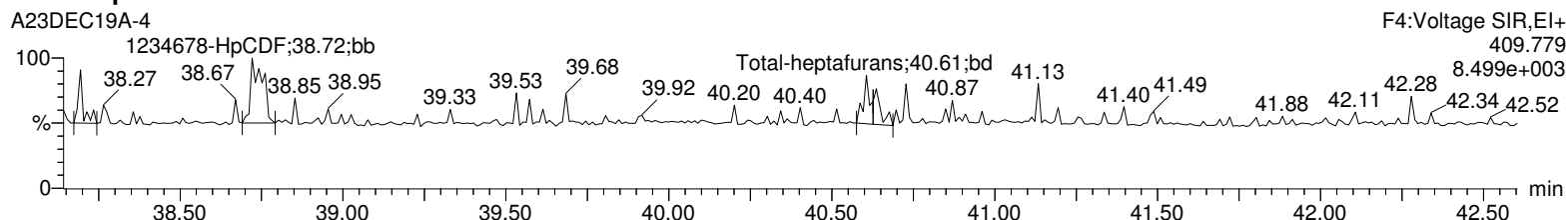
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

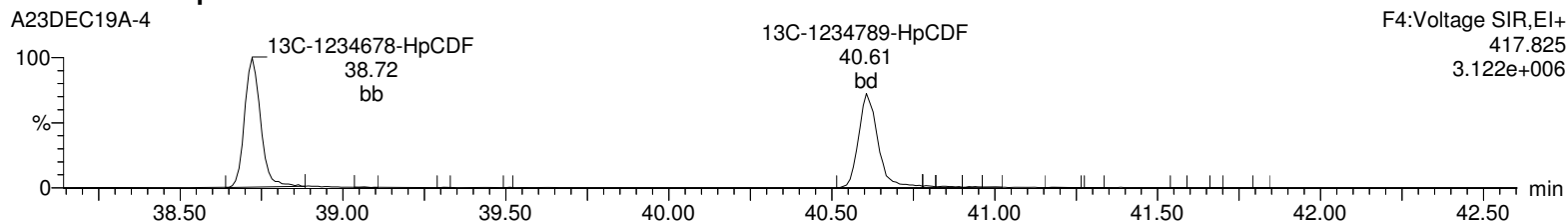
Total-heptafurans



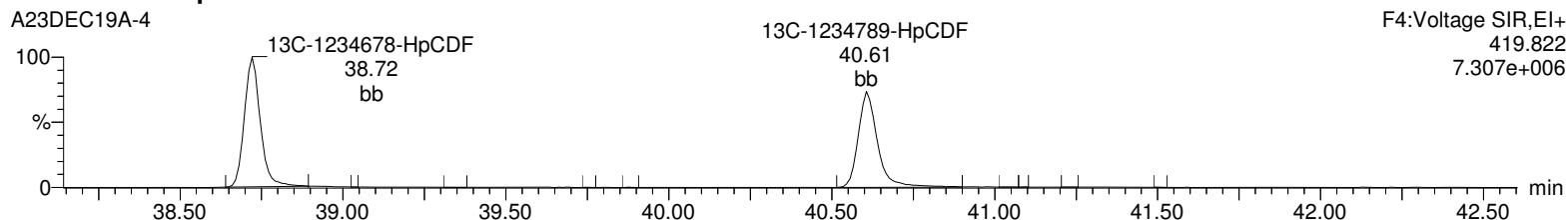
Total-heptafurans



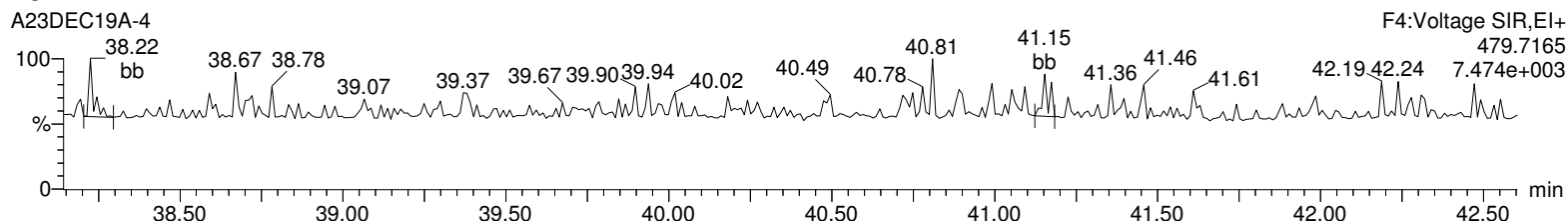
13C-1234678-HpCDF



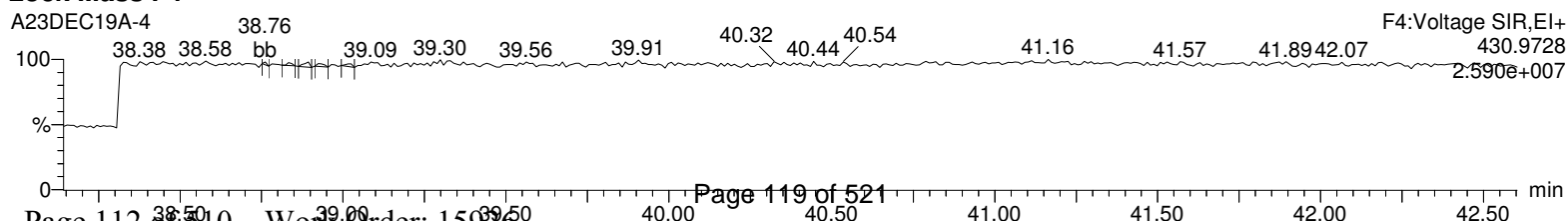
13C-1234678-HpCDF



NoDPE



Lock Mass F4



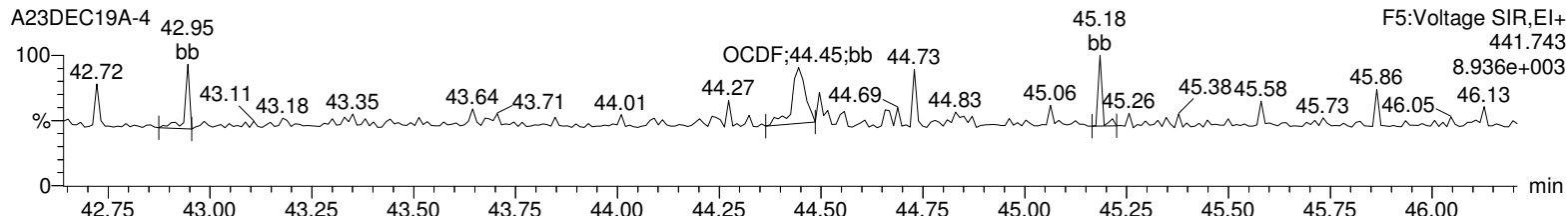
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

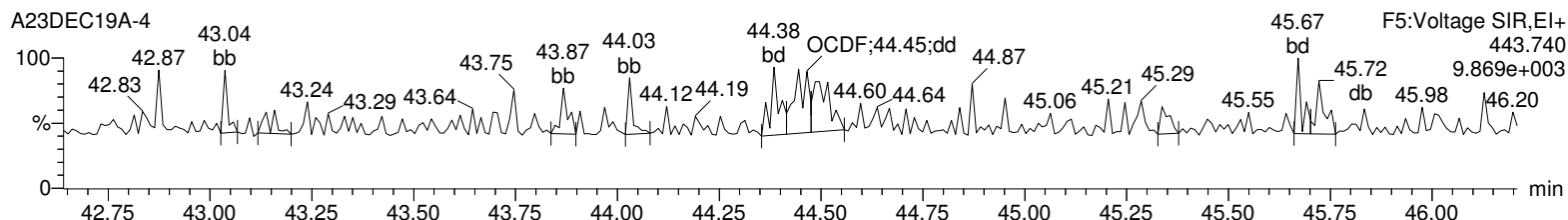
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-4, Date: 23-Dec-2019, Time: 19:51:53, ID: 12025596-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

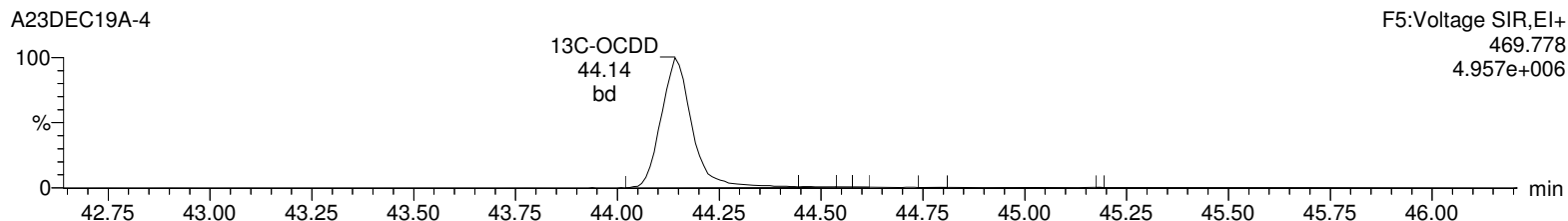
OCDF



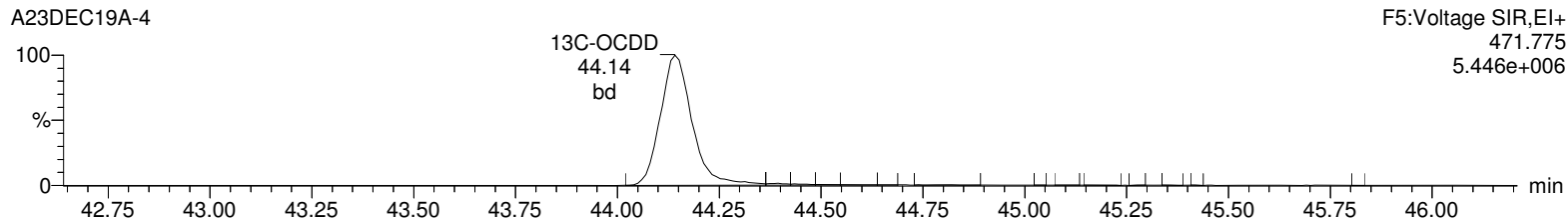
OCDF



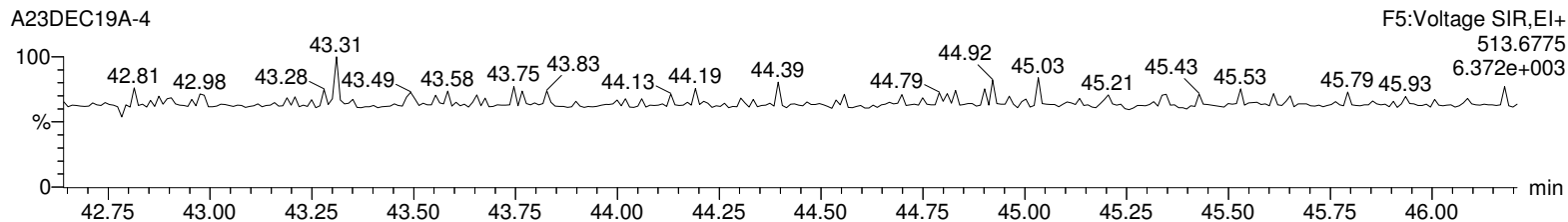
13C-OCDD



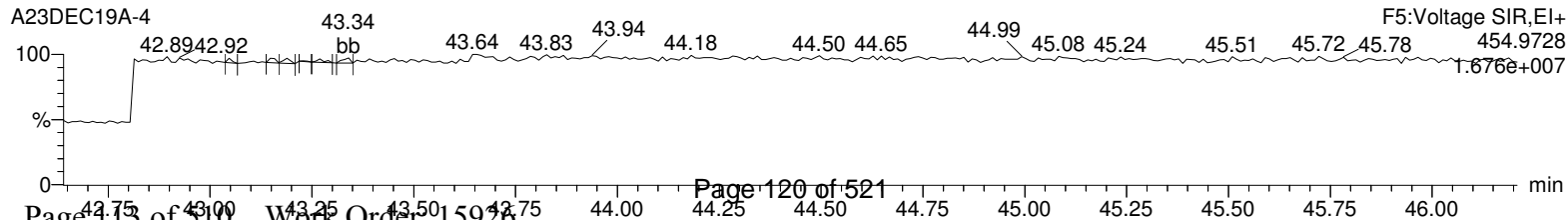
13C-OCDD



DeDPE



Lock Mass F5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025597		Matrix: WATER
Client Sample: QC for batch 42647		
Client ID: LCS for batch 42647		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 18:15	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-2		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.198	ng/L	0.00146	0.010
40321-76-4	1,2,3,7,8-PeCDD		1.03	ng/L	0.00164	0.050
39227-28-6	1,2,3,4,7,8-HxCDD		1.05	ng/L	0.00242	0.050
57653-85-7	1,2,3,6,7,8-HxCDD		0.999	ng/L	0.00248	0.050
19408-74-3	1,2,3,7,8,9-HxCDD		1.07	ng/L	0.00248	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.937	ng/L	0.00366	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1.97	ng/L	0.00558	0.100
51207-31-9	2,3,7,8-TCDF		0.176	ng/L	0.00116	0.010
57117-41-6	1,2,3,7,8-PeCDF		0.916	ng/L	0.00256	0.050
57117-31-4	2,3,4,7,8-PeCDF		1.01	ng/L	0.00246	0.050
70648-26-9	1,2,3,4,7,8-HxCDF		0.997	ng/L	0.0033	0.050
57117-44-9	1,2,3,6,7,8-HxCDF		0.951	ng/L	0.0035	0.050
60851-34-5	2,3,4,6,7,8-HxCDF		0.968	ng/L	0.00334	0.050
72918-21-9	1,2,3,7,8,9-HxCDF		0.971	ng/L	0.00446	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.00	ng/L	0.00324	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.942	ng/L	0.00408	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.76	ng/L	0.00514	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.54	2.00	ng/L	76.9	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.73	2.00	ng/L	86.6	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.46	2.00	ng/L	72.8	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.55	2.00	ng/L	77.3	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.67	2.00	ng/L	83.6	(22%-166%)
13C-OCDD		2.95	4.00	ng/L	73.7	(13%-199%)
13C-2,3,7,8-TCDF		1.68	2.00	ng/L	84.0	(22%-152%)
13C-1,2,3,7,8-PeCDF		1.77	2.00	ng/L	88.3	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.64	2.00	ng/L	82.1	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.41	2.00	ng/L	70.5	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.46	2.00	ng/L	73.2	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.49	2.00	ng/L	74.7	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.50	2.00	ng/L	75.2	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.43	2.00	ng/L	71.3	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.61	2.00	ng/L	80.4	(20%-186%)
37Cl-2,3,7,8-TCDD		0.175	0.200	ng/L	87.3	(31%-191%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time
 Printed: Tuesday, December 24, 2019 08:48:54 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	5.58e4	7.48e4	1.31e5	31.13	1.001	0.75	NO	9.905	0.0729	9.77e5	3975	245.8	1.39e6	2365	588.6	bd	bd
2	12378-PeCDD	3.00e5	1.92e5	4.92e5	34.04	1.001	1.56	NO	51.561	0.0820	7.50e6	4822	1556.4	4.57e6	2669	1714.0	bb	bd
3	123478-HxCDD	2.65e5	2.01e5	4.66e5	36.61	1.000	1.32	NO	52.298	0.121	5.72e6	5107	1119.2	4.44e6	4666	952.0	dd	bd
4	123678-HxCDD	2.87e5	2.35e5	5.22e5	36.70	1.000	1.22	NO	49.951	0.124	5.72e6	5107	1120.5	4.47e6	4666	957.6	dd	dd
5	123789-HxCDD	2.84e5	2.25e5	5.08e5	36.93	1.007	1.26	NO	53.351	0.124	5.42e6	5107	1060.9	4.47e6	4666	958.3	dd	dd
6	1234678-HpCDD	2.04e5	1.93e5	3.98e5	39.96	1.000	1.06	NO	46.849	0.183	3.30e6	5934	556.0	3.07e6	4083	752.1	bd	bd
7	OCDD	3.12e5	3.46e5	6.58e5	44.14	1.000	0.90	NO	98.477	0.279	3.76e6	4254	885.1	4.40e6	4468	986.0	bd	bb
8	2378-TCDF	6.74e4	8.77e4	1.55e5	30.34	1.001	0.77	NO	8.788	0.0581	8.09e5	1576	513.4	1.06e6	3398	310.6	bb	bb
9	12378-PeCDF	4.01e5	2.63e5	6.64e5	33.24	1.000	1.53	NO	45.816	0.128	1.02e7	11562	880.7	6.83e6	6834	999.4	bd	bd
10	23478-PeCDF	4.53e5	2.96e5	7.49e5	33.85	1.000	1.53	NO	50.622	0.123	1.16e7	11562	1004.7	7.51e6	6834	1099.0	bb	bb
11	123478-HxCDF	3.41e5	2.75e5	6.17e5	35.91	1.000	1.24	NO	49.837	0.165	7.83e6	10648	735.6	6.09e6	8274	736.4	bd	bd
12	123678-HxCDF	3.57e5	2.99e5	6.56e5	36.01	1.001	1.19	NO	47.567	0.175	7.52e6	10648	706.3	6.11e6	8274	738.8	db	dd
13	234678-HxCDF	3.57e5	2.88e5	6.45e5	36.48	1.000	1.24	NO	48.403	0.167	7.63e6	10648	716.9	6.40e6	8274	773.0	bb	bd
14	123789-HxCDF	2.99e5	2.45e5	5.44e5	37.24	1.000	1.22	NO	48.550	0.223	5.62e6	10648	528.0	4.55e6	8274	550.4	bb	bd
15	1234678-HpCDF	2.60e5	2.60e5	5.20e5	38.72	1.001	1.00	NO	50.207	0.162	4.50e6	5420	890.1	4.37e6	6214	703.8	bb	bd
16	1234789-HpCDF	2.26e5	2.21e5	4.48e5	40.61	1.000	1.02	NO	47.084	0.204	3.48e6	5420	642.4	3.31e6	6214	531.9	bb	bd
17	OCDF	3.23e5	3.63e5	6.85e5	44.43	1.007	0.89	NO	87.924	0.257	3.56e6	3610	986.0	4.13e6	5767	716.6	bb	bb
18	13C-2378-TCDD	6.46e5	8.45e5	1.49e6	31.11	1.018	0.76	NO	76.856	0.142	1.06e7	8633	1233.0	1.39e7	4798	2888.4	bb	bb
19	13C-12378-PeCDD	6.74e5	4.44e5	1.12e6	34.02	1.114	1.52	NO	86.631	0.129	1.61e7	3832	4209.1	1.04e7	4315	2404.1	bb	bd
20	13C-123478-HxCDD	5.31e5	4.17e5	9.48e5	36.60	0.991	1.27	NO	72.775	0.132	1.20e7	5674	2120.1	9.40e6	7390	1272.2	bd	bd
21	13C-123678-HxCDD	6.14e5	4.93e5	1.11e6	36.69	0.994	1.25	NO	77.312	0.120	1.16e7	5674	2046.7	9.43e6	7390	1276.6	dd	dd
22	13C-1234678-HpCDD	4.22e5	3.94e5	8.16e5	39.95	1.082	1.07	NO	83.598	0.138	6.79e6	5137	1322.6	6.21e6	5087	1221.5	bb	bb
23	13C-OCDD	6.58e5	7.19e5	1.38e6	44.13	1.195	0.91	NO	147.487	0.157	7.68e6	5921	1297.9	8.64e6	5188	1666.1	bd	bb
24	13C-2378-TCDF	7.83e5	1.02e6	1.80e6	30.32	0.993	0.77	NO	83.985	0.202	9.50e6	13895	683.6	1.23e7	7279	1694.1	bb	bb
25	13C-12378-PeCDF	9.38e5	5.95e5	1.53e6	33.23	1.088	1.58	NO	88.303	0.297	2.33e7	11249	2069.5	1.48e7	13890	1067.8	bd	bd
26	13C-23478-PeCDF	9.19e5	5.81e5	1.50e6	33.84	1.108	1.58	NO	82.076	0.282	2.33e7	11249	2067.0	1.45e7	13890	1044.3	db	db
27	13C-123478-HxCDF	3.84e5	7.54e5	1.14e6	35.90	0.972	0.51	NO	70.500	0.222	8.91e6	11352	785.0	1.70e7	15846	1070.5	bd	bd
28	13C-123678-HxCDF	4.55e5	8.71e5	1.33e6	35.99	0.975	0.52	NO	73.173	0.198	8.89e6	11352	783.1	1.75e7	15846	1103.2	dd	dd
29	13C-234678-HxCDF	4.00e5	7.74e5	1.17e6	36.47	0.988	0.52	NO	74.653	0.228	8.52e6	11352	750.1	1.67e7	15846	1054.6	bb	bb
30	13C-123789-HxCDF	3.60e5	6.97e5	1.06e6	37.23	1.009	0.52	NO	75.226	0.255	6.81e6	11352	599.6	1.29e7	15846	813.1	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld
 Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time
 Printed: Tuesday, December 24, 2019 08:48:54 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	2.70e5	6.31e5	9.01e5	38.70	1.048	0.43	NO	71.273	0.121	4.67e6	4650	1004.0	1.06e7	6986	1517.0	bd	bd
32	13C-1234789-HpCDF	2.37e5	5.54e5	7.91e5	40.60	1.100	0.43	NO	80.363	0.156	3.56e6	4650	766.6	8.38e6	6986	1199.6	bb	bd
33	13C-1234-TCDD	7.48e5	9.70e5	1.72e6	30.54	0.000	0.77	NO	100.000	0.160	9.11e6	8633	1055.4	1.20e7	4798	2502.3	bb	bb
34	13C-123789-HxCDD	8.02e5	6.51e5	1.45e6	36.92	0.000	1.23	NO	100.000	0.118	1.52e7	5674	2682.9	1.24e7	7390	1673.6	dd	dd
35	37Cl+2378-TCDD	1.59e5		1.59e5	31.13	1.019			8.732	0.0243	2.75e6	2160	1271.4				bb	bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

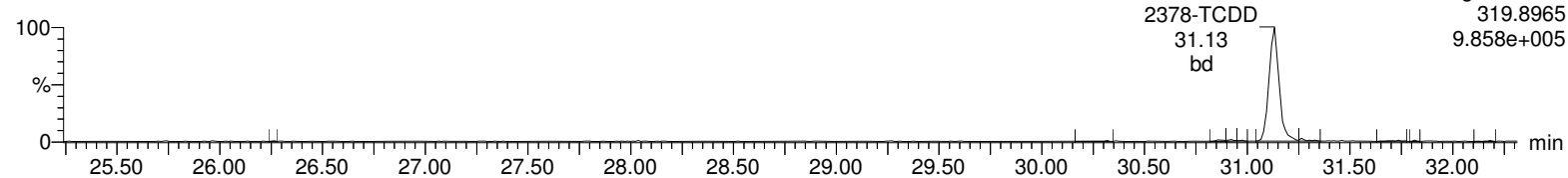
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

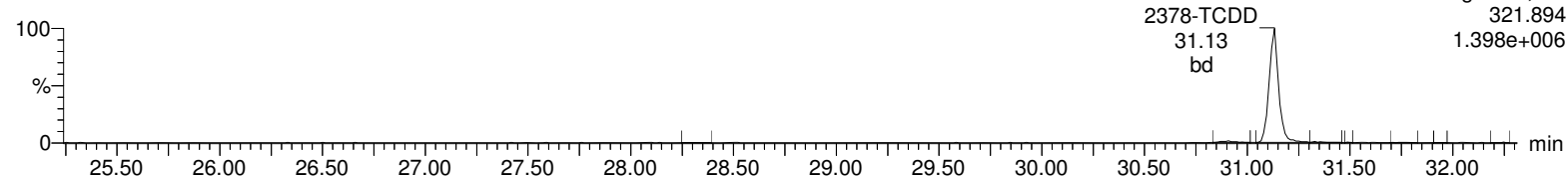
Total-tetradoxins

A23DEC19A-2



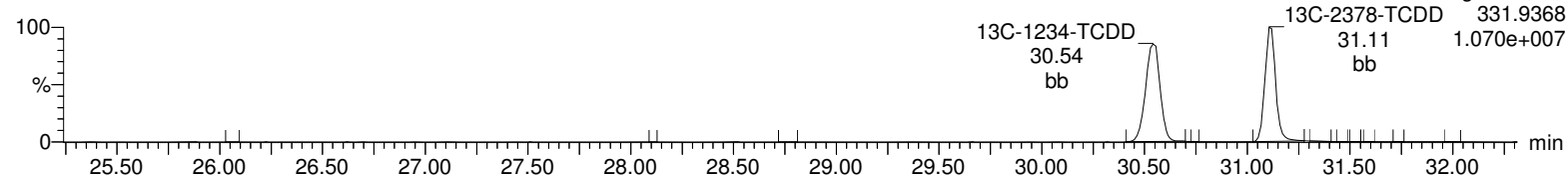
Total-tetradoxins

A23DEC19A-2



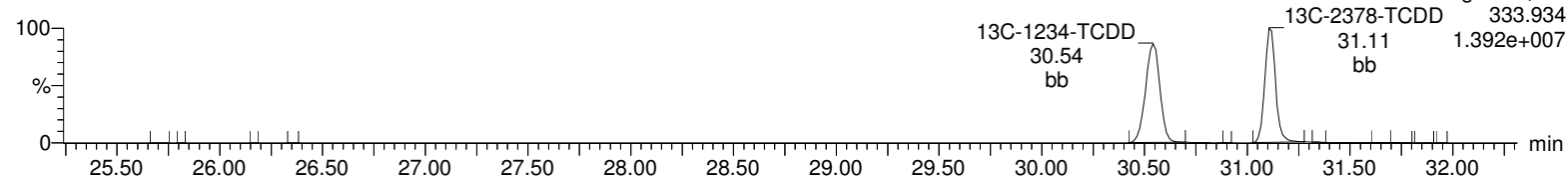
13C-2378-TCDD

A23DEC19A-2



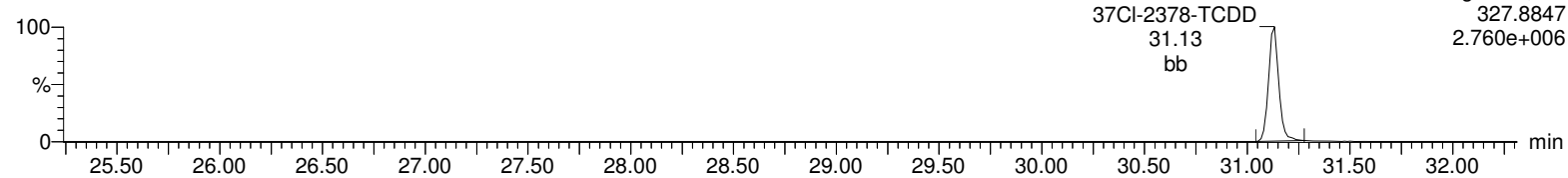
13C-2378-TCDD

A23DEC19A-2



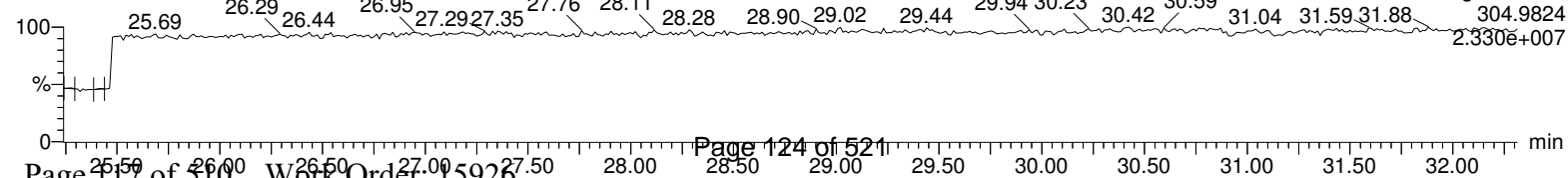
37Cl-2378-TCDD

A23DEC19A-2



Lock Mass F1

A23DEC19A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

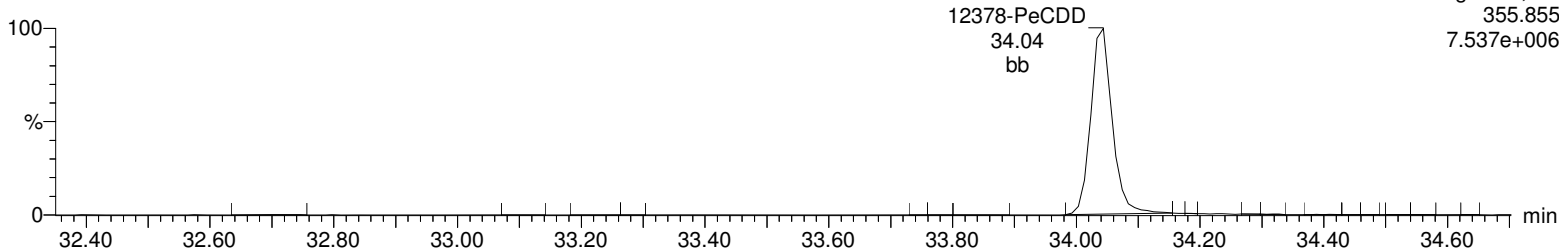
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentadioxins

A23DEC19A-2

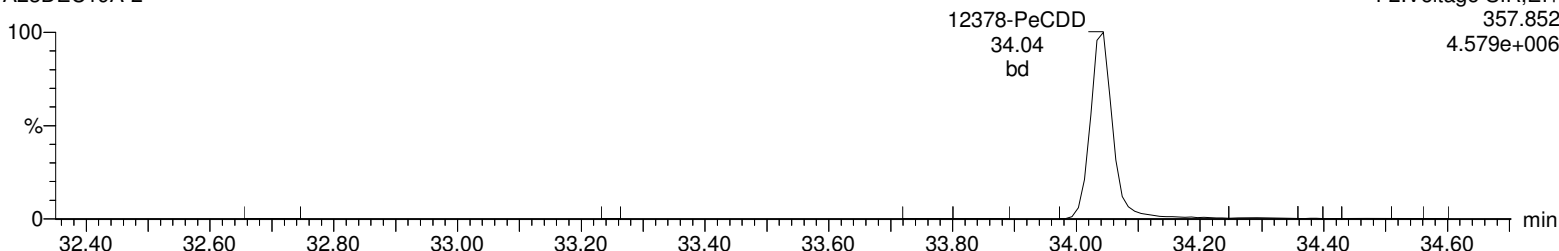
F2:Voltage SIR,EI+
355.855
7.537e+006



Total-pentadioxins

A23DEC19A-2

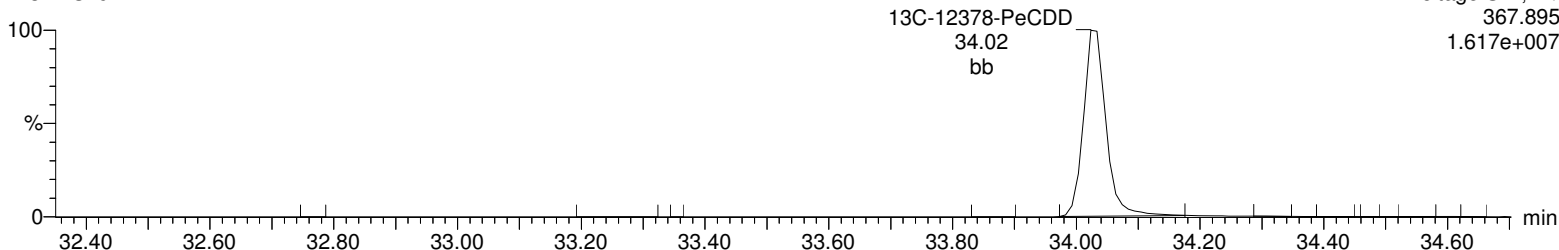
F2:Voltage SIR,EI+
357.852
4.579e+006



13C-12378-PeCDD

A23DEC19A-2

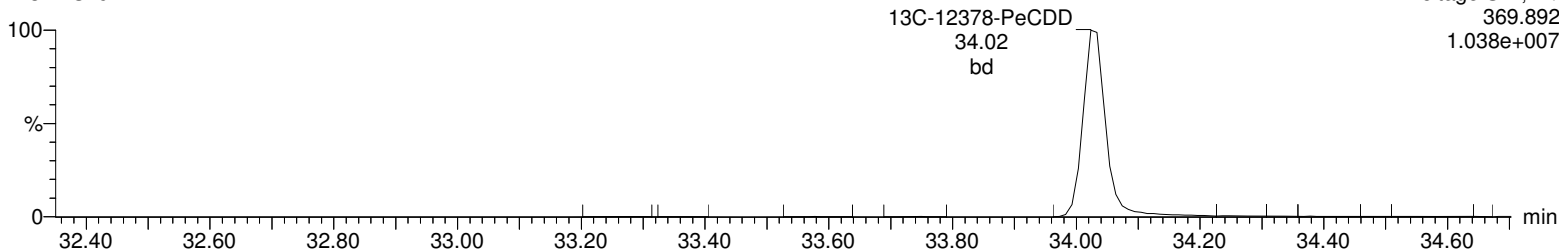
F2:Voltage SIR,EI+
367.895
1.617e+007



13C-12378-PeCDD

A23DEC19A-2

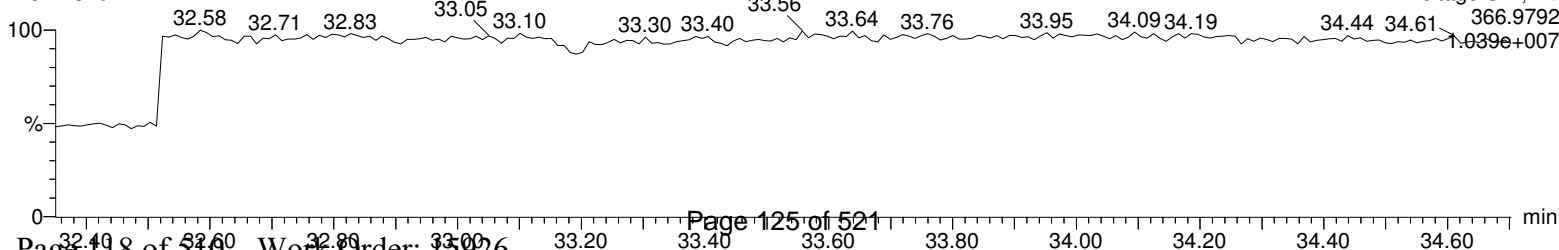
F2:Voltage SIR,EI+
369.892
1.038e+007



Lock Mass F2

A23DEC19A-2

F2:Voltage SIR,EI+
366.9792
1.039e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

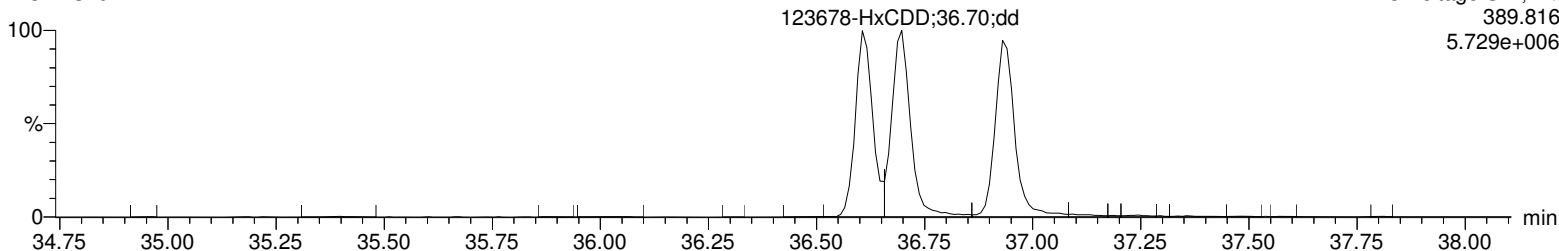
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A-2

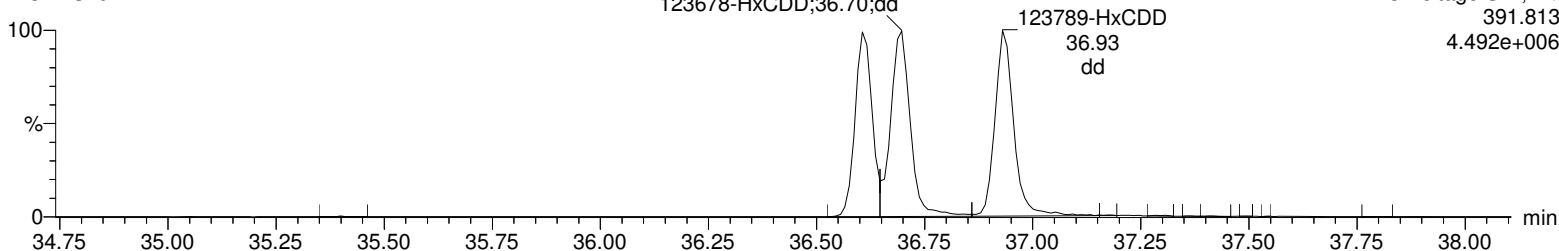
F3:Voltage SIR,EI+
389.816
5.729e+006



Total-hexadioxins

A23DEC19A-2

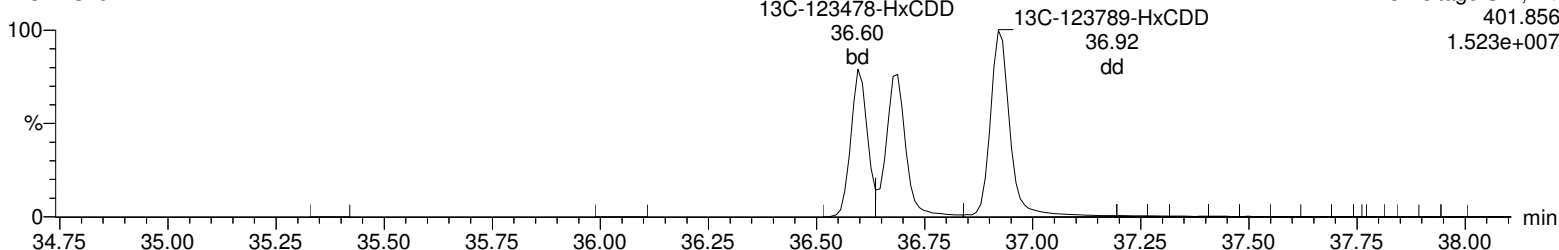
F3:Voltage SIR,EI+
391.813
4.492e+006



13C-123478-HxCDD

A23DEC19A-2

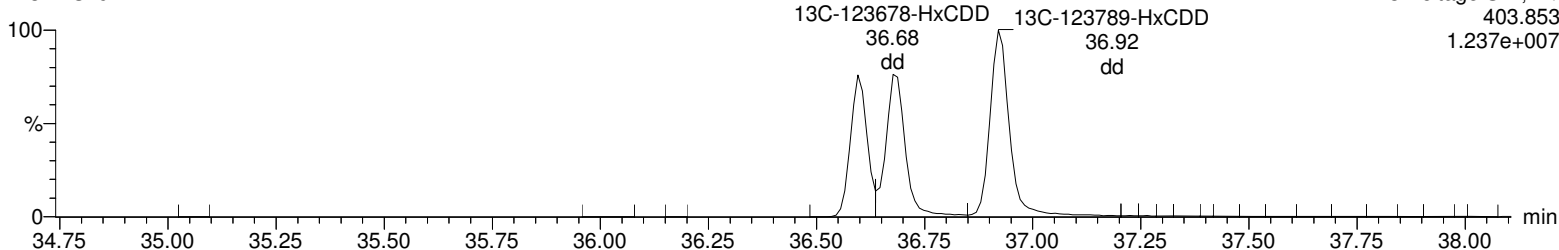
F3:Voltage SIR,EI+
401.856
1.523e+007



13C-123478-HxCDD

A23DEC19A-2

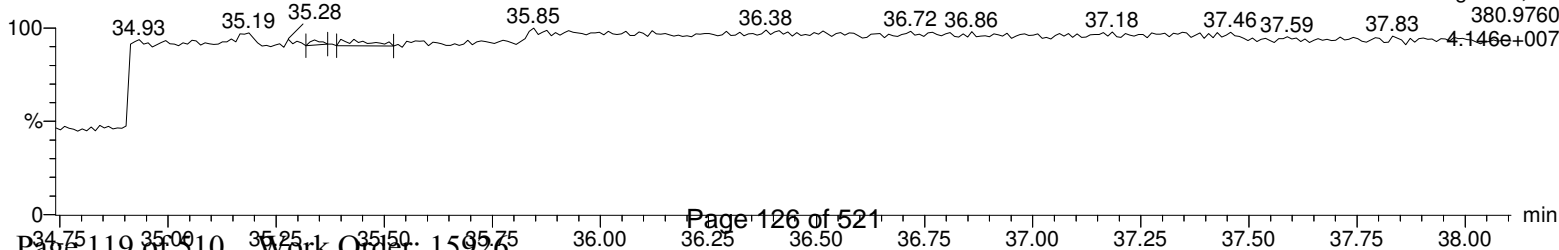
F3:Voltage SIR,EI+
403.853
1.237e+007



Lock Mass F3

A23DEC19A-2

F3:Voltage SIR,EI+
380.9760
4.146e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

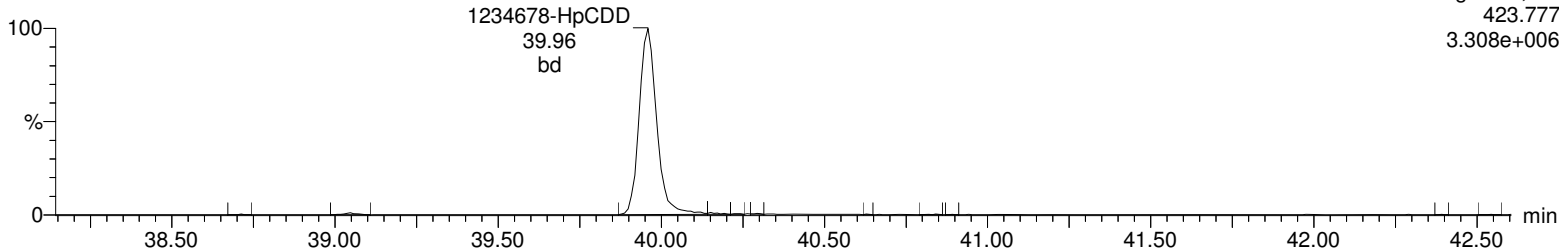
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-heptadioxins

A23DEC19A-2

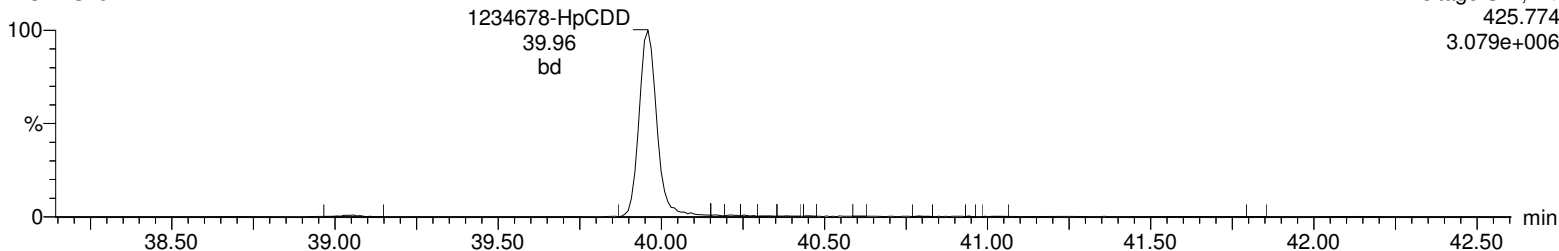
F4:Voltage SIR,EI+
423.777
3.308e+006



Total-heptadioxins

A23DEC19A-2

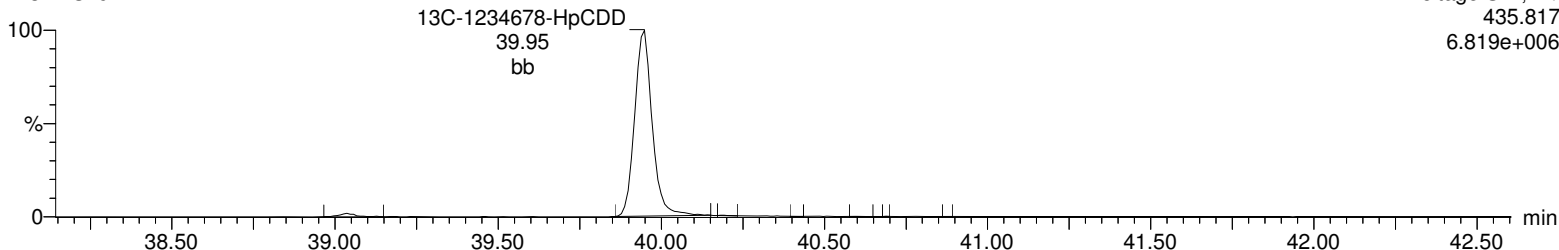
F4:Voltage SIR,EI+
425.774
3.079e+006



13C-1234678-HpCDD

A23DEC19A-2

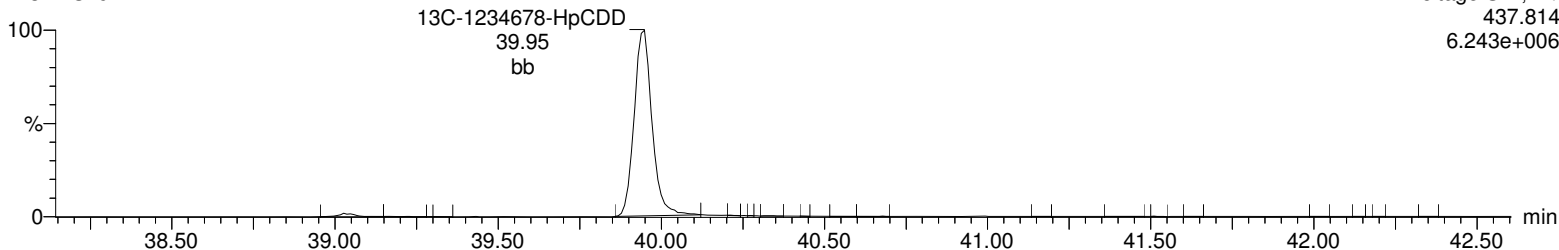
F4:Voltage SIR,EI+
435.817
6.819e+006



13C-1234678-HpCDD

A23DEC19A-2

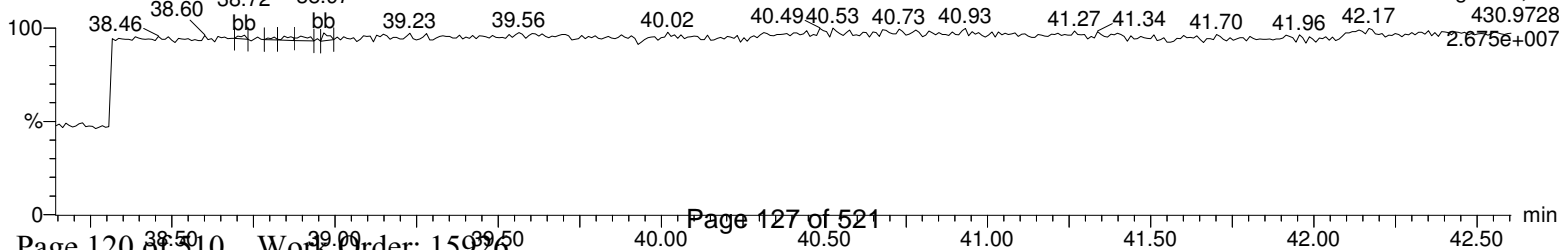
F4:Voltage SIR,EI+
437.814
6.243e+006



Lock Mass F4

A23DEC19A-2

F4:Voltage SIR,EI+
430.9728
2.675e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

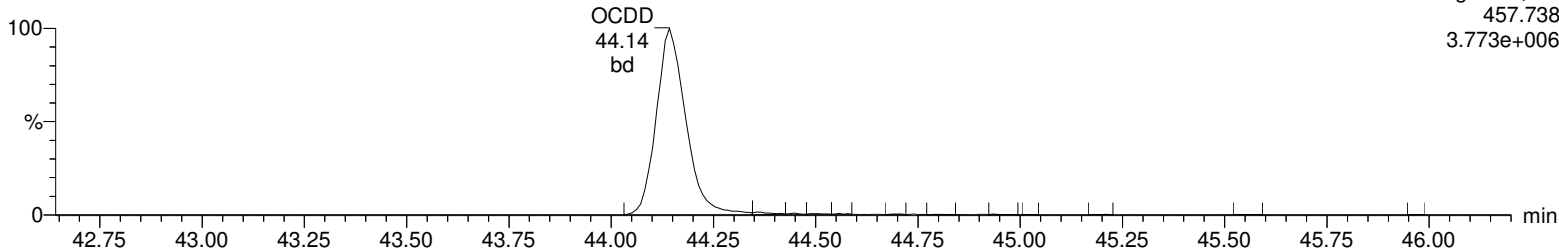
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDD

A23DEC19A-2

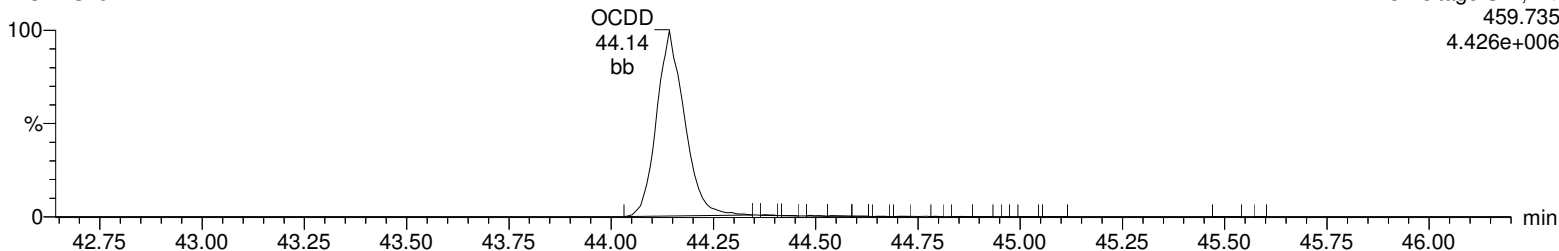
F5:Voltage SIR,EI+
457.738
3.773e+006



OCDD

A23DEC19A-2

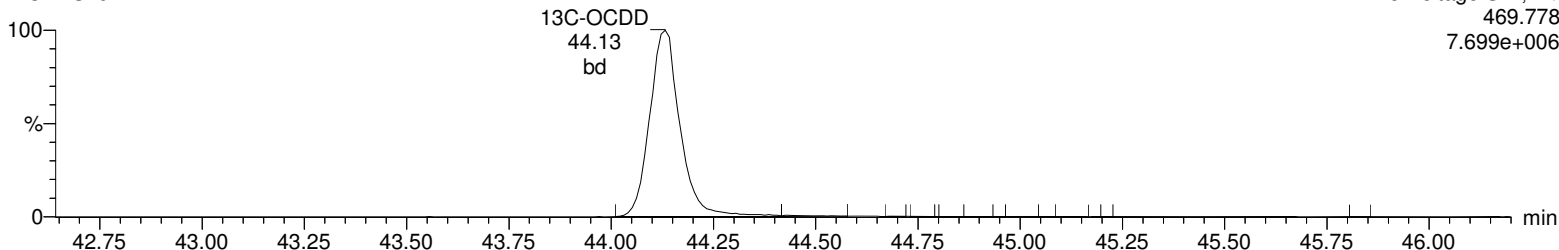
F5:Voltage SIR,EI+
459.735
4.426e+006



13C-OCDD

A23DEC19A-2

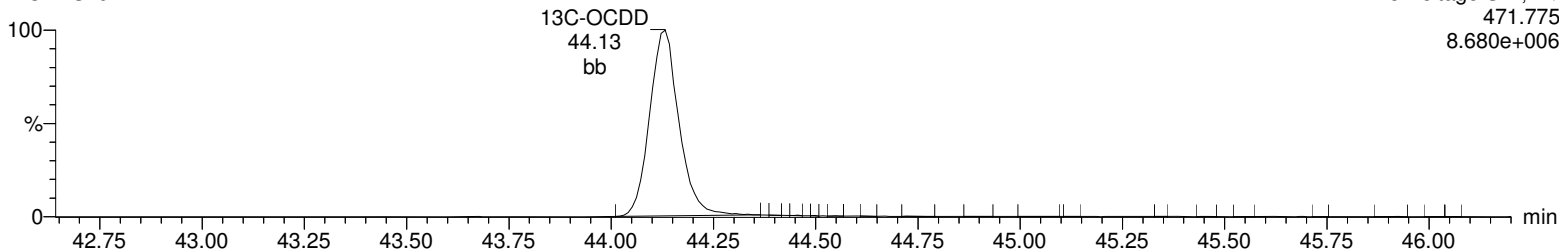
F5:Voltage SIR,EI+
469.778
7.699e+006



13C-OCDD

A23DEC19A-2

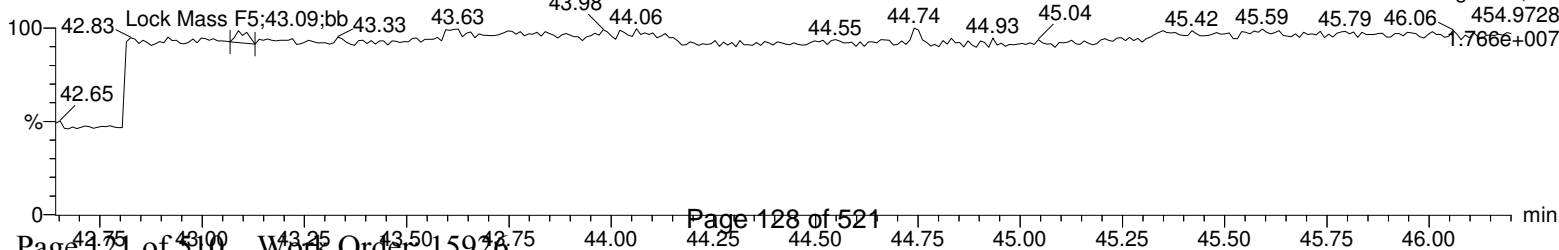
F5:Voltage SIR,EI+
471.775
8.680e+006



Lock Mass F5

A23DEC19A-2

F5:Voltage SIR,EI+
454.9728
1.766e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

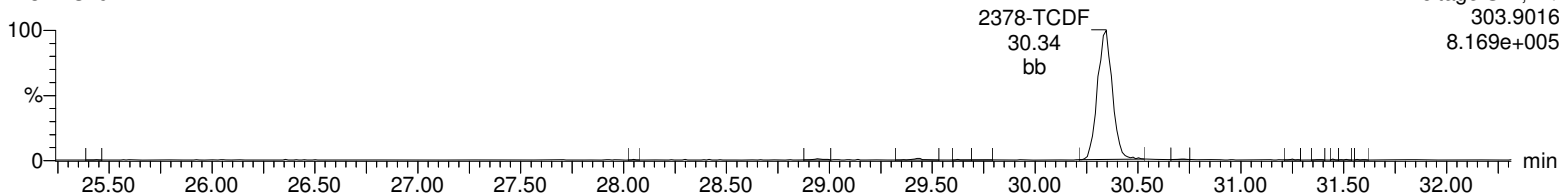
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-tetrafurans

A23DEC19A-2

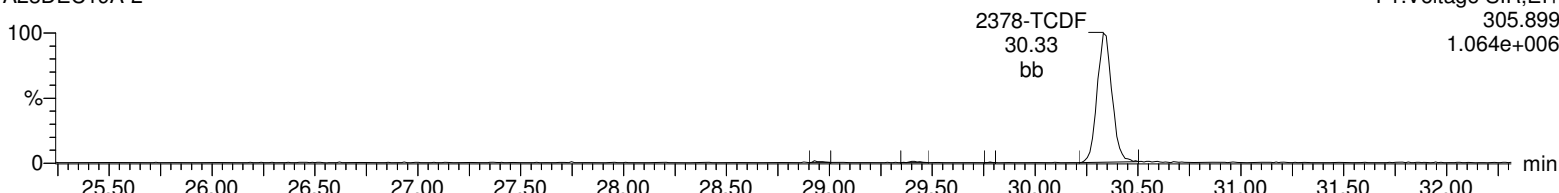
F1:Voltage SIR,EI+
303.9016
8.169e+005



Total-tetrafurans

A23DEC19A-2

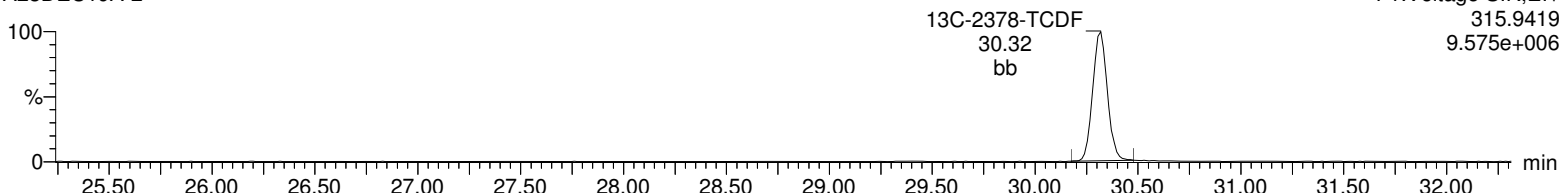
F1:Voltage SIR,EI+
305.899
1.064e+006



13C-2378-TCDF

A23DEC19A-2

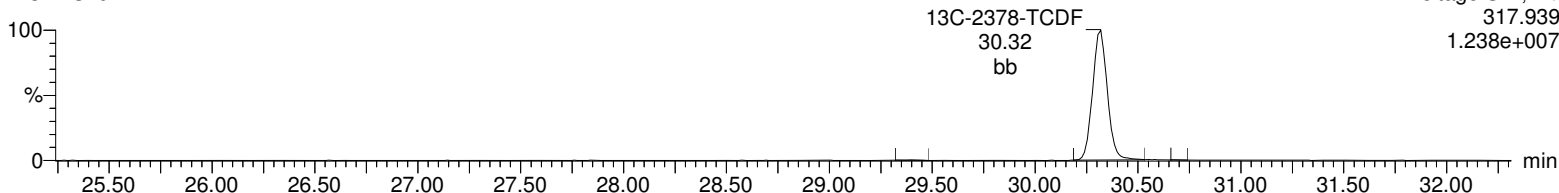
F1:Voltage SIR,EI+
315.9419
9.575e+006



13C-2378-TCDF

A23DEC19A-2

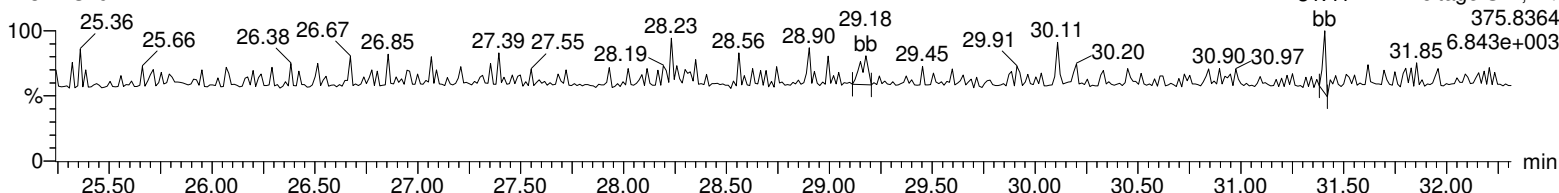
F1:Voltage SIR,EI+
317.939
1.238e+007



HxDPE

A23DEC19A-2

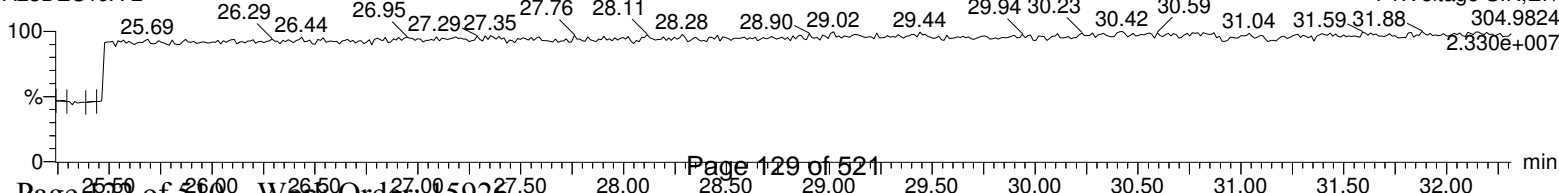
F1:Voltage SIR,EI+
375.8364
6.843e+003



Lock Mass F1

A23DEC19A-2

F1:Voltage SIR,EI+
304.9824
2.330e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

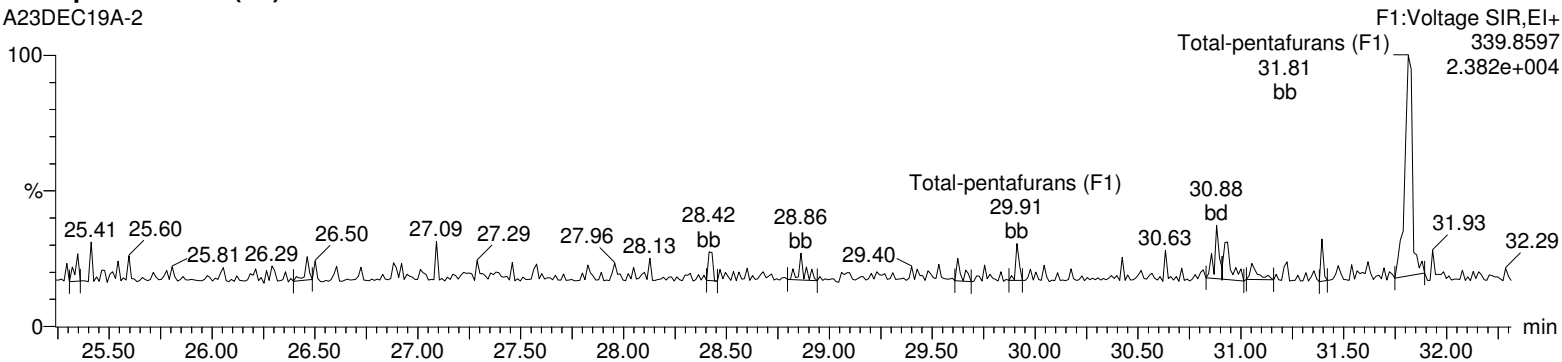
Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

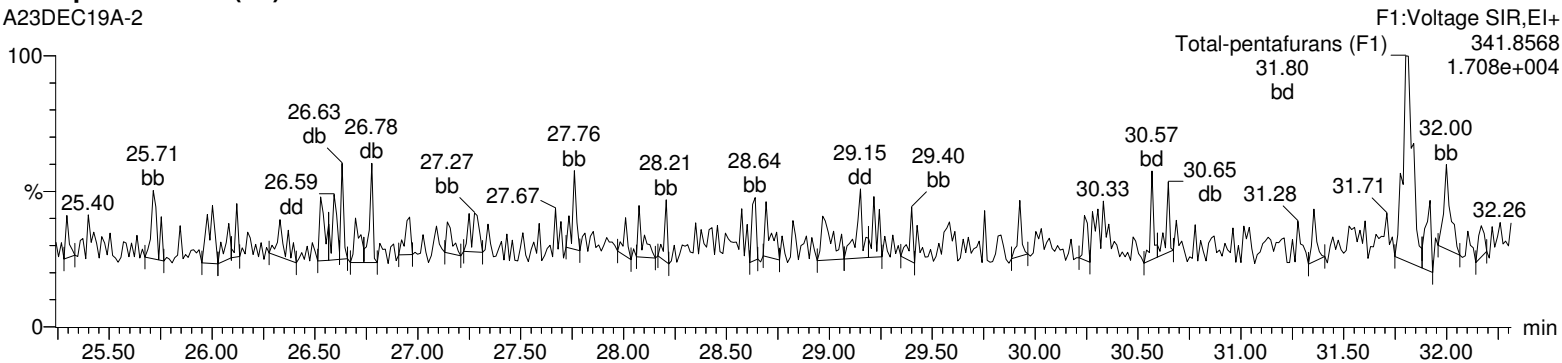
Total-pentafurans (F1)

A23DEC19A-2



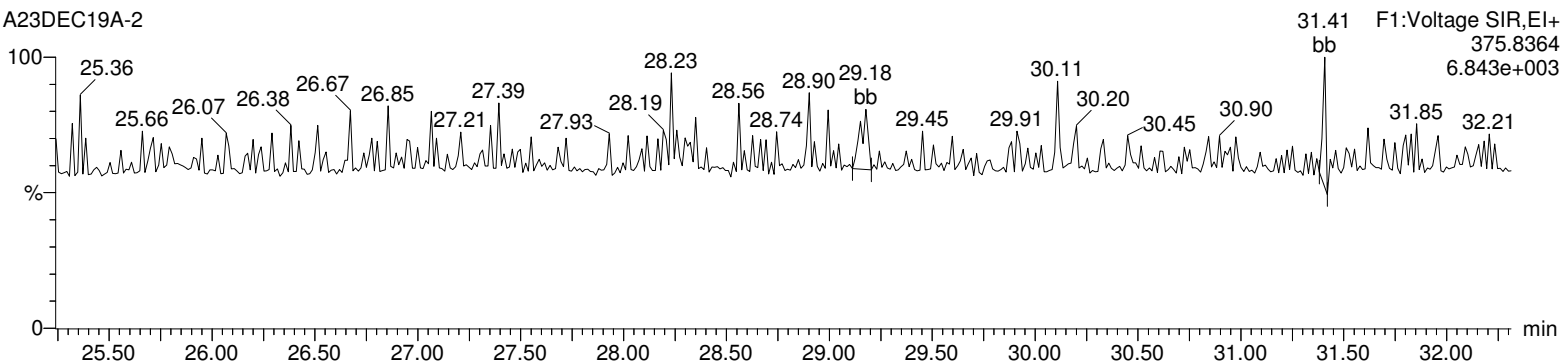
Total-pentafurans (F1)

A23DEC19A-2



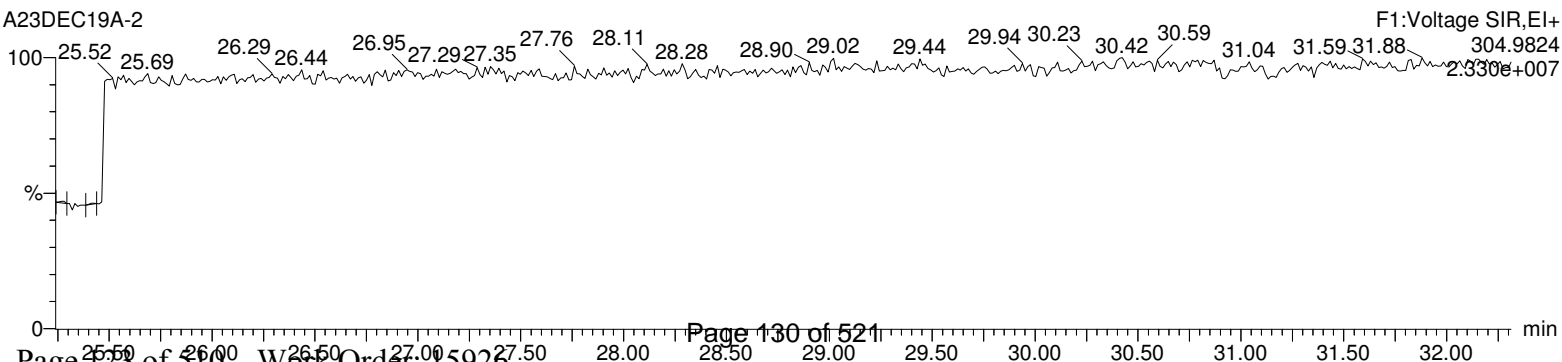
HxDPE

A23DEC19A-2



Lock Mass F1

A23DEC19A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

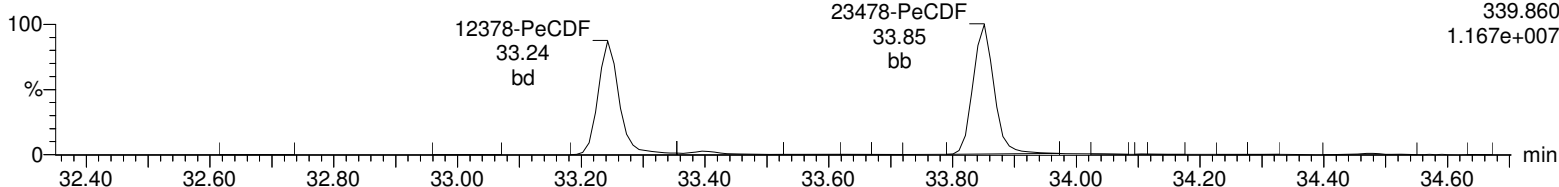
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentafurans

A23DEC19A-2

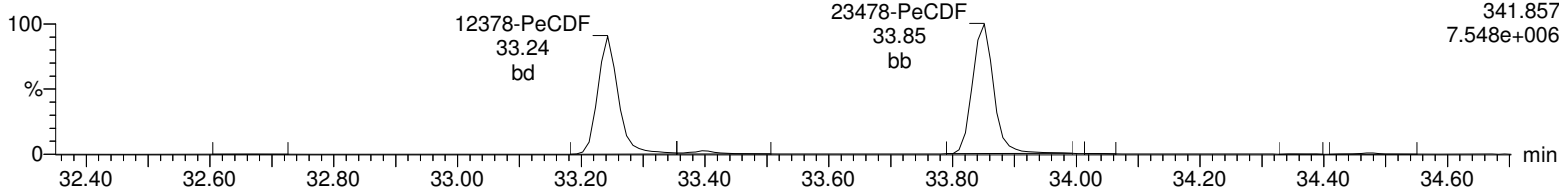
F2:Voltage SIR,EI+
339.860
1.167e+007



Total-pentafurans

A23DEC19A-2

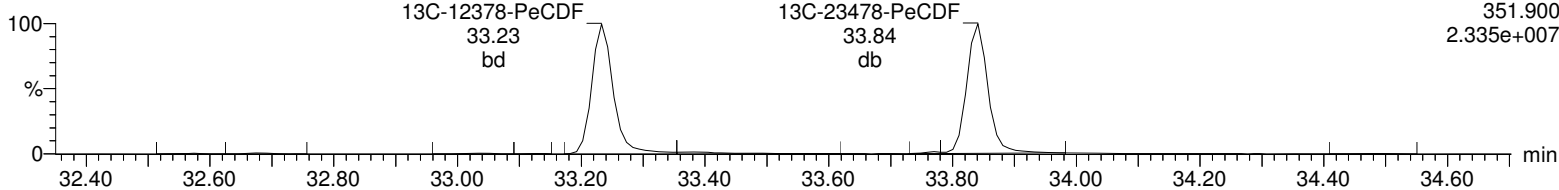
F2:Voltage SIR,EI+
341.857
7.548e+006



13C-12378-PeCDF

A23DEC19A-2

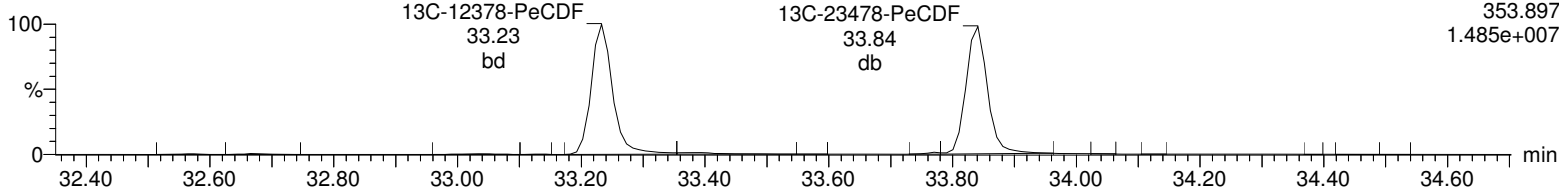
F2:Voltage SIR,EI+
351.900
2.335e+007



13C-12378-PeCDF

A23DEC19A-2

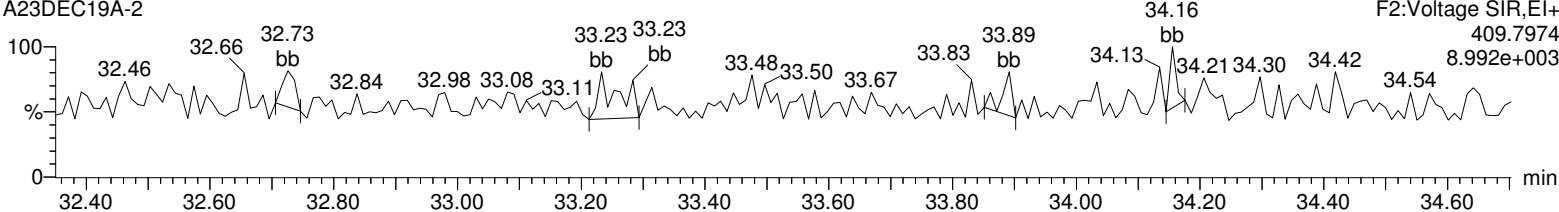
F2:Voltage SIR,EI+
353.897
1.485e+007



HpDPE

A23DEC19A-2

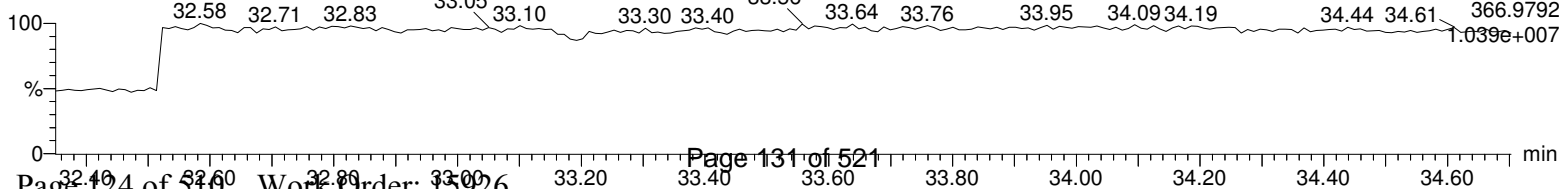
F2:Voltage SIR,EI+
409.7974
8.992e+003



Lock Mass F2

A23DEC19A-2

F2:Voltage SIR,EI+
366.9792
1.039e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

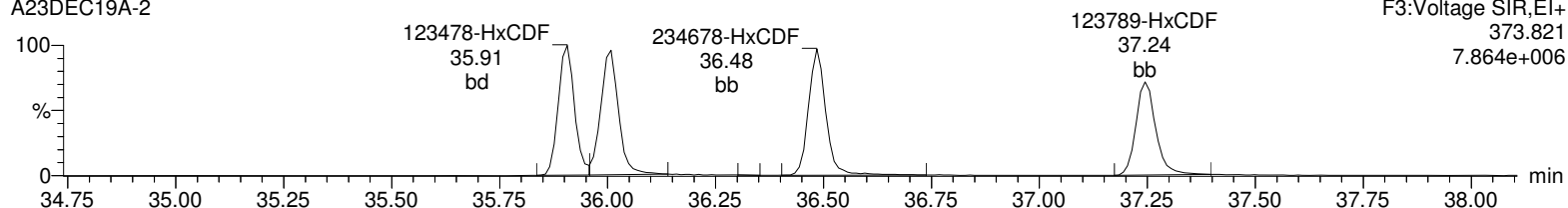
Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

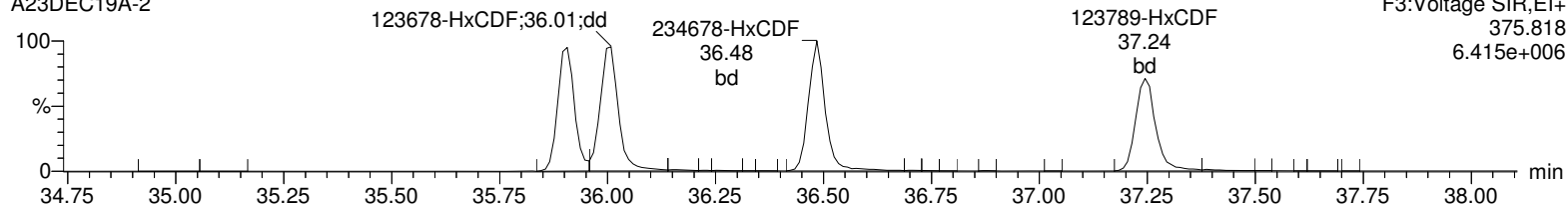
Total-hexafurans

A23DEC19A-2



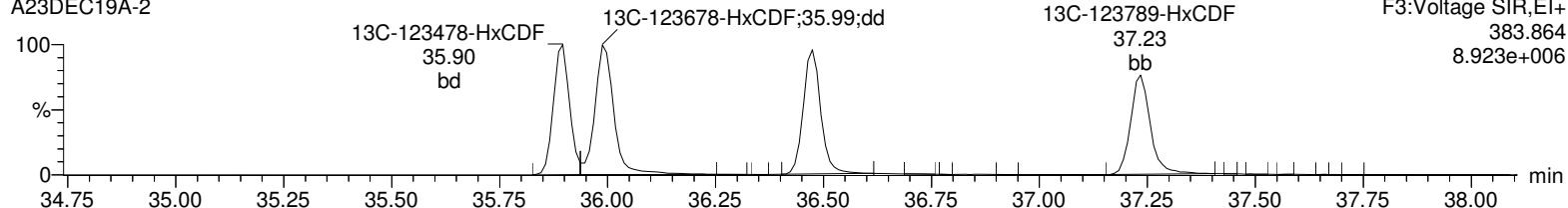
Total-hexafurans

A23DEC19A-2



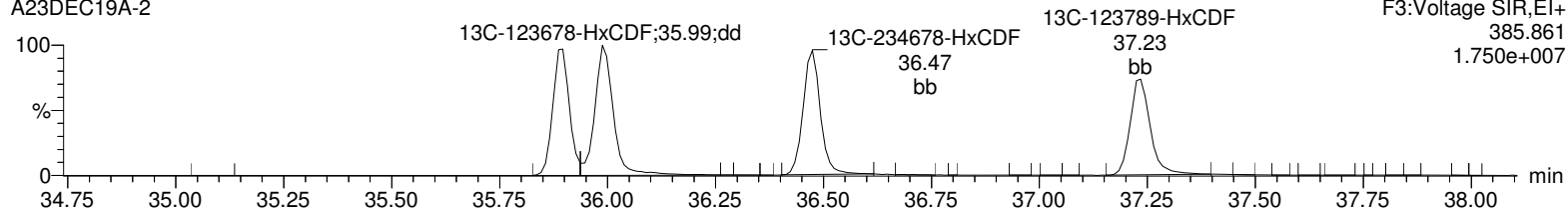
13C-123478-HxCDF

A23DEC19A-2



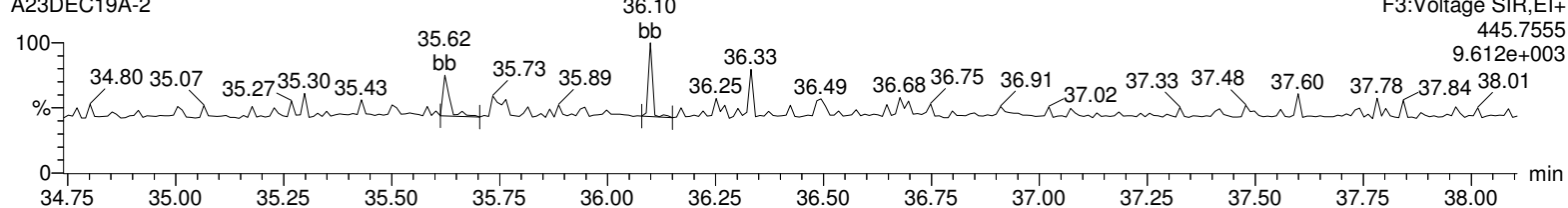
13C-123478-HxCDF

A23DEC19A-2



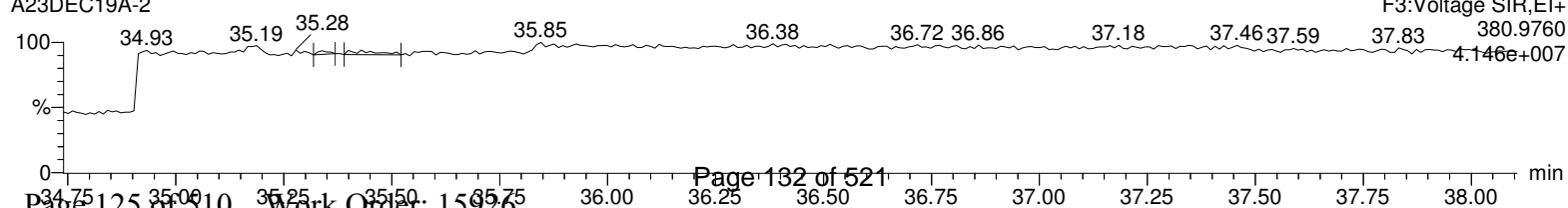
OcDPE

A23DEC19A-2



Lock Mass F3

A23DEC19A-2



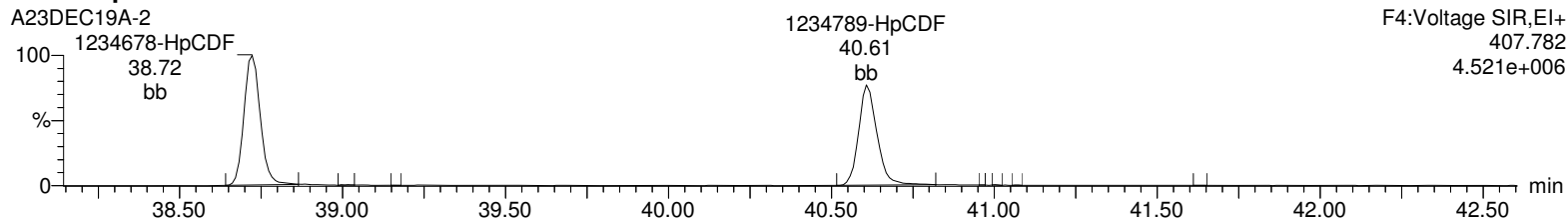
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

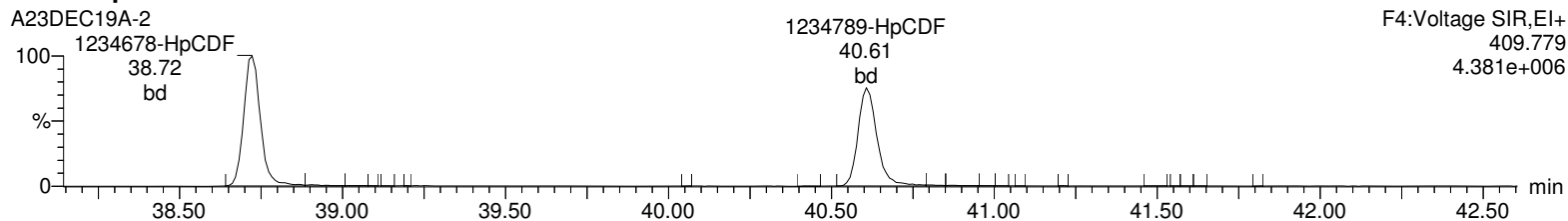
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

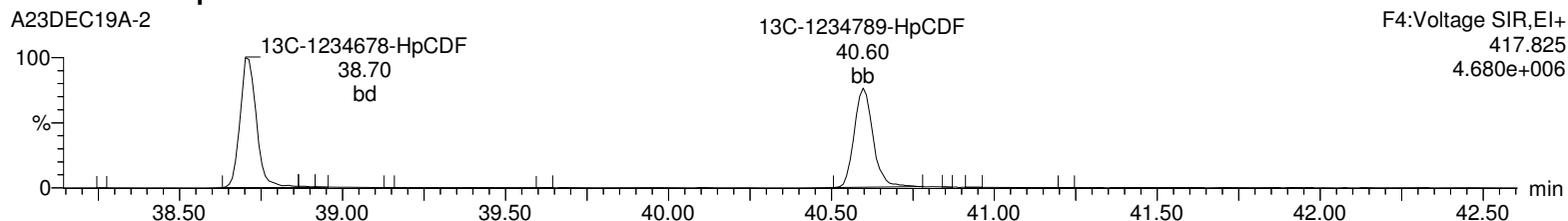
Total-heptafurans



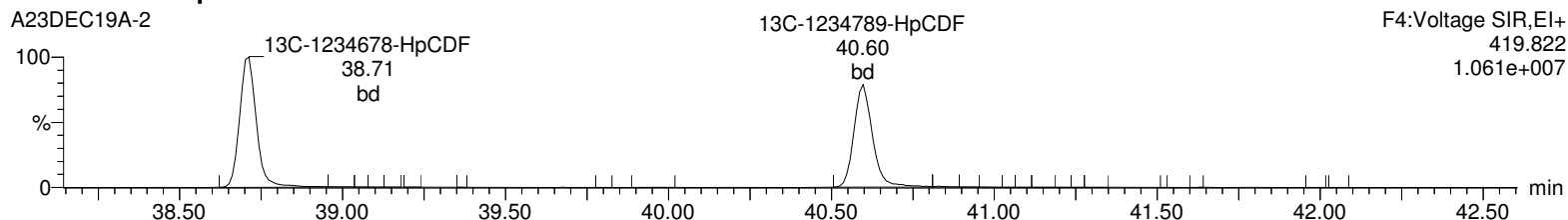
Total-heptafurans



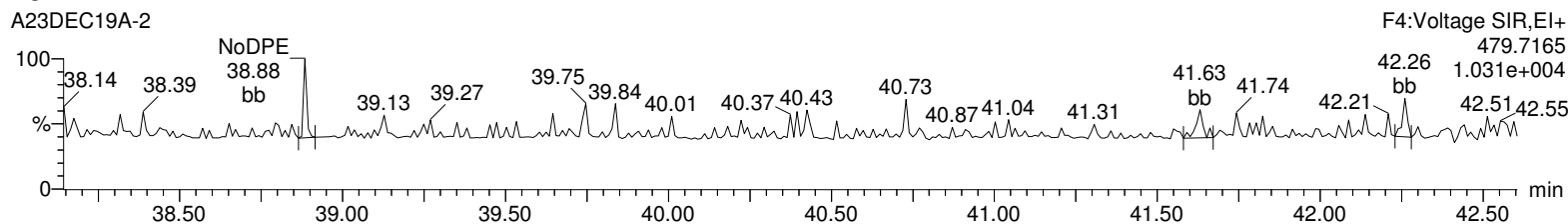
13C-1234678-HpCDF



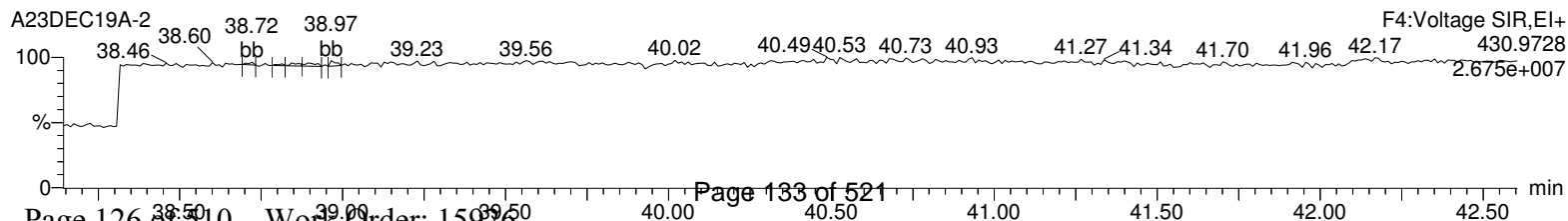
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

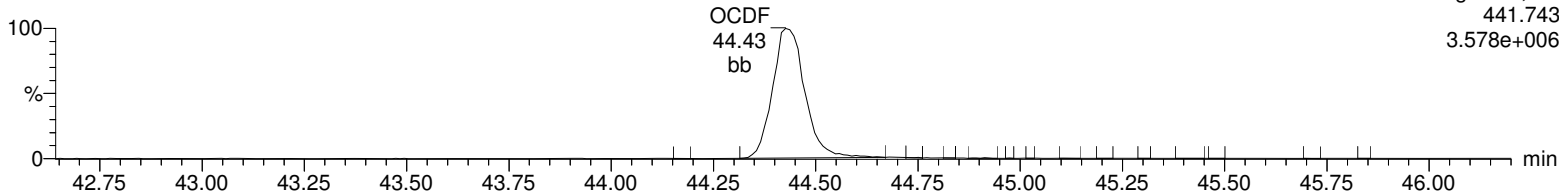
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-2, Date: 23-Dec-2019, Time: 18:15:35, ID: 12025597-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDF

A23DEC19A-2

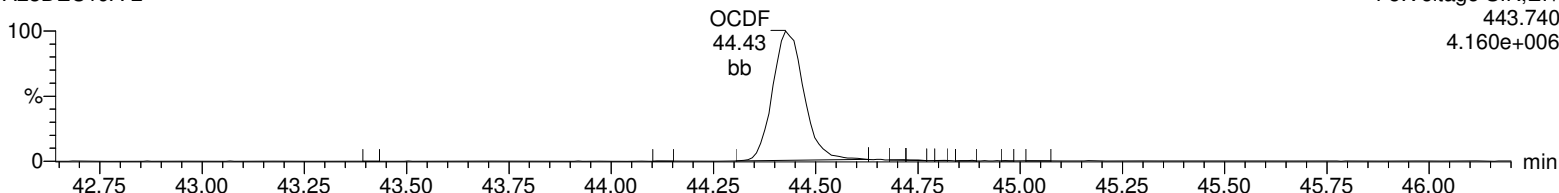
F5:Voltage SIR,EI+
441.743
3.578e+006



OCDF

A23DEC19A-2

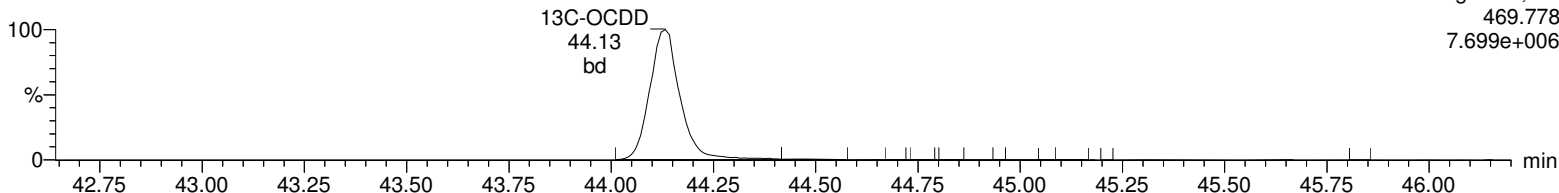
F5:Voltage SIR,EI+
443.740
4.160e+006



13C-OCDD

A23DEC19A-2

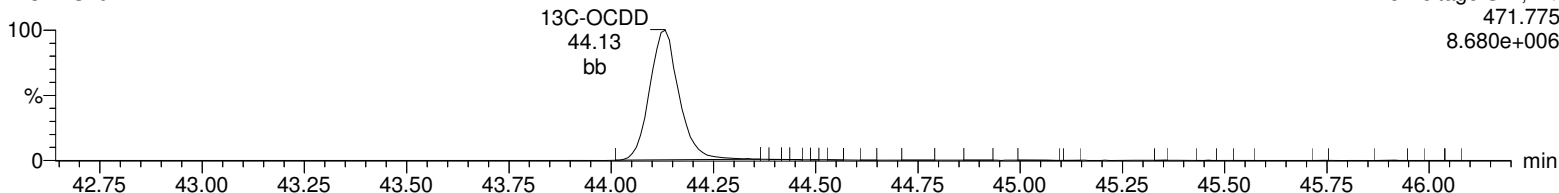
F5:Voltage SIR,EI+
469.778
7.699e+006



13C-OCDD

A23DEC19A-2

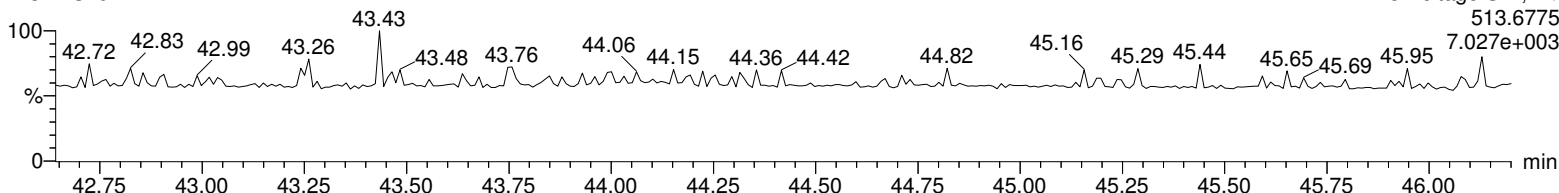
F5:Voltage SIR,EI+
471.775
8.680e+006



DeDPE

A23DEC19A-2

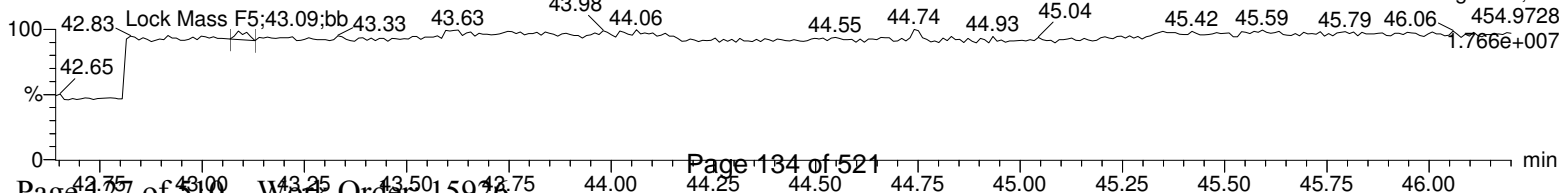
F5:Voltage SIR,EI+
513.6775
7.027e+003



Lock Mass F5

A23DEC19A-2

F5:Voltage SIR,EI+
454.9728
1.766e+007



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: 570-14631	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025598		Matrix: WATER
Client Sample: QC for batch 42647		
Client ID: LCSD for batch 42647		Prep Basis: As Received
Batch ID: 42649	Method: EPA Method 1613B	
Run Date: 12/23/2019 19:03	Analyst: MJC	Instrument: HRP750
Data File: A23DEC19A-3		Dilution: 1
Prep Batch: 42647	Prep Method: SW846 3520C	
Prep Date: 18-DEC-19	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.197	ng/L	0.00195	0.010
40321-76-4	1,2,3,7,8-PeCDD		1.04	ng/L	0.00228	0.050
39227-28-6	1,2,3,4,7,8-HxCDD		1.04	ng/L	0.00304	0.050
57653-85-7	1,2,3,6,7,8-HxCDD		0.973	ng/L	0.00294	0.050
19408-74-3	1,2,3,7,8,9-HxCDD		1.03	ng/L	0.00302	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.913	ng/L	0.0047	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1.95	ng/L	0.00636	0.100
51207-31-9	2,3,7,8-TCDF		0.166	ng/L	0.00184	0.010
57117-41-6	1,2,3,7,8-PeCDF		0.879	ng/L	0.00306	0.050
57117-31-4	2,3,4,7,8-PeCDF		0.978	ng/L	0.00298	0.050
70648-26-9	1,2,3,4,7,8-HxCDF		0.951	ng/L	0.00404	0.050
57117-44-9	1,2,3,6,7,8-HxCDF		0.995	ng/L	0.00406	0.050
60851-34-5	2,3,4,6,7,8-HxCDF		0.946	ng/L	0.00398	0.050
72918-21-9	1,2,3,7,8,9-HxCDF		0.940	ng/L	0.00534	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF		0.985	ng/L	0.00468	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.927	ng/L	0.00588	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.82	ng/L	0.0084	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.47	2.00	ng/L	73.6	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.65	2.00	ng/L	82.3	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.45	2.00	ng/L	72.5	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.56	2.00	ng/L	77.8	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.62	2.00	ng/L	81.2	(22%-166%)
13C-OCDD		2.99	4.00	ng/L	74.7	(13%-199%)
13C-2,3,7,8-TCDF		1.53	2.00	ng/L	76.4	(22%-152%)
13C-1,2,3,7,8-PeCDF		1.75	2.00	ng/L	87.5	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.60	2.00	ng/L	79.9	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.44	2.00	ng/L	72.2	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.43	2.00	ng/L	71.6	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.52	2.00	ng/L	75.9	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.49	2.00	ng/L	74.6	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.37	2.00	ng/L	68.7	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.54	2.00	ng/L	77.1	(20%-186%)
37Cl-2,3,7,8-TCDD		0.167	0.200	ng/L	83.6	(31%-191%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld
 Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time
 Printed: Tuesday, December 24, 2019 08:51:49 Eastern Standard Time

MassLynx 4.1
 Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.80e4	4.80e4	8.60e4	31.15	1.001	0.79	NO	9.840	0.0974	6.19e5	3668	168.7	8.36e5	2208	378.5	bb	bb
2	12378-PeCDD	1.99e5	1.28e5	3.27e5	34.05	1.000	1.56	NO	52.055	0.114	4.72e6	5273	894.6	3.02e6	1568	1926.0	bd	bd
3	123478-HxCDD	1.74e5	1.40e5	3.14e5	36.62	1.000	1.25	NO	52.244	0.152	3.73e6	4721	790.3	2.98e6	3267	913.0	bd	bd
4	123678-HxCDD	1.92e5	1.55e5	3.46e5	36.71	1.000	1.24	NO	48.653	0.147	3.87e6	4721	818.9	3.13e6	3267	956.8	dd	dd
5	123789-HxCDD	1.84e5	1.49e5	3.33e5	36.94	1.007	1.24	NO	51.507	0.151	3.40e6	4721	720.8	2.78e6	3267	851.4	dd	dd
6	1234678-HpCDD	1.28e5	1.27e5	2.55e5	39.97	1.001	1.01	NO	45.642	0.235	1.98e6	3309	599.6	1.92e6	4857	395.5	bd	bd
7	OCDD	2.06e5	2.40e5	4.46e5	44.15	1.000	0.86	NO	97.270	0.318	2.39e6	3496	684.6	2.74e6	2971	921.1	bb	bd
8	2378-TCDF	4.00e4	5.23e4	9.23e4	30.34	1.000	0.76	NO	8.308	0.0920	4.98e5	1899	262.2	6.28e5	3161	198.7	bb	bb
9	12378-PeCDF	2.64e5	1.73e5	4.37e5	33.25	1.000	1.53	NO	43.958	0.153	6.67e6	9183	726.5	4.30e6	6212	692.5	bd	bd
10	23478-PeCDF	2.96e5	1.92e5	4.87e5	33.86	1.000	1.54	NO	48.892	0.149	7.74e6	9183	842.9	4.92e6	6212	792.0	bb	bb
11	123478-HxCDF	2.24e5	1.83e5	4.08e5	35.92	1.000	1.22	NO	47.543	0.202	4.92e6	9292	530.0	4.10e6	6246	657.2	bd	bd
12	123678-HxCDF	2.53e5	2.02e5	4.55e5	36.02	1.001	1.25	NO	49.735	0.203	5.19e6	9292	558.9	4.18e6	6246	668.6	dd	db
13	234678-HxCDF	2.40e5	1.94e5	4.34e5	36.49	1.000	1.24	NO	47.289	0.199	4.90e6	9292	527.4	3.93e6	6246	629.4	bd	bd
14	123789-HxCDF	1.96e5	1.58e5	3.54e5	37.25	1.000	1.25	NO	47.007	0.267	3.62e6	9292	389.9	2.85e6	6246	456.6	bd	bb
15	1234678-HpCDF	1.66e5	1.67e5	3.33e5	38.73	1.000	1.00	NO	49.274	0.234	2.95e6	5006	588.4	2.91e6	5598	520.0	bb	bd
16	1234789-HpCDF	1.46e5	1.40e5	2.86e5	40.62	1.000	1.05	NO	46.355	0.294	2.15e6	5006	428.5	2.07e6	5598	369.6	bd	bd
17	OCDF	2.30e5	2.56e5	4.86e5	44.45	1.007	0.90	NO	90.830	0.420	2.67e6	5287	505.6	3.01e6	4654	647.5	bd	bb
18	13C-2378-TCDD	4.25e5	5.63e5	9.88e5	31.12	1.019	0.75	NO	73.584	0.157	7.34e6	7111	1031.8	9.41e6	3541	2656.4	bb	bd
19	13C-12378-PeCDD	4.43e5	2.92e5	7.36e5	34.04	1.115	1.52	NO	82.343	0.193	1.06e7	5152	2060.1	7.08e6	3603	1965.2	bb	bd
20	13C-123478-HxCDD	3.56e5	2.83e5	6.39e5	36.61	0.991	1.26	NO	72.513	0.144	7.81e6	4451	1754.2	6.38e6	5375	1186.2	bd	bd
21	13C-123678-HxCDD	4.20e5	3.34e5	7.54e5	36.70	0.994	1.26	NO	77.760	0.131	8.05e6	4451	1807.7	6.35e6	5375	1181.4	dd	dd
22	13C-1234678-HpCDD	2.76e5	2.61e5	5.36e5	39.95	1.082	1.06	NO	81.182	0.182	4.30e6	4276	1005.9	3.99e6	5010	795.7	bd	bd
23	13C-OCDD	4.42e5	5.02e5	9.44e5	44.14	1.195	0.88	NO	149.487	0.207	4.89e6	5362	912.6	5.58e6	4741	1177.2	bb	bd
24	13C-2378-TCDF	4.93e5	6.42e5	1.14e6	30.33	0.993	0.77	NO	76.381	0.280	6.10e6	13768	443.2	8.10e6	7311	1107.7	bb	bb
25	13C-12378-PeCDF	6.45e5	4.07e5	1.05e6	33.24	1.088	1.58	NO	87.502	0.439	1.64e7	19485	840.1	1.04e7	7288	1421.5	bd	bd
26	13C-23478-PeCDF	6.19e5	3.91e5	1.01e6	33.85	1.108	1.58	NO	79.887	0.418	1.60e7	19485	823.6	9.90e6	7288	1359.0	db	db
27	13C-123478-HxCDF	2.67e5	5.21e5	7.89e5	35.91	0.972	0.51	NO	72.161	0.230	6.00e6	11167	537.7	1.15e7	8292	1389.5	bd	bd
28	13C-123678-HxCDF	2.90e5	5.88e5	8.78e5	36.00	0.975	0.49	NO	71.612	0.205	6.09e6	11167	545.1	1.21e7	8292	1460.7	dd	dd
29	13C-234678-HxCDF	2.77e5	5.31e5	8.08e5	36.48	0.988	0.52	NO	75.864	0.236	5.87e6	11167	525.8	1.07e7	8292	1289.6	bd	bd
30	13C-123789-HxCDF	2.37e5	4.74e5	7.10e5	37.24	1.009	0.50	NO	74.648	0.265	4.57e6	11167	409.5	8.61e6	8292	1038.1	bd	bd

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time
Printed: Tuesday, December 24, 2019 08:51:49 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	1.78e5	4.10e5	5.88e5	38.72	1.049	0.43	NO	68.684	0.157	2.98e6	4546	654.9	6.98e6	5852	1192.7	bd	bd
32	13C-1234789-HpCDF	1.53e5	3.61e5	5.14e5	40.61	1.100	0.42	NO	77.115	0.202	2.24e6	4546	492.7	4.98e6	5852	850.6	bd	bd
33	13C-1234-TCDD	5.22e5	6.68e5	1.19e6	30.54	0.000	0.78	NO	100.000	0.177	6.61e6	7111	929.4	8.49e6	3541	2397.0	bb	bb
34	13C-123789-HxCDD	5.46e5	4.38e5	9.84e5	36.93	0.000	1.25	NO	100.000	0.129	1.06e7	4451	2370.3	8.40e6	5375	1562.2	dd	dd
35	37Cl+2378-TCDD	1.05e5		1.05e5	31.15	1.020			8.355	0.0432	1.77e6	2761	640.8				bb	bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

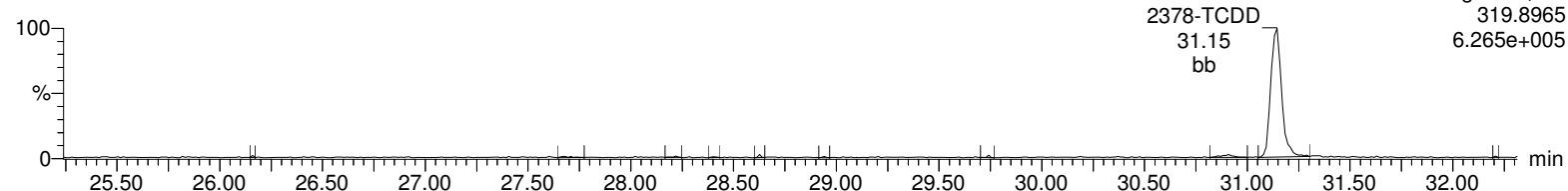
Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

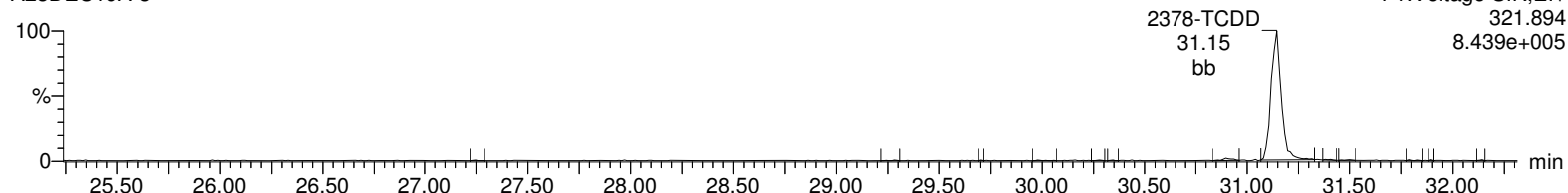
Total-tetradoxins

A23DEC19A-3



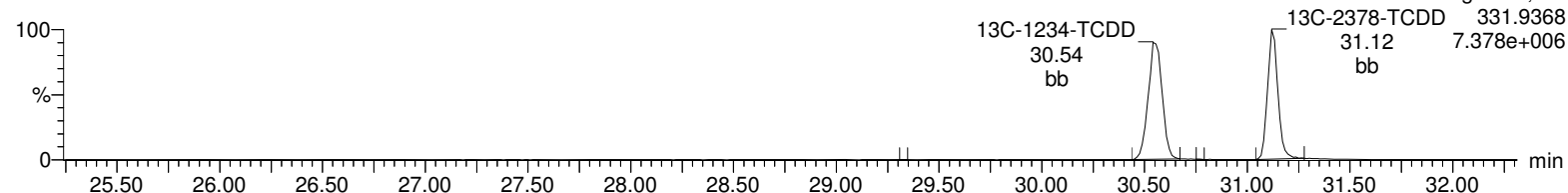
Total-tetradoxins

A23DEC19A-3



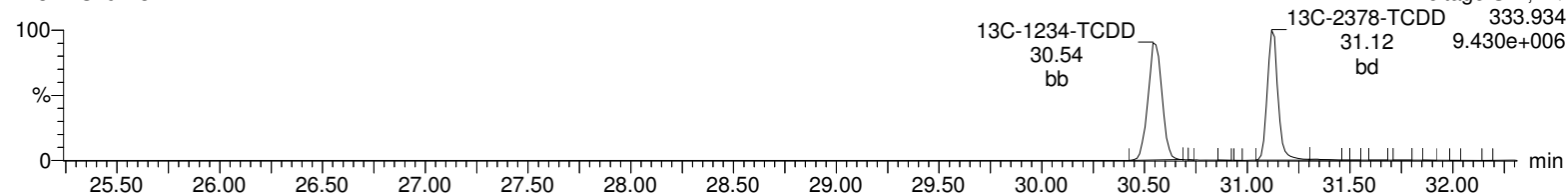
13C-2378-TCDD

A23DEC19A-3



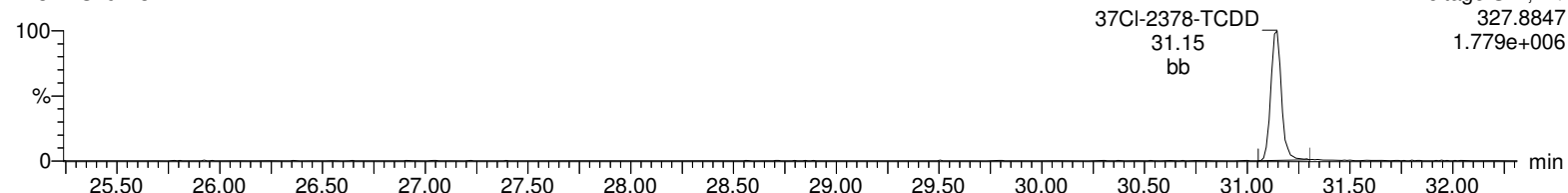
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A23DEC19A-3



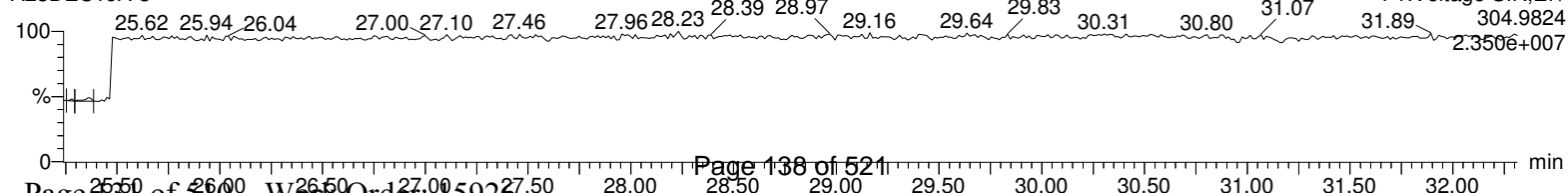
37Cl-2378-TCDD

A23DEC19A-3



Lock Mass F1

A23DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

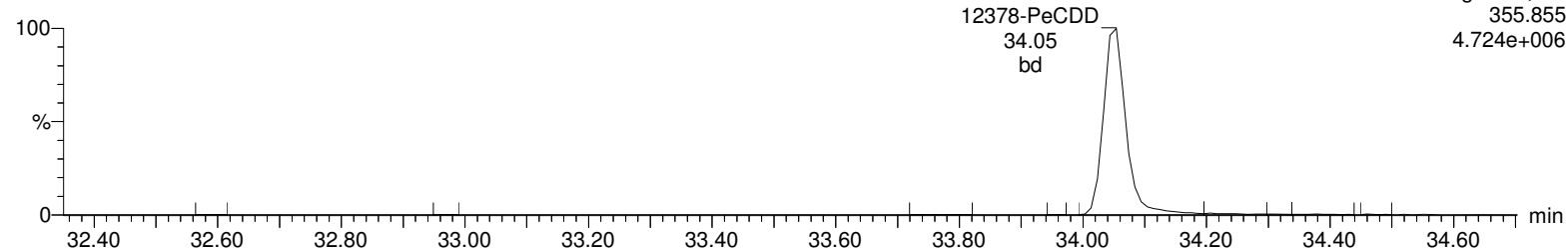
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentadioxins

A23DEC19A-3

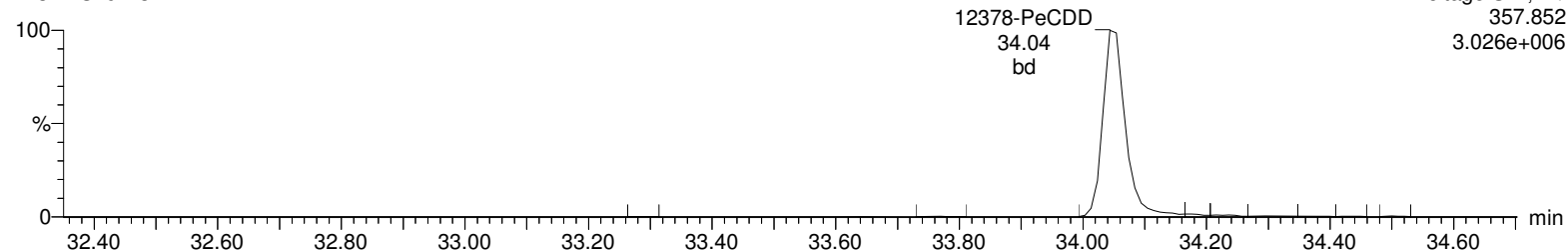
F2:Voltage SIR,EI+



Total-pentadioxins

A23DEC19A-3

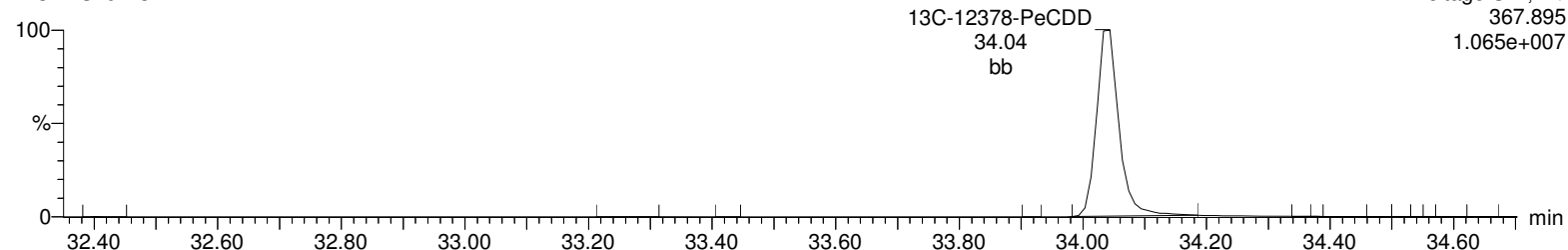
F2:Voltage SIR,EI+



13C-12378-PeCDD

A23DEC19A-3

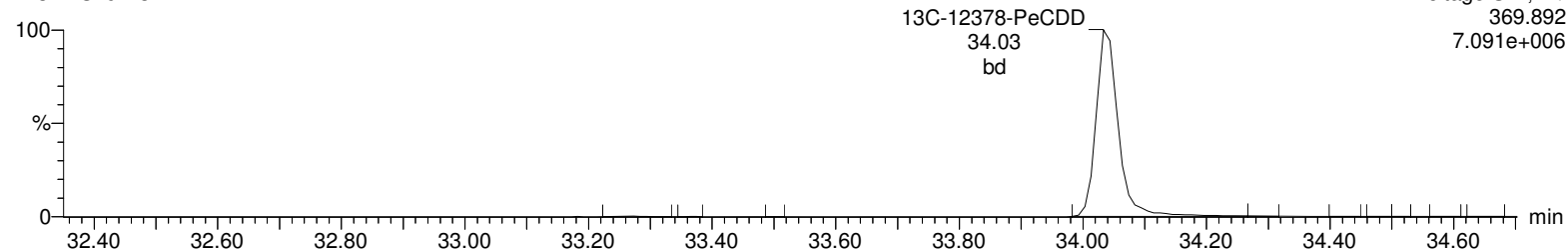
F2:Voltage SIR,EI+



13C-12378-PeCDD

A23DEC19A-3

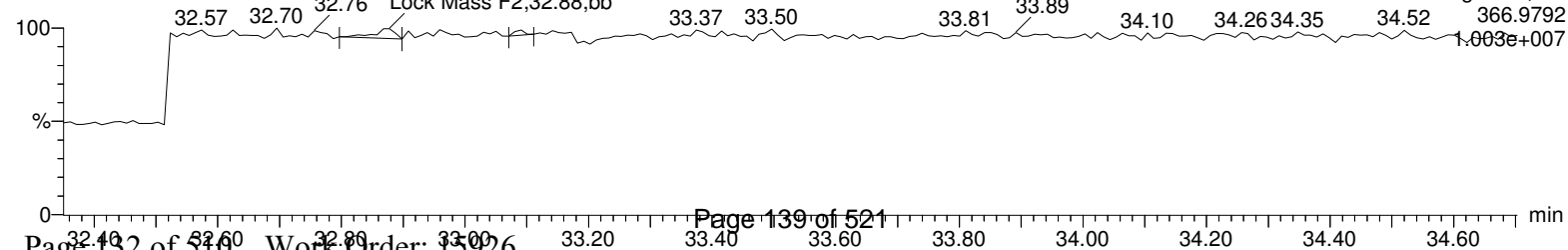
F2:Voltage SIR,EI+



Lock Mass F2

A23DEC19A-3

F2:Voltage SIR,EI+



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

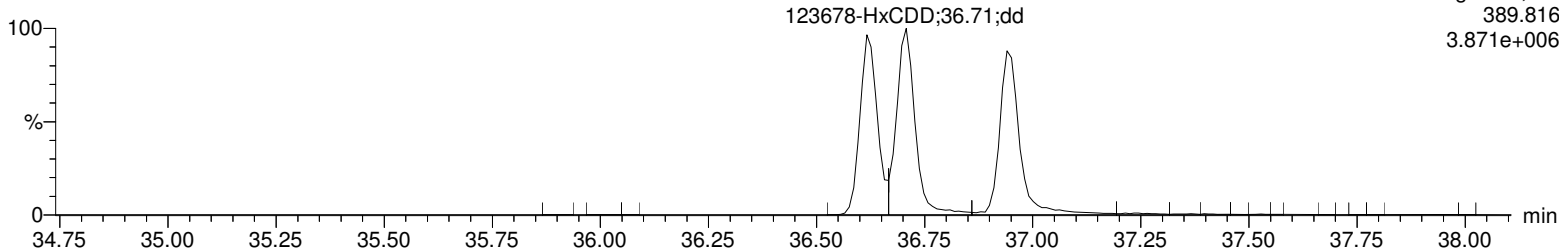
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A-3

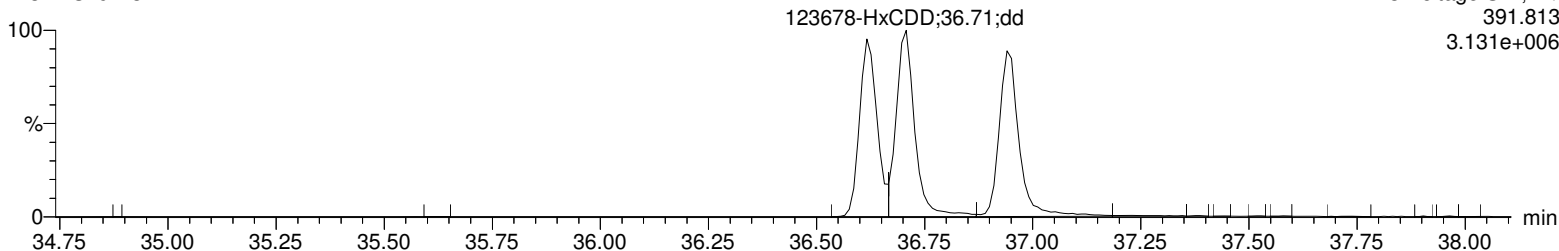
F3:Voltage SIR,EI+
389.816
3.871e+006



Total-hexadioxins

A23DEC19A-3

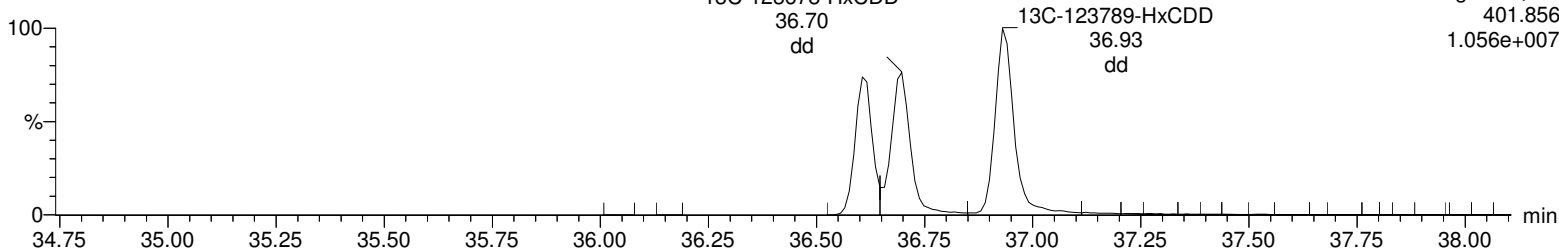
F3:Voltage SIR,EI+
391.813
3.131e+006



13C-123478-HxCDD

A23DEC19A-3

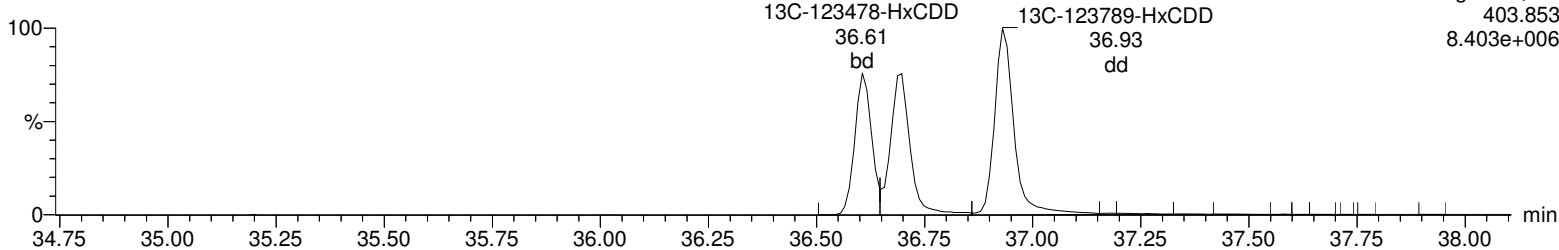
F3:Voltage SIR,EI+
401.856
1.056e+007



13C-123478-HxCDD

A23DEC19A-3

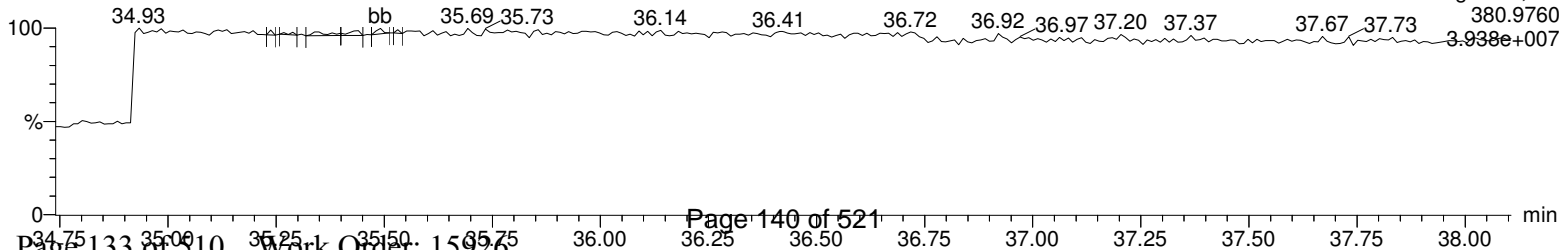
F3:Voltage SIR,EI+
403.853
8.403e+006



Lock Mass F3

A23DEC19A-3

F3:Voltage SIR,EI+
380.9760
3.938e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

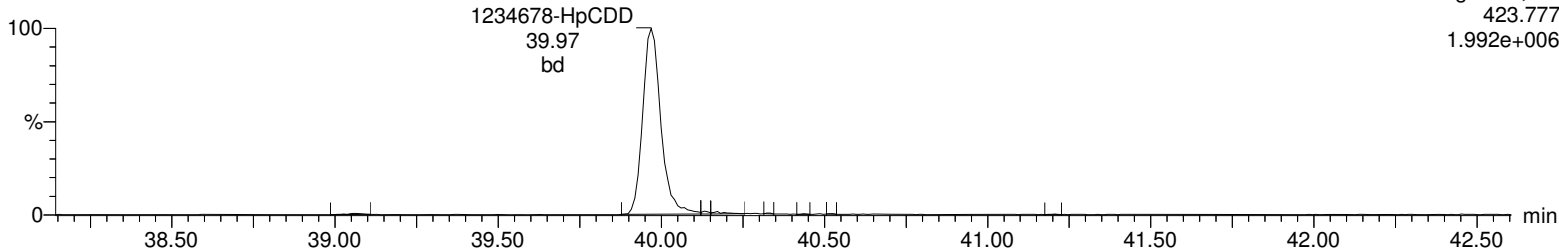
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-heptadioxins

A23DEC19A-3

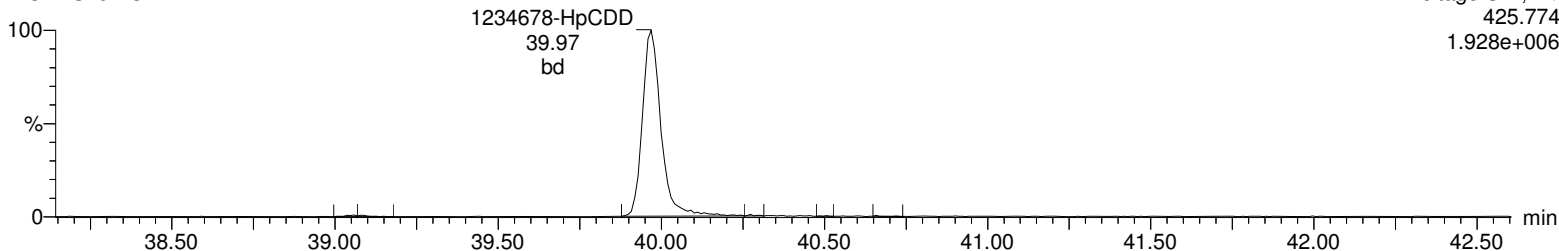
F4:Voltage SIR,EI+
423.777
1.992e+006



Total-heptadioxins

A23DEC19A-3

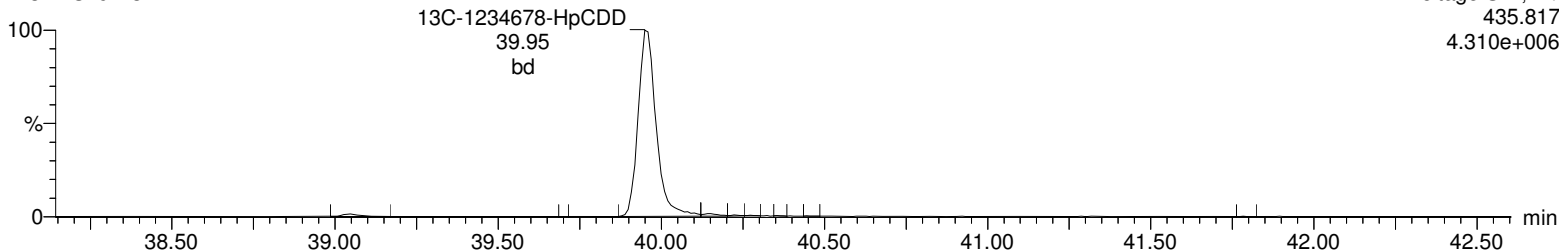
F4:Voltage SIR,EI+
425.774
1.928e+006



13C-1234678-HpCDD

A23DEC19A-3

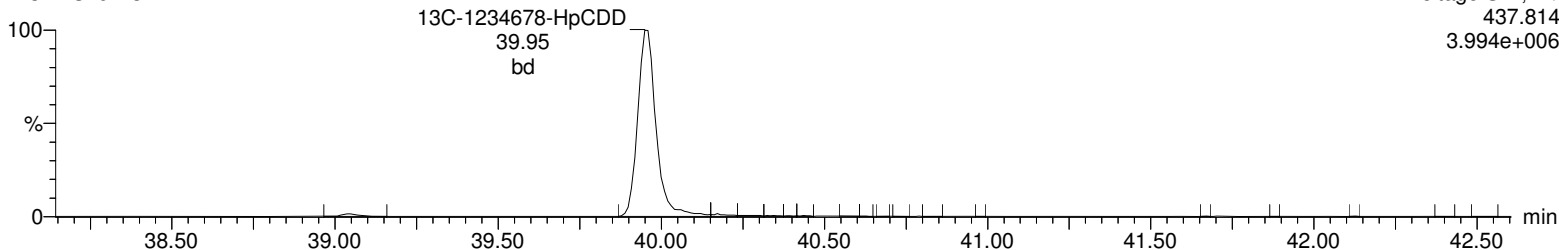
F4:Voltage SIR,EI+
435.817
4.310e+006



13C-1234678-HpCDD

A23DEC19A-3

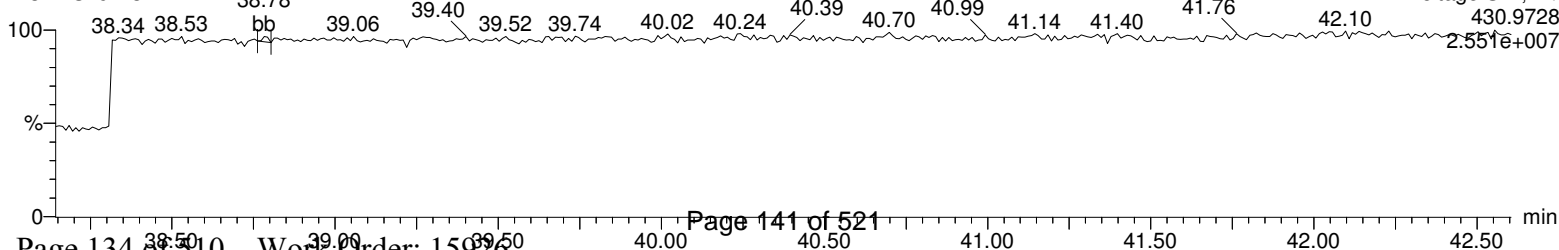
F4:Voltage SIR,EI+
437.814
3.994e+006



Lock Mass F4

A23DEC19A-3

F4:Voltage SIR,EI+
430.9728
2.551e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

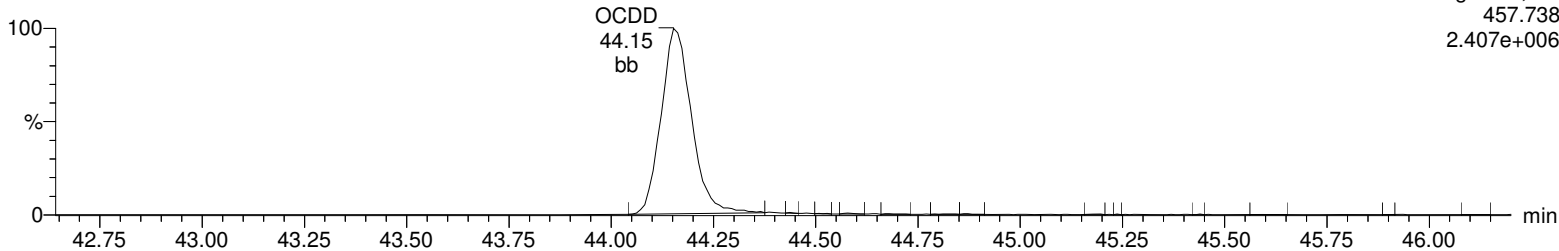
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDD

A23DEC19A-3

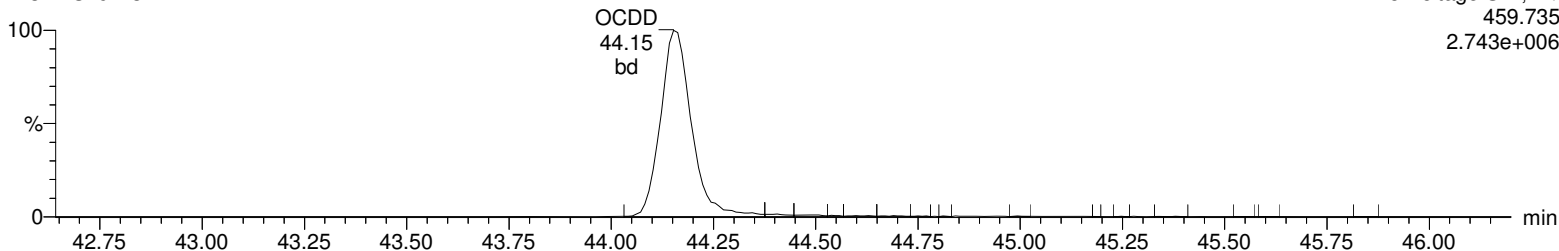
F5:Voltage SIR,EI+
457.738
2.407e+006



OCDD

A23DEC19A-3

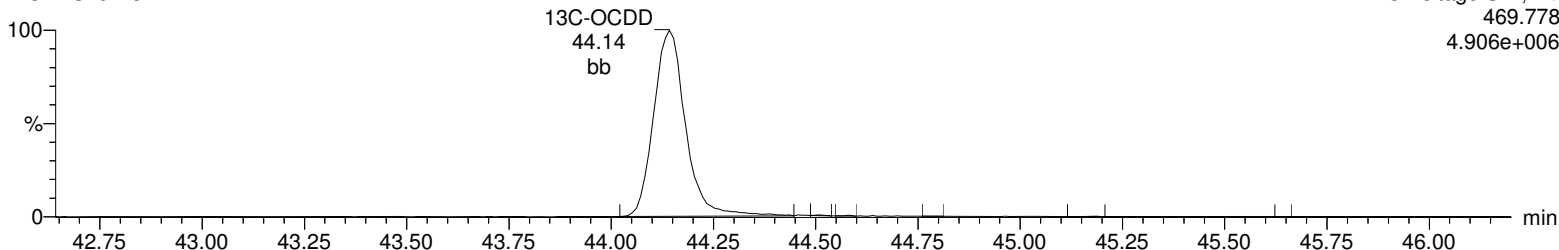
F5:Voltage SIR,EI+
459.735
2.743e+006



13C-OCDD

A23DEC19A-3

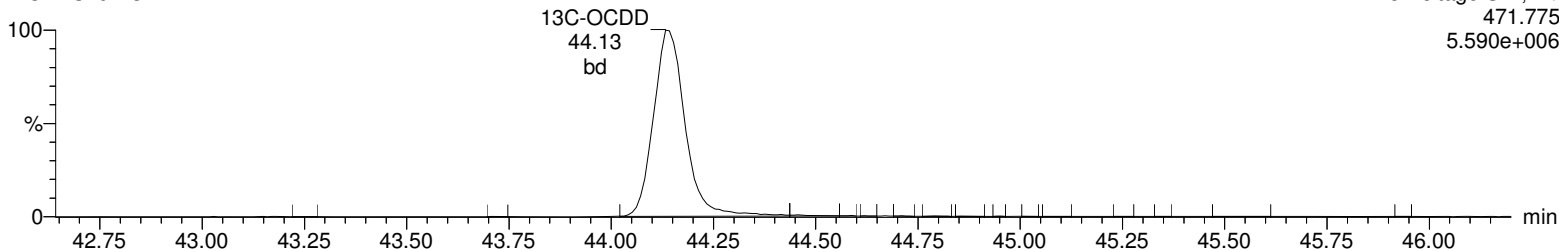
F5:Voltage SIR,EI+
469.778
4.906e+006



13C-OCDD

A23DEC19A-3

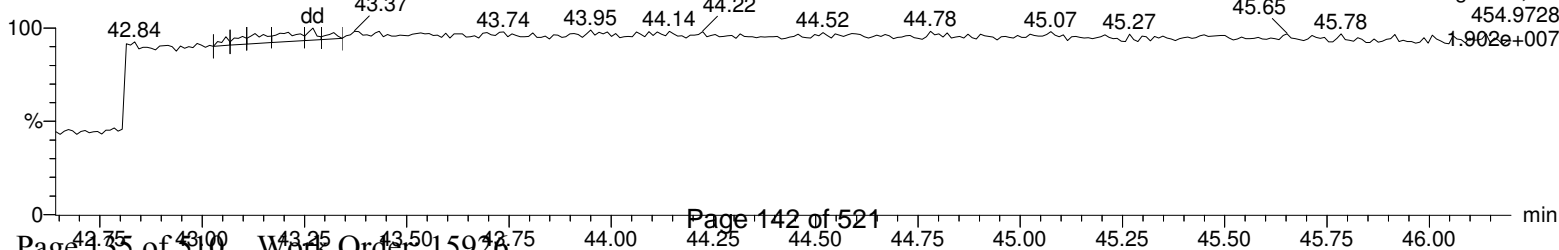
F5:Voltage SIR,EI+
471.775
5.590e+006



Lock Mass F5

A23DEC19A-3

F5:Voltage SIR,EI+
454.9728
1.902e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

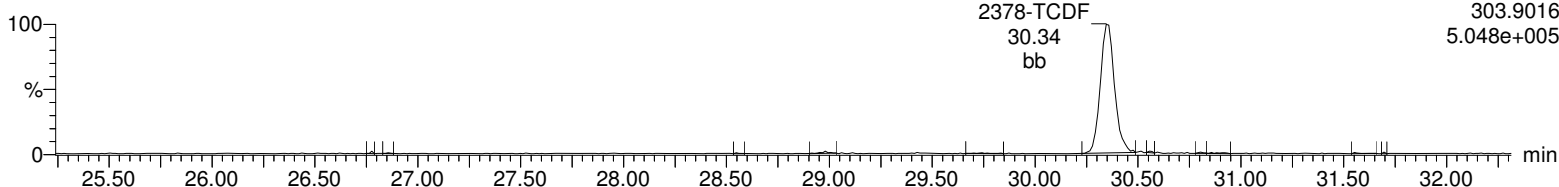
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-tetrafurans

A23DEC19A-3

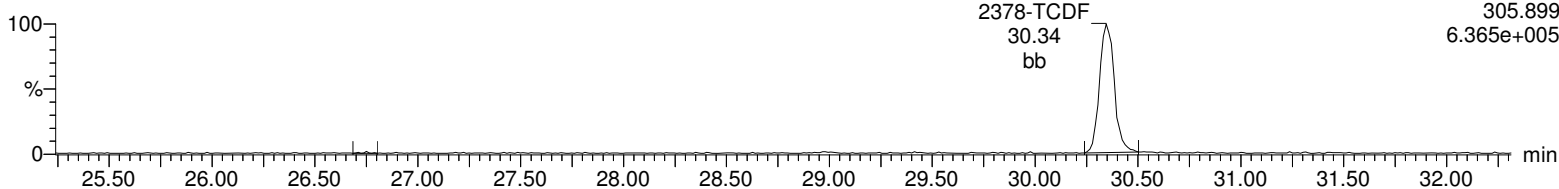
F1:Voltage SIR,EI+
303.9016
5.048e+005



Total-tetrafurans

A23DEC19A-3

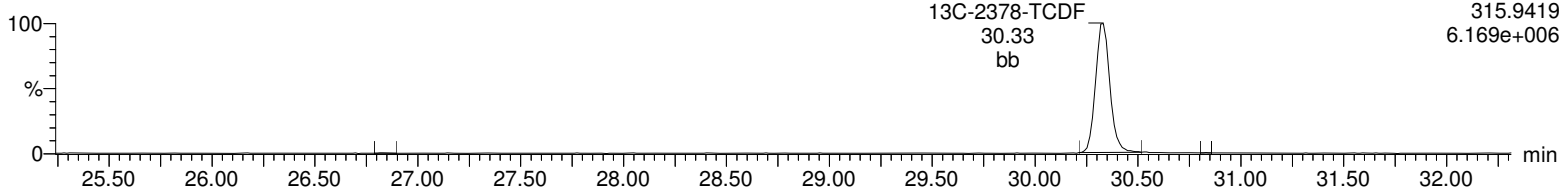
F1:Voltage SIR,EI+
305.899
6.365e+005



13C-2378-TCDF

A23DEC19A-3

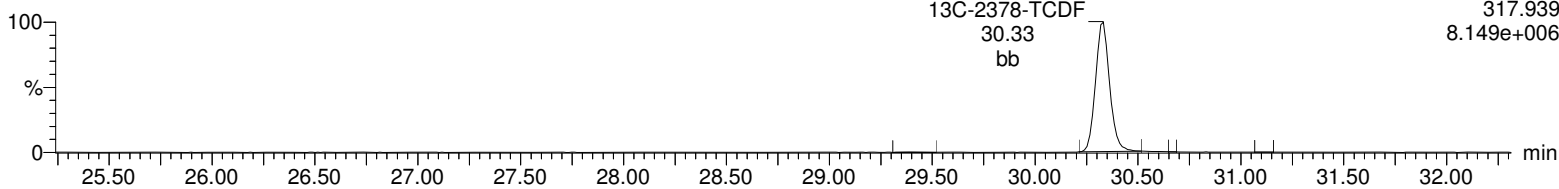
F1:Voltage SIR,EI+
315.9419
6.169e+006



13C-2378-TCDF

A23DEC19A-3

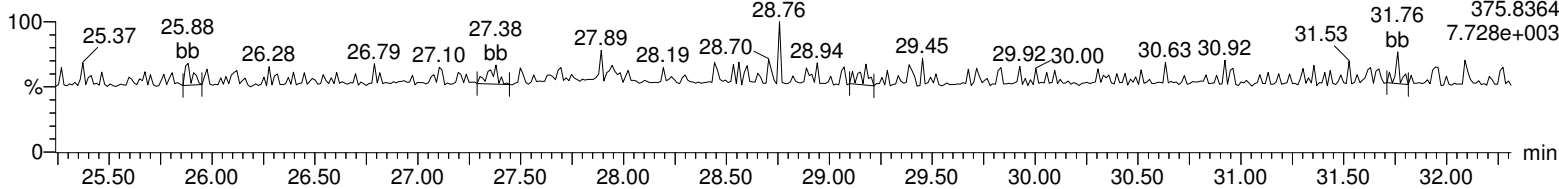
F1:Voltage SIR,EI+
317.939
8.149e+006



HxDPE

A23DEC19A-3

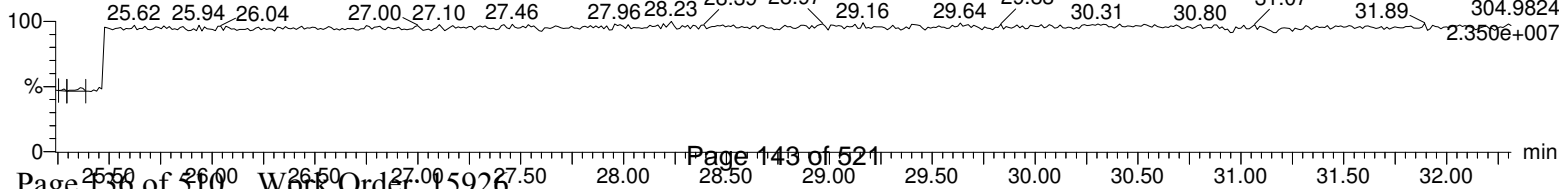
F1:Voltage SIR,EI+
317.6
375.8364
7.728e+003



Lock Mass F1

A23DEC19A-3

F1:Voltage SIR,EI+
304.9824
2.350e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

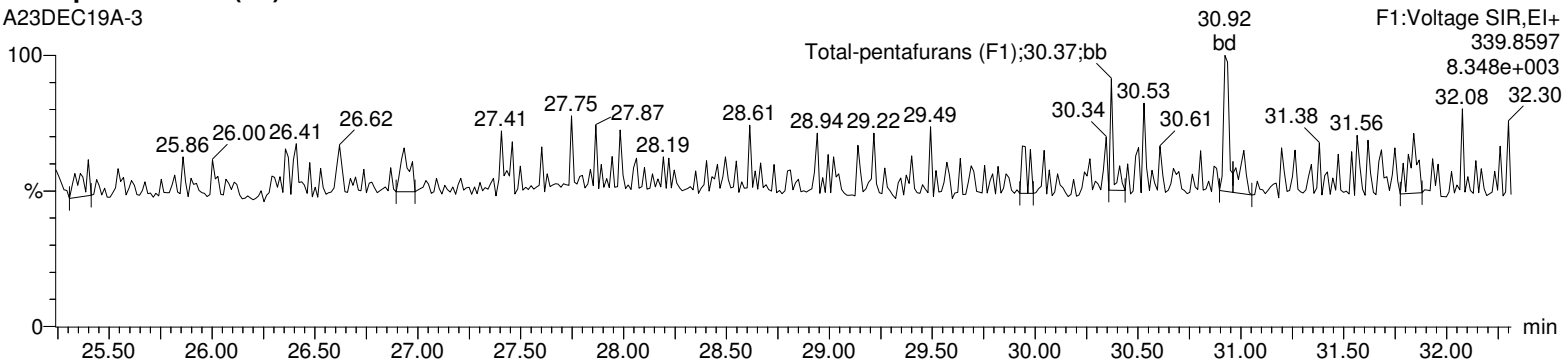
Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

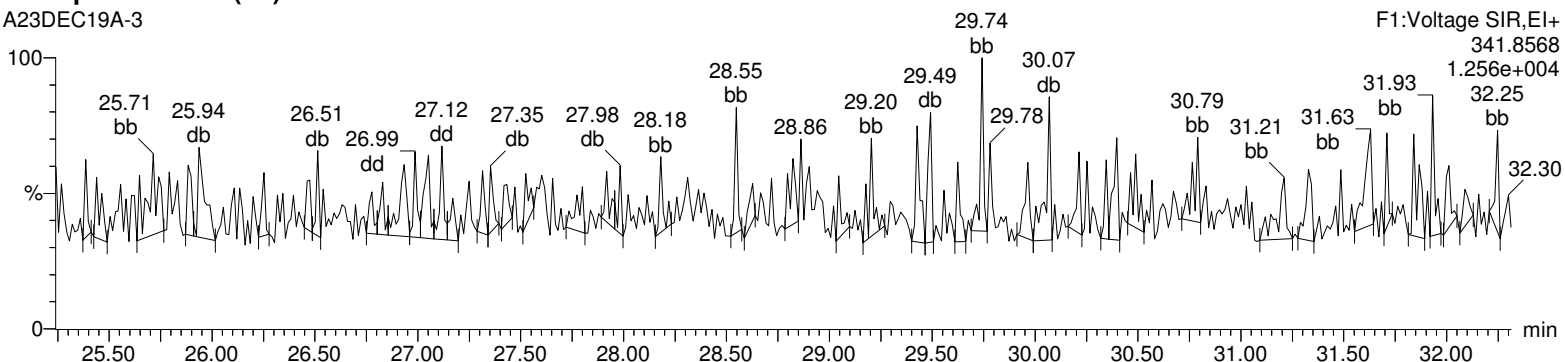
Total-pentafurans (F1)

A23DEC19A-3



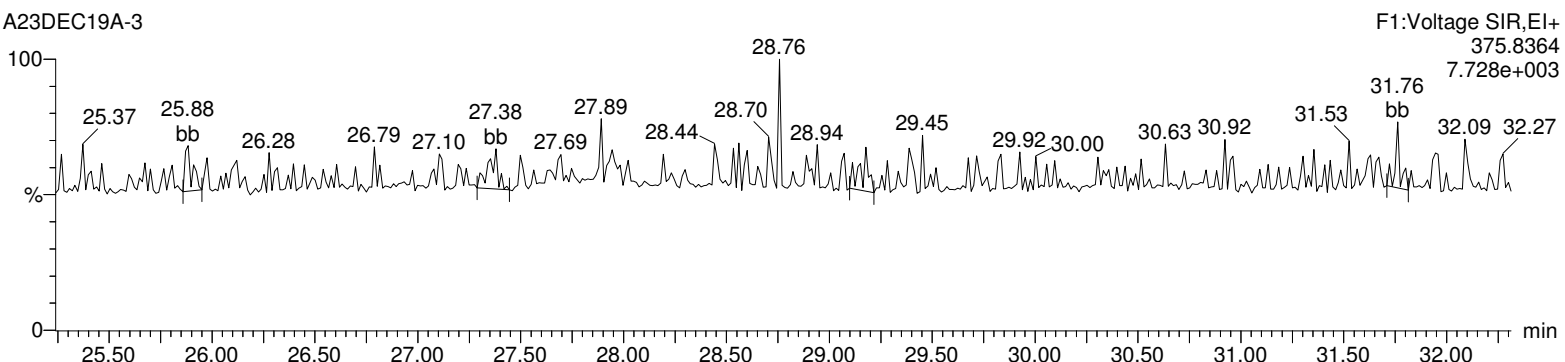
Total-pentafurans (F1)

A23DEC19A-3



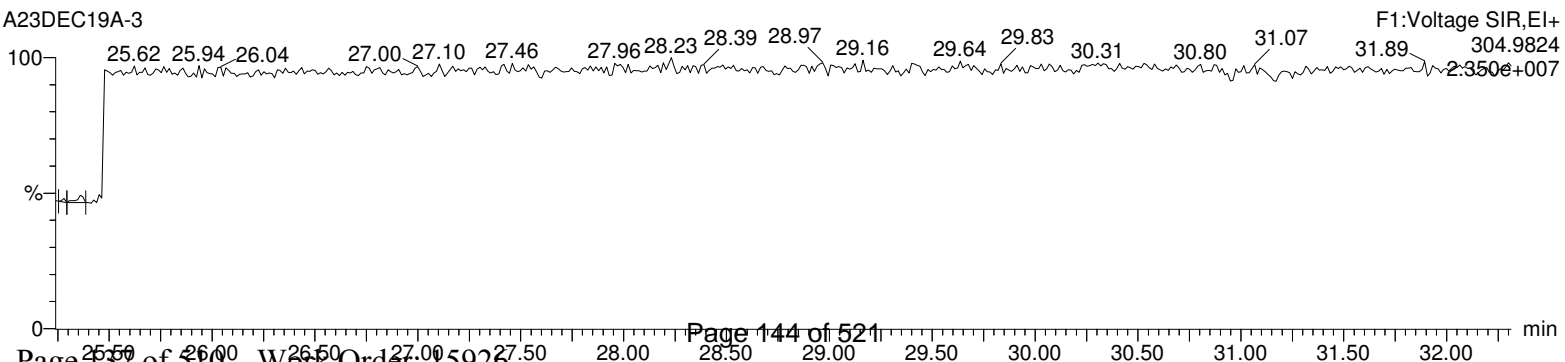
HxDPE

A23DEC19A-3



Lock Mass F1

A23DEC19A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

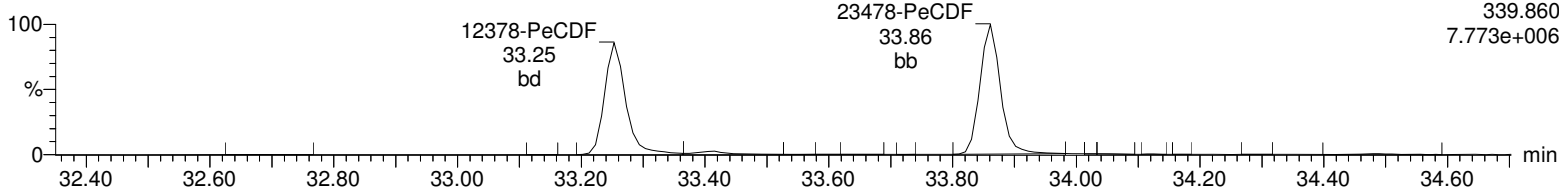
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentafurans

A23DEC19A-3

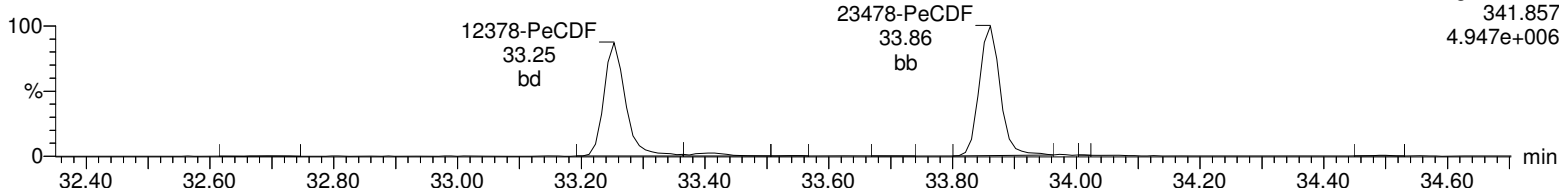
F2:Voltage SIR,EI+
339.860
7.773e+006



Total-pentafurans

A23DEC19A-3

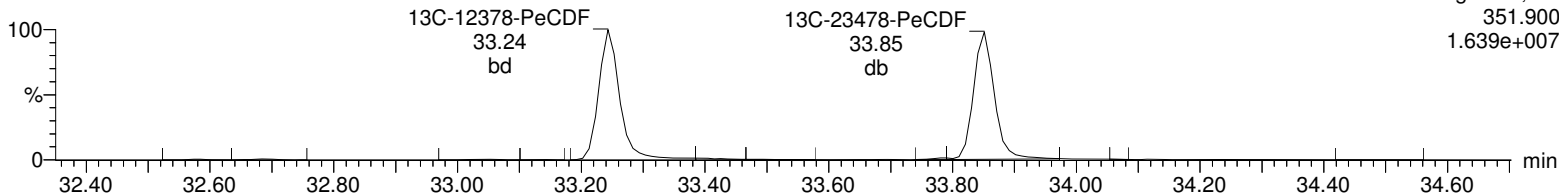
F2:Voltage SIR,EI+
341.857
4.947e+006



13C-12378-PeCDF

A23DEC19A-3

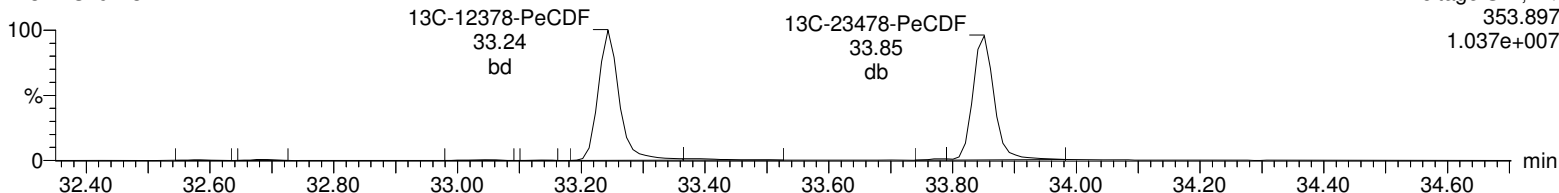
F2:Voltage SIR,EI+
351.900
1.639e+007



13C-12378-PeCDF

A23DEC19A-3

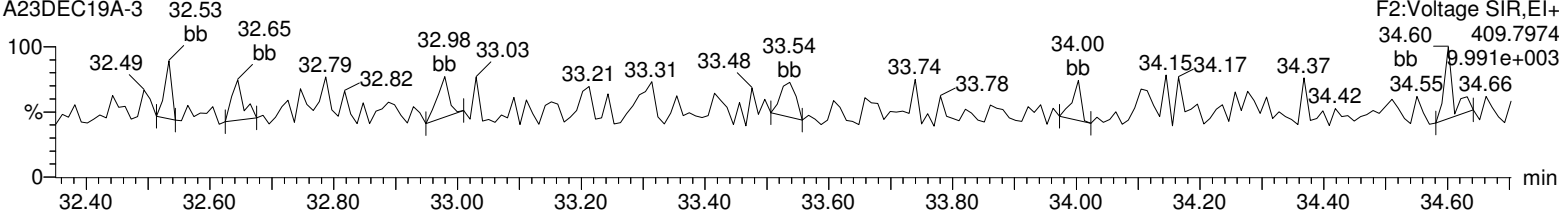
F2:Voltage SIR,EI+
353.897
1.037e+007



HpDPE

A23DEC19A-3

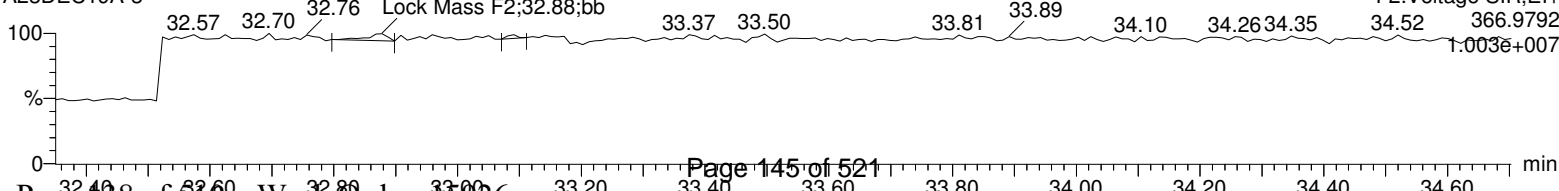
F2:Voltage SIR,EI+
34.60 409.7974
9.991e+003



Lock Mass F2

A23DEC19A-3

F2:Voltage SIR,EI+
34.52 366.9792
1.003e+007



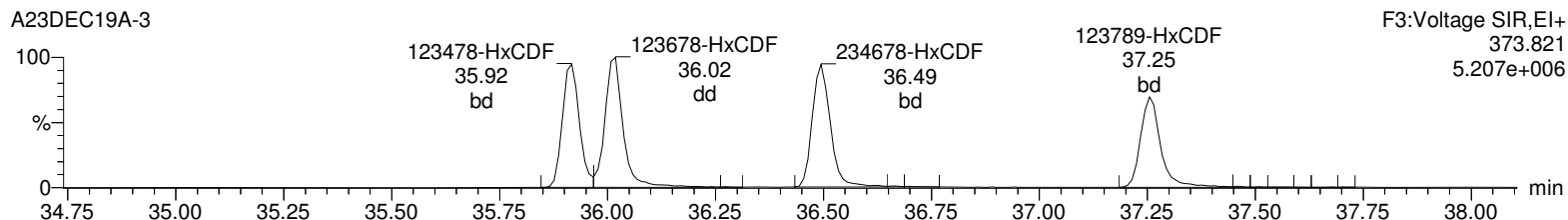
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

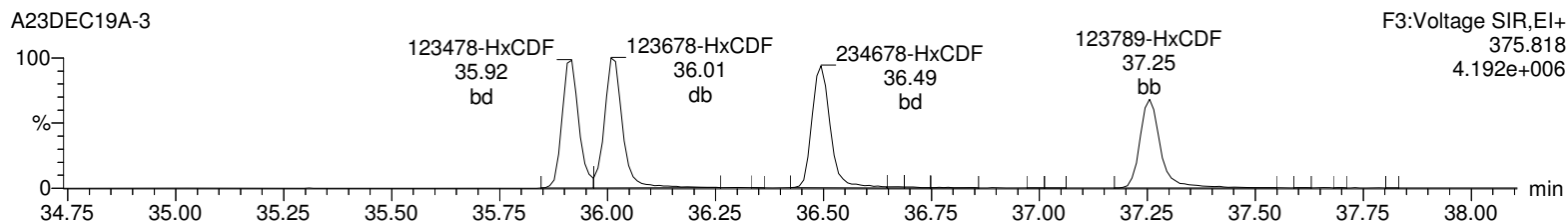
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

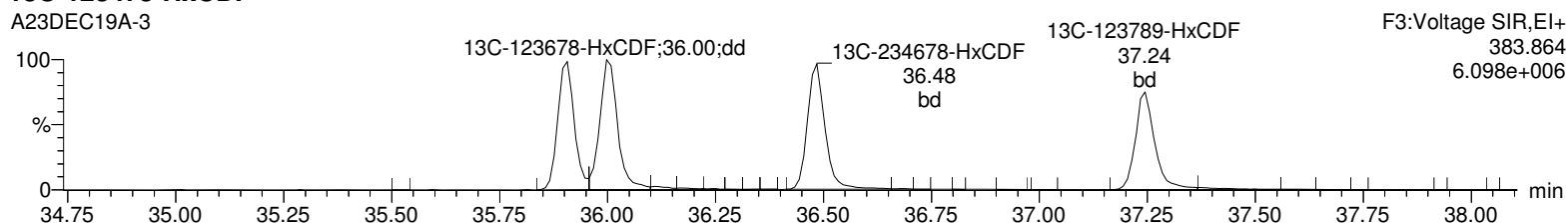
Total-hexafurans



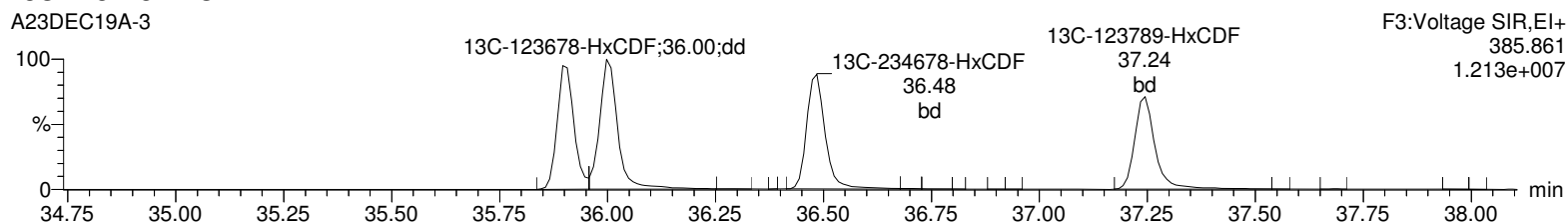
Total-hexafurans



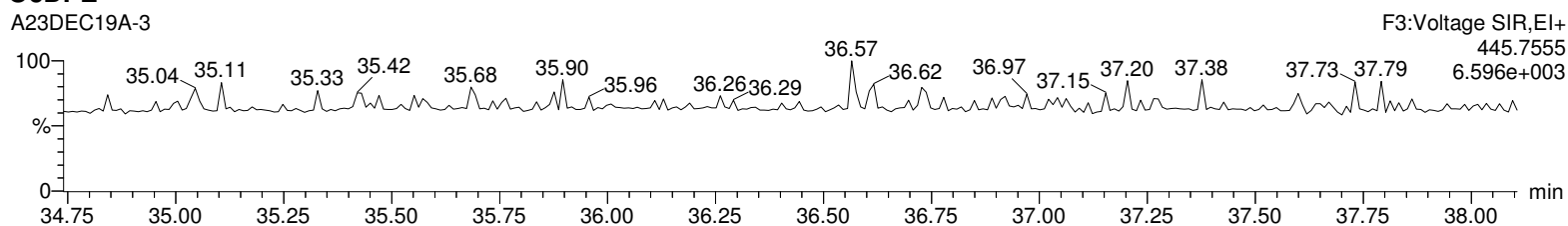
13C-123478-HxCDF



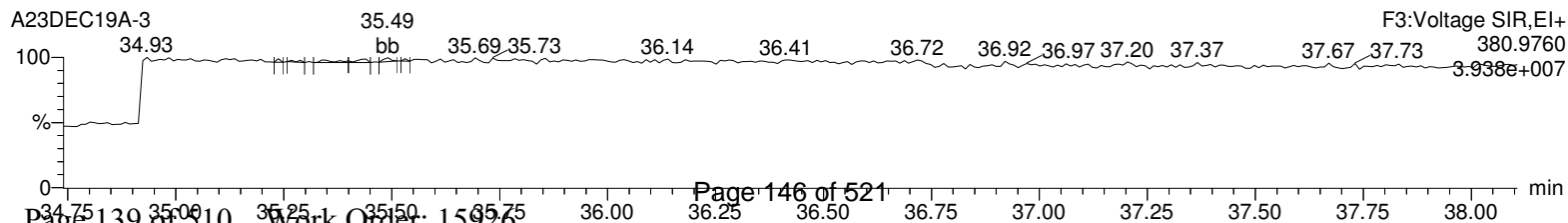
13C-123478-HxCDF



OCDFE



Lock Mass F3



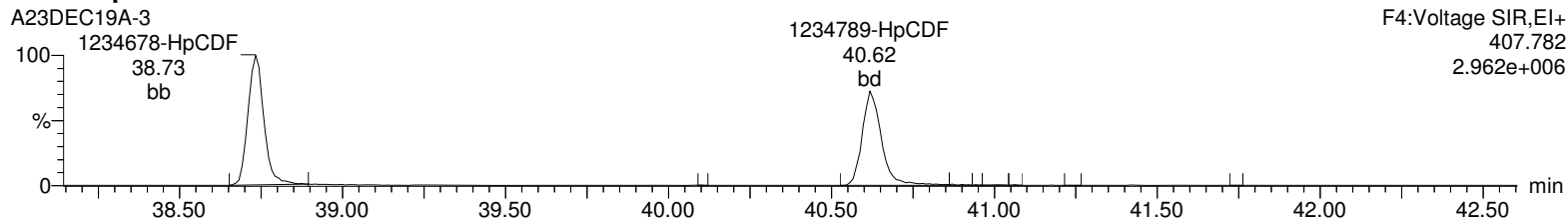
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

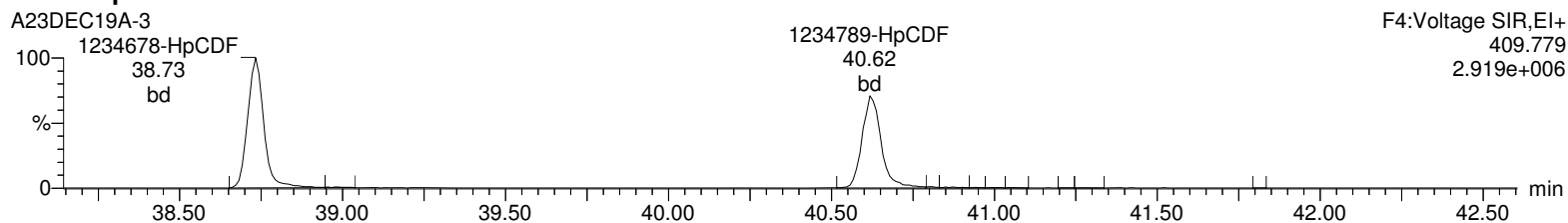
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

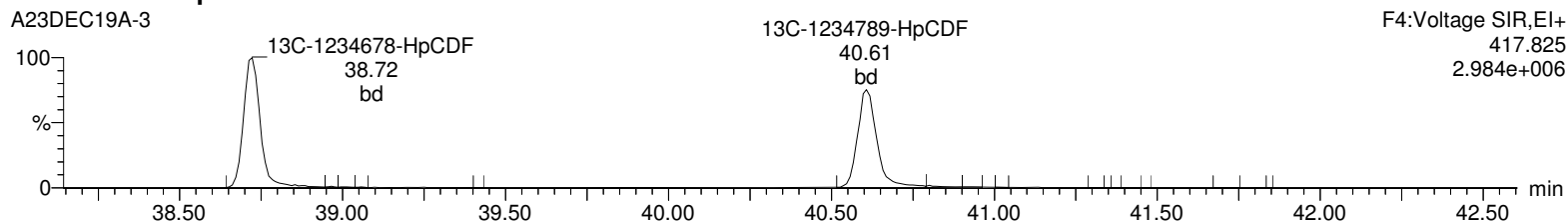
Total-heptafurans



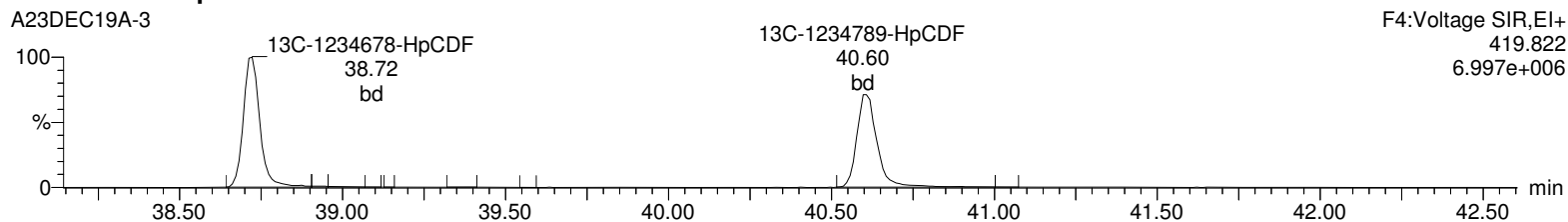
Total-heptafurans



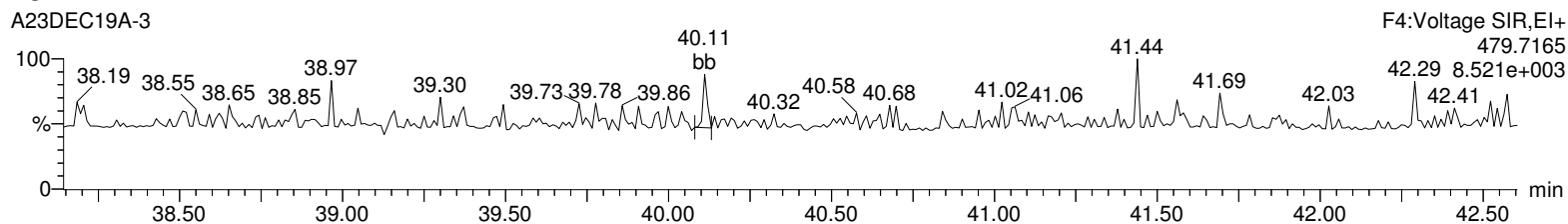
13C-1234678-HpCDF



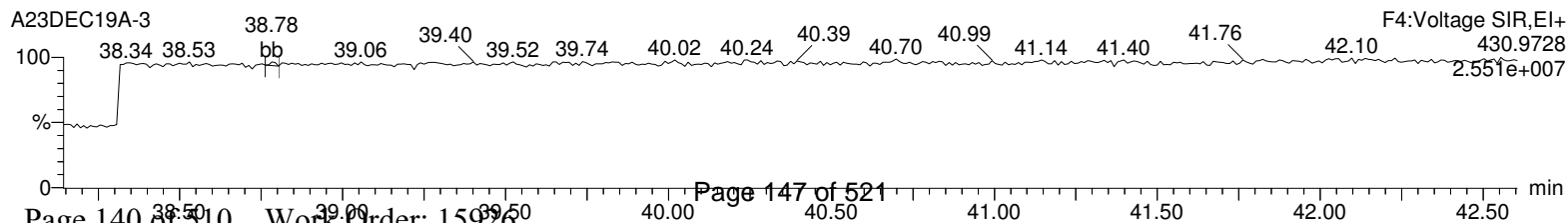
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A23DEC19A.qld

Last Altered: Tuesday, December 24, 2019 07:46:46 Eastern Standard Time

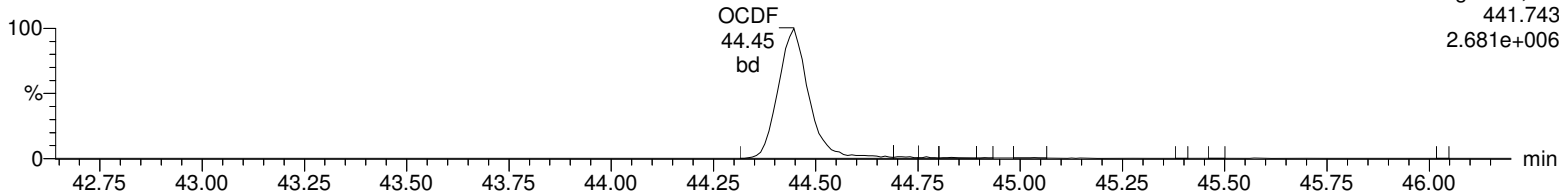
Printed: Tuesday, December 24, 2019 07:47:32 Eastern Standard Time

Name: A23DEC19A-3, Date: 23-Dec-2019, Time: 19:03:43, ID: 12025598-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDF

A23DEC19A-3

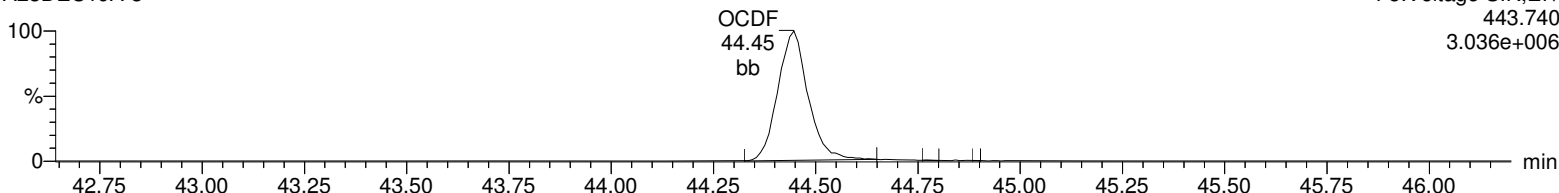
F5:Voltage SIR,EI+
441.743
2.681e+006



OCDF

A23DEC19A-3

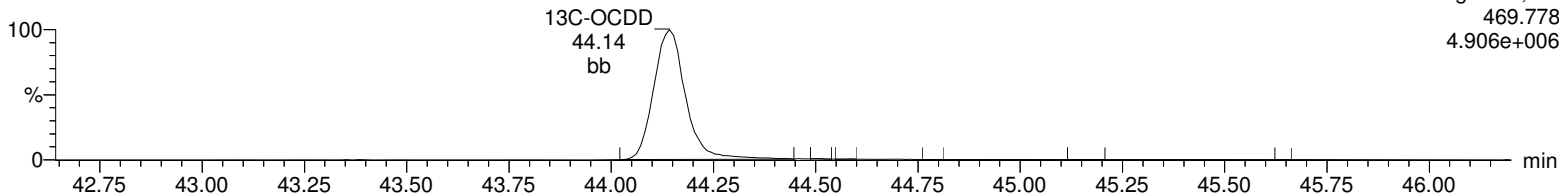
F5:Voltage SIR,EI+
443.740
3.036e+006



13C-OCDD

A23DEC19A-3

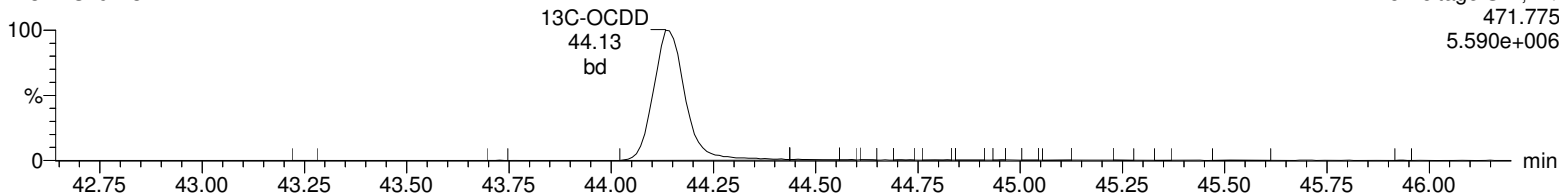
F5:Voltage SIR,EI+
469.778
4.906e+006



13C-OCDD

A23DEC19A-3

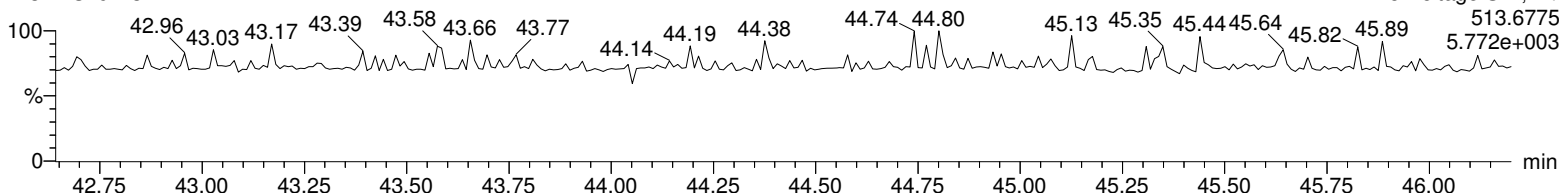
F5:Voltage SIR,EI+
471.775
5.590e+006



DeDPE

A23DEC19A-3

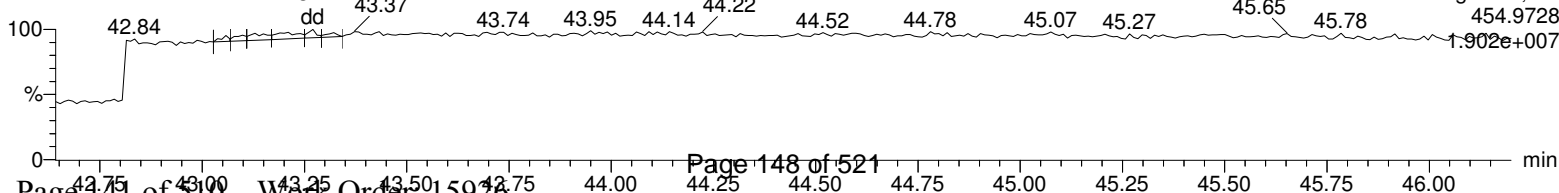
F5:Voltage SIR,EI+
513.6775
5.772e+003



Lock Mass F5

A23DEC19A-3

F5:Voltage SIR,EI+
454.9728
1.902e+007



Logbooks

Prep Logbook

3520C Aqueous Extraction for Method 1613B

Batch ID: 42647 **Verified by:** _____
Analyst: Andrea Scarpello **Lab SOP:** CF-OA-E-002 REV# 15
Method: SW846 3520C **Instrument:** Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
12025596 MB	18-DEC-2019 12:20	1400	400	1000	5	40			WD191218 N -02	
12025596 MB	18-DEC-2019 12:20	1400	400	1000	5	40			.05 ng/uL WD191218 N -02	
12025597 LCS	18-DEC-2019 12:20	1400	400	1000	5	40	40	WD191216 -02	.05 ng/uL WD191218 N -02	
12025597 LCS	18-DEC-2019 12:20	1400	400	1000	5	40	40	WD191216 -02	.05 ng/uL WD191218 N -02	
12025598 LCSD	18-DEC-2019 12:20	1400	400	1000	5	40	40	WD191216 -02	.05 ng/uL WD191218 N -02	
12025598 LCSD	18-DEC-2019 12:20	1400	400	1000	5	40	40	WD191216 -02	.05 ng/uL WD191218 N -02	
15926001	18-DEC-2019 12:20	1542.3	506	1036.3	7	40		.005 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	
15926002	18-DEC-2019 12:20	1552	505.2	1046.8	7	40		.05 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	
15926003	18-DEC-2019 12:20	1552.8	504.8	1048	7	40		.05 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	
15952001	18-DEC-2019 12:20	1181.8	395.2	786.6	8	40		.05 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	
15952002	18-DEC-2019 12:20	1188.7	395.1	793.6	7	40		.05 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	
15952003	18-DEC-2019 12:20	1245.3	392.7	852.6	6	40		.05 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	
15952004	18-DEC-2019 12:20	1311.9	398.6	913.3	7	40		.05 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	
15954001	18-DEC-2019 12:20	1242.6	399.1	843.5	7	40		.05 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	
15956001	18-DEC-2019 12:20	1341.5	417.3	924.2	7	40		.05 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	
15958001	18-DEC-2019 12:20	1374	405.9	968.1	7	40		.05 ng/uL WD191218 N -02	.05 ng/uL WD191218 N -02	

Prep Logbook

Batch ID: 42647 **Verified by:** _____
Analyst: Andrea Scarpello **Lab SOP:** CF-OA-E-002 REV# 15
Method: SW846 3520C **Instrument:** Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
15959001	18-DEC-2019 12:20	789.4	279	510.4	7	40			WD191218 N -02	
15960001	18-DEC-2019 12:20	1369.9	408.4	961.5	7	40			.05 ng/uL WD191218 N -02	
15964001	18-DEC-2019 12:20	1526.7	516	1010.7	7	40			.05 ng/uL WD191218 N -02	
15966001	18-DEC-2019 12:20	1462.4	456.6	1005.8	5	40			.05 ng/uL WD191218 N -02	
15969001	18-DEC-2019 12:20	1333.5	394	939.5	6	40			.05 ng/uL WD191218 N -02	
15969002	18-DEC-2019 12:20	1295.5	392.6	902.9	6	40			.05 ng/uL WD191218 N -02	
15969003	18-DEC-2019 12:20	1291.8	393.8	898	6	40			.05 ng/uL WD191218 N -02	
15980001	18-DEC-2019 12:20	1495.8	503	992.8	7	40			.05 ng/uL WD191218 N -02	
15980006	18-DEC-2019 12:20	1529.4	506.2	1023.2	7	40			.05 ng/uL WD191218 N -02	
15980007	18-DEC-2019 12:20	1487.5	506	981.5	7	40			.05 ng/uL WD191218 N -02	

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Salt	1152107	10	g	Limited volume received for 15959001
REAGENT		Acetone	1152236-A-7	100	uL	Finish Time: 19-DEC-19 07:45:00
REAGENT		Methylene Chloride	1152286-A	250	mL	

Prep Logbook

Cleanup Procedure for Liquids

Batch ID: 42648
 Analyst: Jonathan Shea

Verified by: _____

Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
12025596 MB	19-DEC-2019 10:00	AB Siltica Florisil	103	100	20	WD191217-03 .01 ng/uL
12025596 MB	19-DEC-2019 10:00	AB Siltica Florisil	103	100	20	WD191217-03 .01 ng/uL
12025597 LCS	19-DEC-2019 10:00	AB Siltica Florisil	142	100	20	WD191217-03 .01 ng/uL
12025597 LCS	19-DEC-2019 10:00	AB Siltica Florisil	142	100	20	WD191217-03 .01 ng/uL
12025598 LCSD	19-DEC-2019 10:00	AB Siltica Florisil	27	100	20	WD191217-03 .01 ng/uL
12025598 LCSD	19-DEC-2019 10:00	AB Siltica Florisil	27	100	20	WD191217-03 .01 ng/uL
15926001	19-DEC-2019 10:00	AB Siltica Florisil	144	100	20	WD191217-03 .01 ng/uL
15926002	19-DEC-2019 10:00	AB Siltica Florisil	64	100	20	WD191217-03 .01 ng/uL
15926003	19-DEC-2019 10:00	AB Siltica Florisil	183	100	20	WD191217-03 .01 ng/uL
15952001	19-DEC-2019 10:00	AB Siltica Florisil	98	100	20	WD191217-03 .01 ng/uL
15952002	19-DEC-2019 10:00	AB Siltica Florisil	95	100	20	WD191217-03 .01 ng/uL
15952003	19-DEC-2019 10:00	AB Siltica Florisil	106	100	20	WD191217-03 .01 ng/uL
15952004	19-DEC-2019 10:00	AB Siltica Florisil	154	100	20	WD191217-03 .01 ng/uL
15954001	19-DEC-2019 10:00	AB Siltica Florisil	171	100	20	WD191217-03 .01 ng/uL
15956001	19-DEC-2019 10:00	AB Siltica Florisil	90	100	20	WD191217-03 .01 ng/uL
15958001	19-DEC-2019 10:00	AB Siltica Florisil	116	100	20	WD191217-03 .01 ng/uL
15959001	19-DEC-2019 10:00	AB Siltica Florisil	143	100	20	WD191217-03 .01 ng/uL
15960001	19-DEC-2019 10:00	AB Siltica Florisil	53	100	20	WD191217-03 .01 ng/uL
15964001	19-DEC-2019 10:00	AB Siltica Florisil	170	100	20	WD191217-03 .01 ng/uL
15966001	19-DEC-2019 10:00	AB Siltica Florisil	100	100	20	WD191217-03 .01 ng/uL
15969001	19-DEC-2019 10:00	AB Siltica Florisil	115	100	20	WD191217-03 .01 ng/uL
15969002	19-DEC-2019 10:00	AB Siltica Florisil	191	100	20	WD191217-03 .01 ng/uL
15969003	19-DEC-2019 10:00	AB Siltica Florisil	25	100	20	WD191217-03 .01 ng/uL
15980001	19-DEC-2019 10:00	AB Siltica Florisil	102	100	20	WD191217-03 .01 ng/uL

Prep Logbook

Batch ID: 42648 Verified by: _____
 Analyst: Jonathan Shea

Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
15980006	19-DEC-2019 10:00	AB Silica Florisil	19	100	20	WD191217-03 .01 ng/uL
15980007	19-DEC-2019 10:00	AB Silica Florisil	45	100	20	WD191104-05 .01 ng/uL

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Activated Florisil	1149228	1	g	Date: 19-DEC-2019 11:34
REAGENT		Silica Gel	1151237-A	2	g	
REAGENT		Glass Wool	1151783-A.4	1	each	
REAGENT		Salt	1152107	1	g	
REAGENT		Hexane	1152520-A.12	130	mL	
REAGENT		Base silica	1152566-C	3	g	
REAGENT		Acid silica	1152569	7	g	
REAGENT		Methylene Chloride	1152623-A	100	mL	
REAGENT		Hexane	1152762-A.1	130	mL	

Prep Logbook

Method 1613B HRMS Aqueous Analysis

Batch ID: 42649

Verified by: _____

Analyst: Matt Cash

Lab SOP: CF-OA-E-002 REV# 15
Instrument: Waters Autospec Premier
High-Resolution GC/MS

Method: EPA Method 1613B

Sample ID	Start Run Date	Final Volume (uL)	Prep Factor (Final Volume /Aliquot) (uL/uL)	Dilution	Dilution Type	Injection Volume (uL)	Vial Prep Date
12025597 LCS	23-DEC-2019 18:15	20	2.00E-05	1	Internal	1	20-DEC-2019
12025598 LCSD	23-DEC-2019 19:03	20	2.00E-05	1	Internal	1	20-DEC-2019
12025596 MB	23-DEC-2019 19:51	20	2.00E-05	1	Internal	1	20-DEC-2019
15926001	23-DEC-2019 20:40	20	1.93E-05	1	Internal	1	20-DEC-2019
15926002	23-DEC-2019 21:28	20	1.91E-05	1	Internal	1	20-DEC-2019
15926003	23-DEC-2019 22:16	20	1.91E-05	1	Internal	1	20-DEC-2019

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT	8290	Injection Standard	WD191218-03	20	uL	
STANDARD	8290	Injection Standard	WD191218-03	20	uL	

Initial Calibration Data

Runlog Information

16131CA

Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
• A08JUL19A-1	HRP750_2	08-JUL-2019 09:40	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYQ	1 uL
• A08JUL19A-2	HRP750_2	08-JUL-2019 10:28	A08JUL19A	Matt Cash		SB DIBLK2M	1 uL
• A08JUL19A-3	HRP750_2	08-JUL-2019 11:16	A08JUL19A	Matt Cash		CS0.5 UD190207-01	1 uL
• A08JUL19A-4	HRP750_2	08-JUL-2019 12:03	A08JUL19A	Matt Cash		CS1 UD190207-02 CS143	1 uL
• A08JUL19A-5	HRP750_2	08-JUL-2019 12:51	A08JUL19A	Matt Cash		CS2 UD190207-03 CS243	1 uL
• A08JUL19A-6	HRP750_2	08-JUL-2019 13:39	A08JUL19A	Matt Cash		CS3 UD190207-04 CS3KG	1 uL
• A08JUL19A-7	HRP750_2	08-JUL-2019 14:27	A08JUL19A	Matt Cash		CS4 UD190207-05 CS442	1 uL
• A08JUL19A-8	HRP750_2	08-JUL-2019 15:15	A08JUL19A	Matt Cash		CS5 UD190207-06 CS543	1 uL
• A08JUL19A-9	HRP750_2	08-JUL-2019 16:03	A08JUL19A	Matt Cash		SB DIBLK2N	1 uL
• A08JUL19A-10	HRP750_2	08-JUL-2019 16:51	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYR	1 uL

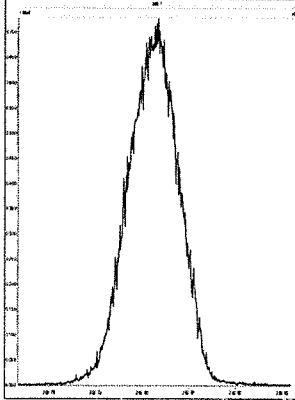
Experiment Calibration Report

MassLynx 4.1

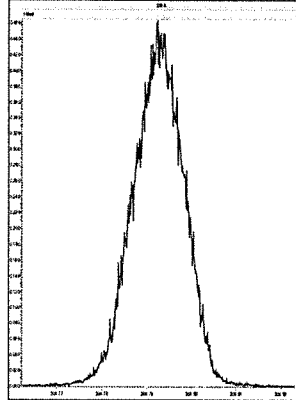
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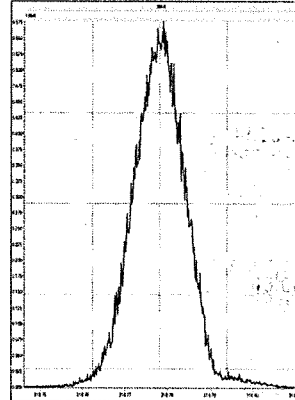
M 292.9824 R 12382



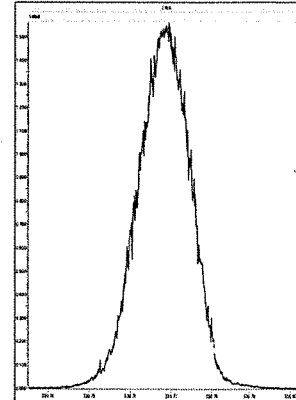
M 304.9824 R 11789



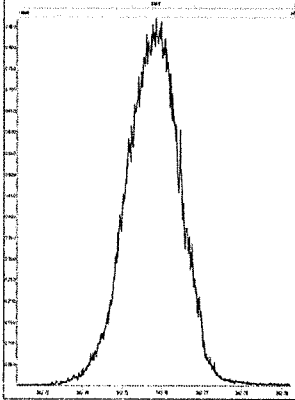
M 318.9792 R 11905



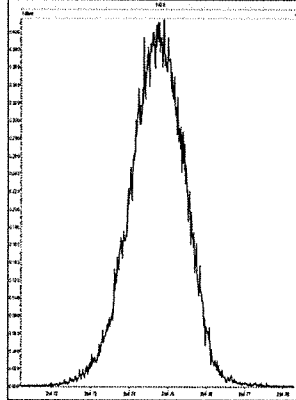
M 330.9792 R 11572



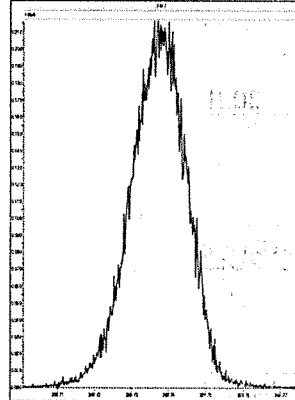
M 342.9792 R 10961



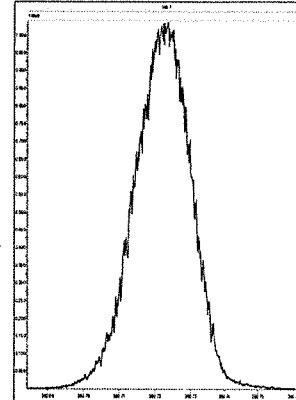
M 354.9792 R 10868



M 366.9792 R 10506



M 380.9760 R 10417



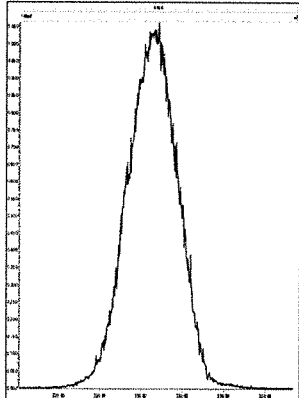
Experiment Calibration Report

MassLynx 4.1

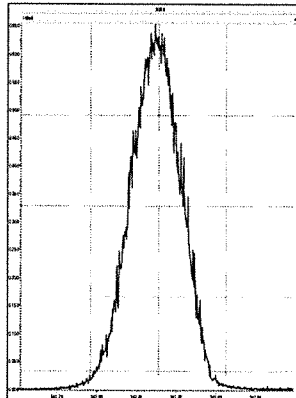
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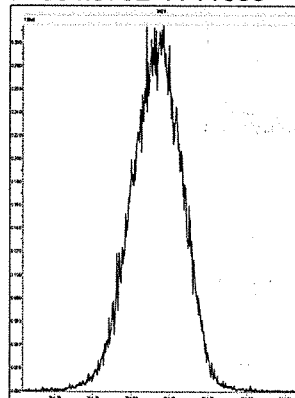
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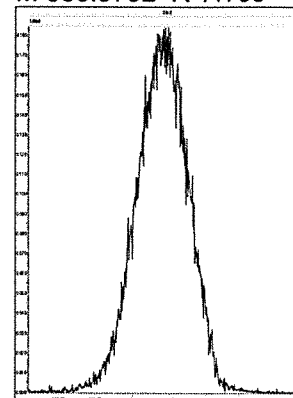
M 342.9792 R 11959



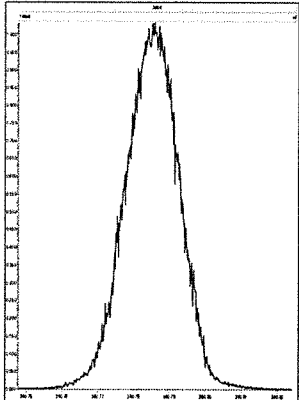
M 354.9792 R 11683



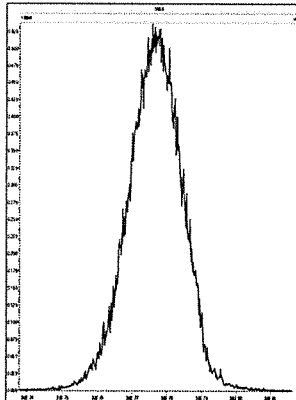
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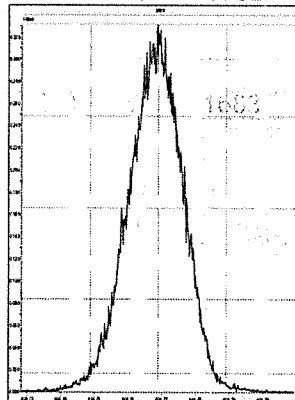
M 380.9760 R 11158



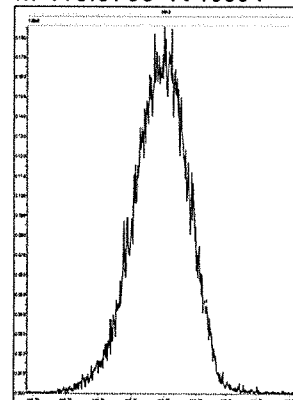
M 392.9760 R 10961



M 404.9760 R 10732



M 416.9760 R 10594



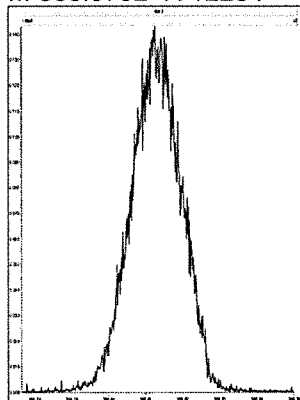
Experiment Calibration Report

MassLynx 4.1

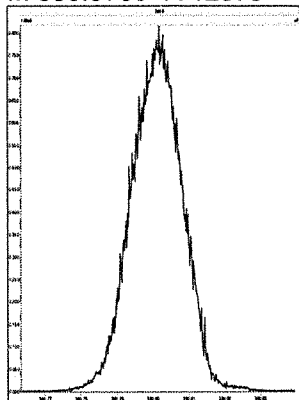
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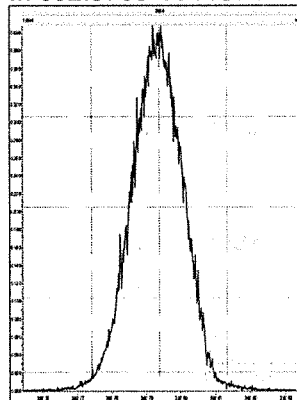
M 366.9792 R 12254



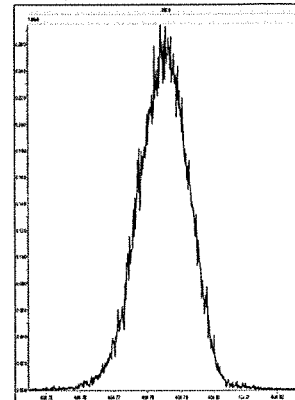
M 380.9760 R 12379



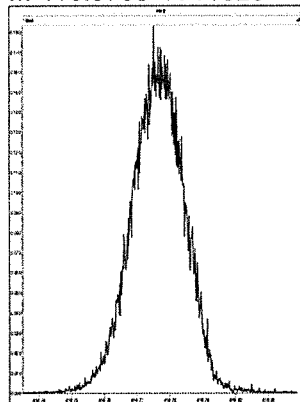
M 392.9760 R 11574



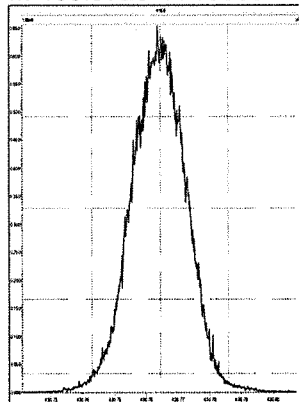
M 404.9760 R 11740



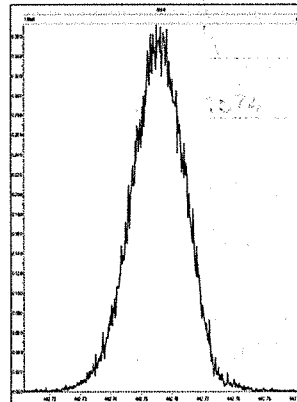
M 416.9760 R 11625



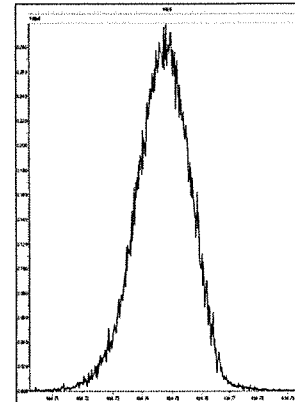
M 430.9728 R 10869



M 442.9728 R 11466



M 454.9728 R 10730



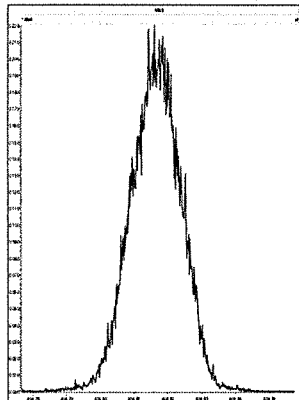
Experiment Calibration Report

MassLynx 4.1

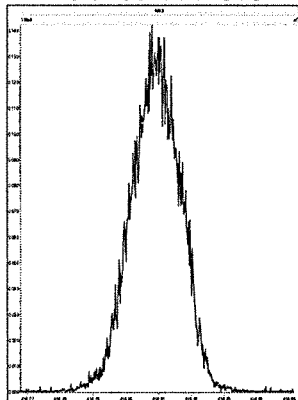
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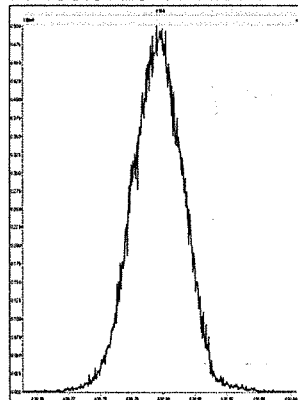
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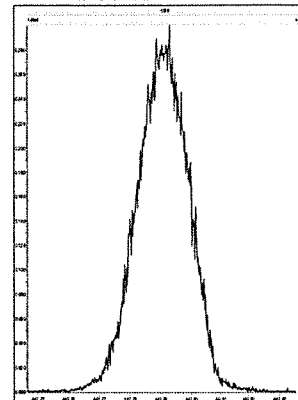
M 416.9760 R 12313



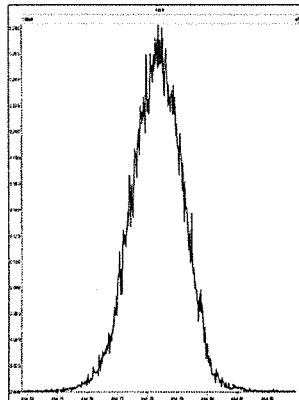
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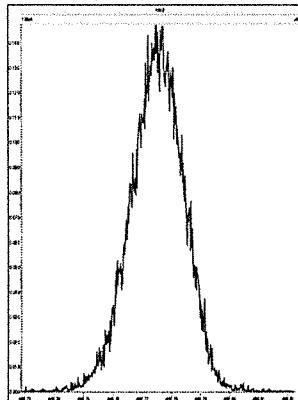
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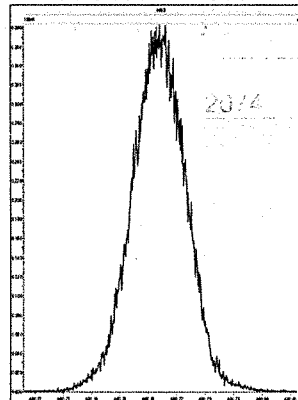
M 454.9728 R 11734



M 466.9728 R 11160



M 480.9696 R 10682



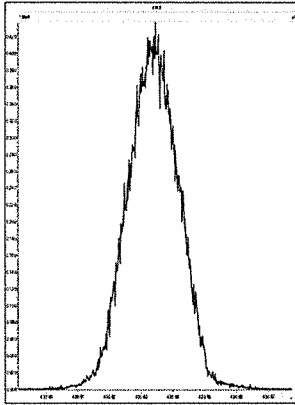
Experiment Calibration Report

MassLynx 4.1

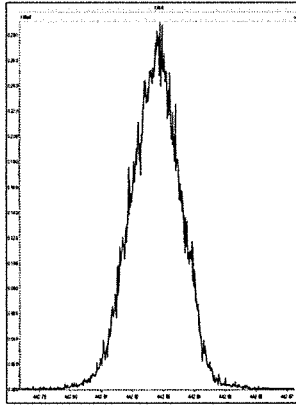
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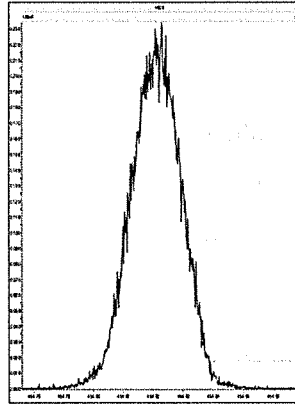
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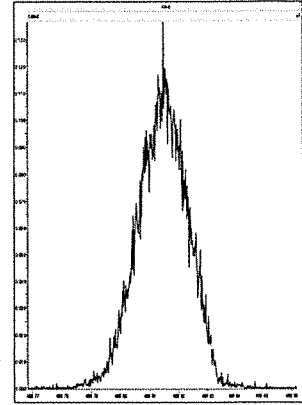
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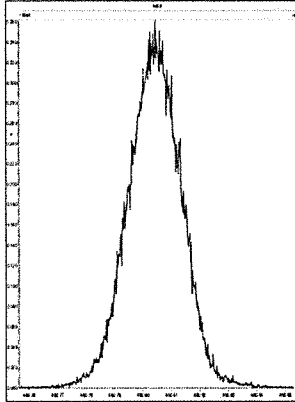
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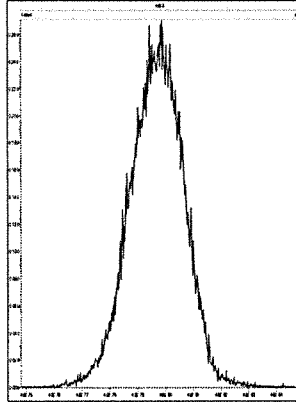
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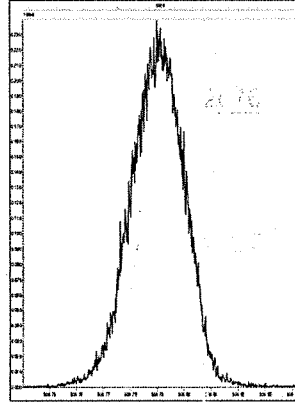
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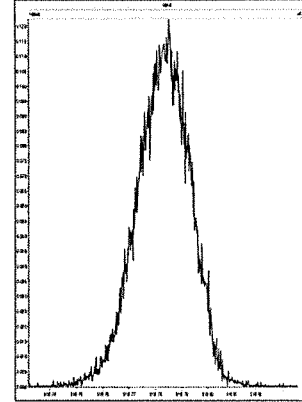
M 492.9696 R 11159



M 504.9696 R 11737



M 516.9697 R 11418

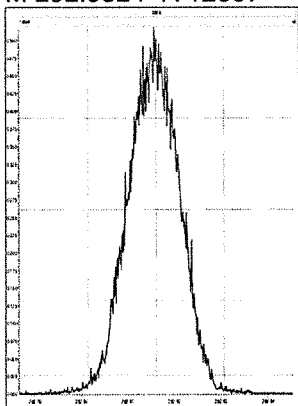


Resolution Check Report

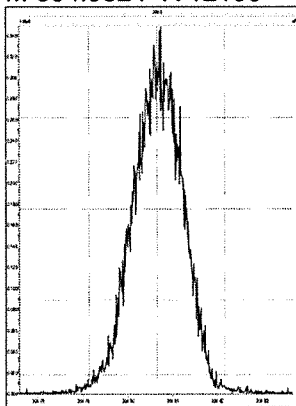
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

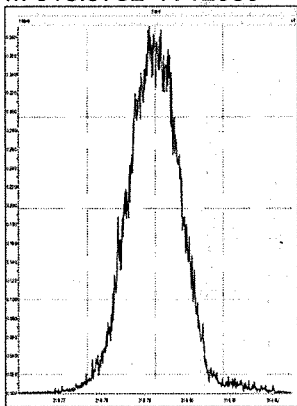
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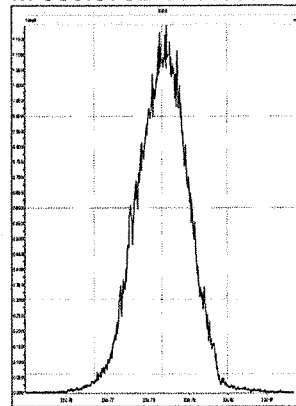
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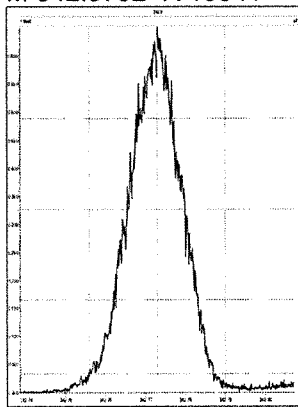
M 318.9792 R 12059



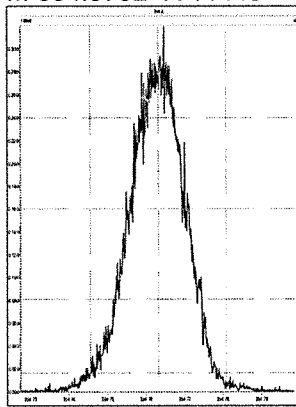
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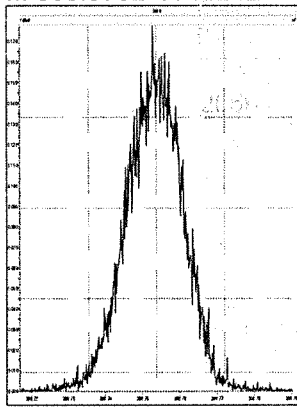
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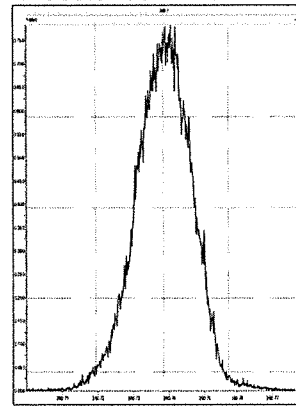
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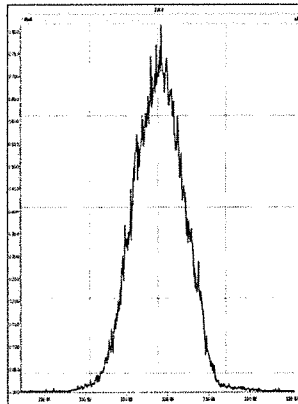
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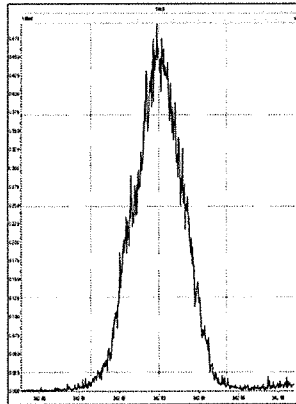
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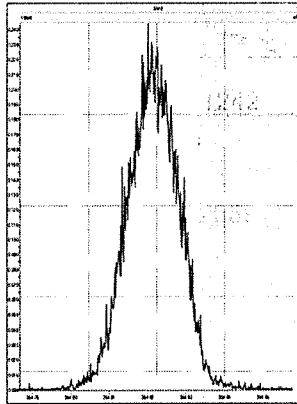
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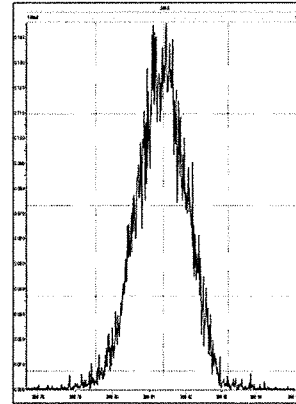
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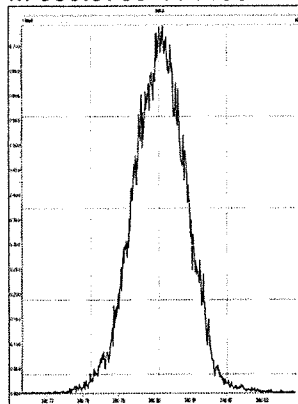
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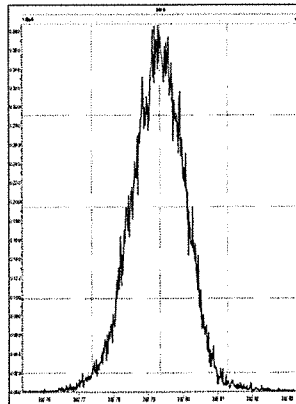
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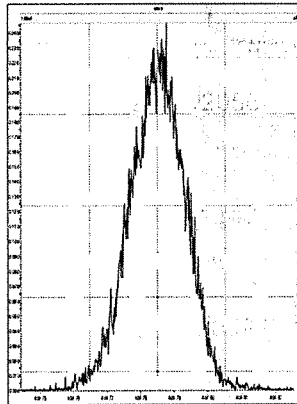
M 380.9760 R 11654



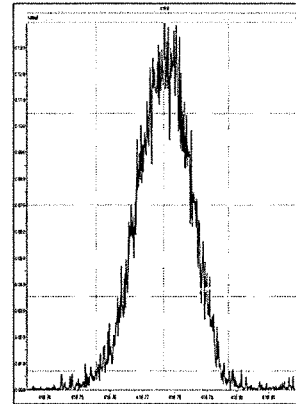
M 392.9760 R 11441



M 404.9760 R 11289



M 416.9760 R 11443

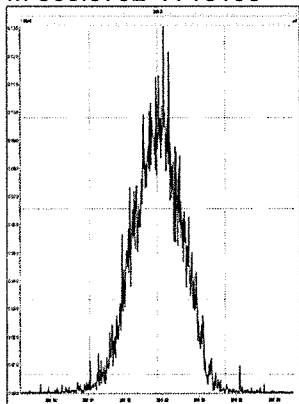


Resolution Check Report

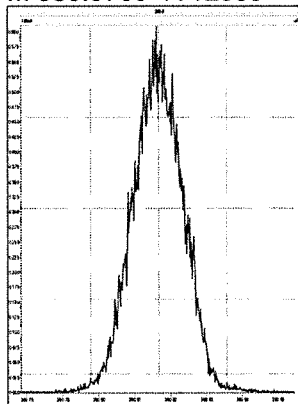
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

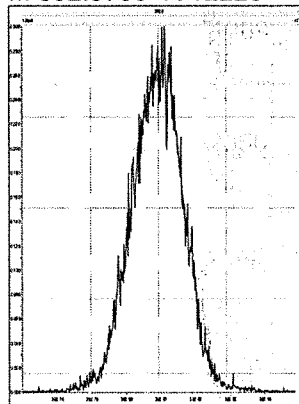
M 366.9792 R 13199



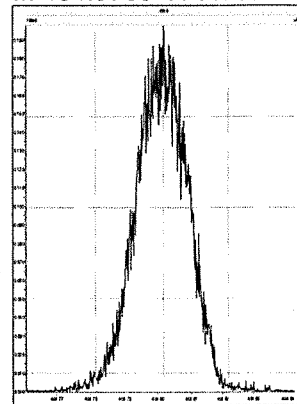
M 380.9760 R 12059



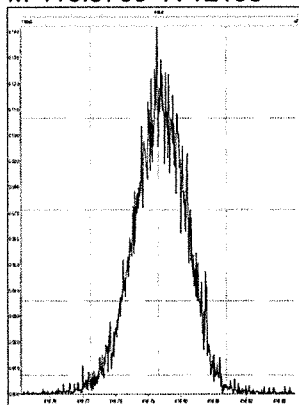
M 392.9760 R 12228



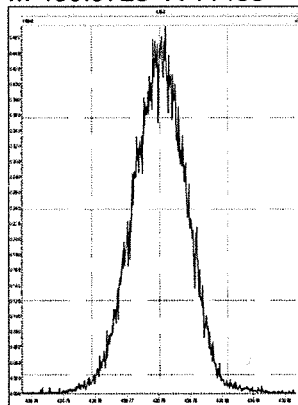
M 404.9760 R 11753



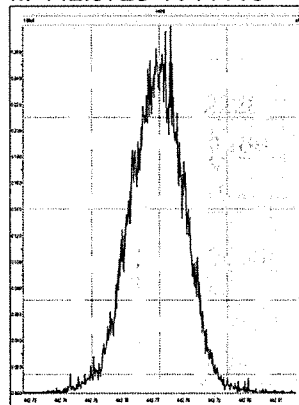
M 416.9760 R 12199



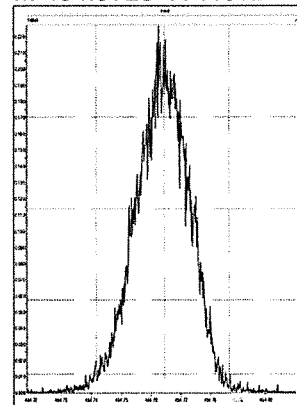
M 430.9728 R 11468



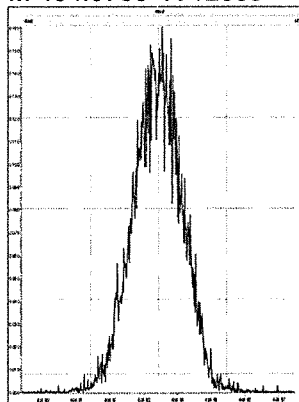
M 442.9728 R 11116



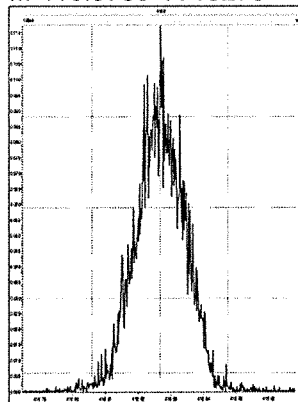
M 454.9728 R 11012



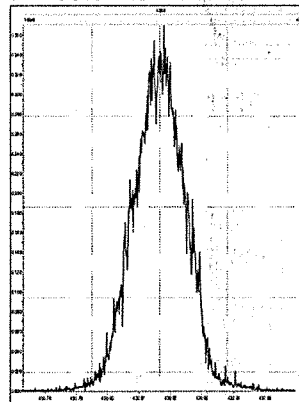
M 404.9760 R 12659



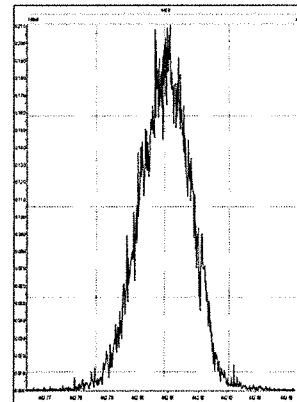
M 416.9760 R 13273



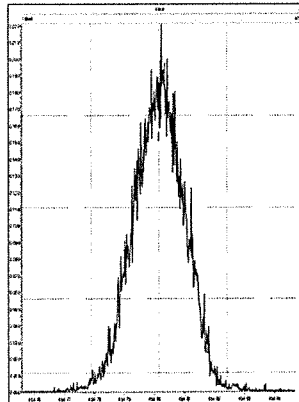
M 430.9728 R 12194



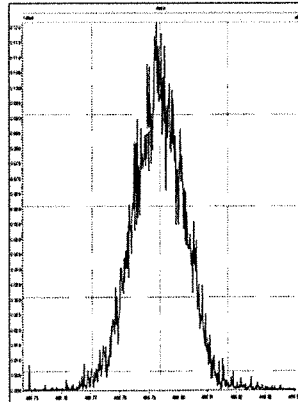
M 442.9728 R 12019



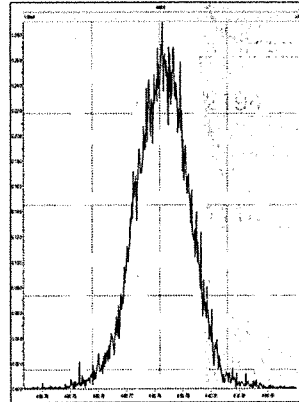
M 454.9728 R 12334



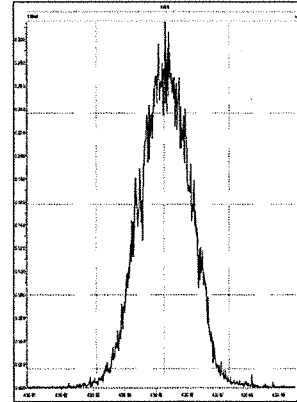
M 466.9728 R 12524



M 480.9696 R 11467



M 430.9728 R 11914

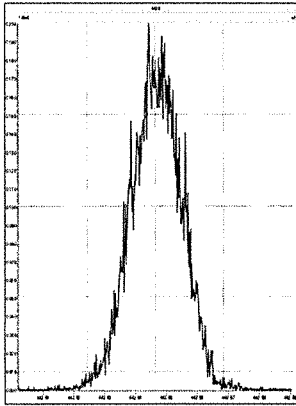


Resolution Check Report

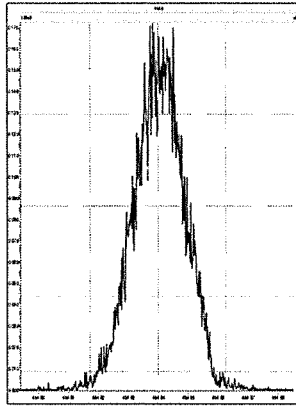
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

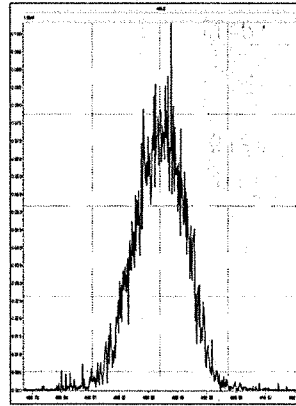
M 442.9728 R 13033



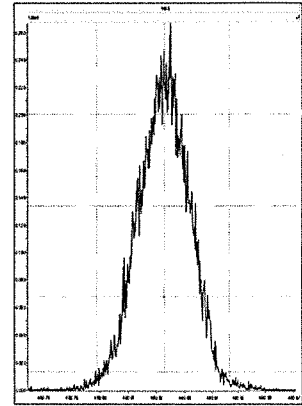
M 454.9728 R 12334



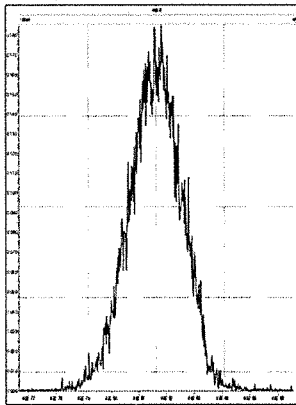
M 466.9728 R 12722



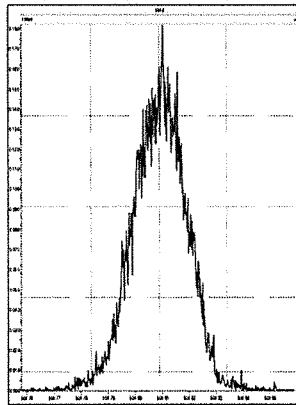
M 480.9696 R 11769



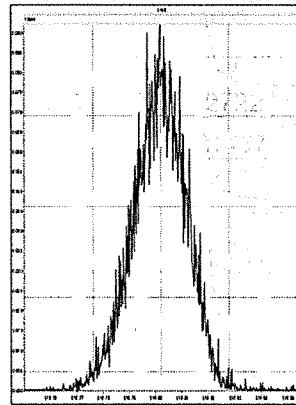
M 492.9696 R 11560



M 504.9696 R 11371



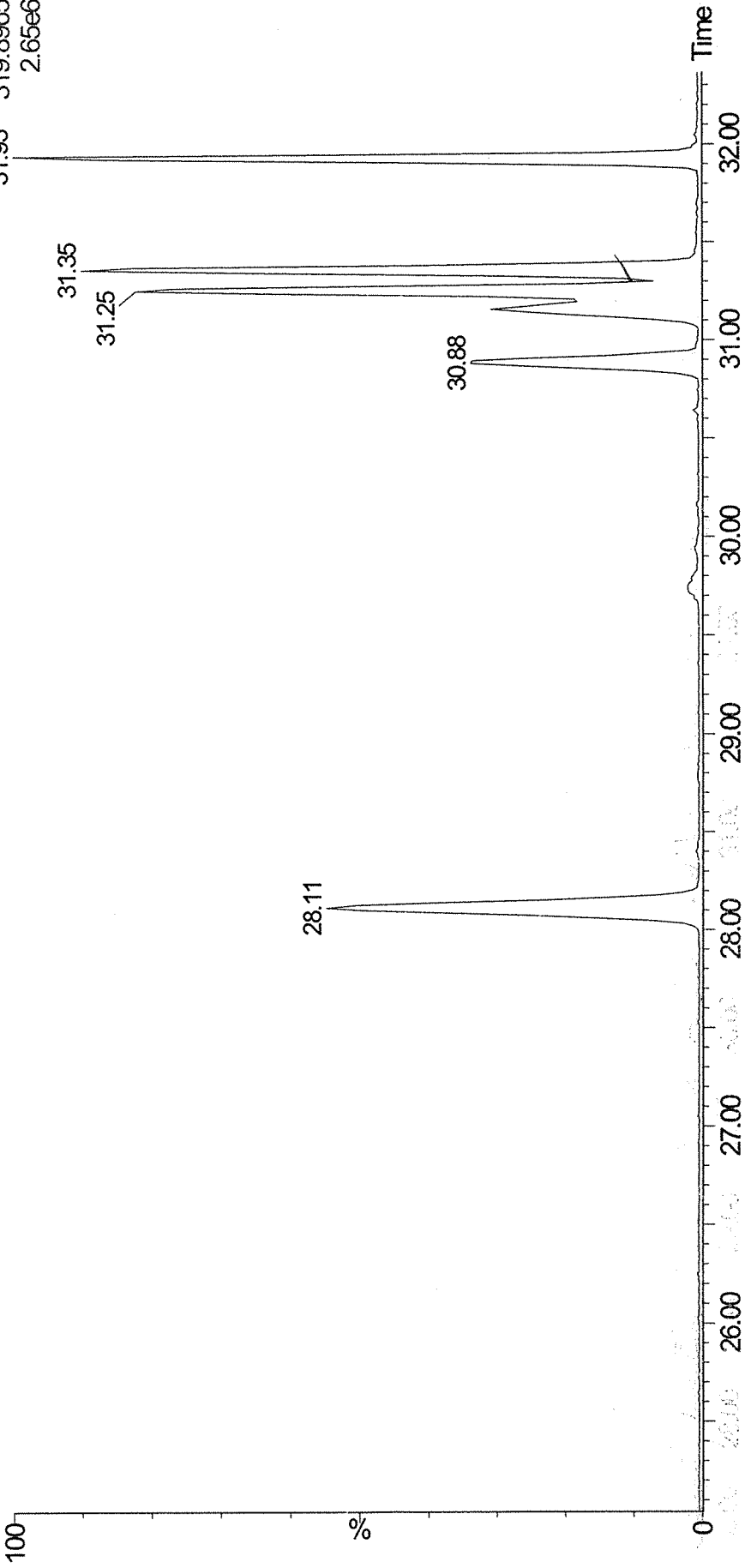
M 516.9697 R 11260



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYQ
A08JUL19A-1

HRP750_2

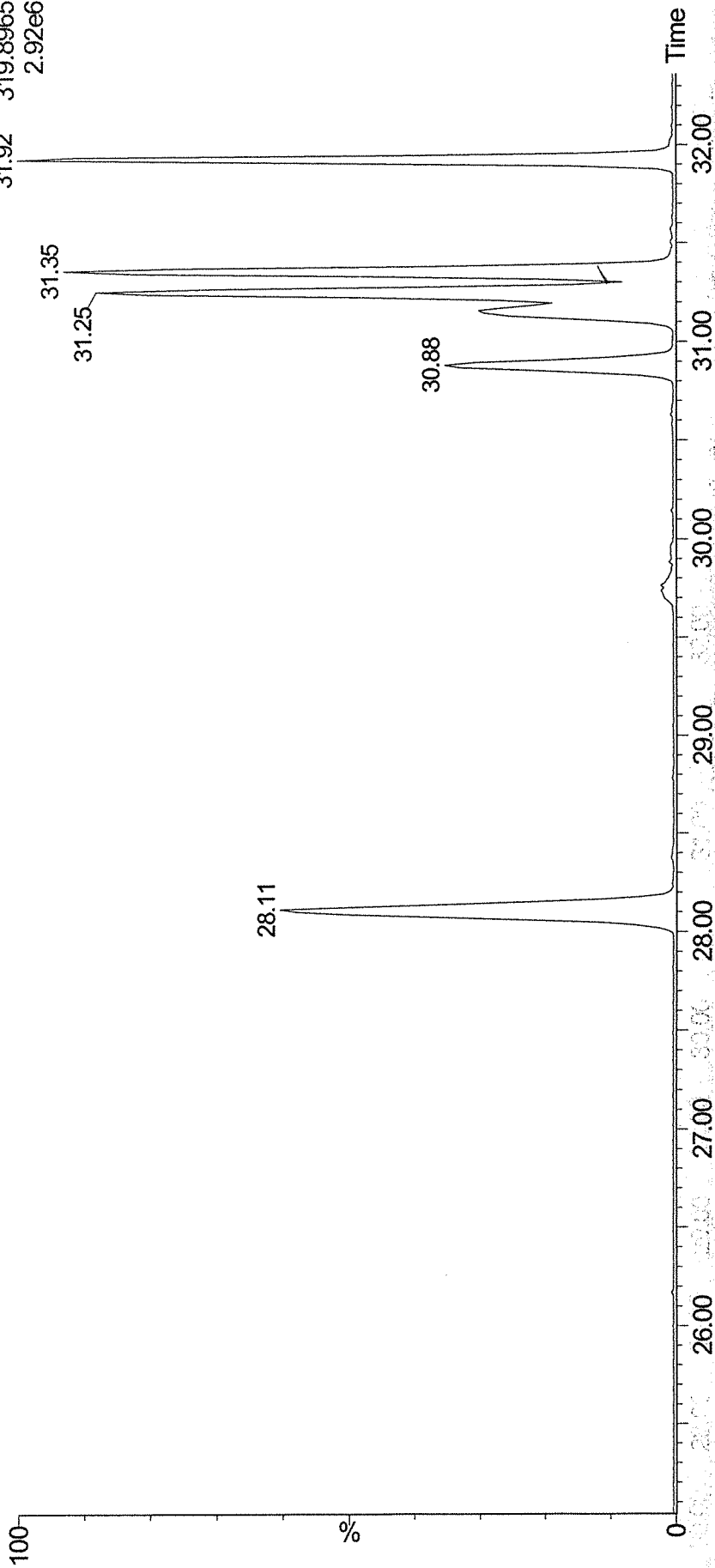
08-Jul-2019 09:40:54
1: Voltage SIR 13 Channels EI+
31.93 319.8965
2.65e6



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYR
A08JUL19A-10 ✓

HRP750_2

08-Jul-2019 16:51:30
1: Voltage SIR 13 Channels EI+
31.92 319.8965
2.92e6



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methodb\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.38
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.48
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.93
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.32
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

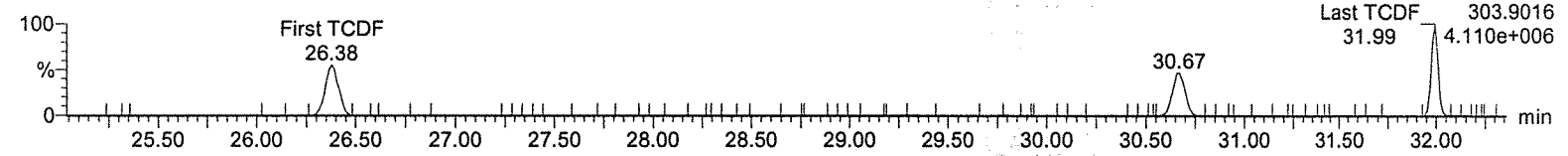
Method: C:\MassLynx\Default.pro\Methdb\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

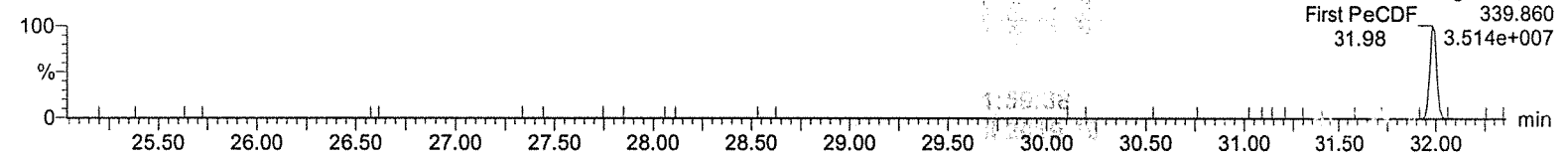
First TCDF

A08JUL19A-1



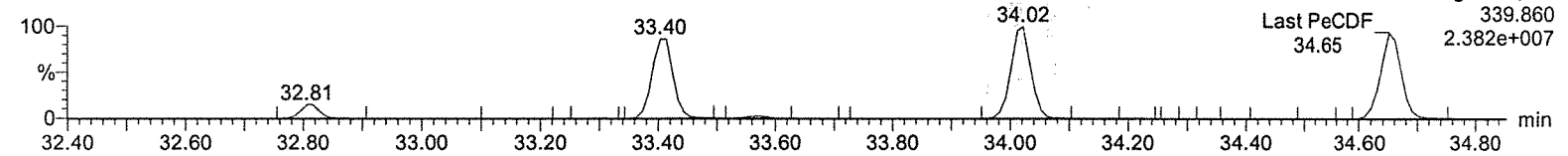
First PeCDF

A08JUL19A-1



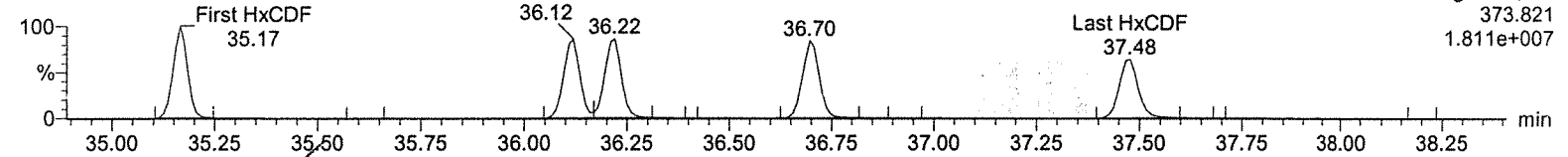
Last PeCDF

A08JUL19A-1



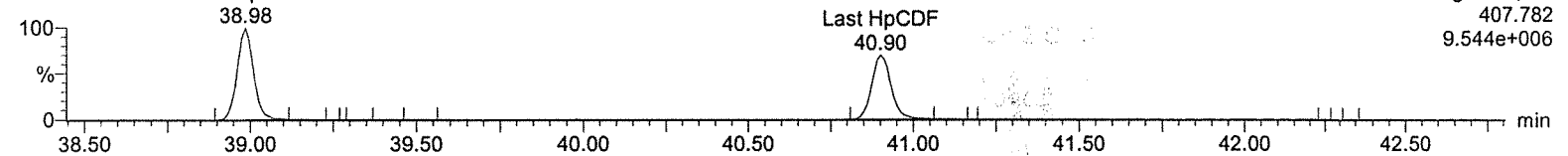
First HxCDF

A08JUL19A-1



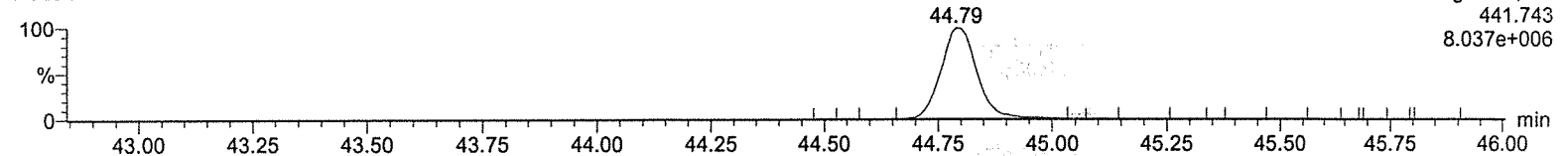
First HpCDF

A08JUL19A-1



OCDF

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

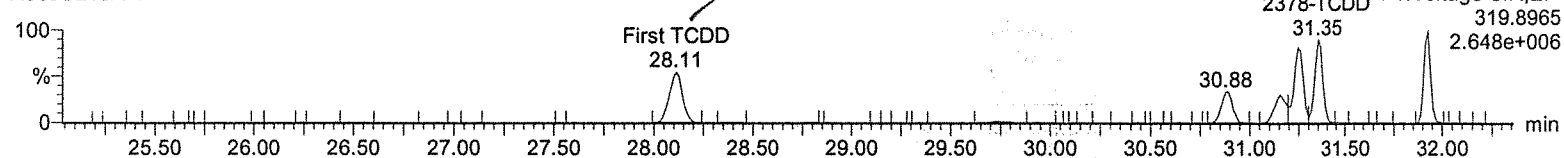
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

23209 JUL 19

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

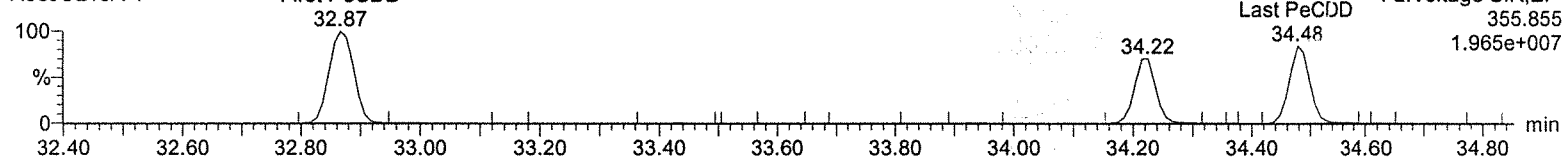
First TCDD

A08JUL19A-1



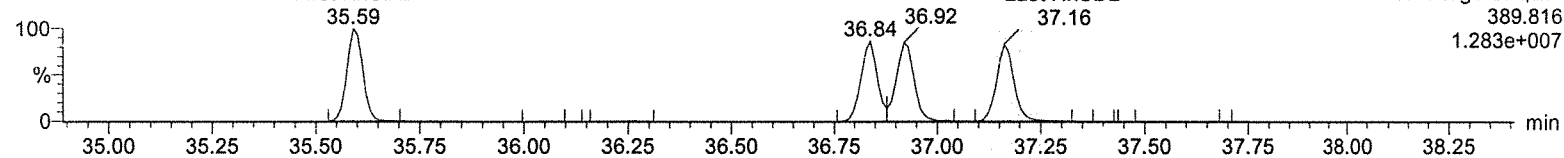
First PeCDD

A08JUL19A-1



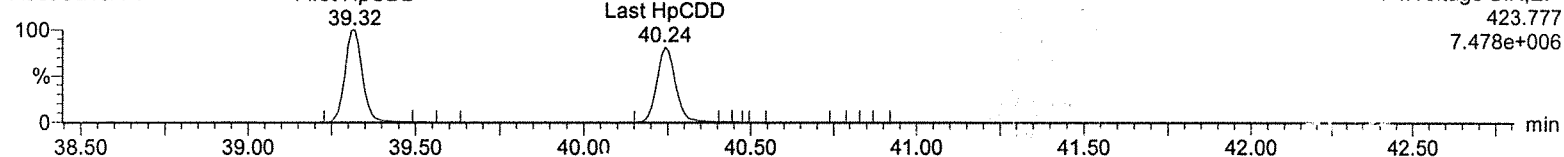
First HxCDD

A08JUL19A-1



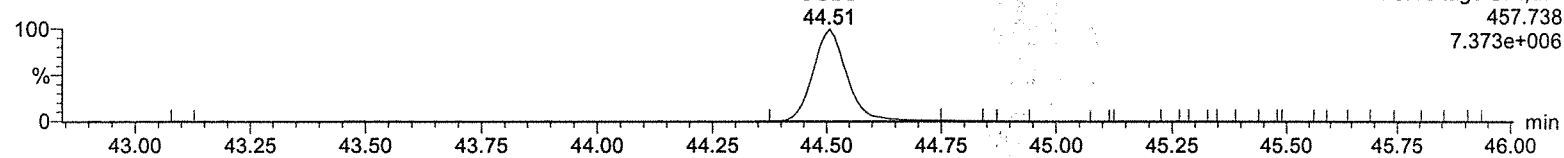
First HpCDD

A08JUL19A-1



OCDD

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.37
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.47
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.92
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.31
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

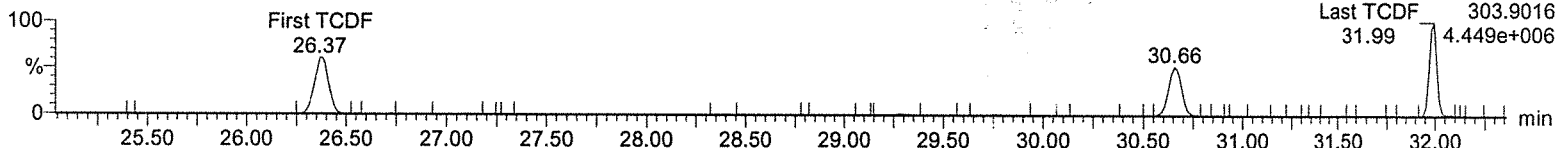
Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

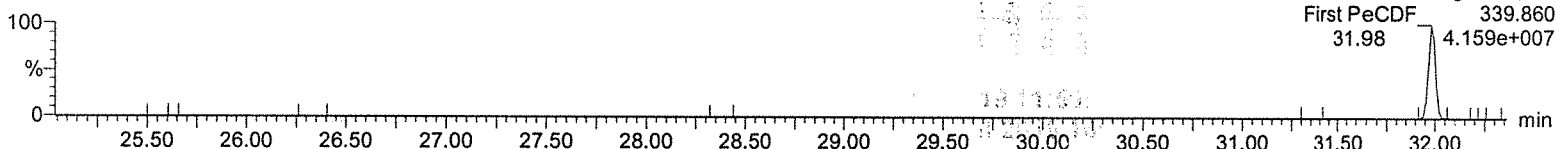
First TCDF

A08JUL19A-10



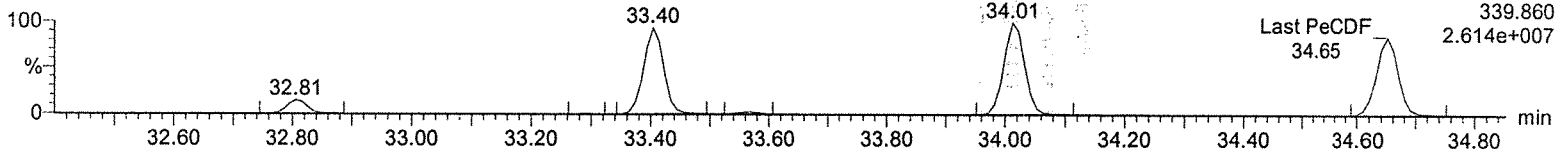
First PeCDF

A08JUL19A-10



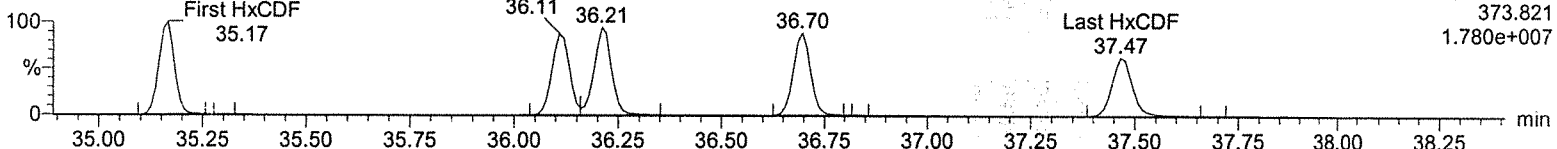
Last PeCDF

A08JUL19A-10



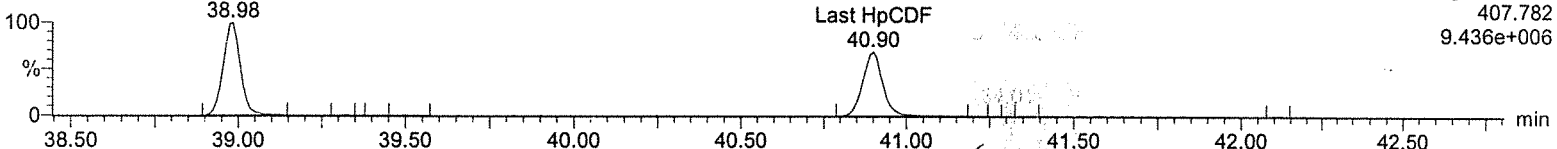
First HxCDF

A08JUL19A-10



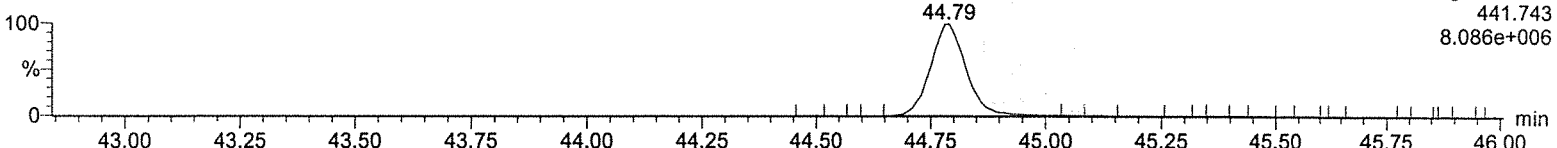
First HpCDF

A08JUL19A-10



OCDF

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

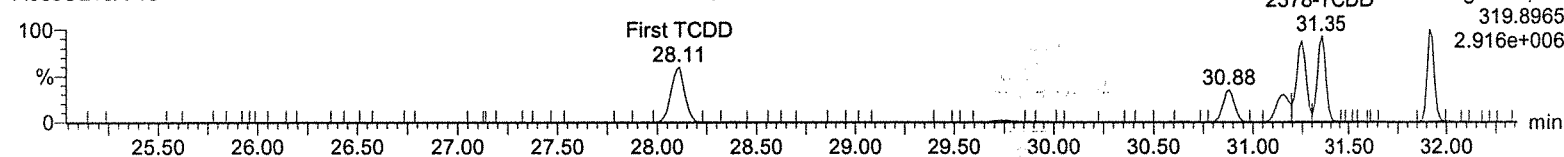
0809 JUL 19

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

LAST

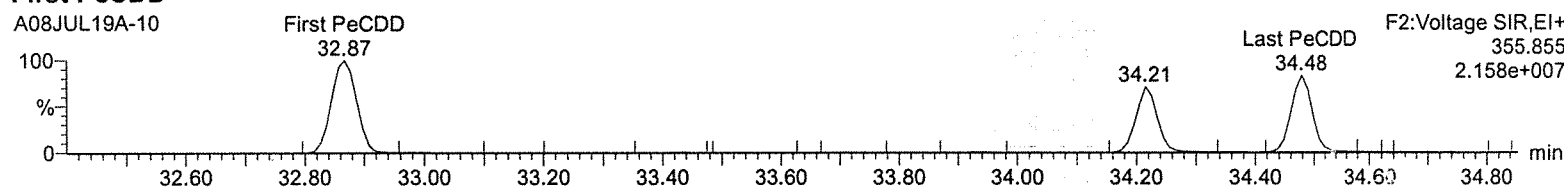
First TCDD

A08JUL19A-10



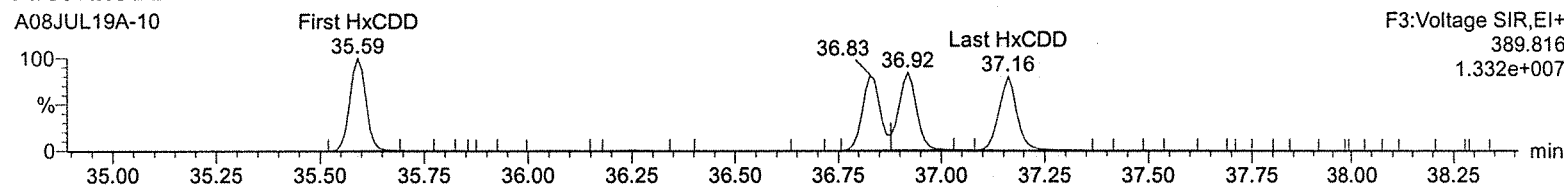
First PeCDD

A08JUL19A-10



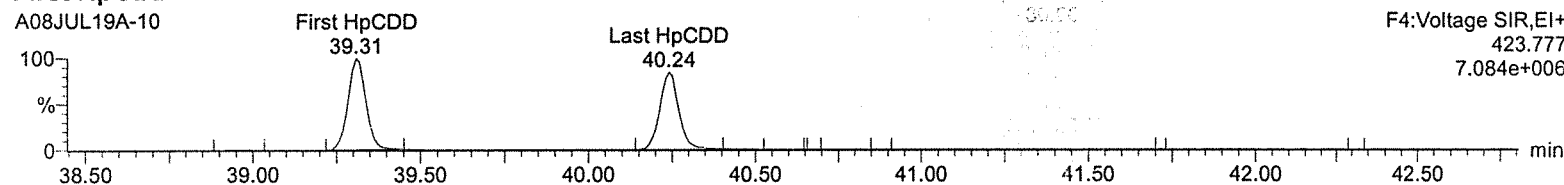
First HxCDD

A08JUL19A-10



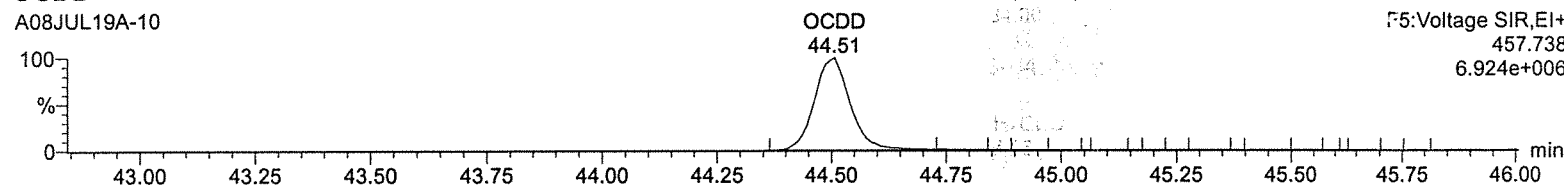
First HpCDD

A08JUL19A-10



OCDD

A08JUL19A-10



Method: C:\MassLynx\Default.pro\Methdb\CF_A_1613_A07_JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Date: 08-Jul-2019, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

	Name	ICAL RRF
1	2378-TCDD	0.884
2	12378-PeCDD	0.853
3	123478-HxCDD	0.940
4	123678-HxCDD	0.944
5	123789-HxCDD	0.927
6	1234678-HpCDD	1.040
7	OCDD	0.971
8	2378-TCDF	0.978
9	12378-PeCDF	0.945
10	23478-PeCDF	0.987
11	123478-HxCDF	1.087
12	123678-HxCDF	1.041
13	234678-HxCDF	1.136
14	123789-HxCDF	1.061
15	1234678-HpCDF	1.150
16	1234789-HpCDF	1.202
17	OCDF	1.133
18	13C-2378-TCDD	1.128
19	13C-12378-PeCDD	0.751
20	13C-123478-HxCDD	0.896
21	13C-123678-HxCDD	0.986
22	13C-1234678-HpCDD	0.672
23	13C-OCDD	0.642
24	13C-2378-TCDF	1.250
25	13C-12378-PeCDF	1.011
26	13C-23478-PeCDF	1.063
27	13C-123478-HxCDF	1.111
28	13C-123678-HxCDF	1.247
29	13C-234678-HxCDF	1.082
30	13C-123789-HxCDF	0.967
31	13C-1234678-HpCDF	0.870
32	13C-1234789-HpCDF	0.677
33	13C-1234-TCDD	1.000
34	13C-123789-HxCDD	1.000
35	37Cl-2378-TCDD	1.061

Quantify Compound Summary Report **MassLynx 4.1**

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

12 July 19

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36

Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Compound name: 2378-TCDD

Response Factor: 0.884458

RRF SD: 0.0448767, Relative SD: 5.07393

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

$$CS0.5 \text{ RRF} = \frac{(5.2423)(100)}{(2.20124)(0.25)} = 0.952$$

$$\text{RRF SD} = \sqrt{\frac{0.010119}{5}} = 0.04499 \times 100 = 5.09$$

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.36	0.27	0.952	0.884	bd
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.36	0.47	0.823	0.884	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.93	0.852	0.884	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.35	9.94	0.879	0.884	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.31	0.891	0.884	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	205.76	0.910	0.884	bb

Compound name: 12378-PeCDD

Response Factor: 0.853475

RRF SD: 0.0140917, Relative SD: 1.65109

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.21	1.28	0.873	0.853	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.22	2.44	0.834	0.853	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.21	9.86	0.841	0.853	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.21	50.22	0.857	0.853	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.21	199.88	0.853	0.853	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.22	1009.56	0.862	0.853	bb

Compound name: 123478-HxCDD

Response Factor: 0.939643

RRF SD: 0.0292523, Relative SD: 3.11313

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.83	1.22	0.917	0.940	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.84	2.37	0.892	0.940	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.83	10.13	0.952	0.940	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.83	50.56	0.950	0.940	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.84	204.08	0.959	0.940	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.84	1030.90	0.969	0.940	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123678-HxCDD

Response Factor: 0.944066

RRF SD: 0.0242859, Relative SD: 2.57248

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.92	1.21	0.916	0.944	db
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.92	2.46	0.930	0.944	dd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.92	9.76	0.922	0.944	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.92	51.25	0.968	0.944	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.92	203.46	0.960	0.944	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.92	1026.32	0.969	0.944	dd

Compound name: 123789-HxCDD

Response Factor: 0.927099

RRF SD: 0.0305511, Relative SD: 3.29534

Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.15	1.21	0.900	0.927	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.16	2.38	0.881	0.927	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.16	10.00	0.927	0.927	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.16	51.43	0.954	0.927	db
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.16	204.71	0.949	0.927	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.16	1026.76	0.952	0.927	dd

Compound name: 1234678-HpCDD

Response Factor: 1.03994

RRF SD: 0.0299236, Relative SD: 2.87742

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.24	1.23	1.027	1.040	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.25	2.38	0.991	1.040	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.24	10.00	1.040	1.040	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.23	51.50	1.071	1.040	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.25	200.19	1.041	1.040	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.24	1029.04	1.070	1.040	bb

Compound name: OCDD

Response Factor: 0.971418

RRF SD: 0.0232154, Relative SD: 2.38985

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.49	2.48	0.962	0.971	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.49	4.96	0.946	0.971	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: OCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.49	19.47	0.945	0.971	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.49	102.63	0.997	0.971	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.51	407.18	0.989	0.971	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.51	2036.59	0.989	0.971	bb

Compound name: 2378-TCDF

Response Factor: 0.978424

RRF SD: 0.0546693, Relative SD: 5.58748

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	30.67	0.28	1.077	0.978	MM
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	30.67	0.47	0.916	0.978	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	30.66	1.93	0.944	0.978	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	30.67	9.95	0.973	0.978	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	30.67	39.70	0.971	0.978	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	30.67	202.19	0.989	0.978	bb

Compound name: 12378-PeCDF

Response Factor: 0.945213

RRF SD: 0.032234, Relative SD: 3.41024

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	33.40	1.28	0.969	0.945	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	33.41	2.35	0.888	0.945	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	33.40	9.78	0.925	0.945	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	33.40	50.77	0.960	0.945	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	33.40	204.22	0.965	0.945	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	33.40	1020.23	0.964	0.945	bb

Compound name: 23478-PeCDF

Response Factor: 0.986747

RRF SD: 0.0368449, Relative SD: 3.73397

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.01	1.18	0.933	0.987	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.02	2.46	0.973	0.987	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.01	9.78	0.965	0.987	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.01	50.78	1.002	0.987	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.02	205.34	1.013	0.987	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.02	1048.35	1.034	0.987	bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 123478-HxCDF

Response Factor: 1.08717

RRF SD: 0.0419813, Relative SD: 3.86151

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.11	1.19	1.039	1.087	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.11	2.41	1.049	1.087	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.11	9.76	1.061	1.087	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.11	51.25	1.114	1.087	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.12	208.35	1.133	1.087	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.12	1036.34	1.127	1.087	bd

Compound name: 123678-HxCDF

Response Factor: 1.04051

RRF SD: 0.0335945, Relative SD: 3.22866

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.21	1.26	1.052	1.041	dd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.22	2.35	0.977	1.041	db
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.21	9.95	1.035	1.041	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.21	51.61	1.074	1.041	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.21	202.58	1.054	1.041	db
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.22	1010.63	1.052	1.041	db

Compound name: 234678-HxCDF

Response Factor: 1.13575

RRF SD: 0.0360558, Relative SD: 3.17463

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.69	1.19	1.084	1.136	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.69	2.44	1.107	1.136	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.69	9.95	1.130	1.136	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.69	50.73	1.152	1.136	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.69	207.52	1.178	1.136	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.69	1024.66	1.164	1.136	bd

Compound name: 123789-HxCDF

Response Factor: 1.06073

RRF SD: 0.0242888, Relative SD: 2.28983

Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.46	1.21	1.029	1.061	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.47	2.44	1.034	1.061	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 123789-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.48	10.04	1.065	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.47	51.19	1.086	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.48	201.24	1.067	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.48	1021.59	1.084	1.061	bb

Compound name: 1234678-HpCDF

Response Factor: 1.14983

RRF SD: 0.0443867, Relative SD: 3.8603

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	38.97	1.17	1.074	1.150	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	38.98	2.45	1.126	1.150	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	38.98	9.98	1.148	1.150	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	38.97	51.63	1.187	1.150	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	38.98	205.56	1.182	1.150	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	38.98	1028.22	1.182	1.150	bb

Compound name: 1234789-HpCDF

Response Factor: 1.20215

RRF SD: 0.0229239, Relative SD: 1.90691

Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.90	1.25	1.200	1.202	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.89	2.47	1.188	1.202	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.90	9.74	1.171	1.202	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.89	49.74	1.196	1.202	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.91	204.32	1.228	1.202	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.91	1022.70	1.229	1.202	bb

Compound name: OCDF

Response Factor: 1.13283

RRF SD: 0.076827, Relative SD: 6.78187

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.78	2.31	1.049	1.133	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.81	4.64	1.052	1.133	bd
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.78	19.91	1.128	1.133	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.78	100.46	1.138	1.133	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.80	416.81	1.180	1.133	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.80	2206.18	1.250	1.133	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 13C-2378-TCDD

Response Factor: 1.12834

RRF SD: 0.0266676, Relative SD: 2.36343

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	31.34	100.14	1.130	1.128	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	31.34	96.74	1.092	1.128	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	31.34	99.09	1.118	1.128	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	31.34	102.35	1.155	1.128	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	31.34	98.65	1.113	1.128	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	31.34	103.02	1.162	1.128	bb

Compound name: 13C-12378-PeCDD

Response Factor: 0.75125

RRF SD: 0.0377537, Relative SD: 5.02545

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.20	103.04	0.774	0.751	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.21	93.93	0.706	0.751	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.20	96.78	0.727	0.751	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.20	99.64	0.749	0.751	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.20	98.42	0.739	0.751	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.21	108.20	0.813	0.751	bb

Compound name: 13C-123478-HxCDD

Response Factor: 0.896281

RRF SD: 0.0124016, Relative SD: 1.38367

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.82	99.03	0.888	0.896	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.83	101.29	0.908	0.896	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.82	99.74	0.894	0.896	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.82	97.87	0.877	0.896	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.83	100.73	0.903	0.896	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.83	101.35	0.908	0.896	bd

Compound name: 13C-123678-HxCDD

Response Factor: 0.985774

RRF SD: 0.00823518, Relative SD: 0.835403

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.91	98.89	0.975	0.986	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.91	100.38	0.990	0.986	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 13C-123678-HxCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.91	98.98	0.976	0.986	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.91	100.62	0.992	0.986	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.91	100.68	0.993	0.986	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.91	100.46	0.990	0.986	dd

Compound name: 13C-1234678-HpCDD

Response Factor: 0.671678

RRF SD: 0.00864315, Relative SD: 1.2868

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.22	99.85	0.671	0.672	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.23	101.04	0.679	0.672	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.23	101.05	0.679	0.672	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.22	99.38	0.667	0.672	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.23	100.89	0.678	0.672	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.23	97.79	0.657	0.672	bb

Compound name: 13C-OCDD

Response Factor: 0.64212

RRF SD: 0.0312445, Relative SD: 4.86583

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	200.000	44.47	190.01	0.610	0.642	bb
A08JUL19A-4	CS1 UD190207-02 CS143	200.000	44.49	195.03	0.626	0.642	bd
A08JUL19A-5	CS2 UD190207-03 CS243	200.000	44.49	191.09	0.614	0.642	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	200.000	44.47	212.75	0.683	0.642	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	44.49	210.31	0.675	0.642	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	44.49	200.81	0.645	0.642	bd

Compound name: 13C-2378-TCDF

Response Factor: 1.24989

RRF SD: 0.0235442, Relative SD: 1.8837

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.64	102.21	1.277	1.250	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.64	97.12	1.214	1.250	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.64	99.85	1.248	1.250	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.64	101.40	1.267	1.250	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.64	98.61	1.233	1.250	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.64	100.81	1.260	1.250	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-12378-PeCDF

Response Factor: 1.0108

RRF SD: 0.042891, Relative SD: 4.24328

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	33.39	101.65	1.028	1.011	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	33.40	95.18	0.962	1.011	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	33.39	98.01	0.991	1.011	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	33.39	100.21	1.013	1.011	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	33.39	97.58	0.986	1.011	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	33.39	107.36	1.085	1.011	bb

Compound name: 13C-23478-PeCDF

Response Factor: 1.06317

RRF SD: 0.056146, Relative SD: 5.28101

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.00	105.12	1.118	1.063	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.01	92.69	0.985	1.063	db
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.00	98.16	1.044	1.063	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.00	99.71	1.060	1.063	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.01	97.32	1.035	1.063	db
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.01	107.01	1.138	1.063	db

Compound name: 13C-123478-HxCDF

Response Factor: 1.11071

RRF SD: 0.0157984, Relative SD: 1.42237

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.10	100.10	1.112	1.111	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.11	102.58	1.139	1.111	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.10	100.42	1.115	1.111	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.10	99.09	1.101	1.111	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.10	98.72	1.097	1.111	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.11	99.08	1.101	1.111	bd

Compound name: 13C-123678-HxCDF

Response Factor: 1.24684

RRF SD: 0.0132688, Relative SD: 1.0642

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.20	98.41	1.227	1.247	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.21	99.91	1.246	1.247	dd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-123678-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.20	101.24	1.262	1.247	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.20	99.13	1.236	1.247	db
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.20	100.72	1.256	1.247	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.21	100.59	1.254	1.247	dd

Compound name: 13C-234678-HxCDF

Response Factor: 1.08201

RRF SD: 0.0109147, Relative SD: 1.00875

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.69	101.62	1.100	1.082	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.69	100.88	1.092	1.082	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.69	99.61	1.078	1.082	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.67	99.46	1.076	1.082	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.69	99.28	1.074	1.082	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.69	99.15	1.073	1.082	bb

Compound name: 13C-123789-HxCDF

Response Factor: 0.967011

RRF SD: 0.010414, Relative SD: 1.07693

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.46	101.72	0.984	0.967	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.46	99.20	0.959	0.967	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.46	100.57	0.973	0.967	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.46	100.32	0.970	0.967	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.47	99.37	0.961	0.967	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.47	98.82	0.956	0.967	bb

Compound name: 13C-1234678-HpCDF

Response Factor: 0.869967

RRF SD: 0.00962967, Relative SD: 1.1069

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	38.96	100.76	0.877	0.870	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	38.97	101.06	0.879	0.870	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	38.96	101.10	0.880	0.870	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	38.96	99.47	0.865	0.870	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	38.97	99.00	0.861	0.870	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	38.97	98.61	0.858	0.870	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-1234789-HpCDF

Response Factor: 0.677351

RRF SD: 0.00683684, Relative SD: 1.00935

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.88	100.25	0.679	0.677	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.89	100.10	0.678	0.677	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.88	101.11	0.685	0.677	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.88	100.56	0.681	0.677	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.89	99.85	0.676	0.677	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.89	98.14	0.665	0.677	bb

Compound name: 13C-1234-TCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.87	100.00	1.000	1.000	bb

Compound name: 13C-123789-HxCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.15	100.00	1.000	1.000	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.15	100.00	1.000	1.000	dd

Compound name: 37Cl-2378-TCDD

Response Factor: 1.06124

RRF SD: 0.0481575, Relative SD: 4.53786

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.35	0.24	1.038	1.061	bb
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.35	0.48	1.012	1.061	bb

Quantify Compound Summary Report **MassLynx 4.1**

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 37CI-2378-TCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.92	1.018	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.34	10.43	1.107	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.07	1.063	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	212.93	1.130	1.061	bb

Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methd\ICFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	2.36e3	2.88e3	5.24e3	31.36	1.001	0.82	NO	0.269	0.952	0.884	5.07	0.0280	5.51e4	2748	20.1	4.64e4	1441	32.2	bd	bb
2	12378-PeCDD	1.02e4	6.32e3	1.65e4	34.21	1.000	1.61	NO	1.279	0.873	0.853	1.65	0.0287	2.62e5	2362	110.9	1.76e5	1093	161.1	bd	bb
3	123478-HxCDD	8.05e3	6.32e3	1.44e4	36.83	1.000	1.27	NO	1.220	0.917	0.940	3.11	0.0368	1.82e5	1603	113.3	1.13e5	1951	57.9	bd	bd
4	123678-HxCDD	8.50e3	7.26e3	1.58e4	36.92	1.000	1.17	NO	1.212	0.916	0.944	2.57	0.0376	1.59e5	1603	99.1	1.28e5	1951	65.8	db	db
5	123789-HxCDD	8.04e3	6.76e3	1.48e4	37.15	1.007	1.19	NO	1.214	0.900	0.927	3.30	0.0378	1.53e5	1603	95.3	1.15e5	1951	58.8	bd	bb
6	1234678-HpCDD	6.04e3	6.12e3	1.22e4	40.24	1.000	0.99	NO	1.235	1.027	1.040	2.88	0.0649	1.03e5	1757	58.6	9.52e4	1920	49.6	bb	bd
7	OCDD	9.77e3	1.10e4	2.07e4	44.49	1.000	0.89	NO	2.477	0.962	0.971	2.39	0.0920	1.23e5	1257	98.1	1.39e5	1991	69.6	bb	bd
8	2378-TCDF	2.70e3	4.01e3	6.71e3	30.67	1.001	0.67	NO	0.275	1.077	0.978	5.59	0.0419	3.94e4	1747	22.5	4.74e4	3466	13.7	M...	db
9	12378-PeCDF	1.47e4	9.62e3	2.43e4	33.40	1.000	1.52	NO	1.281	0.969	0.945	3.41	0.0370	3.34e5	2702	123.5	2.39e5	4145	57.8	bb	bb
10	23478-PeCDF	1.50e4	1.04e4	2.54e4	34.01	1.000	1.45	NO	1.181	0.933	0.987	3.73	0.0321	3.89e5	2702	144.0	2.53e5	4145	61.0	bb	bb
11	123478-HxCDF	1.08e4	9.59e3	2.04e4	36.11	1.000	1.13	NO	1.194	1.039	1.087	3.86	0.0268	2.15e5	2156	99.8	2.06e5	1702	120.8	bd	bd
12	123678-HxCDF	1.26e4	1.02e4	2.28e4	36.21	1.000	1.24	NO	1.263	1.052	1.041	3.23	0.0263	2.63e5	2156	122.0	2.03e5	1702	119.1	dd	dd
13	234678-HxCDF	1.13e4	9.70e3	2.10e4	36.69	1.000	1.17	NO	1.192	1.084	1.136	3.17	0.0290	2.25e5	2156	104.4	1.97e5	1702	115.7	bd	bd
14	123789-HxCDF	9.32e3	8.55e3	1.79e4	37.46	1.000	1.09	NO	1.213	1.029	1.061	2.29	0.0371	1.72e5	2156	79.6	1.49e5	1702	87.4	bd	bd
15	1234678-HpCDF	8.42e3	8.19e3	1.66e4	38.97	1.000	1.03	NO	1.167	1.074	1.150	3.86	0.0282	1.38e5	1549	89.3	1.35e5	1086	124.8	bd	bd
16	1234789-HpCDF	7.33e3	7.06e3	1.44e4	40.90	1.000	1.04	NO	1.248	1.200	1.202	1.91	0.0417	1.12e5	1549	72.2	9.77e4	1086	90.0	bd	bd
17	OCDF	1.05e4	1.21e4	2.26e4	44.78	1.007	0.86	NO	2.315	1.049	1.133	6.78	0.102	1.13e5	2106	53.7	1.39e5	2087	66.4	bb	bb
18	13C-2378-TCDD	9.61e5	1.24e6	2.20e6	31.34	1.015	0.77	NO	100.141	1.130	1.128	2.36	0.101	1.84e7	8503	2165.5	2.38e7	4565	5220.0	bb	bb
19	13C-12378-PeCDD	9.14e5	5.96e5	1.51e6	34.20	1.108	1.53	NO	103.043	0.774	0.751	5.03	0.106	2.14e7	3266	6548.1	1.41e7	5905	2388.5	bb	bb
20	13C-123478-HxCDD	6.92e5	5.62e5	1.25e6	36.82	0.991	1.23	NO	99.030	0.888	0.896	1.38	0.123	1.42e7	5998	2362.3	1.14e7	4559	2506.6	bd	bd
21	13C-123678-HxCDD	7.61e5	6.16e5	1.38e6	36.91	0.994	1.24	NO	98.887	0.975	0.986	0.84	0.112	1.38e7	5998	2308.3	1.11e7	4559	2432.5	dd	dd
22	13C-1234678-HpCDD	4.84e5	4.64e5	9.47e5	40.22	1.083	1.04	NO	99.853	0.671	0.672	1.29	0.246	6.95e6	9910	701.2	6.93e6	5863	1181.6	bd	bb
23	13C-OCDD	7.96e5	9.26e5	1.72e6	44.47	1.197	0.86	NO	190.015	0.610	0.642	4.87	0.239	8.40e6	9103	923.0	9.66e6	5539	1744.6	bb	bd
24	13C-2378-TCDF	1.09e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	102.207	1.277	1.250	1.88	0.156	1.39e7	14607	949.6	1.80e7	7808	2301.1	bb	bb
25	13C-12378-PeCDF	1.23e6	7.70e5	2.00e6	33.39	1.082	1.60	NO	101.654	1.028	1.011	4.24	0.175	3.01e7	14002	2152.1	1.18e7	6379	2945.5	bb	bb
26	13C-23478-PeCDF	1.34e6	8.44e5	2.18e6	34.00	1.102	1.58	NO	105.121	1.118	1.063	5.28	0.166	3.31e7	14002	2361.9	2.10e7	6379	3289.0	bb	bb
27	13C-123478-HxCDF	5.36e5	1.03e6	1.57e6	36.10	0.972	0.52	NO	100.103	1.112	1.111	1.42	0.208	1.13e7	10560	1068.6	2.15e7	11523	1868.6	bd	bd
28	13C-123678-HxCDF	5.97e5	1.14e6	1.73e6	36.20	0.975	0.53	NO	98.415	1.227	1.247	1.06	0.185	1.21e7	10560	1148.5	2.26e7	11523	1961.5	dd	dd
29	13C-234678-HxCDF	5.42e5	1.01e6	1.55e6	36.69	0.988	0.54	NO	101.678	1.100	1.082	1.01	0.214	1.02e7	10560	967.2	1.97e7	11523	1710.4	bd	bd
30	13C-123789-HxCDF	4.77e5	9.12e5	1.39e6	37.46	1.008	0.52	NO	107.717	0.984	0.967	1.08	0.239	8.42e6	10560	797.3	1.58e7	11523	1371.7	bd	bd

Handwritten signature

Handwritten signature

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

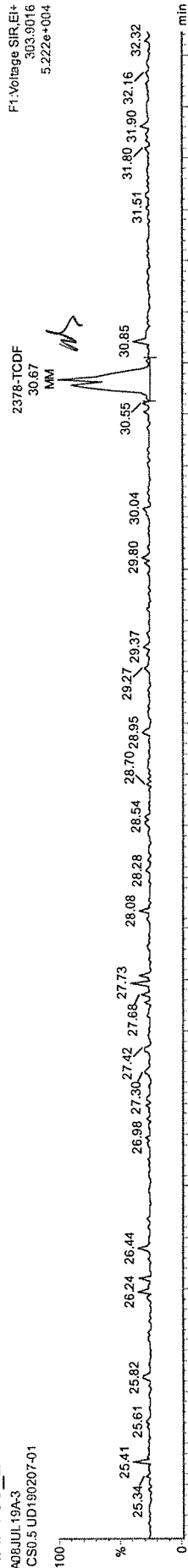
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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

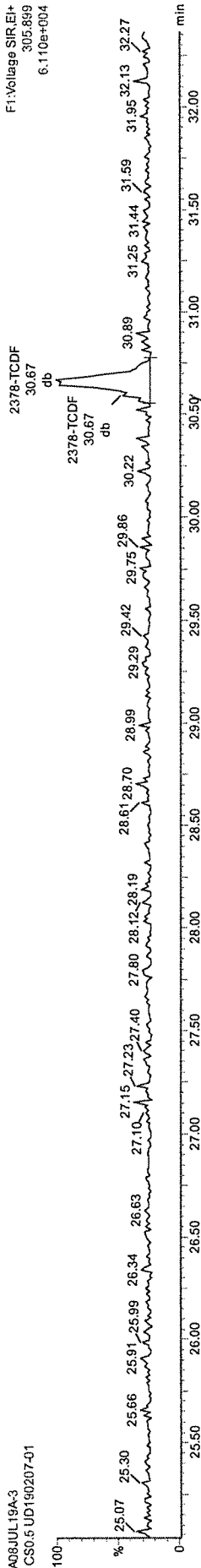
#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.76e5	8.62e5	1.24e6	38.96	1.049	0.44	NO	100.757	0.877	0.870	1.11	0.166	6.16e6	6681	922.6	1.42e7	7130	1992.4	bb	bb
32	13C-1234789-HpCDF	2.94e5	6.65e5	9.59e5	40.88	1.101	0.44	NO	100.246	0.679	0.677	1.01	0.213	4.03e6	6681	603.9	9.12e6	7130	1278.8	bd	bd
33	13C-1234-TCDD	8.61e5	1.09e6	1.95e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.113	1.27e7	8503	1493.6	1.61e7	4565	3518.9	bb	bb
34	13C-123789-HxCDD	7.78e5	6.34e5	1.41e6	37.14	0.000	1.23	NO	100.000	1.000	1.000	0.00	0.111	1.32e7	5998	2193.3	1.10e7	4559	2409.9	dd	dd
35	37Cl-2378-TCDD	5.06e3		5.06e3	31.35	1.016			0.244	1.038	1.061	4.54	0.0287	1.02e5	3507	29.0				bb	bb

MANUAL INTEGRATION
METHOD 1613
HRP750_2

A08JUL19A-3
CS0.5 UD190207-01



A08JUL19A-3
CS0.5 UD190207-01

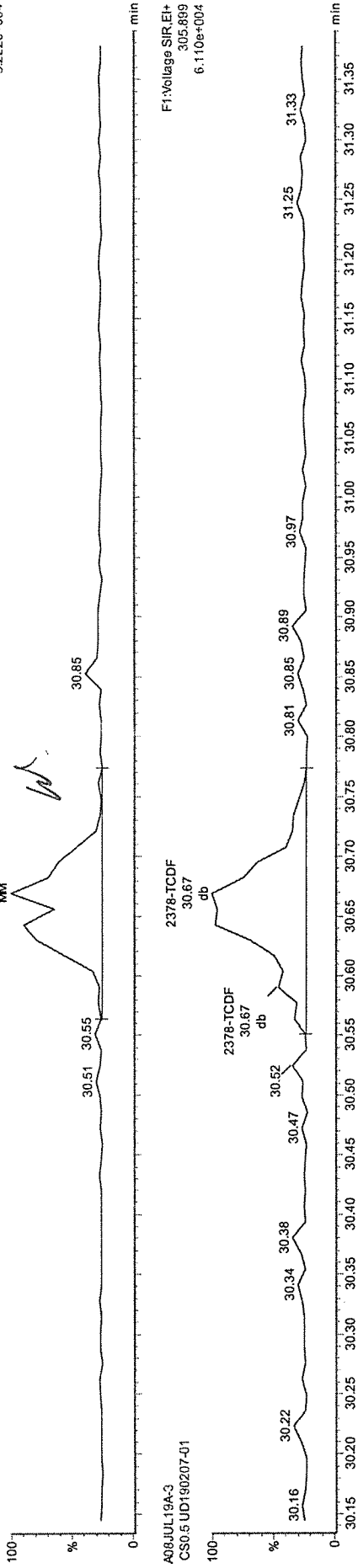


Handwritten signature and date:
7/9/19
[Signature]

MANUAL INTEGRATION
METHOD 1613
HRP750_2

A08-JUL19A-3
CS0.5 UD190207-01

F1:Voltage SIR.EI+
303.9016
5.222e+004



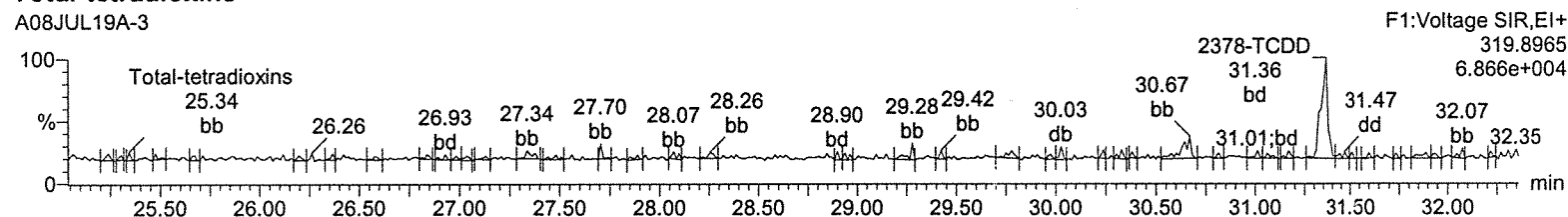
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Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

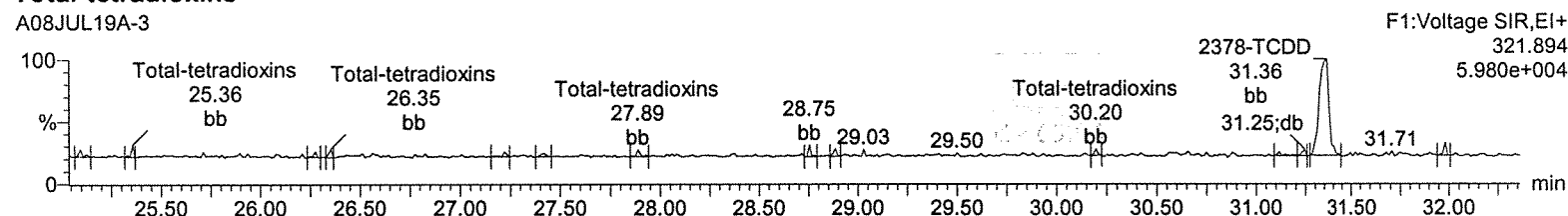
Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
Calibration: 09 Jul 2019 08:43:27

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

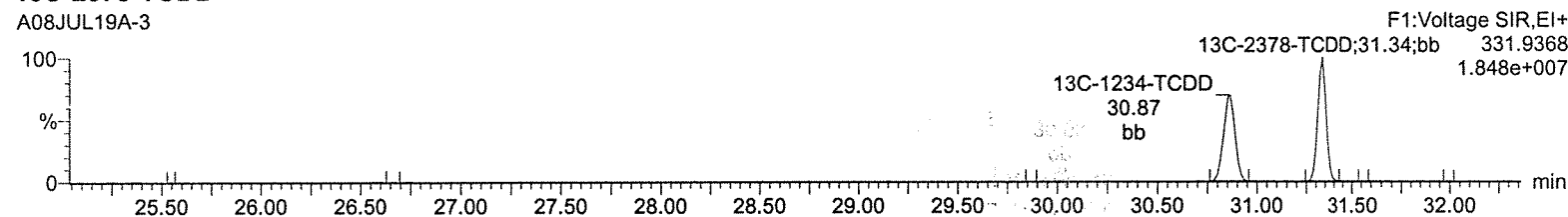
Total-tetradoxins



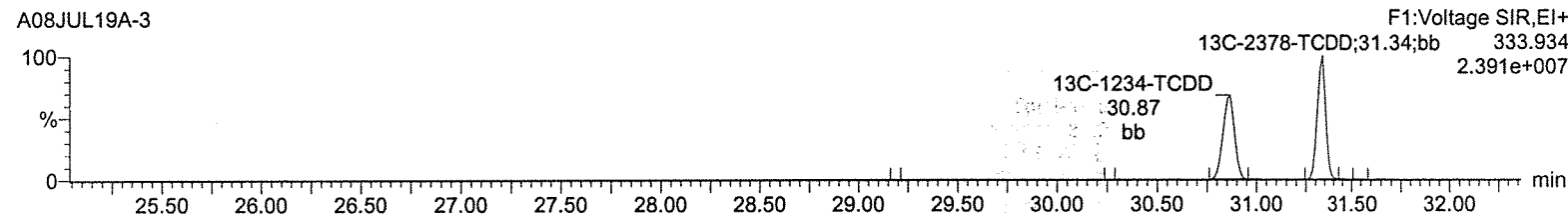
Total-tetradoxins



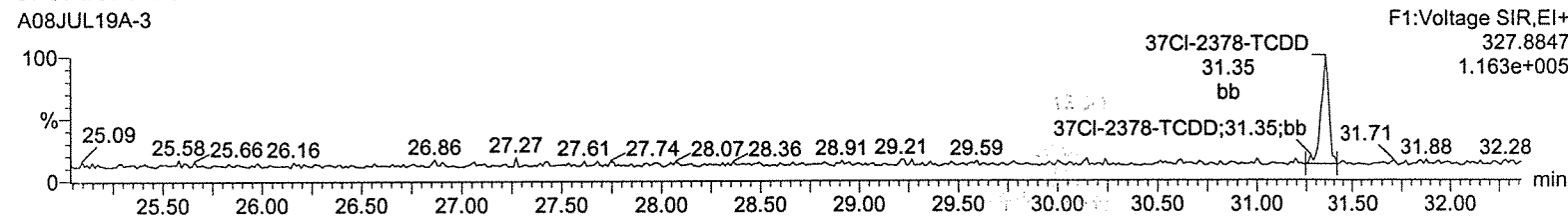
13C-2378-TCDD



13C-2378-TCDD



37Cl-2378-TCDD



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

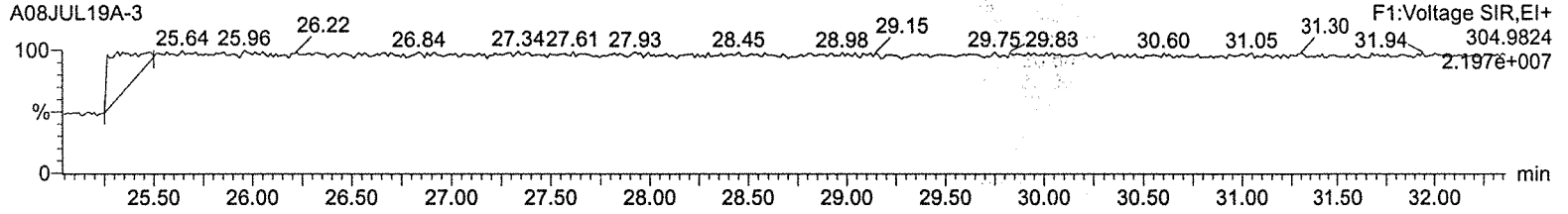
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Lock Mass F1

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

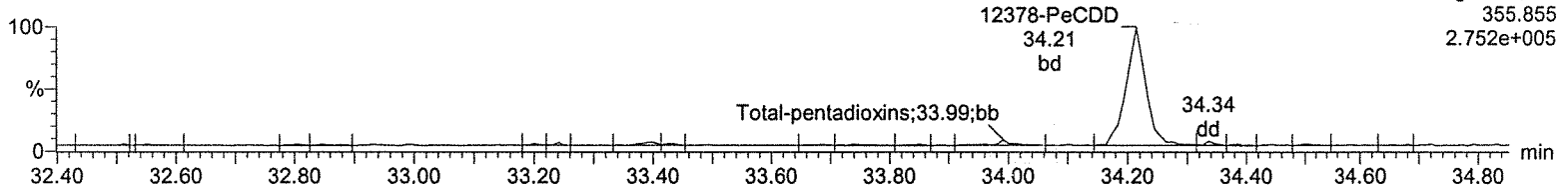
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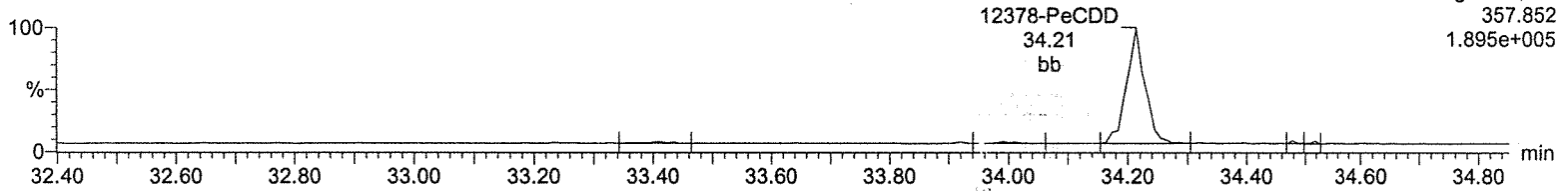
Total-pentadioxins

A08JUL19A-3



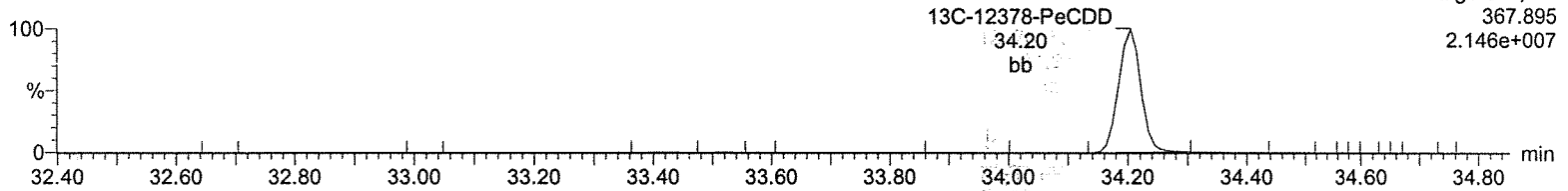
Total-pentadioxins

A08JUL19A-3



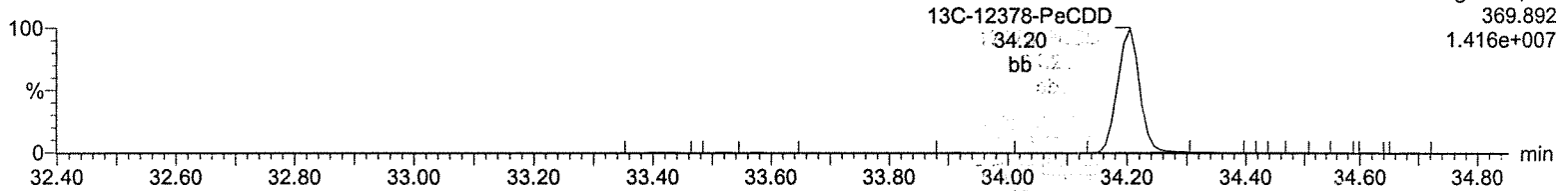
13C-12378-PeCDD

A08JUL19A-3



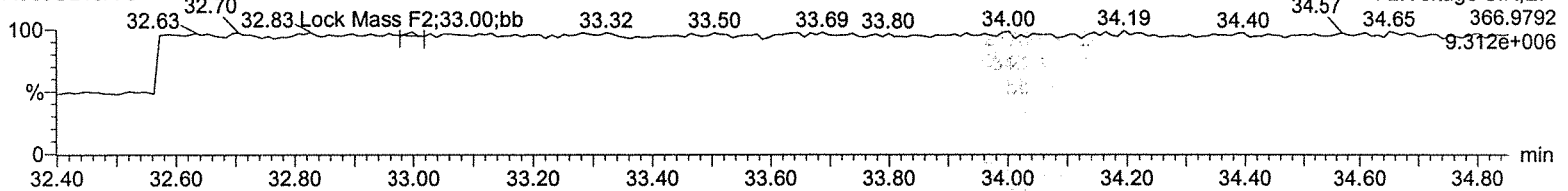
13C-12378-PeCDD

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

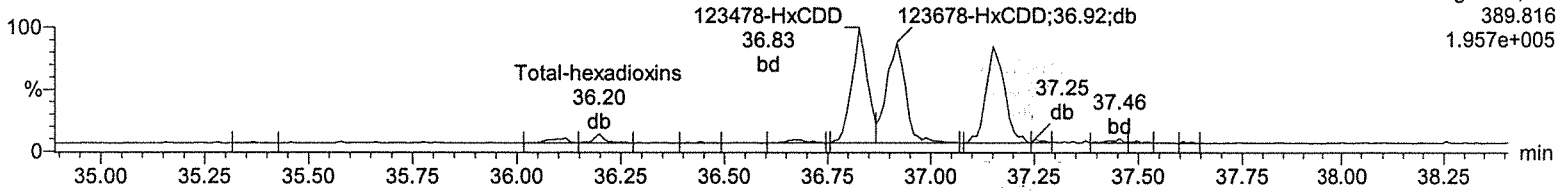
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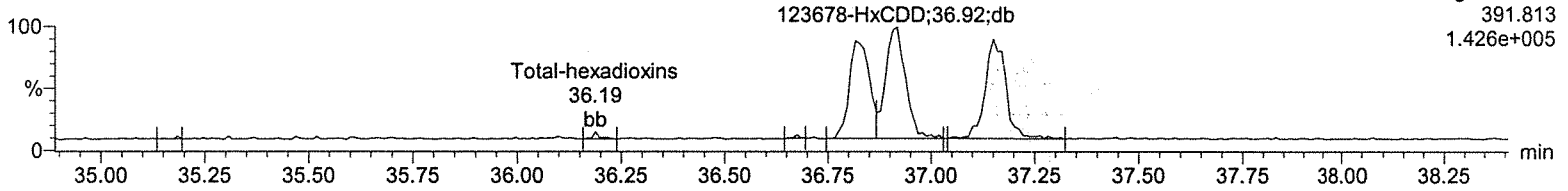
Total-hexadioxins

A08JUL19A-3



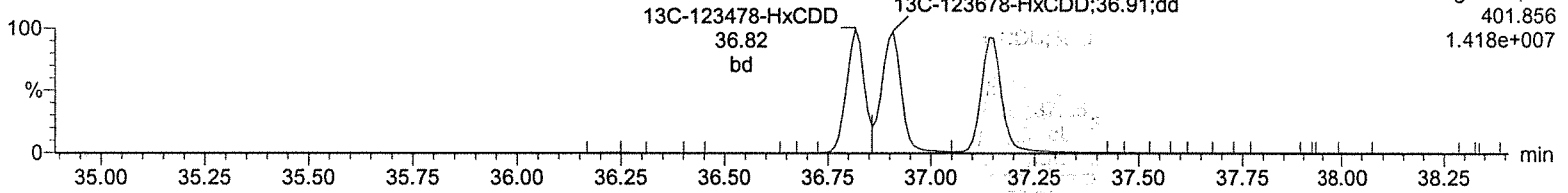
Total-hexadioxins

A08JUL19A-3



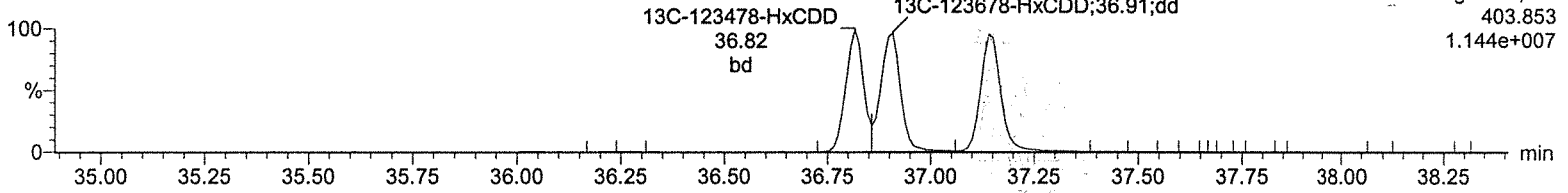
13C-123478-HxCDD

A08JUL19A-3



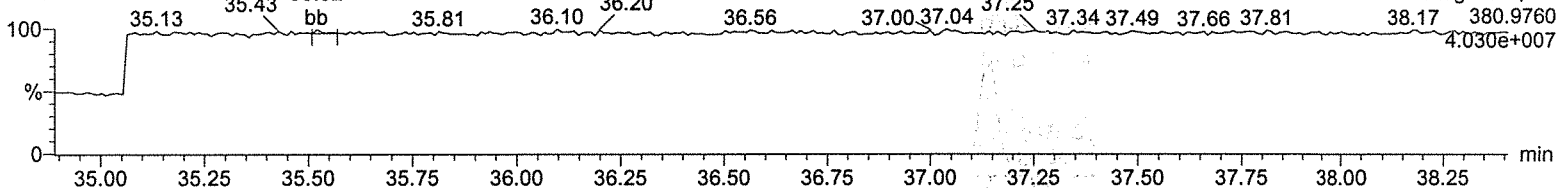
13C-123478-HxCDD

A08JUL19A-3



Lock Mass F3

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

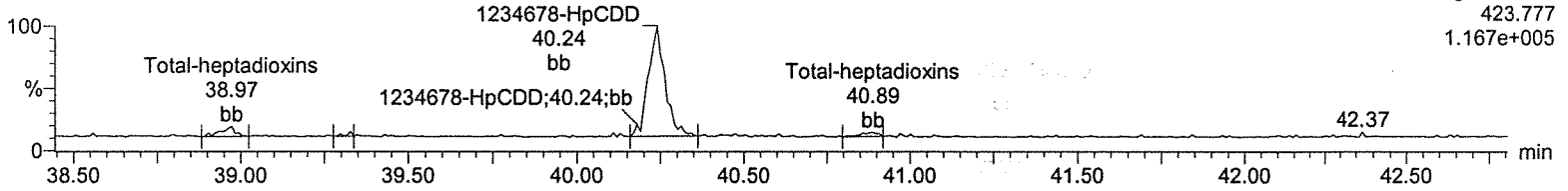
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Total-heptadioxins

A08JUL19A-3

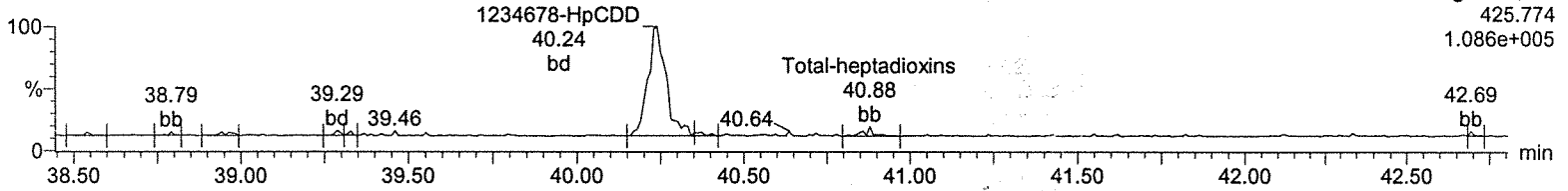
F4:Voltage SIR,EI+
423.777
1.167e+005



Total-heptadioxins

A08JUL19A-3

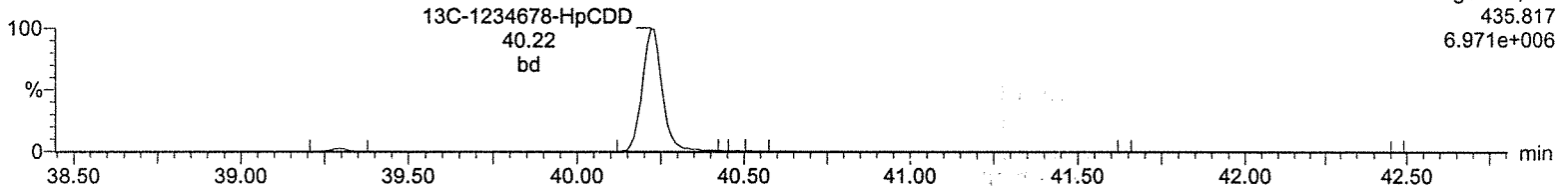
F4:Voltage SIR,EI+
425.774
1.086e+005



13C-1234678-HpCDD

A08JUL19A-3

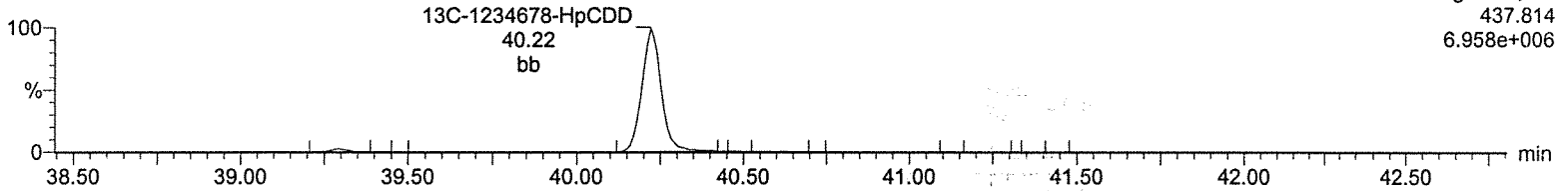
F4:Voltage SIR,EI+
435.817
6.971e+006



13C-1234678-HpCDD

A08JUL19A-3

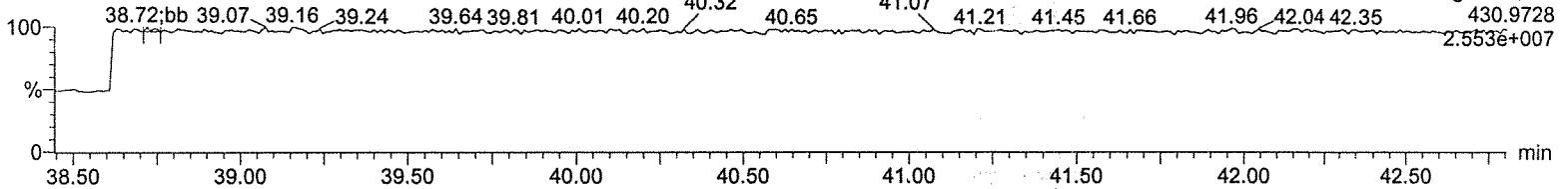
F4:Voltage SIR,EI+
437.814
6.958e+006



Lock Mass F4

A08JUL19A-3

F4:Voltage SIR,EI+
430.9728
2.553e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

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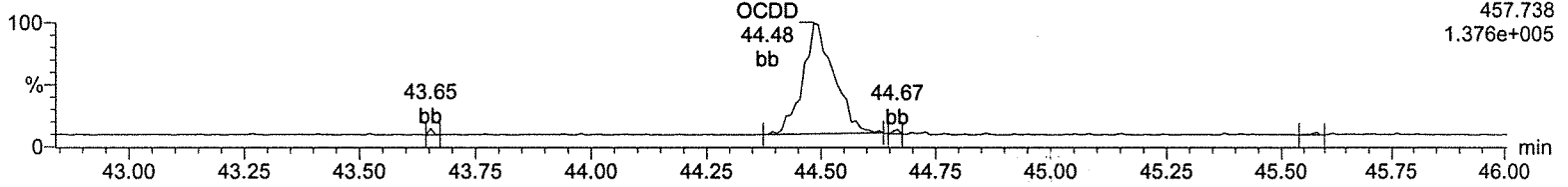
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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

OCDD

A08JUL19A-3

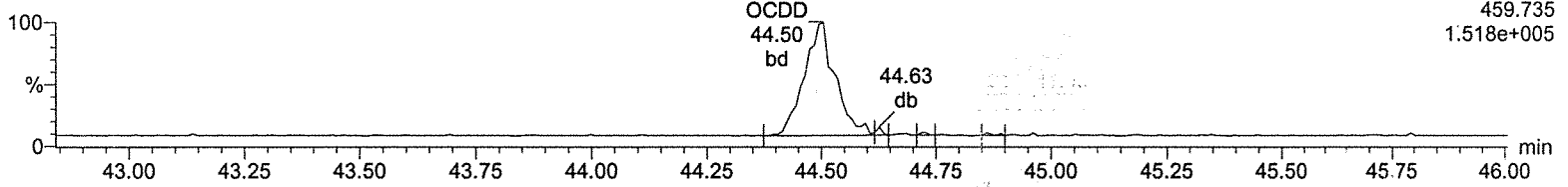
F5:Voltage SIR,EI+
457.738
1.376e+005



OCDD

A08JUL19A-3

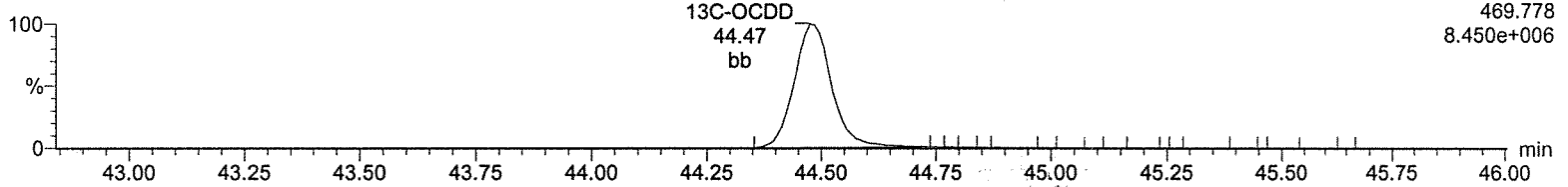
F5:Voltage SIR,EI+
459.735
1.518e+005



13C-OCDD

A08JUL19A-3

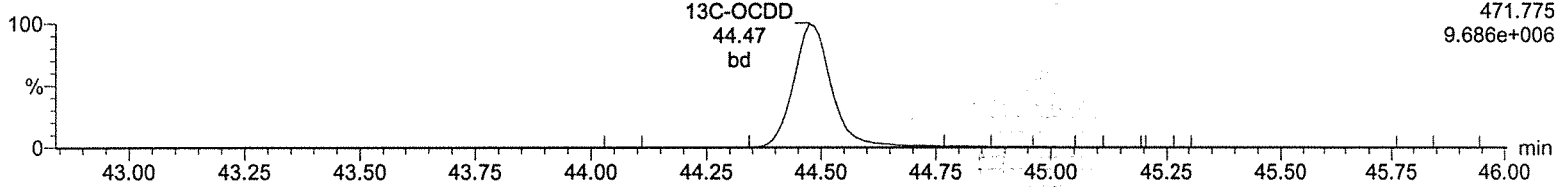
F5:Voltage SIR,EI+
469.778
8.450e+006



13C-OCDD

A08JUL19A-3

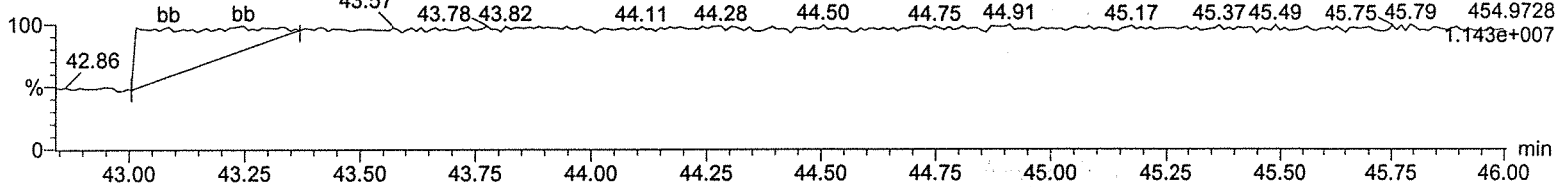
F5:Voltage SIR,EI+
471.775
9.686e+006



Lock Mass F5

A08JUL19A-3

F5:Voltage SIR,EI+
454.9728
1.143e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

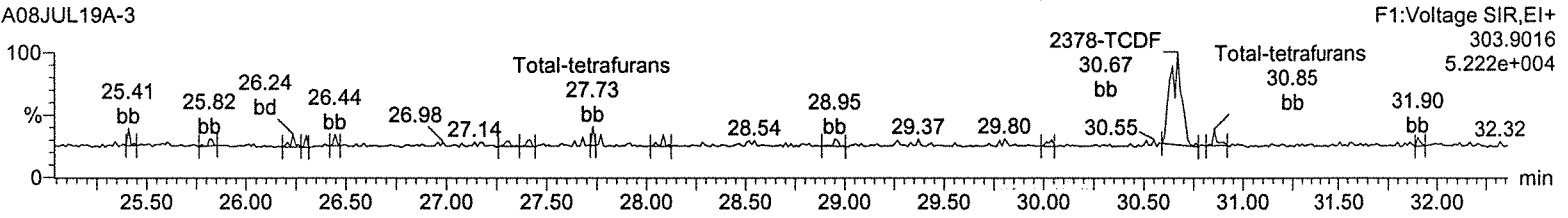
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

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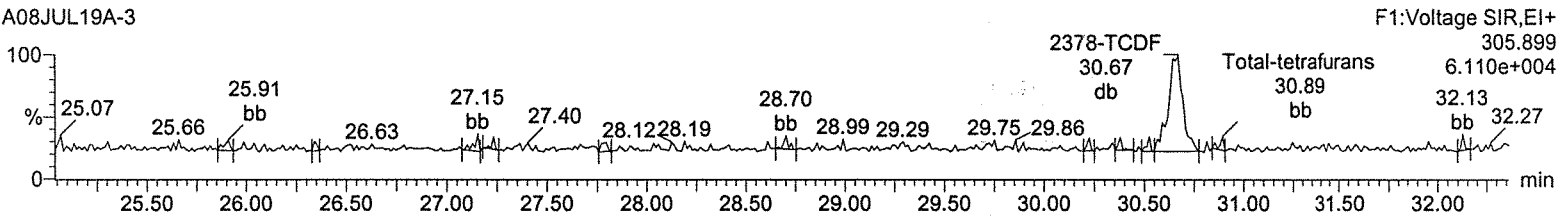
Total-tetrafurans

A08JUL19A-3



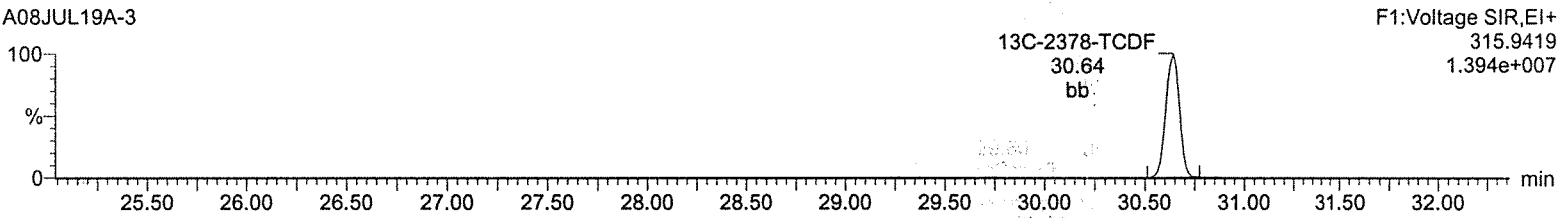
Total-tetrafurans

A08JUL19A-3



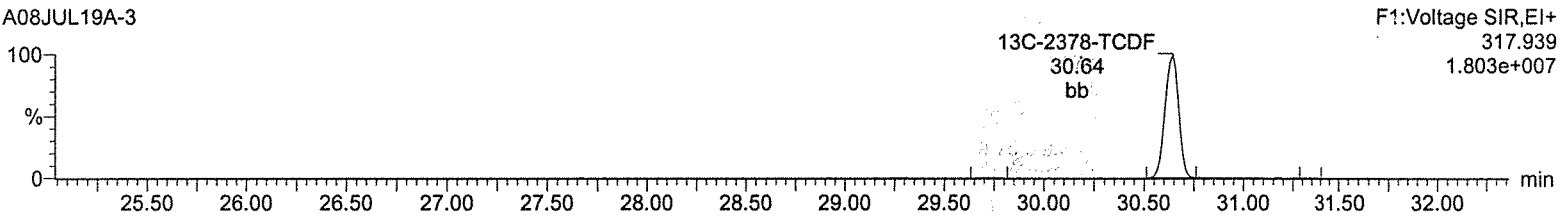
13C-2378-TCDF

A08JUL19A-3



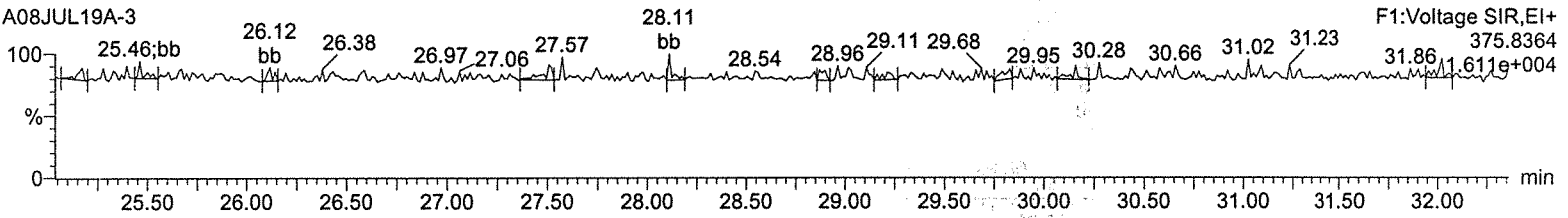
13C-2378-TCDF

A08JUL19A-3



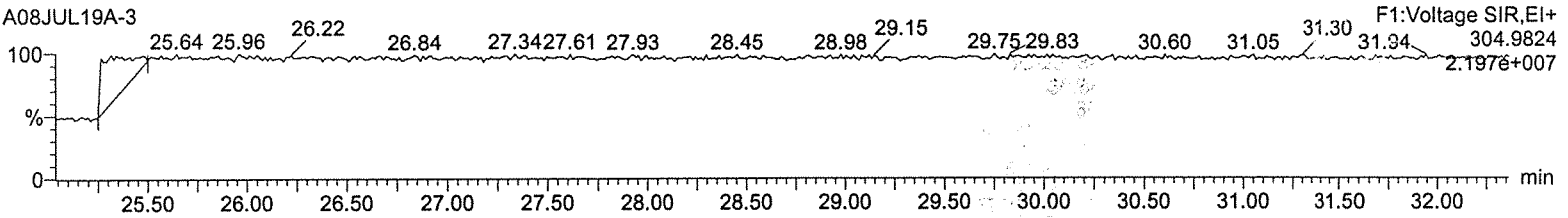
HxDPE

A08JUL19A-3



Lock Mass F1

A08JUL19A-3



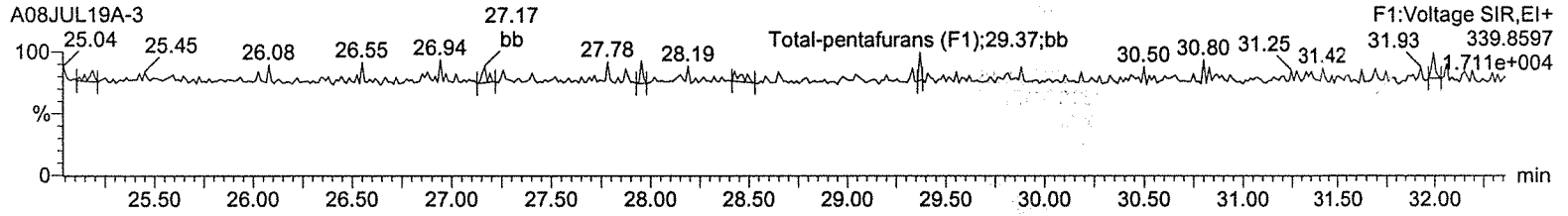
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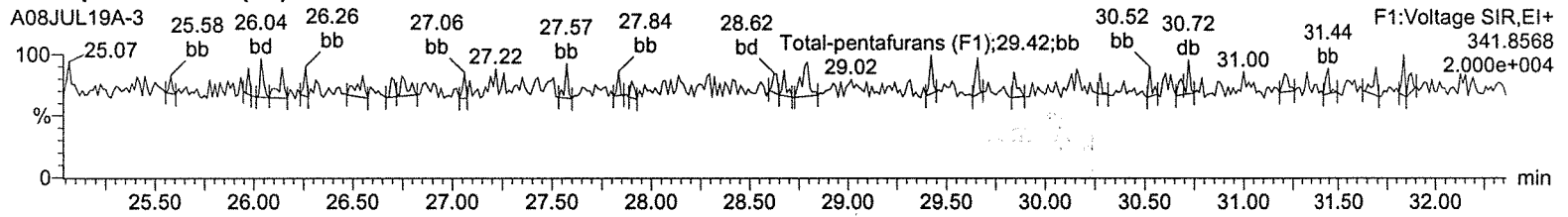
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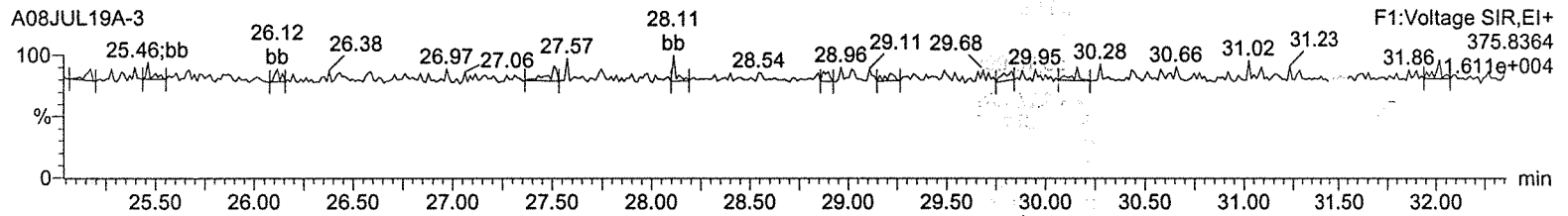
Total-pentafurans (F1)



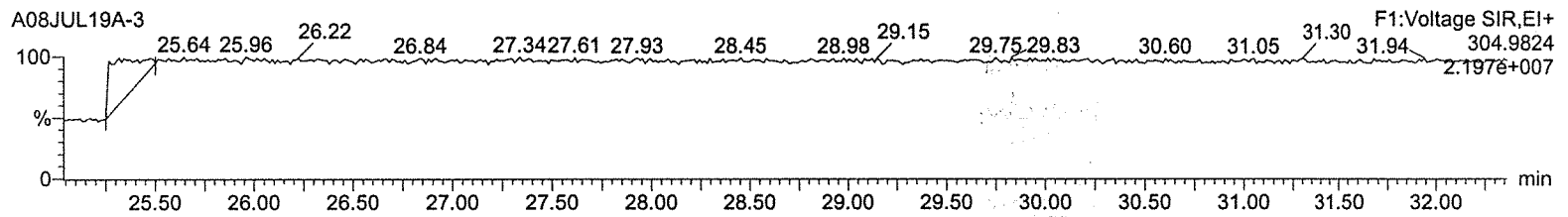
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

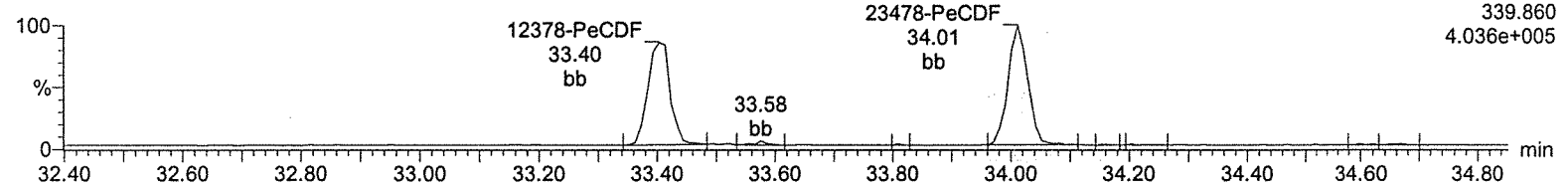
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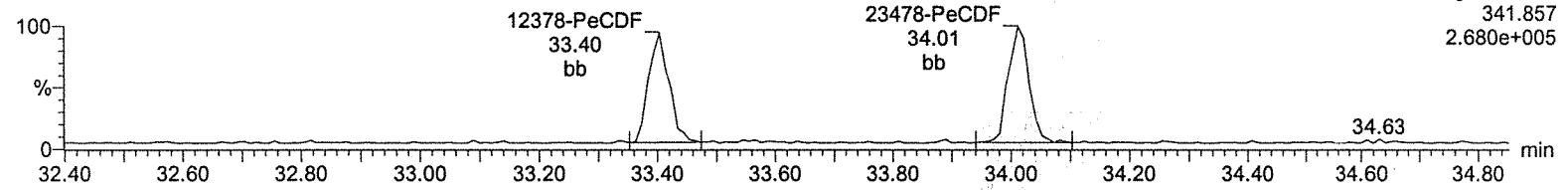
Total-pentafurans

A08JUL19A-3



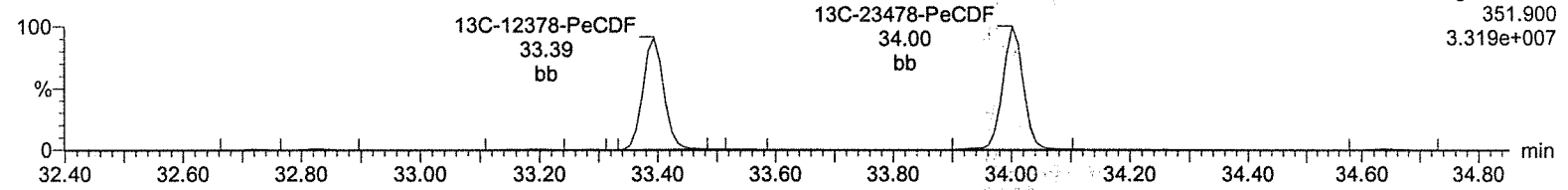
Total-pentafurans

A08JUL19A-3



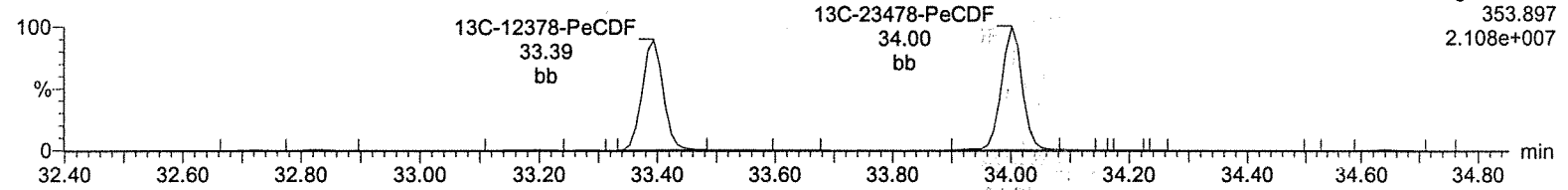
13C-12378-PeCDF

A08JUL19A-3



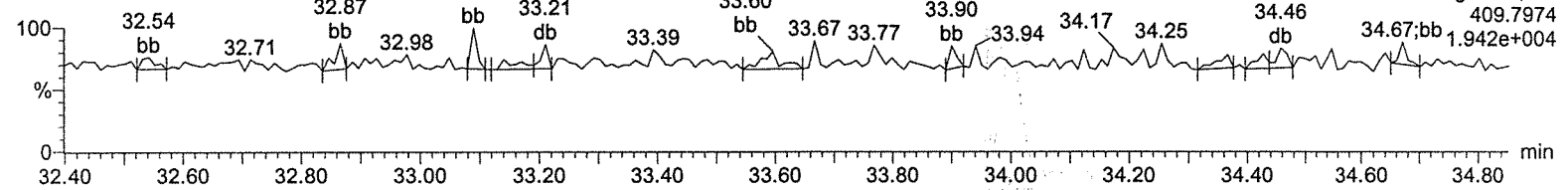
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A08JUL19A-3



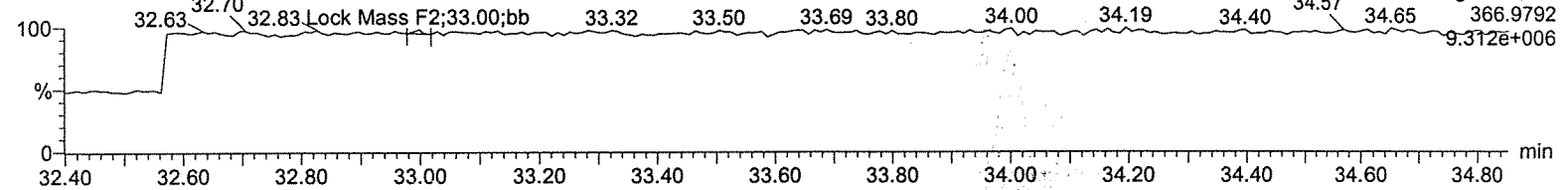
HpDPE

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

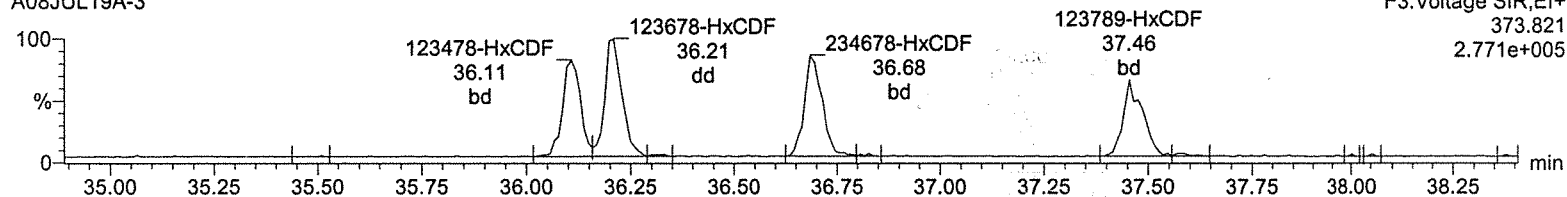
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

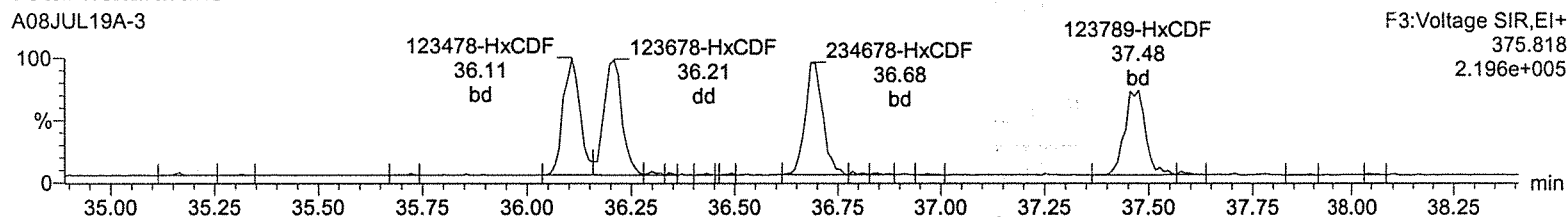
Total-hexafurans

A08JUL19A-3



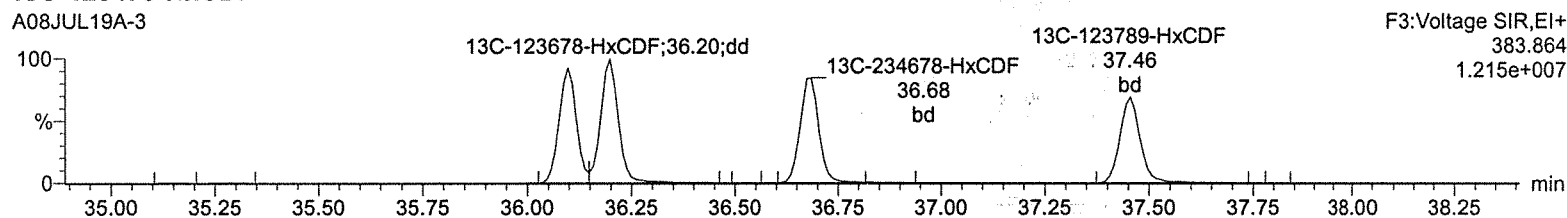
Total-hexafurans

A08JUL19A-3



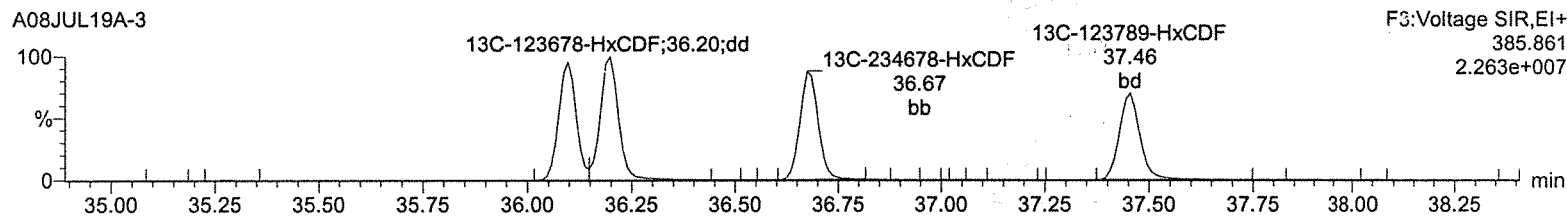
13C-123478-HxCDF

A08JUL19A-3



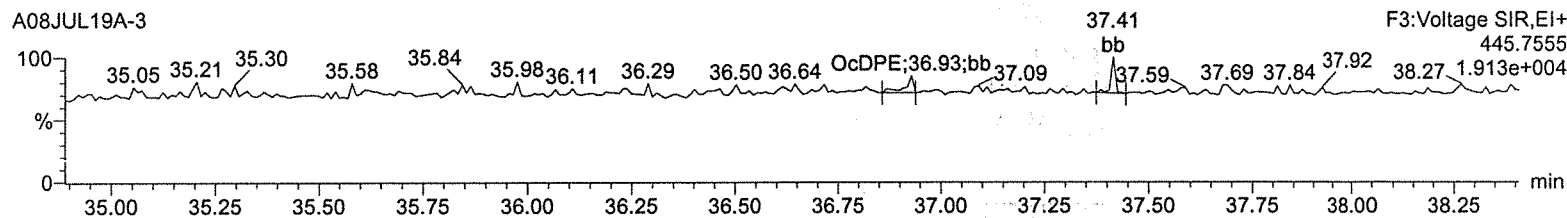
13C-123478-HxCDF

A08JUL19A-3



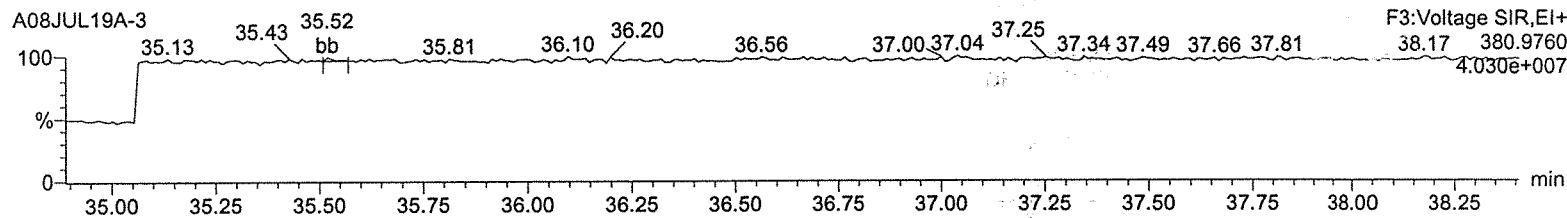
OcDPE

A08JUL19A-3



Lock Mass F3

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

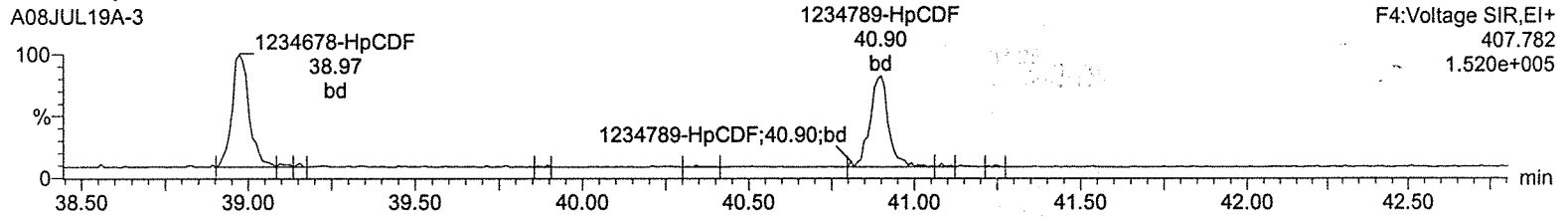
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

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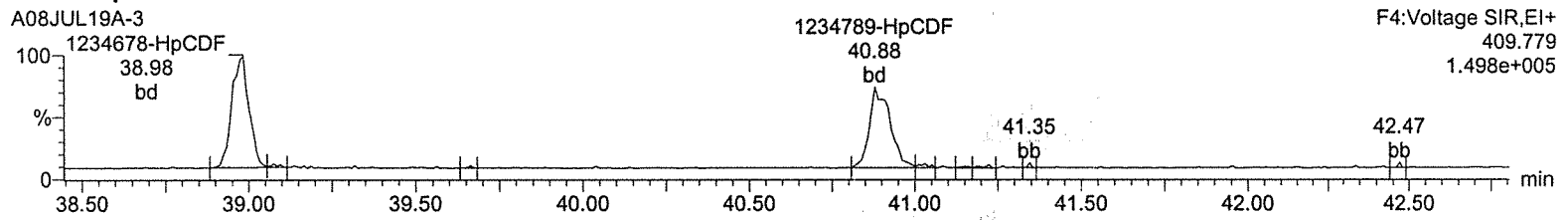
Total-heptafurans

A08JUL19A-3



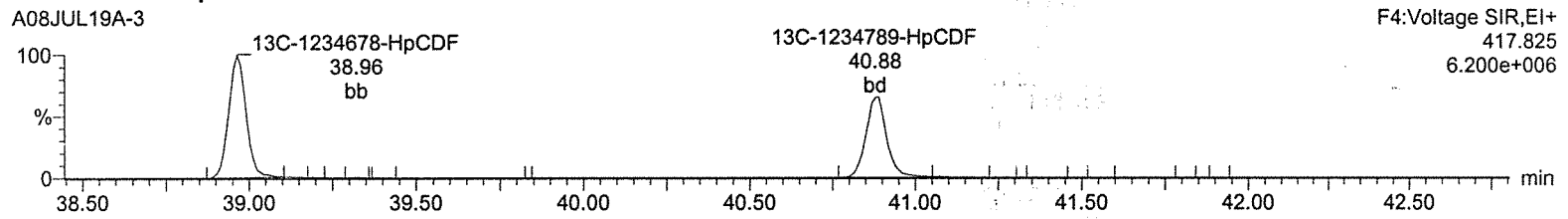
Total-heptafurans

A08JUL19A-3



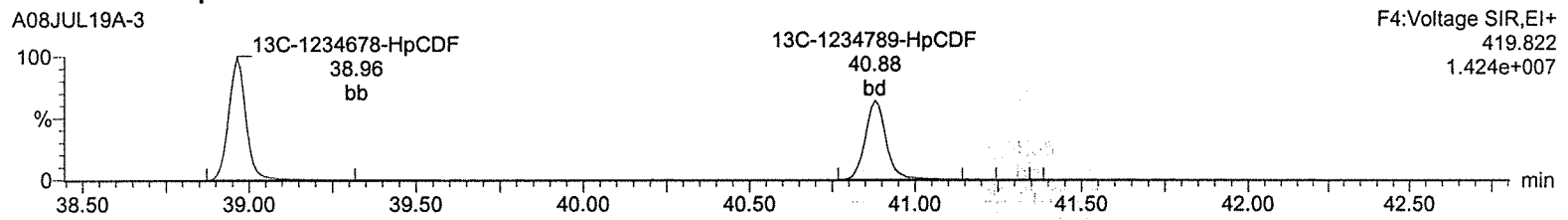
13C-1234678-HpCDF

A08JUL19A-3



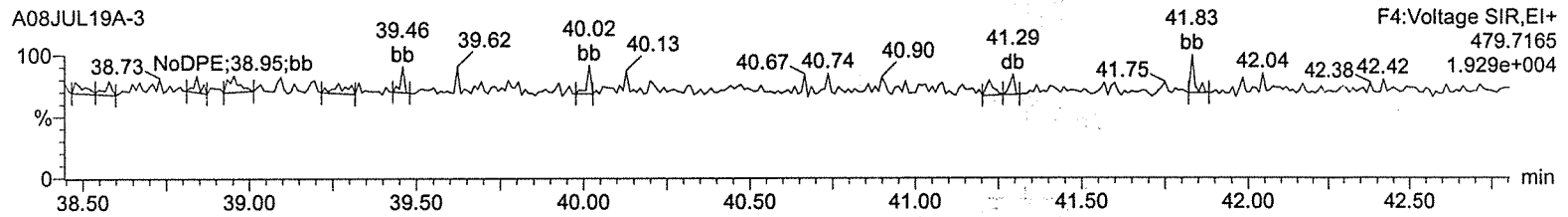
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A08JUL19A-3



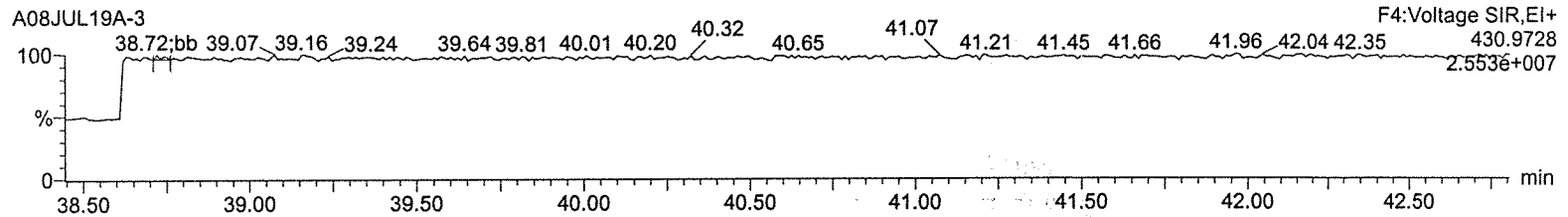
NoDPE

A08JUL19A-3



Lock Mass F4

A08JUL19A-3



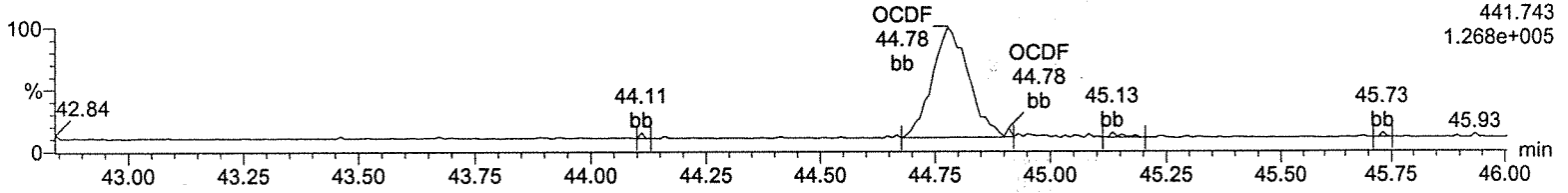
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Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

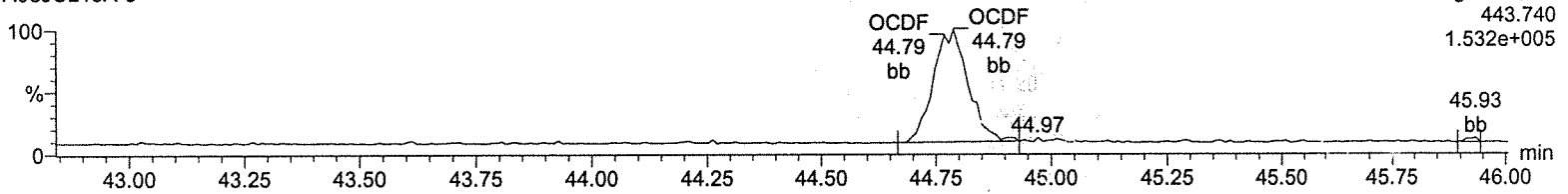
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A08JUL19A-3



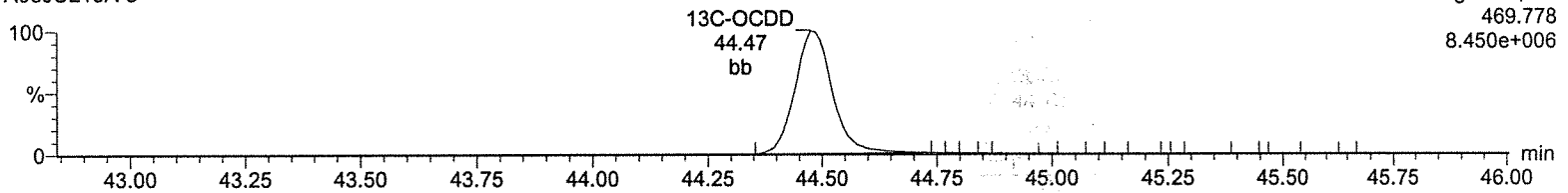
OCDF

A08JUL19A-3



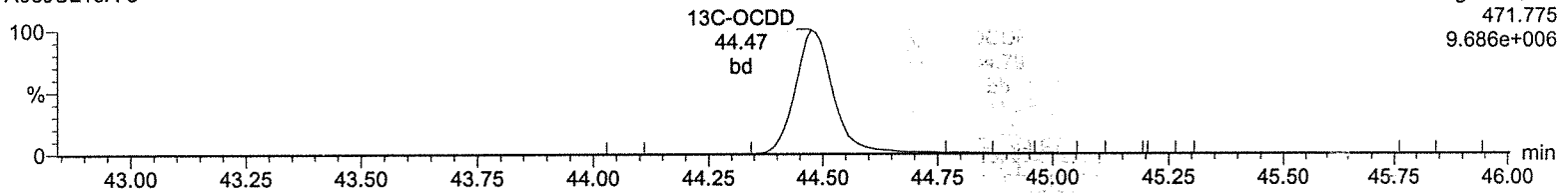
13C-OCDD

A08JUL19A-3



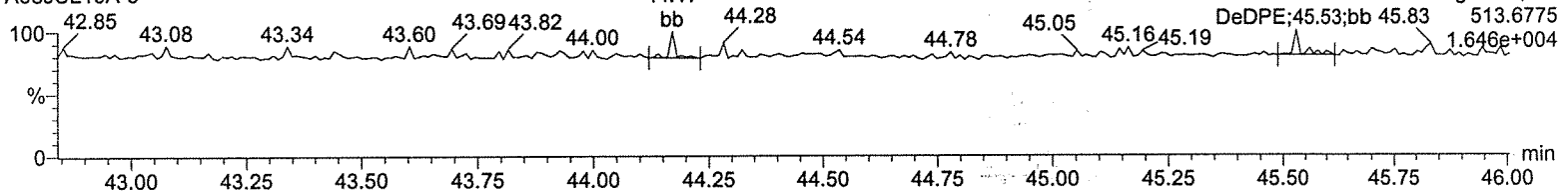
13C-OCDD

A08JUL19A-3



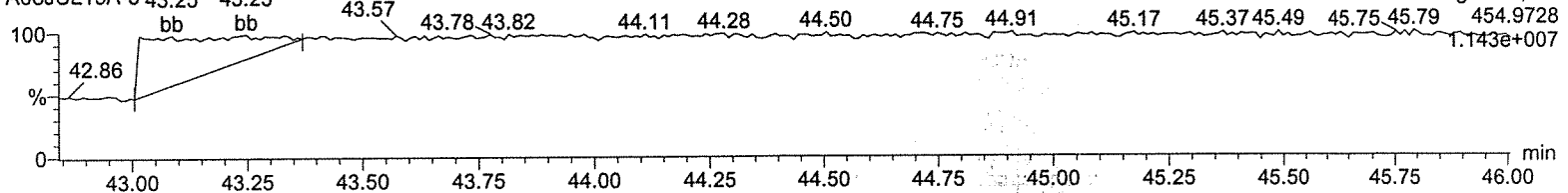
DeDPE

A08JUL19A-3



Lock Mass F5

A08JUL19A-3



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

7/21/19

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.57e3	4.22e3	7.80e3	31.36	1.001	0.85	NO	0.465	0.823	0.884	5.07	0.0381	8.65e4	2341	36.9	7.83e4	1703	45.9	bb	bd
2	12378-PeCDD	1.58e4	9.75e3	2.55e4	34.22	1.000	1.62	NO	2.444	0.834	0.853	1.65	0.0498	3.90e5	2742	142.4	2.48e5	1479	167.7	bd	bb
3	123478-HxCDD	1.23e4	1.02e4	2.25e4	36.84	1.000	1.21	NO	2.373	0.892	0.940	3.11	0.0590	2.55e5	2027	125.9	2.33e5	1848	125.8	bd	bd
4	123678-HxCDD	1.38e4	1.18e4	2.56e4	36.92	1.000	1.16	NO	2.463	0.930	0.944	2.57	0.0565	2.81e5	2027	138.8	2.54e5	1848	137.3	dd	dd
5	123789-HxCDD	1.28e4	1.04e4	2.32e4	37.16	1.007	1.24	NO	2.375	0.881	0.927	3.30	0.0586	2.66e5	2027	131.4	2.12e5	1848	114.5	bd	dd
6	1234678-HpCDD	9.30e3	9.39e3	1.87e4	40.25	1.000	0.99	NO	2.381	0.991	1.040	2.88	0.0813	1.41e5	1799	78.5	1.51e5	1462	103.4	bb	bd
7	OCDD	1.59e4	1.70e4	3.29e4	44.49	1.000	0.93	NO	4.867	0.946	0.971	2.39	0.153	1.93e5	1820	106.0	1.82e5	1858	97.7	bd	bb
8	2378-TCDF	4.46e3	5.19e3	9.65e3	30.67	1.001	0.86	NO	0.468	0.916	0.978	5.59	0.0667	7.01e4	2698	26.0	7.50e4	3399	22.1	bb	bb
9	12378-PeCDF	2.14e4	1.57e4	3.71e4	33.41	1.000	1.36	NO	2.350	0.888	0.945	3.41	0.0418	5.52e5	2463	223.9	3.85e5	3187	120.8	bd	bb
10	23478-PeCDF	2.55e4	1.61e4	4.16e4	34.02	1.000	1.58	NO	2.465	0.973	0.987	3.73	0.0389	6.39e5	2463	259.3	4.09e5	3187	128.4	bb	bd
11	123478-HxCDF	1.80e4	1.52e4	3.32e4	36.11	1.000	1.18	NO	2.413	1.049	1.087	3.86	0.0490	3.72e5	2602	143.0	3.37e5	2286	147.4	bd	bd
12	123678-HxCDF	1.83e4	1.55e4	3.38e4	36.22	1.000	1.18	NO	2.347	0.977	1.041	3.23	0.0513	4.45e5	2602	170.9	3.20e5	2286	139.8	db	db
13	234678-HxCDF	1.88e4	1.48e4	3.36e4	36.69	1.000	1.27	NO	2.436	1.107	1.136	3.17	0.0512	3.63e5	2602	139.4	3.00e5	2286	131.3	bd	bd
14	123789-HxCDF	1.51e4	1.25e4	2.76e4	37.47	1.000	1.21	NO	2.437	1.034	1.061	2.29	0.0691	2.81e5	2602	108.0	2.34e5	2286	102.5	bb	bd
15	1234678-HpCDF	1.32e4	1.44e4	2.75e4	38.98	1.000	0.92	NO	2.449	1.126	1.150	3.86	0.0571	2.36e5	1436	164.0	2.50e5	2218	112.8	bb	bd
16	1234789-HpCDF	1.11e4	1.12e4	2.24e4	40.89	1.000	0.99	NO	2.471	1.188	1.202	1.91	0.0865	1.56e5	1436	108.6	1.54e5	2218	69.5	bd	bd
17	OCDF	1.74e4	1.92e4	3.66e4	44.81	1.007	0.90	NO	4.644	1.052	1.133	6.78	0.201	1.76e5	3765	46.8	2.08e5	1885	110.1	bd	bb
18	13C-2378-TCDD	8.21e5	1.07e6	1.89e6	31.34	1.015	0.77	NO	96.744	1.092	1.128	2.36	0.138	1.56e7	9025	1728.5	2.08e7	4935	4206.5	bb	bb
19	13C-2378-PeCDD	7.37e5	4.88e5	1.22e6	34.21	1.109	1.51	NO	93.933	0.706	0.751	5.03	0.138	1.79e7	3968	4522.8	1.17e7	5328	2187.5	bb	bb
20	13C-123478-HxCDD	5.54e5	4.55e5	1.01e6	36.83	0.991	1.22	NO	101.285	0.908	0.896	1.38	0.180	1.15e7	5441	2114.1	9.33e6	5749	1623.8	bd	bd
21	13C-123678-HxCDD	6.06e5	4.95e5	1.10e6	36.91	0.993	1.22	NO	100.379	0.990	0.986	0.84	0.163	1.20e7	5441	2206.7	9.90e6	5749	1721.4	dd	dd
22	13C-1234678-HpCDD	3.80e5	3.75e5	7.55e5	40.23	1.083	1.01	NO	101.038	0.679	0.672	1.29	0.265	5.82e6	6152	946.8	5.53e6	6204	892.2	bb	bd
23	13C-OCDD	6.49e5	7.44e5	1.39e6	44.49	1.197	0.87	NO	195.027	0.626	0.642	4.87	0.267	6.93e6	5999	1155.6	8.01e6	5912	1355.8	bd	bd
24	13C-2378-TCDF	9.11e5	1.20e6	2.11e6	30.64	0.993	0.76	NO	97.118	1.214	1.250	1.88	0.194	1.21e7	14708	823.8	1.61e7	7000	2294.6	bb	bb
25	13C-12378-PeCDF	1.02e6	6.53e5	1.67e6	33.40	1.082	1.56	NO	95.178	0.962	1.011	4.24	0.227	2.62e7	15253	1715.1	1.64e7	5304	3093.6	bb	bd
26	13C-23478-PeCDF	1.05e6	6.60e5	1.71e6	34.01	1.102	1.59	NO	92.689	0.985	1.063	5.28	0.216	2.71e7	15253	1776.2	1.71e7	5304	3222.8	db	db
27	13C-123478-HxCDF	4.33e5	8.34e5	1.27e6	36.11	0.972	0.52	NO	102.576	1.139	1.111	1.42	0.257	9.40e6	8141	1154.2	1.76e7	11678	1502.8	bd	bd
28	13C-123678-HxCDF	4.78e5	9.08e5	1.39e6	36.21	0.975	0.53	NO	99.908	1.246	1.247	1.06	0.229	9.47e6	8141	1163.6	1.83e7	11678	1564.1	dd	db
29	13C-234678-HxCDF	4.19e5	7.95e5	1.21e6	36.69	0.988	0.53	NO	100.882	1.092	1.082	1.01	0.263	8.70e6	8141	1069.1	1.65e7	11678	1414.7	bb	bb
30	13C-123789-HxCDF	3.73e5	6.94e5	1.07e6	37.46	1.008	0.54	NO	99.201	0.959	0.967	1.08	0.295	6.99e6	8141	859.2	1.29e7	11678	1106.7	bd	bb
31	13C-1234678-HpCDF	3.03e5	6.75e5	9.78e5	38.97	1.049	0.45	NO	101.064	0.879	0.870	1.11	0.205	5.17e6	5374	961.9	1.14e7	7011	1632.7	bb	bb
32	13C-1234789-HpCDF	2.33e5	5.21e5	7.54e5	40.89	1.101	0.45	NO	100.102	0.678	0.677	1.01	0.263	3.26e6	5374	606.3	7.49e6	7011	1069.0	bd	bb
33	13C-1234-TCDD	7.57e5	9.78e5	1.74e6	30.87	0.000	0.77	NO	100.000	1.000	1.000	0.00	0.156	1.17e7	9025	1300.0	1.53e7	4935	3106.6	bb	bb
34	13C-123789-HxCDD	6.11e5	5.01e5	1.11e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.161	1.15e7	5441	2105.6	9.54e6	5749	1659.5	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Cr#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	8.78e3	8.78e3	8.78e3	31.35	1.016			0.477	1.012	1.061	4.54	0.0460	1.91e5	4378	43.7				M	M2	
																						bb

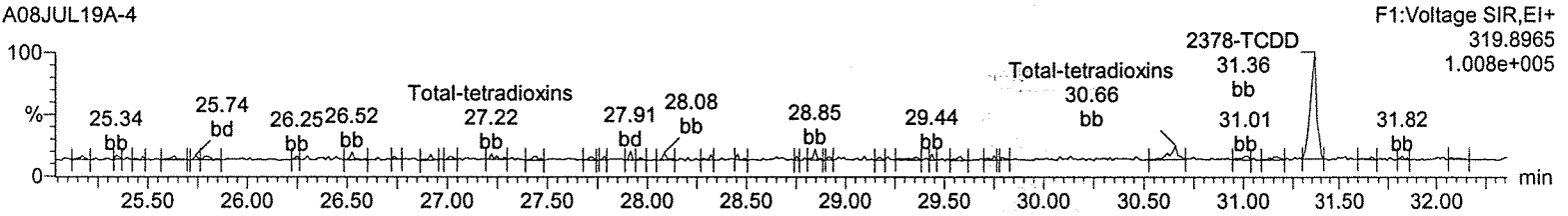
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Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

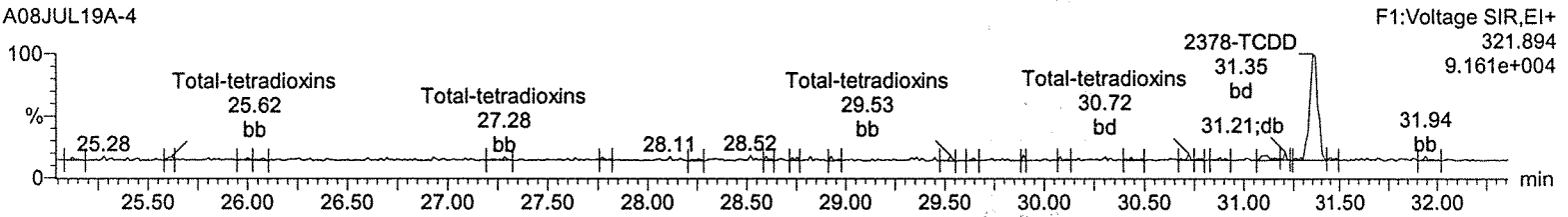
Total-tetradoxins

A08JUL19A-4



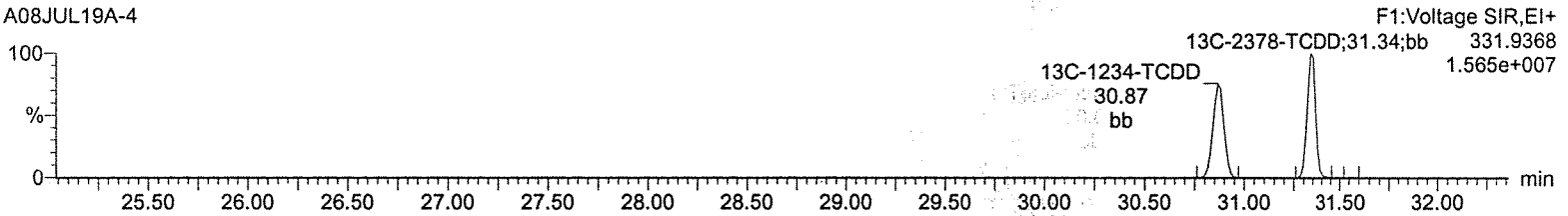
Total-tetradoxins

A08JUL19A-4



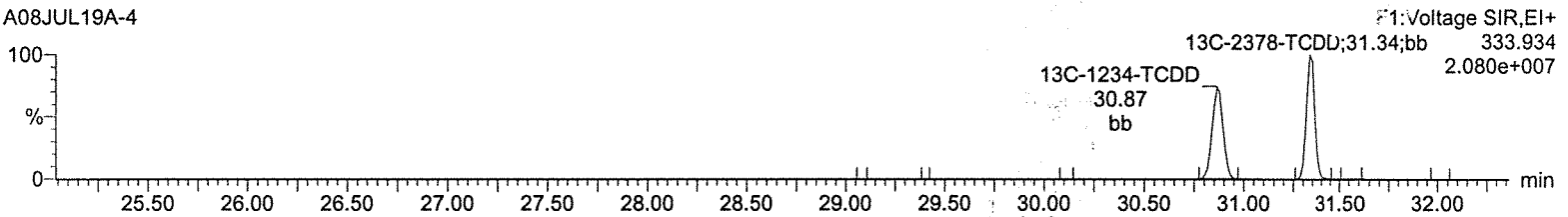
13C-2378-TCDD

A08JUL19A-4



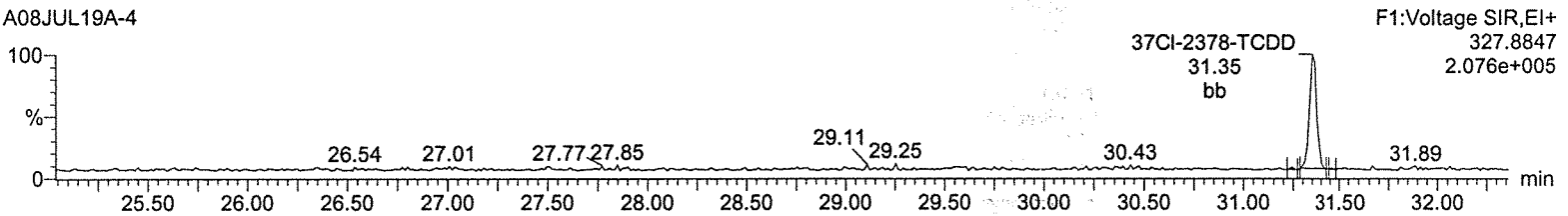
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A08JUL19A-4



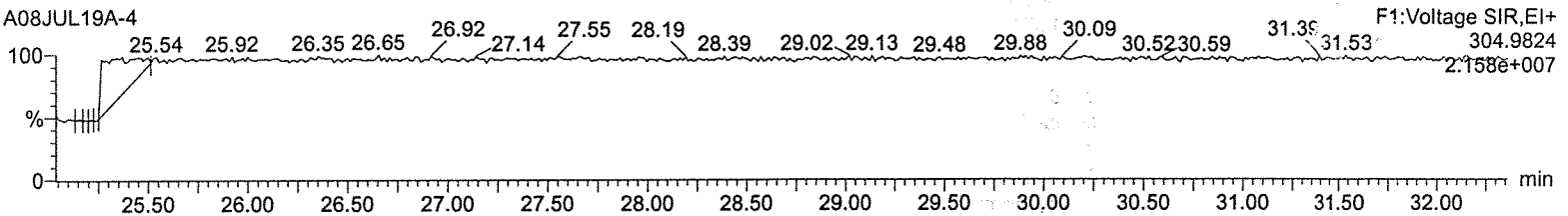
37Cl-2378-TCDD

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

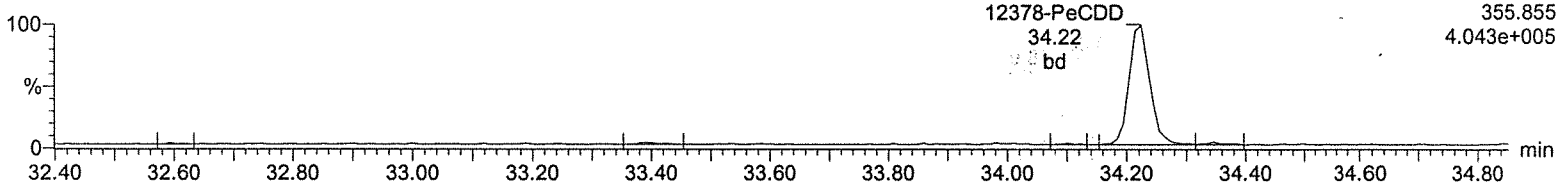
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

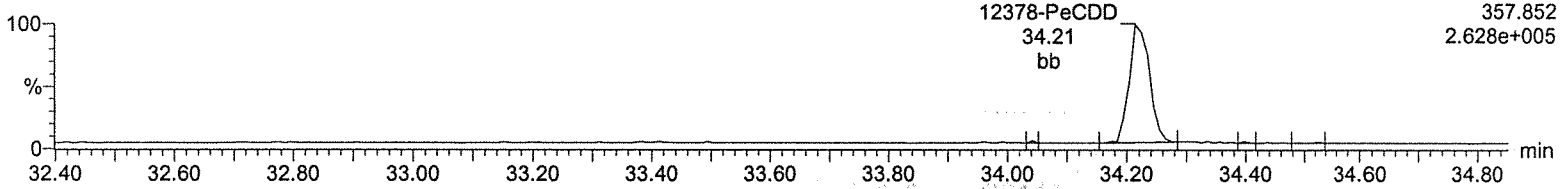
Total-pentadioxins

A08JUL19A-4



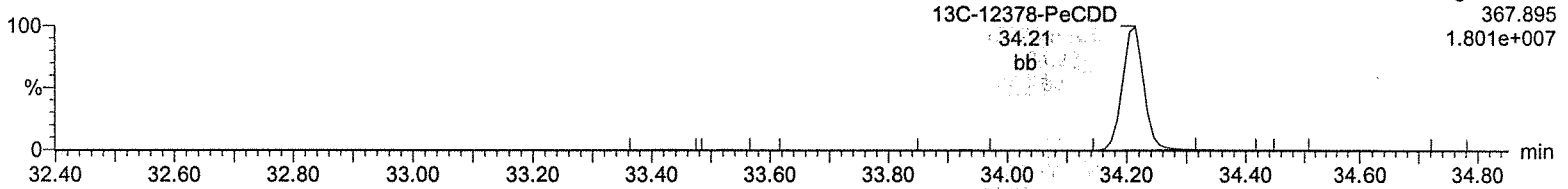
Total-pentadioxins

A08JUL19A-4



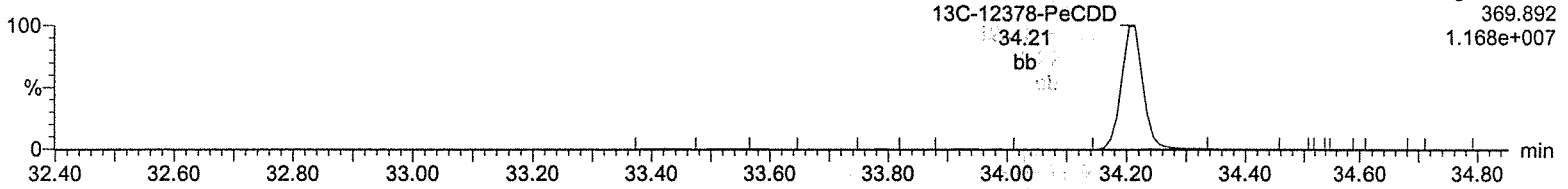
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A08JUL19A-4



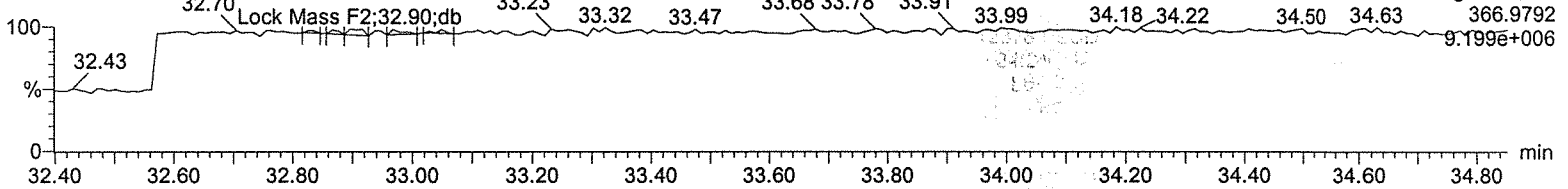
13C-12378-PeCDD

A08JUL19A-4



Lock Mass F2

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

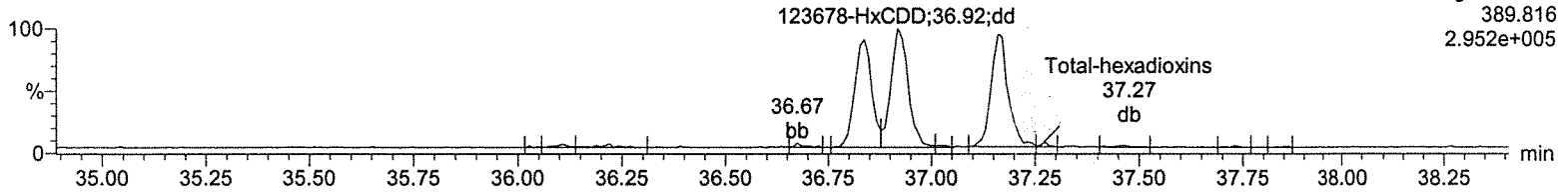
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexadioxins

A08JUL19A-4

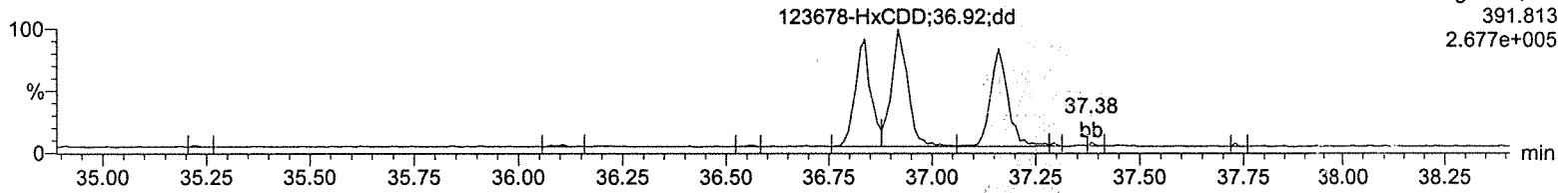
F3:Voltage SIR,EI+
389.816
2.952e+005



Total-hexadioxins

A08JUL19A-4

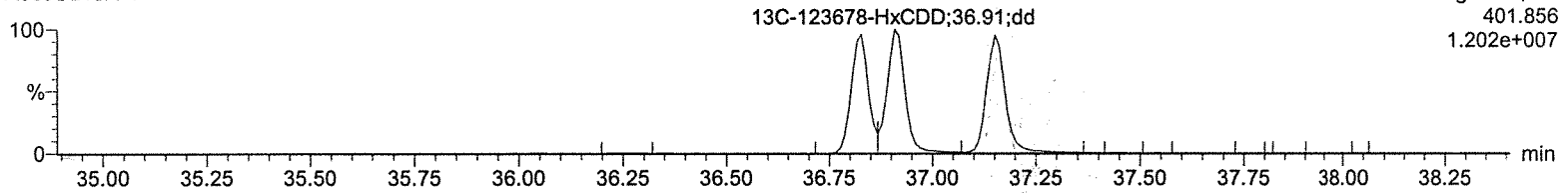
F3:Voltage SIR,EI+
391.813
2.677e+005



13C-123478-HxCDD

A08JUL19A-4

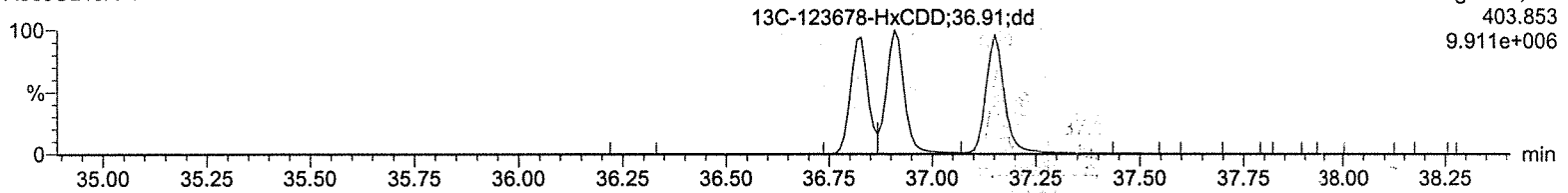
F3:Voltage SIR,EI+
401.856
1.202e+007



13C-123478-HxCDD

A08JUL19A-4

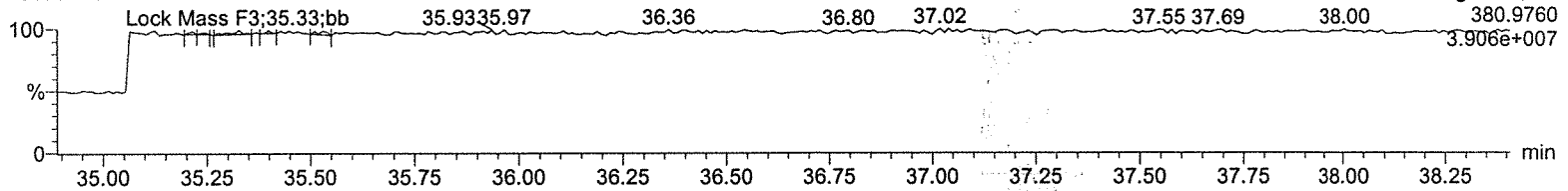
F3:Voltage SIR,EI+
403.853
9.911e+006



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

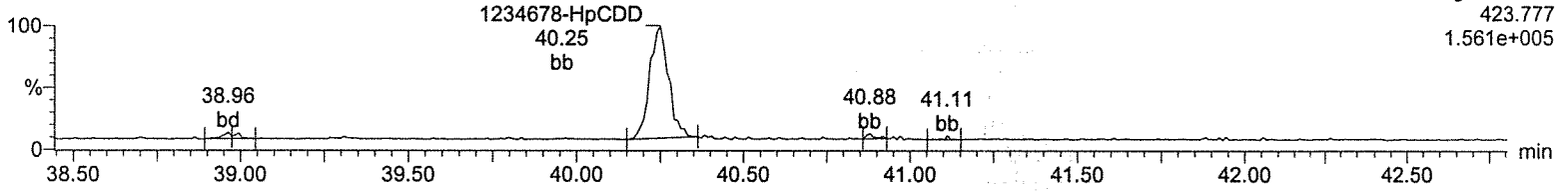
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptadioxins

A08JUL19A-4

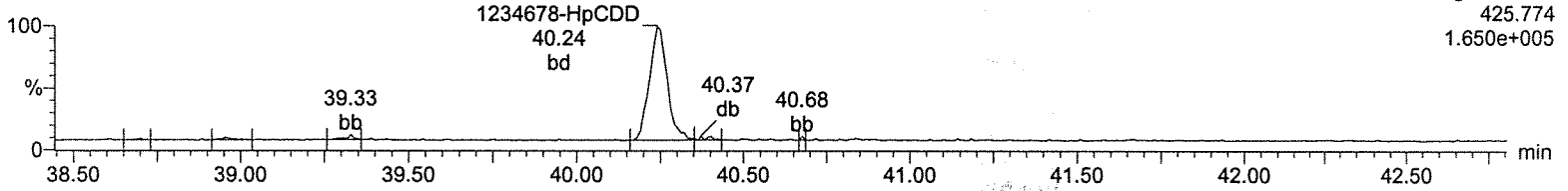
F4:Voltage SIR,EI+
423.777
1.561e+005



Total-heptadioxins

A08JUL19A-4

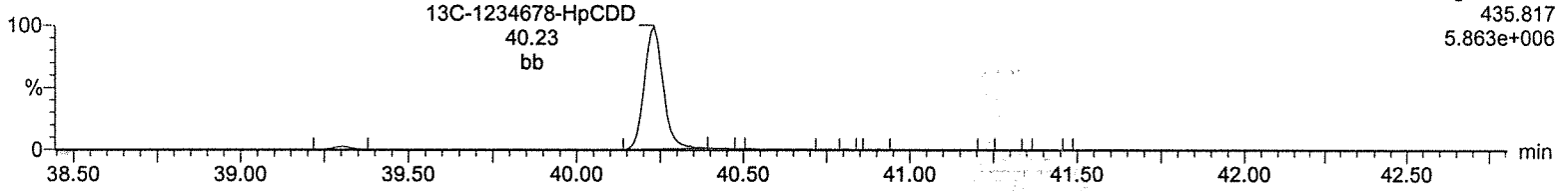
F4:Voltage SIR,EI+
425.774
1.650e+005



13C-1234678-HpCDD

A08JUL19A-4

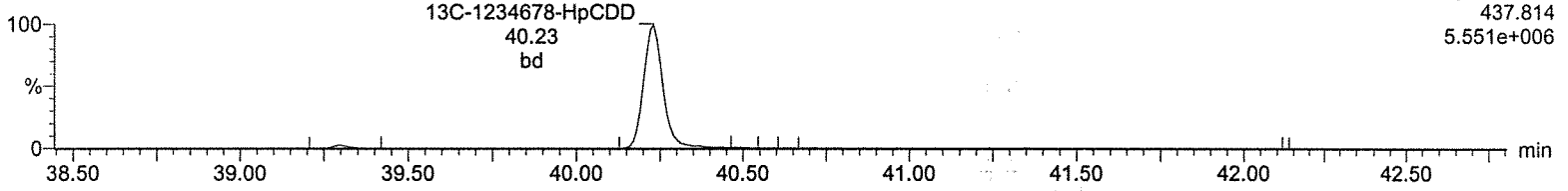
F4:Voltage SIR,EI+
435.817
5.863e+006



13C-1234678-HpCDD

A08JUL19A-4

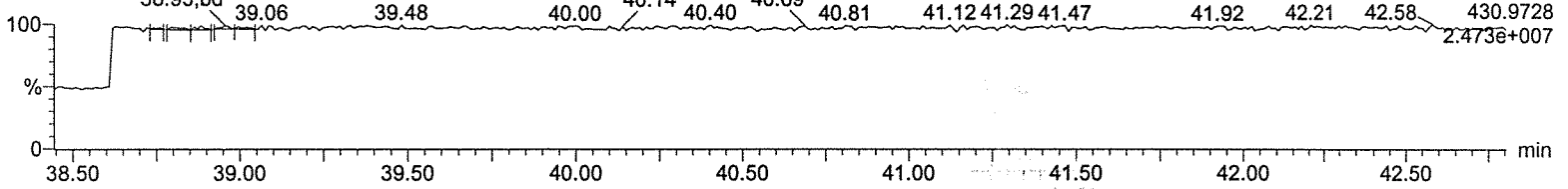
F4:Voltage SIR,EI+
437.814
5.551e+006



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

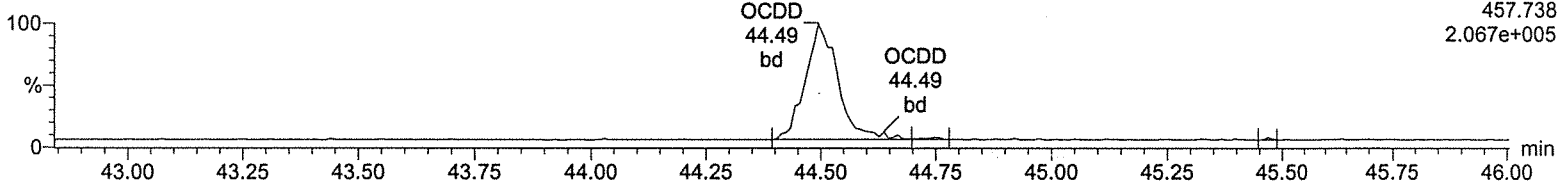
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

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OCDD

A08JUL19A-4

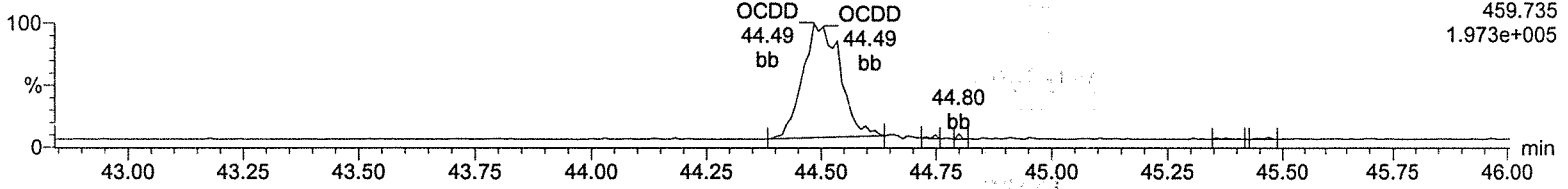
F5:Voltage SIR,EI+
457.738
2.067e+005



OCDD

A08JUL19A-4

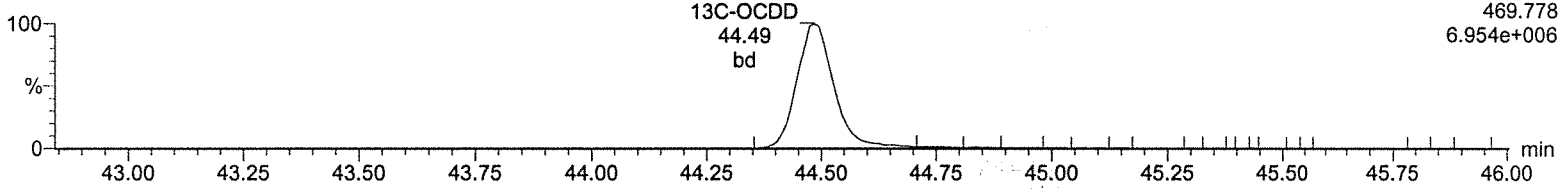
F5:Voltage SIR,EI+
459.735
1.973e+005



13C-OCDD

A08JUL19A-4

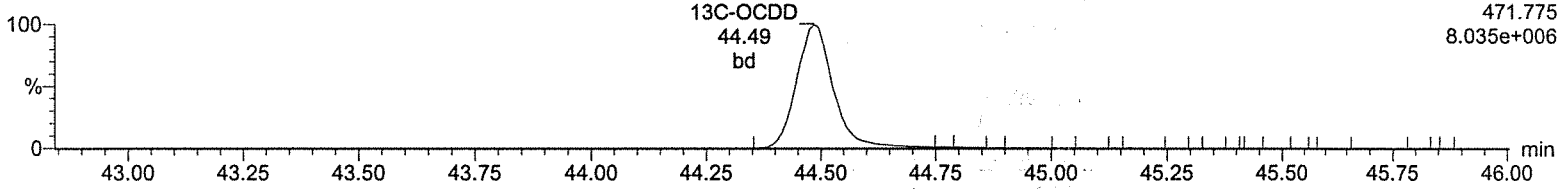
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

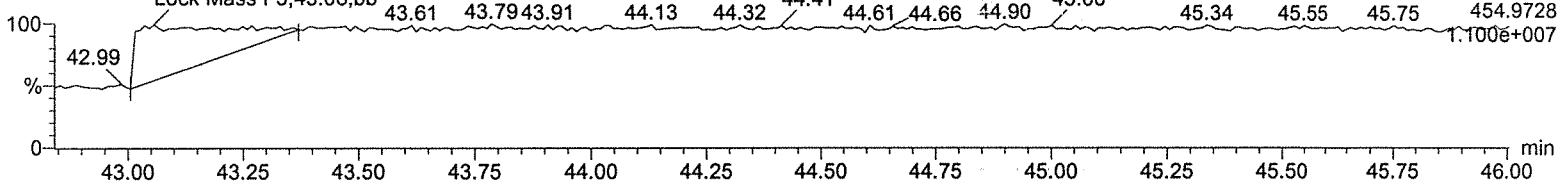
F5:Voltage SIR,EI+
471.775
8.035e+006



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
454.9728
1.100e+007



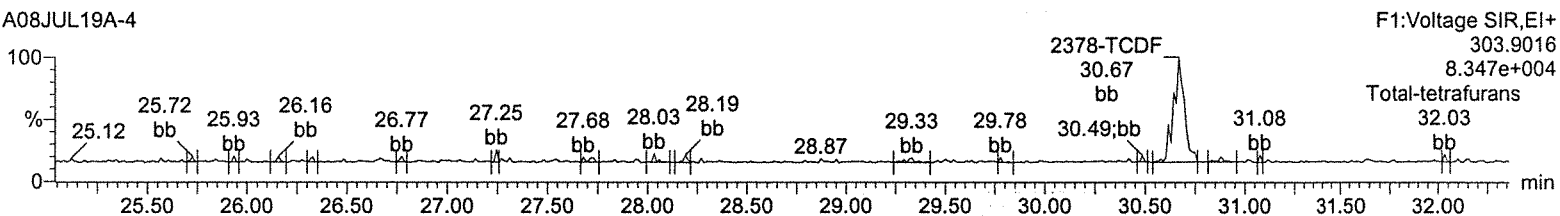
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

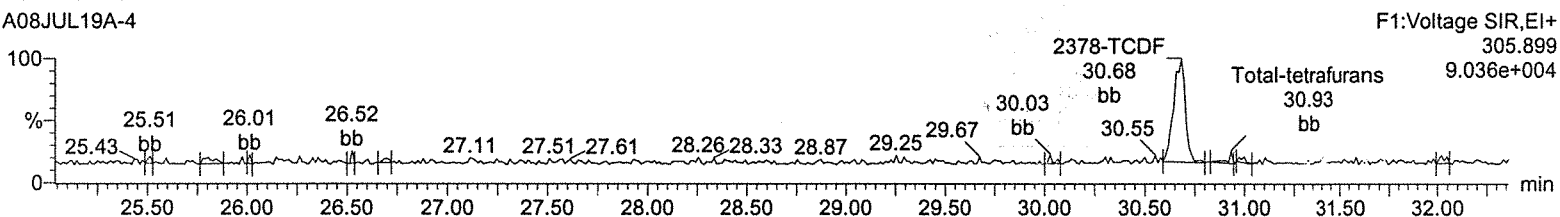
Total-tetrafurans

A08JUL19A-4



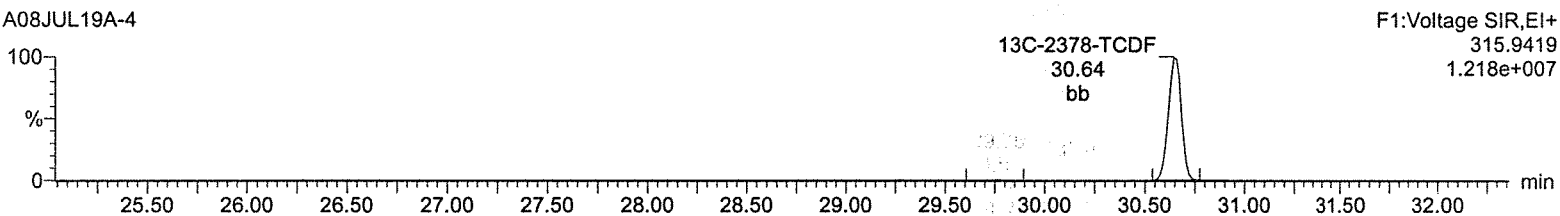
Total-tetrafurans

A08JUL19A-4



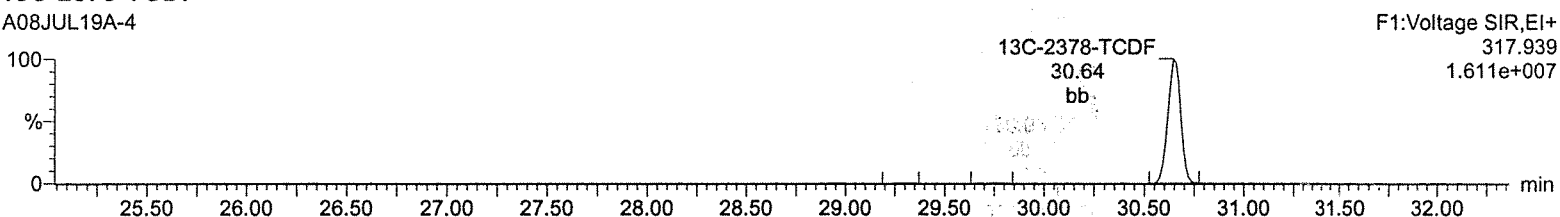
13C-2378-TCDF

A08JUL19A-4



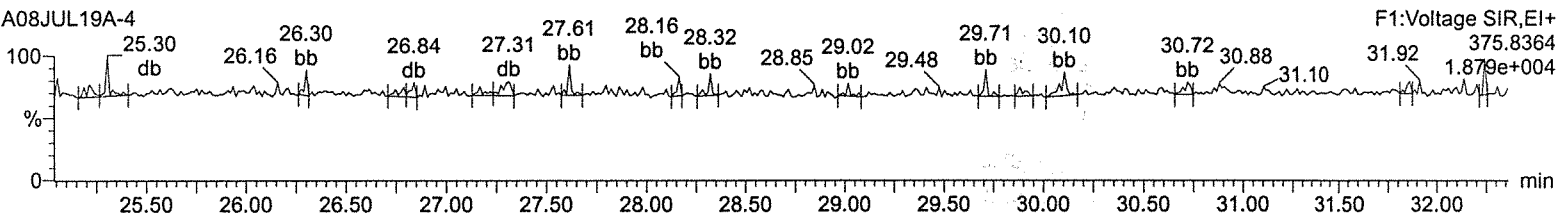
13C-2378-TCDF

A08JUL19A-4



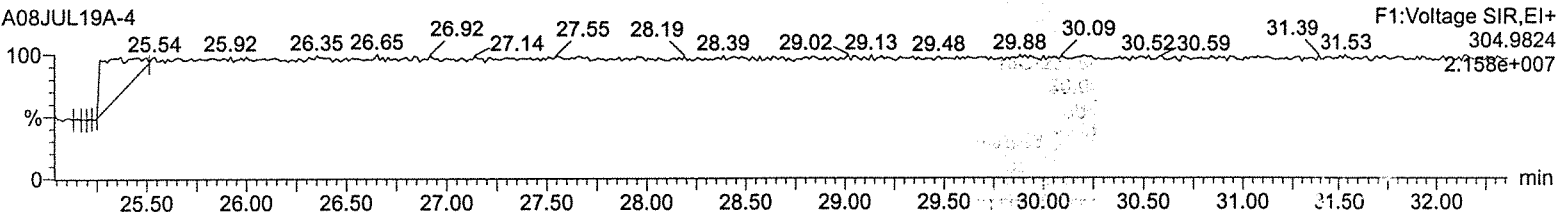
HxDPE

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



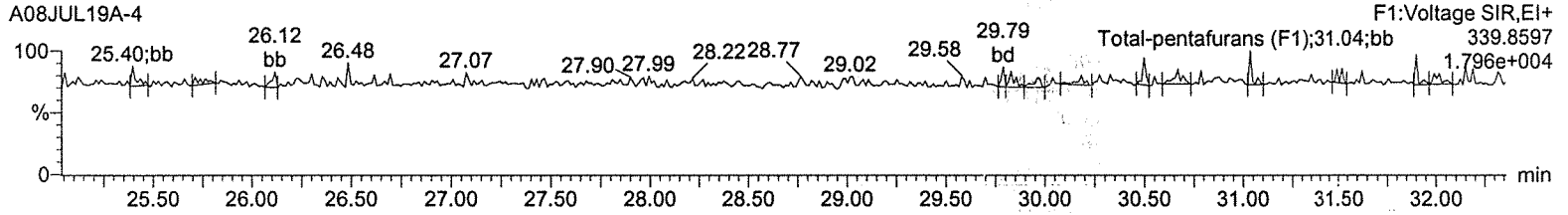
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

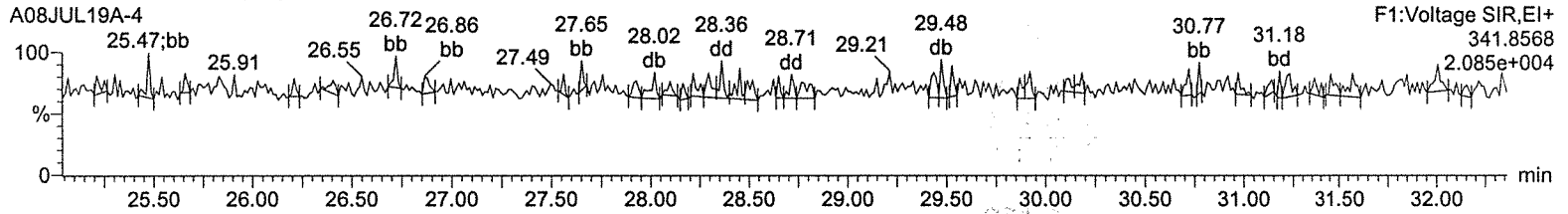
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

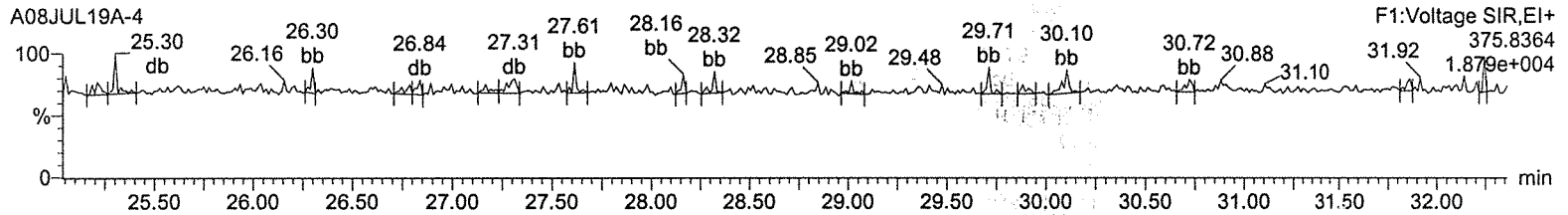
Total-pentafurans (F1)



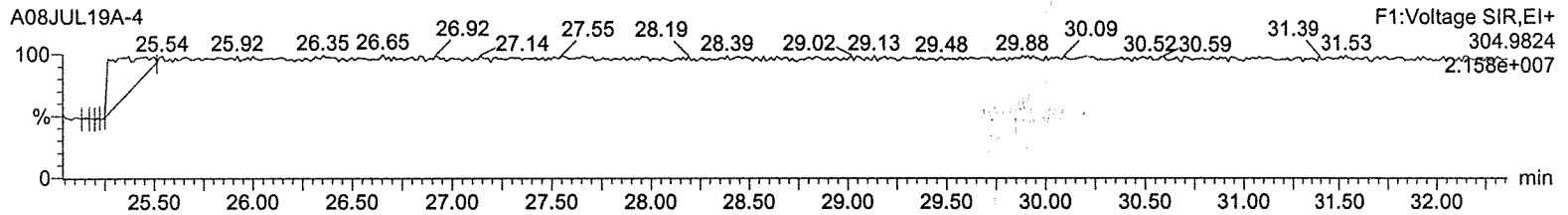
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

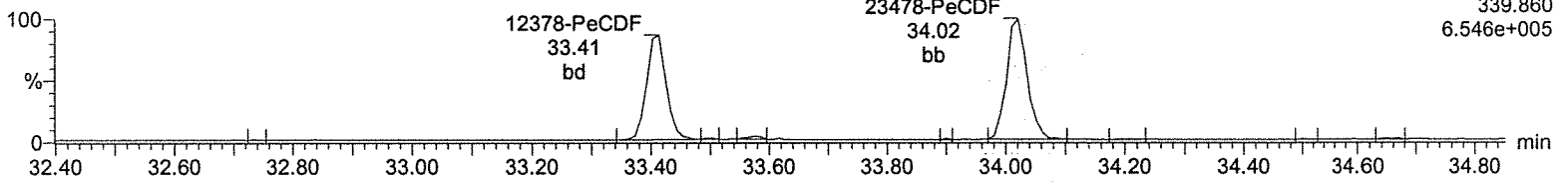
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-pentafurans

A08JUL19A-4

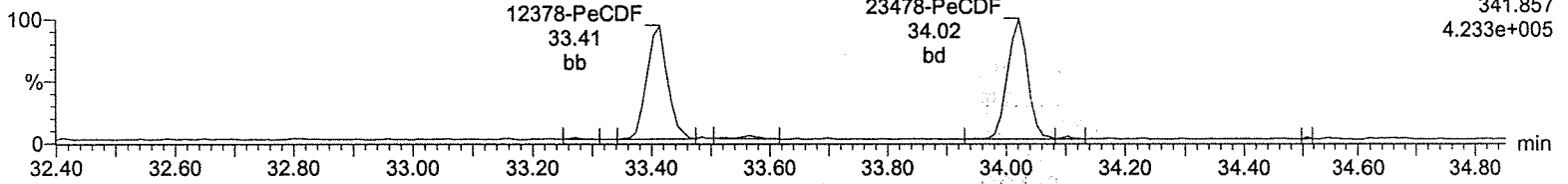
F2:Voltage SIR,EI+
339.860
6.546e+005



Total-pentafurans

A08JUL19A-4

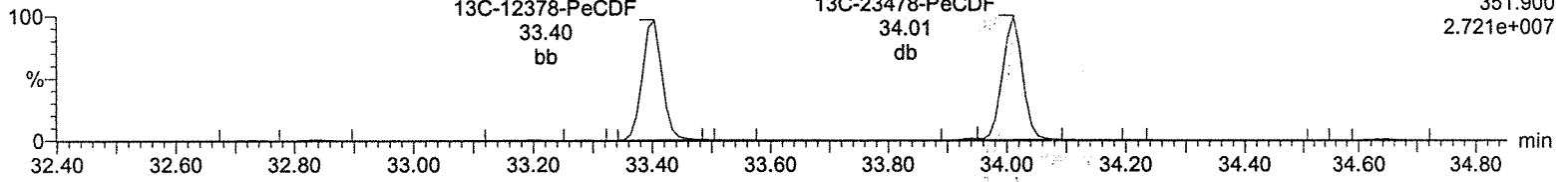
F2:Voltage SIR,EI+
341.857
4.233e+005



13C-12378-PeCDF

A08JUL19A-4

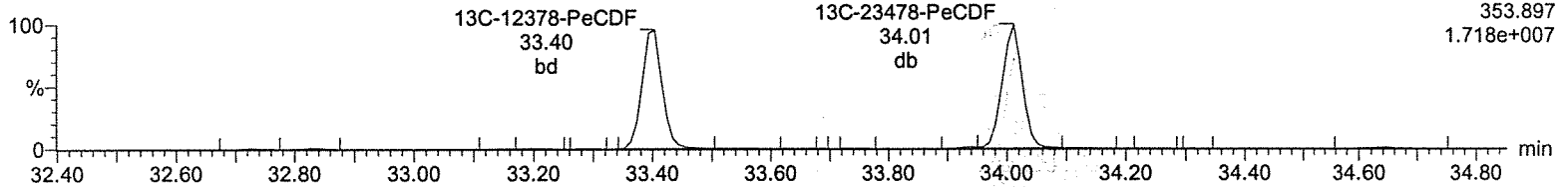
F2:Voltage SIR,EI+
351.900
2.721e+007



13C-12378-PeCDF

A08JUL19A-4

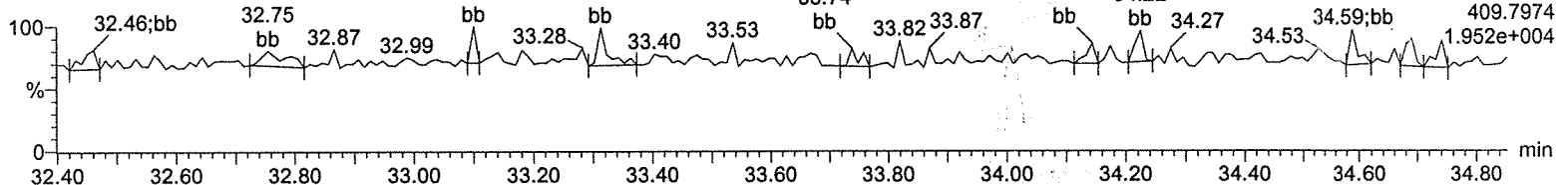
F2:Voltage SIR,EI+
353.897
1.718e+007



HpDPE

A08JUL19A-4

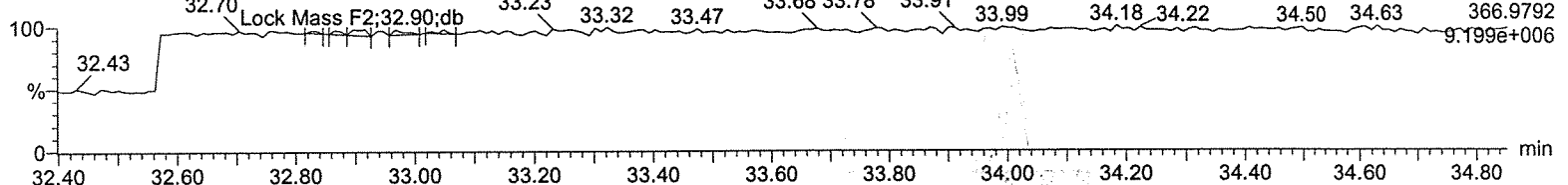
F2:Voltage SIR,EI+
409.7974
1.952e+004



Lock Mass F2

A08JUL19A-4

F2:Voltage SIR,EI+
366.9792
9.199e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

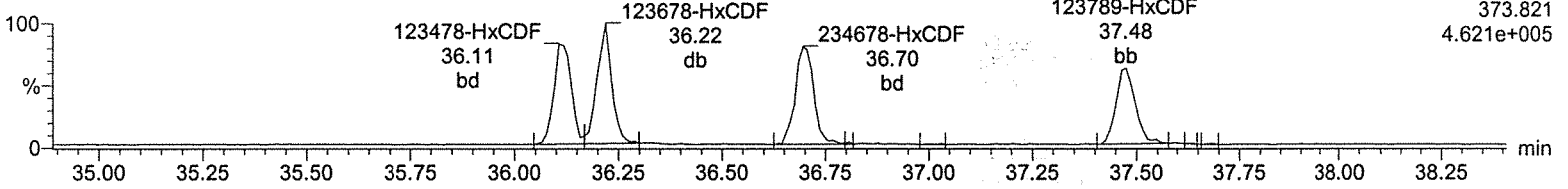
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexafurans

A08JUL19A-4

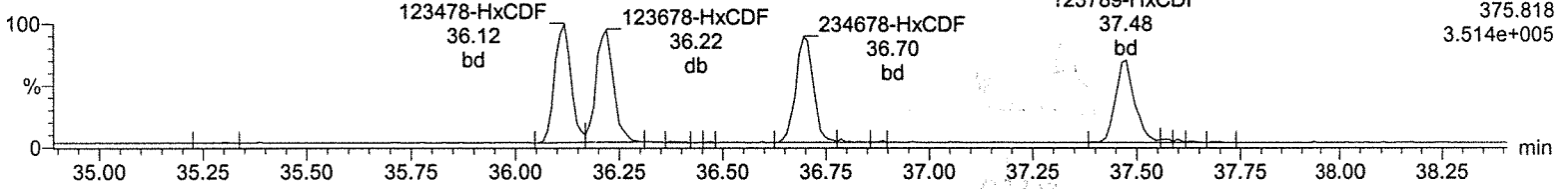
F3:Voltage SIR,EI+
373.821
4.621e+005



Total-hexafurans

A08JUL19A-4

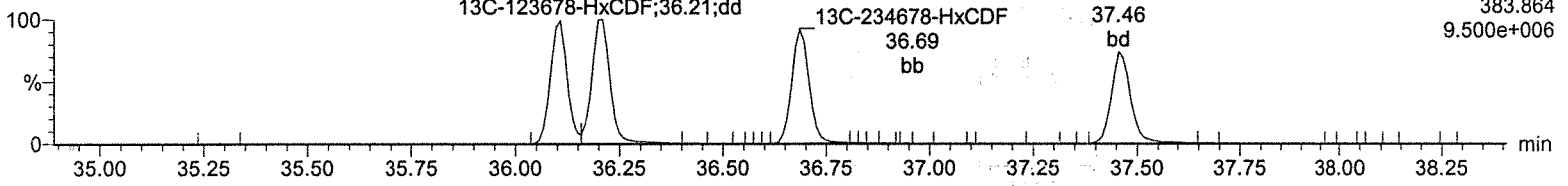
F3:Voltage SIR,EI+
375.818
3.514e+005



13C-123478-HxCDF

A08JUL19A-4

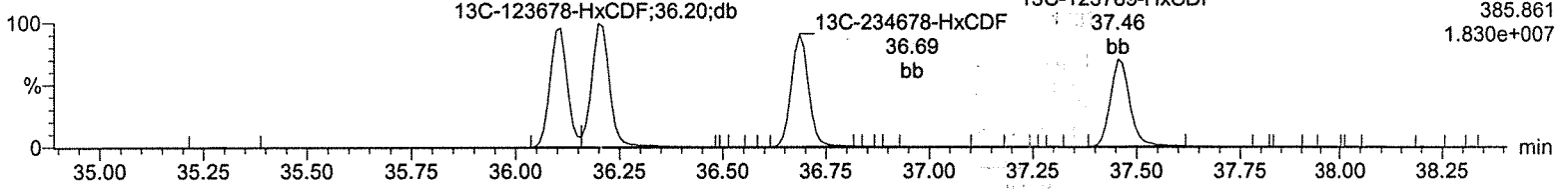
F3:Voltage SIR,EI+
383.864
9.500e+006



13C-123478-HxCDF

A08JUL19A-4

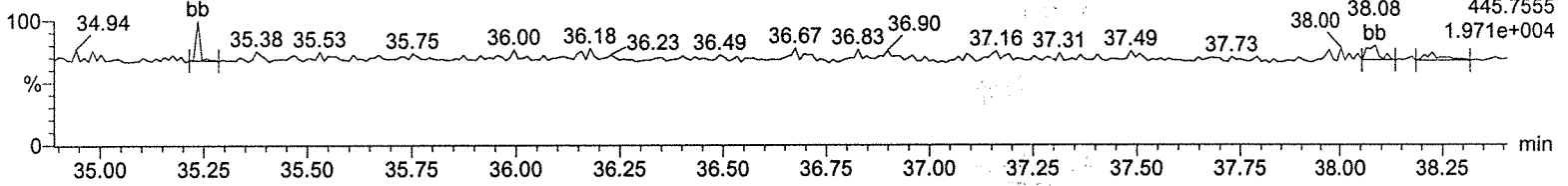
F3:Voltage SIR,EI+
385.861
1.830e+007



OcDPE

A08JUL19A-4

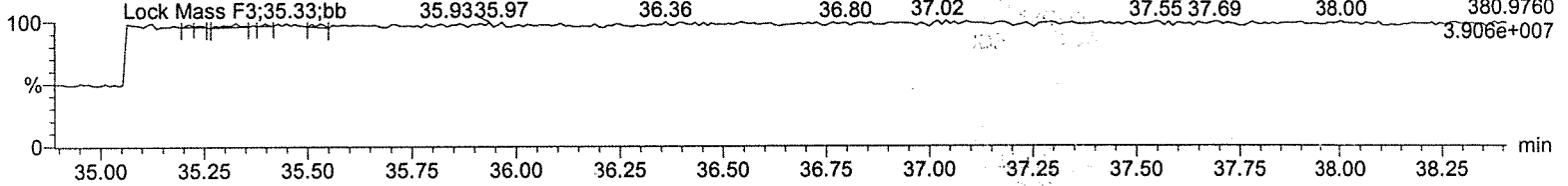
F3:Voltage SIR,EI+
445.7555
1.971e+004



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

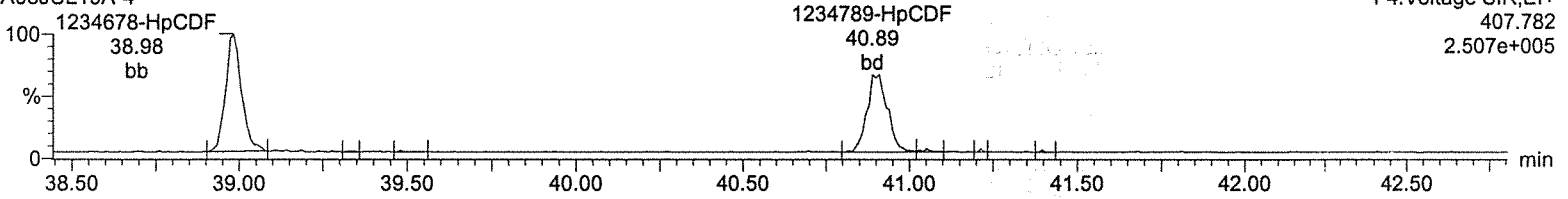
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptafurans

A08JUL19A-4

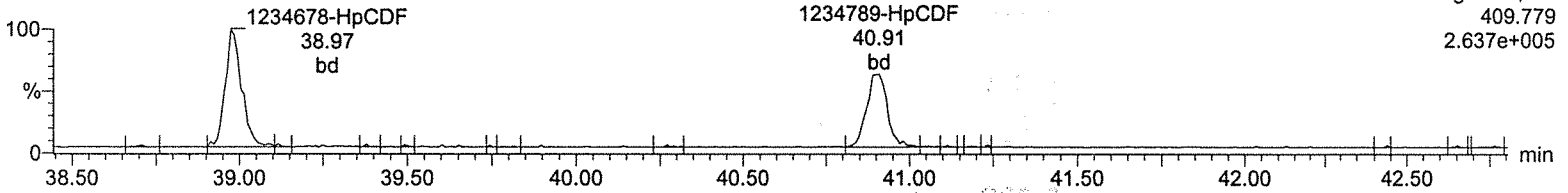
F4:Voltage SIR,EI+
407.782
2.507e+005



Total-heptafurans

A08JUL19A-4

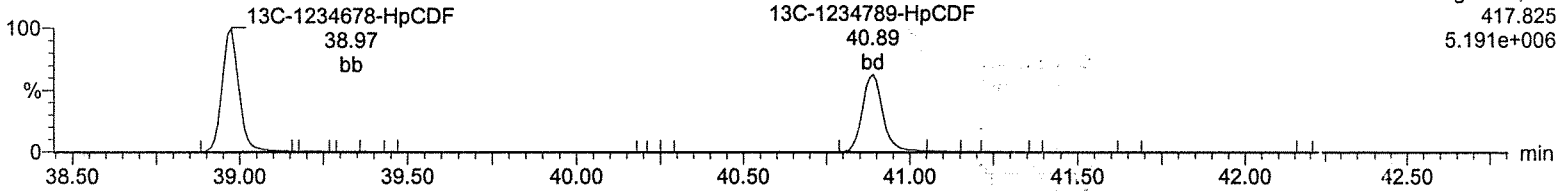
F4:Voltage SIR,EI+
409.779
2.637e+005



13C-1234678-HpCDF

A08JUL19A-4

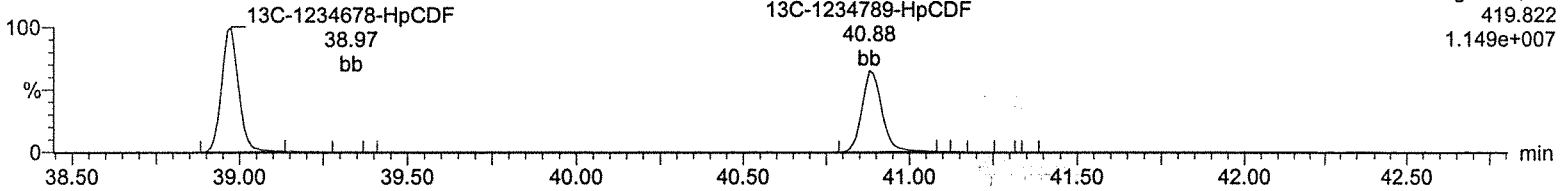
F4:Voltage SIR,EI+
417.825
5.191e+006



13C-1234678-HpCDF

A08JUL19A-4

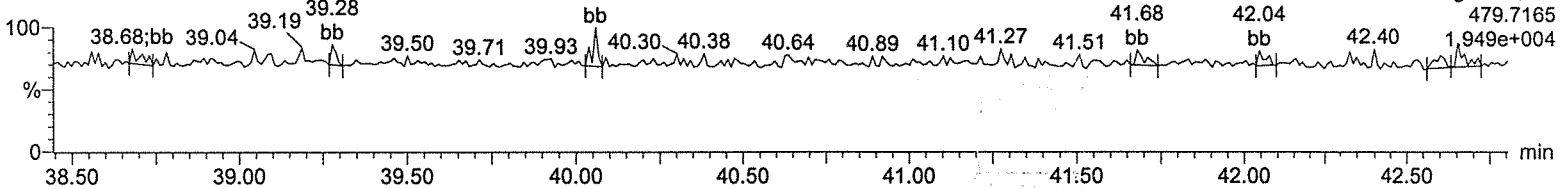
F4:Voltage SIR,EI+
419.822
1.149e+007



NoDPE

A08JUL19A-4

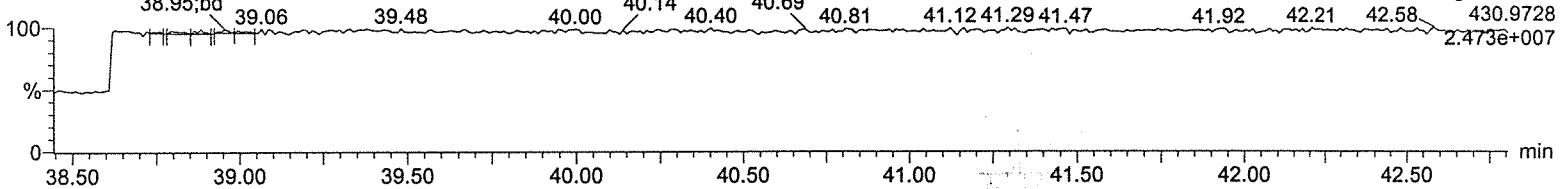
F4:Voltage SIR,EI+
479.7165
1.949e+004



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

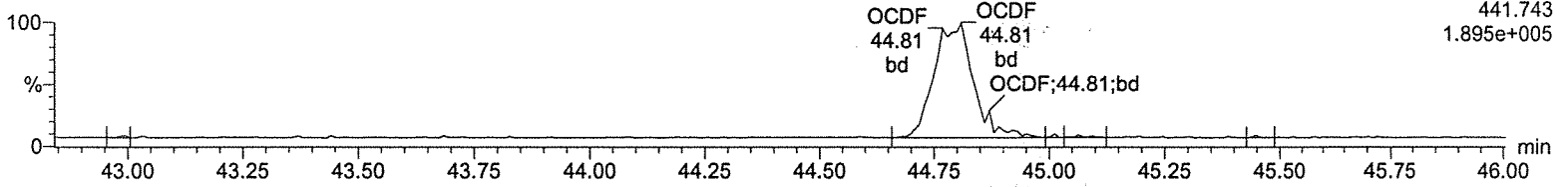
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

OCDF

A08JUL19A-4

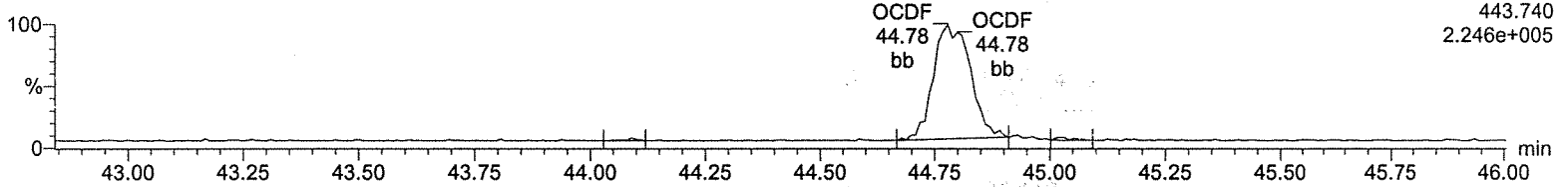
F5:Voltage SIR,EI+
441.743
1.895e+005



OCDF

A08JUL19A-4

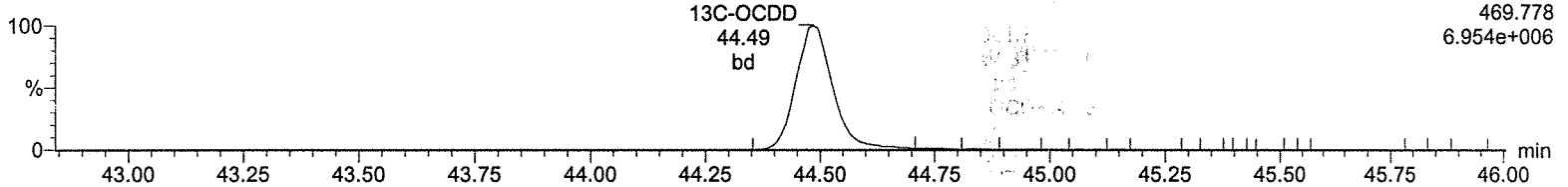
F5:Voltage SIR,EI+
443.740
2.246e+005



13C-OCDD

A08JUL19A-4

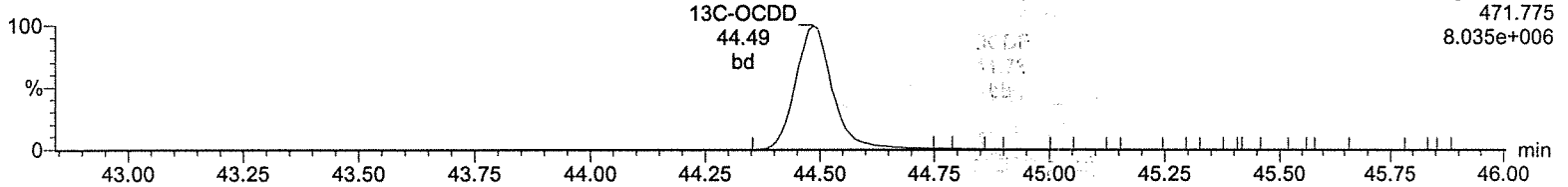
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

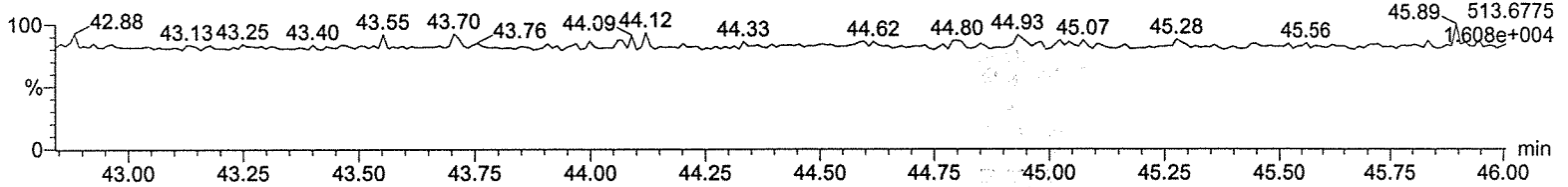
F5:Voltage SIR,EI+
471.775
8.035e+006



DeDPE

A08JUL19A-4

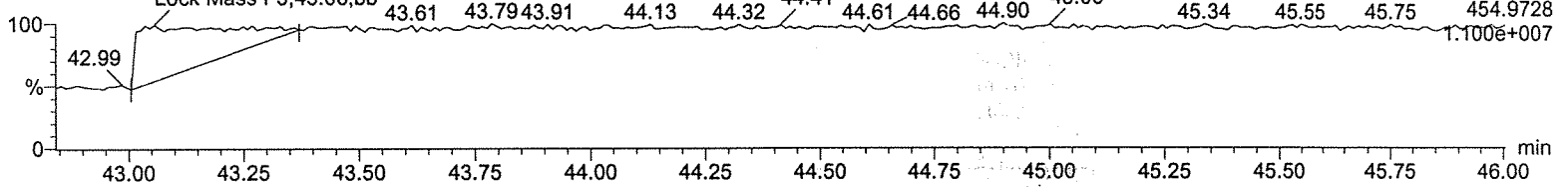
F5:Voltage SIR,EI+
45.89 513.6775
1.608e+004



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
45.75 454.9728
1.100e+007



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2019 July 9

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	SM2	M	M2
1	2378-TCDD	1.64e4	1.96e4	3.60e4	31.35	1.000	0.84	NO	1.926	0.852	0.884	5.07	0.0366	3.15e5	2708	116.2	3.71e5	1865	198.8	bd	bb
2	12378-PeCDD	7.01e4	4.54e4	1.16e5	34.21	1.000	1.54	NO	9.858	0.841	0.853	1.65	0.0620	1.64e6	4036	407.1	1.04e6	1793	580.0	bd	bd
3	123478-HxCDD	6.07e4	4.76e4	1.08e5	36.83	1.000	1.27	NO	10.128	0.952	0.940	3.11	0.0942	1.22e6	2456	497.4	9.73e5	4175	232.9	bd	bd
4	123678-HxCDD	6.34e4	5.11e4	1.15e5	36.92	1.000	1.24	NO	9.763	0.922	0.944	2.57	0.0868	1.18e6	2456	481.4	1.03e6	4175	246.2	dd	db
5	123789-HxCDD	6.39e4	4.66e4	1.10e5	37.16	1.007	1.37	NO	10.002	0.927	0.927	3.30	0.0918	1.18e6	2456	480.1	9.15e5	4175	219.1	dd	bb
6	1234678-HpCDD	4.59e4	4.40e4	8.99e4	40.24	1.000	1.04	NO	9.996	1.040	1.040	2.88	0.110	6.56e5	2814	233.2	6.28e5	2050	306.2	bd	bd
7	OCDD	7.02e4	7.76e4	1.48e5	44.49	1.000	0.90	NO	19.465	0.945	0.971	2.39	0.188	8.27e5	1894	436.6	8.97e5	3432	261.3	bb	bd
8	2378-TCDF	1.89e4	2.56e4	4.45e4	30.66	1.000	0.74	NO	1.930	0.944	0.978	5.59	0.0473	2.49e5	1586	157.1	3.39e5	3348	101.3	bb	bb
9	12378-PeCDF	1.06e5	6.71e4	1.73e5	33.40	1.000	1.58	NO	9.783	0.925	0.945	3.41	0.0636	2.70e6	3895	693.8	1.78e6	5562	320.5	bd	bb
10	23478-PeCDF	1.18e5	7.25e4	1.90e5	34.01	1.000	1.63	NO	9.783	0.965	0.987	3.73	0.0611	2.97e6	3895	763.7	1.80e6	5562	323.0	bb	bb
11	123478-HxCDF	8.27e4	6.81e4	1.51e5	36.11	1.000	1.21	NO	9.763	1.061	1.087	3.86	0.0759	1.84e6	4254	433.3	1.52e6	3988	381.2	bd	bd
12	123678-HxCDF	9.22e4	7.42e4	1.66e5	36.21	1.000	1.24	NO	9.951	1.035	1.041	3.23	0.0734	1.84e6	4254	432.3	1.62e6	3988	407.3	db	db
13	234678-HxCDF	8.43e4	7.08e4	1.55e5	36.69	1.000	1.19	NO	9.949	1.130	1.136	3.17	0.0789	1.74e6	4254	408.5	1.48e6	3988	370.3	bd	bd
14	123789-HxCDF	7.38e4	5.81e4	1.32e5	37.48	1.000	1.27	NO	10.037	1.065	1.061	2.29	0.105	1.25e6	4254	294.9	1.09e6	3988	272.3	bb	bb
15	1234678-HpCDF	6.54e4	6.32e4	1.29e5	38.98	1.000	1.03	NO	9.981	1.148	1.150	3.86	0.0875	1.11e6	3400	327.0	1.11e6	2921	379.1	bd	bd
16	1234789-HpCDF	5.22e4	4.99e4	1.02e5	40.90	1.000	1.04	NO	9.741	1.171	1.202	1.91	0.129	7.25e5	3400	213.2	7.43e5	2921	254.5	bd	bd
17	OCDF	8.37e4	9.25e4	1.76e5	44.78	1.007	0.90	NO	19.911	1.128	1.133	6.78	0.224	8.60e5	5124	167.8	1.02e6	2272	447.0	bd	bd
18	13C-2378-TCDD	9.19e5	1.19e6	2.11e6	31.34	1.015	0.77	NO	99.089	1.118	1.128	2.36	0.123	1.85e7	8904	2075.2	2.42e7	4676	5171.3	bb	bb
19	13C-12378-PeCDD	8.32e5	5.41e5	1.37e6	34.20	1.108	1.54	NO	96.776	0.727	0.751	5.03	0.0911	2.00e7	3434	5827.9	1.32e7	3264	4047.5	bb	bb
20	13C-123478-HxCDD	6.41e5	4.98e5	1.14e6	36.82	0.991	1.29	NO	99.739	0.894	0.896	1.38	0.237	1.27e7	7585	1668.3	1.03e7	8736	1182.7	bd	bd
21	13C-123678-HxCDD	6.70e5	5.73e5	1.24e6	36.91	0.993	1.17	NO	98.976	0.976	0.986	0.84	0.216	1.31e7	7585	1725.4	1.07e7	8736	1227.3	dd	dd
22	13C-1234678-HpCDD	4.39e5	4.25e5	8.65e5	40.23	1.083	1.03	NO	101.051	0.679	0.672	1.29	0.236	6.46e6	6562	985.2	6.05e6	5587	1082.0	bb	bd
23	13C-OCDD	7.21e5	8.42e5	1.56e6	44.49	1.197	0.86	NO	191.086	0.614	0.642	4.87	0.302	8.07e6	5375	1501.9	8.99e6	9504	945.8	bb	bd
24	13C-2378-TCDF	1.03e6	1.33e6	2.36e6	30.64	0.993	0.77	NO	99.848	1.248	1.250	1.88	0.185	1.40e7	15077	925.5	1.82e7	7573	2401.2	bb	bb
25	13C-12378-PeCDF	1.14e6	7.27e5	1.87e6	33.39	1.082	1.57	NO	98.012	0.991	1.011	4.24	0.186	2.88e7	10165	2836.7	1.87e7	8269	2257.4	bb	bb
26	13C-23478-PeCDF	1.20e6	7.67e5	1.97e6	34.00	1.102	1.57	NO	98.156	1.044	1.063	5.28	0.177	2.88e7	10165	2830.5	1.86e7	8269	2249.2	bb	bb
27	13C-123478-HxCDF	4.84e5	9.37e5	1.42e6	36.10	0.972	0.52	NO	100.421	1.115	1.111	1.42	0.255	1.02e7	10424	978.9	1.98e7	11320	1746.0	bd	bd
28	13C-123678-HxCDF	5.51e5	1.06e6	1.61e6	36.20	0.974	0.52	NO	101.235	1.262	1.247	1.06	0.227	1.11e7	10424	1065.6	2.11e7	11320	1864.5	dd	dd
29	13C-234678-HxCDF	4.74e5	8.99e5	1.37e6	36.69	0.987	0.53	NO	99.614	1.078	1.082	1.01	0.262	9.53e6	10424	914.6	1.83e7	11320	1619.4	bb	bb
30	13C-123789-HxCDF	4.34e5	8.05e5	1.24e6	37.46	1.008	0.54	NO	100.569	0.973	0.967	1.08	0.293	7.78e6	10424	746.4	1.45e7	11320	1279.8	bd	bb
31	13C-1234678-HpCDF	3.48e5	7.72e5	1.12e6	38.96	1.049	0.45	NO	101.100	0.880	0.870	1.11	0.203	5.86e6	7080	827.3	1.29e7	6451	1996.6	bd	bb
32	13C-1234789-HpCDF	2.69e5	6.03e5	8.72e5	40.88	1.100	0.45	NO	101.106	0.685	0.677	1.01	0.260	3.78e6	7080	534.3	8.61e6	6451	1355.0	bd	bb
33	13C-1234-TCDD	8.25e5	1.06e6	1.89e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.139	1.28e7	8904	1440.8	1.64e7	4676	3505.8	bb	bb
34	13C-123789-HxCDD	7.00e5	5.74e5	1.27e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.213	1.26e7	7585	1667.6	1.04e7	8736	1189.4	db	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Co#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	3.85e4	3.85e4	3.85e4	31.35	1.016			1.919	1.018	1.061	4.54	0.0384	7.43e5	3989	186.2				M	M2	
																						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

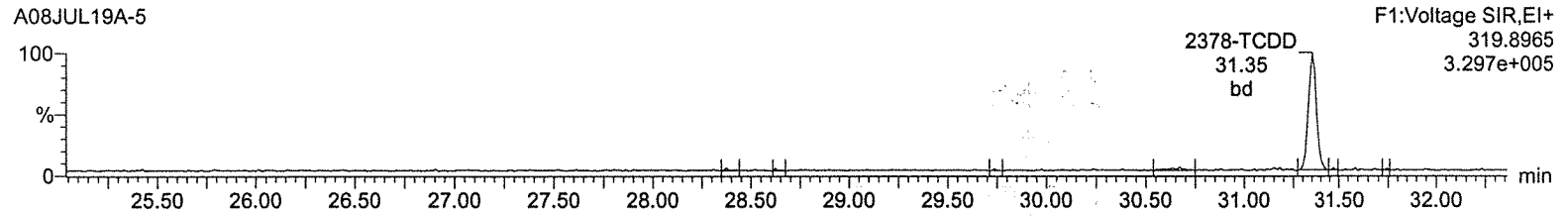
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

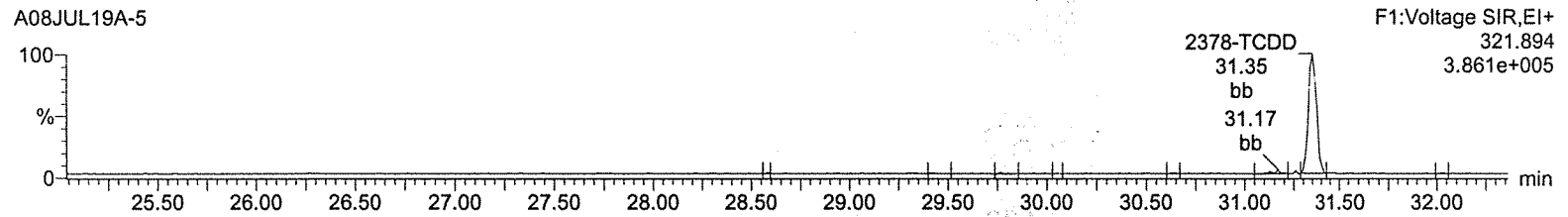
Total-tetradoxins

A08JUL19A-5



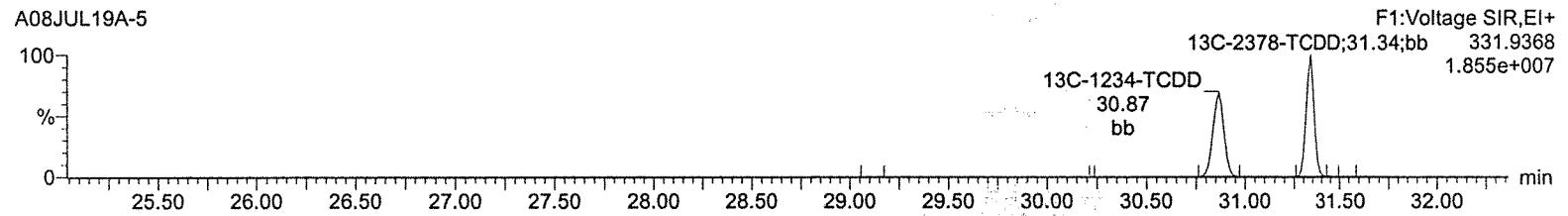
Total-tetradoxins

A08JUL19A-5



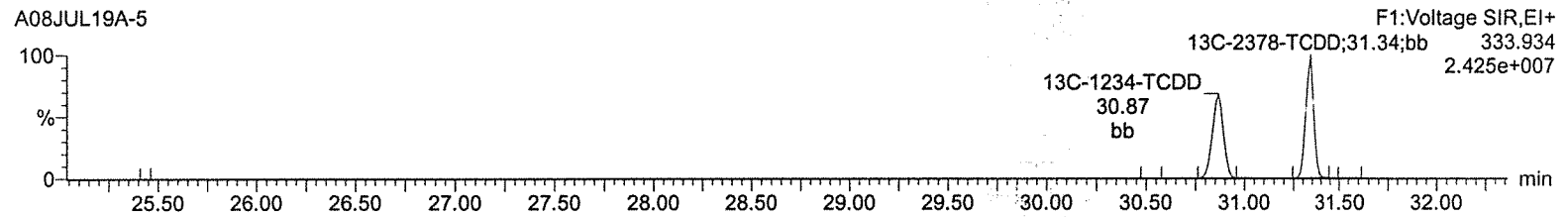
13C-2378-TCDD

A08JUL19A-5



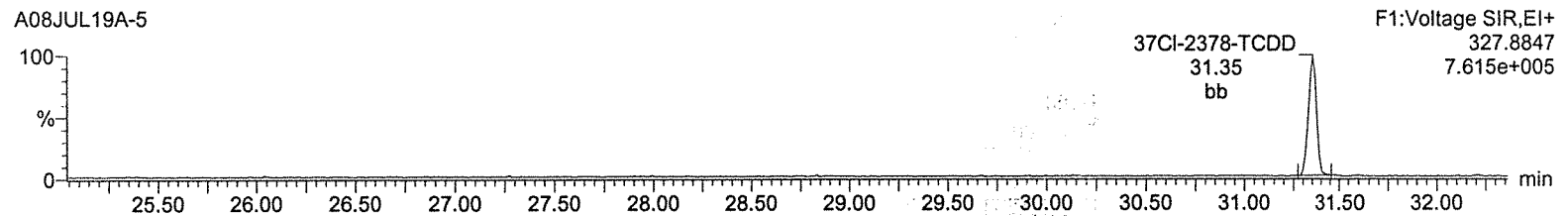
13C-2378-TCDD

A08JUL19A-5



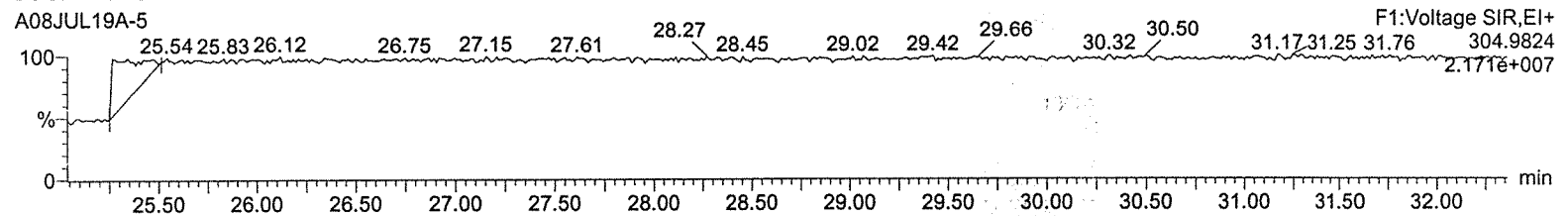
37Cl-2378-TCDD

A08JUL19A-5



Lock Mass F1

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

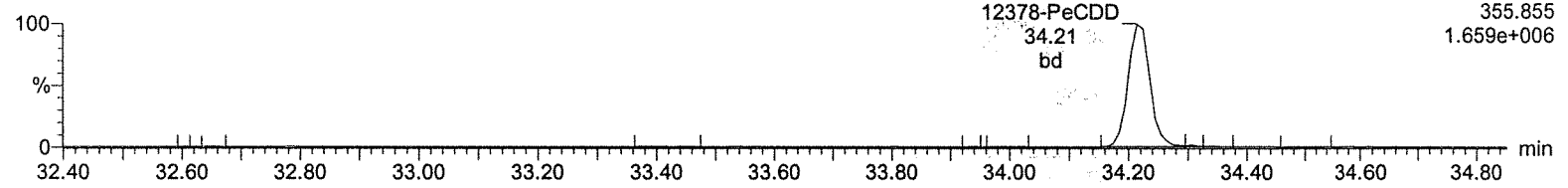
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

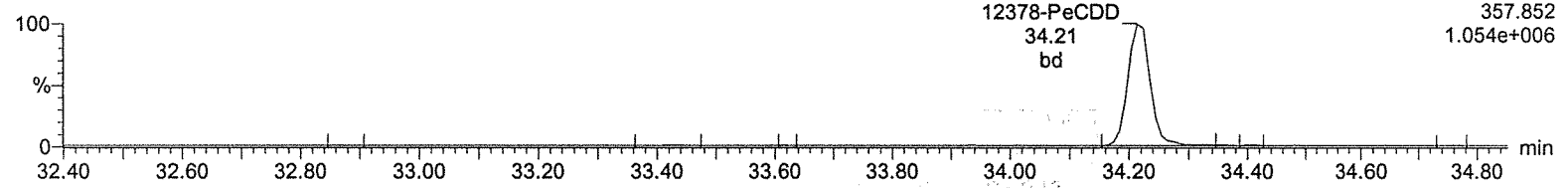
Total-pentadioxins

A08JUL19A-5



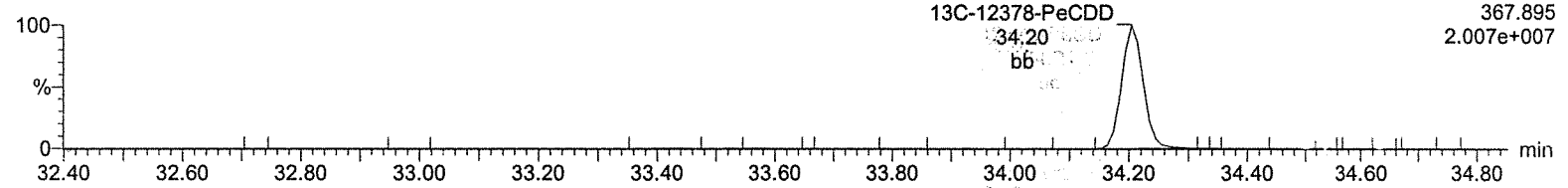
Total-pentadioxins

A08JUL19A-5



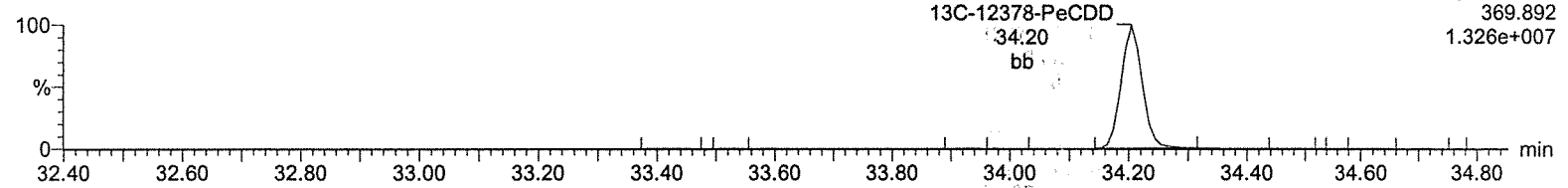
13C-12378-PeCDD

A08JUL19A-5



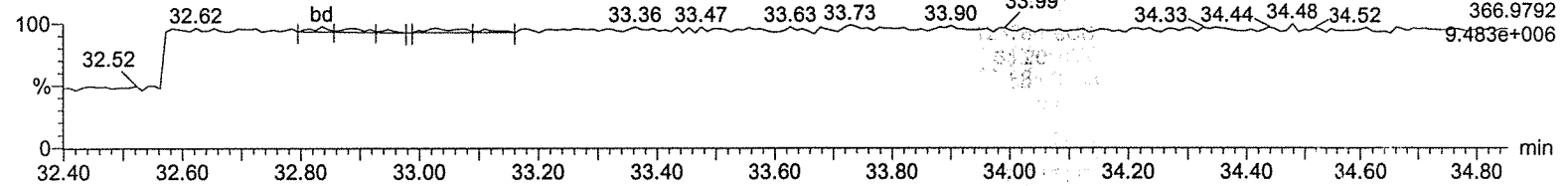
13C-12378-PeCDD

A08JUL19A-5



Lock Mass F2

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

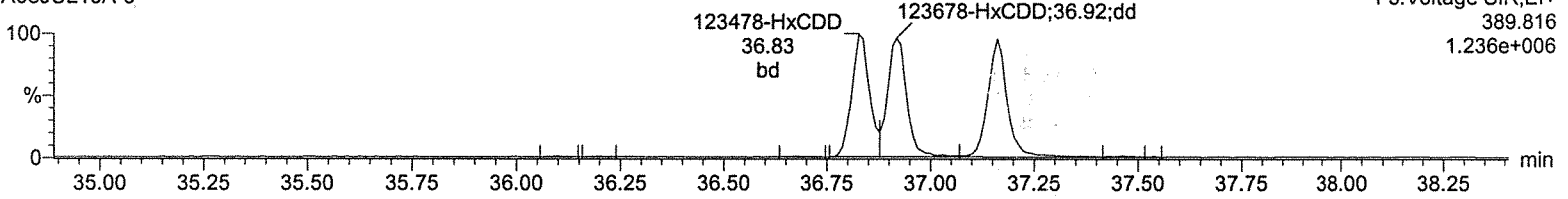
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

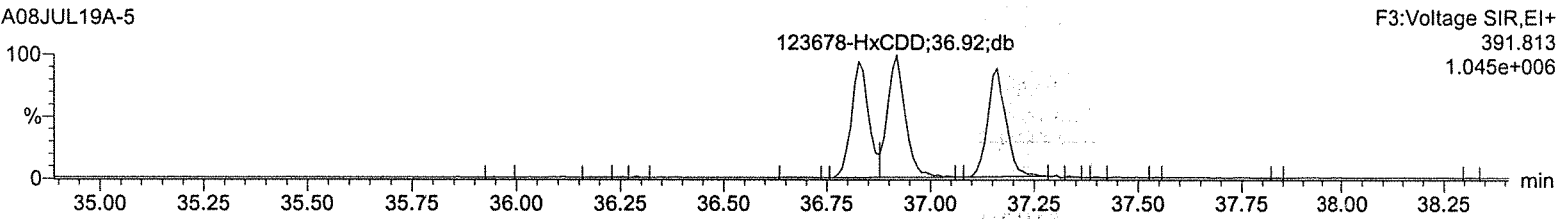
Total-hexadioxins

A08JUL19A-5



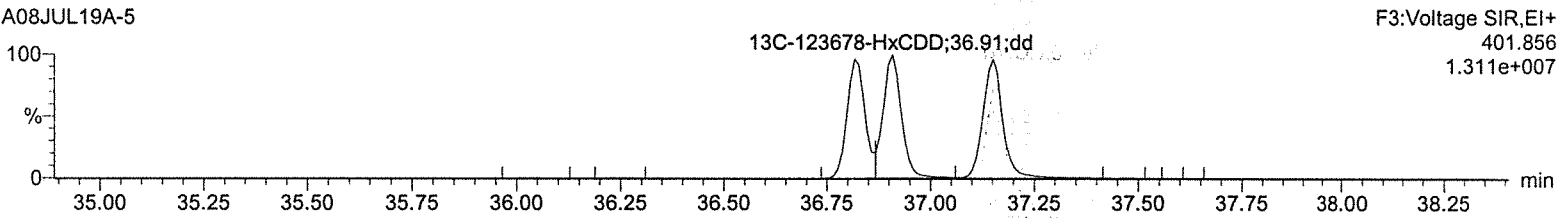
Total-hexadioxins

A08JUL19A-5



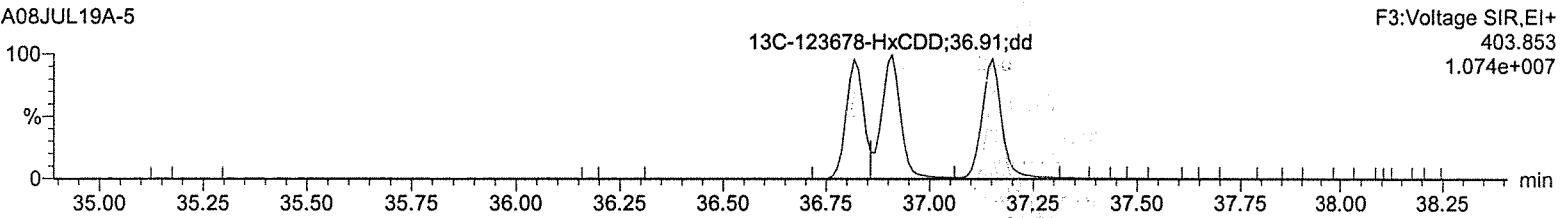
13C-123478-HxCDD

A08JUL19A-5



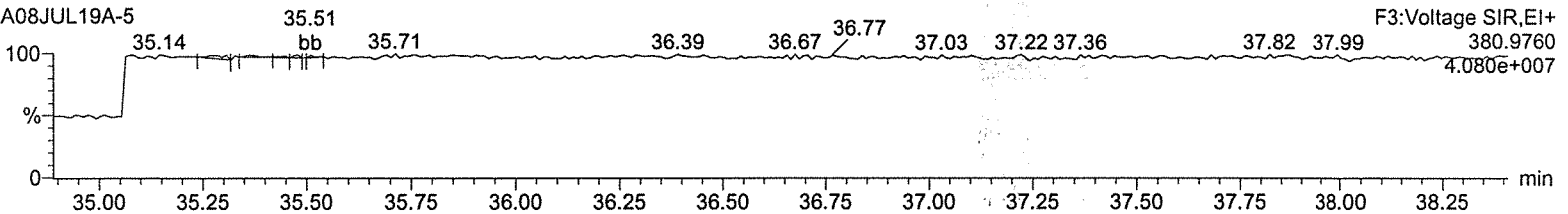
13C-123478-HxCDD

A08JUL19A-5



Lock Mass F3

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

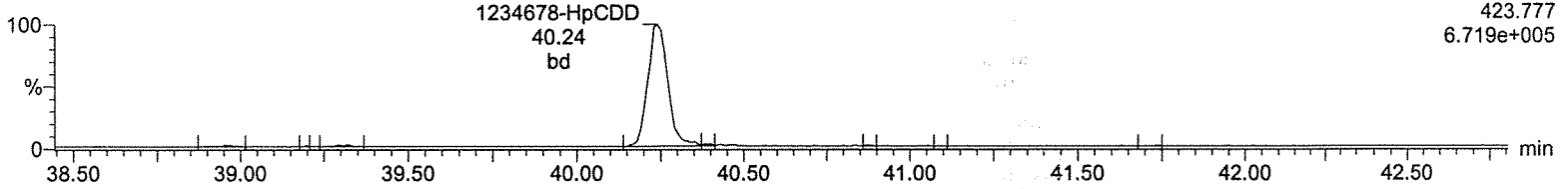
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-heptadioxins

A08JUL19A-5

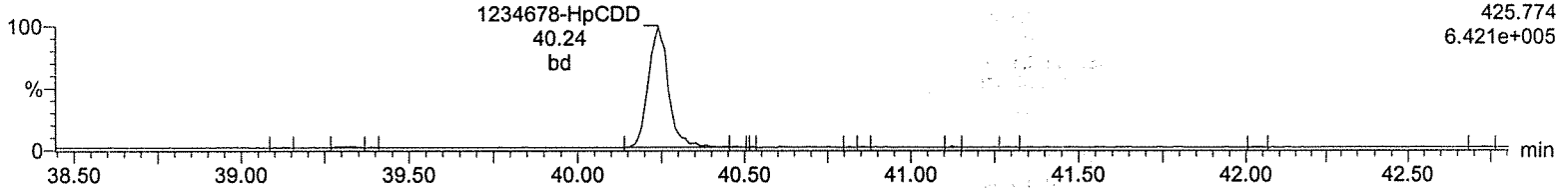
F4:Voltage SIR,EI+
423.777
6.719e+005



Total-heptadioxins

A08JUL19A-5

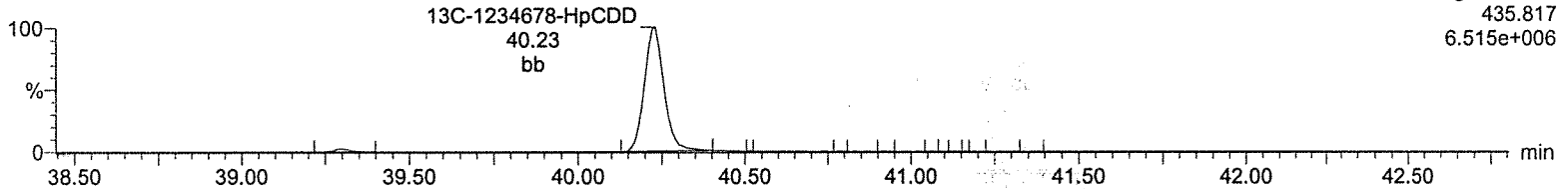
F4:Voltage SIR,EI+
425.774
6.421e+005



13C-1234678-HpCDD

A08JUL19A-5

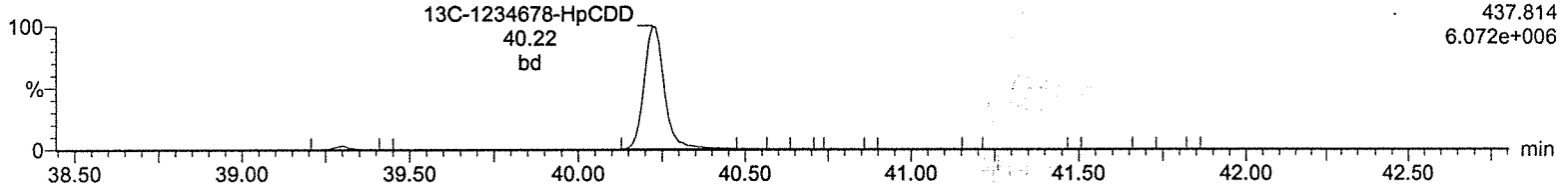
F4:Voltage SIR,EI+
435.817
6.515e+006



13C-1234678-HpCDD

A08JUL19A-5

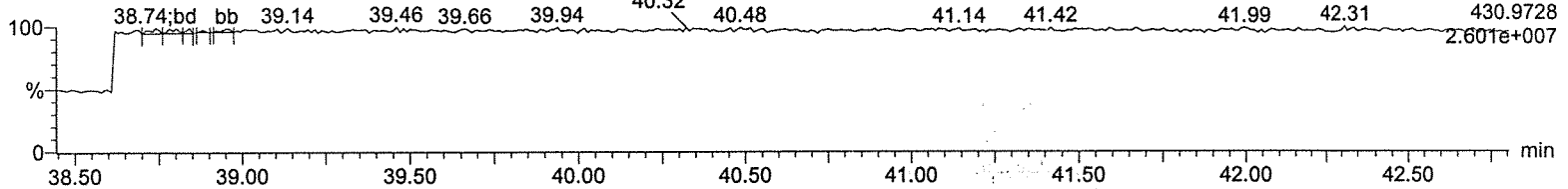
F4:Voltage SIR,EI+
437.814
6.072e+006



Lock Mass F4

A08JUL19A-5

F4:Voltage SIR,EI+
430.9728
2.601e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

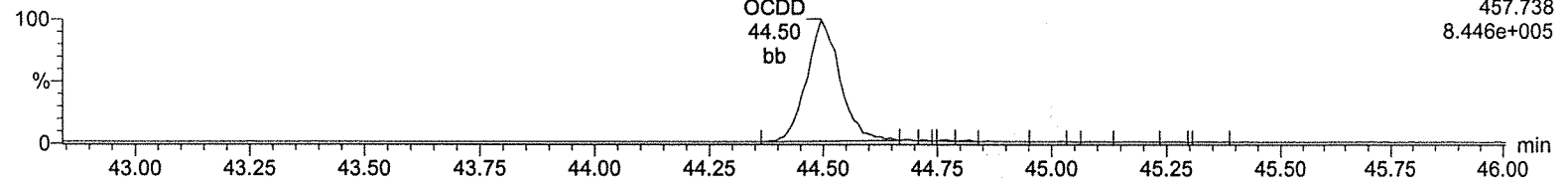
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

OCDD

A08JUL19A-5

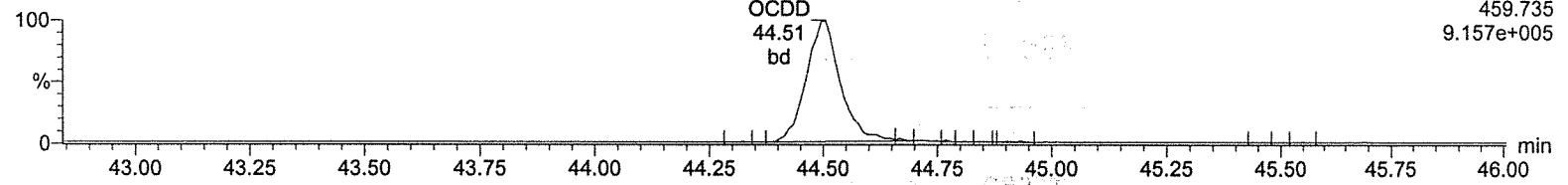
F5:Voltage SIR,EI+
457.738
8.446e+005



OCDD

A08JUL19A-5

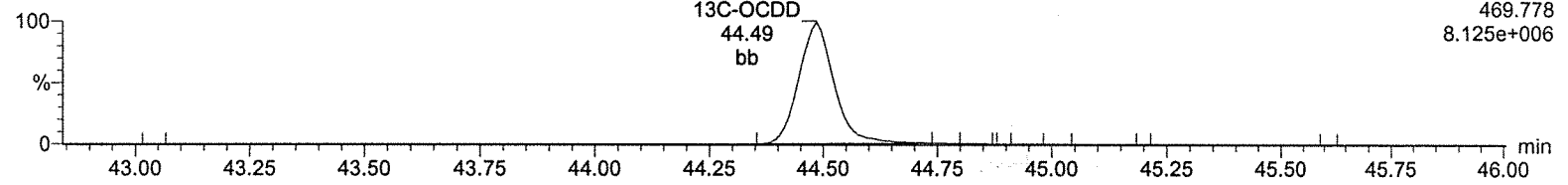
F5:Voltage SIR,EI+
459.735
9.157e+005



13C-OCDD

A08JUL19A-5

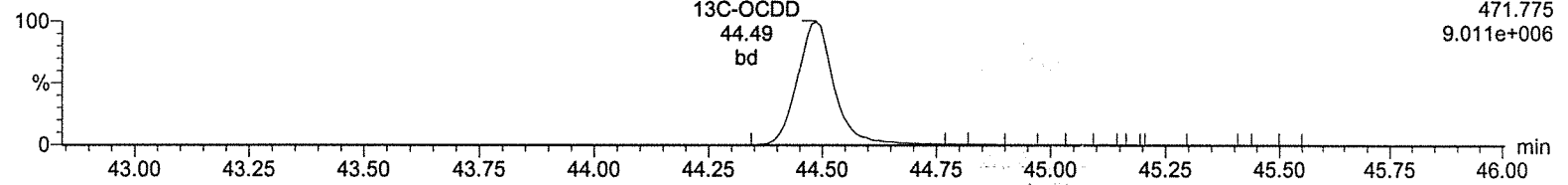
F5:Voltage SIR,EI+
469.778
8.125e+006



13C-OCDD

A08JUL19A-5

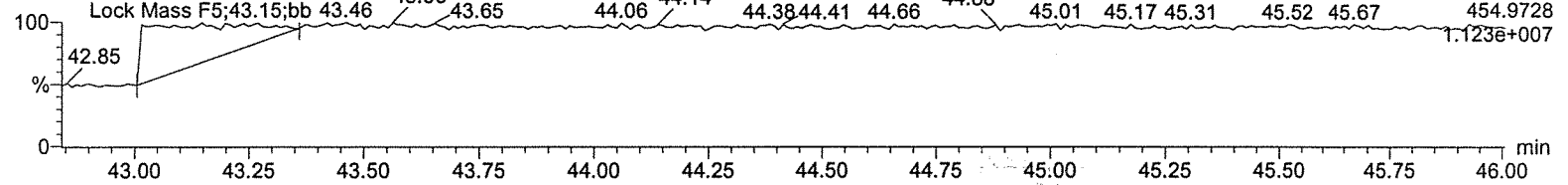
F5:Voltage SIR,EI+
471.775
9.011e+006



Lock Mass F5

A08JUL19A-5

F5:Voltage SIR,EI+
454.9728
1.123e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

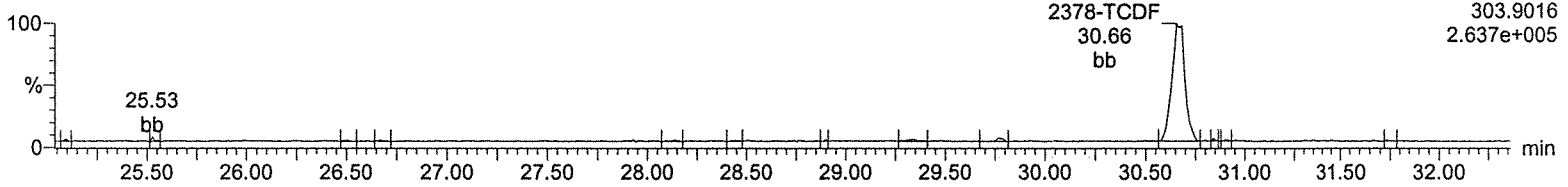
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-tetrafurans

A08JUL19A-5

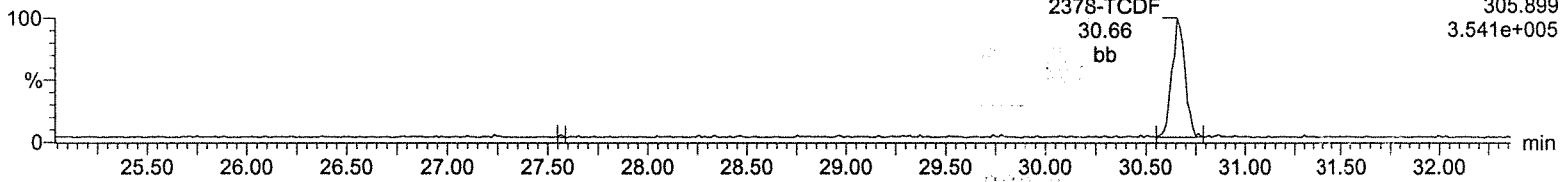
F1:Voltage SIR,EI+
303.9016
2.637e+005



Total-tetrafurans

A08JUL19A-5

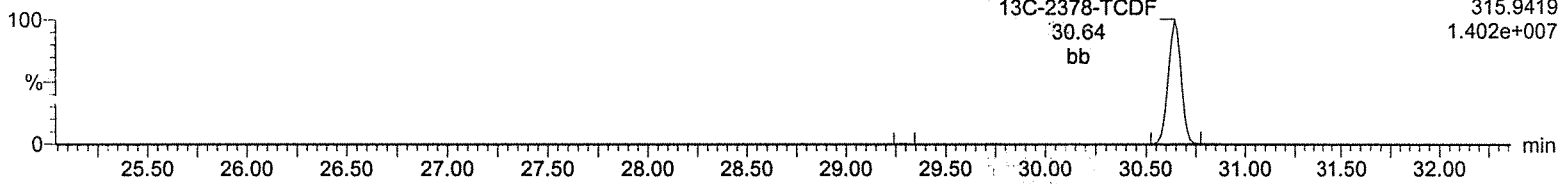
F1:Voltage SIR,EI+
305.899
3.541e+005



13C-2378-TCDF

A08JUL19A-5

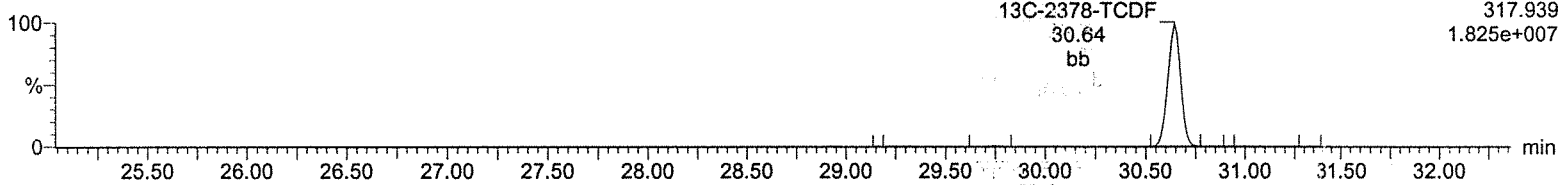
F1:Voltage SIR,EI+
315.9419
1.402e+007



13C-2378-TCDF

A08JUL19A-5

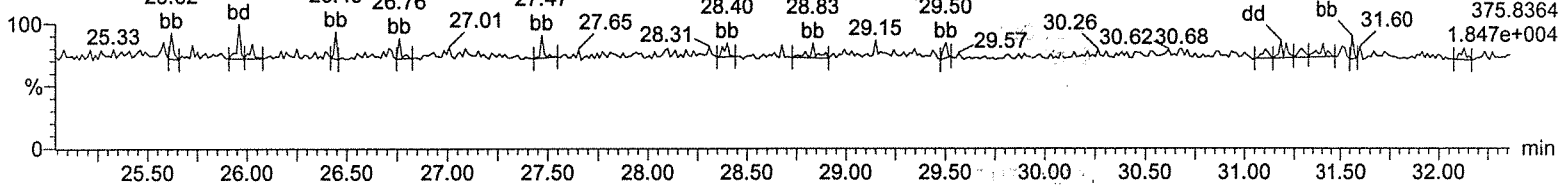
F1:Voltage SIR,EI+
317.939
1.825e+007



HxDPE

A08JUL19A-5

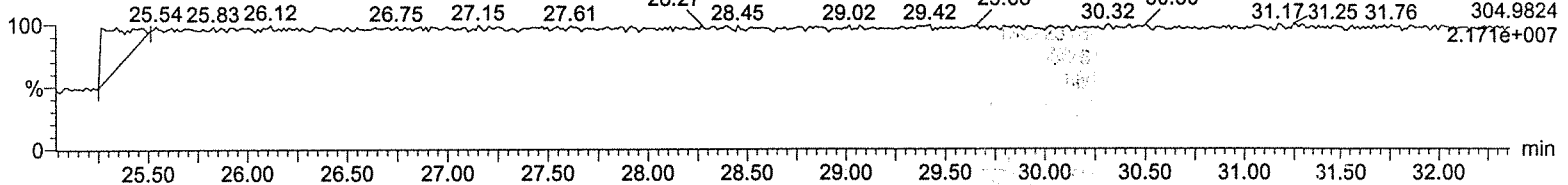
F1:Voltage SIR,EI+
375.8364
1.847e+004



Lock Mass F1

A08JUL19A-5

F1:Voltage SIR,EI+
304.9824
2.171e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

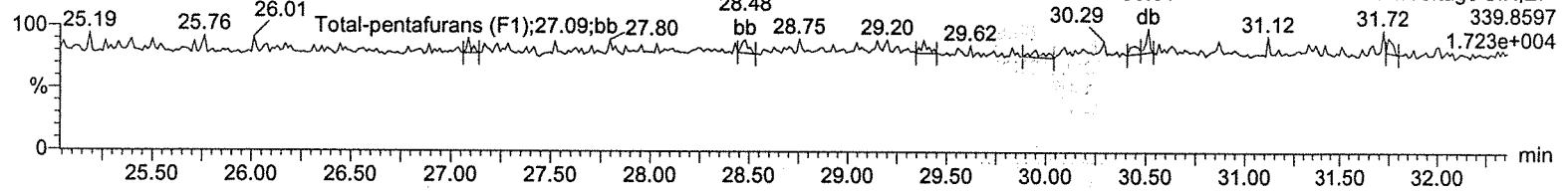
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

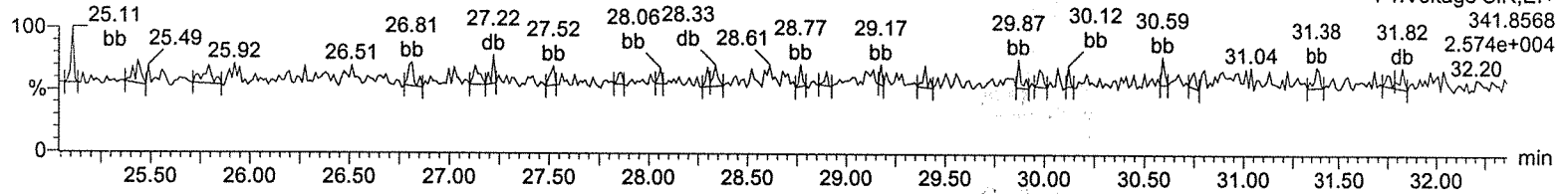
Total-pentafurans (F1)

A08JUL19A-5



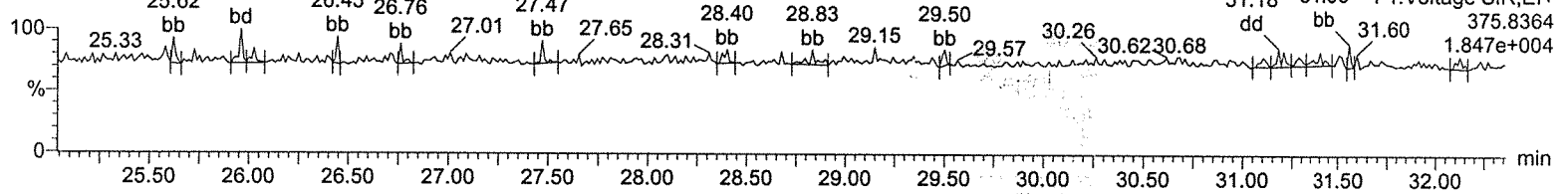
Total-pentafurans (F1)

A08JUL19A-5



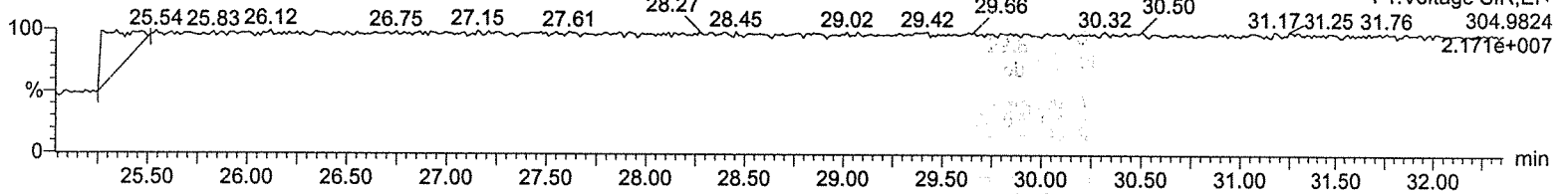
HxDPE

A08JUL19A-5



Lock Mass F1

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

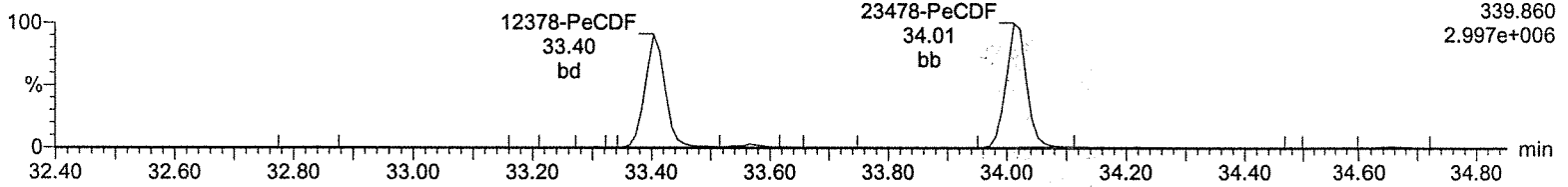
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-pentafurans

A08JUL19A-5

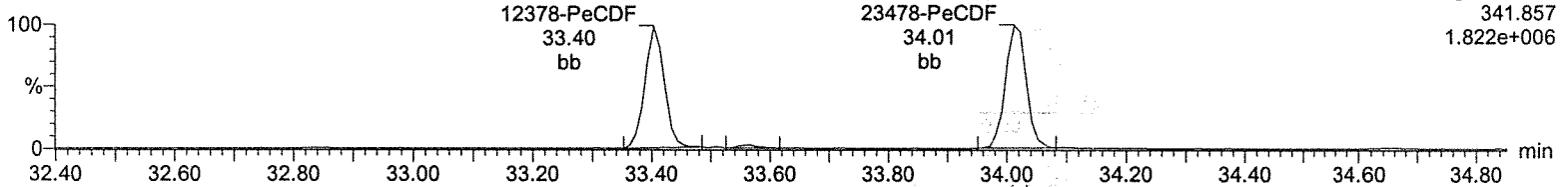
F2:Voltage SIR,EI+
339.860
2.997e+006



Total-pentafurans

A08JUL19A-5

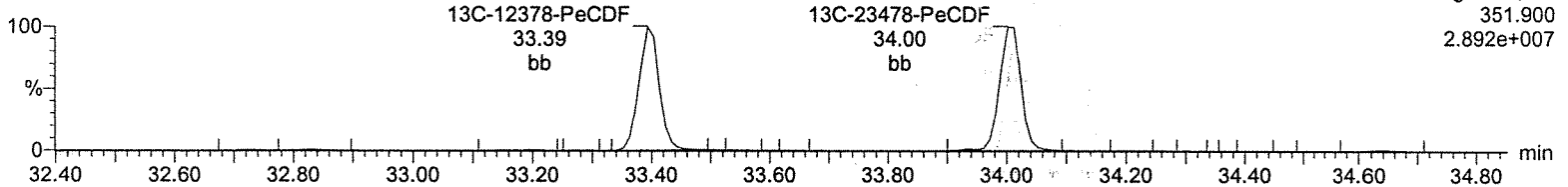
F2:Voltage SIR,EI+
341.857
1.822e+006



13C-12378-PeCDF

A08JUL19A-5

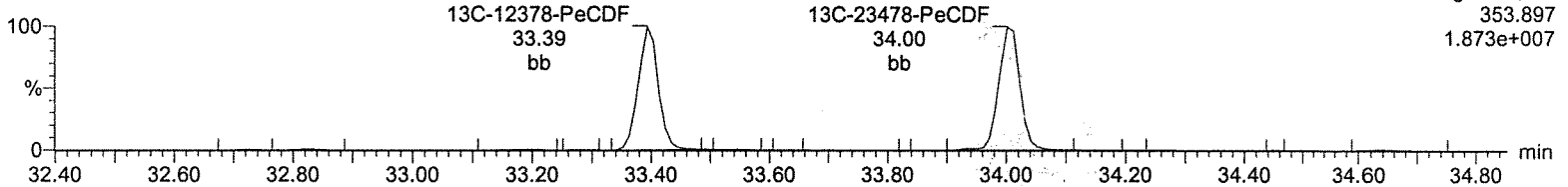
F2:Voltage SIR,EI+
351.900
2.892e+007



13C-12378-PeCDF

A08JUL19A-5

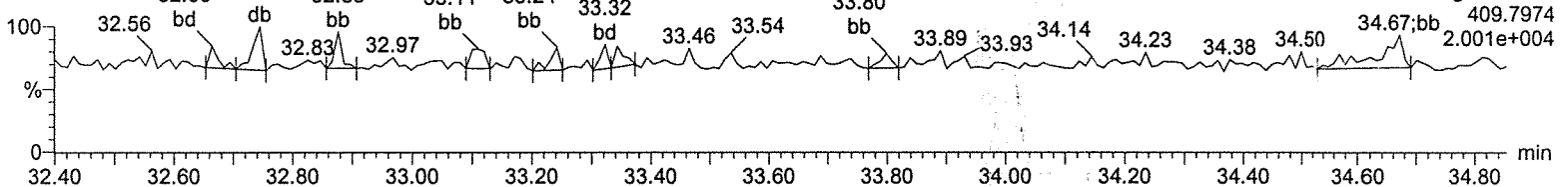
F2:Voltage SIR,EI+
353.897
1.873e+007



HpDPE

A08JUL19A-5

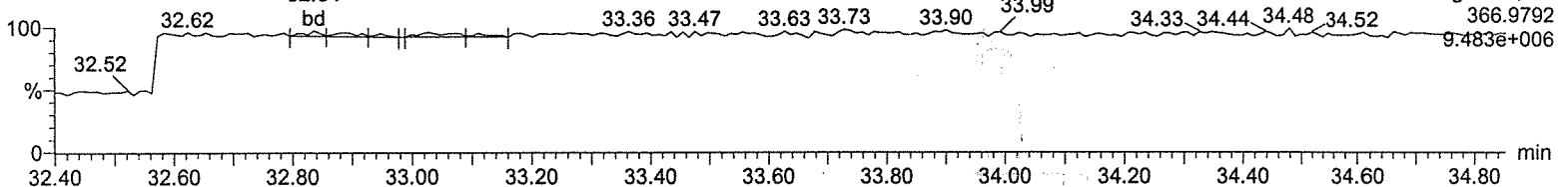
F2:Voltage SIR,EI+
409.7974
2.001e+004



Lock Mass F2

A08JUL19A-5

F2:Voltage SIR,EI+
366.9792
9.483e+006



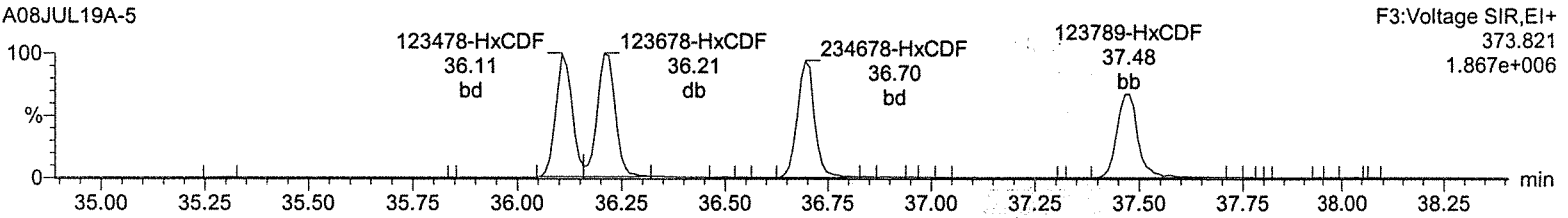
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

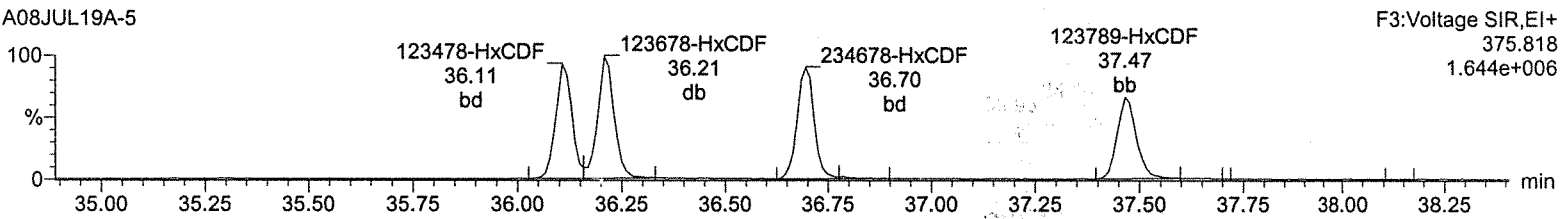
Total-hexafurans

A08JUL19A-5



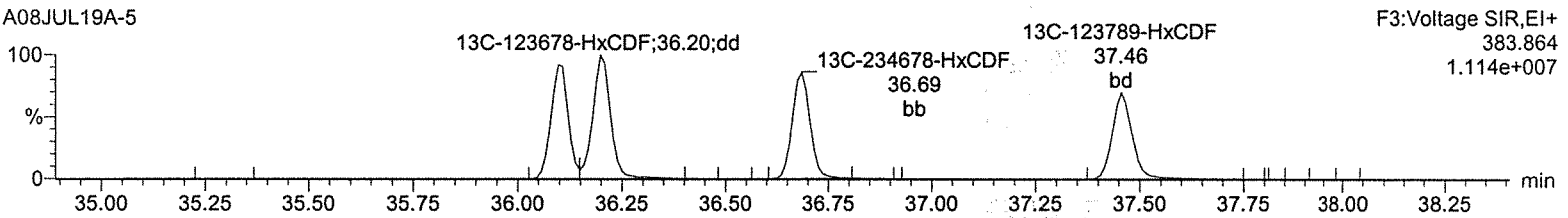
Total-hexafurans

A08JUL19A-5



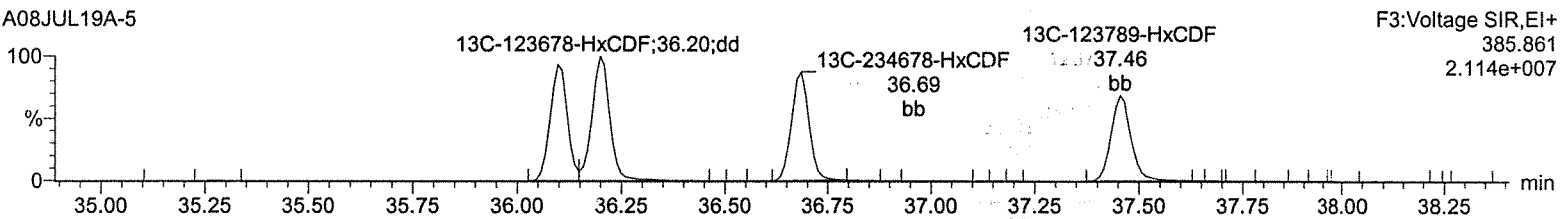
13C-123478-HxCDF

A08JUL19A-5



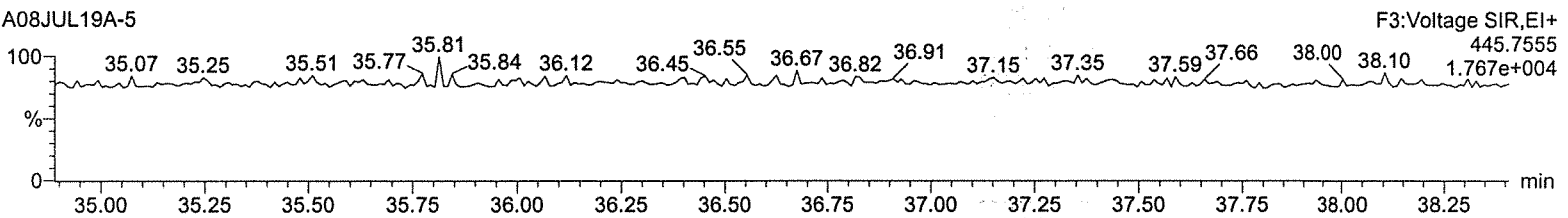
13C-123478-HxCDF

A08JUL19A-5



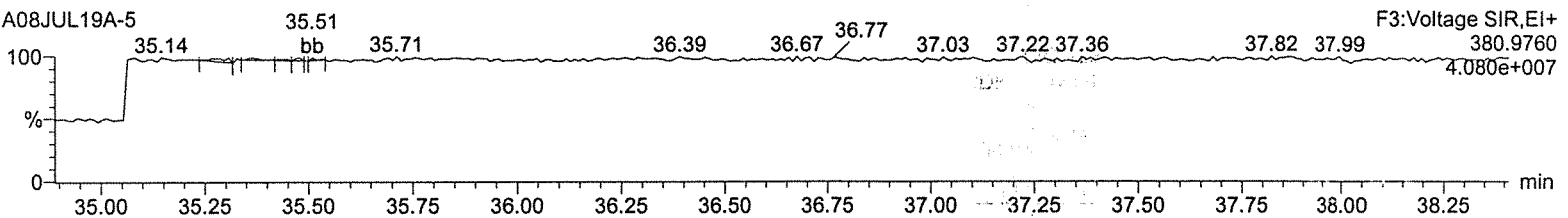
OcDPE

A08JUL19A-5



Lock Mass F3

A08JUL19A-5



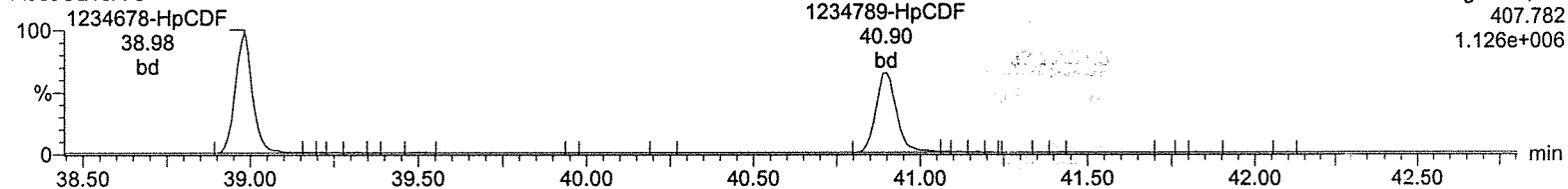
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

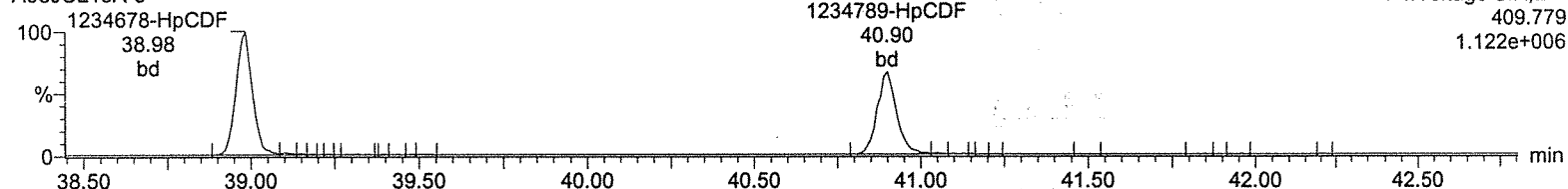
Total-heptafurans

A08JUL19A-5



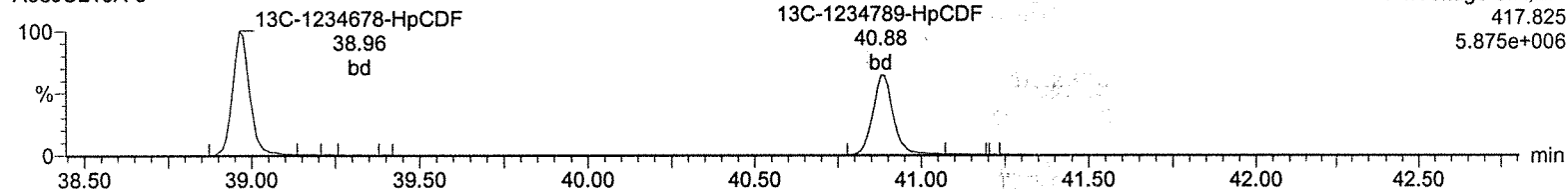
Total-heptafurans

A08JUL19A-5



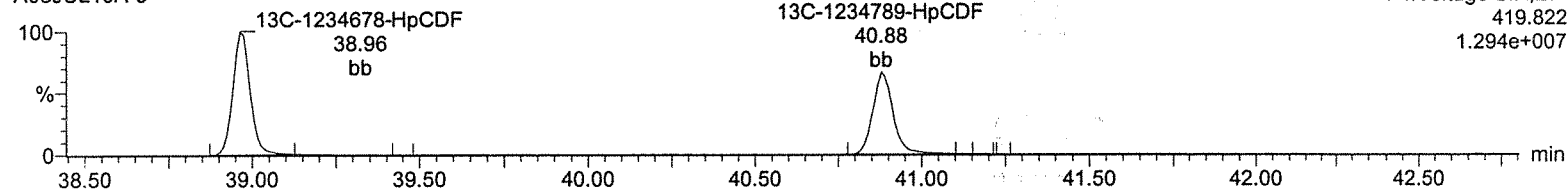
13C-1234678-HpCDF

A08JUL19A-5



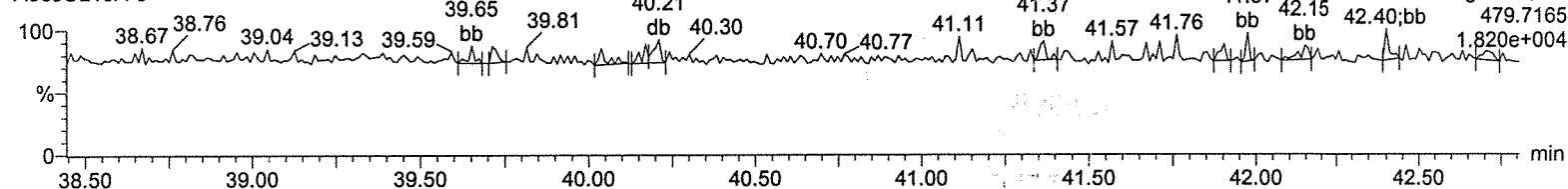
13C-1234678-HpCDF

A08JUL19A-5



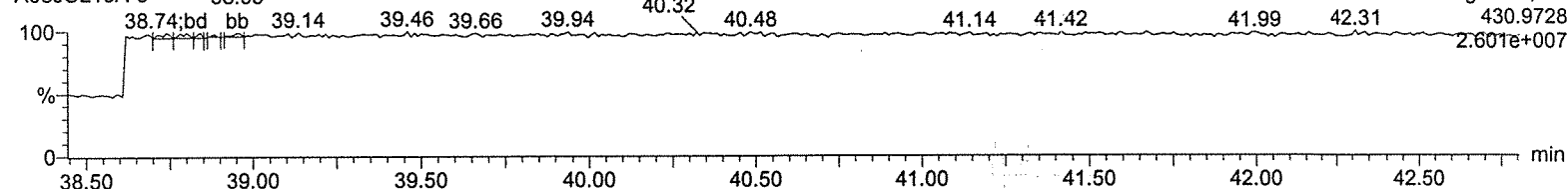
NoDPE

A08JUL19A-5



Lock Mass F4

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

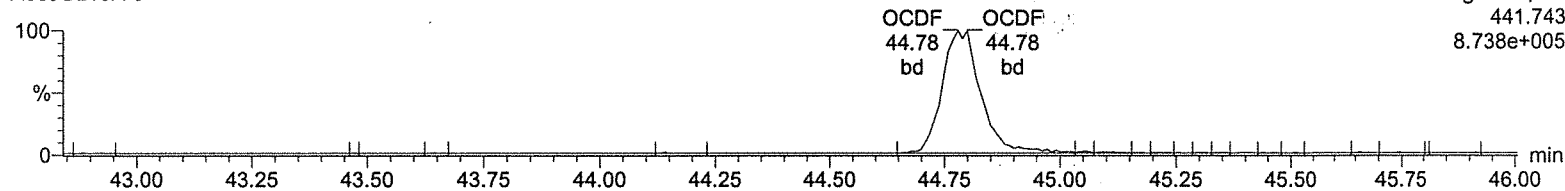
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

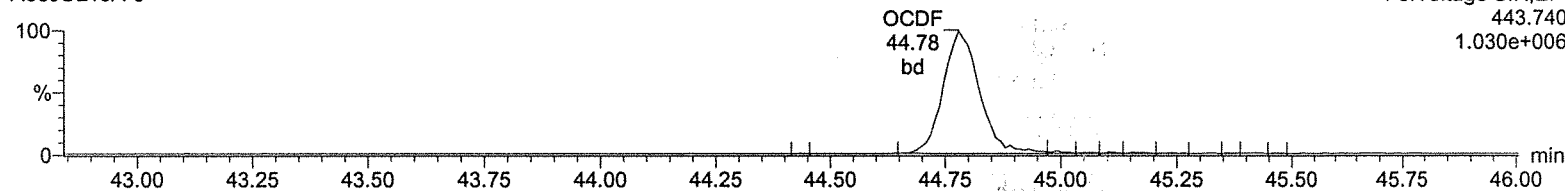
OCDF

A08JUL19A-5



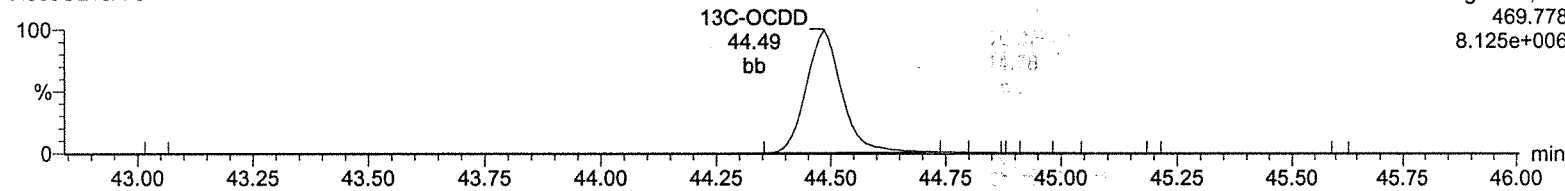
OCDF

A08JUL19A-5



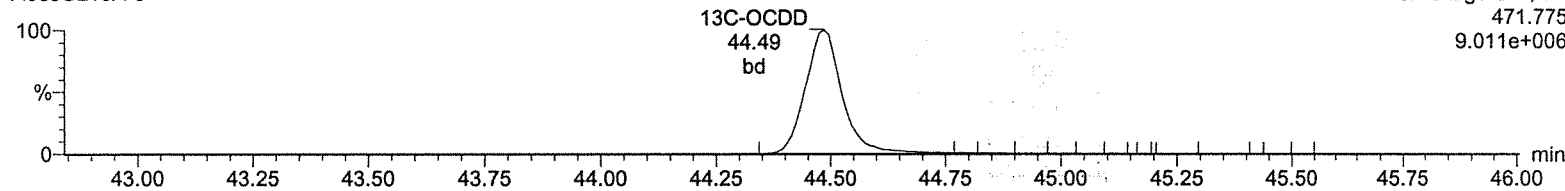
13C-OCDD

A08JUL19A-5



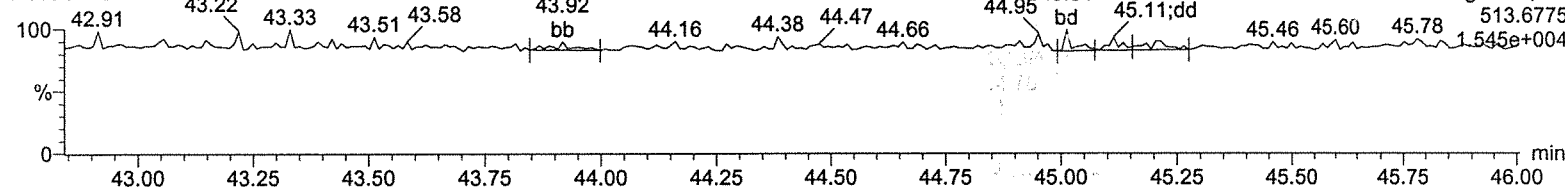
13C-OCDD

A08JUL19A-5



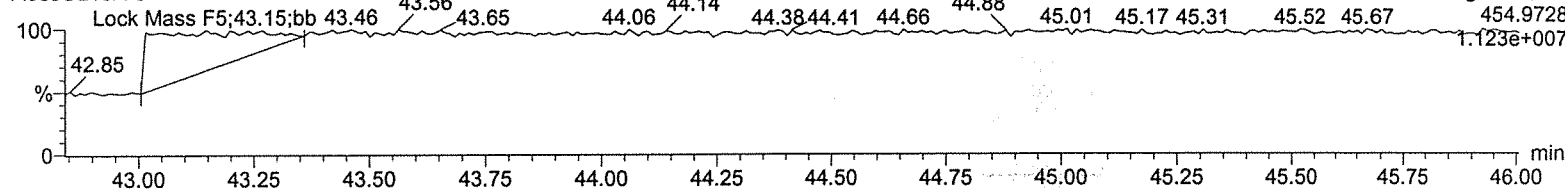
DeDPE

A08JUL19A-5



Lock Mass F5

A08JUL19A-5



Quantify Sample Summary Report

Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	8.68e4	1.19e5	2.00e5	31.35	1.000	0.77	NO	9.942	0.879	0.884	5.07	0.0990	1.57e6	2450	641.8	2.15e6	2611	823.3	bb	bb
2	12378-PeCDD	3.84e5	2.47e5	6.31e5	34.21	1.000	1.55	NO	50.221	0.857	0.853	1.65	0.0618	9.31e6	2979	3125.8	6.05e6	3309	1827.4	bb	bb
3	123478-HxCDD	3.18e5	2.55e5	5.73e5	36.83	1.000	1.25	NO	50.558	0.950	0.940	3.11	0.139	6.71e6	4648	1442.7	5.39e6	6081	886.4	bd	bd
4	123678-HxCDD	3.66e5	2.94e5	6.60e5	36.92	1.000	1.25	NO	51.250	0.968	0.944	2.57	0.135	6.98e6	4648	1501.3	5.54e6	6081	911.6	dd	dd
5	123789-HxCDD	3.38e5	2.74e5	6.12e5	37.16	1.007	1.24	NO	51.427	0.954	0.927	3.30	0.139	6.19e6	4648	1331.0	5.01e6	6081	823.3	dd	dd
6	1234678-HpCDD	2.49e5	2.42e5	4.91e5	40.23	1.000	1.03	NO	51.498	1.071	1.040	2.88	0.178	3.60e6	4071	884.4	3.45e6	4114	898.4	bd	bd
7	OCDD	4.42e5	4.94e5	9.36e5	44.49	1.000	0.90	NO	102.635	0.997	0.971	2.39	0.414	4.83e6	5533	872.8	5.28e6	7922	666.2	bd	bd
8	2378-TCDF	1.06e5	1.37e5	2.43e5	30.67	1.001	0.77	NO	9.949	0.973	0.978	5.59	0.0625	1.36e6	2841	478.3	1.75e6	3684	475.9	bb	bb
9	12378-PeCDF	5.82e5	3.75e5	9.56e5	33.40	1.000	1.55	NO	50.773	0.960	0.945	3.41	0.103	1.43e7	8482	1685.4	9.31e6	7788	1195.1	bd	bb
10	123478-PeCDF	6.27e5	4.19e5	1.05e6	34.01	1.000	1.50	NO	50.780	1.002	0.987	3.73	0.0954	1.57e7	8482	1848.3	1.04e7	7788	1331.7	bb	bb
11	123478-HxCDF	4.65e5	3.78e5	8.43e5	36.11	1.000	1.23	NO	51.251	1.114	1.087	3.86	0.106	1.00e7	5453	1833.5	8.26e6	7295	1131.6	bd	bd
12	123678-HxCDF	5.03e5	4.09e5	9.12e5	36.21	1.000	1.23	NO	51.606	1.074	1.041	3.23	0.109	1.03e7	5453	1882.3	8.37e6	7295	1147.0	dd	db
13	1234678-HxCDF	4.63e5	3.89e5	8.52e5	36.69	1.001	1.19	NO	50.727	1.152	1.136	3.17	0.117	9.28e6	5453	1701.9	7.55e6	7295	1035.1	bb	bd
14	123789-HxCDF	3.95e5	3.29e5	7.24e5	37.47	1.000	1.20	NO	51.190	1.086	1.061	2.29	0.151	7.02e6	5453	1288.2	5.96e6	7295	817.0	bb	bb
15	1234678-HpCDF	3.50e5	3.56e5	7.06e5	38.97	1.000	0.98	NO	51.632	1.187	1.150	3.86	0.160	6.00e6	6270	956.4	6.00e6	6223	963.4	bb	bd
16	1234789-HpCDF	2.81e5	2.79e5	5.60e5	40.89	1.000	1.01	NO	49.736	1.196	1.202	1.91	0.237	4.07e6	6270	648.8	3.95e6	6223	634.8	bb	bb
17	OCDF	4.97e5	5.71e5	1.07e6	44.78	1.007	0.87	NO	100.464	1.138	1.133	6.78	0.245	5.22e6	4930	1059.5	5.92e6	4365	1356.2	bd	bb
18	13C-2378-TCDD	9.90e5	1.28e6	2.27e6	31.34	1.015	0.77	NO	102.354	1.155	1.128	2.36	0.127	1.92e7	8469	2264.4	2.44e7	5255	4640.6	bb	bb
19	13C-12378-PeCDD	8.92e5	5.81e5	1.47e6	34.20	1.108	1.54	NO	99.635	0.749	0.751	5.03	0.124	2.17e7	5732	3778.6	1.40e7	3222	4330.4	bb	bb
20	13C-123478-HxCDD	6.63e5	5.43e5	1.21e6	36.82	0.991	1.22	NO	97.866	0.877	0.896	1.38	0.150	1.36e7	6280	2158.5	1.10e7	4593	2391.6	bd	bd
21	13C-123678-HxCDD	7.53e5	6.11e5	1.36e6	36.91	0.994	1.23	NO	100.617	0.992	0.986	0.84	0.137	1.39e7	6280	2215.9	1.16e7	4593	2523.5	dd	dd
22	13C-1234678-HpCDD	4.70e5	4.47e5	9.17e5	40.22	1.083	1.05	NO	99.377	0.667	0.672	1.29	0.265	6.78e6	6524	1039.1	6.60e6	7834	842.1	bb	bb
23	13C-OCDD	8.79e5	9.99e5	1.88e6	44.47	1.197	0.88	NO	212.754	0.683	0.642	4.87	0.207	9.40e6	5805	1618.6	1.06e7	4926	2154.4	bb	bd
24	13C-2378-TCDF	1.08e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	101.401	1.267	1.250	1.88	0.189	1.39e7	15695	887.2	1.76e7	6952	2535.5	bb	bb
25	13C-12378-PeCDF	1.22e6	7.73e5	1.99e6	33.39	1.082	1.58	NO	100.209	1.013	1.011	4.24	0.182	3.06e7	12046	2538.6	1.95e7	5629	3457.2	bb	bb
26	13C-23478-PeCDF	1.28e6	8.10e5	2.09e6	34.00	1.102	1.57	NO	99.710	1.060	1.063	5.28	0.173	3.17e7	12046	2632.4	2.00e7	5629	3558.0	bb	bb
27	13C-123478-HxCDF	5.20e5	9.92e5	1.51e6	36.10	0.972	0.52	NO	99.093	1.101	1.111	1.42	0.219	1.14e7	8433	1357.0	2.19e7	11233	1938.7	bd	bd
28	13C-123678-HxCDF	5.84e5	1.11e6	1.70e6	36.20	0.975	0.52	NO	99.133	1.236	1.247	1.06	0.196	1.17e7	8433	1381.4	2.19e7	11233	1948.6	db	dd
29	13C-234678-HxCDF	5.07e5	9.72e5	1.48e6	36.67	0.987	0.52	NO	99.455	1.076	1.082	1.01	0.225	9.88e6	8433	1171.9	1.91e7	11233	1703.9	bb	bb
30	13C-123789-HxCDF	4.66e5	8.67e5	1.33e6	37.46	1.008	0.54	NO	100.322	0.970	0.967	1.08	0.252	8.35e6	8433	990.6	1.57e7	11233	1400.3	bd	bb
31	13C-1234678-HpCDF	3.65e5	8.24e5	1.19e6	38.96	1.049	0.44	NO	99.467	0.865	0.870	1.11	0.193	6.26e6	5883	1064.8	1.38e7	7684	1800.2	bb	bd
32	13C-1234789-HpCDF	2.84e5	6.52e5	9.36e5	40.88	1.101	0.44	NO	100.559	0.681	0.677	1.01	0.248	4.00e6	5883	679.7	9.16e6	7684	1192.4	bd	bd
33	13C-1234-TCDD	8.63e5	1.10e6	1.97e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.143	1.26e7	8469	1491.7	1.63e7	5255	3108.4	bb	bb
34	13C-123789-HxCDD	7.56e5	6.18e5	1.37e6	37.14	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.135	1.33e7	6280	2120.3	1.08e7	4593	2349.2	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Ch	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	2.18e5	2.18e5	2.18e5	31.34	1.015			10.427	1.107	1.061	4.54	0.0452	3.98e6	4599	864.6				M	M2	
																					bb	

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

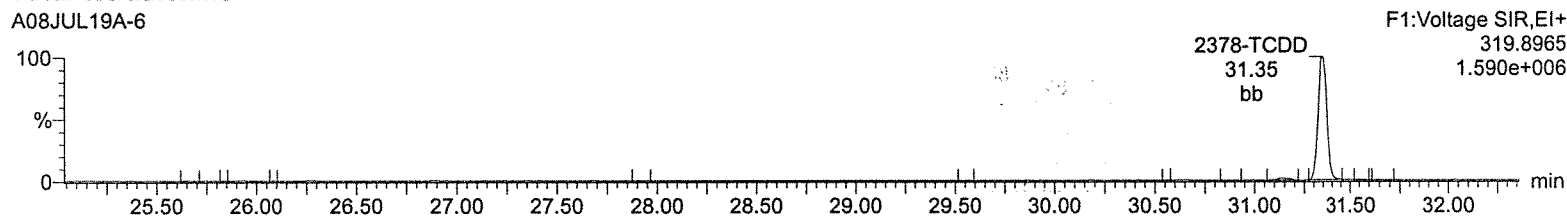
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

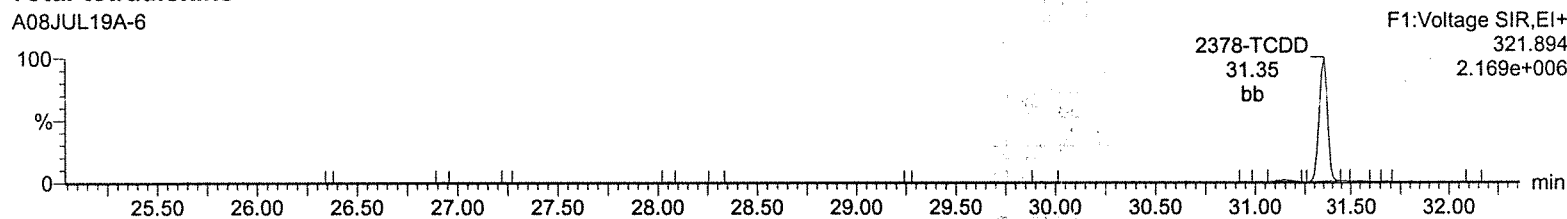
Total-tetradoxins

A08JUL19A-6



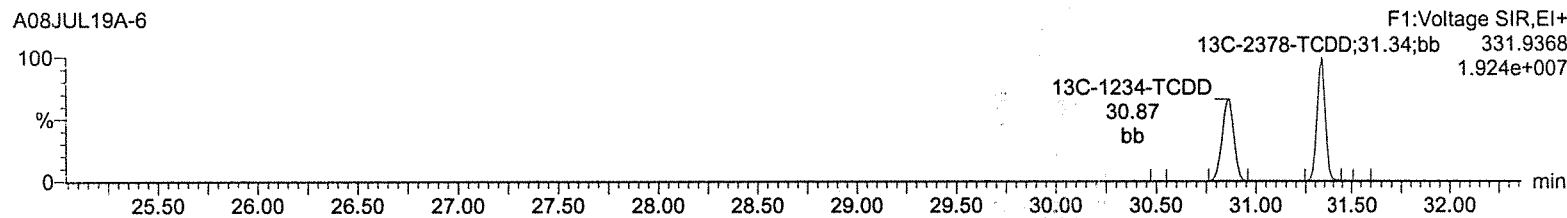
Total-tetradoxins

A08JUL19A-6



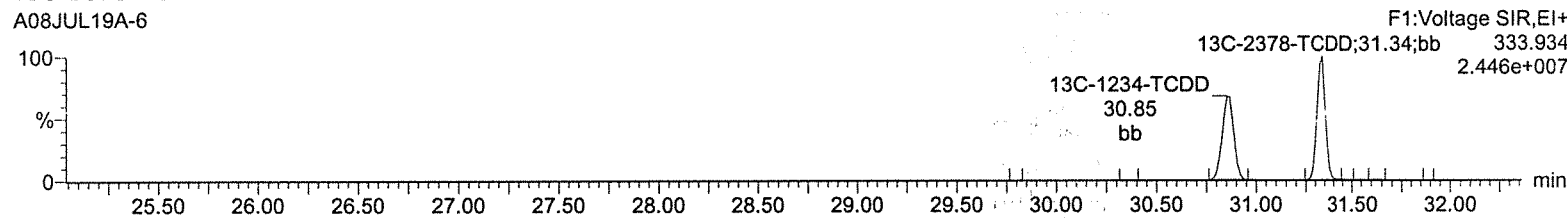
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A08JUL19A-6



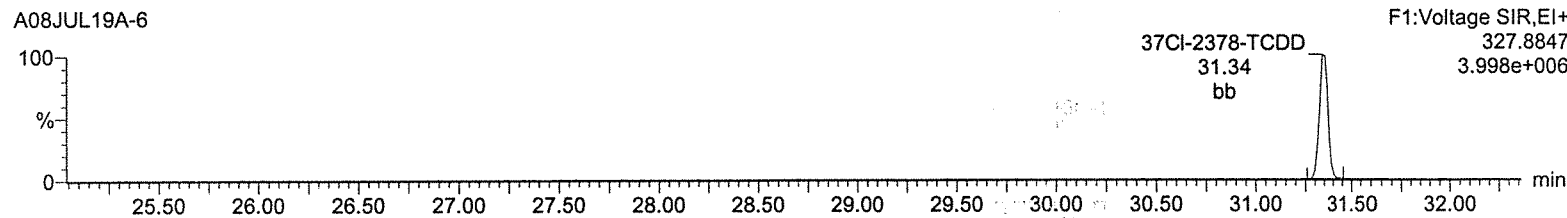
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A08JUL19A-6



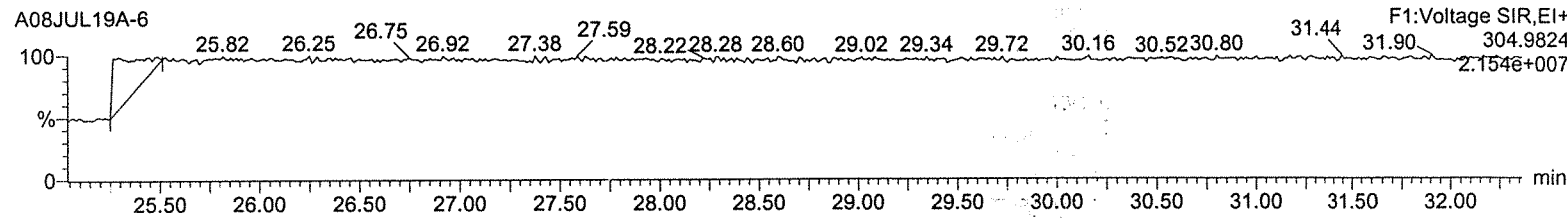
37Cl-2378-TCDD

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

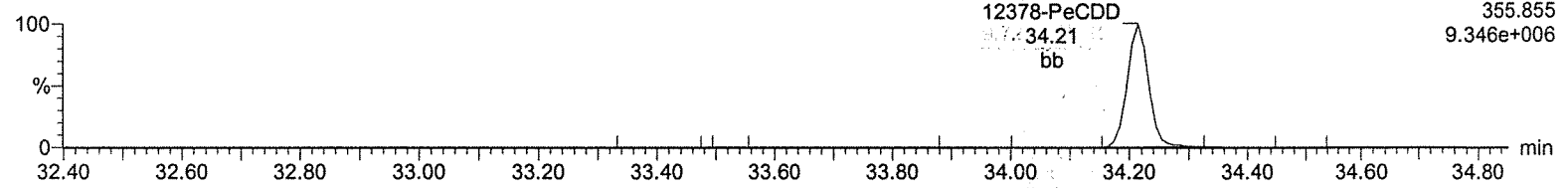
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

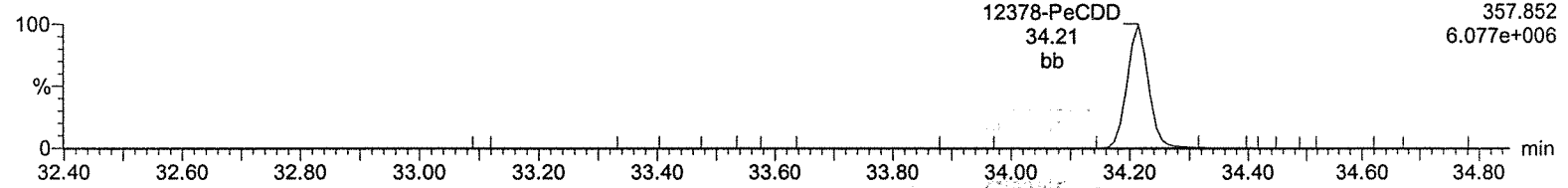
Total-pentadioxins

A08JUL19A-6



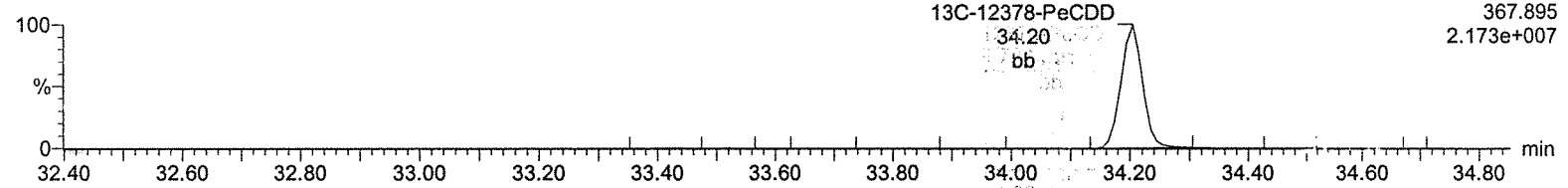
Total-pentadioxins

A08JUL19A-6



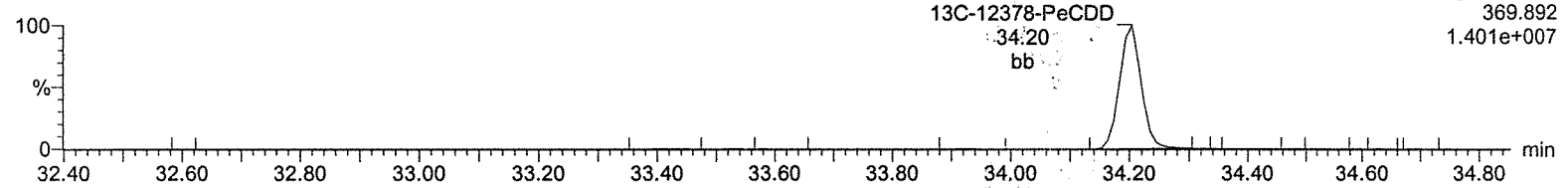
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A08JUL19A-6



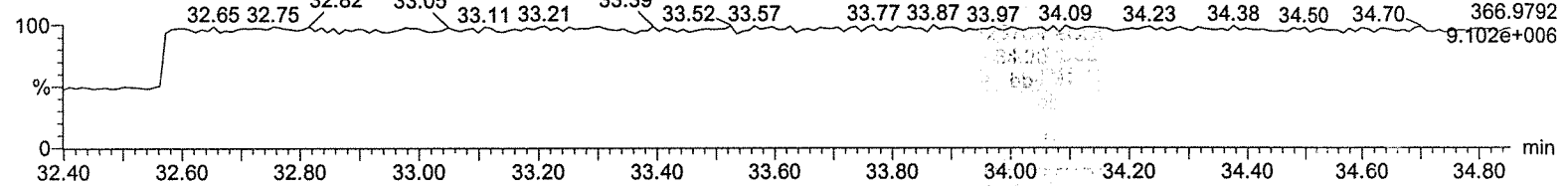
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A08JUL19A-6



Lock Mass F2

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

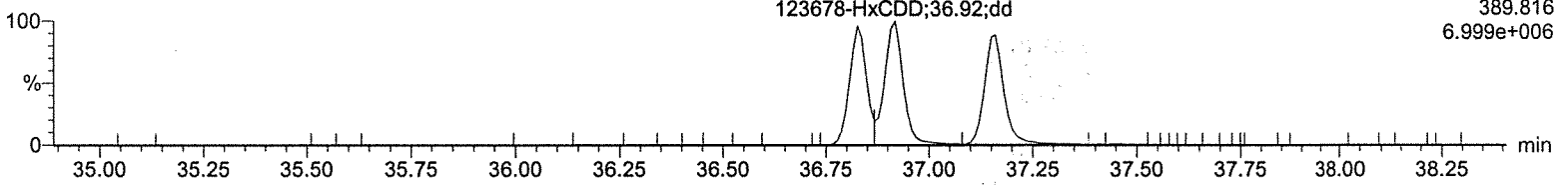
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

Total-hexadioxins

A08JUL19A-6

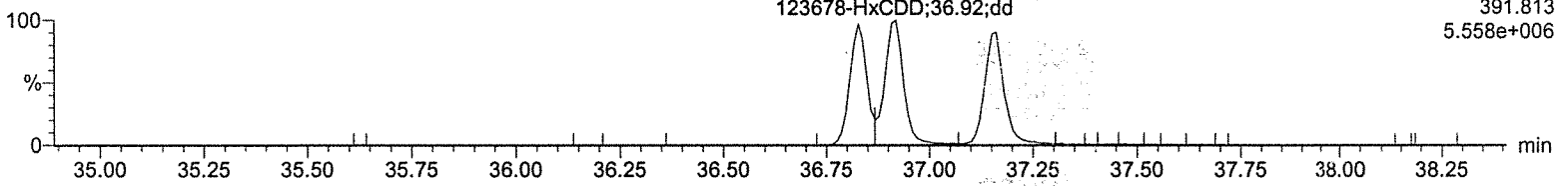
F3:Voltage SIR,EI+
389.816
6.999e+006



Total-hexadioxins

A08JUL19A-6

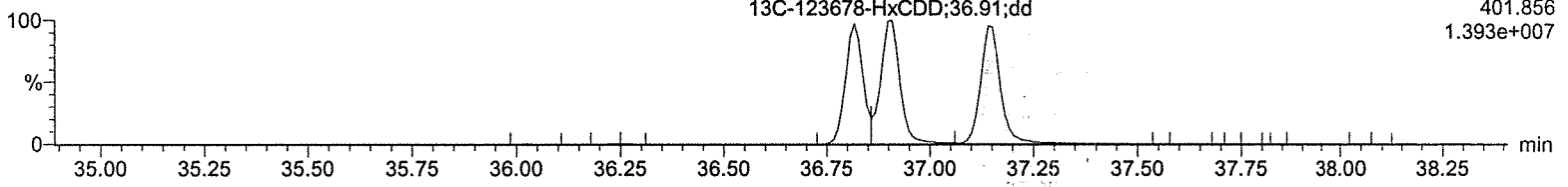
F3:Voltage SIR,EI+
391.813
5.558e+006



13C-123478-HxCDD

A08JUL19A-6

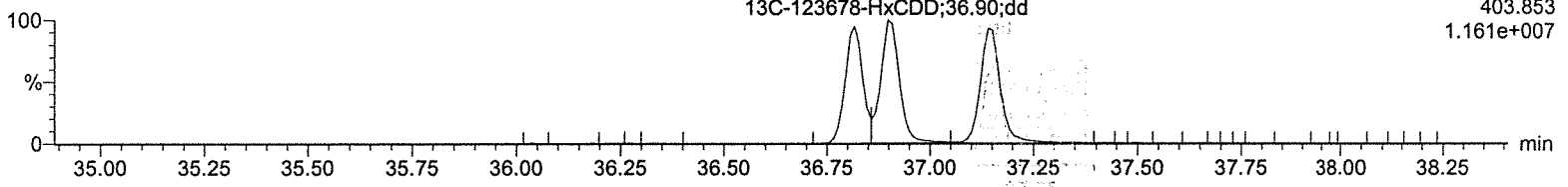
F3:Voltage SIR,EI+
401.856
1.393e+007



13C-123478-HxCDD

A08JUL19A-6

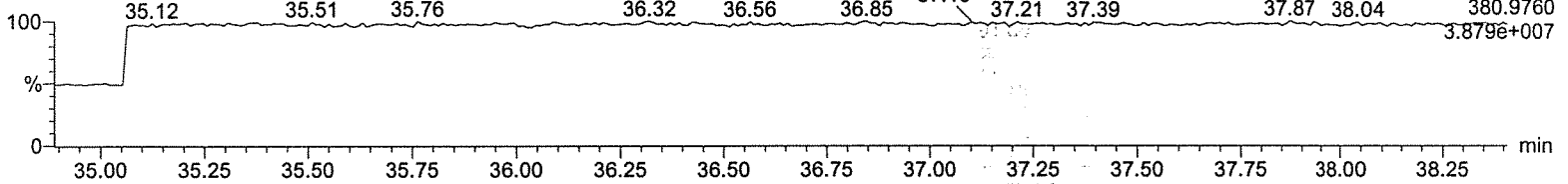
F3:Voltage SIR,EI+
403.853
1.161e+007



Lock Mass F3

A08JUL19A-6

F3:Voltage SIR,EI+
380.9760
3.879e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

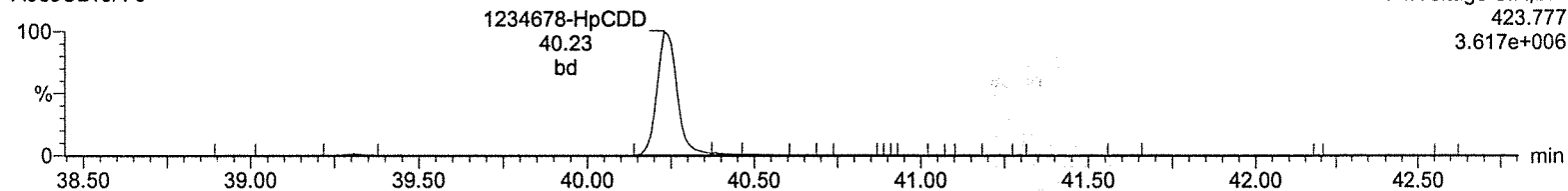
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

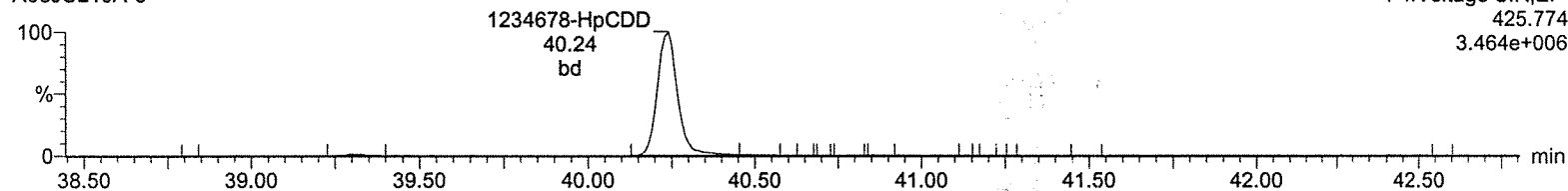
Total-heptadioxins

A08JUL19A-6



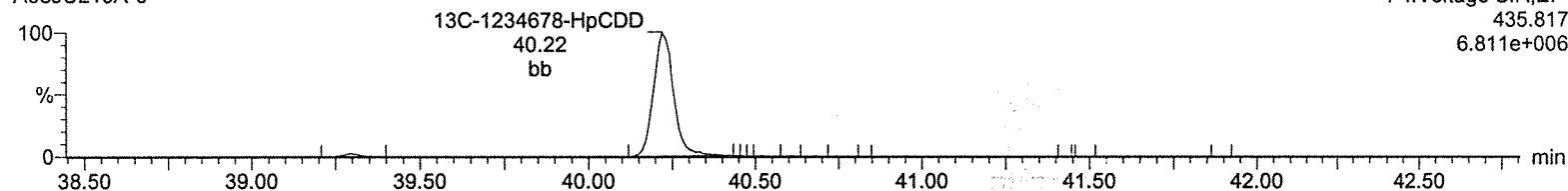
Total-heptadioxins

A08JUL19A-6



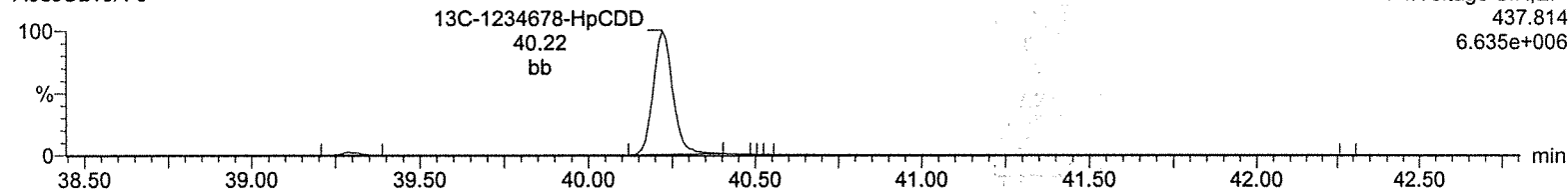
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A08JUL19A-6



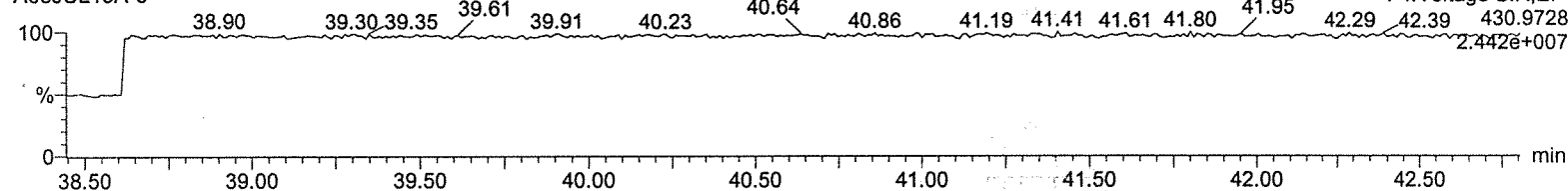
13C-1234678-HpCDD

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

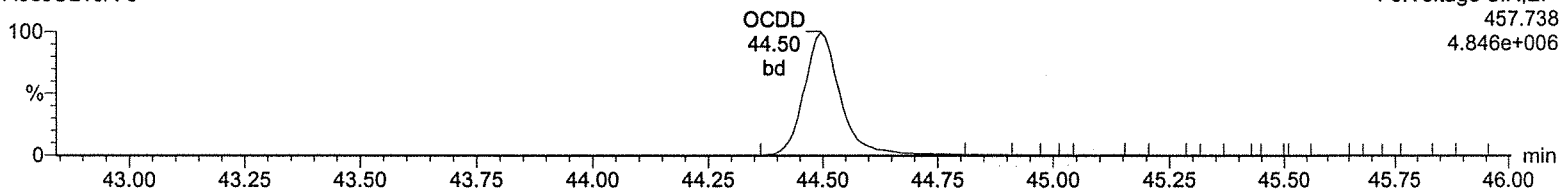
OCDD

A08JUL19A-6

F5:Voltage SIR,EI+

457.738

4.846e+006



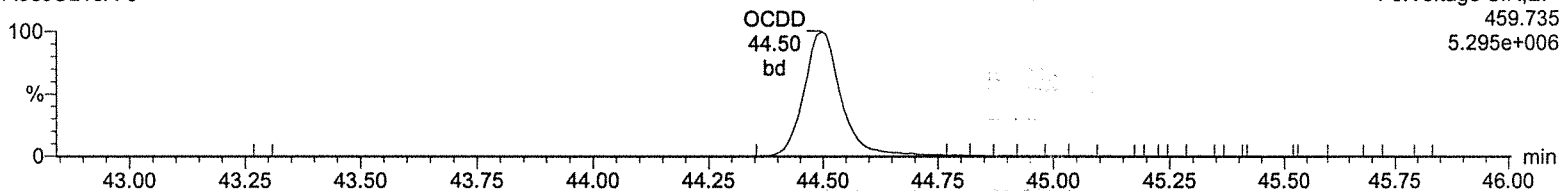
OCDD

A08JUL19A-6

F5:Voltage SIR,EI+

459.735

5.295e+006



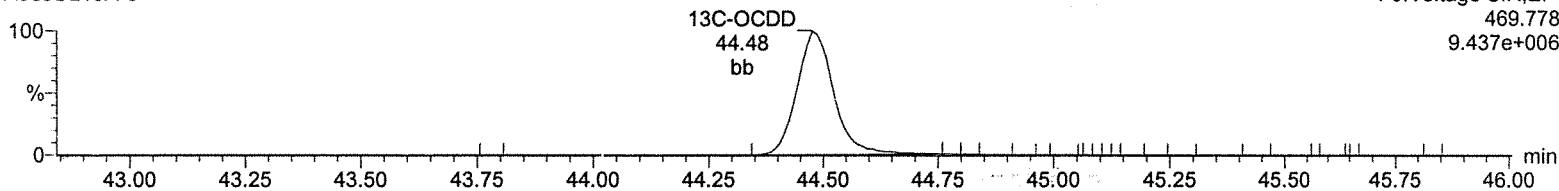
13C-OCDD

A08JUL19A-6

F5:Voltage SIR,EI+

469.778

9.437e+006



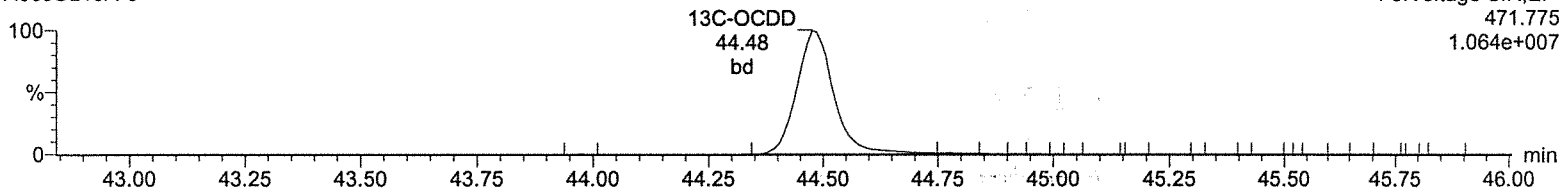
13C-OCDD

A08JUL19A-6

F5:Voltage SIR,EI+

471.775

1.064e+007



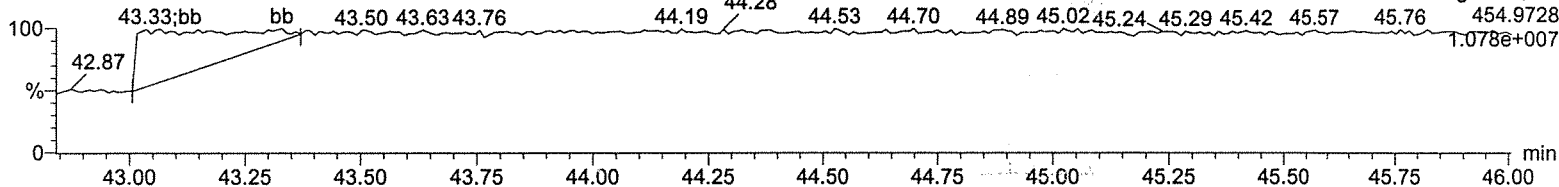
Lock Mass F5

A08JUL19A-6

F5:Voltage SIR,EI+

454.9728

1.078e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

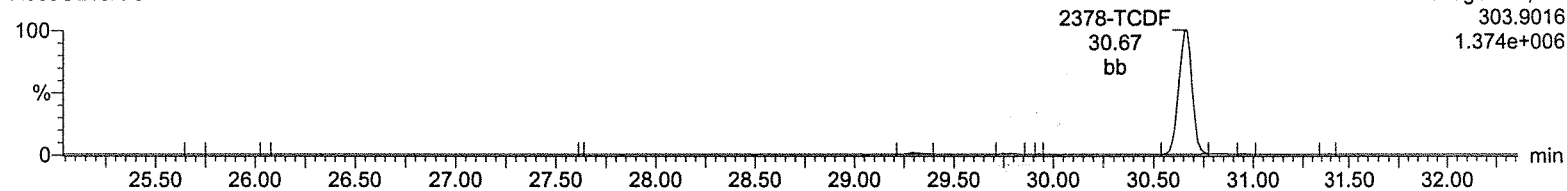
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Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

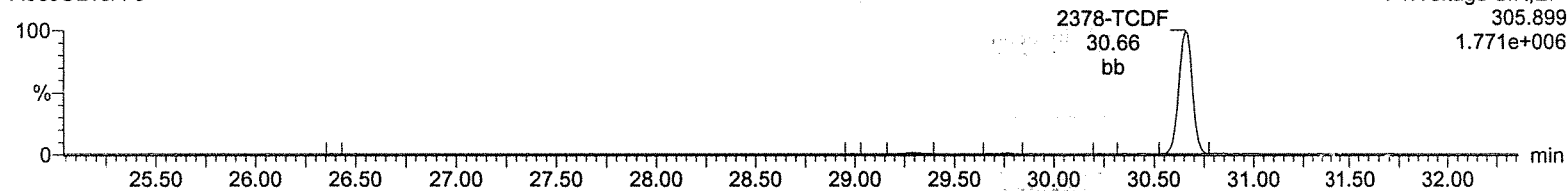
Total-tetrafurans

A08JUL19A-6



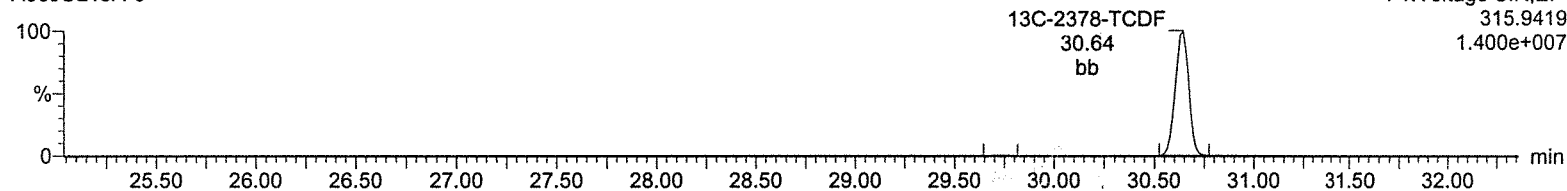
Total-tetrafurans

A08JUL19A-6



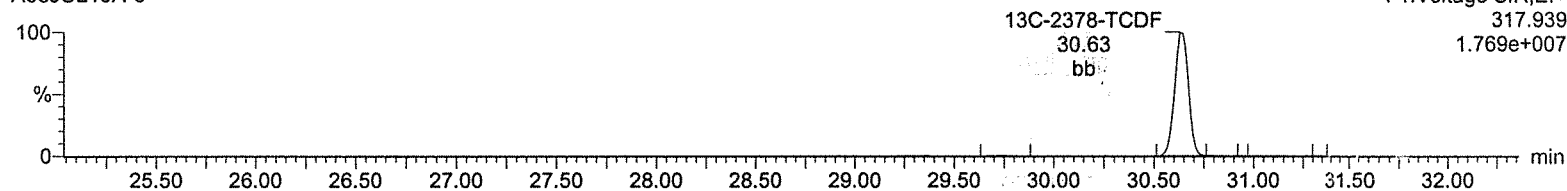
13C-2378-TCDF

A08JUL19A-6



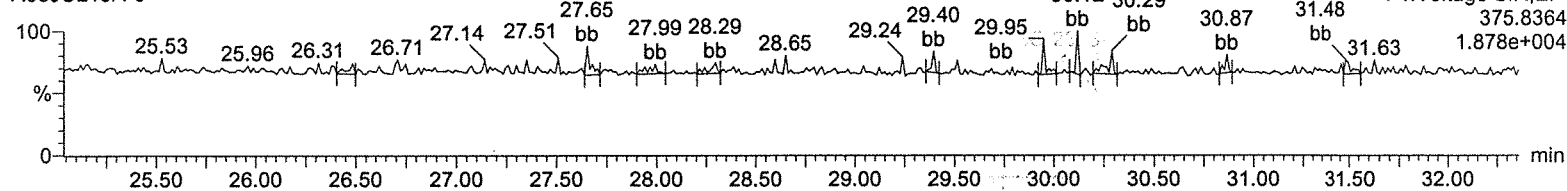
13C-2378-TCDF

A08JUL19A-6



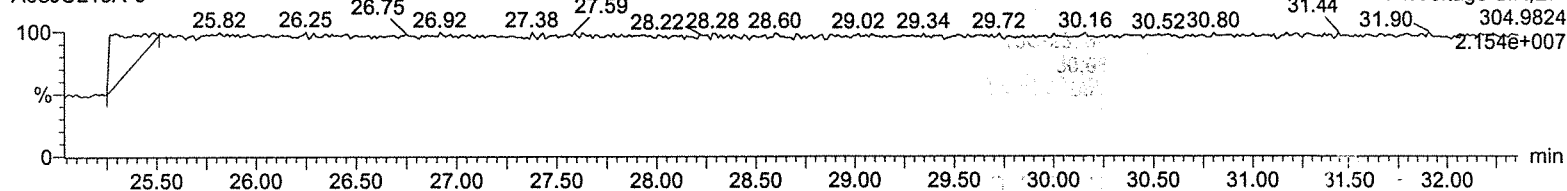
HxDPE

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



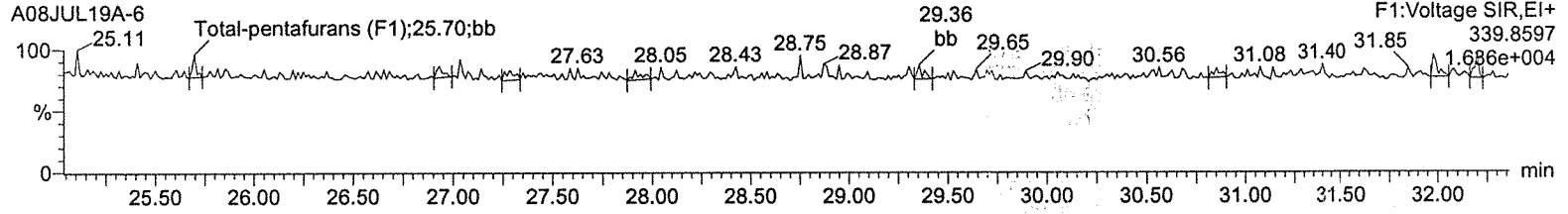
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Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

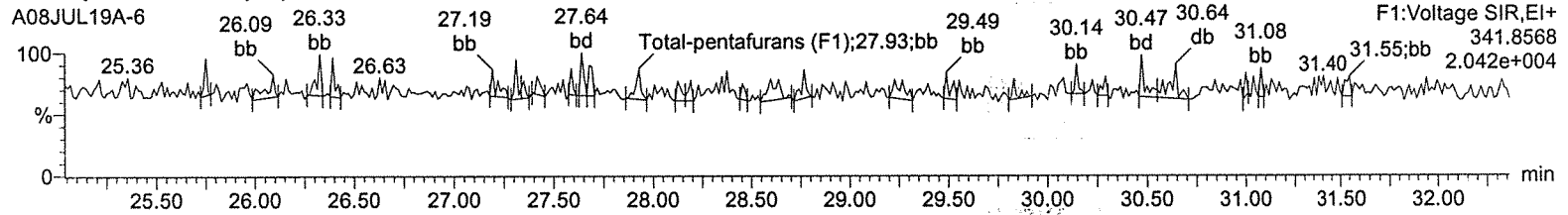
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

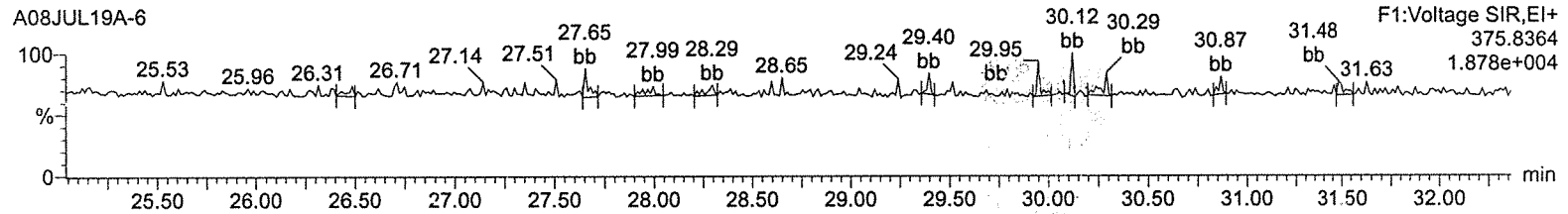
Total-pentafurans (F1)



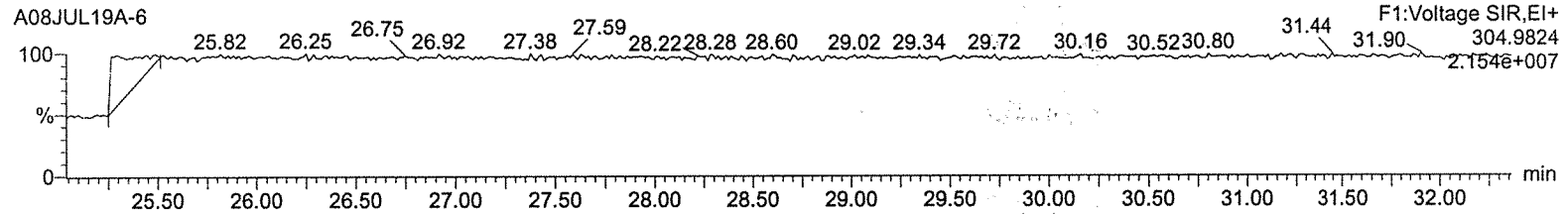
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

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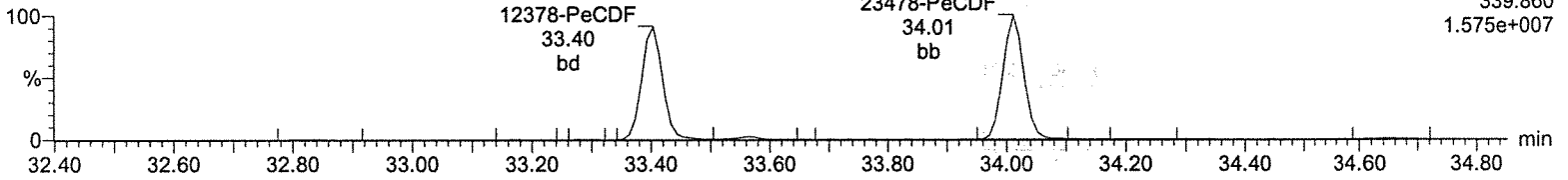
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Total-pentafurans

A08JUL19A-6

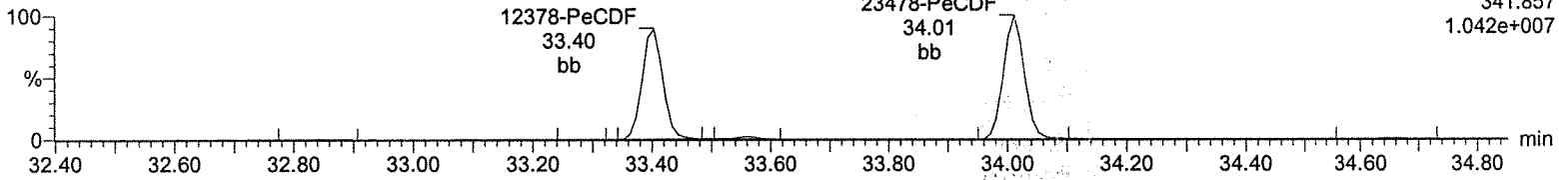
F2:Voltage SIR,EI+
339.860
1.575e+007



Total-pentafurans

A08JUL19A-6

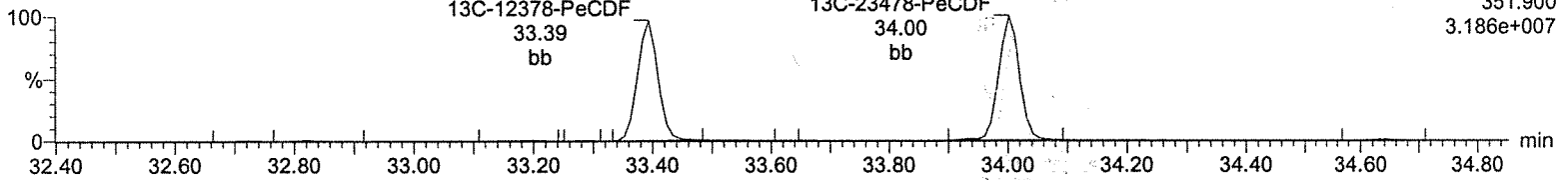
F2:Voltage SIR,EI+
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1.042e+007



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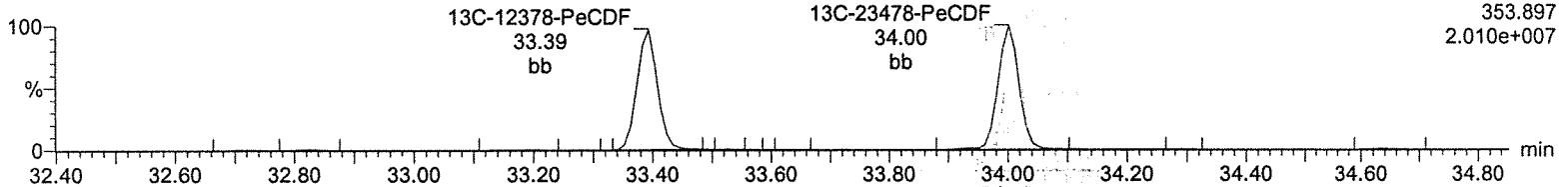
F2:Voltage SIR,EI+
351.900
3.186e+007



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A08JUL19A-6

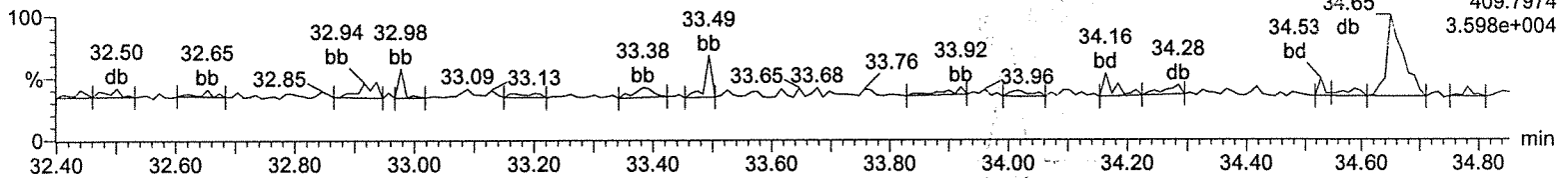
F2:Voltage SIR,EI+
353.897
2.010e+007



HpDPE

A08JUL19A-6

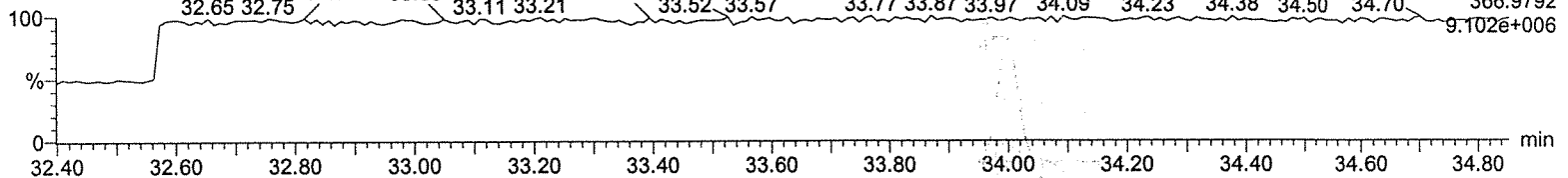
F2:Voltage SIR,EI+
409.7974
3.598e+004



Lock Mass F2

A08JUL19A-6

F2:Voltage SIR,EI+
366.9792
9.102e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

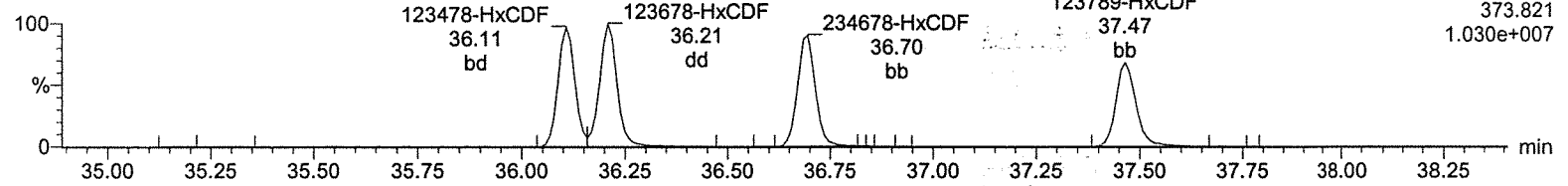
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

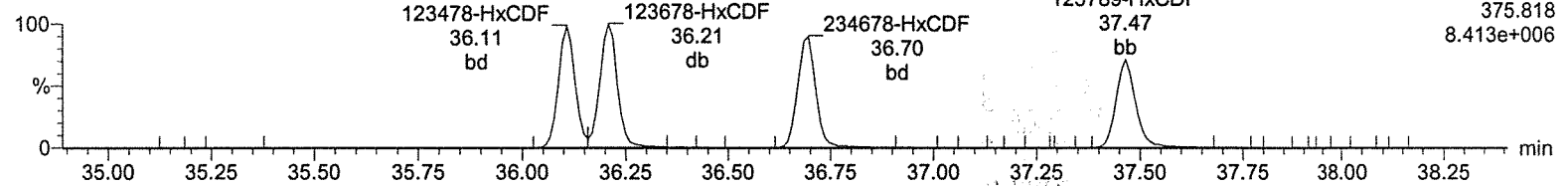
Total-hexafurans

A08JUL19A-6



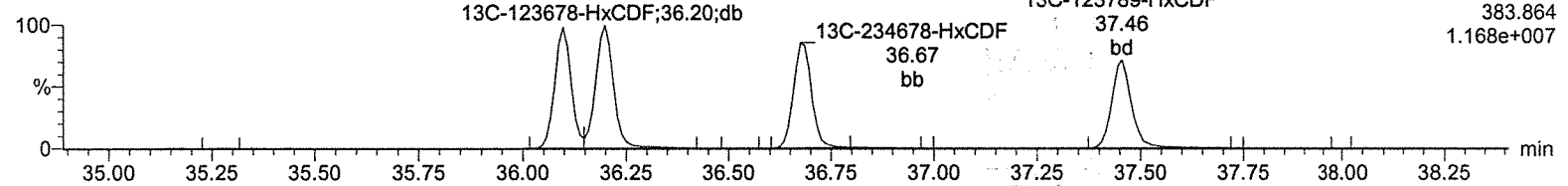
Total-hexafurans

A08JUL19A-6



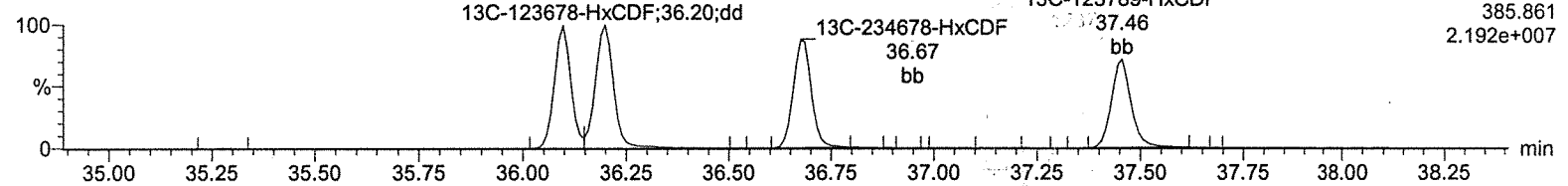
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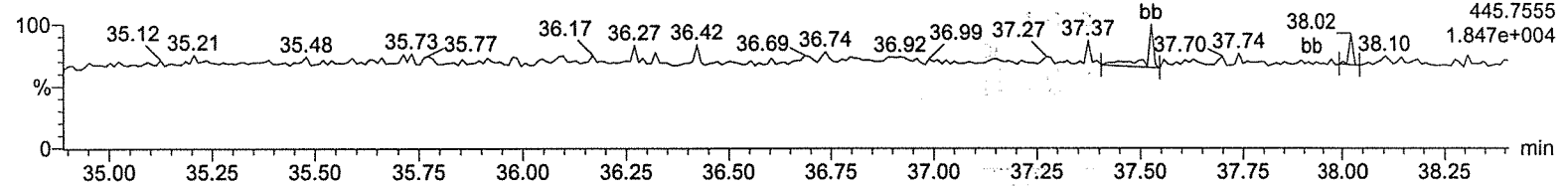
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A08JUL19A-6



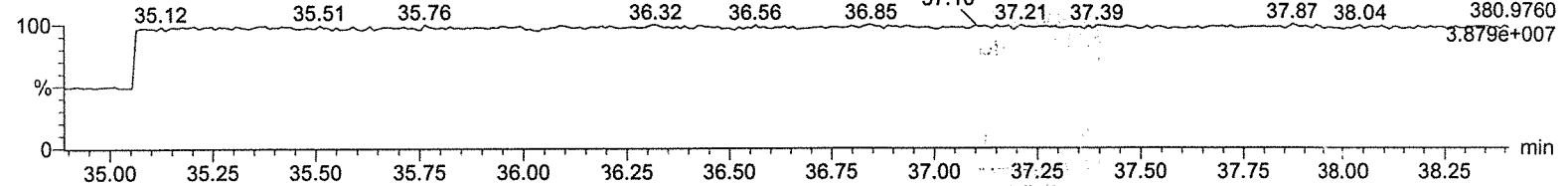
OcDPE

A08JUL19A-6



Lock Mass F3

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

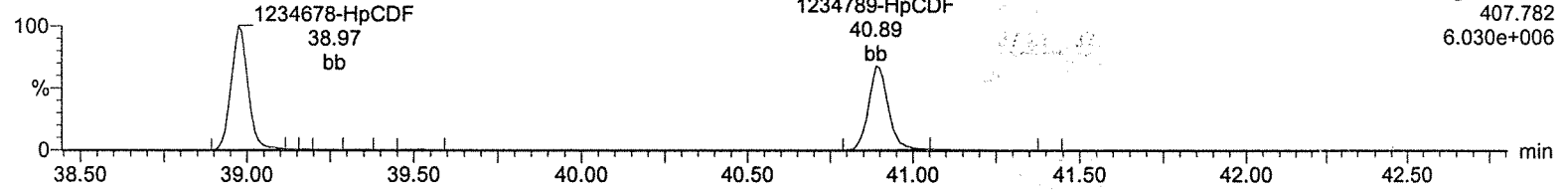
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

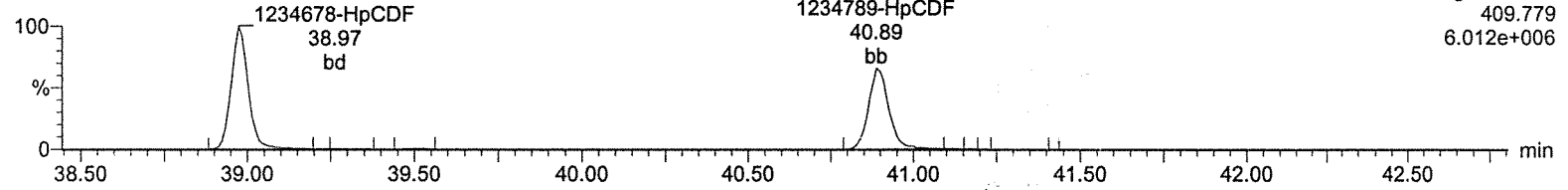
Total-heptafurans

A08JUL19A-6



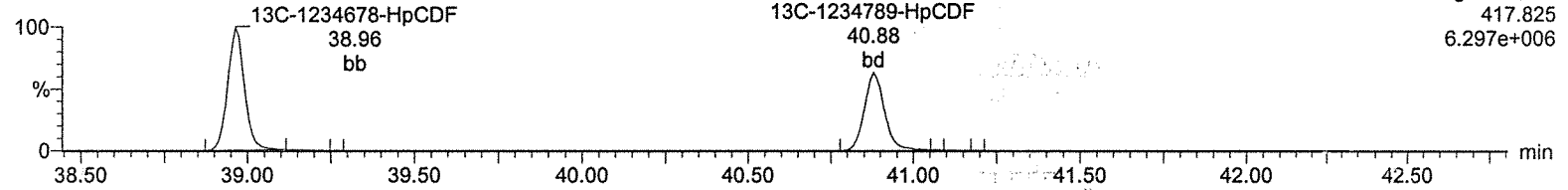
Total-heptafurans

A08JUL19A-6



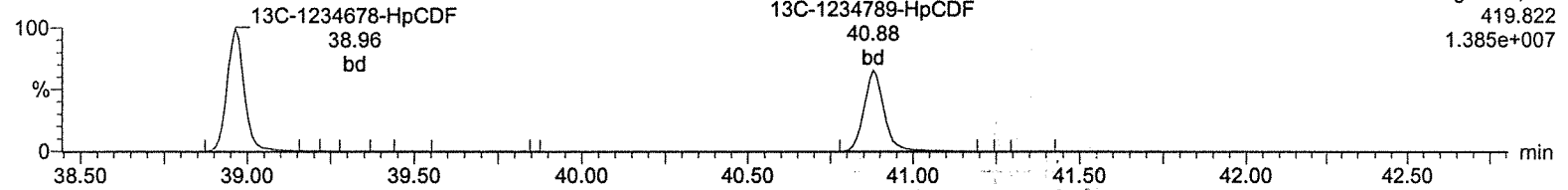
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A08JUL19A-6



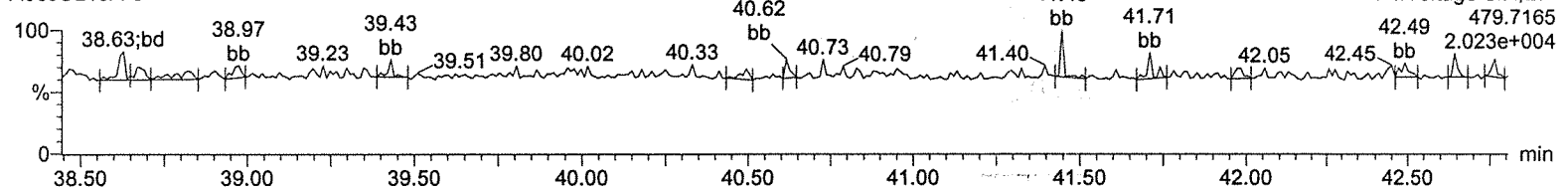
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A08JUL19A-6



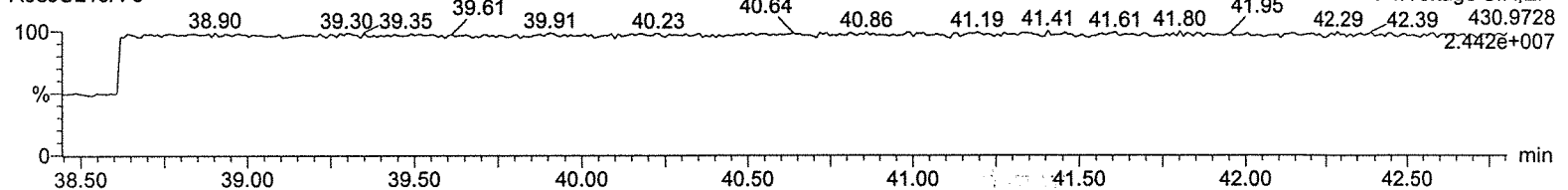
NoDPE

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

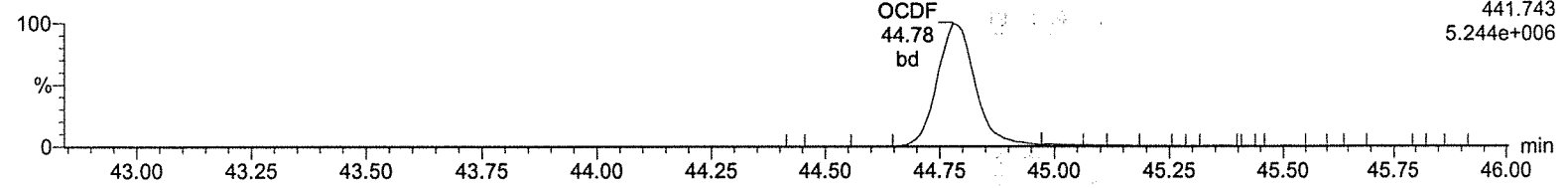
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

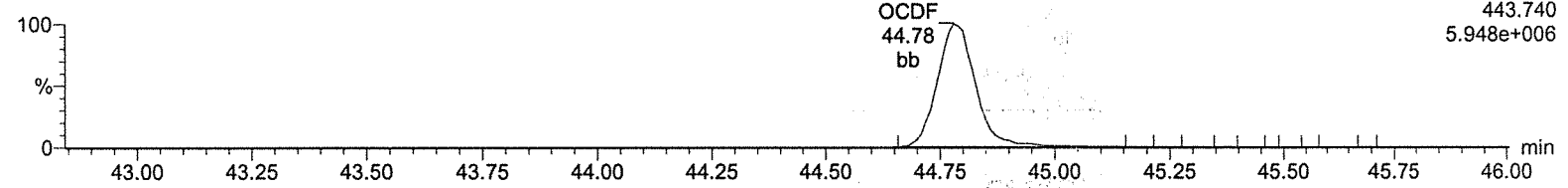
OCDF

A08JUL19A-6



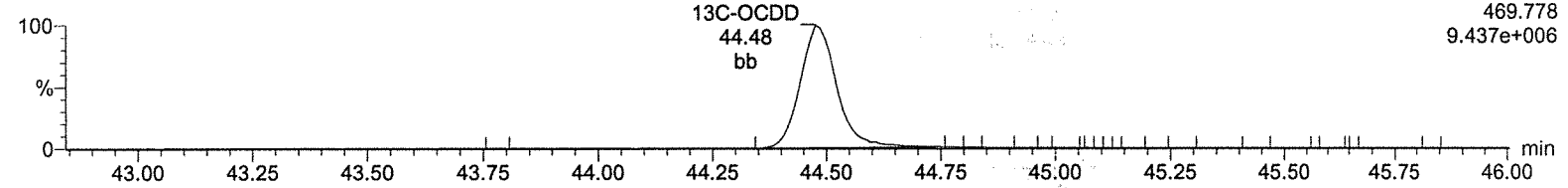
OCDF

A08JUL19A-6



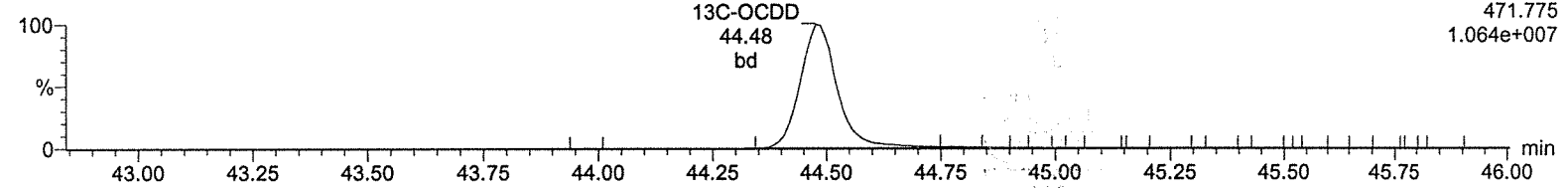
13C-OCDD

A08JUL19A-6



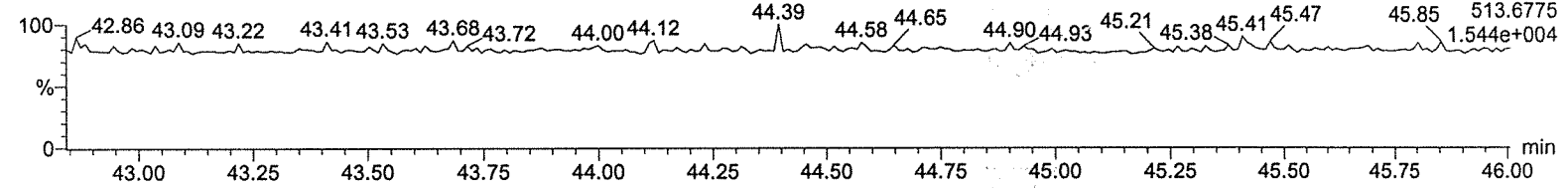
13C-OCDD

A08JUL19A-6



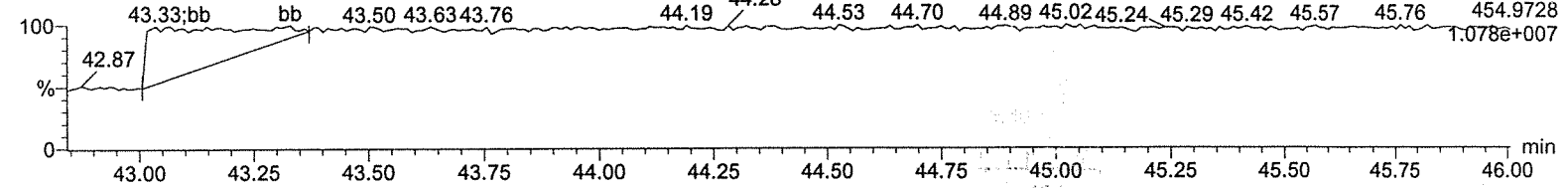
DeDPE

A08JUL19A-6



Lock Mass F5

A08JUL19A-6



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
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2019 July

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.20e5	4.23e5	7.43e5	31.35	1.000	0.76	NO	40.313	0.891	0.884	5.07	0.0467	6.28e6	2669	2351.7	8.28e6	3196	2591.3	bb	bd
2	12378-PeCDD	1.43e6	9.27e5	2.36e6	34.21	1.000	1.55	NO	199.882	0.853	0.853	1.65	0.134	3.45e7	7066	4888.6	2.27e7	5786	3925.7	bb	bb
3	123478-HxCDD	1.20e6	9.61e5	2.16e6	36.84	1.000	1.25	NO	204.080	0.959	0.940	3.11	0.210	2.48e7	6620	3745.7	1.94e7	8330	2329.2	dd	bd
4	123678-HxCDD	1.32e6	1.06e6	2.38e6	36.92	1.000	1.25	NO	203.463	0.960	0.944	2.57	0.193	2.62e7	6620	3954.5	2.14e7	8330	2574.5	dd	dd
5	123789-HxCDD	1.25e6	9.97e5	2.25e6	37.16	1.007	1.25	NO	204.709	0.949	0.927	3.30	0.204	2.37e7	6620	3578.2	1.91e7	8330	2291.3	dd	dd
6	1234678-HpCDD	8.98e5	8.65e5	1.76e6	40.25	1.000	1.04	NO	200.188	1.041	1.040	2.88	0.324	1.35e7	6485	2081.7	1.29e7	7778	1662.5	bb	bd
7	OCDD	1.60e6	1.73e6	3.34e6	44.51	1.000	0.93	NO	407.176	0.989	0.971	2.39	0.535	1.76e7	8985	1960.9	1.94e7	7406	2624.3	bd	bb
8	2378-TCDF	3.91e5	5.06e5	8.96e5	30.67	1.001	0.77	NO	39.698	0.971	0.978	5.59	0.0830	5.42e6	3365	1611.9	6.79e6	5160	1315.9	bb	bb
9	12378-PeCDF	2.15e6	1.42e6	3.56e6	33.40	1.000	1.51	NO	204.220	0.965	0.945	3.41	0.104	5.57e7	6926	8041.1	3.68e7	8542	4302.7	bb	bd
10	23478-PeCDF	2.37e6	1.56e6	3.92e6	34.02	1.000	1.52	NO	205.338	1.013	0.987	3.73	0.0933	6.14e7	6926	8866.5	3.90e7	8542	4567.7	bb	bb
11	123478-HxCDF	1.70e6	1.40e6	3.10e6	36.12	1.001	1.22	NO	208.354	1.133	1.087	3.86	0.274	3.75e7	14090	2658.9	3.03e7	15421	1963.2	bd	bd
12	123678-HxCDF	1.82e6	1.49e6	3.31e6	36.21	1.000	1.22	NO	202.580	1.054	1.041	3.23	0.271	3.78e7	14090	2683.1	3.11e7	15421	2019.8	db	db
13	234678-HxCDF	1.73e6	1.43e6	3.16e6	36.69	1.000	1.21	NO	207.523	1.178	1.136	3.17	0.277	3.67e7	14090	2608.0	3.05e7	15421	1976.9	bd	bd
14	123789-HxCDF	1.41e6	1.15e6	2.56e6	37.48	1.000	1.22	NO	201.238	1.067	1.061	2.29	0.378	2.64e7	14090	1872.9	2.13e7	15421	1383.0	bb	bb
15	1234678-HpCDF	1.28e6	1.26e6	2.54e6	38.98	1.000	1.01	NO	205.556	1.182	1.150	3.86	0.276	2.27e7	10691	2125.0	2.21e7	9042	2443.4	bb	bb
16	1234789-HpCDF	1.04e6	1.03e6	2.08e6	40.91	1.000	1.01	NO	204.324	1.228	1.202	1.91	0.419	1.49e7	10691	1395.5	1.48e7	9042	1631.4	bd	bd
17	OCDF	1.90e6	2.09e6	3.98e6	44.80	1.007	0.91	NO	416.811	1.180	1.133	6.78	0.402	2.07e7	8487	2437.5	2.34e7	5859	3990.3	bd	bb
18	13C-2378-TCDD	9.08e5	1.18e6	2.08e6	31.34	1.015	0.77	NO	98.652	1.113	1.128	2.36	0.112	1.86e7	7944	2339.0	2.37e7	4559	5208.0	bb	bb
19	13C-12378-PeCDD	8.37e5	5.47e5	1.38e6	34.20	1.108	1.53	NO	98.417	0.739	0.751	5.03	0.104	2.04e7	4338	4692.3	1.34e7	3347	4003.3	bb	bb
20	13C-123478-HxCDD	6.25e5	5.03e5	1.13e6	36.83	0.991	1.24	NO	100.728	0.903	0.896	1.38	0.172	1.26e7	6951	1815.9	1.00e7	5143	1950.2	bd	bd
21	13C-123678-HxCDD	6.83e5	5.57e5	1.24e6	36.91	0.993	1.23	NO	100.685	0.993	0.986	0.84	0.156	1.36e7	6951	1953.6	1.11e7	5143	2156.6	dd	dd
22	13C-1234678-HpCDD	4.33e5	4.13e5	8.47e5	40.23	1.083	1.05	NO	100.892	0.678	0.672	1.29	0.183	6.49e6	4520	1436.4	6.16e6	5151	1196.0	bd	bd
23	13C-OCDD	7.80e5	9.07e5	1.69e6	44.49	1.197	0.86	NO	210.311	0.675	0.642	4.87	0.272	8.74e6	8904	981.8	9.98e6	4818	2071.9	bb	bd
24	13C-2378-TCDF	1.01e6	1.30e6	2.31e6	30.64	0.993	0.77	NO	98.614	1.233	1.250	1.88	0.165	1.37e7	13730	999.5	1.79e7	6681	2683.0	bb	bb
25	13C-12378-PeCDF	1.13e6	7.17e5	1.85e6	33.39	1.082	1.58	NO	97.584	0.986	1.011	4.24	0.190	2.89e7	13181	2193.7	1.86e7	5800	3205.6	bb	bb
26	13C-23478-PeCDF	1.19e6	7.44e5	1.94e6	34.01	1.102	1.60	NO	97.318	1.035	1.063	5.28	0.181	3.10e7	13181	2355.2	1.88e7	5800	3248.7	db	bb
27	13C-123478-HxCDF	4.71e5	8.99e5	1.37e6	36.10	0.972	0.52	NO	98.724	1.097	1.111	1.42	0.276	1.02e7	10993	928.5	1.98e7	13101	1511.7	bd	bd
28	13C-123678-HxCDF	5.42e5	1.03e6	1.57e6	36.20	0.974	0.53	NO	100.717	1.256	1.247	1.06	0.246	1.08e7	10993	985.4	2.09e7	13101	1591.5	dd	dd
29	13C-234678-HxCDF	4.70e5	8.72e5	1.34e6	36.69	0.987	0.54	NO	99.282	1.074	1.082	1.01	0.284	9.85e6	10993	896.3	1.88e7	13101	1435.8	bd	bb
30	13C-123789-HxCDF	4.17e5	7.84e5	1.20e6	37.47	1.008	0.53	NO	99.370	0.961	0.967	1.08	0.317	7.67e6	10993	697.3	1.47e7	13101	1123.3	bd	bb
31	13C-1234678-HpCDF	3.30e5	7.46e5	1.08e6	38.97	1.049	0.44	NO	99.003	0.861	0.870	1.11	0.194	5.71e6	6045	944.3	1.31e7	7193	1816.3	bb	bb
32	13C-1234789-HpCDF	2.66e5	5.79e5	8.45e5	40.89	1.101	0.46	NO	99.849	0.676	0.677	1.01	0.249	3.70e6	6045	611.9	8.36e6	7193	1162.3	bd	bb
33	13C-1234-TCDD	8.26e5	1.05e6	1.87e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.127	1.31e7	7944	1645.5	1.65e7	4559	3617.1	bb	bb
34	13C-123789-HxCDD	6.86e5	5.64e5	1.25e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.154	1.29e7	6951	1859.3	1.06e7	5143	2053.6	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Ch#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	7.96e5	7.96e5	7.96e5	31.35	1.016			40.065	1.063	1.061	4.54	0.0384	1.57e7	4023	3910.2						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

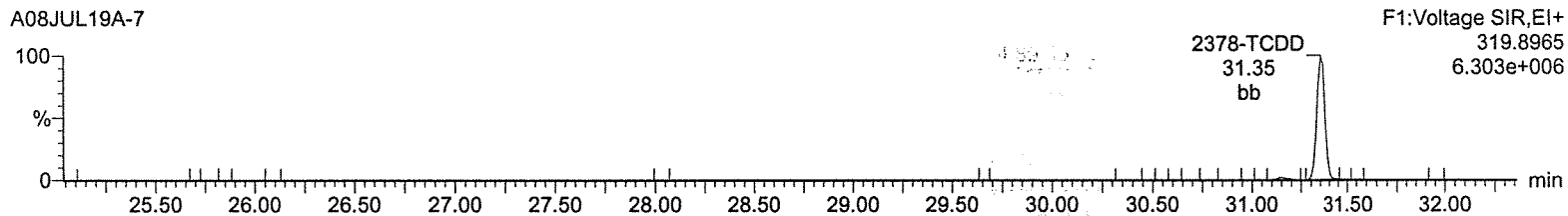
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

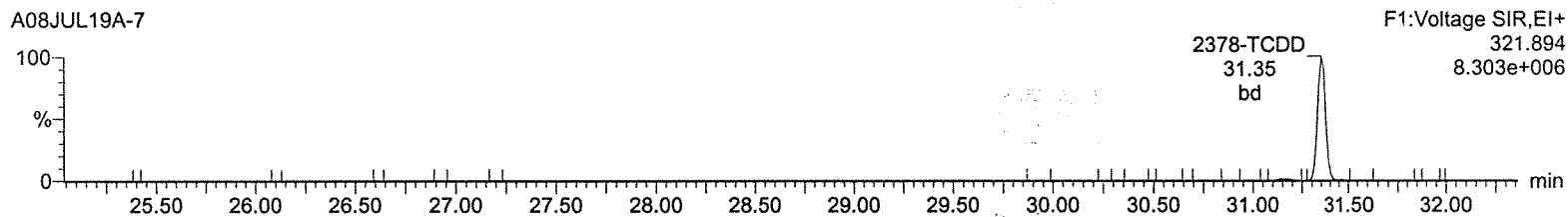
Total-tetradoxins

A08JUL19A-7



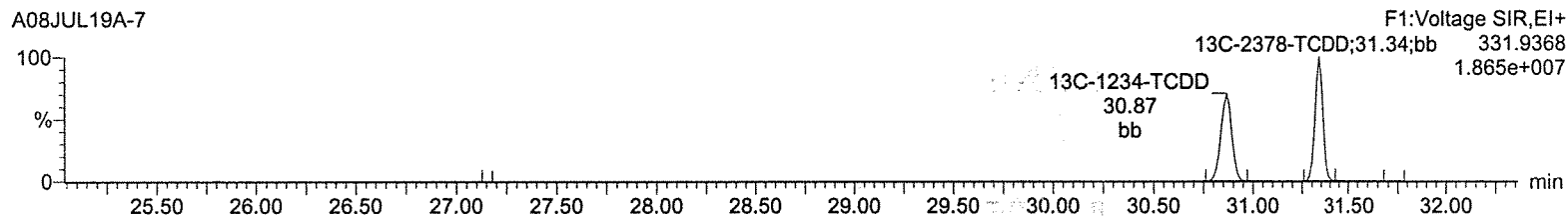
Total-tetradoxins

A08JUL19A-7



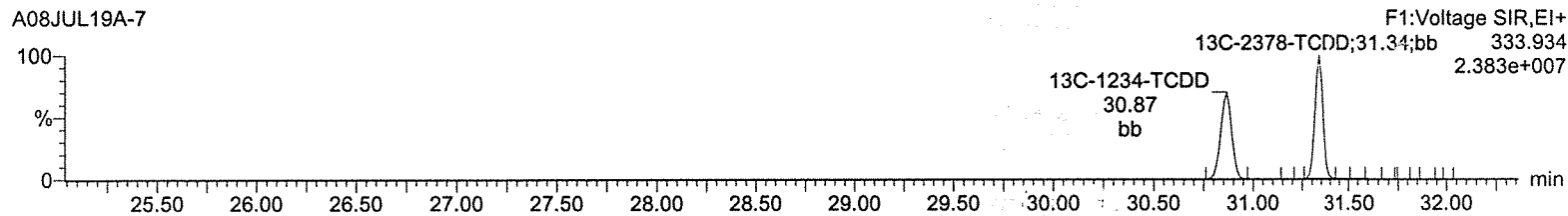
13C-2378-TCDD

A08JUL19A-7



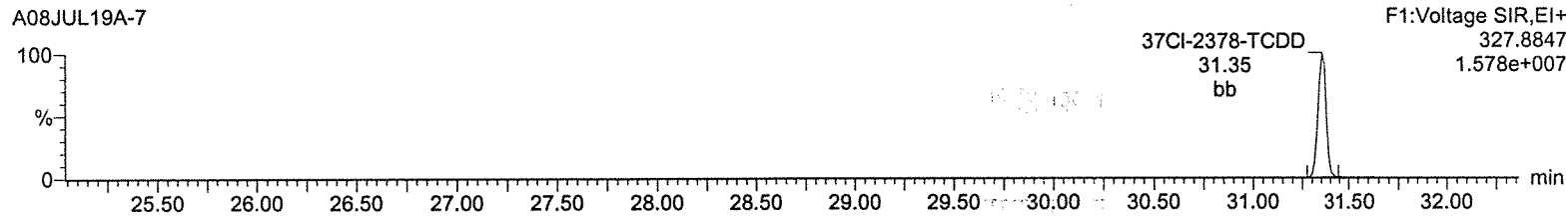
13C-2378-TCDD

A08JUL19A-7



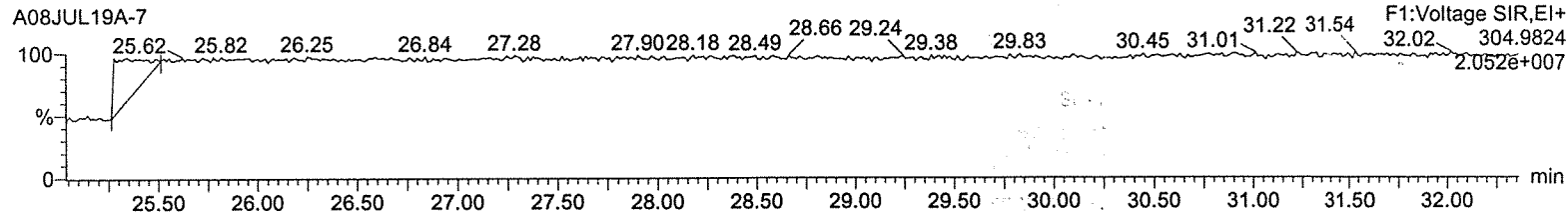
37Cl-2378-TCDD

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

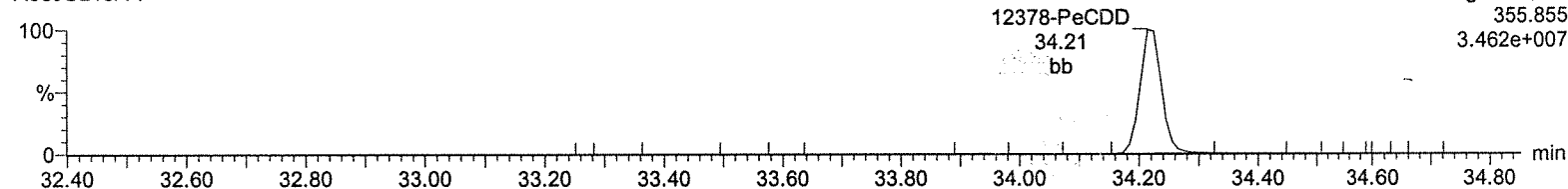
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

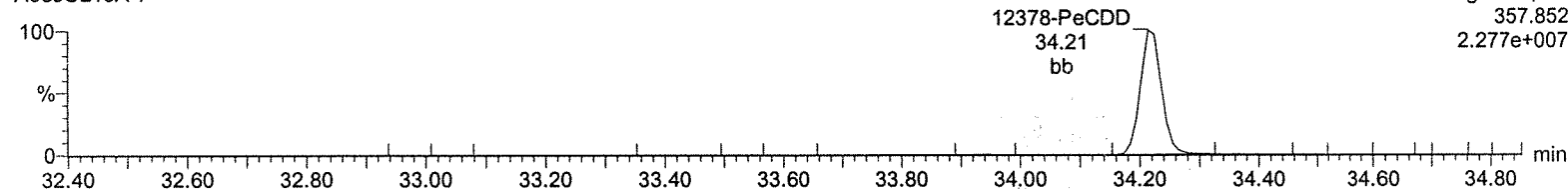
Total-pentadioxins

A08JUL19A-7



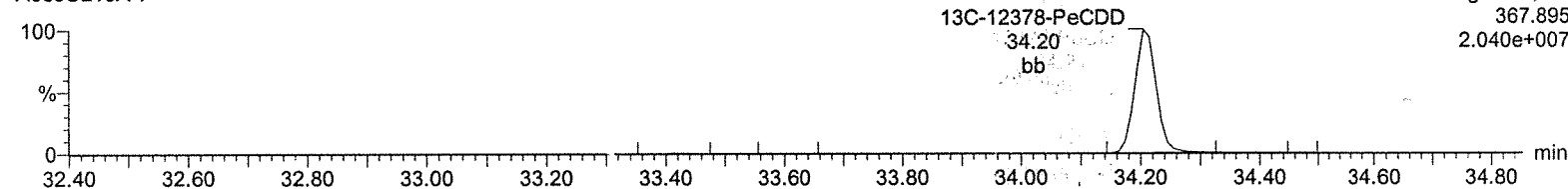
Total-pentadioxins

A08JUL19A-7



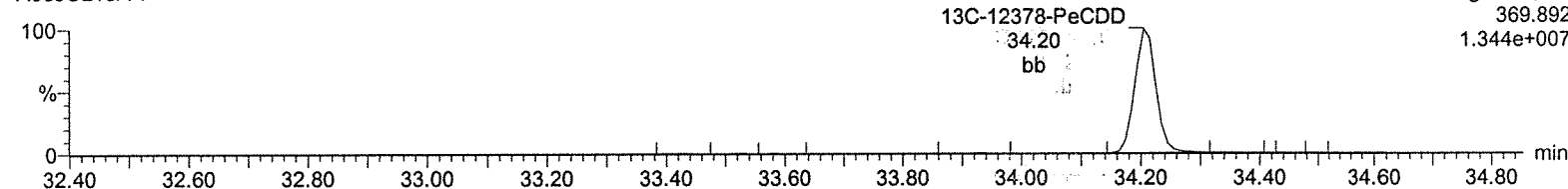
13C-12378-PeCDD

A08JUL19A-7



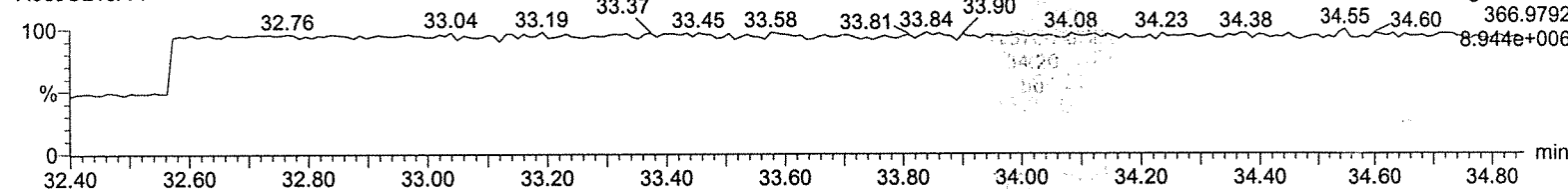
13C-12378-PeCDD

A08JUL19A-7



Lock Mass F2

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

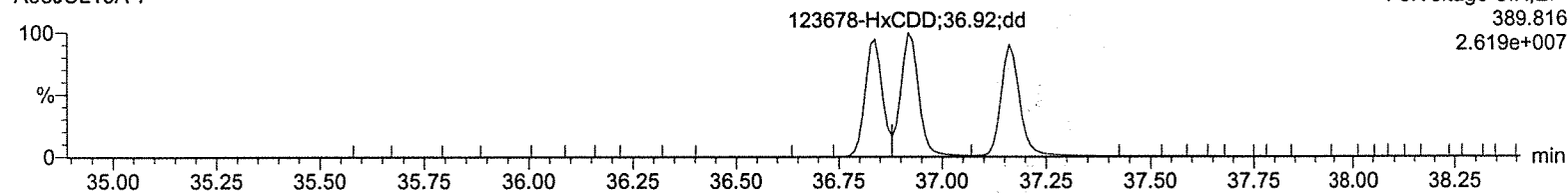
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

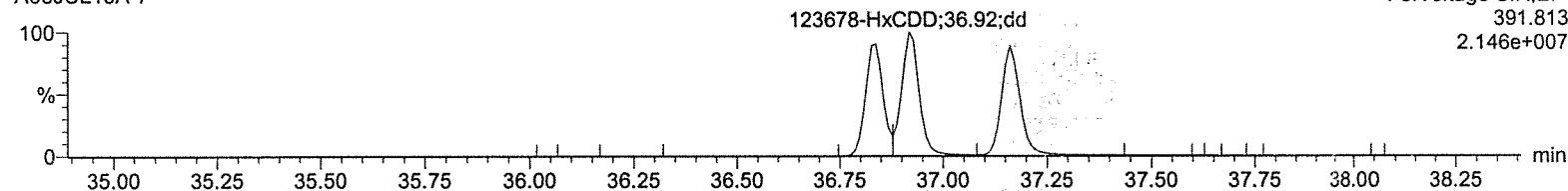
Total-hexadioxins

A08JUL19A-7



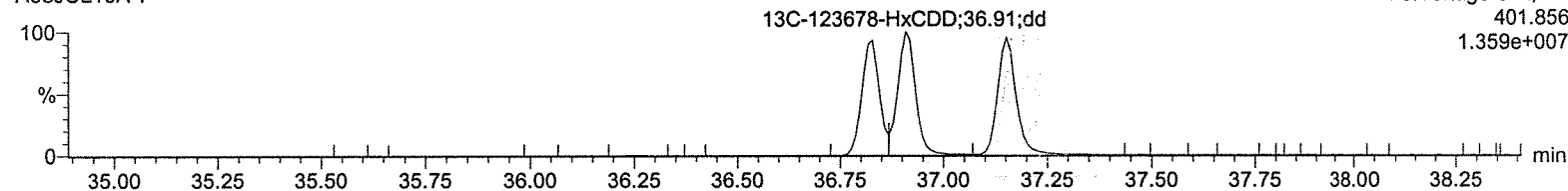
Total-hexadioxins

A08JUL19A-7



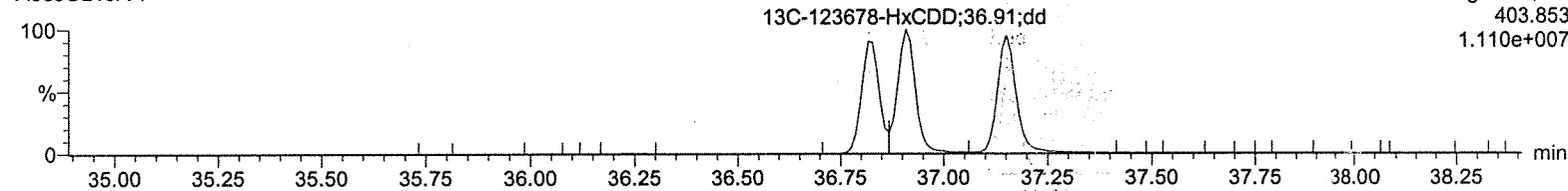
13C-123478-HxCDD

A08JUL19A-7



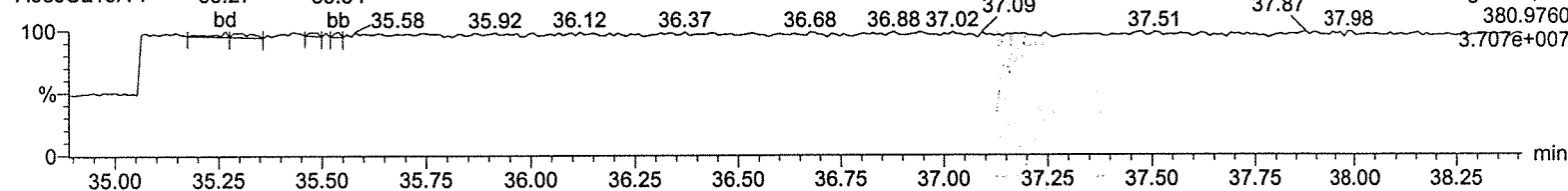
13C-123478-HxCDD

A08JUL19A-7



Lock Mass F3

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

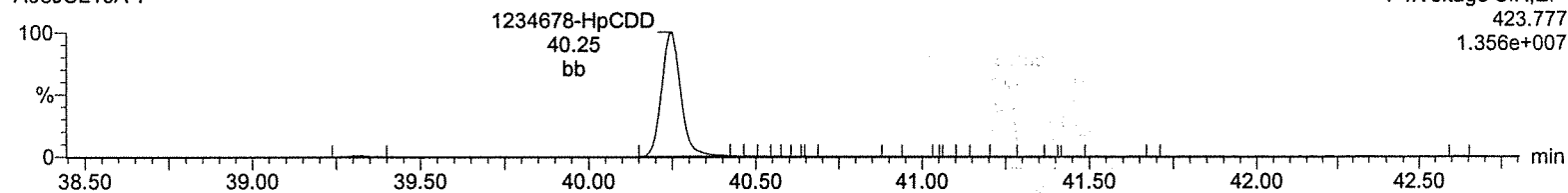
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

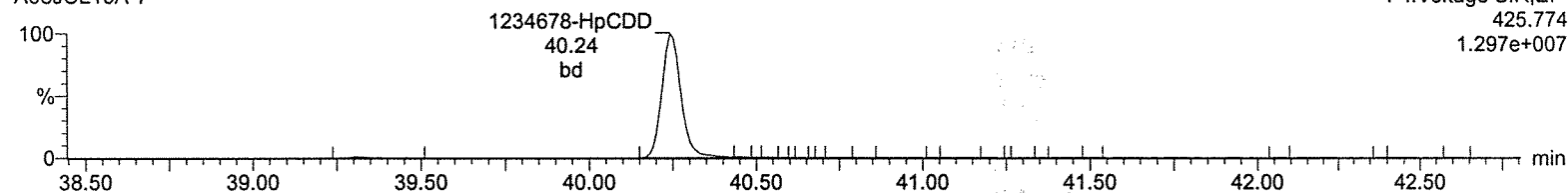
Total-heptadioxins

A08JUL19A-7



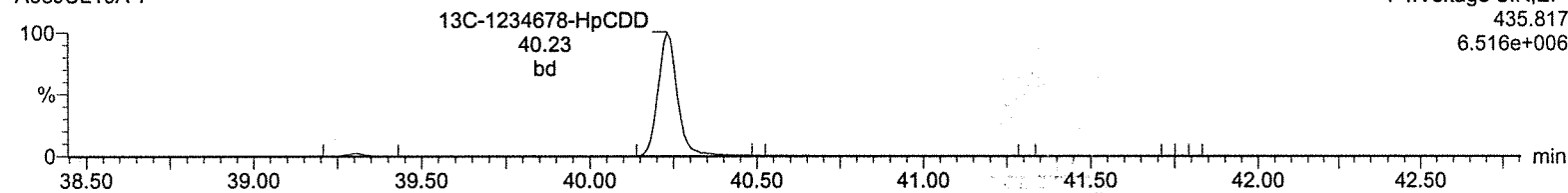
Total-heptadioxins

A08JUL19A-7



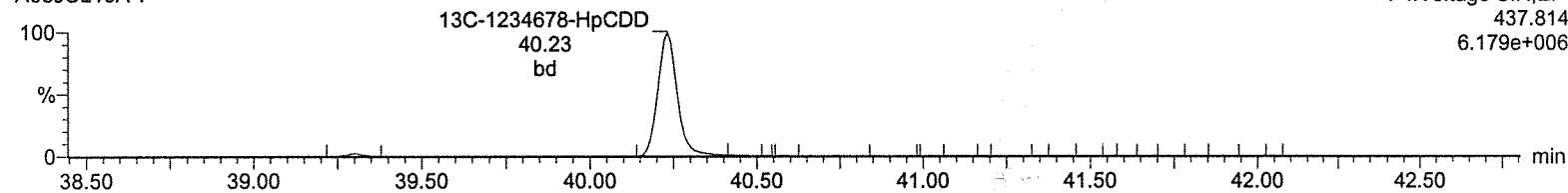
13C-1234678-HpCDD

A08JUL19A-7



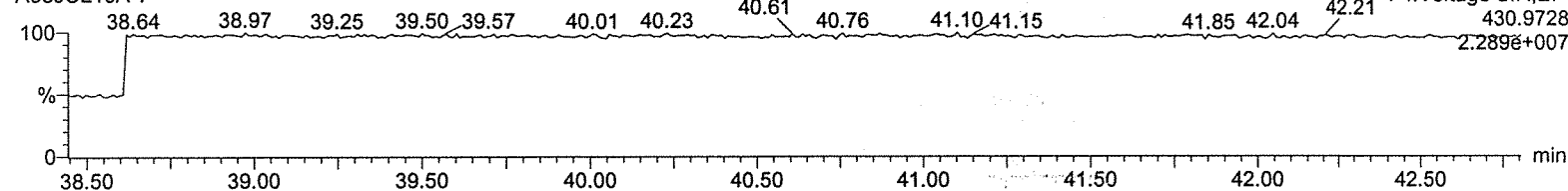
13C-1234678-HpCDD

A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

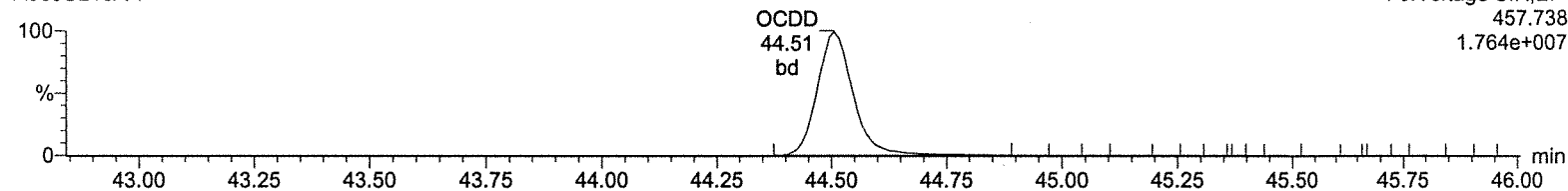
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

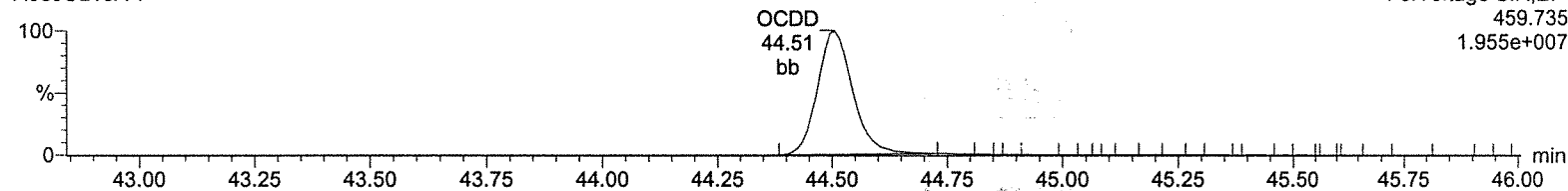
OCDD

A08JUL19A-7



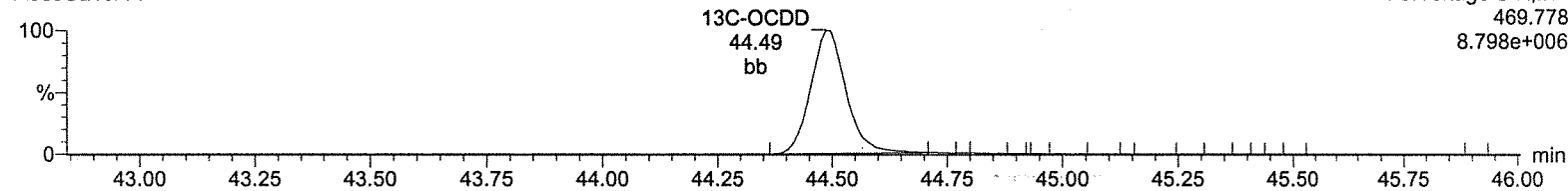
OCDD

A08JUL19A-7



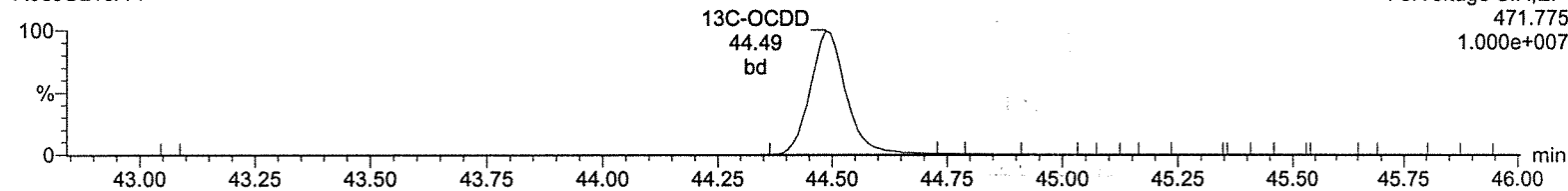
13C-OCDD

A08JUL19A-7



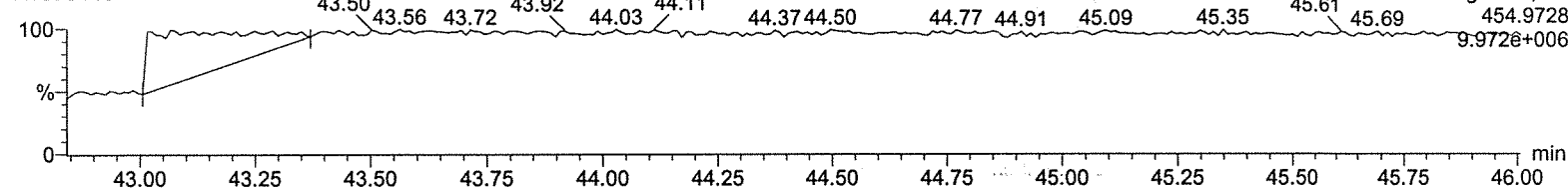
13C-OCDD

A08JUL19A-7



Lock Mass F5

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qid

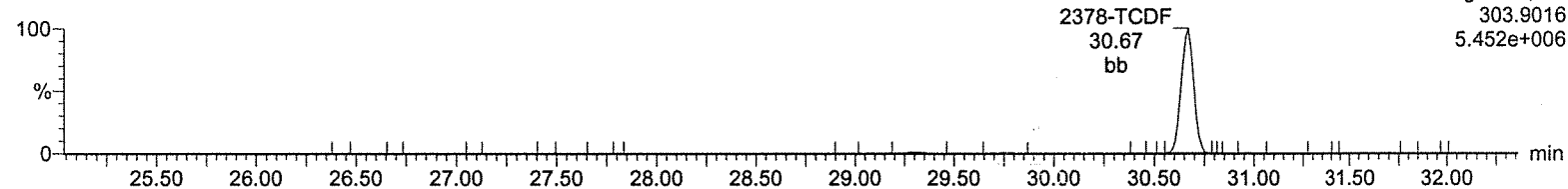
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

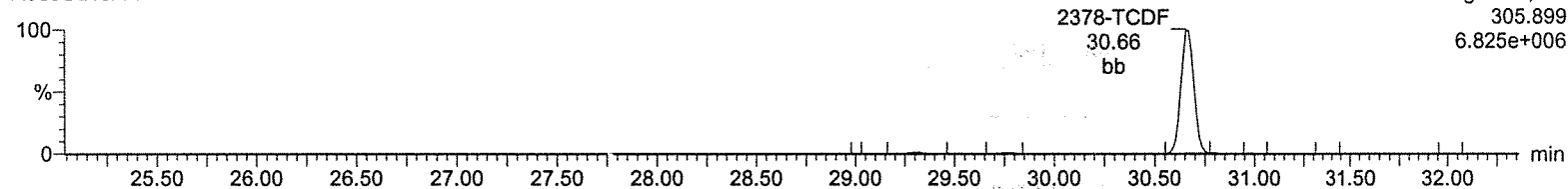
Total-tetrafurans

A08JUL19A-7



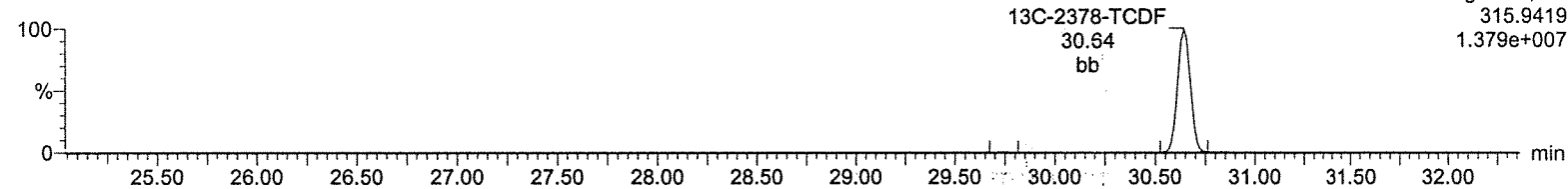
Total-tetrafurans

A08JUL19A-7



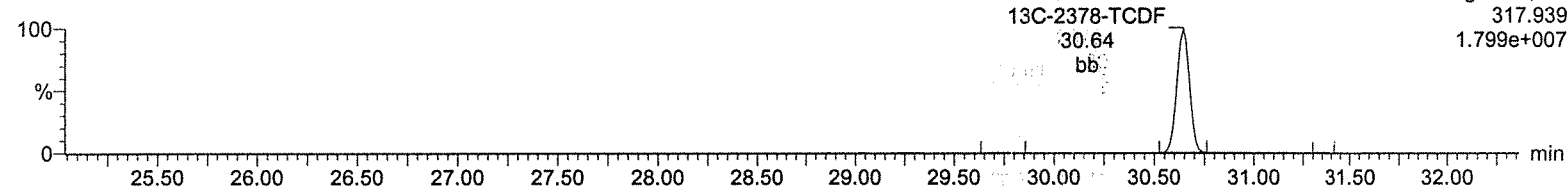
13C-2378-TCDF

A08JUL19A-7



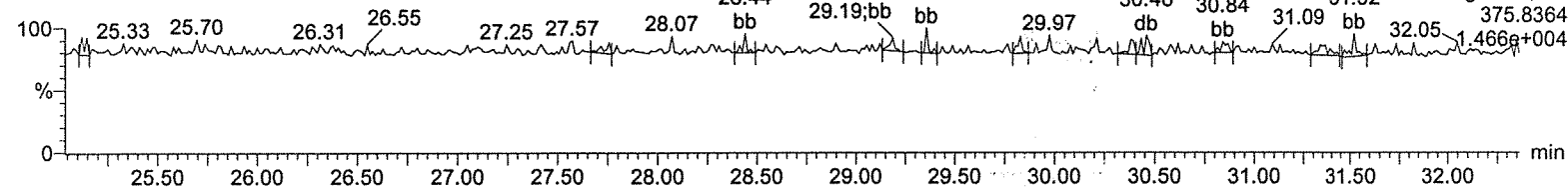
13C-2378-TCDF

A08JUL19A-7



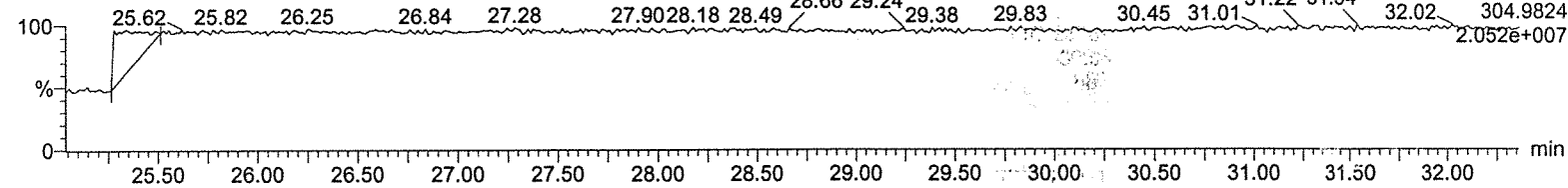
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

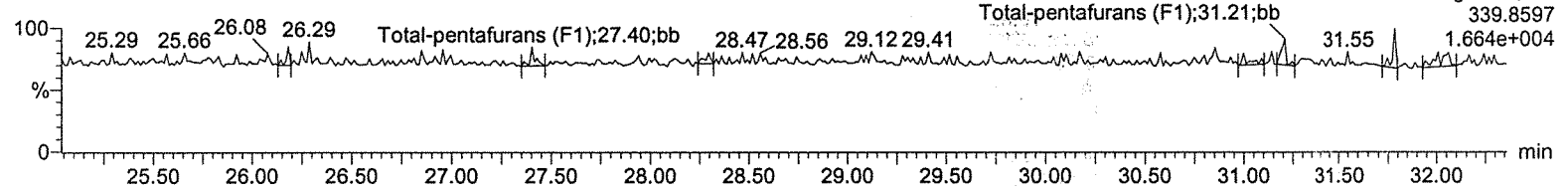
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

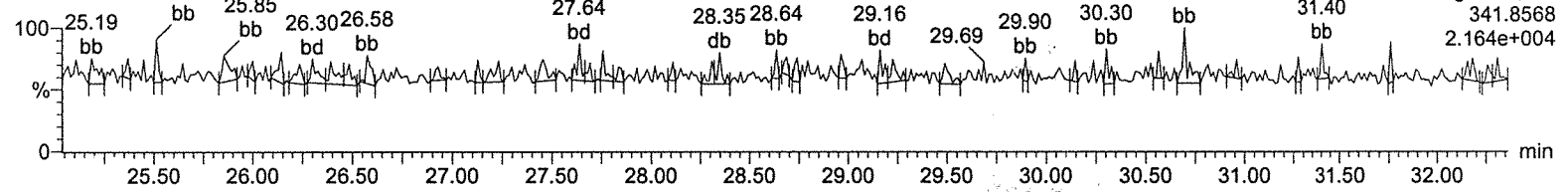
Total-pentafurans (F1)

A08JUL19A-7



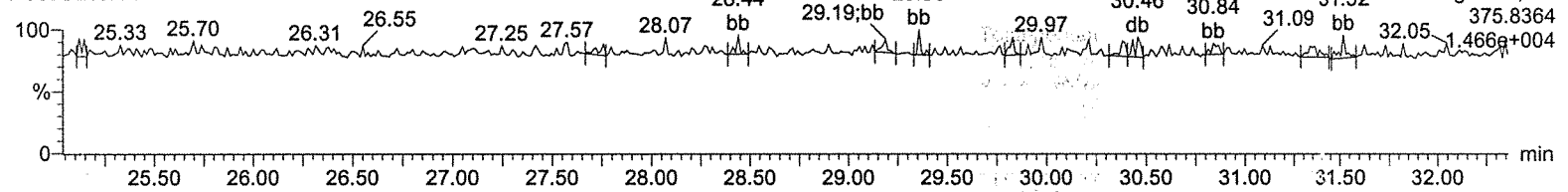
Total-pentafurans (F1)

A08JUL19A-7



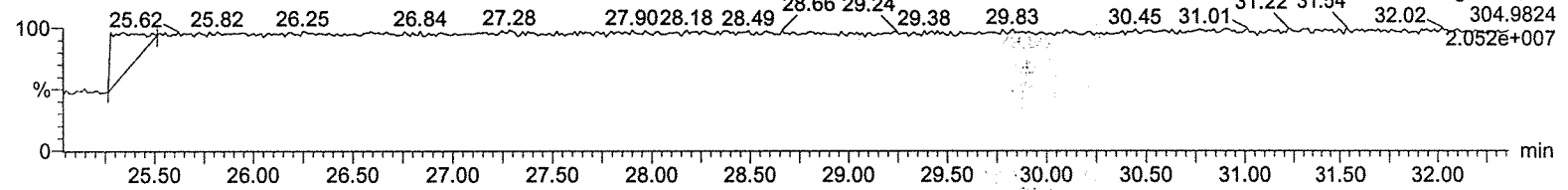
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

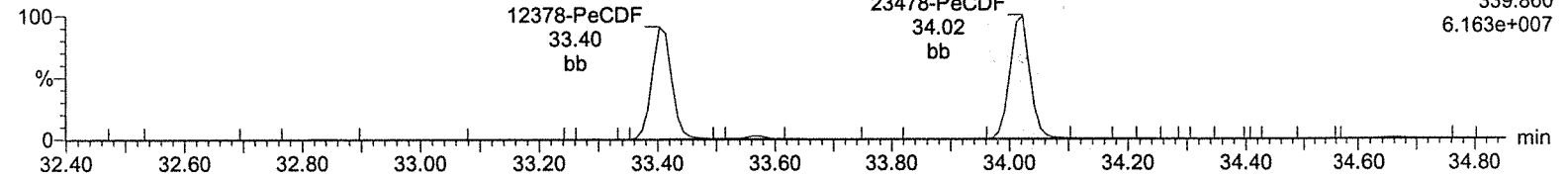
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

Total-pentafurans

A08JUL19A-7

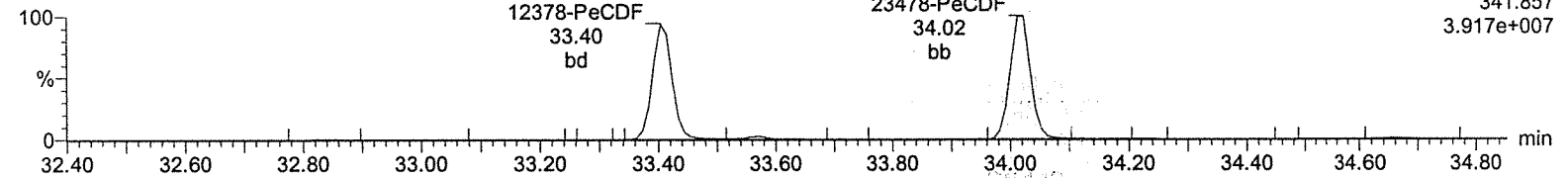
F2:Voltage SIR,EI+
339.860
6.163e+007



Total-pentafurans

A08JUL19A-7

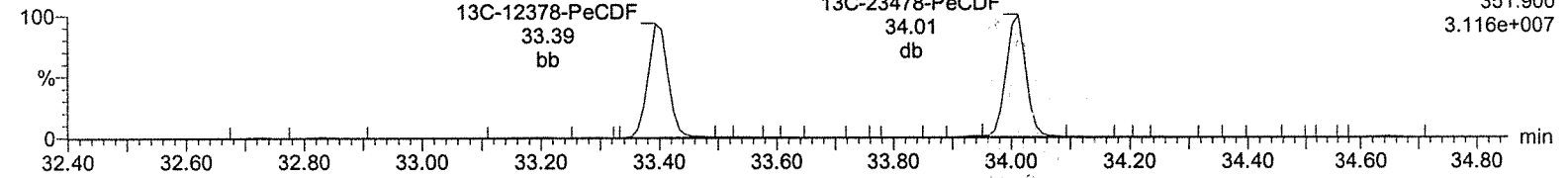
F2:Voltage SIR,EI+
341.857
3.917e+007



13C-12378-PeCDF

A08JUL19A-7

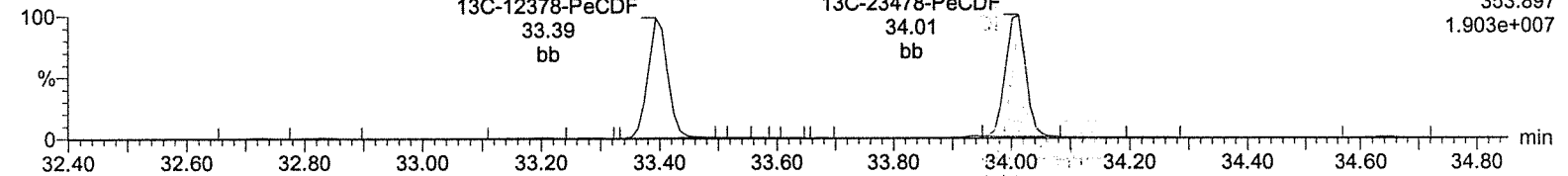
F2:Voltage SIR,EI+
351.900
3.116e+007



13C-12378-PeCDF

A08JUL19A-7

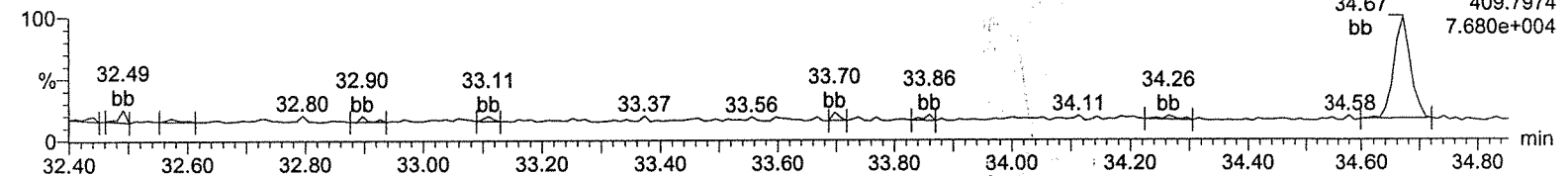
F2:Voltage SIR,EI+
353.897
1.903e+007



HpDPE

A08JUL19A-7

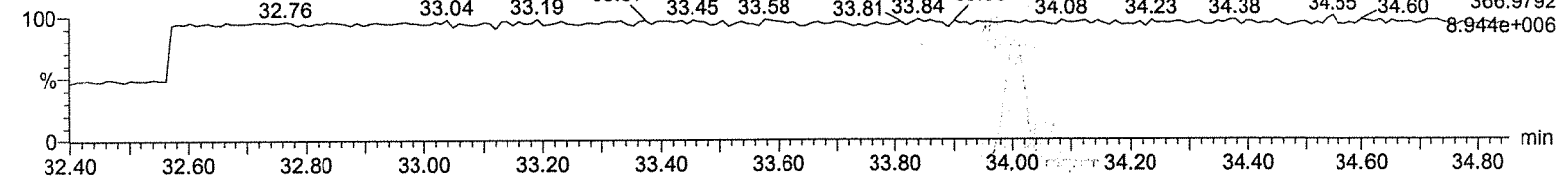
F2:Voltage SIR,EI+
34.67
409.7974
7.680e+004



Lock Mass F2

A08JUL19A-7

F2:Voltage SIR,EI+
366.9792
8.944e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

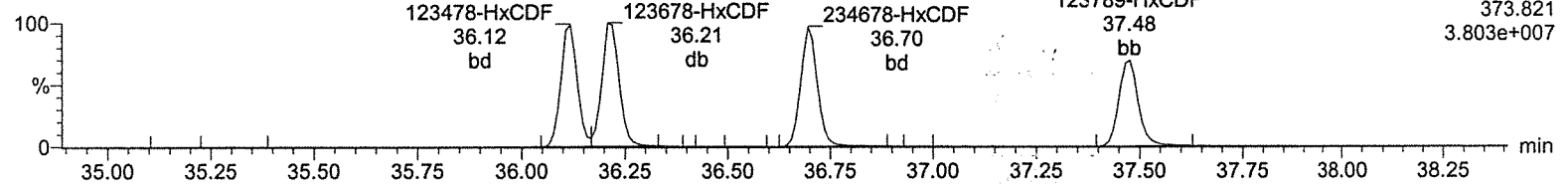
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

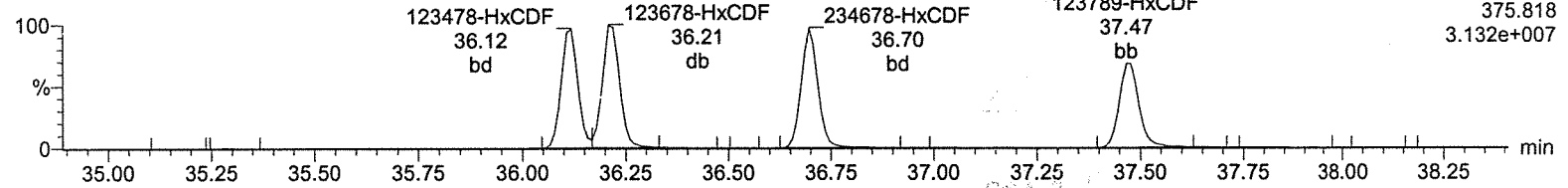
Total-hexafurans

A08JUL19A-7



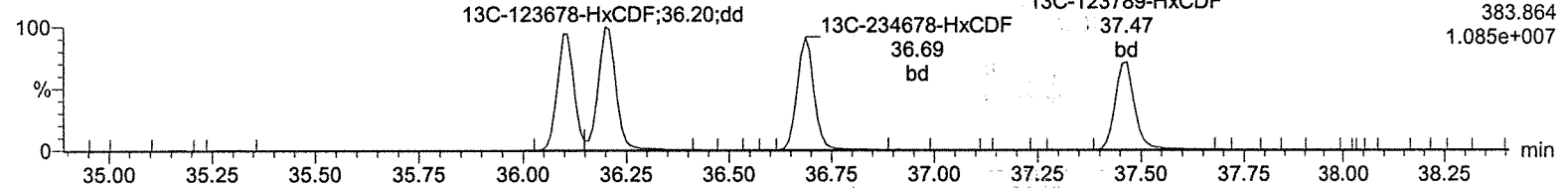
Total-hexafurans

A08JUL19A-7



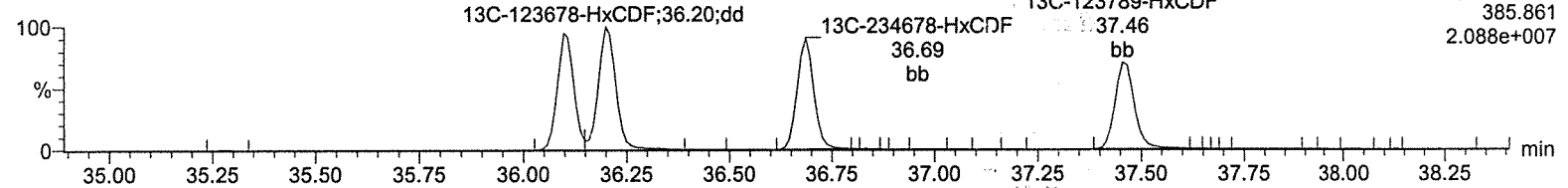
13C-123478-HxCDF

A08JUL19A-7



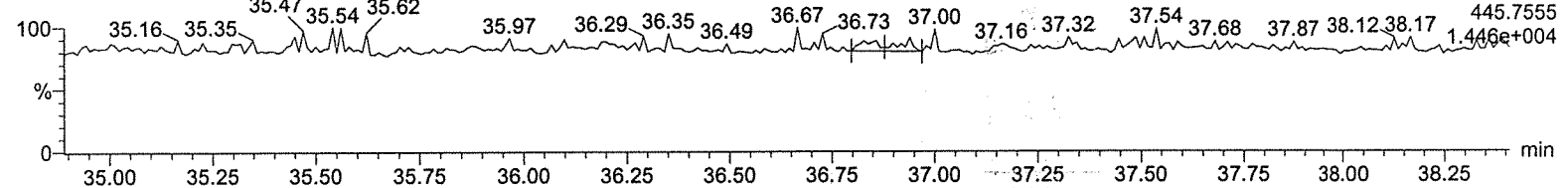
13C-123478-HxCDF

A08JUL19A-7



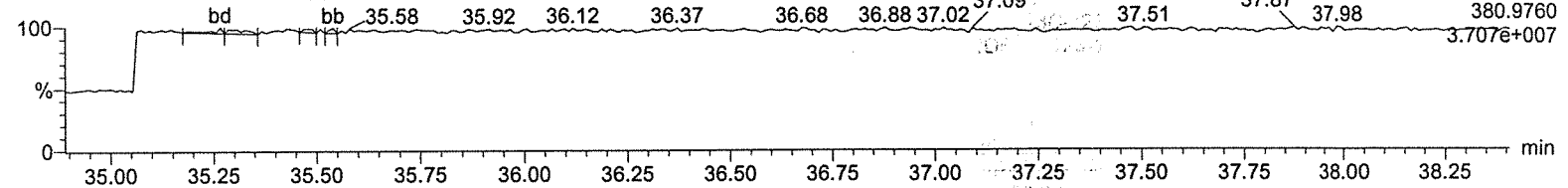
OcDPE

A08JUL19A-7



Lock Mass F3

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

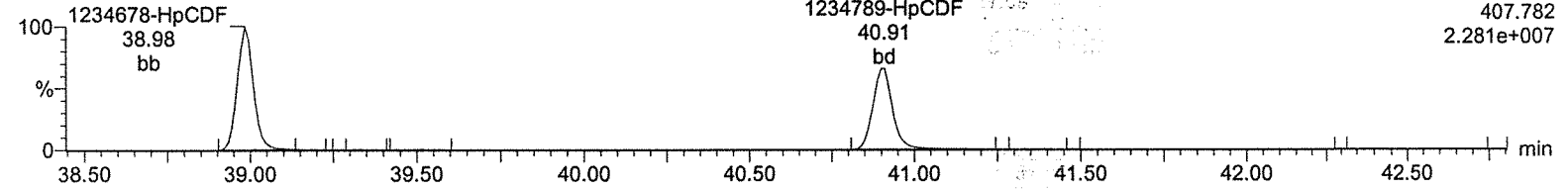
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

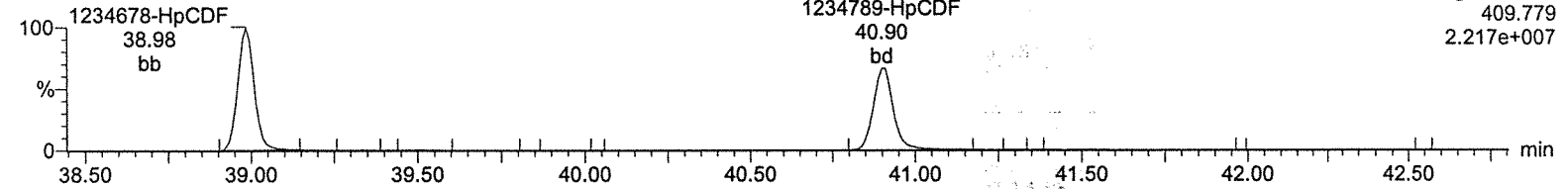
Total-heptafurans

A08JUL19A-7



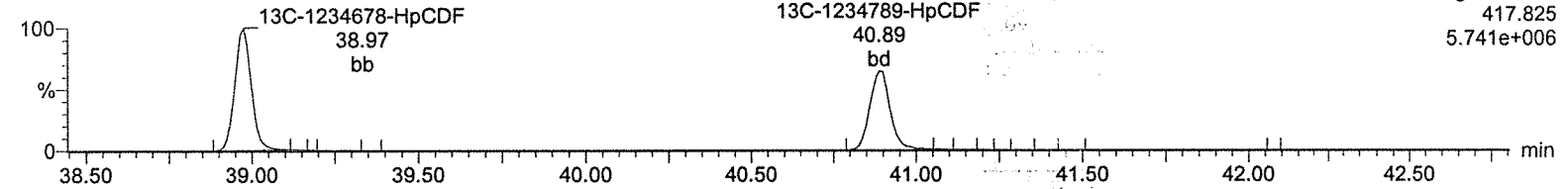
Total-heptafurans

A08JUL19A-7



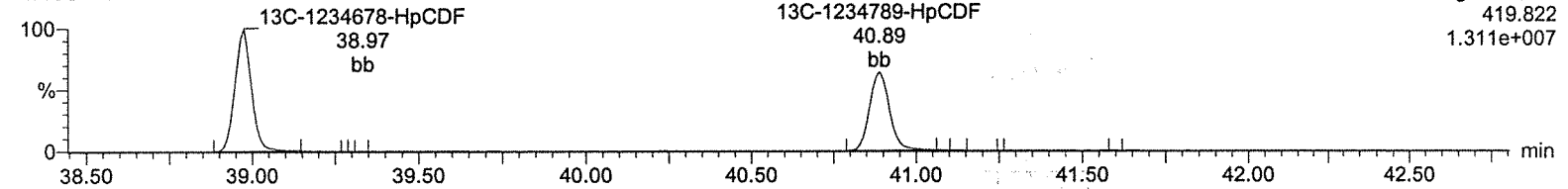
13C-1234678-HpCDF

A08JUL19A-7



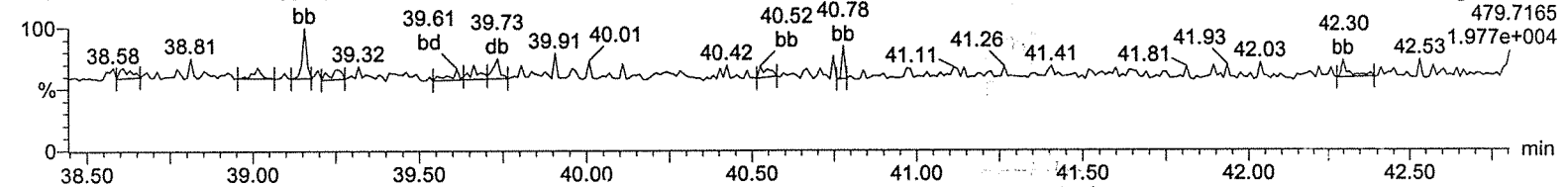
13C-1234678-HpCDF

A08JUL19A-7



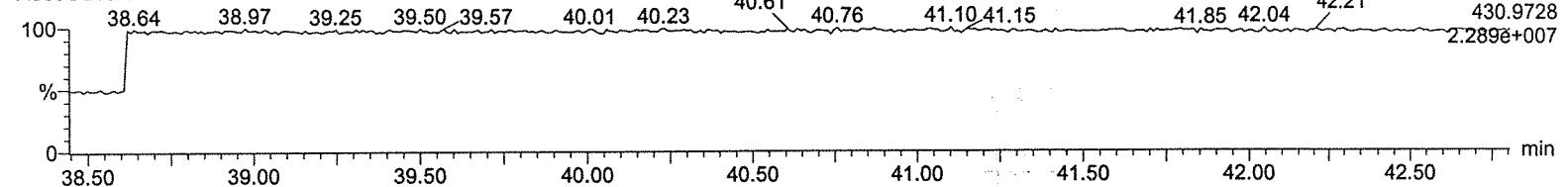
NoDPE

A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

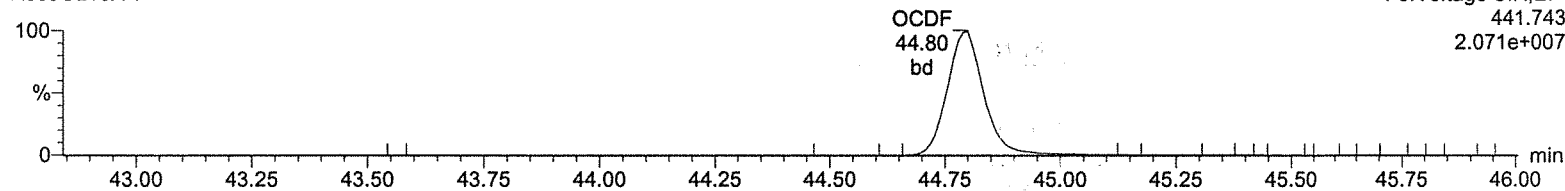
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

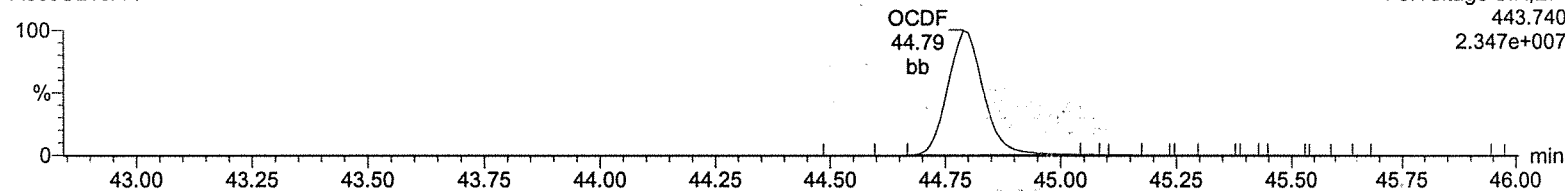
OCDF

A08JUL19A-7



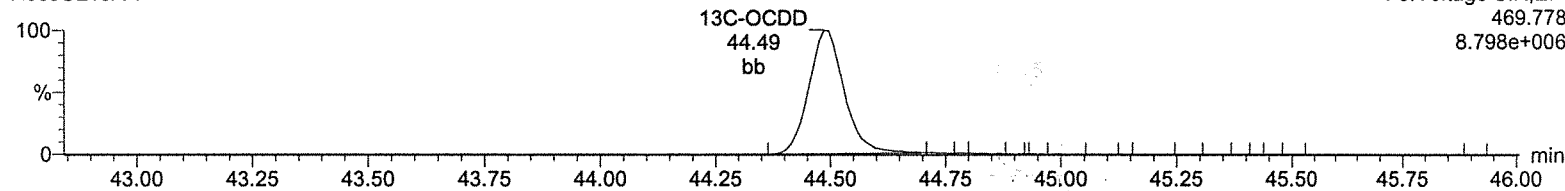
OCDF

A08JUL19A-7



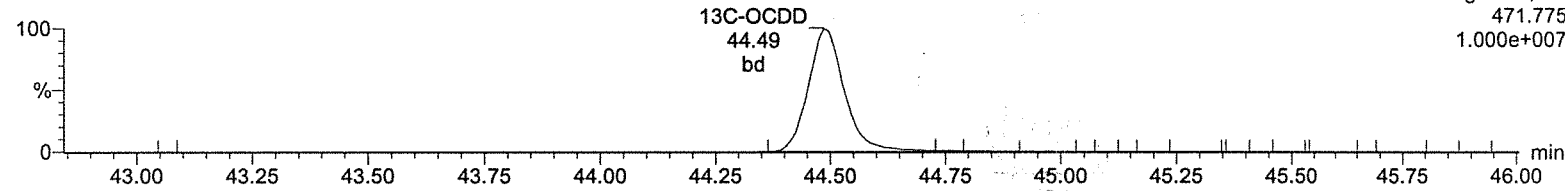
13C-OCDD

A08JUL19A-7



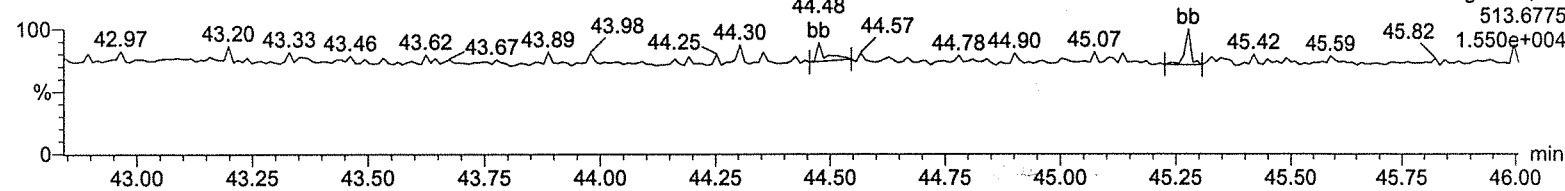
13C-OCDD

A08JUL19A-7



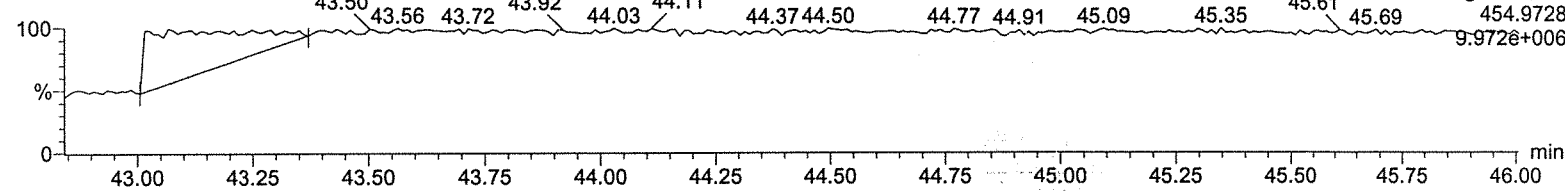
DeDPE

A08JUL19A-7



Lock Mass F5

A08JUL19A-7



Quantify Sample Summary Report

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

22818419

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.78e6	2.34e6	4.12e6	31.35	1.000	0.76	NO	205.757	0.910	0.884	5.07	0.0469	3.47e7	3058	11358.0	4.56e7	3176	14350.1	bb	bb
2	12378-PeCDD	8.29e6	5.35e6	1.36e7	34.22	1.000	1.55	NO	1009.561	0.862	0.853	1.65	0.130	2.10e8	4103	51087.5	1.33e8	10010	13303.8	bb	bb
3	123478-HxCDD	7.14e6	5.72e6	1.29e7	36.84	1.000	1.25	NO	1030.901	0.969	0.940	3.11	0.258	1.49e8	10705	13935.4	1.18e8	11148	10602.9	bd	bd
4	123678-HxCDD	7.78e6	6.24e6	1.40e7	36.92	1.000	1.25	NO	1026.323	0.969	0.944	2.57	0.240	1.53e8	10705	14298.1	1.25e8	11148	11183.8	dd	dd
5	123789-HxCDD	7.35e6	5.86e6	1.32e7	37.16	1.007	1.25	NO	1026.758	0.952	0.927	3.30	0.253	1.43e8	10705	13389.8	1.15e8	11148	10340.8	dd	dd
6	1234678-HpCDD	5.26e6	5.01e6	1.03e7	40.24	1.000	1.05	NO	1029.037	1.070	1.040	2.88	0.612	8.19e7	13310	6152.6	7.83e7	18608	4207.3	bb	bb
7	OCDD	8.83e6	9.80e6	1.86e7	44.51	1.000	0.90	NO	2036.586	0.989	0.971	2.39	0.715	1.05e8	11377	9196.2	1.17e8	13516	8665.0	bb	bb
8	2378-TCDF	2.10e6	2.75e6	4.85e6	30.67	1.001	0.76	NO	202.186	0.989	0.978	5.59	0.0956	2.82e7	4854	5802.8	3.67e7	5522	6647.2	bb	bb
9	12378-PeCDF	1.23e7	8.04e6	2.04e7	33.40	1.000	1.54	NO	1020.233	0.964	0.945	3.41	0.271	3.19e8	31922	9979.2	2.11e8	13143	16048.5	bb	bb
10	123478-PeCDF	1.38e7	9.07e6	2.29e7	34.02	1.000	1.53	NO	1048.349	1.034	0.987	3.73	0.236	3.64e8	31922	11387.7	2.33e8	13143	17714.6	bb	bb
11	123478-HxCDF	9.95e6	8.17e6	1.81e7	36.12	1.000	1.22	NO	1036.336	1.127	1.087	3.86	0.482	2.21e8	28521	7761.7	1.79e8	32460	5528.1	bd	bd
12	123678-HxCDF	1.06e7	8.66e6	1.93e7	36.22	1.000	1.23	NO	1010.825	1.052	1.041	3.23	0.454	2.29e8	28521	8033.9	1.86e8	32460	5739.4	db	db
13	1234678-HxCDF	1.01e7	8.11e6	1.82e7	36.69	1.000	1.25	NO	1024.664	1.164	1.136	3.17	0.472	2.17e8	28521	7620.3	1.80e8	32460	5559.1	bd	bd
14	123789-HxCDF	8.33e6	6.80e6	1.51e7	37.48	1.000	1.23	NO	1021.587	1.084	1.061	2.29	0.652	1.66e8	28521	5836.8	1.34e8	32460	4119.4	bb	bb
15	1234678-HpCDF	7.47e6	7.34e6	1.48e7	38.98	1.000	1.02	NO	1028.218	1.182	1.150	3.86	0.526	1.33e8	22716	5841.8	1.30e8	21882	5933.2	bb	bb
16	1234789-HpCDF	6.03e6	5.91e6	1.19e7	40.91	1.000	1.02	NO	1022.696	1.229	1.202	1.91	0.765	8.92e7	22716	3925.2	8.80e7	21882	4023.5	bb	bb
17	OCDF	1.11e7	1.25e7	2.35e7	44.80	1.007	0.89	NO	2206.183	1.250	1.133	6.78	0.605	1.31e8	9724	13509.9	1.47e8	14872	9854.1	bb	bb
18	13C-2378-TCDD	9.90e5	1.27e6	2.26e6	31.34	1.015	0.78	NO	103.020	1.162	1.128	2.36	0.109	1.97e7	8334	2369.3	2.52e7	4305	5853.2	bb	bb
19	13C-12378-PeCDD	9.58e5	6.25e5	1.58e6	34.21	1.109	1.53	NO	108.196	0.813	0.751	5.03	0.0899	2.31e7	4492	5145.4	1.50e7	2453	6119.5	bb	bb
20	13C-123478-HxCDD	7.35e5	5.93e5	1.33e6	36.83	0.991	1.24	NO	101.352	0.908	0.896	1.38	0.166	1.50e7	7897	1897.6	1.22e7	6151	1976.9	bd	bd
21	13C-123678-HxCDD	7.98e5	6.49e5	1.45e6	36.91	0.993	1.23	NO	100.457	0.990	0.986	0.84	0.151	1.60e7	7897	2020.5	1.31e7	6151	2136.4	dd	dd
22	13C-1234678-HpCDD	4.87e5	4.73e5	9.60e5	40.23	1.083	1.03	NO	97.789	0.657	0.672	1.29	0.151	7.63e6	4493	1698.8	7.17e6	5124	1399.8	bb	bb
23	13C-OCDD	8.91e5	9.93e5	1.88e6	44.49	1.198	0.90	NO	200.806	0.645	0.642	4.87	0.183	1.02e7	6392	1591.5	1.14e7	4751	2406.3	bd	bd
24	13C-2378-TCDF	1.07e6	1.39e6	2.45e6	30.64	0.993	0.77	NO	100.812	1.260	1.250	1.88	0.164	1.45e7	13730	1053.1	1.91e7	7393	2582.1	bb	bb
25	13C-12378-PeCDF	1.29e6	8.22e5	2.11e6	33.39	1.082	1.57	NO	107.363	1.085	1.011	4.24	0.205	3.23e7	11309	2852.5	2.12e7	10040	2107.4	bb	bb
26	13C-23478-PeCDF	1.36e6	8.59e5	2.22e6	34.01	1.102	1.58	NO	107.006	1.138	1.063	5.28	0.195	3.55e7	11309	3143.2	2.23e7	10040	2223.5	db	bb
27	13C-123478-HxCDF	5.56e5	1.05e6	1.61e6	36.11	0.972	0.53	NO	99.083	1.101	1.111	1.42	0.196	1.21e7	11074	1089.3	2.33e7	9505	2456.5	bd	bd
28	13C-123678-HxCDF	6.26e5	1.21e6	1.83e6	36.21	0.975	0.52	NO	100.592	1.254	1.247	1.06	0.174	1.32e7	11074	1193.6	2.46e7	9505	2583.0	dd	dd
29	13C-234678-HxCDF	5.29e5	1.04e6	1.57e6	36.69	0.987	0.51	NO	99.147	1.073	1.082	1.01	0.201	1.15e7	11074	1041.6	2.24e7	9505	2355.3	bb	bd
30	13C-123789-HxCDF	4.81e5	9.15e5	1.40e6	37.47	1.008	0.53	NO	98.821	0.956	0.967	1.08	0.225	9.11e6	11074	822.3	1.74e7	9505	1832.5	bb	bb
31	13C-1234678-HpCDF	3.85e5	8.69e5	1.25e6	38.97	1.049	0.44	NO	98.609	0.858	0.870	1.11	0.141	6.80e6	5478	1240.5	1.53e7	6127	2499.4	bb	bb
32	13C-1234789-HpCDF	2.97e5	6.74e5	9.71e5	40.89	1.101	0.44	NO	98.139	0.665	0.677	1.01	0.181	4.44e6	5478	811.4	9.75e6	6127	1591.7	bb	bb
33	13C-1234-TCDD	8.51e5	1.10e6	1.95e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.123	1.35e7	8334	1618.7	1.69e7	4305	3920.6	bb	bb
34	13C-123789-HxCDD	8.04e5	6.57e5	1.46e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.148	1.56e7	7897	1978.2	1.28e7	6151	2088.1	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	4.40e6	4.40e6	4.40e6	31.35	1.016			212.931	1.130	1.061	4.54	0.0449	8.48e7	4902	17292.5				M	M2	
																						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

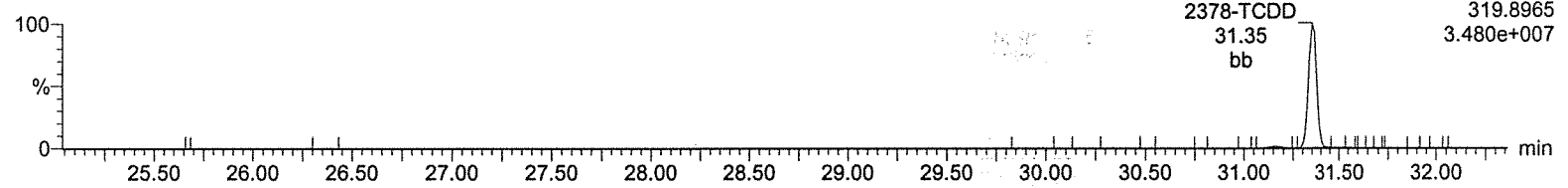
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

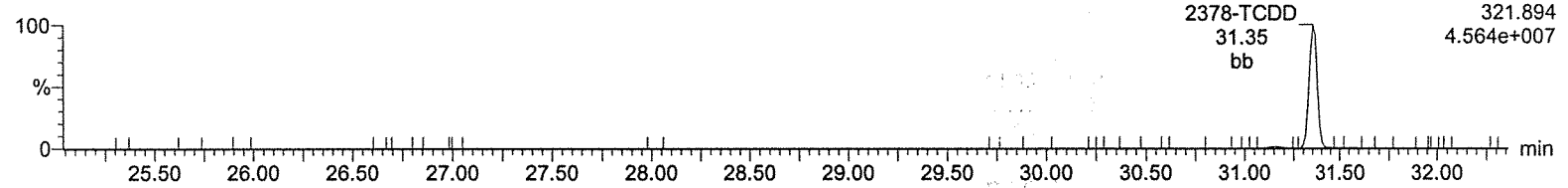
Total-tetradoxins

A08JUL19A-8



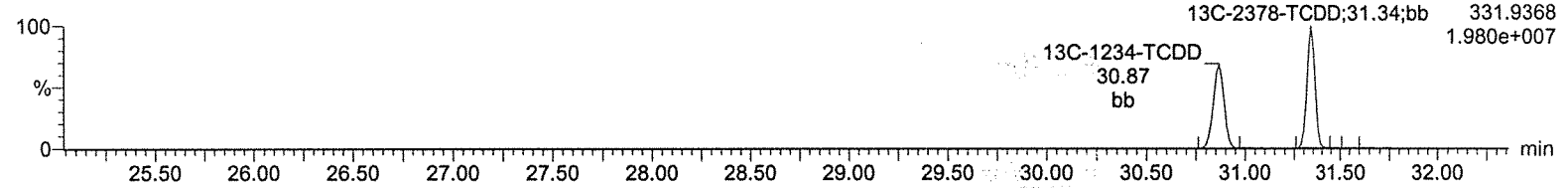
Total-tetradoxins

A08JUL19A-8



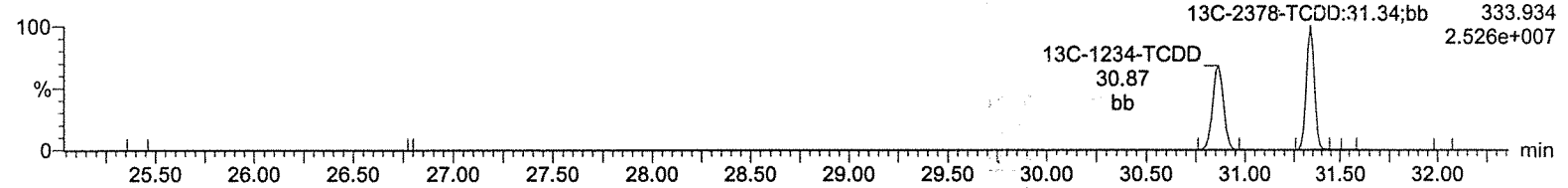
13C-2378-TCDD

A08JUL19A-8



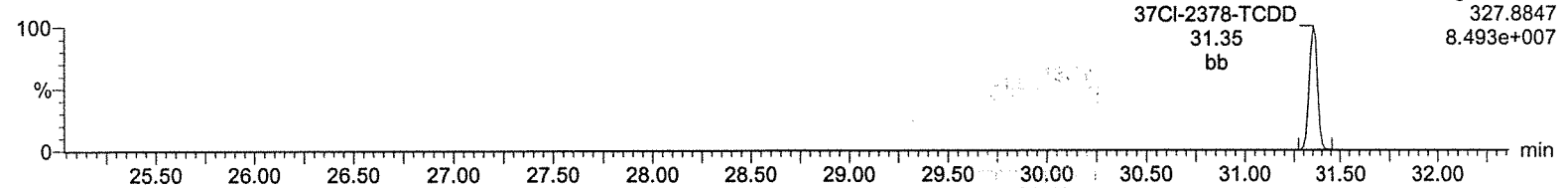
13C-2378-TCDD

A08JUL19A-8



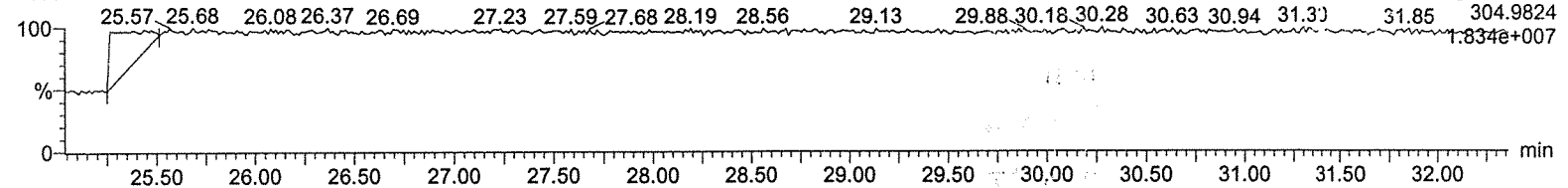
37Cl-2378-TCDD

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

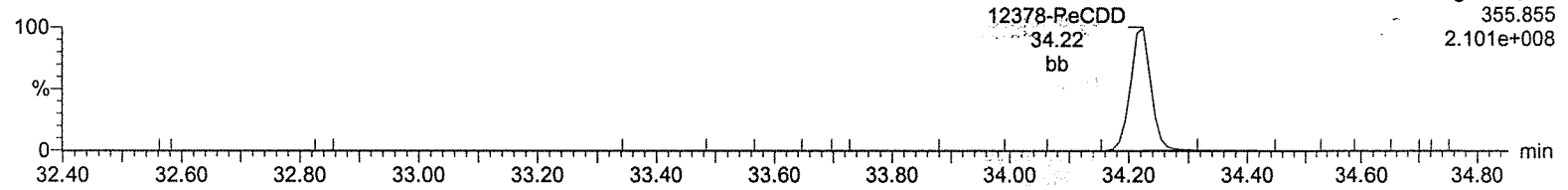
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

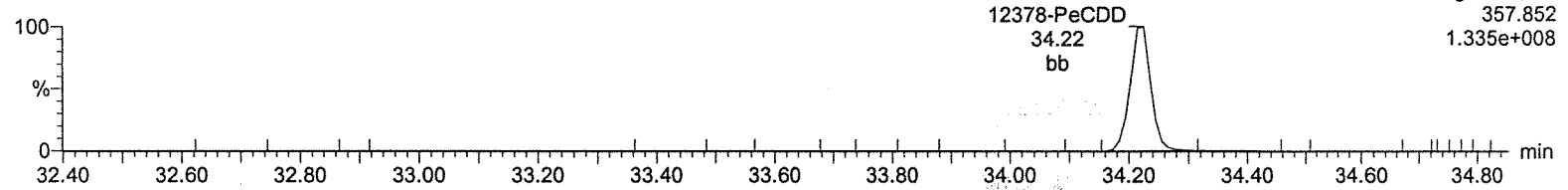
Total-pentadioxins

A08JUL19A-8



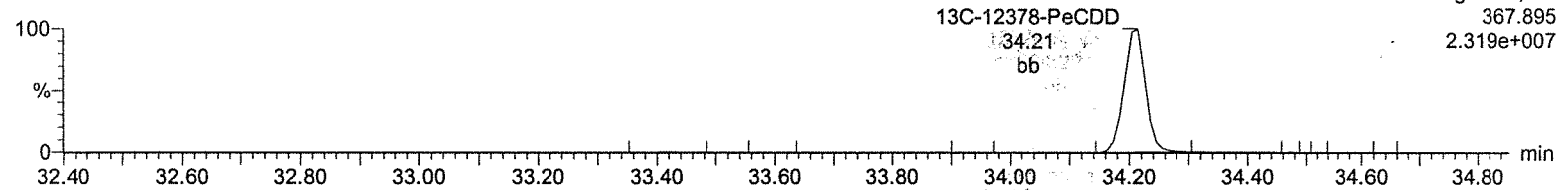
Total-pentadioxins

A08JUL19A-8



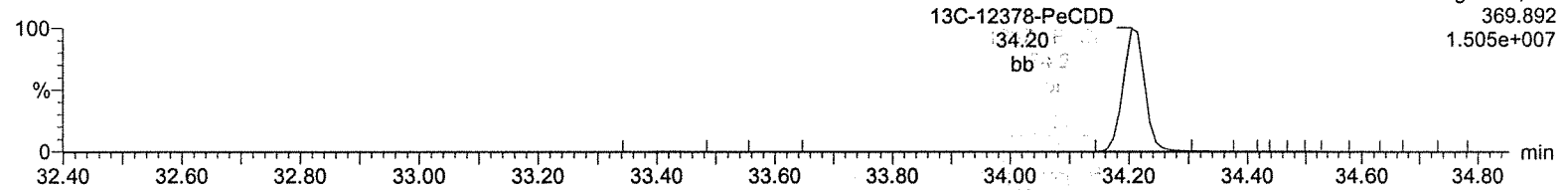
¹³C-12378-PeCDD

A08JUL19A-8



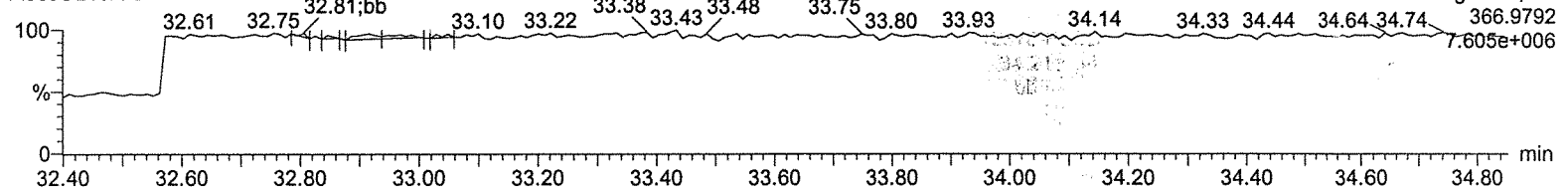
¹³C-12378-PeCDD

A08JUL19A-8



Lock Mass F2

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

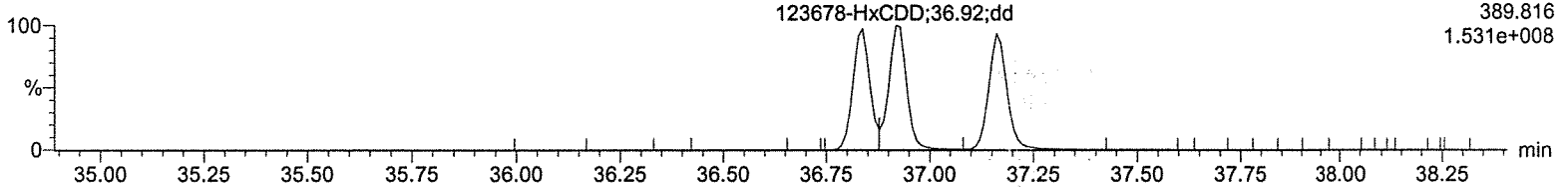
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-hexadioxins

A08JUL19A-8

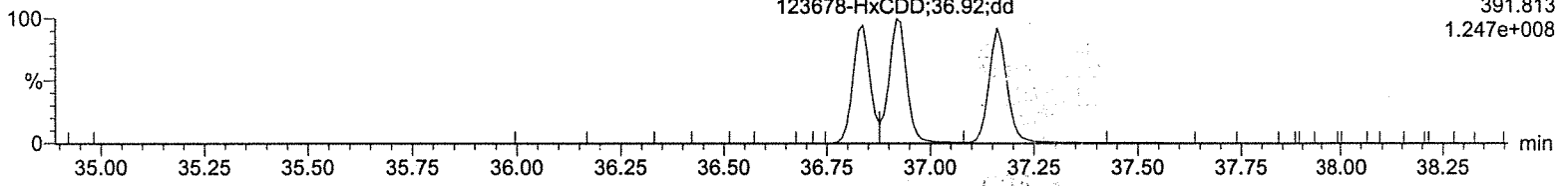
F3:Voltage SIR,EI+
389.816
1.531e+008



Total-hexadioxins

A08JUL19A-8

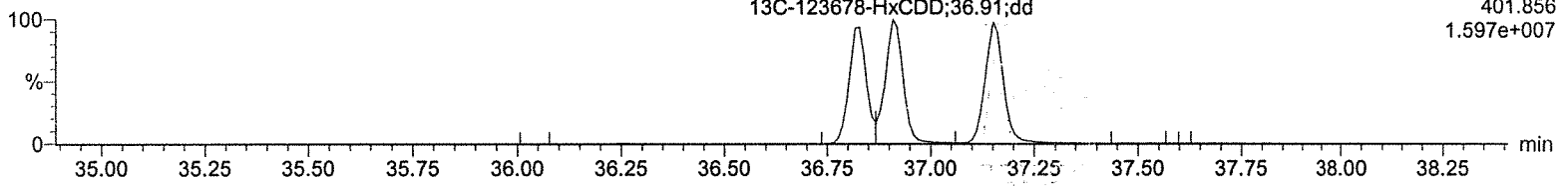
F3:Voltage SIR,EI+
391.813
1.247e+008



13C-123478-HxCDD

A08JUL19A-8

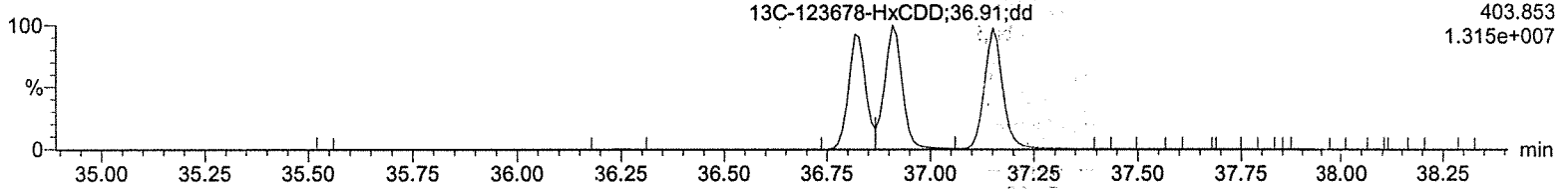
F3:Voltage SIR,EI+
401.856
1.597e+007



13C-123478-HxCDD

A08JUL19A-8

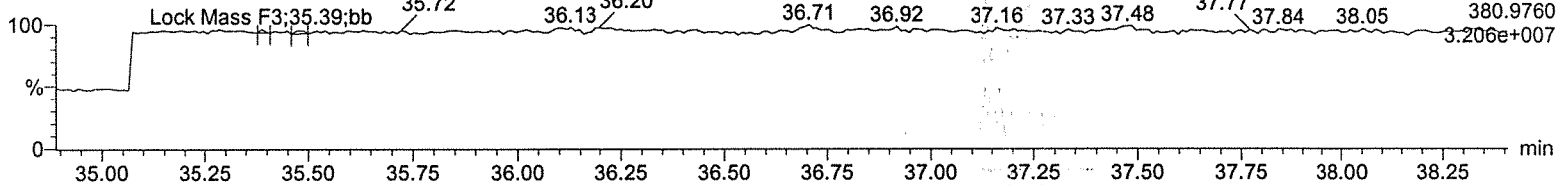
F3:Voltage SIR,EI+
403.853
1.315e+007



Lock Mass F3

A08JUL19A-8

F3:Voltage SIR,EI+
380.9760
3.206e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

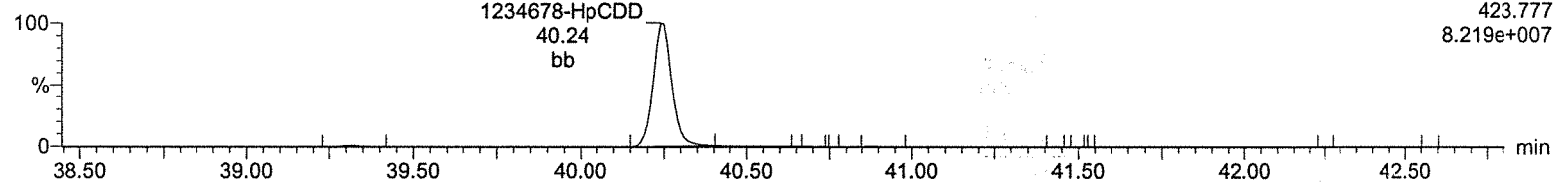
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-heptadioxins

A08JUL19A-8

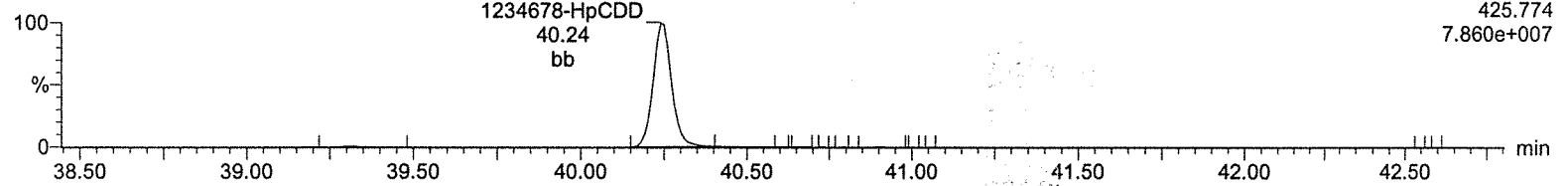
F4:Voltage SIR,EI+
423.777
8.219e+007



Total-heptadioxins

A08JUL19A-8

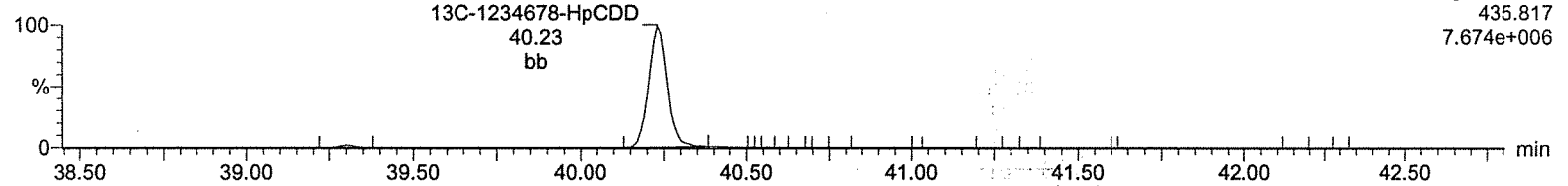
F4:Voltage SIR,EI+
425.774
7.860e+007



13C-1234678-HpCDD

A08JUL19A-8

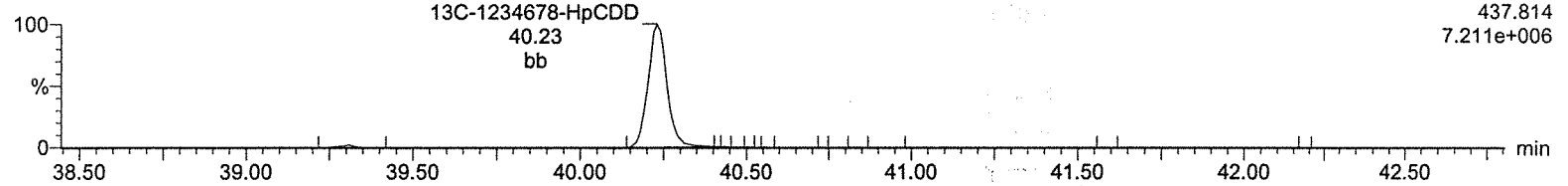
F4:Voltage SIR,EI+
435.817
7.674e+006



13C-1234678-HpCDD

A08JUL19A-8

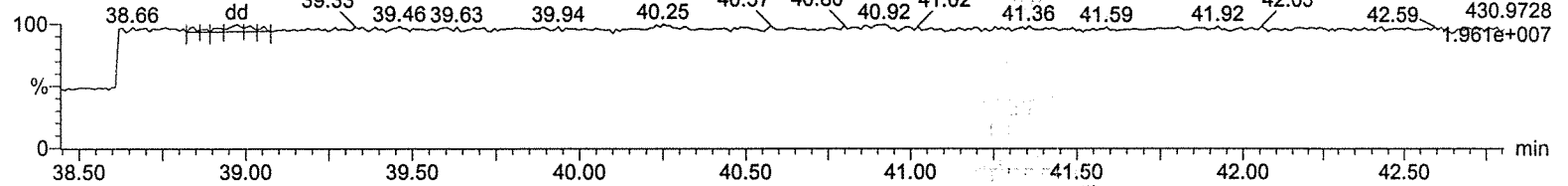
F4:Voltage SIR,EI+
437.814
7.211e+006



Lock Mass F4

A08JUL19A-8

F4:Voltage SIR,EI+
430.9728
1.961e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

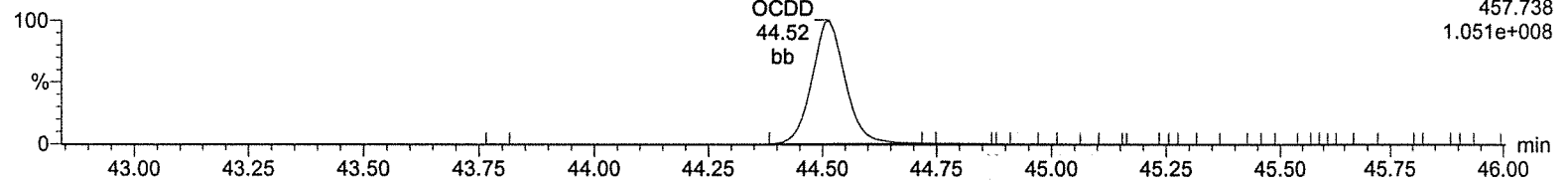
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDD

A08JUL19A-8

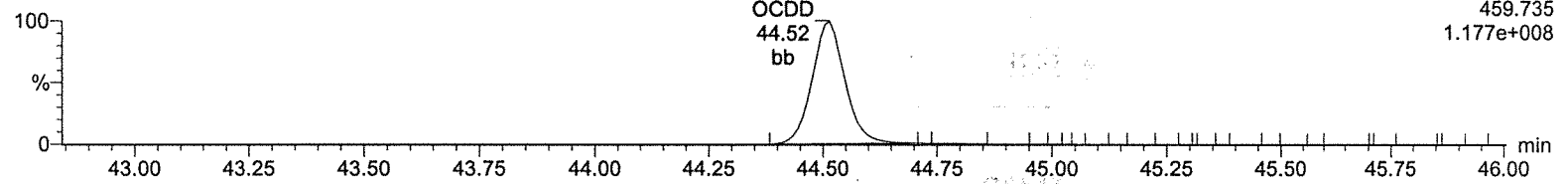
F5:Voltage SIR,EI+
457.738
1.051e+008



OCDD

A08JUL19A-8

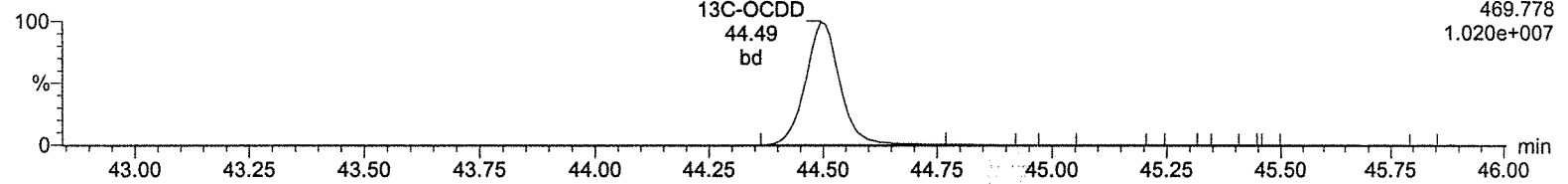
F5:Voltage SIR,EI+
459.735
1.177e+008



13C-OCDD

A08JUL19A-8

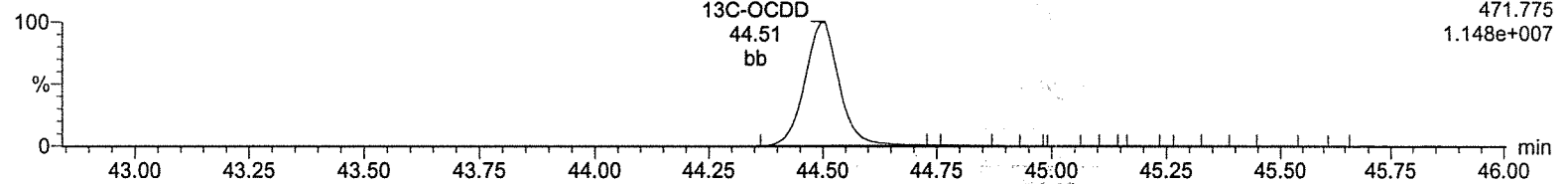
F5:Voltage SIR,EI+
469.778
1.020e+007



13C-OCDD

A08JUL19A-8

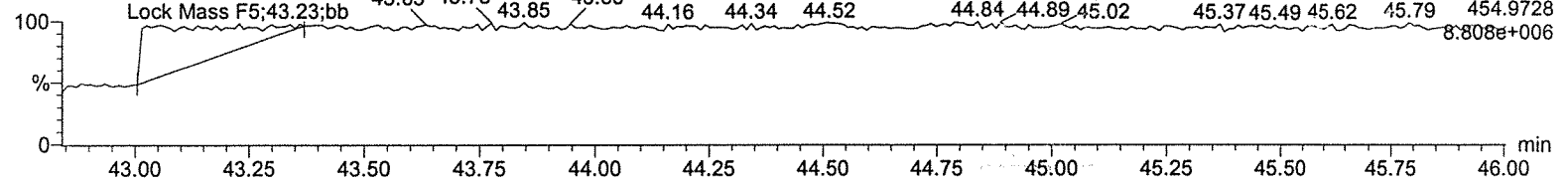
F5:Voltage SIR,EI+
471.775
1.148e+007



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
8.808e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

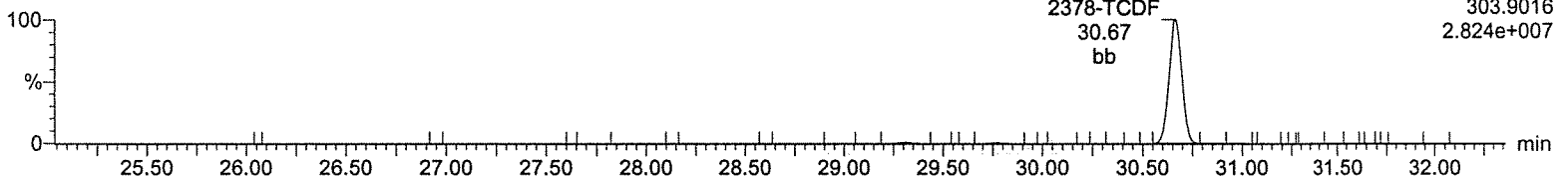
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-tetrafurans

A08JUL19A-8

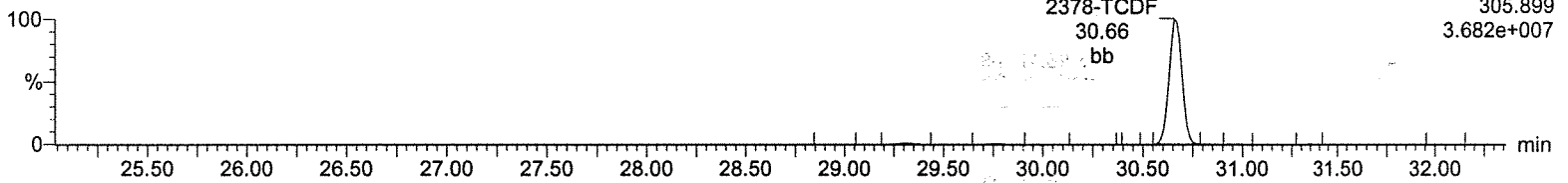
F1:Voltage SIR,EI+
303.9016
2.824e+007



Total-tetrafurans

A08JUL19A-8

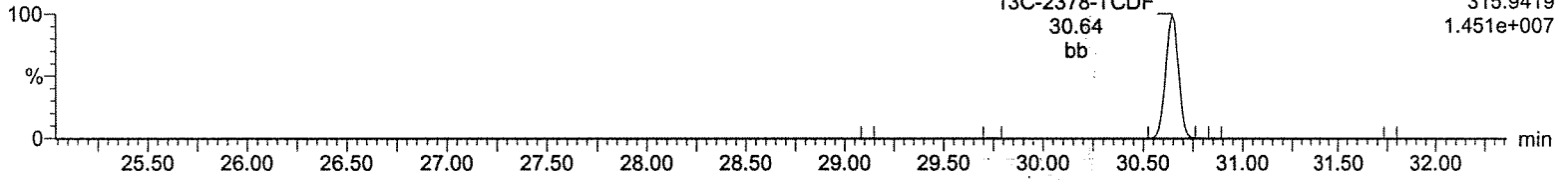
F1:Voltage SIR,EI+
305.899
3.682e+007



13C-2378-TCDF

A08JUL19A-8

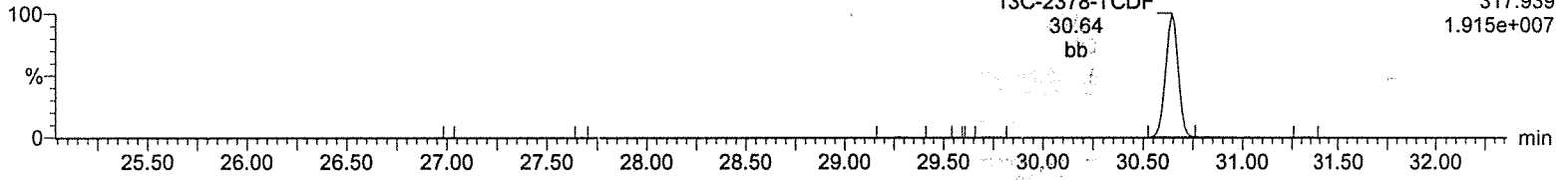
F1:Voltage SIR,EI+
315.9419
1.451e+007



13C-2378-TCDF

A08JUL19A-8

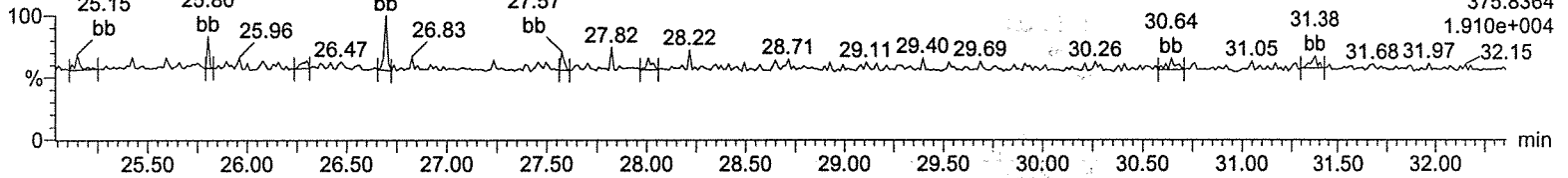
F1:Voltage SIR,EI+
317.939
1.915e+007



HxDPE

A08JUL19A-8

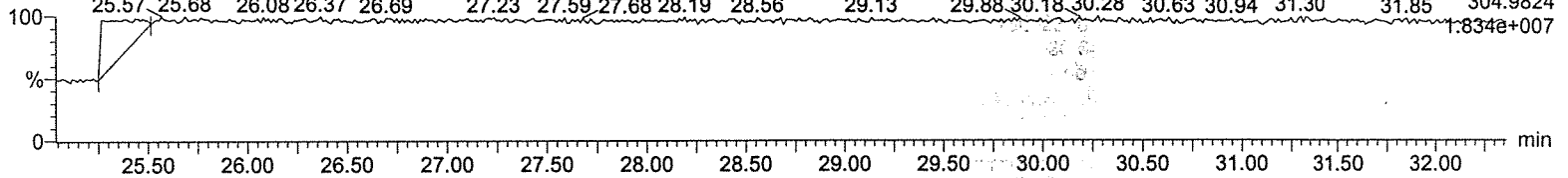
F1:Voltage SIR,EI+
375.8364
1.910e+004



Lock Mass F1

A08JUL19A-8

F1:Voltage SIR,EI+
304.9824
1.834e+007



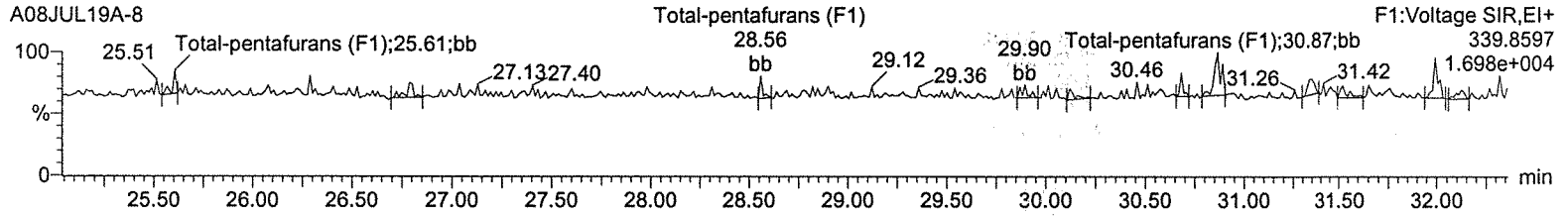
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

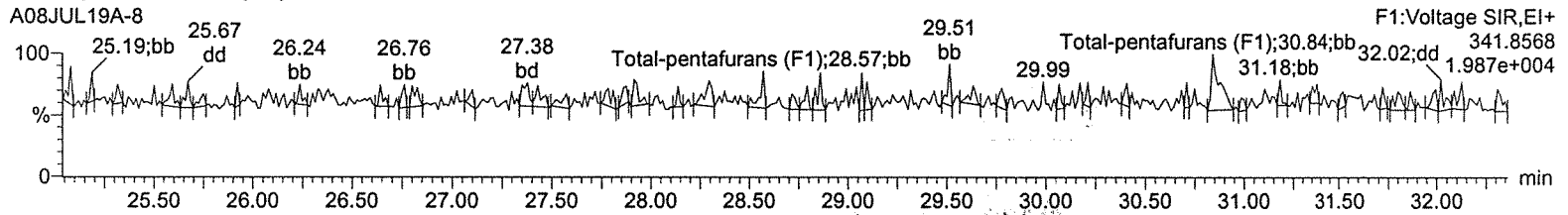
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

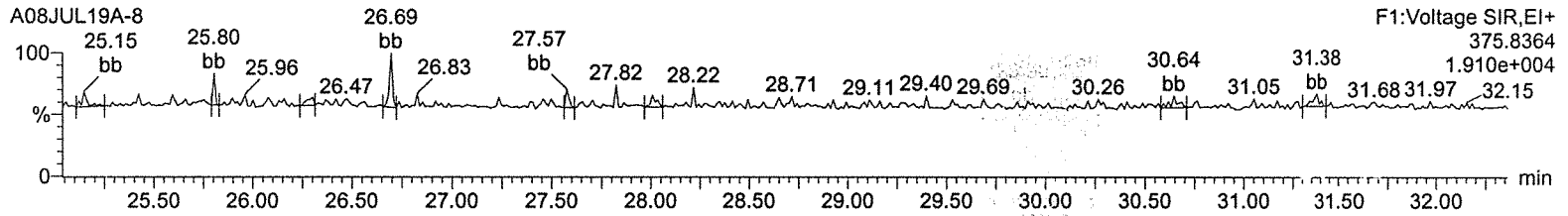
Total-pentafurans (F1)



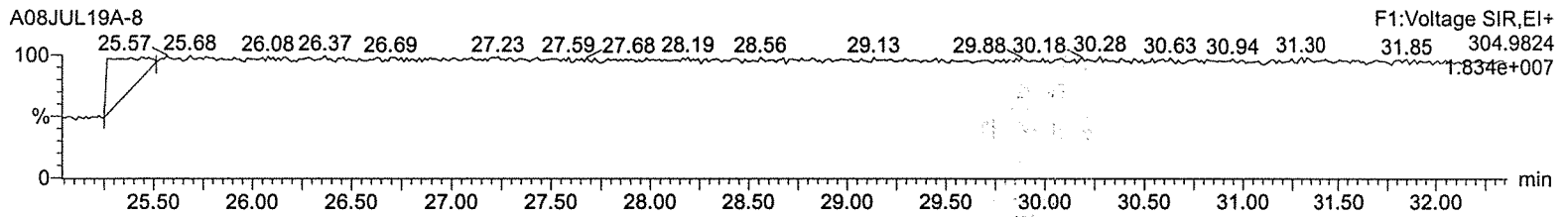
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

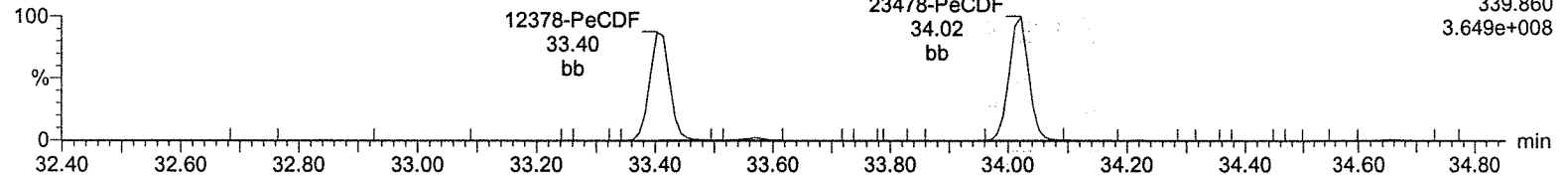
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-pentafurans

A08JUL19A-8

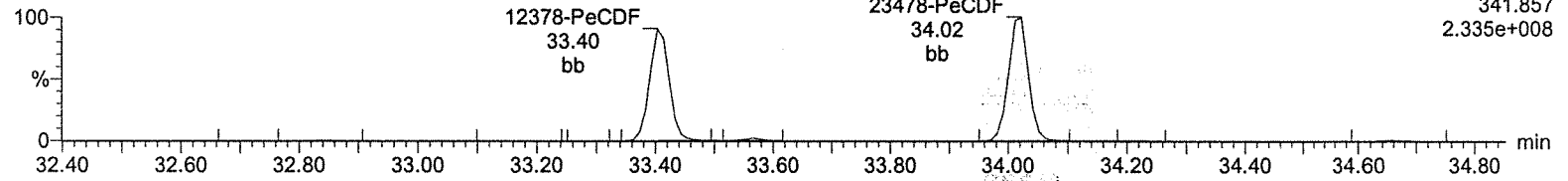
F2:Voltage SIR,EI+
339.860
3.649e+008



Total-pentafurans

A08JUL19A-8

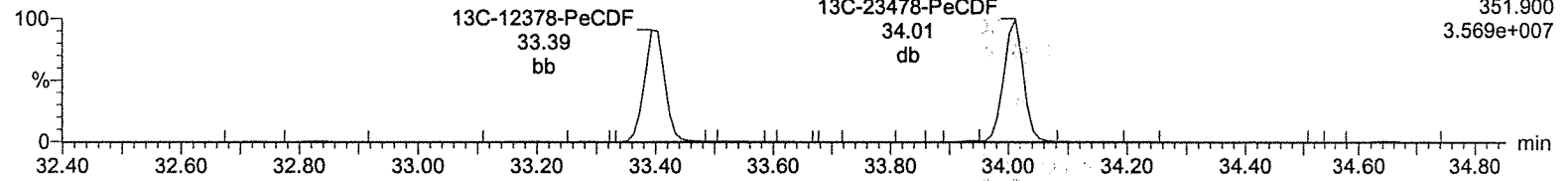
F2:Voltage SIR,EI+
341.857
2.335e+008



13C-12378-PeCDF

A08JUL19A-8

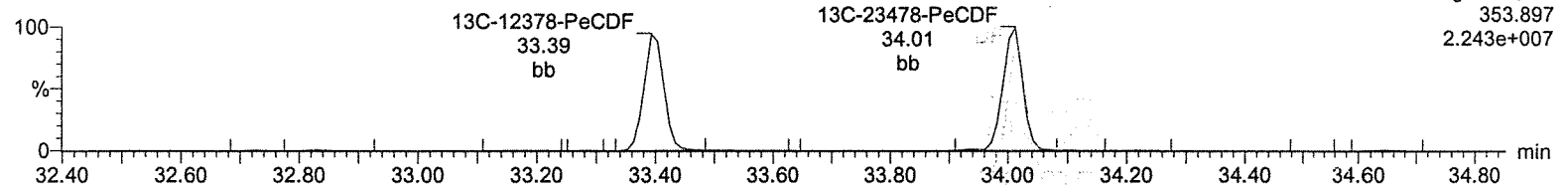
F2:Voltage SIR,EI+
351.900
3.569e+007



13C-12378-PeCDF

A08JUL19A-8

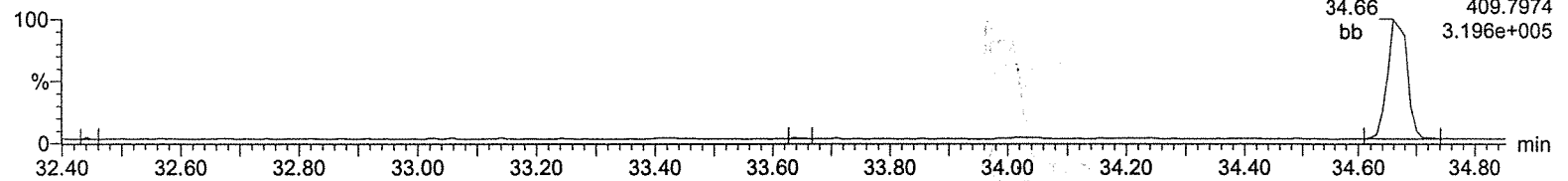
F2:Voltage SIR,EI+
353.897
2.243e+007



HpDPE

A08JUL19A-8

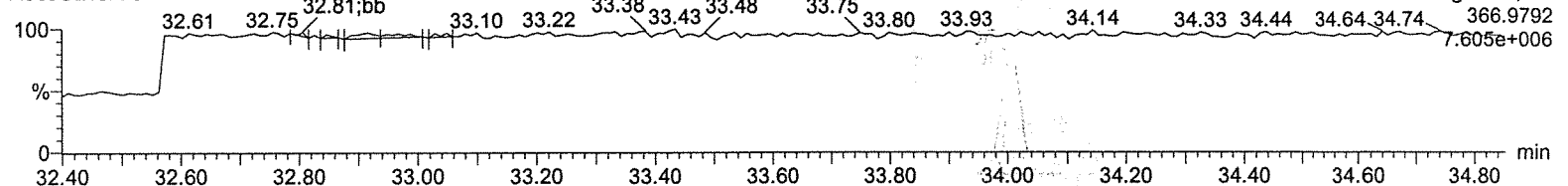
F2:Voltage SIR,EI+
346.6
409.7974
3.196e+005



Lock Mass F2

A08JUL19A-8

F2:Voltage SIR,EI+
366.9792
7.605e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

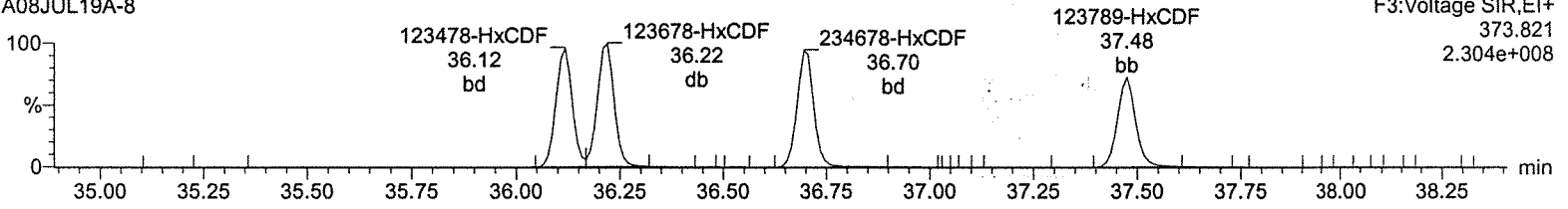
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

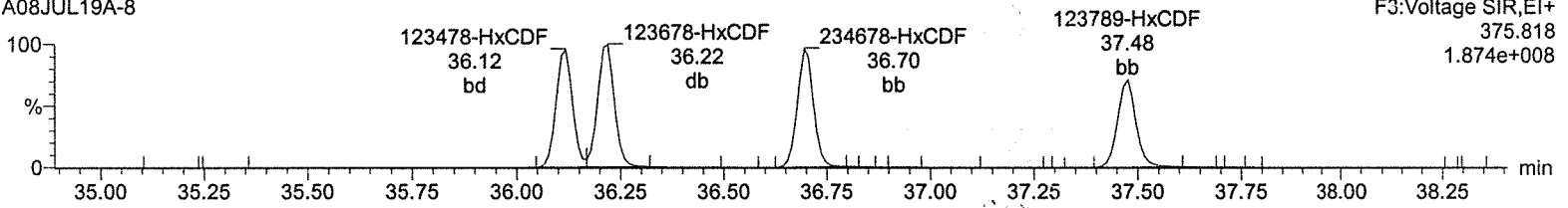
Total-hexafurans

A08JUL19A-8



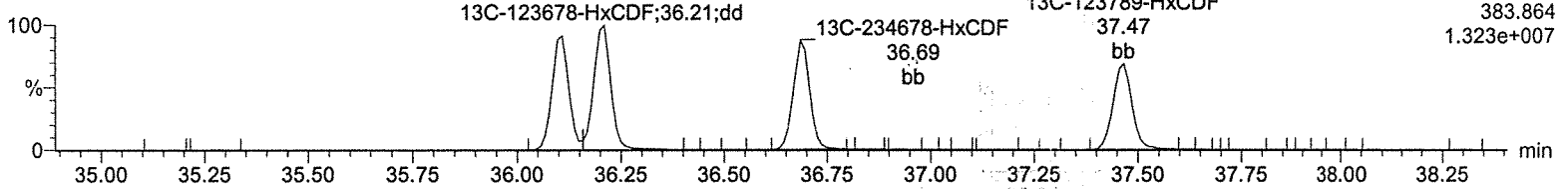
Total-hexafurans

A08JUL19A-8



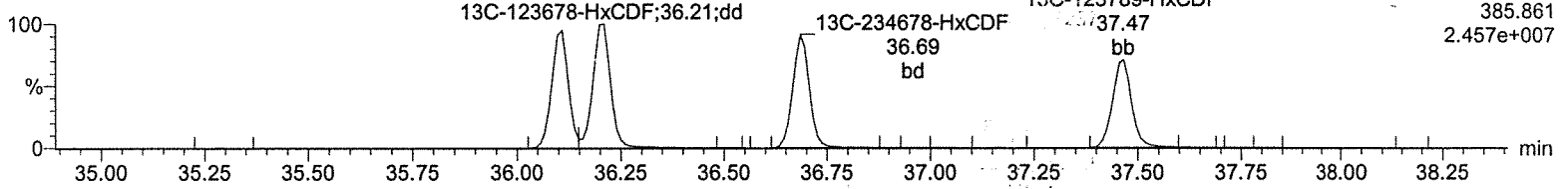
13C-123478-HxCDF

A08JUL19A-8



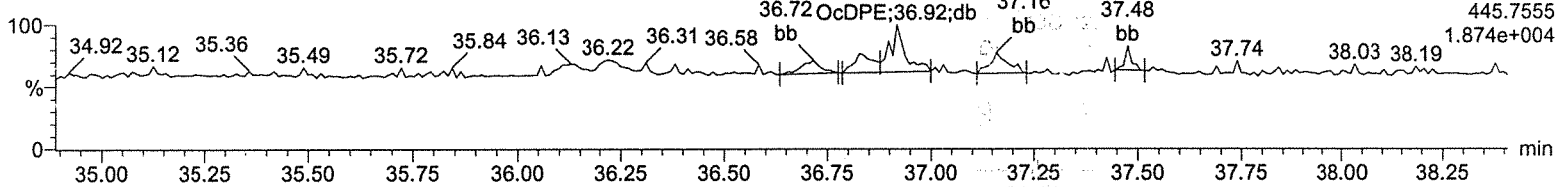
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A08JUL19A-8



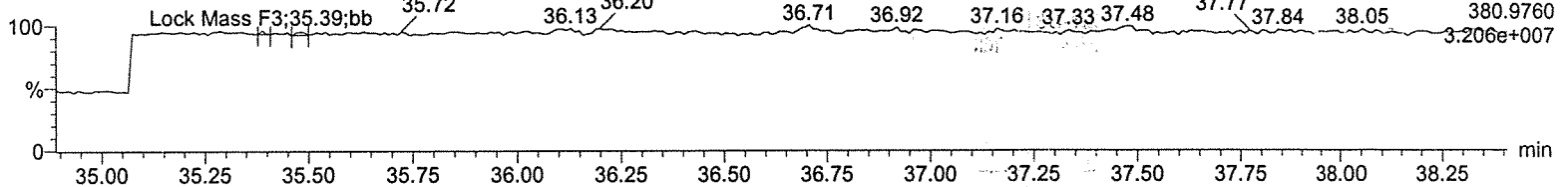
OcDPE

A08JUL19A-8



Lock Mass F3

A08JUL19A-8



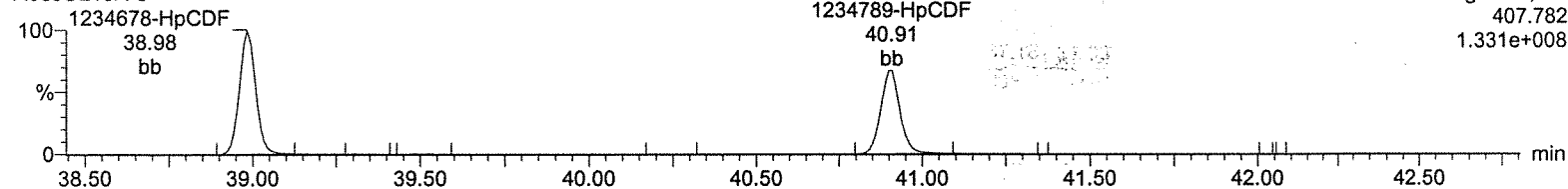
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

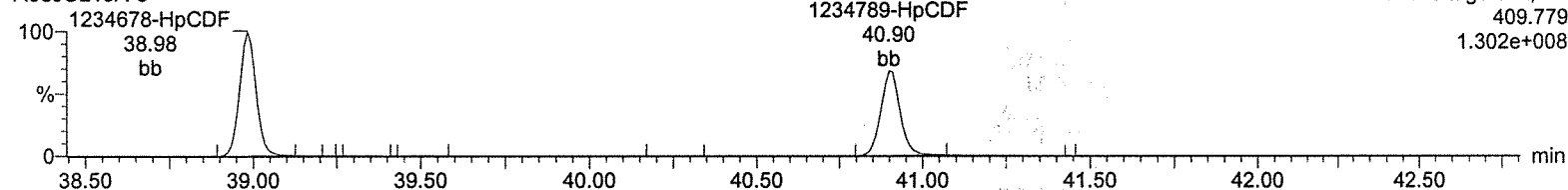
Total-heptafurans

A08JUL19A-8



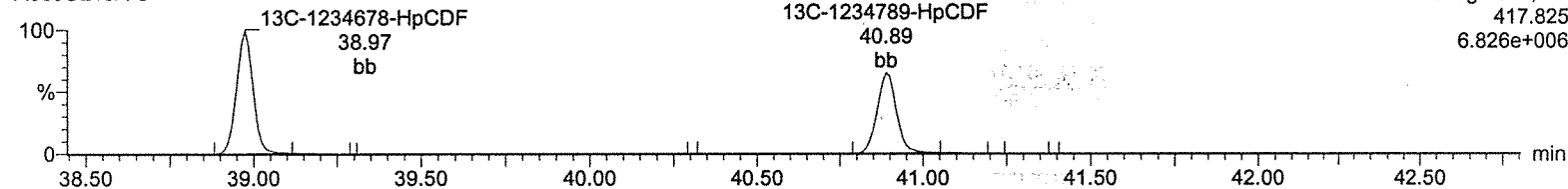
Total-heptafurans

A08JUL19A-8



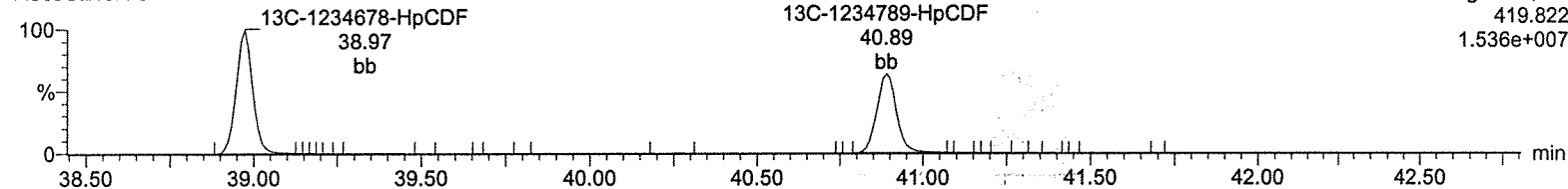
13C-1234678-HpCDF

A08JUL19A-8



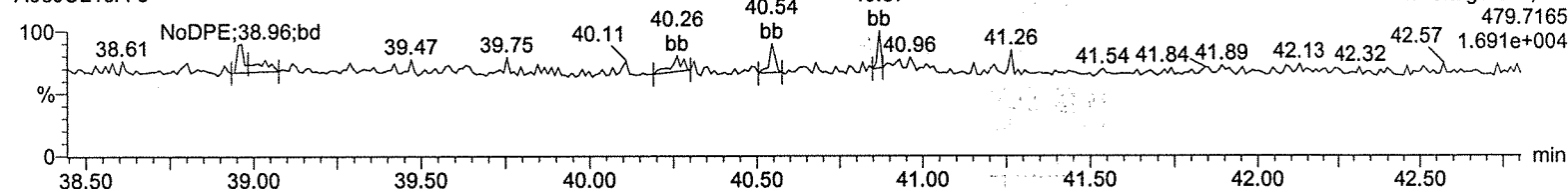
13C-1234678-HpCDF

A08JUL19A-8



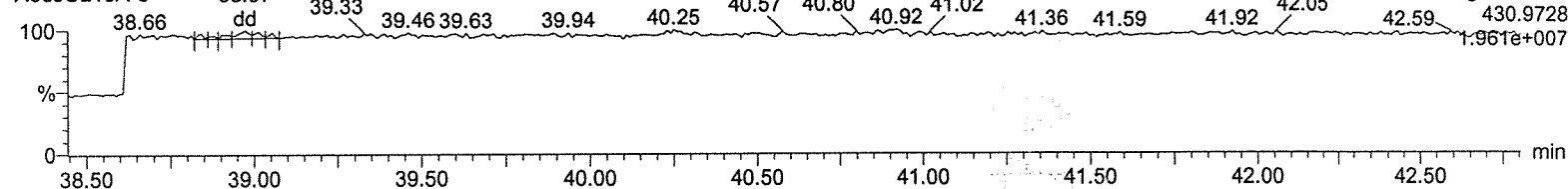
NoDPE

A08JUL19A-8



Lock Mass F4

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

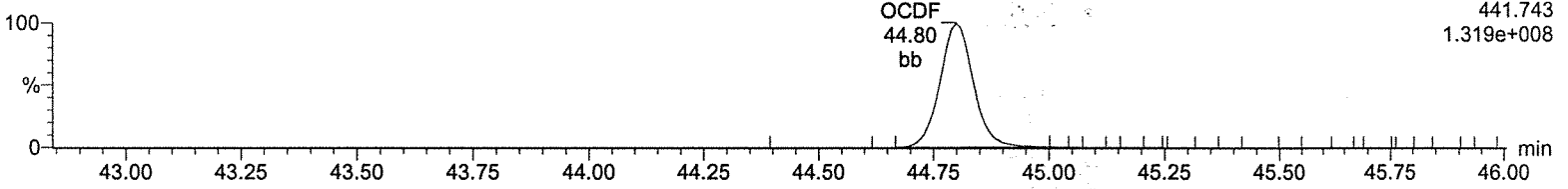
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDF

A08JUL19A-8

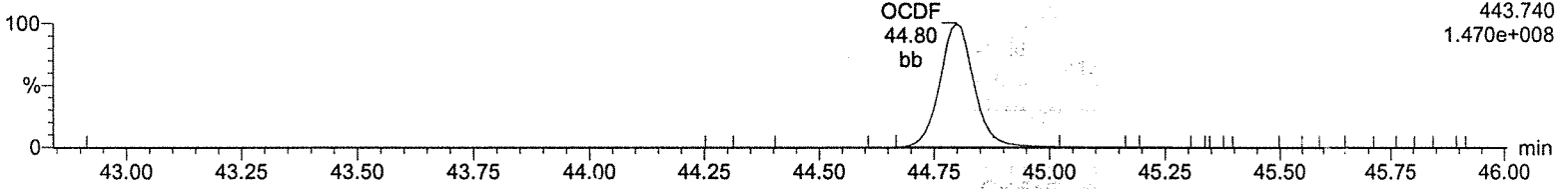
F5:Voltage SIR,EI+
441.743
1.319e+008



OCDF

A08JUL19A-8

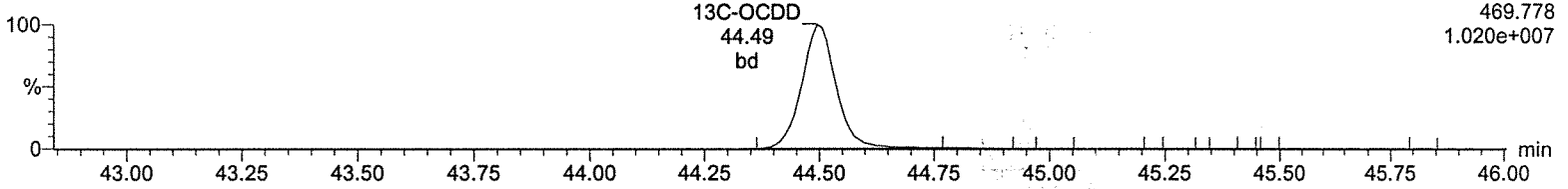
F5:Voltage SIR,EI+
443.740
1.470e+008



13C-OCDD

A08JUL19A-8

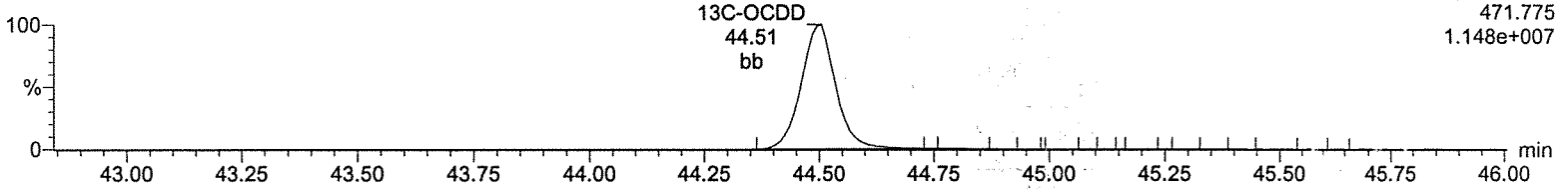
F5:Voltage SIR,EI+
469.778
1.020e+007



13C-OCDD

A08JUL19A-8

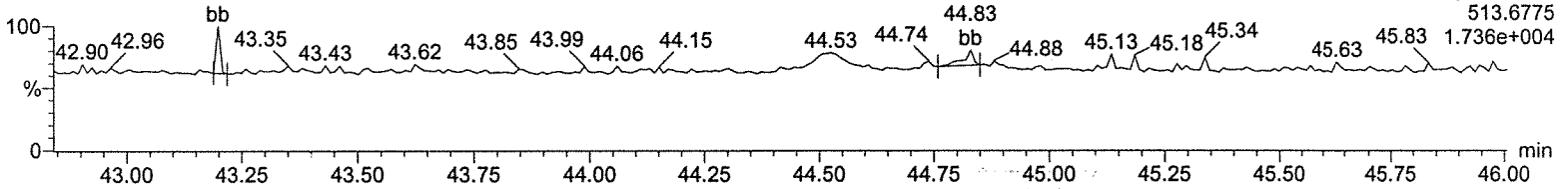
F5:Voltage SIR,EI+
471.775
1.148e+007



DeDPE

A08JUL19A-8

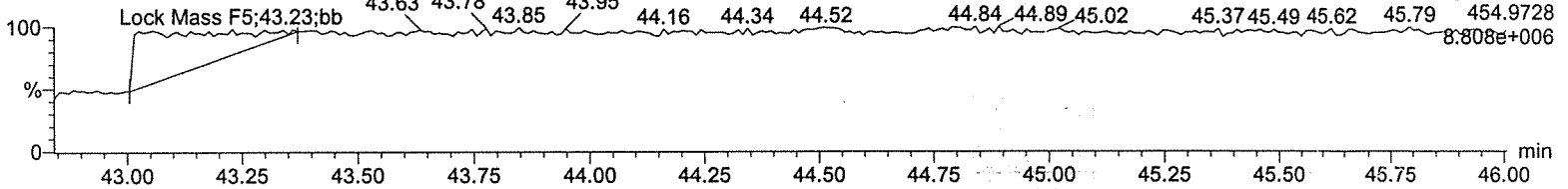
F5:Voltage SIR,EI+
513.6775
1.736e+004



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
454.9728
8.808e+006



Quantify Sample Summary Report
 Method 1613 CCAL Report
 MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Bill Gull

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.41e5	1.82e5	3.24e5	31.35	1.000	0.77	NO	9.832	0.0339	0.870	0.884	-1.7	2.69e6	3060	878.9	3.53e6	5470	645.8	db	db
2	12378-PeCDD	6.28e5	4.05e5	1.03e6	34.21	1.000	1.55	NO	49.971	0.0946	0.853	0.853	-0.1	1.53e7	12457	1224.5	9.64e6	6367	1513.5	bb	bb
3	123478-HxCDD	5.43e5	4.16e5	9.59e5	36.83	1.003	1.31	NO	51.806	0.105	0.974	0.940	3.6	1.08e7	8144	1328.2	8.57e6	8244	1039.0	bd	bd
4	123678-HxCDD	5.67e5	4.68e5	1.03e6	36.92	1.000	1.21	NO	49.386	0.103	0.932	0.944	-1.2	1.12e7	8144	1379.0	9.12e6	8244	1106.7	dd	dd
5	123789-HxCDD	5.58e5	4.36e5	9.94e5	37.16	1.007	1.28	NO	51.189	0.106	0.949	0.927	2.4	1.07e7	8144	1312.0	8.23e6	8244	998.2	dd	db
6	1234678-HpCDD	3.98e5	3.76e5	7.74e5	40.24	1.000	1.06	NO	49.581	0.150	1.031	1.040	-0.8	5.98e6	7083	844.3	5.67e6	6641	854.3	bd	bd
7	OCDD	6.28e5	7.01e5	1.33e6	44.51	1.000	0.90	NO	102.285	0.401	0.994	0.971	2.3	6.90e6	17082	404.1	7.71e6	5735	1344.7	bd	bd
8	2378-TCDF	1.72e5	2.22e5	3.94e5	30.66	1.000	0.77	NO	9.823	0.0430	0.961	0.978	-1.8	2.30e6	3145	731.2	2.96e6	5788	511.5	bb	bb
9	12378-PeCDF	9.44e5	6.09e5	1.55e6	33.40	1.000	1.55	NO	50.062	0.0563	0.946	0.945	0.1	2.45e7	10653	2295.4	1.55e7	7239	2135.3	bb	bb
10	23478-PeCDF	1.04e6	6.88e5	1.73e6	34.01	1.000	1.51	NO	50.564	0.0527	0.998	0.987	1.1	2.61e7	10653	2446.1	1.76e7	7239	2425.8	bb	bb
11	123478-HxCDF	7.43e5	6.15e5	1.36e6	36.11	1.000	1.21	NO	50.445	0.0894	1.097	1.087	0.9	1.57e7	9481	1652.2	1.28e7	11235	1143.5	bd	bd
12	123678-HxCDF	8.06e5	6.66e5	1.47e6	36.21	1.000	1.21	NO	50.994	0.0885	1.061	1.041	2.0	1.68e7	9481	1768.9	1.39e7	11235	1235.2	db	db
13	234678-HxCDF	7.55e5	6.18e5	1.37e6	36.70	1.000	1.22	NO	50.671	0.0922	1.151	1.136	1.3	1.58e7	9481	1664.0	1.25e7	11235	1111.0	bb	bb
14	123789-HxCDF	6.33e5	5.14e5	1.15e6	37.47	1.000	1.23	NO	50.766	0.123	1.077	1.061	1.5	1.12e7	9481	1180.5	9.35e6	11235	832.1	bd	bb
15	1234678-HpCDF	5.58e5	5.57e5	1.12e6	38.98	1.001	1.00	NO	50.942	0.0954	1.171	1.150	1.9	9.40e6	6651	1412.9	9.27e6	7143	1297.6	bb	bd
16	1234789-HpCDF	4.59e5	4.46e5	9.05e5	40.90	1.000	1.03	NO	50.253	0.138	1.208	1.202	0.5	6.56e6	6651	985.8	6.41e6	7143	896.9	bb	bd
17	OCDF	7.28e5	8.04e5	1.53e6	44.79	1.007	0.91	NO	101.154	0.168	1.146	1.133	1.2	8.07e6	4510	1788.9	8.87e6	6658	1332.1	bd	bb
18	13C-2378-TCDD	1.62e6	2.10e6	3.72e6	31.34	1.015	0.77	NO	100.391	0.0536	1.133	1.128	0.4	3.09e7	7595	4072.7	4.03e7	4391	9166.0	bb	bb
19	13C-12378-PeCDD	1.47e6	9.56e5	2.42e6	34.20	1.108	1.53	NO	98.091	0.0648	0.737	0.751	-1.9	3.53e7	4920	7177.0	2.29e7	4727	4839.8	bb	bb
20	13C-123478-HxCDD	1.09e6	8.81e5	1.97e6	36.82	0.991	1.24	NO	99.188	0.128	0.889	0.896	-0.8	2.29e7	5728	3998.3	1.85e7	12292	1505.5	bd	bd
21	13C-123678-HxCDD	1.22e6	9.99e5	2.22e6	36.91	0.993	1.22	NO	101.615	0.116	1.002	0.986	1.6	2.32e7	5728	4044.5	1.91e7	12292	1555.2	dd	dd
22	13C-1234678-HpCDD	7.66e5	7.34e5	1.50e6	40.23	1.083	1.04	NO	100.813	0.141	0.677	0.672	0.8	1.12e7	8086	1388.7	1.07e7	6816	1575.1	bd	bd
23	13C-OCDD	1.26e6	1.42e6	2.67e6	44.49	1.197	0.89	NO	187.951	0.195	0.603	0.642	-6.0	1.38e7	9703	1418.2	1.56e7	10005	1564.1	bb	bb
24	13C-2378-TCDF	1.79e6	2.31e6	4.10e6	30.64	0.993	0.78	NO	99.787	0.0758	1.247	1.250	-0.2	2.32e7	12127	1915.0	3.00e7	6648	4519.7	bb	bb
25	13C-12378-PeCDF	2.01e6	1.27e6	3.28e6	33.39	1.082	1.58	NO	98.830	0.132	0.999	1.011	-1.2	5.15e7	10054	5118.1	3.27e7	16300	2004.3	bb	bb
26	13C-23478-PeCDF	2.12e6	1.34e6	3.48e6	34.00	1.102	1.58	NO	99.016	0.125	1.053	1.063	-1.0	5.26e7	10054	5234.8	3.35e7	16300	2054.1	bb	bb
27	13C-123478-HxCDF	8.52e5	1.62e6	2.48e6	36.10	0.972	0.53	NO	100.589	0.156	1.117	1.111	0.6	1.83e7	10145	1807.7	3.44e7	17090	2014.8	bd	bd
28	13C-123678-HxCDF	9.54e5	1.82e6	2.77e6	36.20	0.974	0.52	NO	100.412	0.139	1.252	1.247	0.4	1.93e7	10145	1906.8	3.71e7	17090	2170.1	dd	dd
29	13C-234678-HxCDF	8.17e5	1.57e6	2.39e6	36.69	0.987	0.52	NO	99.533	0.160	1.077	1.082	-0.5	1.69e7	10145	1670.0	3.21e7	17090	1878.8	bb	bb
30	13C-123789-HxCDF	7.27e5	1.40e6	2.13e6	37.46	1.008	0.52	NO	99.456	0.179	0.962	0.967	-0.5	1.36e7	10145	1338.3	2.55e7	17090	1490.9	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	5.97e5	1.31e6	1.90e6	38.96	1.049	0.46	NO	98.762	0.113	0.859	0.870	-1.2	9.86e6	5992	1645.9	2.20e7	9443	2325.7	bd	bb
32	13C-1234789-HpCDF	4.61e5	1.04e6	1.50e6	40.88	1.100	0.44	NO	99.800	0.145	0.676	0.677	-0.2	6.40e6	5992	1068.7	1.42e7	9443	1505.6	bd	bb
33	13C-1234-TCDD	1.43e6	1.85e6	3.29e6	30.87	0.000	0.77	NO	100.000	0.0605	1.000	1.000	0.0	2.16e7	7595	2846.5	2.76e7	4391	6279.9	bb	bb
34	13C-123789-HxCDD	1.22e6	9.94e5	2.22e6	37.15	0.000	1.23	NO	100.000	0.114	1.000	1.000	0.0	2.17e7	5728	3793.8	1.77e7	12292	1436.7	dd	dd
35	37Cl-2378-TCDD	3.41e5		3.41e5	31.35	1.016			9.764	0.0169	1.036	1.061	-2.4	6.62e6	3545	1868.0				db	

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

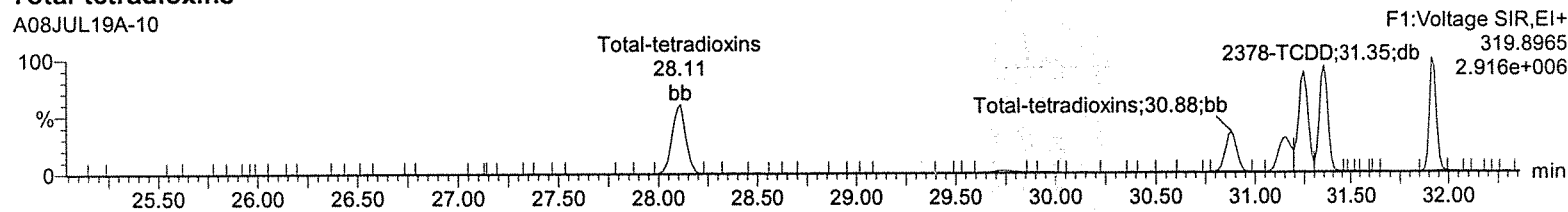
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

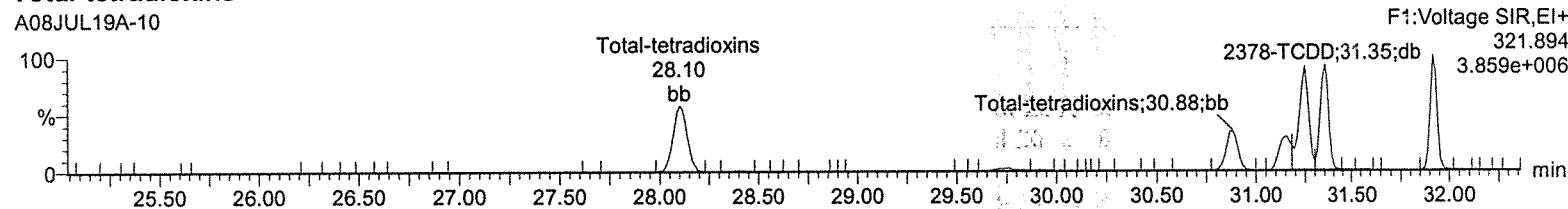
Total-tetradoxins

A08JUL19A-10



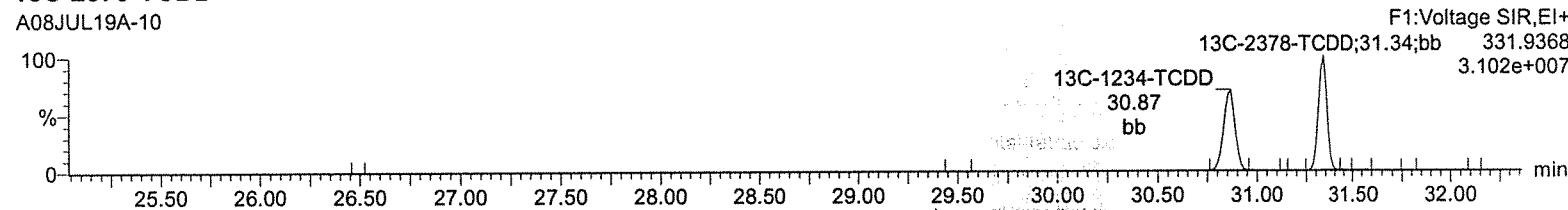
Total-tetradoxins

A08JUL19A-10



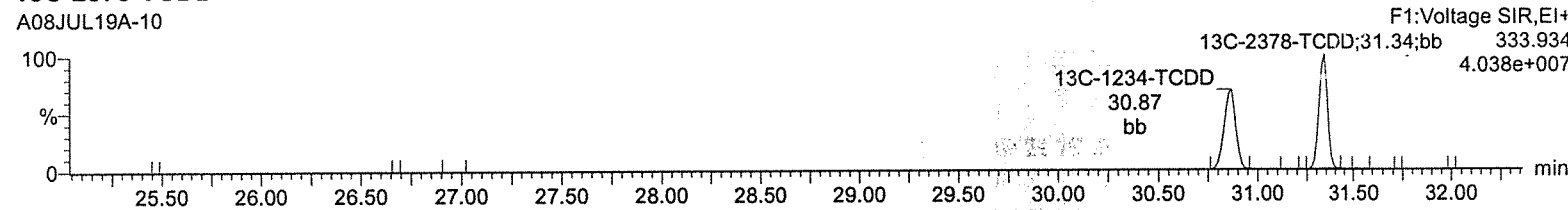
13C-2378-TCDD

A08JUL19A-10



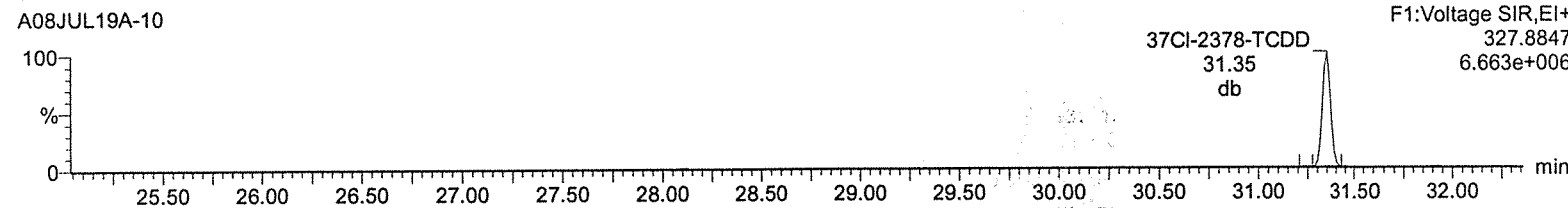
13C-2378-TCDD

A08JUL19A-10



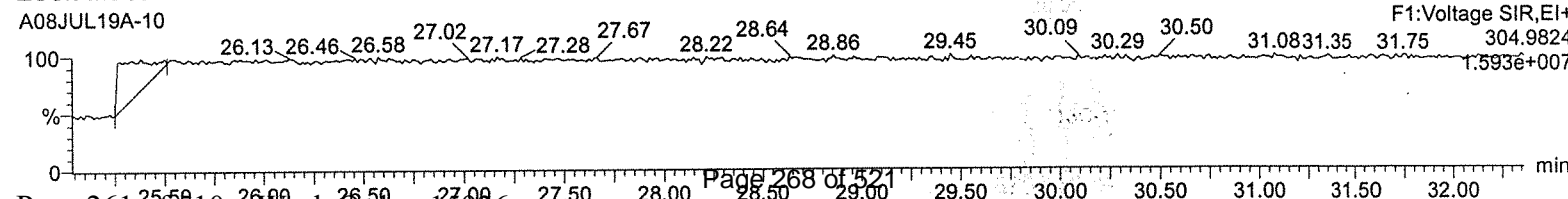
37Cl-2378-TCDD

A08JUL19A-10



Lock Mass F1

A08JUL19A-10

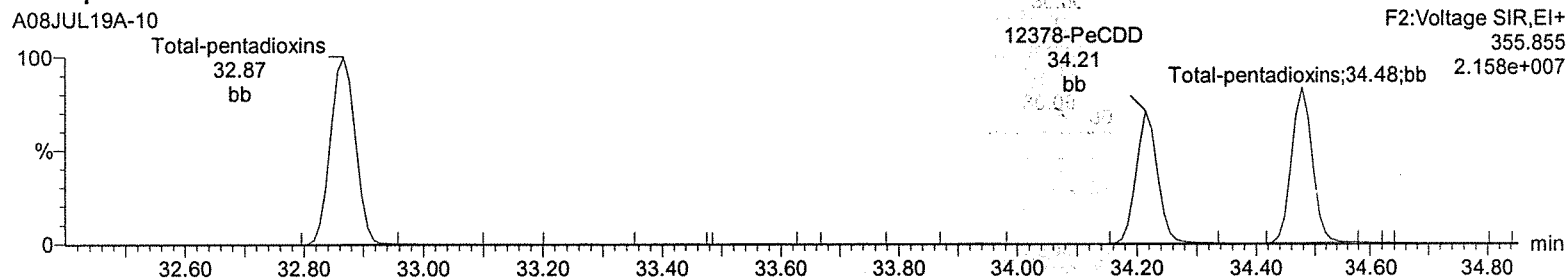


Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

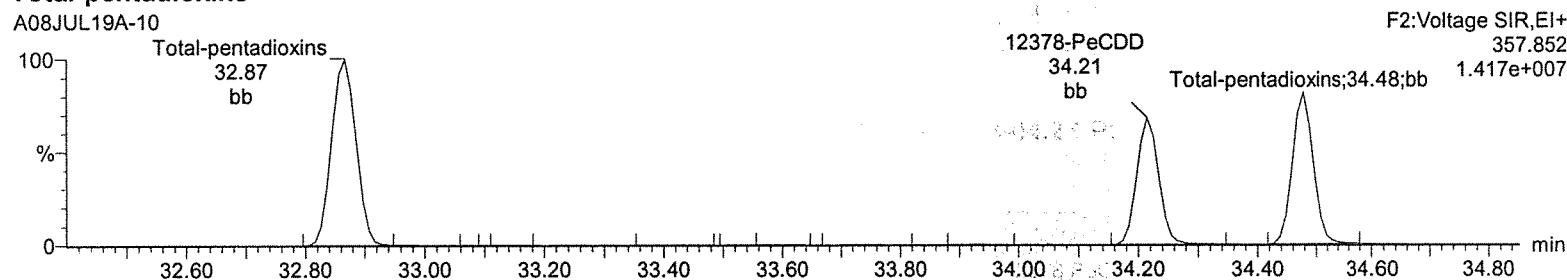
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

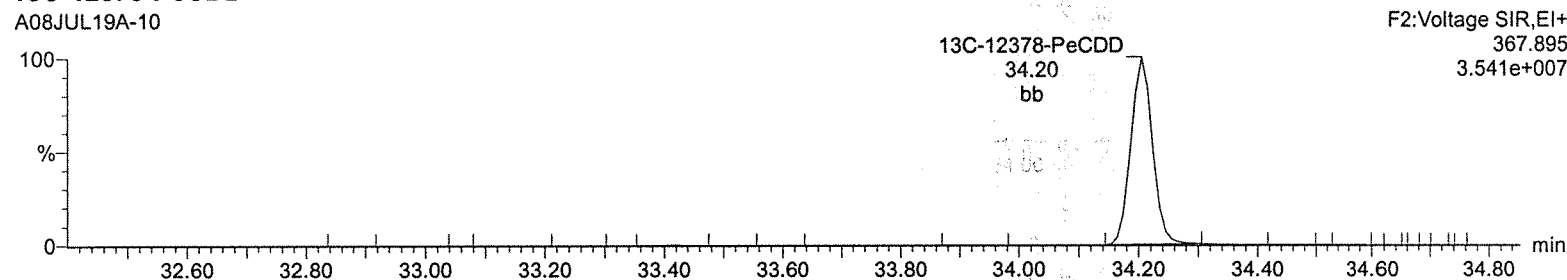
Total-pentadioxins



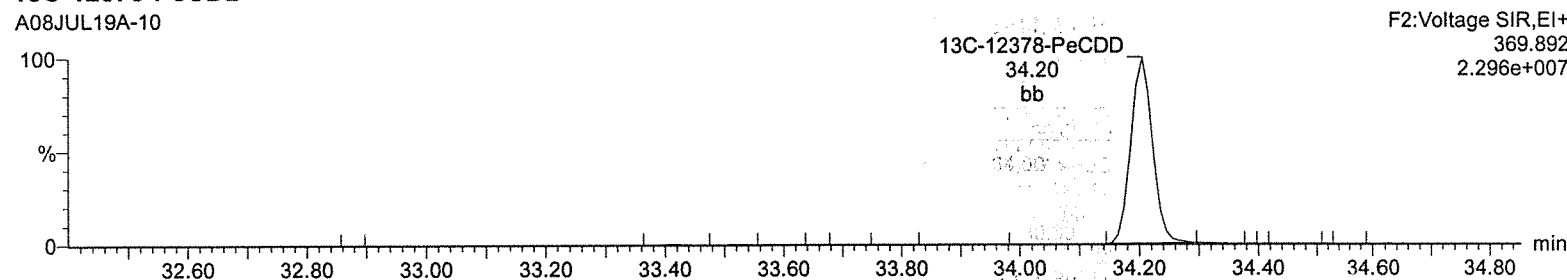
Total-pentadioxins



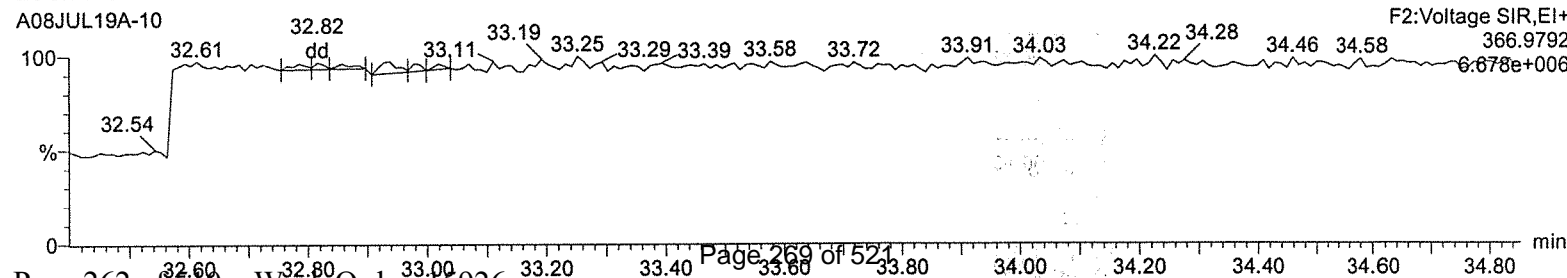
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

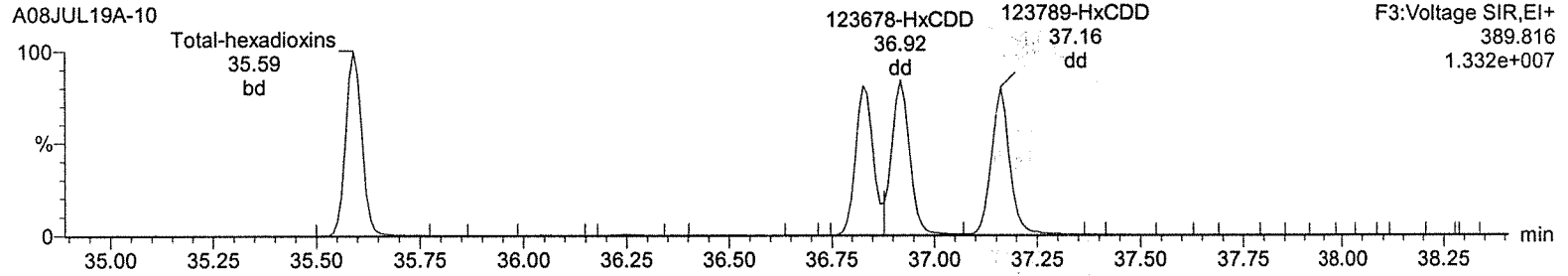
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

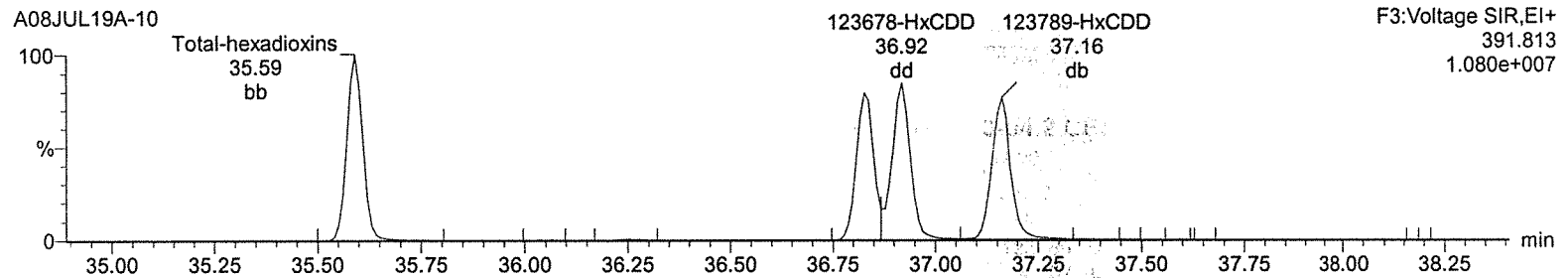
Total-hexadioxins

A08JUL19A-10



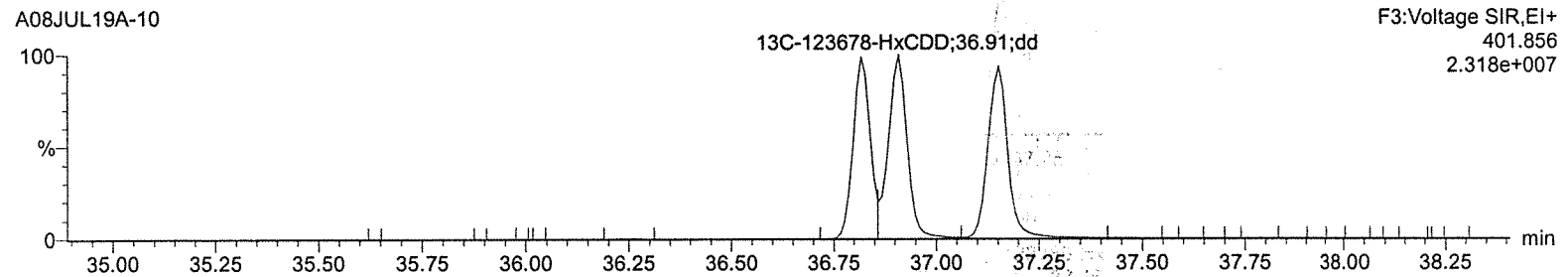
Total-hexadioxins

A08JUL19A-10



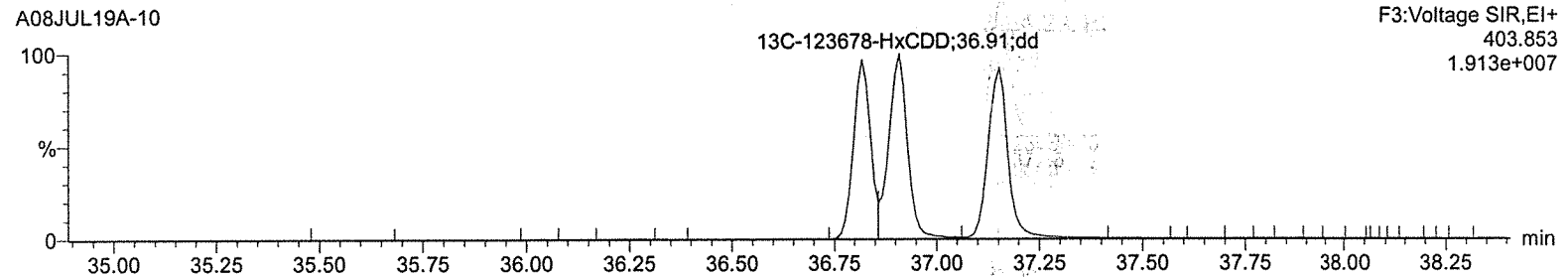
13C-123478-HxCDD

A08JUL19A-10



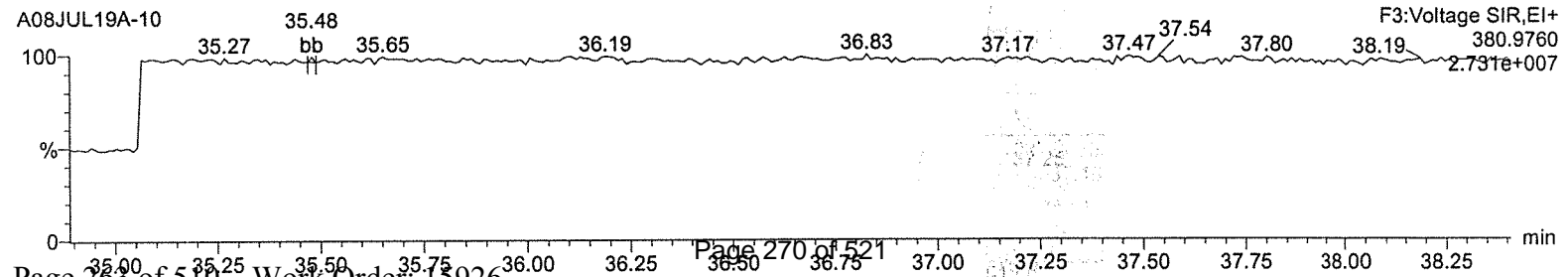
13C-123478-HxCDD

A08JUL19A-10



Lock Mass F3

A08JUL19A-10



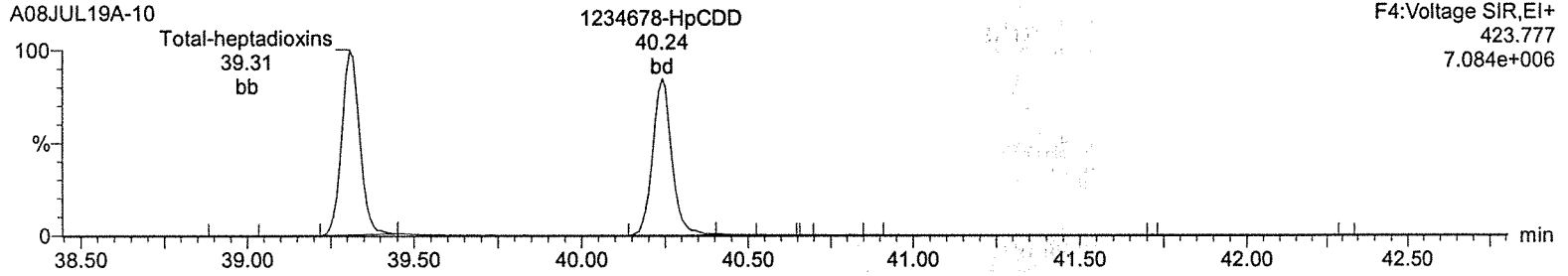
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

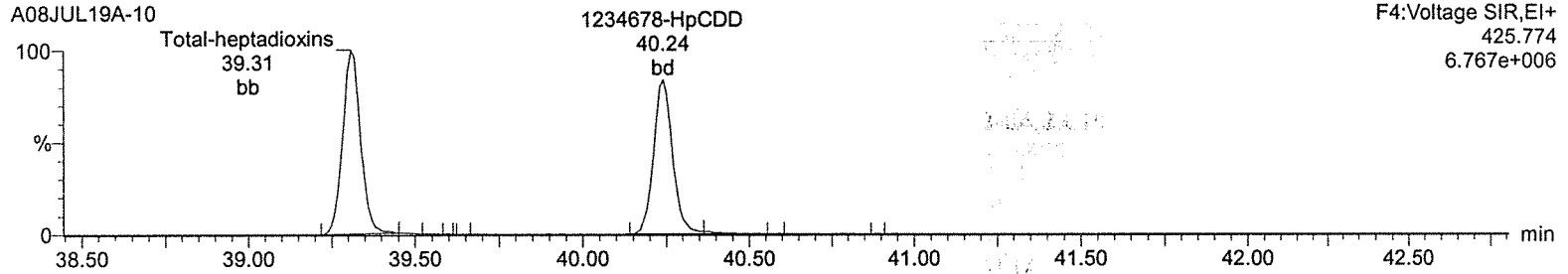
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

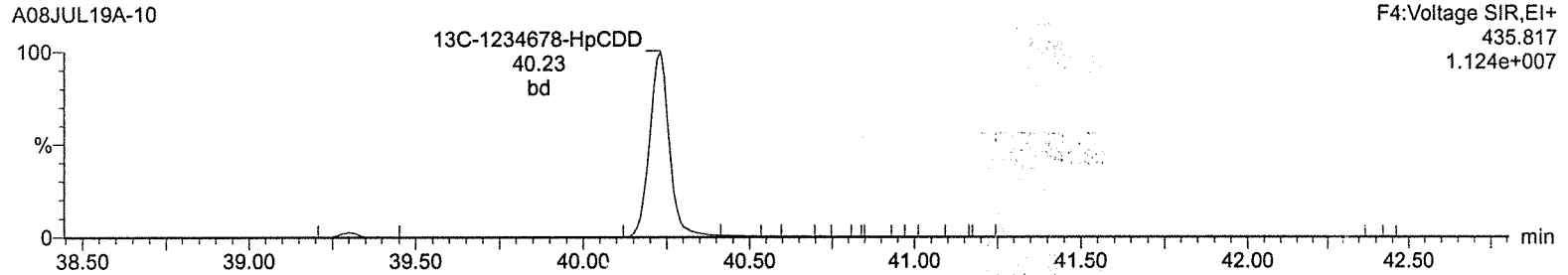
Total-heptadioxins



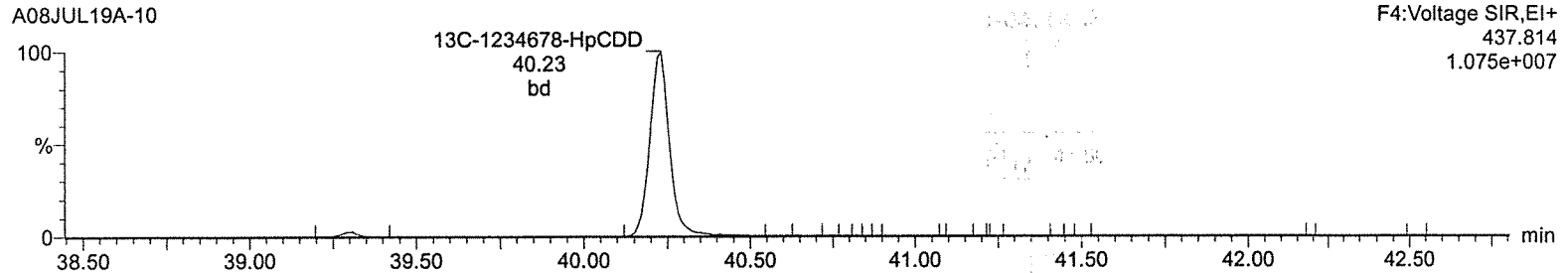
Total-heptadioxins



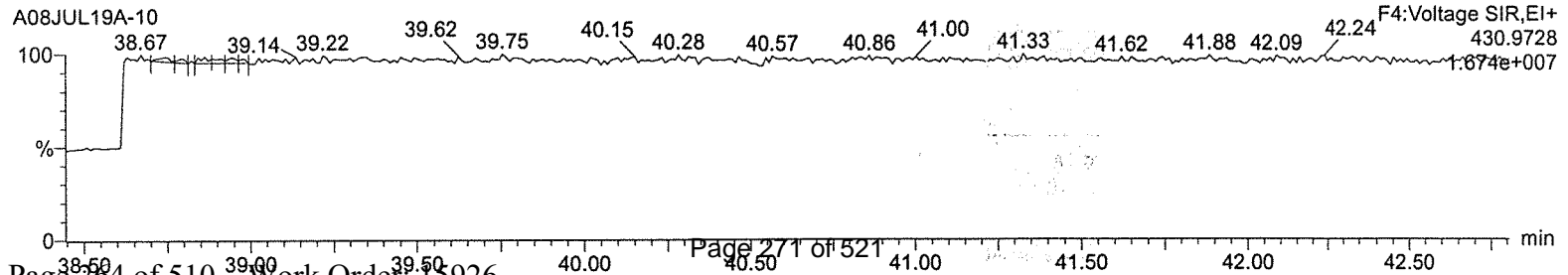
¹³C-1234678-HpCDD



¹³C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

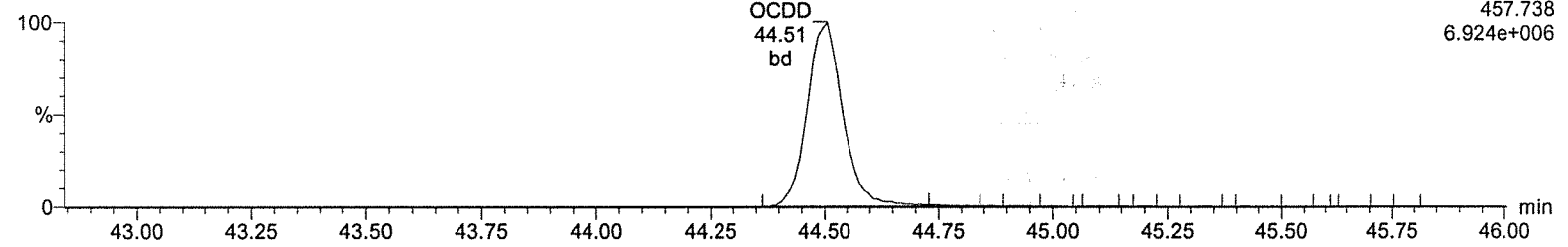
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

OCDD

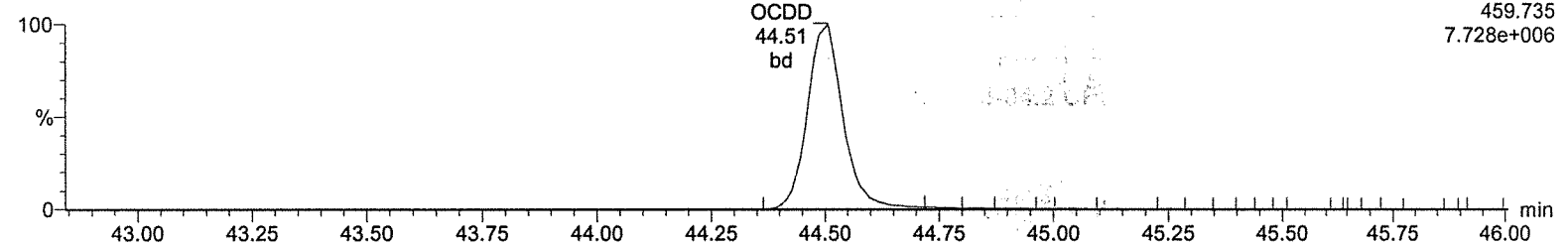
A08JUL19A-10



F5:Voltage SIR,EI+
457.738
6.924e+006

OCDD

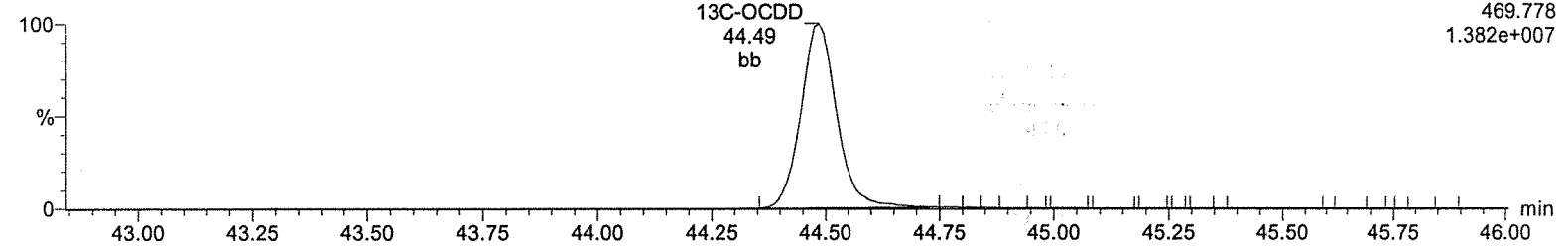
A08JUL19A-10



F5:Voltage SIR,EI+
459.735
7.728e+006

13C-OCDD

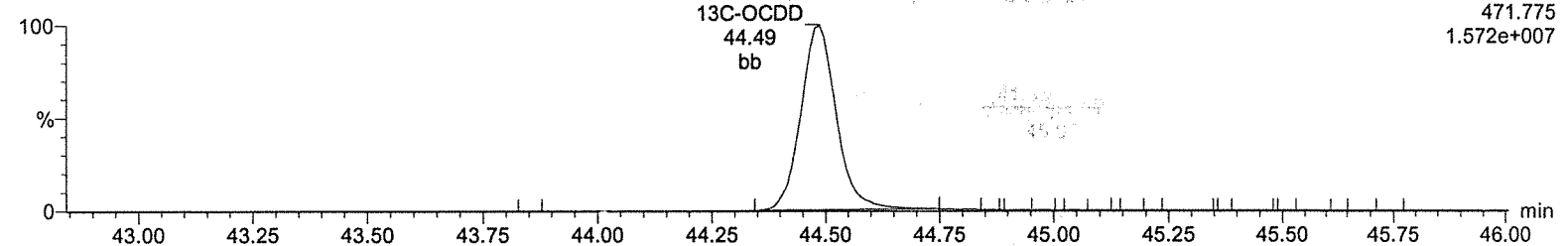
A08JUL19A-10



F5:Voltage SIR,EI+
469.778
1.382e+007

13C-OCDD

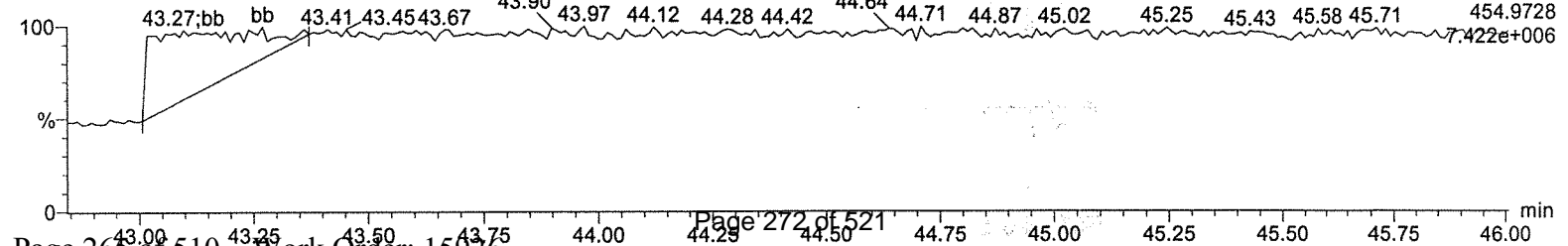
A08JUL19A-10



F5:Voltage SIR,EI+
471.775
1.572e+007

Lock Mass F5

A08JUL19A-10



F5:Voltage SIR,EI+
454.9728
7.422e+006

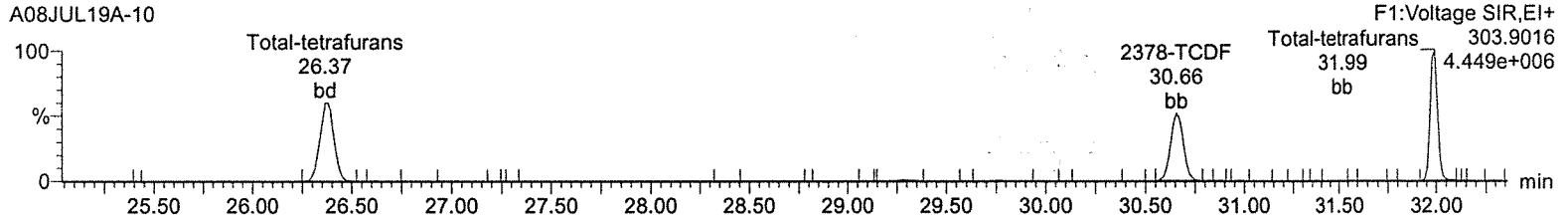
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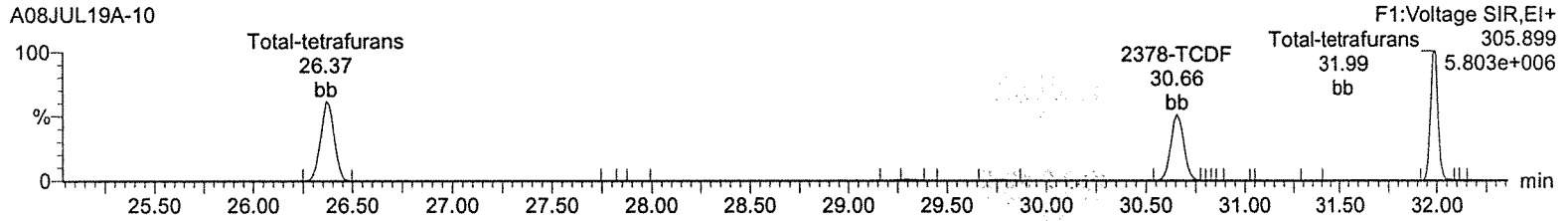
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Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

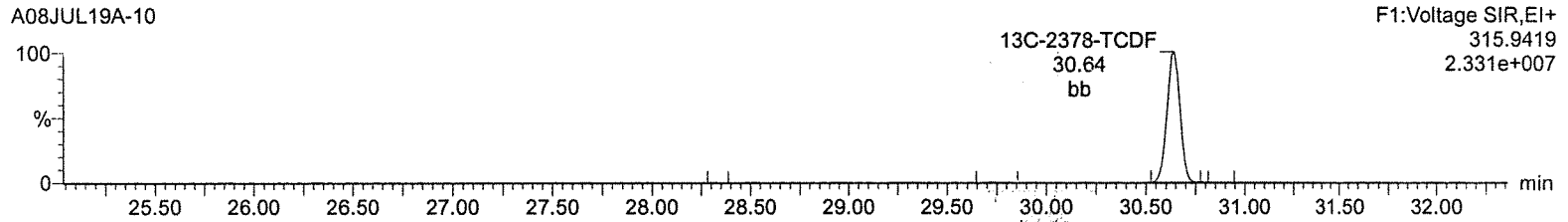
Total-tetrafurans



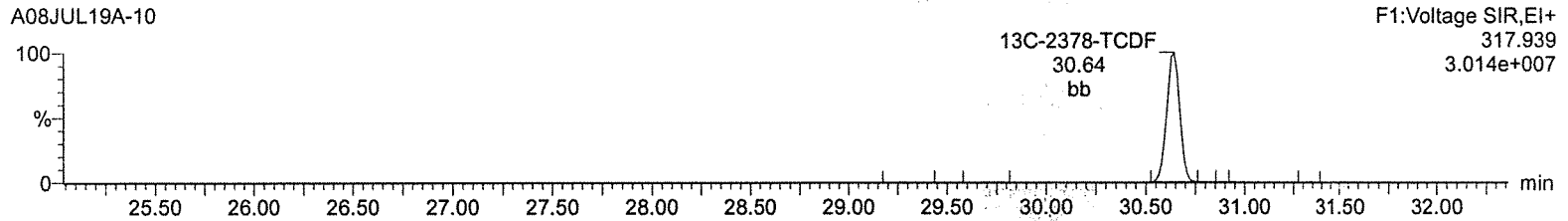
Total-tetrafurans



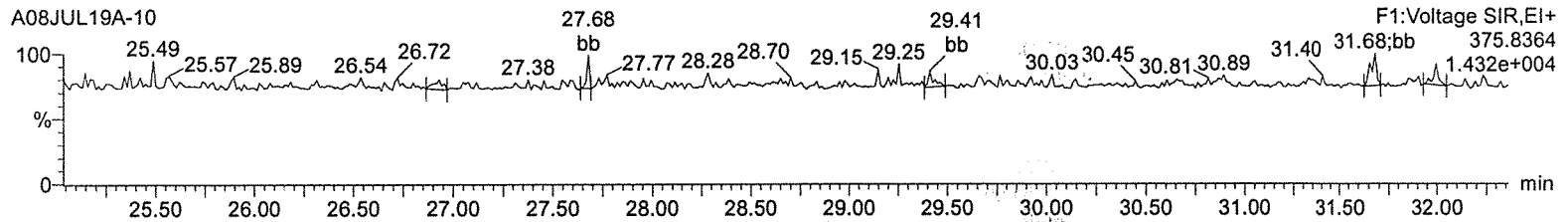
13C-2378-TCDF



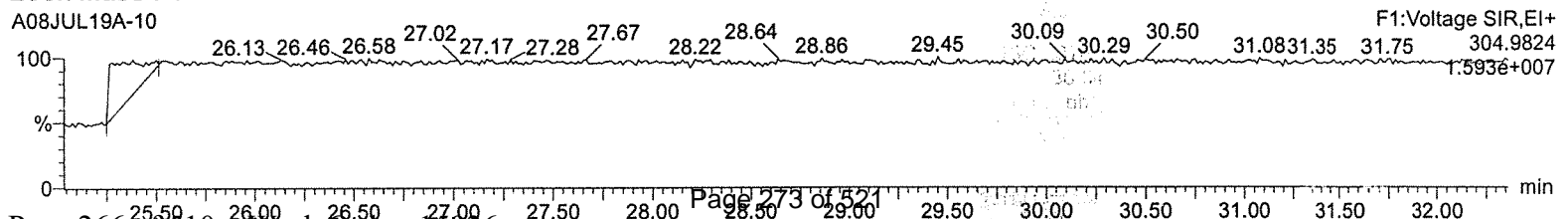
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

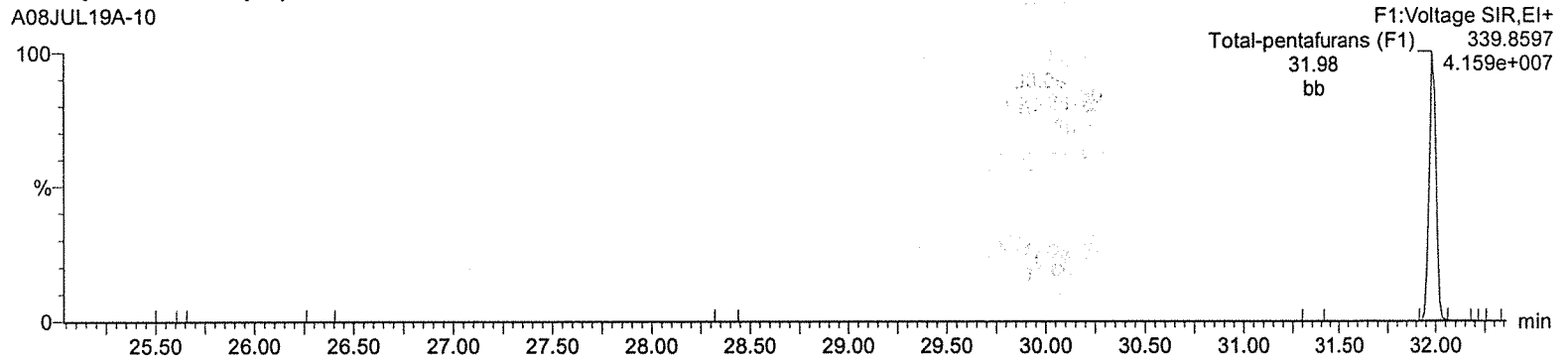
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

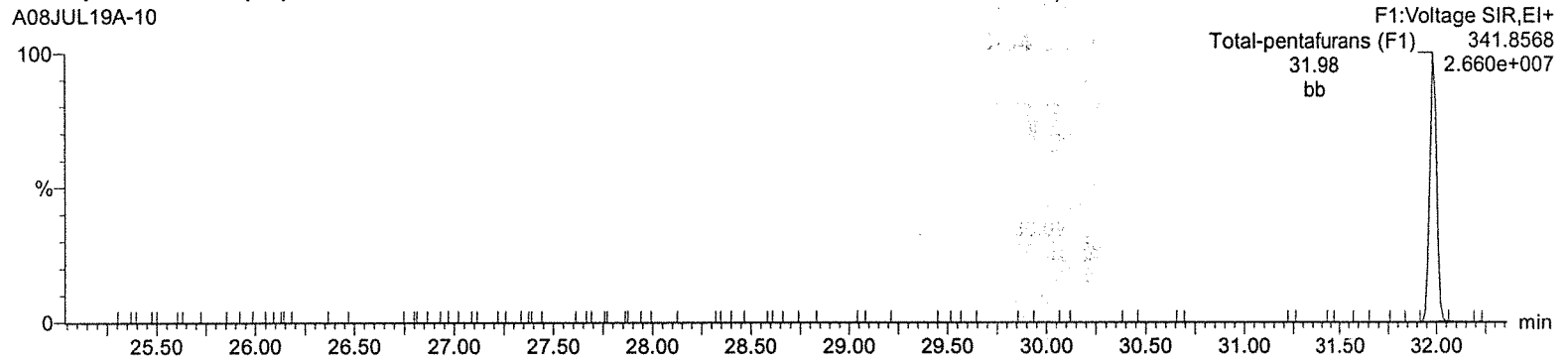
Total-pentafurans (F1)

A08JUL19A-10



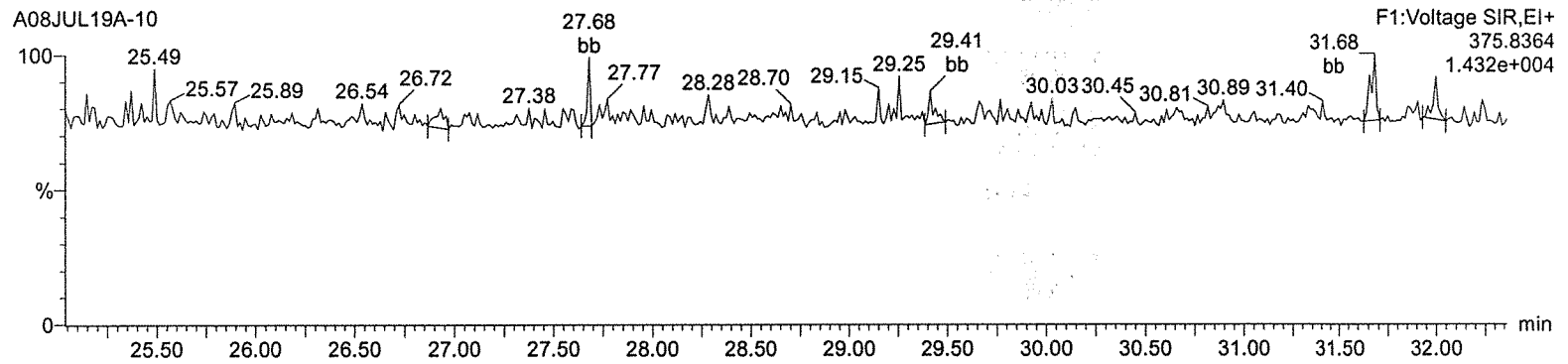
Total-pentafurans (F1)

A08JUL19A-10



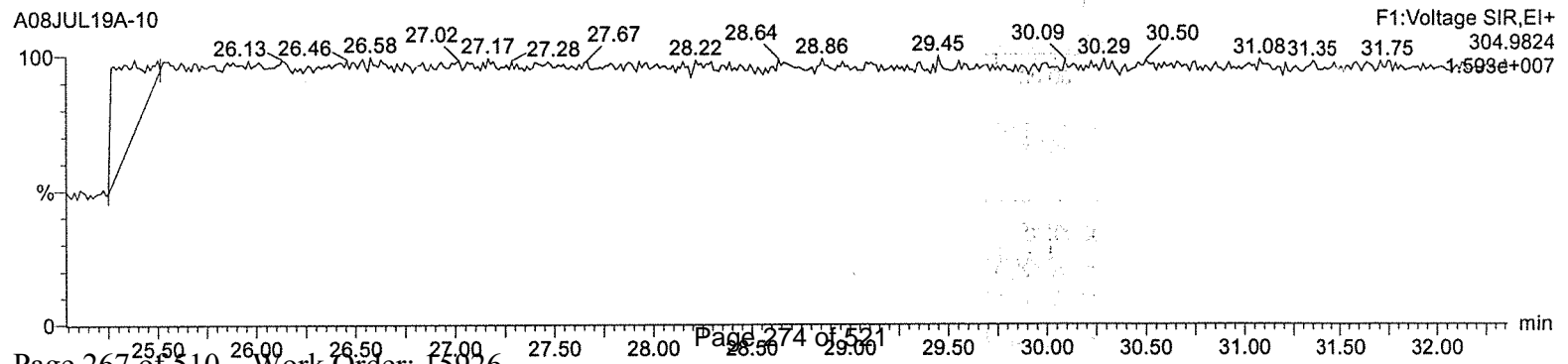
HxDPE

A08JUL19A-10



Lock Mass F1

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

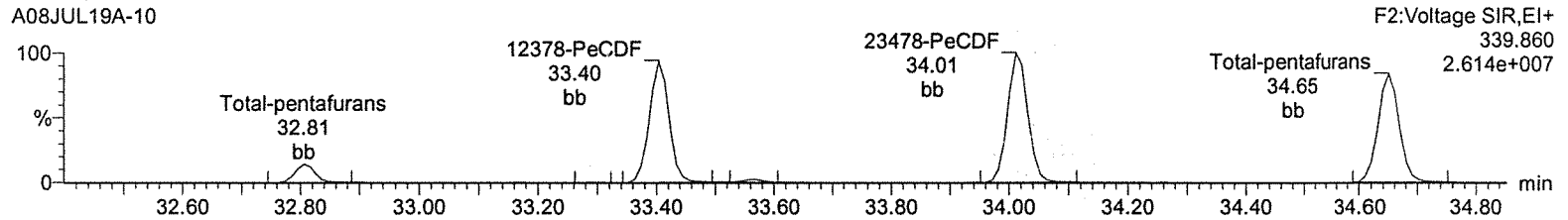
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

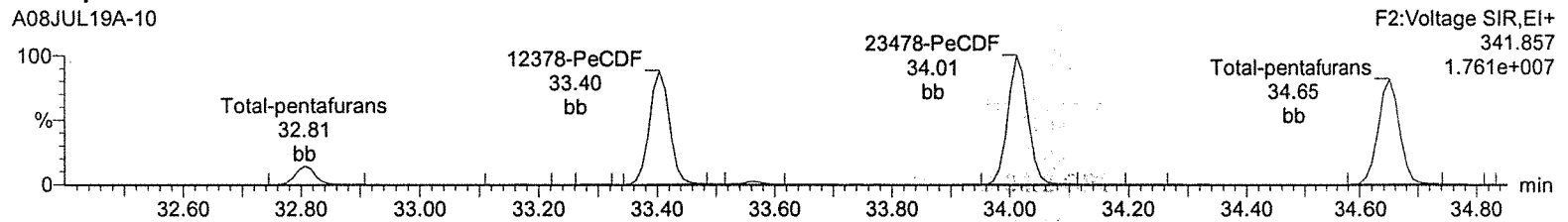
Total-pentafurans

A08JUL19A-10



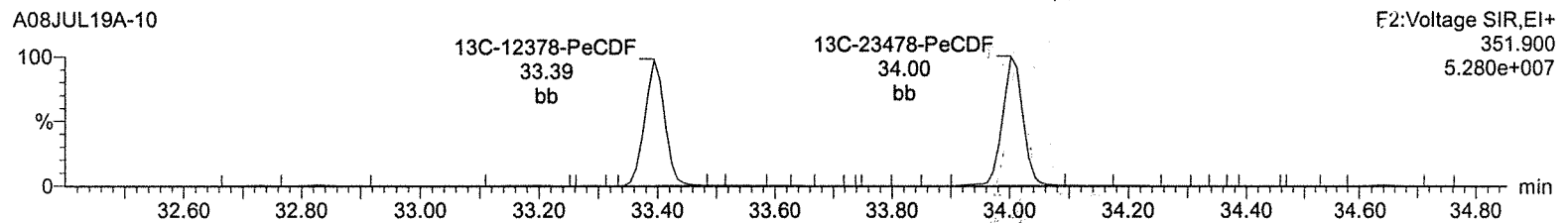
Total-pentafurans

A08JUL19A-10



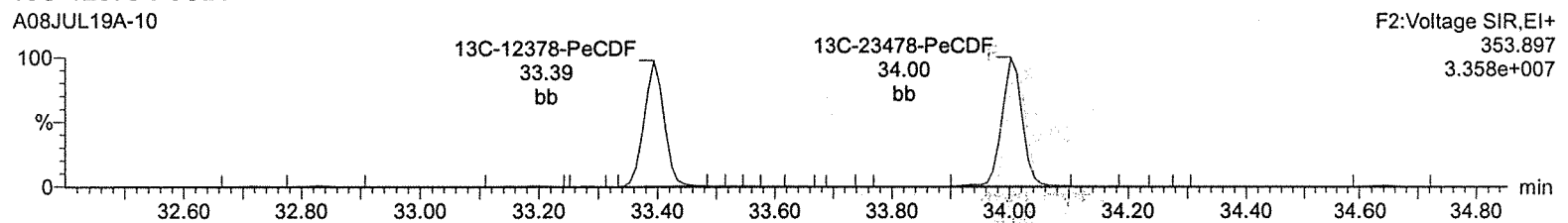
13C-12378-PeCDF

A08JUL19A-10



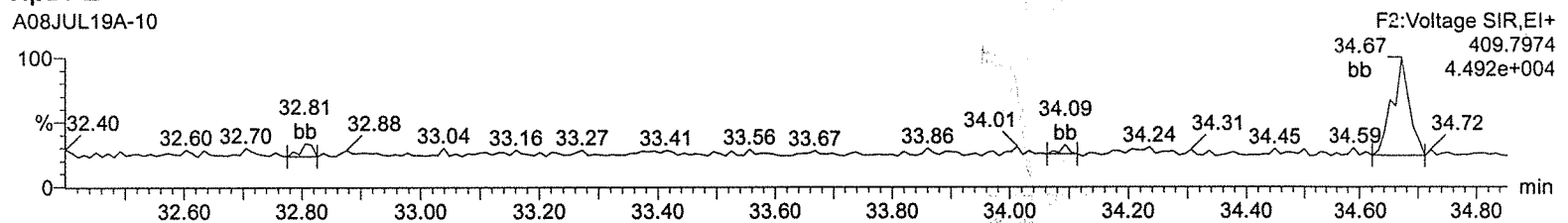
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A08JUL19A-10



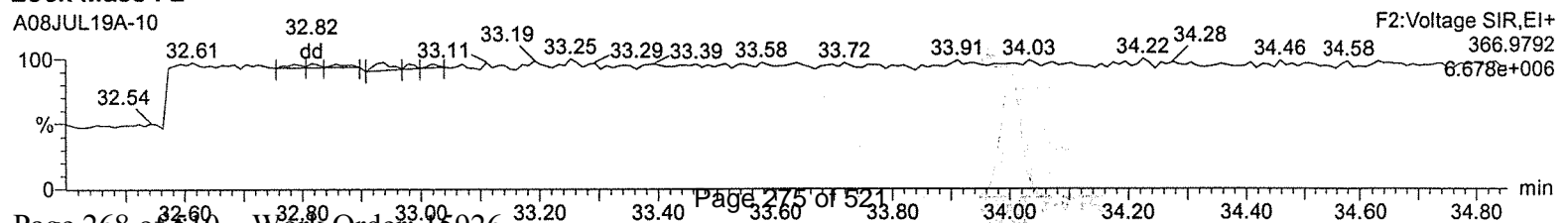
HpdPE

A08JUL19A-10



Lock Mass F2

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

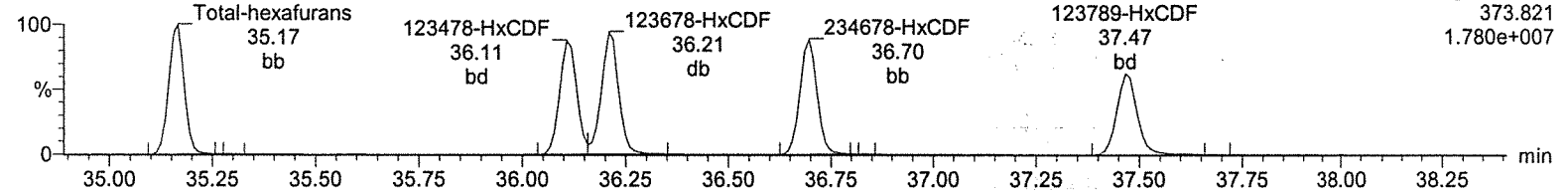
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

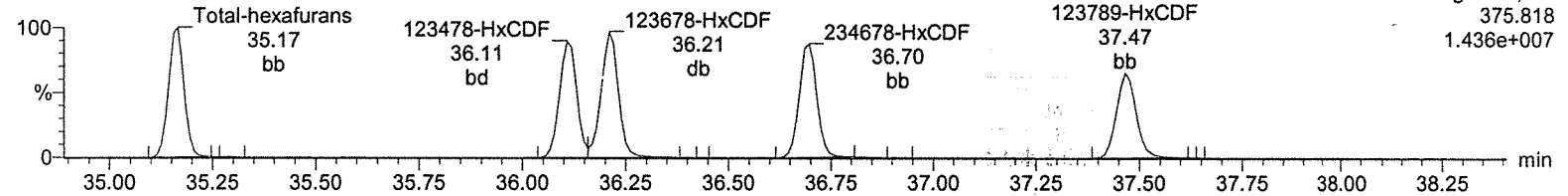
Total-hexafurans

A08JUL19A-10



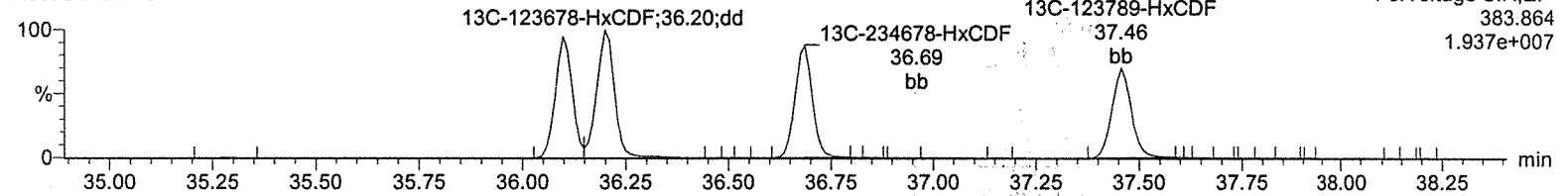
Total-hexafurans

A08JUL19A-10



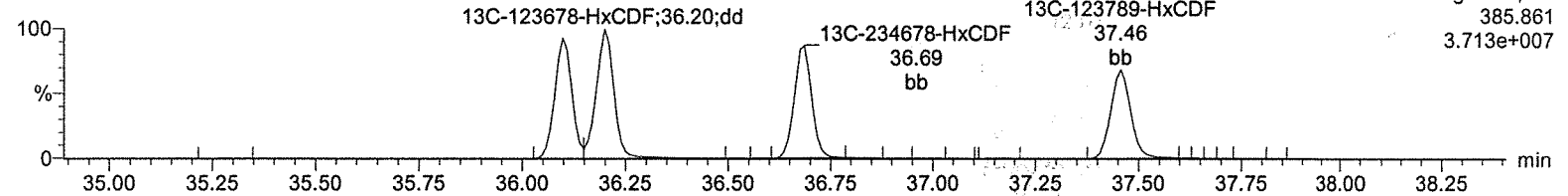
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A08JUL19A-10



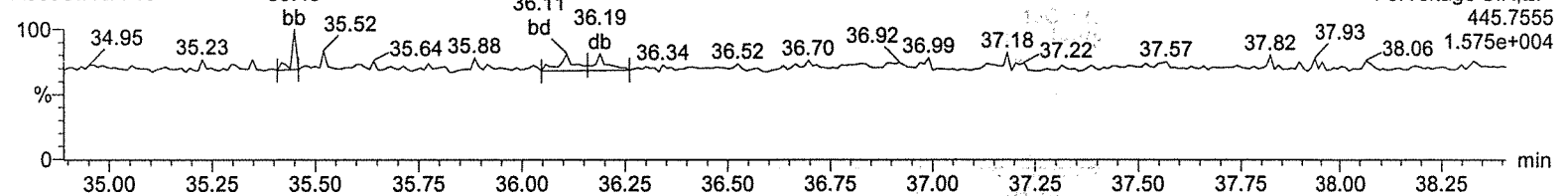
13C-123478-HxCDF

A08JUL19A-10



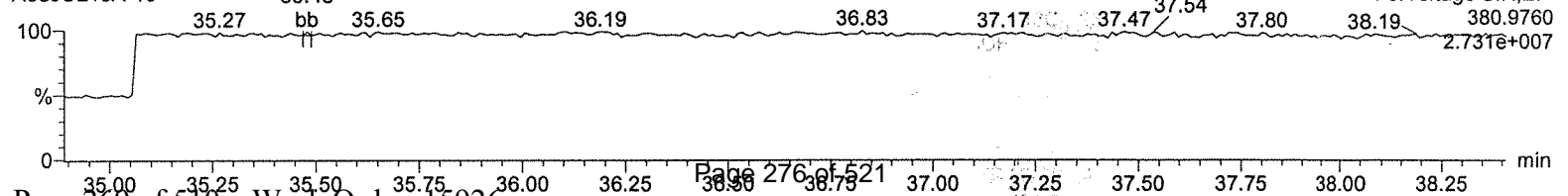
OcDPE

A08JUL19A-10



Lock Mass F3

A08JUL19A-10



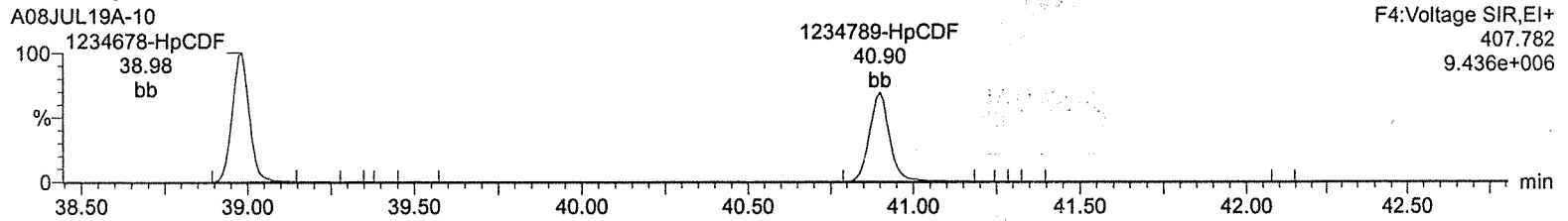
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Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

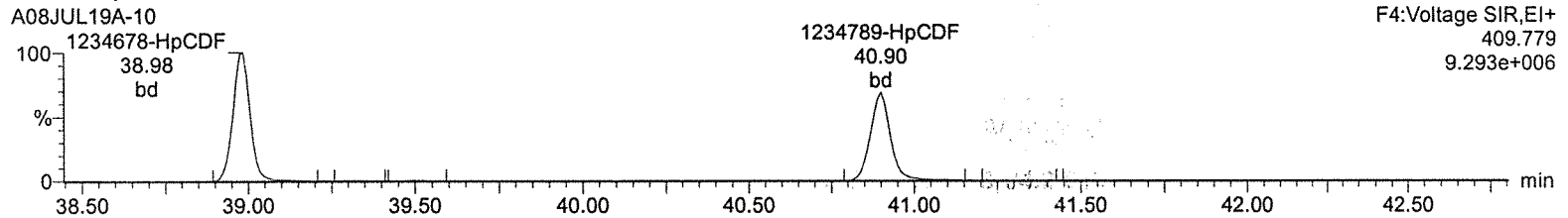
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

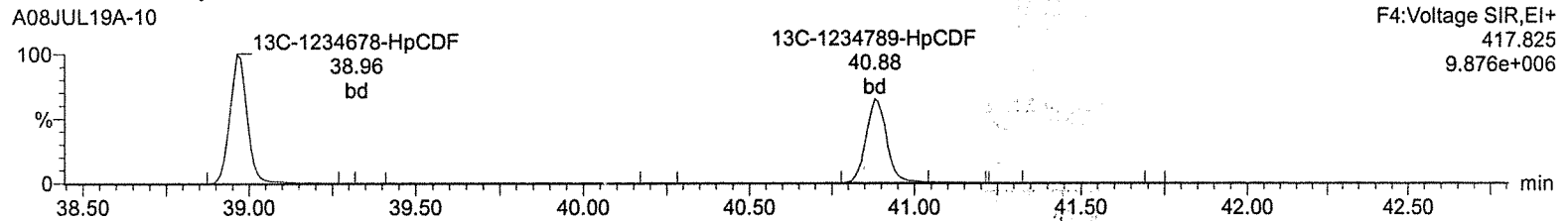
Total-heptafurans



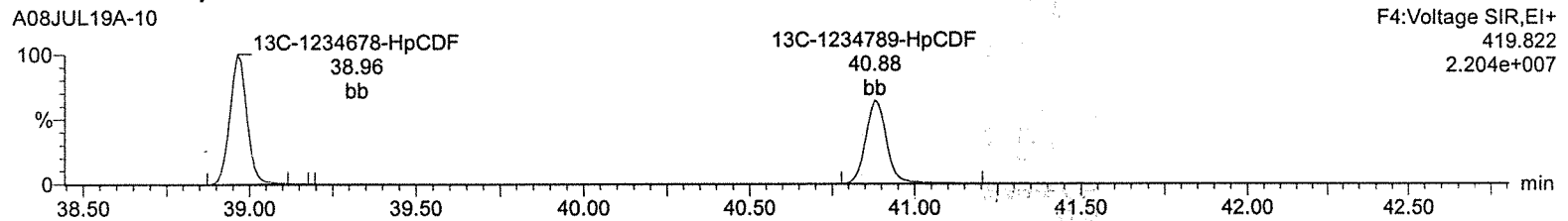
Total-heptafurans



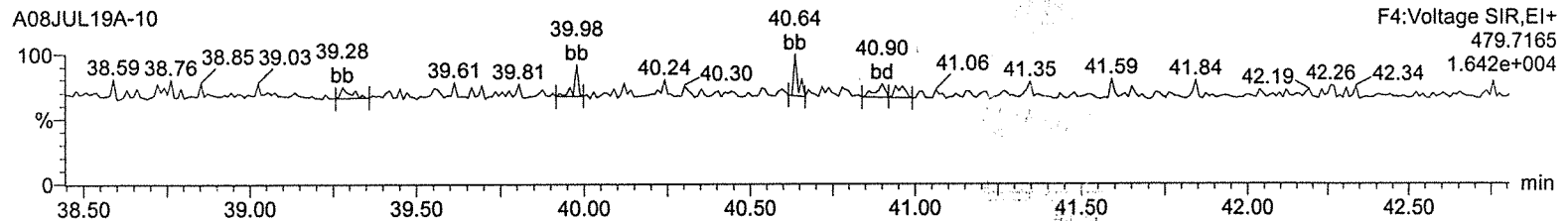
13C-1234678-HpCDF



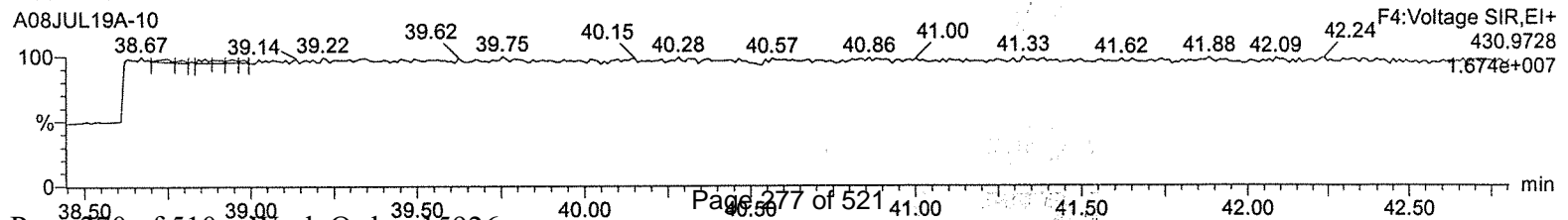
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

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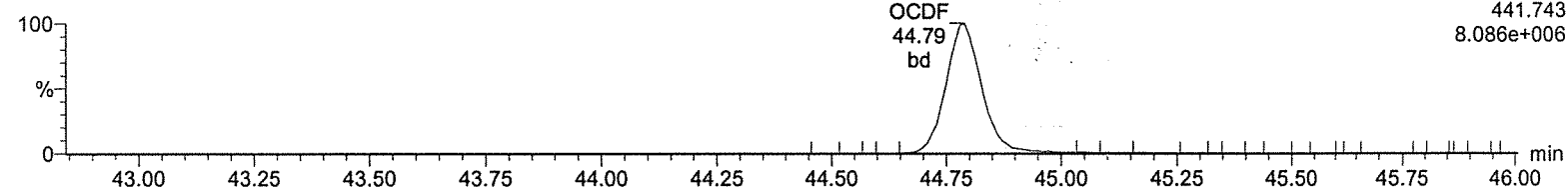
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

OCDF

A08JUL19A-10

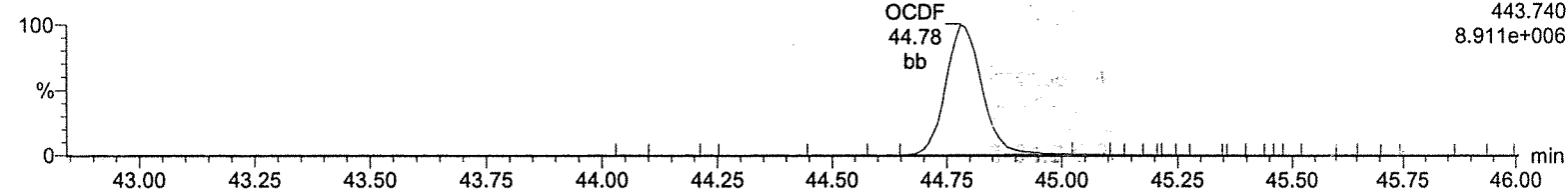
F5:Voltage SIR,EI+
441.743
8.086e+006



OCDF

A08JUL19A-10

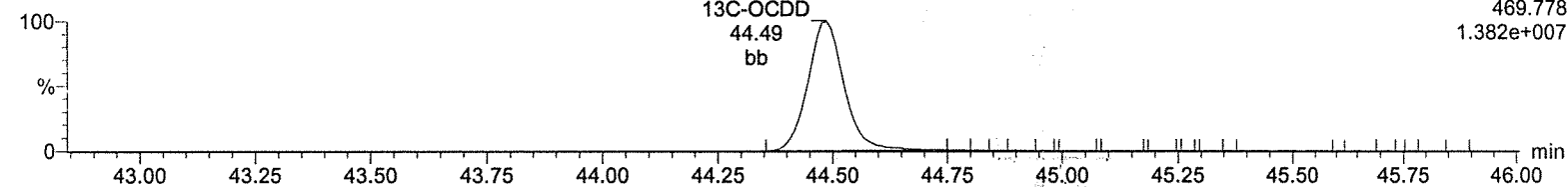
F5:Voltage SIR,EI+
443.740
8.911e+006



13C-OCDD

A08JUL19A-10

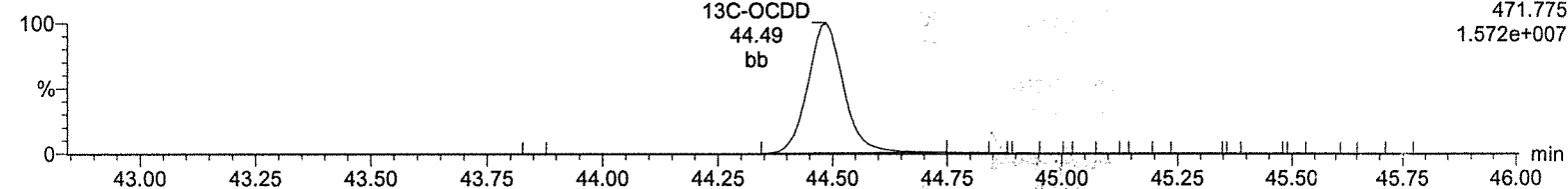
F5:Voltage SIR,EI+
469.778
1.382e+007



13C-OCDD

A08JUL19A-10

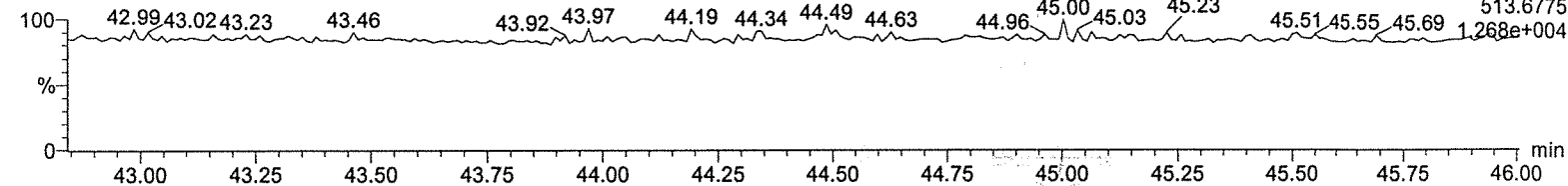
F5:Voltage SIR,EI+
471.775
1.572e+007



DeDPE

A08JUL19A-10

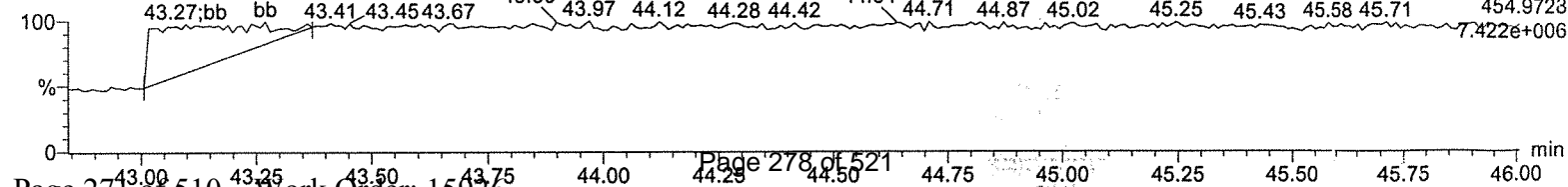
F5:Voltage SIR,EI+
513.6775
1.268e+004



Lock Mass F5

A08JUL19A-10

F5:Voltage SIR,EI+
454.9728
7.422e+006



Continuing Calibration Data

Handwritten:
27 DEC 19

Runlog Information

Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
• A23DEC19A-1	HRP750_2	23-DEC-2019 17:28	A23DEC19A	Matt Cash		CS3WT UD191018-02.1	1 uL
• A23DEC19A-2	HRP750_2	23-DEC-2019 18:15	%613%	Matt Cash		12025597-1 LCS	1 uL
• A23DEC19A-3	HRP750_2	23-DEC-2019 19:03	%613%	Matt Cash		12025598-1 LCSD	1 uL
• A23DEC19A-4	HRP750_2	23-DEC-2019 19:51	%613%	Matt Cash		12025596-1 MB	1 uL
• A23DEC19A-5	HRP750_2	23-DEC-2019 20:40	HMS1613_1L	Matt Cash	42649	15926001-1	1 uL
• A23DEC19A-6	HRP750_2	23-DEC-2019 21:28	HMS1613_1L	Matt Cash	42649	15926002-1	1 uL
• A23DEC19A-7	HRP750_2	23-DEC-2019 22:16	HMS1613_1L	Matt Cash	42649	15926003-1	1 uL
• A23DEC19A-8	HRP750_2	23-DEC-2019 23:04	HMS1613_1L	Matt Cash	42650	15952001-1	1 uL
• A23DEC19A-9	HRP750_2	23-DEC-2019 23:52	HMS1613_1L	Matt Cash	42650	15952002-1	1 uL
• A23DEC19A-10	HRP750_2	24-DEC-2019 00:40	HMS1613_1L	Matt Cash	42650	15952003-1	1 uL
• A23DEC19A-11	HRP750_2	24-DEC-2019 01:29	HMS1613_1L	Matt Cash	42650	15952004-1	1 uL
• A23DEC19A-12	HRP750_2	24-DEC-2019 02:17	HMS1613_1L	Matt Cash	42650	15954001-1	1 uL
• A23DEC19A-13	HRP750_2	24-DEC-2019 03:05	HMS613TCDL	Matt Cash	42650	15956001-1	1 uL
• A23DEC19A-14	HRP750_2	24-DEC-2019	HMS613TCDL	Matt Cash	42650	15958001-1	1 uL

		03:53					
• A23DEC19A-15	HRP750_2	24- DEC-2019 04:41	A23DEC19A	Matt Cash		CS3WT UD191018-02.1	1 uL
• <u>A23DEC19A_2-1</u>	HRP750_2	24- DEC-2019 05:38	A23DEC19A_2	Matt Cash		SB	1 uL
• A23DEC19A_2-2	HRP750_2	24- DEC-2019 06:25	HMS613TCDL	Matt Cash	42650	15959001-1	1 uL
• A23DEC19A_2-3	HRP750_2	24- DEC-2019 07:13	HMS613TCDL	Matt Cash	42650	15960001-1	1 uL
• A23DEC19A_2-4	HRP750_2	24- DEC-2019 08:01	HMS613TCDL	Matt Cash	42650	15966001-1	1 uL
• A23DEC19A_2-5	HRP750_2	24- DEC-2019 08:49	HMS1613_1L	Matt Cash	42650	15969001-1	1 uL
• A23DEC19A_2-6	HRP750_2	24- DEC-2019 09:38	HMS1613_1L	Matt Cash	42650	15969002-1	1 uL
• A23DEC19A_2-7	HRP750_2	24- DEC-2019 10:26	HMS1613_1L	Matt Cash	42650	15969003-1	1 uL
• A23DEC19A_2-8	HRP750_2	24- DEC-2019 11:14	HMS1613_1L	Matt Cash	42651	15964001-1	1 uL
• A23DEC19A_2-9	HRP750_2	24- DEC-2019 12:02	HMS1613_1L	Matt Cash	42651	15980001-1	1 uL
• A23DEC19A_2-10	HRP750_2	24- DEC-2019 12:50	HMS1613_1L	Matt Cash	42651	15980006-1	1 uL
• A23DEC19A_2-11	HRP750_2	24- DEC-2019 13:38	HMS1613_1L	Matt Cash	42651	15980007-1	1 uL
• A23DEC19A_2-12	HRP750_2	24- DEC-2019 14:27	A23DEC19A_2	Matt Cash		CS3WT UD191018-02.1	1 uL
• <u>A23DEC19A_3-1</u>	HRP750_2	24- DEC-2019 15:23	HMS8290_1S	Matt Cash	42591	12025543-1 LCS	1 uL
• A23DEC19A_3-2	HRP750_2	24- DEC-2019 16:10	HMS8290_1S	Matt Cash	42591	12025544-1 LCSD	1 uL

• A23DEC19A_3-3	HRP750_2	24- DEC-2019 16:58	HMS8290_1S	Matt Cash	42591	12025542-1 MB	1 uL
• A23DEC19A_3-4	HRP750_2	24- DEC-2019 17:46	HMS8290_1S	Matt Cash	42591	15905001-1	1 uL
• A23DEC19A_3-5	HRP750_2	24- DEC-2019 18:35	HMS8290_1S	Matt Cash	42591	12025545-1 MS	1 uL
• A23DEC19A_3-6	HRP750_2	24- DEC-2019 19:23	HMS8290_1S	Matt Cash	42591	12025546-1 MSD	1 uL
• A23DEC19A_3-7	HRP750_2	24- DEC-2019 20:11	HMS8290_1S	Matt Cash	42591	15905002-1	1 uL
• A23DEC19A_3-8	HRP750_2	24- DEC-2019 20:59	HMS8290_1S	Matt Cash	42591	15905003-1	1 uL
• A23DEC19A_3-9	HRP750_2	24- DEC-2019 21:47	HMS8290_1S	Matt Cash	42591	15905004-1	1 uL
• A23DEC19A_3-10	HRP750_2	24- DEC-2019 22:35	HMS8290_1S	Matt Cash	42591	15905005-1	1 uL
• A23DEC19A_3-11	HRP750_2	24- DEC-2019 23:24	HMS8290_1S	Matt Cash	42591	15905006-1	1 uL
• A23DEC19A_3-12	HRP750_2	25- DEC-2019 00:12	HMS8290_1S	Matt Cash	42591	15905007-1	1 uL
• A23DEC19A_3-13	HRP750_2	25- DEC-2019 01:00	HMS8290_1S	Matt Cash	42591	15905008-1	1 uL
• A23DEC19A_3-14	HRP750_2	25- DEC-2019 01:48	A23DEC19A_3	Matt Cash		CS3WT UD191018-02.1	1 uL
• A23DEC19A_4-1	HRP750_2	25- DEC-2019 02:44	A23DEC19A_4	Matt Cash		SB	1 uL
• A23DEC19A_4-2	HRP750_2	25- DEC-2019 03:32	HMS8290_1S	Matt Cash	42591	15905009-1	1 uL
• A23DEC19A_4-3	HRP750_2	25- DEC-2019 04:20	HMS8290_1S	Matt Cash	42591	15905010-1	1 uL

• A23DEC19A_4-4	HRP750_2	25- DEC-2019 05:08	HMS8290_1S	Matt Cash	42591	15905011-1	1 uL
• A23DEC19A_4-5	HRP750_2	25- DEC-2019 05:56	HMS8290_1S	Matt Cash	42591	15905012-1	1 uL
• A23DEC19A_4-6	HRP750_2	25- DEC-2019 06:44	HMS8290_1S	Matt Cash	42591	15905013-1	1 uL
• A23DEC19A_4-7	HRP750_2	25- DEC-2019 07:32	HMS8290_1S	Matt Cash	42591	15905014-1	1 uL
• A23DEC19A_4-8	HRP750_2	25- DEC-2019 08:21	HMS8290_1S	Matt Cash	42575	15718005-1	1 uL
• A23DEC19A_4-9	HRP750_2	25- DEC-2019 09:09	HMS8290_1S	Matt Cash	42575	15718006-1	1 uL
• A23DEC19A_4-10	HRP750_2	25- DEC-2019 09:57	HMS8290_1S	Matt Cash	42575	15718007-1	1 uL
• A23DEC19A_4-11	HRP750_2	25- DEC-2019 10:45	HMS8290_1S	Matt Cash	42575	15718008-1	1 uL
• A23DEC19A_4-12	HRP750_2	25- DEC-2019 11:33	A23DEC19A_4	Matt Cash		CS3WT UD191018-02.1	1 uL
• <u>A23DEC19A_5-1</u>	HRP750_2	25- DEC-2019 12:30	HMS1613_1S	Matt Cash	42638	12025584-1 LCS	1 uL
• A23DEC19A_5-2	HRP750_2	25- DEC-2019 13:17	HMS1613_1S	Matt Cash	42638	12025585-1 LCSD	1 uL
• A23DEC19A_5-3	HRP750_2	25- DEC-2019 14:05	HMS1613_1S	Matt Cash	42638	12025583-1 MB	1 uL
• A23DEC19A_5-4	HRP750_2	25- DEC-2019 14:53	HMS1613_1S	Matt Cash	42638	15978001-1	1 uL
• A23DEC19A_5-5	HRP750_2	25- DEC-2019 15:41	HMS1613_1S	Matt Cash	42638	12025586-1 MS	1 uL
• A23DEC19A_5-6	HRP750_2	25- DEC-2019 16:30	HMS1613_1S	Matt Cash	42638	12025587-1 MSD	1 uL

• A23DEC19A_5-7	HRP750_2	25- DEC-2019 17:18	HMS1613_1S	Matt Cash	42638	15978003-1 x10	1 uL
• A23DEC19A_5-8	HRP750_2	25- DEC-2019 18:06	HMS1613_1S	Matt Cash	42638	15978004-1	1 uL
• A23DEC19A_5-9	HRP750_2	25- DEC-2019 18:54	HMS1613_1S	Matt Cash	42638	15978006-1	1 uL
• A23DEC19A_5-10	HRP750_2	25- DEC-2019 19:42	HMS1613_1S	Matt Cash	42638	15978007-1	1 uL
• A23DEC19A_5-11	HRP750_2	25- DEC-2019 20:30	HMS1613_1S	Matt Cash	42638	15978010-1	1 uL
• A23DEC19A_5-12	HRP750_2	25- DEC-2019 21:19	HMS1613_1S	Matt Cash	42638	15978011-1	1 uL
• A23DEC19A_5-13	HRP750_2	25- DEC-2019 22:07	HMS1613_1S	Matt Cash	42638	15978014-1	1 uL
• A23DEC19A_5-14	HRP750_2	25- DEC-2019 22:55	A23DEC19A_5	Matt Cash		CS3WT UD191018-02.1	1 uL
• <u>A23DEC19A_6-1</u>	HRP750_2	25- DEC-2019 23:51	A23DEC19A_6	Matt Cash		SB	1 uL
• A23DEC19A_6-2	HRP750_2	26- DEC-2019 00:39	HMS1613_1S	Matt Cash	42550	15720001-1	1 uL
• A23DEC19A_6-3	HRP750_2	26- DEC-2019 01:27	HMS1613_1S	Matt Cash	42550	15720002-1	1 uL
• A23DEC19A_6-4	HRP750_2	26- DEC-2019 02:15	HMS1613_1S	Matt Cash	42550	15720003-1	1 uL
• A23DEC19A_6-5	HRP750_2	26- DEC-2019 03:03	HMS1613_1S	Matt Cash	42550	15720004-1	1 uL
• A23DEC19A_6-6	HRP750_2	26- DEC-2019 03:51	HMS1613_1S	Matt Cash	42638	15978015-1	1 uL
• A23DEC19A_6-7	HRP750_2	26- DEC-2019 04:39	HMS1613_1S	Matt Cash	42638	15978018-1	1 uL

• A23DEC19A_6-8	HRP750_2	26- DEC-2019 05:27	HMS1613_1S	Matt Cash	42638	15978019-1	1 uL
• A23DEC19A_6-9	HRP750_2	26- DEC-2019 06:16	HMS1613_1S	Matt Cash	42638	15978020-1	1 uL
• A23DEC19A_6-10	HRP750_2	26- DEC-2019 07:04	HMS1613_1S	Matt Cash	42638	15980002-1	1 uL
• A23DEC19A_6-11	HRP750_2	26- DEC-2019 07:52	HMS1613_1S	Matt Cash	42638	15980003-1	1 uL
• A23DEC19A_6-12	HRP750_2	26- DEC-2019 08:40	HMS1613_1S	Matt Cash	42638	15980004-1	1 uL
• A23DEC19A_6-13	HRP750_2	26- DEC-2019 09:28	HMS1613_1S	Matt Cash	42638	15980005-1	1 uL
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• <u>A23DEC19A_7-1</u>	HRP750_2	26- DEC-2019 11:18	A23DEC19A_7	Matt Cash		SB	1 uL
• A23DEC19A_7-2	HRP750_2	26- DEC-2019 12:05	HMS1613_1S	Matt Cash	42562	15570001-3	1 uL
• A23DEC19A_7-3	HRP750_2	26- DEC-2019 12:53	HMS1613_1S	Matt Cash	42562	15570002-3	1 uL
• A23DEC19A_7-4	HRP750_2	26- DEC-2019 13:41	HMS1613_1S	Matt Cash	42562	15570003-3	1 uL
• A23DEC19A_7-5	HRP750_2	26- DEC-2019 14:29	HMS1613_1S	Matt Cash	42562	15570004-3	1 uL
• A23DEC19A_7-6	HRP750_2	26- DEC-2019 15:18	HMS8290_1S	Matt Cash	42578	15720005-1	1 uL
• A23DEC19A_7-7	HRP750_2	26- DEC-2019 16:06	HMS8290_1S	Matt Cash	42578	15720006-1	1 uL
• A23DEC19A_7-8	HRP750_2	26- DEC-2019 16:54	HMS8290_1S	Matt Cash	42578	15720007-1	1 uL

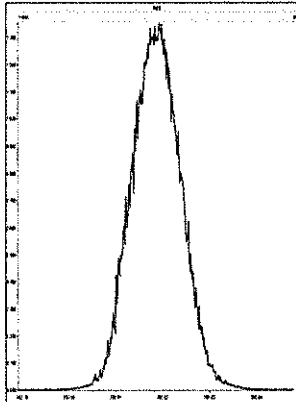
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• A23DEC19A_7-10	HRP750_2	26- DEC-2019 18:30	A23DEC19A_7	Matt Cash		CS3WT UD191018-02.1 CPS66	1 uL
• A23DEC19A_8-1	HRP750_2	26- DEC-2019 19:27	HRSM_DNX_L	Matt Cash	42661	12025600-1 MB DBLK5A	1 uL
• A23DEC19A_8-2	HRP750_2	26- DEC-2019 20:14	HRSM_DNX_L	Matt Cash	42661	12025601-1 LCS DLCS8X	1 uL
• A23DEC19A_8-3	HRP750_2	26- DEC-2019 21:02	HRSM_DNX_L	Matt Cash	42661	12025602-1 LCSD DLCS5Y	1 uL
• A23DEC19A_8-4	HRP750_2	26- DEC-2019 21:50	HRSM_DNX_L	Matt Cash	42661	15890001-1 PC0BL3	1 uL
• A23DEC19A_8-5	HRP750_2	26- DEC-2019 22:38	HRSM_DNX_L	Matt Cash	42661	15890015-1 PC0BR7	1 uL
• A23DEC19A_8-6	HRP750_2	26- DEC-2019 23:26	HRSM_DNX_L	Matt Cash	42661	15890016-1 PC0BR8	1 uL
• A23DEC19A_8-7	HRP750_2	27- DEC-2019 00:15	HRSM_DNX_L	Matt Cash	42661	15890020-1 PC0BS3	1 uL
• A23DEC19A_8-8	HRP750_2	27- DEC-2019 01:03	HRSM_DNX_L	Matt Cash	42661	15909001-1 PX2J82	1 uL
• A23DEC19A_8-9	HRP750_2	27- DEC-2019 01:51	HRSM_DNX_L	Matt Cash	42661	15912001-1 PC0BS4	1 uL
• A23DEC19A_8-10	HRP750_2	27- DEC-2019 02:39	HRSM_DNX_L	Matt Cash	42661	15912003-1 PC0BS5	1 uL
• A23DEC19A_8-11	HRP750_2	27- DEC-2019 03:27	HRSM_DNX_L	Matt Cash	42661	15912004-1 PC0BS7	1 uL
• A23DEC19A_8-12	HRP750_2	27- DEC-2019 04:15	HRSM_DNX_L	Matt Cash	42661	15912010-1 PC0BT3	1 uL
• A23DEC19A_8-13	HRP750_2	27- DEC-2019 05:04	HRSM_DNX_L	Matt Cash	42661	15912011-1 PC0BT4	1 uL

• A23DEC19A_8-14	HRP750_2	27- DEC-2019 05:52	A23DEC19A_8	Matt Cash		CS3WT UD191018-02.1 CPS69 ✓	1 uL
• A23DEC19A_9-1	HRP750_2	27- DEC-2019 06:48	HRSM_DXN_S	Matt Cash	42692	12025635-1 MB DBLK5B ✓	1 uL
• A23DEC19A_9-2	HRP750_2	27- DEC-2019 07:35	HRSM_DXN_S	Matt Cash	42692	12025636-1 LCS DLCS8Y ✓	1 uL
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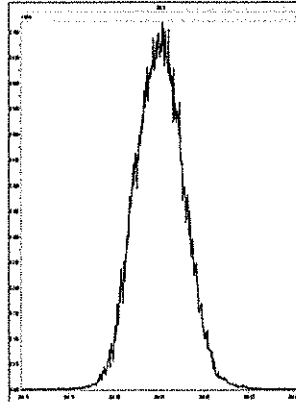
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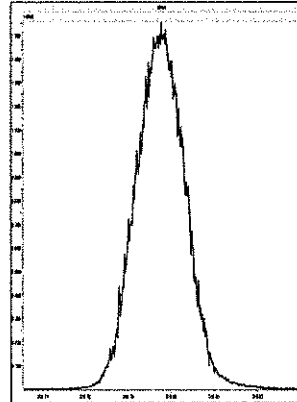
M 292.9824 R 12077



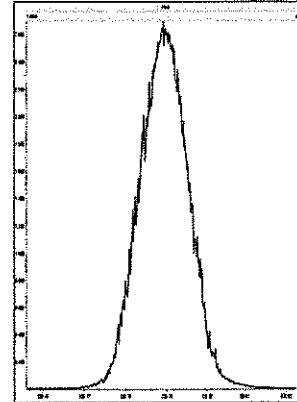
M 304.9824 R 12560



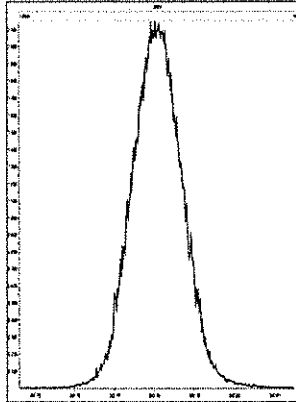
M 318.9792 R 12495



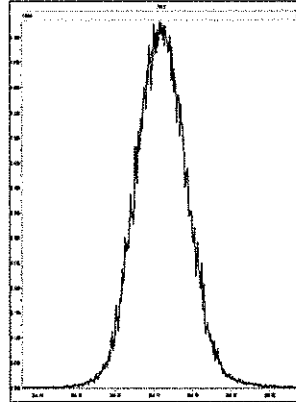
M 330.9792 R 12314



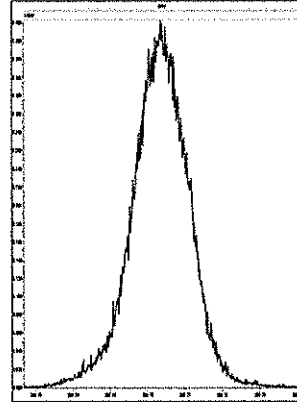
M 342.9792 R 11571



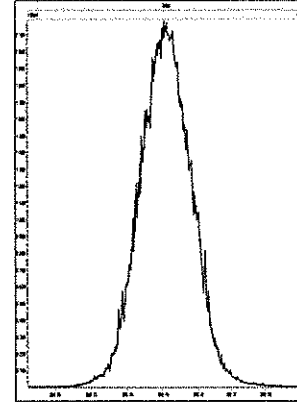
M 354.9792 R 11468



M 366.9792 R 10506



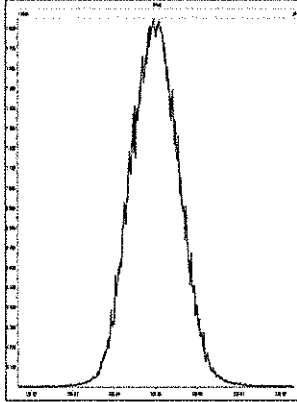
M 380.9760 R 11575



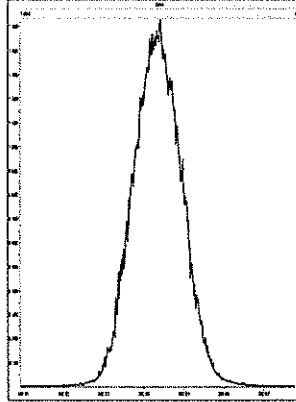
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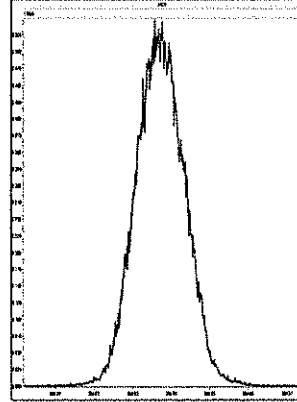
M 330.9792 R 12377



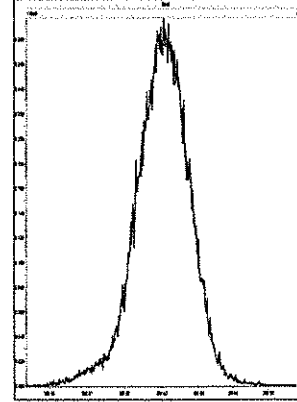
M 342.9792 R 12437



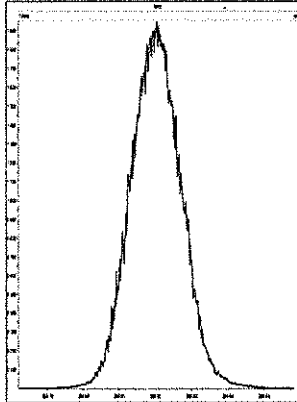
M 354.9792 R 12192



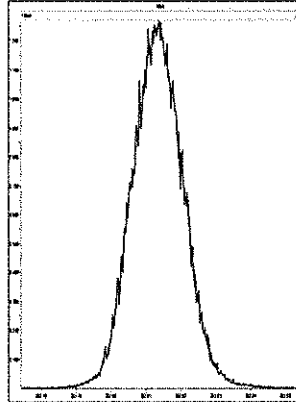
M 366.9792 R 11363



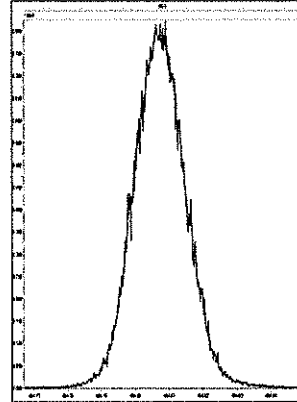
M 380.9760 R 12018



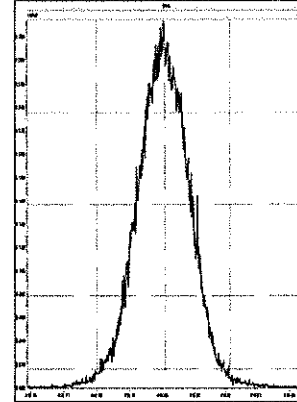
M 392.9760 R 11624



M 404.9760 R 11573



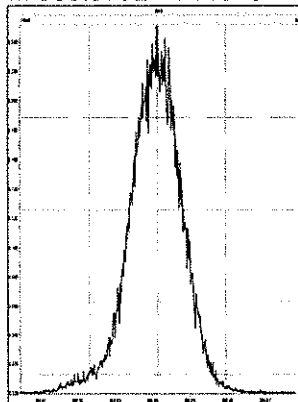
M 416.9760 R 11413



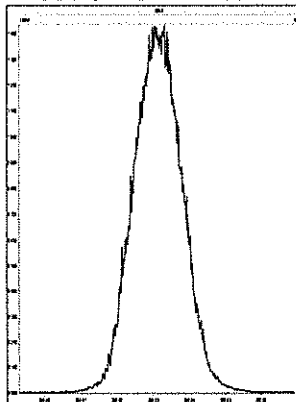
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

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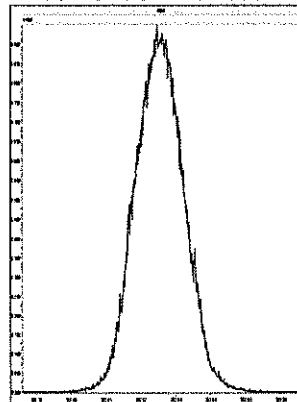
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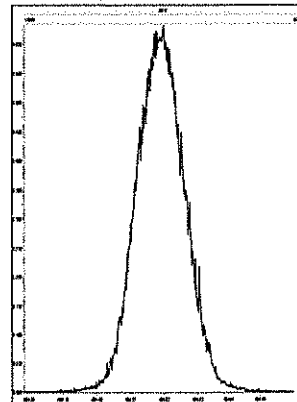
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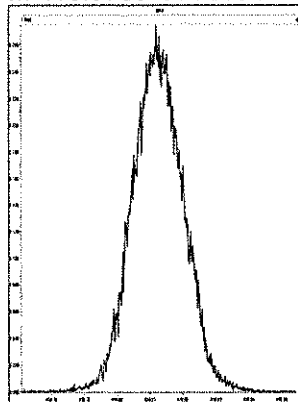
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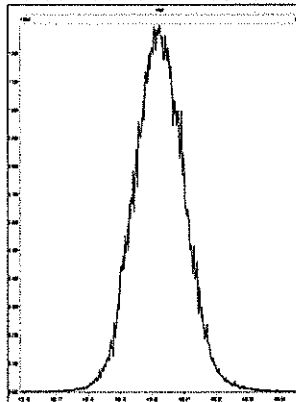
M 404.9760 R 12437



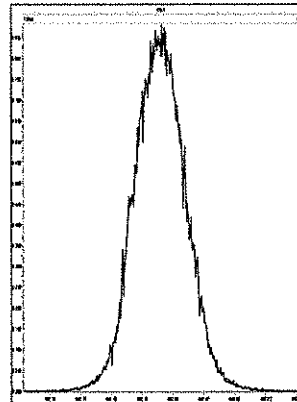
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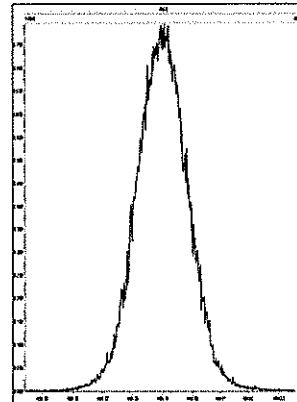
M 430.9728 R 11629



M 442.9728 R 11415



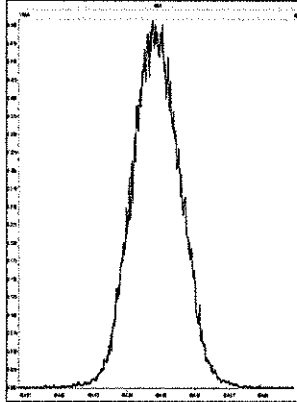
M 454.9728 R 11015



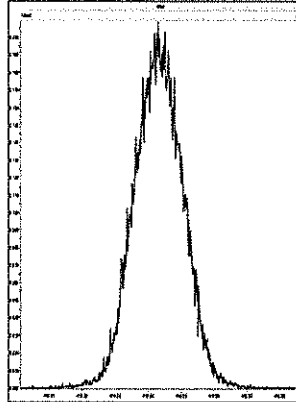
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Printed: Monday, December 23, 2019 17:27:10 Eastern Standard Time

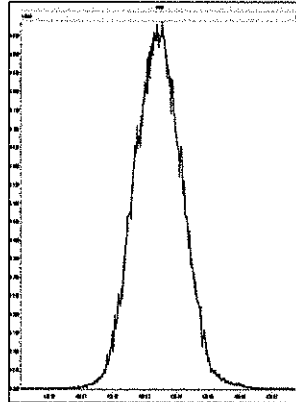
M 404.9760 R 12691



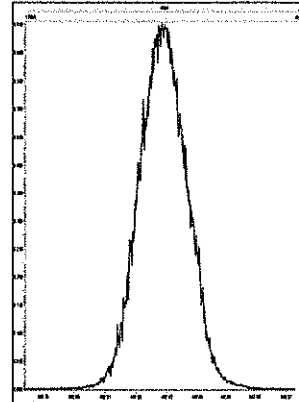
M 416.9760 R 12952



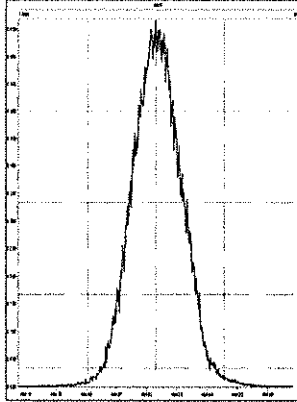
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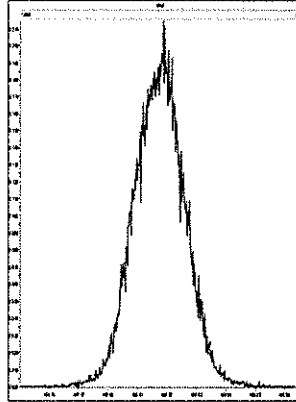
M 442.9728 R 12500



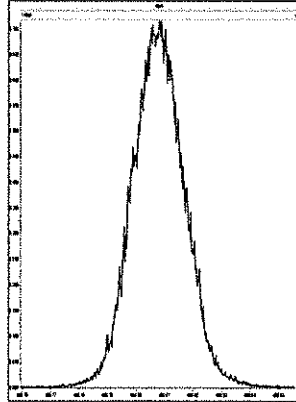
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M 466.9728 R 11849



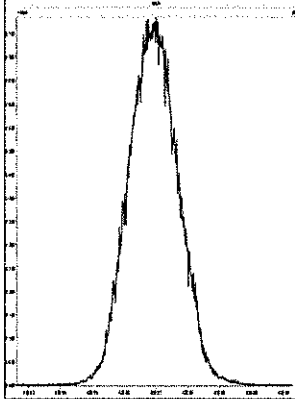
M 480.9696 R 11467



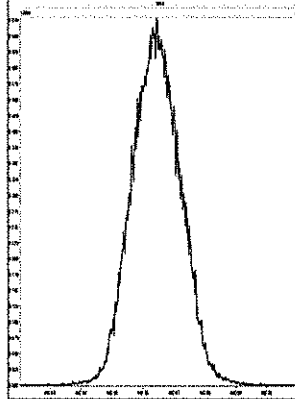
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Printed: Monday, December 23, 2019 17:27:32 Eastern Standard Time

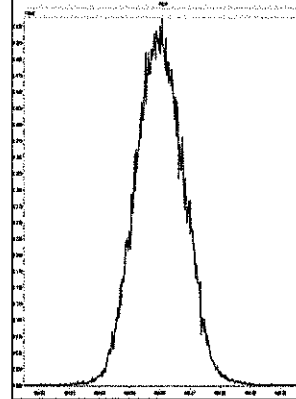
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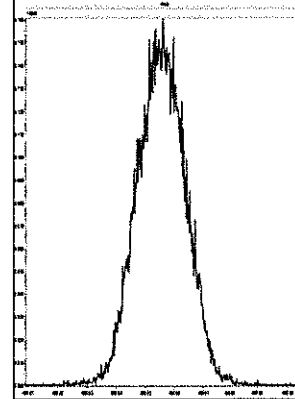
M 442.9728 R 12691



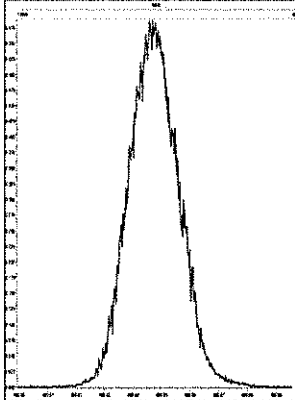
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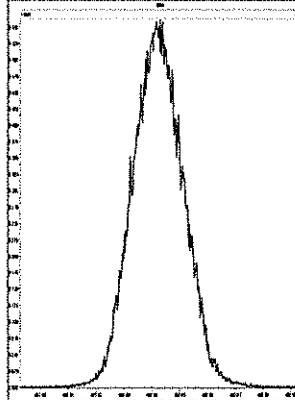
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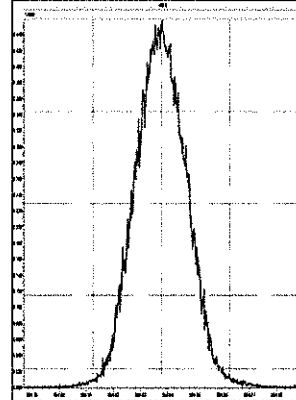
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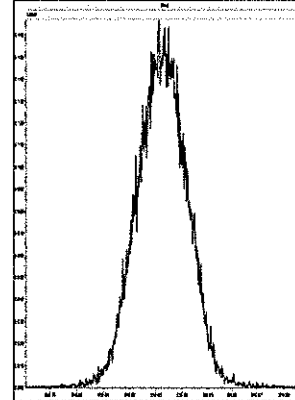
M 492.9696 R 12135



M 504.9696 R 12017

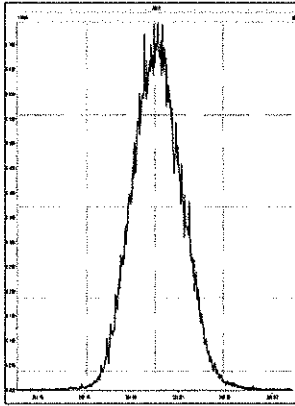


M 516.9697 R 12081

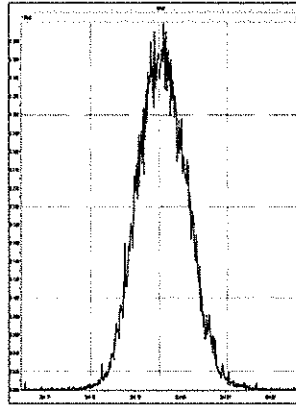


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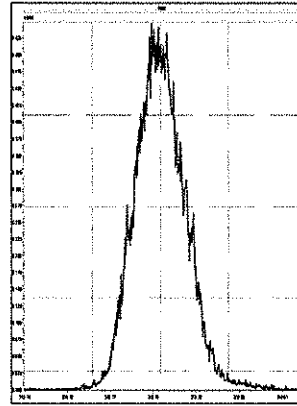
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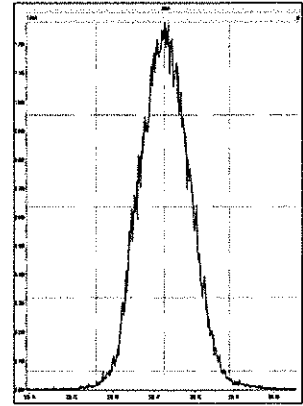
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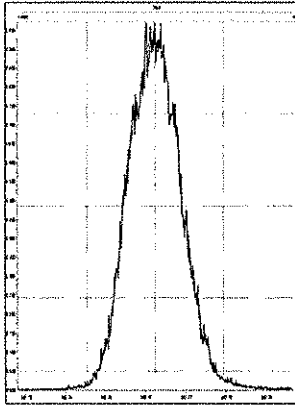
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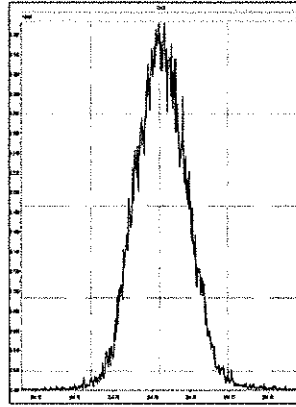
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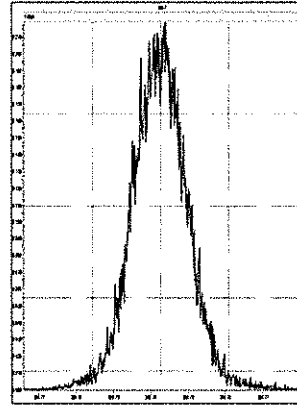
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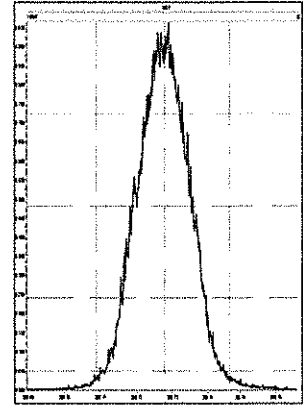
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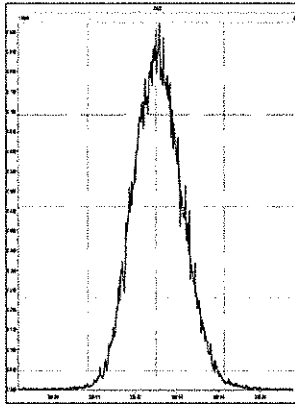
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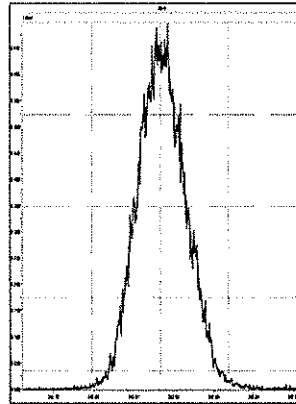
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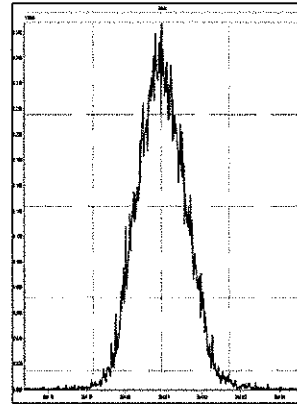
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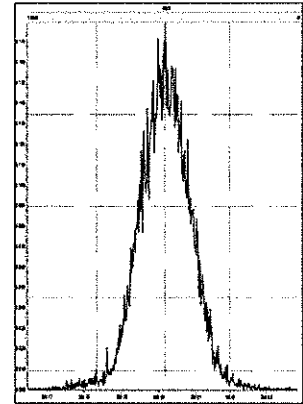
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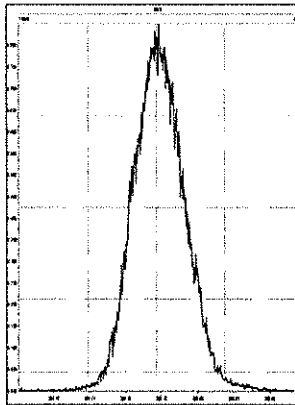
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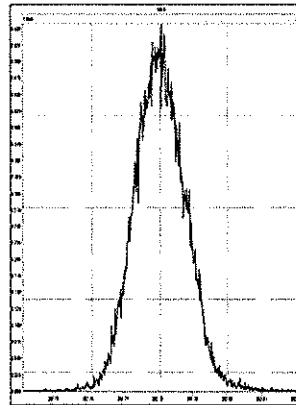
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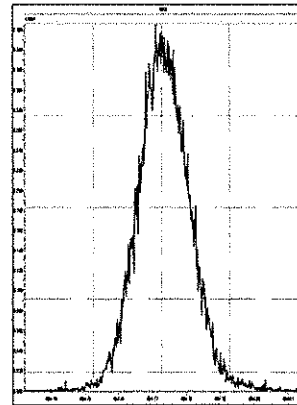
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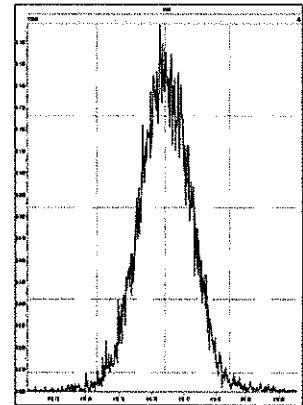
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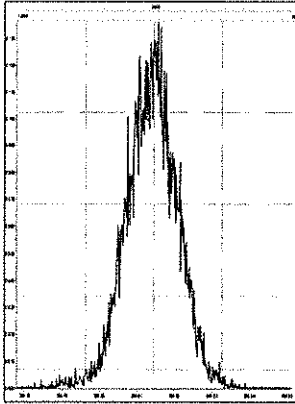


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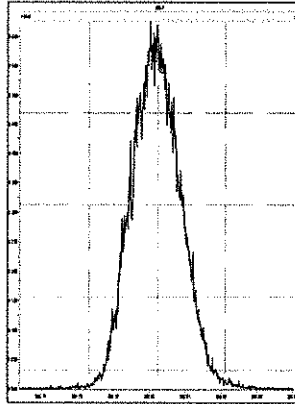


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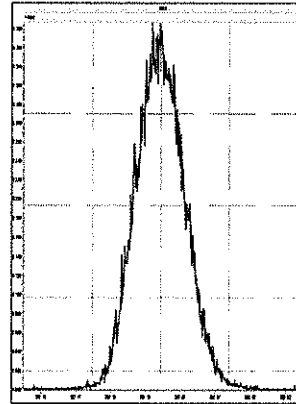
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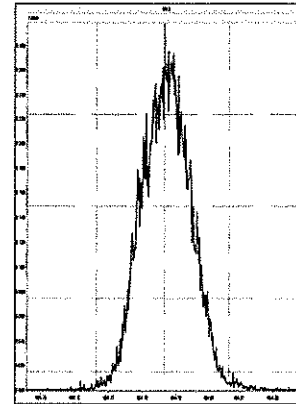
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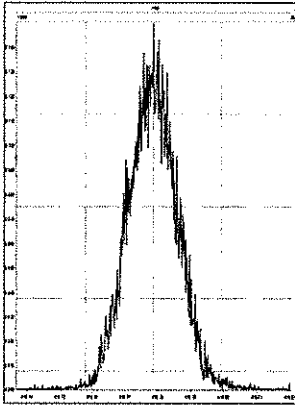
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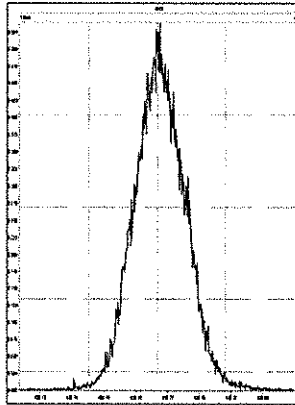
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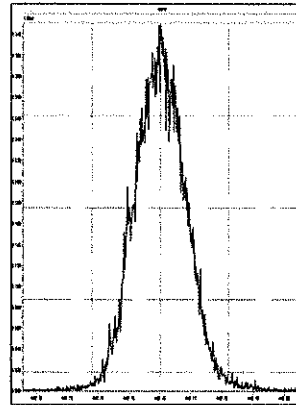
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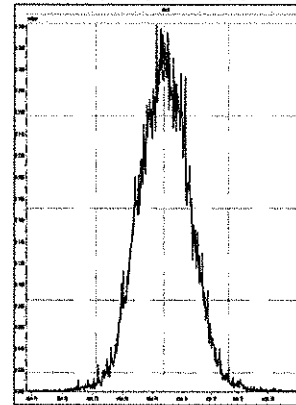
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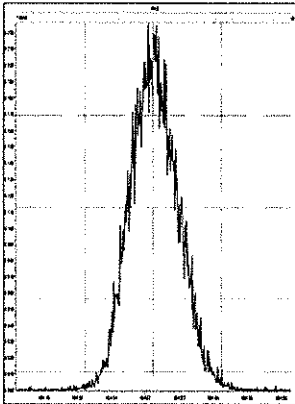
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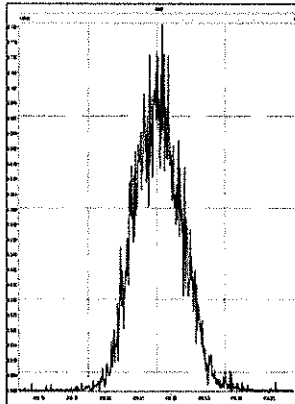
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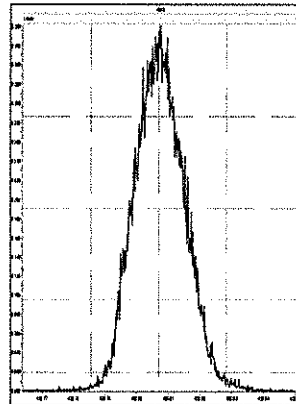
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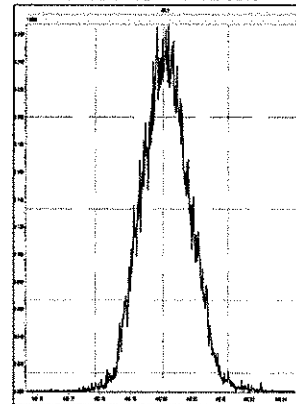
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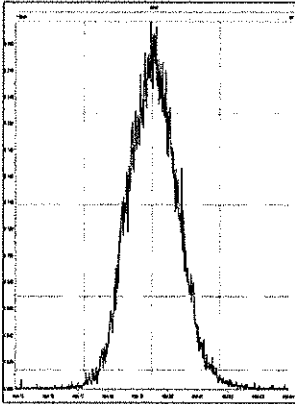
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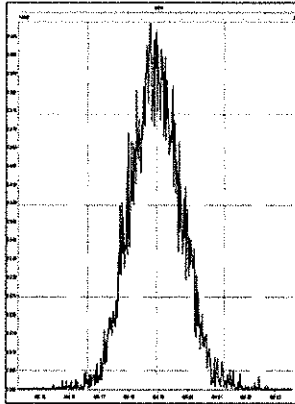
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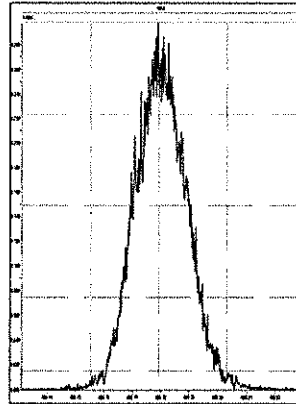
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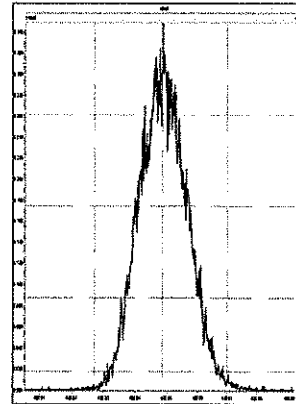
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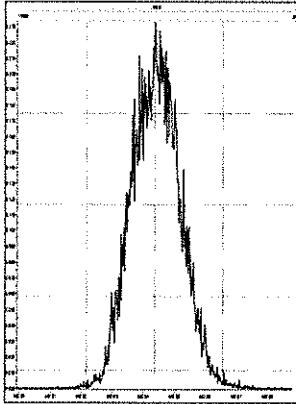


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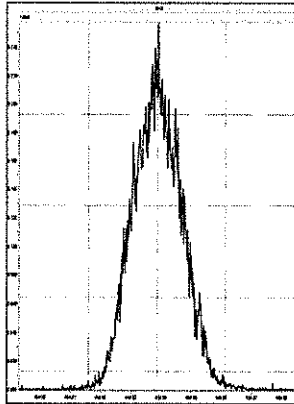


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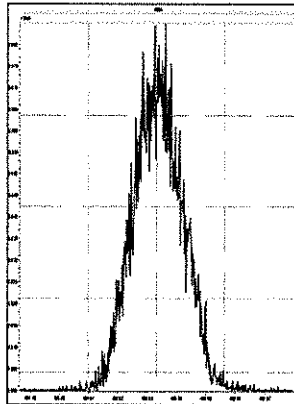
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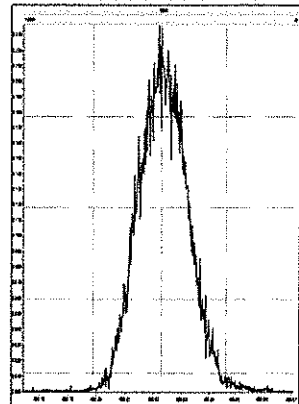
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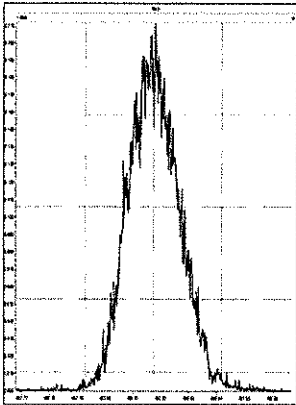
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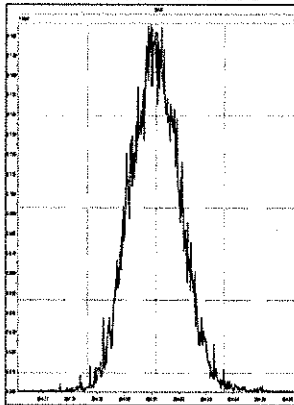
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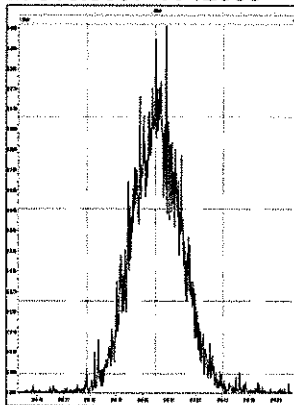
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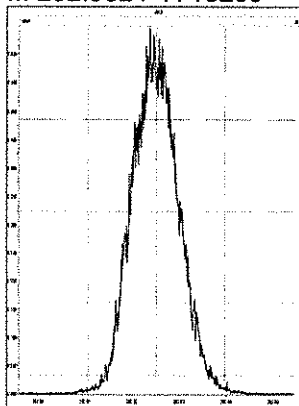


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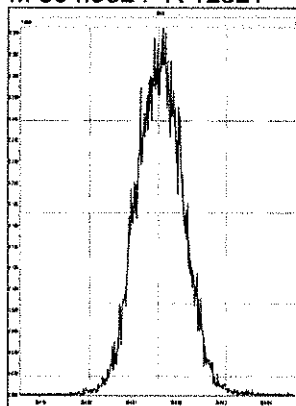


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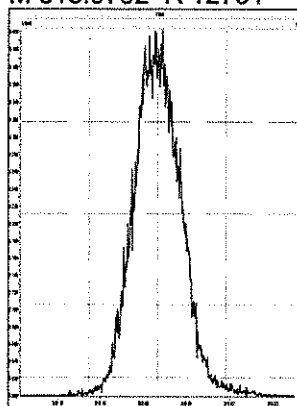
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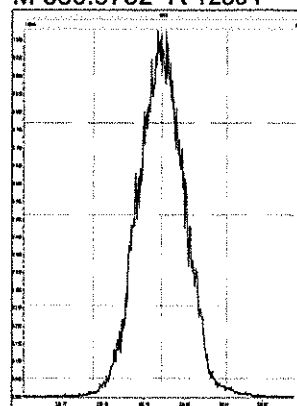
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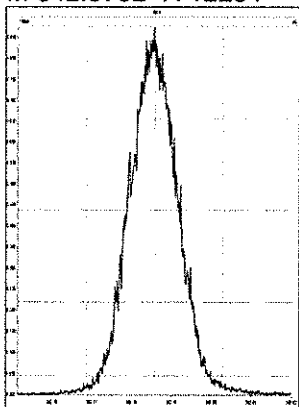
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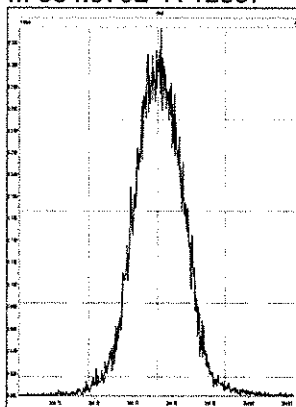
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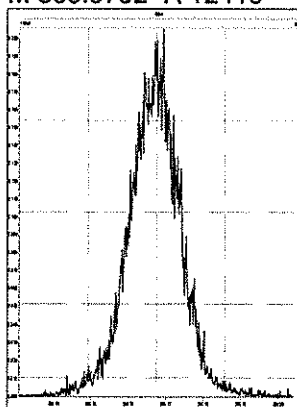
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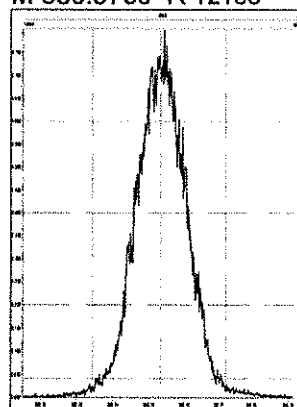
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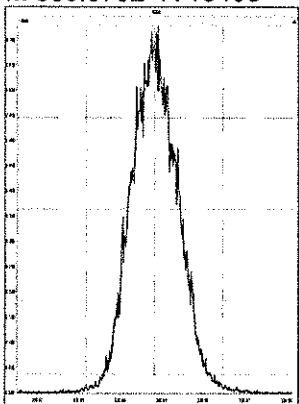
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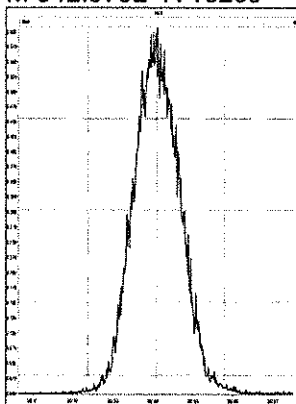
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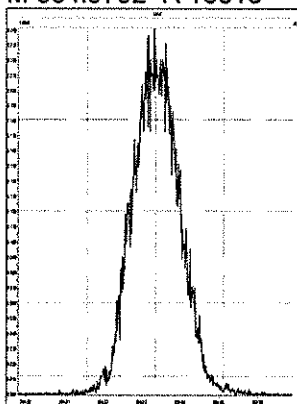
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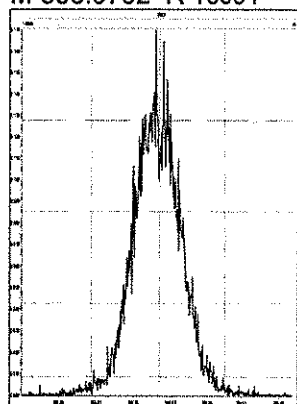
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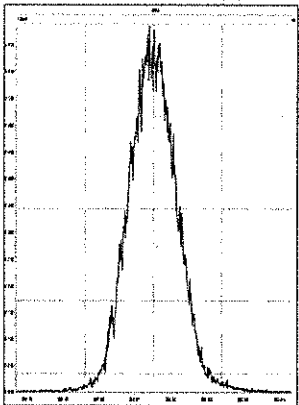
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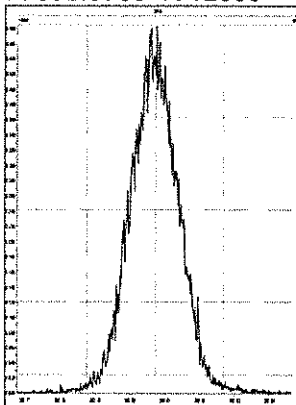
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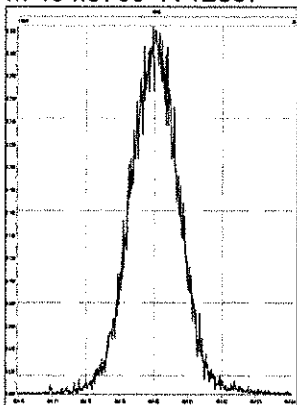
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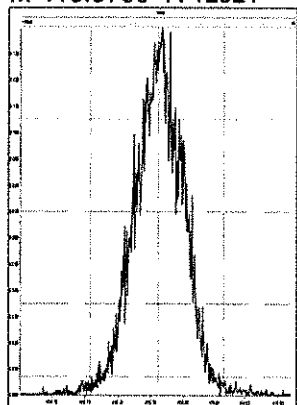
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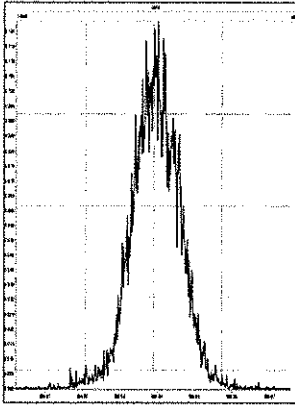


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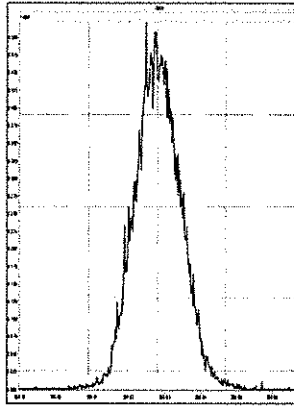


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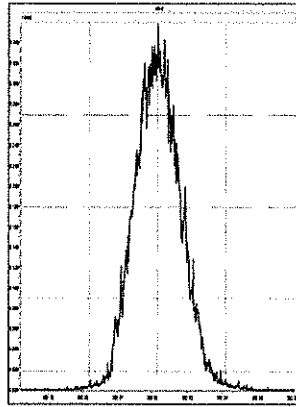
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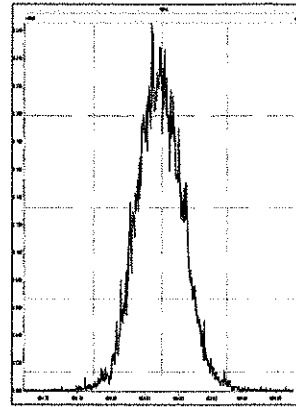
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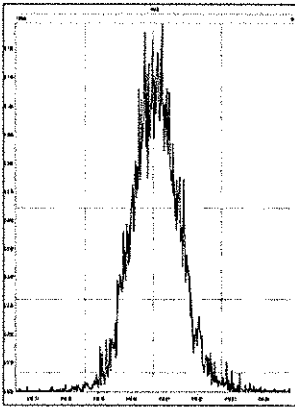
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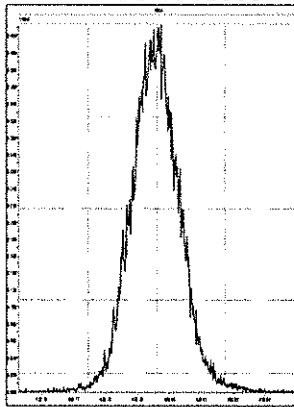
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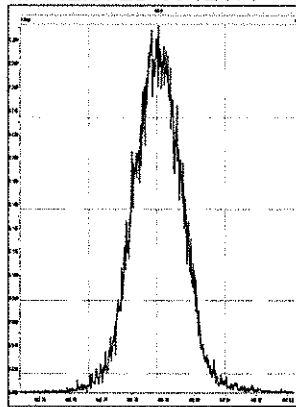
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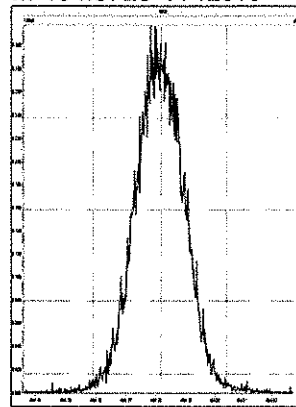
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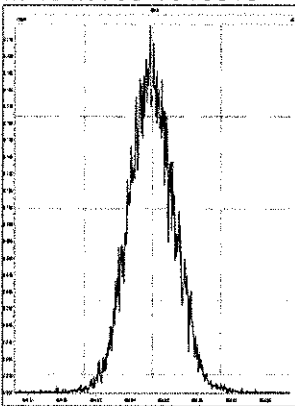
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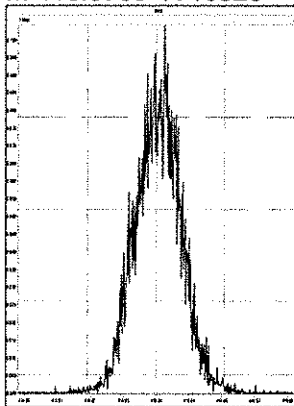
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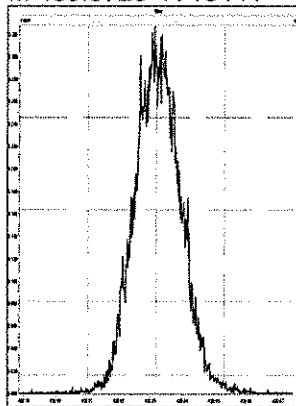
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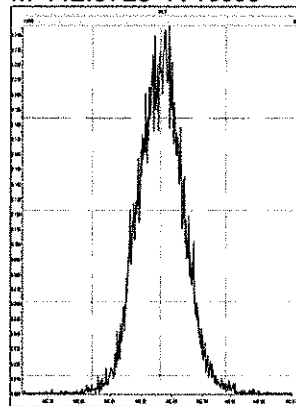
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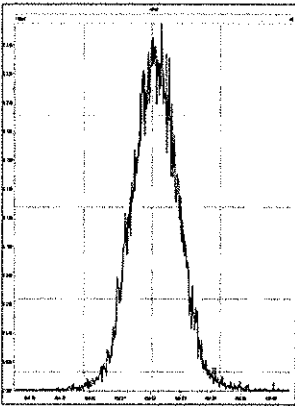
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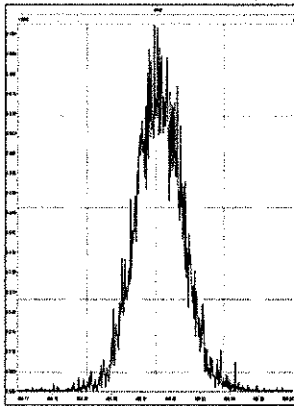
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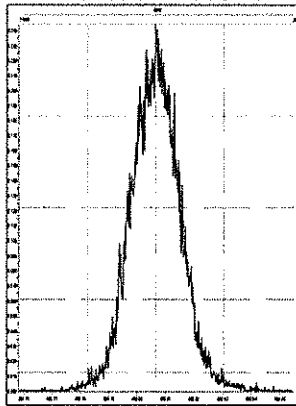
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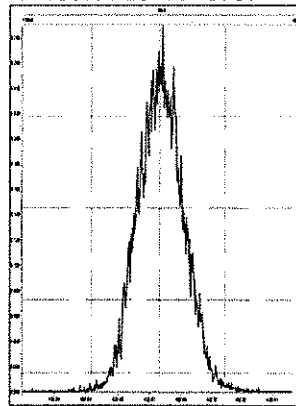
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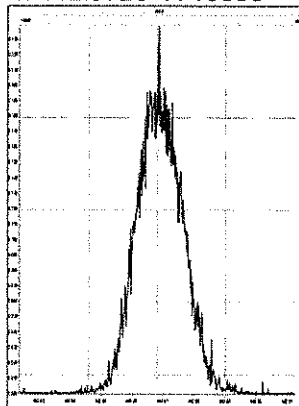


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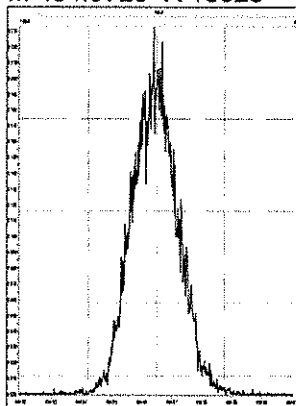


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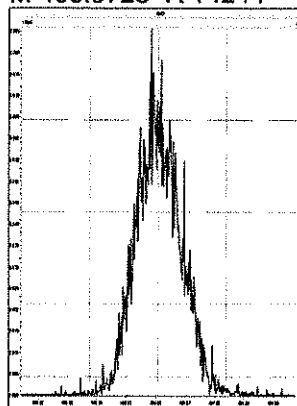
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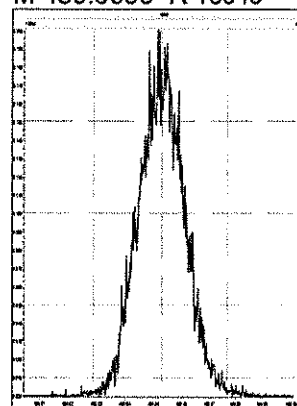
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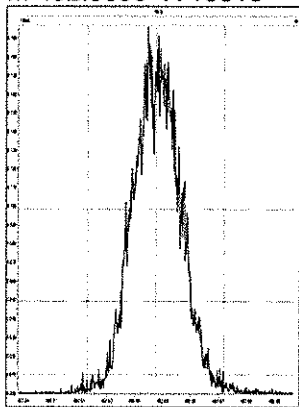
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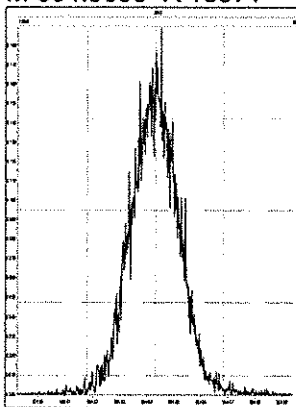
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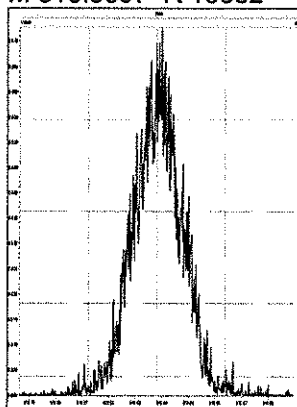
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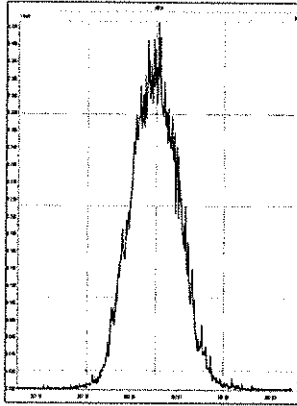


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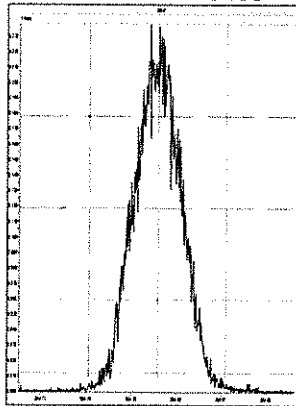


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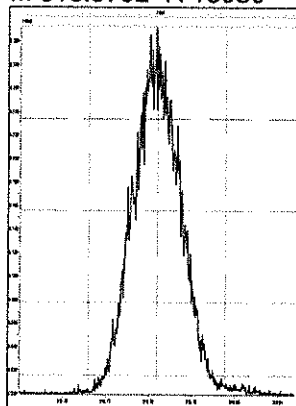
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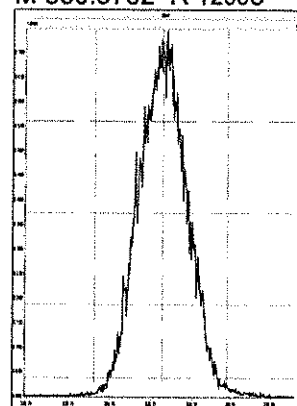
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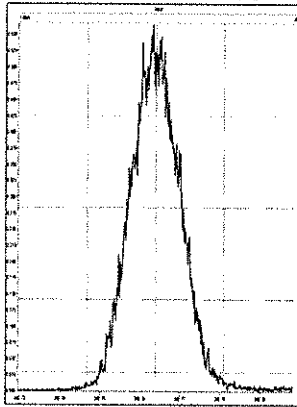
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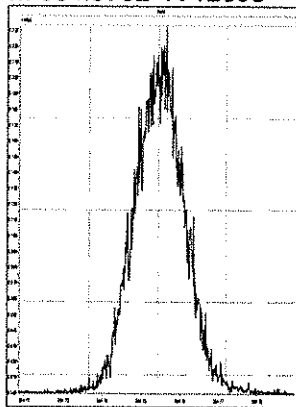
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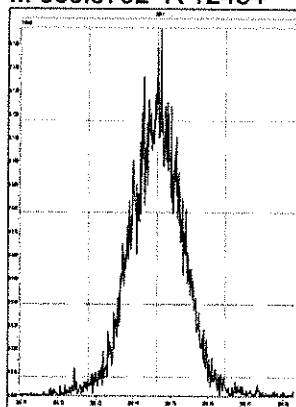
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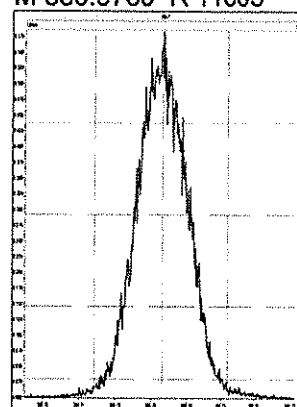
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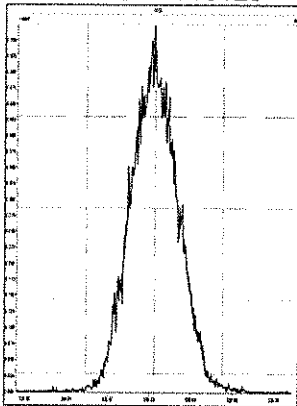
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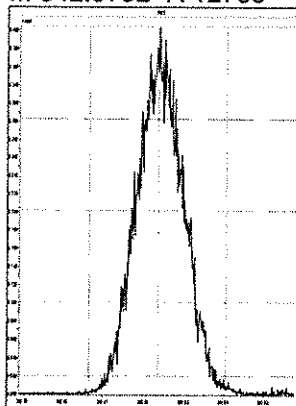
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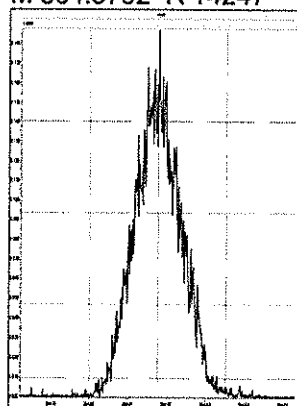
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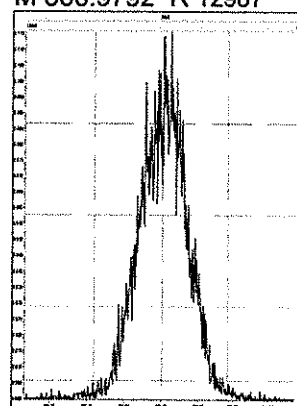
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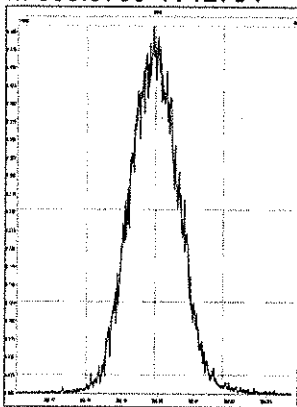
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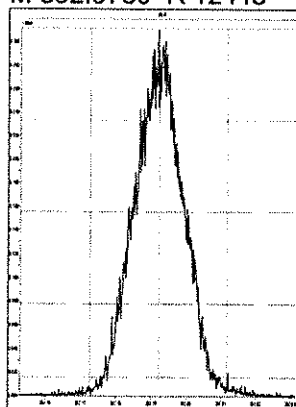
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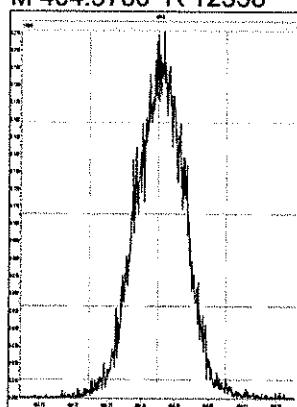
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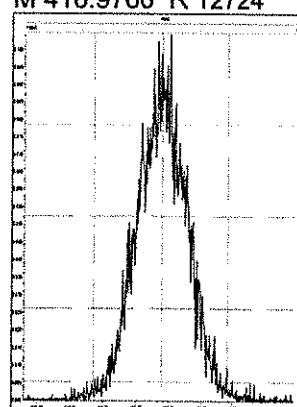
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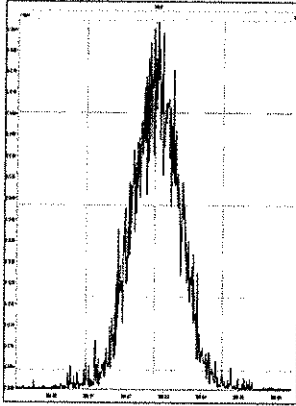
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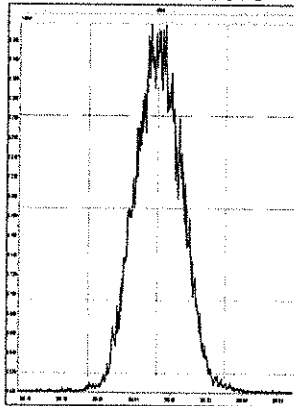
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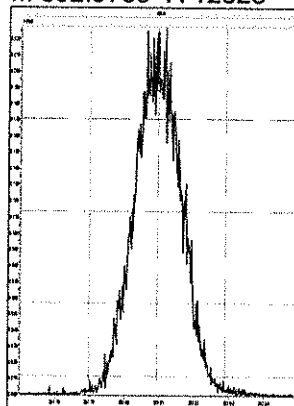
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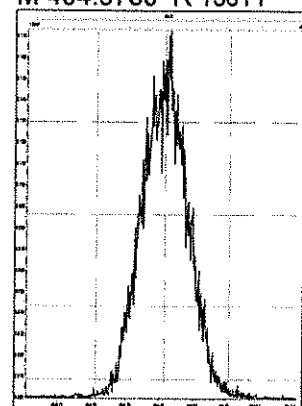
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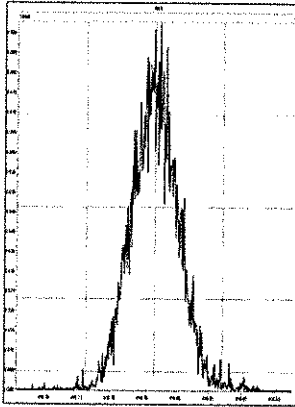
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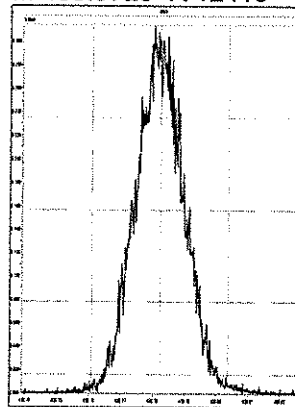
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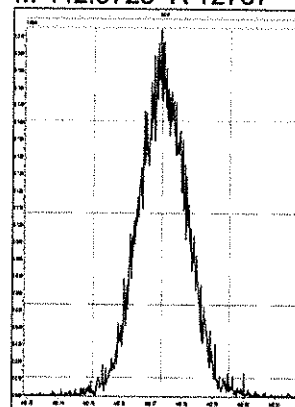
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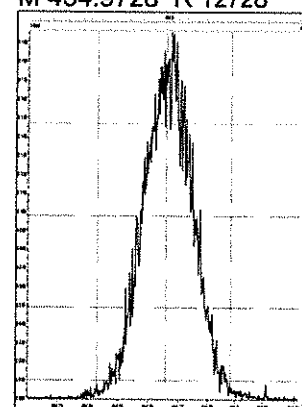
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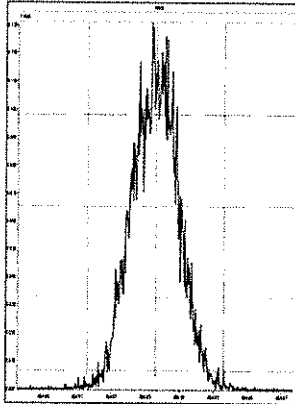
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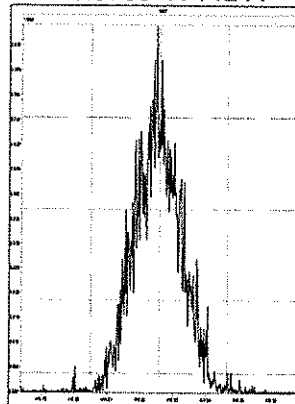
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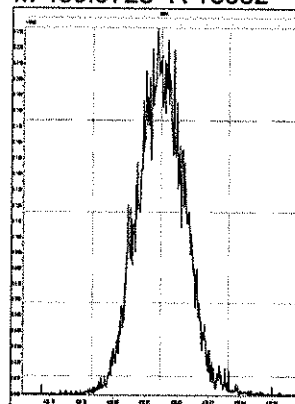
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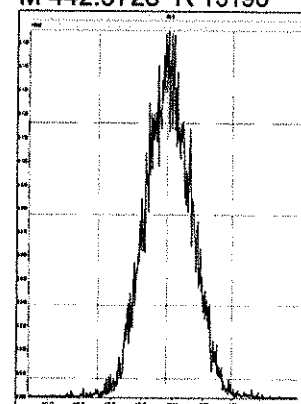
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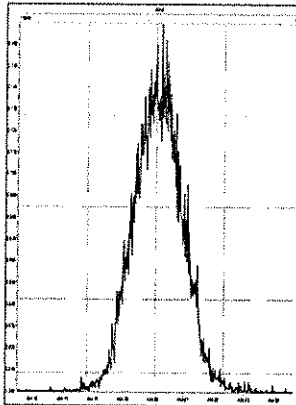
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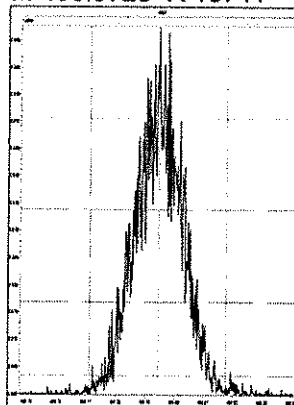
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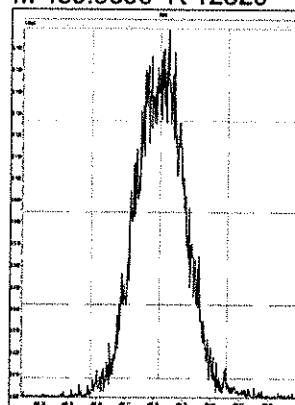
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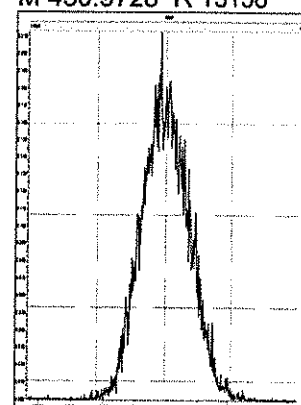
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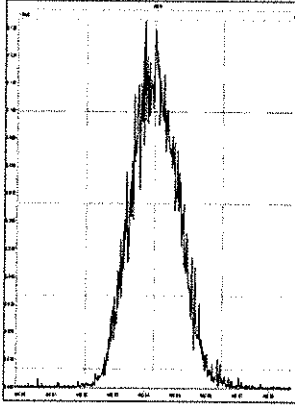


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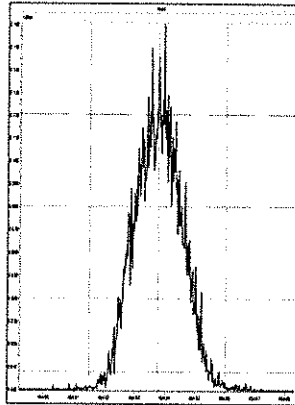


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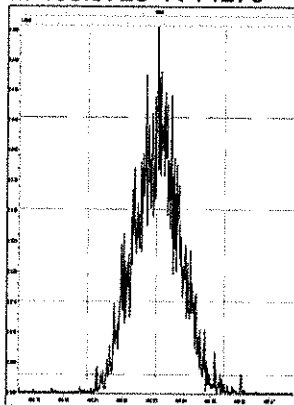
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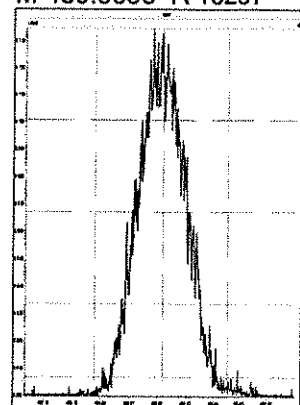
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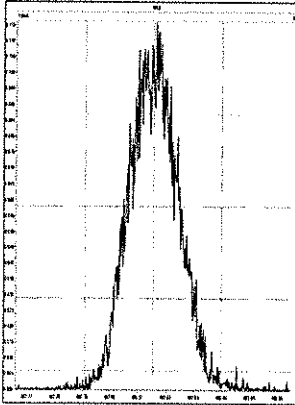
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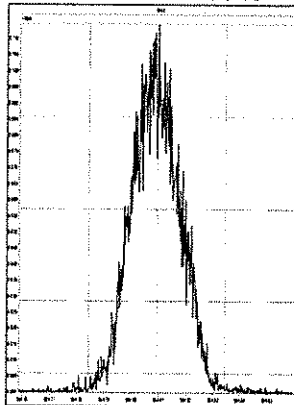
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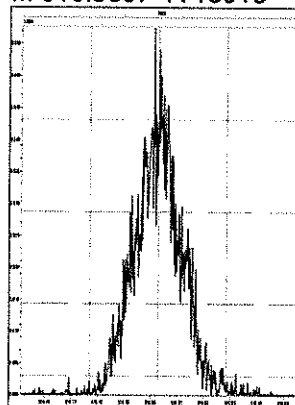
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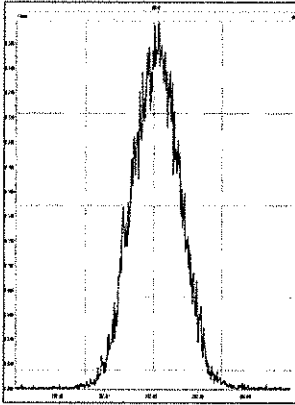
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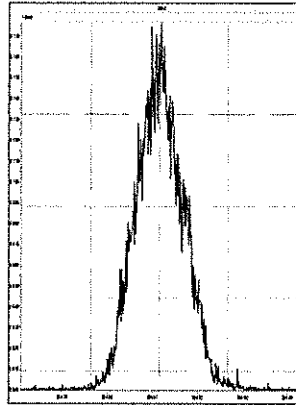
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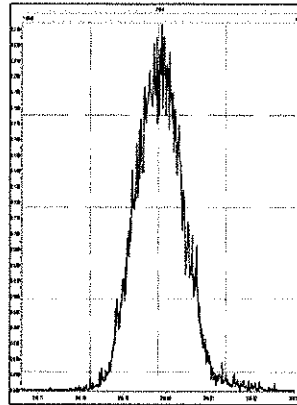
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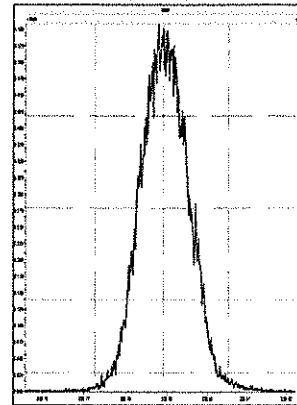
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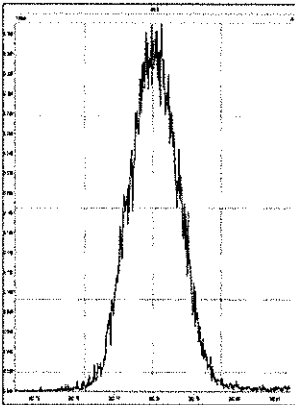
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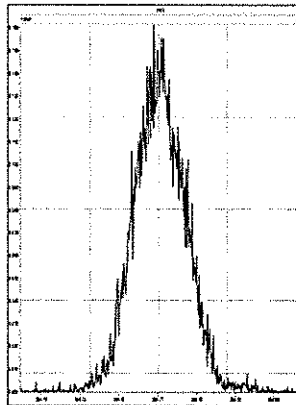
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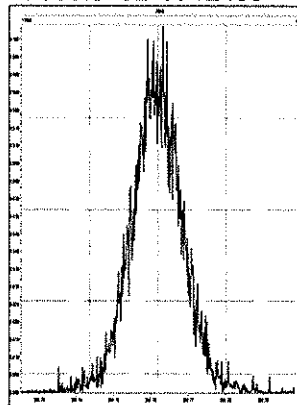
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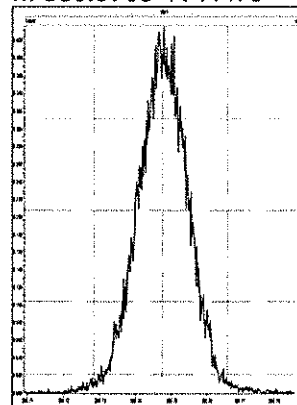
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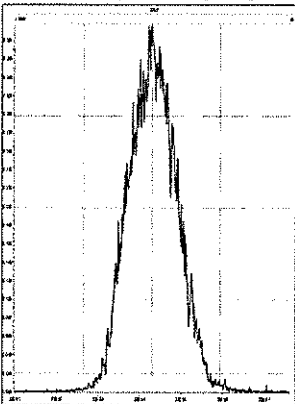
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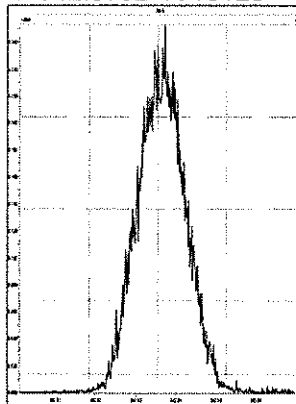
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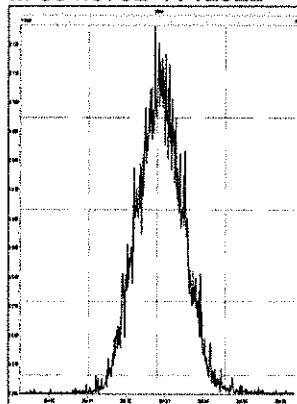
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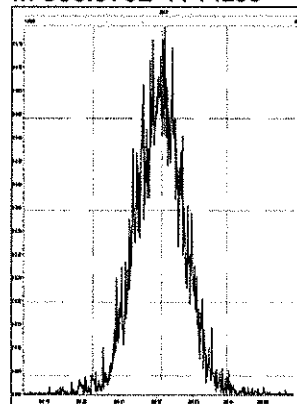
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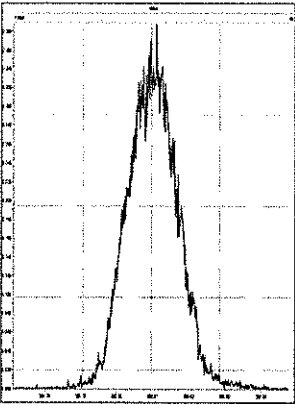
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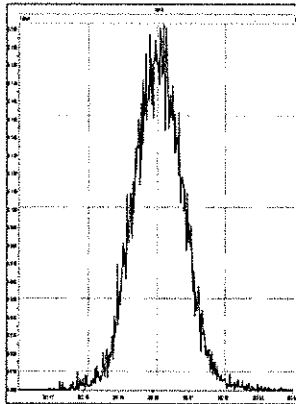
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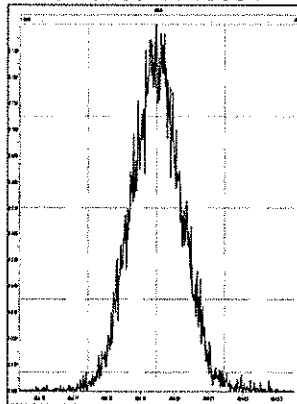
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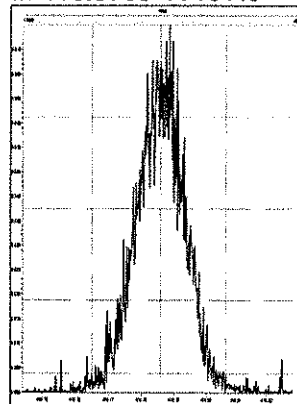
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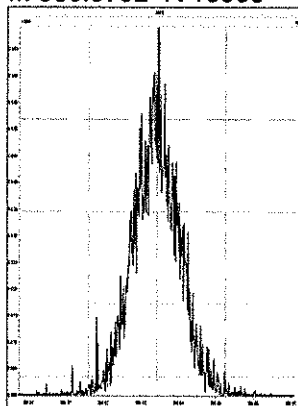


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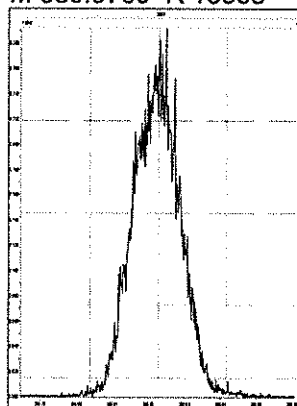


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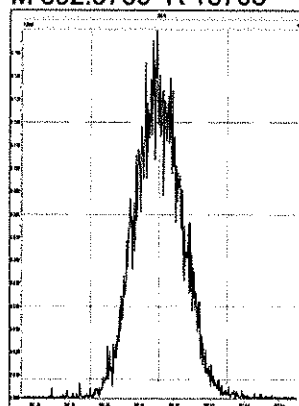
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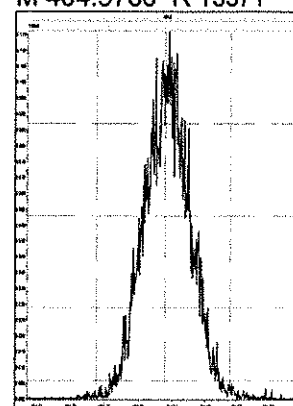
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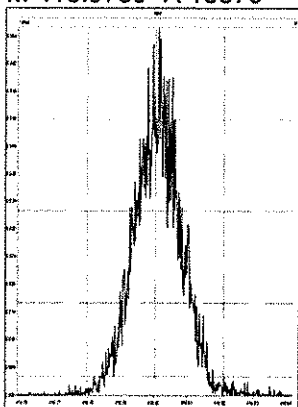
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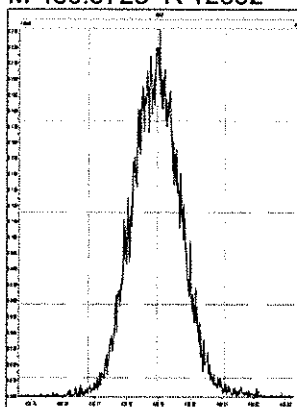
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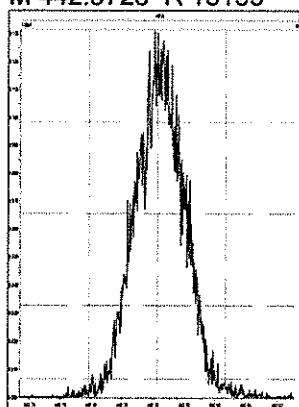
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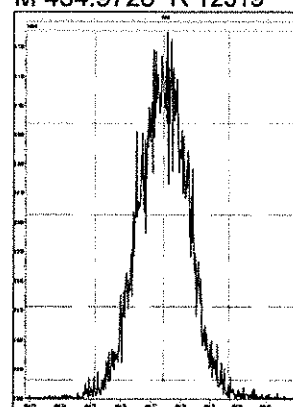
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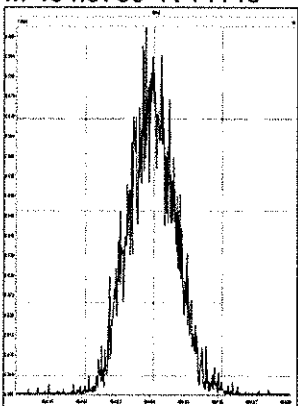
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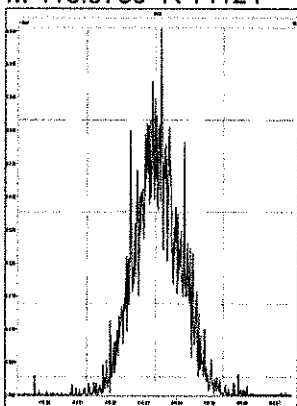
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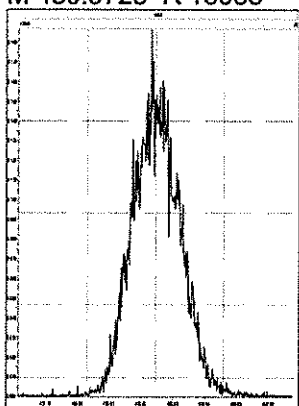
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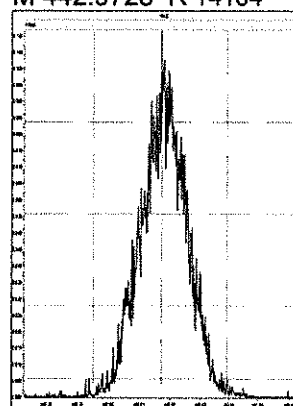
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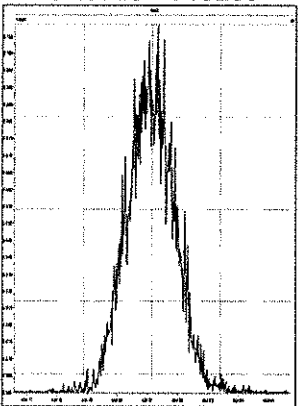
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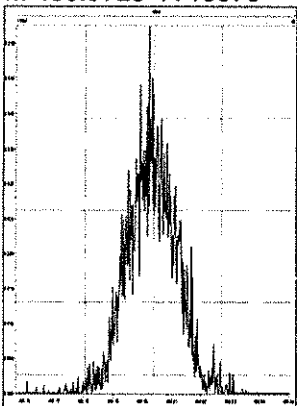
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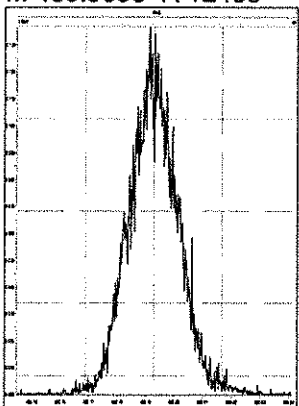
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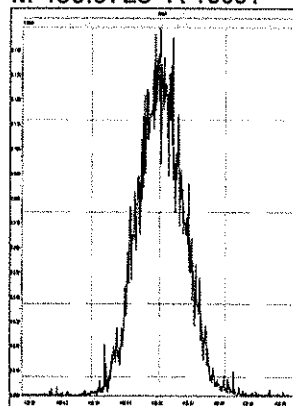
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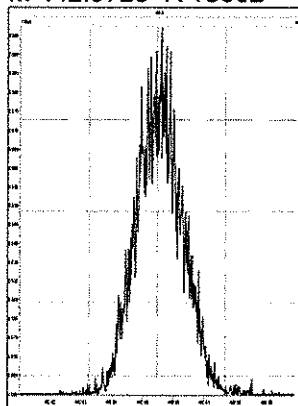
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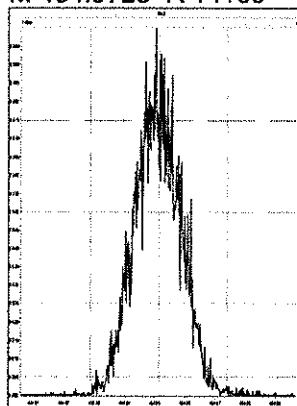
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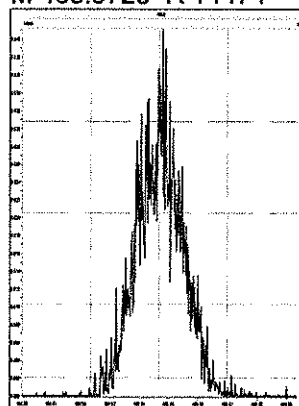
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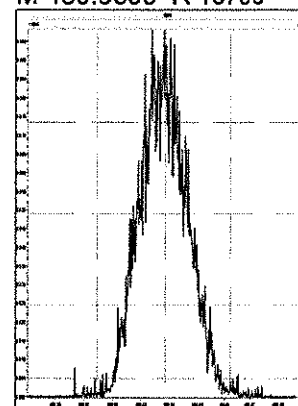
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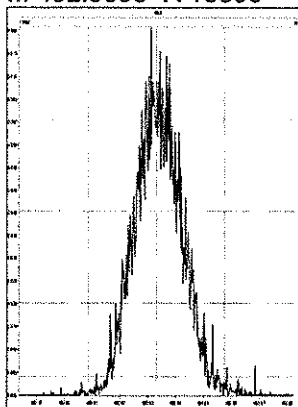
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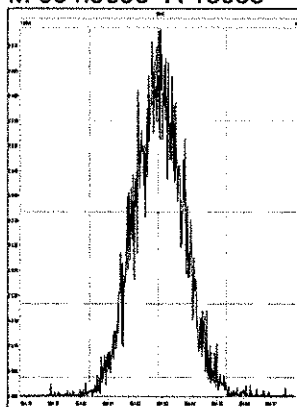
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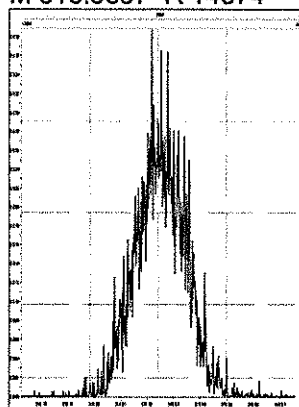
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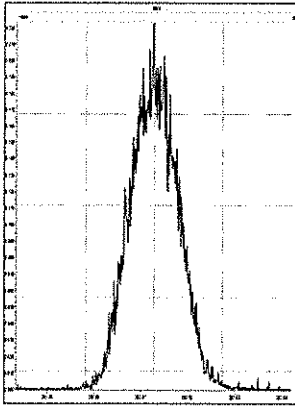
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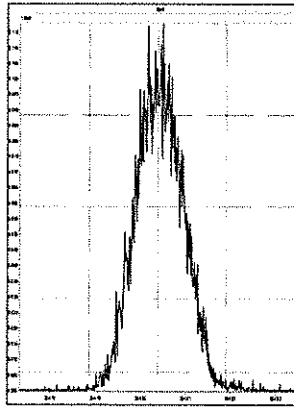
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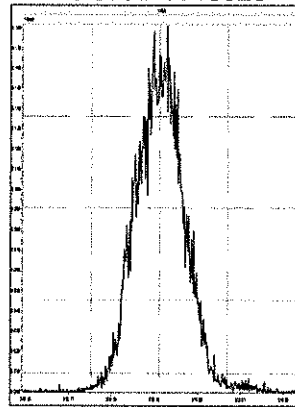
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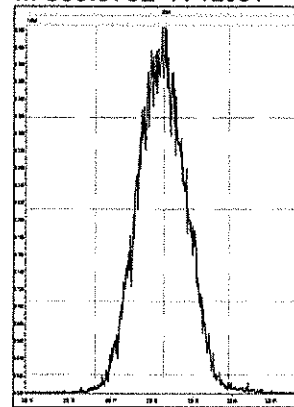
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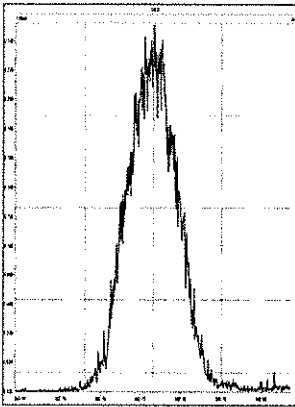
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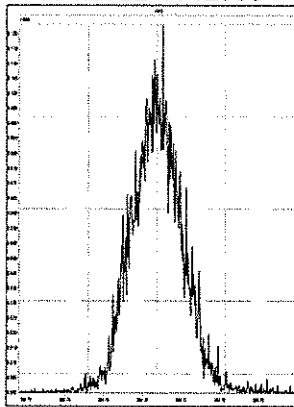
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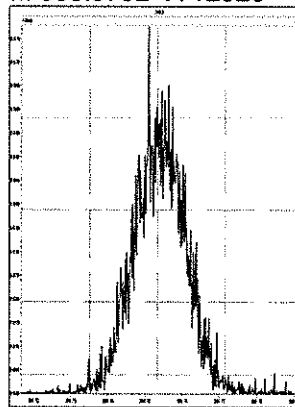
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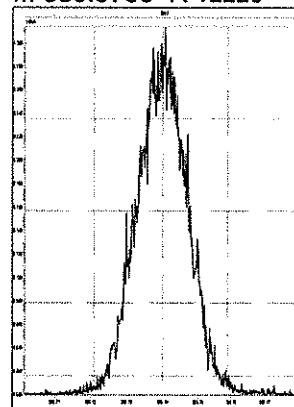
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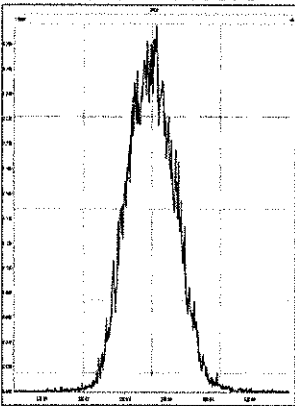
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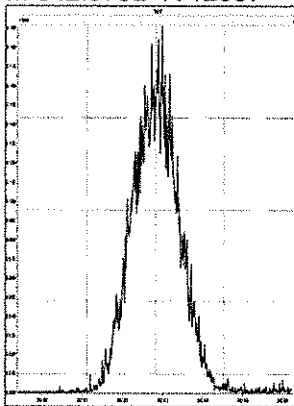
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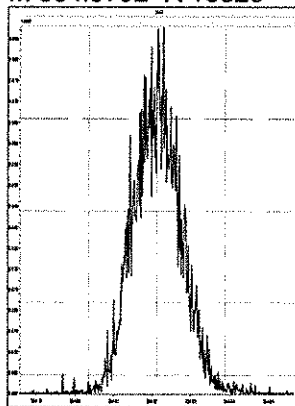
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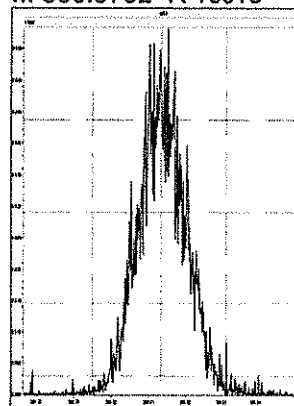
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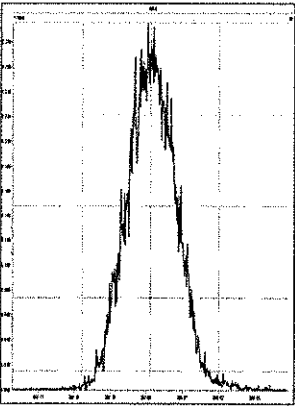
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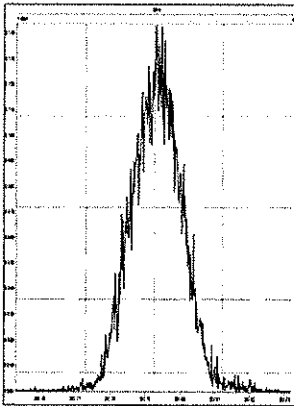
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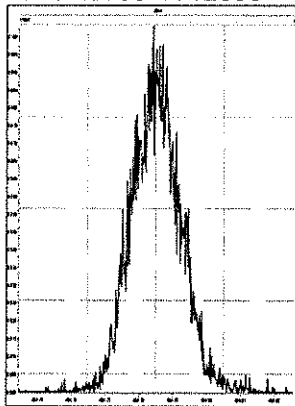
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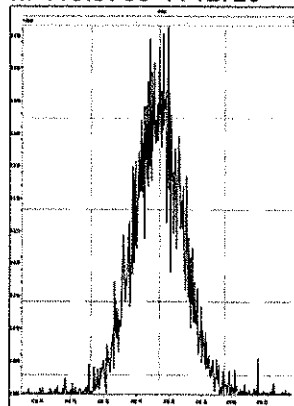
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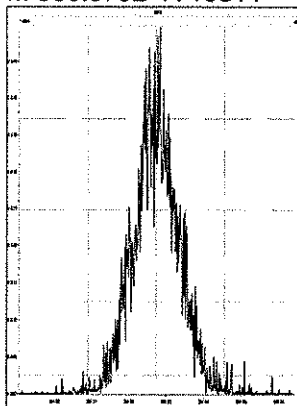
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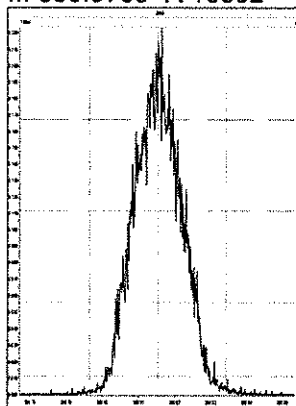
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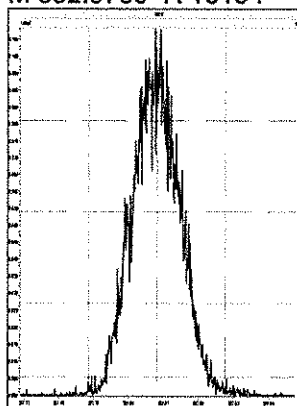
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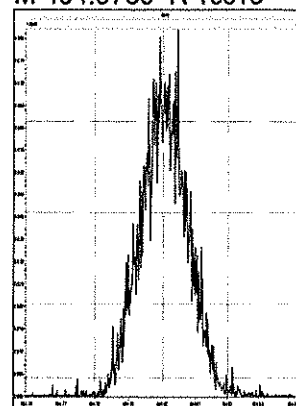
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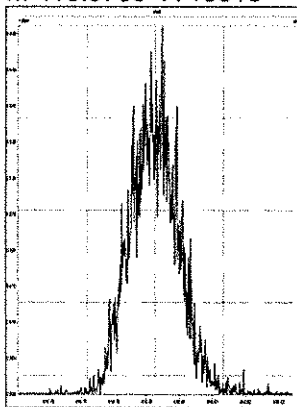
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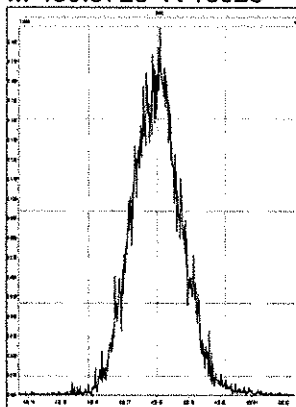
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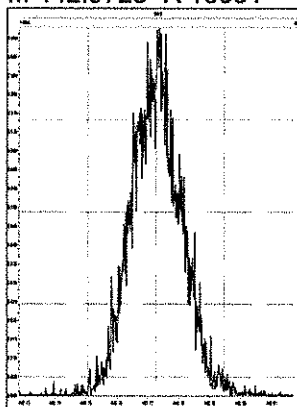
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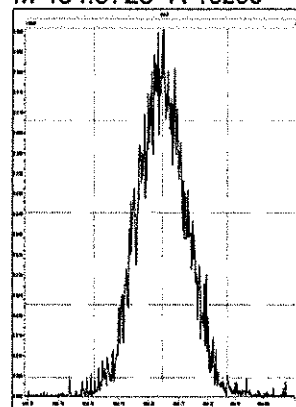
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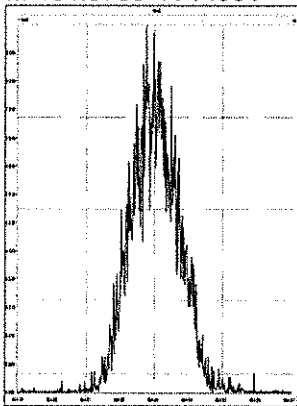
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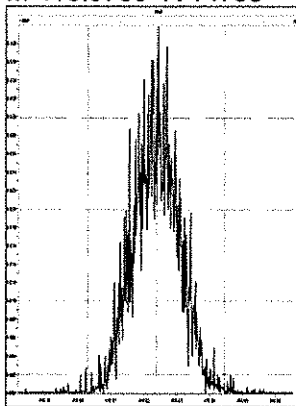
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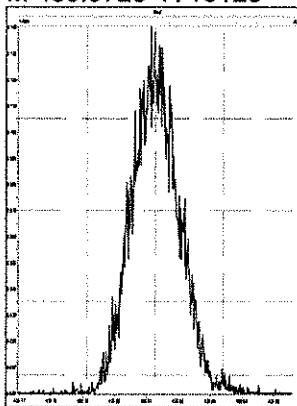
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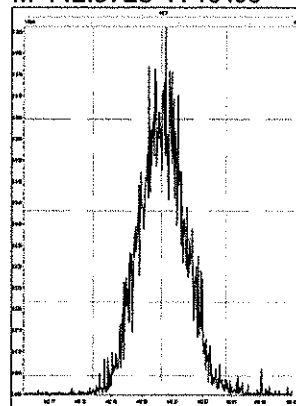
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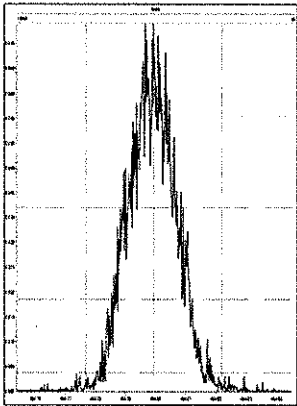
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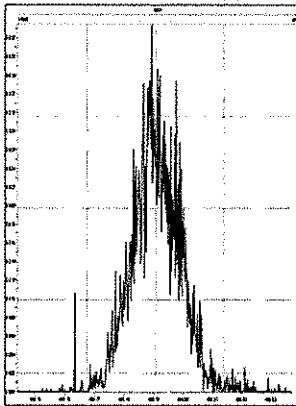
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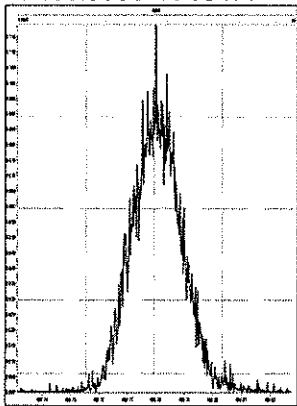
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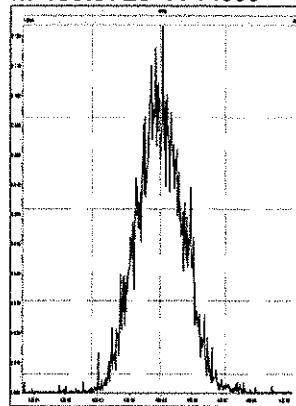
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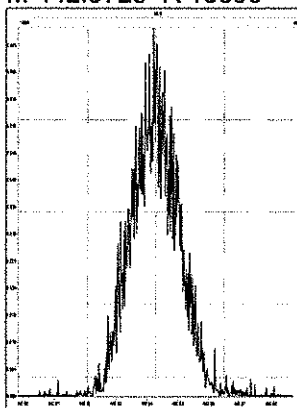
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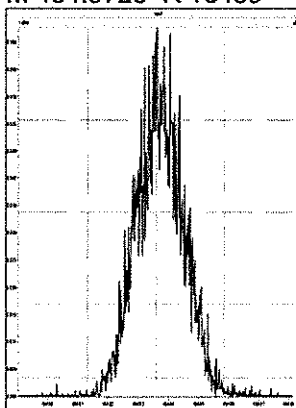
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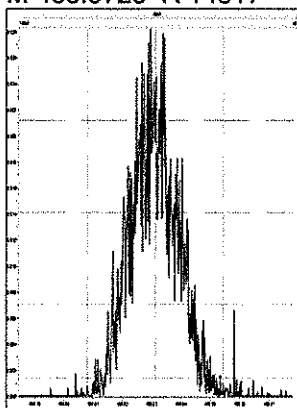
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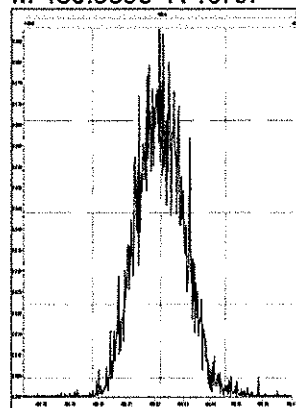
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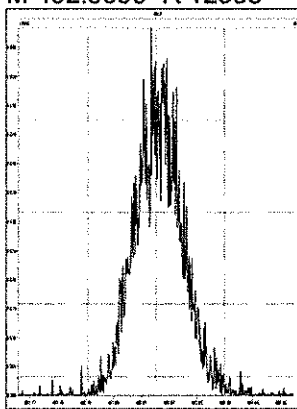
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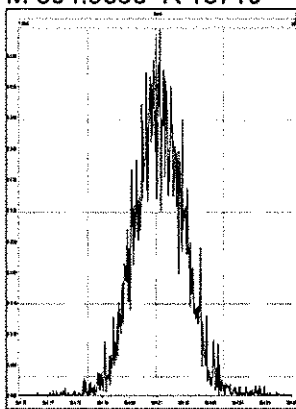
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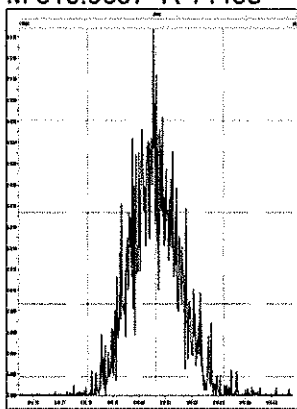
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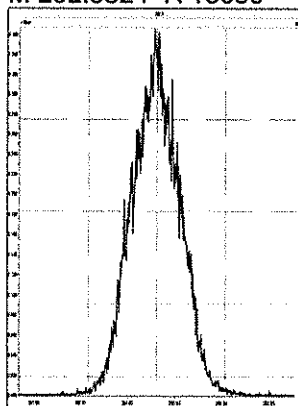
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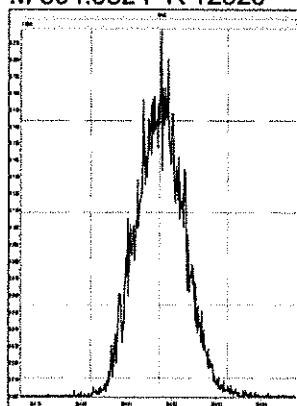
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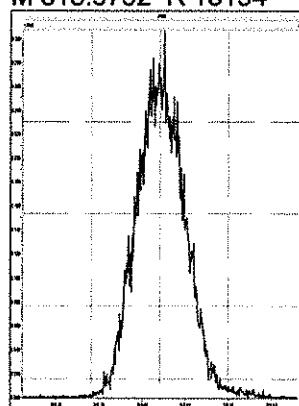
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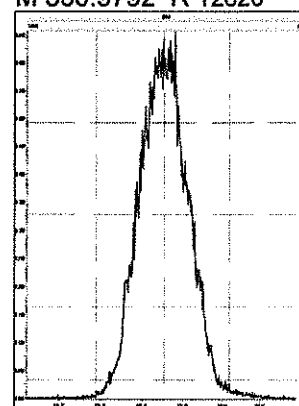
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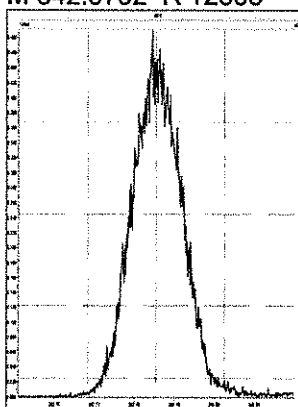
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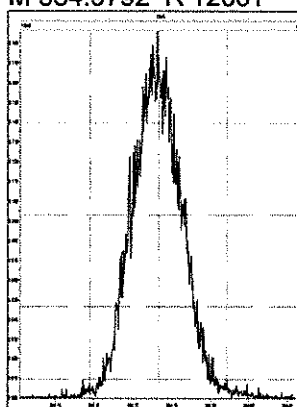
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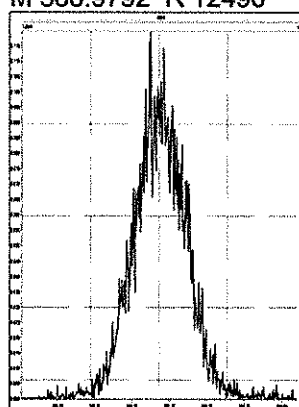
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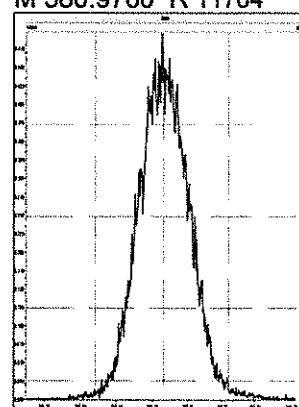
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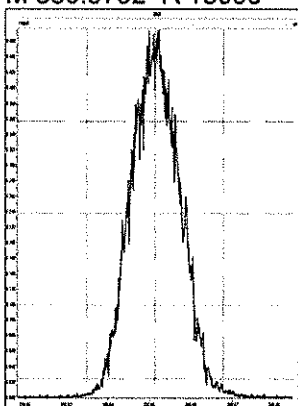
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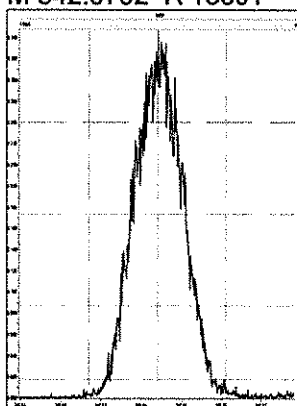
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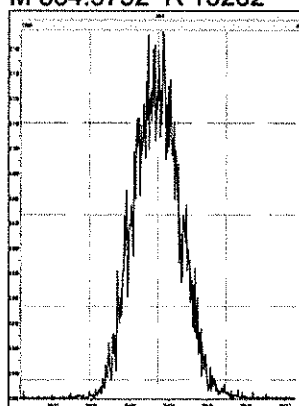
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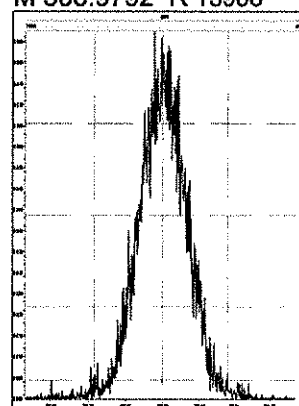
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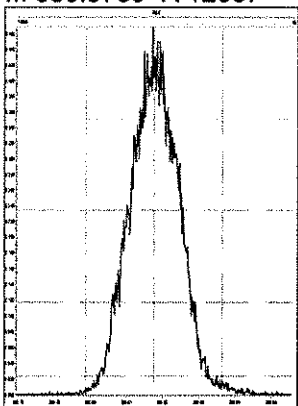
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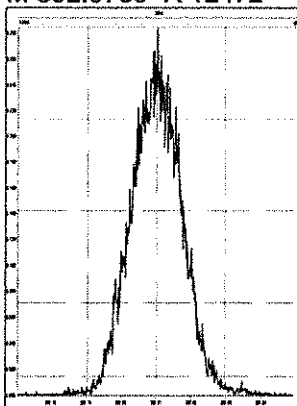
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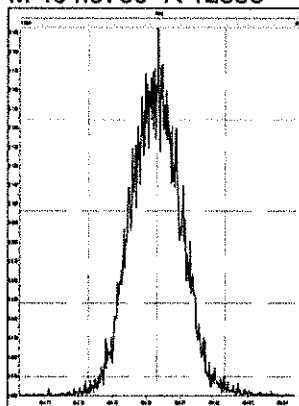
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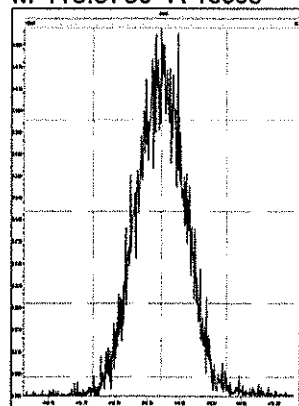
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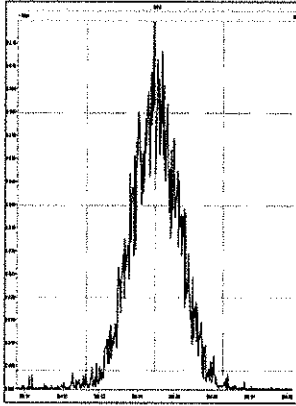
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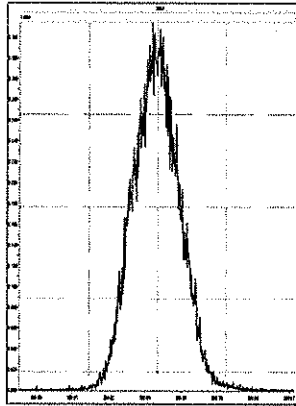
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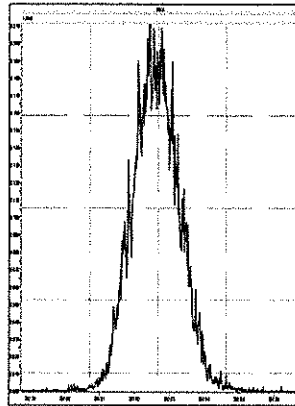
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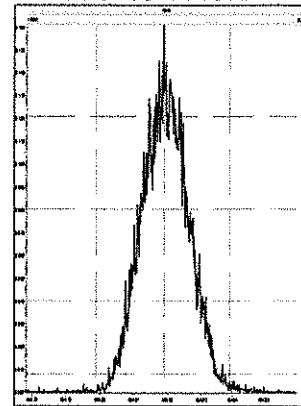
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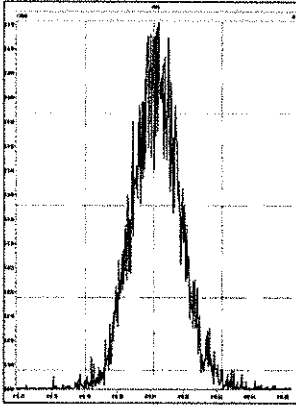
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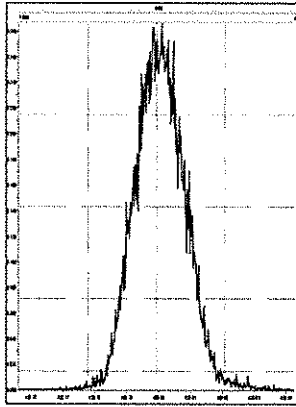
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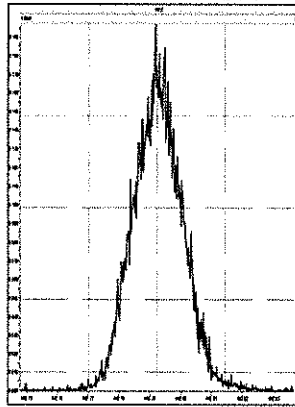
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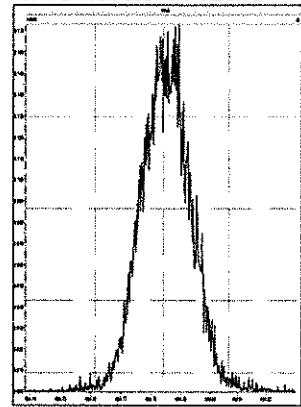
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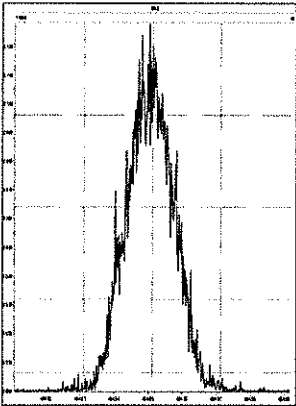
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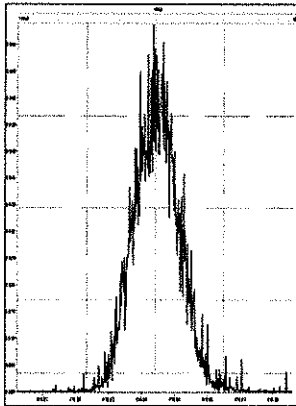
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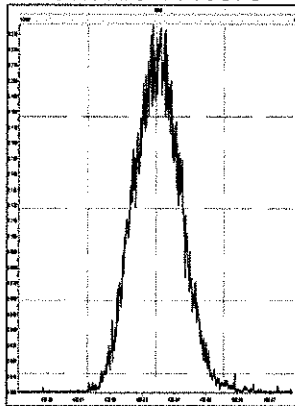
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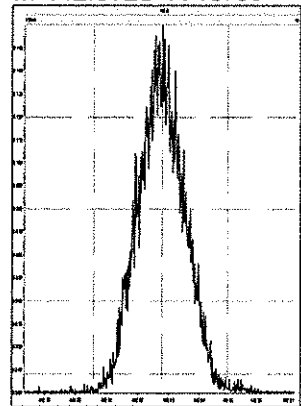
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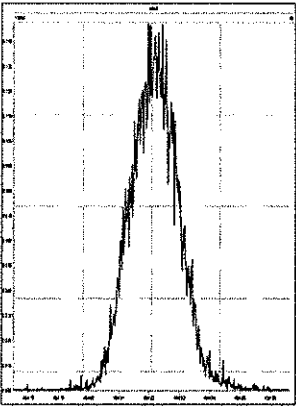
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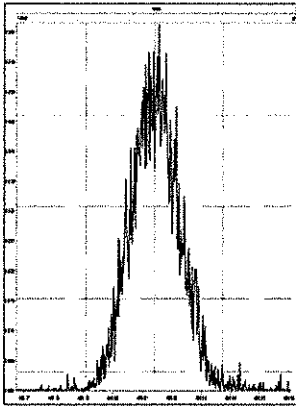
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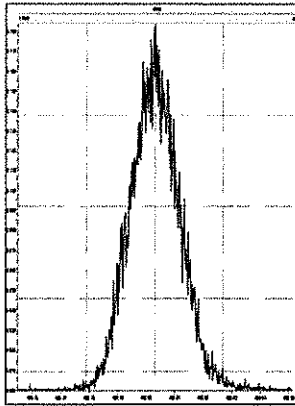
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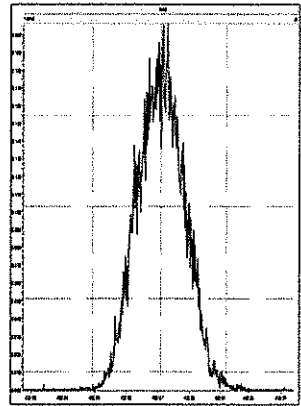
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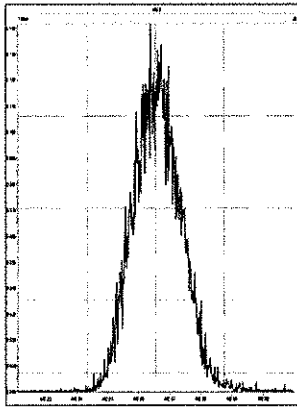


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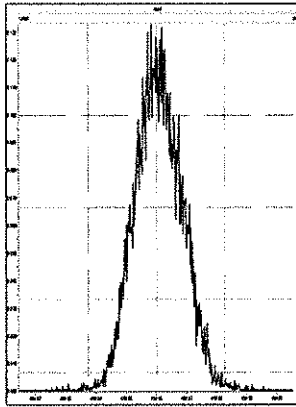


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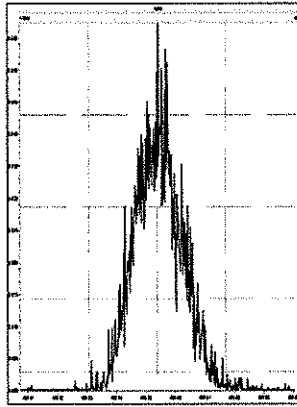
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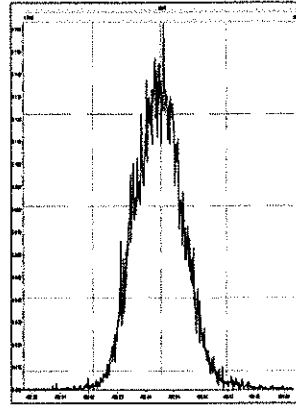
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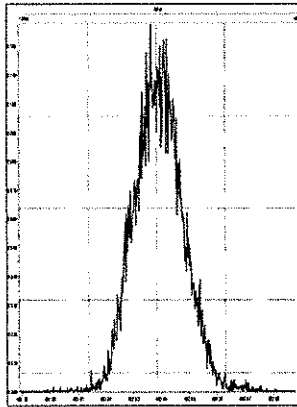
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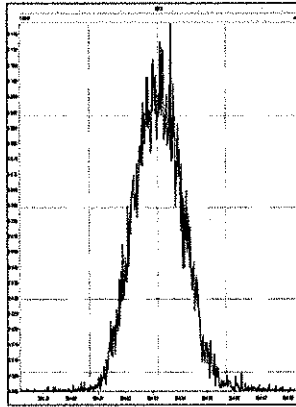
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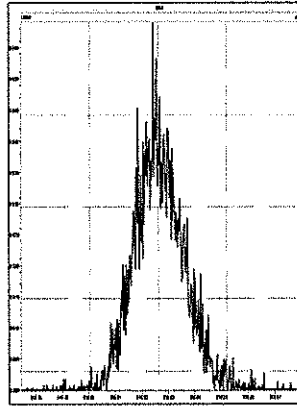
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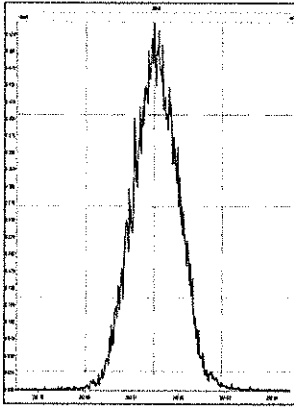


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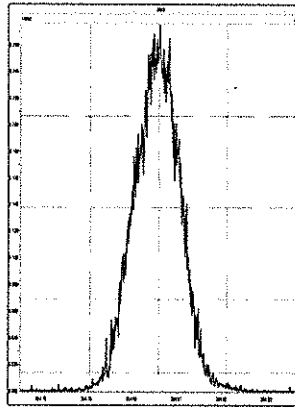
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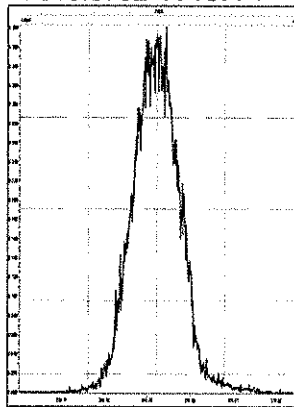
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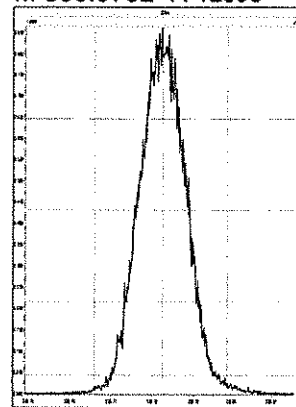
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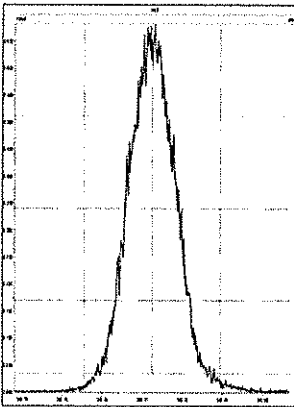
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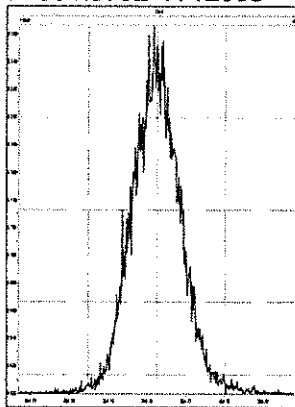
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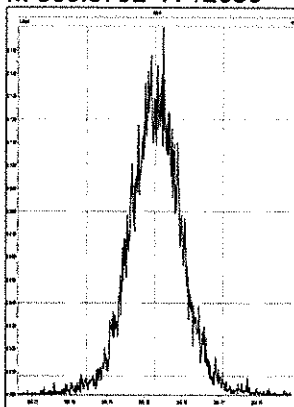
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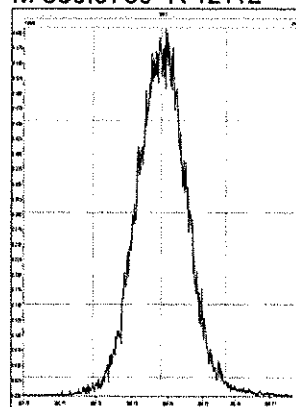
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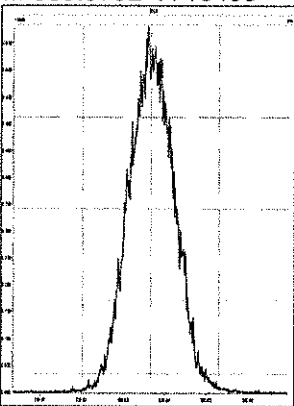
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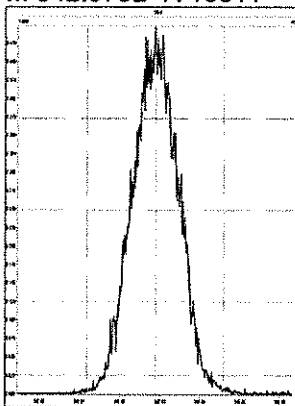
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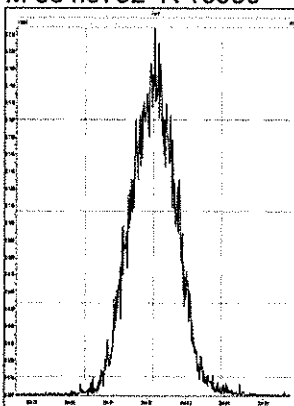
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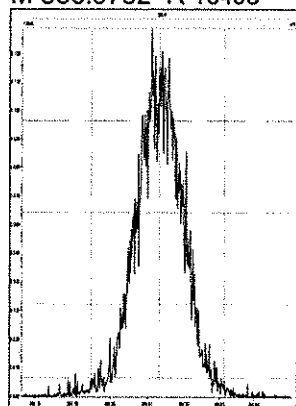
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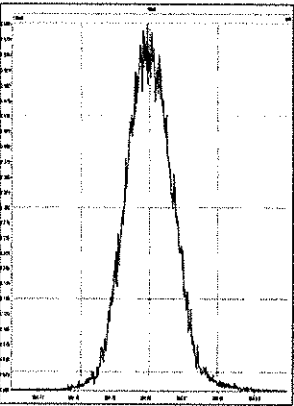
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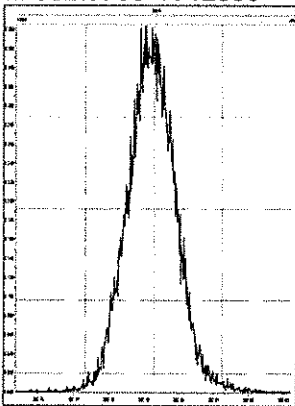
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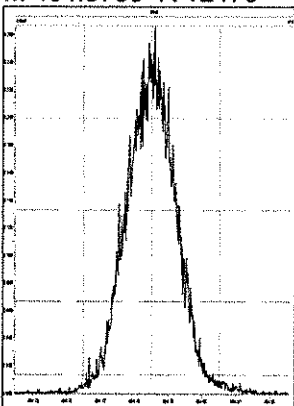
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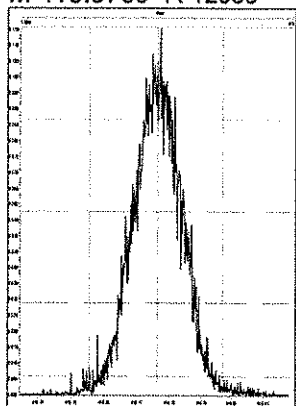
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DFKW 1

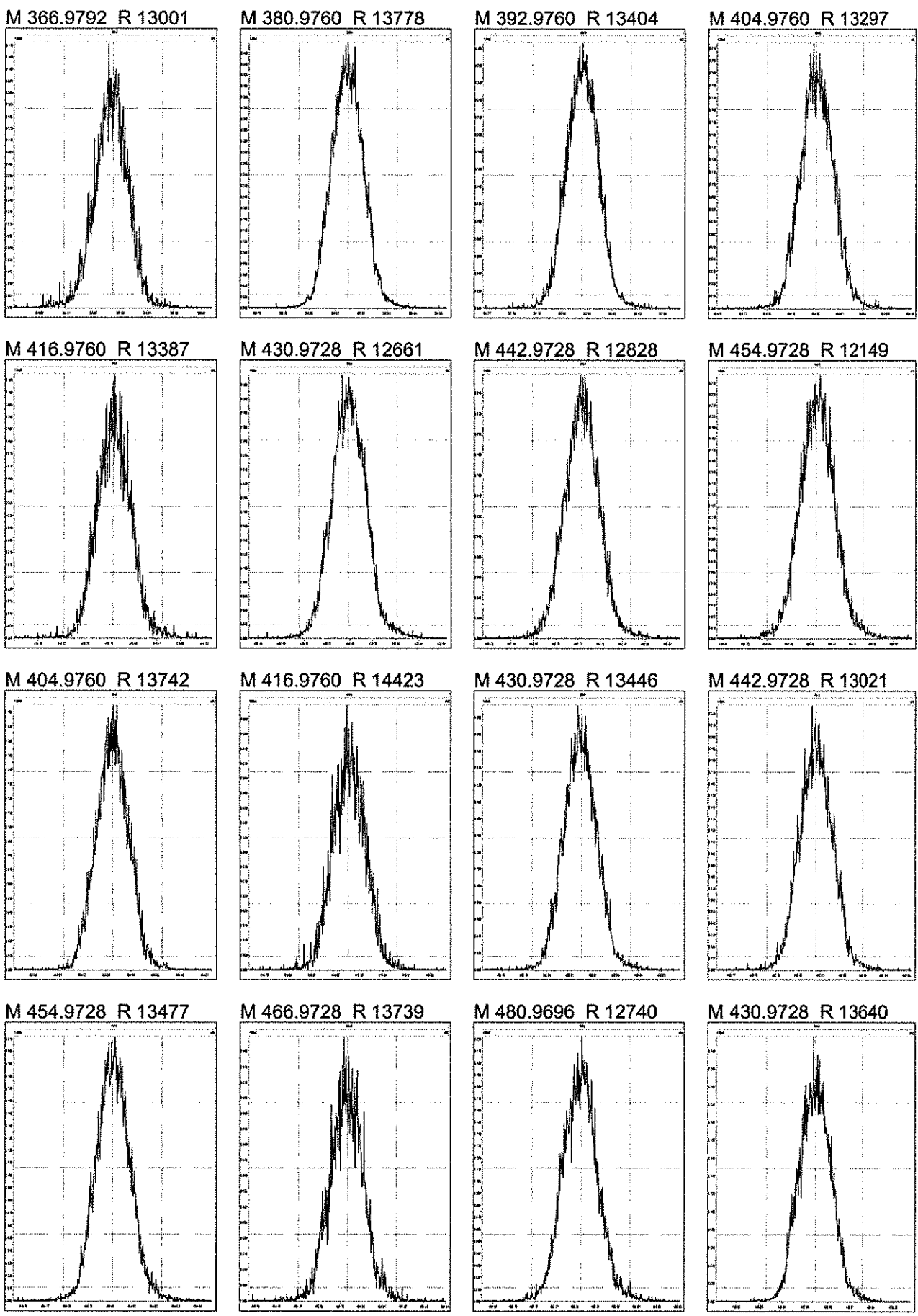
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4FKW1

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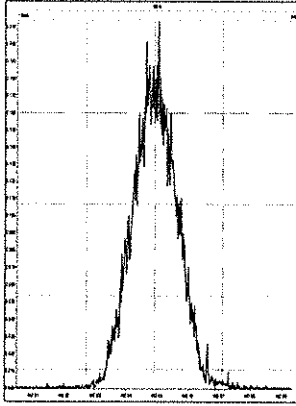
Resolution Check Report

MassLynx 4.1

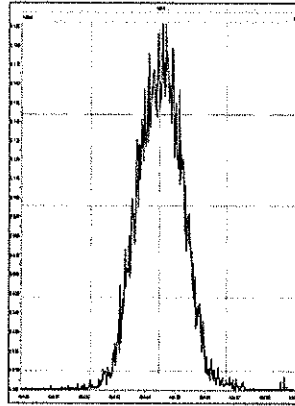
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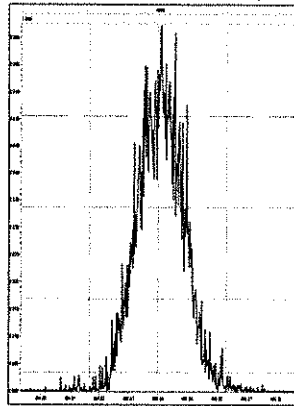
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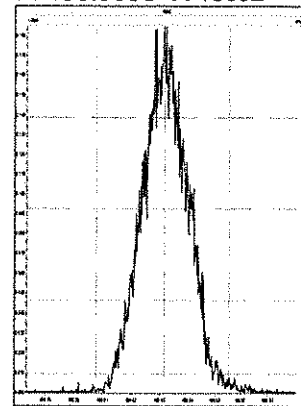
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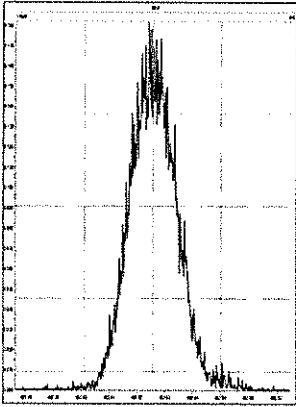
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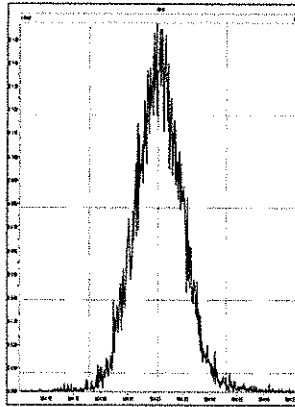
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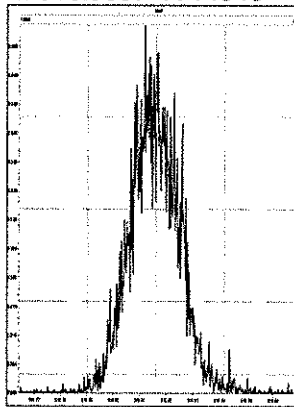
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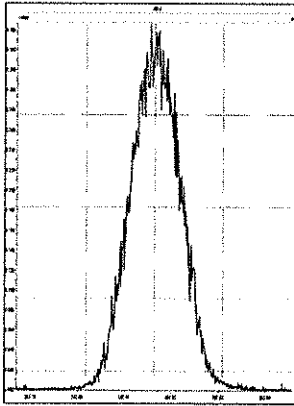


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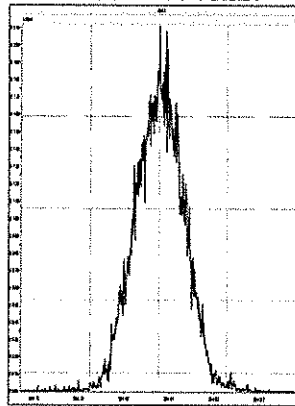
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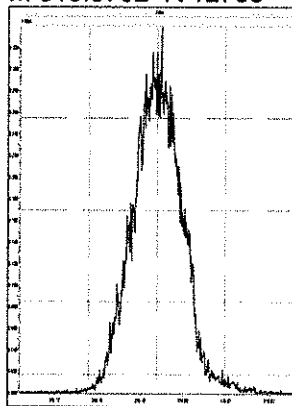
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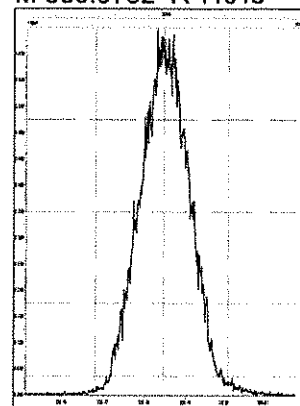
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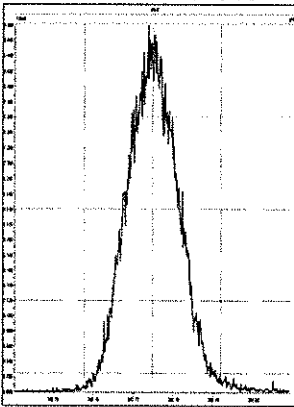
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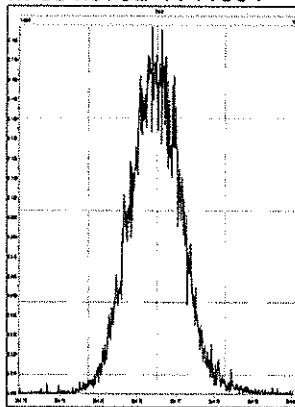
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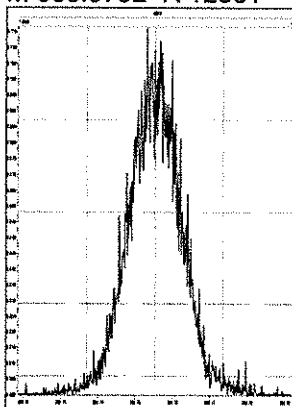
M 342.9792 R 12019



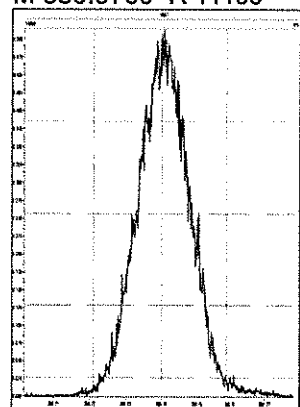
M 354.9792 R 11934



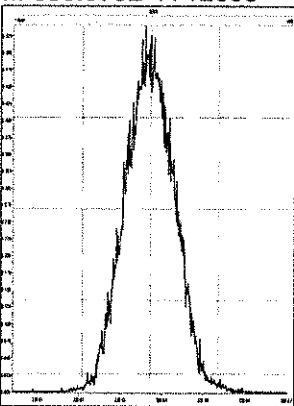
M 366.9792 R 12331



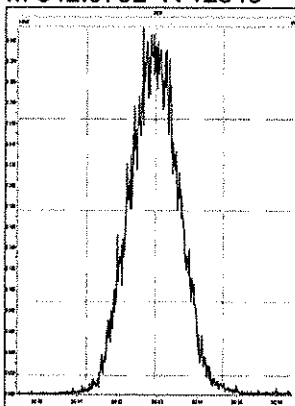
M 380.9760 R 11160



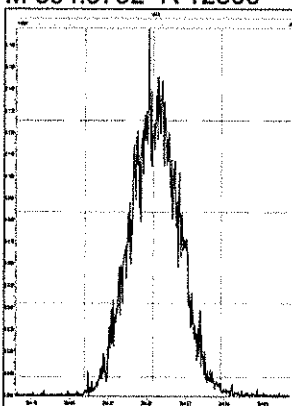
M 330.9792 R 12658



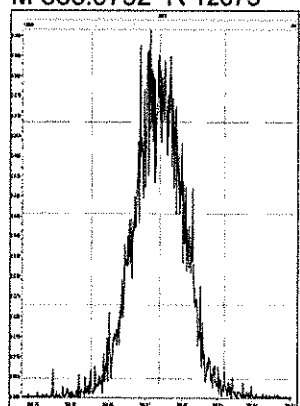
M 342.9792 R 12345



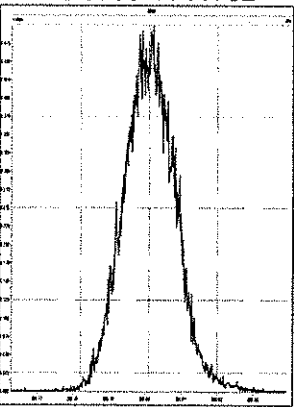
M 354.9792 R 12306



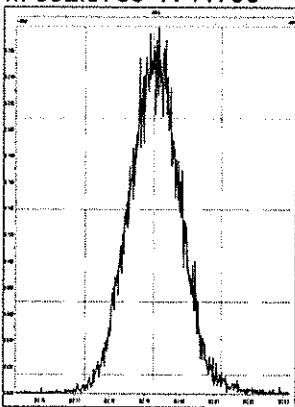
M 366.9792 R 12879



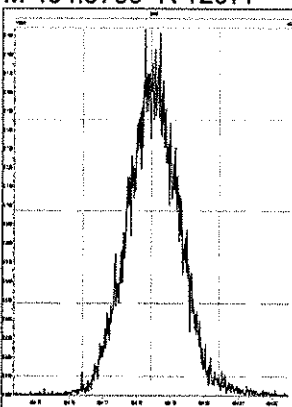
M 380.9760 R 11792



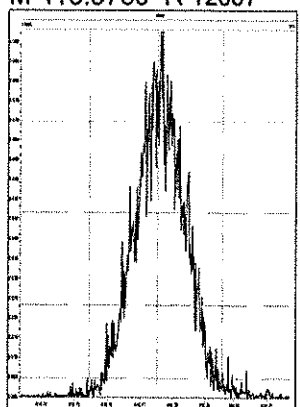
M 392.9760 R 11796



M 404.9760 R 12077



M 416.9760 R 12607

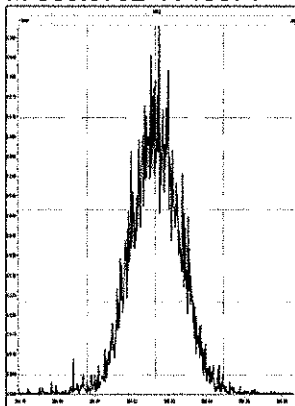


Resolution Check Report

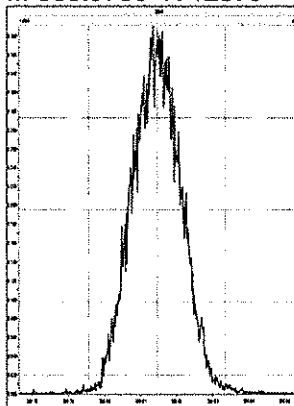
MassLynx 4.1

Printed: Friday, December 27, 2019 06:48:29 Eastern Standard Time

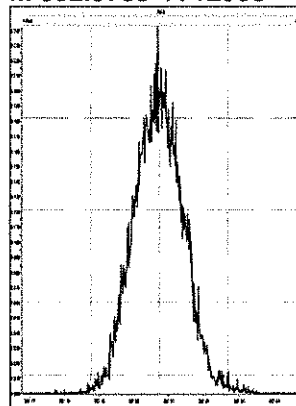
M 366.9792 R 13371



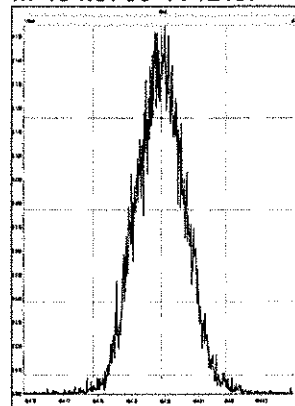
M 380.9760 R 12376



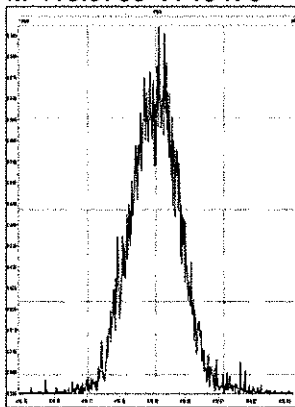
M 392.9760 R 12938



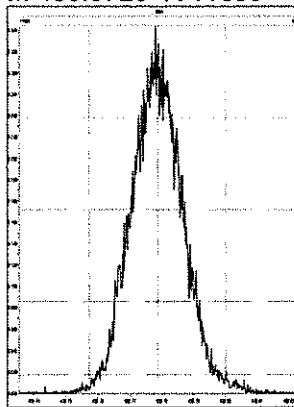
M 404.9760 R 12437



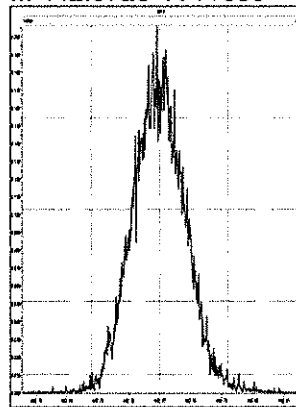
M 416.9760 R 13476



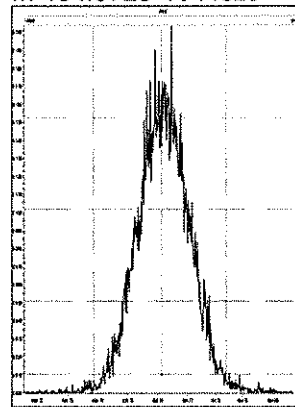
M 430.9728 R 11600



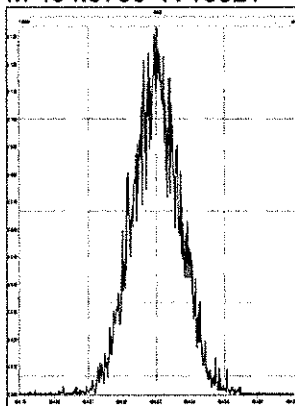
M 442.9728 R 11589



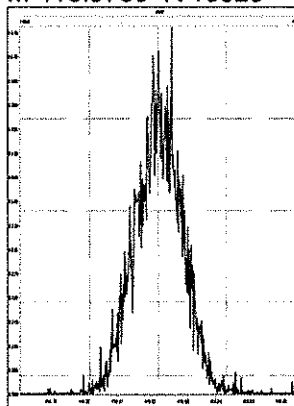
M 454.9728 R 11320



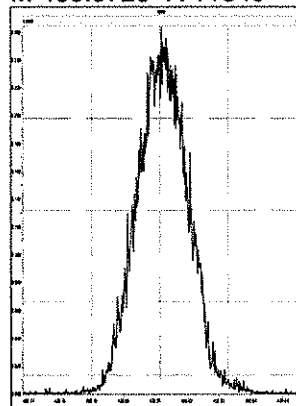
M 404.9760 R 13021



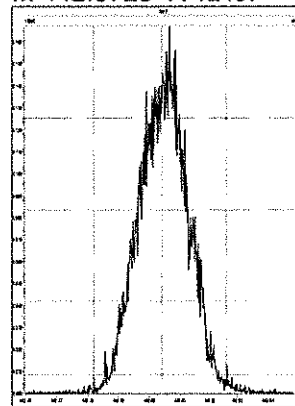
M 416.9760 R 13628



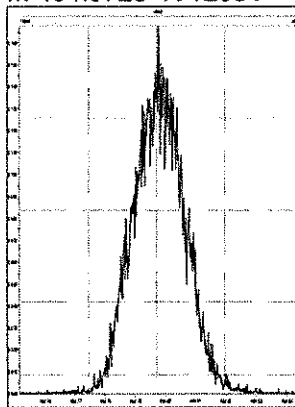
M 430.9728 R 11849



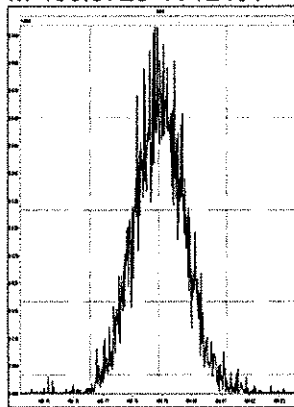
M 442.9728 R 12407



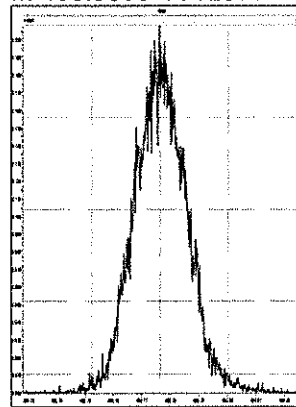
M 454.9728 R 12691



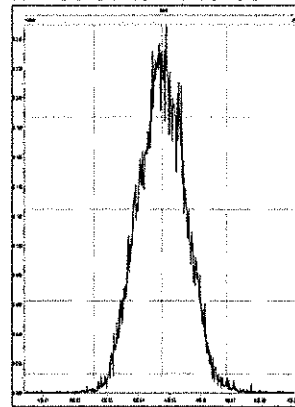
M 466.9728 R 12481



M 480.9696 R 12077



M 430.9728 R 13158

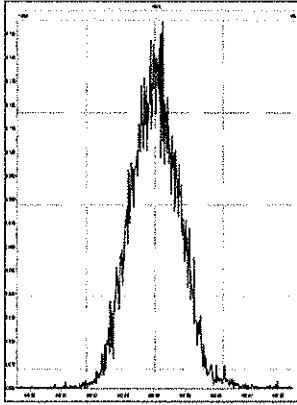


Resolution Check Report

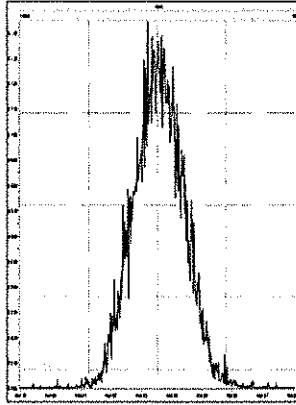
MassLynx 4.1

Printed: Friday, December 27, 2019 06:48:29 Eastern Standard Time

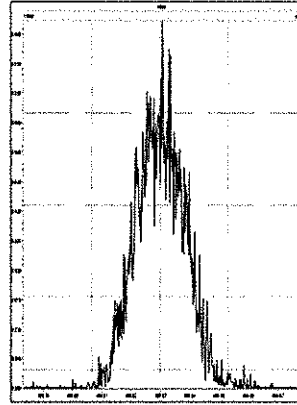
M 442.9728 R 13297



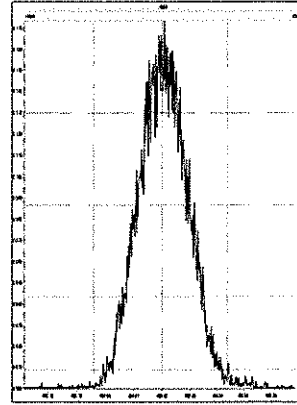
M 454.9728 R 12889



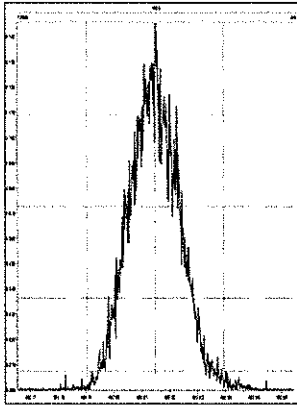
M 466.9728 R 14452



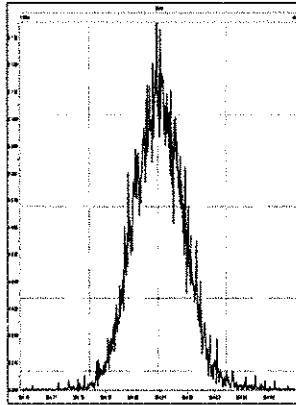
M 480.9696 R 12801



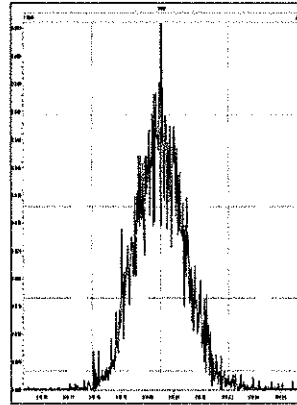
M 492.9696 R 12820



M 504.9696 R 12788



M 516.9697 R 13514

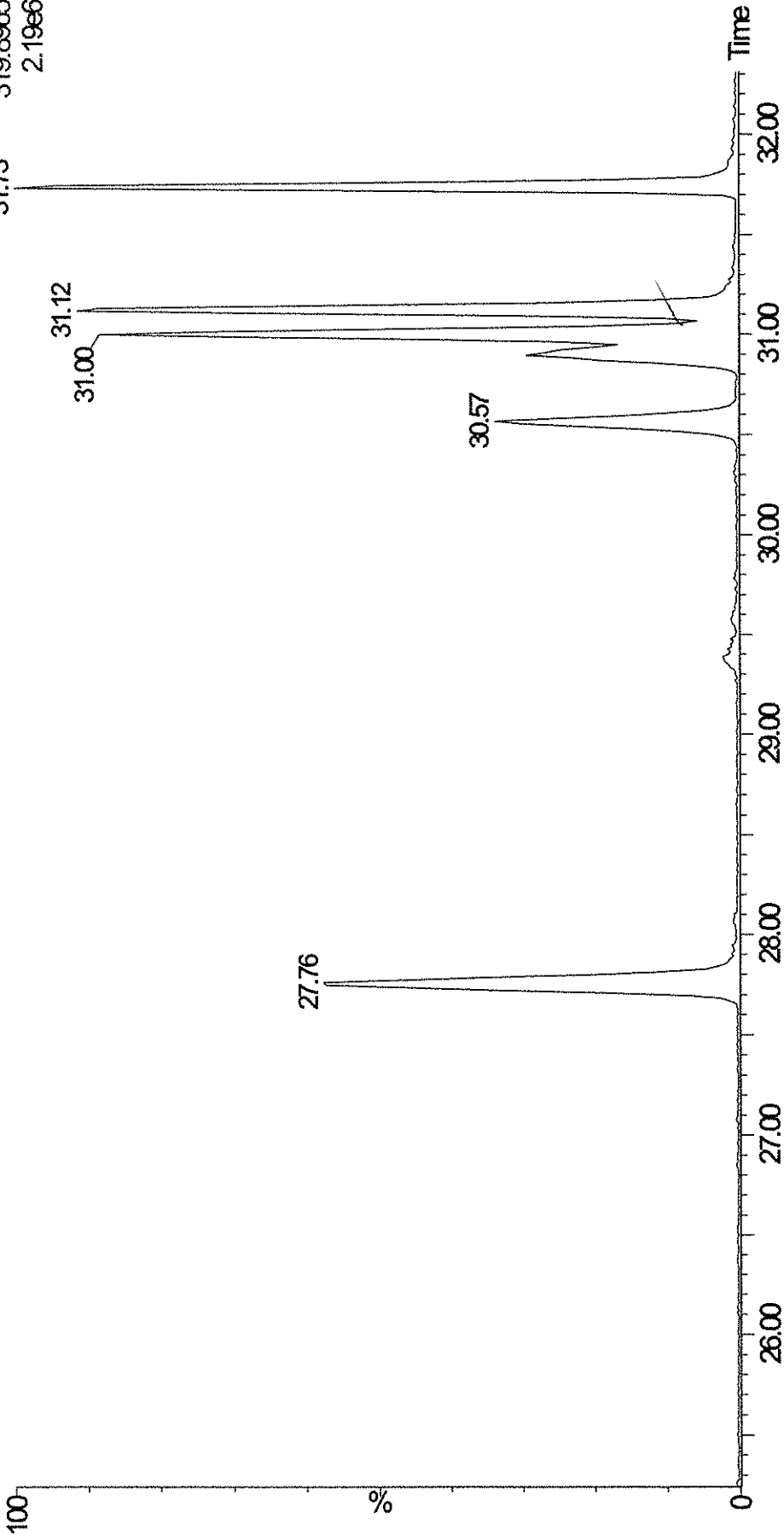


COLUMN CHECK (2378-TCDD 6%)
CS3WT UD191018-02.1
A23DEC19A-1 /

HRP750_2

23-Dec-2019 17:28:13

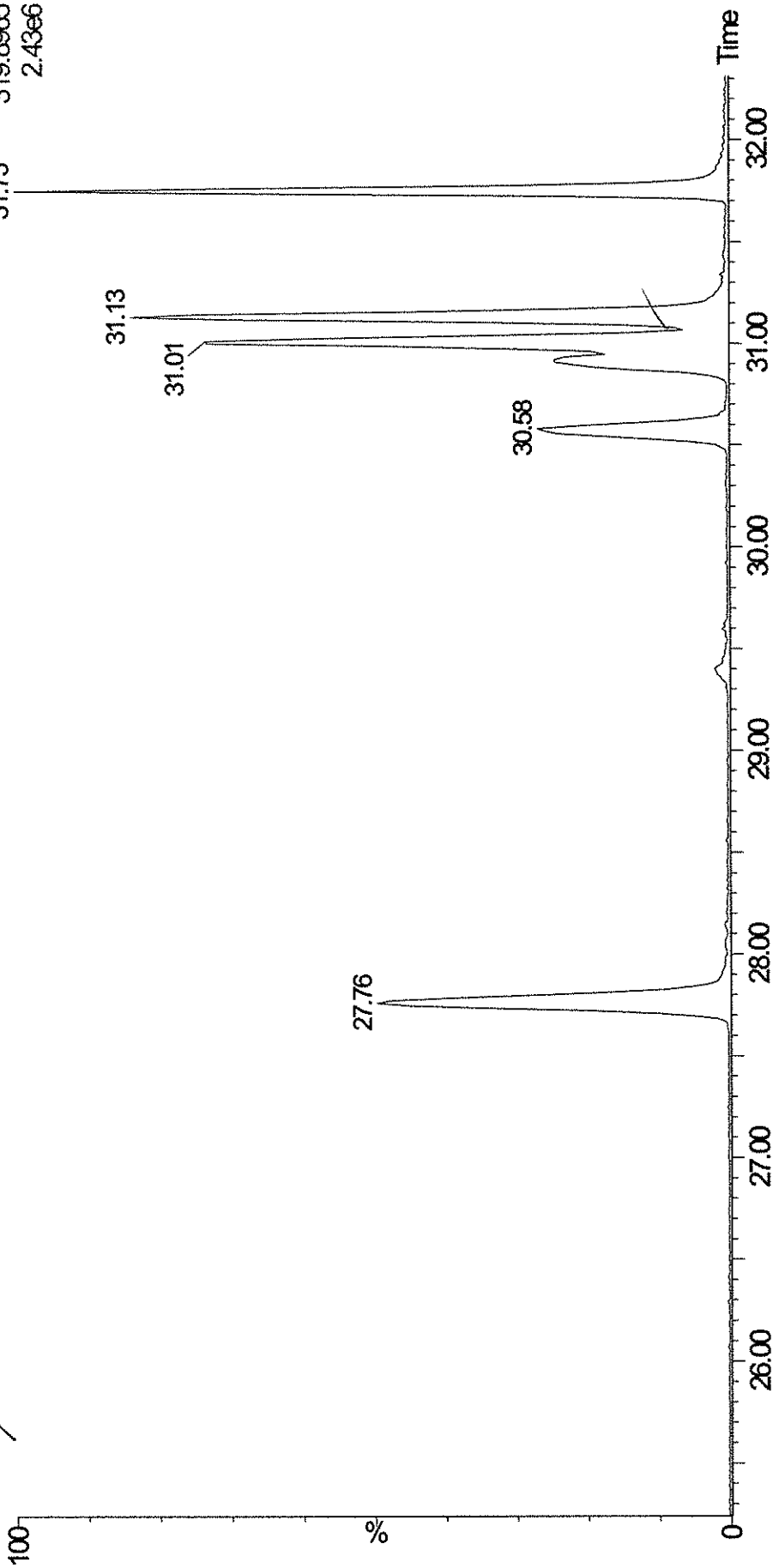
1: Voltage SIR 13 Channels EI+
31.73 319.8965
2.19e6



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD191018-02.1
A23DEC19A-15

HRP750_2

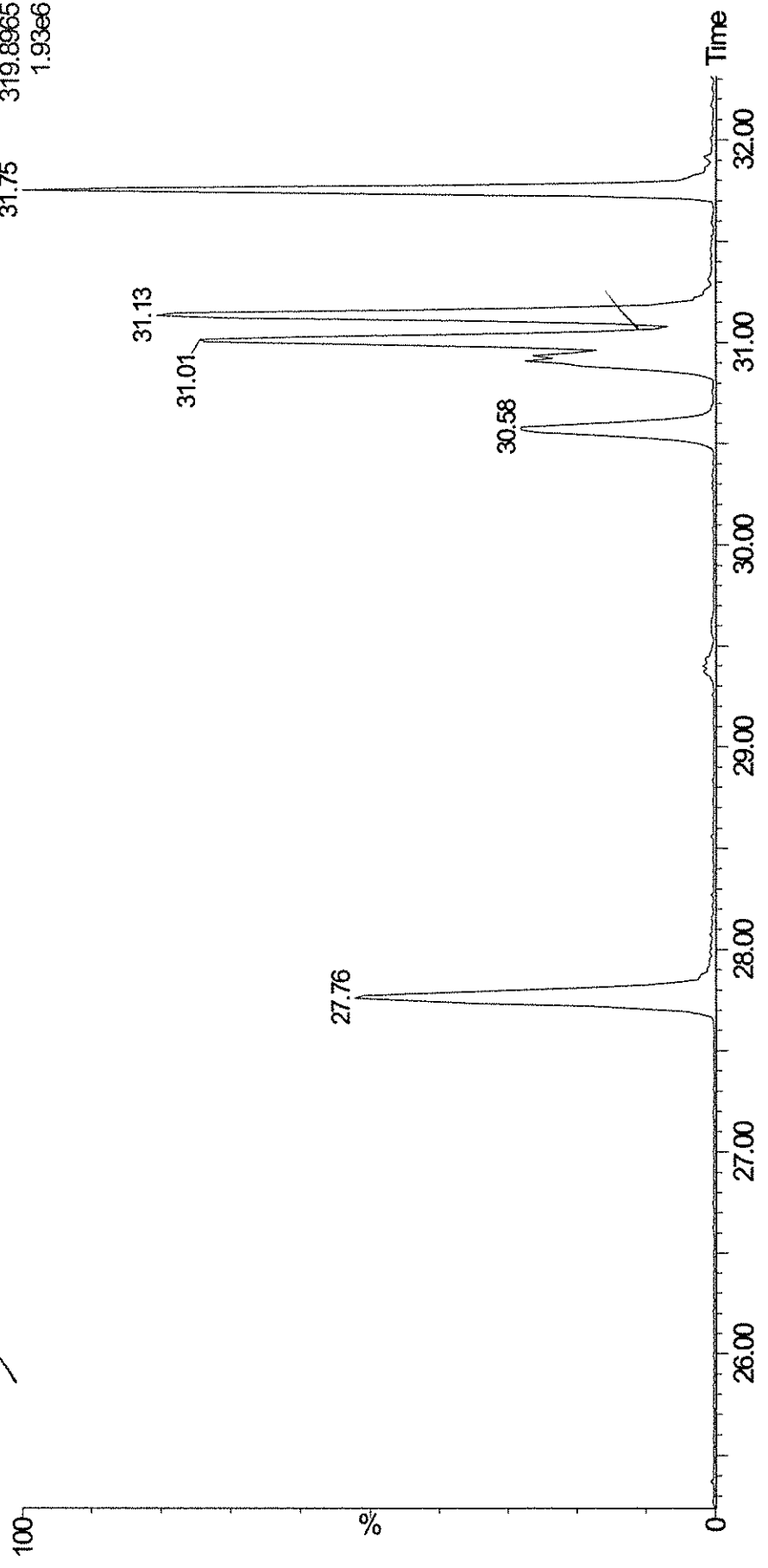
24-Dec-2019 04:41:42
1: Voltage SIR 13 Channels EI+
31.75 319.8965
2.43e6



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD191018-02.1
A23DEC19A_2-12 ✓

HRP750_2

24-Dec-2019 14:27:00
1: Voltage SIR 13 Channels EI+
31.75 319.8965
1.93e6



COLUMN CHECK (2378-TCDD 8%)

CS3WT UD191018-02.1

A23DEC19A_3-14

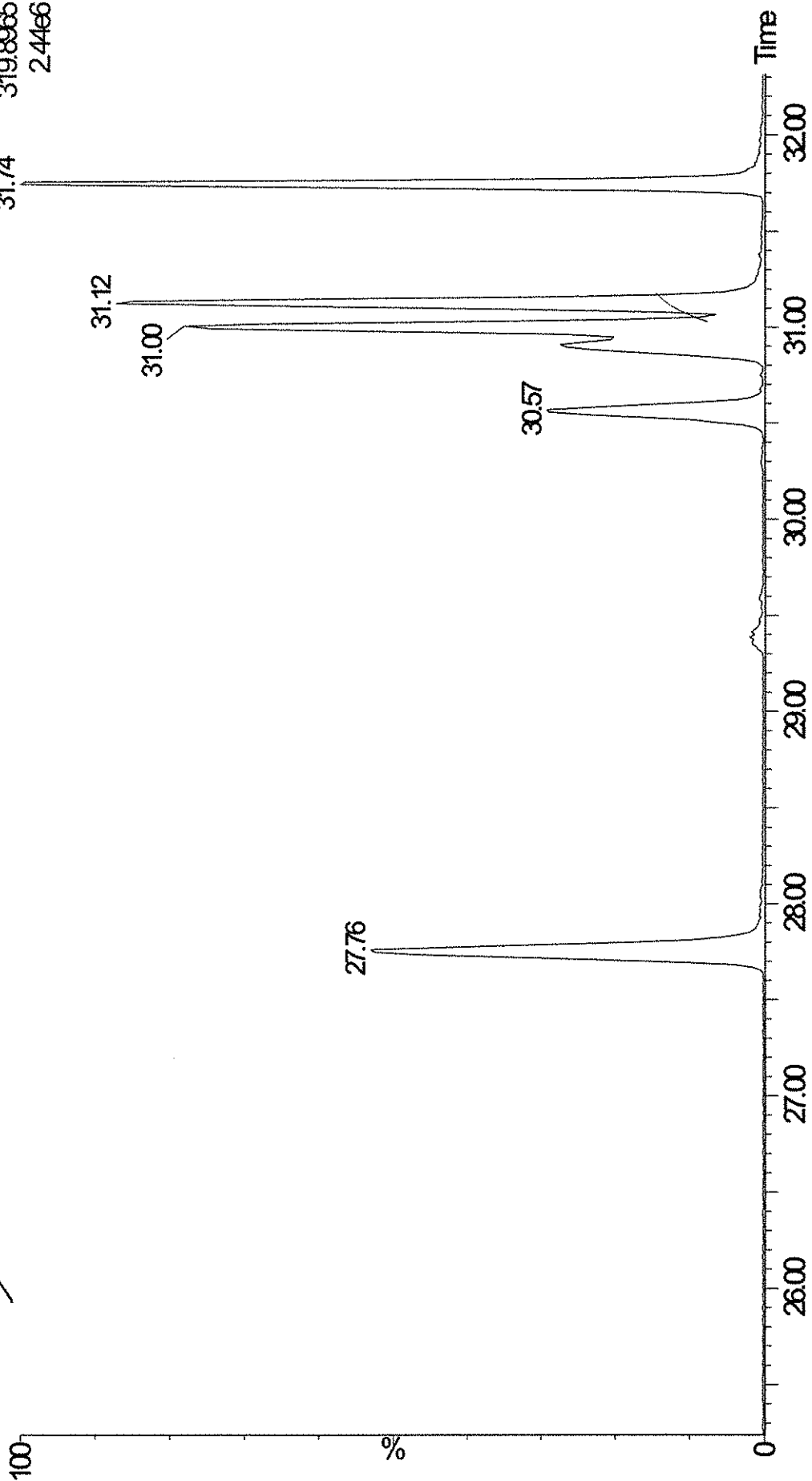
HRP750_2

25-Dec-2019 01:48:30

1: Voltage SIR 13 Channels EI+

31.74 319.8965

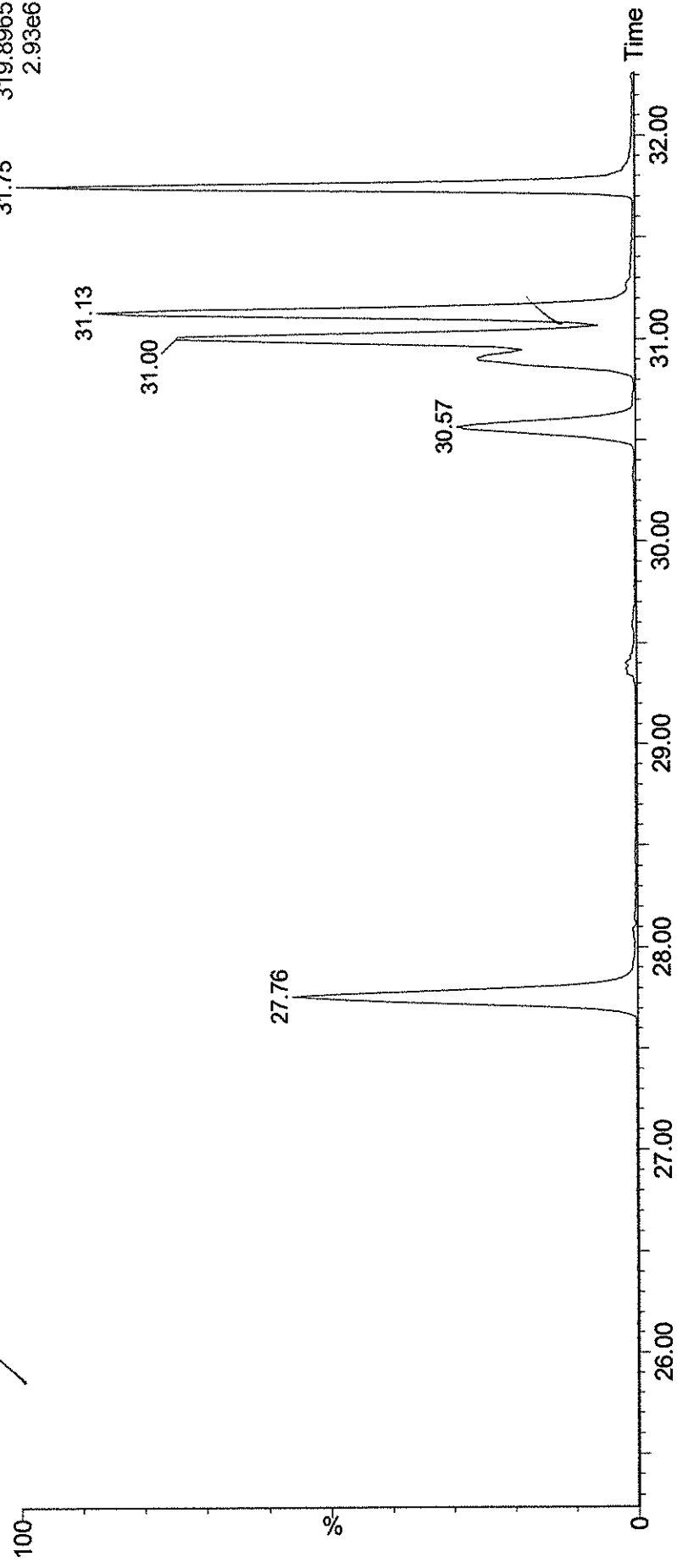
2.4466



COLUMN CHECK (2378-TCDD 7%)
CS3WT UD191018-02.1
A23DEC19A_4-12

HRP750_2

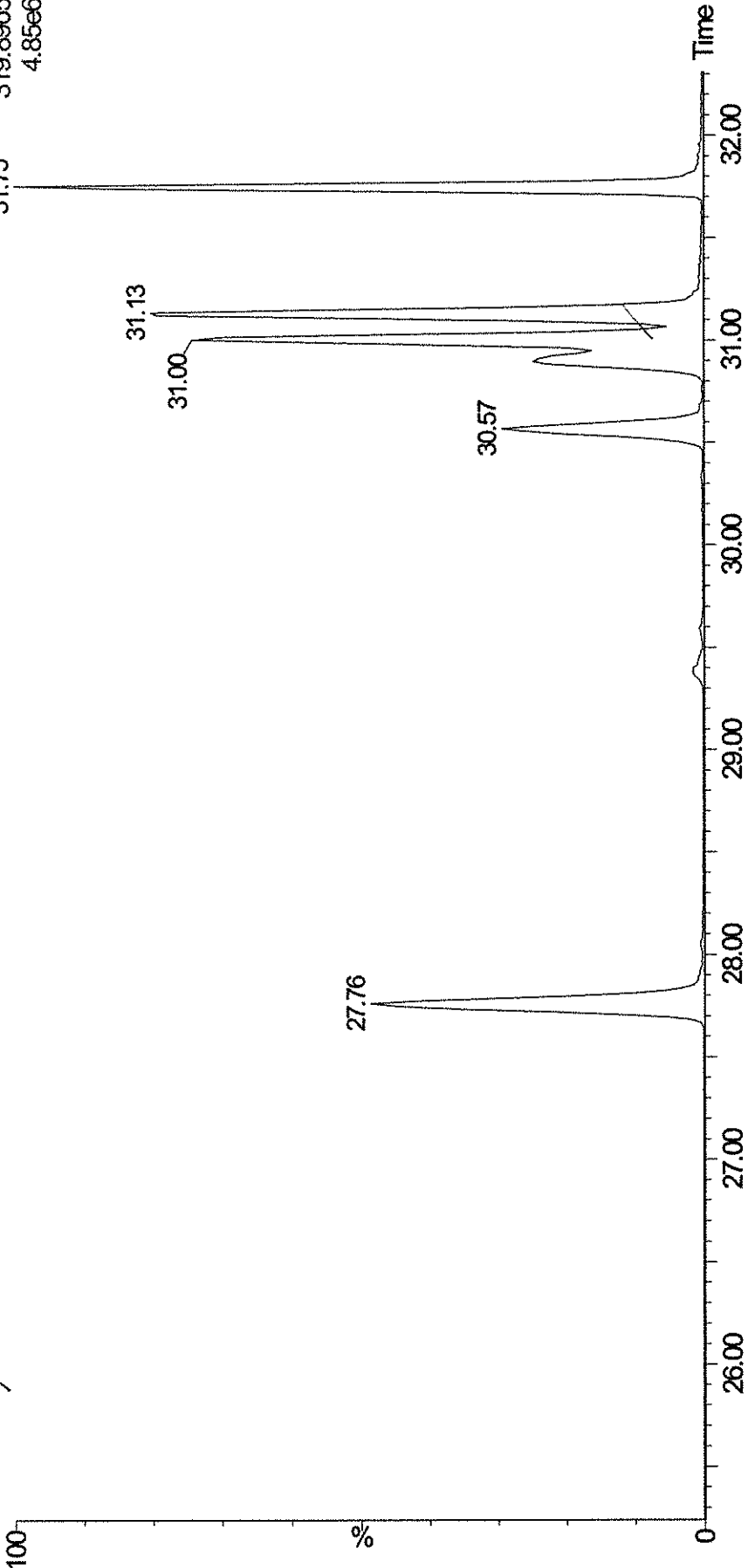
25-Dec-2019 11:33:45
1: Voltage SIR 13 Channels EI+
31.75 319.8965
2.93e6



COLUMN CHECK (2378-TCDD 6%)
CS3WT UD191018-02.1
A23DEC19A_5-14 ✓

HRP750_2

25-Dec-2019 22:55:24
1: Voltage SIR 13 Channels EI+
31.75 319.8965
4.85e6



COLUMN CHECK (2378-TCDD 10%)

CS3WT UD191018-02.1

A23DEC19A_6-14/

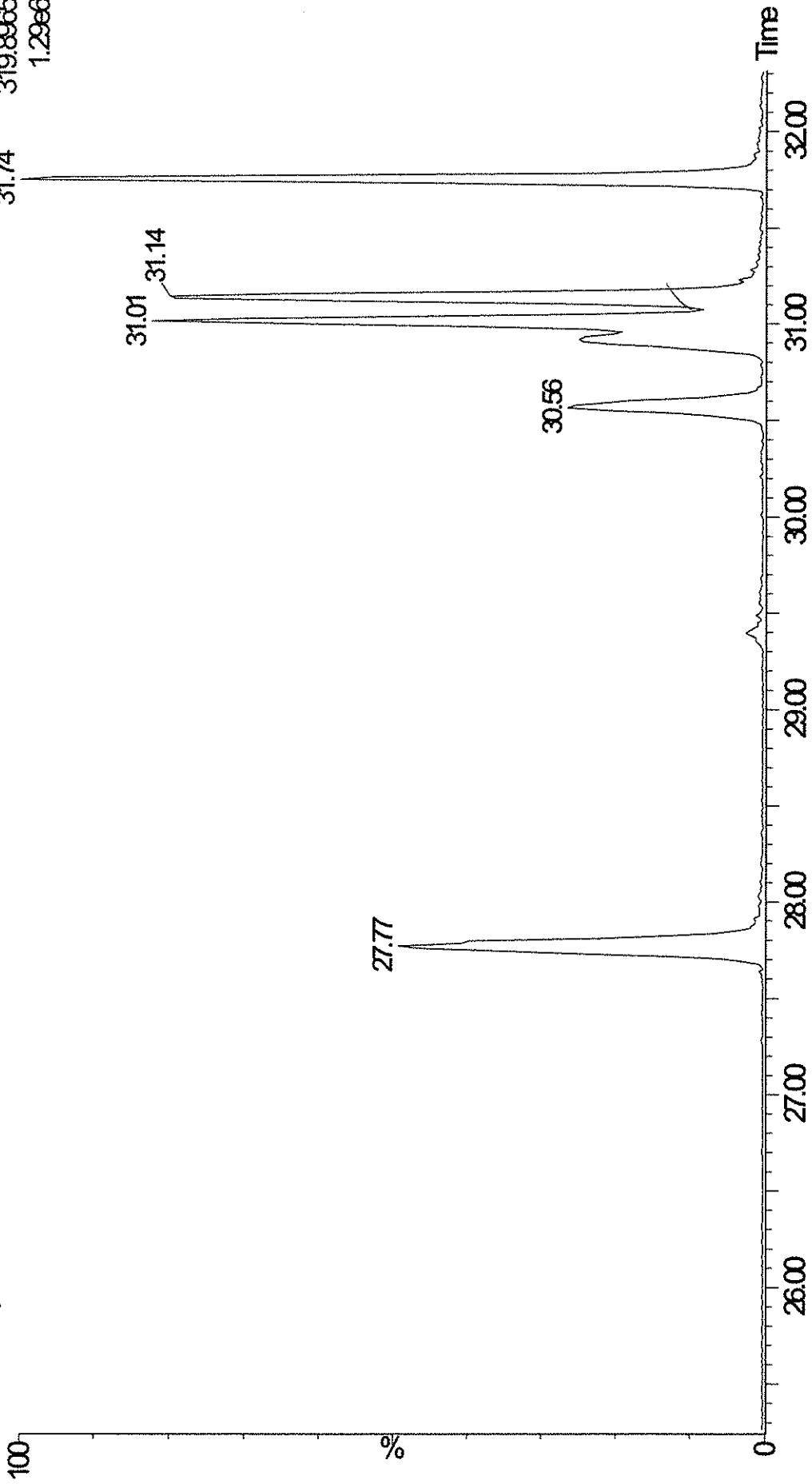
HRP750_2

26-Dec-2019 10:16:59

1: Voltage SIR 13 Channels EI+

31.74 319.8965

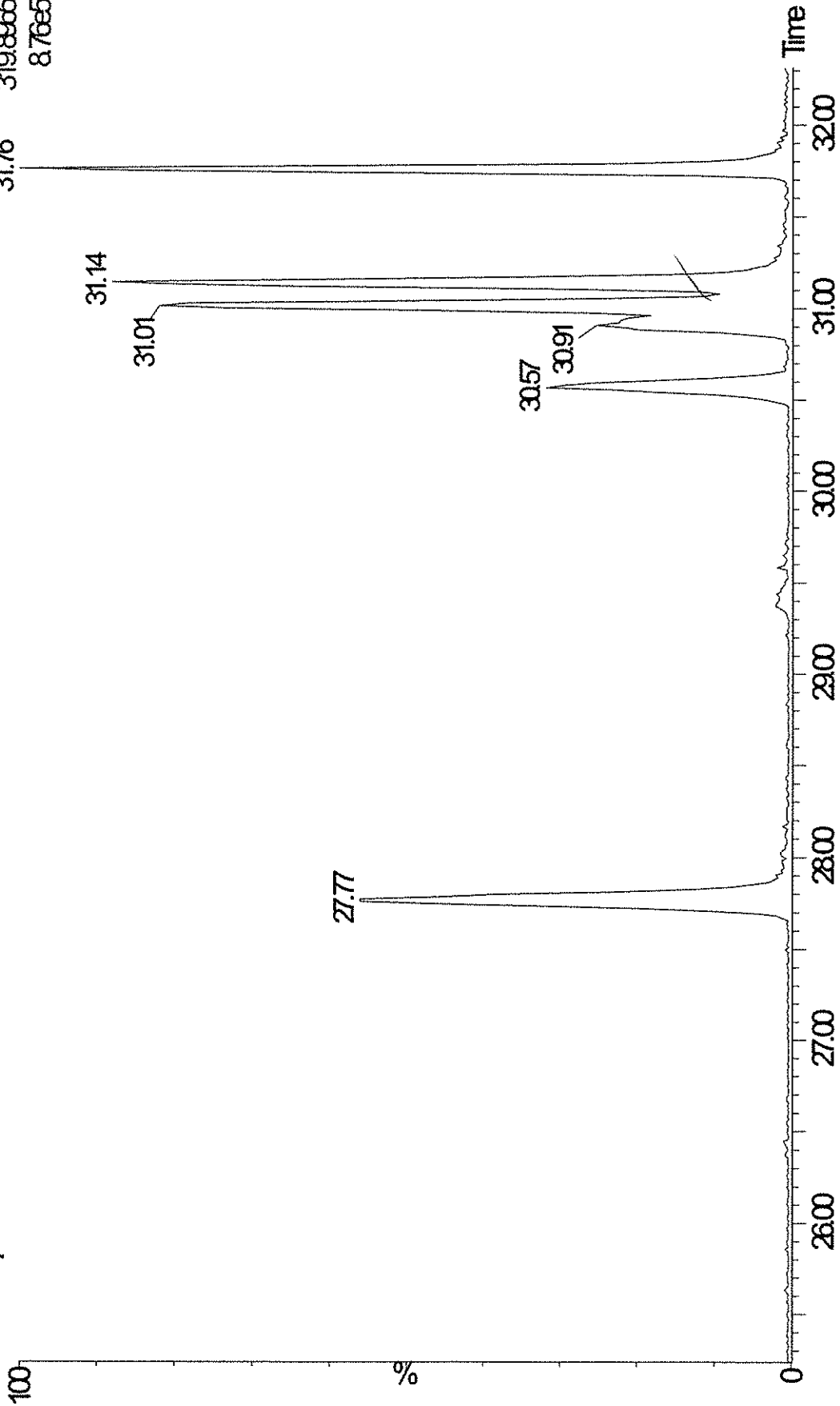
1.2966



COLUMN CHECK (2378-TCDD 11%)
CS3MT UD191018-02.1 QPS86
A23DEC19A_7-10

HRP750_2

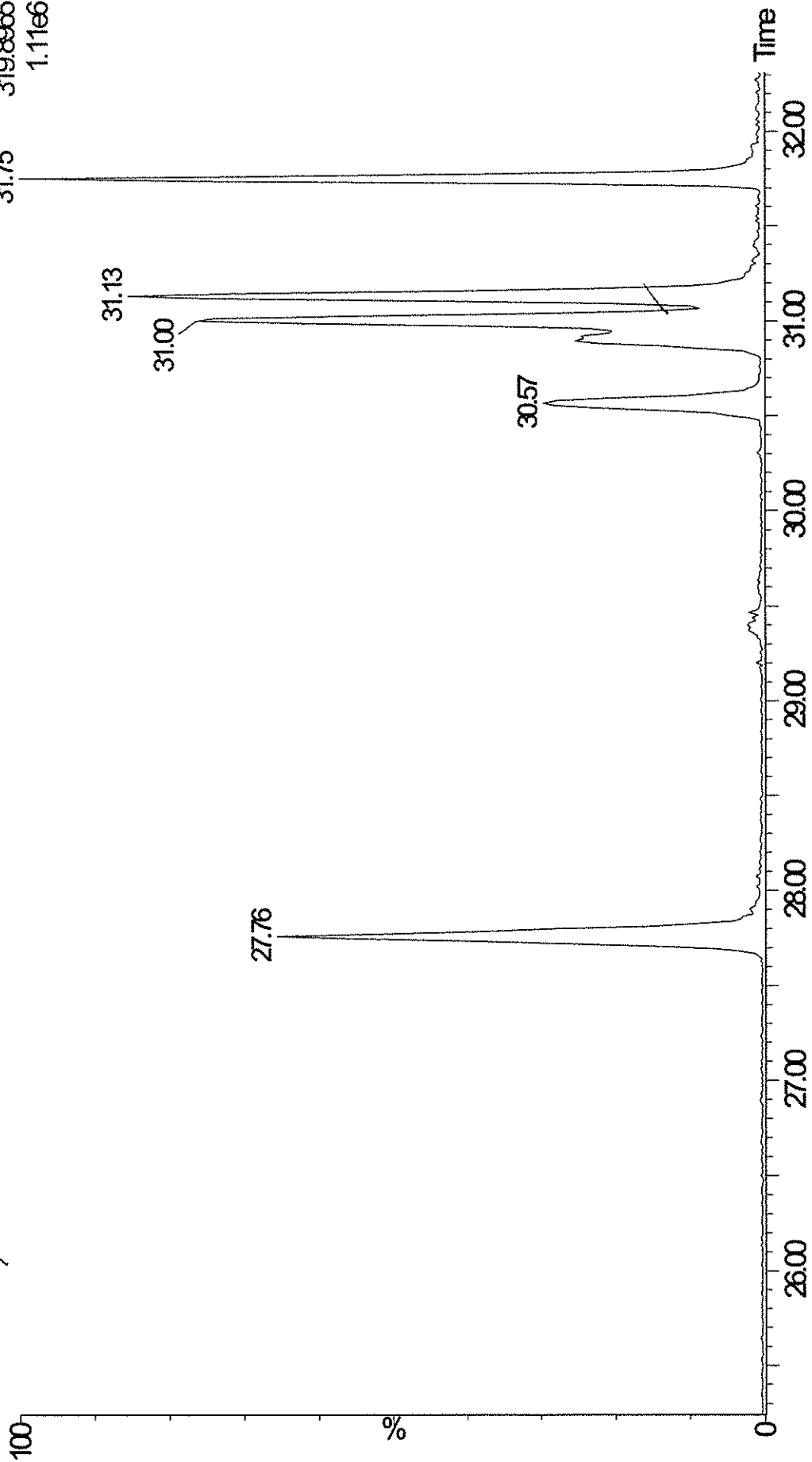
26-Dec-2019 18:30:39
1: Voltage SIR 13 Channels EI+
31.76 319.8865
8.76e5



COLUMN CHECK (2378-TCDD 11%)
CS3WT UD191018-02.1 CPS68
A23DEC19A_8-14

HRP750_2

27-Dec-2019 05:52:14
1: Voltage SIR 13 Channels EI+
31.75 319.8965
1.11e6



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:40:26 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:42:44 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methodb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.03
2	Last TCDF	31.81
3	First PeCDF	31.81
4	Last PeCDF	34.47
5	First HxCDF	34.97
6	Last HxCDF	37.24
7	First HpCDF	38.72
8	Last HpCDF	40.61
9	OCDF	44.44
10	First TCDD	27.76
11	2378-TCDD	31.12
12	Last TCDD	31.73
13	First PeCDD	32.71
14	Last PeCDD	34.29
15	First HxCDD	35.39
16	Last HxCDD	36.93
17	First HpCDD	39.05
18	Last HpCDD	39.96
19	OCDD	44.14

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A-1.qld

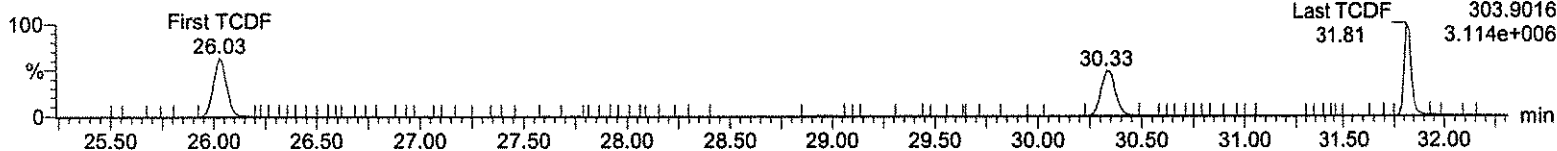
Last Altered: Tuesday, December 24, 2019 07:40:26 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:42:44 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

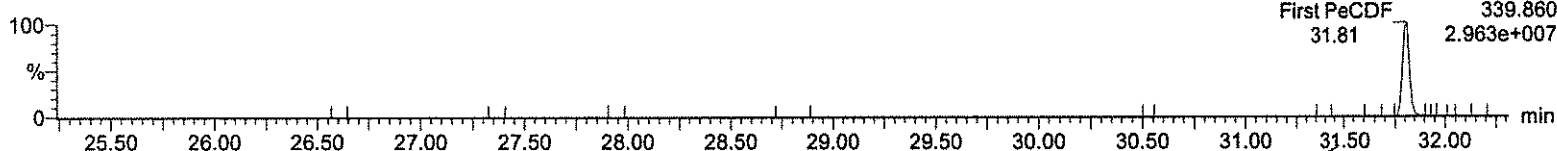
First TCDF

A23DEC19A-1



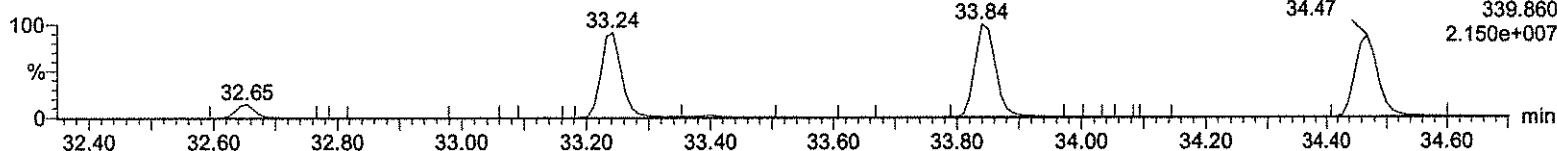
First PeCDF

A23DEC19A-1



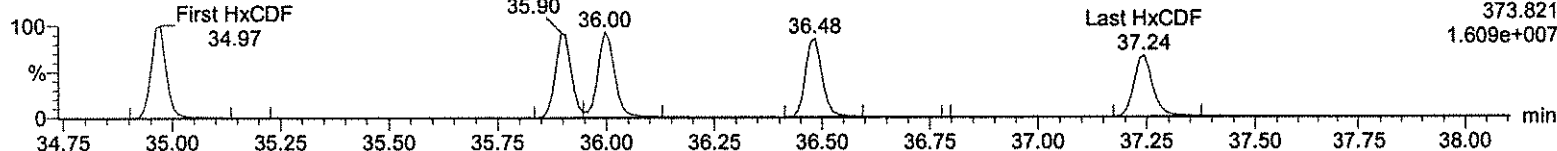
Last PeCDF

A23DEC19A-1



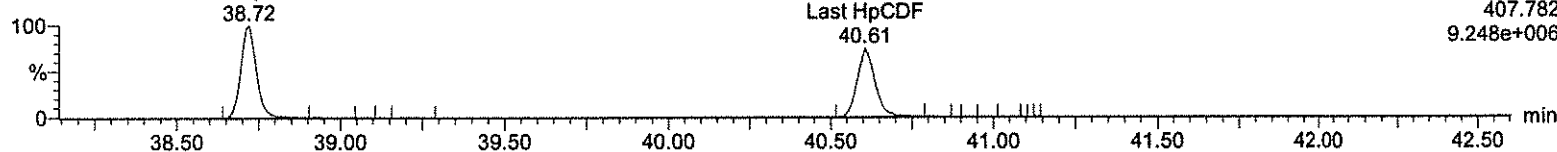
First HxCDF

A23DEC19A-1



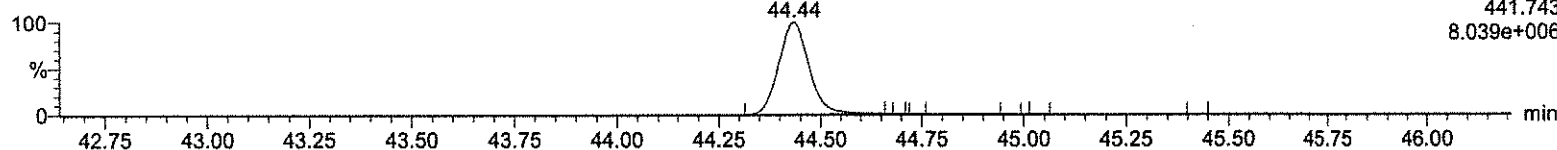
First HpCDF

A23DEC19A-1



OCDF

A23DEC19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:40:26 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:42:44 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

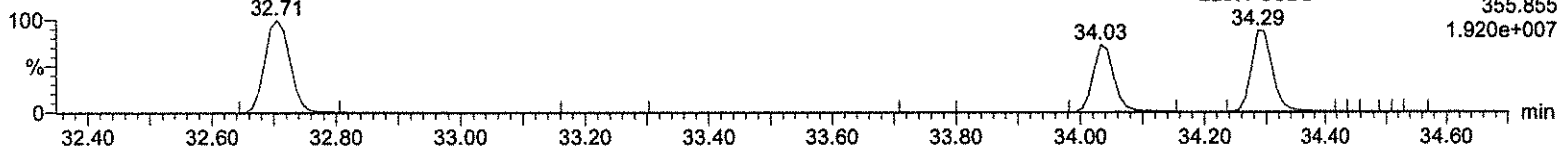
First TCDD

A23DEC19A-1



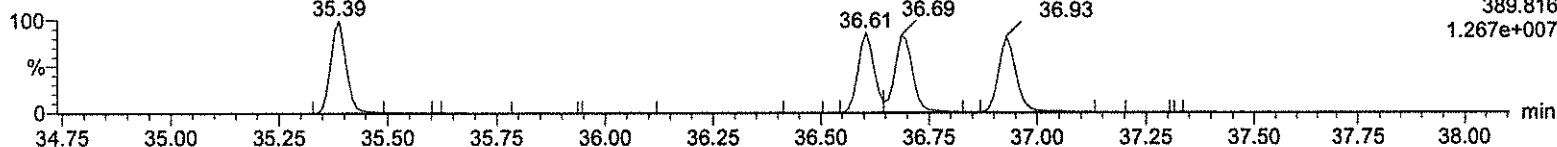
First PeCDD

A23DEC19A-1



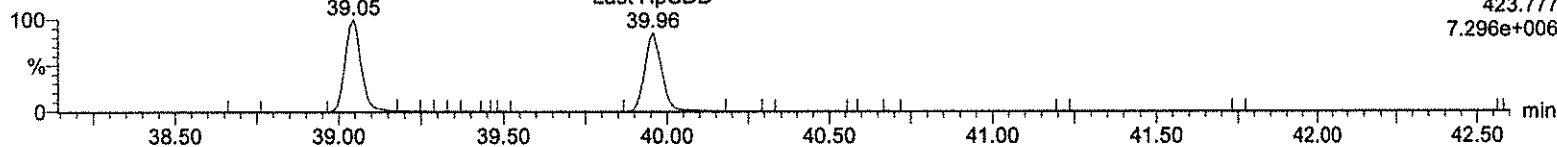
First HxCDD

A23DEC19A-1



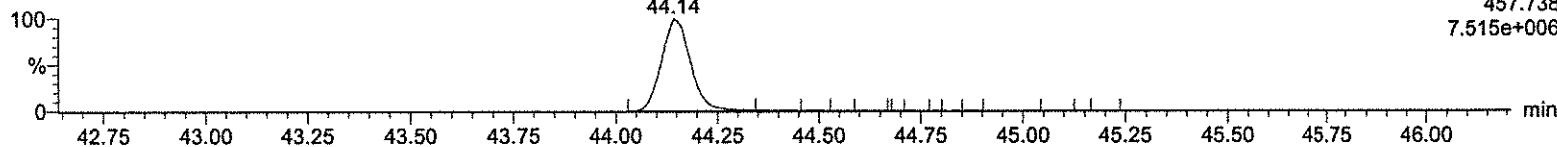
First HpCDD

A23DEC19A-1



OCDD

A23DEC19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:43:19 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:43:47 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.04
2	Last TCDF	31.83
3	First PeCDF	31.81
4	Last PeCDF	34.47
5	First HxCDF	34.97
6	Last HxCDF	37.24
7	First HpCDF	38.72
8	Last HpCDF	40.62
9	OCDF	44.44
10	First TCDD	27.76
11	2378-TCDD	31.13
12	Last TCDD	31.75
13	First PeCDD	32.72
14	Last PeCDD	34.30
15	First HxCDD	35.39
16	Last HxCDD	36.94
17	First HpCDD	39.05
18	Last HpCDD	39.97
19	OCDD	44.15

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A-15.qld

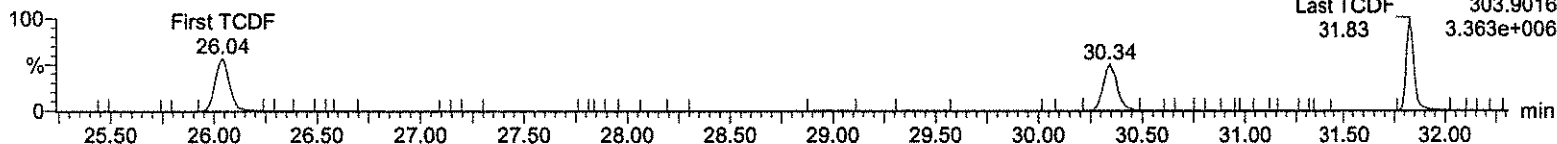
Last Altered: Tuesday, December 24, 2019 07:43:19 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:43:47 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

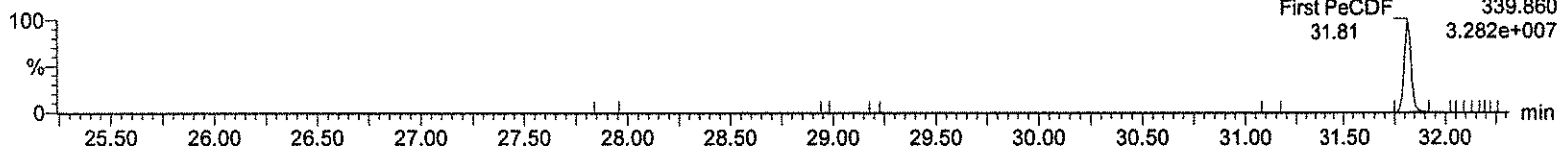
First TCDF

A23DEC19A-15



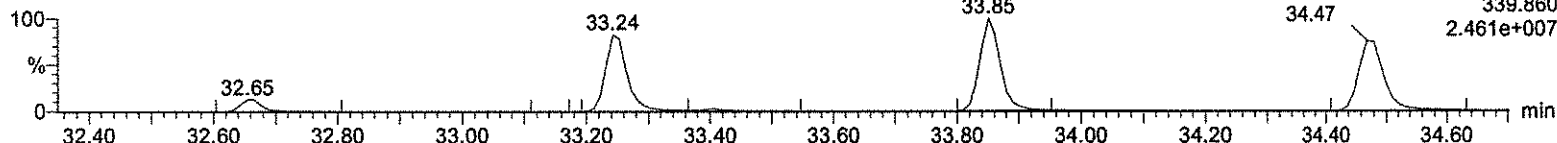
First PeCDF

A23DEC19A-15



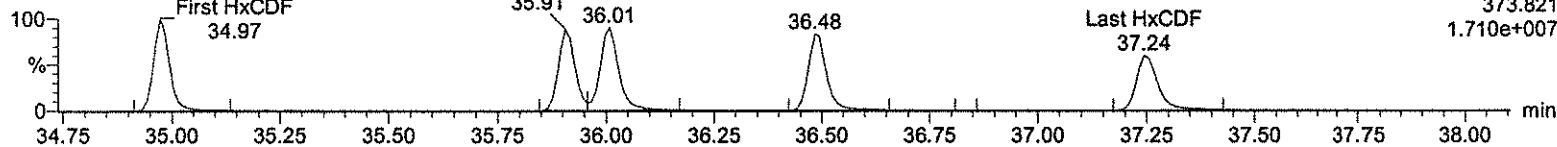
Last PeCDF

A23DEC19A-15



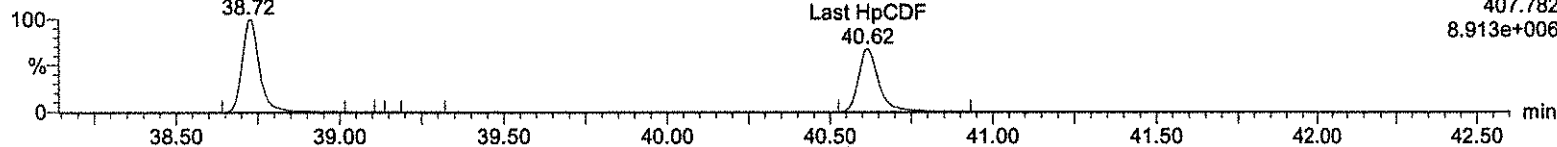
First HxCDF

A23DEC19A-15



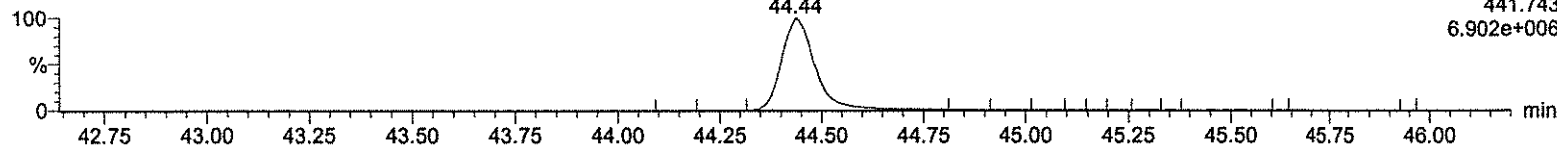
First HpCDF

A23DEC19A-15



OCDF

A23DEC19A-15



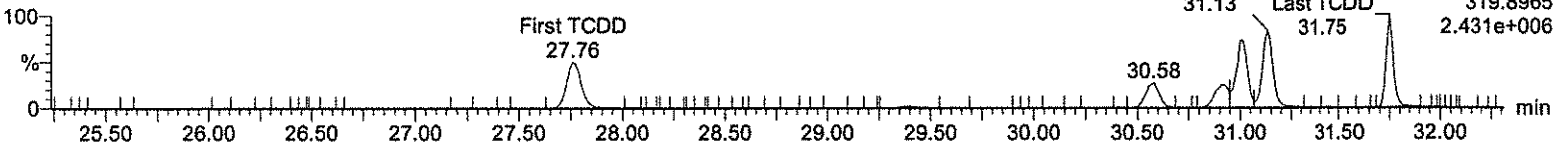
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:43:19 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:43:47 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

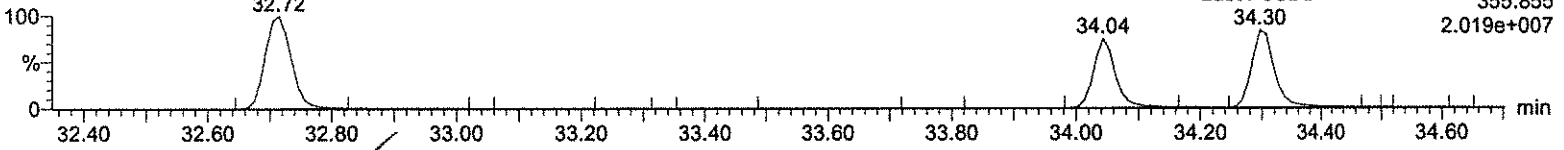
First TCDD

A23DEC19A-15



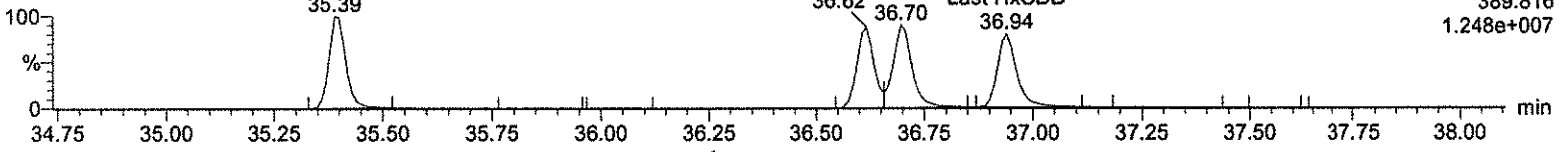
First PeCDD

A23DEC19A-15



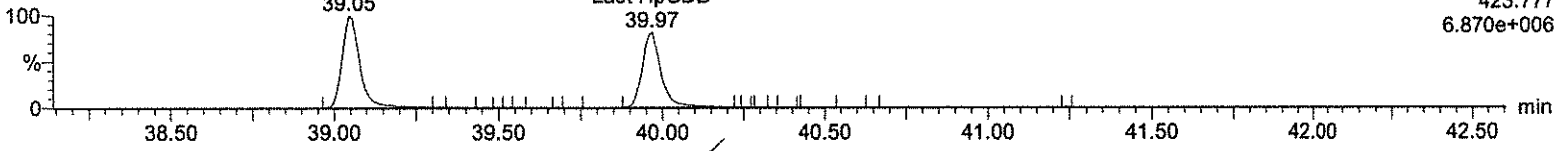
First HxCDD

A23DEC19A-15



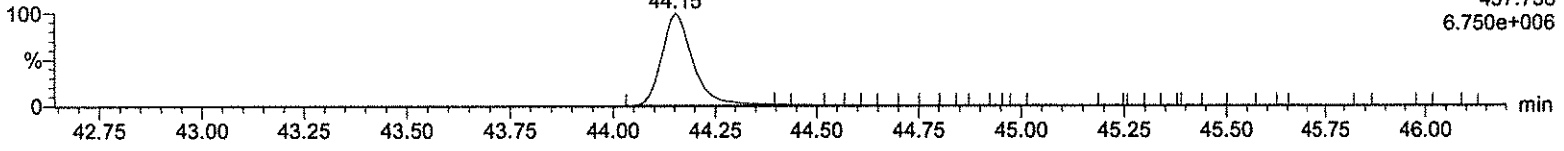
First HpCDD

A23DEC19A-15



OCDD

A23DEC19A-15



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_2-12.qld

Last Altered: Thursday, December 26, 2019 09:59:08 Eastern Standard Time
Printed: Thursday, December 26, 2019 09:59:49 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methodb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

Name	RT
1 First TCDF	26.04
2 Last TCDF	31.83
3 First PeCDF	31.81
4 Last PeCDF	34.48
5 First HxCDF	34.97
6 Last HxCDF	37.25
7 First HpCDF	38.73
8 Last HpCDF	40.82
9 OCDF	44.44
10 First TCDD	27.76
11 2378-TCDD	31.13
12 Last TCDD	31.75
13 First PeCDD	32.72
14 Last PeCDD	34.30
15 First HxCDD	35.40
16 Last HxCDD	36.94
17 First HpCDD	39.06
18 Last HpCDD	39.97
19 OCDD	44.16

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_2-12.qld

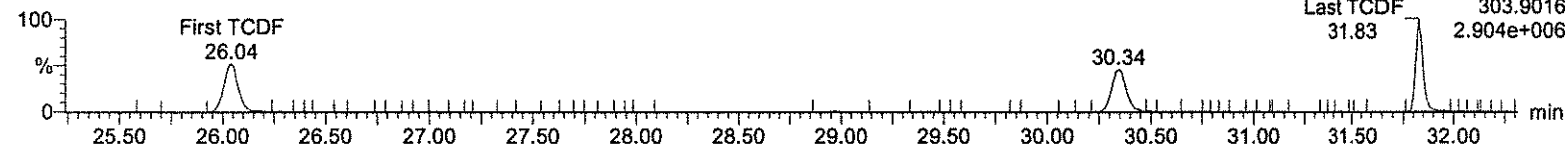
Last Altered: Thursday, December 26, 2019 09:59:08 Eastern Standard Time
Printed: Thursday, December 26, 2019 09:59:49 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2,
Task: HRP750_2, User: MJC

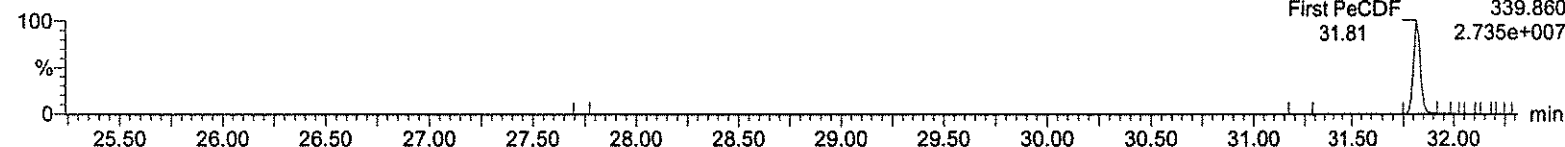
First TCDF

A23DEC19A_2-12



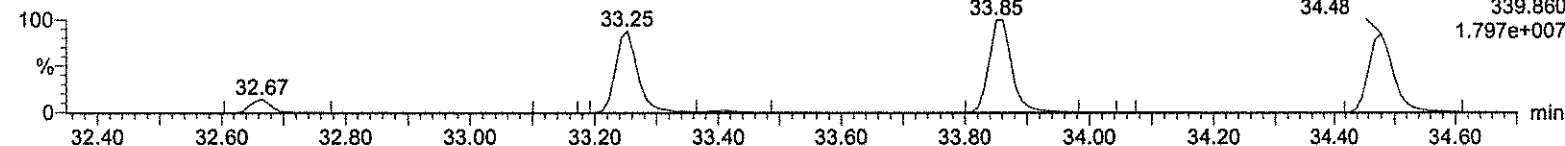
First PeCDF

A23DEC19A_2-12



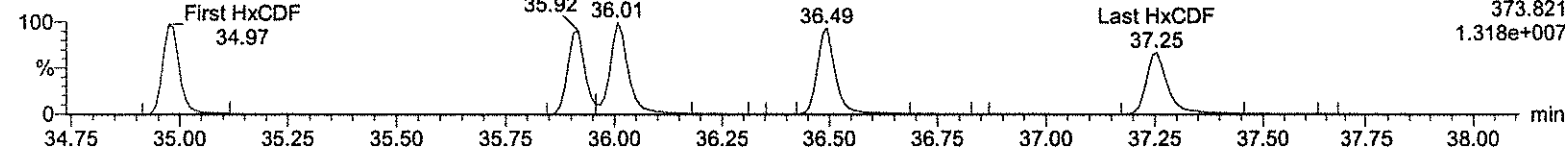
Last PeCDF

A23DEC19A_2-12



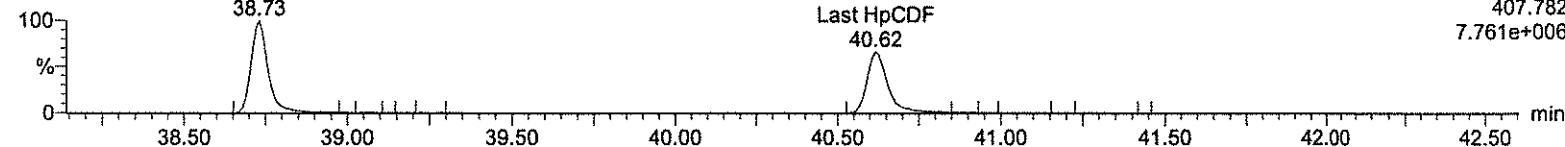
First HxCDF

A23DEC19A_2-12



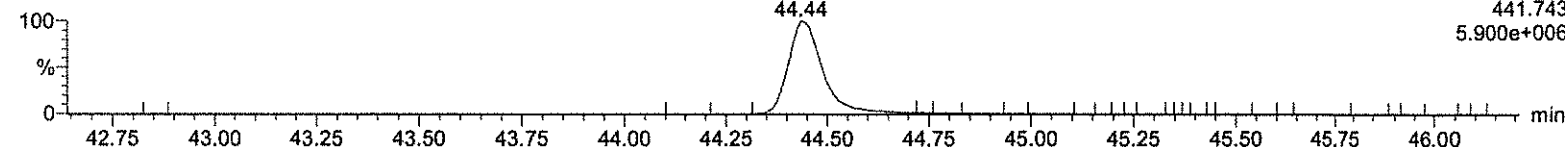
First HpCDF

A23DEC19A_2-12



OCDF

A23DEC19A_2-12



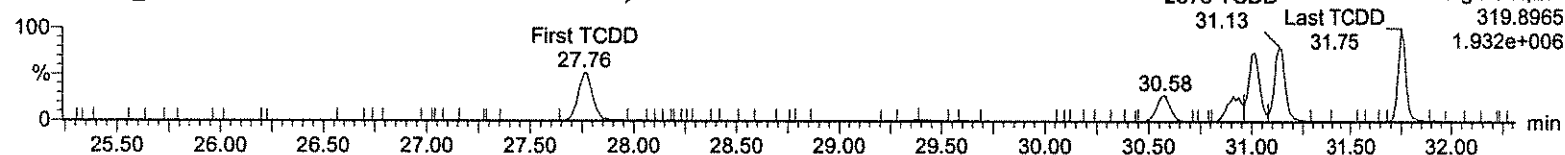
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_2-12.qld

Last Altered: Thursday, December 26, 2019 09:59:08 Eastern Standard Time
Printed: Thursday, December 26, 2019 09:59:49 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2,
Task: HRP750_2, User: MJC

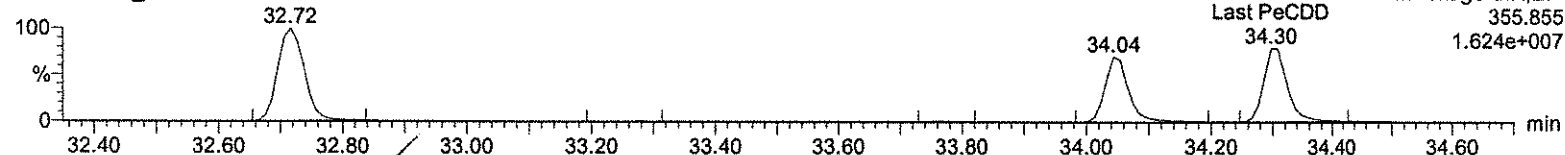
First TCDD

A23DEC19A_2-12



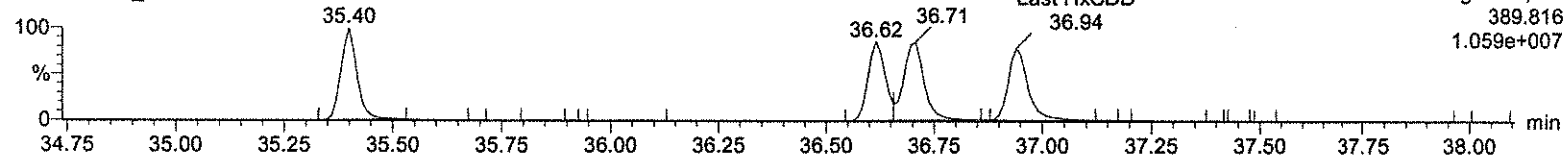
First PeCDD

A23DEC19A_2-12



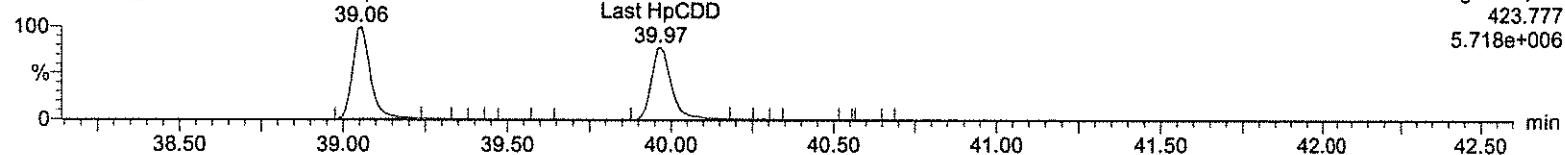
First HxCDD

A23DEC19A_2-12



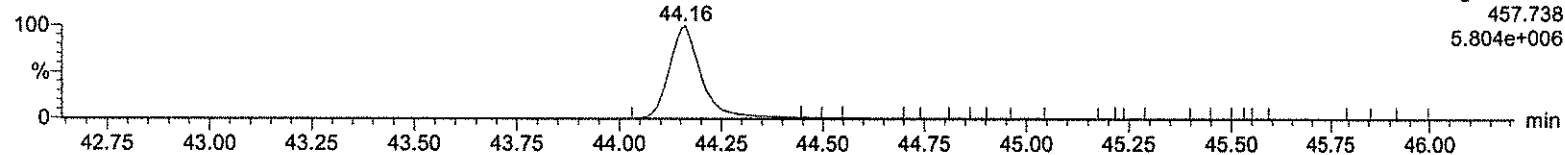
First HpCDD

A23DEC19A_2-12



OCDD

A23DEC19A_2-12



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_3-14.qld

Last Altered: Thursday, December 26, 2019 10:31:51 Eastern Standard Time
Printed: Thursday, December 26, 2019 10:34:24 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Method\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\Default.pro\Curved\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.03
2	Last TCDF	31.81
3	First PeCDF	31.81
4	Last PeCDF	34.47
5	First HxCDF	34.96
6	Last HxCDF	37.24
7	First HpCDF	38.72
8	Last HpCDF	40.61
9	OCDF	44.44
10	First TCDD	27.76
11	2378-TCDD	31.12
12	Last TCDD	31.74
13	First PeCDD	32.71
14	Last PeCDD	34.30
15	First HxCDD	35.39
16	Last HxCDD	36.93
17	First HpCDD	39.05
18	Last HpCDD	39.96
19	OCDD	44.15

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_3-14.qld

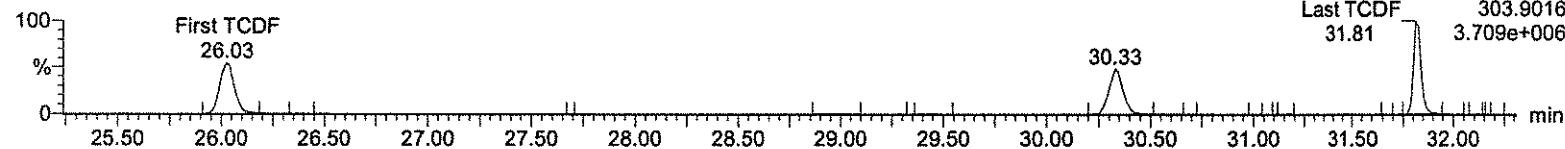
Last Altered: Thursday, December 26, 2019 10:31:51 Eastern Standard Time
Printed: Thursday, December 26, 2019 10:34:24 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3,
Task: HRP750_2, User: MJC

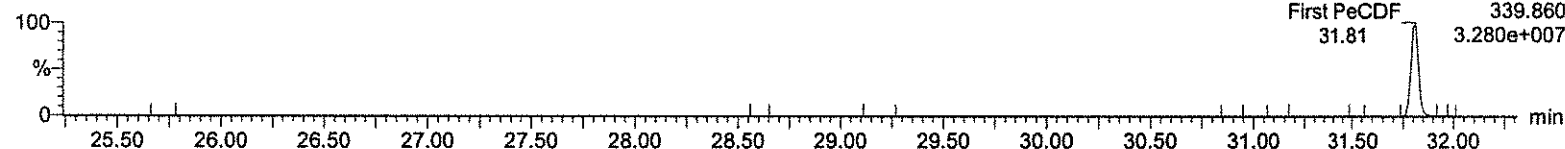
First TCDF

A23DEC19A_3-14



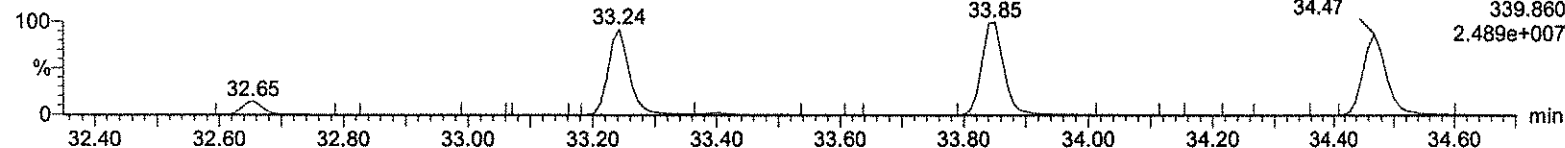
First PeCDF

A23DEC19A_3-14



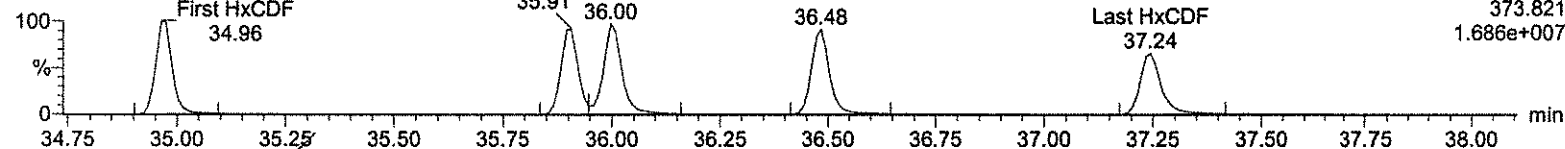
Last PeCDF

A23DEC19A_3-14



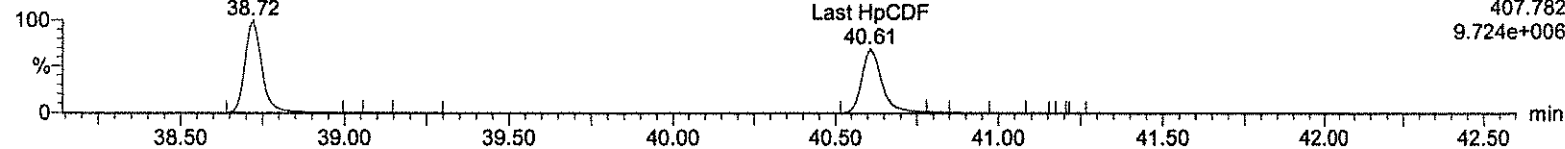
First HxCDF

A23DEC19A_3-14



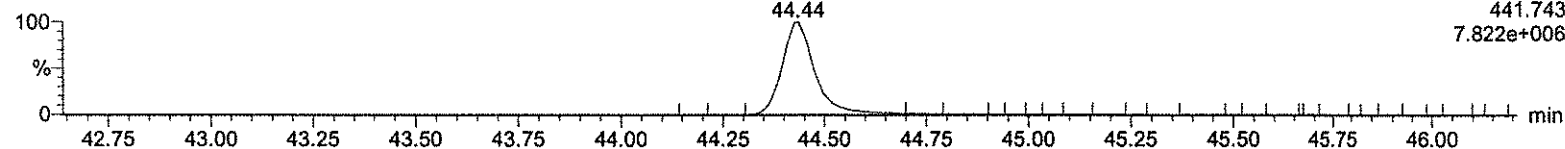
First HpCDF

A23DEC19A_3-14 First HpCDF



OCDF

A23DEC19A_3-14



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_3-14.qld

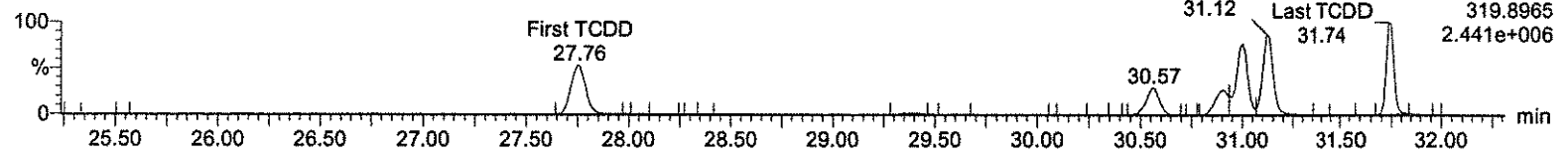
Last Altered: Thursday, December 26, 2019 10:31:51 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:34:24 Eastern Standard Time

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

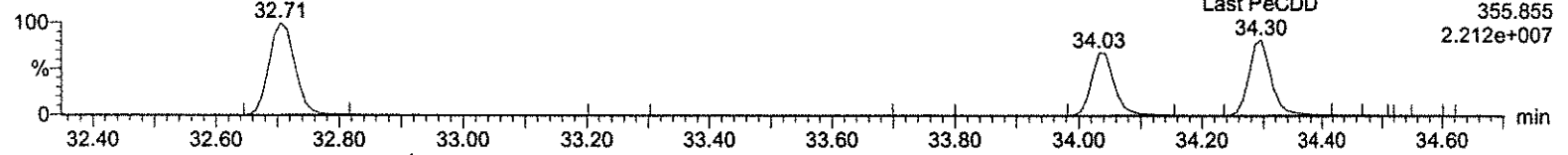
First TCDD

A23DEC19A_3-14



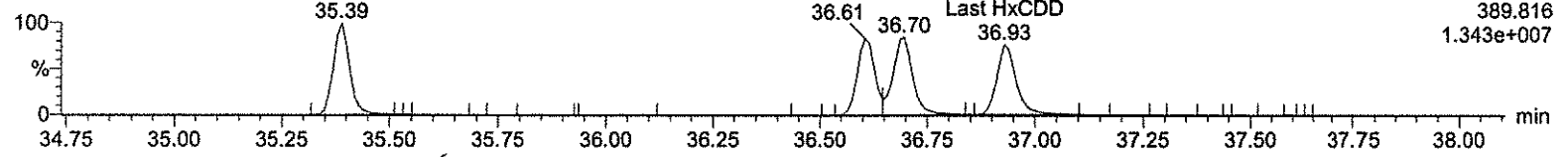
First PeCDD

A23DEC19A_3-14



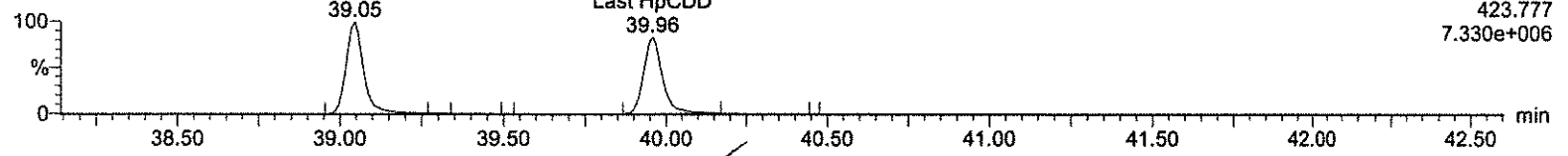
First HxCDD

A23DEC19A_3-14



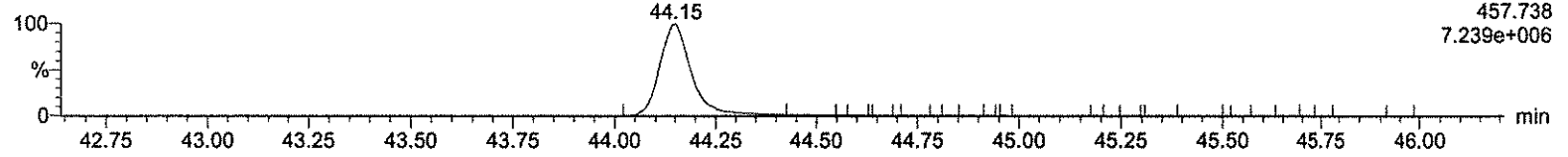
First HpCDD

A23DEC19A_3-14



OCDD

A23DEC19A_3-14



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:55:58 Eastern Standard Time
Printed: Thursday, December 26, 2019 10:56:33 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Method\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.04
2	Last TCDF	31.83
3	First PeCDF	31.81
4	Last PeCDF	34.47
5	First HxCDF	34.97
6	Last HxCDF	37.24
7	First HpCDF	38.72
8	Last HpCDF	40.62
9	OCDF	44.44
10	First TCDD	27.76
11	2378-TCDD	31.13
12	Last TCDD	31.75
13	First PeCDD	32.72
14	Last PeCDD	34.30
15	First HxCDD	35.39
16	Last HxCDD	36.94
17	First HpCDD	39.05
18	Last HpCDD	39.96
19	OCDD	44.15

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:55:58 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:56:33 Eastern Standard Time

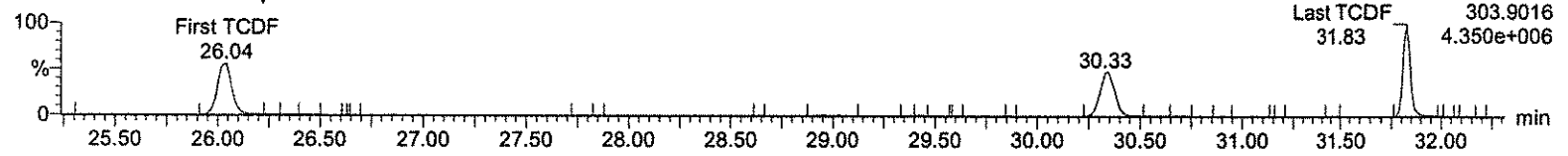
Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4,
Task: HRP750_2, User: MJC

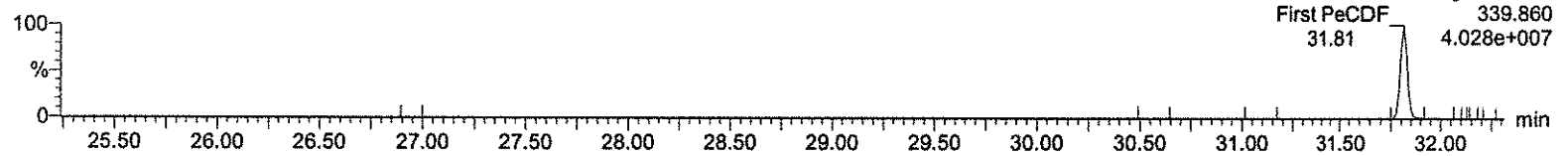
First TCDF

A23DEC19A_4-12



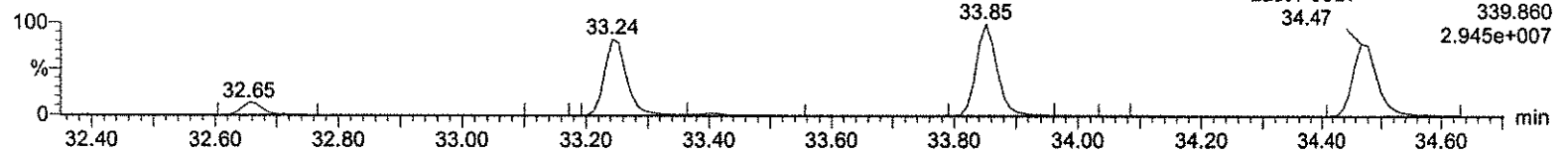
First PeCDF

A23DEC19A_4-12



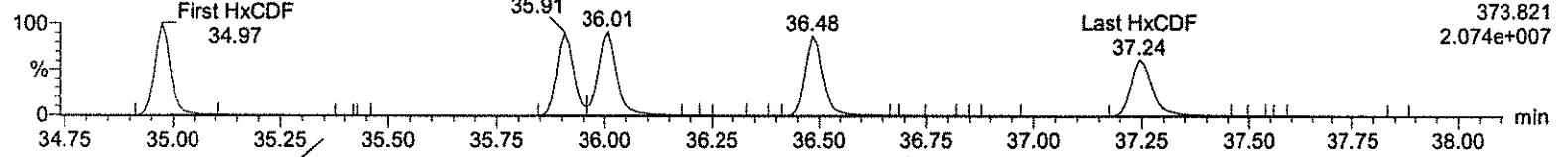
Last PeCDF

A23DEC19A_4-12



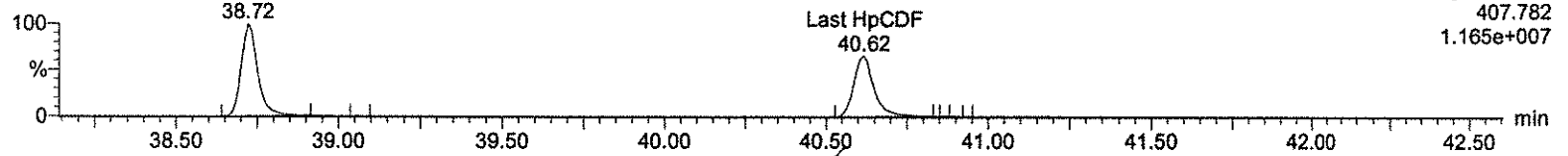
First HxCDF

A23DEC19A_4-12



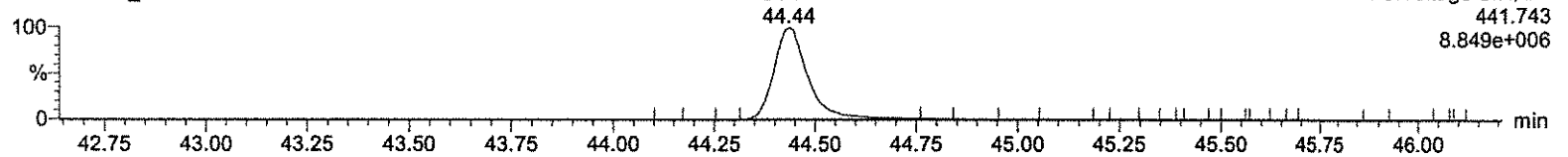
First HpCDF

A23DEC19A_4-12 First HpCDF



OCDF

A23DEC19A_4-12



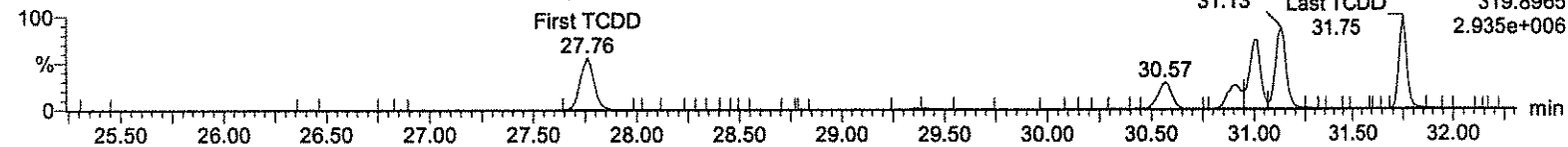
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:55:58 Eastern Standard Time
Printed: Thursday, December 26, 2019 10:56:33 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4,
Task: HRP750_2, User: MJC

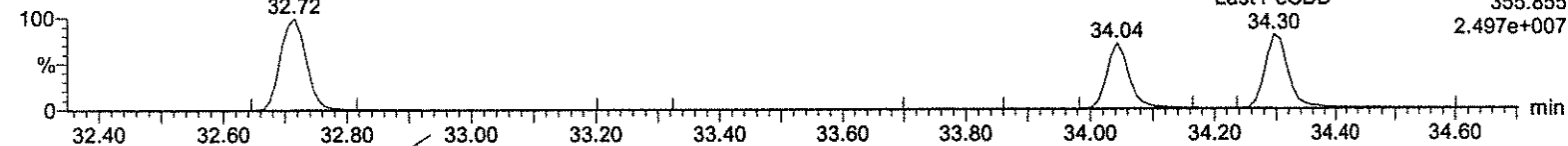
First TCDD

A23DEC19A_4-12



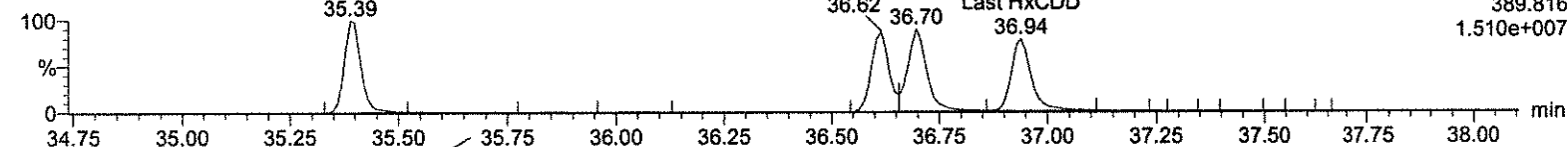
First PeCDD

A23DEC19A_4-12



First HxCDD

A23DEC19A_4-12



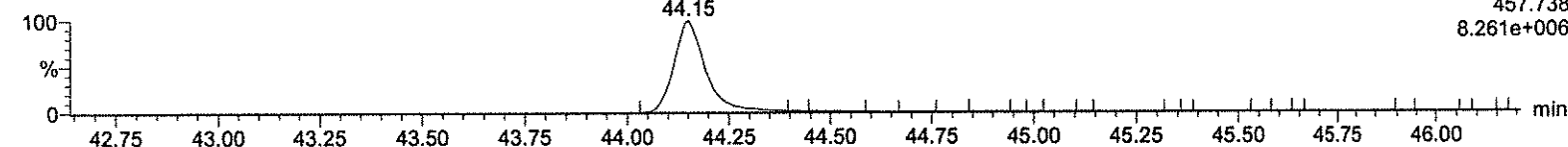
First HpCDD

A23DEC19A_4-12



OCDD

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_5-14.qld

Last Altered: Thursday, December 26, 2019 11:23:28 Eastern Standard Time
Printed: Thursday, December 26, 2019 11:24:01 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.04
2	Last TCDF	31.83
3	First PeCDF	31.81
4	Last PeCDF	34.47
5	First HxCDF	34.97
6	Last HxCDF	37.24
7	First HpCDF	38.72
8	Last HpCDF	40.61
9	OCDF	44.44
10	First TCDD	27.76
11	2378-TCDD	31.13
12	Last TCDD	31.75
13	First PeCDD	32.71
14	Last PeCDD	34.30
15	First HxCDD	35.39
16	Last HxCDD	36.93
17	First HpCDD	39.05
18	Last HpCDD	39.96
19	OCDD	44.15

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_5-14.qld

Last Altered: Thursday, December 26, 2019 11:23:28 Eastern Standard Time

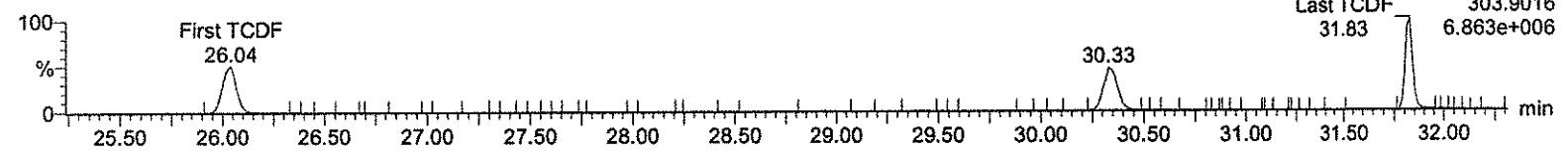
Printed: Thursday, December 26, 2019 11:24:01 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5,
Task: HRP750_2, User: MJC

First TCDF

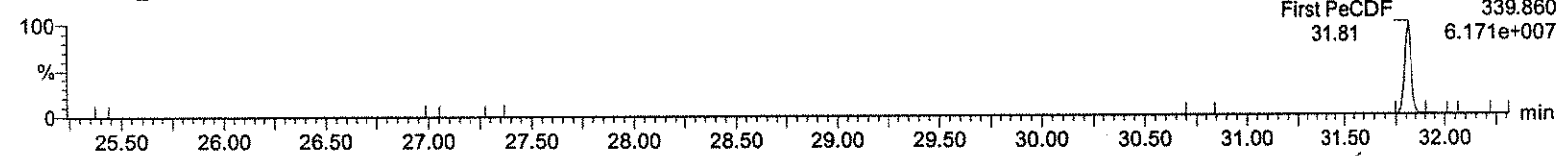
A23DEC19A_5-14



F1:Voltage SIR,EI+
303.9016
6.863e+006

First PeCDF

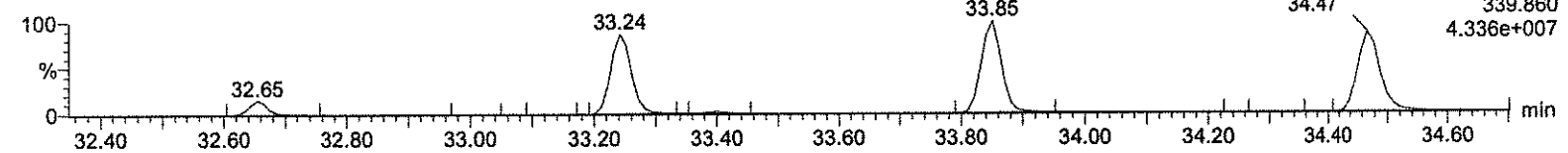
A23DEC19A_5-14



F1:Voltage SIR,EI+
339.860
6.171e+007

Last PeCDF

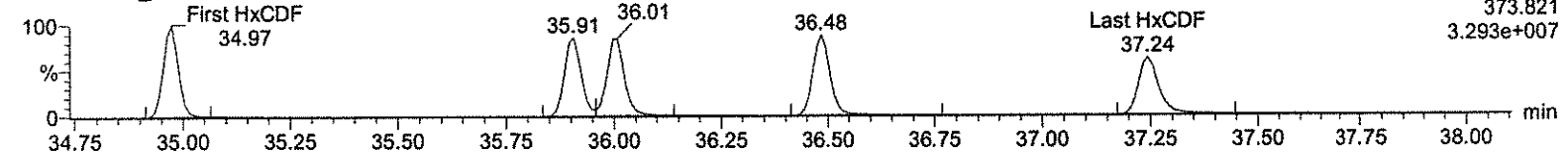
A23DEC19A_5-14



F2:Voltage SIR,EI+
339.860
4.336e+007

First HxCDF

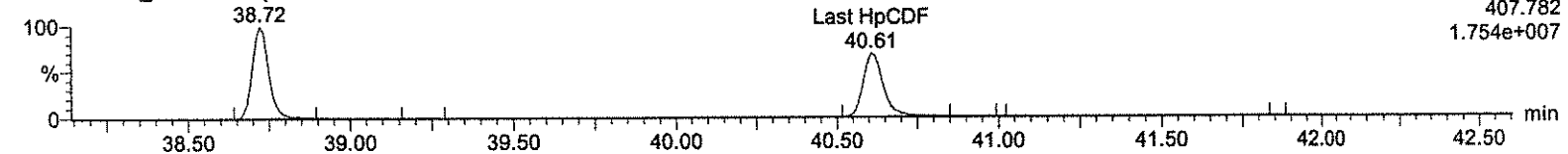
A23DEC19A_5-14



F3:Voltage SIR,EI+
373.821
3.293e+007

First HpCDF

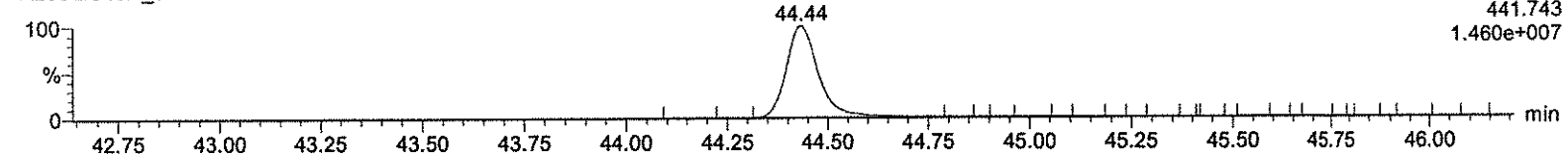
A23DEC19A_5-14 First HpCDF



F4:Voltage SIR,EI+
407.782
1.754e+007

OCDF

A23DEC19A_5-14



F5:Voltage SIR,EI+
441.743
1.460e+007

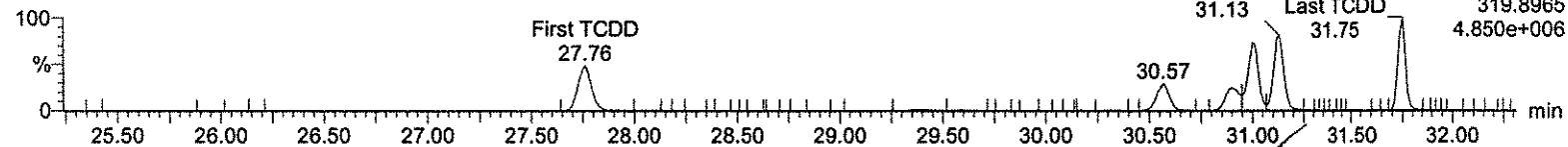
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_5-14.qld

Last Altered: Thursday, December 26, 2019 11:23:28 Eastern Standard Time
Printed: Thursday, December 26, 2019 11:24:01 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

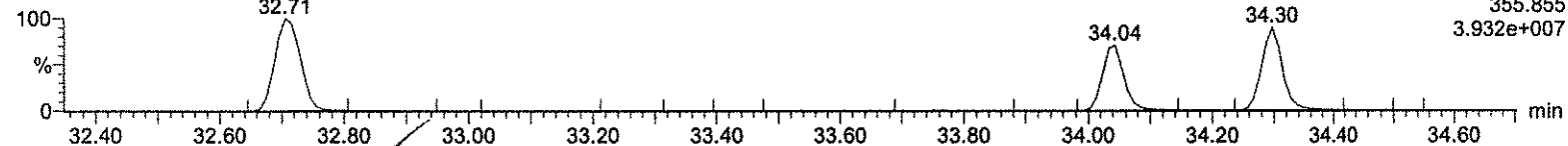
First TCDD

A23DEC19A_5-14



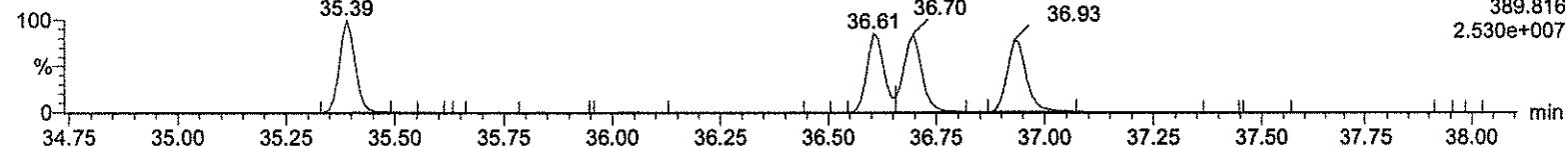
First PeCDD

A23DEC19A_5-14



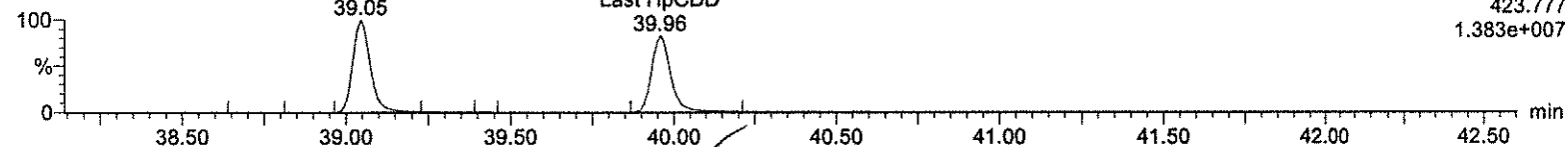
First HxCDD

A23DEC19A_5-14



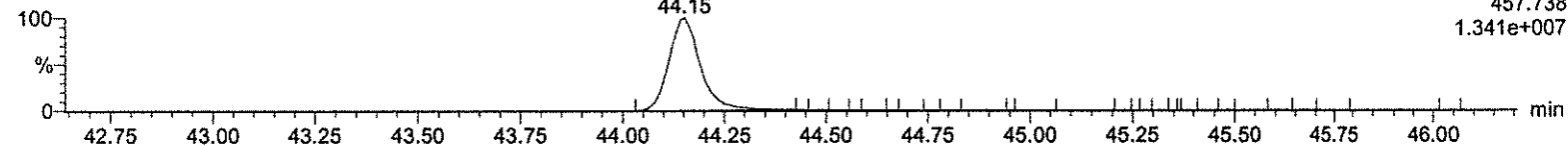
First HpCDD

A23DEC19A_5-14



OCDD

A23DEC19A_5-14



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_6-14.qld

Last Altered: Thursday, December 26, 2019 11:33:53 Eastern Standard Time
Printed: Thursday, December 26, 2019 11:34:42 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methodb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08.JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.05
2	Last TCDF	31.84
3	First PeCDF	31.82
4	Last PeCDF	34.48
5	First HxCDF	34.98
6	Last HxCDF	37.25
7	First HpCDF	38.73
8	Last HpCDF	40.63
9	OCDF	44.45
10	First TCDD	27.77
11	2378-TCDD	31.14
12	Last TCDD	31.74
13	First PeCDD	32.71
14	Last PeCDD	34.30
15	First HxCDD	35.40
16	Last HxCDD	36.94
17	First HpCDD	39.06
18	Last HpCDD	39.97
19	OCDD	44.15

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_6-14.qid

Last Altered: Thursday, December 26, 2019 11:33:53 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:34:42 Eastern Standard Time

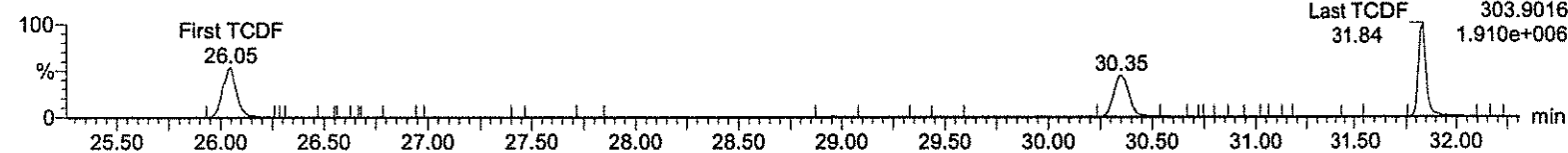
Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

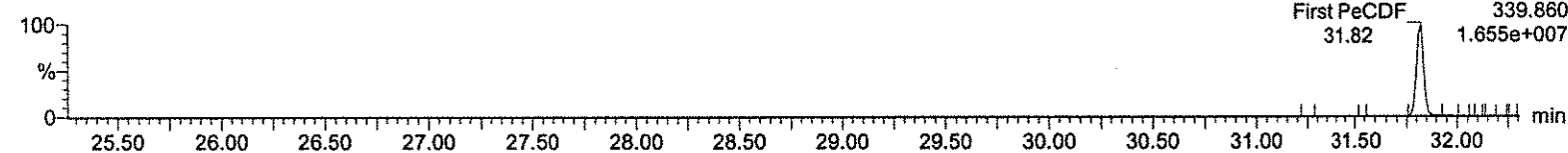
First TCDF

A23DEC19A_6-14



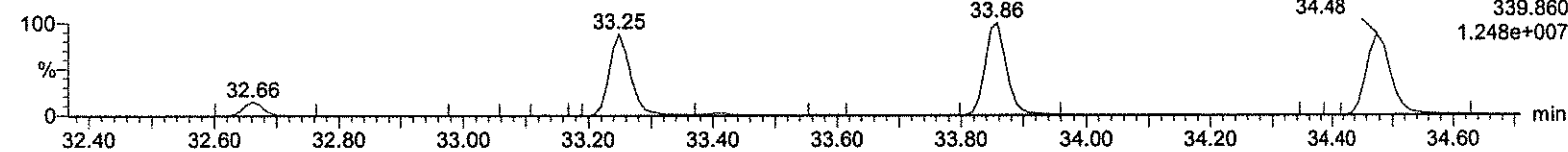
First PeCDF

A23DEC19A_6-14



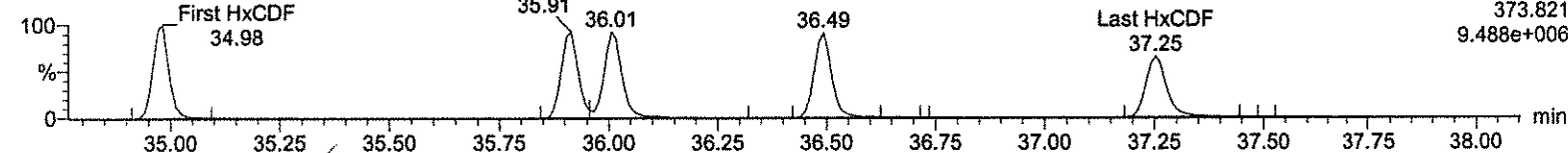
Last PeCDF

A23DEC19A_6-14



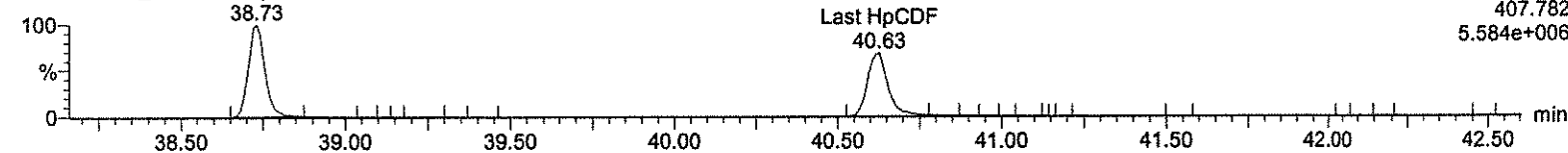
First HxCDF

A23DEC19A_6-14



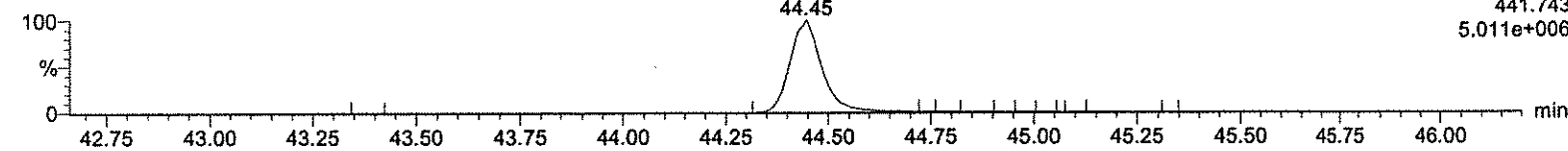
First HpCDF

A23DEC19A_6-14 First HpCDF



OCDF

A23DEC19A_6-14



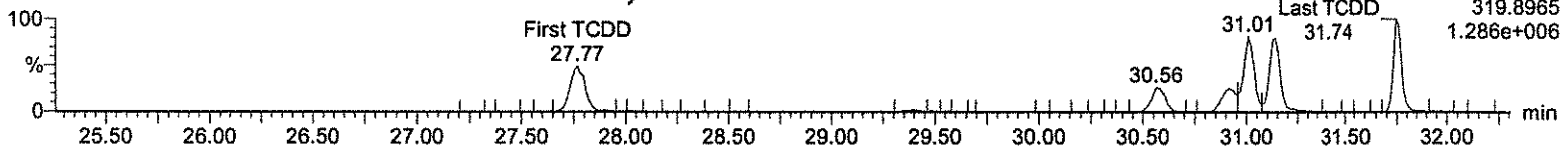
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_6-14.qld

Last Altered: Thursday, December 26, 2019 11:33:53 Eastern Standard Time
Printed: Thursday, December 26, 2019 11:34:42 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6,
Task: HRP750_2, User: MJC

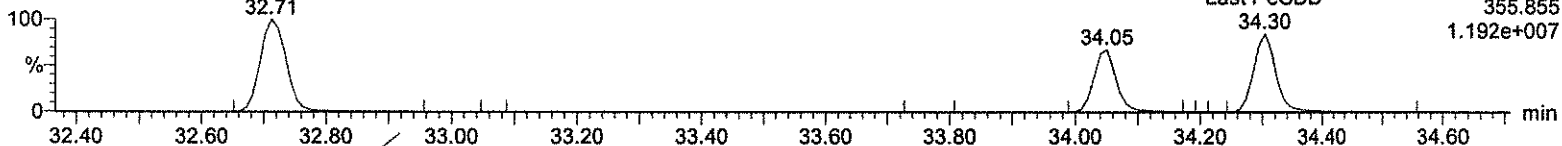
First TCDD

A23DEC19A_6-14



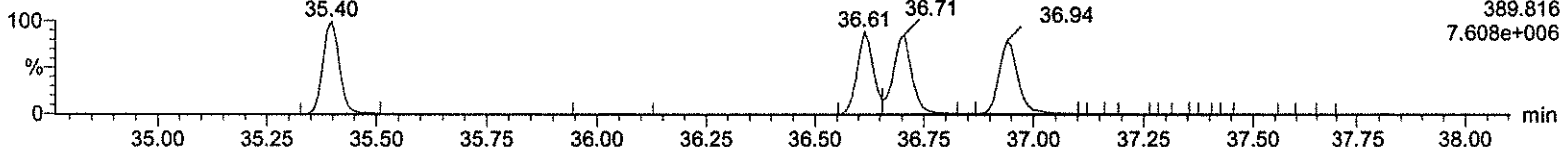
First PeCDD

A23DEC19A_6-14



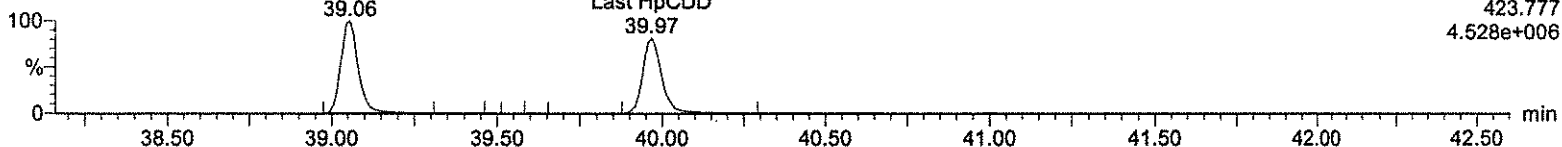
First HxCDD

A23DEC19A_6-14



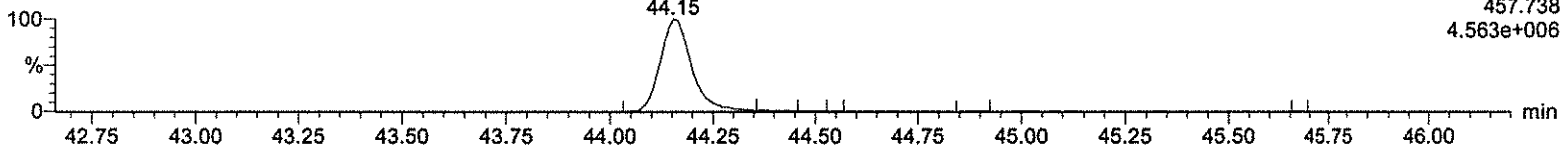
First HpCDD

A23DEC19A_6-14



OCDD

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_7-10.qld

Last Altered: Friday, December 27, 2019 09:03:18 Eastern Standard Time
Printed: Friday, December 27, 2019 09:03:51 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methodb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\DLM-A08.JUL19A.cdb 09 Jul 2019 09:49:09

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: , Job: A23DEC19A_7, Task: HRP750_2, User: MJC

Name	RT
First TCDF	26.04
Last TCDF	31.83
First PeCDF	31.83
Last PeCDF	34.48
First HxCDF	34.98
Last HxCDF	37.25
First HpCDF	38.73
Last HpCDF	40.63
OCDF	44.45
First TCDD	27.77
2378-TCDD	31.14
Last TCDD	31.76
First PeCDD	32.72
Last PeCDD	34.31
First HxCDD	35.40
Last HxCDD	36.95
First HpCDD	39.06
Last HpCDD	39.97
OCDD	44.16

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_7-10.qld

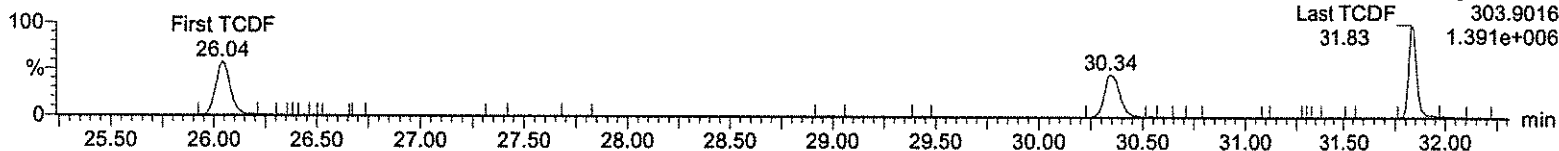
Last Altered: Friday, December 27, 2019 09:03:18 Eastern Standard Time
Printed: Friday, December 27, 2019 09:03:51 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\DLM-A08JUL19A.cdb 09 Jul 2019 09:49:09

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

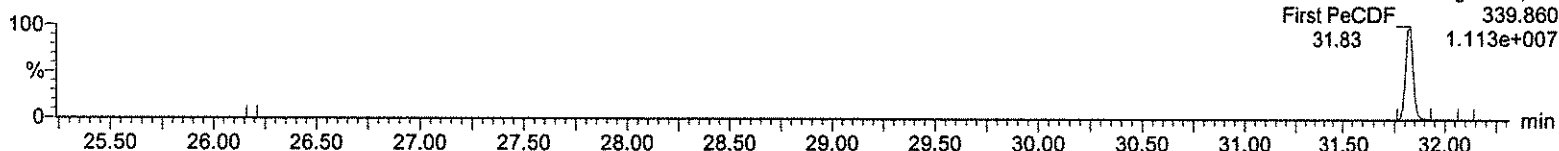
First TCDF

A23DEC19A_7-10



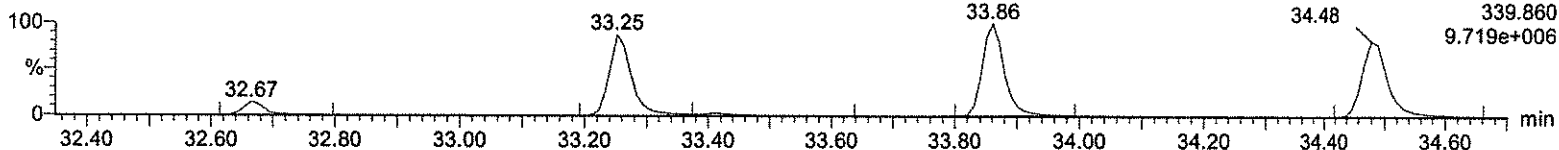
First PeCDF

A23DEC19A_7-10



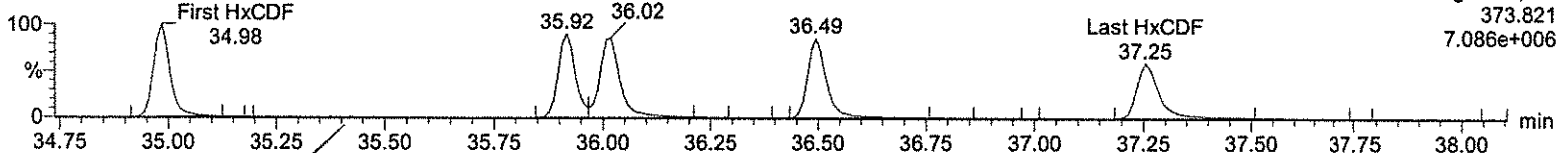
Last PeCDF

A23DEC19A_7-10



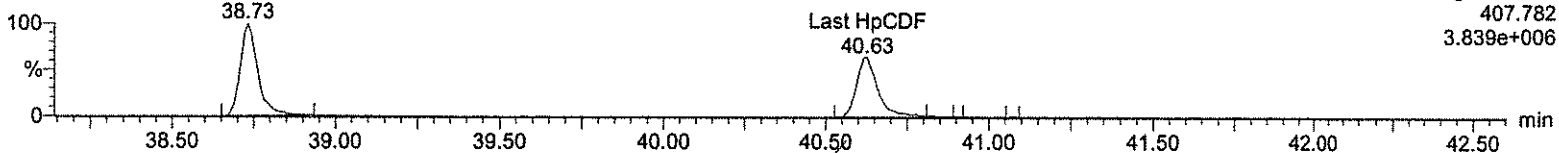
First HxCDF

A23DEC19A_7-10



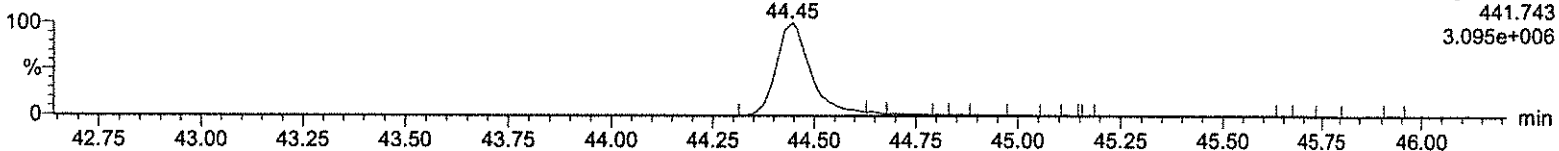
First HpCDF

A23DEC19A_7-10 First HpCDF



OCDF

A23DEC19A_7-10



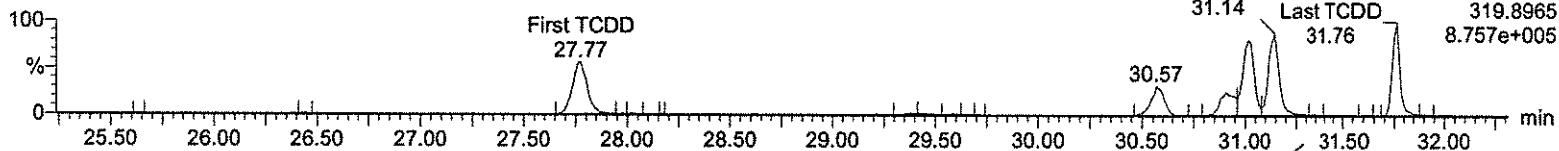
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_7-10.qld

Last Altered: Friday, December 27, 2019 09:03:18 Eastern Standard Time
Printed: Friday, December 27, 2019 09:03:51 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

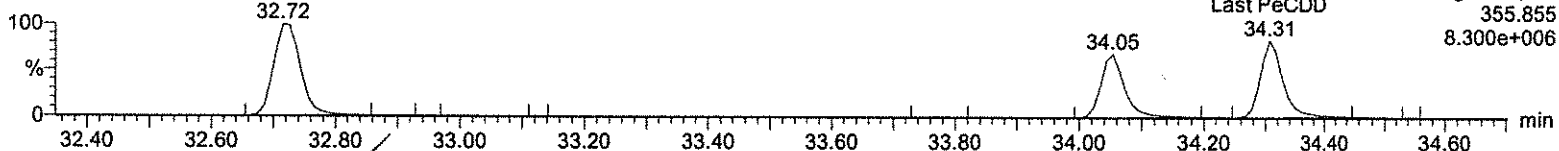
First TCDD

A23DEC19A_7-10



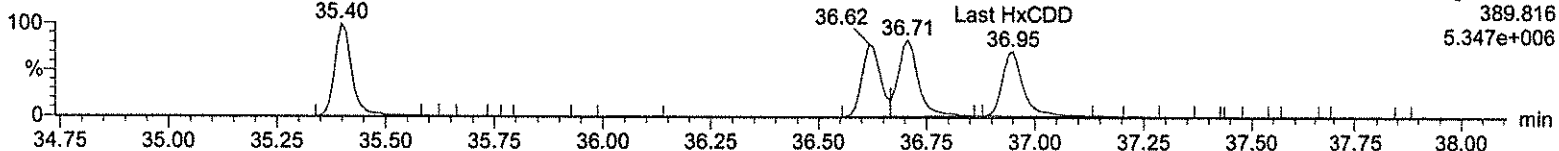
First PeCDD

A23DEC19A_7-10



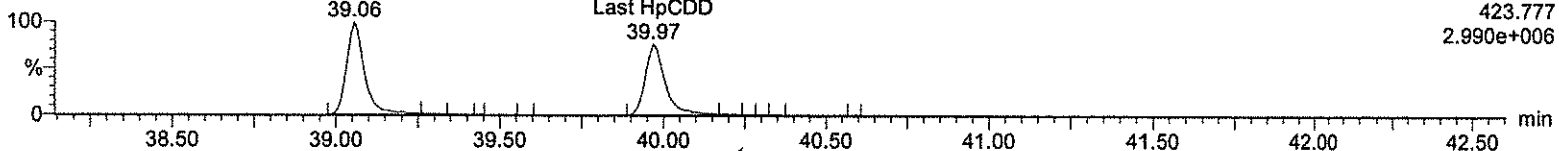
First HxCDD

A23DEC19A_7-10



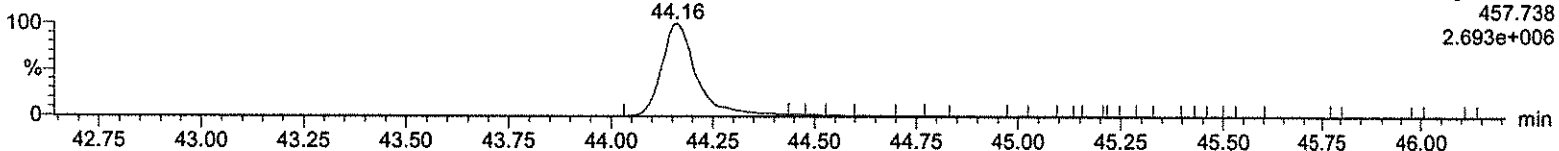
First HpCDD

A23DEC19A_7-10



OCDD

A23DEC19A_7-10



MassLynx 4.1
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_8-14.qld
Last Altered: Friday, December 27, 2019 11:52:26 Eastern Standard Time
Printed: Friday, December 27, 2019 11:53:05 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Method\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\Default.pro\Curved\IDL-M-A08JUL19A.cdb 09 Jul 2019 09:49:09

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: , Job: A23DEC19A_8, Task: HRP750_2, User: MJC

Name	RT
1 First TCDF	26.03
2 Last TCDF	31.83
3 First PeCDF	31.81
4 Last PeCDF	34.47
5 First HxCDF	34.97
6 Last HxCDF	37.24
7 First HpCDF	38.72
8 Last HpCDF	40.61
9 OCDF	44.44
10 First TCDD	27.76
11 2378-TCDD	31.13
12 Last TCDD	31.75
13 First PeCDD	32.72
14 Last PeCDD	34.30
15 First HxCDD	35.39
16 Last HxCDD	36.94
17 First HpCDD	39.05
18 Last HpCDD	39.97
19 OCDD	44.15

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_8-14.qld

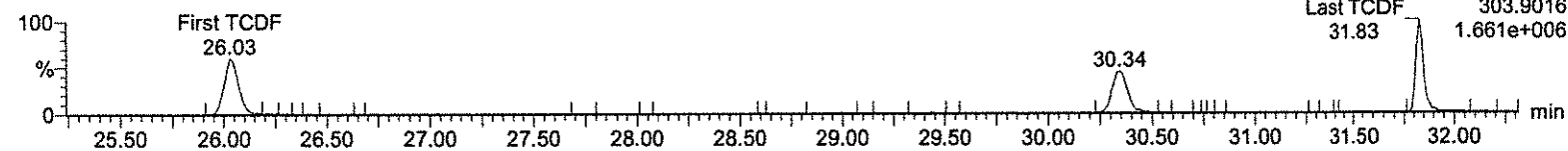
Last Altered: Friday, December 27, 2019 11:52:26 Eastern Standard Time
Printed: Friday, December 27, 2019 11:53:05 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A10DEC19.mdb 12 Dec 2019 09:01:53
Calibration: C:\MassLynx\Default.pro\Curvedb\DLM-A08JUL19A.cdb 09 Jul 2019 09:49:09

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

First TCDF

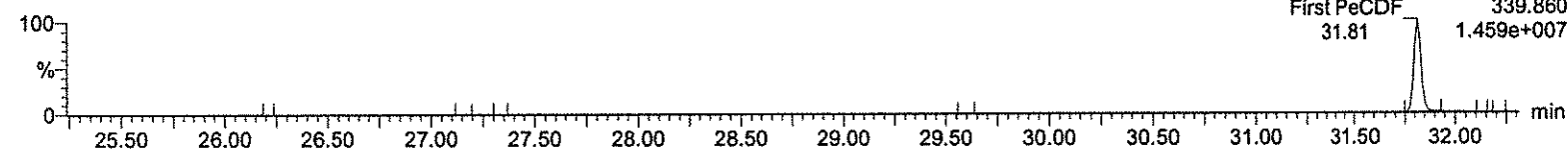
A23DEC19A_8-14



F1:Voltage SIR,EI+
303.9016
1.661e+006

First PeCDF

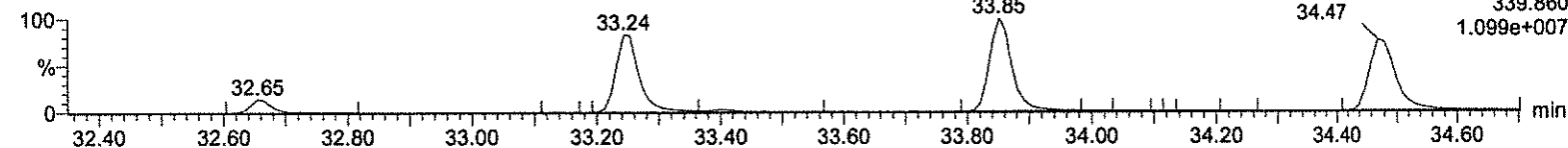
A23DEC19A_8-14



F1:Voltage SIR,EI+
339.860
1.459e+007

Last PeCDF

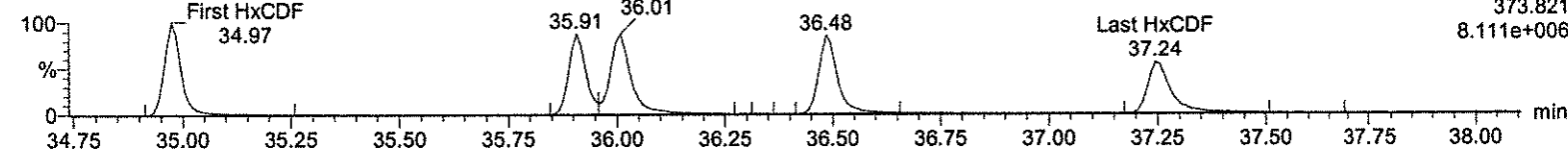
A23DEC19A_8-14



F2:Voltage SIR,EI+
339.860
1.099e+007

First HxCDF

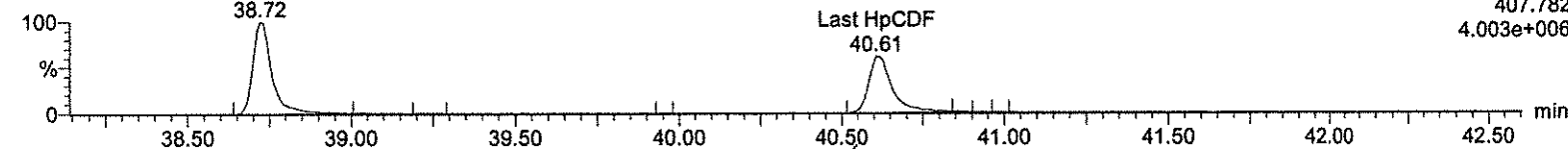
A23DEC19A_8-14



F3:Voltage SIR,EI+
373.821
8.111e+006

First HpCDF

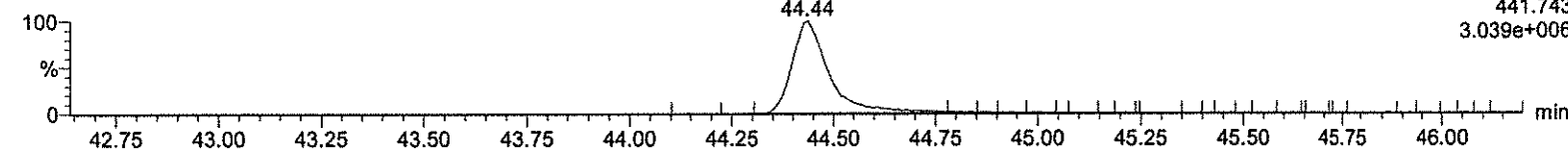
A23DEC19A_8-14 First HpCDF



F4:Voltage SIR,EI+
407.782
4.003e+006

OCDF

A23DEC19A_8-14



F5:Voltage SIR,EI+
441.743
3.039e+006

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A23DEC19A_8-14.qld

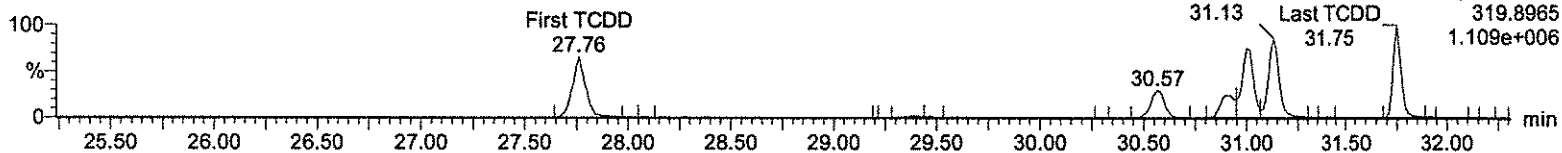
Last Altered: Friday, December 27, 2019 11:52:26 Eastern Standard Time

Printed: Friday, December 27, 2019 11:53:05 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

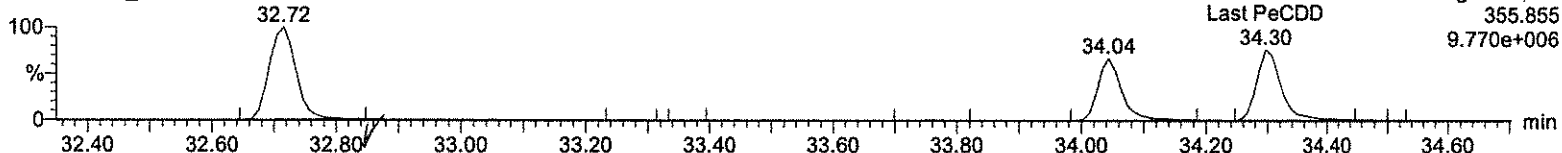
First TCDD

A23DEC19A_8-14



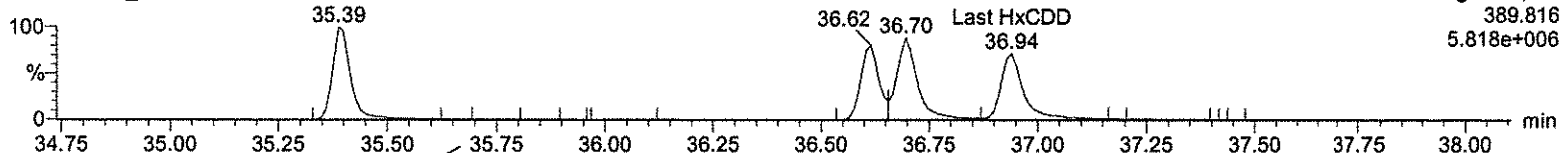
First PeCDD

A23DEC19A_8-14



First HxCDD

A23DEC19A_8-14



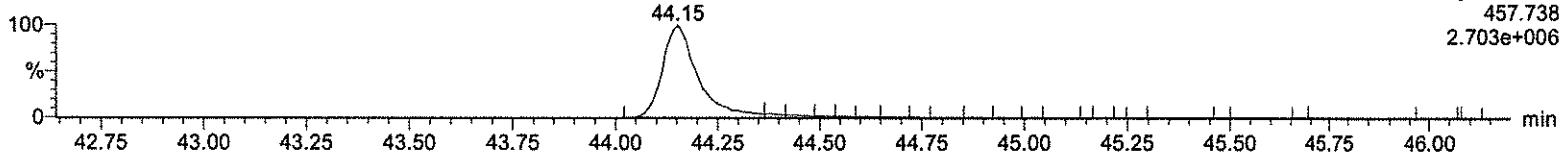
First HpCDD

A23DEC19A_8-14



OCDD

A23DEC19A_8-14



Quantify Sample Summary Report
Method 1613 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CF_A_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08_JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.14e5	1.47e5	2.61e5	31.12	1.000	0.78	NO	10.771	0.0466	0.953	0.884	7.7	2.00e6	4727	422.7	2.67e6	3906	683.1	dd	dd
2	12378-PeCDD	5.45e5	3.46e5	8.91e5	34.03	1.000	1.58	NO	52.755	0.119	0.901	0.853	5.5	1.40e7	14132	988.8	9.25e6	7130	1297.2	bb	bb
3	123478-HxCDD	4.66e5	3.75e5	8.40e5	36.61	1.000	1.24	NO	51.843	0.0874	0.974	0.940	3.7	1.09e7	7338	1491.4	8.85e6	5916	1496.2	bd	bd
4	123678-HxCDD	5.15e5	4.14e5	9.29e5	36.69	1.000	1.24	NO	51.357	0.0891	0.970	0.944	2.7	1.05e7	7338	1431.7	8.44e6	5916	1425.7	dd	dd
5	123789-HxCDD	5.04e5	3.98e5	9.02e5	36.93	1.007	1.27	NO	53.452	0.0897	0.991	0.927	6.9	1.03e7	7338	1405.3	8.29e6	5916	1401.0	dd	dd
6	1234678-HpCDD	3.75e5	3.60e5	7.35e5	39.96	1.000	1.04	NO	48.193	0.121	1.002	1.040	-3.6	6.23e6	6442	966.6	5.87e6	5731	1023.9	bd	bd
7	OCDD	6.26e5	6.94e5	1.32e6	44.14	1.000	0.90	NO	99.122	0.141	0.963	0.971	-0.9	7.50e6	5164	1451.8	8.37e6	3650	2294.0	bd	bd
8	2378-TCDF	1.23e5	1.67e5	2.90e5	30.33	1.000	0.73	NO	8.996	0.0556	0.880	0.978	-10.0	1.52e6	3539	428.5	2.00e6	5526	362.7	bb	bd
9	12378-PeCDF	7.58e5	4.95e5	1.25e6	33.24	1.000	1.53	NO	46.083	0.0869	0.871	0.945	-7.8	1.96e7	12396	1582.4	1.28e7	12126	1054.3	bd	bd
10	23478-PeCDF	8.31e5	5.37e5	1.37e6	33.84	1.000	1.55	NO	48.119	0.0830	0.950	0.987	-3.8	2.14e7	12396	1729.1	1.49e7	12126	1176.8	bb	bb
11	123478-HxCDF	6.24e5	5.04e5	1.13e6	35.90	1.000	1.24	NO	49.715	0.132	1.081	1.087	-0.6	1.48e7	15712	942.4	1.20e7	13003	923.9	bd	bd
12	123678-HxCDF	6.70e5	5.40e5	1.21e6	36.00	1.000	1.24	NO	49.276	0.131	1.025	1.041	-1.4	1.50e7	15712	953.6	1.23e7	13003	945.0	db	db
13	234678-HxCDF	6.20e5	5.07e5	1.13e6	36.48	1.001	1.22	NO	48.847	0.140	1.110	1.136	-2.3	1.38e7	15712	879.3	1.13e7	13003	867.1	bb	bb
14	123789-HxCDF	5.35e5	4.35e5	9.70e5	37.24	1.000	1.23	NO	49.242	0.185	1.045	1.061	-1.5	1.08e7	15712	687.1	8.71e6	13003	670.2	bb	bb
15	1234678-HpCDF	5.08e5	4.88e5	9.96e5	38.72	1.001	1.04	NO	52.225	0.106	1.201	1.150	4.4	9.24e6	7305	1264.5	8.75e6	7192	1216.7	bd	bb
16	1234789-HpCDF	4.24e5	4.27e5	8.52e5	40.61	1.000	0.99	NO	51.551	0.146	1.239	1.202	3.1	6.85e6	7305	937.9	6.54e6	7192	909.1	bb	bd
17	OCDF	6.90e5	7.88e5	1.49e6	44.44	1.007	0.88	NO	95.124	0.151	1.078	1.133	-4.9	8.00e6	4698	1703.7	8.94e6	6308	1416.8	bb	bd
18	13C-2378-TCDD	1.19e6	1.56e6	2.74e6	31.11	1.018	0.76	NO	102.374	0.0823	1.155	1.128	2.4	2.26e7	8378	2703.2	2.89e7	3219	8967.7	bb	bb
19	13C-12378-PeCDD	1.20e6	7.79e5	1.98e6	34.02	1.114	1.54	NO	110.821	0.0860	0.833	0.751	10.8	3.18e7	3689	8828.2	2.09e7	4380	4767.4	bb	bb
20	13C-123478-HxCDD	9.55e5	7.70e5	1.72e6	36.60	0.991	1.24	NO	97.190	0.0980	0.871	0.896	-2.8	2.23e7	5584	4001.8	1.75e7	8571	2046.2	bd	bd
21	13C-123678-HxCDD	1.07e6	8.50e5	1.92e6	36.68	0.993	1.26	NO	98.169	0.0891	0.968	0.986	-1.8	2.19e7	5584	3926.9	1.75e7	8571	2045.8	dd	dd
22	13C-1234678-HpCDD	7.59e5	7.08e5	1.47e6	39.95	1.082	1.07	NO	110.286	0.120	0.741	0.672	10.3	1.25e7	7197	1732.7	1.14e7	5753	1978.6	bb	bb
23	13C-OCDD	1.30e6	1.45e6	2.74e6	44.13	1.195	0.90	NO	215.646	0.122	0.692	0.642	7.8	1.52e7	5363	2830.1	1.72e7	7212	2383.4	bd	bd
24	13C-2378-TCDF	1.45e6	1.85e6	3.30e6	30.32	0.993	0.78	NO	111.010	0.152	1.387	1.250	11.0	1.83e7	14531	1258.8	2.30e7	9187	2505.4	bb	bb
25	13C-12378-PeCDF	1.76e6	1.12e6	2.89e6	33.23	1.088	1.57	NO	119.793	0.179	1.211	1.011	19.8	4.56e7	14661	3110.1	2.86e7	7908	3621.2	bd	bd
26	13C-23478-PeCDF	1.76e6	1.12e6	2.89e6	33.83	1.108	1.58	NO	113.994	0.170	1.212	1.063	14.0	4.58e7	14661	3124.8	3.00e7	7908	3790.6	db	db
27	13C-123478-HxCDF	7.12e5	1.38e6	2.09e6	35.89	0.972	0.52	NO	94.892	0.194	1.054	1.111	-5.1	1.71e7	13057	1309.5	3.26e7	21712	1499.7	bd	bd
28	13C-123678-HxCDF	8.06e5	1.55e6	2.36e6	35.99	0.975	0.52	NO	95.601	0.173	1.192	1.247	-4.4	1.80e7	13057	1382.3	3.47e7	21712	1596.4	dd	db
29	13C-234678-HxCDF	6.96e5	1.34e6	2.03e6	36.46	0.988	0.52	NO	94.825	0.199	1.026	1.082	-5.2	1.54e7	13057	1183.2	3.01e7	21712	1386.1	bd	bb
30	13C-123789-HxCDF	6.35e5	1.22e6	1.86e6	37.23	1.009	0.52	NO	97.023	0.223	0.938	0.967	-3.0	1.25e7	13057	960.5	2.40e7	21712	1106.0	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	CRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	5.00e5	1.16e6	1.66e6	38.70	1.048	0.43	NO	96.306	0.103	0.838	0.870	-3.7	8.97e6	5703	1573.0	2.10e7	8770	2397.4	bb	bb
32	13C-1234789-HpCDF	4.22e5	9.53e5	1.37e6	40.60	1.100	0.44	NO	102.459	0.133	0.694	0.677	2.5	6.35e6	5703	1114.2	1.46e7	8770	1665.4	bb	bb
33	13C-1234-TCDD	1.03e6	1.35e6	2.38e6	30.54	0.000	0.77	NO	100.000	0.0929	1.000	1.000	0.0	1.35e7	8378	1615.0	1.78e7	3219	5514.4	bb	bb
34	13C-123789-HxCDD	1.10e6	8.83e5	1.98e6	36.92	0.000	1.24	NO	100.000	0.0878	1.000	1.000	0.0	2.23e7	5584	3999.6	1.81e7	8571	2112.2	dd	dd
35	37Cl-2378-TCDD	2.54e5		2.54e5	31.12	1.019			10.078	0.0261	1.069	1.061	0.8	4.58e6	3458	1325.3				bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

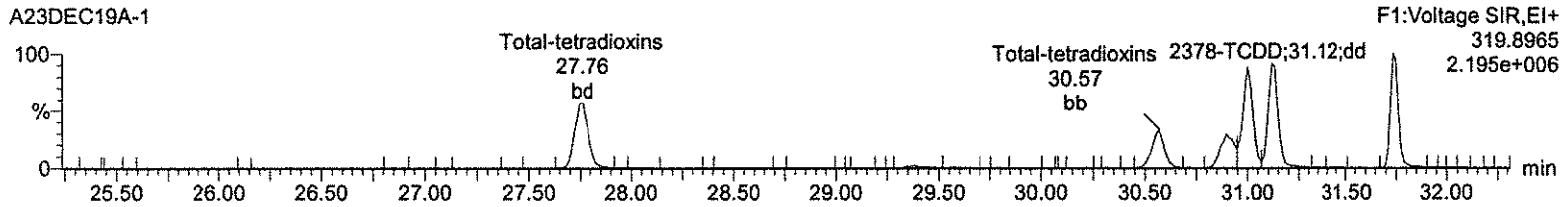
Method: C:\MassLynx\DEFAULT.PRO\MethDB\ICFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

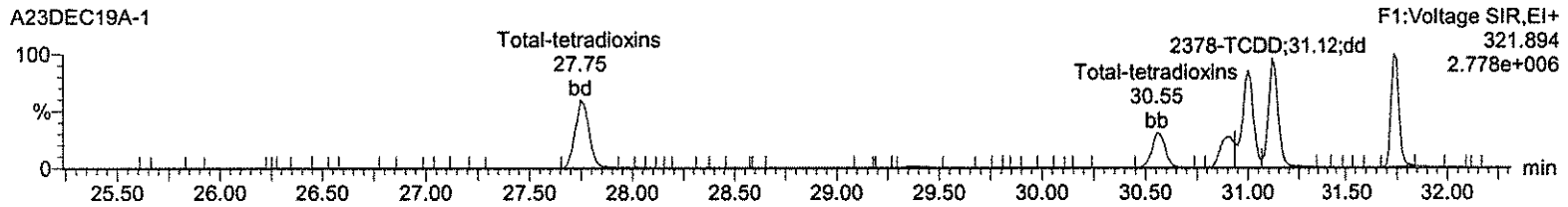
Total-tetradoxins

A23DEC19A-1



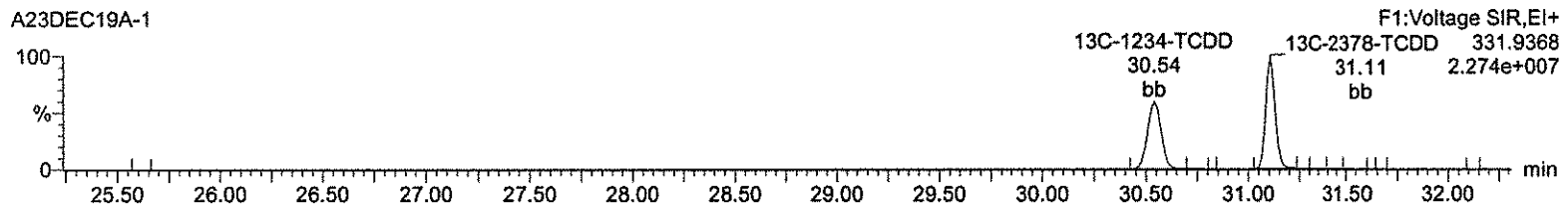
Total-tetradoxins

A23DEC19A-1



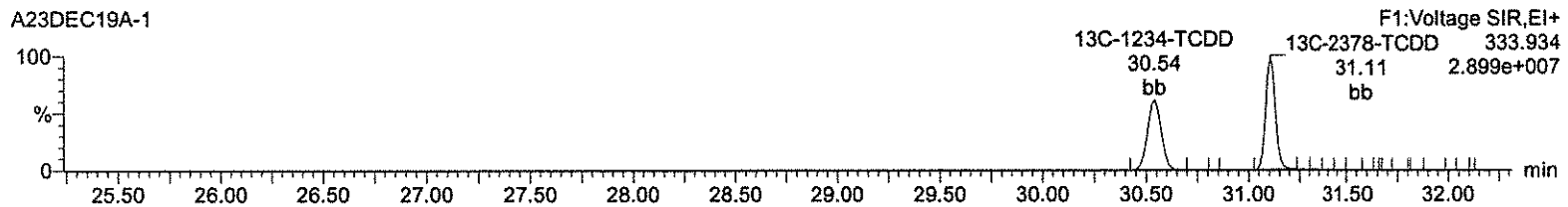
13C-2378-TCDD

A23DEC19A-1



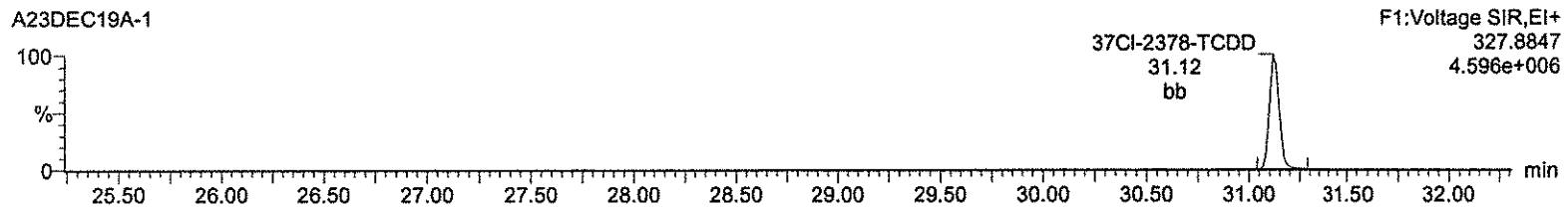
13C-2378-TCDD

A23DEC19A-1



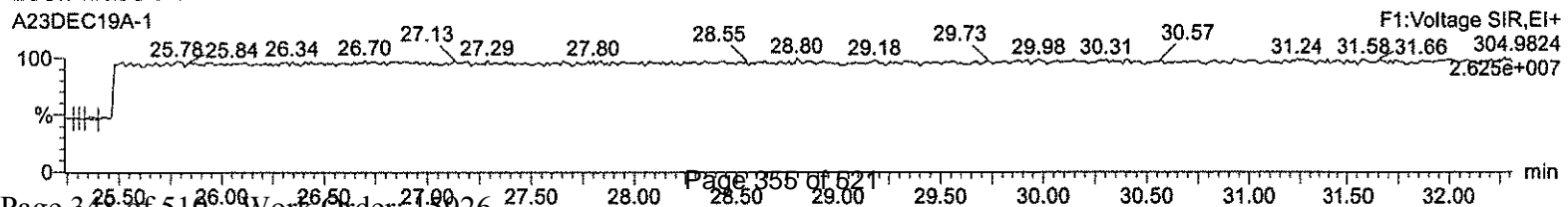
37Cl-2378-TCDD

A23DEC19A-1



Lock Mass F1

A23DEC19A-1



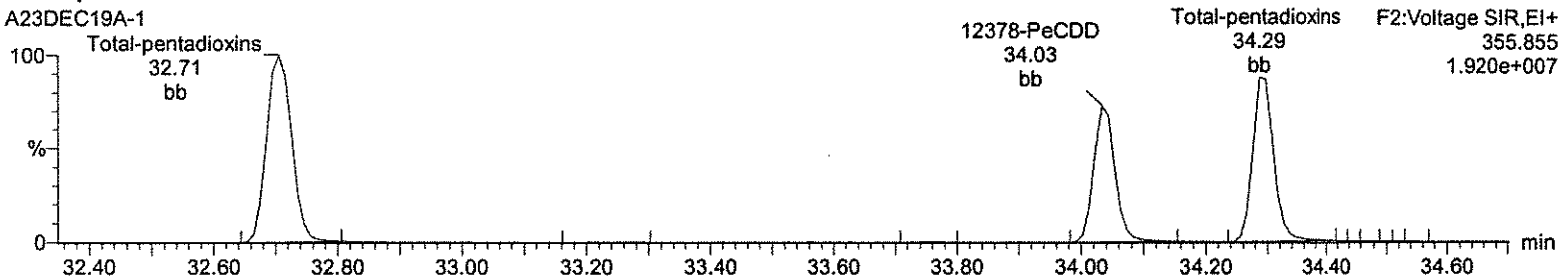
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Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

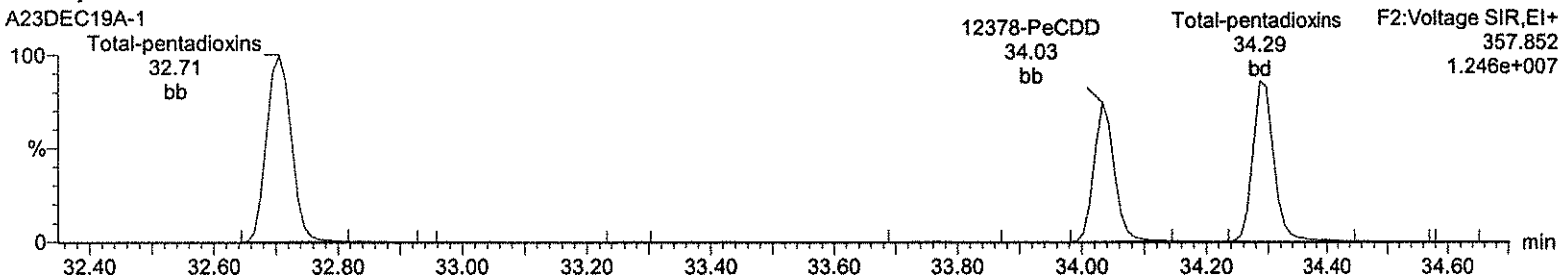
Total-pentadioxins

A23DEC19A-1



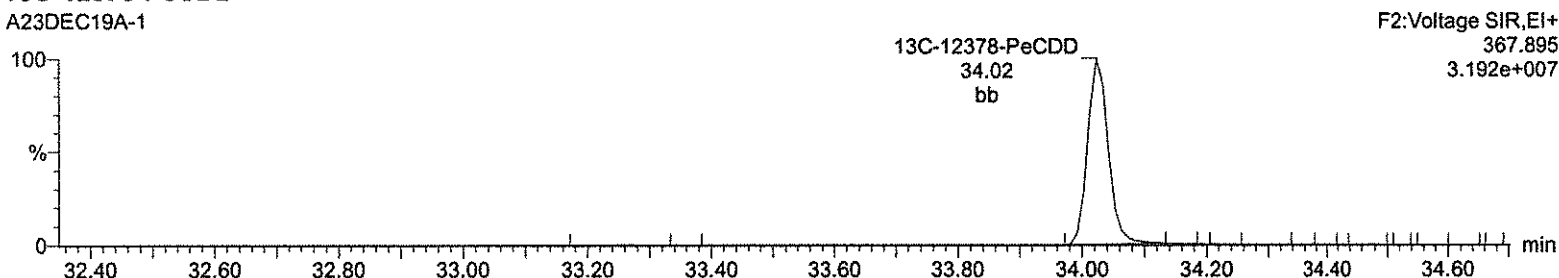
Total-pentadioxins

A23DEC19A-1



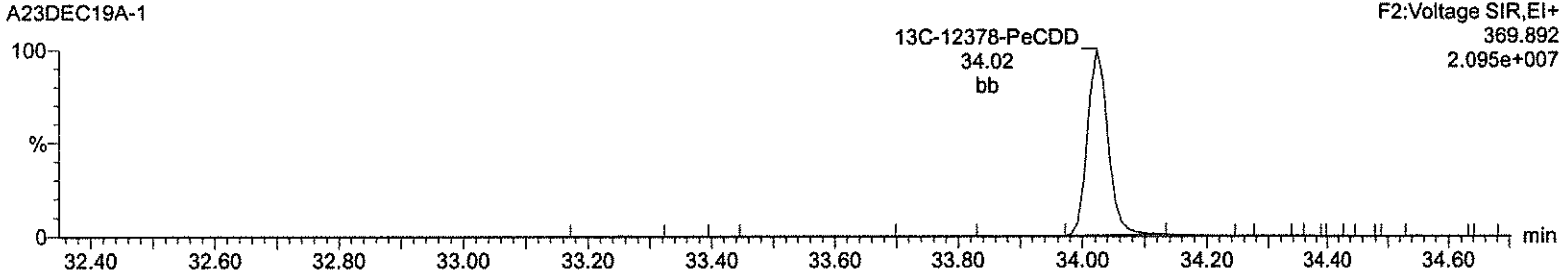
13C-12378-PeCDD

A23DEC19A-1



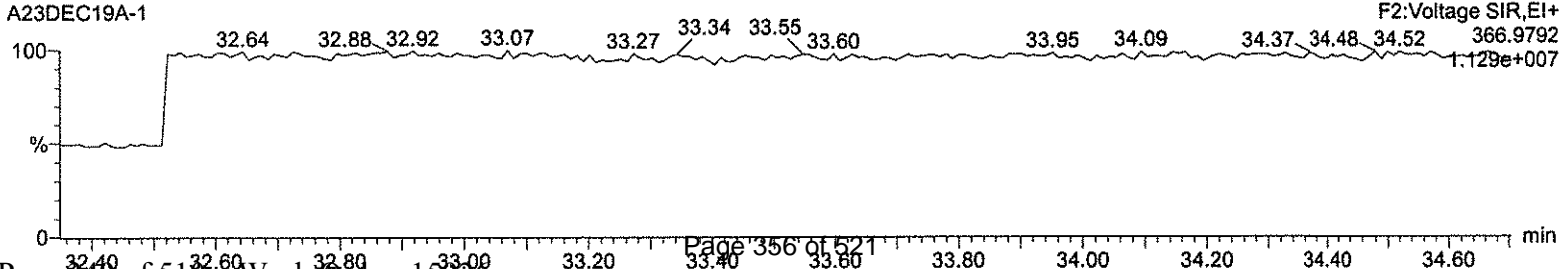
13C-12378-PeCDD

A23DEC19A-1



Lock Mass F2

A23DEC19A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

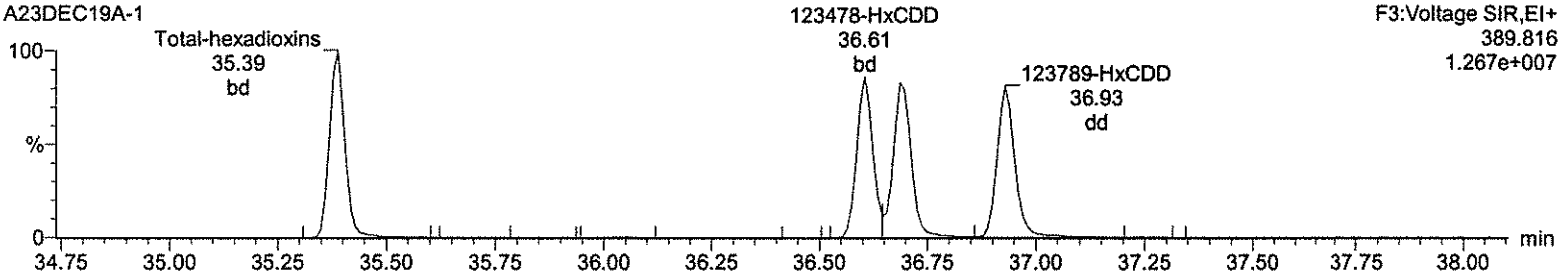
Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

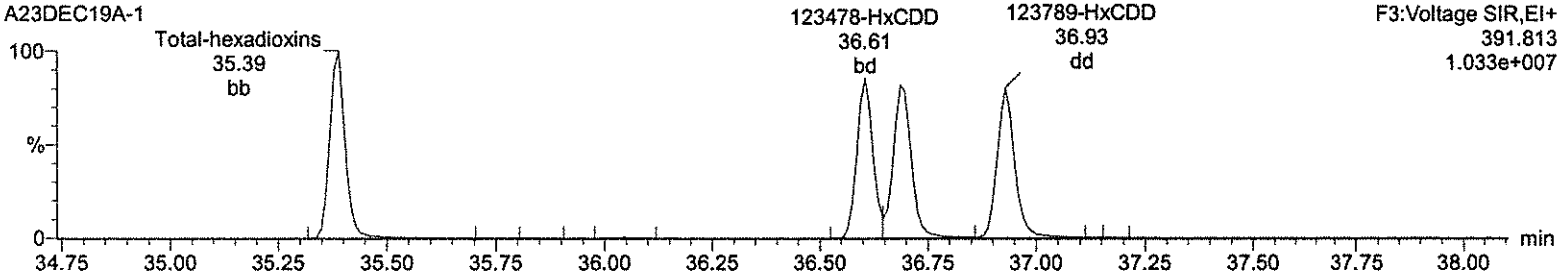
Total-hexadioxins

A23DEC19A-1



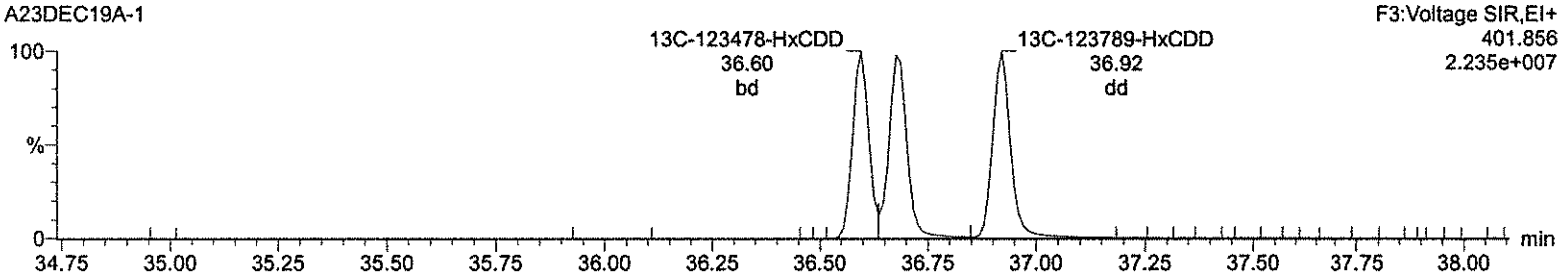
Total-hexadioxins

A23DEC19A-1



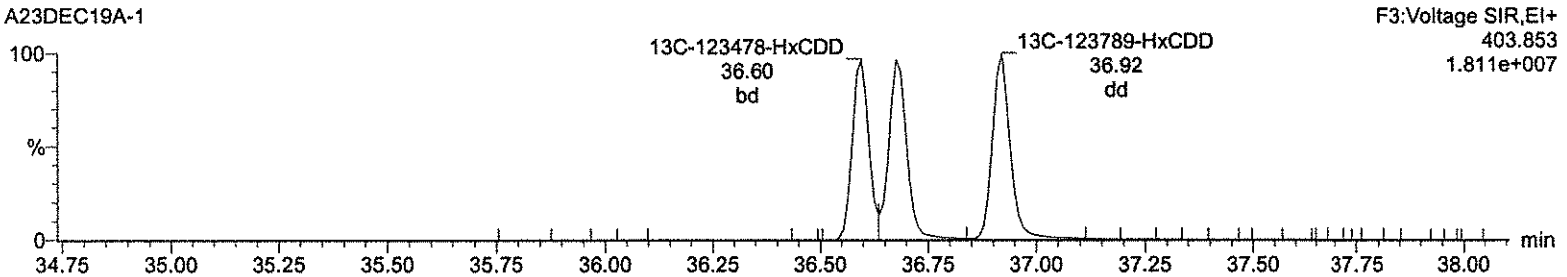
13C-123478-HxCDD

A23DEC19A-1



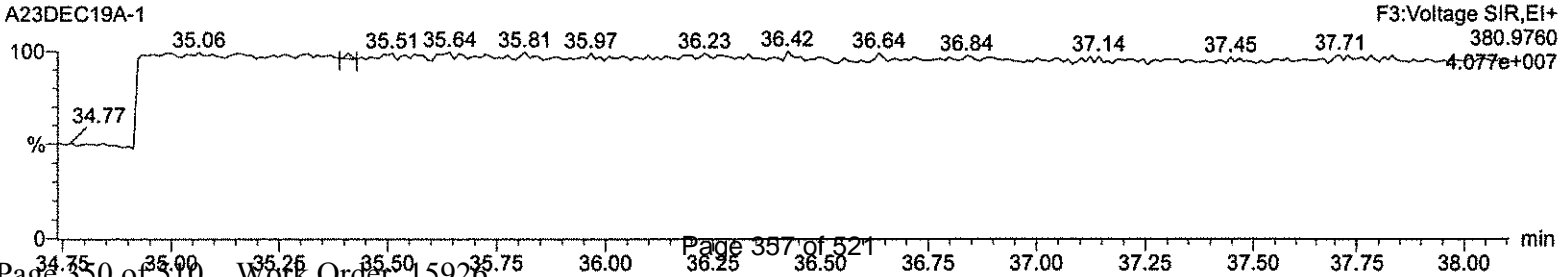
13C-123478-HxCDD

A23DEC19A-1



Lock Mass F3

A23DEC19A-1



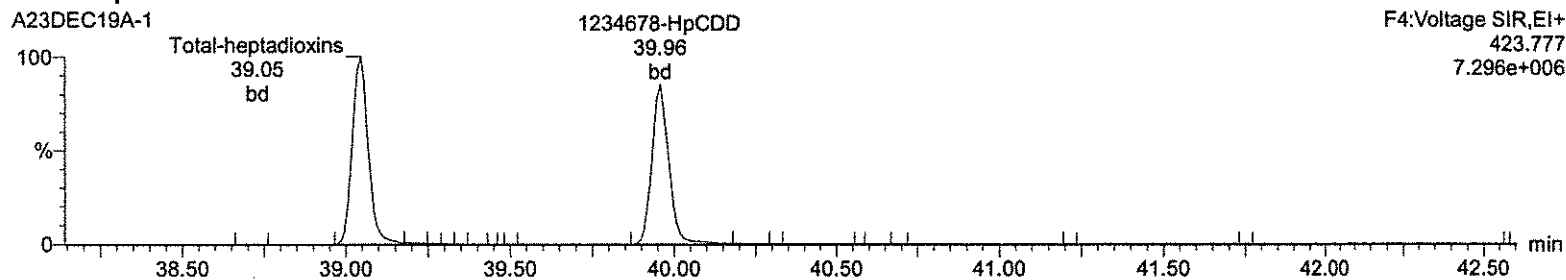
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Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

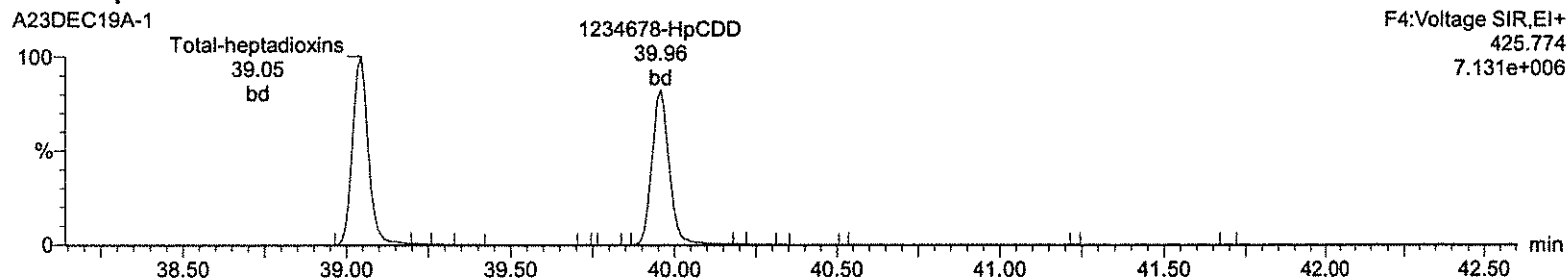
Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

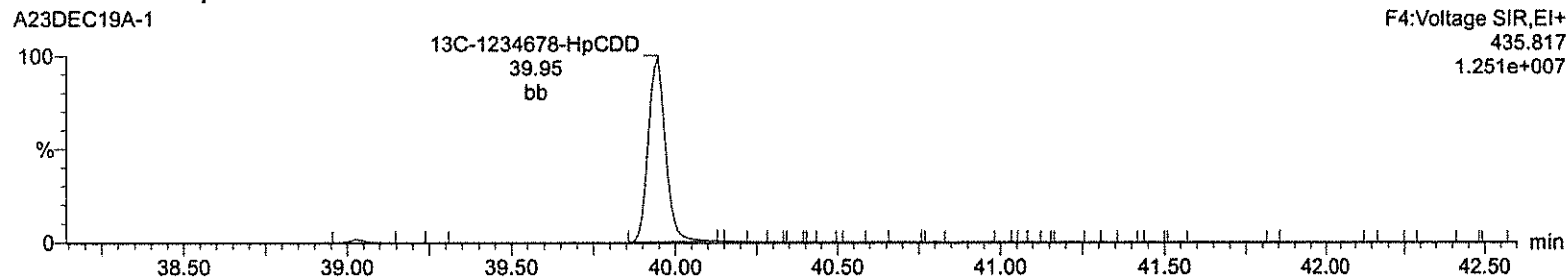
Total-heptadioxins



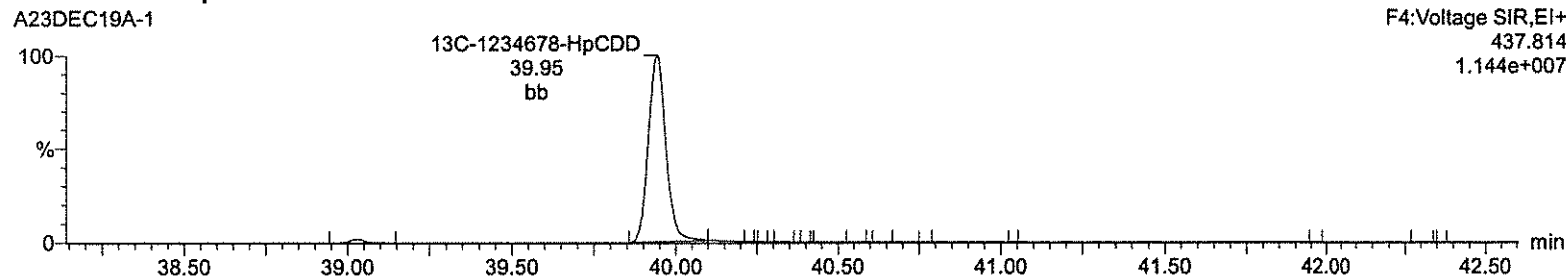
Total-heptadioxins



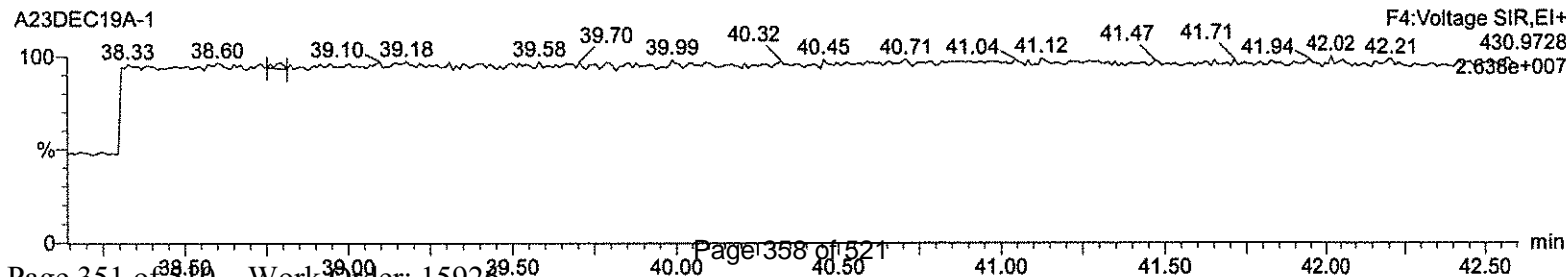
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

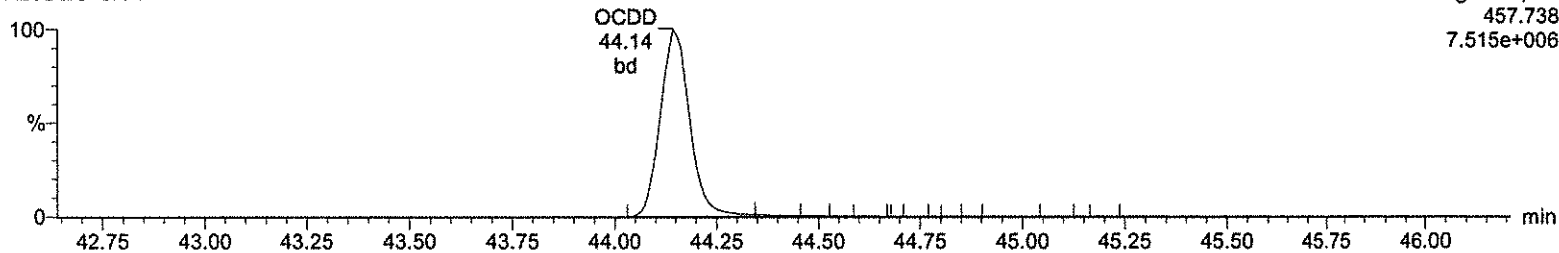
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Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

OCDD

A23DEC19A-1

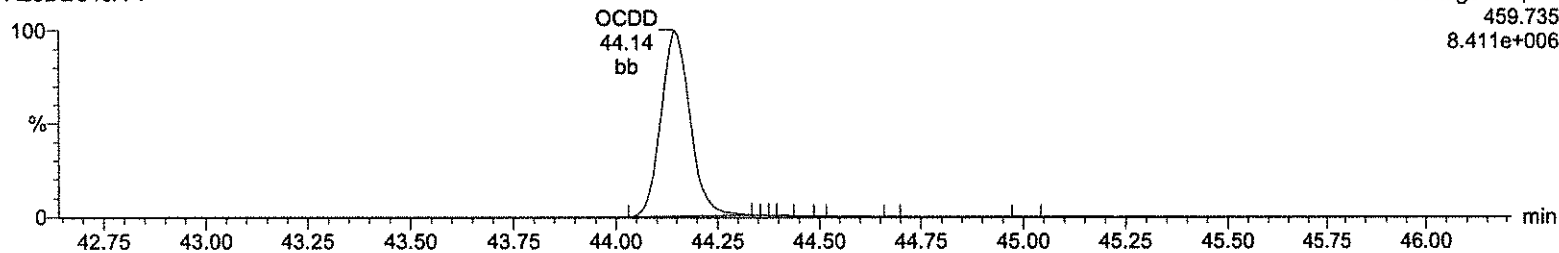
F5:Voltage SIR,EI+
457.738
7.515e+006



OCDD

A23DEC19A-1

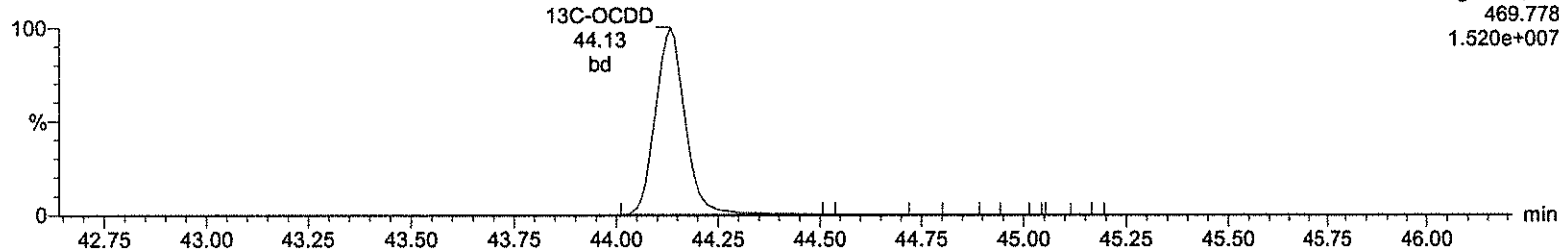
F5:Voltage SIR,EI+
459.735
8.411e+006



13C-OCDD

A23DEC19A-1

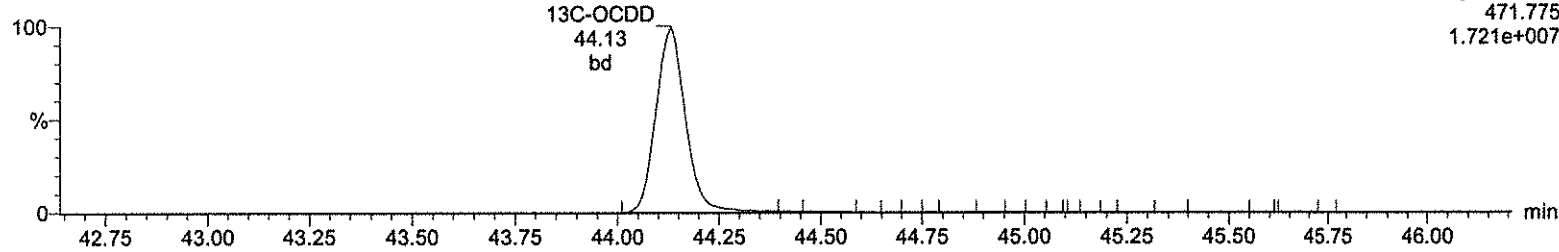
F5:Voltage SIR,EI+
469.778
1.520e+007



13C-OCDD

A23DEC19A-1

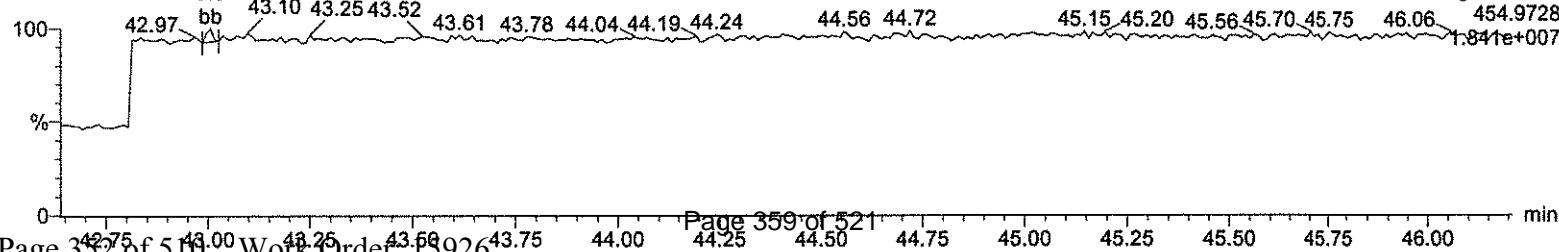
F5:Voltage SIR,EI+
471.775
1.721e+007



Lock Mass F5

A23DEC19A-1

F5:Voltage SIR,EI+
454.9728
1.841e+007



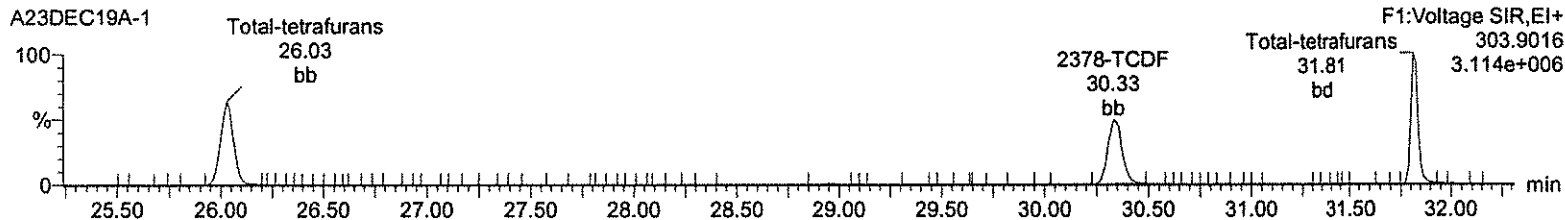
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

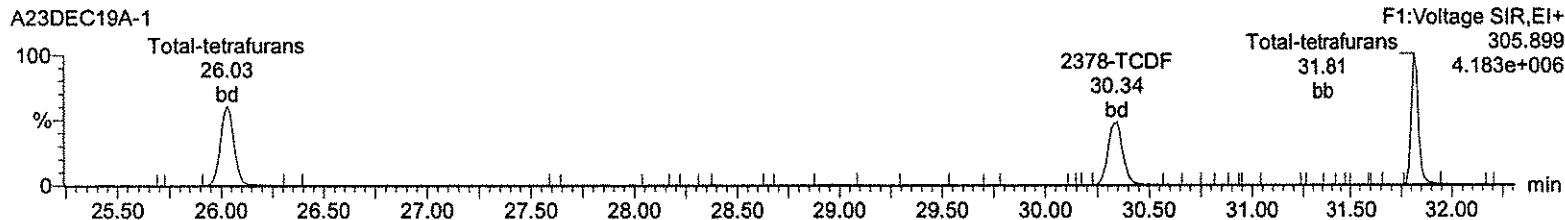
Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

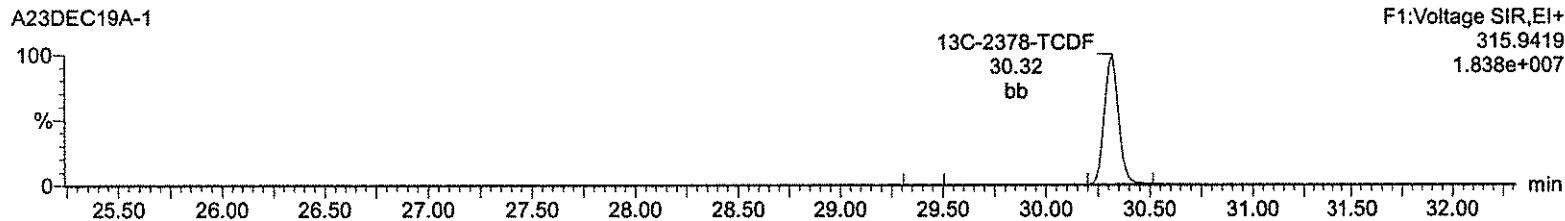
Total-tetrafurans



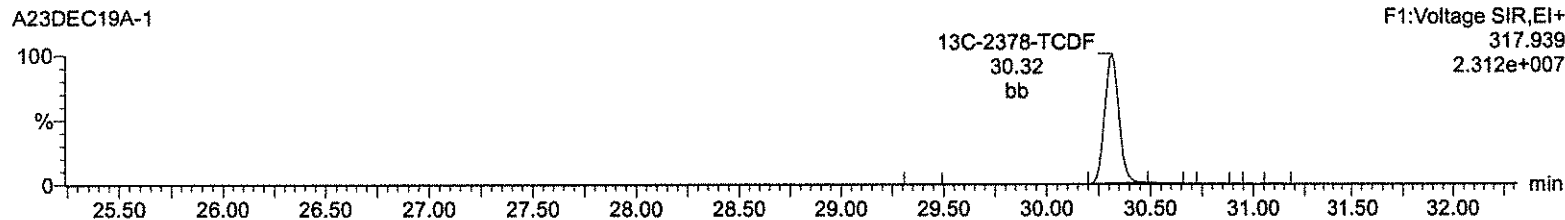
Total-tetrafurans



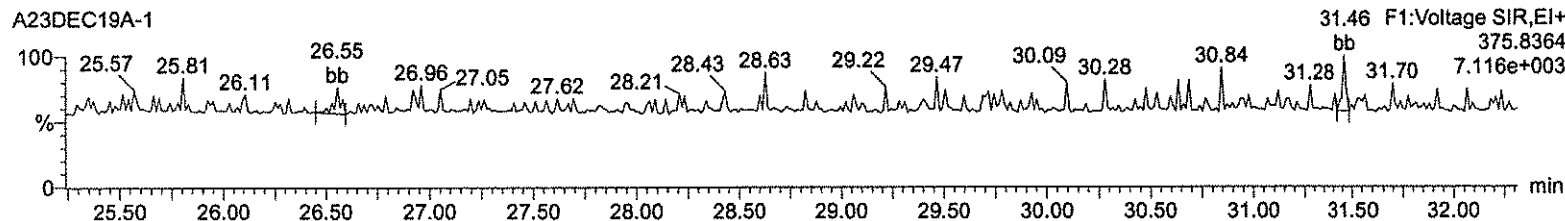
13C-2378-TCDF



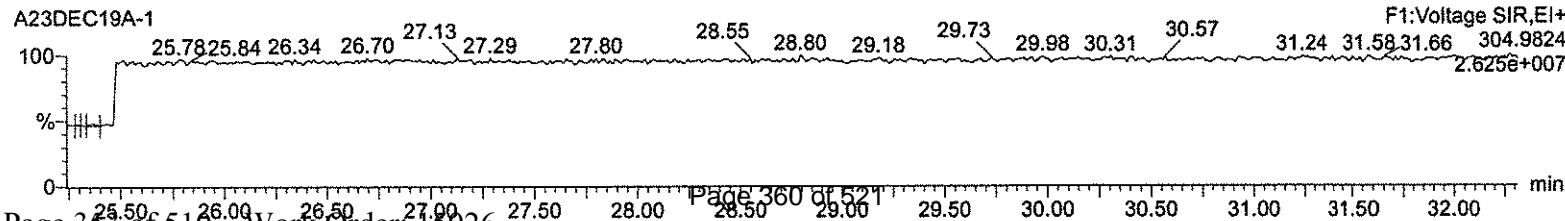
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

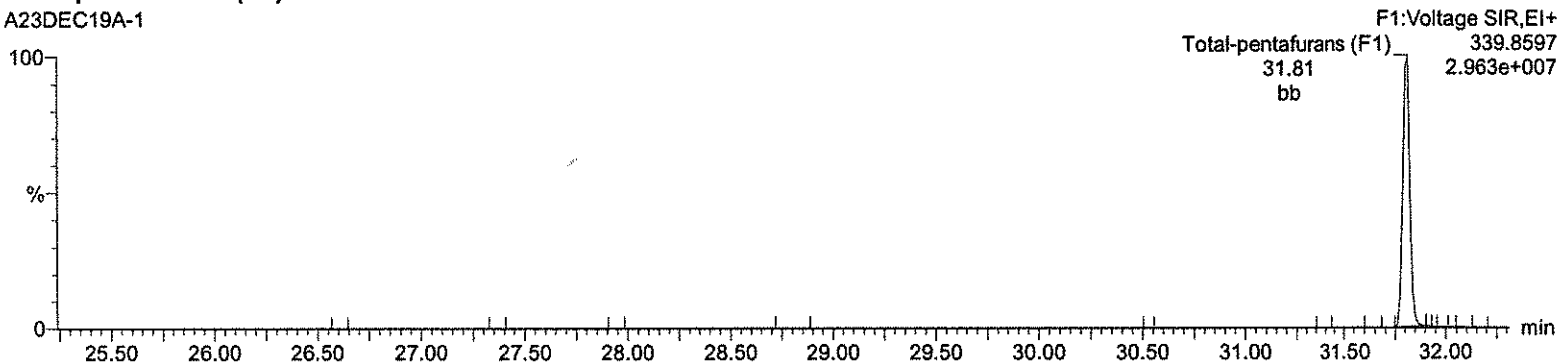
Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

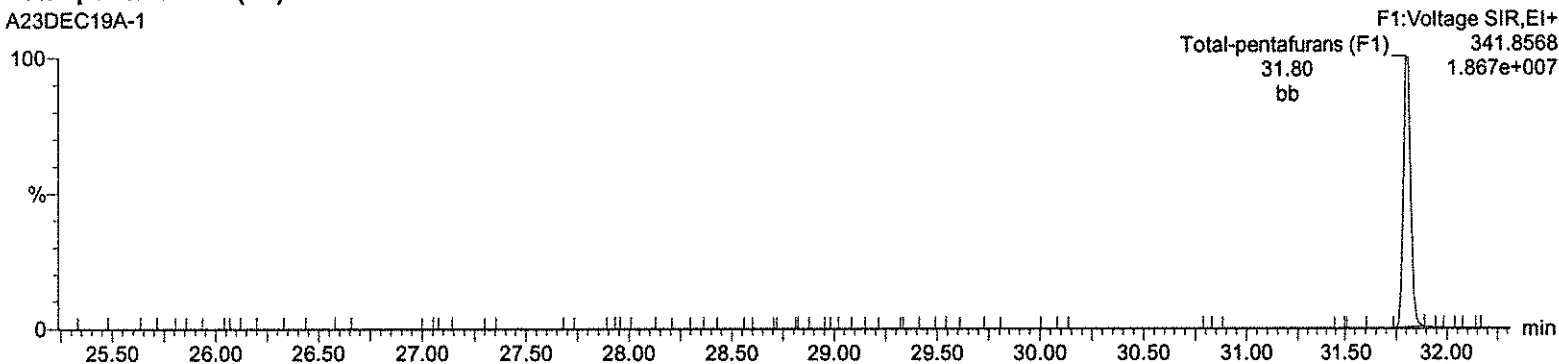
Total-pentafurans (F1)

A23DEC19A-1



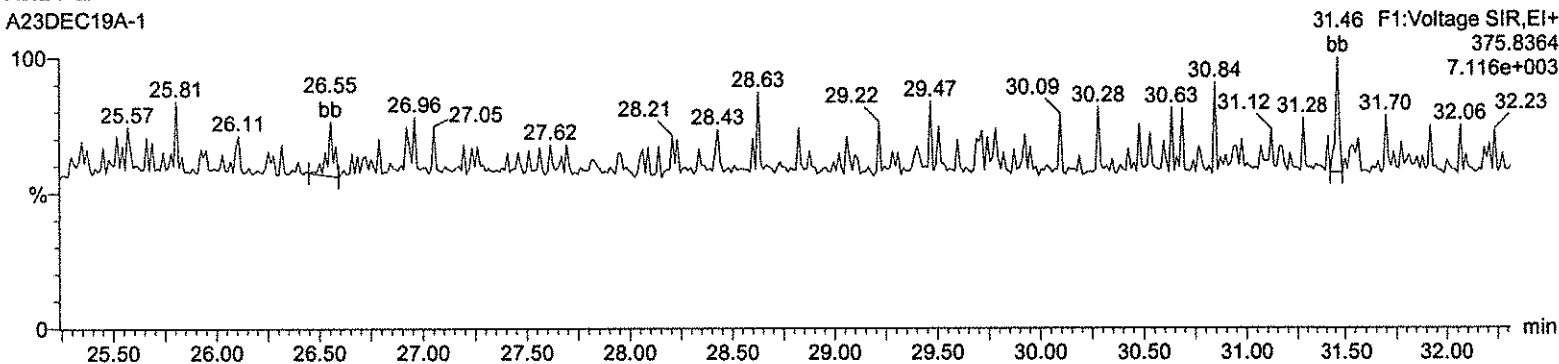
Total-pentafurans (F1)

A23DEC19A-1



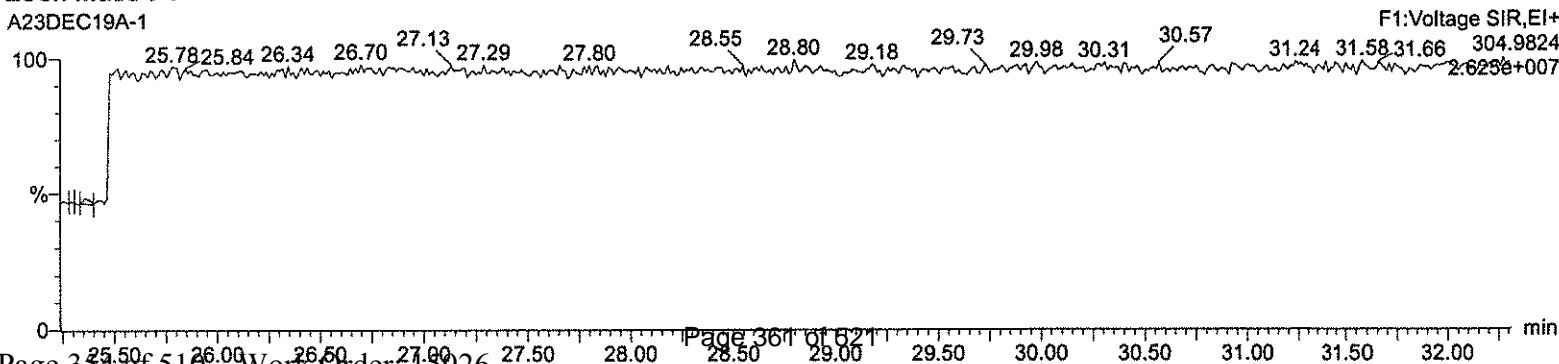
HxDPE

A23DEC19A-1



Lock Mass F1

A23DEC19A-1



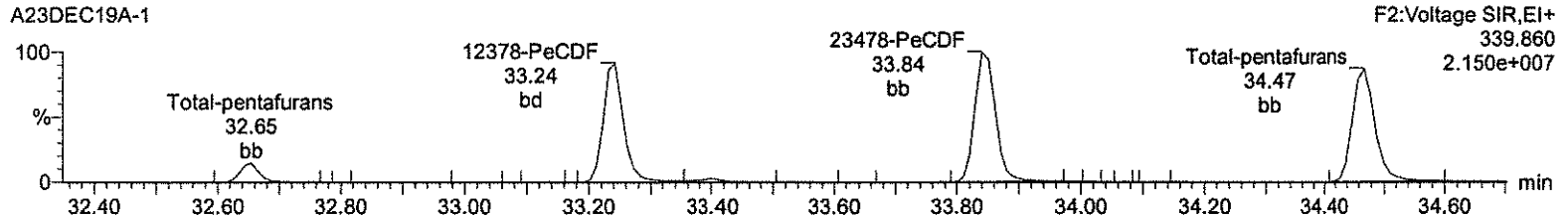
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

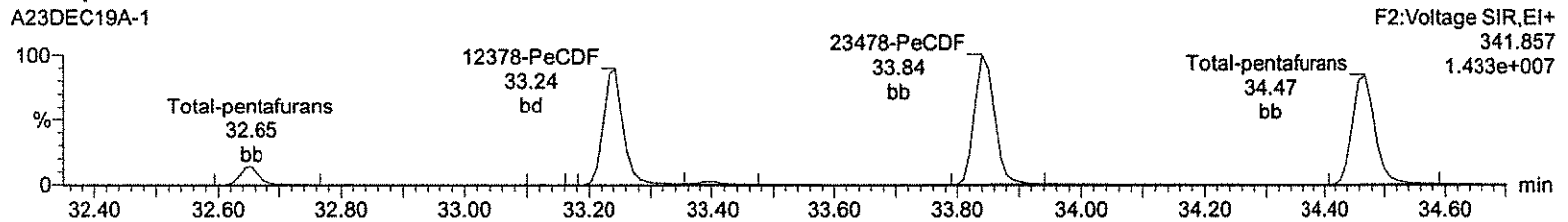
Total-pentafurans

A23DEC19A-1



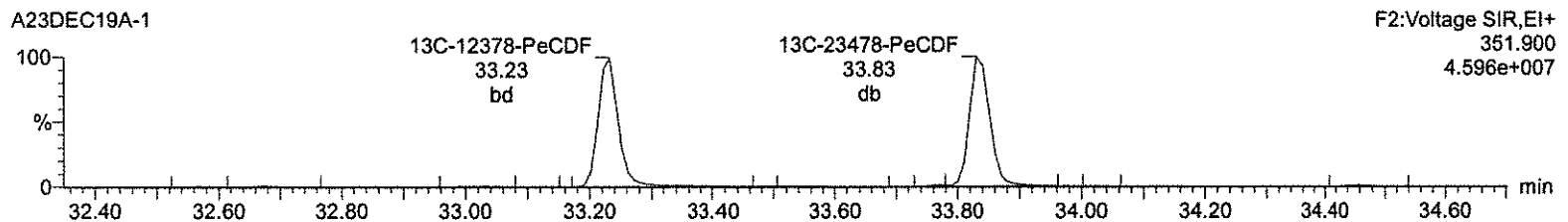
Total-pentafurans

A23DEC19A-1



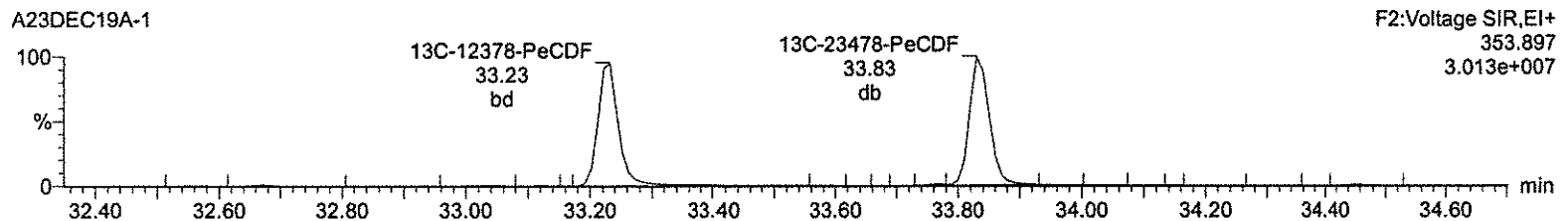
¹³C-12378-PeCDF

A23DEC19A-1



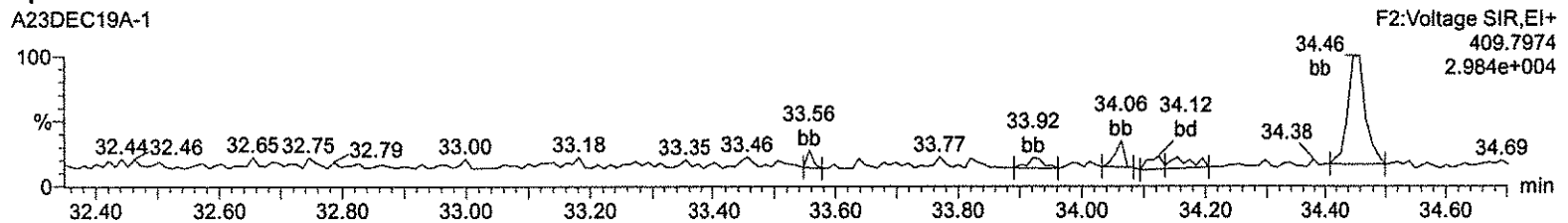
¹³C-12378-PeCDF

A23DEC19A-1



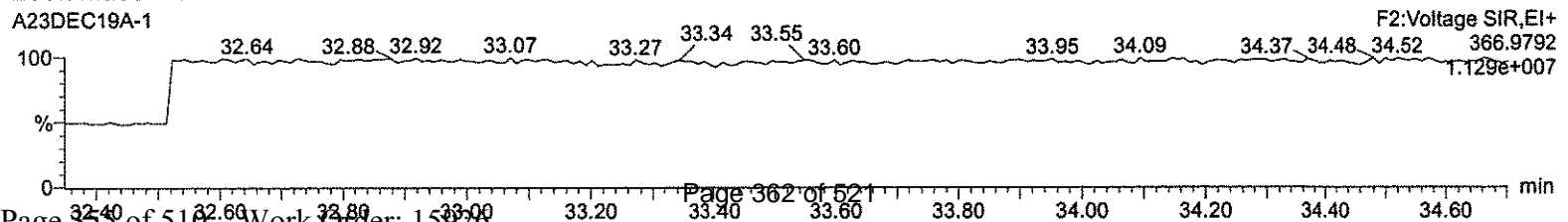
HpDPE

A23DEC19A-1



Lock Mass F2

A23DEC19A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

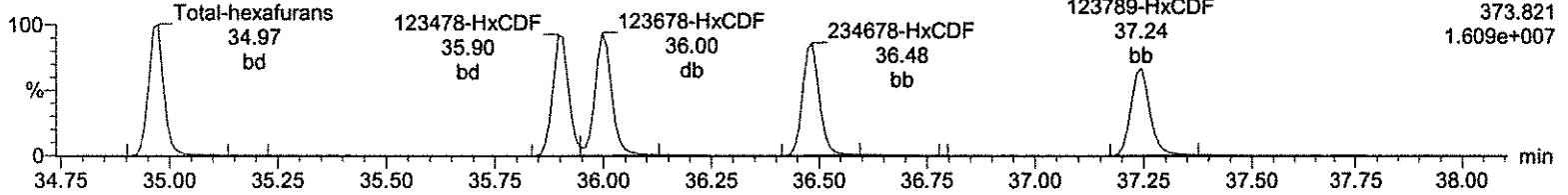
Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

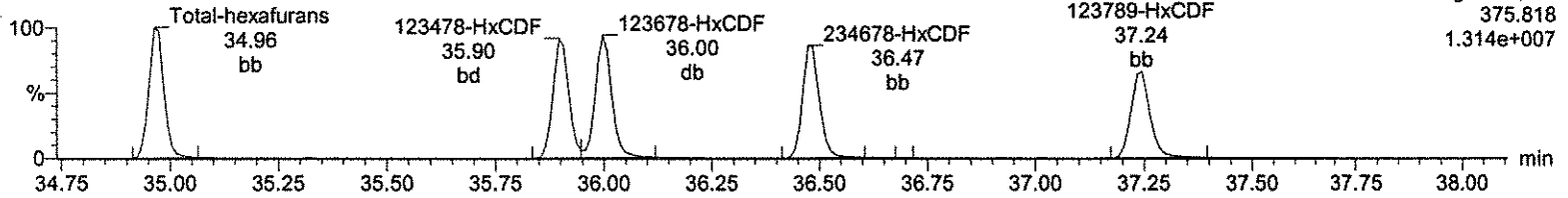
Total-hexafurans

A23DEC19A-1



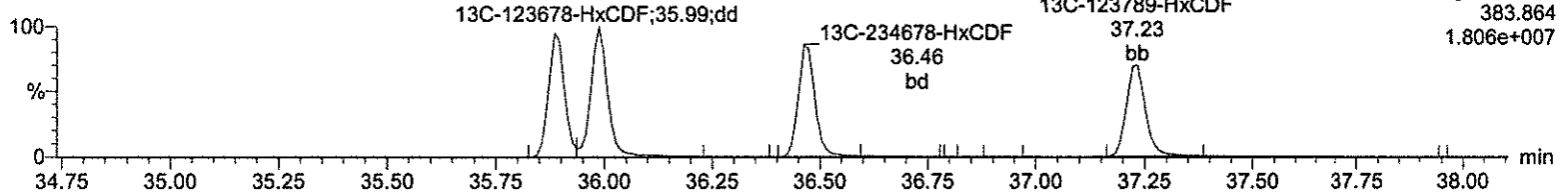
Total-hexafurans

A23DEC19A-1



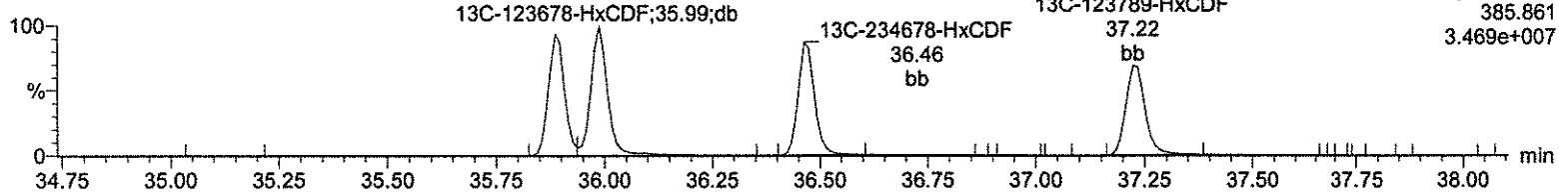
13C-123478-HxCDF

A23DEC19A-1



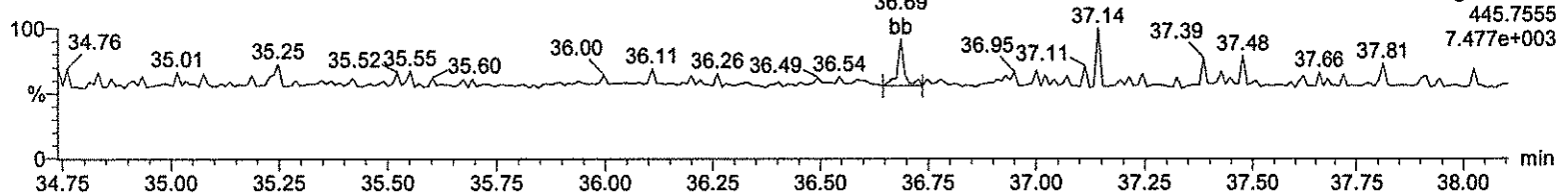
13C-123478-HxCDF

A23DEC19A-1



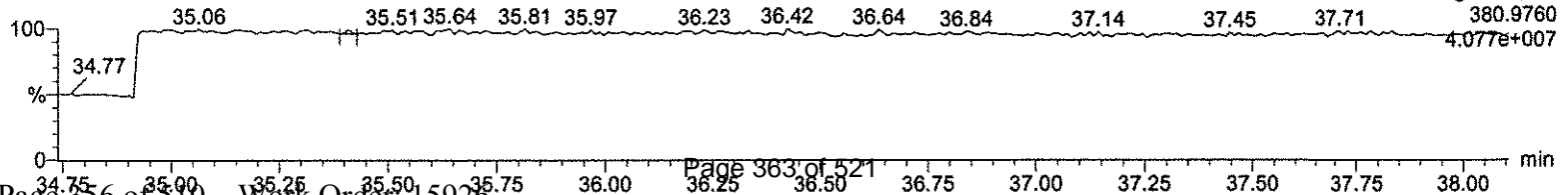
OcDPE

A23DEC19A-1



Lock Mass F3

A23DEC19A-1



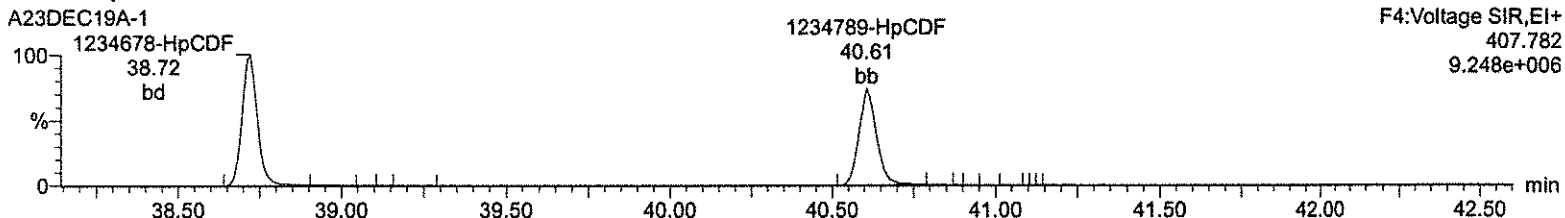
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

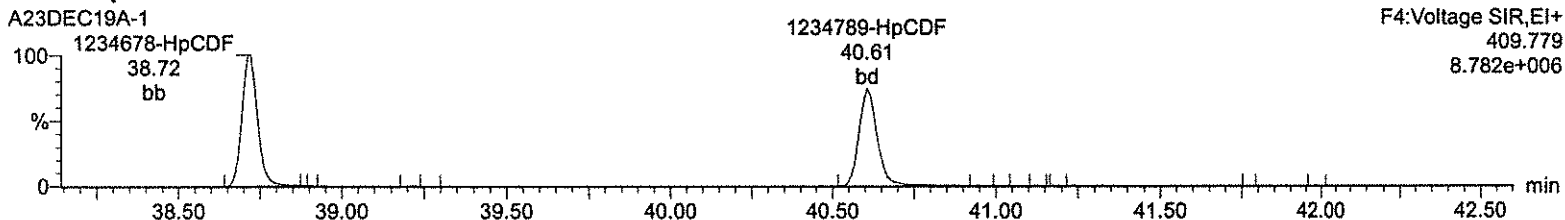
Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

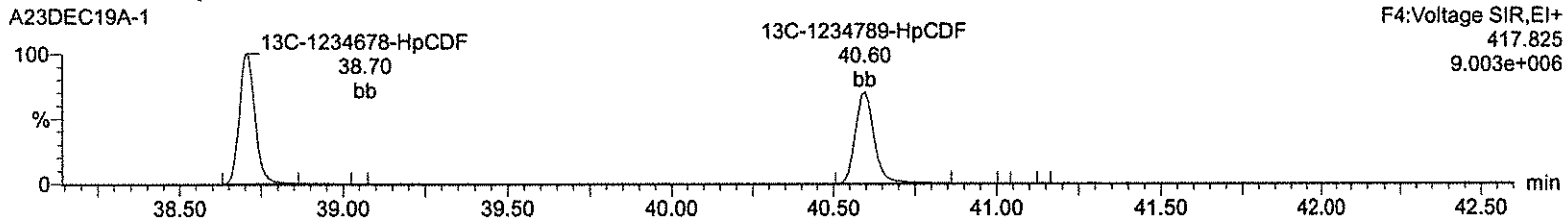
Total-heptafurans



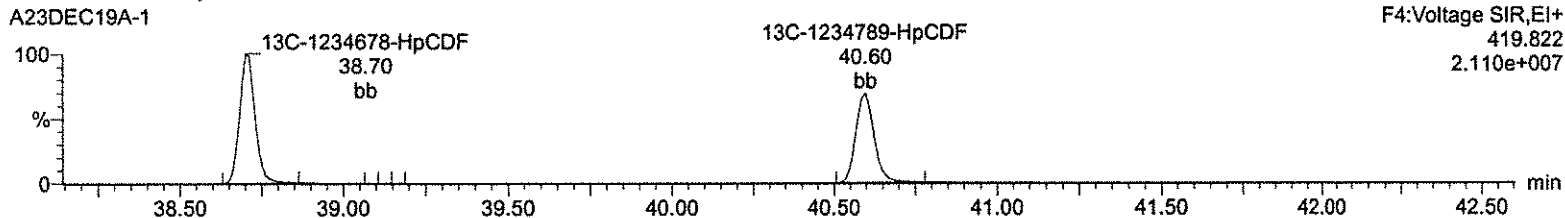
Total-heptafurans



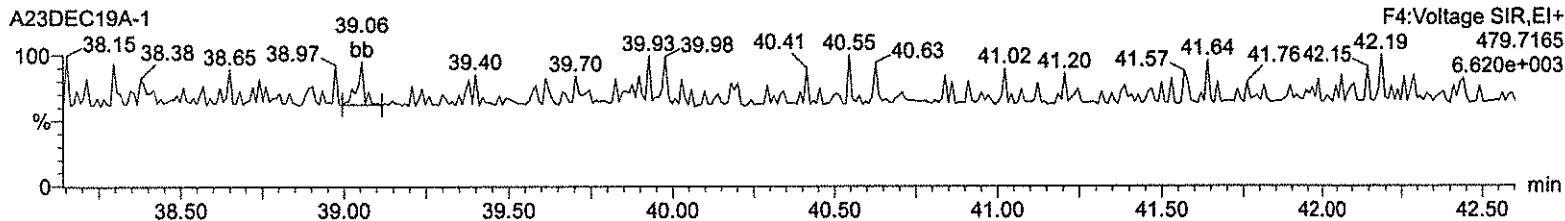
¹³C-1234678-HpCDF



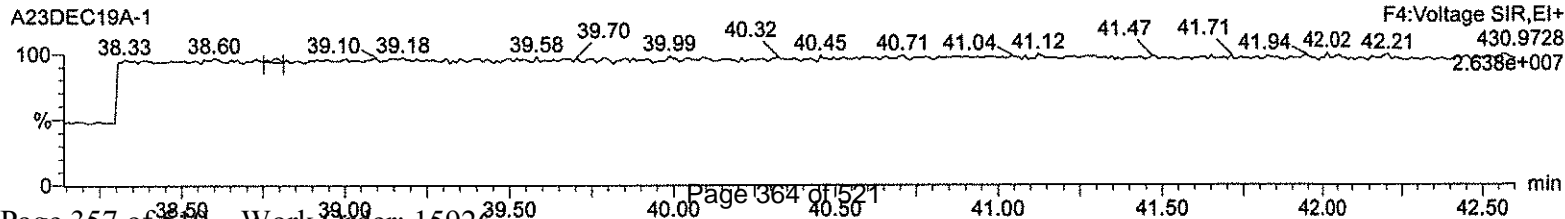
¹³C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-1.qld

Last Altered: Tuesday, December 24, 2019 07:35:40 Eastern Standard Time

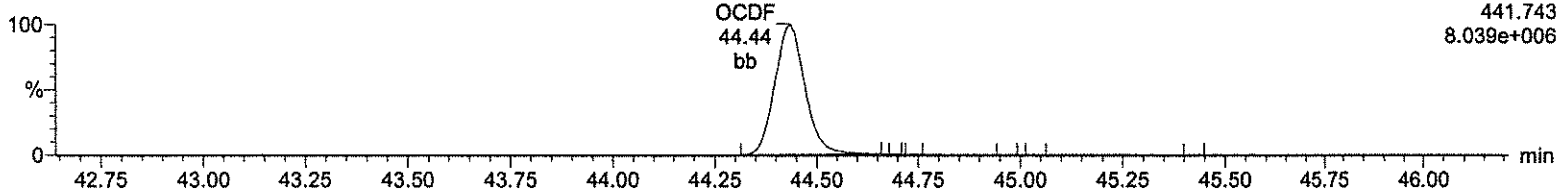
Printed: Tuesday, December 24, 2019 07:37:18 Eastern Standard Time

Name: A23DEC19A-1, Date: 23-Dec-2019, Time: 17:28:13, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

OCDF

A23DEC19A-1

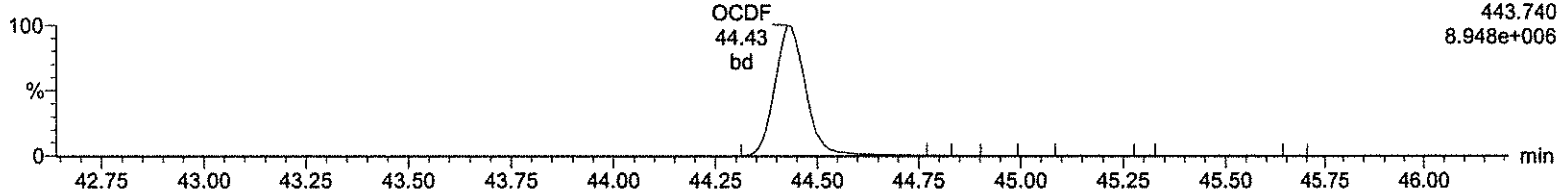
F5:Voltage SIR,EI+
441.743
8.039e+006



OCDF

A23DEC19A-1

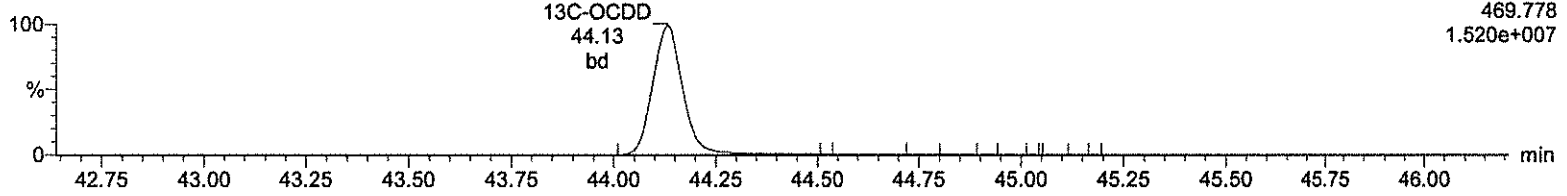
F5:Voltage SIR,EI+
443.740
8.948e+006



13C-OCDD

A23DEC19A-1

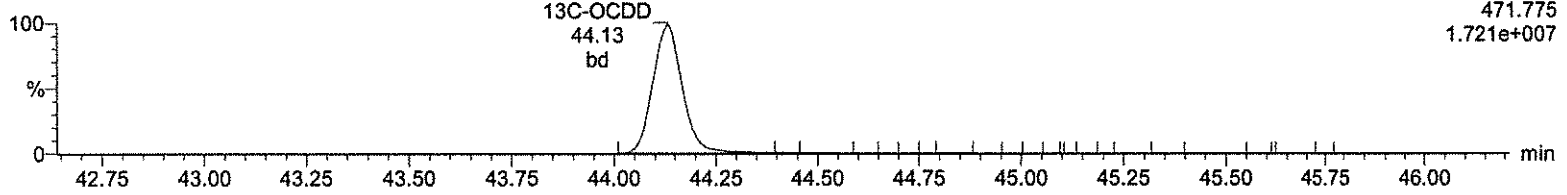
F5:Voltage SIR,EI+
469.778
1.520e+007



13C-OCDD

A23DEC19A-1

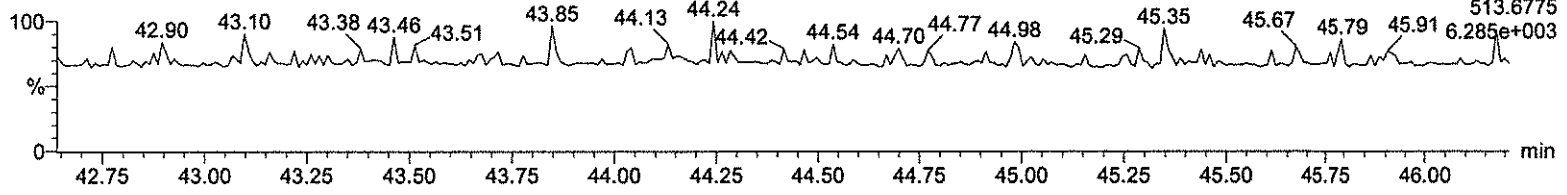
F5:Voltage SIR,EI+
471.775
1.721e+007



DeDPE

A23DEC19A-1

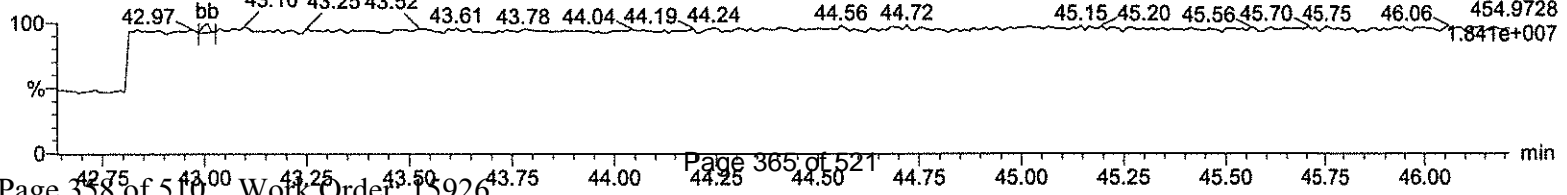
F5:Voltage SIR,EI+
513.6775
6.285e+003



Lock Mass F5

A23DEC19A-1

F5:Voltage SIR,EI+
454.9728
1.841e+007



Quantify Sample Summary Report
Method 1613 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynxDefault.pro\CCAL Results\1613-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Handwritten signature

Method: C:\MassLynxDefault.pro\Methodb\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	ICRRF	%D	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	1.22e5	1.54e5	2.76e5	31.13	1.000	0.79	NO	10.950	0.0408	0.968	0.884	9.5	2.03e6	4634	437.7	2.46e6	2778	887.2	dd	dd
2	12378-PeCDD	6.01e5	3.83e5	9.85e5	34.04	1.000	1.57	NO	53.060	0.0885	0.906	0.853	6.1	1.51e7	7122	2118.1	9.54e6	9105	1048.1	bb	bb
3	123478-HxCDD	5.01e5	4.04e5	9.05e5	36.62	1.000	1.24	NO	52.457	0.117	0.986	0.940	4.9	1.09e7	9911	1096.3	8.70e6	7702	1129.9	bd	bd
4	123678-HxCDD	5.80e5	4.66e5	1.05e6	36.70	1.000	1.24	NO	51.480	0.115	0.972	0.944	3.0	1.12e7	9911	1129.3	9.12e6	7702	1183.7	dd	dd
5	123789-HxCDD	5.33e5	4.45e5	9.77e5	36.94	1.007	1.20	NO	52.870	0.118	0.980	0.927	5.7	9.95e6	9911	1004.2	8.08e6	7702	1048.7	db	dd
6	1234678-HpCDD	3.72e5	3.54e5	7.26e5	39.97	1.001	1.05	NO	46.410	0.160	0.965	1.040	-7.2	5.59e6	7205	775.4	5.38e6	7332	734.2	bb	bb
7	OCDD	5.97e5	6.77e5	1.27e6	44.15	1.000	0.88	NO	101.661	0.194	0.988	0.971	1.7	6.73e6	5233	1286.6	7.34e6	5500	1333.8	bd	bd
8	2378-TCDF	1.31e5	1.78e5	3.10e5	30.34	1.001	0.74	NO	9.161	0.0626	0.896	0.978	-8.4	1.68e6	4482	374.5	2.19e6	5986	365.1	bd	bd
9	12378-PeCDF	8.23e5	5.30e5	1.35e6	33.24	1.000	1.55	NO	46.193	0.0866	0.873	0.945	-7.6	2.02e7	9622	2102.4	1.31e7	14647	891.2	bd	bd
10	23478-PeCDF	9.26e5	6.08e5	1.53e6	33.85	1.000	1.52	NO	48.637	0.0730	0.960	0.987	-2.7	2.45e7	9622	2543.8	1.60e7	14647	1093.6	bb	bb
11	123478-HxCDF	6.64e5	5.43e5	1.21e6	35.94	1.000	1.22	NO	49.861	0.141	1.084	1.087	-0.3	1.51e7	15417	980.1	1.24e7	15162	815.4	bd	bd
12	123678-HxCDF	7.58e5	6.15e5	1.37e6	36.01	1.000	1.23	NO	49.704	0.140	1.034	1.041	-0.6	1.54e7	15417	999.4	1.26e7	15162	831.3	db	db
13	234678-HxCDF	6.87e5	5.79e5	1.27e6	36.48	1.000	1.19	NO	49.592	0.142	1.126	1.136	-0.8	1.42e7	15417	918.7	1.18e7	15162	775.5	bb	bd
14	123789-HxCDF	5.80e5	4.70e5	1.05e6	37.24	1.000	1.23	NO	48.533	0.199	1.030	1.061	-2.9	1.02e7	15417	660.5	8.28e6	15162	545.8	bb	bb
15	1234678-HpCDF	5.43e5	5.20e5	1.06e6	38.72	1.000	1.04	NO	51.059	0.126	1.174	1.150	2.1	8.90e6	7813	1139.2	8.73e6	9806	890.1	bb	bb
16	1234789-HpCDF	4.32e5	4.08e5	8.40e5	40.62	1.000	1.06	NO	51.161	0.194	1.230	1.202	2.3	6.03e6	7813	772.4	5.83e6	9806	595.0	bb	bb
17	OCDF	6.57e5	7.45e5	1.40e6	44.44	1.007	0.88	NO	95.947	0.204	1.087	1.133	-4.1	6.89e6	5960	1156.0	7.58e6	7179	1055.6	bd	bd
18	13C-2378-TCDD	1.24e6	1.60e6	2.85e6	31.12	1.019	0.77	NO	103.710	0.0997	1.170	1.128	3.7	2.24e7	8017	2792.6	2.82e7	6071	4639.8	bb	bb
19	13C-12378-PeCDD	1.32e6	8.55e5	2.17e6	34.03	1.114	1.54	NO	118.956	0.141	0.894	0.751	19.0	3.26e7	6555	4972.6	2.08e7	6706	3103.0	bb	bb
20	13C-123478-HxCDD	1.02e6	8.15e5	1.84e6	36.61	0.991	1.25	NO	95.966	0.145	0.860	0.896	-4.0	2.22e7	11855	1871.5	1.75e7	8154	2146.2	bd	bd
21	13C-123678-HxCDD	1.20e6	9.56e5	2.15e6	36.69	0.993	1.25	NO	102.260	0.132	1.008	0.986	2.3	2.24e7	11855	1893.5	1.80e7	8154	2213.3	dd	dd
22	13C-1234678-HpCDD	7.72e5	7.32e5	1.50e6	39.95	1.082	1.06	NO	104.883	0.150	0.704	0.672	4.9	1.12e7	7061	1584.9	1.04e7	8483	1226.1	bd	bd
23	13C-OCDD	1.18e6	1.40e6	2.59e6	44.14	1.195	0.85	NO	188.179	0.128	0.604	0.642	-5.9	1.31e7	7278	1795.5	1.46e7	5346	2732.6	bb	bd
24	13C-2378-TCDF	1.51e6	1.95e6	3.45e6	30.32	0.993	0.77	NO	113.569	0.134	1.419	1.250	13.6	1.87e7	12610	1479.0	2.37e7	8357	2831.8	bb	bb
25	13C-12378-PeCDF	1.89e6	1.21e6	3.10e6	33.23	1.088	1.56	NO	125.939	0.241	1.273	1.011	25.9	4.52e7	16000	2824.6	2.96e7	14555	2033.7	bd	bd
26	13C-23478-PeCDF	1.94e6	1.26e6	3.20e6	33.84	1.108	1.54	NO	123.629	0.230	1.314	1.063	23.6	5.11e7	16000	3194.7	3.31e7	14555	2272.1	bb	bb
27	13C-123478-HxCDF	7.52e5	1.47e6	2.23e6	35.90	0.972	0.51	NO	93.890	0.138	1.043	1.111	-6.1	1.69e7	12397	1362.0	3.29e7	11173	2949.1	bd	bd
28	13C-123678-HxCDF	8.92e5	1.76e6	2.65e6	36.00	0.975	0.51	NO	99.693	0.123	1.243	1.247	-0.3	1.77e7	12397	1424.9	3.37e7	11173	3014.8	db	dd
29	13C-234678-HxCDF	7.59e5	1.49e6	2.25e6	36.47	0.988	0.51	NO	97.347	0.141	1.053	1.082	-2.7	1.60e7	12397	1286.8	3.03e7	11173	2710.6	bb	bd
30	13C-123789-HxCDF	6.79e5	1.36e6	2.04e6	37.23	1.008	0.50	NO	98.845	0.158	0.956	0.967	-1.2	1.21e7	12397	974.5	2.38e7	11173	2128.1	bb	bd

Quantify Sample Summary Report

Method 1613 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	5.41e5	1.27e6	1.81e6	38.71	1.048	0.43	NO	97.500	0.128	0.848	0.870	-2.5	9.10e6	6977	1304.5	2.11e7	10125	2081.8	bb	bb
32	13C-1234789-HpCDF	4.28e5	9.37e5	1.37e6	40.61	1.100	0.46	NO	94.424	0.164	0.640	0.677	-5.6	5.93e6	6977	849.8	1.33e7	10125	1312.1	bd	bb
33	13C-1234-TCDD	1.07e6	1.37e6	2.43e6	30.54	0.000	0.78	NO	100.000	0.113	1.000	1.000	0.0	1.37e7	8017	1711.5	1.77e7	6071	2910.7	bb	bb
34	13C-123789-HxCDD	1.18e6	9.51e5	2.13e6	36.93	0.000	1.25	NO	100.000	0.130	1.000	1.000	0.0	2.14e7	11855	1802.5	1.69e7	8154	2078.8	dd	dd
35	37Cl-2378-TCDD	2.60e5		2.60e5	31.13	1.019			10.067	0.0304	1.067	1.061	0.6	4.64e6	4044	1147.3				bb	

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

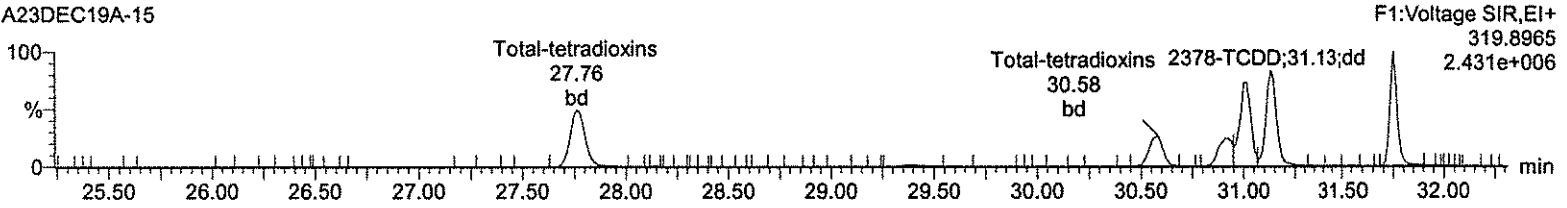
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

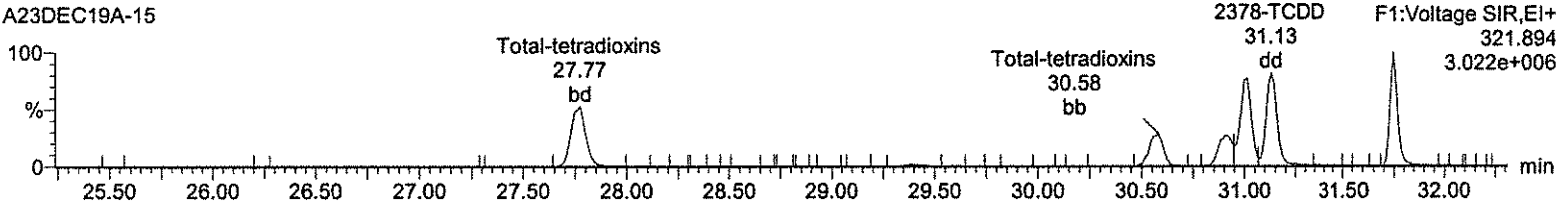
Total-tetradoxins

A23DEC19A-15



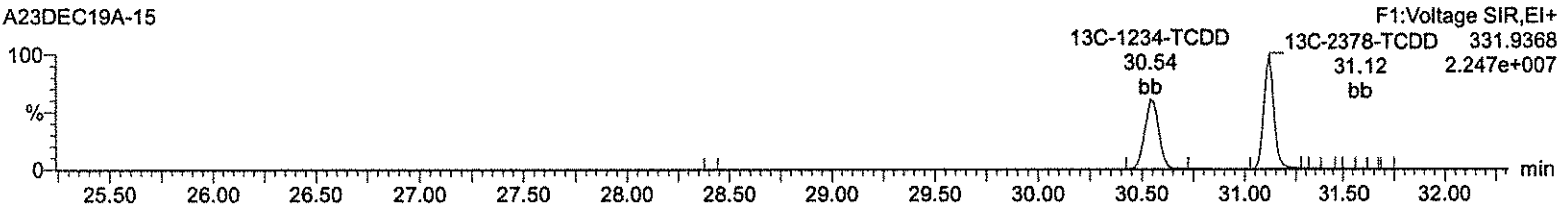
Total-tetradoxins

A23DEC19A-15



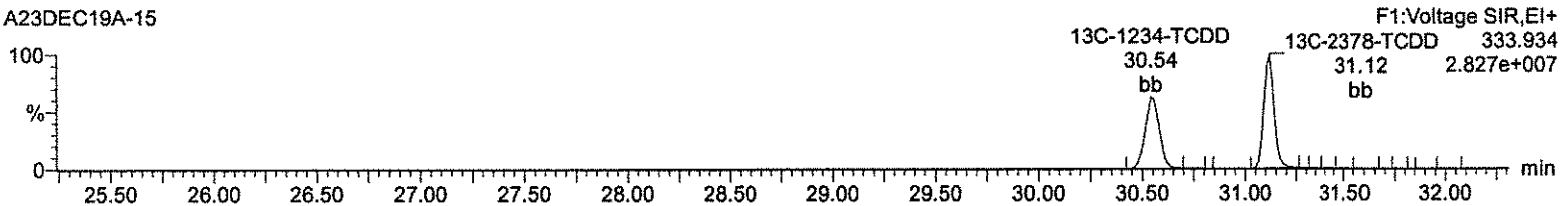
13C-2378-TCDD

A23DEC19A-15



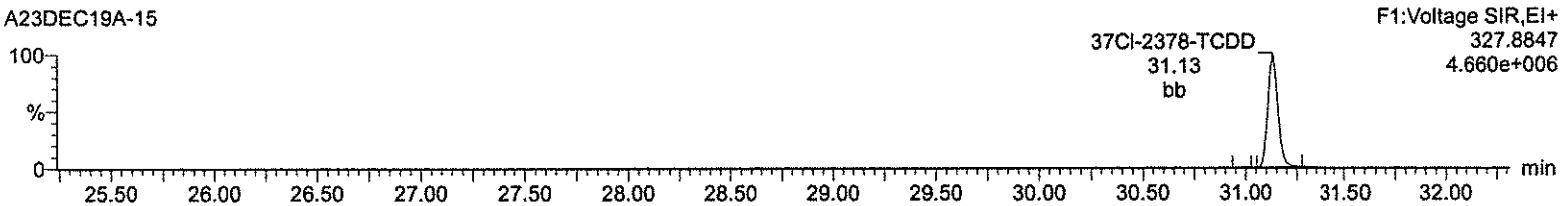
13C-2378-TCDD

A23DEC19A-15



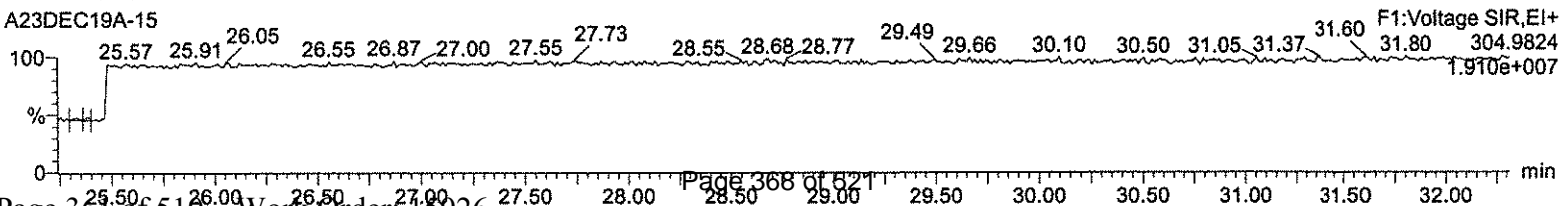
37Cl-2378-TCDD

A23DEC19A-15



Lock Mass F1

A23DEC19A-15



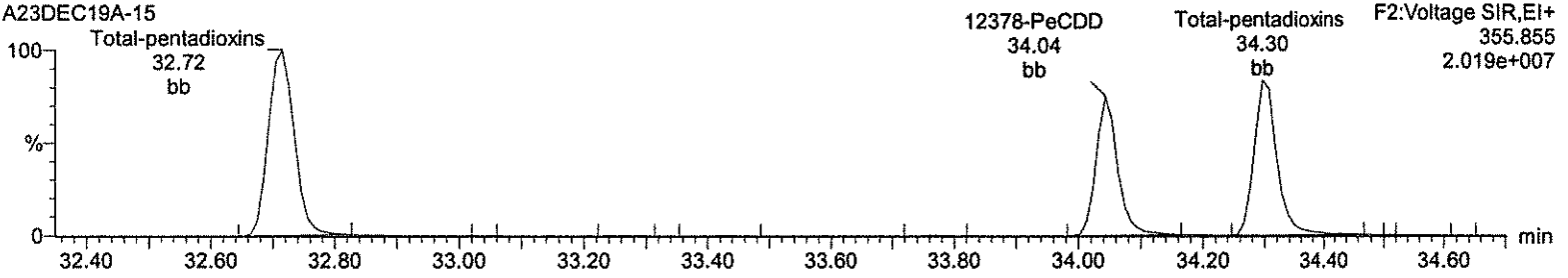
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Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time
Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

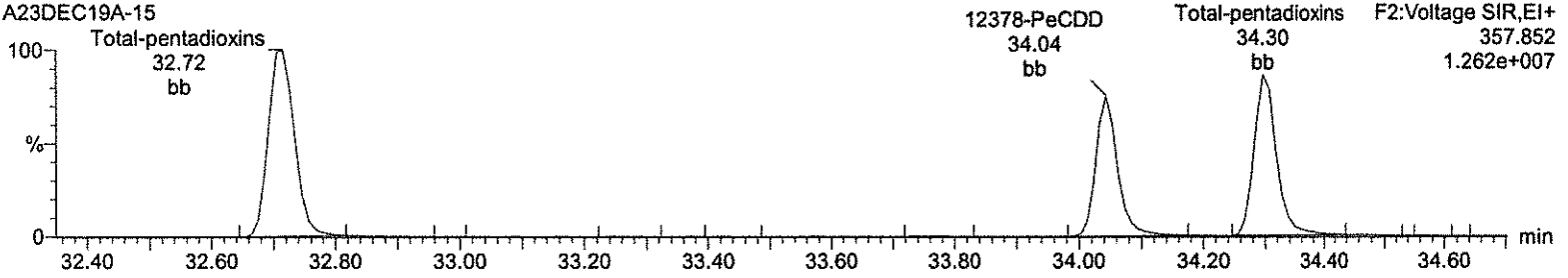
Total-pentadioxins

A23DEC19A-15



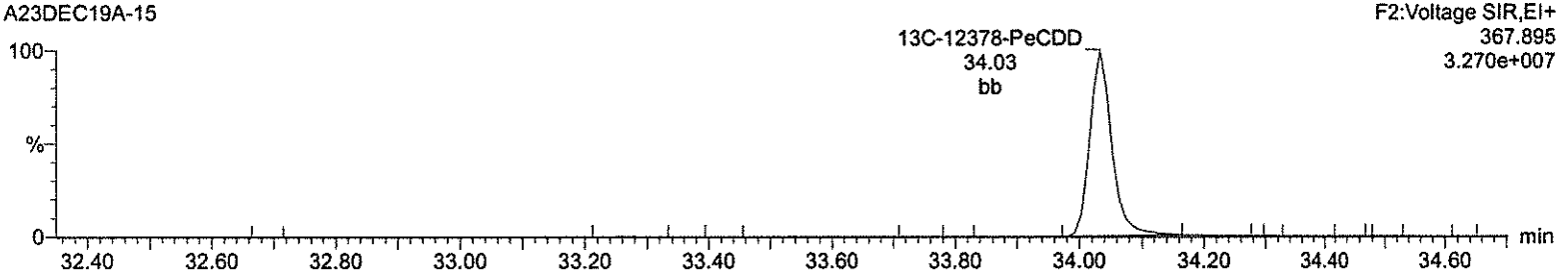
Total-pentadioxins

A23DEC19A-15



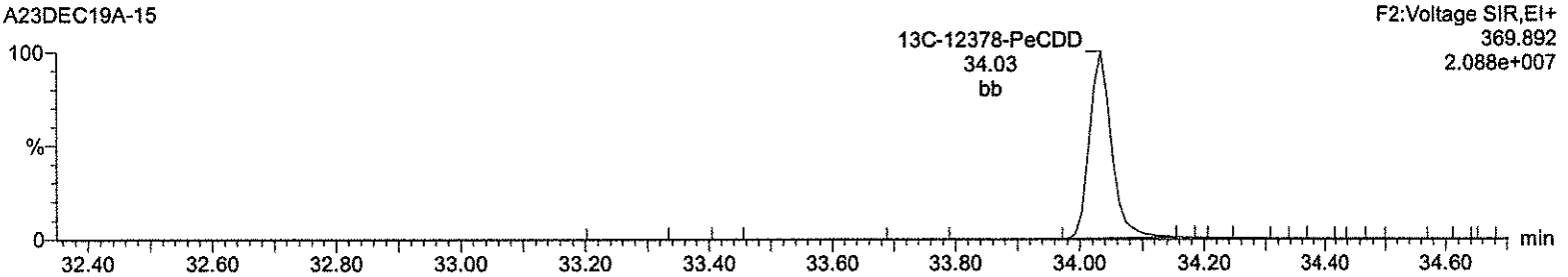
13C-12378-PeCDD

A23DEC19A-15



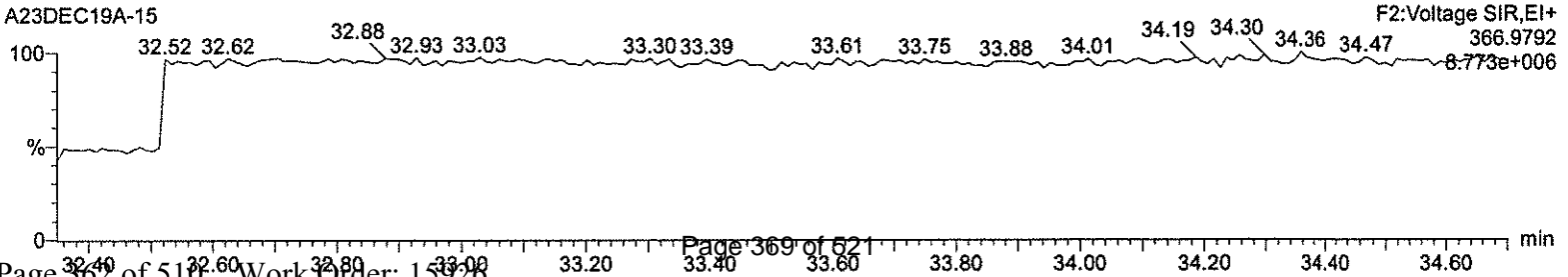
13C-12378-PeCDD

A23DEC19A-15



Lock Mass F2

A23DEC19A-15



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

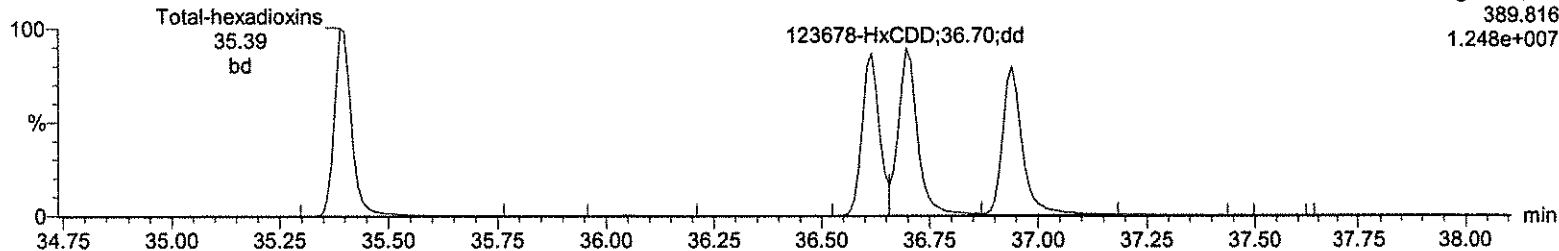
Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A-15

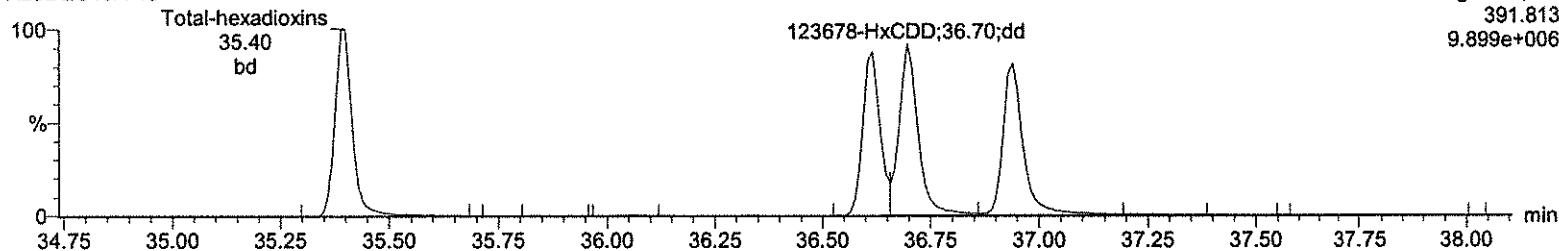
F3:Voltage SIR,EI+
389.816
1.248e+007



Total-hexadioxins

A23DEC19A-15

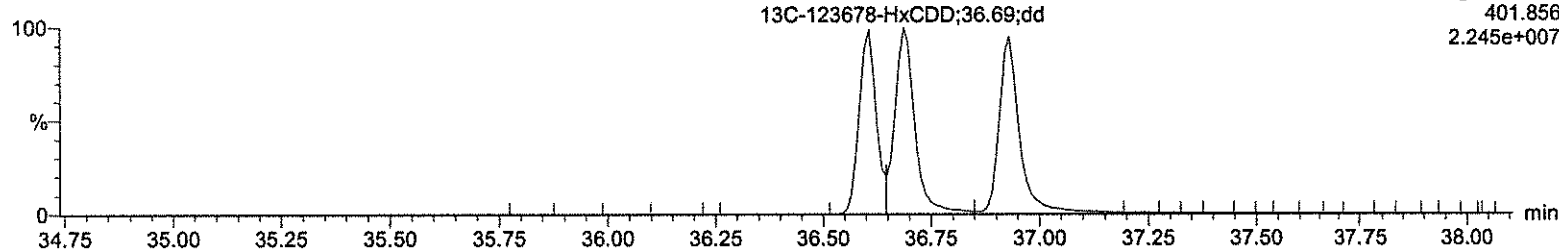
F3:Voltage SIR,EI+
391.813
9.899e+006



13C-123478-HxCDD

A23DEC19A-15

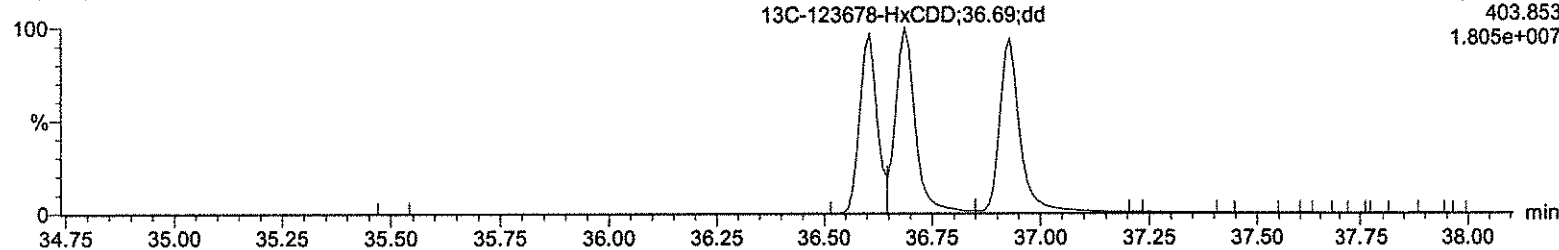
F3:Voltage SIR,EI+
401.856
2.245e+007



13C-123478-HxCDD

A23DEC19A-15

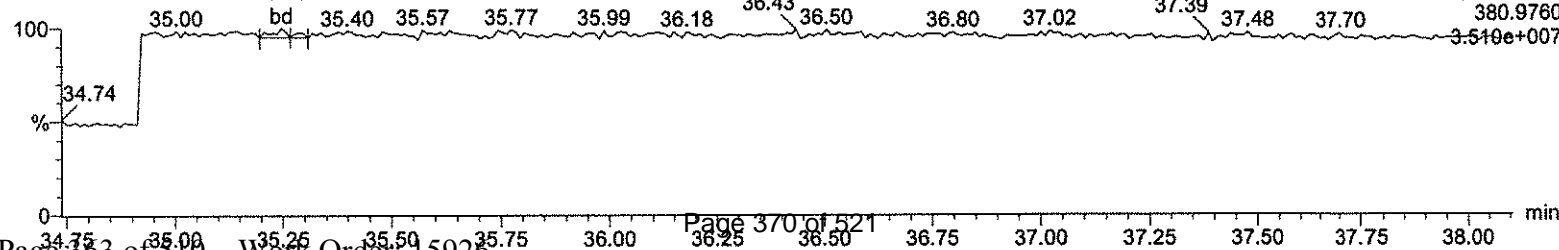
F3:Voltage SIR,EI+
403.853
1.805e+007



Lock Mass F3

A23DEC19A-15

F3:Voltage SIR,EI+
380.9760
3.510e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

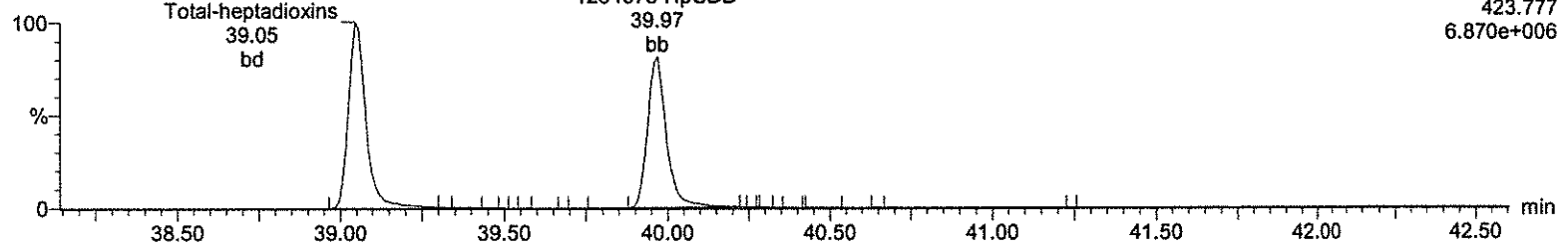
Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

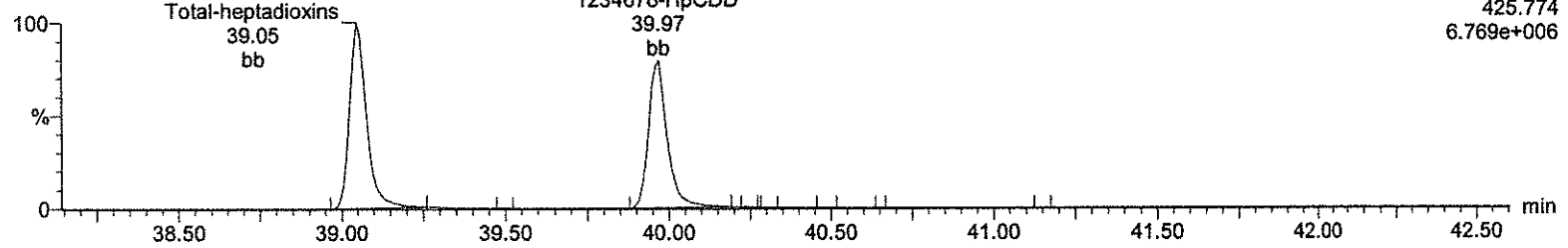
Total-heptadioxins

A23DEC19A-15



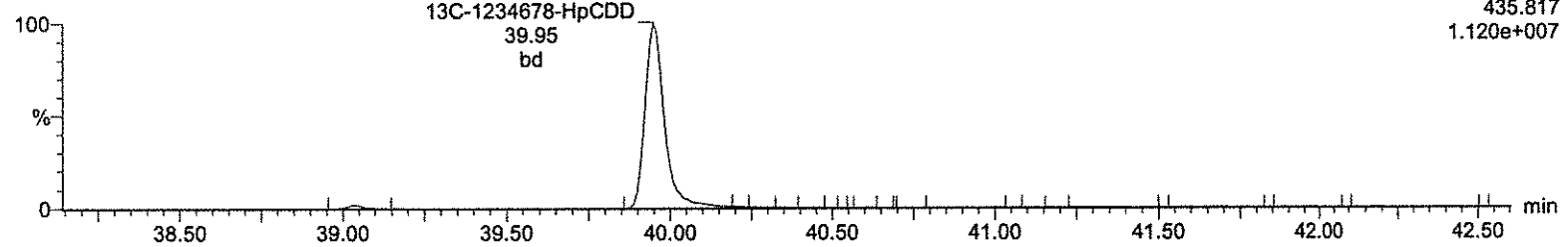
Total-heptadioxins

A23DEC19A-15



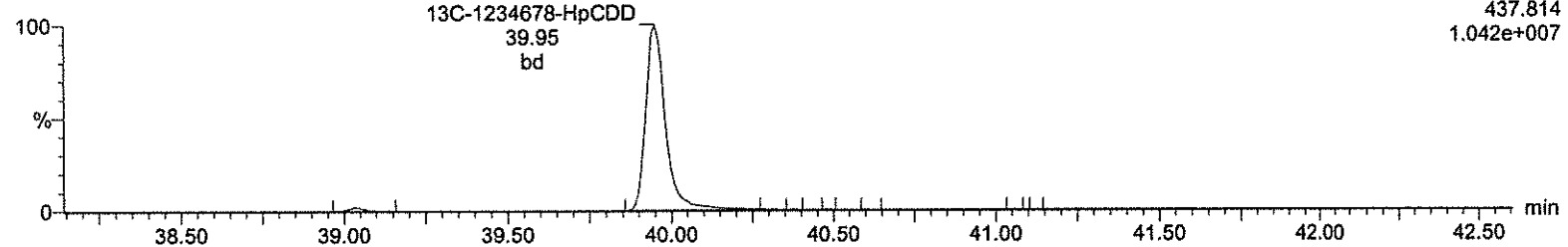
13C-1234678-HpCDD

A23DEC19A-15



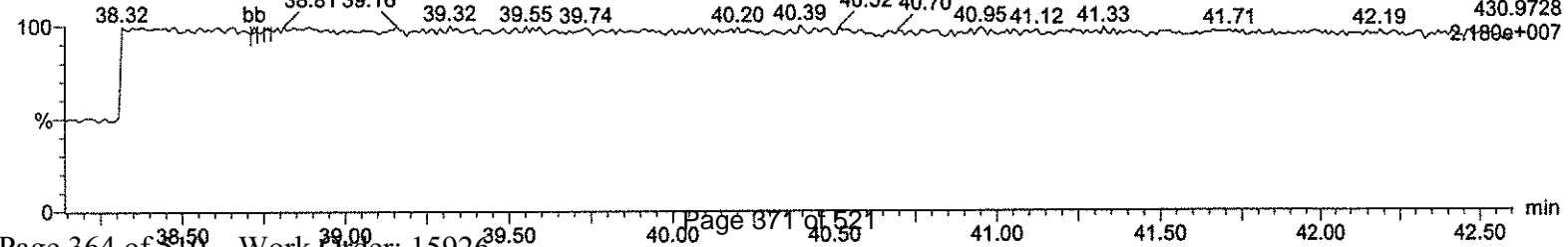
13C-1234678-HpCDD

A23DEC19A-15



Lock Mass F4

A23DEC19A-15



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

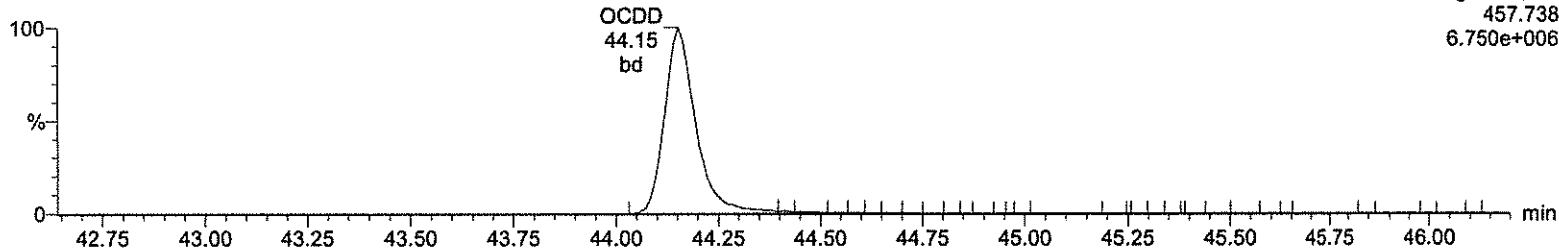
Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

OCDD

A23DEC19A-15

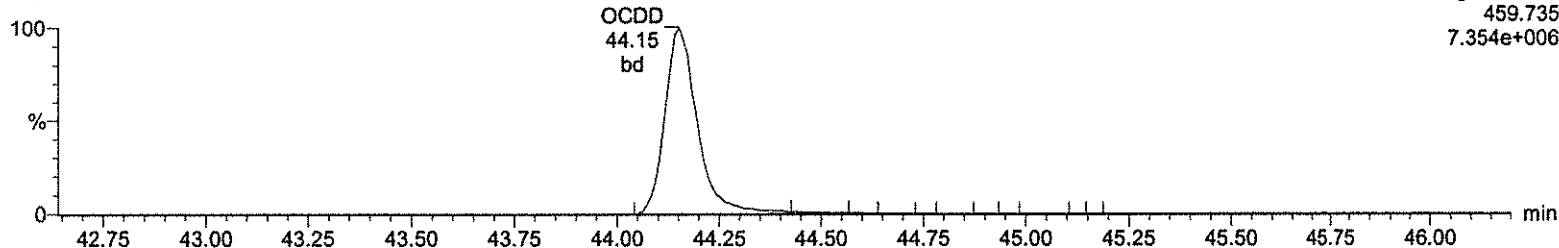
F5:Voltage SIR,EI+
457.738
6.750e+006



OCDD

A23DEC19A-15

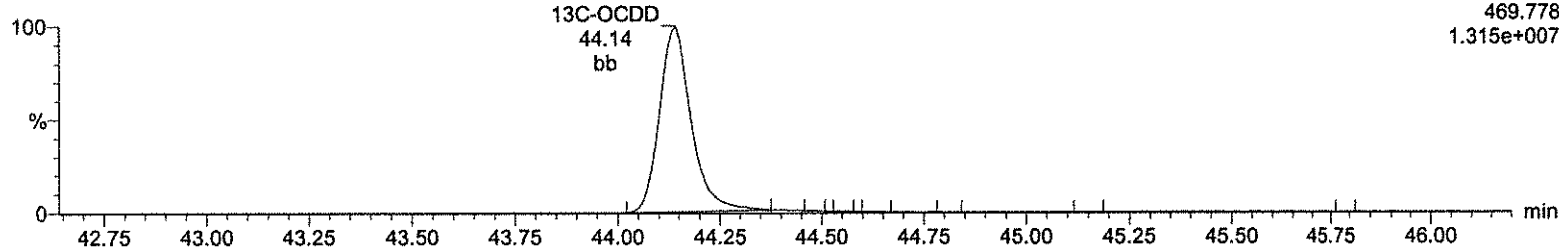
F5:Voltage SIR,EI+
459.735
7.354e+006



13C-OCDD

A23DEC19A-15

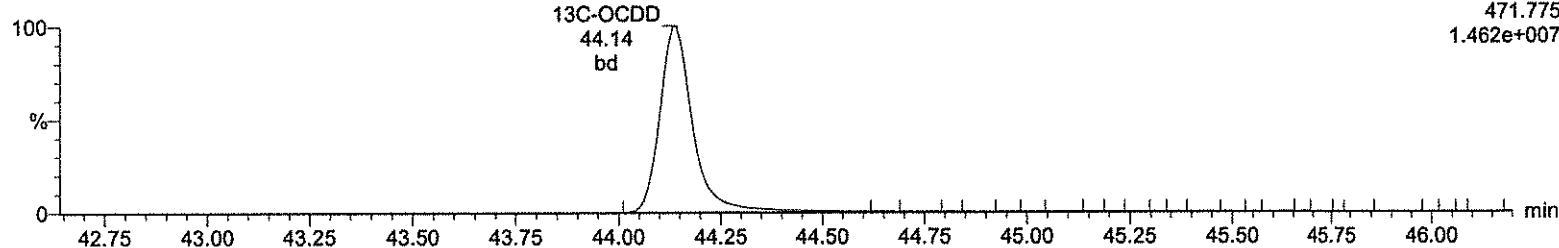
F5:Voltage SIR,EI+
469.778
1.315e+007



13C-OCDD

A23DEC19A-15

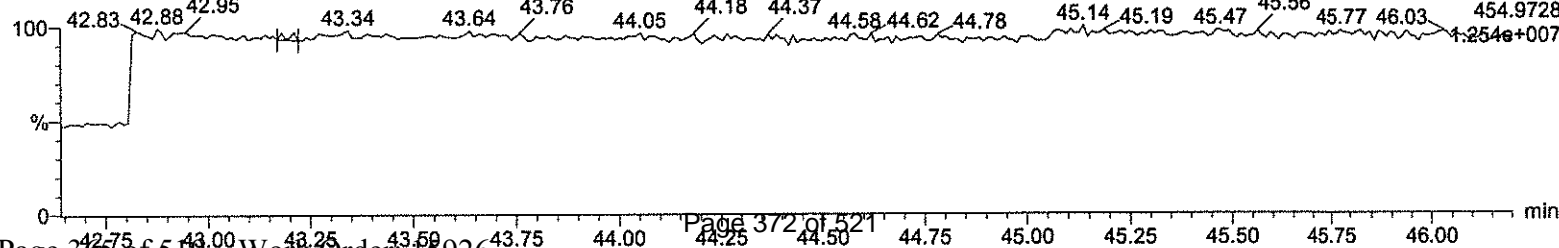
F5:Voltage SIR,EI+
471.775
1.462e+007



Lock Mass F5

A23DEC19A-15

F5:Voltage SIR,EI+
454.9728
1.254e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

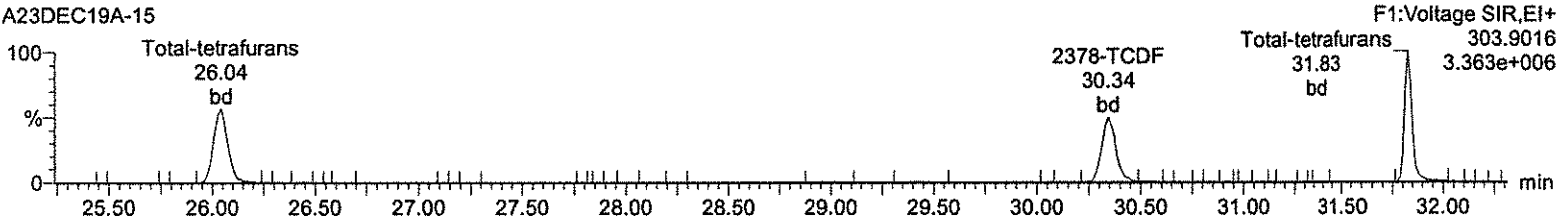
Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

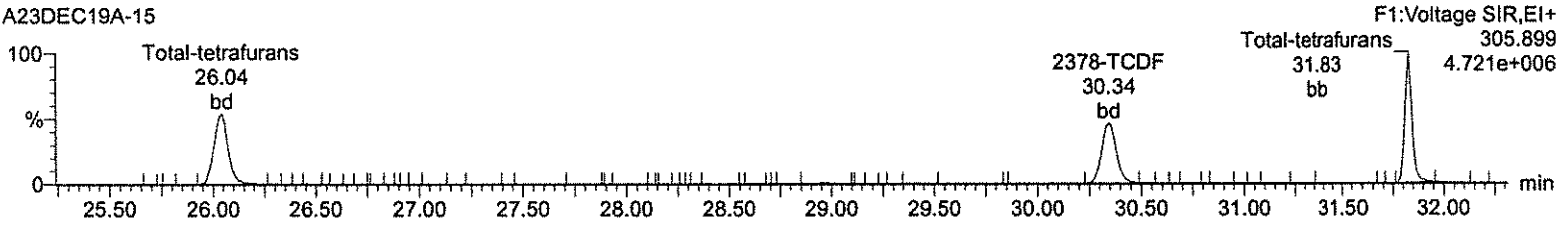
Total-tetrafurans

A23DEC19A-15



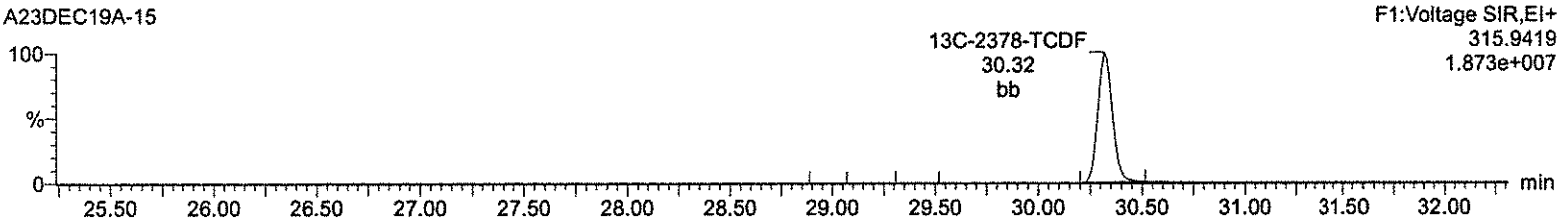
Total-tetrafurans

A23DEC19A-15



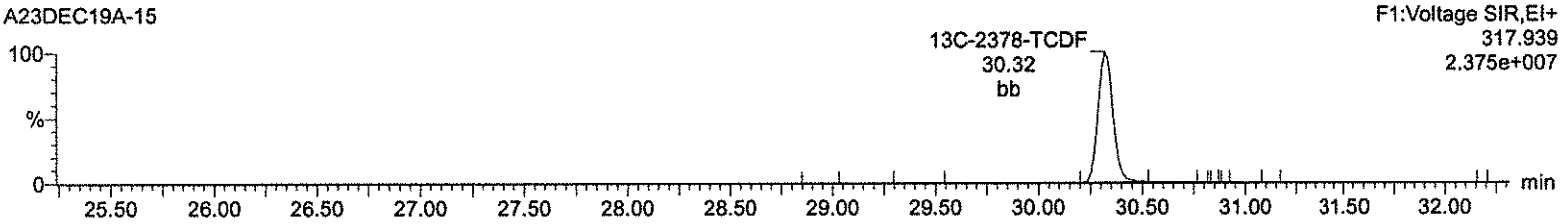
13C-2378-TCDF

A23DEC19A-15



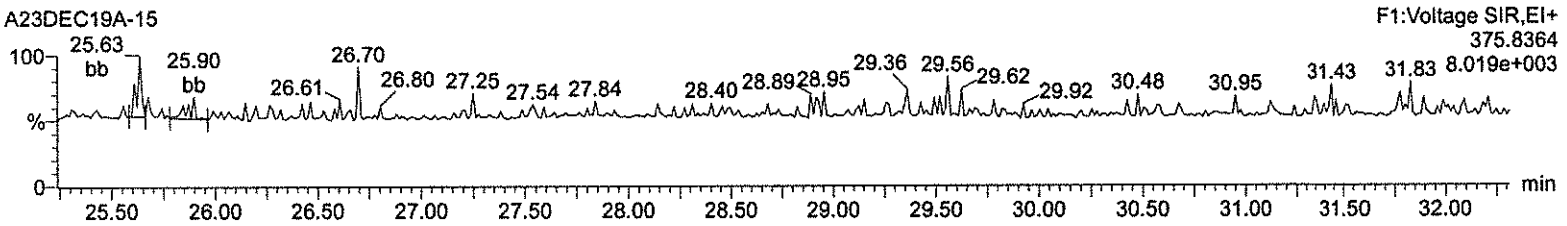
13C-2378-TCDF

A23DEC19A-15



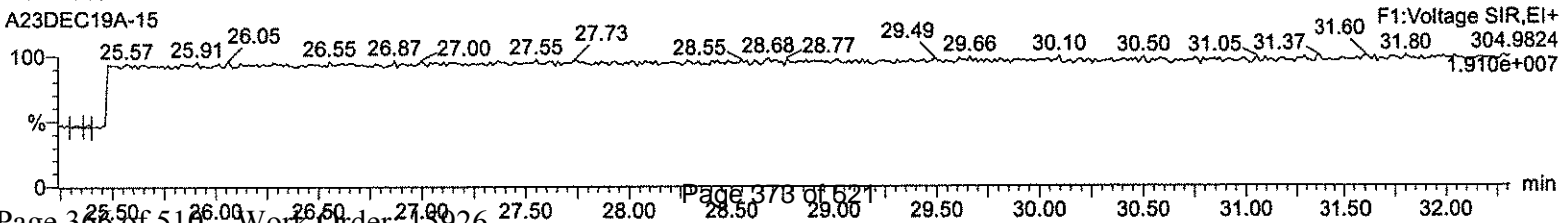
HxDPE

A23DEC19A-15



Lock Mass F1

A23DEC19A-15



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

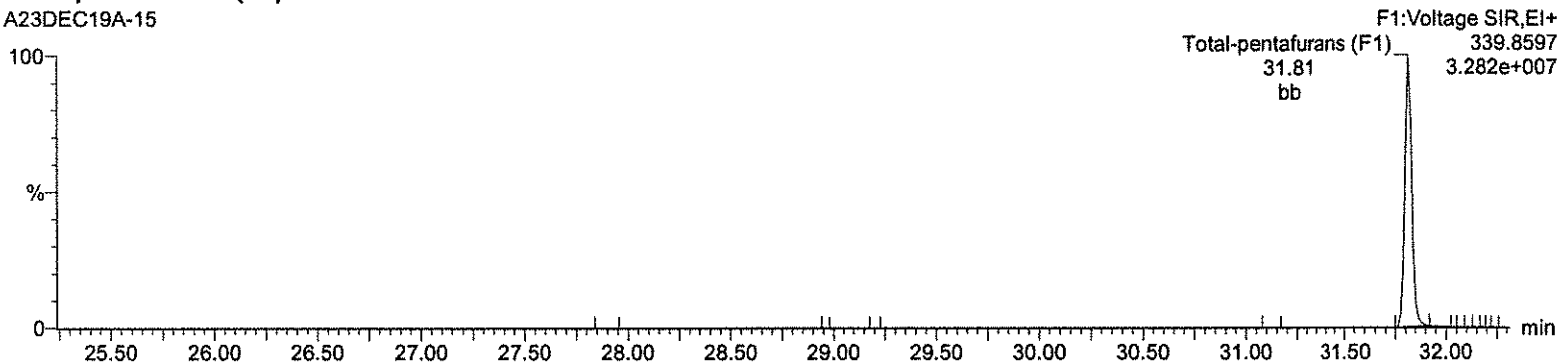
Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

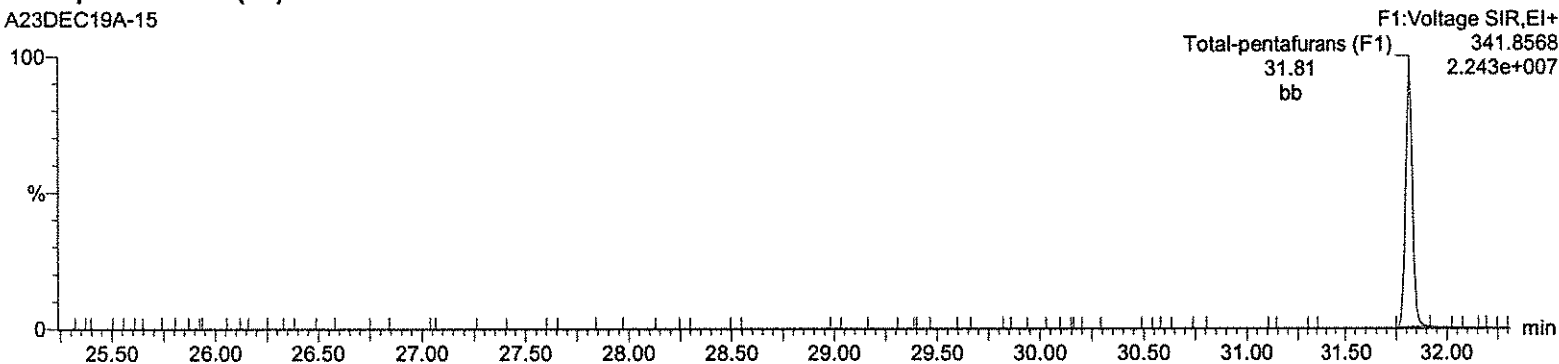
Total-pentafurans (F1)

A23DEC19A-15



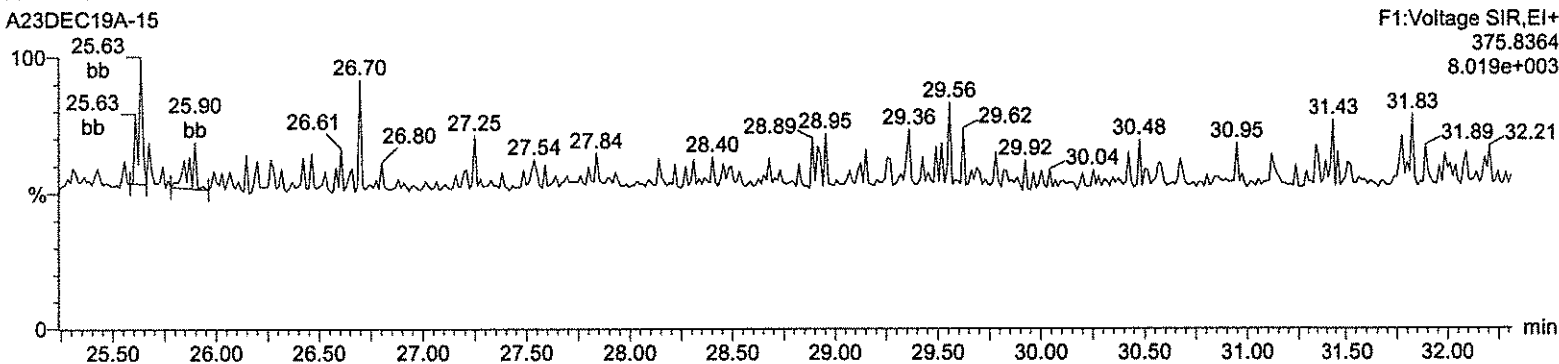
Total-pentafurans (F1)

A23DEC19A-15



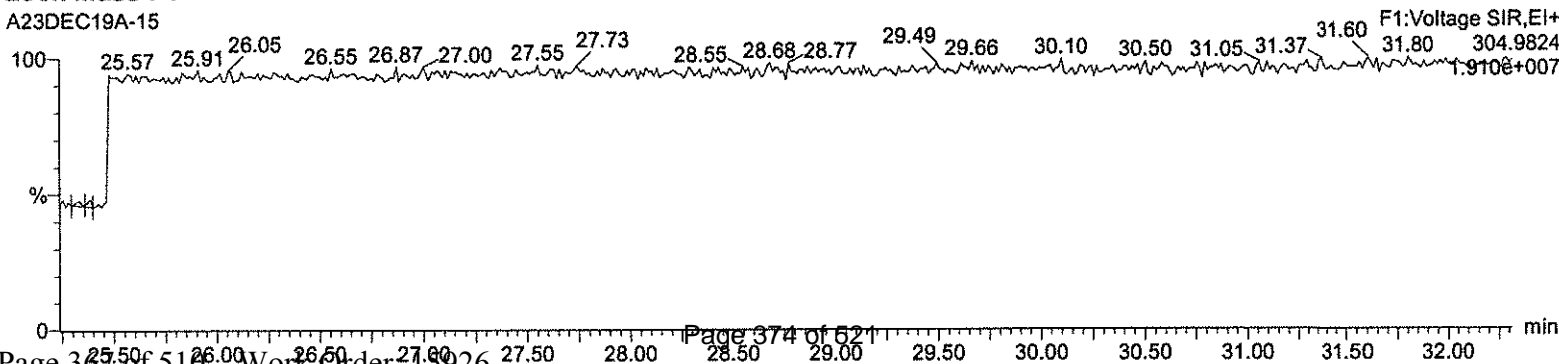
HxDPE

A23DEC19A-15



Lock Mass F1

A23DEC19A-15



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

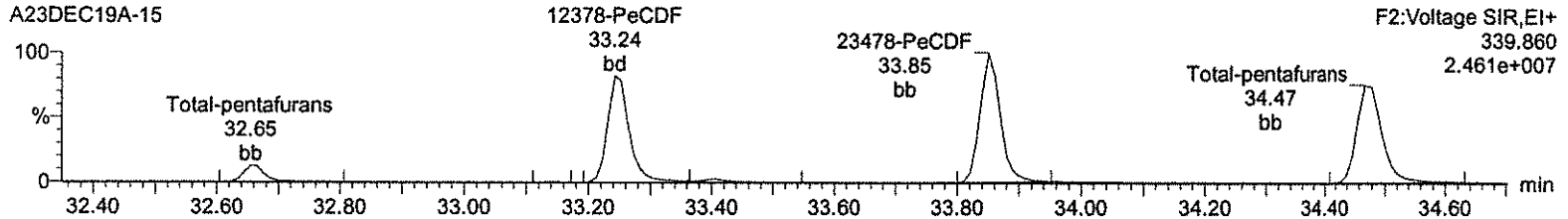
Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

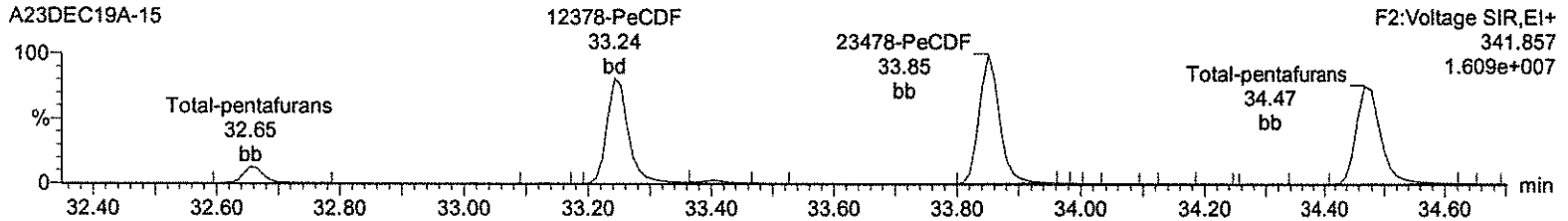
Total-pentafurans

A23DEC19A-15



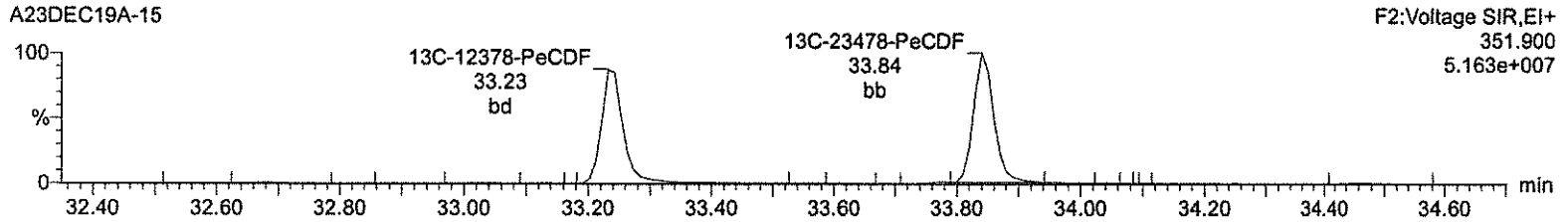
Total-pentafurans

A23DEC19A-15



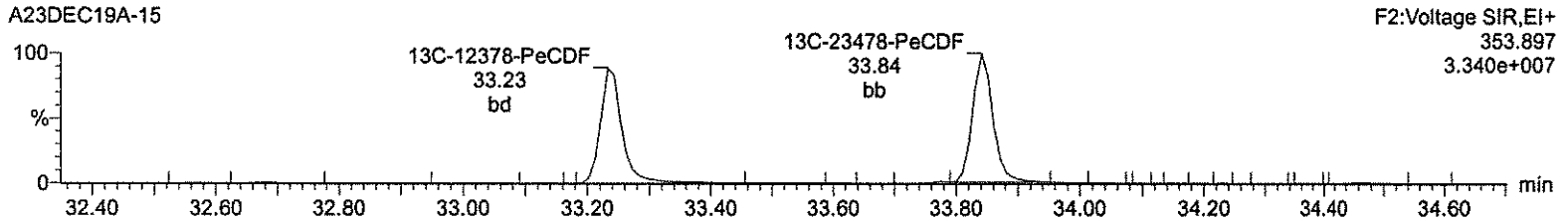
13C-12378-PeCDF

A23DEC19A-15



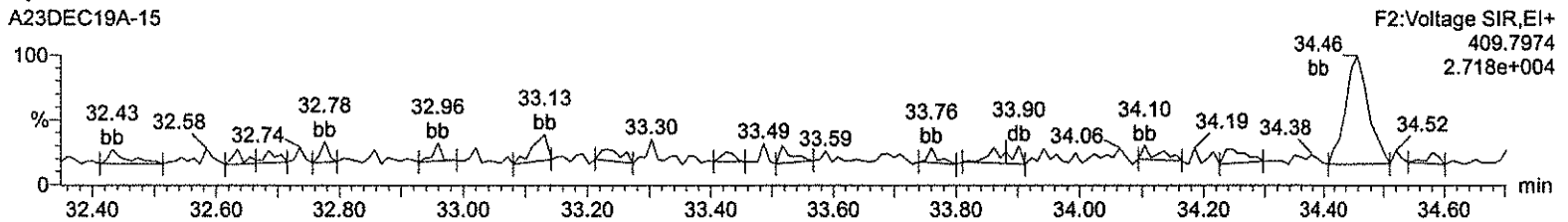
13C-12378-PeCDF

A23DEC19A-15



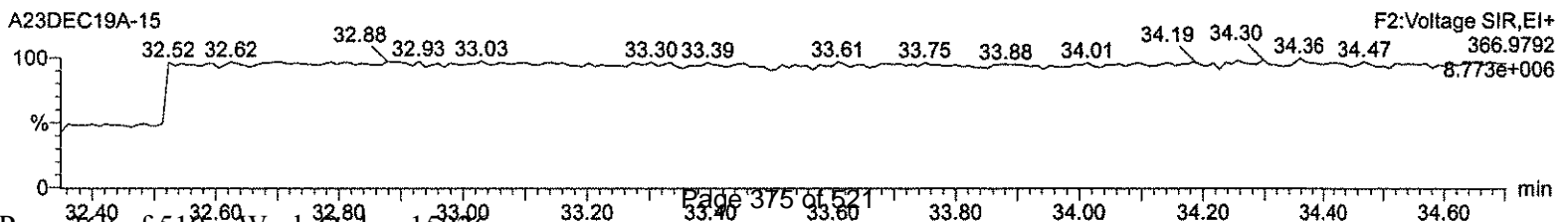
HpDPE

A23DEC19A-15



Lock Mass F2

A23DEC19A-15



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

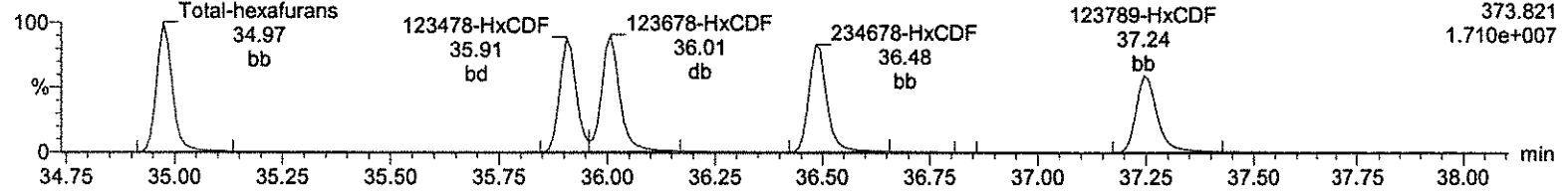
Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

Total-hexafurans

A23DEC19A-15

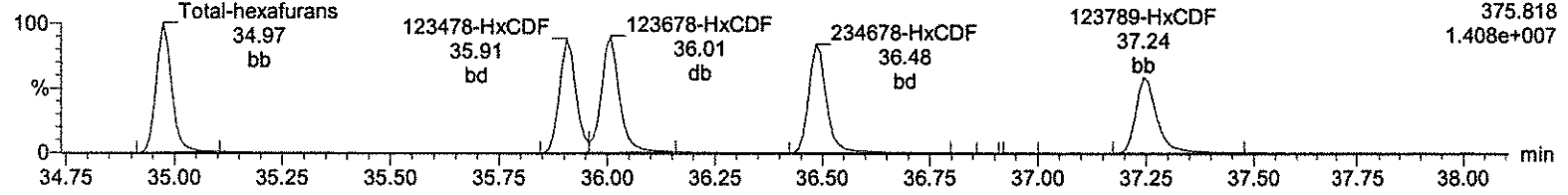
F3:Voltage SIR,EI+
373.821
1.710e+007



Total-hexafurans

A23DEC19A-15

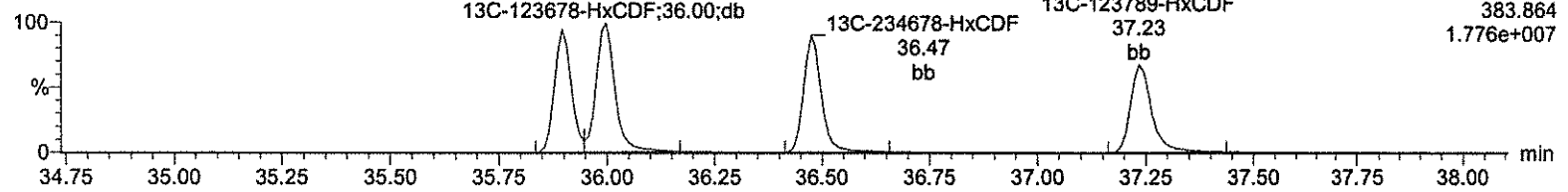
F3:Voltage SIR,EI+
375.818
1.408e+007



13C-123478-HxCDF

A23DEC19A-15

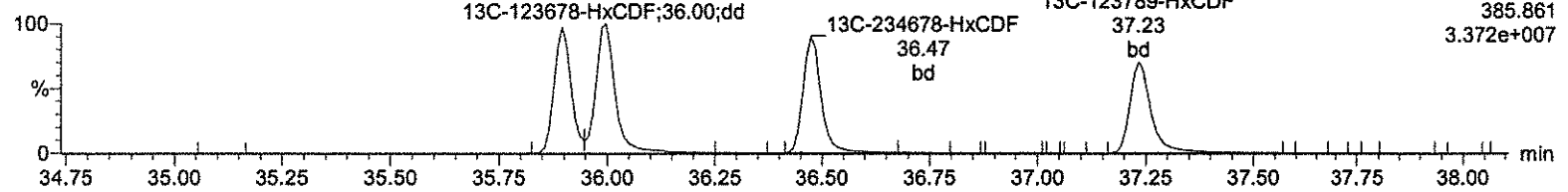
F3:Voltage SIR,EI+
383.864
1.776e+007



13C-123478-HxCDF

A23DEC19A-15

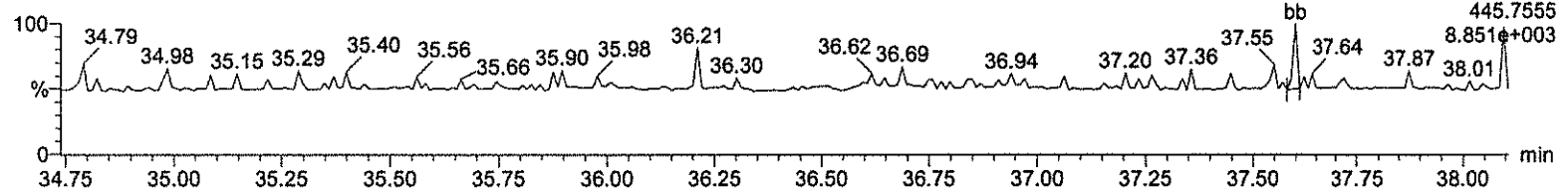
F3:Voltage SIR,EI+
385.861
3.372e+007



OcDPE

A23DEC19A-15

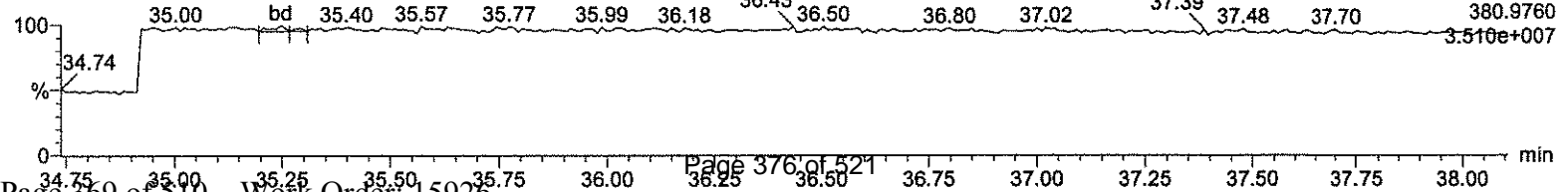
F3:Voltage SIR,EI+
445.7556
8.851e+003



Lock Mass F3

A23DEC19A-15

F3:Voltage SIR,EI+
380.9760
3.510e+007



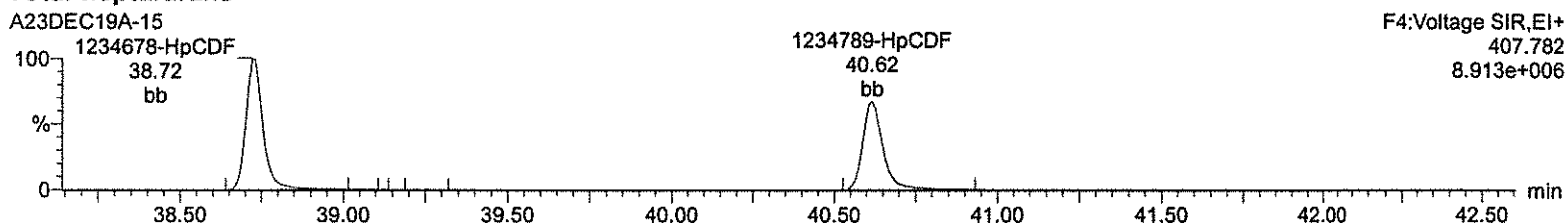
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

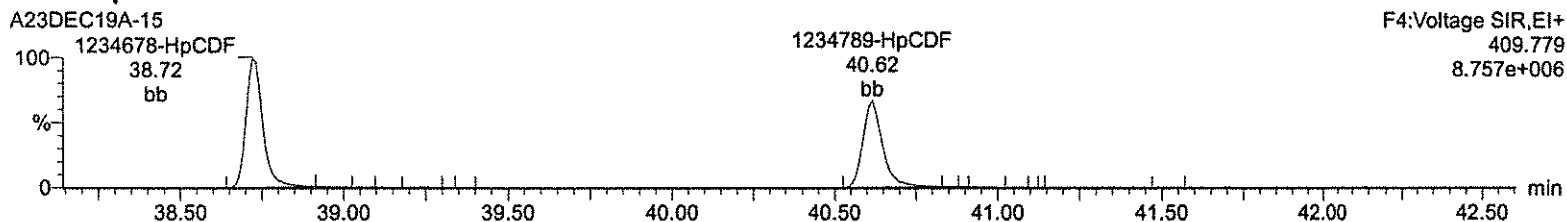
Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A,
Task: HRP750_2, User: MJC

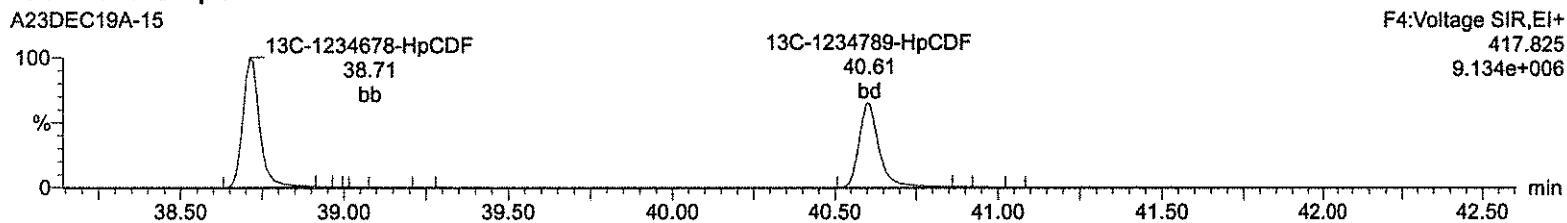
Total-heptafurans



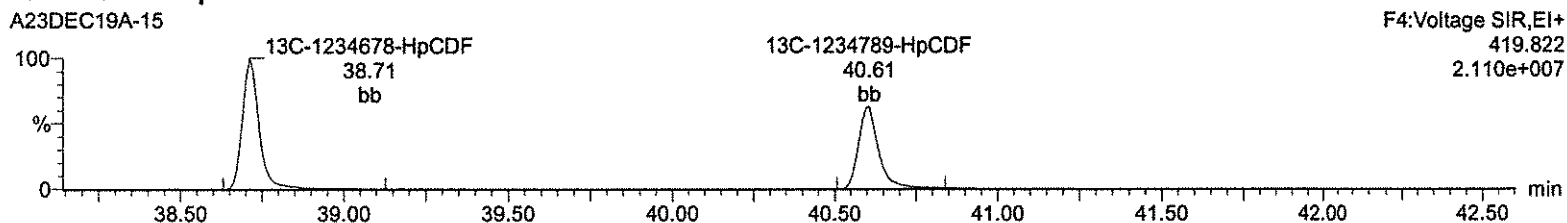
Total-heptafurans



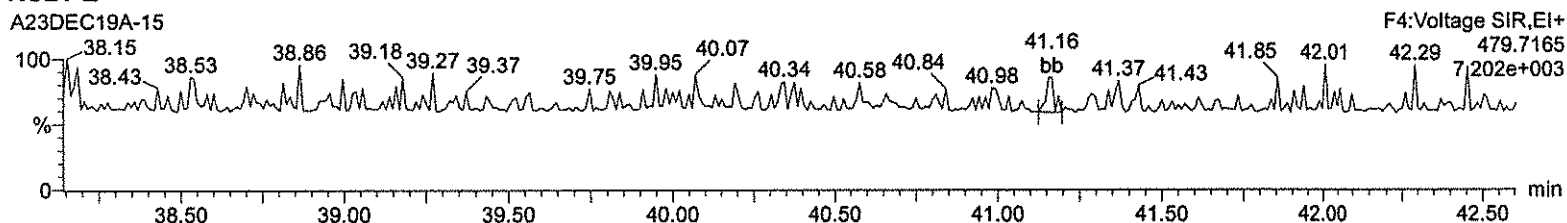
13C-1234678-HpCDF



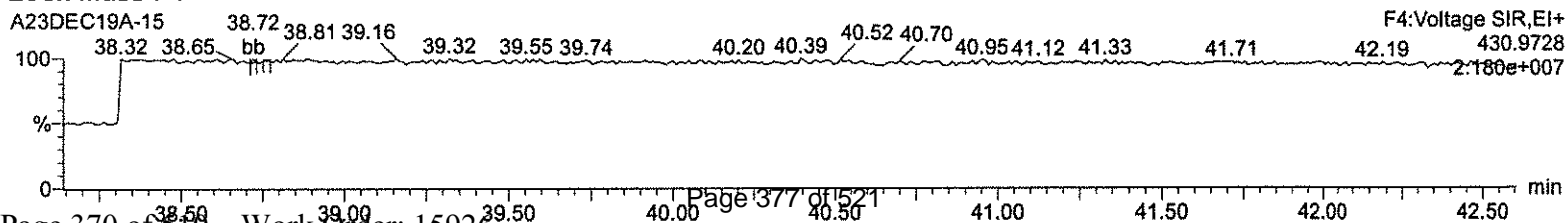
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A-15.qld

Last Altered: Tuesday, December 24, 2019 07:44:50 Eastern Standard Time

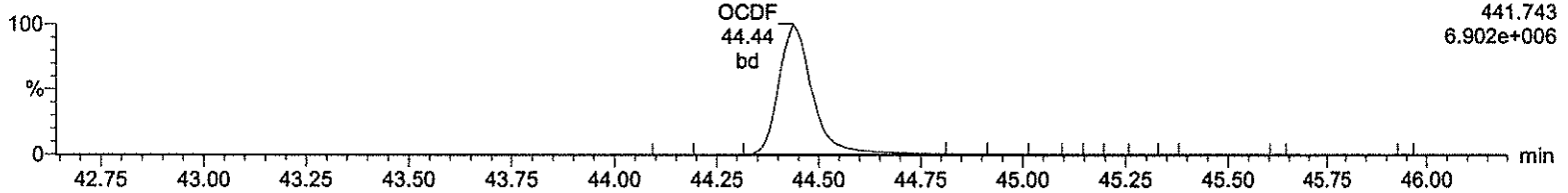
Printed: Tuesday, December 24, 2019 07:45:53 Eastern Standard Time

Name: A23DEC19A-15, Date: 24-Dec-2019, Time: 04:41:42, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A, Task: HRP750_2, User: MJC

OCDF

A23DEC19A-15

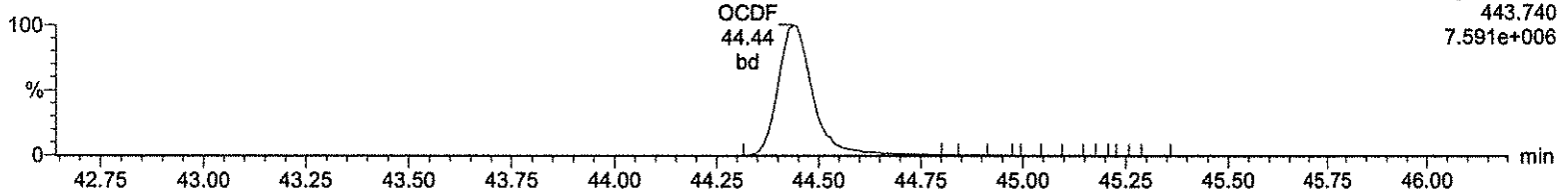
F5:Voltage SIR,EI+
441.743
6.902e+006



OCDF

A23DEC19A-15

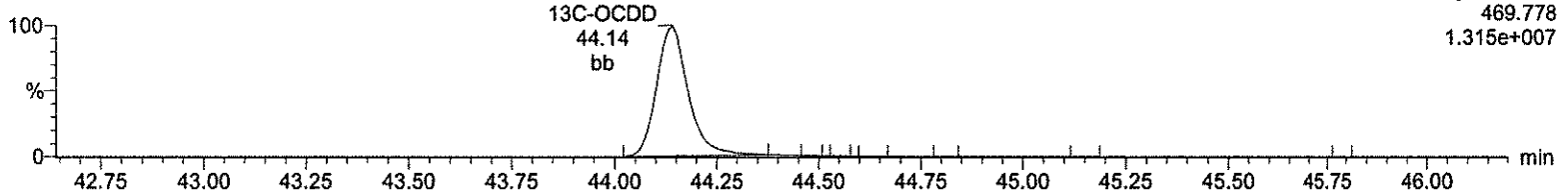
F5:Voltage SIR,EI+
443.740
7.591e+006



13C-OCDD

A23DEC19A-15

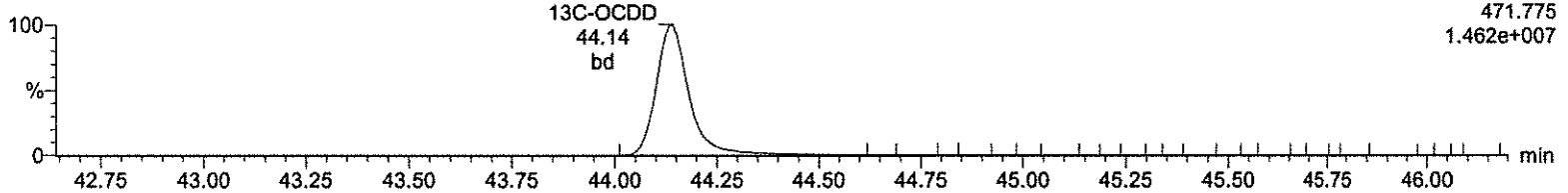
F5:Voltage SIR,EI+
469.778
1.315e+007



13C-OCDD

A23DEC19A-15

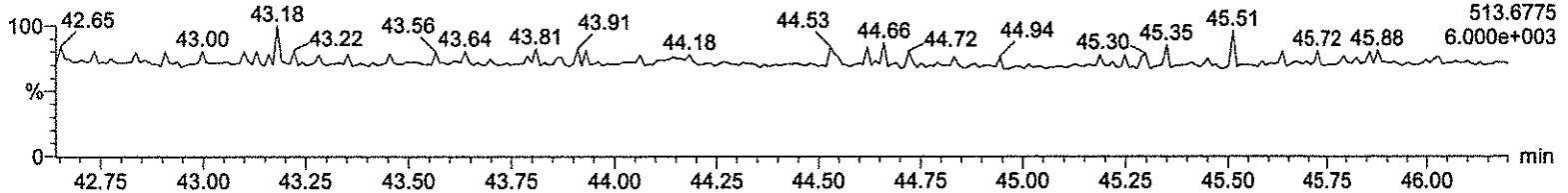
F5:Voltage SIR,EI+
471.775
1.462e+007



DeDPE

A23DEC19A-15

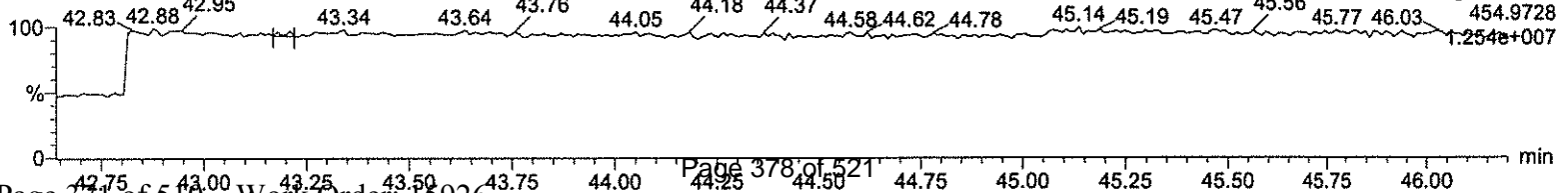
F5:Voltage SIR,EI+
513.6775
6.000e+003



Lock Mass F5

A23DEC19A-15

F5:Voltage SIR,EI+
454.9728
1.254e+007



Quantify Sample Summary Report
 Method 8290 CCAL Report
 MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time
 Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	Mean	%D	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	9.56e4	1.21e5	2.16e5	31.13	1.000	0.79	NO	10.582	0.0452	0.936	0.884	5.8	1.55e6	4088	379.7	2.07e6	2364	876.2	dd	db
2	12378-PeCDD	4.89e5	3.11e5	8.00e5	34.04	1.000	1.57	NO	52.204	0.134	0.891	0.853	4.4	1.14e7	12671	897.3	7.35e6	6658	1104.4	bb	bb
3	123478-HxCDD	4.17e5	3.37e5	7.53e5	36.62	0.998	1.24	NO	46.398	0.174	0.793	0.854	-7.2	9.09e6	10008	908.2	7.45e6	10434	714.0	bd	bd
4	123678-HxCDD	5.11e5	4.10e5	9.21e5	36.71	1.001	1.25	NO	51.311	0.158	0.969	0.944	2.6	8.99e6	10008	898.6	7.13e6	10434	683.2	dd	dd
5	123789-HxCDD	4.62e5	3.76e5	8.38e5	36.94	1.007	1.23	NO	49.824	0.168	0.892	0.885	-0.4	8.31e6	10008	830.7	6.75e6	10434	647.3	dd	dd
6	1234678-HpCDD	3.18e5	2.98e5	6.16e5	39.97	1.001	1.07	NO	46.632	0.173	0.970	1.040	-6.7	4.45e6	7145	623.2	4.40e6	5939	741.6	bd	bb
7	OCDD	5.31e5	5.87e5	1.12e6	44.16	1.000	0.90	NO	100.551	0.261	0.977	0.971	0.6	5.80e6	6309	919.0	6.22e6	5934	1047.8	bd	bd
8	2378-TCDF	1.08e5	1.39e5	2.48e5	30.34	1.001	0.78	NO	8.960	0.0904	0.877	0.978	-10.4	1.33e6	4273	310.7	1.74e6	8141	213.9	bd	bb
9	12378-PeCDF	6.56e5	4.33e5	1.09e6	33.25	1.000	1.51	NO	46.670	0.0966	0.882	0.945	-6.7	1.58e7	12636	1246.8	1.03e7	9447	1092.0	bd	bd
10	23478-PeCDF	7.48e5	4.91e5	1.24e6	33.85	1.018	1.52	NO	48.403	0.0880	1.004	1.037	-3.2	1.79e7	12636	1416.7	1.19e7	9447	1260.9	bb	bb
11	123478-HxCDF	5.39e5	4.39e5	9.78e5	35.92	0.998	1.23	NO	46.288	0.185	0.896	0.968	-7.4	1.19e7	17601	674.3	9.56e6	13282	720.1	bd	bd
12	123678-HxCDF	6.39e5	5.17e5	1.15e6	36.01	1.000	1.23	NO	50.809	0.172	1.057	1.041	1.6	1.31e7	17601	745.4	1.06e7	13282	799.5	db	db
13	234678-HxCDF	5.94e5	4.77e5	1.07e6	36.49	1.014	1.25	NO	49.777	0.182	0.981	0.985	-0.4	1.23e7	17601	698.6	9.62e6	13282	724.7	bd	bd
14	123789-HxCDF	5.08e5	3.98e5	9.06e5	37.25	1.035	1.28	NO	50.438	0.217	0.830	0.823	0.9	8.79e6	17601	499.4	6.94e6	13282	522.8	bd	bb
15	1234678-HpCDF	4.65e5	4.47e5	9.12e5	38.73	1.000	1.04	NO	53.000	0.126	1.219	1.150	6.0	7.75e6	7985	970.2	7.27e6	6089	1194.5	bd	bd
16	1234789-HpCDF	3.76e5	3.65e5	7.41e5	40.62	1.049	1.03	NO	52.914	0.154	0.991	0.936	5.8	5.13e6	7985	642.8	5.07e6	6089	832.4	bd	bd
17	OCDF	5.83e5	6.54e5	1.24e6	44.44	1.007	0.89	NO	95.470	0.184	1.092	1.133	-4.5	5.89e6	4764	1236.9	6.58e6	5274	1247.4	bd	bd
18	13C-2378-TCDD	9.94e5	1.32e6	2.31e6	31.12	1.018	0.75	NO	104.015	0.111	1.174	1.128	4.0	1.74e7	6850	2534.4	2.29e7	5883	3900.3	bb	bb
19	13C-12378-PeCDD	1.08e6	7.12e5	1.79e6	34.03	1.114	1.52	NO	121.281	0.0932	0.911	0.751	21.3	2.55e7	3614	7045.1	1.66e7	3493	4738.9	bb	bd
20	13C-123678-HxCDD	1.06e6	8.44e5	1.90e6	36.69	0.993	1.25	NO	106.225	0.152	1.047	0.986	6.2	1.91e7	7841	2430.1	1.52e7	11948	1275.5	dd	dd
21	13C-1234678-HpCDD	6.43e5	6.28e5	1.27e6	39.95	1.082	1.02	NO	104.232	0.163	0.700	0.672	4.2	9.22e6	8977	1027.1	8.82e6	5476	1611.1	bb	bd
22	13C-OCDD	1.08e6	1.21e6	2.29e6	44.14	1.195	0.90	NO	196.282	0.187	0.630	0.642	-1.9	1.14e7	6350	1793.5	1.28e7	9505	1342.4	bd	bd
23	13C-2378-TCDF	1.23e6	1.59e6	2.83e6	30.32	0.992	0.77	NO	114.741	0.148	1.434	1.250	14.7	1.53e7	11122	1373.4	2.00e7	7676	2604.6	bb	bb
24	13C-12378-PeCDF	1.49e6	9.75e5	2.47e6	33.24	1.088	1.53	NO	123.907	0.221	1.252	1.011	23.9	3.66e7	13514	2706.0	2.30e7	9187	2499.3	bb	bb
25	13C-123678-HxCDF	7.58e5	1.43e6	2.18e6	36.00	0.975	0.53	NO	96.465	0.159	1.203	1.247	-3.5	1.50e7	9348	1602.9	2.92e7	16749	1741.6	dd	db
26	13C-1234678-HpCDF	4.64e5	1.03e6	1.50e6	38.72	1.049	0.45	NO	94.755	0.155	0.824	0.870	-5.2	7.54e6	6637	1136.2	1.68e7	11091	1514.3	bd	bb
27	13C-1234-TCDD	8.63e5	1.11e6	1.97e6	30.55	0.000	0.78	NO	100.000	0.125	1.000	1.000	0.0	1.11e7	6850	1623.0	1.39e7	5883	2362.2	bb	bb
28	13C-123789-HxCDD	1.00e6	8.11e5	1.82e6	36.93	0.000	1.24	NO	100.000	0.150	1.000	1.000	0.0	1.82e7	7841	2324.1	1.46e7	11948	1218.5	dd	dd
29	37Cl-2378-TCDD (SS)	2.10e5		2.10e5	31.13	1.000			9.642	0.0177	0.907	0.940	-3.6	3.60e6	2686	1341.1				bb	bb
30	13C-23478-PeCDF (SS)	1.61e6	1.03e6	2.63e6	33.85	1.018	1.57	NO	101.402	0.0893	1.066	1.052	1.4	3.77e7	13514	2791.0	2.46e7	9187	2679.7	db	db

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-123478-HxCDF (SS)	6.11e5	1.20e6	1.81e6	35.90	0.997	0.51	NO	92.977	0.170	0.828	0.891	-7.0	1.33e7	9348	1419.1	2.68e7	16749	1598.5	bd	bd
32	13C-123478-HxCDD (SS)	8.62e5	6.81e5	1.54e6	36.61	0.998	1.27	NO	89.293	0.159	0.812	0.909	-10.7	1.88e7	7841	2396.5	1.49e7	11948	1247.1	bd	bd
33	13C-1234789-HpCDF (SS)	3.61e5	8.27e5	1.19e6	40.61	1.049	0.44	NO	102.013	0.234	0.794	0.779	2.0	4.94e6	6637	743.9	1.13e7	11091	1016.1	bb	bd

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

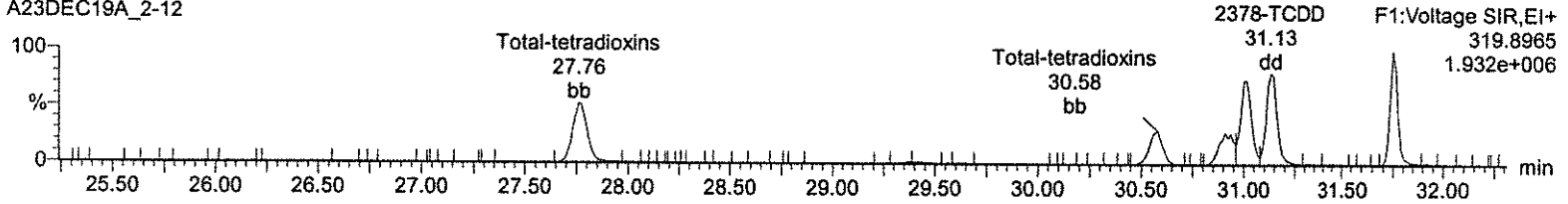
Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

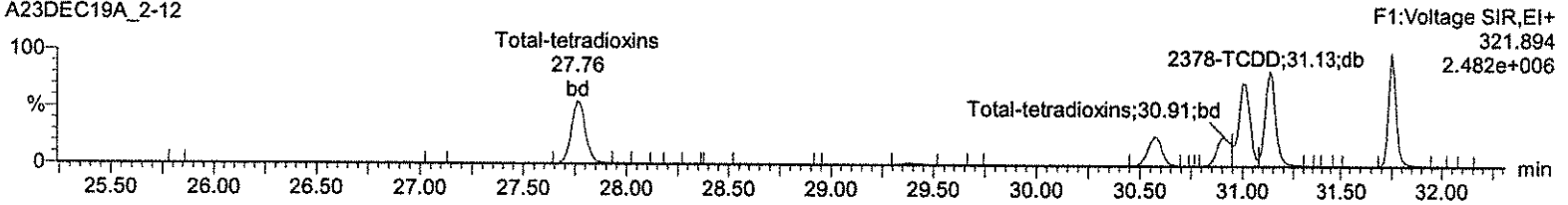
Total-tetradoxins

A23DEC19A_2-12



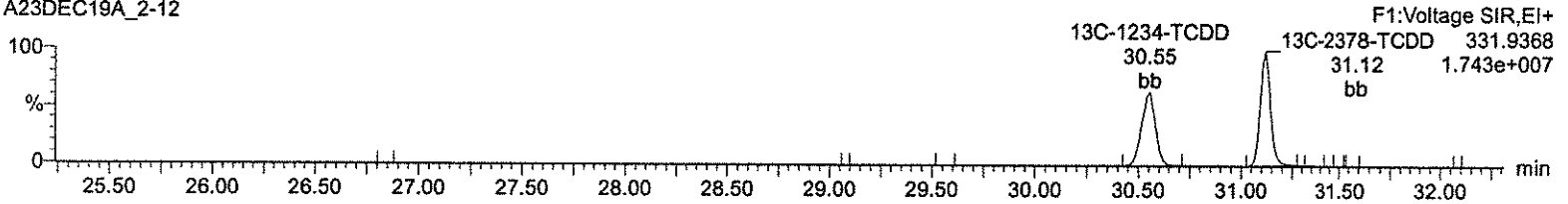
Total-tetradoxins

A23DEC19A_2-12



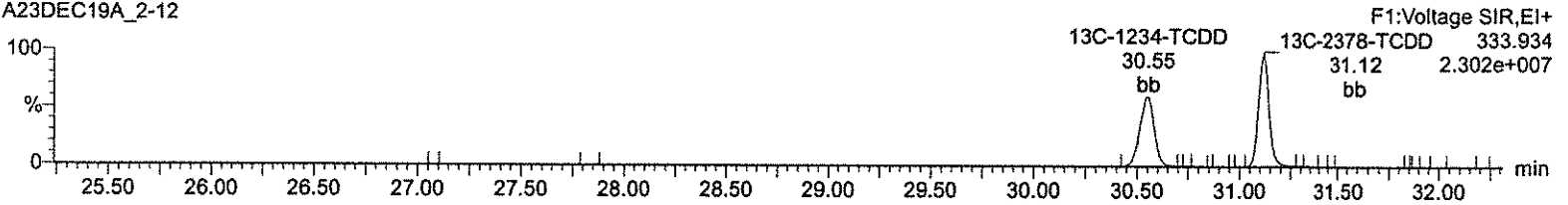
13C-2378-TCDD

A23DEC19A_2-12



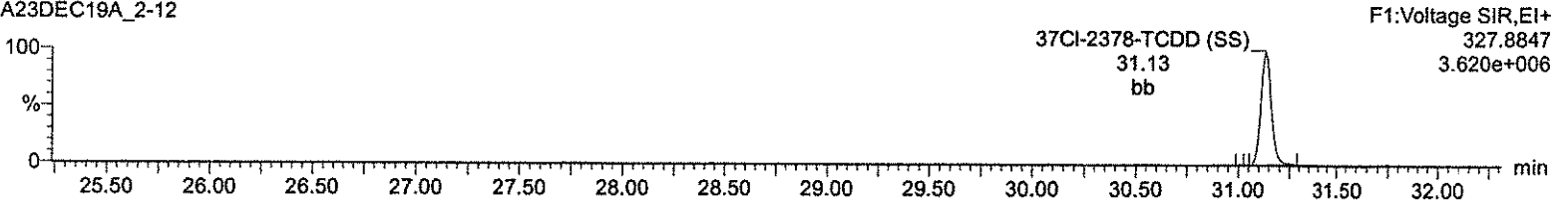
13C-2378-TCDD

A23DEC19A_2-12



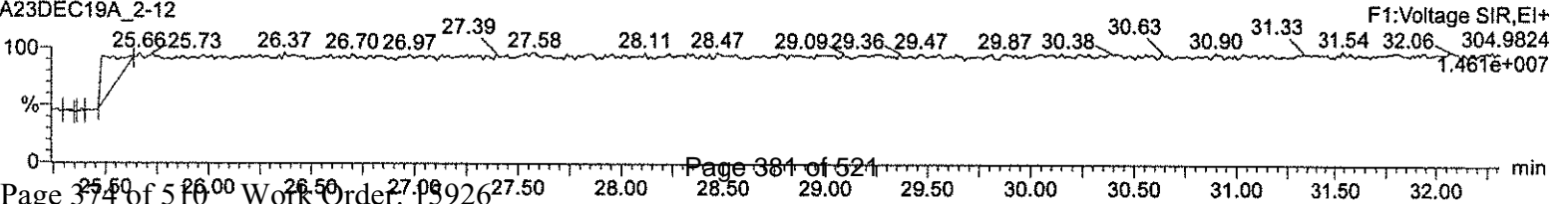
37Cl-2378-TCDD (SS)

A23DEC19A_2-12



Lock Mass F1

A23DEC19A_2-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

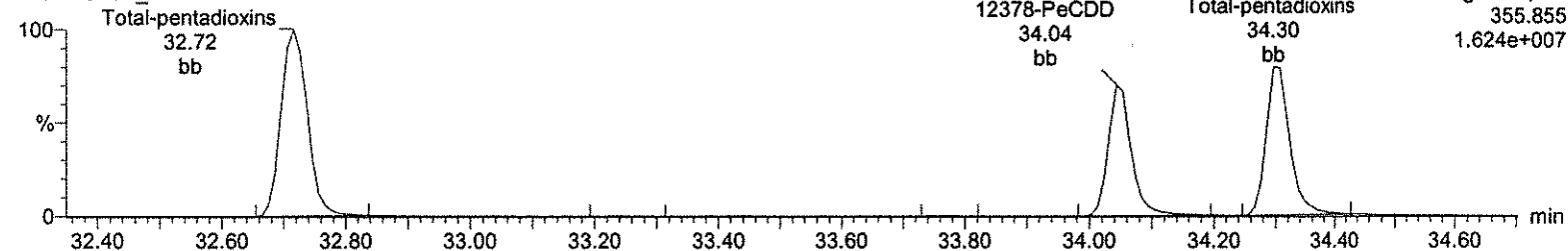
Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

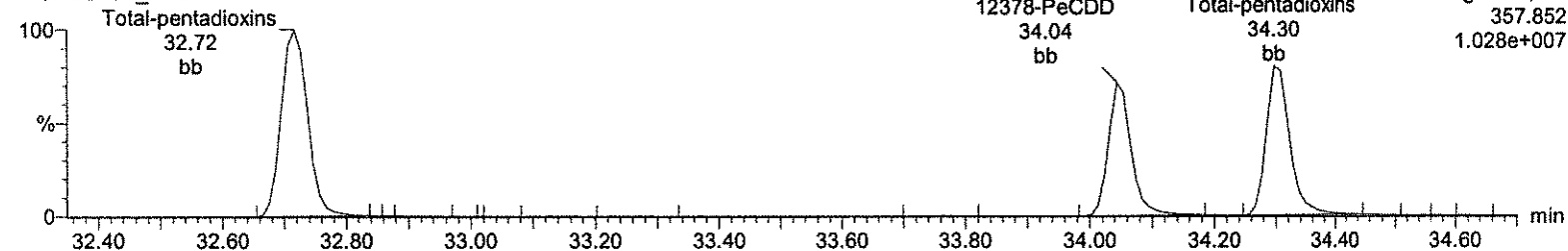
Total-pentadioxins

A23DEC19A_2-12



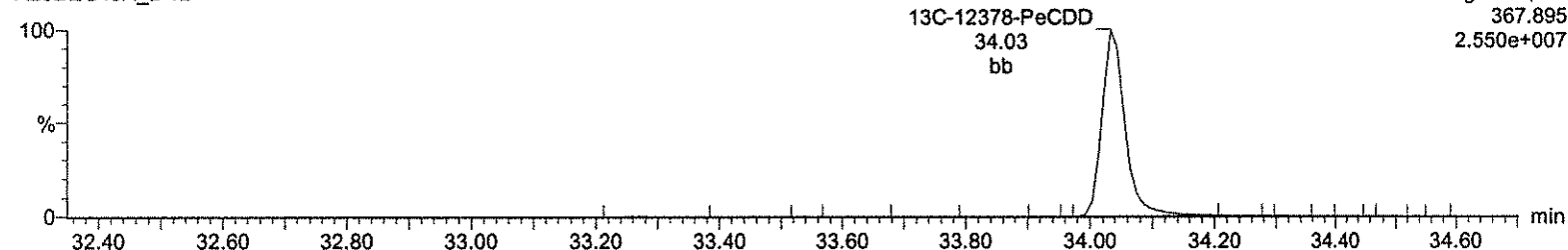
Total-pentadioxins

A23DEC19A_2-12



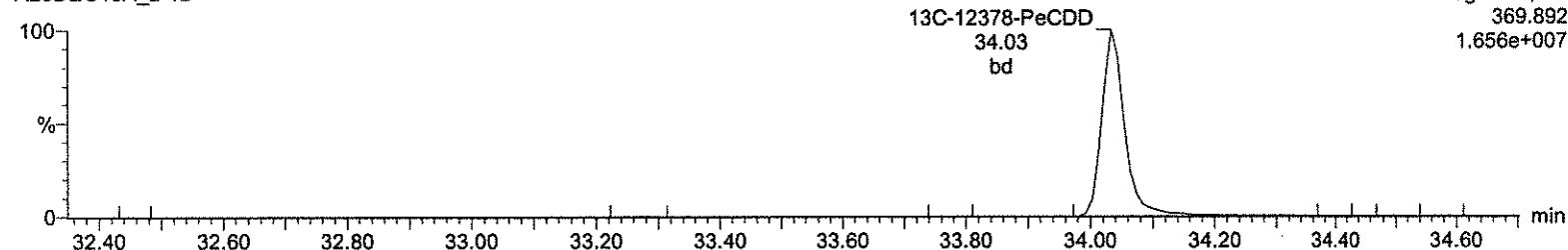
13C-12378-PeCDD

A23DEC19A_2-12



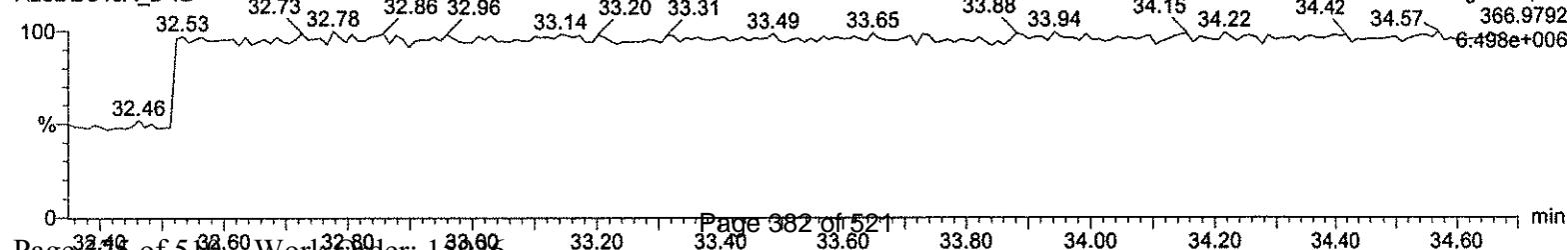
13C-12378-PeCDD

A23DEC19A_2-12



Lock Mass F2

A23DEC19A_2-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

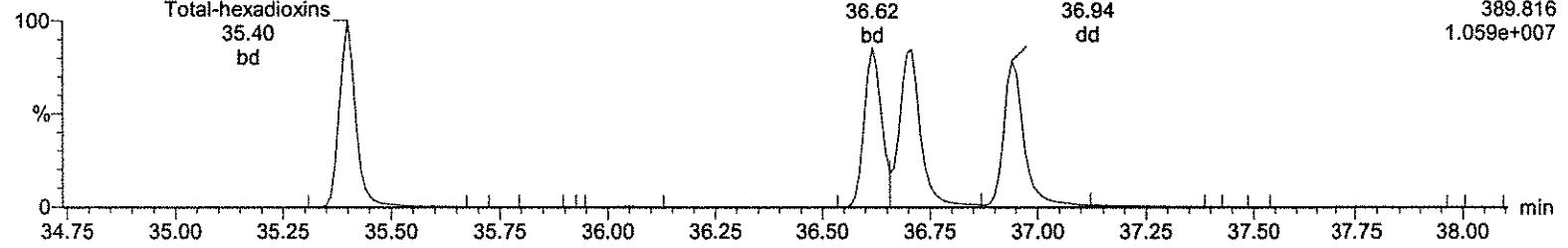
Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

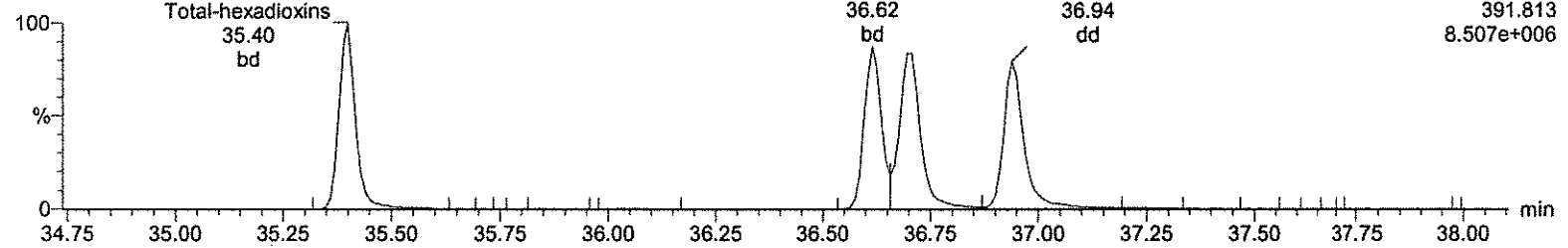
Total-hexadioxins

A23DEC19A_2-12



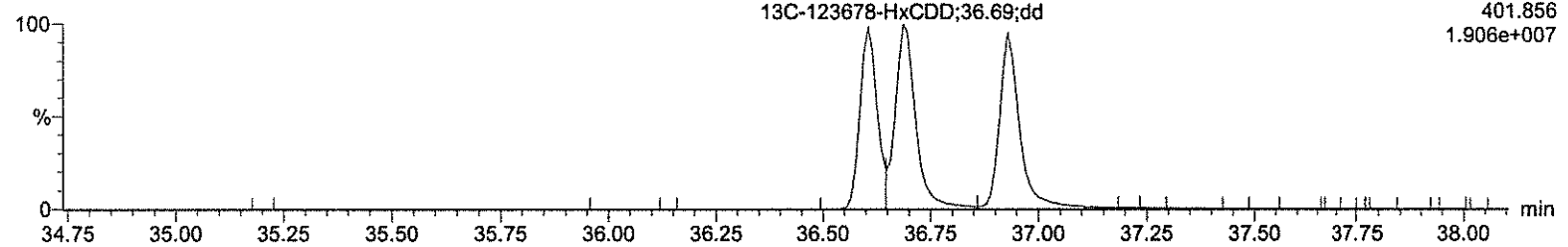
Total-hexadioxins

A23DEC19A_2-12



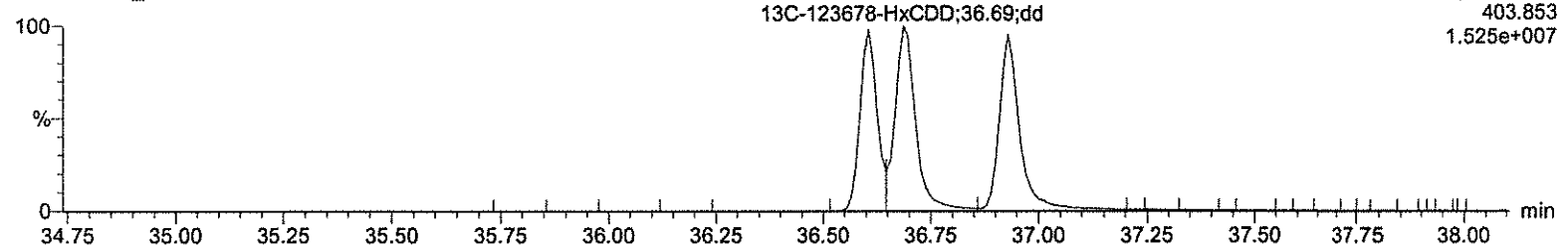
13C-123678-HxCDD

A23DEC19A_2-12



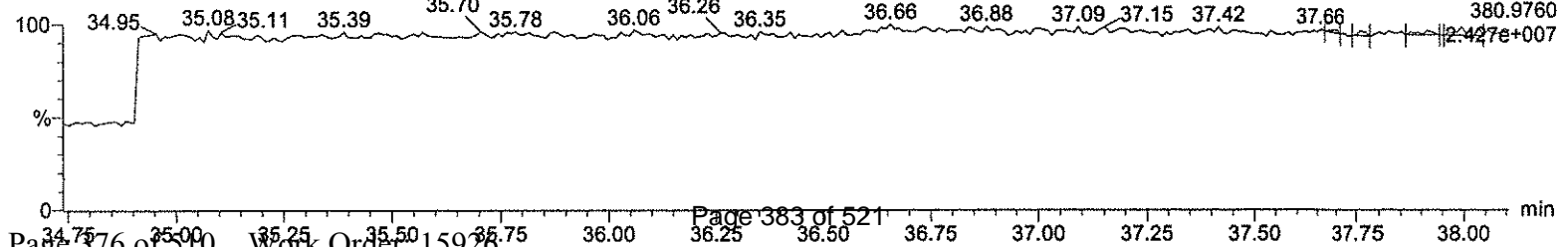
13C-123678-HxCDD

A23DEC19A_2-12



Lock Mass F3

A23DEC19A_2-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

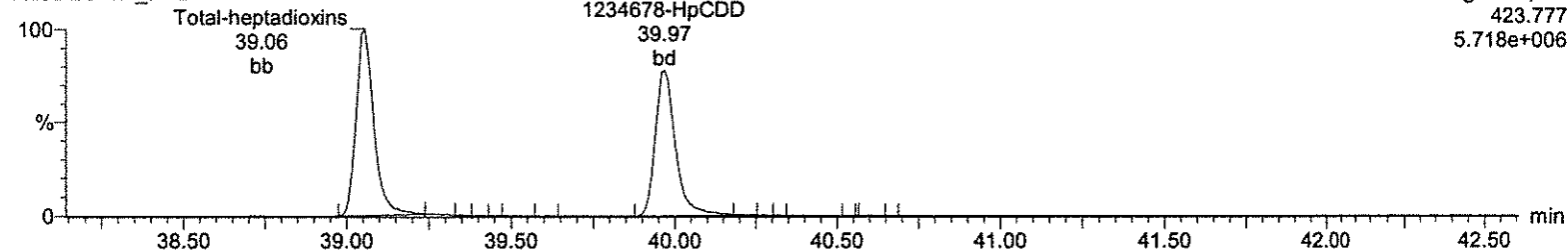
Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

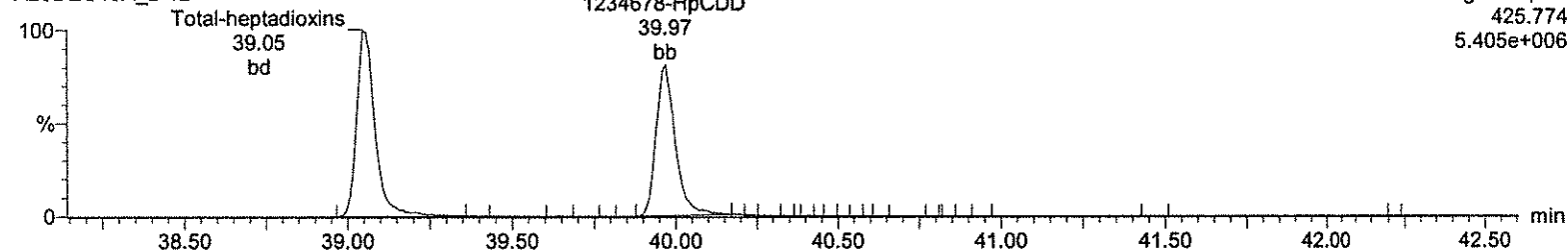
Total-heptadioxins

A23DEC19A_2-12



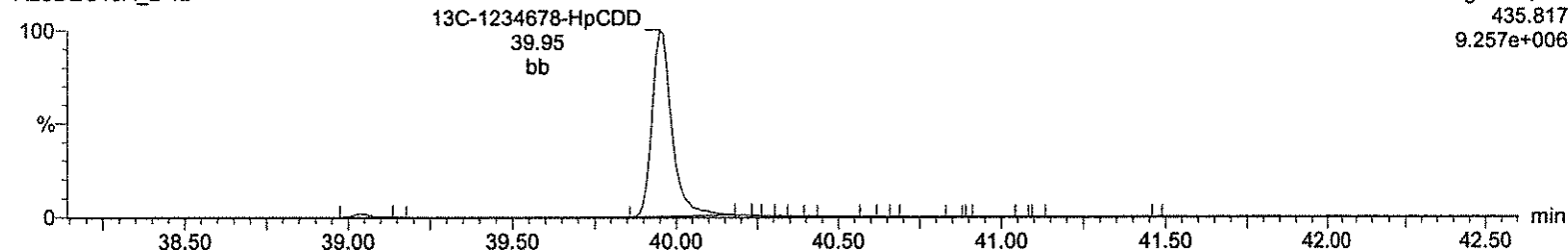
Total-heptadioxins

A23DEC19A_2-12



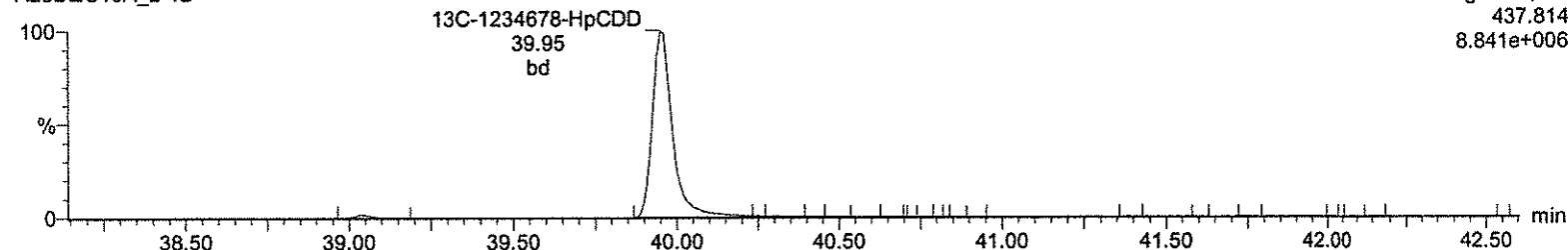
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A23DEC19A_2-12



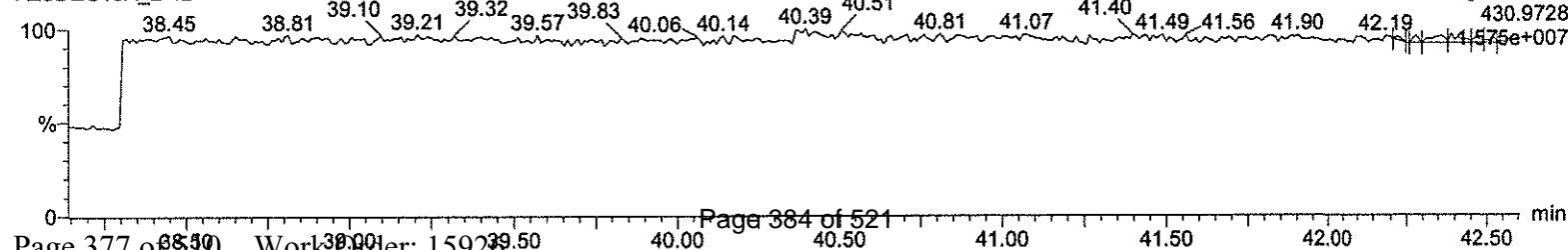
13C-1234678-HpCDD

A23DEC19A_2-12



Lock Mass F4

A23DEC19A_2-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

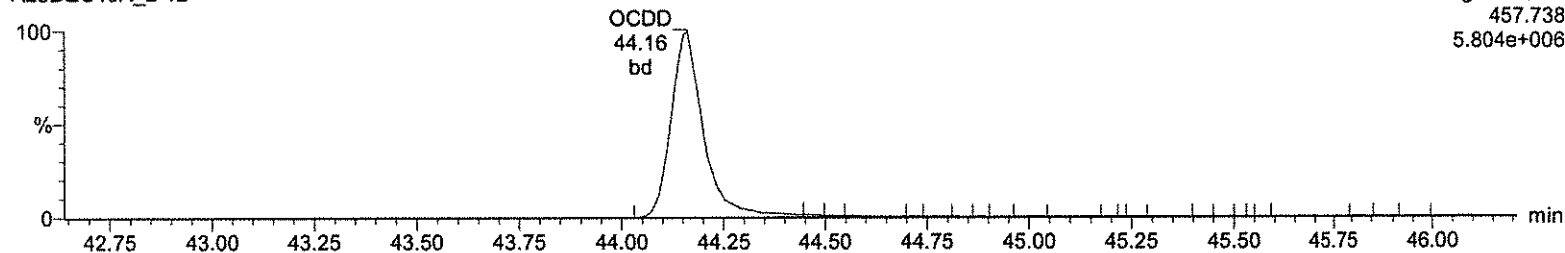
Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

OCDD

A23DEC19A_2-12

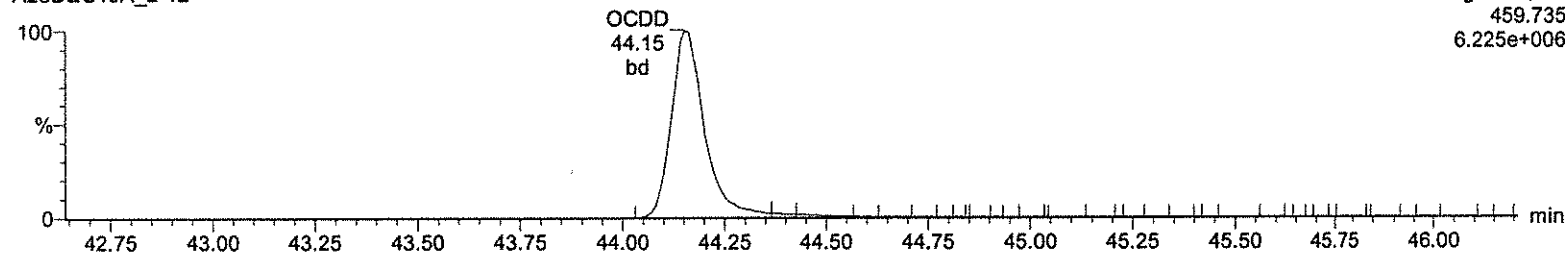
F5:Voltage SIR,EI+
457.738
5.804e+006



OCDD

A23DEC19A_2-12

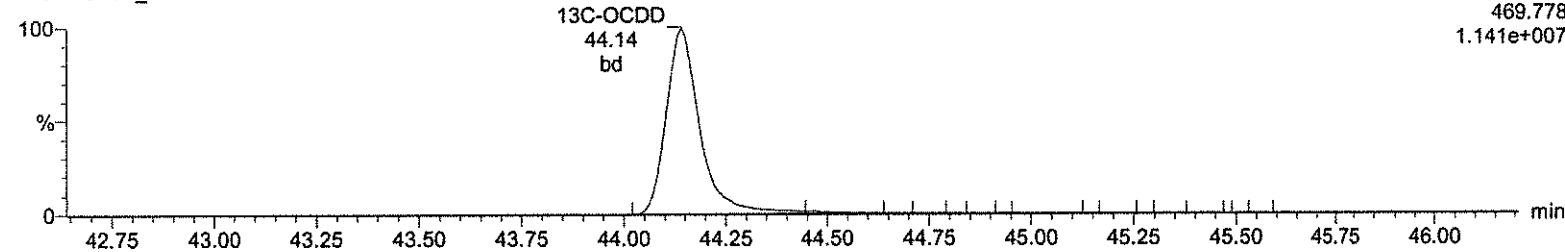
F5:Voltage SIR,EI+
459.735
6.225e+006



13C-OCDD

A23DEC19A_2-12

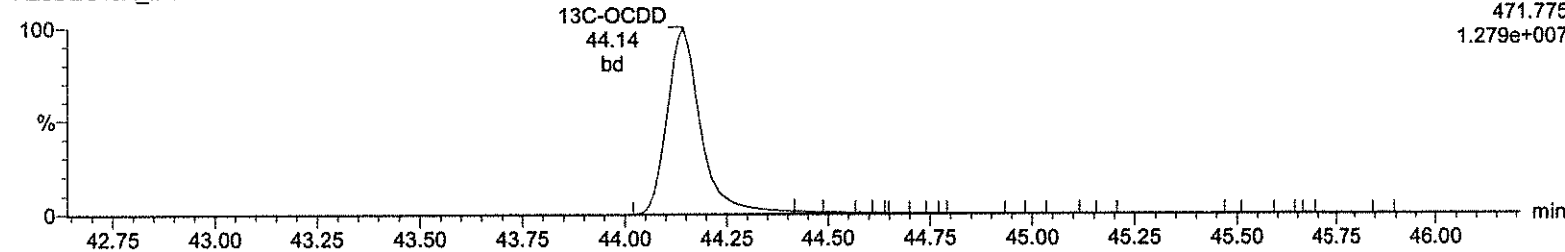
F5:Voltage SIR,EI+
469.778
1.141e+007



13C-OCDD

A23DEC19A_2-12

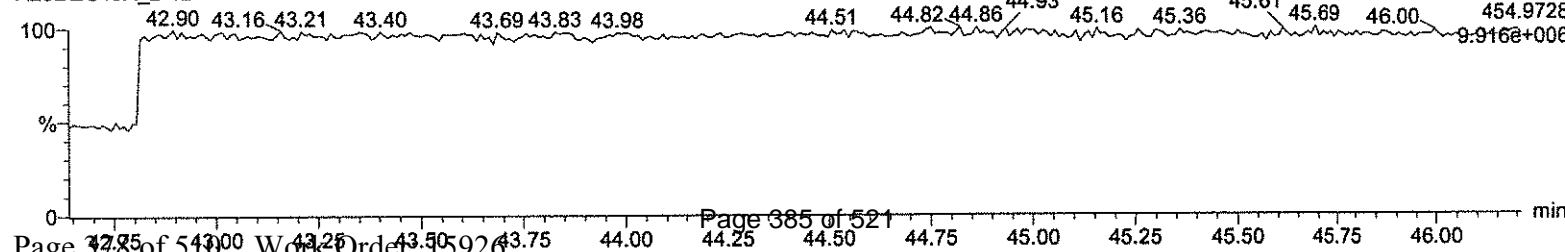
F5:Voltage SIR,EI+
471.775
1.279e+007



Lock Mass F5

A23DEC19A_2-12

F5:Voltage SIR,EI+
454.9728
9.916e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

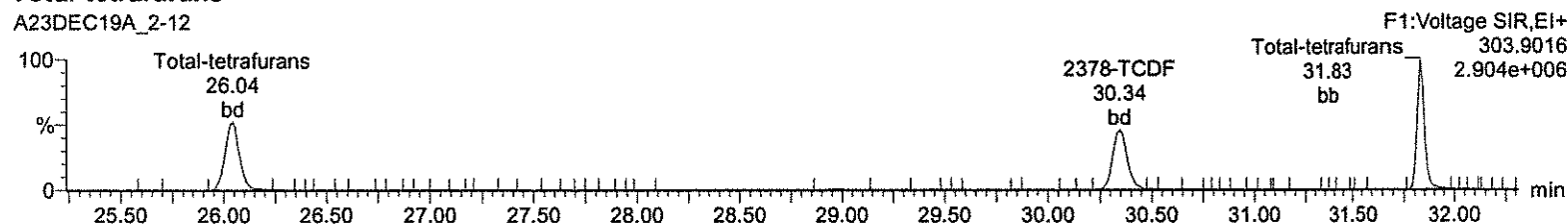
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Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

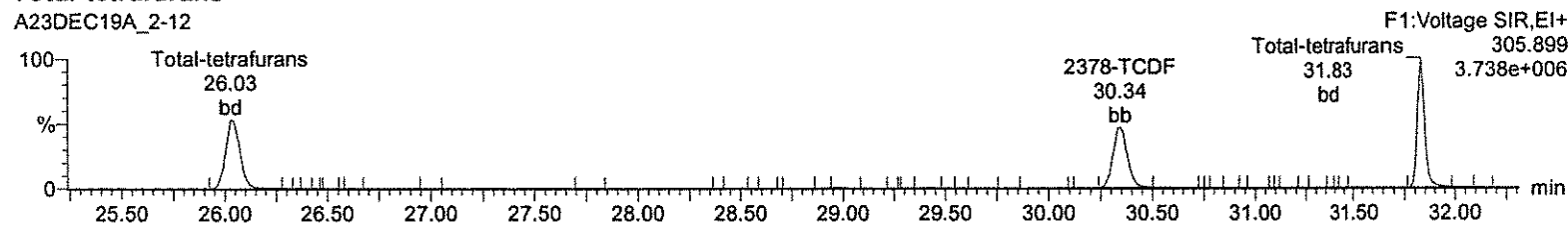
Total-tetrafurans

A23DEC19A_2-12



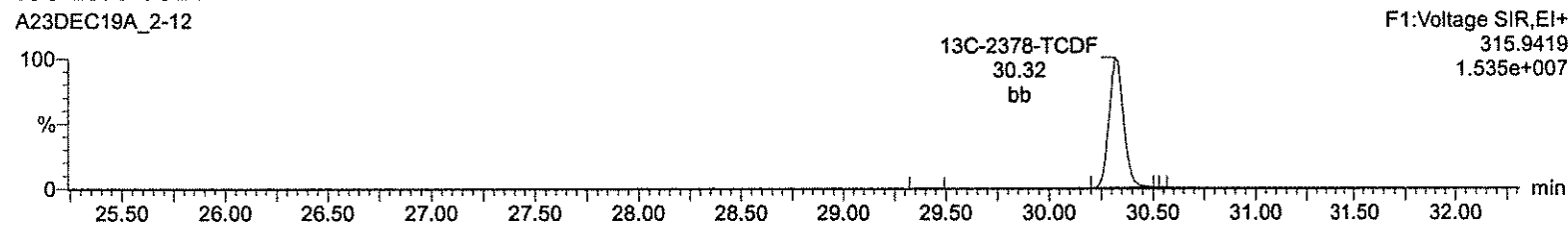
Total-tetrafurans

A23DEC19A_2-12



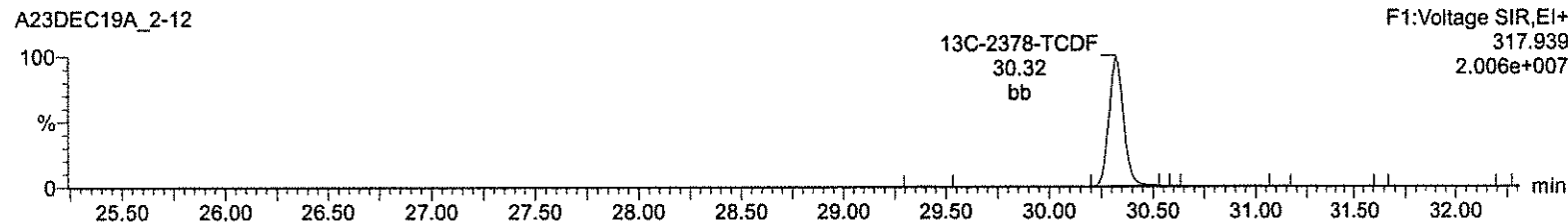
13C-2378-TCDF

A23DEC19A_2-12



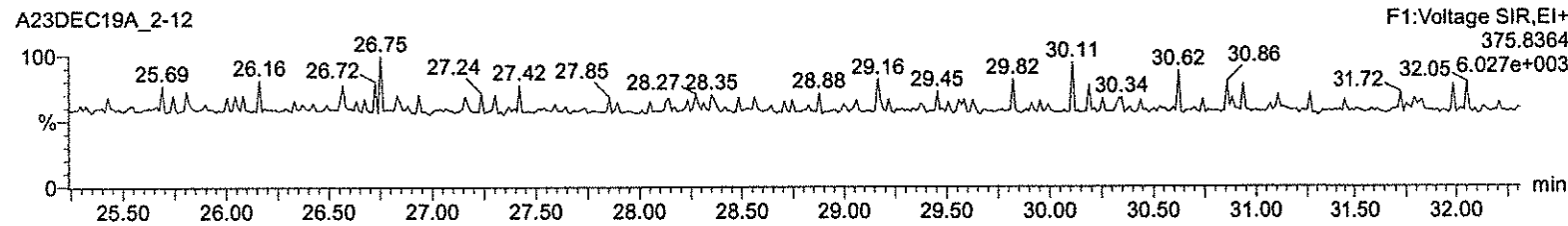
13C-2378-TCDF

A23DEC19A_2-12



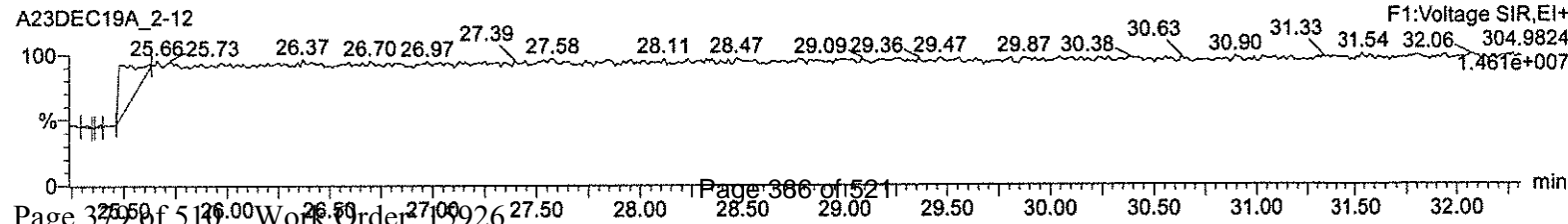
HxDPE

A23DEC19A_2-12



Lock Mass F1

A23DEC19A_2-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

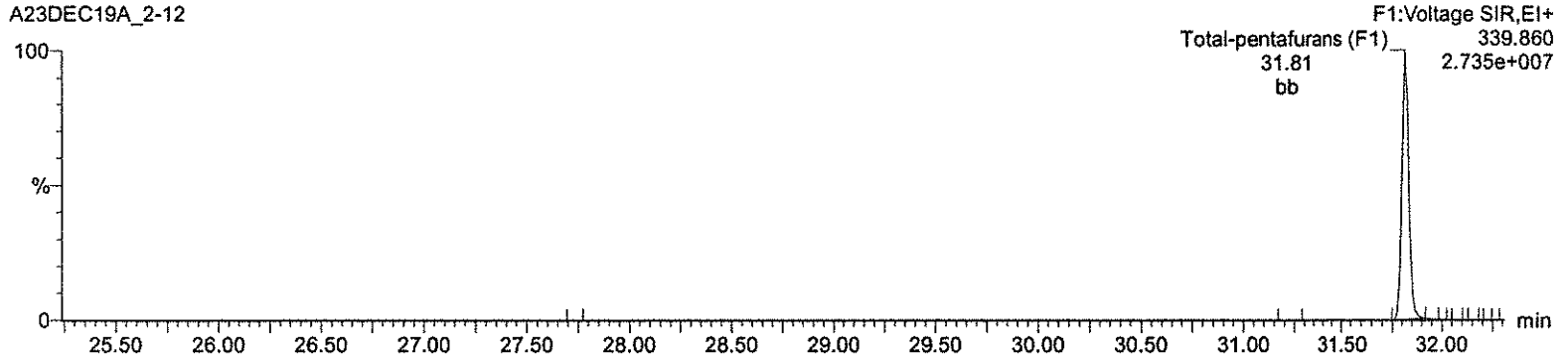
Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

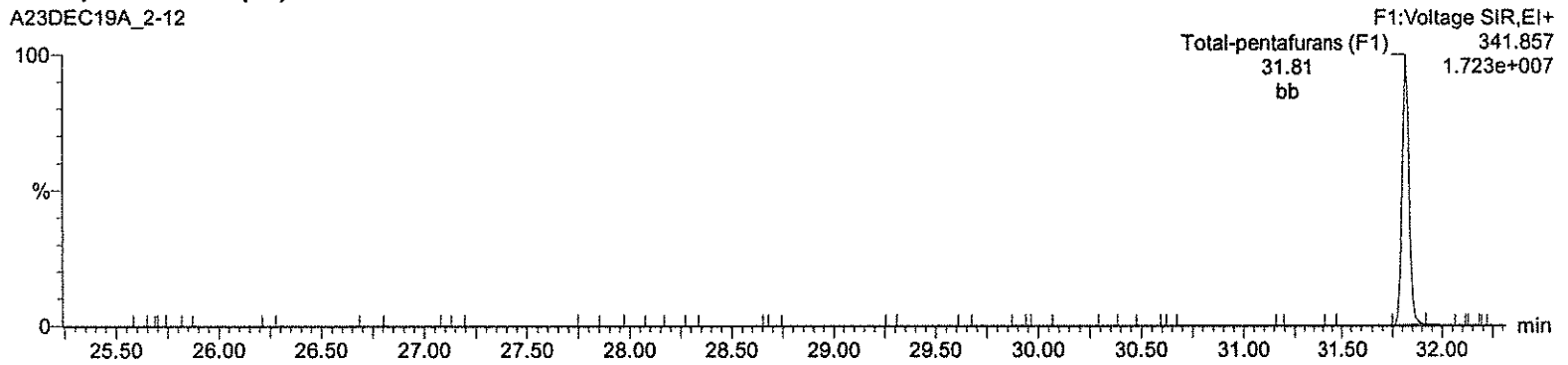
Total-pentafurans (F1)

A23DEC19A_2-12



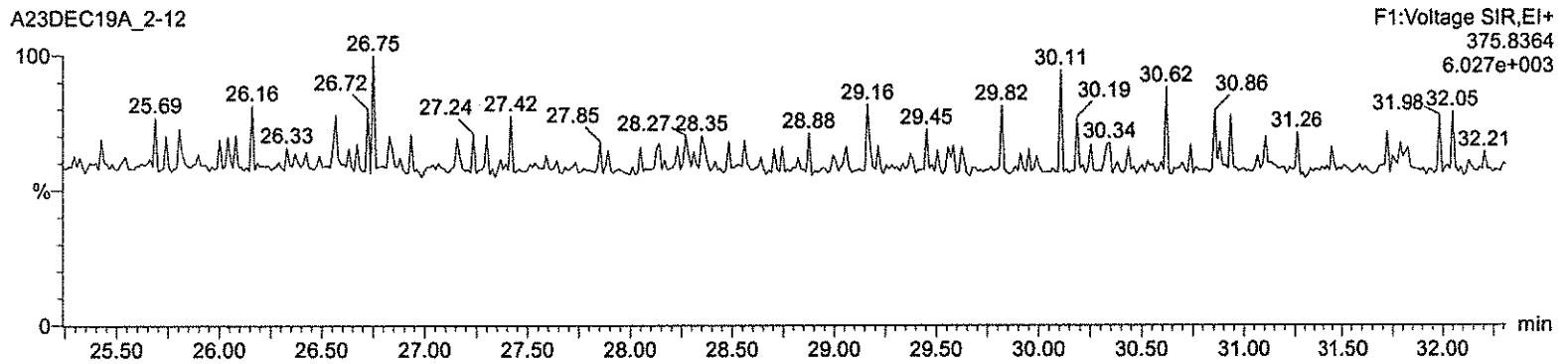
Total-pentafurans (F1)

A23DEC19A_2-12



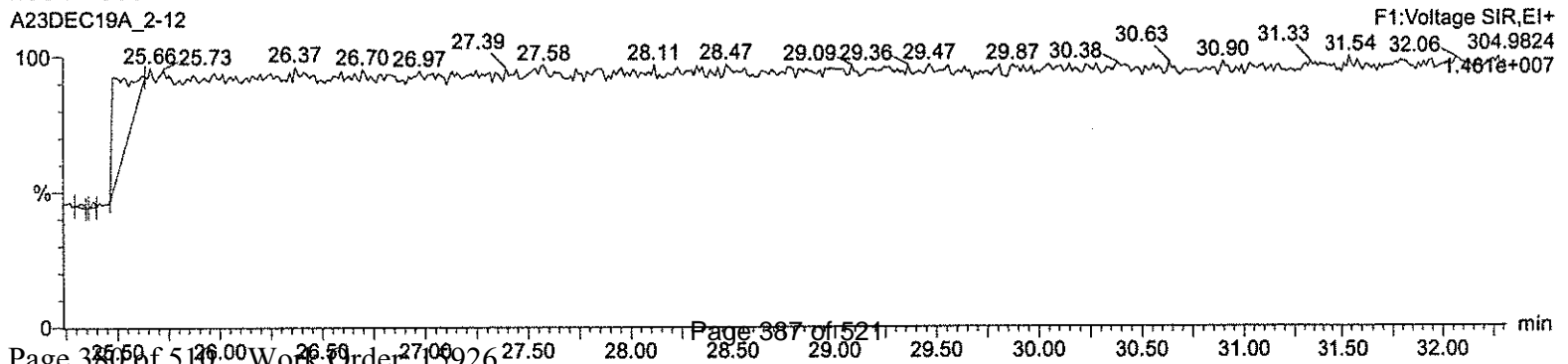
HxDPE

A23DEC19A_2-12



Lock Mass F1

A23DEC19A_2-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

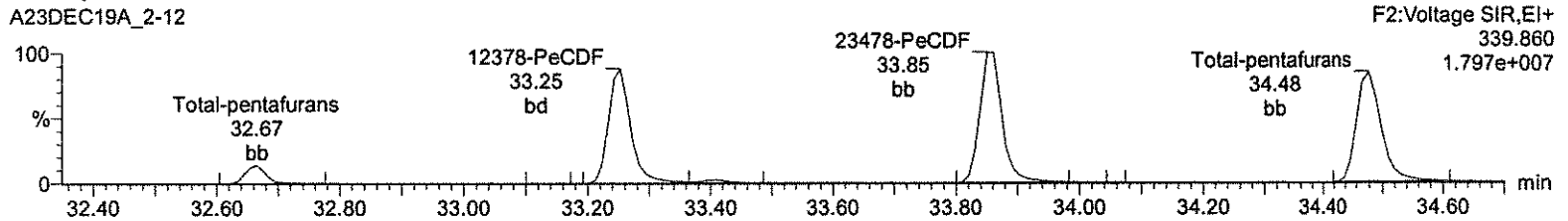
Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

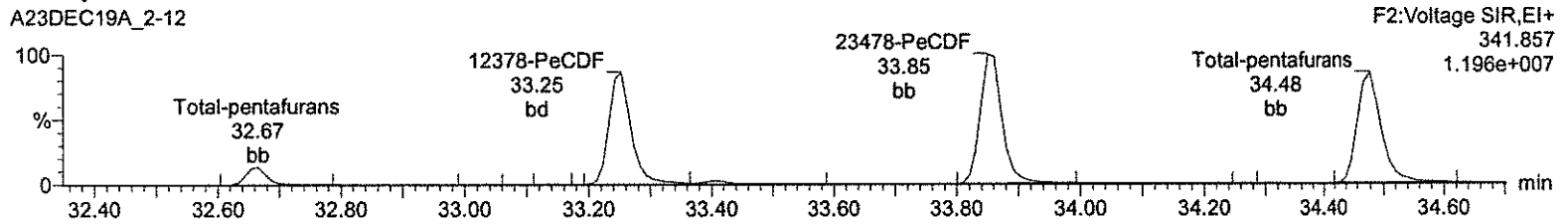
Total-pentafurans

A23DEC19A_2-12



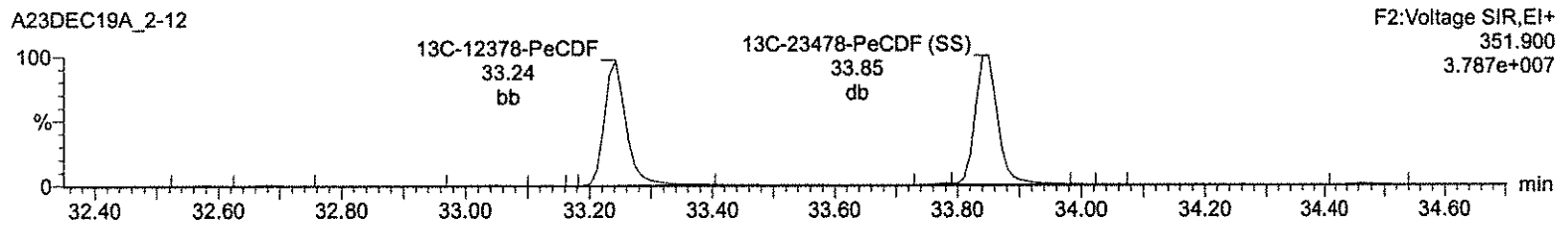
Total-pentafurans

A23DEC19A_2-12



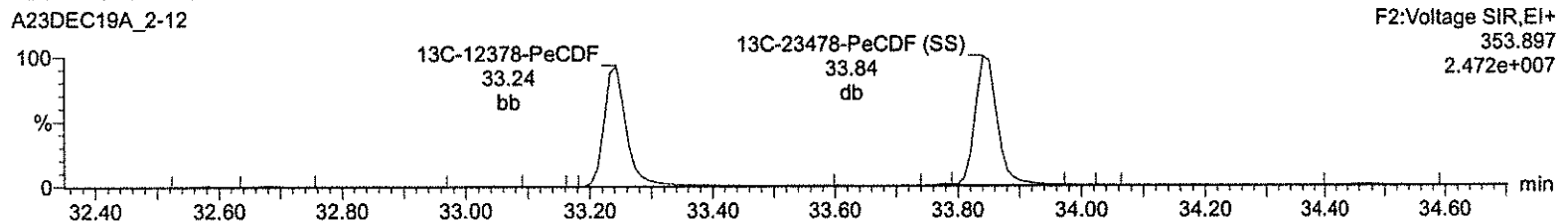
13C-12378-PeCDF

A23DEC19A_2-12



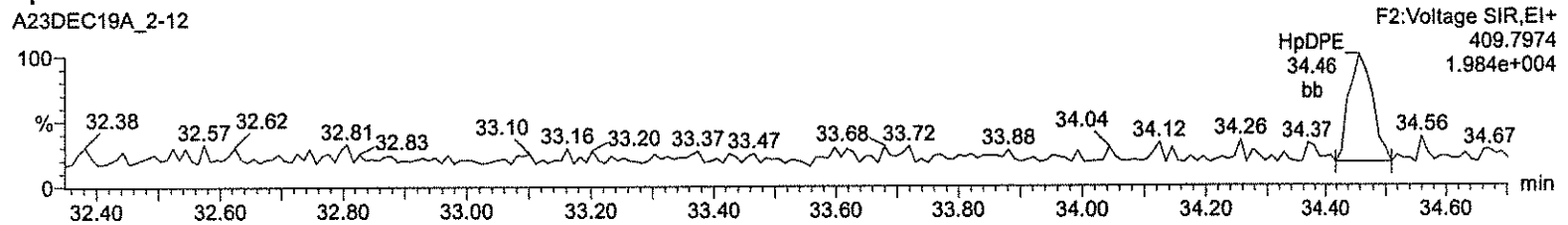
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A23DEC19A_2-12



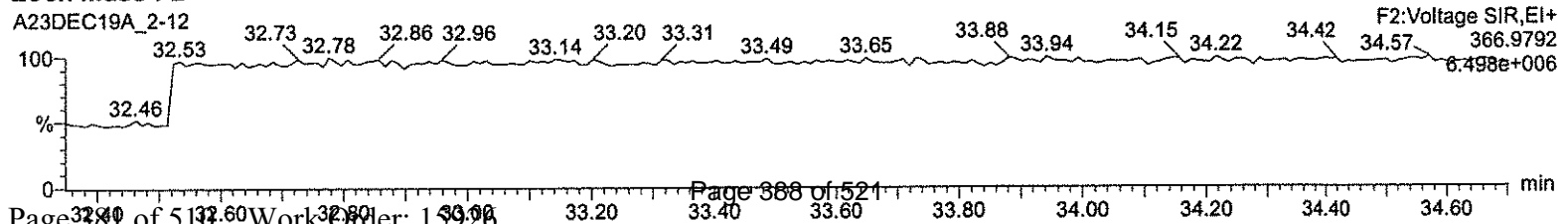
HpDPE

A23DEC19A_2-12



Lock Mass F2

A23DEC19A_2-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

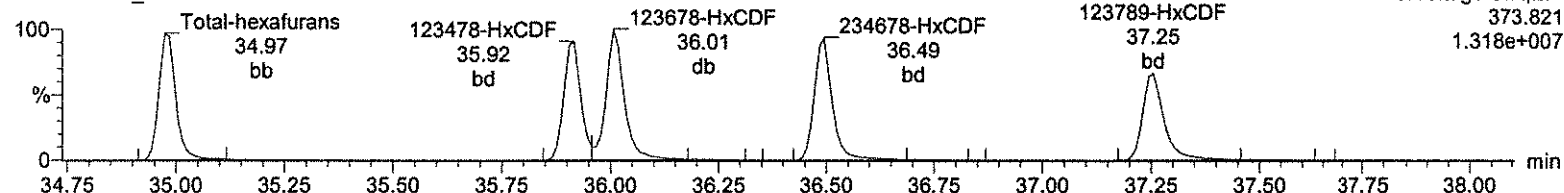
Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

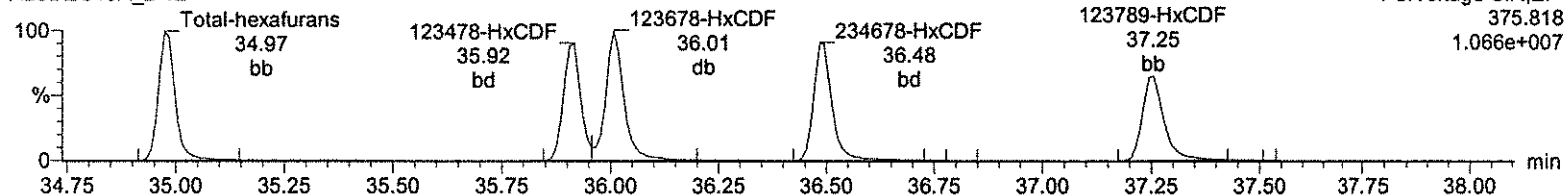
Total-hexafurans

A23DEC19A_2-12



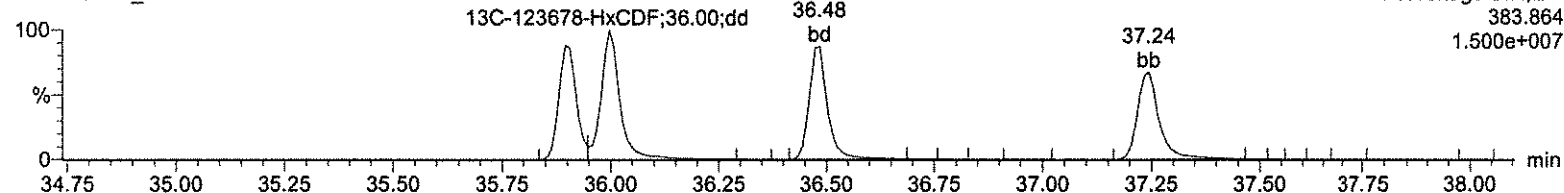
Total-hexafurans

A23DEC19A_2-12



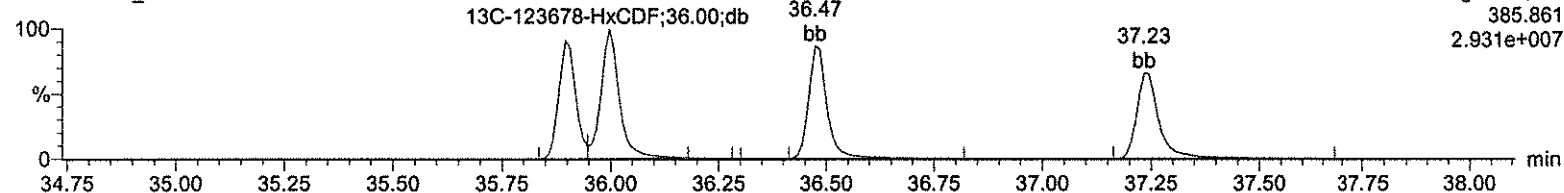
13C-123678-HxCDF

A23DEC19A_2-12



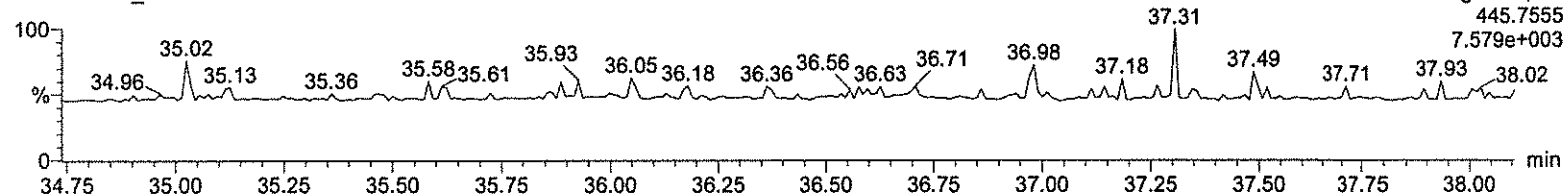
13C-123678-HxCDF

A23DEC19A_2-12



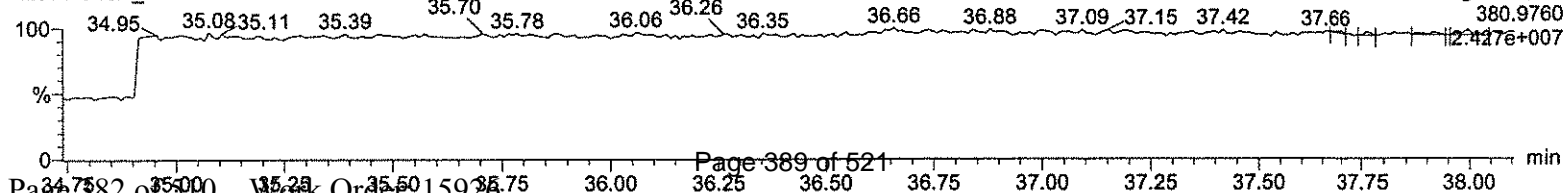
OcdPE

A23DEC19A_2-12



Lock Mass F3

A23DEC19A_2-12



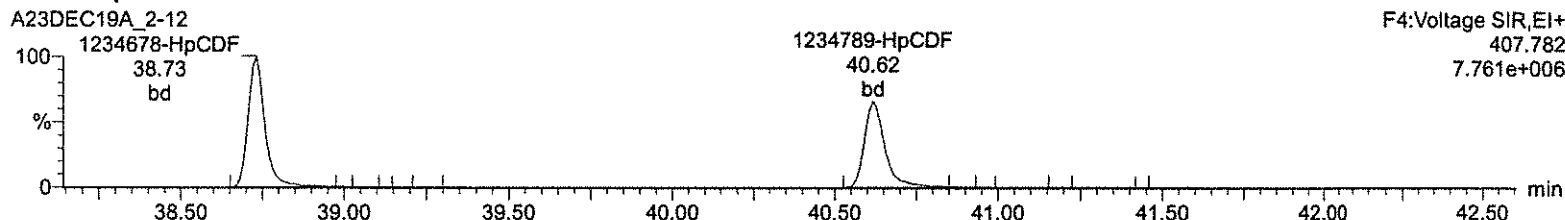
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Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

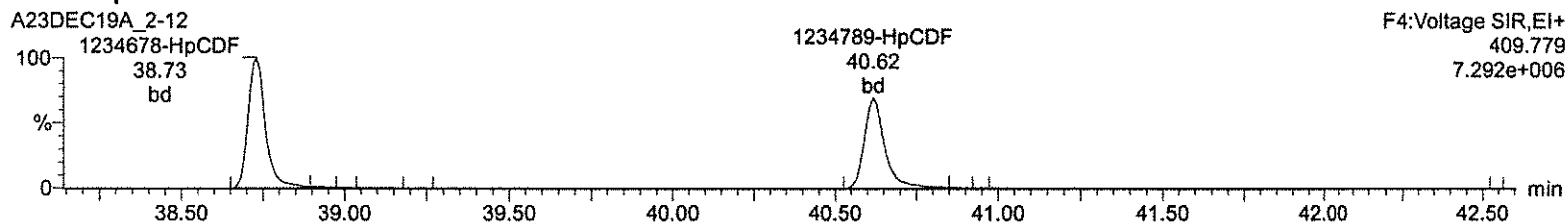
Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

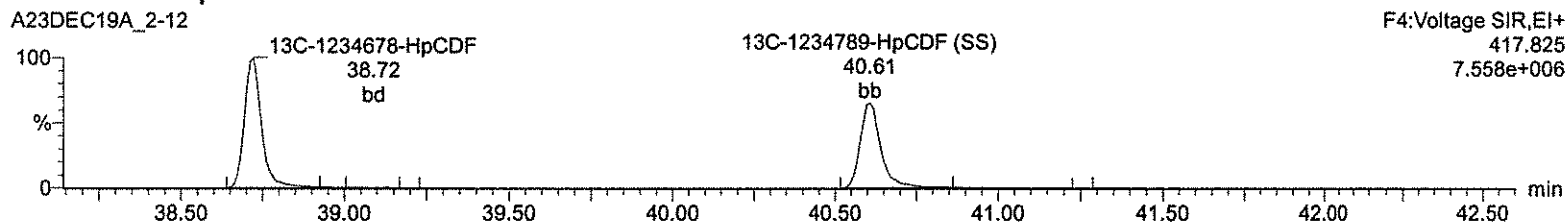
Total-heptafurans



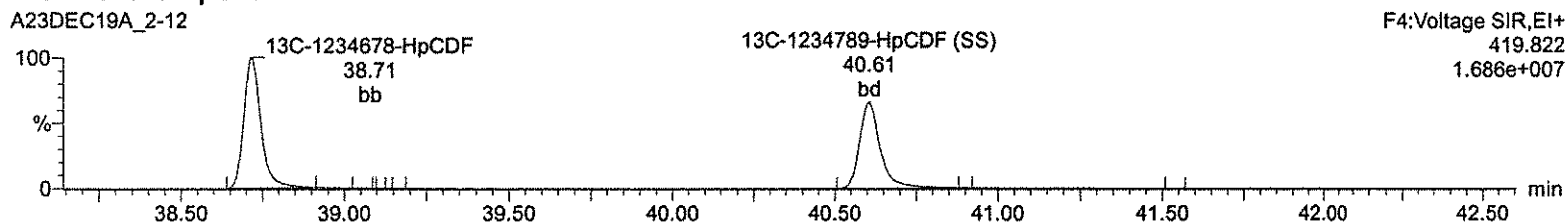
Total-heptafurans



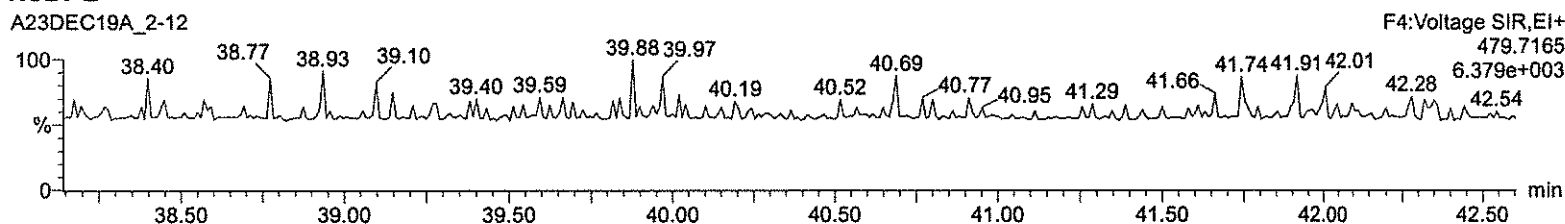
13C-1234678-HpCDF



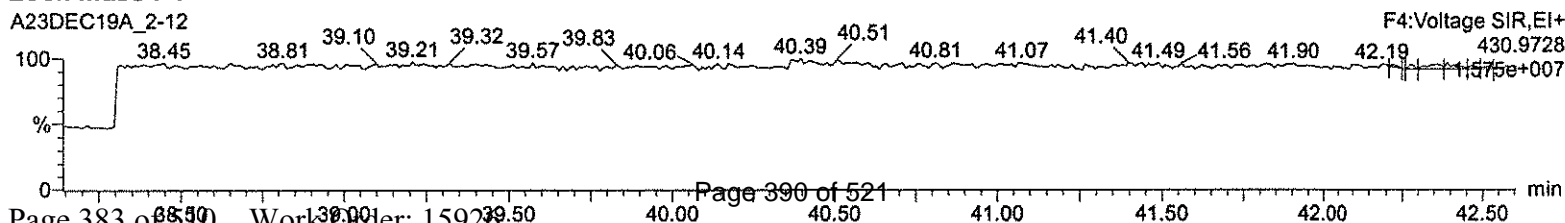
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_2-12.qld

Last Altered: Thursday, December 26, 2019 10:00:04 Eastern Standard Time

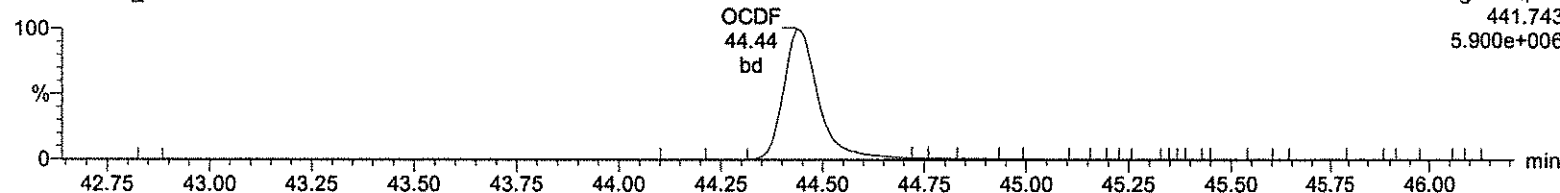
Printed: Thursday, December 26, 2019 10:11:45 Eastern Standard Time

Name: A23DEC19A_2-12, Date: 24-Dec-2019, Time: 14:27:00, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_2, Task: HRP750_2, User: MJC

OCDF

A23DEC19A_2-12

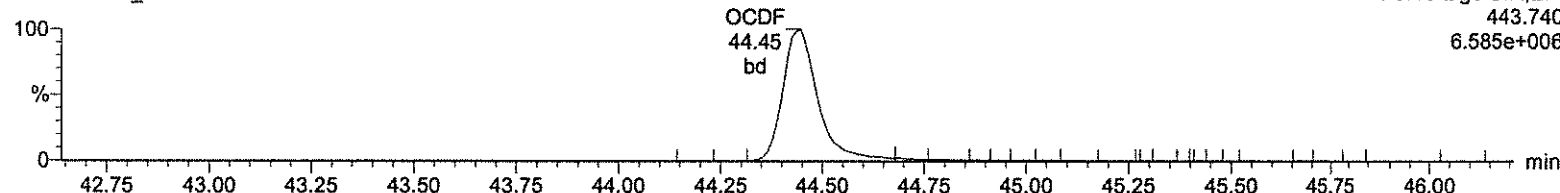
F5:Voltage SIR,EI+
441.743
5.900e+006



OCDF

A23DEC19A_2-12

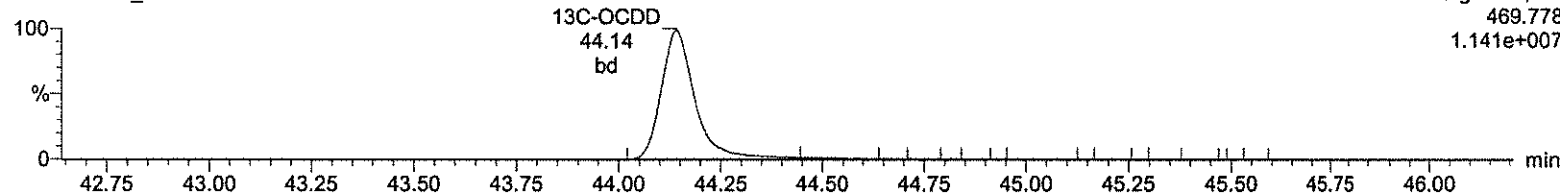
F5:Voltage SIR,EI+
443.740
6.585e+006



13C-OCDD

A23DEC19A_2-12

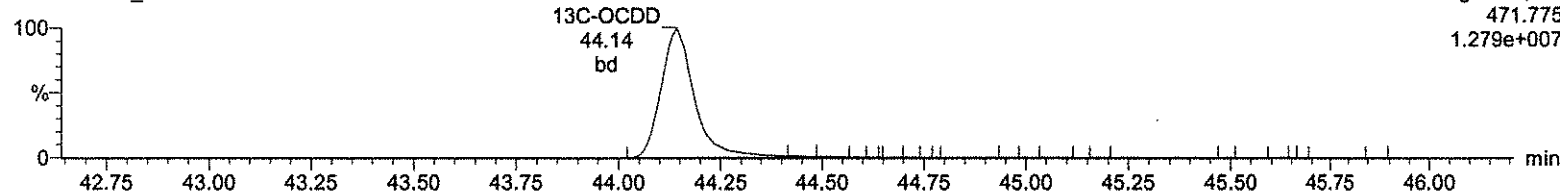
F5:Voltage SIR,EI+
469.778
1.141e+007



13C-OCDD

A23DEC19A_2-12

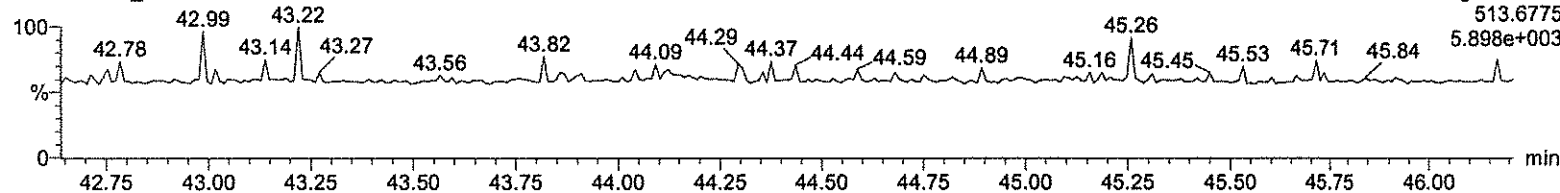
F5:Voltage SIR,EI+
471.775
1.279e+007



DeDPE

A23DEC19A_2-12

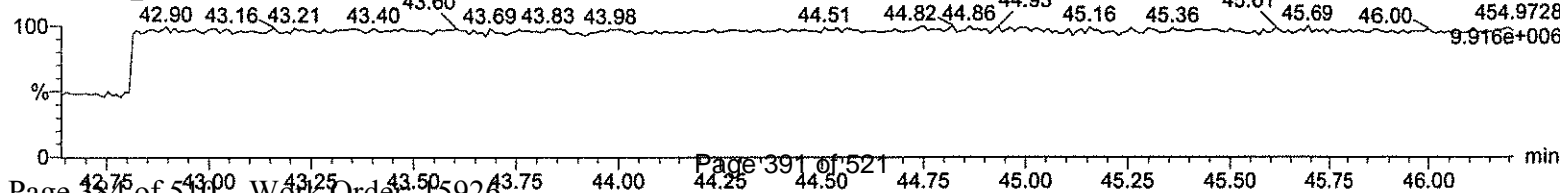
F5:Voltage SIR,EI+
513.6775
5.898e+003



Lock Mass F5

A23DEC19A_2-12

F5:Voltage SIR,EI+
454.9728
9.916e+006



Quantify Sample Summary Report
Method 8290 CCAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time
Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\Default.pro\Method\b\CFE_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	Mean	%D	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	1.28e5	1.67e5	2.96e5	31.12	1.000	0.77	NO	10.793	0.0371	0.955	0.884	7.9	2.12e6	3426	618.6	2.90e6	3773	768.6	dd	dd
2	12378-PeCDD	6.48e5	4.23e5	1.07e6	34.03	1.000	1.53	NO	53.504	0.0814	0.913	0.853	7.0	1.51e7	8768	1722.5	9.88e6	6957	1419.7	bb	bb
3	123478-HxCDD	5.25e5	4.23e5	9.48e5	36.61	0.998	1.24	NO	48.561	0.133	0.830	0.854	-2.9	1.12e7	9842	1134.6	9.19e6	8865	1037.0	bd	bd
4	123678-HxCDD	6.24e5	4.93e5	1.12e6	36.70	1.001	1.26	NO	51.782	0.121	0.978	0.944	3.6	1.14e7	9842	1162.3	9.05e6	8865	1021.4	dd	dd
5	123789-HxCDD	5.73e5	4.59e5	1.03e6	36.93	1.007	1.25	NO	51.037	0.129	0.903	0.885	2.1	1.03e7	9842	1051.4	8.33e6	8865	939.7	dd	dd
6	1234678-HpCDD	4.05e5	3.90e5	7.96e5	39.96	1.000	1.04	NO	46.032	0.159	0.957	1.040	-7.9	6.07e6	6692	907.6	5.76e6	8799	654.8	bb	bd
7	OCDD	6.60e5	7.29e5	1.39e6	44.15	1.000	0.91	NO	98.852	0.239	0.960	0.971	-1.1	7.22e6	6468	1116.6	7.93e6	7708	1029.4	bd	bb
8	2378-TCDF	1.44e5	1.89e5	3.33e5	30.33	1.001	0.76	NO	8.991	0.0626	0.880	0.978	-10.1	1.80e6	3640	495.9	2.34e6	7116	329.5	bd	bb
9	12378-PeCDF	9.08e5	5.78e5	1.49e6	33.24	1.000	1.57	NO	46.232	0.0764	0.874	0.945	-7.5	2.30e7	12991	1769.3	1.44e7	11799	1224.5	bd	bb
10	23478-PeCDF	1.04e6	6.56e5	1.69e6	33.85	1.019	1.58	NO	47.986	0.0697	0.995	1.037	-4.0	2.49e7	12991	1912.9	1.62e7	11799	1371.4	bd	bb
11	123478-HxCDF	7.00e5	5.69e5	1.27e6	35.91	0.998	1.23	NO	47.974	0.133	0.929	0.968	-4.1	1.56e7	12781	1217.4	1.26e7	14805	852.0	bd	bd
12	123678-HxCDF	7.99e5	6.46e5	1.45e6	36.00	1.000	1.24	NO	50.884	0.124	1.058	1.041	1.7	1.64e7	12781	1281.0	1.32e7	14805	888.6	db	db
13	234678-HxCDF	7.39e5	6.03e5	1.34e6	36.48	1.014	1.23	NO	49.861	0.131	0.983	0.985	-0.3	1.54e7	12781	1206.1	1.24e7	14805	839.4	bb	bb
14	123789-HxCDF	6.19e5	5.01e5	1.12e6	37.24	1.035	1.24	NO	49.811	0.157	0.820	0.823	-0.4	1.11e7	12781	869.6	9.16e6	14805	618.6	bb	bb
15	1234678-HpCDF	5.76e5	5.55e5	1.13e6	38.72	1.000	1.04	NO	52.672	0.121	1.211	1.150	5.3	9.71e6	8844	1097.4	9.40e6	8418	1116.3	bd	bd
16	1234789-HpCDF	4.73e5	4.65e5	9.38e5	40.61	1.049	1.02	NO	53.615	0.148	1.004	0.936	7.2	6.70e6	8844	757.8	6.60e6	8418	784.3	bd	bd
17	OCDF	7.33e5	8.24e5	1.56e6	44.44	1.007	0.89	NO	95.056	0.212	1.077	1.133	-4.9	7.81e6	7205	1084.4	8.65e6	7505	1152.5	bd	bd
18	13C-2378-TCDD	1.34e6	1.76e6	3.10e6	31.11	1.018	0.76	NO	104.826	0.0814	1.183	1.128	4.8	2.37e7	7037	3371.8	3.06e7	4685	6540.1	bb	bb
19	13C-12378-PeCDD	1.43e6	9.20e5	2.35e6	34.02	1.114	1.55	NO	119.123	0.119	0.895	0.751	19.1	3.44e7	5667	6067.4	2.25e7	5785	3882.4	bb	bb
20	13C-123678-HxCDD	1.27e6	1.02e6	2.29e6	36.68	0.993	1.25	NO	102.268	0.0771	1.008	0.986	2.3	2.28e7	4532	5037.9	1.87e7	7624	2447.1	dd	dd
21	13C-1234678-HpCDD	8.54e5	8.08e5	1.66e6	39.95	1.082	1.06	NO	109.147	0.119	0.733	0.672	9.1	1.20e7	7403	1625.7	1.14e7	5418	2105.6	bb	bd
22	13C-OCDD	1.37e6	1.52e6	2.89e6	44.13	1.195	0.90	NO	198.675	0.198	0.638	0.642	-0.7	1.45e7	9337	1553.6	1.60e7	10995	1458.6	bd	bd
23	13C-2378-TCDF	1.67e6	2.11e6	3.78e6	30.31	0.992	0.79	NO	115.486	0.0996	1.443	1.250	15.5	1.94e7	9895	1958.6	2.50e7	6008	4160.3	bb	bb
24	13C-12378-PeCDF	2.08e6	1.33e6	3.40e6	33.23	1.088	1.57	NO	128.370	0.211	1.298	1.011	28.4	5.23e7	14266	3669.1	3.33e7	12916	2577.5	bd	bb
25	13C-123678-HxCDF	9.49e5	1.78e6	2.73e6	35.99	0.975	0.53	NO	96.634	0.139	1.205	1.247	-3.4	1.86e7	14143	1314.9	3.61e7	13607	2650.2	db	db
26	13C-1234678-HpCDF	5.78e5	1.29e6	1.87e6	38.71	1.049	0.45	NO	94.760	0.110	0.824	0.870	-5.2	9.62e6	6215	1548.1	2.15e7	9060	2367.8	bd	bb
27	13C-1234-TCDD	1.15e6	1.47e6	2.62e6	30.54	0.000	0.78	NO	100.000	0.0918	1.000	1.000	0.0	1.40e7	7037	1988.5	1.83e7	4685	3901.1	bb	bb
28	13C-123789-HxCDD	1.25e6	1.01e6	2.27e6	36.92	0.000	1.24	NO	100.000	0.0760	1.000	1.000	0.0	2.21e7	4532	4882.0	1.77e7	7624	2317.9	dd	dd
29	37Cl-2378-TCDD (SS)	2.83e5		2.83e5	31.12	1.000			9.720	0.0171	0.914	0.940	-2.8	4.99e6	3529	1413.1				bb	
30	13C-23478-PeCDF (SS)	2.16e6	1.39e6	3.55e6	33.83	1.018	1.56	NO	99.179	0.0753	1.043	1.052	-0.8	5.29e7	14266	3709.1	3.40e7	12916	2630.0	db	db

Quantify Sample Summary Report

Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time
 Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	Mean	%D	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
131	13C-123478-HxCDF (SS)	7.99e5	1.55e6	2.35e6	35.89	0.997	0.52	NO	96.385	0.146	0.859	0.891	-3.6	1.77e7	14143	1248.1	3.42e7	13607	2515.0	bd	bd
132	13C-123478-HxCDD (SS)	1.08e6	8.58e5	1.93e6	36.60	0.998	1.25	NO	93.085	0.0813	0.846	0.909	-6.9	2.31e7	4532	5095.6	1.87e7	7624	2448.1	bd	bd
133	13C-1234789-HpCDF (SS)	4.61e5	1.08e6	1.54e6	40.60	1.049	0.43	NO	105.927	0.158	0.825	0.779	5.9	6.46e6	6215	1038.7	1.49e7	9060	1645.0	bd	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time

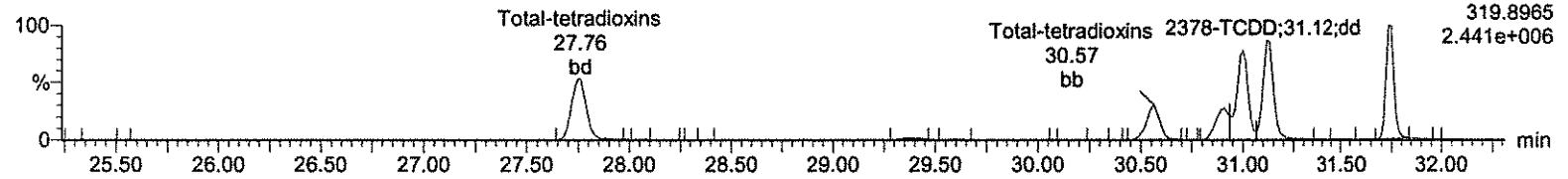
Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3,
Task: HRP750_2, User: MJC

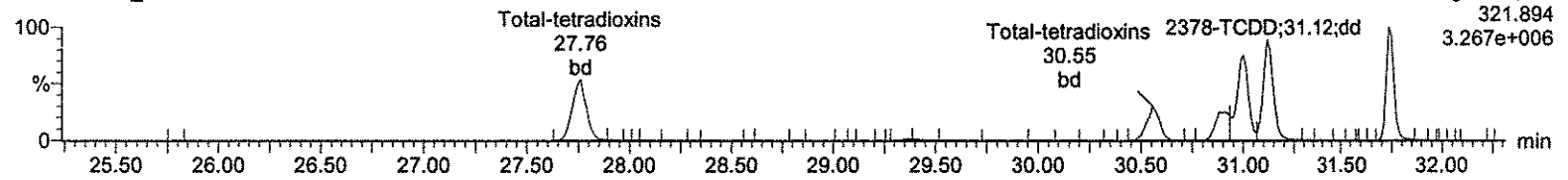
Total-tetradoxins

A23DEC19A_3-14



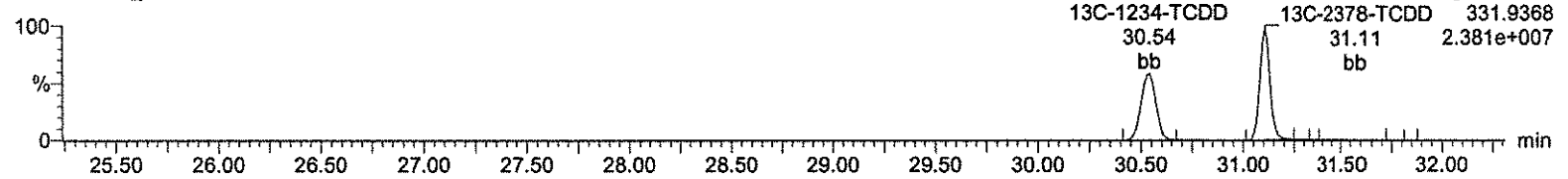
Total-tetradoxins

A23DEC19A_3-14



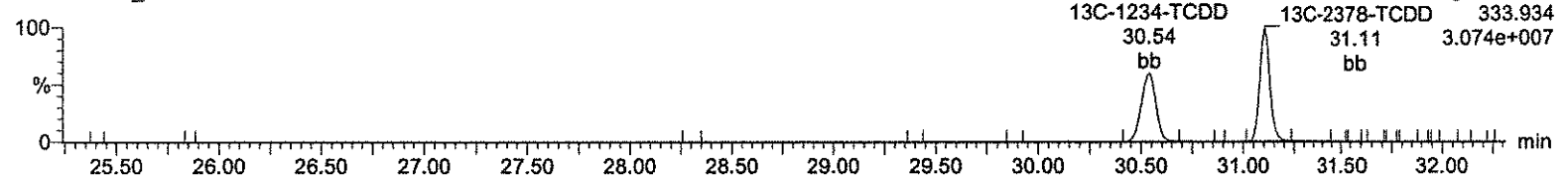
13C-2378-TCDD

A23DEC19A_3-14



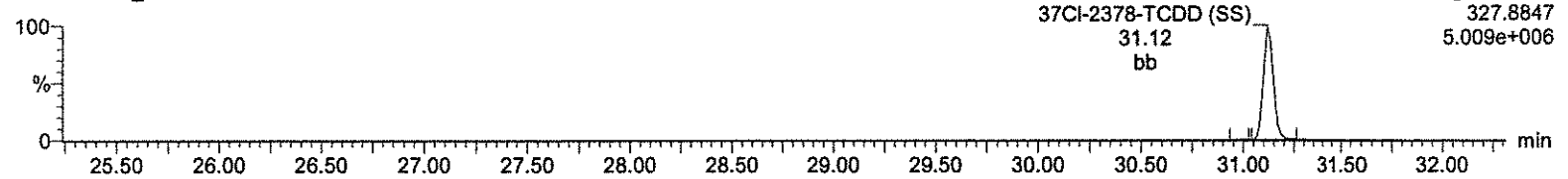
13C-2378-TCDD

A23DEC19A_3-14



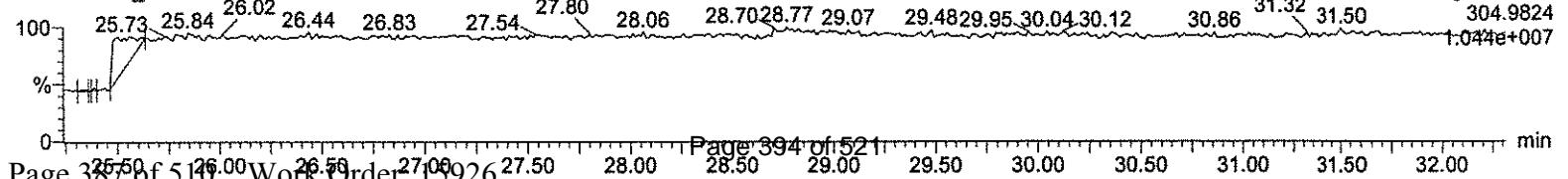
37Cl-2378-TCDD (SS)

A23DEC19A_3-14



Lock Mass F1

A23DEC19A_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

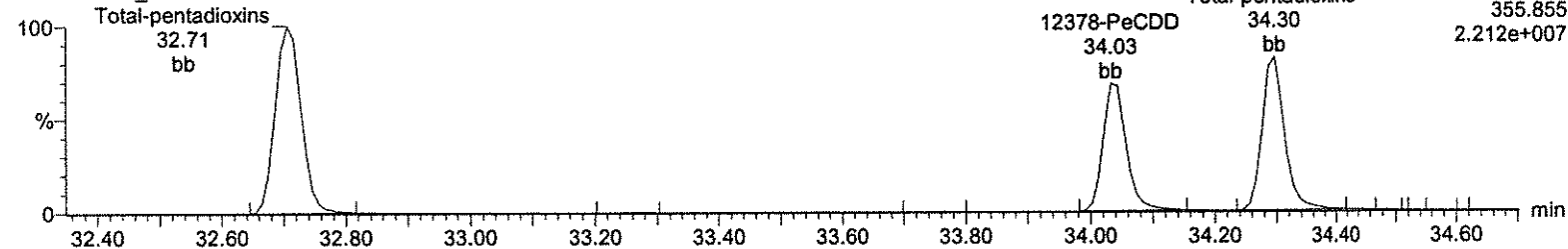
Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

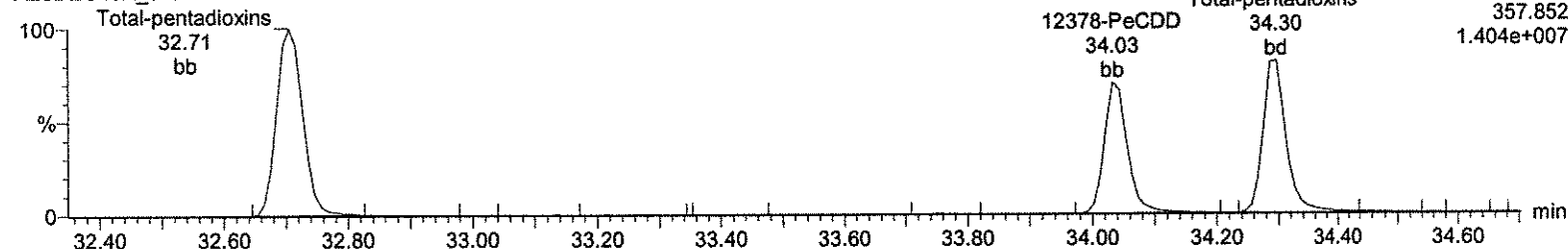
Total-pentadioxins

A23DEC19A_3-14



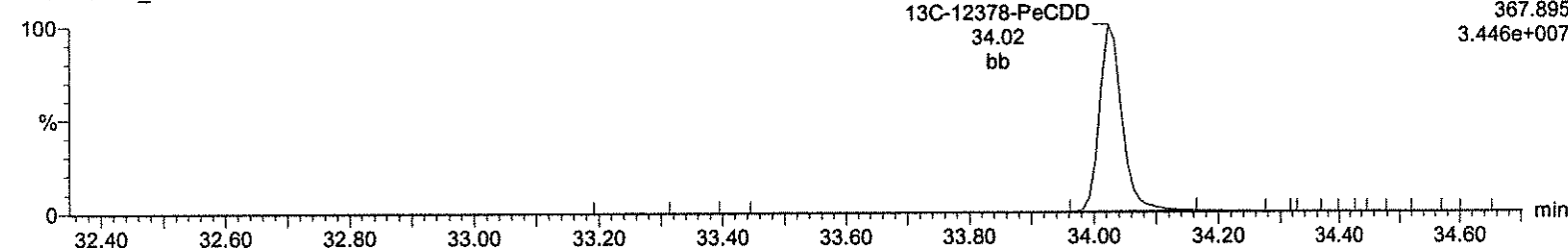
Total-pentadioxins

A23DEC19A_3-14



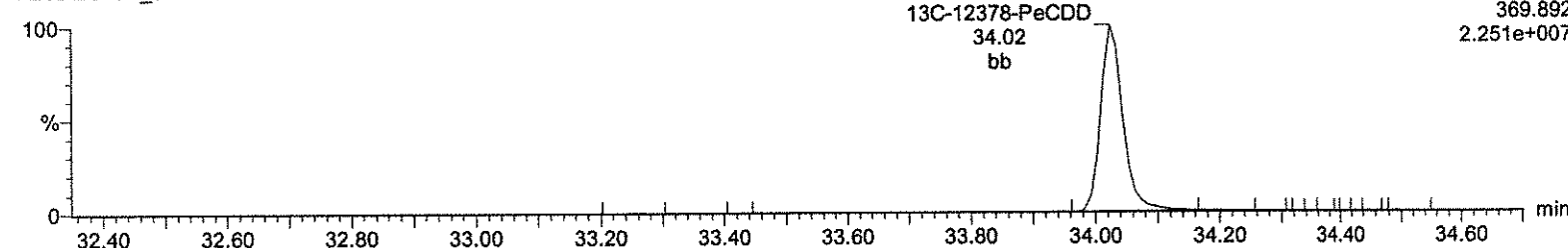
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A23DEC19A_3-14



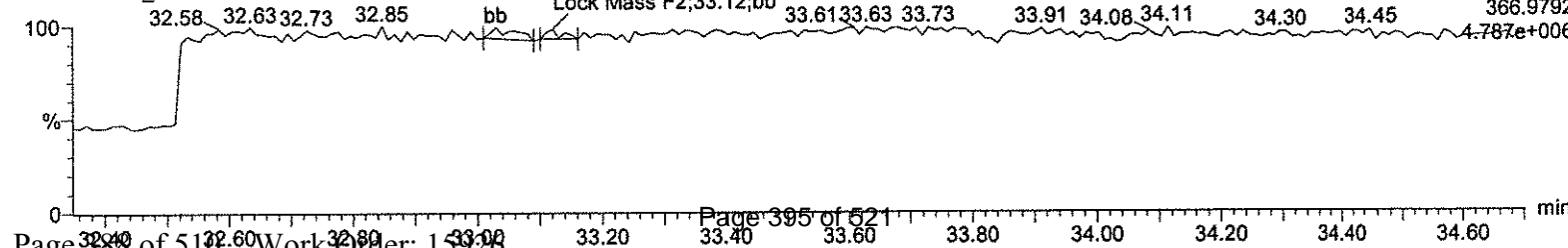
¹³C-12378-PeCDD

A23DEC19A_3-14



Lock Mass F2

A23DEC19A_3-14



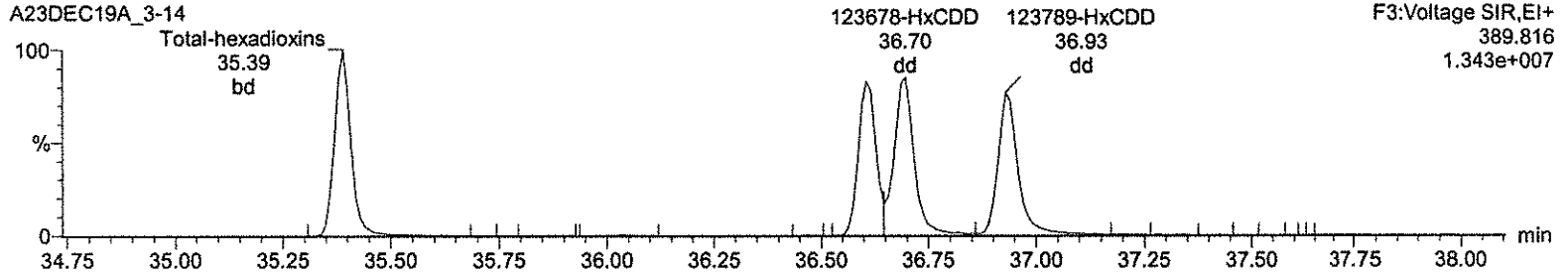
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Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time

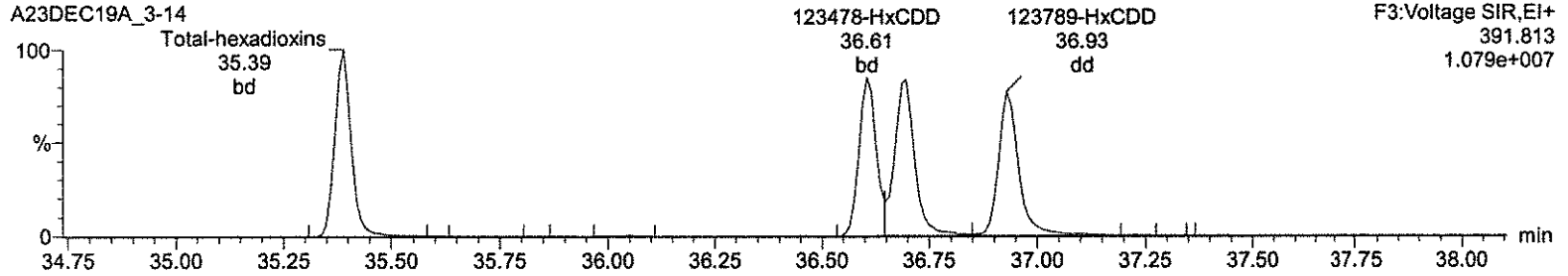
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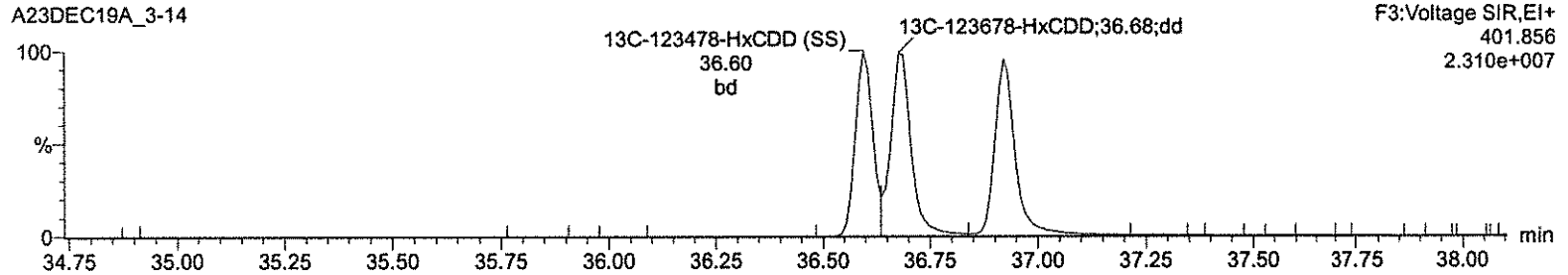
Total-hexadioxins



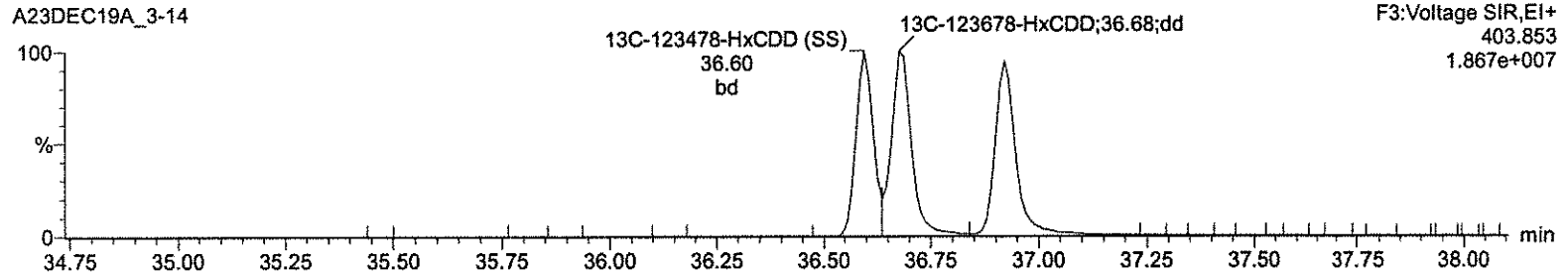
Total-hexadioxins



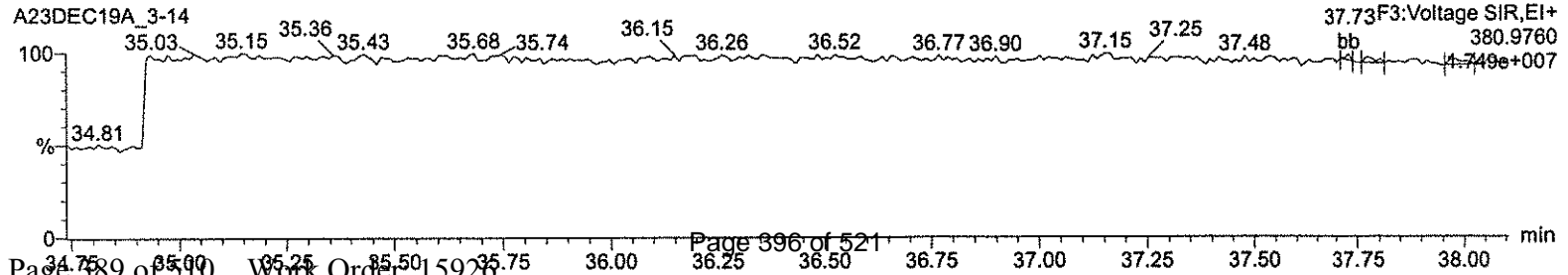
13C-123678-HxCDD



13C-123678-HxCDD



Lock Mass F3



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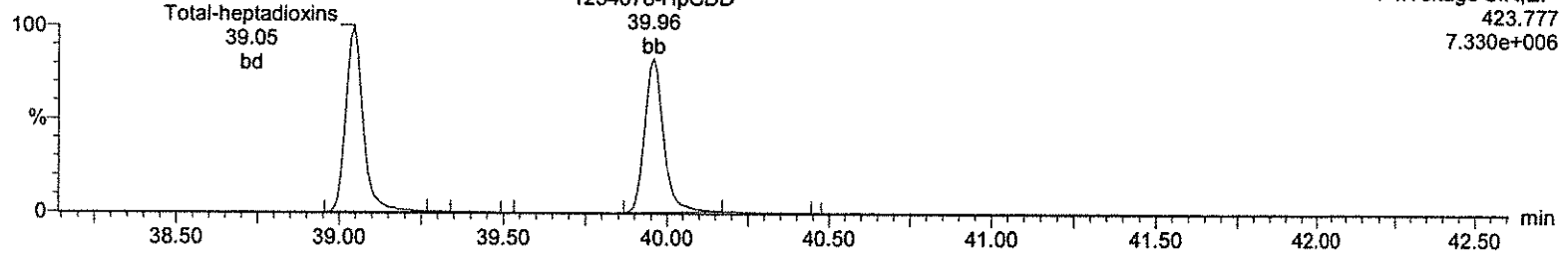
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Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

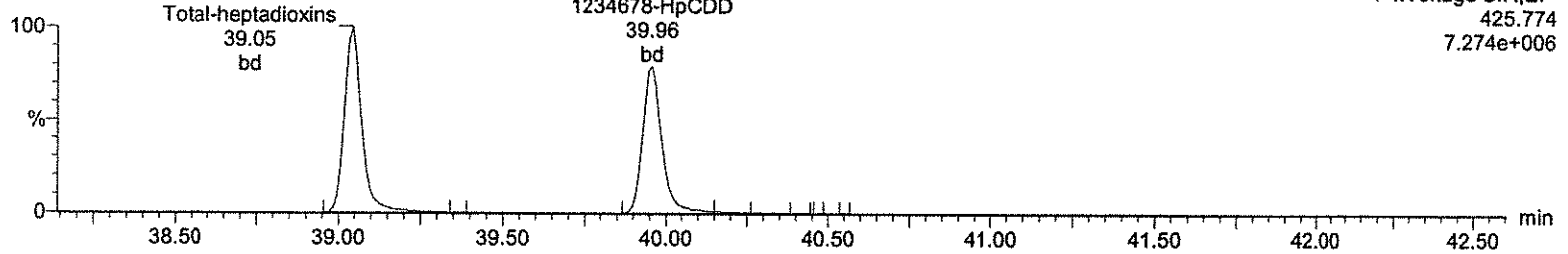
Total-heptadioxins

A23DEC19A_3-14



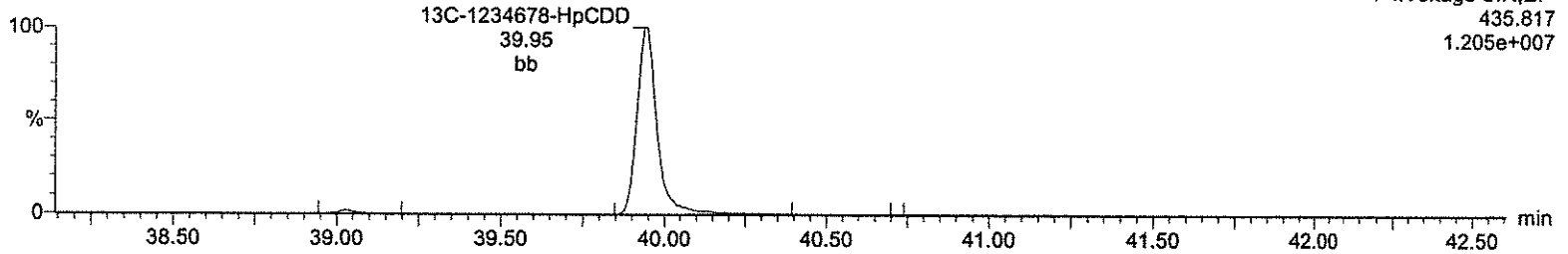
Total-heptadioxins

A23DEC19A_3-14



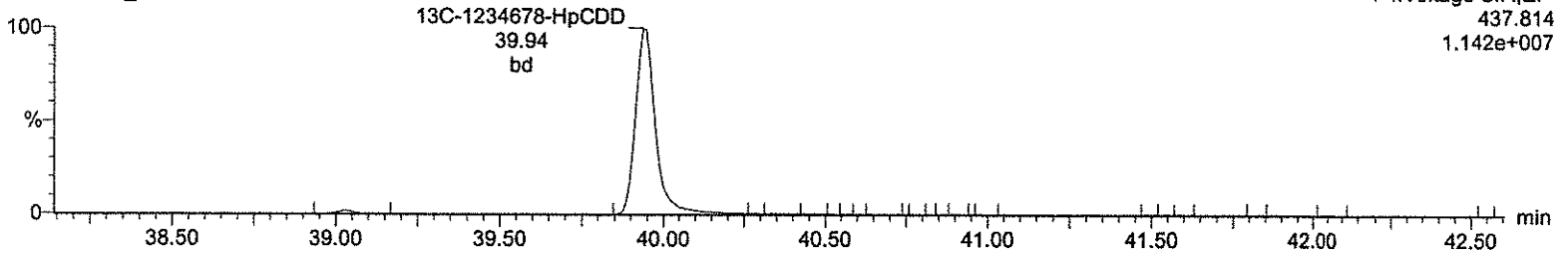
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A23DEC19A_3-14



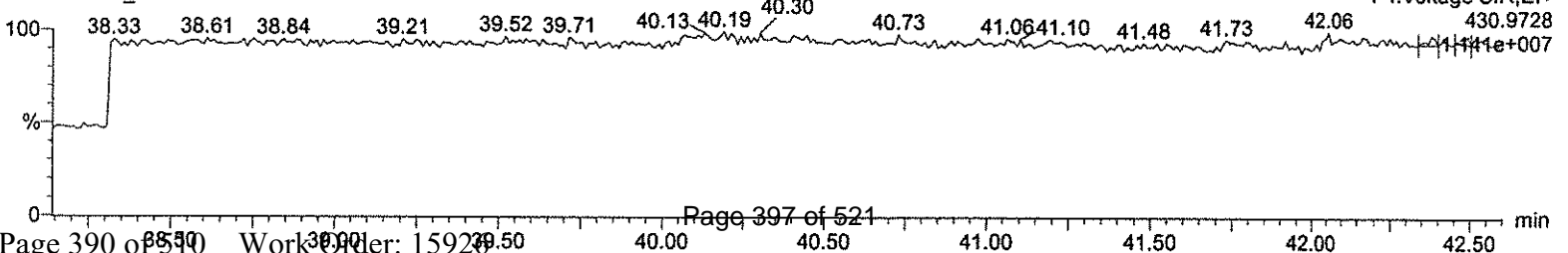
13C-1234678-HpCDD

A23DEC19A_3-14



Lock Mass F4

A23DEC19A_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qid

Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time

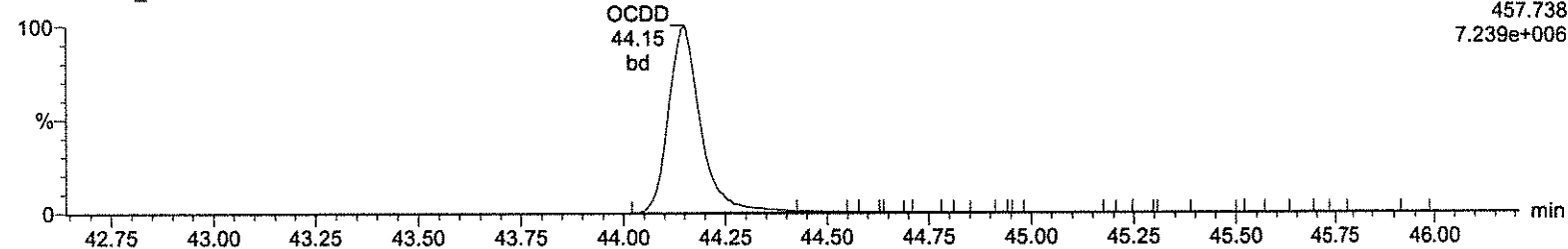
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OCDD

A23DEC19A_3-14

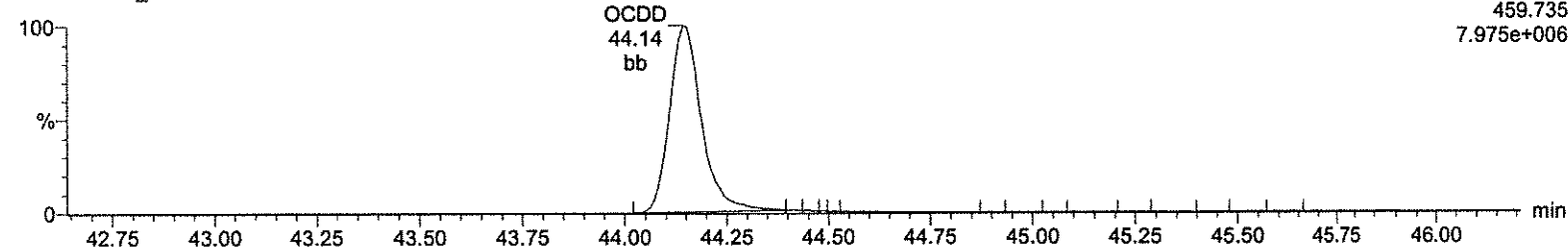
F5:Voltage SIR,EI+
457.738
7.239e+006



OCDD

A23DEC19A_3-14

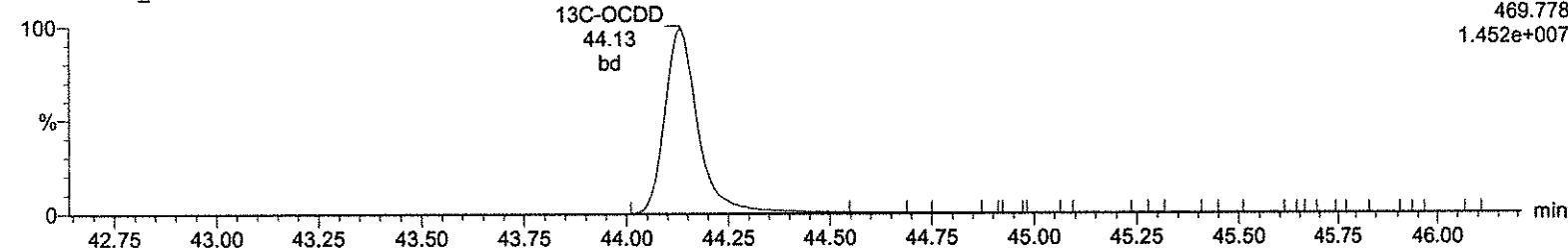
F5:Voltage SIR,EI+
459.735
7.975e+006



13C-OCDD

A23DEC19A_3-14

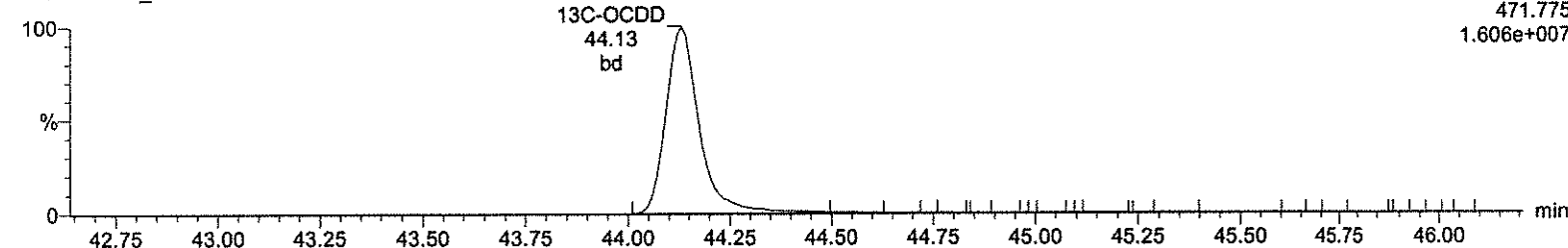
F5:Voltage SIR,EI+
469.778
1.452e+007



13C-OCDD

A23DEC19A_3-14

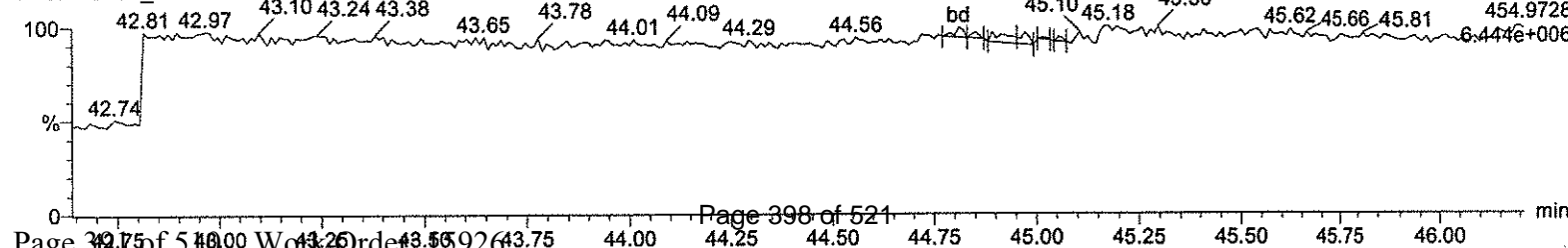
F5:Voltage SIR,EI+
471.775
1.606e+007



Lock Mass F5

A23DEC19A_3-14

F5:Voltage SIR,EI+
454.9728
6.444e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

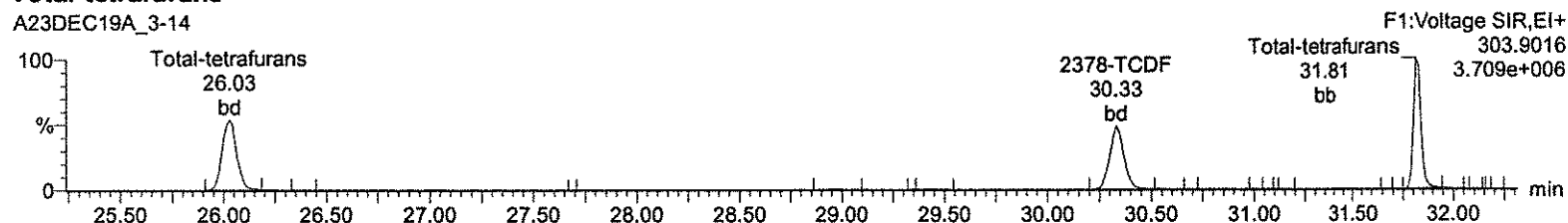
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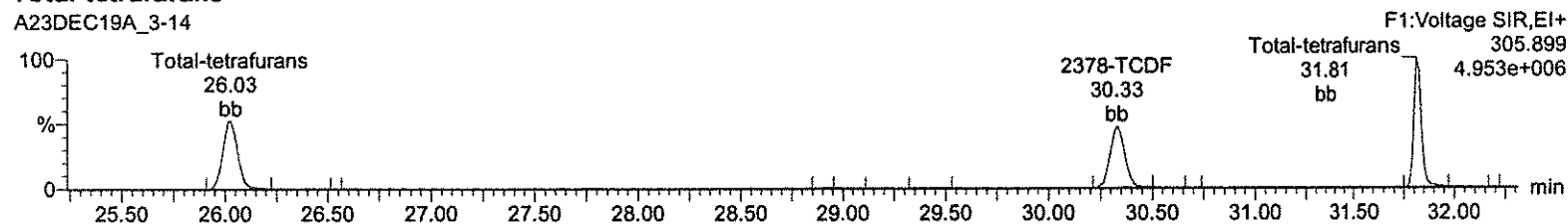
Total-tetrafurans

A23DEC19A_3-14



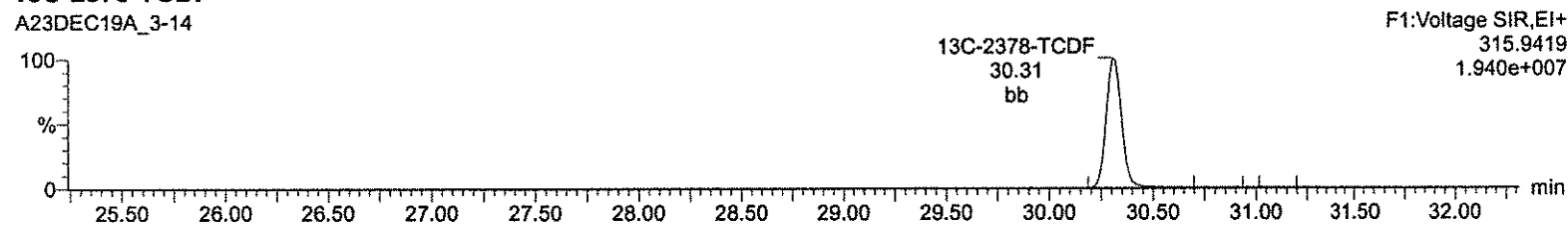
Total-tetrafurans

A23DEC19A_3-14



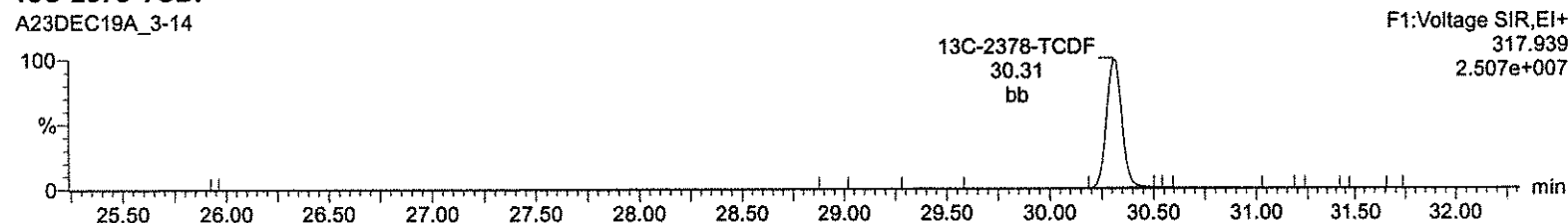
13C-2378-TCDF

A23DEC19A_3-14



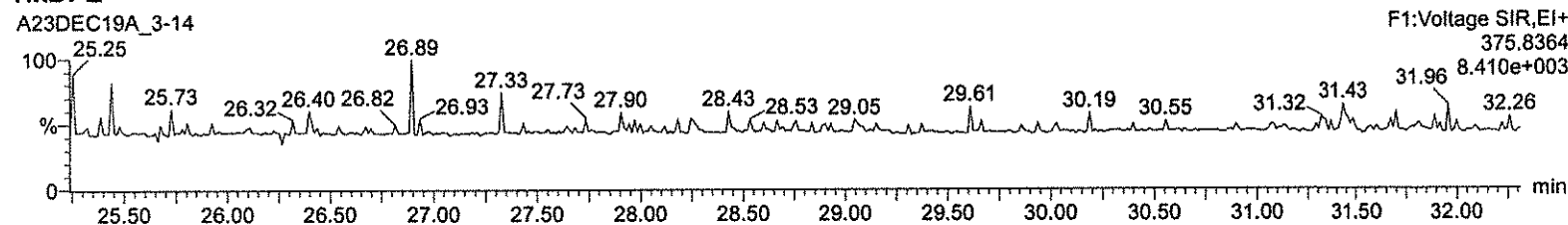
13C-2378-TCDF

A23DEC19A_3-14



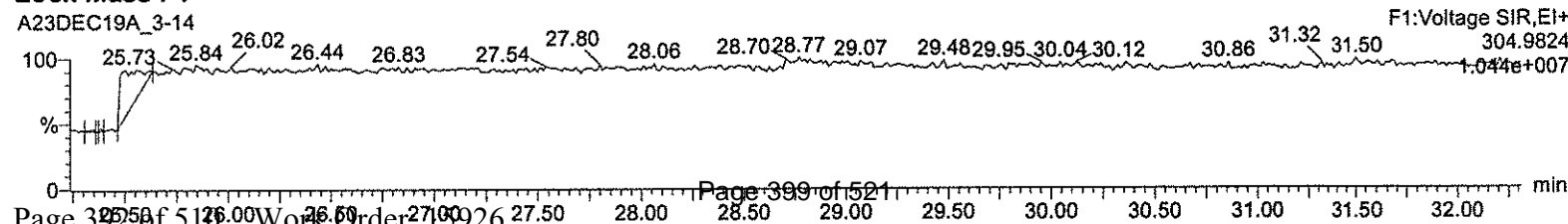
HxDPE

A23DEC19A_3-14



Lock Mass F1

A23DEC19A_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

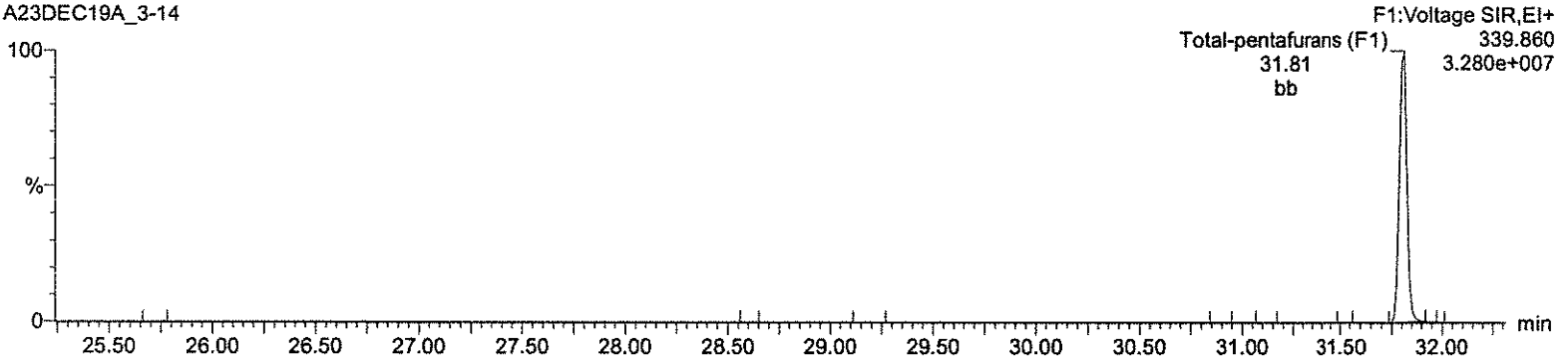
Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3,
Task: HRP750_2, User: MJC

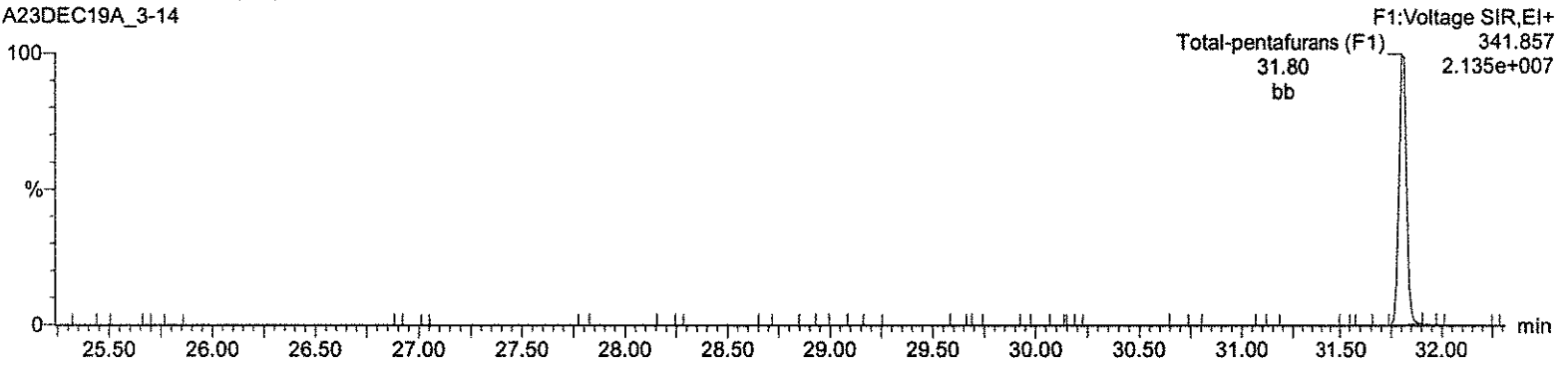
Total-pentafurans (F1)

A23DEC19A_3-14



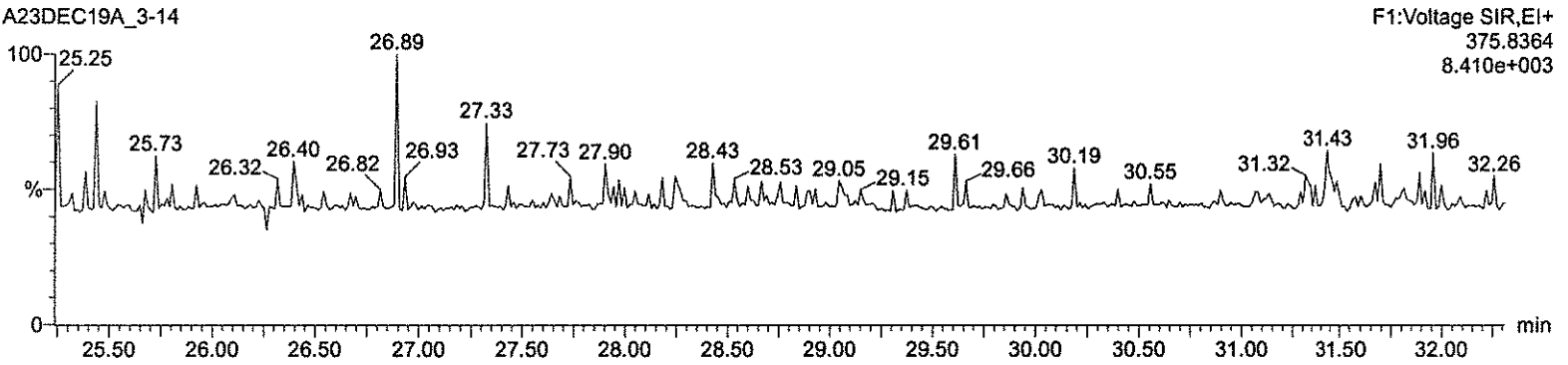
Total-pentafurans (F1)

A23DEC19A_3-14



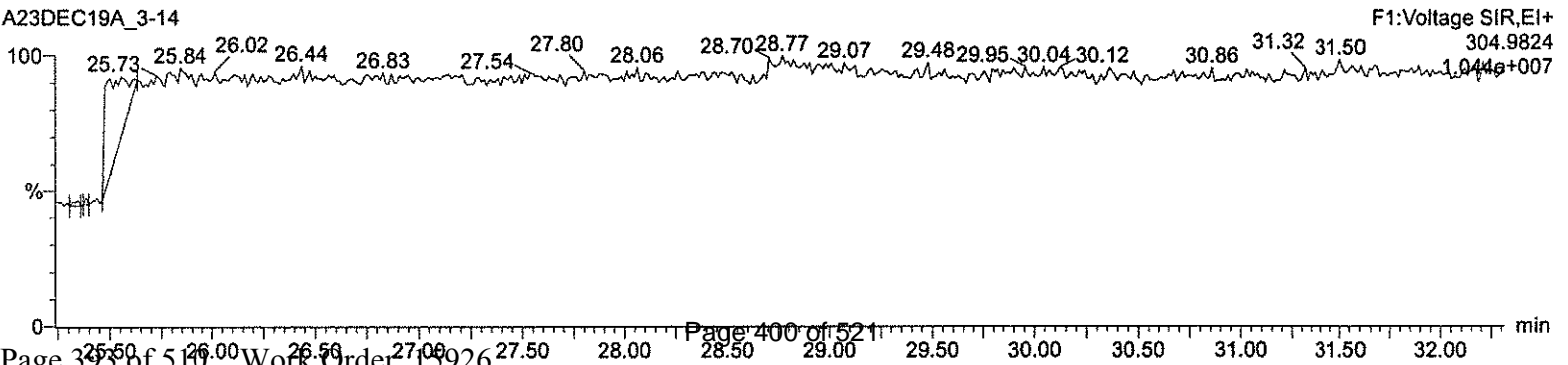
HxDPE

A23DEC19A_3-14



Lock Mass F1

A23DEC19A_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

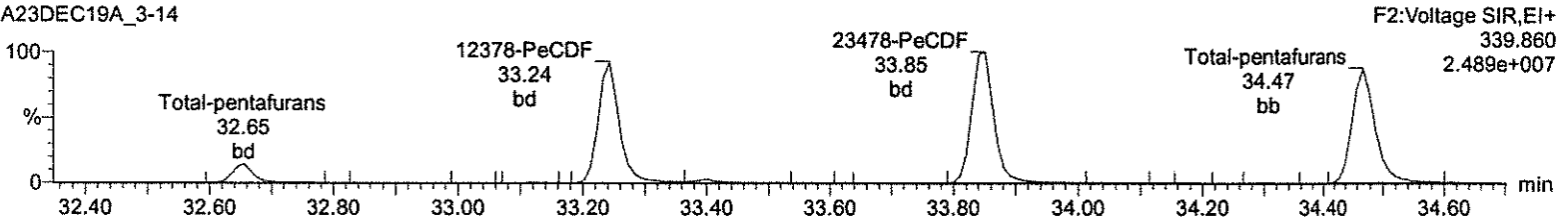
Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

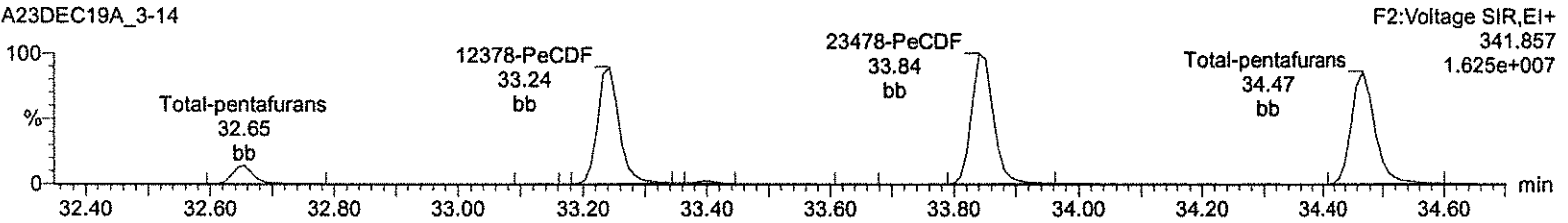
Total-pentafurans

A23DEC19A_3-14



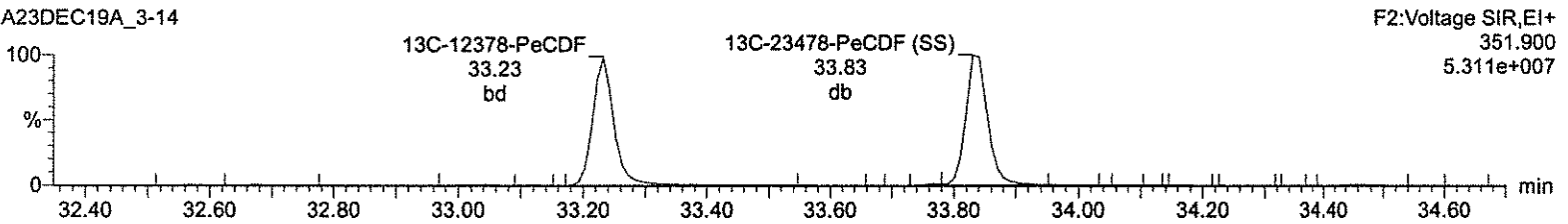
Total-pentafurans

A23DEC19A_3-14



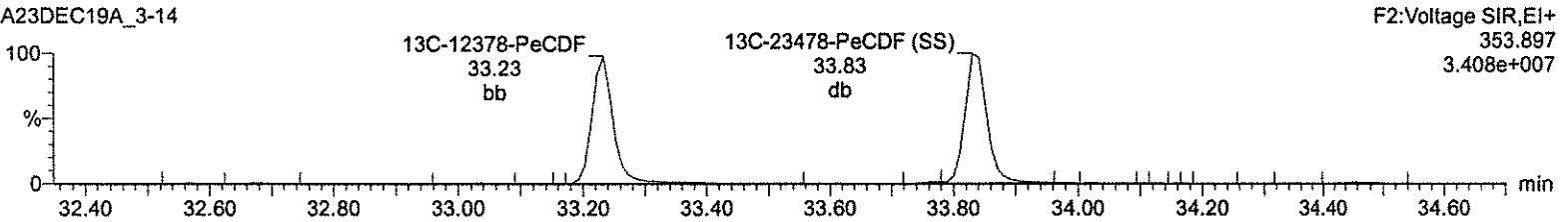
13C-12378-PeCDF

A23DEC19A_3-14



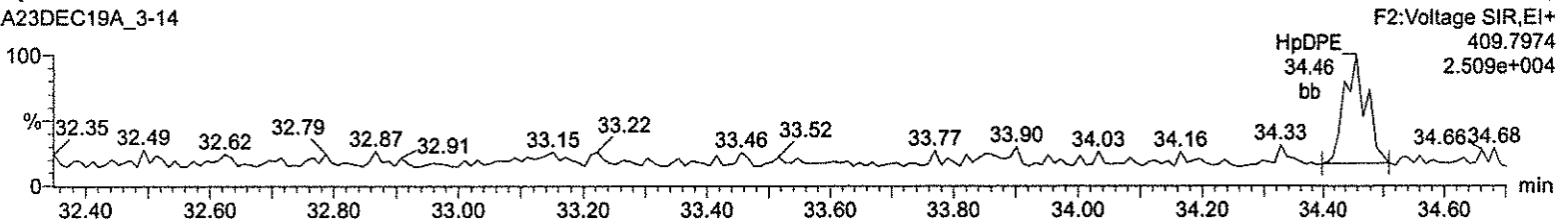
13C-12378-PeCDF

A23DEC19A_3-14



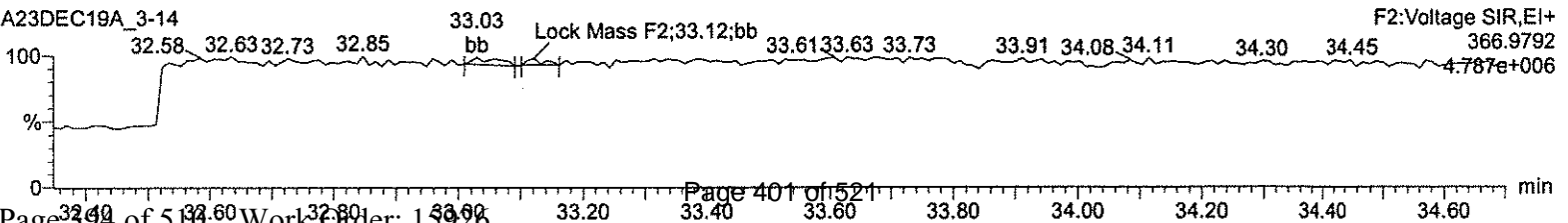
HpDPE

A23DEC19A_3-14



Lock Mass F2

A23DEC19A_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

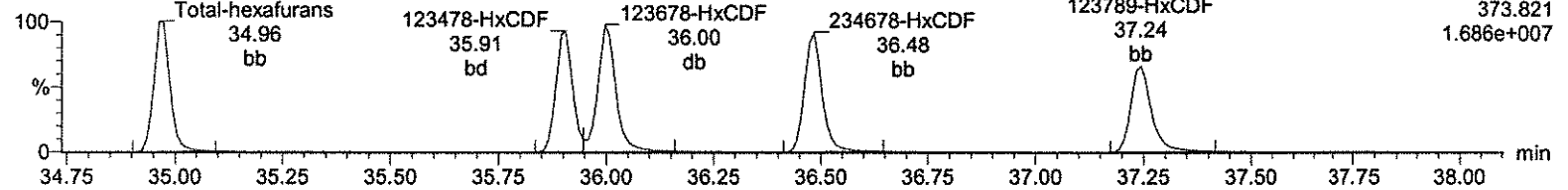
Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

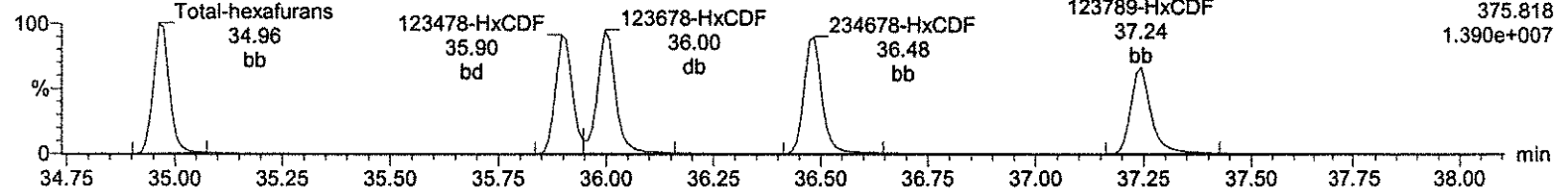
Total-hexafurans

A23DEC19A_3-14



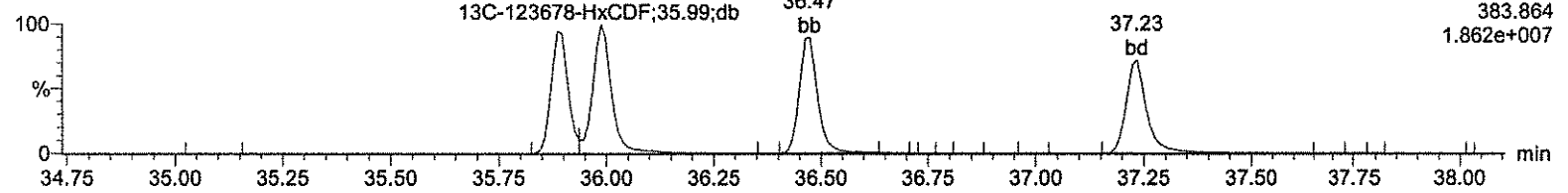
Total-hexafurans

A23DEC19A_3-14



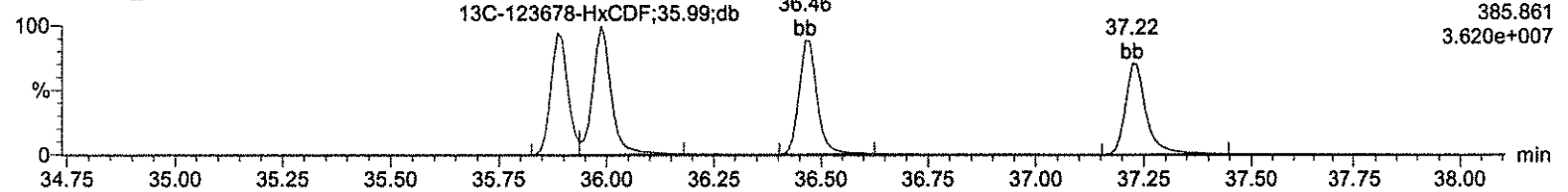
13C-123678-HxCDF

A23DEC19A_3-14



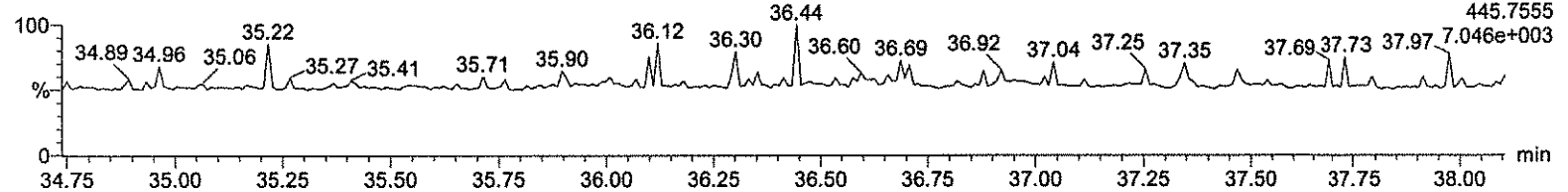
13C-123678-HxCDF

A23DEC19A_3-14



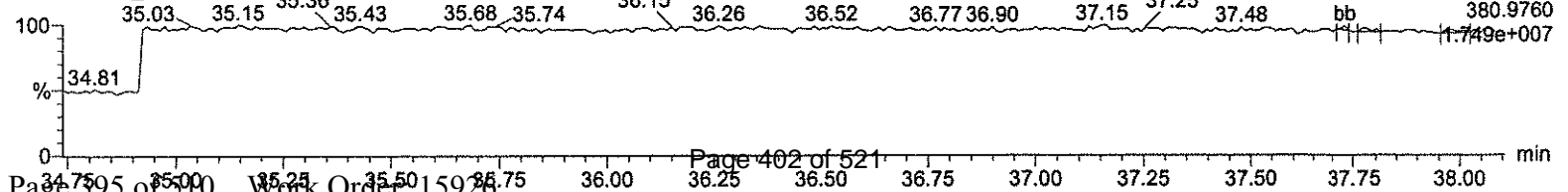
OcDPE

A23DEC19A_3-14



Lock Mass F3

A23DEC19A_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

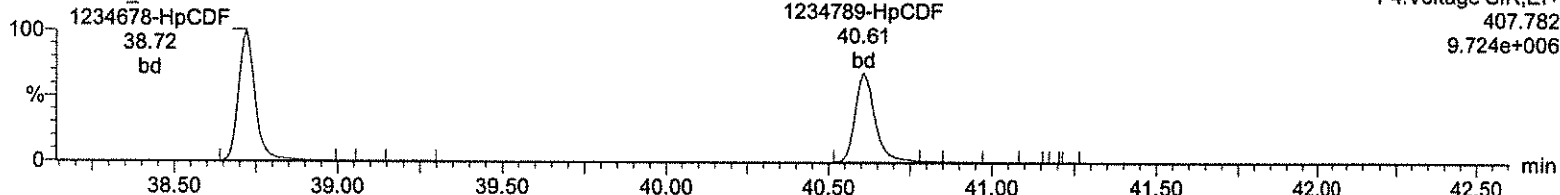
Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

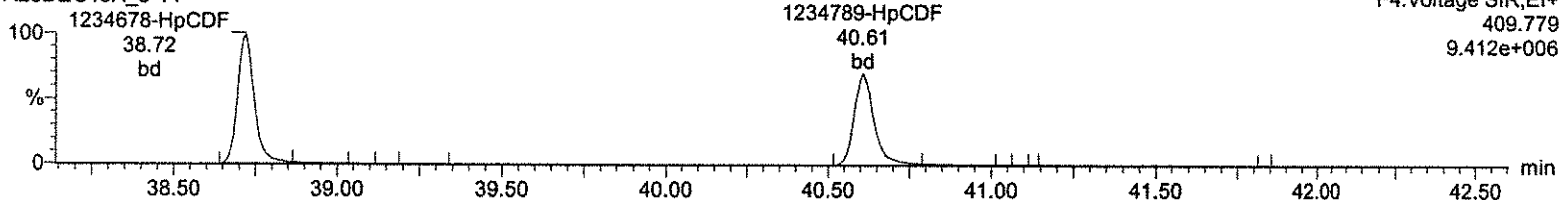
Total-heptafurans

A23DEC19A_3-14



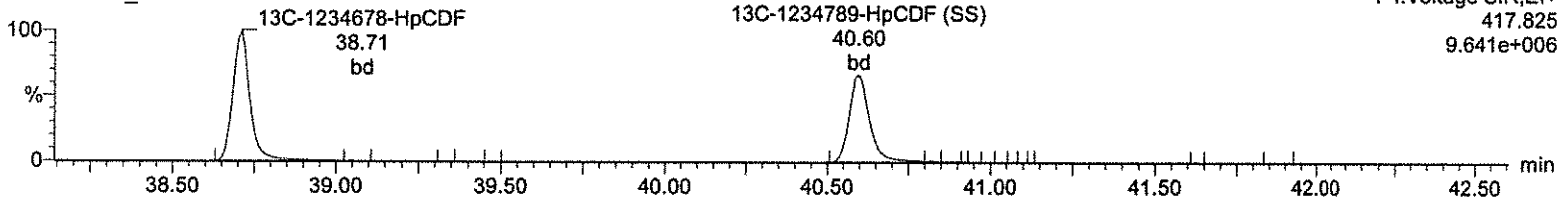
Total-heptafurans

A23DEC19A_3-14



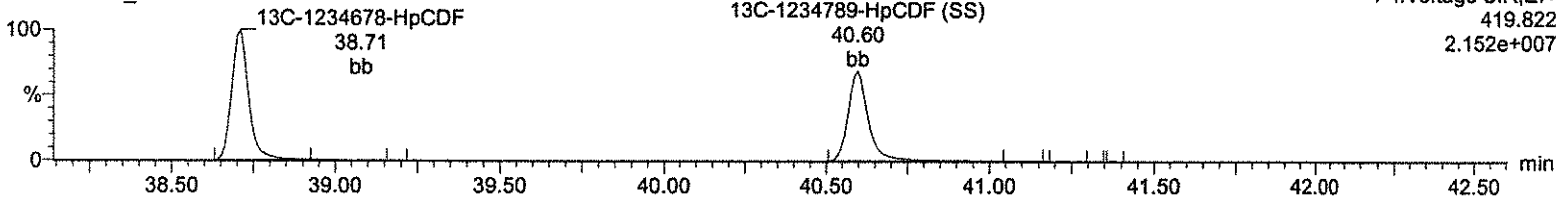
¹³C-1234678-HpCDF

A23DEC19A_3-14



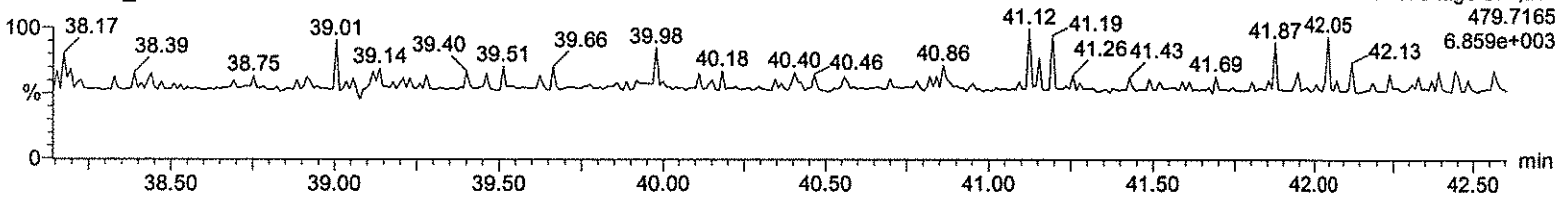
¹³C-1234678-HpCDF

A23DEC19A_3-14



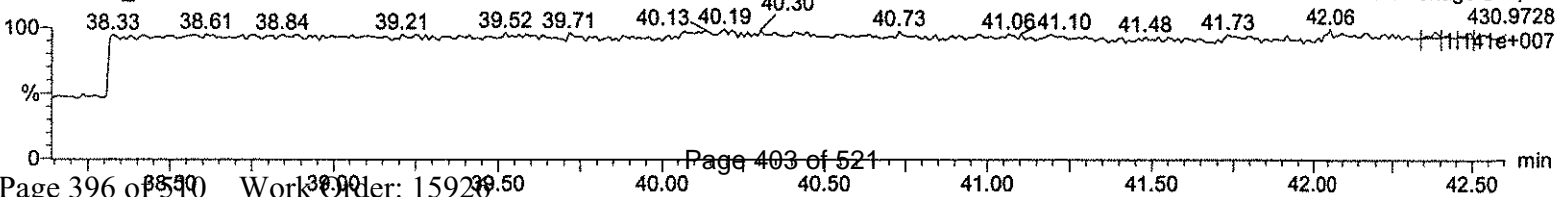
NoDPE

A23DEC19A_3-14



Lock Mass F4

A23DEC19A_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_3-14.qld

Last Altered: Thursday, December 26, 2019 10:35:08 Eastern Standard Time

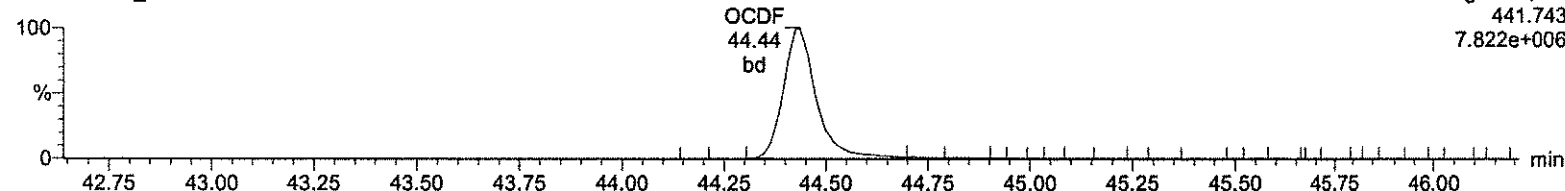
Printed: Thursday, December 26, 2019 10:40:03 Eastern Standard Time

Name: A23DEC19A_3-14, Date: 25-Dec-2019, Time: 01:48:30, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_3, Task: HRP750_2, User: MJC

OCDF

A23DEC19A_3-14

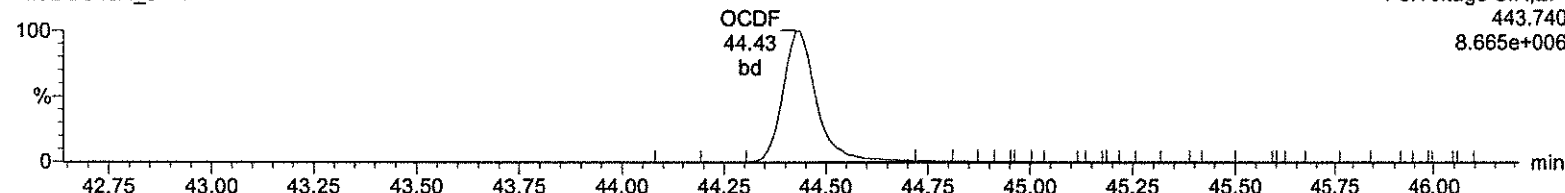
F5:Voltage SIR,EI+
441.743
7.822e+006



OCDF

A23DEC19A_3-14

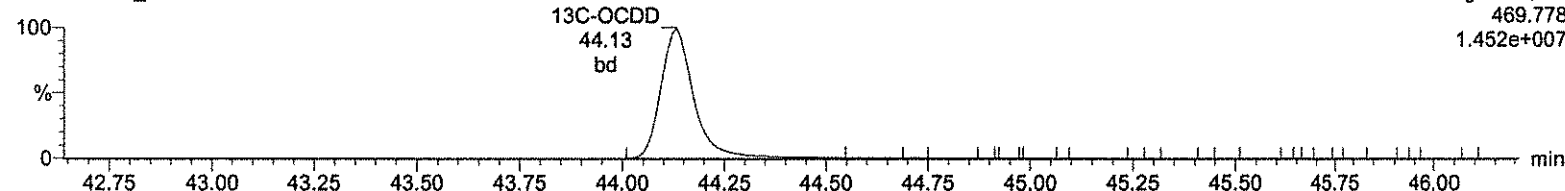
F5:Voltage SIR,EI+
443.740
8.665e+006



13C-OCDD

A23DEC19A_3-14

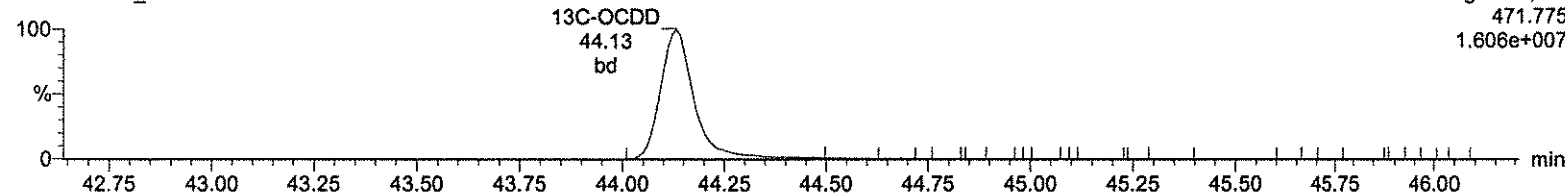
F5:Voltage SIR,EI+
469.778
1.452e+007



13C-OCDD

A23DEC19A_3-14

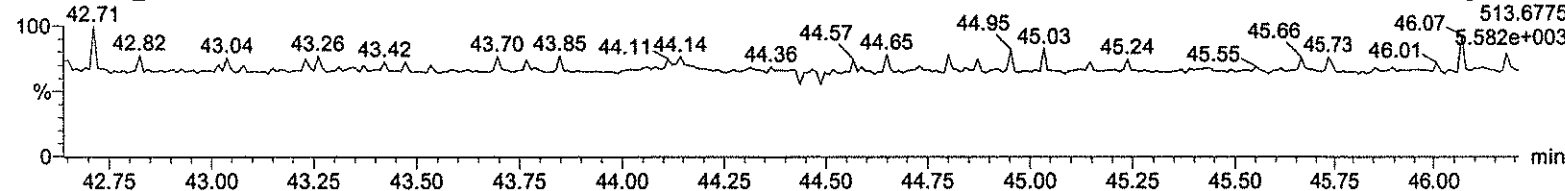
F5:Voltage SIR,EI+
471.775
1.606e+007



DeDPE

A23DEC19A_3-14

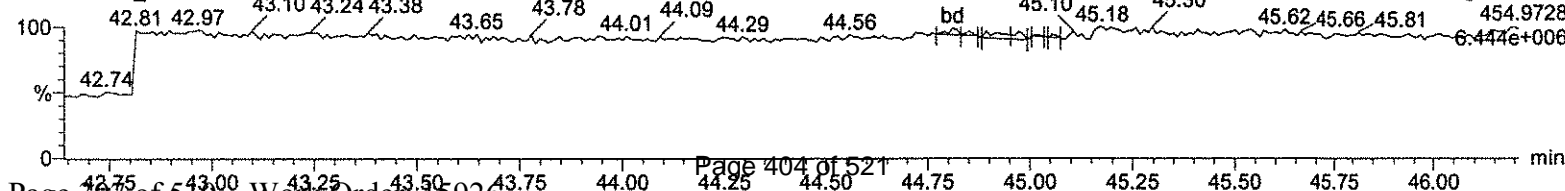
F5:Voltage SIR,EI+
513.6775
5.582e+003



Lock Mass F5

A23DEC19A_3-14

F5:Voltage SIR,EI+
454.9728
6.444e+006



MassLynx 4.1

Quantify Sample Summary Report

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time
Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	1.55e5	1.93e5	3.47e5	31.13	1.001	0.80	NO	11.042	0.0343	0.977	0.884	10.4	2.55e6	4221	603.7	3.22e6	3186	1012.1	dd	db
2	12378-PeCDD	7.34e5	4.72e5	1.21e6	34.04	1.000	1.55	NO	54.171	0.0768	0.925	0.853	8.3	1.78e7	11093	1608.7	1.14e7	5402	2106.6	bb	bb
3	123478-HxCDD	6.14e5	4.91e5	1.11e6	36.62	0.998	1.25	NO	50.081	0.110	0.856	0.854	0.2	1.31e7	10391	1258.7	1.03e7	7814	1321.0	bd	bd
4	123678-HxCDD	7.06e5	5.66e5	1.27e6	36.70	1.000	1.25	NO	52.178	0.100	0.985	0.944	4.4	1.35e7	10391	1300.0	1.07e7	7814	1365.5	dd	dd
5	123789-HxCDD	6.72e5	5.25e5	1.20e6	36.94	1.007	1.28	NO	52.377	0.107	0.927	0.885	4.8	1.19e7	10391	1145.3	9.67e6	7814	1236.9	dd	dd
6	1234678-HpCDD	4.59e5	4.52e5	9.11e5	39.96	1.000	1.02	NO	45.767	0.116	0.952	1.040	-8.5	6.93e6	7434	932.4	6.68e6	5557	1202.8	bb	bb
7	OCDD	7.54e5	8.40e5	1.59e6	44.15	1.000	0.90	NO	98.576	0.203	0.958	0.971	-1.4	8.25e6	5797	1423.4	9.23e6	8101	1139.6	bd	bd
8	2378-TCDF	1.71e5	2.24e5	3.95e5	30.33	1.000	0.76	NO	9.200	0.0397	0.900	0.978	-8.0	2.07e6	3273	633.8	2.73e6	5084	536.4	bd	bd
9	12378-PeCDF	1.02e6	6.65e5	1.68e6	33.24	1.000	1.53	NO	46.584	0.0820	0.881	0.945	-6.8	2.43e7	15802	1539.5	1.62e7	12590	1286.5	bd	bd
10	23478-PeCDF	1.14e6	7.43e5	1.88e6	33.85	1.019	1.54	NO	47.560	0.0747	0.987	1.037	-4.9	2.93e7	15802	1857.2	1.89e7	12590	1502.6	bb	bb
11	123478-HxCDF	8.36e5	6.71e5	1.51e6	35.91	0.997	1.25	NO	49.244	0.110	0.953	0.968	-1.5	1.88e7	14768	1270.6	1.49e7	12215	1219.0	bd	bd
12	123678-HxCDF	9.37e5	7.52e5	1.69e6	36.01	1.000	1.25	NO	51.331	0.102	1.068	1.041	2.7	1.90e7	14768	1289.0	1.52e7	12215	1244.2	db	db
13	234678-HxCDF	8.69e5	7.08e5	1.58e6	36.48	1.014	1.23	NO	50.625	0.108	0.998	0.985	1.2	1.81e7	14768	1228.1	1.46e7	12215	1197.9	bb	bb
14	123789-HxCDF	7.38e5	5.80e5	1.32e6	37.24	1.035	1.27	NO	50.686	0.129	0.834	0.823	1.4	1.28e7	14768	868.2	1.02e7	12215	838.1	bb	bb
15	1234678-HpCDF	6.70e5	6.63e5	1.33e6	38.72	1.000	1.01	NO	52.076	0.0862	1.198	1.150	4.2	1.16e7	8998	1335.1	1.12e7	6640	1684.7	bb	bd
16	1234789-HpCDF	5.46e5	5.30e5	1.08e6	40.62	1.049	1.03	NO	51.606	0.106	0.966	0.936	3.2	7.63e6	8998	877.1	7.13e6	6640	1074.2	bb	bb
17	OCDF	8.67e5	9.70e5	1.84e6	44.44	1.007	0.89	NO	97.443	0.201	1.104	1.133	-2.6	8.83e6	7324	1205.9	1.01e7	8733	1151.9	bd	bd
18	13C-2378-TCDD	1.53e6	2.03e6	3.56e6	31.11	1.018	0.76	NO	101.793	0.0593	1.149	1.128	1.8	2.63e7	5896	4461.1	3.48e7	4207	8272.7	bb	bb
19	13C-12378-PeCDD	1.59e6	1.02e6	2.61e6	34.03	1.114	1.56	NO	112.122	0.0567	0.842	0.751	12.1	3.83e7	2734	14010.1	2.48e7	3701	6693.3	bb	bb
20	13C-123678-HxCDD	1.44e6	1.14e6	2.58e6	36.69	0.993	1.26	NO	100.482	0.105	0.991	0.986	0.5	2.69e7	12485	2151.4	2.14e7	6439	3323.7	dd	dd
21	13C-1234678-HpCDD	9.80e5	9.33e5	1.91e6	39.95	1.082	1.05	NO	109.259	0.118	0.734	0.672	9.3	1.38e7	8907	1549.4	1.31e7	5617	2325.2	bd	bd
22	13C-OCDD	1.57e6	1.76e6	3.33e6	44.14	1.195	0.89	NO	198.825	0.142	0.638	0.642	-0.6	1.66e7	7770	2131.4	1.83e7	8918	2051.7	bd	bd
23	13C-2378-TCDF	1.92e6	2.47e6	4.39e6	30.32	0.993	0.78	NO	113.357	0.0791	1.417	1.250	13.4	2.35e7	8731	2693.2	3.03e7	6201	4891.7	bb	bb
24	13C-12378-PeCDF	2.35e6	1.47e6	3.82e6	33.23	1.088	1.60	NO	122.058	0.175	1.234	1.011	22.1	5.63e7	13934	4042.7	3.64e7	12789	2851.6	bd	bb
25	13C-123678-HxCDF	1.08e6	2.08e6	3.16e6	36.00	0.975	0.52	NO	97.223	0.132	1.212	1.247	-2.8	2.17e7	11549	1875.0	4.05e7	18673	2170.0	db	db
26	13C-1234678-HpCDF	6.77e5	1.55e6	2.23e6	38.71	1.048	0.44	NO	98.113	0.125	0.854	0.870	-1.9	1.18e7	9416	1250.0	2.58e7	10597	2436.5	bb	bd
27	13C-1234-TCDD	1.36e6	1.74e6	3.10e6	30.54	0.000	0.78	NO	100.000	0.0669	1.000	1.000	0.0	1.66e7	5896	2811.4	2.12e7	4207	5050.5	bb	bb
28	13C-123789-HxCDD	1.46e6	1.15e6	2.61e6	36.93	0.000	1.28	NO	100.000	0.103	1.000	1.000	0.0	2.57e7	12485	2060.9	2.04e7	6439	3160.8	dd	dd
29	37Cl-2378-TCDD (SS)	3.27e5		3.27e5	31.13	1.001			9.784	0.0186	0.920	0.940	-2.2	5.65e6	4278	1319.7				bb	bb
30	13C-23478-PeCDF (SS)	2.44e6	1.56e6	4.00e6	33.84	1.018	1.56	NO	99.546	0.0693	1.047	1.052	-0.5	6.38e7	13934	4580.8	4.03e7	12769	3154.3	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time
 Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
131	13C-123478-HxCDF (SS)	9.38e5	1.81e6	2.75e6	35.90	0.997	0.52	NO	97.693	0.134	0.870	0.891	-2.3	2.07e7	11549	1793.2	3.98e7	18673	2129.4	bd	bd
132	13C-123478-HxCDD (SS)	1.24e6	9.96e5	2.24e6	36.61	0.998	1.25	NO	95.383	0.108	0.867	0.909	-4.6	2.58e7	12485	2067.1	2.02e7	6439	3139.6	bd	bd
133	13C-1234789-HpCDF (SS)	5.47e5	1.24e6	1.79e6	40.60	1.049	0.44	NO	103.009	0.166	0.802	0.779	3.0	7.46e6	9416	792.7	1.67e7	10597	1579.2	bd	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

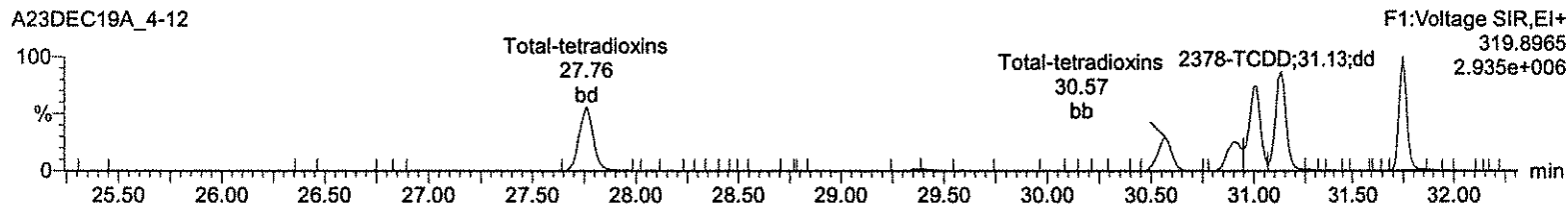
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

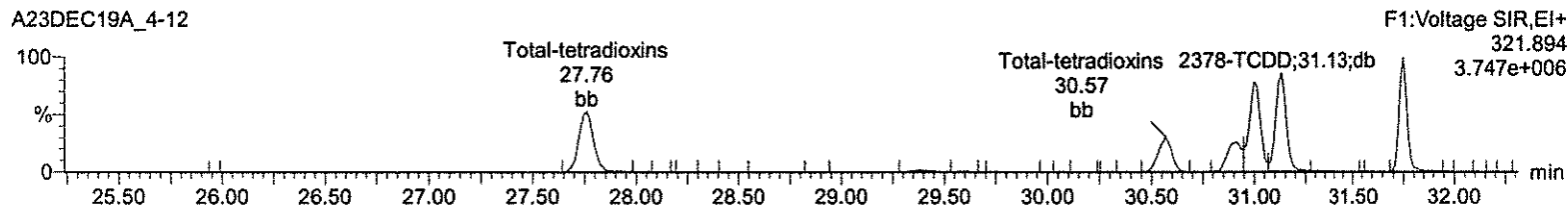
Total-tetradoxins

A23DEC19A_4-12



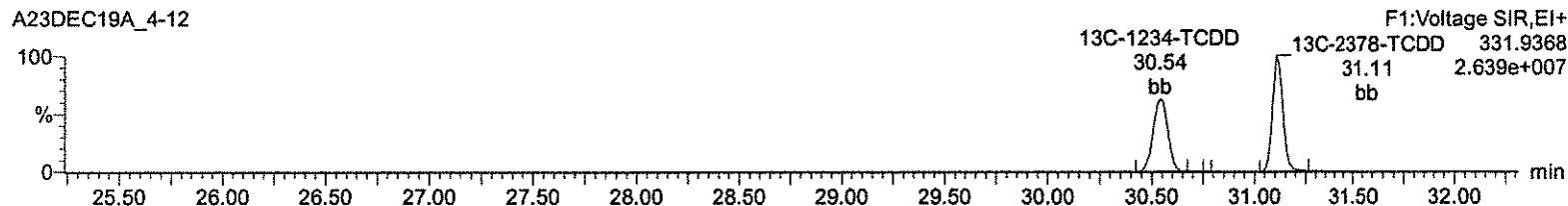
Total-tetradoxins

A23DEC19A_4-12



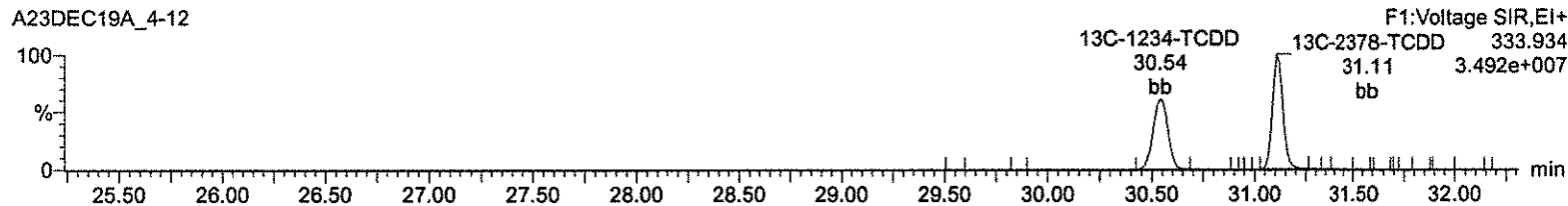
13C-2378-TCDD

A23DEC19A_4-12



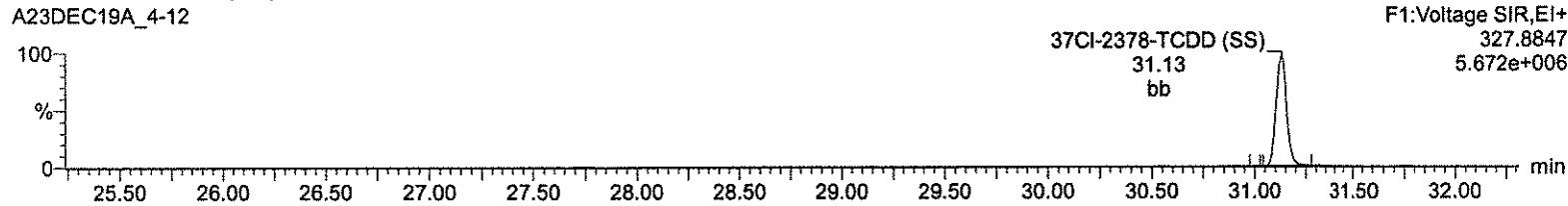
13C-2378-TCDD

A23DEC19A_4-12



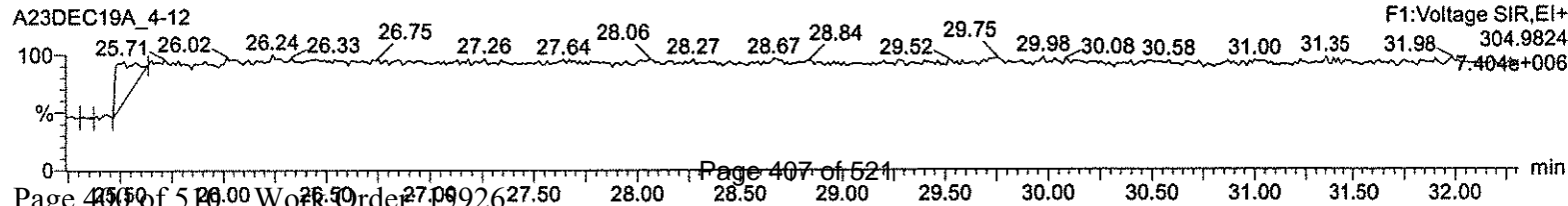
37Cl-2378-TCDD (SS)

A23DEC19A_4-12



Lock Mass F1

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

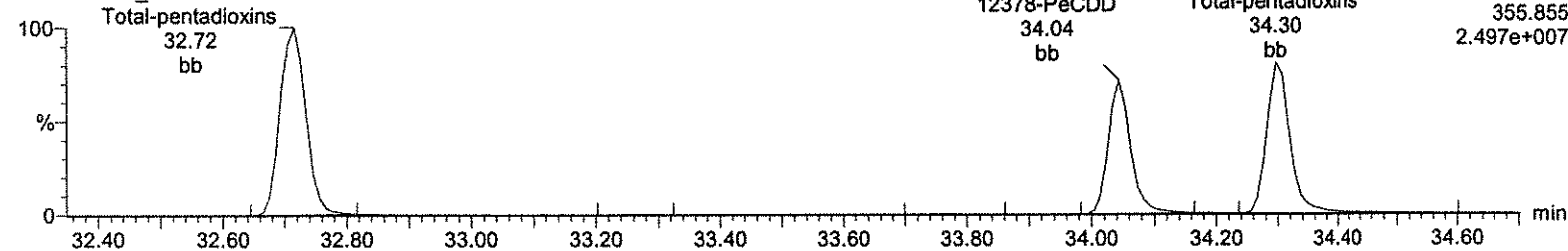
Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

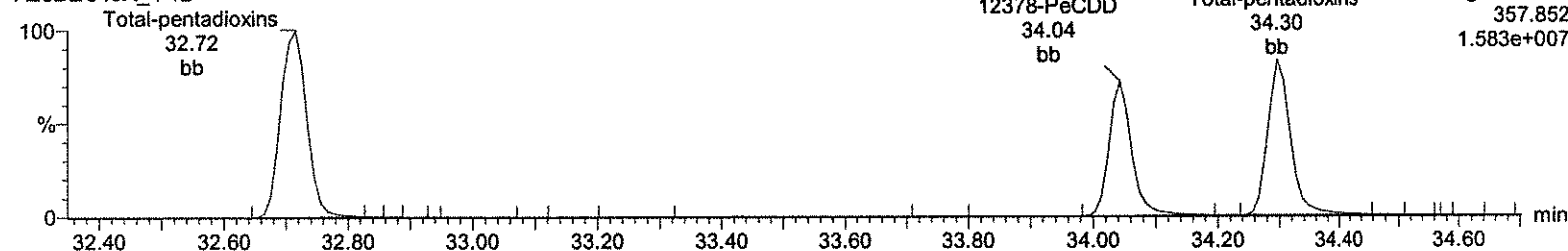
Total-pentadioxins

A23DEC19A_4-12



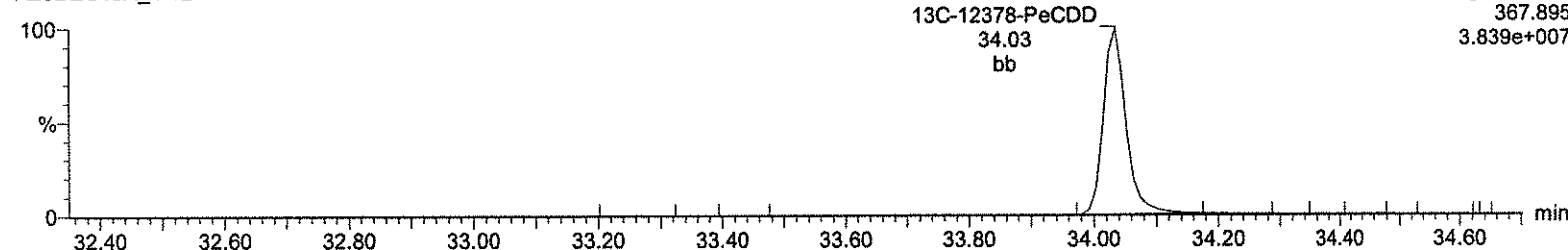
Total-pentadioxins

A23DEC19A_4-12



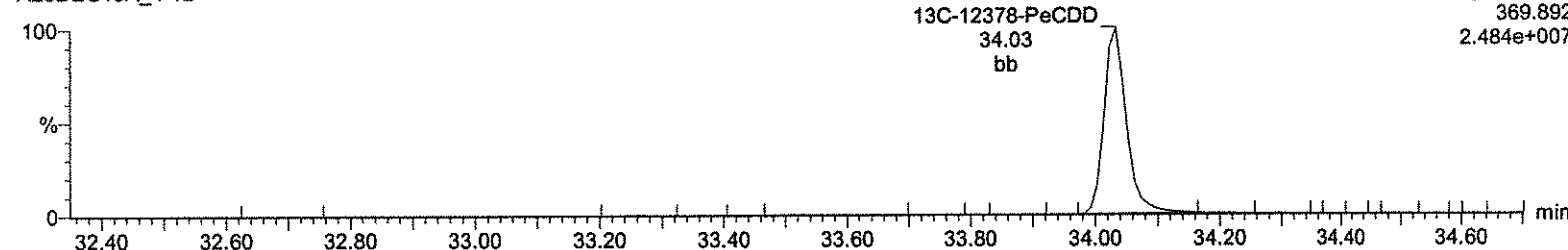
13C-12378-PeCDD

A23DEC19A_4-12



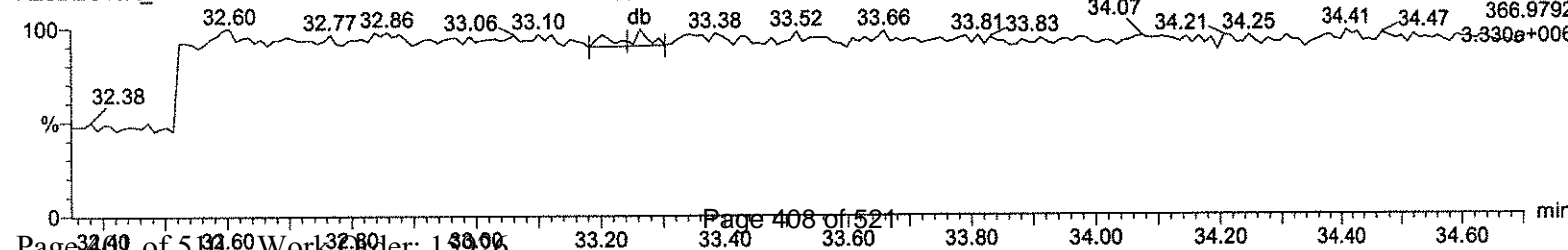
13C-12378-PeCDD

A23DEC19A_4-12



Lock Mass F2

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

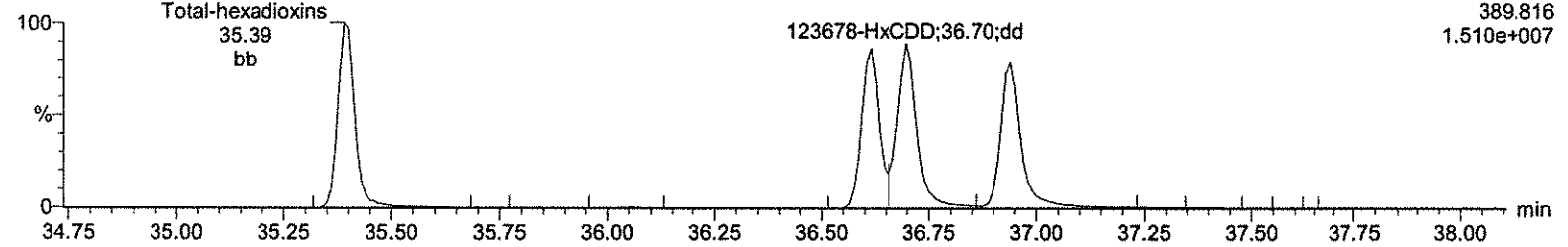
Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time
Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4,
Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A_4-12

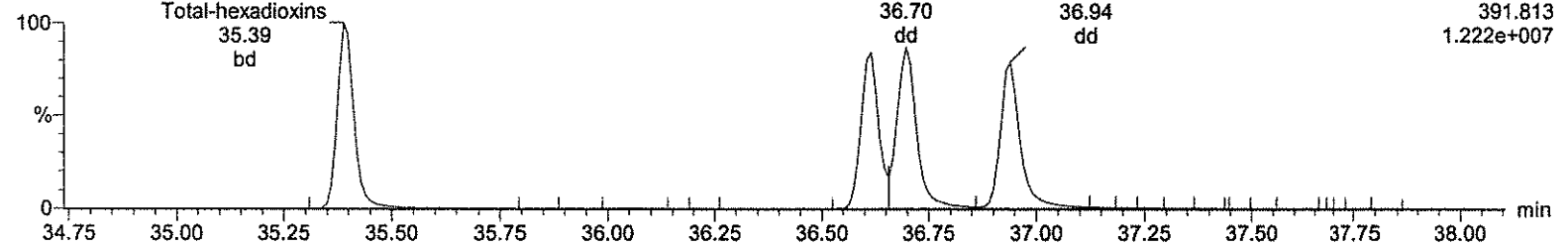
F3:Voltage SIR,EI+
389.816
1.510e+007



Total-hexadioxins

A23DEC19A_4-12

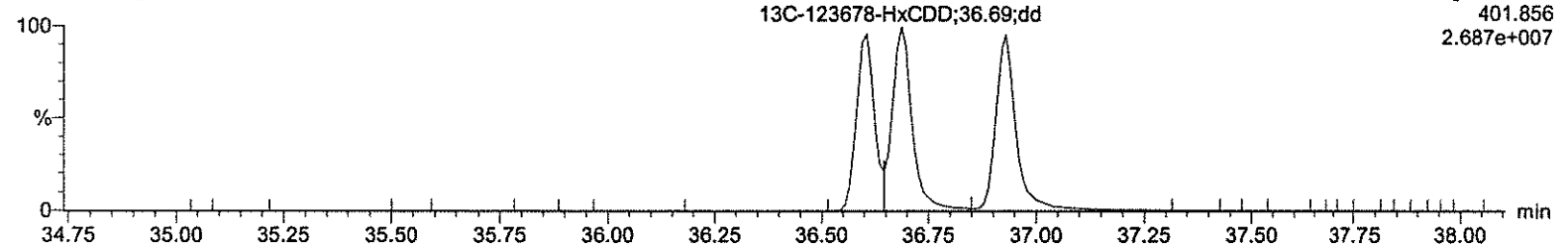
F3:Voltage SIR,EI+
391.813
1.222e+007



13C-123678-HxCDD

A23DEC19A_4-12

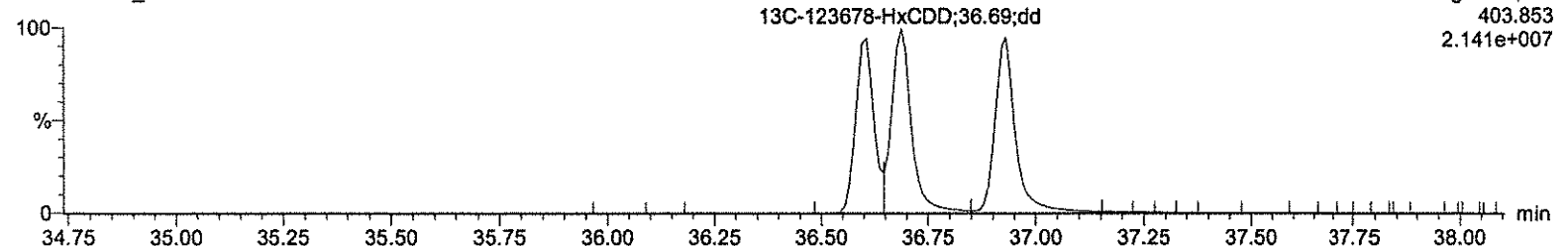
F3:Voltage SIR,EI+
401.856
2.687e+007



13C-123678-HxCDD

A23DEC19A_4-12

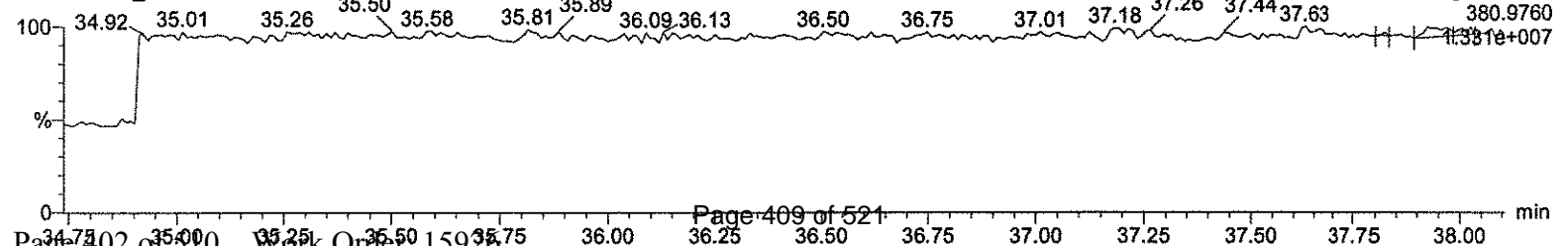
F3:Voltage SIR,EI+
403.853
2.141e+007



Lock Mass F3

A23DEC19A_4-12

F3:Voltage SIR,EI+
380.9760
1.331e+007



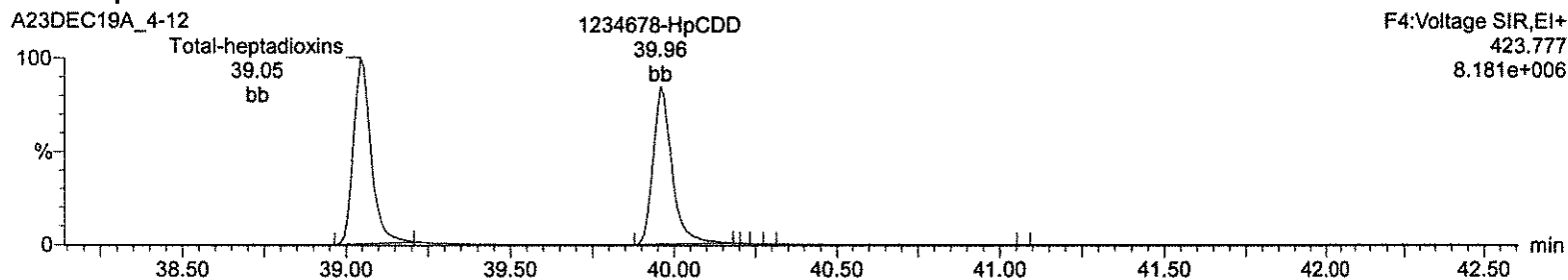
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.q\d

Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

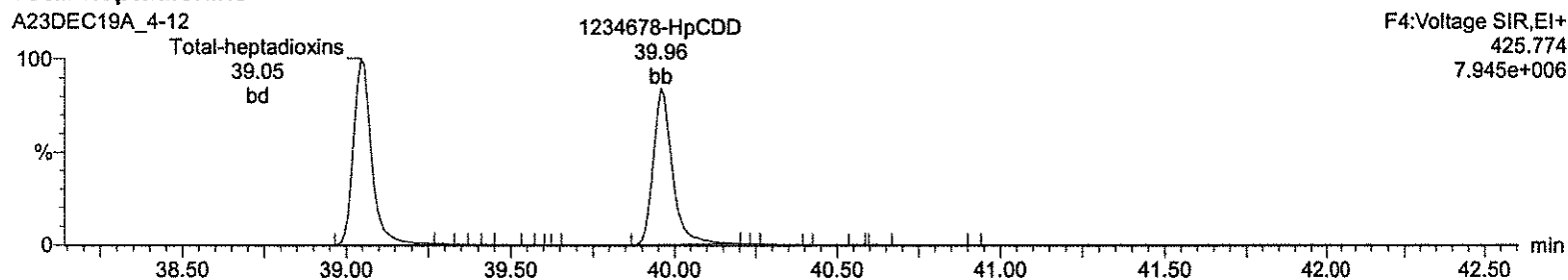
Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

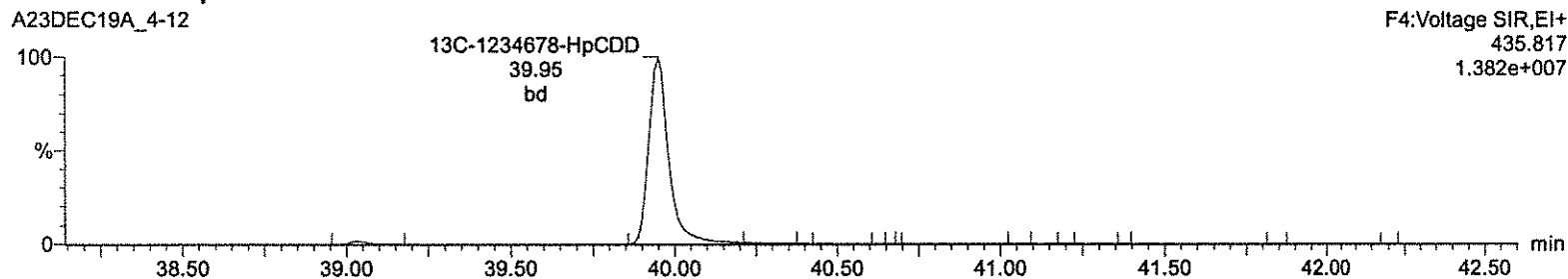
Total-heptadioxins



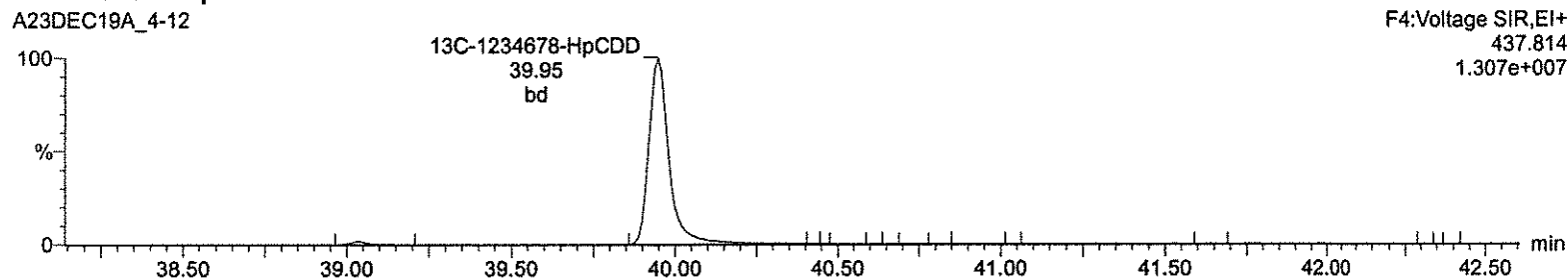
Total-heptadioxins



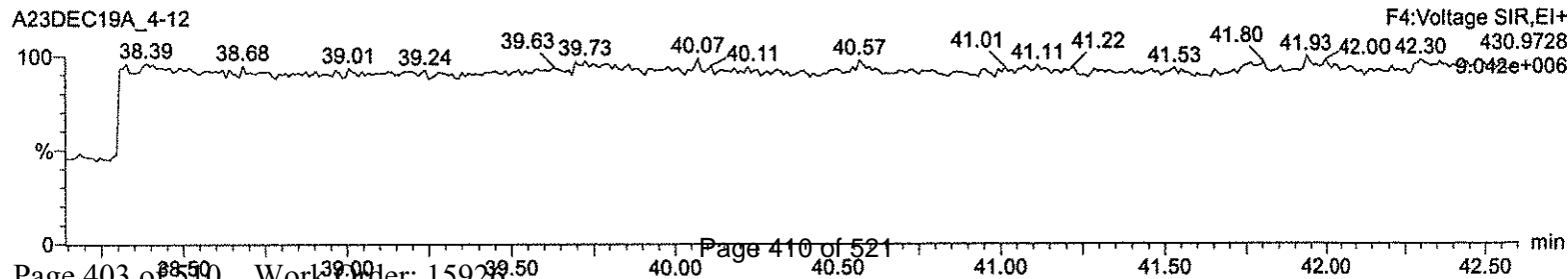
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

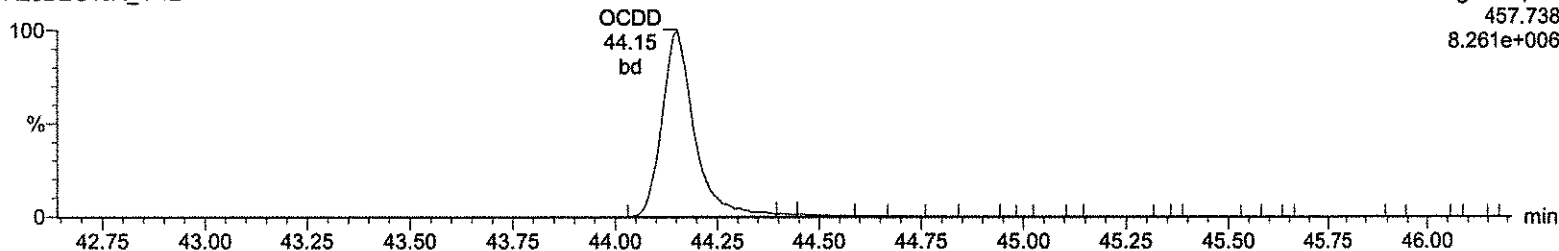
Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

OCDD

A23DEC19A_4-12

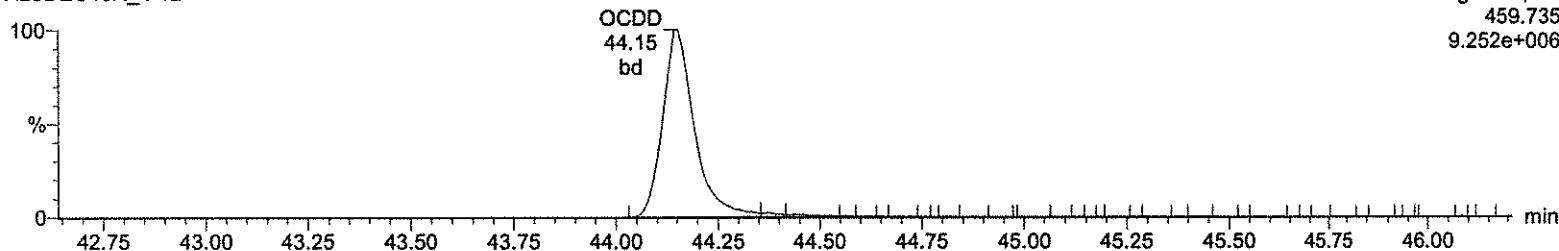
F5:Voltage SIR,EI+
457.738
8.261e+006



OCDD

A23DEC19A_4-12

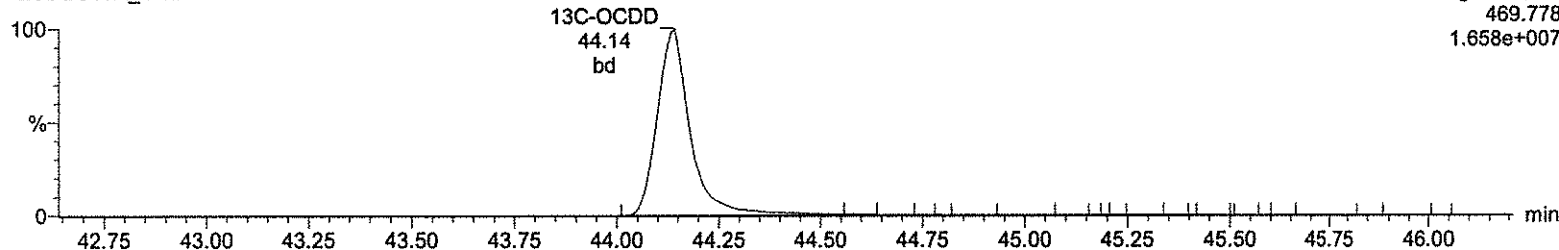
F5:Voltage SIR,EI+
459.735
9.252e+006



13C-OCDD

A23DEC19A_4-12

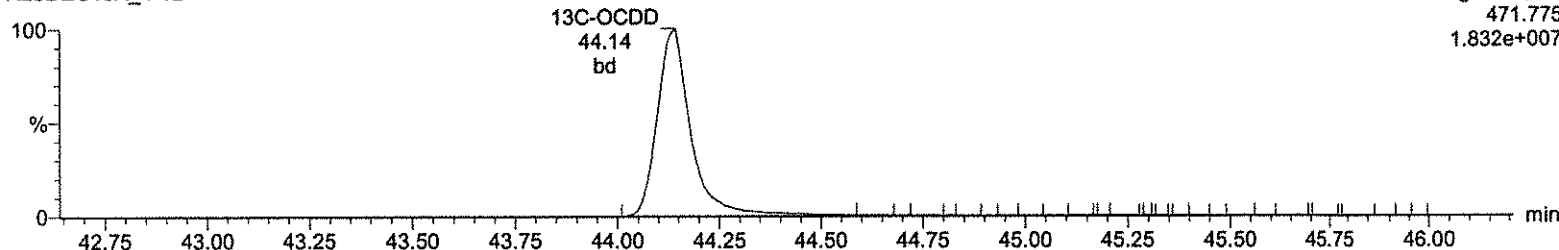
F5:Voltage SIR,EI+
469.778
1.658e+007



13C-OCDD

A23DEC19A_4-12

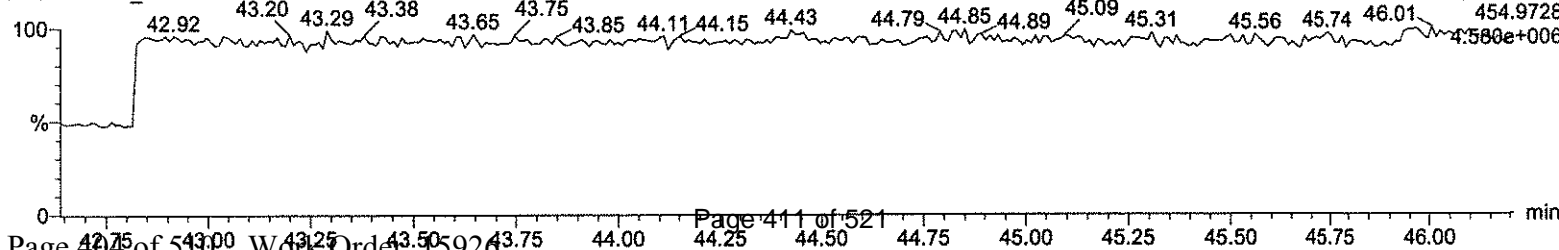
F5:Voltage SIR,EI+
471.775
1.832e+007



Lock Mass F5

A23DEC19A_4-12

F5:Voltage SIR,EI+
454.9728
4.580e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

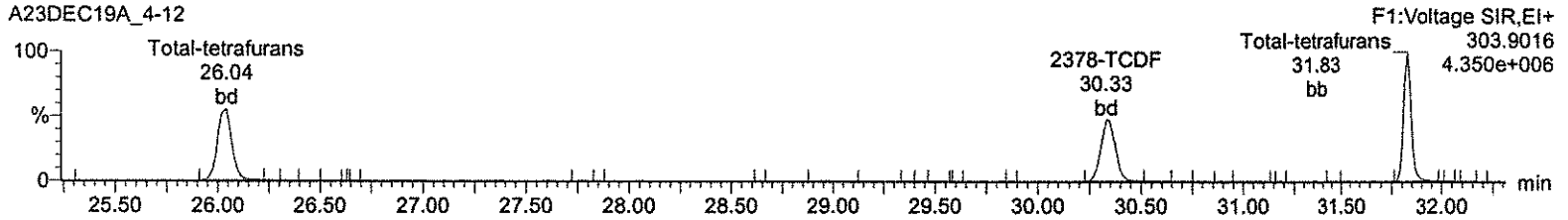
Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

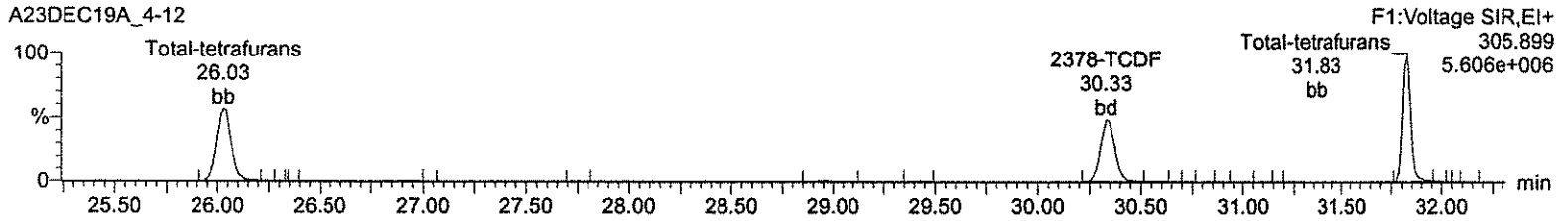
Total-tetrafurans

A23DEC19A_4-12



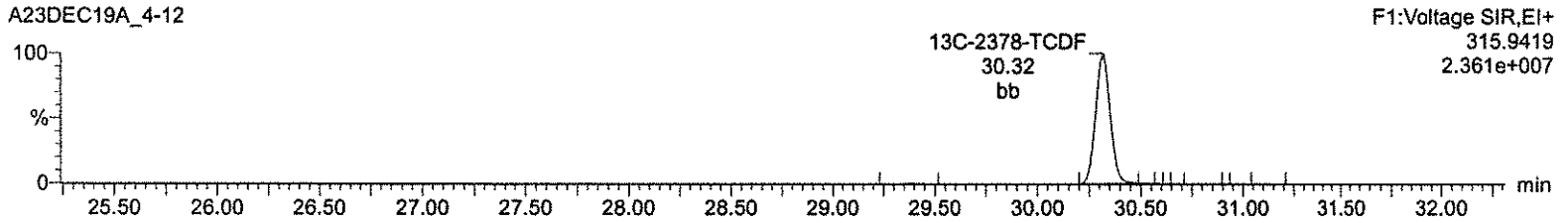
Total-tetrafurans

A23DEC19A_4-12



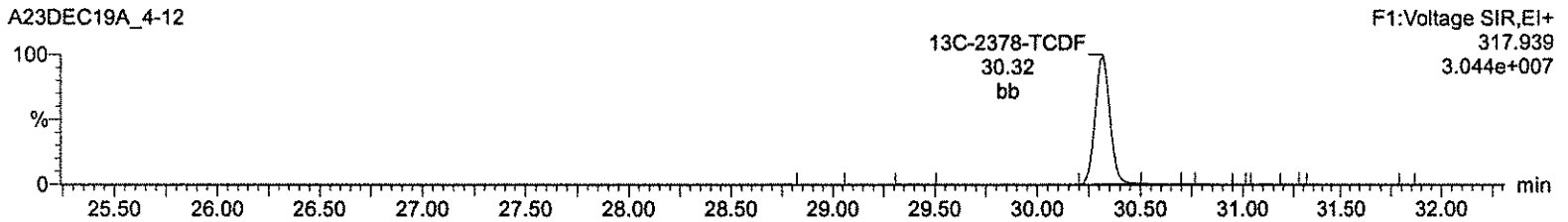
13C-2378-TCDF

A23DEC19A_4-12



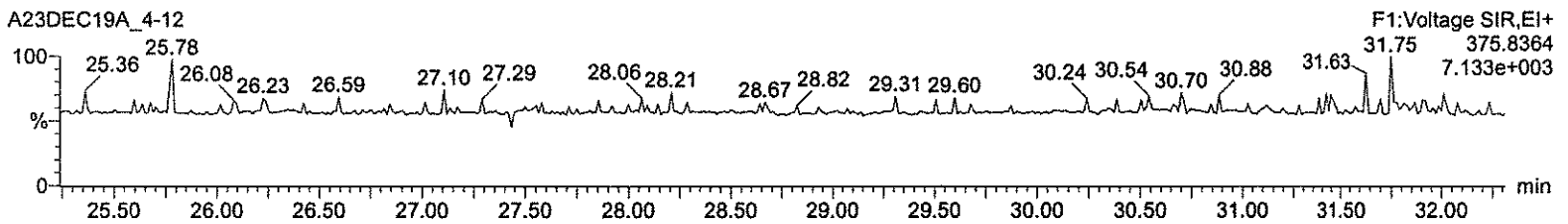
13C-2378-TCDF

A23DEC19A_4-12



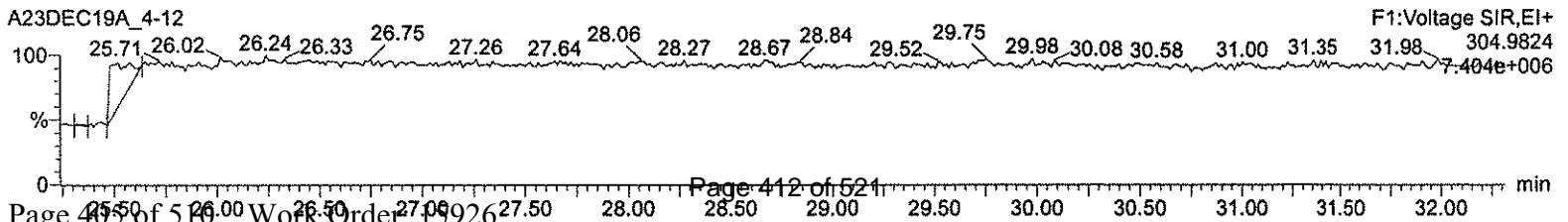
HxDPE

A23DEC19A_4-12



Lock Mass F1

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qid

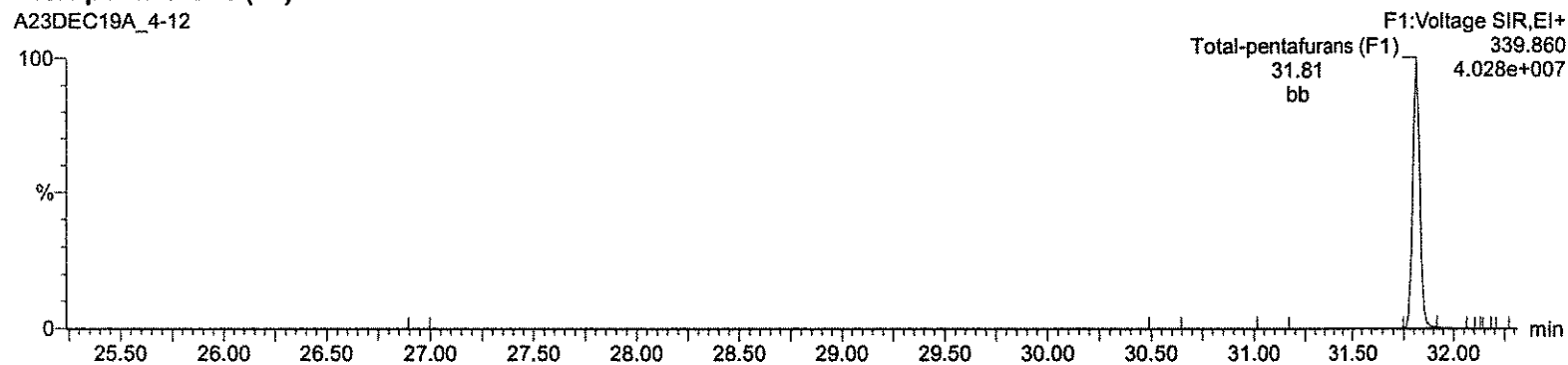
Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4,
Task: HRP750_2, User: MJC

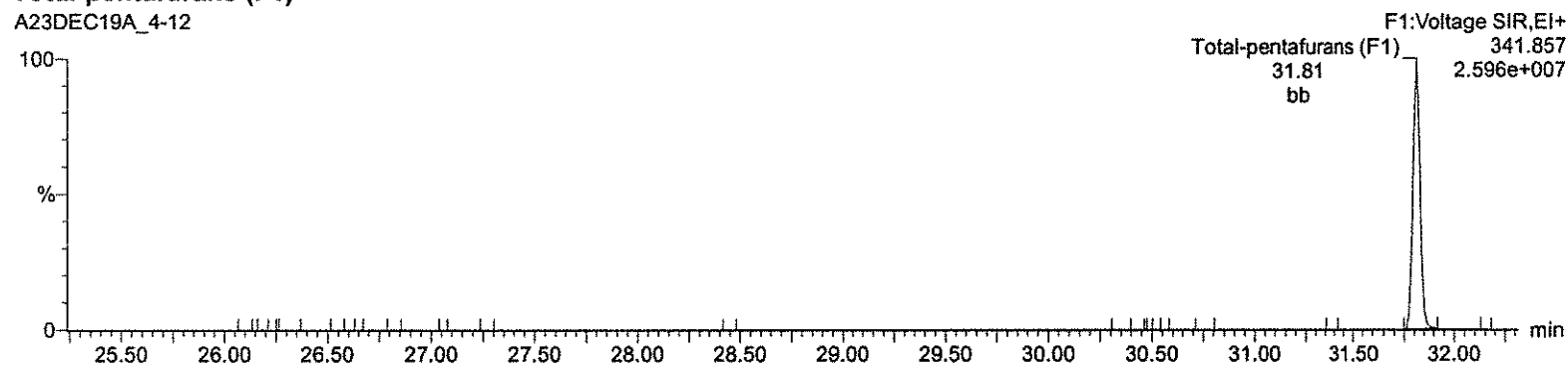
Total-pentafurans (F1)

A23DEC19A_4-12



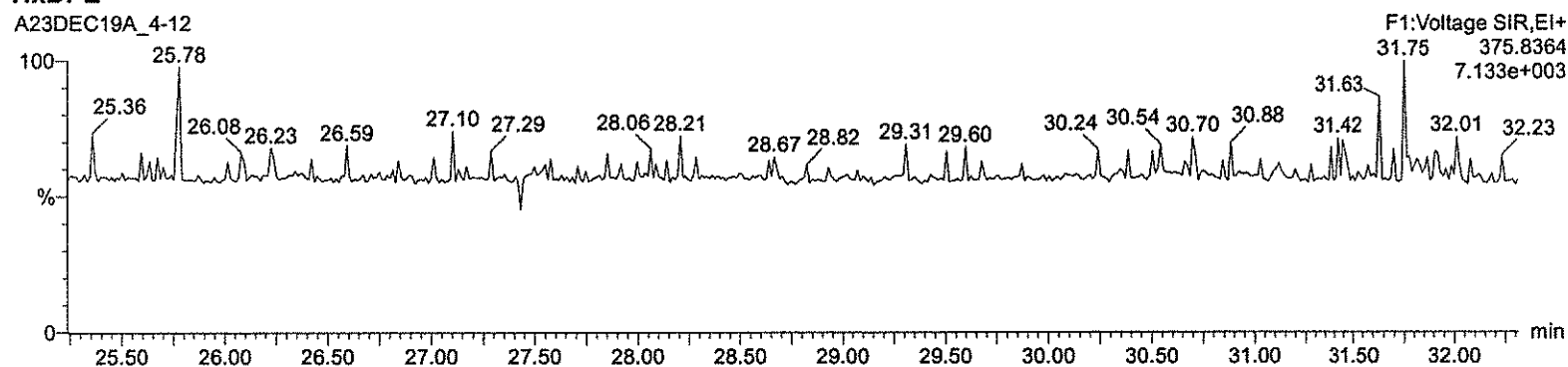
Total-pentafurans (F1)

A23DEC19A_4-12



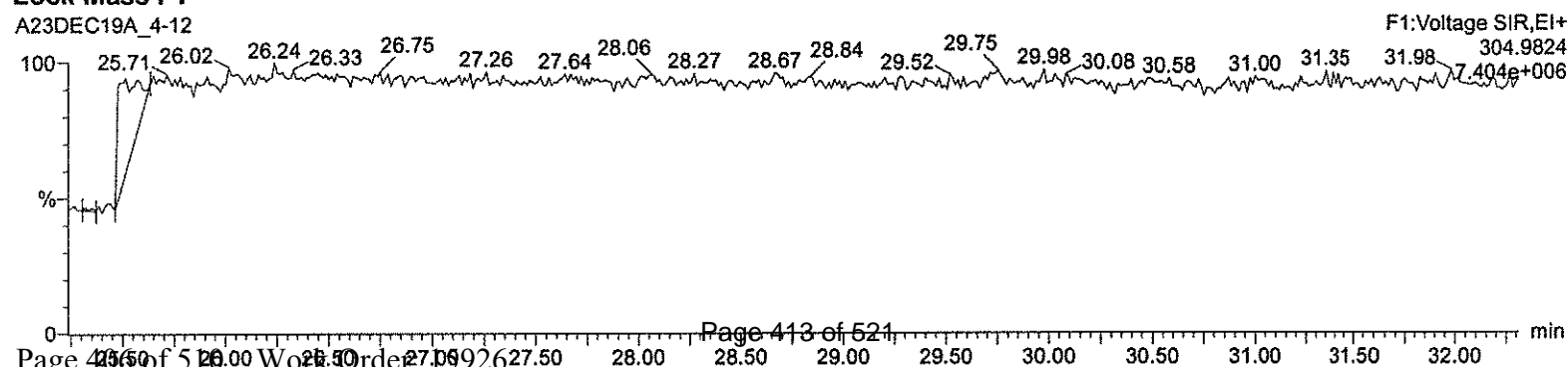
HxDPE

A23DEC19A_4-12



Lock Mass F1

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qid

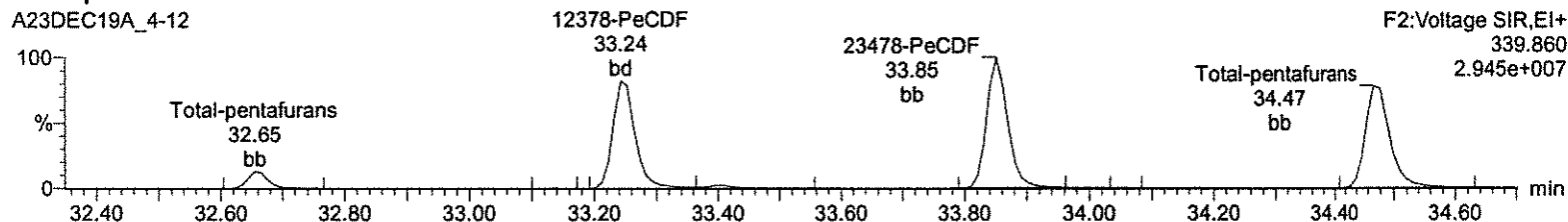
Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

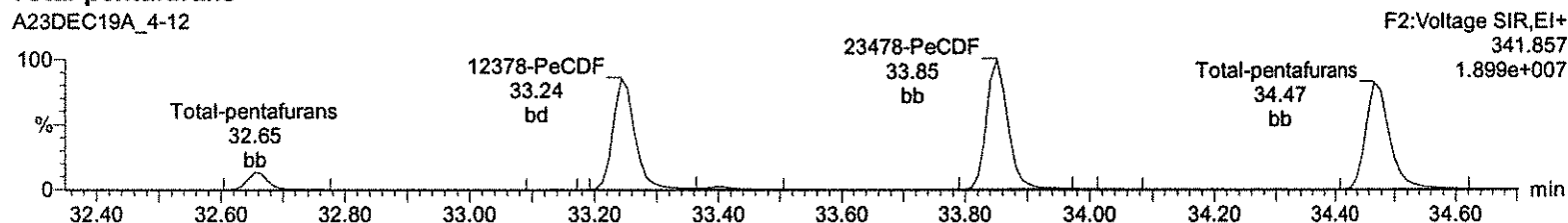
Total-pentafurans

A23DEC19A_4-12



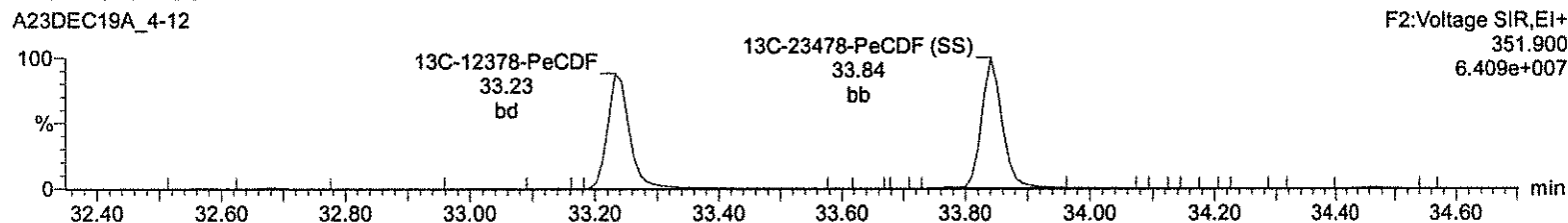
Total-pentafurans

A23DEC19A_4-12



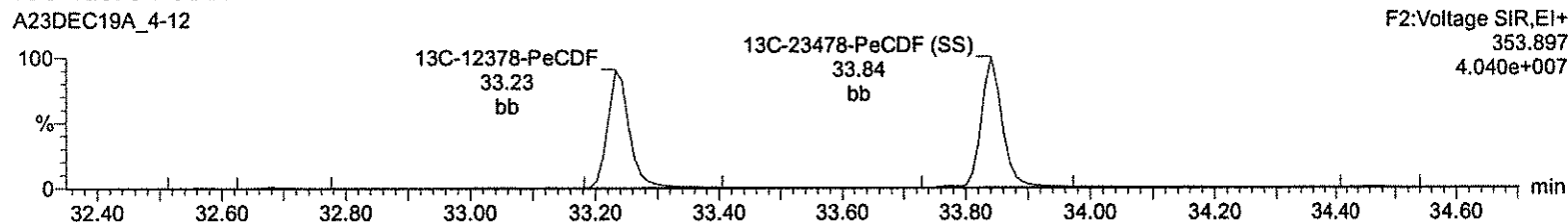
13C-12378-PeCDF

A23DEC19A_4-12



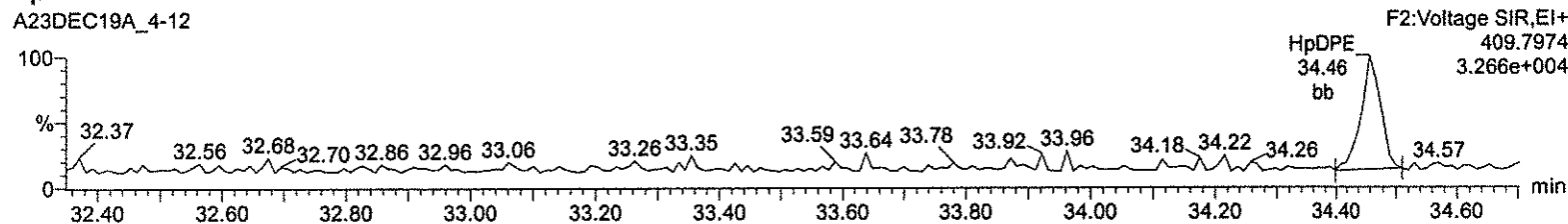
13C-12378-PeCDF

A23DEC19A_4-12



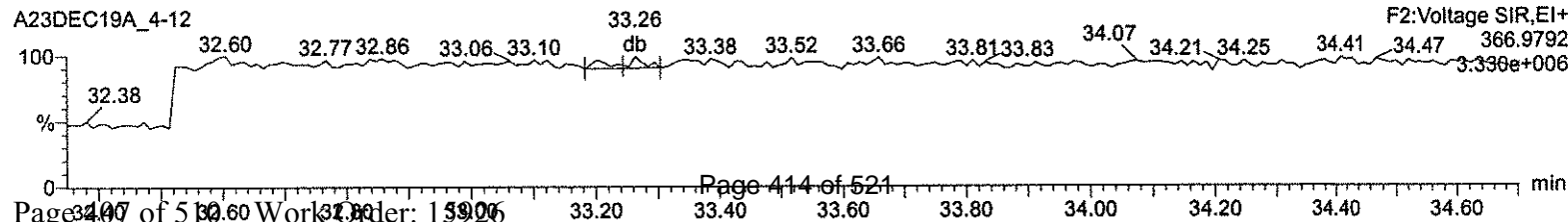
HpDPE

A23DEC19A_4-12



Lock Mass F2

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

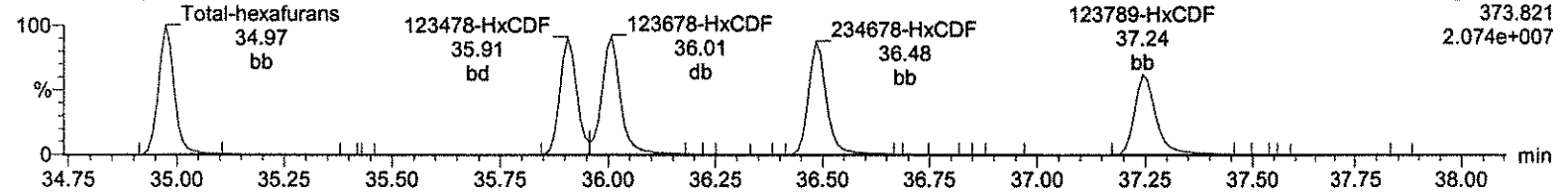
Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

Total-hexafurans

A23DEC19A_4-12

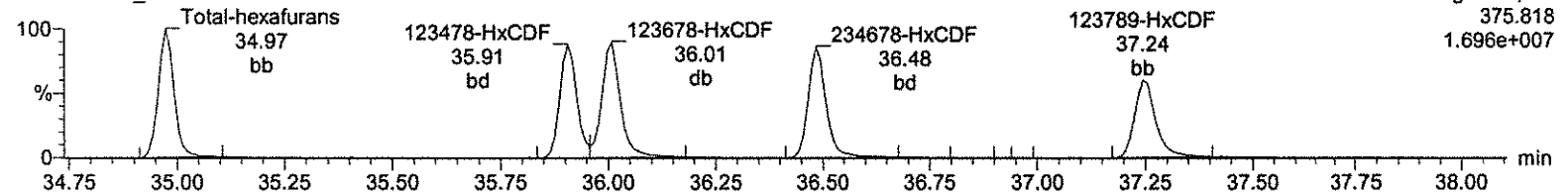
F3:Voltage SIR,EI+
373.821
2.074e+007



Total-hexafurans

A23DEC19A_4-12

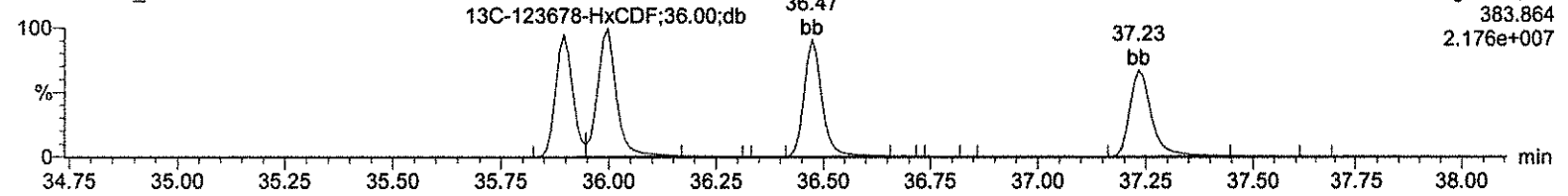
F3:Voltage SIR,EI+
375.818
1.696e+007



13C-123678-HxCDF

A23DEC19A_4-12

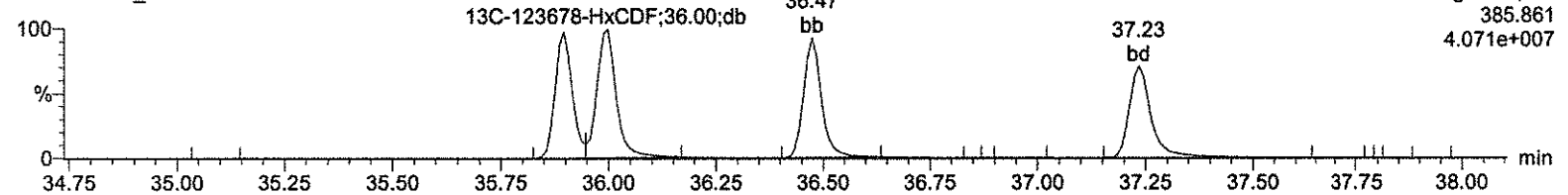
F3:Voltage SIR,EI+
383.864
2.176e+007



13C-123678-HxCDF

A23DEC19A_4-12

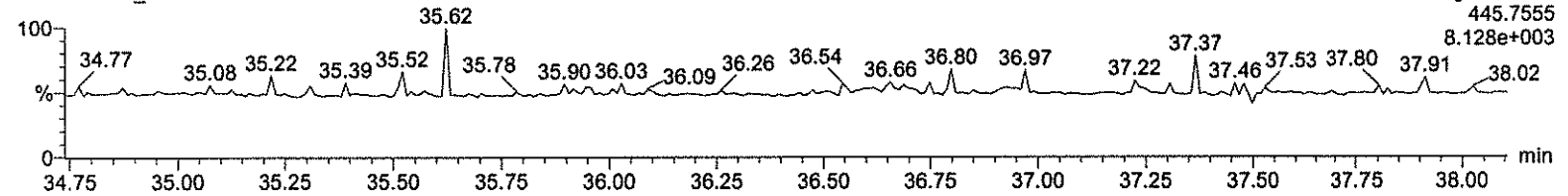
F3:Voltage SIR,EI+
385.861
4.071e+007



OcDPE

A23DEC19A_4-12

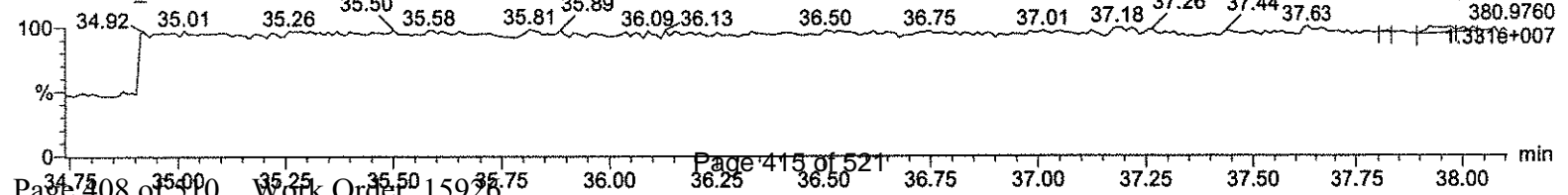
F3:Voltage SIR,EI+
445.7555
8.128e+003



Lock Mass F3

A23DEC19A_4-12

F3:Voltage SIR,EI+
380.9760
1.381e+007



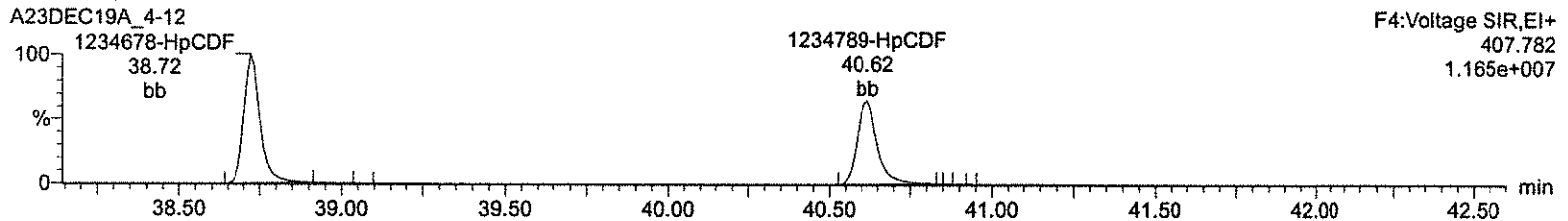
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

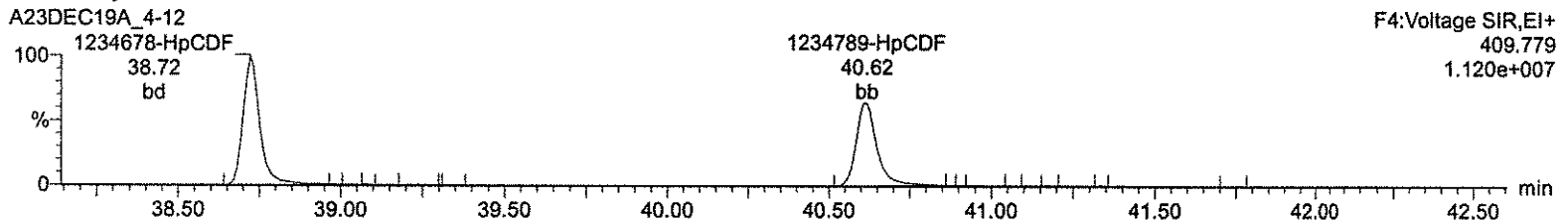
Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

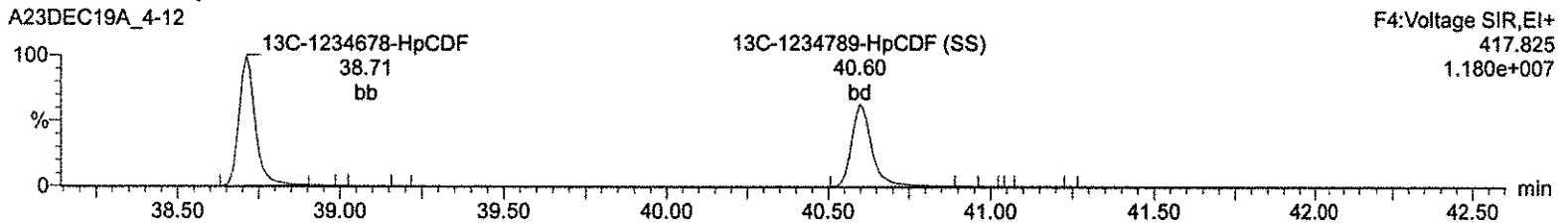
Total-heptafurans



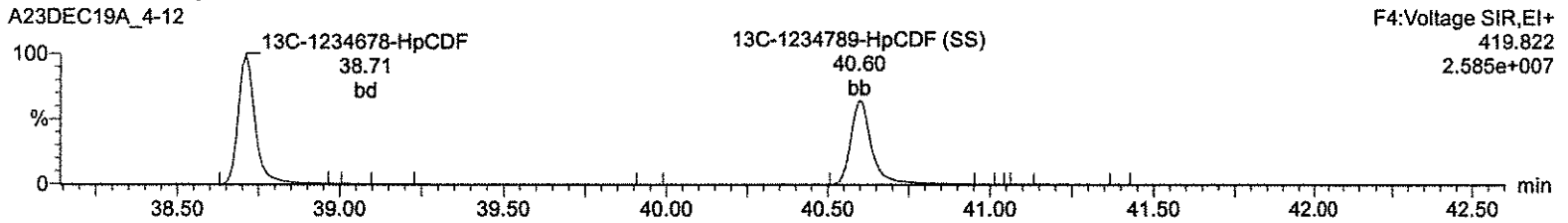
Total-heptafurans



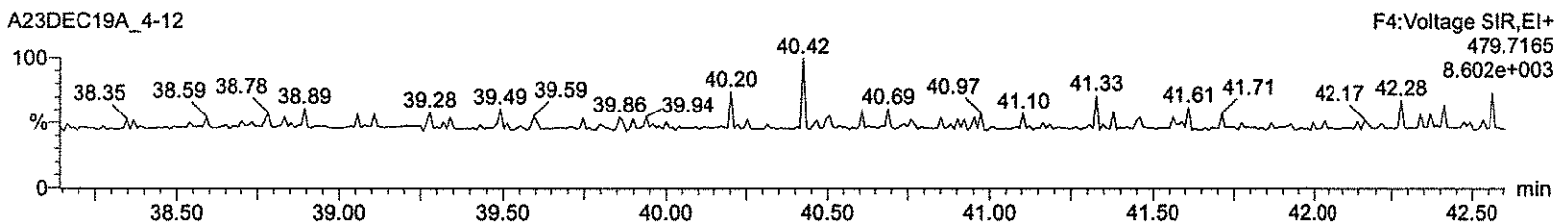
13C-1234678-HpCDF



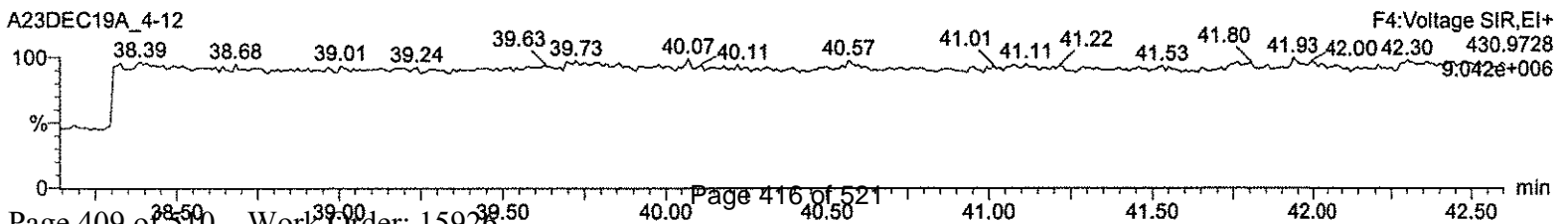
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 10:56:46 Eastern Standard Time

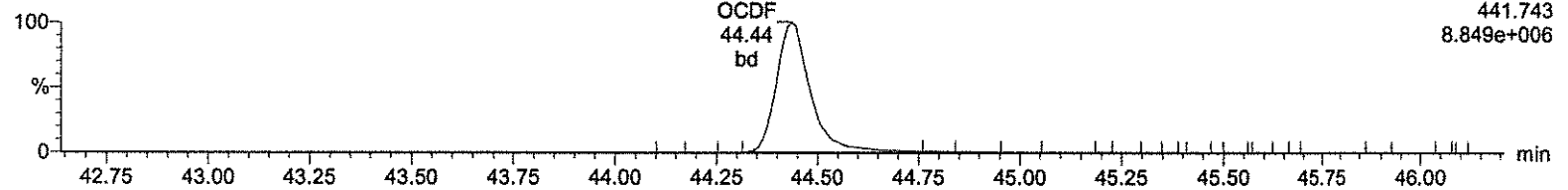
Printed: Thursday, December 26, 2019 10:57:27 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

OCDF

A23DEC19A_4-12

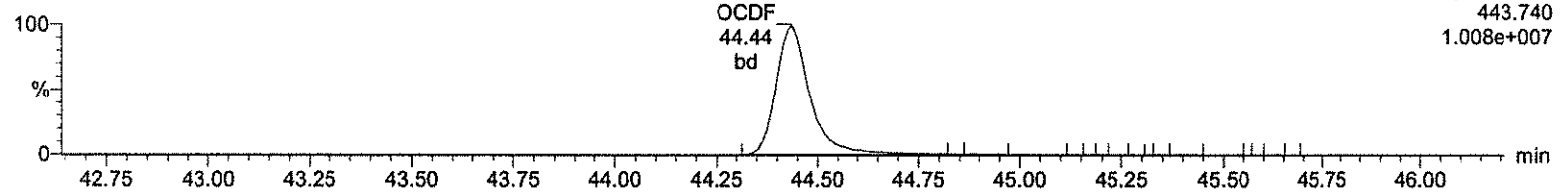
F5:Voltage SIR,EI+
441.743
8.849e+006



OCDF

A23DEC19A_4-12

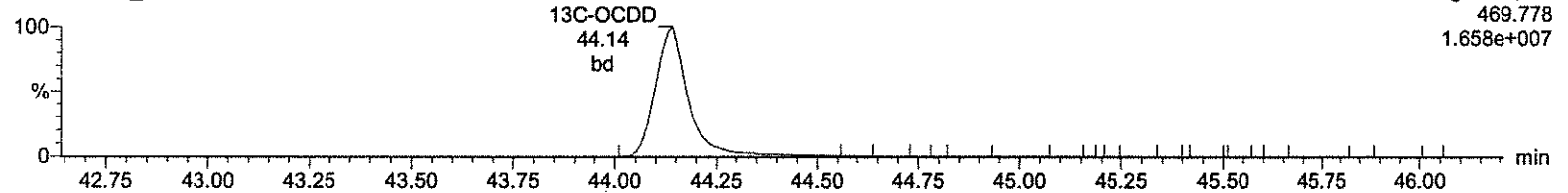
F5:Voltage SIR,EI+
443.740
1.008e+007



13C-OCDD

A23DEC19A_4-12

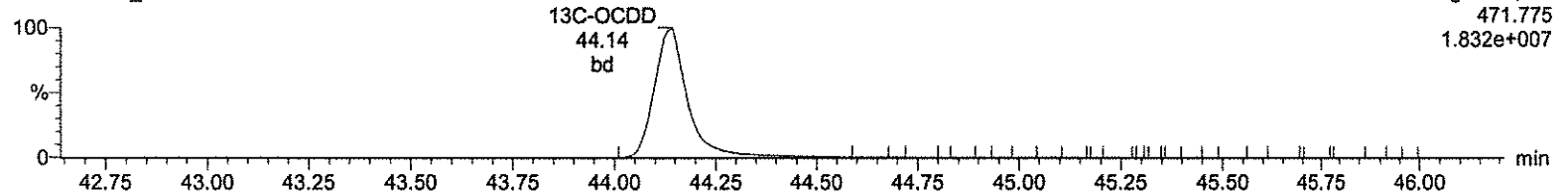
F5:Voltage SIR,EI+
469.778
1.658e+007



13C-OCDD

A23DEC19A_4-12

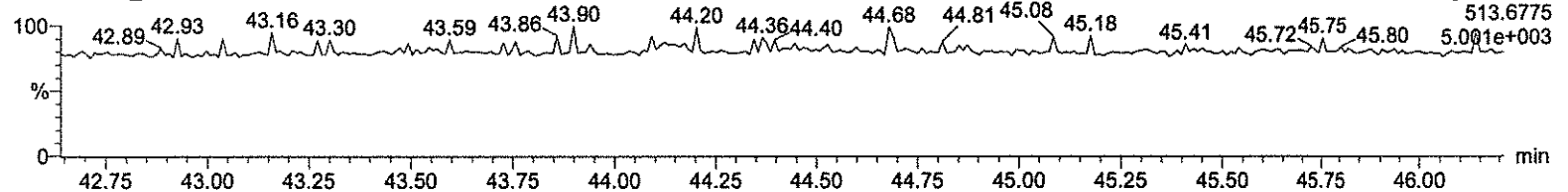
F5:Voltage SIR,EI+
471.775
1.832e+007



DeDPE

A23DEC19A_4-12

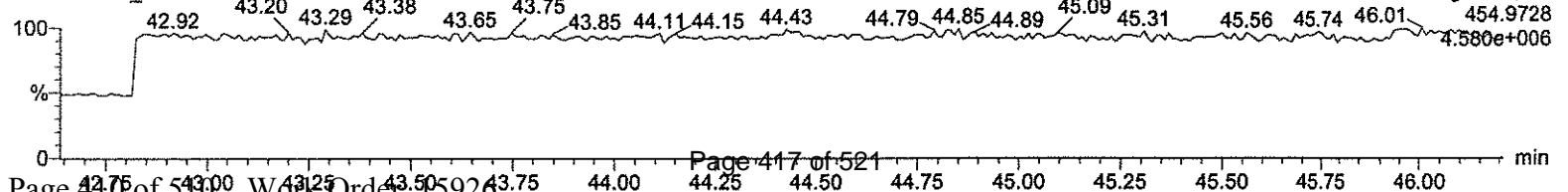
F5:Voltage SIR,EI+
513.6775
5.001e+003



Lock Mass F5

A23DEC19A_4-12

F5:Voltage SIR,EI+
454.9728
4.580e+006



Quantify Sample Summary Report
 Method 1613 CCAL Report

MassLynx 4.1
 C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time
 Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\DEFAULT.PRO\MethDB\ICFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	1.55e5	1.93e5	3.47e5	31.13	1.001	0.80	NO	11.042	0.0343	0.977	0.884	10.4	2.55e6	4221	603.7	3.22e6	3186	1012.1	dd	db
2	12378-PeCDD	7.34e5	4.72e5	1.21e6	34.04	1.000	1.55	NO	54.171	0.0768	0.925	0.853	8.3	1.78e7	11093	1608.7	1.14e7	5402	2106.6	bb	bb
3	123478-HxCDD	6.14e5	4.91e5	1.11e6	36.62	1.000	1.25	NO	52.502	0.104	0.987	0.940	5.0	1.31e7	10391	1258.7	1.03e7	7814	1321.0	bd	bd
4	123678-HxCDD	7.06e5	5.66e5	1.27e6	36.70	1.000	1.25	NO	52.178	0.100	0.985	0.944	4.4	1.35e7	10391	1300.0	1.07e7	7814	1365.5	dd	dd
5	123789-HxCDD	6.72e5	5.25e5	1.20e6	36.94	1.007	1.28	NO	53.550	0.104	0.993	0.927	7.1	1.19e7	10391	1145.3	9.67e6	7814	1236.9	dd	dd
6	1234678-HpCDD	4.59e5	4.52e5	9.11e5	39.96	1.000	1.02	NO	45.767	0.116	0.952	1.040	-8.5	6.93e6	7434	932.4	6.68e6	5557	1202.8	bb	bb
7	OCDD	7.54e5	8.40e5	1.59e6	44.15	1.000	0.90	NO	98.576	0.203	0.958	0.971	-1.4	8.25e6	5797	1423.4	9.23e6	8101	1139.6	bd	bd
8	2378-TCDF	1.71e5	2.24e5	3.95e5	30.33	1.000	0.76	NO	9.200	0.0397	0.900	0.978	-8.0	2.07e6	3273	633.8	2.73e6	5084	536.4	bd	bd
9	12378-PeCDF	1.02e6	6.65e5	1.68e6	33.24	1.000	1.53	NO	46.584	0.0820	0.881	0.945	-6.8	2.43e7	15802	1539.5	1.62e7	12590	1286.5	bd	bd
10	23478-PeCDF	1.14e6	7.43e5	1.88e6	33.85	1.000	1.54	NO	47.763	0.0687	0.943	0.987	-4.5	2.93e7	15802	1857.2	1.89e7	12590	1502.6	bb	bb
11	123478-HxCDF	8.36e5	6.71e5	1.51e6	35.91	1.000	1.25	NO	50.383	0.102	1.095	1.087	0.8	1.88e7	14768	1270.6	1.49e7	12215	1219.0	bd	bd
12	123678-HxCDF	9.37e5	7.52e5	1.69e6	36.01	1.000	1.25	NO	51.331	0.102	1.068	1.041	2.7	1.90e7	14768	1289.0	1.52e7	12215	1244.2	db	db
13	234678-HxCDF	8.69e5	7.08e5	1.58e6	36.48	1.000	1.23	NO	50.531	0.103	1.148	1.136	1.1	1.81e7	14768	1228.1	1.46e7	12215	1197.9	bb	bd
14	123789-HxCDF	7.38e5	5.80e5	1.32e6	37.24	1.000	1.27	NO	48.187	0.144	1.022	1.061	-3.6	1.28e7	14768	868.2	1.02e7	12215	838.1	bb	bb
15	1234678-HpCDF	6.70e5	6.83e5	1.33e6	38.72	1.000	1.01	NO	52.076	0.0862	1.198	1.150	4.2	1.16e7	8698	1335.1	1.12e7	6640	1684.7	bb	bd
16	1234789-HpCDF	5.48e5	5.30e5	1.08e6	40.62	1.000	1.03	NO	50.100	0.131	1.205	1.202	0.2	7.63e6	8698	877.1	7.13e6	6640	1074.2	bb	bb
17	OCDF	8.67e5	9.70e5	1.84e6	44.44	1.007	0.89	NO	97.443	0.201	1.104	1.133	-2.6	8.83e6	7324	1205.9	1.01e7	8733	1151.9	bd	bd
18	13C-2378-TCDD	1.53e6	2.03e6	3.56e6	31.11	1.018	0.76	NO	101.793	0.0593	1.149	1.128	1.8	2.63e7	5896	4461.1	3.48e7	4207	8272.7	bb	bb
19	13C-12378-PeCDD	1.59e6	1.02e6	2.61e6	34.03	1.114	1.56	NO	112.122	0.0567	0.842	0.751	12.1	3.83e7	2734	14010.1	2.48e7	3701	6693.3	bb	bb
20	13C-123478-HxCDD	1.24e6	9.96e5	2.24e6	36.61	0.991	1.25	NO	95.845	0.115	0.859	0.896	-4.2	2.58e7	12485	2067.1	2.02e7	6439	3139.6	bd	bd
21	13C-123678-HxCDD	1.44e6	1.14e6	2.58e6	36.69	0.993	1.26	NO	100.482	0.105	0.991	0.986	0.5	2.69e7	12485	2151.4	2.14e7	6439	3323.7	dd	dd
22	13C-1234678-HpCDD	9.80e5	9.33e5	1.91e6	39.95	1.082	1.05	NO	109.259	0.118	0.734	0.672	9.3	1.38e7	8907	1549.4	1.31e7	5617	2325.2	bd	bd
23	13C-OCDD	1.57e6	1.76e6	3.33e6	44.14	1.195	0.89	NO	198.825	0.142	0.638	0.642	-0.6	1.66e7	7770	2131.4	1.83e7	8918	2051.7	bd	bd
24	13C-2378-TCDF	1.92e6	2.47e6	4.39e6	30.32	0.993	0.78	NO	113.357	0.0791	1.417	1.250	13.4	2.35e7	8731	2693.2	3.03e7	6201	4891.7	bb	bb
25	13C-12378-PeCDF	2.35e6	1.47e6	3.82e6	33.23	1.088	1.60	NO	122.058	0.175	1.234	1.011	22.1	5.63e7	13934	4042.7	3.64e7	12769	2851.6	bb	bb
26	13C-23478-PeCDF	2.44e6	1.56e6	4.00e6	33.84	1.108	1.56	NO	121.471	0.166	1.291	1.063	21.5	6.38e7	13934	4580.8	4.03e7	12769	3154.3	bb	bb
27	13C-123478-HxCDF	9.38e5	1.81e6	2.75e6	35.90	0.972	0.52	NO	94.990	0.148	1.055	1.111	-5.0	2.07e7	11549	1793.2	3.98e7	18673	2129.4	bd	bd
28	13C-123678-HxCDF	1.08e6	2.08e6	3.16e6	36.00	0.975	0.52	NO	97.223	0.132	1.212	1.247	-2.8	2.17e7	11549	1875.0	4.05e7	18673	2170.0	db	db
29	13C-234678-HxCDF	9.42e5	1.81e6	2.75e6	36.47	0.988	0.52	NO	97.377	0.152	1.054	1.082	-2.6	1.97e7	11549	1707.8	3.78e7	18673	2026.6	bb	bb
30	13C-123789-HxCDF	8.55e5	1.72e6	2.58e6	37.23	1.008	0.50	NO	102.264	0.170	0.989	0.967	2.3	1.47e7	11549	1269.2	2.88e7	18673	1544.5	bb	bd

MassLynx 4.1

Quantify Sample Summary Report

Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	6.77e5	1.55e6	2.23e6	38.71	1.048	0.44	NO	98.113	0.125	0.854	0.870	-1.9	1.18e7	9416	1250.0	2.58e7	10597	2436.5	bb	bd
32	13C-1234789-HpCDF	5.47e5	1.24e6	1.79e6	40.60	1.099	0.44	NO	101.069	0.161	0.685	0.677	1.1	7.46e6	9416	792.7	1.67e7	10597	1579.2	bb	bb
33	13C-1234-TCDD	1.36e6	1.74e6	3.10e6	30.54	0.000	0.78	NO	100.000	0.0669	1.000	1.000	0.0	1.66e7	5896	2811.4	2.12e7	4207	5050.5	bb	bb
34	13C-123789-HxCDD	1.46e6	1.15e6	2.61e6	36.93	0.000	1.28	NO	100.000	0.103	1.000	1.000	0.0	2.57e7	12485	2060.9	2.04e7	6439	3160.8	dd	dd
35	37Cl-2378-TCDD	3.27e5	3.27e5	3.27e5	31.13	1.019			9.956	0.0267	1.057	1.061	-0.4	5.65e6	4278	1319.7				bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

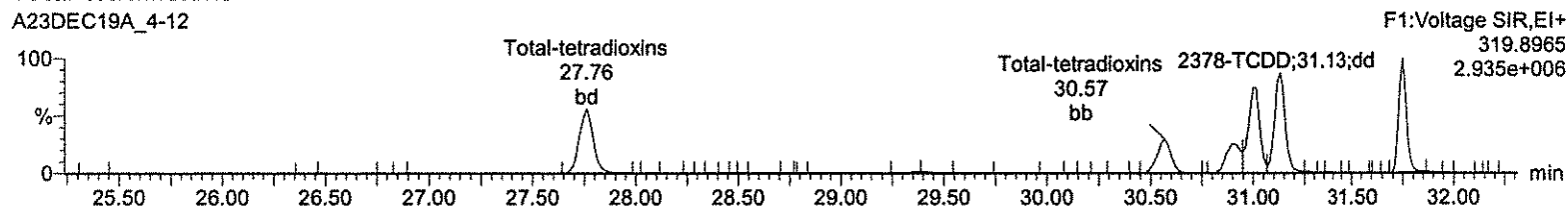
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

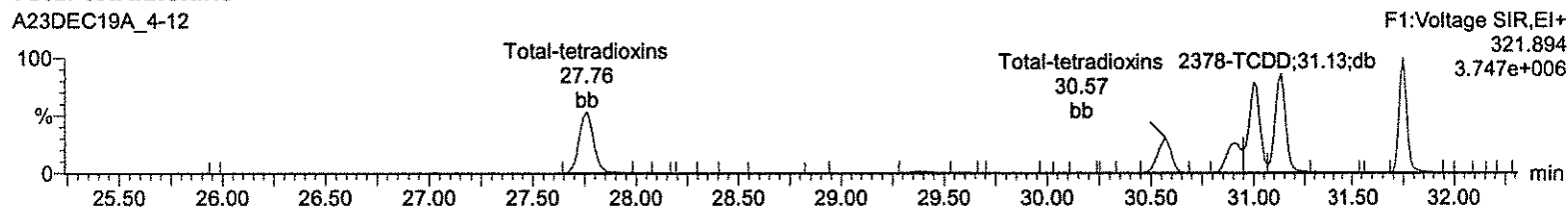
Total-tetradoxins

A23DEC19A_4-12



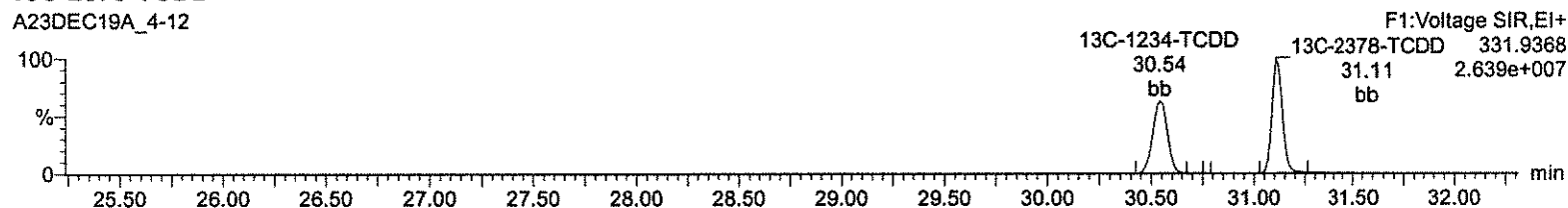
Total-tetradoxins

A23DEC19A_4-12



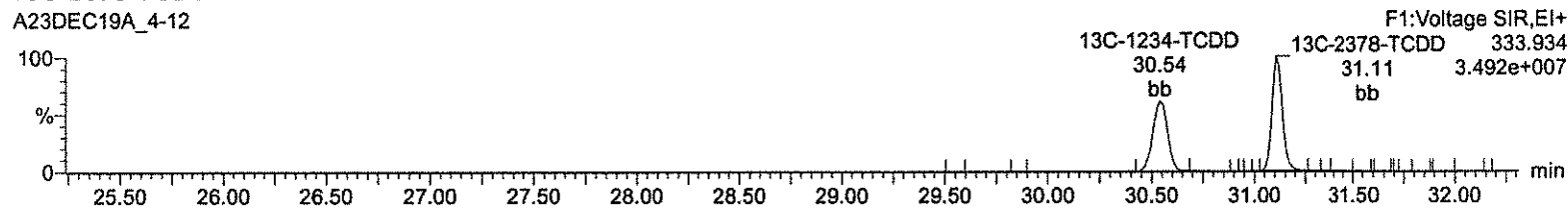
13C-2378-TCDD

A23DEC19A_4-12



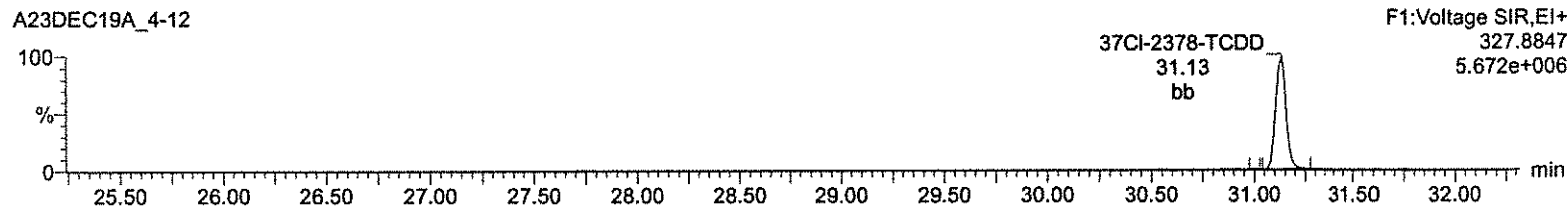
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A23DEC19A_4-12



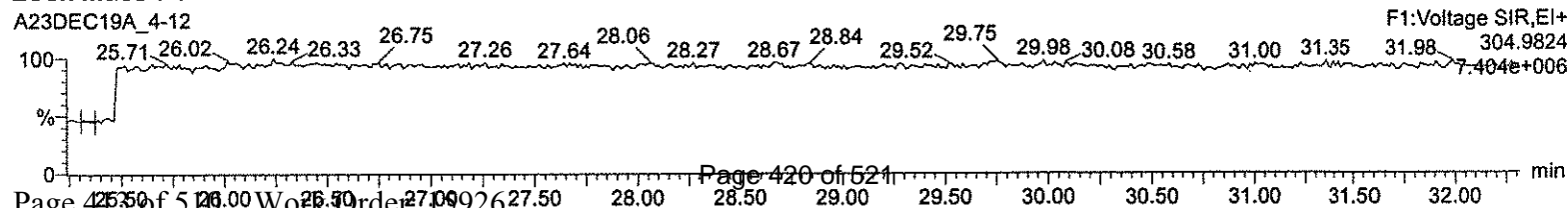
37Cl-2378-TCDD

A23DEC19A_4-12



Lock Mass F1

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

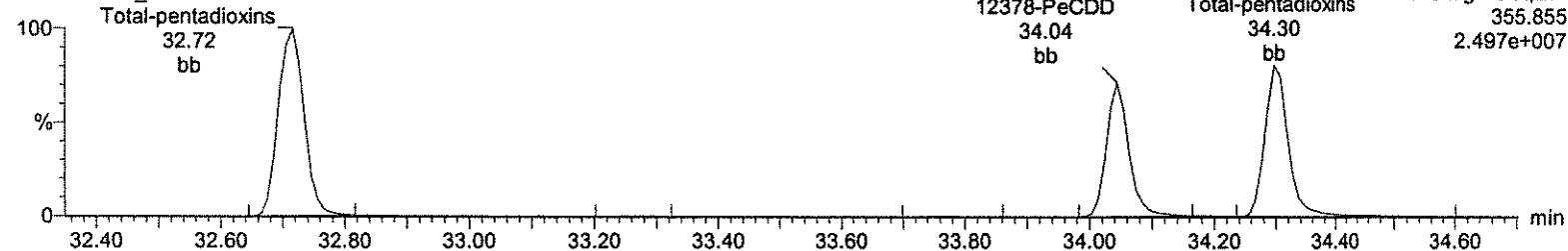
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Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

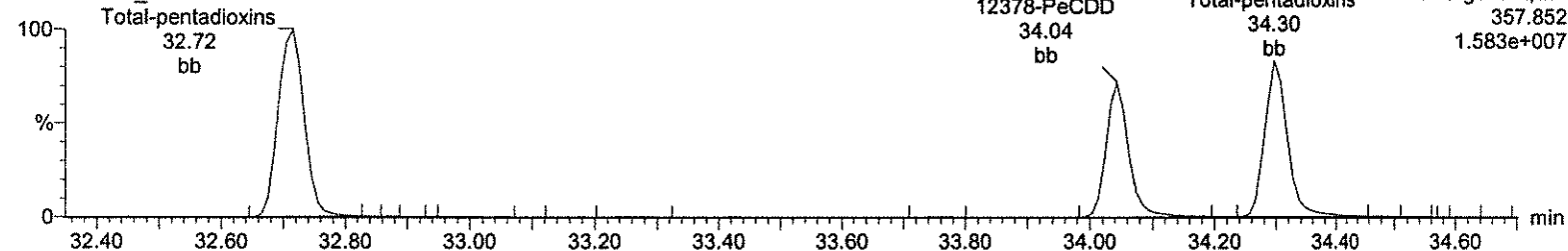
Total-pentadioxins

A23DEC19A_4-12



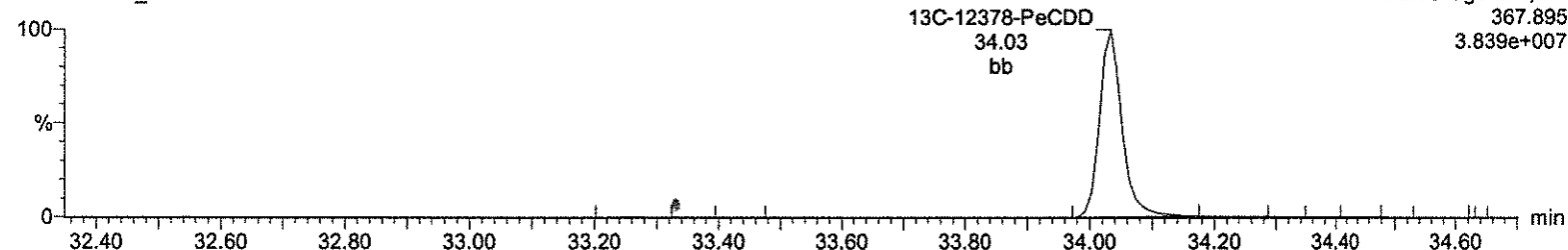
Total-pentadioxins

A23DEC19A_4-12



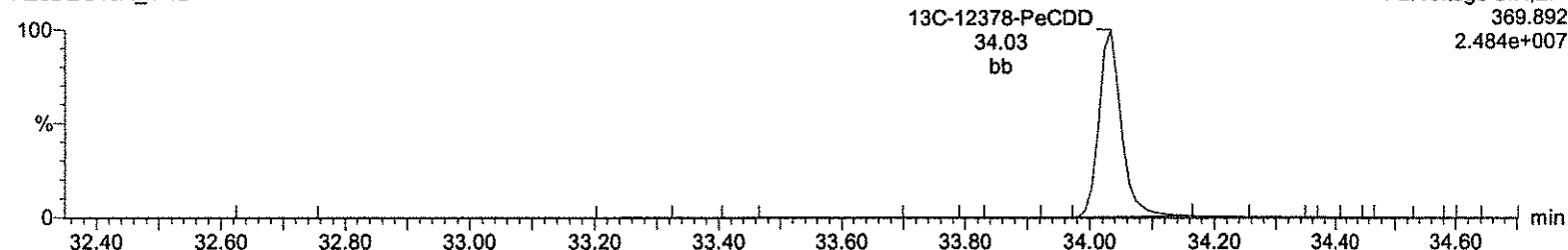
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A23DEC19A_4-12



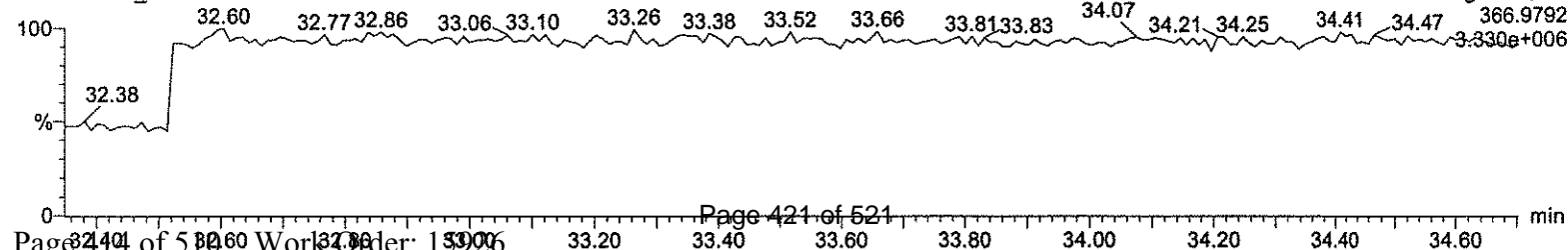
¹³C-12378-PeCDD

A23DEC19A_4-12



Lock Mass F2

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

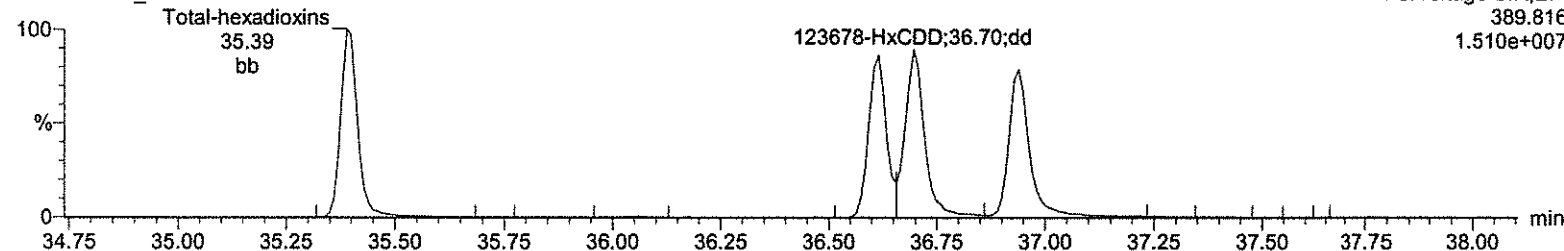
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Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A_4-12

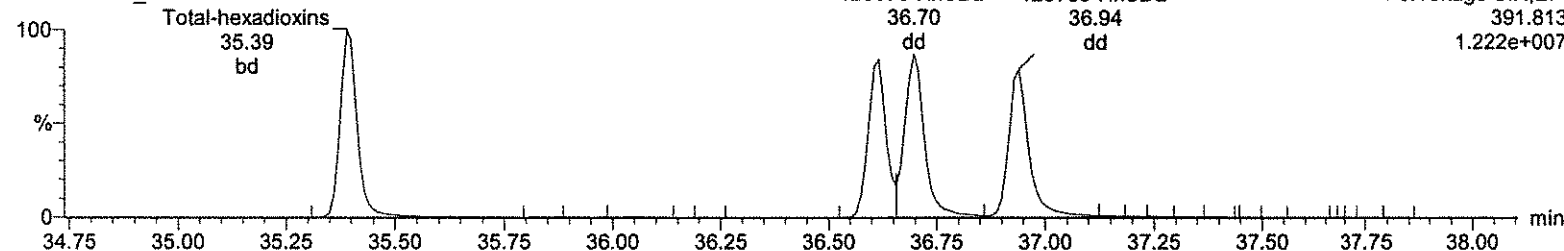
F3:Voltage SIR,EI+
389.816
1.510e+007



Total-hexadioxins

A23DEC19A_4-12

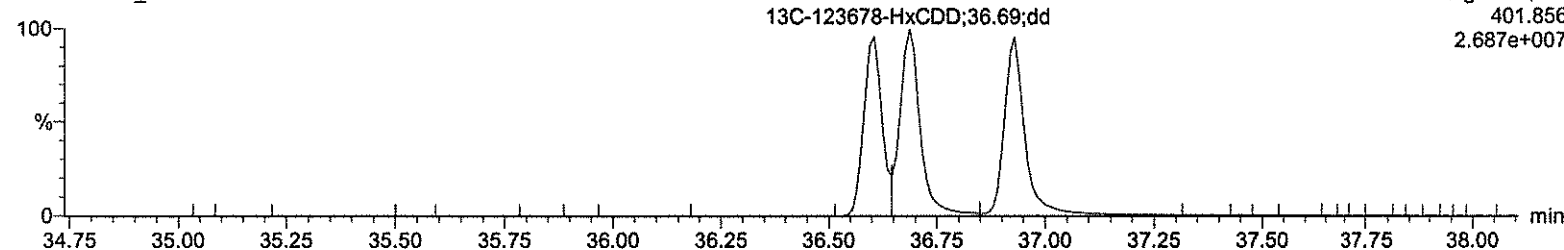
F3:Voltage SIR,EI+
391.813
1.222e+007



13C-123478-HxCDD

A23DEC19A_4-12

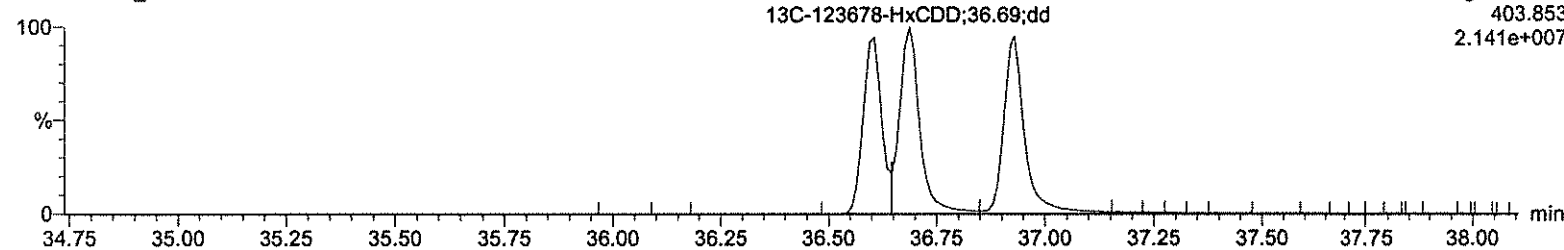
F3:Voltage SIR,EI+
401.856
2.687e+007



13C-123478-HxCDD

A23DEC19A_4-12

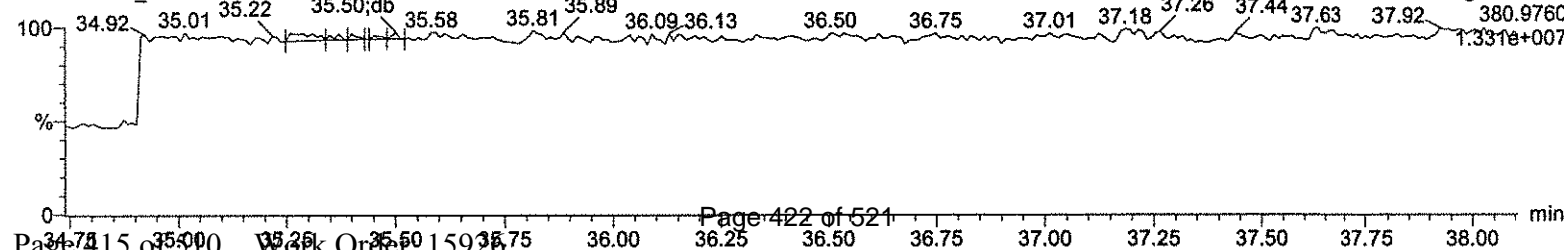
F3:Voltage SIR,EI+
403.853
2.141e+007



Lock Mass F3

A23DEC19A_4-12

F3:Voltage SIR,EI+
380.9760
1.331e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

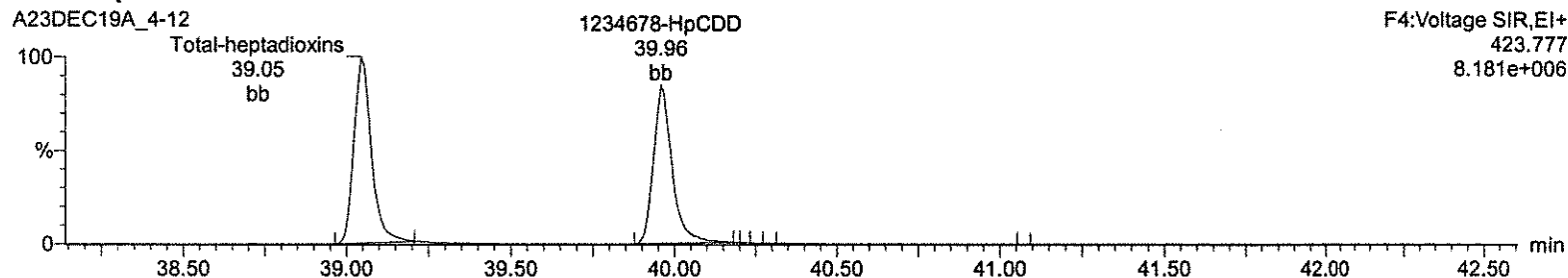
Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

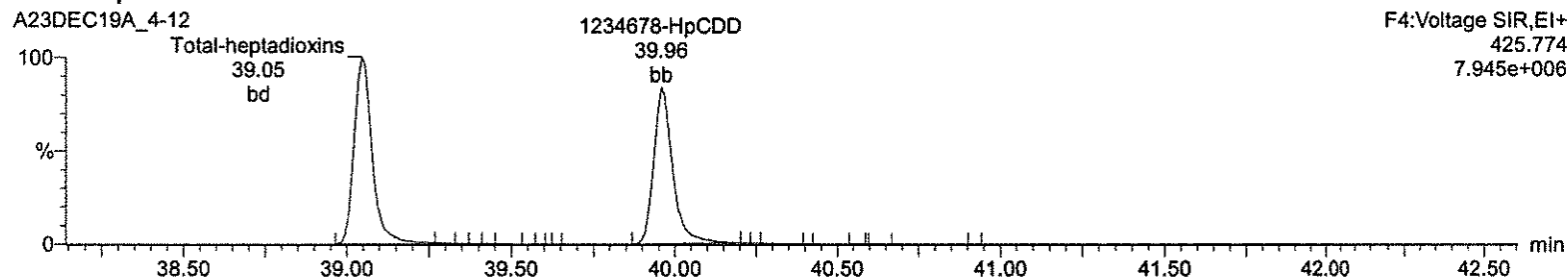
Total-heptadioxins

A23DEC19A_4-12



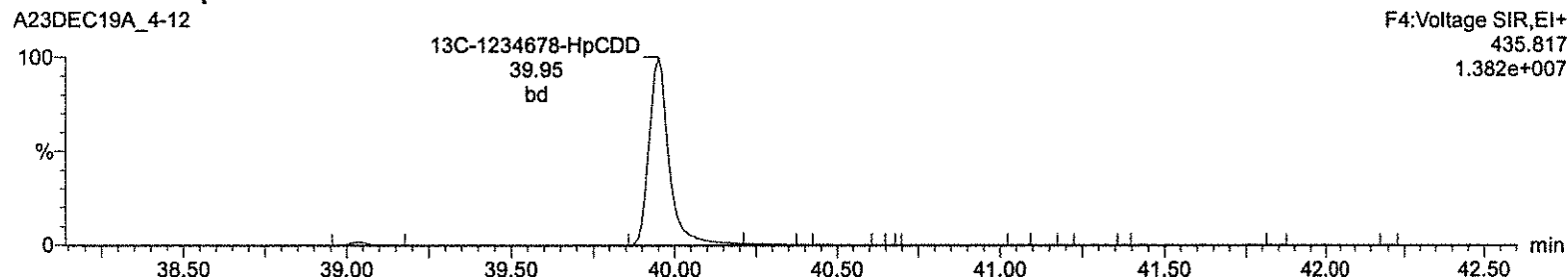
Total-heptadioxins

A23DEC19A_4-12



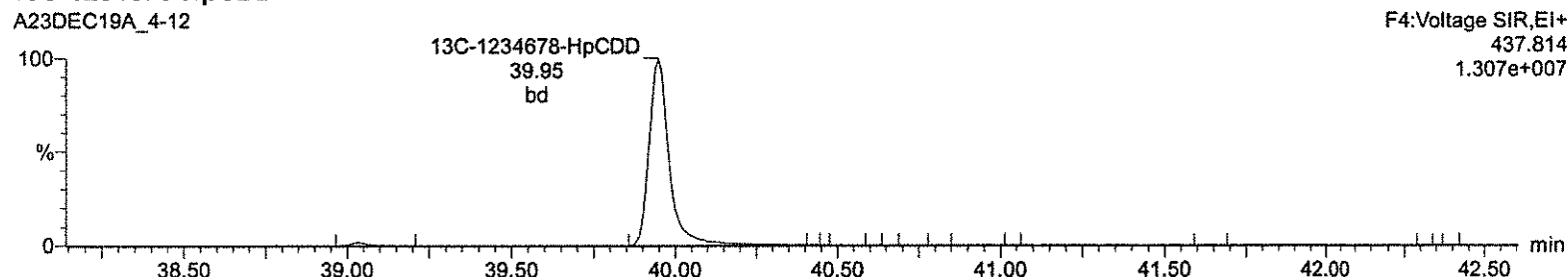
13C-1234678-HpCDD

A23DEC19A_4-12



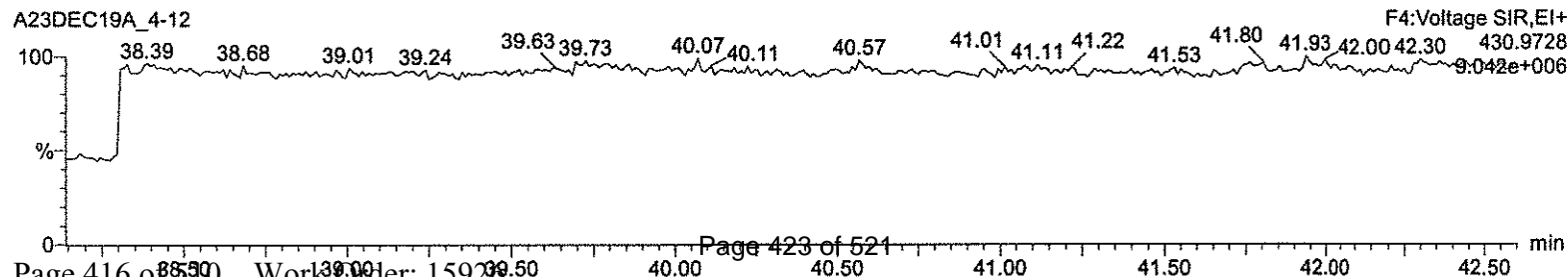
13C-1234678-HpCDD

A23DEC19A_4-12



Lock Mass F4

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

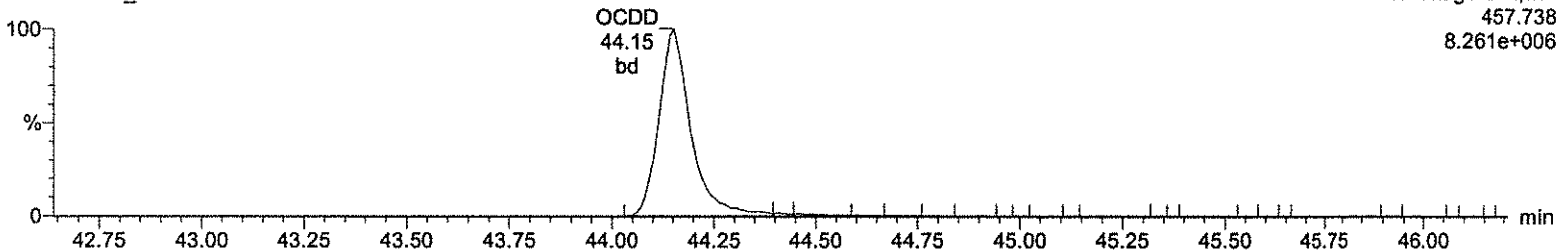
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Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

OCDD

A23DEC19A_4-12

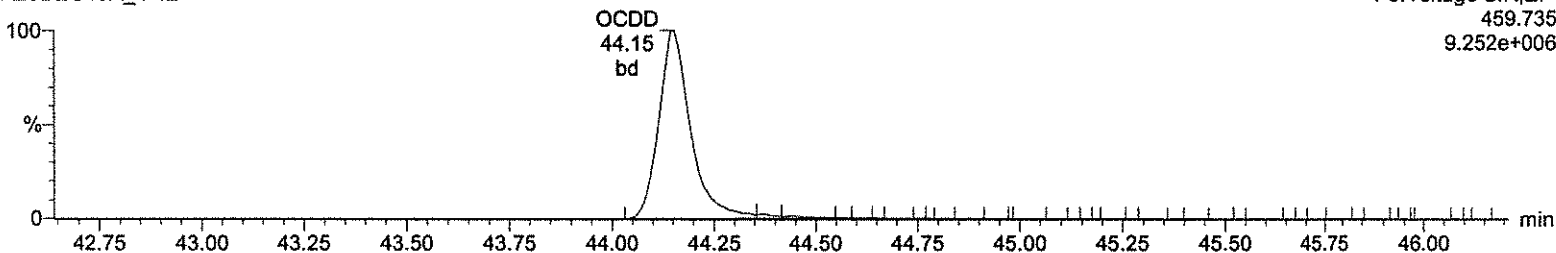
F5:Voltage SIR,EI+
457.738
8.261e+006



OCDD

A23DEC19A_4-12

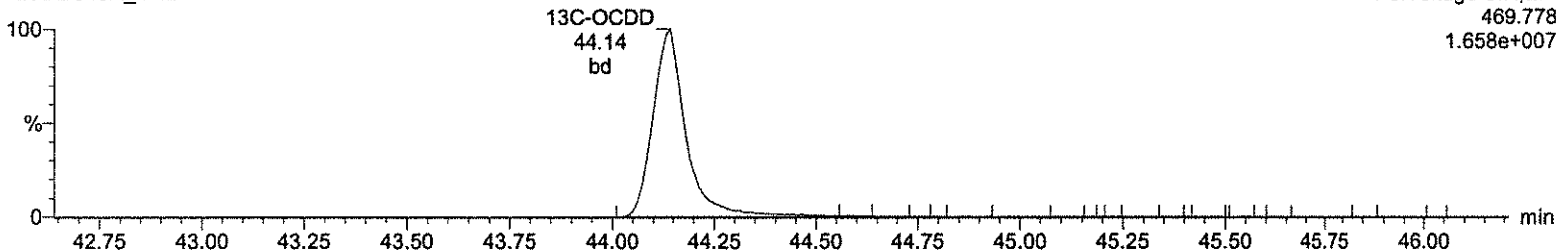
F5:Voltage SIR,EI+
459.735
9.252e+006



13C-OCDD

A23DEC19A_4-12

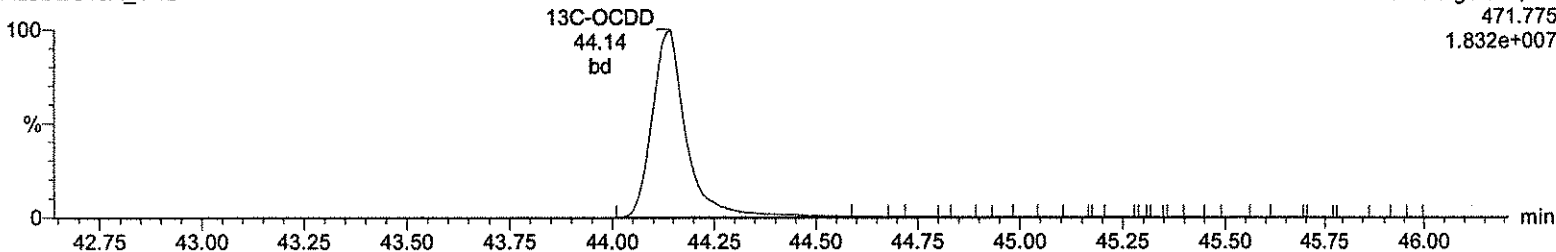
F5:Voltage SIR,EI+
469.778
1.658e+007



13C-OCDD

A23DEC19A_4-12

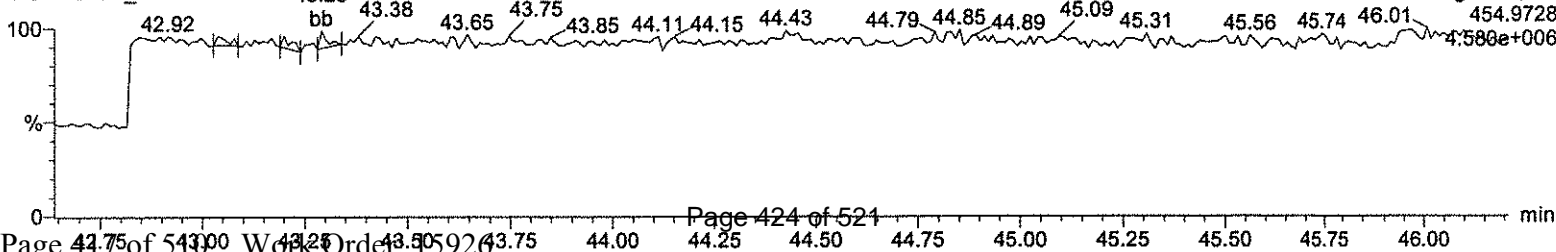
F5:Voltage SIR,EI+
471.775
1.832e+007



Lock Mass F5

A23DEC19A_4-12

F5:Voltage SIR,EI+
454.9728
4.580e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

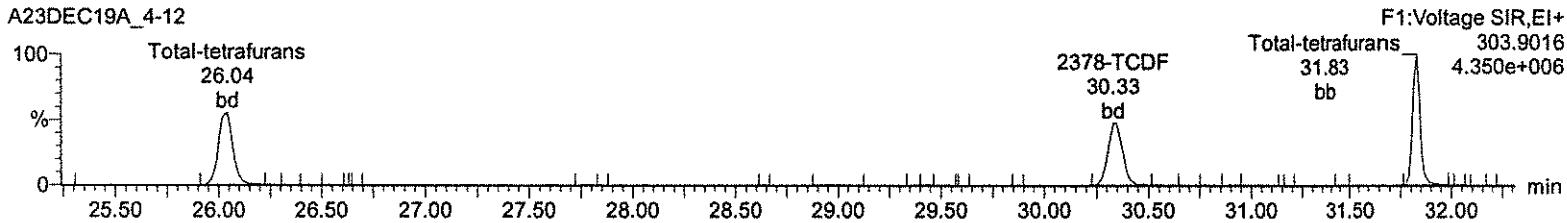
Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

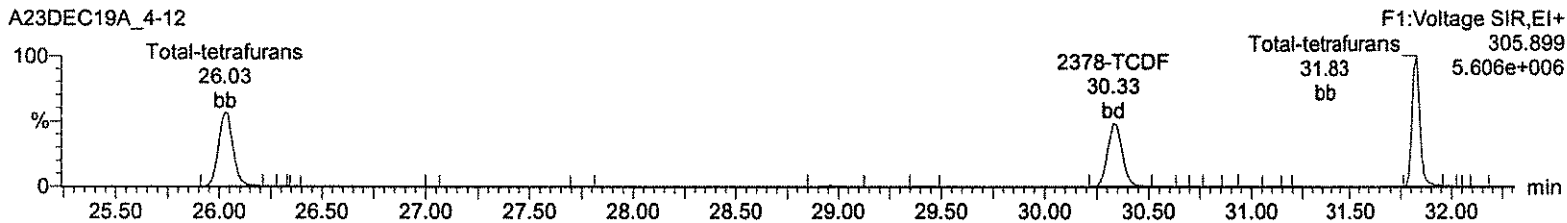
Total-tetrafurans

A23DEC19A_4-12



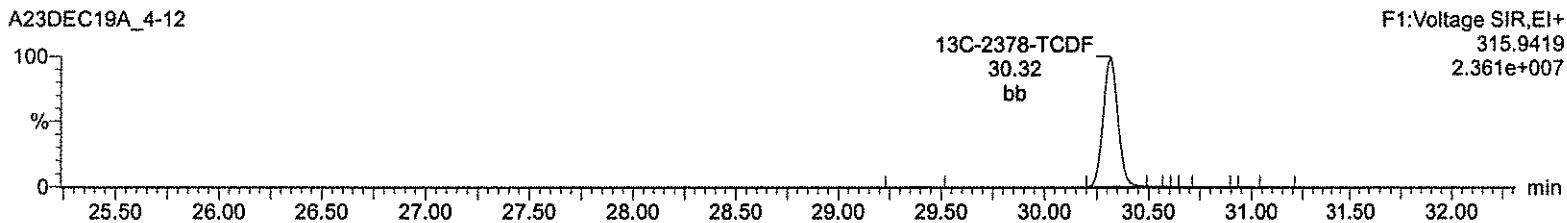
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A23DEC19A_4-12



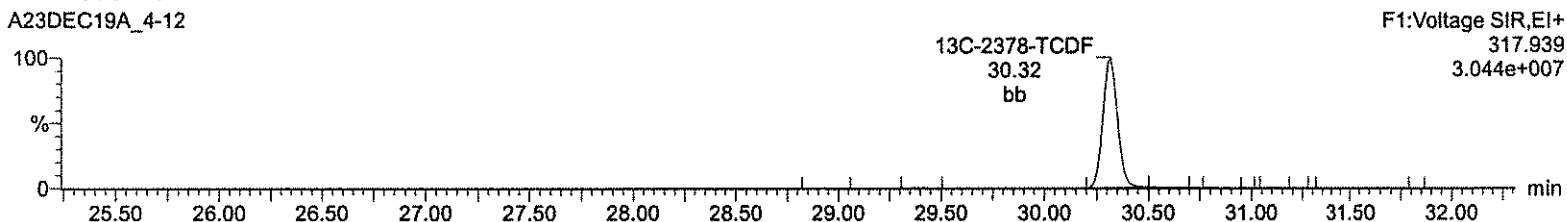
13C-2378-TCDF

A23DEC19A_4-12



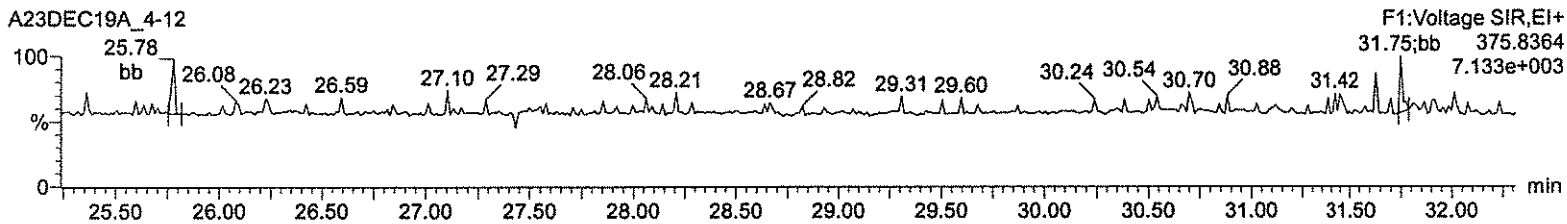
13C-2378-TCDF

A23DEC19A_4-12



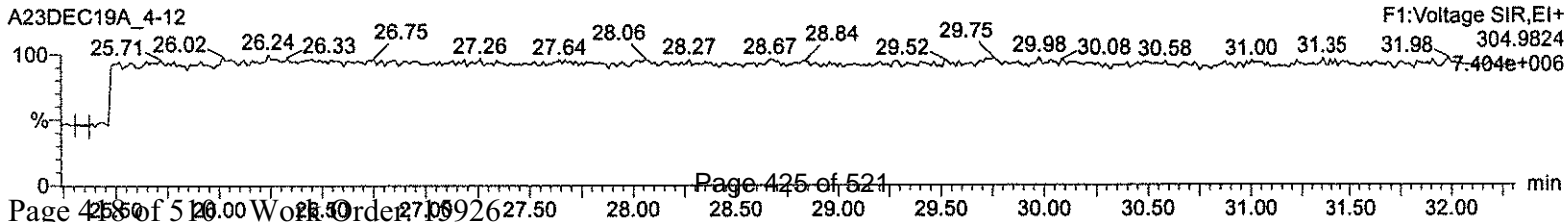
HxDPE

A23DEC19A_4-12



Lock Mass F1

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qid

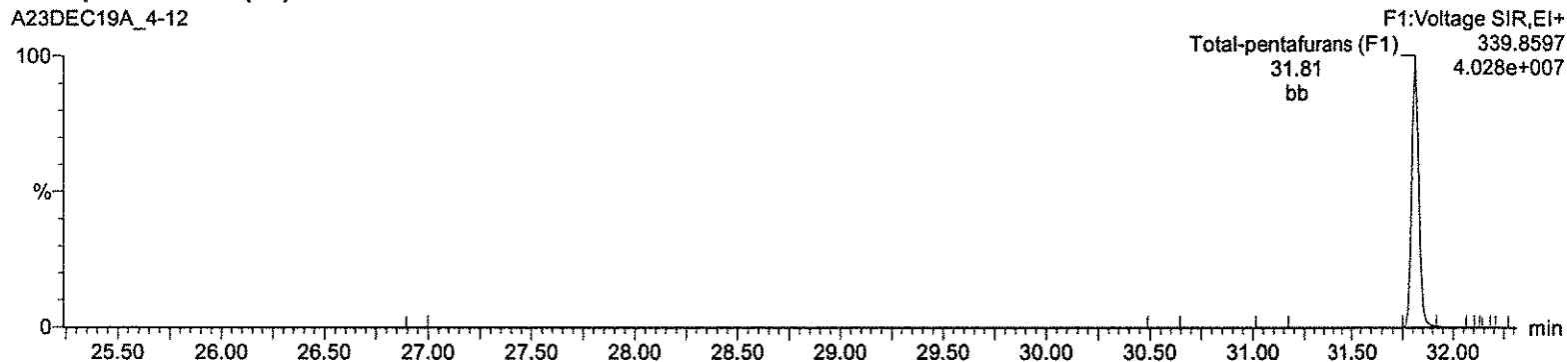
Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

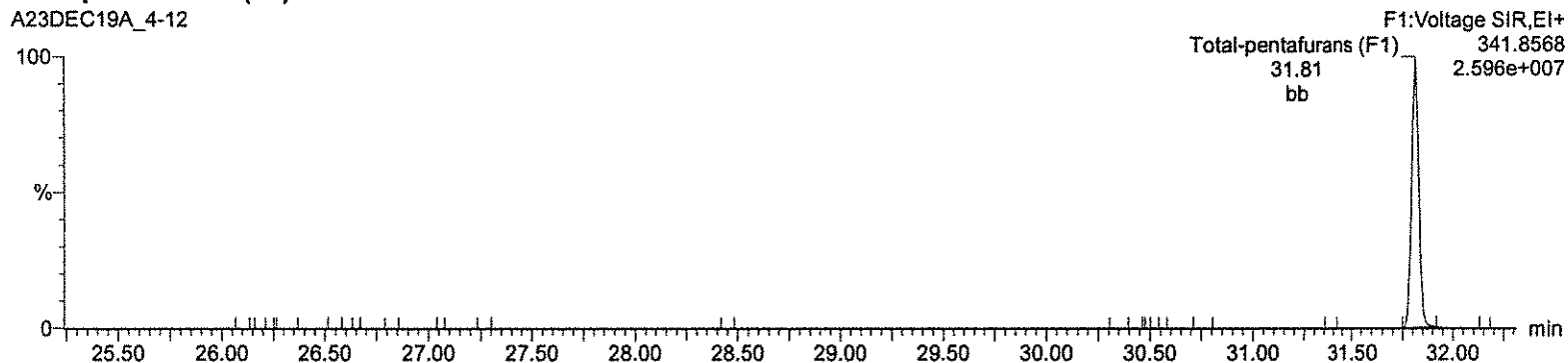
Total-pentafurans (F1)

A23DEC19A_4-12



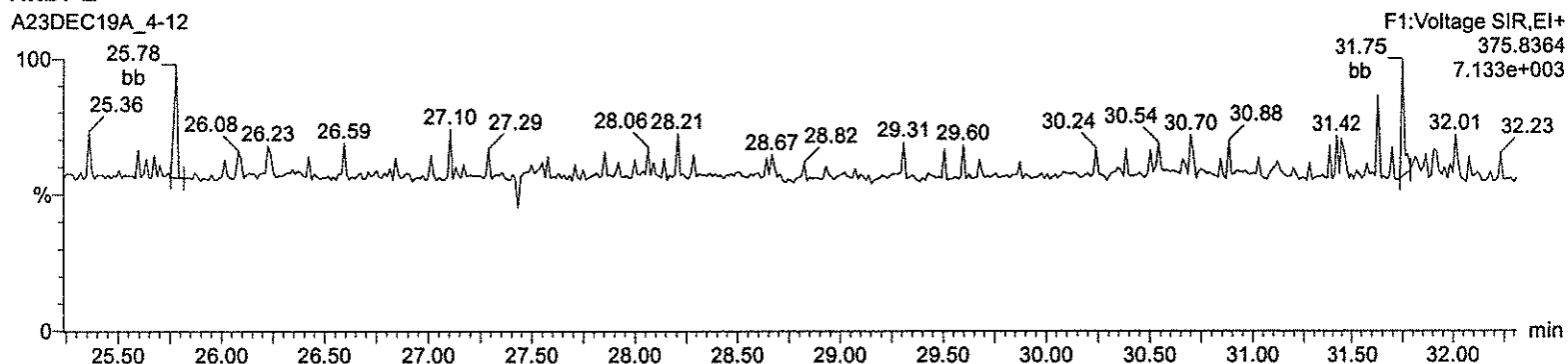
Total-pentafurans (F1)

A23DEC19A_4-12



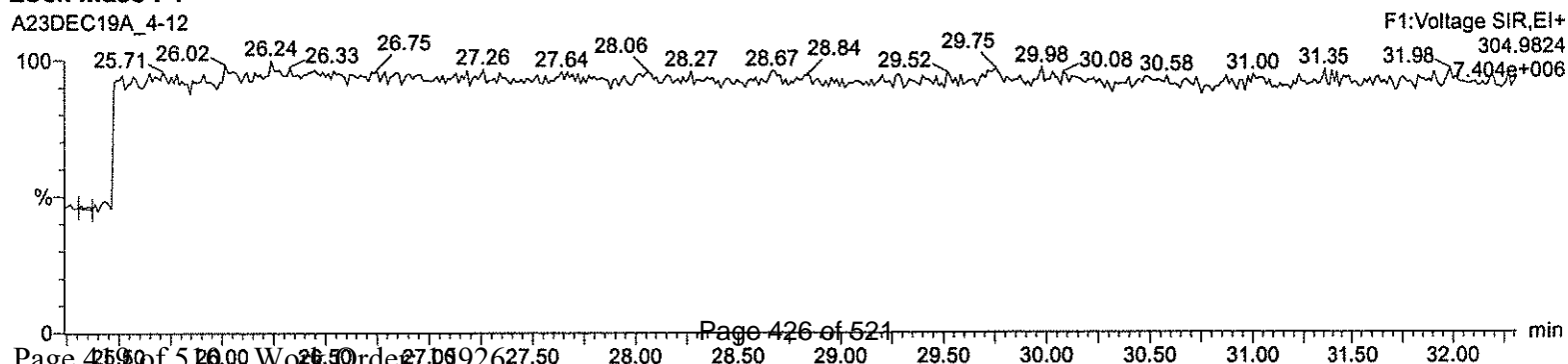
HxDPE

A23DEC19A_4-12



Lock Mass F1

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

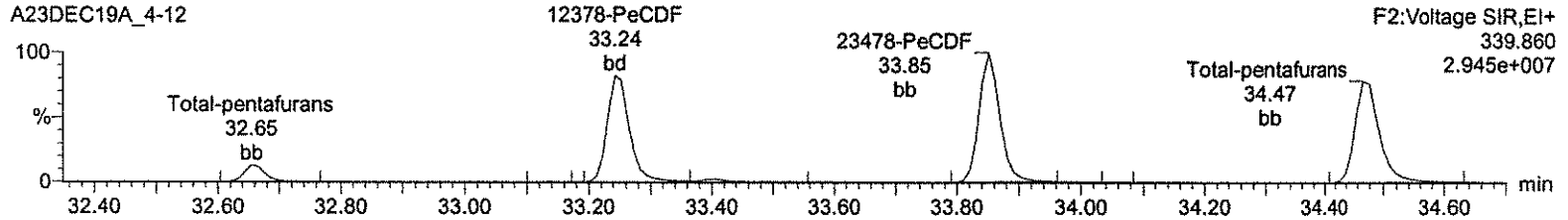
Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

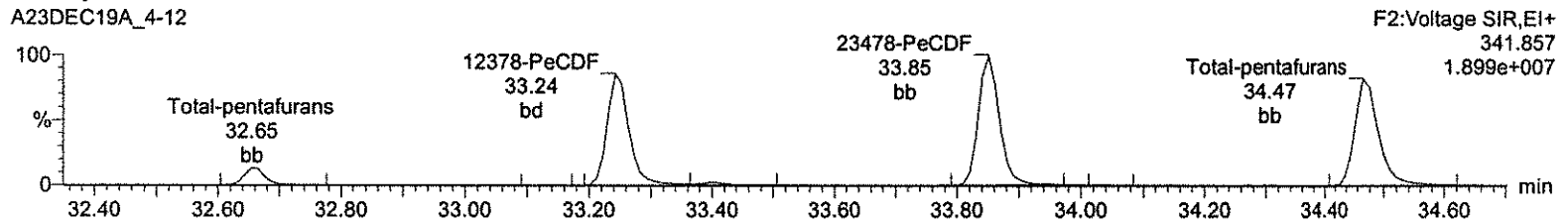
Total-pentafurans

A23DEC19A_4-12



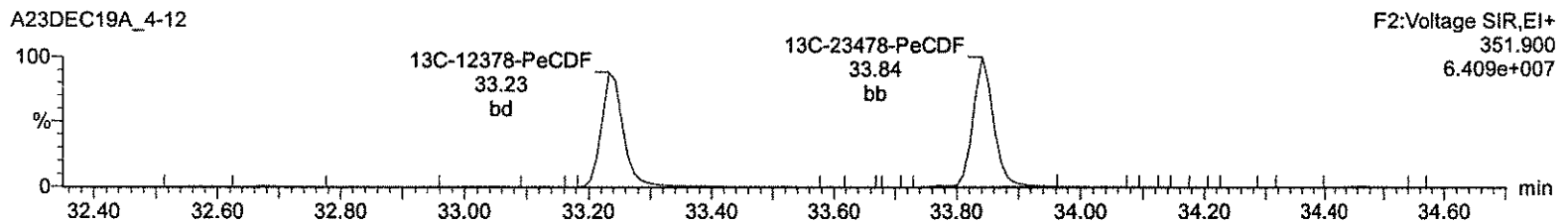
Total-pentafurans

A23DEC19A_4-12



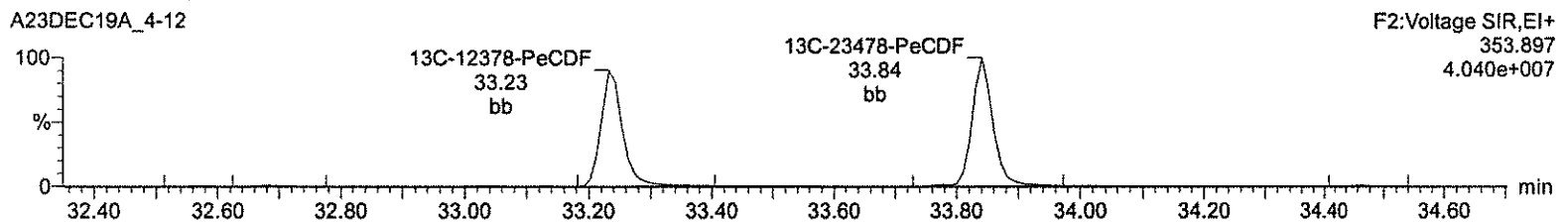
13C-12378-PeCDF

A23DEC19A_4-12



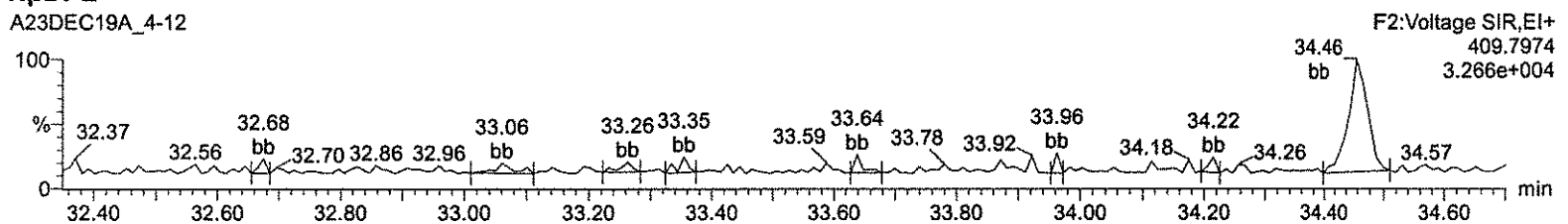
13C-12378-PeCDF

A23DEC19A_4-12



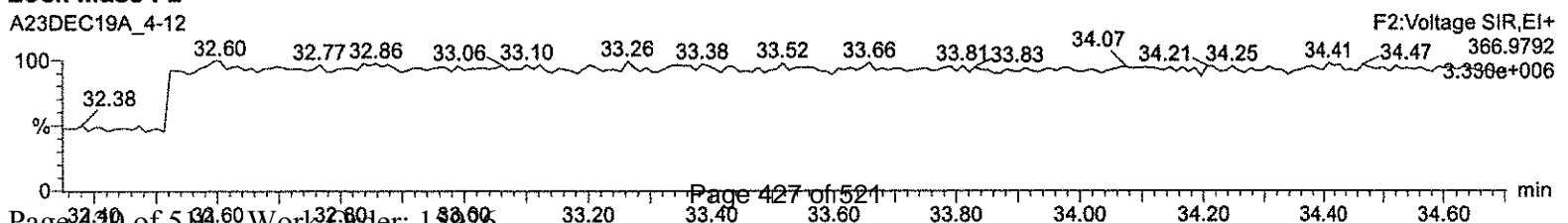
HpDPE

A23DEC19A_4-12



Lock Mass F2

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

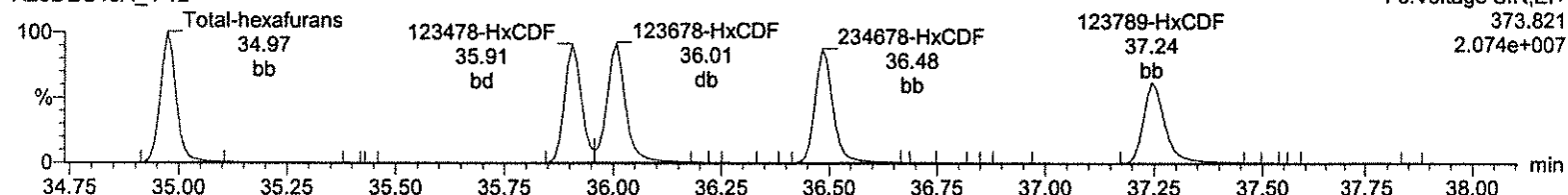
Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

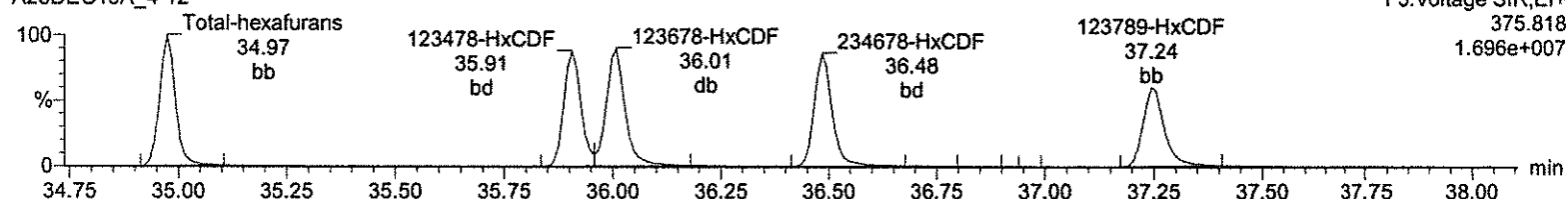
Total-hexafurans

A23DEC19A_4-12



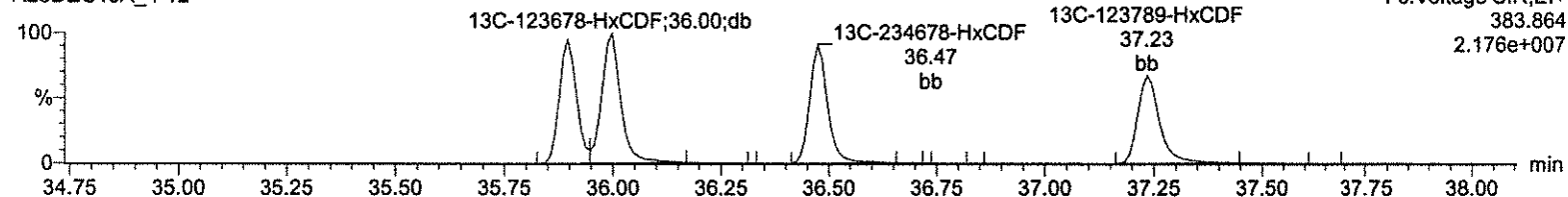
Total-hexafurans

A23DEC19A_4-12



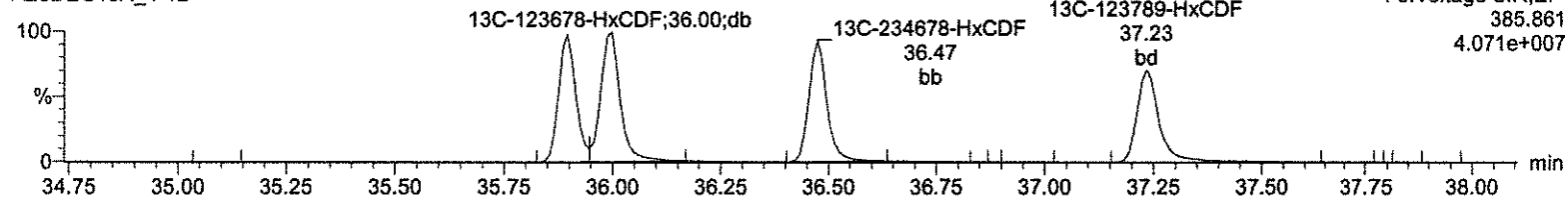
13C-123478-HxCDF

A23DEC19A_4-12



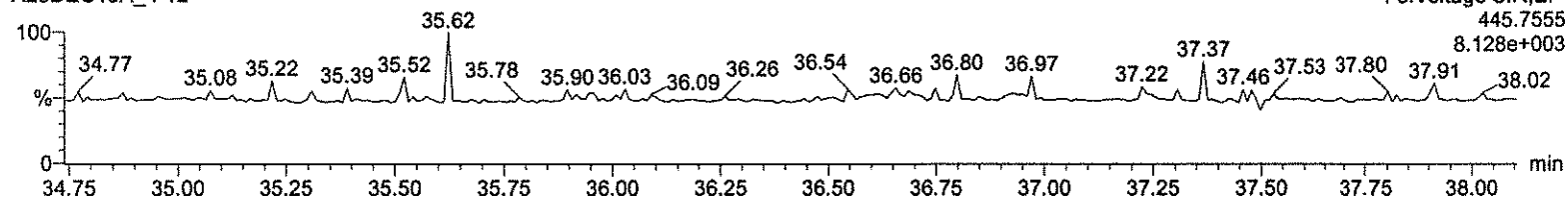
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A23DEC19A_4-12



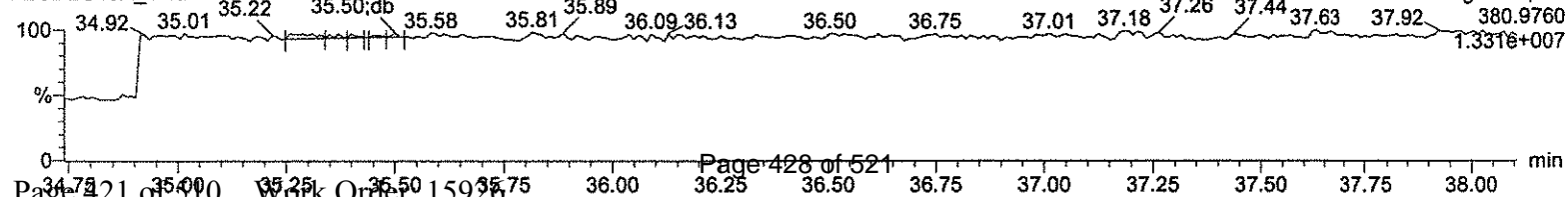
OcDPE

A23DEC19A_4-12



Lock Mass F3

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

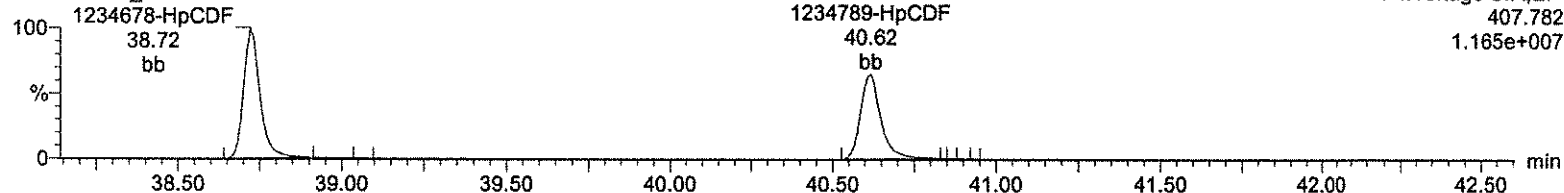
Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

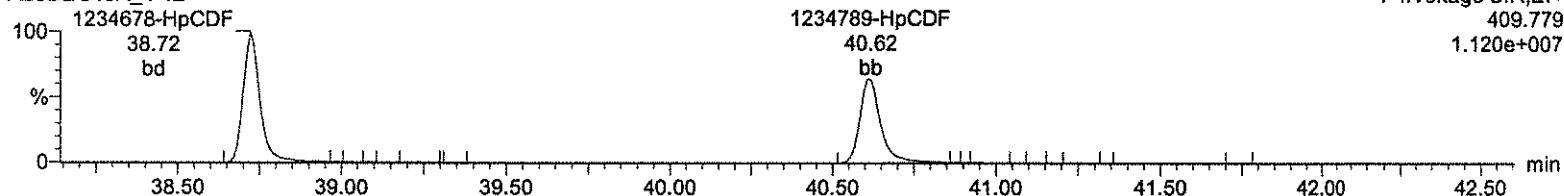
Total-heptafurans

A23DEC19A_4-12



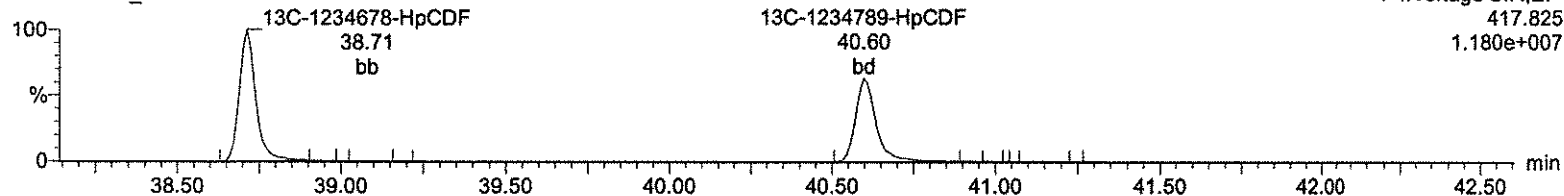
Total-heptafurans

A23DEC19A_4-12



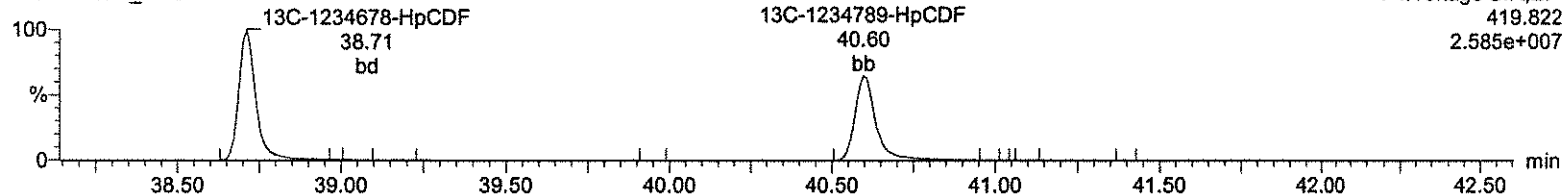
13C-1234678-HpCDF

A23DEC19A_4-12



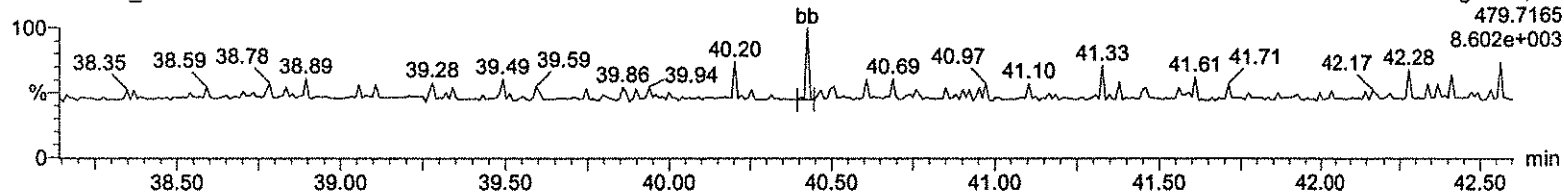
13C-1234678-HpCDF

A23DEC19A_4-12



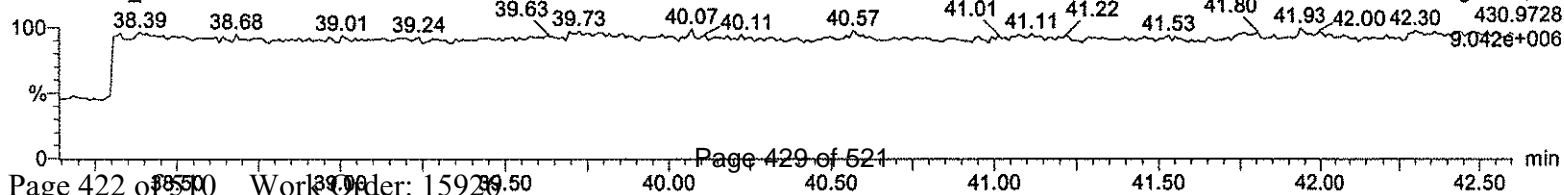
NoDPE

A23DEC19A_4-12



Lock Mass F4

A23DEC19A_4-12



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_4-12.qld

Last Altered: Thursday, December 26, 2019 11:19:03 Eastern Standard Time

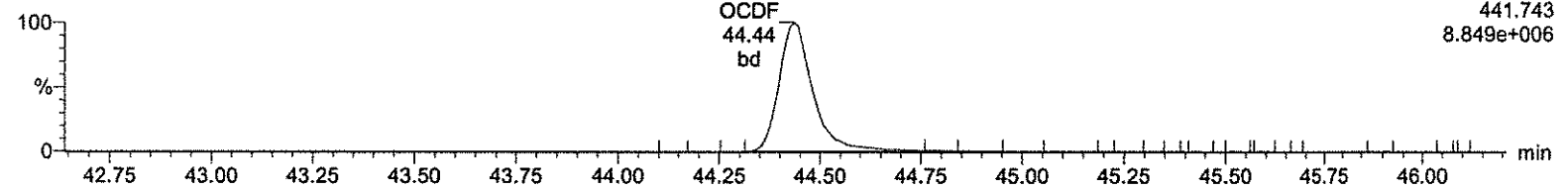
Printed: Thursday, December 26, 2019 11:20:02 Eastern Standard Time

Name: A23DEC19A_4-12, Date: 25-Dec-2019, Time: 11:33:45, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_4, Task: HRP750_2, User: MJC

OCDF

A23DEC19A_4-12

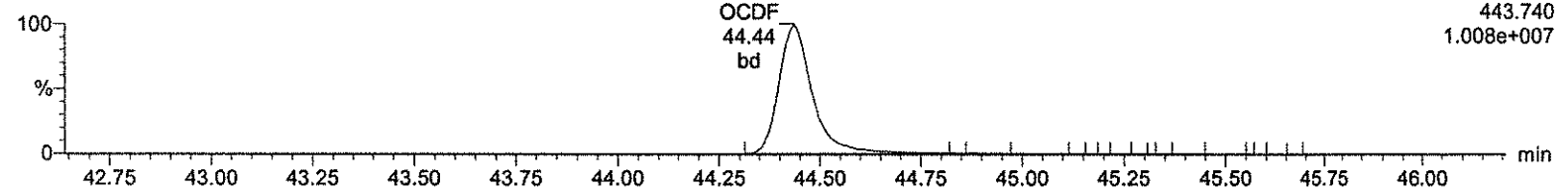
F5:Voltage SIR,EI+
441.743
8.849e+006



OCDF

A23DEC19A_4-12

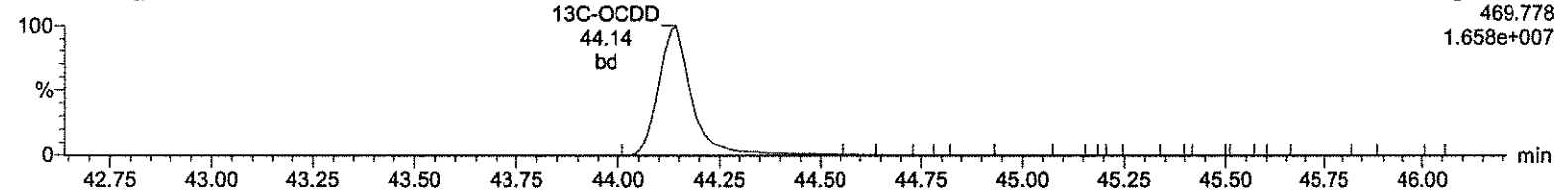
F5:Voltage SIR,EI+
443.740
1.008e+007



13C-OCDD

A23DEC19A_4-12

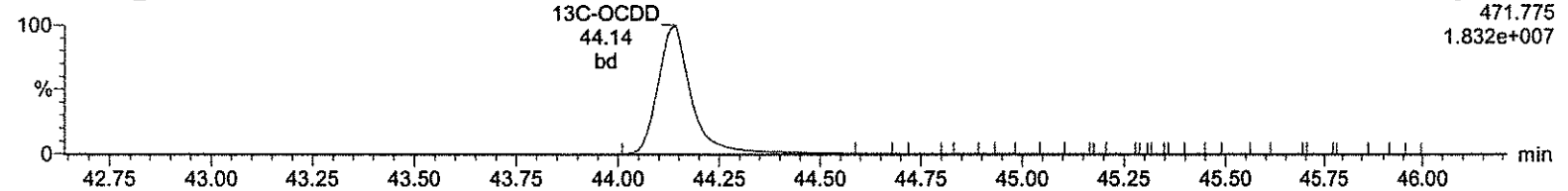
F5:Voltage SIR,EI+
449.778
1.658e+007



13C-OCDD

A23DEC19A_4-12

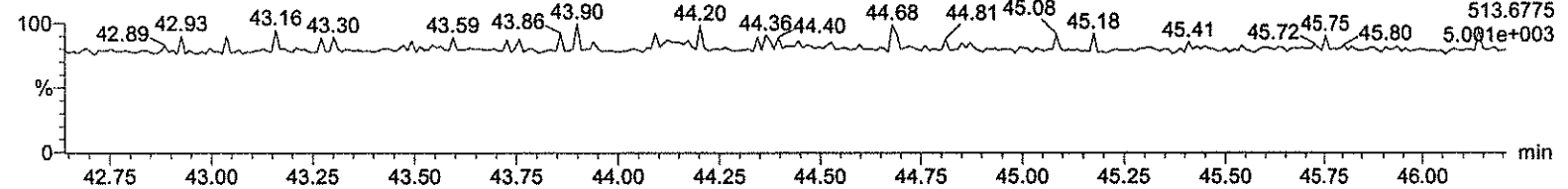
F5:Voltage SIR,EI+
471.775
1.832e+007



DeDPE

A23DEC19A_4-12

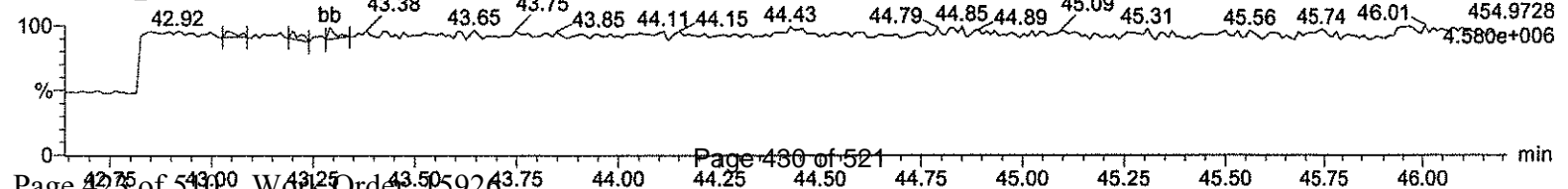
F5:Voltage SIR,EI+
513.6775
5.001e+003



Lock Mass F5

A23DEC19A_4-12

F5:Voltage SIR,EI+
454.9728
4.580e+006



MassLynx 4.1

Quantify Sample Summary Report

Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time
Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\ICFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurvedB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	2.25e5	3.01e5	5.26e5	31.13	1.001	0.75	NO	11.084	0.0256	0.980	0.884	10.8	3.86e6	3862	1000.5	5.15e6	4784	1076.8	db	dd
2	12378-PeCDD	1.10e6	7.04e5	1.81e6	34.04	1.001	1.57	NO	53.212	0.0397	0.908	0.853	6.4	2.76e7	4038	6842.0	1.72e7	9406	1833.3	bb	bb
3	123478-HxCDD	9.98e5	7.63e5	1.76e6	36.61	1.000	1.31	NO	53.916	0.0843	1.013	0.940	7.8	2.16e7	11901	1816.1	1.71e7	12284	1391.5	bd	bd
4	123678-HxCDD	1.06e6	8.75e5	1.93e6	36.70	1.000	1.21	NO	50.758	0.0836	0.958	0.944	1.5	2.13e7	11901	1790.4	1.71e7	12284	1393.2	dd	dd
5	123789-HxCDD	1.09e6	8.69e5	1.96e6	36.93	1.007	1.26	NO	56.437	0.0853	1.046	0.927	12.9	1.96e7	11901	1646.5	1.64e7	12284	1332.5	dd	dd
6	1234678-HpCDD	7.67e5	7.31e5	1.50e6	39.96	1.000	1.05	NO	47.110	0.0994	0.980	1.040	-5.8	1.14e7	10237	1112.6	1.08e7	8192	1324.0	bb	bb
7	OCDD	1.21e6	1.39e6	2.60e6	44.15	1.000	0.87	NO	100.930	0.110	0.980	0.971	0.9	1.34e7	7484	1785.2	1.53e7	4866	3145.8	bb	bd
8	2378-TCDF	2.52e5	3.32e5	5.84e5	30.33	1.000	0.76	NO	9.245	0.0269	0.905	0.978	-7.6	3.19e6	3853	828.6	4.16e6	4624	899.8	bd	bd
9	12378-PeCDF	1.44e6	9.38e5	2.38e6	33.24	1.000	1.54	NO	46.090	0.0523	0.871	0.945	-7.8	3.75e7	14473	2588.0	2.43e7	13483	1798.9	bb	bb
10	23478-PeCDF	1.64e6	1.07e6	2.70e6	33.85	1.000	1.53	NO	47.864	0.0482	0.945	0.987	-4.3	4.32e7	14473	2986.1	2.79e7	13483	2086.5	bb	bb
11	123478-HxCDF	1.25e6	1.03e6	2.28e6	35.91	1.000	1.22	NO	49.445	0.0800	1.075	1.087	-1.1	2.83e7	17715	1599.1	2.29e7	14994	1527.6	bd	bd
12	123678-HxCDF	1.31e6	1.07e6	2.38e6	36.01	1.001	1.23	NO	49.497	0.0826	1.030	1.041	-1.0	2.78e7	17715	1568.5	2.28e7	14994	1522.1	db	db
13	234678-HxCDF	1.35e6	1.08e6	2.43e6	36.48	1.000	1.25	NO	49.826	0.0778	1.132	1.136	-0.3	2.90e7	17715	1636.3	2.37e7	14994	1581.5	bb	bb
14	123789-HxCDF	1.12e6	8.94e5	2.01e6	37.24	1.000	1.25	NO	49.087	0.108	1.041	1.061	-1.8	2.05e7	17715	1157.3	1.68e7	14994	1118.5	bb	bb
15	1234678-HpCDF	1.02e6	9.96e5	2.01e6	38.72	1.000	1.02	NO	51.529	0.0713	1.185	1.150	3.1	1.75e7	9457	1850.0	1.75e7	9870	1771.1	bb	bb
16	1234789-HpCDF	8.57e5	8.43e5	1.70e6	40.61	1.000	1.02	NO	51.261	0.104	1.232	1.202	2.5	1.21e7	9457	1275.2	1.21e7	9870	1222.5	bb	bd
17	OCDF	1.39e6	1.53e6	2.90e6	44.44	1.007	0.89	NO	96.421	0.101	1.092	1.133	-3.6	1.46e7	7943	1836.8	1.66e7	5295	3137.0	bd	bd
18	13C-2378-TCDD	2.37e6	2.99e6	5.36e6	31.11	1.018	0.79	NO	102.763	0.0397	1.160	1.128	2.8	4.22e7	6706	6290.0	5.26e7	4280	12299.5	bd	bb
19	13C-12378-PeCDD	2.41e6	1.57e6	3.98e6	34.02	1.114	1.53	NO	114.482	0.0778	0.860	0.751	14.5	6.00e7	6380	9407.1	3.96e7	7957	4977.9	bb	bb
20	13C-123478-HxCDD	1.93e6	1.54e6	3.48e6	36.60	0.991	1.25	NO	92.262	0.0597	0.827	0.896	-7.7	4.25e7	8118	5229.9	3.42e7	8278	4133.9	bd	bd
21	13C-123678-HxCDD	2.24e6	1.79e6	4.03e6	36.69	0.994	1.25	NO	97.251	0.0543	0.959	0.986	-2.7	4.26e7	8118	5252.2	3.37e7	8278	4074.8	dd	dd
22	13C-1234678-HpCDD	1.58e6	1.47e6	3.06e6	39.95	1.082	1.07	NO	108.333	0.0816	0.728	0.672	8.3	2.31e7	8561	2695.1	2.19e7	8220	2667.4	bb	bb
23	13C-OCDD	2.47e6	2.83e6	5.31e6	44.13	1.195	0.87	NO	196.632	0.0918	0.631	0.642	-1.7	2.71e7	7750	3490.8	3.00e7	10312	2909.0	bb	bd
24	13C-2378-TCDF	2.82e6	3.63e6	6.45e6	30.32	0.993	0.78	NO	111.675	0.0593	1.396	1.250	11.7	3.52e7	8970	3925.3	4.52e7	9206	4908.1	bb	bb
25	13C-12378-PeCDF	3.39e6	2.11e6	5.47e6	33.23	1.088	1.59	NO	116.979	0.144	1.182	1.011	17.0	8.68e7	21132	4108.4	5.53e7	14535	3803.2	bd	bb
26	13C-23478-PeCDF	3.49e6	2.23e6	5.72e6	33.84	1.108	1.57	NO	116.385	0.137	1.237	1.063	16.4	8.96e7	21132	4242.4	5.72e7	14535	3932.2	db	db
27	13C-123478-HxCDF	1.45e6	2.79e6	4.24e6	35.90	0.972	0.52	NO	90.864	0.0843	1.009	1.111	-9.1	3.21e7	12501	2568.8	6.17e7	16166	3814.6	bd	bd
28	13C-123678-HxCDF	1.58e6	3.05e6	4.63e6	35.99	0.975	0.52	NO	88.321	0.0751	1.101	1.247	-11.7	3.25e7	12501	2600.5	6.29e7	16166	3891.0	dd	db
29	13C-234678-HxCDF	1.46e6	2.83e6	4.29e6	36.47	0.988	0.52	NO	94.292	0.0865	1.020	1.082	-5.7	3.15e7	12501	2518.9	6.08e7	16166	3758.0	bb	bb
30	13C-123789-HxCDF	1.34e6	2.52e6	3.86e6	37.23	1.009	0.53	NO	95.097	0.0968	0.920	0.967	-4.9	2.48e7	12501	1987.3	4.70e7	16166	2904.4	bd	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time
 Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	1.05e6	2.34e6	3.40e6	38.71	1.049	0.45	NO	92.876	0.0732	0.808	0.870	-7.1	1.83e7	8414	2169.1	4.05e7	11096	3648.4	bb	bb
32	13C-1234789-HpCDF	8.66e5	1.89e6	2.76e6	40.60	1.100	0.46	NO	96.910	0.0940	0.656	0.677	-3.1	1.21e7	8414	1437.7	2.72e7	11096	2449.4	bd	bb
33	13C-1234-TCDD	2.01e6	2.61e6	4.62e6	30.54	0.000	0.77	NO	100.000	0.0448	1.000	1.000	0.0	2.67e7	6706	3982.8	3.35e7	4280	7825.3	bb	bb
34	13C-123789-HxCDD	2.32e6	1.89e6	4.20e6	36.92	0.000	1.23	NO	100.000	0.0535	1.000	1.000	0.0	4.22e7	8118	5196.2	3.44e7	8278	4149.7	dd	dd
35	37Cl-2378-TCDD	5.01e5		5.01e5	31.12	1.019			10.200	0.0125	1.082	1.061	2.0	8.89e6	3261	2726.4				bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time

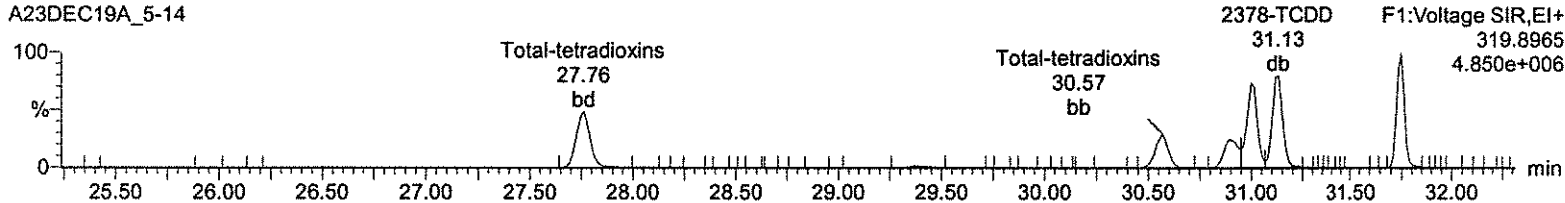
Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5,
Task: HRP750_2, User: MJC

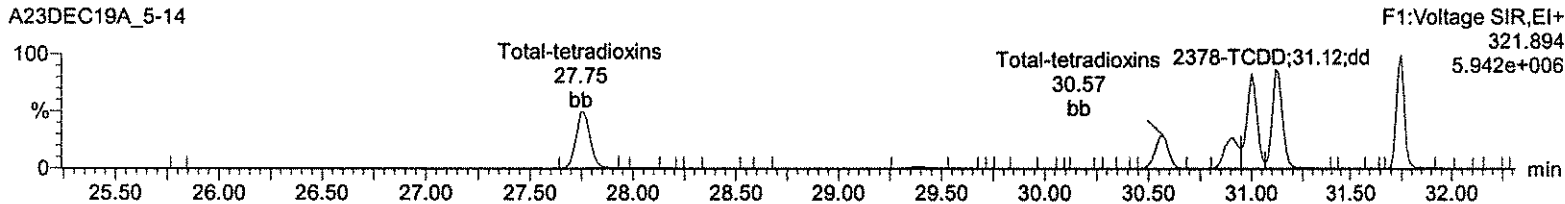
Total-tetradoxins

A23DEC19A_5-14



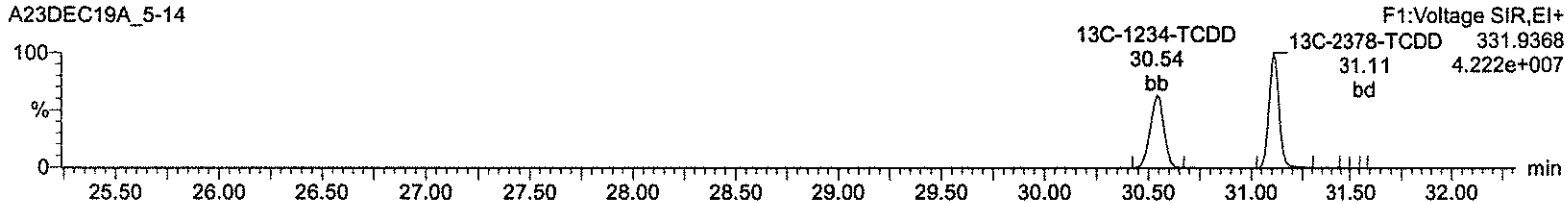
Total-tetradoxins

A23DEC19A_5-14



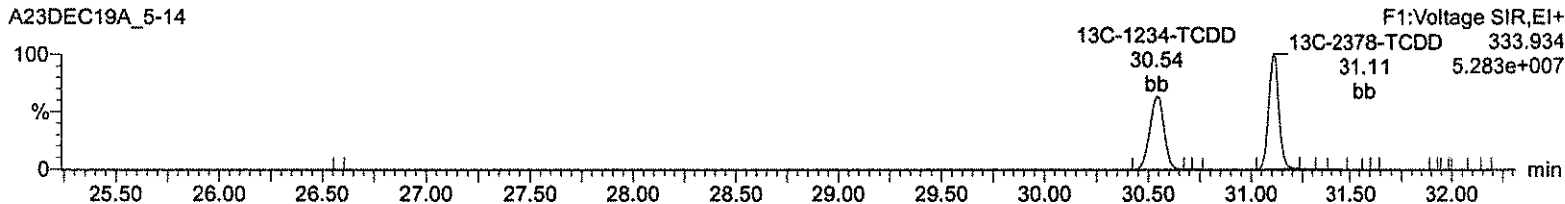
13C-2378-TCDD

A23DEC19A_5-14



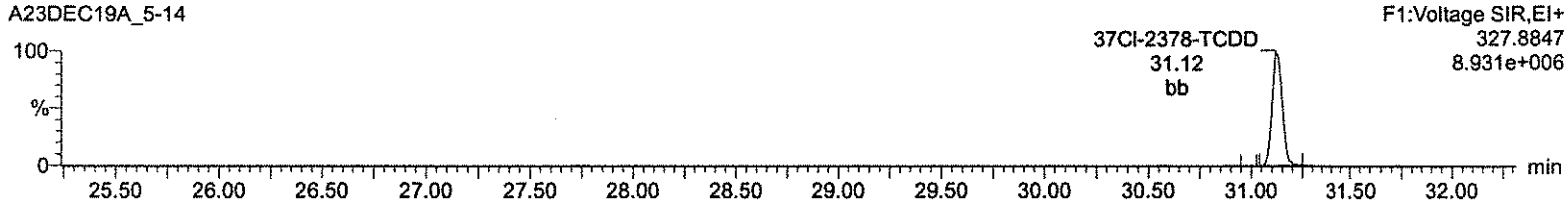
13C-2378-TCDD

A23DEC19A_5-14



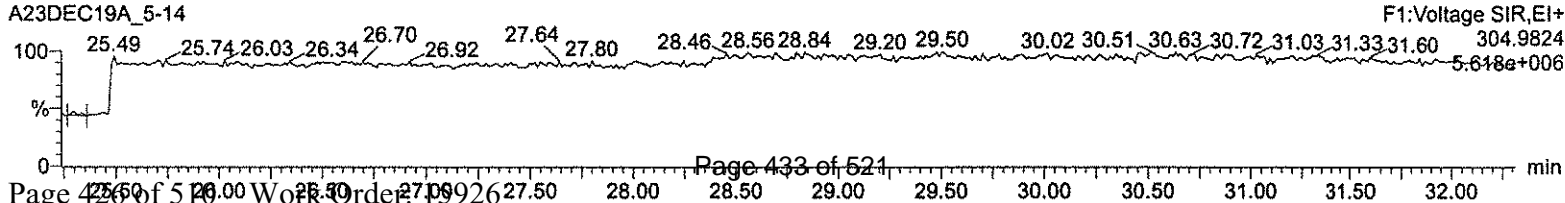
37Cl-2378-TCDD

A23DEC19A_5-14



Lock Mass F1

A23DEC19A_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

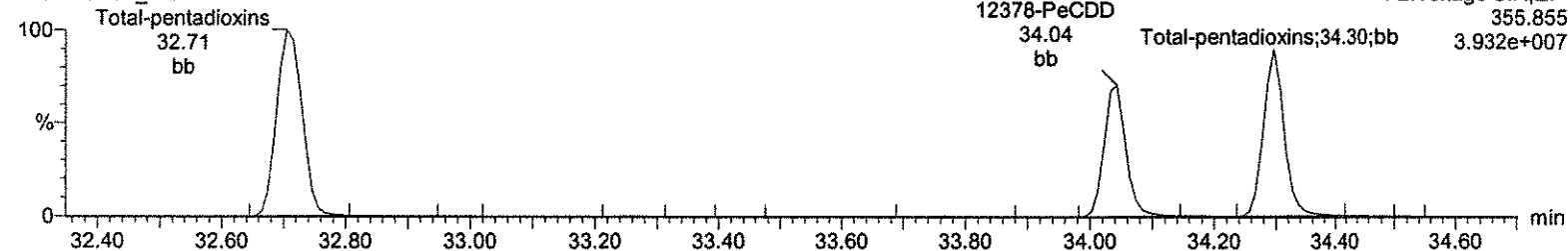
Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

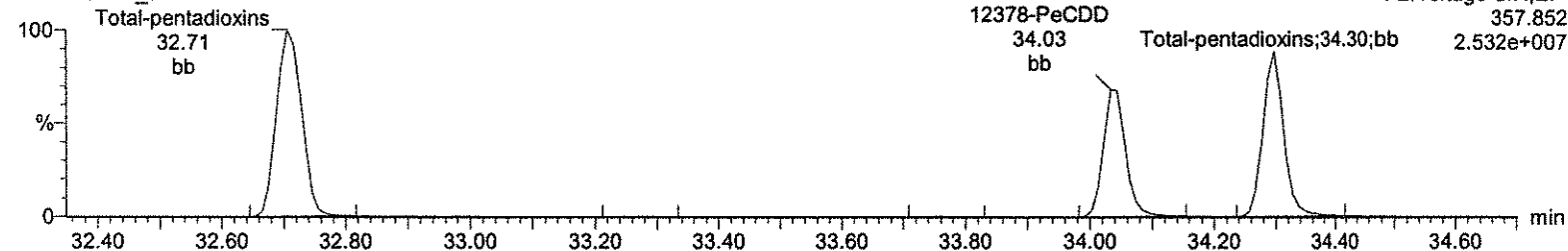
Total-pentadioxins

A23DEC19A_5-14



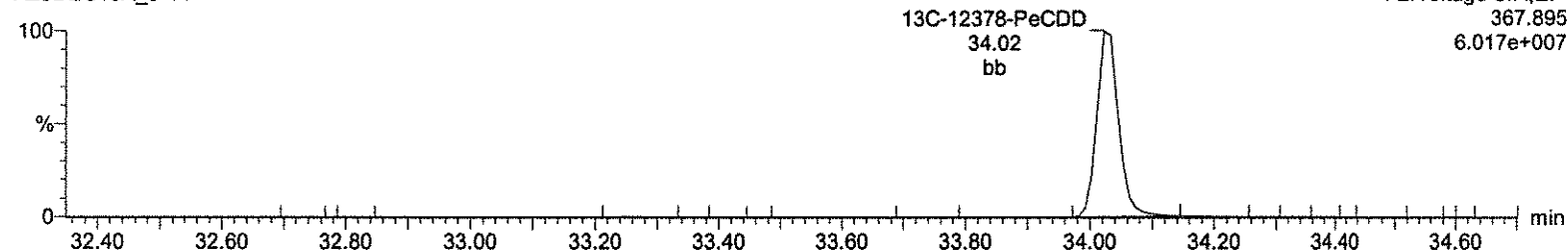
Total-pentadioxins

A23DEC19A_5-14



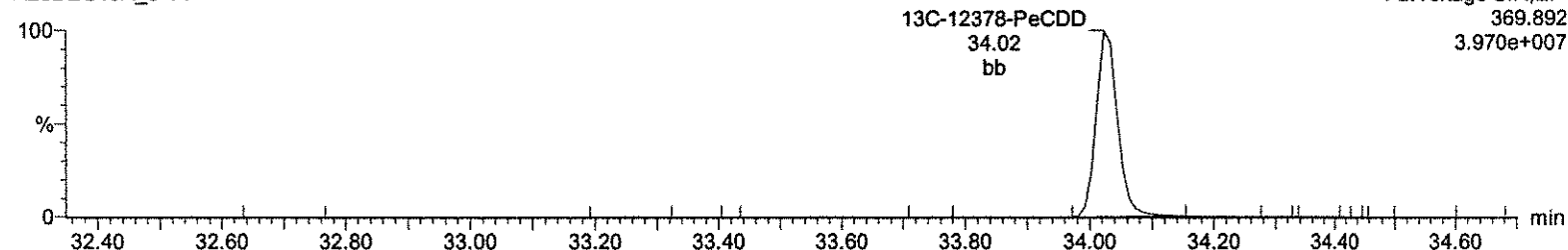
13C-12378-PeCDD

A23DEC19A_5-14



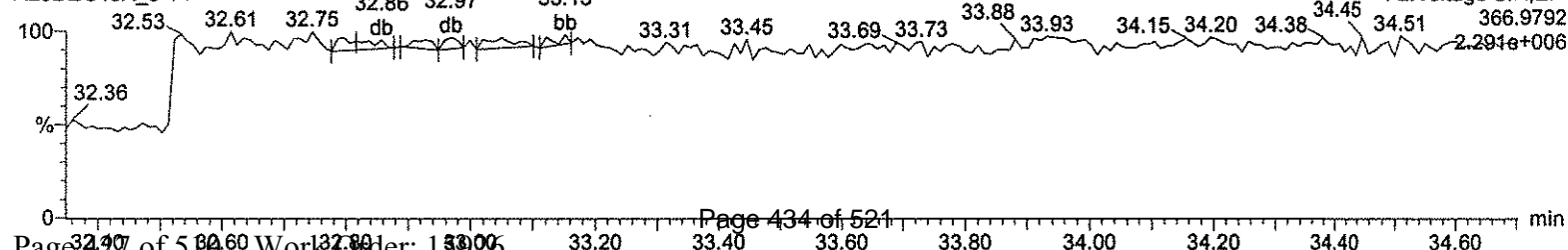
13C-12378-PeCDD

A23DEC19A_5-14



Lock Mass F2

A23DEC19A_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

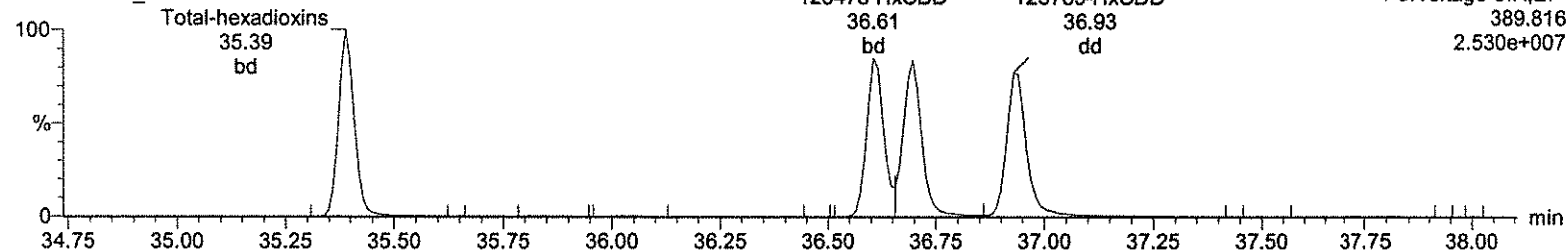
Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

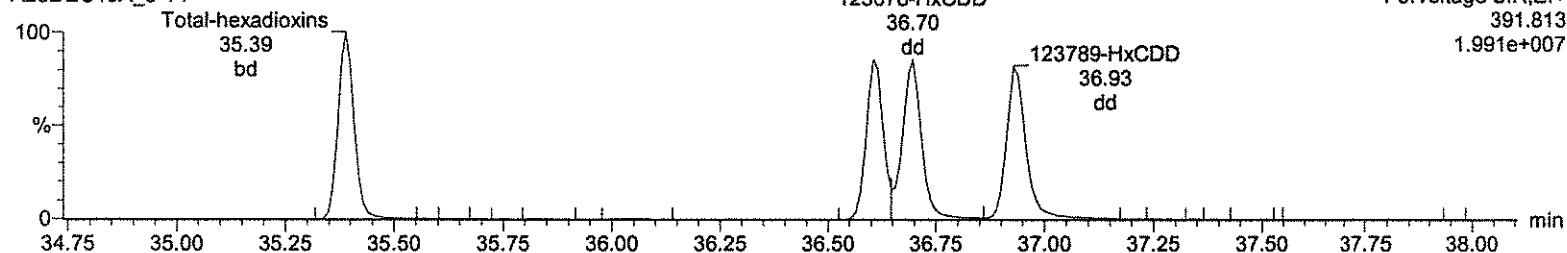
Total-hexadioxins

A23DEC19A_5-14



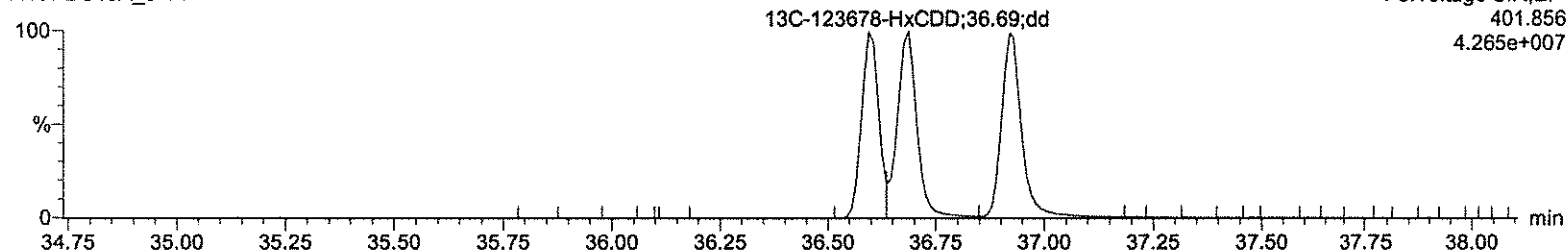
Total-hexadioxins

A23DEC19A_5-14



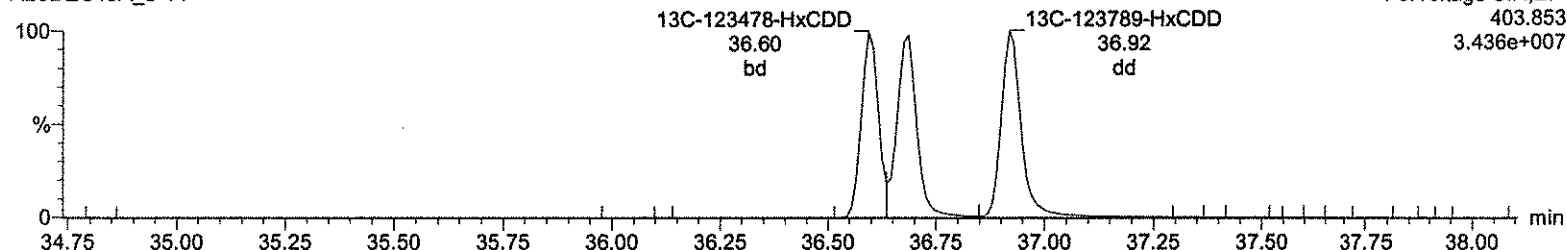
13C-123478-HxCDD

A23DEC19A_5-14



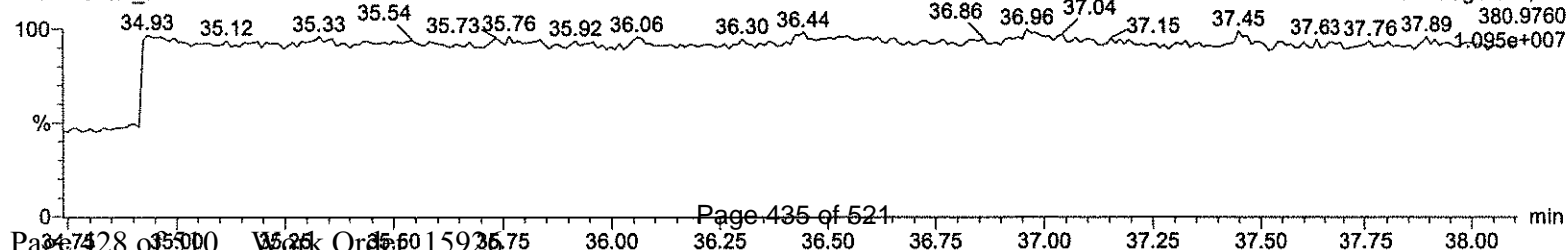
13C-123478-HxCDD

A23DEC19A_5-14



Lock Mass F3

A23DEC19A_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

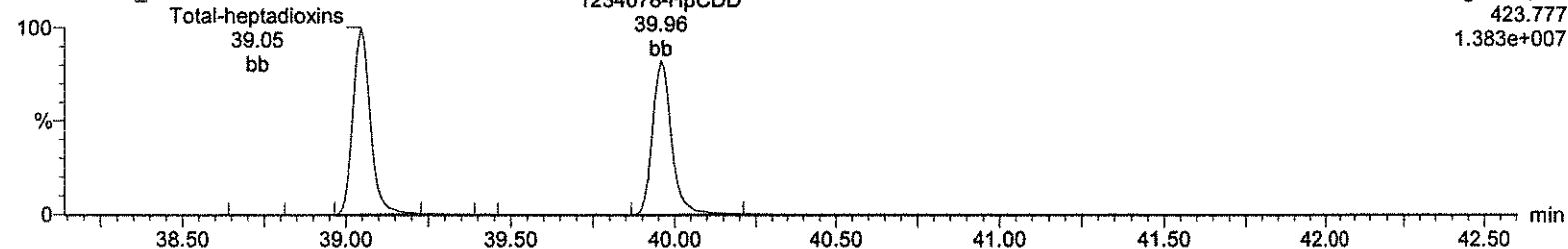
Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

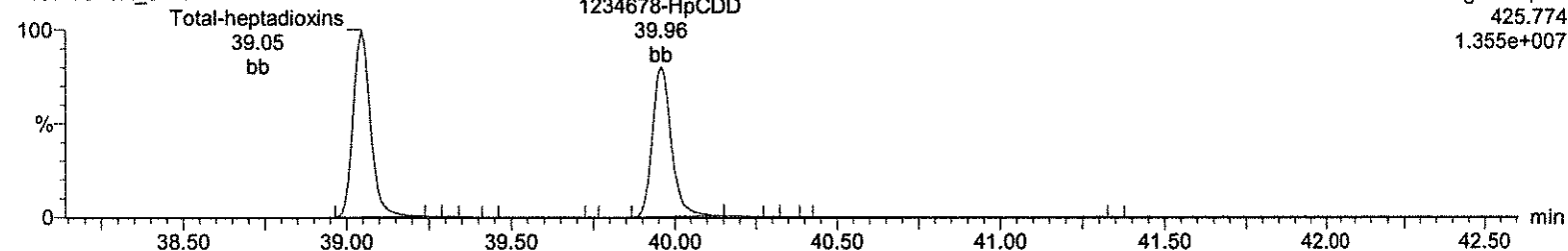
Total-heptadioxins

A23DEC19A_5-14



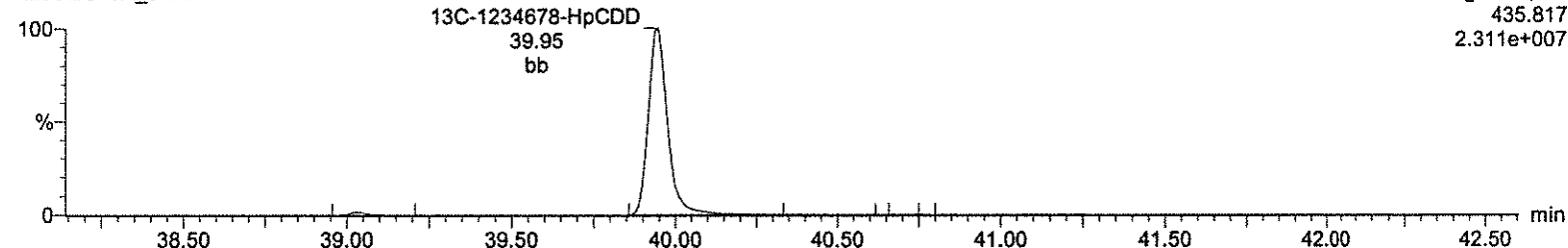
Total-heptadioxins

A23DEC19A_5-14



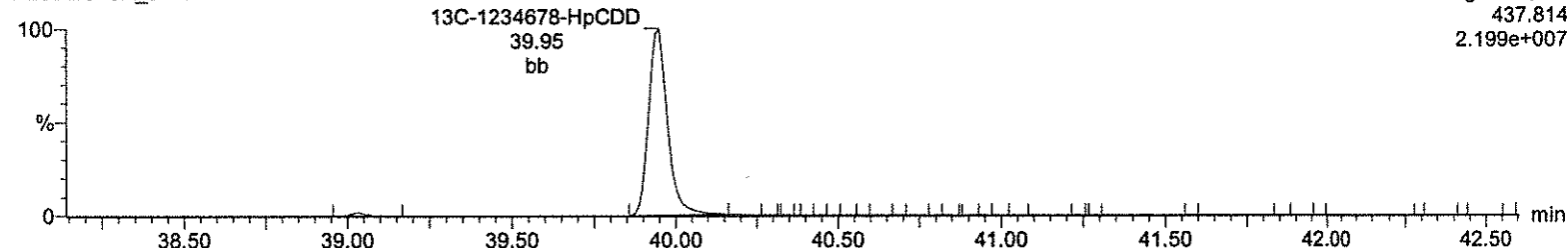
13C-1234678-HpCDD

A23DEC19A_5-14



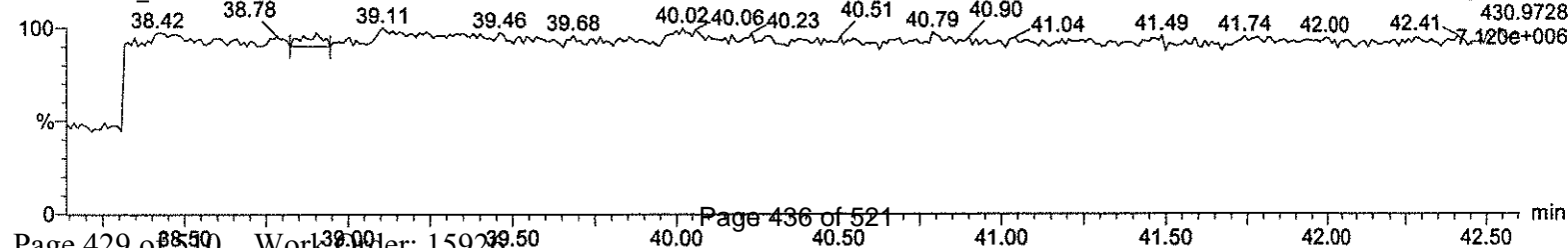
13C-1234678-HpCDD

A23DEC19A_5-14



Lock Mass F4

A23DEC19A_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

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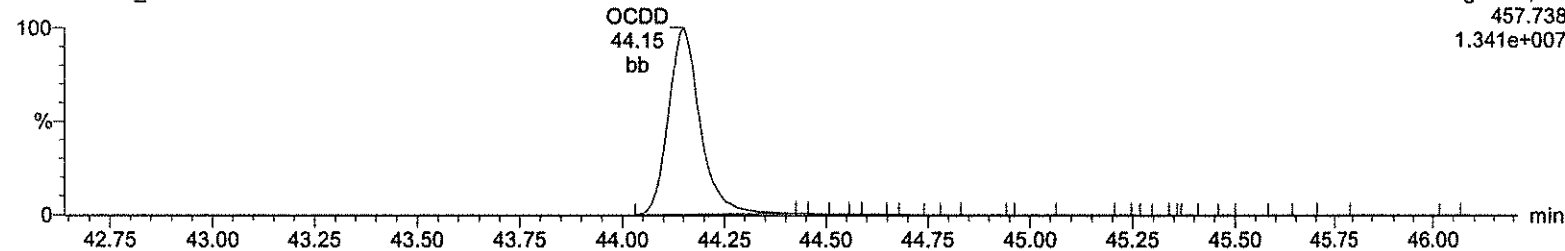
Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

OCDD

A23DEC19A_5-14

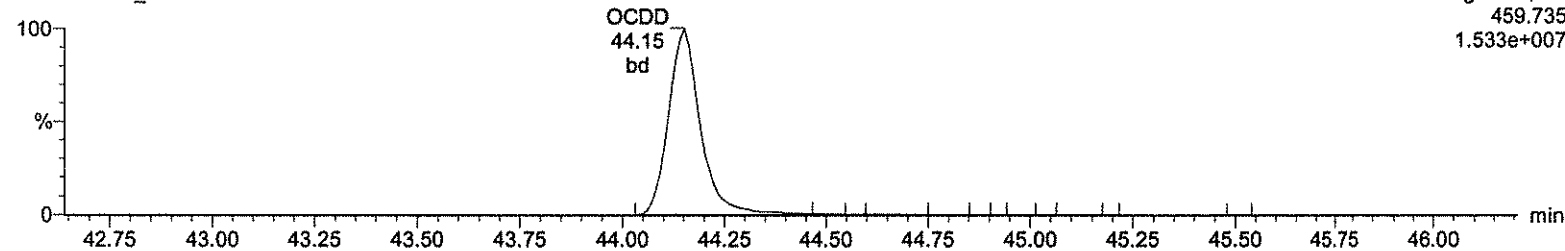
F5:Voltage SIR,EI+
457.738
1.341e+007



OCDD

A23DEC19A_5-14

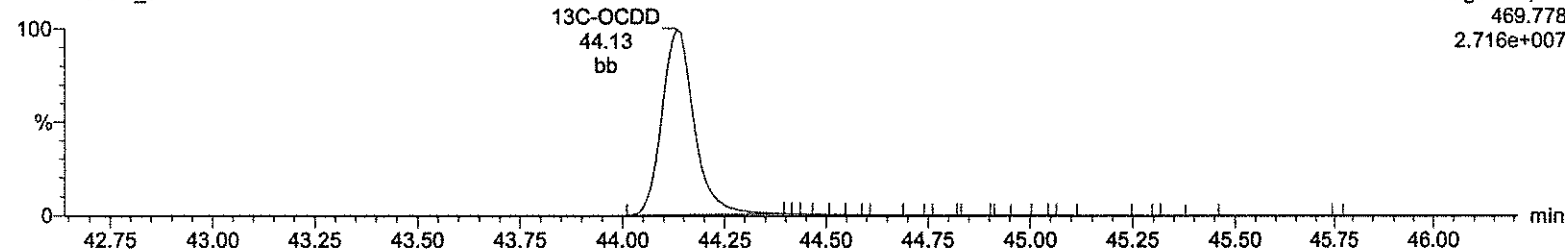
F5:Voltage SIR,EI+
459.735
1.533e+007



13C-OCDD

A23DEC19A_5-14

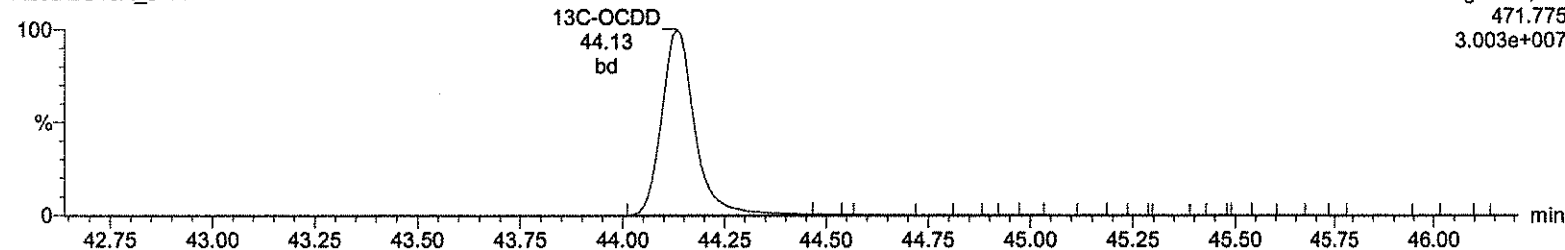
F5:Voltage SIR,EI+
469.778
2.716e+007



13C-OCDD

A23DEC19A_5-14

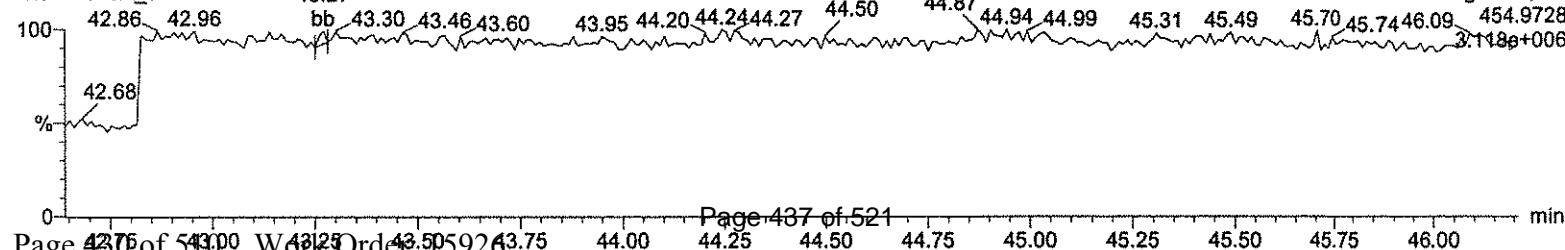
F5:Voltage SIR,EI+
471.775
3.003e+007



Lock Mass F5

A23DEC19A_5-14

F5:Voltage SIR,EI+
454.9728
3.118e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

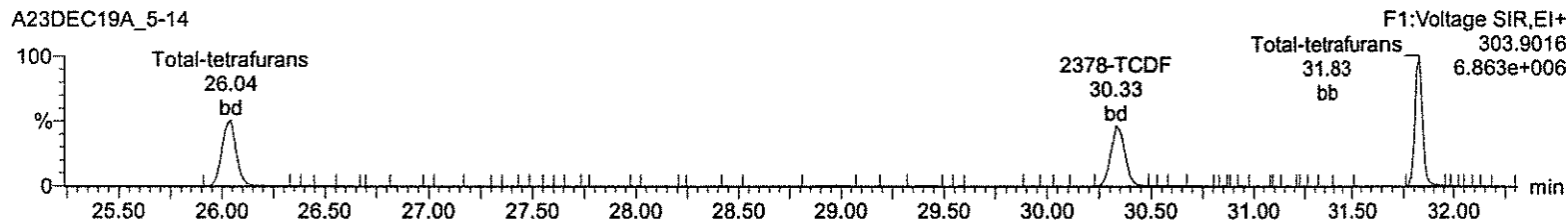
Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

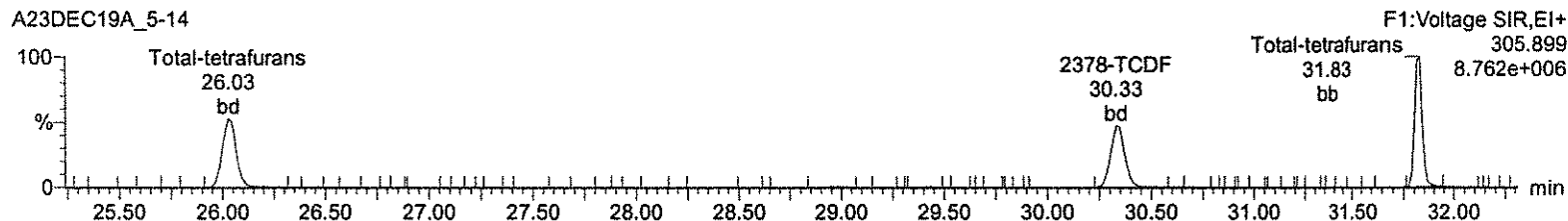
Total-tetrafurans

A23DEC19A_5-14



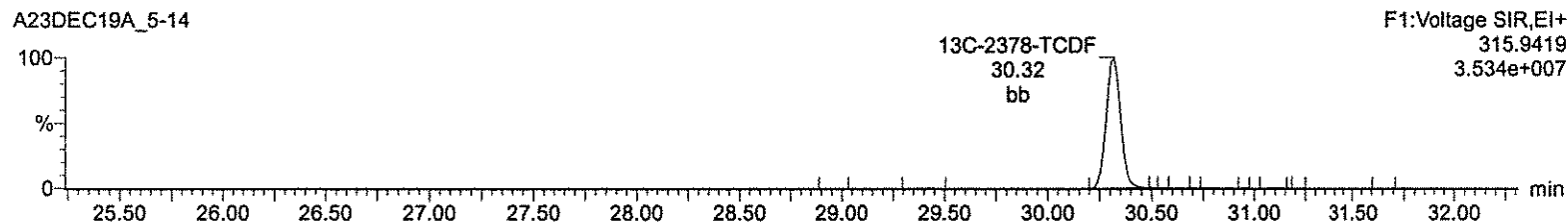
Total-tetrafurans

A23DEC19A_5-14



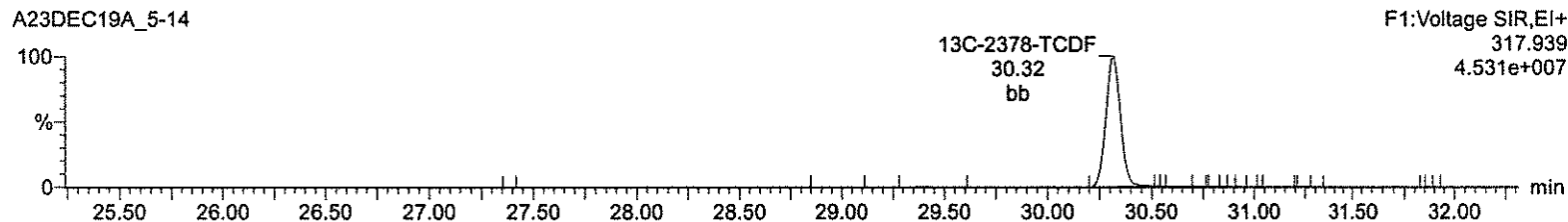
13C-2378-TCDF

A23DEC19A_5-14



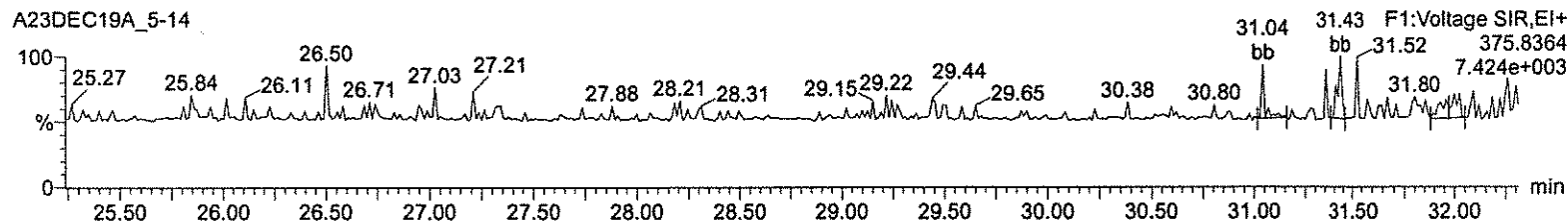
13C-2378-TCDF

A23DEC19A_5-14



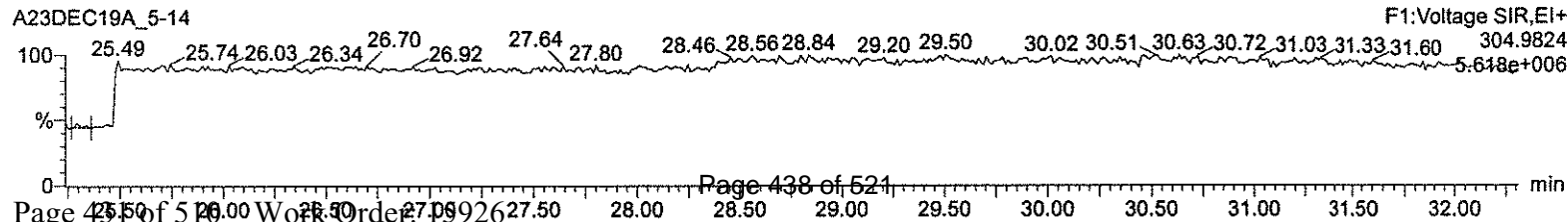
HxDPE

A23DEC19A_5-14



Lock Mass F1

A23DEC19A_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

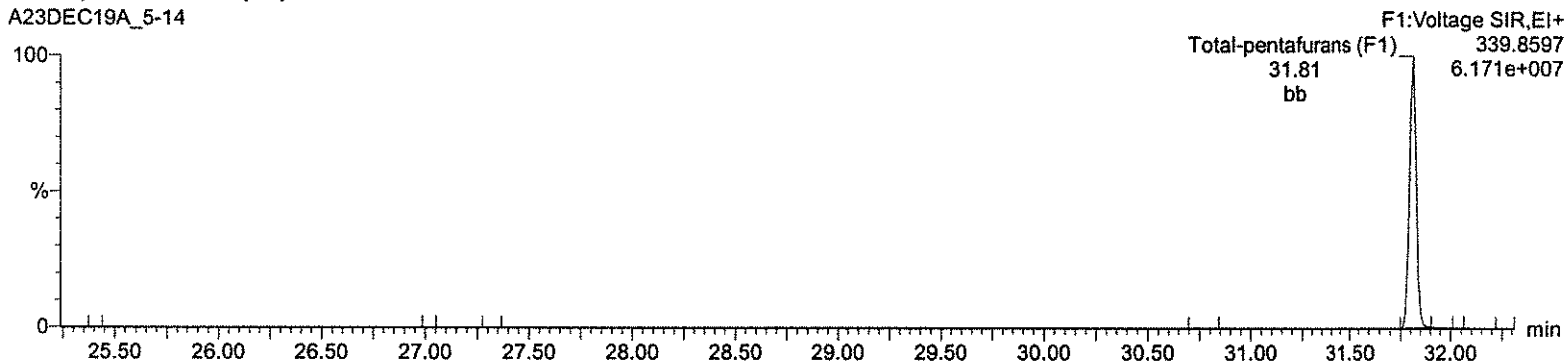
Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

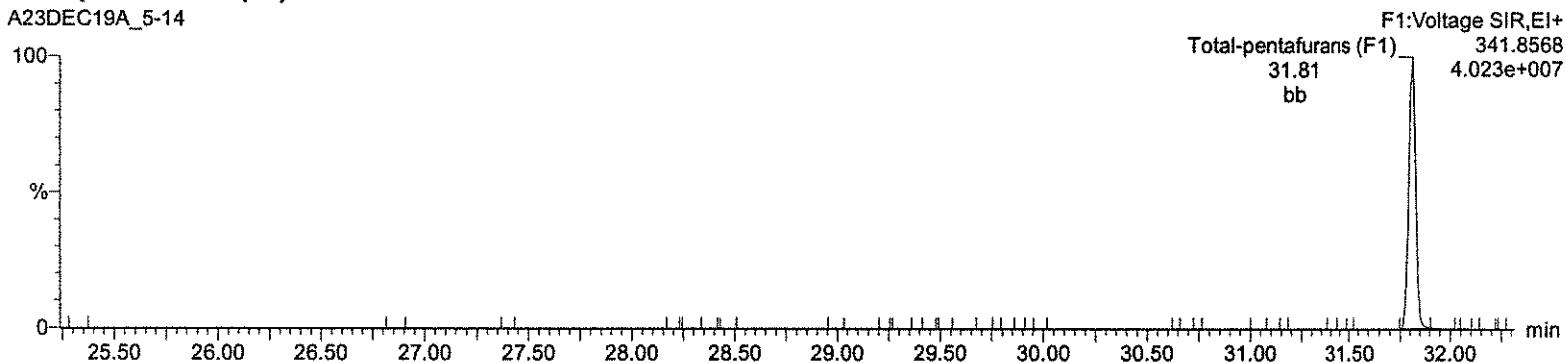
Total-pentafurans (F1)

A23DEC19A_5-14



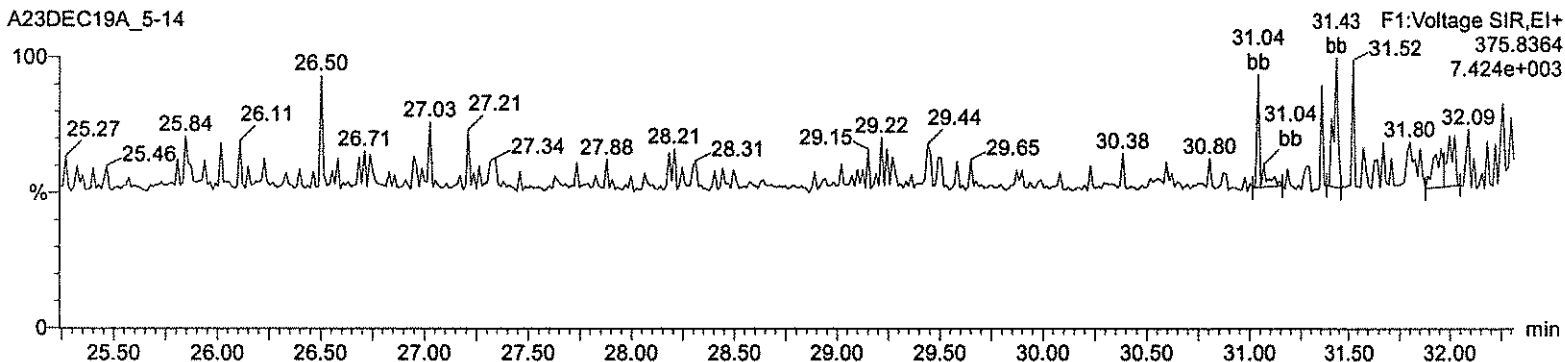
Total-pentafurans (F1)

A23DEC19A_5-14



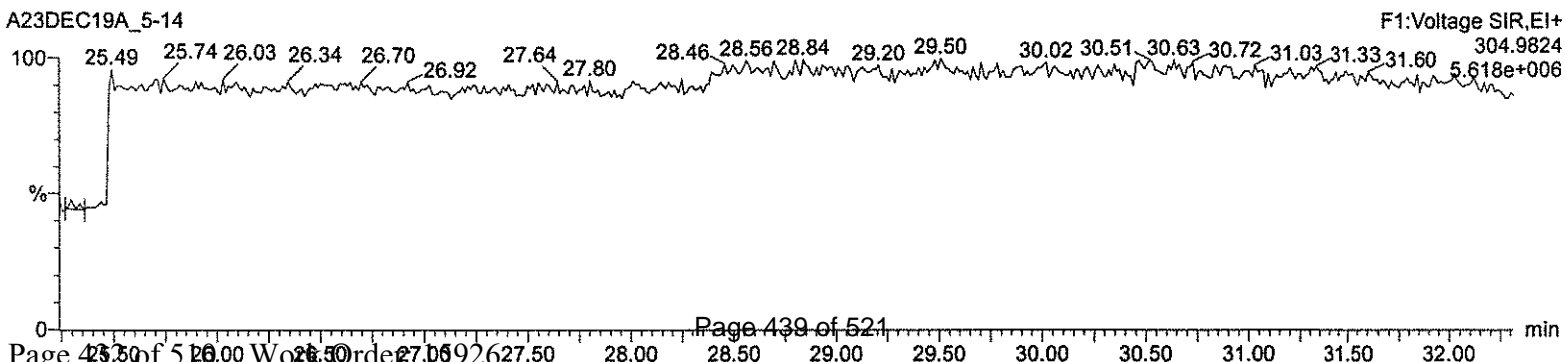
HxDPE

A23DEC19A_5-14



Lock Mass F1

A23DEC19A_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

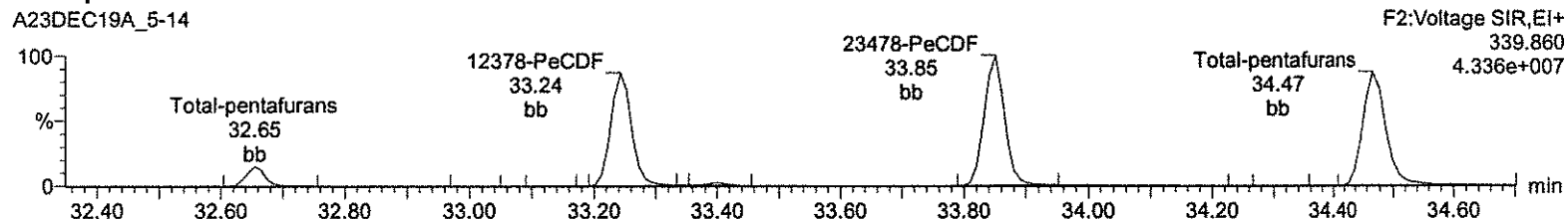
Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

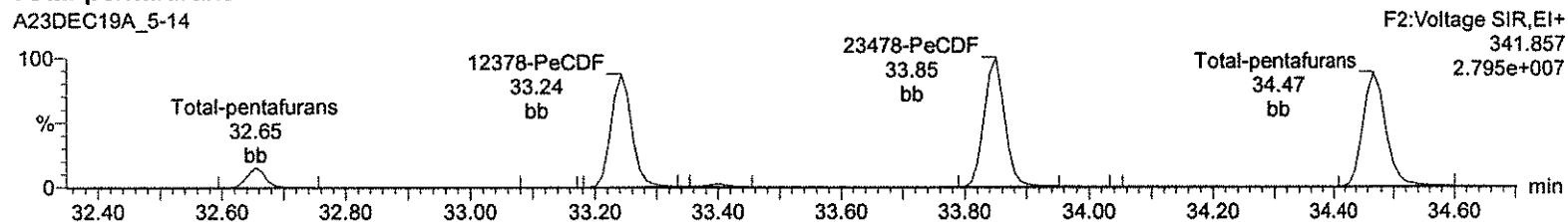
Total-pentafurans

A23DEC19A_5-14



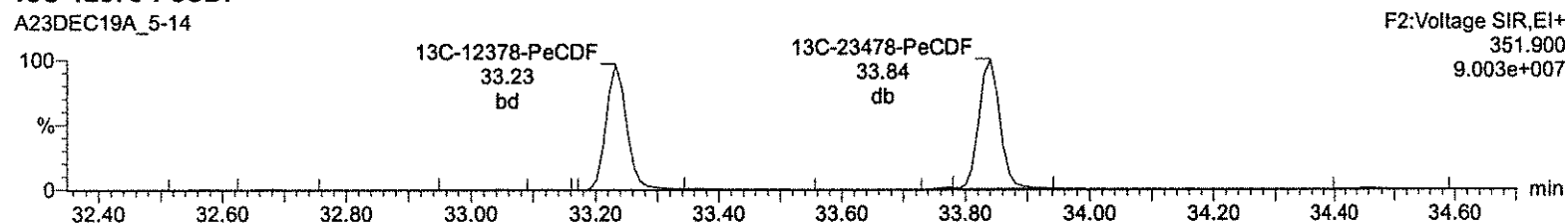
Total-pentafurans

A23DEC19A_5-14



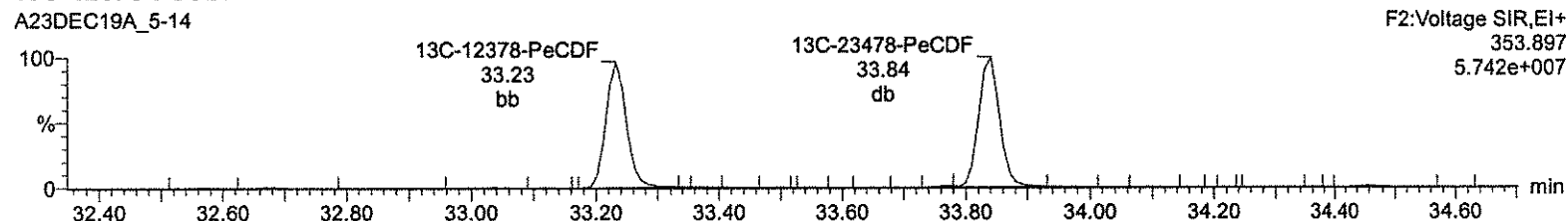
13C-12378-PeCDF

A23DEC19A_5-14



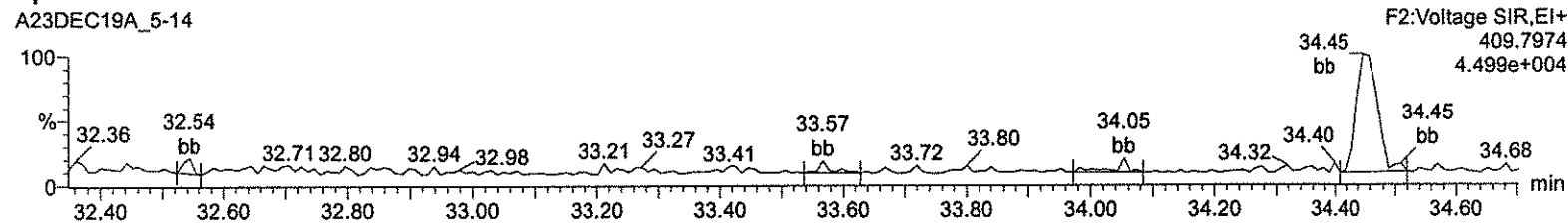
13C-12378-PeCDF

A23DEC19A_5-14



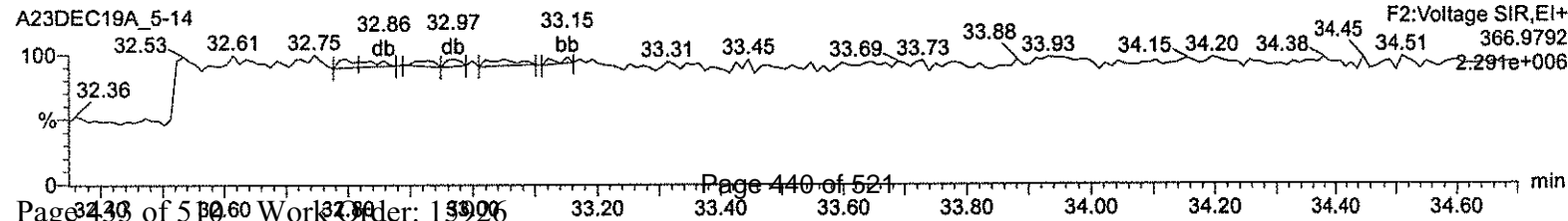
HpdPE

A23DEC19A_5-14



Lock Mass F2

A23DEC19A_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

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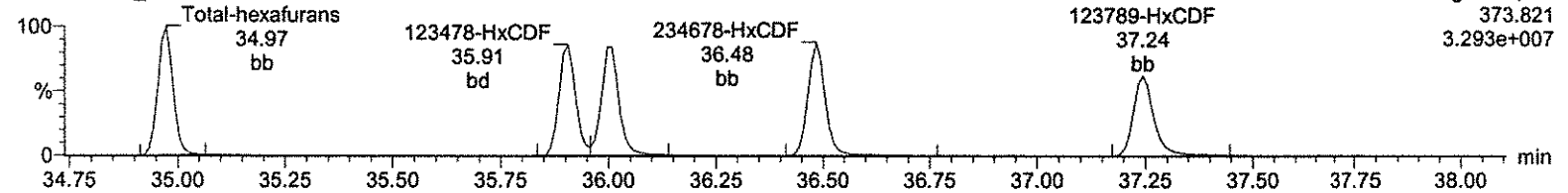
Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

Total-hexafurans

A23DEC19A_5-14

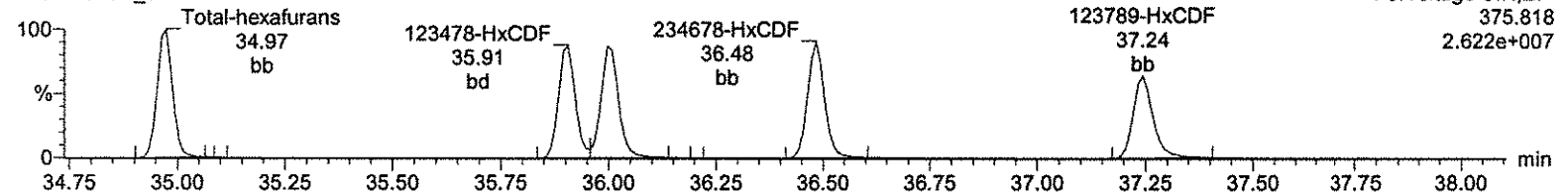
F3:Voltage SIR,EI+
373.821
3.293e+007



Total-hexafurans

A23DEC19A_5-14

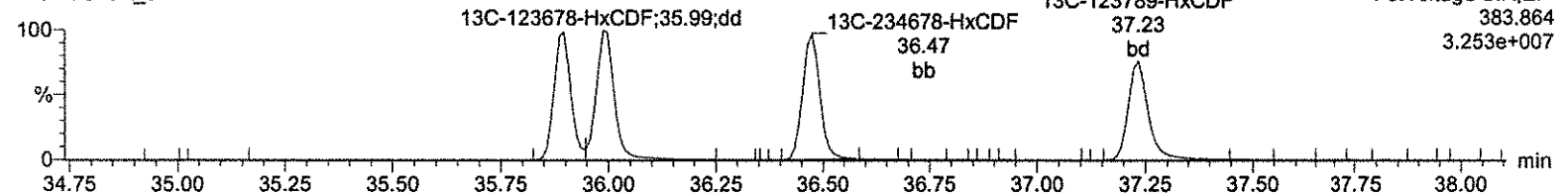
F3:Voltage SIR,EI+
375.818
2.622e+007



13C-123478-HxCDF

A23DEC19A_5-14

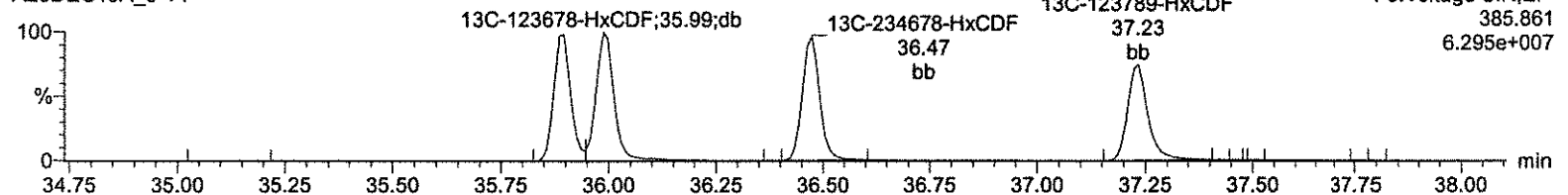
F3:Voltage SIR,EI+
383.864
3.253e+007



13C-123478-HxCDF

A23DEC19A_5-14

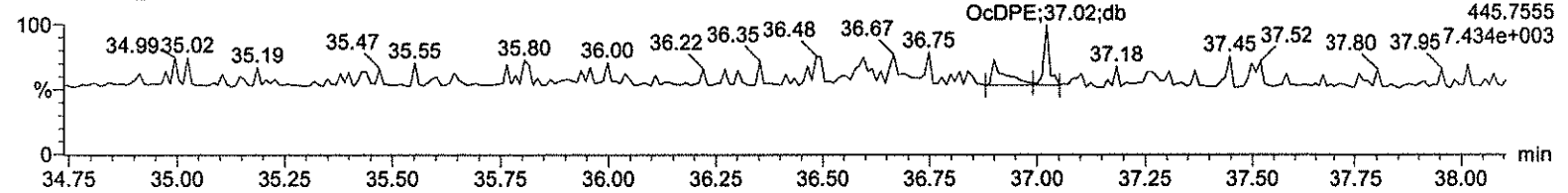
F3:Voltage SIR,EI+
385.861
6.295e+007



OcDPE

A23DEC19A_5-14

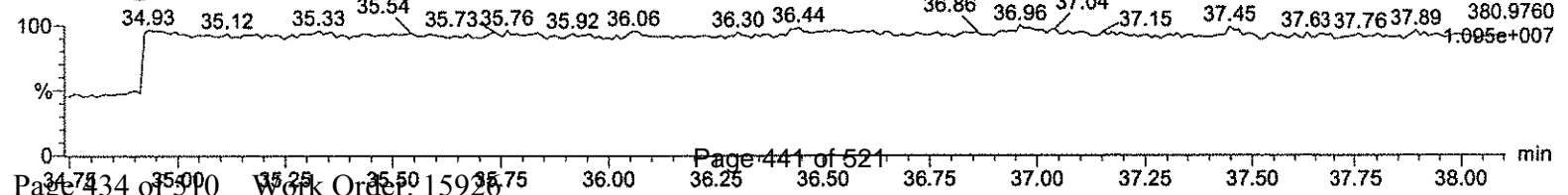
F3:Voltage SIR,EI+
445.7555
1.095e+003



Lock Mass F3

A23DEC19A_5-14

F3:Voltage SIR,EI+
380.9760
1.095e+007



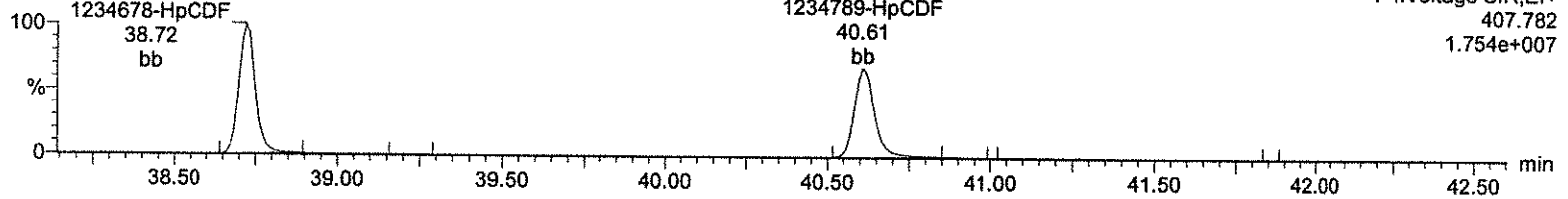
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Last Altered: Thursday, December 26, 2019 11:24:17 Eastern Standard Time
Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5,
Task: HRP750_2, User: MJC

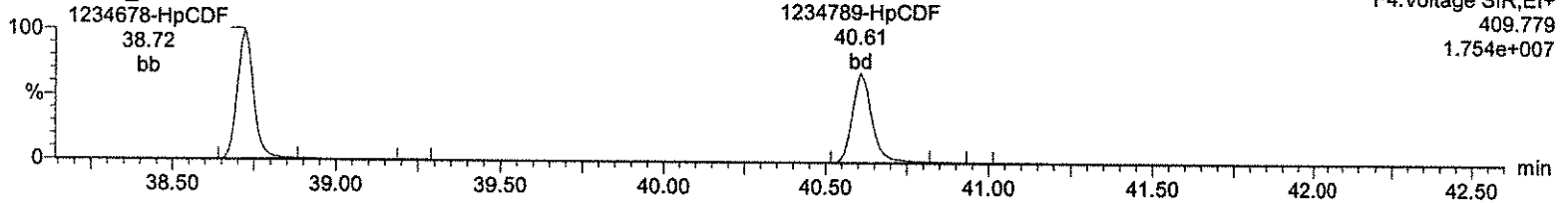
Total-heptafurans

A23DEC19A_5-14



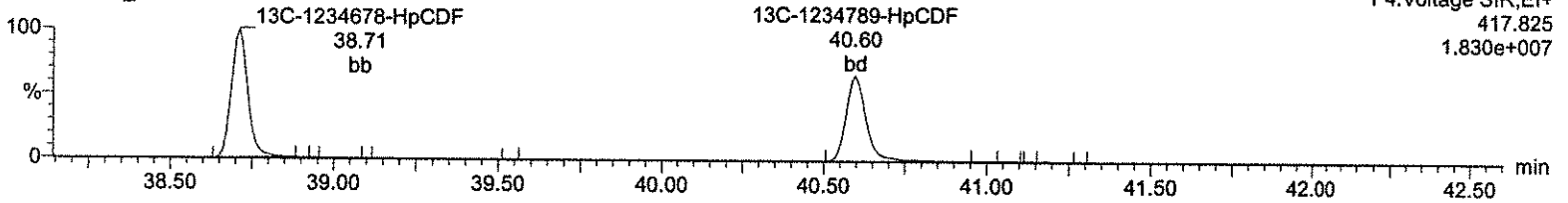
Total-heptafurans

A23DEC19A_5-14



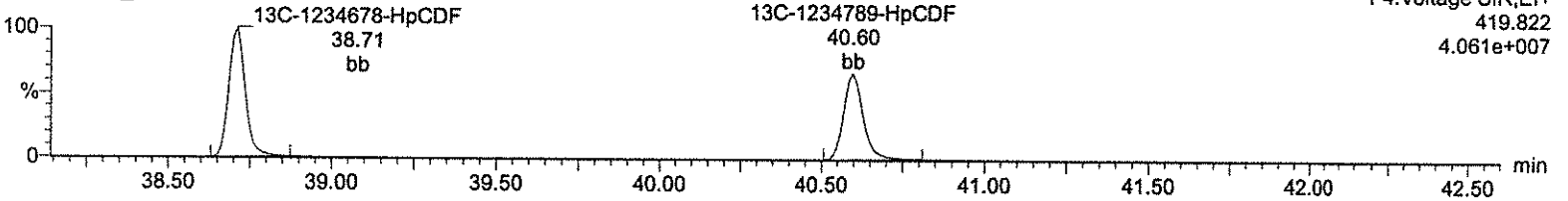
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A23DEC19A_5-14



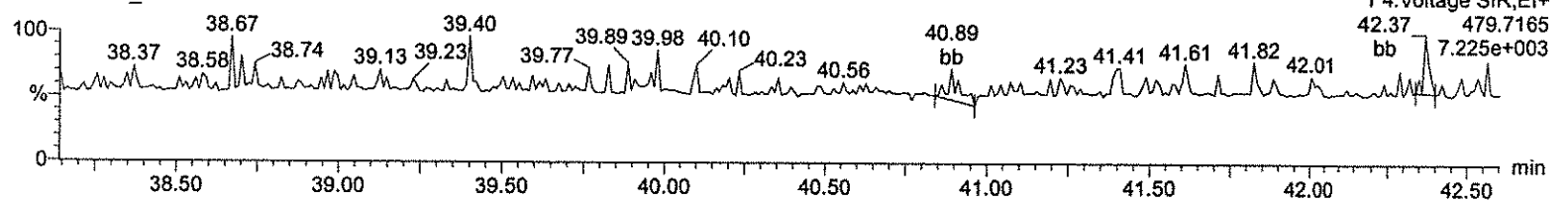
13C-1234678-HpCDF

A23DEC19A_5-14



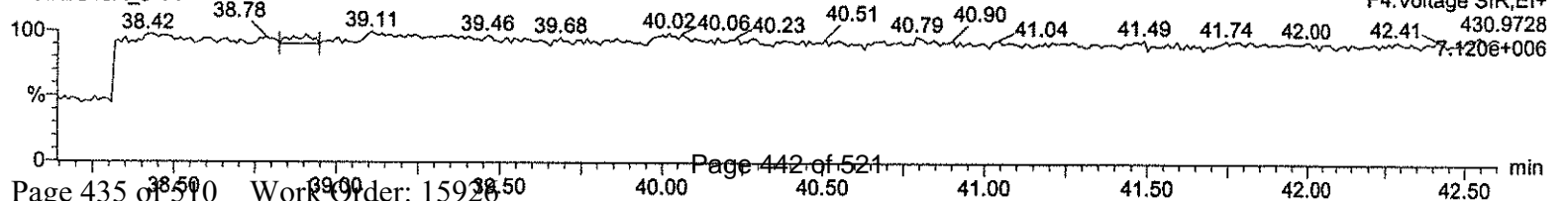
NoDPE

A23DEC19A_5-14



Lock Mass F4

A23DEC19A_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_5-14.qld

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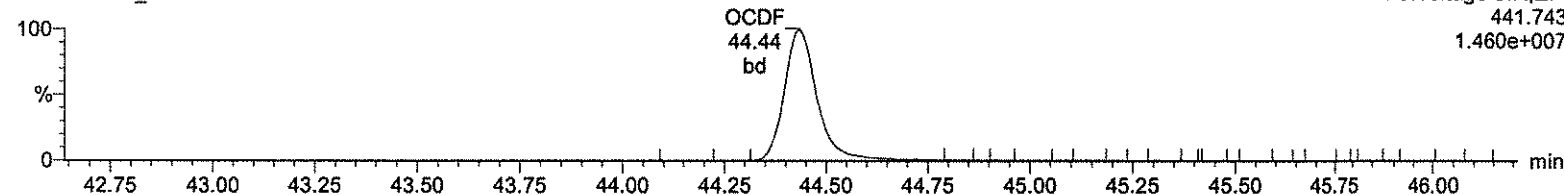
Printed: Thursday, December 26, 2019 11:25:02 Eastern Standard Time

Name: A23DEC19A_5-14, Date: 25-Dec-2019, Time: 22:55:24, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_5, Task: HRP750_2, User: MJC

OCDF

A23DEC19A_5-14

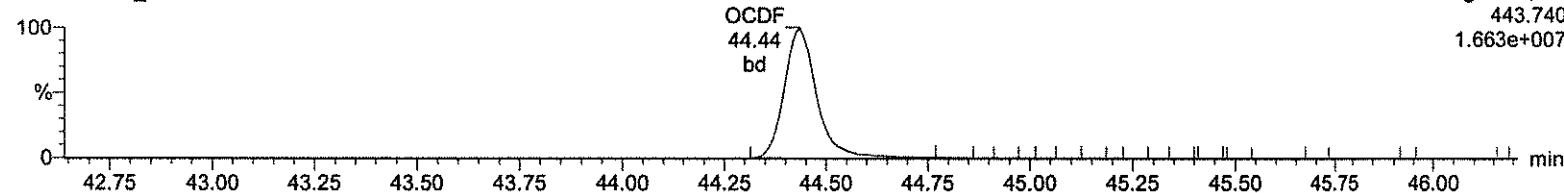
F5:Voltage SIR,EI+
441.743
1.460e+007



OCDF

A23DEC19A_5-14

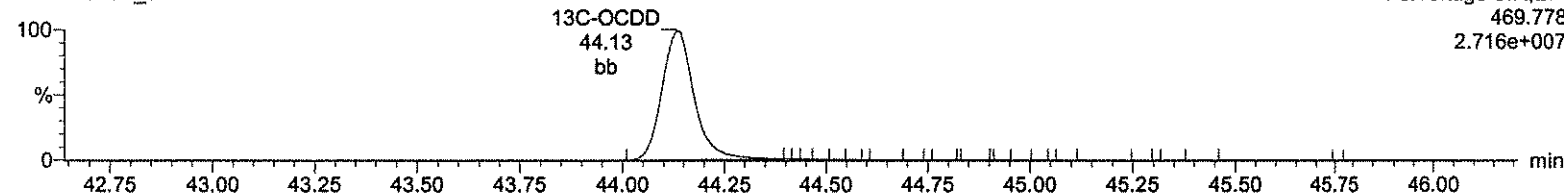
F5:Voltage SIR,EI+
443.740
1.663e+007



13C-OCDD

A23DEC19A_5-14

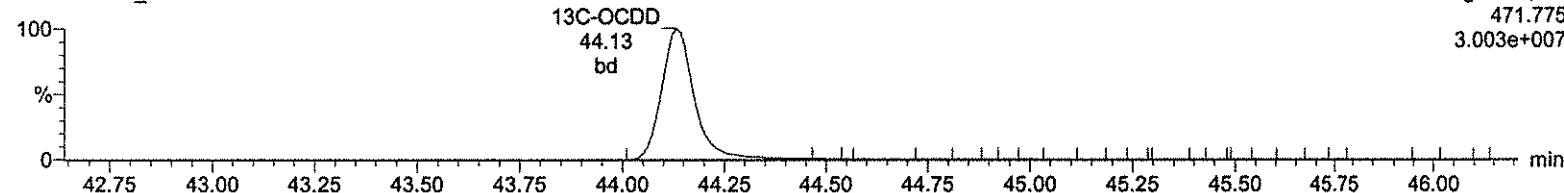
F5:Voltage SIR,EI+
469.778
2.716e+007



13C-OCDD

A23DEC19A_5-14

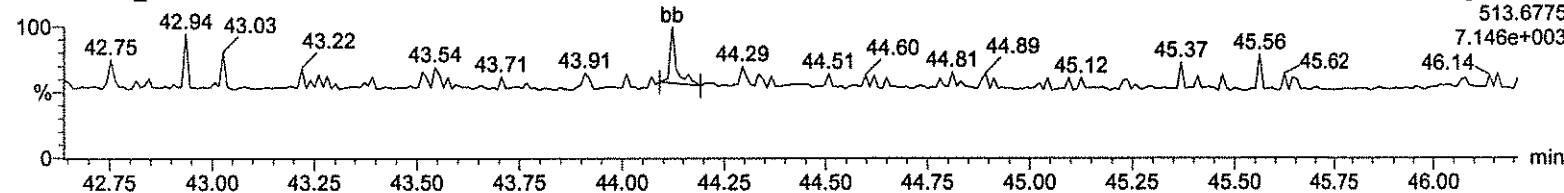
F5:Voltage SIR,EI+
471.775
3.003e+007



DeDPE

A23DEC19A_5-14

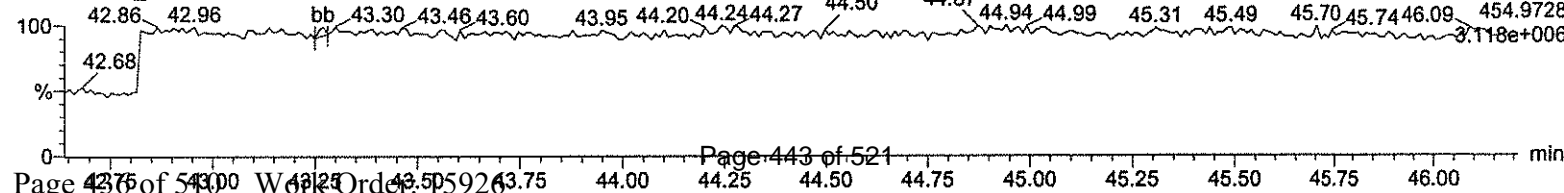
F5:Voltage SIR,EI+
513.6775
7.146e+003



Lock Mass F5

A23DEC19A_5-14

F5:Voltage SIR,EI+
454.9728
3.118e+006



Quantify Sample Summary Report
Method 1613 CCAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time
Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\Default.pro\Methdb\ICFA_1613_A10DEC19.mdb 11 Dec 2019 09:41:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

#	Name	Ion/Area	Ion2/Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	6.51e4	8.59e4	1.51e5	31.14	1.001	0.76	NO	11.540	0.0689	1.021	0.884	15.4	1.02e6	2718	375.8	1.37e6	3181	429.4	dd
2	12378-PeCDD	3.32e5	2.09e5	5.41e5	34.05	1.001	1.59	NO	53.507	0.144	0.913	0.853	7.0	8.07e6	7455	1082.1	4.95e6	6296	785.5	bb
3	123478-HxCDD	2.92e5	2.37e5	5.29e5	36.61	1.000	1.23	NO	53.396	0.166	1.003	0.940	6.8	6.77e6	7157	946.4	5.57e6	7628	729.7	bd
4	123678-HxCDD	3.27e5	2.63e5	5.90e5	36.71	1.000	1.24	NO	52.131	0.173	0.984	0.944	4.3	6.53e6	7157	912.0	5.10e6	7628	688.3	dd
5	123789-HxCDD	3.13e5	2.54e5	5.67e5	36.94	1.007	1.23	NO	54.330	0.172	1.007	0.927	8.7	5.93e6	7157	828.4	4.84e6	7628	635.0	dd
6	1234678-HpCDD	2.48e5	2.38e5	4.84e5	39.97	1.001	1.04	NO	47.295	0.160	0.984	1.040	-5.4	3.70e6	4782	773.1	3.55e6	5535	641.9	bb
7	OCDD	4.08e5	4.46e5	8.54e5	44.15	1.000	0.91	NO	99.502	0.258	0.967	0.971	-0.4	4.55e6	4801	948.5	5.01e6	4871	1027.9	bd
8	2378-TCDF	7.16e4	9.44e4	1.66e5	30.35	1.001	0.76	NO	9.034	0.0731	0.884	0.978	-9.7	8.45e5	2935	288.0	1.23e6	3538	346.6	bb
9	12378-PeCDF	4.34e5	2.85e5	7.19e5	33.25	1.000	1.52	NO	47.705	0.119	0.902	0.945	-4.6	1.10e7	8677	1266.2	7.42e6	10661	695.6	bd
10	23478-PeCDF	4.87e5	3.22e5	8.09e5	33.86	1.000	1.51	NO	47.463	0.111	0.937	0.987	-5.1	1.24e7	8677	1432.9	8.05e6	10661	755.1	bb
11	123478-HxCDF	3.81e5	3.10e5	6.91e5	35.91	1.001	1.23	NO	49.307	0.173	1.072	1.087	-1.4	8.74e6	10894	802.0	7.03e6	10811	650.4	bd
12	123678-HxCDF	4.29e5	3.37e5	7.65e5	36.01	1.000	1.27	NO	50.488	0.172	1.050	1.041	0.9	8.81e6	10894	808.7	7.15e6	10811	661.2	db
13	234678-HxCDF	3.97e5	3.22e5	7.19e5	36.49	1.000	1.23	NO	49.357	0.180	1.121	1.136	-1.3	8.66e6	10894	795.2	6.80e6	10811	628.6	bb
14	123789-HxCDF	3.42e5	2.71e5	6.14e5	37.25	1.000	1.26	NO	50.045	0.242	1.062	1.061	0.1	6.23e6	10894	572.1	4.93e6	10811	456.0	bb
15	1234678-HpCDF	3.23e5	3.20e5	6.44e5	38.73	1.000	1.01	NO	51.891	0.137	1.193	1.150	3.8	5.56e6	5392	1030.5	5.36e6	6136	873.2	bb
16	1234789-HpCDF	2.73e5	2.69e5	5.42e5	40.63	1.001	1.02	NO	50.821	0.188	1.222	1.202	1.6	3.79e6	5392	703.2	3.69e6	6136	600.7	bd
17	OCDF	4.54e5	5.07e5	9.60e5	44.45	1.007	0.90	NO	96.046	0.243	1.088	1.133	-4.0	5.00e6	5860	853.8	5.48e6	4761	1150.2	bd
18	13C-2378-TCDD	6.60e5	8.19e5	1.48e6	31.11	1.018	0.81	NO	103.695	0.145	1.170	1.128	3.7	1.08e7	5834	1916.3	1.37e7	4790	2869.1	bd
19	13C-12378-PeCDD	7.22e5	4.63e5	1.18e6	34.03	1.114	1.56	NO	124.688	0.284	0.937	0.751	24.7	1.71e7	6234	2742.7	1.13e7	7346	1532.6	bb
20	13C-123478-HxCDD	5.89e5	4.66e5	1.05e6	36.60	0.991	1.26	NO	95.660	0.153	0.857	0.896	-4.3	1.33e7	6060	2187.9	1.03e7	6689	1546.0	bd
21	13C-123678-HxCDD	6.65e5	5.33e5	1.20e6	36.70	0.994	1.25	NO	98.835	0.139	0.974	0.986	-1.2	1.26e7	6060	2077.6	1.04e7	6689	1562.2	dd
22	13C-1234678-HpCDD	4.98e5	4.87e5	9.84e5	39.95	1.082	1.02	NO	119.176	0.157	0.800	0.672	19.2	7.85e6	6004	1307.8	7.29e6	3806	1915.0	bb
23	13C-OCDD	8.27e5	9.38e5	1.77e6	44.13	1.195	0.88	NO	223.593	0.202	0.718	0.642	11.8	9.05e6	5383	1681.4	1.02e7	6727	1521.2	bb
24	13C-2378-TCDF	8.10e5	1.07e6	1.88e6	30.33	0.993	0.76	NO	118.813	0.191	1.485	1.250	18.8	9.76e6	8878	1099.0	1.25e7	6358	1969.1	bb
25	13C-12378-PeCDF	9.77e5	6.18e5	1.60e6	33.24	1.088	1.58	NO	124.772	0.380	1.261	1.011	24.8	2.63e7	11957	2203.1	1.62e7	12517	1292.6	bb
26	13C-23478-PeCDF	1.06e6	6.69e5	1.73e6	33.85	1.108	1.58	NO	128.423	0.361	1.365	1.063	28.4	2.70e7	11957	2256.9	1.69e7	12517	1353.6	bb
27	13C-123478-HxCDF	4.35e5	8.54e5	1.29e6	35.89	0.972	0.51	NO	94.344	0.204	1.048	1.111	-5.7	9.71e6	9117	1065.5	1.92e7	12024	1598.0	bd
28	13C-123678-HxCDF	4.93e5	9.64e5	1.46e6	36.00	0.975	0.51	NO	94.996	0.182	1.184	1.247	-5.0	1.02e7	9117	1122.9	1.95e7	12024	1625.9	dd
29	13C-234678-HxCDF	4.40e5	8.43e5	1.28e6	36.48	0.988	0.52	NO	96.453	0.210	1.044	1.082	-3.5	9.10e6	9117	997.7	1.78e7	12024	1483.1	bb
30	13C-123789-HxCDF	3.89e5	7.67e5	1.16e6	37.24	1.009	0.51	NO	97.228	0.235	0.940	0.967	-2.8	7.12e6	9117	781.1	1.41e7	12024	1169.6	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.31e5	7.48e5	1.08e6	38.72	1.049	0.44	NO	100.884	0.183	0.878	0.870	0.9	5.62e6	4854	1157.9	1.30e7	9957	1306.2	bb	bb
32	13C-1234789-HpCDF	2.65e5	6.22e5	8.87e5	40.61	1.100	0.43	NO	106.461	0.235	0.721	0.677	6.5	3.80e6	4854	782.1	8.71e6	9957	875.2	bb	bb
33	13C-1234-TCDD	5.50e5	7.15e5	1.26e6	30.55	0.000	0.77	NO	100.000	0.164	1.000	1.000	0.0	6.93e6	5634	1230.2	8.91e6	4790	1860.0	bb	bb
34	13C-123789-HxCDD	6.83e5	5.47e5	1.23e6	36.93	0.000	1.25	NO	100.000	0.137	1.000	1.000	0.0	1.29e7	6060	2134.2	1.00e7	6689	1587.9	dd	dd
35	37Cl-2378-TCDD	1.35e5		1.35e5	31.14	1.019			10.060	0.0381	1.068	1.061	0.6	2.38e6	2579	921.9				bb	

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

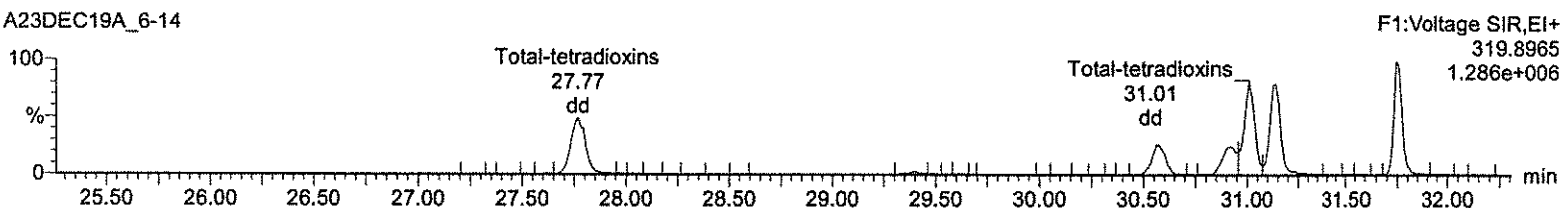
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6,
Task: HRP750_2, User: MJC

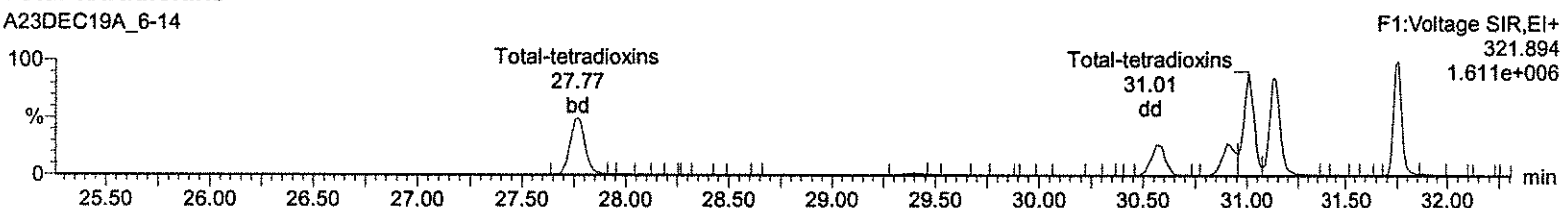
Total-tetradoxins

A23DEC19A_6-14



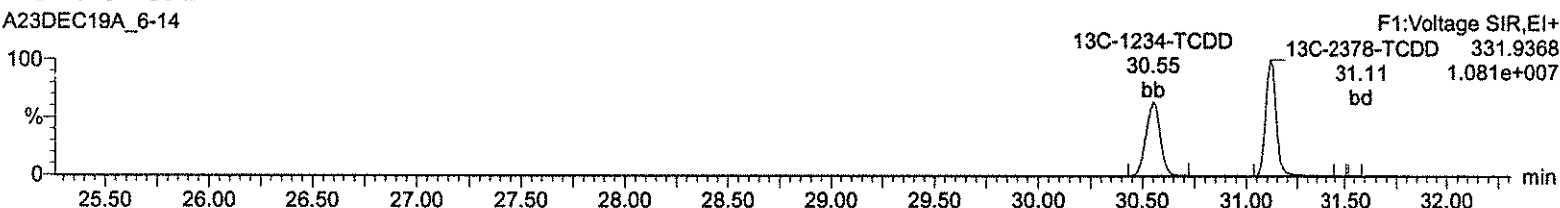
Total-tetradoxins

A23DEC19A_6-14



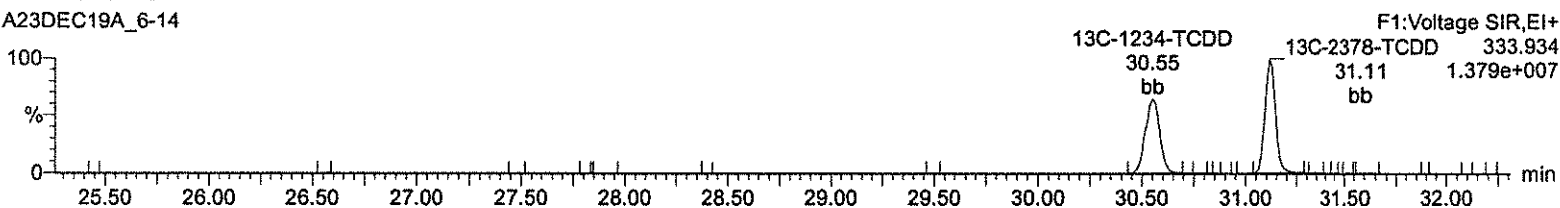
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A23DEC19A_6-14



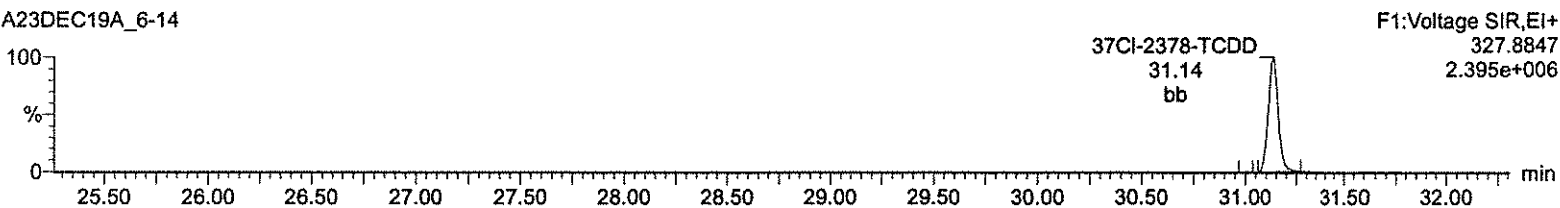
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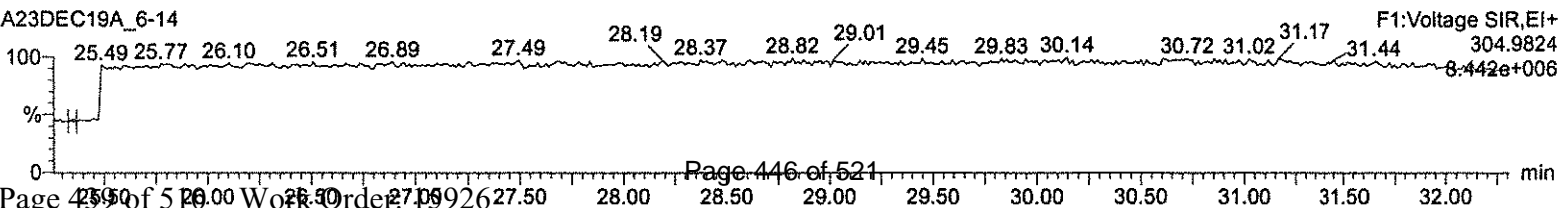
37Cl-2378-TCDD

A23DEC19A_6-14



Lock Mass F1

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

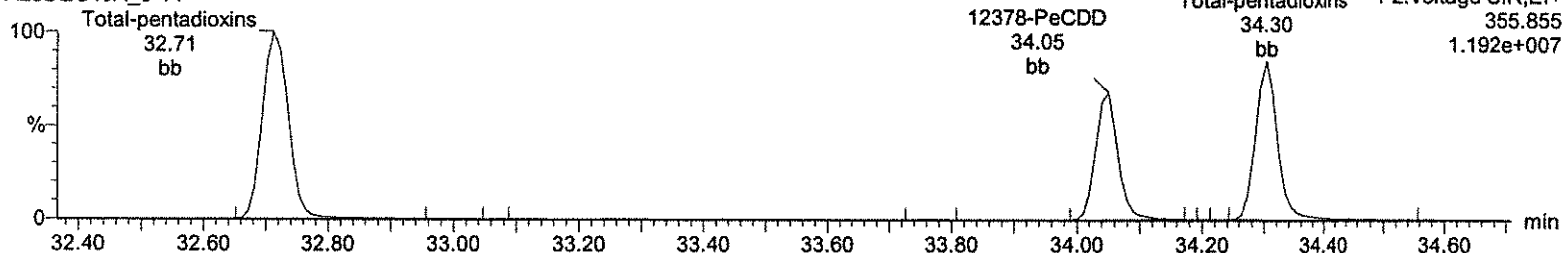
Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

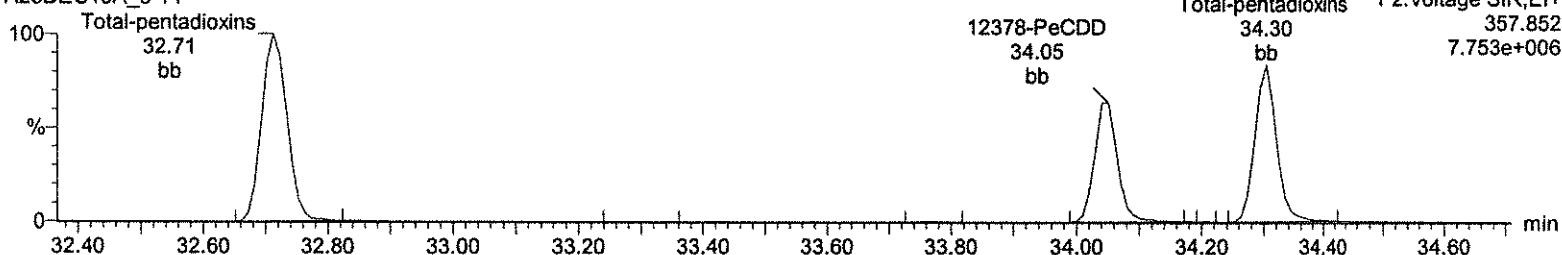
Total-pentadioxins

A23DEC19A_6-14



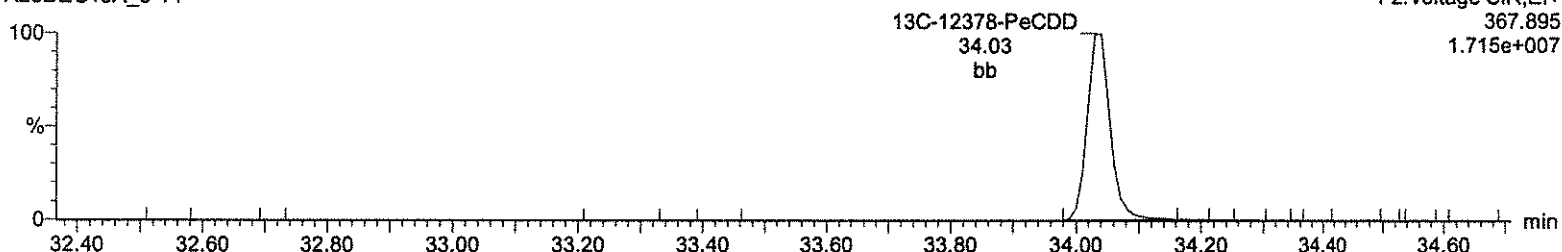
Total-pentadioxins

A23DEC19A_6-14



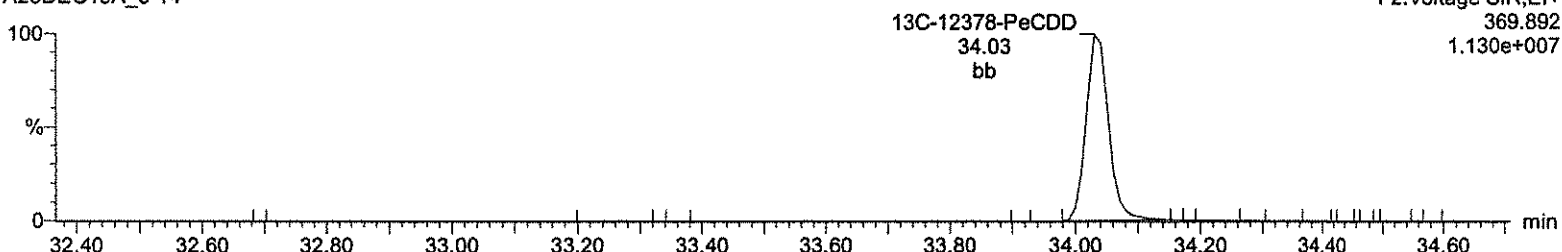
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A23DEC19A_6-14



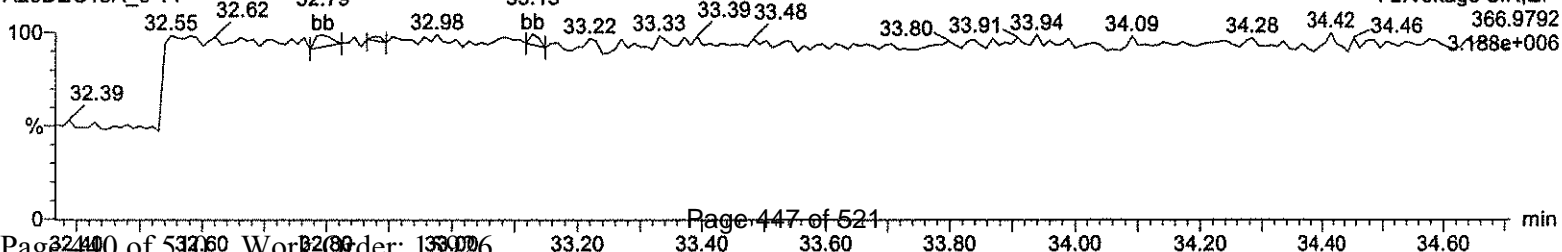
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A23DEC19A_6-14



Lock Mass F2

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

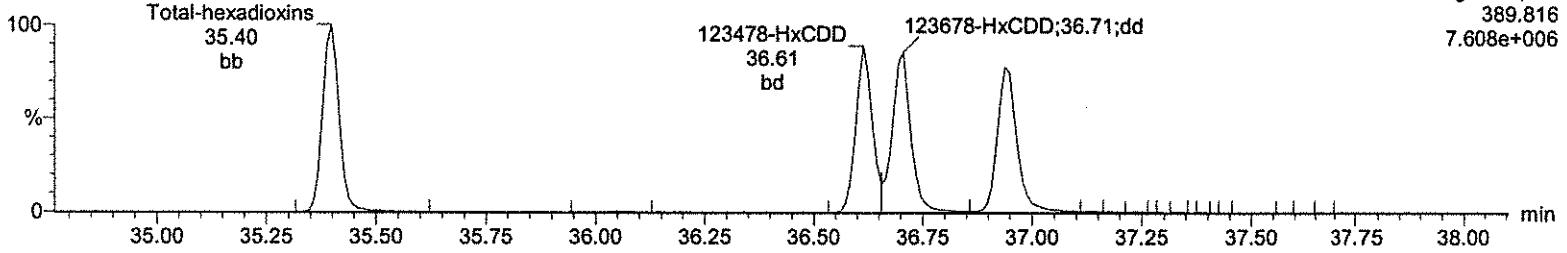
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Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6,
Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A_6-14

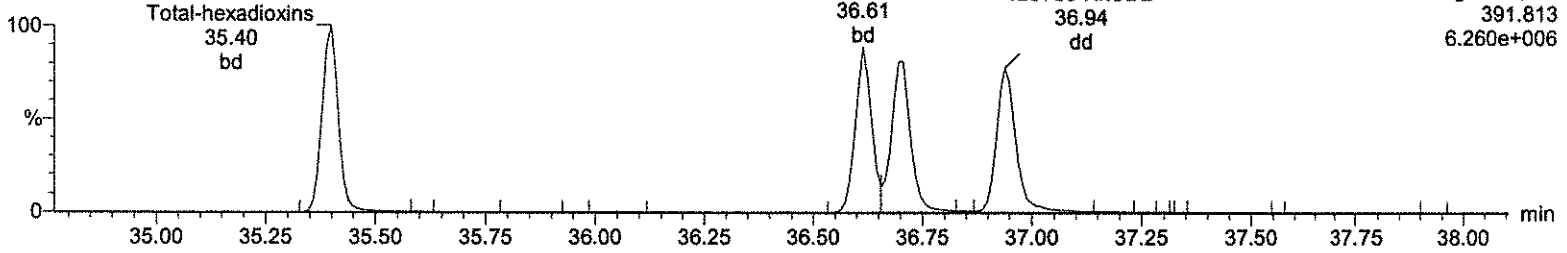
F3:Voltage SIR,EI+
389.816
7.608e+006



Total-hexadioxins

A23DEC19A_6-14

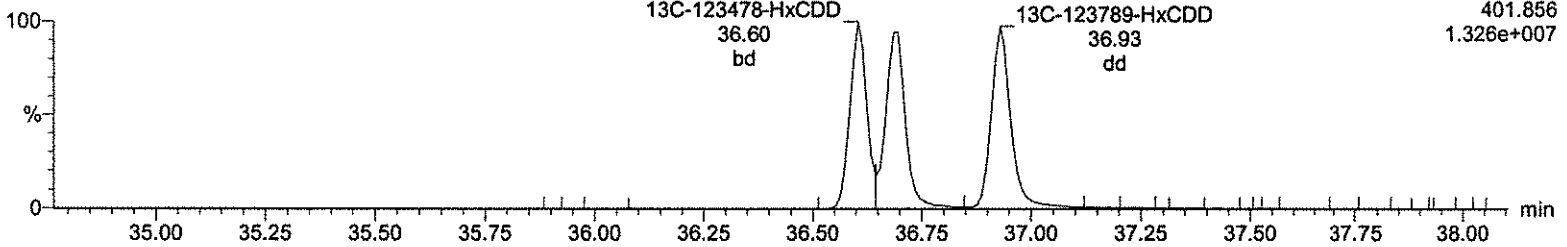
F3:Voltage SIR,EI+
391.813
6.260e+006



13C-123478-HxCDD

A23DEC19A_6-14

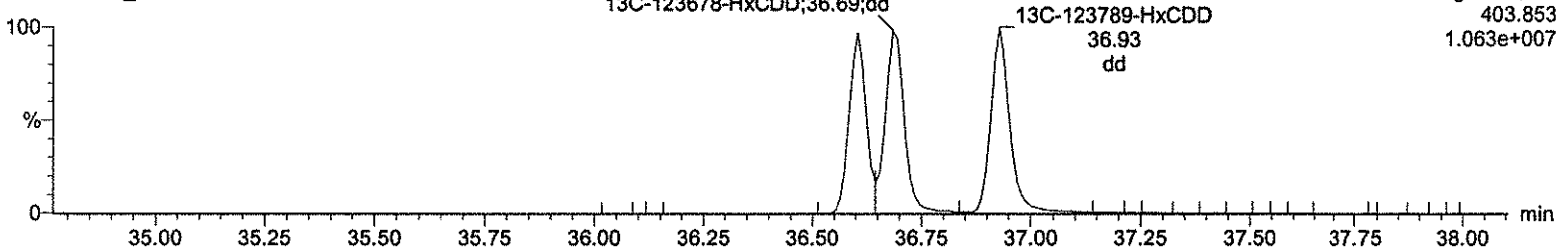
F3:Voltage SIR,EI+
401.856
1.326e+007



13C-123478-HxCDD

A23DEC19A_6-14

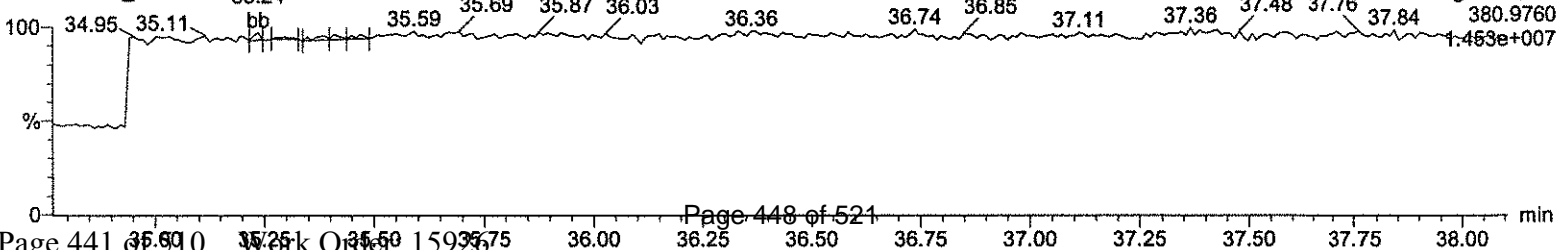
F3:Voltage SIR,EI+
403.853
1.063e+007



Lock Mass F3

A23DEC19A_6-14

F3:Voltage SIR,EI+
380.9760
1.453e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

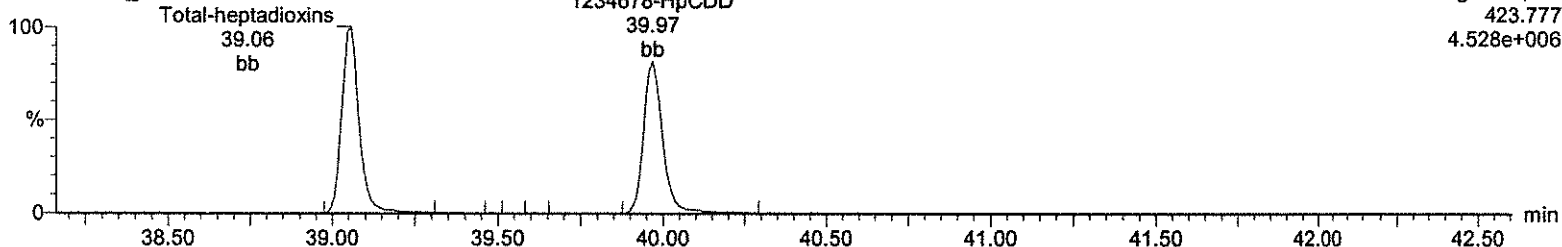
Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

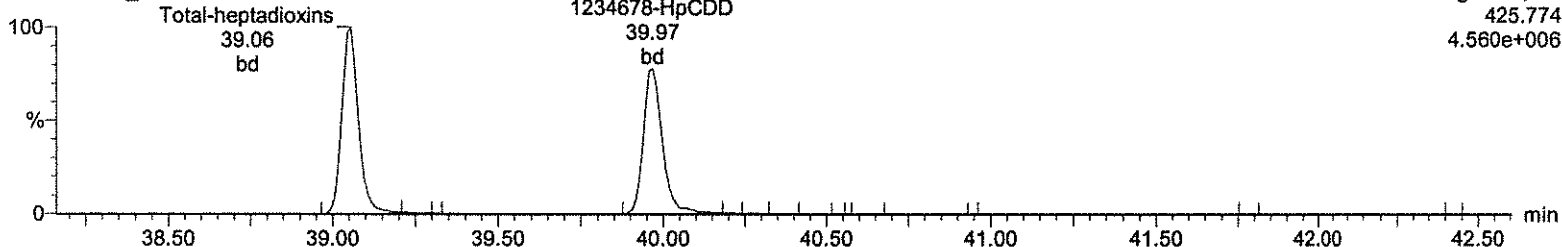
Total-heptadioxins

A23DEC19A_6-14



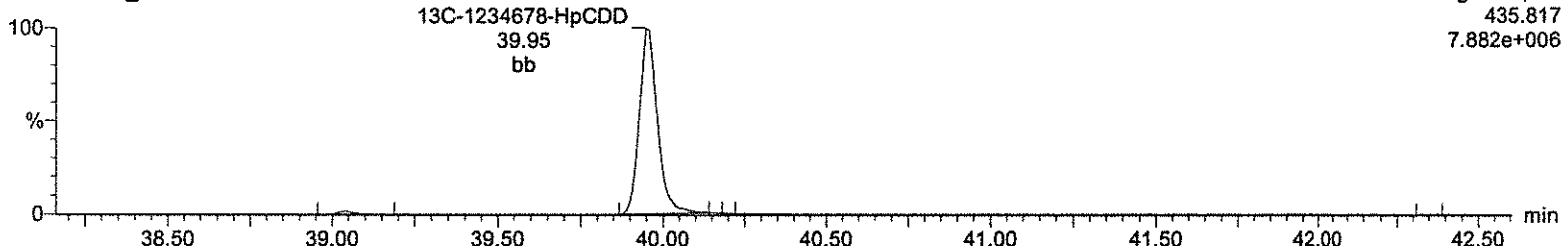
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A23DEC19A_6-14



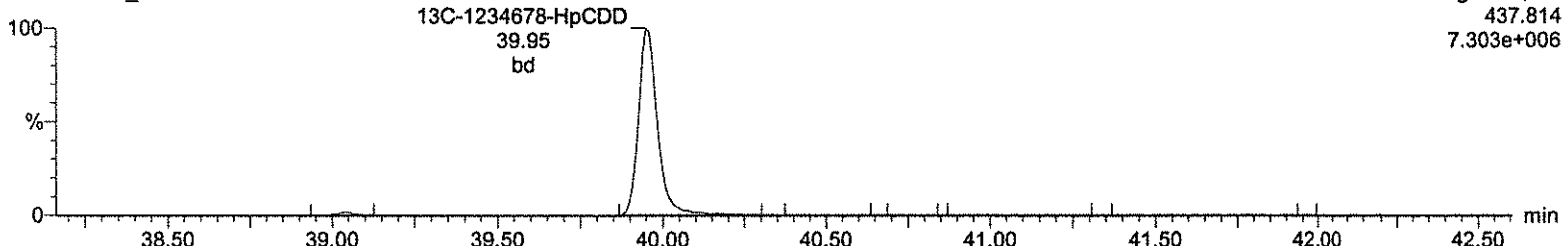
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A23DEC19A_6-14



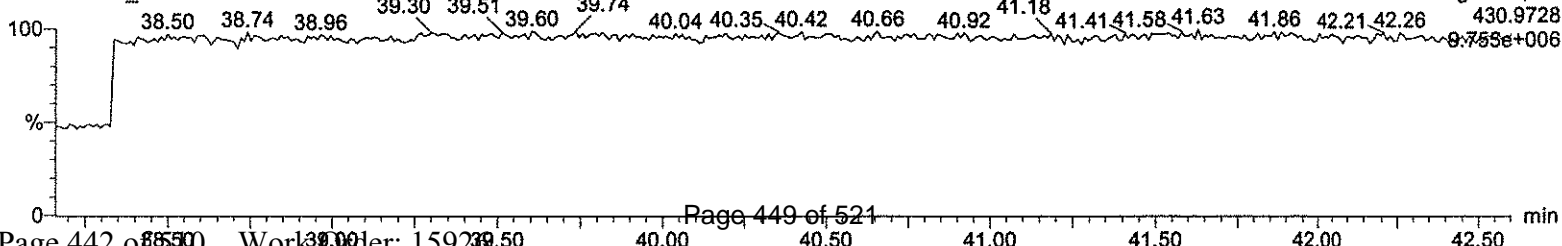
13C-1234678-HpCDD

A23DEC19A_6-14



Lock Mass F4

A23DEC19A_6-14



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Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

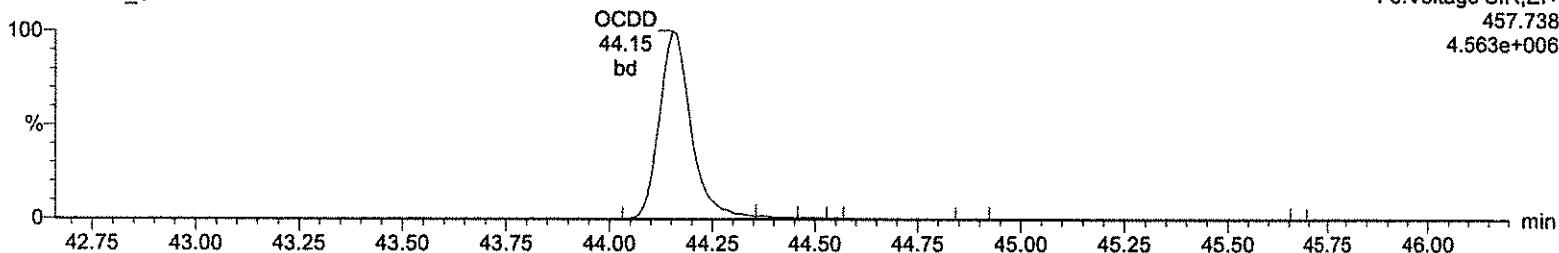
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Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

OCDD

A23DEC19A_6-14

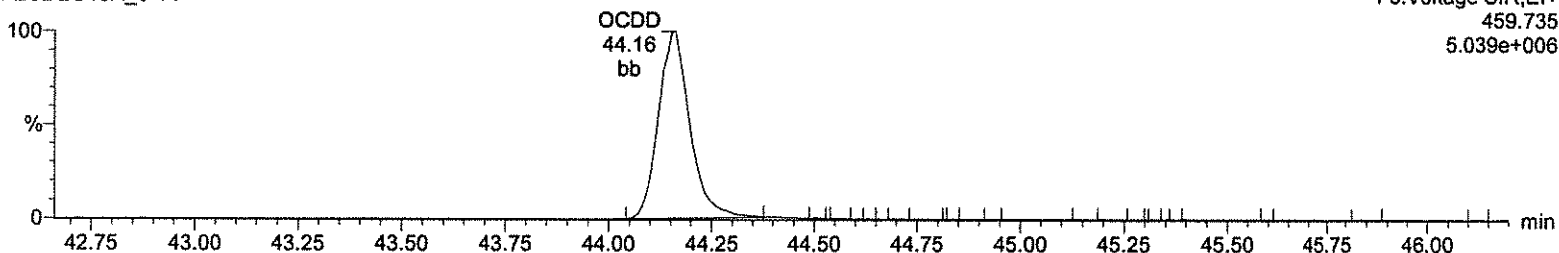
F5:Voltage SIR,EI+
457.738
4.563e+006



OCDD

A23DEC19A_6-14

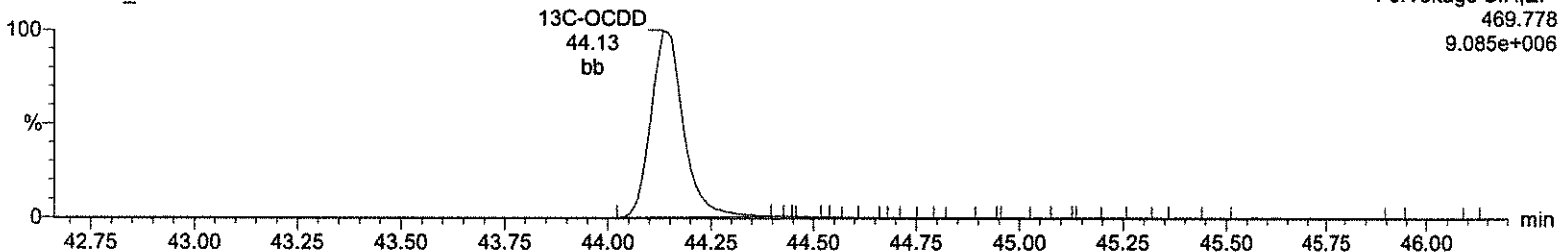
F5:Voltage SIR,EI+
459.735
5.039e+006



13C-OCDD

A23DEC19A_6-14

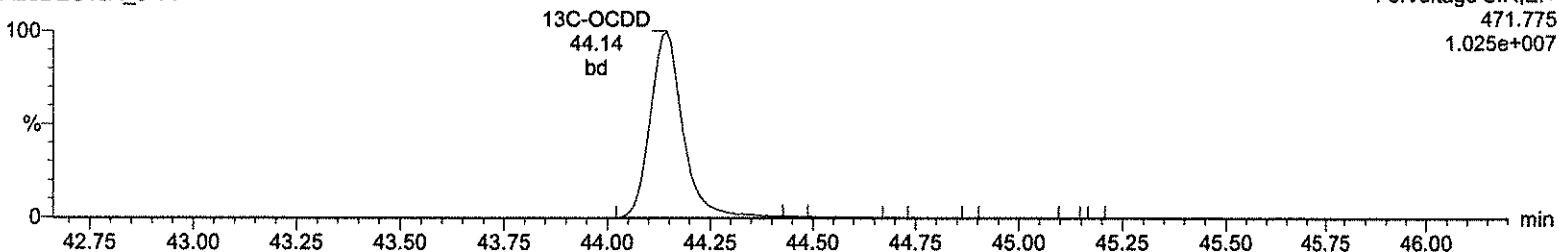
F5:Voltage SIR,EI+
469.778
9.085e+006



13C-OCDD

A23DEC19A_6-14

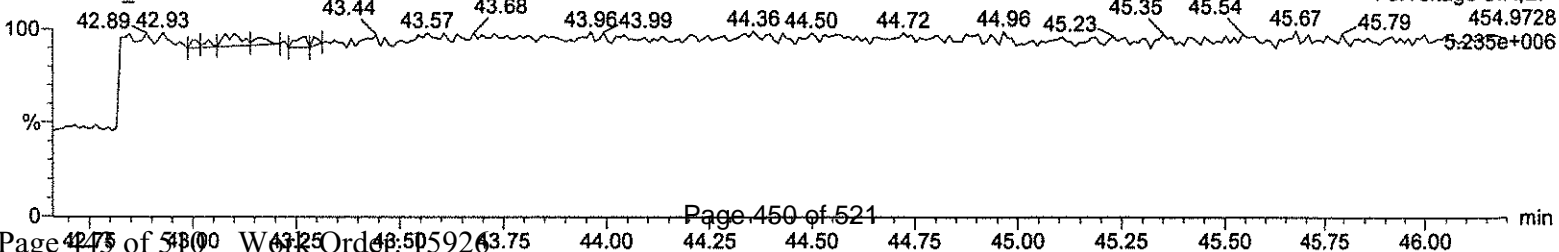
F5:Voltage SIR,EI+
471.775
1.025e+007



Lock Mass F5

A23DEC19A_6-14

F5:Voltage SIR,EI+
454.9728
5.235e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

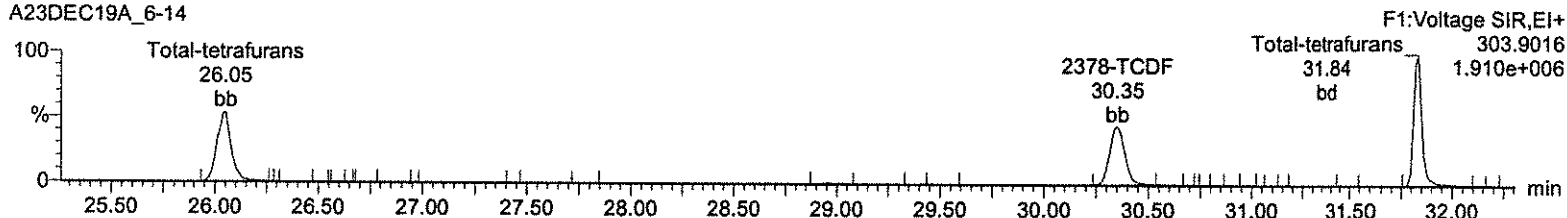
Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

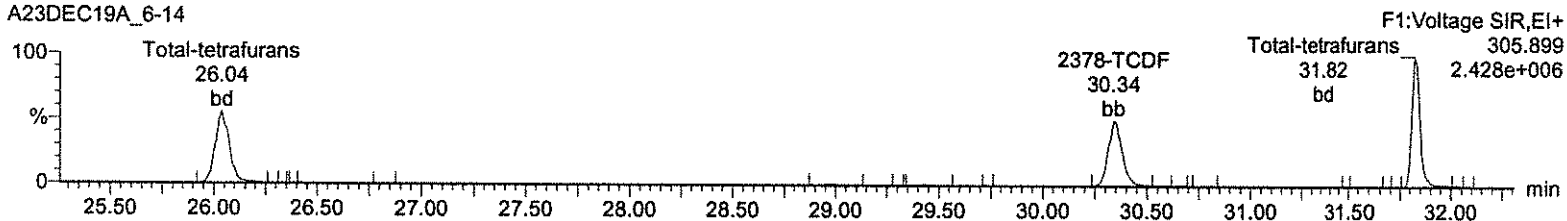
Total-tetrafurans

A23DEC19A_6-14



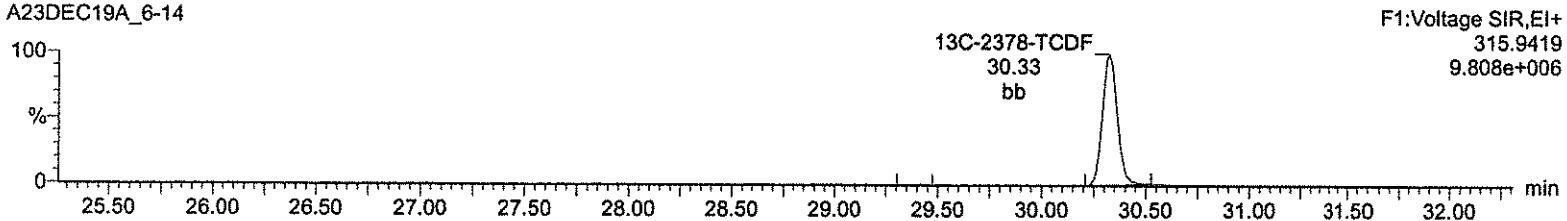
Total-tetrafurans

A23DEC19A_6-14



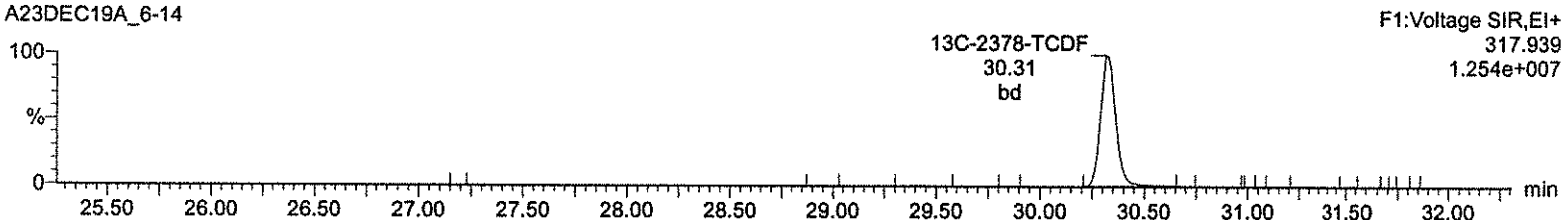
13C-2378-TCDF

A23DEC19A_6-14



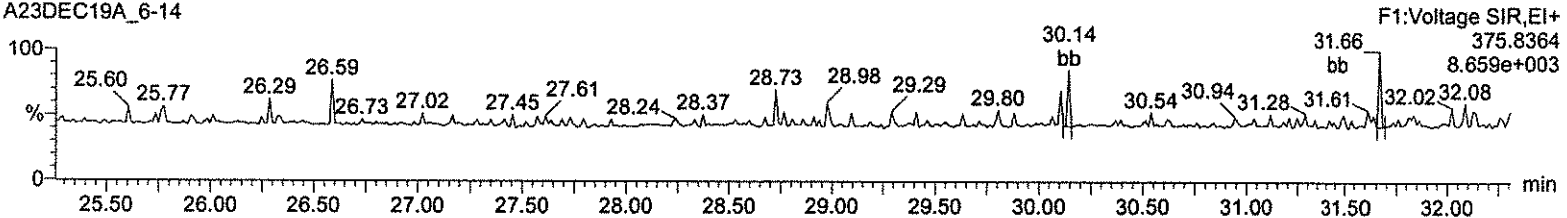
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A23DEC19A_6-14



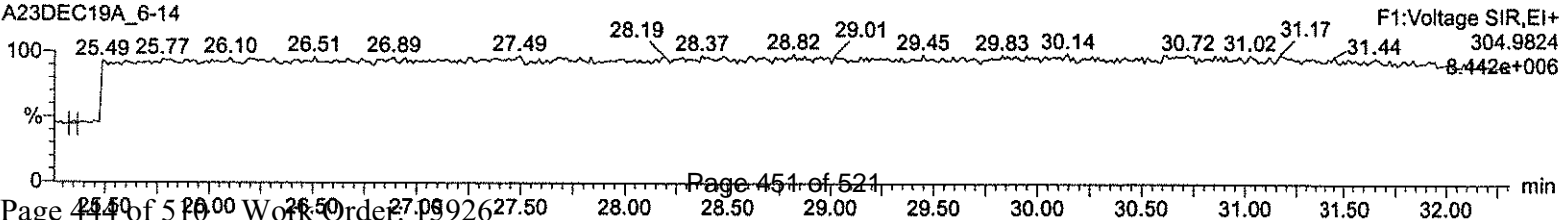
HxDPE

A23DEC19A_6-14



Lock Mass F1

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

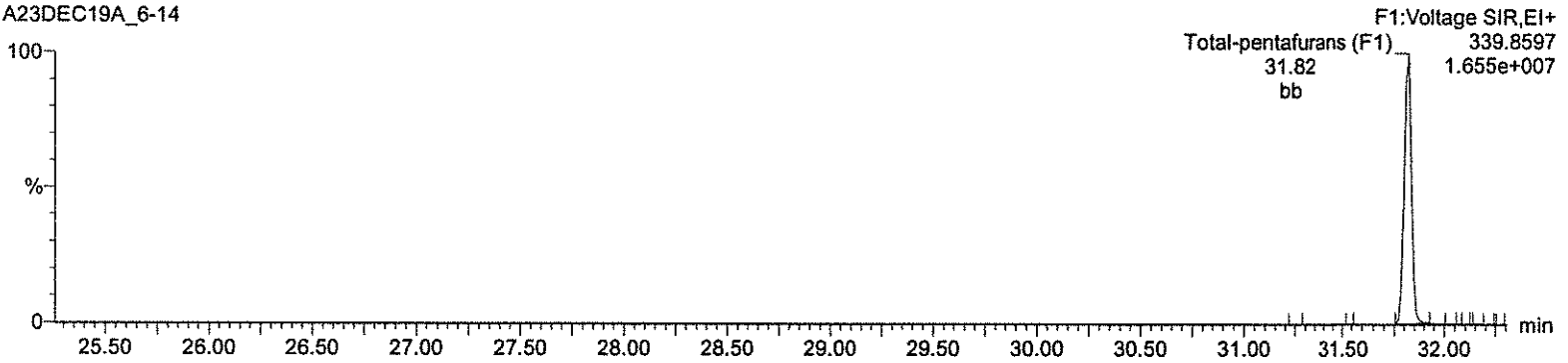
Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

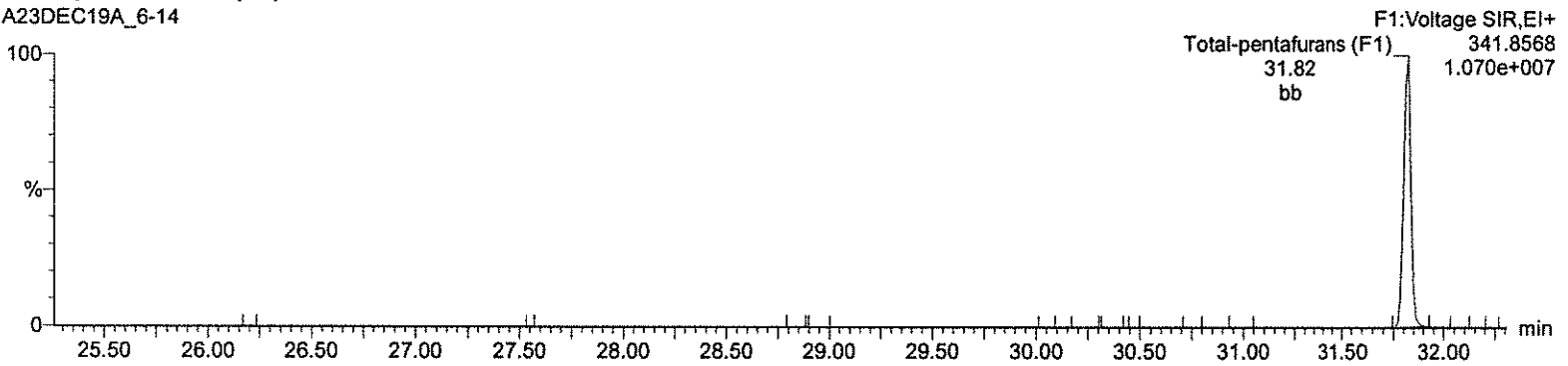
Total-pentafurans (F1)

A23DEC19A_6-14



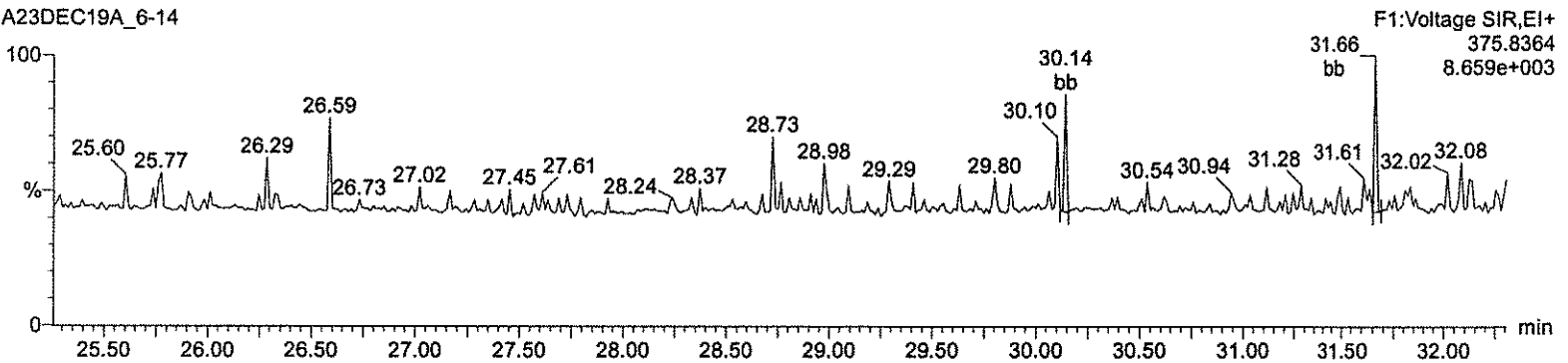
Total-pentafurans (F1)

A23DEC19A_6-14



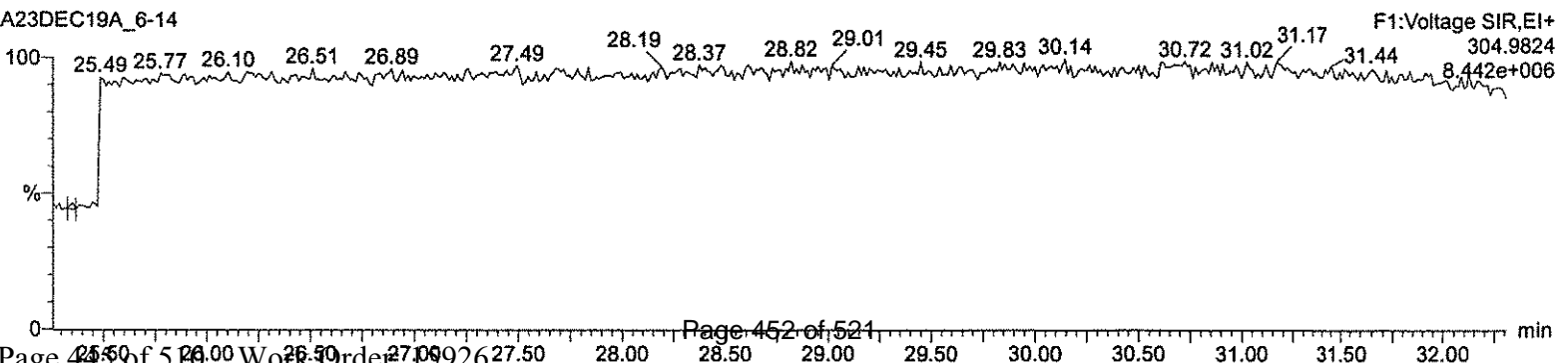
HxDPE

A23DEC19A_6-14



Lock Mass F1

A23DEC19A_6-14



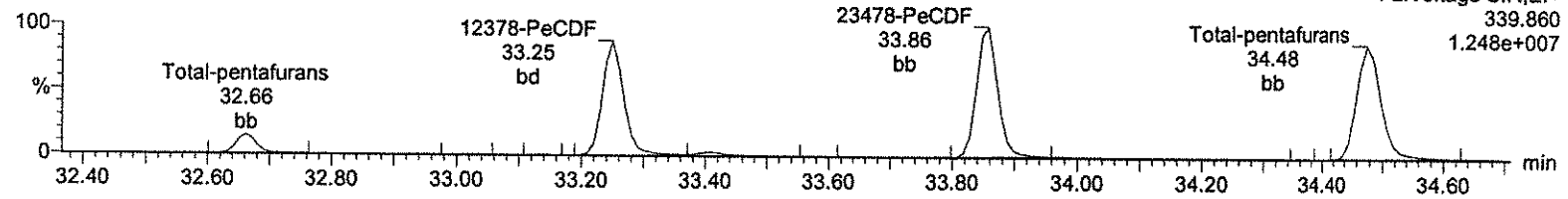
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Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time
Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6,
Task: HRP750_2, User: MJC

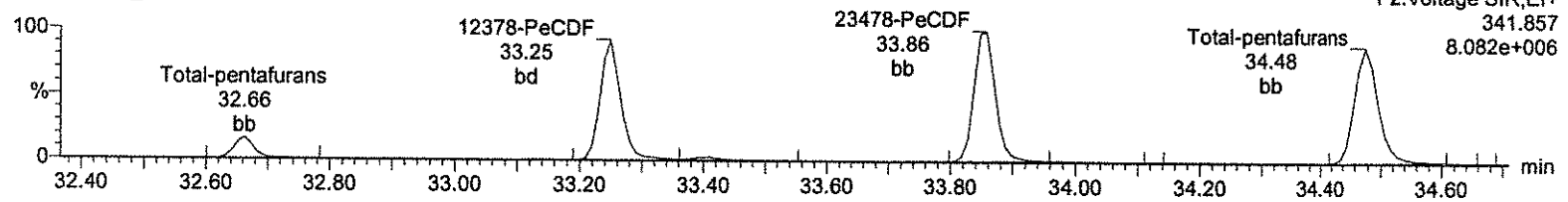
Total-pentafurans

A23DEC19A_6-14



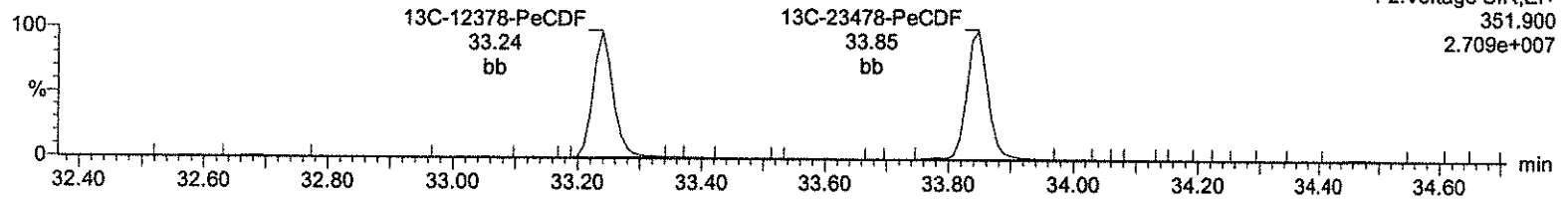
Total-pentafurans

A23DEC19A_6-14



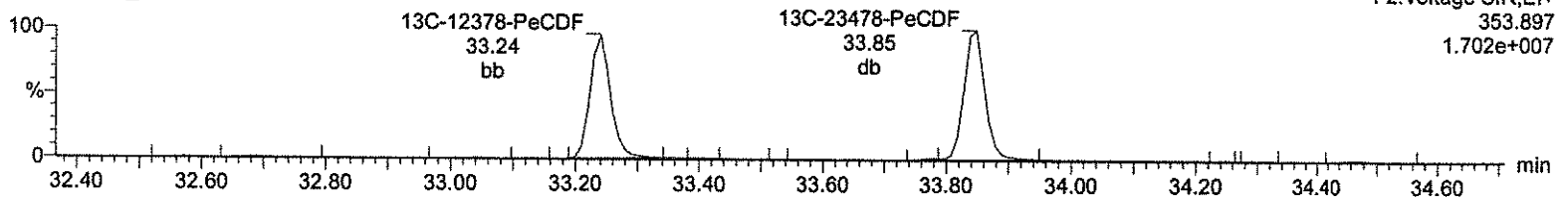
¹³C-12378-PeCDF

A23DEC19A_6-14



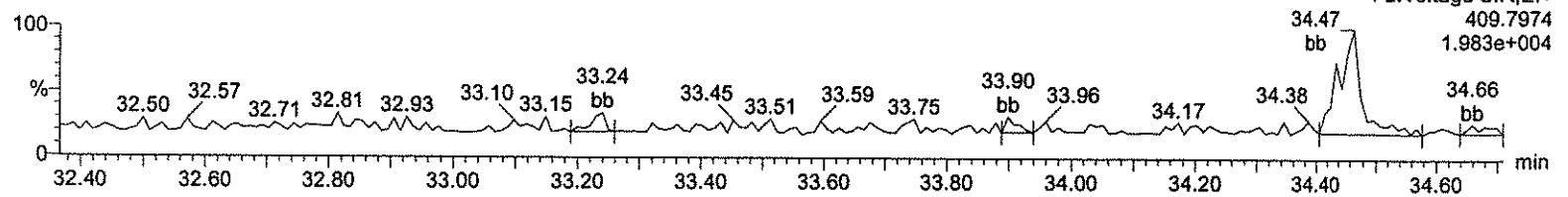
¹³C-12378-PeCDF

A23DEC19A_6-14



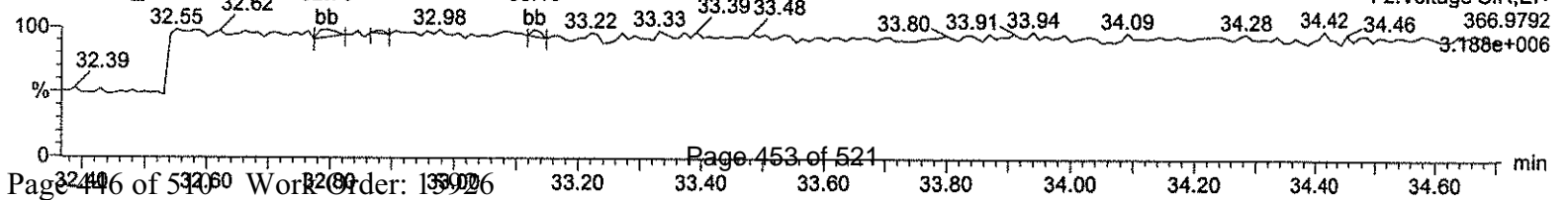
HpDPE

A23DEC19A_6-14



Lock Mass F2

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

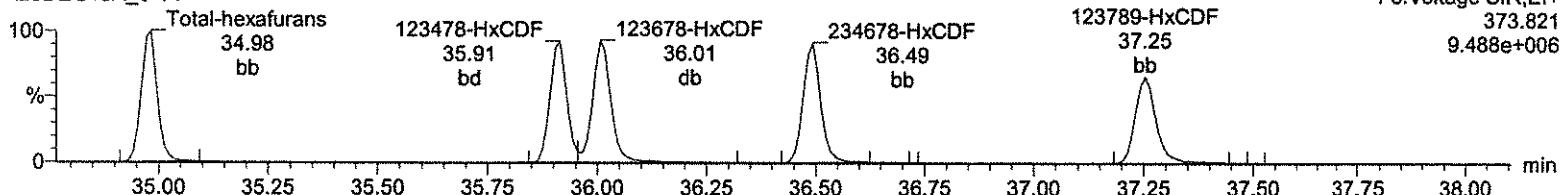
Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

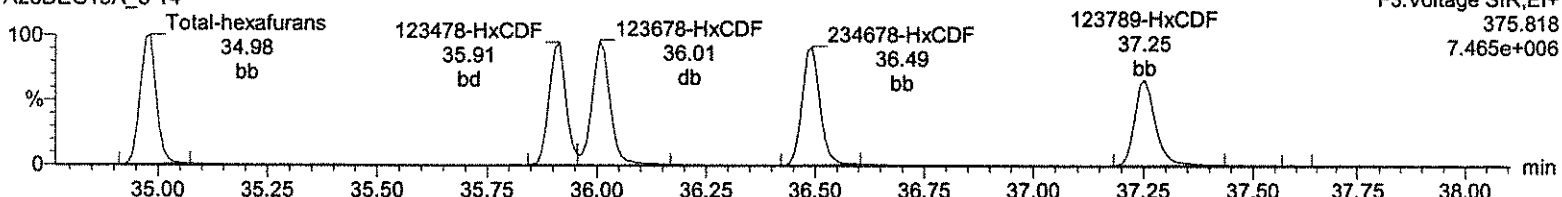
Total-hexafurans

A23DEC19A_6-14



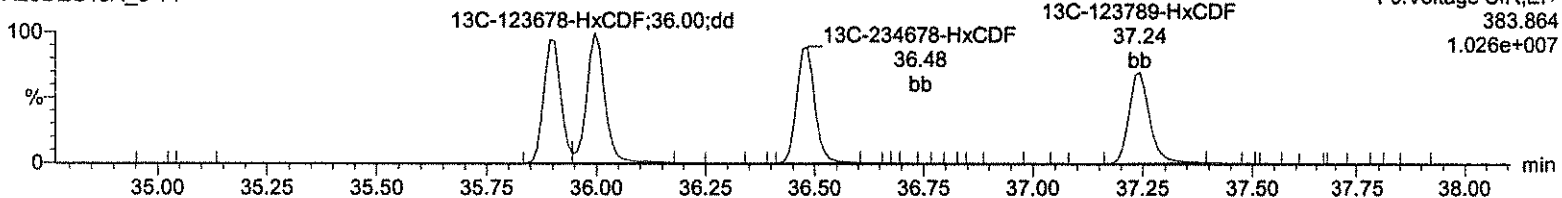
Total-hexafurans

A23DEC19A_6-14



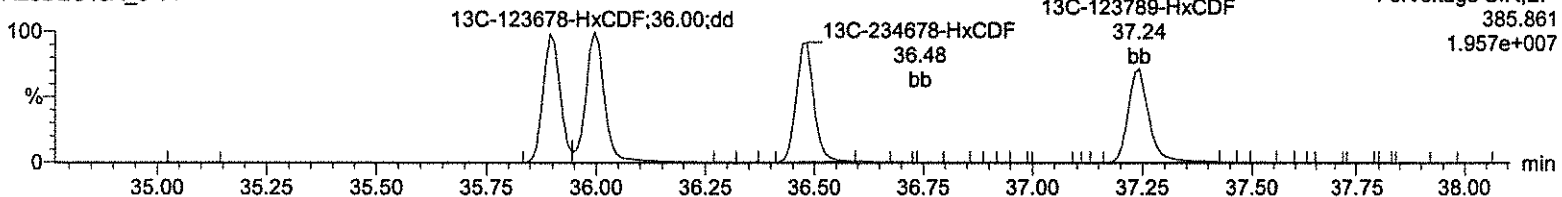
13C-123478-HxCDF

A23DEC19A_6-14



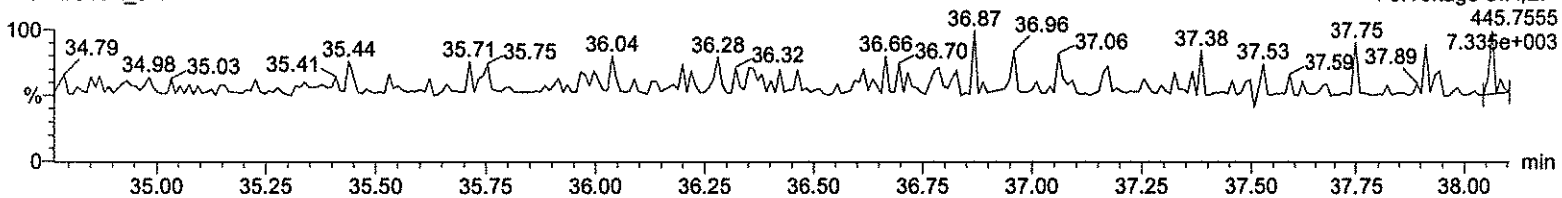
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A23DEC19A_6-14



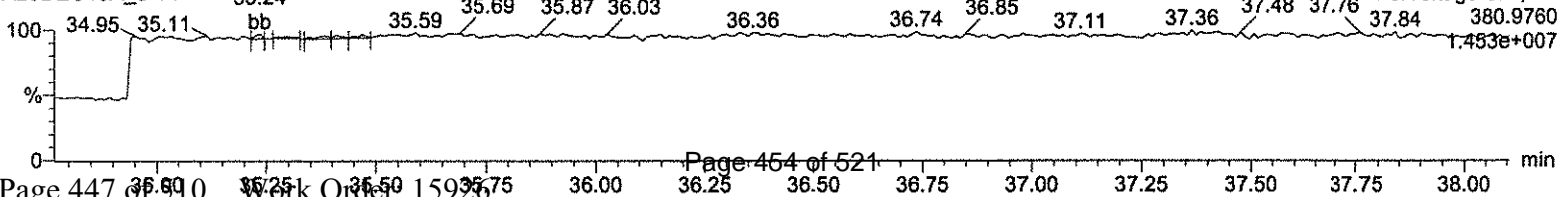
OcDPE

A23DEC19A_6-14



Lock Mass F3

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

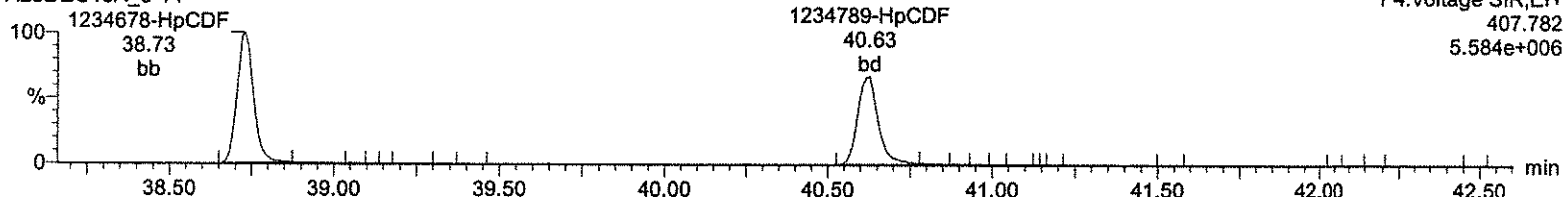
Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

Printed: Thursday, December 26, 2019 11:35:41 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

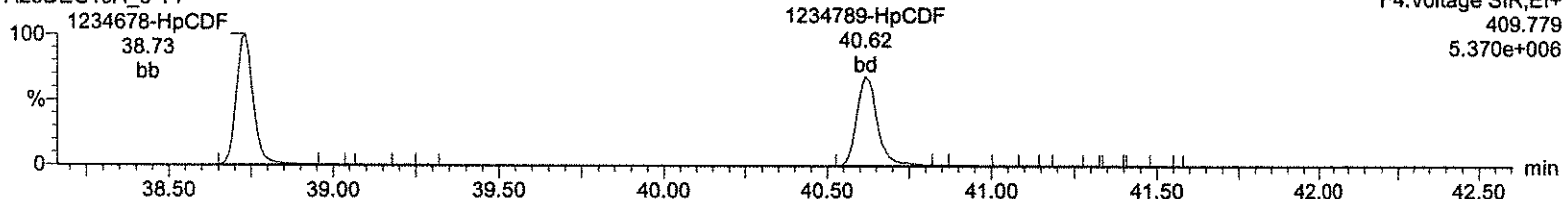
Total-heptafurans

A23DEC19A_6-14



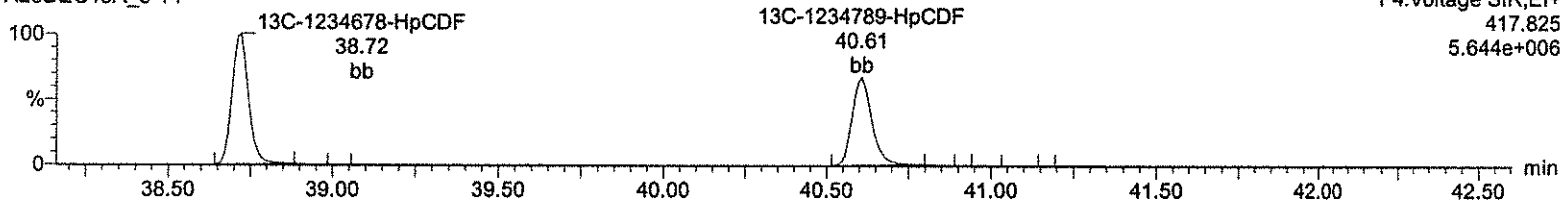
Total-heptafurans

A23DEC19A_6-14



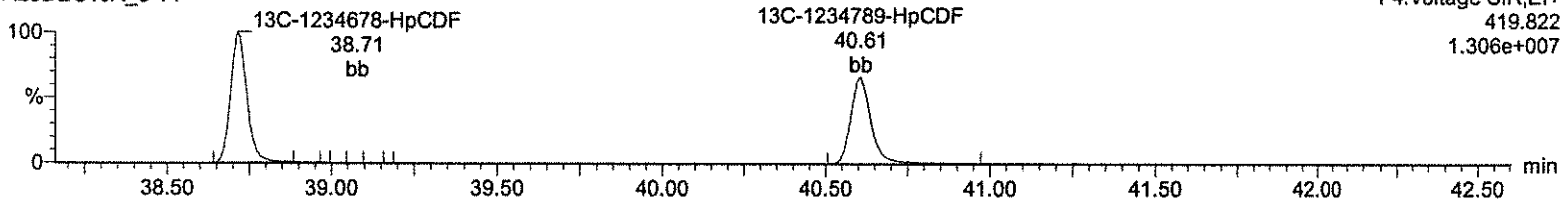
13C-1234678-HpCDF

A23DEC19A_6-14



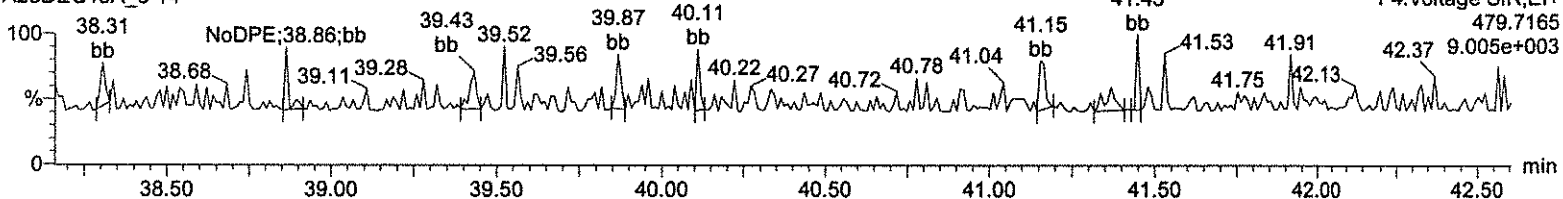
13C-1234678-HpCDF

A23DEC19A_6-14



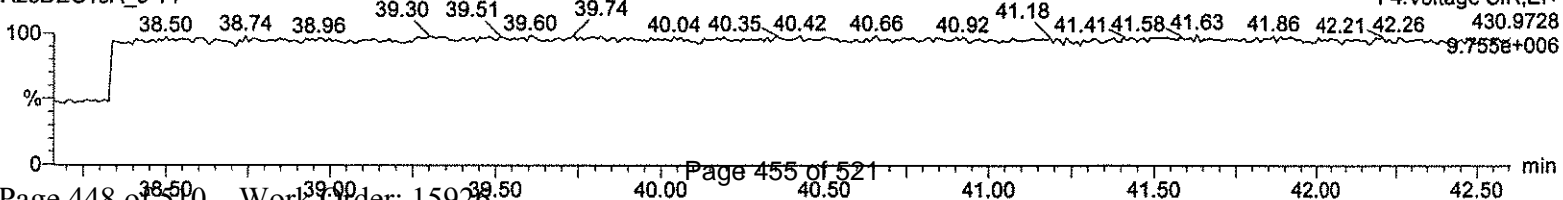
NoDPE

A23DEC19A_6-14



Lock Mass F4

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A23DEC19A_6-14.qld

Last Altered: Thursday, December 26, 2019 11:35:03 Eastern Standard Time

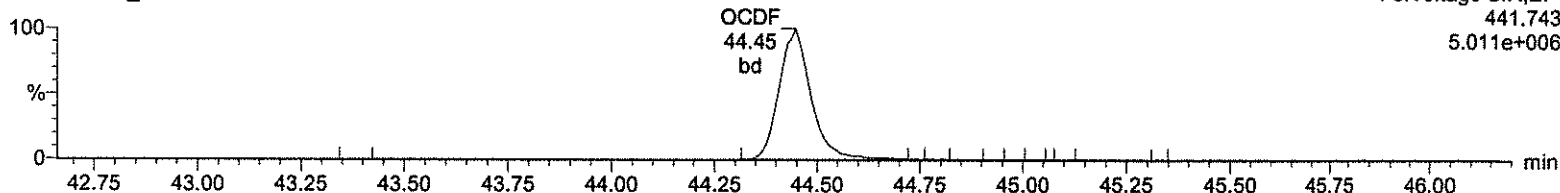
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Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

OCDF

A23DEC19A_6-14

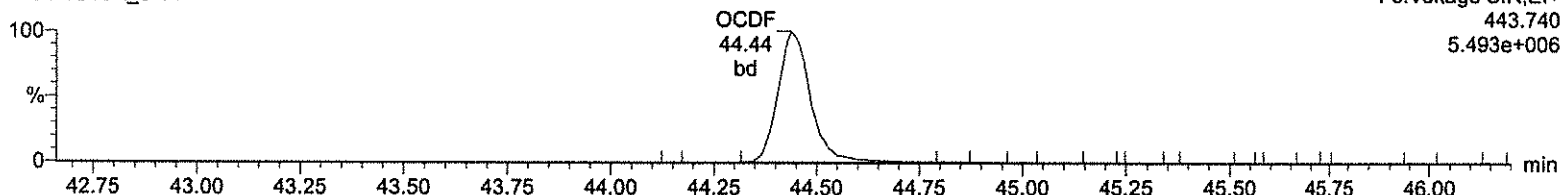
F5:Voltage SIR,EI+
441.743
5.011e+006



OCDF

A23DEC19A_6-14

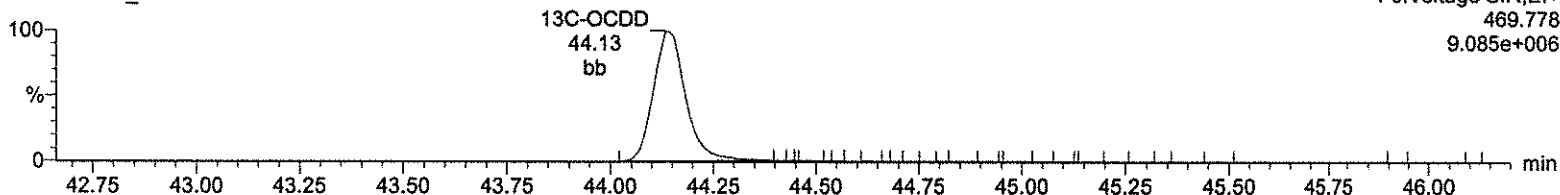
F5:Voltage SIR,EI+
443.740
5.493e+006



13C-OCDD

A23DEC19A_6-14

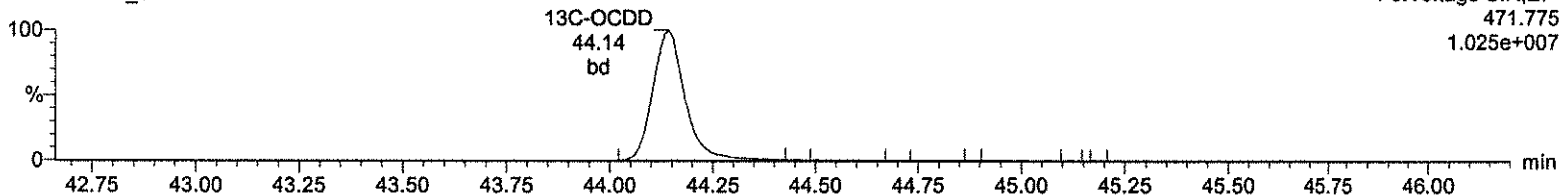
F5:Voltage SIR,EI+
469.778
9.085e+006



13C-OCDD

A23DEC19A_6-14

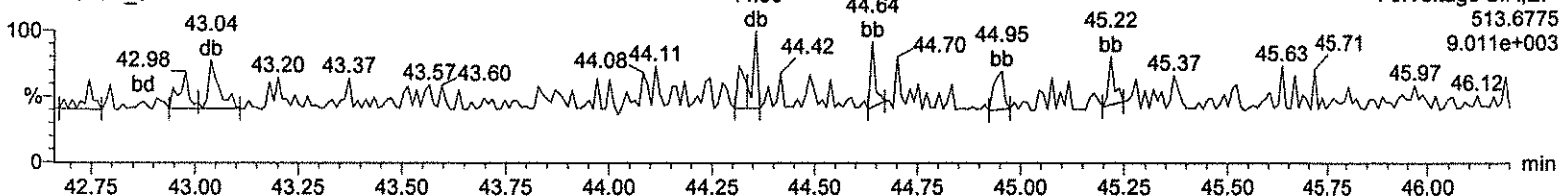
F5:Voltage SIR,EI+
471.775
1.025e+007



DeDPE

A23DEC19A_6-14

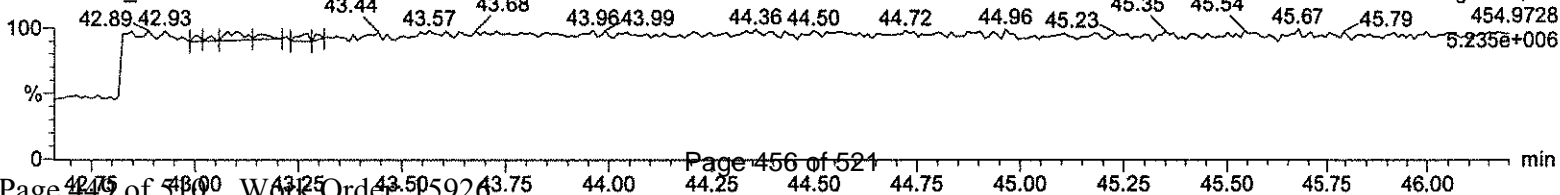
F5:Voltage SIR,EI+
513.6775
9.011e+003



Lock Mass F5

A23DEC19A_6-14

F5:Voltage SIR,EI+
454.9728
5.235e+006



Quantify Sample Summary Report
Method 8290 CCAL Report

MassLynx 4.1
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time
Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\Default.pro\Methodb\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	Mean	%D	Height	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.51e4	8.59e4	1.51e5	31.14	1.001	0.76	NO	11.540	0.0689	1.021	0.884	15.4	1.02e6	2718	375.8	1.37e6	3181	429.4	dd	dd
2	12378-PeCDD	3.32e5	2.09e5	5.41e5	34.05	1.001	1.59	NO	53.507	0.144	0.913	0.853	7.0	8.07e6	7455	1082.1	4.95e6	6296	785.5	bb	bb
3	123478-HxCDD	2.92e5	2.37e5	5.29e5	36.61	0.998	1.23	NO	51.683	0.191	0.883	0.854	3.4	6.77e6	7157	946.4	5.57e6	7628	729.7	bd	bd
4	123678-HxCDD	3.27e5	2.63e5	5.90e5	36.71	1.000	1.24	NO	52.131	0.173	0.984	0.944	4.3	6.53e6	7157	912.0	5.10e6	7628	668.3	dd	dd
5	123789-HxCDD	3.13e5	2.54e5	5.67e5	36.94	1.007	1.23	NO	53.502	0.184	0.947	0.885	7.0	5.93e6	7157	828.4	4.84e6	7628	635.0	dd	dd
6	1234678-HpCDD	2.48e5	2.38e5	4.84e5	39.97	1.001	1.04	NO	47.295	0.160	0.984	1.040	-5.4	3.70e6	4782	773.1	3.55e6	5535	641.9	bb	bd
7	OCDD	4.08e5	4.46e5	8.54e5	44.15	1.000	0.91	NO	99.562	0.258	0.987	0.971	-0.4	4.55e6	4801	948.5	5.01e6	4871	1027.9	bd	bb
8	2378-TCDF	7.16e4	9.44e4	1.66e5	30.35	1.001	0.76	NO	9.034	0.0731	0.884	0.978	-9.7	8.45e5	2935	288.0	1.23e6	3538	346.6	bb	bb
9	12378-PeCDF	4.34e5	2.85e5	7.19e5	33.25	1.000	1.52	NO	47.705	0.119	0.902	0.945	-4.6	1.10e7	8677	1266.2	7.42e6	10661	695.6	bd	bd
10	23478-PeCDF	4.87e5	3.22e5	8.09e5	33.86	1.019	1.51	NO	48.880	0.108	1.014	1.037	-2.2	1.24e7	8677	1432.9	8.05e6	10661	755.1	bb	bb
11	123478-HxCDF	3.81e5	3.10e5	6.91e5	35.91	0.998	1.23	NO	48.987	0.185	0.948	0.968	-2.0	8.74e6	10894	802.0	7.03e6	10811	650.4	bd	bd
12	123678-HxCDF	4.28e5	3.37e5	7.65e5	36.01	1.000	1.27	NO	50.468	0.172	1.050	1.041	0.9	8.81e6	10894	808.7	7.15e6	10811	661.2	db	db
13	234678-HxCDF	3.97e5	3.22e5	7.19e5	36.49	1.014	1.23	NO	50.127	0.182	0.988	0.985	0.3	8.66e6	10894	795.2	6.80e6	10811	628.6	bb	bb
14	123789-HxCDF	3.42e5	2.71e5	6.14e5	37.25	1.035	1.26	NO	51.222	0.218	0.843	0.823	2.4	6.23e6	10894	572.1	4.93e6	10811	456.0	bb	bb
15	1234678-HpCDF	3.23e5	3.20e5	6.44e5	38.73	1.000	1.01	NO	51.891	0.137	1.193	1.150	3.8	5.56e6	5392	1030.5	5.36e6	6136	873.2	bb	bb
16	1234789-HpCDF	2.73e5	2.69e5	5.42e5	40.63	1.049	1.02	NO	53.628	0.168	1.004	0.936	7.3	3.79e6	5392	703.2	3.69e6	6136	600.7	bd	bd
17	OCDF	4.54e5	5.07e5	9.60e5	44.45	1.007	0.90	NO	96.046	0.243	1.088	1.133	-4.0	5.00e6	5860	853.8	5.48e6	4761	1150.2	bd	bd
18	13C-2378-TCDD	6.60e5	8.19e5	1.48e6	31.11	1.018	0.81	NO	103.695	0.145	1.170	1.128	3.7	1.08e7	5634	1916.3	1.37e7	4790	2869.1	bd	bb
19	13C-12378-PeCDD	7.22e5	4.63e5	1.18e6	34.03	1.114	1.56	NO	124.668	0.284	0.937	0.751	24.7	1.71e7	6234	2742.7	1.13e7	7346	1532.6	bb	bb
20	13C-123678-HxCDD	6.65e5	5.33e5	1.20e6	36.70	0.994	1.25	NO	98.835	0.139	0.974	0.986	-1.2	1.26e7	6060	2077.6	1.04e7	6689	1562.2	dd	dd
21	13C-1234678-HpCDD	4.98e5	4.87e5	9.84e5	39.95	1.082	1.02	NO	119.176	0.157	0.800	0.672	19.2	7.85e6	6004	1307.8	7.29e6	3806	1915.0	bb	bd
22	13C-OCDD	8.27e5	9.38e5	1.77e6	44.13	1.195	0.88	NO	223.593	0.202	0.718	0.642	11.8	9.05e6	5383	1681.4	1.02e7	6727	1521.2	bb	bd
23	13C-2378-TCDF	8.10e5	1.07e6	1.88e6	30.33	0.993	0.76	NO	118.813	0.191	1.485	1.250	18.8	9.76e6	8878	1099.0	1.25e7	6358	1969.1	bb	bd
24	13C-12378-PeCDF	9.77e5	6.18e5	1.60e6	33.24	1.088	1.58	NO	124.772	0.380	1.261	1.011	24.8	2.63e7	11957	2203.1	1.62e7	12517	1292.6	bb	bb
25	13C-123678-HxCDF	4.93e5	9.64e5	1.46e6	36.00	0.975	0.51	NO	94.996	0.182	1.184	1.247	-5.0	1.02e7	9117	1122.9	1.95e7	12024	1625.9	dd	dd
26	13C-1234678-HpCDF	3.31e5	7.48e5	1.08e6	38.72	1.049	0.44	NO	100.884	0.183	0.878	0.870	0.9	5.62e6	4854	1157.9	1.30e7	9957	1306.2	bb	bb
27	13C-1234-TCDD	5.50e5	7.15e5	1.26e6	30.55	0.000	0.77	NO	100.000	0.164	1.000	1.000	0.0	6.93e6	5634	1230.2	8.91e6	4790	1860.0	bb	bb
28	13C-123789-HxCDD	6.83e5	5.47e5	1.23e6	36.93	0.000	1.25	NO	100.000	0.137	1.000	1.000	0.0	1.29e7	6060	2134.2	1.06e7	6689	1587.9	dd	dd
29	37Cl-2378-TCDD (SS)	1.35e5		1.35e5	31.14	1.001			9.705	0.0283	0.912	0.940	-2.9	2.38e6	2579	921.9				bb	
30	13C-23478-PeCDF (SS)	1.06e6	6.69e5	1.73e6	33.85	1.018	1.58	NO	102.954	0.135	1.083	1.052	3.0	2.70e7	11957	2256.9	1.69e7	12517	1353.6	bb	db

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qtd

Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	Mean	%D	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
31	13C-123478-HxCDF (SS)	4.35e5	8.54e5	1.29e6	35.89	0.997	0.51	NO	99.304	0.196	0.885	0.891	-0.7	9.71e6	9117	1065.5	1.92e7	12024	1598.0	bd	bd
32	13C-123478-HxCDD (SS)	5.89e5	4.66e5	1.05e6	36.60	0.998	1.26	NO	96.784	0.155	0.880	0.909	-3.2	1.33e7	6060	2187.9	1.03e7	6689	1546.0	bd	bd
33	13C-1234789-HpCDF (SS)	2.65e5	6.22e5	8.87e5	40.61	1.049	0.43	NO	105.524	0.260	0.822	0.779	5.5	3.80e6	4854	782.1	8.71e6	9957	875.2	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

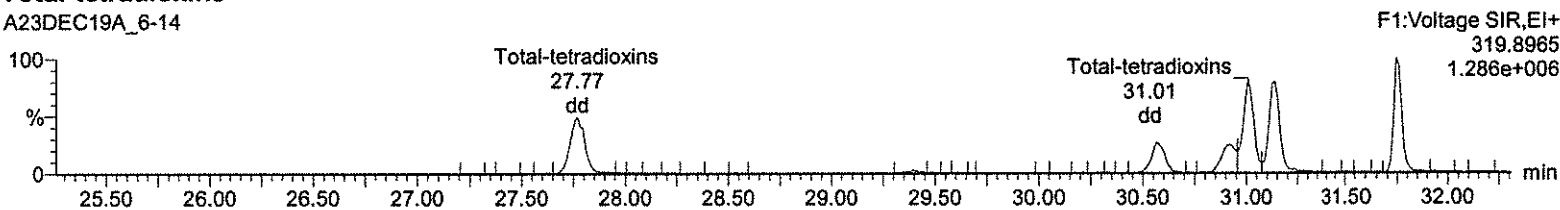
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Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6,
Task: HRP750_2, User: MJC

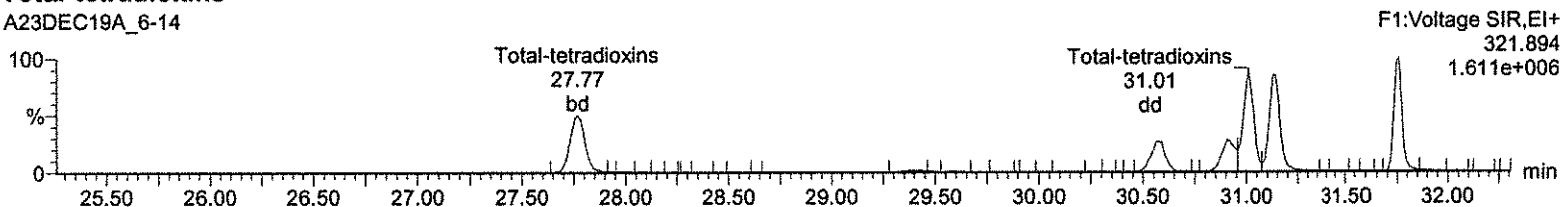
Total-tetradoxins

A23DEC19A_6-14



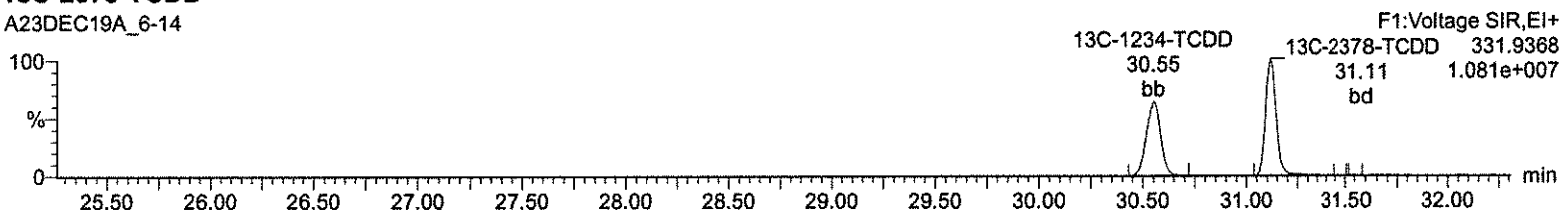
Total-tetradoxins

A23DEC19A_6-14



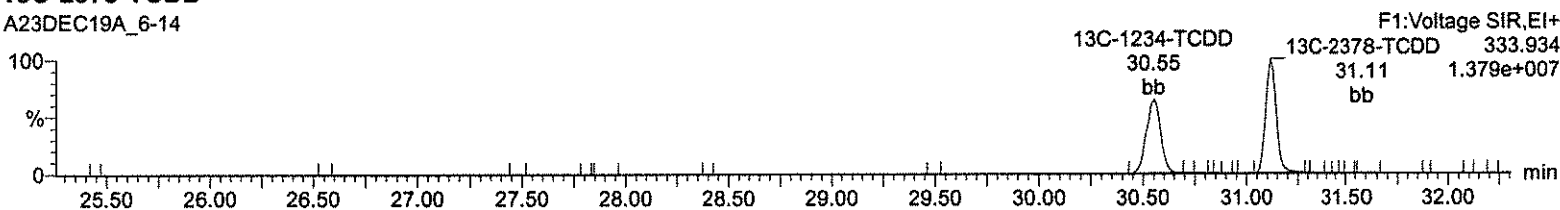
13C-2378-TCDD

A23DEC19A_6-14



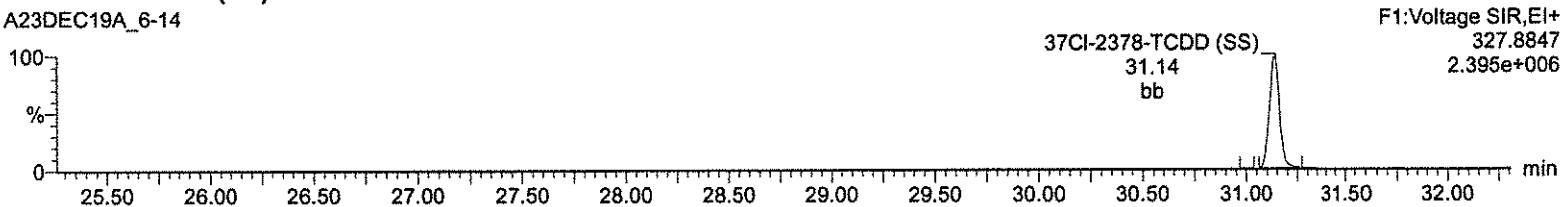
13C-2378-TCDD

A23DEC19A_6-14



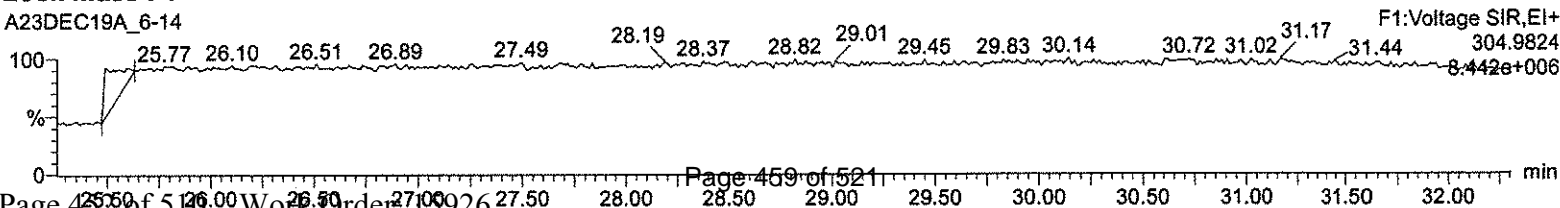
37Cl-2378-TCDD (SS)

A23DEC19A_6-14



Lock Mass F1

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

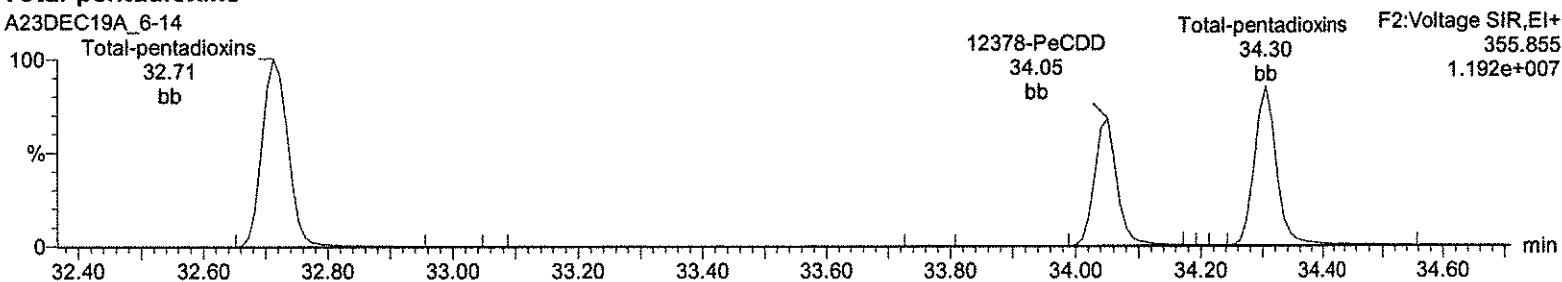
Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

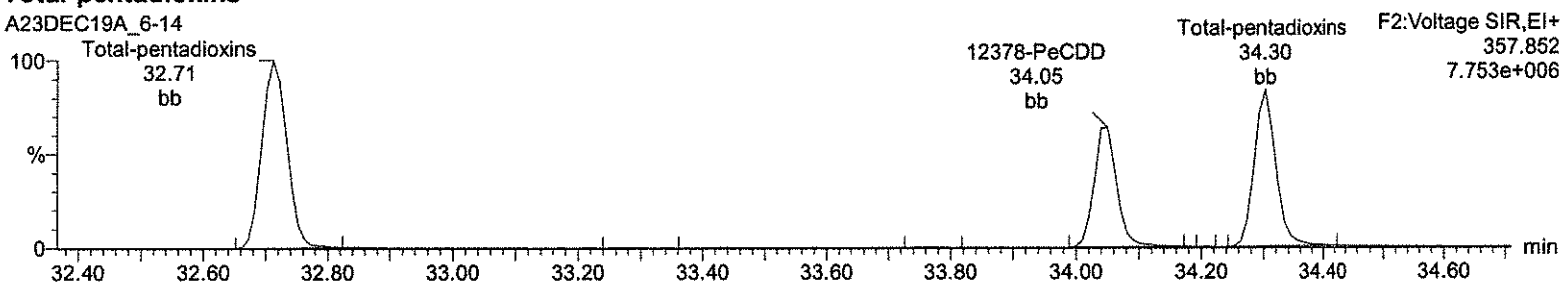
Total-pentadioxins

A23DEC19A_6-14



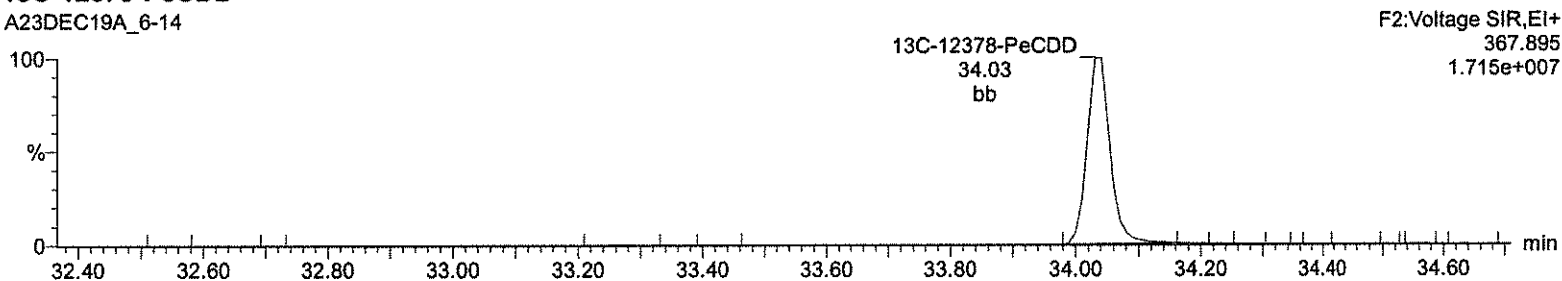
Total-pentadioxins

A23DEC19A_6-14



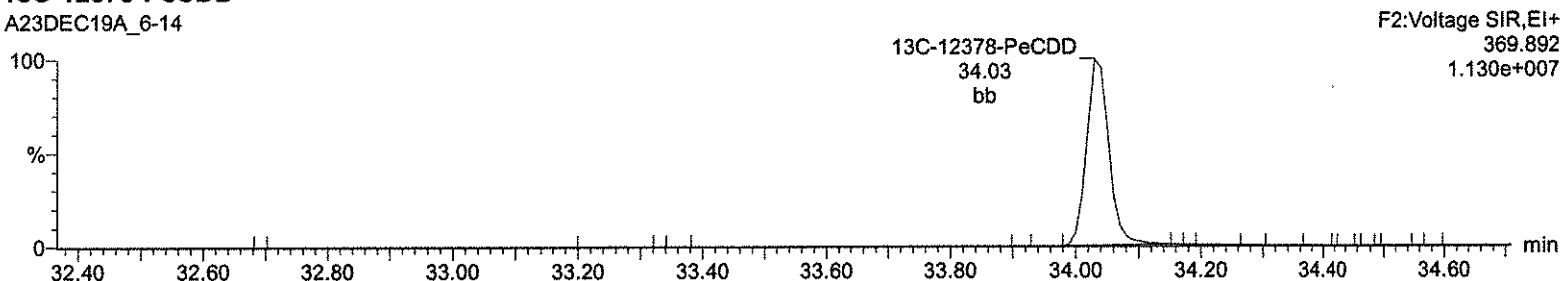
13C-12378-PeCDD

A23DEC19A_6-14



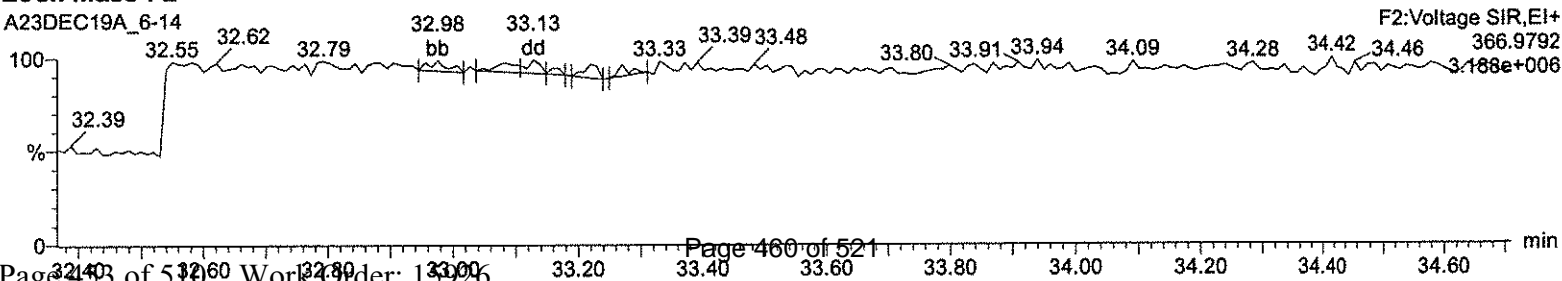
13C-12378-PeCDD

A23DEC19A_6-14



Lock Mass F2

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

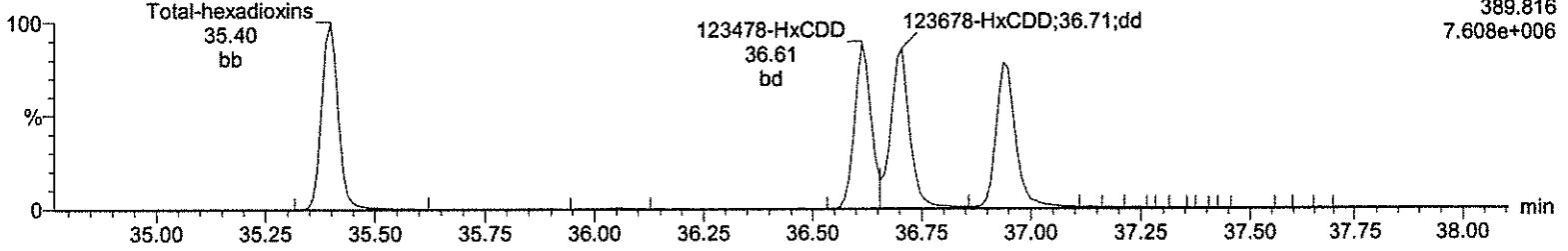
Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6,
Task: HRP750_2, User: MJC

Total-hexadioxins

A23DEC19A_6-14

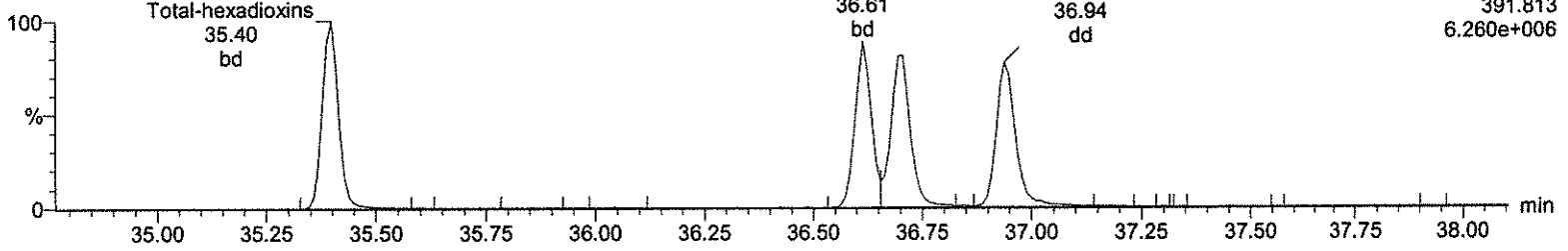
F3:Voltage SIR,EI+
389.816
7.608e+006



Total-hexadioxins

A23DEC19A_6-14

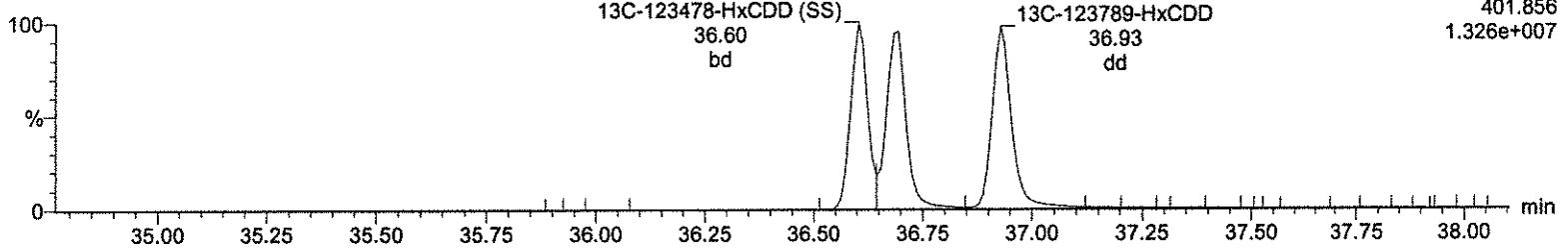
F3:Voltage SIR,EI+
391.813
6.260e+006



13C-123678-HxCDD

A23DEC19A_6-14

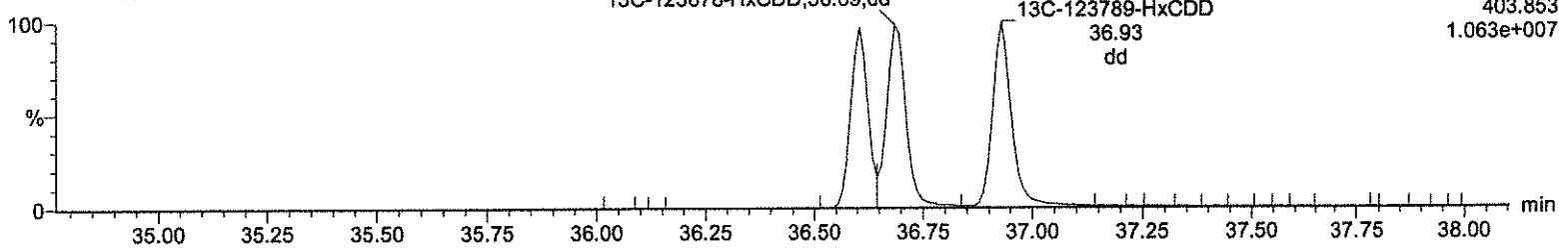
F3:Voltage SIR,EI+
401.856
1.326e+007



13C-123678-HxCDD

A23DEC19A_6-14

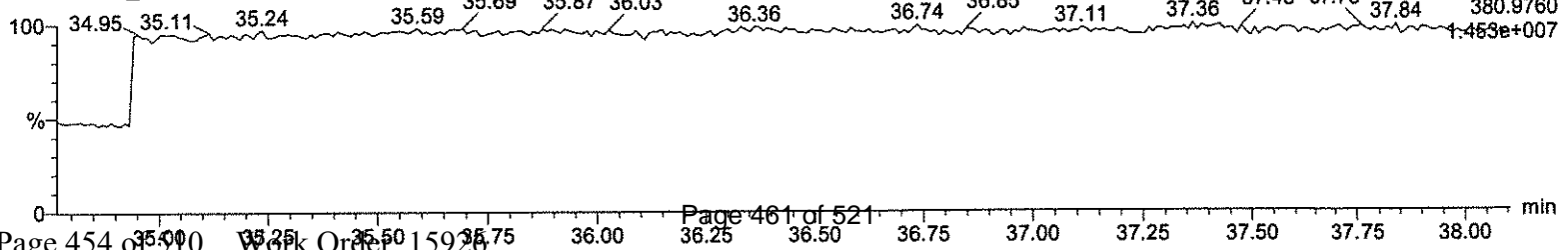
F3:Voltage SIR,EI+
403.853
1.063e+007



Lock Mass F3

A23DEC19A_6-14

F3:Voltage SIR,EI+
380.9760
1.453e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

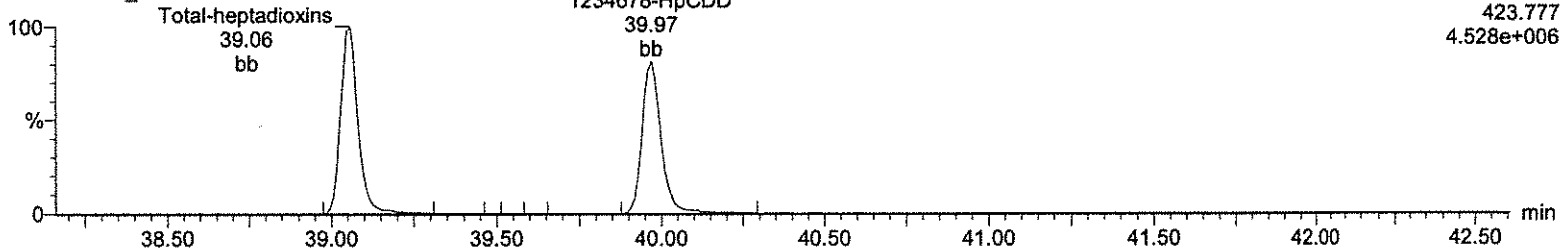
Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6,
Task: HRP750_2, User: MJC

Total-heptadioxins

A23DEC19A_6-14

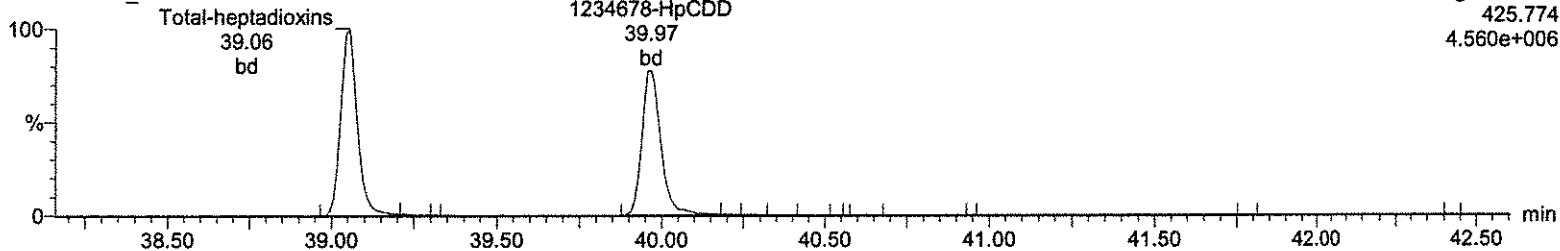
F4:Voltage SIR,EI+
423.777
4.528e+006



Total-heptadioxins

A23DEC19A_6-14

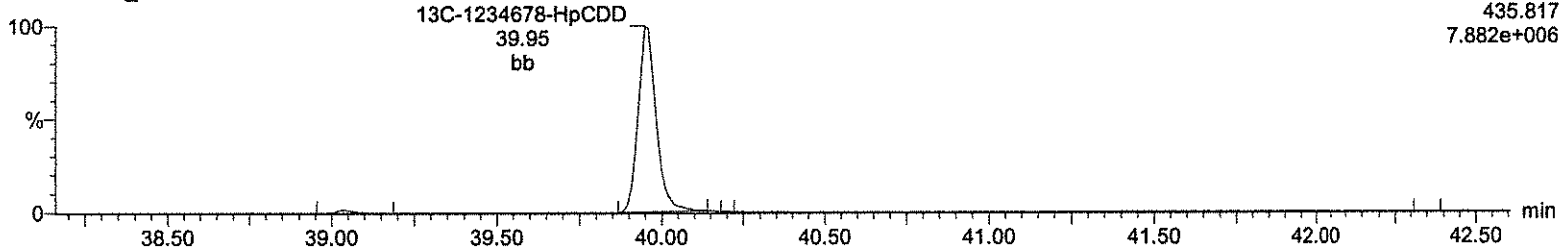
F4:Voltage SIR,EI+
425.774
4.560e+006



13C-1234678-HpCDD

A23DEC19A_6-14

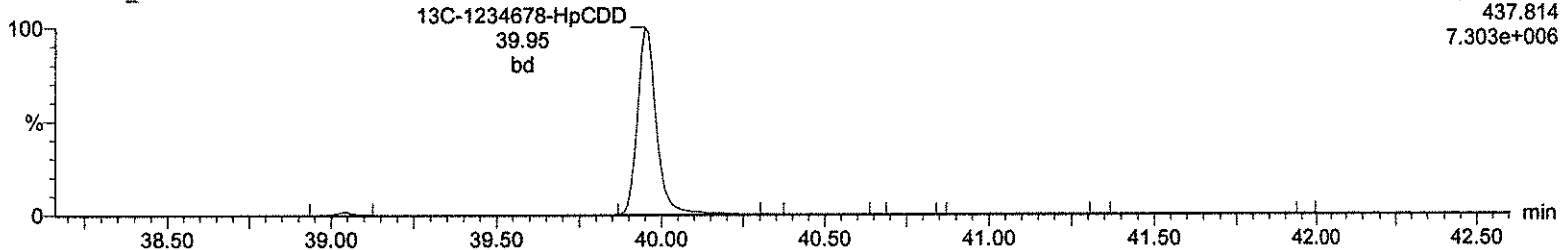
F4:Voltage SIR,EI+
435.817
7.882e+006



13C-1234678-HpCDD

A23DEC19A_6-14

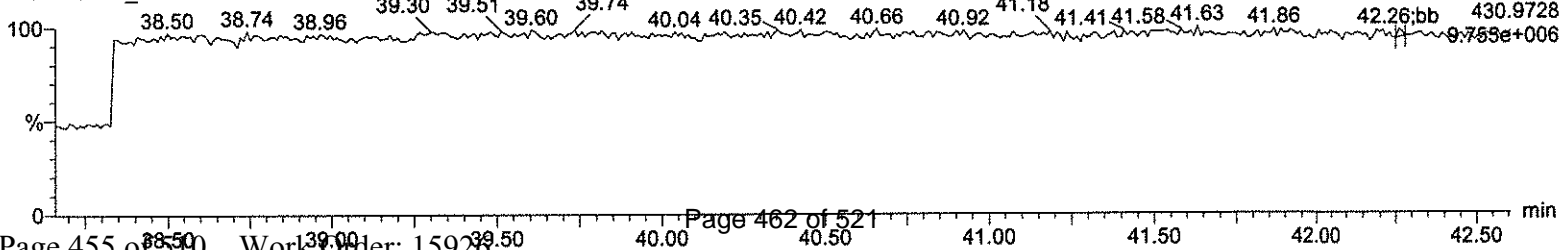
F4:Voltage SIR,EI+
437.814
7.303e+006



Lock Mass F4

A23DEC19A_6-14

F4:Voltage SIR,EI+
430.9728
9.765e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

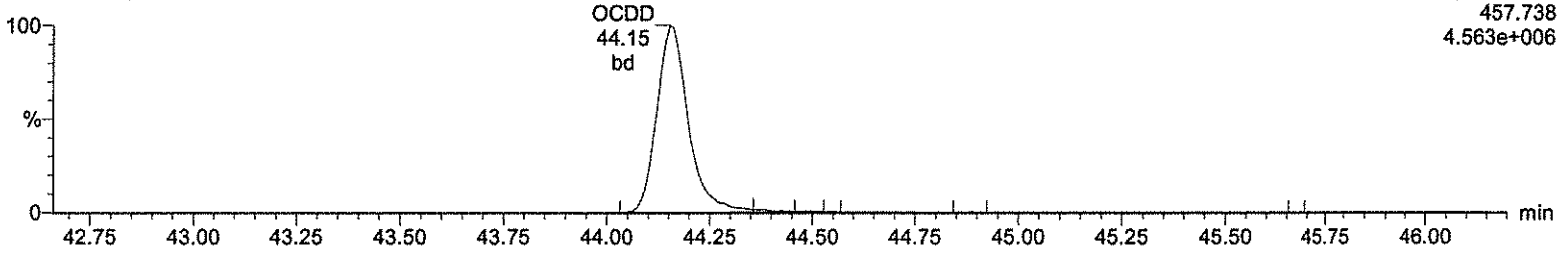
Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

OCDD

A23DEC19A_6-14

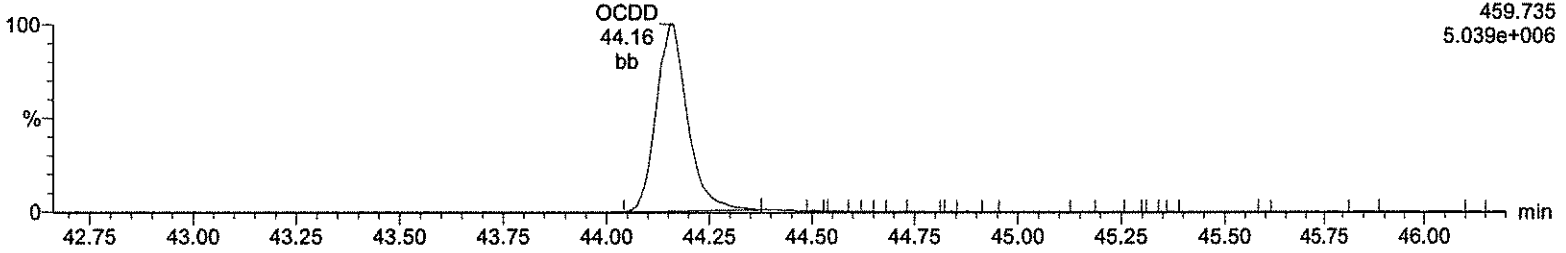
F5:Voltage SIR,EI+
457.738
4.563e+006



OCDD

A23DEC19A_6-14

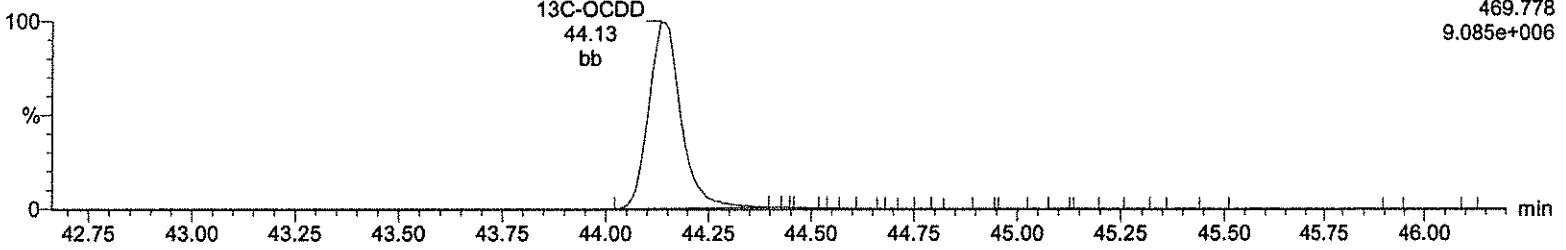
F5:Voltage SIR,EI+
459.735
5.039e+006



13C-OCDD

A23DEC19A_6-14

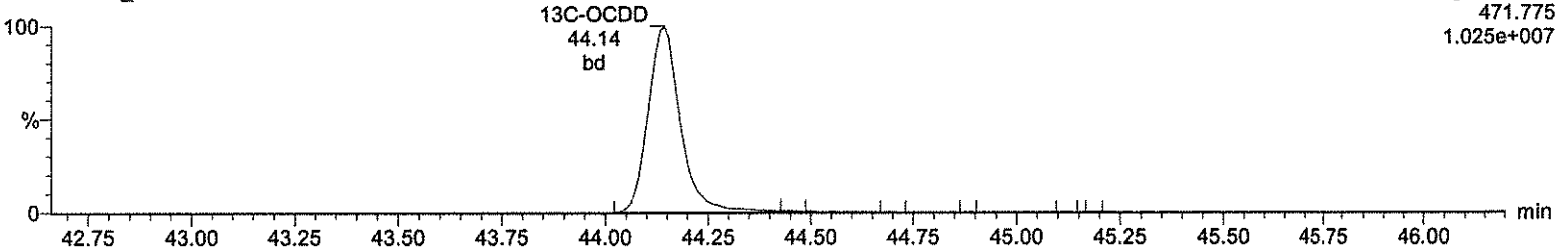
F5:Voltage SIR,EI+
469.778
9.085e+006



13C-OCDD

A23DEC19A_6-14

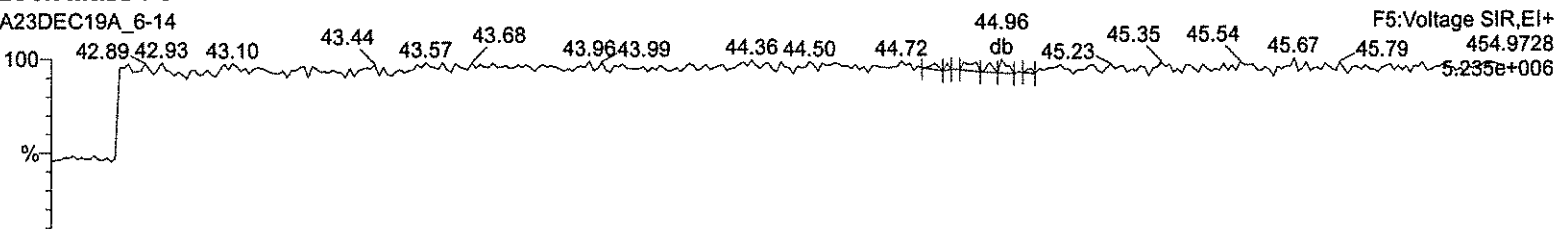
F5:Voltage SIR,EI+
471.775
1.025e+007



Lock Mass F5

A23DEC19A_6-14

F5:Voltage SIR,EI+
454.9728
5.235e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

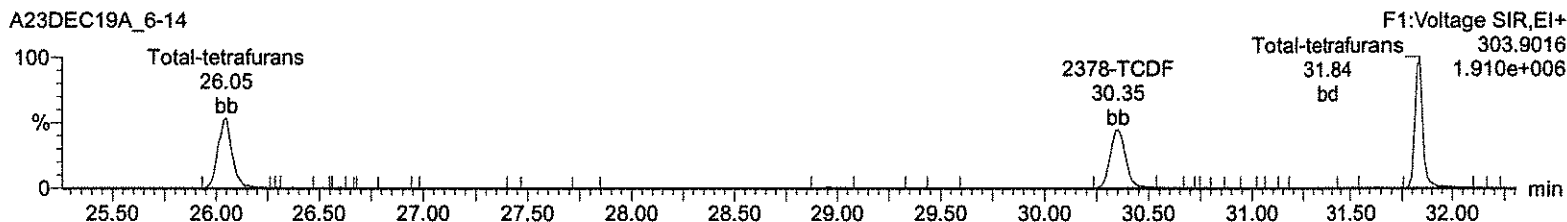
Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

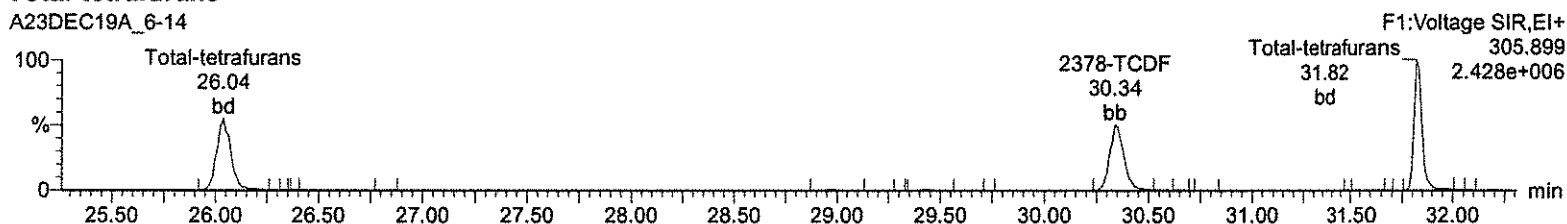
Total-tetrafurans

A23DEC19A_6-14



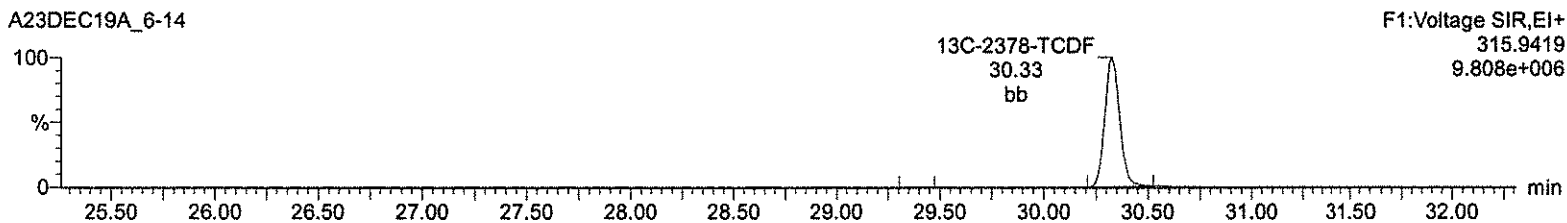
Total-tetrafurans

A23DEC19A_6-14



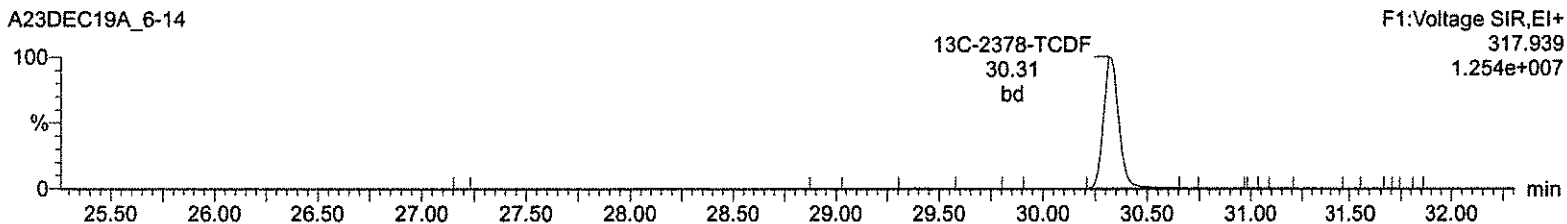
13C-2378-TCDF

A23DEC19A_6-14



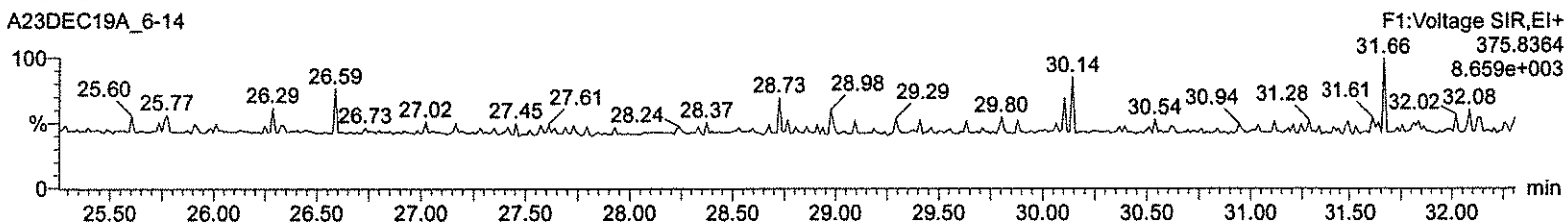
13C-2378-TCDF

A23DEC19A_6-14



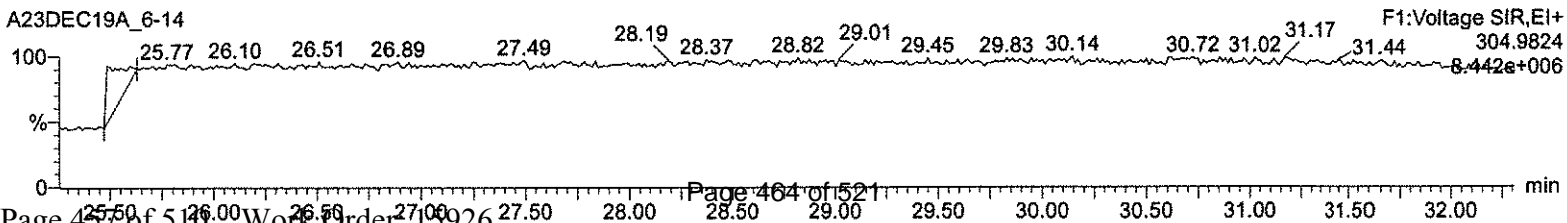
HxDPE

A23DEC19A_6-14



Lock Mass F1

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

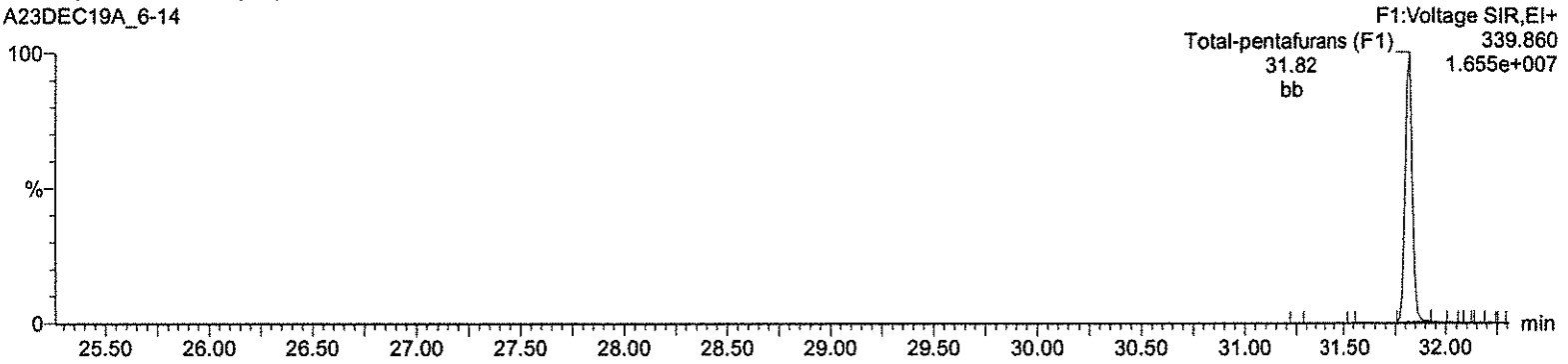
Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6,
Task: HRP750_2, User: MJC

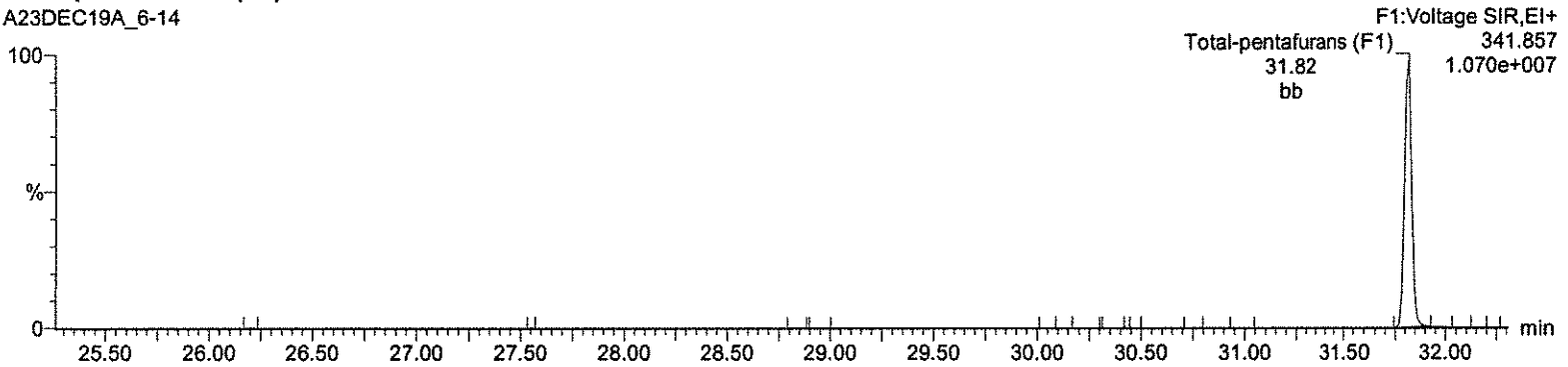
Total-pentafurans (F1)

A23DEC19A_6-14



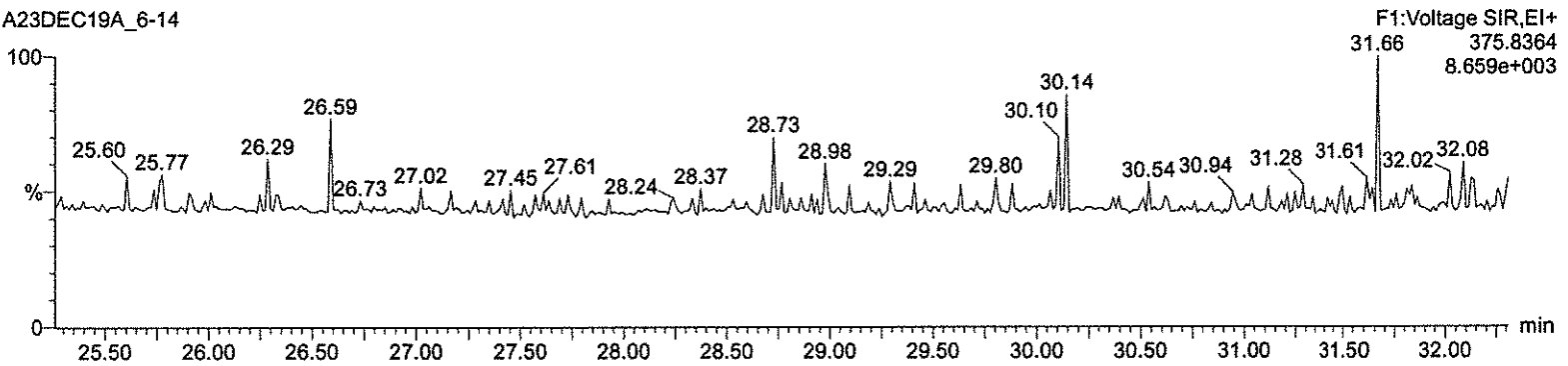
Total-pentafurans (F1)

A23DEC19A_6-14



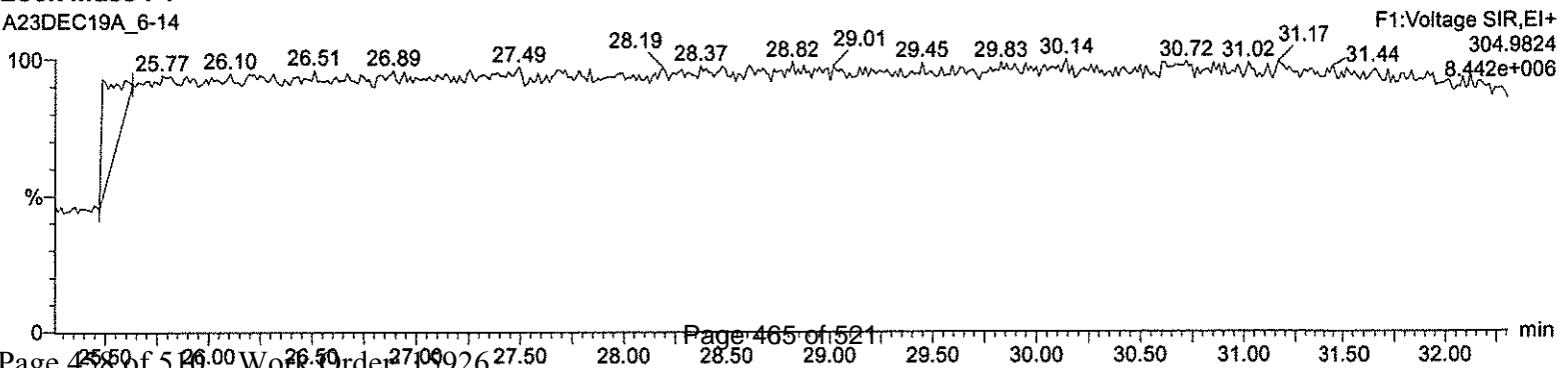
HxDPE

A23DEC19A_6-14



Lock Mass F1

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qid

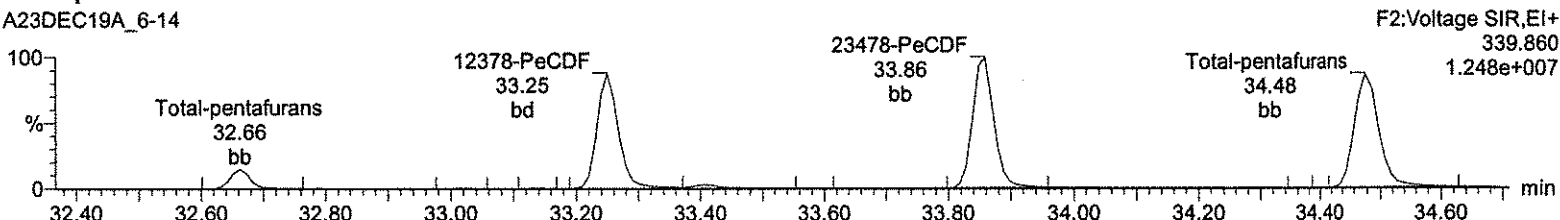
Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

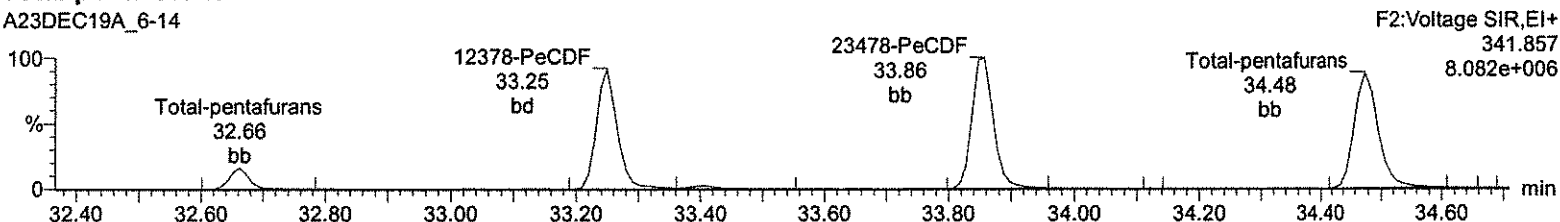
Total-pentafurans

A23DEC19A_6-14



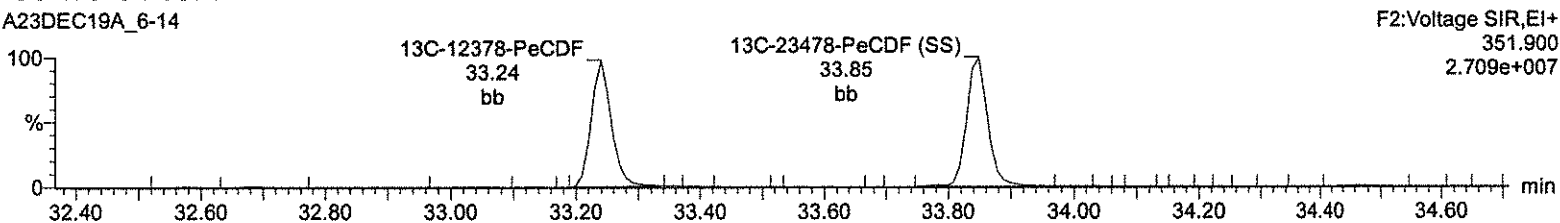
Total-pentafurans

A23DEC19A_6-14



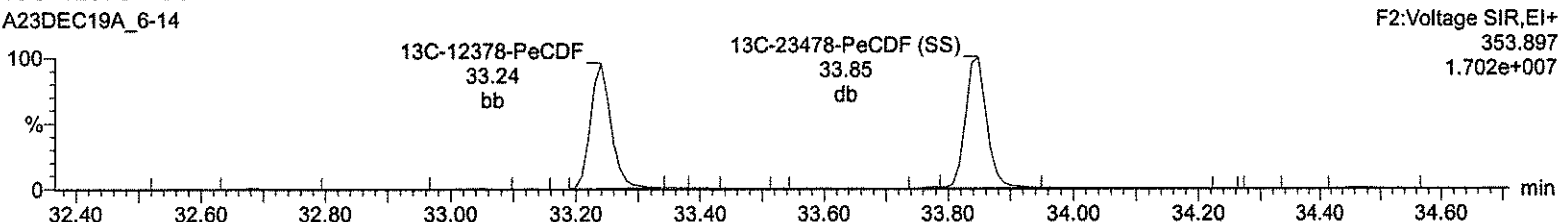
13C-12378-PeCDF

A23DEC19A_6-14



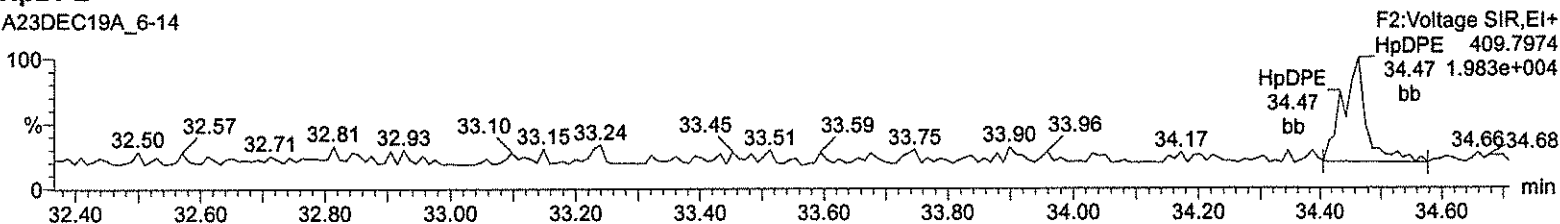
13C-12378-PeCDF

A23DEC19A_6-14



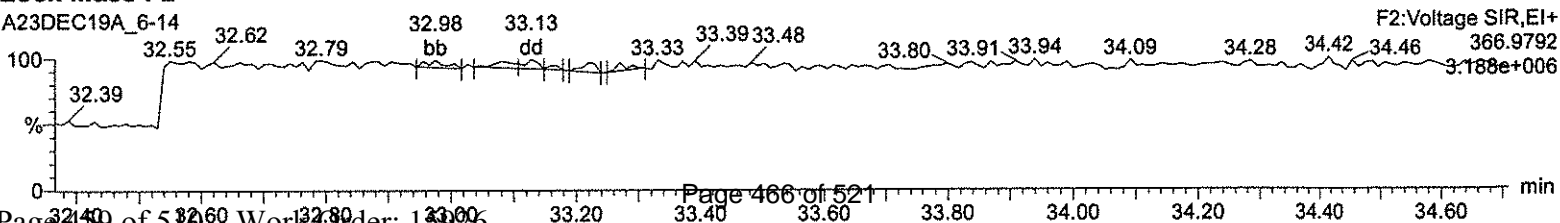
HpDPE

A23DEC19A_6-14



Lock Mass F2

A23DEC19A_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

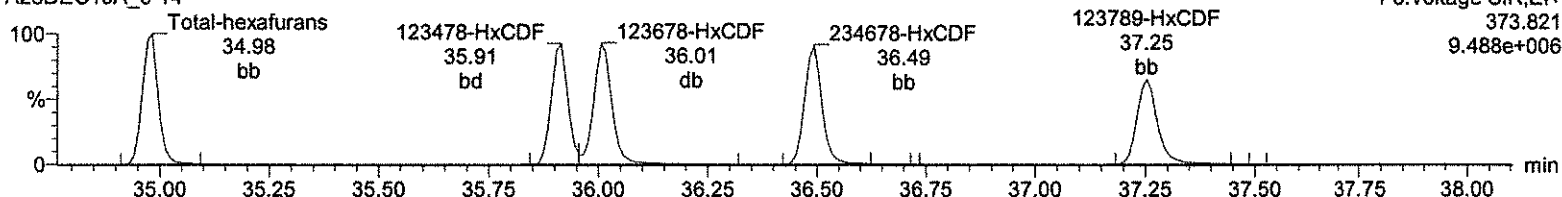
Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

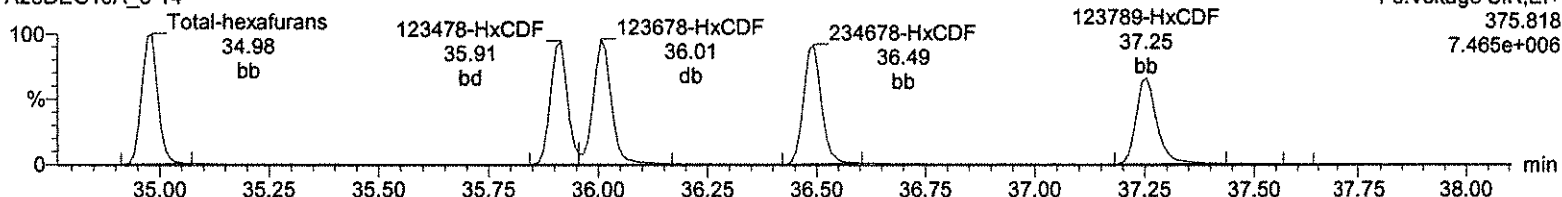
Total-hexafluorans

A23DEC19A_6-14



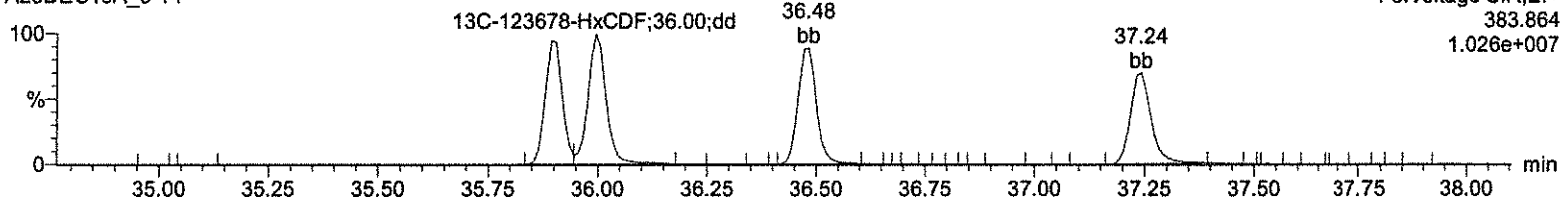
Total-hexafluorans

A23DEC19A_6-14



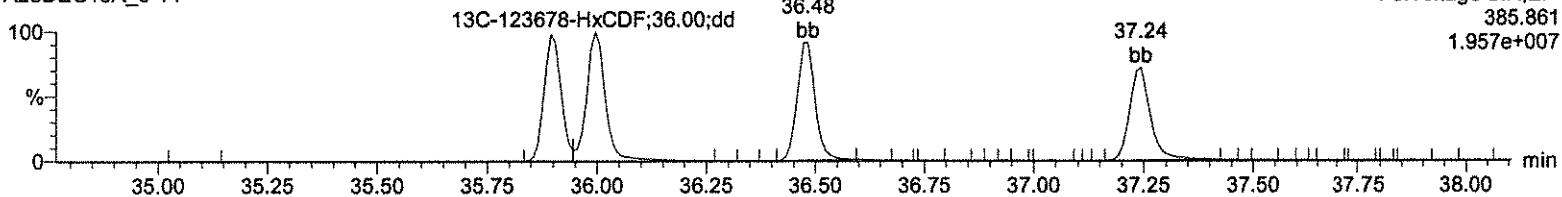
¹³C-123678-HxCDF

A23DEC19A_6-14



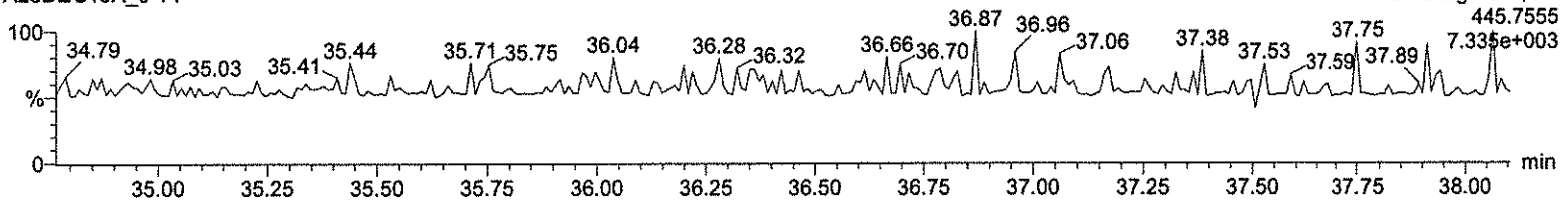
¹³C-123678-HxCDF

A23DEC19A_6-14



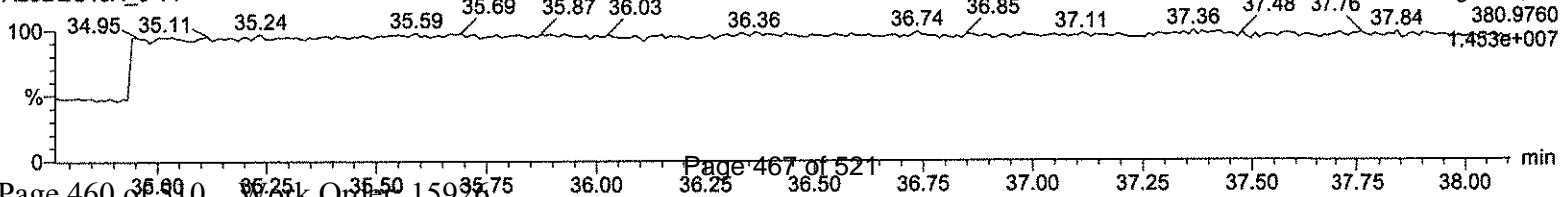
OcDPE

A23DEC19A_6-14



Lock Mass F3

A23DEC19A_6-14



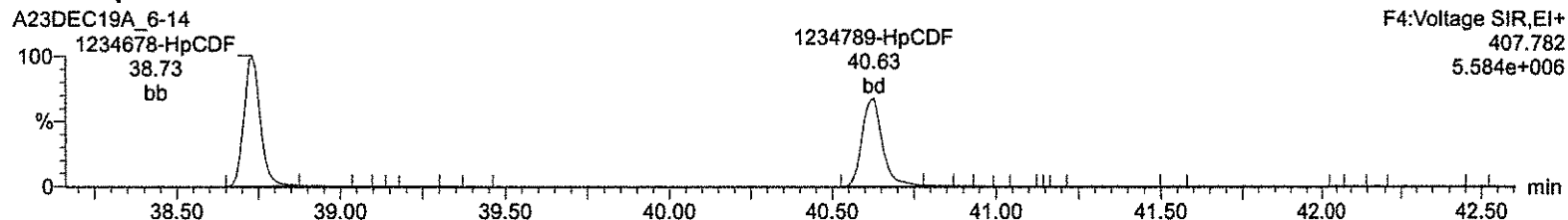
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

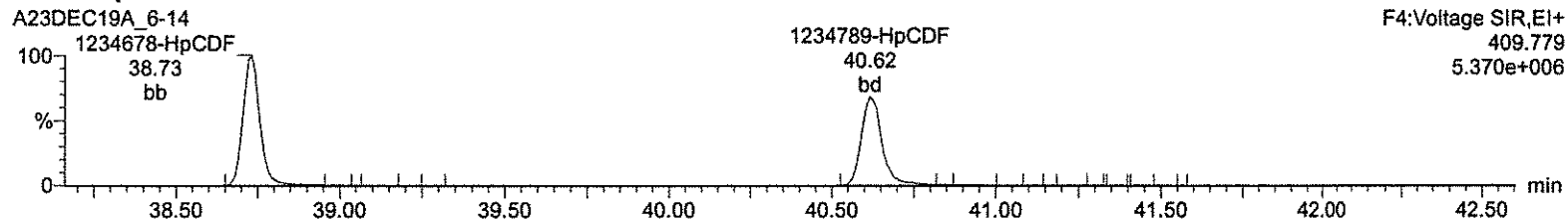
Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

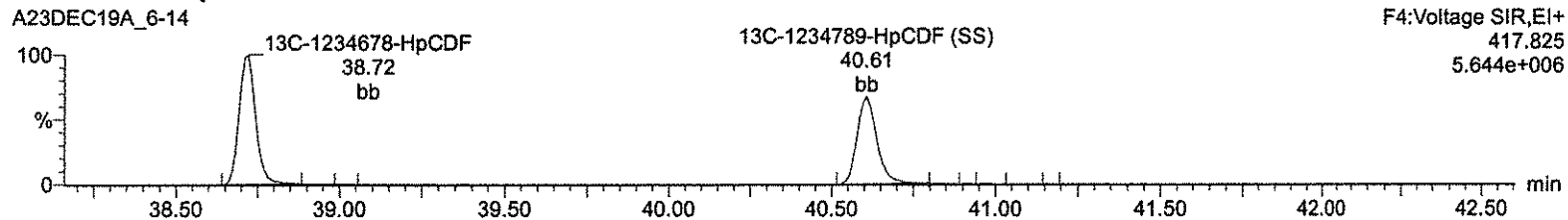
Total-heptafurans



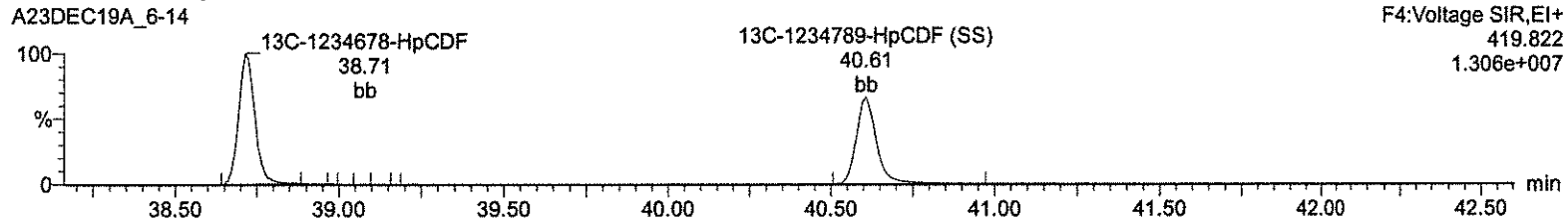
Total-heptafurans



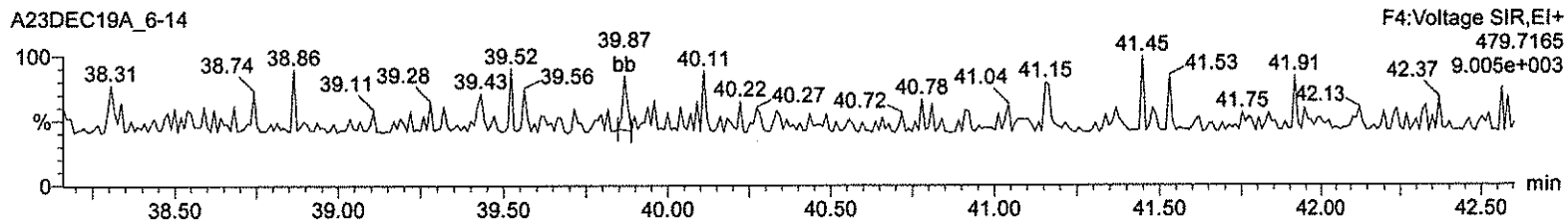
13C-1234678-HpCDF



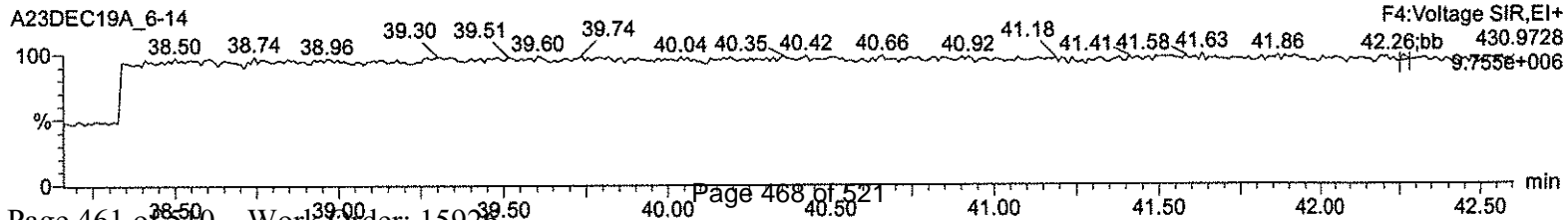
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_6-14.qld

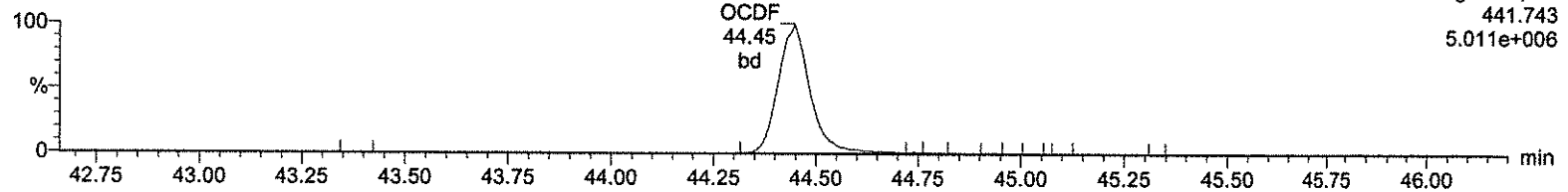
Last Altered: Friday, December 27, 2019 16:15:27 Eastern Standard Time

Printed: Friday, December 27, 2019 16:16:05 Eastern Standard Time

Name: A23DEC19A_6-14, Date: 26-Dec-2019, Time: 10:16:59, ID: CS3WT UD191018-02.1, Description: , Job: A23DEC19A_6, Task: HRP750_2, User: MJC

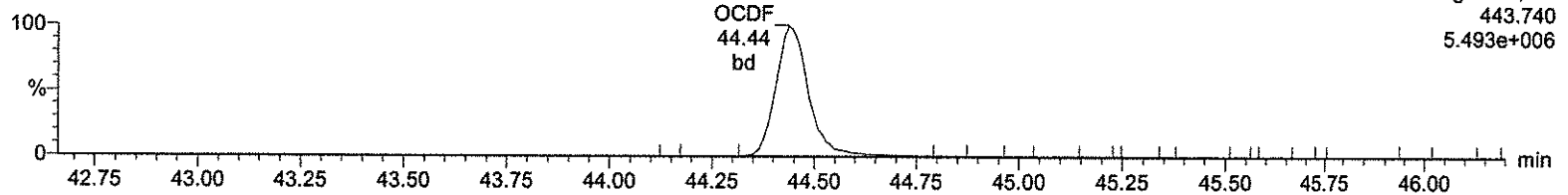
OCDF

A23DEC19A_6-14



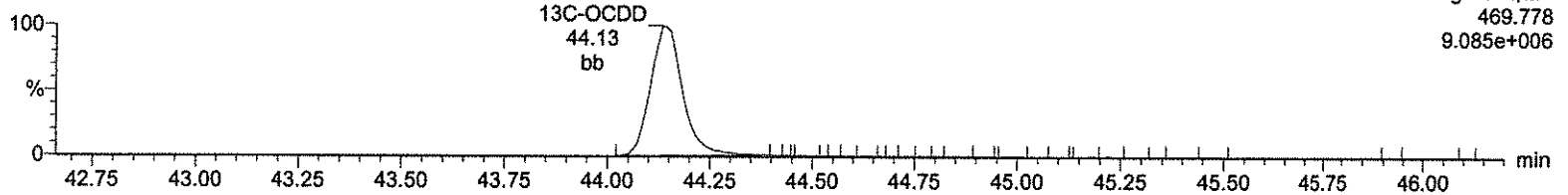
OCDF

A23DEC19A_6-14



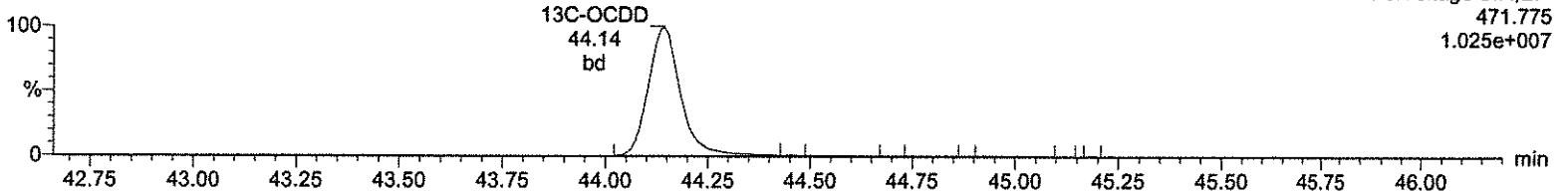
13C-OCDD

A23DEC19A_6-14



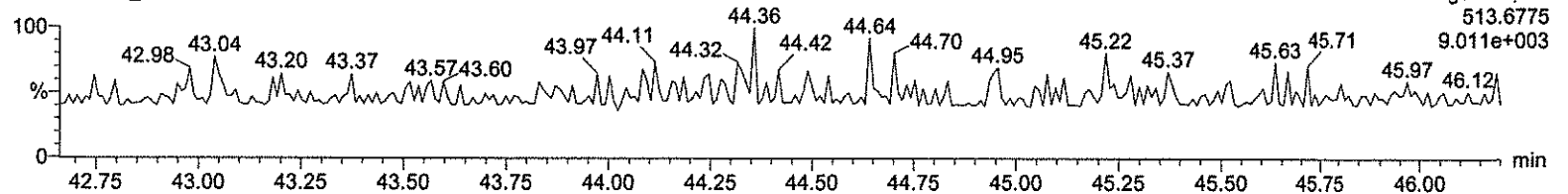
13C-OCDD

A23DEC19A_6-14



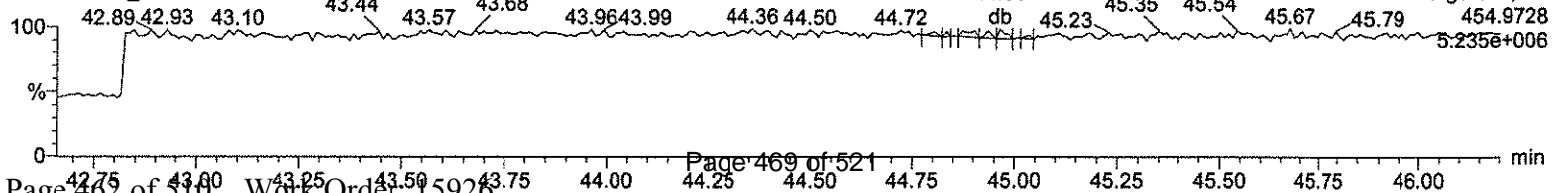
DeDPE

A23DEC19A_6-14



Lock Mass F5

A23DEC19A_6-14



Quantify Sample Summary Report
Method 8290 CCAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time
Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

USE ALL RFS FOR 8290-23-27-2019

Method: C:\MassLynx\Default.pro\Methdb\ICFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08_JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: , Job: A23DEC19A_7, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	Mean %D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	4.75e4	6.09e4	1.08e5	31.14	1.001	0.78	NO	11.247	0.0853	0.995	0.884	12.5	7.64e5	2957	258.5	9.84e5	2606	377.7	dd
2	12378-PeCDD	2.48e5	1.58e5	4.06e5	34.05	1.000	1.57	NO	53.276	0.226	0.909	0.853	6.6	5.69e6	9859	576.1	3.78e6	5435	695.5	bb
3	123478-HxCDD	2.11e5	1.59e5	3.70e5	36.62	0.998	1.32	NO	47.184	0.298	0.806	0.854	-5.6	4.23e6	8101	521.8	3.43e6	8713	393.6	bd
4	123678-HxCDD	2.49e5	2.07e5	4.57e5	36.71	1.000	1.20	NO	52.720	0.270	0.995	0.944	5.4	4.46e6	8101	550.9	3.64e6	8713	417.9	dd
5	123789-HxCDD	2.29e5	1.82e5	4.11e5	36.95	1.007	1.26	NO	50.602	0.288	0.896	0.885	1.2	3.82e6	8101	471.7	3.07e6	8713	351.8	dd
6	1234678-HpCDD	1.62e5	1.58e5	3.20e5	39.97	1.000	1.03	NO	47.668	0.293	0.991	1.040	-4.7	2.29e6	4294	532.8	2.12e6	6428	330.2	bd
7	OCDD	2.70e5	3.07e5	5.77e5	44.16	1.000	0.88	NO	103.992	0.611	1.010	0.971	4.0	2.69e6	5922	454.0	3.09e6	7357	419.8	bd
8	2378-TCDF	5.48e4	7.31e4	1.28e5	30.34	1.000	0.75	NO	9.060	0.0924	0.886	0.978	-9.4	6.35e5	2119	299.6	8.56e5	4205	203.7	bd
9	12378-PeCDF	3.50e5	2.22e5	5.72e5	33.25	1.000	1.57	NO	46.683	0.175	0.883	0.945	-6.6	8.48e6	9685	875.3	5.45e6	9890	550.8	bd
10	23478-PeCDF	3.96e5	2.55e5	6.51e5	33.86	1.019	1.55	NO	48.465	0.160	1.005	1.037	-3.1	9.68e6	9685	999.5	6.31e6	9890	638.2	bb
11	123478-HxCDF	2.92e5	2.34e5	5.26e5	35.92	0.998	1.25	NO	48.562	0.351	0.940	0.968	-2.9	6.43e6	14422	446.2	5.23e6	12736	410.8	bd
12	123678-HxCDF	3.40e5	2.66e5	6.06e5	36.02	1.001	1.28	NO	52.062	0.327	1.083	1.041	4.1	6.11e6	14422	423.6	4.95e6	12736	388.8	dd
13	234678-HxCDF	3.11e5	2.50e5	5.62e5	36.49	1.014	1.24	NO	50.932	0.345	1.004	0.985	1.9	6.12e6	14422	424.5	4.85e6	12736	381.1	bd
14	123789-HxCDF	2.56e5	2.00e5	4.56e5	37.25	1.035	1.28	NO	49.516	0.413	0.815	0.823	-1.0	4.26e6	14422	295.1	3.37e6	12736	284.7	bb
15	1234678-HpCDF	2.36e5	2.36e5	4.71e5	38.73	1.000	1.00	NO	52.693	0.254	1.212	1.150	5.4	3.82e6	7196	530.6	3.77e6	7725	487.4	bb
16	1234789-HpCDF	1.89e5	1.83e5	3.72e5	40.63	1.049	1.03	NO	51.094	0.312	0.957	0.936	2.2	2.46e6	7196	342.1	2.30e6	7725	297.8	bd
17	OCDF	3.03e5	3.40e5	6.43e5	44.45	1.007	0.89	NO	99.343	0.365	1.125	1.133	-0.7	3.09e6	3808	811.3	3.30e6	5434	606.8	bd
18	13C-2378-TCDD	4.68e5	6.22e5	1.09e6	31.12	1.018	0.75	NO	101.082	0.187	1.141	1.128	1.1	7.91e6	6348	1246.7	1.03e7	3762	2749.6	bb
19	13C-12378-PeCDD	5.46e5	3.48e5	8.93e5	34.04	1.114	1.57	NO	124.451	0.373	0.935	0.751	24.5	1.21e7	7812	1548.2	7.90e6	5591	1412.5	bb
20	13C-123678-HxCDD	4.98e5	4.19e5	9.17e5	36.70	0.994	1.19	NO	105.836	0.309	1.043	0.986	5.8	8.97e6	7076	1268.2	7.09e6	10583	669.6	dd
21	13C-1234678-HpCDD	3.30e5	3.15e5	6.45e5	39.96	1.082	1.05	NO	109.266	0.348	0.734	0.672	9.3	4.49e6	7070	635.5	4.34e6	6477	670.4	bd
22	13C-OCDD	5.38e5	6.04e5	1.14e6	44.14	1.195	0.89	NO	202.385	0.384	0.650	0.642	1.2	5.27e6	7894	668.0	6.04e6	6430	939.9	bd
23	13C-2378-TCDF	6.20e5	8.23e5	1.44e6	30.33	0.993	0.75	NO	120.856	0.283	1.511	1.250	20.9	7.51e6	10985	683.4	9.91e6	5929	1671.7	bb
24	13C-12378-PeCDF	7.90e5	5.06e5	1.30e6	33.24	1.088	1.56	NO	134.173	0.590	1.356	1.011	34.2	1.80e7	20498	877.7	1.17e7	8032	1453.0	bd
25	13C-123678-HxCDF	3.91e5	7.28e5	1.12e6	36.00	0.975	0.54	NO	102.109	0.322	1.273	1.247	2.1	6.98e6	7813	893.8	1.37e7	15511	881.7	dd
26	13C-1234678-HpCDF	2.31e5	5.47e5	7.78e5	38.72	1.049	0.42	NO	101.723	0.277	0.885	0.870	1.7	3.78e6	5524	684.7	8.53e6	8475	1006.0	bb
27	13C-1234-TCDD	4.11e5	5.45e5	9.55e5	30.55	0.000	0.75	NO	100.000	0.211	1.000	1.000	0.0	5.15e6	6348	810.6	6.70e6	3762	1782.3	bb
28	13C-123789-HxCDD	4.82e5	3.97e5	8.79e5	36.93	0.000	1.21	NO	100.000	0.304	1.000	1.000	0.0	7.95e6	7076	1124.1	6.46e6	10583	609.9	dd
29	37Cl-2378-TCDD (SS)	9.58e4	9.58e4	31.14	1.001				9.347	0.0386	0.879	0.940	-6.5	1.60e6	2674	597.3				bb
30	13C-23478-PeCDF (SS)	8.36e5	5.30e5	1.37e6	33.85	1.018	1.58	NO	100.225	0.230	1.054	1.052	0.2	2.11e7	20498	1027.2	1.35e7	8032	1681.1	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time
 Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: , Job: A23DEC19A_7, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRE	Mean %D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
131	13C-123478-HxCDF (SS)	3.20e5	6.17e5	9.37e5	35.91	0.997	0.52	NO	93.983	0.328	0.837	0.891	-6.0	6.98e6	7813	893.0	1.32e7	15511	852.0	bd	bd
132	13C-123478-HxCDD (SS)	4.19e5	3.15e5	7.33e5	36.61	0.998	1.33	NO	87.891	0.294	0.799	0.909	-12.1	8.33e6	7076	1177.0	6.62e6	10583	626.0	bd	bd
133	13C-1234789-HpCDF (SS)	1.80e5	4.19e5	5.99e5	40.61	1.049	0.43	NO	98.792	0.352	0.769	0.779	1.2	2.40e6	5524	433.9	5.20e6	8475	614.0	bd	bd

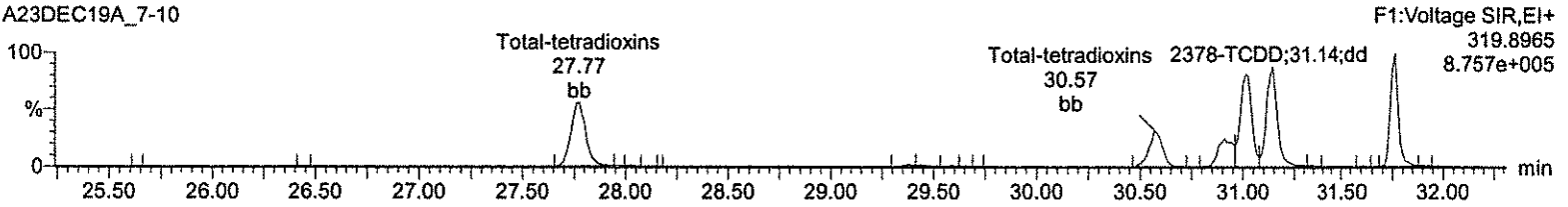
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Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time
Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

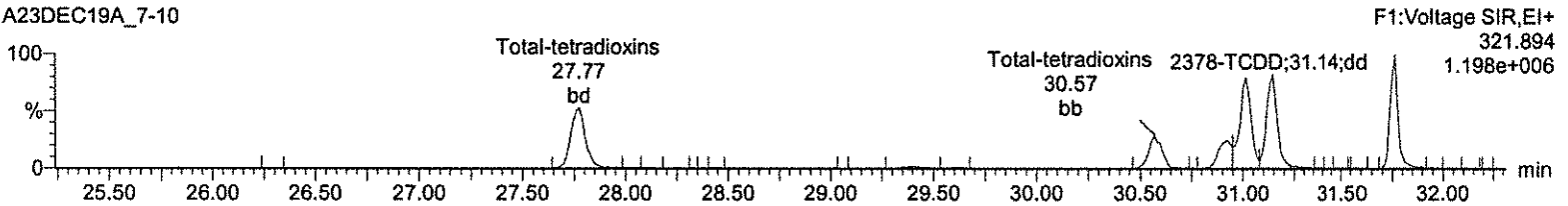
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Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

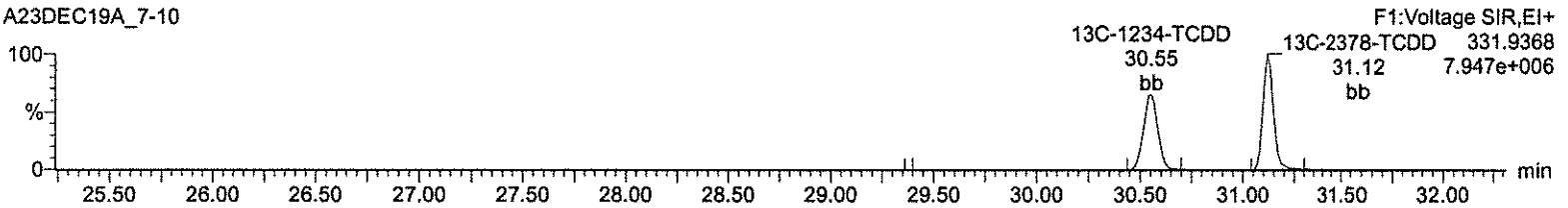
Total-tetradoxins
A23DEC19A_7-10



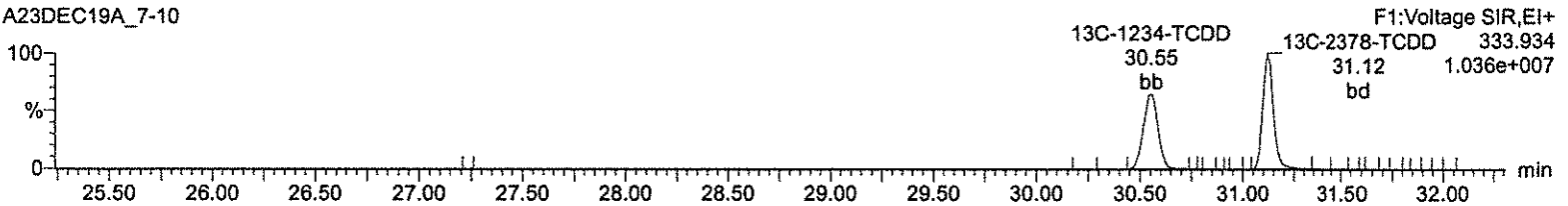
Total-tetradoxins
A23DEC19A_7-10



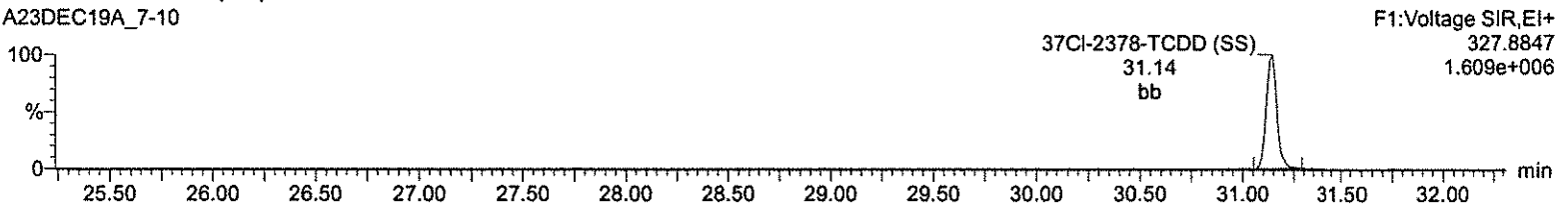
13C-2378-TCDD
A23DEC19A_7-10



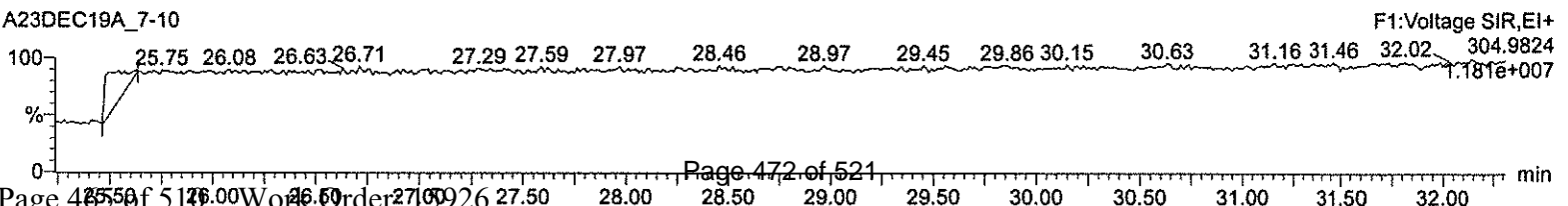
13C-2378-TCDD
A23DEC19A_7-10



37Cl-2378-TCDD (SS)
A23DEC19A_7-10



Lock Mass F1
A23DEC19A_7-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

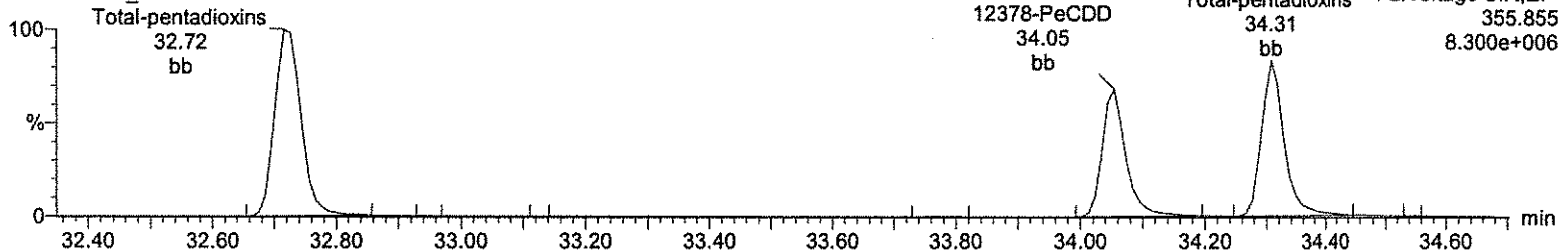
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Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

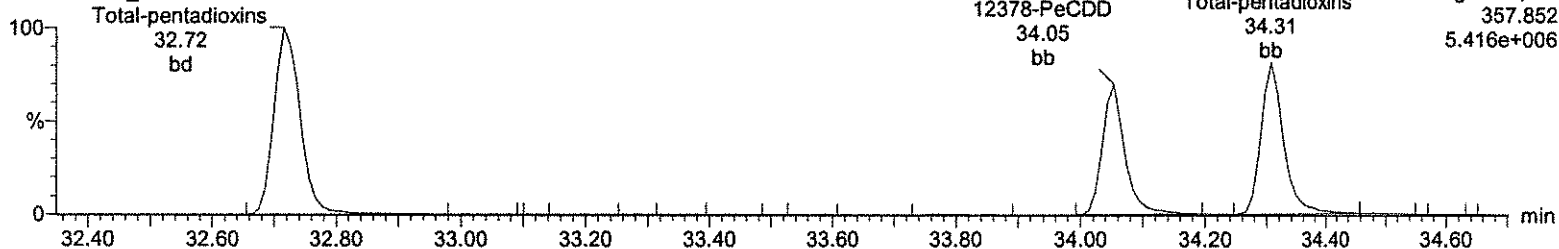
Total-pentadioxins

A23DEC19A_7-10



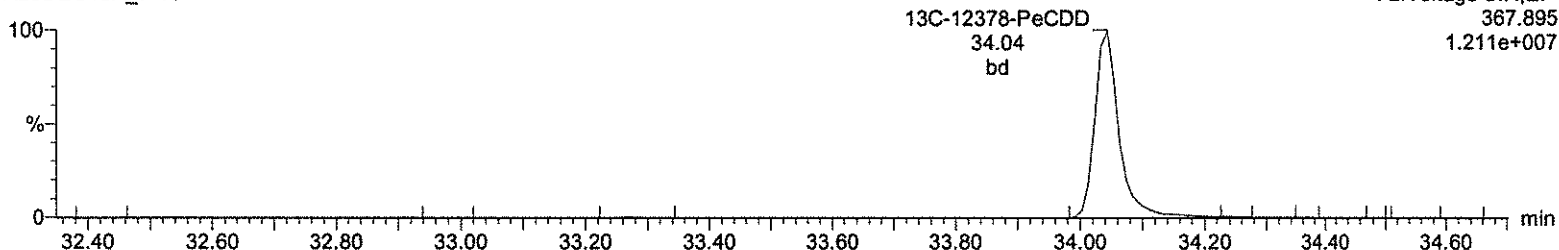
Total-pentadioxins

A23DEC19A_7-10



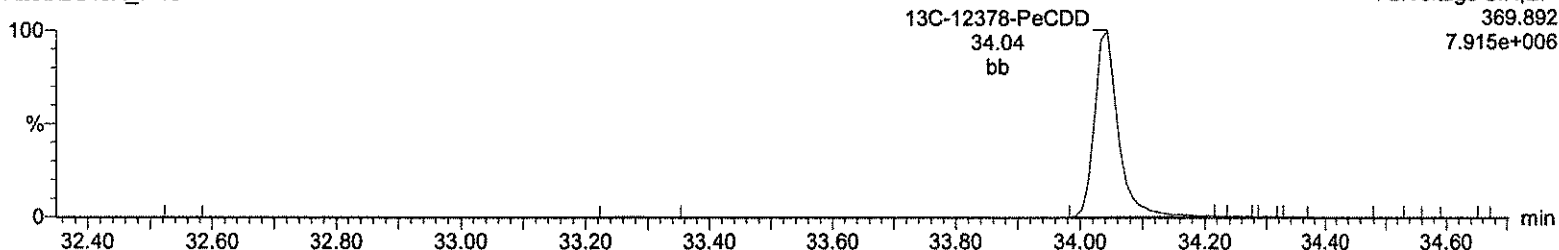
13C-12378-PeCDD

A23DEC19A_7-10



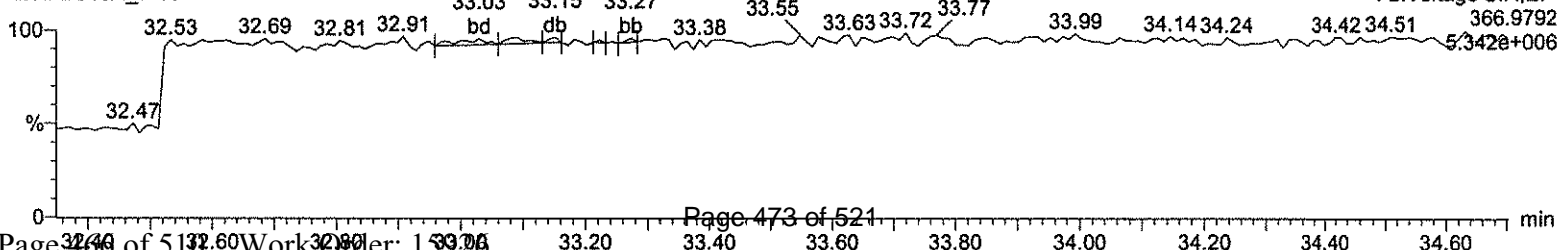
13C-12378-PeCDD

A23DEC19A_7-10



Lock Mass F2

A23DEC19A_7-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

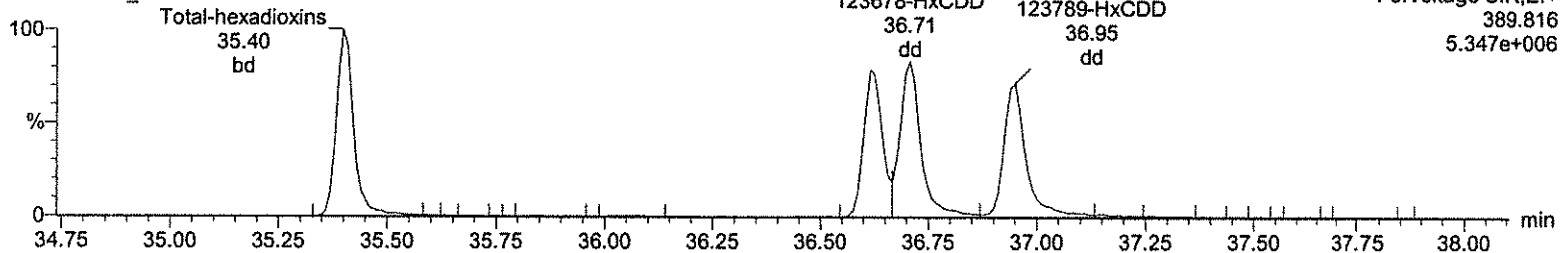
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Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

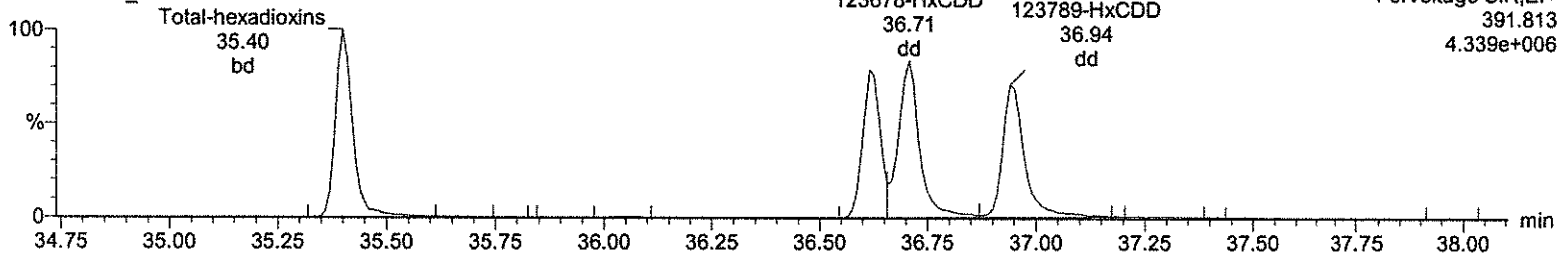
Total-hexadioxins

A23DEC19A_7-10



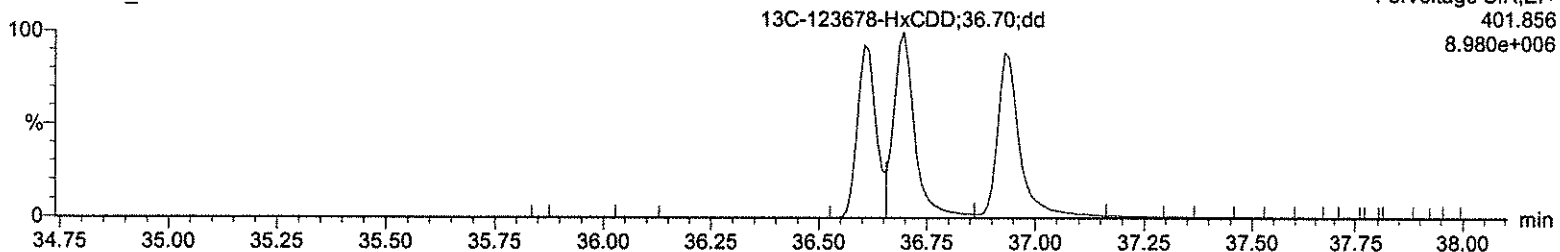
Total-hexadioxins

A23DEC19A_7-10



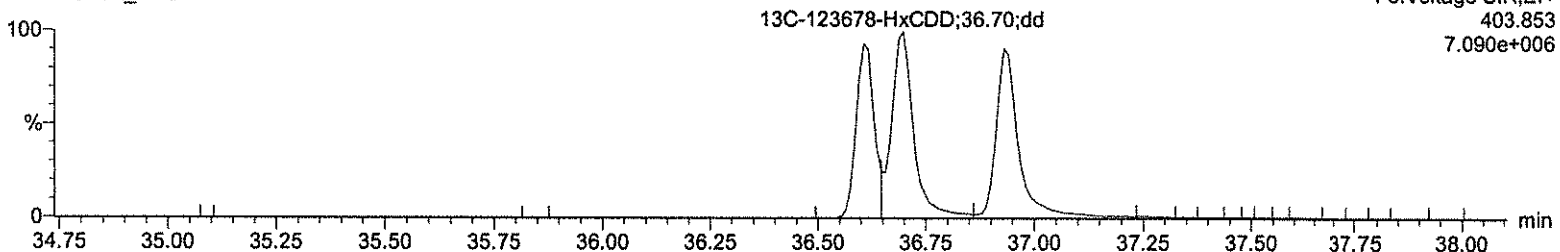
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A23DEC19A_7-10



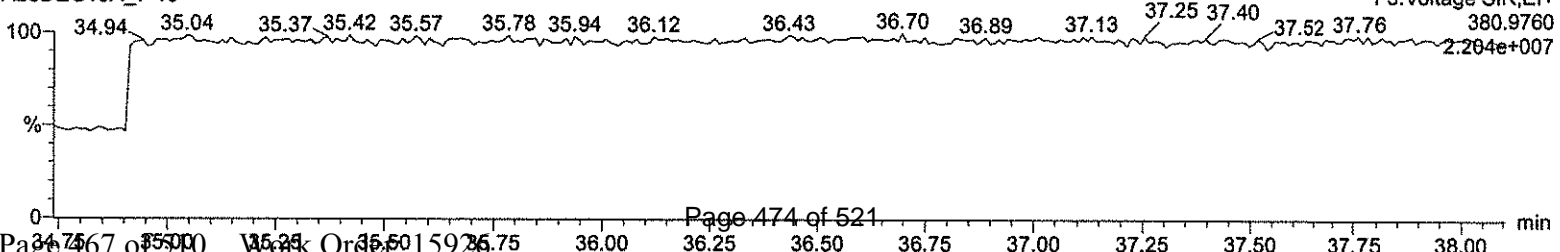
13C-123678-HxCDD

A23DEC19A_7-10



Lock Mass F3

A23DEC19A_7-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time

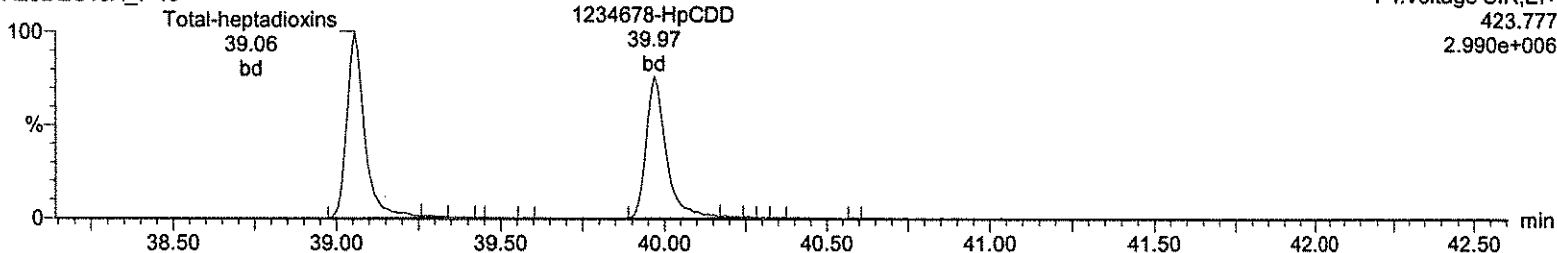
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Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

Total-heptadioxins

A23DEC19A_7-10

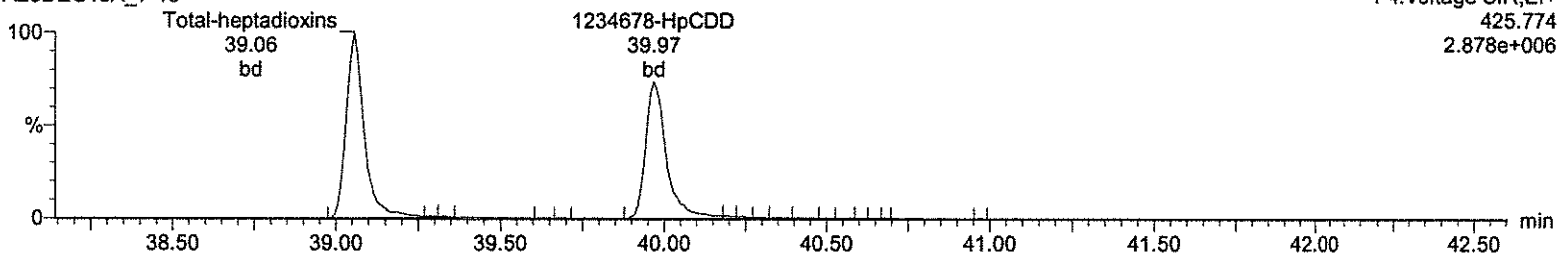
F4:Voltage SIR,EI+
423.777
2.990e+006



Total-heptadioxins

A23DEC19A_7-10

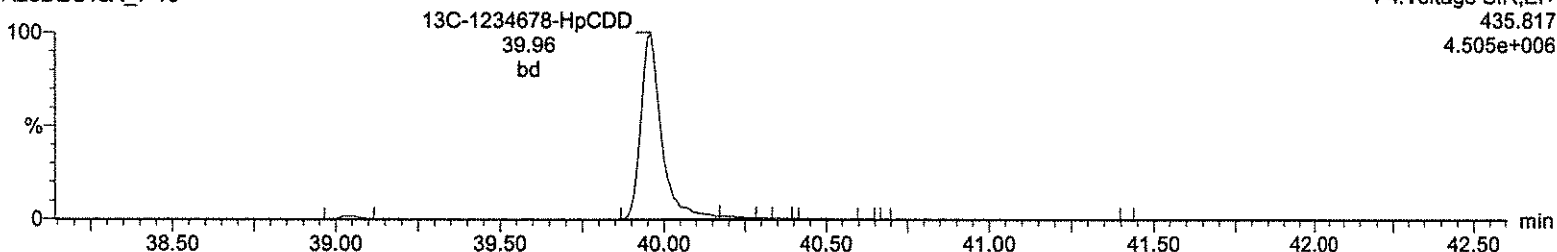
F4:Voltage SIR,EI+
425.774
2.878e+006



13C-1234678-HpCDD

A23DEC19A_7-10

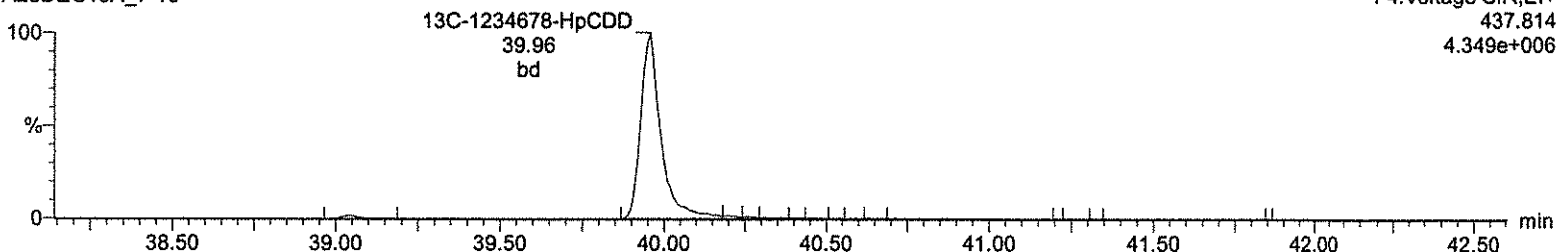
F4:Voltage SIR,EI+
435.817
4.505e+006



13C-1234678-HpCDD

A23DEC19A_7-10

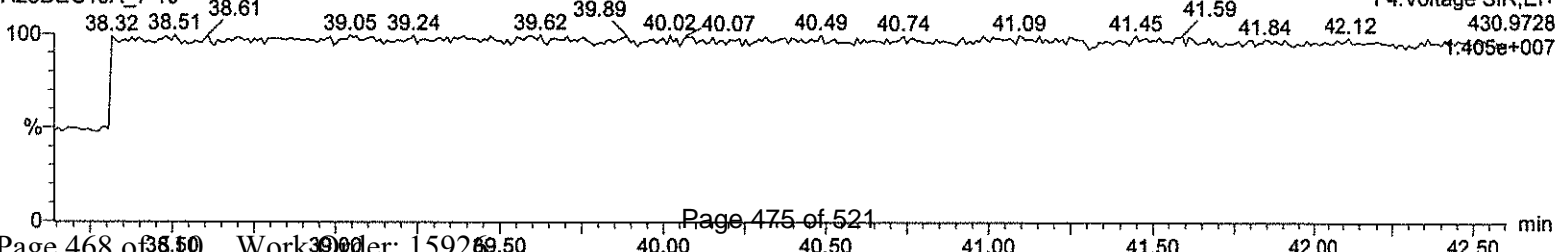
F4:Voltage SIR,EI+
437.814
4.349e+006



Lock Mass F4

A23DEC19A_7-10

F4:Voltage SIR,EI+
430.9728
1.405e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time

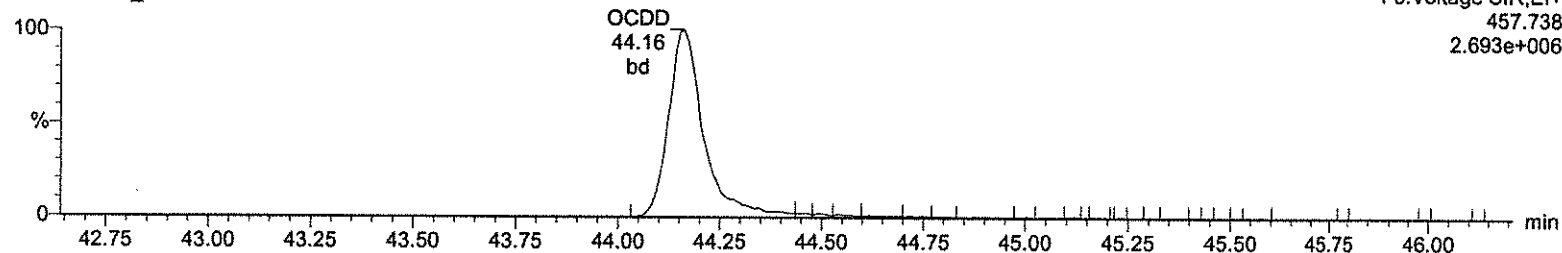
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Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

OCDD

A23DEC19A_7-10

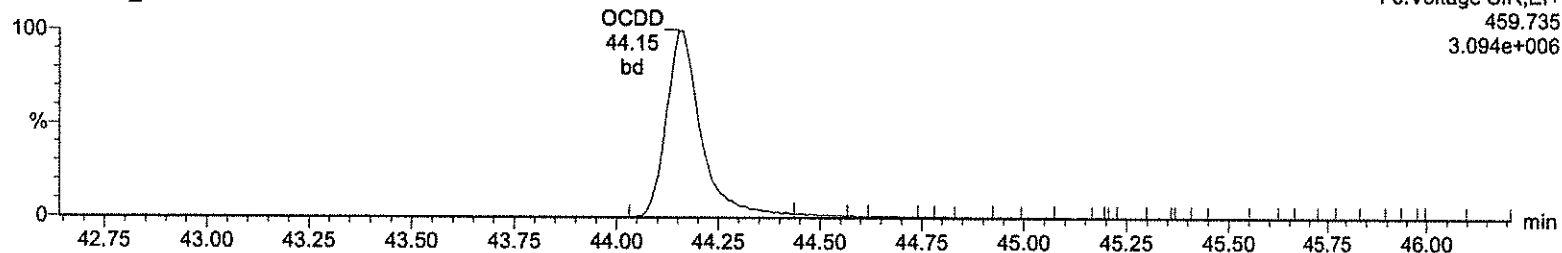
F5:Voltage SIR,EI+
457.738
2.693e+006



OCDD

A23DEC19A_7-10

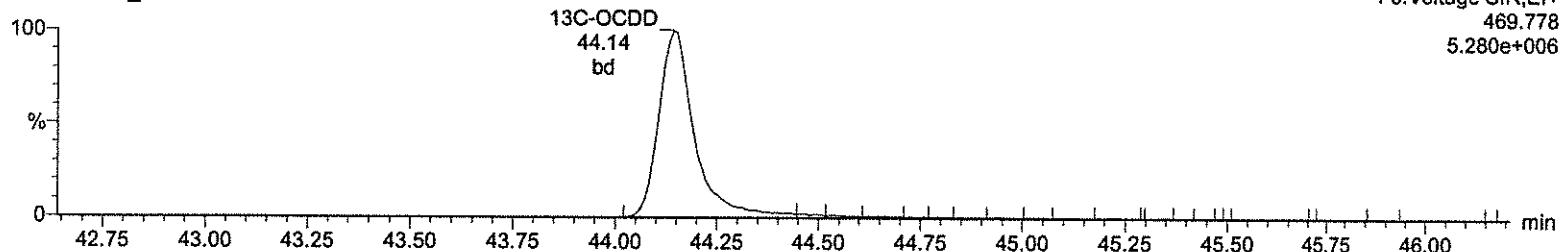
F5:Voltage SIR,EI+
459.735
3.094e+006



13C-OCDD

A23DEC19A_7-10

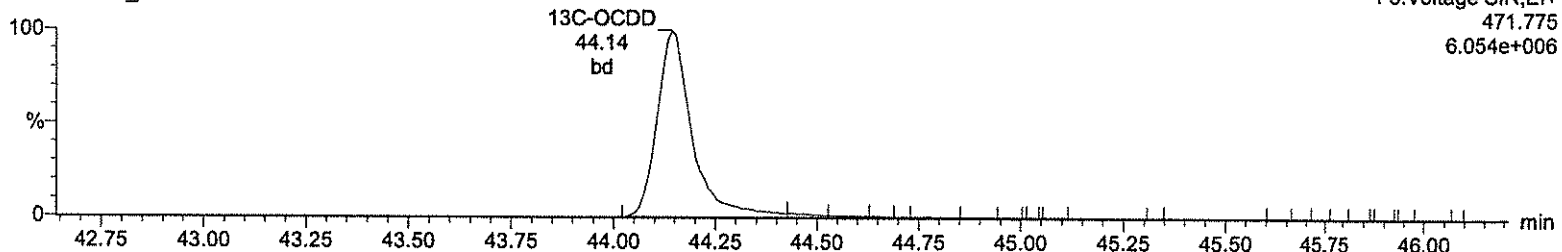
F5:Voltage SIR,EI+
469.778
5.280e+006



13C-OCDD

A23DEC19A_7-10

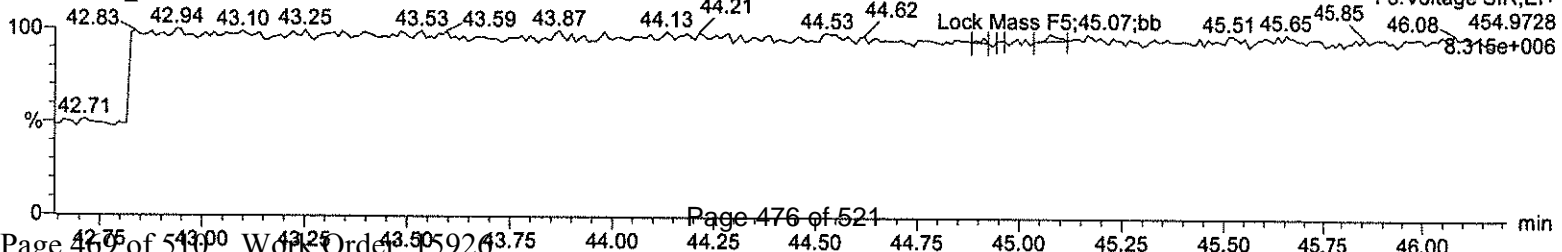
F5:Voltage SIR,EI+
471.775
6.054e+006



Lock Mass F5

A23DEC19A_7-10

F5:Voltage SIR,EI+
454.9728
8.315e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

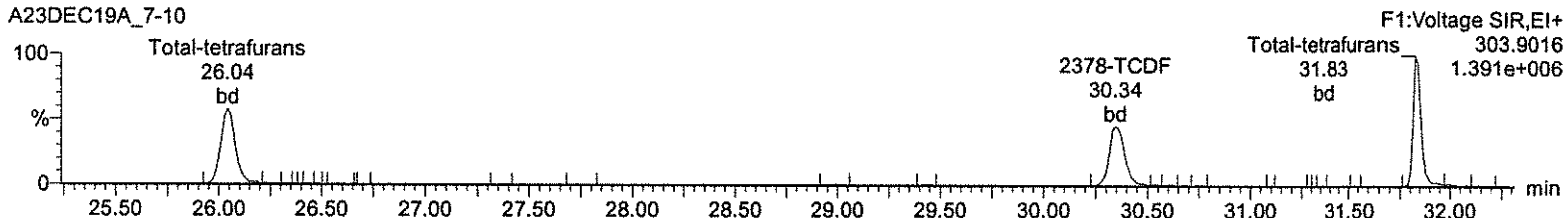
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Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

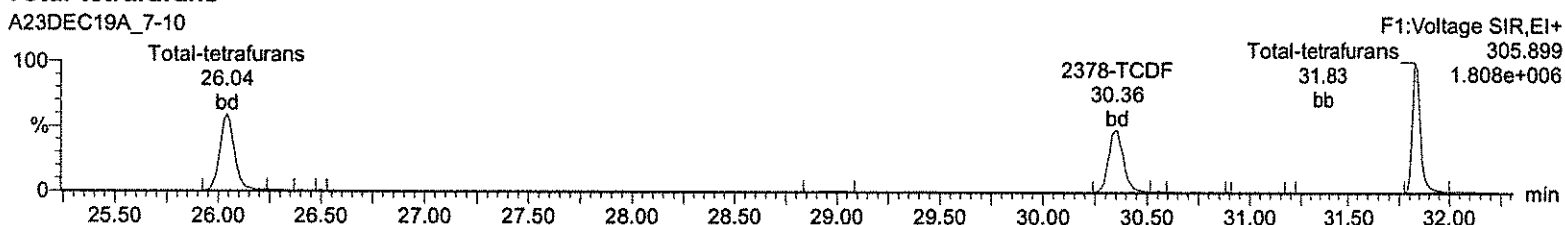
Total-tetrafurans

A23DEC19A_7-10



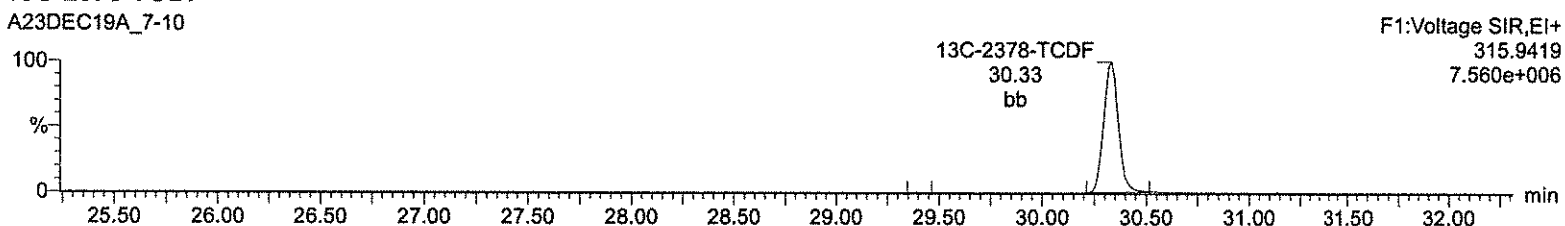
Total-tetrafurans

A23DEC19A_7-10



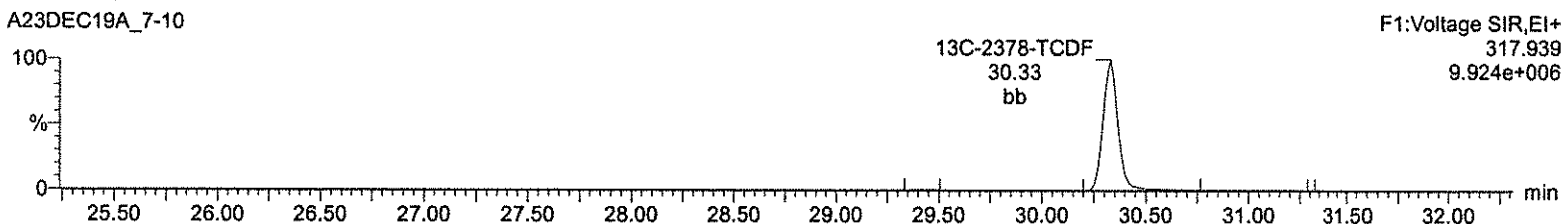
13C-2378-TCDF

A23DEC19A_7-10



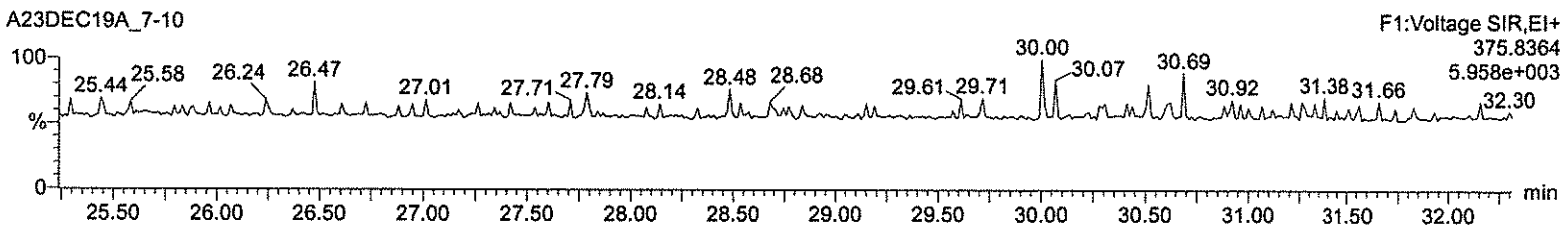
13C-2378-TCDF

A23DEC19A_7-10



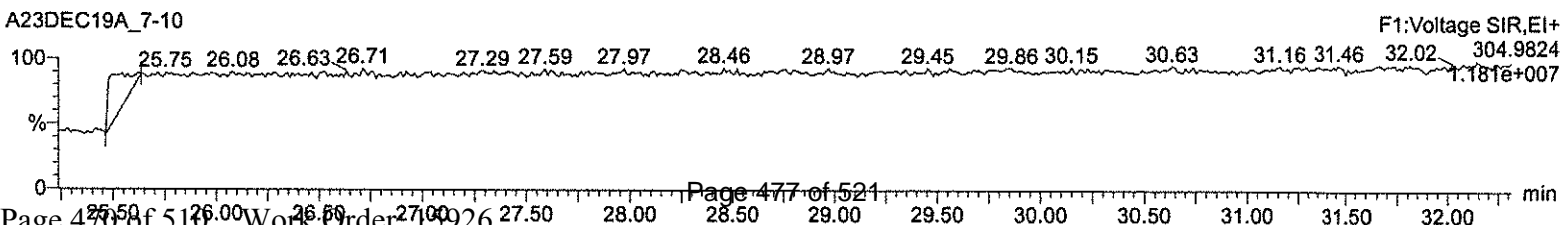
HxDPE

A23DEC19A_7-10



Lock Mass F1

A23DEC19A_7-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

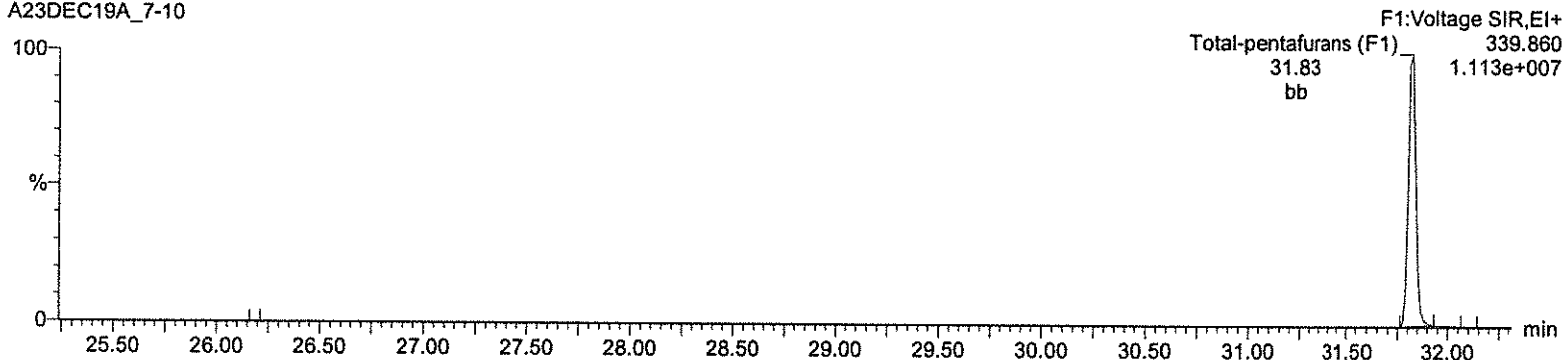
Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time

Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

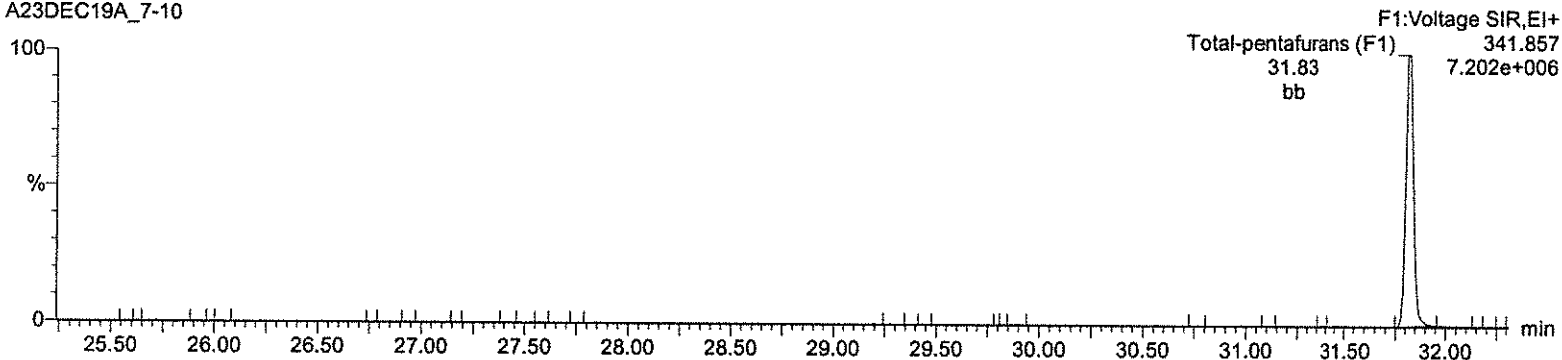
Total-pentafurans (F1)

A23DEC19A_7-10



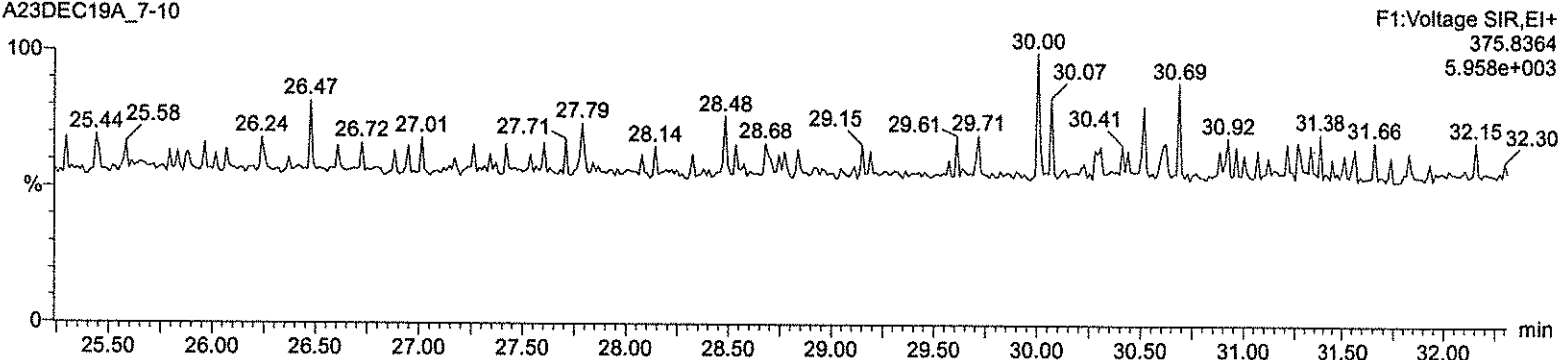
Total-pentafurans (F1)

A23DEC19A_7-10



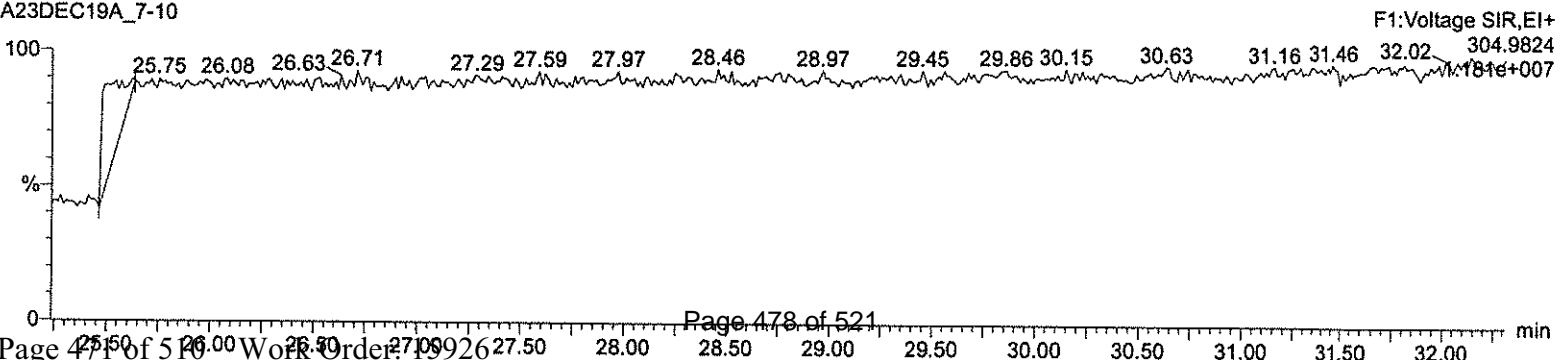
HxDPE

A23DEC19A_7-10



Lock Mass F1

A23DEC19A_7-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

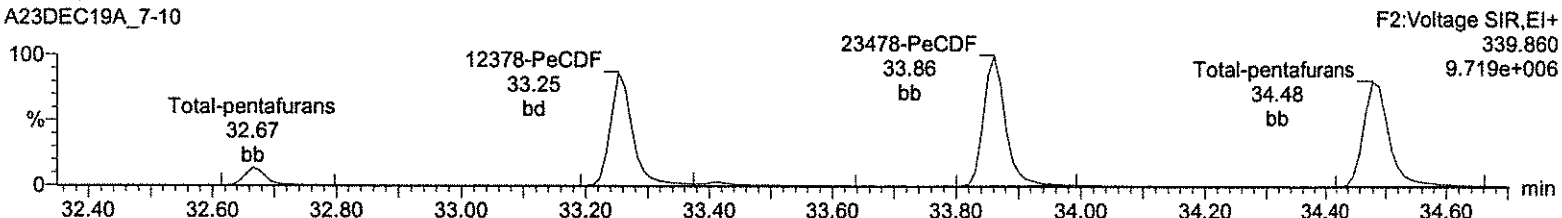
Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time

Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

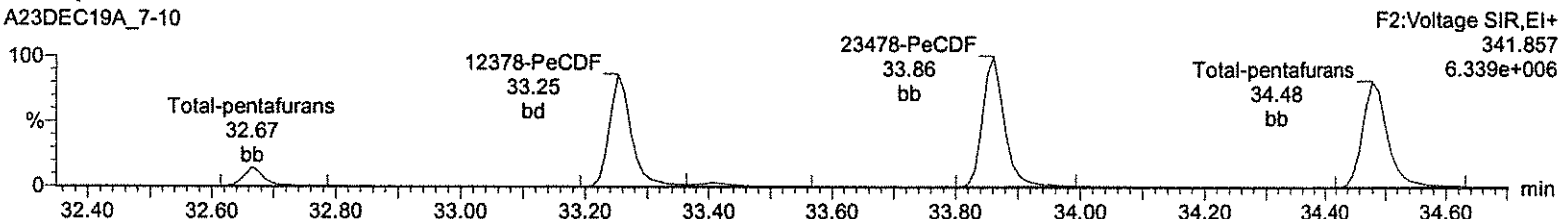
Total-pentafurans

A23DEC19A_7-10



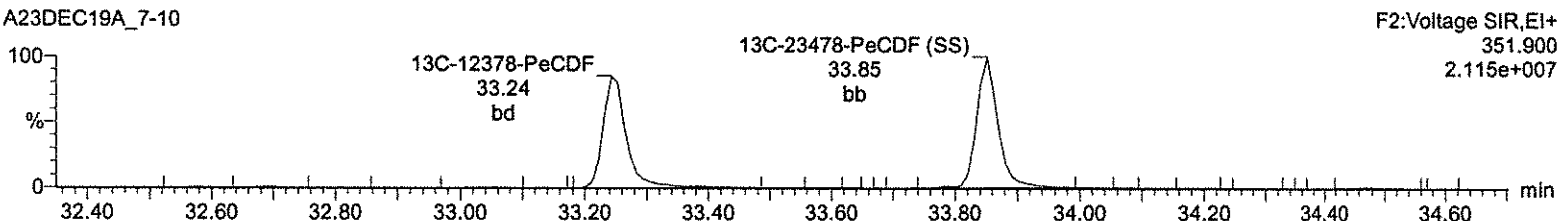
Total-pentafurans

A23DEC19A_7-10



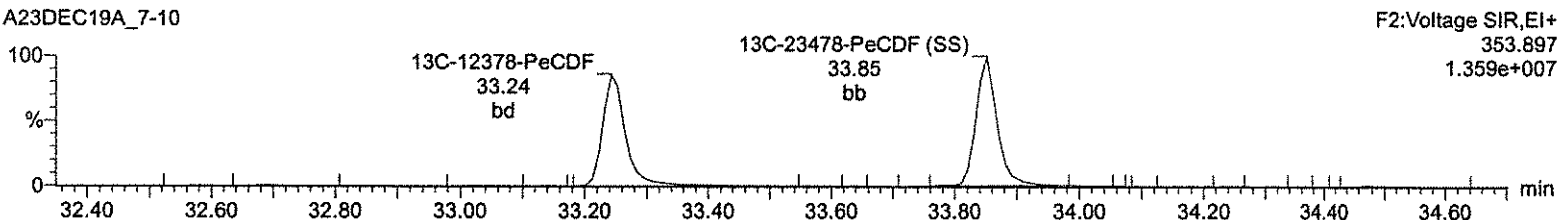
13C-12378-PeCDF

A23DEC19A_7-10



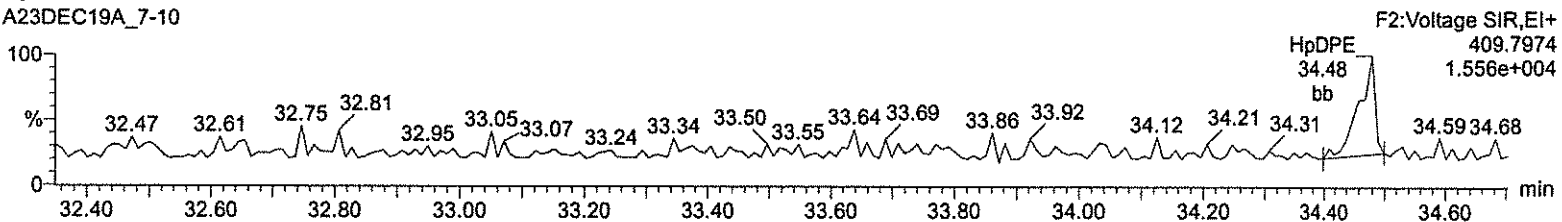
13C-12378-PeCDF

A23DEC19A_7-10



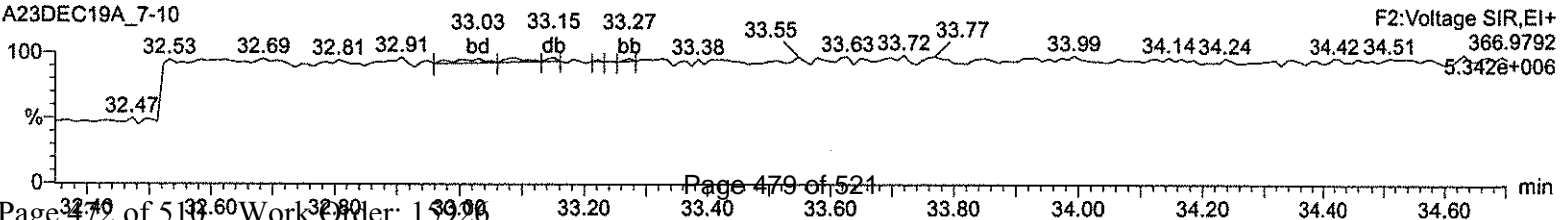
HpDPE

A23DEC19A_7-10



Lock Mass F2

A23DEC19A_7-10



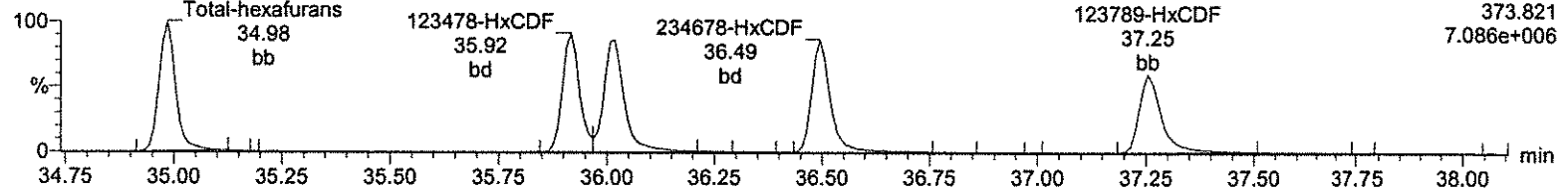
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Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time
Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

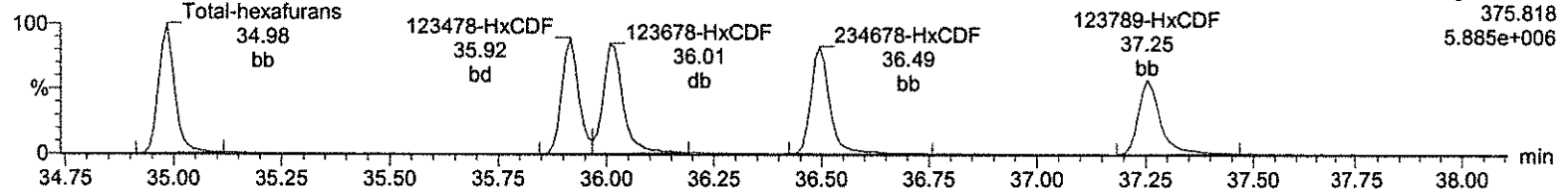
Total-hexafurans

A23DEC19A_7-10



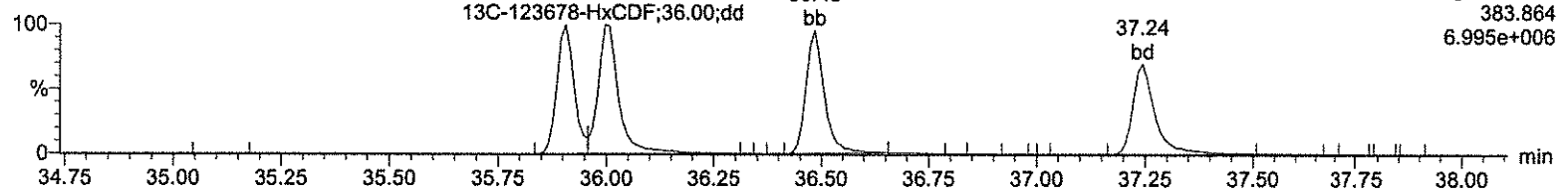
Total-hexafurans

A23DEC19A_7-10



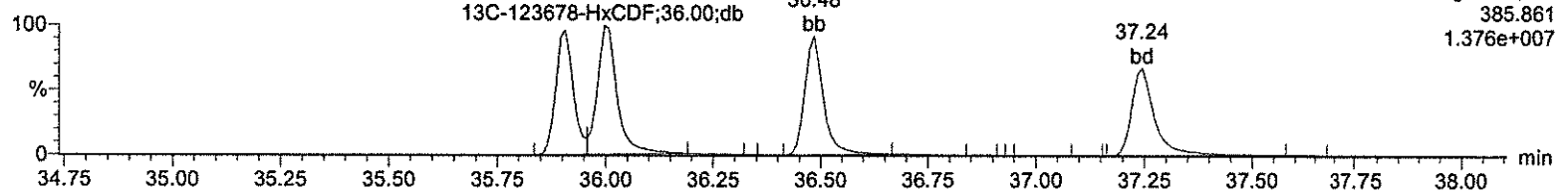
¹³C-123678-HxCDF

A23DEC19A_7-10



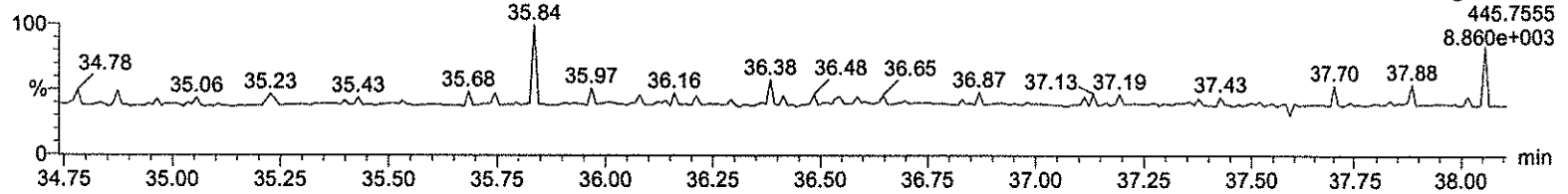
¹³C-123678-HxCDF

A23DEC19A_7-10



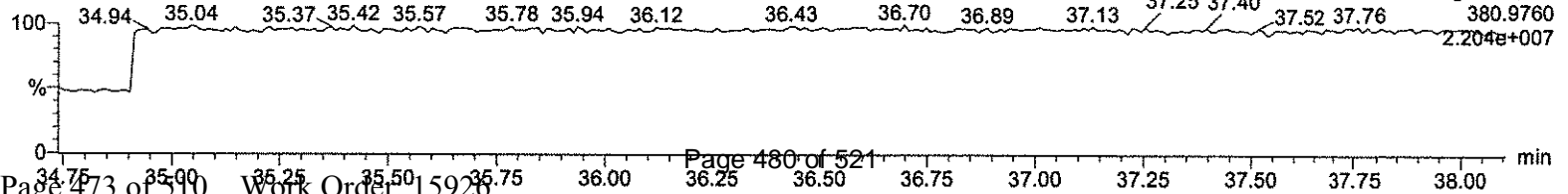
OcDPE

A23DEC19A_7-10



Lock Mass F3

A23DEC19A_7-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

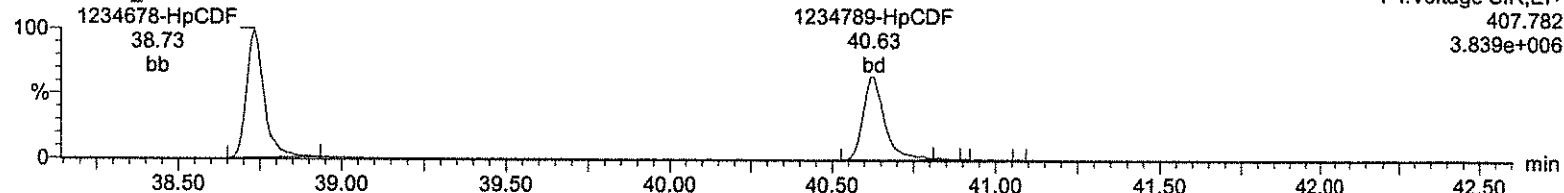
Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time

Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

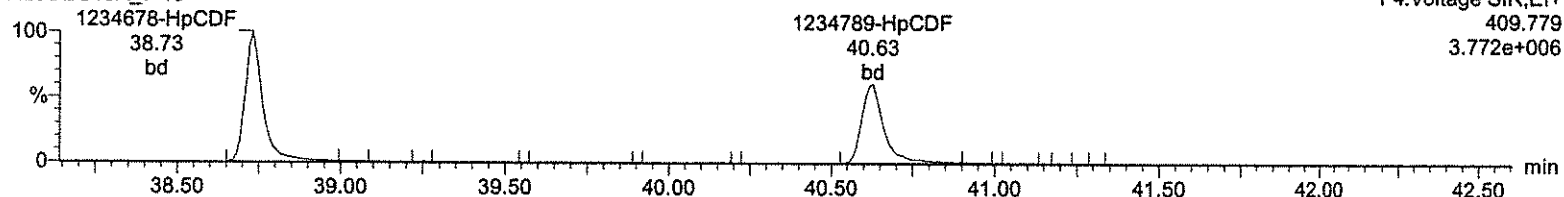
Total-heptafurans

A23DEC19A_7-10



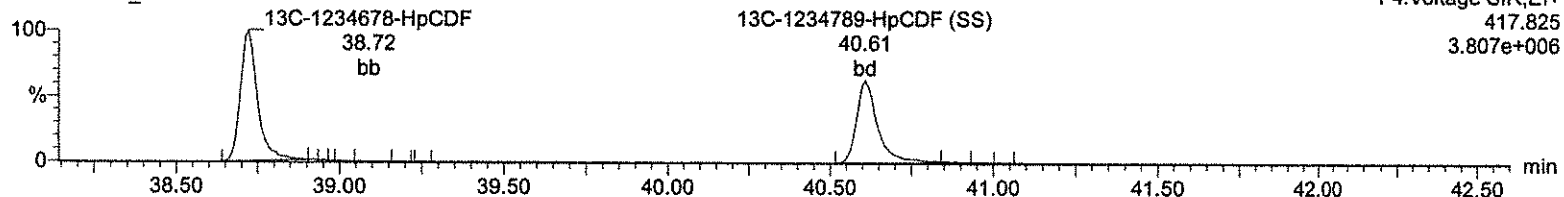
Total-heptafurans

A23DEC19A_7-10



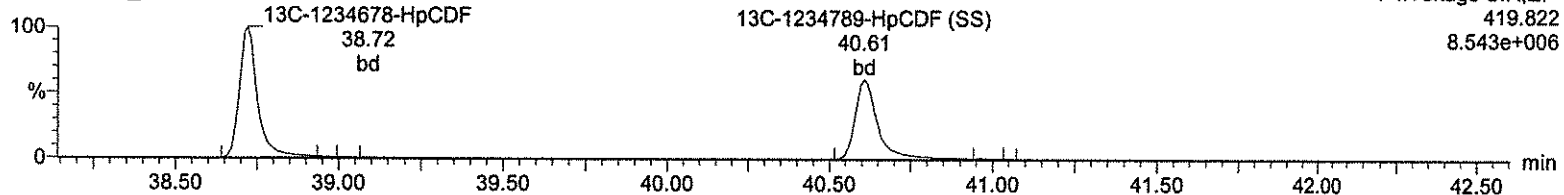
13C-1234678-HpCDF

A23DEC19A_7-10



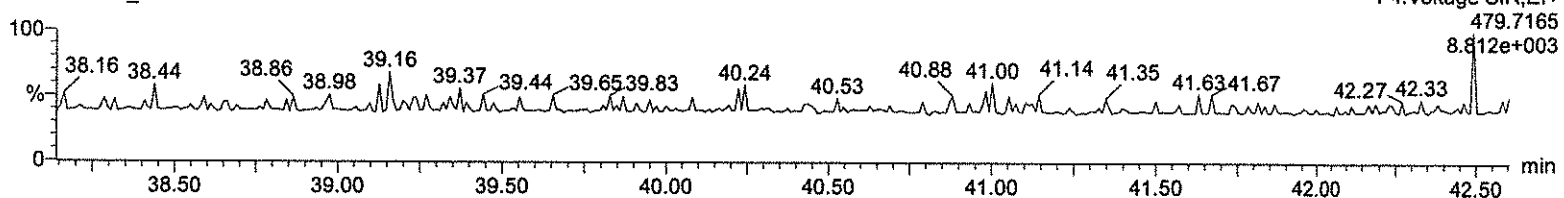
13C-1234678-HpCDF

A23DEC19A_7-10



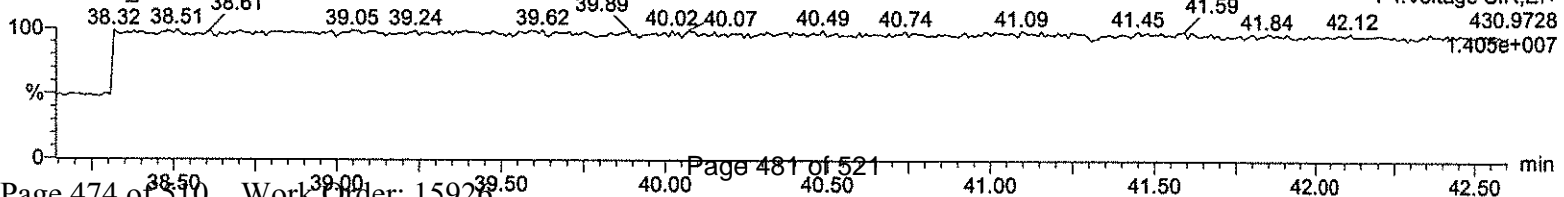
NoDPE

A23DEC19A_7-10



Lock Mass F4

A23DEC19A_7-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_7-10.qld

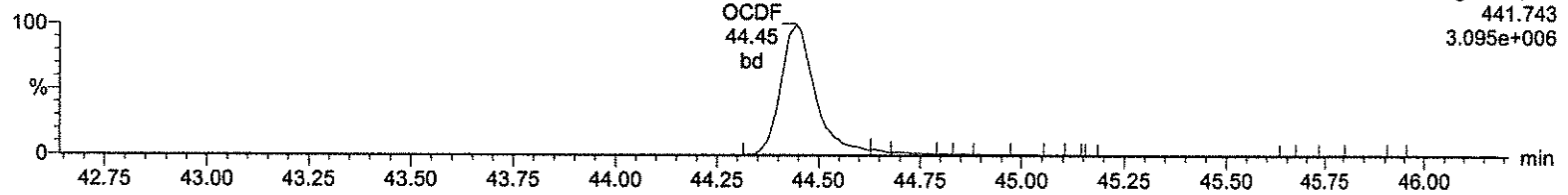
Last Altered: Friday, December 27, 2019 09:04:10 Eastern Standard Time

Printed: Friday, December 27, 2019 09:05:02 Eastern Standard Time

Name: A23DEC19A_7-10, Date: 26-Dec-2019, Time: 18:30:39, ID: CS3WT UD191018-02.1 CPS66, Description: ,
Job: A23DEC19A_7, Task: HRP750_2, User: MJC

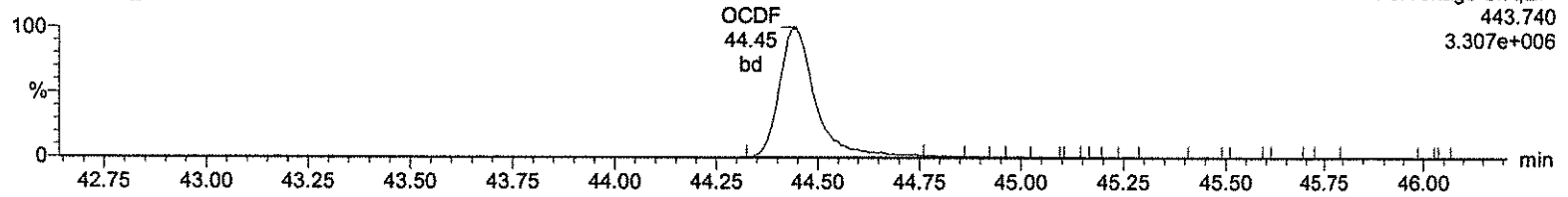
OCDF

A23DEC19A_7-10



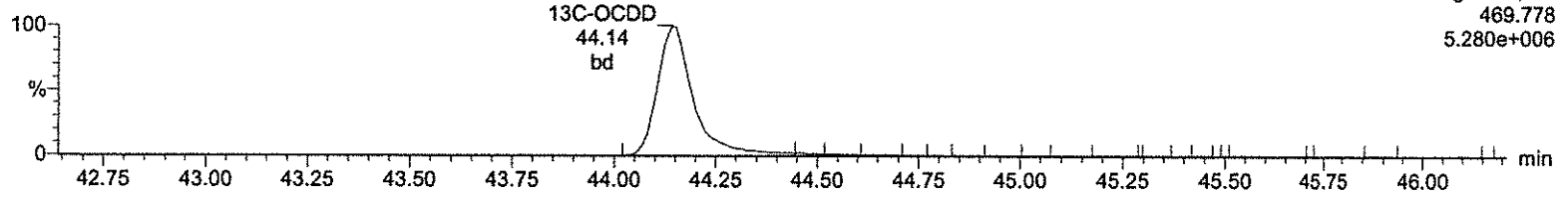
OCDF

A23DEC19A_7-10



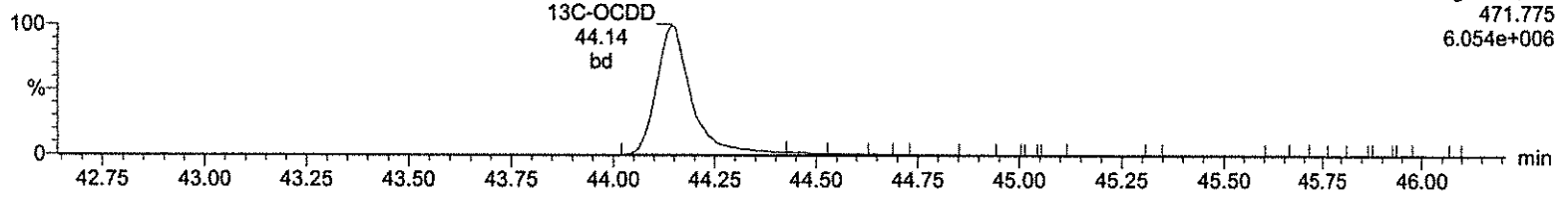
13C-OCDD

A23DEC19A_7-10



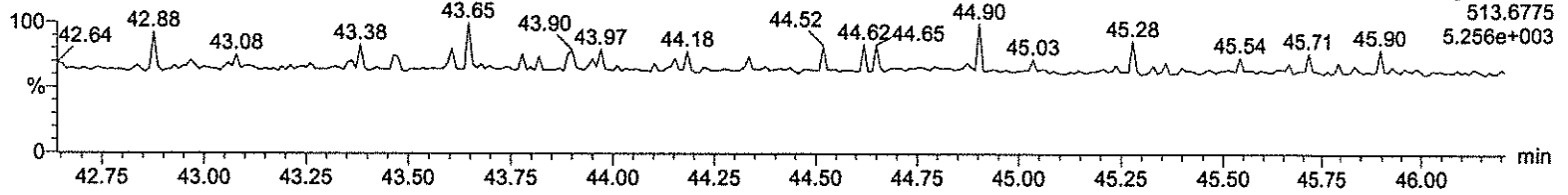
13C-OCDD

A23DEC19A_7-10



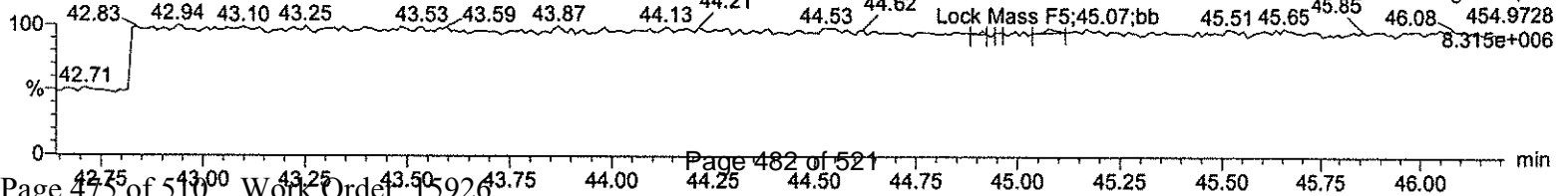
DeDPE

A23DEC19A_7-10



Lock Mass F5

A23DEC19A_7-10



Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-A08JUL19A_A23DEC19A_7_AVG.qld

Last Altered: Friday, December 27, 2019 11:14:01 Eastern Standard Time

Printed: Friday, December 27, 2019 11:15:36 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-A08JUL19A_A23DEC19A_7_AVG.cdb 27 Dec 2019 11:14:01

Compound name: 2378-TCDD

Response Factor: 1.00771

RRF SD: 0.0183725, Relative SD: 1.8232

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	10.000	31.14	10.13	1.021	1.008	dd
A23DEC19A_7-10	CS3WT UD191018-02.1...	10.000	31.14	9.87	0.995	1.008	dd

Compound name: 12378-PeCDD

Response Factor: 0.911369

RRF SD: 0.00278272, Relative SD: 0.305334

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	34.05	50.11	0.913	0.911	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	34.05	49.89	0.909	0.911	bb

Compound name: 123478-HxCDD

Response Factor: 0.844626

RRF SD: 0.0543442, Relative SD: 6.43412

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	36.61	52.27	0.883	0.845	bd
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	36.62	47.73	0.806	0.845	bd

Compound name: 123678-HxCDD

Response Factor: 0.989862

RRF SD: 0.00785705, Relative SD: 0.793752

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	36.71	49.72	0.984	0.990	dd
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	36.71	50.28	0.995	0.990	dd

Compound name: 123789-HxCDD

Response Factor: 0.921276

RRF SD: 0.0362961, Relative SD: 3.93977

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
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Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-A08JUL19A_A23DEC19A_7_AVG.qld

Last Altered: Friday, December 27, 2019 11:14:01 Eastern Standard Time

Printed: Friday, December 27, 2019 11:15:36 Eastern Standard Time

Compound name: 123789-HxCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	36.94	51.39	0.947	0.921	dd
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	36.95	48.61	0.896	0.921	dd

Compound name: 1234678-HpCDD

Response Factor: 0.987572

RRF SD: 0.00548555, Relative SD: 0.555459

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	39.97	49.80	0.984	0.988	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	39.97	50.20	0.991	0.988	bd

Compound name: OCDD

Response Factor: 0.988681

RRF SD: 0.0304325, Relative SD: 3.07809

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	44.15	97.82	0.967	0.989	bd
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	44.16	102.18	1.010	0.989	bd

Compound name: 2378-TCDF

Response Factor: 0.885171

RRF SD: 0.00180441, Relative SD: 0.203849

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	10.000	30.35	9.99	0.884	0.885	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	10.000	30.34	10.01	0.886	0.885	bd

Compound name: 12378-PeCDF

Response Factor: 0.892166

RRF SD: 0.0136597, Relative SD: 1.53107

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	33.25	50.54	0.902	0.892	bd
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	33.25	49.46	0.883	0.892	bd

Compound name: 23478-PeCDF

Response Factor: 1.00973

RRF SD: 0.00609203, Relative SD: 0.603332

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

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Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-A08JUL19A_A23DEC19A_7_AVG.qld

Last Altered: Friday, December 27, 2019 11:14:01 Eastern Standard Time

Printed: Friday, December 27, 2019 11:15:36 Eastern Standard Time

Compound name: 23478-PeCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	33.86	50.21	1.014	1.010	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	33.86	49.79	1.005	1.010	bb

Compound name: 123478-HxCDF

Response Factor: 0.944379

RRF SD: 0.00582292, Relative SD: 0.616587

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	35.91	50.22	0.948	0.944	bd
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	35.92	49.78	0.940	0.944	bd

Compound name: 123678-HxCDF

Response Factor: 1.06684

RRF SD: 0.0234675, Relative SD: 2.19973

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	36.01	49.22	1.050	1.067	db
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	36.02	50.78	1.083	1.067	dd

Compound name: 234678-HxCDF

Response Factor: 0.99578

RRF SD: 0.0112053, Relative SD: 1.12527

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	36.49	49.60	0.988	0.996	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	36.49	50.40	1.004	0.996	bd

Compound name: 123789-HxCDF

Response Factor: 0.828717

RRF SD: 0.0198488, Relative SD: 2.39513

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	37.25	50.85	0.843	0.829	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	37.25	49.15	0.815	0.829	bb

Compound name: 1234678-HpCDF

Response Factor: 1.20252

RRF SD: 0.0130398, Relative SD: 1.08437

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

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Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-A08JUL19A_A23DEC19A_7_AVG.qld

Last Altered: Friday, December 27, 2019 11:14:01 Eastern Standard Time

Printed: Friday, December 27, 2019 11:15:36 Eastern Standard Time

Compound name: 1234678-HpCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	38.73	49.62	1.193	1.203	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	38.73	50.38	1.212	1.203	bb

Compound name: 1234789-HpCDF

Response Factor: 0.98023

RRF SD: 0.0335444, Relative SD: 3.4221

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	50.000	40.63	51.21	1.004	0.980	bd
A23DEC19A_7-10	CS3WT UD191018-02.1...	50.000	40.63	48.79	0.957	0.980	bd

Compound name: OCDF

Response Factor: 1.10671

RRF SD: 0.0264119, Relative SD: 2.38652

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	44.45	98.31	1.088	1.107	bd
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	44.45	101.69	1.125	1.107	bd

Compound name: 13C-2378-TCDD

Response Factor: 1.15529

RRF SD: 0.0208433, Relative SD: 1.80416

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	31.11	101.28	1.170	1.155	bd
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	31.12	98.72	1.141	1.155	bb

Compound name: 13C-12378-PeCDD

Response Factor: 0.935752

RRF SD: 0.00114881, Relative SD: 0.122768

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	34.03	100.09	0.937	0.936	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	34.04	99.91	0.935	0.936	bd

Compound name: 13C-123678-HxCDD

Response Factor: 1.0088

RRF SD: 0.0487975, Relative SD: 4.8372

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

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Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-A08JUL19A_A23DEC19A_7_AVG.qld

Last Altered: Friday, December 27, 2019 11:14:01 Eastern Standard Time

Printed: Friday, December 27, 2019 11:15:36 Eastern Standard Time

Compound name: 13C-123678-HxCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	36.70	96.58	0.974	1.009	dd
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	36.70	103.42	1.043	1.009	dd

Compound name: 13C-1234678-HpCDD

Response Factor: 0.767197

RRF SD: 0.0470676, Relative SD: 6.13501

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	39.95	104.34	0.800	0.767	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	39.96	95.66	0.734	0.767	bd

Compound name: 13C-OCDD

Response Factor: 0.683822

RRF SD: 0.0481464, Relative SD: 7.04078

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	200.000	44.13	209.96	0.718	0.684	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	200.000	44.14	190.04	0.650	0.684	bd

Compound name: 13C-2378-TCDF

Response Factor: 1.49781

RRF SD: 0.0180565, Relative SD: 1.20553

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	30.33	99.15	1.485	1.498	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	30.33	100.85	1.511	1.498	bd

Compound name: 13C-12378-PeCDF

Response Factor: 1.30871

RRF SD: 0.0671945, Relative SD: 5.13442

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	33.24	96.37	1.261	1.309	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	33.24	103.63	1.356	1.309	bd

$$2.617/2 = 1.309$$

$$\sqrt{\frac{0.004513}{1}} = 0.0672$$

$$\frac{0.0672}{1.309} \times 100 = 5.13$$

Compound name: 13C-123678-HxCDF

Response Factor: 1.22879

RRF SD: 0.0627112, Relative SD: 5.10351

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

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592 012719

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-A08JUL19A_A23DEC19A_7_AVG.qld

Last Altered: Friday, December 27, 2019 11:14:01 Eastern Standard Time

Printed: Friday, December 27, 2019 11:15:36 Eastern Standard Time

Compound name: 13C-123678-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	36.00	96.39	1.184	1.229	dd
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	36.00	103.61	1.273	1.229	dd

Compound name: 13C-1234678-HpCDF

Response Factor: 0.881311

RRF SD: 0.00516156, Relative SD: 0.585669

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	38.72	99.59	0.878	0.881	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	38.72	100.41	0.885	0.881	bb

Compound name: 13C-1234-TCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	30.55	100.00	1.000	1.000	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	30.55	100.00	1.000	1.000	bb

Compound name: 13C-123789-HxCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	36.93	100.00	1.000	1.000	dd
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	36.93	100.00	1.000	1.000	dd

Compound name: 37Cl-2378-TCDD (SS)

Response Factor: 0.89563

RRF SD: 0.0238335, Relative SD: 2.66109

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	10.000	31.14	10.19	0.912	0.896	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	10.000	31.14	9.81	0.879	0.896	bb

Compound name: 13C-23478-PeCDF (SS)

Response Factor: 1.06824

RRF SD: 0.0202893, Relative SD: 1.89932

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

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Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-A08JUL19A_A23DEC19A_7_AVG.qld

Last Altered: Friday, December 27, 2019 11:14:01 Eastern Standard Time

Printed: Friday, December 27, 2019 11:15:36 Eastern Standard Time

Compound name: 13C-23478-PeCDF (SS)

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	33.85	101.34	1.083	1.068	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	33.85	98.66	1.054	1.068	bb

Compound name: 13C-123478-HxCDF (SS)

Response Factor: 0.861007

RRF SD: 0.0335191, Relative SD: 3.89301

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	35.89	102.75	0.885	0.861	bd
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	35.91	97.25	0.837	0.861	bd

Compound name: 13C-123478-HxCDD (SS)

Response Factor: 0.839574

RRF SD: 0.0571796, Relative SD: 6.81055

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	36.60	104.82	0.880	0.840	bd
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	36.61	95.18	0.799	0.840	bd

Compound name: 13C-1234789-HpCDF (SS)

Response Factor: 0.795426

RRF SD: 0.0370629, Relative SD: 4.6595

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A23DEC19A_6-14	CS3WT UD191018-02.1	100.000	40.61	103.29	0.822	0.795	bb
A23DEC19A_7-10	CS3WT UD191018-02.1...	100.000	40.61	96.71	0.769	0.795	bd

Quantify Sample Summary Report
Method 8290 CCAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time
Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_EPA8290_A10DEC19.mdb 16 Dec 2019 16:34:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: , Job: A23DEC19A_8, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M1	M2
1	2378-TCDD	5.80e4	7.58e4	1.34e5	31.13	1.000	0.76	NO	11.444	0.0907	1.012	0.884	14.4	9.40e5	3633	258.8	1.17e6	3478	336.4	dd	dd
2	12378-PeCDD	2.85e5	1.84e5	4.69e5	34.04	1.000	1.55	NO	53.785	0.226	0.918	0.853	7.6	6.54e6	9357	698.6	4.11e6	8669	473.7	bb	bb
3	123478-HxCDD	2.28e5	1.88e5	4.16e5	36.62	0.998	1.21	NO	46.401	0.319	0.793	0.854	-7.2	4.66e6	10202	456.8	3.77e6	9598	392.6	bd	bd
4	123678-HxCDD	2.87e5	2.32e5	5.19e5	36.70	1.000	1.24	NO	52.407	0.289	0.990	0.944	4.8	5.16e6	10202	505.8	4.14e6	9598	431.1	dd	dd
5	123789-HxCDD	2.54e5	2.11e5	4.65e5	36.94	1.007	1.20	NO	50.128	0.308	0.887	0.885	0.3	4.16e6	10202	407.7	3.37e6	9598	351.0	dd	dd
6	1234678-HpCDD	1.74e5	1.69e5	3.44e5	39.97	1.001	1.03	NO	46.675	0.382	0.971	1.040	-6.6	2.29e6	7519	304.7	2.36e6	7265	324.8	bd	bd
7	OCDD	2.73e5	3.14e5	5.87e5	44.15	1.000	0.87	NO	102.064	0.568	0.991	0.971	2.1	2.70e6	5187	520.1	3.04e6	6830	445.0	bd	bd
8	2378-TCDF	6.42e4	8.97e4	1.54e5	30.34	1.001	0.72	NO	9.079	0.0862	0.888	0.978	-9.2	7.35e5	2833	259.5	1.09e6	4271	254.1	bb	bd
9	12378-PeCDF	4.02e5	2.57e5	6.58e5	33.24	1.000	1.56	NO	46.264	0.166	0.875	0.945	-7.5	9.11e6	11104	820.7	5.91e6	9726	607.7	bd	bd
10	23478-PeCDF	4.53e5	2.93e5	7.47e5	33.85	1.019	1.55	NO	47.804	0.151	0.992	1.037	-4.4	1.09e7	11104	984.8	7.22e6	9726	742.3	bb	bb
11	123478-HxCDF	3.21e5	2.56e5	5.78e5	35.91	0.997	1.25	NO	46.338	0.312	0.897	0.968	-7.3	7.14e6	12889	553.9	5.57e6	15402	361.6	bd	bd
12	123678-HxCDF	3.98e5	3.01e5	6.99e5	36.01	1.000	1.32	NO	52.164	0.290	1.086	1.041	4.3	7.06e6	12889	548.0	5.43e6	15402	352.7	db	db
13	234678-HxCDF	3.45e5	2.81e5	6.26e5	36.48	1.014	1.23	NO	49.361	0.307	0.973	0.985	-1.3	6.92e6	12889	536.9	5.45e6	15402	353.8	bb	bd
14	123789-HxCDF	2.88e5	2.23e5	5.11e5	37.24	1.035	1.29	NO	48.252	0.367	0.794	0.823	-3.5	4.56e6	12889	353.5	3.59e6	15402	233.2	bd	bb
15	1234678-HpCDF	2.69e5	2.63e5	5.32e5	38.72	1.000	1.02	NO	53.168	0.250	1.223	1.150	6.3	3.99e6	7743	515.6	3.91e6	7702	508.3	bb	bb
16	1234789-HpCDF	2.03e5	1.93e5	3.96e5	40.61	1.049	1.05	NO	48.607	0.307	0.910	0.936	-2.8	2.45e6	7743	316.3	2.44e6	7702	316.3	bd	bb
17	OCDF	3.19e5	3.54e5	6.74e5	44.44	1.007	0.90	NO	100.386	0.688	1.137	1.133	0.4	3.03e6	10577	286.6	3.29e6	6407	513.4	bd	bd
18	13C-2378-TCDD	5.76e5	7.46e5	1.32e6	31.12	1.019	0.77	NO	99.153	0.174	1.119	1.128	-0.8	9.66e6	7559	1277.8	1.21e7	4269	2840.4	bb	bb
19	13C-12378-PeCDD	6.24e5	3.98e5	1.02e6	34.03	1.114	1.57	NO	115.055	0.182	0.864	0.751	15.1	1.43e7	5308	2693.2	8.92e6	2959	3013.9	bb	bb
20	13C-123678-HxCDD	5.84e5	4.65e5	1.05e6	36.69	0.993	1.26	NO	103.842	0.231	1.024	0.986	3.8	1.01e7	7766	1301.8	8.25e6	6588	1252.4	dd	dd
21	13C-1234678-HpCDD	3.65e5	3.43e5	7.08e5	39.95	1.082	1.06	NO	102.838	0.258	0.691	0.672	2.8	4.79e6	5955	803.8	4.59e6	4988	920.5	bd	bd
22	13C-OCDD	5.66e5	6.19e5	1.18e6	44.13	1.195	0.91	NO	180.054	0.427	0.578	0.642	-10.0	5.20e6	7879	660.0	5.89e6	9411	626.4	bd	bd
23	13C-2378-TCDF	7.45e5	9.88e5	1.73e6	30.32	0.993	0.75	NO	117.311	0.203	1.466	1.250	17.3	9.06e6	9306	973.6	1.15e7	6013	1910.0	bb	bd
24	13C-12378-PeCDF	9.22e5	5.83e5	1.51e6	33.23	1.088	1.58	NO	126.028	0.354	1.274	1.011	26.0	2.04e7	12799	1590.7	1.33e7	8785	1518.6	bb	bd
25	13C-123678-HxCDF	4.29e5	8.58e5	1.29e6	36.00	0.975	0.50	NO	100.758	0.343	1.256	1.247	0.8	7.81e6	12873	606.7	1.52e7	14065	1081.9	db	db
26	13C-1234678-HpCDF	2.63e5	6.07e5	8.70e5	38.71	1.048	0.43	NO	97.593	0.318	0.849	0.870	-2.4	4.07e6	7741	525.5	9.13e6	9699	941.5	bd	bd
27	13C-1234-TCDD	5.17e5	6.64e5	1.18e6	30.54	0.000	0.78	NO	100.000	0.196	1.000	1.000	0.0	6.61e6	7559	873.8	8.21e6	4269	1923.7	bb	bb
28	13C-123789-HxCDD	5.64e5	4.61e5	1.02e6	36.93	0.000	1.23	NO	100.000	0.228	1.000	1.000	0.0	8.68e6	7766	1117.5	7.08e6	6598	1074.2	dd	dd
29	37Cl-2378-TCDD (SS)	1.24e5		1.24e5	31.13	1.000			9.987	0.0346	0.939	0.940	-0.1	2.02e6	2881	702.3				bb	
30	13C-23478-PeCDF (SS)	9.26e5	5.89e5	1.51e6	33.84	1.018	1.57	NO	95.690	0.154	1.006	1.052	-4.3	2.29e7	12799	1789.6	1.49e7	8785	1695.4	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time
 Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: , Job: A23DEC19A_8, Task: HRP750_2, User: MJC

Peak #	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
131	13C-123478-HxCDF (SS)	3.58e5	6.92e5	1.05e6	35.90	0.997	0.52	NO	91.603	0.323	0.816	0.891	-8.4	7.85e6	12873	610.1	1.49e7	14065	1061.8	bd	bd
132	13C-123478-HxCDD (SS)	4.71e5	3.78e5	8.49e5	36.61	0.998	1.25	NO	89.047	0.217	0.810	0.909	-11.0	9.41e6	7766	1211.7	7.47e6	6588	1133.9	bd	bd
133	13C-1234789-HpCDF (SS)	1.91e5	4.45e5	6.36e5	40.60	1.049	0.43	NO	98.814	0.417	0.730	0.779	-6.2	2.47e6	7741	318.8	5.36e6	9699	552.8	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qid

Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time

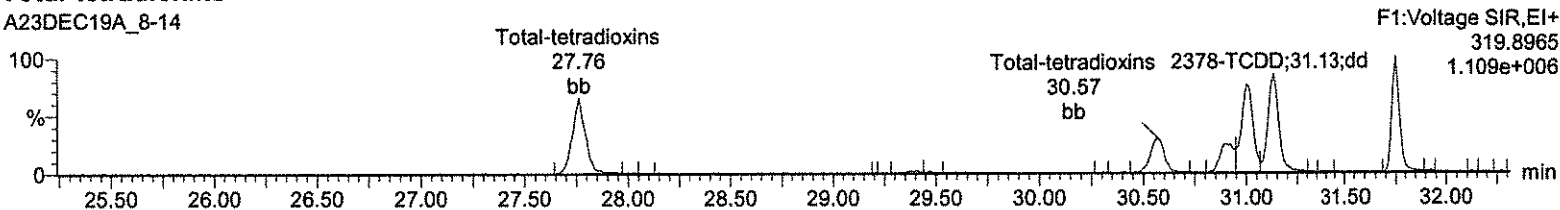
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-A08JUL19A.cdb 09 Jul 2019 09:23:09

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

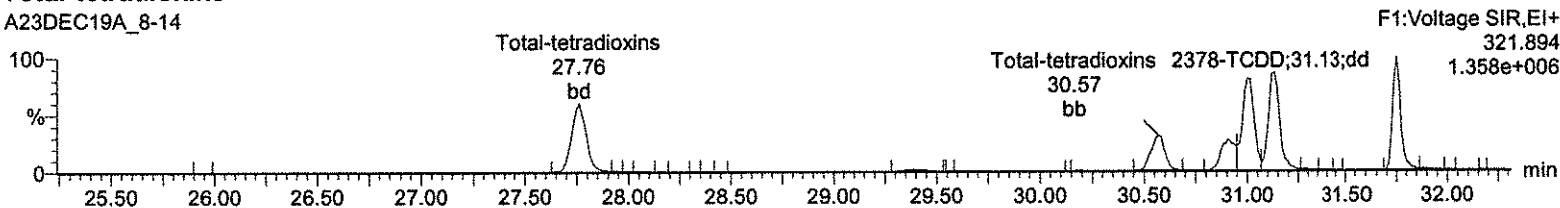
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A23DEC19A_8-14



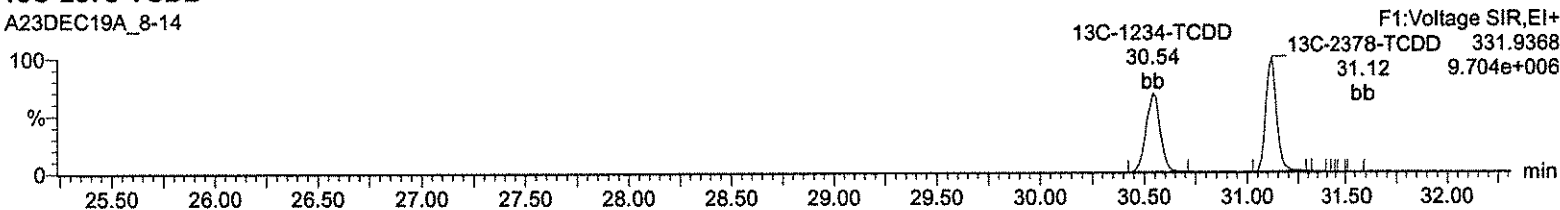
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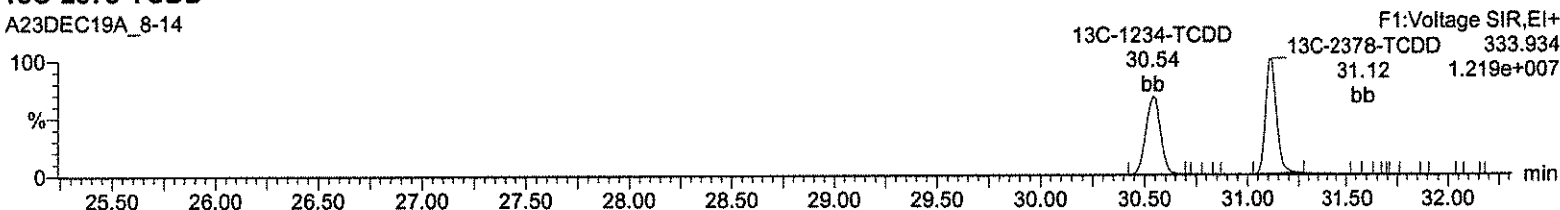
13C-2378-TCDD

A23DEC19A_8-14



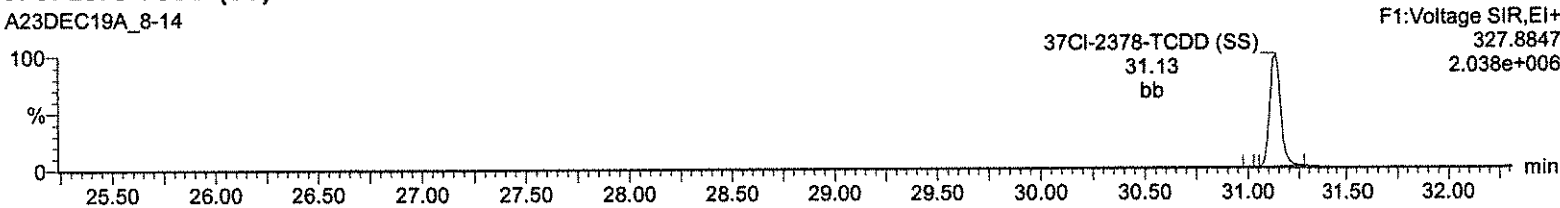
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A23DEC19A_8-14



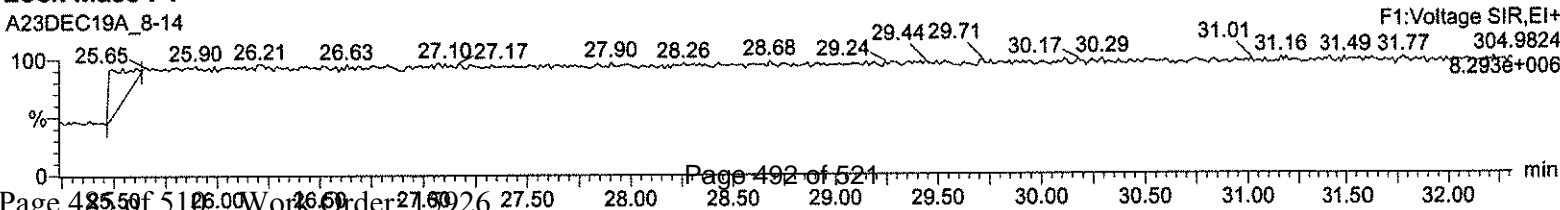
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A23DEC19A_8-14



Lock Mass F1

A23DEC19A_8-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

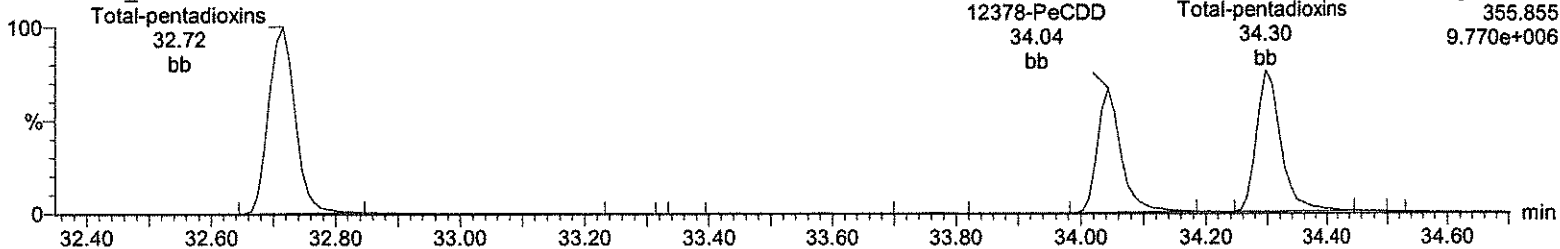
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Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

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Job: A23DEC19A_8, Task: HRP750_2, User: MJC

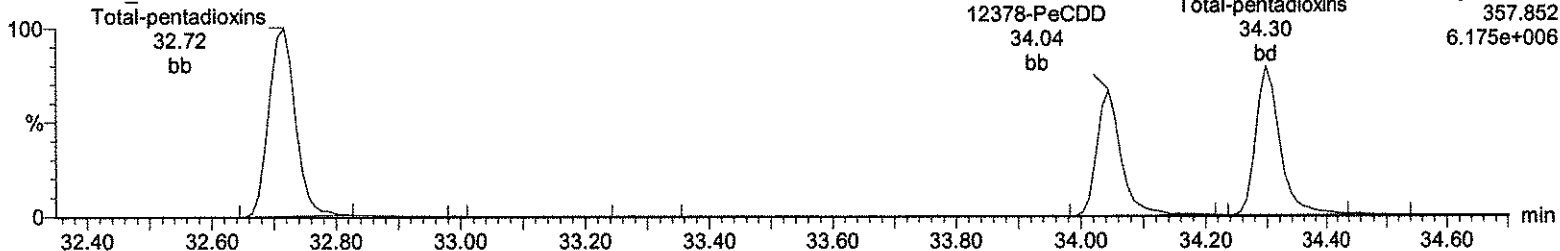
Total-pentadioxins

A23DEC19A_8-14



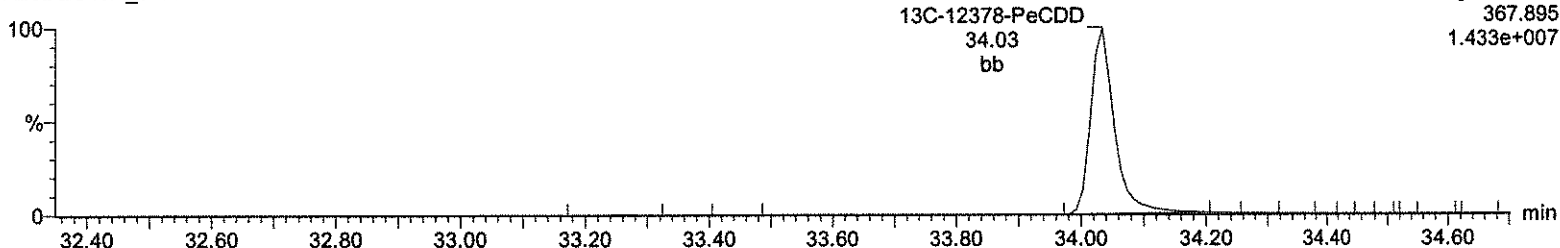
Total-pentadioxins

A23DEC19A_8-14



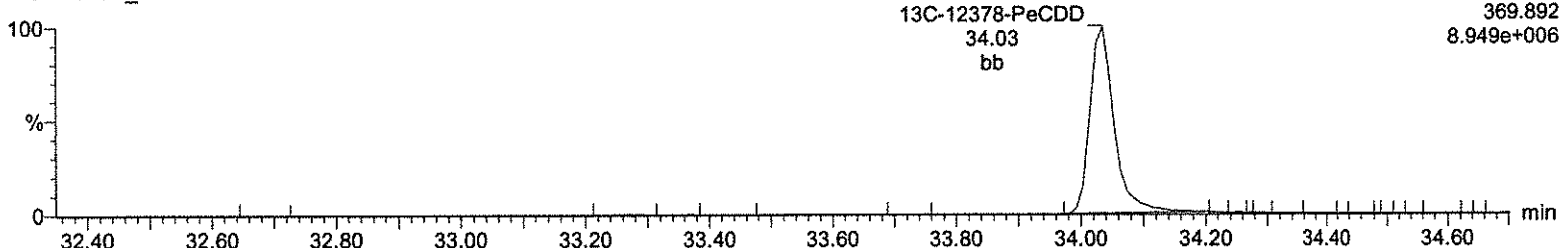
13C-12378-PeCDD

A23DEC19A_8-14



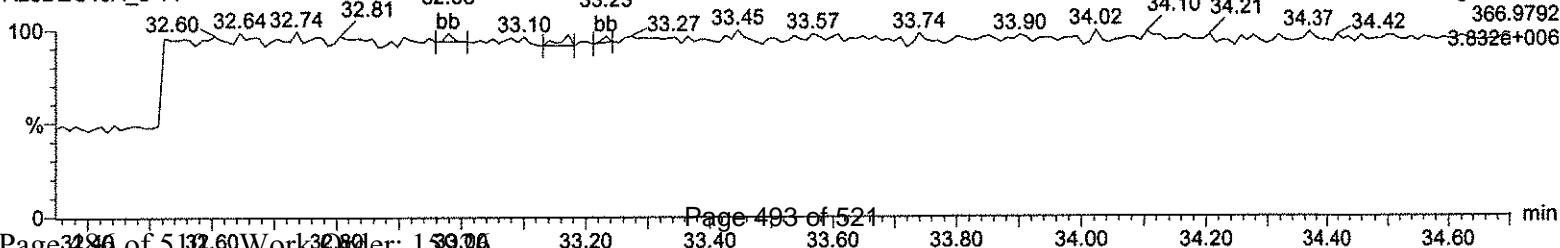
13C-12378-PeCDD

A23DEC19A_8-14



Lock Mass F2

A23DEC19A_8-14



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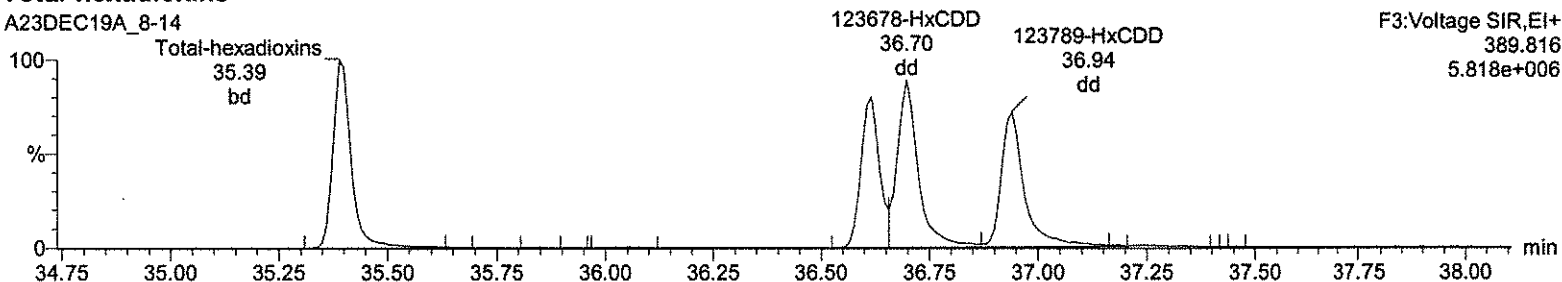
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Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

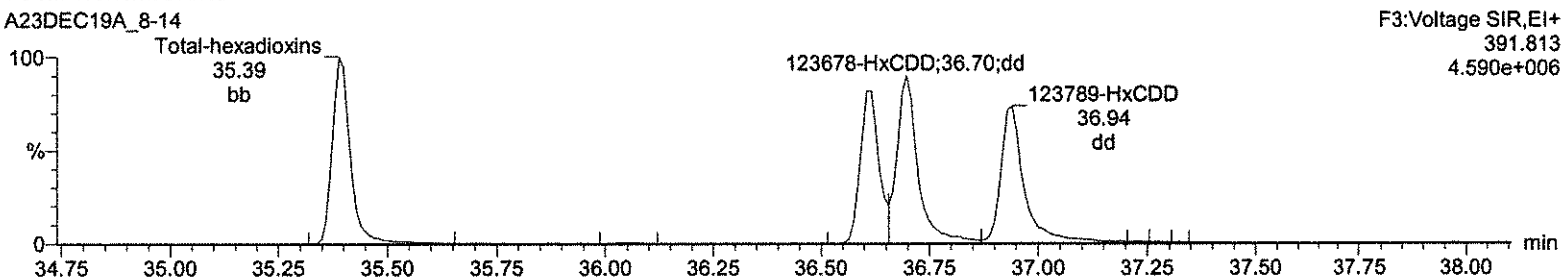
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A23DEC19A_8-14



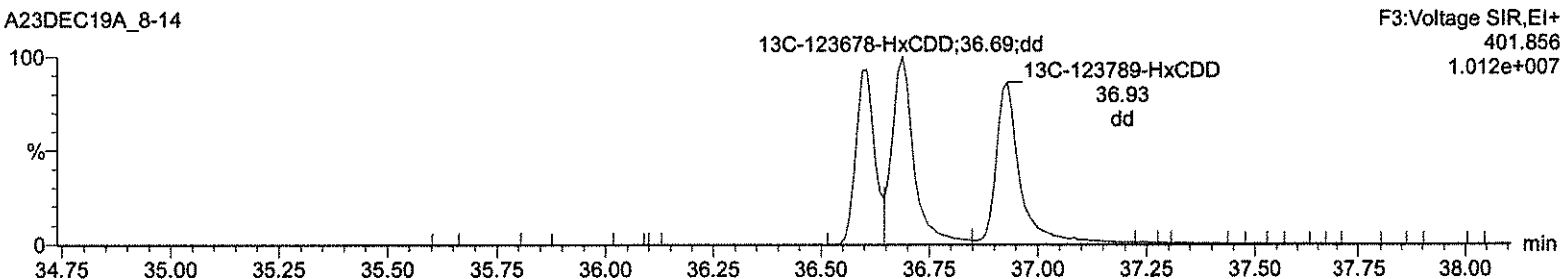
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A23DEC19A_8-14



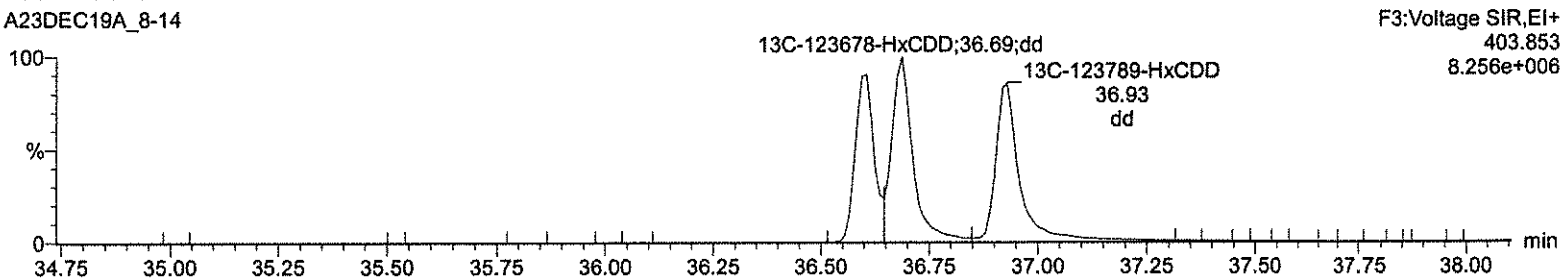
13C-123678-HxCDD

A23DEC19A_8-14



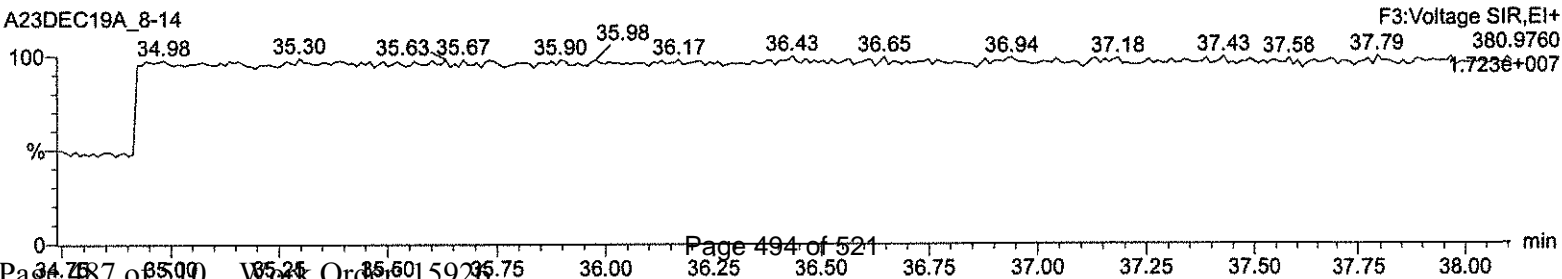
13C-123678-HxCDD

A23DEC19A_8-14



Lock Mass F3

A23DEC19A_8-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time

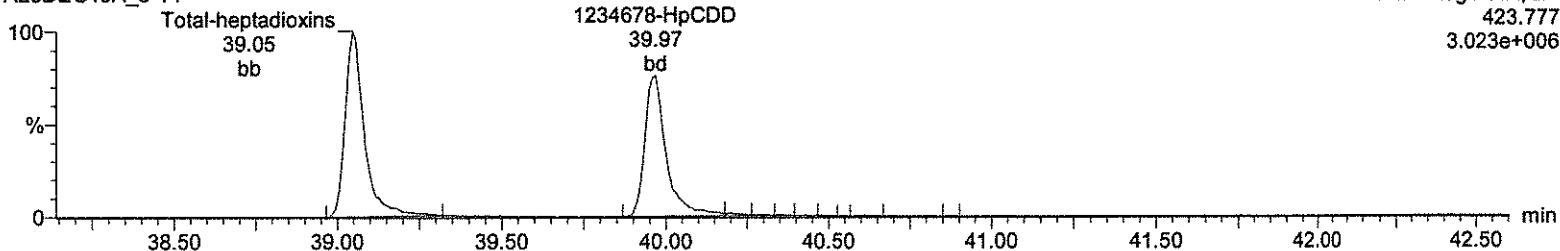
Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

Total-heptadioxins

A23DEC19A_8-14

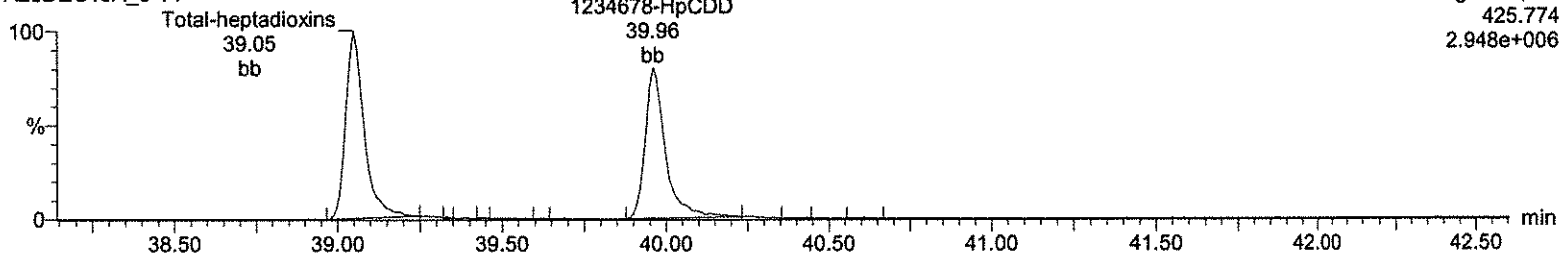
F4:Voltage SIR,EI+
423.777
3.023e+006



Total-heptadioxins

A23DEC19A_8-14

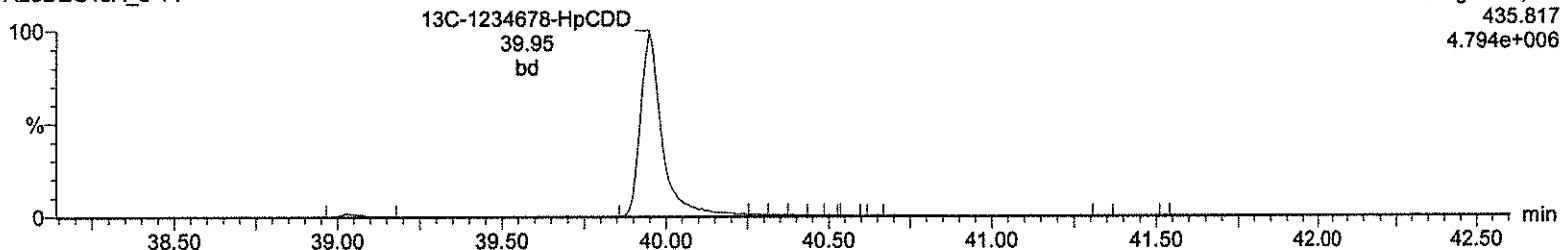
F4:Voltage SIR,EI+
425.774
2.948e+006



13C-1234678-HpCDD

A23DEC19A_8-14

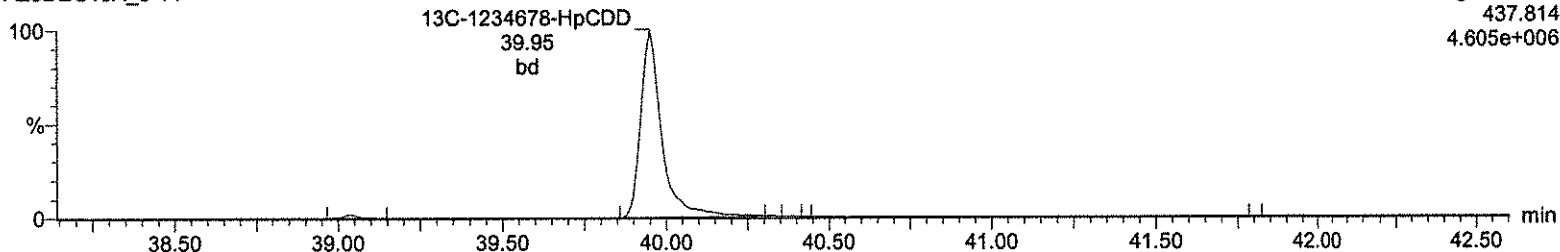
F4:Voltage SIR,EI+
435.817
4.794e+006



13C-1234678-HpCDD

A23DEC19A_8-14

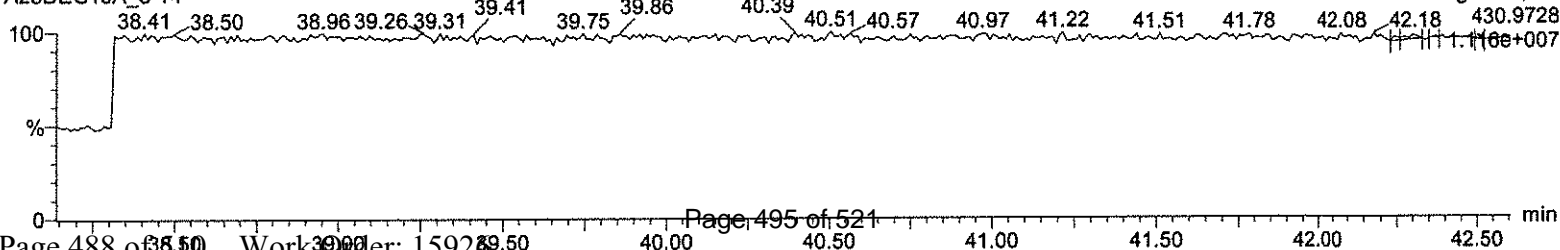
F4:Voltage SIR,EI+
437.814
4.605e+006



Lock Mass F4

A23DEC19A_8-14

F4:Voltage SIR,EI+
430.9728
1.110e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time

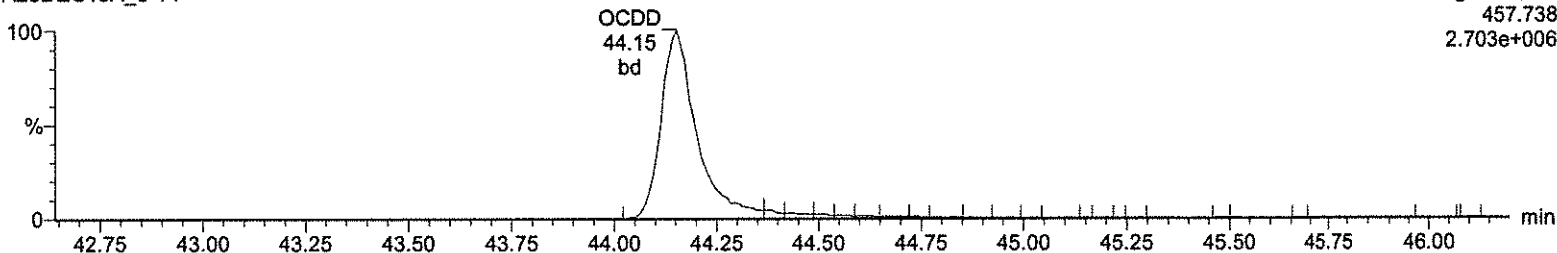
Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

OCDD

A23DEC19A_8-14

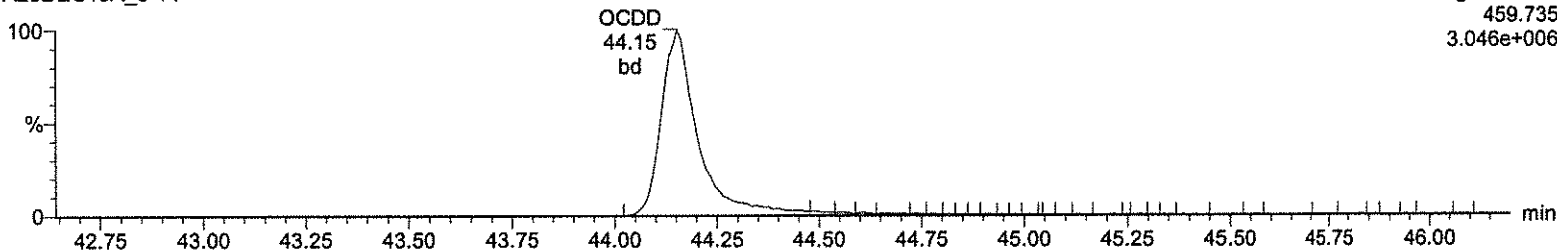
F5:Voltage SIR,EI+
457.738
2.703e+006



OCDD

A23DEC19A_8-14

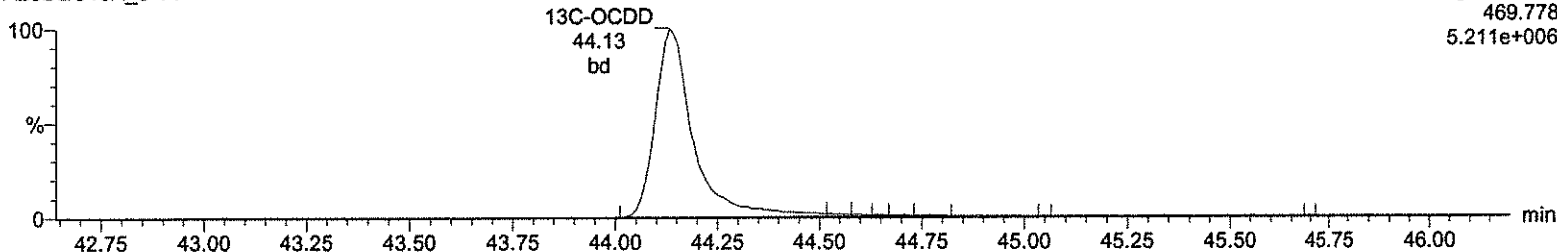
F5:Voltage SIR,EI+
459.735
3.046e+006



13C-OCDD

A23DEC19A_8-14

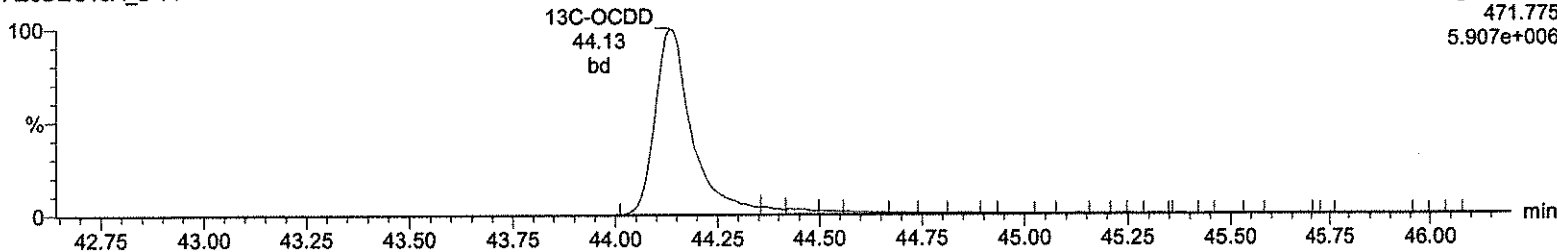
F5:Voltage SIR,EI+
469.778
5.211e+006



13C-OCDD

A23DEC19A_8-14

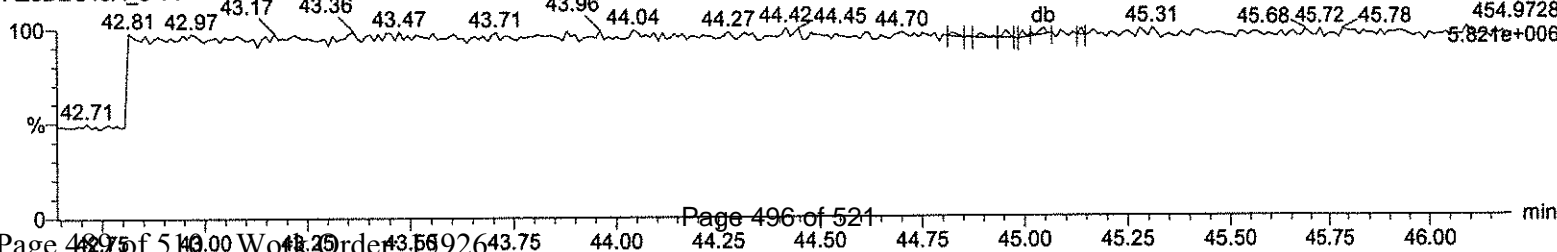
F5:Voltage SIR,EI+
471.775
5.907e+006



Lock Mass F5

A23DEC19A_8-14

F5:Voltage SIR,EI+
454.9728
5.821e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

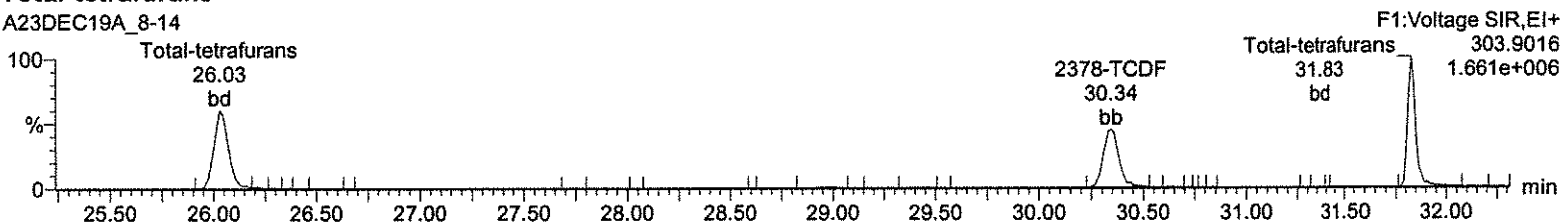
Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time

Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

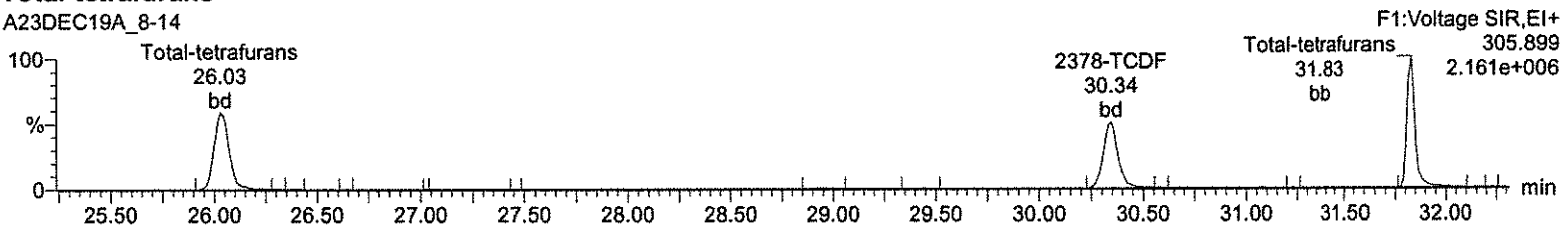
Total-tetrafurans

A23DEC19A_8-14



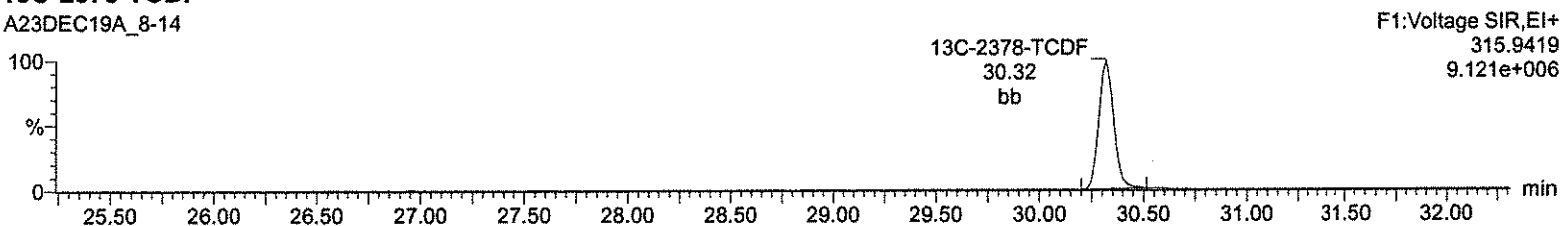
Total-tetrafurans

A23DEC19A_8-14



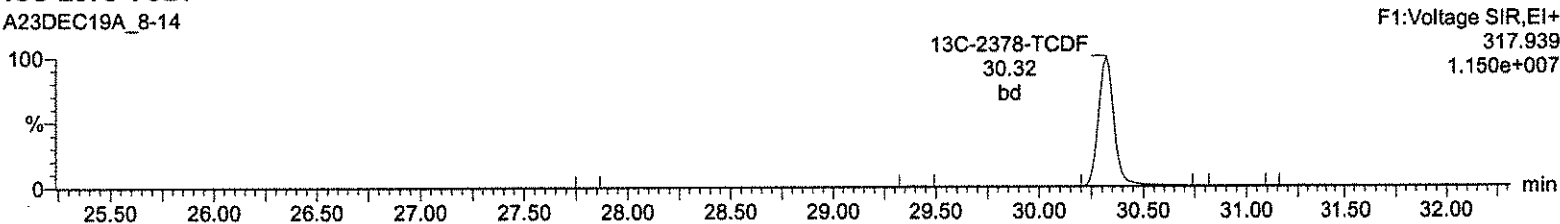
13C-2378-TCDF

A23DEC19A_8-14



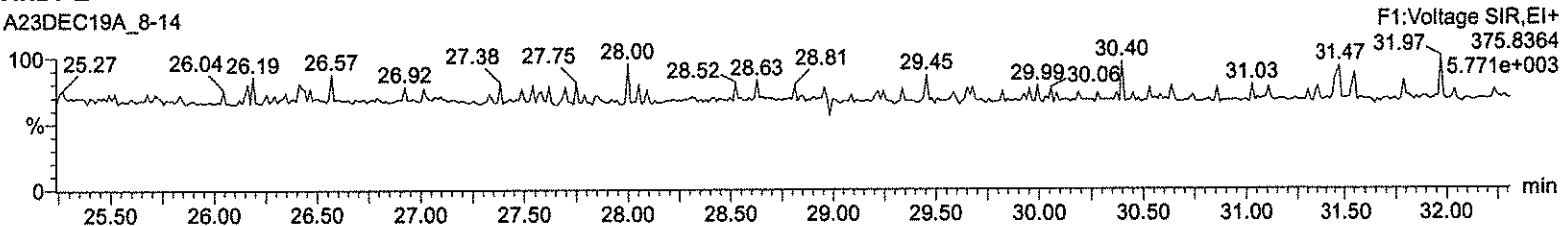
13C-2378-TCDF

A23DEC19A_8-14



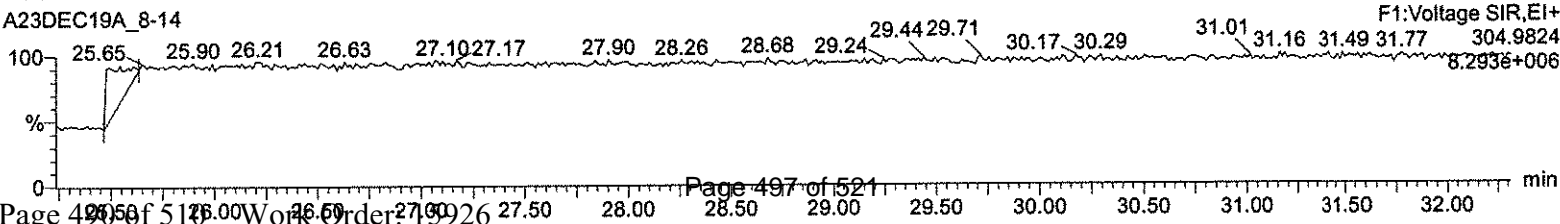
HxDPE

A23DEC19A_8-14



Lock Mass F1

A23DEC19A_8-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

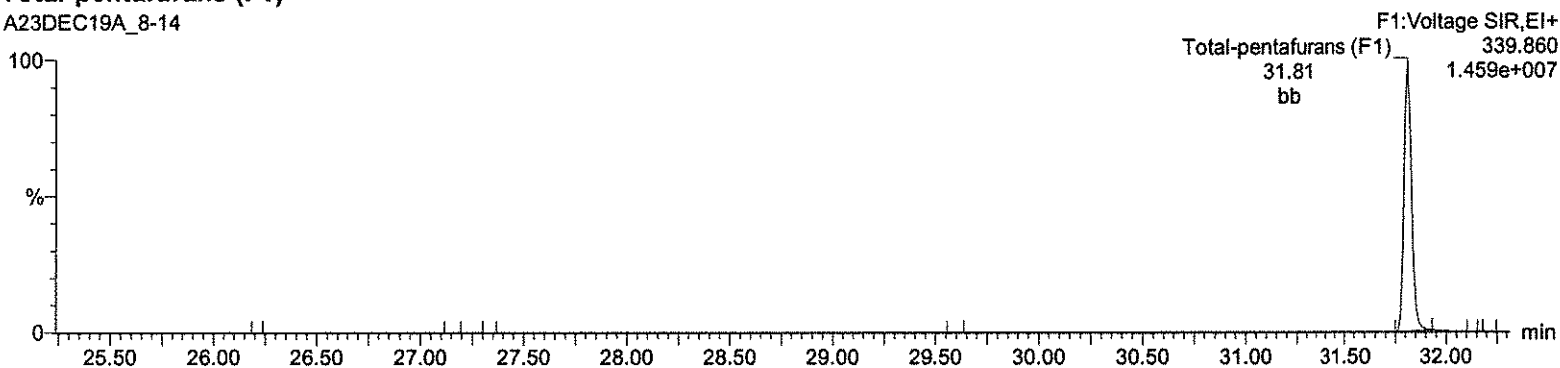
Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time

Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

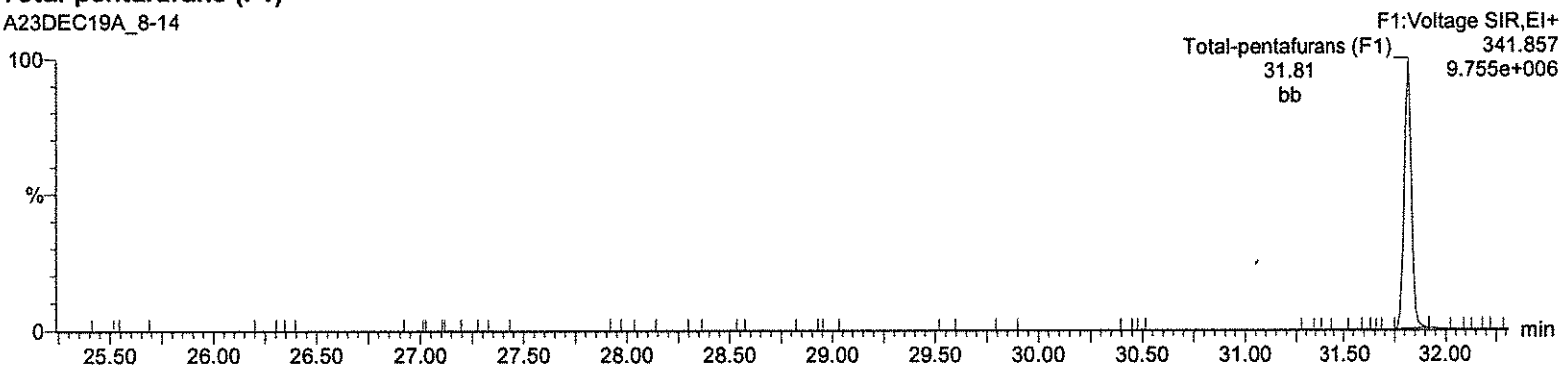
Total-pentafurans (F1)

A23DEC19A_8-14



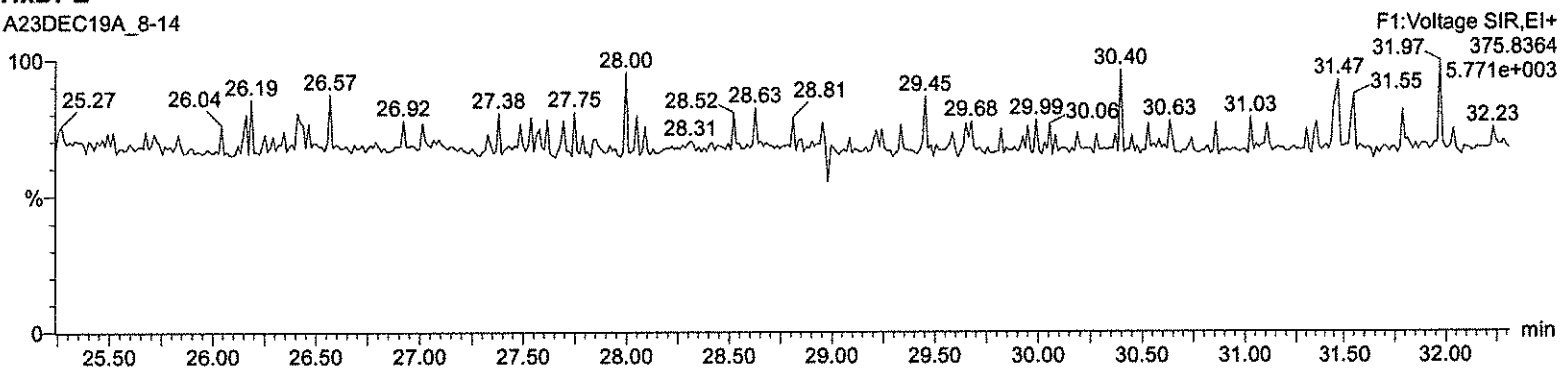
Total-pentafurans (F1)

A23DEC19A_8-14



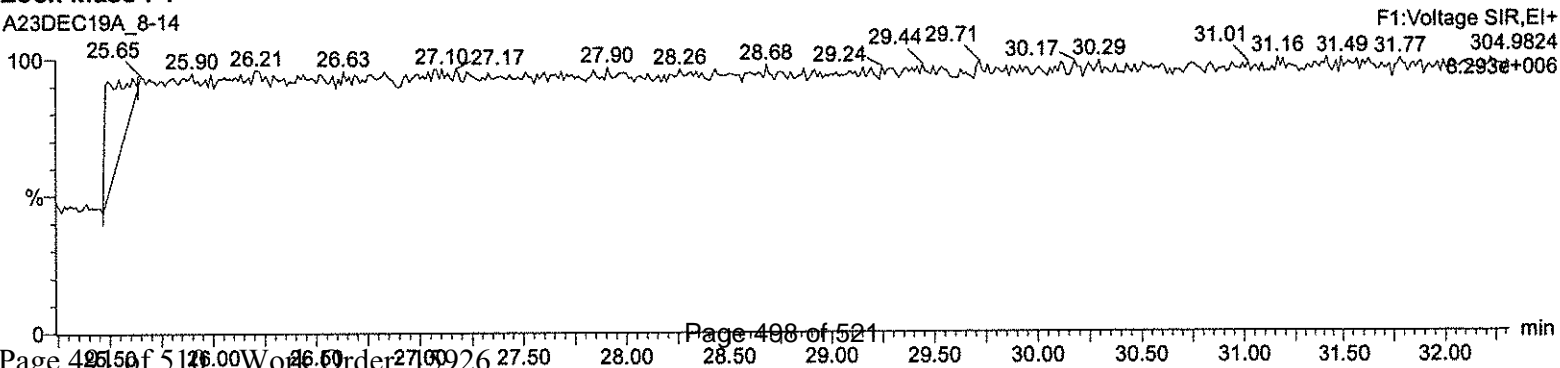
HxDPE

A23DEC19A_8-14



Lock Mass F1

A23DEC19A_8-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

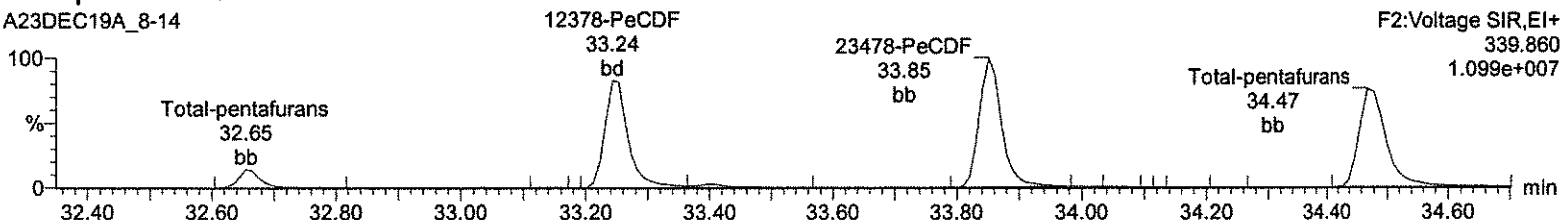
Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time

Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

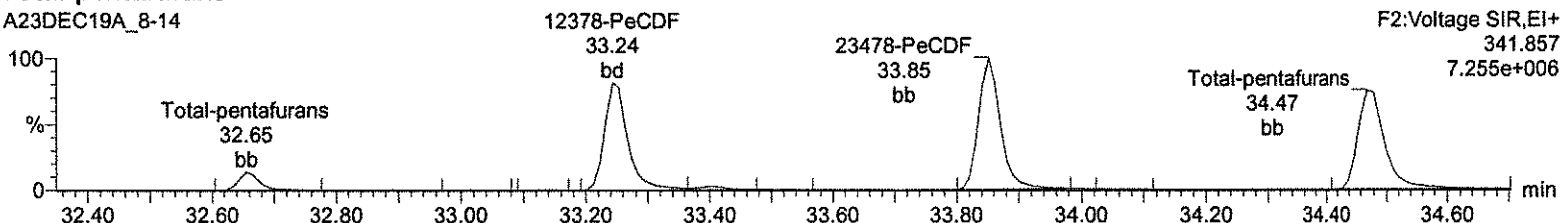
Total-pentafurans

A23DEC19A_8-14



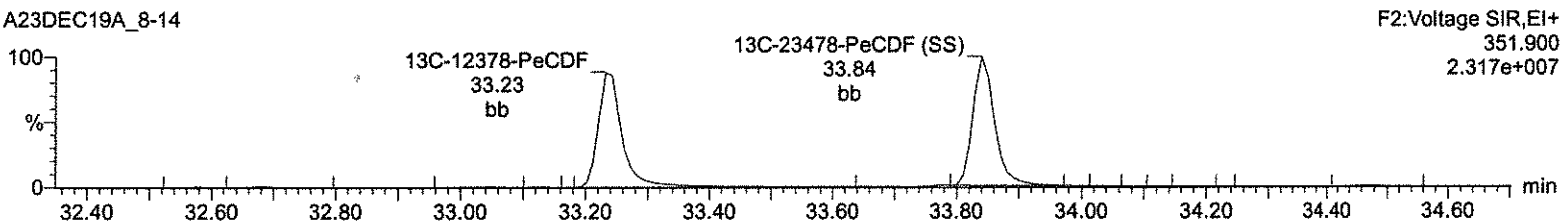
Total-pentafurans

A23DEC19A_8-14



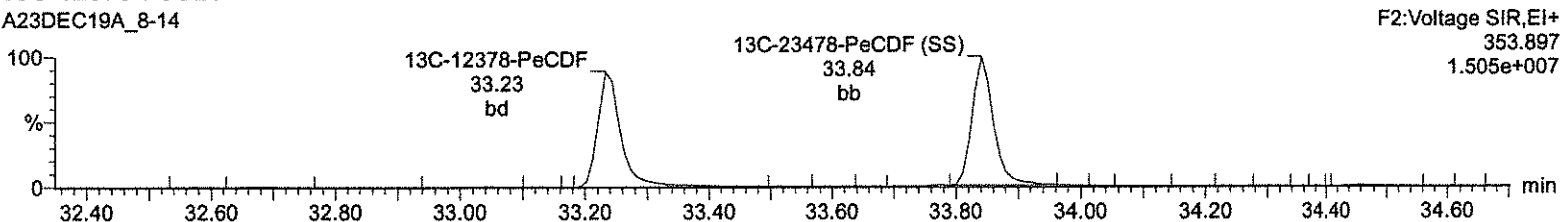
13C-12378-PeCDF

A23DEC19A_8-14



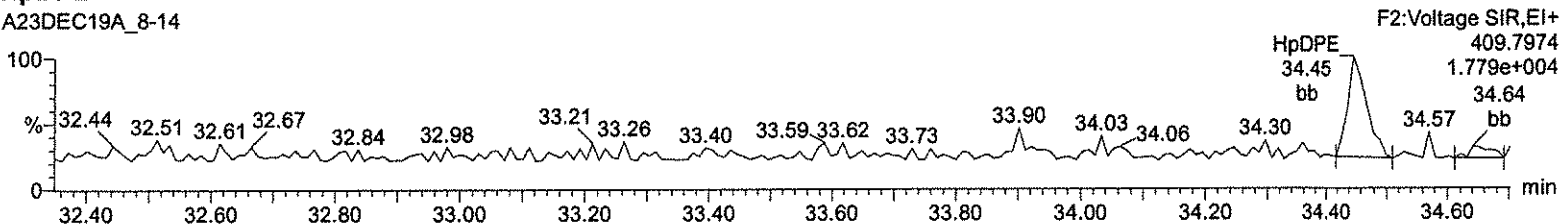
13C-12378-PeCDF

A23DEC19A_8-14



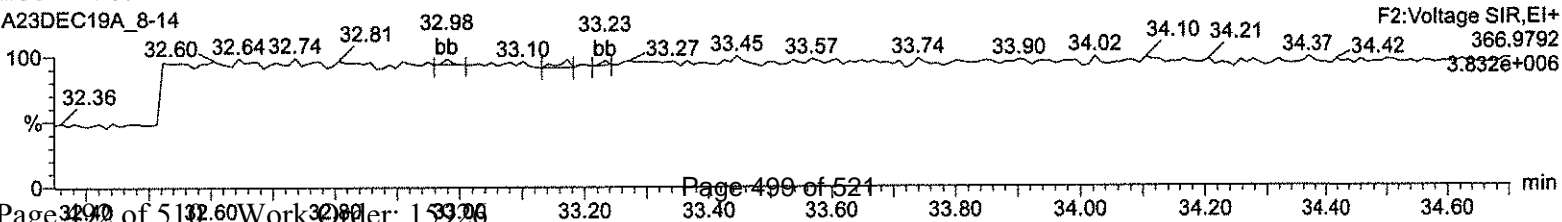
HpDPE

A23DEC19A_8-14



Lock Mass F2

A23DEC19A_8-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

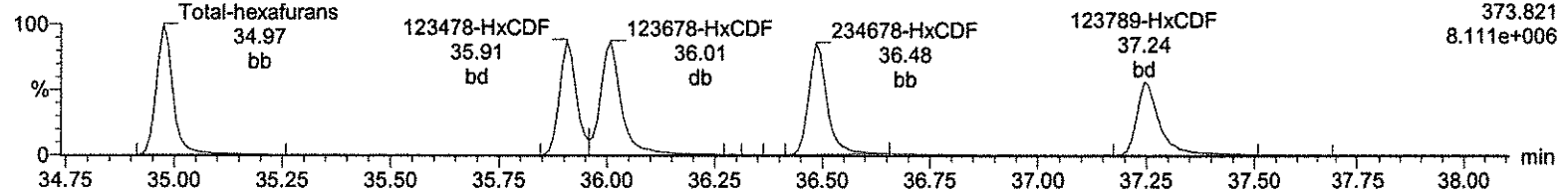
Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time

Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

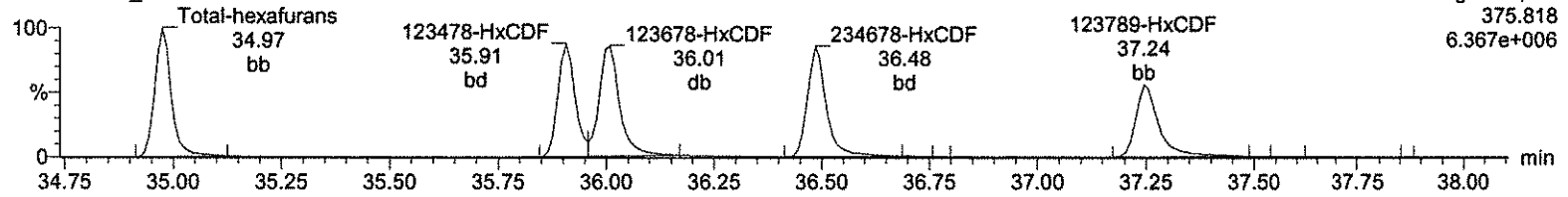
Total-hexafurans

A23DEC19A_8-14



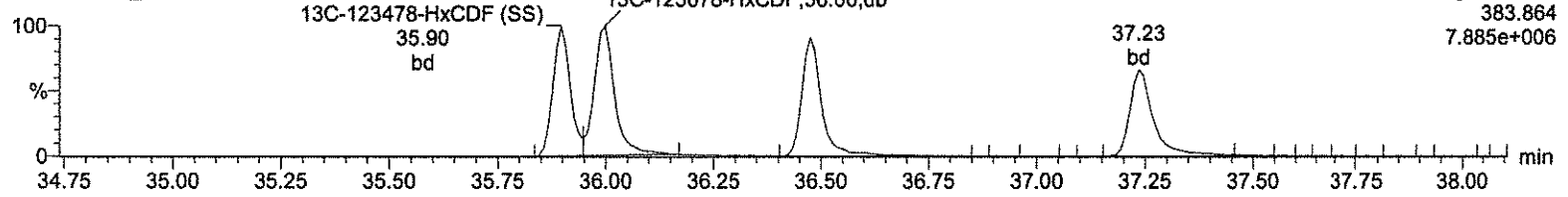
Total-hexafurans

A23DEC19A_8-14



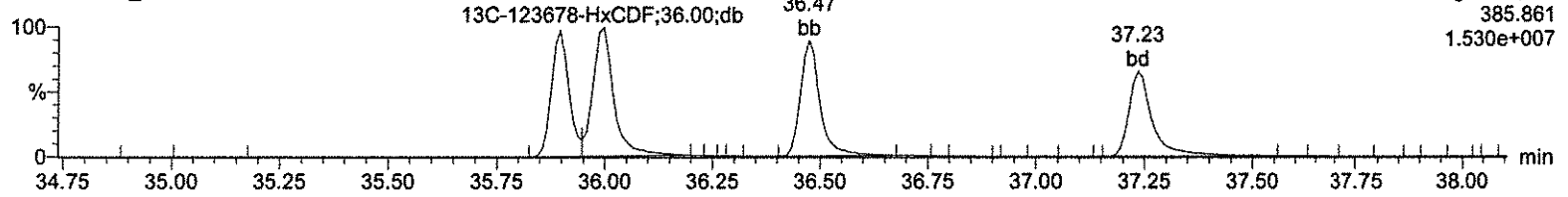
13C-123678-HxCDF

A23DEC19A_8-14



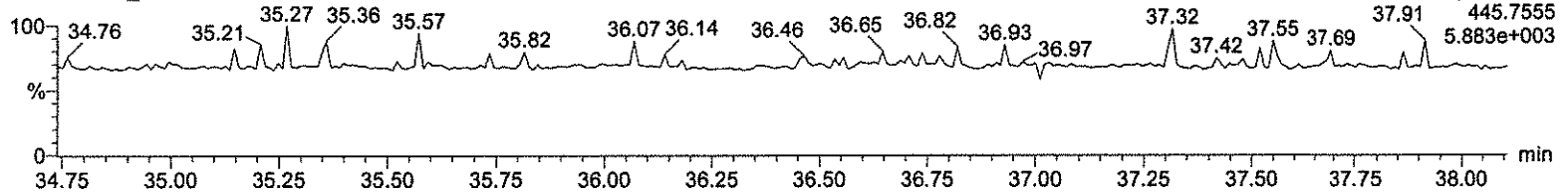
13C-123678-HxCDF

A23DEC19A_8-14



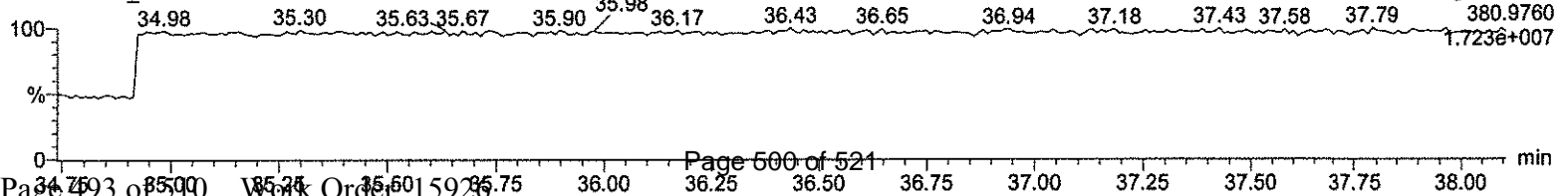
OcDPE

A23DEC19A_8-14



Lock Mass F3

A23DEC19A_8-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

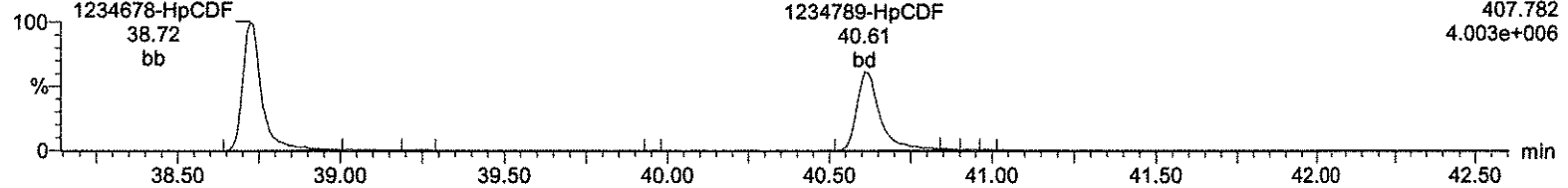
Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time

Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

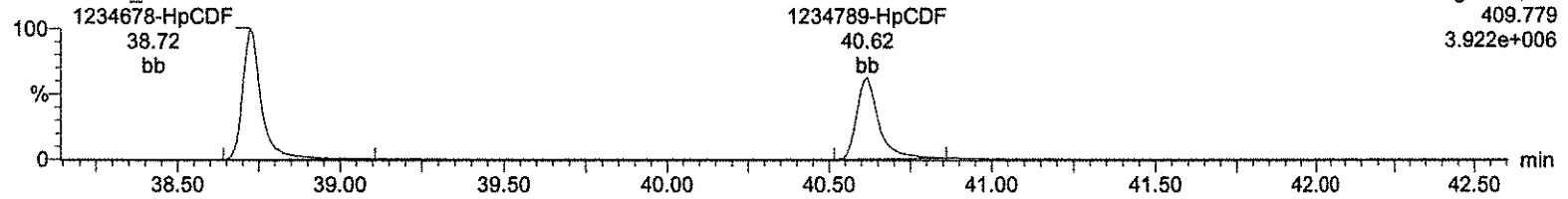
Total-heptafurans

A23DEC19A_8-14



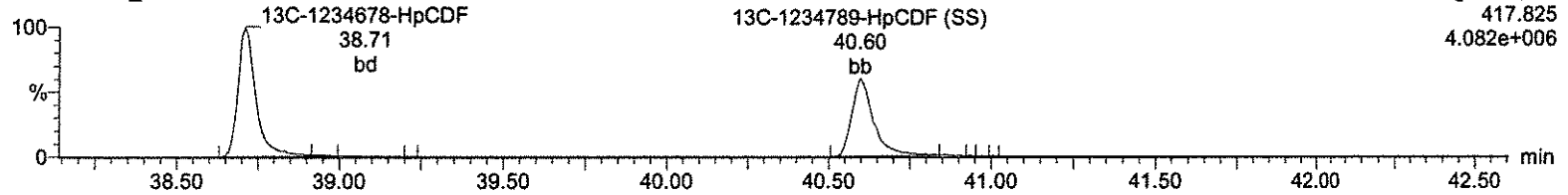
Total-heptafurans

A23DEC19A_8-14



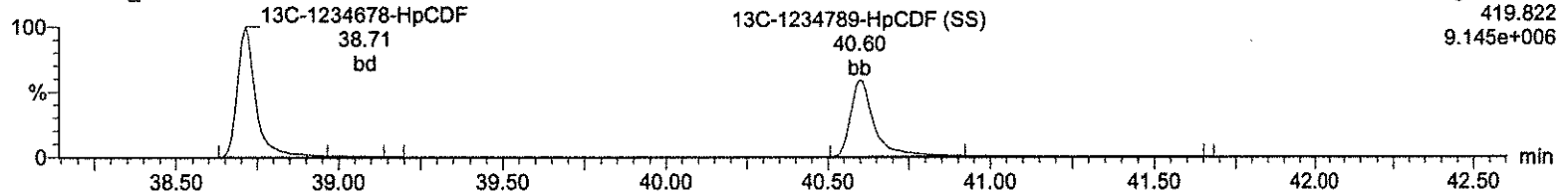
¹³C-1234678-HpCDF

A23DEC19A_8-14



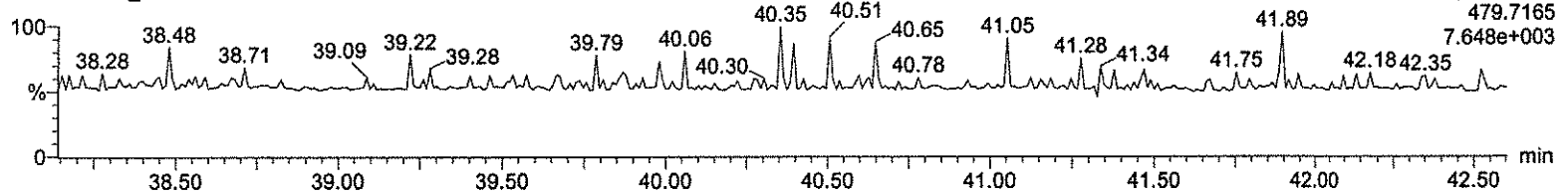
¹³C-1234678-HpCDF

A23DEC19A_8-14



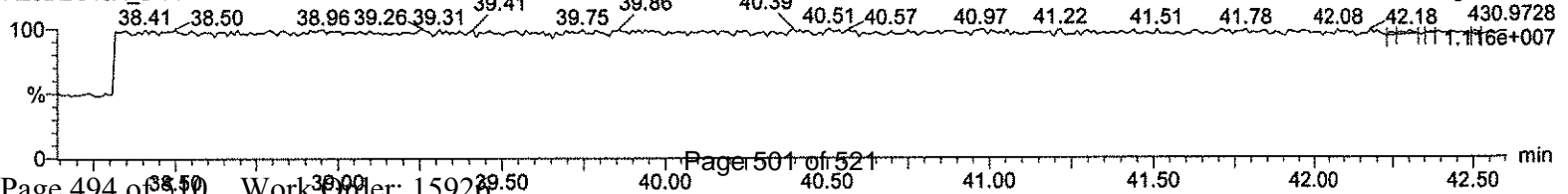
NoDPE

A23DEC19A_8-14



Lock Mass F4

A23DEC19A_8-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 16:16:55 Eastern Standard Time

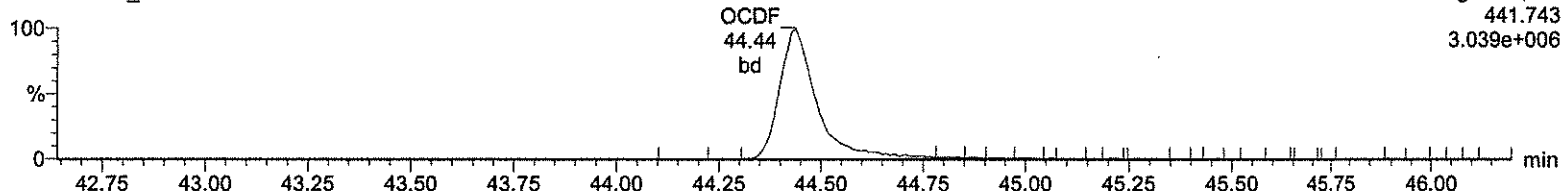
Printed: Friday, December 27, 2019 16:19:28 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

OCDF

A23DEC19A_8-14

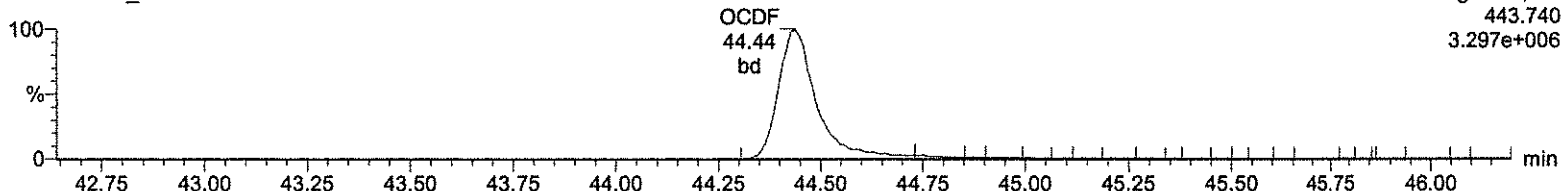
F5:Voltage SIR,EI+
441.743
3.039e+006



OCDF

A23DEC19A_8-14

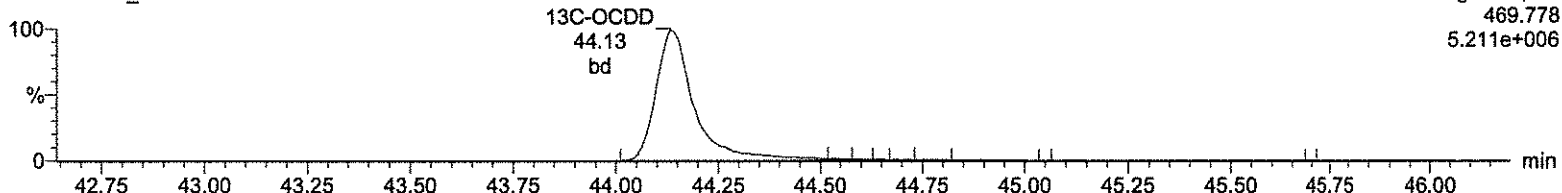
F5:Voltage SIR,EI+
443.740
3.297e+006



13C-OCDD

A23DEC19A_8-14

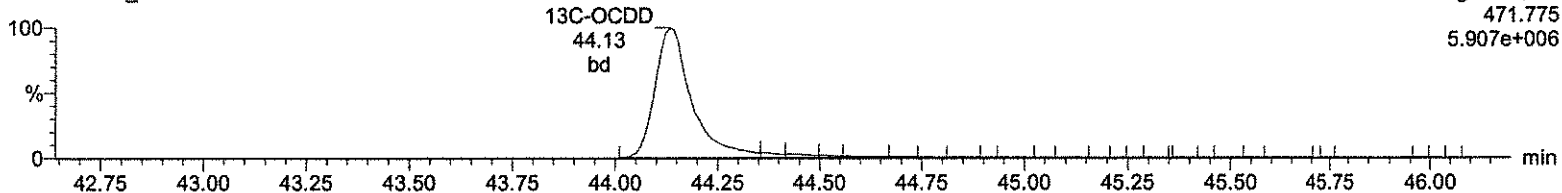
F5:Voltage SIR,EI+
469.778
5.211e+006



13C-OCDD

A23DEC19A_8-14

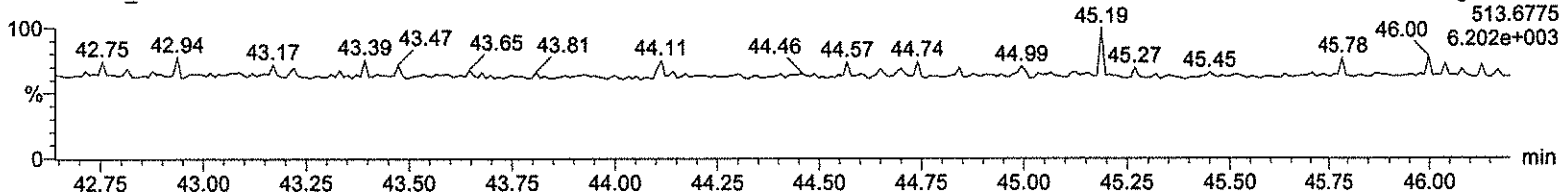
F5:Voltage SIR,EI+
471.775
5.907e+006



DeDPE

A23DEC19A_8-14

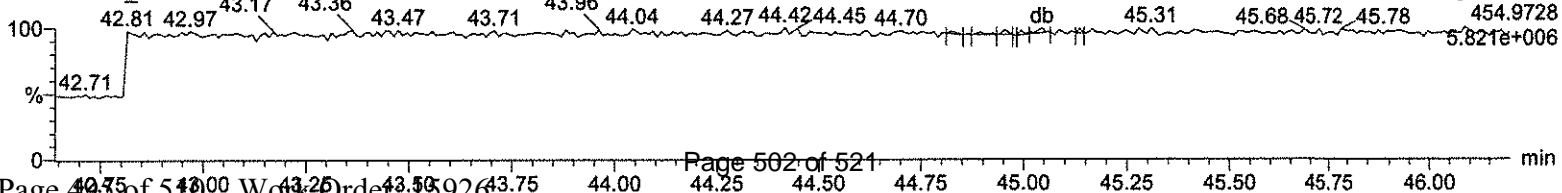
F5:Voltage SIR,EI+
513.6775
6.202e+003



Lock Mass F5

A23DEC19A_8-14

F5:Voltage SIR,EI+
454.9728
5.821e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\DLM-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time
Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Handwritten signature

Method: C:\MassLynx\Default.pro\Methdb\CFA_DLM_A10DEC19.mdb 13 Dec 2019 11:48:29
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\DLM-A08JUL19A.cdb 09 Jul 2019 09:49:09

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: , Job: A23DEC19A_8, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	5.80e4	7.58e4	1.34e5	31.13	1.000	0.76	NO	11.620	0.111	1.012	0.871	16.2	9.40e5	3633	258.8	1.17e6	3478	336.4	dd	dd
2	12378-PeCDD	2.85e5	1.84e5	4.69e5	34.04	1.000	1.55	NO	54.037	0.272	0.918	0.849	8.1	6.54e6	9357	698.6	4.11e6	8669	473.7	bb	bb
3	123478-HxCDD	2.28e5	1.88e5	4.16e5	36.62	1.000	1.21	NO	51.854	0.371	0.979	0.944	3.7	4.66e6	10202	456.8	3.77e6	9598	392.6	bd	bd
4	123678-HxCDD	2.87e5	2.32e5	5.19e5	36.70	1.000	1.24	NO	52.092	0.345	0.990	0.950	4.2	5.16e6	10202	505.8	4.14e6	9598	431.1	dd	dd
5	123789-HxCDD	2.54e5	2.11e5	4.65e5	36.94	1.007	1.20	NO	52.576	0.362	0.981	0.932	5.2	4.16e6	10202	407.7	3.37e6	9598	351.0	dd	dd
6	1234678-HpCDD	1.74e5	1.69e5	3.44e5	39.97	1.001	1.03	NO	46.562	0.458	0.971	1.042	-6.9	2.29e6	7519	304.7	2.36e6	7265	324.8	bd	bb
7	OCDD	2.73e5	3.14e5	5.87e5	44.15	1.000	0.87	NO	101.873	0.680	0.991	0.973	1.9	2.70e6	5187	520.1	3.04e6	6830	445.0	bd	bd
8	2378-TCDF	6.42e4	8.97e4	1.54e5	30.34	1.001	0.72	NO	9.265	0.106	0.888	0.959	-7.3	7.35e5	2833	259.5	1.09e6	4271	254.1	bb	bd
9	12378-PeCDF	4.02e5	2.57e5	6.58e5	33.24	1.000	1.56	NO	46.498	0.200	0.875	0.940	-7.0	9.11e6	11104	820.7	5.91e6	9726	607.7	bd	bd
10	23478-PeCDF	4.53e5	2.93e5	7.47e5	33.85	1.000	1.55	NO	49.399	0.167	0.986	0.998	-1.2	1.09e7	11104	984.8	7.22e6	9726	742.3	bb	bb
11	123478-HxCDF	3.21e5	2.56e5	5.78e5	35.91	1.000	1.25	NO	50.114	0.336	1.099	1.097	0.2	7.14e6	12889	553.9	5.57e6	15402	361.6	bd	bd
12	123678-HxCDF	3.98e5	3.01e5	6.99e5	36.01	1.000	1.32	NO	52.275	0.349	1.086	1.038	4.6	7.06e6	12889	548.0	5.43e6	15402	352.7	db	db
13	234678-HxCDF	3.45e5	2.81e5	6.26e5	36.48	1.000	1.23	NO	49.493	0.358	1.135	1.146	-1.0	6.92e6	12889	536.9	5.45e6	15402	353.8	bb	bd
14	123789-HxCDF	2.88e5	2.23e5	5.11e5	37.24	1.000	1.29	NO	48.630	0.512	1.038	1.067	-2.7	4.56e6	12889	353.5	3.59e6	15402	233.2	bd	bb
15	1234678-HpCDF	2.69e5	2.63e5	5.32e5	38.72	1.000	1.02	NO	52.472	0.296	1.223	1.165	4.9	3.99e6	7743	515.6	3.91e6	7702	508.3	bb	bb
16	1234789-HpCDF	2.03e5	1.93e5	3.96e5	40.61	1.000	1.05	NO	51.797	0.469	1.246	1.203	3.6	2.45e6	7743	316.3	2.44e6	7702	316.3	bd	bb
17	OCDF	3.19e5	3.54e5	6.74e5	44.44	1.007	0.90	NO	98.921	0.814	1.137	1.150	-1.1	3.03e6	10577	286.6	3.29e6	6407	513.4	bd	bd
18	13C-2378-TCDD	5.76e5	7.46e5	1.32e6	31.12	1.019	0.77	NO	99.181	0.208	1.119	1.128	-0.8	9.68e6	7559	1277.8	1.21e7	4269	2840.4	bb	bb
19	13C-12378-PeCDD	6.24e5	3.98e5	1.02e6	34.03	1.114	1.57	NO	115.759	0.220	0.864	0.747	15.8	1.43e7	5308	2693.2	8.92e6	2959	3013.9	bb	bb
20	13C-123478-HxCDD	4.71e5	3.78e5	8.49e5	36.61	0.991	1.25	NO	92.292	0.304	0.829	0.898	-7.7	9.41e6	7766	1211.7	7.47e6	6588	1133.9	bd	bd
21	13C-123678-HxCDD	5.84e5	4.65e5	1.05e6	36.69	0.993	1.26	NO	103.611	0.277	1.024	0.988	3.6	1.01e7	7766	1301.8	8.25e6	6588	1252.4	dd	dd
22	13C-1234678-HpCDD	3.65e5	3.43e5	7.08e5	39.95	1.082	1.06	NO	102.808	0.310	0.691	0.672	2.8	4.79e6	5955	803.8	4.59e6	4988	920.5	bd	bd
23	13C-OCDD	5.66e5	6.19e5	1.18e6	44.13	1.195	0.91	NO	178.273	0.507	0.578	0.649	-10.9	5.20e6	7879	660.0	5.89e6	9411	626.4	bd	bd
24	13C-2378-TCDF	7.45e5	9.88e5	1.73e6	30.32	0.993	0.75	NO	117.831	0.245	1.466	1.244	17.8	9.06e6	9306	973.6	1.15e7	6013	1910.0	bb	bd
25	13C-12378-PeCDF	9.22e5	5.83e5	1.51e6	33.23	1.088	1.58	NO	126.446	0.426	1.274	1.007	26.4	2.04e7	12799	1590.7	1.33e7	8785	1518.6	bb	bd
26	13C-23478-PeCDF	9.26e5	5.89e5	1.51e6	33.84	1.108	1.57	NO	121.812	0.408	1.282	1.052	21.8	2.29e7	12799	1789.6	1.49e7	8785	1695.4	bb	bb
27	13C-123478-HxCDF	3.58e5	6.92e5	1.05e6	35.90	0.972	0.52	NO	92.326	0.462	1.025	1.110	-7.7	7.85e6	12873	610.1	1.49e7	14065	1061.8	bd	bd
28	13C-123678-HxCDF	4.29e5	8.58e5	1.29e6	36.00	0.975	0.50	NO	100.440	0.410	1.256	1.251	0.4	7.81e6	12873	606.7	1.52e7	14065	1081.9	db	db
29	13C-234678-HxCDF	3.83e5	7.20e5	1.10e6	36.47	0.988	0.53	NO	99.870	0.475	1.077	1.079	-0.1	7.19e6	12873	557.6	1.37e7	14065	974.8	bd	bb
30	13C-123789-HxCDF	3.32e5	6.53e5	9.85e5	37.23	1.008	0.51	NO	99.722	0.532	0.961	0.964	-0.3	5.24e6	12873	407.0	1.02e7	14065	723.0	bd	bd

Dataset: C:\MassLynx\Default.pro\CCAL Results\DLM-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time
Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: , Job: A23DEC19A_8, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	2.63e5	6.07e5	8.70e5	38.71	1.048	0.43	NO	97.741	0.382	0.849	0.869	-2.3	4.07e6	7741	525.5	9.13e6	9699	941.5	bd	bd
32	13C-1234789-HpCDF	1.91e5	4.45e5	6.36e5	40.60	1.099	0.43	NO	91.604	0.490	0.620	0.677	-8.4	2.47e6	7741	318.8	5.36e6	9699	552.8	bb	bb
33	13C-1234-TCDD	5.17e5	6.64e5	1.18e6	30.54	0.000	0.78	NO	100.000	0.235	1.000	1.000	0.0	6.61e6	7559	873.8	8.21e6	4269	1923.7	bb	bb
34	13C-123789-HxCDD	5.64e5	4.61e5	1.02e6	36.93	0.000	1.23	NO	100.000	0.273	1.000	1.000	0.0	8.68e6	7766	1117.5	7.08e6	6588	1074.2	dd	dd
35	37Cl-2378-TCDD	1.24e5		1.24e5	31.13	1.019			9.856	0.0537	1.051	1.066	-1.4	2.02e6	2881	702.3				bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\DLM-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time

Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_DLM_A10DEC19.mdb 13 Dec 2019 11:48:29

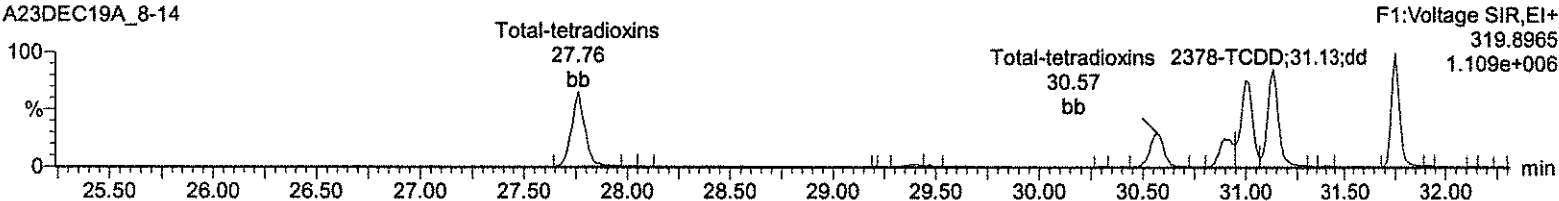
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Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,

Job: A23DEC19A_8, Task: HRP750_2, User: MJC

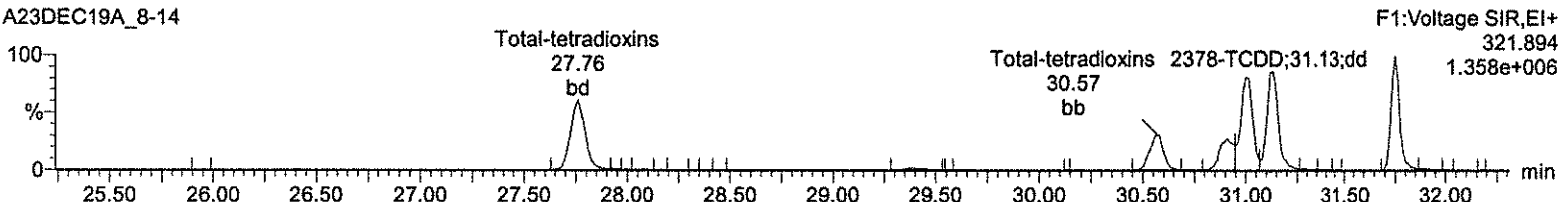
Total-tetradoxins

A23DEC19A_8-14



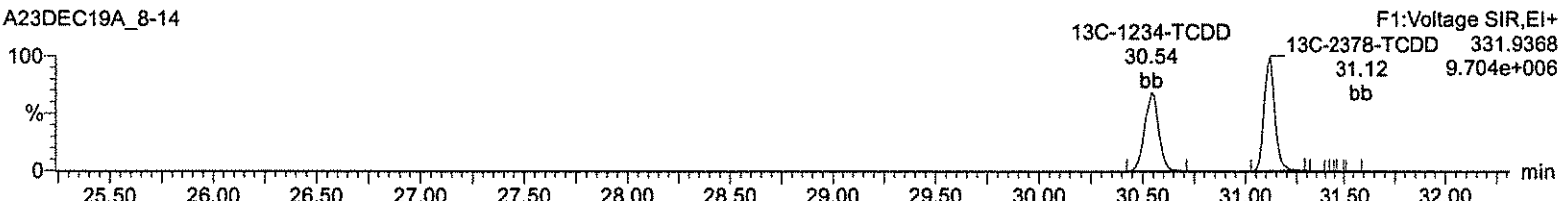
Total-tetradoxins

A23DEC19A_8-14



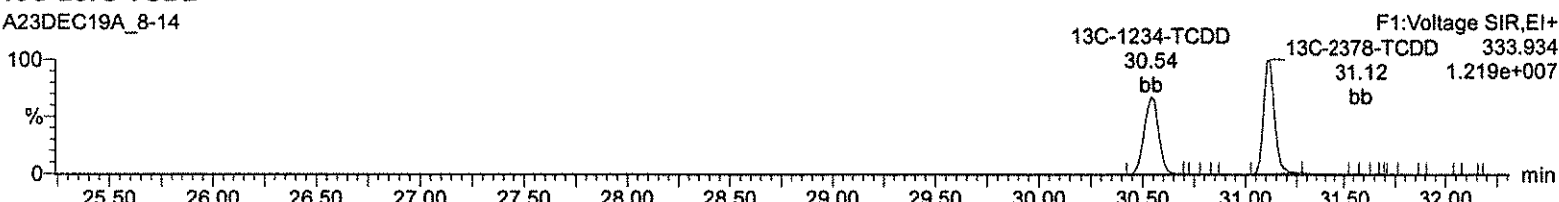
13C-2378-TCDD

A23DEC19A_8-14



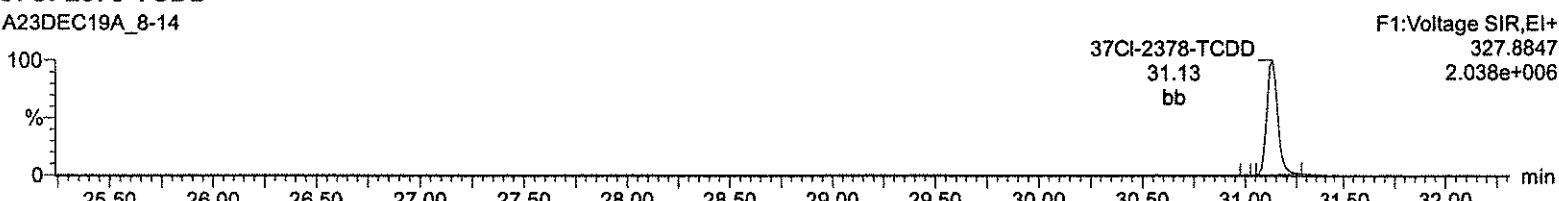
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A23DEC19A_8-14



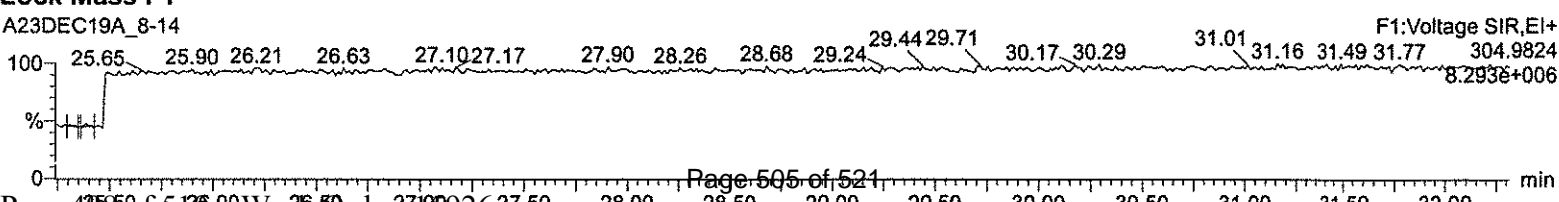
37Cl-2378-TCDD

A23DEC19A_8-14



Lock Mass F1

A23DEC19A_8-14



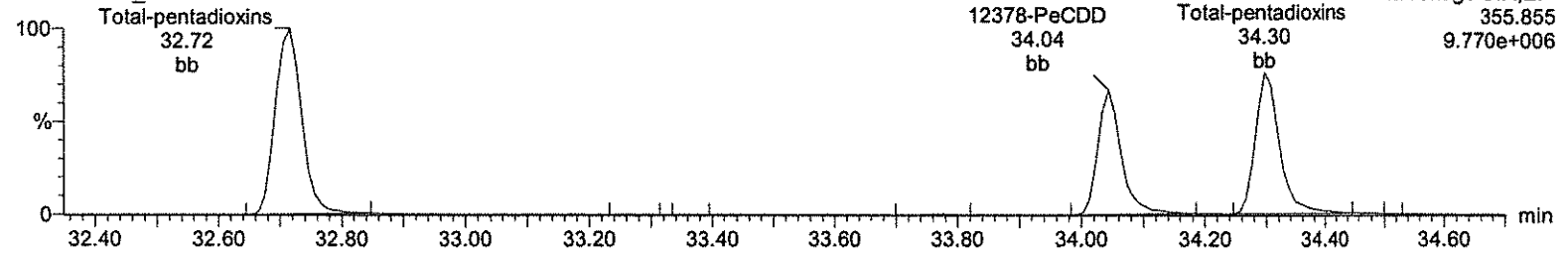
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Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time
Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

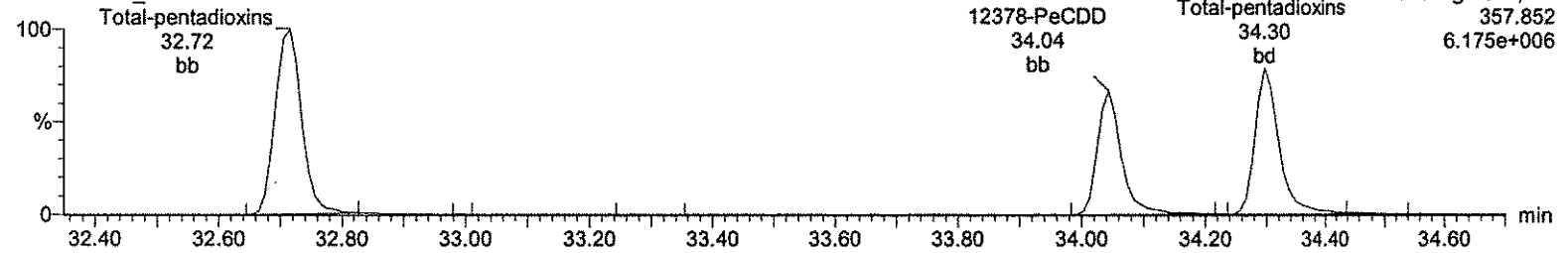
Total-pentadioxins

A23DEC19A_8-14



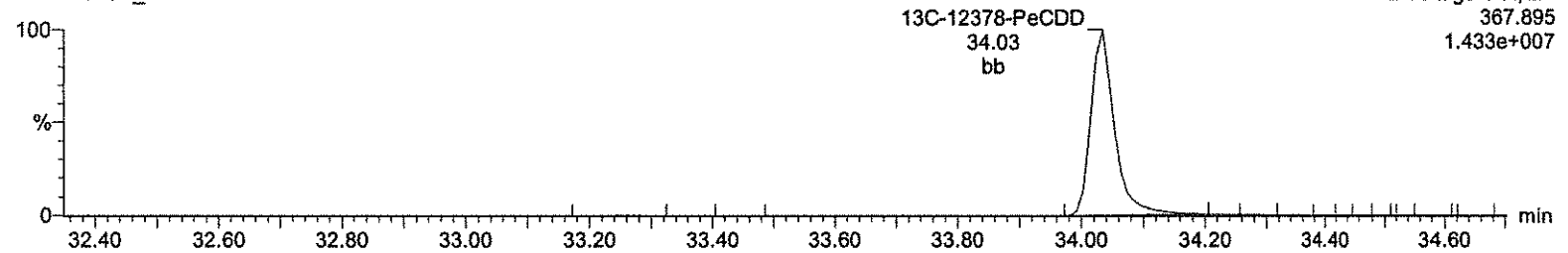
Total-pentadioxins

A23DEC19A_8-14



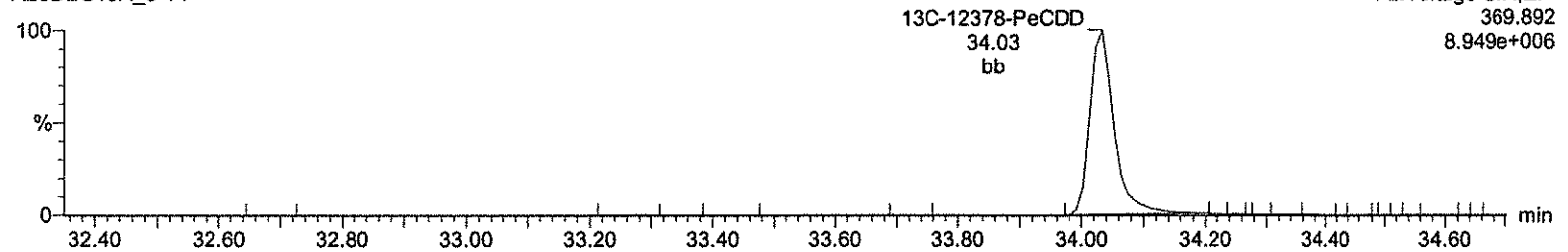
13C-12378-PeCDD

A23DEC19A_8-14



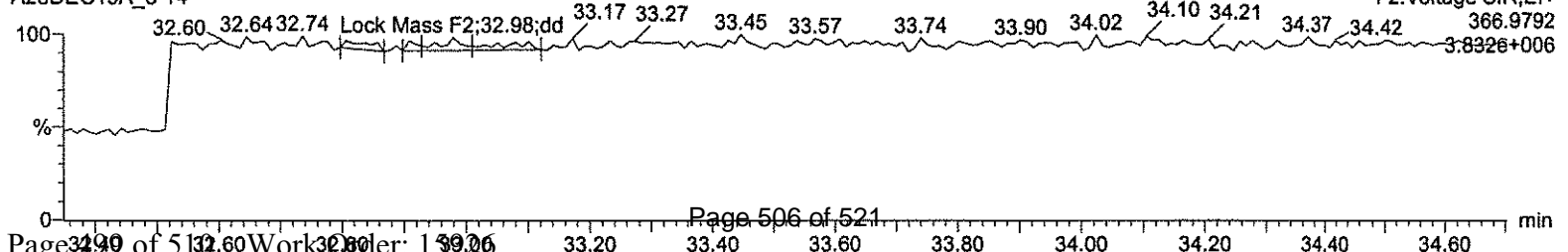
13C-12378-PeCDD

A23DEC19A_8-14



Lock Mass F2

A23DEC19A_8-14



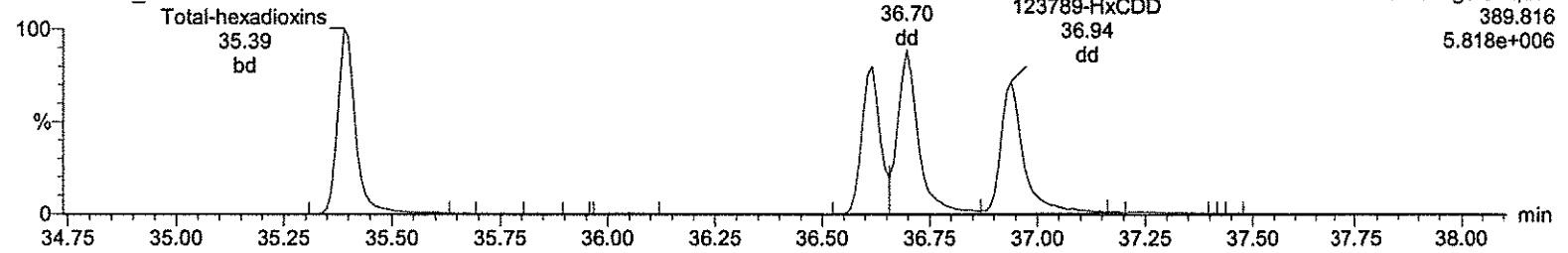
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Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time
Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

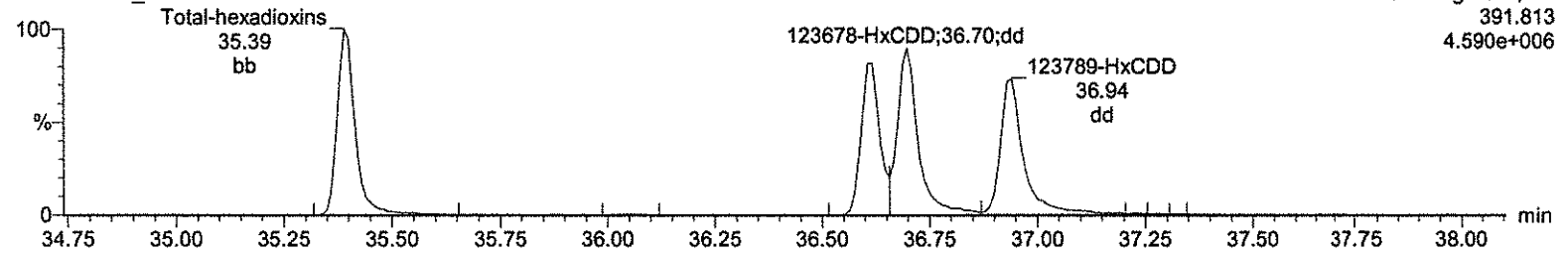
Total-hexadioxins

A23DEC19A_8-14



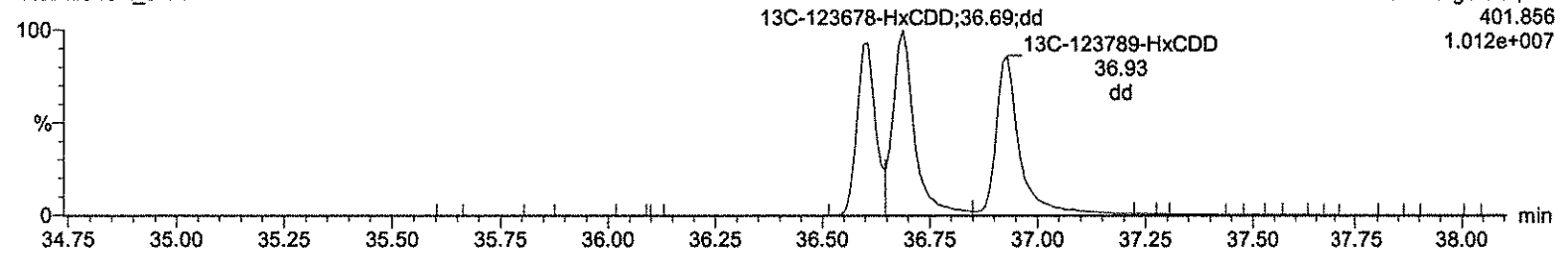
Total-hexadioxins

A23DEC19A_8-14



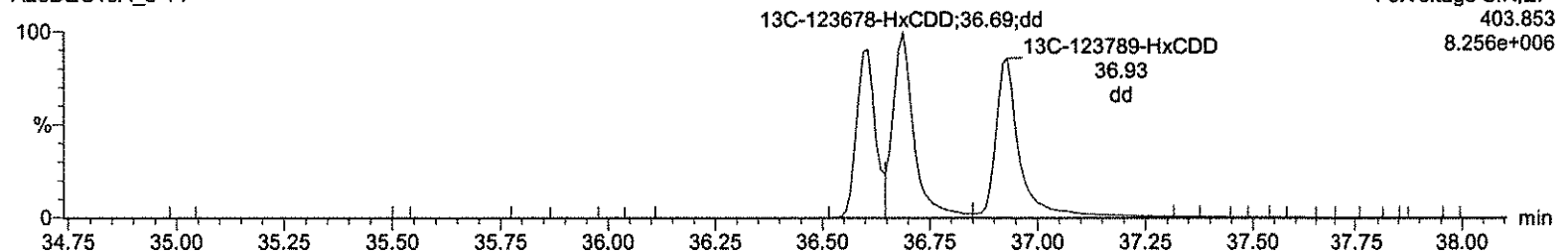
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A23DEC19A_8-14



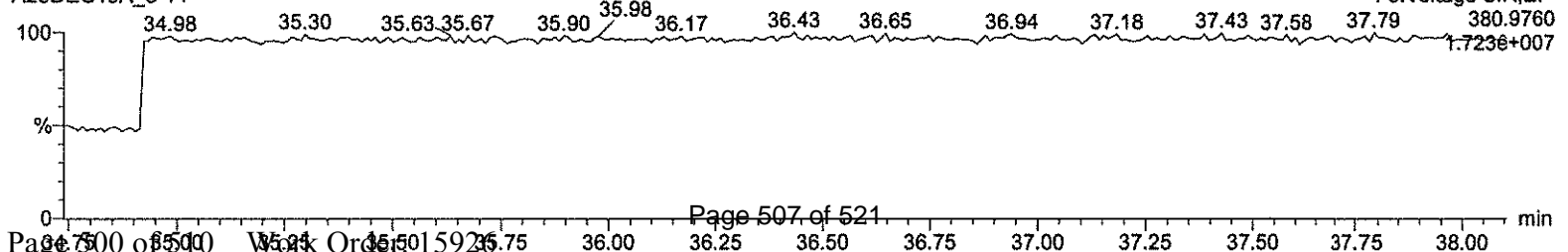
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A23DEC19A_8-14



Lock Mass F3

A23DEC19A_8-14



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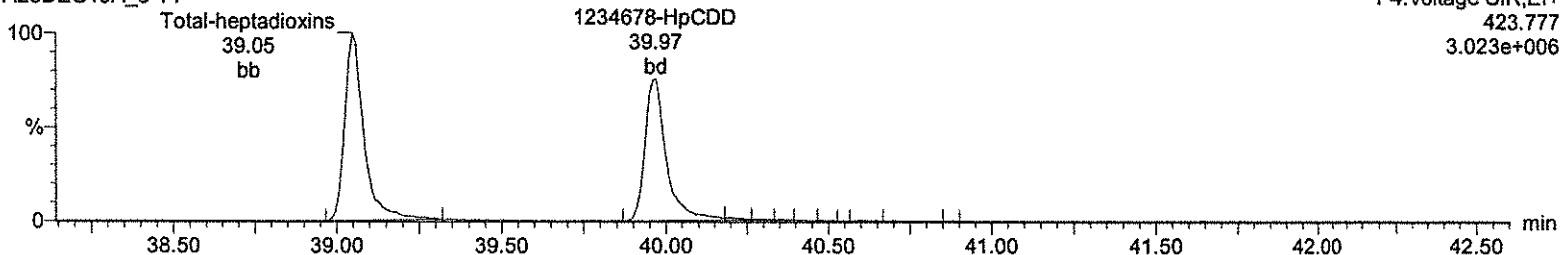
Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

Total-heptadioxins

A23DEC19A_8-14

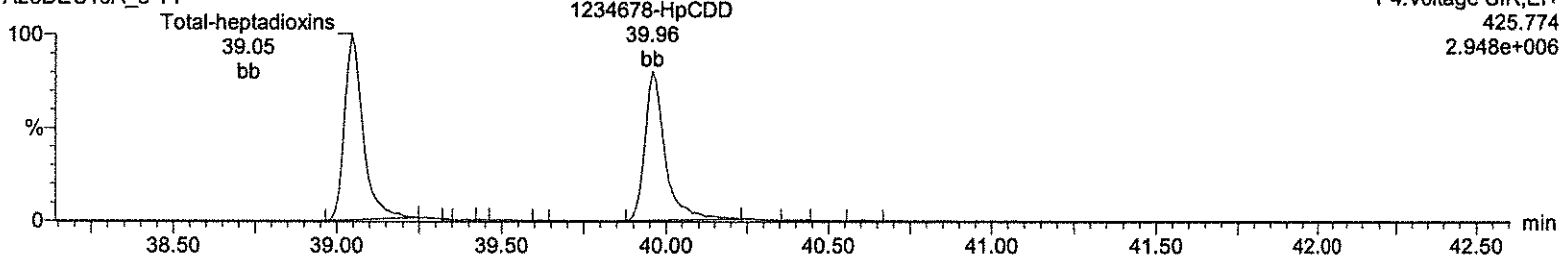
F4:Voltage SIR,EI+
423.777
3.023e+006



Total-heptadioxins

A23DEC19A_8-14

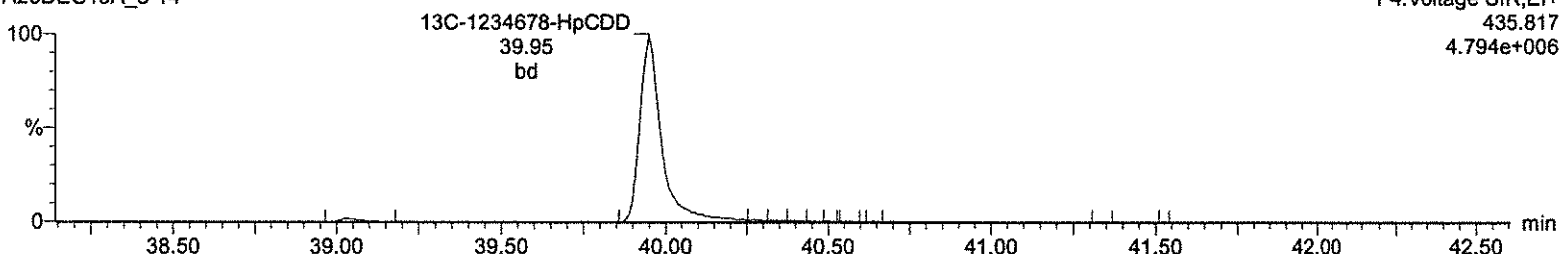
F4:Voltage SIR,EI+
425.774
2.948e+006



13C-1234678-HpCDD

A23DEC19A_8-14

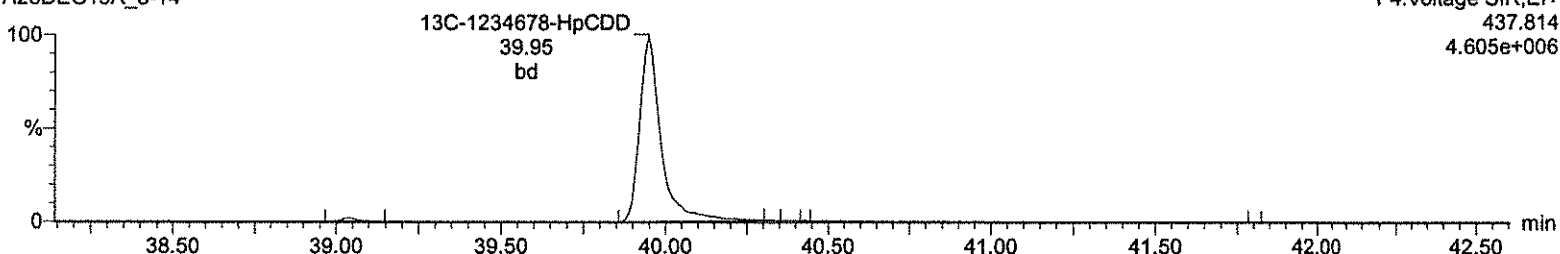
F4:Voltage SIR,EI+
435.817
4.794e+006



13C-1234678-HpCDD

A23DEC19A_8-14

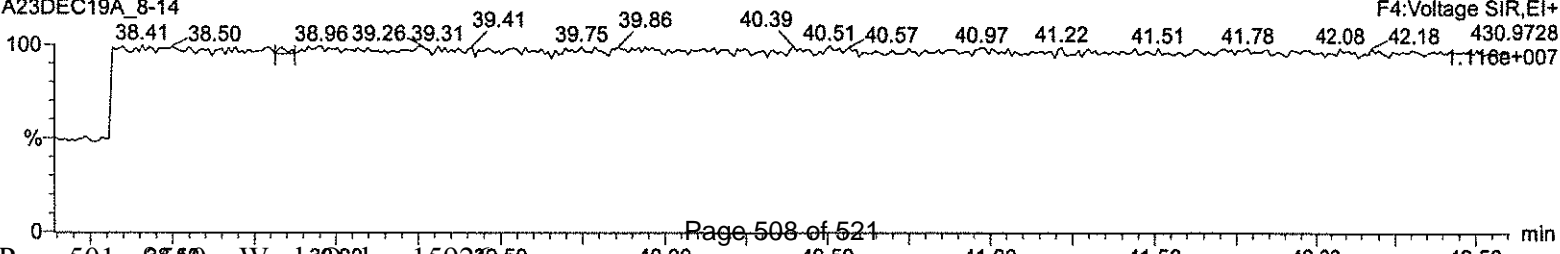
F4:Voltage SIR,EI+
437.814
4.605e+006



Lock Mass F4

A23DEC19A_8-14

F4:Voltage SIR,EI+
430.9728
1.116e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\DLM-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time

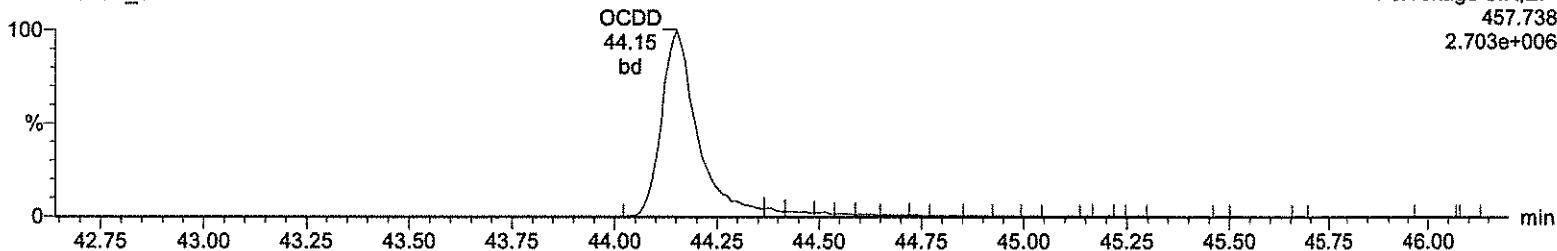
Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

OCDD

A23DEC19A_8-14

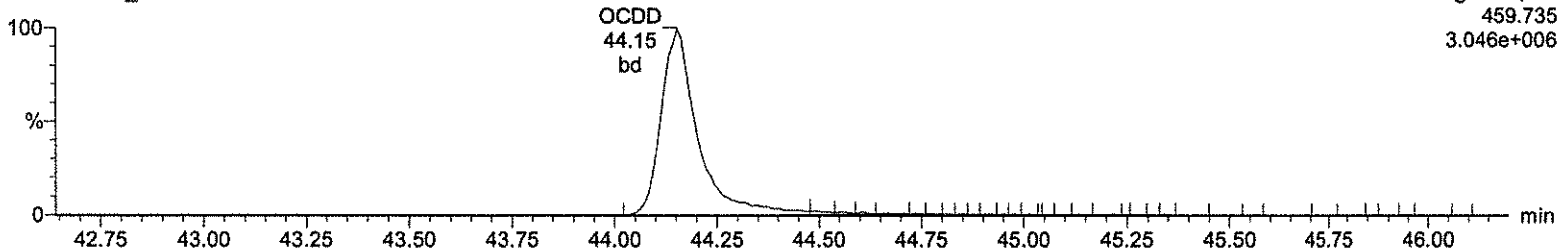
F5:Voltage SIR,EI+
457.738
2.703e+006



OCDD

A23DEC19A_8-14

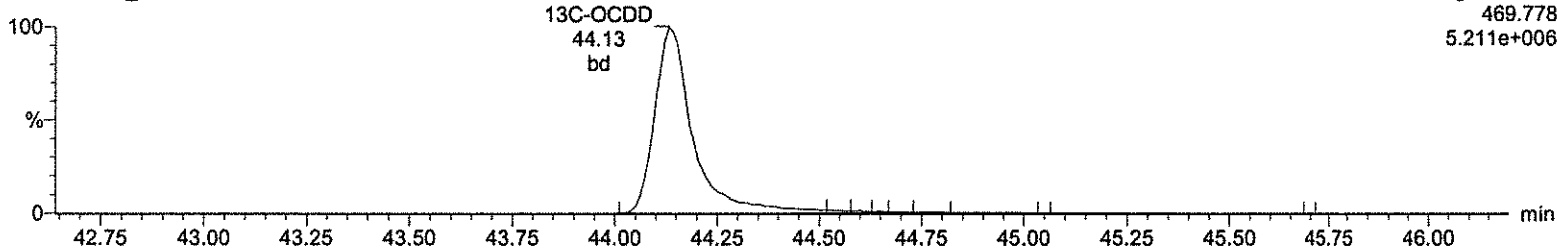
F5:Voltage SIR,EI+
459.735
3.046e+006



13C-OCDD

A23DEC19A_8-14

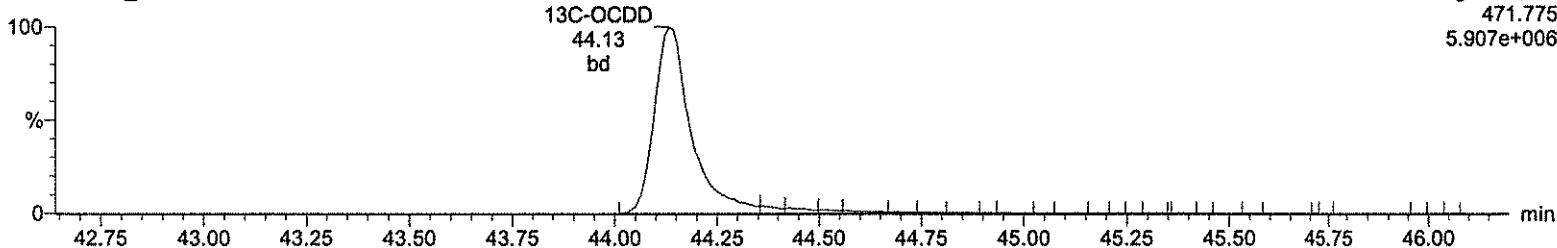
F5:Voltage SIR,EI+
469.778
5.211e+006



13C-OCDD

A23DEC19A_8-14

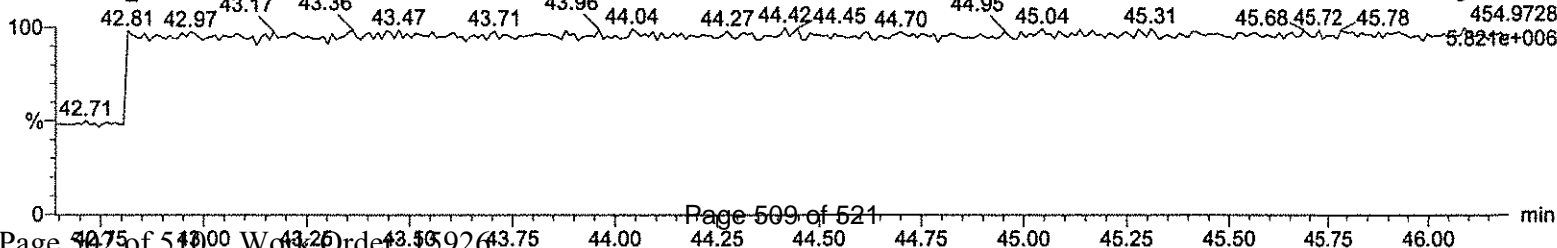
F5:Voltage SIR,EI+
471.775
5.907e+006



Lock Mass F5

A23DEC19A_8-14

F5:Voltage SIR,EI+
454.9728
5.821e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\DLM-A23DEC19A_8-14.qld

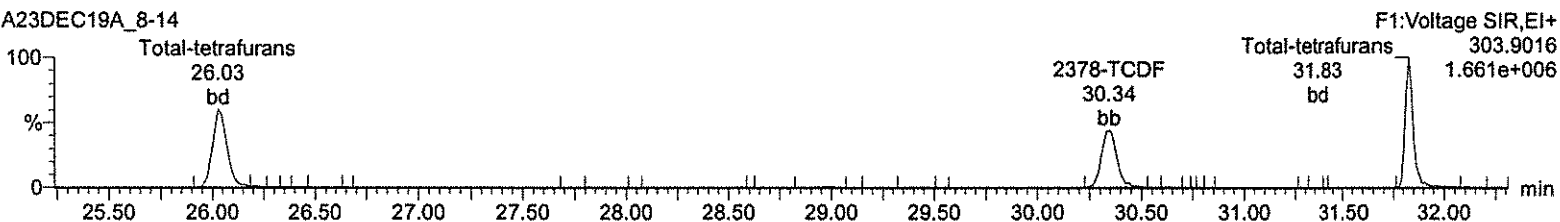
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Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

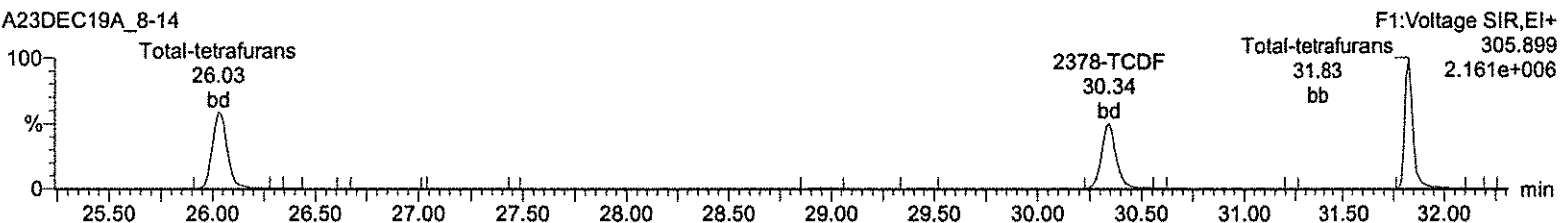
Total-tetrafurans

A23DEC19A_8-14



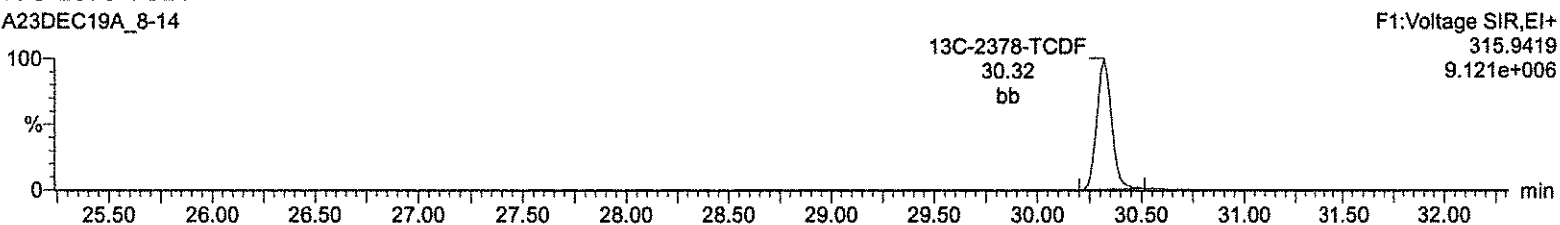
Total-tetrafurans

A23DEC19A_8-14



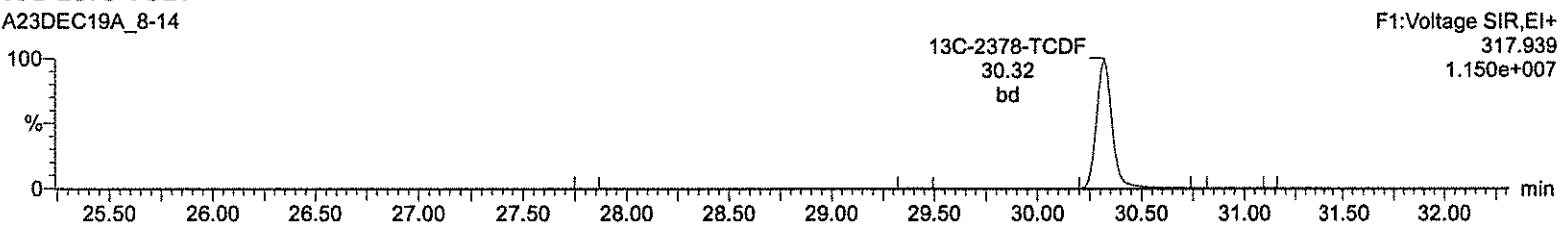
13C-2378-TCDF

A23DEC19A_8-14



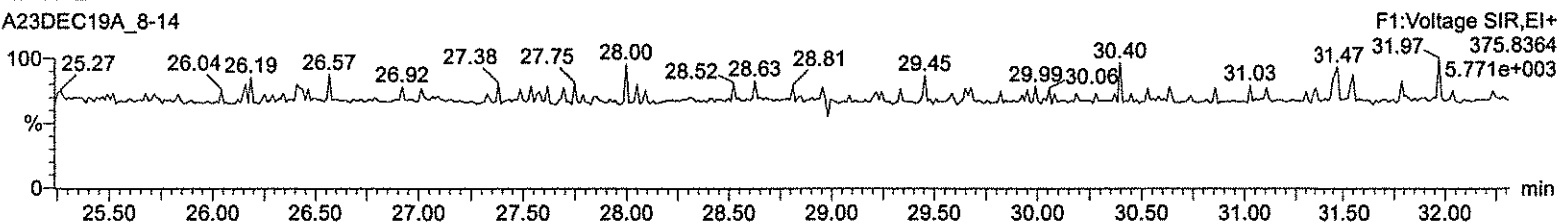
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A23DEC19A_8-14



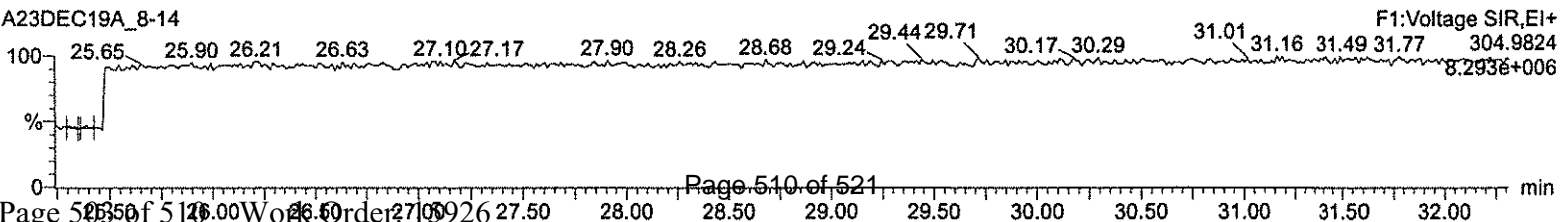
HxDPE

A23DEC19A_8-14



Lock Mass F1

A23DEC19A_8-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\DLM-A23DEC19A_8-14.qld

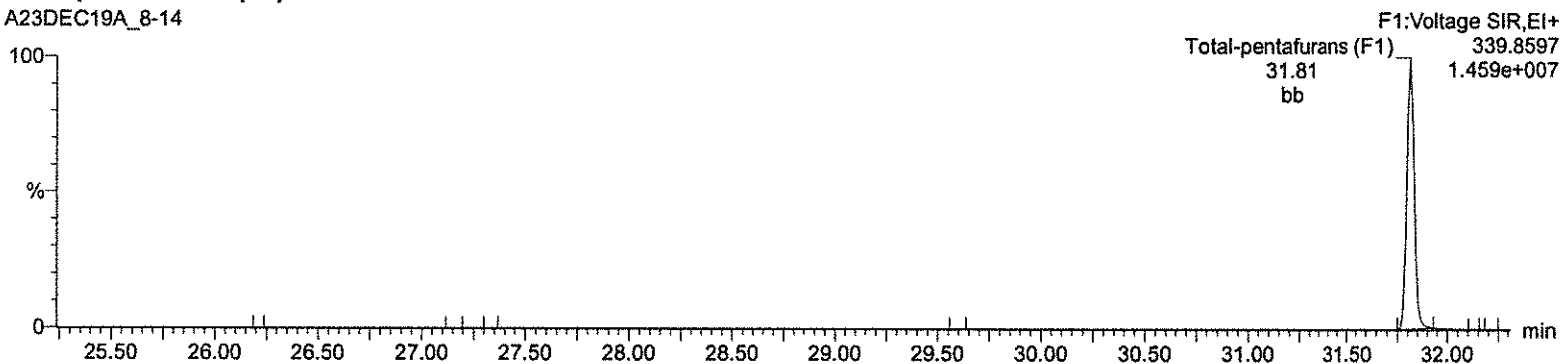
Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time

Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

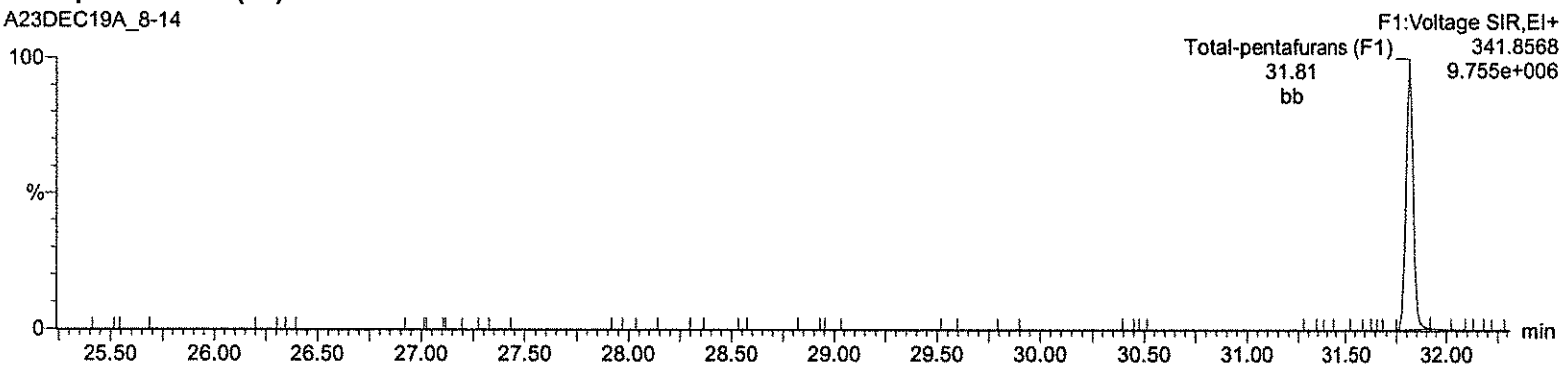
Total-pentafurans (F1)

A23DEC19A_8-14



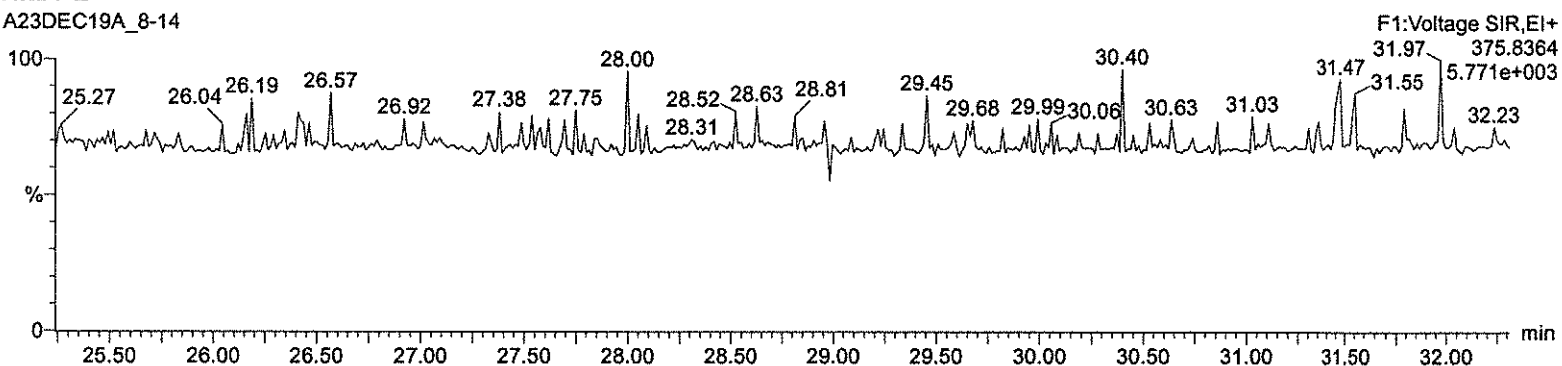
Total-pentafurans (F1)

A23DEC19A_8-14



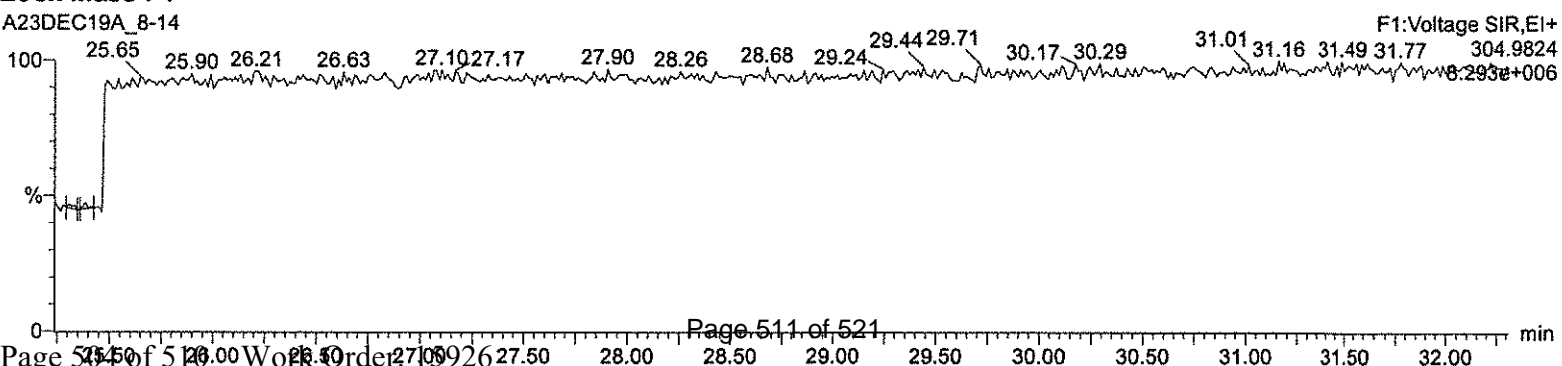
HxDPE

A23DEC19A_8-14



Lock Mass F1

A23DEC19A_8-14

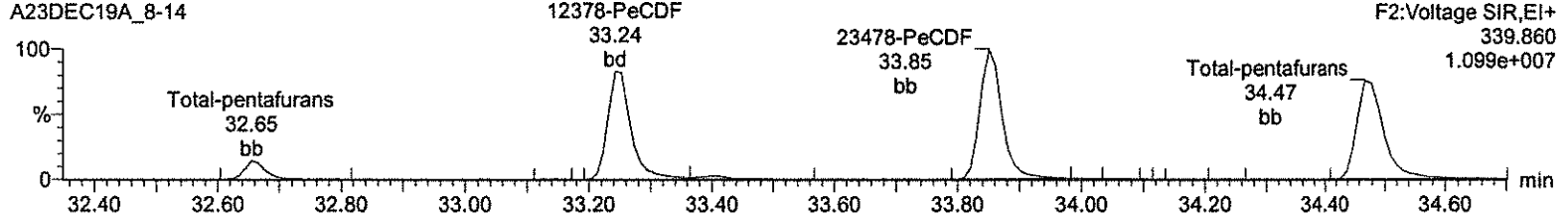


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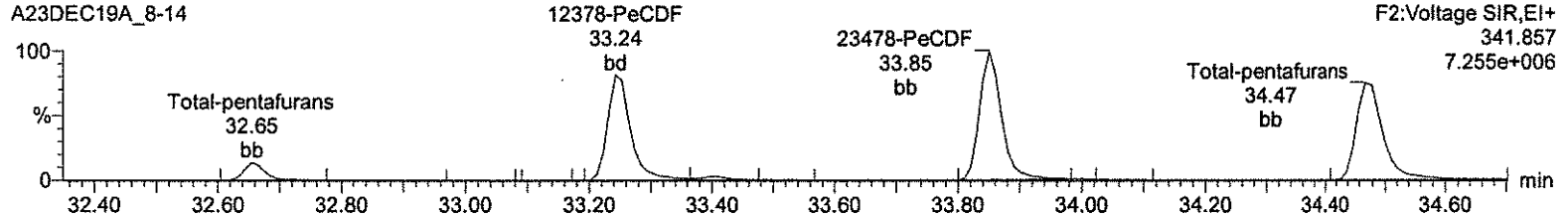
Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time
Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

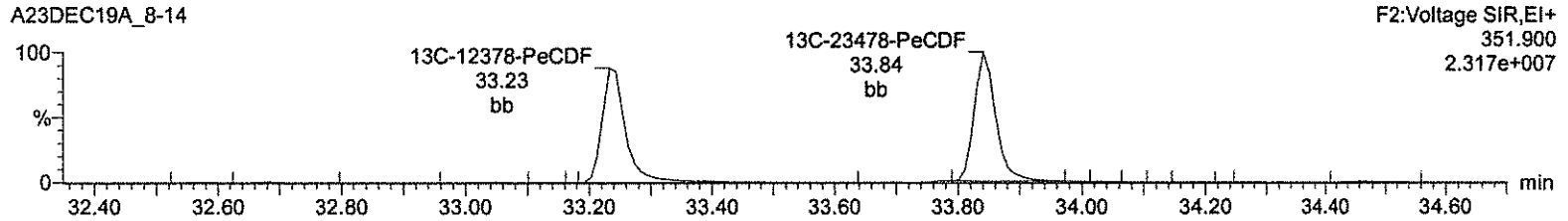
Total-pentafurans



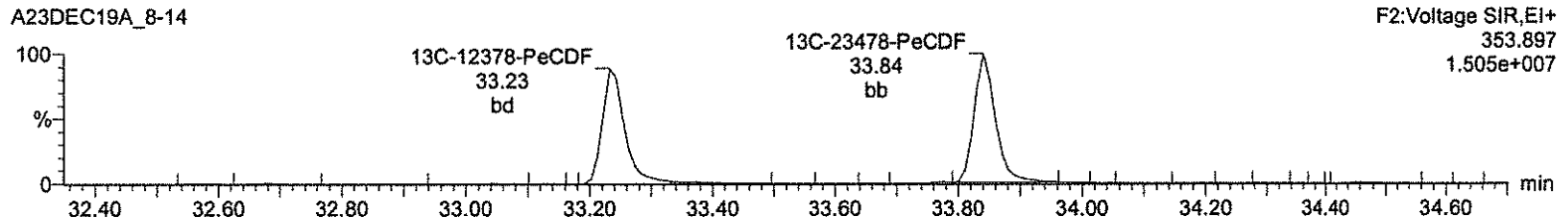
Total-pentafurans



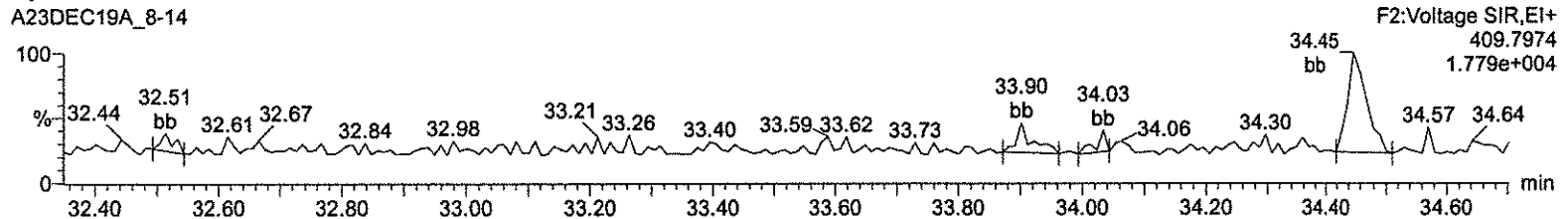
13C-12378-PeCDF



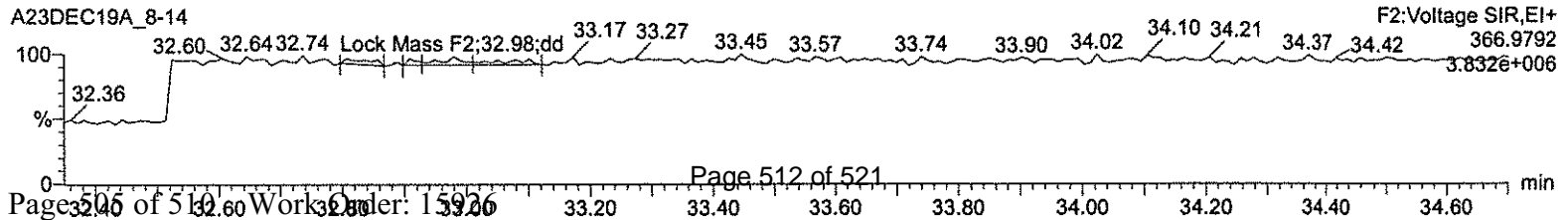
13C-12378-PeCDF



HpDPE



Lock Mass F2

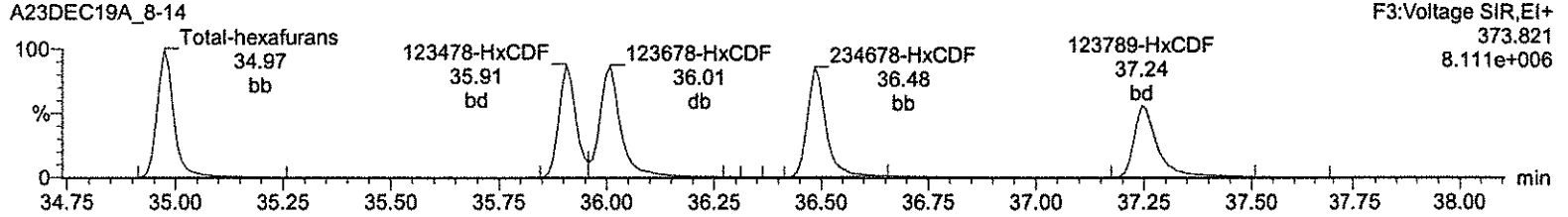


Dataset: C:\MassLynx\Default.pro\CCAL Results\DLM-A23DEC19A_8-14.qld

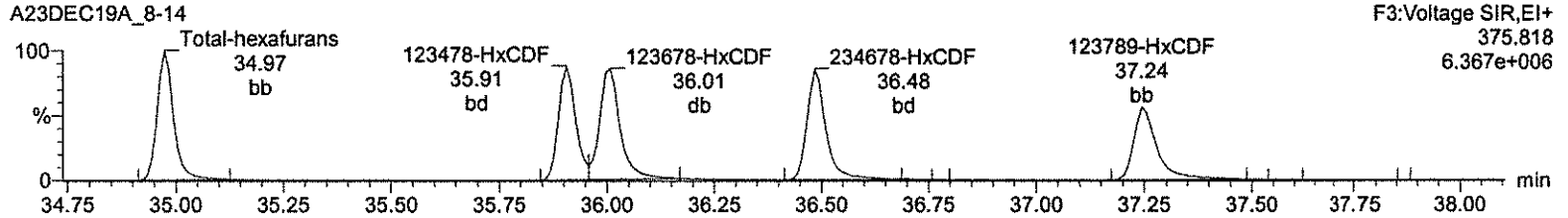
Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time
Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

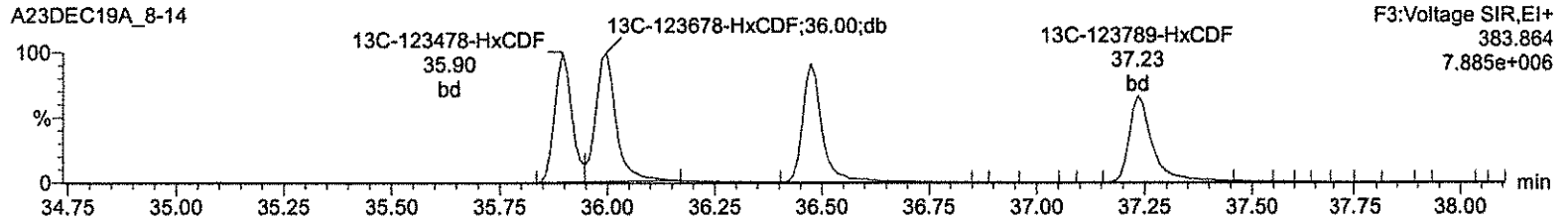
Total-hexafurans



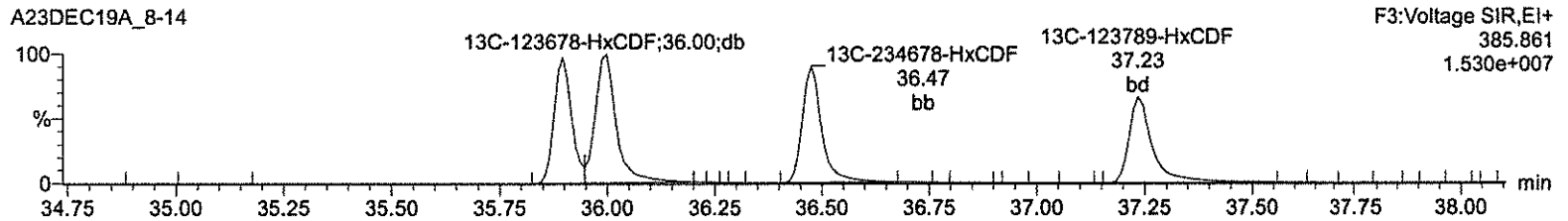
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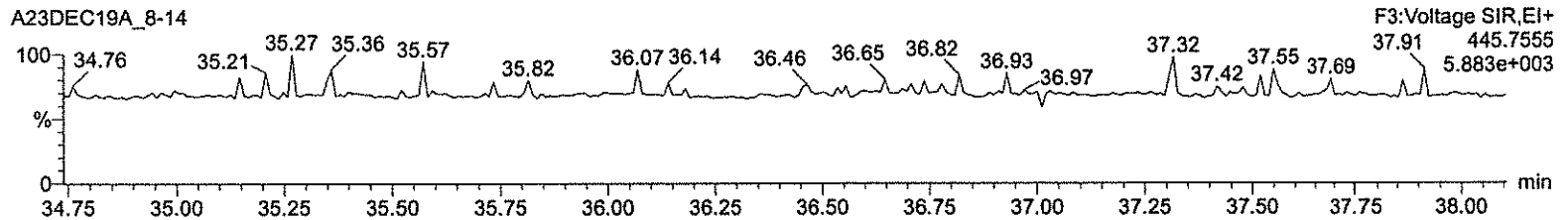
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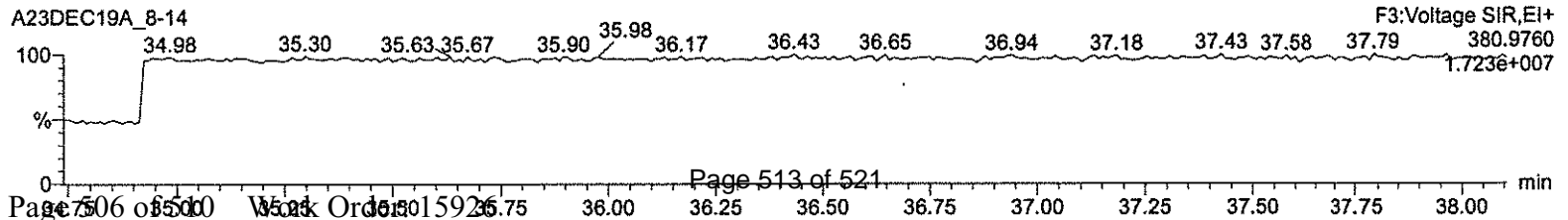
13C-123478-HxCDF



OcDPE



Lock Mass F3

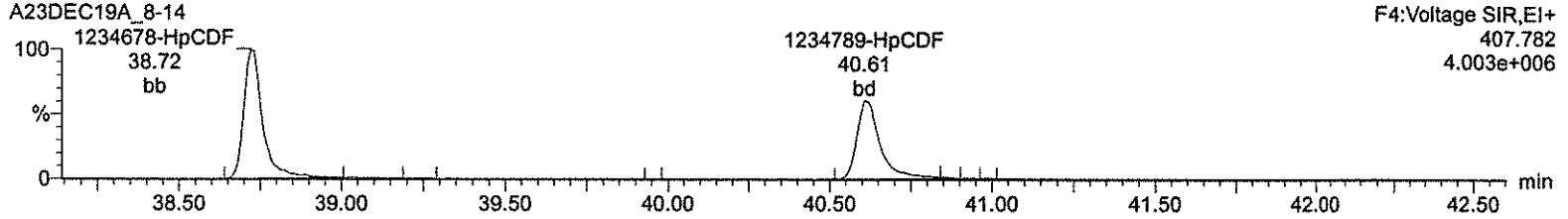


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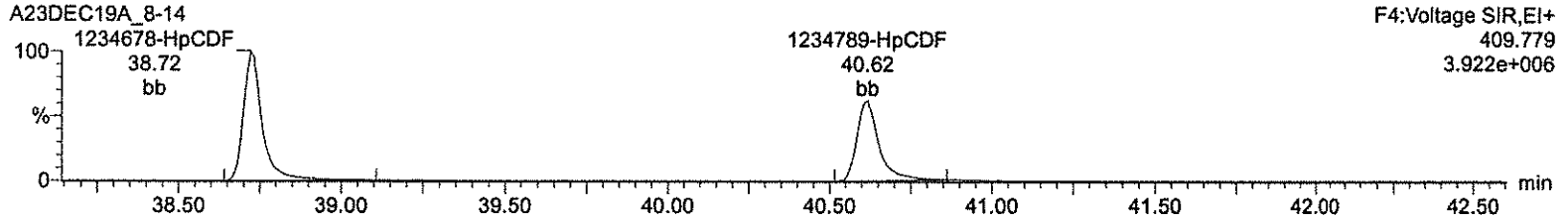
Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time
Printed: Friday, December 27, 2019 11:56:13 Eastern Standard Time

Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

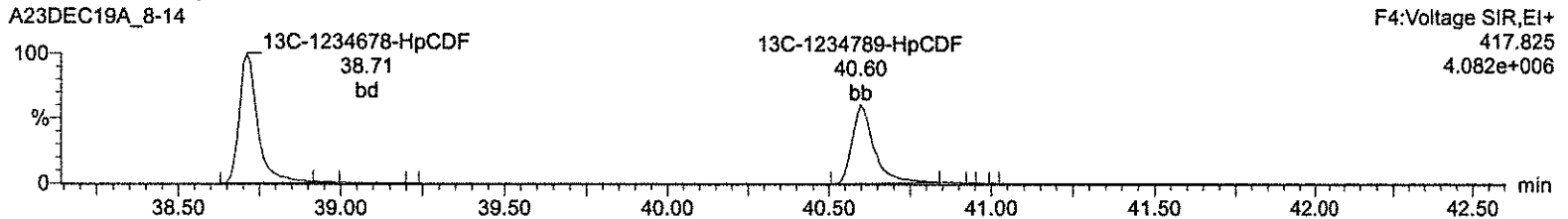
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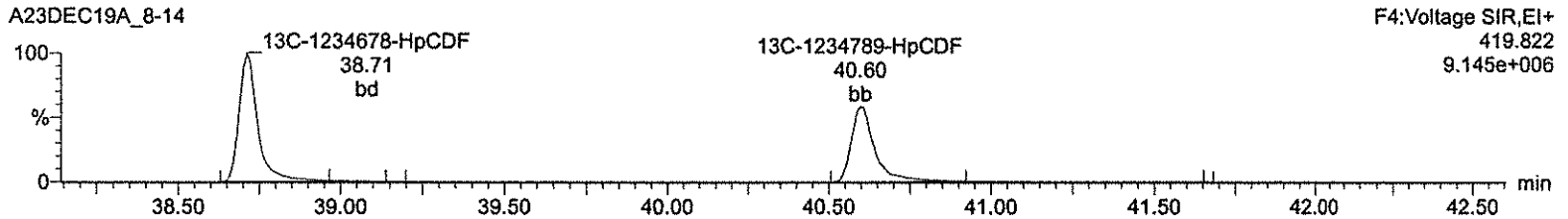
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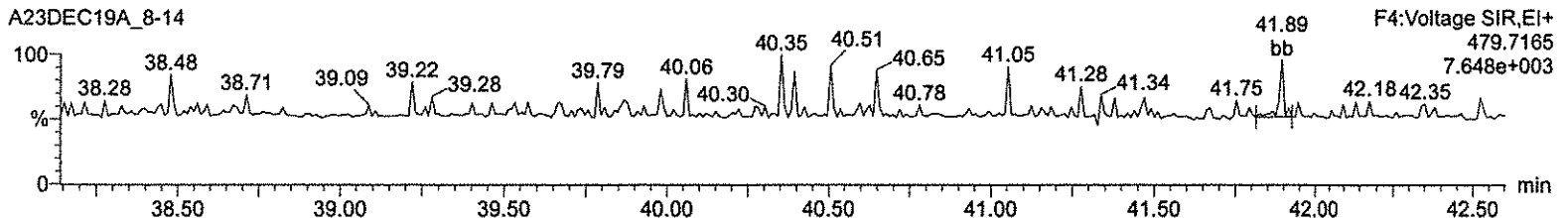
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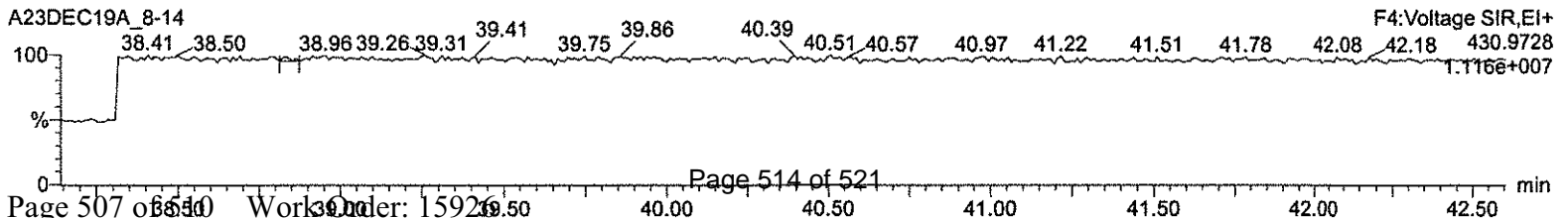
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\DLM-A23DEC19A_8-14.qld

Last Altered: Friday, December 27, 2019 11:54:29 Eastern Standard Time

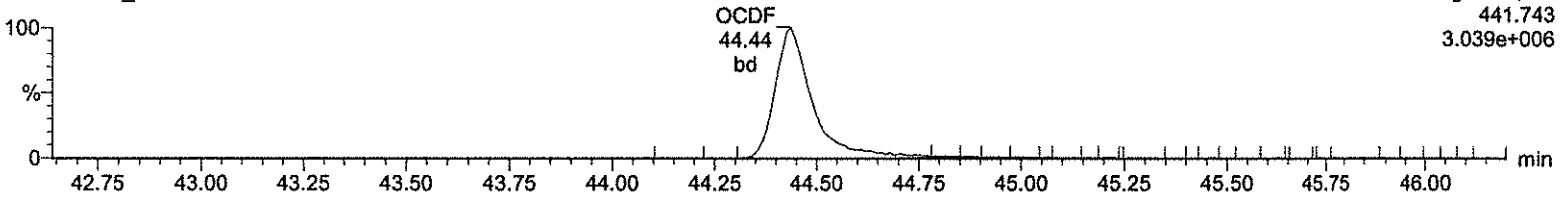
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Name: A23DEC19A_8-14, Date: 27-Dec-2019, Time: 05:52:14, ID: CS3WT UD191018-02.1 CPS69, Description: ,
Job: A23DEC19A_8, Task: HRP750_2, User: MJC

OCDF

A23DEC19A_8-14

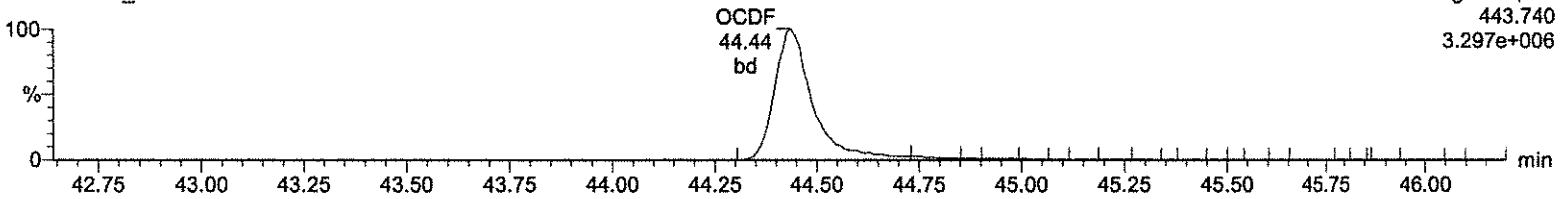
F5:Voltage SIR,EI+
441.743
3.039e+006



OCDF

A23DEC19A_8-14

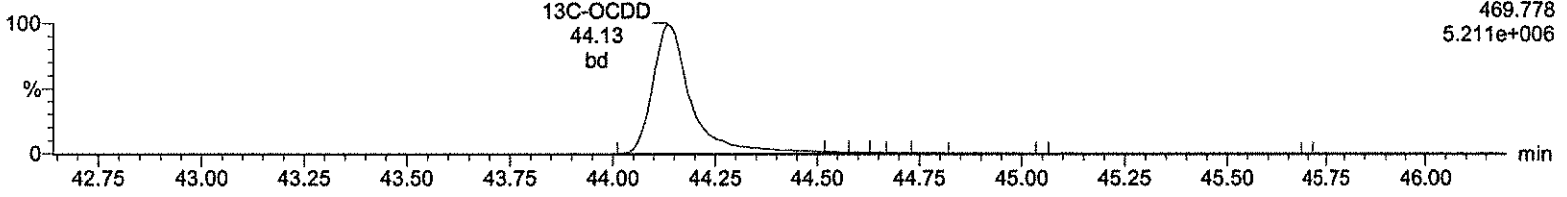
F5:Voltage SIR,EI+
443.740
3.297e+006



13C-OCDD

A23DEC19A_8-14

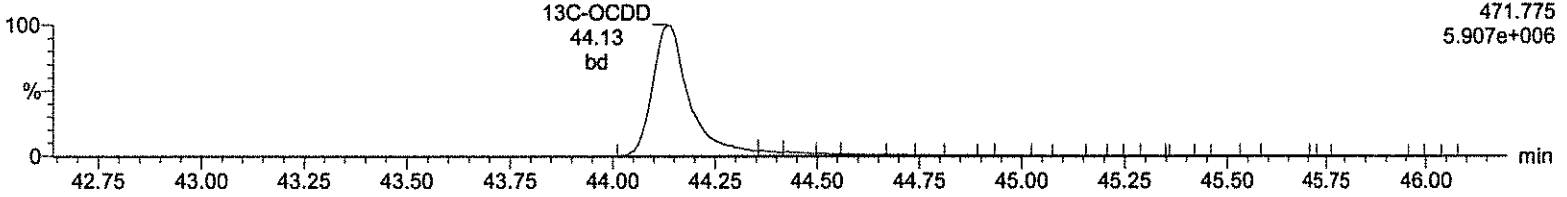
F5:Voltage SIR,EI+
469.778
5.211e+006



13C-OCDD

A23DEC19A_8-14

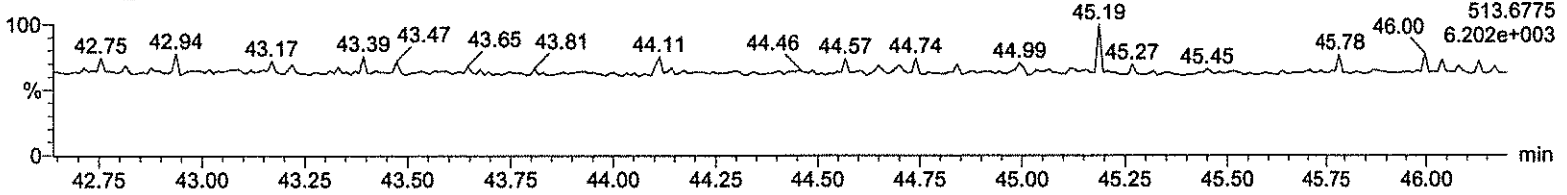
F5:Voltage SIR,EI+
471.775
5.907e+006



DeDPE

A23DEC19A_8-14

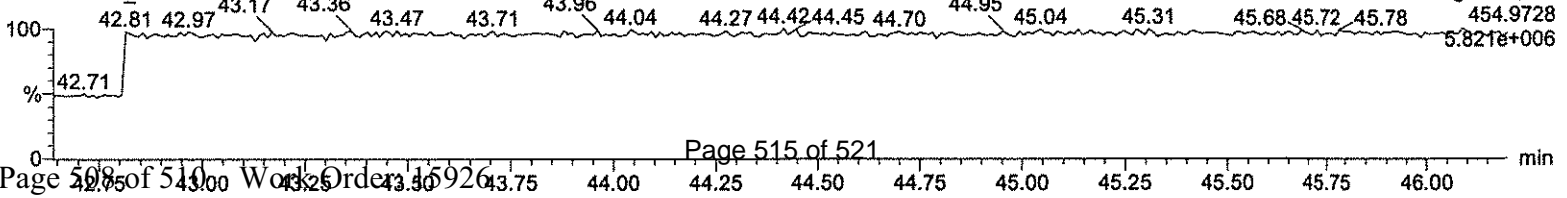
F5:Voltage SIR,EI+
513.6775
6.202e+003



Lock Mass F5

A23DEC19A_8-14

F5:Voltage SIR,EI+
454.9728
5.821e+006



Miscellaneous

No non conformance reports were generated for this work order

Shipping and Receiving Documents

JACOBS ch2m

COC Number: CALS12041901


Chain of Custody Record

Project Name SSFL Location Santa Susana Field Lab
 Project CH661 PO 100067108373
 Project Number 692670.61.SW Task Order 661
 Project Manager Randy Dean
 Sample Manager Jamie Beckett 530 570 5084
 Turnaround Time 10 Days
 PO Number 100067108373

Sample ID	Sample Date/Time	Type	Matrix	Preservative	# Containers	
					Field	Filtered
A2BMP0007S019	04-Dec-19 7:52	N	Water			
Dioxins			4°C		<input checked="" type="checkbox"/>	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg			4°C		<input type="checkbox"/>	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg			HNO3, 4°C		<input type="checkbox"/>	<input type="checkbox"/>
Particle Size Distribution TSS			4°C		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Total Containers: 7						
A2BMP0012S008	04-Dec-19 7:40	N	Water			
Dioxins			4°C		<input checked="" type="checkbox"/>	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg			4°C		<input type="checkbox"/>	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg			HNO3, 4°C		<input type="checkbox"/>	<input type="checkbox"/>
Particle Size Distribution TSS			4°C		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Turbidity			4°C		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Total Containers: 8

Barcode:  570-14631 Chain of Custody

MS = Matrix Spike SD = Matrix Spike Duplicate		Shipping Details	
Sampled by	Signature	Date/Time	Shipping Method: FedEx
Relinquished by	<i>Ben Westervelt</i>	12/4/19	Airbill No:
Received by	<i>Randy Dean</i>	12/4/19 11:00	Lab Name: Eurofins Calscience Lab
Relinquished by	<i>Randy Dean</i>	12-4-19 11:00	Lab Phone: (949) 870-8766
Received by	<i>Randy Dean</i>	12/4/19 10:35	On Ice: yes / no Cooler Temp
	<i>[Signature]</i>	12/4/19 16:10	

ATTN: Sample Custody and

Special Instructions: Report Copy to Mark Fesler (530) 229-3273

4.1/4.0 SWL

Chamber

12/4/19 16:10

Project Name SSFL Location Santa Susana Field Lab
 Project CH661 PO 100067108373
 Project Number 692670.61.SW Task Order 661
 Project Manager Randy Dean
 Sample Manager Jamie Beckett 530 570 5084
 Turnaround Time 10 Days
 PO Number 100067108373

Sample ID	Sample Date/Time	Type	Matrix	Preservative	Field Filtered	# Containers
EVBMPO003S030	04-Dec-19 7:32	N	Water			
Dioxins				4°C	<input type="checkbox"/>	2
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4°C	<input type="checkbox"/>	1
Include Cd, Cu, Pb, Hg				HNO3, 4°C	<input type="checkbox"/>	2
Particle Size Distribution TSS				4°C	<input type="checkbox"/>	2
						Total Containers: 7

180.1
 200.8/245.1
 200.8/245.1F
 ASTM D4464
 SM2540
 SW8290/1613B

MS = Matrix Spike SD = Matrix Spike Duplicate

Signatures
 Sampled by: *Ben Westertling* Date/Time: 12/4/19
 Relinquished by: *Randy Dean* Date/Time: 12/4/19
 Received by: *Randy Dean* Date/Time: 12-4-19
 Relinquished by: *Randy Dean* Date/Time: 12-4-19
 Received by: *Jamie Beckett* Date/Time: 12/4/19

Shipping Details
 Shipment Method: FedEx
 Airbill No: 1000
 Lab Name: Eurofins Calscience Lab
 Lab Phone: (949) 870-8766
 On Ice: yes / no Cooler Temp: _____

ATTN: Sample Custody and

Special Instructions: Report Copy to Mark Fesler (530) 229-3273

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-14631-2

Login Number: 14631

List Source: Eurofins Calscience

List Number: 1

Creator: Le, Danny

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 570-16773-1

Job Description: CH661 / 692670.61.SW

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Ritu Sedha
Project Manager I
1/13/2020 3:22 PM

Designee for
Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
01/13/2020

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

Tel (714) 895-5494 Fax (714) 894-7501 www.EurofinsUS.com

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Qualifiers

Metals

Qualifier

Qualifier Description

F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CH661 / 692670.61.SW

Report Number: 570-16773-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/27/2019 at 4:40 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.7 degrees Celsius.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 degrees Celsius of the required temperature or method specified range. For samples with a specified temperature of 4 degrees Celsius, samples with a temperature ranging from just above freezing temperature of water to 6 degrees Celsius shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DISSOLVED METALS (ICPMS)

Samples EVBMP0007S011 (570-16773-1), EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3) were analyzed for dissolved Metals (ICPMS) in accordance with EPA Method 200.8. The samples were analyzed on 01/02/2020.

The following samples were not filtered within 15 minutes of sample collection as required by the method: EVBMP0007S011 (570-16773-1), EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3). The samples were filtered prior to analysis at the laboratory, and the results have been flagged.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Samples EVBMP0007S011 (570-16773-1), EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3) were analyzed for total recoverable Metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared and analyzed on 01/02/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY

Samples EVBMP0007S011 (570-16773-1), EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3) were analyzed for dissolved Mercury in accordance with EPA Method 245.1. The samples were prepared and analyzed on 01/08/2020.

The following samples were not filtered within 15 minutes of sample collection as required by the method: EVBMP0007S011 (570-16773-1), EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3). The samples were filtered prior to analysis at the laboratory, and the results have been flagged.

Mercury was detected in method blank MB 570-43350/1-B at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Mercury failed the recovery criteria low for the MS of sample EVBMP0007S011MS (570-16773-1) in batch 570-43304.

Mercury failed the recovery criteria low for the MSD of sample EVBMP0007S011MSD (570-16773-1) in batch 570-43304. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS and LCSD recoveries were within acceptance limits.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples EVBMP0007S011 (570-16773-1), EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3) were analyzed for total Mercury in accordance with EPA Method 245.1. The samples were prepared on 01/02/2020 and analyzed on 01/03/2020.

The instrument blank (ICB) and/or continuing calibration blank (CCB) contained analytes greater than the lowest method detection limits (MDL), and were not reanalyzed because detections were below the reporting limits (RL). The data has been reported.

Mercury failed the recovery criteria low for the MS of sample EVBMP0007S011MS (570-16773-1) in batch 570-42667.

Mercury failed the recovery criteria low for the MSD of sample EVBMP0007S011MSD (570-16773-1) in batch 570-42667. Mercury exceeded the RPD limit. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS and LCSD recoveries were within acceptance limits.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS

Samples EVBMP0007S011 (570-16773-1), EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3) were analyzed for Total Suspended Solids in accordance with SM 2540D. The samples were analyzed on 12/31/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PARTICLE SIZE

Samples EVBMP0007S011 (570-16773-1), EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3) were analyzed for Particle Size in accordance with ASTM D 4464. The samples were analyzed on 01/06/2020.

Particle size could not be detected for the following samples due to sample matrix: EVBMP0007S011 (570-16773-1), EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TURBIDITY

Samples EVBMP0008S014 (570-16773-2) and EVBMP0009S012 (570-16773-3) were analyzed for Turbidity in accordance with SM 2130B. The samples were analyzed on 12/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Client Sample ID: EVBMP0007S011

Lab Sample ID: 570-16773-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00163		0.00100	0.000610	mg/L	1		200.8	Total Recoverable
Lead	0.000230	J	0.00100	0.000190	mg/L	1		200.8	Total Recoverable
Copper	0.00177	H	0.00100	0.000610	mg/L	1		200.8	Dissolved
Lead	0.000217	J H	0.00100	0.000190	mg/L	1		200.8	Dissolved
Mercury	0.0000598	J F2 F1	0.000200	0.0000453	mg/L	1		245.1	Total/NA
Total Suspended Solids	7.05		1.05	0.872	mg/L	1		SM 2540D	Total/NA

Client Sample ID: EVBMP0008S014

Lab Sample ID: 570-16773-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00184		0.00100	0.000610	mg/L	1		200.8	Total Recoverable
Lead	0.000358	J	0.00100	0.000190	mg/L	1		200.8	Total Recoverable
Copper	0.00179	H	0.00100	0.000610	mg/L	1		200.8	Dissolved
Lead	0.000270	J H	0.00100	0.000190	mg/L	1		200.8	Dissolved
Turbidity	8.48		0.0500	0.0439	NTU	1		SM 2130B	Total/NA
Total Suspended Solids	8.40		1.00	0.829	mg/L	1		SM 2540D	Total/NA

Client Sample ID: EVBMP0009S012

Lab Sample ID: 570-16773-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00164		0.00100	0.000610	mg/L	1		200.8	Total Recoverable
Lead	0.000249	J	0.00100	0.000190	mg/L	1		200.8	Total Recoverable
Copper	0.00169	H	0.00100	0.000610	mg/L	1		200.8	Dissolved
Lead	0.000225	J H	0.00100	0.000190	mg/L	1		200.8	Dissolved
Turbidity	5.94		0.0500	0.0439	NTU	1		SM 2130B	Total/NA
Total Suspended Solids	6.74		1.05	0.872	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: EVBMP0007S011
Date Collected: 12/26/19 08:30
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000980	mg/L		01/02/20 12:00	01/02/20 19:57	1
Copper	0.00163		0.00100	0.000610	mg/L		01/02/20 12:00	01/02/20 19:57	1
Lead	0.000230	J	0.00100	0.000190	mg/L		01/02/20 12:00	01/02/20 19:57	1

Client Sample ID: EVBMP0008S014
Date Collected: 12/26/19 08:45
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000980	mg/L		01/02/20 12:00	01/02/20 19:59	1
Copper	0.00184		0.00100	0.000610	mg/L		01/02/20 12:00	01/02/20 19:59	1
Lead	0.000358	J	0.00100	0.000190	mg/L		01/02/20 12:00	01/02/20 19:59	1

Client Sample ID: EVBMP0009S012
Date Collected: 12/26/19 09:00
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000980	mg/L		01/02/20 12:00	01/02/20 20:02	1
Copper	0.00164		0.00100	0.000610	mg/L		01/02/20 12:00	01/02/20 20:02	1
Lead	0.000249	J	0.00100	0.000190	mg/L		01/02/20 12:00	01/02/20 20:02	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Client Sample ID: EVBMP0007S011
Date Collected: 12/26/19 08:30
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000980	mg/L			01/02/20 20:28	1
Copper	0.00177	H	0.00100	0.000610	mg/L			01/02/20 20:28	1
Lead	0.000217	J H	0.00100	0.000190	mg/L			01/02/20 20:28	1

Client Sample ID: EVBMP0008S014
Date Collected: 12/26/19 08:45
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000980	mg/L			01/02/20 20:34	1
Copper	0.00179	H	0.00100	0.000610	mg/L			01/02/20 20:34	1
Lead	0.000270	J H	0.00100	0.000190	mg/L			01/02/20 20:34	1

Client Sample ID: EVBMP0009S012
Date Collected: 12/26/19 09:00
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000980	mg/L			01/02/20 20:36	1
Copper	0.00169	H	0.00100	0.000610	mg/L			01/02/20 20:36	1
Lead	0.000225	J H	0.00100	0.000190	mg/L			01/02/20 20:36	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: EVBMP0007S011

Date Collected: 12/26/19 08:30

Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000598	J F2 F1	0.000200	0.0000453	mg/L		01/02/20 17:18	01/03/20 14:52	1

Client Sample ID: EVBMP0008S014

Date Collected: 12/26/19 08:45

Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		01/02/20 17:18	01/03/20 14:59	1

Client Sample ID: EVBMP0009S012

Date Collected: 12/26/19 09:00

Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		01/02/20 17:18	01/03/20 15:01	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: 245.1 - Mercury (CVAA) - Dissolved

Client Sample ID: EVBMP0007S011

Date Collected: 12/26/19 08:30

Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H F1	0.000200	0.0000453	mg/L		01/08/20 13:00	01/08/20 19:10	1

Client Sample ID: EVBMP0008S014

Date Collected: 12/26/19 08:45

Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		01/08/20 13:00	01/08/20 19:16	1

Client Sample ID: EVBMP0009S012

Date Collected: 12/26/19 09:00

Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		01/08/20 13:00	01/08/20 19:19	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

General Chemistry

Client Sample ID: EVBMP0007S011
Date Collected: 12/26/19 08:30
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	7.05		1.05	0.872	mg/L			12/31/19 11:51	1

Client Sample ID: EVBMP0008S014
Date Collected: 12/26/19 08:45
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	8.48		0.0500	0.0439	NTU			12/27/19 20:59	1
Total Suspended Solids	8.40		1.00	0.829	mg/L			12/31/19 11:51	1

Client Sample ID: EVBMP0009S012
Date Collected: 12/26/19 09:00
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	5.94		0.0500	0.0439	NTU			12/27/19 20:59	1
Total Suspended Solids	6.74		1.05	0.872	mg/L			12/31/19 11:51	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Client Sample ID: EVBMP0007S011
Date Collected: 12/26/19 08:30
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	ND		0.01	0.01	%			01/06/20 18:50	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			01/06/20 18:50	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			01/06/20 18:50	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			01/06/20 18:50	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			01/06/20 18:50	1
Silt (0.00391 to 0.0625mm)	ND		0.01	0.01	%			01/06/20 18:50	1
Total Silt and Clay (0 to 0.0626mm)	ND		0.01	0.01	%			01/06/20 18:50	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			01/06/20 18:50	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			01/06/20 18:50	1

Client Sample ID: EVBMP0008S014
Date Collected: 12/26/19 08:45
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	ND		0.01	0.01	%			01/06/20 19:00	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			01/06/20 19:00	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			01/06/20 19:00	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			01/06/20 19:00	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			01/06/20 19:00	1
Silt (0.00391 to 0.0625mm)	ND		0.01	0.01	%			01/06/20 19:00	1
Total Silt and Clay (0 to 0.0626mm)	ND		0.01	0.01	%			01/06/20 19:00	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			01/06/20 19:00	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			01/06/20 19:00	1

Client Sample ID: EVBMP0009S012
Date Collected: 12/26/19 09:00
Date Received: 12/27/19 16:40

Lab Sample ID: 570-16773-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	ND		0.01	0.01	%			01/06/20 19:09	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			01/06/20 19:09	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			01/06/20 19:09	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			01/06/20 19:09	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			01/06/20 19:09	1
Silt (0.00391 to 0.0625mm)	ND		0.01	0.01	%			01/06/20 19:09	1
Total Silt and Clay (0 to 0.0626mm)	ND		0.01	0.01	%			01/06/20 19:09	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			01/06/20 19:09	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			01/06/20 19:09	1

File name:	C:\LS13320\570-16773F1_6 Jan 2020_18.50.56.\$ls		
	570-16773F1_6 Jan 2020_18.50.56.\$ls		
File ID:	570-16773F1		
Sample ID:	570-16773F1		
Operator:	1106		
Run number:	9		
Comment 1:	ASTM D4464M , LPSA 1		
LS 13 320	Aqueous Liquid Module		
Start time:	18:48 6 Jan 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	-0%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

File name:	C:\LS13320\570-16773G3_6 Jan 2020_19.09.34.\$ls		
	570-16773G3_6 Jan 2020_19.09.34.\$ls		
File ID:	570-16773G3		
Sample ID:	570-16773G3		
Operator:	1106		
Run number:	11		
Comment 1:	ASTM D4464M , LPSA 1		
LS 13 320	Aqueous Liquid Module		
Start time:	19:08 6 Jan 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	-1%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

File name:	C:\LS13320\570-16773H2_6 Jan 2020_19.00.40.\$ls		
	570-16773H2_6 Jan 2020_19.00.40.\$ls		
File ID:	570-16773H2		
Sample ID:	570-16773H2		
Operator:	1106		
Run number:	10		
Comment 1:	ASTM D4464M , LPSA 1		
LS 13 320	Aqueous Liquid Module		
Start time:	18:59 6 Jan 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	-1%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

Default Detection Limits

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Prep: 200.8

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000980	mg/L
Copper	0.00100	0.000610	mg/L
Lead	0.00100	0.000190	mg/L

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000980	mg/L
Copper	0.00100	0.000610	mg/L
Lead	0.00100	0.000190	mg/L

Method: 245.1 - Mercury (CVAA)

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

Method: 245.1 - Mercury (CVAA) - Dissolved

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

General Chemistry

Analyte	RL	MDL	Units
Turbidity	0.0500	0.0439	NTU
Total Suspended Solids	1.00	0.829	mg/L

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	RL	MDL	Units
Clay(less than 0.00391 mm)	0.01	0.01	%
Coarse Sand (0.5mm to 1mm)	0.01	0.01	%
Fine Sand (0.125 to 0.25mm)	0.01	0.01	%
Gravel (greater than 2 mm)	0.01	0.01	%
Medium Sand (0.25 to 0.5 mm)	0.01	0.01	%
Silt (0.00391 to 0.0625mm)	0.01	0.01	%
Total Silt and Clay (0 to 0.0626mm)	0.01	0.01	%
Very Coarse Sand (1 to 2mm)	0.01	0.01	%
Very Fine Sand (0.0625 to 0.125 mm)	0.01	0.01	%

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 570-42423/1-A
Matrix: Water
Analysis Batch: 42506

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 42423

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000980	mg/L		01/02/20 12:00	01/02/20 18:39	1
Copper	ND		0.00100	0.000610	mg/L		01/02/20 12:00	01/02/20 18:39	1
Lead	ND		0.00100	0.000190	mg/L		01/02/20 12:00	01/02/20 18:39	1

Lab Sample ID: LCS 570-42423/2-A
Matrix: Water
Analysis Batch: 42506

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 42423

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.09899		mg/L		99	80 - 120
Copper	0.100	0.09940		mg/L		99	80 - 120
Lead	0.100	0.09903		mg/L		99	80 - 120

Lab Sample ID: LCSD 570-42423/3-A
Matrix: Water
Analysis Batch: 42506

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 42423

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.09917		mg/L		99	80 - 120	0	20
Copper	0.100	0.09844		mg/L		98	80 - 120	1	20
Lead	0.100	0.09830		mg/L		98	80 - 120	1	20

Lab Sample ID: 570-16469-B-1-B MS
Matrix: Water
Analysis Batch: 42506

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 42423

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		0.100	0.1106		mg/L		111	80 - 120
Copper	0.0209		0.100	0.1280		mg/L		107	80 - 120
Lead	0.0105		0.100	0.1155		mg/L		105	80 - 120

Lab Sample ID: 570-16469-B-1-C MSD
Matrix: Water
Analysis Batch: 42506

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 42423

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		0.100	0.1111		mg/L		111	80 - 120	0	20
Copper	0.0209		0.100	0.1291		mg/L		108	80 - 120	1	20
Lead	0.0105		0.100	0.1147		mg/L		104	80 - 120	1	20

Lab Sample ID: MB 570-42480/1-A
Matrix: Water
Analysis Batch: 42506

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000980	mg/L			01/02/20 20:20	1
Copper	ND		0.00100	0.000610	mg/L			01/02/20 20:20	1
Lead	ND		0.00100	0.000190	mg/L			01/02/20 20:20	1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 570-42480/2-A
Matrix: Water
Analysis Batch: 42506

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.1023		mg/L		102	80 - 120
Copper	0.100	0.1037		mg/L		104	80 - 120
Lead	0.100	0.1043		mg/L		104	80 - 120

Lab Sample ID: LCSD 570-42480/3-A
Matrix: Water
Analysis Batch: 42506

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.1009		mg/L		101	80 - 120	1	20
Copper	0.100	0.1020		mg/L		102	80 - 120	2	20
Lead	0.100	0.1044		mg/L		104	80 - 120	0	20

Lab Sample ID: 570-16773-1 MS
Matrix: Water
Analysis Batch: 42506

Client Sample ID: EVBMP0007S011
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND	H	0.100	0.09233		mg/L		92	80 - 120
Copper	0.00177	H	0.100	0.09629		mg/L		95	80 - 120
Lead	0.000217	J H	0.100	0.09123		mg/L		91	80 - 120

Lab Sample ID: 570-16773-1 MSD
Matrix: Water
Analysis Batch: 42697

Client Sample ID: EVBMP0007S011
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND	H	0.100	0.09868		mg/L		99	80 - 120	7	20
Copper	0.00177	H	0.100	0.1032		mg/L		101	80 - 120	7	20
Lead	0.000217	J H	0.100	0.09870		mg/L		98	80 - 120	8	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 570-42474/1-A
Matrix: Water
Analysis Batch: 42667

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42474

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		01/02/20 17:18	01/03/20 14:45	1

Lab Sample ID: LCS 570-42474/2-A
Matrix: Water
Analysis Batch: 42667

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42474

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.009587		mg/L		96	85 - 121

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 570-42474/3-A
Matrix: Water
Analysis Batch: 42667

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42474

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.009599		mg/L		96	85 - 121	0	10

Lab Sample ID: 570-16773-1 MS
Matrix: Water
Analysis Batch: 42667

Client Sample ID: EVBMP0007S011
Prep Type: Total/NA
Prep Batch: 42474

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0000598	J F2 F1	0.0100	0.003331	F1	mg/L		33	57 - 141

Lab Sample ID: 570-16773-1 MSD
Matrix: Water
Analysis Batch: 42667

Client Sample ID: EVBMP0007S011
Prep Type: Total/NA
Prep Batch: 42474

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0000598	J F2 F1	0.0100	0.001196	F2 F1	mg/L		11	57 - 141	94	10

Lab Sample ID: MB 570-43350/1-B
Matrix: Water
Analysis Batch: 43304

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 43351

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00007375	J	0.000200	0.0000453	mg/L		01/08/20 13:00	01/08/20 19:03	1

Lab Sample ID: LCS 570-43350/2-B
Matrix: Water
Analysis Batch: 43304

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 43351

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.01015		mg/L		101	85 - 121

Lab Sample ID: LCSD 570-43350/3-B
Matrix: Water
Analysis Batch: 43304

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 43351

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.01009		mg/L		101	85 - 121	1	10

Lab Sample ID: 570-16773-1 MS
Matrix: Water
Analysis Batch: 43304

Client Sample ID: EVBMP0007S011
Prep Type: Dissolved
Prep Batch: 43351

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	H F1	0.0100	0.004829	F1	mg/L		48	57 - 141

Lab Sample ID: 570-16773-1 MSD
Matrix: Water
Analysis Batch: 43304

Client Sample ID: EVBMP0007S011
Prep Type: Dissolved
Prep Batch: 43351

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	H F1	0.0100	0.004713	F1	mg/L		47	57 - 141	2	10

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: SM 2130B - Turbidity

Lab Sample ID: LCSSRM 570-41681/1
Matrix: Water
Analysis Batch: 41681

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	1000	1000		NTU		100.0	99.0 - 101.0

Lab Sample ID: LCSSRM 570-41681/2
Matrix: Water
Analysis Batch: 41681

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	10.0	9.900		NTU		99.0	99.0 - 101.0

Lab Sample ID: LCSSRM 570-41681/3
Matrix: Water
Analysis Batch: 41681

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	0.0200	ND		NTU		150.0	0.0 - 200.0

Lab Sample ID: 570-16773-3 DU
Matrix: Water
Analysis Batch: 41681

Client Sample ID: EVBMP0009S012
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	5.94		5.880		NTU		1	25

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 570-42164/1
Matrix: Water
Analysis Batch: 42164

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.00	0.829	mg/L			12/31/19 11:51	1

Lab Sample ID: LCS 570-42164/2
Matrix: Water
Analysis Batch: 42164

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	109.0		mg/L		109	85 - 115

Lab Sample ID: LCSD 570-42164/3
Matrix: Water
Analysis Batch: 42164

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	112.0		mg/L		112	85 - 115	3	10

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: 570-16799-A-4 DU
Matrix: Water
Analysis Batch: 42164

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	970		958.0		mg/L		1	10

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Metals

Prep Batch: 42423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Total Recoverable	Water	200.8	
570-16773-2	EVBMP0008S014	Total Recoverable	Water	200.8	
570-16773-3	EVBMP0009S012	Total Recoverable	Water	200.8	
MB 570-42423/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 570-42423/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 570-42423/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
570-16469-B-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
570-16469-B-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	

Prep Batch: 42474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Total/NA	Water	245.1	
570-16773-2	EVBMP0008S014	Total/NA	Water	245.1	
570-16773-3	EVBMP0009S012	Total/NA	Water	245.1	
MB 570-42474/1-A	Method Blank	Total/NA	Water	245.1	
LCS 570-42474/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 570-42474/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
570-16773-1 MS	EVBMP0007S011	Total/NA	Water	245.1	
570-16773-1 MSD	EVBMP0007S011	Total/NA	Water	245.1	

Filtration Batch: 42480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Dissolved	Water	Filtration	
570-16773-2	EVBMP0008S014	Dissolved	Water	Filtration	
570-16773-3	EVBMP0009S012	Dissolved	Water	Filtration	
MB 570-42480/1-A	Method Blank	Dissolved	Water	Filtration	
LCS 570-42480/2-A	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-42480/3-A	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-16773-1 MS	EVBMP0007S011	Dissolved	Water	Filtration	
570-16773-1 MSD	EVBMP0007S011	Dissolved	Water	Filtration	

Analysis Batch: 42506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Dissolved	Water	200.8	42480
570-16773-1	EVBMP0007S011	Total Recoverable	Water	200.8	42423
570-16773-2	EVBMP0008S014	Dissolved	Water	200.8	42480
570-16773-2	EVBMP0008S014	Total Recoverable	Water	200.8	42423
570-16773-3	EVBMP0009S012	Dissolved	Water	200.8	42480
570-16773-3	EVBMP0009S012	Total Recoverable	Water	200.8	42423
MB 570-42423/1-A	Method Blank	Total Recoverable	Water	200.8	42423
MB 570-42480/1-A	Method Blank	Dissolved	Water	200.8	42480
LCS 570-42423/2-A	Lab Control Sample	Total Recoverable	Water	200.8	42423
LCS 570-42480/2-A	Lab Control Sample	Dissolved	Water	200.8	42480
LCSD 570-42423/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	42423
LCSD 570-42480/3-A	Lab Control Sample Dup	Dissolved	Water	200.8	42480
570-16469-B-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	42423
570-16469-B-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	42423
570-16773-1 MS	EVBMP0007S011	Dissolved	Water	200.8	42480

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Metals

Analysis Batch: 42667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Total/NA	Water	245.1	42474
570-16773-2	EVBMP0008S014	Total/NA	Water	245.1	42474
570-16773-3	EVBMP0009S012	Total/NA	Water	245.1	42474
MB 570-42474/1-A	Method Blank	Total/NA	Water	245.1	42474
LCS 570-42474/2-A	Lab Control Sample	Total/NA	Water	245.1	42474
LCSD 570-42474/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	42474
570-16773-1 MS	EVBMP0007S011	Total/NA	Water	245.1	42474
570-16773-1 MSD	EVBMP0007S011	Total/NA	Water	245.1	42474

Analysis Batch: 42697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1 MSD	EVBMP0007S011	Dissolved	Water	200.8	42480

Analysis Batch: 43304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Dissolved	Water	245.1	43351
570-16773-2	EVBMP0008S014	Dissolved	Water	245.1	43351
570-16773-3	EVBMP0009S012	Dissolved	Water	245.1	43351
MB 570-43350/1-B	Method Blank	Dissolved	Water	245.1	43351
LCS 570-43350/2-B	Lab Control Sample	Dissolved	Water	245.1	43351
LCSD 570-43350/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	43351
570-16773-1 MS	EVBMP0007S011	Dissolved	Water	245.1	43351
570-16773-1 MSD	EVBMP0007S011	Dissolved	Water	245.1	43351

Filtration Batch: 43350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Dissolved	Water	Filtration	
570-16773-2	EVBMP0008S014	Dissolved	Water	Filtration	
570-16773-3	EVBMP0009S012	Dissolved	Water	Filtration	
MB 570-43350/1-B	Method Blank	Dissolved	Water	Filtration	
LCS 570-43350/2-B	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-43350/3-B	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-16773-1 MS	EVBMP0007S011	Dissolved	Water	Filtration	
570-16773-1 MSD	EVBMP0007S011	Dissolved	Water	Filtration	

Prep Batch: 43351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Dissolved	Water	245.1	43350
570-16773-2	EVBMP0008S014	Dissolved	Water	245.1	43350
570-16773-3	EVBMP0009S012	Dissolved	Water	245.1	43350
MB 570-43350/1-B	Method Blank	Dissolved	Water	245.1	43350
LCS 570-43350/2-B	Lab Control Sample	Dissolved	Water	245.1	43350
LCSD 570-43350/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	43350
570-16773-1 MS	EVBMP0007S011	Dissolved	Water	245.1	43350
570-16773-1 MSD	EVBMP0007S011	Dissolved	Water	245.1	43350

General Chemistry

Analysis Batch: 41681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-2	EVBMP0008S014	Total/NA	Water	SM 2130B	

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

General Chemistry (Continued)

Analysis Batch: 41681 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-3	EVBMP0009S012	Total/NA	Water	SM 2130B	
LCSSRM 570-41681/1	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-41681/2	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-41681/3	Lab Control Sample	Total/NA	Water	SM 2130B	
570-16773-3 DU	EVBMP0009S012	Total/NA	Water	SM 2130B	

Analysis Batch: 42164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Total/NA	Water	SM 2540D	
570-16773-2	EVBMP0008S014	Total/NA	Water	SM 2540D	
570-16773-3	EVBMP0009S012	Total/NA	Water	SM 2540D	
MB 570-42164/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-42164/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-42164/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-16799-A-4 DU	Duplicate	Total/NA	Water	SM 2540D	

Geotechnical

Analysis Batch: 42967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-16773-1	EVBMP0007S011	Total/NA	Water	D4464	
570-16773-2	EVBMP0008S014	Total/NA	Water	D4464	
570-16773-3	EVBMP0009S012	Total/NA	Water	D4464	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Client Sample ID: EVBMP0007S011

Lab Sample ID: 570-16773-1

Date Collected: 12/26/19 08:30

Matrix: Water

Date Received: 12/27/19 16:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	42480	12/27/19 17:30	ZHW5	ECL 1
Dissolved	Analysis	200.8		1			42506	01/02/20 20:28	ZHW5	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	42423	01/02/20 12:00	WL8G	ECL 1
Total Recoverable	Analysis	200.8		1			42506	01/02/20 19:57	ZHW5	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	43350	12/28/19 12:00	ZHW5	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	43351	01/08/20 13:00	ZHW5	ECL 1
Dissolved	Analysis	245.1		1			43304	01/08/20 19:10	MD3A	ECL 1
Instrument ID: HG7										
Total/NA	Prep	245.1			50 mL	100 mL	42474	01/02/20 17:18	WL8G	ECL 1
Total/NA	Analysis	245.1		1			42667	01/03/20 14:52	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2540D		1	950 mL	1000 mL	42164	12/31/19 11:51	YR9U	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			42967	01/06/20 18:50	C4LT	ECL 1
Instrument ID: NOEQUIP										

Client Sample ID: EVBMP0008S014

Lab Sample ID: 570-16773-2

Date Collected: 12/26/19 08:45

Matrix: Water

Date Received: 12/27/19 16:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	42480	12/27/19 17:30	ZHW5	ECL 1
Dissolved	Analysis	200.8		1			42506	01/02/20 20:34	ZHW5	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	42423	01/02/20 12:00	WL8G	ECL 1
Total Recoverable	Analysis	200.8		1			42506	01/02/20 19:59	ZHW5	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	43350	12/28/19 12:00	ZHW5	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	43351	01/08/20 13:00	ZHW5	ECL 1
Dissolved	Analysis	245.1		1			43304	01/08/20 19:16	MD3A	ECL 1
Instrument ID: HG7										
Total/NA	Prep	245.1			50 mL	100 mL	42474	01/02/20 17:18	WL8G	ECL 1
Total/NA	Analysis	245.1		1			42667	01/03/20 14:59	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2130B		1			41681	12/27/19 20:59	KZ4O	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	42164	12/31/19 11:51	YR9U	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			42967	01/06/20 19:00	C4LT	ECL 1
Instrument ID: NOEQUIP										

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Client Sample ID: EVBMP0009S012

Lab Sample ID: 570-16773-3

Date Collected: 12/26/19 09:00

Matrix: Water

Date Received: 12/27/19 16:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	42480	12/27/19 17:30	ZHW5	ECL 1
Dissolved	Analysis	200.8		1			42506	01/02/20 20:36	ZHW5	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	42423	01/02/20 12:00	WL8G	ECL 1
Total Recoverable	Analysis	200.8		1			42506	01/02/20 20:02	ZHW5	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	43350	12/28/19 12:00	ZHW5	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	43351	01/08/20 13:00	ZHW5	ECL 1
Dissolved	Analysis	245.1		1			43304	01/08/20 19:19	MD3A	ECL 1
Instrument ID: HG7										
Total/NA	Prep	245.1			50 mL	100 mL	42474	01/02/20 17:18	WL8G	ECL 1
Total/NA	Analysis	245.1		1			42667	01/03/20 15:01	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2130B		1			41681	12/27/19 20:59	KZ4O	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	SM 2540D		1	950 mL	1000 mL	42164	12/31/19 11:51	YR9U	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			42967	01/06/20 19:09	C4LT	ECL 1
Instrument ID: NOEQUIP										

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	ECL 1
245.1	Mercury (CVAA)	EPA	ECL 1
SM 2130B	Turbidity	SM	ECL 1
SM 2540D	Solids, Total Suspended (TSS)	SM	ECL 1
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
200.8	Preparation, Total Recoverable Metals	EPA	ECL 1
245.1	Preparation, Mercury	EPA	ECL 1
Filtration	Sample Filtration	None	ECL 1

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-16773-1	EVBMP0007S011	Water	12/26/19 08:30	12/27/19 16:40	
570-16773-2	EVBMP0008S014	Water	12/26/19 08:45	12/27/19 16:40	
570-16773-3	EVBMP0009S012	Water	12/26/19 09:00	12/27/19 16:40	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
Hg 1ppm ICV 00013	01/31/20	12/31/19	DI Water, Lot n/a	100 mL	MT-Hg-CS_00002	0.1 mL	Mercury	1 mg/L
.MT-Hg-CS_00002	12/31/20		High Purity Standards, Lot 1914918-100		(Purchased Reagent)		Mercury	1000 ug/mL
Hg 1ppm STD 00009	01/31/20	12/31/19	DI Water, Lot n/a	100 mL	MT-Hg-SS_00001	1 mL	Mercury	1 mg/L
.MT-Hg-SS_00001	07/14/22		AccuStandard, Lot 217075028		(Purchased Reagent)		Mercury	100 ug/mL
Hg H2SO4_00001	02/21/21		Fisher, Lot 3117052		(Purchased Reagent)		Sulfuric acid	98 mg/L
Hg K2S2O3_00001	02/19/20	02/19/19	DI Water, Lot N/A	10 L	HG_7440K2S2O8_00001	500 g	Potassium persulfate	4950000 mg/L
.HG_7440K2S2O8_00001	02/27/22		AcrosOrganic, Lot A0379062		(Purchased Reagent)		Potassium persulfate	99 g/g
Hg KMnO4_00002	02/19/20	02/19/19	DI Water, Lot N/A	10 L	HG_7471_KMNO4_00001	500 g	Potassium Permanganate	5000000 mg/L
.HG_7471_KMNO4_00001	08/22/23		VWR, Lot 0277-C094		(Purchased Reagent)		Potassium Permanganate	100 g/g
Hg NaCl-NH2OH_00005	03/23/20	11/30/19	DI Water, Lot N/A	10 L	HG_7470_NH3OH_00002	1.2 Kg	Hydroxylamine hydrochloride	0.01188 L
.HG_7470_NH3OH_00002	10/02/20		VWR Chemicals, LLC, Lot 19F1856849		HG_7470_NaCl_00001	1.2 Kg	Sodium Chloride	11880 L
.HG_7470_NaCl_00001	03/23/20		Fisher, Lot 176121		(Purchased Reagent)		Hydroxylamine hydrochloride	99 g/g
					(Purchased Reagent)		Sodium Chloride	99 g/g
MT: 1:1 HCl_00002	03/02/20	06/05/19	DI Water, Lot Di water	500 mL	MT: HCl Conc. 00002	250 mL	Hydrogen Chloride	18.5 mL
.MT: HCl Conc. 00002	11/14/22		Fisher Scientific, Lot 4118110		(Purchased Reagent)		Hydrogen Chloride	37 mL
MT: 1:1 HNO3_00001	03/15/20	06/05/19	DI Water, Lot DI Water	500 mL	MT: H2NO3 Con_00001	250 mL	Nitric acid	35 mL
.MT: H2NO3 Con_00001	11/14/20		Fisher Chemical, Lot 1118101		(Purchased Reagent)		Nitric acid	70 mL
							Nitric acid	70 mL
MT_ICP_Spike1_00005	01/30/20	09/06/19	HNO3, Lot 1118092	1000 mL	MT-As-SpS_00001	10 mL	As	100 ug/mL
					MT-Be-SpS_00001	10 mL	Be	100 ug/mL
					MT-Bi-CS-SpS_00001	10 mL	Bi	100 ug/mL
					MT-Ca-SpS_00001	10 mL	Ca	100 ug/mL
					MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Co-SpS_00001	10 mL	Co	100 ug/mL
					MT-Cr-SpS_00001	10 mL	Cr	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Fe-SpS_00001	10 mL	Fe	100 ug/mL
					MT-Li-CS-SpS_00001	10 mL	Li	100 ug/mL
					MT-Mg-SpS_00001	10 mL	Mg	100 ug/mL
					MT-Mn-SpS_00001	10 mL	Mn	100 ug/mL
					MT-Mo-SpS_00001	10 mL	Mo	100 ug/mL
					MT-Ni-SpS_00001	10 mL	Ni	100 ug/mL
					MT-P-SpS_00001	10 mL	P	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
					MT-S-CS-SpS_00001	10 mL	Sulfur	100 ug/mL
					MT-Sb-SpS_00001	10 mL	Sb	100 ug/mL
					MT-Se-SpS_00001	10 mL	Se	100 ug/mL
					MT-Sn-SpS_00001	10 mL	Sn	100 ug/mL
					MT-Sr-SpS_00001	10 mL	Sr	100 ug/mL
					MT-Ti-SpS_00001	10 mL	Ti	100 ug/mL
					MT-Tl-SpS_00001	10 mL	Tl	100 ug/mL
					MT-V-SpS_00001	10 mL	V	100 ug/mL
					MT-Zn-SpS_00001	10 mL	Zn	100 ug/mL
.MT-As-SpS_00001	04/30/23		AccuStandard, Lot 218045118		(Purchased Reagent)		As	10000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT-Be-SpS_00001	02/28/23		Ultra, Lot CP-0170		(Purchased Reagent)		Be	10000 ug/mL
.MT-Bi-CS-SpS_00001	06/30/23		Ultra, Lot CP-2124		(Purchased Reagent)		Bi	10000 ug/mL
.MT-Ca-SpS_00001	04/30/23		Ultra, Lot CP-0877		(Purchased Reagent)		Ca	10000 ug/mL
.MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
.MT-Co-SpS_00001	05/31/23		Ultra, Lot CP-2011		(Purchased Reagent)		Co	10000 ug/mL
.MT-Cr-SpS_00001	05/31/23		Ultra, Lot CP-1768		(Purchased Reagent)		Cr	10000 ug/mL
.MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
.MT-Fe-SpS_00001	08/31/24		Ultra, Lot CR-3137		(Purchased Reagent)		Fe	10000 ug/mL
.MT-Li-CS-SpS_00001	05/31/21		Ultra, Lot T00356		(Purchased Reagent)		Li	10000 ug/mL
.MT-Mg-SpS_00001	09/30/22		Ultra, Lot CM-4445		(Purchased Reagent)		Mg	10000 ug/mL
.MT-Mn-SpS_00001	01/31/24		Ultra, Lot M00334A		(Purchased Reagent)		Mn	10000 ug/mL
.MT-Mo-SpS_00001	08/31/21		Ultra, Lot CL-2860		(Purchased Reagent)		Mo	10000 ug/mL
.MT-Ni-SpS_00001	02/28/23		Ultra, Lot CP-0006		(Purchased Reagent)		Ni	10000 ug/mL
.MT-P-SpS_00001	09/10/23		Ultra, Lot CP-4381		(Purchased Reagent)		P	10000 ug/mL
.MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
.MT-S-CS-SpS_00001	11/30/22		Ultra, Lot CM-5393		(Purchased Reagent)		Sulfur	10000 ug/mL
.MT-Sb-SpS_00001	06/30/23		Ultra, Lot CP-2412		(Purchased Reagent)		Sb	10000 ug/mL
.MT-Se-SpS_00001	11/30/22		Ultra, Lot CM-5316		(Purchased Reagent)		Se	10000 ug/mL
.MT-Sn-SpS_00001	07/31/21		Ultra, Lot T00753		(Purchased Reagent)		Sn	10000 ug/mL
.MT-Sr-SpS_00001	09/30/22		Ultra, Lot CM-4363		(Purchased Reagent)		Sr	10000 ug/mL
.MT-Ti-SpS_00001	04/30/22		Ultra, Lot CM-1138		(Purchased Reagent)		Ti	10000 ug/mL
.MT-Tl-SpS_00001	05/31/23		Ultra, Lot CP-2010		(Purchased Reagent)		Tl	10000 ug/mL
.MT-V-SpS_00001	08/31/23		Ultra, Lot CP-3591		(Purchased Reagent)		V	10000 ug/mL
.MT-Zn-SpS_00001	02/28/23		Ultra, Lot CP-0155		(Purchased Reagent)		Zn	10000 ug/mL
MT_ICP_Spike2_00003	01/30/20	07/04/19	HNO3, Lot 1118092	1000 mL	MT_ICP_Ag_SpS_00001	5 mL	Ag	50 ug/mL
					MT_ICP_Al_SpS_00001	10 mL	Al	100 ug/mL
					MT_ICP_B_SpS_00001	10 mL	B	100 ug/mL
					MT_ICP_Ba_SpS_00001	10 mL	Ba	100 ug/mL
					MT_ICP_K_SpS_00001	100 mL	K	1000 ug/mL
					MT_ICP_Na_SpS_00001	100 mL	Na	1000 ug/mL
					MT_ICP_Si_SpS_00004	10 mL	Si	100 ug/mL
		SiO2	214 ug/mL					
.MT_ICP_Ag_SpS_00001	09/30/23		Ultra, Lot CP-4409		(Purchased Reagent)		Ag	10000 ug/mL
.MT_ICP_Al_SpS_00001	09/30/23		Ultra, Lot CP-3976		(Purchased Reagent)		Al	10000 ug/mL
.MT_ICP_B_SpS_00001	12/31/21		Ultra, Lot K00924A		(Purchased Reagent)		B	10000 ug/mL
.MT_ICP_Ba_SpS_00001	01/31/23		Ultra, Lot CM-6544		(Purchased Reagent)		Ba	10000 ug/mL
.MT_ICP_K_SpS_00001	04/30/24		Ultra, Lot CR-0917		(Purchased Reagent)		K	10000 ug/mL
.MT_ICP_Na_SpS_00001	09/30/23		Ultra, Lot CP-3978		(Purchased Reagent)		Na	10000 ug/mL
.MT_ICP_Si_SpS_00004	04/30/23		Ultra, Lot CP-1238		(Purchased Reagent)		Si	10000 ug/mL
							SiO2	21400 ug/mL
MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
.MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
..MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
.MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_ICS_A_00002	05/30/20	07/01/19	1% HNO3, Lot DIWATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
							Ti	20 mg/L
MT_MS_ICS_AB_00002	05/14/20	07/01/19	1% HNO3, Lot DIWAATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
					MT_MS_Int_B_00002	0.5 mL	Ag	0.005 mg/L
							As	0.01 mg/L
							Cadmium	0.01 mg/L
							Co	0.02 mg/L
							Copper	0.02 mg/L
							Cr	0.02 mg/L
							Mn	0.02 mg/L
							Ni	0.02 mg/L
							Se	0.01 mg/L
							V	0.02 mg/L
							Zn	0.01 mg/L
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
							Ti	20 mg/L
.MT_MS_Int_B_00002	05/30/20		Spex, Lot CL6-114MKBY		(Purchased Reagent)		Ag	5 mg/L
							As	10 mg/L
							Cadmium	10 mg/L
							Co	20 mg/L
							Copper	20 mg/L
							Cr	20 mg/L
							Mn	20 mg/L
							Ni	20 mg/L
							Se	10 mg/L
							V	20 mg/L
							Zn	10 mg/L
MT_MS_ICV1_00002	01/11/20	10/03/19	1% Nitric Acid, Lot DIWATER	2000 mL	MT_MS_Spike1_00001	2 mL	Cadmium	0.1 ug/mL
							Copper	0.1 ug/mL
							Lead	0.1 ug/mL
.MT_MS_Spike1_00001	01/30/20	09/26/19	HNO3, Lot 1118092	1000 mL	MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
..MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
..MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
..MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
MT_MS_LL_00006	08/30/20	09/24/19	1% HNO3, Lot DIWATER	100 mL	MT_MS_CCV_00005	1 mL	Cadmium	0.001 mg/L
							Copper	0.001 mg/L
							Lead	0.001 mg/L
.MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
..MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
...MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_SPIKE_3_00002	12/31/22	07/09/19	2% Nitric Acid, Lot DIWATER	1000 mL	MT_MS_Ca10000_00001	100 mL	Ca	1000 mg/L
					MT_MS_Fe10000_00001	100 mL	Fe	1000 mg/L
					MT_MS_Mg10000_00001	100 mL	Mg	1000 mg/L
.MT_MS_Ca10000_00001	09/30/24		Ultra, Lot CR-3808		(Purchased Reagent)		Ca	10000 mg/L
.MT_MS_Fe10000_00001	08/31/24		Ultra, Lot ICP-126-L		(Purchased Reagent)		Fe	10000 mg/L
.MT_MS_Mg10000_00001	04/20/23		Ultra, Lot ICP-112-L		(Purchased Reagent)		Mg	10000 mg/L
WC_TSS_STD_00012	06/26/20	12/26/19	DI Water, Lot 12182019	2 L	WC_TSS_STK_00001	0.2 g	Total Suspended Solids	100 mg/L
.WC_TSS_STK_00001	11/04/21		FISHER, Lot 160676		(Purchased Reagent)		Total Suspended Solids	1 g/g

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
WC TUR STD 00008	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	10 NTU
WC TUR STD 00009	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	1000 NTU
WC TUR STD 00010	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	0.02 NTU
WC TUR STD2 00071	12/28/19	12/27/19	H2O, Lot 1	100 mL	WC TUR STD1 00001	2.5 mL	Turbidity	100 NTU
.WC TUR STD1 00001	11/27/20		HACH, Lot A8330		(Purchased Reagent)		Turbidity	4000 NTU

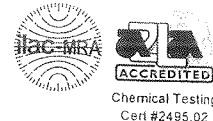
Reagent

MT_MS_ICs2_00002



SPEXertificate®

Certificate of Reference Material



Catalog Number: CL-CAL-2 **Lot No.** CL2-69WGY
Description: Instrument Calibration Standard 2
Matrix: 5% HNO₃ / Tr. Tart. Acid / Tr. HF

This CLARITAS PPT® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.6 µg/mL	±0.5 µg/mL	3151*	Mn	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3132*
Al	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3101a*	Mo	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3134*
As	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3103a*	Na	100 µg/mL	100 µg/mL	±0.5 µg/mL	3152a*
Ba	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3104a*	Ni	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3136*
Be	100 µg/mL	100 µg/mL	±0.5 µg/mL	3105a*	Pb	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3128*
Ca	100 µg/mL	100 µg/mL	±0.5 µg/mL	3109a*	Sb	100 µg/mL	100 µg/mL	±0.5 µg/mL	3102a*
Cd	100 µg/mL	99.0 µg/mL	±0.5 µg/mL	3108*	Se	100 µg/mL	100 µg/mL	±0.5 µg/mL	3149*
Co	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3113*	Sn	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3161a*
Cr	100 µg/mL	100 µg/mL	±0.5 µg/mL	3112a*	Sr	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3153a*
Cu	100 µg/mL	101 µg/mL	±0.5 µg/mL	3114*	Ti	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3162a*
Fe	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3126a*	Tl	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3158*
K	100 µg/mL	100 µg/mL	±0.5 µg/mL	3141a*	V	100 µg/mL	100 µg/mL	±0.5 µg/mL	3165*
Mg	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3131a*	Zn	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3168a*

* - indicates NIST SRM

† - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# CL5-135MKB, CL6-41MKB, CL-1-112YJ, CL1372YP

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.08	Eu	<0.1	In	<20	P	<400	Ru	2
B	<4	Ga	<0.01	Ir	<0.1	Pd	<50	Sc	<0.4
Bi	2	Gd	0.4	La	5	Pr	0.04	Si	<300
Ce	0.9	Ge	<0.7	Li	0.5	Pt	<0.1	Sm	3
Cs	0.3	Hf	0.07	Lu	<0.02	Rb	3	Ta	0.6
Dy	<0.01	Hg	<0.2	Nb	0.4	Re	1	Tb	<0.01
Er	<0.01	Ho	<0.01	Nd	0.1	Rh	4	Te	<1
								Zr	3



116696

ID: MI_MS_JCS2_00002
 Exp: 08/30/20 Pppl U/LE Cph 0881319
 1000ppm Cal Std 2 SPEX

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: AUG -- 2019

Certifying Officer: Katherine Cullinan
 Katherine Cullinan, QC Manager

Page 1 of 2
 Rev. 0

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METALS

COVER PAGE
METALS

Lab Name: Eurofins Calscience _____ Job Number: 570-16773-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID	Lab Sample ID
EVBMP0007S011	570-16773-1
EVBMP0008S014	570-16773-2
EVBMP0009S012	570-16773-3

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: EV BMP0007S011

Lab Sample ID: 570-16773-1

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:30

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.0000598	0.000200	0.000045 3	mg/L	J	F2 F1	1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: EV BMP0007S011

Lab Sample ID: 570-16773-1

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:30

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L			1	200.8
7440-50-8	Copper	0.00163	0.00100	0.000610	mg/L			1	200.8
7439-92-1	Lead	0.000230	0.00100	0.000190	mg/L	J		1	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: EV BMP0007S011

Lab Sample ID: 570-16773-1

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:30

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L		H	1	200.8
7440-50-8	Copper	0.00177	0.00100	0.000610	mg/L		H	1	200.8
7439-92-1	Lead	0.000217	0.00100	0.000190	mg/L	J	H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H F1	1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: EVBMP0008S014

Lab Sample ID: 570-16773-2

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:45

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: EV BMP0008S014

Lab Sample ID: 570-16773-2

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:45

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L			1	200.8
7440-50-8	Copper	0.00184	0.00100	0.000610	mg/L			1	200.8
7439-92-1	Lead	0.000358	0.00100	0.000190	mg/L	J		1	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: EV BMP0008S014

Lab Sample ID: 570-16773-2

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:45

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L		H	1	200.8
7440-50-8	Copper	0.00179	0.00100	0.000610	mg/L		H	1	200.8
7439-92-1	Lead	0.000270	0.00100	0.000190	mg/L	J	H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: EV BMP0009S012

Lab Sample ID: 570-16773-3

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 09:00

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: EV BMP0009S012

Lab Sample ID: 570-16773-3

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 09:00

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L			1	200.8
7440-50-8	Copper	0.00164	0.00100	0.000610	mg/L			1	200.8
7439-92-1	Lead	0.000249	0.00100	0.000190	mg/L	J		1	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: EV BMP0009S012

Lab Sample ID: 570-16773-3

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 09:00

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L		H	1	200.8
7440-50-8	Copper	0.00169	0.00100	0.000610	mg/L		H	1	200.8
7439-92-1	Lead	0.000225	0.00100	0.000190	mg/L	J	H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-42378/3 01/02/2020 10:48				CCV 570-42378/6 01/02/2020 11:07							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<i>Cadmium</i>	103.4		100	103	99.43		100	99				
<i>Copper</i>	102.1		100	102	100.5		100	100				
<i>Lead</i>	100.6		100	101	97.97		100	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-42506/45 01/02/2020 10:48				CCV 570-42506/3 01/02/2020 18:27				CCV 570-42506/15 01/02/2020 19:03			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	103.4		100	103	99.93		100	100	103.0		100	103
Copper	102.1		100	102	102.4		100	102	104.4		100	104
Lead	97.30		100	97	102.5		100	103	101.2		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-42506/27 01/02/2020 19:48				CCV 570-42506/33 01/02/2020 20:10				CCV 570-42506/43 01/02/2020 20:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.4		100	101	99.51		100	100	101.0		100	101
Copper	104.5		100	105	102.8		100	103	106.6		100	107
Lead	104.4		100	104	104.6		100	105	107.2		100	107

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-42378/6 01/02/2020 11:07				ICVL 570-42378/11 01/02/2020 11:24							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<i>Cadmium</i>	99.43		100	99	1.023		1.00	102				
<i>Copper</i>	100.5		100	100	1.086		1.00	109				
<i>Lead</i>	97.97		100	98	0.9795	J	1.00	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-42506/3 01/02/2020 18:27				ICVL 570-42506/6 01/02/2020 18:36				CCV 570-42506/15 01/02/2020 19:03			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	99.93		100	100	1.055		1.00	106	103.0		100	103
Copper	102.4		100	102	1.060		1.00	106	104.4		100	104
Lead	102.5		100	103	1.065		1.00	106	101.2		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-42506/27 01/02/2020 19:48				CCV 570-42506/33 01/02/2020 20:10				CCV 570-42506/43 01/02/2020 20:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.4		100	101	99.51		100	100	101.0		100	101
Copper	104.5		100	105	102.8		100	103	106.6		100	107
Lead	104.4		100	104	104.6		100	105	107.2		100	107

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00002 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-42697/3 01/03/2020 13:35				CCV 570-42697/34 01/03/2020 16:01				CCV 570-42697/39 01/03/2020 16:24			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	104.7		100	105	98.25		100	98	97.16		100	97
Copper	102.7		100	103	98.65		100	99	98.09		100	98
Lead	104.3		100	104	100.7		100	101	100.5		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICVL 570-42697/13 01/03/2020 14:42				CCV 570-42697/34 01/03/2020 16:01				CCV 570-42697/39 01/03/2020 16:24			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	0.9915	J	1.00	99	98.25		100	98	97.16		100	97
Copper	1.035		1.00	104	98.65		100	99	98.09		100	98
Lead	0.9971	J	1.00	100	100.7		100	101	100.5		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00013 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00009

Analyte	ICV 570-43281/2-A 01/08/2020 14:13				CCV 570-43281/10-A 01/08/2020 18:58				CCV 570-43281/10-A 01/08/2020 19:21			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00993 3		0.0100	99	0.00402 4		0.00400	101	0.00396 9		0.00400	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00013 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00009

Analyte	ICV 570-42609/2-A 01/03/2020 13:06				CCV 570-42609/10-A 01/03/2020 14:40				CCV 570-42609/10-A 01/03/2020 15:08			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00971 5		0.0100	97	0.00400 7		0.00400	100	0.00393 7		0.00400	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00013 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00009

Analyte	ICV 570-42889/2-A 01/06/2020 13:32				CCV 570-42889/10-A 01/06/2020 16:56				CCV 570-42889/10-A 01/06/2020 17:36			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<i>Mercury</i>	0.01013		0.0100	101	0.00395 3		0.00400	99	0.00401 6		0.00400	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1
 SDG No.: _____
 Method: 245.1 Instrument ID: HG7
 Lab Sample ID: CRA 570-43281/12-A Concentration Units: mg/L
 CRQL Check Standard Source: HG_1ppm STD_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0005746		115	65-135

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Method: 245.1 Instrument ID: HG8

Lab Sample ID: CRA 570-42609/12-A Concentration Units: mg/L

CRQL Check Standard Source: HG_1ppm STD_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0004983		100	65-135

Lab Sample ID: CRA 570-42889/12-A Concentration Units: mg/L

CRQL Check Standard Source: HG_1ppm STD_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0005148		103	65-135

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-42378/5 01/02/2020 11:05		CCB 570-42378/7 01/02/2020 11:10		CCB 570-42378/10 01/02/2020 11:21		Found	C
		Found	C	Found	C	Found	C		
<i>Cadmium</i>	1.00	ND		ND		ND			
<i>Copper</i>	1.00	ND		ND		ND			
<i>Lead</i>	1.00	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-42506/47 01/02/2020 11:05		CCB 570-42506/5 01/02/2020 18:33		CCB 570-42506/16 01/02/2020 19:09		CCB 570-42506/28 01/02/2020 19:53	
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		ND		ND		ND	
Copper	1.00	ND		ND		ND		ND	
Lead	1.00	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 570-42506/34 01/02/2020 20:14		CCB 570-42506/44 01/02/2020 20:41					
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		ND					
Copper	1.00	ND		ND					
Lead	1.00	ND		ND					

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-42697/5 01/03/2020 13:51		CCB 570-42697/35 01/03/2020 16:06		CCB 570-42697/40 01/03/2020 16:27		Found	C
		Found	C	Found	C	Found	C		
Cadmium	1.00	ND		ND		ND			
Copper	1.00	ND		ND		ND			
Lead	1.00	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-43281/3-A 01/08/2020 14:15		CCB 570-43281/11-A 01/08/2020 19:01		CCB 570-43281/11-A 01/08/2020 19:23		Found	C
		Found	C	Found	C	Found	C		
Mercury	0.000200	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-42609/3-A 01/03/2020 13:08		CCB 570-42609/11-A 01/03/2020 14:43		CCB 570-42609/11-A 01/03/2020 15:10		Found	C
		Found	C	Found	C	Found	C		
Mercury	0.000200	ND		0.00004813	J	0.00009900	J		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-42889/3-A 01/06/2020 13:34		CCB 570-42889/11-A 01/06/2020 16:58		CCB 570-42889/11-A 01/06/2020 17:39		Found	C
		Found	C	Found	C	Found	C		
<i>Mercury</i>	0.000200	ND		ND		0.0001970	J		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job No.: 570-16773-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-42423/1-A
Instrument Code: ICPMS05 Batch No.: 42506

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-16773-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-42480/1-A
Instrument Code: ICPMS05 Batch No.: 42506

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-42474/1-A
Instrument Code: HG8 Batch No.: 42667

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-16773-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-43350/1-B
Instrument Code: HG7 Batch No.: 43304

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.00007375	J		245.1

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Lab Sample ID: ICSA 570-42378/8

Instrument ID: ICPMS05

Lab File ID: 200102E1_iCal.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Aluminum	10000	10240	102
Antimony		0.188	
Arsenic		0.118	
Barium		0.258	
Beryllium		0.0433	
Boron		-3.72	
Cadmium		0.0899	
Calcium	30000	32369	108
Chromium		0.398	
Cobalt		0.0815	
Copper		0.0024	
Iron	25000	24500	98
Lead		0.0736	
Magnesium	10000	9664	97
Manganese		0.489	
Molybdenum	200	199	100
Nickel		0.396	
Potassium	10000	10096	101
Selenium		0.0993	
Silver		0.257	
Sodium	25000	24797	99
Strontium		0.492	
Thallium		0.0638	
Tin		0.613	
Titanium	200	218	109
Vanadium		0.158	
Zinc		1.67	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Lab Sample ID: ICSAB 570-42378/9

Instrument ID: ICPMS05

Lab File ID: 200102E1_iCal.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Aluminum	10000	10551	106
Antimony		0.165	
Arsenic	10.0	10.6	106
Barium		0.201	
Beryllium		0.0521	
Boron		0.0641	
Cadmium	10.0	10.1	101
Calcium	30000	33474	112
Chromium	20.0	21.9	109
Cobalt	20.0	19.7	98
Copper	20.0	19.9	99
Iron	25000	24292	97
Lead		0.0523	
Magnesium	10000	9299	93
Manganese	20.0	22.7	114
Molybdenum	200	202	101
Nickel	20.0	20.2	101
Potassium	10000	9786	98
Selenium	10.0	9.95	99
Silver	5.00	4.02	80
Sodium	25000	23905	96
Strontium		0.464	
Thallium		0.0456	
Tin		0.263	
Titanium	200	226	113
Vanadium	20.0	20.6	103
Zinc	10.0	11.2	112

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Lab Sample ID: ICSA 570-42697/8

Instrument ID: ICPMS05

Lab File ID: 200103E1_16838.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Cadmium		-0.0131	
Copper		-0.0152	
Lead		0.0639	
<i>Aluminum</i>	<i>10000</i>	<i>10158</i>	<i>102</i>
<i>Antimony</i>		<i>0.159</i>	
<i>Arsenic</i>		<i>0.286</i>	
<i>Barium</i>		<i>0.203</i>	
<i>Beryllium</i>		<i>0.0319</i>	
<i>Boron</i>		<i>-3.82</i>	
<i>Calcium</i>	<i>30000</i>	<i>29720</i>	<i>99</i>
<i>Chromium</i>		<i>0.101</i>	
<i>Cobalt</i>		<i>0.0598</i>	
<i>Iron</i>	<i>25000</i>	<i>24708</i>	<i>99</i>
<i>Magnesium</i>	<i>10000</i>	<i>10018</i>	<i>100</i>
<i>Manganese</i>		<i>0.414</i>	
<i>Molybdenum</i>	<i>200</i>	<i>208</i>	<i>104</i>
<i>Nickel</i>		<i>0.337</i>	
<i>Potassium</i>	<i>10000</i>	<i>10186</i>	<i>102</i>
<i>Selenium</i>		<i>0.280</i>	
<i>Silver</i>		<i>0.235</i>	
<i>Sodium</i>	<i>25000</i>	<i>25541</i>	<i>102</i>
<i>Strontium</i>		<i>0.469</i>	
<i>Thallium</i>		<i>0.0497</i>	
<i>Tin</i>		<i>0.577</i>	
<i>Titanium</i>	<i>200</i>	<i>204</i>	<i>102</i>
<i>Vanadium</i>		<i>0.279</i>	
<i>Zinc</i>		<i>1.50</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Lab Sample ID: ICSAB 570-42697/10

Instrument ID: ICPMS05

Lab File ID: 200103E1_16838.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Cadmium	10.0	10.2	102
Copper	20.0	19.7	99
Lead		0.0153	
<i>Aluminum</i>	<i>10000</i>	<i>9980</i>	<i>100</i>
<i>Antimony</i>		<i>0.0878</i>	
<i>Arsenic</i>	<i>10.0</i>	<i>10.1</i>	<i>101</i>
<i>Barium</i>		<i>0.176</i>	
<i>Beryllium</i>		<i>0.0035</i>	
<i>Boron</i>		<i>-0.166</i>	
<i>Calcium</i>	<i>30000</i>	<i>29319</i>	<i>98</i>
<i>Chromium</i>	<i>20.0</i>	<i>20.2</i>	<i>101</i>
<i>Cobalt</i>	<i>20.0</i>	<i>19.7</i>	<i>99</i>
<i>Iron</i>	<i>25000</i>	<i>24048</i>	<i>96</i>
<i>Magnesium</i>	<i>10000</i>	<i>9614</i>	<i>96</i>
<i>Manganese</i>	<i>20.0</i>	<i>20.3</i>	<i>102</i>
<i>Molybdenum</i>	<i>200</i>	<i>206</i>	<i>103</i>
<i>Nickel</i>	<i>20.0</i>	<i>19.6</i>	<i>98</i>
<i>Potassium</i>	<i>10000</i>	<i>9836</i>	<i>98</i>
<i>Selenium</i>	<i>10.0</i>	<i>10.0</i>	<i>100</i>
<i>Silver</i>	<i>5.00</i>	<i>4.03</i>	<i>81</i>
<i>Sodium</i>	<i>25000</i>	<i>24443</i>	<i>98</i>
<i>Strontium</i>		<i>0.445</i>	
<i>Thallium</i>		<i>0.0081</i>	
<i>Tin</i>		<i>0.134</i>	
<i>Titanium</i>	<i>200</i>	<i>204</i>	<i>102</i>
<i>Vanadium</i>	<i>20.0</i>	<i>20.3</i>	<i>101</i>
<i>Zinc</i>	<i>10.0</i>	<i>11.0</i>	<i>110</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS

Client ID: EVBMP0007S011 MS Lab ID: 570-16773-1 MS
 Lab Name: Eurofins Calscience Job No.: 570-16773-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA) J	%R	Control Limit %R	Q	Method
Mercury	0.003331	0.0000598	0.0100	33	57-141	F1	245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: EVBMP0007S011 MS

Lab ID: 570-16773-1 MS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.09233	ND	0.100	92	80-120		200.8
Copper	0.09629	0.00177	0.100	95	80-120		200.8
Lead	0.09123	0.000217	J 0.100	91	80-120		200.8
Mercury	0.004829	ND	0.0100	48	57-141	F1	245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-16469-B-1-B MS
 Lab Name: Eurofins Calscience Job No.: 570-16773-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.1106	ND	0.100	111	80-120		200.8
Copper	0.1280	0.0209	0.100	107	80-120		200.8
Lead	0.1155	0.0105	0.100	105	80-120		200.8

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS

Client ID: EVBMP0007S011 MSD

Lab ID: 570-16773-1 MSD

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.001196	0.0100	11	57-141	94	10	F2 F1	245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: EVBMP0007S011 MSD

Lab ID: 570-16773-1 MSD

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.09868	0.100	99	80-120	7	20		200.8
Copper	0.1032	0.100	101	80-120	7	20		200.8
Lead	0.09870	0.100	98	80-120	8	20		200.8
Mercury	0.004713	0.0100	47	57-141	2	10	F1	245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-16469-B-1-C MSD
 Lab Name: Eurofins Calscience Job No.: 570-16773-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1111	0.100	111	80-120	0	20		200.8
Copper	0.1291	0.100	108	80-120	1	20		200.8
Lead	0.1147	0.100	104	80-120	1	20		200.8

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 METALS - TOTAL RECOVERABLE

Lab ID: LCS 570-42423/2-A

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.09899		99	80	120		200.8
Copper	0.100	0.09940		99	80	120		200.8
Lead	0.100	0.09903		99	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - TOTAL RECOVERABLE

Lab ID: LCSD 570-42423/3-A

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.09917	0.100	99	80-120	0	20		200.8
Copper	0.09844	0.100	98	80-120	1	20		200.8
Lead	0.09830	0.100	98	80-120	1	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-42480/2-A

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1023		102	80	120		200.8
Copper	0.100	0.1037		104	80	120		200.8
Lead	0.100	0.1043		104	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-42480/3-A

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00005

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1009	0.100	101	80-120	1	20		200.8
Copper	0.1020	0.100	102	80-120	2	20		200.8
Lead	0.1044	0.100	104	80-120	0	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 570-42474/2-A

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00009

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.009587		96	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS

Lab ID: LCSD 570-42474/3-A

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00009

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009599	0.0100	96	85-121	0	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-43350/2-B

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00009

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.01015		101	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-43350/3-B

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00009

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.01009	0.0100	101	85-121	1	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience

Job Number: 570-16773-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 12/06/2019 00:00

Prep Method: 200.8

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.00098
Copper	65	0.001	0.00061
Lead	207	0.001	0.00019

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job Number: 570-16773-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 12/06/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.9785
Copper	65	1	0.6066
Lead	207	1	0.1929

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-16773-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 12/06/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.00098
Copper	65	0.001	0.00061
Lead	207	0.001	0.00019

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-16773-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 12/06/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.9785
Copper	65	1	0.6066
Lead	207	1	0.1929

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience

Job Number: 570-16773-1

SDG Number: _____

Matrix: Water

Instrument ID: HG8

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience Job Number: 570-16773-1
SDG Number: _____
Matrix: Water Instrument ID: HG8
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-16773-1

SDG Number: _____

Matrix: Water

Instrument ID: HG7

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-16773-1
SDG Number: _____
Matrix: Water Instrument ID: HG7
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-16773-1

SDG No.: _____

Instrument ID: ICPMS05

Date: 04/17/2017 06:04

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Cadmium		10	200.8
Copper		50	200.8
Lead		20	200.8

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-16773-1

SDG No.: _____

Instrument ID: HG7

Date: 04/17/2017 05:54

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Mercury		10	245.1

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-16773-1

SDG No.: _____

Instrument ID: HG8

Date: 04/17/2017 05:54

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Mercury		10	245.1

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Prep Method: 200.8

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-42423/1-A	01/02/2020 12:00	42423		50	50
LCS 570-42423/2-A	01/02/2020 12:00	42423		50	50
LCSD 570-42423/3-A	01/02/2020 12:00	42423		50	50
570-16469-B-1-B MS	01/02/2020 12:00	42423		50	50
570-16469-B-1-C MSD	01/02/2020 12:00	42423		50	50
570-16773-1	01/02/2020 12:00	42423		50	50
570-16773-2	01/02/2020 12:00	42423		50	50
570-16773-3	01/02/2020 12:00	42423		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-42474/1-A	01/02/2020 17:18	42474		50	100
LCS 570-42474/2-A	01/02/2020 17:18	42474		50	100
LCSD 570-42474/3-A	01/02/2020 17:18	42474		50	100
570-16773-1	01/02/2020 17:18	42474		50	100
570-16773-1 MS	01/02/2020 17:18	42474		50	100
570-16773-1 MSD	01/02/2020 17:18	42474		50	100
570-16773-2	01/02/2020 17:18	42474		50	100
570-16773-3	01/02/2020 17:18	42474		50	100

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-43350/1-B	01/08/2020 13:00	43351		50	100
LCS 570-43350/2-B	01/08/2020 13:00	43351		50	100
LCSD 570-43350/3-B	01/08/2020 13:00	43351		50	100
570-16773-1	01/08/2020 13:00	43351		50	100
570-16773-1 MS	01/08/2020 13:00	43351		50	100
570-16773-1 MSD	01/08/2020 13:00	43351		50	100
570-16773-2	01/08/2020 13:00	43351		50	100
570-16773-3	01/08/2020 13:00	43351		50	100

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 01/02/2020 10:40 End Date: 01/02/2020 11:57

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICIS 570-42378/1	1		10:40	X	X	X																									
IC 570-42378/2	1		10:43	X	X	X																									
ICV 570-42378/3	1		10:48	X	X	X																									
ICV 570-42378/4	1		10:54	X	X	X																									
ICB 570-42378/5	1		11:05	X	X	X																									
CCV 570-42378/6	1		11:07	X	X	X																									
CCB 570-42378/7	1		11:10	X	X	X																									
ICSA 570-42378/8	1		11:13	X	X	X																									
ICSAB 570-42378/9	1		11:16	X	X	X																									
CCB 570-42378/10	1		11:21	X	X	X																									
ICVL 570-42378/11	1		11:24	X	X	X																									
ZZZZZZ			11:36																												
ZZZZZZ			11:39																												
ZZZZZZ			11:42																												
ZZZZZZ			11:45																												
ZZZZZZ			11:47																												
ZZZZZZ			11:50																												
CCV 570-42378/18			11:53																												
CCB 570-42378/19			11:57																												

Prep Types: _____
=

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.: _____

Instrument ID: ICPMS05

Analysis Method: 200.8

Start Date: 01/02/2020 10:48

End Date: 01/02/2020 20:41

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICV 570-42506/45	1		10:48	X	X	X																									
ICV 570-42506/46			10:54																												
ICB 570-42506/47	1		11:05	X	X	X																									
ICIS 570-42506/1			18:22	X	X	X																									
IC 570-42506/2	1		18:25	X	X	X																									
CCV 570-42506/3	1		18:27	X	X	X																									
CCB 570-42506/4			18:30																												
CCB 570-42506/5	1		18:33	X	X	X																									
ICVL 570-42506/6	1		18:36	X	X	X																									
MB 570-42423/1-A	1	R	18:39	X	X	X																									
LCS 570-42423/2-A	1	R	18:41	X	X	X																									
LCSD 570-42423/3-A	1	R	18:44	X	X	X																									
ZZZZZZ			18:50																												
ZZZZZZ			18:52																												
ZZZZZZ			18:55																												
ZZZZZZ			18:58																												
ZZZZZZ			19:01																												
CCV 570-42506/15	1		19:03	X	X	X																									
CCB 570-42506/16	1		19:09	X	X	X																									
ZZZZZZ			19:12																												
ZZZZZZ			19:14																												
ZZZZZZ			19:17																												
ZZZZZZ			19:20																												
ZZZZZZ			19:23																												
ZZZZZZ			19:25																												
570-16469-B-1-B MS	1	R	19:28	X	X	X																									
570-16469-B-1-C MSD	1	R	19:31	X	X	X																									
ZZZZZZ			19:34																												
ZZZZZZ			19:36																												
CCV 570-42506/27	1		19:48	X	X	X																									
CCB 570-42506/28	1		19:53	X	X	X																									
570-16773-1	1	R	19:57	X	X	X																									
570-16773-2	1	R	19:59	X	X	X																									
570-16773-3	1	R	20:02	X	X	X																									
ZZZZZZ			20:05																												
CCV 570-42506/33	1		20:10	X	X	X																									
CCB 570-42506/34	1		20:14	X	X	X																									
MB 570-42480/1-A	1	D	20:20	X	X	X																									
LCS 570-42480/2-A	1	D	20:22	X	X	X																									
LCSD 570-42480/3-A	1	D	20:24	X	X	X																									
570-16773-1	1	D	20:28	X	X	X																									
570-16773-1 MS	1	D	20:30	X	X	X																									

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 01/02/2020 10:48 End Date: 01/02/2020 20:41

Lab Sample Id	D/F	T y p e	Time	Analytes																											
				C d	C u	P b																									
ZZZZZZ			20:32																												
570-16773-2	1	D	20:34	X	X	X																									
570-16773-3	1	D	20:36	X	X	X																									
CCV 570-42506/43	1		20:38	X	X	X																									
CCB 570-42506/44	1		20:41	X	X	X																									

Prep Types: _____
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 01/03/2020 13:27 End Date: 01/03/2020 17:10

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICIS 570-42697/1			13:27	X	X	X																									
IC 570-42697/2			13:30	X	X	X																									
ICV 570-42697/3	1		13:35	X	X	X																									
ICV 570-42697/4	1		13:41	X	X	X																									
ICB 570-42697/5	1		13:51	X	X	X																									
CCV 570-42697/6			13:54																												
CCB 570-42697/7			13:57																												
ICSA 570-42697/8	1		13:59	X	X	X																									
ZZZZZZ			14:30																												
ICSAB 570-42697/10	1		14:33	X	X	X																									
ZZZZZZ			14:36																												
CCB 570-42697/12			14:39																												
ICVL 570-42697/13	1		14:42	X	X	X																									
ZZZZZZ			15:02																												
ZZZZZZ			15:04																												
ZZZZZZ			15:07																												
ZZZZZZ			15:10																												
ZZZZZZ			15:13																												
ZZZZZZ			15:16																												
ZZZZZZ			15:18																												
ZZZZZZ			15:21																												
ZZZZZZ			15:24																												
CCV 570-42697/23			15:27																												
CCB 570-42697/24			15:29																												
CCB 570-42697/25			15:32																												
ZZZZZZ			15:35																												
ZZZZZZ			15:38																												
ZZZZZZ			15:40																												
ZZZZZZ			15:43																												
ZZZZZZ			15:46																												
ZZZZZZ			15:51																												
ZZZZZZ			15:54																												
ZZZZZZ			15:56																												
CCV 570-42697/34	1		16:01	X	X	X																									
CCB 570-42697/35	1		16:06	X	X	X																									
ZZZZZZ			16:09																												
ZZZZZZ			16:11																												
570-16773-1 MSD	1	D	16:14	X	X	X																									
CCV 570-42697/39	1		16:24	X	X	X																									
CCB 570-42697/40	1		16:27	X	X	X																									
CCB 570-42697/41			16:30																												
CCV 570-42697/42			17:06																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 01/03/2020 13:27 End Date: 01/03/2020 17:10

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
CCB 570-42697/43			17:10																												

Prep Types: _____
D = Dissolved

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: HG7 Analysis Method: 245.1

Start Date: 01/08/2020 13:45 End Date: 01/08/2020 19:23

Lab Sample Id	D/F	Type	Time	Hg	Analytes																			
ICIS 570-43281/1-A			13:45	X																				
IC 570-43281/4-A			13:47	X																				
IC 570-43281/5-A			13:49	X																				
IC 570-43281/6-A			13:52	X																				
IC 570-43281/7-A			13:54	X																				
IC 570-43281/8-A			13:56	X																				
IC 570-43281/9-A			13:58	X																				
ICV 570-43281/2-A	1		14:13	X																				
ICB 570-43281/3-A	1		14:15	X																				
CRA 570-43281/12-A	1		14:18	X																				
CCV 570-43281/10-A			14:20																					
CCB 570-43281/11-A			14:22																					
ZZZZZZ			14:36																					
ZZZZZZ			14:38																					
ZZZZZZ			14:40																					
ZZZZZZ			14:42																					
ZZZZZZ			14:45																					
ZZZZZZ			14:47																					
ZZZZZZ			14:49																					
ZZZZZZ			14:52																					
ZZZZZZ			14:54																					
ZZZZZZ			14:56																					
CCV 570-43281/10-A			14:58																					
CCB 570-43281/11-A			15:01																					
ZZZZZZ			15:03																					
ZZZZZZ			15:05																					
ZZZZZZ			15:08																					
ZZZZZZ			15:10																					
ZZZZZZ			15:12																					
ZZZZZZ			15:14																					
ZZZZZZ			15:17																					
ZZZZZZ			15:19																					
ZZZZZZ			15:21																					
ZZZZZZ			15:23																					
CCV 570-43281/10-A			15:26																					
CCB 570-43281/11-A			15:28																					
ZZZZZZ			15:30																					
ZZZZZZ			15:33																					
ZZZZZZ			15:35																					
ZZZZZZ			15:37																					
ZZZZZZ			15:39																					
ZZZZZZ			15:42																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1
 SDG No.: _____
 Instrument ID: HG7 Analysis Method: 245.1
 Start Date: 01/08/2020 13:45 End Date: 01/08/2020 19:23

Lab Sample Id	D/F	Type	Time	Hg	Analytes																											
ZZZZZZ			15:44																													
ZZZZZZ			15:46																													
ZZZZZZ			15:48																													
ZZZZZZ			15:51																													
CCV 570-43281/10-A			15:53																													
CCB 570-43281/11-A			15:55																													
ZZZZZZ			15:58																													
CCV 570-43281/10-A			16:08																													
CCB 570-43281/11-A			16:10																													
CCV 570-43281/10-A	1		18:58	X																												
CCB 570-43281/11-A	1		19:01	X																												
MB 570-43350/1-B	1	D	19:03	X																												
LCS 570-43350/2-B	1	D	19:05	X																												
LCSD 570-43350/3-B	1	D	19:07	X																												
570-16773-1	1	D	19:10	X																												
570-16773-1 MS	1	D	19:12	X																												
570-16773-1 MSD	1	D	19:14	X																												
570-16773-2	1	D	19:16	X																												
570-16773-3	1	D	19:19	X																												
CCV 570-43281/10-A	1		19:21	X																												
CCB 570-43281/11-A	1		19:23	X																												

Prep Types: _____
 D = Dissolved

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 01/03/2020 12:42 End Date: 01/03/2020 20:23

Lab Sample Id	D/F	Type	Time	Hg	Analytes																			
ICIS 570-42609/1-A			12:42	X																				
IC 570-42609/4-A			12:44	X																				
IC 570-42609/5-A			12:46	X																				
IC 570-42609/6-A			12:49	X																				
IC 570-42609/7-A			12:51	X																				
IC 570-42609/8-A			12:53	X																				
IC 570-42609/9-A			12:55	X																				
ICV 570-42609/2-A			12:59																					
ICV 570-42609/2-A	1		13:06	X																				
ICB 570-42609/3-A	1		13:08	X																				
CRA 570-42609/12-A	1		13:10	X																				
CCV 570-42609/10-A			13:13																					
CCB 570-42609/11-A			13:15																					
ZZZZZZ			13:19																					
ZZZZZZ			13:21																					
ZZZZZZ			13:23																					
ZZZZZZ			13:26																					
ZZZZZZ			13:28																					
CCV 570-42609/10-A			13:30																					
CCB 570-42609/11-A			13:32																					
ZZZZZZ			13:39																					
ZZZZZZ			13:41																					
ZZZZZZ			13:43																					
ZZZZZZ			13:45																					
ZZZZZZ			13:48																					
ZZZZZZ			13:50																					
ZZZZZZ			13:52																					
ZZZZZZ			13:54																					
ZZZZZZ			13:57																					
ZZZZZZ			13:59																					
CCV 570-42609/10-A			14:01																					
CCB 570-42609/11-A			14:04																					
ZZZZZZ			14:06																					
ZZZZZZ			14:08																					
ZZZZZZ			14:10																					
ZZZZZZ			14:13																					
ZZZZZZ			14:15																					
ZZZZZZ			14:17																					
ZZZZZZ			14:20																					
ZZZZZZ			14:22																					
CCV 570-42609/10-A			14:24																					
CCB 570-42609/11-A			14:26																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 01/03/2020 12:42 End Date: 01/03/2020 20:23

Lab Sample Id	D/F	Type	Time	Hg	Analytes																											
ZZZZZZ			14:32																													
ZZZZZZ			14:36																													
ZZZZZZ			14:38																													
CCV 570-42609/10-A	1		14:40	X																												
CCB 570-42609/11-A	1		14:43	X																												
MB 570-42474/1-A	1	T	14:45	X																												
LCS 570-42474/2-A	1	T	14:47	X																												
LCSD 570-42474/3-A	1	T	14:50	X																												
570-16773-1	1	T	14:52	X																												
570-16773-1 MS	1	T	14:54	X																												
570-16773-1 MSD	1	T	14:57	X																												
570-16773-2	1	T	14:59	X																												
570-16773-3	1	T	15:01	X																												
ZZZZZZ			15:03																													
ZZZZZZ			15:06																													
CCV 570-42609/10-A	1		15:08	X																												
CCB 570-42609/11-A	1		15:10	X																												
ZZZZZZ			15:13																													
ZZZZZZ			15:15																													
ZZZZZZ			15:17																													
ZZZZZZ			15:19																													
ZZZZZZ			15:22																													
ZZZZZZ			15:24																													
ZZZZZZ			15:26																													
ZZZZZZ			15:29																													
ZZZZZZ			15:31																													
ZZZZZZ			15:33																													
CCV 570-42609/10-A			15:35																													
CCB 570-42609/11-A			15:38																													
ZZZZZZ			15:40																													
ZZZZZZ			15:42																													
ZZZZZZ			15:44																													
CCV 570-42609/10-A			15:47																													
CCB 570-42609/11-A			15:49																													
ZZZZZZ			16:00																													
ZZZZZZ			16:03																													
ZZZZZZ			16:05																													
ZZZZZZ			16:07																													
ZZZZZZ			16:10																													
ZZZZZZ			16:12																													
ZZZZZZ			16:14																													
ZZZZZZ			16:16																													

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG No.:

Instrument ID: HG8

Analysis Method: 245.1

Start Date: 01/03/2020 12:42

End Date: 01/03/2020 20:23

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			16:19																												
ZZZZZZ			16:21																												
CCV 570-42609/10-A			16:23																												
CCB 570-42609/11-A			16:26																												
ZZZZZZ			16:28																												
ZZZZZZ			16:30																												
ZZZZZZ			16:32																												
ZZZZZZ			16:35																												
ZZZZZZ			16:37																												
ZZZZZZ			16:39																												
ZZZZZZ			16:42																												
ZZZZZZ			16:44																												
ZZZZZZ			16:46																												
ZZZZZZ			16:48																												
CCV 570-42609/10-A			16:51																												
CCB 570-42609/11-A			16:53																												
ZZZZZZ			16:55																												
ZZZZZZ			16:57																												
ZZZZZZ			17:00																												
ZZZZZZ			17:02																												
ZZZZZZ			17:04																												
CCV 570-42609/10-A			17:07																												
CCB 570-42609/11-A			17:09																												
ZZZZZZ			17:21																												
ZZZZZZ			17:23																												
ZZZZZZ			17:26																												
ZZZZZZ			17:28																												
ZZZZZZ			17:30																												
ZZZZZZ			17:33																												
ZZZZZZ			17:35																												
CCV 570-42609/10-A			17:37																												
CCB 570-42609/11-A			17:40																												
ZZZZZZ			18:06																												
ZZZZZZ			18:08																												
ZZZZZZ			18:10																												
ZZZZZZ			18:13																												
ZZZZZZ			18:15																												
ZZZZZZ			18:17																												
ZZZZZZ			18:19																												
ZZZZZZ			18:22																												
ZZZZZZ			18:24																												
ZZZZZZ			18:26																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 01/03/2020 12:42 End Date: 01/03/2020 20:23

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
CCV 570-42609/10-A			18:28																												
CCB 570-42609/11-A			18:31																												
ZZZZZZ			18:33																												
ZZZZZZ			18:35																												
ZZZZZZ			18:38																												
ZZZZZZ			18:40																												
ZZZZZZ			18:42																												
ZZZZZZ			18:44																												
ZZZZZZ			18:47																												
ZZZZZZ			18:49																												
ZZZZZZ			18:51																												
CCV 570-42609/10-A			18:53																												
CCB 570-42609/11-A			18:56																												
ZZZZZZ			19:35																												
ZZZZZZ			19:37																												
ZZZZZZ			19:39																												
ZZZZZZ			19:41																												
ZZZZZZ			19:44																												
ZZZZZZ			19:46																												
ZZZZZZ			19:48																												
ZZZZZZ			19:51																												
ZZZZZZ			19:53																												
ZZZZZZ			19:55																												
CCV 570-42609/10-A			19:58																												
CCB 570-42609/11-A			20:00																												
CCB 570-42609/11-A			20:02																												
ZZZZZZ			20:04																												
ZZZZZZ			20:07																												
ZZZZZZ			20:09																												
ZZZZZZ			20:11																												
ZZZZZZ			20:14																												
ZZZZZZ			20:16																												
CCV 570-42609/10-A			20:18																												
CCB 570-42609/11-A			20:21																												
CCB 570-42609/11-A			20:23																												

Prep Types: _____
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 01/06/2020 13:14 End Date: 01/06/2020 20:06

Lab Sample Id	D/F	Type	Time	Hg	Analytes																			
ICIS 570-42889/1-A			13:14	X																				
IC 570-42889/4-A			13:16	X																				
IC 570-42889/5-A			13:19	X																				
IC 570-42889/6-A			13:21	X																				
IC 570-42889/7-A			13:23	X																				
IC 570-42889/8-A			13:25	X																				
IC 570-42889/9-A			13:28	X																				
ICV 570-42889/2-A	1		13:32	X																				
ICB 570-42889/3-A	1		13:34	X																				
CRA 570-42889/12-A	1		13:36	X																				
CCV 570-42889/10-A			13:39																					
CCB 570-42889/11-A			13:41																					
ZZZZZZ			14:03																					
ZZZZZZ			14:05																					
ZZZZZZ			14:07																					
ZZZZZZ			14:10																					
ZZZZZZ			14:12																					
ZZZZZZ			14:14																					
ZZZZZZ			14:16																					
ZZZZZZ			14:19																					
ZZZZZZ			14:21																					
ZZZZZZ			14:23																					
CCV 570-42889/10-A			14:25																					
CCB 570-42889/11-A			14:28																					
ZZZZZZ			14:30																					
ZZZZZZ			14:32																					
ZZZZZZ			14:35																					
ZZZZZZ			14:37																					
ZZZZZZ			14:39																					
ZZZZZZ			14:41																					
ZZZZZZ			14:44																					
ZZZZZZ			14:46																					
ZZZZZZ			14:48																					
ZZZZZZ			14:51																					
CCV 570-42889/10-A			14:53																					
CCB 570-42889/11-A			14:55																					
ZZZZZZ			14:57																					
ZZZZZZ			15:00																					
ZZZZZZ			15:02																					
ZZZZZZ			15:04																					
ZZZZZZ			15:07																					
CCV 570-42889/10-A			15:09																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 01/06/2020 13:14 End Date: 01/06/2020 20:06

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
CCB 570-42889/11-A			15:11																												
ZZZZZZ			15:20																												
ZZZZZZ			15:22																												
ZZZZZZ			15:24																												
ZZZZZZ			15:26																												
ZZZZZZ			15:29																												
ZZZZZZ			15:31																												
ZZZZZZ			15:33																												
ZZZZZZ			15:36																												
ZZZZZZ			15:38																												
ZZZZZZ			15:40																												
CCV 570-42889/10-A			15:42																												
CCB 570-42889/11-A			15:45																												
ZZZZZZ			15:47																												
ZZZZZZ			15:49																												
ZZZZZZ			15:52																												
ZZZZZZ			15:54																												
ZZZZZZ			15:56																												
ZZZZZZ			15:58																												
ZZZZZZ			16:01																												
ZZZZZZ			16:03																												
ZZZZZZ			16:05																												
ZZZZZZ			16:08																												
CCV 570-42889/10-A			16:10																												
CCB 570-42889/11-A			16:12																												
ZZZZZZ			16:14																												
ZZZZZZ			16:17																												
ZZZZZZ			16:19																												
ZZZZZZ			16:21																												
ZZZZZZ			16:24																												
ZZZZZZ			16:26																												
ZZZZZZ			16:28																												
ZZZZZZ			16:31																												
ZZZZZZ			16:33																												
ZZZZZZ			16:35																												
CCV 570-42889/10-A			16:37																												
CCB 570-42889/11-A			16:40																												
ZZZZZZ			16:42																												
ZZZZZZ			16:44																												
ZZZZZZ			16:46																												
ZZZZZZ			16:49																												
ZZZZZZ			16:51																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 01/06/2020 13:14 End Date: 01/06/2020 20:06

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			16:53																												
CCV 570-42889/10-A	1		16:56	X																											
CCB 570-42889/11-A	1		16:58	X																											
ZZZZZZ			17:13																												
ZZZZZZ			17:16																												
ZZZZZZ			17:18																												
ZZZZZZ			17:20																												
ZZZZZZ			17:23																												
ZZZZZZ			17:25																												
ZZZZZZ			17:27																												
ZZZZZZ			17:30																												
ZZZZZZ			17:32																												
ZZZZZZ			17:34																												
CCV 570-42889/10-A	1		17:36	X																											
CCB 570-42889/11-A	1		17:39	X																											
ZZZZZZ			17:41																												
ZZZZZZ			17:43																												
ZZZZZZ			17:46																												
ZZZZZZ			17:48																												
ZZZZZZ			17:50																												
ZZZZZZ			17:52																												
ZZZZZZ			17:55																												
ZZZZZZ			17:57																												
ZZZZZZ			17:59																												
CCV 570-42889/10-A			19:10																												
CCB 570-42889/11-A			19:13																												
ZZZZZZ			19:15																												
ZZZZZZ			19:18																												
ZZZZZZ			19:20																												
ZZZZZZ			19:22																												
ZZZZZZ			19:25																												
ZZZZZZ			19:27																												
ZZZZZZ			19:29																												
ZZZZZZ			19:32																												
ZZZZZZ			19:34																												
ZZZZZZ			19:36																												
ZZZZZZ			19:38																												
CCV 570-42889/10-A			19:41																												
CCB 570-42889/11-A			19:43																												
ZZZZZZ			19:45																												
ZZZZZZ			19:48																												
ZZZZZZ			19:50																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 01/06/2020 13:14 End Date: 01/06/2020 20:06

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			19:52																												
ZZZZZZ			19:55																												
ZZZZZZ			19:57																												
ZZZZZZ			19:59																												
ZZZZZZ			20:01																												
CCV 570-42889/10-A			20:04																												
CCB 570-42889/11-A			20:06																												

Prep Types: _____
D = Dissolved

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 01/02/2020 End Date: 01/02/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICIS 570-42378/1	10:40										
IC 570-42378/2	10:43										
ICV 570-42378/3	10:48	98		102		99		100			
ICV 570-42378/4	10:54	97		102		99		101			
ICB 570-42378/5	11:05	97		104		98		101			
CCV 570-42378/6	11:07	96		105		98		101			
CCB 570-42378/7	11:10	96		104		98		102			
ICSA 570-42378/8	11:13	99		114		101		110			
ICSAB 570-42378/9	11:16	99		119		105		113			
CCB 570-42378/10	11:21	101		115		108		112			
ICVL 570-42378/11	11:24	99		116		109		111			

15-IN
 ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 01/02/2020 End Date: 01/02/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 570-42378/1	10:40										
IC 570-42378/2	10:43										
ICV 570-42378/3	10:48	102									
ICV 570-42378/4	10:54	102									
ICB 570-42378/5	11:05	103									
CCV 570-42378/6	11:07	103									
CCB 570-42378/7	11:10	103									
ICSA 570-42378/8	11:13	114									
ICSAB 570-42378/9	11:16	116									
CCB 570-42378/10	11:21	113									
ICVL 570-42378/11	11:24	111									

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 01/02/2020 End Date: 01/02/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICV 570-42506/45	10:48			102				99		100	
ICB 570-42506/47	11:05			104				98		101	
IC 570-42506/2	18:25										
CCV 570-42506/3	18:27			95				96		96	
CCB 570-42506/5	18:33			94				97		95	
ICVL 570-42506/6	18:36			94				96		96	
MB 570-42423/1-A	18:39			93				96		95	
LCS 570-42423/2-A	18:41			93				96		95	
LCSD 570-42423/3-A	18:44			92				92		93	
CCV 570-42506/15	19:03			103				108		106	
CCB 570-42506/16	19:09			100				108		106	
570-16469-B-1-B MS	19:28			100				104		102	
570-16469-B-1-C MSD	19:31			99				102		101	
CCV 570-42506/27	19:48			92				99		97	
CCB 570-42506/28	19:53			92				98		98	
570-16773-1	19:57			92				97		96	
570-16773-2	19:59			94				97		97	
570-16773-3	20:02			92				98		93	
CCV 570-42506/33	20:10			91				96		96	
CCB 570-42506/34	20:14			91				96		94	
MB 570-42480/1-A	20:20			80				93		87	
LCS 570-42480/2-A	20:22			79				92		85	
LCSD 570-42480/3-A	20:24			79				92		84	
570-16773-1	20:28			78				92		84	
570-16773-1 MS	20:30			79				92		82	
570-16773-2	20:34			80				91		82	
570-16773-3	20:36			79				92		84	
CCV 570-42506/43	20:38			79				91		82	
CCB 570-42506/44	20:41			78				91		82	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 01/02/2020 End Date: 01/02/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-42506/45	10:48	102									
ICB 570-42506/47	11:05	103									
IC 570-42506/2	18:25										
CCV 570-42506/3	18:27	96									
CCB 570-42506/5	18:33	97									
ICVL 570-42506/6	18:36	97									
MB 570-42423/1-A	18:39	97									
LCS 570-42423/2-A	18:41	96									
LCSD 570-42423/3-A	18:44	95									
CCV 570-42506/15	19:03	102									
CCB 570-42506/16	19:09	101									
570-16469-B-1-B MS	19:28	101									
570-16469-B-1-C MSD	19:31	100									
CCV 570-42506/27	19:48	95									
CCB 570-42506/28	19:53	96									
570-16773-1	19:57	94									
570-16773-2	19:59	95									
570-16773-3	20:02	93									
CCV 570-42506/33	20:10	94									
CCB 570-42506/34	20:14	93									
MB 570-42480/1-A	20:20	83									
LCS 570-42480/2-A	20:22	82									
LCSD 570-42480/3-A	20:24	82									
570-16773-1	20:28	81									
570-16773-1 MS	20:30	81									
570-16773-2	20:34	81									
570-16773-3	20:36	82									
CCV 570-42506/43	20:38	81									
CCB 570-42506/44	20:41	81									

15-IN
 ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
 METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 01/03/2020 End Date: 01/03/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
				Sc		Ga		Ga		In	
ICV 570-42697/3	13:35			99				98		97	
ICV 570-42697/4	13:41			98				98		96	
ICB 570-42697/5	13:51			100				96		97	
ICSA 570-42697/8	13:59			104				99		103	
ICSAB 570-42697/10	14:33			110				106		106	
ICVL 570-42697/13	14:42			107				106		107	
CCV 570-42697/34	16:01			100				95		97	
CCB 570-42697/35	16:06			98				95		99	
570-16773-1 MSD	16:14			101				96		100	
CCV 570-42697/39	16:24			98				91		96	
CCB 570-42697/40	16:27			97				94		98	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 01/03/2020 End Date: 01/03/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-42697/3	13:35	98									
ICV 570-42697/4	13:41	98									
ICB 570-42697/5	13:51	97									
ICSA 570-42697/8	13:59	104									
ICSAB 570-42697/10	14:33	109									
ICVL 570-42697/13	14:42	105									
CCV 570-42697/34	16:01	103									
CCB 570-42697/35	16:06	102									
570-16773-1 MSD	16:14	105									
CCV 570-42697/39	16:24	103									
CCB 570-42697/40	16:27	104									

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42423 Batch Start Date: 01/02/20 12:00 Batch Analyst: Rolin, Randy

Batch Method: 200.8 Batch End Date: 01/02/20 14:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MT: 1:1 HCl 00002	MT: 1:1 HNO3 00001	MT_ICP_Spike1 00005
MB 570-42423/1		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	
LCS 570-42423/2		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
LCSD 570-42423/3		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
570-16469-B-1 MS		200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	50 uL
570-16469-B-1 MSD		200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	50 uL
570-16773-A-1	EV BMP0007S011	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	
570-16773-A-2	EV BMP0008S014	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	
570-16773-A-3	EV BMP0009S012	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00003	MT_MS_SPIKE_3 00002				
MB 570-42423/1		200.8, 200.8							
LCS 570-42423/2		200.8, 200.8		50 uL	0.25 mL				
LCSD 570-42423/3		200.8, 200.8		50 uL	0.25 mL				
570-16469-B-1 MS		200.8, 200.8	R	50 uL	0.25 mL				
570-16469-B-1 MSD		200.8, 200.8	R	50 uL	0.25 mL				
570-16773-A-1	EV BMP0007S011	200.8, 200.8	R						
570-16773-A-2	EV BMP0008S014	200.8, 200.8	R						
570-16773-A-3	EV BMP0009S012	200.8, 200.8	R						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42423 Batch Start Date: 01/02/20 12:00 Batch Analyst: Rolin, Randy

Batch Method: 200.8 Batch End Date: 01/02/20 14:30

Batch Notes	
Batch Comment	DISPENSERS- D-30/MD-032
Lot # of hydrochloric acid	MR013019A
Lot # of Nitric Acid	MR013019B
Hot Block ID	12
Oven, Bath or Block Temperature 1	94.6 Degrees C
Oven, Bath or Block Temperature 2	94.6 Degrees C
pH Paper ID	M006-47-07
Pipette ID	P-116/P-069
Thermometer ID	31465640
Digestion Tube/Cup ID	J3330884566
Uncorrected Temperature	95 Degrees C
Uncorrected Temperature 2	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42480 Batch Start Date: 12/27/19 17:30 Batch Analyst: Gonzales, Julian

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00001	MT_ICP_Spike1 00005
MB 570-42480/1		Filtration, 200.8		50 mL	50 mL		<2 SU	1 mL	
LCS 570-42480/2		Filtration, 200.8		50 mL	50 mL		<2 SU	1 mL	50 uL
LCSD 570-42480/3		Filtration, 200.8		50 mL	50 mL		<2 SU	1 mL	50 uL
570-16773-C-1	EVBMP0007S011	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-1 MS	EVBMP0007S011	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-16773-C-1 MSD	EVBMP0007S011	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-16773-C-2	EVBMP0008S014	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-3	EVBMP0009S012	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00003	MT_MS_SPIKE_3 00002				
MB 570-42480/1		Filtration, 200.8							
LCS 570-42480/2		Filtration, 200.8		50 uL	0.25 mL				
LCSD 570-42480/3		Filtration, 200.8		50 uL	0.25 mL				
570-16773-C-1	EVBMP0007S011	Filtration, 200.8	D						
570-16773-C-1 MS	EVBMP0007S011	Filtration, 200.8	D	50 uL	0.25 mL				
570-16773-C-1 MSD	EVBMP0007S011	Filtration, 200.8	D	50 uL	0.25 mL				
570-16773-C-2	EVBMP0008S014	Filtration, 200.8	D						
570-16773-C-3	EVBMP0009S012	Filtration, 200.8	D						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42480 Batch Start Date: 12/27/19 17:30 Batch Analyst: Gonzales, Julian

Batch Method: Filtration Batch End Date: _____

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42506 Batch Start Date: 01/02/20 10:48 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_BLK_1 00002	MT_MS_CCV 00005	MT_MS_IC 00008	MT_MS_ICV1 00002	MT_MS_LL 00006	
IC 570-42506/2		200.8				# mL			
CCV 570-42506/3		200.8			# mL				
CCB 570-42506/5		200.8		# mL					
ICVL 570-42506/6		200.8						# mL	
CCV 570-42506/15		200.8			# mL				
CCB 570-42506/16		200.8		# mL					
CCV 570-42506/27		200.8			# mL				
CCB 570-42506/28		200.8		# mL					
CCV 570-42506/33		200.8			# mL				
CCB 570-42506/34		200.8		# mL					
CCV 570-42506/43		200.8			# mL				
CCB 570-42506/44		200.8		# mL					
ICV 570-42506/45		200.8					# mL		
ICB 570-42506/47		200.8		# mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42697 Batch Start Date: 01/03/20 13:27 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_BLK_1 00002	MT_MS_CCV 00005	MT_MS_ICS_A 00002	MT_MS_ICS_AB 00002	MT_MS_ICV1 00002	MT_MS_ICV2 00003
ICV 570-42697/3		200.8						# mL	
ICV 570-42697/4		200.8							# mL
ICB 570-42697/5		200.8		# mL					
ICSA 570-42697/8		200.8				# mL			
ICSAB 570-42697/10		200.8					# mL		
ICVL 570-42697/13		200.8							
CCV 570-42697/34		200.8			# mL				
CCB 570-42697/35		200.8		# mL					
CCV 570-42697/39		200.8			# mL				
CCB 570-42697/40		200.8		# mL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_LL 00006					
ICV 570-42697/3		200.8							
ICV 570-42697/4		200.8							
ICB 570-42697/5		200.8							
ICSA 570-42697/8		200.8							
ICSAB 570-42697/10		200.8							
ICVL 570-42697/13		200.8		# mL					
CCV 570-42697/34		200.8							
CCB 570-42697/35		200.8							
CCV 570-42697/39		200.8							
CCB 570-42697/40		200.8							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42697 Batch Start Date: 01/03/20 13:27 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: _____

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42474 Batch Start Date: 01/02/20 17:18 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 01/02/20 19:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg_lppm STD 00009	Hg_H2SO4 00001	Hg_K2S2O3 00001
MB 570-42474/1		245.1, 245.1			50 mL	100 mL		2.5 mL	4 mL
LCS 570-42474/2		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-42474/3		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
570-16773-A-1	EVBMP0007S011	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL
570-16773-A-1	EVBMP0007S011	245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
MS 570-16773-A-1	EVBMP0007S011	245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
MSD 570-16773-A-2	EVBMP0008S014	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL
570-16773-A-3	EVBMP0009S012	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
MB 570-42474/1		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-42474/2		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-42474/3		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-16773-A-1	EVBMP0007S011	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-16773-A-1	EVBMP0007S011	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
MS 570-16773-A-1	EVBMP0007S011	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
MSD 570-16773-A-2	EVBMP0008S014	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-16773-A-3	EVBMP0009S012	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42474 Batch Start Date: 01/02/20 17:18 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 01/02/20 19:30

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	01/02/2019 19:30
Digestion Start Time	01/02/2019 17:30
Digestion Unit ID	Block 3
Sulfuric Acid Lot Number	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42609 Batch Start Date: 01/03/20 10:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 01/03/20 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00013	HG_1ppm STD 00009	Hg_H2SO4 00001	Hg_K2S2O3 00001
ICV 570-42609/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-42609/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-42609/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-42609/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CRA 570-42609/12		7470A, 245.1		50 mL	100 mL		25 uL	2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
ICV 570-42609/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-42609/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-42609/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-42609/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CRA 570-42609/12		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42609 Batch Start Date: 01/03/20 10:00

Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 01/03/20 12:00

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12:00
Digestion Start Time	10:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42878 Batch Start Date: 12/28/19 12:00 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00001	
MB 570-42878/1		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-42878/2		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCSD 570-42878/3		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-1	EVBMP0007S011	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-1 MS	EVBMP0007S011	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-1 MSD		Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-2	EVBMP0008S014	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-3	EVBMP0009S012	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Batch Notes	
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	D-30

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42880 Batch Start Date: 01/06/20 12:07 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 01/06/20 14:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	HG_lppm STD 00009	Hg_H2SO4 00001	Hg_K2S2O3 00001
MB 570-42878/1-A		245.1, 245.1			50 mL	100 mL		2.5 mL	4 mL
LCS 570-42878/2-A		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-42878/3-A		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
570-16773-C-1-D	EVBMP0007S011	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL
570-16773-C-1-E MS	EVBMP0007S011	245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-16773-C-1-F MSD		245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-16773-C-2-B	EVBMP0008S014	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL
570-16773-C-3-B	EVBMP0009S012	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
MB 570-42878/1-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-42878/2-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-42878/3-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-16773-C-1-D	EVBMP0007S011	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-16773-C-1-E MS	EVBMP0007S011	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-16773-C-1-F MSD		245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-16773-C-2-B	EVBMP0008S014	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-16773-C-3-B	EVBMP0009S012	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42880 Batch Start Date: 01/06/20 12:07 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 01/06/20 14:30

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	01/06/2019 14:30
Digestion Start Time	01/06/2019 13:30
Digestion Unit ID	Block 3
Sulfuric Acid Lot Number	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42889 Batch Start Date: 01/06/20 11:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 01/06/20 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00013	HG_1ppm STD 00009	Hg_H2SO4 00001	Hg_K2S2O3 00001
ICV 570-42889/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-42889/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-42889/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-42889/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CRA 570-42889/12		7470A, 245.1		50 mL	100 mL		25 uL	2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
ICV 570-42889/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-42889/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-42889/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-42889/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CRA 570-42889/12		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42889 Batch Start Date: 01/06/20 11:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 01/06/20 13:00

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	13:00
Digestion Start Time	11:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 43281 Batch Start Date: 01/08/20 11:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 01/08/20 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00013	HG_1ppm STD 00009	Hg_H2SO4 00001	Hg_K2S2O3 00001
ICV 570-43281/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-43281/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-43281/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-43281/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CRA 570-43281/12		7470A, 245.1		50 mL	100 mL		25 uL	2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00002	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001			
ICV 570-43281/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-43281/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-43281/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-43281/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CRA 570-43281/12		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 43281 Batch Start Date: 01/08/20 11:00 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 01/08/20 12:00

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	12:00
Digestion Start Time	11:00
Digestion Unit ID	Block 3
Sulfuric Acid ID	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 43350 Batch Start Date: 12/28/19 12:00 Batch Analyst: Gonzales, Julian

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00001	
MB 570-43350/1		Filtration, 245.1, 245.1		50 mL	50 mL		<2 SU	1 mL	
LCS 570-43350/2		Filtration, 245.1, 245.1		50 mL	50 mL		<2 SU	1 mL	
LCSD 570-43350/3		Filtration, 245.1, 245.1		50 mL	50 mL		<2 SU	1 mL	
570-16773-C-1	EVBMP0007S011	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-1 MS	EVBMP0007S011	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-1 MSD	EVBMP0007S011	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-2	EVBMP0008S014	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-16773-C-3	EVBMP0009S012	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 43351 Batch Start Date: 01/08/20 13:00 Batch Analyst: Gonzales, Julian

Batch Method: 245.1 Batch End Date: 01/08/20 15:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg_1ppm STD 00009	Hg_H2SO4 00001	Hg_K2S2O3 00001	Hg_KMnO4 00002
MB 570-43350/1-A		245.1, 245.1		50 mL	100 mL		2.5 mL	4 mL	7.5 mL
LCS 570-43350/2-A		245.1, 245.1		50 mL	100 mL	500 uL	2.5 mL	4 mL	7.5 mL
LCSD 570-43350/3-A		245.1, 245.1		50 mL	100 mL	500 uL	2.5 mL	4 mL	7.5 mL
570-16773-C-1-J	EVBMP0007S011	245.1, 245.1	D	50 mL	100 mL		2.5 mL	4 mL	7.5 mL
570-16773-C-1-K MS	EVBMP0007S011	245.1, 245.1	D	50 mL	100 mL	500 uL	2.5 mL	4 mL	7.5 mL
570-16773-C-1-L MSD	EVBMP0007S011	245.1, 245.1	D	50 mL	100 mL	500 uL	2.5 mL	4 mL	7.5 mL
570-16773-C-2-D	EVBMP0008S014	245.1, 245.1	D	50 mL	100 mL		2.5 mL	4 mL	7.5 mL
570-16773-C-3-D	EVBMP0009S012	245.1, 245.1	D	50 mL	100 mL		2.5 mL	4 mL	7.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_NaCl-NH2OH 00005	MT: H2NO3 Con 00001				
MB 570-43350/1-A		245.1, 245.1		3 mL	1.25 mL				
LCS 570-43350/2-A		245.1, 245.1		3 mL	1.25 mL				
LCSD 570-43350/3-A		245.1, 245.1		3 mL	1.25 mL				
570-16773-C-1-J	EVBMP0007S011	245.1, 245.1	D	3 mL	1.25 mL				
570-16773-C-1-K MS	EVBMP0007S011	245.1, 245.1	D	3 mL	1.25 mL				
570-16773-C-1-L MSD	EVBMP0007S011	245.1, 245.1	D	3 mL	1.25 mL				
570-16773-C-2-D	EVBMP0008S014	245.1, 245.1	D	3 mL	1.25 mL				
570-16773-C-3-D	EVBMP0009S012	245.1, 245.1	D	3 mL	1.25 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 43351 Batch Start Date: 01/08/20 13:00 Batch Analyst: Gonzales, Julian

Batch Method: 245.1 Batch End Date: 01/08/20 15:15

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	01/08/2019 15:15
Digestion Start Time	01/08/2019 13:15
Digestion Unit ID	Block 3
Sulfuric Acid Lot Number	022376
Nitric Acid ID	157210
Hydroxylamine ID	275841
Potassium Persulfate ID	022374
Potassium Permanganate ID	026090
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1174
Sufficient Volume for Batch QC	yes
Thermometer ID	3147035
Digestion Tube/Cup ID	190108
Temperature - Uncorrected - End	96.4 Degrees C
Temperature - Uncorrected - Start	96.4 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Thursday, January 02, 2020 09:57:15

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2020\200102E1\STD Performance Check.005

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode	
Be	9.0		2593.4		2593.369		37.323		1.4	Standard	
In	114.9		58960.4		58960.394		1189.687		2.0	Standard	
U	238.1		50237.6		50237.570		1442.757		2.9	Standard	
[	CeO	155.9		941.0		0.018		0.000		1.9	Standard
>	Ce	139.9		52409.6		52409.636		562.052		1.1	Standard
[	Ce++	70.0		567.7		0.011		0.000		0.5	Standard
	Bkgd	220.0		0.9		0.900		0.325		36.1	Standard

Current Conditions File Data

Current Value	Description
0.94	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.00	Deflector Voltage
1600.00	ICP RF Power
-2150.00	Analog Stage Voltage
2000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-12.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-16.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.50	DRC Mode QRO
-2.50	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-13.00	KED Mode CRO
-22.50	KED Mode QRO
-17.00	KED Mode Cell Entrance Voltage
-38.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Thursday, January 02, 2020 09:59:20

Page 1

475.00 KED Mode Axial Field Voltage

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, January 02, 2020 10:40:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\ICIS-23447.010

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[>		46054.118		ppb			0.745	
9	Be	|		14.444		ppb			13.323	
10	B	|		3886.084		ppb			1.908	
27	Al	|		2734.706		ppb			1.292	
43	Ca-2	|		50.000		ppb			36.056	
49	Ti	|		140.001		ppb			24.858	
52	Cr	|		12955.874		ppb			2.332	
55	Mn	|		608.902		ppb			3.645	
57	Fe	|		14724.252		ppb			1.576	
45	Sc-IS	|>		1411296.713		ppb			1.377	
66	Zn	|		461.119		ppb			12.938	
86	Sr	|		-27.044		ppb			77.209	
65	Cu	|		121.836		ppb			16.107	
69	Ga-IS	|		533865.970		ppb			1.422	
95	Mo	|		98.889		ppb			10.836	
115	In-IS	|>		379299.869		ppb			2.360	
111	Cd	|		12.015		ppb			16.086	
118	Sn	|		2049.036		ppb			2.574	
121	Sb	|		496.675		ppb			5.734	
135	Ba	|		42.222		ppb			18.232	
165	Ho-IS	|		393265.360		ppb			2.005	
159	Tb-IS	|>		448893.554		ppb			1.543	
207	Pb	|		236.667		ppb			2.817	
203	Tl	|		23.333		ppb			14.286	
209	Bi-IS	|		261666.154		ppb			1.543	
51	V	|		7.778		ppb			137.766	
59	Co	|		33.333		ppb			10.000	
60	Ni	|		44.445		ppb			28.395	
75	As	|		1190.311		ppb			3.453	
71	Ga-ISK	|>		125245.540		ppb			0.770	
82	Se-2	|		3.541		ppb			99.042	
107	Ag-1	|		907.807		ppb			11.591	
115	In-ISK	|		125904.181		ppb			0.205	
45	Sc-ISK	|>		287058.999		ppb			1.167	
23	Na	|		941.698		ppb			3.767	
39	K	|		119753.168		ppb			0.149	
24	Mg	|		125.001		ppb			22.271	
159	Tb-ISK	|		261718.619		ppb			1.459	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, January 02, 2020 10:43:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\IC-210761.011

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	44083.470		ppb		0.694		46054.118
9	Be	|	259210.553	200.000000	ppb	0.525	0.677		14.444
10	B	|	183767.751	500.000000	ppb	0.102	0.801		3886.084
27	Al	|	1445832.476	200.000000	ppb	0.596	1.070		2734.706
43	Ca-2	|	214051.804	10200.000000	ppb	0.940	1.598		50.000
49	Ti	|	132179.810	200.000000	ppb	0.552	1.247		140.001
52	Cr	|	2096679.328	200.000000	ppb	0.164	0.534		12955.874
55	Mn	|	3388744.994	200.000000	ppb	0.311	0.653		608.902
57	Fe	[	3575517.600	10200.000000	ppb	0.156	1.599		14724.252
45	Sc-IS	>	1432191.868		ppb	1.457			1411296.713
66	Zn	|	308809.269	200.000000	ppb	1.642	0.820		461.119
86	Sr	|	487749.014	200.000000	ppb	2.023	1.535		-27.044
65	Cu	|	484613.366	200.000000	ppb	1.351	1.312		121.836
69	Ga-IS	|	561675.987		ppb	1.478			533865.970
95	Mo	|	500439.203	200.000000	ppb	0.692	1.030		98.889
115	In-IS	[>	372416.865		ppb	1.129			379299.869
111	Cd	|	552754.596	200.000000	ppb	0.995	0.224		12.015
118	Sn	|	1510457.634	200.000000	ppb	1.279	0.188		2049.036
121	Sb	|	1526264.751	200.000000	ppb	1.591	1.028		496.675
135	Ba	|	383889.219	200.000000	ppb	1.488	0.364		42.222
165	Ho-IS	|	394745.766		ppb	2.270			393265.360
159	Tb-IS	[>	449504.743		ppb	1.674			448893.554
207	Pb	|	5576768.330	200.000000	ppb	1.267	1.222		236.667
203	Tl	|	1812796.327	200.000000	ppb	1.141	1.780		23.333
209	Bi-IS	|	246983.478		ppb	0.758			261666.154
51	V	[	176736.724	200.000000	ppb	1.630	2.245		7.778
59	Co	|	477442.800	200.000000	ppb	0.365	0.905		33.333
60	Ni	|	279671.090	200.000000	ppb	0.627	1.280		44.445
75	As	|	113913.019	200.000000	ppb	1.195	1.810		1190.311
71	Ga-ISK	>	123611.393		ppb	0.660			125245.540
82	Se-2	|	11607.583	200.000000	ppb	1.110	0.711		3.541
107	Ag-1	|	1197023.234	200.000000	ppb	1.799	1.156		907.807
115	In-ISK	|	123790.694		ppb	0.726			125904.181
45	Sc-ISK	[>	287249.772		ppb	1.765			287058.999
23	Na	|	6873931.540	10200.000000	ppb	1.693	1.478		941.698
39	K	|	14868960.732	10200.000000	ppb	1.148	2.119		119753.168
24	Mg	|	7476344.322	10200.000000	ppb	1.201	2.623		125.001
159	Tb-ISK	|	264941.037		ppb	1.006			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-235105

Autosampler Position: 206

Sample Date/Time: Thursday, January 02, 2020 10:48:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\ICV-235105.012

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	45113.345		ppb		0.752		46054.118
9	Be	|	132417.541	99.833058	ppb	0.198	0.647		14.444
10	B	|	4439.579	1.718197	ppb	0.771	10.333		3886.084
27	Al	|	4289.534	0.218242	ppb	4.088	12.868		2734.706
43	Ca-2	|	107576.882	5008.107467	ppb	0.880	1.612		50.000
49	Ti	|	65845.851	97.248301	ppb	0.827	0.814		140.001
52	Cr	|	1020896.883	94.537067	ppb	1.135	1.428		12955.874
55	Mn	|	1639584.752	94.539677	ppb	1.477	1.593		608.902
57	Fe	[	1806850.150	5104.447890	ppb	1.357	1.263		14724.252
45	Sc-IS	>]	1440066.142		ppb	1.330			1411296.713
66	Zn	|	163391.411	105.098695	ppb	1.375	0.708		461.119
86	Sr	|	243667.331	99.366668	ppb	2.497	1.594		-27.044
65	Cu	|	248928.208	102.137699	ppb	1.641	0.739		121.836
69	Ga-IS	|	523744.230		ppb	1.089			533865.970
95	Mo	|	252384.524	100.286936	ppb	1.091	0.340		98.889
115	In-IS	[>	380838.462		ppb	0.849			379299.869
111	Cd	|	292369.143	103.442318	ppb	1.257	0.666		12.015
118	Sn	|	766801.093	99.148924	ppb	1.772	0.961		2049.036
121	Sb	|	727959.843	93.245869	ppb	1.372	0.666		496.675
135	Ba	|	182.223	0.071177	ppb	21.043	26.620		42.222
165	Ho-IS	|	398223.410		ppb	2.099			393265.360
159	Tb-IS	[>	459155.405		ppb	2.151			448893.554
207	Pb	|	2866565.351	100.644121	ppb	1.401	1.284		236.667
203	Tl	|	897829.481	96.987755	ppb	0.204	2.276		23.333
209	Bi-IS	|	259050.233		ppb	1.556			261666.154
51	V	|	85954.482	96.827126	ppb	0.549	0.687		7.778
59	Co	|	225030.815	93.841261	ppb	0.845	1.159		33.333
60	Ni	|	140995.713	100.364683	ppb	0.271	0.321		44.445
75	As	|	58095.337	100.516154	ppb	0.792	0.616		1190.311
71	Ga-ISK	>]	124158.315		ppb	0.316			125245.540
82	Se-2	|	5855.034	100.410011	ppb	0.198	0.308		3.541
107	Ag-1	|	3918.319	0.502544	ppb	10.456	13.725		907.807
115	In-ISK	|	124739.512		ppb	2.182			125904.181
45	Sc-ISK	[>	286603.220		ppb	0.918			287058.999
23	Na	|	3398.754	3.664632	ppb	24.933	35.832		941.698
39	K	|	136920.910	12.042994	ppb	1.559	19.549		119753.168
24	Mg	|	3721356.659	5087.012404	ppb	1.448	1.235		125.001
159	Tb-ISK	|	261983.950		ppb	1.128			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-62207

Autosampler Position: 213

Sample Date/Time: Thursday, January 02, 2020 10:54:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\ICV-62207.013

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	44445.707		ppb	1.335			46054.118
9	Be	|	66.667	0.040516	ppb	35.000	45.450		14.444
10	B	|	39103.457	97.368482	ppb	1.828	0.555		3886.084
27	Al	|	725025.104	99.297829	ppb	0.205	1.138		2734.706
43	Ca-2	|	93.334	2.148200	ppb	53.661	112.667		50.000
49	Ti	|	230.002	0.142965	ppb	16.461	42.382		140.001
52	Cr	|	13634.284	0.108070	ppb	2.597	46.527		12955.874
55	Mn	|	1396.736	0.047474	ppb	13.440	25.210		608.902
57	Fe	[	14102.514	-2.654102	ppb	1.373	26.270		14724.252
45	Sc-IS	>	1441170.814		ppb	0.990			1411296.713
66	Zn	|	770.021	0.192903	ppb	8.840	23.381		461.119
86	Sr	|	122.995	0.061641	ppb	85.392	70.369		-27.044
65	Cu	|	233.556	0.044676	ppb	17.852	36.557		121.836
69	Ga-IS	|	558481.649		ppb	2.182			533865.970
95	Mo	|	1290.058	0.472306	ppb	2.067	2.010		98.889
115	In-IS	[>	382140.611		ppb	0.862			379299.869
111	Cd	|	122.847	0.039119	ppb	28.804	32.902		12.015
118	Sn	|	8530.324	0.835586	ppb	1.032	2.223		2049.036
121	Sb	|	8176.785	0.980832	ppb	2.496	3.595		496.675
135	Ba	|	204707.496	103.926510	ppb	1.202	0.532		42.222
165	Ho-IS	|	402637.396		ppb	1.697			393265.360
159	Tb-IS	[>	457820.763		ppb	1.838			448893.554
207	Pb	|	6753.891	0.230818	ppb	124.194	129.235		236.667
203	Tl	|	624.458	0.065011	ppb	16.816	16.833		23.333
209	Bi-IS	|	255284.237		ppb	1.013			261666.154
51	V	|	51.111	0.049012	ppb	44.393	53.086		7.778
59	Co	|	148.890	0.048352	ppb	15.884	21.006		33.333
60	Ni	|	127.778	0.059501	ppb	33.645	50.718		44.445
75	As	|	1286.524	0.188682	ppb	2.533	38.330		1190.311
71	Ga-ISK	>	124147.119		ppb	0.649			125245.540
82	Se-2	|	14.489	0.188858	ppb	45.036	60.144		3.541
107	Ag-1	|	307519.184	51.051194	ppb	0.694	0.889		907.807
115	In-ISK	|	123103.146		ppb	1.081			125904.181
45	Sc-ISK	[>	287385.241		ppb	0.429			287058.999
23	Na	|	648675.901	960.759436	ppb	0.758	0.804		941.698
39	K	|	1560379.762	995.537447	ppb	0.417	0.828		119753.168
24	Mg	|	2468.557	3.195251	ppb	27.035	28.589		125.001
159	Tb-ISK	|	260779.404		ppb	0.617			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Thursday, January 02, 2020 11:05:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\ICB-23446.014

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>		44864.786		ppb		0.744		46054.118
9	Be	|		95.556	0.061831	ppb	30.076	35.569		14.444
10	B	|		3931.652	0.397817	ppb	1.518	23.536		3886.084
27	Al	|		12678.958	1.363575	ppb	1.504	1.100		2734.706
43	Ca-2	|		196.668	6.922086	ppb	15.534	19.639		50.000
49	Ti	|		310.003	0.258410	ppb	9.557	17.288		140.001
52	Cr	|		14126.983	0.141898	ppb	1.884	11.700		12955.874
55	Mn	|		2305.746	0.099328	ppb	18.203	24.535		608.902
57	Fe	[		16567.387	3.753573	ppb	3.559	50.795		14724.252
45	Sc-IS	| >		1460339.781		ppb	2.203			1411296.713
66	Zn	|		1248.944	0.490547	ppb	5.874	6.032		461.119
86	Sr	|		201.311	0.091646	ppb	51.086	42.765		-27.044
65	Cu	|		427.310	0.121713	ppb	12.965	15.836		121.836
69	Ga-IS	|		526947.102		ppb	0.381			533865.970
95	Mo	|		1083.374	0.384522	ppb	3.731	2.758		98.889
115	In-IS	| >		383450.590		ppb	0.593			379299.869
111	Cd	|		169.948	0.055367	ppb	37.903	40.111		12.015
118	Sn	|		9739.990	0.987669	ppb	4.189	5.850		2049.036
121	Sb	|		2487.994	0.252823	ppb	0.542	0.075		496.675
135	Ba	|		363.338	0.162207	ppb	10.580	11.385		42.222
165	Ho-IS	|		406015.650		ppb	0.570			393265.360
159	Tb-IS	| >		464300.198		ppb	0.612			448893.554
207	Pb	|		2146.731	0.065992	ppb	14.138	15.229		236.667
203	Tl	|		591.124	0.060509	ppb	21.253	21.591		23.333
209	Bi-IS	|		262757.969		ppb	1.115			261666.154
51	V	|		84.445	0.087193	ppb	46.762	50.215		7.778
59	Co	|		188.890	0.065824	ppb	8.340	9.070		33.333
60	Ni	|		125.556	0.058982	ppb	4.055	4.560		44.445
75	As	|		1232.626	0.116802	ppb	2.107	43.832		1190.311
71	Ga-ISK	| >		122823.558		ppb	1.118			125245.540
82	Se-2	|		11.510	0.138129	ppb	121.963	176.285		3.541
107	Ag-1	|		3062.551	0.365816	ppb	5.314	9.044		907.807
115	In-ISK	|		122389.951		ppb	0.529			125904.181
45	Sc-ISK	| >		288186.705		ppb	0.447			287058.999
23	Na	|		4108.927	4.680286	ppb	7.855	10.613		941.698
39	K	|		136265.722	11.058063	ppb	0.782	9.045		119753.168
24	Mg	|		2368.534	3.051013	ppb	18.648	20.142		125.001
159	Tb-ISK	|		256765.302		ppb	1.550			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, January 02, 2020 11:07:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCV-210770.015

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	44229.478		ppb		0.961		46054.118
9	Be	|	128703.837	98.974739	ppb	0.416	0.983		14.444
10	B	|	94819.219	252.108331	ppb	1.200	0.774		3886.084
27	Al	|	716660.425	98.621936	ppb	1.338	1.244		2734.706
43	Ca-2	|	109553.504	5202.432282	ppb	1.189	2.148		50.000
49	Ti	|	66129.399	99.627982	ppb	1.637	1.886		140.001
52	Cr	|	1015893.434	95.978865	ppb	1.029	1.945		12955.874
55	Mn	|	1681285.615	98.888314	ppb	0.400	1.328		608.902
57	Fe	[	1806216.337	4973.272851	ppb	0.577	1.234		14724.252
45	Sc-IS	[>	1477212.734		ppb	0.658			1411296.713
66	Zn	|	158879.864	99.607522	ppb	1.556	1.136		461.119
86	Sr	|	246398.550	97.955620	ppb	1.724	1.090		-27.044
65	Cu	|	251164.919	100.465042	ppb	0.528	0.135		121.836
69	Ga-IS	|	544716.788		ppb	0.827			533865.970
95	Mo	|	247687.755	95.941388	ppb	0.836	0.384		98.889
115	In-IS	[>	381971.479		ppb	1.218			379299.869
111	Cd	|	281868.210	99.433567	ppb	1.087	0.227		12.015
118	Sn	|	761345.776	98.155571	ppb	1.406	1.029		2049.036
121	Sb	|	772740.076	98.697604	ppb	0.874	0.526		496.675
135	Ba	|	195908.635	99.509618	ppb	0.606	0.765		42.222
165	Ho-IS	|	404715.745		ppb	2.269			393265.360
159	Tb-IS	[>	462779.048		ppb	1.070			448893.554
207	Pb	|	2813059.051	97.974519	ppb	1.979	1.308		236.667
203	Tl	|	914775.838	98.016378	ppb	2.147	2.127		23.333
209	Bi-IS	|	253325.356		ppb	0.929			261666.154
51	V	|	86058.458	97.801215	ppb	1.186	1.286		7.778
59	Co	|	232344.242	97.749212	ppb	0.628	1.207		33.333
60	Ni	|	136795.170	98.239948	ppb	0.361	1.364		44.445
75	As	|	57069.911	99.602711	ppb	0.404	1.422		1190.311
71	Ga-ISK	[>	123074.586		ppb	1.007			125245.540
82	Se-2	|	5740.350	99.320798	ppb	0.956	1.862		3.541
107	Ag-1	|	590799.070	99.076389	ppb	0.233	0.774		907.807
115	In-ISK	|	122551.847		ppb	1.253			125904.181
45	Sc-ISK	[>	288101.744		ppb	0.724			287058.999
23	Na	|	3476489.763	5142.320148	ppb	0.591	0.135		941.698
39	K	|	7634481.543	5180.400116	ppb	1.034	1.374		119753.168
24	Mg	|	3767770.427	5123.880006	ppb	0.957	1.381		125.001
159	Tb-ISK	|	260790.268		ppb	0.627			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, January 02, 2020 11:10:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCB-23446.016

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	44230.591		ppb	0.697			46054.118
9	Be	|	116.667	0.079165	ppb	27.256	31.659		14.444
10	B	|	4293.979	1.556123	ppb	1.923	19.580		3886.084
27	Al	|	3160.353	0.073977	ppb	11.911	74.149		2734.706
43	Ca-2	|	135.001	4.131942	ppb	9.799	15.321		50.000
49	Ti	|	275.558	0.213115	ppb	8.917	18.363		140.001
52	Cr	|	13348.456	0.086621	ppb	0.793	10.719		12955.874
55	Mn	|	2102.379	0.089358	ppb	12.947	18.860		608.902
57	Fe	[	16804.325	4.372138	ppb	2.116	36.150		14724.252
45	Sc-IS	>]	1461807.847		ppb	1.397			1411296.713
66	Zn	|	581.123	0.065536	ppb	8.359	38.957		461.119
86	Sr	|	215.781	0.097752	ppb	24.373	20.224		-27.044
65	Cu	|	367.800	0.097826	ppb	8.170	14.270		121.836
69	Ga-IS	|	521520.190		ppb	0.716			533865.970
95	Mo	|	4361.777	1.668600	ppb	2.804	4.261		98.889
115	In-IS	[>	388544.138		ppb	1.084			379299.869
111	Cd	|	251.954	0.083144	ppb	18.453	19.612		12.015
118	Sn	|	15310.423	1.679334	ppb	1.530	2.992		2049.036
121	Sb	|	2344.637	0.230794	ppb	5.511	8.400		496.675
135	Ba	|	191.112	0.073974	ppb	17.558	24.086		42.222
165	Ho-IS	|	405144.264		ppb	1.414			393265.360
159	Tb-IS	[>	464230.333		ppb	0.804			448893.554
207	Pb	|	3541.290	0.114606	ppb	21.435	23.754		236.667
203	Tl	|	1061.151	0.110845	ppb	12.353	13.396		23.333
209	Bi-IS	|	257735.585		ppb	1.391			261666.154
51	V	|	72.222	0.073360	ppb	20.812	21.717		7.778
59	Co	|	144.445	0.047176	ppb	27.820	37.224		33.333
60	Ni	|	120.001	0.054961	ppb	16.897	26.622		44.445
75	As	|	1335.604	0.299919	ppb	2.223	29.240		1190.311
71	Ga-ISK	>]	122896.434		ppb	1.462			125245.540
82	Se-2	|	25.867	0.387841	ppb	71.696	82.992		3.541
107	Ag-1	|	8660.409	1.306408	ppb	6.258	6.157		907.807
115	In-ISK	|	122303.101		ppb	0.508			125904.181
45	Sc-ISK	[>	286072.749		ppb	0.930			287058.999
23	Na	|	3033.656	3.120786	ppb	5.258	6.284		941.698
39	K	|	142250.286	15.909207	ppb	0.453	5.324		119753.168
24	Mg	|	2193.503	2.831959	ppb	9.267	8.806		125.001
159	Tb-ISK	|	257035.091		ppb	0.435			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Thursday, January 02, 2020 11:13:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\ICSA-30518.017

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	45480.058		ppb		0.078		46054.118
9	Be	|	72.222	0.043344	ppb	10.659	13.199		14.444
10	B	|	2456.878	-3.716384	ppb	5.026	9.081		3886.084
27	Al	|	76237842.573	10239.713856	ppb	1.311	1.233		2734.706
43	Ca-2	|	700731.313	32368.535948	ppb	0.430	0.427		50.000
49	Ti	|	148440.604	217.713403	ppb	0.942	1.009		140.001
52	Cr	|	17073.530	0.397994	ppb	0.630	2.541		12955.874
55	Mn	|	9139.596	0.488532	ppb	5.630	6.110		608.902
57	Fe	[	9638580.457	24500.166807	ppb	0.825	0.635		14724.252
45	Sc-IS	[>	1611004.064		ppb	0.231			1411296.713
66	Zn	|	3424.856	1.671407	ppb	4.649	5.565		461.119
86	Sr	|	1319.595	0.492261	ppb	7.797	7.640		-27.044
65	Cu	|	145.593	0.002422	ppb	44.321	982.655		121.836
69	Ga-IS	|	578902.278		ppb	0.502			533865.970
95	Mo	|	561434.237	199.454211	ppb	0.394	0.375		98.889
115	In-IS	[>	417392.282		ppb	1.156			379299.869
111	Cd	|	292.175	0.089863	ppb	31.762	32.402		12.015
118	Sn	|	7431.934	0.612753	ppb	3.504	6.574		2049.036
121	Sb	|	2150.162	0.187589	ppb	0.820	2.533		496.675
135	Ba	|	601.124	0.257741	ppb	12.229	12.674		42.222
165	Ho-IS	|	444750.809		ppb	1.898			393265.360
159	Tb-IS	[>	510261.861		ppb	1.970			448893.554
207	Pb	|	2597.870	0.073625	ppb	4.649	6.776		236.667
203	Tl	|	683.350	0.063834	ppb	12.446	13.041		23.333
209	Bi-IS	|	265168.642		ppb	1.295			261666.154
51	V	|	151.112	0.158174	ppb	17.830	19.355		7.778
59	Co	|	233.335	0.081532	ppb	6.547	7.345		33.333
60	Ni	|	612.236	0.395771	ppb	16.464	18.027		44.445
75	As	|	1272.632	0.117571	ppb	2.785	49.811		1190.311
71	Ga-ISK	[>	126754.305		ppb	0.554			125245.540
82	Se-2	|	9.510	0.099257	ppb	67.744	107.968		3.541
107	Ag-1	|	2495.774	0.257169	ppb	1.853	2.974		907.807
115	In-ISK	|	123970.251		ppb	0.525			125904.181
45	Sc-ISK	[>	301181.937		ppb	0.952			287058.999
23	Na	|	17520081.372	24797.324788	ppb	0.813	1.651		941.698
39	K	|	15434310.319	10095.730537	ppb	0.446	1.080		119753.168
24	Mg	|	7429090.119	9664.202244	ppb	0.541	0.590		125.001
159	Tb-ISK	|	269442.802		ppb	1.176			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Thursday, January 02, 2020 11:16:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\ICSAB-30517.018

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	[> 45777.675		ppb	0.703		46054.118
9	Be	84.445	0.052104	ppb	9.116	11.783	14.444
10	B	3886.084	0.064053	ppb	2.934	585.250	3886.084
27	Al	79071335.668	10551.151234	ppb	1.283	0.815	2734.706
43	Ca-2	729317.685	33474.235936	ppb	1.959	2.663	50.000
49	Ti	155360.273	226.404195	ppb	0.984	1.627	140.001
52	Cr	249624.336	21.877146	ppb	0.717	1.269	12955.874
55	Mn	400323.788	22.721854	ppb	0.049	0.657	608.902
57	Fe	9968450.804	24292.040964	ppb	0.460	2.030	14724.252
45	Sc-IS	[> 1680916.571		ppb	2.305		1411296.713
66	Zn	20879.692	11.240821	ppb	0.696	2.994	461.119
86	Sr	1296.772	0.464455	ppb	1.585	2.926	-27.044
65	Cu	56672.046	19.885740	ppb	0.597	1.742	121.836
69	Ga-IS	609133.418		ppb	0.504		533865.970
95	Mo	594430.836	202.420291	ppb	1.752	1.329	98.889
115	In-IS	[> 428352.507		ppb	0.640		379299.869
111	Cd	32250.933	10.140927	ppb	1.629	1.191	12.015
118	Sn	4592.964	0.262903	ppb	8.261	17.861	2049.036
121	Sb	2005.697	0.164722	ppb	7.415	11.041	496.675
135	Ba	492.231	0.201389	ppb	3.054	3.391	42.222
165	Ho-IS	456253.483		ppb	1.496		393265.360
159	Tb-IS	[> 518390.272		ppb	2.003		448893.554
207	Pb	1955.610	0.052288	ppb	15.890	17.752	236.667
203	Tl	504.454	0.045621	ppb	18.483	18.424	23.333
209	Bi-IS	272741.342		ppb	2.750		261666.154
51	V	19385.373	20.551127	ppb	2.849	3.214	7.778
59	Co	50088.774	19.651831	ppb	0.961	1.327	33.333
60	Ni	30128.410	20.162537	ppb	1.817	1.513	44.445
75	As	7618.795	10.582308	ppb	0.437	0.723	1190.311
71	Ga-ISK	[> 131894.968		ppb	0.408		125245.540
82	Se-2	619.522	9.947994	ppb	3.683	4.117	3.541
107	Ag-1	26623.709	4.022147	ppb	4.576	4.473	907.807
115	In-ISK	130224.019		ppb	0.538		125904.181
45	Sc-ISK	[> 316315.317		ppb	1.647		287058.999
23	Na	17737662.820	23905.100142	ppb	0.521	1.315	941.698
39	K	15715106.740	9786.008285	ppb	0.288	1.441	119753.168
24	Mg	7507182.909	9299.278062	ppb	0.654	0.994	125.001
159	Tb-ISK	282151.141		ppb	0.593		261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, January 02, 2020 11:21:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCB-23446.019

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[>		46349.523		ppb		1.480		46054.118
9	Be	|		37.778	0.017093	ppb	13.478	24.075		14.444
10	B	|		4027.235	0.310189	ppb	3.123	140.728		3886.084
27	Al	|		38186.839	4.674384	ppb	9.622	11.613		2734.706
43	Ca-2	|		426.673	17.102037	ppb	20.843	25.124		50.000
49	Ti	|		332.226	0.276431	ppb	18.401	33.844		140.001
52	Cr	|		15797.625	0.252397	ppb	3.142	26.076		12955.874
55	Mn	|		1407.848	0.044694	ppb	11.760	22.180		608.902
57	Fe	[		21732.112	11.983642	ppb	5.992	24.910		14724.252
45	Sc-IS	>		1627250.307		ppb	2.040			1411296.713
66	Zn	|		622.236	0.051382	ppb	9.222	50.501		461.119
86	Sr	|		72.970	0.037456	ppb	37.863	25.253		-27.044
65	Cu	|		275.361	0.048863	ppb	12.287	21.123		121.836
69	Ga-IS	|		590119.519		ppb	1.180			533865.970
95	Mo	|		2197.947	0.733539	ppb	4.985	6.568		98.889
115	In-IS	[>		424521.431		ppb	1.859			379299.869
111	Cd	|		93.162	0.025225	ppb	23.770	25.447		12.015
118	Sn	|		3075.887	0.090928	ppb	5.463	16.864		2049.036
121	Sb	|		872.249	0.036388	ppb	1.103	2.094		496.675
135	Ba	|		71.111	0.010957	ppb	27.063	83.059		42.222
165	Ho-IS	|		440058.622		ppb	3.313			393265.360
159	Tb-IS	[>		505297.513		ppb	1.867			448893.554
207	Pb	|		1041.127	0.024743	ppb	8.327	12.730		236.667
203	Tl	|		277.781	0.024648	ppb	12.020	11.275		23.333
209	Bi-IS	|		279243.209		ppb	1.573			261666.154
51	V	|		54.445	0.047667	ppb	25.490	30.077		7.778
59	Co	|		112.223	0.029233	ppb	44.982	66.222		33.333
60	Ni	|		58.889	0.007123	ppb	40.158	215.492		44.445
75	As	|		1292.950	0.014205	ppb	2.307	300.108		1190.311
71	Ga-ISK	>		135119.334		ppb	0.352			125245.540
82	Se-2	|		4.179	0.005694	ppb	27.360	319.616		3.541
107	Ag-1	|		3652.690	0.408883	ppb	5.279	6.739		907.807
115	In-ISK	|		130567.244		ppb	0.819			125904.181
45	Sc-ISK	[>		311663.046		ppb	0.456			287058.999
23	Na	|		11779.909	14.711641	ppb	12.916	14.053		941.698
39	K	|		147795.030	11.329798	ppb	0.205	2.272		119753.168
24	Mg	|		5384.362	6.597318	ppb	14.264	14.548		125.001
159	Tb-ISK	|		275272.706		ppb	1.796			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, January 02, 2020 11:24:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\ICVL-210771.020

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>		45396.460		ppb		0.298		46054.118
9	Be	|		1305.615	0.967625	ppb	3.046	3.169		14.444
10	B	|		23420.299	52.827714	ppb	2.183	2.805		3886.084
27	Al	|		433321.481	57.947183	ppb	1.645	1.580		2734.706
43	Ca-2	|		1485.078	66.445430	ppb	8.458	8.626		50.000
49	Ti	|		1026.704	1.306889	ppb	6.518	7.253		140.001
52	Cr	|		28048.620	1.423577	ppb	0.513	1.049		12955.874
55	Mn	|		20467.986	1.138846	ppb	0.729	1.011		608.902
57	Fe	[		40378.131	58.277688	ppb	3.106	6.467		14724.252
45	Sc-IS	>		1639013.649		ppb	0.880			1411296.713
66	Zn	|		9732.203	5.212658	ppb	1.246	1.352		461.119
86	Sr	|		2822.109	1.022257	ppb	6.589	6.233		-27.044
65	Cu	|		3153.120	1.086295	ppb	4.896	5.144		121.836
69	Ga-IS	|		591485.473		ppb	1.208			533865.970
95	Mo	|		3909.424	1.325591	ppb	4.166	4.993		98.889
115	In-IS	>		422018.347		ppb	0.984			379299.869
111	Cd	|		3215.488	1.022700	ppb	5.021	5.637		12.015
118	Sn	|		10539.443	0.966409	ppb	1.615	1.555		2049.036
121	Sb	|		9224.090	1.003159	ppb	2.681	3.116		496.675
135	Ba	|		2241.287	1.008946	ppb	2.683	2.383		42.222
165	Ho-IS	|		438601.286		ppb	2.324			393265.360
159	Tb-IS	>		499821.174		ppb	1.997			448893.554
207	Pb	|		30623.975	0.979511	ppb	3.502	4.403		236.667
203	Tl	|		9957.915	0.985250	ppb	2.650	1.097		23.333
209	Bi-IS	|		275654.165		ppb	0.747			261666.154
51	V	|		938.920	0.957500	ppb	3.202	2.787		7.778
59	Co	|		2552.451	0.958841	ppb	5.130	5.696		33.333
60	Ni	|		1647.873	1.040524	ppb	0.766	1.252		44.445
75	As	|		1983.189	1.115212	ppb	5.259	14.156		1190.311
71	Ga-ISK	>		135916.855		ppb	0.571			125245.540
82	Se-2	|		63.526	0.934627	ppb	24.747	25.845		3.541
107	Ag-1	|		6241.363	0.799341	ppb	0.558	0.091		907.807
115	In-ISK	|		132997.213		ppb	1.715			125904.181
45	Sc-ISK	>		316355.870		ppb	1.118			287058.999
23	Na	|		43880.684	57.717525	ppb	3.693	2.766		941.698
39	K	|		219491.188	54.945828	ppb	0.914	0.912		119753.168
24	Mg	|		42379.445	52.312292	ppb	1.575	0.472		125.001
159	Tb-ISK	|		279069.532		ppb	0.772			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 440-257660-F-2-A SD @500

Autosampler Position: 104

Sample Date/Time: Thursday, January 02, 2020 11:36:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\440-257660-F-2-A SD @500.021

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>		47144.337		ppb		1.238		46054.118
9	Be	|		247.780	0.168208	ppb	6.636	8.261		14.444
10	B	|		5040.890	2.756489	ppb	4.492	16.019		3886.084
27	Al	|		3072991.122	397.870287	ppb	1.654	2.152		2734.706
43	Ca-2	|		23073.623	1025.972192	ppb	1.922	1.221		50.000
49	Ti	|		402.228	0.367308	ppb	13.900	23.414		140.001
52	Cr	|		19661.298	0.574354	ppb	0.443	4.994		12955.874
55	Mn	|		4839491.839	267.119040	ppb	0.454	1.694		608.902
57	Fe	[		19409.845	3.369911	ppb	1.419	21.241		14724.252
45	Sc-IS	>		1724719.441		ppb	1.244			1411296.713
66	Zn	|		124382.570	66.692089	ppb	1.658	1.331		461.119
86	Sr	|		24543.036	8.368203	ppb	1.108	1.430		-27.044
65	Cu	|		1874.911	0.591405	ppb	7.442	7.172		121.836
69	Ga-IS	|		609494.160		ppb	0.771			533865.970
95	Mo	|		525.565	0.134482	ppb	10.467	15.029		98.889
115	In-IS	>		430405.998		ppb	1.091			379299.869
111	Cd	|		2569.128	0.799910	ppb	3.911	2.851		12.015
118	Sn	|		3082.555	0.087000	ppb	3.090	16.772		2049.036
121	Sb	|		735.575	0.019471	ppb	6.818	24.401		496.675
135	Ba	|		161.112	0.051011	ppb	18.544	26.032		42.222
165	Ho-IS	|		454839.584		ppb	1.593			393265.360
159	Tb-IS	>		522347.949		ppb	1.192			448893.554
207	Pb	|		72005.146	2.213552	ppb	1.807	1.074		236.667
203	Tl	|		72.222	0.004292	ppb	23.230	39.050		23.333
209	Bi-IS	|		275061.330		ppb	2.086			261666.154
51	V	|		23.333	0.014824	ppb	28.571	43.965		7.778
59	Co	|		9164.050	3.410339	ppb	1.944	2.269		33.333
60	Ni	|		6607.083	4.183368	ppb	1.120	1.526		44.445
75	As	|		1386.669	0.109710	ppb	3.053	47.612		1190.311
71	Ga-ISK	>		138595.763		ppb	0.888			125245.540
82	Se-2	|		6.127	0.033906	ppb	111.634	310.840		3.541
107	Ag-1	|		598.901	-0.060498	ppb	5.631	8.298		907.807
115	In-ISK	|		134547.828		ppb	0.683			125904.181
45	Sc-ISK	>		330777.938		ppb	0.456			287058.999
23	Na	|		1894868.618	2440.480723	ppb	0.809	0.774		941.698
39	K	|		191838.385	32.332751	ppb	0.459	2.014		119753.168
24	Mg	|		866782.263	1026.502736	ppb	0.622	0.759		125.001
159	Tb-ISK	|		284520.113		ppb	0.635			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 440-257660-F-2-A @100

Autosampler Position: 105

Sample Date/Time: Thursday, January 02, 2020 11:39:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\440-257660-F-2-A @100.022

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	49530.181		ppb	1.945			46054.118
9	Be	|	1100.042	0.745141	ppb	3.687	4.967		14.444
10	B	|	11134.339	17.203886	ppb	2.108	6.416		3886.084
27	Al	|	15888560.399	1959.996597	ppb	1.091	2.956		2734.706
43	Ca-2	|	117650.821	4989.173738	ppb	0.664	1.460		50.000
49	Ti	|	950.032	1.077655	ppb	7.468	8.643		140.001
52	Cr	|	18767.876	0.413213	ppb	0.424	7.029		12955.874
55	Mn	|	24683715.818	1297.086700	ppb	0.324	1.982		608.902
57	Fe	[	22521.074	9.630179	ppb	1.574	13.050		14724.252
45	Sc-IS	>	1762493.928		ppb	1.811			1411296.713
66	Zn	|	635463.506	334.668139	ppb	0.988	0.994		461.119
86	Sr	|	127273.342	42.417115	ppb	1.698	0.679		-27.044
65	Cu	|	8991.853	2.965416	ppb	0.893	1.257		121.836
69	Ga-IS	|	645301.781		ppb	0.567			533865.970
95	Mo	|	474.452	0.113859	ppb	13.648	17.000		98.889
115	In-IS	>	444891.211		ppb	2.855			379299.869
111	Cd	|	12917.065	3.910099	ppb	1.288	2.973		12.015
118	Sn	|	2635.800	0.025997	ppb	7.328	90.665		2049.036
121	Sb	|	1051.150	0.051455	ppb	1.201	3.995		496.675
135	Ba	|	544.455	0.216294	ppb	12.862	15.701		42.222
165	Ho-IS	|	479484.207		ppb	2.682			393265.360
159	Tb-IS	>	545165.831		ppb	3.334			448893.554
207	Pb	|	371056.322	10.966997	ppb	1.783	1.601		236.667
203	Tl	|	70.000	0.003820	ppb	25.198	45.463		23.333
209	Bi-IS	|	283790.229		ppb	1.219			261666.154
51	V	|	36.667	0.027658	ppb	32.778	43.552		7.778
59	Co	|	45461.112	16.659544	ppb	0.740	1.532		33.333
60	Ni	|	32941.273	20.593237	ppb	1.202	0.660		44.445
75	As	|	1440.620	0.153646	ppb	6.517	100.462		1190.311
71	Ga-ISK	>	141202.232		ppb	1.076			125245.540
82	Se-2	|	37.015	0.499143	ppb	24.553	28.361		3.541
107	Ag-1	|	571.123	-0.066199	ppb	14.012	17.888		907.807
115	In-ISK	|	136017.273		ppb	0.573			125904.181
45	Sc-ISK	>	332521.044		ppb	0.453			287058.999
23	Na	|	9974010.288	12784.584059	ppb	0.205	0.344		941.698
39	K	|	408998.886	161.435689	ppb	0.346	0.174		119753.168
24	Mg	|	4428990.394	5218.407530	ppb	0.673	1.086		125.001
159	Tb-ISK	|	297587.011		ppb	0.696			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Tb-IS 159

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 440-257660-F-2-B MS @100

Autosampler Position: 106

Sample Date/Time: Thursday, January 02, 2020 11:42:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\440-257660-F-2-B MS @100.023

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[>		50850.362		ppb			1.886			46054.118
9	Be	|		2490.217	1.655013	ppb			3.473	2.682		14.444
10	B	|		11457.928	17.256942	ppb			2.309	3.508		3886.084
27	Al	|		16039069.622	1926.778078	ppb			0.619	1.339		2734.706
43	Ca-2	|		119356.606	4929.532288	ppb			1.460	0.852		50.000
49	Ti	|		1367.843	1.592160	ppb			5.991	4.887		140.001
52	Cr	|		30048.236	1.310441	ppb			0.815	5.169		12955.874
55	Mn	|		24533355.118	1255.793479	ppb			0.652	2.526		608.902
57	Fe	[		44345.402	59.565542	ppb			1.774	1.742		14724.252
45	Sc-IS	>		1777053.140		ppb			1.053			1411296.713
66	Zn	|		641067.053	334.815857	ppb			1.100	0.125		461.119
86	Sr	|		132248.046	43.712794	ppb			1.051	0.519		-27.044
65	Cu	|		11958.793	3.927784	ppb			2.280	2.798		121.836
69	Ga-IS	|		660931.430		ppb			0.532			533865.970
95	Mo	|		3168.130	0.980707	ppb			4.837	5.735		98.889
115	In-IS	>		455124.913		ppb			0.412			379299.869
111	Cd	|		16301.540	4.822108	ppb			1.412	1.120		12.015
118	Sn	|		3448.196	0.107318	ppb			9.610	32.831		2049.036
121	Sb	|		8518.095	0.849690	ppb			2.112	1.833		496.675
135	Ba	|		2754.711	1.153082	ppb			6.452	6.901		42.222
165	Ho-IS	|		488560.130		ppb			2.406			393265.360
159	Tb-IS	>		551874.115		ppb			1.679			448893.554
207	Pb	|		398414.183	11.628606	ppb			1.913	0.313		236.667
203	Tl	|		9149.597	0.819615	ppb			2.138	2.416		23.333
209	Bi-IS	|		284718.272		ppb			0.809			261666.154
51	V	|		967.811	0.928675	ppb			4.689	5.619		7.778
59	Co	|		48225.716	17.271737	ppb			1.291	0.400		33.333
60	Ni	|		35079.691	21.434928	ppb			1.514	0.593		44.445
75	As	|		2093.971	1.094389	ppb			0.591	1.195		1190.311
71	Ga-ISK	>		144466.841		ppb			0.947			125245.540
82	Se-2	|		73.973	1.029968	ppb			12.665	12.489		3.541
107	Ag-1	|		1218.941	0.024663	ppb			6.926	55.066		907.807
115	In-ISK	|		139014.575		ppb			0.239			125904.181
45	Sc-ISK	>		338666.300		ppb			0.673			287058.999
23	Na	|		10108862.909	12722.608940	ppb			0.532	0.904		941.698
39	K	|		422847.990	165.125574	ppb			0.572	0.408		119753.168
24	Mg	|		4533299.373	5244.293433	ppb			0.447	0.374		125.001
159	Tb-ISK	|		304378.732		ppb			1.173			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Tb-IS 159

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 440-257660-F-2-C MSD @100

Autosampler Position: 107

Sample Date/Time: Thursday, January 02, 2020 11:45:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\440-257660-F-2-C MSD @100.024

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	[> 50039.723		ppb	1.608		46054.118
9	Be	| 2441.320	1.648963	ppb	1.224	1.176	14.444
10	B	| 11352.287	17.447582	ppb	0.898	3.061	3886.084
27	Al	| 15792330.536	1927.681917	ppb	1.593	1.419	2734.706
43	Ca-2	| 113996.417	4784.970623	ppb	1.415	2.323	50.000
49	Ti	| 1376.733	1.635241	ppb	4.945	7.311	140.001
52	Cr	| 29199.812	1.278743	ppb	0.180	2.771	12955.874
55	Mn	| 23923889.290	1244.218406	ppb	0.309	1.337	608.902
57	Fe	[42573.347	56.761380	ppb	1.045	2.824	14724.252
45	Sc-IS	[> 1754386.497		ppb	1.594		1411296.713
66	Zn	| 624263.148	330.273499	ppb	0.900	0.725	461.119
86	Sr	| 129585.099	43.382282	ppb	2.382	0.873	-27.044
65	Cu	| 11693.053	3.889608	ppb	0.682	1.117	121.836
69	Ga-IS	| 657633.285		ppb	0.594		533865.970
95	Mo	| 3000.315	0.938999	ppb	0.484	1.466	98.889
115	In-IS	[> 449304.216		ppb	1.267		379299.869
111	Cd	| 16079.420	4.817922	ppb	2.196	1.448	12.015
118	Sn	| 3139.234	0.078237	ppb	4.737	19.557	2049.036
121	Sb	| 8584.802	0.868727	ppb	2.522	1.481	496.675
135	Ba	| 2651.357	1.123618	ppb	1.949	2.403	42.222
165	Ho-IS	| 484881.673		ppb	2.579		393265.360
159	Tb-IS	[> 546612.664		ppb	2.705		448893.554
207	Pb	| 392593.770	11.573248	ppb	1.071	2.055	236.667
203	Tl	| 8890.544	0.804002	ppb	2.341	1.174	23.333
209	Bi-IS	| 287638.776		ppb	2.020		261666.154
51	V	| 974.478	0.929735	ppb	9.732	10.684	7.778
59	Co	| 47380.667	16.868812	ppb	0.603	0.983	33.333
60	Ni	| 34589.603	21.010704	ppb	0.469	0.953	44.445
75	As	| 1983.480	0.908770	ppb	6.190	20.342	1190.311
71	Ga-ISK	[> 145332.211		ppb	0.843		125245.540
82	Se-2	| 78.349	1.087169	ppb	18.790	19.029	3.541
107	Ag-1	| 1496.745	0.063074	ppb	4.885	17.157	907.807
115	In-ISK	| 138735.732		ppb	0.736		125904.181
45	Sc-ISK	[> 337279.765		ppb	1.000		287058.999
23	Na	| 9919415.440	12535.751457	ppb	0.300	0.853	941.698
39	K	| 418342.576	163.501064	ppb	0.343	0.988	119753.168
24	Mg	| 4445541.566	5164.110503	ppb	0.369	0.831	125.001
159	Tb-ISK	| 303943.429		ppb	0.716		261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Tb-IS 159

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 440-257660-F-2-A PDS @100

Autosampler Position: 108

Sample Date/Time: Thursday, January 02, 2020 11:47:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\440-257660-F-2-A PDS @100.025

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	49418.664		ppb	0.500			46054.118
9	Be	|	134930.924	92.861479	ppb	0.849	0.597		14.444
10	B	|	47974.882	108.506699	ppb	1.784	1.502		3886.084
27	Al	|	16275938.002	2011.616910	ppb	0.363	0.850		2734.706
43	Ca-2	|	228780.865	9723.970188	ppb	1.158	0.812		50.000
49	Ti	|	79505.102	107.210848	ppb	1.521	1.436		140.001
52	Cr	|	1215079.219	102.816663	ppb	0.919	1.082		12955.874
55	Mn	|	25575583.439	1346.677964	ppb	0.693	0.975		608.902
57	Fe	[	1936062.052	4532.807521	ppb	0.236	1.748		14724.252
45	Sc-IS	[>	1736135.663		ppb	1.977			1411296.713
66	Zn	|	805727.552	430.861605	ppb	1.253	0.726		461.119
86	Sr	|	404883.204	136.951044	ppb	2.374	0.532		-27.044
65	Cu	|	296329.610	100.873063	ppb	0.531	1.532		121.836
69	Ga-IS	|	690141.654		ppb	1.479			533865.970
95	Mo	|	294417.481	97.053484	ppb	0.790	1.564		98.889
115	In-IS	[>	445048.450		ppb	1.924			379299.869
111	Cd	|	354236.626	107.258190	ppb	1.443	0.665		12.015
118	Sn	|	860827.096	95.238765	ppb	2.195	0.352		2049.036
121	Sb	|	794745.432	87.115620	ppb	1.877	1.165		496.675
135	Ba	|	234723.919	102.344193	ppb	1.212	2.038		42.222
165	Ho-IS	|	484429.406		ppb	2.332			393265.360
159	Tb-IS	[>	543441.710		ppb	1.501			448893.554
207	Pb	|	3420159.704	101.451133	ppb	1.127	1.307		236.667
203	Tl	|	969908.070	88.491682	ppb	1.898	0.548		23.333
209	Bi-IS	|	282429.537		ppb	1.814			261666.154
51	V	|	98854.188	97.357004	ppb	0.612	2.454		7.778
59	Co	|	300800.522	109.670472	ppb	0.276	2.584		33.333
60	Ni	|	189564.085	117.950335	ppb	1.640	1.261		44.445
75	As	|	66279.951	100.252454	ppb	0.291	2.324		1190.311
71	Ga-ISK	[>	142069.899		ppb	2.511			125245.540
82	Se-2	|	6588.901	98.760096	ppb	2.013	1.181		3.541
107	Ag-1	|	305215.057	44.272053	ppb	0.876	2.362		907.807
115	In-ISK	|	137826.437		ppb	0.102			125904.181
45	Sc-ISK	[>	331933.478		ppb	1.203			287058.999
23	Na	|	10435582.573	13400.785064	ppb	0.470	0.940		941.698
39	K	|	1960624.693	1090.320642	ppb	0.711	0.536		119753.168
24	Mg	|	7876934.176	9297.701889	ppb	0.574	0.750		125.001
159	Tb-ISK	|	300689.026		ppb	0.892			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Tb-IS 159

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, January 02, 2020 11:50:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\b.026

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	46945.906		ppb	1.119			46054.118
9	Be	|	74.445	0.043405	ppb	34.780	44.630		14.444
10	B	|	2192.391	-4.613238	ppb	7.173	8.586		3886.084
27	Al	|	23630.655	2.713237	ppb	3.495	5.219		2734.706
43	Ca-2	|	270.003	9.801814	ppb	8.486	10.284		50.000
49	Ti	|	317.781	0.248644	ppb	11.216	18.305		140.001
52	Cr	|	16445.016	0.291917	ppb	0.694	7.213		12955.874
55	Mn	|	25779.919	1.394948	ppb	2.777	3.977		608.902
57	Fe	[	19844.886	6.819344	ppb	1.146	3.571		14724.252
45	Sc-IS	[>	1640763.581		ppb	1.604			1411296.713
66	Zn	|	1494.523	0.542415	ppb	5.073	6.112		461.119
86	Sr	|	231.861	0.094063	ppb	26.564	22.384		-27.044
65	Cu	|	843.192	0.252816	ppb	0.213	1.667		121.836
69	Ga-IS	|	624712.924		ppb	0.612			533865.970
95	Mo	|	6505.926	2.230798	ppb	2.975	4.610		98.889
115	In-IS	[>	432457.654		ppb	1.669			379299.869
111	Cd	|	155.227	0.044110	ppb	9.423	10.466		12.015
118	Sn	|	22629.028	2.318223	ppb	2.635	4.740		2049.036
121	Sb	|	39851.077	4.436439	ppb	2.043	3.791		496.675
135	Ba	|	146.667	0.044145	ppb	27.928	40.438		42.222
165	Ho-IS	|	442921.288		ppb	2.168			393265.360
159	Tb-IS	[>	501800.017		ppb	2.053			448893.554
207	Pb	|	3144.580	0.092533	ppb	1.134	1.395		236.667
203	Tl	|	738.908	0.070453	ppb	4.949	5.336		23.333
209	Bi-IS	|	281628.997		ppb	0.633			261666.154
51	V	|	45.556	0.036780	ppb	23.521	28.954		7.778
59	Co	|	130.001	0.034248	ppb	9.245	12.024		33.333
60	Ni	|	183.335	0.084267	ppb	7.925	9.802		44.445
75	As	|	1411.677	0.125815	ppb	1.358	44.725		1190.311
71	Ga-ISK	[>	140109.341		ppb	1.214			125245.540
82	Se-2	|	28.849	0.377229	ppb	60.254	69.619		3.541
107	Ag-1	|	13772.216	1.880896	ppb	7.602	6.886		907.807
115	In-ISK	|	136539.650		ppb	1.159			125904.181
45	Sc-ISK	[>	321607.862		ppb	1.082			287058.999
23	Na	|	14325.574	17.596903	ppb	11.333	12.764		941.698
39	K	|	137978.710	2.357233	ppb	0.722	19.753		119753.168
24	Mg	|	6948.369	8.299201	ppb	10.681	11.646		125.001
159	Tb-ISK	|	284152.693		ppb	1.696			261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, January 02, 2020 11:53:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCV-210770.027

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[>	45896.953		ppb		1.374		46054.118
9	Be	|	134563.089	99.714962	ppb		1.427	0.124	14.444
10	B	|	99293.893	254.542752	ppb		0.764	1.681	3886.084
27	Al	|	795718.958	105.558210	ppb		1.166	1.713	2734.706
43	Ca-2	|	120682.656	5523.170191	ppb		1.219	2.321	50.000
49	Ti	|	74135.227	107.660563	ppb		1.534	2.426	140.001
52	Cr	|	1138558.313	103.758969	ppb		0.413	1.727	12955.874
55	Mn	|	1900996.628	107.754107	ppb		0.419	1.187	608.902
57	Fe	[	2041727.434	5113.895801	ppb		0.770	1.512	14724.252
45	Sc-IS	>	1624358.651		ppb		1.112		1411296.713
66	Zn	|	181143.457	103.296654	ppb		0.476	0.720	461.119
86	Sr	|	273626.036	98.920071	ppb		2.600	1.566	-27.044
65	Cu	|	279758.947	101.773689	ppb		0.628	1.235	121.836
69	Ga-IS	|	620269.905		ppb		0.607		533865.970
95	Mo	|	277186.802	97.643691	ppb		0.983	0.153	98.889
115	In-IS	>	421393.566		ppb		1.061		379299.869
111	Cd	|	315314.635	100.831856	ppb		0.321	0.973	12.015
118	Sn	|	822884.572	96.157709	ppb		1.344	0.891	2049.036
121	Sb	|	851827.248	98.621836	ppb		0.622	0.798	496.675
135	Ba	|	214858.139	98.924285	ppb		0.366	0.711	42.222
165	Ho-IS	|	436615.397		ppb		1.845		393265.360
159	Tb-IS	>	499825.186		ppb		1.720		448893.554
207	Pb	|	3005017.719	96.915960	ppb		0.842	0.882	236.667
203	Tl	|	988763.119	98.096004	ppb		1.000	0.716	23.333
209	Bi-IS	|	269921.722		ppb		0.253		261666.154
51	V	|	92754.660	94.316955	ppb		1.874	1.487	7.778
59	Co	|	249862.196	94.047417	ppb		1.868	0.618	33.333
60	Ni	|	155080.539	99.658115	ppb		0.130	1.520	44.445
75	As	|	63503.571	99.154597	ppb		0.988	0.473	1190.311
71	Ga-ISK	>	137547.982		ppb		1.400		125245.540
82	Se-2	|	6309.218	97.679616	ppb		1.407	2.183	3.541
107	Ag-1	|	644459.706	96.701080	ppb		0.769	0.832	907.807
115	In-ISK	|	133601.142		ppb		0.857		125904.181
45	Sc-ISK	>	323462.151		ppb		0.511		287058.999
23	Na	|	3737855.198	4924.415940	ppb		0.914	0.746	941.698
39	K	|	8276824.185	4999.167192	ppb		1.194	0.879	119753.168
24	Mg	|	4006291.646	4852.274504	ppb		1.371	0.906	125.001
159	Tb-ISK	|	282643.451		ppb		0.804		261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, January 02, 2020 11:57:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCB-23446.028

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc. RSD	Blank Intensity
6	Li-IS	[>	45631.749		ppb	4.483		46054.118
9	Be	|	64.445	0.037262	ppb	16.627	17.199	14.444
10	B	|	4369.558	1.403186	ppb	3.321	35.456	3886.084
27	Al	|	11253.323	1.144196	ppb	3.671	1.798	2734.706
43	Ca-2	|	141.667	4.251933	ppb	11.346	18.857	50.000
49	Ti	|	222.224	0.123053	ppb	8.261	30.502	140.001
52	Cr	|	16459.602	0.343765	ppb	14.083	82.683	12955.874
55	Mn	|	12882.476	0.701831	ppb	2.863	7.741	608.902
57	Fe	[	16766.504	1.024946	ppb	2.492	149.731	14724.252
45	Sc-IS	>	1570743.515		ppb	4.263		1411296.713
66	Zn	|	940.031	0.252845	ppb	3.250	8.487	461.119
86	Sr	|	151.722	0.067634	ppb	37.121	28.124	-27.044
65	Cu	|	369.237	0.087664	ppb	14.878	18.587	121.836
69	Ga-IS	|	579083.626		ppb	5.203		533865.970
95	Mo	|	2032.367	0.701792	ppb	2.064	6.391	98.889
115	In-IS	[>	413799.784		ppb	4.086		379299.869
111	Cd	|	175.733	0.052711	ppb	32.350	31.785	12.015
118	Sn	|	9343.057	0.849559	ppb	3.689	7.652	2049.036
121	Sb	|	4231.739	0.436306	ppb	4.340	8.955	496.675
135	Ba	|	163.334	0.055440	ppb	17.792	30.576	42.222
165	Ho-IS	|	430792.534		ppb	2.964		393265.360
159	Tb-IS	[>	491944.300		ppb	3.092		448893.554
207	Pb	|	2576.778	0.076336	ppb	20.461	26.391	236.667
203	Tl	|	608.902	0.058733	ppb	8.236	5.522	23.333
209	Bi-IS	|	273748.360		ppb	4.697		261666.154
51	V	|	56.667	0.050229	ppb	5.882	8.755	7.778
59	Co	|	124.445	0.033922	ppb	28.641	38.276	33.333
60	Ni	|	161.112	0.074477	ppb	32.141	45.622	44.445
75	As	|	1341.294	0.101655	ppb	5.121	135.355	1190.311
71	Ga-ISK	>	134642.783		ppb	1.859		125245.540
82	Se-2	|	14.174	0.162772	ppb	108.759	148.522	3.541
107	Ag-1	|	4283.976	0.507905	ppb	3.187	4.035	907.807
115	In-ISK	|	133213.818		ppb	0.704		125904.181
45	Sc-ISK	[>	311788.035		ppb	0.765		287058.999
23	Na	|	8657.660	10.446827	ppb	14.591	17.415	941.698
39	K	|	142219.996	7.744783	ppb	0.637	13.951	119753.168
24	Mg	|	4937.538	6.039655	ppb	17.770	19.084	125.001
159	Tb-ISK	|	275819.282		ppb	0.640		261718.619

QC Out of Limits

AnalyteMassOut of Limits Message

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Thursday, January 02, 2020 09:51:31

File Name:

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1247	2062	0.701	
Mg 24	23.985	24.025	4625	2062	0.685	
In 115	114.904	114.925	22808	2058	0.693	
U	238.050	238.025	47439	2049	0.698	

Report Date/Time: Thursday, January 02, 2020 09:53:55

Page 1

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, January 02, 2020 18:22:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\ICIS-23447.173

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		42758.339		ppb			0.240	
9	Be	|		8.889		ppb			78.062	
10	B	|		9087.334		ppb			1.405	
27	Al	|		7486.432		ppb			14.308	
43	Ca-2	|		278.336		ppb			21.953	
49	Ti	|		202.224		ppb			25.607	
52	Cr	|		16796.538		ppb			2.190	
55	Mn	|		927.808		ppb			11.163	
57	Fe	|		28665.406		ppb			2.076	
45	Sc-IS	|>		1786230.854		ppb			1.329	
66	Zn	|		3075.905		ppb			28.438	
86	Sr	|		82.957		ppb			19.194	
65	Cu	|		309.199		ppb			7.483	
69	Ga-IS	|		558624.946		ppb			1.804	
95	Mo	|		408.895		ppb			18.985	
115	In-IS	|>		437319.269		ppb			1.707	
111	Cd	|		15.808		ppb			56.008	
118	Sn	|		5080.905		ppb			4.564	
121	Sb	|		1859.010		ppb			8.084	
135	Ba	|		4239.556		ppb			30.027	
165	Ho-IS	|		502133.360		ppb			2.383	
159	Tb-IS	|>		570764.335		ppb			1.287	
207	Pb	|		421.114		ppb			12.574	
203	Tl	|		47.778		ppb			14.523	
209	Bi-IS	|		297460.042		ppb			1.762	
51	V	|		16.667		ppb			34.641	
59	Co	|		36.667		ppb			24.052	
60	Ni	|		45.556		ppb			48.720	
75	As	|		1541.469		ppb			2.955	
71	Ga-ISK	|>		132451.313		ppb			1.785	
82	Se-2	|		-1.162		ppb			851.156	
107	Ag-1	|		1951.244		ppb			1.754	
115	In-ISK	|		129028.634		ppb			0.574	
45	Sc-ISK	|>		300561.194		ppb			0.665	
23	Na	|		7050.078		ppb			6.918	
39	K	|		150074.206		ppb			0.939	
24	Mg	|		303.337		ppb			16.511	
159	Tb-ISK	|		273347.968		ppb			1.210	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, January 02, 2020 18:25:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\IC-210761.174

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	41655.090		ppb		0.915		42758.339
9	Be	|	255729.788	200.000000	ppb		0.647	1.411	8.889
10	B	|	186348.963	500.000000	ppb		2.008	1.242	9087.334
27	Al	|	1414818.681	200.000000	ppb		1.379	0.883	7486.432
43	Ca-2	|	251672.804	10200.000000	ppb		1.416	1.497	278.336
49	Ti	|	145525.278	200.000000	ppb		0.913	0.629	202.224
52	Cr	|	2268432.868	200.000000	ppb		0.461	1.320	16796.538
55	Mn	|	3690428.284	200.000000	ppb		0.454	1.342	927.808
57	Fe	|	3988842.345	10200.000000	ppb		0.596	1.115	28665.406
45	Sc-IS	>	1730135.944		ppb		0.969		1786230.854
66	Zn	|	342935.814	200.000000	ppb		1.605	0.857	3075.905
86	Sr	|	555797.484	200.000000	ppb		2.940	1.999	82.957
65	Cu	|	545670.174	200.000000	ppb		1.240	1.017	309.199
69	Ga-IS	|	595324.871		ppb		2.167		558624.946
95	Mo	|	512670.333	200.000000	ppb		2.788	1.913	408.895
115	In-IS	>	416839.790		ppb		3.337		437319.269
111	Cd	|	607517.058	200.000000	ppb		2.474	0.986	15.808
118	Sn	|	1697075.543	200.000000	ppb		1.854	1.852	5080.905
121	Sb	|	1716245.205	200.000000	ppb		1.865	1.556	1859.010
135	Ba	|	454304.301	200.000000	ppb		0.806	2.847	4239.556
165	Ho-IS	|	493050.380		ppb		1.837		502133.360
159	Tb-IS	>	561847.752		ppb		1.810		570764.335
207	Pb	|	6343185.574	200.000000	ppb		0.364	1.750	421.114
203	Tl	|	2109897.020	200.000000	ppb		0.917	1.013	47.778
209	Bi-IS	|	284642.649		ppb		1.525		297460.042
51	V	|	181820.538	200.000000	ppb		3.251	4.025	16.667
59	Co	|	484131.050	200.000000	ppb		2.490	3.148	36.667
60	Ni	|	273163.811	200.000000	ppb		1.167	1.371	45.556
75	As	|	120072.531	200.000000	ppb		0.833	0.655	1541.469
71	Ga-ISK	>	129423.704		ppb		1.447		132451.313
82	Se-2	|	11573.530	200.000000	ppb		0.688	1.907	-1.162
107	Ag-1	|	1202739.979	200.000000	ppb		1.534	2.962	1951.244
115	In-ISK	|	126336.010		ppb		0.849		129028.634
45	Sc-ISK	>	303966.507		ppb		0.408		300561.194
23	Na	|	7058424.031	10200.000000	ppb		0.732	1.038	7050.078
39	K	|	16286131.838	10200.000000	ppb		1.252	1.367	150074.206
24	Mg	|	7756277.358	10200.000000	ppb		0.570	0.974	303.337
159	Tb-ISK	|	276029.896		ppb		0.224		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, January 02, 2020 18:27:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCV-210770.175

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40927.440		ppb		1.474		42758.339
9	Be	|		126026.794	100.288856	ppb	0.397	1.781		8.889
10	B	|		94603.360	246.370775	ppb	1.393	3.127		9087.334
27	Al	|		698849.293	100.037032	ppb	2.143	3.580		7486.432
43	Ca-2	|		124555.665	5131.246616	ppb	0.888	1.566		278.336
49	Ti	|		73105.494	102.096167	ppb	1.512	1.177		202.224
52	Cr	|		1062073.390	94.527813	ppb	0.501	1.945		16796.538
55	Mn	|		1754636.529	96.737961	ppb	0.677	2.114		927.808
57	Fe	|		1925050.317	4973.183996	ppb	1.349	2.790		28665.406
45	Sc-IS	>		1700443.050		ppb	1.441			1786230.854
66	Zn	|		173246.438	101.971662	ppb	0.815	2.051		3075.905
86	Sr	|		278726.806	102.056223	ppb	1.443	1.562		82.957
65	Cu	|		274615.759	102.363174	ppb	0.641	0.832		309.199
69	Ga-IS	|		565847.583		ppb	2.484			558624.946
95	Mo	|		263239.089	104.429891	ppb	1.505	1.392		408.895
115	In-IS	>		417672.273		ppb	2.385			437319.269
111	Cd	|		304069.801	99.930988	ppb	0.859	3.188		15.808
118	Sn	|		856968.960	100.489667	ppb	1.264	1.220		5080.905
121	Sb	|		846992.953	98.381391	ppb	1.541	0.842		1859.010
135	Ba	|		226390.984	98.524347	ppb	1.034	1.368		4239.556
165	Ho-IS	|		489766.707		ppb	2.252			502133.360
159	Tb-IS	>		549679.029		ppb	2.630			570764.335
207	Pb	|		3180276.516	102.503798	ppb	0.582	2.121		421.114
203	Tl	|		1037066.415	100.490246	ppb	1.393	1.387		47.778
209	Bi-IS	|		284895.683		ppb	3.150			297460.042
51	V	|		89228.916	99.959304	ppb	0.720	0.751		16.667
59	Co	|		238099.114	100.183874	ppb	1.275	1.512		36.667
60	Ni	|		135173.333	100.800611	ppb	1.975	1.887		45.556
75	As	|		60423.330	101.290666	ppb	1.000	1.152		1541.469
71	Ga-ISK	>		127039.030		ppb	0.243			132451.313
82	Se-2	|		5953.435	104.802789	ppb	0.971	1.016		-1.162
107	Ag-1	|		600159.112	101.484757	ppb	1.917	1.731		1951.244
115	In-ISK	|		124671.084		ppb	1.223			129028.634
45	Sc-ISK	>		299233.754		ppb	0.646			300561.194
23	Na	|		3510569.715	5148.316448	ppb	1.046	1.448		7050.078
39	K	|		8144722.118	5134.523586	ppb	0.316	0.444		150074.206
24	Mg	|		3822276.782	5106.004163	ppb	0.730	1.373		303.337
159	Tb-ISK	|		268382.474		ppb	1.230			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, January 02, 2020 18:30:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCB-23446.176

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		41324.128		ppb		0.339		42758.339
9	Be	|		95.556	0.069353	ppb	23.227	27.287		8.889
10	B	|		8286.848	-1.080808	ppb	2.211	86.837		9087.334
27	Al	|		5349.899	-0.257300	ppb	11.544	39.558		7486.432
43	Ca-2	|		160.001	-4.339491	ppb	8.268	15.030		278.336
49	Ti	|		318.893	0.175332	ppb	15.726	35.636		202.224
52	Cr	|		15518.428	-0.044723	ppb	2.745	140.770		16796.538
55	Mn	|		2289.073	0.077389	ppb	6.183	12.887		927.808
57	Fe	|		21564.046	-15.093628	ppb	2.092	12.821		28665.406
45	Sc-IS	>		1703940.346		ppb	1.776			1786230.854
66	Zn	|		1802.336	-0.674940	ppb	7.866	15.310		3075.905
86	Sr	|		243.534	0.060312	ppb	20.649	33.014		82.957
65	Cu	|		494.243	0.074476	ppb	15.203	40.403		309.199
69	Ga-IS	|		533970.746		ppb	1.339			558624.946
95	Mo	|		5592.206	2.063211	ppb	3.056	4.352		408.895
115	In-IS	>		416223.287		ppb	0.287			437319.269
111	Cd	|		224.925	0.069177	ppb	6.339	6.524		15.808
118	Sn	|		20273.283	1.826359	ppb	4.431	5.483		5080.905
121	Sb	|		2742.486	0.113625	ppb	4.723	12.517		1859.010
135	Ba	|		1873.459	-0.961247	ppb	17.858	15.246		4239.556
165	Ho-IS	|		493129.791		ppb	1.204			502133.360
159	Tb-IS	>		558061.413		ppb	1.328			570764.335
207	Pb	|		4091.343	0.116874	ppb	9.062	11.042		421.114
203	Tl	|		1181.161	0.108258	ppb	13.624	14.146		47.778
209	Bi-IS	|		289021.369		ppb	1.288			297460.042
51	V	|		150.001	0.150882	ppb	21.199	25.286		16.667
59	Co	|		397.784	0.153544	ppb	29.154	33.731		36.667
60	Ni	|		270.003	0.169299	ppb	16.050	19.327		45.556
75	As	|		1533.526	0.103631	ppb	6.079	206.158		1541.469
71	Ga-ISK	>		126751.123		ppb	2.274			132451.313
82	Se-2	|		36.851	0.671863	ppb	42.384	42.239		-1.162
107	Ag-1	|		10503.868	1.470377	ppb	5.469	9.237		1951.244
115	In-ISK	|		123794.134		ppb	2.555			129028.634
45	Sc-ISK	>		290567.745		ppb	2.655			300561.194
23	Na	|		9668.291	4.347202	ppb	9.639	40.649		7050.078
39	K	|		165071.725	13.298625	ppb	1.632	34.327		150074.206
24	Mg	|		4035.577	5.162475	ppb	13.249	16.652		303.337
159	Tb-ISK	|		262158.075		ppb	1.799			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, January 02, 2020 18:33:28

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCB-23446.177

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		41485.711		ppb			1.168			42758.339
9	Be	|		65.556	0.046145	ppb	38.835	45.371				8.889
10	B	|		7460.837	-3.154047	ppb	1.309	7.342				9087.334
27	Al	|		4823.038	-0.324812	ppb	6.415	13.155				7486.432
43	Ca-2	|		148.334	-4.744318	ppb	19.167	24.384				278.336
49	Ti	|		271.114	0.114456	ppb	17.228	56.685				202.224
52	Cr	|		14739.823	-0.096861	ppb	1.028	25.211				16796.538
55	Mn	|		1707.881	0.046614	ppb	11.183	22.996				927.808
57	Fe	|		19227.375	-20.513643	ppb	0.252	2.487				28665.406
45	Sc-IS	>		1680322.001		ppb		0.805				1786230.854
66	Zn	|		1672.321	-0.739729	ppb	8.635	11.842				3075.905
86	Sr	|		137.365	0.022053	ppb	27.636	65.675				82.957
65	Cu	|		343.638	0.019877	ppb	17.675	112.623				309.199
69	Ga-IS	|		534143.901		ppb		0.577				558624.946
95	Mo	|		1535.638	0.462772	ppb	6.713	9.041				408.895
115	In-IS	>		415952.389		ppb		0.437				437319.269
111	Cd	|		172.332	0.051867	ppb	12.375	13.091				15.808
118	Sn	|		8287.961	0.409135	ppb	3.256	8.213				5080.905
121	Sb	|		1506.746	-0.030568	ppb	4.307	22.716				1859.010
135	Ba	|		1330.063	-1.202330	ppb	14.990	7.215				4239.556
165	Ho-IS	|		484974.600		ppb		1.450				502133.360
159	Tb-IS	>		551766.568		ppb		0.949				570764.335
207	Pb	|		2302.296	0.060805	ppb	8.160	8.782				421.114
203	Tl	|		621.125	0.055471	ppb	7.765	7.592				47.778
209	Bi-IS	|		297862.271		ppb		0.873				297460.042
51	V	|		47.778	0.035043	ppb	14.523	22.499				16.667
59	Co	|		110.000	0.031033	ppb	13.209	21.547				36.667
60	Ni	|		158.890	0.084593	ppb	5.280	6.554				45.556
75	As	|		1468.945	-0.044109	ppb	0.399	107.075				1541.469
71	Ga-ISK	>		128474.084		ppb		1.501				132451.313
82	Se-2	|		15.903	0.295528	ppb	38.200	34.807				-1.162
107	Ag-1	|		4302.872	0.403920	ppb	7.283	10.608				1951.244
115	In-ISK	|		122363.050		ppb		0.361				129028.634
45	Sc-ISK	>		290874.907		ppb		0.825				300561.194
23	Na	|		8794.410	2.979733	ppb	14.438	64.349				7050.078
39	K	|		159725.956	9.574140	ppb	1.888	21.106				150074.206
24	Mg	|		3450.439	4.337430	ppb	28.093	30.691				303.337
159	Tb-ISK	|		262317.315		ppb		1.120				273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, January 02, 2020 18:36:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\ICVL-210771.178

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40645.518		ppb		0.340		42758.339
9	Be	|		1355.620	1.084007	ppb	1.988	1.467		8.889
10	B	|		24861.616	47.252331	ppb	0.985	0.593		9087.334
27	Al	|		362637.201	51.983881	ppb	2.720	2.416		7486.432
43	Ca-2	|		1291.725	42.979432	ppb	1.987	1.411		278.336
49	Ti	|		861.137	0.949960	ppb	2.931	4.610		202.224
52	Cr	|		25258.978	0.863237	ppb	0.516	3.274		16796.538
55	Mn	|		18810.156	1.000489	ppb	1.913	2.927		927.808
57	Fe	|		37828.918	28.738927	ppb	1.724	8.220		28665.406
45	Sc-IS	>		1681547.530		ppb	0.900			1786230.854
66	Zn	|		10510.537	4.609551	ppb	4.705	6.434		3075.905
86	Sr	|		2908.219	1.047998	ppb	2.981	2.288		82.957
65	Cu	|		3099.400	1.059576	ppb	2.461	2.258		309.199
69	Ga-IS	|		529731.239		ppb	1.072			558624.946
95	Mo	|		3360.395	1.195505	ppb	1.721	2.614		408.895
115	In-IS	>		418083.654		ppb	1.377			437319.269
111	Cd	|		3228.865	1.055136	ppb	3.471	4.900		15.808
118	Sn	|		13687.666	1.040170	ppb	1.144	0.630		5080.905
121	Sb	|		9725.532	0.924263	ppb	0.120	1.569		1859.010
135	Ba	|		3789.396	-0.118307	ppb	12.295	156.632		4239.556
165	Ho-IS	|		487355.709		ppb	2.463			502133.360
159	Tb-IS	>		553461.238		ppb	1.527			570764.335
207	Pb	|		33674.479	1.064719	ppb	1.018	1.230		421.114
203	Tl	|		10900.827	1.044340	ppb	3.484	2.842		47.778
209	Bi-IS	|		289153.344		ppb	2.016			297460.042
51	V	|		937.809	1.038130	ppb	4.300	4.772		16.667
59	Co	|		2565.786	1.069917	ppb	3.978	2.810		36.667
60	Ni	|		1413.403	1.027116	ppb	3.120	4.113		45.556
75	As	|		2071.521	1.036091	ppb	1.839	1.773		1541.469
71	Ga-ISK	>		126432.674		ppb	1.650			132451.313
82	Se-2	|		68.510	1.231628	ppb	11.035	11.202		-1.162
107	Ag-1	|		6102.416	0.723214	ppb	4.485	8.412		1951.244
115	In-ISK	|		123208.513		ppb	0.812			129028.634
45	Sc-ISK	>		295464.206		ppb	0.244			300561.194
23	Na	|		36558.386	44.090555	ppb	0.519	0.776		7050.078
39	K	|		225426.908	50.663640	ppb	0.192	1.247		150074.206
24	Mg	|		35871.653	48.128376	ppb	1.334	1.367		303.337
159	Tb-ISK	|		265850.955		ppb	0.679			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Ba 135

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-42423_1-A

Autosampler Position: 325

Sample Date/Time: Thursday, January 02, 2020 18:39:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\MB 570-42423_1-A.179

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	40729.089		ppb	0.076		42758.339
9	Be	56.667	0.039451	ppb	42.418	49.204	8.889
10	B	6434.782	-5.870929	ppb	0.526	5.668	9087.334
27	Al	5836.755	-0.165127	ppb	9.913	47.793	7486.432
43	Ca-2	190.001	-2.893315	ppb	10.526	28.146	278.336
49	Ti	236.669	0.070850	ppb	14.906	77.897	202.224
52	Cr	15164.713	-0.039063	ppb	1.869	67.035	16796.538
55	Mn	2013.476	0.065177	ppb	6.944	11.136	927.808
57	Fe	19575.625	-18.876539	ppb	0.181	3.252	28665.406
45	Sc-IS	> 1657600.317		ppb	1.252		1786230.854
66	Zn	2382.421	-0.290512	ppb	6.869	28.404	3075.905
86	Sr	196.355	0.044760	ppb	19.453	30.674	82.957
65	Cu	366.916	0.030520	ppb	17.439	77.584	309.199
69	Ga-IS	529485.272		ppb	1.501		558624.946
95	Mo	745.575	0.149141	ppb	4.567	7.194	408.895
115	In-IS	> 416655.697		ppb	0.836		437319.269
111	Cd	149.546	0.044308	ppb	12.680	14.678	15.808
118	Sn	5049.783	0.024799	ppb	5.986	152.561	5080.905
121	Sb	1247.832	-0.061077	ppb	3.445	6.259	1859.010
135	Ba	1498.972	-1.126984	ppb	30.746	18.713	4239.556
165	Ho-IS	487825.592		ppb	1.213		502133.360
159	Tb-IS	> 551708.718		ppb	0.847		570764.335
207	Pb	1902.273	0.047956	ppb	21.925	27.126	421.114
203	Tl	593.346	0.052775	ppb	26.755	28.475	47.778
209	Bi-IS	291784.275		ppb	0.795		297460.042
51	V	45.556	0.033353	ppb	48.720	76.426	16.667
59	Co	108.889	0.031241	ppb	61.935	92.753	36.667
60	Ni	255.558	0.158333	ppb	9.790	13.005	45.556
75	As	1396.901	-0.137845	ppb	1.937	52.587	1541.469
71	Ga-ISK	> 126943.791		ppb	1.146		132451.313
82	Se-2	8.869	0.176113	ppb	22.196	20.682	-1.162
107	Ag-1	2549.117	0.115175	ppb	3.911	10.365	1951.244
115	In-ISK	123029.550		ppb	1.414		129028.634
45	Sc-ISK	> 290658.273		ppb	0.567		300561.194
23	Na	6309.729	-0.767431	ppb	4.949	65.615	7050.078
39	K	153864.169	5.777706	ppb	0.457	15.508	150074.206
24	Mg	1580.088	1.769184	ppb	11.718	13.985	303.337
159	Tb-ISK	262751.044		ppb	0.628		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-42423_2-A

Autosampler Position: 326

Sample Date/Time: Thursday, January 02, 2020 18:41:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\LCS 570-42423_2-A.180

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	40846.090		ppb		0.573		42758.339
9	Be	|	126244.351	103.014539	ppb	1.642	1.100		8.889
10	B	|	39763.066	92.063570	ppb	2.679	2.805		9087.334
27	Al	|	727483.734	106.833853	ppb	1.547	1.049		7486.432
43	Ca-2	|	118539.817	5007.545194	ppb	1.104	0.542		278.336
49	Ti	|	68736.080	98.443677	ppb	0.506	1.044		202.224
52	Cr	|	1015959.830	92.695465	ppb	0.636	0.062		16796.538
55	Mn	|	1624541.202	91.839702	ppb	0.436	0.259		927.808
57	Fe	|	1824939.066	4832.126380	ppb	0.577	0.482		28665.406
45	Sc-IS	>	1657965.958		ppb	0.576			1786230.854
66	Zn	|	168511.623	101.697373	ppb	1.965	1.409		3075.905
86	Sr	|	258235.400	96.960666	ppb	2.169	1.606		82.957
65	Cu	|	260046.834	99.402098	ppb	1.351	0.778		309.199
69	Ga-IS	|	558870.608		ppb	2.092			558624.946
95	Mo	|	241417.315	98.212585	ppb	0.782	0.744		408.895
115	In-IS	>	413831.348		ppb	1.549			437319.269
111	Cd	|	298569.368	98.989447	ppb	1.343	1.033		15.808
118	Sn	|	832625.824	98.516194	ppb	1.143	0.413		5080.905
121	Sb	|	740535.893	86.768053	ppb	2.958	1.654		1859.010
135	Ba	|	224295.275	98.500177	ppb	1.913	1.515		4239.556
165	Ho-IS	|	478226.688		ppb	2.784			502133.360
159	Tb-IS	>	544970.306		ppb	1.892			570764.335
207	Pb	|	3046780.422	99.034898	ppb	1.129	2.110		421.114
203	Tl	|	967403.852	94.530459	ppb	2.254	1.471		47.778
209	Bi-IS	|	283903.647		ppb	1.401			297460.042
51	V	|	86701.278	96.955549	ppb	2.232	3.537		16.667
59	Co	|	226153.123	94.984023	ppb	1.924	3.229		36.667
60	Ni	|	131704.361	98.015655	ppb	0.941	0.868		45.556
75	As	|	58585.998	97.934601	ppb	0.322	1.286		1541.469
71	Ga-ISK	>	127304.796		ppb	1.500			132451.313
82	Se-2	|	5546.577	97.458179	ppb	0.759	2.151		-1.162
107	Ag-1	|	277109.819	46.594476	ppb	1.107	1.310		1951.244
115	In-ISK	|	122860.637		ppb	1.199			129028.634
45	Sc-ISK	>	292779.904		ppb	0.829			300561.194
23	Na	|	608235.324	903.191569	ppb	0.608	1.440		7050.078
39	K	|	1539519.637	914.544745	ppb	0.102	1.007		150074.206
24	Mg	|	3594328.792	4907.145698	ppb	1.187	1.178		303.337
159	Tb-ISK	|	264686.530		ppb	1.389			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-42423_3-A

Autosampler Position: 327

Sample Date/Time: Thursday, January 02, 2020 18:44:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\LCSD 570-42423_3-A.181

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	40900.711		ppb		2.401		42758.339
9	Be	|	125485.421	103.143519	ppb	0.959	1.076		8.889
10	B	|	39911.232	93.358738	ppb	0.864	1.189		9087.334
27	Al	|	694002.421	102.619726	ppb	0.583	0.482		7486.432
43	Ca-2	|	119262.453	5074.777315	ppb	0.987	0.496		278.336
49	Ti	|	67528.119	97.407841	ppb	0.688	0.169		202.224
52	Cr	|	999145.104	91.810046	ppb	0.708	0.766		16796.538
55	Mn	|	1598036.770	90.995332	ppb	0.626	0.312		927.808
57	Fe	|	1821547.404	4858.445401	ppb	0.796	0.463		28665.406
45	Sc-IS	>	1646031.225		ppb	0.556			1786230.854
66	Zn	|	164979.453	100.267071	ppb	0.999	0.451		3075.905
86	Sr	|	254967.401	96.442524	ppb	2.318	2.813		82.957
65	Cu	|	255687.540	98.442551	ppb	1.631	1.102		309.199
69	Ga-IS	|	546322.221		ppb	1.054			558624.946
95	Mo	|	243725.535	99.877313	ppb	2.296	2.554		408.895
115	In-IS	>	404444.656		ppb	0.591			437319.269
111	Cd	|	292354.147	99.174827	ppb	0.307	0.583		15.808
118	Sn	|	829270.351	100.403510	ppb	0.912	0.787		5080.905
121	Sb	|	772925.052	92.690721	ppb	1.215	1.147		1859.010
135	Ba	|	223862.819	100.626894	ppb	1.397	1.319		4239.556
165	Ho-IS	|	479874.119		ppb	1.262			502133.360
159	Tb-IS	>	542774.592		ppb	0.426			570764.335
207	Pb	|	3012753.898	98.304206	ppb	0.933	1.051		421.114
203	Tl	|	951233.306	93.325522	ppb	0.651	0.851		47.778
209	Bi-IS	|	279543.315		ppb	1.334			297460.042
51	V	|	85875.126	100.502120	ppb	0.859	3.708		16.667
59	Co	|	224556.851	98.718966	ppb	1.167	4.269		36.667
60	Ni	|	129844.111	101.141298	ppb	0.898	3.075		45.556
75	As	|	57366.265	100.459410	ppb	0.929	4.448		1541.469
71	Ga-ISK	>	121702.145		ppb	3.377			132451.313
82	Se-2	|	5540.572	101.914832	ppb	1.677	4.684		-1.162
107	Ag-1	|	288582.666	50.805023	ppb	1.356	2.098		1951.244
115	In-ISK	|	121050.428		ppb	3.800			129028.634
45	Sc-ISK	>	285961.690		ppb	3.602			300561.194
23	Na	|	614646.548	935.748058	ppb	0.908	4.442		7050.078
39	K	|	1554823.794	949.814677	ppb	0.092	4.141		150074.206
24	Mg	|	3618484.556	5064.016102	ppb	1.442	5.116		303.337
159	Tb-ISK	|	256222.455		ppb	2.752			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16164-B-1-A

Autosampler Position: 328

Sample Date/Time: Thursday, January 02, 2020 18:50:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16164-B-1-A.183

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	46456.526		ppb		0.079		42758.339
9	Be	|	88.889	0.059981	ppb	15.155	17.724		8.889
10	B	|	137752.166	347.244903	ppb	1.462	2.518		9087.334
27	Al	|	100810.028	12.705755	ppb	1.129	2.224		7486.432
43	Ca-2	|	1738159.791	67604.795002	ppb	0.764	0.266		278.336
49	Ti	|	2400.202	2.897068	ppb	3.489	2.882		202.224
52	Cr	|	36272.665	1.643698	ppb	1.548	2.745		16796.538
55	Mn	|	490968.014	25.470399	ppb	0.939	1.853		927.808
57	Fe	|	153586.881	307.756468	ppb	1.534	3.083		28665.406
45	Sc-IS	>	1804432.211		ppb	0.972			1786230.854
66	Zn	|	72145.067	38.944449	ppb	1.305	0.874		3075.905
86	Sr	|	1390230.858	479.724218	ppb	2.486	1.581		82.957
65	Cu	|	6470.823	2.165372	ppb	2.612	2.383		309.199
69	Ga-IS	|	540785.756		ppb	0.514			558624.946
95	Mo	|	25176.622	9.269827	ppb	2.895	1.965		408.895
115	In-IS	>	411085.236		ppb	1.355			437319.269
111	Cd	|	182.687	0.056195	ppb	34.638	39.055		15.808
118	Sn	|	8276.843	0.419731	ppb	3.000	9.936		5080.905
121	Sb	|	25358.042	2.792298	ppb	0.204	1.664		1859.010
135	Ba	|	53357.251	22.224299	ppb	1.441	1.192		4239.556
165	Ho-IS	|	496859.637		ppb	0.644			502133.360
159	Tb-IS	>	562877.717		ppb	0.959			570764.335
207	Pb	|	8778.851	0.263283	ppb	4.783	5.991		421.114
203	Tl	|	728.908	0.064609	ppb	23.455	25.905		47.778
209	Bi-IS	|	264278.148		ppb	1.764			297460.042
51	V	|	3121.452	3.622108	ppb	3.556	3.118		16.667
59	Co	|	2312.410	0.998313	ppb	7.486	8.069		36.667
60	Ni	|	5169.824	3.981677	ppb	1.147	1.584		45.556
75	As	|	2054.891	1.134207	ppb	7.521	23.247		1541.469
71	Ga-ISK	>	122051.391		ppb	0.464			132451.313
82	Se-2	|	92.148	1.707596	ppb	6.320	6.031		-1.162
107	Ag-1	|	1943.466	0.025661	ppb	2.022	20.935		1951.244
115	In-ISK	|	119317.083		ppb	0.902			129028.634
45	Sc-ISK	>	302101.363		ppb	1.559			300561.194
23	Na	|	138150770.338	201053.341965	ppb	1.929	0.597		7050.078
39	K	|	28744040.487	18188.812776	ppb	0.978	0.586		150074.206
24	Mg	|	12589897.122	16657.460849	ppb	2.220	0.746		303.337
159	Tb-ISK	|	267826.685		ppb	0.692			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16164-B-1-B MS

Autosampler Position: 329

Sample Date/Time: Thursday, January 02, 2020 18:52:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16164-B-1-B MS.184

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	46584.733		ppb		1.576		42758.339
9	Be	|	129290.219	95.210669	ppb	0.685	0.615		8.889
10	B	|	173599.540	435.631999	ppb	0.409	0.387		9087.334
27	Al	|	910501.371	120.806180	ppb	1.552	1.742		7486.432
43	Ca-2	|	1918837.258	73301.629887	ppb	0.632	0.787		278.336
49	Ti	|	52604.457	67.906308	ppb	0.840	1.295		202.224
52	Cr	|	1146935.636	94.464668	ppb	0.313	0.514		16796.538
55	Mn	|	2448017.797	124.909641	ppb	0.581	0.757		927.808
57	Fe	|	2305464.940	5518.967552	ppb	0.957	1.094		28665.406
45	Sc-IS	>	1837231.284		ppb	0.766			1786230.854
66	Zn	|	238323.738	130.289156	ppb	0.427	0.425		3075.905
86	Sr	|	1712090.530	580.283336	ppb	2.427	2.123		82.957
65	Cu	|	280922.152	96.905778	ppb	0.473	0.393		309.199
69	Ga-IS	|	589525.080		ppb	0.749			558624.946
95	Mo	|	285379.463	104.775483	ppb	1.704	1.216		408.895
115	In-IS	>	418914.615		ppb	0.741			437319.269
111	Cd	|	308600.071	101.069085	ppb	0.850	0.711		15.808
118	Sn	|	162669.836	18.551594	ppb	0.801	1.061		5080.905
121	Sb	|	734373.072	85.013644	ppb	1.154	1.683		1859.010
135	Ba	|	293912.061	128.038115	ppb	1.610	1.991		4239.556
165	Ho-IS	|	504321.262		ppb	0.879			502133.360
159	Tb-IS	>	569333.484		ppb	2.230			570764.335
207	Pb	|	3144422.068	97.845334	ppb	0.042	2.235		421.114
203	Tl	|	946257.744	88.523159	ppb	1.066	1.539		47.778
209	Bi-IS	|	270105.166		ppb	0.469			297460.042
51	V	|	97334.968	111.030847	ppb	1.595	2.079		16.667
59	Co	|	236912.942	101.507412	ppb	1.194	2.270		36.667
60	Ni	|	137353.925	104.282976	ppb	1.549	0.337		45.556
75	As	|	64160.624	109.711229	ppb	1.336	0.726		1541.469
71	Ga-ISK	>	124783.839		ppb	1.772			132451.313
82	Se-2	|	5476.567	98.156302	ppb	1.441	0.679		-1.162
107	Ag-1	|	232934.942	39.918382	ppb	1.043	2.211		1951.244
115	In-ISK	|	121629.726		ppb	0.480			129028.634
45	Sc-ISK	>	310808.809		ppb	1.898			300561.194
23	Na	|	141166472.890	199730.230280	ppb	0.765	1.613		7050.078
39	K	|	31193265.937	19194.806576	ppb	0.583	2.161		150074.206
24	Mg	|	16854012.909	21677.857526	ppb	1.657	1.273		303.337
159	Tb-ISK	|	273836.462		ppb	2.240			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16164-B-1-C MSD

Autosampler Position: 330

Sample Date/Time: Thursday, January 02, 2020 18:55:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16164-B-1-C MSD.185

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47998.321		ppb		2.878		42758.339
9	Be	|	133091.611	95.149086	ppb	1.338	1.970		8.889
10	B	|	175261.112	426.481389	ppb	2.289	3.011		9087.334
27	Al	|	938749.808	120.914534	ppb	0.936	1.579		7486.432
43	Ca-2	|	1948451.029	72253.588561	ppb	0.798	0.625		278.336
49	Ti	|	54524.969	68.327797	ppb	0.533	1.169		202.224
52	Cr	|	1188975.438	95.070074	ppb	0.776	0.744		16796.538
55	Mn	|	2522498.592	124.943943	ppb	0.425	0.679		927.808
57	Fe	|	2360924.792	5485.958671	ppb	0.409	0.769		28665.406
45	Sc-IS	>	1892601.003		ppb	0.642			1786230.854
66	Zn	|	243139.473	129.013563	ppb	0.704	0.236		3075.905
86	Sr	|	1713430.899	563.724492	ppb	2.817	2.356		82.957
65	Cu	|	288559.399	96.627517	ppb	0.913	0.921		309.199
69	Ga-IS	|	620848.587		ppb	1.250			558624.946
95	Mo	|	308093.838	109.807030	ppb	2.611	1.968		408.895
115	In-IS	>	437613.062		ppb	1.288			437319.269
111	Cd	|	320481.208	100.479897	ppb	0.703	0.696		15.808
118	Sn	|	170568.334	18.624445	ppb	2.865	3.108		5080.905
121	Sb	|	783799.821	86.864182	ppb	2.385	2.534		1859.010
135	Ba	|	296524.867	123.604027	ppb	0.852	1.724		4239.556
165	Ho-IS	|	508588.756		ppb	2.611			502133.360
159	Tb-IS	>	574036.791		ppb	1.054			570764.335
207	Pb	|	3134421.603	96.702726	ppb	1.052	0.004		421.114
203	Tl	|	938587.075	87.068364	ppb	1.578	1.203		47.778
209	Bi-IS	|	274109.240		ppb	0.416			297460.042
51	V	|	98579.029	109.471462	ppb	1.822	1.068		16.667
59	Co	|	241045.600	100.540477	ppb	0.953	0.151		36.667
60	Ni	|	139818.782	103.358762	ppb	1.573	0.940		45.556
75	As	|	65801.135	109.552172	ppb	0.620	0.668		1541.469
71	Ga-ISK	>	128151.144		ppb	0.835			132451.313
82	Se-2	|	5622.888	98.128769	ppb	0.898	1.026		-1.162
107	Ag-1	|	253915.575	42.381976	ppb	0.180	0.772		1951.244
115	In-ISK	|	124373.210		ppb	0.503			129028.634
45	Sc-ISK	>	320236.289		ppb	0.695			300561.194
23	Na	|	143242866.060	196661.972061	ppb	1.782	1.501		7050.078
39	K	|	31184197.238	18616.222066	ppb	1.183	0.617		150074.206
24	Mg	|	16837570.182	21017.087302	ppb	1.031	0.381		303.337
159	Tb-ISK	|	277497.423		ppb	1.014			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16164-B-2-A

Autosampler Position: 331

Sample Date/Time: Thursday, January 02, 2020 18:58:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16164-B-2-A.186

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	57723.066		ppb	1.439		42758.339
9	Be	114.445	0.072604	ppb	16.816	19.295	8.889
10	B	80306.235	175.514877	ppb	1.601	1.763	9087.334
27	Al	153343.451	18.264122	ppb	2.731	1.993	7486.432
43	Ca-2	2485030.194	89276.677329	ppb	0.967	0.096	278.336
49	Ti	3522.657	4.023556	ppb	4.296	4.324	202.224
52	Cr	34318.954	1.254257	ppb	1.027	1.857	16796.538
55	Mn	383373.186	18.355710	ppb	1.238	1.660	927.808
57	Fe	137277.574	241.583015	ppb	0.922	2.179	28665.406
45	Sc-IS	> 1953581.989		ppb	0.918		1786230.854
66	Zn	17759.925	7.500091	ppb	2.118	1.494	3075.905
86	Sr	2719570.434	866.870829	ppb	1.364	0.540	82.957
65	Cu	9705.988	3.042527	ppb	1.138	1.266	309.199
69	Ga-IS	643441.746		ppb	1.245		558624.946
95	Mo	61842.467	21.231727	ppb	1.088	1.528	408.895
115	In-IS	> 454041.027		ppb	0.610		437319.269
111	Cd	360.139	0.103799	ppb	19.634	20.130	15.808
118	Sn	8289.071	0.326891	ppb	1.209	2.633	5080.905
121	Sb	51354.399	5.291303	ppb	2.488	2.429	1859.010
135	Ba	179351.126	71.297295	ppb	1.091	0.530	4239.556
165	Ho-IS	518854.241		ppb	1.340		502133.360
159	Tb-IS	> 585949.815		ppb	0.282		570764.335
207	Pb	17703.131	0.522074	ppb	0.949	0.927	421.114
203	Tl	947.809	0.081680	ppb	10.110	10.617	47.778
209	Bi-IS	282614.923		ppb	2.635		297460.042
51	V	6438.118	6.763484	ppb	2.333	3.679	16.667
59	Co	1106.710	0.423149	ppb	6.889	8.250	36.667
60	Ni	2885.847	1.991318	ppb	2.625	4.255	45.556
75	As	4177.459	4.205737	ppb	1.139	1.071	1541.469
71	Ga-ISK	> 135183.364		ppb	1.549		132451.313
82	Se-2	338.736	5.619922	ppb	10.349	9.469	-1.162
107	Ag-1	6238.030	0.676925	ppb	4.636	6.357	1951.244
115	In-ISK	130742.367		ppb	0.810		129028.634
45	Sc-ISK	> 334887.686		ppb	0.749		300561.194
23	Na	86404455.357	113439.107635	ppb	0.879	1.219	7050.078
39	K	5627350.138	3133.177391	ppb	0.580	0.818	150074.206
24	Mg	28250639.720	33721.517959	ppb	2.109	2.059	303.337
159	Tb-ISK	287787.260		ppb	0.656		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16164-B-3-A

Autosampler Position: 332

Sample Date/Time: Thursday, January 02, 2020 19:01:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16164-B-3-A.187

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	55262.240		ppb	0.735		42758.339
9	Be	153.334	0.095075	ppb	27.755	26.988	8.889
10	B	117379.183	257.341494	ppb	1.147	4.372	9087.334
27	Al	161785.749	18.603800	ppb	4.934	8.278	7486.432
43	Ca-2	2405051.933	83249.307900	ppb	0.702	3.142	278.336
49	Ti	4481.818	4.998625	ppb	9.280	11.917	202.224
52	Cr	41577.083	1.705950	ppb	0.620	6.545	16796.538
55	Mn	1226269.590	56.682710	ppb	0.668	4.195	927.808
57	Fe	131022.612	216.491792	ppb	1.307	6.242	28665.406
45	Sc-IS	> 2029243.301		ppb	3.903		1786230.854
66	Zn	20439.058	8.505286	ppb	1.736	2.563	3075.905
86	Sr	2821771.068	866.136580	ppb	3.293	1.703	82.957
65	Cu	11509.711	3.492027	ppb	0.967	3.621	309.199
69	Ga-IS	653361.932		ppb	0.835		558624.946
95	Mo	171352.694	56.934882	ppb	0.850	3.088	408.895
115	In-IS	> 457226.859		ppb	1.145		437319.269
111	Cd	381.290	0.109435	ppb	16.193	16.602	15.808
118	Sn	5713.366	0.043428	ppb	4.908	82.380	5080.905
121	Sb	23605.049	2.303262	ppb	2.438	3.240	1859.010
135	Ba	160339.440	63.092870	ppb	1.894	1.083	4239.556
165	Ho-IS	516387.630		ppb	2.088		502133.360
159	Tb-IS	> 588981.208		ppb	1.471		570764.335
207	Pb	13318.054	0.387214	ppb	10.179	9.398	421.114
203	Tl	925.588	0.079097	ppb	34.876	35.830	47.778
209	Bi-IS	275310.745		ppb	2.389		297460.042
51	V	4400.678	4.539938	ppb	1.555	0.915	16.667
59	Co	856.693	0.318565	ppb	10.470	11.405	36.667
60	Ni	3308.161	2.248907	ppb	4.672	5.084	45.556
75	As	3634.932	3.232662	ppb	3.824	5.707	1541.469
71	Ga-ISK	> 137427.882		ppb	0.702		132451.313
82	Se-2	305.076	4.983616	ppb	2.672	3.051	-1.162
107	Ag-1	3646.021	0.254260	ppb	1.750	3.783	1951.244
115	In-ISK	134281.779		ppb	1.934		129028.634
45	Sc-ISK	> 347665.232		ppb	0.412		300561.194
23	Na	179179442.233	226597.866441	ppb	0.305	0.230	7050.078
39	K	8167484.755	4418.384267	ppb	0.557	0.221	150074.206
24	Mg	32999944.755	37943.486742	ppb	0.752	1.093	303.337
159	Tb-ISK	294567.365		ppb	0.617		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, January 02, 2020 19:03:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCV-210770.188

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	45524.649		ppb		1.017		42758.339
9	Be	|	131292.898	96.521745	ppb	1.679	0.461		8.889
10	B	|	101753.479	244.605317	ppb	2.593	1.565		9087.334
27	Al	|	795727.691	105.270793	ppb	1.311	0.825		7486.432
43	Ca-2	|	139800.875	5321.176824	ppb	1.861	0.433		278.336
49	Ti	|	79696.172	102.839822	ppb	1.723	0.809		202.224
52	Cr	|	1214709.836	99.977740	ppb	0.396	1.771		16796.538
55	Mn	|	2140792.717	109.082411	ppb	1.266	3.233		927.808
57	Fe	|	2267095.102	5418.557180	ppb	0.985	3.111		28665.406
45	Sc-IS	>	1840417.561		ppb	2.049			1786230.854
66	Zn	|	196939.374	107.189651	ppb	0.930	1.514		3075.905
86	Sr	|	306843.169	103.787470	ppb	3.537	2.274		82.957
65	Cu	|	303052.339	104.399542	ppb	0.319	2.396		309.199
69	Ga-IS	|	665498.746		ppb	0.710			558624.946
95	Mo	|	318772.534	116.863626	ppb	1.838	1.257		408.895
115	In-IS	>	463131.463		ppb	1.954			437319.269
111	Cd	|	347552.944	102.966320	ppb	1.382	0.700		15.808
118	Sn	|	926099.343	97.888112	ppb	3.252	1.409		5080.905
121	Sb	|	954184.819	99.943887	ppb	1.925	0.275		1859.010
135	Ba	|	246898.704	96.868245	ppb	0.788	1.349		4239.556
165	Ho-IS	|	508333.886		ppb	2.010			502133.360
159	Tb-IS	>	584685.050		ppb	0.113			570764.335
207	Pb	|	3340106.537	101.171590	ppb	1.634	1.557		421.114
203	Tl	|	1094538.639	99.686011	ppb	1.274	1.209		47.778
209	Bi-IS	|	300961.031		ppb	4.343			297460.042
51	V	|	98924.696	98.482498	ppb	1.183	4.595		16.667
59	Co	|	263705.136	98.584653	ppb	0.966	3.910		36.667
60	Ni	|	158635.072	105.114672	ppb	2.156	4.528		45.556
75	As	|	68467.917	102.030090	ppb	1.056	5.191		1541.469
71	Ga-ISK	>	143130.926		ppb	4.141			132451.313
82	Se-2	|	6662.980	104.281117	ppb	2.398	6.249		-1.162
107	Ag-1	|	674511.414	101.404414	ppb	1.950	6.078		1951.244
115	In-ISK	|	138562.842		ppb	2.992			129028.634
45	Sc-ISK	>	335257.487		ppb	3.792			300561.194
23	Na	|	4310225.939	5650.887631	ppb	2.114	5.893		7050.078
39	K	|	9257253.596	5216.553032	ppb	1.067	4.927		150074.206
24	Mg	|	4362989.041	5207.690172	ppb	0.819	4.541		303.337
159	Tb-ISK	|	292764.675		ppb	3.622			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Mo 95
Na 23

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, January 02, 2020 19:09:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCB-23446.190

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		44749.984		ppb			0.973			42758.339
9	Be	|		122.223	0.085511	ppb		20.103	21.023			8.889
10	B	|		6261.373	-7.757373	ppb		2.777	6.213			9087.334
27	Al	|		3902.759	-0.494899	ppb		10.411	10.764			7486.432
43	Ca-2	|		1626.766	52.761272	ppb		33.473	39.891			278.336
49	Ti	|		310.003	0.142504	ppb		4.687	13.914			202.224
52	Cr	|		17613.102	0.065689	ppb		6.285	135.579			16796.538
55	Mn	|		3172.589	0.117285	ppb		24.558	34.150			927.808
57	Fe	|		21821.101	-17.227020	ppb		1.744	4.396			28665.406
45	Sc-IS	>		1791365.787		ppb		0.701				1786230.854
66	Zn	|		1245.610	-1.044987	ppb		2.936	2.147			3075.905
86	Sr	|		1777.460	0.588629	ppb		36.446	37.847			82.957
65	Cu	|		746.379	0.154349	ppb		17.636	29.135			309.199
69	Ga-IS	|		624197.144		ppb		1.502				558624.946
95	Mo	|		2905.851	0.941372	ppb		3.049	4.339			408.895
115	In-IS	>		464096.041		ppb		0.754				437319.269
111	Cd	|		281.679	0.078276	ppb		28.302	29.717			15.808
118	Sn	|		8092.294	0.286433	ppb		4.309	11.380			5080.905
121	Sb	|		6322.512	0.455448	ppb		5.216	6.590			1859.010
135	Ba	|		493.342	-1.597258	ppb		12.011	1.392			4239.556
165	Ho-IS	|		505770.559		ppb		1.283				502133.360
159	Tb-IS	>		577419.826		ppb		1.437				570764.335
207	Pb	|		2787.884	0.072320	ppb		17.525	18.970			421.114
203	Tl	|		782.245	0.067526	ppb		25.598	25.859			47.778
209	Bi-IS	|		305938.183		ppb		1.164				297460.042
51	V	|		102.223	0.083947	ppb		26.357	31.990			16.667
59	Co	|		203.335	0.061297	ppb		23.242	28.875			36.667
60	Ni	|		172.223	0.081657	ppb		6.222	8.705			45.556
75	As	|		1672.192	0.014793	ppb		1.375	234.654			1541.469
71	Ga-ISK	>		142851.790		ppb		0.025				132451.313
82	Se-2	|		20.838	0.345761	ppb		29.975	28.256			-1.162
107	Ag-1	|		8649.292	0.987291	ppb		6.842	9.017			1951.244
115	In-ISK	|		136640.961		ppb		0.855				129028.634
45	Sc-ISK	>		331365.892		ppb		0.826				300561.194
23	Na	|		117795.344	145.941524	ppb		7.263	6.978			7050.078
39	K	|		175850.283	6.027644	ppb		1.420	18.555			150074.206
24	Mg	|		19004.412	22.513751	ppb		11.581	11.221			303.337
159	Tb-ISK	|		292357.064		ppb		1.590				273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16345-A-1-A

Autosampler Position: 333

Sample Date/Time: Thursday, January 02, 2020 19:12:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16345-A-1-A.191

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	45698.532		ppb	0.303		42758.339
9	Be	100.000	0.067688	ppb	17.638	18.685	8.889
10	B	8180.120	-2.848117	ppb	2.061	11.943	9087.334
27	Al	5023932.508	678.915240	ppb	0.910	1.601	7486.432
43	Ca-2	910226.620	35160.391151	ppb	1.145	0.538	278.336
49	Ti	4105.034	5.111005	ppb	1.550	1.613	202.224
52	Cr	38848.316	1.840678	ppb	1.714	1.502	16796.538
55	Mn	2464391.767	127.175516	ppb	0.657	0.369	927.808
57	Fe	404075.330	919.471290	ppb	0.956	0.710	28665.406
45	Sc-IS	> 1816561.860		ppb	0.908		1786230.854
66	Zn	45424.365	23.697142	ppb	2.874	2.116	3075.905
86	Sr	247354.380	84.761269	ppb	2.482	1.713	82.957
65	Cu	17129.687	5.872428	ppb	2.711	1.860	309.199
69	Ga-IS	612426.984		ppb	1.477		558624.946
95	Mo	5382.125	1.846841	ppb	1.409	0.968	408.895
115	In-IS	> 447868.864		ppb	1.574		437319.269
111	Cd	358.702	0.104908	ppb	13.093	13.277	15.808
118	Sn	3182.577	-0.222098	ppb	3.514	7.008	5080.905
121	Sb	7380.797	0.594427	ppb	4.187	5.081	1859.010
135	Ba	82902.145	32.459578	ppb	2.126	2.037	4239.556
165	Ho-IS	505554.230		ppb	1.297		502133.360
159	Tb-IS	> 571733.874		ppb	1.098		570764.335
207	Pb	143226.449	4.424309	ppb	0.606	0.602	421.114
203	Tl	431.118	0.035726	ppb	41.813	47.177	47.778
209	Bi-IS	296133.395		ppb	0.068		297460.042
51	V	4206.175	4.268313	ppb	4.169	3.008	16.667
59	Co	4720.780	1.792394	ppb	3.382	3.191	36.667
60	Ni	4526.273	3.039088	ppb	0.644	0.804	45.556
75	As	1992.510	0.573743	ppb	2.590	7.474	1541.469
71	Ga-ISK	> 139651.566		ppb	1.291		132451.313
82	Se-2	19.528	0.332095	ppb	60.153	56.225	-1.162
107	Ag-1	5790.064	0.576522	ppb	5.604	10.728	1951.244
115	In-ISK	133612.861		ppb	1.137		129028.634
45	Sc-ISK	> 326989.954		ppb	0.232		300561.194
23	Na	1280682.448	1711.760521	ppb	1.578	1.523	7050.078
39	K	1359002.655	702.695863	ppb	1.436	1.609	150074.206
24	Mg	5453983.688	6667.030526	ppb	1.205	1.212	303.337
159	Tb-ISK	285484.572		ppb	1.146		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16345-A-2-A

Autosampler Position: 334

Sample Date/Time: Thursday, January 02, 2020 19:14:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16345-A-2-A.192

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	45079.916		ppb	1.592		42758.339
9	Be	67.778	0.045399	ppb	20.475	20.778	8.889
10	B	10406.016	4.122661	ppb	4.381	35.473	9087.334
27	Al	2268175.993	316.911377	ppb	0.156	2.425	7486.432
43	Ca-2	131630.543	5255.432952	ppb	2.382	0.366	278.336
49	Ti	4019.466	5.185984	ppb	17.547	18.659	202.224
52	Cr	27404.041	0.955367	ppb	1.480	2.203	16796.538
55	Mn	458074.937	24.444470	ppb	0.182	2.108	927.808
57	Fe	181301.090	388.954937	ppb	1.230	1.352	28665.406
45	Sc-IS	> 1754425.541		ppb	2.314		1786230.854
66	Zn	494160.946	285.027926	ppb	0.999	1.943	3075.905
86	Sr	54315.892	19.254708	ppb	2.631	2.782	82.957
65	Cu	14793.736	5.239407	ppb	3.287	1.022	309.199
69	Ga-IS	595444.021		ppb	1.302		558624.946
95	Mo	2229.063	0.703428	ppb	5.132	4.383	408.895
115	In-IS	> 442182.187		ppb	0.214		437319.269
111	Cd	235.321	0.068041	ppb	15.848	16.774	15.808
118	Sn	3038.101	-0.233811	ppb	4.130	5.844	5080.905
121	Sb	6970.589	0.559654	ppb	1.476	2.081	1859.010
135	Ba	42692.597	16.071357	ppb	1.571	1.546	4239.556
165	Ho-IS	493799.622		ppb	0.723		502133.360
159	Tb-IS	> 562187.031		ppb	1.664		570764.335
207	Pb	91885.420	2.881608	ppb	2.667	1.078	421.114
203	Tl	375.561	0.031040	ppb	24.889	26.945	47.778
209	Bi-IS	299945.219		ppb	0.977		297460.042
51	V	2631.354	2.693888	ppb	3.461	3.174	16.667
59	Co	1203.384	0.450977	ppb	1.939	1.179	36.667
60	Ni	2206.837	1.481869	ppb	2.077	2.925	45.556
75	As	1631.406	0.038485	ppb	3.313	264.008	1541.469
71	Ga-ISK	> 138112.222		ppb	0.849		132451.313
82	Se-2	6.841	0.130655	ppb	52.914	45.532	-1.162
107	Ag-1	3995.003	0.305856	ppb	2.382	4.166	1951.244
115	In-ISK	134372.280		ppb	0.713		129028.634
45	Sc-ISK	> 321204.292		ppb	0.572		300561.194
23	Na	2041629.798	2784.594290	ppb	4.830	4.988	7050.078
39	K	1113728.213	570.358256	ppb	0.047	0.624	150074.206
24	Mg	597809.585	743.597774	ppb	1.183	1.423	303.337
159	Tb-ISK	285211.439		ppb	1.621		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16345-A-3-A

Autosampler Position: 335

Sample Date/Time: Thursday, January 02, 2020 19:17:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16345-A-3-A.193

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	45277.206		ppb	1.653		42758.339
9	Be	60.000	0.039228	ppb	45.474	51.940	8.889
10	B	8824.948	-0.338497	ppb	2.517	100.406	9087.334
27	Al	1031383.900	143.146842	ppb	2.419	1.591	7486.432
43	Ca-2	301236.620	12013.285956	ppb	1.397	0.579	278.336
49	Ti	3918.326	5.036937	ppb	17.589	18.680	202.224
52	Cr	25468.242	0.780416	ppb	1.818	4.336	16796.538
55	Mn	299715.917	15.936936	ppb	0.606	1.722	927.808
57	Fe	107448.121	200.745229	ppb	0.164	1.926	28665.406
45	Sc-IS	> 1758550.954		ppb	1.558		1786230.854
66	Zn	17072.418	8.129632	ppb	1.060	0.735	3075.905
86	Sr	130594.021	46.224027	ppb	2.920	3.221	82.957
65	Cu	7163.901	2.474242	ppb	3.889	2.492	309.199
69	Ga-IS	603611.038		ppb	0.814		558624.946
95	Mo	1244.499	0.323443	ppb	2.278	2.785	408.895
115	In-IS	> 437170.569		ppb	0.737		437319.269
111	Cd	168.499	0.047893	ppb	14.866	15.715	15.808
118	Sn	2136.826	-0.331453	ppb	0.974	0.444	5080.905
121	Sb	4416.238	0.284423	ppb	1.928	3.389	1859.010
135	Ba	102018.628	41.391257	ppb	1.990	2.621	4239.556
165	Ho-IS	492293.615		ppb	0.958		502133.360
159	Tb-IS	> 560860.261		ppb	1.890		570764.335
207	Pb	16932.792	0.521612	ppb	3.029	1.244	421.114
203	Tl	418.895	0.035250	ppb	15.231	15.015	47.778
209	Bi-IS	292154.792		ppb	2.228		297460.042
51	V	1897.904	1.967241	ppb	6.368	5.807	16.667
59	Co	695.573	0.258361	ppb	6.507	5.370	36.667
60	Ni	1876.790	1.275015	ppb	4.162	5.160	45.556
75	As	1771.409	0.301987	ppb	3.715	38.417	1541.469
71	Ga-ISK	> 136062.757		ppb	1.478		132451.313
82	Se-2	15.544	0.275645	ppb	37.420	35.345	-1.162
107	Ag-1	2609.127	0.095776	ppb	3.458	13.737	1951.244
115	In-ISK	131929.364		ppb	0.751		129028.634
45	Sc-ISK	> 318735.488		ppb	0.650		300561.194
23	Na	2837979.719	3904.568554	ppb	1.177	0.692	7050.078
39	K	1383130.076	737.936803	ppb	1.470	1.665	150074.206
24	Mg	2546738.609	3193.775255	ppb	0.885	1.492	303.337
159	Tb-ISK	282797.704		ppb	0.402		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16345-A-4-A

Autosampler Position: 336

Sample Date/Time: Thursday, January 02, 2020 19:20:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16345-A-4-A.194

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46364.006		ppb	0.665		42758.339
9	Be	61.111	0.038028	ppb	26.907	31.715	8.889
10	B	15061.283	14.940562	ppb	5.157	14.852	9087.334
27	Al	5713576.687	759.278627	ppb	1.231	1.524	7486.432
43	Ca-2	2212293.126	84043.690375	ppb	0.879	0.871	278.336
49	Ti	12349.824	15.645417	ppb	11.038	11.142	202.224
52	Cr	48044.018	2.550541	ppb	2.456	3.731	16796.538
55	Mn	1403601.307	71.199951	ppb	0.922	1.045	927.808
57	Fe	473076.679	1069.282154	ppb	0.446	0.543	28665.406
45	Sc-IS	> 1847471.438		ppb	0.558		1786230.854
66	Zn	52395.912	27.115655	ppb	0.481	0.466	3075.905
86	Sr	810230.245	273.068891	ppb	2.001	1.450	82.957
65	Cu	23980.199	8.125981	ppb	0.782	1.292	309.199
69	Ga-IS	634170.489		ppb	0.351		558624.946
95	Mo	193327.233	70.537473	ppb	1.119	1.038	408.895
115	In-IS	> 456453.557		ppb	1.778		437319.269
111	Cd	240.694	0.067794	ppb	45.470	50.723	15.808
118	Sn	2772.492	-0.272779	ppb	7.835	10.000	5080.905
121	Sb	18168.213	1.728835	ppb	1.112	3.241	1859.010
135	Ba	143062.782	56.213138	ppb	0.401	1.781	4239.556
165	Ho-IS	507557.016		ppb	0.463		502133.360
159	Tb-IS	> 576397.129		ppb	0.112		570764.335
207	Pb	76803.518	2.347070	ppb	0.670	0.577	421.114
203	Tl	344.449	0.027373	ppb	38.726	45.144	47.778
209	Bi-IS	298175.872		ppb	1.793		297460.042
51	V	4551.838	4.808534	ppb	5.755	6.578	16.667
59	Co	3389.291	1.334778	ppb	2.088	3.398	36.667
60	Ni	5184.275	3.624338	ppb	4.568	2.925	45.556
75	As	3062.970	2.438616	ppb	0.796	2.028	1541.469
71	Ga-ISK	> 134302.914		ppb	1.694		132451.313
82	Se-2	74.172	1.256113	ppb	15.567	16.571	-1.162
107	Ag-1	1394.513	-0.093694	ppb	7.696	18.103	1951.244
115	In-ISK	129960.692		ppb	1.574		129028.634
45	Sc-ISK	> 323379.348		ppb	0.950		300561.194
23	Na	4488167.563	6092.226143	ppb	0.784	0.448	7050.078
39	K	2229880.071	1229.140060	ppb	1.088	0.980	150074.206
24	Mg	13021325.563	16096.597133	ppb	0.384	0.943	303.337
159	Tb-ISK	285468.806		ppb	0.807		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16400-A-1-A

Autosampler Position: 337

Sample Date/Time: Thursday, January 02, 2020 19:23:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16400-A-1-A.195

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46978.237		ppb	1.374		42758.339
9	Be	34.444	0.018232	ppb	33.986	46.611	8.889
10	B	13759.958	11.138853	ppb	1.572	5.889	9087.334
27	Al	1163855.562	152.306070	ppb	1.830	2.770	7486.432
43	Ca-2	2786212.047	104787.065169	ppb	0.449	0.762	278.336
49	Ti	5777.838	7.102517	ppb	6.610	7.060	202.224
52	Cr	36856.426	1.588764	ppb	4.149	6.088	16796.538
55	Mn	384128.207	19.255166	ppb	0.521	1.407	927.808
57	Fe	200012.666	405.984769	ppb	0.062	1.142	28665.406
45	Sc-IS	> 1866262.542		ppb	0.974		1786230.854
66	Zn	31150.596	15.237201	ppb	1.248	0.876	3075.905
86	Sr	999172.672	333.347203	ppb	2.537	1.557	82.957
65	Cu	18612.929	6.218353	ppb	1.781	2.032	309.199
69	Ga-IS	653784.000		ppb	0.877		558624.946
95	Mo	286403.904	103.514800	ppb	1.341	0.468	408.895
115	In-IS	> 462421.583		ppb	0.514		437319.269
111	Cd	75.234	0.017385	ppb	28.236	37.025	15.808
118	Sn	2302.408	-0.326946	ppb	2.359	2.031	5080.905
121	Sb	20460.200	1.944312	ppb	1.928	2.696	1859.010
135	Ba	123283.024	47.538181	ppb	0.790	0.620	4239.556
165	Ho-IS	508125.704		ppb	0.636		502133.360
159	Tb-IS	> 575795.156		ppb	0.816		570764.335
207	Pb	15667.800	0.468924	ppb	1.802	2.055	421.114
203	Tl	271.114	0.020637	ppb	16.373	20.669	47.778
209	Bi-IS	297486.320		ppb	2.005		297460.042
51	V	3054.771	3.121960	ppb	4.230	2.724	16.667
59	Co	888.917	0.328441	ppb	3.756	3.476	36.667
60	Ni	3041.435	2.050276	ppb	2.934	4.642	45.556
75	As	3498.000	2.976039	ppb	4.120	8.272	1541.469
71	Ga-ISK	> 138447.755		ppb	1.635		132451.313
82	Se-2	96.154	1.570549	ppb	13.969	12.401	-1.162
107	Ag-1	884.472	-0.179681	ppb	8.121	7.126	1951.244
115	In-ISK	136682.812		ppb	0.293		129028.634
45	Sc-ISK	> 332931.629		ppb	0.714		300561.194
23	Na	5358673.537	7066.769774	ppb	0.529	0.369	7050.078
39	K	2569279.680	1386.994888	ppb	0.704	0.160	150074.206
24	Mg	16363089.718	19647.551285	ppb	1.121	1.660	303.337
159	Tb-ISK	293744.682		ppb	0.614		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16469-B-1-A

Autosampler Position: 338

Sample Date/Time: Thursday, January 02, 2020 19:25:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16469-B-1-A.196

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		48129.830		ppb			0.356			42758.339
9	Be	|		192.224	0.136122	ppb	16.113	18.116				8.889
10	B	|		27969.581	49.982026	ppb	1.605	4.012				9087.334
27	Al	|		21967848.678	2961.432341	ppb	0.771	0.903				7486.432
43	Ca-2	|		825058.427	31756.981195	ppb	1.132	0.910				278.336
49	Ti	|		34448.156	44.719385	ppb	1.407	0.194				202.224
52	Cr	|		99086.896	6.906220	ppb	0.295	1.511				16796.538
55	Mn	|		3092046.037	159.013679	ppb	1.117	1.139				927.808
57	Fe	|		971670.582	2303.060563	ppb	0.805	0.983				28665.406
45	Sc-IS	>		1823108.778		ppb	1.465					1786230.854
66	Zn	|		306794.431	169.537780	ppb	1.795	1.008				3075.905
86	Sr	|		383906.719	131.095121	ppb	3.069	2.114				82.957
65	Cu	|		60376.646	20.902200	ppb	1.744	0.947				309.199
69	Ga-IS	|		654190.955		ppb	1.421					558624.946
95	Mo	|		24792.614	9.035379	ppb	2.326	3.770				408.895
115	In-IS	>		456697.901		ppb	1.076					437319.269
111	Cd	|		1565.805	0.465343	ppb	4.340	3.346				15.808
118	Sn	|		3435.969	-0.201661	ppb	1.651	1.939				5080.905
121	Sb	|		5124.252	0.338822	ppb	1.023	2.529				1859.010
135	Ba	|		182935.306	72.319966	ppb	2.169	1.156				4239.556
165	Ho-IS	|		513490.455		ppb	1.612					502133.360
159	Tb-IS	>		580164.341		ppb	1.403					570764.335
207	Pb	|		345825.989	10.545093	ppb	1.363	0.160				421.114
203	Tl	|		383.339	0.030690	ppb	16.568	17.870				47.778
209	Bi-IS	|		300272.472		ppb	1.825					297460.042
51	V	|		12763.477	12.770762	ppb	0.921	2.632				16.667
59	Co	|		6674.892	2.497028	ppb	0.589	2.388				36.667
60	Ni	|		13628.721	9.056587	ppb	1.353	0.513				45.556
75	As	|		2873.710	1.875174	ppb	4.411	11.472				1541.469
71	Ga-ISK	>		142105.674		ppb	1.852					132451.313
82	Se-2	|		68.151	1.091101	ppb	12.401	11.019				-1.162
107	Ag-1	|		1092.264	-0.151870	ppb	4.468	3.262				1951.244
115	In-ISK	|		136360.067		ppb	0.913					129028.634
45	Sc-ISK	>		332061.660		ppb	0.484					300561.194
23	Na	|		14584842.514	19301.719087	ppb	0.853	0.610				7050.078
39	K	|		4754896.823	2655.735993	ppb	1.154	1.347				150074.206
24	Mg	|		5171529.343	6225.452391	ppb	1.031	1.498				303.337
159	Tb-ISK	|		296234.588		ppb	0.295					273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16469-B-1-B MS

Autosampler Position: 339

Sample Date/Time: Thursday, January 02, 2020 19:28:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16469-B-1-B MS.197

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	45591.525		ppb	0.561		42758.339
9	Be	141284.125	106.912405	ppb	0.828	2.373	8.889
10	B	64226.290	150.212198	ppb	1.306	0.838	9087.334
27	Al	22053750.505	3031.081704	ppb	0.746	1.741	7486.432
43	Ca-2	940296.960	36897.660008	ppb	1.474	1.126	278.336
49	Ti	85549.868	113.632985	ppb	1.344	0.724	202.224
52	Cr	1271167.305	107.774997	ppb	0.987	1.955	16796.538
55	Mn	4947409.198	259.447185	ppb	0.616	2.225	927.808
57	Fe	3179415.179	7851.034277	ppb	0.912	2.698	28665.406
45	Sc-IS	> 1788410.857		ppb	1.874		1786230.854
66	Zn	491809.716	278.167827	ppb	1.796	0.267	3075.905
86	Sr	674608.495	234.816233	ppb	4.040	2.213	82.957
65	Cu	361074.560	128.008783	ppb	0.971	1.528	309.199
69	Ga-IS	660301.984		ppb	2.662		558624.946
95	Mo	271019.810	102.212673	ppb	2.367	0.526	408.895
115	In-IS	> 445121.229		ppb	3.097		437319.269
111	Cd	358802.100	110.611866	ppb	2.396	1.278	15.808
118	Sn	135534.495	14.438289	ppb	1.883	5.173	5080.905
121	Sb	832183.084	90.691967	ppb	2.211	1.335	1859.010
135	Ba	436647.248	179.774997	ppb	1.704	1.409	4239.556
165	Ho-IS	506290.099		ppb	2.119		502133.360
159	Tb-IS	> 575553.217		ppb	1.358		570764.335
207	Pb	3753347.961	115.504708	ppb	2.974	3.070	421.114
203	Tl	1014080.147	93.826218	ppb	2.971	2.787	47.778
209	Bi-IS	299704.167		ppb	3.059		297460.042
51	V	111042.135	114.791660	ppb	0.856	1.470	16.667
59	Co	260191.652	101.025622	ppb	1.176	1.903	36.667
60	Ni	164441.108	113.150696	ppb	1.225	0.270	45.556
75	As	70305.833	108.936160	ppb	0.592	0.497	1541.469
71	Ga-ISK	> 137681.438		ppb	0.985		132451.313
82	Se-2	6324.890	102.753878	ppb	2.523	3.294	-1.162
107	Ag-1	282693.351	43.935160	ppb	1.444	2.332	1951.244
115	In-ISK	134172.922		ppb	1.125		129028.634
45	Sc-ISK	> 327495.779		ppb	0.109		300561.194
23	Na	15035874.210	20176.667032	ppb	0.593	0.671	7050.078
39	K	6410833.251	3665.690911	ppb	0.771	0.808	150074.206
24	Mg	9266907.228	11310.790360	ppb	0.229	0.337	303.337
159	Tb-ISK	290878.223		ppb	0.493		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16469-B-1-C MSD

Autosampler Position: 340

Sample Date/Time: Thursday, January 02, 2020 19:31:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16469-B-1-C MSD.198

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		45405.415		ppb		2.828		42758.339
9	Be	|		142023.651	108.206267	ppb	1.107	1.570		8.889
10	B	|		62913.810	147.820948	ppb	1.601	0.364		9087.334
27	Al	|		21243542.693	2940.171354	ppb	0.961	2.268		7486.432
43	Ca-2	|		931527.189	36806.598436	ppb	1.371	0.190		278.336
49	Ti	|		83695.575	111.949368	ppb	0.624	1.348		202.224
52	Cr	|		1268587.999	108.306951	ppb	0.548	1.368		16796.538
55	Mn	|		4861516.905	256.698390	ppb	0.351	1.653		927.808
57	Fe	|		3172060.960	7886.265818	ppb	0.489	1.140		28665.406
45	Sc-IS	>		1775952.978		ppb		1.312		1786230.854
66	Zn	|		485958.043	276.784232	ppb	1.268	0.977		3075.905
86	Sr	|		660089.117	231.386268	ppb	4.131	3.017		82.957
65	Cu	|		361755.958	129.131247	ppb	1.607	1.068		309.199
69	Ga-IS	|		651189.860		ppb		1.554		558624.946
95	Mo	|		280688.097	106.610609	ppb	2.054	1.161		408.895
115	In-IS	>		441531.896		ppb		1.962		437319.269
111	Cd	|		357413.891	111.066705	ppb	1.669	1.005		15.808
118	Sn	|		120497.288	12.860714	ppb	6.080	4.326		5080.905
121	Sb	|		821139.525	90.213392	ppb	0.576	1.592		1859.010
135	Ba	|		425091.068	176.394923	ppb	0.881	1.915		4239.556
165	Ho-IS	|		501298.119		ppb		1.925		502133.360
159	Tb-IS	>		572952.894		ppb		1.853		570764.335
207	Pb	|		3710658.477	114.694804	ppb	2.451	1.114		421.114
203	Tl	|		1014413.210	94.276395	ppb	2.842	1.793		47.778
209	Bi-IS	|		292964.522		ppb		2.297		297460.042
51	V	|		110630.065	117.052649	ppb	0.815	2.463		16.667
59	Co	|		263804.771	104.836955	ppb	1.099	2.809		36.667
60	Ni	|		162668.821	114.554476	ppb	1.551	1.824		45.556
75	As	|		69840.783	110.780255	ppb	1.355	0.707		1541.469
71	Ga-ISK	>		134548.550		ppb		1.737		132451.313
82	Se-2	|		6419.910	106.721035	ppb	0.766	1.349		-1.162
107	Ag-1	|		306867.575	48.838182	ppb	0.538	1.321		1951.244
115	In-ISK	|		131129.430		ppb		1.563		129028.634
45	Sc-ISK	>		320500.997		ppb		0.634		300561.194
23	Na	|		14300774.270	19608.943321	ppb	0.428	0.412		7050.078
39	K	|		6224682.543	3636.076557	ppb	1.242	0.624		150074.206
24	Mg	|		9023140.060	11253.110195	ppb	1.702	1.102		303.337
159	Tb-ISK	|		286364.587		ppb		1.133		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16469-B-6-A

Autosampler Position: 341

Sample Date/Time: Thursday, January 02, 2020 19:34:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16469-B-6-A.199

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		44585.053		ppb		2.621		42758.339
9	Be	|		205.557	0.151647	ppb	21.595	24.216		8.889
10	B	|		27655.641	51.727769	ppb	2.235	2.046		9087.334
27	Al	|		13091853.790	1827.024020	ppb	0.629	2.534		7486.432
43	Ca-2	|		557936.939	22229.905751	ppb	0.712	1.312		278.336
49	Ti	|		20045.167	26.833075	ppb	1.659	1.603		202.224
52	Cr	|		57393.952	3.563156	ppb	0.548	2.688		16796.538
55	Mn	|		3276193.080	174.435248	ppb	1.082	1.752		927.808
57	Fe	|		875839.109	2144.682633	ppb	0.533	2.522		28665.406
45	Sc-IS	>		1761157.225		ppb	1.942			1786230.854
66	Zn	|		90569.555	50.599633	ppb	1.240	1.242		3075.905
86	Sr	|		285319.892	100.849304	ppb	2.790	0.841		82.957
65	Cu	|		28132.691	10.026876	ppb	1.453	1.849		309.199
69	Ga-IS	|		610107.871		ppb	2.000			558624.946
95	Mo	|		17449.546	6.542261	ppb	2.989	4.716		408.895
115	In-IS	>		439420.781		ppb	1.408			437319.269
111	Cd	|		798.936	0.244721	ppb	9.374	10.803		15.808
118	Sn	|		6062.398	0.107500	ppb	2.564	24.442		5080.905
121	Sb	|		10717.356	0.979529	ppb	3.931	6.412		1859.010
135	Ba	|		119590.718	48.570337	ppb	0.653	1.181		4239.556
165	Ho-IS	|		502156.924		ppb	3.551			502133.360
159	Tb-IS	>		572190.136		ppb	2.623			570764.335
207	Pb	|		156260.612	4.826868	ppb	0.861	3.355		421.114
203	Tl	|		1375.623	0.123970	ppb	17.102	19.857		47.778
209	Bi-IS	|		298773.360		ppb	1.196			297460.042
51	V	|		8683.750	9.182352	ppb	1.188	1.205		16.667
59	Co	|		6146.880	2.431112	ppb	4.821	4.805		36.667
60	Ni	|		8904.997	6.248672	ppb	1.176	1.128		45.556
75	As	|		3008.049	2.346926	ppb	1.619	2.685		1541.469
71	Ga-ISK	>		134351.029		ppb	0.398			132451.313
82	Se-2	|		53.817	0.915203	ppb	16.231	15.817		-1.162
107	Ag-1	|		15909.994	2.234272	ppb	6.898	7.698		1951.244
115	In-ISK	|		130862.478		ppb	1.021			129028.634
45	Sc-ISK	>		316448.757		ppb	0.396			300561.194
23	Na	|		9830689.159	13648.555342	ppb	2.050	1.782		7050.078
39	K	|		7390242.685	4391.783606	ppb	1.113	1.181		150074.206
24	Mg	|		4499492.148	5683.346170	ppb	0.696	0.301		303.337
159	Tb-ISK	|		284498.452		ppb	0.966			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16469-A-7-A

Autosampler Position: 342

Sample Date/Time: Thursday, January 02, 2020 19:36:54

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16469-A-7-A.200

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	50159.038		ppb		2.016		42758.339
9	Be	|	82.222	0.054792	ppb	6.193	5.956		8.889
10	B	|	77406.959	183.922165	ppb	1.559	3.399		9087.334
27	Al	|	1782981.656	241.483163	ppb	1.064	1.912		7486.432
43	Ca-2	|	2029261.588	78796.699783	ppb	3.996	4.217		278.336
49	Ti	|	7893.308	10.139262	ppb	10.745	12.556		202.224
52	Cr	|	208065.392	16.241914	ppb	0.659	2.314		16796.538
55	Mn	|	189805.973	9.798790	ppb	0.697	0.877		927.808
57	Fe	|	186072.881	387.120997	ppb	0.550	1.323		28665.406
45	Sc-IS	>	1807680.145		ppb	1.466			1786230.854
66	Zn	|	92462.729	50.317600	ppb	1.058	1.506		3075.905
86	Sr	|	734958.919	253.203135	ppb	0.672	1.699		82.957
65	Cu	|	37676.210	13.115842	ppb	0.202	1.443		309.199
69	Ga-IS	|	616899.816		ppb	1.361			558624.946
95	Mo	|	37470.196	13.851928	ppb	1.642	2.919		408.895
115	In-IS	>	444480.169		ppb	0.245			437319.269
111	Cd	|	844.676	0.255801	ppb	6.346	6.674		15.808
118	Sn	|	3409.296	-0.194417	ppb	3.724	7.407		5080.905
121	Sb	|	14918.899	1.424905	ppb	1.932	2.008		1859.010
135	Ba	|	109091.681	43.622630	ppb	1.520	1.792		4239.556
165	Ho-IS	|	500709.573		ppb	0.728			502133.360
159	Tb-IS	>	567707.502		ppb	0.742			570764.335
207	Pb	|	97926.000	3.042293	ppb	1.142	1.188		421.114
203	Tl	|	540.010	0.046191	ppb	3.266	2.795		47.778
209	Bi-IS	|	290841.113		ppb	1.347			297460.042
51	V	|	4707.442	4.953231	ppb	0.958	0.752		16.667
59	Co	|	1304.504	0.502619	ppb	6.840	7.161		36.667
60	Ni	|	5868.983	4.093793	ppb	1.117	1.350		45.556
75	As	|	3206.250	2.652087	ppb	1.080	1.589		1541.469
71	Ga-ISK	>	134789.573		ppb	0.330			132451.313
82	Se-2	|	121.857	2.040644	ppb	9.451	9.042		-1.162
107	Ag-1	|	6513.708	0.723954	ppb	3.695	5.501		1951.244
115	In-ISK	|	130796.277		ppb	0.306			129028.634
45	Sc-ISK	>	320323.876		ppb	0.957			300561.194
23	Na	|	21152041.612	29024.341695	ppb	0.995	0.739		7050.078
39	K	|	7593662.297	4459.576243	ppb	1.558	1.483		150074.206
24	Mg	|	2794911.290	3487.550604	ppb	0.821	0.842		303.337
159	Tb-ISK	|	281260.199		ppb	1.555			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, January 02, 2020 19:48:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCV-210770.203

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	42138.730		ppb		1.204		42758.339
9	Be	|	125681.552	103.309352	ppb		0.444	1.755	8.889
10	B	|	93566.530	252.205089	ppb		0.462	1.901	9087.334
27	Al	|	741028.679	109.634937	ppb		1.863	1.561	7486.432
43	Ca-2	|	122790.527	5224.765609	ppb		1.444	0.175	278.336
49	Ti	|	72064.666	103.973910	ppb		1.422	2.013	202.224
52	Cr	|	1070157.726	98.436831	ppb		0.428	1.112	16796.538
55	Mn	|	1791069.498	101.991329	ppb		0.540	0.915	927.808
57	Fe	|	1932649.161	5158.953094	ppb		0.782	0.660	28665.406
45	Sc-IS	>	1646180.107		ppb		1.312		1786230.854
66	Zn	|	173608.682	105.594589	ppb		1.493	0.575	3075.905
86	Sr	|	279523.558	105.713539	ppb		1.381	0.176	82.957
65	Cu	|	271471.000	104.531249	ppb		0.554	1.278	309.199
69	Ga-IS	|	590265.654		ppb		2.159		558624.946
95	Mo	|	263800.081	108.117705	ppb		0.436	1.751	408.895
115	In-IS	>	423803.770		ppb		0.594		437319.269
111	Cd	|	313058.132	101.353377	ppb		1.473	2.052	15.808
118	Sn	|	846950.522	97.840831	ppb		2.292	1.916	5080.905
121	Sb	|	863532.294	98.839846	ppb		1.867	1.837	1859.010
135	Ba	|	225345.949	96.595663	ppb		1.628	1.551	4239.556
165	Ho-IS	|	479535.315		ppb		1.316		502133.360
159	Tb-IS	>	539469.907		ppb		1.571		570764.335
207	Pb	|	3180362.781	104.418186	ppb		0.898	1.091	421.114
203	Tl	|	1047443.051	103.408278	ppb		1.009	1.729	47.778
209	Bi-IS	|	286760.679		ppb		0.558		297460.042
51	V	|	89921.170	97.887101	ppb		2.976	3.276	16.667
59	Co	|	238668.445	97.582945	ppb		3.129	3.436	36.667
60	Ni	|	138961.533	100.687918	ppb		1.108	0.361	45.556
75	As	|	60805.146	98.973528	ppb		2.096	0.778	1541.469
71	Ga-ISK	>	130750.139		ppb		1.379		132451.313
82	Se-2	|	6054.779	103.580716	ppb		1.808	2.659	-1.162
107	Ag-1	|	597421.833	98.155911	ppb		0.482	1.136	1951.244
115	In-ISK	|	128196.530		ppb		0.781		129028.634
45	Sc-ISK	>	305231.627		ppb		1.983		300561.194
23	Na	|	3603607.470	5181.861143	ppb		0.655	1.746	7050.078
39	K	|	8315351.009	5140.913049	ppb		0.697	2.706	150074.206
24	Mg	|	3914928.096	5127.663460	ppb		0.634	1.440	303.337
159	Tb-ISK	|	273705.138		ppb		0.244		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, January 02, 2020 19:53:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCB-23446.204

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	41970.453		ppb	0.595		42758.339
9	Be	105.556	0.080458	ppb	21.026	21.231	8.889
10	B	5048.671	-9.730574	ppb	3.626	7.648	9087.334
27	Al	8299.111	0.217363	ppb	14.589	79.541	7486.432
43	Ca-2	718.351	19.902222	ppb	5.271	5.854	278.336
49	Ti	251.113	0.096109	ppb	8.637	29.474	202.224
52	Cr	14639.722	-0.068272	ppb	2.079	52.956	16796.538
55	Mn	2766.940	0.109743	ppb	16.764	21.584	927.808
57	Fe	17185.892	-24.655295	ppb	2.885	1.935	28665.406
45	Sc-IS	> 1634437.899		ppb	1.930		1786230.854
66	Zn	910.029	-1.186233	ppb	7.317	3.026	3075.905
86	Sr	449.109	0.141408	ppb	38.069	43.802	82.957
65	Cu	405.745	0.047621	ppb	9.177	27.275	309.199
69	Ga-IS	563206.994		ppb	2.027		558624.946
95	Mo	2059.037	0.696471	ppb	3.078	3.513	408.895
115	In-IS	> 429384.631		ppb	1.036		437319.269
111	Cd	211.233	0.062447	ppb	31.344	33.357	15.808
118	Sn	8801.601	0.437597	ppb	3.266	9.854	5080.905
121	Sb	2047.925	0.025155	ppb	5.138	40.295	1859.010
135	Ba	236.669	-1.692086	ppb	33.891	1.977	4239.556
165	Ho-IS	476742.822		ppb	1.153		502133.360
159	Tb-IS	> 544831.275		ppb	1.027		570764.335
207	Pb	2690.101	0.074247	ppb	24.522	27.516	421.114
203	Tl	742.242	0.068015	ppb	18.056	18.207	47.778
209	Bi-IS	296437.806		ppb	1.449		297460.042
51	V	84.445	0.074865	ppb	23.130	27.957	16.667
59	Co	244.447	0.086193	ppb	34.775	40.656	36.667
60	Ni	126.667	0.060033	ppb	16.007	23.189	45.556
75	As	1442.842	-0.108206	ppb	5.380	96.316	1541.469
71	Ga-ISK	> 129450.581		ppb	1.122		132451.313
82	Se-2	14.208	0.265510	ppb	75.444	69.893	-1.162
107	Ag-1	5757.828	0.640848	ppb	4.373	5.199	1951.244
115	In-ISK	127316.585		ppb	0.862		129028.634
45	Sc-ISK	> 302171.331		ppb	0.776		300561.194
23	Na	14135.490	10.255206	ppb	18.925	38.016	7050.078
39	K	155479.465	2.924613	ppb	1.807	50.419	150074.206
24	Mg	4990.916	6.199638	ppb	27.763	29.654	303.337
159	Tb-ISK	270909.319		ppb	0.622		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16773-A-1-A

Autosampler Position: 343

Sample Date/Time: Thursday, January 02, 2020 19:57:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16773-A-1-A.205

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		42225.647		ppb		0.474		42758.339
9	Be	|		42.222	0.028140	ppb	60.297	75.028		8.889
10	B	|		8564.790	0.665668	ppb	2.598	88.549		9087.334
27	Al	|		1093653.354	162.961321	ppb	1.956	1.733		7486.432
43	Ca-2	|		103814.271	4433.936545	ppb	1.949	1.946		278.336
49	Ti	|		4849.739	6.773111	ppb	22.248	23.054		202.224
52	Cr	|		22972.902	0.708171	ppb	0.875	2.998		16796.538
55	Mn	|		42293.706	2.370730	ppb	4.400	4.702		927.808
57	Fe	|		69708.661	117.921543	ppb	3.141	4.573		28665.406
45	Sc-IS	>		1639421.999		ppb	0.294			1786230.854
66	Zn	|		8202.355	3.340051	ppb	1.708	2.970		3075.905
86	Sr	|		42916.523	16.273256	ppb	2.274	2.278		82.957
65	Cu	|		4496.539	1.630475	ppb	2.675	3.169		309.199
69	Ga-IS	|		550888.090		ppb	1.613			558624.946
95	Mo	|		682.239	0.126439	ppb	8.608	18.527		408.895
115	In-IS	>		420304.376		ppb	0.448			437319.269
111	Cd	|		169.679	0.050424	ppb	9.323	10.043		15.808
118	Sn	|		1068.929	-0.446888	ppb	7.749	2.289		5080.905
121	Sb	|		2196.836	0.047421	ppb	2.498	11.014		1859.010
135	Ba	|		16142.454	5.312831	ppb	3.001	3.936		4239.556
165	Ho-IS	|		472807.927		ppb	3.001			502133.360
159	Tb-IS	>		537346.485		ppb	0.822			570764.335
207	Pb	|		7374.074	0.230039	ppb	4.694	5.379		421.114
203	Tl	|		395.561	0.034728	ppb	17.359	19.174		47.778
209	Bi-IS	|		285827.292		ppb	1.882			297460.042
51	V	|		665.571	0.720635	ppb	6.613	6.383		16.667
59	Co	|		242.224	0.086030	ppb	18.326	20.373		36.667
60	Ni	|		1160.047	0.824215	ppb	4.748	3.416		45.556
75	As	|		2611.606	1.905654	ppb	1.165	6.725		1541.469
71	Ga-ISK	>		128266.704		ppb	1.720			132451.313
82	Se-2	|		15.859	0.296425	ppb	10.922	11.705		-1.162
107	Ag-1	|		1544.528	-0.058025	ppb	5.487	20.348		1951.244
115	In-ISK	|		124530.644		ppb	1.168			129028.634
45	Sc-ISK	>		299545.725		ppb	0.560			300561.194
23	Na	|		909074.755	1324.126373	ppb	0.494	1.016		7050.078
39	K	|		3305399.541	2024.497926	ppb	1.062	0.889		150074.206
24	Mg	|		687157.879	916.567191	ppb	1.664	1.150		303.337
159	Tb-ISK	|		265492.993		ppb	0.261			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16773-A-2-A

Autosampler Position: 344

Sample Date/Time: Thursday, January 02, 2020 19:59:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16773-A-2-A.206

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		43308.887		ppb			1.104			42758.339
9	Be	|		75.556	0.054406	ppb			54.808	63.765		8.889
10	B	|		16737.579	23.667643	ppb			1.476	3.075		9087.334
27	Al	|		4597557.991	670.552219	ppb			1.613	2.172		7486.432
43	Ca-2	|		64736.353	2689.084634	ppb			0.848	1.643		278.336
49	Ti	|		13175.048	18.345479	ppb			14.636	13.670		202.224
52	Cr	|		26860.786	1.007772	ppb			1.090	6.961		16796.538
55	Mn	|		51230.802	2.806467	ppb			5.969	6.652		927.808
57	Fe	|		119817.486	245.605657	ppb			3.689	3.852		28665.406
45	Sc-IS	>		1683263.375		ppb			1.860			1786230.854
66	Zn	|		4913.067	1.218500	ppb			2.919	7.011		3075.905
86	Sr	|		30965.618	11.427134	ppb			2.076	0.778		82.957
65	Cu	|		5169.297	1.839740	ppb			4.901	6.544		309.199
69	Ga-IS	|		560025.683		ppb			2.096			558624.946
95	Mo	|		2166.832	0.715913	ppb			6.874	10.665		408.895
115	In-IS	>		422118.790		ppb			2.356			437319.269
111	Cd	|		127.673	0.036595	ppb			20.278	23.709		15.808
118	Sn	|		1154.491	-0.437268	ppb			9.958	3.656		5080.905
121	Sb	|		2576.899	0.090333	ppb			2.913	16.680		1859.010
135	Ba	|		8709.324	2.023978	ppb			4.429	7.034		4239.556
165	Ho-IS	|		480578.724		ppb			2.587			502133.360
159	Tb-IS	>		542944.402		ppb			1.484			570764.335
207	Pb	|		11366.244	0.357840	ppb			5.711	6.474		421.114
203	Tl	|		404.450	0.035295	ppb			22.059	26.339		47.778
209	Bi-IS	|		287639.212		ppb			0.659			297460.042
51	V	|		961.144	1.050686	ppb			11.819	12.270		16.667
59	Co	|		323.337	0.120209	ppb			19.669	22.149		36.667
60	Ni	|		1142.268	0.812777	ppb			1.179	2.108		45.556
75	As	|		3624.660	3.638002	ppb			1.234	0.571		1541.469
71	Ga-ISK	>		128063.705		ppb			0.935			132451.313
82	Se-2	|		15.513	0.290206	ppb			30.589	27.962		-1.162
107	Ag-1	|		881.138	-0.169216	ppb			6.402	5.202		1951.244
115	In-ISK	|		125784.402		ppb			1.215			129028.634
45	Sc-ISK	>		300073.468		ppb			1.077			300561.194
23	Na	|		3530003.525	5162.349256	ppb			0.444	0.638		7050.078
39	K	|		2376292.102	1425.839991	ppb			0.620	0.492		150074.206
24	Mg	|		277650.612	369.488382	ppb			0.761	1.080		303.337
159	Tb-ISK	|		270765.355		ppb			0.867			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16773-A-3-A

Autosampler Position: 345

Sample Date/Time: Thursday, January 02, 2020 20:02:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16773-A-3-A.207

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42330.477		ppb	4.292		42758.339
9	Be	37.778	0.024579	ppb	13.478	18.190	8.889
10	B	8362.447	0.153682	ppb	1.855	525.799	9087.334
27	Al	1175069.928	176.074209	ppb	6.092	9.640	7486.432
43	Ca-2	110321.066	4731.328970	ppb	1.486	4.732	278.336
49	Ti	3930.551	5.464082	ppb	17.126	18.985	202.224
52	Cr	24336.267	0.844172	ppb	0.678	8.388	16796.538
55	Mn	45890.279	2.585107	ppb	2.200	2.443	927.808
57	Fe	69496.449	118.021332	ppb	1.895	5.030	28665.406
45	Sc-IS	> 1634639.222		ppb	3.427		1786230.854
66	Zn	9443.122	4.130078	ppb	3.308	5.046	3075.905
86	Sr	45425.940	17.291067	ppb	1.596	3.943	82.957
65	Cu	4501.751	1.639732	ppb	2.256	6.055	309.199
69	Ga-IS	538020.278		ppb	4.088		558624.946
95	Mo	591.123	0.089771	ppb	6.891	19.264	408.895
115	In-IS	> 407955.763		ppb	4.923		437319.269
111	Cd	144.315	0.043577	ppb	5.346	2.519	15.808
118	Sn	701.128	-0.487343	ppb	8.509	1.811	5080.905
121	Sb	1963.469	0.027292	ppb	5.750	18.282	1859.010
135	Ba	18390.721	6.558139	ppb	1.483	4.982	4239.556
165	Ho-IS	463303.607		ppb	4.741		502133.360
159	Tb-IS	> 528499.714		ppb	4.689		570764.335
207	Pb	7803.063	0.249088	ppb	4.000	8.731	421.114
203	Tl	246.669	0.020552	ppb	16.606	25.131	47.778
209	Bi-IS	286145.506		ppb	2.827		297460.042
51	V	772.243	0.827327	ppb	10.664	10.889	16.667
59	Co	243.335	0.085223	ppb	15.069	17.567	36.667
60	Ni	1166.714	0.817467	ppb	4.874	4.652	45.556
75	As	2612.054	1.843886	ppb	2.141	4.753	1541.469
71	Ga-ISK	> 130051.517		ppb	0.455		132451.313
82	Se-2	10.185	0.194883	ppb	31.444	28.728	-1.162
107	Ag-1	777.799	-0.188588	ppb	4.721	3.098	1951.244
115	In-ISK	124678.926		ppb	0.332		129028.634
45	Sc-ISK	> 298811.798		ppb	0.883		300561.194
23	Na	905747.997	1322.503044	ppb	0.432	0.616	7050.078
39	K	3323749.014	2041.454095	ppb	1.602	1.034	150074.206
24	Mg	678219.661	906.924965	ppb	0.511	0.650	303.337
159	Tb-ISK	267294.908		ppb	0.867		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16472-B-2-B

Autosampler Position: 346

Sample Date/Time: Thursday, January 02, 2020 20:05:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16472-B-2-B.208

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		46242.504		ppb			0.961			42758.339
9	Be	|		67.778	0.046937	ppb			20.475	21.976		8.889
10	B	|		18300.604	27.477261	ppb			1.204	2.814		9087.334
27	Al	|		975114.825	139.478219	ppb			1.308	1.759		7486.432
43	Ca-2	|		767511.980	31564.640837	ppb			1.274	0.950		278.336
49	Ti	|		3294.825	4.329426	ppb			5.164	6.101		202.224
52	Cr	|		21649.726	0.504916	ppb			0.552	5.270		16796.538
55	Mn	|		156337.461	8.545008	ppb			0.076	1.478		927.808
57	Fe	|		75701.242	126.204922	ppb			2.562	5.315		28665.406
45	Sc-IS	>		1706264.369		ppb			1.452			1786230.854
66	Zn	|		78544.225	45.107229	ppb			0.643	0.868		3075.905
86	Sr	|		548432.851	200.142231	ppb			1.150	0.406		82.957
65	Cu	|		5509.328	1.939295	ppb			1.336	2.752		309.199
69	Ga-IS	|		562524.417		ppb			2.102			558624.946
95	Mo	|		3493.761	1.228319	ppb			3.668	2.517		408.895
115	In-IS	>		423874.238		ppb			0.952			437319.269
111	Cd	|		9528.069	3.079247	ppb			3.521	3.494		15.808
118	Sn	|		2638.022	-0.265577	ppb			3.945	5.666		5080.905
121	Sb	|		7328.547	0.633678	ppb			3.394	3.365		1859.010
135	Ba	|		42504.252	16.762536	ppb			0.905	1.664		4239.556
165	Ho-IS	|		482379.573		ppb			1.841			502133.360
159	Tb-IS	>		548306.097		ppb			1.667			570764.335
207	Pb	|		11319.510	0.352669	ppb			3.388	3.956		421.114
203	Tl	|		486.675	0.042764	ppb			11.213	10.666		47.778
209	Bi-IS	|		284548.393		ppb			1.150			297460.042
51	V	|		780.021	0.841994	ppb			6.029	4.899		16.667
59	Co	|		411.117	0.155474	ppb			6.086	6.403		36.667
60	Ni	|		21523.982	15.771561	ppb			1.020	0.835		45.556
75	As	|		1660.147	0.267493	ppb			3.378	36.460		1541.469
71	Ga-ISK	>		129077.309		ppb			1.854			132451.313
82	Se-2	|		46.185	0.820000	ppb			14.476	14.574		-1.162
107	Ag-1	|		1336.730	-0.094004	ppb			11.234	30.404		1951.244
115	In-ISK	|		125427.619		ppb			1.851			129028.634
45	Sc-ISK	>		306981.232		ppb			0.979			300561.194
23	Na	|		5984030.367	8560.409670	ppb			1.480	0.680		7050.078
39	K	|		2275768.902	1328.657074	ppb			0.753	0.625		150074.206
24	Mg	|		6418818.014	8358.453937	ppb			0.255	0.927		303.337
159	Tb-ISK	|		274613.724		ppb			0.658			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, January 02, 2020 20:10:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCV-210770.210

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		42679.215		ppb		0.556		42758.339
9	Be	|		125210.869	103.851111	ppb		1.637	2.146	8.889
10	B	|		93229.906	253.678561	ppb		0.880	0.716	9087.334
27	Al	|		726248.343	108.414249	ppb		0.309	0.565	7486.432
43	Ca-2	|		119480.944	5130.156055	ppb		1.137	1.205	278.336
49	Ti	|		70423.196	102.517855	ppb		1.930	2.144	202.224
52	Cr	|		1035203.395	96.046396	ppb		0.507	0.643	16796.538
55	Mn	|		1711718.069	98.355037	ppb		0.730	1.244	927.808
57	Fe	|		1858751.810	5004.697135	ppb		0.595	1.155	28665.406
45	Sc-IS	>		1631332.026		ppb		0.558		1786230.854
66	Zn	|		169221.975	103.838135	ppb		0.938	1.205	3075.905
86	Sr	|		276535.176	105.536045	ppb		1.434	1.350	82.957
65	Cu	|		264461.680	102.750518	ppb		0.466	0.995	309.199
69	Ga-IS	|		574686.362		ppb		1.527		558624.946
95	Mo	|		254808.312	105.363029	ppb		1.623	1.529	408.895
115	In-IS	>		417618.820		ppb		0.994		437319.269
111	Cd	|		302883.348	99.505257	ppb		0.718	0.279	15.808
118	Sn	|		835278.494	97.923913	ppb		1.406	0.534	5080.905
121	Sb	|		852201.629	98.985087	ppb		1.526	0.834	1859.010
135	Ba	|		222306.680	96.701554	ppb		1.700	0.718	4239.556
165	Ho-IS	|		473998.676		ppb		3.353		502133.360
159	Tb-IS	>		537423.168		ppb		1.237		570764.335
207	Pb	|		3173766.989	104.584739	ppb		2.406	1.765	421.114
203	Tl	|		1031258.319	102.178222	ppb		2.776	2.163	47.778
209	Bi-IS	|		286337.866		ppb		0.491		297460.042
51	V	|		89037.795	99.478529	ppb		2.030	0.927	16.667
59	Co	|		235657.027	98.893312	ppb		1.641	0.858	36.667
60	Ni	|		135989.789	101.148135	ppb		0.924	0.266	45.556
75	As	|		58655.902	97.992012	ppb		1.545	1.351	1541.469
71	Ga-ISK	>		127370.902		ppb		1.151		132451.313
82	Se-2	|		5882.063	103.285286	ppb		2.337	2.609	-1.162
107	Ag-1	|		587728.694	99.123072	ppb		0.606	0.634	1951.244
115	In-ISK	|		125277.212		ppb		1.441		129028.634
45	Sc-ISK	>		302993.053		ppb		1.139		300561.194
23	Na	|		3585100.306	5191.946469	ppb		2.073	1.167	7050.078
39	K	|		8162293.985	5080.748627	ppb		1.404	1.035	150074.206
24	Mg	|		3900464.460	5146.436443	ppb		1.475	2.522	303.337
159	Tb-ISK	|		269578.754		ppb		1.387		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, January 02, 2020 20:14:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCB-23446.211

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		42237.907		ppb	0.690			42758.339
9	Be	|		47.778	0.033066	ppb	24.502	28.398		8.889
10	B	|		4547.390	-11.123524	ppb	1.338	3.132		9087.334
27	Al	|		4766.357	-0.308197	ppb	11.041	23.998		7486.432
43	Ca-2	|		348.338	4.124009	ppb	21.738	76.604		278.336
49	Ti	|		225.557	0.061397	ppb	9.615	46.293		202.224
52	Cr	|		14730.925	-0.049129	ppb	0.923	8.081		16796.538
55	Mn	|		1562.308	0.041626	ppb	7.221	15.139		927.808
57	Fe	|		16538.460	-26.065360	ppb	2.223	1.828		28665.406
45	Sc-IS	>		1621750.107		ppb	1.198			1786230.854
66	Zn	|		864.471	-1.210783	ppb	14.558	6.045		3075.905
86	Sr	|		298.018	0.085509	ppb	2.959	3.174		82.957
65	Cu	|		272.537	-0.003338	ppb	17.116	512.474		309.199
69	Ga-IS	|		542218.888		ppb	0.866			558624.946
95	Mo	|		2451.323	0.867269	ppb	8.941	11.964		408.895
115	In-IS	>		412137.207		ppb	0.951			437319.269
111	Cd	|		119.297	0.034767	ppb	8.337	10.065		15.808
118	Sn	|		9467.584	0.559469	ppb	3.792	9.600		5080.905
121	Sb	|		1388.957	-0.042885	ppb	8.288	28.266		1859.010
135	Ba	|		153.334	-1.725032	ppb	19.565	0.764		4239.556
165	Ho-IS	|		471053.397		ppb	1.383			502133.360
159	Tb-IS	>		531969.338		ppb	0.453			570764.335
207	Pb	|		1717.819	0.044106	ppb	13.606	17.032		421.114
203	Tl	|		453.341	0.040906	ppb	16.260	17.568		47.778
209	Bi-IS	|		289242.260		ppb	0.844			297460.042
51	V	|		111.112	0.106829	ppb	33.046	38.933		16.667
59	Co	|		193.335	0.066701	ppb	10.767	13.818		36.667
60	Ni	|		96.667	0.039574	ppb	24.138	43.491		45.556
75	As	|		1426.996	-0.085355	ppb	3.784	104.424		1541.469
71	Ga-ISK	>		126874.255		ppb	0.625			132451.313
82	Se-2	|		19.562	0.364329	ppb	46.117	43.755		-1.162
107	Ag-1	|		5054.231	0.540728	ppb	8.130	11.877		1951.244
115	In-ISK	|		123062.308		ppb	0.701			129028.634
45	Sc-ISK	>		293797.095		ppb	0.685			300561.194
23	Na	|		6664.893	-0.337064	ppb	7.463	232.145		7050.078
39	K	|		149969.797	2.139498	ppb	1.060	23.715		150074.206
24	Mg	|		2913.631	3.560851	ppb	4.558	5.018		303.337
159	Tb-ISK	|		266062.087		ppb	2.032			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: MB 570-42480_1-A
 Autosampler Position: 123
 Sample Date/Time: Thursday, January 02, 2020 20:20:50
 Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200102E1\MB 570-42480_1-A.212
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		41698.561		ppb	1.935			42758.339
45	Sc-IS	|>		1429122.617		ppb	4.549			1786230.854
65	Cu	|		229.418	-0.007445	ppb	12.439	235.386		309.199
69	Ga-IS	[		497663.943		ppb	2.261			558624.946
115	In-IS	[>		380380.323		ppb	5.055			437319.269
111	Cd	|		93.607	0.028927	ppb	26.295	33.031		15.808
165	Ho-IS	[		410961.300		ppb	7.195			502133.360
159	Tb-IS	[>		472118.694		ppb	6.127			570764.335
207	Pb	|		1165.574	0.030737	ppb	6.586	10.828		421.114
209	Bi-IS	[		264418.311		ppb	4.798			297460.042
71	Ga-ISK	[>		123714.495		ppb	0.511			132451.313
115	In-ISK	[		128892.394		ppb	0.727			129028.634
45	Sc-ISK	[>		288143.870		ppb	1.211			300561.194
159	Tb-ISK	[		275105.091		ppb	0.842			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-42480_2-A

Autosampler Position: 124

Sample Date/Time: Thursday, January 02, 2020 20:22:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\LCS 570-42480_2-A.213

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40917.421		ppb	2.156			42758.339
45	Sc-IS	|>		1405787.355		ppb	4.639			1786230.854
65	Cu	|		229841.207	103.668598	ppb	3.449	1.721		309.199
69	Ga-IS	[		514899.650		ppb	1.503			558624.946
115	In-IS	[>		370105.034		ppb	5.413			437319.269
111	Cd	|		275788.915	102.307161	ppb	3.503	1.998		15.808
165	Ho-IS	[		402757.106		ppb	6.476			502133.360
159	Tb-IS	[>		468695.089		ppb	7.465			570764.335
207	Pb	|		2755206.379	104.300397	ppb	3.982	3.733		421.114
209	Bi-IS	[		253056.512		ppb	4.268			297460.042
71	Ga-ISK	[>		121388.122		ppb	1.969			132451.313
115	In-ISK	[		127156.813		ppb	1.575			129028.634
45	Sc-ISK	[>		287150.754		ppb	1.015			300561.194
159	Tb-ISK	[		271217.188		ppb	1.022			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-42480_3-A

Autosampler Position: 125

Sample Date/Time: Thursday, January 02, 2020 20:24:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\LCSD 570-42480_3-A.214

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40579.798		ppb	2.405			42758.339
45	Sc-IS	|>		1402702.030		ppb	4.049			1786230.854
65	Cu	|		225646.584	101.989749	ppb	2.793	1.269		309.199
69	Ga-IS	[		514778.275		ppb	2.299			558624.946
115	In-IS	[>		366385.676		ppb	4.839			437319.269
111	Cd	|		269550.275	100.942810	ppb	4.661	0.556		15.808
165	Ho-IS	[		405038.072		ppb	5.961			502133.360
159	Tb-IS	[>		467158.674		ppb	6.040			570764.335
207	Pb	|		2750942.491	104.393787	ppb	3.684	2.625		421.114
209	Bi-IS	[		253180.272		ppb	3.728			297460.042
71	Ga-ISK	[>		121902.344		ppb	0.264			132451.313
115	In-ISK	[		127090.359		ppb	0.936			129028.634
45	Sc-ISK	[>		283444.437		ppb	0.853			300561.194
159	Tb-ISK	[		271856.022		ppb	1.484			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16773-C-1-A

Autosampler Position: 126

Sample Date/Time: Thursday, January 02, 2020 20:28:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16773-C-1-A.216

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	40274.471		ppb	0.724			42758.339
45	Sc-IS	|>	1395084.188		ppb	4.105			1786230.854
65	Cu	|	4126.495	1.769249	ppb	0.625	4.935		309.199
69	Ga-IS	[	485810.994		ppb	1.956			558624.946
115	In-IS	[>	366245.236		ppb	3.496			437319.269
111	Cd	|	197.321	0.069491	ppb	26.957	32.907		15.808
165	Ho-IS	[	396660.302		ppb	5.006			502133.360
159	Tb-IS	[>	459854.613		ppb	5.429			570764.335
207	Pb	|	5964.933	0.217336	ppb	3.674	8.905		421.114
209	Bi-IS	[	252326.866		ppb	2.994			297460.042
71	Ga-ISK	[>	121878.910		ppb	1.716			132451.313
115	In-ISK	[	126162.196		ppb	1.392			129028.634
45	Sc-ISK	[>	285094.258		ppb	3.339			300561.194
159	Tb-ISK	[	270782.823		ppb	2.759			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16773-C-1-B MS

Autosampler Position: 127

Sample Date/Time: Thursday, January 02, 2020 20:30:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16773-C-1-B MS.217

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40325.725		ppb	0.486			42758.339
45	Sc-IS	|>		1404995.098		ppb	4.559			1786230.854
65	Cu	|		213353.599	96.287442	ppb	2.951	1.848		309.199
69	Ga-IS	[		500559.268		ppb	1.105			558624.946
115	In-IS	[>		357324.254		ppb	4.316			437319.269
111	Cd	|		240430.791	92.331135	ppb	3.687	0.665		15.808
165	Ho-IS	[		397308.307		ppb	5.683			502133.360
159	Tb-IS	[>		460236.669		ppb	5.211			570764.335
207	Pb	|		2369460.839	91.233399	ppb	3.492	1.795		421.114
209	Bi-IS	[		252391.661		ppb	3.354			297460.042
71	Ga-ISK	[>		121236.763		ppb	1.209			132451.313
115	In-ISK	[		127584.529		ppb	1.315			129028.634
45	Sc-ISK	[>		284612.752		ppb	2.467			300561.194
159	Tb-ISK	[		271755.159		ppb	0.625			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16773-C-1-C MSD

Autosampler Position: 128

Sample Date/Time: Thursday, January 02, 2020 20:32:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16773-C-1-C MSD.218

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		40108.451		ppb		0.924		42758.339
45	Sc-IS	|>		1404369.454		ppb		4.259		1786230.854
65	Cu	|		124811.258	56.291724	ppb		3.414	0.870	309.199
69	Ga-IS	[		485850.407		ppb		1.526		558624.946
115	In-IS	[>		362651.563		ppb		4.715		437319.269
111	Cd	|		139914.753	52.948332	ppb		3.655	1.355	15.808
165	Ho-IS	[		397842.794		ppb		4.752		502133.360
159	Tb-IS	[>		461973.015		ppb		5.070		570764.335
207	Pb	|		1366241.831	52.408993	ppb		3.291	2.645	421.114
209	Bi-IS	[		250199.730		ppb		2.764		297460.042
71	Ga-ISK	[>		120479.253		ppb		0.752		132451.313
115	In-ISK	[		124091.610		ppb		1.435		129028.634
45	Sc-ISK	[>		278114.445		ppb		0.485		300561.194
159	Tb-ISK	[		265671.289		ppb		1.523		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16773-C-2-A

Autosampler Position: 129

Sample Date/Time: Thursday, January 02, 2020 20:34:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16773-C-2-A.219

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		40286.727		ppb		0.644		42758.339
45	Sc-IS	|>		1424984.240		ppb		5.261		1786230.854
65	Cu	|		4275.345	1.793142	ppb		6.190	1.156	309.199
69	Ga-IS	[		480649.842		ppb		2.077		558624.946
115	In-IS	[>		360450.939		ppb		5.263		437319.269
111	Cd	|		201.213	0.072201	ppb		16.152	23.221	15.808
165	Ho-IS	[		401451.687		ppb		7.066		502133.360
159	Tb-IS	[>		462996.778		ppb		5.961		570764.335
207	Pb	|		7371.857	0.269608	ppb		6.686	9.298	421.114
209	Bi-IS	[		255750.599		ppb		4.284		297460.042
71	Ga-ISK	[>		120651.896		ppb		1.755		132451.313
115	In-ISK	[		124963.955		ppb		0.964		129028.634
45	Sc-ISK	[>		277321.583		ppb		0.925		300561.194
159	Tb-ISK	[		268031.161		ppb		0.805		273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16773-C-3-A

Autosampler Position: 130

Sample Date/Time: Thursday, January 02, 2020 20:36:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\570-16773-C-3-A.220

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	40560.839		ppb	1.241			42758.339
45	Sc-IS	] >	1404295.838		ppb	3.336			1786230.854
65	Cu	|	3987.531	1.692513	ppb	3.092	3.442		309.199
69	Ga-IS	[	482654.361		ppb	1.259			558624.946
115	In-IS	] >	365834.634		ppb	3.455			437319.269
111	Cd	|	191.897	0.066514	ppb	39.009	39.608		15.808
165	Ho-IS	[	405550.687		ppb	5.835			502133.360
159	Tb-IS	] >	467756.327		ppb	4.929			570764.335
207	Pb	|	6263.869	0.224644	ppb	3.186	7.583		421.114
209	Bi-IS	[	257651.290		ppb	3.589			297460.042
71	Ga-ISK	] >	121605.396		ppb	0.631			132451.313
115	In-ISK	[	126863.216		ppb	0.965			129028.634
45	Sc-ISK	] >	281458.966		ppb	0.229			300561.194
159	Tb-ISK	[	271576.737		ppb	1.387			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, January 02, 2020 20:38:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCV-210770.221

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40393.753		ppb	3.959			42758.339
45	Sc-IS	|>		1405911.002		ppb	4.396			1786230.854
65	Cu	|		236384.352	106.609350	ppb	3.229	1.640		309.199
69	Ga-IS	[		506543.114		ppb	2.048			558624.946
115	In-IS	[>		359105.516		ppb	5.361			437319.269
111	Cd	|		264194.204	101.042749	ppb	2.587	3.142		15.808
165	Ho-IS	[		404748.842		ppb	5.410			502133.360
159	Tb-IS	[>		462687.358		ppb	6.220			570764.335
207	Pb	|		2798670.337	107.240583	ppb	3.772	2.728		421.114
209	Bi-IS	[		252792.415		ppb	4.670			297460.042
71	Ga-ISK	[>		120870.309		ppb	0.661			132451.313
115	In-ISK	[		124061.259		ppb	0.706			129028.634
45	Sc-ISK	[>		280924.659		ppb	1.690			300561.194
159	Tb-ISK	[		270458.290		ppb	0.879			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, January 02, 2020 20:41:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200102E1\CCB-23446.222

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40010.416		ppb	2.376			42758.339
45	Sc-IS	|>		1397563.142		ppb	4.879			1786230.854
65	Cu	|		307.185	0.029276	ppb	16.229	60.388		309.199
69	Ga-IS	[		476364.237		ppb	2.082			558624.946
115	In-IS	[>		356811.250		ppb	5.035			437319.269
111	Cd	|		165.887	0.058470	ppb	25.795	23.231		15.808
165	Ho-IS	[		398747.352		ppb	6.387			502133.360
159	Tb-IS	[>		460170.199		ppb	4.994			570764.335
207	Pb	|		2146.738	0.069175	ppb	38.692	42.358		421.114
209	Bi-IS	[		253850.795		ppb	5.316			297460.042
71	Ga-ISK	[>		121033.978		ppb	1.586			132451.313
115	In-ISK	[		125666.255		ppb	1.453			129028.634
45	Sc-ISK	[>		278314.281		ppb	1.665			300561.194
159	Tb-ISK	[		267762.944		ppb	1.056			273347.968

QC Out of Limits

AnalyteMassOut of Limits Message

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Friday, January 03, 2020 12:59:55

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2020\200103E1\STD Performance Check.004

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode	
Be	9.0		2149.2		2149.162		32.301		1.5	Standard	
In	114.9		47801.0		47801.003		1050.249		2.2	Standard	
U	238.1		41839.4		41839.410		1049.260		2.5	Standard	
[	CeO	155.9		779.7		0.018		0.000		0.9	Standard
|>	Ce	139.9		43187.4		43187.384		311.630		0.7	Standard
[	Ce++	70.0		469.3		0.011		0.000		2.2	Standard
	Bkgd	220.0		0.8		0.767		0.384		50.0	Standard

Current Conditions File Data

Current Value	Description
0.94	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.00	Deflector Voltage
1600.00	ICP RF Power
-2150.00	Analog Stage Voltage
2000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-12.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-16.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.50	DRC Mode QRO
-2.50	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-13.00	KED Mode CRO
-22.50	KED Mode QRO
-17.00	KED Mode Cell Entrance Voltage
-38.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Friday, January 03, 2020 13:01:59

Page 1

475.00 KED Mode Axial Field Voltage

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Friday, January 03, 2020 13:27:21

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\ICIS-23447.013

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		39383.110		ppb			1.672	
9	Be	|		11.111		ppb			17.321	
10	B	|		2986.979		ppb			2.919	
27	Al	|		20926.043		ppb			26.718	
43	Ca-2	|		231.669		ppb			8.986	
49	Ti	|		241.113		ppb			13.428	
52	Cr	|		13004.807		ppb			1.743	
55	Mn	|		773.354		ppb			1.879	
57	Fe	|		15419.430		ppb			1.889	
45	Sc-IS	|>		1289122.760		ppb			1.462	
66	Zn	|		713.351		ppb			9.346	
86	Sr	|		-13.698		ppb		286.869		
65	Cu	|		134.923		ppb			38.701	
69	Ga-IS	|		491644.119		ppb			1.038	
95	Mo	|		802.245		ppb			12.917	
115	In-IS	|>		340397.154		ppb			1.310	
111	Cd	|		16.093		ppb			61.960	
118	Sn	|		1288.947		ppb			7.141	
121	Sb	|		424.451		ppb			14.100	
135	Ba	|		40.000		ppb			22.048	
165	Ho-IS	|		347002.268		ppb			1.596	
159	Tb-IS	|>		402181.670		ppb			1.838	
207	Pb	|		168.889		ppb			7.977	
203	Tl	|		13.333		ppb			75.000	
209	Bi-IS	|		225834.566		ppb			1.269	
51	V	|		15.556		ppb			53.927	
59	Co	|		43.333		ppb			33.530	
60	Ni	|		46.667		ppb			68.139	
75	As	|		1156.886		ppb			7.714	
71	Ga-ISK	|>		110705.078		ppb			0.570	
82	Se-2	|		-0.808		ppb		846.777		
107	Ag-1	|		1406.736		ppb			3.108	
115	In-ISK	|		121210.466		ppb			0.193	
45	Sc-ISK	|>		258098.531		ppb			0.838	
23	Na	|		8701.834		ppb			69.455	
39	K	|		124803.123		ppb			3.082	
24	Mg	|		2675.372		ppb			85.281	
159	Tb-ISK	|		256025.219		ppb			0.576	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Friday, January 03, 2020 13:30:08

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\IC-210761.014

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		38576.460		ppb			0.506			39383.110
9	Be	|		225542.075	200.000000	ppb			0.598	2.489		11.111
10	B	|		151621.578	500.000000	ppb			1.345	1.555		2986.979
27	Al	|		1228072.279	200.000000	ppb			1.439	2.648		20926.043
43	Ca-2	|		194355.269	10200.000000	ppb			2.272	0.336		231.669
49	Ti	|		115769.503	200.000000	ppb			1.650	1.421		241.113
52	Cr	|		1824902.529	200.000000	ppb			1.896	1.481		13004.807
55	Mn	|		3087630.093	200.000000	ppb			1.242	1.658		773.354
57	Fe	|		3311074.441	10200.000000	ppb			0.946	1.595		15419.430
45	Sc-IS	>		1262560.051		ppb			2.037			1289122.760
66	Zn	|		278996.098	200.000000	ppb			1.320	1.055		713.351
86	Sr	|		433942.161	200.000000	ppb			3.671	2.136		-13.698
65	Cu	|		439988.972	200.000000	ppb			1.740	1.073		134.923
69	Ga-IS	|		509966.870		ppb			1.840			491644.119
95	Mo	|		450574.006	200.000000	ppb			2.136	1.901		802.245
115	In-IS	>		323273.432		ppb			2.592			340397.154
111	Cd	|		486121.077	200.000000	ppb			2.485	0.229		16.093
118	Sn	|		1282713.601	200.000000	ppb			2.724	1.006		1288.947
121	Sb	|		1362249.830	200.000000	ppb			1.698	1.073		424.451
135	Ba	|		332823.834	200.000000	ppb			1.194	1.901		40.000
165	Ho-IS	|		332002.155		ppb			2.774			347002.268
159	Tb-IS	>		389213.543		ppb			2.845			402181.670
207	Pb	|		4798317.861	200.000000	ppb			1.401	1.445		168.889
203	Tl	|		1547531.204	200.000000	ppb			1.547	1.552		13.333
209	Bi-IS	|		210853.063		ppb			2.470			225834.566
51	V	|		157154.225	200.000000	ppb			1.319	1.595		15.556
59	Co	|		414272.379	200.000000	ppb			1.960	1.744		43.333
60	Ni	|		250560.511	200.000000	ppb			0.706	0.268		46.667
75	As	|		102177.250	200.000000	ppb			0.311	0.632		1156.886
71	Ga-ISK	>		107093.260		ppb			0.657			110705.078
82	Se-2	|		9780.228	200.000000	ppb			1.907	1.332		-0.808
107	Ag-1	|		1120115.742	200.000000	ppb			0.393	0.410		1406.736
115	In-ISK	|		116777.304		ppb			0.646			121210.466
45	Sc-ISK	>		256412.936		ppb			0.327			258098.531
23	Na	|		6313208.215	10200.000000	ppb			0.928	0.674		8701.834
39	K	|		13294178.055	10200.000000	ppb			0.475	0.501		124803.123
24	Mg	|		6637873.647	10200.000000	ppb			1.076	1.332		2675.372
159	Tb-ISK	|		252061.014		ppb			0.733			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-235105

Autosampler Position: 206

Sample Date/Time: Friday, January 03, 2020 13:35:40

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\ICV-235105.015

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		39281.727		ppb			2.146			39383.110
9	Be	|		118765.038	104.212533	ppb			1.456	0.980		11.111
10	B	|		3929.430	3.235782	ppb			4.445	8.311		2986.979
27	Al	|		20608.498	-0.015064	ppb			17.722	3963.206		20926.043
43	Ca-2	|		99359.497	5155.119099	ppb			2.675	0.402		231.669
49	Ti	|		59086.423	100.821050	ppb			2.180	0.681		241.113
52	Cr	|		955657.813	102.997581	ppb			1.259	1.508		13004.807
55	Mn	|		1519546.495	97.406328	ppb			0.626	1.931		773.354
57	Fe	|		1706744.441	5181.541618	ppb			0.552	1.896		15419.430
45	Sc-IS	>		1275635.508		ppb			2.412			1289122.760
66	Zn	|		148731.418	105.303056	ppb			1.259	1.813		713.351
86	Sr	|		219215.373	100.018414	ppb			2.444	0.702		-13.698
65	Cu	|		228285.294	102.703440	ppb			0.303	2.156		134.923
69	Ga-IS	|		473908.604		ppb			1.164			491644.119
95	Mo	|		231491.865	101.556547	ppb			1.376	2.696		802.245
115	In-IS	>		328874.958		ppb			2.630			340397.154
111	Cd	|		258859.672	104.691253	ppb			2.069	0.553		16.093
118	Sn	|		675730.354	103.468914	ppb			2.872	0.746		1288.947
121	Sb	|		656349.193	94.696098	ppb			1.533	1.548		424.451
135	Ba	|		175.557	0.081412	ppb			32.297	43.824		40.000
165	Ho-IS	|		337585.608		ppb			3.664			347002.268
159	Tb-IS	>		395532.264		ppb			3.229			402181.670
207	Pb	|		2544193.912	104.328975	ppb			2.988	1.185		168.889
203	Tl	|		780906.430	99.291603	ppb			2.862	0.679		13.333
209	Bi-IS	|		220810.893		ppb			2.687			225834.566
51	V	|		79156.536	99.514121	ppb			2.079	2.661		15.556
59	Co	|		206374.886	98.439406	ppb			2.176	3.362		43.333
60	Ni	|		128127.648	101.011912	ppb			1.394	0.558		46.667
75	As	|		53287.212	101.981363	ppb			0.612	2.305		1156.886
71	Ga-ISK	>		108415.466		ppb			1.698			110705.078
82	Se-2	|		5075.735	102.541730	ppb			2.052	1.011		-0.808
107	Ag-1	|		4295.091	0.515019	ppb			3.817	3.391		1406.736
115	In-ISK	|		117807.717		ppb			0.934			121210.466
45	Sc-ISK	>		255592.942		ppb			0.722			258098.531
23	Na	|		11428.553	4.533308	ppb			46.216	186.197		8701.834
39	K	|		131475.217	6.111766	ppb			4.387	63.926		124803.123
24	Mg	|		3413960.337	5260.953635	ppb			0.189	0.844		2675.372
159	Tb-ISK	|		250264.589		ppb			1.052			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-62207

Autosampler Position: 213

Sample Date/Time: Friday, January 03, 2020 13:41:14

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\ICV-62207.016

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		39052.215		ppb			2.461			39383.110
9	Be	|		28.889	0.015804	ppb			40.522	62.971		11.111
10	B	|		33846.715	103.731018	ppb			0.299	1.501		2986.979
27	Al	|		635565.172	101.631381	ppb			1.297	2.188		20926.043
43	Ca-2	|		150.001	-4.104367	ppb			60.828	112.570		231.669
49	Ti	|		205.557	-0.053570	ppb			3.376	30.078		241.113
52	Cr	|		12176.306	-0.064810	ppb			4.660	87.381		13004.807
55	Mn	|		1475.632	0.046317	ppb			5.428	10.568		773.354
57	Fe	|		13708.798	-4.400273	ppb			1.589	4.363		15419.430
45	Sc-IS	>		1265277.541		ppb			1.658			1289122.760
66	Zn	|		1295.614	0.427445	ppb			3.113	10.291		713.351
86	Sr	|		63.020	0.035170	ppb			9.145	7.417		-13.698
65	Cu	|		277.982	0.066023	ppb			2.536	1.679		134.923
69	Ga-IS	|		493191.326		ppb			0.675			491644.119
95	Mo	|		1530.082	0.329498	ppb			5.011	9.906		802.245
115	In-IS	>		326207.735		ppb			0.169			340397.154
111	Cd	|		83.454	0.027755	ppb			43.841	53.955		16.093
118	Sn	|		7786.566	1.013255	ppb			0.866	1.117		1288.947
121	Sb	|		7038.401	0.964989	ppb			2.233	2.298		424.451
135	Ba	|		180445.993	107.416201	ppb			1.579	1.622		40.000
165	Ho-IS	|		336890.765		ppb			2.329			347002.268
159	Tb-IS	>		394216.845		ppb			1.220			402181.670
207	Pb	|		1188.908	0.042067	ppb			22.179	24.987		168.889
203	Tl	|		318.893	0.038969	ppb			23.052	23.134		13.333
209	Bi-IS	|		219104.595		ppb			2.086			225834.566
51	V	|		46.667	0.039621	ppb			7.143	12.616		15.556
59	Co	|		82.222	0.019016	ppb			10.203	20.721		43.333
60	Ni	|		94.445	0.038515	ppb			14.264	27.248		46.667
75	As	|		1097.008	-0.066413	ppb			6.307	252.570		1156.886
71	Ga-ISK	>		108307.988		ppb			1.701			110705.078
82	Se-2	|		6.190	0.140337	ppb			61.406	53.895		-0.808
107	Ag-1	|		293411.476	51.629033	ppb			0.537	1.458		1406.736
115	In-ISK	|		116097.821		ppb			0.272			121210.466
45	Sc-ISK	>		257848.443		ppb			0.441			258098.531
23	Na	|		621464.079	985.862608	ppb			1.030	0.656		8701.834
39	K	|		1433405.929	1007.928031	ppb			0.995	0.974		124803.123
24	Mg	|		2598.643	-0.106238	ppb			68.171	2567.473		2675.372
159	Tb-ISK	|		251617.988		ppb			2.296			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Friday, January 03, 2020 13:51:29

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\ICB-23446.017

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		38292.366		ppb		0.922		39383.110
9	Be	|		55.556	0.039035	ppb	74.539	94.054		11.111
10	B	|		3070.330	0.331715	ppb	0.820	71.788		2986.979
27	Al	|		17473.302	-0.543056	ppb	23.738	127.219		20926.043
43	Ca-2	|		225.002	-0.240218	ppb	53.932	2667.794		231.669
49	Ti	|		243.335	0.005620	ppb	8.555	476.832		241.113
52	Cr	|		13473.024	0.059285	ppb	4.128	136.544		13004.807
55	Mn	|		1705.658	0.059804	ppb	6.828	14.452		773.354
57	Fe	|		14436.187	-2.728476	ppb	3.973	77.402		15419.430
45	Sc-IS	>		1282285.262		ppb	2.253			1289122.760
66	Zn	|		1212.274	0.356013	ppb	1.515	7.262		713.351
86	Sr	|		114.144	0.058299	ppb	75.997	68.602		-13.698
65	Cu	|		359.163	0.100903	ppb	14.470	24.801		134.923
69	Ga-IS	|		477084.056		ppb	1.941			491644.119
95	Mo	|		514.454	-0.123873	ppb	19.550	37.048		802.245
115	In-IS	>		331596.032		ppb	0.751			340397.154
111	Cd	|		97.809	0.032877	ppb	54.139	63.804		16.093
118	Sn	|		2800.276	0.235044	ppb	8.326	15.195		1288.947
121	Sb	|		1241.165	0.118443	ppb	10.802	15.618		424.451
135	Ba	|		325.559	0.167680	ppb	20.332	22.357		40.000
165	Ho-IS	|		336930.005		ppb	1.799			347002.268
159	Tb-IS	>		390432.947		ppb	1.387			402181.670
207	Pb	|		1297.803	0.047081	ppb	33.304	37.833		168.889
203	Tl	|		318.893	0.039359	ppb	41.515	42.897		13.333
209	Bi-IS	|		216468.964		ppb	1.090			225834.566
51	V	|		100.000	0.109816	ppb	48.420	58.607		15.556
59	Co	|		257.781	0.106175	ppb	69.988	85.132		43.333
60	Ni	|		154.445	0.088105	ppb	14.371	18.341		46.667
75	As	|		1097.470	-0.025728	ppb	2.656	157.677		1156.886
71	Ga-ISK	>		106250.390		ppb	1.610			110705.078
82	Se-2	|		9.560	0.213413	ppb	69.801	64.837		-0.808
107	Ag-1	|		1120.044	-0.041365	ppb	5.164	29.836		1406.736
115	In-ISK	|		117011.227		ppb	0.960			121210.466
45	Sc-ISK	>		254944.723		ppb	2.686			258098.531
23	Na	|		6543.221	-3.298266	ppb	23.626	83.407		8701.834
39	K	|		129898.039	5.238017	ppb	1.896	87.131		124803.123
24	Mg	|		3018.680	0.607207	ppb	35.979	293.454		2675.372
159	Tb-ISK	|		249628.932		ppb	1.009			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, January 03, 2020 13:54:14

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCV-210770.018

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		37832.271		ppb		2.465		39383.110
9	Be	|		112823.784	100.446992	ppb		0.705	1.704	11.111
10	B	|		78491.754	255.188458	ppb		1.760	1.725	2986.979
27	Al	|		593671.716	95.337913	ppb		0.831	2.248	20926.043
43	Ca-2	|		95561.925	5030.721739	ppb		1.267	0.759	231.669
49	Ti	|		57207.671	99.029637	ppb		1.678	0.482	241.113
52	Cr	|		914119.264	99.907113	ppb		0.578	0.808	13004.807
55	Mn	|		1517845.184	98.702437	ppb		0.517	1.229	773.354
57	Fe	|		1641391.204	5054.163717	ppb		0.718	1.755	15419.430
45	Sc-IS	>		1257226.931		ppb		1.344		1289122.760
66	Zn	|		140690.594	101.023552	ppb		1.433	0.657	713.351
86	Sr	|		214060.257	99.093344	ppb		1.555	0.216	-13.698
65	Cu	|		220151.079	100.459153	ppb		1.607	1.054	134.923
69	Ga-IS	|		481875.356		ppb		1.242		491644.119
95	Mo	|		220917.494	98.288331	ppb		1.404	0.328	802.245
115	In-IS	>		321883.617		ppb		1.789		340397.154
111	Cd	|		242005.109	99.983796	ppb		2.569	1.152	16.093
118	Sn	|		635828.001	99.479354	ppb		0.936	0.929	1288.947
121	Sb	|		676113.232	99.654665	ppb		1.165	0.785	424.451
135	Ba	|		165540.398	99.870035	ppb		1.436	0.661	40.000
165	Ho-IS	|		331127.742		ppb		1.776		347002.268
159	Tb-IS	>		387181.783		ppb		2.289		402181.670
207	Pb	|		2428054.645	101.718032	ppb		1.412	0.921	168.889
203	Tl	|		785249.661	102.025002	ppb		0.823	2.495	13.333
209	Bi-IS	|		211281.073		ppb		1.225		225834.566
51	V	|		77289.629	96.533270	ppb		0.432	1.026	15.556
59	Co	|		206260.716	97.727894	ppb		1.217	1.128	43.333
60	Ni	|		123964.434	97.103626	ppb		0.694	0.789	46.667
75	As	|		51754.170	98.313208	ppb		1.742	1.601	1156.886
71	Ga-ISK	>		109110.663		ppb		0.694		110705.078
82	Se-2	|		4896.692	98.309605	ppb		2.306	3.008	-0.808
107	Ag-1	|		548337.620	95.978640	ppb		1.817	2.401	1406.736
115	In-ISK	|		115656.649		ppb		1.742		121210.466
45	Sc-ISK	>		256163.031		ppb		0.777		258098.531
23	Na	|		3179564.317	5135.765077	ppb		1.507	2.198	8701.834
39	K	|		6744264.484	5132.529826	ppb		0.307	0.845	124803.123
24	Mg	|		3430145.512	5274.143158	ppb		0.607	0.983	2675.372
159	Tb-ISK	|		251193.226		ppb		0.540		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: CCB-23446
 Autosampler Position: 9
 Sample Date/Time: Friday, January 03, 2020 13:57:00
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\CCB-23446.019
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		38443.888		ppb		1.519		39383.110
9	Be	|		55.556	0.039858	ppb	15.100	16.999		11.111
10	B	|		3457.085	1.860909	ppb	3.630	13.608		2986.979
27	Al	|		7717.724	-2.109487	ppb	24.629	14.434		20926.043
43	Ca-2	|		168.334	-3.040688	ppb	25.951	72.046		231.669
49	Ti	|		247.780	0.023150	ppb	3.386	91.010		241.113
52	Cr	|		11751.501	-0.100450	ppb	2.944	19.122		13004.807
55	Mn	|		1360.065	0.039532	ppb	11.024	21.626		773.354
57	Fe	|		15459.476	1.417035	ppb	2.709	63.365		15419.430
45	Sc-IS	>		1254361.970		ppb	1.478			1289122.760
66	Zn	|		554.455	-0.101254	ppb	12.326	45.734		713.351
86	Sr	|		123.557	0.063312	ppb	42.155	36.833		-13.698
65	Cu	|		245.747	0.052289	ppb	9.763	17.929		134.923
69	Ga-IS	|		463781.793		ppb	1.798			491644.119
95	Mo	|		4525.162	1.676657	ppb	3.426	5.863		802.245
115	In-IS	>		326823.299		ppb	1.904			340397.154
111	Cd	|		143.831	0.052226	ppb	6.353	5.838		16.093
118	Sn	|		12582.205	1.751593	ppb	0.774	1.439		1288.947
121	Sb	|		1830.118	0.206437	ppb	7.934	7.943		424.451
135	Ba	|		153.334	0.068216	ppb	20.965	27.248		40.000
165	Ho-IS	|		335447.890		ppb	2.719			347002.268
159	Tb-IS	>		392105.263		ppb	0.959			402181.670
207	Pb	|		2087.837	0.079507	ppb	15.948	16.834		168.889
203	Tl	|		678.906	0.085342	ppb	21.971	21.972		13.333
209	Bi-IS	|		215657.968		ppb	1.182			225834.566
51	V	|		46.667	0.040024	ppb	14.286	20.304		15.556
59	Co	|		63.333	0.010259	ppb	9.116	29.472		43.333
60	Ni	|		95.556	0.039987	ppb	16.112	30.067		46.667
75	As	|		1142.792	0.040355	ppb	4.898	315.564		1156.886
71	Ga-ISK	>		107429.105		ppb	0.765			110705.078
82	Se-2	|		20.854	0.440890	ppb	25.004	23.797		-0.808
107	Ag-1	|		8539.221	1.278724	ppb	3.922	5.251		1406.736
115	In-ISK	|		115683.792		ppb	1.213			121210.466
45	Sc-ISK	>		251394.988		ppb	0.738			258098.531
23	Na	|		4168.963	-7.113932	ppb	22.926	21.610		8701.834
39	K	|		131586.630	7.917251	ppb	1.102	5.086		124803.123
24	Mg	|		2200.186	-0.642018	ppb	38.790	205.584		2675.372
159	Tb-ISK	|		246892.952		ppb	1.765			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Friday, January 03, 2020 13:59:46

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\ICSA-30518.020

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	38423.829		ppb	0.849		39383.110
9	Be	50.000	0.031939	ppb	29.059	37.153	11.111
10	B	1904.571	-3.819802	ppb	0.535	0.572	2986.979
27	Al	65322003.245	10157.738021	ppb	0.491	1.150	20926.043
43	Ca-2	602289.406	29720.258150	ppb	0.479	1.166	231.669
49	Ti	125766.778	204.096694	ppb	1.101	0.424	241.113
52	Cr	14534.062	0.101050	ppb	3.471	43.002	13004.807
55	Mn	7616.480	0.414372	ppb	6.744	7.111	773.354
57	Fe	8515259.349	24707.737241	ppb	1.255	2.111	15419.430
45	Sc-IS	> 1343946.180		ppb	0.877		1289122.760
66	Zn	2972.532	1.504404	ppb	3.350	3.703	713.351
86	Sr	1069.084	0.469200	ppb	2.326	2.969	-13.698
65	Cu	105.566	-0.015179	ppb	82.160	240.773	134.923
69	Ga-IS	512128.253		ppb	0.668		491644.119
95	Mo	499736.188	208.386838	ppb	0.461	0.487	802.245
115	In-IS	> 350833.798		ppb	0.795		340397.154
111	Cd	-18.298	-0.013117	ppb	381.763	202.494	16.093
118	Sn	5342.110	0.577242	ppb	1.377	2.455	1288.947
121	Sb	1610.092	0.158684	ppb	11.483	15.955	424.451
135	Ba	407.784	0.203045	ppb	19.895	22.588	40.000
165	Ho-IS	359217.414		ppb	2.375		347002.268
159	Tb-IS	> 417240.625		ppb	1.379		402181.670
207	Pb	1817.824	0.063931	ppb	25.493	29.013	168.889
203	Tl	425.562	0.049653	ppb	27.764	29.015	13.333
209	Bi-IS	223823.490		ppb	1.854		225834.566
51	V	240.002	0.278552	ppb	16.667	17.013	15.556
59	Co	170.001	0.059769	ppb	23.773	31.113	43.333
60	Ni	478.897	0.337078	ppb	6.832	8.599	46.667
75	As	1295.323	0.285870	ppb	0.114	7.420	1156.886
71	Ga-ISK	> 109788.055		ppb	0.900		110705.078
82	Se-2	13.208	0.279957	ppb	43.005	41.102	-0.808
107	Ag-1	2740.264	0.234686	ppb	7.277	15.644	1406.736
115	In-ISK	119945.520		ppb	0.249		121210.466
45	Sc-ISK	> 265509.407		ppb	1.472		258098.531
23	Na	16353615.207	25540.903652	ppb	1.186	1.661	8701.834
39	K	13745966.924	10185.926237	ppb	0.696	0.828	124803.123
24	Mg	6750180.324	10018.220862	ppb	0.160	1.355	2675.372
159	Tb-ISK	260824.876		ppb	0.544		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, January 03, 2020 14:30:58

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\b.021

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		40287.842		ppb				0.678		39383.110
9	Be	|		20.000	0.006944	ppb			86.603	206.948		11.111
10	B	|		3090.334	-0.224635	ppb			2.084	171.586		2986.979
27	Al	|		21186.853	-0.134954	ppb			92.461	2224.100		20926.043
43	Ca-2	|		200.002	-2.166314	ppb			89.478	401.767		231.669
49	Ti	|		200.001	-0.088366	ppb			13.642	52.343		241.113
52	Cr	|		15074.617	0.132906	ppb			1.076	29.239		13004.807
55	Mn	|		924.477	0.006394	ppb			33.028	290.082		773.354
57	Fe	|		18457.654	6.135151	ppb			15.168	137.856		15419.430
45	Sc-IS	>		1365697.999		ppb			2.347			1289122.760
66	Zn	|		555.567	-0.132710	ppb			14.317	41.085		713.351
86	Sr	|		16.252	0.013041	ppb			104.113	55.275		-13.698
65	Cu	|		155.795	0.005370	ppb			41.133	500.568		134.923
69	Ga-IS	|		514925.876		ppb			1.354			491644.119
95	Mo	|		1445.630	0.246062	ppb			14.037	37.902		802.245
115	In-IS	>		354411.461		ppb			2.195			340397.154
111	Cd	|		44.742	0.010522	ppb			89.352	141.930		16.093
118	Sn	|		4223.959	0.410884	ppb			5.335	10.933		1288.947
121	Sb	|		945.587	0.067610	ppb			17.106	33.331		424.451
135	Ba	|		47.778	0.003348	ppb			88.891	691.836		40.000
165	Ho-IS	|		352943.202		ppb			1.828			347002.268
159	Tb-IS	>		417659.955		ppb			2.545			402181.670
207	Pb	|		494.449	0.012608	ppb			78.105	122.611		168.889
203	Tl	|		112.223	0.012060	ppb			106.324	121.824		13.333
209	Bi-IS	|		225791.863		ppb			1.794			225834.566
51	V	|		16.667	0.000955	ppb			72.111	1516.886		15.556
59	Co	|		36.667	-0.003438	ppb			15.746	77.493		43.333
60	Ni	|		55.556	0.006057	ppb			48.125	334.165		46.667
75	As	|		1197.247	0.033038	ppb			8.116	523.884		1156.886
71	Ga-ISK	>		112858.492		ppb			0.432			110705.078
82	Se-2	|		-1.818	-0.018920	ppb			422.016	785.996		-0.808
107	Ag-1	|		1340.065	-0.016021	ppb			19.877	278.928		1406.736
115	In-ISK	|		122329.636		ppb			2.087			121210.466
45	Sc-ISK	>		267596.667		ppb			1.382			258098.531
23	Na	|		5551.280	-5.420088	ppb			52.974	81.391		8701.834
39	K	|		125741.318	-2.727151	ppb			3.155	60.587		124803.123
24	Mg	|		2000.176	-1.155889	ppb			62.180	154.044		2675.372
159	Tb-ISK	|		259708.955		ppb			1.087			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Friday, January 03, 2020 14:33:45

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\ICSAB-30517.022

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		39666.110		ppb			1.354			39383.110
9	Be	|		16.667	0.003535	ppb	20.000	70.829				11.111
10	B	|		3220.363	-0.166463	ppb	3.525	135.204				2986.979
27	Al	|		67492863.215	9979.680006	ppb	0.945	2.045				20926.043
43	Ca-2	|		624991.727	29319.088628	ppb	1.834	0.532				231.669
49	Ti	|		131971.243	203.633112	ppb	0.821	0.524				241.113
52	Cr	|		218806.267	20.164191	ppb	0.156	1.278				13004.807
55	Mn	|		352121.249	20.327266	ppb	0.164	1.368				773.354
57	Fe	|		8718343.845	24048.298231	ppb	1.088	0.567				15419.430
45	Sc-IS	>		1413526.847		ppb	1.322					1289122.760
66	Zn	|		17955.728	11.025755	ppb	2.892	4.097				713.351
86	Sr	|		1064.004	0.444554	ppb	11.443	12.134				-13.698
65	Cu	|		48713.199	19.723474	ppb	1.285	1.267				134.923
69	Ga-IS	|		542051.414		ppb	0.682					491644.119
95	Mo	|		520195.232	206.246747	ppb	0.495	0.863				802.245
115	In-IS	>		362331.543		ppb	1.411					340397.154
111	Cd	|		27677.653	10.152508	ppb	2.438	1.042				16.093
118	Sn	|		2337.970	0.134441	ppb	7.349	16.564				1288.947
121	Sb	|		1122.266	0.087818	ppb	5.496	8.279				424.451
135	Ba	|		371.116	0.176121	ppb	2.744	2.994				40.000
165	Ho-IS	|		368722.955		ppb	1.466					347002.268
159	Tb-IS	>		436225.542		ppb	2.236					402181.670
207	Pb	|		594.449	0.015304	ppb	3.817	7.612				168.889
203	Tl	|		84.445	0.008059	ppb	25.069	29.681				13.333
209	Bi-IS	|		228115.136		ppb	2.066					225834.566
51	V	|		17423.955	20.272187	ppb	1.687	1.274				15.556
59	Co	|		44684.227	19.723204	ppb	1.273	1.755				43.333
60	Ni	|		26898.641	19.615834	ppb	2.084	2.443				46.667
75	As	|		6793.451	10.085948	ppb	3.994	4.171				1156.886
71	Ga-ISK	>		117034.116		ppb	0.576					110705.078
82	Se-2	|		536.195	10.047986	ppb	4.307	3.807				-0.808
107	Ag-1	|		26103.847	4.026445	ppb	3.501	3.178				1406.736
115	In-ISK	|		124666.236		ppb	0.824					121210.466
45	Sc-ISK	>		278666.228		ppb	0.811					258098.531
23	Na	|		16429304.105	24443.028572	ppb	1.848	1.156				8701.834
39	K	|		13937591.168	9836.250062	ppb	1.044	0.620				124803.123
24	Mg	|		6799088.290	9613.526222	ppb	0.460	1.169				2675.372
159	Tb-ISK	|		269548.690		ppb	0.942					256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 1

Sample Date/Time: Friday, January 03, 2020 14:36:31

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\b.023

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		39915.697		ppb		1.720		39383.110
9	Be	|		11.111	-0.000622	ppb	75.498	1064.354		11.111
10	B	|		3105.893	-0.171977	ppb	2.718	144.090		2986.979
27	Al	|		20938.130	-0.186982	ppb	23.737	403.794		20926.043
43	Ca-2	|		248.336	0.138085	ppb	25.653	2183.261		231.669
49	Ti	|		277.780	0.036575	ppb	8.514	120.641		241.113
52	Cr	|		12479.894	-0.130419	ppb	1.509	39.360		13004.807
55	Mn	|		745.575	-0.004410	ppb	8.392	64.471		773.354
57	Fe	|		21093.347	13.686499	ppb	2.783	16.758		15419.430
45	Sc-IS	>		1364553.267		ppb		2.563		1289122.760
66	Zn	|		530.010	-0.149451	ppb	1.089	7.986		713.351
86	Sr	|		7.975	0.009567	ppb	312.298	111.947		-13.698
65	Cu	|		172.167	0.012395	ppb	8.527	54.469		134.923
69	Ga-IS	|		523976.296		ppb		0.309		491644.119
95	Mo	|		7829.924	2.874374	ppb	2.644	5.642		802.245
115	In-IS	>		361121.641		ppb		1.820		340397.154
111	Cd	|		29.113	0.004404	ppb	36.372	84.662		16.093
118	Sn	|		1542.306	0.024476	ppb	9.275	82.977		1288.947
121	Sb	|		431.118	-0.002533	ppb	4.531	71.280		424.451
135	Ba	|		26.667	-0.008478	ppb	0.000	3.072		40.000
165	Ho-IS	|		359413.833		ppb		2.686		347002.268
159	Tb-IS	>		421405.365		ppb		2.531		402181.670
207	Pb	|		228.890	0.002029	ppb	25.655	120.156		168.889
203	Tl	|		30.000	0.001920	ppb	11.111	24.782		13.333
209	Bi-IS	|		233196.686		ppb		2.831		225834.566
51	V	|		32.222	0.018641	ppb	33.254	70.252		15.556
59	Co	|		44.445	-0.000572	ppb	11.456	331.770		43.333
60	Ni	|		67.778	0.013708	ppb	14.197	57.708		46.667
75	As	|		1364.228	0.262810	ppb	0.527	13.373		1156.886
71	Ga-ISK	>		116719.439		ppb		1.910		110705.078
82	Se-2	|		5.875	0.124873	ppb	177.940	157.159		-0.808
107	Ag-1	|		7757.673	1.028095	ppb	8.969	8.795		1406.736
115	In-ISK	|		125905.374		ppb		1.077		121210.466
45	Sc-ISK	>		271561.882		ppb		1.947		258098.531
23	Na	|		12272.239	4.818574	ppb	29.380	121.290		8701.834
39	K	|		134916.649	2.683802	ppb	2.821	161.372		124803.123
24	Mg	|		4229.025	2.076525	ppb	39.725	122.907		2675.372
159	Tb-ISK	|		265978.614		ppb		0.591		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, January 03, 2020 14:39:17

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCB-23446.024

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		40218.759		ppb			0.729			39383.110
9	Be	|		6.667	-0.004208	ppb			50.000	64.896		11.111
10	B	|		3052.549	-0.380575	ppb			5.713	159.574		2986.979
27	Al	|		13288.412	-1.365801	ppb			5.548	10.228		20926.043
43	Ca-2	|		160.001	-4.183940	ppb			21.651	39.376		231.669
49	Ti	|		207.779	-0.077830	ppb			10.682	38.834		241.113
52	Cr	|		12760.141	-0.108616	ppb			0.477	13.209		13004.807
55	Mn	|		747.797	-0.004452	ppb			3.603	34.359		773.354
57	Fe	|		15292.631	-3.133347	ppb			3.200	61.546		15419.430
45	Sc-IS	>		1370945.431		ppb			1.492			1289122.760
66	Zn	|		472.230	-0.189483	ppb			7.548	12.769		713.351
86	Sr	|		19.673	0.014598	ppb			110.155	63.920		-13.698
65	Cu	|		136.028	-0.003248	ppb			23.614	385.144		134.923
69	Ga-IS	|		523239.993		ppb			1.367			491644.119
95	Mo	|		1742.329	0.364914	ppb			10.731	23.629		802.245
115	In-IS	>		360758.174		ppb			1.122			340397.154
111	Cd	|		25.230	0.003006	ppb			33.381	102.734		16.093
118	Sn	|		1417.848	0.007368	ppb			7.634	232.921		1288.947
121	Sb	|		433.340	-0.002154	ppb			13.077	356.010		424.451
135	Ba	|		31.111	-0.006089	ppb			32.733	89.450		40.000
165	Ho-IS	|		361929.349		ppb			2.574			347002.268
159	Tb-IS	>		421887.955		ppb			1.734			402181.670
207	Pb	|		183.334	0.000242	ppb			4.810	182.183		168.889
203	Tl	|		24.444	0.001260	ppb			67.267	159.071		13.333
209	Bi-IS	|		234207.677		ppb			0.848			225834.566
51	V	|		33.333	0.019730	ppb			52.915	104.225		15.556
59	Co	|		52.222	0.002870	ppb			19.500	157.203		43.333
60	Ni	|		53.333	0.002982	ppb			0.000	2.969		46.667
75	As	|		1267.168	0.083613	ppb			2.849	83.540		1156.886
71	Ga-ISK	>		116851.510		ppb			0.227			110705.078
82	Se-2	|		-0.490	0.006804	ppb			476.861	643.437		-0.808
107	Ag-1	|		3482.648	0.327352	ppb			6.579	11.703		1406.736
115	In-ISK	|		124379.768		ppb			0.602			121210.466
45	Sc-ISK	>		271278.167		ppb			0.263			258098.531
23	Na	|		5726.208	-5.225781	ppb			28.099	47.548		8701.834
39	K	|		128268.870	-2.126747	ppb			0.987	51.758		124803.123
24	Mg	|		1746.787	-1.545938	ppb			43.913	72.572		2675.372
159	Tb-ISK	|		264998.075		ppb			0.990			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, January 03, 2020 14:42:04

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\ICVL-210771.025

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40052.741		ppb		1.210		39383.110
9	Be	|		1230.053	0.988748	ppb	8.162	7.175		11.111
10	B	|		19202.898	49.318606	ppb	0.770	2.651		2986.979
27	Al	|		352708.074	50.118374	ppb	1.192	3.000		20926.043
43	Ca-2	|		1155.047	43.715022	ppb	4.499	8.001		231.669
49	Ti	|		858.915	0.954347	ppb	7.054	12.382		241.113
52	Cr	|		23119.805	0.932006	ppb	0.651	4.352		13004.807
55	Mn	|		17220.373	0.972901	ppb	1.024	1.298		773.354
57	Fe	|		33132.842	47.236597	ppb	2.786	9.356		15419.430
45	Sc-IS	>		1378343.990		ppb	2.014			1289122.760
66	Zn	|		8469.176	5.074452	ppb	0.658	2.928		713.351
86	Sr	|		2301.449	0.978106	ppb	1.616	2.079		-13.698
65	Cu	|		2628.858	1.035143	ppb	1.264	3.031		134.923
69	Ga-IS	|		519586.224		ppb	0.905			491644.119
95	Mo	|		3359.284	1.019327	ppb	2.035	4.709		802.245
115	In-IS	>		363602.914		ppb	2.665			340397.154
111	Cd	|		2726.540	0.991484	ppb	2.544	3.479		16.093
118	Sn	|		7668.725	0.873243	ppb	1.696	1.467		1288.947
121	Sb	|		7395.247	0.906466	ppb	1.445	1.378		424.451
135	Ba	|		1922.352	1.003943	ppb	4.949	3.835		40.000
165	Ho-IS	|		362627.382		ppb	2.254			347002.268
159	Tb-IS	>		421387.608		ppb	1.464			402181.670
207	Pb	|		26081.567	0.997062	ppb	1.452	0.331		168.889
203	Tl	|		8424.706	1.003749	ppb	1.572	0.939		13.333
209	Bi-IS	|		230999.316		ppb	0.175			225834.566
51	V	|		822.246	0.938702	ppb	6.440	6.756		15.556
59	Co	|		2261.290	0.978879	ppb	5.466	5.108		43.333
60	Ni	|		1360.065	0.958094	ppb	4.896	6.097		46.667
75	As	|		1706.370	0.874868	ppb	6.611	20.615		1156.886
71	Ga-ISK	>		117015.094		ppb	1.005			110705.078
82	Se-2	|		44.177	0.842946	ppb	5.693	6.087		-0.808
107	Ag-1	|		5612.214	0.675104	ppb	1.752	3.714		1406.736
115	In-ISK	|		125001.632		ppb	1.092			121210.466
45	Sc-ISK	>		273128.828		ppb	1.441			258098.531
23	Na	|		38754.166	44.889081	ppb	1.181	3.197		8701.834
39	K	|		198775.590	48.521381	ppb	0.359	4.867		124803.123
24	Mg	|		36120.610	48.043579	ppb	0.963	0.522		2675.372
159	Tb-ISK	|		263925.215		ppb	1.173			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16838-B-1-A

Autosampler Position: 315

Sample Date/Time: Friday, January 03, 2020 15:02:10

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\570-16838-B-1-A.026

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		40381.439		ppb			0.648			39383.110
9	Be	|		6.667	-0.004342	ppb	50.000		61.567			11.111
10	B	|		2543.560	-2.152110	ppb	1.966		9.338			2986.979
27	Al	|		36061.020	1.971202	ppb	1.629		6.750			20926.043
43	Ca-2	|		65057.824	3058.940727	ppb	1.499		0.789			231.669
49	Ti	|		254.447	-0.012997	ppb	26.375		815.381			241.113
52	Cr	|		17225.936	0.302271	ppb	1.220		8.742			13004.807
55	Mn	|		126040.272	7.286195	ppb	0.930		1.304			773.354
57	Fe	|		17337.183	1.473188	ppb	1.898		94.335			15419.430
45	Sc-IS	>		1405561.214		ppb	2.012					1289122.760
66	Zn	|		11330.047	6.812572	ppb	0.529		1.617			713.351
86	Sr	|		22719.492	9.414740	ppb	1.324		1.626			-13.698
65	Cu	|		38468.081	15.655132	ppb	0.609		2.338			134.923
69	Ga-IS	|		520455.737		ppb	0.713					491644.119
95	Mo	|		430.007	-0.177717	ppb	18.798		17.630			802.245
115	In-IS	>		354140.702		ppb	1.444					340397.154
111	Cd	|		110.209	0.035124	ppb	4.594		6.914			16.093
118	Sn	|		577.790	-0.108628	ppb	13.336		10.970			1288.947
121	Sb	|		1420.071	0.131114	ppb	5.084		6.089			424.451
135	Ba	|		5479.940	2.982485	ppb	2.922		2.311			40.000
165	Ho-IS	|		363245.433		ppb	1.654					347002.268
159	Tb-IS	>		425616.050		ppb	0.127					402181.670
207	Pb	|		1980.053	0.068644	ppb	6.753		7.449			168.889
203	Tl	|		36.667	0.002664	ppb	41.660		67.541			13.333
209	Bi-IS	|		229346.372		ppb	3.101					225834.566
51	V	|		910.029	1.046938	ppb	4.928		5.649			15.556
59	Co	|		161.112	0.051339	ppb	3.160		3.523			43.333
60	Ni	|		765.576	0.526427	ppb	1.648		1.727			46.667
75	As	|		1336.325	0.218590	ppb	3.991		37.551			1156.886
71	Ga-ISK	>		116373.198		ppb	0.669					110705.078
82	Se-2	|		5.536	0.119914	ppb	109.060		94.115			-0.808
107	Ag-1	|		913.363	-0.093072	ppb	9.212		13.833			1406.736
115	In-ISK	|		124042.279		ppb	1.502					121210.466
45	Sc-ISK	>		271919.133		ppb	0.665					258098.531
23	Na	|		690024.467	1038.726358	ppb	1.029		0.584			8701.834
39	K	|		539842.450	298.228103	ppb	0.831		0.826			124803.123
24	Mg	|		216129.432	309.211054	ppb	1.073		1.110			2675.372
159	Tb-ISK	|		264119.982		ppb	0.801					256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16839-B-1-A

Autosampler Position: 316

Sample Date/Time: Friday, January 03, 2020 15:04:55

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\570-16839-B-1-A.027

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40511.816		ppb		1.636		39383.110
9	Be	|		11.111	-0.000623	ppb	34.641	480.123		11.111
10	B	|		2340.193	-2.603661	ppb	10.734	23.093		2986.979
27	Al	|		31953.482	1.476946	ppb	1.843	7.778		20926.043
43	Ca-2	|		57232.799	2755.816167	ppb	2.534	1.393		231.669
49	Ti	|		262.225	0.007858	ppb	17.812	806.551		241.113
52	Cr	|		16735.353	0.294520	ppb	1.316	10.621		13004.807
55	Mn	|		127932.550	7.579718	ppb	1.102	1.579		773.354
57	Fe	|		16611.880	0.582844	ppb	2.680	183.534		15419.430
45	Sc-IS	>		1371920.385		ppb	2.619			1289122.760
66	Zn	|		10148.048	6.212037	ppb	0.822	3.111		713.351
86	Sr	|		19395.690	8.233542	ppb	2.935	0.700		-13.698
65	Cu	|		31805.032	13.249987	ppb	1.881	1.404		134.923
69	Ga-IS	|		516138.165		ppb	2.640			491644.119
95	Mo	|		475.563	-0.154794	ppb	6.321	6.365		802.245
115	In-IS	>		349605.821		ppb	2.083			340397.154
111	Cd	|		139.002	0.046576	ppb	12.499	13.439		16.093
118	Sn	|		596.679	-0.104906	ppb	7.680	6.541		1288.947
121	Sb	|		1401.180	0.131036	ppb	3.571	3.304		424.451
135	Ba	|		5175.384	2.850891	ppb	6.263	4.490		40.000
165	Ho-IS	|		358653.949		ppb	3.851			347002.268
159	Tb-IS	>		417742.292		ppb	3.046			402181.670
207	Pb	|		2792.330	0.101676	ppb	1.015	3.742		168.889
203	Tl	|		32.222	0.002184	ppb	43.069	72.296		13.333
209	Bi-IS	|		228212.454		ppb	2.484			225834.566
51	V	|		833.358	0.971871	ppb	1.386	2.799		15.556
59	Co	|		133.334	0.039813	ppb	19.843	28.479		43.333
60	Ni	|		595.568	0.408195	ppb	1.710	2.628		46.667
75	As	|		1301.409	0.191621	ppb	1.333	31.168		1156.886
71	Ga-ISK	>		114642.669		ppb	1.402			110705.078
82	Se-2	|		3.520	0.083534	ppb	58.937	48.755		-0.808
107	Ag-1	|		758.909	-0.116593	ppb	7.315	6.852		1406.736
115	In-ISK	|		123679.067		ppb	0.892			121210.466
45	Sc-ISK	>		270000.966		ppb	0.037			258098.531
23	Na	|		596809.026	902.995307	ppb	1.185	1.240		8701.834
39	K	|		465707.287	246.501636	ppb	0.840	1.219		124803.123
24	Mg	|		202830.149	292.018109	ppb	2.054	2.120		2675.372
159	Tb-ISK	|		263133.636		ppb	1.544			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-16839-B-2-A

Autosampler Position: 317

Sample Date/Time: Friday, January 03, 2020 15:07:40

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\570-16839-B-2-A.028

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		41255.045		ppb			1.288			39383.110
9	Be	|		3.333	-0.006997	ppb	173.205	65.588				11.111
10	B	|		3920.538	2.122265	ppb	1.475	14.162				2986.979
27	Al	|		165747.099	21.499471	ppb	0.401	0.794				20926.043
43	Ca-2	|		95483.069	4538.636607	ppb	1.304	0.219				231.669
49	Ti	|		423.340	0.255086	ppb	17.835	43.550				241.113
52	Cr	|		19280.781	0.524392	ppb	0.921	2.585				13004.807
55	Mn	|		40783.703	2.347308	ppb	1.920	1.884				773.354
57	Fe	|		18451.913	5.058328	ppb	2.148	19.677				15419.430
45	Sc-IS	>		1391973.156		ppb			1.086			1289122.760
66	Zn	>		14192.602	8.748703	ppb	0.538	0.898				713.351
86	Sr	|		22850.821	9.560018	ppb	1.252	0.803				-13.698
65	Cu	|		13440.175	5.482717	ppb	0.730	0.755				134.923
69	Ga-IS	|		509694.397		ppb			1.425			491644.119
95	Mo	|		474.452	-0.158095	ppb	11.293	12.865				802.245
115	In-IS	>		351106.851		ppb			0.913			340397.154
111	Cd	|		1919.133	0.720628	ppb	2.559	1.676				16.093
118	Sn	|		818.912	-0.073371	ppb	1.244	0.611				1288.947
121	Sb	|		2116.824	0.227024	ppb	1.346	2.554				424.451
135	Ba	|		9450.903	5.205787	ppb	0.854	1.751				40.000
165	Ho-IS	|		355702.097		ppb			2.330			347002.268
159	Tb-IS	>		416571.802		ppb			1.619			402181.670
207	Pb	|		3310.148	0.122107	ppb	3.602	4.685				168.889
203	Tl	|		24.444	0.001262	ppb	69.976	158.845				13.333
209	Bi-IS	|		232030.502		ppb			1.384			225834.566
51	V	|		950.032	1.116728	ppb	2.431	2.132				15.556
59	Co	|		153.334	0.049273	ppb	16.413	22.440				43.333
60	Ni	|		467.786	0.314672	ppb	12.553	13.441				46.667
75	As	|		1348.841	0.293119	ppb	0.809	11.178				1156.886
71	Ga-ISK	>		113993.006		ppb			0.553			110705.078
82	Se-2	|		5.500	0.122301	ppb	179.772	156.258				-0.808
107	Ag-1	|		504.453	-0.158559	ppb	2.502	1.045				1406.736
115	In-ISK	|		121203.495		ppb			0.968			121210.466
45	Sc-ISK	>		270193.600		ppb			0.968			258098.531
23	Na	|		2507888.096	3836.761071	ppb	0.176	0.809				8701.834
39	K	|		1342800.976	890.934858	ppb	0.639	0.881				124803.123
24	Mg	|		243491.037	351.157426	ppb	1.098	1.822				2675.372
159	Tb-ISK	|		261331.981		ppb			0.228			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16839-B-3-A
 Autosampler Position: 318
 Sample Date/Time: Friday, January 03, 2020 15:10:27
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16839-B-3-A.029
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		40571.976		ppb			0.272			39383.110
9	Be	|		15.556	0.003277	ppb	98.974	391.403				11.111
10	B	|		1584.532	-4.851385	ppb	1.909	4.040				2986.979
27	Al	|		6040.167	-2.458089	ppb	3.546	1.372				20926.043
43	Ca-2	|		1128.378	43.655502	ppb	12.379	19.049				231.669
49	Ti	|		275.559	0.034116	ppb	43.571	529.480				241.113
52	Cr	|		16302.631	0.277622	ppb	1.104	22.549				13004.807
55	Mn	|		2247.955	0.087206	ppb	3.930	9.123				773.354
57	Fe	|		13183.859	-8.567982	ppb	0.947	13.030				15419.430
45	Sc-IS	>		1350377.213		ppb	2.682					1289122.760
66	Zn	|		3109.228	1.586306	ppb	4.621	3.303				713.351
86	Sr	|		435.300	0.193501	ppb	11.869	8.950				-13.698
65	Cu	|		1239.446	0.466609	ppb	4.782	2.440				134.923
69	Ga-IS	|		501077.533		ppb	0.481					491644.119
95	Mo	|		192.224	-0.269454	ppb	10.596	2.879				802.245
115	In-IS	>		344855.675		ppb	2.606					340397.154
111	Cd	|		32.930	0.006381	ppb	17.435	29.187				16.093
118	Sn	|		486.675	-0.119818	ppb	12.348	7.515				1288.947
121	Sb	|		285.558	-0.019809	ppb	11.693	26.885				424.451
135	Ba	|		255.558	0.120820	ppb	14.308	13.790				40.000
165	Ho-IS	|		354413.683		ppb	2.880					347002.268
159	Tb-IS	>		411427.906		ppb	1.444					402181.670
207	Pb	|		536.671	0.014326	ppb	12.376	16.300				168.889
203	Tl	|		15.556	0.000238	ppb	53.927	438.057				13.333
209	Bi-IS	|		228242.806		ppb	2.258					225834.566
51	V	|		30.000	0.016650	ppb	11.111	26.970				15.556
59	Co	|		20.000	-0.011202	ppb	16.667	13.028				43.333
60	Ni	|		116.667	0.051131	ppb	8.571	12.156				46.667
75	As	|		1202.260	0.014871	ppb	4.838	936.684				1156.886
71	Ga-ISK	>		114348.103		ppb	1.448					110705.078
82	Se-2	|		-2.829	-0.038035	ppb	167.535	239.098				-0.808
107	Ag-1	|		682.239	-0.129091	ppb	6.070	4.284				1406.736
115	In-ISK	|		121838.746		ppb	1.001					121210.466
45	Sc-ISK	>		269119.471		ppb	1.677					258098.531
23	Na	|		34272.729	38.853932	ppb	0.335	2.142				8701.834
39	K	|		146239.140	11.903610	ppb	0.180	13.743				124803.123
24	Mg	|		3375.399	0.857612	ppb	4.074	19.679				2675.372
159	Tb-ISK	|		258822.996		ppb	0.745					256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16430-C-1-A @10
 Autosampler Position: 301
 Sample Date/Time: Friday, January 03, 2020 15:13:16
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16430-C-1-A @10.030
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42620.155		ppb	1.248		39383.110
9	Be	7.778	-0.003429	ppb	89.214	162.763	11.111
10	B	19309.708	48.968826	ppb	0.381	2.565	2986.979
27	Al	8819.426	-2.068958	ppb	14.495	10.197	20926.043
43	Ca-2	190493.742	9052.322327	ppb	2.227	1.491	231.669
49	Ti	314.448	0.084595	ppb	14.854	92.069	241.113
52	Cr	16836.582	0.277412	ppb	0.371	13.265	13004.807
55	Mn	1715.659	0.051629	ppb	2.318	8.064	773.354
57	Fe	21263.599	12.854637	ppb	2.716	10.719	15419.430
45	Sc-IS	> 1394231.673		ppb	1.859		1289122.760
66	Zn	767.798	-0.002546	ppb	7.722	1372.396	713.351
86	Sr	322584.701	134.671834	ppb	1.067	0.894	-13.698
65	Cu	475.495	0.135938	ppb	9.106	15.535	134.923
69	Ga-IS	504796.098		ppb	0.284		491644.119
95	Mo	2067.927	0.483380	ppb	1.724	3.559	802.245
115	In-IS	> 347219.415		ppb	2.011		340397.154
111	Cd	13.435	-0.001160	ppb	37.823	159.299	16.093
118	Sn	1913.461	0.087033	ppb	0.871	3.697	1288.947
121	Sb	476.675	0.005901	ppb	12.293	115.539	424.451
135	Ba	3172.575	1.752638	ppb	4.949	5.966	40.000
165	Ho-IS	359403.180		ppb	3.114		347002.268
159	Tb-IS	> 423026.663		ppb	0.859		402181.670
207	Pb	304.446	0.004860	ppb	4.425	9.019	168.889
203	Tl	26.667	0.001503	ppb	33.072	69.519	13.333
209	Bi-IS	222393.283		ppb	0.599		225834.566
51	V	454.452	0.518674	ppb	6.933	6.770	15.556
59	Co	31.111	-0.006290	ppb	26.964	58.111	43.333
60	Ni	194.446	0.108388	ppb	15.365	20.914	46.667
75	As	1321.104	0.217648	ppb	5.400	70.616	1156.886
71	Ga-ISK	> 115151.143		ppb	0.894		110705.078
82	Se-2	25.505	0.500879	ppb	5.922	4.892	-0.808
107	Ag-1	292.225	-0.194663	ppb	10.287	2.757	1406.736
115	In-ISK	122739.082		ppb	0.720		121210.466
45	Sc-ISK	> 277597.981		ppb	0.911		258098.531
23	Na	24720668.225	36928.763393	ppb	1.069	0.171	8701.834
39	K	700521.227	405.136692	ppb	0.211	1.286	124803.123
24	Mg	510648.774	720.977553	ppb	1.090	0.185	2675.372
159	Tb-ISK	262503.936		ppb	0.806		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16430-C-1-B MS @10
 Autosampler Position: 302
 Sample Date/Time: Friday, January 03, 2020 15:16:02
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16430-C-1-B MS @10.031
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		41935.913		ppb			1.289			39383.110
9	Be	|		12028.395	9.760937	ppb			0.373	2.299		11.111
10	B	|		22127.126	58.321238	ppb			1.613	2.383		2986.979
27	Al	|		74420.008	7.897679	ppb			0.485	3.785		20926.043
43	Ca-2	|		195397.273	9395.832141	ppb			0.733	2.521		231.669
49	Ti	|		2396.868	3.393026	ppb			0.139	3.077		241.113
52	Cr	|		101003.588	8.807476	ppb			0.570	2.577		13004.807
55	Mn	|		158853.898	9.381025	ppb			0.524	2.988		773.354
57	Fe	|		118981.219	290.658884	ppb			0.737	3.874		15419.430
45	Sc-IS	>		1378455.199		ppb			2.640			1289122.760
66	Zn	|		15719.757	9.851559	ppb			1.558	4.357		713.351
86	Sr	|		337638.910	142.608963	ppb			0.595	2.189		-13.698
65	Cu	|		25036.652	10.368261	ppb			1.495	1.356		134.923
69	Ga-IS	|		492940.473		ppb			0.316			491644.119
95	Mo	[		7934.426	2.881736	ppb			2.703	0.330		802.245
115	In-IS	>		344624.130		ppb			1.353			340397.154
111	Cd	|		26255.257	10.126665	ppb			2.040	1.645		16.093
118	Sn	|		3425.967	0.310659	ppb			4.336	8.207		1288.947
121	Sb	|		26523.495	3.593994	ppb			2.022	1.188		424.451
135	Ba	|		20920.869	11.767461	ppb			2.352	1.620		40.000
165	Ho-IS	[		360379.659		ppb			2.496			347002.268
159	Tb-IS	>		418283.943		ppb			2.813			402181.670
207	Pb	|		247283.550	9.583526	ppb			1.770	1.073		168.889
203	Tl	|		74067.092	8.906185	ppb			1.405	2.186		13.333
209	Bi-IS	[		224300.836		ppb			1.718			225834.566
51	V	|		3642.687	4.452696	ppb			5.230	6.799		15.556
59	Co	|		20533.640	9.539654	ppb			2.101	3.698		43.333
60	Ni	|		12933.630	9.919056	ppb			1.070	2.444		46.667
75	As	|		5869.465	8.986329	ppb			2.457	5.074		1156.886
71	Ga-ISK	>		111107.139		ppb			1.652			110705.078
82	Se-2	|		214.207	4.238045	ppb			4.584	4.319		-0.808
107	Ag-1	|		2722.564	0.227423	ppb			68.904	143.835		1406.736
115	In-ISK	[		120825.129		ppb			0.205			121210.466
45	Sc-ISK	>		266997.590		ppb			0.635			258098.531
23	Na	|		24106353.918	37441.518608	ppb			2.606	2.547		8701.834
39	K	|		818084.191	512.450010	ppb			0.815	0.981		124803.123
24	Mg	|		845891.073	1244.685312	ppb			0.777	0.522		2675.372
159	Tb-ISK	[		260099.899		ppb			0.841			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16430-C-1-C MSD @10
 Autosampler Position: 303
 Sample Date/Time: Friday, January 03, 2020 15:18:48
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16430-C-1-C MSD @10.032
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		42038.440		ppb			1.620		39383.110
9	Be	|		12277.497	10.067771	ppb			2.020	3.775	11.111
10	B	|		21978.008	58.560902	ppb			1.827	2.737	2986.979
27	Al	|		75703.430	8.207356	ppb			1.774	1.548	20926.043
43	Ca-2	|		198638.289	9648.355974	ppb			1.316	1.039	231.669
49	Ti	|		2274.626	3.234918	ppb			1.979	0.051	241.113
52	Cr	|		97870.811	8.590792	ppb			1.244	0.809	13004.807
55	Mn	|		160280.915	9.560520	ppb			1.398	0.588	773.354
57	Fe	|		112027.543	274.147880	ppb			0.307	2.495	15419.430
45	Sc-IS	|>		1364250.033		ppb			1.934		1289122.760
66	Zn	|		15913.310	10.078827	ppb			3.425	1.958	713.351
86	Sr	|		337692.101	144.054954	ppb			2.638	1.313	-13.698
65	Cu	|		24951.233	10.439685	ppb			1.207	0.879	134.923
69	Ga-IS	|		489177.274		ppb			1.172		491644.119
95	Mo	|		7799.908	2.860030	ppb			3.103	2.635	802.245
115	In-IS	|>		341941.679		ppb			2.159		340397.154
111	Cd	|		26738.654	10.395312	ppb			1.434	1.003	16.093
118	Sn	|		3497.100	0.325190	ppb			13.211	21.773	1288.947
121	Sb	|		27075.646	3.699137	ppb			2.676	0.520	424.451
135	Ba	|		21076.656	11.948200	ppb			2.829	1.281	40.000
165	Ho-IS	|		361190.189		ppb			4.368		347002.268
159	Tb-IS	|>		416907.962		ppb			3.307		402181.670
207	Pb	|		247559.747	9.625743	ppb			2.497	0.821	168.889
203	Tl	|		74857.938	9.029770	ppb			2.750	1.827	13.333
209	Bi-IS	|		220928.243		ppb			2.688		225834.566
51	V	|		3693.811	4.562812	ppb			1.891	3.274	15.556
59	Co	|		21073.311	9.893816	ppb			1.382	0.625	43.333
60	Ni	|		13240.578	10.264372	ppb			1.474	1.581	46.667
75	As	|		5991.610	9.339501	ppb			0.742	1.127	1156.886
71	Ga-ISK	|>		109911.250		ppb			1.385		110705.078
82	Se-2	|		202.533	4.052324	ppb			2.974	3.741	-0.808
107	Ag-1	|		4929.077	0.621611	ppb			89.050	125.498	1406.736
115	In-ISK	|		119975.492		ppb			0.968		121210.466
45	Sc-ISK	|>		267505.813		ppb			0.377		258098.531
23	Na	|		24279456.395	37638.154157	ppb			0.882	0.505	8701.834
39	K	|		822775.738	514.764803	ppb			0.790	0.669	124803.123
24	Mg	|		849395.446	1247.441957	ppb			1.379	1.003	2675.372
159	Tb-ISK	|		257925.657		ppb			0.776		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16430-C-2-A @10
 Autosampler Position: 304
 Sample Date/Time: Friday, January 03, 2020 15:21:33
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16430-C-2-A @10.033
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42885.408		ppb	2.306		39383.110
9	Be	17.778	0.004828	ppb	28.641	80.952	11.111
10	B	18395.169	47.130797	ppb	0.600	2.655	2986.979
27	Al	12873.991	-1.437382	ppb	32.795	42.029	20926.043
43	Ca-2	218045.248	10538.128310	ppb	2.119	0.365	231.669
49	Ti	304.448	0.076684	ppb	18.234	117.251	241.113
52	Cr	17356.093	0.358445	ppb	0.946	6.553	13004.807
55	Mn	3999.449	0.189553	ppb	1.221	2.188	773.354
57	Fe	22159.398	16.424323	ppb	1.655	8.980	15419.430
45	Sc-IS	> 1371039.349		ppb	1.758		1289122.760
66	Zn	1238.943	0.317184	ppb	12.439	29.252	713.351
86	Sr	381044.035	161.741680	ppb	2.264	0.642	-13.698
65	Cu	874.495	0.306168	ppb	2.671	4.349	134.923
69	Ga-IS	482918.697		ppb	1.310		491644.119
95	Mo	1762.331	0.372062	ppb	3.621	3.712	802.245
115	In-IS	> 343485.054		ppb	1.193		340397.154
111	Cd	18.521	0.000859	ppb	44.589	363.014	16.093
118	Sn	1060.039	-0.035294	ppb	2.574	16.502	1288.947
121	Sb	1952.356	0.210666	ppb	3.932	5.642	424.451
135	Ba	11778.187	6.637373	ppb	0.939	0.368	40.000
165	Ho-IS	361118.064		ppb	1.666		347002.268
159	Tb-IS	> 419644.156		ppb	1.547		402181.670
207	Pb	584.449	0.015772	ppb	4.430	4.261	168.889
203	Tl	122.223	0.012967	ppb	19.156	20.597	13.333
209	Bi-IS	221663.610		ppb	2.040		225834.566
51	V	421.117	0.502117	ppb	6.732	7.126	15.556
59	Co	75.556	0.015247	ppb	17.830	41.892	43.333
60	Ni	416.673	0.287450	ppb	11.200	12.514	46.667
75	As	1269.682	0.228597	ppb	5.692	57.144	1156.886
71	Ga-ISK	> 110118.341		ppb	0.343		110705.078
82	Se-2	22.213	0.457514	ppb	36.266	34.774	-0.808
107	Ag-1	393.339	-0.174882	ppb	6.619	2.688	1406.736
115	In-ISK	117669.800		ppb	0.757		121210.466
45	Sc-ISK	> 269048.821		ppb	0.277		258098.531
23	Na	25832848.423	39818.097548	ppb	0.218	0.368	8701.834
39	K	727095.331	440.645405	ppb	0.204	0.320	124803.123
24	Mg	548714.667	799.790246	ppb	0.499	0.314	2675.372
159	Tb-ISK	257028.319		ppb	0.535		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, January 03, 2020 15:24:19

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\b.034

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		41526.943		ppb			1.266		39383.110
9	Be	|		6.667	-0.004055	ppb			50.000	70.646	11.111
10	B	|		3149.237	0.151942	ppb			5.078	246.176	2986.979
27	Al	|		3410.466	-2.859880	ppb			46.740	8.797	20926.043
43	Ca-2	|		183.335	-2.834526	ppb			54.158	174.628	231.669
49	Ti	|		168.890	-0.133000	ppb			6.931	12.317	241.113
52	Cr	|		14110.300	0.063900	ppb			1.566	47.141	13004.807
55	Mn	|		734.463	-0.004142	ppb			6.488	83.142	773.354
57	Fe	|		12802.401	-9.342961	ppb			0.683	7.365	15419.430
45	Sc-IS	>		1338166.845		ppb			2.144		1289122.760
66	Zn	|		502.231	-0.161689	ppb			6.714	11.038	713.351
86	Sr	|		137.403	0.065754	ppb			68.569	62.394	-13.698
65	Cu	|		148.540	0.003633	ppb			17.119	298.977	134.923
69	Ga-IS	|		478457.547		ppb			1.075		491644.119
95	Mo	|		283.336	-0.230241	ppb			12.283	7.347	802.245
115	In-IS	>		344102.628		ppb			1.840		340397.154
111	Cd	|		24.961	0.003325	ppb			53.958	154.418	16.093
118	Sn	|		962.255	-0.049900	ppb			2.691	11.243	1288.947
121	Sb	|		994.479	0.078205	ppb			10.506	21.775	424.451
135	Ba	|		30.000	-0.005895	ppb			19.245	54.178	40.000
165	Ho-IS	|		357526.882		ppb			2.371		347002.268
159	Tb-IS	>		416079.121		ppb			3.006		402181.670
207	Pb	|		202.223	0.001075	ppb			10.072	74.289	168.889
203	Tl	|		46.667	0.003948	ppb			31.135	40.643	13.333
209	Bi-IS	|		230321.360		ppb			2.302		225834.566
51	V	|		23.333	0.009197	ppb			65.465	199.967	15.556
59	Co	|		34.444	-0.004327	ppb			20.145	72.048	43.333
60	Ni	|		40.000	-0.005475	ppb			33.333	183.986	46.667
75	As	|		1163.673	-0.009866	ppb			9.027	1905.513	1156.886
71	Ga-ISK	>		111824.869		ppb			0.799		110705.078
82	Se-2	|		-0.464	0.007145	ppb			904.255	1143.956	-0.808
107	Ag-1	|		775.577	-0.110531	ppb			10.791	12.464	1406.736
115	In-ISK	|		118864.888		ppb			0.580		121210.466
45	Sc-ISK	>		262399.163		ppb			0.862		258098.531
23	Na	|		12603.964	5.939604	ppb			14.085	46.871	8701.834
39	K	|		123985.737	-2.187614	ppb			0.843	52.547	124803.123
24	Mg	|		366.672	-3.535025	ppb			32.964	5.103	2675.372
159	Tb-ISK	|		256529.438		ppb			0.258		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, January 03, 2020 15:27:04

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCV-210770.035

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		39462.210		ppb			0.940			39383.110
9	Be	|		115786.229	98.807372	ppb			0.528	1.679		11.111
10	B	|		80453.710	250.549909	ppb			1.157	1.465		2986.979
27	Al	|		606025.400	93.204940	ppb			0.583	1.684		20926.043
43	Ca-2	|		100403.355	5065.914209	ppb			2.014	0.603		231.669
49	Ti	|		59354.197	98.476978	ppb			2.182	1.167		241.113
52	Cr	|		931084.833	97.488611	ppb			2.231	0.351		13004.807
55	Mn	|		1547527.781	96.454705	ppb			1.131	1.462		773.354
57	Fe	|		1674838.589	4942.059000	ppb			1.040	1.781		15419.430
45	Sc-IS	>		1311787.705		ppb			2.221			1289122.760
66	Zn	|		144290.777	99.295082	ppb			1.988	0.700		713.351
86	Sr	|		225242.711	99.945978	ppb			1.965	1.510		-13.698
65	Cu	|		226572.687	99.103824	ppb			1.154	1.186		134.923
69	Ga-IS	|		493873.681		ppb			1.848			491644.119
95	Mo	|		222452.620	94.841127	ppb			2.466	0.762		802.245
115	In-IS	>		333867.724		ppb			1.858			340397.154
111	Cd	|		246949.719	98.371350	ppb			1.917	0.558		16.093
118	Sn	|		656037.615	98.935872	ppb			2.670	0.873		1288.947
121	Sb	|		693172.376	98.497332	ppb			1.555	0.525		424.451
135	Ba	|		171743.082	99.888204	ppb			1.862	0.372		40.000
165	Ho-IS	|		349452.783		ppb			3.044			347002.268
159	Tb-IS	>		411712.403		ppb			1.255			402181.670
207	Pb	|		2555666.973	100.674836	ppb			1.469	1.270		168.889
203	Tl	|		811416.824	99.103213	ppb			2.406	1.681		13.333
209	Bi-IS	|		220450.382		ppb			1.473			225834.566
51	V	|		79476.034	99.432297	ppb			1.049	2.068		15.556
59	Co	|		213852.228	101.488830	ppb			1.153	1.029		43.333
60	Ni	|		124302.980	97.517937	ppb			1.548	0.251		46.667
75	As	|		51561.307	98.108672	ppb			1.466	2.067		1156.886
71	Ga-ISK	>		108939.397		ppb			1.304			110705.078
82	Se-2	|		4938.042	99.294114	ppb			1.069	1.790		-0.808
107	Ag-1	|		550632.252	96.538090	ppb			1.249	2.074		1406.736
115	In-ISK	|		116897.537		ppb			0.874			121210.466
45	Sc-ISK	>		260122.647		ppb			1.211			258098.531
23	Na	|		3274313.792	5207.552738	ppb			2.162	0.973		8701.834
39	K	|		6963993.617	5220.638461	ppb			1.218	0.970		124803.123
24	Mg	|		3473089.091	5259.117238	ppb			0.441	1.152		2675.372
159	Tb-ISK	|		255647.235		ppb			0.723			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, January 03, 2020 15:29:50

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCB-23446.036

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		39383.102		ppb			0.765			39383.110
9	Be	|		18.889	0.006802	ppb	26.956	64.086				11.111
10	B	|		3253.704	0.918823	ppb	0.307	14.302				2986.979
27	Al	|		5513.915	-2.500617	ppb	94.218	33.344				20926.043
43	Ca-2	|		121.667	-5.637697	ppb	6.278	6.900				231.669
49	Ti	|		214.446	-0.043508	ppb	16.179	143.024				241.113
52	Cr	|		11807.101	-0.124638	ppb	2.051	23.385				13004.807
55	Mn	|		743.353	-0.001721	ppb	1.794	74.373				773.354
57	Fe	|		14129.208	-3.746105	ppb	1.813	27.730				15419.430
45	Sc-IS	>		1284356.386		ppb			0.919			1289122.760
66	Zn	|		461.119	-0.176137	ppb	7.662	15.836				713.351
86	Sr	|		97.490	0.050375	ppb	7.754	7.324				-13.698
65	Cu	|		154.795	0.009091	ppb	5.093	33.697				134.923
69	Ga-IS	|		468215.015		ppb			0.767			491644.119
95	Mo	|		4488.483	1.612596	ppb	3.139	4.193				802.245
115	In-IS	>		337253.047		ppb			0.145			340397.154
111	Cd	|		71.686	0.021980	ppb	11.728	14.928				16.093
118	Sn	|		11932.761	1.594034	ppb	2.393	2.542				1288.947
121	Sb	|		1232.276	0.114248	ppb	7.440	11.237				424.451
135	Ba	|		55.556	0.009170	ppb	9.165	31.766				40.000
165	Ho-IS	|		355687.594		ppb			2.544			347002.268
159	Tb-IS	>		408201.881		ppb			1.564			402181.670
207	Pb	|		1300.023	0.044853	ppb	3.333	4.379				168.889
203	Tl	|		342.226	0.040508	ppb	12.022	12.951				13.333
209	Bi-IS	|		227657.466		ppb			0.651			225834.566
51	V	|		38.889	0.030638	ppb	34.641	55.408				15.556
59	Co	|		57.778	0.007856	ppb	8.813	30.956				43.333
60	Ni	|		66.667	0.017534	ppb	21.795	65.058				46.667
75	As	|		1181.395	0.140081	ppb	1.166	10.097				1156.886
71	Ga-ISK	>		106323.091		ppb			0.565			110705.078
82	Se-2	|		24.203	0.514651	ppb	34.557	33.663				-0.808
107	Ag-1	|		9965.705	1.550977	ppb	5.904	6.485				1406.736
115	In-ISK	|		116385.322		ppb			1.236			121210.466
45	Sc-ISK	>		252781.665		ppb			1.625			258098.531
23	Na	|		8622.877	0.114082	ppb	39.852	4730.783				8701.834
39	K	|		126513.291	3.382290	ppb	0.484	53.577				124803.123
24	Mg	|		955.034	-2.600007	ppb	28.768	15.602				2675.372
159	Tb-ISK	|		247652.198		ppb			0.525			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, January 03, 2020 15:32:35

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCB-23446.037

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	39966.941		ppb	0.391		39383.110
9	Be	28.889	0.015369	ppb	37.091	58.854	11.111
10	B	3110.339	0.408792	ppb	2.705	78.567	2986.979
27	Al	2363.529	-3.009838	ppb	4.894	0.792	20926.043
43	Ca-2	143.334	-4.565834	ppb	60.050	96.633	231.669
49	Ti	157.779	-0.141019	ppb	7.420	16.696	241.113
52	Cr	11884.944	-0.120775	ppb	2.499	28.534	13004.807
55	Mn	823.357	0.003114	ppb	16.240	252.308	773.354
57	Fe	12536.617	-8.712457	ppb	4.598	25.521	15419.430
45	Sc-IS	> 1289027.860		ppb	1.748		1289122.760
66	Zn	470.008	-0.171210	ppb	8.179	15.839	713.351
86	Sr	195.781	0.094258	ppb	83.865	78.696	-13.698
65	Cu	166.299	0.014140	ppb	17.340	98.981	134.923
69	Ga-IS	469318.095		ppb	0.734		491644.119
95	Mo	1086.708	0.124025	ppb	4.519	19.253	802.245
115	In-IS	> 340263.489		ppb	2.838		340397.154
111	Cd	64.385	0.018757	ppb	28.796	34.576	16.093
118	Sn	4366.225	0.456782	ppb	6.929	11.000	1288.947
121	Sb	670.016	0.034377	ppb	4.251	17.287	424.451
135	Ba	58.889	0.010689	ppb	33.167	101.141	40.000
165	Ho-IS	350501.685		ppb	3.802		347002.268
159	Tb-IS	> 407084.393		ppb	1.879		402181.670
207	Pb	743.341	0.022754	ppb	29.238	36.849	168.889
203	Tl	192.224	0.022050	ppb	31.037	32.892	13.333
209	Bi-IS	227748.621		ppb	2.731		225834.566
51	V	30.000	0.018955	ppb	48.432	96.943	15.556
59	Co	70.000	0.013466	ppb	33.333	82.517	43.333
60	Ni	56.667	0.009005	ppb	35.781	172.747	46.667
75	As	1206.580	0.168627	ppb	2.344	27.419	1156.886
71	Ga-ISK	> 107293.692		ppb	1.497		110705.078
82	Se-2	6.179	0.141108	ppb	113.928	101.675	-0.808
107	Ag-1	3791.616	0.432918	ppb	7.708	10.140	1406.736
115	In-ISK	117089.697		ppb	1.223		121210.466
45	Sc-ISK	> 256162.193		ppb	1.593		258098.531
23	Na	15465.338	11.104504	ppb	23.382	55.132	8701.834
39	K	124417.271	0.452444	ppb	1.236	561.907	124803.123
24	Mg	1163.381	-2.293681	ppb	14.867	12.381	2675.372
159	Tb-ISK	250680.323		ppb	0.465		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16430-C-3-A @10
 Autosampler Position: 305
 Sample Date/Time: Friday, January 03, 2020 15:35:21
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16430-C-3-A @10.038
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		39821.010		ppb			2.931			39383.110
9	Be	|		6.667	-0.004050	ppb			50.000	70.216		11.111
10	B	|		18182.682	47.825625	ppb			3.045	5.694		2986.979
27	Al	|		7587.847	-2.206751	ppb			45.420	24.794		20926.043
43	Ca-2	|		114460.068	5658.683996	ppb			0.916	1.532		231.669
49	Ti	|		277.781	0.045258	ppb			15.662	170.955		241.113
52	Cr	|		17330.509	0.398144	ppb			2.003	16.502		13004.807
55	Mn	|		2153.496	0.082500	ppb			2.817	6.604		773.354
57	Fe	|		17464.003	4.231337	ppb			1.250	34.927		15419.430
45	Sc-IS	>		1339259.925		ppb			1.724			1289122.760
66	Zn	|		1381.178	0.434296	ppb			5.662	15.420		713.351
86	Sr	|		189960.307	82.548276	ppb			2.324	0.811		-13.698
65	Cu	|		871.039	0.313519	ppb			4.266	7.071		134.923
69	Ga-IS	|		472665.512		ppb			2.111			491644.119
95	Mo	|		2350.194	0.635361	ppb			5.061	5.132		802.245
115	In-IS	>		342585.370		ppb			2.831			340397.154
111	Cd	|		19.509	0.001332	ppb			40.004	241.986		16.093
118	Sn	|		2776.937	0.218336	ppb			4.413	12.092		1288.947
121	Sb	|		585.568	0.022054	ppb			5.980	29.953		424.451
135	Ba	|		1548.973	0.854674	ppb			7.210	4.680		40.000
165	Ho-IS	|		357978.935		ppb			2.241			347002.268
159	Tb-IS	>		419021.957		ppb			2.351			402181.670
207	Pb	|		362.224	0.007199	ppb			10.745	18.159		168.889
203	Tl	|		92.223	0.009394	ppb			11.619	12.541		13.333
209	Bi-IS	|		219448.259		ppb			0.583			225834.566
51	V	|		390.005	0.477959	ppb			9.045	9.856		15.556
59	Co	|		37.778	-0.001971	ppb			25.471	238.296		43.333
60	Ni	|		302.225	0.205459	ppb			6.648	7.027		46.667
75	As	|		1395.951	0.550879	ppb			1.746	3.473		1156.886
71	Ga-ISK	>		106981.424		ppb			2.135			110705.078
82	Se-2	|		13.875	0.301536	ppb			35.981	35.950		-0.808
107	Ag-1	|		1141.157	-0.039027	ppb			2.361	12.550		1406.736
115	In-ISK	|		116661.282		ppb			1.552			121210.466
45	Sc-ISK	>		257621.334		ppb			1.403			258098.531
23	Na	|		19910349.873	32052.676743	ppb			0.965	1.899		8701.834
39	K	|		635334.198	393.748881	ppb			0.716	0.934		124803.123
24	Mg	|		402923.563	612.414061	ppb			1.078	0.626		2675.372
159	Tb-ISK	|		254085.695		ppb			0.443			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16430-C-4-A @10
 Autosampler Position: 306
 Sample Date/Time: Friday, January 03, 2020 15:38:06
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16430-C-4-A @10.039
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc.	Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		38969.748			ppb			0.525			39383.110
9	Be	|		12.222	0.000580		ppb	41.660	752.165				11.111
10	B	|		19284.121	51.129313		ppb	1.845	0.759				2986.979
27	Al	|		13300.659	-1.323576		ppb	7.964	10.515				20926.043
43	Ca-2	|		54314.755	2671.631851		ppb	2.126	0.959				231.669
49	Ti	|		260.002	0.014129		ppb	13.012	357.357				241.113
52	Cr	|		17286.011	0.388383		ppb	2.384	11.372				13004.807
55	Mn	|		1218.941	0.025228		ppb	6.611	22.346				773.354
57	Fe	|		15366.038	-2.016188		ppb	1.108	14.183				15419.430
45	Sc-IS	>		1342629.512			ppb	1.300					1289122.760
66	Zn	|		877.805	0.091070		ppb	2.585	10.370				713.351
86	Sr	|		72231.175	31.314819		ppb	1.503	0.213				-13.698
65	Cu	|		613.051	0.202070		ppb	13.763	18.107				134.923
69	Ga-IS	|		479497.813			ppb	0.570					491644.119
95	Mo	|		3600.454	1.156221		ppb	0.563	2.374				802.245
115	In-IS	>		342922.391			ppb	0.419					340397.154
111	Cd	|		21.328	0.001999		ppb	70.304	292.130				16.093
118	Sn	|		2206.837	0.133647		ppb	3.272	8.239				1288.947
121	Sb	|		554.455	0.017586		ppb	13.661	61.136				424.451
135	Ba	|		402.228	0.204985		ppb	5.880	6.449				40.000
165	Ho-IS	|		362589.366			ppb	2.735					347002.268
159	Tb-IS	>		417427.598			ppb	0.612					402181.670
207	Pb	|		260.001	0.003294		ppb	10.494	33.183				168.889
203	Tl	|		43.333	0.003561		ppb	35.251	52.665				13.333
209	Bi-IS	|		221981.740			ppb	1.838					225834.566
51	V	|		610.013	0.739966		ppb	10.666	10.942				15.556
59	Co	|		48.889	0.002821		ppb	19.682	154.766				43.333
60	Ni	|		132.223	0.067155		ppb	5.248	6.999				46.667
75	As	|		1568.174	0.820227		ppb	2.996	13.474				1156.886
71	Ga-ISK	>		109524.927			ppb	0.694					110705.078
82	Se-2	|		18.534	0.385986		ppb	36.034	33.860				-0.808
107	Ag-1	|		692.239	-0.122290		ppb	9.116	8.777				1406.736
115	In-ISK	|		118096.413			ppb	1.773					121210.466
45	Sc-ISK	>		261570.801			ppb	0.684					258098.531
23	Na	|		17279140.742	27390.282292		ppb	1.008	0.513				8701.834
39	K	|		741344.363	466.803784		ppb	0.770	0.391				124803.123
24	Mg	|		499017.813	747.900293		ppb	0.428	0.542				2675.372
159	Tb-ISK	|		257413.857			ppb	0.659					256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16430-C-5-A @10
 Autosampler Position: 307
 Sample Date/Time: Friday, January 03, 2020 15:40:51
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16430-C-5-A @10.040
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	40426.009		ppb	0.594		39383.110
9	Be	16.667	0.004065	ppb	0.000	9.583	11.111
10	B	18388.500	47.511795	ppb	2.755	1.598	2986.979
27	Al	8609.262	-2.071237	ppb	3.177	0.726	20926.043
43	Ca-2	97823.841	4756.938087	ppb	1.516	1.429	231.669
49	Ti	236.669	-0.028951	ppb	12.279	149.954	241.113
52	Cr	16713.105	0.306269	ppb	1.185	19.989	13004.807
55	Mn	1567.864	0.045188	ppb	0.614	5.663	773.354
57	Fe	17264.871	2.856671	ppb	0.847	63.267	15419.430
45	Sc-IS	> 1361198.949		ppb	2.881		1289122.760
66	Zn	980.034	0.150407	ppb	10.948	37.596	713.351
86	Sr	160828.973	68.785943	ppb	1.528	1.423	-13.698
65	Cu	734.235	0.249594	ppb	4.315	4.699	134.923
69	Ga-IS	476427.549		ppb	1.552		491644.119
95	Mo	2383.532	0.633964	ppb	1.454	3.403	802.245
115	In-IS	> 342175.820		ppb	0.975		340397.154
111	Cd	12.772	-0.001352	ppb	92.169	334.134	16.093
118	Sn	1823.450	0.077780	ppb	6.600	21.448	1288.947
121	Sb	450.007	0.003213	ppb	9.630	172.986	424.451
135	Ba	624.458	0.331601	ppb	2.940	2.420	40.000
165	Ho-IS	360934.237		ppb	1.218		347002.268
159	Tb-IS	> 417983.651		ppb	0.862		402181.670
207	Pb	267.779	0.003589	ppb	20.618	61.252	168.889
203	Tl	36.667	0.002735	ppb	54.546	86.741	13.333
209	Bi-IS	226493.761		ppb	1.241		225834.566
51	V	447.785	0.547790	ppb	7.036	6.912	15.556
59	Co	44.445	0.001115	ppb	33.819	650.487	43.333
60	Ni	391.116	0.274659	ppb	9.388	10.752	46.667
75	As	1409.906	0.561285	ppb	3.911	18.632	1156.886
71	Ga-ISK	> 107635.079		ppb	0.371		110705.078
82	Se-2	18.565	0.393210	ppb	52.942	50.397	-0.808
107	Ag-1	618.902	-0.133196	ppb	3.586	2.806	1406.736
115	In-ISK	117553.822		ppb	0.521		121210.466
45	Sc-ISK	> 261857.417		ppb	1.599		258098.531
23	Na	19145790.338	30324.872477	ppb	1.324	2.489	8701.834
39	K	566535.674	333.715484	ppb	0.752	2.810	124803.123
24	Mg	342895.315	512.170427	ppb	1.483	2.501	2675.372
159	Tb-ISK	258204.020		ppb	1.025		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16430-C-6-A @10
 Autosampler Position: 308
 Sample Date/Time: Friday, January 03, 2020 15:43:36
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16430-C-6-A @10.041
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40627.696		ppb			1.274		39383.110
9	Be	|		10.000	-0.001397	ppb			33.333	200.926	11.111
10	B	|		11054.276	24.763362	ppb			2.095	6.702	2986.979
27	Al	|		8970.678	-2.013709	ppb			21.234	13.925	20926.043
43	Ca-2	|		132664.895	6473.461973	ppb			1.370	1.429	231.669
49	Ti	|		285.558	0.050870	ppb			13.016	113.753	241.113
52	Cr	|		16097.954	0.247539	ppb			0.964	17.510	13004.807
55	Mn	|		1402.291	0.035566	ppb			6.201	21.043	773.354
57	Fe	|		18633.256	6.919794	ppb			0.972	17.604	15419.430
45	Sc-IS	>		1357414.850		ppb			2.817		1289122.760
66	Zn	|		2111.267	0.909340	ppb			2.686	3.684	713.351
86	Sr	|		215049.991	92.231028	ppb			1.355	1.453	-13.698
65	Cu	|		431.012	0.121853	ppb			14.294	17.588	134.923
69	Ga-IS	|		479859.291		ppb			1.992		491644.119
95	Mo	|		4963.084	1.703845	ppb			1.497	2.823	802.245
115	In-IS	>		346281.271		ppb			1.285		340397.154
111	Cd	|		15.133	-0.000448	ppb			56.221	746.167	16.093
118	Sn	|		1557.863	0.036009	ppb			5.767	40.788	1288.947
121	Sb	|		434.451	0.000409	ppb			9.470	1538.676	424.451
135	Ba	|		10317.059	5.763287	ppb			2.667	1.487	40.000
165	Ho-IS	|		358446.746		ppb			1.932		347002.268
159	Tb-IS	>		420912.270		ppb			0.918		402181.670
207	Pb	|		294.446	0.004529	ppb			9.628	21.793	168.889
203	Tl	|		32.222	0.002181	ppb			15.802	27.145	13.333
209	Bi-IS	|		224070.778		ppb			2.121		225834.566
51	V	|		232.224	0.269931	ppb			11.150	11.742	15.556
59	Co	|		45.556	0.001277	ppb			15.232	256.279	43.333
60	Ni	|		230.002	0.143600	ppb			5.225	6.787	46.667
75	As	|		1204.366	0.116943	ppb			4.976	102.470	1156.886
71	Ga-ISK	>		109474.530		ppb			0.196		110705.078
82	Se-2	|		37.888	0.773833	ppb			9.557	9.257	-0.808
107	Ag-1	|		628.903	-0.133305	ppb			11.677	9.518	1406.736
115	In-ISK	|		117767.443		ppb			1.343		121210.466
45	Sc-ISK	>		262651.523		ppb			0.890		258098.531
23	Na	|		11715176.676	18490.979008	ppb			0.280	1.165	8701.834
39	K	|		267588.458	106.300180	ppb			0.433	1.448	124803.123
24	Mg	|		451559.760	673.589341	ppb			1.283	1.290	2675.372
159	Tb-ISK	|		259115.589		ppb			0.854		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16430-C-8-A @10
 Autosampler Position: 309
 Sample Date/Time: Friday, January 03, 2020 15:46:21
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16430-C-8-A @10.042
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40784.809		ppb		1.287		39383.110
9	Be	|		5.556	-0.005180	ppb	124.900	106.547		11.111
10	B	|		18741.176	48.640027	ppb	1.478	3.522		2986.979
27	Al	|		7630.966	-2.217110	ppb	16.993	10.350		20926.043
43	Ca-2	|		183721.183	8942.476837	ppb	2.994	0.259		231.669
49	Ti	|		265.558	0.017167	ppb	9.081	156.496		241.113
52	Cr	|		15792.059	0.211837	ppb	1.690	24.687		13004.807
55	Mn	|		1910.128	0.065810	ppb	1.839	7.880		773.354
57	Fe	|		20309.984	11.585676	ppb	0.992	8.995		15419.430
45	Sc-IS	|>		1361071.962		ppb	2.769			1289122.760
66	Zn	|		1722.326	0.647665	ppb	7.266	16.805		713.351
86	Sr	|		306428.302	131.072460	ppb	1.996	2.473		-13.698
65	Cu	|		509.990	0.155574	ppb	11.627	19.725		134.923
69	Ga-IS	|		464237.314		ppb	0.916			491644.119
95	Mo	|		1831.229	0.407203	ppb	6.737	17.435		802.245
115	In-IS	|>		337692.407		ppb	0.953			340397.154
111	Cd	|		13.932	-0.000789	ppb	35.953	256.826		16.093
118	Sn	|		1314.505	0.005480	ppb	10.101	394.972		1288.947
121	Sb	|		373.338	-0.006725	ppb	5.357	34.434		424.451
135	Ba	|		3274.821	1.860095	ppb	6.128	5.230		40.000
165	Ho-IS	|		363375.661		ppb	1.946			347002.268
159	Tb-IS	|>		420918.353		ppb	2.131			402181.670
207	Pb	|		227.779	0.001945	ppb	34.918	153.109		168.889
203	Tl	|		35.556	0.002552	ppb	53.309	84.503		13.333
209	Bi-IS	|		218929.315		ppb	0.830			225834.566
51	V	|		441.118	0.534942	ppb	11.739	12.905		15.556
59	Co	|		42.222	-0.000191	ppb	35.599	3632.880		43.333
60	Ni	|		224.446	0.140573	ppb	11.147	12.714		46.667
75	As	|		1284.699	0.291708	ppb	6.316	43.956		1156.886
71	Ga-ISK	|>		108584.483		ppb	1.230			110705.078
82	Se-2	|		20.182	0.422960	ppb	23.434	22.379		-0.808
107	Ag-1	|		462.230	-0.161778	ppb	8.959	4.458		1406.736
115	In-ISK	|		117353.151		ppb	0.764			121210.466
45	Sc-ISK	|>		262206.771		ppb	0.791			258098.531
23	Na	|		23771937.950	37598.463631	ppb	0.546	1.077		8701.834
39	K	|		677361.072	417.020171	ppb	1.003	2.020		124803.123
24	Mg	|		492831.306	736.783676	ppb	1.508	1.591		2675.372
159	Tb-ISK	|		255546.801		ppb	0.753			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16164-C-1-A @5
 Autosampler Position: 310
 Sample Date/Time: Friday, January 03, 2020 15:51:19
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16164-C-1-A @5.043
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40917.411		ppb		1.426		39383.110
9	Be	|		10.000	-0.001442	ppb	33.333	181.195		11.111
10	B	|		27119.061	74.824765	ppb	2.560	2.829		2986.979
27	Al	|		16036.777	-0.927969	ppb	2.060	4.250		20926.043
43	Ca-2	|		281078.476	13701.660794	ppb	1.146	0.824		231.669
49	Ti	|		515.565	0.419987	ppb	0.747	3.908		241.113
52	Cr	|		15753.127	0.208536	ppb	1.556	1.424		13004.807
55	Mn	|		74634.455	4.440478	ppb	0.455	1.281		773.354
57	Fe	|		36858.600	59.174939	ppb	0.586	2.341		15419.430
45	Sc-IS	|>		1359818.155		ppb	1.610			1289122.760
66	Zn	|		13129.365	8.259318	ppb	1.665	2.644		713.351
86	Sr	|		229824.732	98.361535	ppb	2.189	0.867		-13.698
65	Cu	|		1252.638	0.469150	ppb	6.621	9.107		134.923
69	Ga-IS	|		480291.925		ppb	0.969			491644.119
95	Mo	|		5155.375	1.779086	ppb	0.980	1.634		802.245
115	In-IS	|>		343697.070		ppb	2.679			340397.154
111	Cd	|		18.063	0.000710	ppb	69.452	690.440		16.093
118	Sn	|		1390.068	0.013191	ppb	2.492	78.004		1288.947
121	Sb	|		2813.611	0.329432	ppb	3.260	2.914		424.451
135	Ba	|		8204.578	4.615086	ppb	2.337	2.801		40.000
165	Ho-IS	|		363899.167		ppb	2.993			347002.268
159	Tb-IS	|>		421407.343		ppb	1.686			402181.670
207	Pb	|		962.235	0.030247	ppb	4.133	7.061		168.889
203	Tl	|		30.000	0.001913	ppb	22.222	41.798		13.333
209	Bi-IS	|		224295.238		ppb	1.829			225834.566
51	V	|		601.124	0.747399	ppb	6.934	7.019		15.556
59	Co	|		446.674	0.195860	ppb	17.550	19.375		43.333
60	Ni	|		990.034	0.755964	ppb	6.503	6.895		46.667
75	As	|		1241.875	0.247788	ppb	3.700	36.468		1156.886
71	Ga-ISK	|>		106879.434		ppb	0.137			110705.078
82	Se-2	|		14.880	0.320961	ppb	68.333	65.029		-0.808
107	Ag-1	|		453.341	-0.162076	ppb	11.320	5.614		1406.736
115	In-ISK	|		114933.067		ppb	0.392			121210.466
45	Sc-ISK	|>		259113.217		ppb	0.156			258098.531
23	Na	|		26313867.388	42115.496628	ppb	0.453	0.539		8701.834
39	K	|		5090206.428	3805.111175	ppb	0.421	0.311		124803.123
24	Mg	|		2357572.685	3582.262494	ppb	0.357	0.509		2675.372
159	Tb-ISK	|		253517.715		ppb	0.208			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16164-C-2-A @5
 Autosampler Position: 311
 Sample Date/Time: Friday, January 03, 2020 15:54:04
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16164-C-2-A @5.044
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		42818.531		ppb			1.695		39383.110
9	Be	|		14.444	0.002147	ppb	26.647	143.558			11.111
10	B	|		15742.007	38.965586	ppb	3.010	3.730			2986.979
27	Al	|		4026.123	-2.778694	ppb	0.633	0.124			20926.043
43	Ca-2	|		344680.289	16688.700932	ppb	0.338	1.256			231.669
49	Ti	|		592.235	0.536073	ppb	13.722	23.467			241.113
52	Cr	|		15535.111	0.175102	ppb	2.038	12.063			13004.807
55	Mn	|		49783.274	2.924992	ppb	1.635	2.659			773.354
57	Fe	|		29583.952	37.696109	ppb	3.010	8.863			15419.430
45	Sc-IS	|>		1369290.573		ppb	1.004				1289122.760
66	Zn	|		2296.851	1.019854	ppb	2.719	4.233			713.351
86	Sr	|		400435.806	170.197597	ppb	1.430	0.926			-13.698
65	Cu	|		1414.900	0.532971	ppb	4.920	4.741			134.923
69	Ga-IS	|		477814.126		ppb	0.882				491644.119
95	Mo	|		8508.089	3.138566	ppb	1.501	1.252			802.245
115	In-IS	|>		341909.251		ppb	1.545				340397.154
111	Cd	|		21.022	0.001851	ppb	47.742	203.171			16.093
118	Sn	|		1062.262	-0.034203	ppb	4.179	26.086			1288.947
121	Sb	|		2249.066	0.253123	ppb	3.878	5.472			424.451
135	Ba	|		25326.875	14.366216	ppb	0.324	1.217			40.000
165	Ho-IS	|		366191.726		ppb	2.697				347002.268
159	Tb-IS	|>		419146.528		ppb	2.287				402181.670
207	Pb	|		638.894	0.017902	ppb	7.198	8.310			168.889
203	Tl	|		13.333	-0.000072	ppb	25.000	508.793			13.333
209	Bi-IS	|		228822.826		ppb	1.703				225834.566
51	V	|		1010.036	1.253793	ppb	8.899	11.148			15.556
59	Co	|		134.445	0.044229	ppb	29.055	45.127			43.333
60	Ni	|		521.121	0.375737	ppb	5.131	8.121			46.667
75	As	|		1474.667	0.671785	ppb	0.481	12.203			1156.886
71	Ga-ISK	|>		108328.263		ppb	2.719				110705.078
82	Se-2	|		51.904	1.060630	ppb	27.283	24.581			-0.808
107	Ag-1	|		342.226	-0.182926	ppb	14.879	4.073			1406.736
115	In-ISK	|		117886.312		ppb	1.856				121210.466
45	Sc-ISK	|>		263925.019		ppb	1.724				258098.531
23	Na	|		14867868.281	23359.846181	ppb	1.422	2.000			8701.834
39	K	|		939770.420	611.135931	ppb	1.214	0.929			124803.123
24	Mg	|		4958492.319	7402.786724	ppb	0.593	1.912			2675.372
159	Tb-ISK	|		255158.560		ppb	0.398				256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16164-C-3-A @5
 Autosampler Position: 312
 Sample Date/Time: Friday, January 03, 2020 15:56:49
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16164-C-3-A @5.045
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42673.657		ppb	1.935		39383.110
9	Be	4.444	-0.006015	ppb	114.564	70.203	11.111
10	B	21809.972	57.250653	ppb	1.526	3.110	2986.979
27	Al	5927.982	-2.491948	ppb	32.284	12.370	20926.043
43	Ca-2	336129.675	16141.737168	ppb	2.212	0.371	231.669
49	Ti	730.019	0.748038	ppb	4.185	9.857	241.113
52	Cr	16215.868	0.231667	ppb	2.391	23.098	13004.807
55	Mn	175553.270	10.354102	ppb	1.086	1.480	773.354
57	Fe	31156.161	41.468485	ppb	0.671	4.420	15419.430
45	Sc-IS	> 1380464.413		ppb	2.381		1289122.760
66	Zn	3152.571	1.570717	ppb	5.873	8.615	713.351
86	Sr	406049.573	171.239355	ppb	1.513	2.399	-13.698
65	Cu	1750.948	0.668874	ppb	5.615	8.453	134.923
69	Ga-IS	485625.149		ppb	0.430		491644.119
95	Mo	27789.241	10.951364	ppb	3.045	2.417	802.245
115	In-IS	> 345048.293		ppb	0.774		340397.154
111	Cd	31.643	0.005911	ppb	37.202	76.518	16.093
118	Sn	994.479	-0.045622	ppb	11.230	35.840	1288.947
121	Sb	1622.314	0.164014	ppb	4.856	6.928	424.451
135	Ba	22573.379	12.684553	ppb	1.494	1.973	40.000
165	Ho-IS	373457.568		ppb	2.777		347002.268
159	Tb-IS	> 428121.000		ppb	1.251		402181.670
207	Pb	850.010	0.025402	ppb	4.242	6.582	168.889
203	Tl	26.667	0.001466	ppb	25.000	53.925	13.333
209	Bi-IS	225987.201		ppb	1.937		225834.566
51	V	723.352	0.902901	ppb	5.587	5.060	15.556
59	Co	134.445	0.044818	ppb	10.322	15.852	43.333
60	Ni	577.790	0.425797	ppb	9.814	9.686	46.667
75	As	1408.853	0.578291	ppb	1.614	7.430	1156.886
71	Ga-ISK	> 106907.456		ppb	1.170		110705.078
82	Se-2	43.502	0.908104	ppb	16.446	16.989	-0.808
107	Ag-1	295.559	-0.190375	ppb	18.544	5.020	1406.736
115	In-ISK	116388.253		ppb	0.737		121210.466
45	Sc-ISK	> 262852.933		ppb	0.809		258098.531
23	Na	29492402.099	46532.261324	ppb	0.958	0.346	8701.834
39	K	1290997.487	879.319190	ppb	0.839	0.034	124803.123
24	Mg	5492033.759	8231.673978	ppb	0.442	0.371	2675.372
159	Tb-ISK	254038.235		ppb	0.679		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, January 03, 2020 16:01:56

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCV-210770.046

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	37234.026		ppb	1.819			39383.110
9	Be	|	112172.016	97.818297	ppb	0.733	2.925		11.111
10	B	|	78683.895	250.428993	ppb	1.223	3.492		2986.979
27	Al	|	587603.417	92.317049	ppb	1.211	3.039		20926.043
43	Ca-2	|	98681.373	5087.939030	ppb	1.470	1.778		231.669
49	Ti	|	57566.894	97.580618	ppb	1.919	0.391		241.113
52	Cr	|	898300.041	96.101379	ppb	0.863	1.856		13004.807
55	Mn	|	1492830.351	95.077680	ppb	0.484	2.315		773.354
57	Fe	|	1621037.041	4886.906357	ppb	0.470	2.054		15419.430
45	Sc-IS	>	1283935.799		ppb	2.289			1289122.760
66	Zn	|	138802.220	97.595349	ppb	1.130	1.325		713.351
86	Sr	|	218791.667	99.176561	ppb	2.569	0.839		-13.698
65	Cu	|	220744.272	98.646259	ppb	1.364	0.928		134.923
69	Ga-IS	|	472704.875		ppb	0.782			491644.119
95	Mo	|	214869.595	93.606239	ppb	1.335	0.968		802.245
115	In-IS	>	330954.992		ppb	0.986			340397.154
111	Cd	|	244480.771	98.245075	ppb	0.997	0.398		16.093
118	Sn	|	649818.612	98.868590	ppb	1.213	0.285		1288.947
121	Sb	|	693216.135	99.367285	ppb	0.929	0.280		424.451
135	Ba	|	172201.661	101.045197	ppb	0.370	1.356		40.000
165	Ho-IS	|	359360.772		ppb	1.087			347002.268
159	Tb-IS	>	413611.313		ppb	0.832			402181.670
207	Pb	|	2569098.413	100.735418	ppb	0.934	0.278		168.889
203	Tl	|	828286.682	100.705957	ppb	0.874	0.851		13.333
209	Bi-IS	|	223229.855		ppb	1.835			225834.566
51	V	|	77234.959	99.712385	ppb	2.287	0.961		15.556
59	Co	|	205398.727	100.598913	ppb	2.143	0.450		43.333
60	Ni	|	119699.472	96.945189	ppb	1.610	2.418		46.667
75	As	|	50758.318	99.716898	ppb	0.861	0.914		1156.886
71	Ga-ISK	>	105548.559		ppb	1.731			110705.078
82	Se-2	|	4824.364	100.119373	ppb	1.266	0.904		-0.808
107	Ag-1	|	536916.432	97.170978	ppb	1.614	2.781		1406.736
115	In-ISK	|	113696.377		ppb	0.459			121210.466
45	Sc-ISK	>	253246.204		ppb	0.967			258098.531
23	Na	|	3173077.800	5184.097033	ppb	0.641	0.765		8701.834
39	K	|	6762896.723	5206.956461	ppb	1.535	0.587		124803.123
24	Mg	|	3363195.279	5230.318559	ppb	1.563	0.608		2675.372
159	Tb-ISK	|	251687.051		ppb	2.078			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, January 03, 2020 16:06:23

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCB-23446.047

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		37848.976		ppb			2.055			39383.110
9	Be	|		18.889	0.006926	ppb			53.913	124.993		11.111
10	B	|		3032.544	0.309072	ppb			2.183	84.093		2986.979
27	Al	|		2446.876	-2.990125	ppb			2.782	0.592		20926.043
43	Ca-2	|		63.333	-8.618644	ppb			24.119	8.620		231.669
49	Ti	|		170.001	-0.116289	ppb			12.245	27.465		241.113
52	Cr	|		12068.432	-0.080709	ppb			2.916	32.255		13004.807
55	Mn	|		631.125	-0.008413	ppb			7.210	27.945		773.354
57	Fe	|		13480.804	-5.230535	ppb			1.873	5.772		15419.430
45	Sc-IS	>		1269112.957		ppb			1.744			1289122.760
66	Zn	|		464.452	-0.170027	ppb			8.623	16.508		713.351
86	Sr	|		52.483	0.030158	ppb			43.242	33.126		-13.698
65	Cu	|		148.447	0.007248	ppb			22.752	224.262		134.923
69	Ga-IS	|		456967.295		ppb			0.864			491644.119
95	Mo	|		1423.404	0.280139	ppb			6.156	12.324		802.245
115	In-IS	>		338519.020		ppb			0.713			340397.154
111	Cd	|		35.900	0.007852	ppb			51.636	94.390		16.093
118	Sn	|		5873.431	0.684462	ppb			4.429	6.239		1288.947
121	Sb	|		442.229	0.002787	ppb			13.679	290.089		424.451
135	Ba	|		38.889	-0.000528	ppb			24.744	1022.862		40.000
165	Ho-IS	|		353736.038		ppb			2.054			347002.268
159	Tb-IS	>		410928.968		ppb			0.966			402181.670
207	Pb	|		537.782	0.014419	ppb			9.924	15.044		168.889
203	Tl	|		132.223	0.014501	ppb			18.922	20.315		13.333
209	Bi-IS	|		228952.502		ppb			1.264			225834.566
51	V	|		24.444	0.012744	ppb			64.443	161.534		15.556
59	Co	|		54.445	0.006616	ppb			31.418	126.266		43.333
60	Ni	|		34.444	-0.007889	ppb			20.145	74.831		46.667
75	As	|		1135.596	0.082814	ppb			3.432	76.903		1156.886
71	Ga-ISK	>		104740.369		ppb			0.977			110705.078
82	Se-2	|		12.211	0.271023	ppb			57.561	53.711		-0.808
107	Ag-1	|		4458.474	0.571464	ppb			4.763	5.457		1406.736
115	In-ISK	|		115906.139		ppb			0.489			121210.466
45	Sc-ISK	>		250719.929		ppb			0.659			258098.531
23	Na	|		3603.788	-8.023977	ppb			2.133	1.289		8701.834
39	K	|		122455.953	0.972577	ppb			0.722	135.421		124803.123
24	Mg	|		631.681	-3.092562	ppb			6.732	2.237		2675.372
159	Tb-ISK	|		250235.962		ppb			0.428			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16164-C-3-B MS @5
 Autosampler Position: 313
 Sample Date/Time: Friday, January 03, 2020 16:09:09
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16164-C-3-B MS @5.048
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		40695.661		ppb			0.417			39383.110
9	Be	|		24228.307	20.201761	ppb			1.071	2.455		11.111
10	B	|		26231.848	73.154622	ppb			2.349	3.667		2986.979
27	Al	|		139132.247	18.284997	ppb			2.275	3.979		20926.043
43	Ca-2	|		343769.073	16982.122574	ppb			1.195	0.445		231.669
49	Ti	|		8776.031	13.880755	ppb			3.993	3.375		241.113
52	Cr	|		204914.864	19.869810	ppb			1.118	0.699		13004.807
55	Mn	|		481415.034	29.293641	ppb			0.322	1.299		773.354
57	Fe	|		379340.995	1057.589612	ppb			1.247	1.497		15419.430
45	Sc-IS	>		1342014.485		ppb			1.416			1289122.760
66	Zn	|		33246.430	21.972135	ppb			2.068	0.692		713.351
86	Sr	|		444321.663	192.646572	ppb			3.847	2.451		-13.698
65	Cu	|		49291.306	21.025675	ppb			0.619	1.027		134.923
69	Ga-IS	|		478870.611		ppb			1.575			491644.119
95	Mo	|		73614.763	30.443060	ppb			1.429	0.800		802.245
115	In-IS	>		339383.519		ppb			2.460			340397.154
111	Cd	|		52525.710	20.581997	ppb			1.468	1.243		16.093
118	Sn	|		29326.782	4.167046	ppb			4.706	2.329		1288.947
121	Sb	|		118448.188	16.506364	ppb			2.931	0.581		424.451
135	Ba	|		58482.836	33.447717	ppb			2.213	0.354		40.000
165	Ho-IS	|		362229.661		ppb			2.225			347002.268
159	Tb-IS	>		420096.722		ppb			2.018			402181.670
207	Pb	|		523207.561	20.197980	ppb			0.692	1.918		168.889
203	Tl	|		154201.302	18.457449	ppb			1.937	0.423		13.333
209	Bi-IS	|		223477.818		ppb			0.780			225834.566
51	V	|		16634.125	20.973603	ppb			1.636	1.826		15.556
59	Co	|		41606.082	19.900833	ppb			2.590	2.972		43.333
60	Ni	|		25695.316	20.306367	ppb			1.894	2.246		46.667
75	As	|		12064.147	21.461835	ppb			2.342	3.197		1156.886
71	Ga-ISK	>		108007.922		ppb			1.351			110705.078
82	Se-2	|		936.886	19.008177	ppb			4.696	3.765		-0.808
107	Ag-1	|		23576.201	3.934080	ppb			8.608	8.248		1406.736
115	In-ISK	|		115280.352		ppb			0.472			121210.466
45	Sc-ISK	>		258935.877		ppb			1.359			258098.531
23	Na	|		28922759.814	46327.298837	ppb			0.780	0.950		8701.834
39	K	|		1534097.243	1080.625611	ppb			0.749	1.342		124803.123
24	Mg	|		6089678.794	9266.953594	ppb			0.079	1.313		2675.372
159	Tb-ISK	|		254301.597		ppb			0.973			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16164-C-3-C MSD @5
 Autosampler Position: 314
 Sample Date/Time: Friday, January 03, 2020 16:11:54
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16164-C-3-C MSD @5.049
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	40712.377		ppb	0.859		39383.110
9	Be	23580.558	19.858118	ppb	1.065	2.309	11.111
10	B	26701.604	75.497777	ppb	1.974	3.963	2986.979
27	Al	136695.367	18.118689	ppb	0.962	3.118	20926.043
43	Ca-2	346239.217	17276.436369	ppb	0.993	0.929	231.669
49	Ti	8763.799	14.005454	ppb	1.782	1.086	241.113
52	Cr	203223.086	19.908314	ppb	0.565	1.926	13004.807
55	Mn	483583.170	29.721233	ppb	0.456	1.337	773.354
57	Fe	381302.926	1074.490969	ppb	0.593	1.655	15419.430
45	Sc-IS	> 1328736.069		ppb	1.707		1289122.760
66	Zn	32542.588	21.717331	ppb	1.902	0.691	713.351
86	Sr	454350.118	199.016225	ppb	1.465	0.785	-13.698
65	Cu	49233.114	21.210683	ppb	1.157	0.549	134.923
69	Ga-IS	477799.108		ppb	0.783		491644.119
95	Mo	74746.154	31.233848	ppb	0.831	1.815	802.245
115	In-IS	> 340437.742		ppb	1.898		340397.154
111	Cd	52314.800	20.433528	ppb	1.911	1.434	16.093
118	Sn	28908.120	4.093105	ppb	2.518	1.792	1288.947
121	Sb	123196.712	17.123165	ppb	0.368	2.229	424.451
135	Ba	58749.448	33.500659	ppb	0.746	1.486	40.000
165	Ho-IS	360697.252		ppb	1.218		347002.268
159	Tb-IS	> 423412.481		ppb	1.104		402181.670
207	Pb	517033.427	19.800100	ppb	0.782	1.404	168.889
203	Tl	152339.095	18.092848	ppb	0.868	1.391	13.333
209	Bi-IS	221235.646		ppb	1.239		225834.566
51	V	16722.006	21.322312	ppb	1.862	2.467	15.556
59	Co	41340.849	19.995512	ppb	1.299	1.927	43.333
60	Ni	24957.337	19.942826	ppb	0.336	0.773	46.667
75	As	11832.172	21.266366	ppb	1.778	2.641	1156.886
71	Ga-ISK	> 106806.682		ppb	0.665		110705.078
82	Se-2	914.538	18.766269	ppb	3.785	3.478	-0.808
107	Ag-1	29991.723	5.134318	ppb	11.428	12.325	1406.736
115	In-ISK	114870.324		ppb	1.006		121210.466
45	Sc-ISK	> 261894.535		ppb	1.070		258098.531
23	Na	29562016.322	46813.205055	ppb	1.420	0.964	8701.834
39	K	1541251.567	1072.713237	ppb	0.300	0.850	124803.123
24	Mg	6128650.635	9219.295858	ppb	1.873	0.879	2675.372
159	Tb-ISK	252493.904		ppb	0.787		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-16773-C-1-C MSD
 Autosampler Position: 460
 Sample Date/Time: Friday, January 03, 2020 16:14:41
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200103E1\570-16773-C-1-C MSD.050
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	38441.663		ppb		1.780		39383.110
9	Be	|	112179.973	96.930737	ppb	2.137	1.271		11.111
10	B	|	32129.440	95.458217	ppb	2.677	2.020		2986.979
27	Al	|	801643.220	125.995853	ppb	1.407	0.680		20926.043
43	Ca-2	|	189014.432	9668.893872	ppb	2.612	1.629		231.669
49	Ti	|	38579.829	64.684729	ppb	2.813	2.128		241.113
52	Cr	|	926176.912	98.237335	ppb	0.705	0.997		13004.807
55	Mn	|	1489058.178	93.993145	ppb	1.047	1.651		773.354
57	Fe	|	1756671.068	5252.474310	ppb	1.025	1.850		15419.430
45	Sc-IS	>	1295129.769		ppb	1.007			1289122.760
66	Zn	|	143317.676	99.888030	ppb	1.742	0.900		713.351
86	Sr	|	251696.420	113.112427	ppb	0.357	0.685		-13.698
65	Cu	|	232879.397	103.157410	ppb	1.094	0.225		134.923
69	Ga-IS	|	485464.491		ppb	0.781			491644.119
95	Mo	|	227220.583	98.142908	ppb	0.588	1.463		802.245
115	In-IS	>	339066.247		ppb	1.160			340397.154
111	Cd	|	251588.528	98.683286	ppb	1.260	0.726		16.093
118	Sn	|	119026.138	17.519506	ppb	1.919	1.414		1288.947
121	Sb	|	589508.760	82.463293	ppb	2.188	1.065		424.451
135	Ba	|	168900.876	96.716127	ppb	2.774	1.633		40.000
165	Ho-IS	|	360743.972		ppb	2.303			347002.268
159	Tb-IS	>	420666.844		ppb	2.239			402181.670
207	Pb	|	2560174.659	98.701185	ppb	2.297	0.117		168.889
203	Tl	|	731470.954	87.456863	ppb	1.552	1.697		13.333
209	Bi-IS	|	227488.329		ppb	1.435			225834.566
51	V	|	76938.912	98.866458	ppb	2.106	0.717		15.556
59	Co	|	199428.170	97.231397	ppb	1.684	1.716		43.333
60	Ni	|	122306.899	98.590346	ppb	0.555	1.545		46.667
75	As	|	52431.924	102.585152	ppb	0.974	1.018		1156.886
71	Ga-ISK	>	106047.816		ppb	1.972			110705.078
82	Se-2	|	4118.473	85.068390	ppb	1.599	0.502		-0.808
107	Ag-1	|	234695.693	42.130366	ppb	1.246	0.751		1406.736
115	In-ISK	|	115543.242		ppb	0.416			121210.466
45	Sc-ISK	>	252415.894		ppb	2.623			258098.531
23	Na	|	1326222.724	2166.743583	ppb	0.935	2.977		8701.834
39	K	|	3769216.050	2870.469652	ppb	1.200	2.513		124803.123
24	Mg	|	4200025.748	6557.121842	ppb	0.458	2.314		2675.372
159	Tb-ISK	|	253973.721		ppb	0.359			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, January 03, 2020 16:24:41

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCV-210770.053

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		35498.500		ppb			1.372			39383.110
9	Be	|		107153.701	94.968220	ppb			0.306	1.131		11.111
10	B	|		74667.996	241.160539	ppb			1.648	1.944		2986.979
27	Al	|		557034.743	88.825202	ppb			0.440	1.578		20926.043
43	Ca-2	|		97442.876	5107.424221	ppb			0.670	1.376		231.669
49	Ti	|		55405.014	95.473986	ppb			0.793	0.754		241.113
52	Cr	|		871802.950	94.792280	ppb			0.434	1.638		13004.807
55	Mn	|		1438005.677	93.096919	ppb			0.865	2.043		773.354
57	Fe	|		1584288.270	4854.699115	ppb			0.515	1.668		15419.430
45	Sc-IS	>		1262854.537		ppb			1.207			1289122.760
66	Zn	|		136989.449	97.903794	ppb			2.227	1.053		713.351
86	Sr	|		221218.465	101.951529	ppb			2.176	1.737		-13.698
65	Cu	|		215939.903	98.094005	ppb			1.478	0.349		134.923
69	Ga-IS	|		459285.752		ppb			1.937			491644.119
95	Mo	|		211810.945	93.808215	ppb			0.640	1.111		802.245
115	In-IS	>		327065.211		ppb			1.264			340397.154
111	Cd	|		238918.413	97.155541	ppb			0.942	0.808		16.093
118	Sn	|		650347.614	100.127720	ppb			1.691	0.815		1288.947
121	Sb	|		700394.792	101.592230	ppb			1.305	0.688		424.451
135	Ba	|		172091.550	102.173469	ppb			1.226	0.362		40.000
165	Ho-IS	|		359601.499		ppb			1.531			347002.268
159	Tb-IS	>		415844.202		ppb			2.240			402181.670
207	Pb	|		2575925.086	100.493723	ppb			0.283	2.191		168.889
203	Tl	|		825991.673	99.887501	ppb			2.153	0.459		13.333
209	Bi-IS	|		224707.402		ppb			2.264			225834.566
51	V	|		74504.928	100.650075	ppb			1.703	1.624		15.556
59	Co	|		196609.048	100.752973	ppb			3.229	2.774		43.333
60	Ni	|		113415.095	96.096177	ppb			0.345	1.073		46.667
75	As	|		48922.783	100.578119	ppb			0.483	1.188		1156.886
71	Ga-ISK	>		100874.912		ppb			0.776			110705.078
82	Se-2	|		4690.635	101.851471	ppb			0.389	1.013		-0.808
107	Ag-1	|		535745.264	101.426974	ppb			2.265	1.536		1406.736
115	In-ISK	|		111460.810		ppb			0.994			121210.466
45	Sc-ISK	>		242497.559		ppb			0.522			258098.531
23	Na	|		3027633.109	5165.679168	ppb			0.615	1.116		8701.834
39	K	|		6537552.672	5257.781223	ppb			0.296	0.655		124803.123
24	Mg	|		3232941.221	5250.968629	ppb			0.296	0.807		2675.372
159	Tb-ISK	|		246289.732		ppb			1.069			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

AI 27

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, January 03, 2020 16:27:26

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCB-23446.054

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		35120.904		ppb				1.576		39383.110
9	Be	|		70.000	0.053290	ppb				4.762	4.404	11.111
10	B	|		3331.500	1.529779	ppb				2.903	27.523	2986.979
27	Al	|		2558.007	-2.963705	ppb				1.640	0.160	20926.043
43	Ca-2	|		1466.746	66.108978	ppb				28.810	32.905	231.669
49	Ti	|		310.003	0.135849	ppb				9.855	41.985	241.113
52	Cr	|		12102.903	-0.050633	ppb				1.215	6.033	13004.807
55	Mn	|		1282.280	0.035168	ppb				6.948	14.243	773.354
57	Fe	|		16650.811	5.536452	ppb				1.748	6.491	15419.430
45	Sc-IS	>		1244540.533		ppb				1.065		1289122.760
66	Zn	|		532.232	-0.114141	ppb				4.701	12.675	713.351
86	Sr	|		1045.325	0.494569	ppb				32.332	31.338	-13.698
65	Cu	|		325.233	0.090068	ppb				11.849	21.548	134.923
69	Ga-IS	|		438375.903		ppb				1.854		491644.119
95	Mo	|		5393.240	2.083681	ppb				1.520	2.980	802.245
115	In-IS	>		332207.197		ppb				3.114		340397.154
111	Cd	|		156.453	0.056170	ppb				28.390	29.172	16.093
118	Sn	|		15967.809	2.235823	ppb				1.254	4.133	1288.947
121	Sb	|		3283.711	0.410456	ppb				5.433	8.031	424.451
135	Ba	|		254.447	0.125732	ppb				26.212	29.383	40.000
165	Ho-IS	|		360119.187		ppb				1.966		347002.268
159	Tb-IS	>		416511.981		ppb				2.737		402181.670
207	Pb	|		2533.424	0.091558	ppb				22.182	21.147	168.889
203	Tl	|		734.464	0.086813	ppb				17.344	15.116	13.333
209	Bi-IS	|		227373.069		ppb				1.046		225834.566
51	V	|		100.000	0.111820	ppb				15.275	15.961	15.556
59	Co	|		74.445	0.016773	ppb				18.642	39.188	43.333
60	Ni	|		82.222	0.031494	ppb				18.725	36.143	46.667
75	As	|		1203.849	0.242172	ppb				1.526	36.707	1156.886
71	Ga-ISK	>		103901.059		ppb				2.397		110705.078
82	Se-2	|		22.237	0.481581	ppb				43.288	40.093	-0.808
107	Ag-1	|		11236.654	1.825683	ppb				6.932	5.185	1406.736
115	In-ISK	|		110828.817		ppb				0.515		121210.466
45	Sc-ISK	>		238346.706		ppb				1.739		258098.531
23	Na	|		26962.630	32.964037	ppb				17.910	26.168	8701.834
39	K	|		120183.434	4.131885	ppb				0.541	49.855	124803.123
24	Mg	|		12070.229	15.883130	ppb				19.710	25.298	2675.372
159	Tb-ISK	|		244480.244		ppb				0.399		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, January 03, 2020 16:30:12

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCB-23446.055

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		35896.155		ppb		0.836		39383.110
9	Be	|		51.111	0.036184	ppb	26.357	33.047		11.111
10	B	|		3076.998	0.634351	ppb	3.231	47.262		2986.979
27	Al	|		2598.015	-2.958043	ppb	6.161	0.856		20926.043
43	Ca-2	|		1140.047	48.689822	ppb	21.393	26.427		231.669
49	Ti	|		188.890	-0.077737	ppb	7.347	33.461		241.113
52	Cr	|		12009.490	-0.064127	ppb	0.765	27.534		13004.807
55	Mn	|		1185.605	0.028637	ppb	14.462	38.170		773.354
57	Fe	|		14677.538	-0.759190	ppb	1.967	136.799		15419.430
45	Sc-IS	>		1247429.891		ppb		0.553		1289122.760
66	Zn	|		510.009	-0.131237	ppb	10.062	26.945		713.351
86	Sr	|		774.644	0.367305	ppb	22.905	22.081		-13.698
65	Cu	|		243.666	0.052000	ppb	12.392	25.544		134.923
69	Ga-IS	|		440715.040		ppb		0.784		491644.119
95	Mo	|		1366.732	0.265914	ppb	9.766	23.842		802.245
115	In-IS	>		335445.423		ppb		2.309		340397.154
111	Cd	|		93.797	0.030696	ppb	38.734	44.525		16.093
118	Sn	|		6538.163	0.792852	ppb	2.139	4.845		1288.947
121	Sb	|		1893.459	0.208682	ppb	3.921	2.118		424.451
135	Ba	|		180.001	0.080998	ppb	28.509	33.676		40.000
165	Ho-IS	|		362434.387		ppb		2.731		347002.268
159	Tb-IS	>		418678.772		ppb		3.346		402181.670
207	Pb	|		1184.464	0.039063	ppb	17.818	20.735		168.889
203	Tl	|		342.227	0.039312	ppb	26.823	26.250		13.333
209	Bi-IS	|		230895.816		ppb		1.768		225834.566
51	V	|		35.556	0.029153	ppb	28.641	52.357		15.556
59	Co	|		65.556	0.013572	ppb	30.649	83.733		43.333
60	Ni	|		97.778	0.047052	ppb	28.386	51.590		46.667
75	As	|		1177.634	0.258975	ppb	2.966	4.149		1156.886
71	Ga-ISK	>		100893.004		ppb		2.924		110705.078
82	Se-2	|		1.851	0.058157	ppb	268.829	188.994		-0.808
107	Ag-1	|		4531.833	0.618594	ppb	8.752	16.333		1406.736
115	In-ISK	|		109707.006		ppb		3.877		121210.466
45	Sc-ISK	>		239347.145		ppb		2.738		258098.531
23	Na	|		42416.340	60.041124	ppb	45.003	58.591		8701.834
39	K	|		120087.115	3.673213	ppb	1.242	98.434		124803.123
24	Mg	|		19002.645	27.412250	ppb	44.718	54.109		2675.372
159	Tb-ISK	|		240997.265		ppb		4.029		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, January 03, 2020 17:06:56

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCV-210770.058

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		35680.063		ppb		1.443		39383.110
9	Be	|		107120.120	97.260130	ppb		0.437	1.586	11.111
10	B	|		72088.106	238.396274	ppb		1.047	0.997	2986.979
27	Al	|		539481.270	88.108038	ppb		2.382	3.403	20926.043
43	Ca-2	|		93367.500	5012.458193	ppb		1.556	0.462	231.669
49	Ti	|		53689.644	94.750834	ppb		2.843	0.895	241.113
52	Cr	|		836523.933	93.159416	ppb		0.737	2.284	13004.807
55	Mn	|		1383019.041	91.719985	ppb		0.423	1.706	773.354
57	Fe	|		1513759.966	4751.041114	ppb		0.364	1.991	15419.430
45	Sc-IS	>		1232864.924		ppb		2.008		1289122.760
66	Zn	|		132304.350	96.867446	ppb		1.359	0.877	713.351
86	Sr	|		216216.079	102.065505	ppb		2.429	0.503	-13.698
65	Cu	|		210779.824	98.088993	ppb		1.603	0.989	134.923
69	Ga-IS	|		435961.428		ppb		0.887		491644.119
95	Mo	|		203524.347	92.319472	ppb		2.006	0.629	802.245
115	In-IS	>		318754.959		ppb		3.188		340397.154
111	Cd	|		233346.711	97.402012	ppb		1.289	2.180	16.093
118	Sn	|		631252.680	99.736733	ppb		2.907	1.599	1288.947
121	Sb	|		672420.600	100.102229	ppb		1.937	1.320	424.451
135	Ba	|		164972.765	100.538921	ppb		1.371	1.900	40.000
165	Ho-IS	|		357696.409		ppb		2.224		347002.268
159	Tb-IS	>		407227.547		ppb		1.123		402181.670
207	Pb	|		2514738.942	100.148517	ppb		1.728	1.123	168.889
203	Tl	|		803818.440	99.253988	ppb		2.122	1.076	13.333
209	Bi-IS	|		222459.349		ppb		2.391		225834.566
51	V	|		71800.003	98.272048	ppb		1.348	1.839	15.556
59	Co	|		195215.988	101.364779	ppb		1.091	1.719	43.333
60	Ni	|		109522.709	94.008834	ppb		1.118	0.976	46.667
75	As	|		47241.699	98.337956	ppb		1.319	0.646	1156.886
71	Ga-ISK	>		99570.249		ppb		0.706		110705.078
82	Se-2	|		4452.894	97.957551	ppb		1.182	1.614	-0.808
107	Ag-1	|		503640.890	96.597036	ppb		0.447	0.821	1406.736
115	In-ISK	|		109024.463		ppb		0.507		121210.466
45	Sc-ISK	>		234883.056		ppb		0.755		258098.531
23	Na	|		2863616.904	5043.811648	ppb		1.794	1.817	8701.834
39	K	|		6285325.683	5217.935447	ppb		0.948	0.238	124803.123
24	Mg	|		3113368.837	5220.512719	ppb		0.835	0.290	2675.372
159	Tb-ISK	|		241429.038		ppb		0.634		256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

AI 27

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, January 03, 2020 17:10:54

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200103E1\CCB-23446.059

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34664.236		ppb		1.760		39383.110
9	Be	|		22.222	0.010714	ppb	45.826	87.184		11.111
10	B	|		2775.825	-0.198332	ppb	1.502	37.023		2986.979
27	Al	|		2991.441	-2.881905	ppb	27.964	4.953		20926.043
43	Ca-2	|		300.003	4.363336	ppb	28.432	106.493		231.669
49	Ti	|		190.001	-0.069051	ppb	15.593	77.357		241.113
52	Cr	|		11227.746	-0.126053	ppb	2.869	27.644		13004.807
55	Mn	|		708.907	-0.001668	ppb	9.219	234.475		773.354
57	Fe	|		13642.067	-3.137168	ppb	0.936	2.653		15419.430
45	Sc-IS	>		1222619.594		ppb	0.986			1289122.760
66	Zn	|		413.339	-0.195321	ppb	4.490	6.742		713.351
86	Sr	|		241.861	0.121159	ppb	21.061	19.095		-13.698
65	Cu	|		161.670	0.015856	ppb	5.162	29.368		134.923
69	Ga-IS	|		423155.123		ppb	1.214			491644.119
95	Mo	|		1674.543	0.419725	ppb	7.410	14.566		802.245
115	In-IS	>		322892.189		ppb	1.160			340397.154
111	Cd	|		66.484	0.021065	ppb	30.127	38.557		16.093
118	Sn	|		7915.530	1.046258	ppb	5.205	7.231		1288.947
121	Sb	|		817.801	0.061095	ppb	6.345	14.380		424.451
135	Ba	|		100.000	0.037286	ppb	31.798	50.903		40.000
165	Ho-IS	|		356485.089		ppb	2.675			347002.268
159	Tb-IS	>		409410.024		ppb	2.237			402181.670
207	Pb	|		878.900	0.028003	ppb	3.874	3.180		168.889
203	Tl	|		236.669	0.027397	ppb	5.078	4.149		13.333
209	Bi-IS	|		226569.505		ppb	1.582			225834.566
51	V	|		52.222	0.052067	ppb	42.500	56.962		15.556
59	Co	|		83.334	0.022874	ppb	34.176	61.350		43.333
60	Ni	|		58.889	0.014431	ppb	29.047	98.910		46.667
75	As	|		1093.616	0.114073	ppb	4.043	93.857		1156.886
71	Ga-ISK	>		99552.414		ppb	1.849			110705.078
82	Se-2	|		12.226	0.286704	ppb	68.346	64.768		-0.808
107	Ag-1	|		3674.918	0.463506	ppb	3.911	5.823		1406.736
115	In-ISK	|		110377.417		ppb	0.774			121210.466
45	Sc-ISK	>		232687.617		ppb	1.005			258098.531
23	Na	|		10297.524	4.329956	ppb	44.080	182.546		8701.834
39	K	|		122368.537	8.413819	ppb	0.616	11.208		124803.123
24	Mg	|		4889.329	4.173495	ppb	53.463	103.973		2675.372
159	Tb-ISK	|		243288.167		ppb	0.536			256025.219

QC Out of Limits

AnalyteMassOut of Limits Message

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Friday, January 03, 2020 12:54:45

File Name: Default.tun

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	6.975	1239	2062	0.705	
Mg 24	23.985	23.975	4623	2062	0.694	
In 115	114.904	114.875	22802	2058	0.690	
U	238.050	238.075	47443	2049	0.687	

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200108G1.sifx

Batch ID:
Results Data Set: 200108G1
Results Library: Y:\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: icis 570-43281/1-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/8/2020 1:45:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icis 570-43281/1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	-0.0018	0.0000	1:46:28 PM	Yes
2		[0.00]	0.0001	-0.0012	0.0001	1:47:12 PM	Yes

Mean: [0.00] 0.0000
SD: 0.0000 0.0000
%RSD: 0.00% 62.50
Auto-zero performed.

=====
Sequence No.: 2
Sample ID: ic 570-43281/4-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 1/8/2020 1:47:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-43281/4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0005	0.0016	0.0005	1:48:42 PM	Yes
2		[0.025]	0.0005	0.0014	0.0006	1:49:27 PM	Yes

Mean: [0.025] 0.0005
SD: 0.00000 0.0000
%RSD: 0.00% 5.25
Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.02007 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: ic 570-43281/5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 1/8/2020 1:49:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-43281/5-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0011	0.0031	0.0011	1:50:57 PM	Yes
2		[0.100]	0.0011	0.0044	0.0012	1:51:42 PM	Yes

Mean: [0.100] 0.0011
SD: 0.00000 0.0001
%RSD: 0.00% 4.83
Standard number 2 applied. [0.100]
Correlation Coef.: 0.972522 Slope: 0.01020 Intercept: 0.00011

=====
Sequence No.: 4
Sample ID: ic 570-43281/6-a
Autosampler Location: 4
Date Collected: 1/8/2020 1:52:09 PM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-43281/6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0086	0.0362	0.0087	1:53:14 PM	Yes
2		[1.000]	0.0087	0.0372	0.0087	1:54:00 PM	Yes

Mean: [1.000] 0.0087
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.26
 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999517 Slope: 0.00849 Intercept: 0.00017

=====
 Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-43281/7-a Date Collected: 1/8/2020 1:54:27 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-43281/7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0169	0.0703	0.0169	1:55:32 PM	Yes
2		[2.000]	0.0168	0.0730	0.0169	1:56:17 PM	Yes

Mean: [2.000] 0.0169
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.28
 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999853 Slope: 0.00836 Intercept: 0.00020

=====
 Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-43281/8-a Date Collected: 1/8/2020 1:56:44 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-43281/8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0445	0.1784	0.0445	1:57:47 PM	Yes
2		[5.000]	0.0443	0.1857	0.0444	1:58:33 PM	Yes

Mean: [5.000] 0.0444
 SD: 0.00000 0.0001
 %RSD: 0.00% 0.25
 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999716 Slope: 0.00882 Intercept: -0.00003

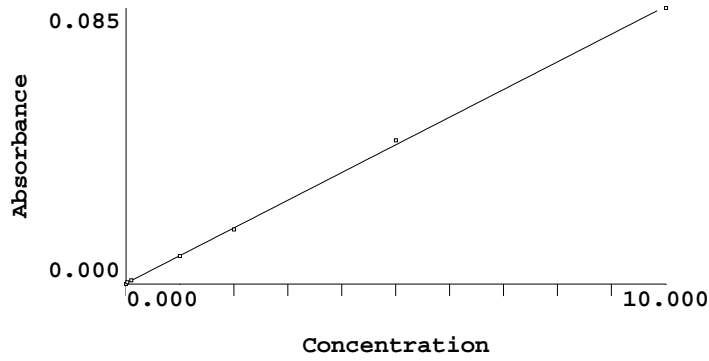
=====
 Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-43281/9-a Date Collected: 1/8/2020 1:58:58 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-43281/9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.00]	0.0856	0.3461	0.0856	2:00:02 PM	Yes
2		[10.00]	0.0851	0.3455	0.0851	2:00:47 PM	Yes

Mean: [10.00] 0.0853
 SD: 0.0000 0.0004
 %RSD: 0.00% 0.44
 Standard number 6 applied. [10.00]

Correlation Coef.: 0.999800 Slope: 0.00857 Intercept: 0.00022



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-43281/1-a	0.0000	0	-0.0261	0.00	62.50
ic 570-43281/4-a	0.0005	0.025	0.0324	0.00	5.25
ic 570-43281/5-a	0.0011	0.100	0.1012	0.00	4.83
ic 570-43281/6-a	0.0087	1.000	0.9836	0.00	0.26
ic 570-43281/7-a	0.0169	2.000	1.9424	0.00	0.28
ic 570-43281/8-a	0.0444	5.000	5.1568	0.00	0.25
ic 570-43281/9-a	0.0853	10.00	9.9347	0.00	0.44

Correlation Coef.: 0.999800 Slope: 0.00857 Intercept: 0.00022

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200108G1.sifx

Batch ID:
Results Data Set: 200108G1
Results Library: Y:\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-43281/2-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 1/8/2020 2:13:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-43281/2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.72	0.0406	0.1710	0.0407	2:14:43 PM	Yes
2	0.0052	5.22	0.0449	0.1763	0.0449	2:15:28 PM	Yes
Mean:	0.0050	4.97	0.0428				
SD:	0.00035	0.352	0.0030				
%RSD:	7.08%	7.08%	7.05				

QC value within limits for Hg 253.7 Recovery = 99.33%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-43281/3-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/8/2020 2:15:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-43281/3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0239	0.0000	-0.0014	0.0001	2:16:58 PM	Yes
2	-0.0000	-0.0200	0.0001	-0.0004	0.0001	2:17:43 PM	Yes
Mean:	-0.0000	-0.0219	0.0000				
SD:	0.00000	0.00274	0.0000				
%RSD:	12.50%	12.50%	65.31				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-43281/12-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 1/8/2020 2:18:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-43281/12-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0006	0.288	0.0027	0.0104	0.0027	2:19:13 PM	Yes
2	0.0006	0.286	0.0027	0.0111	0.0027	2:19:58 PM	Yes
Mean:	0.0006	0.287	0.0027				
SD:	0.00000	0.0015	0.0000				
%RSD:	0.54%	0.54%	0.49				

=====
Sequence No.: 4
Sample ID: ccv 570-43281/10-a
Analyst: 1174 HG-7
Autosampler Location: 5
Date Collected: 1/8/2020 2:20:24 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-43281/10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.98	0.0172	0.0698	0.0172	2:21:30 PM	Yes
2	0.0020	2.04	0.0177	0.0709	0.0177	2:22:14 PM	Yes
Mean:	0.0020	2.01	0.0174				
SD:	0.00004	0.041	0.0004				
%RSD:	2.04%	2.04%	2.01				

QC value within limits for Hg 253.7 Recovery = 100.39%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-43281/11-a Date Collected: 1/8/2020 2:22:42 PM
 Analyst: 1174 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-43281/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0219	0.0000	-0.0008	0.0001	2:23:45 PM	Yes
2	-0.0000	-0.0164	0.0001	-0.0006	0.0001	2:24:30 PM	Yes
Mean:	-0.0000	-0.0191	0.0001				
SD:	0.00000	0.00385	0.0000				
%RSD:	20.14%	20.14%	55.07				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200108G1.sifx

Batch ID:
Results Data Set: 200108G1
Results Library: Y:\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: 570-17227-a-21-c
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 1/8/2020 2:36:06 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-17227-a-21-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0042	4.23	0.0365	0.1605	0.0365	2:37:10 PM	Yes
2	0.0043	4.27	0.0368	0.1603	0.0369	2:37:56 PM	Yes
Mean:	0.0043	4.25	0.0367				
SD:	0.00003	0.032	0.0003				
%RSD:	0.76%	0.76%	0.76				

=====
Sequence No.: 2
Sample ID: 570-17227-a-22-c
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 11
Date Collected: 1/8/2020 2:38:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-17227-a-22-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0006	0.572	0.0051	0.0215	0.0052	2:39:28 PM	Yes
2	0.0006	0.559	0.0050	0.0212	0.0051	2:40:12 PM	Yes
Mean:	0.0006	0.566	0.0051				
SD:	0.00001	0.0098	0.0001				
%RSD:	1.73%	1.73%	1.65				

=====
Sequence No.: 3
Sample ID: 570-17227-a-23-c
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 12
Date Collected: 1/8/2020 2:40:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-17227-a-23-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0032	3.20	0.0276	0.1147	0.0277	2:41:45 PM	Yes
2	0.0031	3.15	0.0272	0.1122	0.0272	2:42:30 PM	Yes
Mean:	0.0032	3.17	0.0274				
SD:	0.00004	0.037	0.0003				
%RSD:	1.16%	1.16%	1.15				

=====
Sequence No.: 4
Sample ID: 570-17215-a-1-g
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 13
Date Collected: 1/8/2020 2:42:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-17215-a-1-g

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.63	0.0399	0.1709	0.0400	2:44:03 PM	Yes
2	0.0047	4.67	0.0402	0.1737	0.0403	2:44:48 PM	Yes
Mean:	0.0047	4.65	0.0401				
SD:	0.00003	0.026	0.0002				
%RSD:	0.55%	0.55%	0.55				

Sequence No.: 5

Autosampler Location: 14

Sample ID: 570-17215-a-2-e

Date Collected: 1/8/2020 2:45:16 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-17215-a-2-e

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0006	0.596	0.0053	0.0230	0.0054	2:46:19 PM	Yes
2	0.0006	0.625	0.0056	0.0235	0.0056	2:47:05 PM	Yes
Mean:	0.0006	0.611	0.0055				
SD:	0.00002	0.0203	0.0002				
%RSD:	3.32%	3.32%	3.18				

Sequence No.: 6

Autosampler Location: 15

Sample ID: 570-17215-a-3-e

Date Collected: 1/8/2020 2:47:30 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-17215-a-3-e

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.224	0.0021	0.0097	0.0022	2:48:34 PM	Yes
2	0.0002	0.221	0.0021	0.0099	0.0022	2:49:19 PM	Yes
Mean:	0.0002	0.223	0.0021				
SD:	0.00000	0.0025	0.0000				
%RSD:	1.12%	1.12%	1.00				

Sequence No.: 7

Autosampler Location: 16

Sample ID: 570-17215-a-4-e

Date Collected: 1/8/2020 2:49:45 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-17215-a-4-e

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.273	0.0026	0.0120	0.0026	2:50:50 PM	Yes
2	0.0003	0.277	0.0026	0.0106	0.0026	2:51:35 PM	Yes
Mean:	0.0003	0.275	0.0026				
SD:	0.00000	0.0033	0.0000				
%RSD:	1.22%	1.22%	1.11				

Sequence No.: 8

Autosampler Location: 17

Sample ID: 570-17234-a-1-b

Date Collected: 1/8/2020 2:52:01 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-17234-a-1-b

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	------------------	----------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0006	0.635	0.0057	0.0263	0.0057	2:53:05 PM	Yes
2	0.0007	0.673	0.0060	0.0273	0.0060	2:53:50 PM	Yes
Mean:	0.0007	0.654	0.0058				
SD:	0.00003	0.0270	0.0002				
%RSD:	4.13%	4.13%	3.97				

Sequence No.: 9
 Sample ID: 570-17234-a-2-b
 Analyst: 1174 HG-7
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 18
 Date Collected: 1/8/2020 2:54:16 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-17234-a-2-b Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0007	0.657	0.0059	0.0242	0.0059	2:55:20 PM	Yes
2	0.0007	0.698	0.0062	0.0249	0.0062	2:56:05 PM	Yes
Mean:	0.0007	0.678	0.0060				
SD:	0.00003	0.0290	0.0002				
%RSD:	4.28%	4.28%	4.12				

Sequence No.: 10
 Sample ID: 570-17033-a-1-c
 Analyst: 1174 HG-7
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 19
 Date Collected: 1/8/2020 2:56:31 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-17033-a-1-c Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	-0.0000	-0.0080	0.0002	-0.0010	0.0002	2:57:35 PM	Yes
2	0.0000	0.0047	0.0003	0.0002	0.0003	2:58:20 PM	Yes
Mean:	-0.0000	-0.0016	0.0002				
SD:	0.00001	0.00898	0.0001				
%RSD:	553.84%	553.84%	36.64				

Sequence No.: 11
 Sample ID: ccv 570-43281/10-a
 Analyst: 1174 HG-7
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 1/8/2020 2:58:46 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-43281/10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0019	1.89	0.0164	0.0667	0.0165	2:59:52 PM	Yes
2	0.0019	1.88	0.0163	0.0673	0.0164	3:00:37 PM	Yes
Mean:	0.0019	1.89	0.0164				
SD:	0.00001	0.010	0.0001				
%RSD:	0.52%	0.52%	0.51				

QC value within limits for Hg 253.7 Recovery = 94.32%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-43281/11-a
 Analyst: 1174 HG-7
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 1/8/2020 3:01:04 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-43281/11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	-0.0000	-0.0234	0.0000	-0.0007	0.0001	3:02:07 PM	Yes
2	-0.0000	-0.0214	0.0000	-0.0010	0.0001	3:02:53 PM	Yes
Mean:	-0.0000	-0.0224	0.0000				
SD:	0.00000	0.00144	0.0000				
%RSD:	6.42%	6.42%	38.38				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200108G1.sifx

Batch ID:
Results Data Set: 200108G1
Results Library: Y:\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-42966/1-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 20
Date Collected: 1/8/2020 3:03:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-42966/1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0264	0.0005	0.0016	0.0005	3:04:35 PM	Yes
2	0.0000	0.0225	0.0004	-0.0002	0.0005	3:05:20 PM	Yes
Mean:	0.0000	0.0245	0.0004				
SD:	0.00000	0.00273	0.0000				
%RSD:	11.17%	11.17%	5.40				

=====
Sequence No.: 2
Sample ID: lcs 570-42966/2-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 21
Date Collected: 1/8/2020 3:05:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-42966/2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.86	0.0419	0.1683	0.0419	3:06:51 PM	Yes
2	0.0051	5.07	0.0436	0.1770	0.0437	3:07:37 PM	Yes
Mean:	0.0050	4.96	0.0428				
SD:	0.00015	0.148	0.0013				
%RSD:	2.98%	2.98%	2.96				

=====
Sequence No.: 3
Sample ID: lcsd 570-42966/3-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 22
Date Collected: 1/8/2020 3:08:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-42966/3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.89	0.0421	0.1694	0.0422	3:09:08 PM	Yes
2	0.0050	5.00	0.0430	0.1786	0.0431	3:09:53 PM	Yes
Mean:	0.0049	4.94	0.0426				
SD:	0.00007	0.073	0.0006				
%RSD:	1.48%	1.48%	1.47				

=====
Sequence No.: 4
Sample ID: 570-17059-a-21-d
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 23
Date Collected: 1/8/2020 3:10:20 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-17059-a-21-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0021	0.0002	-0.0002	0.0003	3:11:25 PM	Yes
2	0.0000	0.0103	0.0003	0.0007	0.0004	3:12:10 PM	Yes
Mean:	0.0000	0.0062	0.0003				
SD:	0.00001	0.00583	0.0000				
%RSD:	94.05%	94.05%	18.03				

Sequence No.: 5

Autosampler Location: 24

Sample ID: 570-17059-a-21-e ms

Date Collected: 1/8/2020 3:12:37 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-17059-a-21-e ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0040	4.03	0.0348	0.1463	0.0348	3:13:41 PM	Yes
2	0.0045	4.47	0.0385	0.1606	0.0385	3:14:27 PM	Yes
Mean:	0.0042	4.25	0.0366				
SD:	0.00031	0.308	0.0026				
%RSD:	7.24%	7.24%	7.20				

Sequence No.: 6

Autosampler Location: 25

Sample ID: 570-17059-a-21-f msd

Date Collected: 1/8/2020 3:14:54 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-17059-a-21-f msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0044	4.38	0.0378	0.1587	0.0378	3:15:59 PM	Yes
2	0.0041	4.12	0.0355	0.1506	0.0356	3:16:45 PM	Yes
Mean:	0.0043	4.25	0.0367				
SD:	0.00019	0.187	0.0016				
%RSD:	4.39%	4.39%	4.37				

Sequence No.: 7

Autosampler Location: 26

Sample ID: 570-17059-a-22-b

Date Collected: 1/8/2020 3:17:12 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-17059-a-22-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0321	0.0005	0.0033	0.0005	3:18:16 PM	Yes
2	0.0001	0.0650	0.0008	0.0043	0.0008	3:19:02 PM	Yes
Mean:	0.0000	0.0485	0.0006				
SD:	0.00002	0.02324	0.0002				
%RSD:	47.88%	47.88%	31.13				

Sequence No.: 8

Autosampler Location: 27

Sample ID: 570-17059-a-23-b

Date Collected: 1/8/2020 3:19:28 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-17059-a-23-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0136	0.0003	0.0019	0.0004	3:20:32 PM	Yes
2	0.0000	0.0192	0.0004	0.0034	0.0004	3:21:17 PM	Yes
Mean:	0.0000	0.0164	0.0004				
SD:	0.00000	0.00399	0.0000				
%RSD:	24.30%	24.30%	9.37				

Sequence No.: 9
 Sample ID: 570-17059-a-24-b
 Analyst: 1174 HG-7
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 28
 Date Collected: 1/8/2020 3:21:43 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-17059-a-24-b Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0070	0.0003	0.0008	0.0003	3:22:47 PM	Yes
2	0.0000	0.0149	0.0004	0.0014	0.0004	3:23:32 PM	Yes
Mean:	0.0000	0.0110	0.0003				
SD:	0.00001	0.00557	0.0000				
%RSD:	50.71%	50.71%	15.01				

Sequence No.: 10
 Sample ID: 570-17059-a-25-b
 Analyst: 1174 HG-7
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 29
 Date Collected: 1/8/2020 3:23:58 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-17059-a-25-b Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0003	0.311	0.0029	0.0118	0.0029	3:25:03 PM	Yes
2	0.0003	0.298	0.0028	0.0115	0.0028	3:25:48 PM	Yes
Mean:	0.0003	0.304	0.0028				
SD:	0.00001	0.0096	0.0001				
%RSD:	3.14%	3.14%	2.89				

Sequence No.: 11
 Sample ID: ccv 570-43281/10-a
 Analyst: 1174 HG-7
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 1/8/2020 3:26:14 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-43281/10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0019	1.91	0.0166	0.0694	0.0166	3:27:19 PM	Yes
2	0.0020	2.03	0.0176	0.0713	0.0177	3:28:04 PM	Yes
Mean:	0.0020	1.97	0.0171				
SD:	0.00009	0.086	0.0007				
%RSD:	4.34%	4.34%	4.29				

QC value within limits for Hg 253.7 Recovery = 98.64%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-43281/11-a
 Analyst: 1174 HG-7
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 1/8/2020 3:28:31 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-43281/11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	-0.0000	-0.0202	0.0001	0.0004	0.0001	3:29:35 PM	Yes
2	-0.0000	-0.0126	0.0001	0.0004	0.0002	3:30:20 PM	Yes
Mean:	-0.0000	-0.0164	0.0001				
SD:	0.00001	0.00537	0.0000				
%RSD:	32.78%	32.78%	55.04				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 30
Sample ID: 570-17059-a-26-b                   Date Collected: 1/8/2020 3:30:46 PM
Analyst: 1174 HG-7                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-17059-a-26-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0031   0.0003   0.0005 0.0003 3:31:50 PM  Yes
2      0.0000     0.0029   0.0002   0.0007 0.0003 3:32:35 PM  Yes
Mean:  0.0000     0.0030   0.0002
SD:    0.00000     0.00015  0.0000
%RSD:  4.96%      4.96%    0.50
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 31
Sample ID: 570-17059-a-27-b                   Date Collected: 1/8/2020 3:33:01 PM
Analyst: 1174 HG-7                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-17059-a-27-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0074   0.0003   0.0012 0.0003 3:34:06 PM  Yes
2      0.0000     0.0008   0.0002   0.0006 0.0003 3:34:50 PM  Yes
Mean:  0.0000     0.0041   0.0003
SD:    0.00000     0.00465  0.0000
%RSD: 113.77%    113.77% 15.40
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 32
Sample ID: 570-17059-a-28-b                   Date Collected: 1/8/2020 3:35:17 PM
Analyst: 1174 HG-7                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-17059-a-28-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0005     0.524    0.0047   0.0186 0.0048 3:36:21 PM  Yes
2      0.0005     0.516    0.0046   0.0191 0.0047 3:37:07 PM  Yes
Mean:  0.0005     0.520    0.0047
SD:    0.00001     0.0059   0.0001
%RSD:  1.14%      1.14%    1.08
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 33
Sample ID: 570-17059-a-29-b                   Date Collected: 1/8/2020 3:37:33 PM
Analyst: 1174 HG-7                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-17059-a-29-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0022   0.0002   0.0017 0.0003 3:38:38 PM  Yes
=====
  
```

2 -0.0000 -0.0098 0.0001 -0.0001 0.0002 3:39:23 PM Yes
 Mean: -0.0000 -0.0038 0.0002
 SD: 0.00001 0.00848 0.0001
 %RSD: 224.76% 224.76% 37.92

=====
 Sequence No.: 17 Autosampler Location: 34
 Sample ID: 570-17059-a-30-b Date Collected: 1/8/2020 3:39:49 PM
 Analyst: 1174 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17059-a-30-b Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0000 0.0120 0.0003 -0.0002 0.0004 3:40:54 PM Yes
 2 0.0000 0.0050 0.0003 0.0014 0.0003 3:41:40 PM Yes
 Mean: 0.0000 0.0085 0.0003
 SD: 0.00000 0.00495 0.0000
 %RSD: 58.43% 58.43% 14.31

=====
 Sequence No.: 18 Autosampler Location: 35
 Sample ID: 570-17159-a-1-e Date Collected: 1/8/2020 3:42:06 PM
 Analyst: 1174 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17159-a-1-e Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 -0.0000 -0.0123 0.0001 0.0003 0.0002 3:43:11 PM Yes
 2 -0.0000 -0.0150 0.0001 0.0001 0.0001 3:43:56 PM Yes
 Mean: -0.0000 -0.0137 0.0001
 SD: 0.00000 0.00189 0.0000
 %RSD: 13.85% 13.85% 15.16

=====
 Sequence No.: 19 Autosampler Location: 36
 Sample ID: 570-17159-a-2-e Date Collected: 1/8/2020 3:44:23 PM
 Analyst: 1174 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17159-a-2-e Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 -0.0000 -0.0019 0.0002 0.0008 0.0002 3:45:29 PM Yes
 2 -0.0000 -0.0129 0.0001 -0.0005 0.0002 3:46:14 PM Yes
 Mean: -0.0000 -0.0074 0.0002
 SD: 0.00001 0.00780 0.0001
 %RSD: 105.14% 105.14% 41.69

=====
 Sequence No.: 20 Autosampler Location: 37
 Sample ID: 570-17159-a-3-e Date Collected: 1/8/2020 3:46:41 PM
 Analyst: 1174 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17159-a-3-e Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0000 0.0029 0.0002 0.0010 0.0003 3:47:46 PM Yes
 2 -0.0000 -0.0005 0.0002 0.0015 0.0003 3:48:31 PM Yes
 Mean: 0.0000 0.0012 0.0002
 SD: 0.00000 0.00242 0.0000

%RSD: 202.50% 202.50% 8.87

```

=====
Sequence No.: 21                               Autosampler Location: 38
Sample ID: 570-17159-a-4-e                   Date Collected: 1/8/2020 3:48:59 PM
Analyst: 1174 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-17159-a-4-e               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      -0.0000      -0.0144   0.0001   -0.0000  0.0001   3:50:04 PM  Yes
2      -0.0000      -0.0302   -0.0000  -0.0017  0.0000   3:50:49 PM  Yes
Mean:  -0.0000      -0.0223   0.0000
SD:     0.00001     0.01119   0.0001
%RSD:  50.20%     50.20%    290.63
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 39
Sample ID: 570-17159-a-5-e                   Date Collected: 1/8/2020 3:51:15 PM
Analyst: 1174 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-17159-a-5-e               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      -0.0000      -0.0042   0.0002   0.0010  0.0002   3:52:19 PM  Yes
2      0.0000       0.0025   0.0002   0.0009  0.0003   3:53:04 PM  Yes
Mean:  -0.0000      -0.0008   0.0002
SD:     0.00000     0.00472   0.0000
%RSD:  568.40%    568.40%   18.64
=====

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-43281/10-a                Date Collected: 1/8/2020 3:53:31 PM
Analyst: 1174 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-43281/10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0020       1.96      0.0171   0.0690  0.0171   3:54:36 PM  Yes
2      0.0020       1.98      0.0172   0.0691  0.0172   3:55:21 PM  Yes
Mean:  0.0020       1.97      0.0171
SD:     0.00001     0.009     0.0001
%RSD:  0.44%      0.44%     0.44
=====

```

QC value within limits for Hg 253.7 Recovery = 98.53%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-43281/11-a                Date Collected: 1/8/2020 3:55:49 PM
Analyst: 1174 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-43281/11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      -0.0000      -0.0145   0.0001   0.0007  0.0001   3:56:52 PM  Yes
2      -0.0000      -0.0148   0.0001   0.0007  0.0001   3:57:37 PM  Yes
Mean:  -0.0000      -0.0146   0.0001
SD:     0.00000     0.00018   0.0000
%RSD:  1.21%      1.21%     1.55
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 40
Sample ID: 570-17159-a-6-e                     Date Collected: 1/8/2020 3:58:03 PM
Analyst: 1174 HG-7                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

=====
Replicate Data: 570-17159-a-6-e               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      -0.0000    -0.0130  0.0001   -0.0007 0.0002  3:59:07 PM  Yes
2      -0.0000    -0.0115  0.0001   0.0004 0.0002  3:59:53 PM  Yes
Mean:  -0.0000    -0.0122  0.0001
SD:     0.00000    0.00108  0.0000
%RSD:   8.80%     8.80%    7.74
=====

```

```

=====
Sequence No.: 26                               Autosampler Location: 5
Sample ID: ccv 570-43281/10-a                 Date Collected: 1/8/2020 4:00:19 PM
Analyst: 1174 HG-7                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

=====
Replicate Data: ccv 570-43281/10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      2.225e-308  2.225e-308  12:00:00 AM  Yes
=====

```

FIMS-400: Computer unable to communicate with the FIAS.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200108G1.sifx

Batch ID:
Results Data Set: 200108G1
Results Library: Y:\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: ccv 570-43281/10-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 1/8/2020 4:08:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-43281/10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.04	0.0177	0.0712	0.0178	4:09:10 PM	Yes
2	0.0020	1.98	0.0172	0.0701	0.0172	4:09:56 PM	Yes
Mean:	0.0020	2.01	0.0174				
SD:	0.00005	0.047	0.0004				
%RSD:	2.35%	2.35%	2.32				

QC value within limits for Hg 253.7 Recovery = 100.46%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: ccb 570-43281/11-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/8/2020 4:10:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-43281/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0152	0.0001	-0.0003	0.0001	4:11:27 PM	Yes
2	-0.0000	-0.0160	0.0001	0.0004	0.0001	4:12:12 PM	Yes
Mean:	-0.0000	-0.0156	0.0001				
SD:	0.00000	0.00051	0.0000				
%RSD:	3.27%	3.27%	4.85				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200108G1.sifx

Batch ID:
Results Data Set: 200108G1
Results Library: Y:\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: ccv 570-43281/10-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 1/8/2020 6:58:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-43281/10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.95	0.0169	0.0706	0.0170	6:59:51 PM	Yes
2	0.0021	2.07	0.0180	0.0740	0.0180	7:00:36 PM	Yes
Mean:	0.0020	2.01	0.0175				
SD:	0.00009	0.087	0.0007				
%RSD:	4.30%	4.30%	4.24				

QC value within limits for Hg 253.7 Recovery = 100.61%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: ccb 570-43281/11-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/8/2020 7:01:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-43281/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0110	0.0001	0.0006	0.0002	7:02:07 PM	Yes
2	-0.0000	-0.0156	0.0001	0.0008	0.0001	7:02:52 PM	Yes
Mean:	-0.0000	-0.0133	0.0001				
SD:	0.00000	0.00325	0.0000				
%RSD:	24.43%	24.43%	25.35				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: mb 570-43350/1-b
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 41
Date Collected: 1/8/2020 7:03:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-43350/1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0317	0.0005	0.0025	0.0005	7:04:22 PM	Yes
2	0.0000	0.0420	0.0006	0.0031	0.0006	7:05:07 PM	Yes
Mean:	0.0000	0.0369	0.0005				
SD:	0.00001	0.00729	0.0001				
%RSD:	19.76%	19.76%	11.56				

=====
Sequence No.: 4
Sample ID: lcs 570-43350/2-b
Analyst: 1174 HG-7
Autosampler Location: 42
Date Collected: 1/8/2020 7:05:34 PM
Data Type: Original

Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-43350/2-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	5.03	0.0434	0.1786	0.0434	7:06:38 PM	Yes
2	0.0051	5.11	0.0440	0.1796	0.0440	7:07:23 PM	Yes
Mean:	0.0051	5.07	0.0437				
SD:	0.00005	0.054	0.0005				
%RSD:	1.06%	1.06%	1.05				

Sequence No.: 5
Sample ID: lcsd 570-43350/3-b
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 43
Date Collected: 1/8/2020 7:07:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-43350/3-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0051	5.05	0.0435	0.1792	0.0436	7:08:54 PM	Yes
2	0.0050	5.04	0.0434	0.1824	0.0434	7:09:40 PM	Yes
Mean:	0.0050	5.05	0.0434				
SD:	0.00001	0.012	0.0001				
%RSD:	0.24%	0.24%	0.24				

Sequence No.: 6
Sample ID: 570-16773-c-1-m
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 44
Date Collected: 1/8/2020 7:10:06 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16773-c-1-m

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0044	0.0003	0.0013	0.0003	7:11:10 PM	Yes
2	0.0000	0.0021	0.0002	0.0007	0.0003	7:11:55 PM	Yes
Mean:	0.0000	0.0032	0.0003				
SD:	0.00000	0.00161	0.0000				
%RSD:	49.89%	49.89%	5.48				

Sequence No.: 7
Sample ID: 570-16773-c-1-n ms
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 45
Date Collected: 1/8/2020 7:12:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16773-c-1-n ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0024	2.40	0.0208	0.0860	0.0208	7:13:26 PM	Yes
2	0.0024	2.43	0.0210	0.0885	0.0211	7:14:11 PM	Yes
Mean:	0.0024	2.41	0.0209				
SD:	0.00002	0.021	0.0002				
%RSD:	0.88%	0.88%	0.87				

Sequence No.: 8
Sample ID: 570-16773-c-1-o msd
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 46
Date Collected: 1/8/2020 7:14:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

```

-----
Replicate Data: 570-16773-c-1-o msd           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height    Time      Stored
1      0.0023       2.34     0.0202   0.0830   0.0203   7:15:42 PM  Yes
2      0.0024       2.38     0.0206   0.0872   0.0206   7:16:27 PM  Yes
Mean:  0.0024       2.36     0.0204
SD:    0.00003      0.029    0.0002
%RSD:  1.22%      1.22%    1.21
    
```

```

=====
Sequence No.: 9                               Autosampler Location: 47
Sample ID: 570-16773-c-2-e                   Date Collected: 1/8/2020 7:16:54 PM
Analyst: 1174 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
    
```

```

-----
Replicate Data: 570-16773-c-2-e           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height    Time      Stored
1      -0.0000      -0.0021  0.0002   0.0002   0.0002   7:17:59 PM  Yes
2      0.0000       0.0027  0.0002   0.0002   0.0003   7:18:44 PM  Yes
Mean:  0.0000      0.0003  0.0002
SD:    0.00000     0.00345 0.0000
%RSD:  >999.9%    >999.9% 13.04
    
```

```

=====
Sequence No.: 10                             Autosampler Location: 48
Sample ID: 570-16773-c-3-e                   Date Collected: 1/8/2020 7:19:11 PM
Analyst: 1174 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
    
```

```

-----
Replicate Data: 570-16773-c-3-e           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height    Time      Stored
1      -0.0000      -0.0087  0.0001   -0.0001  0.0002   7:20:16 PM  Yes
2      -0.0000      -0.0053  0.0002   -0.0004  0.0002   7:21:01 PM  Yes
Mean:  -0.0000     -0.0070 0.0002
SD:    0.00000     0.00238 0.0000
%RSD:  34.01%    34.01%  12.41
    
```

```

=====
Sequence No.: 11                             Autosampler Location: 5
Sample ID: ccv 570-43281/10-a                 Date Collected: 1/8/2020 7:21:28 PM
Analyst: 1174 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
    
```

```

-----
Replicate Data: ccv 570-43281/10-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height    Time      Stored
1      0.0020       1.98     0.0172   0.0703   0.0173   7:22:33 PM  Yes
2      0.0020       1.99     0.0172   0.0712   0.0173   7:23:19 PM  Yes
Mean:  0.0020       1.98     0.0172
SD:    0.00000     0.002    0.0000
%RSD:  0.08%      0.08%    0.08
    
```

QC value within limits for Hg 253.7 Recovery = 99.24%
 All analyte(s) passed QC.

```

=====
Sequence No.: 12                             Autosampler Location: 1
Sample ID: ccb 570-43281/11-a                 Date Collected: 1/8/2020 7:23:46 PM
Analyst: 1174 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
    
```

Replicate Data: ccb 570-43281/11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0069	0.0002	-0.0002	0.0002	7:24:49 PM	Yes
2	0.0000	0.0048	0.0003	0.0010	0.0003	7:25:35 PM	Yes
Mean:	-0.0000	-0.0011	0.0002				
SD:	0.00001	0.00821	0.0001				
%RSD:	781.67%	781.67%	32.73				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

1	0.0000	0.0371	0.0005	0.0025	0.0006	3:20:15 PM	Yes
2	0.0001	0.0541	0.0007	0.0031	0.0008	3:21:01 PM	Yes
Mean:	0.0000	0.0456	0.0006				
SD:	0.00001	0.01202	0.0001				
%RSD:	26.34%	26.34%	22.50				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 29
Sample ID: 570-16417-D-4-A                     Date Collected: 1/2/2020 3:21:26 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16417-D-4-A                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0148   0.0002   0.0013 0.0003 3:22:30 PM  Yes
2      0.0000     0.0126   0.0002   0.0009 0.0003 3:23:16 PM  Yes
Mean:  0.0000     0.0137   0.0002
SD:    0.00000    0.00152  0.0000
%RSD:  11.05%    11.05%   7.05
=====

```

```

=====
Sequence No.: 14                               Autosampler Location: 30
Sample ID: 570-16420-E-1-A                     Date Collected: 1/2/2020 3:23:41 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16420-E-1-A                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      -0.0000    -0.0096  -0.0000  0.0001 0.0001 3:24:45 PM  Yes
2      -0.0000    -0.0098  -0.0000  -0.0002 0.0001 3:25:31 PM  Yes
Mean:  -0.0000    -0.0097  -0.0000
SD:    0.00000    0.00015  0.0000
%RSD:  1.59%    1.59%   8.05
=====

```

```

=====
Sequence No.: 15                               Autosampler Location: 31
Sample ID: 570-16420-E-2-A                     Date Collected: 1/2/2020 3:25:57 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16420-E-2-A                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.242      242      2.5824   5.0920 2.5825 3:27:01 PM  Yes
Sample concentration is greater than that of the highest standard.
2      0.143      143      1.5233   4.8162 1.5234 3:27:46 PM  Yes
Sample concentration is greater than that of the highest standard.
Mean:  0.193      193      2.0529
SD:    0.0702     70.23    0.7489
%RSD:  36.48%    36.48%  36.48
Sample concentration is greater than that of the highest standard.
=====

```

```

=====
Sequence No.: 16                               Autosampler Location: 32
Sample ID: 570-16420-E-2-B MS                  Date Collected: 1/2/2020 3:28:11 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

Replicate Data: 570-16420-E-2-B MS Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.405	405	4.3186	17.7819	4.3186	3:29:16 PM	Yes
Sample concentration is greater than that of the highest standard.							
2	0.278	278	2.9670	15.4302	2.9671	3:30:01 PM	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	0.342	342	3.6428				
SD:	0.0896	89.62	0.9557				
%RSD:	26.24%	26.24%	26.24				
Sample concentration is greater than that of the highest standard.							

```

=====
Sequence No.: 17
Sample ID: 570-16420-E-2-C MSD
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 33
Date Collected: 1/2/2020 3:30:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

Replicate Data: 570-16420-E-2-C MSD Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.396	396	4.2247	20.3008	4.2248	3:31:31 PM	Yes
Sample concentration is greater than that of the highest standard.							
2	0.399	399	4.2563	29.3736	4.2564	3:32:16 PM	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	0.398	398	4.2405				
SD:	0.0021	2.09	0.0223				
%RSD:	0.53%	0.53%	0.53				
Sample concentration is greater than that of the highest standard.							

```

=====
Sequence No.: 18
Sample ID: 570-16420-D-3-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 34
Date Collected: 1/2/2020 3:32:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

Replicate Data: 570-16420-D-3-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.64	0.0495	0.0546	0.0496	3:33:48 PM	Yes
2	0.0100	10.0	0.1070	0.2140	0.1071	3:34:34 PM	Yes
Mean:	0.0073	7.33	0.0782				
SD:	0.00381	3.810	0.0406				
%RSD:	51.98%	51.98%	51.92				

```

=====
Sequence No.: 19
Sample ID: 570-16420-D-4-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 35
Date Collected: 1/2/2020 3:35:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

Replicate Data: 570-16420-D-4-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.330	0.0036	0.0403	0.0037	3:36:06 PM	Yes
2	0.0002	0.214	0.0024	0.0380	0.0025	3:36:51 PM	Yes
Mean:	0.0003	0.272	0.0030				
SD:	0.00008	0.0827	0.0009				
%RSD:	30.39%	30.39%	29.55				

```

=====
Sequence No.: 20
Sample ID: 570-16425-E-1-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 36
Date Collected: 1/2/2020 3:37:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
=====

```

 Replicate Data: 570-16425-E-1-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.378	0.0041	0.0405	0.0042	3:38:25 PM	Yes
2	0.0006	0.557	0.0060	0.0653	0.0061	3:39:11 PM	Yes
Mean:	0.0005	0.467	0.0051				
SD:	0.00013	0.1267	0.0014				
%RSD:	27.11%	27.11%	26.66				

Sequence No.: 21

Autosampler Location: 37

Sample ID: 570-16425-E-2-A

Date Collected: 1/2/2020 3:39:38 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

 Replicate Data: 570-16425-E-2-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.425	0.0046	0.0509	0.0047	3:40:44 PM	Yes
2	0.0002	0.222	0.0024	0.0265	0.0025	3:41:29 PM	Yes
Mean:	0.0003	0.323	0.0035				
SD:	0.00014	0.1442	0.0015				
%RSD:	44.59%	44.59%	43.54				

Sequence No.: 22

Autosampler Location: 38

Sample ID: 570-16425-D-3-A

Date Collected: 1/2/2020 3:41:56 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

 Replicate Data: 570-16425-D-3-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0982	0.0011	0.0129	0.0012	3:43:01 PM	Yes
2	0.0001	0.0772	0.0009	0.0117	0.0010	3:43:46 PM	Yes
Mean:	0.0001	0.0877	0.0010				
SD:	0.00001	0.01481	0.0002				
%RSD:	16.88%	16.88%	15.51				

Sequence No.: 23

Autosampler Location: 5

Sample ID: CCV 570-42374_10-A

Date Collected: 1/2/2020 3:44:13 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

 Replicate Data: CCV 570-42374_10-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.99	0.0213	0.1156	0.0214	3:45:18 PM	Yes
2	0.0020	2.04	0.0218	0.1048	0.0219	3:46:03 PM	Yes
Mean:	0.0020	2.01	0.0216				
SD:	0.00003	0.031	0.0003				
%RSD:	1.51%	1.51%	1.51				

QC value within limits for Hg 253.7 Recovery = 100.72%
 All analyte(s) passed QC.

Sequence No.: 24

Autosampler Location: 1

Sample ID: CCB 570-42374_11-A

Date Collected: 1/2/2020 3:46:30 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: CCB 570-42374_11-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.370	0.0040	0.0462	0.0041	3:47:34 PM	Yes
2	0.0003	0.283	0.0031	0.0363	0.0032	3:48:19 PM	Yes
Mean:	0.0003	0.326	0.0036				
SD:	0.00006	0.0613	0.0007				
%RSD:	18.78%	18.78%	18.34				

QC value greater than the upper limit for Hg 253.7 Recovery = Not calculated
QC Failed. Retry.

Sequence No.: 25

Autosampler Location: 1

Sample ID: CCB 570-42374_11-A

Date Collected: 1/2/2020 3:48:45 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: CCB 570-42374_11-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.123	0.0014	0.0144	0.0015	3:49:48 PM	Yes
2	0.0001	0.119	0.0014	0.0183	0.0014	3:50:33 PM	Yes
Mean:	0.0001	0.121	0.0014				
SD:	0.00000	0.0027	0.0000				
%RSD:	2.26%	2.26%	2.13				

QC value greater than the upper limit for Hg 253.7 Recovery = Not calculated
QC Failed. Stop the analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200102H1.sifx

Batch ID:

Results Data Set: 200102H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: ICIS 570-42374_1-A
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/2/2020 4:09:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ICIS 570-42374_1-A
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.00] 0.0001 -0.0023 0.0001 4:10:53 PM Yes
2 [0.00] 0.0000 -0.0043 0.0000 4:11:38 PM Yes
Mean: [0.00] 0.0001
SD: 0.0000 0.0000
%RSD: 0.00% 48.01
Auto-zero performed.

=====
Sequence No.: 2
Sample ID: IC 570-42374_4-A
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 1/2/2020 4:12:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: IC 570-42374_4-A
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.025] 0.0003 -0.0023 0.0003 4:13:08 PM Yes
2 [0.025] 0.0003 -0.0041 0.0003 4:13:52 PM Yes
Mean: [0.025] 0.0003
SD: 0.00000 0.0000
%RSD: 0.00% 0.14
Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.01032 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: IC 570-42374_5-A
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 1/2/2020 4:14:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: IC 570-42374_5-A
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.100] 0.0010 0.0019 0.0010 4:15:23 PM Yes
2 [0.100] 0.0010 0.0019 0.0011 4:16:08 PM Yes
Mean: [0.100] 0.0010
SD: 0.00000 0.0000
%RSD: 0.00% 3.14
Standard number 2 applied. [0.100]
Correlation Coef.: 0.999885 Slope: 0.00972 Intercept: 0.00001

=====
Sequence No.: 4
Sample ID: IC 570-42374_6-A
Autosampler Location: 4
Date Collected: 1/2/2020 4:16:34 PM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: IC 570-42374_6-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0107	0.0433	0.0108	4:17:39 PM	Yes
2		[1.000]	0.0108	0.0426	0.0108	4:18:24 PM	Yes
Mean:		[1.000]	0.0107				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.44				

Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999962 Slope: 0.01077 Intercept: -0.00004

=====

Sequence No.: 5 Autosampler Location: 5
 Sample ID: IC 570-42374_7-A Date Collected: 1/2/2020 4:18:51 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: IC 570-42374_7-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0215	0.0885	0.0215	4:19:56 PM	Yes
2		[2.000]	0.0215	0.0894	0.0216	4:20:41 PM	Yes
Mean:		[2.000]	0.0215				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.16				

Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999991 Slope: 0.01076 Intercept: -0.00003

=====

Sequence No.: 6 Autosampler Location: 6
 Sample ID: IC 570-42374_8-A Date Collected: 1/2/2020 4:21:08 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: IC 570-42374_8-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0537	0.2260	0.0538	4:22:11 PM	Yes
2		[5.000]	0.0533	0.2272	0.0534	4:22:56 PM	Yes
Mean:		[5.000]	0.0535				
SD:		0.00000	0.0003				
%RSD:		0.00%	0.51				

Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999997 Slope: 0.01071 Intercept: -0.00001

=====

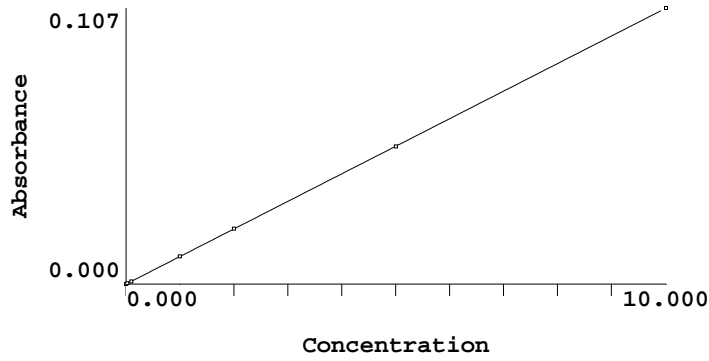
Sequence No.: 7 Autosampler Location: 7
 Sample ID: IC 570-42374_9-A Date Collected: 1/2/2020 4:23:22 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: IC 570-42374_9-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.1074	0.4585	0.1074	4:24:26 PM	Yes
2		[10.000]	0.1074	0.4636	0.1074	4:25:11 PM	Yes
Mean:		[10.000]	0.1074				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.01				

Standard number 6 applied. [10.000]

Correlation Coef.: 0.999999 Slope: 0.01073 Intercept: -0.00003



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
ICIS 570-42374_1-A	0.0000	0	0.0030	0.00	48.01
IC 570-42374_4-A	0.0003	0.025	0.0270	0.00	0.14
IC 570-42374_5-A	0.0010	0.100	0.0940	0.00	3.14
IC 570-42374_6-A	0.0107	1.000	1.0040	0.00	0.44
IC 570-42374_7-A	0.0215	2.000	2.0039	0.00	0.16
IC 570-42374_8-A	0.0535	5.000	4.9885	0.00	0.51
IC 570-42374_9-A	0.1074	10.000	10.0046	0.00	0.01

Correlation Coef.: 0.999999 Slope: 0.01073 Intercept: -0.00003

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200102H1.sifx

Batch ID:
Results Data Set: 200102H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: ICV 570-42374_2-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 1/2/2020 4:25:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ICV 570-42374_2-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0053	5.27	0.0566	0.2418	0.0566	4:26:51 PM	Yes
2	0.0052	5.23	0.0561	0.2403	0.0562	4:27:36 PM	Yes
Mean:	0.0053	5.25	0.0563				
SD:	0.00003	0.030	0.0003				
%RSD:	0.57%	0.57%	0.57				

QC value within limits for Hg 253.7 Recovery = 105.01%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: ICB 570-42374_3-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/2/2020 4:28:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ICB 570-42374_3-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0239	0.0002	0.0031	0.0003	4:29:06 PM	Yes
2	0.0000	0.0186	0.0002	0.0015	0.0002	4:29:52 PM	Yes
Mean:	0.0000	0.0213	0.0002				
SD:	0.00000	0.00376	0.0000				
%RSD:	17.71%	17.71%	20.60				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: CRA 570-42374_12-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 1/2/2020 4:30:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: CRA 570-42374_12-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0006	0.278	0.0029	0.0140	0.0030	4:31:22 PM	Yes
2	0.0005	0.275	0.0029	0.0134	0.0030	4:32:07 PM	Yes
Mean:	0.0006	0.276	0.0029				
SD:	0.00000	0.0021	0.0000				
%RSD:	0.77%	0.77%	0.78				

=====
Sequence No.: 4
Sample ID: CCV 570-42374_10-A
Analyst: 1174 HG-8
Autosampler Location: 5
Date Collected: 1/2/2020 4:32:33 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: CCV 570-42374_10-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.02	0.0217	0.0936	0.0218	4:33:39 PM	Yes
2	0.0020	2.02	0.0216	0.0924	0.0217	4:34:23 PM	Yes
Mean:	0.0020	2.02	0.0217				
SD:	0.00000	0.005	0.0001				
%RSD:	0.24%	0.24%	0.24				

QC value within limits for Hg 253.7 Recovery = 101.07%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: CCB 570-42374_11-A Date Collected: 1/2/2020 4:34:50 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCB 570-42374_11-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0196	0.0002	0.0025	0.0002	4:35:53 PM	Yes
2	0.0000	0.0179	0.0002	0.0022	0.0002	4:36:38 PM	Yes
Mean:	0.0000	0.0188	0.0002				
SD:	0.00000	0.00121	0.0000				
%RSD:	6.45%	6.45%	7.67				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200102H1.sifx

Batch ID:

Results Data Set: 200102H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-16417-D-4-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 29
Date Collected: 1/2/2020 4:38:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16417-D-4-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0130	0.0001	0.0003	0.0002	4:39:58 PM	Yes
2	0.0000	0.0147	0.0001	0.0011	0.0002	4:40:44 PM	Yes
Mean:	0.0000	0.0138	0.0001				
SD:	0.00000	0.00122	0.0000				
%RSD:	8.83%	8.83%	11.26				

=====
Sequence No.: 2
Sample ID: 570-16420-E-1-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 30
Date Collected: 1/2/2020 4:41:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16420-E-1-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0046	0.0000	0.0010	0.0001	4:42:14 PM	Yes
2	0.0000	0.0060	0.0000	0.0008	0.0001	4:42:59 PM	Yes
Mean:	0.0000	0.0053	0.0000				
SD:	0.00000	0.00097	0.0000				
%RSD:	18.23%	18.23%	41.54				

=====
Sequence No.: 3
Sample ID: 570-16420-E-2-A@1000
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 31
Date Collected: 1/2/2020 4:43:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16420-E-2-A@1000 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0100	0.0001	0.0011	0.0001	4:44:30 PM	Yes
2	0.0000	0.0156	0.0001	0.0022	0.0002	4:45:14 PM	Yes
Mean:	0.0000	0.0128	0.0001				
SD:	0.00000	0.00398	0.0000				
%RSD:	31.14%	31.14%	40.63				

=====
Sequence No.: 4
Sample ID: 570-16420-E-2-B MS@1000
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 32
Date Collected: 1/2/2020 4:45:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16420-E-2-B MS@1000

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0103	0.0001	0.0011	0.0001	4:46:45 PM	Yes
2	0.0000	0.0088	0.0001	0.0005	0.0001	4:47:31 PM	Yes
Mean:	0.0000	0.0096	0.0001				
SD:	0.00000	0.00106	0.0000				
%RSD:	11.08%	11.08%	16.11				

Sequence No.: 5

Autosampler Location: 33

Sample ID: 570-16420-E-2-C MSD@1000

Date Collected: 1/2/2020 4:47:57 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16420-E-2-C MSD@1000

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0106	0.0001	0.0012	0.0002	4:49:02 PM	Yes
2	0.0000	0.0097	0.0001	0.0006	0.0001	4:49:47 PM	Yes
Mean:	0.0000	0.0102	0.0001				
SD:	0.00000	0.00062	0.0000				
%RSD:	6.08%	6.08%	8.60				

Sequence No.: 6

Autosampler Location: 34

Sample ID: 570-16420-D-3-A

Date Collected: 1/2/2020 4:50:14 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16420-D-3-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0030	-0.0000	0.0003	0.0001	4:51:19 PM	Yes
2	0.0000	0.0039	0.0000	0.0005	0.0001	4:52:04 PM	Yes
Mean:	0.0000	0.0034	0.0000				
SD:	0.00000	0.00064	0.0000				
%RSD:	18.63%	18.63%	149.31				

Sequence No.: 7

Autosampler Location: 35

Sample ID: 570-16420-D-4-A

Date Collected: 1/2/2020 4:52:30 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16420-D-4-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0009	-0.0000	-0.0001	0.0000	4:53:35 PM	Yes
2	0.0000	0.0032	0.0000	0.0001	0.0001	4:54:20 PM	Yes
Mean:	0.0000	0.0020	-0.0000				
SD:	0.00000	0.00157	0.0000				
%RSD:	76.71%	76.71%	166.06				

Sequence No.: 8

Autosampler Location: 36

Sample ID: 570-16425-E-1-A

Date Collected: 1/2/2020 4:54:47 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16425-E-1-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0132	0.0001	0.0007	0.0002	4:55:53 PM	Yes
2	0.0000	0.0138	0.0001	0.0004	0.0002	4:56:38 PM	Yes
Mean:	0.0000	0.0135	0.0001				
SD:	0.00000	0.00044	0.0000				
%RSD:	3.29%	3.29%	4.23				

Sequence No.: 9
 Sample ID: 570-16425-E-2-A
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 37
 Date Collected: 1/2/2020 4:57:05 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-16425-E-2-A Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0128	0.0001	0.0007	0.0002	4:58:10 PM	Yes
2	0.0000	0.0097	0.0001	-0.0003	0.0001	4:58:55 PM	Yes
Mean:	0.0000	0.0113	0.0001				
SD:	0.00000	0.00218	0.0000				
%RSD:	19.36%	19.36%	26.36				

Sequence No.: 10
 Sample ID: 570-16425-D-3-A
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 38
 Date Collected: 1/2/2020 4:59:23 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-16425-D-3-A Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0150	0.0001	0.0007	0.0002	5:00:27 PM	Yes
2	0.0000	0.0096	0.0001	-0.0002	0.0001	5:01:12 PM	Yes
Mean:	0.0000	0.0123	0.0001				
SD:	0.00000	0.00385	0.0000				
%RSD:	31.32%	31.32%	41.39				

Sequence No.: 11
 Sample ID: CCV 570-42374_10-A
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 1/2/2020 5:01:38 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: CCV 570-42374_10-A Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	1.98	0.0213	0.0901	0.0213	5:02:43 PM	Yes
2	0.0020	1.99	0.0214	0.0909	0.0215	5:03:27 PM	Yes
Mean:	0.0020	1.99	0.0213				
SD:	0.00001	0.008	0.0001				
%RSD:	0.41%	0.41%	0.41				

QC value within limits for Hg 253.7 Recovery = 99.46%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: CCB 570-42374_11-A
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 1/2/2020 5:03:54 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: CCB 570-42374_11-A Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0000	0.0117	0.0001	0.0007	0.0002	5:04:58 PM	Yes
2	0.0000	0.0094	0.0001	0.0002	0.0001	5:05:43 PM	Yes
Mean:	0.0000	0.0105	0.0001				
SD:	0.00000	0.00162	0.0000				
%RSD:	15.38%	15.38%	21.49				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 39
Sample ID: 570-16425-D-4-A                    Date Collected: 1/2/2020 5:06:08 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16425-D-4-A                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0148   0.0001   0.0010 0.0002  5:07:12 PM  Yes
2      0.0000     0.0135   0.0001   0.0005 0.0002  5:07:57 PM  Yes
Mean:  0.0000     0.0142   0.0001
SD:    0.00000     0.00095  0.0000
%RSD:  6.68%      6.68%    8.47
=====

```

```

=====
Sequence No.: 14                               Autosampler Location: 40
Sample ID: MB 570-42161_1-A                   Date Collected: 1/2/2020 5:08:23 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: MB 570-42161_1-A              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0102   0.0001   0.0009 0.0001  5:09:26 PM  Yes
2      0.0000     0.0060   0.0000   -0.0001 0.0001  5:10:12 PM  Yes
Mean:  0.0000     0.0081   0.0001
SD:    0.00000     0.00302  0.0000
%RSD:  37.21%     37.21%   58.91
=====

```

```

=====
Sequence No.: 15                               Autosampler Location: 41
Sample ID: LCS 570-42161_2-A                  Date Collected: 1/2/2020 5:10:37 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: LCS 570-42161_2-A              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0052     5.18     0.0555   0.2348 0.0556  5:11:42 PM  Yes
2      0.0052     5.20     0.0558   0.2390 0.0558  5:12:26 PM  Yes
Mean:  0.0052     5.19     0.0556
SD:    0.00002     0.016    0.0002
%RSD:  0.31%      0.31%    0.31
=====

```

```

=====
Sequence No.: 16                               Autosampler Location: 42
Sample ID: LCSD 570-42161_3-A                 Date Collected: 1/2/2020 5:12:52 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: LCSD 570-42161_3-A              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0052     5.21     0.0559   0.2388 0.0560  5:13:56 PM  Yes
=====

```

2 0.0052 5.19 0.0557 0.2403 0.0558 5:14:41 PM Yes
 Mean: 0.0052 5.20 0.0558
 SD: 0.00001 0.011 0.0001
 %RSD: 0.22% 0.22% 0.22

=====
 Sequence No.: 17 Autosampler Location: 43
 Sample ID: 570-15999-A-1-A Date Collected: 1/2/2020 5:15:07 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-15999-A-1-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.204	0.0022	0.0100	0.0022	5:16:10 PM	Yes
2	0.0002	0.186	0.0020	0.0081	0.0020	5:16:55 PM	Yes
Mean:	0.0002	0.195	0.0021				
SD:	0.00001	0.0131	0.0001				
%RSD:	6.69%	6.69%	6.80				

=====
 Sequence No.: 18 Autosampler Location: 44
 Sample ID: 570-15999-A-1-B MS Date Collected: 1/2/2020 5:17:22 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-15999-A-1-B MS Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0045	4.54	0.0487	0.2122	0.0488	5:18:26 PM	Yes
2	0.0045	4.54	0.0487	0.2153	0.0488	5:19:10 PM	Yes
Mean:	0.0045	4.54	0.0487				
SD:	0.00000	0.001	0.0000				
%RSD:	0.03%	0.03%	0.03				

=====
 Sequence No.: 19 Autosampler Location: 45
 Sample ID: 570-15999-A-1-C MSD Date Collected: 1/2/2020 5:19:36 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-15999-A-1-C MSD Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.60	0.0493	0.2158	0.0494	5:20:40 PM	Yes
2	0.0046	4.55	0.0488	0.2166	0.0489	5:21:25 PM	Yes
Mean:	0.0046	4.58	0.0491				
SD:	0.00003	0.031	0.0003				
%RSD:	0.68%	0.68%	0.68				

=====
 Sequence No.: 20 Autosampler Location: 46
 Sample ID: 570-16222-F-1-A Date Collected: 1/2/2020 5:21:51 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16222-F-1-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.188	0.0020	0.0089	0.0021	5:22:55 PM	Yes
2	0.0001	0.134	0.0014	0.0059	0.0015	5:23:40 PM	Yes
Mean:	0.0002	0.161	0.0017				
SD:	0.00004	0.0383	0.0004				

%RSD: 23.86% 23.86% 24.31

```

=====
Sequence No.: 21                               Autosampler Location: 47
Sample ID: 570-16222-E-2-A                    Date Collected: 1/2/2020 5:24:07 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16222-E-2-A              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0002       0.178     0.0019   0.0077    0.0019    5:25:11 PM  Yes
2      0.0002       0.182     0.0019   0.0082    0.0020    5:25:55 PM  Yes
Mean:  0.0002       0.180     0.0019
SD:    0.00000      0.0029    0.0000
%RSD:  1.62%       1.62%     1.65
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 48
Sample ID: 570-16222-D-3-A                    Date Collected: 1/2/2020 5:26:22 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16222-D-3-A              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0002       0.180     0.0019   0.0082    0.0020    5:27:26 PM  Yes
2      0.0002       0.176     0.0019   0.0076    0.0019    5:28:11 PM  Yes
Mean:  0.0002       0.178     0.0019
SD:    0.00000      0.0023    0.0000
%RSD:  1.29%       1.29%     1.32
=====

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: CCV 570-42374_10-A                 Date Collected: 1/2/2020 5:28:39 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: CCV 570-42374_10-A          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0020       1.99      0.0214   0.0909    0.0214    5:29:44 PM  Yes
2      0.0020       2.01      0.0215   0.0917    0.0216    5:30:29 PM  Yes
Mean:  0.0020       2.00      0.0214
SD:    0.00001      0.011     0.0001
%RSD:  0.54%       0.54%     0.54
=====

```

QC value within limits for Hg 253.7 Recovery = 100.01%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: CCB 570-42374_11-A                 Date Collected: 1/2/2020 5:30:56 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: CCB 570-42374_11-A          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0000       0.0121    0.0001   0.0005    0.0002    5:32:00 PM  Yes
2      0.0000       0.0110    0.0001   0.0009    0.0002    5:32:46 PM  Yes
Mean:  0.0000       0.0115    0.0001
SD:    0.00000      0.00073   0.0000
%RSD:  6.36%       6.36%     8.59
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 49
Sample ID: 570-16222-D-4-A                   Date Collected: 1/2/2020 5:33:11 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-16222-D-4-A               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0846   0.0009   0.0038 0.0009 5:34:16 PM  Yes
2      0.0001     0.0837   0.0009   0.0033 0.0009 5:35:01 PM  Yes
Mean:  0.0001     0.0841   0.0009
SD:    0.00000    0.00061  0.0000
%RSD:  0.72%     0.72%    0.75
    
```

```

=====
Sequence No.: 26                               Autosampler Location: 50
Sample ID: 570-16229-F-1-A                   Date Collected: 1/2/2020 5:35:28 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-16229-F-1-A               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0002     0.197    0.0021   0.0095 0.0021 5:36:32 PM  Yes
2      0.0002     0.193    0.0020   0.0089 0.0021 5:37:17 PM  Yes
Mean:  0.0002     0.195    0.0021
SD:    0.00000    0.0029   0.0000
%RSD:  1.48%     1.48%    1.51
    
```

```

=====
Sequence No.: 27                               Autosampler Location: 51
Sample ID: 570-16229-E-2-A                   Date Collected: 1/2/2020 5:37:44 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-16229-E-2-A               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.124    0.0013   0.0060 0.0014 5:38:49 PM  Yes
2      0.0001     0.125    0.0013   0.0059 0.0014 5:39:33 PM  Yes
Mean:  0.0001     0.125    0.0013
SD:    0.00000    0.0004   0.0000
%RSD:  0.29%     0.29%    0.30
    
```

```

=====
Sequence No.: 28                               Autosampler Location: 52
Sample ID: 570-16229-D-3-A                   Date Collected: 1/2/2020 5:40:00 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-16229-D-3-A               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0003     0.321    0.0034   0.0153 0.0035 5:41:04 PM  Yes
2      0.0003     0.320    0.0034   0.0150 0.0035 5:41:49 PM  Yes
Mean:  0.0003     0.320    0.0034
SD:    0.00000    0.0004   0.0000
%RSD:  0.12%     0.12%    0.12
    
```

```

=====
Sequence No.: 29                               Autosampler Location: 53
Sample ID: 570-16229-D-4-A                    Date Collected: 1/2/2020 5:42:16 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16229-D-4-A                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height    Time      Stored
1      0.0002       0.172    0.0018   0.0082   0.0019   5:43:21 PM  Yes
2      0.0002       0.167    0.0018   0.0075   0.0018   5:44:06 PM  Yes
Mean:  0.0002       0.170    0.0018
SD:     0.00000     0.0036   0.0000
%RSD:  2.10%       2.10%    2.14
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 54
Sample ID: 570-16232-F-1-A                    Date Collected: 1/2/2020 5:44:33 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16232-F-1-A                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height    Time      Stored
1      0.0001       0.0684   0.0007   0.0025   0.0008   5:45:37 PM  Yes
2      0.0001       0.0702   0.0007   0.0032   0.0008   5:46:22 PM  Yes
Mean:  0.0001       0.0693   0.0007
SD:     0.00000     0.00126  0.0000
%RSD:  1.82%       1.82%    1.91
=====

```

```

=====
Sequence No.: 31                               Autosampler Location: 55
Sample ID: 570-16232-F-1-B MS                 Date Collected: 1/2/2020 5:46:49 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16232-F-1-B MS            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height    Time      Stored
1      0.0050       4.97     0.0533   0.2383   0.0533   5:47:54 PM  Yes
2      0.0050       5.04     0.0541   0.2475   0.0542   5:48:38 PM  Yes
Mean:  0.0050       5.01     0.0537
SD:     0.00006     0.055    0.0006
%RSD:  1.11%       1.11%    1.11
=====

```

```

=====
Sequence No.: 32                               Autosampler Location: 56
Sample ID: 570-16232-F-1-C MSD                 Date Collected: 1/2/2020 5:49:05 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16232-F-1-C MSD            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height    Time      Stored
1      0.0052       5.17     0.0554   0.2495   0.0555   5:50:09 PM  Yes
2      0.0052       5.16     0.0554   0.2518   0.0555   5:50:54 PM  Yes
Mean:  0.0052       5.16     0.0554
SD:     0.00000     0.004    0.0000
%RSD:  0.07%       0.07%    0.07
=====

```

```

=====
Sequence No.: 33                               Autosampler Location: 57
Sample ID: 570-16232-E-2-A                    Date Collected: 1/2/2020 5:51:21 PM
=====

```

Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16232-E-2-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.169	0.0018	0.0078	0.0019	5:52:25 PM	Yes
2	0.0001	0.0819	0.0008	0.0035	0.0009	5:53:10 PM	Yes
Mean:	0.0001	0.126	0.0013				
SD:	0.00006	0.0619	0.0007				
%RSD:	49.24%	49.24%	50.44				

=====
Sequence No.: 34
Sample ID: 570-16232-D-3-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 58
Date Collected: 1/2/2020 5:53:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16232-D-3-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.215	0.0023	0.0102	0.0023	5:54:42 PM	Yes
2	0.0002	0.214	0.0023	0.0101	0.0023	5:55:27 PM	Yes
Mean:	0.0002	0.214	0.0023				
SD:	0.00000	0.0006	0.0000				
%RSD:	0.26%	0.26%	0.26				

=====
Sequence No.: 35
Sample ID: CCV 570-42374_10-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 1/2/2020 5:55:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 570-42374_10-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.00	0.0214	0.0914	0.0215	5:56:59 PM	Yes
2	0.0020	2.01	0.0215	0.0919	0.0216	5:57:44 PM	Yes
Mean:	0.0020	2.00	0.0215				
SD:	0.00001	0.008	0.0001				
%RSD:	0.41%	0.41%	0.41				

QC value within limits for Hg 253.7 Recovery = 100.23%
All analyte(s) passed QC.

=====
Sequence No.: 36
Sample ID: CCB 570-42374_11-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 1/2/2020 5:58:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB 570-42374_11-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0109	0.0001	0.0003	0.0002	5:59:15 PM	Yes
2	0.0000	0.0101	0.0001	0.0005	0.0001	5:59:59 PM	Yes
Mean:	0.0000	0.0105	0.0001				
SD:	0.00000	0.00059	0.0000				
%RSD:	5.67%	5.67%	7.94				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 37

Autosampler Location: 59

Sample ID: 570-16232-D-4-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 1/2/2020 6:00:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16232-D-4-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.191	0.0020	0.0087	0.0021	6:01:31 PM	Yes
2	0.0002	0.201	0.0021	0.0098	0.0022	6:02:16 PM	Yes
Mean:	0.0002	0.196	0.0021				
SD:	0.00001	0.0074	0.0001				
%RSD:	3.79%	3.79%	3.85				

=====

Sequence No.: 38
Sample ID: 570-16235-F-1-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 60
Date Collected: 1/2/2020 6:02:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.118	0.0012	0.0052	0.0013	6:03:48 PM	Yes
2	0.0001	0.114	0.0012	0.0046	0.0013	6:04:33 PM	Yes
Mean:	0.0001	0.116	0.0012				
SD:	0.00000	0.0029	0.0000				
%RSD:	2.51%	2.51%	2.58				

=====

Sequence No.: 39
Sample ID: 570-16235-E-2-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 61
Date Collected: 1/2/2020 6:05:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0882	0.0009	0.0039	0.0010	6:06:05 PM	Yes
2	0.0001	0.0867	0.0009	0.0032	0.0010	6:06:50 PM	Yes
Mean:	0.0001	0.0874	0.0009				
SD:	0.00000	0.00106	0.0000				
%RSD:	1.21%	1.21%	1.26				

=====

Sequence No.: 40
Sample ID: 570-16235-D-3-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 62
Date Collected: 1/2/2020 6:07:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.106	0.0011	0.0047	0.0012	6:08:23 PM	Yes
2	0.0001	0.105	0.0011	0.0045	0.0012	6:09:08 PM	Yes
Mean:	0.0001	0.106	0.0011				
SD:	0.00000	0.0008	0.0000				
%RSD:	0.71%	0.71%	0.73				

=====

Sequence No.: 41
Sample ID: 570-16235-D-4-A
Analyst: 1174 HG-8
Initial Sample Wt:

Autosampler Location: 63
Date Collected: 1/2/2020 6:09:34 PM
Data Type: Original
Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16235-D-4-A

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.130	0.0014	0.0059	0.0014	6:10:39 PM	Yes
2	0.0001	0.129	0.0014	0.0059	0.0014	6:11:24 PM	Yes
Mean:	0.0001	0.130	0.0014				
SD:	0.00000	0.0005	0.0000				
%RSD:	0.38%	0.38%	0.39				

=====

Sequence No.: 42

Autosampler Location: 31

Sample ID: 570-16420-E-2-A@100
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 1/2/2020 6:11:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16420-E-2-A@100

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0070	0.0000	-0.0003	0.0001	6:12:54 PM	Yes
2	0.0000	0.0073	0.0000	-0.0003	0.0001	6:13:39 PM	Yes
Mean:	0.0000	0.0071	0.0000				
SD:	0.00000	0.00025	0.0000				
%RSD:	3.52%	3.52%	6.06				

=====

Sequence No.: 43

Autosampler Location: 32

Sample ID: 570-16420-E-2-B MS@100
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 1/2/2020 6:14:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16420-E-2-B MS@100

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0088	0.0001	0.0002	0.0001	6:15:10 PM	Yes
2	0.0000	0.0097	0.0001	0.0003	0.0001	6:15:55 PM	Yes
Mean:	0.0000	0.0092	0.0001				
SD:	0.00000	0.00066	0.0000				
%RSD:	7.10%	7.10%	10.50				

=====

Sequence No.: 44

Autosampler Location: 33

Sample ID: 570-16420-E-2-C MSD@100
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 1/2/2020 6:16:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16420-E-2-C MSD@100

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0083	0.0001	-0.0000	0.0001	6:17:26 PM	Yes
2	0.0000	0.0089	0.0001	0.0000	0.0001	6:18:11 PM	Yes
Mean:	0.0000	0.0086	0.0001				
SD:	0.00000	0.00044	0.0000				
%RSD:	5.11%	5.11%	7.83				

=====

Sequence No.: 45

Autosampler Location: 64

Sample ID: mb 570-42190_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 1/2/2020 6:18:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

```

-----
Replicate Data: mb 570-42190_1-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#     mg/L       ug/L      Signal   Area  Height
1     0.0000     0.0061   0.0000   0.0001 0.0001  6:19:42 PM  Yes
2     0.0000     0.0062   0.0000   -0.0001 0.0001  6:20:27 PM  Yes
Mean:  0.0000     0.0061   0.0000
SD:    0.00000    0.00006  0.0000
%RSD:  1.02%     1.02%    1.99

```

```

=====
Sequence No.: 46                    Autosampler Location: 65
Sample ID: lcs 570-42190_2-a        Date Collected: 1/2/2020 6:20:54 PM
Analyst: 1174 HG-8                 Data Type: Original
Initial Sample Wt:                  Initial Sample Vol:
Dilution:                          Sample Prep Vol:
Wash Time (before sample): 0        Auto Dilution Factor: 1

```

```

-----
Replicate Data: lcs 570-42190_2-a       Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#     mg/L       ug/L      Signal   Area  Height
1     0.0051     5.13     0.0550   0.2344 0.0551  6:21:59 PM  Yes
2     0.0039     3.90     0.0418   0.2455 0.0419  6:22:44 PM  Yes
Mean:  0.0045     4.51     0.0484
SD:    0.00087    0.868    0.0093
%RSD:  19.24%    19.24%   19.26

```

```

=====
Sequence No.: 47                    Autosampler Location: 5
Sample ID: CCV 570-42374_10-A       Date Collected: 1/2/2020 6:23:10 PM
Analyst: 1174 HG-8                 Data Type: Original
Initial Sample Wt:                  Initial Sample Vol:
Dilution:                          Sample Prep Vol:
Wash Time (before sample): 0        Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: CCV 570-42374_10-A     Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#     mg/L       ug/L      Signal   Area  Height
1     0.0015     1.51     0.0162   0.0847 0.0163  6:24:15 PM  Yes
2     0.0016     1.57     0.0169   0.0845 0.0169  6:25:01 PM  Yes
Mean:  0.0015     1.54     0.0165
SD:    0.00004    0.044    0.0005
%RSD:  2.88%     2.88%    2.88

```

QC value less than the lower limit for Hg 253.7 Recovery = 77.09%
QC Failed. Stop the analysis.

=====
Analysis Begun

```

Logged In Analyst: US26_USR_INSTRUMENT       Technique: AA FIMS-MHS
Spectrometer: FIMS-400, S/N B050-9560      Autosampler: S10

```

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200102H1.sifx

```

Batch ID:
Results Data Set: 200102H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

```

```

=====
Sequence No.: 48                    Autosampler Location: 1
Sample ID: CCB 570-42374_11-A       Date Collected: 1/2/2020 6:40:12 PM
Analyst: 1174 HG-8                 Data Type: Original
Initial Sample Wt:                  Initial Sample Vol:
Dilution:                          Sample Prep Vol:
Wash Time (before sample): 0        Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: CCB 570-42374_11-A     Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#     mg/L       ug/L      Signal   Area  Height
1     0.0002     0.182    0.0019   -0.0064 0.0020  6:41:16 PM  Yes

```

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200102H1.sifx

Batch ID:
Results Data Set: 200102H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: ICIS 570-42374_1-A
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/2/2020 7:02:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ICIS 570-42374_1-A
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.00] -0.0001 -0.0286 -0.0001 7:03:53 PM Yes
2 [0.00] -0.0001 -0.0130 -0.0001 7:04:37 PM Yes
Mean: [0.00] -0.0001
SD: 0.0000 0.0000
%RSD: 0.00% 44.74
Auto-zero performed.

=====
Sequence No.: 2
Sample ID: IC 570-42374_4-A
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 1/2/2020 7:05:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: IC 570-42374_4-A
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.025] 0.0005 -0.0008 0.0004 7:06:07 PM Yes
2 [0.025] 0.0005 0.0004 0.0004 7:06:52 PM Yes
Mean: [0.025] 0.0005
SD: 0.00000 0.0000
%RSD: 0.00% 0.69
Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.01885 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: IC 570-42374_5-A
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 1/2/2020 7:07:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: IC 570-42374_5-A
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.100] 0.0011 0.0042 0.0010 7:08:22 PM Yes
2 [0.100] 0.0011 0.0049 0.0010 7:09:07 PM Yes
Mean: [0.100] 0.0011
SD: 0.00000 0.0000
%RSD: 0.00% 0.15
Standard number 2 applied. [0.100]
Correlation Coef.: 0.982954 Slope: 0.01073 Intercept: 0.00009

=====
Sequence No.: 4
Sample ID: IC 570-42374_6-A
Autosampler Location: 4
Date Collected: 1/2/2020 7:09:33 PM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: IC 570-42374_6-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0092	0.0436	0.0090	7:10:38 PM	Yes
2		[1.000]	0.0092	0.0450	0.0091	7:11:23 PM	Yes
Mean:		[1.000]	0.0092				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.38				

 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999668 Slope: 0.00903 Intercept: 0.00015

=====
 Sequence No.: 5 Autosampler Location: 5
 Sample ID: IC 570-42374_7-A Date Collected: 1/2/2020 7:11:50 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: IC 570-42374_7-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0181	0.0886	0.0180	7:12:55 PM	Yes
2		[2.000]	0.0183	0.0902	0.0182	7:13:40 PM	Yes
Mean:		[2.000]	0.0182				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.59				

 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999924 Slope: 0.00902 Intercept: 0.00016

=====
 Sequence No.: 6 Autosampler Location: 6
 Sample ID: IC 570-42374_8-A Date Collected: 1/2/2020 7:14:07 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: IC 570-42374_8-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0447	0.2211	0.0446	7:15:10 PM	Yes
2		[5.000]	0.0450	0.2266	0.0449	7:15:55 PM	Yes
Mean:		[5.000]	0.0449				
SD:		0.00000	0.0003				
%RSD:		0.00%	0.56				

 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999981 Slope: 0.00895 Intercept: 0.00019

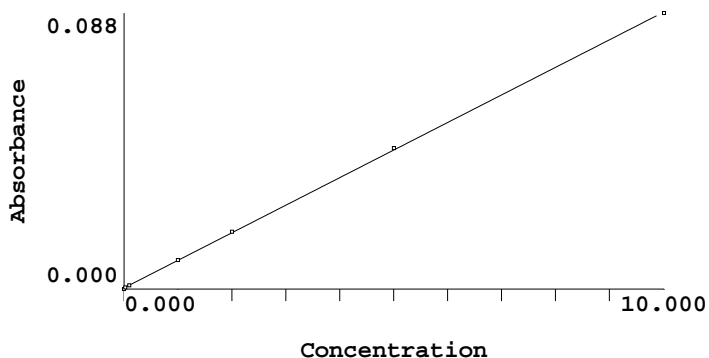
=====
 Sequence No.: 7 Autosampler Location: 7
 Sample ID: IC 570-42374_9-A Date Collected: 1/2/2020 7:16:21 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: IC 570-42374_9-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.0894	0.4411	0.0892	7:17:25 PM	Yes
2		[10.000]	0.0864	0.4538	0.0863	7:18:10 PM	Yes
Mean:		[10.000]	0.0879				
SD:		0.00000	0.0021				
%RSD:		0.00%	2.34				

 Standard number 6 applied. [10.000]

Correlation Coef.: 0.999948 Slope: 0.00879 Intercept: 0.00035



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
ICIS 570-42374_1-A	0.0000	0	-0.0395	0.00	44.74
IC 570-42374_4-A	0.0005	0.025	0.0141	0.00	0.69
IC 570-42374_5-A	0.0011	0.100	0.0892	0.00	0.15
IC 570-42374_6-A	0.0092	1.000	1.0044	0.00	0.38
IC 570-42374_7-A	0.0182	2.000	2.0304	0.00	0.59
IC 570-42374_8-A	0.0449	5.000	5.0656	0.00	0.56
IC 570-42374_9-A	0.0879	10.000	9.9608	0.00	2.34

Correlation Coef.: 0.999948 Slope: 0.00879 Intercept: 0.00035

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200102H1.sifx

Batch ID:
Results Data Set: 200102H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: ICV 570-42374_2-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 1/2/2020 7:18:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ICV 570-42374_2-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0053	5.32	0.0471	0.2423	0.0470	7:19:50 PM	Yes
2	0.0053	5.28	0.0467	0.2370	0.0466	7:20:35 PM	Yes
Mean:	0.0053	5.30	0.0469				
SD:	0.00003	0.031	0.0003				
%RSD:	0.58%	0.58%	0.57				

QC value within limits for Hg 253.7 Recovery = 106.01%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: ICB 570-42374_3-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/2/2020 7:21:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ICB 570-42374_3-A Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.275	0.0028	0.0094	0.0027	7:22:05 PM	Yes
2	0.0000	0.0432	0.0007	0.0026	0.0006	7:22:49 PM	Yes
Mean:	0.0002	0.159	0.0017				
SD:	0.00016	0.1638	0.0014				
%RSD:	103.01%	103.01%	82.51				

QC value greater than the upper limit for Hg 253.7 Recovery = Not calculated
QC Failed. Stop the analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:
Results Data Set: 200103H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icis 570-42609_1-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/3/2020 12:42:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icis 570-42609_1-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.00] 0.0001 -0.0003 0.0001 12:43:27 PM Yes
2 [0.00] 0.0000 -0.0016 0.0000 12:44:12 PM Yes
Mean: [0.00] 0.0001
SD: 0.0000 0.0000
%RSD: 0.00% 52.41
Auto-zero performed.

=====
Sequence No.: 2
Sample ID: ic 570-42609_4-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 1/3/2020 12:44:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-42609_4-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.025] 0.0003 0.0010 0.0003 12:45:41 PM Yes
2 [0.025] 0.0003 0.0020 0.0004 12:46:26 PM Yes
Mean: [0.025] 0.0003
SD: 0.00000 0.0000
%RSD: 0.00% 10.07
Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.01225 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: ic 570-42609_5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 1/3/2020 12:46:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-42609_5-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.100] 0.0012 0.0062 0.0012 12:47:57 PM Yes
2 [0.100] 0.0011 0.0042 0.0011 12:48:41 PM Yes
Mean: [0.100] 0.0011
SD: 0.00000 0.0001
%RSD: 0.00% 5.56
Standard number 2 applied. [0.100]
Correlation Coef.: 0.999640 Slope: 0.01105 Intercept: 0.00001

=====
Sequence No.: 4
Sample ID: ic 570-42609_6-a
Autosampler Location: 4
Date Collected: 1/3/2020 12:49:08 PM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-42609_6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0110	0.0459	0.0110	12:50:13 PM	Yes
2		[1.000]	0.0110	0.0457	0.0111	12:50:58 PM	Yes

Mean: [1.000] 0.0110
 SD: 0.00000 0.0000
 %RSD: 0.00% 0.07
 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999997 Slope: 0.01099 Intercept: 0.00002

=====
 Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-42609_7-a Date Collected: 1/3/2020 12:51:24 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-42609_7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0220	0.0937	0.0220	12:52:29 PM	Yes
2		[2.000]	0.0222	0.0949	0.0222	12:53:14 PM	Yes

Mean: [2.000] 0.0221
 SD: 0.00000 0.0002
 %RSD: 0.00% 0.68
 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999998 Slope: 0.01102 Intercept: 0.00001

=====
 Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-42609_8-a Date Collected: 1/3/2020 12:53:40 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-42609_8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0545	0.2365	0.0546	12:54:44 PM	Yes
2		[5.000]	0.0553	0.2428	0.0553	12:55:28 PM	Yes

Mean: [5.000] 0.0549
 SD: 0.00000 0.0005
 %RSD: 0.00% 0.93
 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999998 Slope: 0.01098 Intercept: 0.00003

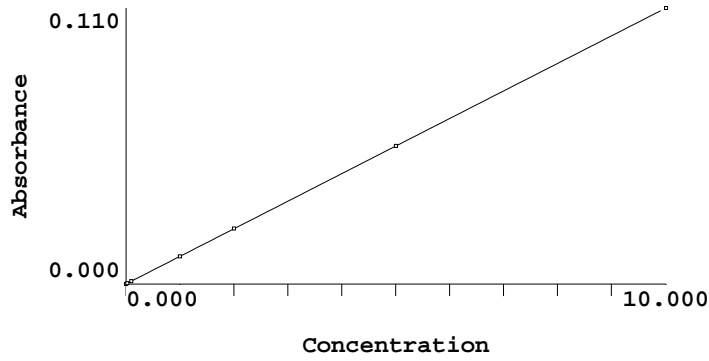
=====
 Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-42609_9-a Date Collected: 1/3/2020 12:55:54 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-42609_9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.1095	0.4809	0.1095	12:56:57 PM	Yes
2		[10.000]	0.1102	0.4854	0.1102	12:57:43 PM	Yes

Mean: [10.000] 0.1098
 SD: 0.00000 0.0005
 %RSD: 0.00% 0.42
 Standard number 6 applied. [10.000]

Correlation Coef.: 1.000000 Slope: 0.01098 Intercept: 0.00003



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-42609_1-a	0.0000	0	-0.0028	0.00	52.41
ic 570-42609_4-a	0.0003	0.025	0.0251	0.00	10.07
ic 570-42609_5-a	0.0011	0.100	0.0987	0.00	5.56
ic 570-42609_6-a	0.0110	1.000	0.9994	0.00	0.07
ic 570-42609_7-a	0.0221	2.000	2.0073	0.00	0.68
ic 570-42609_8-a	0.0549	5.000	4.9973	0.00	0.93
ic 570-42609_9-a	0.1098	10.000	10.0000	0.00	0.42

Correlation Coef.: 1.000000 Slope: 0.01098 Intercept: 0.00003

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:
Results Data Set: 200103H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-42609_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 1/3/2020 12:59:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-42609_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.85	0.0532	0.2356	0.0533	1:00:23 PM	Yes
2	0.0049	4.85	0.0533	0.2359	0.0533	1:01:08 PM	Yes
Mean:	0.0048	4.85	0.0533				
SD:	0.00000	0.003	0.0000				
%RSD:	0.07%	0.07%	0.07				

QC value within limits for Hg 253.7 Recovery = 96.95%
All analyte(s) passed QC.
FIMS-400: Computer unable to communicate with the FIAS.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:
Results Data Set: 200103H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-42609_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 1/3/2020 1:06:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-42609_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0532	0.2333	0.0532	1:07:27 PM	Yes
2	0.0049	4.88	0.0536	0.2363	0.0536	1:08:12 PM	Yes
Mean:	0.0049	4.86	0.0534				
SD:	0.00003	0.027	0.0003				
%RSD:	0.55%	0.55%	0.55				

QC value within limits for Hg 253.7 Recovery = 97.15%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-42609_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/3/2020 1:08:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-42609_3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0016	0.0000	-0.0010	0.0001	1:09:42 PM	Yes
2	-0.0000	-0.0054	-0.0000	-0.0023	0.0000	1:10:27 PM	Yes
Mean:	-0.0000	-0.0035	-0.0000				
SD:	0.00000	0.00273	0.0000				
%RSD:	78.01%	78.01%	368.21				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 3

Autosampler Location: 9

Sample ID: cra 570-42609_12-a

Date Collected: 1/3/2020 1:10:53 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution: 2X

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: cra 570-42609_12-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.249	0.0028	0.0103	0.0028	1:11:57 PM	Yes
2	0.0005	0.249	0.0028	0.0099	0.0028	1:12:42 PM	Yes
Mean:	0.0005	0.249	0.0028				
SD:	0.00000	0.0001	0.0000				
%RSD:	0.05%	0.05%	0.05				

Sequence No.: 4

Autosampler Location: 5

Sample ID: ccv 570-42609_10-a

Date Collected: 1/3/2020 1:13:09 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42609_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.99	0.0219	0.0937	0.0220	1:14:14 PM	Yes
2	0.0020	2.02	0.0223	0.0944	0.0223	1:14:59 PM	Yes
Mean:	0.0020	2.01	0.0221				
SD:	0.00002	0.021	0.0002				
%RSD:	1.05%	1.05%	1.05				

QC value within limits for Hg 253.7 Recovery = 100.47%

All analyte(s) passed QC.

Sequence No.: 5

Autosampler Location: 1

Sample ID: ccb 570-42609_11-a

Date Collected: 1/3/2020 1:15:26 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42609_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0042	-0.0000	-0.0013	0.0000	1:16:29 PM	Yes
2	-0.0000	-0.0056	-0.0000	-0.0020	0.0000	1:17:15 PM	Yes
Mean:	-0.0000	-0.0049	-0.0000				
SD:	0.00000	0.00103	0.0000				
%RSD:	20.93%	20.93%	47.63				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:
Results Data Set: 200103H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-16232-D-4-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 59
Date Collected: 1/3/2020 1:19:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16232-D-4-A
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.181	0.0020	0.0060	0.0021	1:20:29 PM	Yes
2	0.0002	0.183	0.0020	0.0075	0.0021	1:21:13 PM	Yes
Mean:	0.0002	0.182	0.0020				
SD:	0.00000	0.0015	0.0000				
%RSD:	0.85%	0.85%	0.83				

=====
Sequence No.: 2
Sample ID: 570-16235-F-1-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 60
Date Collected: 1/3/2020 1:21:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16235-F-1-A
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.110	0.0012	0.0067	0.0013	1:22:44 PM	Yes
2	0.0001	0.108	0.0012	0.0050	0.0013	1:23:28 PM	Yes
Mean:	0.0001	0.109	0.0012				
SD:	0.00000	0.0010	0.0000				
%RSD:	0.88%	0.88%	0.86				

=====
Sequence No.: 3
Sample ID: 570-16235-E-2-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 61
Date Collected: 1/3/2020 1:23:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16235-E-2-A
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0893	0.0010	0.0060	0.0011	1:25:00 PM	Yes
2	0.0001	0.0676	0.0008	0.0008	0.0008	1:25:45 PM	Yes
Mean:	0.0001	0.0784	0.0009				
SD:	0.00002	0.01534	0.0002				
%RSD:	19.56%	19.56%	18.89				

=====
Sequence No.: 4
Sample ID: 570-16235-D-3-A
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 62
Date Collected: 1/3/2020 1:26:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16235-D-3-A

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0859	0.0010	0.0013	0.0010	1:27:16 PM	Yes
2	0.0001	0.0977	0.0011	0.0055	0.0012	1:28:01 PM	Yes
Mean:	0.0001	0.0918	0.0010				
SD:	0.00001	0.00832	0.0001				
%RSD:	9.07%	9.07%	8.80				

Sequence No.: 5

Autosampler Location: 63

Sample ID: 570-16235-D-4-A

Date Collected: 1/3/2020 1:28:27 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16235-D-4-A

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.137	0.0015	0.0121	0.0016	1:29:32 PM	Yes
2	0.0001	0.122	0.0014	0.0068	0.0014	1:30:16 PM	Yes
Mean:	0.0001	0.129	0.0015				
SD:	0.00001	0.0110	0.0001				
%RSD:	8.48%	8.48%	8.30				

Sequence No.: 6

Autosampler Location: 5

Sample ID: ccv 570-42609_10-a

Date Collected: 1/3/2020 1:30:42 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42609_10-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.97	0.0216	0.0953	0.0217	1:31:47 PM	Yes
2	0.0020	1.98	0.0217	0.0936	0.0218	1:32:32 PM	Yes
Mean:	0.0020	1.97	0.0217				
SD:	0.00001	0.006	0.0001				
%RSD:	0.32%	0.32%	0.32				

QC value within limits for Hg 253.7 Recovery = 98.53%

All analyte(s) passed QC.

Sequence No.: 7

Autosampler Location: 1

Sample ID: ccb 570-42609_11-a

Date Collected: 1/3/2020 1:32:58 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42609_11-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0027	0.0001	0.0004	0.0001	1:34:02 PM	Yes
2	0.0000	0.0017	0.0000	0.0001	0.0001	1:34:46 PM	Yes
Mean:	0.0000	0.0022	0.0001				
SD:	0.00000	0.00069	0.0000				
%RSD:	31.57%	31.57%	14.00				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:
Results Data Set: 200103H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-42190_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 64
Date Collected: 1/3/2020 1:39:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-42190_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0074	-0.0001	-0.0044	-0.0000	1:40:05 PM	Yes
2	-0.0000	-0.0082	-0.0001	-0.0036	-0.0000	1:40:50 PM	Yes
Mean:	-0.0000	-0.0078	-0.0001				
SD:	0.00000	0.00052	0.0000				
%RSD:	6.72%	6.72%	10.40				

=====
Sequence No.: 2
Sample ID: lcs 570-42190_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 65
Date Collected: 1/3/2020 1:41:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-42190_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.74	0.0521	0.2302	0.0521	1:42:22 PM	Yes
2	0.0048	4.78	0.0525	0.2342	0.0526	1:43:07 PM	Yes
Mean:	0.0048	4.76	0.0523				
SD:	0.00003	0.028	0.0003				
%RSD:	0.58%	0.58%	0.58				

=====
Sequence No.: 3
Sample ID: lcsd 570-42190_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 66
Date Collected: 1/3/2020 1:43:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-42190_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	5.02	0.0552	0.2438	0.0552	1:44:39 PM	Yes
2	0.0050	4.99	0.0548	0.2436	0.0549	1:45:24 PM	Yes
Mean:	0.0050	5.01	0.0550				
SD:	0.00002	0.023	0.0003				
%RSD:	0.47%	0.47%	0.47				

=====
Sequence No.: 4
Sample ID: 570-16429-e-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 67
Date Collected: 1/3/2020 1:45:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

 Replicate Data: 570-16429-e-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0067	0.0001	-0.0002	0.0002	1:46:55 PM	Yes
2	0.0000	0.0016	0.0000	-0.0016	0.0001	1:47:40 PM	Yes
Mean:	0.0000	0.0042	0.0001				
SD:	0.00000	0.00363	0.0000				
%RSD:	86.86%	86.86%	52.30				

Sequence No.: 5 Autosampler Location: 68
 Sample ID: 570-16429-e-1-b ms Date Collected: 1/3/2020 1:48:07 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16429-e-1-b ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0043	4.31	0.0473	0.2100	0.0474	1:49:11 PM	Yes
2	0.0043	4.31	0.0473	0.2125	0.0474	1:49:56 PM	Yes
Mean:	0.0043	4.31	0.0473				
SD:	0.00000	0.001	0.0000				
%RSD:	0.03%	0.03%	0.03				

Sequence No.: 6 Autosampler Location: 69
 Sample ID: 570-16429-e-1-c msd Date Collected: 1/3/2020 1:50:23 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16429-e-1-c msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0043	4.29	0.0471	0.2113	0.0472	1:51:27 PM	Yes
2	0.0043	4.27	0.0469	0.2121	0.0470	1:52:13 PM	Yes
Mean:	0.0043	4.28	0.0470				
SD:	0.00001	0.015	0.0002				
%RSD:	0.34%	0.34%	0.34				

Sequence No.: 7 Autosampler Location: 70
 Sample ID: 570-16429-e-2-a Date Collected: 1/3/2020 1:52:39 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16429-e-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0141	0.0002	0.0004	0.0002	1:53:44 PM	Yes
2	0.0000	0.0081	0.0001	-0.0004	0.0002	1:54:29 PM	Yes
Mean:	0.0000	0.0111	0.0002				
SD:	0.00000	0.00423	0.0000				
%RSD:	38.05%	38.05%	30.50				

Sequence No.: 8 Autosampler Location: 71
 Sample ID: 570-16429-d-3-a Date Collected: 1/3/2020 1:54:56 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16429-d-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
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#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0103	0.0001	0.0016	0.0002	1:56:01 PM	Yes
2	0.0000	0.0089	0.0001	0.0004	0.0002	1:56:46 PM	Yes
Mean:	0.0000	0.0096	0.0001				
SD:	0.00000	0.00100	0.0000				
%RSD:	10.38%	10.38%	8.07				

Sequence No.: 9
 Sample ID: 570-16429-d-4-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 72
 Date Collected: 1/3/2020 1:57:13 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-16429-d-4-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0265	0.0003	0.0050	0.0004	1:58:18 PM	Yes
2	0.0000	0.0245	0.0003	0.0038	0.0004	1:59:04 PM	Yes
Mean:	0.0000	0.0255	0.0003				
SD:	0.00000	0.00137	0.0000				
%RSD:	5.39%	5.39%	4.86				

Sequence No.: 10
 Sample ID: 570-16560-j-2-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 73
 Date Collected: 1/3/2020 1:59:31 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-16560-j-2-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0307	0.0004	0.0029	0.0004	2:00:36 PM	Yes
2	0.0000	0.0267	0.0003	0.0056	0.0004	2:01:21 PM	Yes
Mean:	0.0000	0.0287	0.0003				
SD:	0.00000	0.00284	0.0000				
%RSD:	9.91%	9.91%	9.04				

Sequence No.: 11
 Sample ID: ccv 570-42609_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 1/3/2020 2:01:49 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42609_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	1.97	0.0217	0.0951	0.0218	2:02:54 PM	Yes
2	0.0020	1.98	0.0218	0.0950	0.0218	2:03:39 PM	Yes
Mean:	0.0020	1.98	0.0217				
SD:	0.00000	0.004	0.0000				
%RSD:	0.22%	0.22%	0.22				

QC value within limits for Hg 253.7 Recovery = 98.89%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-42609_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 1/3/2020 2:04:06 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42609_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0000	0.0044	0.0001	0.0009	0.0001	2:05:10 PM	Yes
2	0.0000	0.0047	0.0001	0.0009	0.0001	2:05:55 PM	Yes
Mean:	0.0000	0.0045	0.0001				
SD:	0.00000	0.00024	0.0000				
%RSD:	5.20%	5.20%	3.23				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 74
Sample ID: 570-16560-k-3-a                     Date Collected: 1/3/2020 2:06:21 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16560-k-3-a                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0095   0.0001   0.0015 0.0002 2:07:26 PM  Yes
2      0.0000     0.0133   0.0002   0.0017 0.0002 2:08:11 PM  Yes
Mean:  0.0000     0.0114   0.0002
SD:    0.00000     0.00268  0.0000
%RSD:  23.39%     23.39%   18.85
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 75
Sample ID: 570-16596-a-1-a                     Date Collected: 1/3/2020 2:08:38 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16596-a-1-a                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0021   0.0001   0.0001 0.0001 2:09:43 PM  Yes
2      0.0000     0.0171   0.0002   0.0031 0.0003 2:10:28 PM  Yes
Mean:  0.0000     0.0096   0.0001
SD:    0.00001     0.01064  0.0001
%RSD:  111.10%     111.10%  86.26
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 76
Sample ID: 570-16625-f-1-a                     Date Collected: 1/3/2020 2:10:55 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16625-f-1-a                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0034   0.0001   0.0001 0.0001 2:11:59 PM  Yes
2      0.0000     0.0003   0.0000  -0.0008 0.0001 2:12:44 PM  Yes
Mean:  0.0000     0.0019   0.0001
SD:    0.00000     0.00214  0.0000
%RSD:  115.23%     115.23%  46.36
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 77
Sample ID: 570-16625-e-2-a                     Date Collected: 1/3/2020 2:13:11 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16625-e-2-a                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1     -0.0000     -0.0008  0.0000  -0.0006 0.0001 2:14:16 PM  Yes
=====
  
```

2 -0.0000 -0.0015 0.0000 -0.0012 0.0001 2:15:01 PM Yes
 Mean: -0.0000 -0.0012 0.0000
 SD: 0.00000 0.00051 0.0000
 %RSD: 43.69% 43.69% 32.45

=====
 Sequence No.: 17 Autosampler Location: 78
 Sample ID: 570-16625-d-3-a Date Collected: 1/3/2020 2:15:28 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16625-d-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0062	0.0001	-0.0000	0.0001	2:16:33 PM	Yes
2	0.0000	0.0028	0.0001	-0.0010	0.0001	2:17:18 PM	Yes
Mean:	0.0000	0.0045	0.0001				
SD:	0.00000	0.00241	0.0000				
%RSD:	53.24%	53.24%	33.11				

=====
 Sequence No.: 18 Autosampler Location: 79
 Sample ID: 570-16625-d-3-b ms Date Collected: 1/3/2020 2:17:45 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16625-d-3-b ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0034	3.38	0.0371	0.1685	0.0372	2:18:50 PM	Yes
2	0.0034	3.36	0.0370	0.1697	0.0370	2:19:36 PM	Yes
Mean:	0.0034	3.37	0.0371				
SD:	0.00001	0.012	0.0001				
%RSD:	0.35%	0.35%	0.35				

=====
 Sequence No.: 19 Autosampler Location: 80
 Sample ID: 570-16625-d-3-c msd Date Collected: 1/3/2020 2:20:03 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16625-d-3-c msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0030	2.98	0.0328	0.1493	0.0328	2:21:08 PM	Yes
2	0.0030	2.96	0.0325	0.1493	0.0325	2:21:53 PM	Yes
Mean:	0.0030	2.97	0.0326				
SD:	0.00002	0.018	0.0002				
%RSD:	0.59%	0.59%	0.59				

=====
 Sequence No.: 20 Autosampler Location: 81
 Sample ID: 570-16625-d-4-a Date Collected: 1/3/2020 2:22:19 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16625-d-4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0072	0.0001	0.0008	0.0002	2:23:24 PM	Yes
2	0.0000	0.0174	0.0002	0.0031	0.0003	2:24:09 PM	Yes
Mean:	0.0000	0.0123	0.0002				
SD:	0.00001	0.00722	0.0001				

%RSD: 58.55% 58.55% 47.85

```

=====
Sequence No.: 21                               Autosampler Location: 5
Sample ID: ccv 570-42609_10-a                 Date Collected: 1/3/2020 2:24:35 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

Replicate Data: ccv 570-42609_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.99	0.0218	0.0989	0.0219	2:25:41 PM	Yes
2	0.0020	1.98	0.0218	0.0975	0.0219	2:26:26 PM	Yes
Mean:	0.0020	1.99	0.0218				
SD:	0.00000	0.001	0.0000				
%RSD:	0.06%	0.06%	0.06				

QC value within limits for Hg 253.7 Recovery = 99.27%
 All analyte(s) passed QC.

```

=====
Sequence No.: 22                               Autosampler Location: 1
Sample ID: ccb 570-42609_11-a                 Date Collected: 1/3/2020 2:26:53 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

Replicate Data: ccb 570-42609_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0109	0.0001	0.0026	0.0002	2:27:56 PM	Yes
2	0.0000	0.0046	0.0001	0.0001	0.0001	2:28:42 PM	Yes
Mean:	0.0000	0.0078	0.0001				
SD:	0.00000	0.00440	0.0000				
%RSD:	56.75%	56.75%	41.87				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42609_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0248	0.0003	0.0011	0.0004	2:44:14 PM	Yes
2	0.0000	0.0233	0.0003	0.0000	0.0003	2:44:58 PM	Yes
Mean:	0.0000	0.0241	0.0003				
SD:	0.00000	0.00105	0.0000				
%RSD:	4.37%	4.37%	3.92				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:

Results Data Set: 200103H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Sample ID: mb 570-42474_1-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 85

Date Collected: 1/3/2020 2:45:35 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: mb 570-42474_1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0032	0.0001	-0.0011	0.0001	2:46:41 PM	Yes
2	0.0000	0.0086	0.0001	-0.0005	0.0002	2:47:26 PM	Yes
Mean:	0.0000	0.0059	0.0001				
SD:	0.00000	0.00382	0.0000				
%RSD:	64.42%	64.42%	43.99				

=====
Sequence No.: 2

Sample ID: lcs 570-42474_2-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 86

Date Collected: 1/3/2020 2:47:53 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: lcs 570-42474_2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.80	0.0528	0.2364	0.0528	2:48:59 PM	Yes
2	0.0048	4.78	0.0525	0.2397	0.0526	2:49:43 PM	Yes
Mean:	0.0048	4.79	0.0527				
SD:	0.00001	0.015	0.0002				
%RSD:	0.31%	0.31%	0.31				

=====
Sequence No.: 3

Sample ID: lcsd 570-42474_3-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 87

Date Collected: 1/3/2020 2:50:11 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: lcsd 570-42474_3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.83	0.0531	0.2462	0.0531	2:51:16 PM	Yes
2	0.0048	4.77	0.0524	0.2436	0.0524	2:52:01 PM	Yes
Mean:	0.0048	4.80	0.0527				
SD:	0.00004	0.045	0.0005				
%RSD:	0.93%	0.93%	0.93				

=====
Sequence No.: 4

Sample ID: 570-16773-a-1-b

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 88

Date Collected: 1/3/2020 2:52:28 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

 Replicate Data: 570-16773-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0207	0.0003	0.0017	0.0003	2:53:33 PM	Yes
2	0.0000	0.0390	0.0005	0.0069	0.0005	2:54:18 PM	Yes
Mean:	0.0000	0.0299	0.0004				
SD:	0.00001	0.01295	0.0001				
%RSD:	43.33%	43.33%	39.67				

=====

Sequence No.:	5	Autosampler Location:	89
Sample ID:	570-16773-a-1-c ms	Date Collected:	1/3/2020 2:54:45 PM
Analyst:	1174 HG-8	Data Type:	Original
Initial Sample Wt:		Initial Sample Vol:	
Dilution:		Sample Prep Vol:	
Wash Time (before sample):	0	Auto Dilution Factor:	1

 Replicate Data: 570-16773-a-1-c ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0016	1.64	0.0181	0.0796	0.0181	2:55:50 PM	Yes
2	0.0017	1.69	0.0185	0.0861	0.0186	2:56:35 PM	Yes
Mean:	0.0017	1.67	0.0183				
SD:	0.00003	0.030	0.0003				
%RSD:	1.80%	1.80%	1.79				

=====

Sequence No.:	6	Autosampler Location:	90
Sample ID:	570-16773-a-1-d msd	Date Collected:	1/3/2020 2:57:02 PM
Analyst:	1174 HG-8	Data Type:	Original
Initial Sample Wt:		Initial Sample Vol:	
Dilution:		Sample Prep Vol:	
Wash Time (before sample):	0	Auto Dilution Factor:	1

 Replicate Data: 570-16773-a-1-d msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0006	0.600	0.0066	0.0312	0.0067	2:58:07 PM	Yes
2	0.0006	0.596	0.0066	0.0288	0.0066	2:58:52 PM	Yes
Mean:	0.0006	0.598	0.0066				
SD:	0.00000	0.0023	0.0000				
%RSD:	0.38%	0.38%	0.38				

=====

Sequence No.:	7	Autosampler Location:	91
Sample ID:	570-16773-a-2-b	Date Collected:	1/3/2020 2:59:19 PM
Analyst:	1174 HG-8	Data Type:	Original
Initial Sample Wt:		Initial Sample Vol:	
Dilution:		Sample Prep Vol:	
Wash Time (before sample):	0	Auto Dilution Factor:	1

 Replicate Data: 570-16773-a-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0308	0.0004	0.0051	0.0004	3:00:24 PM	Yes
2	0.0000	0.0093	0.0001	-0.0002	0.0002	3:01:09 PM	Yes
Mean:	0.0000	0.0201	0.0003				
SD:	0.00002	0.01527	0.0002				
%RSD:	76.17%	76.17%	66.96				

=====

Sequence No.:	8	Autosampler Location:	92
Sample ID:	570-16773-a-3-b	Date Collected:	1/3/2020 3:01:36 PM
Analyst:	1174 HG-8	Data Type:	Original
Initial Sample Wt:		Initial Sample Vol:	
Dilution:		Sample Prep Vol:	
Wash Time (before sample):	0	Auto Dilution Factor:	1

 Replicate Data: 570-16773-a-3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0211	0.0003	0.0039	0.0003	3:02:41 PM	Yes
2	0.0000	0.0128	0.0002	-0.0002	0.0002	3:03:27 PM	Yes
Mean:	0.0000	0.0169	0.0002				
SD:	0.00001	0.00588	0.0001				
%RSD:	34.69%	34.69%	29.84				

```

=====
Sequence No.: 9                               Autosampler Location: 93
Sample ID: 570-16737-a-1-a                   Date Collected: 1/3/2020 3:03:54 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16737-a-1-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0059   0.0001   0.0001 0.0001 3:04:59 PM  Yes
2      0.0000     0.0120   0.0002   0.0015 0.0002 3:05:44 PM  Yes
Mean:  0.0000     0.0090   0.0001
SD:    0.00000    0.00429  0.0000
%RSD:  47.83%    47.83%   36.59
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 94
Sample ID: 570-16737-a-2-a                   Date Collected: 1/3/2020 3:06:11 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16737-a-2-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0111   0.0002   0.0004 0.0002 3:07:15 PM  Yes
2      0.0000     0.0078   0.0001   -0.0003 0.0002 3:08:00 PM  Yes
Mean:  0.0000     0.0094   0.0001
SD:    0.00000    0.00236  0.0000
%RSD:  25.06%    25.06%   19.39
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-42609_10-a                 Date Collected: 1/3/2020 3:08:27 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-42609_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0020     1.96     0.0216   0.0948 0.0216 3:09:33 PM  Yes
2      0.0020     1.98     0.0217   0.0972 0.0218 3:10:18 PM  Yes
Mean:  0.0020     1.97     0.0216
SD:    0.00001    0.011    0.0001
%RSD:  0.54%     0.54%    0.53
=====

```

QC value within limits for Hg 253.7 Recovery = 98.43%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-42609_11-a                 Date Collected: 1/3/2020 3:10:45 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-42609_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
=====

```

1 0.0000 0.0445 0.0005 0.0021 0.0006 3:11:49 PM Yes
 2 0.0001 0.0545 0.0006 0.0019 0.0007 3:12:35 PM Yes
 Mean: 0.0000 0.0495 0.0006
 SD: 0.00001 0.00703 0.0001
 %RSD: 14.20% 14.20% 13.45

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

Sequence No.: 13 Autosampler Location: 95
 Sample ID: 570-16737-a-3-a Date Collected: 1/3/2020 3:13:00 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16737-a-3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0163	0.0002	0.0003	0.0003	3:14:05 PM	Yes
2	0.0000	0.0091	0.0001	-0.0007	0.0002	3:14:50 PM	Yes
Mean:	0.0000	0.0127	0.0002				
SD:	0.00001	0.00508	0.0001				
%RSD:	39.87%	39.87%	32.77				

Sequence No.: 14 Autosampler Location: 96
 Sample ID: 570-16737-a-4-a Date Collected: 1/3/2020 3:15:17 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16737-a-4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0107	0.0001	0.0008	0.0002	3:16:22 PM	Yes
2	0.0000	0.0099	0.0001	0.0002	0.0002	3:17:07 PM	Yes
Mean:	0.0000	0.0103	0.0001				
SD:	0.00000	0.00060	0.0000				
%RSD:	5.79%	5.79%	4.57				

Sequence No.: 15 Autosampler Location: 97
 Sample ID: 570-16737-a-5-a Date Collected: 1/3/2020 3:17:34 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16737-a-5-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0224	0.0003	0.0040	0.0003	3:18:40 PM	Yes
2	0.0000	0.0090	0.0001	-0.0002	0.0002	3:19:25 PM	Yes
Mean:	0.0000	0.0157	0.0002				
SD:	0.00001	0.00948	0.0001				
%RSD:	60.28%	60.28%	51.28				

Sequence No.: 16 Autosampler Location: 98
 Sample ID: 570-16627-b-1-e Date Collected: 1/3/2020 3:19:53 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16627-b-1-e Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.126	0.0014	0.0074	0.0015	3:20:58 PM	Yes

2 0.0001 0.143 0.0016 0.0077 0.0016 3:21:43 PM Yes
 Mean: 0.0001 0.134 0.0015
 SD: 0.00001 0.0120 0.0001
 %RSD: 8.92% 8.92% 8.74

=====
 Sequence No.: 17 Autosampler Location: 99
 Sample ID: mb 570-42588_1-a Date Collected: 1/3/2020 3:22:10 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: mb 570-42588_1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0336	0.0004	0.0031	0.0005	3:23:16 PM	Yes
2	0.0000	0.0391	0.0005	0.0037	0.0005	3:24:00 PM	Yes
Mean:	0.0000	0.0364	0.0004				
SD:	0.00000	0.00384	0.0000				
%RSD:	10.56%	10.56%	9.82				

=====
 Sequence No.: 18 Autosampler Location: 100
 Sample ID: lcs 570-42588_2-a Date Collected: 1/3/2020 3:24:27 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: lcs 570-42588_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.84	0.0532	0.2395	0.0533	3:25:32 PM	Yes
2	0.0048	4.83	0.0531	0.2467	0.0531	3:26:17 PM	Yes
Mean:	0.0048	4.84	0.0531				
SD:	0.00001	0.010	0.0001				
%RSD:	0.20%	0.20%	0.20				

=====
 Sequence No.: 19 Autosampler Location: 101
 Sample ID: lcsd 570-42588_3-a Date Collected: 1/3/2020 3:26:44 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: lcsd 570-42588_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.86	0.0534	0.2438	0.0535	3:27:48 PM	Yes
2	0.0048	4.83	0.0531	0.2457	0.0532	3:28:33 PM	Yes
Mean:	0.0048	4.85	0.0533				
SD:	0.00002	0.022	0.0002				
%RSD:	0.45%	0.45%	0.45				

=====
 Sequence No.: 20 Autosampler Location: 102
 Sample ID: 570-16956-c-2-b Date Collected: 1/3/2020 3:29:00 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16956-c-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0007	0.697	0.0077	0.0393	0.0077	3:30:04 PM	Yes
2	0.0003	0.283	0.0031	0.0105	0.0032	3:30:48 PM	Yes
Mean:	0.0005	0.490	0.0054				
SD:	0.00029	0.2930	0.0032				

%RSD: 59.81% 59.81% 59.48

```

=====
Sequence No.: 21                               Autosampler Location: 103
Sample ID: 570-16956-c-2-c ms                 Date Collected: 1/3/2020 3:31:16 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16956-c-2-c ms             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0043        4.28      0.0470    0.2170    0.0471    3:32:20 PM  Yes
2      0.0043        4.30      0.0472    0.2205    0.0473    3:33:05 PM  Yes
Mean:  0.0043        4.29      0.0471
SD:    0.00001       0.014     0.0002
%RSD:  0.32%       0.32%     0.32
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 104
Sample ID: 570-16956-c-2-d ms                 Date Collected: 1/3/2020 3:33:32 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16956-c-2-d ms             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0042        4.22      0.0464    0.2164    0.0464    3:34:38 PM  Yes
2      0.0042        4.24      0.0466    0.2170    0.0467    3:35:22 PM  Yes
Mean:  0.0042        4.23      0.0465
SD:    0.00002       0.017     0.0002
%RSD:  0.41%       0.41%     0.41
=====

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-42609_10-a                 Date Collected: 1/3/2020 3:35:50 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-42609_10-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0020        1.97      0.0217    0.0967    0.0217    3:36:55 PM  Yes
2      0.0020        1.97      0.0217    0.0962    0.0217    3:37:40 PM  Yes
Mean:  0.0020        1.97      0.0217
SD:    0.00000       0.001     0.0000
%RSD:  0.07%       0.07%     0.07
=====

```

QC value within limits for Hg 253.7 Recovery = 98.59%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-42609_11-a                 Date Collected: 1/3/2020 3:38:07 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-42609_11-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      -0.0000        -0.0020   0.0000    -0.0011   0.0001    3:39:10 PM  Yes
2      -0.0000        -0.0040   -0.0000   -0.0012   0.0000    3:39:56 PM  Yes
Mean:  -0.0000        -0.0030   -0.0000
SD:    0.00000       0.00145   0.0000
%RSD:  48.18%       48.18%    566.38
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 105
Sample ID: 570-16895-h-1-a                    Date Collected: 1/3/2020 3:40:21 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

=====
Replicate Data: 570-16895-h-1-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0182   0.0002   0.0006 0.0003  3:41:27 PM  Yes
2      0.0000     0.0109   0.0001   -0.0006 0.0002  3:42:12 PM  Yes
Mean:  0.0000     0.0146   0.0002
SD:    0.00001     0.00519  0.0001
%RSD:  35.61%     35.61%   29.94
=====

```

```

=====
Sequence No.: 26                               Autosampler Location: 106
Sample ID: 570-16763-b-1-d                    Date Collected: 1/3/2020 3:42:40 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

=====
Replicate Data: 570-16763-b-1-d              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0008   0.0000   -0.0010 0.0001  3:43:45 PM  Yes
2     -0.0000     -0.0009   0.0000   -0.0013 0.0001  3:44:30 PM  Yes
Mean:  -0.0000     -0.0001  0.0000
SD:    0.00000     0.00123  0.0000
%RSD:  >999.9%     >999.9%  45.73
=====

```

```

=====
Sequence No.: 27                               Autosampler Location: 107
Sample ID: 570-16708-g-1-b                    Date Collected: 1/3/2020 3:44:57 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

=====
Replicate Data: 570-16708-g-1-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0057   0.0001   0.0010 0.0001  3:46:03 PM  Yes
2      0.0000     0.0071   0.0001   0.0017 0.0002  3:46:48 PM  Yes
Mean:  0.0000     0.0064   0.0001
SD:    0.00000     0.00098  0.0000
%RSD:  15.39%     15.39%   10.75
=====

```

```

=====
Sequence No.: 28                               Autosampler Location: 5
Sample ID: ccv 570-42609_10-a                 Date Collected: 1/3/2020 3:47:15 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

=====
Replicate Data: ccv 570-42609_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0020     1.96     0.0216   0.0961 0.0216  3:48:21 PM  Yes
2      0.0020     1.97     0.0217   0.1034 0.0217  3:49:06 PM  Yes
Mean:  0.0020     1.97     0.0216
SD:    0.00001     0.007    0.0001
%RSD:  0.35%     0.35%    0.35
=====

```

QC value within limits for Hg 253.7 Recovery = 98.40%

All analyte(s) passed QC.

```

=====
Sequence No.: 29                               Autosampler Location: 1
Sample ID: ccb 570-42609_11-a                 Date Collected: 1/3/2020 3:49:34 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                       Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

Replicate Data: ccb 570-42609_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L        Signal    Area     Height
1      -0.0000     -0.0055    -0.0000  -0.0016  0.0000    3:50:38 PM  Yes
2      -0.0000     -0.0059    -0.0000  -0.0026  0.0000    3:51:23 PM  Yes
Mean:  -0.0000     -0.0057    -0.0000
SD:     0.00000     0.00029    0.0000
%RSD:   4.99%      4.99%      9.60

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:
Results Data Set: 200103H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-42172_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 108
Date Collected: 1/3/2020 4:00:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-42172_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0108	-0.0001	-0.0067	-0.0000	4:01:55 PM	Yes
2	-0.0000	-0.0099	-0.0001	-0.0062	-0.0000	4:02:41 PM	Yes
Mean:	-0.0000	-0.0104	-0.0001				
SD:	0.00000	0.00057	0.0000				
%RSD:	5.55%	5.55%	7.57				

=====
Sequence No.: 2
Sample ID: lcs 570-42172_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 109
Date Collected: 1/3/2020 4:03:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-42172_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.75	0.0522	0.2345	0.0522	4:04:14 PM	Yes
2	0.0048	4.76	0.0523	0.2384	0.0523	4:04:59 PM	Yes
Mean:	0.0048	4.75	0.0522				
SD:	0.00001	0.006	0.0001				
%RSD:	0.12%	0.12%	0.12				

=====
Sequence No.: 3
Sample ID: lcsd 570-42172_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 110
Date Collected: 1/3/2020 4:05:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-42172_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.96	0.0545	0.2463	0.0545	4:06:32 PM	Yes
2	0.0050	4.97	0.0546	0.2473	0.0546	4:07:17 PM	Yes
Mean:	0.0050	4.96	0.0545				
SD:	0.00001	0.008	0.0001				
%RSD:	0.16%	0.16%	0.16				

=====
Sequence No.: 4
Sample ID: 570-16502-a-6-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 111
Date Collected: 1/3/2020 4:07:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16502-a-6-c **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0012	1.18	0.0130	0.0646	0.0131	4:08:51 PM	Yes
2	0.0013	1.31	0.0144	0.0712	0.0145	4:09:36 PM	Yes
Mean:	0.0012	1.25	0.0137				
SD:	0.00009	0.088	0.0010				
%RSD:	7.08%	7.08%	7.06				

=====

Sequence No.: 5	Autosampler Location: 112
Sample ID: 570-16502-a-6-d ms	Date Collected: 1/3/2020 4:10:04 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

Replicate Data: 570-16502-a-6-d ms **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0057	5.75	0.0631	0.3127	0.0632	4:11:10 PM	Yes
2	0.0060	6.05	0.0664	0.3273	0.0665	4:11:54 PM	Yes
Mean:	0.0059	5.90	0.0648				
SD:	0.00021	0.210	0.0023				
%RSD:	3.56%	3.56%	3.56				

=====

Sequence No.: 6	Autosampler Location: 113
Sample ID: 570-16502-a-6-e msd	Date Collected: 1/3/2020 4:12:22 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

Replicate Data: 570-16502-a-6-e msd **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0059	5.90	0.0648	0.3203	0.0649	4:13:27 PM	Yes
2	0.0060	6.05	0.0664	0.3284	0.0665	4:14:13 PM	Yes
Mean:	0.0060	5.97	0.0656				
SD:	0.00010	0.104	0.0011				
%RSD:	1.74%	1.74%	1.74				

=====

Sequence No.: 7	Autosampler Location: 114
Sample ID: 570-16502-a-10-d	Date Collected: 1/3/2020 4:14:40 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

Replicate Data: 570-16502-a-10-d **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.398	0.0044	0.0246	0.0045	4:15:46 PM	Yes
2	0.0002	0.235	0.0026	0.0146	0.0027	4:16:31 PM	Yes
Mean:	0.0003	0.317	0.0035				
SD:	0.00012	0.1156	0.0013				
%RSD:	36.50%	36.50%	36.18				

=====

Sequence No.: 8	Autosampler Location: 115
Sample ID: 570-16726-a-3-j	Date Collected: 1/3/2020 4:16:59 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

Replicate Data: 570-16726-a-3-j **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0002	0.249	0.0028	0.0178	0.0028	4:18:05 PM	Yes
2	0.0003	0.254	0.0028	0.0175	0.0029	4:18:50 PM	Yes
Mean:	0.0003	0.251	0.0028				
SD:	0.00000	0.0036	0.0000				
%RSD:	1.42%	1.42%	1.41				

Sequence No.: 9
 Sample ID: 570-16842-a-1-c
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 116
 Date Collected: 1/3/2020 4:19:18 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-16842-a-1-c Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0003	0.317	0.0035	0.0198	0.0036	4:20:24 PM	Yes
2	0.0003	0.315	0.0035	0.0155	0.0035	4:21:08 PM	Yes
Mean:	0.0003	0.316	0.0035				
SD:	0.00000	0.0010	0.0000				
%RSD:	0.31%	0.31%	0.31				

Sequence No.: 10
 Sample ID: 570-16852-a-1-b
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 117
 Date Collected: 1/3/2020 4:21:35 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-16852-a-1-b Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.106	0.0012	0.0054	0.0012	4:22:40 PM	Yes
2	0.0001	0.109	0.0012	0.0079	0.0013	4:23:25 PM	Yes
Mean:	0.0001	0.108	0.0012				
SD:	0.00000	0.0024	0.0000				
%RSD:	2.25%	2.25%	2.19				

Sequence No.: 11
 Sample ID: ccv 570-42609_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 1/3/2020 4:23:52 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42609_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	1.95	0.0215	0.0994	0.0215	4:24:57 PM	Yes
2	0.0020	1.95	0.0215	0.0980	0.0215	4:25:41 PM	Yes
Mean:	0.0020	1.95	0.0215				
SD:	0.00000	0.000	0.0000				
%RSD:	0.02%	0.02%	0.02				

QC value within limits for Hg 253.7 Recovery = 97.68%
 All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: ccb 570-42609_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 1/3/2020 4:26:08 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42609_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0000	0.0248	0.0003	0.0046	0.0004	4:27:11 PM	Yes
2	0.0000	0.0126	0.0002	0.0025	0.0002	4:27:56 PM	Yes
Mean:	0.0000	0.0187	0.0002				
SD:	0.00001	0.00860	0.0001				
%RSD:	45.92%	45.92%	40.03				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 118
Sample ID: 570-16852-b-2-b                    Date Collected: 1/3/2020 4:28:21 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16852-b-2-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.145    0.0016   0.0068 0.0017 4:29:26 PM  Yes
2      0.0002     0.163    0.0018   0.0086 0.0019 4:30:11 PM  Yes
Mean:  0.0002     0.154    0.0017
SD:    0.00001    0.0132   0.0001
%RSD:  8.56%     8.56%    8.41
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 119
Sample ID: 570-16852-a-6-b                    Date Collected: 1/3/2020 4:30:38 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16852-a-6-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.111    0.0012   0.0079 0.0013 4:31:43 PM  Yes
2      0.0001     0.101    0.0011   0.0056 0.0012 4:32:28 PM  Yes
Mean:  0.0001     0.106    0.0012
SD:    0.00001    0.0067   0.0001
%RSD:  6.29%     6.29%    6.13
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 120
Sample ID: 570-16852-b-7-b                    Date Collected: 1/3/2020 4:32:55 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16852-b-7-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0774   0.0009  -0.0020 0.0009 4:34:00 PM  Yes
2      0.0001     0.0907   0.0010   0.0039 0.0011 4:34:44 PM  Yes
Mean:  0.0001     0.0840   0.0010
SD:    0.00001    0.00937  0.0001
%RSD:  11.15%    11.15%   10.79
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 121
Sample ID: 570-16501-a-1-a                    Date Collected: 1/3/2020 4:35:11 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16501-a-1-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0656   0.0008   0.0029 0.0008 4:36:16 PM  Yes
=====
  
```

2 0.0001 0.0702 0.0008 0.0051 0.0009 4:37:01 PM Yes
 Mean: 0.0001 0.0679 0.0008
 SD: 0.00000 0.00325 0.0000
 %RSD: 4.79% 4.79% 4.60

=====
 Sequence No.: 17 Autosampler Location: 122
 Sample ID: 570-16501-a-4-a Date Collected: 1/3/2020 4:37:28 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16501-a-4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0572	0.0007	0.0021	0.0007	4:38:33 PM	Yes
2	0.0001	0.0529	0.0006	0.0015	0.0007	4:39:18 PM	Yes
Mean:	0.0001	0.0551	0.0006				
SD:	0.00000	0.00301	0.0000				
%RSD:	5.47%	5.47%	5.21				

=====
 Sequence No.: 18 Autosampler Location: 123
 Sample ID: 570-16501-a-7-a Date Collected: 1/3/2020 4:39:46 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16501-a-7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0144	0.0002	-0.0003	0.0002	4:40:51 PM	Yes
2	0.0000	0.0114	0.0002	-0.0009	0.0002	4:41:36 PM	Yes
Mean:	0.0000	0.0129	0.0002				
SD:	0.00000	0.00213	0.0000				
%RSD:	16.47%	16.47%	13.57				

=====
 Sequence No.: 19 Autosampler Location: 124
 Sample ID: 570-16501-a-10-a Date Collected: 1/3/2020 4:42:03 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16501-a-10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0293	0.0004	0.0005	0.0004	4:43:08 PM	Yes
2	0.0000	0.0292	0.0004	0.0003	0.0004	4:43:53 PM	Yes
Mean:	0.0000	0.0293	0.0004				
SD:	0.00000	0.00005	0.0000				
%RSD:	0.18%	0.18%	0.17				

=====
 Sequence No.: 20 Autosampler Location: 125
 Sample ID: 570-16501-a-11-a Date Collected: 1/3/2020 4:44:20 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16501-a-11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0210	0.0003	0.0003	0.0003	4:45:26 PM	Yes
2	0.0000	0.0162	0.0002	-0.0007	0.0003	4:46:11 PM	Yes
Mean:	0.0000	0.0186	0.0002				
SD:	0.00000	0.00339	0.0000				

%RSD: 18.23% 18.23% 15.88

```

=====
Sequence No.: 21                               Autosampler Location: 126
Sample ID: 570-16501-a-14-a                   Date Collected: 1/3/2020 4:46:38 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16501-a-14-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0312   0.0004   0.0010 0.0004  4:47:43 PM  Yes
2      0.0000     0.0277   0.0003   -0.0000 0.0004  4:48:28 PM  Yes
Mean:  0.0000     0.0295   0.0004
SD:    0.00000    0.00247  0.0000
%RSD:  8.37%     8.37%    7.65
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 127
Sample ID: 570-16501-a-17-a                   Date Collected: 1/3/2020 4:48:55 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16501-a-17-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0199   0.0002   0.0007 0.0003  4:50:00 PM  Yes
2      0.0000     0.0201   0.0003   0.0008 0.0003  4:50:45 PM  Yes
Mean:  0.0000     0.0200   0.0003
SD:    0.00000    0.00016  0.0000
%RSD:  0.79%     0.79%    0.69
=====

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-42609_10-a                 Date Collected: 1/3/2020 4:51:12 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-42609_10-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0020     1.98     0.0218   0.1064 0.0219  4:52:17 PM  Yes
2      0.0019     1.93     0.0213   0.0927 0.0213  4:53:02 PM  Yes
Mean:  0.0020     1.96     0.0215
SD:    0.00004    0.036    0.0004
%RSD:  1.85%     1.85%    1.84
=====

```

QC value within limits for Hg 253.7 Recovery = 97.93%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-42609_11-a                 Date Collected: 1/3/2020 4:53:28 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-42609_11-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0536   0.0006   0.0093 0.0007  4:54:31 PM  Yes
2      0.0000     0.0365   0.0004   0.0046 0.0005  4:55:16 PM  Yes
Mean:  0.0000     0.0450   0.0005
SD:    0.00001    0.01209  0.0001
%RSD:  26.86%     26.86%   25.31
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 128
Sample ID: 570-16501-a-20-a                   Date Collected: 1/3/2020 4:55:42 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-16501-a-20-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0279   0.0003   -0.0006 0.0004  4:56:47 PM  Yes
2      0.0000     0.0392   0.0005   0.0034 0.0005  4:57:32 PM  Yes
Mean:  0.0000     0.0336   0.0004
SD:    0.00001     0.00798  0.0001
%RSD:  23.79%     23.79%   21.99
    
```

```

=====
Sequence No.: 26                               Autosampler Location: 129
Sample ID: 570-16501-a-21-a                   Date Collected: 1/3/2020 4:57:59 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-16501-a-21-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0584   0.0007   0.0054 0.0007  4:59:04 PM  Yes
2      0.0001     0.0603   0.0007   0.0068 0.0007  4:59:49 PM  Yes
Mean:  0.0001     0.0594   0.0007
SD:    0.00000     0.00133  0.0000
%RSD:  2.25%     2.25%   2.15
    
```

```

=====
Sequence No.: 27                               Autosampler Location: 130
Sample ID: 570-16501-a-24-a                   Date Collected: 1/3/2020 5:00:17 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-16501-a-24-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0220   0.0003   -0.0012 0.0003  5:01:22 PM  Yes
2      0.0000     0.0216   0.0003   -0.0015 0.0003  5:02:07 PM  Yes
Mean:  0.0000     0.0218   0.0003
SD:    0.00000     0.00029  0.0000
%RSD:  1.35%     1.35%   1.19
    
```

```

=====
Sequence No.: 28                               Autosampler Location: 131
Sample ID: 570-16501-a-27-a                   Date Collected: 1/3/2020 5:02:34 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
    
```

```

=====
Replicate Data: 570-16501-a-27-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0397   0.0005   0.0007 0.0005  5:03:39 PM  Yes
2      0.0000     0.0447   0.0005   0.0015 0.0006  5:04:24 PM  Yes
Mean:  0.0000     0.0422   0.0005
SD:    0.00000     0.00352  0.0000
%RSD:  8.34%     8.34%   7.83
    
```

```

=====
Sequence No.: 29                               Autosampler Location: 132
Sample ID: 570-16501-a-30-a                   Date Collected: 1/3/2020 5:04:51 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16501-a-30-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0605   0.0007   0.0029 0.0007  5:05:56 PM  Yes
2      0.0001     0.0707   0.0008   0.0046 0.0009  5:06:41 PM  Yes
Mean:  0.0001     0.0656   0.0008
SD:     0.00001    0.00716  0.0001
%RSD:  10.91%    10.91%   10.47
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 5
Sample ID: ccv 570-42609_10-a                 Date Collected: 1/3/2020 5:07:08 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-42609_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0020     1.95     0.0214   0.0956 0.0215  5:08:13 PM  Yes
2      0.0019     1.93     0.0212   0.0963 0.0213  5:08:57 PM  Yes
Mean:  0.0019     1.94     0.0213
SD:     0.00001    0.013    0.0001
%RSD:  0.66%     0.66%    0.66
=====

```

QC value within limits for Hg 253.7 Recovery = 97.07%
All analyte(s) passed QC.

```

=====
Sequence No.: 31                               Autosampler Location: 1
Sample ID: ccb 570-42609_11-a                 Date Collected: 1/3/2020 5:09:24 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-42609_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0035   0.0001   -0.0003 0.0001  5:10:27 PM  Yes
2     -0.0000     -0.0010  0.0000   -0.0013 0.0001  5:11:12 PM  Yes
Mean:  0.0000     0.0012  0.0000
SD:     0.00000    0.00320  0.0000
%RSD:  261.51%   261.51%  80.31
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:

Results Data Set: 200103H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-42645_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 133
Date Collected: 1/3/2020 5:21:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-42645_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0216	-0.0002	-0.0306	-0.0002	5:22:46 PM	Yes
2	-0.0000	-0.0159	-0.0001	-0.0177	-0.0001	5:23:31 PM	Yes
Mean:	-0.0000	-0.0188	-0.0002				
SD:	0.00000	0.00402	0.0000				
%RSD:	21.42%	21.42%	25.10				

=====
Sequence No.: 2
Sample ID: lcs 570-42645_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 134
Date Collected: 1/3/2020 5:23:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-42645_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	5.00	0.0549	0.2441	0.0550	5:25:04 PM	Yes
2	0.0050	5.01	0.0550	0.2489	0.0551	5:25:49 PM	Yes
Mean:	0.0050	5.00	0.0550				
SD:	0.00001	0.007	0.0001				
%RSD:	0.13%	0.13%	0.13				

=====
Sequence No.: 3
Sample ID: lcsd 570-42645_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 135
Date Collected: 1/3/2020 5:26:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-42645_3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	5.04	0.0554	0.2495	0.0554	5:27:23 PM	Yes
2	0.0050	5.01	0.0551	0.2540	0.0551	5:28:09 PM	Yes
Mean:	0.0050	5.03	0.0552				
SD:	0.00002	0.018	0.0002				
%RSD:	0.36%	0.36%	0.35				

=====
Sequence No.: 4
Sample ID: 570-16989-b-1-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 136
Date Collected: 1/3/2020 5:28:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

 Replicate Data: 570-16989-b-1-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0840	0.0010	0.0039	0.0010	5:29:43 PM	Yes
2	0.0001	0.0615	0.0007	0.0021	0.0008	5:30:28 PM	Yes
Mean:	0.0001	0.0728	0.0008				
SD:	0.00002	0.01591	0.0002				
%RSD:	21.85%	21.85%	21.06				

=====
 Sequence No.: 5 Autosampler Location: 137
 Sample ID: 570-16996-b-1-c Date Collected: 1/3/2020 5:30:55 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16996-b-1-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0494	0.0006	0.0041	0.0006	5:32:00 PM	Yes
2	0.0000	0.0351	0.0004	0.0013	0.0005	5:32:45 PM	Yes
Mean:	0.0000	0.0423	0.0005				
SD:	0.00001	0.01015	0.0001				
%RSD:	24.01%	24.01%	22.54				

=====
 Sequence No.: 6 Autosampler Location: 138
 Sample ID: 570-16996-b-2-c Date Collected: 1/3/2020 5:33:12 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16996-b-2-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0233	0.0003	-0.0016	0.0003	5:34:18 PM	Yes
2	0.0000	0.0131	0.0002	-0.0013	0.0002	5:35:03 PM	Yes
Mean:	0.0000	0.0182	0.0002				
SD:	0.00001	0.00721	0.0001				
%RSD:	39.63%	39.63%	34.42				

=====
 Sequence No.: 7 Autosampler Location: 139
 Sample ID: 570-16996-b-3-c Date Collected: 1/3/2020 5:35:30 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16996-b-3-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0221	0.0003	0.0014	0.0003	5:36:36 PM	Yes
2	0.0000	0.0158	0.0002	0.0002	0.0003	5:37:21 PM	Yes
Mean:	0.0000	0.0190	0.0002				
SD:	0.00000	0.00450	0.0000				
%RSD:	23.74%	23.74%	20.73				

=====
 Sequence No.: 8 Autosampler Location: 5
 Sample ID: ccv 570-42609_10-a Date Collected: 1/3/2020 5:37:49 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42609_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0019	1.94	0.0214	0.0974	0.0214	5:38:54 PM	Yes
2	0.0020	1.96	0.0215	0.0968	0.0216	5:39:39 PM	Yes
Mean:	0.0020	1.95	0.0215				
SD:	0.00001	0.010	0.0001				
%RSD:	0.50%	0.50%	0.50				

QC value within limits for Hg 253.7 Recovery = 97.55%

All analyte(s) passed QC.

Sequence No.: 9

Autosampler Location: 1

Sample ID: ccb 570-42609_11-a

Date Collected: 1/3/2020 5:40:06 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42609_11-a

Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0033	0.0001	-0.0003	0.0001	5:41:10 PM	Yes
2	0.0000	0.0009	0.0000	-0.0007	0.0001	5:41:55 PM	Yes
Mean:	0.0000	0.0021	0.0001				
SD:	0.00000	0.00172	0.0000				
%RSD:	81.44%	81.44%	35.28				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:
Results Data Set: 200103H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====

Sequence No.: 1
Sample ID: mb 570-42161_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.

Autosampler Location: 40
Date Collected: 1/3/2020 6:05:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:

Results Data Set: 200103H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Autosampler Location: 40

Sample ID: mb 570-42161_1-a

Date Collected: 1/3/2020 6:06:13 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: mb 570-42161_1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0111	-0.0001	-0.0068	-0.0000	6:07:17 PM	Yes
2	-0.0000	-0.0090	-0.0001	-0.0043	-0.0000	6:08:02 PM	Yes
Mean:	-0.0000	-0.0100	-0.0001				
SD:	0.00000	0.00142	0.0000				
%RSD:	14.12%	14.12%	19.46				

=====
Sequence No.: 2

Autosampler Location: 41

Sample ID: lcs 570-42161_2-a

Date Collected: 1/3/2020 6:08:29 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcs 570-42161_2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.90	0.0538	0.2468	0.0539	6:09:33 PM	Yes
2	0.0049	4.90	0.0538	0.2517	0.0538	6:10:19 PM	Yes
Mean:	0.0049	4.90	0.0538				
SD:	0.00000	0.004	0.0000				
%RSD:	0.07%	0.07%	0.07				

=====
Sequence No.: 3

Autosampler Location: 42

Sample ID: lcsd 570-42161_3-a

Date Collected: 1/3/2020 6:10:45 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcsd 570-42161_3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.95	0.0544	0.2522	0.0545	6:11:49 PM	Yes
2	0.0049	4.94	0.0543	0.2549	0.0543	6:12:34 PM	Yes
Mean:	0.0049	4.95	0.0544				
SD:	0.00001	0.008	0.0001				
%RSD:	0.17%	0.17%	0.17				

=====
Sequence No.: 4

Autosampler Location: 43

Sample ID: lcsd 570-42161_3-a

Date Collected: 1/3/2020 6:13:00 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

```

Replicate Data: lcsd 570-42161_3-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0002      0.185    0.0021    0.0090  0.0021   6:14:05 PM  Yes
2      0.0002      0.172    0.0019    0.0080  0.0020   6:14:50 PM  Yes
Mean:  0.0002      0.179    0.0020
SD:    0.00001     0.0091   0.0001
%RSD:  5.11%     5.11%    5.03
    
```

```

Sequence No.: 5                               Autosampler Location: 44
Sample ID: 570-15999-a-1-b ms                Date Collected: 1/3/2020 6:15:16 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

Replicate Data: 570-15999-a-1-b ms           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0045      4.45     0.0489    0.2293  0.0490   6:16:21 PM  Yes
2      0.0044      4.42     0.0485    0.2319  0.0486   6:17:06 PM  Yes
Mean:  0.0044      4.44     0.0487
SD:    0.00002     0.025    0.0003
%RSD:  0.56%     0.56%    0.56
    
```

```

Sequence No.: 6                               Autosampler Location: 45
Sample ID: 570-15999-a-1-c msd              Date Collected: 1/3/2020 6:17:32 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

Replicate Data: 570-15999-a-1-c msd           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0045      4.48     0.0493    0.2332  0.0493   6:18:36 PM  Yes
2      0.0045      4.46     0.0490    0.2344  0.0491   6:19:22 PM  Yes
Mean:  0.0045      4.47     0.0491
SD:    0.00002     0.017    0.0002
%RSD:  0.37%     0.37%    0.37
    
```

```

Sequence No.: 7                               Autosampler Location: 46
Sample ID: 570-16222-f-1-a                  Date Collected: 1/3/2020 6:19:48 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

Replicate Data: 570-16222-f-1-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal    Area    Height             Stored
1      0.0002      0.150    0.0017    0.0075  0.0017   6:20:53 PM  Yes
2      0.0001      0.123    0.0014    0.0063  0.0014   6:21:38 PM  Yes
Mean:  0.0001      0.137    0.0015
SD:    0.00002     0.0191   0.0002
%RSD:  13.92%     13.92%   13.65
    
```

```

Sequence No.: 8                               Autosampler Location: 47
Sample ID: 570-16222-e-2-a                  Date Collected: 1/3/2020 6:22:05 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
    
```

```

Replicate Data: 570-16222-e-2-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
    
```

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0002	0.173	0.0019	0.0088	0.0020	6:23:10 PM	Yes
2	0.0002	0.173	0.0019	0.0085	0.0020	6:23:55 PM	Yes
Mean:	0.0002	0.173	0.0019				
SD:	0.00000	0.0004	0.0000				
%RSD:	0.24%	0.24%	0.24				

```

=====
Sequence No.: 9                               Autosampler Location: 48
Sample ID: 570-16222-d-3-a                   Date Collected: 1/3/2020 6:24:22 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16222-d-3-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0002     0.164    0.0018   0.0082 0.0019 6:25:27 PM  Yes
2      0.0002     0.164    0.0018   0.0080 0.0019 6:26:12 PM  Yes
Mean:  0.0002     0.164    0.0018
SD:    0.00000    0.0002   0.0000
%RSD:  0.12%     0.12%    0.12
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 49
Sample ID: 570-16222-d-4-a                   Date Collected: 1/3/2020 6:26:39 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16222-d-4-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0779   0.0009   0.0041 0.0009 6:27:45 PM  Yes
2      0.0001     0.0782   0.0009   0.0041 0.0009 6:28:29 PM  Yes
Mean:  0.0001     0.0780   0.0009
SD:    0.00000    0.00023 0.0000
%RSD:  0.29%     0.29%    0.28
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-42609_10-a                Date Collected: 1/3/2020 6:28:57 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-42609_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0019     1.95     0.0214   0.0972 0.0214 6:30:02 PM  Yes
2      0.0019     1.94     0.0213   0.0983 0.0214 6:30:47 PM  Yes
Mean:  0.0019     1.94     0.0214
SD:    0.00000    0.005    0.0001
%RSD:  0.26%     0.26%    0.26
=====

```

QC value within limits for Hg 253.7 Recovery = 97.11%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-42609_11-a                Date Collected: 1/3/2020 6:31:14 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-42609_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height

```

1	0.0000	0.0032	0.0001	-0.0000	0.0001	6:32:18 PM	Yes
2	0.0000	0.0020	0.0001	-0.0003	0.0001	6:33:03 PM	Yes
Mean:	0.0000	0.0026	0.0001				
SD:	0.00000	0.00083	0.0000				
%RSD:	31.86%	31.86%	15.45				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 50
Sample ID: 570-16229-f-1-a                   Date Collected: 1/3/2020 6:33:29 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16229-f-1-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.149    0.0017   0.0099 0.0017 6:34:33 PM  Yes
2      0.0001     0.137    0.0015   0.0069 0.0016 6:35:18 PM  Yes
Mean:  0.0001     0.143    0.0016
SD:    0.00001     0.0082   0.0001
%RSD:  5.73%      5.73%    5.62
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 51
Sample ID: 570-16229-e-2-a                   Date Collected: 1/3/2020 6:35:45 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16229-e-2-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0827   0.0009   0.0037 0.0010 6:36:49 PM  Yes
2      0.0001     0.0873   0.0010   0.0045 0.0010 6:37:34 PM  Yes
Mean:  0.0001     0.0850   0.0010
SD:    0.00000     0.00328  0.0000
%RSD:  3.86%      3.86%    3.74
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 52
Sample ID: 570-16229-d-3-a                   Date Collected: 1/3/2020 6:38:01 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16229-d-3-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0003     0.256    0.0028   0.0143 0.0029 6:39:05 PM  Yes
2      0.0002     0.248    0.0028   0.0129 0.0028 6:39:50 PM  Yes
Mean:  0.0003     0.252    0.0028
SD:    0.00001     0.0055   0.0001
%RSD:  2.17%      2.17%    2.15
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 53
Sample ID: 570-16229-d-4-a                   Date Collected: 1/3/2020 6:40:17 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16229-d-4-a               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.130    0.0015   0.0063 0.0015 6:41:21 PM  Yes
=====
  
```

2 0.0001 0.137 0.0015 0.0072 0.0016 6:42:06 PM Yes
 Mean: 0.0001 0.133 0.0015
 SD: 0.00000 0.0046 0.0001
 %RSD: 3.47% 3.47% 3.40

=====
 Sequence No.: 17 Autosampler Location: 54
 Sample ID: 570-16232-f-1-a Date Collected: 1/3/2020 6:42:33 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16232-f-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0478	0.0006	0.0022	0.0006	6:43:37 PM	Yes
2	0.0001	0.0509	0.0006	0.0025	0.0006	6:44:22 PM	Yes
Mean:	0.0000	0.0494	0.0006				
SD:	0.00000	0.00218	0.0000				
%RSD:	4.42%	4.42%	4.18				

=====
 Sequence No.: 18 Autosampler Location: 55
 Sample ID: 570-16232-f-1-b ms Date Collected: 1/3/2020 6:44:49 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16232-f-1-b ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0041	4.11	0.0451	0.2304	0.0452	6:45:53 PM	Yes
2	0.0042	4.15	0.0456	0.2368	0.0457	6:46:38 PM	Yes
Mean:	0.0041	4.13	0.0454				
SD:	0.00003	0.031	0.0003				
%RSD:	0.75%	0.75%	0.75				

=====
 Sequence No.: 19 Autosampler Location: 56
 Sample ID: 570-16232-f-1-c msd Date Collected: 1/3/2020 6:47:04 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16232-f-1-c msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0042	4.22	0.0464	0.2386	0.0464	6:48:09 PM	Yes
2	0.0042	4.23	0.0465	0.2415	0.0465	6:48:54 PM	Yes
Mean:	0.0042	4.22	0.0464				
SD:	0.00001	0.008	0.0001				
%RSD:	0.18%	0.18%	0.18				

=====
 Sequence No.: 20 Autosampler Location: 57
 Sample ID: 570-16232-e-2-a Date Collected: 1/3/2020 6:49:21 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16232-e-2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.188	0.0021	0.0083	0.0021	6:50:25 PM	Yes
2	0.0001	0.0763	0.0009	0.0040	0.0009	6:51:10 PM	Yes
Mean:	0.0001	0.132	0.0015				
SD:	0.00008	0.0787	0.0009				

%RSD: 59.62% 59.62% 58.40

```

=====
Sequence No.: 21                               Autosampler Location: 58
Sample ID: 570-16232-D-3-A                    Date Collected: 1/3/2020 6:51:37 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16232-D-3-A                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0002       0.175    0.0020    0.0097    0.0020    6:52:42 PM  Yes
2      0.0002       0.173    0.0019    0.0091    0.0020    6:53:26 PM  Yes
Mean:  0.0002       0.174    0.0019
SD:     0.00000     0.0015   0.0000
%RSD:  0.87%      0.87%    0.85
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 5
Sample ID: ccv 570-42609_10-a                 Date Collected: 1/3/2020 6:53:53 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-42609_10-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0016       1.64     0.0180    0.0909    0.0181    6:54:58 PM  Yes
2      0.0017       1.66     0.0183    0.0930    0.0183    6:55:43 PM  Yes
Mean:  0.0017       1.65     0.0182
SD:     0.00002     0.016    0.0002
%RSD:  0.98%      0.98%    0.98
=====

```

QC value within limits for Hg 253.7 Recovery = 82.55%
All analyte(s) passed QC.

```

=====
Sequence No.: 23                               Autosampler Location: 1
Sample ID: ccb 570-42609_11-a                 Date Collected: 1/3/2020 6:56:10 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-42609_11-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0001       0.0647   0.0007    0.0022    0.0008    6:57:14 PM  Yes
2      0.0000       0.0379   0.0004    0.0009    0.0005    6:57:59 PM  Yes
Mean:  0.0001       0.0513   0.0006
SD:     0.00002     0.01900  0.0002
%RSD:  37.04%     37.04%   35.15
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200103H1.sifx

Batch ID:
Results Data Set: 200103H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: lb 570-42642_1-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 140
Date Collected: 1/3/2020 7:35:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lb 570-42642_1-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0226	0.0003	0.0015	0.0003	7:36:06 PM	Yes
2	0.0000	0.0259	0.0003	0.0018	0.0004	7:36:51 PM	Yes
Mean:	0.0000	0.0243	0.0003				
SD:	0.00000	0.00231	0.0000				
%RSD:	9.49%	9.49%	8.53				

=====
Sequence No.: 2
Sample ID: lcs 570-42642_2-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 141
Date Collected: 1/3/2020 7:37:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-42642_2-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0042	4.17	0.0458	0.2385	0.0458	7:38:25 PM	Yes
2	0.0042	4.19	0.0460	0.2427	0.0461	7:39:11 PM	Yes
Mean:	0.0042	4.18	0.0459				
SD:	0.00002	0.018	0.0002				
%RSD:	0.42%	0.42%	0.42				

=====
Sequence No.: 3
Sample ID: lcsd 570-42642_3-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 142
Date Collected: 1/3/2020 7:39:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-42642_3-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0042	4.21	0.0463	0.2440	0.0463	7:40:44 PM	Yes
2	0.0042	4.19	0.0460	0.2446	0.0461	7:41:29 PM	Yes
Mean:	0.0042	4.20	0.0461				
SD:	0.00001	0.015	0.0002				
%RSD:	0.35%	0.35%	0.35				

=====
Sequence No.: 4
Sample ID: 570-16002-a-3-g
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 143
Date Collected: 1/3/2020 7:41:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

 Replicate Data: 570-16002-a-3-g Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.153	0.0017	0.0057	0.0018	7:43:02 PM	Yes
2	0.0000	0.0174	0.0002	0.0008	0.0003	7:43:48 PM	Yes
Mean:	0.0001	0.0853	0.0010				
SD:	0.00010	0.09609	0.0011				
%RSD:	112.61%	112.61%	109.08				

=====

Sequence No.: 5	Autosampler Location: 144
Sample ID: 570-16002-a-3-h ms	Date Collected: 1/3/2020 7:44:16 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

 Replicate Data: 570-16002-a-3-h ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0007	0.716	0.0079	0.0418	0.0079	7:45:21 PM	Yes
2	0.0007	0.718	0.0079	0.0425	0.0080	7:46:06 PM	Yes
Mean:	0.0007	0.717	0.0079				
SD:	0.00000	0.0020	0.0000				
%RSD:	0.28%	0.28%	0.28				

=====

Sequence No.: 6	Autosampler Location: 145
Sample ID: 570-16002-a-3-i msd	Date Collected: 1/3/2020 7:46:34 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

 Replicate Data: 570-16002-a-3-i msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0012	1.21	0.0133	0.0700	0.0134	7:47:39 PM	Yes
2	0.0012	1.21	0.0133	0.0708	0.0134	7:48:24 PM	Yes
Mean:	0.0012	1.21	0.0133				
SD:	0.00000	0.000	0.0000				
%RSD:	0.02%	0.02%	0.02				

=====

Sequence No.: 7	Autosampler Location: 146
Sample ID: 570-16954-a-2-i	Date Collected: 1/3/2020 7:48:52 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

 Replicate Data: 570-16954-a-2-i Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0790	0.0009	0.0045	0.0009	7:49:58 PM	Yes
2	0.0001	0.0573	0.0007	0.0036	0.0007	7:50:43 PM	Yes
Mean:	0.0001	0.0682	0.0008				
SD:	0.00002	0.01535	0.0002				
%RSD:	22.52%	22.52%	21.64				

=====

Sequence No.: 8	Autosampler Location: 147
Sample ID: 570-16001-a-3-g	Date Collected: 1/3/2020 7:51:10 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

 Replicate Data: 570-16001-a-3-g Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0514	51.4	0.5644	3.1096	0.5644	7:52:16 PM	Yes
Sample concentration is greater than that of the highest standard.							
2	0.0516	51.6	0.5669	3.1498	0.5669	7:53:01 PM	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	0.0515	51.5	0.5656				
SD:	0.00016	0.16	0.0018				
%RSD:	0.31%	0.31%	0.31				
Sample concentration is greater than that of the highest standard.							

Sequence No.: 9
Sample ID: 570-16954-a-1-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 148
Date Collected: 1/3/2020 7:53:28 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16954-a-1-f
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.95	0.0214	0.0736	0.0215	7:54:35 PM	Yes
2	0.0002	0.239	0.0027	0.0135	0.0027	7:55:20 PM	Yes
Mean:	0.0011	1.10	0.0121				
SD:	0.00121	1.210	0.0133				
%RSD:	110.51%	110.51%	110.24				

Sequence No.: 10
Sample ID: 570-16954-a-3-g
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 149
Date Collected: 1/3/2020 7:55:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16954-a-3-g
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0722	0.0008	0.0033	0.0009	7:56:54 PM	Yes
2	0.0000	0.0329	0.0004	0.0006	0.0004	7:57:39 PM	Yes
Mean:	0.0001	0.0526	0.0006				
SD:	0.00003	0.02777	0.0003				
%RSD:	52.83%	52.83%	50.20				

Sequence No.: 11
Sample ID: ccv 570-42609_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 1/3/2020 7:58:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42609_10-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0016	1.63	0.0179	0.0926	0.0180	7:59:12 PM	Yes
2	0.0017	1.68	0.0185	0.0978	0.0185	7:59:58 PM	Yes
Mean:	0.0017	1.65	0.0182				
SD:	0.00004	0.035	0.0004				
%RSD:	2.14%	2.14%	2.14				

QC value within limits for Hg 253.7 Recovery = 82.74%
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: ccb 570-42609_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 1/3/2020 8:00:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42609_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.141	0.0016	0.0061	0.0016	8:01:29 PM	Yes
2	0.0001	0.0990	0.0011	0.0050	0.0012	8:02:14 PM	Yes
Mean:	0.0001	0.120	0.0013				
SD:	0.00003	0.0294	0.0003				
%RSD:	24.57%	24.57%	24.01				

QC value greater than the upper limit for Hg 253.7 Recovery = Not calculated
QC Failed. Retry.

Sequence No.: 13

Autosampler Location: 1

Sample ID: ccb 570-42609_11-a

Date Collected: 1/3/2020 8:02:40 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42609_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0929	0.0010	0.0045	0.0011	8:03:44 PM	Yes
2	0.0001	0.0957	0.0011	0.0054	0.0011	8:04:28 PM	Yes
Mean:	0.0001	0.0943	0.0011				
SD:	0.00000	0.00200	0.0000				
%RSD:	2.12%	2.12%	2.06				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 14

Autosampler Location: 150

Sample ID: lb 570-39627_1-d

Date Collected: 1/3/2020 8:04:54 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lb 570-39627_1-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0953	0.0011	0.0049	0.0011	8:06:00 PM	Yes
2	0.0001	0.0949	0.0011	0.0056	0.0011	8:06:45 PM	Yes
Mean:	0.0001	0.0951	0.0011				
SD:	0.00000	0.00027	0.0000				
%RSD:	0.29%	0.29%	0.28				

Sequence No.: 15

Autosampler Location: 151

Sample ID: lcs 570-39627_2-d

Date Collected: 1/3/2020 8:07:13 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcs 570-39627_2-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0042	4.25	0.0467	0.2421	0.0467	8:08:18 PM	Yes
2	0.0043	4.29	0.0471	0.2456	0.0471	8:09:03 PM	Yes
Mean:	0.0043	4.27	0.0469				
SD:	0.00003	0.027	0.0003				
%RSD:	0.62%	0.62%	0.62				

Sequence No.: 16

Autosampler Location: 152

Sample ID: lcsd 570-39627_3-d

Date Collected: 1/3/2020 8:09:31 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcsd 570-39627_3-d

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0043	4.29	0.0472	0.2464	0.0472	8:10:37 PM	Yes
2	0.0043	4.32	0.0475	0.2466	0.0475	8:11:22 PM	Yes
Mean:	0.0043	4.31	0.0473				
SD:	0.00002	0.017	0.0002				
%RSD:	0.40%	0.40%	0.40				

Sequence No.: 17

Autosampler Location: 153

Sample ID: 570-15848-b-1-q

Date Collected: 1/3/2020 8:11:50 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15848-b-1-q

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.204	0.0023	0.0086	0.0023	8:12:57 PM	Yes
2	0.0001	0.0935	0.0011	0.0052	0.0011	8:13:42 PM	Yes
Mean:	0.0001	0.149	0.0017				
SD:	0.00008	0.0779	0.0009				
%RSD:	52.42%	52.42%	51.46				

Sequence No.: 18

Autosampler Location: 154

Sample ID: 570-15848-b-2-g

Date Collected: 1/3/2020 8:14:10 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-15848-b-2-g

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0377	0.0004	0.0006	0.0005	8:15:15 PM	Yes
2	0.0000	0.0370	0.0004	0.0024	0.0005	8:16:00 PM	Yes
Mean:	0.0000	0.0374	0.0004				
SD:	0.00000	0.00047	0.0000				
%RSD:	1.25%	1.25%	1.16				

Sequence No.: 19

Autosampler Location: 144

Sample ID: 570-16002-a-3-h ms

Date Collected: 1/3/2020 8:16:28 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16002-a-3-h ms

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0012	1.24	0.0137	0.0711	0.0137	8:17:34 PM	Yes
2	0.0013	1.26	0.0138	0.0726	0.0139	8:18:19 PM	Yes
Mean:	0.0013	1.25	0.0138				
SD:	0.00001	0.012	0.0001				
%RSD:	0.95%	0.95%	0.95				

Sequence No.: 20

Autosampler Location: 5

Sample ID: ccv 570-42609_10-a

Date Collected: 1/3/2020 8:18:47 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42609_10-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	------------------	----------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0140	0.0001	0.0017	0.0001	3:37:11 PM	Yes
2	0.0000	0.0129	0.0001	0.0013	0.0001	3:37:57 PM	Yes
Mean:	0.0000	0.0134	0.0001				
SD:	0.00000	0.00082	0.0000				
%RSD:	6.10%	6.10%	6.32				

```

=====
Sequence No.: 9                               Autosampler Location: 43
Sample ID: 570-16420-e-2-e@100              Date Collected: 1/6/2020 3:38:24 PM
Analyst: 1174 HG-8                          Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                   Sample Prep Vol:
Wash Time (before sample): 0                Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16420-e-2-e@100          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0001      0.105    0.0011   0.0053 0.0011 3:39:29 PM  Yes
2      0.0001      0.131    0.0014   0.0071 0.0014 3:40:14 PM  Yes
Mean:  0.0001      0.118    0.0013
SD:    0.00002     0.0186   0.0002
%RSD:  15.77%     15.77%  15.84
=====

```

```

=====
Sequence No.: 10                             Autosampler Location: 44
Sample ID: 570-16420-d-3-c                  Date Collected: 1/6/2020 3:40:40 PM
Analyst: 1174 HG-8                         Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                   Sample Prep Vol:
Wash Time (before sample): 0                Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16420-d-3-c             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0000      0.0213   0.0002   0.0025 0.0002 3:41:46 PM  Yes
2      0.0000      0.0095   0.0001  -0.0010 0.0001 3:42:31 PM  Yes
Mean:  0.0000      0.0154   0.0002
SD:    0.00001     0.00834  0.0001
%RSD:  54.17%     54.17%  55.86
=====

```

```

=====
Sequence No.: 11                             Autosampler Location: 5
Sample ID: ccv 570-42889_10-a              Date Collected: 1/6/2020 3:42:57 PM
Analyst: 1174 HG-8                         Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                   Sample Prep Vol:
Wash Time (before sample): 0                Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-42889_10-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0020      1.98     0.0214   0.0984 0.0214 3:44:03 PM  Yes
2      0.0020      2.03     0.0219   0.1013 0.0218 3:44:49 PM  Yes
Mean:  0.0020      2.00     0.0216
SD:    0.00003     0.031    0.0003
%RSD:  1.53%      1.53%    1.54
=====

```

QC value within limits for Hg 253.7 Recovery = 100.24%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                             Autosampler Location: 1
Sample ID: ccb 570-42889_11-a              Date Collected: 1/6/2020 3:45:16 PM
Analyst: 1174 HG-8                         Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                   Sample Prep Vol:
Wash Time (before sample): 0                Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-42889_11-a         Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height

```

1	0.0001	0.0633	0.0007	0.0040	0.0007	3:46:19 PM	Yes
2	0.0001	0.0811	0.0009	0.0050	0.0009	3:47:06 PM	Yes
Mean:	0.0001	0.0722	0.0008				
SD:	0.00001	0.01263	0.0001				
%RSD:	17.50%	17.50%	17.61				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 45
Sample ID: 570-16420-d-4-c                    Date Collected: 1/6/2020 3:47:32 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16420-d-4-c                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0233   0.0002   0.0015 0.0002 3:48:36 PM  Yes
2      0.0000     0.0121   0.0001   -0.0001 0.0001 3:49:22 PM  Yes
Mean:  0.0000     0.0177   0.0002
SD:    0.00001     0.00796  0.0001
%RSD:  45.00%     45.00%   46.21
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 46
Sample ID: mb 570-42439_1-a                   Date Collected: 1/6/2020 3:49:48 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: mb 570-42439_1-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0747   0.0008   0.0039 0.0008 3:50:54 PM  Yes
2      0.0001     0.0932   0.0010   0.0038 0.0010 3:51:39 PM  Yes
Mean:  0.0001     0.0840   0.0009
SD:    0.00001     0.01306  0.0001
%RSD:  15.55%     15.55%   15.64
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 47
Sample ID: lcs 570-42439_2-a                  Date Collected: 1/6/2020 3:52:06 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: lcs 570-42439_2-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0049     4.90     0.0528   0.2458 0.0528 3:53:11 PM  Yes
2      0.0049     4.90     0.0528   0.2522 0.0528 3:53:57 PM  Yes
Mean:  0.0049     4.90     0.0528
SD:    0.00000     0.002    0.0000
%RSD:  0.03%     0.03%    0.03
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 48
Sample ID: lcsd 570-42439_3-a                 Date Collected: 1/6/2020 3:54:24 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: lcsd 570-42439_3-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0049     4.93     0.0532   0.2468 0.0532 3:55:29 PM  Yes
=====
  
```

2 0.0049 4.89 0.0528 0.2515 0.0528 3:56:15 PM Yes
 Mean: 0.0049 4.91 0.0530
 SD: 0.00003 0.030 0.0003
 %RSD: 0.61% 0.61% 0.61

=====
 Sequence No.: 17 Autosampler Location: 49
 Sample ID: 570-16301-a-3-i Date Collected: 1/6/2020 3:56:42 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16301-a-3-i Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0007	0.674	0.0073	0.0381	0.0073	3:57:47 PM	Yes
2	0.0007	0.664	0.0072	0.0351	0.0071	3:58:33 PM	Yes
Mean:	0.0007	0.669	0.0072				
SD:	0.00001	0.0072	0.0001				
%RSD:	1.08%	1.08%	1.08				

=====
 Sequence No.: 18 Autosampler Location: 50
 Sample ID: 570-16301-a-3-j ms Date Collected: 1/6/2020 3:58:59 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16301-a-3-j ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.57	0.0493	0.2529	0.0493	4:00:04 PM	Yes
2	0.0048	4.84	0.0522	0.2663	0.0522	4:00:49 PM	Yes
Mean:	0.0047	4.70	0.0507				
SD:	0.00019	0.189	0.0020				
%RSD:	4.02%	4.02%	4.02				

=====
 Sequence No.: 19 Autosampler Location: 51
 Sample ID: 570-16301-a-3-k msd Date Collected: 1/6/2020 4:01:15 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16301-a-3-k msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.79	0.0516	0.2628	0.0516	4:02:21 PM	Yes
2	0.0049	4.90	0.0528	0.2687	0.0528	4:03:06 PM	Yes
Mean:	0.0048	4.84	0.0522				
SD:	0.00008	0.078	0.0008				
%RSD:	1.61%	1.61%	1.61				

=====
 Sequence No.: 20 Autosampler Location: 52
 Sample ID: 570-16837-a-3-d Date Collected: 1/6/2020 4:03:33 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16837-a-3-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.284	0.0031	0.0157	0.0030	4:04:38 PM	Yes
2	0.0001	0.0694	0.0007	0.0039	0.0007	4:05:23 PM	Yes
Mean:	0.0002	0.177	0.0019				
SD:	0.00015	0.1515	0.0016				

%RSD: 85.81% 85.81% 86.03

```

=====
Sequence No.: 21                               Autosampler Location: 53
Sample ID: 570-16503-a-1-c                    Date Collected: 1/6/2020 4:05:50 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-16503-a-1-c                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0001     0.0787    0.0008   0.0037 0.0008  4:06:55 PM  Yes
2      0.0001     0.0831    0.0009   0.0039 0.0009  4:07:40 PM  Yes
Mean:  0.0001     0.0809    0.0009
SD:    0.00000    0.00313   0.0000
%RSD:  3.86%     3.86%     3.89

```

```

=====
Sequence No.: 22                               Autosampler Location: 54
Sample ID: 570-16503-a-2-f                    Date Collected: 1/6/2020 4:08:07 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-16503-a-2-f                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0005     0.461     0.0050   0.0240 0.0050  4:09:12 PM  Yes
2      0.0005     0.499     0.0054   0.0263 0.0054  4:09:58 PM  Yes
Mean:  0.0005     0.480     0.0052
SD:    0.00003    0.0272    0.0003
%RSD:  5.67%     5.67%     5.68

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-42889_10-a                 Date Collected: 1/6/2020 4:10:24 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccv 570-42889_10-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0020     2.03      0.0219   0.1032 0.0219  4:11:30 PM  Yes
2      0.0020     2.00      0.0215   0.1040 0.0215  4:12:16 PM  Yes
Mean:  0.0020     2.01      0.0217
SD:    0.00002    0.022     0.0002
%RSD:  1.10%     1.10%     1.10

```

QC value within limits for Hg 253.7 Recovery = 100.60%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-42889_11-a                 Date Collected: 1/6/2020 4:12:43 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000

```

```

-----
Replicate Data: ccb 570-42889_11-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0000     0.0274    0.0003   0.0023 0.0003  4:13:47 PM  Yes
2      0.0000     0.0103    0.0001   -0.0014 0.0001  4:14:32 PM  Yes
Mean:  0.0000     0.0188    0.0002
SD:    0.00001    0.01210   0.0001
%RSD:  64.24%     64.24%     65.86

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 55
Sample ID: 570-16503-a-4-f Date Collected: 1/6/2020 4:14:58 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16503-a-4-f Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0006	0.562	0.0061	0.0324	0.0061	4:16:04 PM	Yes
2	0.0006	0.579	0.0062	0.0302	0.0062	4:16:49 PM	Yes
Mean:	0.0006	0.571	0.0062				
SD:	0.00001	0.0121	0.0001				
%RSD:	2.12%	2.12%	2.12				

Sequence No.: 26 Autosampler Location: 56
Sample ID: 570-16503-a-6-e Date Collected: 1/6/2020 4:17:16 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16503-a-6-e Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.533	0.0057	0.0271	0.0057	4:18:20 PM	Yes
2	0.0005	0.536	0.0058	0.0262	0.0058	4:19:06 PM	Yes
Mean:	0.0005	0.535	0.0058				
SD:	0.00000	0.0018	0.0000				
%RSD:	0.34%	0.34%	0.34				

Sequence No.: 27 Autosampler Location: 57
Sample ID: 570-16879-b-1-a Date Collected: 1/6/2020 4:19:32 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16879-b-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.258	0.0028	0.0139	0.0028	4:20:38 PM	Yes
2	0.0002	0.245	0.0026	0.0125	0.0026	4:21:24 PM	Yes
Mean:	0.0003	0.252	0.0027				
SD:	0.00001	0.0096	0.0001				
%RSD:	3.82%	3.82%	3.83				

Sequence No.: 28 Autosampler Location: 58
Sample ID: 570-16582-a-1-e Date Collected: 1/6/2020 4:21:50 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-16582-a-1-e Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.499	0.0054	0.0288	0.0054	4:22:56 PM	Yes
2	0.0005	0.516	0.0056	0.0279	0.0056	4:23:41 PM	Yes
Mean:	0.0005	0.508	0.0055				
SD:	0.00001	0.0122	0.0001				
%RSD:	2.40%	2.40%	2.40				

```

=====
Sequence No.: 29                               Autosampler Location: 59
Sample ID: 570-16582-a-2-d                    Date Collected: 1/6/2020 4:24:08 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-16582-a-2-d                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height    Height    Stored
1      0.0001       0.149     0.0016   0.0074    0.0016   4:25:14 PM  Yes
2      0.0001       0.138     0.0015   0.0070    0.0015   4:25:59 PM  Yes
Mean:  0.0001       0.143     0.0015
SD:    0.00001      0.0073    0.0001
%RSD:  5.12%       5.12%     5.14

```

```

=====
Sequence No.: 30                               Autosampler Location: 60
Sample ID: 570-11188-a-3-f                    Date Collected: 1/6/2020 4:26:26 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-11188-a-3-f                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height    Height    Stored
1      0.0005       0.479     0.0052   0.0244    0.0052   4:27:32 PM  Yes
2      0.0005       0.499     0.0054   0.0258    0.0054   4:28:17 PM  Yes
Mean:  0.0005       0.489     0.0053
SD:    0.00001      0.0142    0.0002
%RSD:  2.89%       2.89%     2.90

```

```

=====
Sequence No.: 31                               Autosampler Location: 61
Sample ID: 570-11188-a-4-e                    Date Collected: 1/6/2020 4:28:43 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-11188-a-4-e                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height    Height    Stored
1      0.0001       0.0748    0.0008   0.0034    0.0008   4:29:49 PM  Yes
2      0.0001       0.0564    0.0006   0.0017    0.0006   4:30:34 PM  Yes
Mean:  0.0001       0.0656    0.0007
SD:    0.00001      0.01300   0.0001
%RSD:  19.81%       19.81%    19.96

```

```

=====
Sequence No.: 32                               Autosampler Location: 62
Sample ID: 570-11188-a-5-f                    Date Collected: 1/6/2020 4:31:00 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: 570-11188-a-5-f                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height    Height    Stored
1      0.0000       0.0374    0.0004   0.0023    0.0004   4:32:05 PM  Yes
2      0.0000       0.0480    0.0005   0.0042    0.0005   4:32:51 PM  Yes
Mean:  0.0000       0.0427    0.0005
SD:    0.00001      0.00751   0.0001
%RSD:  17.59%       17.59%    17.78

```

```

=====
Sequence No.: 33                               Autosampler Location: 63
Sample ID: 570-11188-a-6-e                    Date Collected: 1/6/2020 4:33:17 PM

```

Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-11188-a-6-e

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0374	0.0004	0.0003	0.0004	4:34:22 PM	Yes
2	0.0000	0.0357	0.0004	0.0005	0.0004	4:35:07 PM	Yes
Mean:	0.0000	0.0365	0.0004				
SD:	0.00000	0.00120	0.0000				
%RSD:	3.28%	3.28%	3.33				

=====
Sequence No.: 34
Sample ID: 570-11188-a-7-k
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 64
Date Collected: 1/6/2020 4:35:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-11188-a-7-k

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0360	0.0004	0.0010	0.0004	4:36:38 PM	Yes
2	0.0000	0.0309	0.0003	0.0007	0.0003	4:37:23 PM	Yes
Mean:	0.0000	0.0334	0.0004				
SD:	0.00000	0.00359	0.0000				
%RSD:	10.75%	10.75%	10.90				

=====
Sequence No.: 35
Sample ID: ccv 570-42889_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 1/6/2020 4:37:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42889_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.00	0.0215	0.0994	0.0215	4:38:55 PM	Yes
2	0.0020	1.99	0.0215	0.1015	0.0215	4:39:40 PM	Yes
Mean:	0.0020	2.00	0.0215				
SD:	0.00000	0.002	0.0000				
%RSD:	0.10%	0.10%	0.10				

QC value within limits for Hg 253.7 Recovery = 99.80%
All analyte(s) passed QC.

=====
Sequence No.: 36
Sample ID: ccb 570-42889_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 1/6/2020 4:40:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42889_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0195	0.0002	0.0010	0.0002	4:41:11 PM	Yes
2	0.0000	0.0144	0.0002	0.0006	0.0001	4:41:56 PM	Yes
Mean:	0.0000	0.0169	0.0002				
SD:	0.00000	0.00360	0.0000				
%RSD:	21.28%	21.28%	21.88				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 37

Autosampler Location: 65

Sample ID: 570-11188-a-10-e
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 1/6/2020 4:42:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-11188-a-10-e

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0403	0.0004	0.0013	0.0004	4:43:26 PM	Yes
2	0.0000	0.0433	0.0005	0.0018	0.0005	4:44:11 PM	Yes
Mean:	0.0000	0.0418	0.0004				
SD:	0.00000	0.00212	0.0000				
%RSD:	5.08%	5.08%	5.13				

=====

Sequence No.: 38

Autosampler Location: 66

Sample ID: 570-11188-a-11-m
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 1/6/2020 4:44:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-11188-a-11-m

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0318	0.0003	0.0030	0.0003	4:45:43 PM	Yes
2	0.0000	0.0233	0.0002	0.0008	0.0002	4:46:27 PM	Yes
Mean:	0.0000	0.0275	0.0003				
SD:	0.00001	0.00604	0.0001				
%RSD:	21.93%	21.93%	22.31				

=====

Sequence No.: 39

Autosampler Location: 67

Sample ID: 570-11188-a-14-e
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 1/6/2020 4:46:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-11188-a-14-e

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0867	0.0009	0.0043	0.0009	4:47:58 PM	Yes
2	0.0001	0.0934	0.0010	0.0051	0.0010	4:48:44 PM	Yes
Mean:	0.0001	0.0901	0.0010				
SD:	0.00000	0.00475	0.0001				
%RSD:	5.28%	5.28%	5.31				

=====

Sequence No.: 40

Autosampler Location: 68

Sample ID: 570-11188-a-15-e
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 1/6/2020 4:49:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-11188-a-15-e

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0776	0.0008	0.0051	0.0008	4:50:15 PM	Yes
2	0.0001	0.0732	0.0008	0.0045	0.0008	4:51:01 PM	Yes
Mean:	0.0001	0.0754	0.0008				
SD:	0.00000	0.00310	0.0000				
%RSD:	4.11%	4.11%	4.14				

=====

Sequence No.: 41

Autosampler Location: 69

Sample ID: 570-11188-a-16-e
Analyst: 1174 HG-8
Initial Sample Wt:

Date Collected: 1/6/2020 4:51:27 PM
Data Type: Original
Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-11188-a-16-e

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 42

Autosampler Location: 70

Sample ID: 570-11188-a-18-f

Date Collected: 1/6/2020 4:53:43 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-11188-a-18-f

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 43

Autosampler Location: 5

Sample ID: ccv 570-42889_10-a

Date Collected: 1/6/2020 4:56:00 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42889_10-a

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

QC value within limits for Hg 253.7 Recovery = 98.82%
All analyte(s) passed QC.

Sequence No.: 44

Autosampler Location: 1

Sample ID: ccb 570-42889_11-a

Date Collected: 1/6/2020 4:58:17 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42889_11-a

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Replicate Data: 570-16773-c-1-g

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.127	0.0014	0.0064	0.0014	5:21:58 PM	Yes
2	0.0001	0.0946	0.0010	0.0060	0.0010	5:22:44 PM	Yes
Mean:	0.0001	0.111	0.0012				
SD:	0.00002	0.0228	0.0002				
%RSD:	20.61%	20.61%	20.69				

Sequence No.: 5

Autosampler Location: 75

Sample ID: 570-16773-c-1-h ms

Date Collected: 1/6/2020 5:23:10 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16773-c-1-h ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.368	0.0040	0.0177	0.0040	5:24:16 PM	Yes
2	0.0004	0.359	0.0039	0.0178	0.0039	5:25:01 PM	Yes
Mean:	0.0004	0.363	0.0039				
SD:	0.00001	0.0061	0.0001				
%RSD:	1.68%	1.68%	1.68				

Sequence No.: 6

Autosampler Location: 76

Sample ID: 570-16773-c-1-i msd

Date Collected: 1/6/2020 5:25:28 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16773-c-1-i msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.81	0.0196	0.0944	0.0195	5:26:34 PM	Yes
2	0.0018	1.78	0.0192	0.0956	0.0192	5:27:20 PM	Yes
Mean:	0.0018	1.80	0.0194				
SD:	0.00002	0.024	0.0003				
%RSD:	1.33%	1.33%	1.33				

Sequence No.: 7

Autosampler Location: 77

Sample ID: 570-16773-c-2-c

Date Collected: 1/6/2020 5:27:47 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16773-c-2-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.122	0.0013	0.0043	0.0013	5:28:52 PM	Yes
2	0.0001	0.108	0.0012	0.0061	0.0012	5:29:38 PM	Yes
Mean:	0.0001	0.115	0.0012				
SD:	0.00001	0.0102	0.0001				
%RSD:	8.86%	8.86%	8.90				

Sequence No.: 8

Autosampler Location: 78

Sample ID: 570-16773-c-3-c

Date Collected: 1/6/2020 5:30:04 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16773-c-3-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.101	0.0011	0.0054	0.0011	5:31:09 PM	Yes
2	0.0001	0.0986	0.0011	0.0058	0.0011	5:31:55 PM	Yes
Mean:	0.0001	0.0999	0.0011				
SD:	0.00000	0.00179	0.0000				
%RSD:	1.79%	1.79%	1.80				

Sequence No.: 9
Sample ID: 570-16773-c-1-h ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 79
Date Collected: 1/6/2020 5:32:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16773-c-1-h ms Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0018	1.76	0.0189	0.0914	0.0189	5:33:27 PM	Yes
2	0.0018	1.77	0.0190	0.0924	0.0190	5:34:13 PM	Yes
Mean:	0.0018	1.76	0.0190				
SD:	0.00001	0.007	0.0001				
%RSD:	0.38%	0.38%	0.38				

Sequence No.: 10
Sample ID: mb 570-42489_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 80
Date Collected: 1/6/2020 5:34:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-42489_1-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.147	0.0016	0.0082	0.0016	5:35:45 PM	Yes
2	0.0002	0.157	0.0017	0.0093	0.0017	5:36:31 PM	Yes
Mean:	0.0002	0.152	0.0016				
SD:	0.00001	0.0069	0.0001				
%RSD:	4.55%	4.55%	4.56				

Sequence No.: 11
Sample ID: ccv 570-42889_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 1/6/2020 5:36:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42889_10-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0020	2.00	0.0215	0.1035	0.0215	5:38:03 PM	Yes
2	0.0020	2.02	0.0218	0.1067	0.0218	5:38:49 PM	Yes
Mean:	0.0020	2.01	0.0217				
SD:	0.00001	0.014	0.0002				
%RSD:	0.72%	0.72%	0.72				

QC value within limits for Hg 253.7 Recovery = 100.40%
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: ccb 570-42889_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 1/6/2020 5:39:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42889_11-a Analyte: Hg 253.7

Repl	SampleConc	StndConc	Blncorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored

1	0.0001	0.0857	0.0009	0.0045	0.0009	5:40:21 PM	Yes
2	0.0001	0.111	0.0012	0.0057	0.0012	5:41:07 PM	Yes
Mean:	0.0001	0.0985	0.0011				
SD:	0.00002	0.01806	0.0002				
%RSD:	18.34%	18.34%	18.43				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 81
Sample ID: lcs 570-42489_2-a                 Date Collected: 1/6/2020 5:41:33 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: lcs 570-42489_2-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0048     4.81     0.0519   0.2479 0.0518 5:42:38 PM  Yes
2      0.0048     4.85     0.0523   0.2538 0.0523 5:43:24 PM  Yes
Mean:  0.0048     4.83     0.0521
SD:    0.00003     0.028    0.0003
%RSD:  0.58%     0.58%    0.58
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 82
Sample ID: lcsd 570-42489_3-a                 Date Collected: 1/6/2020 5:43:50 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: lcsd 570-42489_3-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0049     4.86     0.0524   0.2516 0.0524 5:44:55 PM  Yes
2      0.0048     4.83     0.0521   0.2550 0.0521 5:45:41 PM  Yes
Mean:  0.0048     4.84     0.0522
SD:    0.00002     0.020    0.0002
%RSD:  0.42%     0.42%    0.42
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 83
Sample ID: 570-16985-a-1-b                 Date Collected: 1/6/2020 5:46:07 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16985-a-1-b           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0007     0.743    0.0080   0.0413 0.0080 5:47:12 PM  Yes
2      0.0007     0.713    0.0077   0.0386 0.0077 5:47:57 PM  Yes
Mean:  0.0007     0.728    0.0078
SD:    0.00002     0.0213   0.0002
%RSD:  2.93%     2.93%    2.93
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 84
Sample ID: 570-16985-a-1-c ms                 Date Collected: 1/6/2020 5:48:24 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-16985-a-1-c ms           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0045     4.53     0.0489   0.2503 0.0489 5:49:29 PM  Yes
=====
  
```

2 0.0050 4.97 0.0536 0.2720 0.0536 5:50:14 PM Yes
 Mean: 0.0048 4.75 0.0512
 SD: 0.00031 0.311 0.0034
 %RSD: 6.54% 6.54% 6.54

=====
 Sequence No.: 17 Autosampler Location: 85
 Sample ID: 570-16985-a-1-d msd Date Collected: 1/6/2020 5:50:41 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16985-a-1-d msd Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0048 4.82 0.0520 0.2654 0.0520 5:51:46 PM Yes
 2 0.0049 4.89 0.0528 0.2682 0.0528 5:52:31 PM Yes
 Mean: 0.0049 4.86 0.0524
 SD: 0.00005 0.049 0.0005
 %RSD: 1.01% 1.01% 1.02

=====
 Sequence No.: 18 Autosampler Location: 86
 Sample ID: 570-16983-a-1-b Date Collected: 1/6/2020 5:52:58 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16983-a-1-b Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0008 0.797 0.0086 0.0481 0.0086 5:54:03 PM Yes
 2 0.0006 0.585 0.0063 0.0340 0.0063 5:54:49 PM Yes
 Mean: 0.0007 0.691 0.0074
 SD: 0.00015 0.1497 0.0016
 %RSD: 21.67% 21.67% 21.68

=====
 Sequence No.: 19 Autosampler Location: 87
 Sample ID: 570-16960-a-1-e Date Collected: 1/6/2020 5:55:15 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16960-a-1-e Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0006 0.592 0.0064 0.0336 0.0064 5:56:21 PM Yes
 2 0.0005 0.505 0.0054 0.0288 0.0054 5:57:06 PM Yes
 Mean: 0.0005 0.548 0.0059
 SD: 0.00006 0.0615 0.0007
 %RSD: 11.21% 11.21% 11.22

=====
 Sequence No.: 20 Autosampler Location: 88
 Sample ID: 570-16961-a-1-b Date Collected: 1/6/2020 5:57:33 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-16961-a-1-b Analyte: Hg 253.7
 Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
 # mg/L ug/L Signal Area Height Stored
 1 0.0003 0.347 0.0037 0.0215 0.0037 5:58:38 PM Yes
 2 0.0003 0.254 0.0027 0.0138 0.0027 5:59:24 PM Yes
 Mean: 0.0003 0.301 0.0032
 SD: 0.00007 0.0659 0.0007

%RSD: 21.91% 21.91% 21.94

```

=====
Sequence No.: 21                               Autosampler Location: 89
Sample ID: 570-16962-a-1-c                    Date Collected: 1/6/2020 5:59:50 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16962-a-1-c                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0003       0.282     0.0030    0.0162    0.0030    6:00:56 PM  Yes
2      0.0003       0.305     0.0033    0.0166    0.0033    6:01:41 PM  Yes
Mean:  0.0003       0.294     0.0032
SD:    0.00002      0.0166    0.0002
%RSD:  5.65%       5.65%     5.66
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 90
Sample ID: 570-16599-a-15-f                   Date Collected: 1/6/2020 6:02:07 PM
Analyst: 1174 HG-8                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16599-a-15-f                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      2.225e-3082.225e-30812:00:00 AM  Yes
=====

```

FIMS-400: Computer unable to communicate with the FIAS.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200104H1.sifx

Batch ID:

Results Data Set: 200104H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====

Sequence No.: 1
Sample ID: 570-16599-a-15-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.

Autosampler Location: 90
Date Collected: 1/6/2020 7:09:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200104H1.sifx

Batch ID:
Results Data Set: 200104H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: ccv 570-42889_10-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 1/6/2020 7:10:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42889_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0015	1.46	0.0157	-0.0091	0.0157	7:11:48 PM	Yes
2	0.0018	1.84	0.0199	0.0882	0.0199	7:12:34 PM	Yes
Mean:	0.0017	1.65	0.0178				
SD:	0.00027	0.271	0.0029				
%RSD:	16.40%	16.40%	16.41				

QC value within limits for Hg 253.7 Recovery = 82.59%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: ccb 570-42889_11-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/6/2020 7:13:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42889_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0609	0.0007	0.0042	0.0006	7:14:05 PM	Yes
2	0.0000	0.0360	0.0004	0.0008	0.0004	7:14:51 PM	Yes
Mean:	0.0000	0.0484	0.0005				
SD:	0.00002	0.01759	0.0002				
%RSD:	36.31%	36.31%	36.67				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: 570-16599-a-15-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 90
Date Collected: 1/6/2020 7:15:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16599-a-15-f Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.107	0.0012	0.0068	0.0011	7:16:22 PM	Yes

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200104H1.sifx

Batch ID:
Results Data Set: 200104H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-16599-a-15-f
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 90
Date Collected: 1/6/2020 7:18:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16599-a-15-f
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.106	0.0011	0.0049	0.0011	7:19:24 PM	Yes
2	0.0001	0.107	0.0012	0.0057	0.0011	7:20:10 PM	Yes
Mean:	0.0001	0.106	0.0011				
SD:	0.00000	0.0012	0.0000				
%RSD:	1.09%	1.09%	1.09				

=====
Sequence No.: 2
Sample ID: mb 570-42658_1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 91
Date Collected: 1/6/2020 7:20:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-42658_1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0565	0.0006	0.0031	0.0006	7:21:42 PM	Yes
2	0.0000	0.0471	0.0005	0.0020	0.0005	7:22:27 PM	Yes
Mean:	0.0001	0.0518	0.0006				
SD:	0.00001	0.00662	0.0001				
%RSD:	12.79%	12.79%	12.91				

=====
Sequence No.: 3
Sample ID: lcs 570-42658_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 92
Date Collected: 1/6/2020 7:22:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-42658_2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.62	0.0498	0.2414	0.0498	7:23:58 PM	Yes
2	0.0047	4.69	0.0506	0.2500	0.0506	7:24:44 PM	Yes
Mean:	0.0047	4.65	0.0502				
SD:	0.00005	0.051	0.0005				
%RSD:	1.09%	1.09%	1.09				

=====
Sequence No.: 4
Sample ID: lcsd 570-42658_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 93
Date Collected: 1/6/2020 7:25:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-42658_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.71	0.0508	0.2494	0.0508	7:26:15 PM	Yes
2	0.0047	4.71	0.0508	0.2517	0.0508	7:27:01 PM	Yes
Mean:	0.0047	4.71	0.0508				
SD:	0.00000	0.000	0.0000				
%RSD:	0.00%	0.00%	0.00				

Sequence No.: 5 Autosampler Location: 94
 Sample ID: 570-17031-a-1-b Date Collected: 1/6/2020 7:27:27 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-17031-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.172	0.0018	0.0093	0.0018	7:28:33 PM	Yes
2	0.0001	0.113	0.0012	0.0059	0.0012	7:29:18 PM	Yes
Mean:	0.0001	0.142	0.0015				
SD:	0.00004	0.0416	0.0004				
%RSD:	29.24%	29.24%	29.34				

Sequence No.: 6 Autosampler Location: 95
 Sample ID: 570-17031-a-1-c ms Date Collected: 1/6/2020 7:29:45 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-17031-a-1-c ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0041	4.12	0.0444	0.2261	0.0444	7:30:50 PM	Yes
2	0.0046	4.60	0.0497	0.2539	0.0497	7:31:35 PM	Yes
Mean:	0.0044	4.36	0.0470				
SD:	0.00034	0.343	0.0037				
%RSD:	7.87%	7.87%	7.87				

Sequence No.: 7 Autosampler Location: 96
 Sample ID: 570-17031-a-1-d msd Date Collected: 1/6/2020 7:32:02 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-17031-a-1-d msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0045	4.47	0.0482	0.2468	0.0482	7:33:07 PM	Yes
2	0.0046	4.63	0.0499	0.2560	0.0499	7:33:52 PM	Yes
Mean:	0.0045	4.55	0.0491				
SD:	0.00011	0.112	0.0012				
%RSD:	2.47%	2.47%	2.47				

Sequence No.: 8 Autosampler Location: 97
 Sample ID: 570-17031-a-2-b Date Collected: 1/6/2020 7:34:19 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-17031-a-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0005	0.468	0.0050	0.0267	0.0050	7:35:25 PM	Yes
2	0.0002	0.181	0.0019	0.0114	0.0019	7:36:10 PM	Yes
Mean:	0.0003	0.324	0.0035				
SD:	0.00020	0.2035	0.0022				
%RSD:	62.72%	62.72%	62.81				

```

=====
Sequence No.: 9                               Autosampler Location: 98
Sample ID: 570-17031-a-3-b                   Date Collected: 1/6/2020 7:36:37 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-17031-a-3-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0001      0.133    0.0014   0.0086 0.0014 7:37:42 PM  Yes
2      0.0001      0.137    0.0015   0.0073 0.0015 7:38:28 PM  Yes
Mean:  0.0001      0.135    0.0015
SD:    0.00000     0.0028   0.0000
%RSD:  2.07%      2.07%    2.08
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 99
Sample ID: 570-16906-a-3-f                   Date Collected: 1/6/2020 7:38:55 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16906-a-3-f               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0002      0.177    0.0019   0.0126 0.0019 7:40:01 PM  Yes
2      0.0002      0.152    0.0016   0.0108 0.0016 7:40:46 PM  Yes
Mean:  0.0002      0.165    0.0018
SD:    0.00002     0.0176   0.0002
%RSD:  10.68%     10.68%   10.71
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-42889_10-a                Date Collected: 1/6/2020 7:41:13 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-42889_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0019      1.94     0.0209   0.1003 0.0209 7:42:19 PM  Yes
2      0.0019      1.94     0.0209   0.1030 0.0209 7:43:05 PM  Yes
Mean:  0.0019      1.94     0.0209
SD:    0.00000     0.004    0.0000
%RSD:  0.20%      0.20%    0.20
=====

```

QC value within limits for Hg 253.7 Recovery = 96.90%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-42889_11-a                Date Collected: 1/6/2020 7:43:32 PM
Analyst: 1174 HG-8                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-42889_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height

```

1 0.0001 0.0582 0.0006 0.0045 0.0006 7:44:36 PM Yes
 2 0.0000 0.0396 0.0004 0.0021 0.0004 7:45:21 PM Yes
 Mean: 0.0000 0.0489 0.0005
 SD: 0.00001 0.01314 0.0001
 %RSD: 26.86% 26.86% 27.12

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
 Sequence No.: 13 Autosampler Location: 100
 Sample ID: 570-15416-a-10-b Date Collected: 1/6/2020 7:45:47 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-15416-a-10-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.149	0.0016	0.0087	0.0016	7:46:52 PM	Yes
2	0.0002	0.165	0.0018	0.0087	0.0018	7:47:38 PM	Yes
Mean:	0.0002	0.157	0.0017				
SD:	0.00001	0.0110	0.0001				
%RSD:	7.02%	7.02%	7.04				

=====
 Sequence No.: 14 Autosampler Location: 101
 Sample ID: 570-17013-a-1-e Date Collected: 1/6/2020 7:48:05 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17013-a-1-e Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0008	0.760	0.0082	0.0444	0.0082	7:49:11 PM	Yes
2	0.0008	0.799	0.0086	0.0452	0.0086	7:49:56 PM	Yes
Mean:	0.0008	0.779	0.0084				
SD:	0.00003	0.0278	0.0003				
%RSD:	3.57%	3.57%	3.58				

=====
 Sequence No.: 15 Autosampler Location: 102
 Sample ID: 570-17023-a-1-b Date Collected: 1/6/2020 7:50:24 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17023-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.130	0.0014	0.0087	0.0014	7:51:30 PM	Yes
2	0.0001	0.0807	0.0009	0.0047	0.0009	7:52:16 PM	Yes
Mean:	0.0001	0.106	0.0011				
SD:	0.00004	0.0352	0.0004				
%RSD:	33.31%	33.31%	33.46				

=====
 Sequence No.: 16 Autosampler Location: 103
 Sample ID: 570-17023-a-2-b Date Collected: 1/6/2020 7:52:43 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17023-a-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0771	0.0008	0.0026	0.0008	7:53:49 PM	Yes

2 0.0001 0.0864 0.0009 0.0041 0.0009 7:54:34 PM Yes
 Mean: 0.0001 0.0817 0.0009
 SD: 0.00001 0.00654 0.0001
 %RSD: 8.00% 8.00% 8.04

=====
 Sequence No.: 17 Autosampler Location: 104
 Sample ID: 570-17023-a-3-b Date Collected: 1/6/2020 7:55:02 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17023-a-3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0695	0.0007	0.0025	0.0007	7:56:08 PM	Yes
2	0.0001	0.0701	0.0008	0.0026	0.0007	7:56:54 PM	Yes
Mean:	0.0001	0.0698	0.0007				
SD:	0.00000	0.00037	0.0000				
%RSD:	0.53%	0.53%	0.54				

=====
 Sequence No.: 18 Autosampler Location: 105
 Sample ID: 570-17023-a-4-b Date Collected: 1/6/2020 7:57:22 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17023-a-4-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0961	0.0010	0.0046	0.0010	7:58:27 PM	Yes
2	0.0001	0.0974	0.0010	0.0041	0.0010	7:59:12 PM	Yes
Mean:	0.0001	0.0968	0.0010				
SD:	0.00000	0.00098	0.0000				
%RSD:	1.02%	1.02%	1.02				

=====
 Sequence No.: 19 Autosampler Location: 106
 Sample ID: 570-17023-a-5-b Date Collected: 1/6/2020 7:59:40 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17023-a-5-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0683	0.0007	0.0023	0.0007	8:00:46 PM	Yes
2	0.0001	0.0628	0.0007	0.0015	0.0007	8:01:31 PM	Yes
Mean:	0.0001	0.0655	0.0007				
SD:	0.00000	0.00388	0.0000				
%RSD:	5.92%	5.92%	5.96				

=====
 Sequence No.: 20 Autosampler Location: 107
 Sample ID: 570-17023-a-6-b Date Collected: 1/6/2020 8:01:58 PM
 Analyst: 1174 HG-8 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-17023-a-6-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0693	0.0007	0.0024	0.0007	8:03:04 PM	Yes
2	0.0001	0.0682	0.0007	0.0023	0.0007	8:03:48 PM	Yes
Mean:	0.0001	0.0688	0.0007				
SD:	0.00000	0.00074	0.0000				

%RSD: 1.08% 1.08% 1.08

Sequence No.: 21

Sample ID: ccv 570-42889_10-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 5

Date Collected: 1/6/2020 8:04:16 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42889_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.98	0.0214	0.1013	0.0214	8:05:21 PM	Yes
2	0.0020	2.00	0.0216	0.1038	0.0216	8:06:07 PM	Yes
Mean:	0.0020	1.99	0.0215				
SD:	0.00001	0.014	0.0002				
%RSD:	0.72%	0.72%	0.72				

QC value within limits for Hg 253.7 Recovery = 99.61%

All analyte(s) passed QC.

Sequence No.: 22

Sample ID: ccb 570-42889_11-a

Analyst: 1174 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 1/6/2020 8:06:34 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42889_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0480	0.0005	0.0010	0.0005	8:07:38 PM	Yes
2	0.0000	0.0319	0.0003	0.0001	0.0003	8:08:23 PM	Yes
Mean:	0.0000	0.0400	0.0004				
SD:	0.00001	0.01136	0.0001				
%RSD:	28.41%	28.41%	28.74				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-42889_6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0107	0.0477	0.0107	1:22:27 PM	Yes
2		[1.000]	0.0107	0.0494	0.0107	1:23:13 PM	Yes
Mean:		[1.000]	0.0107				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.12				

Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999942 Slope: 0.01061 Intercept: 0.00008

=====

Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-42889_7-a Date Collected: 1/6/2020 1:23:39 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-42889_7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0216	0.0966	0.0216	1:24:45 PM	Yes
2		[2.000]	0.0216	0.0987	0.0216	1:25:31 PM	Yes
Mean:		[2.000]	0.0216				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.04				

Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999965 Slope: 0.01074 Intercept: 0.00005

=====

Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-42889_8-a Date Collected: 1/6/2020 1:25:58 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-42889_8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0538	0.2450	0.0538	1:27:02 PM	Yes
2		[5.000]	0.0535	0.2470	0.0535	1:27:48 PM	Yes
Mean:		[5.000]	0.0536				
SD:		0.00000	0.0003				
%RSD:		0.00%	0.47				

Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999994 Slope: 0.01072 Intercept: 0.00006

=====

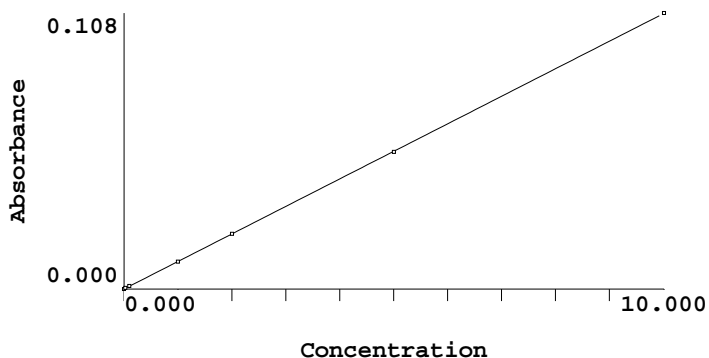
Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-42889_9-a Date Collected: 1/6/2020 1:28:14 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-42889_9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.000]	0.1086	0.4963	0.1085	1:29:18 PM	Yes
2		[10.000]	0.1075	0.4993	0.1075	1:30:03 PM	Yes
Mean:		[10.000]	0.1080				
SD:		0.00000	0.0008				
%RSD:		0.00%	0.70				

Standard number 6 applied. [10.000]

Correlation Coef.: 0.999993 Slope: 0.01079 Intercept: -0.00001



Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-42889_1-a	0.0000	0	0.0005	0.00	>999.9%
ic 570-42889_4-a	0.0004	0.025	0.0365	0.00	0.98
ic 570-42889_5-a	0.0012	0.100	0.1088	0.00	1.96
ic 570-42889_6-a	0.0107	1.000	0.9905	0.00	0.12
ic 570-42889_7-a	0.0216	2.000	2.0015	0.00	0.04
ic 570-42889_8-a	0.0536	5.000	4.9734	0.00	0.47
ic 570-42889_9-a	0.1080	10.000	10.0138	0.00	0.70

Correlation Coef.: 0.999993 Slope: 0.01079 Intercept: -0.00001

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200104H1.sifx

Batch ID:
Results Data Set: 200104H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-42889_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 1/6/2020 1:32:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-42889_2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0051 5.09 0.0549 0.2502 0.0549 1:33:23 PM Yes
2 0.0050 5.04 0.0543 0.2522 0.0543 1:34:09 PM Yes
Mean: 0.0051 5.06 0.0546
SD: 0.00004 0.041 0.0004
%RSD: 0.81% 0.81% 0.81
QC value within limits for Hg 253.7 Recovery = 101.30%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-42889_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/6/2020 1:34:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-42889_3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0000 0.0160 0.0002 0.0000 0.0002 1:35:39 PM Yes
2 0.0000 0.0063 0.0001 -0.0007 0.0001 1:36:25 PM Yes
Mean: 0.0000 0.0112 0.0001
SD: 0.00001 0.00686 0.0001
%RSD: 61.53% 61.53% 64.20
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-42889_12-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 1/6/2020 1:36:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-42889_12-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0005 0.261 0.0028 0.0120 0.0028 1:37:56 PM Yes
2 0.0005 0.254 0.0027 0.0113 0.0027 1:38:41 PM Yes
Mean: 0.0005 0.257 0.0028
SD: 0.00001 0.0048 0.0001
%RSD: 1.86% 1.86% 1.86

=====
Sequence No.: 4
Sample ID: ccv 570-42889_10-a
Analyst: 1174 HG-8
Autosampler Location: 5
Date Collected: 1/6/2020 1:39:07 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-42889_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.01	0.0217	0.0980	0.0217	1:40:13 PM	Yes
2	0.0020	2.01	0.0216	0.0989	0.0216	1:40:59 PM	Yes
Mean:	0.0020	2.01	0.0217				
SD:	0.00001	0.006	0.0001				
%RSD:	0.29%	0.29%	0.29				

QC value within limits for Hg 253.7 Recovery = 100.48%
 All analyte(s) passed QC.

=====

Sequence No.: 5	Autosampler Location: 1
Sample ID: ccb 570-42889_11-a	Date Collected: 1/6/2020 1:41:26 PM
Analyst: 1174 HG-8	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42889_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0091	0.0001	-0.0004	0.0001	1:42:30 PM	Yes
2	0.0000	0.0091	0.0001	-0.0000	0.0001	1:43:16 PM	Yes
Mean:	0.0000	0.0091	0.0001				
SD:	0.00000	0.00005	0.0000				
%RSD:	0.53%	0.53%	0.55				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200104H1.sifx

Batch ID:
Results Data Set: 200104H1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: icv 570-42889_2-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 1/6/2020 1:58:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-42889_2-a
Table with columns: Repl #, SampleConc (mg/L), StndConc (ug/L), BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Includes Mean, SD, %RSD and QC value information.

Sequence No.: 2
Sample ID: icb 570-42889_3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 1/6/2020 2:00:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-42889_3-a
Table with columns: Repl #, SampleConc (mg/L), StndConc (ug/L), BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Includes Mean, SD, %RSD and QC value information.

Sequence No.: 3
Sample ID: 570-16229-f-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 1/6/2020 2:03:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16229-f-1-a
Table with columns: Repl #, SampleConc (mg/L), StndConc (ug/L), BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Includes Mean, SD, %RSD and QC value information.

Sequence No.: 4
Sample ID: 570-16229-e-2-a
Analyst: 1174 HG-8
Autosampler Location: 11
Date Collected: 1/6/2020 2:05:28 PM
Data Type: Original

Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16229-e-2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.105	0.0011	0.0046	0.0011	2:06:34 PM	Yes
2	0.0001	0.104	0.0011	0.0044	0.0011	2:07:19 PM	Yes
Mean:	0.0001	0.104	0.0011				
SD:	0.00000	0.0007	0.0000				
%RSD:	0.69%	0.69%	0.69				

Sequence No.: 5
Sample ID: 570-16229-d-3-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 12
Date Collected: 1/6/2020 2:07:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16229-d-3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.269	0.0029	0.0128	0.0029	2:08:51 PM	Yes
2	0.0003	0.267	0.0029	0.0120	0.0029	2:09:36 PM	Yes
Mean:	0.0003	0.268	0.0029				
SD:	0.00000	0.0014	0.0000				
%RSD:	0.53%	0.53%	0.53				

Sequence No.: 6
Sample ID: 570-16229-d-4-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 13
Date Collected: 1/6/2020 2:10:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16229-d-4-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.154	0.0017	0.0065	0.0016	2:11:07 PM	Yes
2	0.0002	0.153	0.0016	0.0064	0.0016	2:11:53 PM	Yes
Mean:	0.0002	0.153	0.0016				
SD:	0.00000	0.0008	0.0000				
%RSD:	0.55%	0.55%	0.55				

Sequence No.: 7
Sample ID: 570-16232-f-1-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 14
Date Collected: 1/6/2020 2:12:20 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16232-f-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0685	0.0007	0.0031	0.0007	2:13:24 PM	Yes
2	0.0001	0.0673	0.0007	0.0023	0.0007	2:14:09 PM	Yes
Mean:	0.0001	0.0679	0.0007				
SD:	0.00000	0.00085	0.0000				
%RSD:	1.25%	1.25%	1.26				

Sequence No.: 8
Sample ID: 570-16232-f-1-b ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 15
Date Collected: 1/6/2020 2:14:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-16232-f-1-b ms

Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0002	0.155	0.0017	0.0086	0.0017	2:15:39 PM	Yes
2	0.0001	0.149	0.0016	0.0068	0.0016	2:16:25 PM	Yes
Mean:	0.0002	0.152	0.0016				
SD:	0.00000	0.0040	0.0000				
%RSD:	2.64%	2.64%	2.65				

Sequence No.: 9

Autosampler Location: 16

Sample ID: 570-16232-f-1-c msd

Date Collected: 1/6/2020 2:16:51 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16232-f-1-c msd

Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.147	0.0016	0.0049	0.0016	2:17:55 PM	Yes
2	0.0002	0.161	0.0017	0.0079	0.0017	2:18:41 PM	Yes
Mean:	0.0002	0.154	0.0017				
SD:	0.00001	0.0099	0.0001				
%RSD:	6.42%	6.42%	6.44				

Sequence No.: 10

Autosampler Location: 17

Sample ID: 570-16232-e-2-a

Date Collected: 1/6/2020 2:19:06 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16232-e-2-a

Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0001	0.0872	0.0009	0.0053	0.0009	2:20:10 PM	Yes
2	0.0001	0.0848	0.0009	0.0050	0.0009	2:20:56 PM	Yes
Mean:	0.0001	0.0860	0.0009				
SD:	0.00000	0.00171	0.0000				
%RSD:	1.99%	1.99%	2.00				

Sequence No.: 11

Autosampler Location: 18

Sample ID: 570-16232-d-3-a

Date Collected: 1/6/2020 2:21:22 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16232-d-3-a

Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0002	0.198	0.0021	0.0099	0.0021	2:22:27 PM	Yes
2	0.0002	0.198	0.0021	0.0092	0.0021	2:23:12 PM	Yes
Mean:	0.0002	0.198	0.0021				
SD:	0.00000	0.0001	0.0000				
%RSD:	0.05%	0.05%	0.05				

Sequence No.: 12

Autosampler Location: 19

Sample ID: 570-16232-d-4-a

Date Collected: 1/6/2020 2:23:38 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16232-d-4-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.159	0.0017	0.0077	0.0017	2:24:43 PM	Yes
2	0.0002	0.156	0.0017	0.0072	0.0017	2:25:29 PM	Yes
Mean:	0.0002	0.158	0.0017				
SD:	0.00000	0.0017	0.0000				
%RSD:	1.08%	1.08%	1.09				

Sequence No.: 13
 Sample ID: ccv 570-42889_10-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 1/6/2020 2:25:54 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42889_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.05	0.0221	0.0980	0.0221	2:27:00 PM	Yes
2	0.0020	2.05	0.0221	0.0983	0.0221	2:27:45 PM	Yes
Mean:	0.0020	2.05	0.0221				
SD:	0.00000	0.000	0.0000				
%RSD:	0.02%	0.02%	0.02				

QC value within limits for Hg 253.7 Recovery = 102.44%
 All analyte(s) passed QC.

Sequence No.: 14
 Sample ID: ccb 570-42889_11-a
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 1
 Date Collected: 1/6/2020 2:28:12 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42889_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0095	0.0001	-0.0006	0.0001	2:29:16 PM	Yes
2	0.0000	0.0091	0.0001	-0.0007	0.0001	2:30:01 PM	Yes
Mean:	0.0000	0.0093	0.0001				
SD:	0.00000	0.00029	0.0000				
%RSD:	3.16%	3.16%	3.33				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

Sequence No.: 15
 Sample ID: lcs 570-39627_2-d
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 20
 Date Collected: 1/6/2020 2:30:27 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: lcs 570-39627_2-d Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	5.03	0.0543	0.2427	0.0543	2:31:32 PM	Yes
2	0.0050	5.03	0.0542	0.2458	0.0542	2:32:17 PM	Yes
Mean:	0.0050	5.03	0.0543				
SD:	0.00001	0.005	0.0001				
%RSD:	0.11%	0.11%	0.11				

Sequence No.: 16
 Sample ID: lcsd 570-39627_3-d
 Analyst: 1174 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 21
 Date Collected: 1/6/2020 2:32:43 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: lcsd 570-39627_3-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0051	5.07	0.0547	0.2483	0.0547	2:33:48 PM	Yes
2	0.0050	5.01	0.0540	0.2476	0.0540	2:34:34 PM	Yes
Mean:	0.0050	5.04	0.0544				
SD:	0.00005	0.048	0.0005				
%RSD:	0.95%	0.95%	0.95				

Sequence No.: 17

Autosampler Location: 22

Sample ID: 570-16001-a-3-g@10

Date Collected: 1/6/2020 2:35:01 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16001-a-3-g@10

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0087	8.69	0.0938	0.4237	0.0938	2:36:06 PM	Yes
2	0.0086	8.61	0.0929	0.4272	0.0929	2:36:51 PM	Yes
Mean:	0.0087	8.65	0.0933				
SD:	0.00006	0.058	0.0006				
%RSD:	0.67%	0.67%	0.67				

Sequence No.: 18

Autosampler Location: 23

Sample ID: 570-16783-i-9-b

Date Collected: 1/6/2020 2:37:18 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16783-i-9-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0061	6.13	0.0661	0.3043	0.0661	2:38:23 PM	Yes
2	0.0060	6.02	0.0649	0.3033	0.0649	2:39:09 PM	Yes
Mean:	0.0061	6.07	0.0655				
SD:	0.00008	0.077	0.0008				
%RSD:	1.27%	1.27%	1.27				

Sequence No.: 19

Autosampler Location: 24

Sample ID: 570-16783-i-10-b

Date Collected: 1/6/2020 2:39:36 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16783-i-10-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0845	0.0009	0.0059	0.0009	2:40:41 PM	Yes
2	0.0000	0.0177	0.0002	-0.0006	0.0002	2:41:27 PM	Yes
Mean:	0.0001	0.0511	0.0005				
SD:	0.00005	0.04721	0.0005				
%RSD:	92.34%	92.34%	93.18				

Sequence No.: 20

Autosampler Location: 25

Sample ID: 570-16783-i-11-b

Date Collected: 1/6/2020 2:41:54 PM

Analyst: 1174 HG-8

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-16783-i-11-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0845	0.0009	0.0059	0.0009	2:40:41 PM	Yes
2	0.0000	0.0177	0.0002	-0.0006	0.0002	2:41:27 PM	Yes

1	0.0001	0.0798	0.0009	0.0021	0.0008	2:43:00 PM	Yes
2	0.0001	0.0861	0.0009	0.0044	0.0009	2:43:46 PM	Yes
Mean:	0.0001	0.0829	0.0009				
SD:	0.00000	0.00443	0.0000				
%RSD:	5.34%	5.34%	5.37				

```

=====
Sequence No.: 21                               Autosampler Location: 26
Sample ID: 570-16783-i-12-b                   Date Collected: 1/6/2020 2:44:13 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16783-i-12-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height
1      0.0000       0.0247   0.0003   0.0002 0.0003  2:45:17 PM  Yes
2      0.0000       0.0206   0.0002   -0.0012 0.0002  2:46:03 PM  Yes
Mean:  0.0000       0.0227   0.0002
SD:    0.00000      0.00295  0.0000
%RSD:  13.02%     13.02%   13.29
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 27
Sample ID: 570-16783-i-13-b                   Date Collected: 1/6/2020 2:46:29 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-16783-i-13-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height
1      -0.0000      -0.0006  -0.0000  -0.0033 -0.0000  2:47:33 PM  Yes
2      0.0000       0.0101   0.0001  -0.0003 0.0001  2:48:19 PM  Yes
Mean:  0.0000       0.0048   0.0000
SD:    0.00001      0.00760  0.0001
%RSD:  159.21%     159.21%  176.34
=====

```

```

=====
Sequence No.: 23                               Autosampler Location: 28
Sample ID: lb 570-39634_1-e                   Date Collected: 1/6/2020 2:48:45 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lb 570-39634_1-e              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height
1      0.0000       0.0039   0.0000  -0.0016 0.0000  2:49:50 PM  Yes
2      0.0000       0.0117   0.0001   0.0006 0.0001  2:50:35 PM  Yes
Mean:  0.0000       0.0078   0.0001
SD:    0.00001      0.00548  0.0001
%RSD:  70.11%     70.11%   74.53
=====

```

```

=====
Sequence No.: 24                               Autosampler Location: 29
Sample ID: lcs 570-39634_2-c                   Date Collected: 1/6/2020 2:51:01 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: lcs 570-39634_2-c              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height
1      0.0049       4.95     0.0534   0.2441 0.0534  2:52:06 PM  Yes
2      0.0049       4.92     0.0530   0.2458 0.0530  2:52:51 PM  Yes
Mean:  0.0049       4.93     0.0532
=====

```

SD: 0.00002 0.021 0.0002
%RSD: 0.43% 0.43% 0.43

Sequence No.: 25 Autosampler Location: 5
Sample ID: ccv 570-42889_10-a Date Collected: 1/6/2020 2:53:18 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-42889_10-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0021 2.06 0.0223 0.1015 0.0223 2:54:23 PM Yes
2 0.0020 2.01 0.0217 0.0990 0.0217 2:55:09 PM Yes
Mean: 0.0020 2.04 0.0220
SD: 0.00004 0.036 0.0004
%RSD: 1.75% 1.75% 1.75
QC value within limits for Hg 253.7 Recovery = 101.94%
All analyte(s) passed QC.

Sequence No.: 26 Autosampler Location: 1
Sample ID: ccb 570-42889_11-a Date Collected: 1/6/2020 2:55:36 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-42889_11-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0000 0.0114 0.0001 -0.0003 0.0001 2:56:41 PM Yes
2 0.0000 0.0138 0.0001 0.0003 0.0001 2:57:26 PM Yes
Mean: 0.0000 0.0126 0.0001
SD: 0.00000 0.00169 0.0000
%RSD: 13.45% 13.45% 13.96
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 27 Autosampler Location: 30
Sample ID: lcsd 570-39634_3-c Date Collected: 1/6/2020 2:57:52 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: lcsd 570-39634_3-c Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0050 4.97 0.0536 0.2441 0.0536 2:58:57 PM Yes
2 0.0050 4.97 0.0536 0.2467 0.0536 2:59:43 PM Yes
Mean: 0.0050 4.97 0.0536
SD: 0.00000 0.002 0.0000
%RSD: 0.03% 0.03% 0.03

Sequence No.: 28 Autosampler Location: 31
Sample ID: 570-15848-b-1-n Date Collected: 1/6/2020 3:00:09 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-15848-b-1-n Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0000 0.0385 0.0004 0.0017 0.0004 3:01:14 PM Yes
2 0.0000 0.0149 0.0002 0.0010 0.0001 3:01:59 PM Yes

Mean: 0.0000 0.0267 0.0003
SD: 0.00002 0.01667 0.0002
%RSD: 62.39% 62.39% 63.49

Sequence No.: 29 Autosampler Location: 32
Sample ID: 570-15848-b-1-o ms Date Collected: 1/6/2020 3:02:26 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 30 Autosampler Location: 33
Sample ID: 570-15848-b-1-p msd Date Collected: 1/6/2020 3:04:43 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 31 Autosampler Location: 34
Sample ID: 570-15848-b-2-f Date Collected: 1/6/2020 3:07:00 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 32 Autosampler Location: 5
Sample ID: ccv 570-42889_10-a Date Collected: 1/6/2020 3:09:17 PM
Analyst: 1174 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

QC value within limits for Hg 253.7 Recovery = 102.74%
All analyte(s) passed QC.

```

=====
Sequence No.: 33                               Autosampler Location: 1
Sample ID: ccb 570-42889_11-a                 Date Collected: 1/6/2020 3:11:37 PM
Analyst: 1174 HG-8                             Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                   Auto Dilution Factor: 1.0000
=====

```

```

=====
Replicate Data: ccb 570-42889_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0000      0.0498   0.0005   0.0022 0.0005  3:12:41 PM  Yes
2      0.0001      0.0525   0.0006   0.0007 0.0006  3:13:27 PM  Yes
Mean:  0.0001      0.0511   0.0005
SD:    0.00000     0.00192  0.0000
%RSD:  3.76%      3.76%    3.79
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis BegunLogged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200104H1.sifx

Batch ID:

Results Data Set: 200104H1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-16417-d-4-a
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 35
Date Collected: 1/6/2020 3:20:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: 570-16417-d-4-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0401	0.0004	-0.0026	0.0004	3:21:10 PM	Yes
2	0.0000	0.0108	0.0001	-0.0033	0.0001	3:21:55 PM	Yes
Mean:	0.0000	0.0254	0.0003				
SD:	0.00002	0.02067	0.0002				
%RSD:	81.23%	81.23%	82.74				

=====
Sequence No.: 2
Sample ID: 570-16425-e-1-d
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 36
Date Collected: 1/6/2020 3:22:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: 570-16425-e-1-d
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0260	0.0003	0.0025	0.0003	3:23:28 PM	Yes
2	0.0000	0.0060	0.0001	-0.0037	0.0001	3:24:13 PM	Yes
Mean:	0.0000	0.0160	0.0002				
SD:	0.00001	0.01411	0.0002				
%RSD:	88.09%	88.09%	90.72				

=====
Sequence No.: 3
Sample ID: 570-16425-e-2-c
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 37
Date Collected: 1/6/2020 3:24:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: 570-16425-e-2-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0198	0.0002	0.0009	0.0002	3:25:46 PM	Yes
2	0.0000	0.0180	0.0002	0.0003	0.0002	3:26:32 PM	Yes
Mean:	0.0000	0.0189	0.0002				
SD:	0.00000	0.00129	0.0000				
%RSD:	6.83%	6.83%	7.01				

=====
Sequence No.: 4
Sample ID: 570-16425-e-2-d ms
Analyst: 1174 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 38
Date Collected: 1/6/2020 3:26:59 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience _____ Job Number: 570-16773-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID	Lab Sample ID
EVBMP0007S011	570-16773-1
EVBMP0008S014	570-16773-2
EVBMP0009S012	570-16773-3

Comments:

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: EV BMP0007S011

Lab Sample ID: 570-16773-1

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:30

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Suspended Solids	7.05	1.05	0.872	mg/L			1	SM 2540D

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: EV BMP0008S014

Lab Sample ID: 570-16773-2

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:45

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Turbidity	8.48	0.0500	0.0439	NTU			1	SM 2130B
	Total Suspended Solids	8.40	1.00	0.829	mg/L			1	SM 2540D

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: EV BMP0009S012

Lab Sample ID: 570-16773-3

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 09:00

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Turbidity	5.94	0.0500	0.0439	NTU			1	SM 2130B
	Total Suspended Solids	6.74	1.05	0.872	mg/L			1	SM 2540D

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-16773-1
SDG No.: _____
Analyst: KZ40 Batch Start Date: 12/27/2019
Reporting Units: NTU Analytical Batch No.: 41681

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
4	CCV	20:59	Turbidity	96.10	100	96	95-105		WC_TUR_STD2_00071
8	CCV	20:59	Turbidity	95.30	100	95	95-105		WC_TUR_STD2_00071

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 42164 Date: 12/31/2019 11:51							
SM 2540D	MB 570-42164/1	Total Suspended Solids	ND		mg/L	1.00	1

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 41681 Date: 12/27/2019 20:59								
SM 2130B	EVBMP0009S012	570-16773-3	Turbidity	5.94	NTU			
SM 2130B	EVBMP0009S012	570-16773-3 DU	Turbidity	5.880	NTU	1	25	
Batch ID: 42164 Date: 12/31/2019 11:51								
SM 2540D		570-16799-A-4	Total Suspended Solids	970	mg/L			
SM 2540D		570-16799-A-4 DU	Total Suspended Solids	958.0	mg/L	1	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-16773-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 42164			Date: 12/31/2019 11:51			LCS Source: WC_TSS_STD_00012					
SM 2540D	LCS 570-42164/2	Total Suspended Solids	109.0		mg/L	100	109	85-115	3	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE DUPLICATE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-16773-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 42164		Date: 12/31/2019 11:51									
						LCSD Source: WC_TSS_STD_00012					
SM 2540D	LCSD 570-42164/3	Total Suspended Solids	112.0		mg/L	100	112	85-115	3	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LCS-CERTIFIED REFERENCE MATERIAL
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 41681 Date: 12/27/2019 20:59											
LCS Source: WC_TUR_STD_00009											
SM	LCSSRM	Turbidity	1000		NTU	1000	100.0	99.0-10			
2130B	570-41681/1							1.0			
Batch ID: 41681 Date: 12/27/2019 20:59											
LCS Source: WC_TUR_STD_00008											
SM	LCSSRM	Turbidity	9.900		NTU	10.0	99.0	99.0-10			
2130B	570-41681/2							1.0			
Batch ID: 41681 Date: 12/27/2019 20:59											
LCS Source: WC_TUR_STD_00010											
SM	LCSSRM	Turbidity	ND		NTU	0.0200	150.0	0.0-200			
2130B	570-41681/3							.0			

Calculations are performed before rounding to avoid round-off errors in calculated results.

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-16773-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2130B MDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	RL (NTU)	MDL (NTU)
Turbidity		0.05	0.04392

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-16773-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2130B XMDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	XRL (NTU)	XMDL (NTU)
Turbidity		0.05	0.04391639

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience

Job Number: 570-16773-1

SDG Number: _____

Matrix: Water

Instrument ID: NOEQUIP

Method: SM 2540D

MDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Suspended Solids		1	0.82873

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-16773-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2540D XMDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Suspended Solids		1	0.82873

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: NOEQUIP Analysis Method: SM 2130B

Start Date: 12/27/2019 20:59 End Date: 12/27/2019 20:59

Lab Sample Id	D/F	T y p e	Time	T u r b	Analytes																											
LCSSRM 570-41681/1	1	T	20:59	X																												
LCSSRM 570-41681/2	1	T	20:59	X																												
LCSSRM 570-41681/3	1	T	20:59	X																												
CCV 570-41681/4	1		20:59	X																												
570-16773-2	1	T	20:59	X																												
570-16773-3	1	T	20:59	X																												
570-16773-3 DU	1	T	20:59	X																												
CCV 570-41681/8	1		20:59	X																												

Prep Types: _____
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Instrument ID: NOEQUIP Analysis Method: SM 2540D

Start Date: 12/31/2019 11:51 End Date: 12/31/2019 11:51

Lab Sample Id	D/F	Type	Time	Analytes																											
				T	S	S																									
MB 570-42164/1	1	T	11:51	X																											
LCS 570-42164/2	1	T	11:51	X																											
LCSD 570-42164/3	1	T	11:51	X																											
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
570-16799-A-4 DU	1	T	11:51	X																											
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
570-16773-2	1	T	11:51	X																											
570-16773-3	1	T	11:51	X																											
570-16773-1	1	T	11:51	X																											
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												
ZZZZZZ			11:51																												

Prep Types: _____
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 41681 Batch Start Date: 12/27/19 20:59 Batch Analyst: DeVera, Christopher A

Batch Method: SM 2130B Batch End Date: 12/27/19 21:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	WC_TUR_STD 00008	WC_TUR_STD 00009	WC_TUR_STD 00010	WC_TUR_STD2 00071	
LCSSRM 570-41681/1		SM 2130B		30 mL		30 mL			
LCSSRM 570-41681/2		SM 2130B		30 mL	30 mL				
LCSSRM 570-41681/3		SM 2130B		30 mL			30 mL		
CCV 570-41681/4		SM 2130B		30 mL				30 mL	
570-16773-C-2	EVBMP0008S014	SM 2130B	T	30 mL					
570-16773-C-3	EVBMP0009S012	SM 2130B	T	30 mL					
570-16773-C-3 DU	EVBMP0009S012	SM 2130B	T	30 mL					
CCV 570-41681/8		SM 2130B		30 mL				30 mL	

Batch Notes	
Calibration Date	10-01-2019
Instrument ID	TUR04
Pipette/Syringe/Dispenser ID	P-121

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42164 Batch Start Date: 12/31/19 11:51 Batch Analyst: Le, Uyen

Batch Method: SM 2540D Batch End Date: 01/02/20 11:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	CrucibleID	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 570-42164/1		SM 2540D		B0777757 0.4185	0.4185 g	1000 mL	0.4188 g	0.4188 g	0 g
LCS 570-42164/2		SM 2540D		B0777756 0.4188	0.4188 g	100 mL	0.4297 g	0.4297 g	0 g
LCSD 570-42164/3		SM 2540D		B0777755 0.4165	0.4165 g	100 mL	0.4277 g	0.4277 g	0 g
570-16799-A-4 DU		SM 2540D	T	B0777742 0.4172	0.4172 g	50 mL	0.4651 g	0.4651 g	0 g
570-16773-F-2	EVBMP0008S014	SM 2540D	T	B0777739 0.4158	0.4158 g	1000 mL	0.4242 g	0.4242 g	0 g
570-16773-H-3	EVBMP0009S012	SM 2540D	T	B0777738 0.4169	0.4169 g	950 mL	0.4234 g	0.4233 g	0 g
570-16773-G-1	EVBMP0007S011	SM 2540D	T	B0777737 0.4175	0.4175 g	950 mL	0.4241 g	0.4242 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	Residue	Residue2	FinalAmount	ResDishWt	DishWeight
MB 570-42164/1		SM 2540D		PASS <0.5mg	0.0003 g	0.0003 g	1000 mL	0.4188 g	0.4185 g
LCS 570-42164/2		SM 2540D		PASS <0.5mg	0.0109 g	0.0109 g	1000 mL	0.4297 g	0.4188 g
LCSD 570-42164/3		SM 2540D		PASS <0.5mg	0.0112 g	0.0112 g	1000 mL	0.4277 g	0.4165 g
570-16799-A-4 DU		SM 2540D	T	PASS <0.5mg	0.0479 g	0.0479 g	1000 mL	0.4651 g	0.4172 g
570-16773-F-2	EVBMP0008S014	SM 2540D	T	PASS <0.5mg	0.0084 g	0.0084 g	1000 mL	0.4242 g	0.4158 g
570-16773-H-3	EVBMP0009S012	SM 2540D	T	PASS <0.5mg	0.0065 g	0.0064 g	1000 mL	0.4233 g	0.4169 g
570-16773-G-1	EVBMP0007S011	SM 2540D	T	PASS <0.5mg	0.0066 g	0.0067 g	1000 mL	0.4242 g	0.4175 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC_TSS_STD 00012					
MB 570-42164/1		SM 2540D							
LCS 570-42164/2		SM 2540D		100 mL					
LCSD 570-42164/3		SM 2540D		100 mL					
570-16799-A-4 DU		SM 2540D	T						
570-16773-F-2	EVBMP0008S014	SM 2540D	T						
570-16773-H-3	EVBMP0009S012	SM 2540D	T						
570-16773-G-1	EVBMP0007S011	SM 2540D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-16773-1

SDG No.: _____

Batch Number: 42164 Batch Start Date: 12/31/19 11:51 Batch Analyst: Le, Uyen

Batch Method: SM 2540D Batch End Date: 01/02/20 11:30

Batch Notes	
Balance ID	87
Date/Time - In - CW (WT2)	01/02/2020 09:30
Date/Time - Out - CW (WT2)	01/02/2020 10:30
Temperature - Start - CW (WT2) - Correct	104 Celsius
Temperature - End - CW (WT2) - Correct	104 Celsius
Temperature - Start-CW(WT2) -Uncorrected	104 Celsius
Temperature - End-CW(WT2) -Uncorrected	104 Celsius
Temperature - Start - Corrected	104 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	12/31/2019 13:00
Date/Time - Out	01/02/2020 08:30
Filter ID	37634
Nominal Amount Used	1000 mL
Oven ID	IO07
Perform Calculation (0=No, 1=Yes)	1
Thermometer ID	TSS IO 7A
Temperature - Start - Uncorrected	104 Celsius
Temperature - End - Uncorrected	104 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

BALANCE CALIBRATION CHECK LOG

Eurofins Calscience

Date performed: 12/31/19 Initials: SFT

ID	Class 2 Weight (g)	Reading (g)	Acceptance Range	Pass? <small>(circle one)</small>	Comment <small>(If not passed, note removal or corrective action)</small>
83	1	1.00	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
	100	99.97	98.00 - 102.00	<input type="radio"/> Y <input type="radio"/> N	
62	0.002	0.0018	0.0015 - 0.0025	<input type="radio"/> Y <input type="radio"/> N	IO Lab
	1	0.9993	0.9990 - 1.0010	<input type="radio"/> Y <input type="radio"/> N	
	100	99.9951	99.9000 - 100.1000	<input type="radio"/> Y <input type="radio"/> N	
11	1	0.99	0.98 - 1.02	<input type="radio"/> Y <input type="radio"/> N	IO Lab
	100	99.96	98.00 - 102.00	<input type="radio"/> Y <input type="radio"/> N	
55	1	0.99	0.98 - 1.02	<input type="radio"/> Y <input type="radio"/> N	IO Lab
	100	99.91	98.00 - 102.00	<input type="radio"/> Y <input type="radio"/> N	
	500	500.01	490.00 - 510.00	<input type="radio"/> Y <input type="radio"/> N	
86	1	1.00	0.98 - 1.02	<input type="radio"/> Y <input type="radio"/> N	IO Lab
	100	99.96	98.00 - 102.00	<input type="radio"/> Y <input type="radio"/> N	
	500	499.98	490.00 - 510.00	<input type="radio"/> Y <input type="radio"/> N	
71	0.002	0.0018	0.0015 - 0.0025	<input type="radio"/> Y <input type="radio"/> N	BOD Room
	1	0.9997	0.9990 - 1.0010	<input type="radio"/> Y <input type="radio"/> N	
	100	99.9935	99.9000 - 100.1000	<input checked="" type="radio"/> Y <input type="radio"/> N	
63	0.1	/	0.08 - 0.12	<input type="radio"/> Y <input type="radio"/> N	BOD Room
	100	/	98.00 - 102.00	<input type="radio"/> Y <input type="radio"/> N	
73	0.1	0.10	0.08 - 0.12	<input checked="" type="radio"/> Y <input type="radio"/> N	Oil & Grease Room
	1	0.99	0.98 - 1.02	<input type="radio"/> Y <input type="radio"/> N	
	100	99.99	98.00 - 102.00	<input type="radio"/> Y <input type="radio"/> N	
87	0.002	0.0017	0.0015 - 0.0025	<input type="radio"/> Y <input type="radio"/> N	Solids Room
	1	0.9996	0.9990 - 1.0010	<input type="radio"/> Y <input type="radio"/> N	
	100	99.9983	99.9000 - 100.1000	<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
Comments:					
WT SET ID USED: 2 mg				COMMENT:	
WT SET ID USED: 10 mg - 100 g					
WT SET ID USED: 500 g					

COVER PAGE
GEOTECHNICAL

Lab Name: Eurofins Calscience _____ Job Number: 570-16773-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID	Lab Sample ID
EVBMP0007S011	570-16773-1
EVBMP0008S014	570-16773-2
EVBMP0009S012	570-16773-3

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: EV BMP0007S011

Lab Sample ID: 570-16773-1

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:30

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay (less than 0.00391 mm)	ND	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	ND	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	ND	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	ND	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	ND	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	ND	0.01	0.01	%			1	D4464

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: EV BMP0008S014

Lab Sample ID: 570-16773-2

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 08:45

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	ND	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	ND	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	ND	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	ND	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	ND	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	ND	0.01	0.01	%			1	D4464

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: EV BMP0009S012

Lab Sample ID: 570-16773-3

Lab Name: Eurofins Calscience

Job No.: 570-16773-1

SDG ID.: _____

Matrix: Water

Date Sampled: 12/26/2019 09:00

Reporting Basis: WET

Date Received: 12/27/2019 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay (less than 0.00391 mm)	ND	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	ND	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	ND	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	ND	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	ND	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	ND	0.01	0.01	%			1	D4464

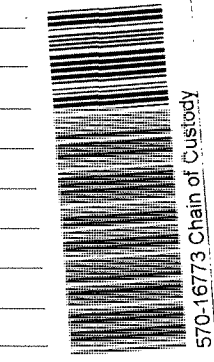
ASTM D4464-10(M) Raw Data Logbook

METHOD	MATRIX	DATE	ANALYSIS		INSTRUMENT/EQUIPMENT ID #	BATCH NUMBER	COMMENTS
			Preparation:	Analysis:			
ASTM D4464-10(M)	<input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Solid	1/6/2020 1/6/2020	1/06 1/06	1/06 1/06	Instrument: LPSA 1 Balance: — Sieve (if used): 10196878		
DATA FILENAME	RUN #	EDID #	SAMPLE	MASS (g)	GRAVEL	STANDARD SAND ID #	COMMENTS
STD SAND-DT	1	STD SAND	—	—	—	316865	Fine sand
440-258024D1-DT	2	440-258024D1	—	—	—	—	Low observation (1%)
↓	3	D2	—	—	—	—	(1%)
D3	4	D3	—	—	—	—	(1%)
440-258216D1-DT	5	440-258216D1	—	—	—	—	Insufficient sample for analysis
↓	6	D2	—	—	—	—	Low observation (1%)
D3	7	D3	—	—	—	—	(1%)
↓	8	D4	—	—	—	—	(1%)
570-16773F1-DT	9	570-16773F1	—	—	—	—	Insufficient sample for analysis
↓	10	H2	—	—	—	—	(1%) / Fine amount
G3	11	G3	—	—	—	—	(1%) / Sample too small
STD SAND-DT	12	STD SAND	—	—	—	316865	Fine sand
440-258024D2-DT	13	440-258024D2	—	—	—	—	Low observation (1%)
STD SAND-DT	14	STD SAND	—	—	—	316865	Fine sand

COMMENTS: Duplicate did not pass. Duplicate did not fall within 70% RPD range of original (18.61%). Closing sand run were compared for verification and were within 20% RPD range of each other (160%).

Instrument QC: Analyze one DPV control sample daily prior to sample analysis, after every batch of 10 samples or portion thereof within a 24-hour shift, and at the end of sequence. Record the standard sand ID number. Sample Batch QC: Prepare one Sample Duplicate for every batch of 20 field samples per matrix or portion thereof, and analyze immediately following a DPV control sample. Record the batch number.

Shipping and Receiving Documents



Project Name	SSFL	Location	Santa Susana Field Lab	Task Order	661				
Project	CH661 PO 100067108373								
Project Number	692670.61.SW								
Project Manager	Randy Dean								
Sample Manager	Jamie Beckett								
Turnaround Time	10 Days								
PO Number	100067108373								
Sample ID		Sample Date/Time	26-Dec-19 8:30	Type Matrix	N Water	Preservative		# Containers	
Field Filtered									
EVBMP0007S011									
Dioxins				4C					
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C					
Include Cd, Cu, Pb, Hg				HNO3, 4C					
Particle Size Distribution TSS				4C					
Total Containers: 7									
EVBMP0006S014									
Dioxins				4C					
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C					
Include Cd, Cu, Pb, Hg				HNO3, 4C					
Particle Size Distribution TSS				4C					
Total Containers: 8									

MS = Matrix Spike SD = Matrix Spike Duplicate

Sampled by	Relinquished by	Received by	Relinquished by	Received by	Signatures	Date/Time	Shipping Details	Special Instructions:
							Shipping Method: FedEx	ATTN: Sample Custody and
							Airbill No:	Report Copy to Mark Fesler (530) 229-3273
							Lab Name: Eurofins Calscience Lab	
							Lab Phone: (949) 870-8766	
							On Ice: yes / no	
							Cooler Temp	

2.2 / 2.7 566

16773

Chain of Custody Record COC Number: **CALS12261901** **JACOBS ch2m** 12/27/2019 6:11:00 AM Page 2 of 2

Project Name SSFL Location Santa Susana Field Lab
 Project CH661 PO 100067108373
 Project Number 692670.61.SW Task Order 661
 Project Manager Randy Dean
 Sample Manager Jamie Beckett 530 570 5084
 Turnaround Time 10 Days
 PO Number 100067108373

Sample ID	Sample Date/Time	Type	Matrix	Preservative	Field Filtered	# Containers
EVBMPO009S012	26-Dec-19 9:00	N	Water			
Dioxins				4C	<input type="checkbox"/>	2
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C	<input checked="" type="checkbox"/>	1
Include Cd, Cu, Pb, Hg			HNO3, 4C		<input type="checkbox"/>	2
Particle Size Distribution TSS			4C		<input checked="" type="checkbox"/>	2
Turbidity			4C		<input checked="" type="checkbox"/>	1
Total Containers:						8

SW8290/1613B	<input checked="" type="checkbox"/>
SM2540	<input type="checkbox"/>
ASTMD4464	<input type="checkbox"/>
200.8/245.1F	<input checked="" type="checkbox"/>
200.8/245.1	<input checked="" type="checkbox"/>
180.1	<input checked="" type="checkbox"/>

MS = Matrix Spike SD = Matrix Spike Duplicate

Signatures	Date/Time	Shipping Details	ATTN:	Special Instructions:
Sampled by <i>Ryan G. Simpson</i>	12/27/19 1326	Shipment Method: FedEx	Sample Custody and	Report Copy to Mark Fesler (530) 229-3273
Relinquished by <i>J. Beckett</i>	12/27/19 1326	Airbill No:		
Received by <i>[Signature]</i>	12/27/19 1648	Lab Name: Eurofins Calscience Lab		
Relinquished by <i>[Signature]</i>	12/27/19 1648	Lab Phone: (949) 870-8766		
Received by <i>Alambel</i>	12/27/19 1640	On Ice: yes / no Cooler Temp _____		

2.2/2.7 566

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-16773-1

Login Number: 16773
List Number: 1
Creator: Ramos, Maribel

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

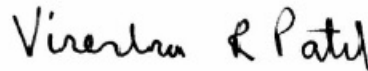
ANALYTICAL REPORT

Job Number: 570-16773-2

Job Description: CH661 / 692670.61.SW

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Virendra Patel
Project Manager I
1/23/2020 1:55 PM

Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
01/23/2020

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

Tel (714) 895-5494 Fax (714) 894-7501 www.EurofinsUS.com

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
570-16773-2

Comments

No additional comments.

Receipt

The samples were received on 12/27/2019 4:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7° C.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Method EPA 1613B - Dioxins/Furans - Report with J - Level IV: This method was subcontracted to Cape Fear Analytical, LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-2

Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0781	03-13-20
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Hawaii	State	<cert No.>	07-02-20
Nevada	State	CA00111	07-31-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-2

Method	Method Description	Protocol	Laboratory
1613B	EPA 1613B Dioxin/Furan	EPA	CFAnalytic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

CFAnalytic = Cape Fear Analytical, LLC, 3306 Kitty Hawk Road, Wilmington, NC 28405

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-16773-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-16773-1	EVBMP0007S011	Water	12/26/19 08:30	12/27/19 16:40	
570-16773-2	EVBMP0008S014	Water	12/26/19 08:45	12/27/19 16:40	
570-16773-3	EVBMP0009S012	Water	12/26/19 09:00	12/27/19 16:40	

Subcontract Data

January 23, 2020

Mr. Virendra Patel
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, California 92841-1432

Re: Stormwater RFP Boeing SSFL MECX DXN
Work Order: 16017
SDG: 570-16773

Dear Mr. Patel:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 31, 2019. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421 Ext. 2.

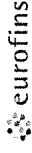
Sincerely,



Cynde Larkins
Project Manager

Enclosures

Chain of Custody Record



CFA WO#16017

Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: Cape Fear Analytical, LLC Address: 3306 Kitty Hawk Road, City: Wilmington State, Zip: NC, 28405 Phone: Email:		Lab P.M.: Patel, Virendra E-Mail: virendrapatel@eurofins.com Accreditations Required (See note):	
Due Date Requested: 1/21/2020 TAT Requested (days):		Carrier Tracking No(s): 570-16388-1 State of Origin: California Page: Page 1 of 1 Job #: 570-16773-2	
Project Name: CH661 / 692670.61.SW Site:	PO #: WO #: Project #: 57009454 SSO#: 570-16773	Analysis Requested A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - PH 4-5 X - EDTA Z - other (specify)	Total Number of Containers		
Sample Identification - Client ID (Lab ID)	Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=soil, O=wast, B=biota) Preservation C	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) SUB (EPA 1613B - Dioxins/Furans - Report with J - Level IV) / EPA 1613B - Dioxins/Furans	Special Instructions/Note: Ch2m Hill Lab Spec 7 EDD, Standard TAT Ch2m Hill Lab Spec 7 EDD, Standard TAT Ch2m Hill Lab Spec 7 EDD, Standard TAT
EVBMP0007S011 (570-16773-1)	12/26/19 08:30 Pacific Water	X	1
EVBMP0008S014 (570-16773-2)	12/26/19 08:45 Pacific Water	X	1
EVBMP0009S012 (570-16773-3)	12/26/19 09:00 Pacific Water	X	1

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/method/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____

Relinquished by: *[Signature]* Date/Time: 12/30/19 1300 Company: CFA
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Δ No Δ No
 Cooler Temperature(s) °C and Other Remarks: 1, 2°C

SAMPLE RECEIPT CHECKLIST
Cape Fear Analytical

Client: <u>CALS</u>	Work Order: <u>16017</u>
Shipping Company: <u>FedEx</u>	Date/Time Received: <u>31 Dec 19</u> <u>1241</u>

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Samples < 2x background?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Air Witness: _____

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: seals broken damaged container leaking container other(describe)
2 Custody seal/s present on cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Seal intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3 Chain of Custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4 Samples requiring cold preservation within 0-6°C?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Temperature Blank present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ice bags blue ice dry ice none other (describe) <u>1.1° + 0.1 = 1.2°C</u>
5 Aqueous samples found to have visible solids?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: <u>Minimal (<1%) visible solids in all</u>
5 Samples requiring chemical preservation at proper pH?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected and pH observed: <u>pH = 7 on all</u> If preservative added, Lot#:
7 Samples requiring preservation have no residual chlorine?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: If preservative added, Lot#:
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, tests affected:
9 Sample IDs on COC match IDs on containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
10 Date & time of COC match date & time on containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	List type and number of containers / Sample IDs, containers affected: <u>1-1L NMA 6 bottles per sample. 3 total</u>
12 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Comments:

Checklist performed by: Initials: CL Date: 31 Dec 19

High Resolution Dioxins and Furans Analysis

Case Narrative

**HDOX Case Narrative
Eurofins Calscience (CALs)
SDG 570-16773
Work Order 16017**

Method/Analysis Information

Product: Dioxins/Furans by EPA Method 1613B in Liquids
Analytical Method: EPA Method 1613B
Extraction Method: SW846 3520C
Analytical Batch Number: 42781
Clean Up Batch Number: 42777
Extraction Batch Number: 42776

Sample Analysis

Samples were received at 1.2°C (16017001, 16017002, 16017003). The following samples were analyzed using the analytical protocol as established in EPA Method 1613B:

Sample ID	Client ID
12025720	Method Blank (MB)
12025721	Laboratory Control Sample (LCS)
12025722	Laboratory Control Sample Duplicate (LCSD)
16017001	EVBMP0007S011
16017002	EVBMP0008S014
16017003	EVBMP0009S012

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 15.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement

The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement

The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery

The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement

The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation

A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation

A NCR was not required for this SDG.

Manual Integrations

Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

System Configuration

This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP750_2	Primary Dioxin Analysis	Dioxin Analysis	DB-5MS	60m x 0.25mm, 0.25um

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report for

CALS001 Eurofins Calscience

Client SDG: 570-16773 CFA Work Order: 16017

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- J Value is estimated
- K Estimated Maximum Possible Concentration
- U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: 

Name: Heather Patterson

Date: 23 JAN 2020

Title: Group Leader

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-16773
Lab Sample ID: 16017001
Client Sample: 1613B Water
Client ID: EVBMP0007S011
Batch ID: 42781
Run Date: 01/15/2020 12:16
Data File: A14JAN20A_2-12
Prep Batch: 42776
Prep Date: 06-JAN-20

Client: CALS001
Date Collected: 12/26/2019 08:30
Date Received: 12/31/2019 12:41
Method: EPA Method 1613B
Analyst: MJC
Prep Method: SW846 3520C
Prep Aliquot: 1040.1 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00115	ng/L	0.00115	0.00961
40321-76-4	1,2,3,7,8-PeCDD	U	0.000838	ng/L	0.000838	0.0481
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.000898	ng/L	0.000898	0.0481
57653-85-7	1,2,3,6,7,8-HxCDD	BJ	0.00138	ng/L	0.000902	0.0481
19408-74-3	1,2,3,7,8,9-HxCDD	BJK	0.00137	ng/L	0.000915	0.0481
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	0.0299	ng/L	0.00145	0.0481
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.350	ng/L	0.00187	0.0961
51207-31-9	2,3,7,8-TCDF	U	0.000627	ng/L	0.000627	0.00961
57117-41-6	1,2,3,7,8-PeCDF	U	0.000436	ng/L	0.000436	0.0481
57117-31-4	2,3,4,7,8-PeCDF	U	0.000442	ng/L	0.000442	0.0481
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000481	ng/L	0.000481	0.0481
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.00051	ng/L	0.00051	0.0481
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000488	ng/L	0.000488	0.0481
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000577	ng/L	0.000577	0.0481
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.00667	ng/L	0.00065	0.0481
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000823	ng/L	0.000823	0.0481
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.0198	ng/L	0.00117	0.0961
41903-57-5	Total TeCDD	U	0.00115	ng/L	0.00115	0.00961
36088-22-9	Total PeCDD	U	0.000838	ng/L	0.000838	0.0481
34465-46-8	Total HxCDD	BJK	0.00923	ng/L	0.000898	0.0481
37871-00-4	Total HpCDD	J	0.0766	ng/L	0.00145	0.0481
30402-14-3	Total TeCDF	U	0.000627	ng/L	0.000627	0.00961
30402-15-4	Total PeCDF	BJK	0.00165	ng/L	0.000273	0.0481
55684-94-1	Total HxCDF	BJ	0.00502	ng/L	0.000481	0.0481
38998-75-3	Total HpCDF	BJ	0.018	ng/L	0.00065	0.0481
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000752	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.002	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.48	1.92	ng/L	76.8	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.61	1.92	ng/L	83.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.47	1.92	ng/L	76.5	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.45	1.92	ng/L	75.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.71	1.92	ng/L	88.9	(23%-140%)
13C-OCDD		3.12	3.85	ng/L	81.1	(17%-157%)
13C-2,3,7,8-TCDF		1.58	1.92	ng/L	82.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.67	1.92	ng/L	87.1	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.53	1.92	ng/L	79.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.37	1.92	ng/L	71.2	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.29	1.92	ng/L	67.3	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.42	1.92	ng/L	74.0	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.50	1.92	ng/L	78.2	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 16017001	Date Collected: 12/26/2019 08:30	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/31/2019 12:41	
Client ID: EVBMP0007S011		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/15/2020 12:16	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A_2-12		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1040.1 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.38	1.92	ng/L	71.7 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.60	1.92	ng/L	83.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.165	0.192	ng/L	86.0 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-16773
Lab Sample ID: 16017002
Client Sample: 1613B Water
Client ID: EVBMP0008S014
Batch ID: 42781
Run Date: 01/15/2020 13:04
Data File: A14JAN20A_2-13
Prep Batch: 42776
Prep Date: 06-JAN-20

Client: CALS001
Date Collected: 12/26/2019 08:45
Date Received: 12/31/2019 12:41
Method: EPA Method 1613B
Analyst: MJC
Prep Method: SW846 3520C
Prep Aliquot: 1059.3 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0011	ng/L	0.0011	0.00944
40321-76-4	1,2,3,7,8-PeCDD	U	0.000885	ng/L	0.000885	0.0472
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00101	ng/L	0.00101	0.0472
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00098	ng/L	0.00098	0.0472
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00101	ng/L	0.00101	0.0472
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	0.0148	ng/L	0.000969	0.0472
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.192	ng/L	0.00165	0.0944
51207-31-9	2,3,7,8-TCDF	U	0.000789	ng/L	0.000789	0.00944
57117-41-6	1,2,3,7,8-PeCDF	U	0.000498	ng/L	0.000498	0.0472
57117-31-4	2,3,4,7,8-PeCDF	U	0.000495	ng/L	0.000495	0.0472
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000549	ng/L	0.000549	0.0472
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000544	ng/L	0.000544	0.0472
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000525	ng/L	0.000525	0.0472
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.0007	ng/L	0.0007	0.0472
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.00383	ng/L	0.00077	0.0472
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000982	ng/L	0.000982	0.0472
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.011	ng/L	0.0021	0.0944
41903-57-5	Total TeCDD	JK	0.00126	ng/L	0.0011	0.00944
36088-22-9	Total PeCDD	U	0.000885	ng/L	0.000885	0.0472
34465-46-8	Total HxCDD	BJK	0.00423	ng/L	0.00098	0.0472
37871-00-4	Total HpCDD	BJ	0.0373	ng/L	0.000969	0.0472
30402-14-3	Total TeCDF	U	0.000789	ng/L	0.000789	0.00944
30402-15-4	Total PeCDF	BJK	0.000359	ng/L	0.000344	0.0472
55684-94-1	Total HxCDF	BJK	0.00183	ng/L	0.000525	0.0472
38998-75-3	Total HpCDF	BJ	0.00835	ng/L	0.00077	0.0472
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000247	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00163	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.59	1.89	ng/L	84.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.75	1.89	ng/L	92.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.50	1.89	ng/L	79.5	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.52	1.89	ng/L	80.5	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.73	1.89	ng/L	91.7	(23%-140%)
13C-OCDD		3.05	3.78	ng/L	80.7	(17%-157%)
13C-2,3,7,8-TCDF		1.66	1.89	ng/L	88.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.85	1.89	ng/L	98.1	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.68	1.89	ng/L	88.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.41	1.89	ng/L	74.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.36	1.89	ng/L	72.1	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.48	1.89	ng/L	78.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.51	1.89	ng/L	79.9	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 16017002	Date Collected: 12/26/2019 08:45	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/31/2019 12:41	
Client ID: EVBMP0008S014		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/15/2020 13:04	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A_2-13		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1059.3 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.39	1.89	ng/L	73.4 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.59	1.89	ng/L	84.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.177	0.189	ng/L	93.6 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773
Lab Sample ID: 16017003
Client Sample: 1613B Water
Client ID: EVBMP0009S012
Batch ID: 42781
Run Date: 01/15/2020 13:52
Data File: A14JAN20A_2-14
Prep Batch: 42776
Prep Date: 06-JAN-20

Client: CALS001
Date Collected: 12/26/2019 09:00
Date Received: 12/31/2019 12:41

Method: EPA Method 1613B
Analyst: MJC

Prep Method: SW846 3520C
Prep Aliquot: 1062.6 mL

Project: CALS00214
Matrix: WATER

Prep Basis: As Received

Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.000975	ng/L	0.000975	0.00941
40321-76-4	1,2,3,7,8-PeCDD	U	0.000619	ng/L	0.000619	0.0471
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.000977	ng/L	0.000977	0.0471
57653-85-7	1,2,3,6,7,8-HxCDD	BJK	0.00162	ng/L	0.000915	0.0471
19408-74-3	1,2,3,7,8,9-HxCDD	BJK	0.00143	ng/L	0.00096	0.0471
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	0.0305	ng/L	0.00124	0.0471
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.359	ng/L	0.00222	0.0941
51207-31-9	2,3,7,8-TCDF	U	0.000623	ng/L	0.000623	0.00941
57117-41-6	1,2,3,7,8-PeCDF	U	0.000361	ng/L	0.000361	0.0471
57117-31-4	2,3,4,7,8-PeCDF	U	0.000367	ng/L	0.000367	0.0471
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000491	ng/L	0.000491	0.0471
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000518	ng/L	0.000518	0.0471
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000499	ng/L	0.000499	0.0471
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000655	ng/L	0.000655	0.0471
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.00614	ng/L	0.000518	0.0471
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000666	ng/L	0.000666	0.0471
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.023	ng/L	0.00216	0.0941
41903-57-5	Total TeCDD	U	0.000975	ng/L	0.000975	0.00941
36088-22-9	Total PeCDD	U	0.000619	ng/L	0.000619	0.0471
34465-46-8	Total HxCDD	BJK	0.00947	ng/L	0.000915	0.0471
37871-00-4	Total HpCDD	J	0.0784	ng/L	0.00124	0.0471
30402-14-3	Total TeCDF	U	0.000623	ng/L	0.000623	0.00941
30402-15-4	Total PeCDF	BJK	0.00111	ng/L	0.000275	0.0471
55684-94-1	Total HxCDF	BJK	0.00442	ng/L	0.000491	0.0471
38998-75-3	Total HpCDF	BJ	0.0183	ng/L	0.000518	0.0471
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000785	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00183	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.47	1.88	ng/L	78.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.60	1.88	ng/L	85.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.45	1.88	ng/L	76.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.41	1.88	ng/L	75.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.60	1.88	ng/L	85.1	(23%-140%)
13C-OCDD		2.86	3.76	ng/L	76.1	(17%-157%)
13C-2,3,7,8-TCDF		1.56	1.88	ng/L	83.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.68	1.88	ng/L	89.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.50	1.88	ng/L	79.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.38	1.88	ng/L	73.1	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.30	1.88	ng/L	68.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.40	1.88	ng/L	74.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.42	1.88	ng/L	75.2	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 16017003	Date Collected: 12/26/2019 09:00	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/31/2019 12:41	
Client ID: EVBMP0009S012		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/15/2020 13:52	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A_2-14		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1062.6 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.29	1.88	ng/L	68.4 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.50	1.88	ng/L	79.7 (26%-138%)
37Cl-2,3,7,8-TCDD			0.158	0.188	ng/L	84.0 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-16773

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12025721	LCS for batch 42776	13C-2,3,7,8-TCDD		83.2	(20%-175%)
		13C-1,2,3,7,8-PeCDD		91.7	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		80.7	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		80.3	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		94.0	(22%-166%)
		13C-OCDD		85.2	(13%-199%)
		13C-2,3,7,8-TCDF		89.4	(22%-152%)
		13C-1,2,3,7,8-PeCDF		95.3	(21%-192%)
		13C-2,3,4,7,8-PeCDF		87.3	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		74.7	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		73.3	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		78.5	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		79.2	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		75.1	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		86.6	(20%-186%)
		37Cl-2,3,7,8-TCDD		86.2	(31%-191%)
12025722	LCSD for batch 42776	13C-2,3,7,8-TCDD		75.0	(20%-175%)
		13C-1,2,3,7,8-PeCDD		81.8	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		75.0	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		72.7	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		87.0	(22%-166%)
		13C-OCDD		76.9	(13%-199%)
		13C-2,3,7,8-TCDF		79.7	(22%-152%)
		13C-1,2,3,7,8-PeCDF		85.9	(21%-192%)
		13C-2,3,4,7,8-PeCDF		78.4	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		69.5	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		67.5	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		73.0	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		72.9	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		68.8	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		78.6	(20%-186%)
		37Cl-2,3,7,8-TCDD		81.8	(31%-191%)
12025720	MB for batch 42776	13C-2,3,7,8-TCDD		67.6	(25%-164%)
		13C-1,2,3,7,8-PeCDD		75.2	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		66.8	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		68.4	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		77.3	(23%-140%)
		13C-OCDD		70.4	(17%-157%)
		13C-2,3,7,8-TCDF		73.1	(24%-169%)
		13C-1,2,3,7,8-PeCDF		79.3	(24%-185%)
		13C-2,3,4,7,8-PeCDF		70.4	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		63.1	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		62.0	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		65.5	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		68.7	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		62.2	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		72.7	(26%-138%)
		37Cl-2,3,7,8-TCDD		88.3	(35%-197%)
16017001	EVBMP0007S011	13C-2,3,7,8-TCDD		76.8	(25%-164%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-16773

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
16017001	EVBMP0007S011	13C-1,2,3,7,8-PeCDD		83.5	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		76.5	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		75.4	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		88.9	(23%-140%)
		13C-OCDD		81.1	(17%-157%)
		13C-2,3,7,8-TCDF		82.3	(24%-169%)
		13C-1,2,3,7,8-PeCDF		87.1	(24%-185%)
		13C-2,3,4,7,8-PeCDF		79.6	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		71.2	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		67.3	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		74.0	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		78.2	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		71.7	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		83.3	(26%-138%)
		37Cl-2,3,7,8-TCDD		86.0	(35%-197%)
16017002	EVBMP0008S014	13C-2,3,7,8-TCDD		84.0	(25%-164%)
		13C-1,2,3,7,8-PeCDD		92.5	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		79.5	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		80.5	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		91.7	(23%-140%)
		13C-OCDD		80.7	(17%-157%)
		13C-2,3,7,8-TCDF		88.1	(24%-169%)
		13C-1,2,3,7,8-PeCDF		98.1	(24%-185%)
		13C-2,3,4,7,8-PeCDF		88.9	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		74.7	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		72.1	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		78.5	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		79.9	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		73.4	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		84.3	(26%-138%)
37Cl-2,3,7,8-TCDD		93.6	(35%-197%)		
16017003	EVBMP0009S012	13C-2,3,7,8-TCDD		78.2	(25%-164%)
		13C-1,2,3,7,8-PeCDD		85.0	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		76.8	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		75.1	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		85.1	(23%-140%)
		13C-OCDD		76.1	(17%-157%)
		13C-2,3,7,8-TCDF		83.1	(24%-169%)
		13C-1,2,3,7,8-PeCDF		89.2	(24%-185%)
		13C-2,3,4,7,8-PeCDF		79.9	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		73.1	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		68.9	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		74.1	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		75.2	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		68.4	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		79.7	(26%-138%)
37Cl-2,3,7,8-TCDD		84.0	(35%-197%)		

* Recovery outside Acceptance Limits

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-16773

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
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* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-16773

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 42776

Matrix: WATER

Lab Sample ID: 12025721

Instrument: HRP750

Analysis Date: 01/14/2020 16:12

Dilution: 1

Analyst: MJC

Prep Batch ID:42776

Batch ID: 42781

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits
1746-01-6	LCS 2,3,7,8-TCDD	0.200	0.207	103	67-158
40321-76-4	LCS 1,2,3,7,8-PeCDD	1.00	1.11	111	70-142
39227-28-6	LCS 1,2,3,4,7,8-HxCDD	1.00	1.06	106	70-164
57653-85-7	LCS 1,2,3,6,7,8-HxCDD	1.00	1.03	103	74-134
19408-74-3	LCS 1,2,3,7,8,9-HxCDD	1.00	1.09	109	64-162
35822-46-9	LCS 1,2,3,4,6,7,8-HpCDD	1.00	0.939	93.9	70-140
3268-87-9	LCS 1,2,3,4,6,7,8,9-OCDD	2.00	2.02	101	78-144
51207-31-9	LCS 2,3,7,8-TCDF	0.200	0.184	91.8	75-158
57117-41-6	LCS 1,2,3,7,8-PeCDF	1.00	0.943	94.3	80-134
57117-31-4	LCS 2,3,4,7,8-PeCDF	1.00	1.03	103	68-160
70648-26-9	LCS 1,2,3,4,7,8-HxCDF	1.00	1.00	100	72-134
57117-44-9	LCS 1,2,3,6,7,8-HxCDF	1.00	1.00	100	84-130
60851-34-5	LCS 2,3,4,6,7,8-HxCDF	1.00	0.972	97.2	70-156
72918-21-9	LCS 1,2,3,7,8,9-HxCDF	1.00	0.988	98.8	78-130
67562-39-4	LCS 1,2,3,4,6,7,8-HpCDF	1.00	1.03	103	82-122
55673-89-7	LCS 1,2,3,4,7,8,9-HpCDF	1.00	0.978	97.8	78-138
39001-02-0	LCS 1,2,3,4,6,7,8,9-OCDF	2.00	1.89	94.7	63-170

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-16773

Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 42776

Matrix: WATER

Lab Sample ID: 12025722

Instrument: HRP750

Analysis Date: 01/14/2020 16:59

Dilution: 1

Analyst: MJC

Prep Batch ID: 42776

Batch ID: 42781

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD 2,3,7,8-TCDD	0.200	0.203	101	67-158	1.86	0-20
40321-76-4	LCSD 1,2,3,7,8-PeCDD	1.00	1.09	109	70-142	2.08	0-20
39227-28-6	LCSD 1,2,3,4,7,8-HxCDD	1.00	1.02	102	70-164	4.30	0-20
57653-85-7	LCSD 1,2,3,6,7,8-HxCDD	1.00	1.03	103	74-134	0.670	0-20
19408-74-3	LCSD 1,2,3,7,8,9-HxCDD	1.00	1.07	107	64-162	1.84	0-20
35822-46-9	LCSD 1,2,3,4,6,7,8-HpCDD	1.00	0.913	91.3	70-140	2.80	0-20
3268-87-9	LCSD 1,2,3,4,6,7,8,9-OCDD	2.00	2.04	102	78-144	1.23	0-20
51207-31-9	LCSD 2,3,7,8-TCDF	0.200	0.176	88	75-158	4.23	0-20
57117-41-6	LCSD 1,2,3,7,8-PeCDF	1.00	0.901	90.1	80-134	4.59	0-20
57117-31-4	LCSD 2,3,4,7,8-PeCDF	1.00	1.00	100	68-160	2.64	0-20
70648-26-9	LCSD 1,2,3,4,7,8-HxCDF	1.00	0.977	97.7	72-134	2.67	0-20
57117-44-9	LCSD 1,2,3,6,7,8-HxCDF	1.00	0.980	98	84-130	2.41	0-20
60851-34-5	LCSD 2,3,4,6,7,8-HxCDF	1.00	0.930	93	70-156	4.47	0-20
72918-21-9	LCSD 1,2,3,7,8,9-HxCDF	1.00	0.990	99	78-130	0.253	0-20
67562-39-4	LCSD 1,2,3,4,6,7,8-HpCDF	1.00	1.03	103	82-122	0.136	0-20
55673-89-7	LCSD 1,2,3,4,7,8,9-HpCDF	1.00	0.965	96.5	78-138	1.33	0-20
39001-02-0	LCSD 1,2,3,4,6,7,8,9-OCDF	2.00	1.88	94.1	63-170	0.573	0-20

Method Blank Summary

Page 1 of 1

SDG Number: 570-16773
Client ID: MB for batch 42776
Lab Sample ID: 12025720
Column:

Client: CALS001
Instrument ID: HRP750
Prep Date: 06-JAN-20

Matrix: WATER
Data File: A14JAN20A-4
Analyzed: 01/14/20 17:47

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 42776	12025721	A14JAN20A-2	01/14/20	1612
02 LCSD for batch 42776	12025722	A14JAN20A-3	01/14/20	1659
03 EVBMP0007S011	16017001	A14JAN20A_2-12	01/15/20	1216
04 EVBMP0008S014	16017002	A14JAN20A_2-13	01/15/20	1304
05 EVBMP0009S012	16017003	A14JAN20A_2-14	01/15/20	1352

Sample Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773
Lab Sample ID: 16017001
Client Sample: 1613B Water
Client ID: EVBMP0007S011
Batch ID: 42781
Run Date: 01/15/2020 12:16
Data File: A14JAN20A_2-12
Prep Batch: 42776
Prep Date: 06-JAN-20

Client: CALS001
Date Collected: 12/26/2019 08:30
Date Received: 12/31/2019 12:41

Method: EPA Method 1613B
Analyst: MJC

Prep Method: SW846 3520C
Prep Aliquot: 1040.1 mL

Project: CALS00214
Matrix: WATER

Prep Basis: As Received

Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00115	ng/L	0.00115	0.00961
40321-76-4	1,2,3,7,8-PeCDD	U	0.000838	ng/L	0.000838	0.0481
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.000898	ng/L	0.000898	0.0481
57653-85-7	1,2,3,6,7,8-HxCDD	BJ	0.00138	ng/L	0.000902	0.0481
19408-74-3	1,2,3,7,8,9-HxCDD	BJK	0.00137	ng/L	0.000915	0.0481
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	0.0299	ng/L	0.00145	0.0481
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.350	ng/L	0.00187	0.0961
51207-31-9	2,3,7,8-TCDF	U	0.000627	ng/L	0.000627	0.00961
57117-41-6	1,2,3,7,8-PeCDF	U	0.000436	ng/L	0.000436	0.0481
57117-31-4	2,3,4,7,8-PeCDF	U	0.000442	ng/L	0.000442	0.0481
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000481	ng/L	0.000481	0.0481
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.00051	ng/L	0.00051	0.0481
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000488	ng/L	0.000488	0.0481
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000577	ng/L	0.000577	0.0481
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.00667	ng/L	0.00065	0.0481
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000823	ng/L	0.000823	0.0481
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.0198	ng/L	0.00117	0.0961
41903-57-5	Total TeCDD	U	0.00115	ng/L	0.00115	0.00961
36088-22-9	Total PeCDD	U	0.000838	ng/L	0.000838	0.0481
34465-46-8	Total HxCDD	BJK	0.00923	ng/L	0.000898	0.0481
37871-00-4	Total HpCDD	J	0.0766	ng/L	0.00145	0.0481
30402-14-3	Total TeCDF	U	0.000627	ng/L	0.000627	0.00961
30402-15-4	Total PeCDF	BJK	0.00165	ng/L	0.000273	0.0481
55684-94-1	Total HxCDF	BJ	0.00502	ng/L	0.000481	0.0481
38998-75-3	Total HpCDF	BJ	0.018	ng/L	0.00065	0.0481
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000752	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.002	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.48	1.92	ng/L	76.8	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.61	1.92	ng/L	83.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.47	1.92	ng/L	76.5	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.45	1.92	ng/L	75.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.71	1.92	ng/L	88.9	(23%-140%)
13C-OCDD		3.12	3.85	ng/L	81.1	(17%-157%)
13C-2,3,7,8-TCDF		1.58	1.92	ng/L	82.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.67	1.92	ng/L	87.1	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.53	1.92	ng/L	79.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.37	1.92	ng/L	71.2	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.29	1.92	ng/L	67.3	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.42	1.92	ng/L	74.0	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.50	1.92	ng/L	78.2	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 16017001	Date Collected: 12/26/2019 08:30	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/31/2019 12:41	
Client ID: EVBMP0007S011		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/15/2020 12:16	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A_2-12		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1040.1 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.38	1.92	ng/L	71.7 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.60	1.92	ng/L	83.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.165	0.192	ng/L	86.0 (35%-197%)

Comments:
B The target analyte was detected in the associated blank.
J Value is estimated
K Estimated Maximum Possible Concentration
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:04:19 Eastern Standard Time
 Printed: Thursday, January 16, 2020 11:04:42 Eastern Standard Time

Method: Untitled 13 Jan 2020 13:57:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	9.00e1	1.04e2	1.94e2	30.75	1.003	0.86	NO	0.014	0.0596	3.74e3	2668	1.4	4.64e3	1626	2.9	bb	db
2	12378-PeCDD	1.91e2	7.02e1	2.62e2	33.82	1.002	2.73	YES	0.026	0.0436	9.48e3	2746	3.5	4.72e3	1460	3.2	db	bb
3	123478-HxCDD							NO		0.0467		2478			1747			
4	123678-HxCDD	4.45e2	3.41e2	7.87e2	36.35	1.000	1.31	NO	0.072	0.0469	9.43e3	2478	3.8	8.47e3	1747	4.8	db	bb
5	123789-HxCDD	3.61e2	3.70e2	7.31e2	36.61	1.007	0.98	YES	0.071	0.0476	1.00e4	2478	4.0	7.39e3	1747	4.2	bb	bb
6	1234678-HpCDD	7.51e3	7.51e3	1.50e4	39.53	1.001	1.00	NO	1.557	0.0755	1.18e5	2703	43.7	1.23e5	1840	67.1	bb	bd
7	OCDD	6.76e4	7.57e4	1.43e5	43.56	1.000	0.89	NO	18.224	0.0971	8.31e5	1745	476.0	9.05e5	2078	435.3	bd	bd
8	2378-TCDF							NO		0.0326		1250			1562			
9	12378-PeCDF							NO		0.0227		1925			1794			
10	23478-PeCDF							NO		0.0230		1925			1794			
11	123478-HxCDF							NO		0.0250		1380			1669			
12	123678-HxCDF							NO		0.0265		1380			1669			
13	234678-HxCDF	1.62e2	1.70e2	3.32e2	36.15	1.000	0.95	YES	0.024	0.0254	4.39e3	1380	3.2	3.86e3	1669	2.3	bb	bb
14	123789-HxCDF							NO		0.0300		1380			1669			
15	1234678-HpCDF	1.99e3	1.87e3	3.86e3	38.32	1.000	1.07	NO	0.347	0.0338	3.92e4	1215	32.3	4.03e4	1469	27.4	bb	bb
16	1234789-HpCDF	8.52e1	7.29e1	1.58e2	40.16	1.001	1.17	NO	0.015	0.0428	3.18e3	1215	2.6	2.39e3	1469	1.6	bd	bb
17	OCDF	4.65e3	4.79e3	9.44e3	43.83	1.007	0.97	NO	1.031	0.0609	5.38e4	1605	33.5	6.30e4	1190	52.9	bd	bb
18	13C-2378-TCDD	6.95e5	9.06e5	1.60e6	30.67	1.023	0.77	NO	76.826	0.0999	8.85e6	6777	1905.3	1.16e7	3048	3806.1	bb	bb
19	13C-12378-PeCDD	7.05e5	4.54e5	1.16e6	33.76	1.126	1.55	NO	83.533	0.147	1.72e7	4580	3758.2	1.13e7	5048	2237.3	bb	bb
20	13C-123478-HxCDD	5.93e5	4.72e5	1.06e6	36.27	0.991	1.26	NO	76.482	0.110	1.34e7	7194	1863.4	1.07e7	4950	2168.2	bd	bd
21	13C-123678-HxCDD	6.42e5	5.12e5	1.15e6	36.35	0.994	1.25	NO	75.406	0.0998	1.33e7	7194	1845.9	1.06e7	4950	2147.6	dd	dd
22	13C-1234678-HpCDD	4.76e5	4.52e5	9.28e5	39.51	1.080	1.05	NO	88.920	0.124	7.42e6	5096	1456.7	7.03e6	5200	1351.0	bb	bb
23	13C-OCDD	7.53e5	8.65e5	1.62e6	43.54	1.190	0.87	NO	162.245	0.150	9.43e6	5409	1743.6	1.06e7	6489	1632.2	bb	bd
24	13C-2378-TCDF	8.22e5	1.08e6	1.90e6	29.75	0.993	0.76	NO	82.334	0.146	9.53e6	10236	931.0	1.26e7	5702	2212.2	bb	bb
25	13C-12378-PeCDF	9.89e5	6.38e5	1.63e6	32.98	1.100	1.55	NO	87.106	0.223	2.63e7	11580	2274.6	1.69e7	8046	2097.2	bd	bd
26	13C-23478-PeCDF	9.51e5	6.13e5	1.56e6	33.58	1.120	1.55	NO	79.626	0.212	2.49e7	11580	2146.8	1.60e7	8046	1985.9	db	db
27	13C-123478-HxCDF	4.13e5	8.14e5	1.23e6	35.58	0.973	0.51	NO	71.165	0.164	9.44e6	12865	734.0	1.85e7	9562	1939.4	bd	bd
28	13C-123678-HxCDF	4.40e5	8.64e5	1.30e6	35.67	0.975	0.51	NO	67.334	0.146	9.34e6	12865	725.8	1.82e7	9562	1907.4	dd	dd
29	13C-234678-HxCDF	4.24e5	8.19e5	1.24e6	36.15	0.988	0.52	NO	73.963	0.168	9.03e6	12865	701.7	1.73e7	9562	1810.7	bb	bb
30	13C-123789-HxCDF	3.93e5	7.81e5	1.17e6	36.88	1.008	0.50	NO	78.173	0.188	8.02e6	12865	623.7	1.53e7	9562	1597.8	bd	bd

MassLynx 4.1

Quantify Sample Summary Report
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:04:19 Eastern Standard Time
Printed: Thursday, January 16, 2020 11:04:42 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	2.93e5	6.75e5	9.69e5	38.32	1.047	0.43	NO	71.691	0.0977	5.23e6	4898	1067.4	1.20e7	5588	2147.4	bb	bd
32	13C-1234789-HpCDF	2.70e5	6.06e5	8.77e5	40.13	1.097	0.45	NO	83.324	0.125	4.03e6	4898	821.8	9.31e6	5588	1665.6	bd	bd
33	13C-1234-TCDD	8.06e5	1.04e6	1.85e6	29.97	0.000	0.77	NO	100.000	0.113	9.51e6	6777	1403.5	1.22e7	3048	4017.5	bb	bb
34	13C-123789-HxCDD	8.59e5	6.94e5	1.55e6	36.59	0.000	1.24	NO	100.000	0.0984	1.71e7	7194	2372.8	1.39e7	4950	2802.2	dd	dd
35	37Cl+2378-TCDD	1.69e5		1.69e5	30.69	1.024			8.600	0.0237	2.14e6	2193	976.7				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:04:19 Eastern Standard Time
Printed: Thursday, January 16, 2020 11:04:42 Eastern Standard Time

Method: Untitled 13 Jan 2020 13:57:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

1	2	3	4	5	6	7	8	9	10	11	12	13	14			
Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-tetradoxins	9.66e1	8.13e1	1.78e2	27.68	1.19	YES	0.013	0.0596	2.42e3	2668	0.9	3.27e3	1626	2.0	db	bb
Total-tetradoxins	1.49e2	5.41e1	2.03e2	26.27	2.74	YES	0.014	0.0596	5.43e3	2668	2.0	2.33e3	1626	1.4	bb	bb
Total-tetradoxins	9.37e1	5.73e1	1.51e2	25.47	1.63	YES	0.011	0.0596	3.87e3	2668	1.5	3.49e3	1626	2.1	bd	bb
Total-tetradoxins	7.40e1	9.85e1	1.72e2	30.41	0.75	NO	0.012	0.0596	5.24e3	2668	2.0	5.46e3	1626	3.4	bd	bb
Total-tetradoxins	1.16e2	9.05e1	2.06e2	30.13	1.28	YES	0.015	0.0596	4.24e3	2668	1.6	2.29e3	1626	1.4	db	bb
Total-tetradoxins	9.45e1	5.63e1	1.51e2	29.97	1.68	YES	0.011	0.0596	2.83e3	2668	1.1	3.85e3	1626	2.4	db	bb
Total-tetradoxins	4.09e2	1.09e2	5.18e2	29.74	3.76	YES	0.037	0.0596	6.38e3	2668	2.4	4.67e3	1626	2.9	dd	db
Total-tetradoxins	6.63e1	8.41e1	1.50e2	29.61	0.79	NO	0.011	0.0596	2.64e3	2668	1.0	3.90e3	1626	2.4	dd	bd
Total-tetradoxins	5.45e1	7.59e1	1.30e2	29.55	0.72	NO	0.009	0.0596	2.50e3	2668	0.9	3.23e3	1626	2.0	dd	bb
Total-tetradoxins	6.17e1	5.48e1	1.16e2	29.32	1.12	YES	0.008	0.0596	2.14e3	2668	0.8	4.04e3	1626	2.5	bb	bb
Total-tetradoxins	9.92e1	8.14e1	1.81e2	29.16	1.22	YES	0.013	0.0596	2.65e3	2668	1.0	3.25e3	1626	2.0	bb	bb
Total-tetradoxins	1.07e2	6.49e1	1.72e2	32.05	1.65	YES	0.012	0.0596	4.65e3	2668	1.7	2.03e3	1626	1.2	bb	bb
Total-tetradoxins	1.39e2	1.17e2	2.56e2	31.29	1.19	YES	0.018	0.0596	2.65e3	2668	1.0	2.17e3	1626	1.3	db	bb
2378-TCDD	9.00e1	1.04e2	1.94e2	30.75	0.86	NO	0.014	0.0596	3.74e3	2668	1.4	4.64e3	1626	2.9	bb	db

PD

1	2	3	4													
Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
12378-PeCDD	1.91e2	7.02e1	2.62e2	33.82	2.73	YES	0.026	0.0436	9.48e3	2746	3.5	4.72e3	1460	3.2	db	bb
Total-pentadoxins	5.03e1	7.10e1	1.21e2	33.01	0.71	YES	0.012	0.0436	1.95e3	2746	0.7	2.32e3	1460	1.6	db	bd
Total-pentadoxins	1.04e2	5.85e1	1.63e2	32.72	1.79	YES	0.016	0.0436	3.53e3	2746	1.3	1.82e3	1460	1.2	bb	bb
Total-pentadoxins	5.33e1	1.10e2	1.63e2	32.51	0.48	YES	0.016	0.0436	2.74e3	2746	1.0	2.88e3	1460	2.0	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:04:19 Eastern Standard Time
Printed: Thursday, January 16, 2020 11:04:42 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDD	3.61e2	3.70e2	7.31e2	36.61	0.98	YES	0.071	0.0476	1.00e4	2478	4.0	7.39e3	1747	4.2	bb	bb
2	123678-HxCDD	4.45e2	3.41e2	7.87e2	36.35	1.31	NO	0.072	0.0469	9.43e3	2478	3.8	8.47e3	1747	4.8	db	bb
3	Total-hexadioxins	2.78e2	1.14e2	3.92e2	36.13	2.44	YES	0.038	0.0471	7.32e3	2478	3.0	5.95e3	1747	3.4	bb	bb
4	Total-hexadioxins	1.25e3	7.59e2	2.01e3	35.75	1.65	YES	0.193	0.0471	2.98e4	2478	12.0	1.42e4	1747	8.1	dd	bb
5	Total-hexadioxins	1.38e2	1.22e2	2.60e2	35.58	1.13	NO	0.025	0.0471	4.35e3	2478	1.8	5.10e3	1747	2.9	dd	bb
6	Total-hexadioxins	7.59e2	7.37e2	1.50e3	35.10	1.03	YES	0.144	0.0471	2.18e4	2478	8.8	1.83e4	1747	10.5	bb	bb

HRP

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	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	9.62e1	7.29e1	1.69e2	38.89	1.32	YES	0.018	0.0755	4.99e3	2703	1.8	6.61e3	1840	3.6	bb	db
2	Total-heptadioxins	1.20e4	1.14e4	2.34e4	38.65	1.05	NO	2.427	0.0755	1.96e5	2703	72.7	2.10e5	1840	114.2	bb	bd
3	Total-heptadioxins	4.41e2	1.43e2	5.83e2	38.30	3.09	YES	0.060	0.0755	1.28e4	2703	4.7	3.65e3	1840	2.0	bb	bb
4	1234678-HpCDD	7.51e3	7.51e3	1.50e4	39.53	1.00	NO	1.557	0.0755	1.18e5	2703	43.7	1.23e5	1840	67.1	bb	bd

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	6.29e1	5.18e1	1.15e2	29.40	1.21	YES	0.006	0.0326	2.92e3	1250	2.3	2.90e3	1562	1.9	bb	bb
2	Total-tetrafurans	7.34e1	5.91e1	1.32e2	27.43	1.24	YES	0.007	0.0326	2.60e3	1250	2.1	1.71e3	1562	1.1	bb	bb
3	Total-tetrafurans	5.03e1	1.21e2	1.71e2	26.52	0.42	YES	0.009	0.0326	3.85e3	1250	3.1	3.22e3	1562	2.1	bb	bb
4	Total-tetrafurans	5.29e1	6.26e1	1.15e2	25.36	0.84	NO	0.006	0.0326	2.20e3	1250	1.8	2.20e3	1562	1.4	bb	bb
5	Total-tetrafurans	8.26e1	8.23e1	1.65e2	31.35	1.00	YES	0.009	0.0326	2.33e3	1250	1.9	2.17e3	1562	1.4	bb	db

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	8.00e1	1.12e2	1.92e2	31.77	0.71	YES	0.012	0.0142	3.09e3	704	4.4	1.73e3	1608	1.1	bb	bb
2	Total-pentafurans (F1)	4.97e2	3.45e2	8.42e2	31.55	1.44	NO	0.055	0.0142	9.29e3	704	13.2	8.28e3	1608	5.1	bb	bb
3	Total-pentafurans (F1)	5.22e1	8.72e1	1.39e2	29.13	0.60	YES	0.009	0.0142	2.38e3	704	3.4	1.94e3	1608	1.2	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:04:19 Eastern Standard Time
Printed: Thursday, January 16, 2020 11:04:42 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

PF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentafurans	1.88e2	2.90e2	4.78e2	32.44	0.65	YES	0.031	0.0229	7.03e3	1925	3.7	1.28e4	1794	7.2	bb	bb

HIF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
234678-HxCDF	1.62e2	1.70e2	3.32e2	36.15	0.95	YES	0.024	0.0254	4.39e3	1380	3.2	3.86e3	1669	2.3	bb	bb
Total-hexafurans	2.20e2	6.63e1	2.86e2	35.56	3.32	YES	0.021	0.0266	5.04e3	1380	3.7	3.38e3	1669	2.0	bd	db
Total-hexafurans	7.45e2	6.06e2	1.35e3	35.24	1.23	NO	0.101	0.0266	1.39e4	1380	10.1	1.29e4	1669	7.7	bb	bb
Total-hexafurans	6.47e1	6.27e1	1.27e2	34.90	1.03	YES	0.010	0.0266	3.33e3	1380	2.4	2.65e3	1669	1.6	db	bb
Total-hexafurans	8.72e2	6.12e2	1.48e3	34.82	1.43	NO	0.111	0.0266	2.07e4	1380	15.0	1.99e4	1669	11.9	dd	bb
Total-hexafurans	3.55e2	3.06e2	6.61e2	34.70	1.16	NO	0.049	0.0266	8.47e3	1380	6.1	9.18e3	1669	5.5	MM	bb

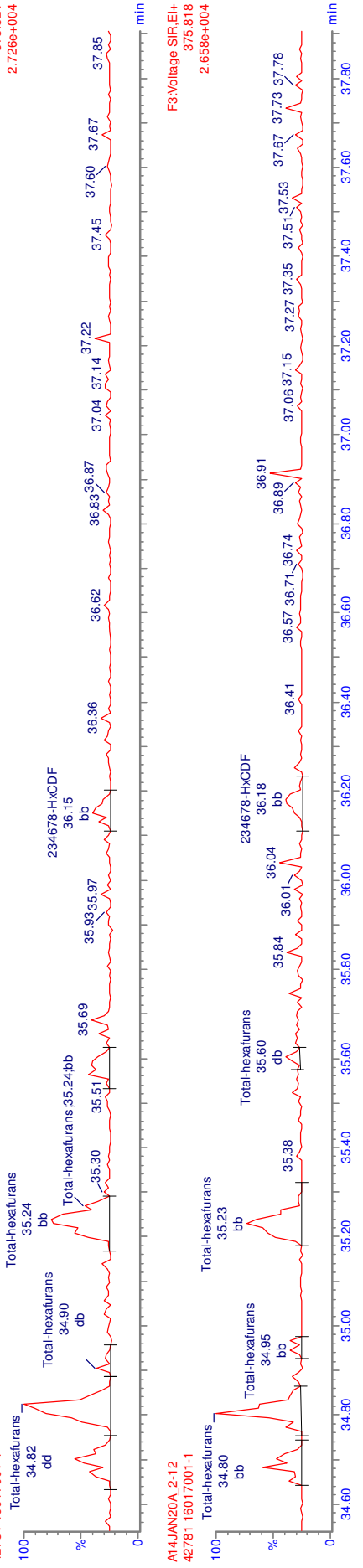
HIF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-heptafurans	3.24e3	3.17e3	6.41e3	38.81	1.02	NO	0.590	0.0381	5.16e4	1215	42.5	4.93e4	1469	33.6	bb	bb
1234678-HpCDF	1.99e3	1.87e3	3.86e3	38.32	1.07	NO	0.347	0.0338	3.92e4	1215	32.3	4.03e4	1469	27.4	bb	bb
1234789-HpCDF	8.52e1	7.29e1	1.58e2	40.16	1.17	NO	0.015	0.0428	3.18e3	1215	2.6	2.39e3	1469	1.6	bd	bb

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

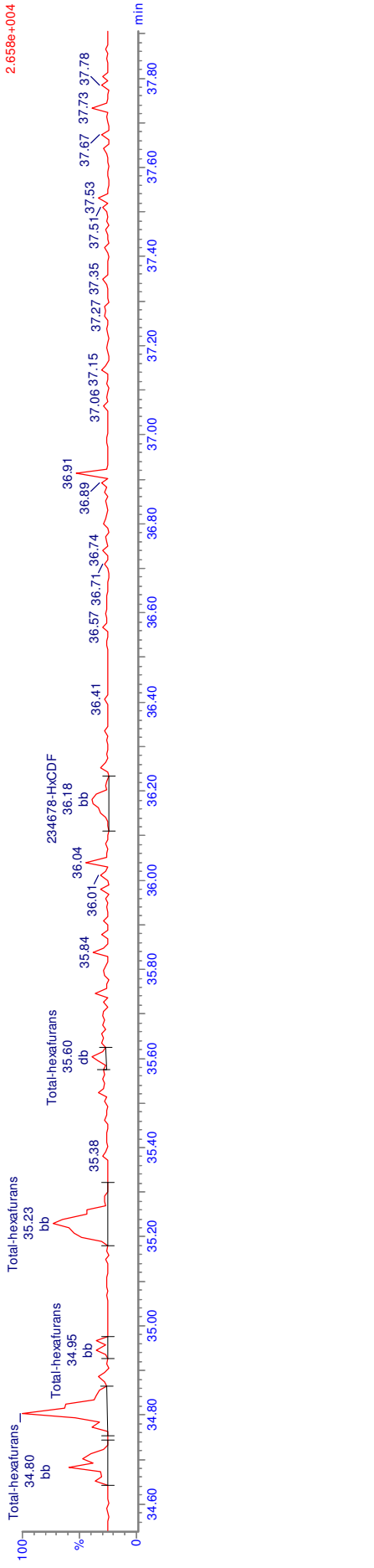
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 42781 16017001-1

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 373.821
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AI4JAN20A_2-12
 42781 16017001-1

F3:Voltage SIR.EI+
 375.818
 2.658e+004



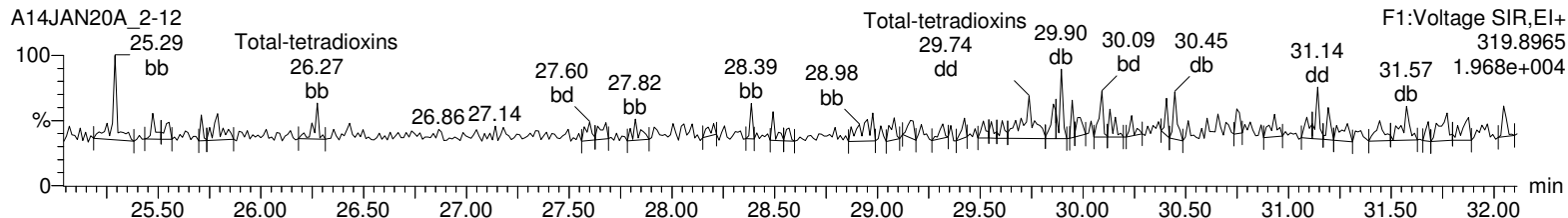
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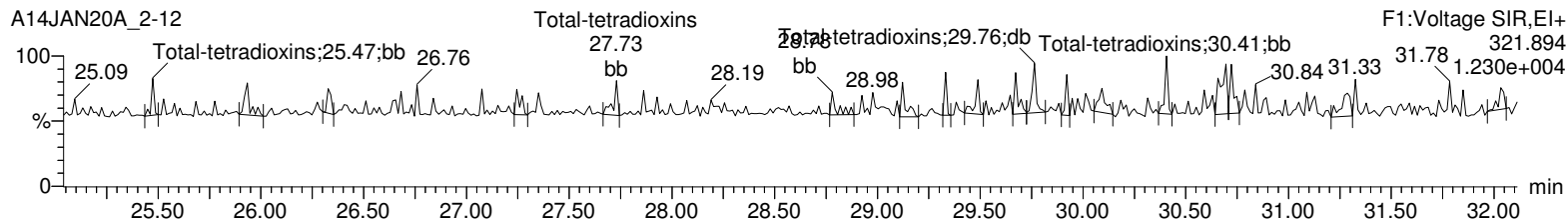
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Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

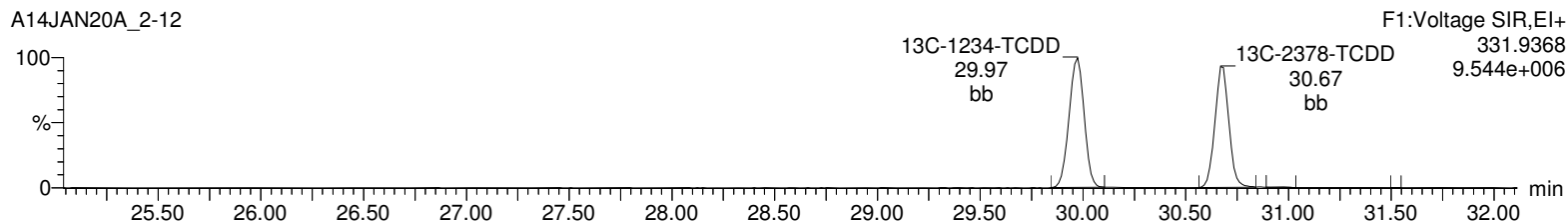
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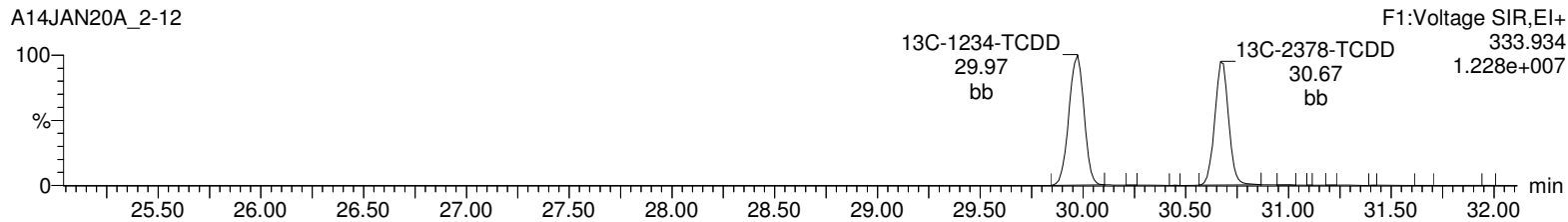
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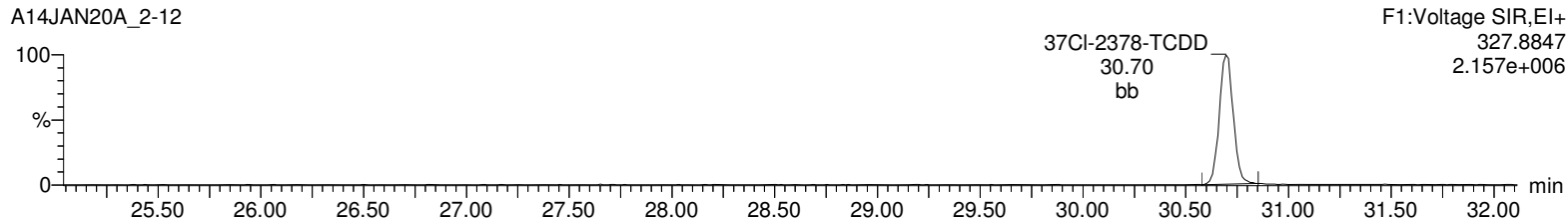
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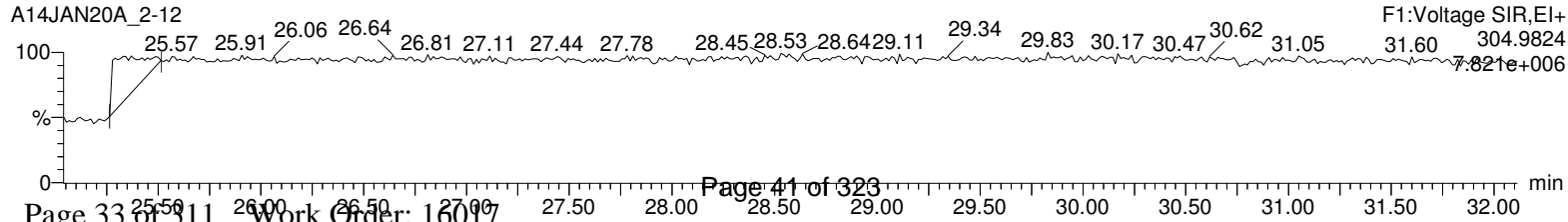
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37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

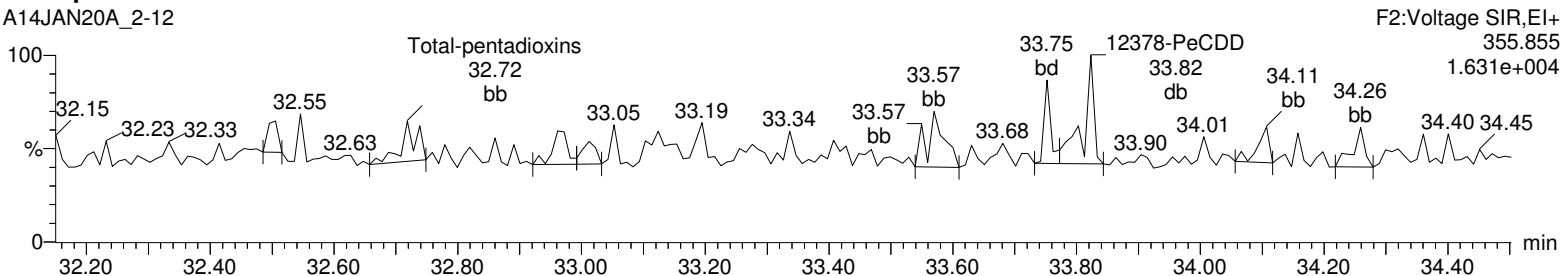
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Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

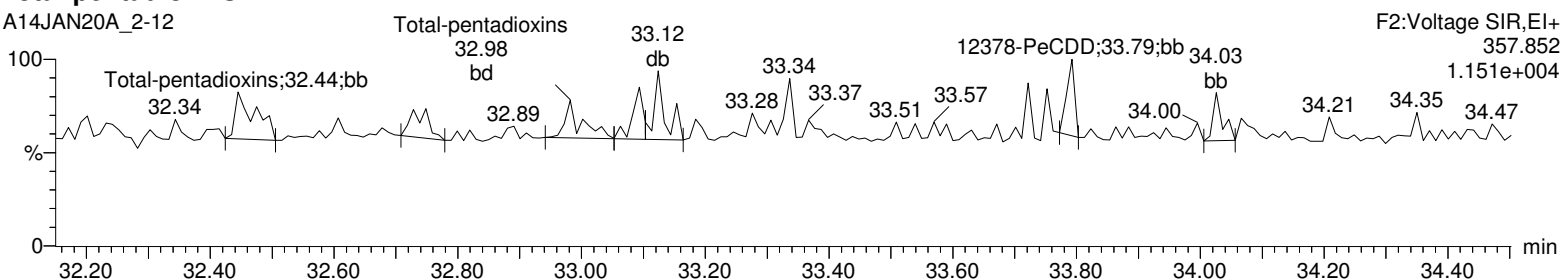
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A14JAN20A_2-12



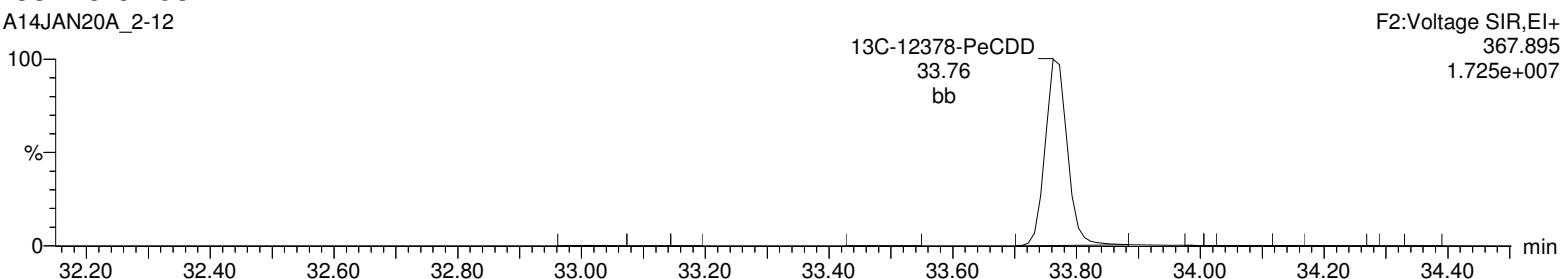
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A14JAN20A_2-12



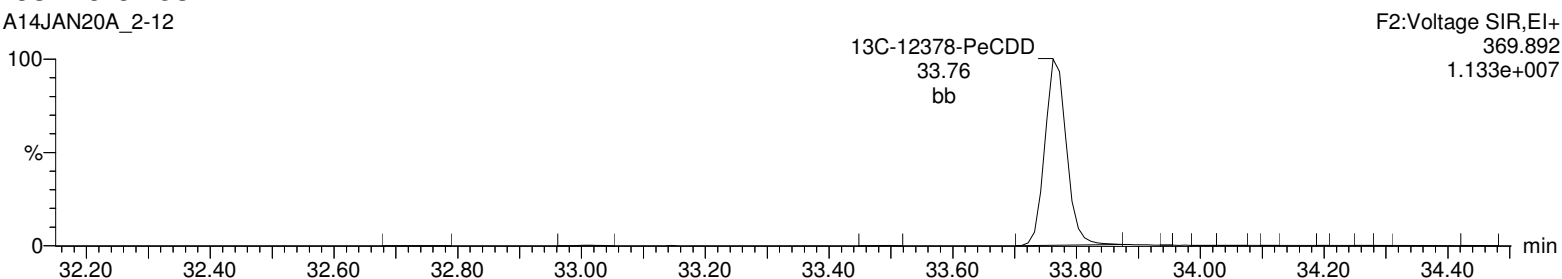
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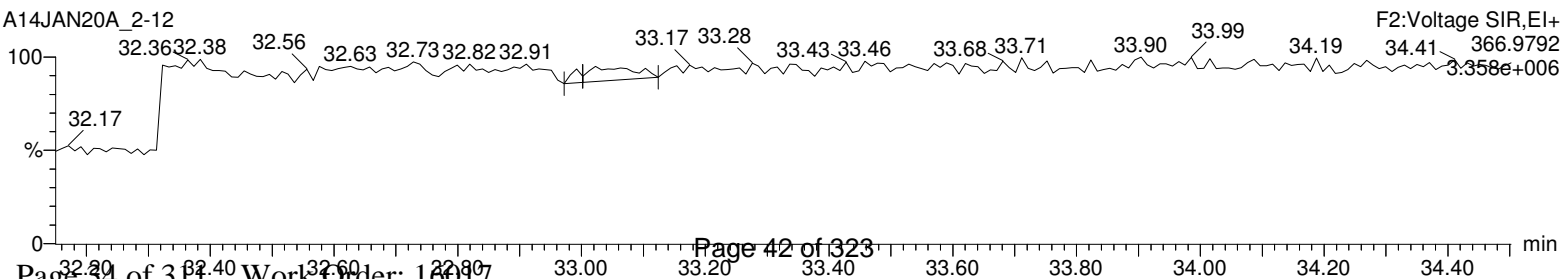
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A14JAN20A_2-12



Lock Mass F2

A14JAN20A_2-12



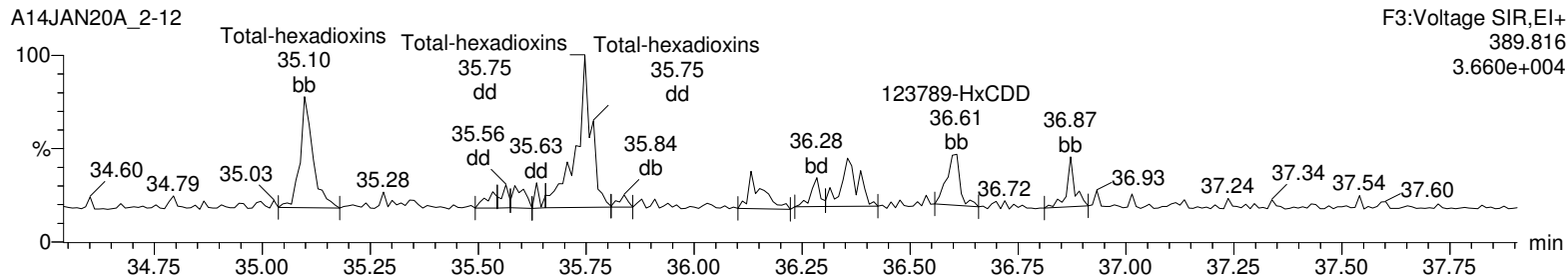
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

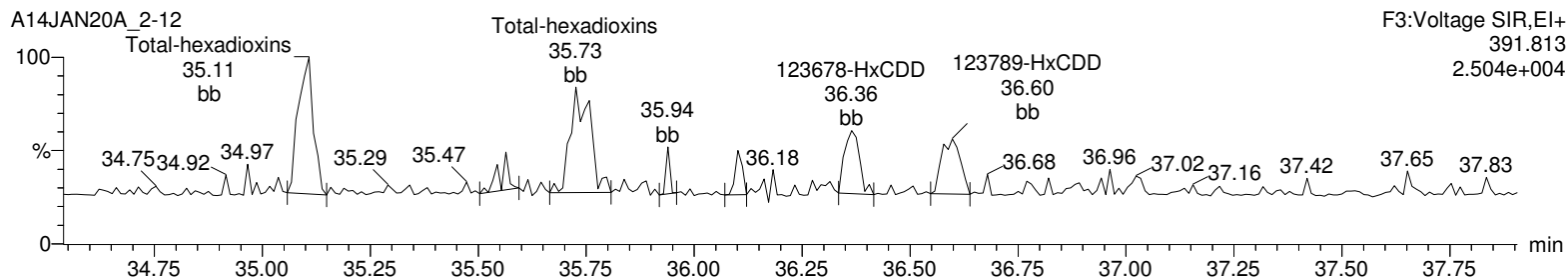
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

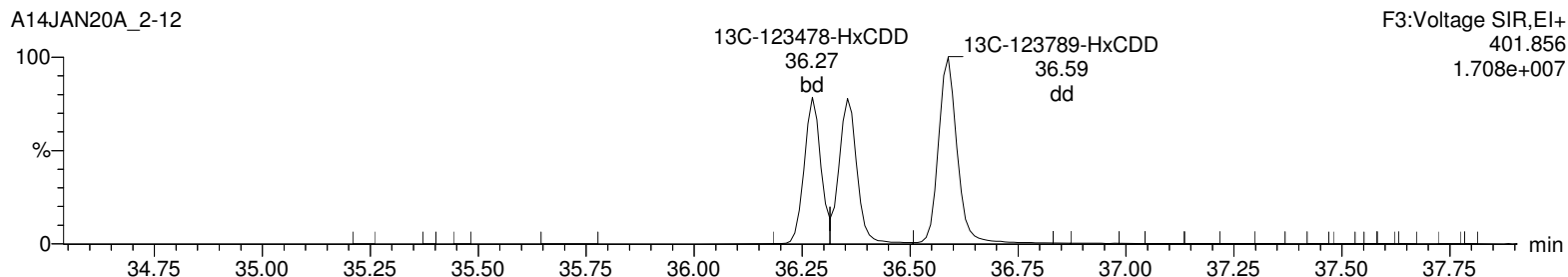
Total-hexadioxins



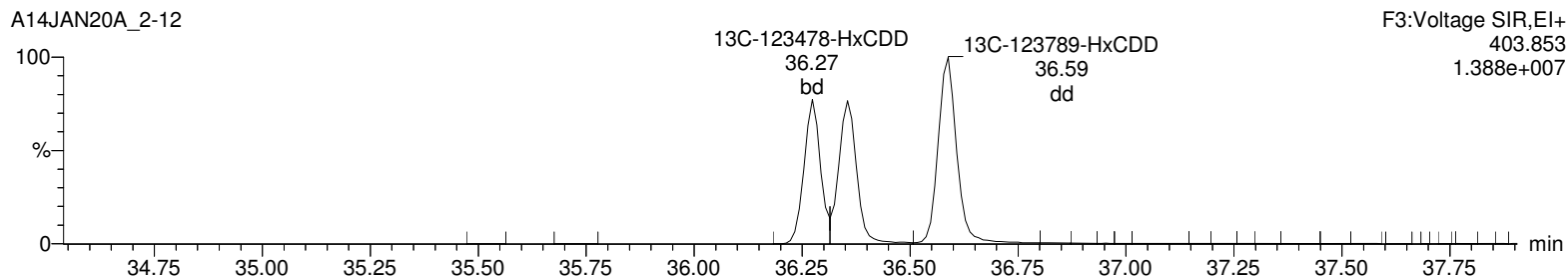
Total-hexadioxins



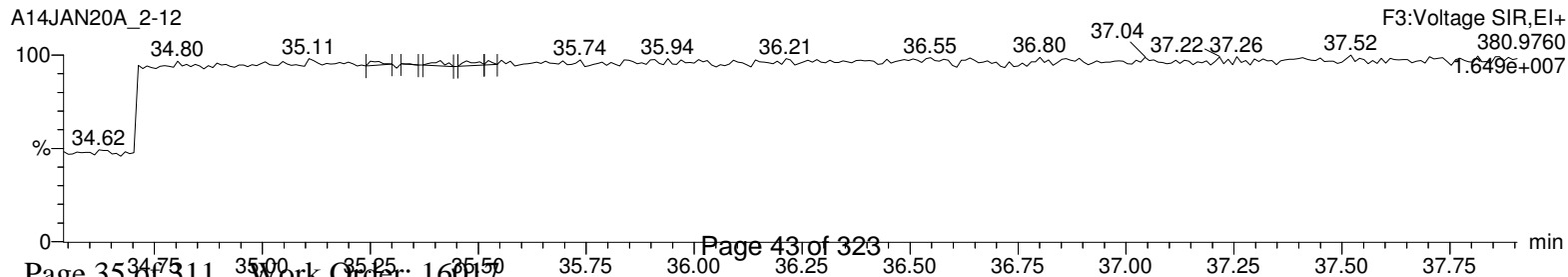
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

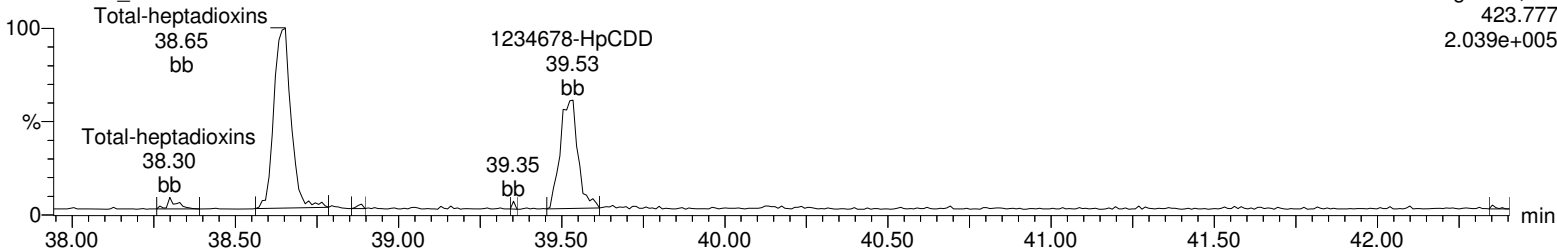
Total-heptadioxins

A14JAN20A_2-12

F4:Voltage SIR,EI+

423.777

2.039e+005



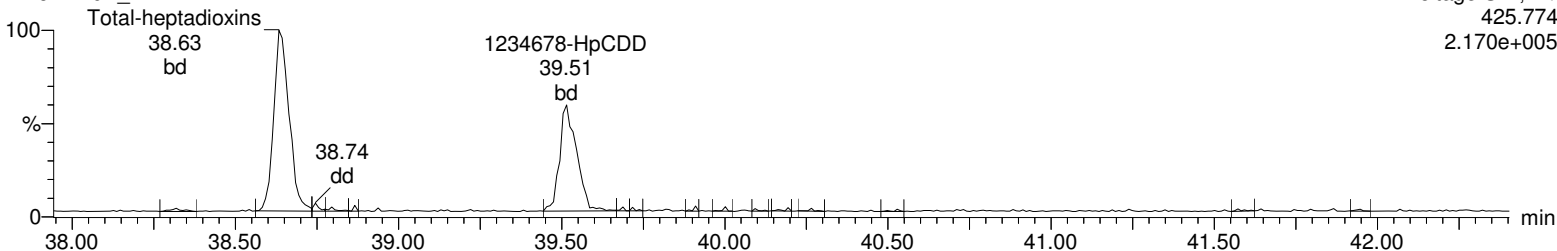
Total-heptadioxins

A14JAN20A_2-12

F4:Voltage SIR,EI+

425.774

2.170e+005



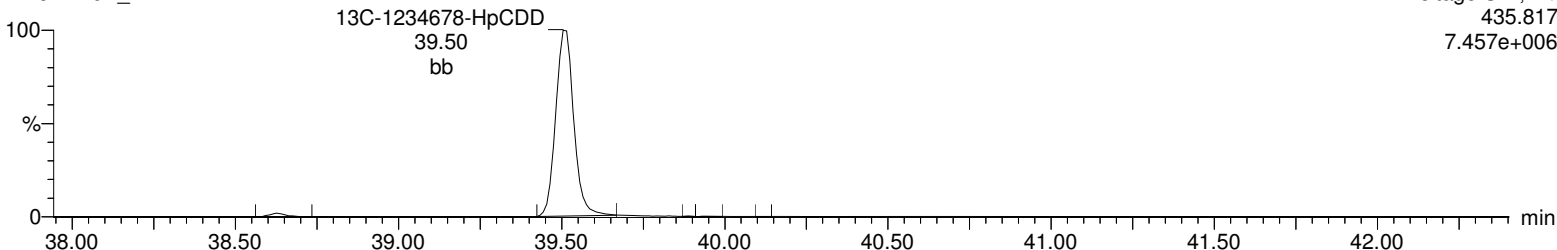
13C-1234678-HpCDD

A14JAN20A_2-12

F4:Voltage SIR,EI+

435.817

7.457e+006



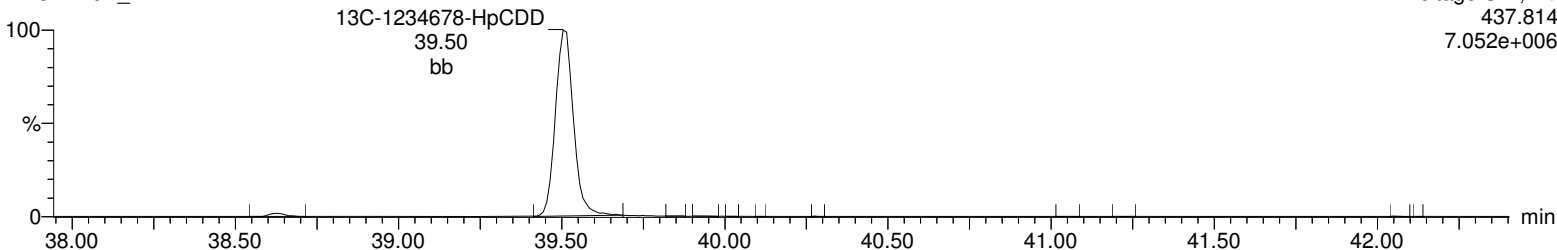
13C-1234678-HpCDD

A14JAN20A_2-12

F4:Voltage SIR,EI+

437.814

7.052e+006



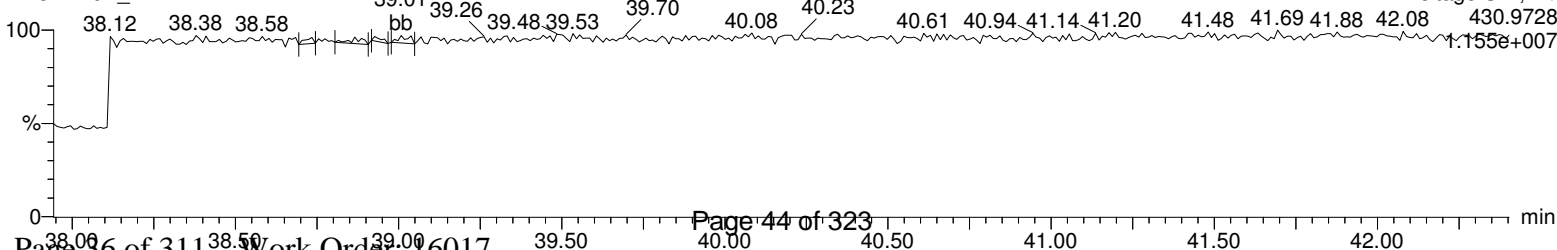
Lock Mass F4

A14JAN20A_2-12

F4:Voltage SIR,EI+

430.9728

1.155e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

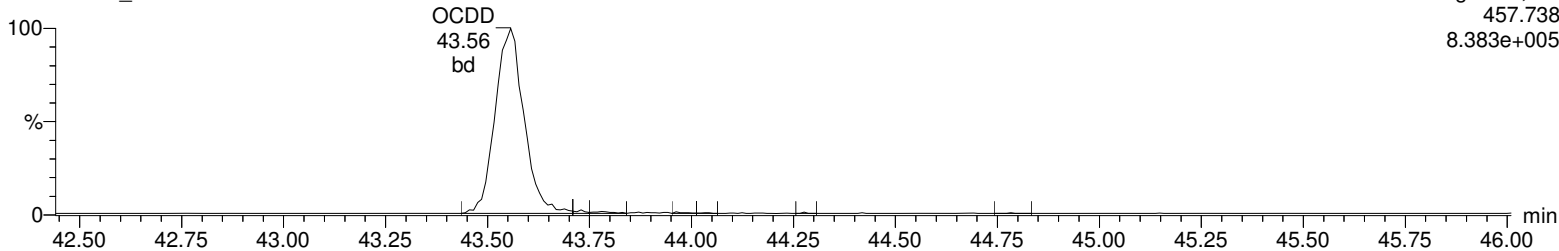
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDD

A14JAN20A_2-12

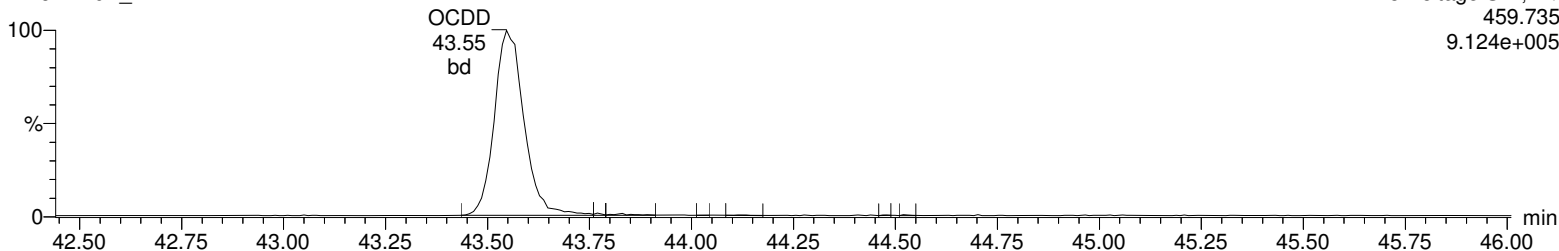
F5:Voltage SIR,EI+
457.738
8.383e+005



OCDD

A14JAN20A_2-12

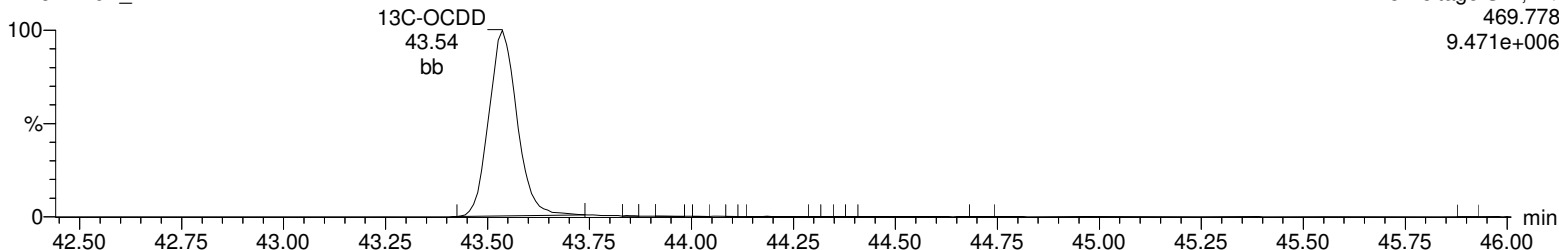
F5:Voltage SIR,EI+
459.735
9.124e+005



13C-OCDD

A14JAN20A_2-12

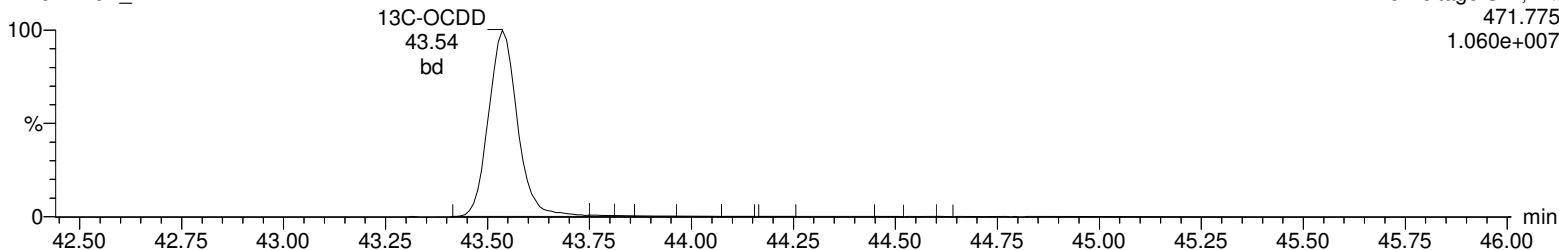
F5:Voltage SIR,EI+
469.778
9.471e+006



13C-OCDD

A14JAN20A_2-12

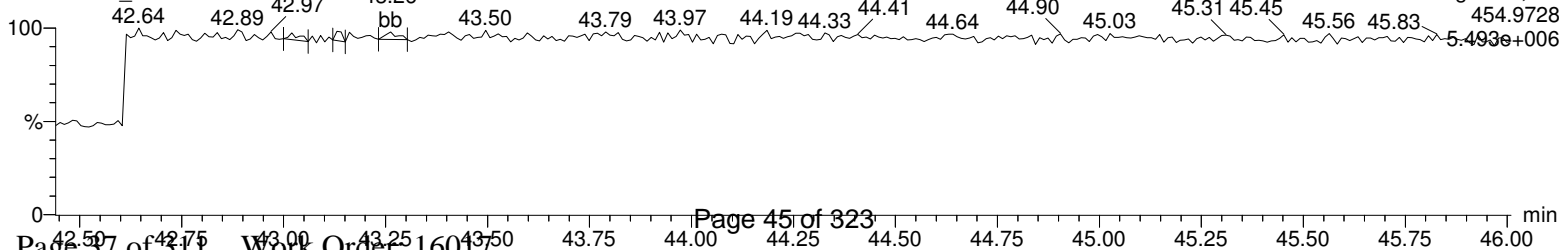
F5:Voltage SIR,EI+
471.775
1.060e+007



Lock Mass F5

A14JAN20A_2-12

F5:Voltage SIR,EI+
454.9728
5.493e+006



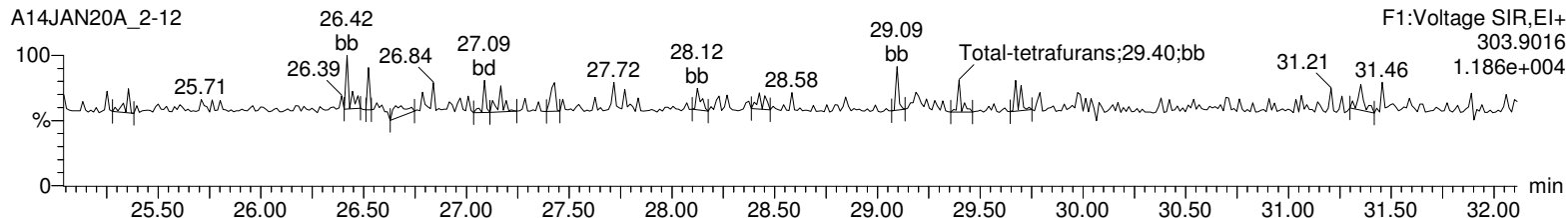
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

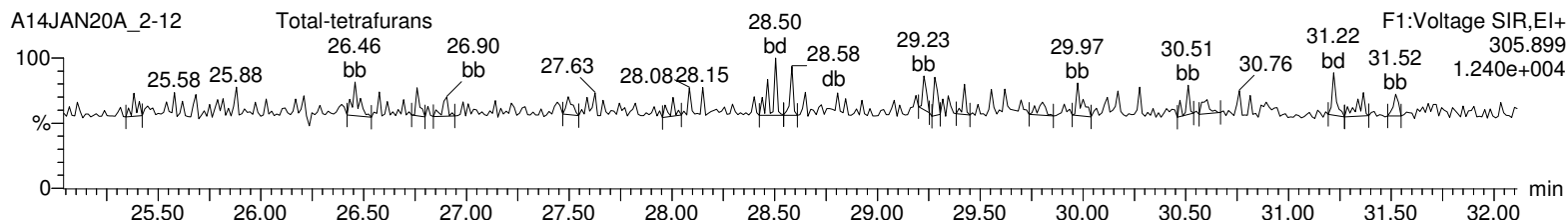
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

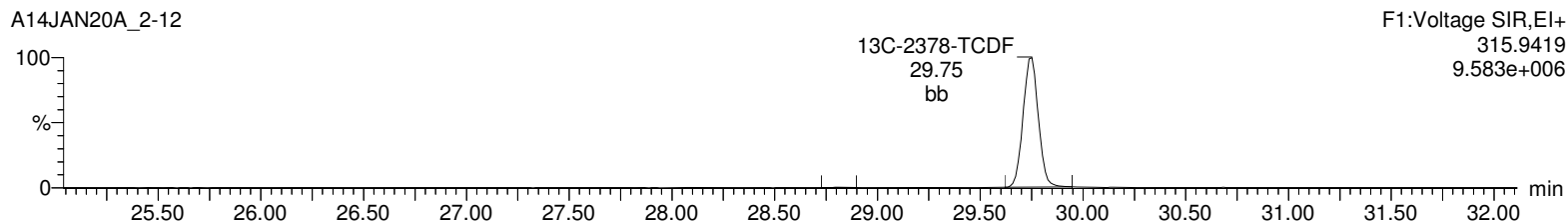
Total-tetrafurans



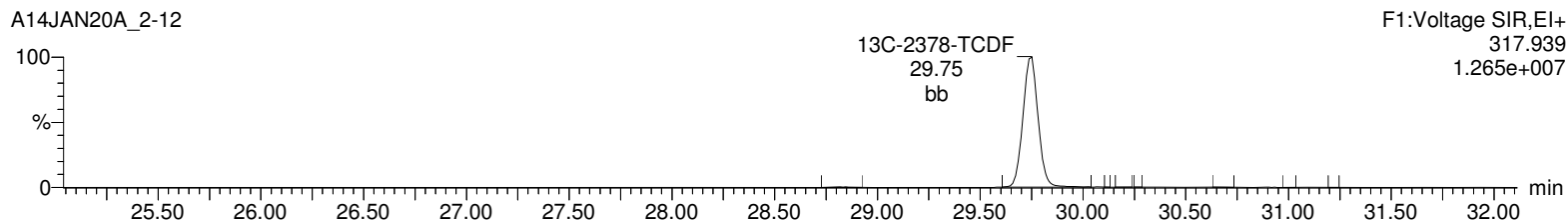
Total-tetrafurans



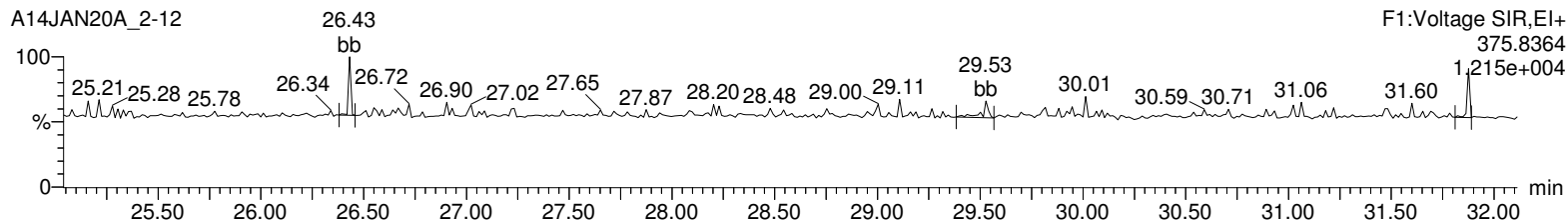
13C-2378-TCDF



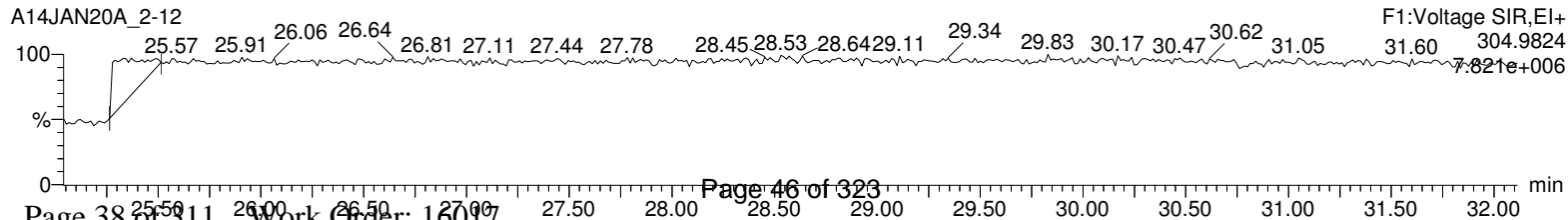
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

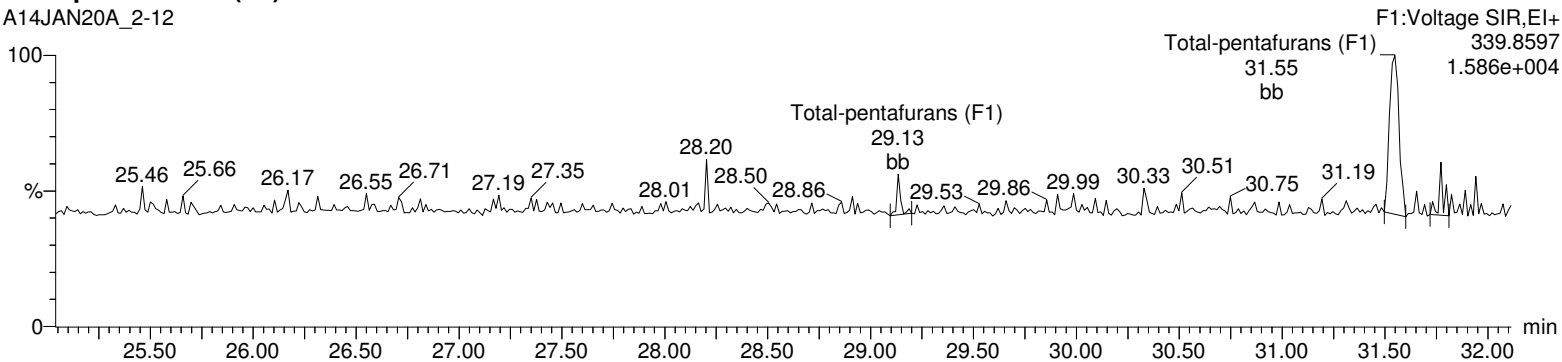
Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

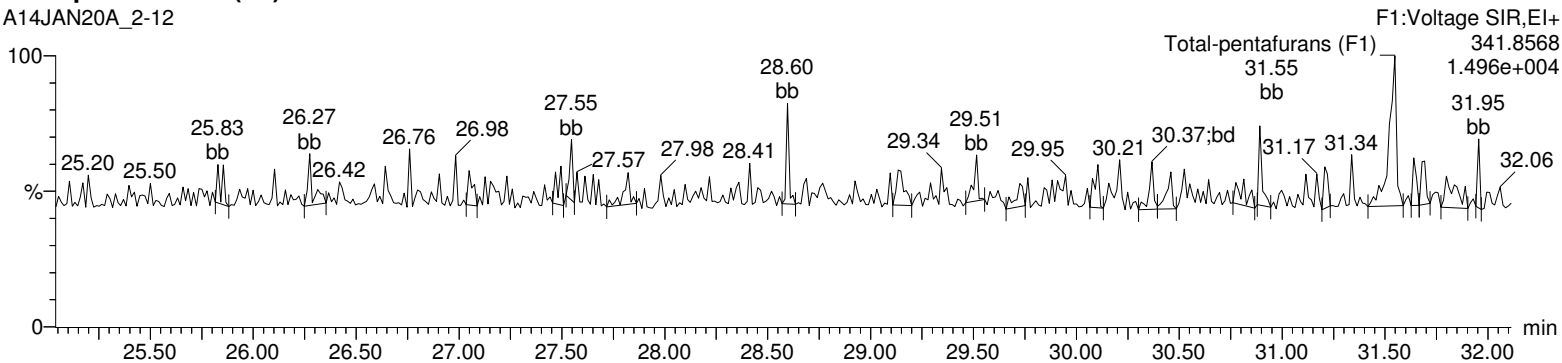
Total-pentafurans (F1)

A14JAN20A_2-12



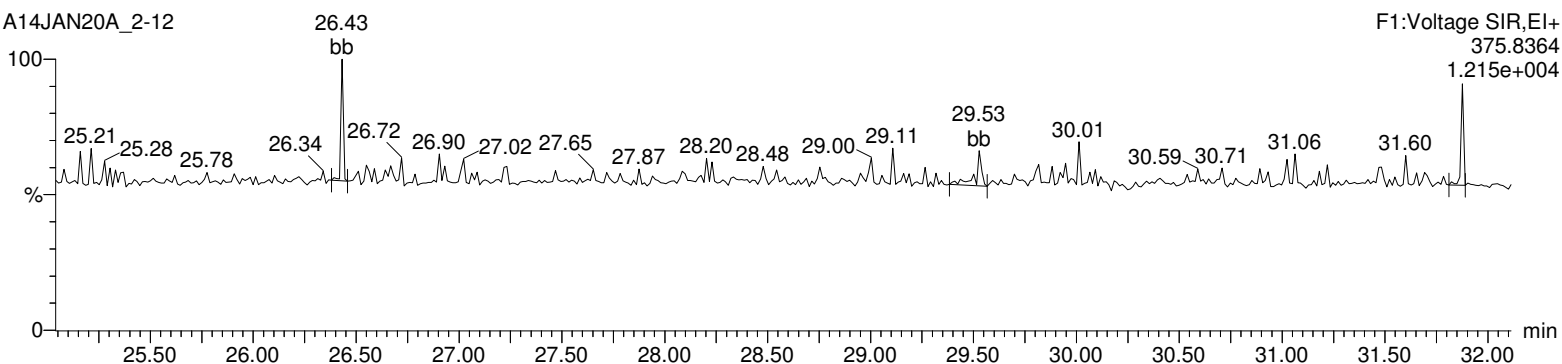
Total-pentafurans (F1)

A14JAN20A_2-12



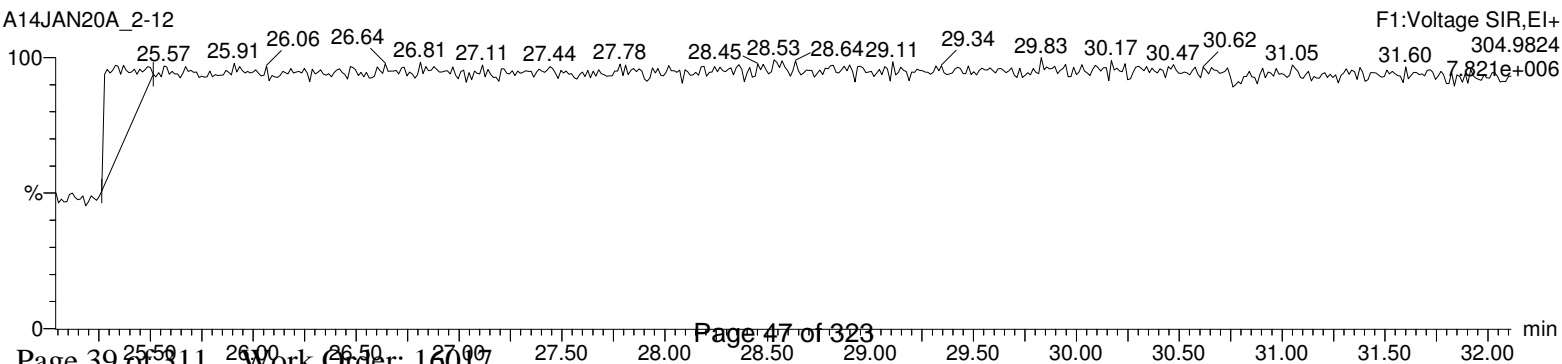
HxDPE

A14JAN20A_2-12



Lock Mass F1

A14JAN20A_2-12



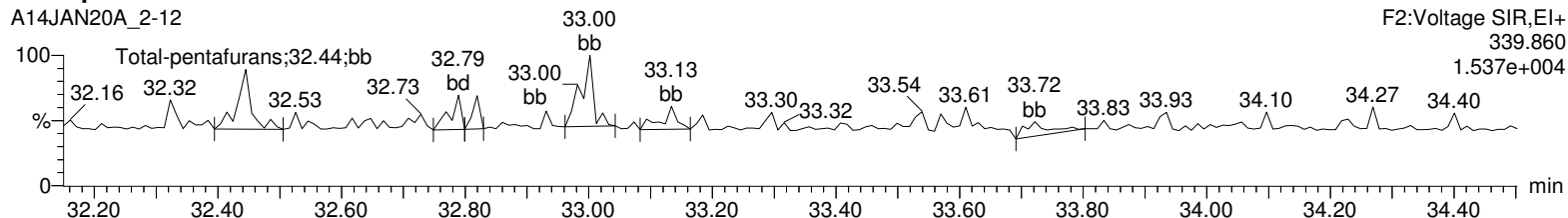
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

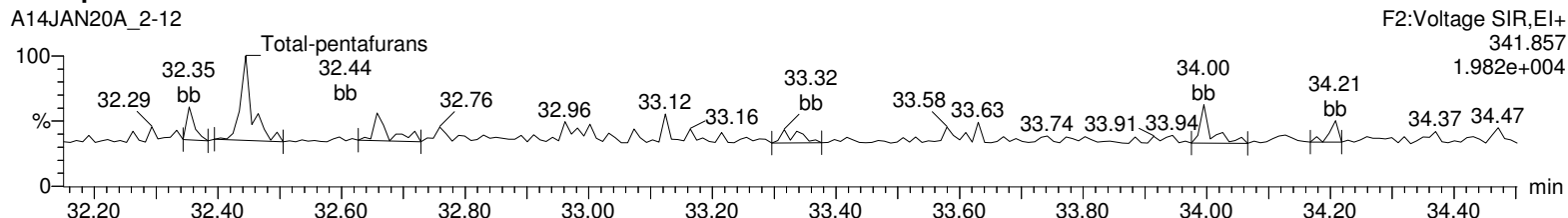
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

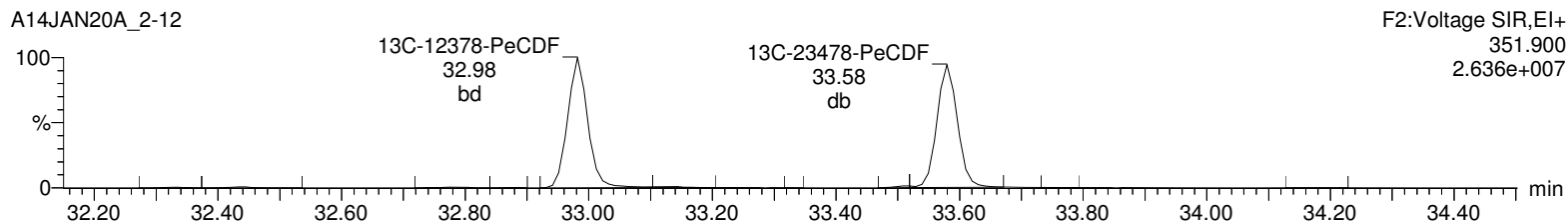
Total-pentafurans



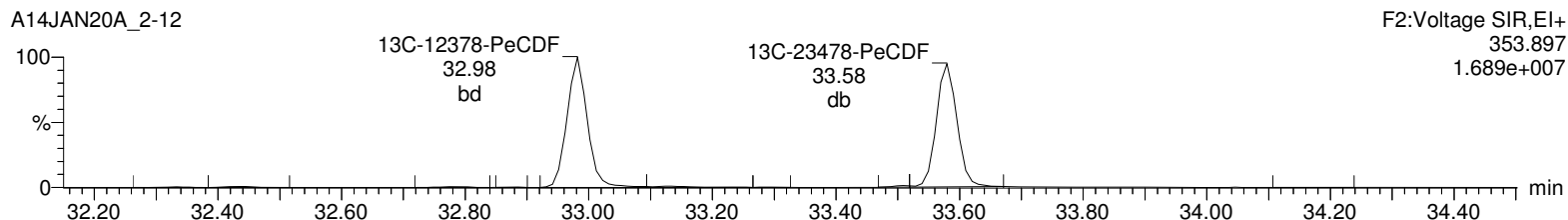
Total-pentafurans



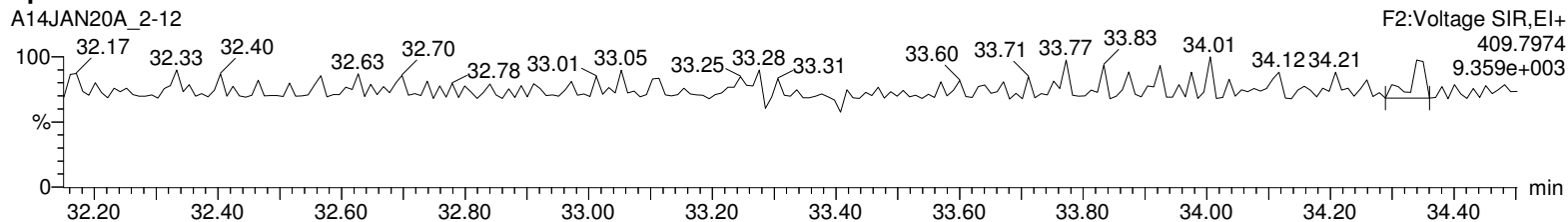
13C-12378-PeCDF



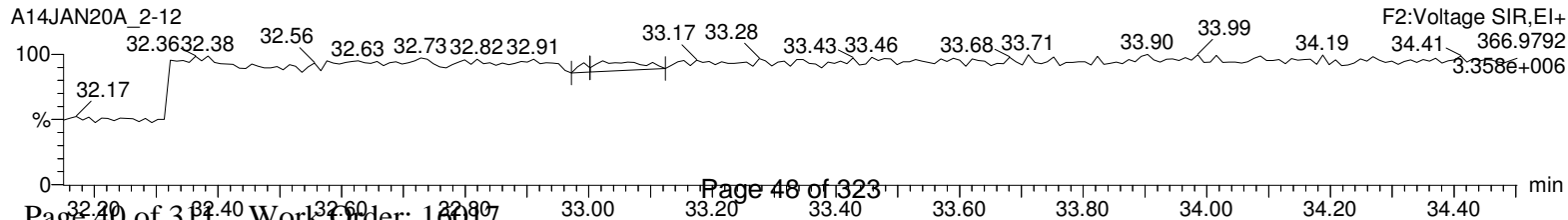
13C-12378-PeCDF



HpDPE



Lock Mass F2



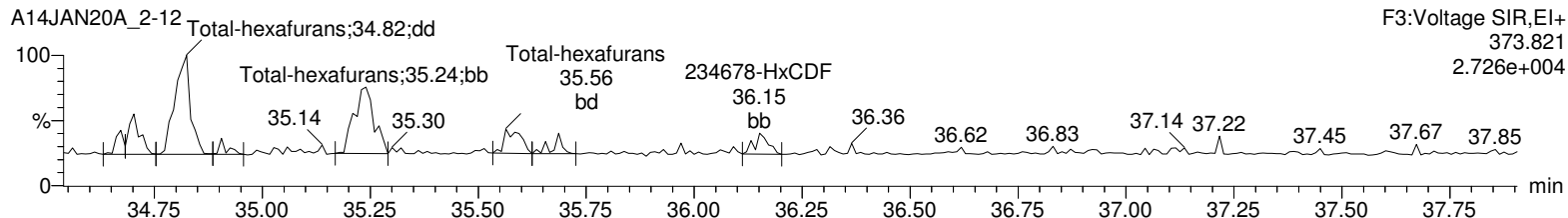
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

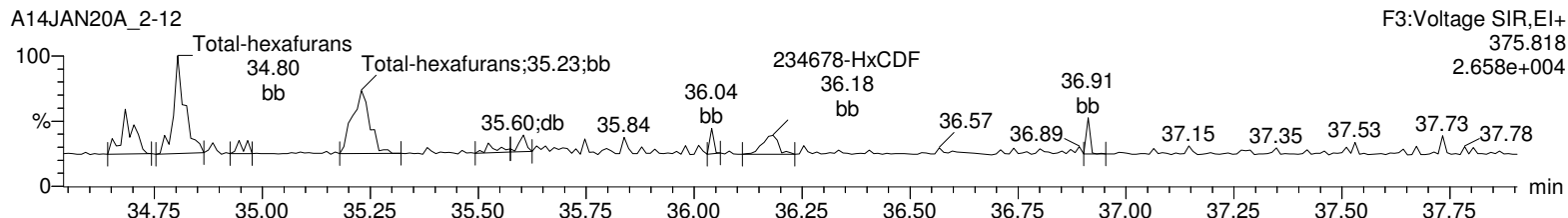
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

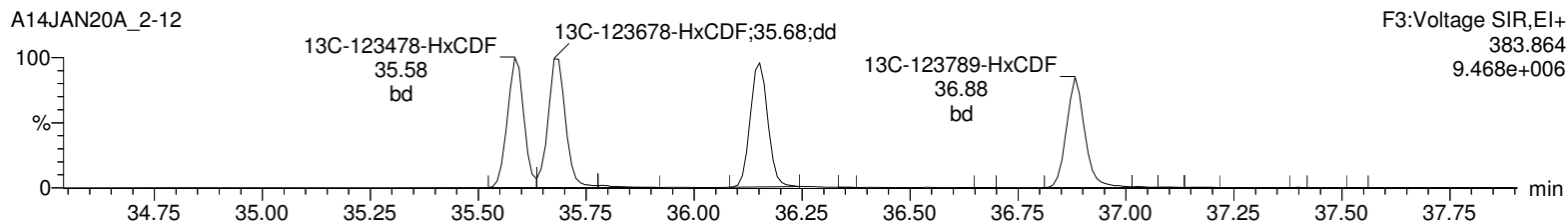
Total-hexafurans



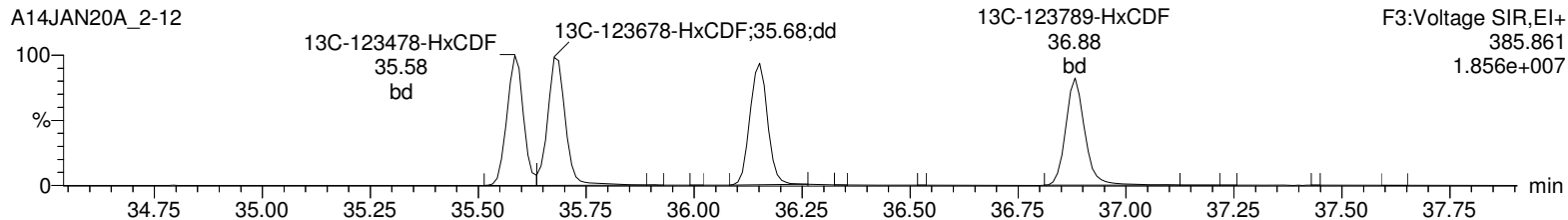
Total-hexafurans



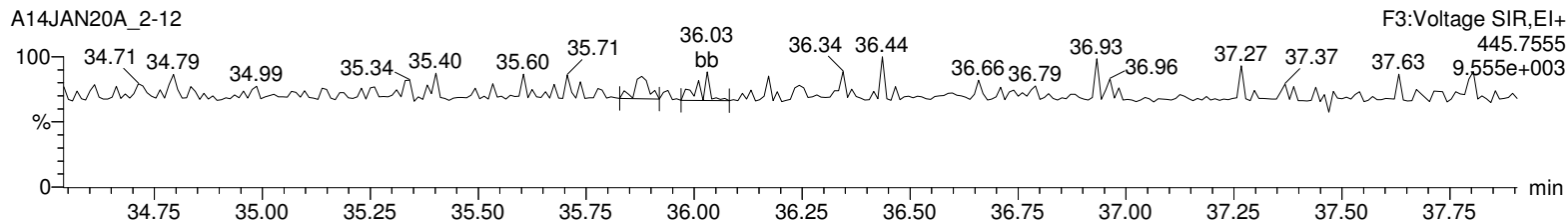
13C-123478-HxCDF



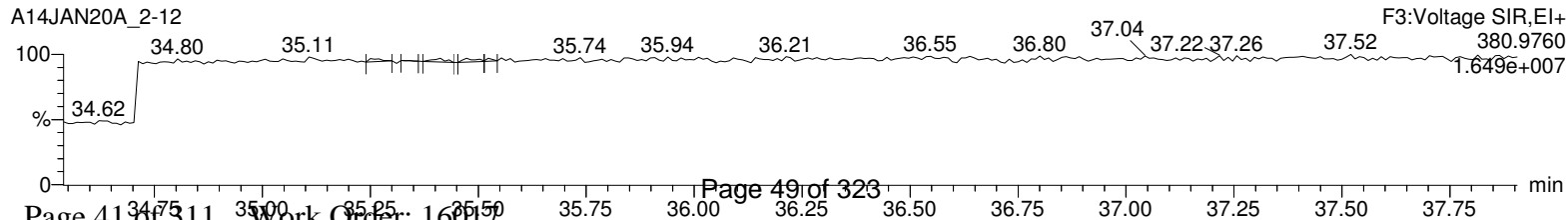
13C-123478-HxCDF



OcDPE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

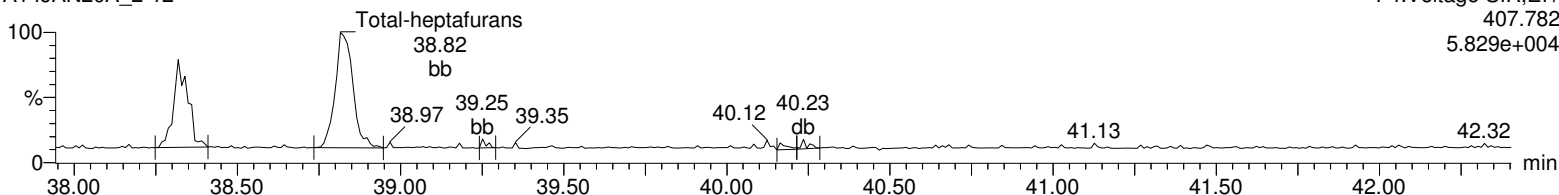
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-heptafurans

A14JAN20A_2-12

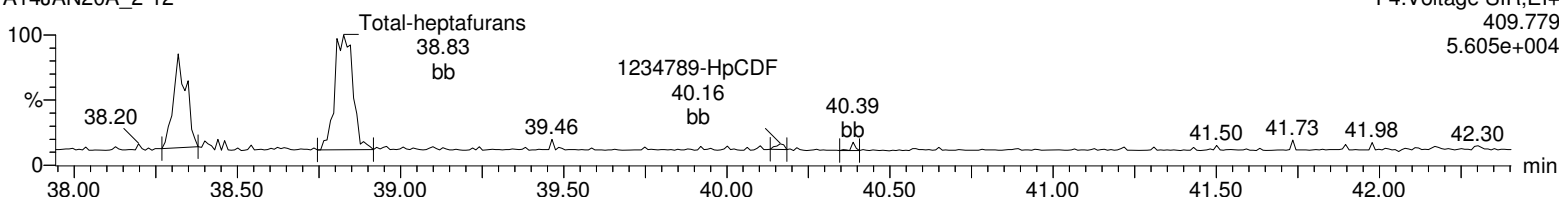
F4:Voltage SIR,EI+
407.782
5.829e+004



Total-heptafurans

A14JAN20A_2-12

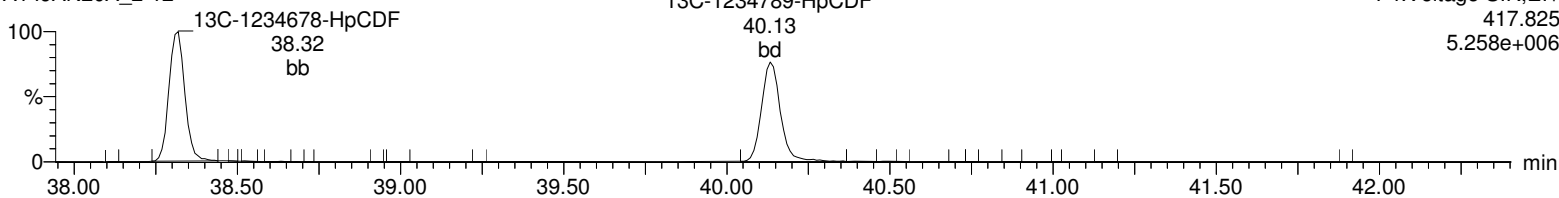
F4:Voltage SIR,EI+
409.779
5.605e+004



13C-1234678-HpCDF

A14JAN20A_2-12

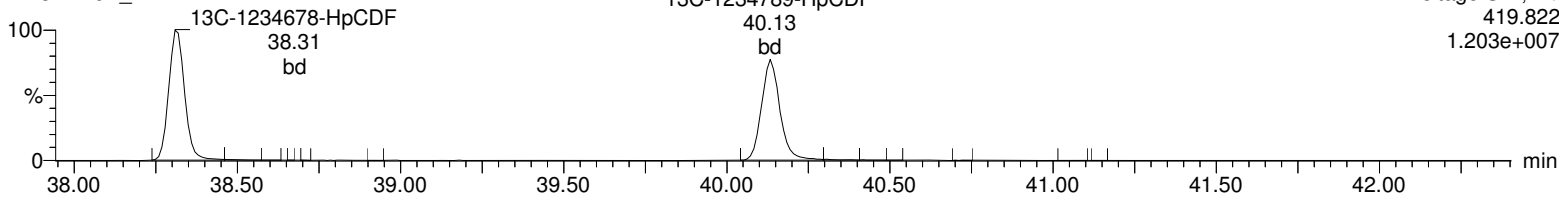
F4:Voltage SIR,EI+
417.825
5.258e+006



13C-1234678-HpCDF

A14JAN20A_2-12

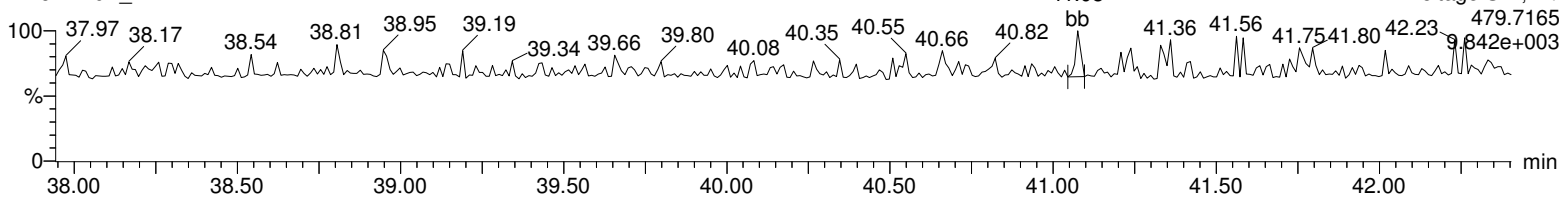
F4:Voltage SIR,EI+
419.822
1.203e+007



NoDPE

A14JAN20A_2-12

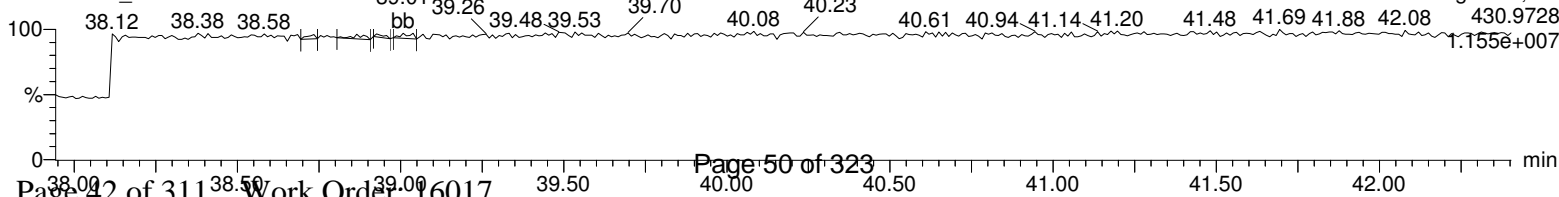
F4:Voltage SIR,EI+
479.7165
9.842e+003



Lock Mass F4

A14JAN20A_2-12

F4:Voltage SIR,EI+
430.9728
1.155e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

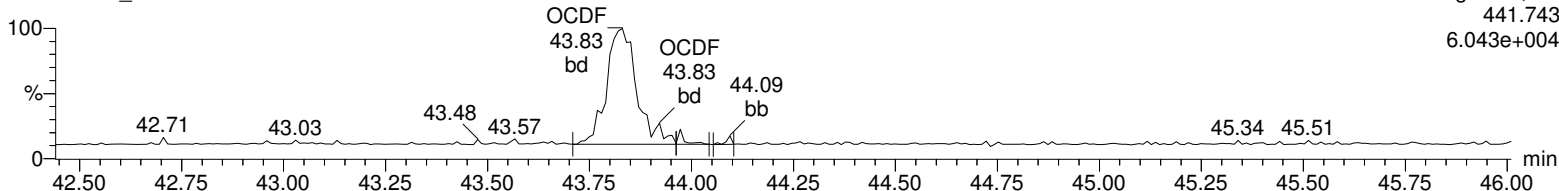
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-12, Date: 15-Jan-2020, Time: 12:16:40, ID: 16017001-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDF

A14JAN20A_2-12

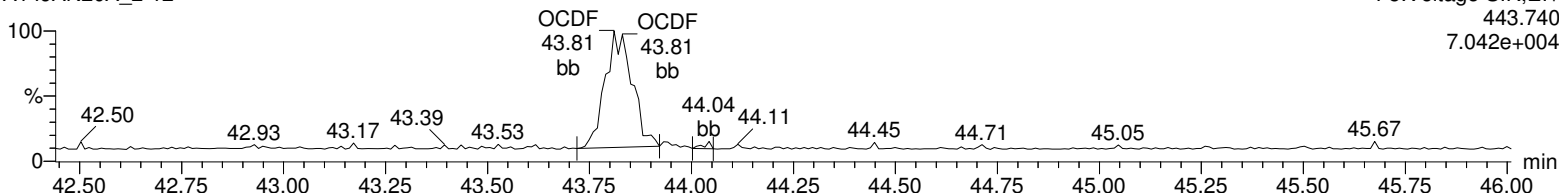
F5:Voltage SIR,EI+
441.743
6.043e+004



OCDF

A14JAN20A_2-12

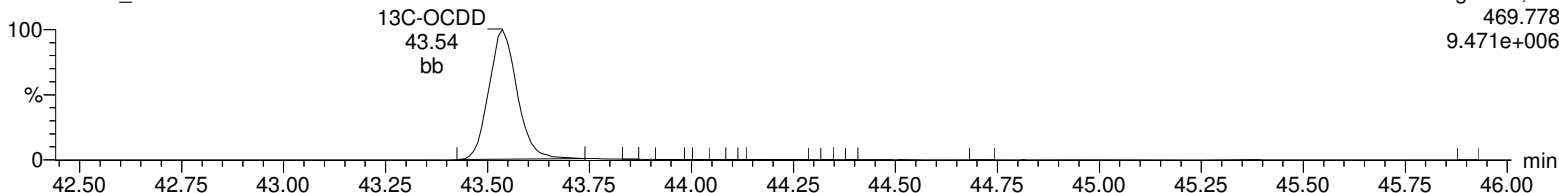
F5:Voltage SIR,EI+
443.740
7.042e+004



13C-OCDD

A14JAN20A_2-12

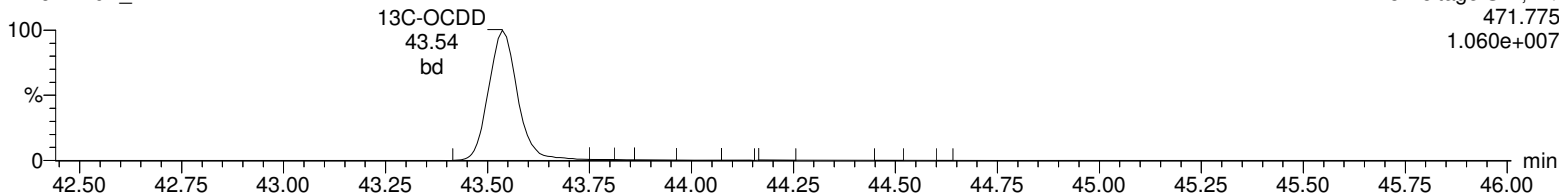
F5:Voltage SIR,EI+
469.778
9.471e+006



13C-OCDD

A14JAN20A_2-12

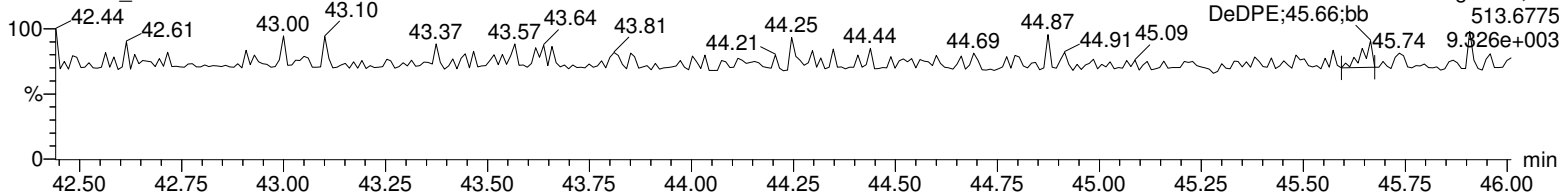
F5:Voltage SIR,EI+
471.775
1.060e+007



DeDPE

A14JAN20A_2-12

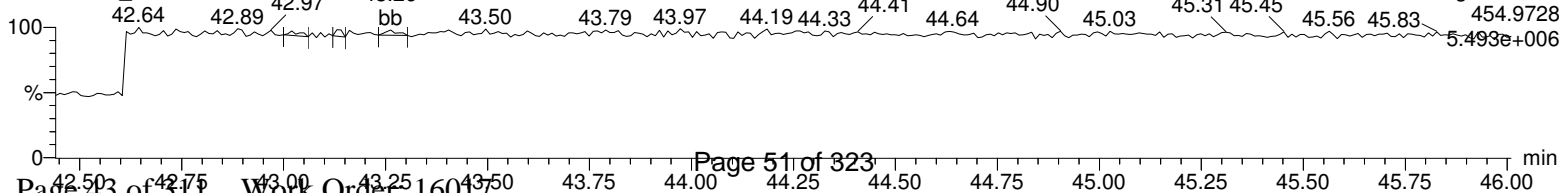
F5:Voltage SIR,EI+
513.6775
9.326e+003



Lock Mass F5

A14JAN20A_2-12

F5:Voltage SIR,EI+
454.9728
5.493e+006



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773
Lab Sample ID: 16017002
Client Sample: 1613B Water
Client ID: EVBMP0008S014
Batch ID: 42781
Run Date: 01/15/2020 13:04
Data File: A14JAN20A_2-13
Prep Batch: 42776
Prep Date: 06-JAN-20

Client: CALS001
Date Collected: 12/26/2019 08:45
Date Received: 12/31/2019 12:41

Method: EPA Method 1613B
Analyst: MJC

Prep Method: SW846 3520C
Prep Aliquot: 1059.3 mL

Project: CALS00214
Matrix: WATER

Prep Basis: As Received

Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0011	ng/L	0.0011	0.00944
40321-76-4	1,2,3,7,8-PeCDD	U	0.000885	ng/L	0.000885	0.0472
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00101	ng/L	0.00101	0.0472
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00098	ng/L	0.00098	0.0472
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00101	ng/L	0.00101	0.0472
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	0.0148	ng/L	0.000969	0.0472
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.192	ng/L	0.00165	0.0944
51207-31-9	2,3,7,8-TCDF	U	0.000789	ng/L	0.000789	0.00944
57117-41-6	1,2,3,7,8-PeCDF	U	0.000498	ng/L	0.000498	0.0472
57117-31-4	2,3,4,7,8-PeCDF	U	0.000495	ng/L	0.000495	0.0472
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000549	ng/L	0.000549	0.0472
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000544	ng/L	0.000544	0.0472
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000525	ng/L	0.000525	0.0472
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.0007	ng/L	0.0007	0.0472
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.00383	ng/L	0.00077	0.0472
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000982	ng/L	0.000982	0.0472
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.011	ng/L	0.0021	0.0944
41903-57-5	Total TeCDD	JK	0.00126	ng/L	0.0011	0.00944
36088-22-9	Total PeCDD	U	0.000885	ng/L	0.000885	0.0472
34465-46-8	Total HxCDD	BJK	0.00423	ng/L	0.00098	0.0472
37871-00-4	Total HpCDD	BJ	0.0373	ng/L	0.000969	0.0472
30402-14-3	Total TeCDF	U	0.000789	ng/L	0.000789	0.00944
30402-15-4	Total PeCDF	BJK	0.000359	ng/L	0.000344	0.0472
55684-94-1	Total HxCDF	BJK	0.00183	ng/L	0.000525	0.0472
38998-75-3	Total HpCDF	BJ	0.00835	ng/L	0.00077	0.0472
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000247	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00163	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.59	1.89	ng/L	84.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.75	1.89	ng/L	92.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.50	1.89	ng/L	79.5	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.52	1.89	ng/L	80.5	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.73	1.89	ng/L	91.7	(23%-140%)
13C-OCDD		3.05	3.78	ng/L	80.7	(17%-157%)
13C-2,3,7,8-TCDF		1.66	1.89	ng/L	88.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.85	1.89	ng/L	98.1	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.68	1.89	ng/L	88.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.41	1.89	ng/L	74.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.36	1.89	ng/L	72.1	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.48	1.89	ng/L	78.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.51	1.89	ng/L	79.9	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 16017002	Date Collected: 12/26/2019 08:45	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/31/2019 12:41	
Client ID: EVBMP0008S014		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/15/2020 13:04	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A_2-13		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1059.3 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.39	1.89	ng/L	73.4 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.59	1.89	ng/L	84.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.177	0.189	ng/L	93.6 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:07:54 Eastern Standard Time
 Printed: Thursday, January 16, 2020 11:08:45 Eastern Standard Time

Method: Untitled 13 Jan 2020 13:57:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.57e1	2.22e2	2.87e2	30.68	1.000	0.30	YES	0.026	0.0583	2.63e3	2224	1.2	4.14e3	1156	3.6	bb	bb
2	12378-PeCDD	6.05e1	6.40e1	1.24e2	33.77	1.000	0.95	YES	0.016	0.0469	3.13e3	1932	1.6	3.61e3	1943	1.9	bb	bb
3	123478-HxCDD							NO	0.0533			2177			1500			
4	123678-HxCDD	2.25e2	1.94e2	4.19e2	36.36	1.000	1.16	NO	0.047	0.0519	5.14e3	2177	2.4	4.70e3	1500	3.1	MM	MM
5	123789-HxCDD	1.43e2	1.40e2	2.82e2	36.61	1.007	1.02	YES	0.034	0.0534	3.71e3	2177	1.7	5.50e3	1500	3.7	bb	bd
6	1234678-HpCDD	3.15e3	2.78e3	5.93e3	39.51	1.000	1.13	NO	0.783	0.0513	6.03e4	1178	51.2	4.81e4	1302	36.9	bb	bd
7	OCDD	2.75e4	3.31e4	6.06e4	43.55	1.000	0.83	NO	10.165	0.0873	3.50e5	1213	288.9	4.62e5	1278	361.2	bb	bd
8	2378-TCDF							NO	0.0418			1008			1853			
9	12378-PeCDF	5.01e1	9.13e1	1.41e2	32.99	1.000	0.55	YES	0.011	0.0264	3.14e3	1207	2.6	4.37e3	2088	2.1	bb	bd
10	23478-PeCDF							NO	0.0262			1207			2088			
11	123478-HxCDF							NO	0.0291			1488			1255			
12	123678-HxCDF	6.44e1	5.06e1	1.15e2	35.72	1.001	1.27	NO	0.010	0.0288	4.64e3	1488	3.1	1.13e3	1255	0.9	db	bb
13	234678-HxCDF							NO	0.0278			1488			1255			
14	123789-HxCDF							NO	0.0371			1488			1255			
15	1234678-HpCDF	9.35e2	8.26e2	1.76e3	38.32	1.000	1.13	NO	0.203	0.0408	3.08e4	1067	28.9	2.28e4	1448	15.8	bb	bb
16	1234789-HpCDF							NO	0.0520			1067			1448			
17	OCDF	1.97e3	2.08e3	4.05e3	43.81	1.006	0.95	NO	0.582	0.111	3.66e4	1135	32.3	3.14e4	2561	12.3	MM	bb
18	13C-2378-TCDD	5.53e5	7.19e5	1.27e6	30.68	1.024	0.77	NO	83.985	0.137	7.13e6	5823	1224.1	9.39e6	3970	2365.6	bb	bb
19	13C-12378-PeCDD	5.68e5	3.65e5	9.33e5	33.77	1.127	1.55	NO	92.550	0.208	1.47e7	4021	3664.6	9.60e6	5870	1635.7	bb	bb
20	13C-123478-HxCDD	4.66e5	3.77e5	8.43e5	36.27	0.991	1.24	NO	79.457	0.143	1.02e7	5739	1770.3	8.30e6	6064	1368.4	bd	bd
21	13C-123678-HxCDD	5.21e5	4.17e5	9.39e5	36.36	0.994	1.25	NO	80.454	0.130	1.04e7	5739	1814.5	8.14e6	6064	1342.2	dd	dd
22	13C-1234678-HpCDD	3.72e5	3.57e5	7.29e5	39.51	1.080	1.04	NO	91.730	0.146	5.93e6	4480	1323.6	5.76e6	4567	1261.6	bd	bb
23	13C-OCDD	5.77e5	6.49e5	1.23e6	43.54	1.190	0.89	NO	161.434	0.156	6.91e6	5083	1359.2	7.72e6	4188	1843.6	bb	bb
24	13C-2378-TCDF	6.40e5	8.37e5	1.48e6	29.75	0.993	0.76	NO	88.101	0.180	7.58e6	8411	901.7	9.76e6	5837	1671.5	bb	bb
25	13C-12378-PeCDF	8.13e5	5.18e5	1.33e6	32.98	1.100	1.57	NO	98.095	0.280	2.02e7	9635	2094.9	1.30e7	8283	1563.8	bd	bd
26	13C-23478-PeCDF	7.66e5	5.02e5	1.27e6	33.58	1.120	1.52	NO	88.910	0.266	1.93e7	9635	2000.4	1.27e7	8283	1536.5	db	db
27	13C-123478-HxCDF	3.31e5	6.50e5	9.81e5	35.59	0.973	0.51	NO	74.651	0.198	7.30e6	10578	690.1	1.43e7	9681	1476.3	bd	bd
28	13C-123678-HxCDF	3.57e5	7.07e5	1.06e6	35.68	0.975	0.50	NO	72.106	0.176	7.66e6	10578	723.9	1.48e7	9681	1532.4	db	dd
29	13C-234678-HxCDF	3.45e5	6.60e5	1.01e6	36.15	0.988	0.52	NO	78.518	0.203	7.45e6	10578	703.9	1.44e7	9681	1486.4	bd	bb
30	13C-123789-HxCDF	3.08e5	6.06e5	9.14e5	36.88	1.008	0.51	NO	79.864	0.227	5.87e6	10578	555.3	1.15e7	9681	1188.7	bd	bb

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:07:54 Eastern Standard Time
 Printed: Thursday, January 16, 2020 11:08:45 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
31	13C-1234678-HpCDF	2.33e5	5.23e5	7.56e5	38.32	1.047	0.45	NO	73.426	0.113	4.13e6	4373	943.8	9.49e6	4669	2033.7	bd
32	13C-1234789-HpCDF	2.05e5	4.71e5	6.76e5	40.13	1.097	0.44	NO	84.325	0.145	3.05e6	4373	697.6	6.94e6	4669	1486.9	bd
33	13C-1234-TCDD	5.86e5	7.55e5	1.34e6	29.97	0.000	0.78	NO	100.000	0.155	6.91e6	5823	1186.9	9.09e6	3970	2290.5	bb
34	13C-123789-HxCDD	6.56e5	5.28e5	1.18e6	36.59	0.000	1.24	NO	100.000	0.128	1.28e7	5739	2227.1	1.03e7	6064	1702.1	dd
35	37Cl-2378-TCDD	1.33e5		1.33e5	30.69	1.024			9.361	0.0296	1.73e6	1985	873.7				bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:07:54 Eastern Standard Time
Printed: Thursday, January 16, 2020 11:08:45 Eastern Standard Time

Method: Untitled 13 Jan 2020 13:57:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	1.17e2	6.36e1	1.80e2	30.09	1.83	YES	0.016	0.0583	4.18e3	2224	1.9	1.67e3	1156	1.4	db	bd
2	Total-tetradioxins	6.40e2	1.19e2	7.59e2	29.72	5.38	YES	0.067	0.0583	8.10e3	2224	3.6	3.94e3	1156	3.4	db	bd
3	Total-tetradioxins	6.13e1	7.47e1	1.36e2	28.45	0.82	NO	0.012	0.0583	3.70e3	2224	1.7	3.24e3	1156	2.8	bb	bb
4	Total-tetradioxins	1.45e2	5.56e1	2.01e2	31.10	2.61	YES	0.018	0.0583	6.01e3	2224	2.7	2.86e3	1156	2.5	bd	bb
5	2378-TCDD	6.57e1	2.22e2	2.87e2	30.68	0.30	YES	0.026	0.0583	2.63e3	2224	1.2	4.14e3	1156	3.6	bb	bb
6	Total-tetradioxins	1.25e2	5.53e1	1.80e2	30.49	2.26	YES	0.016	0.0583	3.22e3	2224	1.4	2.23e3	1156	1.9	bb	bb
7	Total-tetradioxins	7.12e1	6.38e1	1.35e2	30.17	1.12	YES	0.012	0.0583	2.34e3	2224	1.1	1.59e3	1156	1.4	bb	db

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDD	6.05e1	6.40e1	1.24e2	33.77	0.95	YES	0.016	0.0469	3.13e3	1932	1.6	3.61e3	1943	1.9	bb	bb
2	Total-pentadioxins	1.40e2	9.11e1	2.31e2	33.57	1.54	NO	0.029	0.0469	3.69e3	1932	1.9	4.63e3	1943	2.4	bb	bb

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123678-HxCDD	2.25e2	1.94e2	4.19e2	36.36	1.16	NO	0.047	0.0519	5.14e3	2177	2.4	4.70e3	1500	3.1	MM	MM
2	Total-hexadioxins	7.74e2	3.90e2	1.16e3	35.72	1.98	YES	0.139	0.0528	1.40e4	2177	6.4	7.92e3	1500	5.3	MM	bb
3	Total-hexadioxins	3.52e2	3.56e2	7.09e2	35.10	0.99	YES	0.085	0.0528	5.51e3	2177	2.5	7.57e3	1500	5.0	MM	bb
4	Total-hexadioxins	1.41e2	8.36e1	2.24e2	36.88	1.68	YES	0.027	0.0528	4.30e3	2177	2.0	4.83e3	1500	3.2	bb	bb
5	123789-HxCDD	1.43e2	1.40e2	2.82e2	36.61	1.02	YES	0.034	0.0534	3.71e3	2177	1.7	5.50e3	1500	3.7	bb	bd

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	2.14e2	5.01e1	2.64e2	40.12	4.27	YES	0.035	0.0513	7.34e3	1178	6.2	1.39e3	1302	1.1	bb	bb
2	1234678-HpCDD	3.15e3	2.78e3	5.93e3	39.51	1.13	NO	0.783	0.0513	6.03e4	1178	51.2	4.81e4	1302	36.9	bb	bd
3	Total-heptadioxins	7.31e1	1.18e2	1.91e2	38.74	0.62	YES	0.025	0.0513	3.35e3	1178	2.8	6.32e3	1302	4.9	db	db
4	Total-heptadioxins	4.40e3	4.64e3	9.04e3	38.65	0.95	NO	1.193	0.0513	7.47e4	1178	63.4	7.94e4	1302	61.0	bd	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:07:54 Eastern Standard Time
Printed: Thursday, January 16, 2020 11:08:45 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	5.69e1	6.40e1	1.21e2	28.79	0.89	YES	0.008	0.0418	2.19e3	1008	2.2	2.76e3	1853	1.5	bb	bb
2	Total-tetrafurans	7.18e1	6.68e1	1.39e2	25.92	1.08	YES	0.010	0.0418	4.96e3	1008	4.9	1.78e3	1853	1.0	bb	bb
3	Total-tetrafurans	1.02e2	9.32e1	1.95e2	31.35	1.09	YES	0.013	0.0418	3.63e3	1008	3.6	5.42e3	1853	2.9	db	db
4	Total-tetrafurans	5.47e1	1.23e2	1.78e2	31.25	0.44	YES	0.012	0.0418	1.20e3	1008	1.2	2.80e3	1853	1.5	bd	dd
5	Total-tetrafurans	7.23e1	7.39e1	1.46e2	29.39	0.98	YES	0.010	0.0418	2.18e3	1008	2.2	5.65e3	1853	3.0	bb	bb

PF1

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	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.13e2	1.25e2	2.37e2	31.53	0.90	YES	0.019	0.0182	1.99e3	715	2.8	4.47e3	1573	2.8	bb	dd
2	Total-pentafurans (F1)	8.63e1	5.31e1	1.39e2	31.03	1.62	NO	0.011	0.0182	3.52e3	715	4.9	1.69e3	1573	1.1	bb	bd

PF3

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	6.89e1	8.32e1	1.52e2	34.32	0.83	YES	0.012	0.0263	3.48e3	1207	2.9	4.22e3	2088	2.0	bb	bb
2	12378-PeCDF	5.01e1	9.13e1	1.41e2	32.99	0.55	YES	0.011	0.0264	3.14e3	1207	2.6	4.37e3	2088	2.1	bb	bd

HIF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123678-HxCDF	6.44e1	5.06e1	1.15e2	35.72	1.27	NO	0.010	0.0288	4.64e3	1488	3.1	1.13e3	1255	0.9	db	bb
2	Total-hexafurans	2.54e2	8.79e1	3.42e2	35.24	2.89	YES	0.032	0.0305	1.16e4	1488	7.8	6.41e3	1255	5.1	bb	db
3	Total-hexafurans	4.37e2	2.63e2	6.99e2	34.80	1.66	YES	0.065	0.0305	1.06e4	1488	7.1	5.60e3	1255	4.5	db	MM

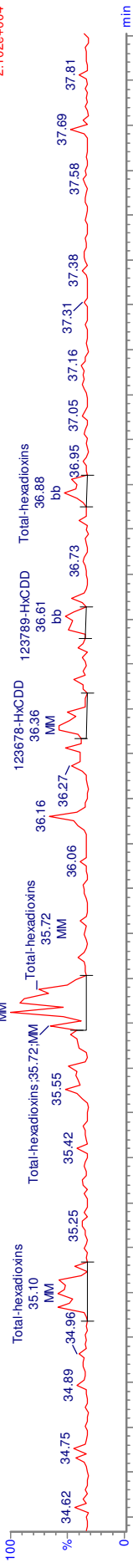
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	9.35e2	8.26e2	1.76e3	38.32	1.13	NO	0.203	0.0408	3.08e4	1067	28.9	2.28e4	1448	15.8	bb	bb
2	Total-heptafurans	1.08e3	9.31e2	2.01e3	38.83	1.16	NO	0.239	0.0462	2.08e4	1067	19.5	2.05e4	1448	14.2	bb	bd

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

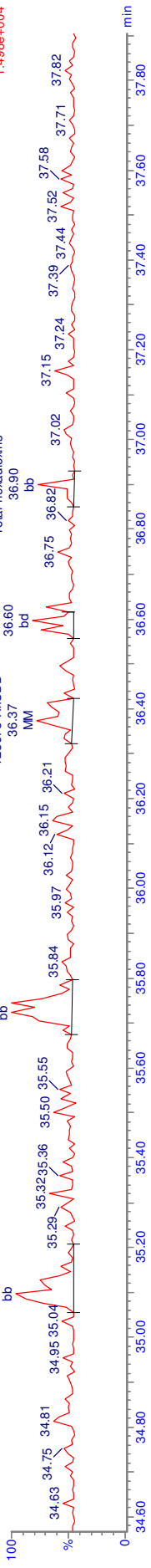
A14JAN20A_2-13
 42781 16017002-1

F3:Voltage SIR,EI+
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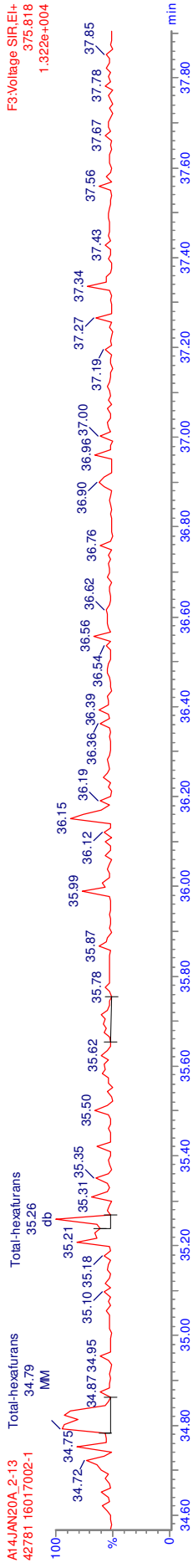
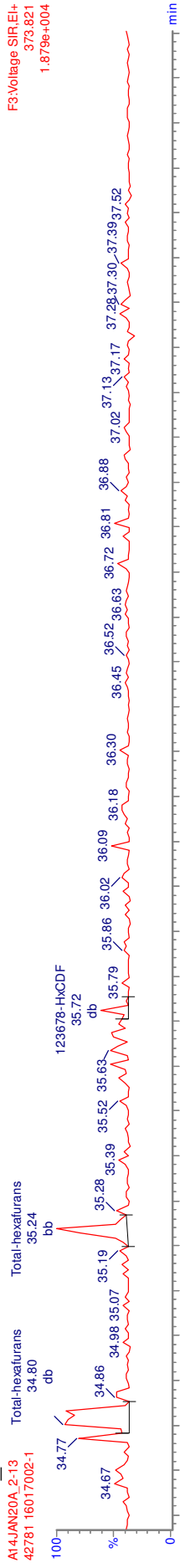


A14JAN20A_2-13
 42781 16017002-1

F3:Voltage SIR,EI+
 391.813
 1.498e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2



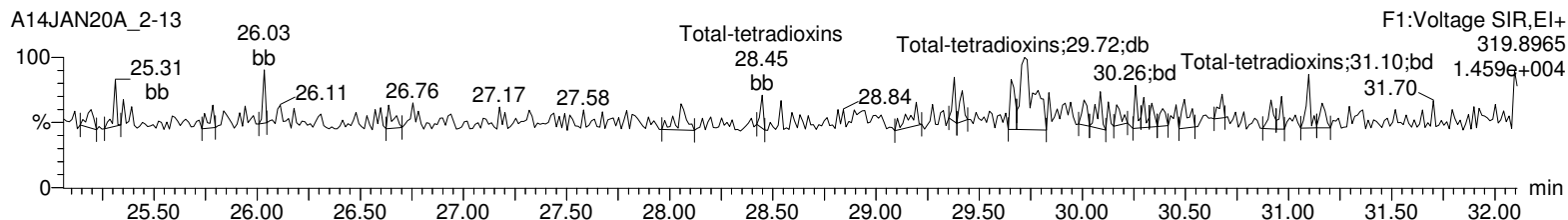
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Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

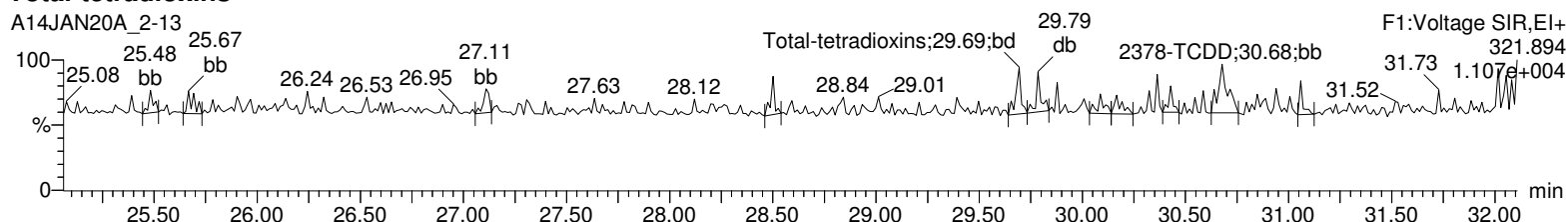
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

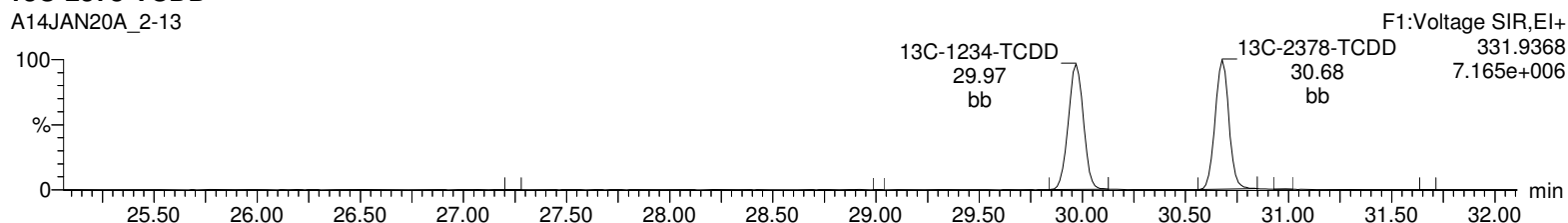
Total-tetradoxins



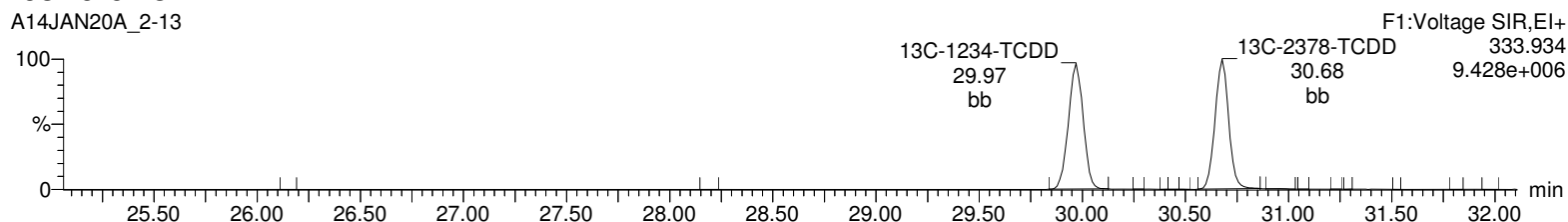
Total-tetradoxins



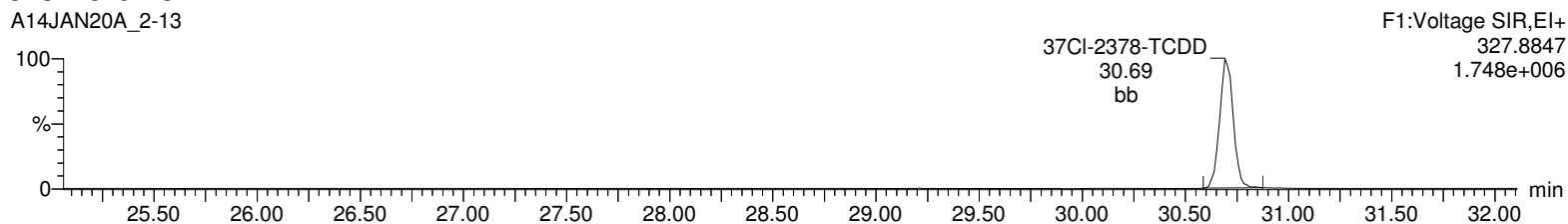
13C-2378-TCDD



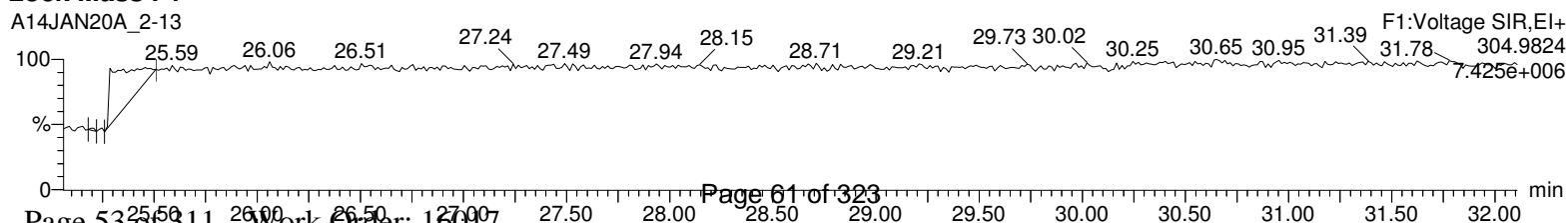
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



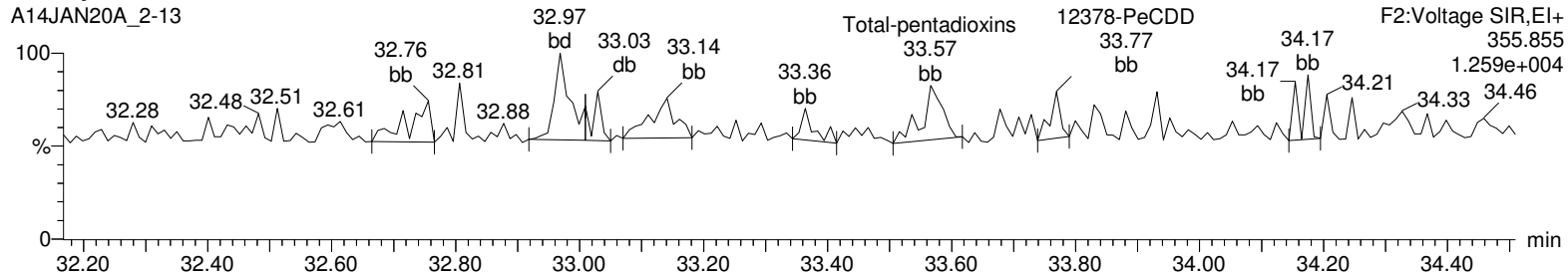
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

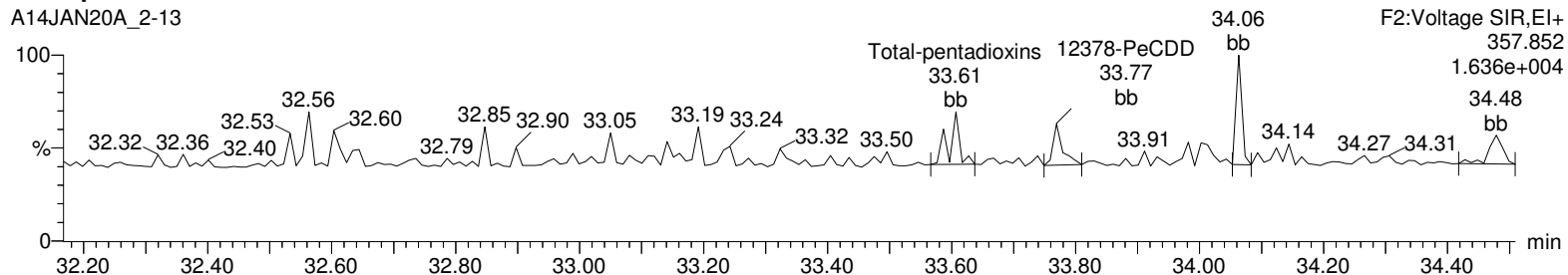
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

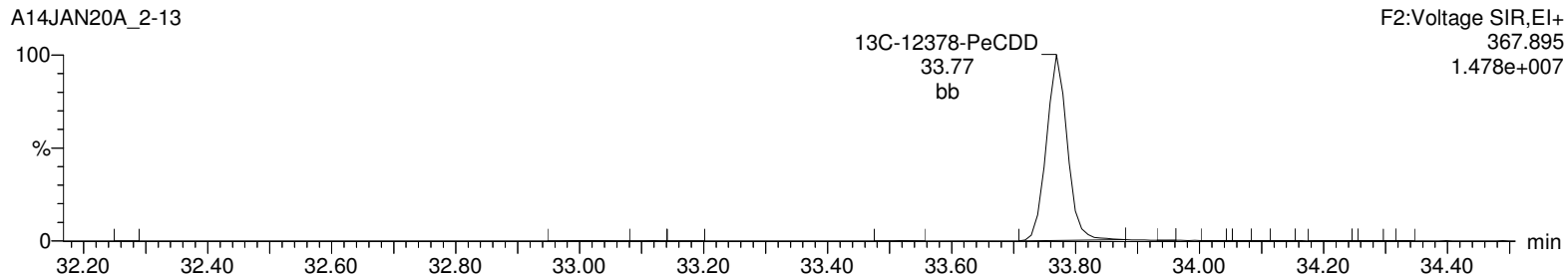
Total-pentadioxins



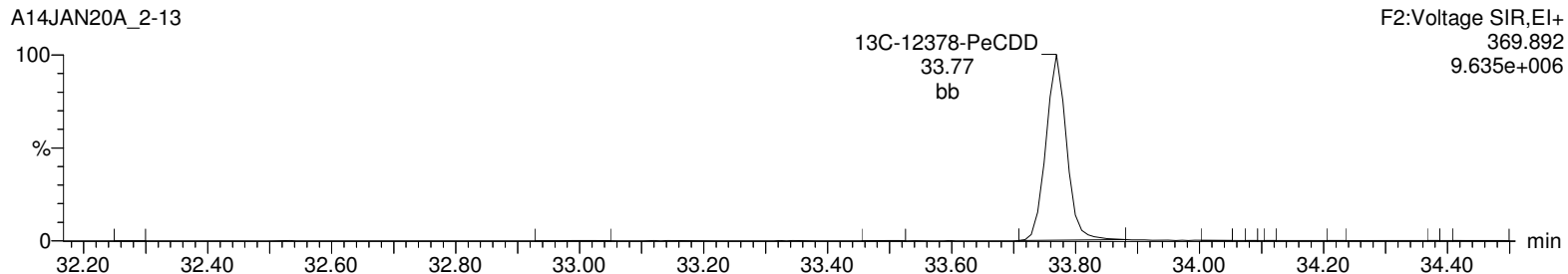
Total-pentadioxins



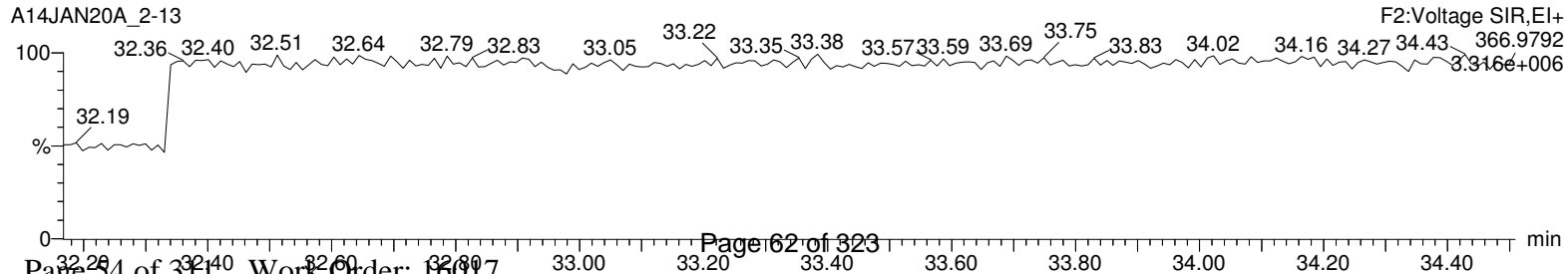
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

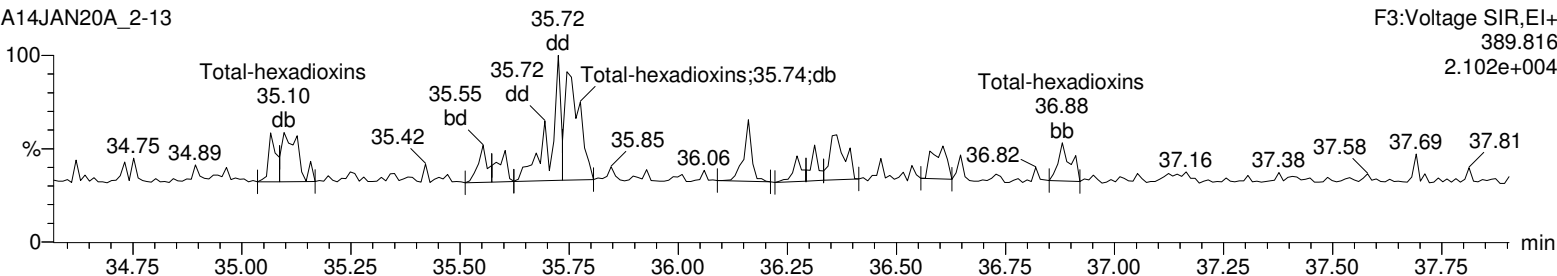
Total-hexadioxins

A14JAN20A_2-13

F3:Voltage SIR,EI+

389.816

2.102e+004



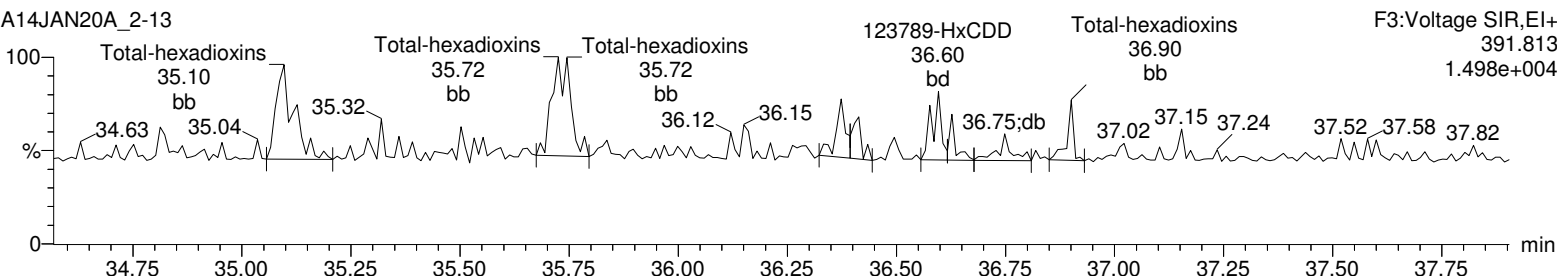
Total-hexadioxins

A14JAN20A_2-13

F3:Voltage SIR,EI+

391.813

1.498e+004



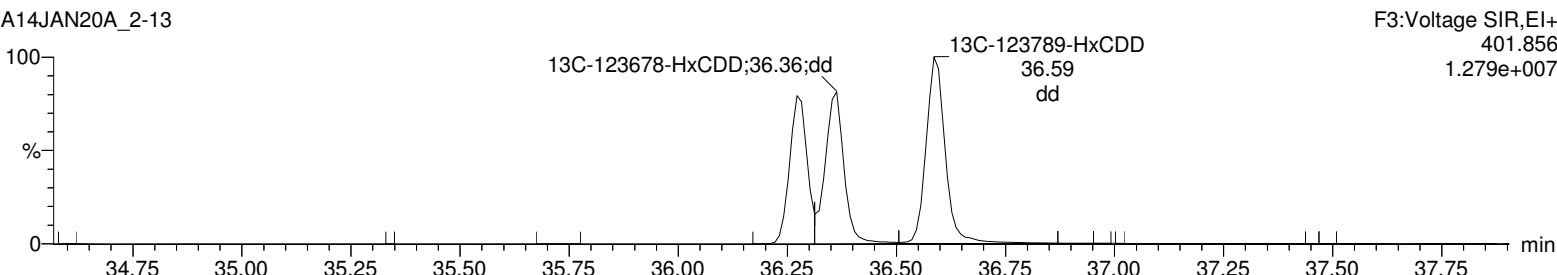
13C-123478-HxCDD

A14JAN20A_2-13

F3:Voltage SIR,EI+

401.856

1.279e+007



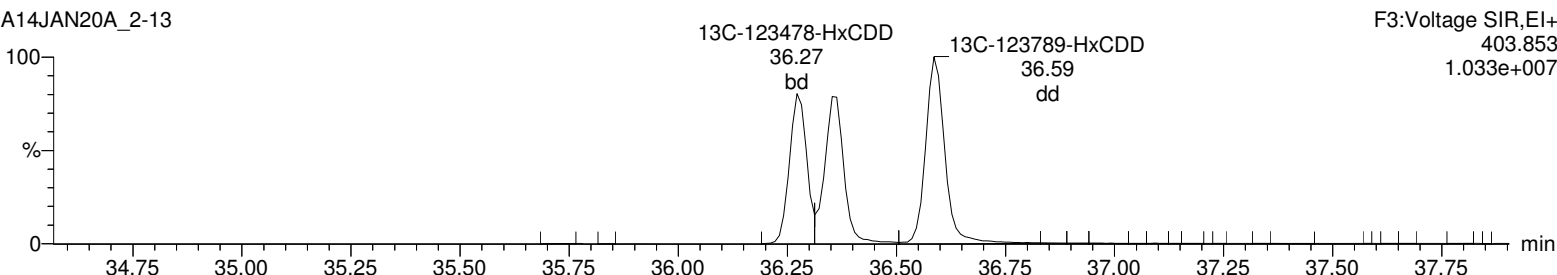
13C-123478-HxCDD

A14JAN20A_2-13

F3:Voltage SIR,EI+

403.853

1.033e+007



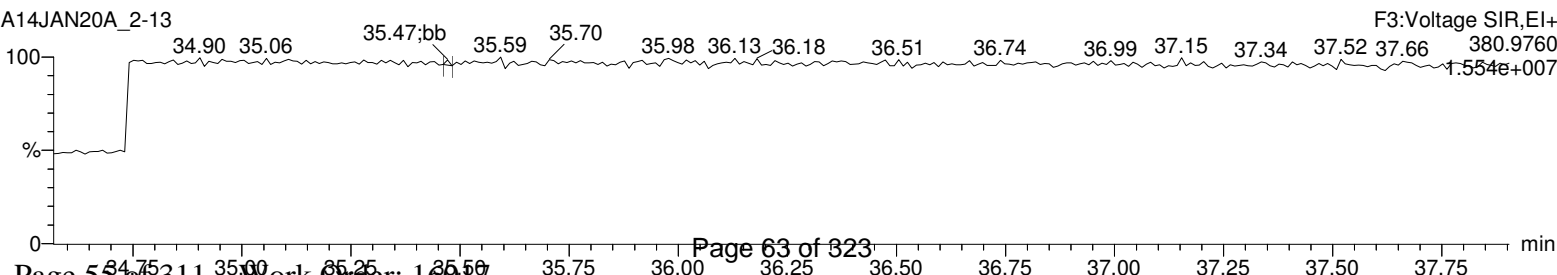
Lock Mass F3

A14JAN20A_2-13

F3:Voltage SIR,EI+

380.9760

1.554e+007



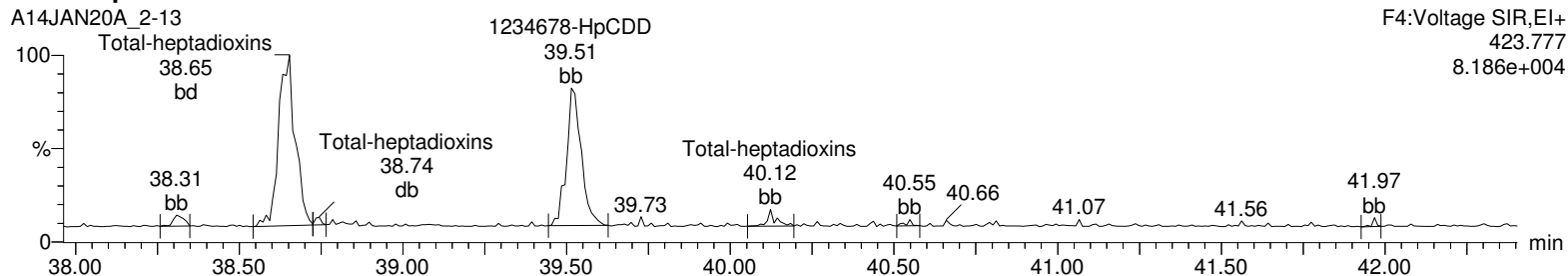
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

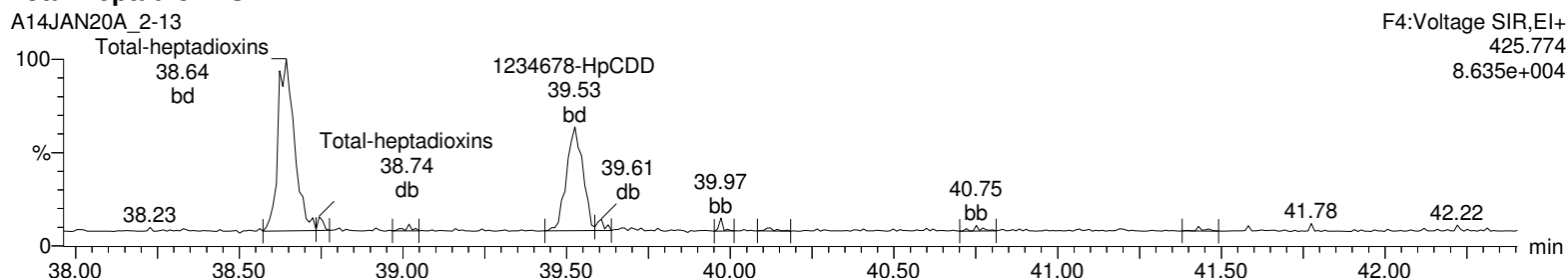
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

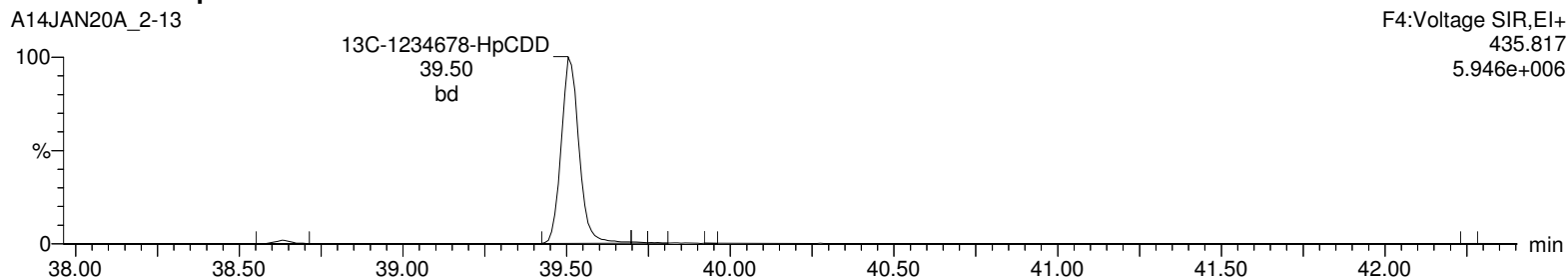
Total-heptadioxins



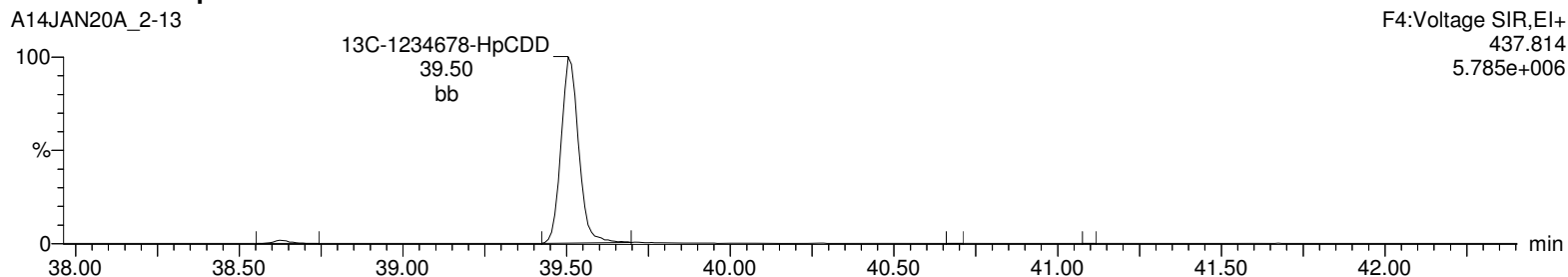
Total-heptadioxins



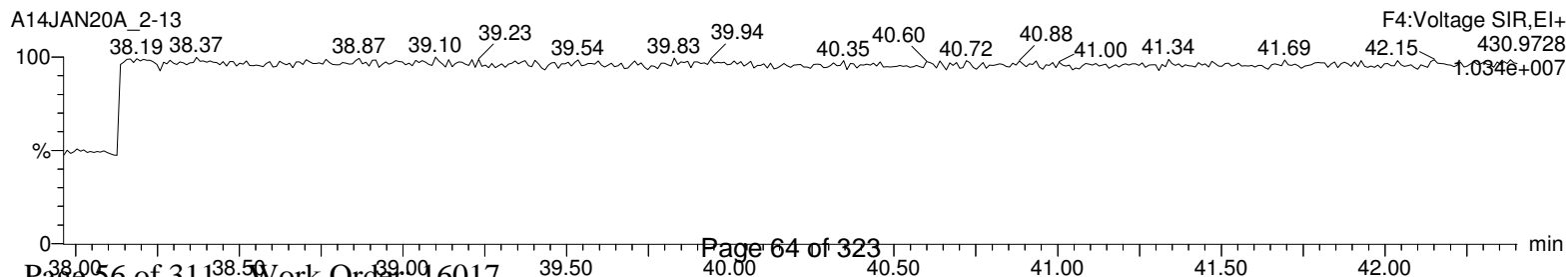
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

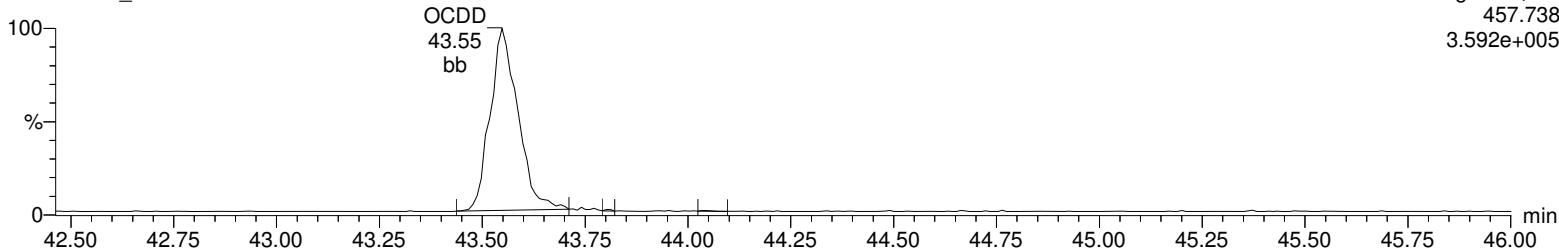
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDD

A14JAN20A_2-13

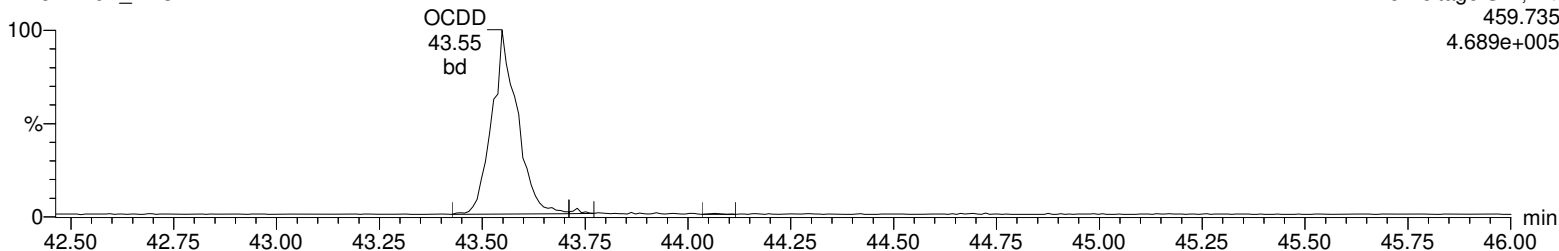
F5:Voltage SIR,EI+
457.738
3.592e+005



OCDD

A14JAN20A_2-13

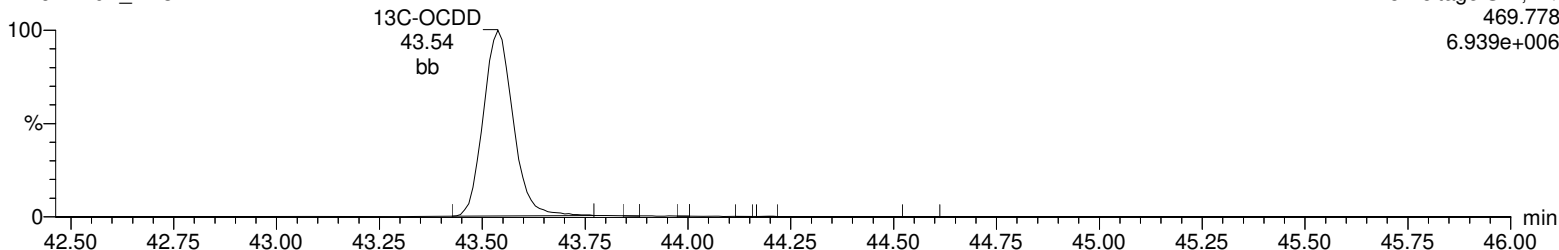
F5:Voltage SIR,EI+
459.735
4.689e+005



13C-OCDD

A14JAN20A_2-13

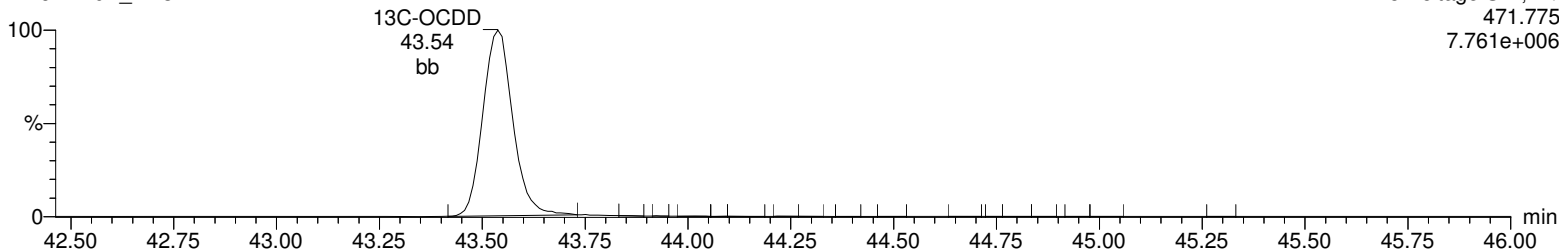
F5:Voltage SIR,EI+
469.778
6.939e+006



13C-OCDD

A14JAN20A_2-13

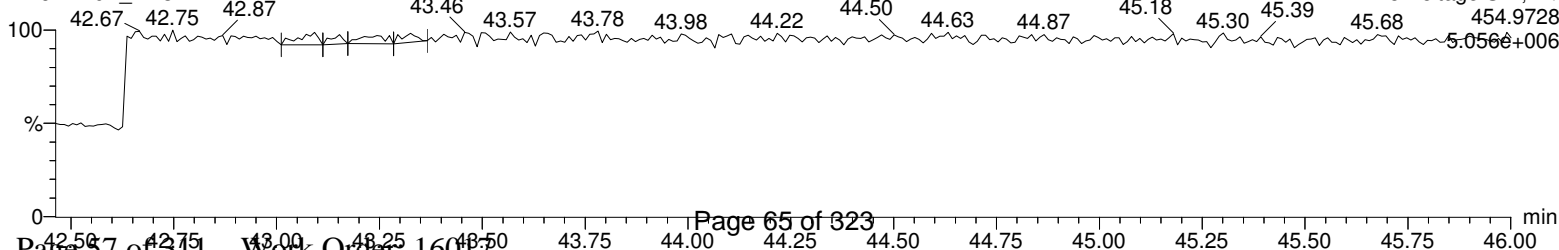
F5:Voltage SIR,EI+
471.775
7.761e+006



Lock Mass F5

A14JAN20A_2-13

F5:Voltage SIR,EI+
454.9728
5.056e+006



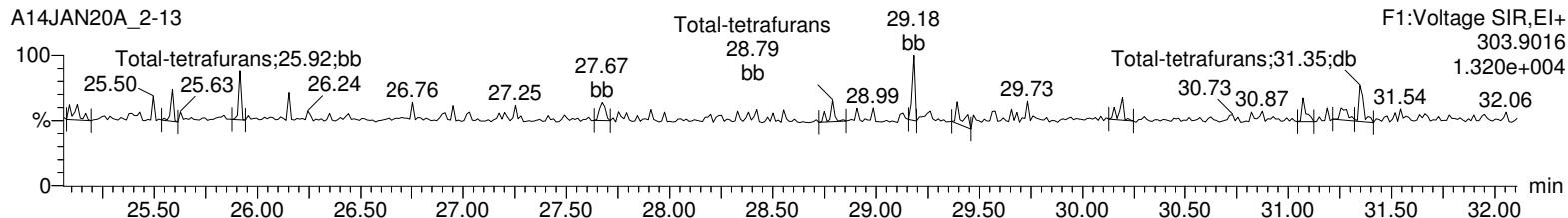
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

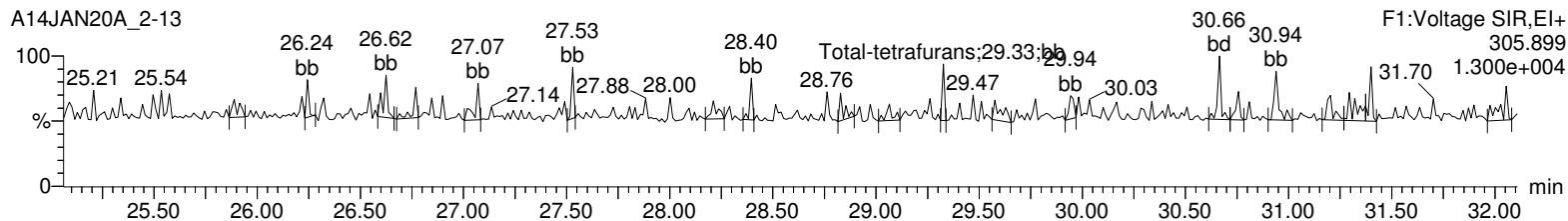
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

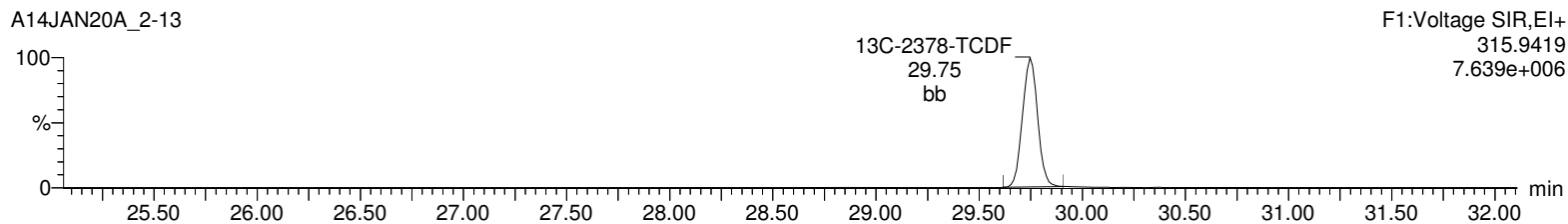
Total-tetrafurans



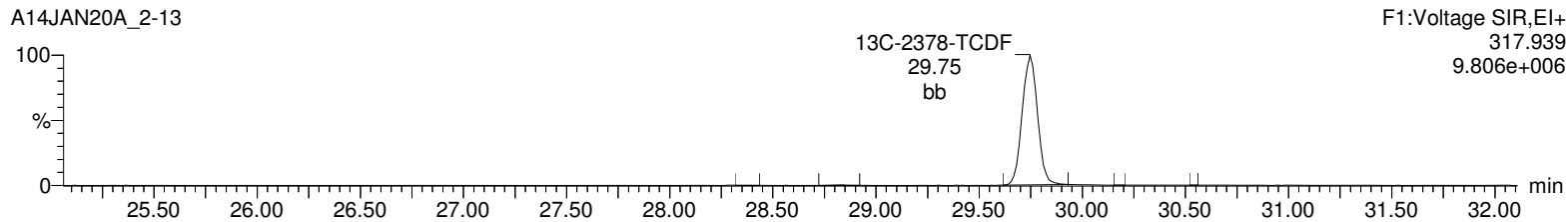
Total-tetrafurans



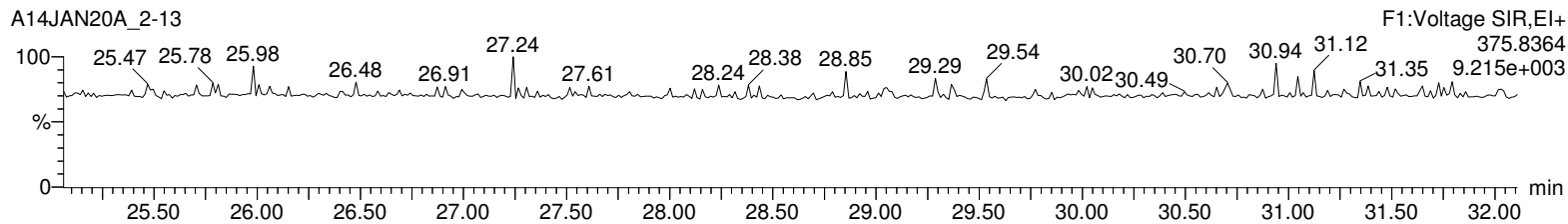
13C-2378-TCDF



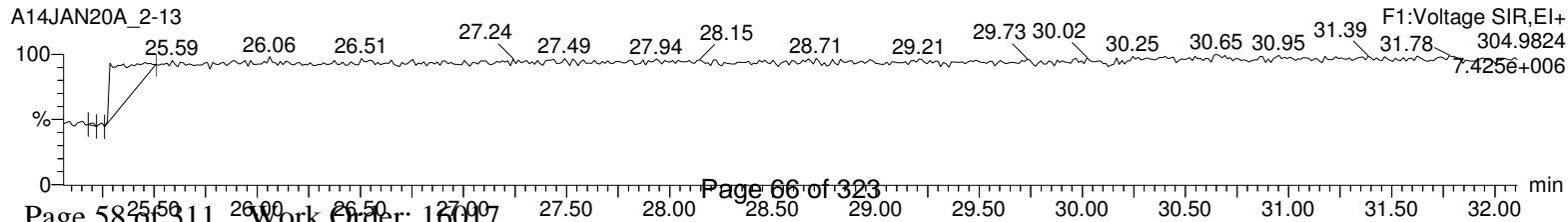
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

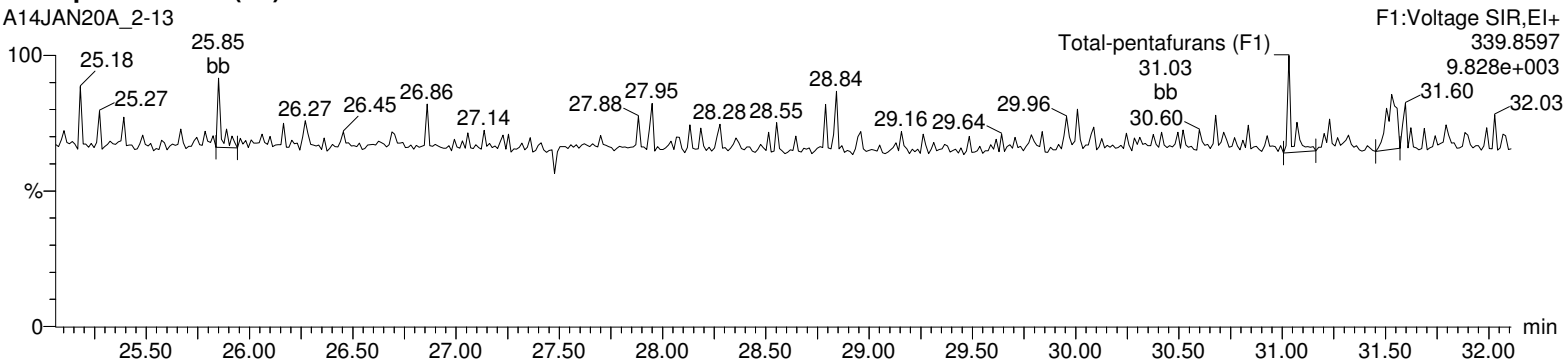
Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

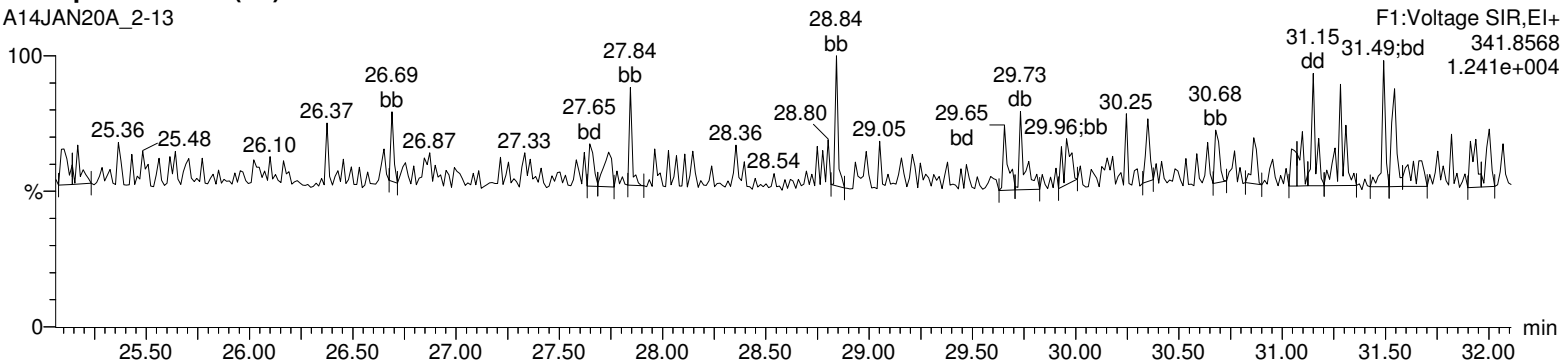
Total-pentafurans (F1)

A14JAN20A_2-13



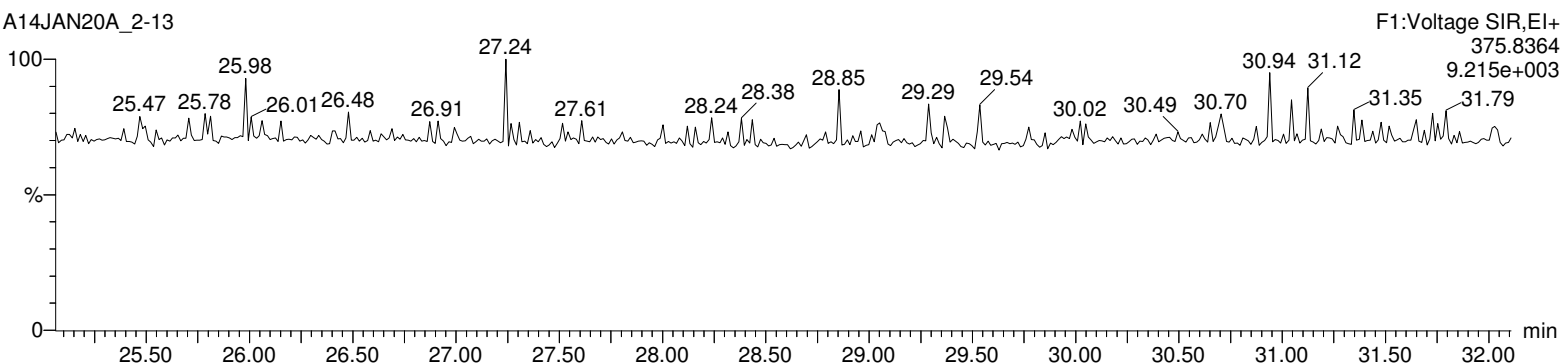
Total-pentafurans (F1)

A14JAN20A_2-13



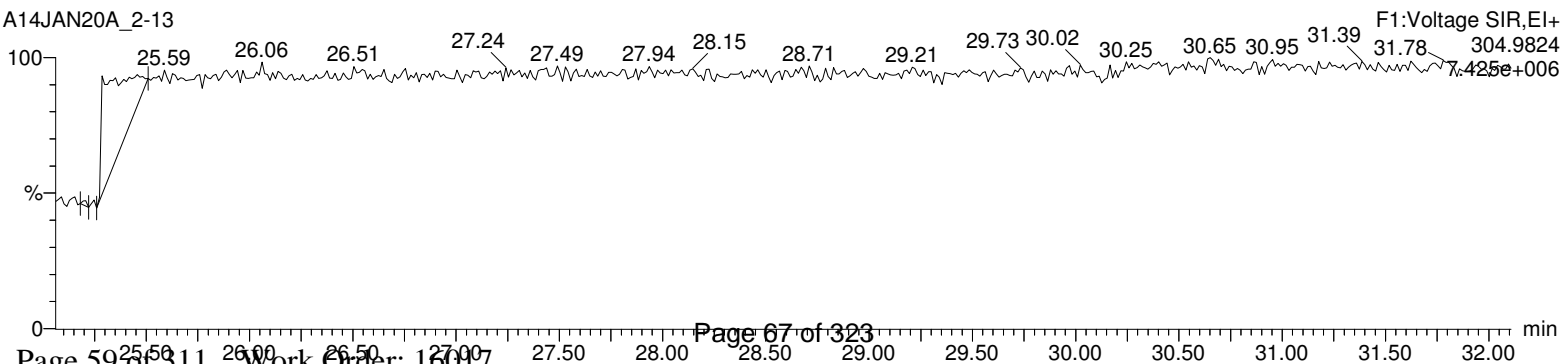
HxDPE

A14JAN20A_2-13



Lock Mass F1

A14JAN20A_2-13



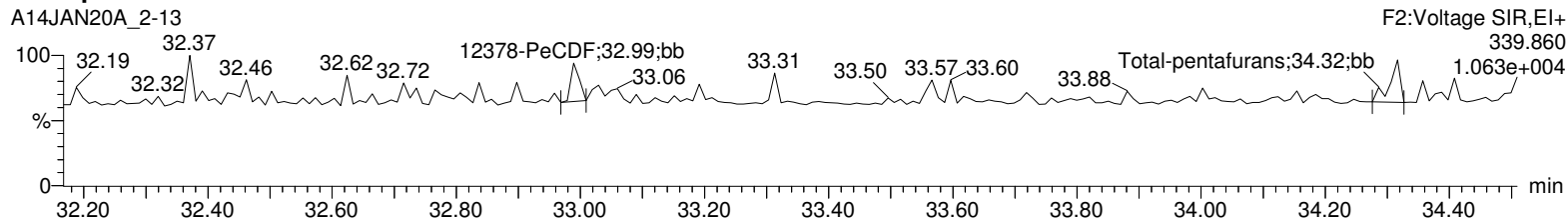
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

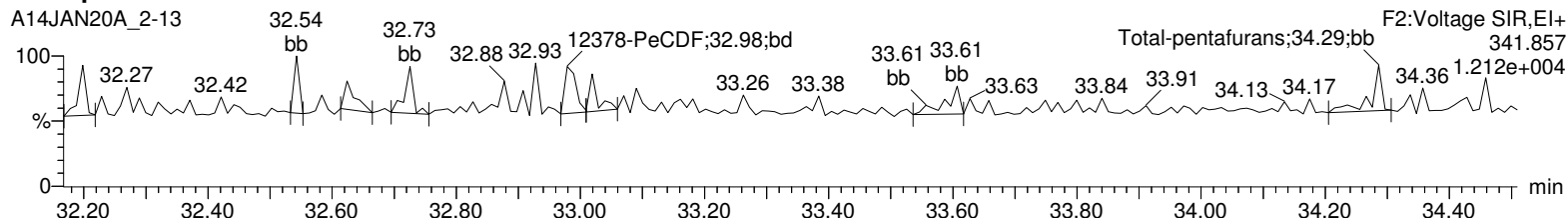
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Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

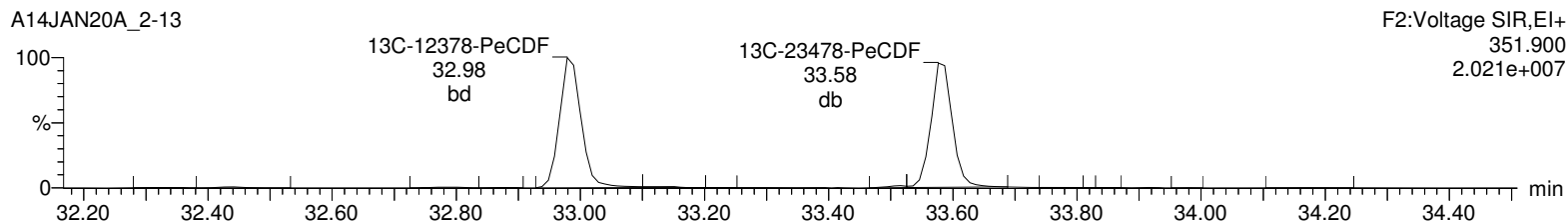
Total-pentafurans



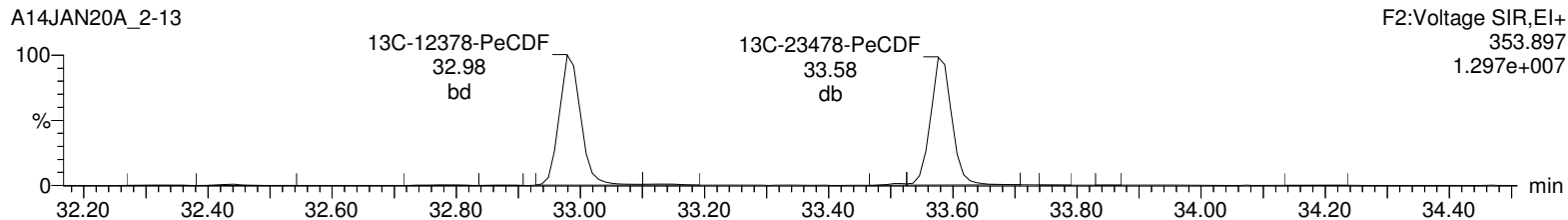
Total-pentafurans



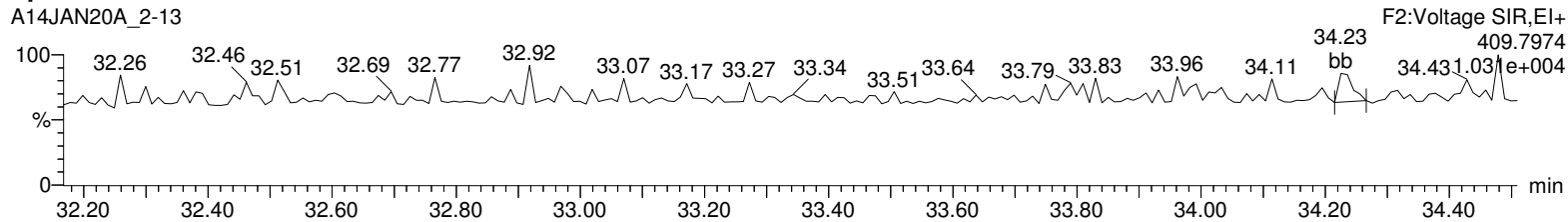
13C-12378-PeCDF



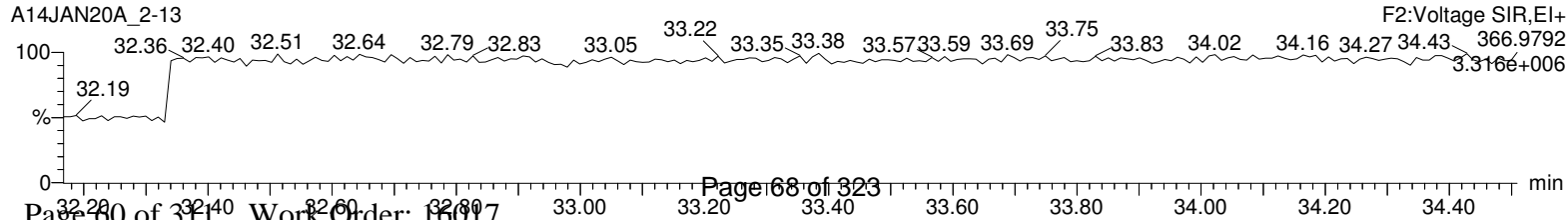
13C-12378-PeCDF



HpDPE



Lock Mass F2



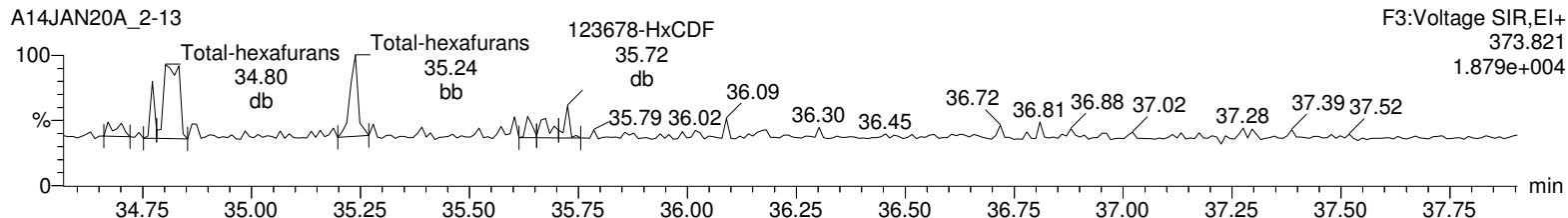
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Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

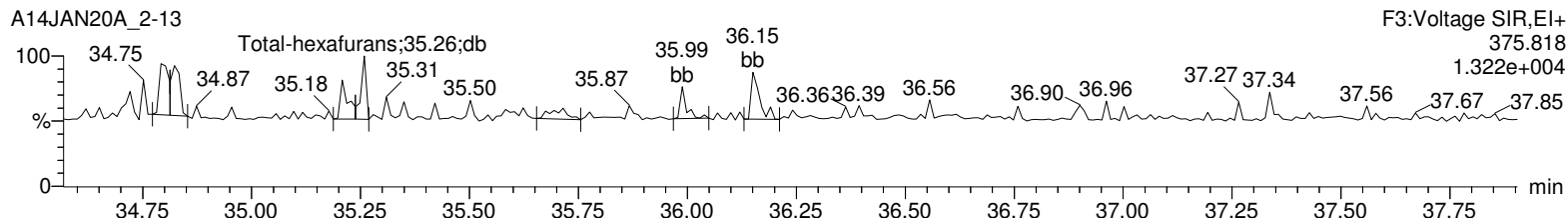
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

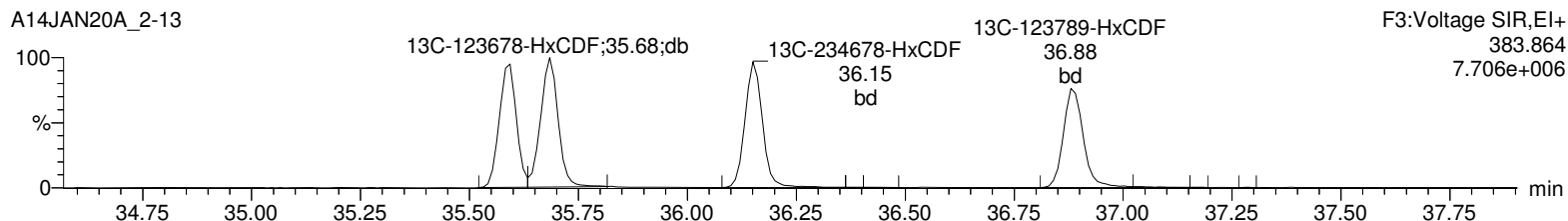
Total-hexafurans



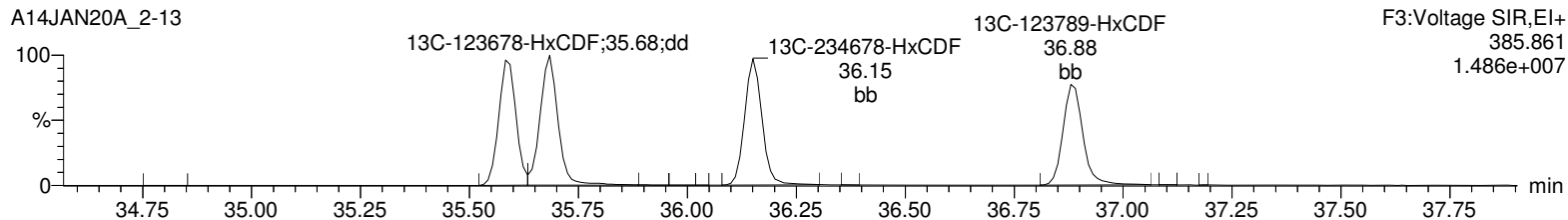
Total-hexafurans



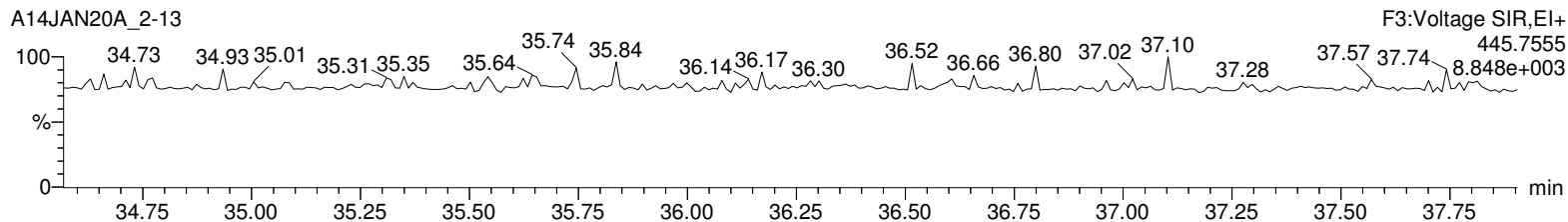
13C-123478-HxCDF



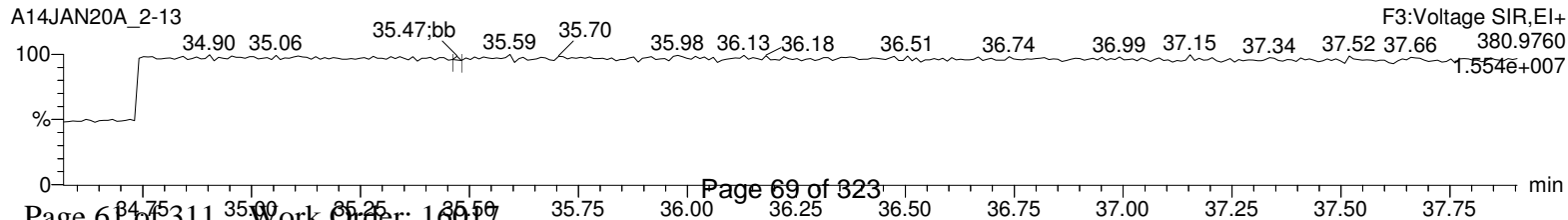
13C-123478-HxCDF



OcDPE



Lock Mass F3



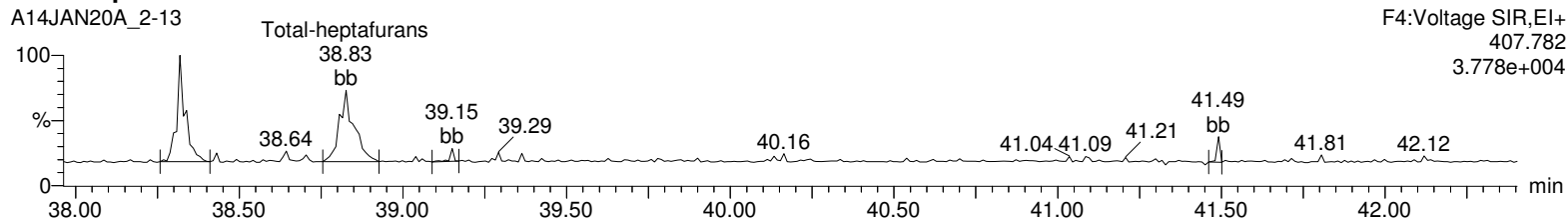
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

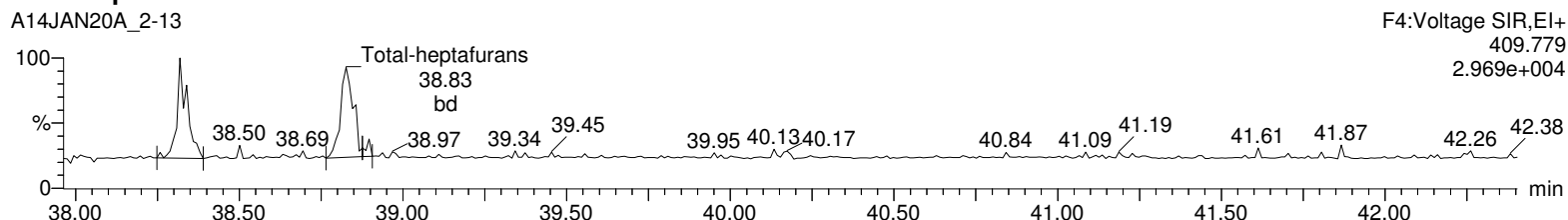
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

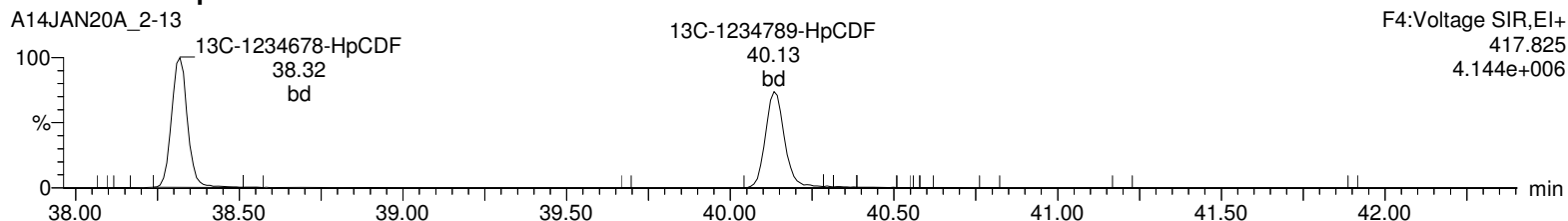
Total-heptafurans



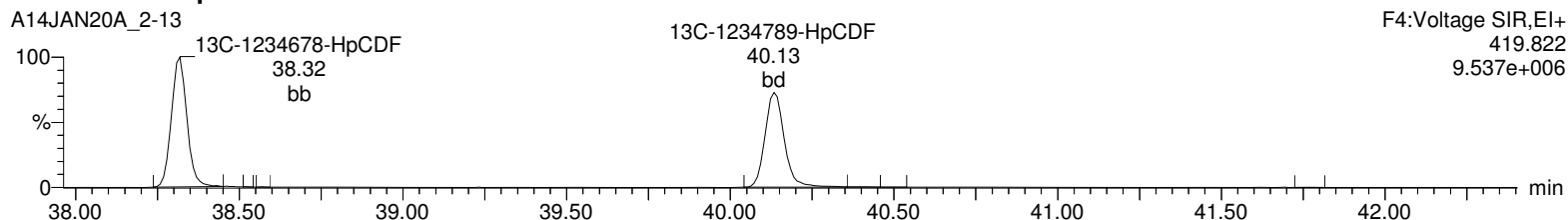
Total-heptafurans



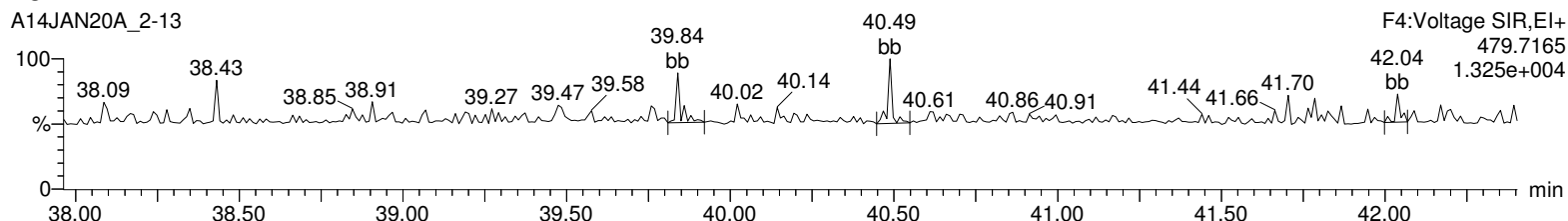
13C-1234678-HpCDF



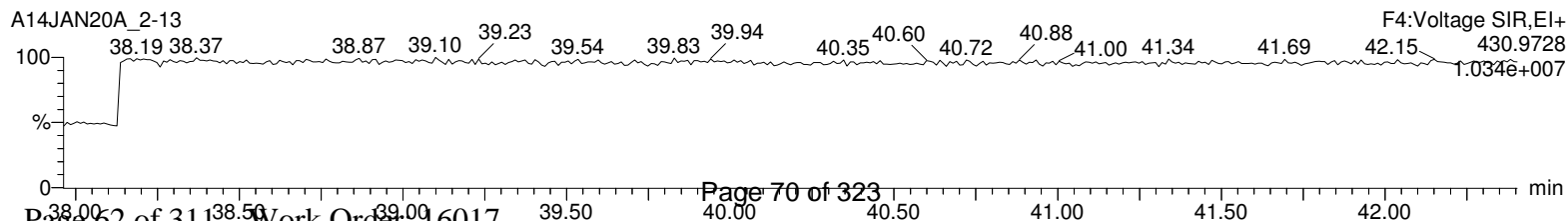
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

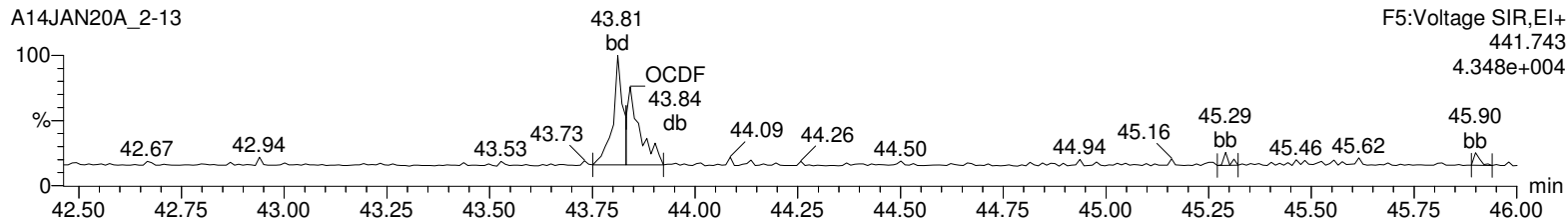
Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-13, Date: 15-Jan-2020, Time: 13:04:33, ID: 16017002-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

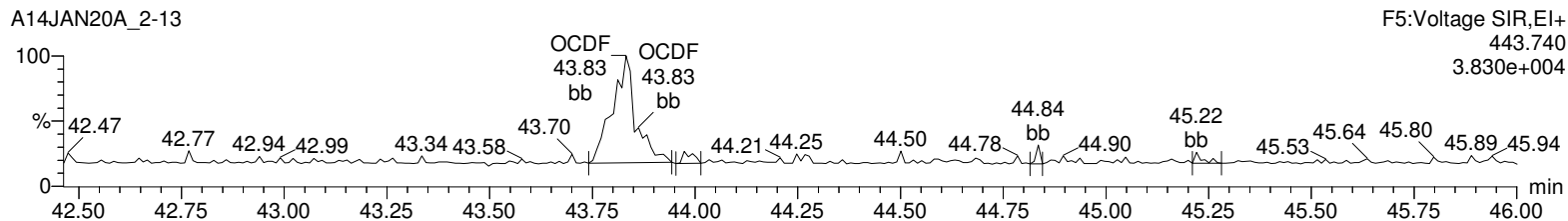
OCDF

A14JAN20A_2-13



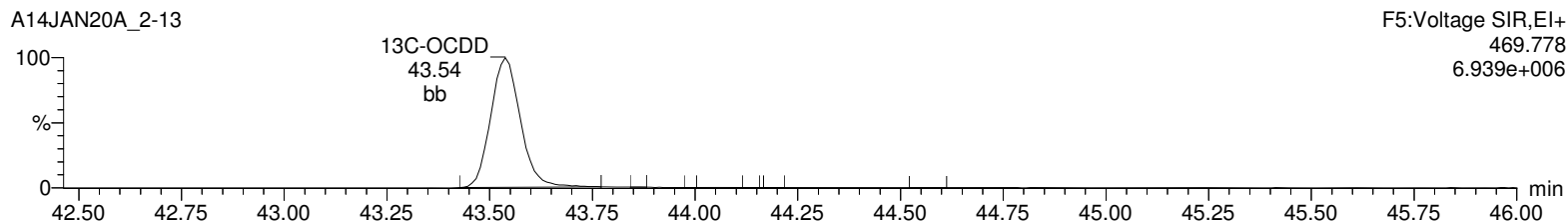
OCDF

A14JAN20A_2-13



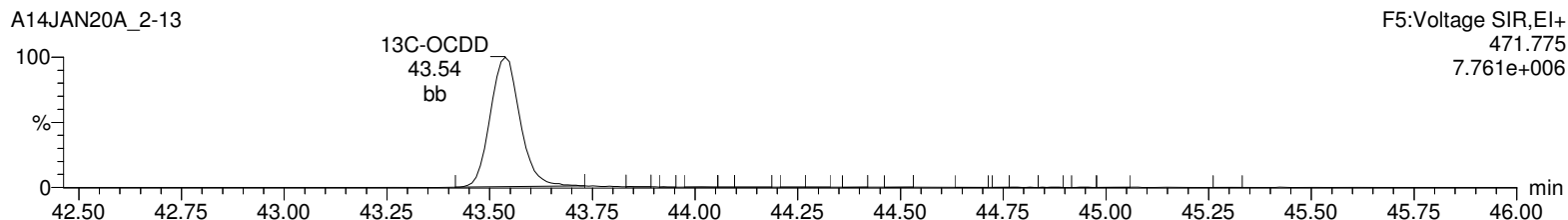
13C-OCDD

A14JAN20A_2-13



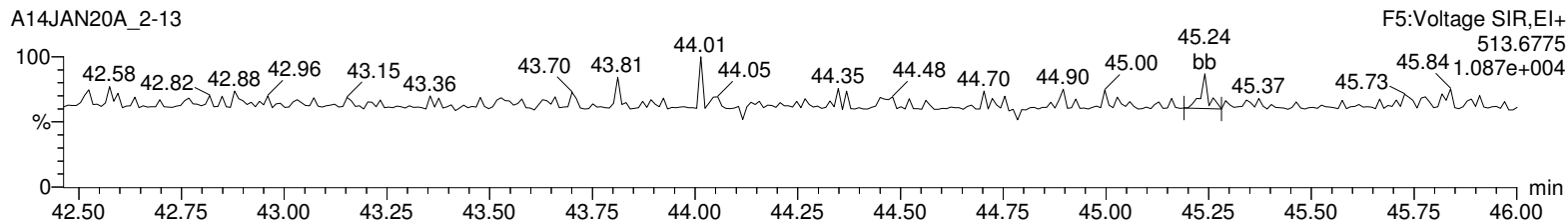
13C-OCDD

A14JAN20A_2-13



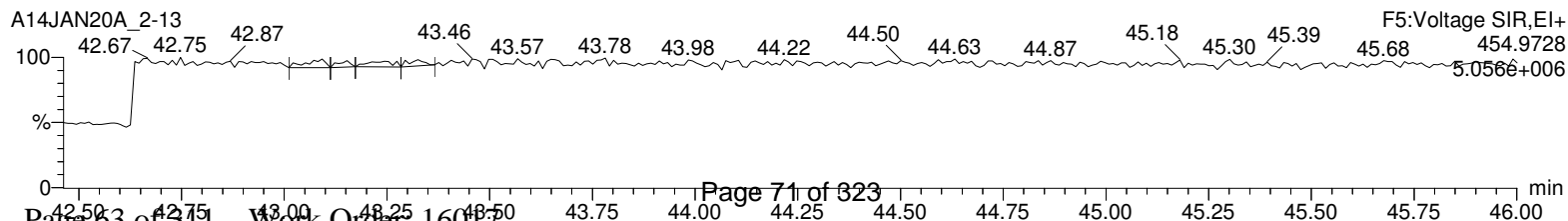
DeDPE

A14JAN20A_2-13



Lock Mass F5

A14JAN20A_2-13



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773
Lab Sample ID: 16017003
Client Sample: 1613B Water
Client ID: EVBMP0009S012
Batch ID: 42781
Run Date: 01/15/2020 13:52
Data File: A14JAN20A_2-14
Prep Batch: 42776
Prep Date: 06-JAN-20

Client: CALS001
Date Collected: 12/26/2019 09:00
Date Received: 12/31/2019 12:41

Method: EPA Method 1613B
Analyst: MJC

Prep Method: SW846 3520C
Prep Aliquot: 1062.6 mL

Project: CALS00214
Matrix: WATER

Prep Basis: As Received

Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.000975	ng/L	0.000975	0.00941
40321-76-4	1,2,3,7,8-PeCDD	U	0.000619	ng/L	0.000619	0.0471
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.000977	ng/L	0.000977	0.0471
57653-85-7	1,2,3,6,7,8-HxCDD	BJK	0.00162	ng/L	0.000915	0.0471
19408-74-3	1,2,3,7,8,9-HxCDD	BJK	0.00143	ng/L	0.00096	0.0471
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	0.0305	ng/L	0.00124	0.0471
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.359	ng/L	0.00222	0.0941
51207-31-9	2,3,7,8-TCDF	U	0.000623	ng/L	0.000623	0.00941
57117-41-6	1,2,3,7,8-PeCDF	U	0.000361	ng/L	0.000361	0.0471
57117-31-4	2,3,4,7,8-PeCDF	U	0.000367	ng/L	0.000367	0.0471
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000491	ng/L	0.000491	0.0471
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000518	ng/L	0.000518	0.0471
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000499	ng/L	0.000499	0.0471
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.000655	ng/L	0.000655	0.0471
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.00614	ng/L	0.000518	0.0471
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.000666	ng/L	0.000666	0.0471
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.023	ng/L	0.00216	0.0941
41903-57-5	Total TeCDD	U	0.000975	ng/L	0.000975	0.00941
36088-22-9	Total PeCDD	U	0.000619	ng/L	0.000619	0.0471
34465-46-8	Total HxCDD	BJK	0.00947	ng/L	0.000915	0.0471
37871-00-4	Total HpCDD	J	0.0784	ng/L	0.00124	0.0471
30402-14-3	Total TeCDF	U	0.000623	ng/L	0.000623	0.00941
30402-15-4	Total PeCDF	BJK	0.00111	ng/L	0.000275	0.0471
55684-94-1	Total HxCDF	BJK	0.00442	ng/L	0.000491	0.0471
38998-75-3	Total HpCDF	BJ	0.0183	ng/L	0.000518	0.0471
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000785	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00183	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.47	1.88	ng/L	78.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.60	1.88	ng/L	85.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.45	1.88	ng/L	76.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.41	1.88	ng/L	75.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.60	1.88	ng/L	85.1	(23%-140%)
13C-OCDD		2.86	3.76	ng/L	76.1	(17%-157%)
13C-2,3,7,8-TCDF		1.56	1.88	ng/L	83.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.68	1.88	ng/L	89.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.50	1.88	ng/L	79.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.38	1.88	ng/L	73.1	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.30	1.88	ng/L	68.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.40	1.88	ng/L	74.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.42	1.88	ng/L	75.2	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 2 of 2

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 16017003	Date Collected: 12/26/2019 09:00	Matrix: WATER
Client Sample: 1613B Water	Date Received: 12/31/2019 12:41	
Client ID: EVBMP0009S012		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/15/2020 13:52	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A_2-14		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1062.6 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.29	1.88	ng/L	68.4 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.50	1.88	ng/L	79.7 (26%-138%)
37Cl-2,3,7,8-TCDD			0.158	0.188	ng/L	84.0 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:10:12 Eastern Standard Time
 Printed: Thursday, January 16, 2020 11:10:51 Eastern Standard Time

Method: Untitled 13 Jan 2020 13:57:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	7.96e1	6.15e1	1.41e2	30.59	0.997	1.29	YES	0.010	0.0518	3.78e3	2557	1.5	1.37e3	1280	1.1	db	bb
2	12378-PeCDD							NO	0.0329			1823			1461			
3	123478-HxCDD	1.97e2	9.48e1	2.92e2	36.27	1.000	2.08	YES	0.029	0.0519	5.03e3	2264	2.2	3.32e3	2236	1.5	dd	bd
4	123678-HxCDD	4.40e2	4.91e2	9.31e2	36.35	1.000	0.90	YES	0.086	0.0486	7.91e3	2264	3.5	8.86e3	2236	4.0	db	db
5	123789-HxCDD	4.99e2	2.79e2	7.78e2	36.59	1.006	1.79	YES	0.076	0.0510	1.30e4	2264	5.7	6.52e3	2236	2.9	bb	bb
6	1234678-HpCDD	7.20e3	7.68e3	1.49e4	39.51	1.000	0.94	NO	1.619	0.0659	1.27e5	2253	56.5	1.37e5	1650	83.0	bb	bb
7	OCDD	6.35e4	7.64e4	1.40e5	43.56	1.001	0.83	NO	19.054	0.118	7.92e5	1914	413.7	9.57e5	2194	436.4	bb	bd
8	2378-TCDF							NO	0.0331			1241			1670			
9	12378-PeCDF							NO	0.0192			1538			1671			
10	23478-PeCDF	9.95e1	5.19e1	1.51e2	33.59	1.000	1.92	YES	0.010	0.0195	2.70e3	1538	1.8	1.62e3	1671	1.0	bb	bb
11	123478-HxCDF	8.22e1	7.76e1	1.60e2	35.61	1.001	1.06	NO	0.012	0.0261	4.15e3	2006	2.1	3.16e3	1242	2.5	bb	dd
12	123678-HxCDF	1.51e2	5.86e1	2.10e2	35.67	1.000	2.57	YES	0.015	0.0275	3.37e3	2006	1.7	1.93e3	1242	1.6	bb	db
13	234678-HxCDF	8.26e1	6.75e1	1.50e2	36.15	1.000	1.22	NO	0.011	0.0265	3.18e3	2006	1.6	2.26e3	1242	1.8	bb	bb
14	123789-HxCDF							NO	0.0348			2006			1242			
15	1234678-HpCDF	1.68e3	1.78e3	3.45e3	38.32	1.000	0.94	NO	0.326	0.0275	4.28e4	1272	33.7	3.47e4	944	36.7	bd	bb
16	1234789-HpCDF	1.08e2	9.14e1	2.00e2	40.11	1.000	1.18	NO	0.020	0.0354	2.58e3	1272	2.0	2.67e3	944	2.8	bd	bb
17	OCDF	5.06e3	5.38e3	1.04e4	43.83	1.007	0.94	NO	1.220	0.115	6.36e4	2656	23.9	6.60e4	2004	33.0	bd	bd
18	13C-2378-TCDD	7.10e5	9.19e5	1.63e6	30.68	1.024	0.77	NO	78.231	0.110	9.13e6	6203	1472.0	1.18e7	4700	2506.4	bb	bb
19	13C-12378-PeCDD	7.17e5	4.62e5	1.18e6	33.76	1.126	1.55	NO	84.996	0.145	1.78e7	5850	3039.3	1.15e7	3680	3111.8	bb	bb
20	13C-123478-HxCDD	5.93e5	4.72e5	1.06e6	36.27	0.991	1.26	NO	76.804	0.0976	1.28e7	5287	2429.5	1.01e7	5612	1794.4	bd	bd
21	13C-123678-HxCDD	6.36e5	5.09e5	1.14e6	36.35	0.994	1.25	NO	75.071	0.0887	1.36e7	5287	2574.1	1.08e7	5612	1932.1	dd	dd
22	13C-1234678-HpCDD	4.49e5	4.34e5	8.84e5	39.51	1.080	1.03	NO	85.059	0.122	7.24e6	5609	1290.9	7.01e6	4615	1518.5	bb	bd
23	13C-OCDD	7.13e5	7.99e5	1.51e6	43.53	1.190	0.89	NO	152.191	0.140	8.46e6	4183	2021.8	9.41e6	7015	1340.9	bd	bd
24	13C-2378-TCDF	8.40e5	1.08e6	1.92e6	29.75	0.993	0.78	NO	83.138	0.124	9.83e6	8946	1098.7	1.25e7	4676	2681.7	bb	bb
25	13C-12378-PeCDF	1.00e6	6.61e5	1.66e6	32.98	1.100	1.52	NO	89.171	0.222	2.67e7	11753	2271.0	1.70e7	7931	2137.9	bb	bd
26	13C-23478-PeCDF	9.41e5	6.28e5	1.57e6	33.58	1.120	1.50	NO	79.924	0.211	2.50e7	11753	2131.1	1.64e7	7931	2064.4	bb	db
27	13C-123478-HxCDF	4.24e5	8.32e5	1.26e6	35.58	0.973	0.51	NO	73.106	0.134	9.65e6	9353	1032.1	1.90e7	9144	2074.5	bd	bd
28	13C-123678-HxCDF	4.57e5	8.72e5	1.33e6	35.67	0.975	0.52	NO	68.895	0.119	9.76e6	9353	1043.5	1.89e7	9144	2070.7	dd	dd
29	13C-234678-HxCDF	4.20e5	8.21e5	1.24e6	36.15	0.988	0.51	NO	74.131	0.137	9.11e6	9353	974.1	1.75e7	9144	1914.1	bb	bb
30	13C-123789-HxCDF	3.86e5	7.39e5	1.13e6	36.88	1.008	0.52	NO	75.225	0.154	7.55e6	9353	807.1	1.45e7	9144	1584.9	bb	bb

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:10:12 Eastern Standard Time
 Printed: Thursday, January 16, 2020 11:10:51 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
31	13C-1234678-HpCDF	2.81e5	6.40e5	9.21e5	38.31	1.047	0.44	NO	68.424	0.0970	5.34e6	4389	1217.0	1.21e7	6130	1969.7	bb
32	13C-1234789-HpCDF	2.54e5	5.82e5	8.35e5	40.12	1.097	0.44	NO	79.699	0.125	3.95e6	4389	900.4	8.64e6	6130	1409.5	bd
33	13C-1234-TCDD	8.03e5	1.04e6	1.85e6	29.97	0.000	0.77	NO	100.000	0.124	9.53e6	6203	1536.9	1.25e7	4700	2653.5	bb
34	13C-123789-HxCDD	8.56e5	6.91e5	1.55e6	36.59	0.000	1.24	NO	100.000	0.0875	1.72e7	5287	3260.9	1.37e7	5612	2441.1	dd
35	37Cl-2378-TCDD	1.65e5		1.65e5	30.69	1.024			8.404	0.0199	2.19e6	1850	1183.3				bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:10:12 Eastern Standard Time
Printed: Thursday, January 16, 2020 11:10:51 Eastern Standard Time

Method: Untitled 13 Jan 2020 13:57:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraoxins	9.84e1	1.22e2	2.20e2	29.29	0.81	NO	0.015	0.0518	4.23e3	2557	1.7	6.09e3	1280	4.8	db	bb
2	Total-tetraoxins	7.14e1	6.51e1	1.37e2	26.53	1.10	YES	0.009	0.0518	2.03e3	2557	0.8	1.12e3	1280	0.9	bb	bb
3	Total-tetraoxins	6.74e1	5.93e1	1.27e2	31.57	1.14	YES	0.009	0.0518	3.82e3	2557	1.5	3.54e3	1280	2.8	bb	bb
4	Total-tetraoxins	9.29e1	5.32e1	1.46e2	30.97	1.74	YES	0.010	0.0518	2.10e3	2557	0.8	1.28e3	1280	1.0	bb	bb
5	2378-TCDD	7.96e1	6.15e1	1.41e2	30.59	1.29	YES	0.010	0.0518	3.78e3	2557	1.5	1.37e3	1280	1.1	db	bb
6	Total-tetraoxins	1.43e2	1.33e2	2.75e2	29.77	1.08	YES	0.019	0.0518	3.57e3	2557	1.4	2.76e3	1280	2.2	db	bb

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PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	7.30e1	9.81e1	1.71e2	33.13	0.74	YES	0.017	0.0329	3.85e3	1823	2.1	6.45e3	1461	4.4	bb	bb
2	Total-pentadioxins	7.09e1	6.59e1	1.37e2	32.98	1.08	YES	0.014	0.0329	2.14e3	1823	1.2	1.49e3	1461	1.0	bb	bb

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDD	4.99e2	2.79e2	7.78e2	36.59	1.79	YES	0.076	0.0510	1.30e4	2264	5.7	6.52e3	2236	2.9	bb	bb
2	123678-HxCDD	4.40e2	4.91e2	9.31e2	36.35	0.90	YES	0.086	0.0486	7.91e3	2264	3.5	8.86e3	2236	4.0	db	db
3	123478-HxCDD	1.97e2	9.48e1	2.92e2	36.27	2.08	YES	0.029	0.0519	5.03e3	2264	2.2	3.32e3	2236	1.5	dd	bd
4	Total-hexadioxins	1.12e3	1.09e3	2.21e3	35.74	1.03	YES	0.214	0.0505	2.95e4	2264	13.0	1.86e4	2236	8.3	db	dd
5	Total-hexadioxins	9.36e1	2.24e2	3.18e2	35.53	0.42	YES	0.031	0.0505	8.23e3	2264	3.6	3.89e3	2236	1.7	bb	bd
6	Total-hexadioxins	7.79e2	5.36e2	1.32e3	35.10	1.45	YES	0.127	0.0505	2.12e4	2264	9.4	1.27e4	2236	5.7	bb	bb

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	7.20e3	7.68e3	1.49e4	39.51	0.94	NO	1.619	0.0659	1.27e5	2253	56.5	1.37e5	1650	83.0	bb	bb
2	Total-heptadioxins	1.18e4	1.16e4	2.34e4	38.64	1.01	NO	2.548	0.0659	2.12e5	2253	93.9	1.94e5	1650	117.3	bd	bb
3	Total-heptadioxins	6.27e1	7.06e1	1.33e2	41.01	0.89	NO	0.015	0.0659	4.10e3	2253	1.8	6.82e3	1650	4.1	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Thursday, January 16, 2020 11:10:12 Eastern Standard Time
Printed: Thursday, January 16, 2020 11:10:51 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	1.47e2	1.13e2	2.59e2	29.17	1.30	YES	0.014	0.0331	5.75e3	1241	4.6	2.64e3	1670	1.6	bd	bd
2	Total-tetrafurans	1.59e2	8.10e1	2.40e2	31.32	1.96	YES	0.013	0.0331	4.38e3	1241	3.5	2.79e3	1670	1.7	bb	bd
3	Total-tetrafurans	5.05e1	7.55e1	1.26e2	31.01	0.67	NO	0.007	0.0331	1.73e3	1241	1.4	1.93e3	1670	1.2	bb	bb
4	Total-tetrafurans	2.03e2	1.52e2	3.55e2	29.21	1.33	YES	0.019	0.0331	6.66e3	1241	5.4	3.70e3	1670	2.2	db	db

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	5.04e2	4.25e2	9.28e2	31.54	1.19	YES	0.059	0.0146	1.12e4	819	13.6	7.30e3	1600	4.6	bb	bd
2	Total-pentafurans (F1)	6.22e1	5.23e1	1.15e2	30.49	1.19	YES	0.007	0.0146	1.56e3	819	1.9	4.00e3	1600	2.5	db	bb
3	Total-pentafurans (F1)	5.29e1	5.97e1	1.13e2	29.64	0.89	YES	0.007	0.0146	2.94e3	819	3.6	2.09e3	1600	1.3	bb	db
4	Total-pentafurans (F1)	7.48e1	6.58e1	1.41e2	26.80	1.14	YES	0.009	0.0146	2.57e3	819	3.1	2.56e3	1600	1.6	bb	db

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	9.95e1	5.19e1	1.51e2	33.59	1.92	YES	0.010	0.0195	2.70e3	1538	1.8	1.62e3	1671	1.0	bb	bb
2	Total-pentafurans	6.69e1	5.25e1	1.19e2	33.12	1.27	YES	0.008	0.0193	1.79e3	1538	1.2	1.66e3	1671	1.0	bb	bb
3	Total-pentafurans	1.93e2	1.14e2	3.08e2	32.99	1.69	NO	0.020	0.0193	7.94e3	1538	5.2	3.50e3	1671	2.1	bb	db
4	Total-pentafurans	1.53e2	5.07e1	2.04e2	32.79	3.03	YES	0.013	0.0193	3.25e3	1538	2.1	2.18e3	1671	1.3	bb	bd
5	Total-pentafurans	1.02e2	8.51e1	1.87e2	32.44	1.20	YES	0.012	0.0193	4.17e3	1538	2.7	3.10e3	1671	1.9	bb	bb

HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	2.86e2	9.74e1	3.83e2	34.67	2.93	YES	0.029	0.0285	8.87e3	2006	4.4	5.43e3	1242	4.4	bd	bb
2	234678-HxCDF	8.26e1	6.75e1	1.50e2	36.15	1.22	NO	0.011	0.0265	3.18e3	2006	1.6	2.26e3	1242	1.8	bb	bb
3	123678-HxCDF	1.51e2	5.86e1	2.10e2	35.67	2.57	YES	0.015	0.0275	3.37e3	2006	1.7	1.93e3	1242	1.6	bb	db
4	123478-HxCDF	8.22e1	7.76e1	1.60e2	35.61	1.06	NO	0.012	0.0261	4.15e3	2006	2.1	3.16e3	1242	2.5	bb	dd
5	Total-hexafurans	7.56e2	5.24e2	1.28e3	35.24	1.44	YES	0.096	0.0285	1.89e4	2006	9.4	1.38e4	1242	11.1	MM	bb
6	Total-hexafurans	7.60e2	7.10e2	1.47e3	34.80	1.07	NO	0.110	0.0285	1.51e4	2006	7.5	2.34e4	1242	18.8	db	bb

Quantify Totals Report MassLynx 4.1
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

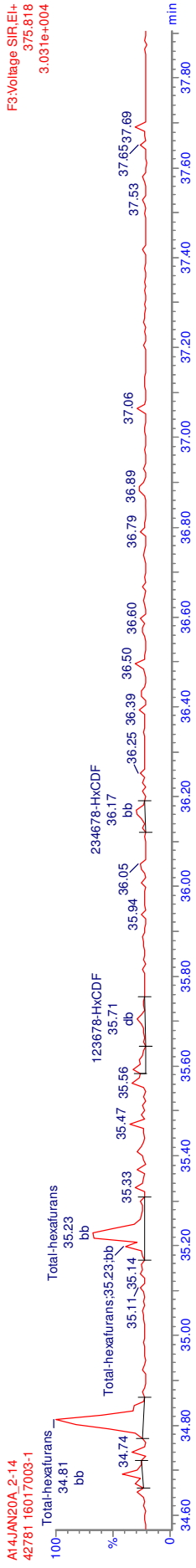
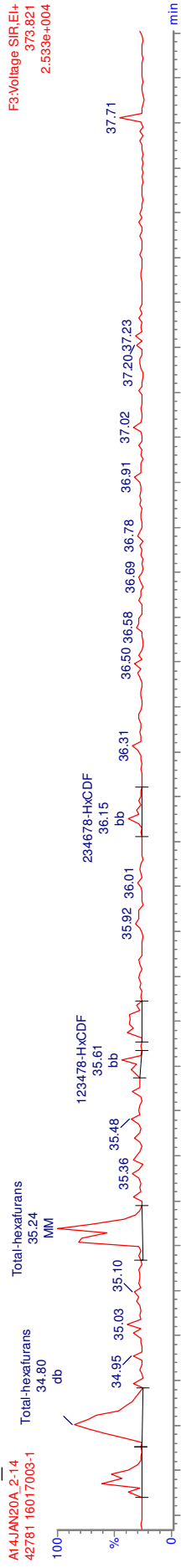
Last Altered: Thursday, January 16, 2020 11:10:12 Eastern Standard Time
 Printed: Thursday, January 16, 2020 11:10:51 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234789-HpCDF	1.08e2	9.14e1	2.00e2	40.11	1.18	NO	0.020	0.0354	2.58e3	1272	2.0	2.67e3	944	2.8	bd	bb
2	Total-heptafurans	3.44e3	3.25e3	6.68e3	38.82	1.06	NO	0.647	0.0313	6.63e4	1272	52.2	5.13e4	944	54.3	bb	bb
3	1234678-HpCDF	1.68e3	1.78e3	3.45e3	38.32	0.94	NO	0.326	0.0275	4.28e4	1272	33.7	3.47e4	944	36.7	bd	bb

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2



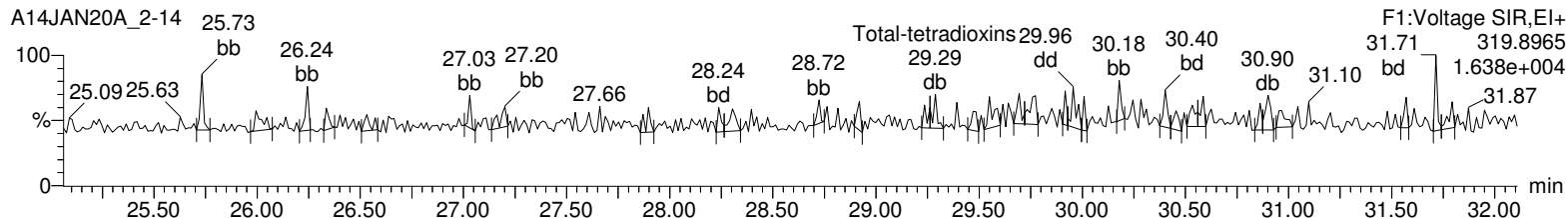
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

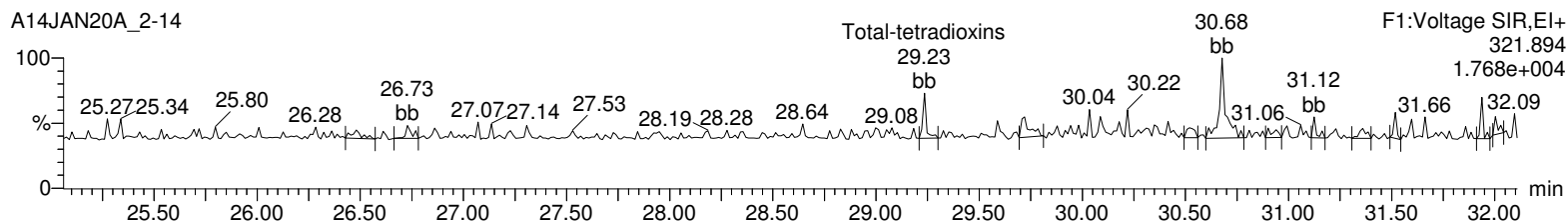
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

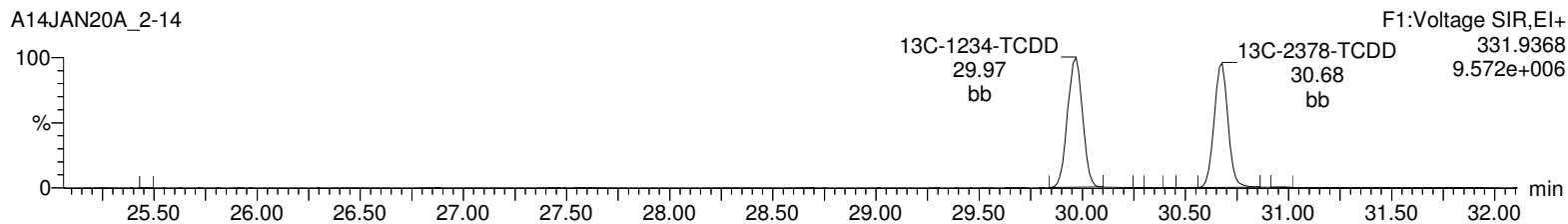
Total-tetradoxins



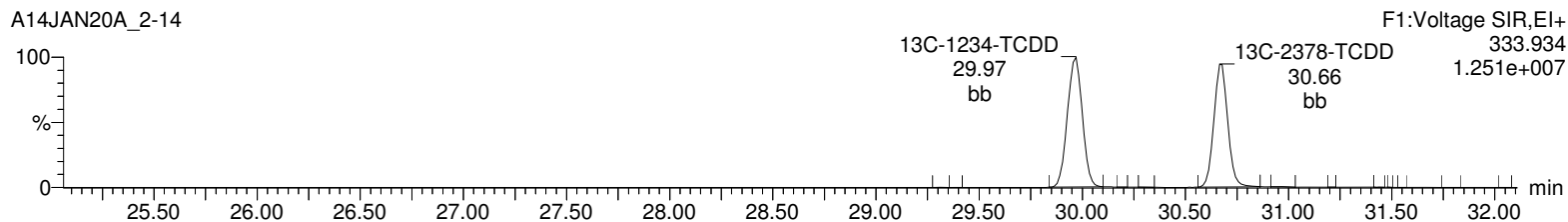
Total-tetradoxins



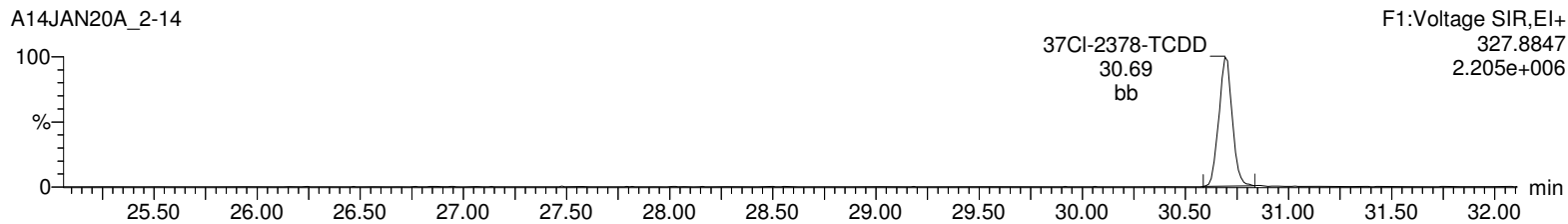
13C-2378-TCDD



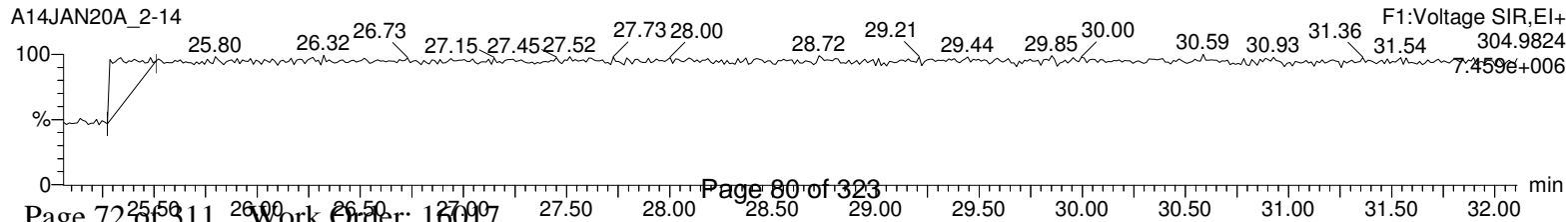
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

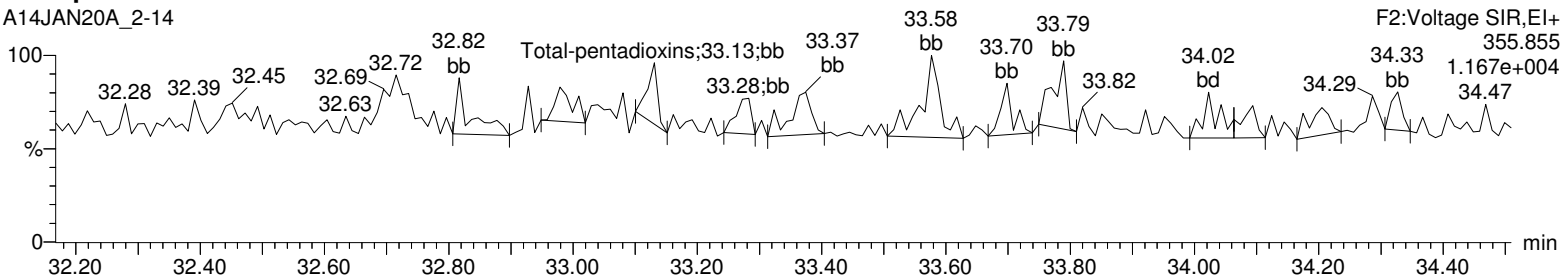
Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

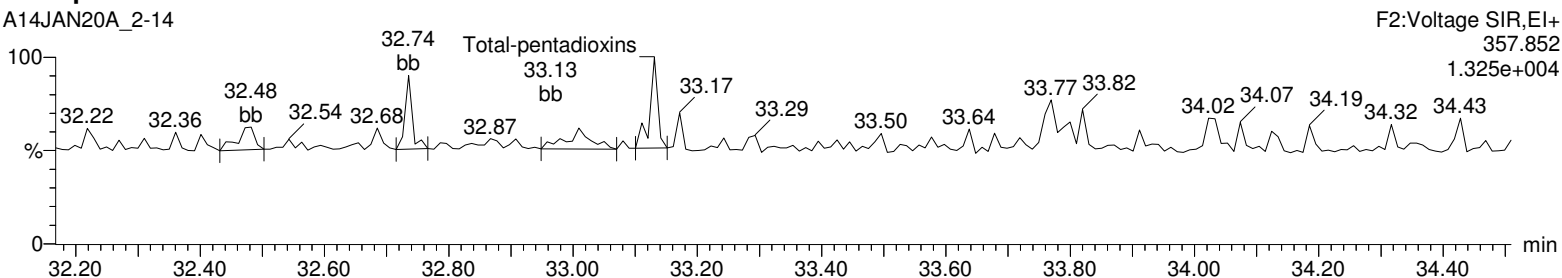
Total-pentadioxins

A14JAN20A_2-14



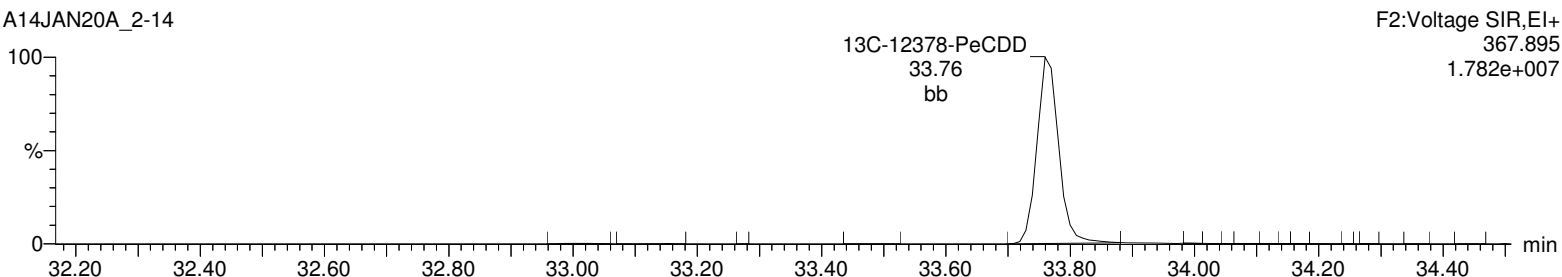
Total-pentadioxins

A14JAN20A_2-14



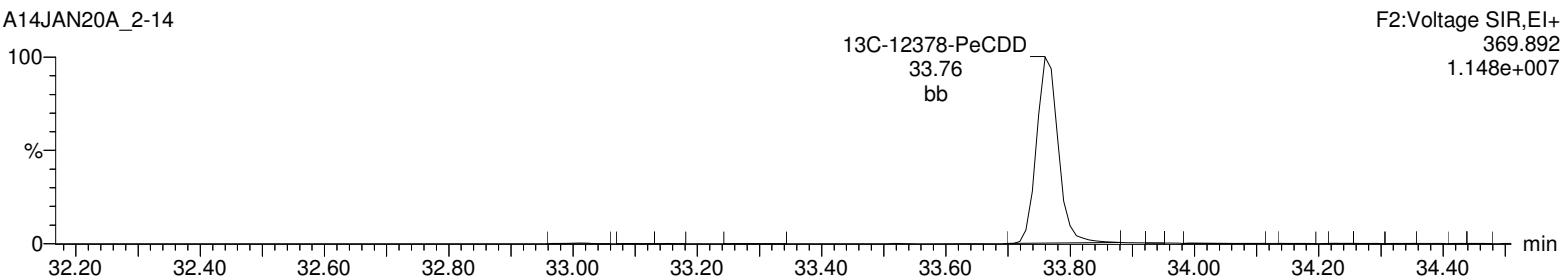
13C-12378-PeCDD

A14JAN20A_2-14



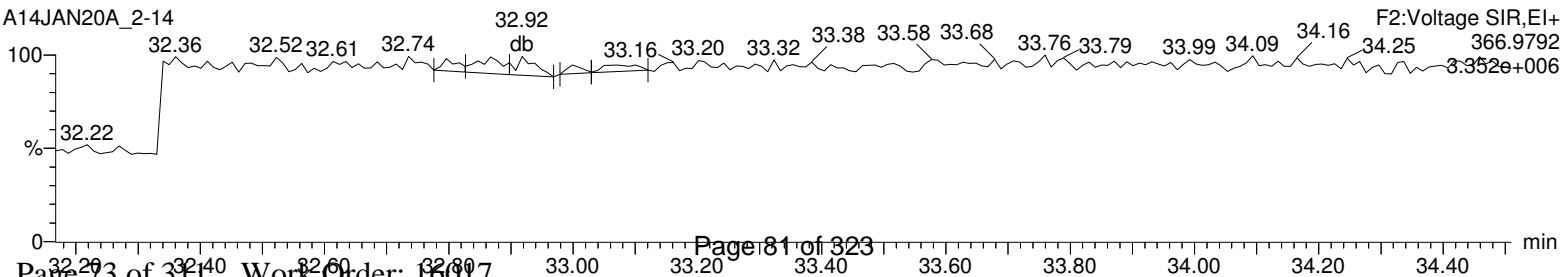
13C-12378-PeCDD

A14JAN20A_2-14



Lock Mass F2

A14JAN20A_2-14



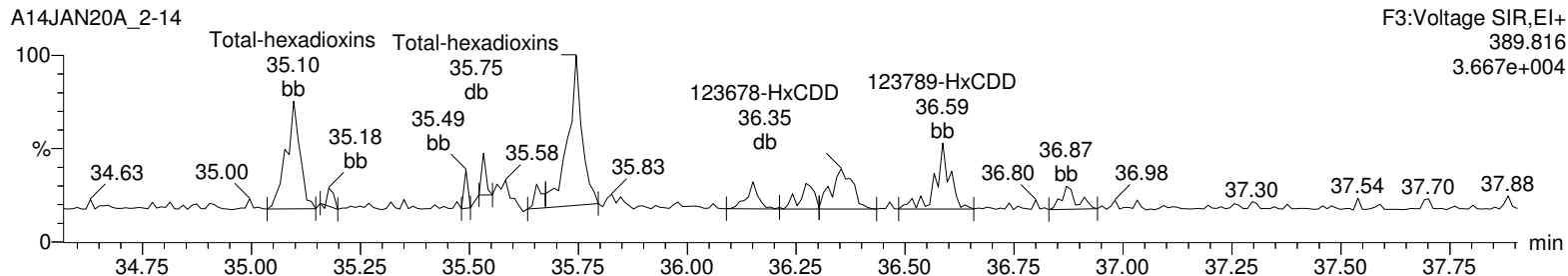
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

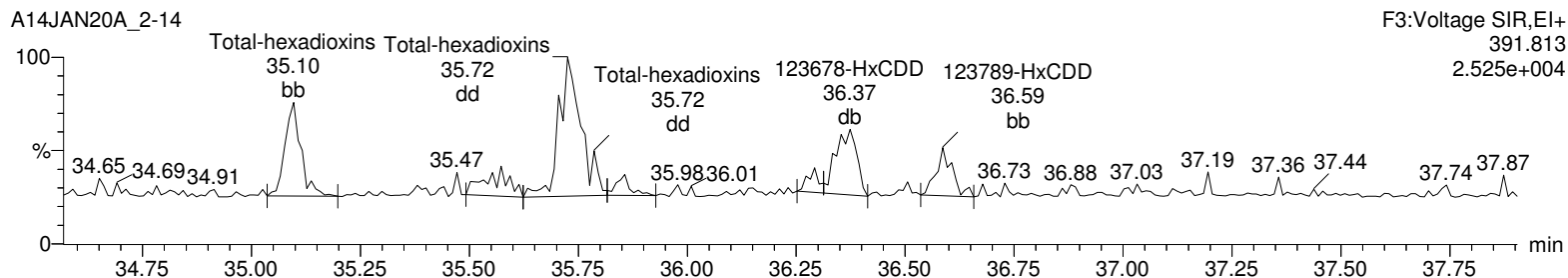
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

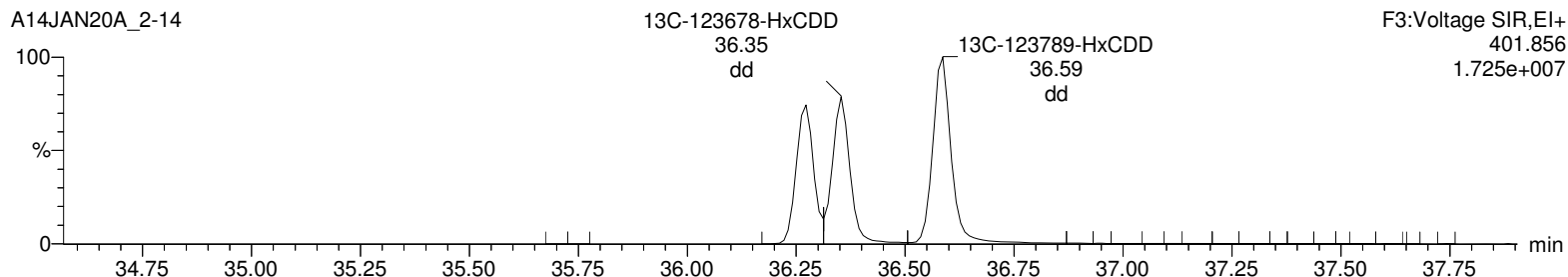
Total-hexadioxins



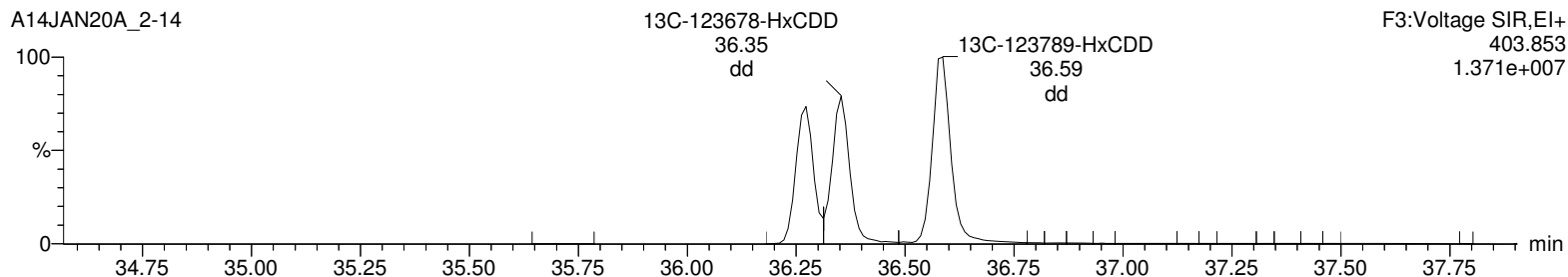
Total-hexadioxins



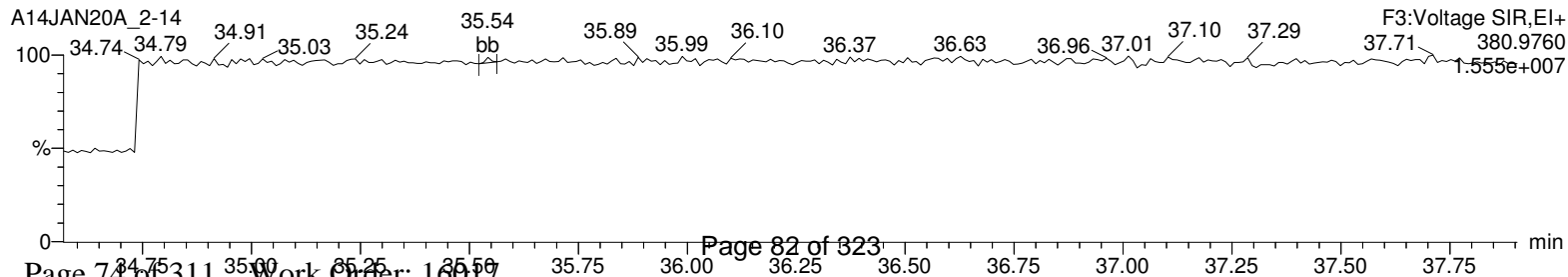
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

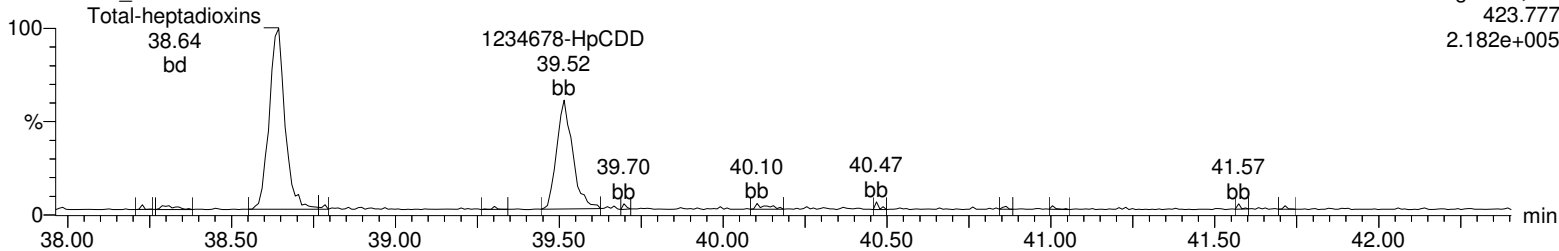
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-heptadioxins

A14JAN20A_2-14

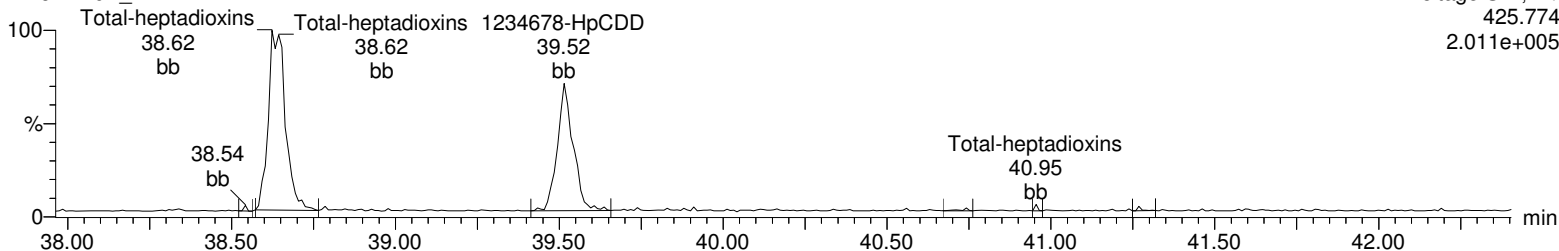
F4:Voltage SIR,EI+
423.777
2.182e+005



Total-heptadioxins

A14JAN20A_2-14

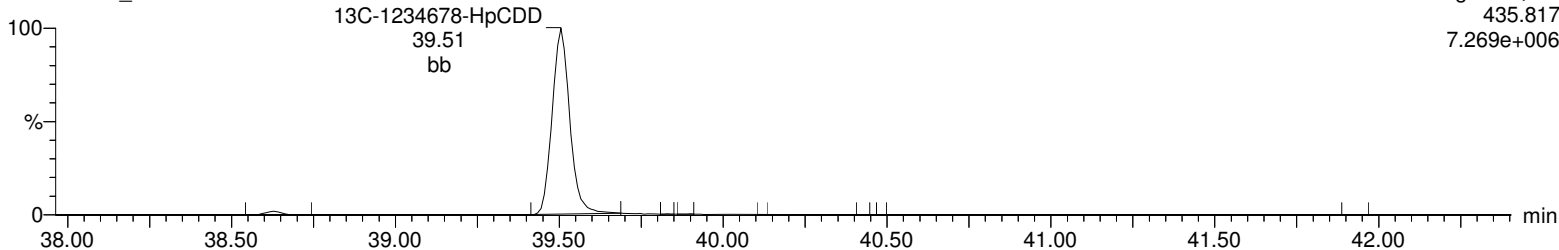
F4:Voltage SIR,EI+
425.774
2.011e+005



13C-1234678-HpCDD

A14JAN20A_2-14

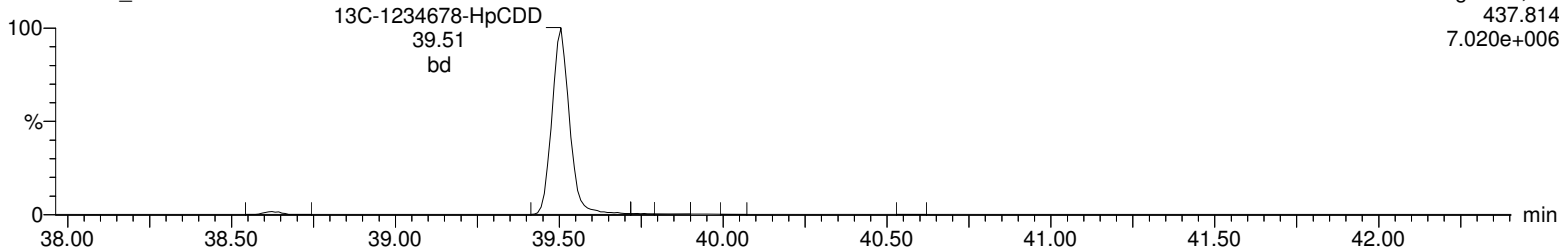
F4:Voltage SIR,EI+
435.817
7.269e+006



13C-1234678-HpCDD

A14JAN20A_2-14

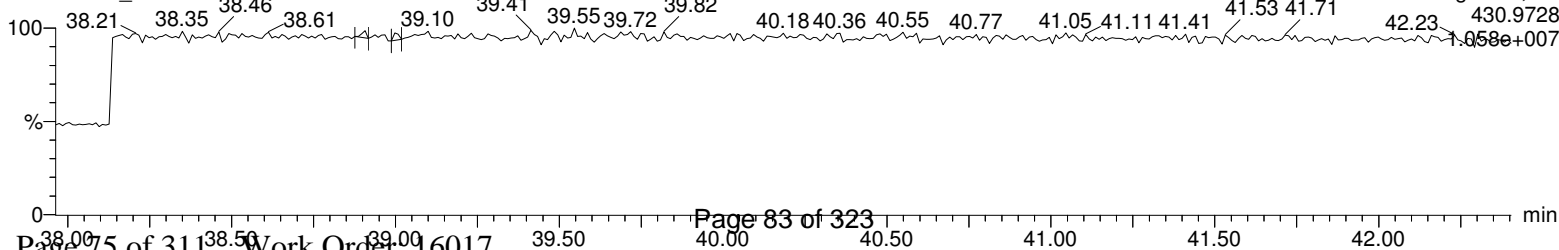
F4:Voltage SIR,EI+
437.814
7.020e+006



Lock Mass F4

A14JAN20A_2-14

F4:Voltage SIR,EI+
430.9728
1.058e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

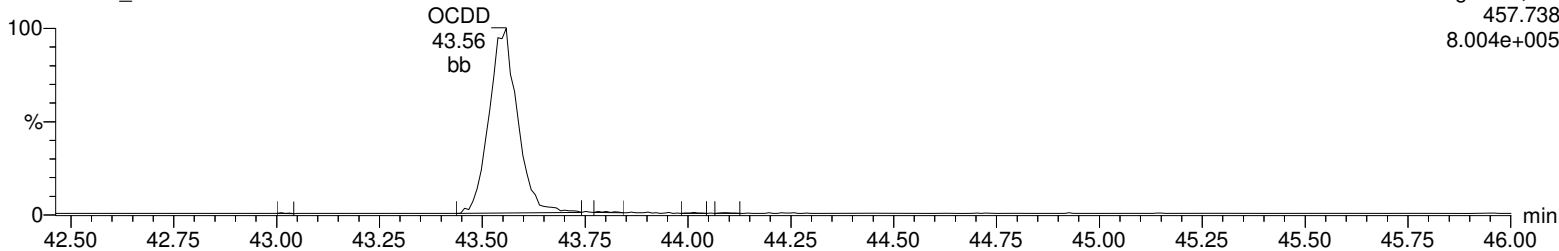
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDD

A14JAN20A_2-14

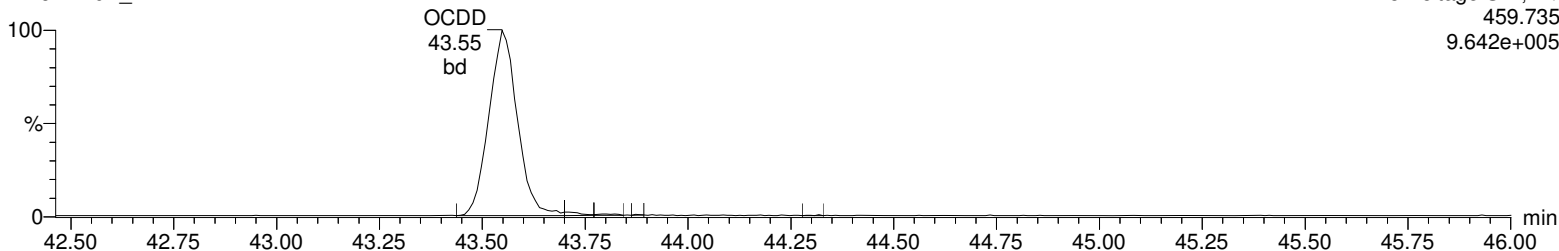
F5:Voltage SIR,EI+
457.738
8.004e+005



OCDD

A14JAN20A_2-14

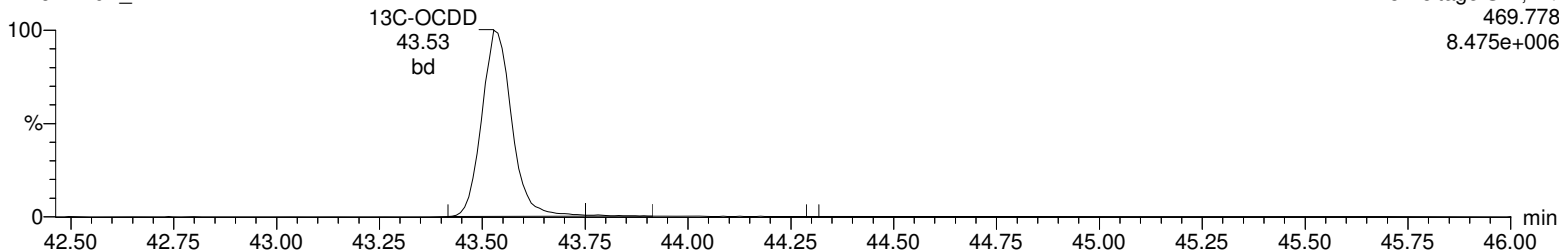
F5:Voltage SIR,EI+
459.735
9.642e+005



13C-OCDD

A14JAN20A_2-14

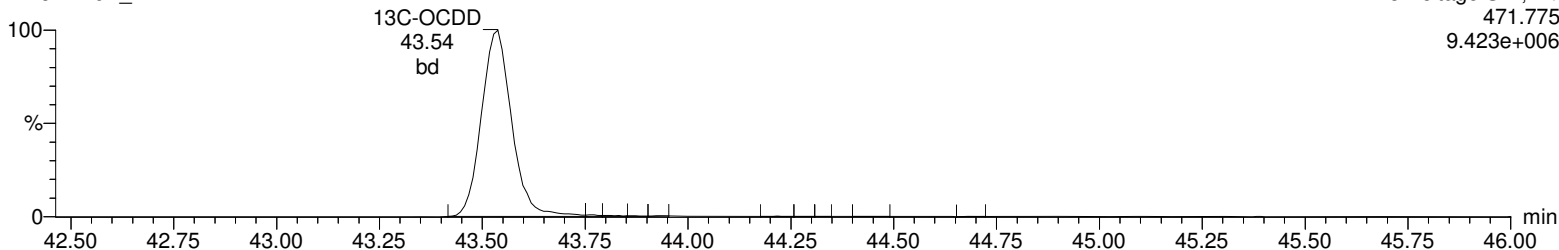
F5:Voltage SIR,EI+
469.778
8.475e+006



13C-OCDD

A14JAN20A_2-14

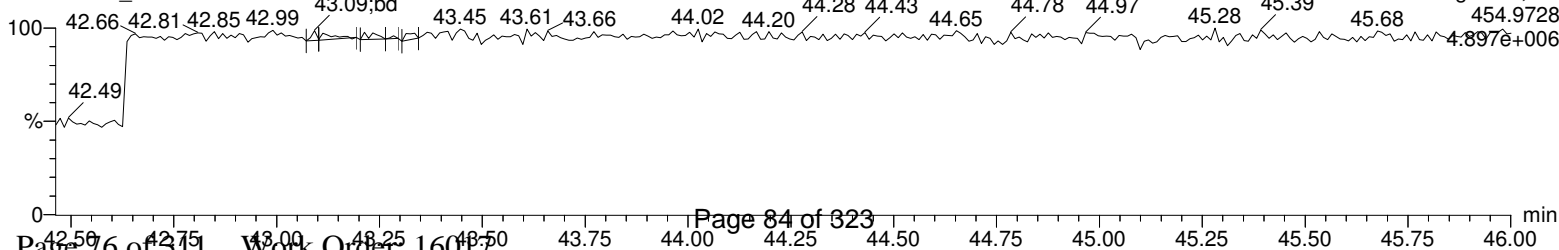
F5:Voltage SIR,EI+
471.775
9.423e+006



Lock Mass F5

A14JAN20A_2-14

F5:Voltage SIR,EI+
454.9728
4.897e+006



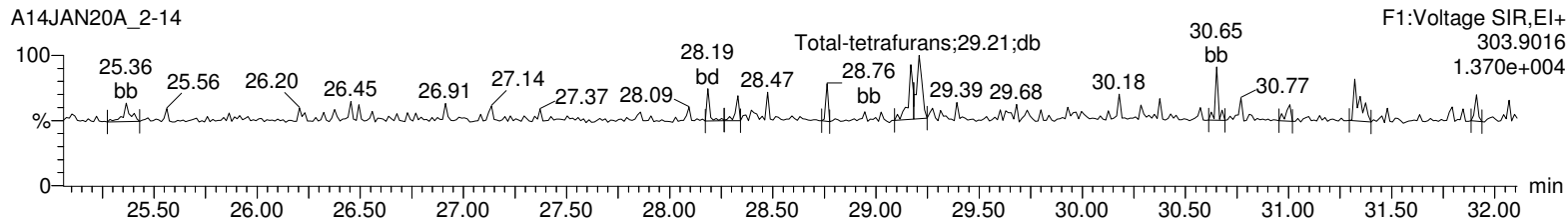
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

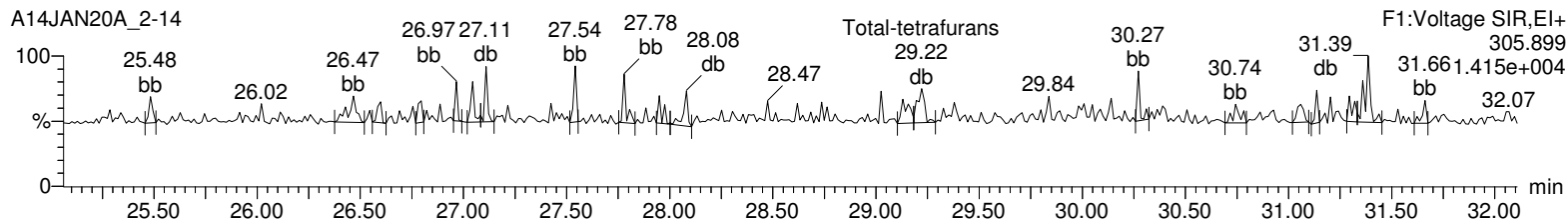
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

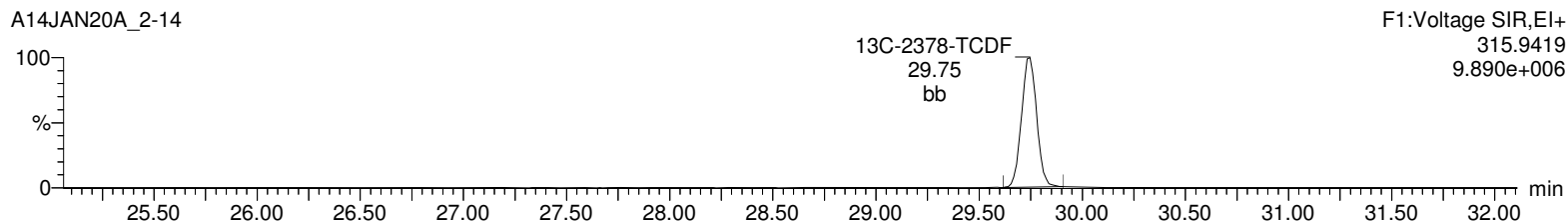
Total-tetrafurans



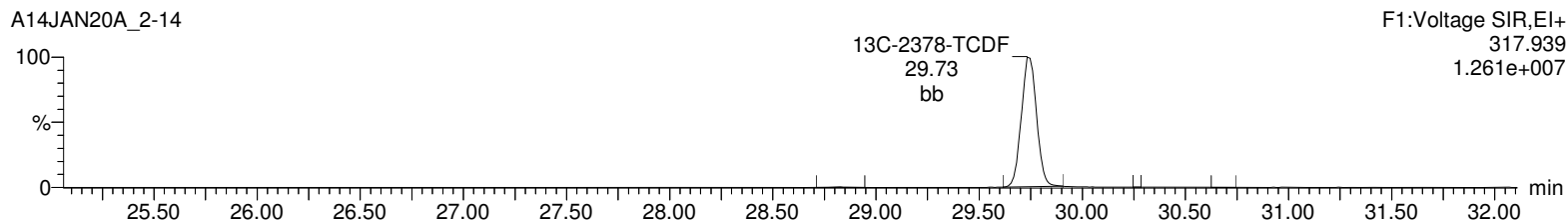
Total-tetrafurans



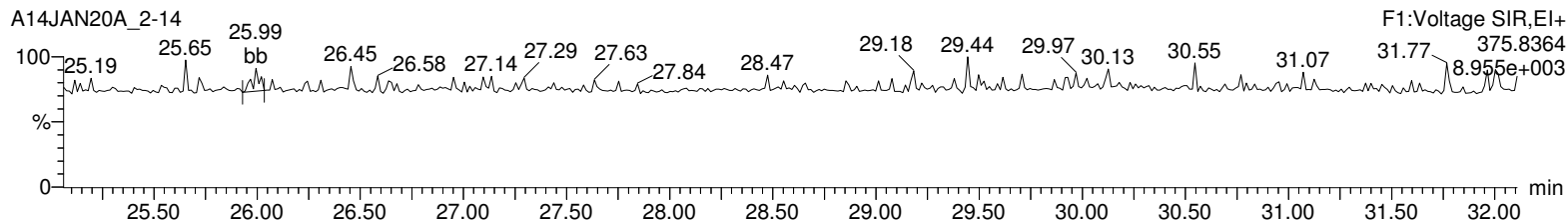
13C-2378-TCDF



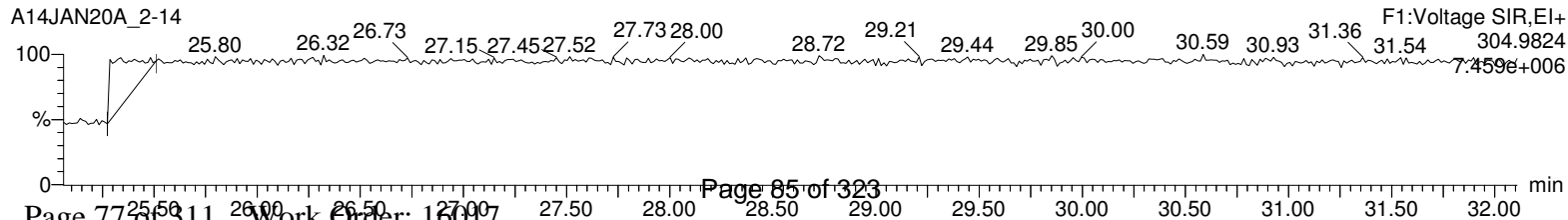
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

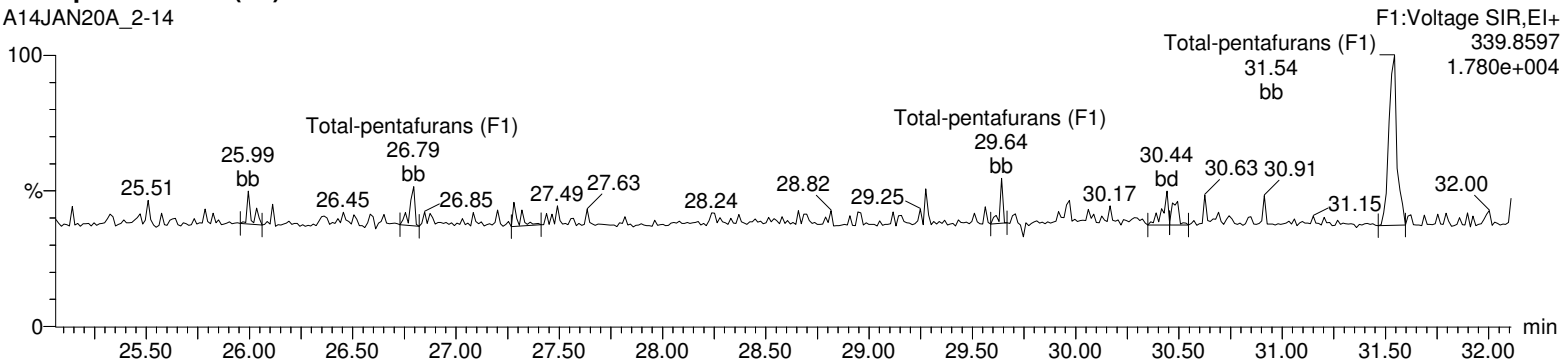
Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

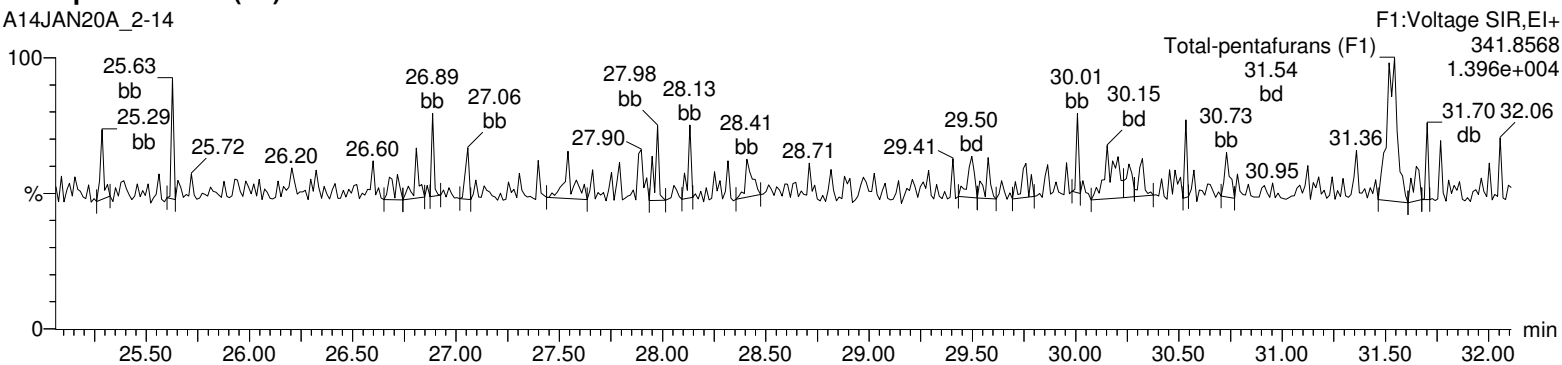
Total-pentafurans (F1)

A14JAN20A_2-14



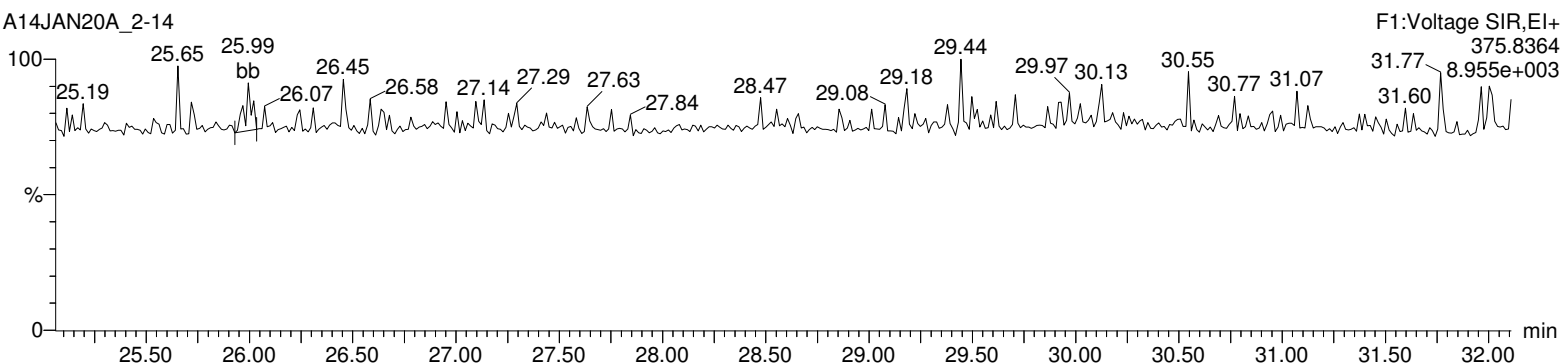
Total-pentafurans (F1)

A14JAN20A_2-14



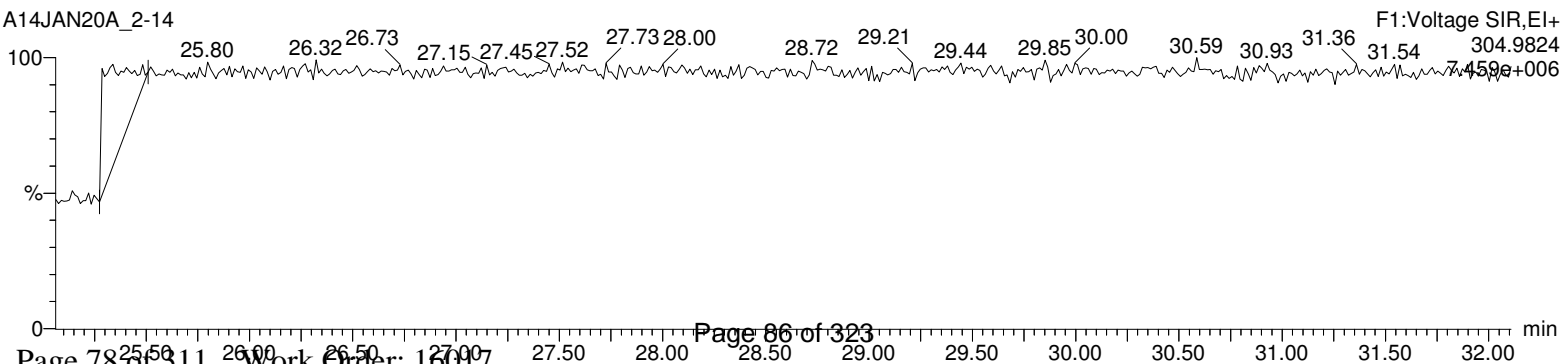
HxDPE

A14JAN20A_2-14



Lock Mass F1

A14JAN20A_2-14



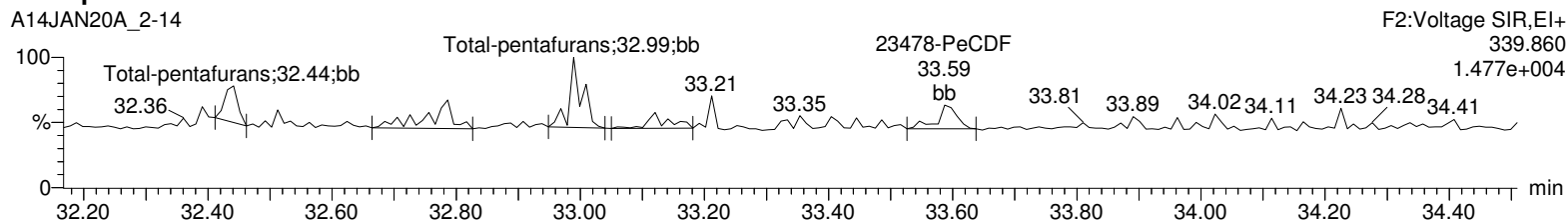
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

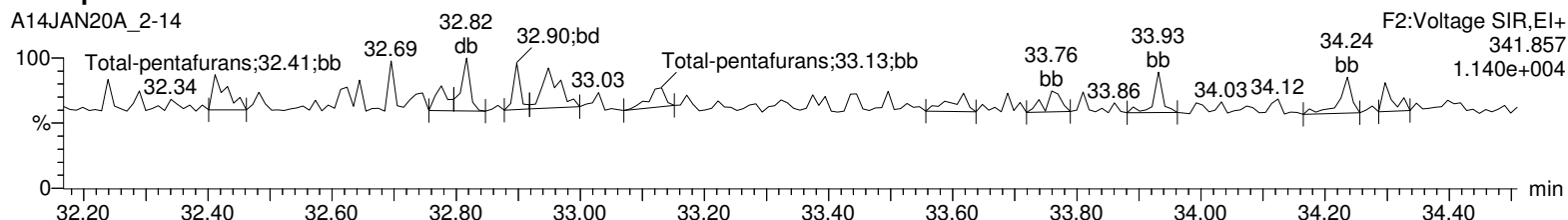
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

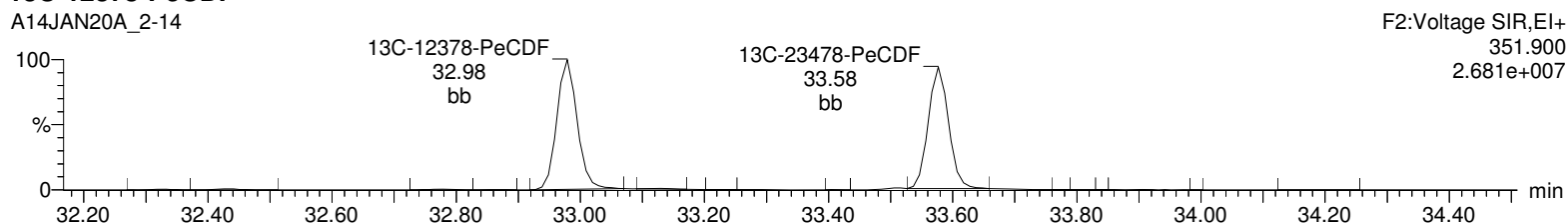
Total-pentafurans



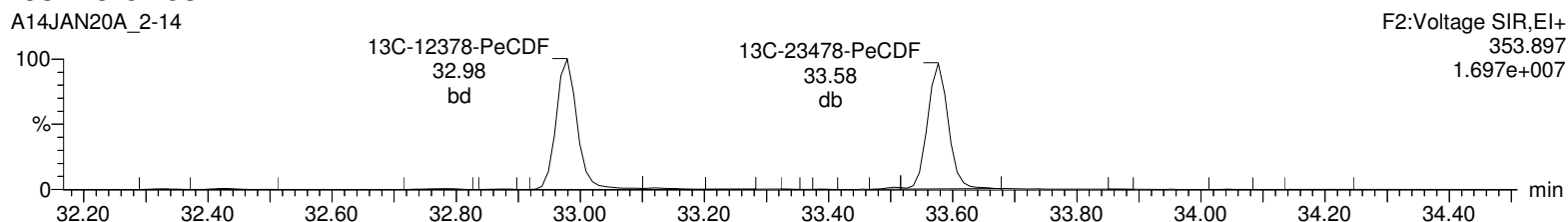
Total-pentafurans



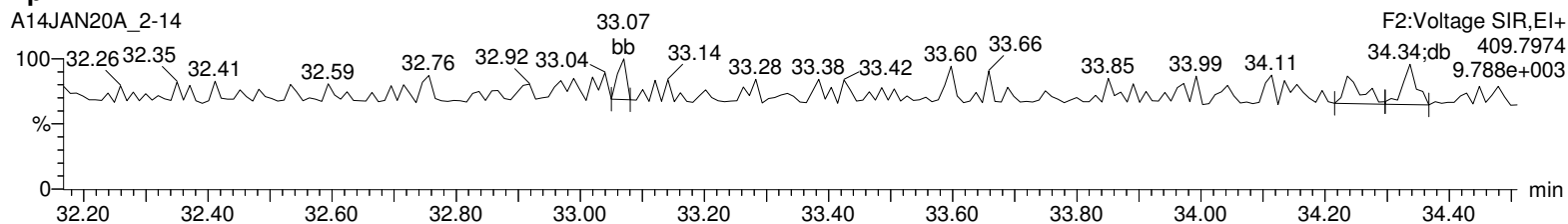
13C-12378-PeCDF



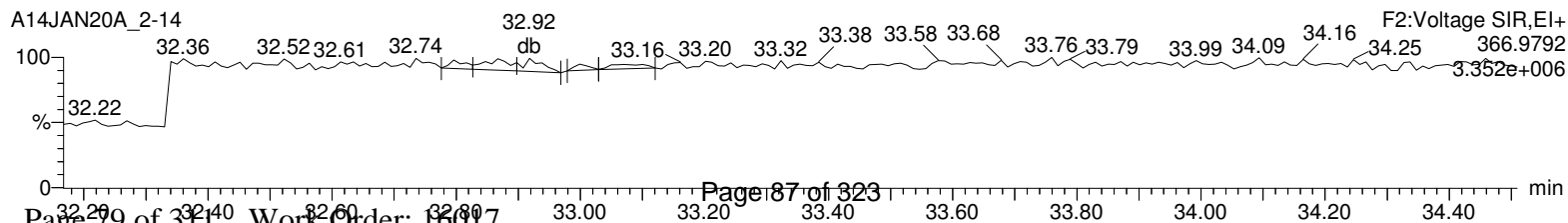
13C-12378-PeCDF



HpDPE



Lock Mass F2



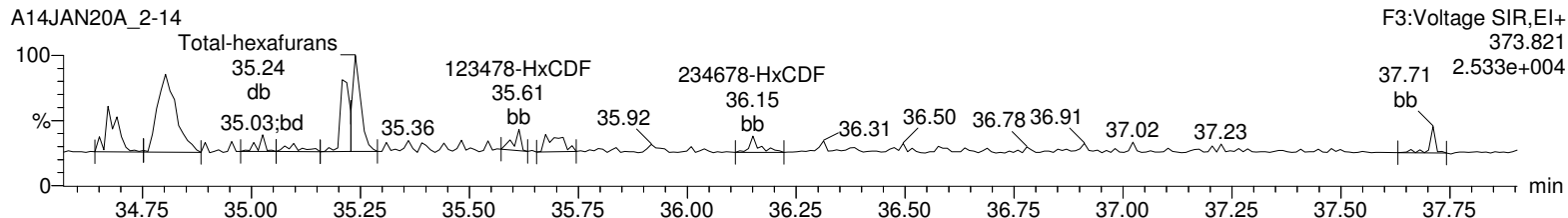
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

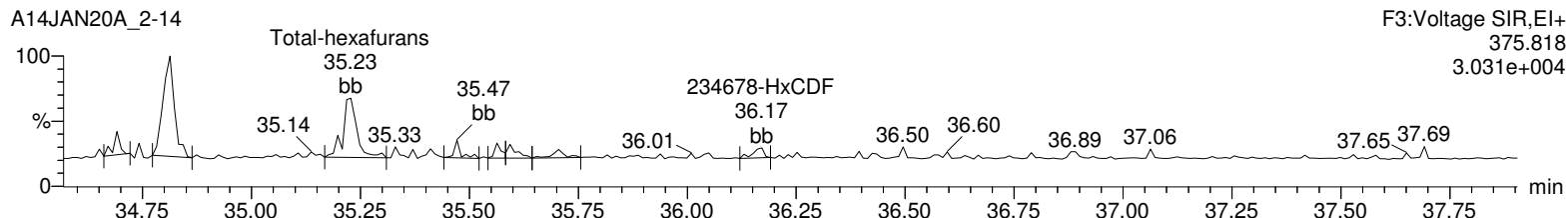
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

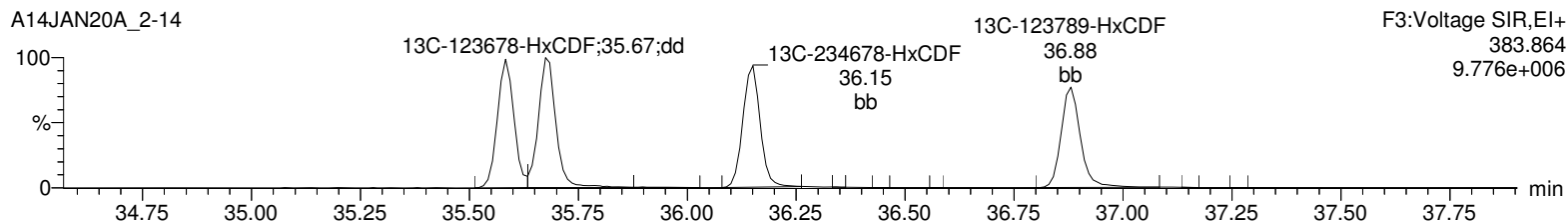
Total-hexafurans



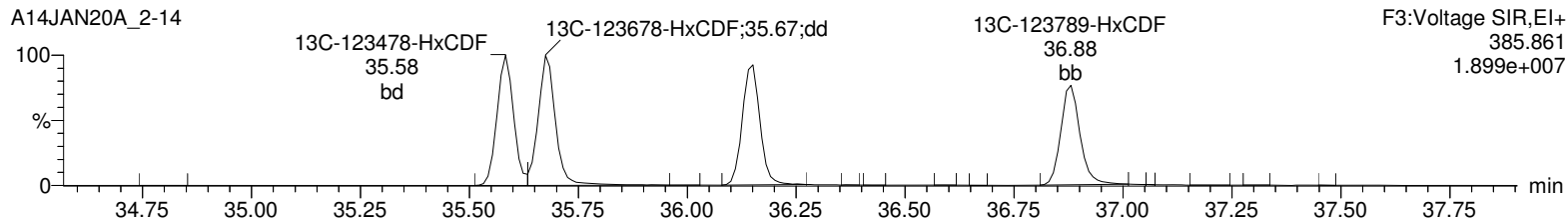
Total-hexafurans



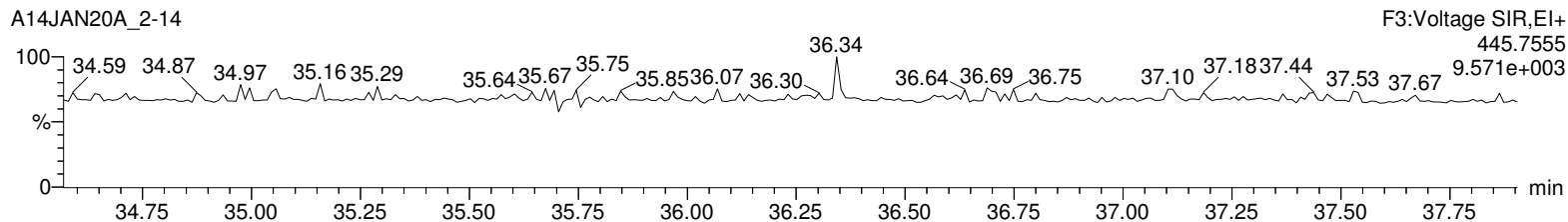
13C-123478-HxCDF



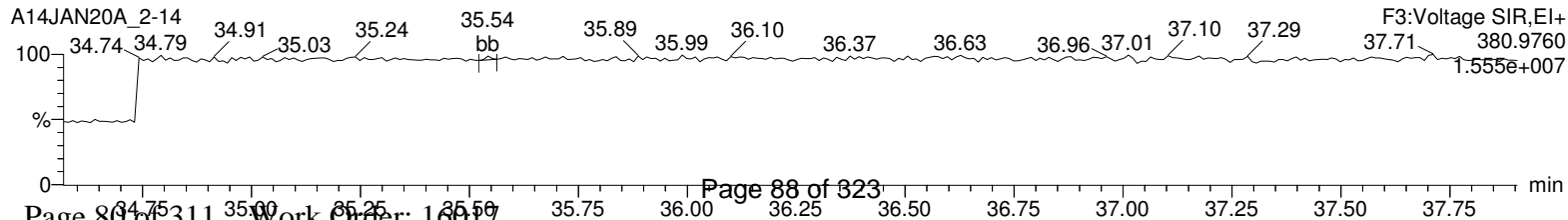
13C-123478-HxCDF



OcDPE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

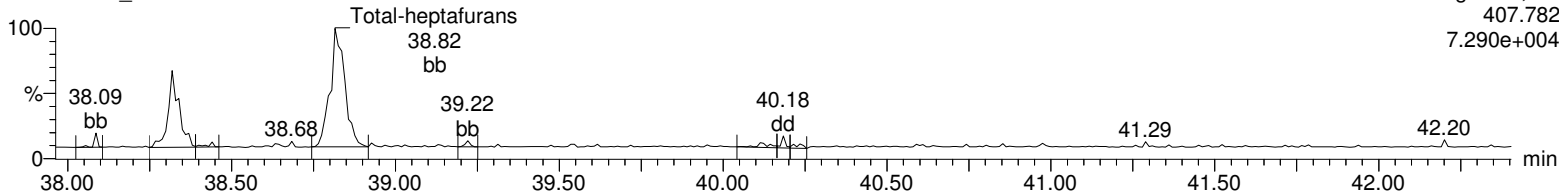
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

Total-heptafurans

A14JAN20A_2-14

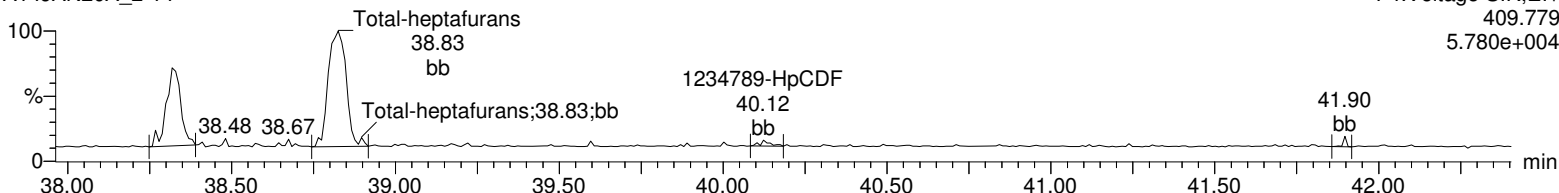
F4:Voltage SIR,EI+
407.782
7.290e+004



Total-heptafurans

A14JAN20A_2-14

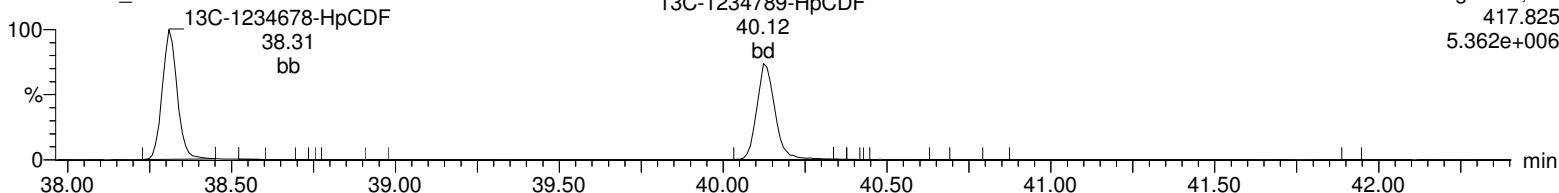
F4:Voltage SIR,EI+
409.779
5.780e+004



13C-1234678-HpCDF

A14JAN20A_2-14

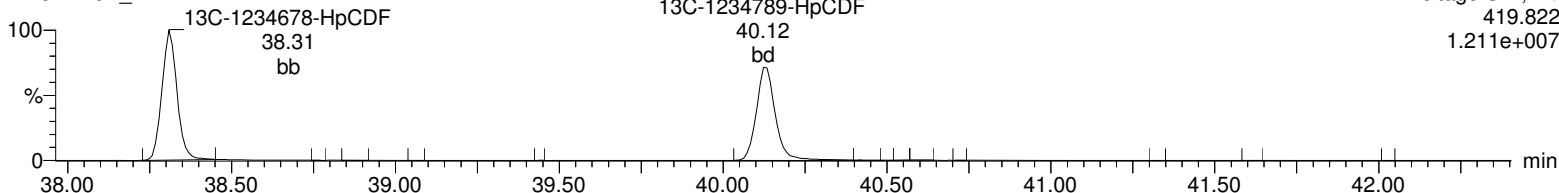
F4:Voltage SIR,EI+
417.825
5.362e+006



13C-1234678-HpCDF

A14JAN20A_2-14

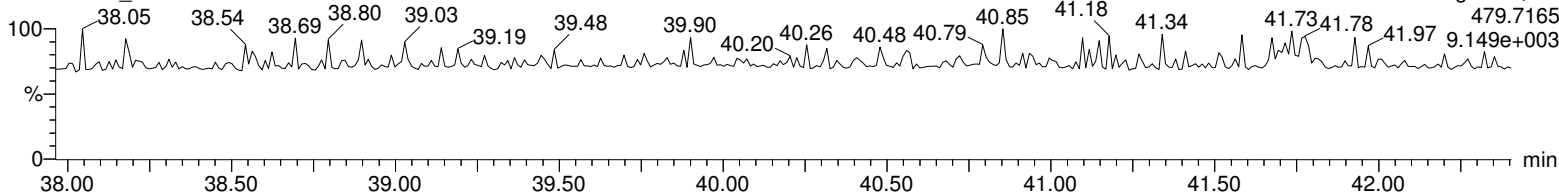
F4:Voltage SIR,EI+
419.822
1.211e+007



NoDPE

A14JAN20A_2-14

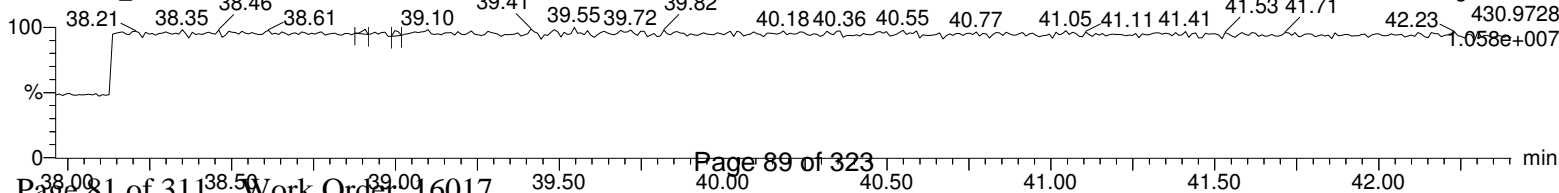
F4:Voltage SIR,EI+
479.7165
9.149e+003



Lock Mass F4

A14JAN20A_2-14

F4:Voltage SIR,EI+
430.9728
1.058e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A_2.qld

Last Altered: Wednesday, January 15, 2020 15:40:44 Eastern Standard Time

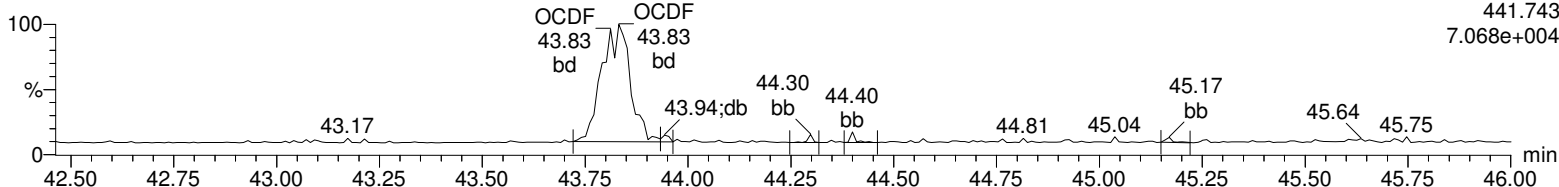
Printed: Wednesday, January 15, 2020 15:41:55 Eastern Standard Time

Name: A14JAN20A_2-14, Date: 15-Jan-2020, Time: 13:52:25, ID: 16017003-1, Description: 42781, Job: HMS1613_1L, Task: HRP750_2, User: MJC

OCDF

A14JAN20A_2-14

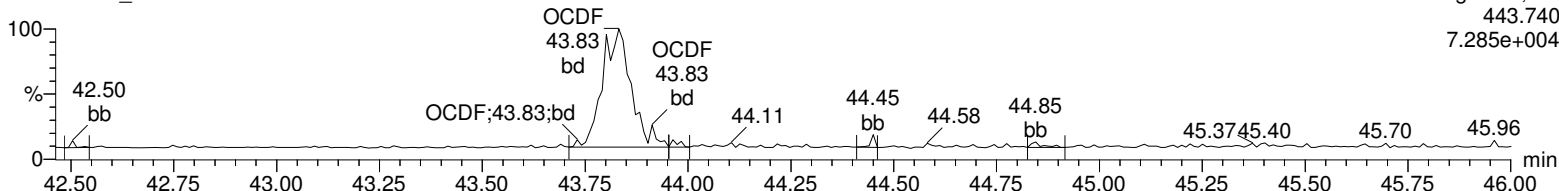
F5:Voltage SIR,EI+
441.743
7.068e+004



OCDF

A14JAN20A_2-14

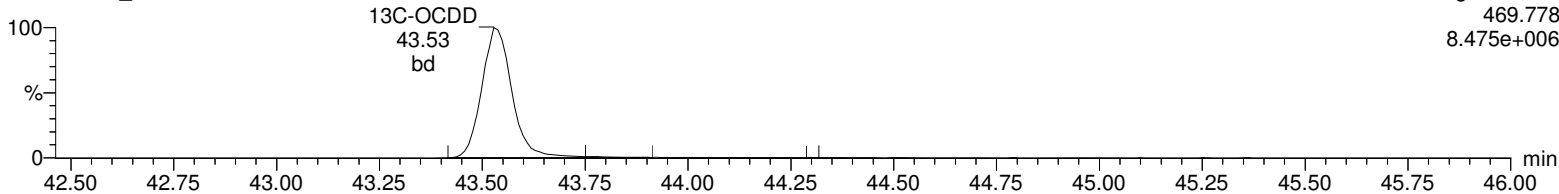
F5:Voltage SIR,EI+
443.740
7.285e+004



13C-OCDD

A14JAN20A_2-14

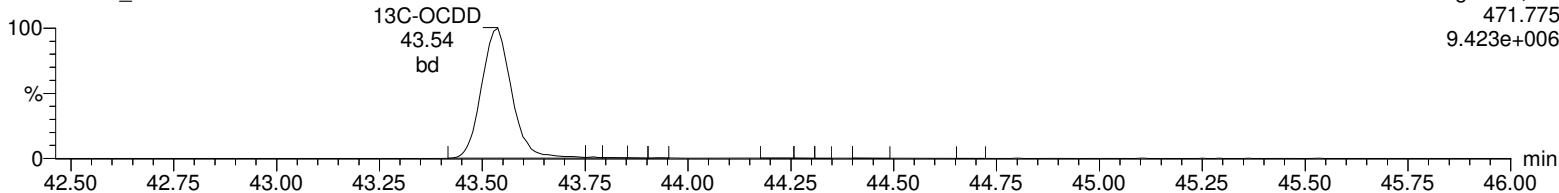
F5:Voltage SIR,EI+
469.778
8.475e+006



13C-OCDD

A14JAN20A_2-14

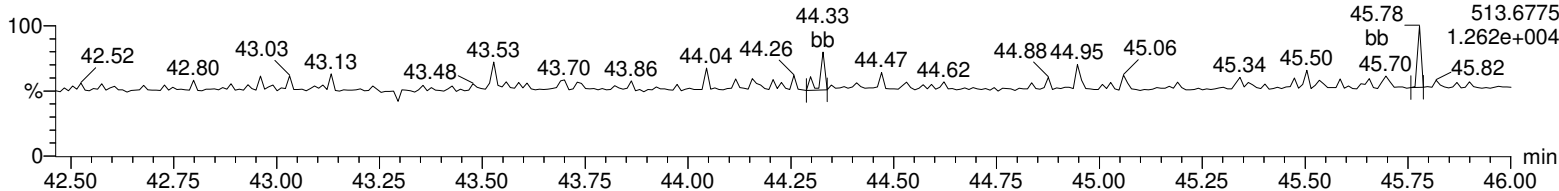
F5:Voltage SIR,EI+
471.775
9.423e+006



DeDPE

A14JAN20A_2-14

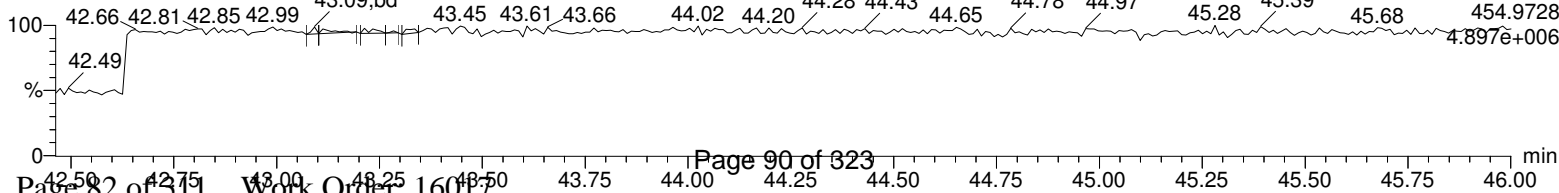
F5:Voltage SIR,EI+
513.6775
1.262e+004



Lock Mass F5

A14JAN20A_2-14

F5:Voltage SIR,EI+
454.9728
4.897e+006



Quality Control Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025720		Matrix: WATER
Client Sample: QC for batch 42776		
Client ID: MB for batch 42776		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/14/2020 17:47	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A-4		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0023	ng/L	0.0023	0.010
40321-76-4	1,2,3,7,8-PeCDD	J	0.00596	ng/L	0.002	0.050
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.00386	ng/L	0.0012	0.050
57653-85-7	1,2,3,6,7,8-HxCDD	JK	0.00348	ng/L	0.00119	0.050
19408-74-3	1,2,3,7,8,9-HxCDD	JK	0.00464	ng/L	0.00122	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD	JK	0.0053	ng/L	0.00169	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	0.011	ng/L	0.0054	0.100
51207-31-9	2,3,7,8-TCDF	U	0.00164	ng/L	0.00164	0.010
57117-41-6	1,2,3,7,8-PeCDF	J	0.00426	ng/L	0.00116	0.050
57117-31-4	2,3,4,7,8-PeCDF	JK	0.00524	ng/L	0.00121	0.050
70648-26-9	1,2,3,4,7,8-HxCDF	JK	0.00442	ng/L	0.00125	0.050
57117-44-9	1,2,3,6,7,8-HxCDF	J	0.00422	ng/L	0.00122	0.050
60851-34-5	2,3,4,6,7,8-HxCDF	J	0.00496	ng/L	0.0012	0.050
72918-21-9	1,2,3,7,8,9-HxCDF	JK	0.00468	ng/L	0.00155	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.00394	ng/L	0.00172	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF	JK	0.0045	ng/L	0.0023	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00906	ng/L	0.00906	0.100
41903-57-5	Total TeCDD	U	0.0023	ng/L	0.0023	0.010
36088-22-9	Total PeCDD	J	0.00596	ng/L	0.002	0.050
34465-46-8	Total HxCDD	JK	0.012	ng/L	0.00119	0.050
37871-00-4	Total HpCDD	JK	0.0053	ng/L	0.00169	0.050
30402-14-3	Total TeCDF	U	0.00164	ng/L	0.00164	0.010
30402-15-4	Total PeCDF	JK	0.0095	ng/L	0.000842	0.050
55684-94-1	Total HxCDF	JK	0.0183	ng/L	0.0012	0.050
38998-75-3	Total HpCDF	JK	0.00844	ng/L	0.00172	0.050
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0108	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.0121	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.35	2.00	ng/L	67.6	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.50	2.00	ng/L	75.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.34	2.00	ng/L	66.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.37	2.00	ng/L	68.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.55	2.00	ng/L	77.3	(23%-140%)
13C-OCDD		2.82	4.00	ng/L	70.4	(17%-157%)
13C-2,3,7,8-TCDF		1.46	2.00	ng/L	73.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.59	2.00	ng/L	79.3	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.41	2.00	ng/L	70.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.26	2.00	ng/L	63.1	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.24	2.00	ng/L	62.0	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.31	2.00	ng/L	65.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.37	2.00	ng/L	68.7	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025720		Matrix: WATER
Client Sample: QC for batch 42776		
Client ID: MB for batch 42776		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/14/2020 17:47	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A-4		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.24	2.00	ng/L	62.2 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.45	2.00	ng/L	72.7 (26%-138%)
37Cl-2,3,7,8-TCDD			0.177	0.200	ng/L	88.3 (35%-197%)

Comments:
J Value is estimated
K Estimated Maximum Possible Concentration
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld
 Last Altered: Wednesday, January 15, 2020 08:57:34 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:58:19 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A13JAN20.mdb 13 Jan 2020 13:57:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	2.45e2	3.90e2	6.35e2	30.70	1.001	0.63	YES	0.082	0.115	9.95e3	2996	3.3	6.16e3	2033	3.0	bd	bb
2	12378-PeCDD	1.03e3	6.19e2	1.65e3	33.76	1.000	1.67	NO	0.298	0.100	2.91e4	3425	8.5	1.61e4	2303	7.0	bb	db
3	123478-HxCDD	5.85e2	4.65e2	1.05e3	36.26	1.000	1.26	NO	0.193	0.0602	1.28e4	1407	9.1	1.13e4	1560	7.2	bd	bd
4	123678-HxCDD	5.26e2	5.43e2	1.07e3	36.35	1.000	0.97	YES	0.174	0.0596	1.14e4	1407	8.1	1.22e4	1560	7.8	db	db
5	123789-HxCDD	5.21e2	8.00e2	1.32e3	36.60	1.007	0.65	YES	0.232	0.0608	1.08e4	1407	7.7	1.81e4	1560	11.6	bb	bb
6	1234678-HpCDD	8.62e2	5.21e2	1.38e3	39.53	1.001	1.65	YES	0.265	0.0844	1.68e4	1660	10.1	1.10e4	1264	8.7	MM	bb
7	OCDD	1.14e3	1.21e3	2.34e3	43.56	1.000	0.94	NO	0.551	0.270	1.68e4	2696	6.2	1.45e4	2743	5.3	MM	bb
8	2378-TCDF	2.54e2	2.57e2	5.11e2	29.78	1.001	0.99	YES	0.050	0.0818	4.45e3	1289	3.4	6.16e3	2745	2.2	bb	bb
9	12378-PeCDF	1.15e3	7.04e2	1.85e3	32.98	1.000	1.63	NO	0.213	0.0582	2.71e4	1949	13.9	1.77e4	3437	5.2	bb	bb
10	23478-PeCDF	1.21e3	1.02e3	2.23e3	33.58	1.000	1.19	YES	0.262	0.0604	4.15e4	1949	21.3	2.50e4	3437	7.3	bb	bb
11	123478-HxCDF	1.06e3	5.69e2	1.63e3	35.58	1.000	1.86	YES	0.221	0.0627	2.45e4	1923	12.7	1.71e4	2319	7.4	bd	bd
12	123678-HxCDF	8.94e2	7.48e2	1.64e3	35.68	1.000	1.19	NO	0.211	0.0610	1.86e4	1923	9.7	1.71e4	2319	7.4	db	db
13	234678-HxCDF	1.09e3	8.38e2	1.93e3	36.15	1.000	1.30	NO	0.248	0.0602	2.26e4	1923	11.7	1.87e4	2319	8.1	bb	bd
14	123789-HxCDF	7.86e2	8.06e2	1.59e3	36.87	1.000	0.97	YES	0.234	0.0776	1.87e4	1923	9.7	1.63e4	2319	7.0	bb	bb
15	1234678-HpCDF	6.46e2	5.41e2	1.19e3	38.32	1.000	1.19	NO	0.197	0.0858	2.00e4	2565	7.8	1.33e4	1475	9.0	bb	bd
16	1234789-HpCDF	7.03e2	5.87e2	1.29e3	40.14	1.001	1.20	YES	0.225	0.115	1.53e4	2565	6.0	1.03e4	1475	7.0	bb	bb
17	OCDF	9.15e2	8.68e2	1.78e3	43.82	1.007	1.05	YES	0.360	0.453	1.44e4	5091	2.8	1.74e4	5562	3.1	bb	bd
18	13C-2378-TCDD	3.79e5	4.99e5	8.78e5	30.67	1.023	0.76	NO	67.648	0.194	5.35e6	7299	732.9	7.02e6	5036	1394.5	bb	bb
19	13C-12378-PeCDD	4.00e5	2.50e5	6.50e5	33.76	1.126	1.60	NO	75.214	0.173	1.03e7	4100	2511.3	6.39e6	3231	1976.6	bd	bb
20	13C-123478-HxCDD	3.22e5	2.57e5	5.79e5	36.26	0.991	1.25	NO	66.756	0.153	7.29e6	4995	1460.1	5.78e6	5956	969.9	bd	bd
21	13C-123678-HxCDD	3.61e5	2.91e5	6.52e5	36.34	0.994	1.24	NO	68.411	0.139	7.30e6	4995	1462.5	6.02e6	5956	1010.2	dd	dd
22	13C-1234678-HpCDD	2.55e5	2.47e5	5.02e5	39.49	1.080	1.03	NO	77.344	0.167	4.23e6	4872	867.8	3.99e6	4070	979.6	bb	bb
23	13C-OCDD	4.15e5	4.60e5	8.74e5	43.54	1.190	0.90	NO	140.791	0.175	4.92e6	4566	1078.1	5.60e6	4432	1263.4	bd	bb
24	13C-2378-TCDF	4.60e5	5.91e5	1.05e6	29.74	0.992	0.78	NO	73.139	0.265	5.51e6	12205	451.8	7.26e6	6424	1130.2	bb	bb
25	13C-12378-PeCDF	5.58e5	3.64e5	9.22e5	32.97	1.100	1.53	NO	79.265	0.288	1.48e7	9203	1610.0	9.49e6	7185	1320.5	bd	bd
26	13C-23478-PeCDF	5.26e5	3.34e5	8.61e5	33.57	1.120	1.57	NO	70.386	0.274	1.38e7	9203	1501.4	9.04e6	7185	1258.8	db	bb
27	13C-123478-HxCDF	2.33e5	4.45e5	6.78e5	35.57	0.973	0.52	NO	63.108	0.180	5.34e6	6724	793.7	1.05e7	9259	1132.3	bd	bd
28	13C-123678-HxCDF	2.48e5	5.00e5	7.48e5	35.68	0.975	0.50	NO	62.032	0.160	5.54e6	6724	824.6	1.08e7	9259	1165.1	dd	dd
29	13C-234678-HxCDF	2.35e5	4.50e5	6.85e5	36.14	0.988	0.52	NO	65.491	0.185	5.32e6	6724	791.4	1.01e7	9259	1093.9	bb	bb
30	13C-123789-HxCDF	2.19e5	4.23e5	6.42e5	36.87	1.008	0.52	NO	68.678	0.207	4.39e6	6724	653.4	8.50e6	9259	918.0	bd	bd

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld
 Last Altered: Wednesday, January 15, 2020 08:57:34 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:58:19 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	1.57e5	3.67e5	5.23e5	38.31	1.047	0.43	NO	62.199	0.125	3.06e6	4537	675.0	6.70e6	4138	1619.6	bb	bb
32	13C-1234789-HpCDF	1.44e5	3.32e5	4.76e5	40.12	1.097	0.43	NO	72.681	0.160	2.21e6	4537	486.8	5.01e6	4138	1210.6	bd	bd
33	13C-1234-TCDD	4.98e5	6.53e5	1.15e6	29.97	0.000	0.76	NO	100.000	0.219	6.09e6	7299	834.4	7.90e6	5036	1569.5	bb	bb
34	13C-123789-HxCDD	5.36e5	4.31e5	9.67e5	36.58	0.000	1.24	NO	100.000	0.137	1.11e7	4995	2217.8	8.80e6	5956	1477.3	dd	dd
35	37Cl+2378-TCDD	1.08e5		1.08e5	30.68	1.024			8.829	0.0449	1.38e6	2685	514.7				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld
 Last Altered: Wednesday, January 15, 2020 08:57:34 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:58:19 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A13JAN20.mdb 13 Jan 2020 13:57:24
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradoxins	1.92e2	5.02e1	2.42e2	28.94	3.83	YES	0.031	0.115	5.19e3	2996	1.7	3.55e3	2033	1.7	bb	bb
2	Total-tetradoxins	1.21e2	2.02e2	3.22e2	27.35	0.60	YES	0.042	0.115	5.71e3	2996	1.9	8.22e3	2033	4.0	bb	bb
3	Total-tetradoxins	1.23e2	6.70e1	1.90e2	27.00	1.83	YES	0.024	0.115	5.42e3	2996	1.8	2.34e3	2033	1.2	bb	bb
4	Total-tetradoxins	1.59e2	1.34e2	2.92e2	31.43	1.19	YES	0.038	0.115	5.51e3	2996	1.8	2.56e3	2033	1.3	db	bd
5	2378-TCDD	2.45e2	3.90e2	6.35e2	30.70	0.63	YES	0.082	0.115	9.95e3	2996	3.3	6.16e3	2033	3.0	bd	bb
6	Total-tetradoxins	2.17e2	1.88e2	4.05e2	30.52	1.15	YES	0.052	0.115	4.45e3	2996	1.5	9.91e3	2033	4.9	bb	bb

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDD	1.03e3	6.19e2	1.65e3	33.76	1.67	NO	0.298	0.100	2.91e4	3425	8.5	1.61e4	2303	7.0	bb	db
2	Total-pentadoxins	1.04e2	5.40e1	1.58e2	32.90	1.92	YES	0.028	0.100	6.69e3	3425	2.0	2.23e3	2303	1.0	bb	bb
3	Total-pentadoxins	6.54e1	7.01e1	1.35e2	32.85	0.93	YES	0.024	0.100	5.65e3	3425	1.6	3.07e3	2303	1.3	bb	bb
4	Total-pentadoxins	1.22e2	7.57e1	1.98e2	32.56	1.61	NO	0.036	0.100	4.01e3	3425	1.2	2.37e3	2303	1.0	db	bb
5	Total-pentadoxins	1.67e2	7.11e1	2.39e2	32.49	2.35	YES	0.043	0.100	7.34e3	3425	2.1	2.94e3	2303	1.3	dd	bb
6	Total-pentadoxins	6.28e1	5.32e1	1.16e2	32.39	1.18	YES	0.021	0.100	5.06e3	3425	1.5	4.62e3	2303	2.0	bd	bb
7	Total-pentadoxins	1.66e2	6.34e1	2.30e2	32.32	2.62	YES	0.041	0.100	5.14e3	3425	1.5	4.89e3	2303	2.1	bb	bb
8	Total-pentadoxins	1.03e2	5.54e1	1.59e2	32.23	1.87	YES	0.029	0.100	6.54e3	3425	1.9	2.18e3	2303	0.9	db	bb

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadoxins	8.52e1	6.92e1	1.54e2	36.78	1.23	NO	0.027	0.0602	6.12e3	1407	4.3	3.86e3	1560	2.5	bb	bb
2	123789-HxCDD	5.21e2	8.00e2	1.32e3	36.60	0.65	YES	0.232	0.0608	1.08e4	1407	7.7	1.81e4	1560	11.6	bb	bb
3	123678-HxCDD	5.26e2	5.43e2	1.07e3	36.35	0.97	YES	0.174	0.0596	1.14e4	1407	8.1	1.22e4	1560	7.8	db	db
4	123478-HxCDD	5.85e2	4.65e2	1.05e3	36.26	1.26	NO	0.193	0.0602	1.28e4	1407	9.1	1.13e4	1560	7.2	bd	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld
Last Altered: Wednesday, January 15, 2020 08:57:34 Eastern Standard Time
Printed: Wednesday, January 15, 2020 08:58:19 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	8.62e2	5.21e2	1.39e3	39.53	1.65	YES	0.265	0.0844	1.68e4	1660	10.1	1.10e4	1264	8.7	MM	bb
2	Total-heptadioxins	7.74e1	6.14e1	1.39e2	38.31	1.26	YES	0.027	0.0844	4.33e3	1660	2.6	2.20e3	1264	1.7	bb	bb

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	7.80e1	1.53e2	2.31e2	30.77	0.51	YES	0.022	0.0818	1.87e3	1289	1.5	4.69e3	2745	1.7	bb	bb
2	2378-TCDF	2.54e2	2.57e2	5.11e2	29.78	0.99	YES	0.050	0.0818	4.45e3	1289	3.4	6.16e3	2745	2.2	bb	bb
3	Total-tetrafurans	1.11e2	2.60e2	3.72e2	29.21	0.43	YES	0.036	0.0818	3.47e3	1289	2.7	8.56e3	2745	3.1	db	bb
4	Total-tetrafurans	5.53e1	1.72e2	2.27e2	31.02	0.32	YES	0.022	0.0818	1.56e3	1289	1.2	5.50e3	2745	2.0	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	8.22e1	7.41e1	1.56e2	30.96	1.11	YES	0.018	0.0421	2.87e3	1438	2.0	2.53e3	2392	1.1	bb	bb
2	Total-pentafurans (F1)	1.13e2	1.06e2	2.19e2	30.52	1.07	YES	0.025	0.0421	5.08e3	1438	3.5	4.40e3	2392	1.8	bb	bd
3	Total-pentafurans (F1)	5.63e1	1.30e2	1.87e2	29.44	0.43	YES	0.022	0.0421	1.58e3	1438	1.1	2.81e3	2392	1.2	bb	bb
4	Total-pentafurans (F1)	1.08e2	7.20e1	1.79e2	28.89	1.49	NO	0.021	0.0421	2.46e3	1438	1.7	2.15e3	2392	0.9	bb	dd
5	Total-pentafurans (F1)	9.24e1	1.11e2	2.03e2	27.57	0.83	YES	0.024	0.0421	3.46e3	1438	2.4	3.98e3	2392	1.7	bd	bb
6	Total-pentafurans (F1)	5.22e1	1.32e2	1.84e2	26.06	0.40	YES	0.021	0.0421	2.38e3	1438	1.7	4.35e3	2392	1.8	bb	bb
7	Total-pentafurans (F1)	7.77e1	1.05e2	1.83e2	31.76	0.74	YES	0.021	0.0421	2.86e3	1438	2.0	2.10e3	2392	0.9	bb	bb
8	Total-pentafurans (F1)	5.14e1	7.97e1	1.31e2	31.57	0.65	YES	0.015	0.0421	1.84e3	1438	1.3	4.26e3	2392	1.8	db	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	1.21e3	1.02e3	2.23e3	33.58	1.19	YES	0.262	0.0604	4.15e4	1949	21.3	2.50e4	3437	7.3	bb	bb
2	12378-PeCDF	1.15e3	7.04e2	1.85e3	32.98	1.63	NO	0.213	0.0582	2.71e4	1949	13.9	1.77e4	3437	5.2	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld
 Last Altered: Wednesday, January 15, 2020 08:57:34 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:58:19 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

HIF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	234678-HxCDF	1.09e3	8.38e2	1.93e3	36.15	1.30	NO	0.248	0.0602	2.26e4	1923	11.7	1.87e4	2319	8.1	bb	bd
2	123678-HxCDF	8.94e2	7.48e2	1.64e3	35.68	1.19	NO	0.211	0.0610	1.86e4	1923	9.7	1.71e4	2319	7.4	db	db
3	123478-HxCDF	1.06e3	5.69e2	1.63e3	35.58	1.86	YES	0.221	0.0627	2.45e4	1923	12.7	1.71e4	2319	7.4	bd	bd
4	123789-HxCDF	7.86e2	8.06e2	1.59e3	36.87	0.97	YES	0.234	0.0776	1.87e4	1923	9.7	1.63e4	2319	7.0	bb	bb

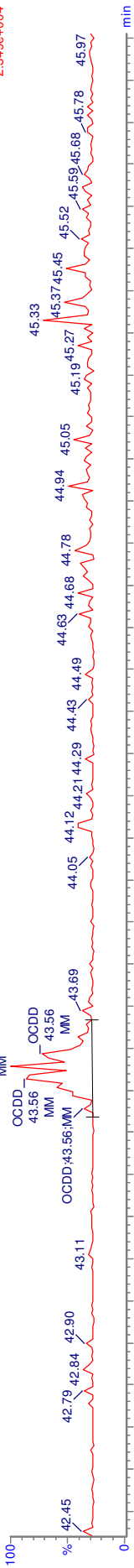
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234789-HpCDF	7.03e2	5.87e2	1.29e3	40.14	1.20	YES	0.225	0.115	1.53e4	2565	6.0	1.03e4	1475	7.0	bb	bb
2	1234678-HpCDF	6.46e2	5.41e2	1.19e3	38.32	1.19	NO	0.197	0.0858	2.00e4	2565	7.8	1.33e4	1475	9.0	bb	bd

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

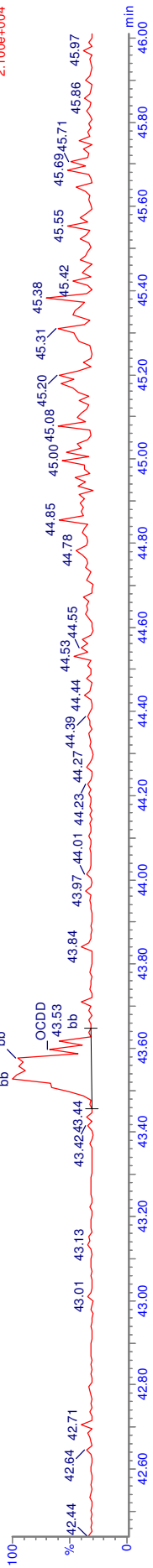
A14JAN20A-4
 12025720-1.MB

F5:Voltage SIR.EI+
 457.738
 2.349e+004



A14JAN20A-4
 12025720-1.MB

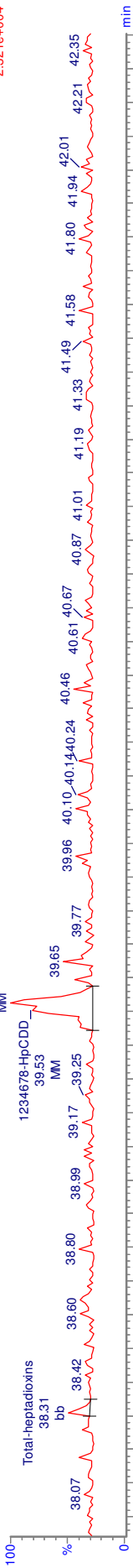
F5:Voltage SIR.EI+
 459.735
 2.100e+004



MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

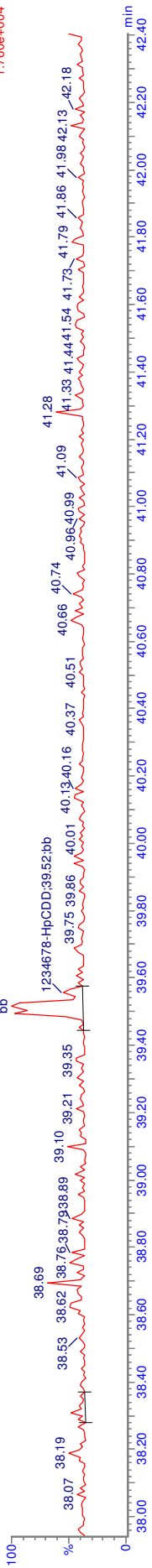
A14JAN20A-4
 12025720-1 MB

F4:Voltage SIR.EI+
 423.777
 2.321e+004



A14JAN20A-4
 12025720-1 MB

F4:Voltage SIR.EI+
 425.774
 1.760e+004



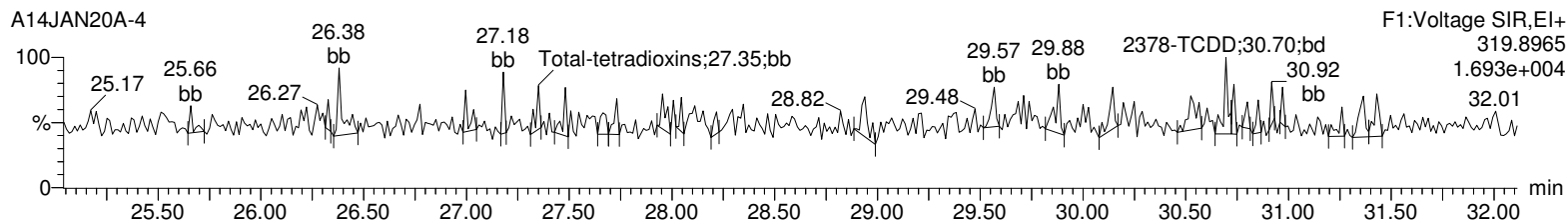
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Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

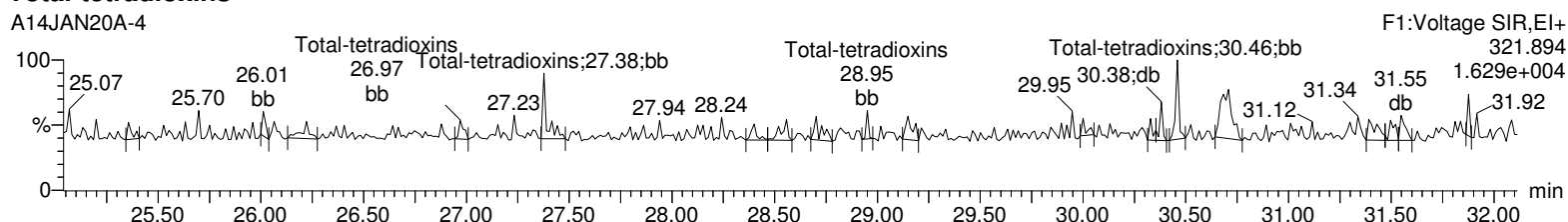
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

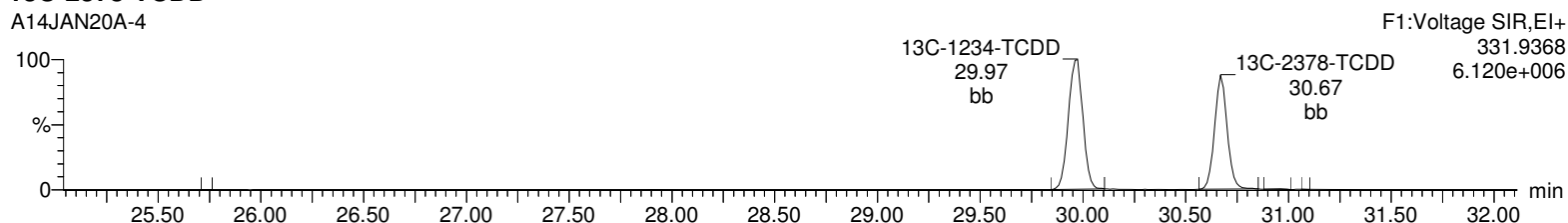
Total-tetradoxins



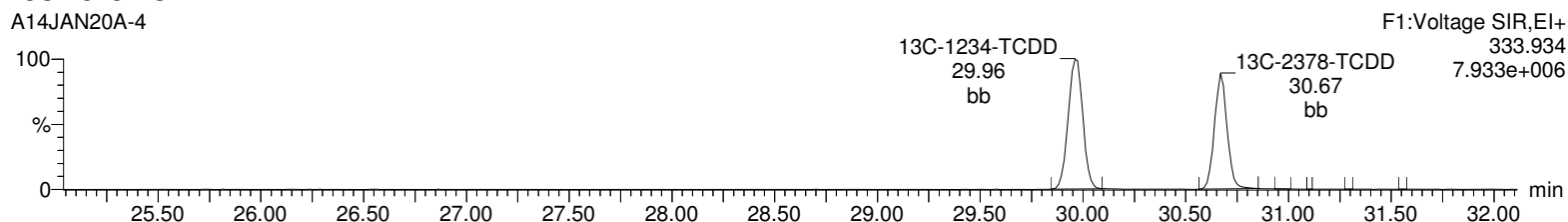
Total-tetradoxins



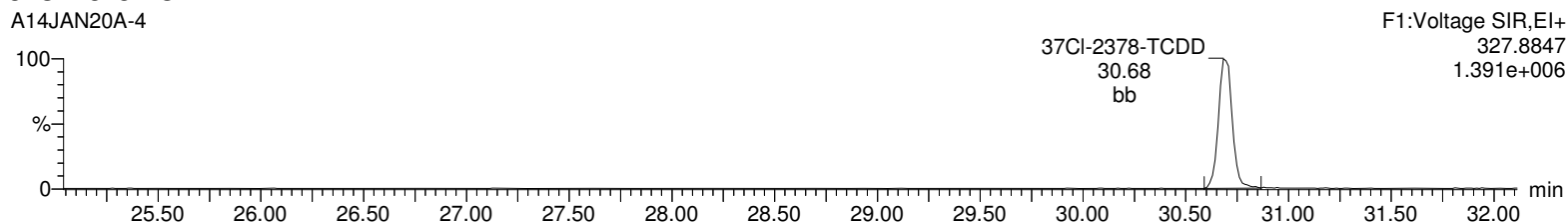
13C-2378-TCDD



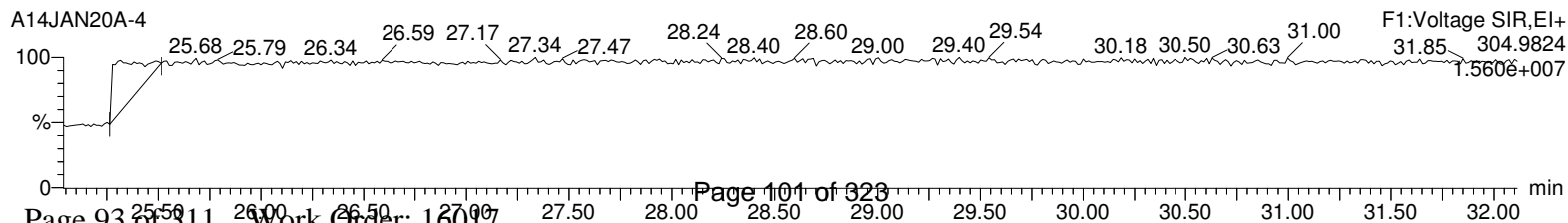
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

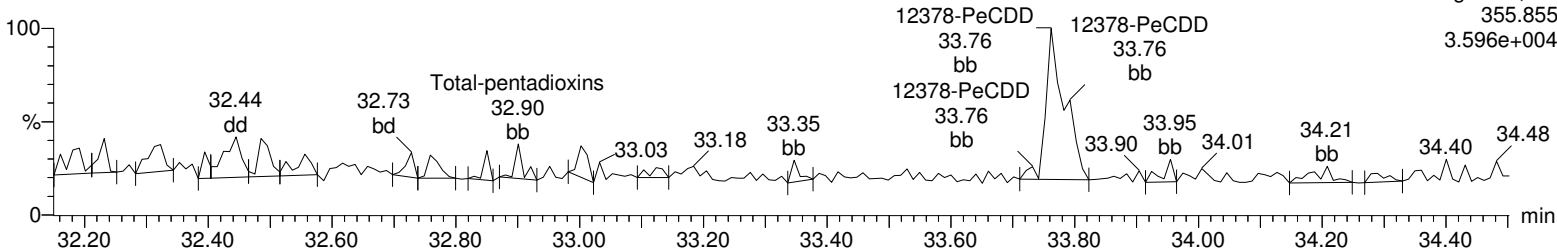
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentadioxins

A14JAN20A-4

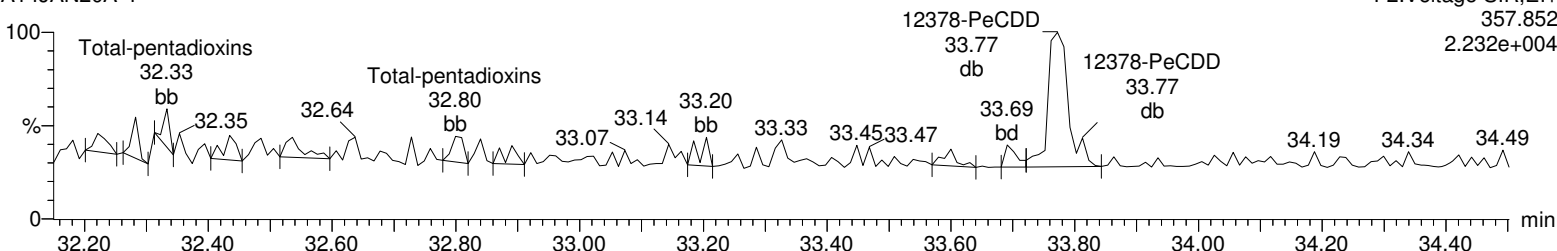
F2:Voltage SIR,EI+
355.855
3.596e+004



Total-pentadioxins

A14JAN20A-4

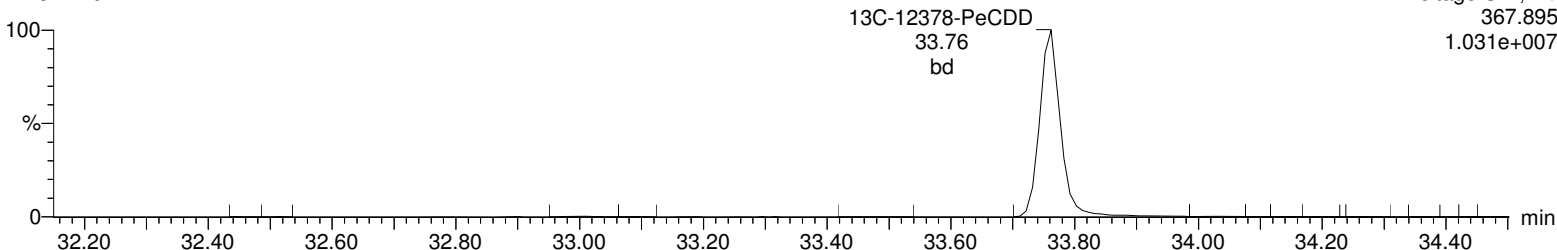
F2:Voltage SIR,EI+
357.852
2.232e+004



13C-12378-PeCDD

A14JAN20A-4

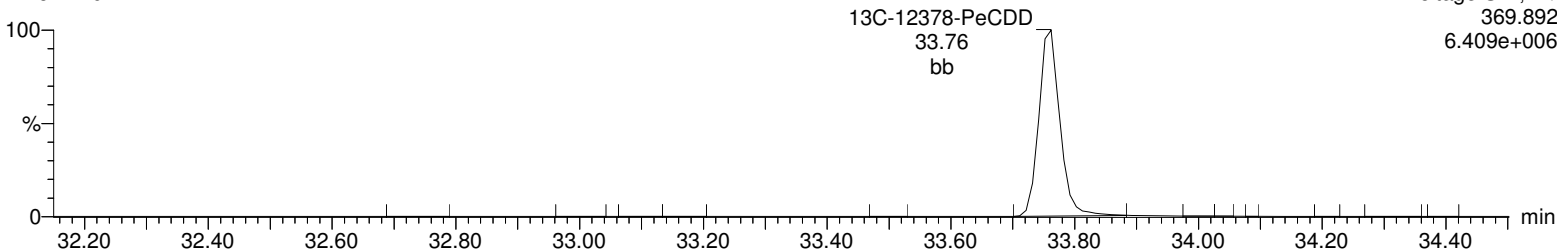
F2:Voltage SIR,EI+
367.895
1.031e+007



13C-12378-PeCDD

A14JAN20A-4

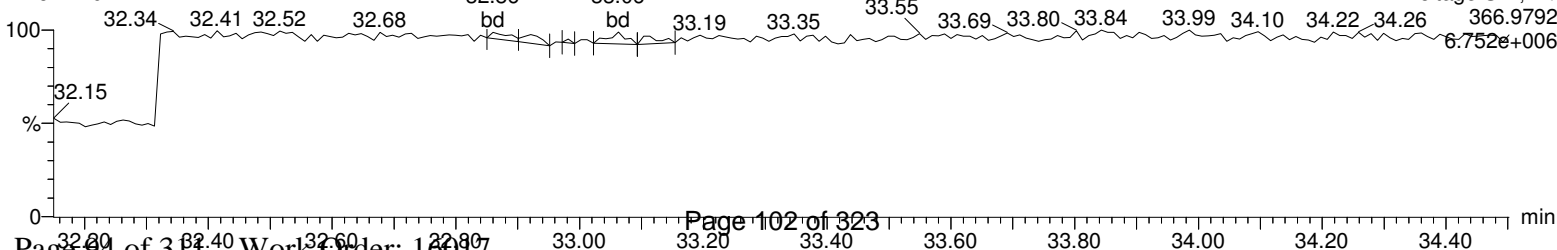
F2:Voltage SIR,EI+
369.892
6.409e+006



Lock Mass F2

A14JAN20A-4

F2:Voltage SIR,EI+
366.9792
6.752e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

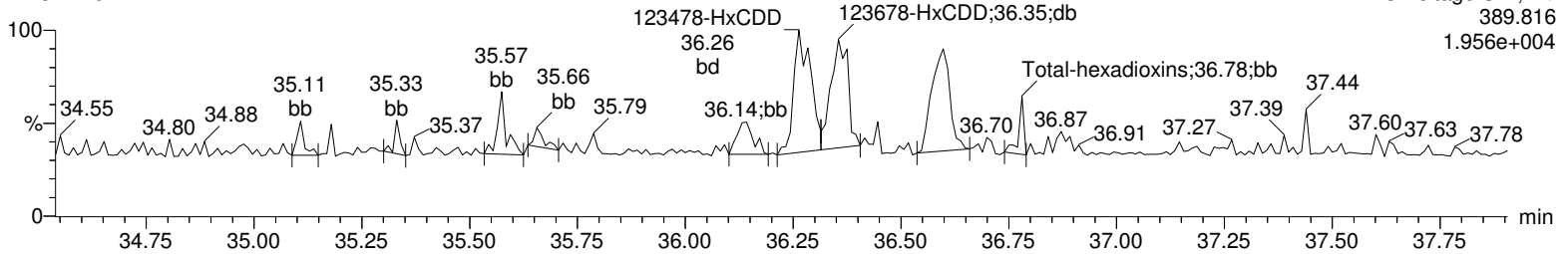
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Total-hexadioxins

A14JAN20A-4

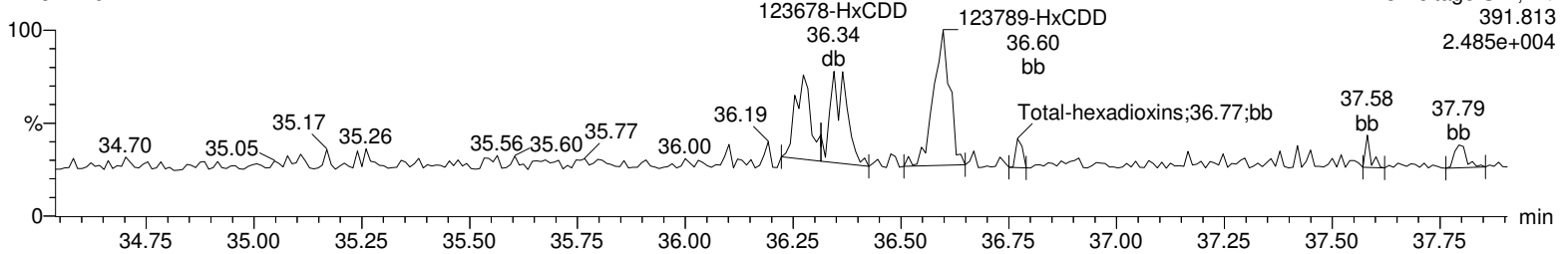
F3:Voltage SIR,EI+
389.816
1.956e+004



Total-hexadioxins

A14JAN20A-4

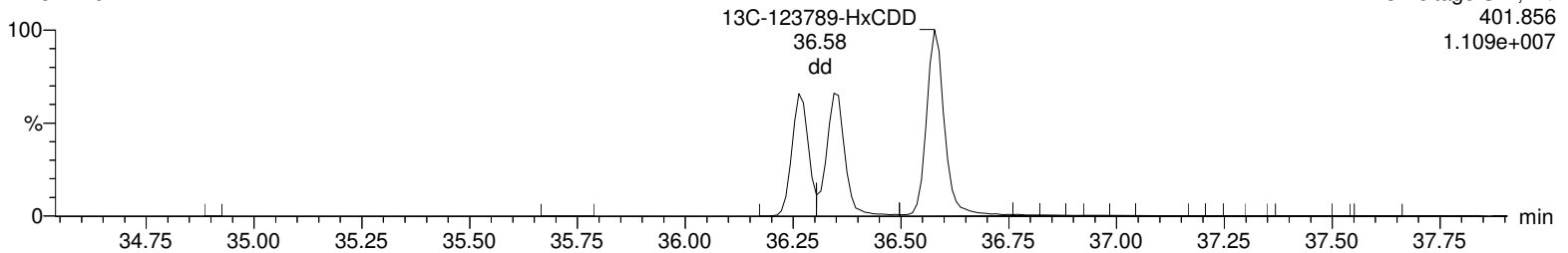
F3:Voltage SIR,EI+
391.813
2.485e+004



13C-123478-HxCDD

A14JAN20A-4

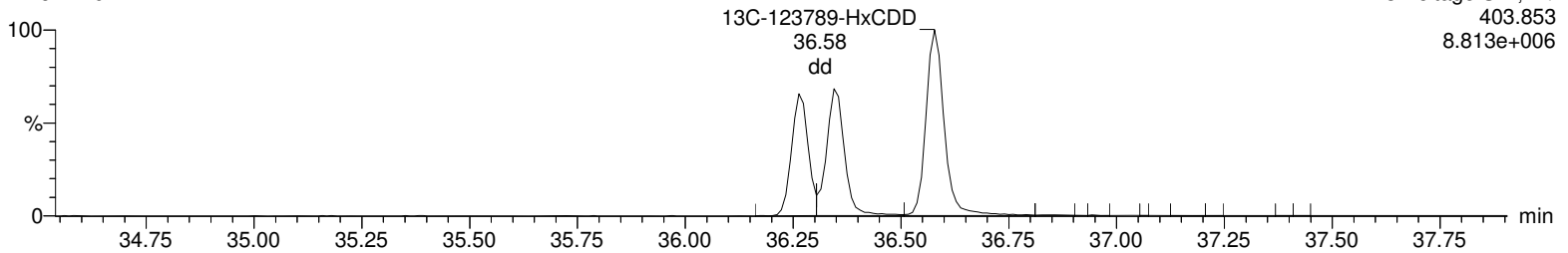
F3:Voltage SIR,EI+
401.856
1.109e+007



13C-123478-HxCDD

A14JAN20A-4

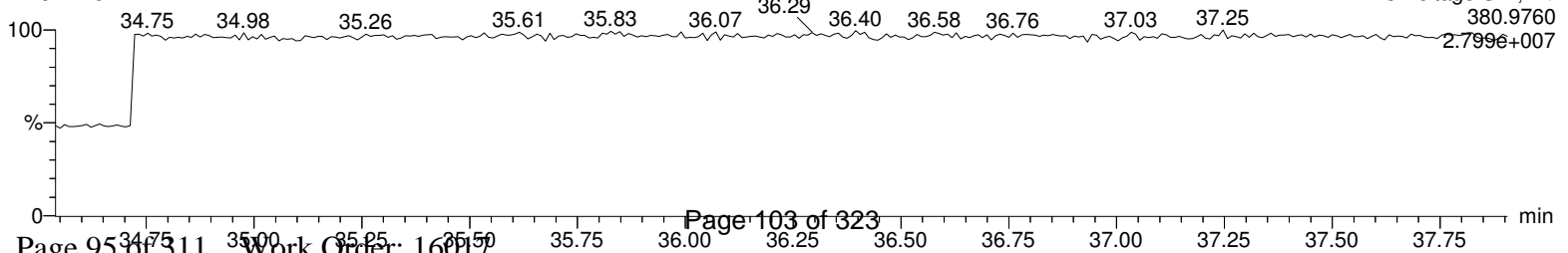
F3:Voltage SIR,EI+
403.853
8.813e+006



Lock Mass F3

A14JAN20A-4

F3:Voltage SIR,EI+
380.9760
2.799e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

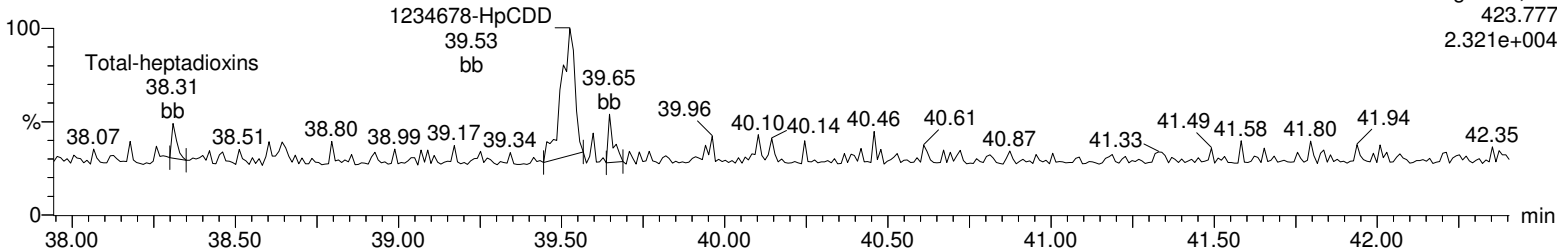
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-heptadioxins

A14JAN20A-4

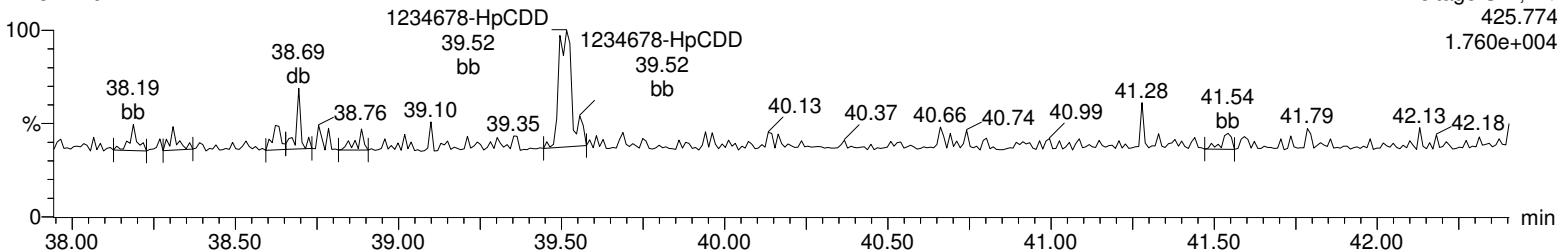
F4:Voltage SIR,EI+
423.777
2.321e+004



Total-heptadioxins

A14JAN20A-4

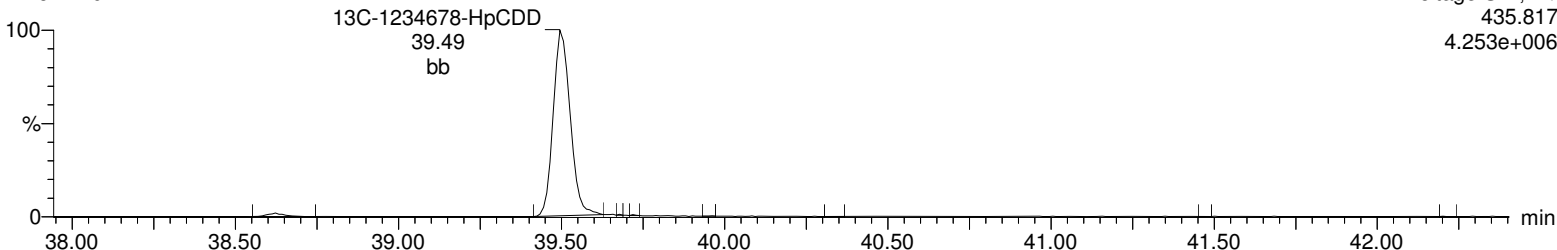
F4:Voltage SIR,EI+
425.774
1.760e+004



13C-1234678-HpCDD

A14JAN20A-4

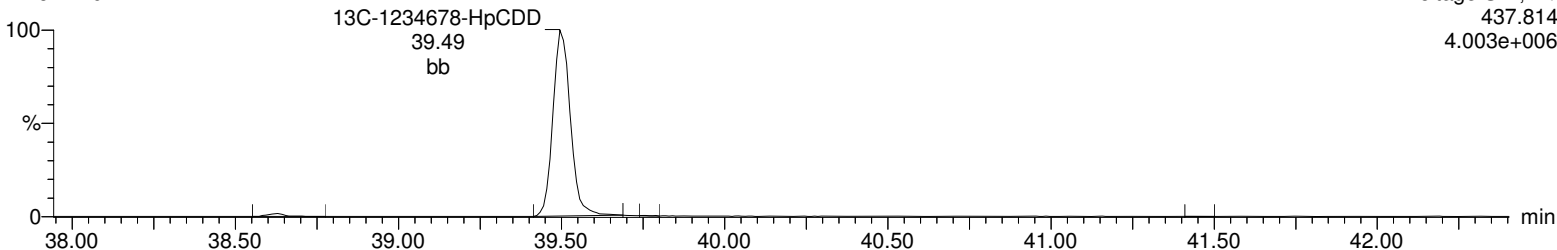
F4:Voltage SIR,EI+
435.817
4.253e+006



13C-1234678-HpCDD

A14JAN20A-4

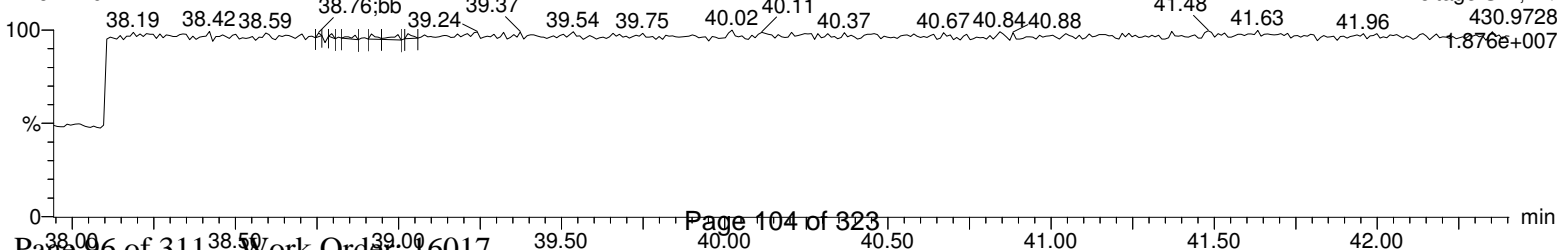
F4:Voltage SIR,EI+
437.814
4.003e+006



Lock Mass F4

A14JAN20A-4

F4:Voltage SIR,EI+
430.9728
1.876e+007



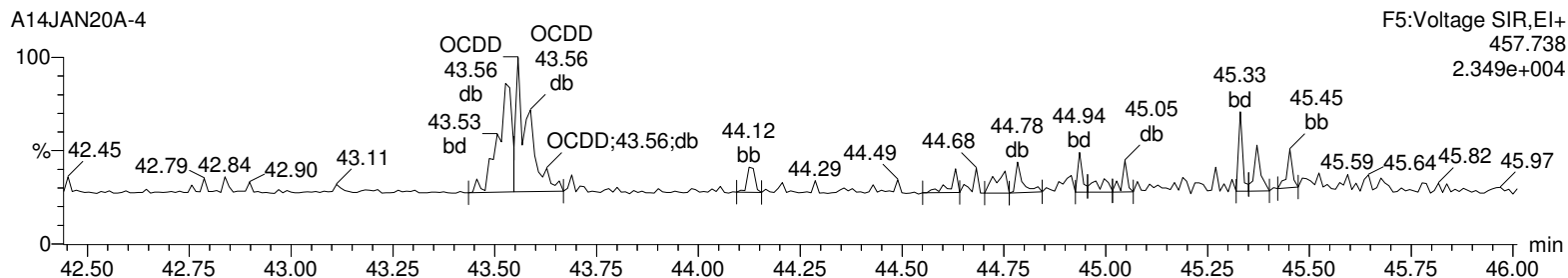
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Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

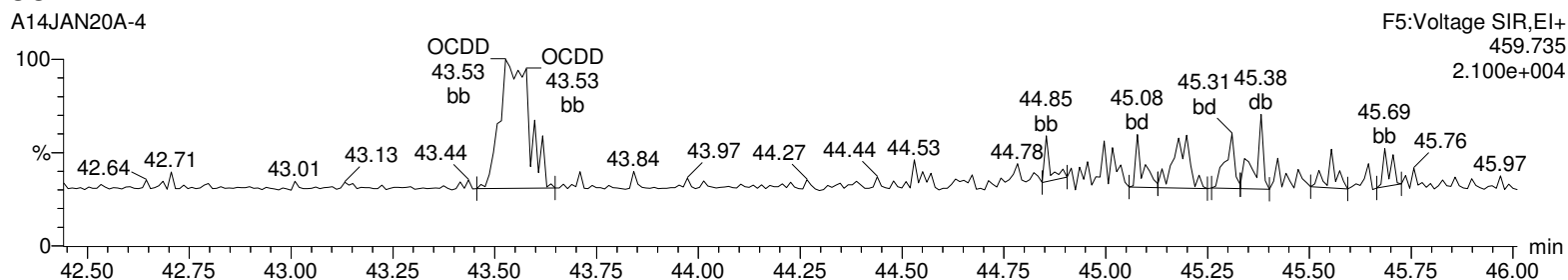
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

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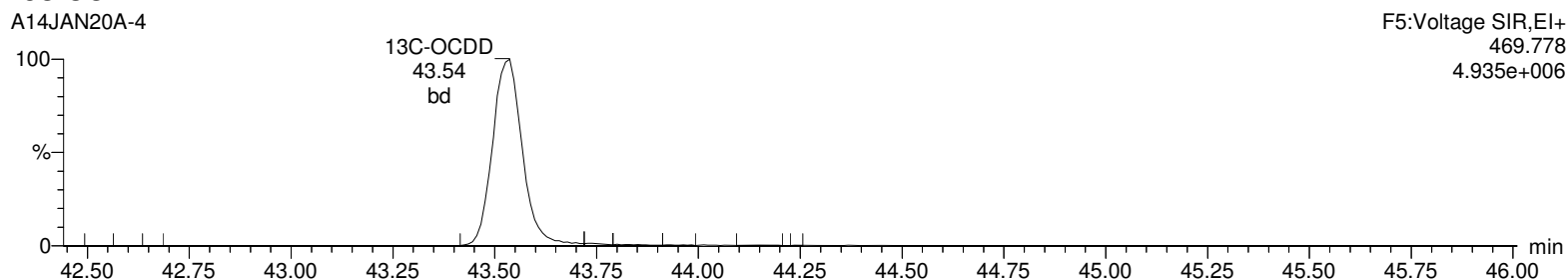
OCDD



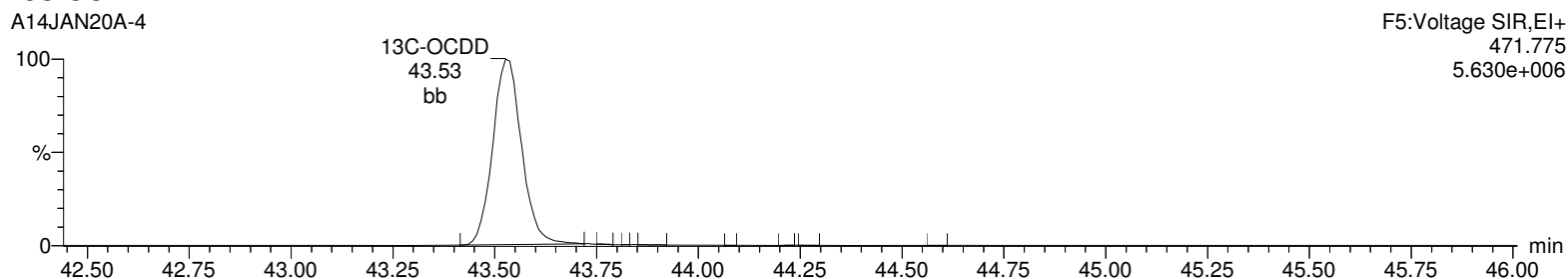
OCDD



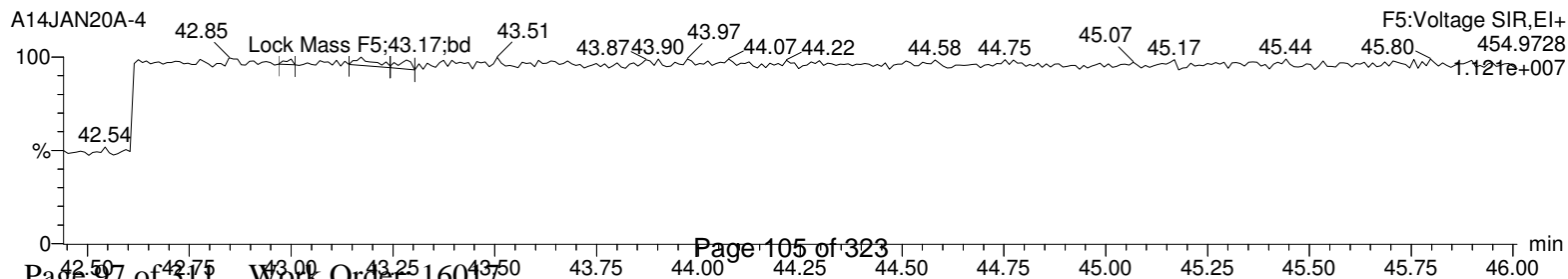
13C-OCDD



13C-OCDD



Lock Mass F5



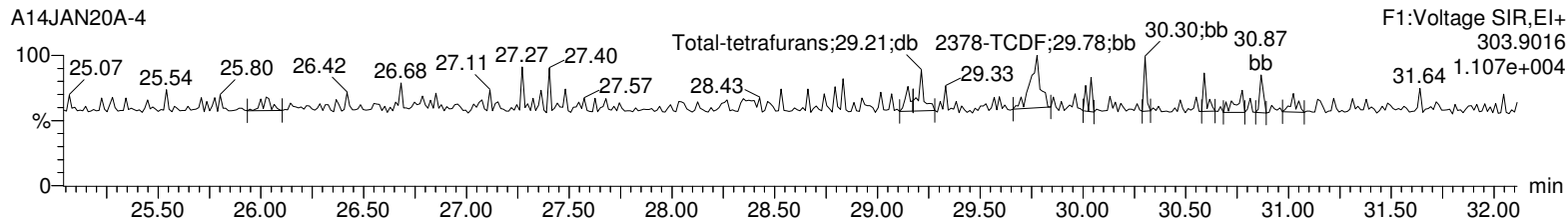
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Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

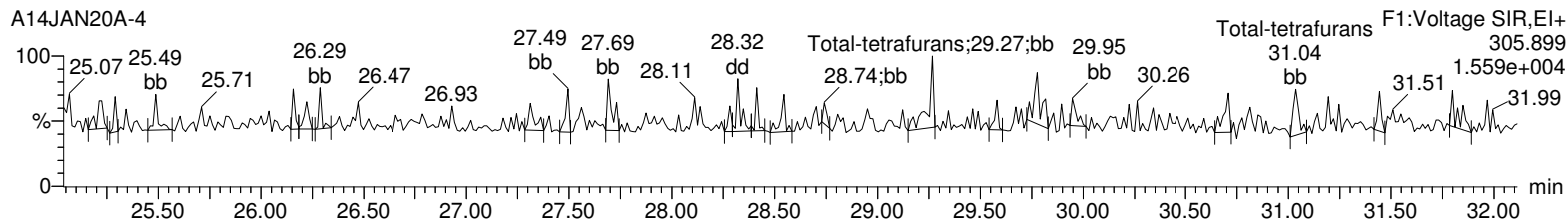
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

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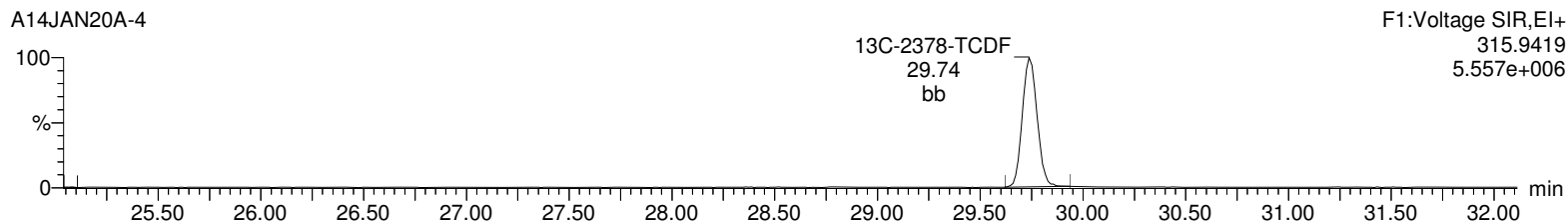
Total-tetrafurans



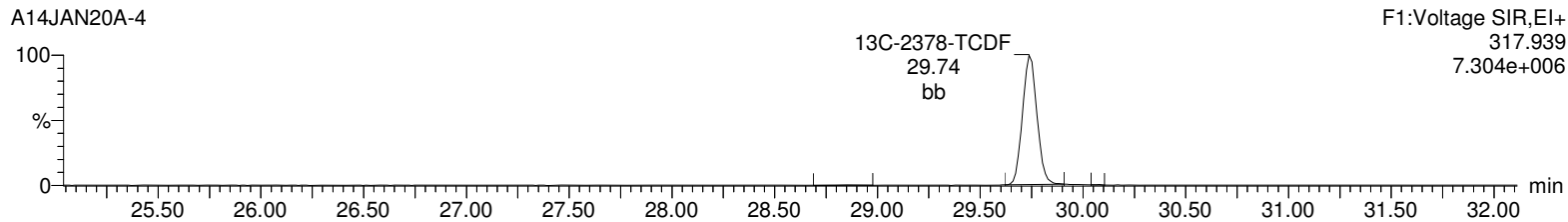
Total-tetrafurans



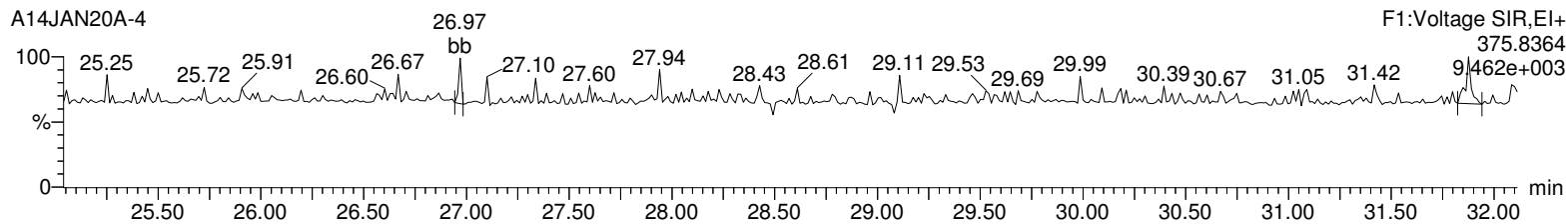
13C-2378-TCDF



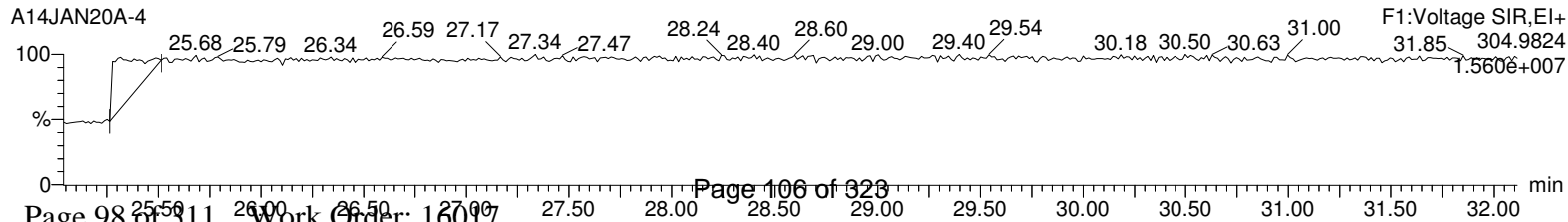
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

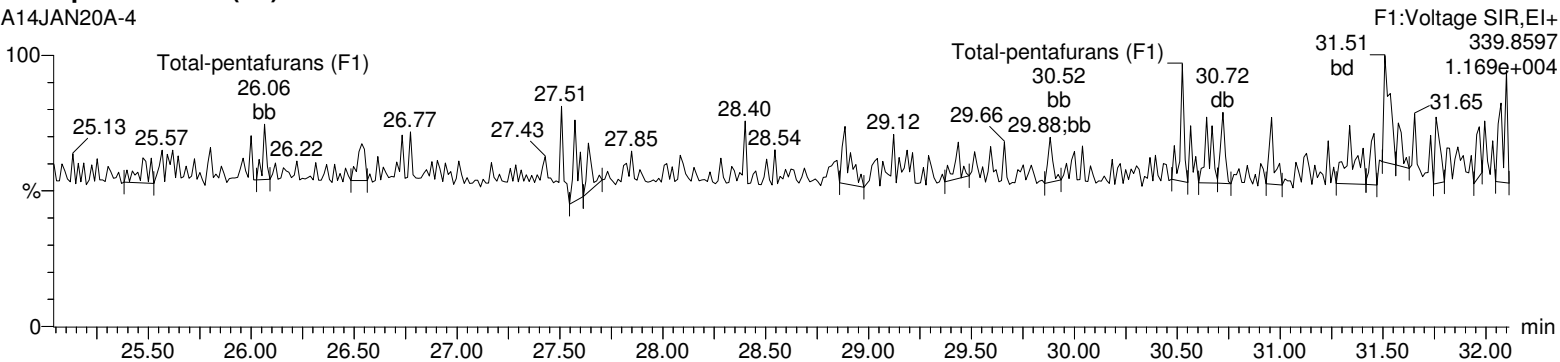
Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

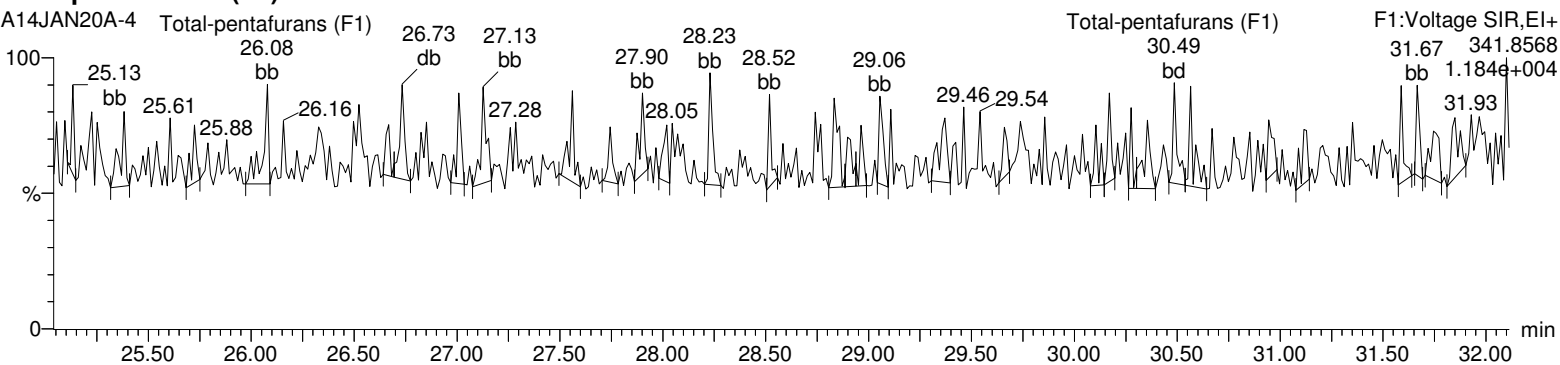
Total-pentafurans (F1)

A14JAN20A-4



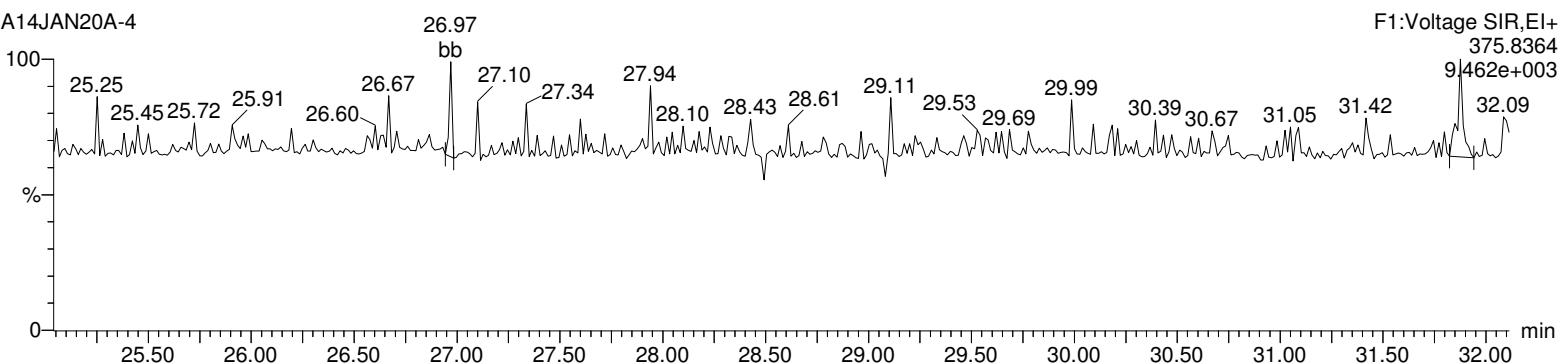
Total-pentafurans (F1)

A14JAN20A-4



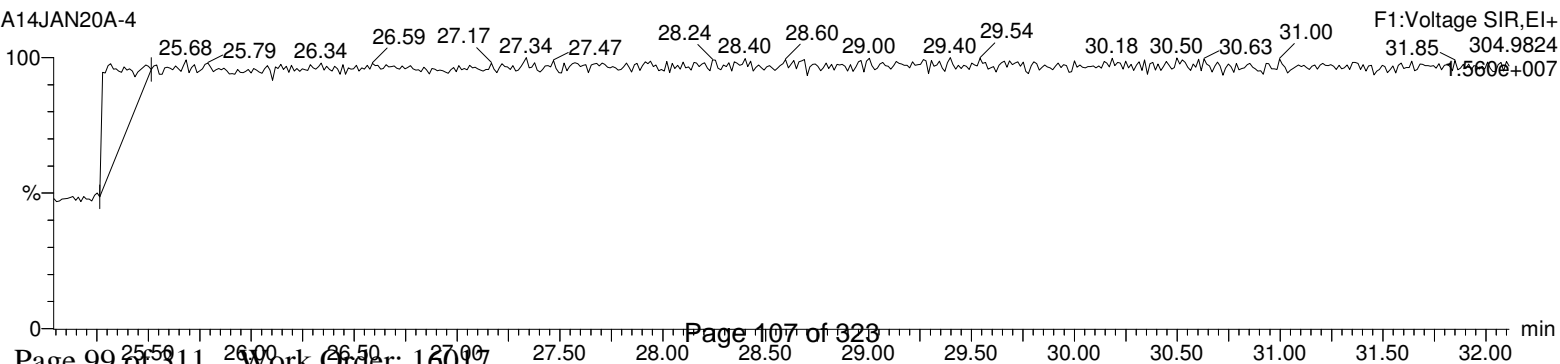
HxDPE

A14JAN20A-4



Lock Mass F1

A14JAN20A-4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

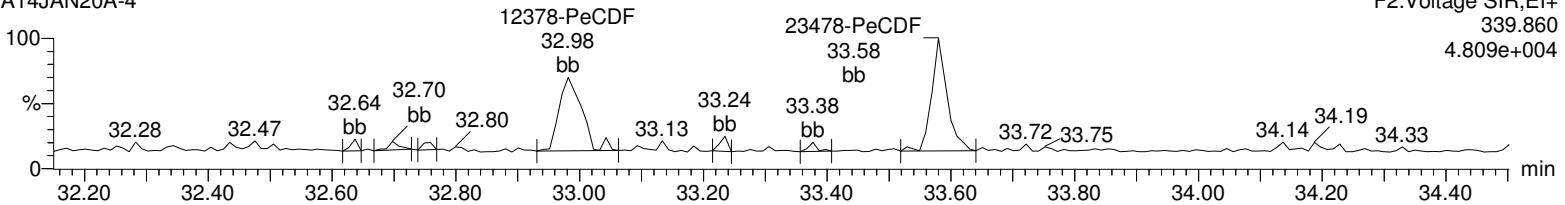
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Total-pentafurans

A14JAN20A-4

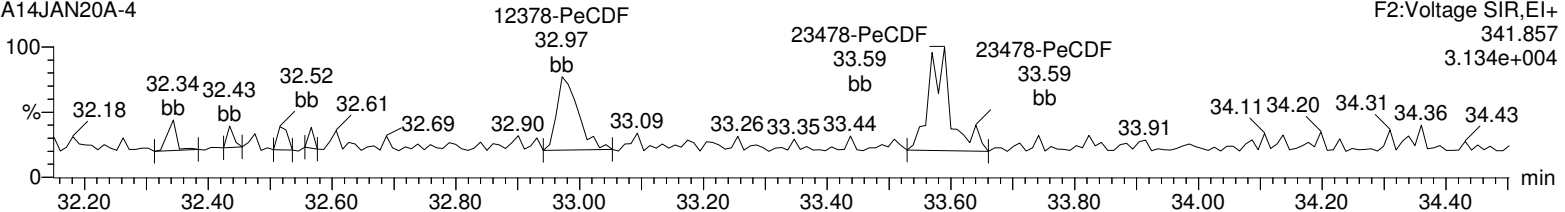
F2:Voltage SIR,EI+
339.860
4.809e+004



Total-pentafurans

A14JAN20A-4

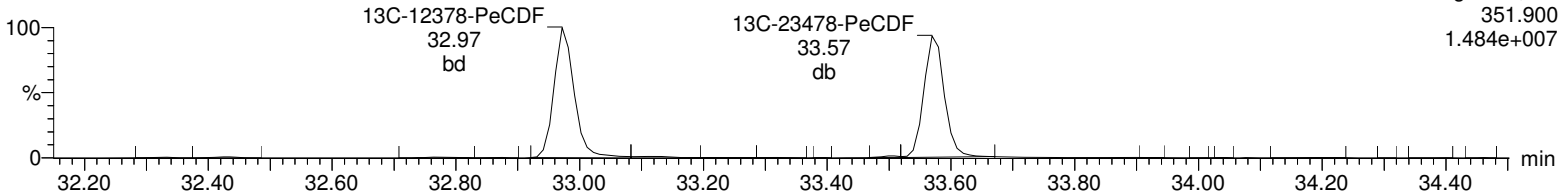
F2:Voltage SIR,EI+
341.857
3.134e+004



13C-12378-PeCDF

A14JAN20A-4

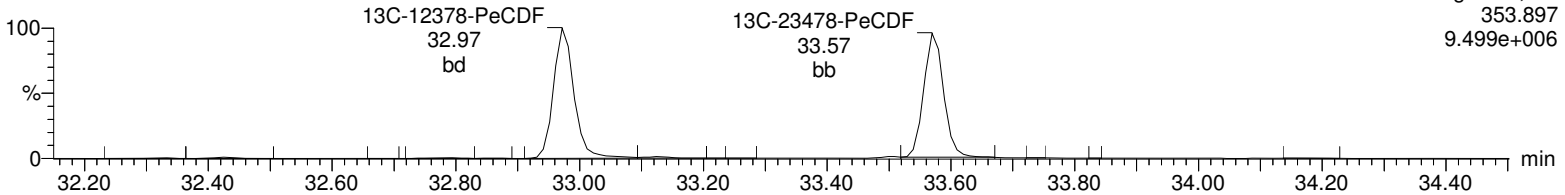
F2:Voltage SIR,EI+
351.900
1.484e+007



13C-12378-PeCDF

A14JAN20A-4

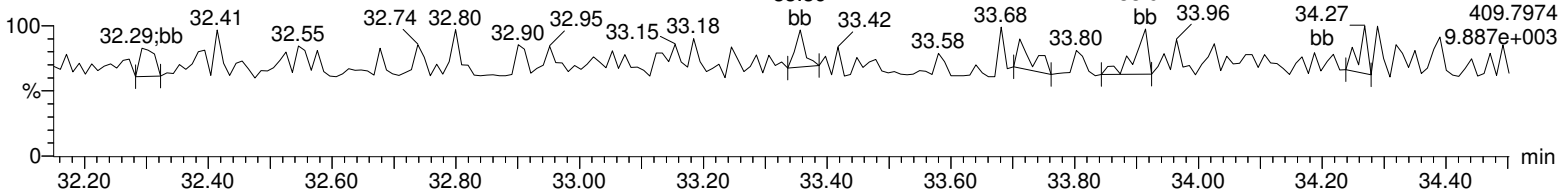
F2:Voltage SIR,EI+
353.897
9.499e+006



HpDPE

A14JAN20A-4

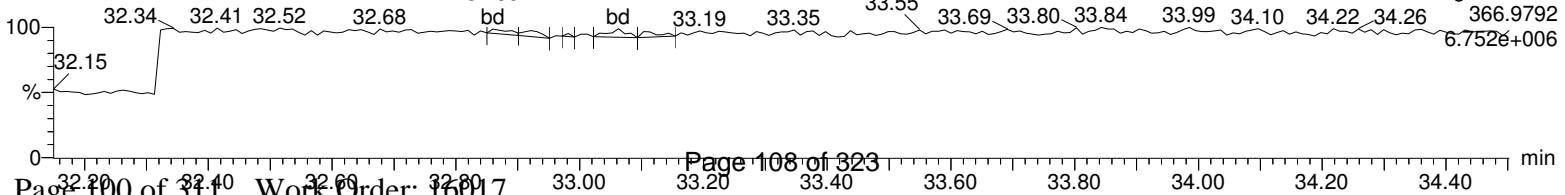
F2:Voltage SIR,EI+
409.7974
9.887e+003



Lock Mass F2

A14JAN20A-4

F2:Voltage SIR,EI+
366.9792
6.752e+006



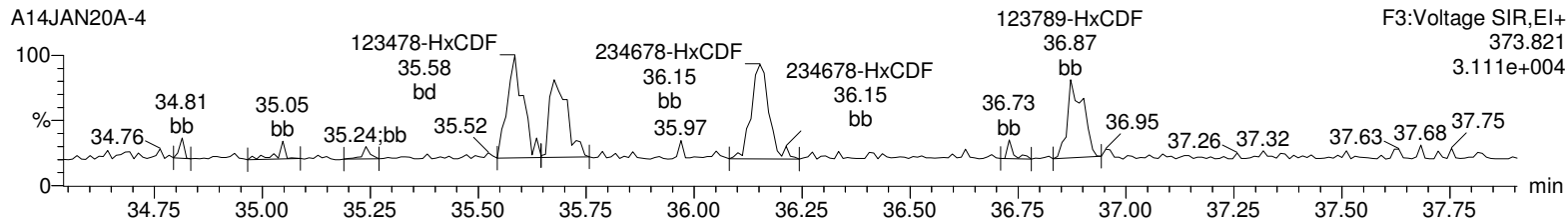
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

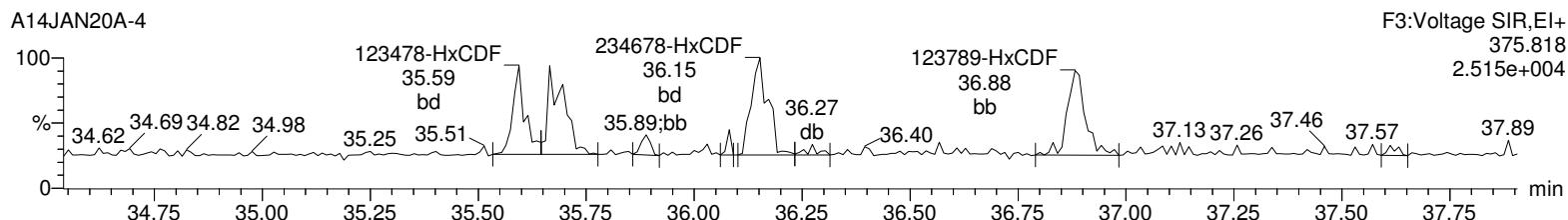
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

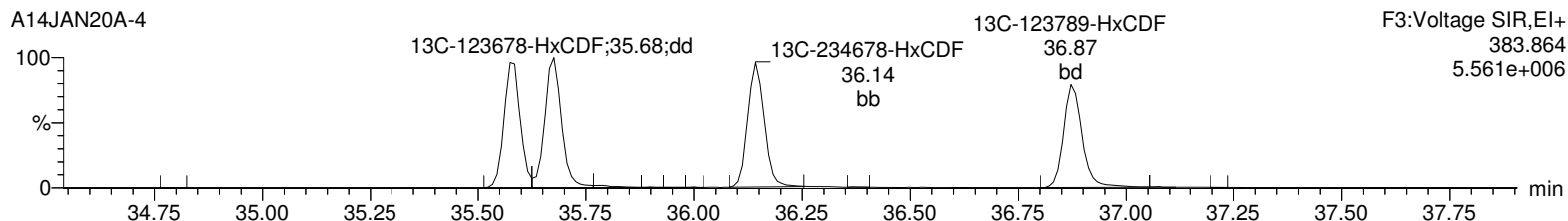
Total-hexafurans



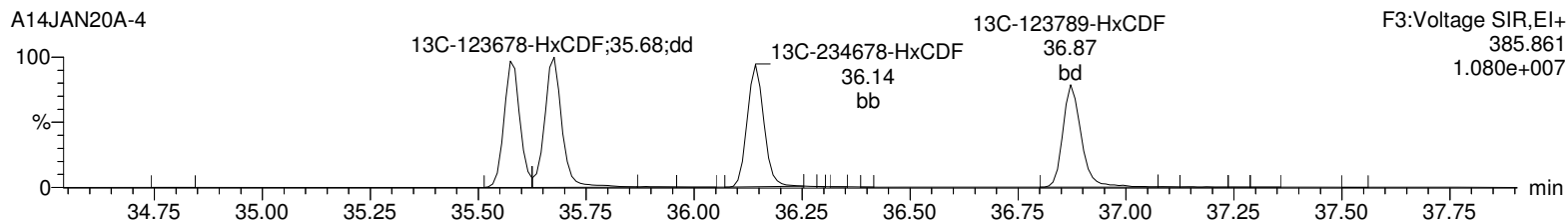
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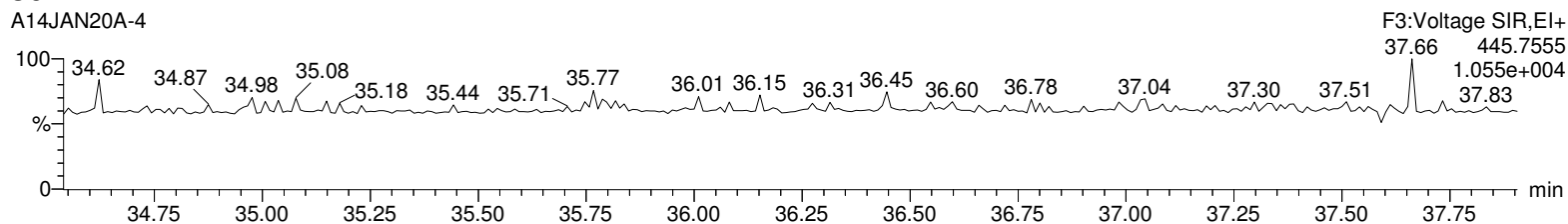
13C-123478-HxCDF



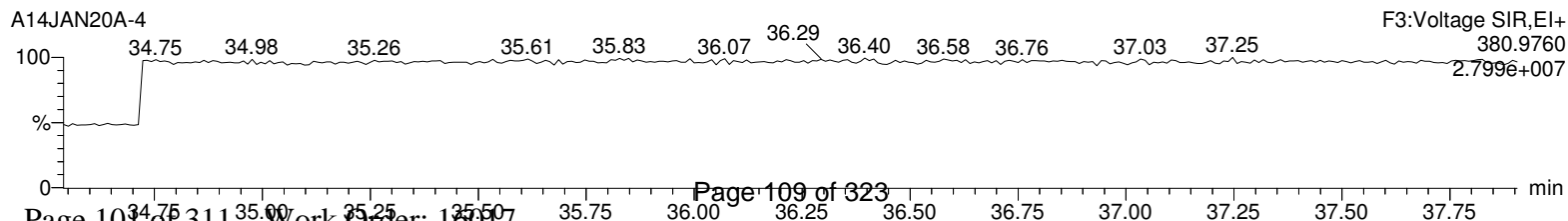
13C-123478-HxCDF



OcDPE



Lock Mass F3



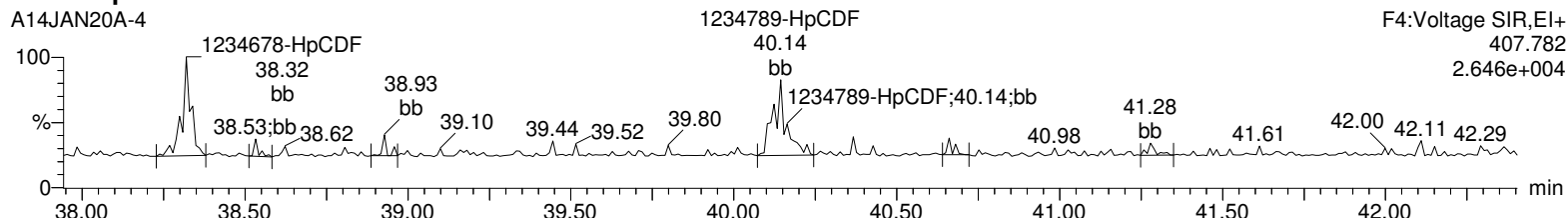
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Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

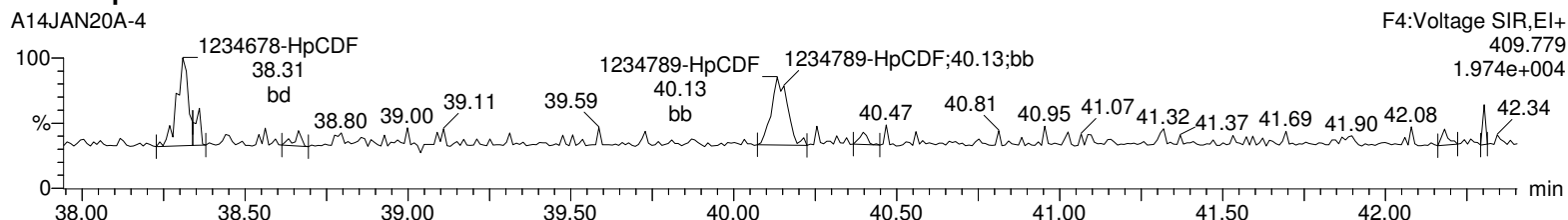
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

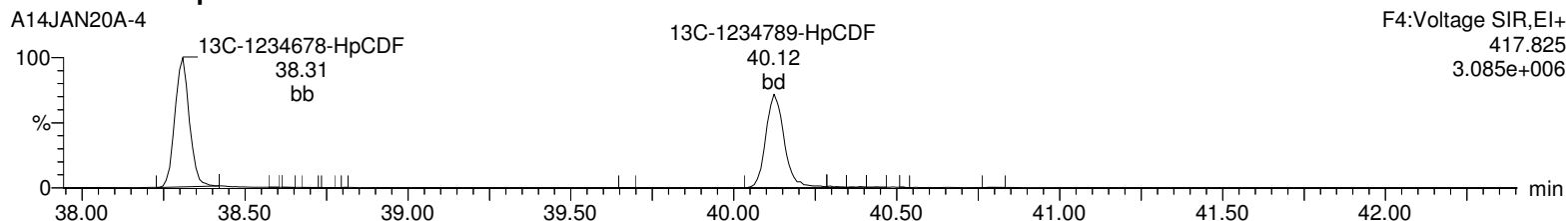
Total-heptafurans



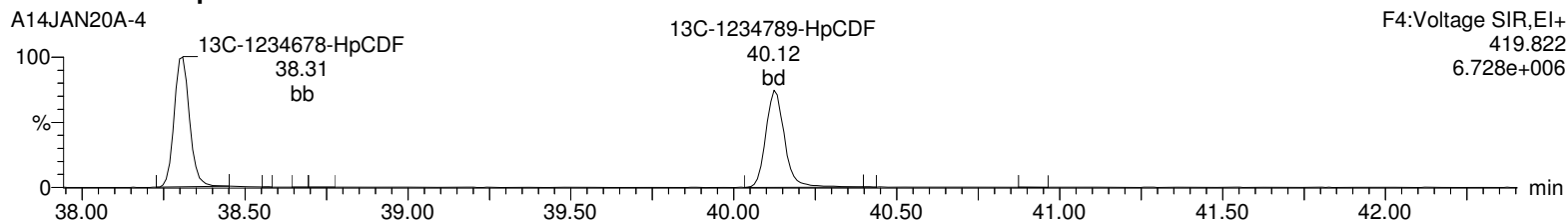
Total-heptafurans



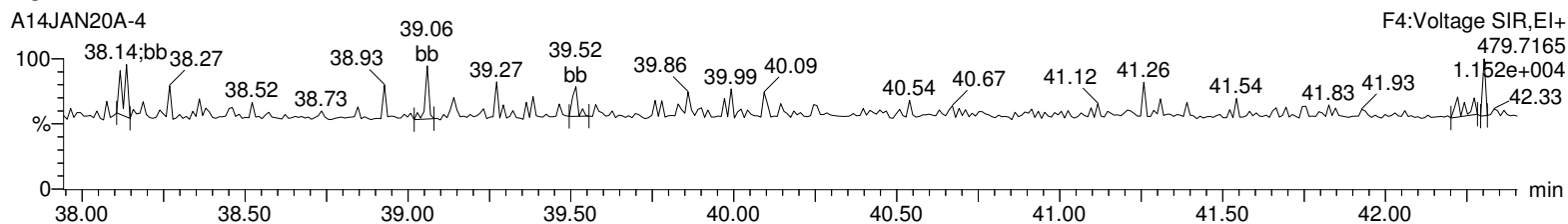
13C-1234678-HpCDF



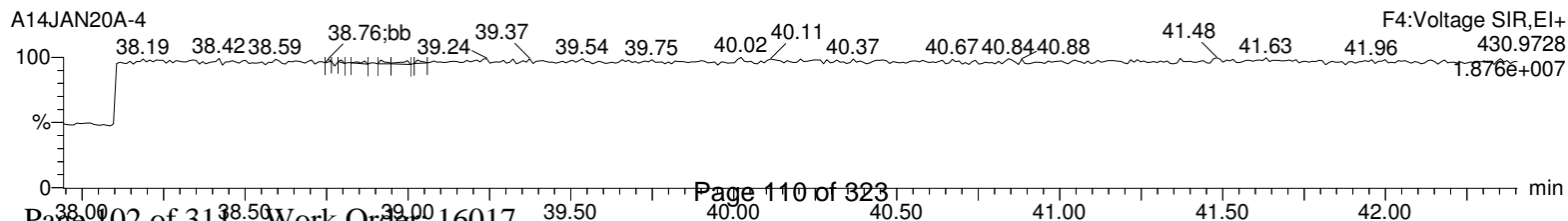
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Quantify Sample Report MassLynx 4.1

Method 1613 Quantification Report

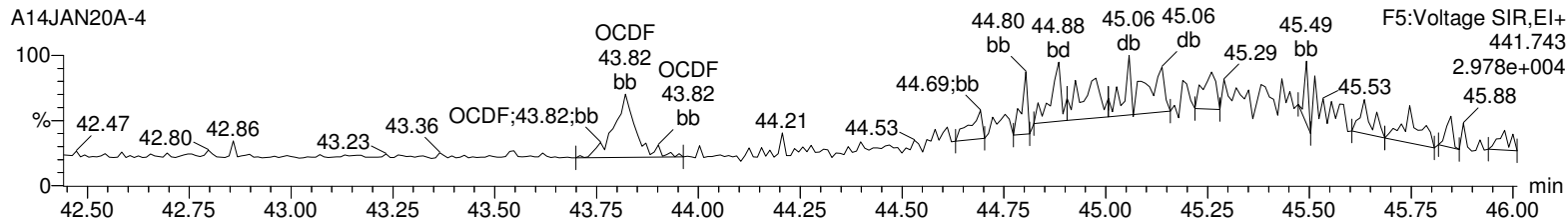
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Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

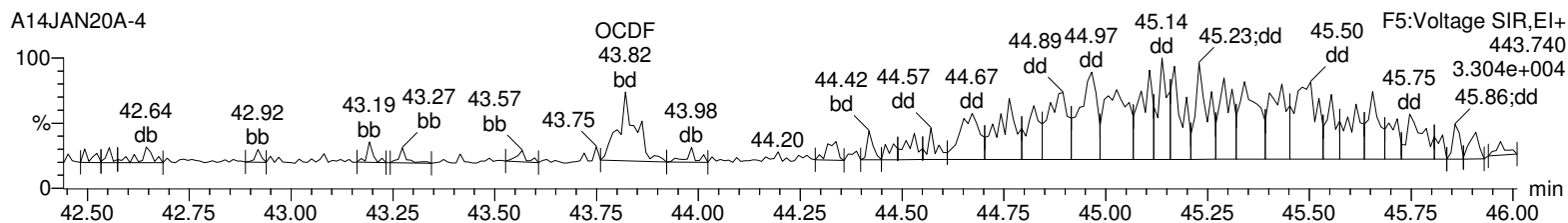
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-4, Date: 14-Jan-2020, Time: 17:47:26, ID: 12025720-1 MB, Description: , Job: %613%, Task: HRP750_2, User: MJC

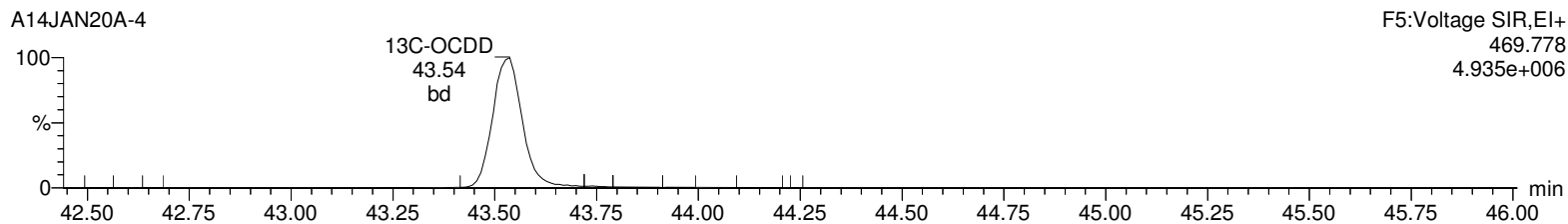
OCDF



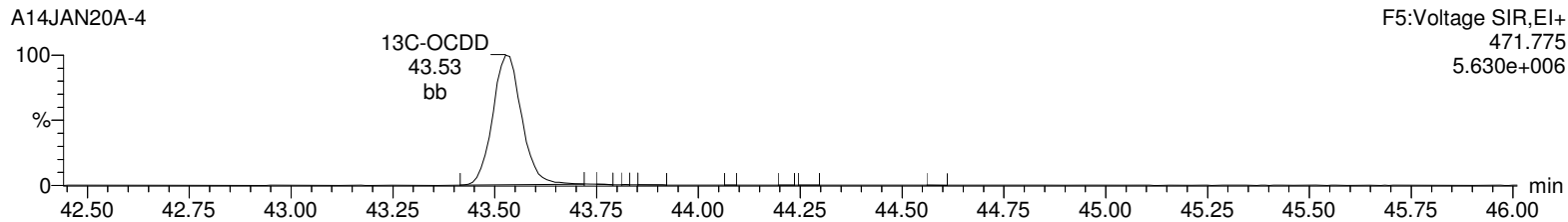
OCDF



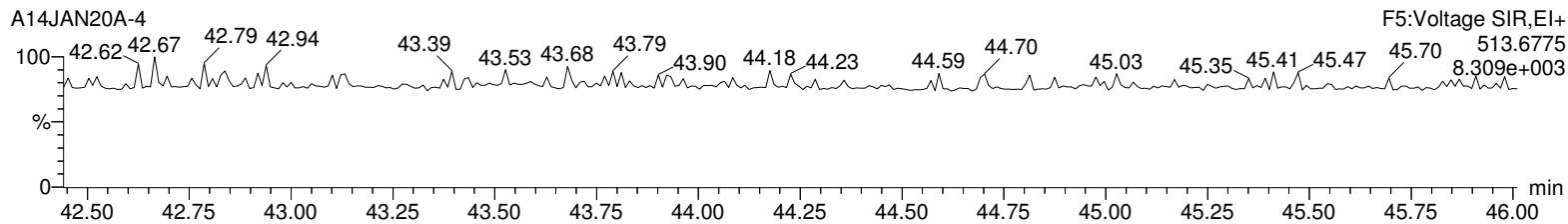
13C-OCDD



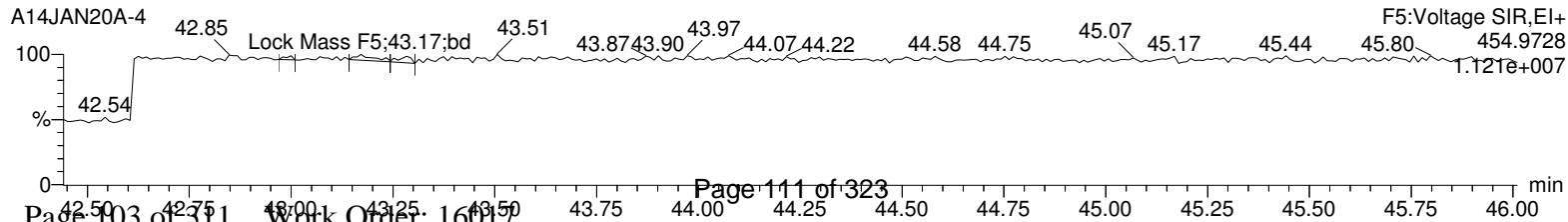
13C-OCDD



DeDPE



Lock Mass F5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025721		Matrix: WATER
Client Sample: QC for batch 42776		
Client ID: LCS for batch 42776		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/14/2020 16:12	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A-2		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.207	ng/L	0.002	0.010
40321-76-4	1,2,3,7,8-PeCDD		1.11	ng/L	0.00137	0.050
39227-28-6	1,2,3,4,7,8-HxCDD		1.06	ng/L	0.00308	0.050
57653-85-7	1,2,3,6,7,8-HxCDD		1.03	ng/L	0.00312	0.050
19408-74-3	1,2,3,7,8,9-HxCDD		1.09	ng/L	0.00316	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.939	ng/L	0.00314	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2.02	ng/L	0.00462	0.100
51207-31-9	2,3,7,8-TCDF		0.184	ng/L	0.0015	0.010
57117-41-6	1,2,3,7,8-PeCDF		0.943	ng/L	0.00212	0.050
57117-31-4	2,3,4,7,8-PeCDF		1.03	ng/L	0.00208	0.050
70648-26-9	1,2,3,4,7,8-HxCDF		1.00	ng/L	0.003	0.050
57117-44-9	1,2,3,6,7,8-HxCDF		1.00	ng/L	0.00298	0.050
60851-34-5	2,3,4,6,7,8-HxCDF		0.972	ng/L	0.00284	0.050
72918-21-9	1,2,3,7,8,9-HxCDF		0.988	ng/L	0.00388	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.03	ng/L	0.00284	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.978	ng/L	0.00376	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.89	ng/L	0.00436	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.66	2.00	ng/L	83.2	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.83	2.00	ng/L	91.7	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.61	2.00	ng/L	80.7	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.61	2.00	ng/L	80.3	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.88	2.00	ng/L	94.0	(22%-166%)
13C-OCDD		3.41	4.00	ng/L	85.2	(13%-199%)
13C-2,3,7,8-TCDF		1.79	2.00	ng/L	89.4	(22%-152%)
13C-1,2,3,7,8-PeCDF		1.91	2.00	ng/L	95.3	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.75	2.00	ng/L	87.3	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.49	2.00	ng/L	74.7	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.47	2.00	ng/L	73.3	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.57	2.00	ng/L	78.5	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.58	2.00	ng/L	79.2	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.50	2.00	ng/L	75.1	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.73	2.00	ng/L	86.6	(20%-186%)
37Cl-2,3,7,8-TCDD		0.172	0.200	ng/L	86.2	(31%-191%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld
 Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:54:19 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A13JAN20.mdb 13 Jan 2020 13:57:24
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	4.82e4	6.04e4	1.09e5	30.71	1.001	0.80	NO	10.333	0.100	6.72e5	3382	198.7	8.91e5	2424	367.5	bb	bb
2	12378-PeCDD	2.52e5	1.60e5	4.13e5	33.78	1.000	1.58	NO	55.467	0.0685	6.52e6	3140	2077.8	4.27e6	2167	1969.4	bd	bd
3	123478-HxCDD	2.21e5	1.79e5	4.00e5	36.29	1.000	1.24	NO	53.176	0.154	5.12e6	5845	876.3	4.06e6	4705	862.9	bd	bd
4	123678-HxCDD	2.36e5	1.92e5	4.27e5	36.37	1.000	1.23	NO	51.685	0.156	4.96e6	5845	848.3	4.01e6	4705	852.6	dd	dd
5	123789-HxCDD	2.31e5	1.92e5	4.23e5	36.60	1.006	1.20	NO	54.411	0.158	4.49e6	5845	768.7	3.92e6	4705	834.2	dd	dd
6	1234678-HpCDD	1.73e5	1.68e5	3.41e5	39.52	1.000	1.03	NO	46.928	0.157	2.89e6	3857	749.5	2.83e6	3677	769.6	bd	bd
7	OCDD	2.77e5	3.16e5	5.94e5	43.56	1.000	0.88	NO	100.872	0.231	3.53e6	3467	1019.4	3.92e6	3164	1239.6	bd	bd
8	2378-TCDF	5.34e4	7.36e4	1.27e5	29.78	1.001	0.73	NO	9.177	0.0748	6.76e5	1726	391.5	9.34e5	3352	278.7	bd	bb
9	12378-PeCDF	3.30e5	2.12e5	5.43e5	32.99	1.000	1.56	NO	47.154	0.106	8.64e6	6055	1426.5	5.68e6	6474	877.7	bd	bd
10	23478-PeCDF	3.61e5	2.36e5	5.97e5	33.59	1.000	1.53	NO	51.508	0.104	9.71e6	6055	1604.4	6.57e6	6474	1014.3	bb	bb
11	123478-HxCDF	2.79e5	2.22e5	5.01e5	35.60	1.000	1.25	NO	50.193	0.150	6.44e6	7790	827.0	5.08e6	6368	797.3	bd	bd
12	123678-HxCDF	2.89e5	2.39e5	5.28e5	35.70	1.000	1.21	NO	50.172	0.149	6.57e6	7790	843.0	5.51e6	6368	865.2	db	dd
13	234678-HxCDF	2.88e5	2.32e5	5.19e5	36.17	1.001	1.24	NO	48.617	0.142	6.28e6	7790	806.3	5.13e6	6368	806.1	bb	bb
14	123789-HxCDF	2.47e5	1.97e5	4.44e5	36.90	1.000	1.26	NO	49.398	0.194	5.07e6	7790	650.9	3.96e6	6368	622.6	bb	bb
15	1234678-HpCDF	2.17e5	2.12e5	4.29e5	38.33	1.000	1.02	NO	51.629	0.142	4.00e6	4306	929.8	3.98e6	4829	824.9	bb	bb
16	1234789-HpCDF	1.93e5	1.89e5	3.82e5	40.15	1.001	1.03	NO	48.890	0.188	2.98e6	4306	693.0	3.00e6	4829	622.0	bb	bb
17	OCDF	3.10e5	3.40e5	6.50e5	43.83	1.007	0.91	NO	94.665	0.218	3.71e6	2893	1284.0	4.20e6	4412	953.1	bd	bb
18	13C-2378-TCDD	5.19e5	6.70e5	1.19e6	30.68	1.023	0.77	NO	83.244	0.148	7.14e6	6753	1057.5	9.31e6	4166	2234.1	bb	bb
19	13C-12378-PeCDD	5.28e5	3.44e5	8.71e5	33.77	1.126	1.53	NO	91.681	0.157	1.37e7	4505	3051.2	9.08e6	3190	2847.5	bb	bb
20	13C-123478-HxCDD	4.52e5	3.49e5	8.01e5	36.28	0.992	1.29	NO	80.716	0.154	1.03e7	6514	1573.8	8.08e6	5690	1419.8	bd	bd
21	13C-123678-HxCDD	4.78e5	3.98e5	8.76e5	36.36	0.994	1.20	NO	80.292	0.140	9.79e6	6514	1503.5	8.06e6	5690	1415.7	dd	dd
22	13C-1234678-HpCDD	3.60e5	3.38e5	6.99e5	39.51	1.080	1.07	NO	93.990	0.167	5.93e6	5619	1055.7	5.60e6	4323	1295.3	bd	bd
23	13C-OCDD	5.72e5	6.40e5	1.21e6	43.54	1.190	0.89	NO	170.445	0.182	6.98e6	6498	1074.8	7.91e6	3843	2059.6	bd	bd
24	13C-2378-TCDF	6.16e5	7.98e5	1.41e6	29.75	0.992	0.77	NO	89.426	0.241	7.56e6	12336	612.7	9.77e6	7361	1327.7	bb	bb
25	13C-12378-PeCDF	7.47e5	4.71e5	1.22e6	32.98	1.100	1.59	NO	95.255	0.223	1.91e7	8396	2273.2	1.26e7	6350	1985.7	bd	bb
26	13C-23478-PeCDF	7.16e5	4.59e5	1.17e6	33.59	1.120	1.56	NO	87.309	0.212	1.87e7	8396	2225.6	1.22e7	6350	1920.0	db	db
27	13C-123478-HxCDF	3.13e5	6.05e5	9.19e5	35.59	0.973	0.52	NO	74.726	0.208	7.39e6	10831	682.7	1.41e7	9581	1472.7	bd	bd
28	13C-123678-HxCDF	3.44e5	6.68e5	1.01e6	35.69	0.975	0.52	NO	73.334	0.185	7.78e6	10831	718.1	1.51e7	9581	1579.3	db	dd
29	13C-234678-HxCDF	3.16e5	6.25e5	9.40e5	36.15	0.988	0.51	NO	78.527	0.213	7.36e6	10831	679.4	1.41e7	9581	1468.8	bb	bd
30	13C-123789-HxCDF	2.85e5	5.63e5	8.47e5	36.89	1.008	0.51	NO	79.158	0.238	5.77e6	10831	532.6	1.10e7	9581	1153.3	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld
 Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:54:19 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	2.23e5	4.99e5	7.23e5	38.32	1.047	0.45	NO	75.057	0.144	4.34e6	5147	842.4	9.76e6	5914	1650.5	bd	bb
32	13C-1234789-HpCDF	1.97e5	4.53e5	6.50e5	40.13	1.097	0.43	NO	86.636	0.184	3.07e6	5147	596.0	7.12e6	5914	1203.8	bd	bd
33	13C-1234-TCDD	5.49e5	7.16e5	1.27e6	29.99	0.000	0.77	NO	100.000	0.167	7.10e6	6753	1051.8	9.16e6	4166	2198.5	bb	bb
34	13C-123789-HxCDD	6.15e5	4.92e5	1.11e6	36.59	0.000	1.25	NO	100.000	0.138	1.23e7	6514	1887.0	1.01e7	5690	1772.0	dd	dd
35	37Cl-2378-TCDD	1.16e5		1.16e5	30.71	1.024			8.621	0.0382	1.56e6	2652	586.5				bb	

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

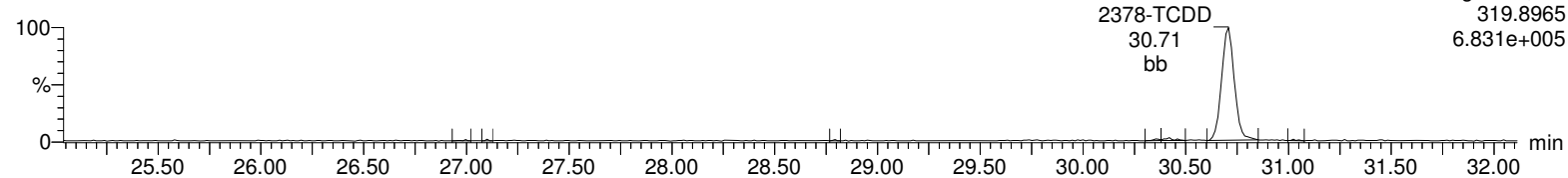
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A13JAN20.mdb 13 Jan 2020 13:57:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

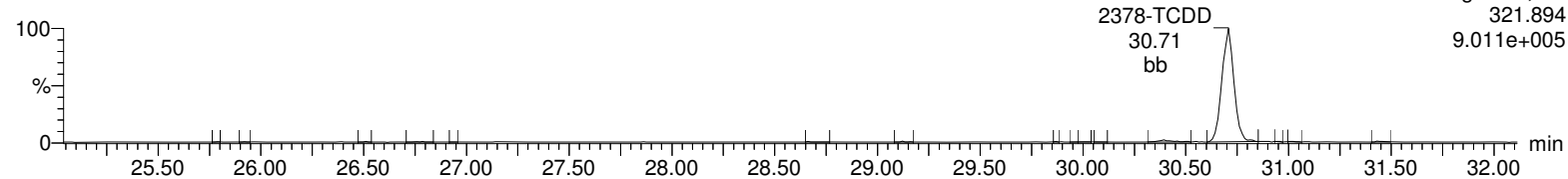
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A14JAN20A-2



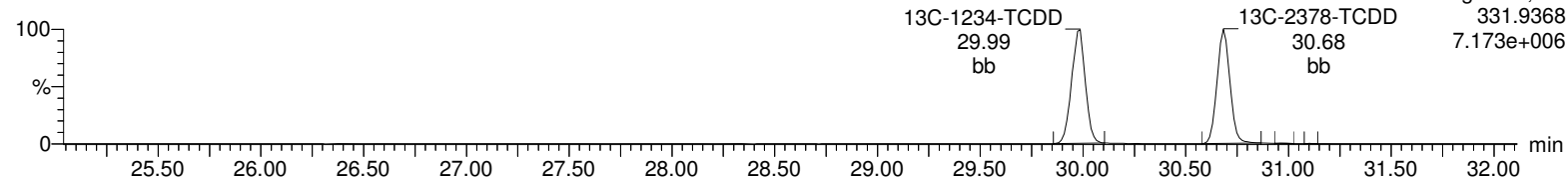
Total-tetradoxins

A14JAN20A-2



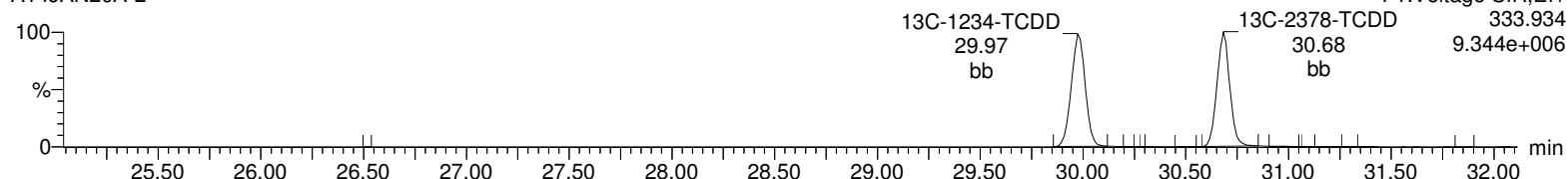
13C-2378-TCDD

A14JAN20A-2



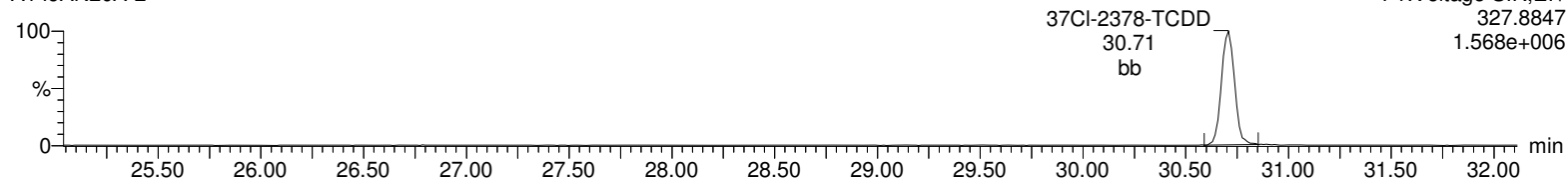
13C-2378-TCDD

A14JAN20A-2



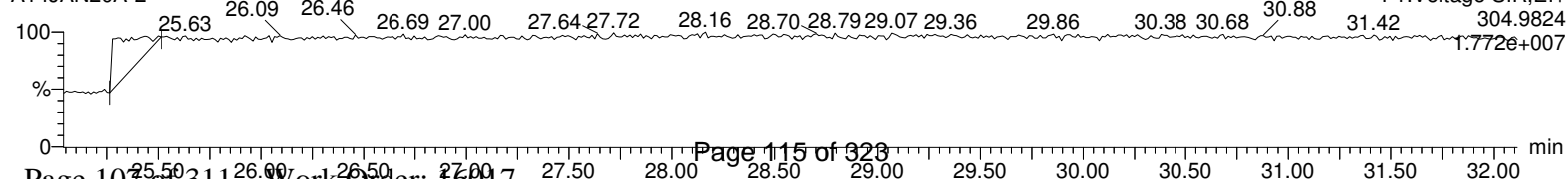
37Cl-2378-TCDD

A14JAN20A-2



Lock Mass F1

A14JAN20A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

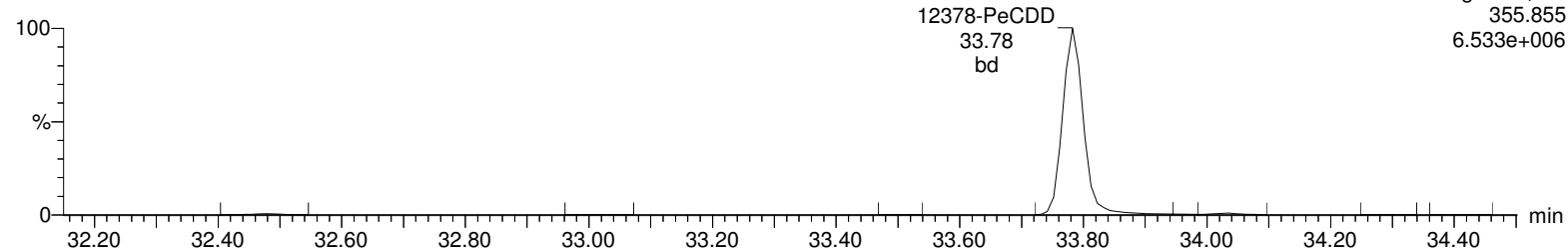
Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

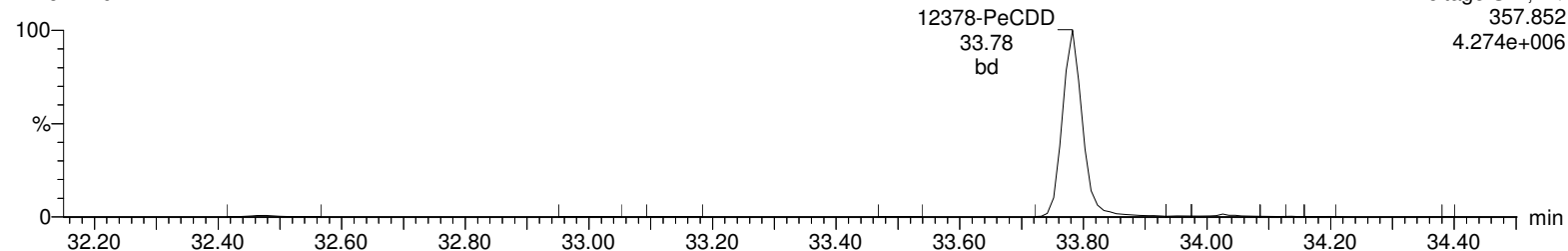
Total-pentadioxins

A14JAN20A-2



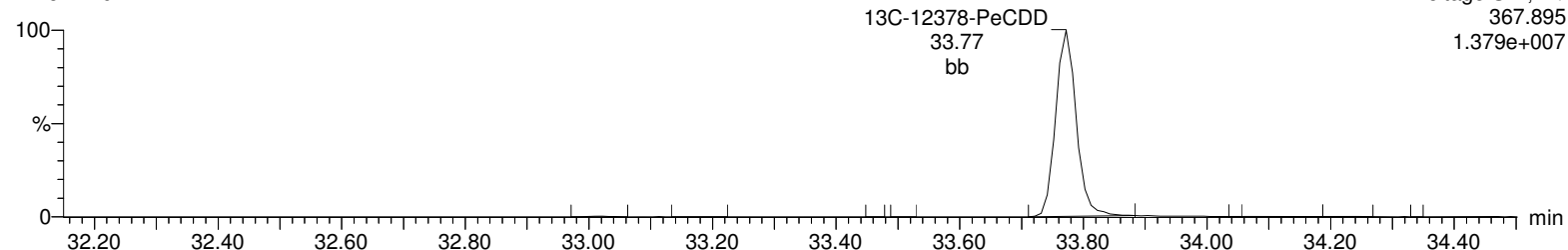
Total-pentadioxins

A14JAN20A-2



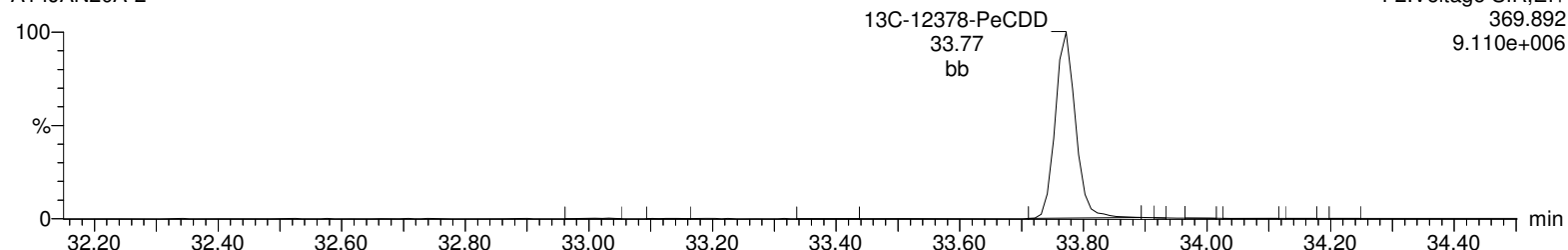
13C-12378-PeCDD

A14JAN20A-2



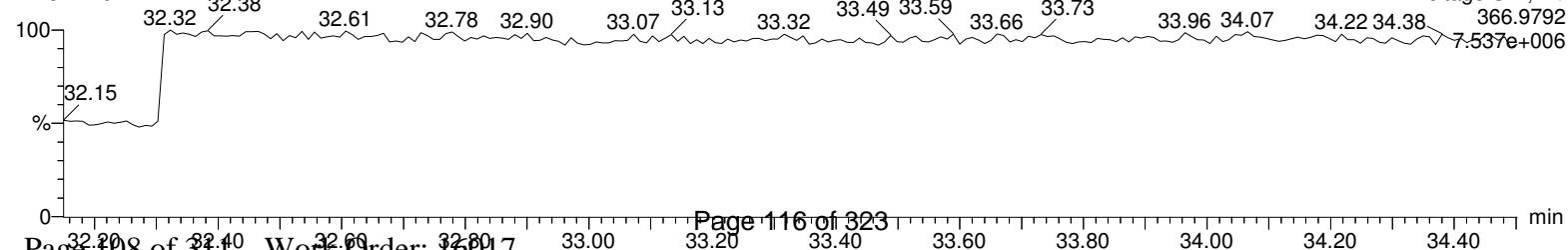
13C-12378-PeCDD

A14JAN20A-2



Lock Mass F2

A14JAN20A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

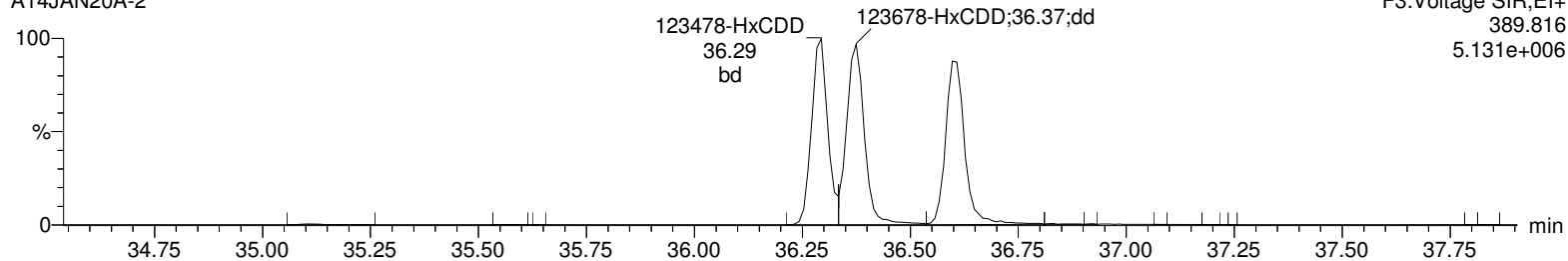
Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

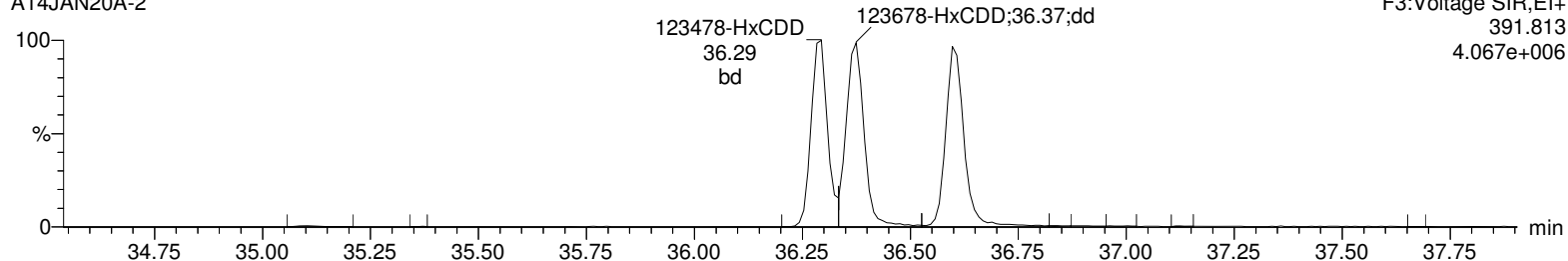
Total-hexadioxins

A14JAN20A-2



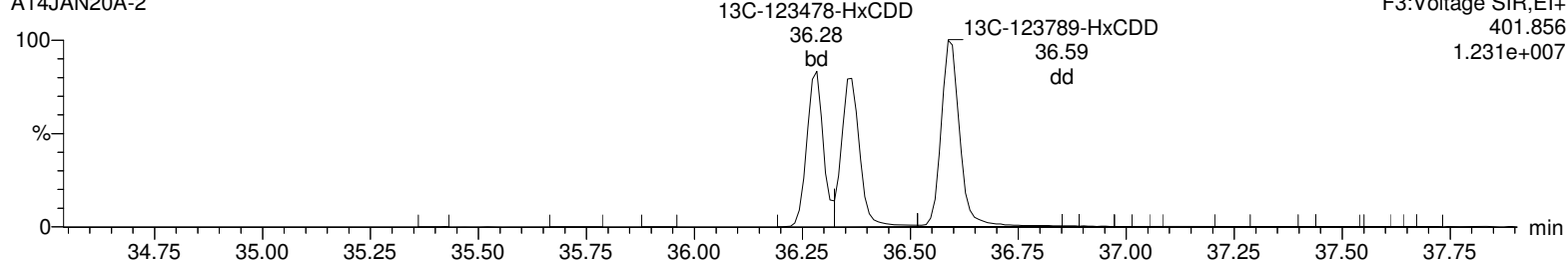
Total-hexadioxins

A14JAN20A-2



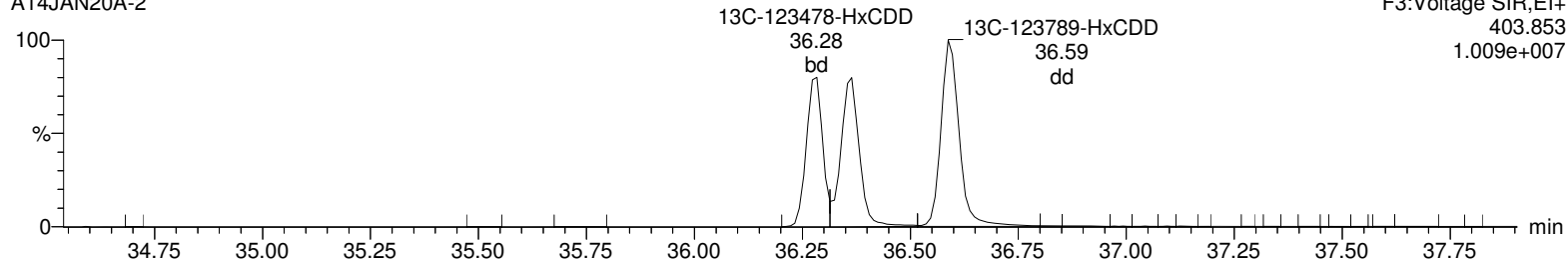
13C-123478-HxCDD

A14JAN20A-2



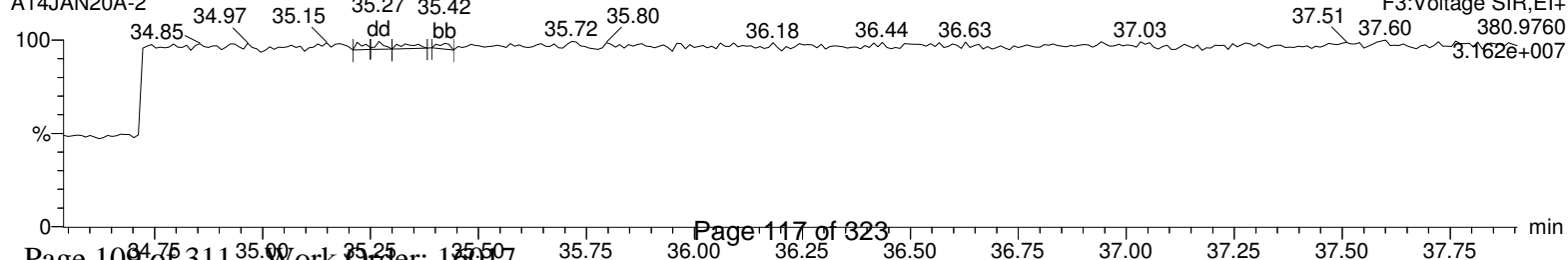
13C-123478-HxCDD

A14JAN20A-2



Lock Mass F3

A14JAN20A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

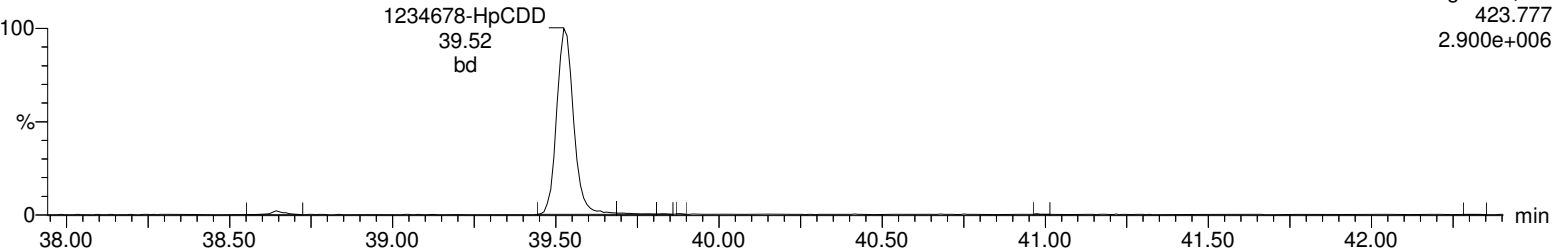
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-heptadioxins

A14JAN20A-2

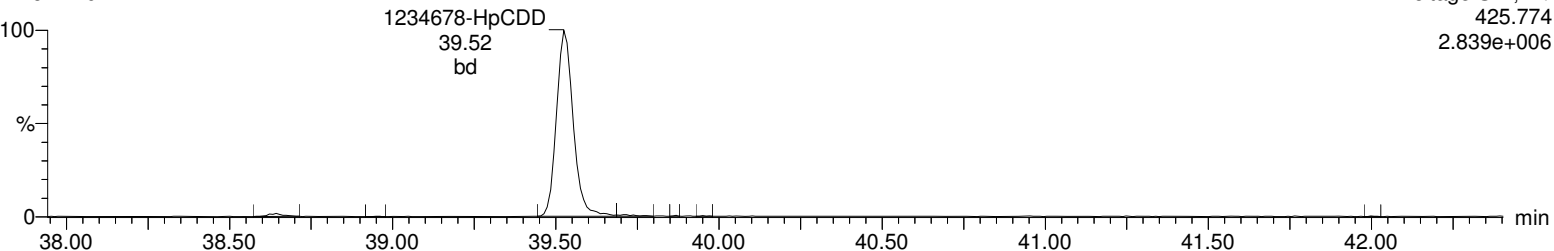
F4:Voltage SIR,EI+



Total-heptadioxins

A14JAN20A-2

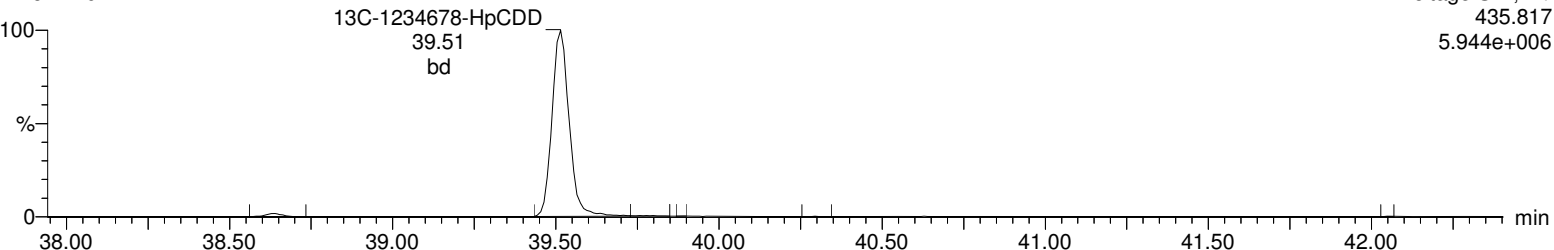
F4:Voltage SIR,EI+



13C-1234678-HpCDD

A14JAN20A-2

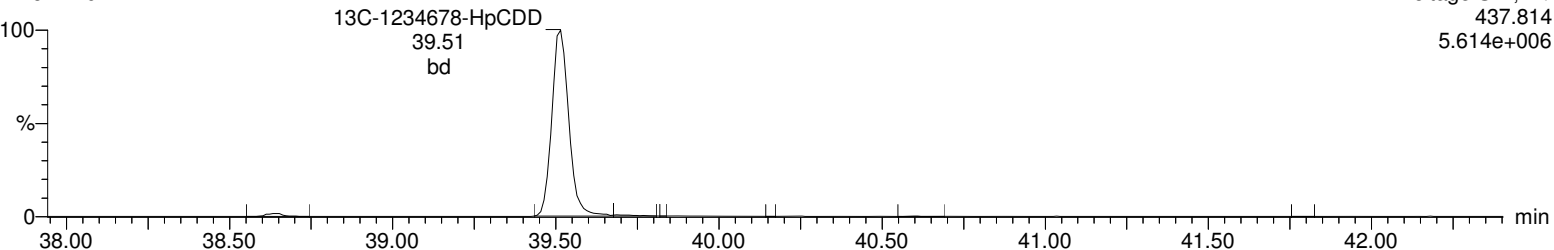
F4:Voltage SIR,EI+



13C-1234678-HpCDD

A14JAN20A-2

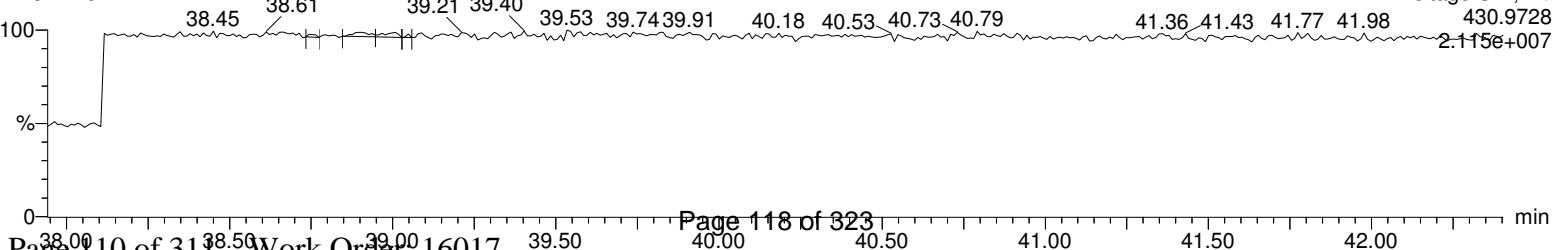
F4:Voltage SIR,EI+



Lock Mass F4

A14JAN20A-2

F4:Voltage SIR,EI+



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

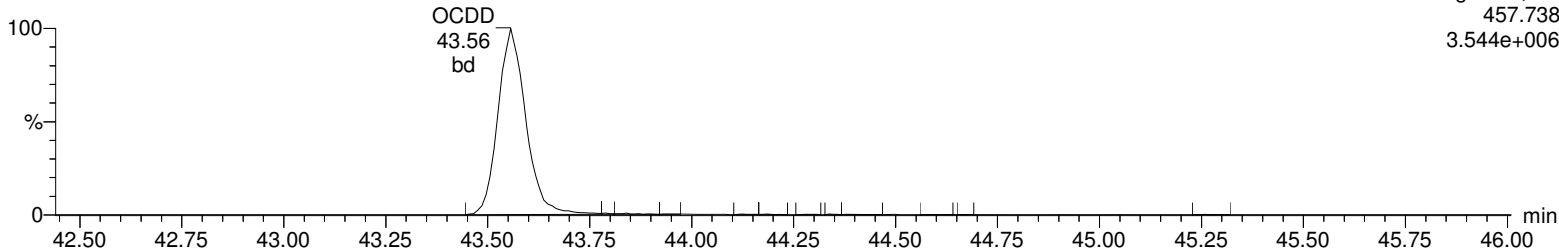
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDD

A14JAN20A-2

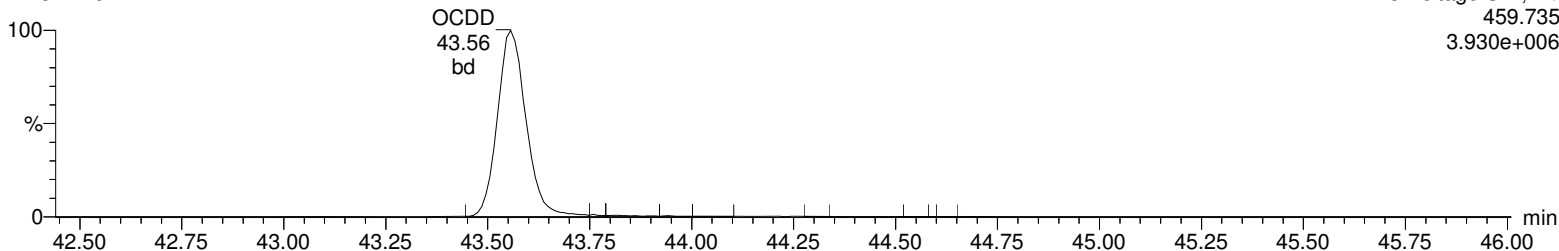
F5:Voltage SIR,EI+
457.738
3.544e+006



OCDD

A14JAN20A-2

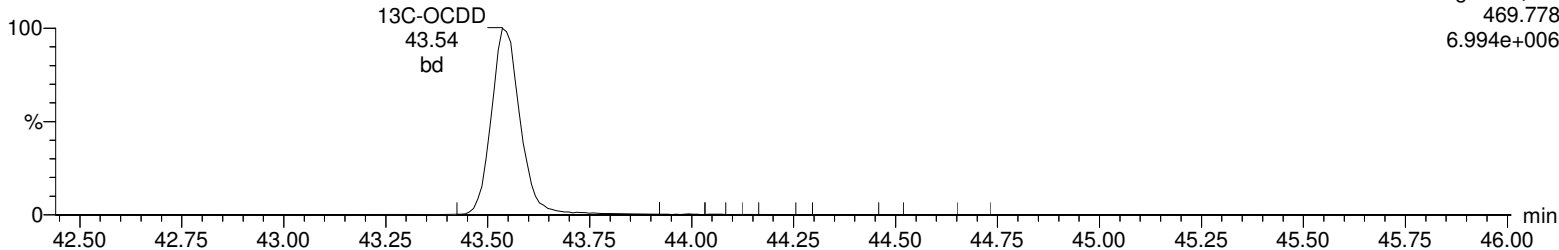
F5:Voltage SIR,EI+
459.735
3.930e+006



13C-OCDD

A14JAN20A-2

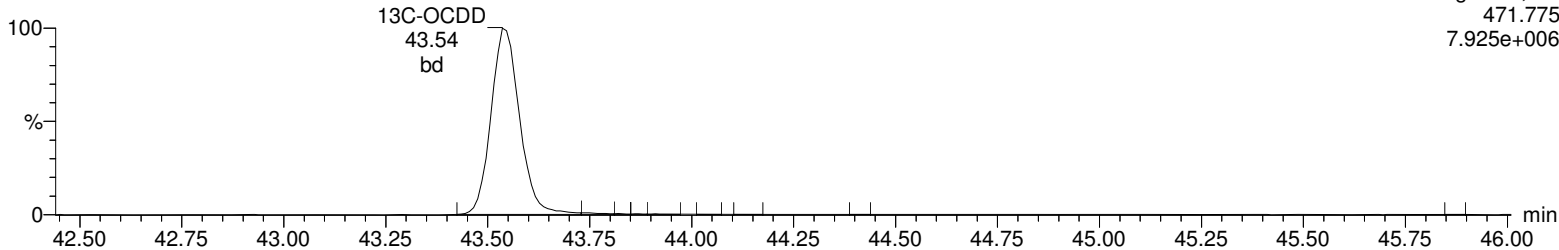
F5:Voltage SIR,EI+
469.778
6.994e+006



13C-OCDD

A14JAN20A-2

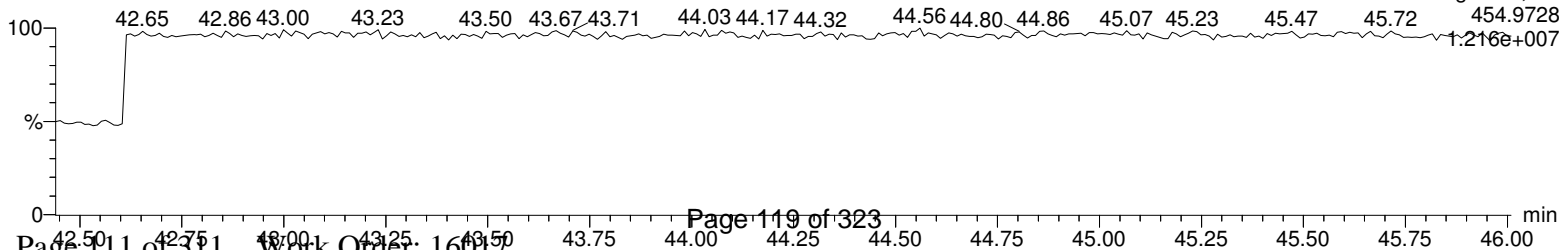
F5:Voltage SIR,EI+
471.775
7.925e+006



Lock Mass F5

A14JAN20A-2

F5:Voltage SIR,EI+
454.9728
1.216e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

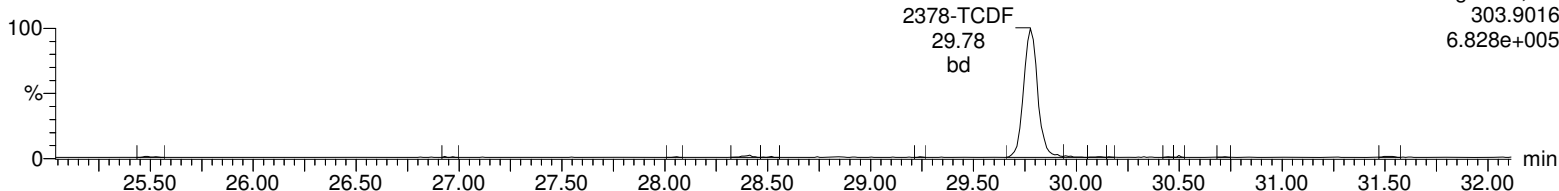
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-tetrafurans

A14JAN20A-2

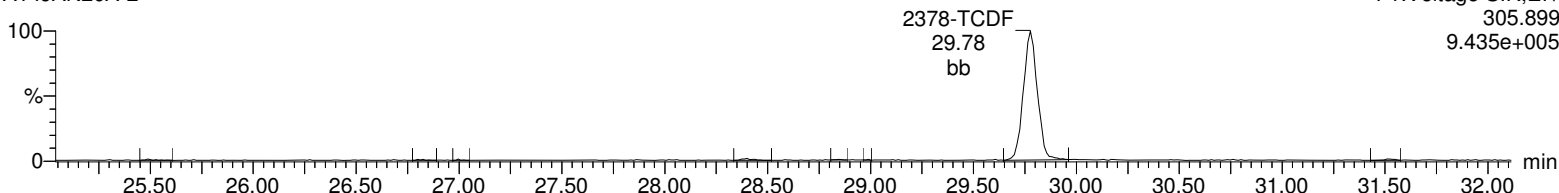
F1:Voltage SIR,EI+
303.9016
6.828e+005



Total-tetrafurans

A14JAN20A-2

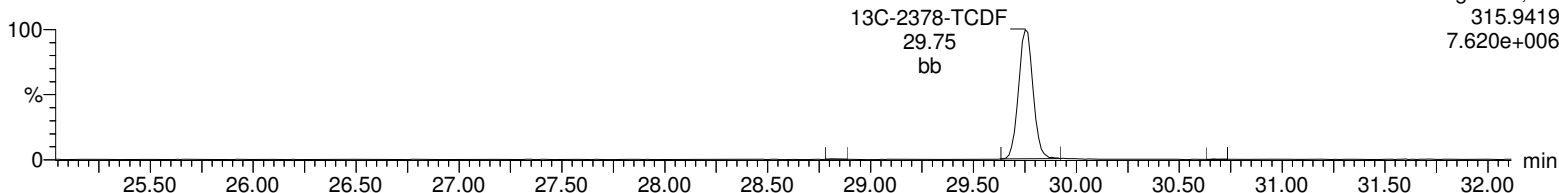
F1:Voltage SIR,EI+
305.899
9.435e+005



13C-2378-TCDF

A14JAN20A-2

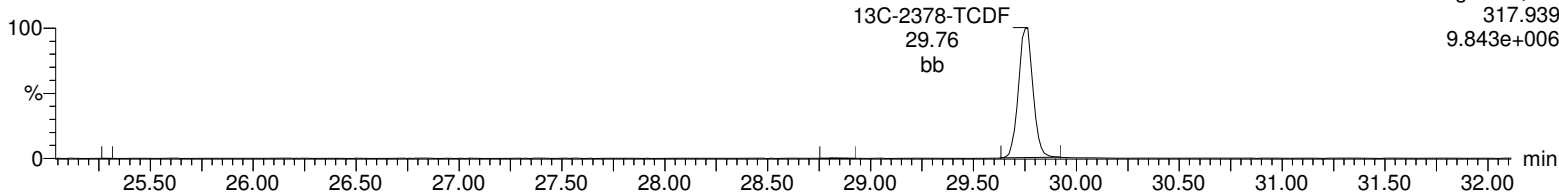
F1:Voltage SIR,EI+
315.9419
7.620e+006



13C-2378-TCDF

A14JAN20A-2

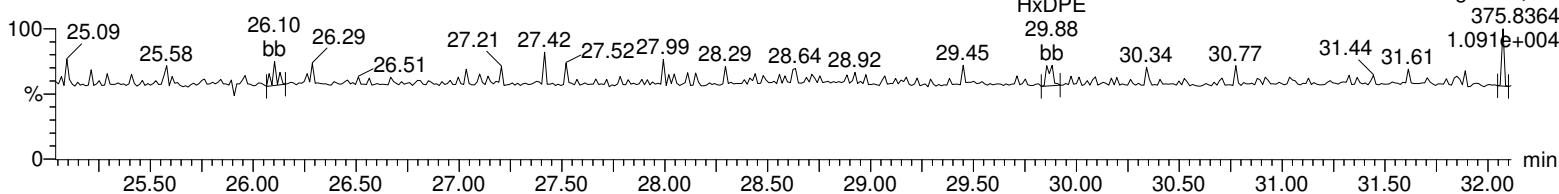
F1:Voltage SIR,EI+
317.939
9.843e+006



HxDPE

A14JAN20A-2

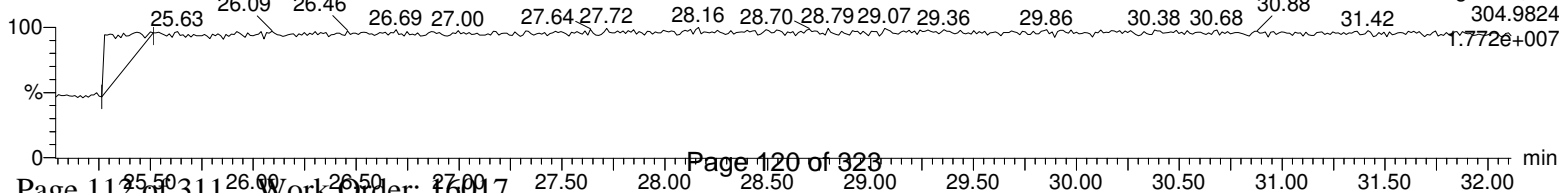
F1:Voltage SIR,EI+
375.8364
1.091e+004



Lock Mass F1

A14JAN20A-2

F1:Voltage SIR,EI+
304.9824
1.772e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

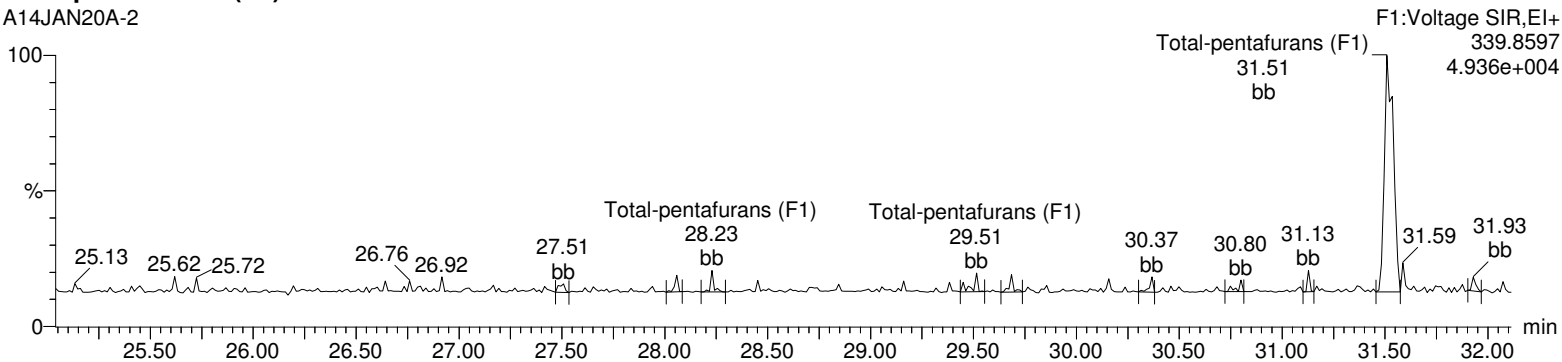
Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

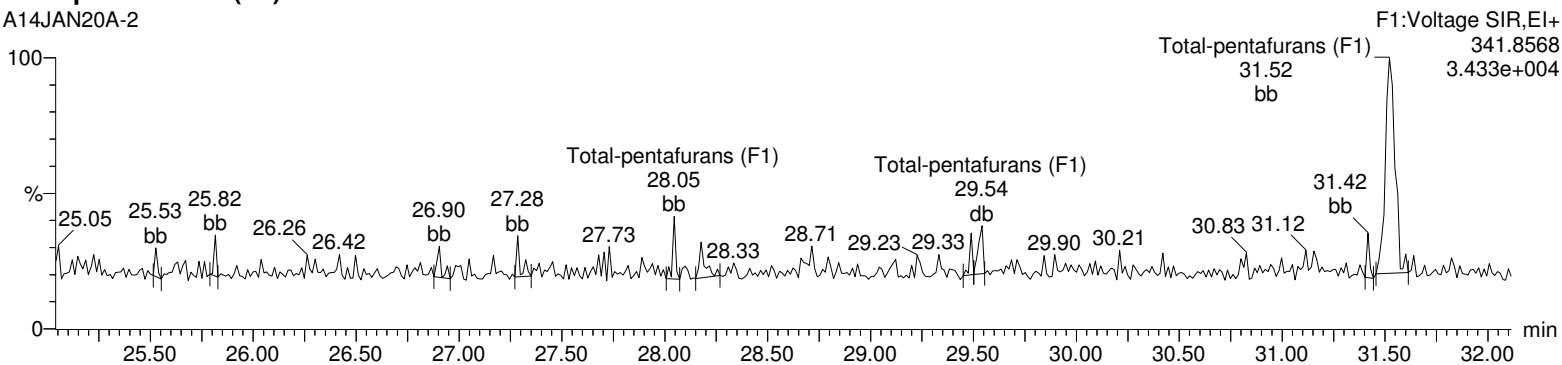
Total-pentafurans (F1)

A14JAN20A-2



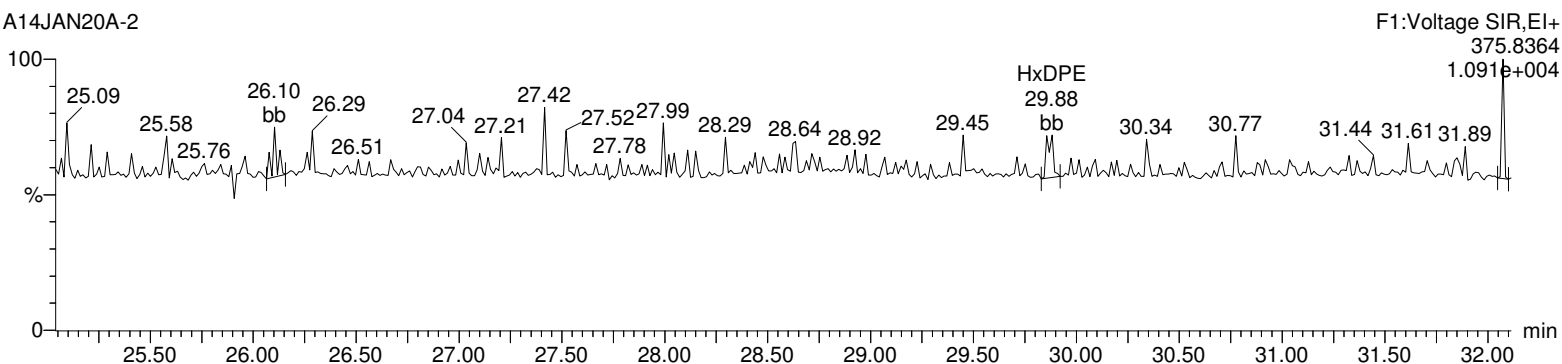
Total-pentafurans (F1)

A14JAN20A-2



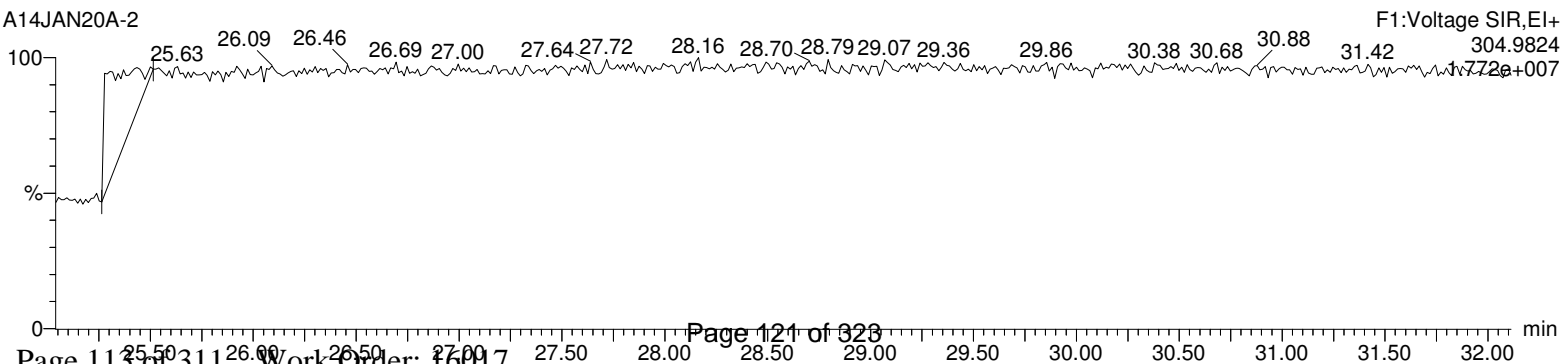
HxDPE

A14JAN20A-2



Lock Mass F1

A14JAN20A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

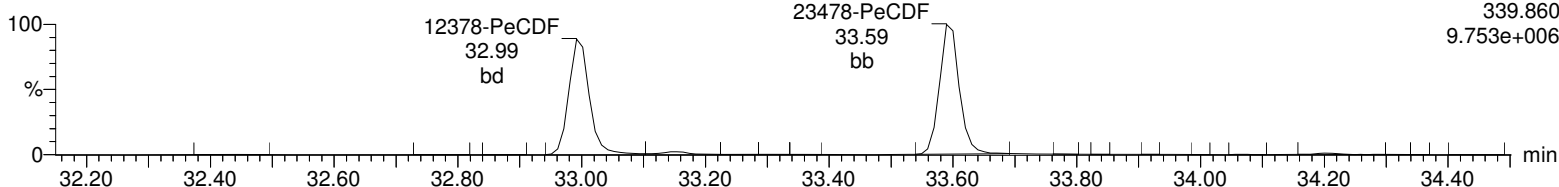
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentafurans

A14JAN20A-2

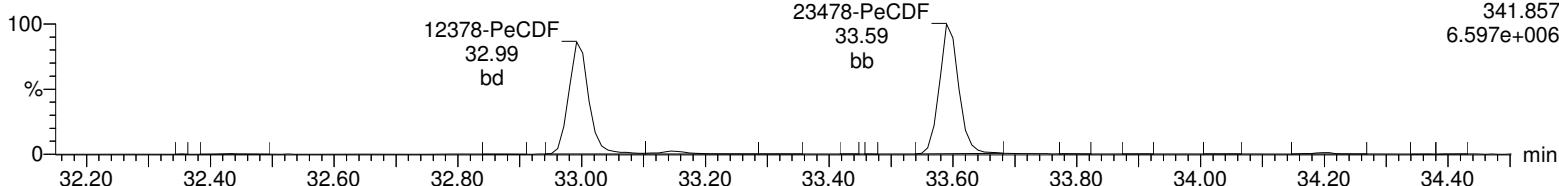
F2:Voltage SIR,EI+
339.860
9.753e+006



Total-pentafurans

A14JAN20A-2

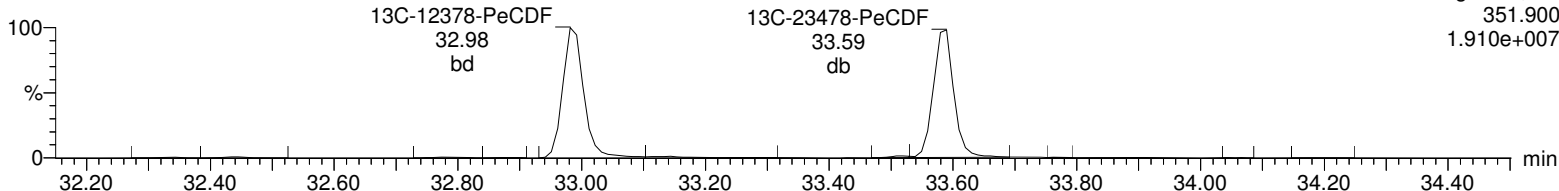
F2:Voltage SIR,EI+
341.857
6.597e+006



13C-12378-PeCDF

A14JAN20A-2

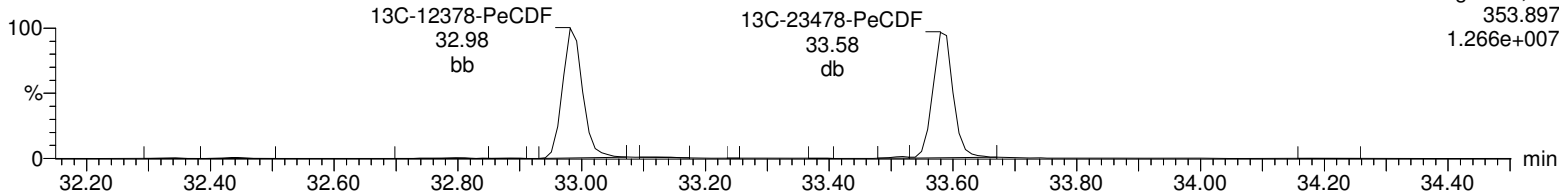
F2:Voltage SIR,EI+
351.900
1.910e+007



13C-12378-PeCDF

A14JAN20A-2

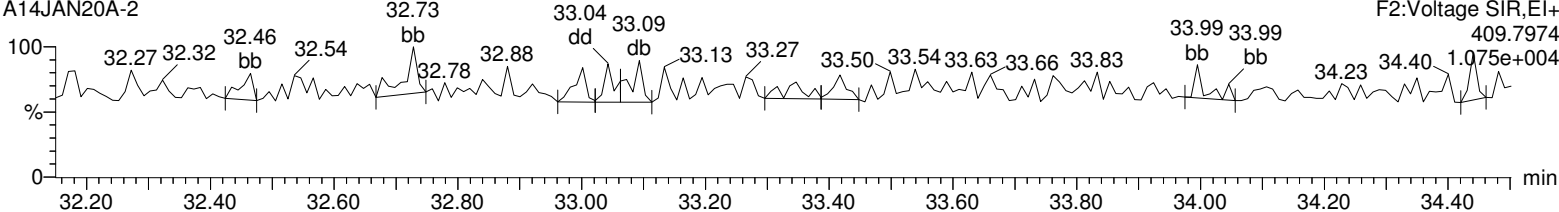
F2:Voltage SIR,EI+
353.897
1.266e+007



HpDPE

A14JAN20A-2

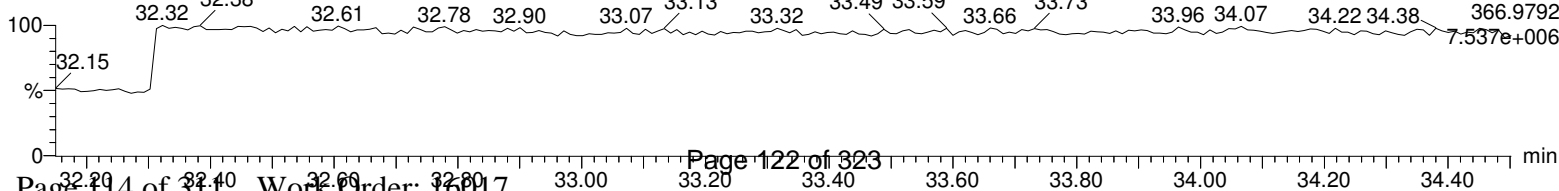
F2:Voltage SIR,EI+
409.7974
1.075e+004



Lock Mass F2

A14JAN20A-2

F2:Voltage SIR,EI+
366.9792
7.537e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

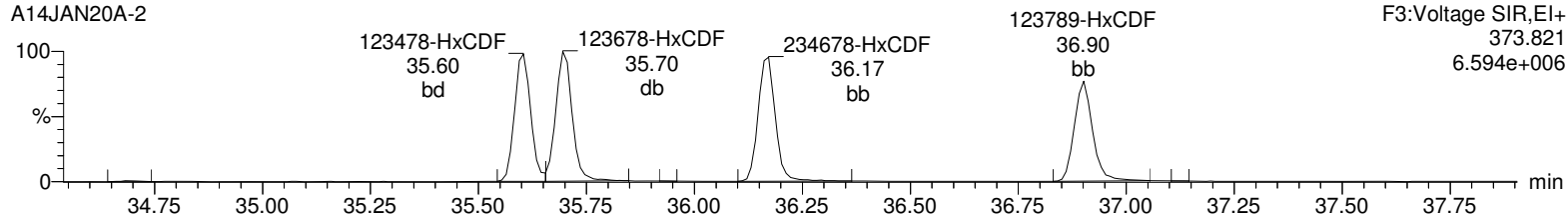
Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

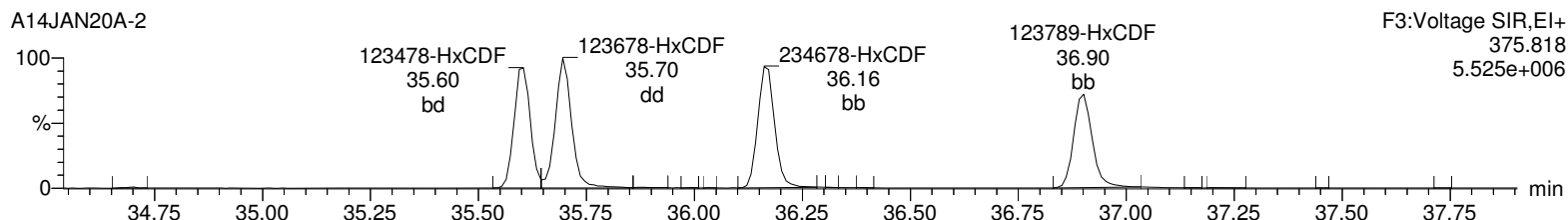
Total-hexafurans

A14JAN20A-2



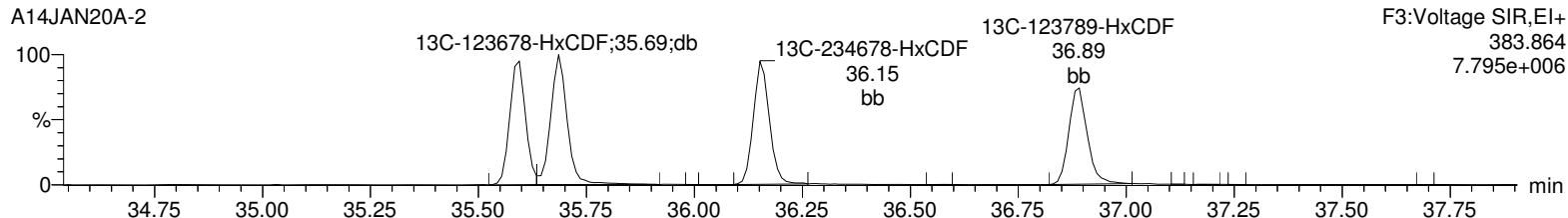
Total-hexafurans

A14JAN20A-2



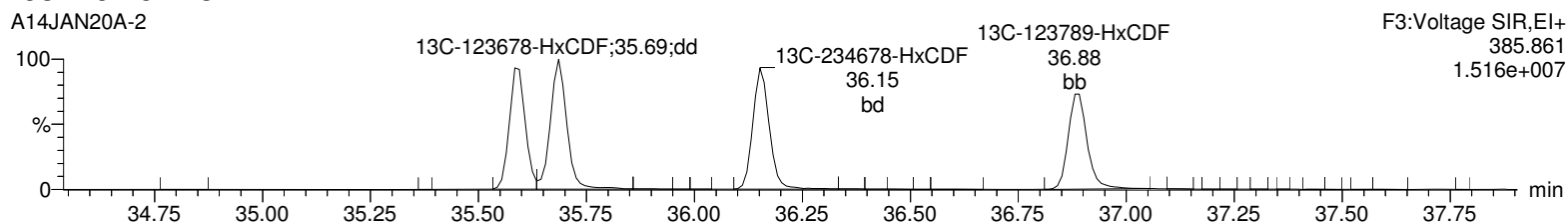
13C-123478-HxCDF

A14JAN20A-2



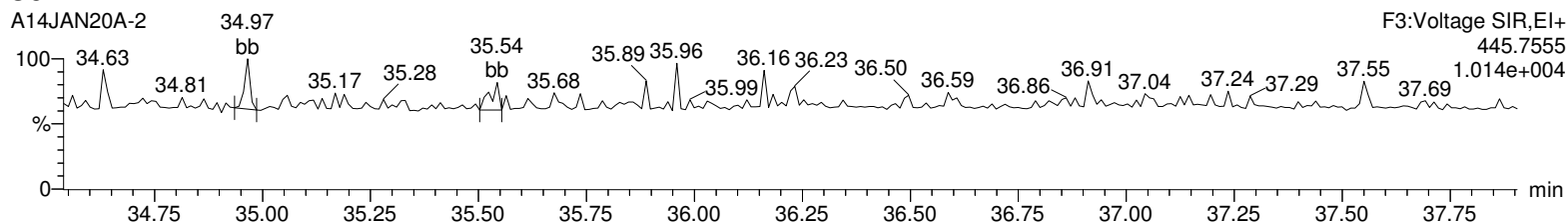
13C-123478-HxCDF

A14JAN20A-2



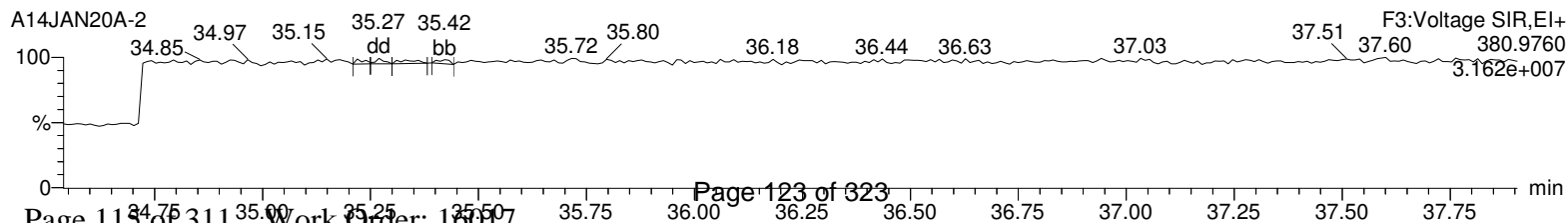
OcDPE

A14JAN20A-2



Lock Mass F3

A14JAN20A-2



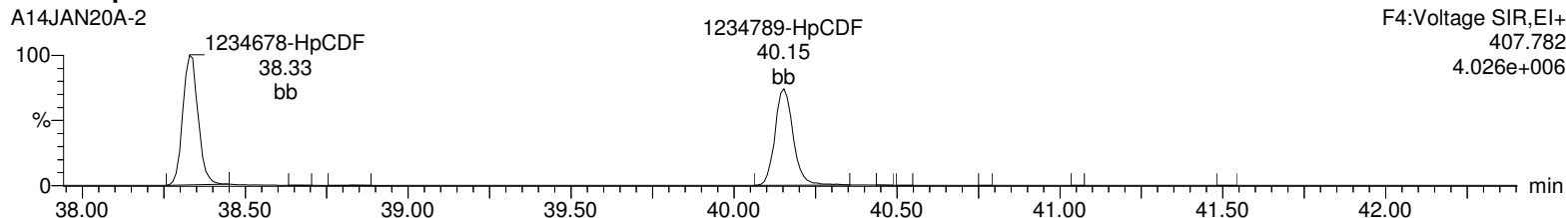
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

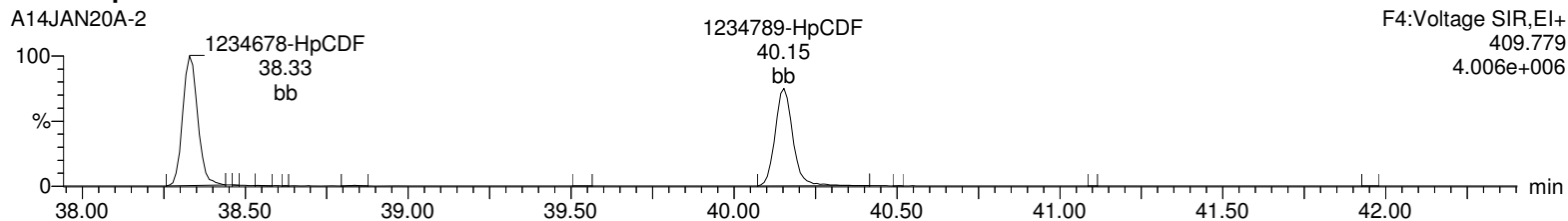
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

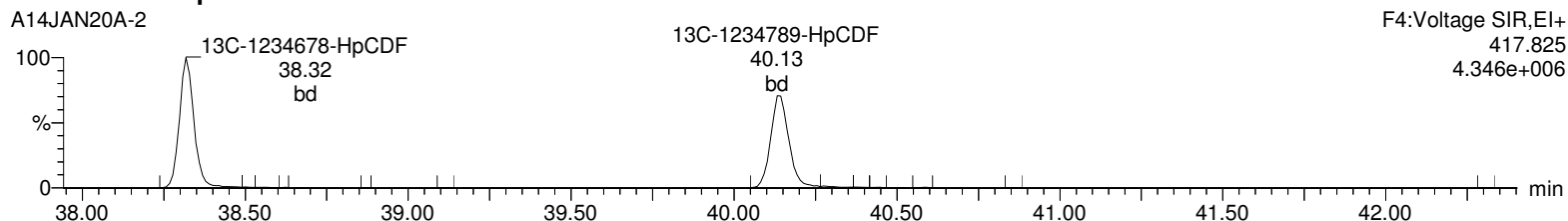
Total-heptafurans



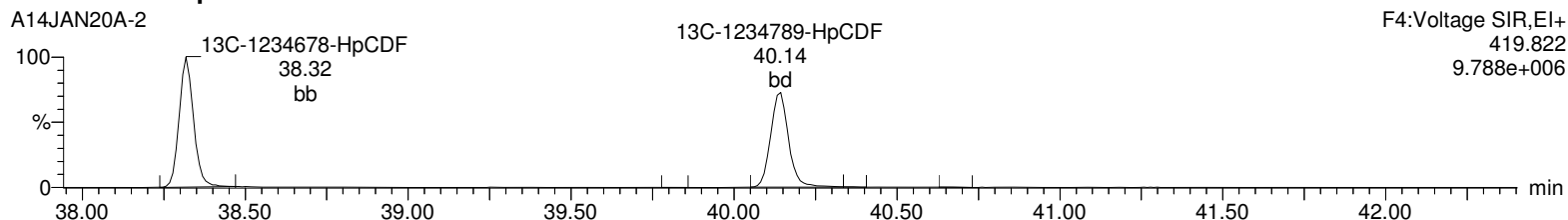
Total-heptafurans



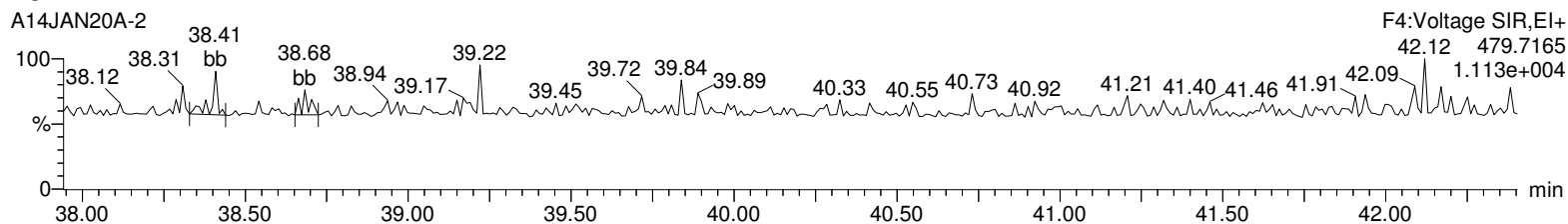
13C-1234678-HpCDF



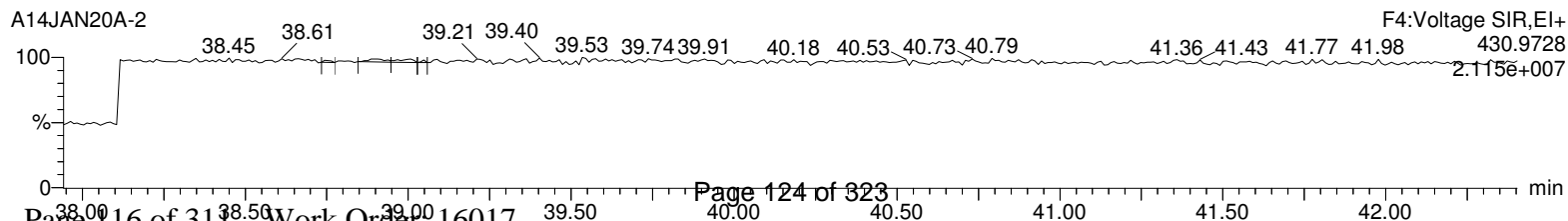
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

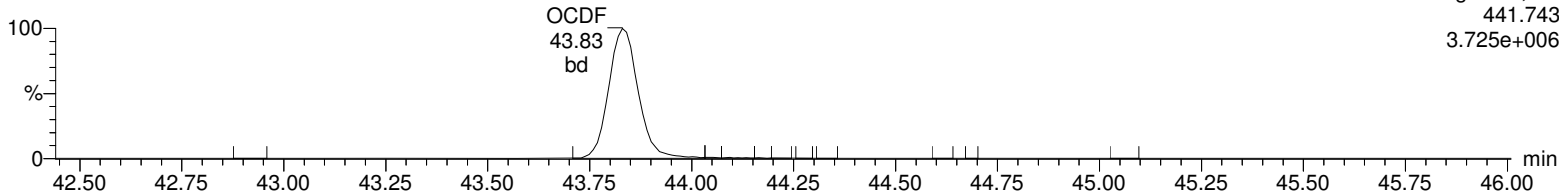
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-2, Date: 14-Jan-2020, Time: 16:12:21, ID: 12025721-1 LCS, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDF

A14JAN20A-2

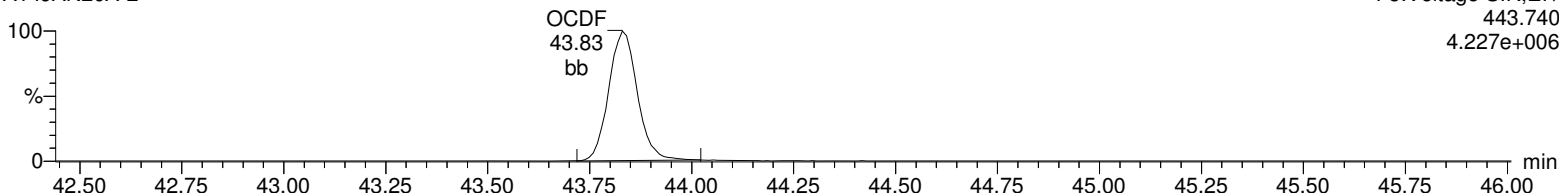
F5:Voltage SIR,EI+
441.743
3.725e+006



OCDF

A14JAN20A-2

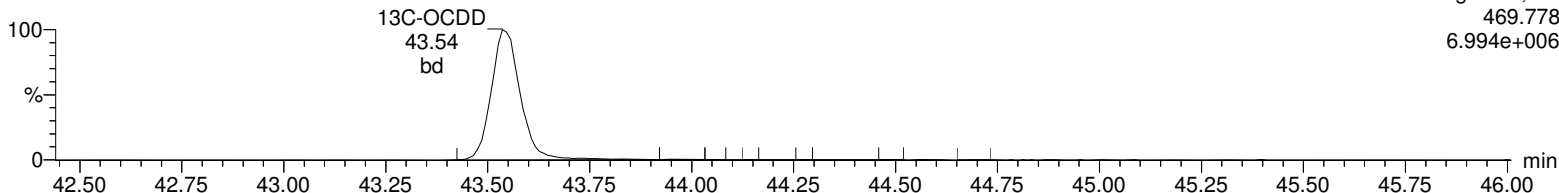
F5:Voltage SIR,EI+
443.740
4.227e+006



13C-OCDD

A14JAN20A-2

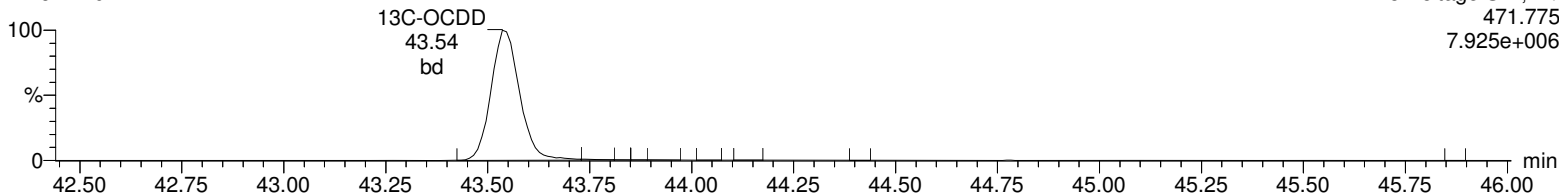
F5:Voltage SIR,EI+
469.778
6.994e+006



13C-OCDD

A14JAN20A-2

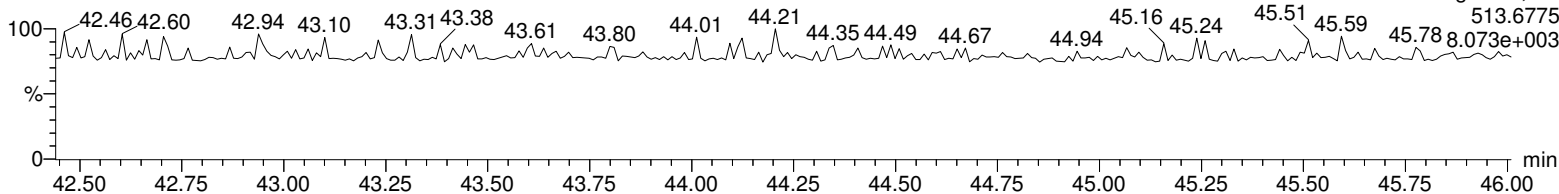
F5:Voltage SIR,EI+
471.775
7.925e+006



DeDPE

A14JAN20A-2

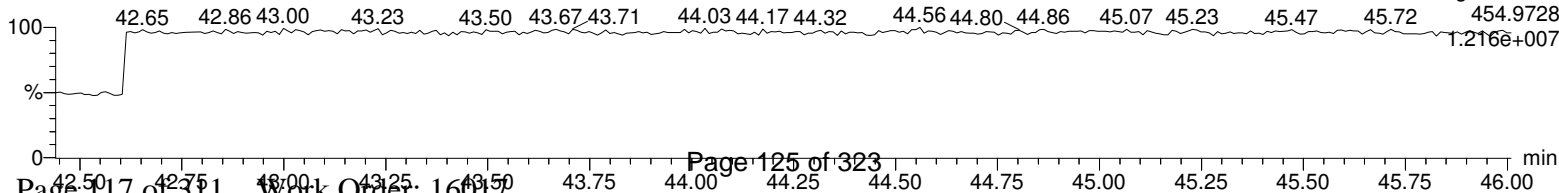
F5:Voltage SIR,EI+
513.6775
8.073e+003



Lock Mass F5

A14JAN20A-2

F5:Voltage SIR,EI+
454.9728
1.216e+007



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-16773	Client: CALS001	Project: CALS00214
Lab Sample ID: 12025722		Matrix: WATER
Client Sample: QC for batch 42776		
Client ID: LCSDD for batch 42776		Prep Basis: As Received
Batch ID: 42781	Method: EPA Method 1613B	
Run Date: 01/14/2020 16:59	Analyst: MJC	Instrument: HRP750
Data File: A14JAN20A-3		Dilution: 1
Prep Batch: 42776	Prep Method: SW846 3520C	
Prep Date: 06-JAN-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.203	ng/L	0.00212	0.010
40321-76-4	1,2,3,7,8-PeCDD		1.09	ng/L	0.00216	0.050
39227-28-6	1,2,3,4,7,8-HxCDD		1.02	ng/L	0.00326	0.050
57653-85-7	1,2,3,6,7,8-HxCDD		1.03	ng/L	0.00324	0.050
19408-74-3	1,2,3,7,8,9-HxCDD		1.07	ng/L	0.0033	0.050
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.913	ng/L	0.0029	0.050
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2.04	ng/L	0.00612	0.100
51207-31-9	2,3,7,8-TCDF		0.176	ng/L	0.0016	0.010
57117-41-6	1,2,3,7,8-PeCDF		0.901	ng/L	0.00216	0.050
57117-31-4	2,3,4,7,8-PeCDF		1.00	ng/L	0.00212	0.050
70648-26-9	1,2,3,4,7,8-HxCDF		0.977	ng/L	0.00294	0.050
57117-44-9	1,2,3,6,7,8-HxCDF		0.980	ng/L	0.00294	0.050
60851-34-5	2,3,4,6,7,8-HxCDF		0.930	ng/L	0.00286	0.050
72918-21-9	1,2,3,7,8,9-HxCDF		0.990	ng/L	0.00388	0.050
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.03	ng/L	0.00414	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.965	ng/L	0.00536	0.050
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.88	ng/L	0.00928	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.50	2.00	ng/L	75.0	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.64	2.00	ng/L	81.8	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.50	2.00	ng/L	75.0	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.45	2.00	ng/L	72.7	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.74	2.00	ng/L	87.0	(22%-166%)
13C-OCDD		3.08	4.00	ng/L	76.9	(13%-199%)
13C-2,3,7,8-TCDF		1.59	2.00	ng/L	79.7	(22%-152%)
13C-1,2,3,7,8-PeCDF		1.72	2.00	ng/L	85.9	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.57	2.00	ng/L	78.4	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.39	2.00	ng/L	69.5	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.35	2.00	ng/L	67.5	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.46	2.00	ng/L	73.0	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.46	2.00	ng/L	72.9	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.38	2.00	ng/L	68.8	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.57	2.00	ng/L	78.6	(20%-186%)
37Cl-2,3,7,8-TCDD		0.164	0.200	ng/L	81.8	(31%-191%)

Comments:
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:55:17 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A13JAN20.mdb 13 Jan 2020 13:57:24
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	4.54e4	5.92e4	1.05e5	30.70	1.001	0.77	NO	10.143	0.106	6.19e5	3308	187.2	7.49e5	2420	309.5	bb	bd
2	12378-PeCDD	2.38e5	1.54e5	3.93e5	33.77	1.000	1.55	NO	54.323	0.108	5.86e6	4444	1318.1	3.92e6	3418	1148.4	bb	bb
3	123478-HxCDD	2.07e5	1.65e5	3.72e5	36.28	1.000	1.25	NO	50.938	0.163	4.63e6	6161	752.3	3.61e6	4481	805.4	bd	bd
4	123678-HxCDD	2.24e5	1.77e5	4.01e5	36.36	1.000	1.26	NO	51.340	0.162	4.76e6	6161	772.1	3.74e6	4481	834.3	dd	dd
5	123789-HxCDD	2.21e5	1.77e5	3.97e5	36.60	1.007	1.25	NO	53.419	0.165	4.39e6	6161	712.6	3.47e6	4481	775.3	dd	dd
6	1234678-HpCDD	1.62e5	1.59e5	3.21e5	39.52	1.000	1.02	NO	45.631	0.145	2.74e6	3172	863.6	2.57e6	3361	765.4	bb	bd
7	OCDD	2.67e5	2.99e5	5.66e5	43.55	1.000	0.89	NO	102.118	0.306	3.20e6	4719	678.0	3.61e6	3415	1058.5	bd	bd
8	2378-TCDF	5.14e4	6.67e4	1.18e5	29.76	1.000	0.77	NO	8.797	0.0802	6.04e5	1740	347.0	7.67e5	3451	222.2	bd	bb
9	12378-PeCDF	3.06e5	2.03e5	5.09e5	32.99	1.000	1.51	NO	45.036	0.108	8.03e6	7121	1127.2	5.14e6	5476	937.9	bb	bd
10	23478-PeCDF	3.46e5	2.22e5	5.68e5	33.59	1.000	1.56	NO	50.166	0.106	8.87e6	7121	1245.3	5.53e6	5476	1010.4	bb	bb
11	123478-HxCDF	2.63e5	2.11e5	4.74e5	35.59	1.000	1.25	NO	48.869	0.147	6.42e6	7219	889.0	5.00e6	5878	851.1	bd	bd
12	123678-HxCDF	2.73e5	2.23e5	4.95e5	35.69	1.000	1.23	NO	48.978	0.147	5.87e6	7219	813.2	4.98e6	5878	846.9	db	dd
13	234678-HxCDF	2.69e5	2.13e5	4.82e5	36.16	1.001	1.26	NO	46.490	0.143	5.80e6	7219	803.8	4.58e6	5878	778.5	bb	bb
14	123789-HxCDF	2.39e5	1.89e5	4.28e5	36.89	1.000	1.26	NO	49.523	0.194	4.71e6	7219	652.6	3.64e6	5878	619.4	bd	bb
15	1234678-HpCDF	2.06e5	2.03e5	4.10e5	38.32	1.000	1.02	NO	51.559	0.207	3.92e6	7126	549.5	3.68e6	5215	705.6	bb	bd
16	1234789-HpCDF	1.80e5	1.76e5	3.57e5	40.14	1.001	1.02	NO	48.244	0.268	2.97e6	7126	416.9	2.83e6	5215	543.0	bb	bd
17	OCDF	2.86e5	3.23e5	6.09e5	43.82	1.007	0.88	NO	94.124	0.464	3.43e6	7196	476.8	3.79e6	7198	526.3	bb	bd
18	13C-2378-TCDD	5.06e5	6.60e5	1.17e6	30.67	1.023	0.77	NO	75.001	0.156	6.64e6	6976	951.6	8.53e6	4676	1825.1	bb	bb
19	13C-12378-PeCDD	5.17e5	3.30e5	8.47e5	33.76	1.126	1.57	NO	81.814	0.124	1.30e7	3643	3574.1	8.53e6	2526	3375.3	bb	bb
20	13C-123478-HxCDD	4.33e5	3.44e5	7.77e5	36.27	0.991	1.26	NO	74.990	0.173	9.68e6	7597	1274.6	7.49e6	6482	1155.5	bd	bd
21	13C-123678-HxCDD	4.60e5	3.68e5	8.28e5	36.35	0.994	1.25	NO	72.676	0.158	9.65e6	7597	1269.7	7.76e6	6482	1197.7	dd	dd
22	13C-1234678-HpCDD	3.50e5	3.25e5	6.76e5	39.51	1.080	1.08	NO	87.043	0.148	5.61e6	4614	1216.7	5.20e6	4388	1184.7	bd	bb
23	13C-OCDD	5.29e5	6.12e5	1.14e6	43.54	1.190	0.86	NO	153.822	0.204	6.35e6	6430	988.1	7.50e6	5420	1384.6	bb	bd
24	13C-2378-TCDF	5.90e5	7.82e5	1.37e6	29.75	0.993	0.75	NO	79.709	0.238	7.11e6	13181	539.3	9.43e6	6561	1436.5	bb	bb
25	13C-12378-PeCDF	7.28e5	4.68e5	1.20e6	32.98	1.100	1.56	NO	85.886	0.233	1.88e7	7429	2531.8	1.17e7	8217	1427.7	bd	bd
26	13C-23478-PeCDF	7.03e5	4.45e5	1.15e6	33.58	1.120	1.58	NO	78.408	0.222	1.84e7	7429	2478.3	1.14e7	8217	1389.6	db	db
27	13C-123478-HxCDF	3.05e5	5.88e5	8.93e5	35.58	0.973	0.52	NO	69.547	0.192	7.00e6	8727	802.7	1.42e7	10639	1332.7	bd	bd
28	13C-123678-HxCDF	3.25e5	6.47e5	9.72e5	35.68	0.975	0.50	NO	67.462	0.171	7.16e6	8727	820.8	1.39e7	10639	1306.7	dd	dd
29	13C-234678-HxCDF	3.06e5	6.07e5	9.12e5	36.14	0.988	0.50	NO	72.970	0.198	6.74e6	8727	772.0	1.28e7	10639	1205.1	bb	bd
30	13C-123789-HxCDF	2.78e5	5.37e5	8.15e5	36.88	1.008	0.52	NO	72.933	0.221	5.42e6	8727	621.1	1.05e7	10639	988.4	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld
 Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:55:17 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	2.08e5	4.83e5	6.91e5	38.31	1.047	0.43	NO	68.763	0.133	3.90e6	5382	724.4	8.85e6	5082	1741.9	bb	bb
32	13C-1234789-HpCDF	1.89e5	4.26e5	6.15e5	40.12	1.097	0.45	NO	78.586	0.171	2.95e6	5382	548.5	6.78e6	5082	1333.8	bd	bb
33	13C-1234-TCDD	6.04e5	7.73e5	1.38e6	29.97	0.000	0.78	NO	100.000	0.176	7.28e6	6976	1043.3	9.01e6	4676	1927.4	bb	bb
34	13C-123789-HxCDD	6.41e5	5.15e5	1.16e6	36.59	0.000	1.24	NO	100.000	0.155	1.26e7	7597	1652.5	1.02e7	6482	1568.5	dd	dd
35	37Cl+2378-TCDD	1.20e5	1.20e5	1.20e5	30.70	1.024			8.180	0.0302	1.51e6	2127	708.8				bb	

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

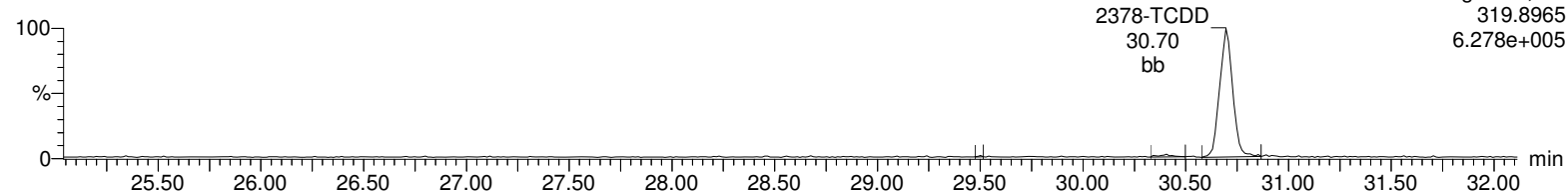
Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

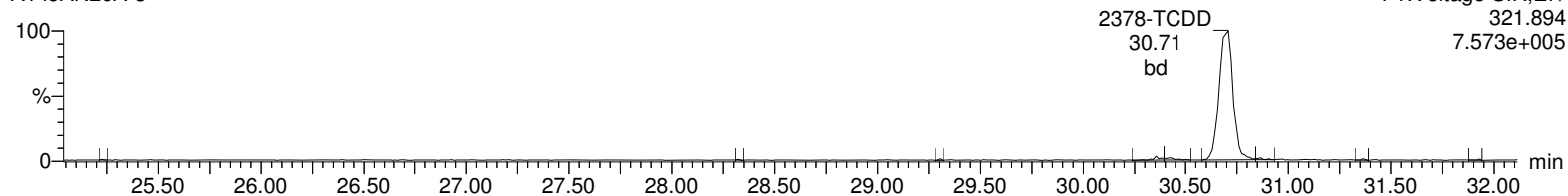
Total-tetradoxins

A14JAN20A-3



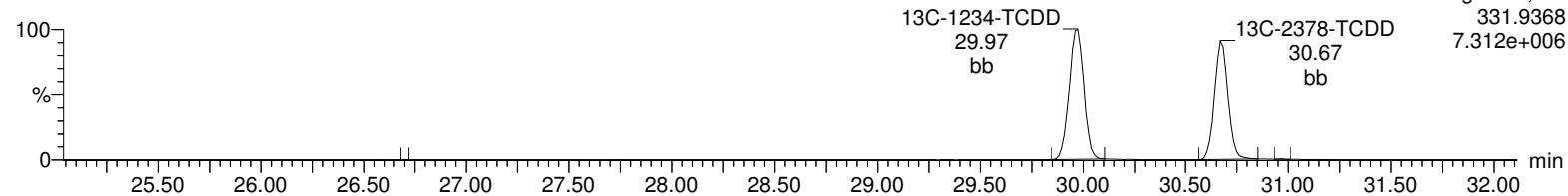
Total-tetradoxins

A14JAN20A-3



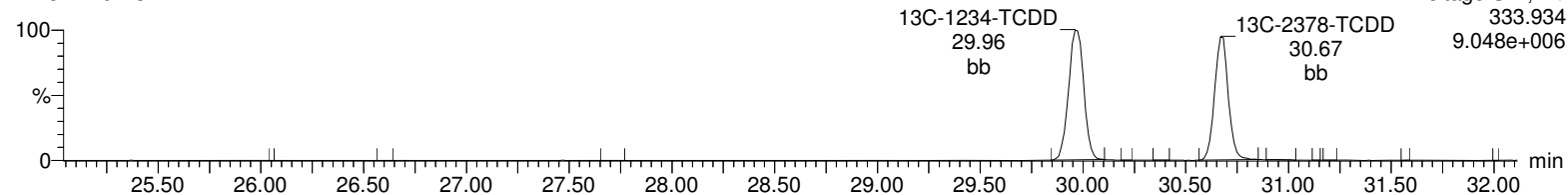
13C-2378-TCDD

A14JAN20A-3



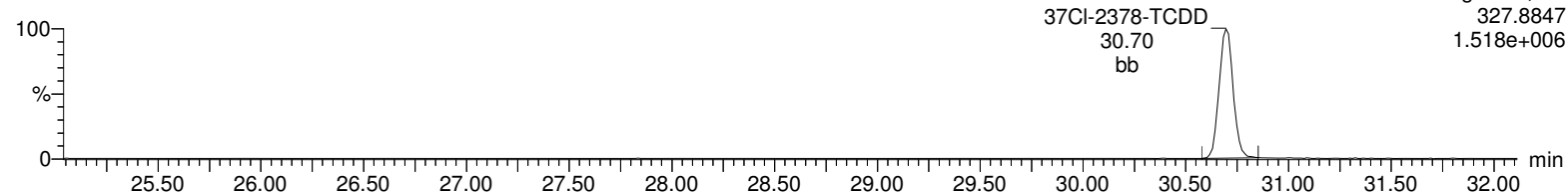
13C-2378-TCDD

A14JAN20A-3



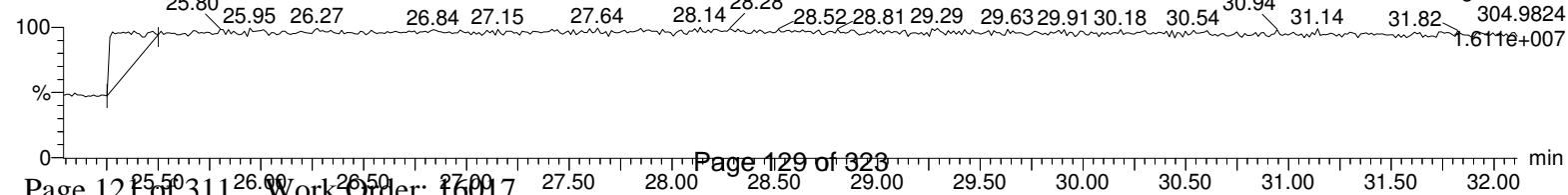
37Cl-2378-TCDD

A14JAN20A-3



Lock Mass F1

A14JAN20A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

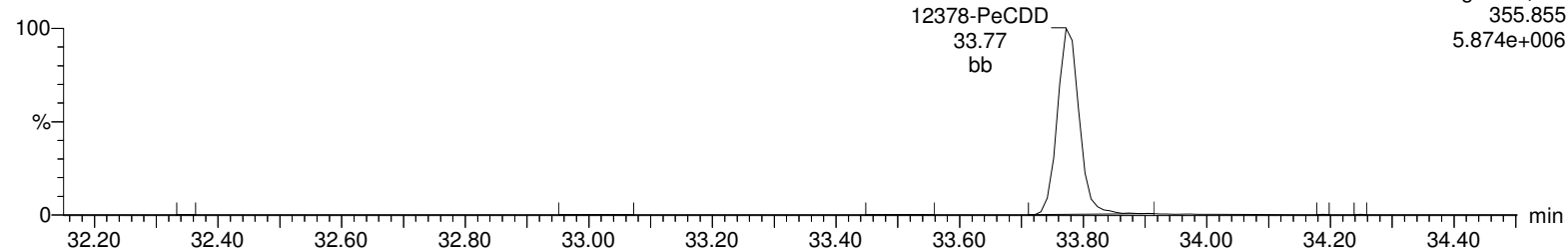
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentadioxins

A14JAN20A-3

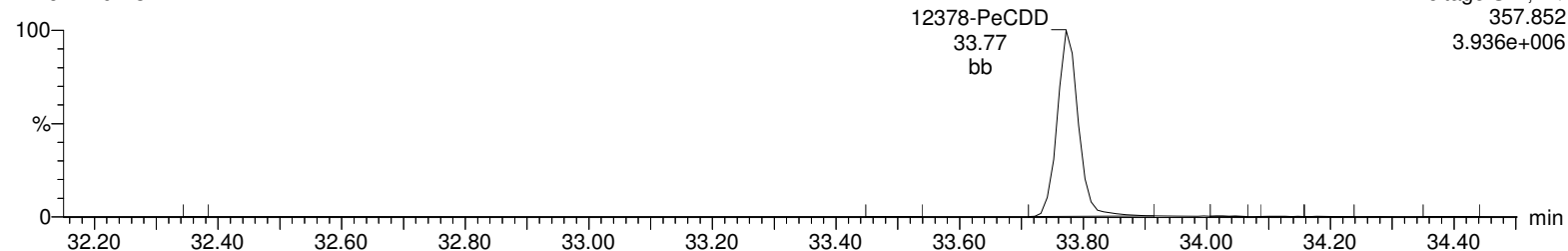
F2:Voltage SIR,EI+



Total-pentadioxins

A14JAN20A-3

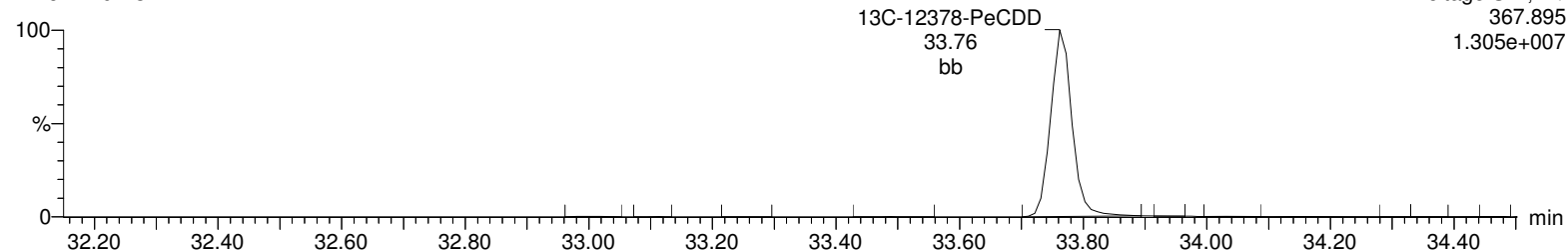
F2:Voltage SIR,EI+



13C-12378-PeCDD

A14JAN20A-3

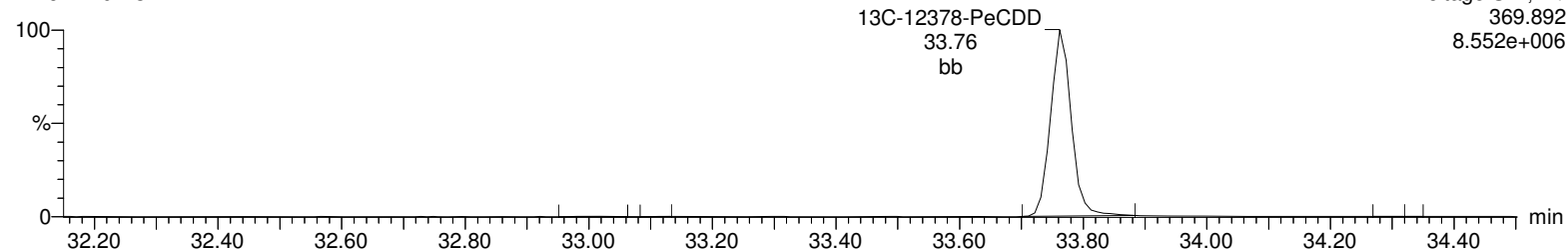
F2:Voltage SIR,EI+



13C-12378-PeCDD

A14JAN20A-3

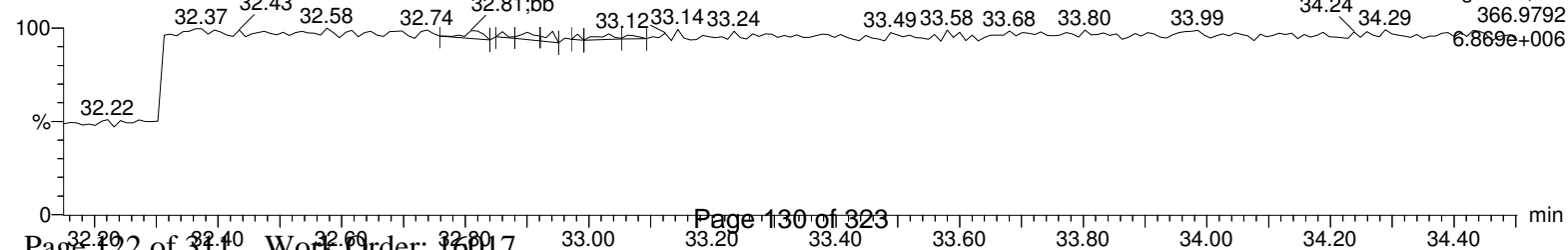
F2:Voltage SIR,EI+



Lock Mass F2

A14JAN20A-3

F2:Voltage SIR,EI+



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

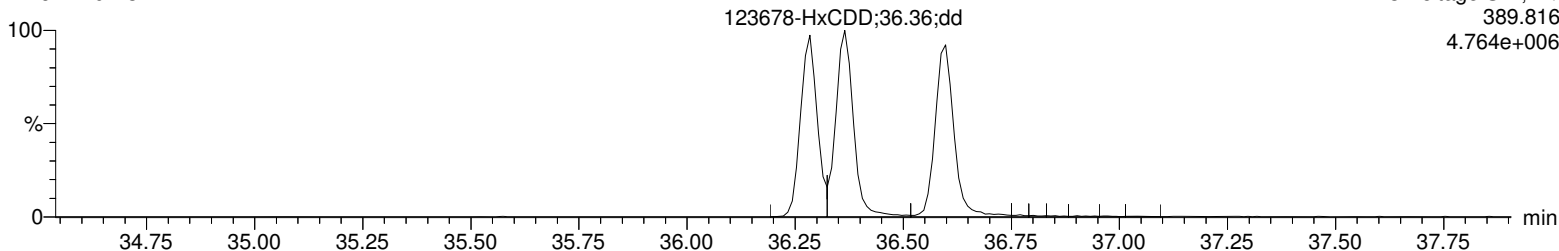
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-hexadioxins

A14JAN20A-3

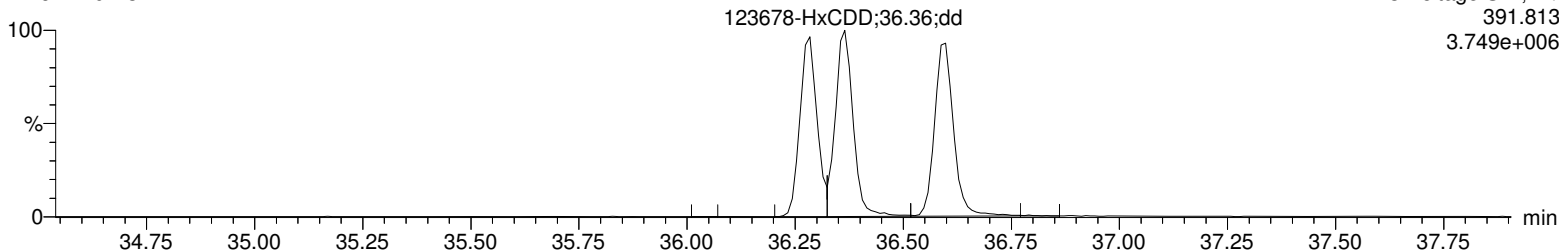
F3:Voltage SIR,EI+
389.816
4.764e+006



Total-hexadioxins

A14JAN20A-3

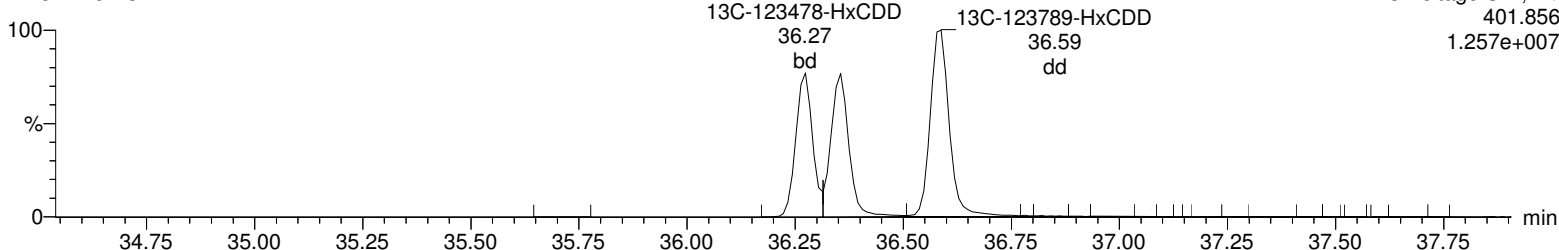
F3:Voltage SIR,EI+
391.813
3.749e+006



13C-123478-HxCDD

A14JAN20A-3

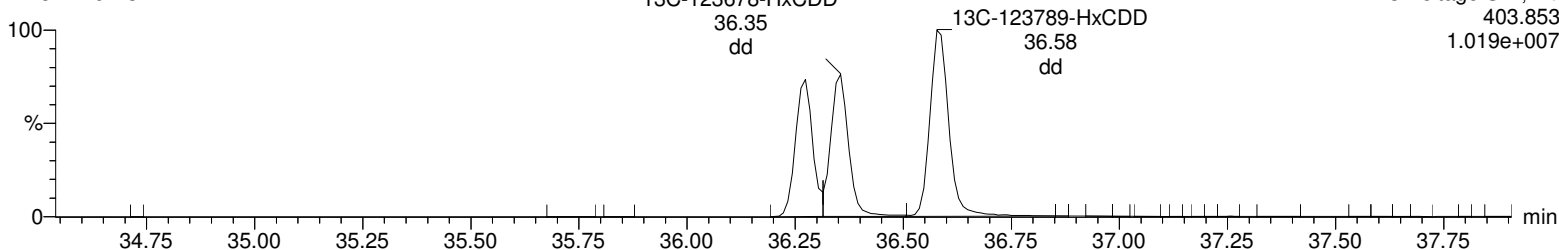
F3:Voltage SIR,EI+
401.856
1.257e+007



13C-123478-HxCDD

A14JAN20A-3

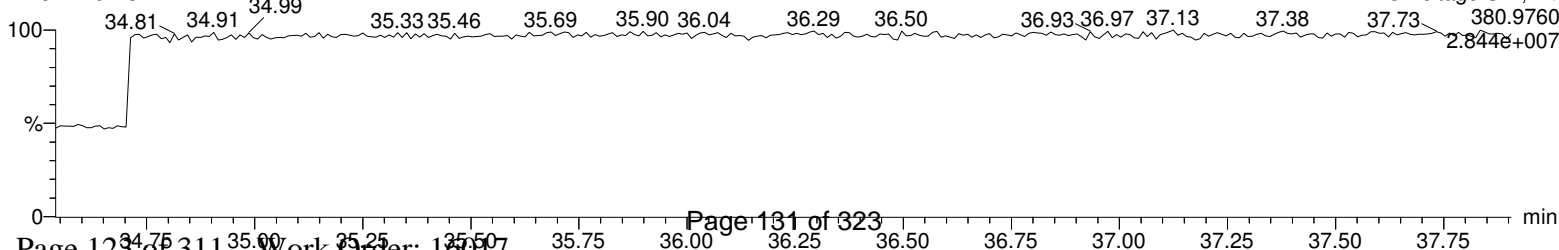
F3:Voltage SIR,EI+
403.853
1.019e+007



Lock Mass F3

A14JAN20A-3

F3:Voltage SIR,EI+
380.9760
2.844e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

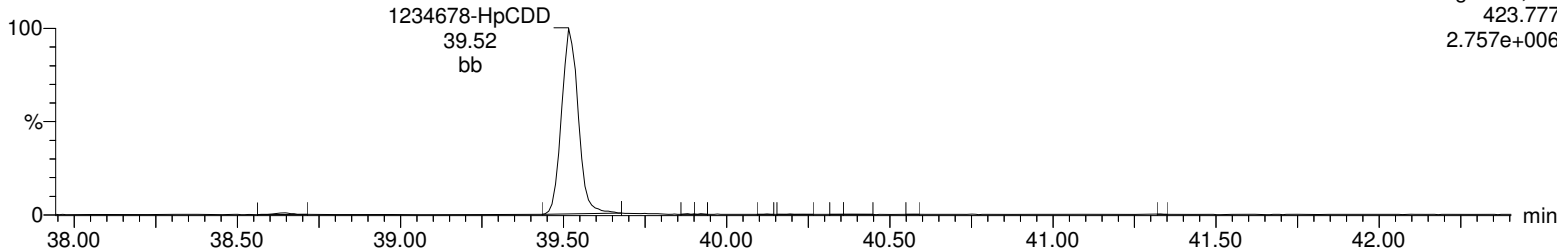
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-heptadioxins

A14JAN20A-3

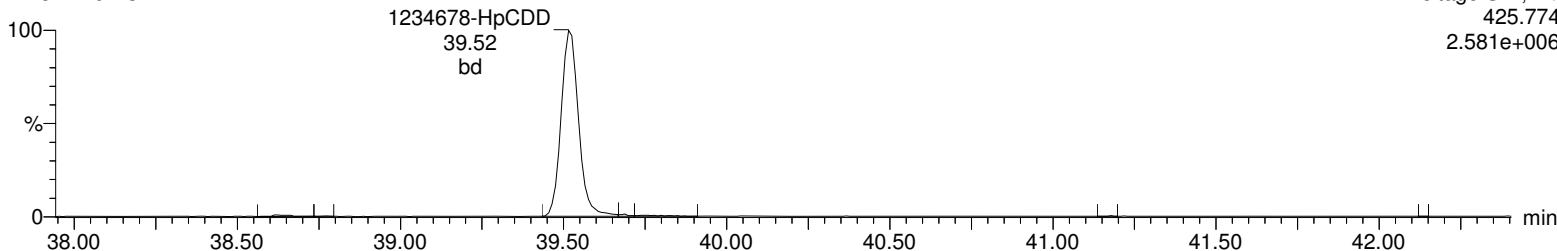
F4:Voltage SIR,EI+
423.777
2.757e+006



Total-heptadioxins

A14JAN20A-3

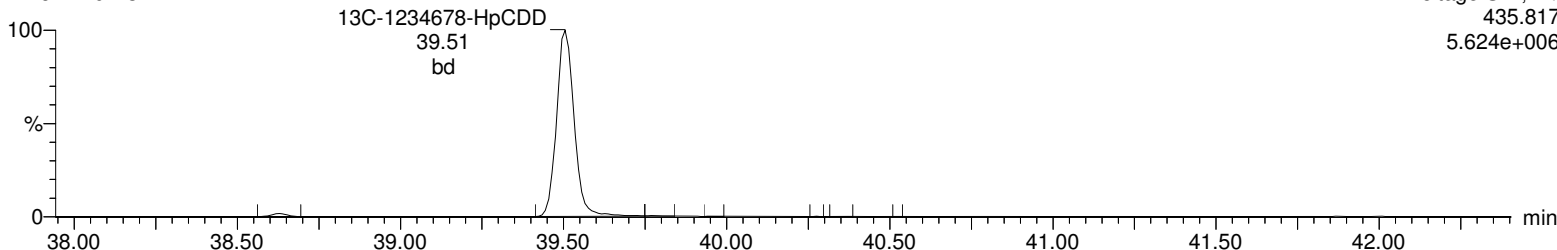
F4:Voltage SIR,EI+
425.774
2.581e+006



13C-1234678-HpCDD

A14JAN20A-3

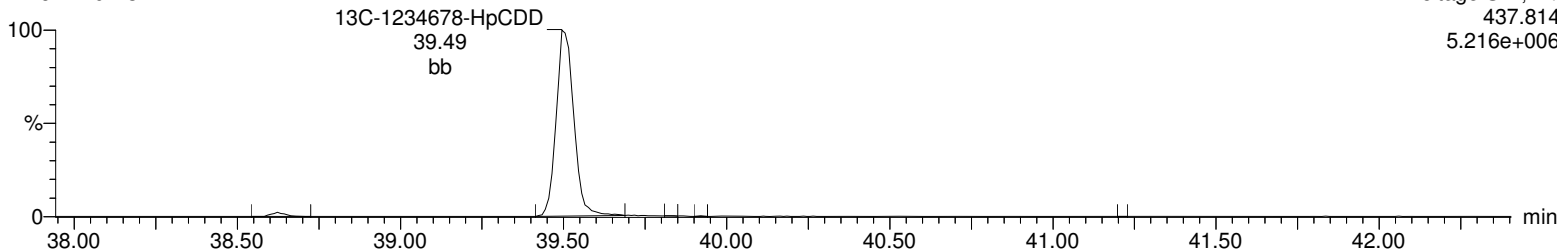
F4:Voltage SIR,EI+
435.817
5.624e+006



13C-1234678-HpCDD

A14JAN20A-3

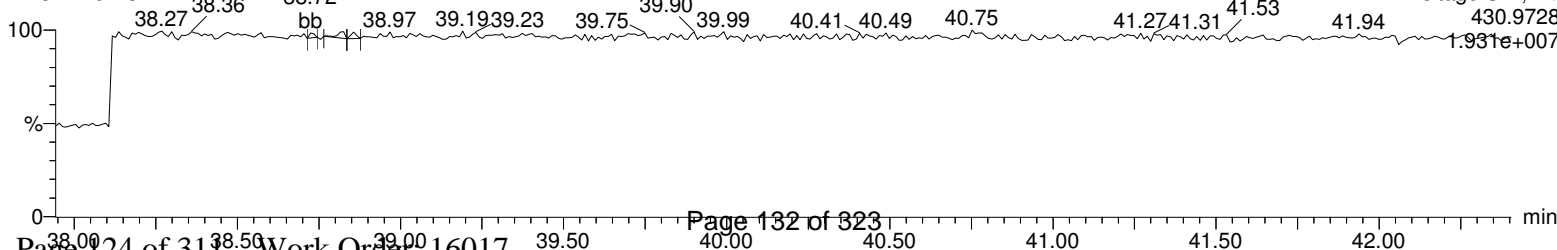
F4:Voltage SIR,EI+
437.814
5.216e+006



Lock Mass F4

A14JAN20A-3

F4:Voltage SIR,EI+
430.9728
1.931e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

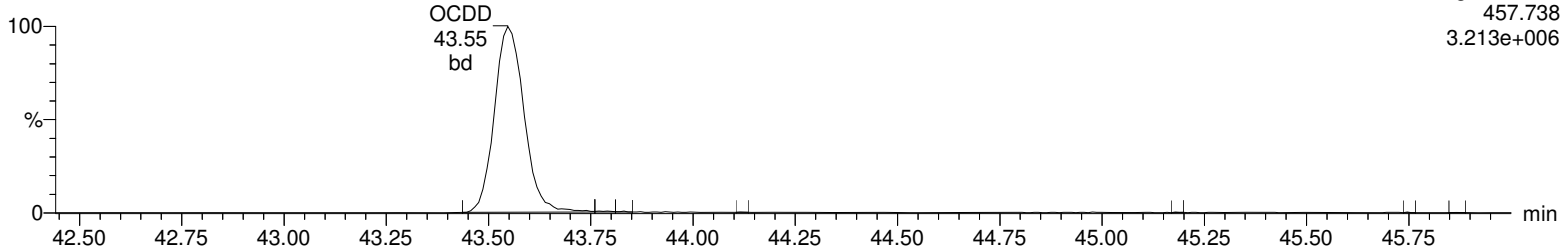
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDD

A14JAN20A-3

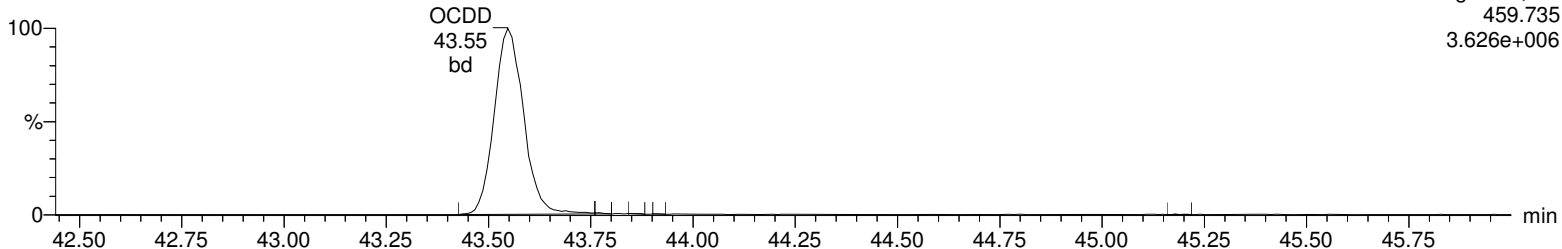
F5:Voltage SIR,EI+



OCDD

A14JAN20A-3

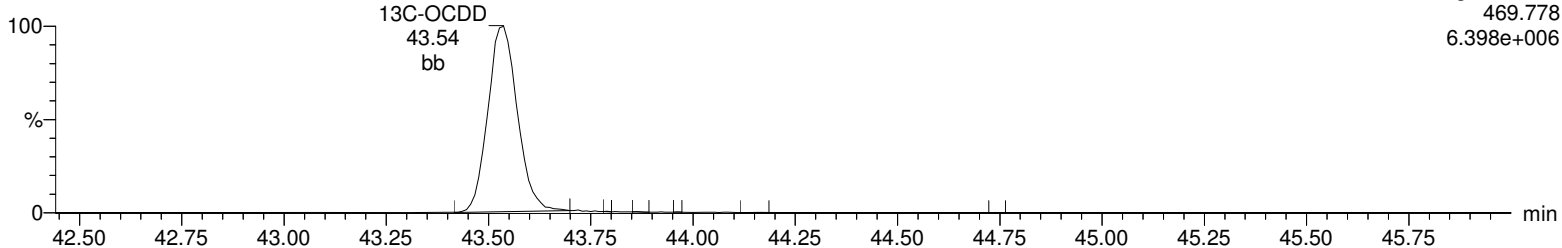
F5:Voltage SIR,EI+



13C-OCDD

A14JAN20A-3

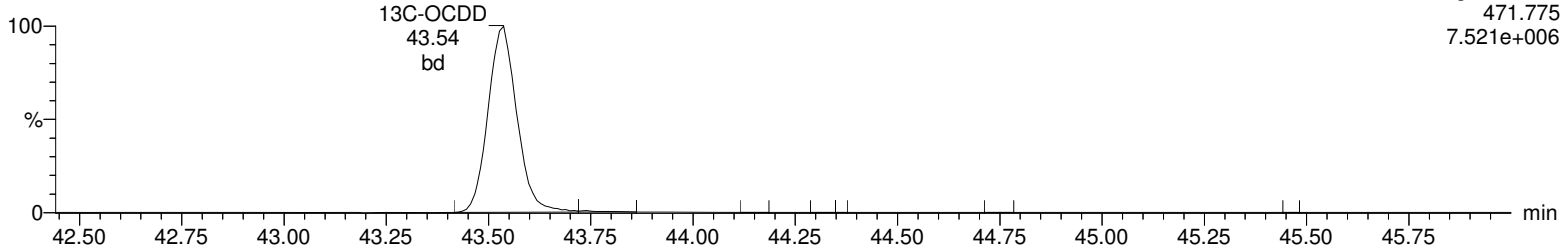
F5:Voltage SIR,EI+



13C-OCDD

A14JAN20A-3

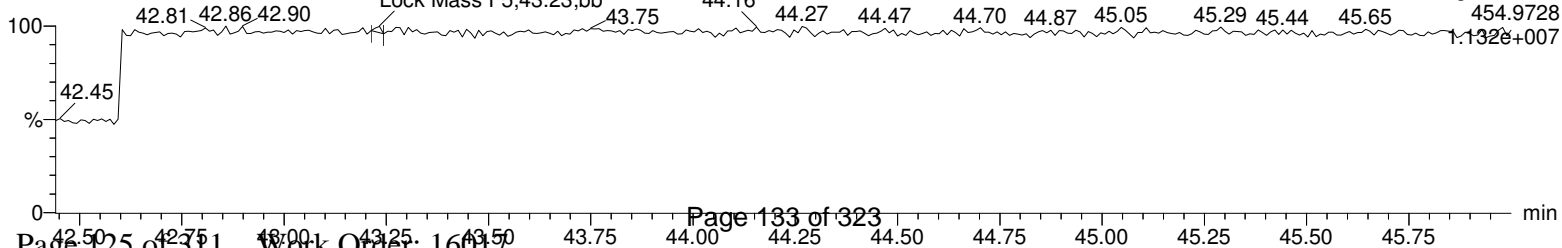
F5:Voltage SIR,EI+



Lock Mass F5

A14JAN20A-3

F5:Voltage SIR,EI+



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

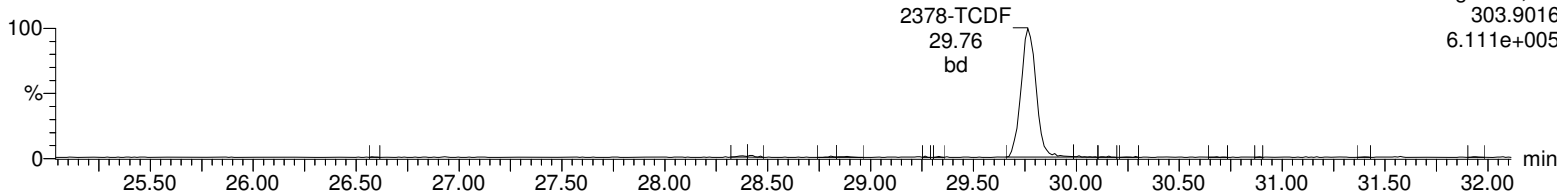
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-tetrafurans

A14JAN20A-3

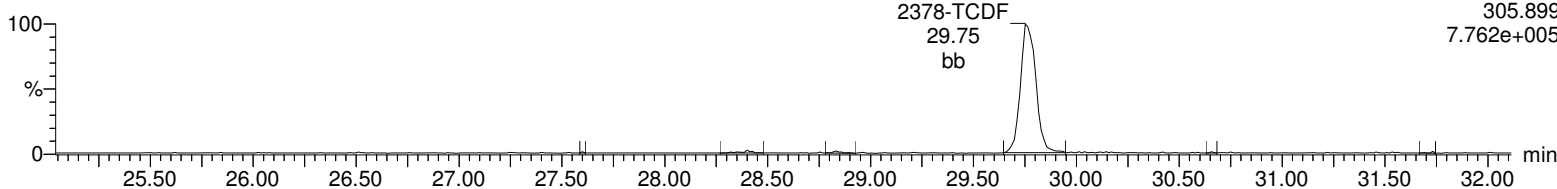
F1:Voltage SIR,EI+
303.9016
6.111e+005



Total-tetrafurans

A14JAN20A-3

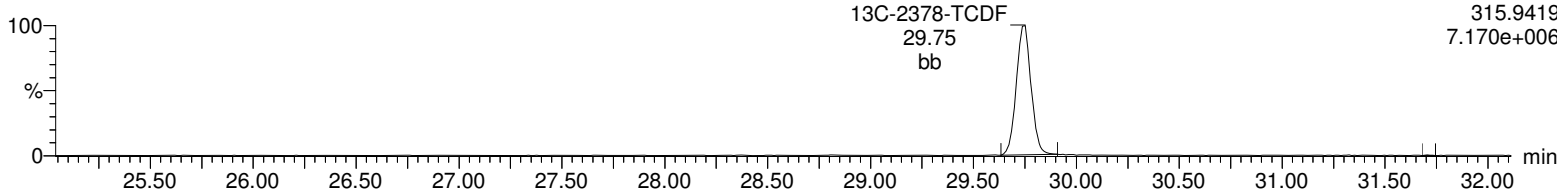
F1:Voltage SIR,EI+
305.899
7.762e+005



13C-2378-TCDF

A14JAN20A-3

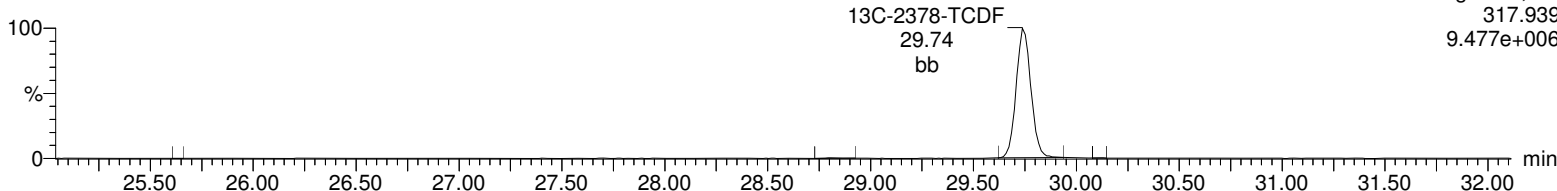
F1:Voltage SIR,EI+
315.9419
7.170e+006



13C-2378-TCDF

A14JAN20A-3

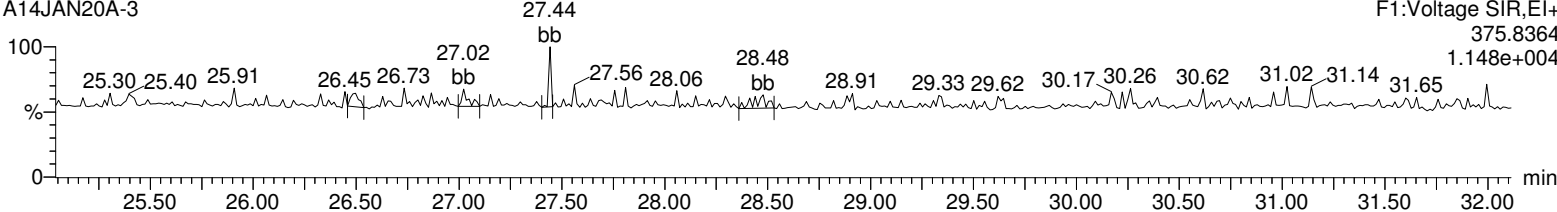
F1:Voltage SIR,EI+
317.939
9.477e+006



HxDPE

A14JAN20A-3

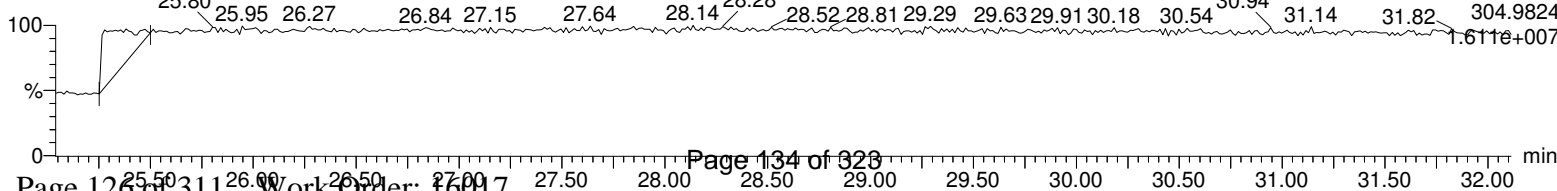
F1:Voltage SIR,EI+
375.8364
1.148e+004



Lock Mass F1

A14JAN20A-3

F1:Voltage SIR,EI+
304.9824
1.611e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

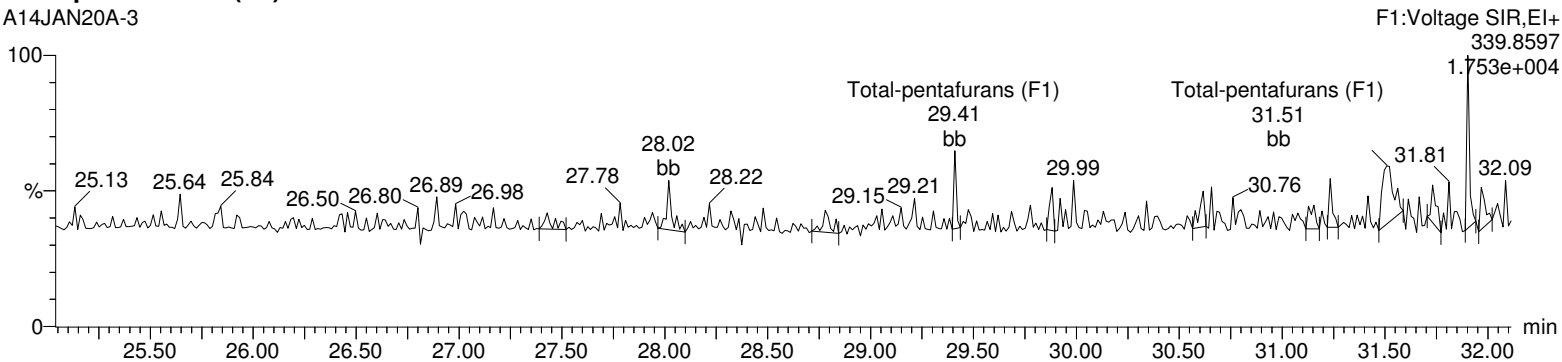
Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

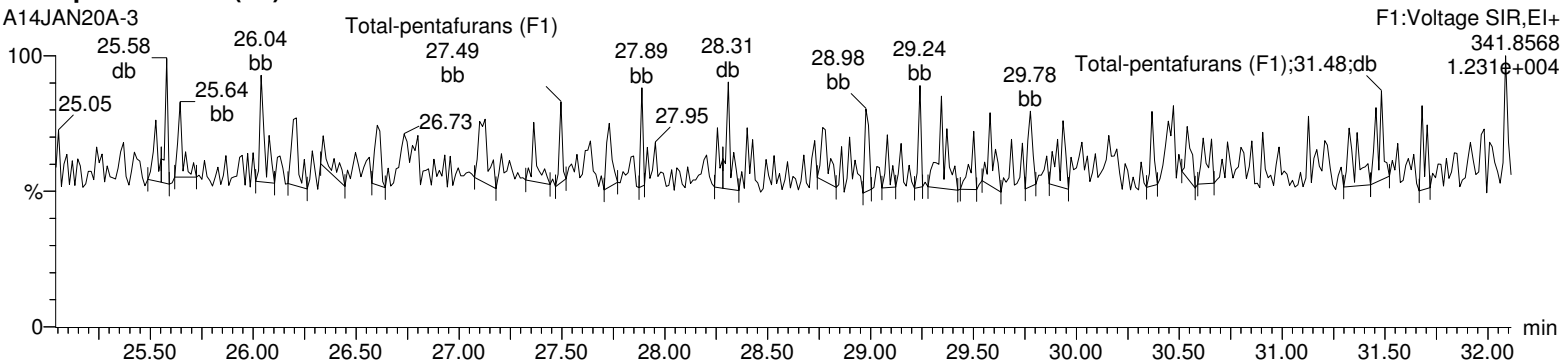
Total-pentafurans (F1)

A14JAN20A-3



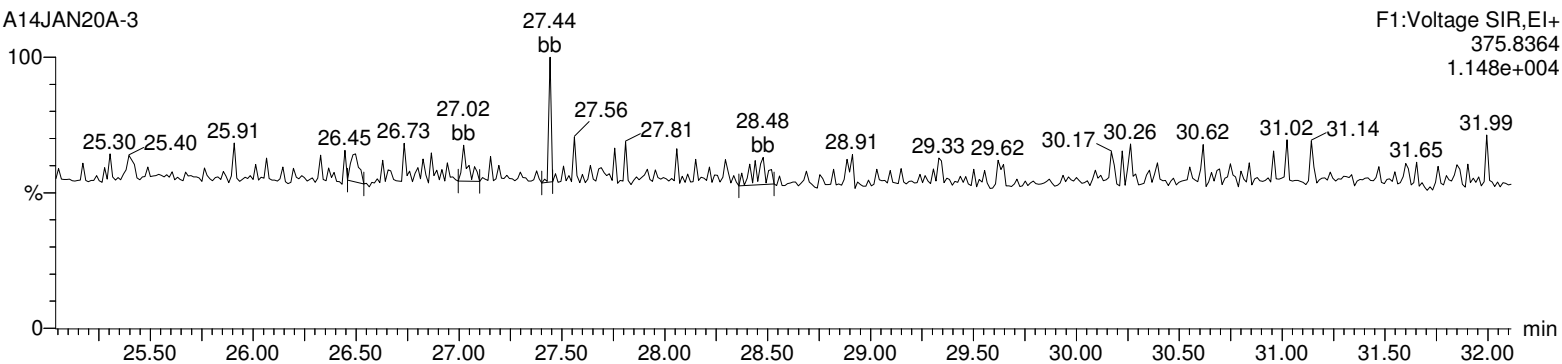
Total-pentafurans (F1)

A14JAN20A-3



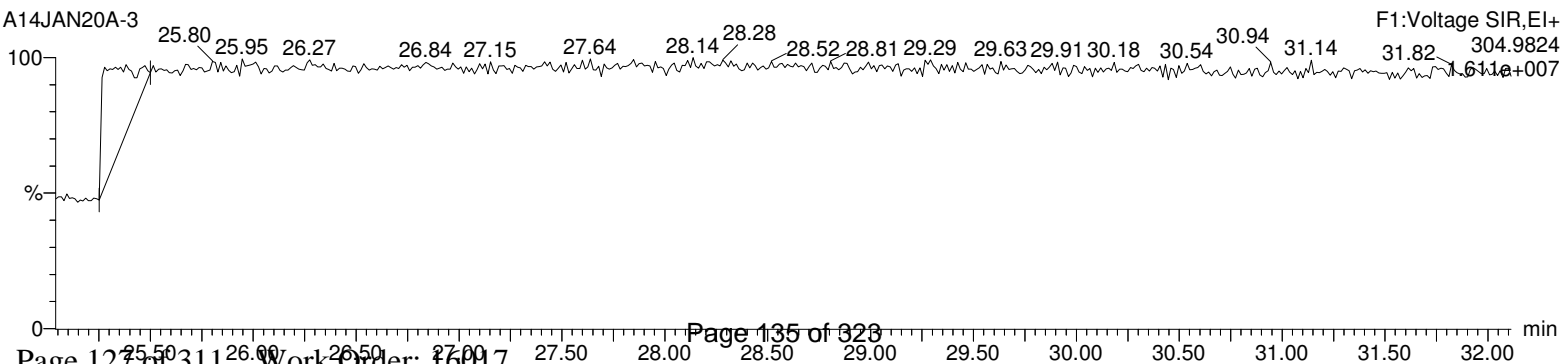
HxDPE

A14JAN20A-3



Lock Mass F1

A14JAN20A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

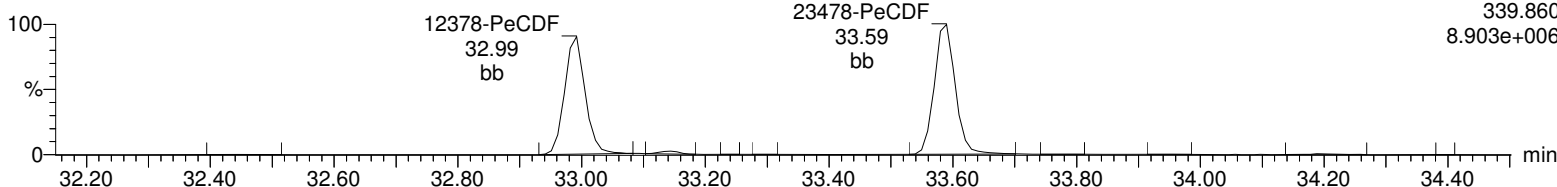
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

Total-pentafurans

A14JAN20A-3

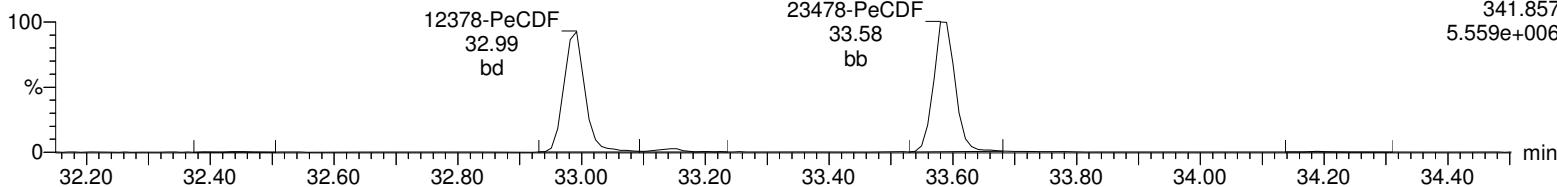
F2:Voltage SIR,EI+
339.860
8.903e+006



Total-pentafurans

A14JAN20A-3

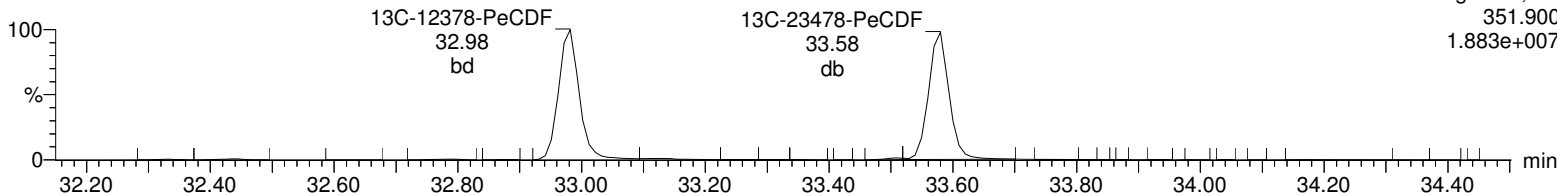
F2:Voltage SIR,EI+
341.857
5.559e+006



13C-12378-PeCDF

A14JAN20A-3

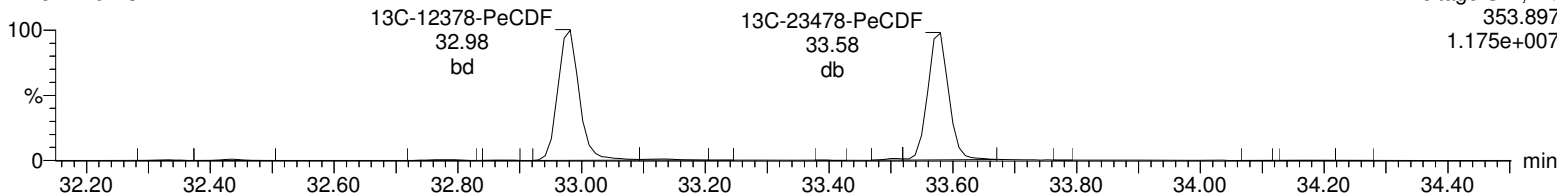
F2:Voltage SIR,EI+
351.900
1.883e+007



13C-12378-PeCDF

A14JAN20A-3

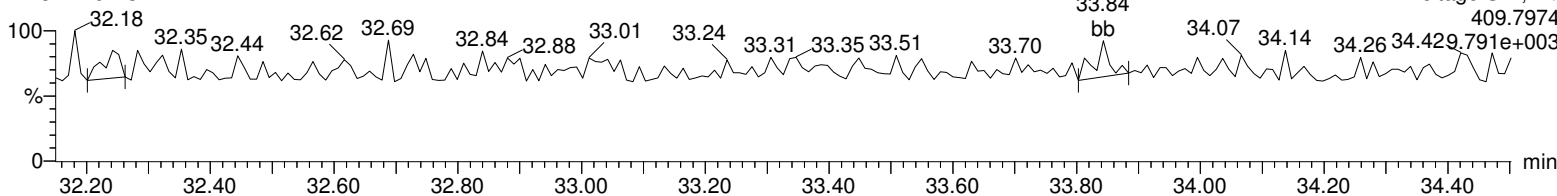
F2:Voltage SIR,EI+
353.897
1.175e+007



HpDPE

A14JAN20A-3

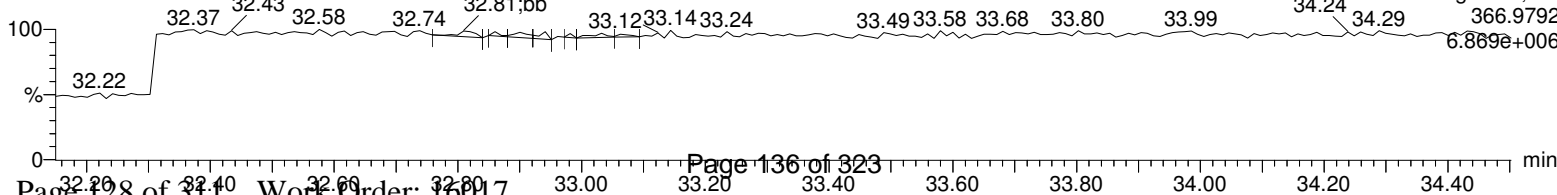
F2:Voltage SIR,EI+
409.7974
1.791e+003



Lock Mass F2

A14JAN20A-3

F2:Voltage SIR,EI+
366.9792
6.869e+006



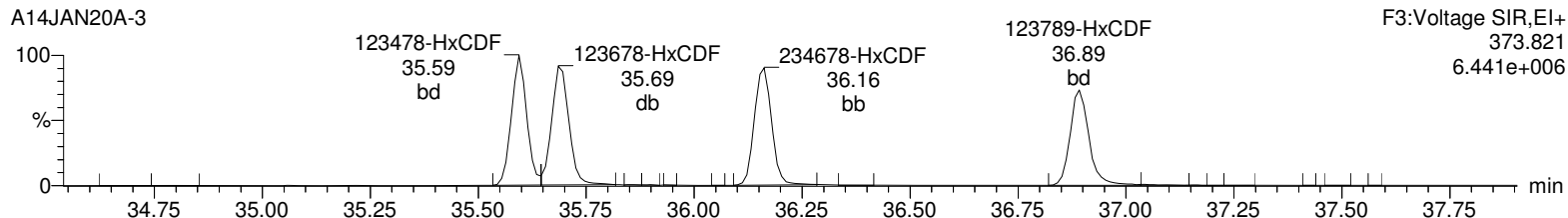
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

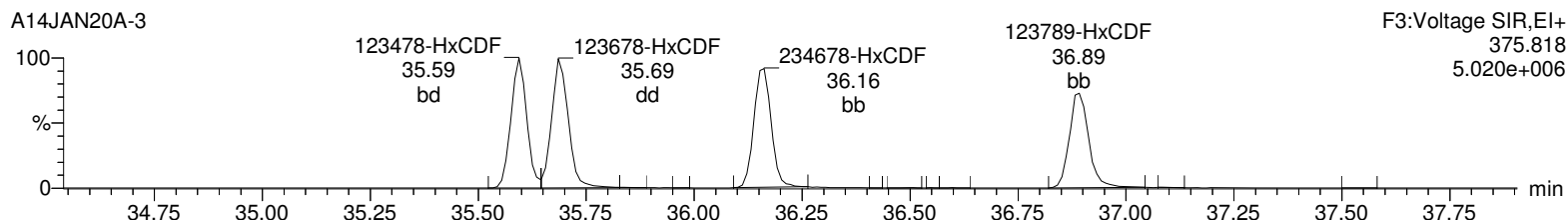
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

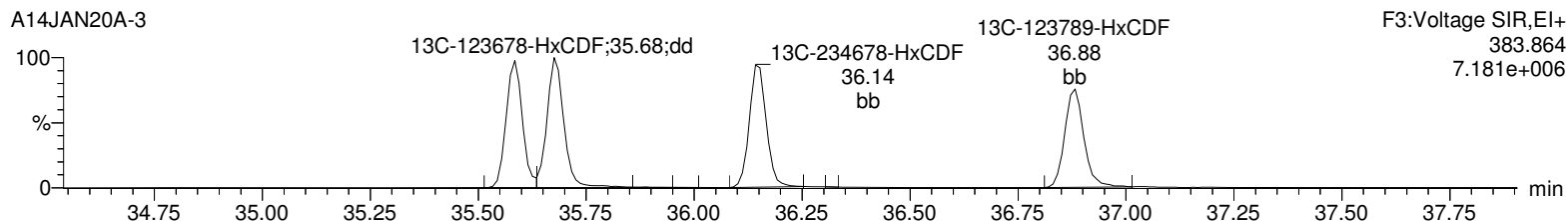
Total-hexafurans



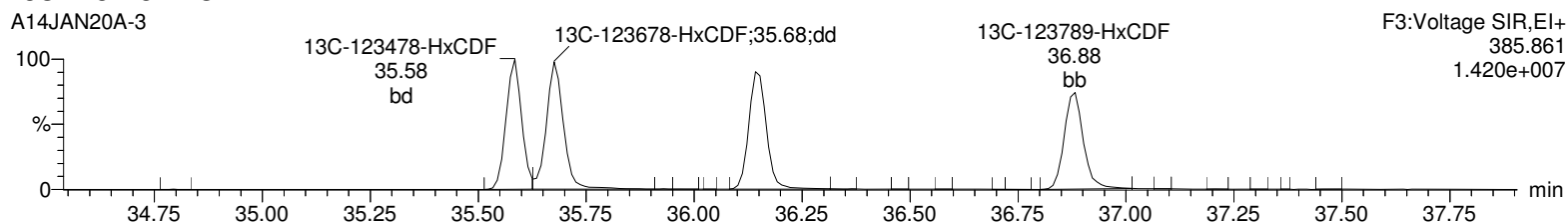
Total-hexafurans



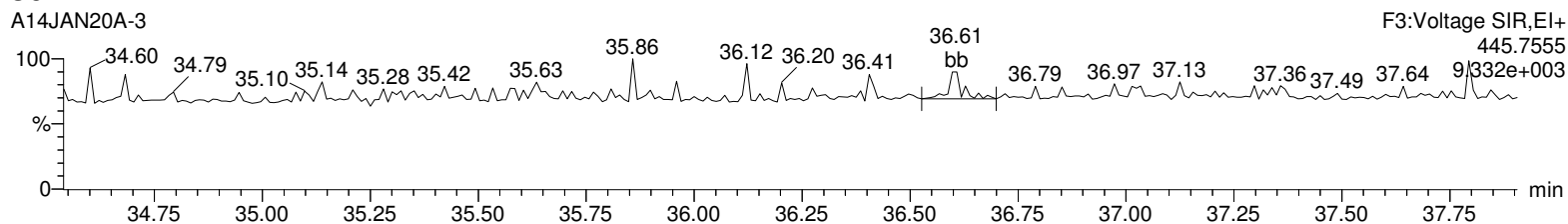
13C-123478-HxCDF



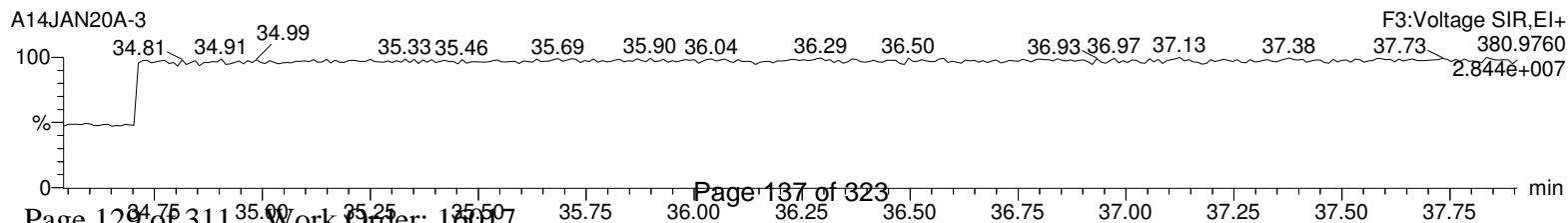
13C-123478-HxCDF



OcDPE



Lock Mass F3



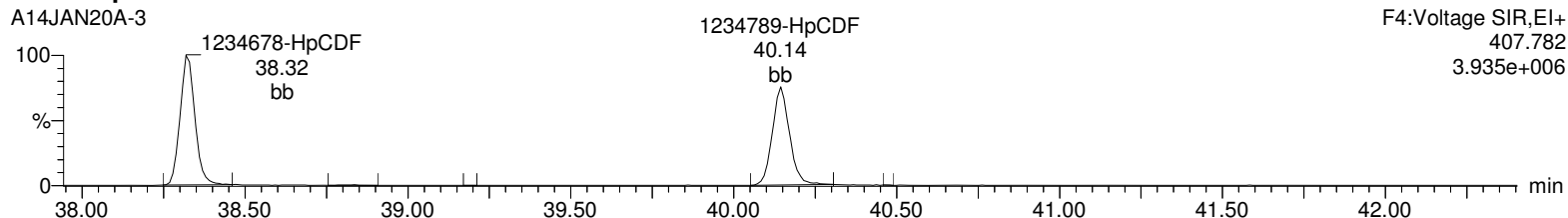
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

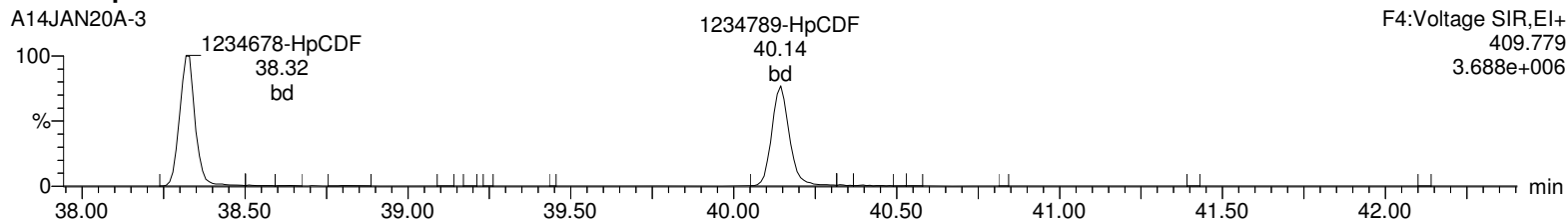
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

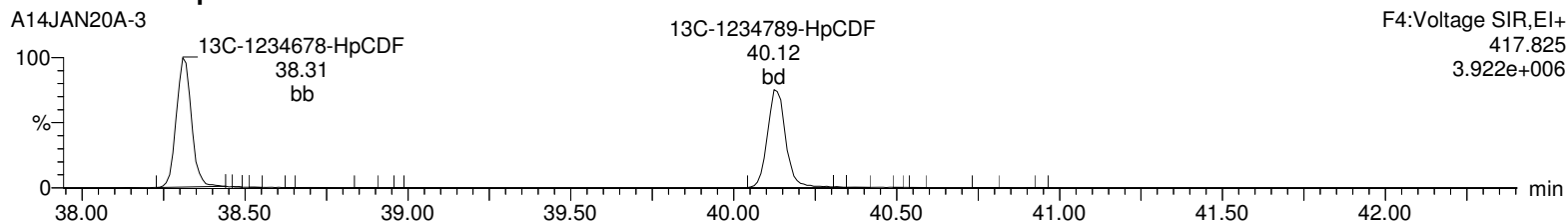
Total-heptafurans



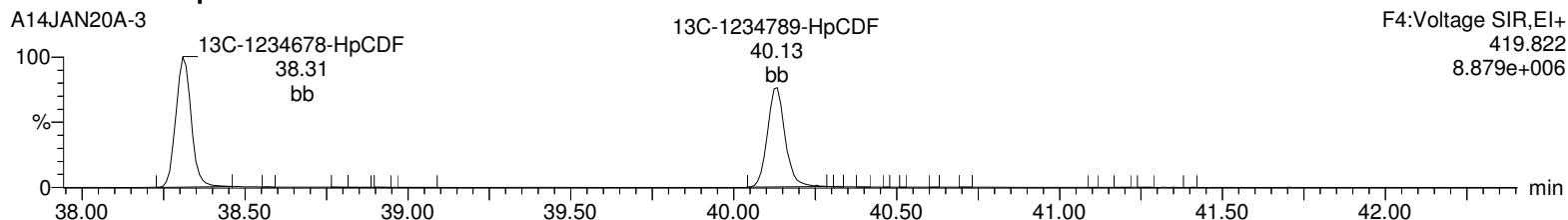
Total-heptafurans



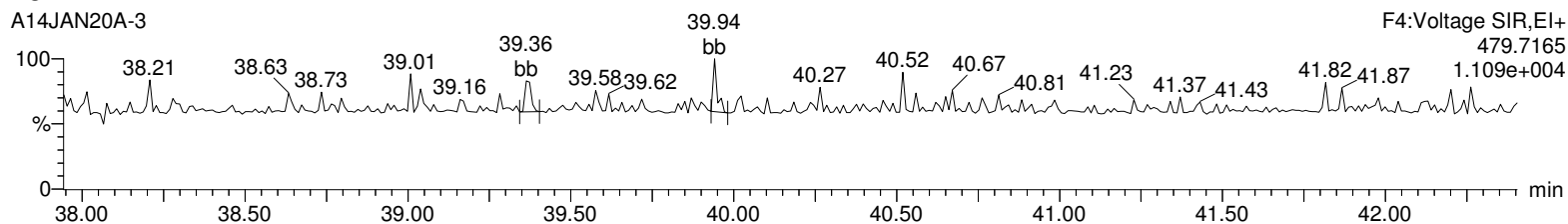
13C-1234678-HpCDF



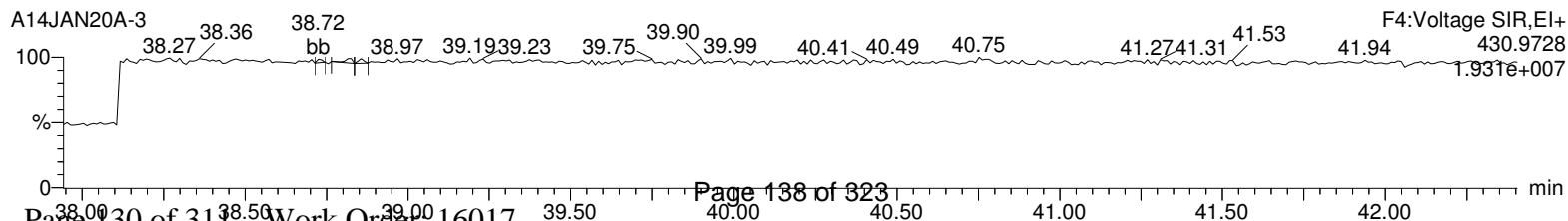
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A14JAN20A.qld

Last Altered: Wednesday, January 15, 2020 08:38:51 Eastern Standard Time

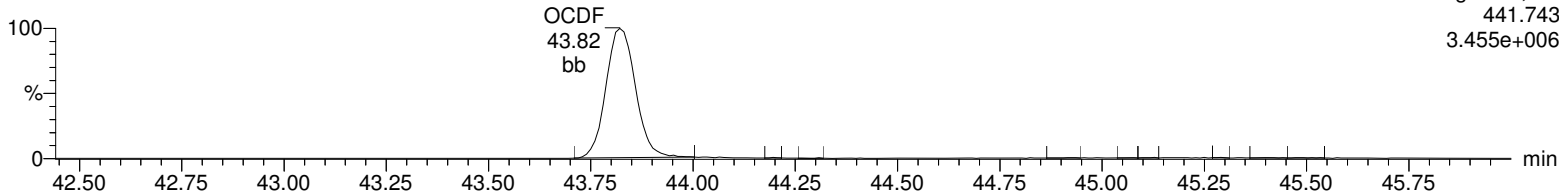
Printed: Wednesday, January 15, 2020 08:39:41 Eastern Standard Time

Name: A14JAN20A-3, Date: 14-Jan-2020, Time: 16:59:28, ID: 12025722-1 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MJC

OCDF

A14JAN20A-3

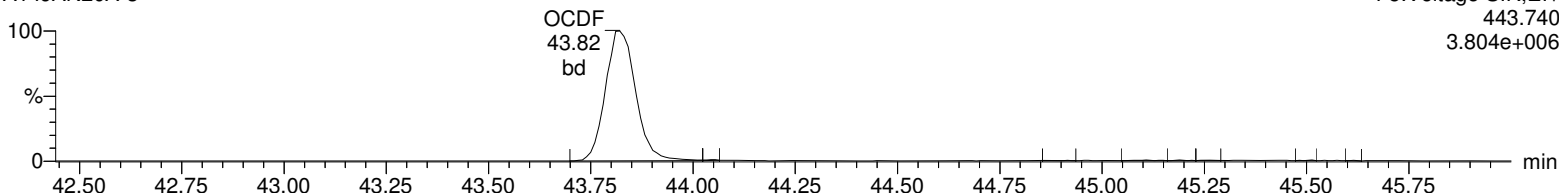
F5:Voltage SIR,EI+
441.743
3.455e+006



OCDF

A14JAN20A-3

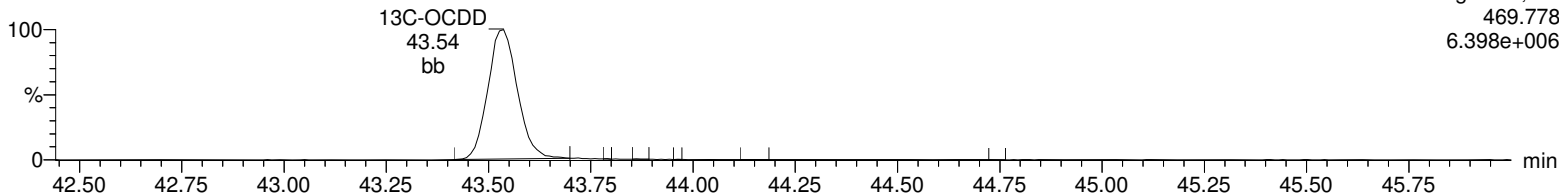
F5:Voltage SIR,EI+
443.740
3.804e+006



13C-OCDD

A14JAN20A-3

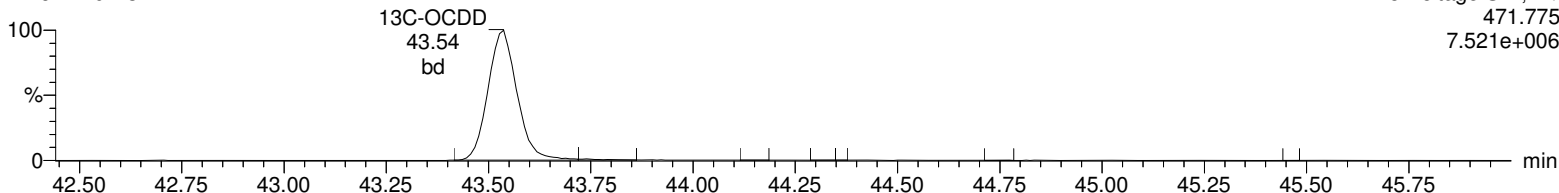
F5:Voltage SIR,EI+
469.778
6.398e+006



13C-OCDD

A14JAN20A-3

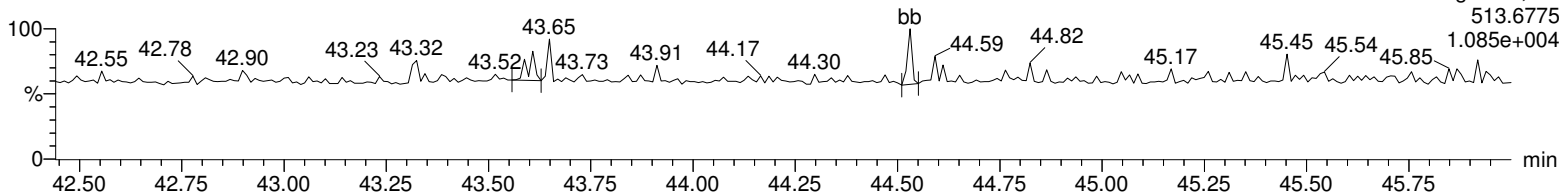
F5:Voltage SIR,EI+
471.775
7.521e+006



DeDPE

A14JAN20A-3

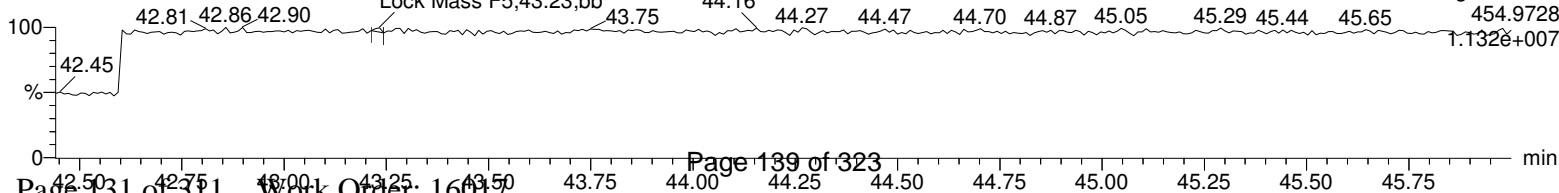
F5:Voltage SIR,EI+
513.6775
1.085e+004



Lock Mass F5

A14JAN20A-3

F5:Voltage SIR,EI+
454.9728
1.132e+007



Logbooks

Prep Logbook

3520C Aqueous Extraction for Method 1613B

Batch ID: 42776 **Verified by:** _____
Analyst: Jonathan Shea **Lab SOP:** CF-OA-E-002 REV# 15
Method: SW846 3520C **Instrument:** Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
12025720 MB	06-JAN-2020 11:55	1400	400	1000	5	40			WD200103 N -01	
12025720 MB	06-JAN-2020 11:55	1400	400	1000	5	40			.05 ng/uL WD200103 N -01	
12025721 LCS	06-JAN-2020 11:55	1400	400	1000	5	40	40	WD200102 -02	.05 ng/uL WD200103 N -01	
12025721 LCS	06-JAN-2020 11:55	1400	400	1000	5	40	40	WD200102 -02	.05 ng/uL WD200103 N -01	
12025722 LCSD	06-JAN-2020 11:55	1400	400	1000	5	40	40	WD200102 -02	.05 ng/uL WD200103 N -01	
12025722 LCSD	06-JAN-2020 11:55	1400	400	1000	5	40	40	WD200102 -02	.05 ng/uL WD200103 N -01	
15974001	06-JAN-2020 11:55	1390	414.9	975.1	7	40		.005 ng/uL WD200103 N -01	.05 ng/uL WD200103 N -01	
15974002	06-JAN-2020 11:55	1397.1	417.1	980	7	40		.05 ng/uL WD200103 N -01	.05 ng/uL WD200103 N -01	
15974003	06-JAN-2020 11:55	1386.7	419	967.7	7	40		.05 ng/uL WD200103 N -01	.05 ng/uL WD200103 N -01	
15974004	06-JAN-2020 11:55	1389	411.5	977.5	7	40		.05 ng/uL WD200103 N -01	.05 ng/uL WD200103 N -01	
16009001	06-JAN-2020 11:55	1401.7	416.9	984.8	7	40		.05 ng/uL WD200103 N -01	.05 ng/uL WD200103 N -01	
16011001	06-JAN-2020 11:55	1378.7	410.4	968.3	7	40		.05 ng/uL WD200106 N -01	.05 ng/uL WD200106 N -01	
16014001	06-JAN-2020 11:55	1360.2	510.4	849.8	7	40		.05 ng/uL WD200106 N -01	.05 ng/uL WD200106 N -01	
16017001	06-JAN-2020 11:55	1547.4	507.3	1040.1	7	40		.05 ng/uL WD200106 N -01	.05 ng/uL WD200106 N -01	
16017002	06-JAN-2020 11:55	1554.6	495.3	1059.3	7	40		.05 ng/uL WD200106 N -01	.05 ng/uL WD200106 N -01	
16017003	06-JAN-2020 11:55	1573.2	510.6	1062.6	7	40		.05 ng/uL WD200106 N -01	.05 ng/uL WD200106 N -01	

Prep Logbook

Batch ID: 42776 Verified by: _____
Analyst: Jonathan Shea
Method: SW846 3520C

Lab SOP: CF-OA-E-002 REV# 15
Instrument: Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
16018001	06-JAN-2020 11:55	1369.1	409.2	959.9	7	40			WD200106 N -01	
16018002	06-JAN-2020 11:55	1328.6	407.8	920.8	7	40			.05 ng/uL WD200106 N -01	
16020001	06-JAN-2020 11:55	1421	447.2	973.8	12	40			.05 ng/uL WD200106 N -01	
16021001	06-JAN-2020 11:55	1360.8	476.6	884.2	7	40			.05 ng/uL WD200106 N -01	
16025003	06-JAN-2020 11:55	1448.2	449.3	998.9	7	40			.05 ng/uL WD200106 N -01	

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Concentrated Sulfuric Acid	1151147-A.2	1	mL	Finish Time: 07-JAN-20 08:05:00
REAGENT		Salt	1152107	10	g	
REAGENT		Acetone	1152699-A.1	100	uL	
REAGENT		Methylene Chloride	1152874-A	250	mL	

Prep Logbook

Cleanup Procedure for Liquids

Batch ID: 42777
 Analyst: Mike Medwedeff
 Verified by: _____

Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
12025720 MB	07-JAN-2020 10:00	AB Silica	188	100	20	WD200103-03
		Florisl				.01 ng/uL
12025720 MB	07-JAN-2020 10:00	AB Silica	188	100	20	WD200103-03
		Florisl				.01 ng/uL
12025721 LCS	07-JAN-2020 10:00	AB Silica	30	100	20	WD200103-03
		Florisl				.01 ng/uL
12025721 LCS	07-JAN-2020 10:00	AB Silica	30	100	20	WD200103-03
		Florisl				.01 ng/uL
12025722 LCSD	07-JAN-2020 10:00	AB Silica	178	100	20	WD200103-03
		Florisl				.01 ng/uL
12025722 LCSD	07-JAN-2020 10:00	AB Silica	178	100	20	WD200103-03
		Florisl				.01 ng/uL
15974001	07-JAN-2020 10:00	AB Silica	92	100	20	WD200103-03
		Florisl				.01 ng/uL
15974002	07-JAN-2020 10:00	AB Silica	156	100	20	WD200103-03
		Florisl				.01 ng/uL
15974003	07-JAN-2020 10:00	AB Silica	40	100	20	WD200103-03
		Florisl				.01 ng/uL
15974004	07-JAN-2020 10:00	AB Silica	43	100	20	WD200103-03
		Florisl				.01 ng/uL
16009001	07-JAN-2020 10:00	AB Silica	50	100	20	WD200103-03
		Florisl				.01 ng/uL
16011001	07-JAN-2020 10:00	AB Silica	88	100	20	WD200103-03
		Florisl				.01 ng/uL
16014001	07-JAN-2020 10:00	AB Silica	73	100	20	WD200103-03
		Florisl				.01 ng/uL
16017001	07-JAN-2020 10:00	AB Silica	77	100	20	WD200103-03
		Florisl				.01 ng/uL
16017002	07-JAN-2020 10:00	AB Silica	97	100	20	WD200103-03
		Florisl				.01 ng/uL
16017003	07-JAN-2020 10:00	AB Silica	14	100	20	WD200103-03
		Florisl				.01 ng/uL
16018001	07-JAN-2020 10:00	AB Silica	69	100	20	WD200103-03
		Florisl				.01 ng/uL
16018002	07-JAN-2020 10:00	AB Silica	42	100	20	WD200103-03
		Florisl				.01 ng/uL
16020001	07-JAN-2020 10:00	AB Silica	54	100	20	WD200103-03
		Florisl				.01 ng/uL
16021001	07-JAN-2020 10:00	AB Silica	29	100	20	WD200103-03
		Florisl				.01 ng/uL
16025003	07-JAN-2020 10:00	AB Silica	60	100	20	WD200103-03
		Florisl				.01 ng/uL

Comments:

Type	Sample Id	Description	Serial Number	Spike Amt	Units
REAGENT		Activated Florisl	1149228	1	g
REAGENT		Silica Gel	1151237-A	2	g

Prep Logbook

Batch ID: 42777 Verified by: _____
 Analyst: Mike Medwedeff

Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
REAGENT			1151783-A.4	1	each	
REAGENT			1152107	1	g	
REAGENT			1152566-C	3	g	
REAGENT			1152569	7	g	
REAGENT			1152874-A	100	mL	
REAGENT			1153071-A.2	130	mL	
REAGENT			1153073-A.3	130	mL	
REAGENT			1153075-A.4	130	mL	

Prep Logbook

Method 1613B HRMS Aqueous Analysis

Batch ID: 42781 Verified by: _____
Analyst: Matt Cash
Method: EPA Method 1613B
Lab SOP: CF-OA-E-002 REV# 15
Instrument: Waters Autospec Premier High-Resolution GC/MS

Sample ID	Start Run Date	Final Volume (uL)	Prep Factor (Final Volume /Aliquot) (uL/uL)	Dilution	Dilution Type	Injection Volume (uL)	Vial Prep Date
12025721 LCS	14-JAN-2020 16:12	20	2.00E-05	1	Internal	1	07-JAN-2020
12025722 LCSD	14-JAN-2020 16:59	20	2.00E-05	1	Internal	1	07-JAN-2020
12025720 MB	14-JAN-2020 17:47	20	2.00E-05	1	Internal	1	07-JAN-2020
16017001	15-JAN-2020 12:16	20	1.92E-05	1	Internal	1	07-JAN-2020
16017002	15-JAN-2020 13:04	20	1.89E-05	1	Internal	1	07-JAN-2020
16017003	15-JAN-2020 13:52	20	1.88E-05	1	Internal	1	07-JAN-2020

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		8290 Injection Standard	WD2000107-03	20	uL	
STANDARD		8290 Injection Standard	WD2000107-03	20	uL	

Initial Calibration Data

Runlog Information

16131CA

Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
• A08JUL19A-1	HRP750_2	08-JUL-2019 09:40	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYQ	1 uL
• A08JUL19A-2	HRP750_2	08-JUL-2019 10:28	A08JUL19A	Matt Cash		SB DIBLK2M	1 uL
• A08JUL19A-3	HRP750_2	08-JUL-2019 11:16	A08JUL19A	Matt Cash		CS0.5 UD190207-01	1 uL
• A08JUL19A-4	HRP750_2	08-JUL-2019 12:03	A08JUL19A	Matt Cash		CS1 UD190207-02 CS143	1 uL
• A08JUL19A-5	HRP750_2	08-JUL-2019 12:51	A08JUL19A	Matt Cash		CS2 UD190207-03 CS243	1 uL
• A08JUL19A-6	HRP750_2	08-JUL-2019 13:39	A08JUL19A	Matt Cash		CS3 UD190207-04 CS3KG	1 uL
• A08JUL19A-7	HRP750_2	08-JUL-2019 14:27	A08JUL19A	Matt Cash		CS4 UD190207-05 CS442	1 uL
• A08JUL19A-8	HRP750_2	08-JUL-2019 15:15	A08JUL19A	Matt Cash		CS5 UD190207-06 CS543	1 uL
• A08JUL19A-9	HRP750_2	08-JUL-2019 16:03	A08JUL19A	Matt Cash		SB DIBLK2N	1 uL
• A08JUL19A-10	HRP750_2	08-JUL-2019 16:51	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYR	1 uL

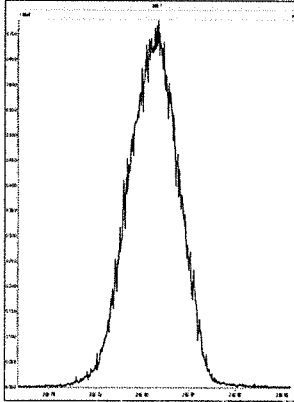
Experiment Calibration Report

MassLynx 4.1

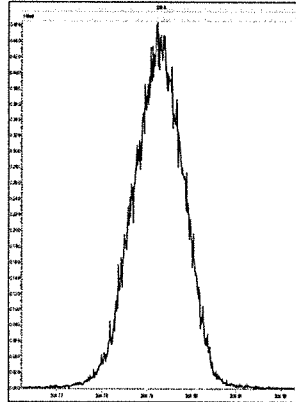
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 08, 2019 09:38:33 Eastern Standard Time

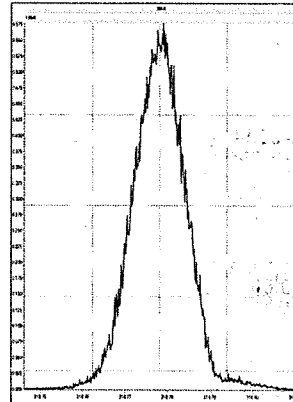
M 292.9824 R 12382



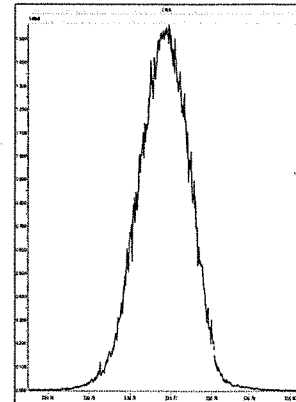
M 304.9824 R 11789



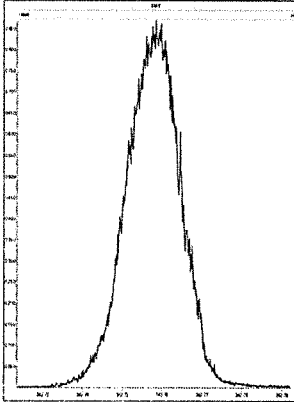
M 318.9792 R 11905



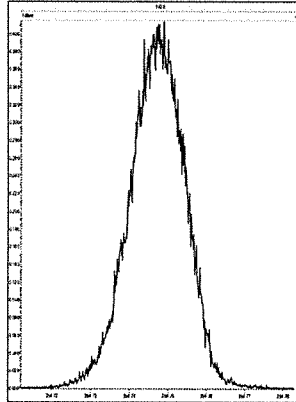
M 330.9792 R 11572



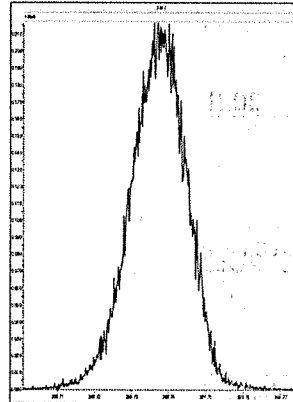
M 342.9792 R 10961



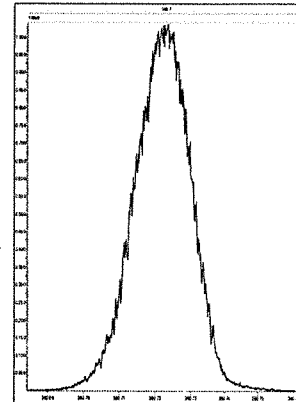
M 354.9792 R 10868



M 366.9792 R 10506



M 380.9760 R 10417



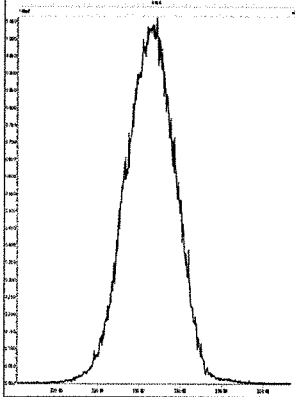
Experiment Calibration Report

MassLynx 4.1

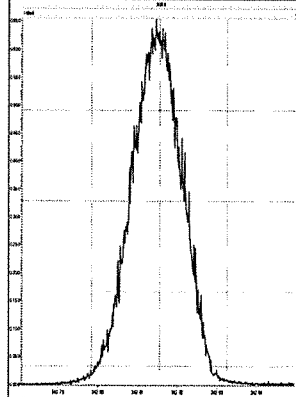
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Printed: Monday, July 08, 2019 09:38:55 Eastern Standard Time

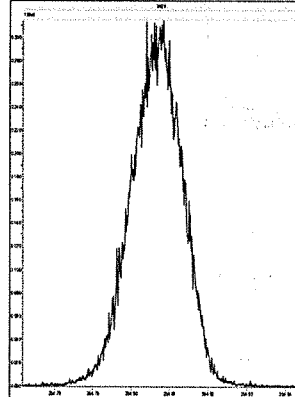
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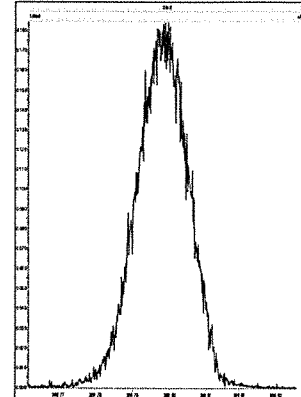
M 342.9792 R 11959



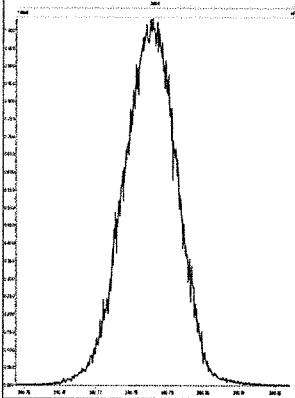
M 354.9792 R 11683



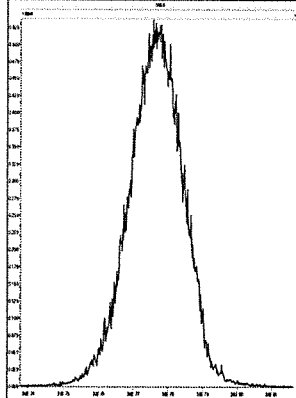
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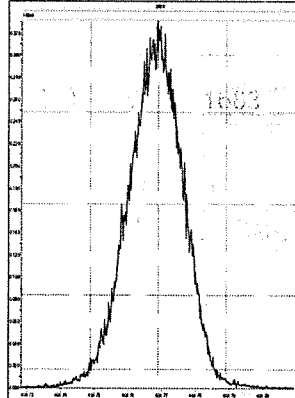
M 380.9760 R 11158



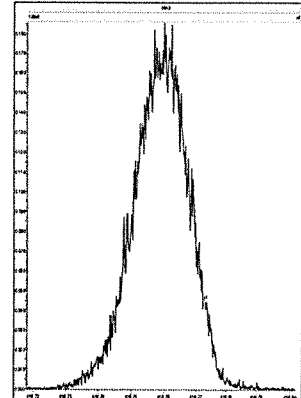
M 392.9760 R 10961



M 404.9760 R 10732



M 416.9760 R 10594



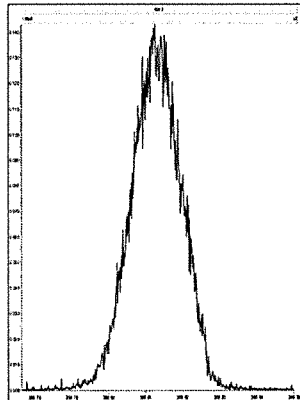
Experiment Calibration Report

MassLynx 4.1

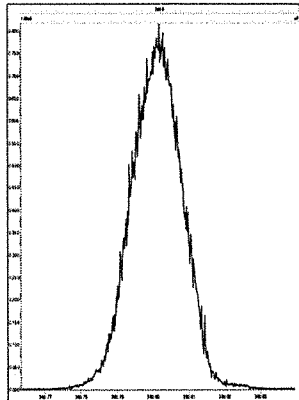
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Printed: Monday, July 08, 2019 09:39:18 Eastern Standard Time

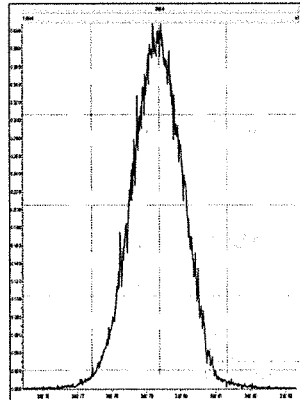
M 366.9792 R 12254



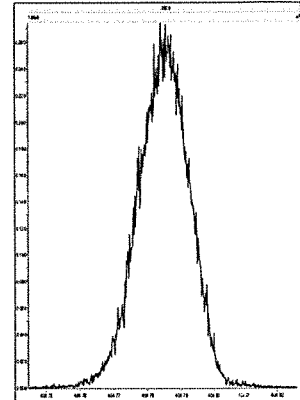
M 380.9760 R 12379



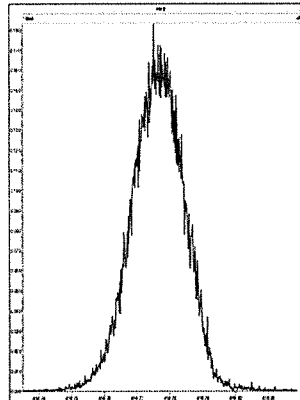
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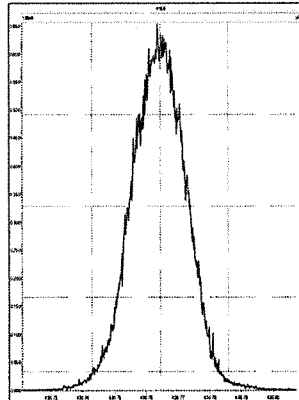
M 404.9760 R 11740



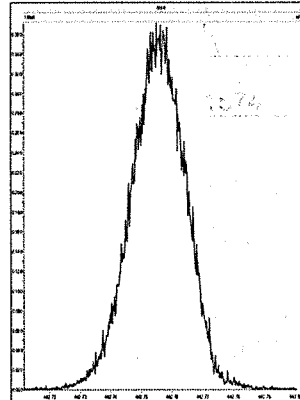
M 416.9760 R 11625



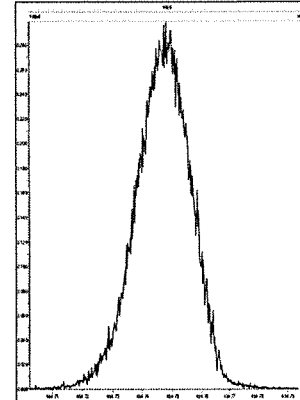
M 430.9728 R 10869



M 442.9728 R 11466



M 454.9728 R 10730



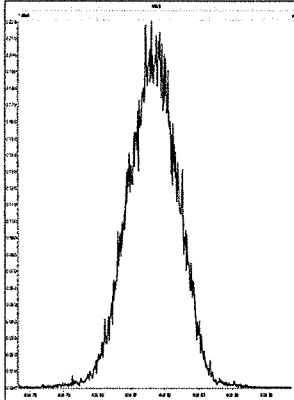
Experiment Calibration Report

MassLynx 4.1

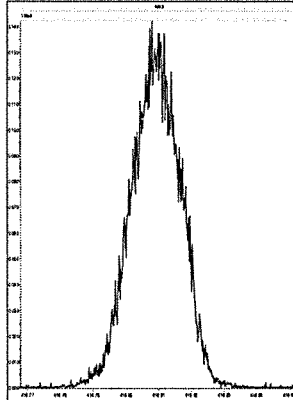
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Printed: Monday, July 08, 2019 09:39:46 Eastern Standard Time

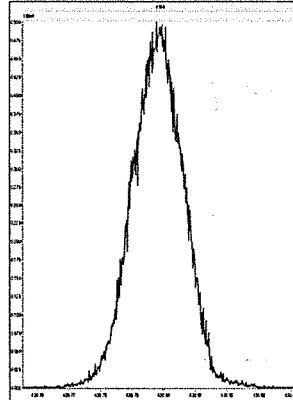
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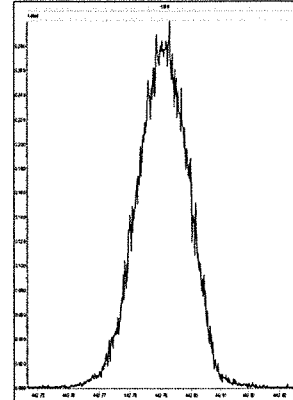
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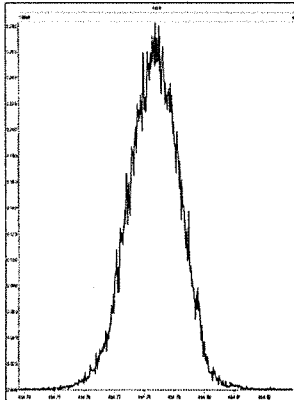
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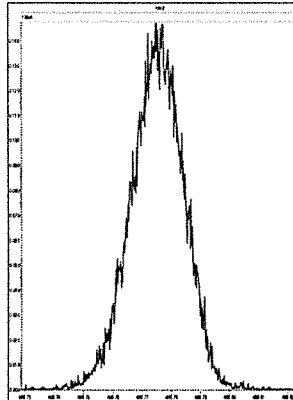
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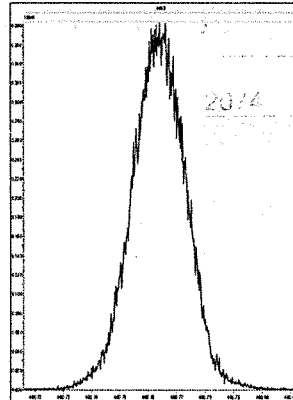
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M 466.9728 R 11160



M 480.9696 R 10682



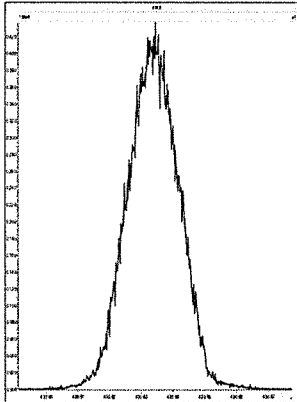
Experiment Calibration Report

MassLynx 4.1

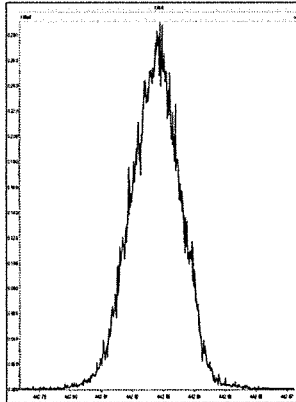
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Printed: Monday, July 08, 2019 09:40:08 Eastern Standard Time

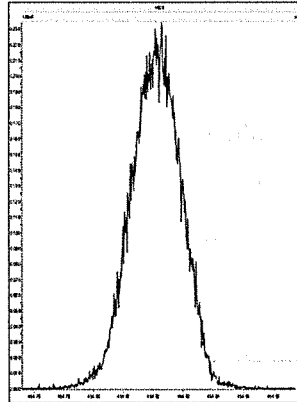
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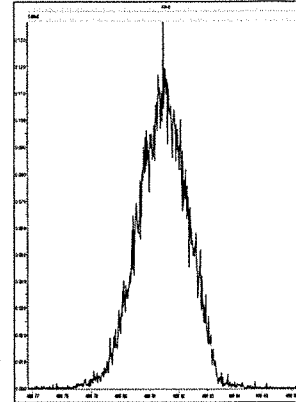
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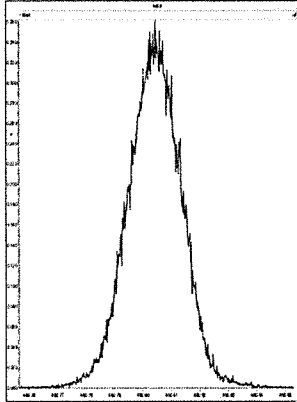
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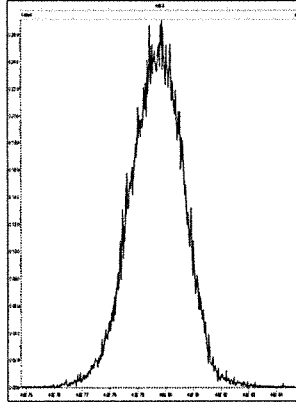
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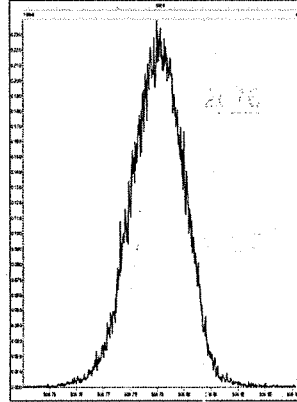
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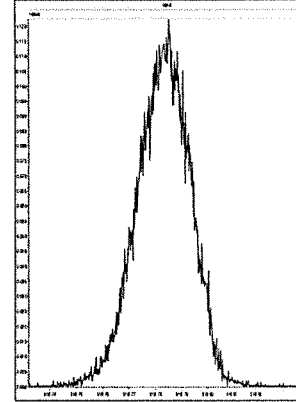
M 492.9696 R 11159



M 504.9696 R 11737



M 516.9697 R 11418

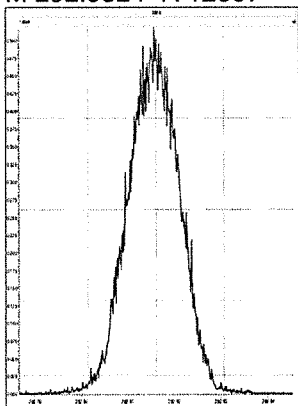


Resolution Check Report

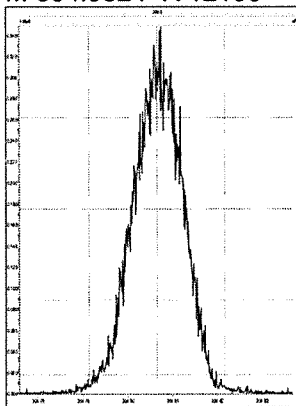
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

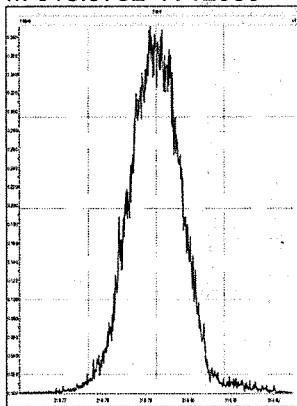
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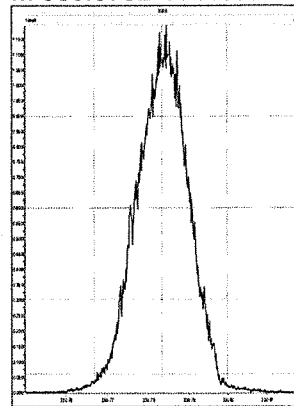
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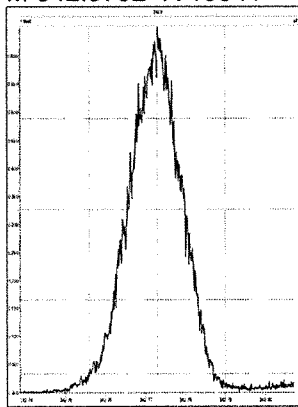
M 318.9792 R 12059



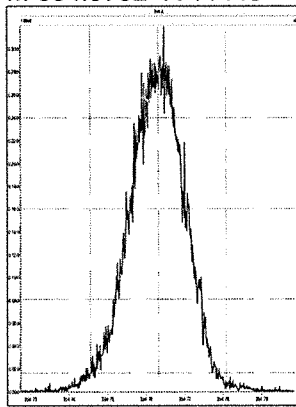
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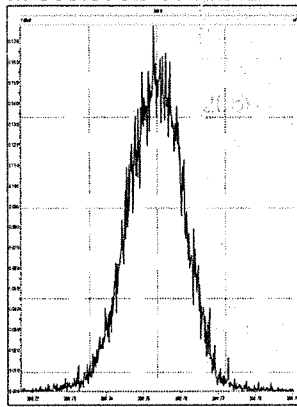
M 342.9792 R 10941



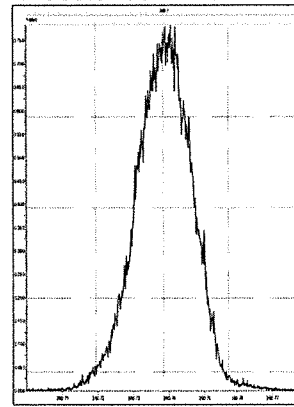
M 354.9792 R 11443



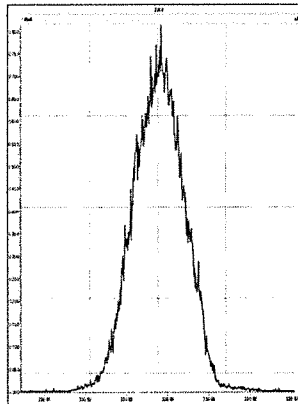
M 366.9792 R 11242



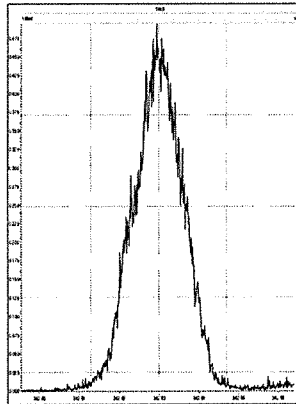
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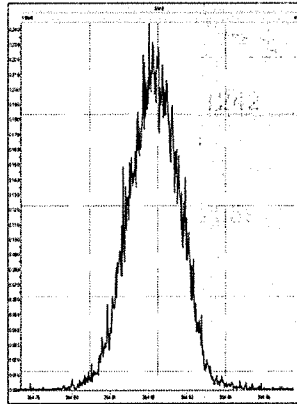
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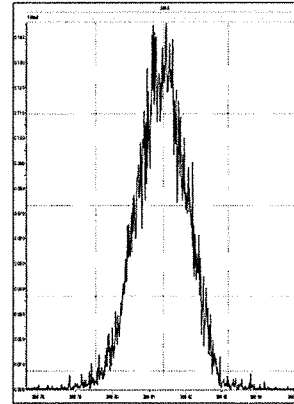
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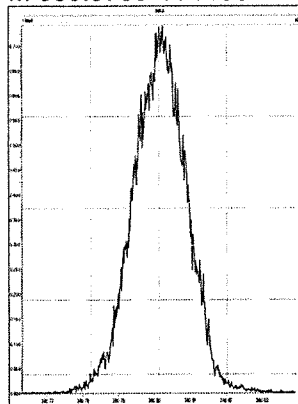
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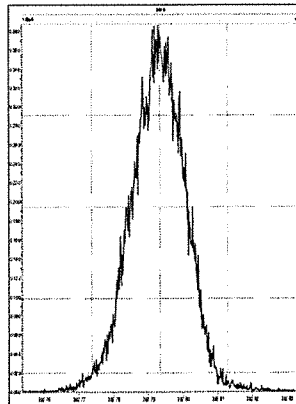
M 366.9792 R 12530



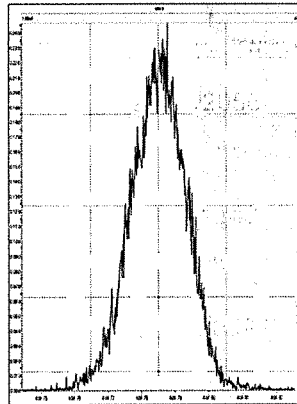
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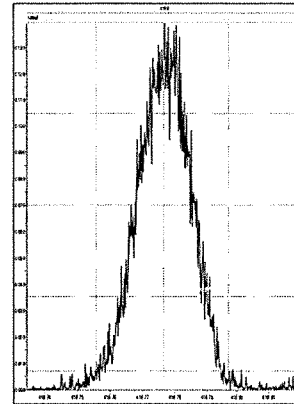
M 392.9760 R 11441



M 404.9760 R 11289



M 416.9760 R 11443

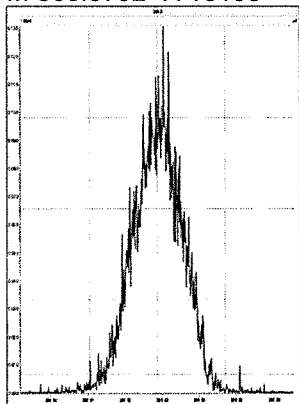


Resolution Check Report

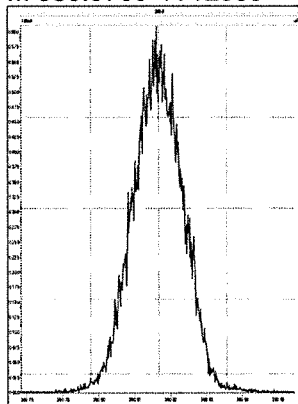
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

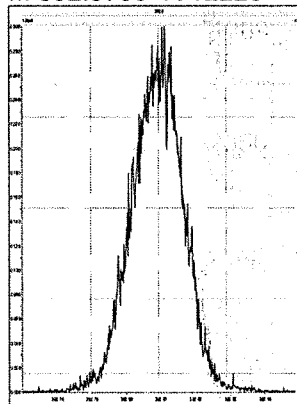
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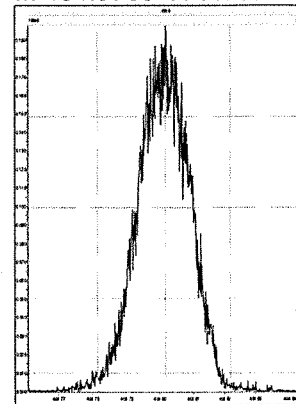
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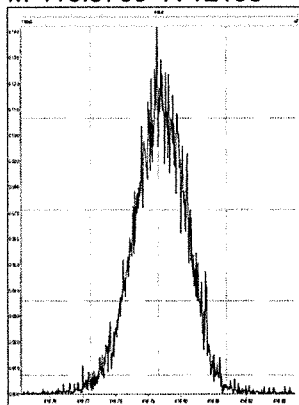
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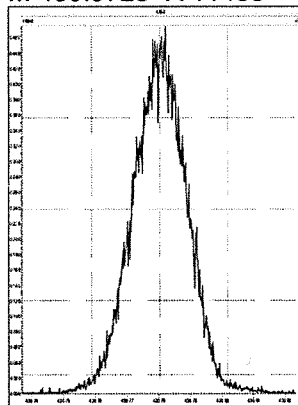
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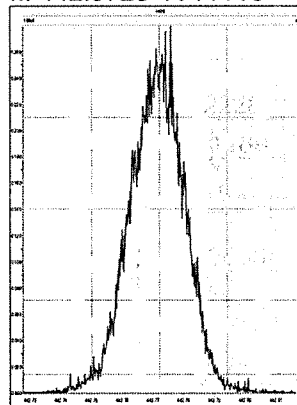
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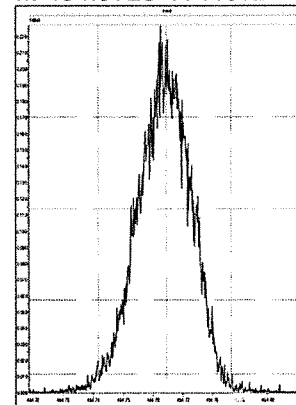
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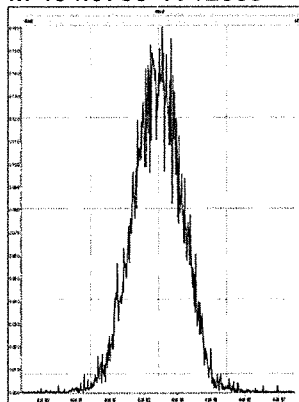
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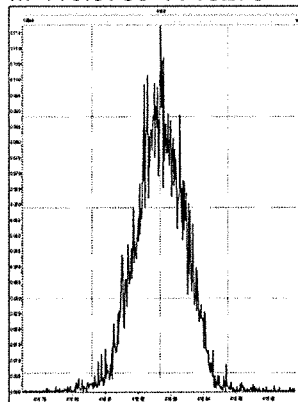
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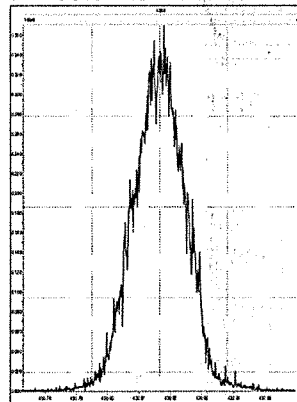
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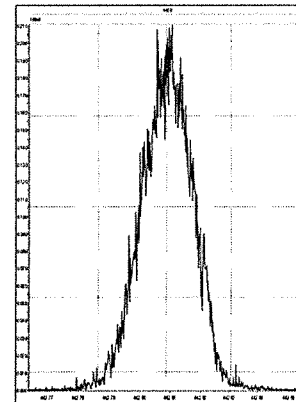
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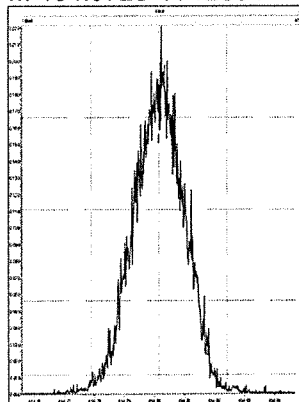
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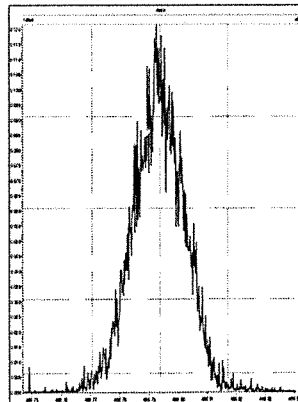
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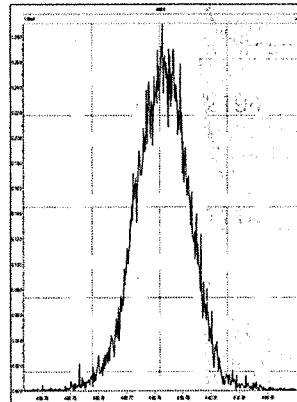
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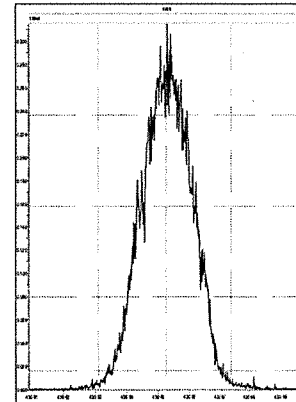
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M 480.9696 R 11467



M 430.9728 R 11914

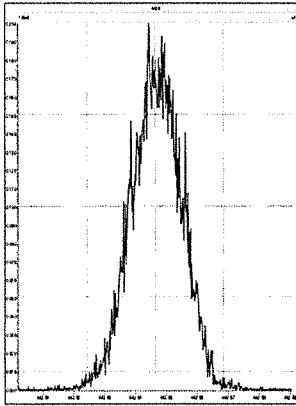


Resolution Check Report

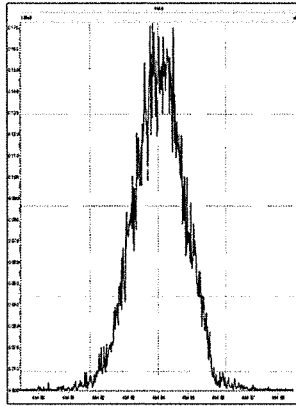
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

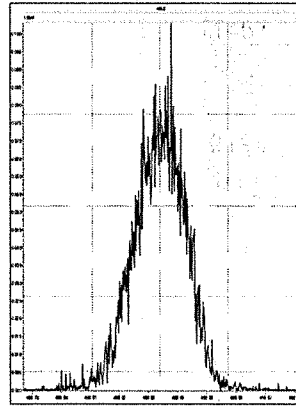
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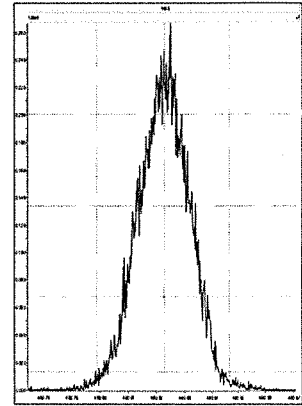
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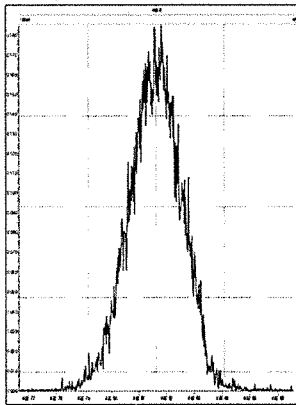
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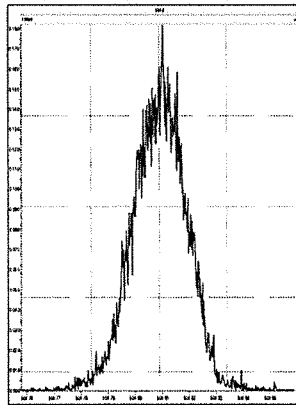
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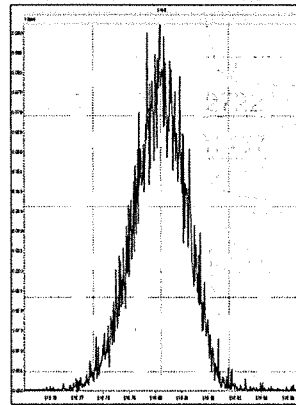
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M 504.9696 R 11371



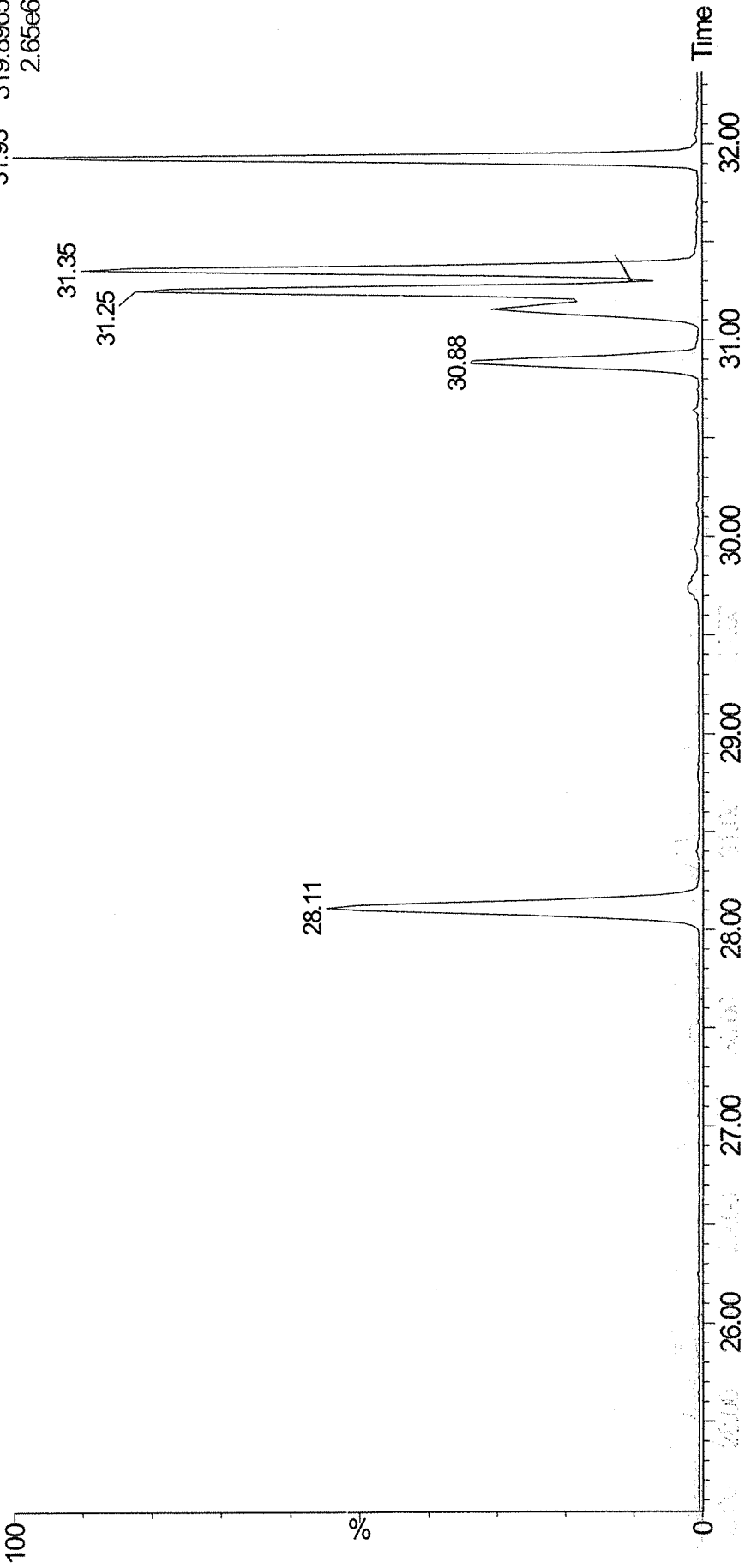
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COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYQ
A08JUL19A-1

HRP750_2

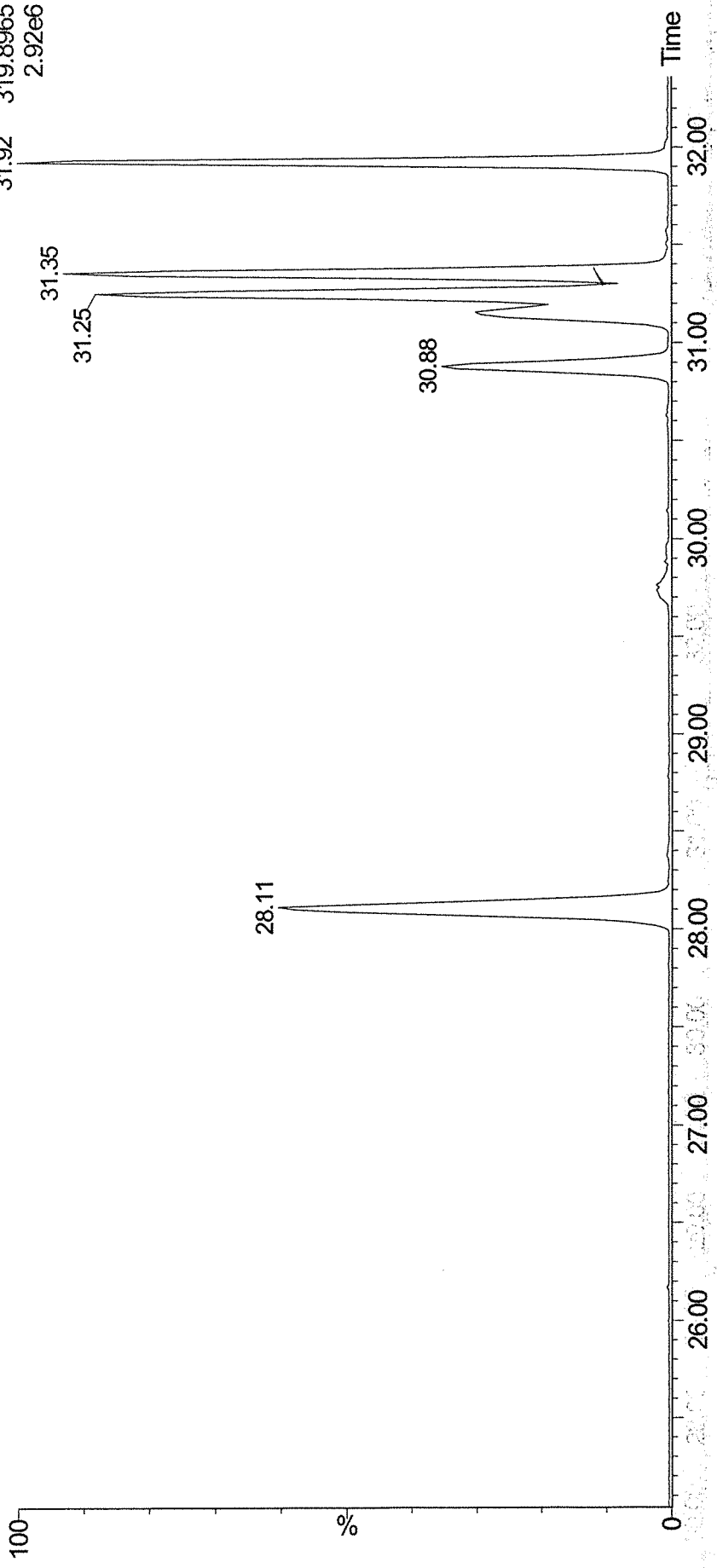
08-Jul-2019 09:40:54
1: Voltage SIR 13 Channels EI+
31.93 319.8965
2.65e6



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYR
A08JUL19A-10 ✓

HRP750_2

08-Jul-2019 16:51:30
1: Voltage SIR 13 Channels EI+
31.92 319.8965
2.92e6



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methodb\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.38
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.48
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.93
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.32
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

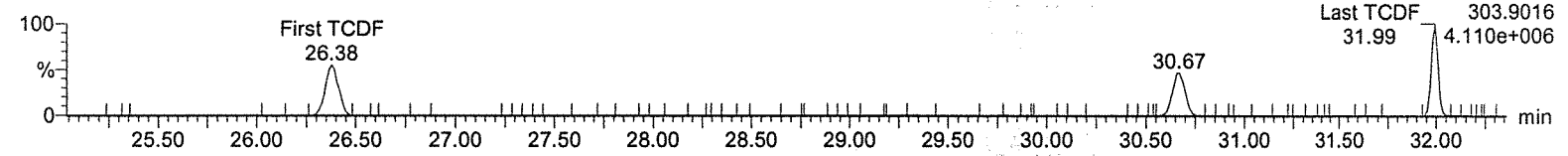
Method: C:\MassLynx\Default.pro\Methdb\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

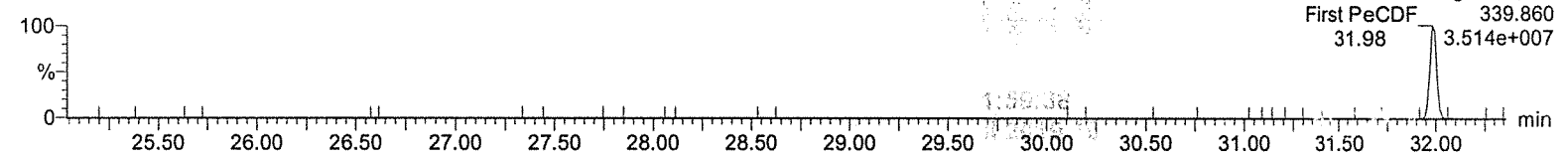
First TCDF

A08JUL19A-1



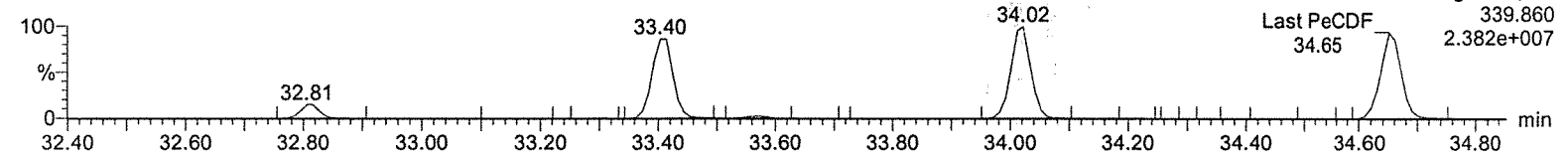
First PeCDF

A08JUL19A-1



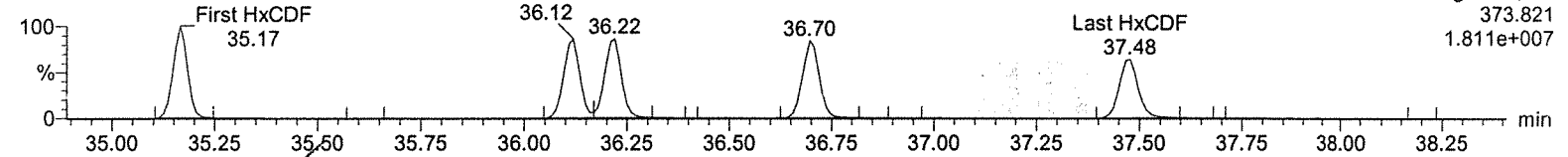
Last PeCDF

A08JUL19A-1



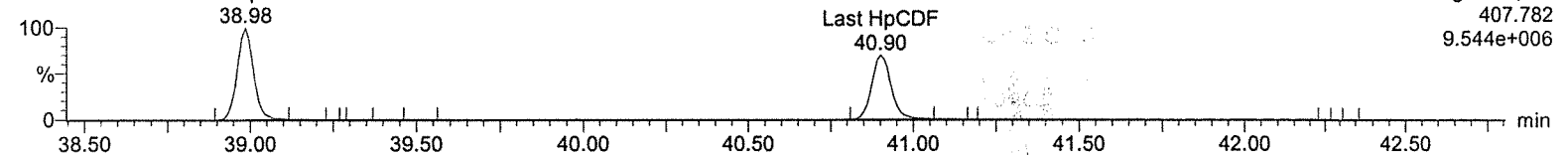
First HxCDF

A08JUL19A-1



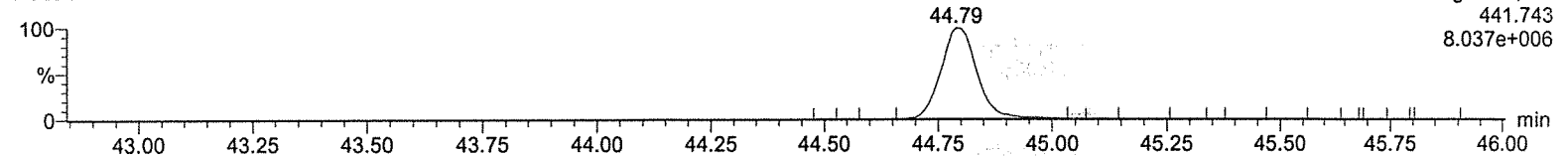
First HpCDF

A08JUL19A-1



OCDF

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

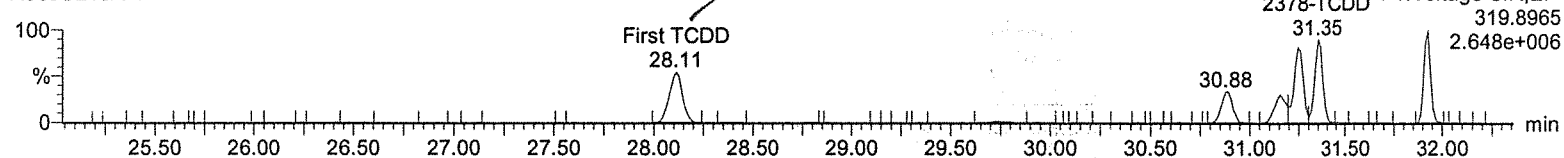
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

23209 JUL 19

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

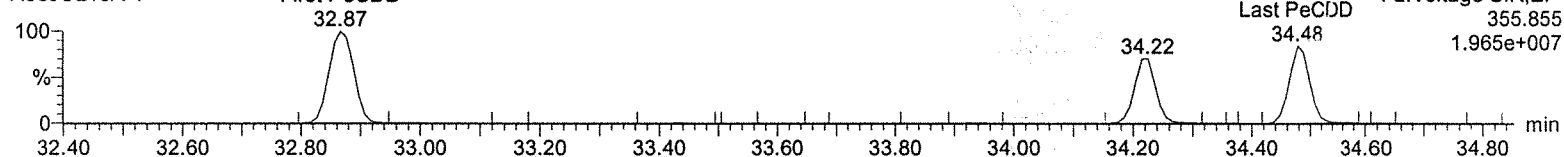
First TCDD

A08JUL19A-1



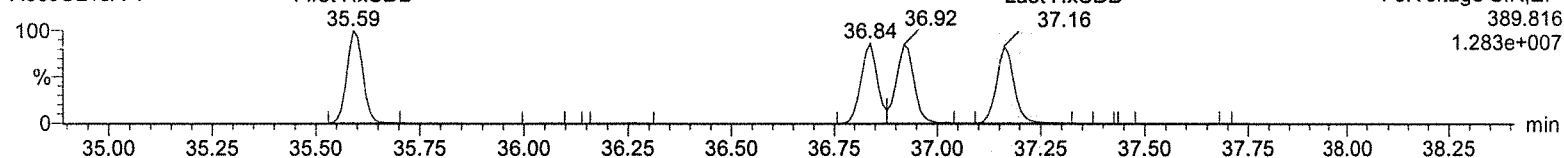
First PeCDD

A08JUL19A-1



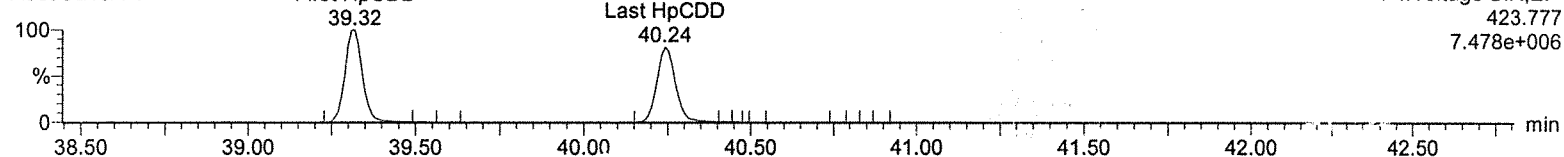
First HxCDD

A08JUL19A-1



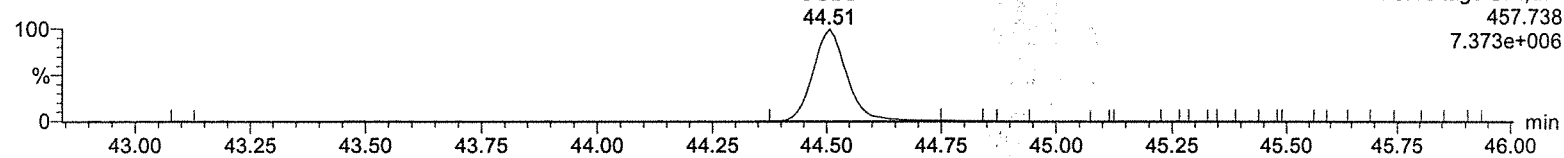
First HpCDD

A08JUL19A-1



OCDD

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.37
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.47
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.92
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.31
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

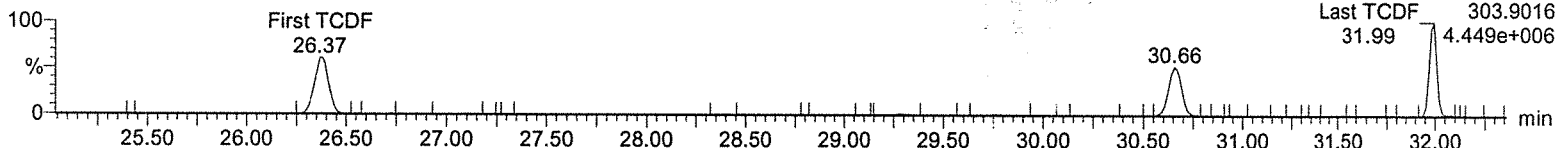
Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

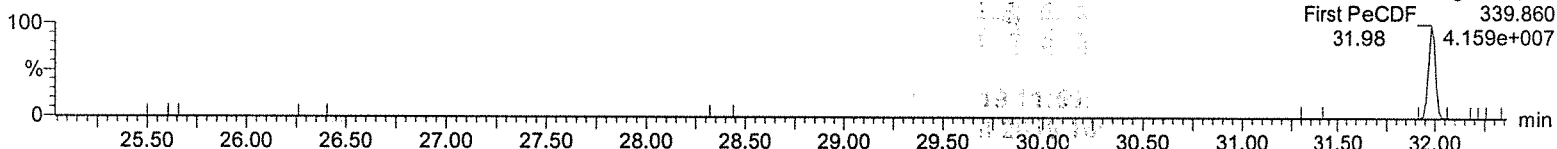
First TCDF

A08JUL19A-10



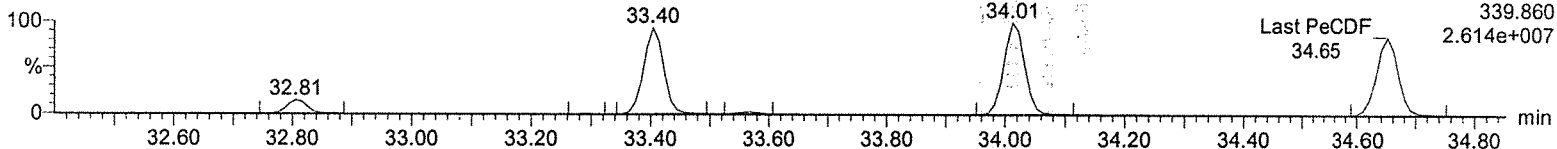
First PeCDF

A08JUL19A-10



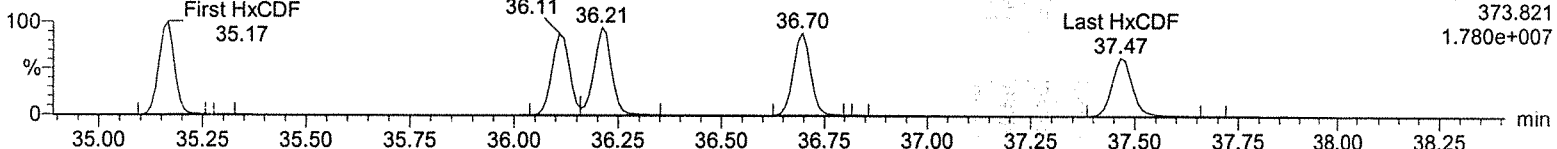
Last PeCDF

A08JUL19A-10



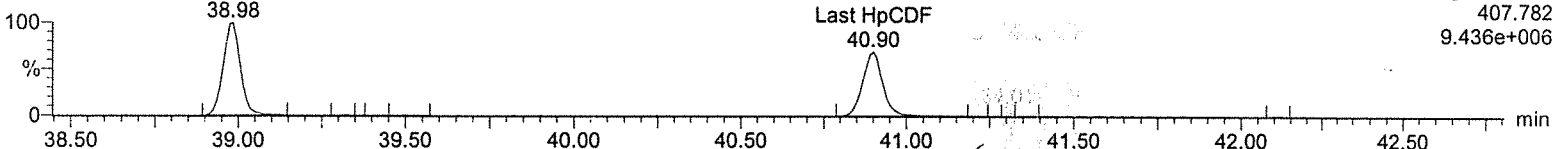
First HxCDF

A08JUL19A-10



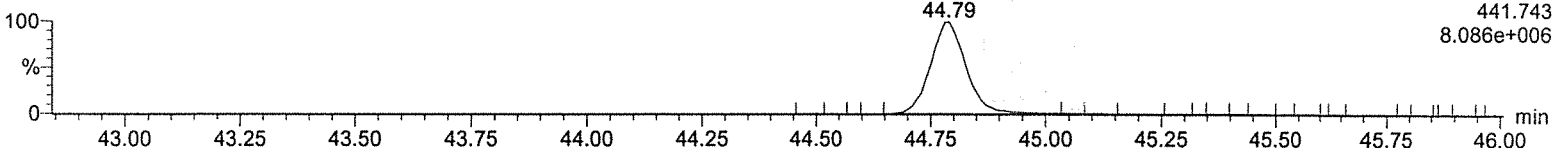
First HpCDF

A08JUL19A-10



OCDF

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

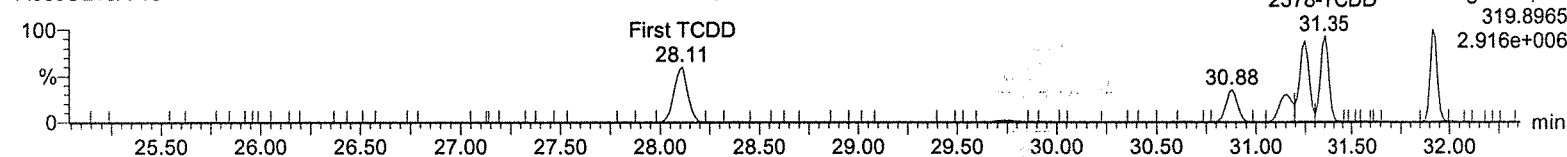
0809 JUL 19

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

LAST

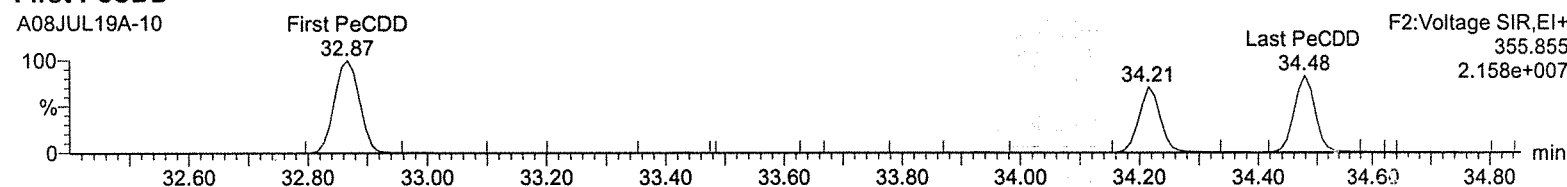
First TCDD

A08JUL19A-10



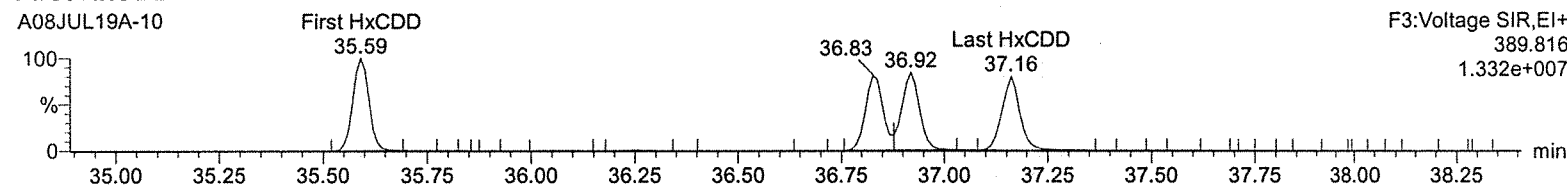
First PeCDD

A08JUL19A-10



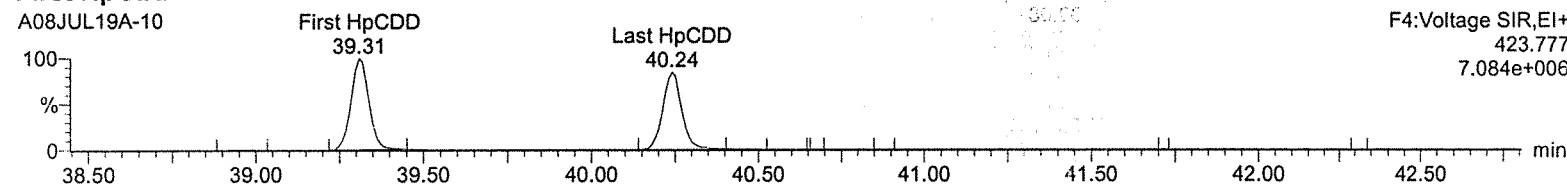
First HxCDD

A08JUL19A-10



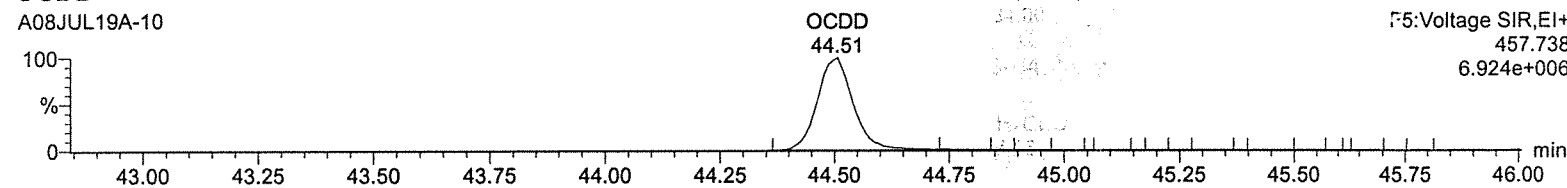
First HpCDD

A08JUL19A-10



OCDD

A08JUL19A-10



Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07_JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Date: 08-Jul-2019, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

	Name	ICAL RRF
1	2378-TCDD	0.884
2	12378-PeCDD	0.853
3	123478-HxCDD	0.940
4	123678-HxCDD	0.944
5	123789-HxCDD	0.927
6	1234678-HpCDD	1.040
7	OCDD	0.971
8	2378-TCDF	0.978
9	12378-PeCDF	0.945
10	23478-PeCDF	0.987
11	123478-HxCDF	1.087
12	123678-HxCDF	1.041
13	234678-HxCDF	1.136
14	123789-HxCDF	1.061
15	1234678-HpCDF	1.150
16	1234789-HpCDF	1.202
17	OCDF	1.133
18	13C-2378-TCDD	1.128
19	13C-12378-PeCDD	0.751
20	13C-123478-HxCDD	0.896
21	13C-123678-HxCDD	0.986
22	13C-1234678-HpCDD	0.672
23	13C-OCDD	0.642
24	13C-2378-TCDF	1.250
25	13C-12378-PeCDF	1.011
26	13C-23478-PeCDF	1.063
27	13C-123478-HxCDF	1.111
28	13C-123678-HxCDF	1.247
29	13C-234678-HxCDF	1.082
30	13C-123789-HxCDF	0.967
31	13C-1234678-HpCDF	0.870
32	13C-1234789-HpCDF	0.677
33	13C-1234-TCDD	1.000
34	13C-123789-HxCDD	1.000
35	37Cl-2378-TCDD	1.061

Quantify Compound Summary Report **MassLynx 4.1**

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

12 July 19

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36

Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Compound name: 2378-TCDD

Response Factor: 0.884458

RRF SD: 0.0448767, Relative SD: 5.07393

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

$$CS0.5 \text{ RRF} = \frac{(5.2423)(100)}{(2.20124)(0.25)} = 0.952$$

$$\text{RRF SD} = \sqrt{\frac{0.010119}{5}} = 0.04499 \times 100 = 5.09$$

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.36	0.27	0.952	0.884	bd
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.36	0.47	0.823	0.884	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.93	0.852	0.884	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.35	9.94	0.879	0.884	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.31	0.891	0.884	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	205.76	0.910	0.884	bb

Compound name: 12378-PeCDD

Response Factor: 0.853475

RRF SD: 0.0140917, Relative SD: 1.65109

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.21	1.28	0.873	0.853	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.22	2.44	0.834	0.853	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.21	9.86	0.841	0.853	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.21	50.22	0.857	0.853	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.21	199.88	0.853	0.853	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.22	1009.56	0.862	0.853	bb

Compound name: 123478-HxCDD

Response Factor: 0.939643

RRF SD: 0.0292523, Relative SD: 3.11313

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.83	1.22	0.917	0.940	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.84	2.37	0.892	0.940	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.83	10.13	0.952	0.940	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.83	50.56	0.950	0.940	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.84	204.08	0.959	0.940	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.84	1030.90	0.969	0.940	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123678-HxCDD

Response Factor: 0.944066

RRF SD: 0.0242859, Relative SD: 2.57248

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.92	1.21	0.916	0.944	db
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.92	2.46	0.930	0.944	dd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.92	9.76	0.922	0.944	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.92	51.25	0.968	0.944	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.92	203.46	0.960	0.944	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.92	1026.32	0.969	0.944	dd

Compound name: 123789-HxCDD

Response Factor: 0.927099

RRF SD: 0.0305511, Relative SD: 3.29534

Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.15	1.21	0.900	0.927	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.16	2.38	0.881	0.927	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.16	10.00	0.927	0.927	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.16	51.43	0.954	0.927	db
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.16	204.71	0.949	0.927	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.16	1026.76	0.952	0.927	dd

Compound name: 1234678-HpCDD

Response Factor: 1.03994

RRF SD: 0.0299236, Relative SD: 2.87742

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.24	1.23	1.027	1.040	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.25	2.38	0.991	1.040	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.24	10.00	1.040	1.040	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.23	51.50	1.071	1.040	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.25	200.19	1.041	1.040	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.24	1029.04	1.070	1.040	bb

Compound name: OCDD

Response Factor: 0.971418

RRF SD: 0.0232154, Relative SD: 2.38985

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.49	2.48	0.962	0.971	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.49	4.96	0.946	0.971	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: OCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.49	19.47	0.945	0.971	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.49	102.63	0.997	0.971	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.51	407.18	0.989	0.971	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.51	2036.59	0.989	0.971	bb

Compound name: 2378-TCDF

Response Factor: 0.978424

RRF SD: 0.0546693, Relative SD: 5.58748

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	30.67	0.28	1.077	0.978	MM
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	30.67	0.47	0.916	0.978	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	30.66	1.93	0.944	0.978	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	30.67	9.95	0.973	0.978	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	30.67	39.70	0.971	0.978	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	30.67	202.19	0.989	0.978	bb

Compound name: 12378-PeCDF

Response Factor: 0.945213

RRF SD: 0.032234, Relative SD: 3.41024

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	33.40	1.28	0.969	0.945	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	33.41	2.35	0.888	0.945	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	33.40	9.78	0.925	0.945	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	33.40	50.77	0.960	0.945	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	33.40	204.22	0.965	0.945	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	33.40	1020.23	0.964	0.945	bb

Compound name: 23478-PeCDF

Response Factor: 0.986747

RRF SD: 0.0368449, Relative SD: 3.73397

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.01	1.18	0.933	0.987	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.02	2.46	0.973	0.987	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.01	9.78	0.965	0.987	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.01	50.78	1.002	0.987	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.02	205.34	1.013	0.987	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.02	1048.35	1.034	0.987	bb

Quantify Compound Summary Report **MassLynx 4.1**

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123478-HxCDF

Response Factor: 1.08717

RRF SD: 0.0419813, Relative SD: 3.86151

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.11	1.19	1.039	1.087	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.11	2.41	1.049	1.087	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.11	9.76	1.061	1.087	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.11	51.25	1.114	1.087	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.12	208.35	1.133	1.087	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.12	1036.34	1.127	1.087	bd

Compound name: 123678-HxCDF

Response Factor: 1.04051

RRF SD: 0.0335945, Relative SD: 3.22866

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.21	1.26	1.052	1.041	dd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.22	2.35	0.977	1.041	db
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.21	9.95	1.035	1.041	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.21	51.61	1.074	1.041	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.21	202.58	1.054	1.041	db
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.22	1010.63	1.052	1.041	db

Compound name: 234678-HxCDF

Response Factor: 1.13575

RRF SD: 0.0360558, Relative SD: 3.17463

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.69	1.19	1.084	1.136	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.69	2.44	1.107	1.136	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.69	9.95	1.130	1.136	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.69	50.73	1.152	1.136	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.69	207.52	1.178	1.136	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.69	1024.66	1.164	1.136	bd

Compound name: 123789-HxCDF

Response Factor: 1.06073

RRF SD: 0.0242888, Relative SD: 2.28983

Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.46	1.21	1.029	1.061	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.47	2.44	1.034	1.061	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123789-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.48	10.04	1.065	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.47	51.19	1.086	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.48	201.24	1.067	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.48	1021.59	1.084	1.061	bb

Compound name: 1234678-HpCDF

Response Factor: 1.14983

RRF SD: 0.0443867, Relative SD: 3.8603

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	38.97	1.17	1.074	1.150	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	38.98	2.45	1.126	1.150	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	38.98	9.98	1.148	1.150	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	38.97	51.63	1.187	1.150	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	38.98	205.56	1.182	1.150	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	38.98	1028.22	1.182	1.150	bb

Compound name: 1234789-HpCDF

Response Factor: 1.20215

RRF SD: 0.0229239, Relative SD: 1.90691

Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.90	1.25	1.200	1.202	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.89	2.47	1.188	1.202	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.90	9.74	1.171	1.202	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.89	49.74	1.196	1.202	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.91	204.32	1.228	1.202	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.91	1022.70	1.229	1.202	bb

Compound name: OCDF

Response Factor: 1.13283

RRF SD: 0.076827, Relative SD: 6.78187

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.78	2.31	1.049	1.133	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.81	4.64	1.052	1.133	bd
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.78	19.91	1.128	1.133	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.78	100.46	1.138	1.133	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.80	416.81	1.180	1.133	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.80	2206.18	1.250	1.133	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-2378-TCDD

Response Factor: 1.12834

RRF SD: 0.0266676, Relative SD: 2.36343

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	31.34	100.14	1.130	1.128	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	31.34	96.74	1.092	1.128	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	31.34	99.09	1.118	1.128	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	31.34	102.35	1.155	1.128	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	31.34	98.65	1.113	1.128	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	31.34	103.02	1.162	1.128	bb

Compound name: 13C-12378-PeCDD

Response Factor: 0.75125

RRF SD: 0.0377537, Relative SD: 5.02545

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.20	103.04	0.774	0.751	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.21	93.93	0.706	0.751	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.20	96.78	0.727	0.751	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.20	99.64	0.749	0.751	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.20	98.42	0.739	0.751	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.21	108.20	0.813	0.751	bb

Compound name: 13C-123478-HxCDD

Response Factor: 0.896281

RRF SD: 0.0124016, Relative SD: 1.38367

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.82	99.03	0.888	0.896	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.83	101.29	0.908	0.896	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.82	99.74	0.894	0.896	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.82	97.87	0.877	0.896	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.83	100.73	0.903	0.896	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.83	101.35	0.908	0.896	bd

Compound name: 13C-123678-HxCDD

Response Factor: 0.985774

RRF SD: 0.00823518, Relative SD: 0.835403

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.91	98.89	0.975	0.986	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.91	100.38	0.990	0.986	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-123678-HxCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.91	98.98	0.976	0.986	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.91	100.62	0.992	0.986	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.91	100.68	0.993	0.986	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.91	100.46	0.990	0.986	dd

Compound name: 13C-1234678-HpCDD

Response Factor: 0.671678

RRF SD: 0.00864315, Relative SD: 1.2868

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.22	99.85	0.671	0.672	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.23	101.04	0.679	0.672	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.23	101.05	0.679	0.672	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.22	99.38	0.667	0.672	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.23	100.89	0.678	0.672	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.23	97.79	0.657	0.672	bb

Compound name: 13C-OCDD

Response Factor: 0.64212

RRF SD: 0.0312445, Relative SD: 4.86583

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	200.000	44.47	190.01	0.610	0.642	bb
A08JUL19A-4	CS1 UD190207-02 CS143	200.000	44.49	195.03	0.626	0.642	bd
A08JUL19A-5	CS2 UD190207-03 CS243	200.000	44.49	191.09	0.614	0.642	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	200.000	44.47	212.75	0.683	0.642	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	44.49	210.31	0.675	0.642	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	44.49	200.81	0.645	0.642	bd

Compound name: 13C-2378-TCDF

Response Factor: 1.24989

RRF SD: 0.0235442, Relative SD: 1.8837

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.64	102.21	1.277	1.250	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.64	97.12	1.214	1.250	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.64	99.85	1.248	1.250	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.64	101.40	1.267	1.250	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.64	98.61	1.233	1.250	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.64	100.81	1.260	1.250	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-12378-PeCDF

Response Factor: 1.0108

RRF SD: 0.042891, Relative SD: 4.24328

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	33.39	101.65	1.028	1.011	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	33.40	95.18	0.962	1.011	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	33.39	98.01	0.991	1.011	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	33.39	100.21	1.013	1.011	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	33.39	97.58	0.986	1.011	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	33.39	107.36	1.085	1.011	bb

Compound name: 13C-23478-PeCDF

Response Factor: 1.06317

RRF SD: 0.056146, Relative SD: 5.28101

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.00	105.12	1.118	1.063	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.01	92.69	0.985	1.063	db
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.00	98.16	1.044	1.063	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.00	99.71	1.060	1.063	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.01	97.32	1.035	1.063	db
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.01	107.01	1.138	1.063	db

Compound name: 13C-123478-HxCDF

Response Factor: 1.11071

RRF SD: 0.0157984, Relative SD: 1.42237

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.10	100.10	1.112	1.111	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.11	102.58	1.139	1.111	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.10	100.42	1.115	1.111	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.10	99.09	1.101	1.111	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.10	98.72	1.097	1.111	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.11	99.08	1.101	1.111	bd

Compound name: 13C-123678-HxCDF

Response Factor: 1.24684

RRF SD: 0.0132688, Relative SD: 1.0642

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.20	98.41	1.227	1.247	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.21	99.91	1.246	1.247	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-123678-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.20	101.24	1.262	1.247	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.20	99.13	1.236	1.247	db
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.20	100.72	1.256	1.247	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.21	100.59	1.254	1.247	dd

Compound name: 13C-234678-HxCDF

Response Factor: 1.08201

RRF SD: 0.0109147, Relative SD: 1.00875

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.69	101.62	1.100	1.082	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.69	100.88	1.092	1.082	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.69	99.61	1.078	1.082	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.67	99.46	1.076	1.082	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.69	99.28	1.074	1.082	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.69	99.15	1.073	1.082	bb

Compound name: 13C-123789-HxCDF

Response Factor: 0.967011

RRF SD: 0.010414, Relative SD: 1.07693

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.46	101.72	0.984	0.967	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.46	99.20	0.959	0.967	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.46	100.57	0.973	0.967	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.46	100.32	0.970	0.967	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.47	99.37	0.961	0.967	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.47	98.82	0.956	0.967	bb

Compound name: 13C-1234678-HpCDF

Response Factor: 0.869967

RRF SD: 0.00962967, Relative SD: 1.1069

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	38.96	100.76	0.877	0.870	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	38.97	101.06	0.879	0.870	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	38.96	101.10	0.880	0.870	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	38.96	99.47	0.865	0.870	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	38.97	99.00	0.861	0.870	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	38.97	98.61	0.858	0.870	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-1234789-HpCDF

Response Factor: 0.677351

RRF SD: 0.00683684, Relative SD: 1.00935

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.88	100.25	0.679	0.677	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.89	100.10	0.678	0.677	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.88	101.11	0.685	0.677	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.88	100.56	0.681	0.677	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.89	99.85	0.676	0.677	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.89	98.14	0.665	0.677	bb

Compound name: 13C-1234-TCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.87	100.00	1.000	1.000	bb

Compound name: 13C-123789-HxCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.15	100.00	1.000	1.000	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.15	100.00	1.000	1.000	dd

Compound name: 37Cl-2378-TCDD

Response Factor: 1.06124

RRF SD: 0.0481575, Relative SD: 4.53786

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.35	0.24	1.038	1.061	bb
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.35	0.48	1.012	1.061	bb

Quantify Compound Summary Report **MassLynx 4.1**

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 37CI-2378-TCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.92	1.018	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.34	10.43	1.107	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.07	1.063	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	212.93	1.130	1.061	bb

Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

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Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	2.36e3	2.88e3	5.24e3	31.36	1.001	0.82	NO	0.269	0.952	0.884	5.07	0.0280	5.51e4	2748	20.1	4.64e4	1441	32.2	bd	bb
2	12378-PeCDD	1.02e4	6.32e3	1.65e4	34.21	1.000	1.61	NO	1.279	0.873	0.853	1.65	0.0287	2.62e5	2362	110.9	1.76e5	1093	161.1	bd	bb
3	123478-HxCDD	8.05e3	6.32e3	1.44e4	36.83	1.000	1.27	NO	1.220	0.917	0.940	3.11	0.0368	1.82e5	1603	113.3	1.13e5	1951	57.9	bd	bd
4	123678-HxCDD	8.50e3	7.26e3	1.58e4	36.92	1.000	1.17	NO	1.212	0.916	0.944	2.57	0.0376	1.59e5	1603	99.1	1.28e5	1951	65.8	db	db
5	123789-HxCDD	8.04e3	6.76e3	1.48e4	37.15	1.007	1.19	NO	1.214	0.900	0.927	3.30	0.0378	1.53e5	1603	95.3	1.15e5	1951	58.8	bd	bb
6	1234678-HpCDD	6.04e3	6.12e3	1.22e4	40.24	1.000	0.99	NO	1.235	1.027	1.040	2.88	0.0649	1.03e5	1757	58.6	9.52e4	1920	49.6	bd	bd
7	OCDD	9.77e3	1.10e4	2.07e4	44.49	1.000	0.89	NO	2.477	0.962	0.971	2.39	0.0920	1.23e5	1257	98.1	1.39e5	1991	69.6	bd	bd
8	2378-TCDF	2.70e3	4.01e3	6.71e3	30.67	1.001	0.67	NO	0.275	1.077	0.978	5.59	0.0419	3.94e4	1747	22.5	4.74e4	3466	13.7	M...	db
9	12378-PeCDF	1.47e4	9.62e3	2.43e4	33.40	1.000	1.52	NO	1.281	0.969	0.945	3.41	0.0370	3.34e5	2702	123.5	2.39e5	4145	57.8	bb	bb
10	23478-PeCDF	1.50e4	1.04e4	2.54e4	34.01	1.000	1.45	NO	1.181	0.933	0.987	3.73	0.0321	3.89e5	2702	144.0	2.53e5	4145	61.0	bb	bb
11	123478-HxCDF	1.08e4	9.59e3	2.04e4	36.11	1.000	1.13	NO	1.194	1.039	1.087	3.86	0.0268	2.15e5	2156	99.8	2.06e5	1702	120.8	bd	bd
12	123678-HxCDF	1.26e4	1.02e4	2.28e4	36.21	1.000	1.24	NO	1.263	1.052	1.041	3.23	0.0263	2.63e5	2156	122.0	2.03e5	1702	119.1	dd	dd
13	234678-HxCDF	1.13e4	9.70e3	2.10e4	36.69	1.000	1.17	NO	1.192	1.084	1.136	3.17	0.0290	2.25e5	2156	104.4	1.97e5	1702	115.7	bd	bd
14	123789-HxCDF	9.32e3	8.55e3	1.79e4	37.46	1.000	1.09	NO	1.213	1.029	1.061	2.29	0.0371	1.72e5	2156	79.6	1.49e5	1702	87.4	bd	bd
15	1234678-HpCDF	8.42e3	8.19e3	1.66e4	38.97	1.000	1.03	NO	1.167	1.074	1.150	3.86	0.0282	1.38e5	1549	89.3	1.35e5	1086	124.8	bd	bd
16	1234789-HpCDF	7.33e3	7.06e3	1.44e4	40.90	1.000	1.04	NO	1.248	1.200	1.202	1.91	0.0417	1.12e5	1549	72.2	9.77e4	1086	90.0	bd	bd
17	OCDF	1.05e4	1.21e4	2.26e4	44.78	1.007	0.86	NO	2.315	1.049	1.133	6.78	0.102	1.13e5	2106	53.7	1.39e5	2087	66.4	bb	bb
18	13C-2378-TCDD	9.61e5	1.24e6	2.20e6	31.34	1.015	0.77	NO	100.141	1.130	1.128	2.36	0.101	1.84e7	8503	2165.5	2.38e7	4565	5220.0	bb	bb
19	13C-12378-PeCDD	9.14e5	5.96e5	1.51e6	34.20	1.108	1.53	NO	103.043	0.774	0.751	5.03	0.106	2.14e7	3266	6548.1	1.41e7	5905	2388.5	bb	bb
20	13C-123478-HxCDD	6.92e5	5.62e5	1.25e6	36.82	0.991	1.23	NO	99.030	0.888	0.896	1.38	0.123	1.42e7	5998	2362.3	1.14e7	4559	2506.6	bd	bd
21	13C-123678-HxCDD	7.61e5	6.16e5	1.38e6	36.91	0.994	1.24	NO	98.887	0.975	0.986	0.84	0.112	1.38e7	5998	2308.3	1.11e7	4559	2432.5	dd	dd
22	13C-1234678-HpCDD	4.84e5	4.64e5	9.47e5	40.22	1.083	1.04	NO	99.853	0.671	0.672	1.29	0.246	6.95e6	9910	701.2	6.93e6	5863	1181.6	bd	bb
23	13C-OCDD	7.96e5	9.26e5	1.72e6	44.47	1.197	0.86	NO	190.015	0.610	0.642	4.87	0.239	8.40e6	9103	923.0	9.66e6	5539	1744.6	bb	bd
24	13C-2378-TCDF	1.09e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	102.207	1.277	1.250	1.88	0.156	1.39e7	14607	949.6	1.80e7	7808	2301.1	bb	bb
25	13C-12378-PeCDF	1.23e6	7.70e5	2.00e6	33.39	1.082	1.60	NO	101.654	1.028	1.011	4.24	0.175	3.01e7	14002	2152.1	1.18e7	6379	2945.5	bb	bb
26	13C-23478-PeCDF	1.34e6	8.44e5	2.18e6	34.00	1.102	1.58	NO	105.121	1.118	1.063	5.28	0.166	3.31e7	14002	2361.9	2.10e7	6379	3289.0	bb	bb
27	13C-123478-HxCDF	5.36e5	1.03e6	1.57e6	36.10	0.972	0.52	NO	100.103	1.112	1.111	1.42	0.208	1.13e7	10560	1068.6	2.15e7	11523	1868.6	bd	bd
28	13C-123678-HxCDF	5.97e5	1.14e6	1.73e6	36.20	0.975	0.53	NO	98.415	1.227	1.247	1.06	0.185	1.21e7	10560	1148.5	2.26e7	11523	1961.5	dd	dd
29	13C-234678-HxCDF	5.42e5	1.01e6	1.55e6	36.69	0.988	0.54	NO	101.678	1.100	1.082	1.01	0.214	1.02e7	10560	967.2	1.97e7	11523	1710.4	bd	bd
30	13C-123789-HxCDF	4.77e5	9.12e5	1.39e6	37.46	1.008	0.52	NO	107.717	0.984	0.967	1.08	0.239	8.42e6	10560	797.3	1.58e7	11523	1371.7	bd	bd

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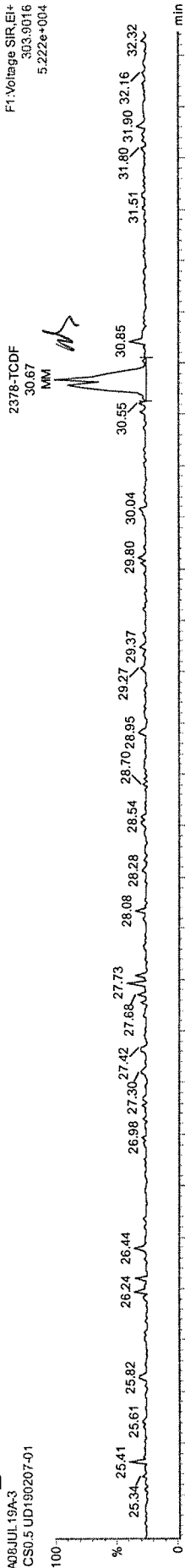
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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.76e5	8.62e5	1.24e6	38.96	1.049	0.44	NO	100.757	0.877	0.870	1.11	0.166	6.16e6	6681	922.6	1.42e7	7130	1992.4	bb	bb
32	13C-1234789-HpCDF	2.94e5	6.65e5	9.59e5	40.88	1.101	0.44	NO	100.246	0.679	0.677	1.01	0.213	4.03e6	6681	603.9	9.12e6	7130	1278.8	bd	bd
33	13C-1234-TCDD	8.61e5	1.09e6	1.95e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.113	1.27e7	8503	1493.6	1.61e7	4565	3518.9	bb	bb
34	13C-123789-HxCDD	7.78e5	6.34e5	1.41e6	37.14	0.000	1.23	NO	100.000	1.000	1.000	0.00	0.111	1.32e7	5998	2193.3	1.10e7	4559	2409.9	dd	dd
35	37Cl-2378-TCDD	5.06e3		5.06e3	31.35	1.016			0.244	1.038	1.061	4.54	0.0287	1.02e5	3507	29.0				bb	bb

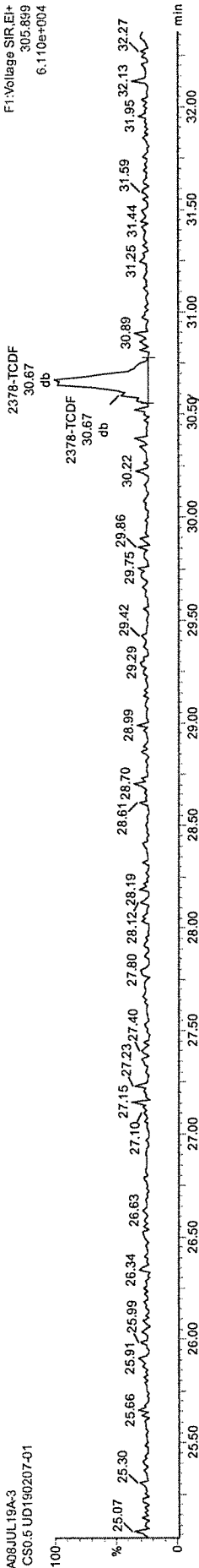
MANUAL INTEGRATION
METHOD 1613
HRP750_2

A08JUL19A-3
CS0.5 UD190207-01



F1:Voltage SIR.EI+
303.9016
5.222e+004

A08JUL19A-3
CS0.5 UD190207-01

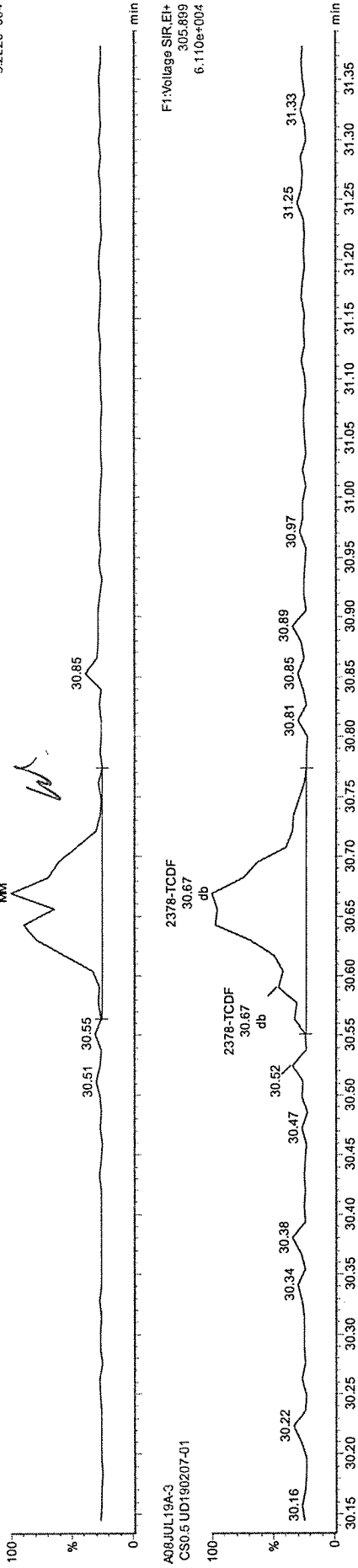


F1:Voltage SIR.EI+
305.899
6.110e+004

MANUAL INTEGRATION
METHOD 1613
HRP750_2

A08JUL19A-3
CS0.5 UD190207-01

F1:Voltage SIR.EI+
303.9016
5.222e+004



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7/9/19
6m/11888

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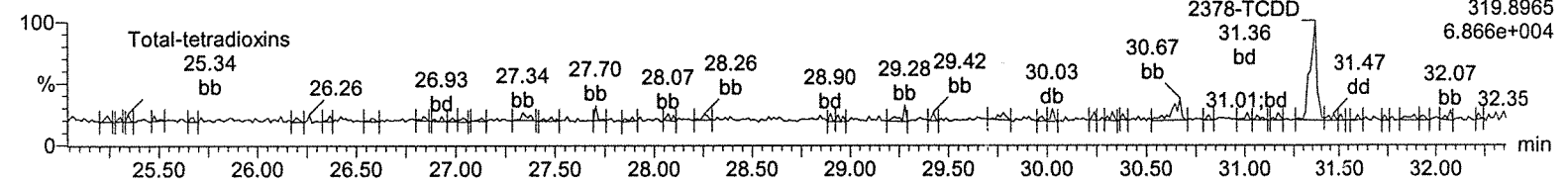
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Calibration: 09 Jul 2019 08:43:27

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Total-tetradoxins

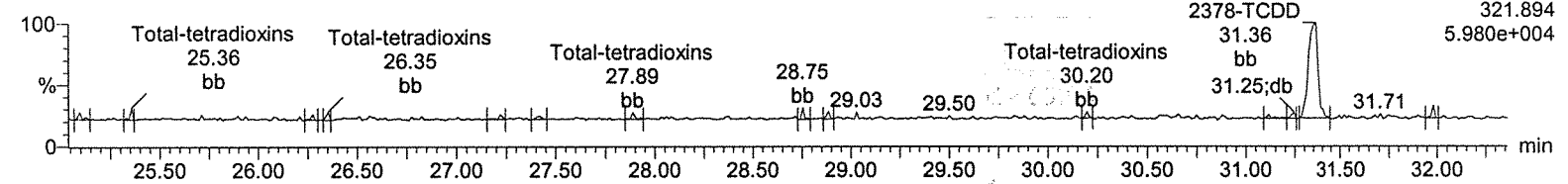
A08JUL19A-3



F1:Voltage SIR,EI+
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6.866e+004

Total-tetradoxins

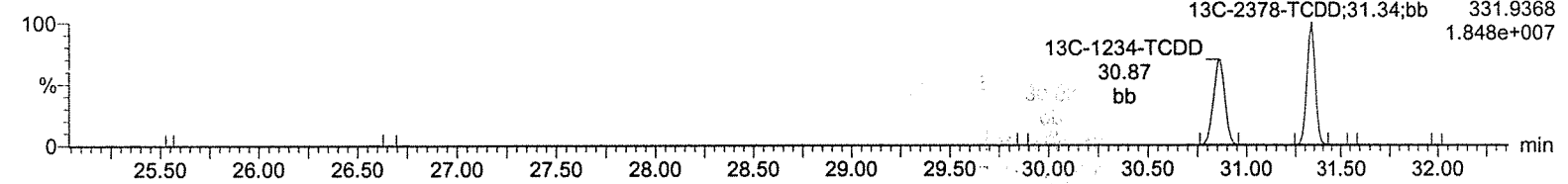
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F1:Voltage SIR,EI+
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5.980e+004

13C-2378-TCDD

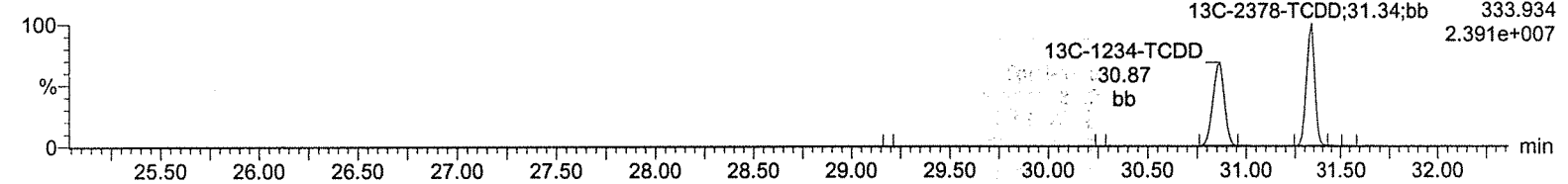
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F1:Voltage SIR,EI+
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13C-2378-TCDD

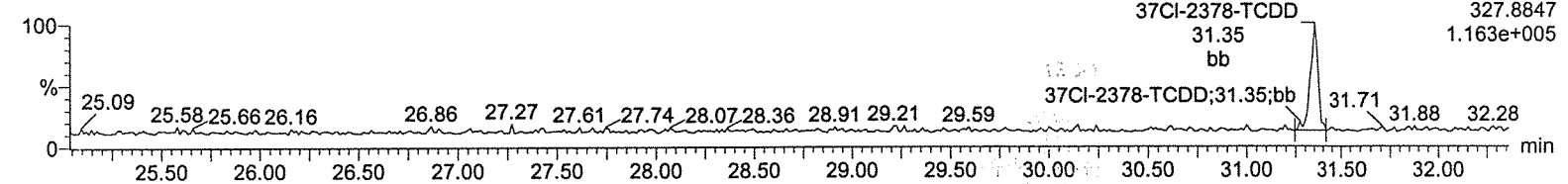
A08JUL19A-3



F1:Voltage SIR,EI+
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2.391e+007

37Cl-2378-TCDD

A08JUL19A-3



F1:Voltage SIR,EI+
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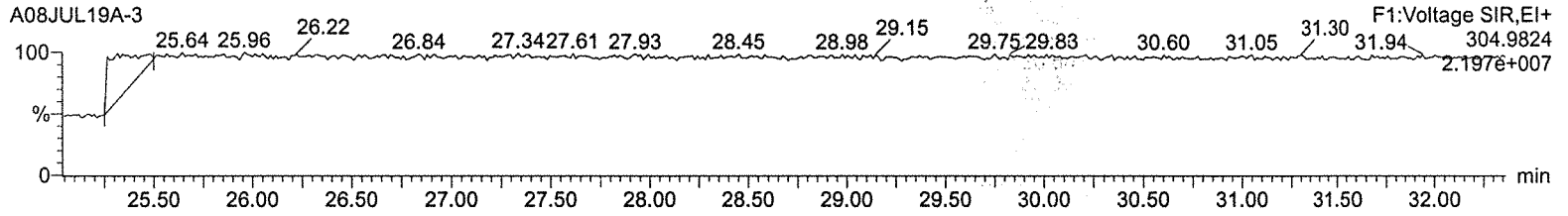
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Lock Mass F1

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

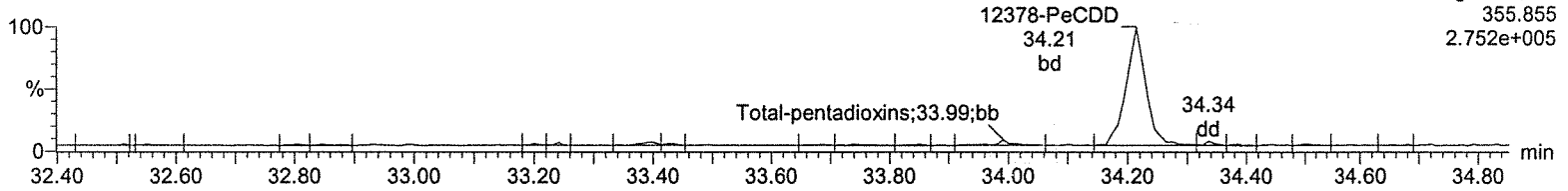
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

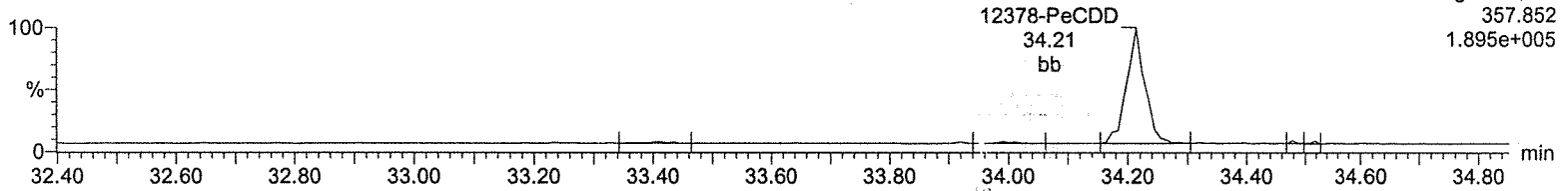
Total-pentadioxins

A08JUL19A-3



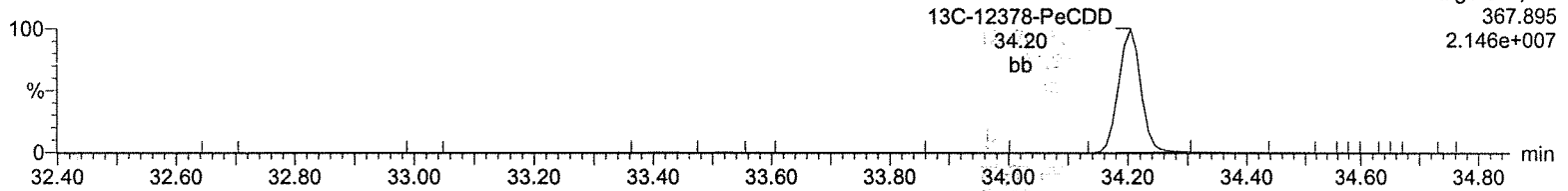
Total-pentadioxins

A08JUL19A-3



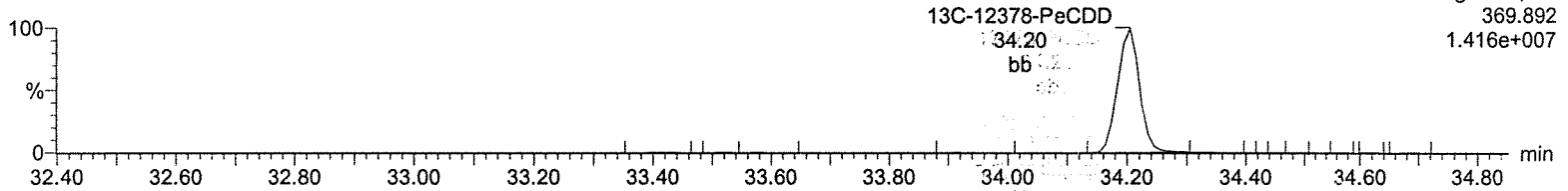
13C-12378-PeCDD

A08JUL19A-3



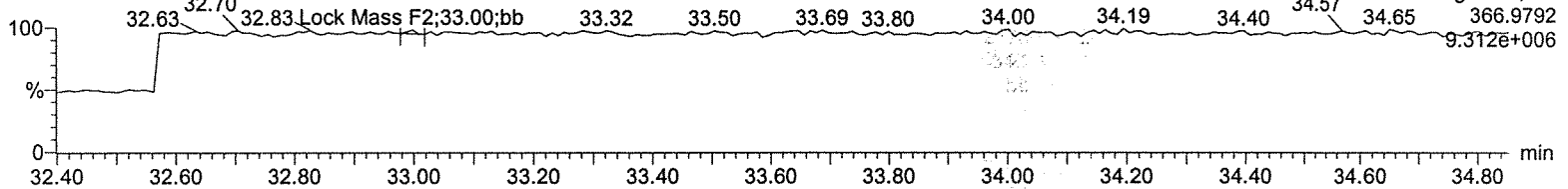
13C-12378-PeCDD

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

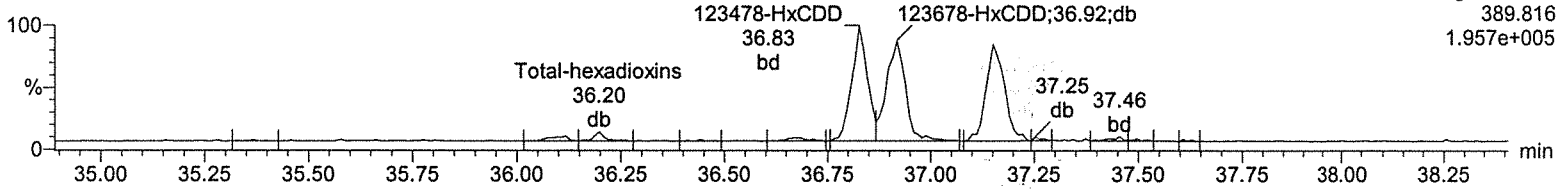
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

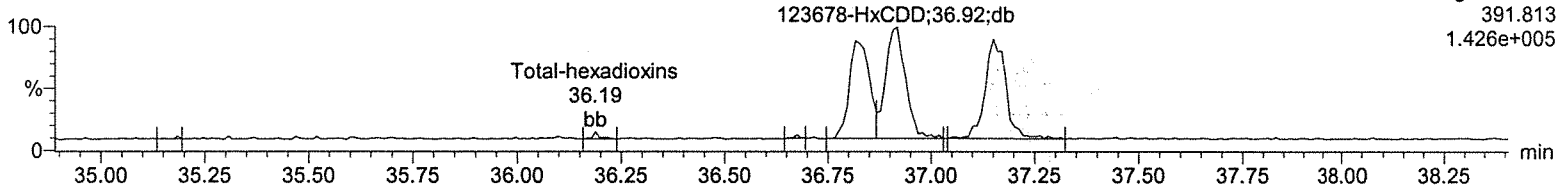
Total-hexadioxins

A08JUL19A-3



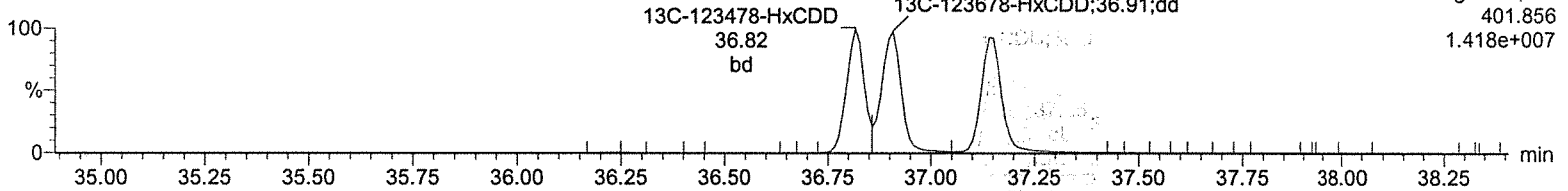
Total-hexadioxins

A08JUL19A-3



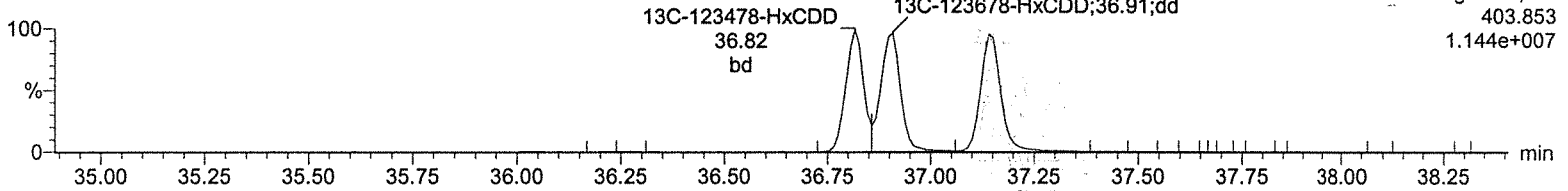
13C-123478-HxCDD

A08JUL19A-3



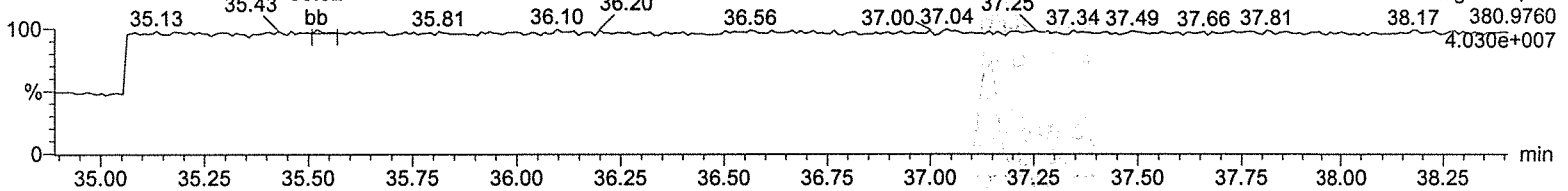
13C-123478-HxCDD

A08JUL19A-3



Lock Mass F3

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

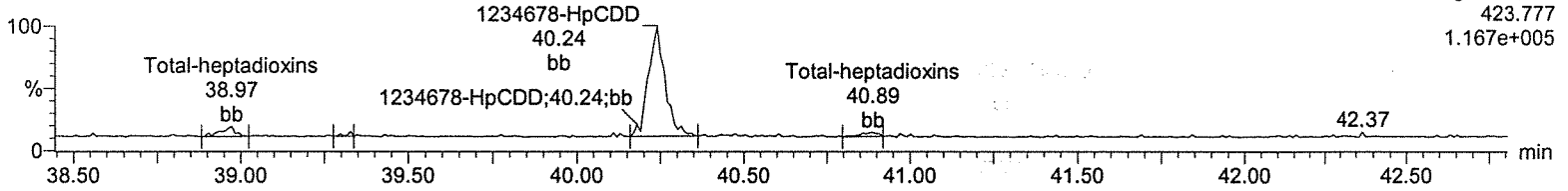
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Total-heptadioxins

A08JUL19A-3

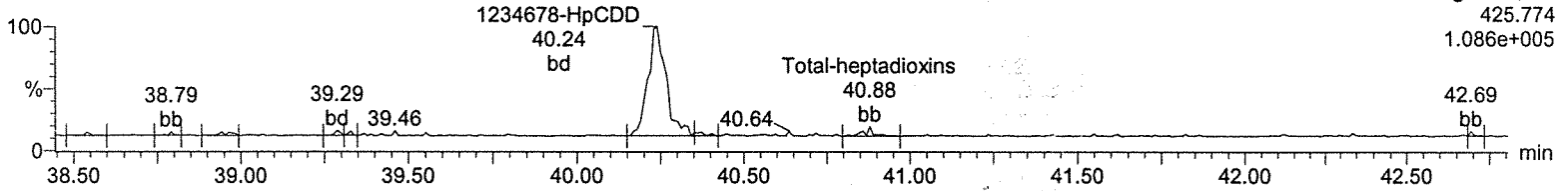
F4:Voltage SIR,EI+
423.777
1.167e+005



Total-heptadioxins

A08JUL19A-3

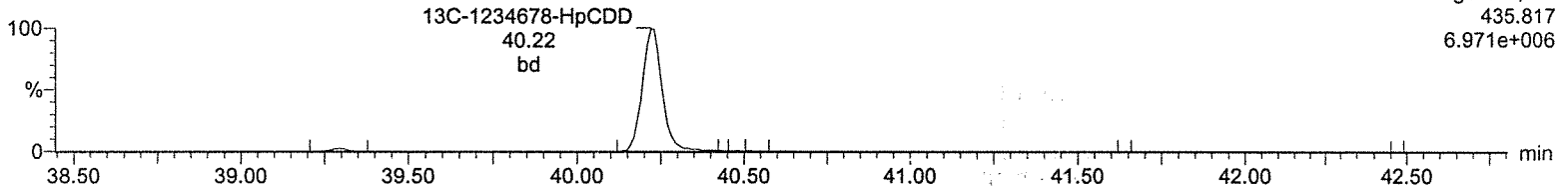
F4:Voltage SIR,EI+
425.774
1.086e+005



13C-1234678-HpCDD

A08JUL19A-3

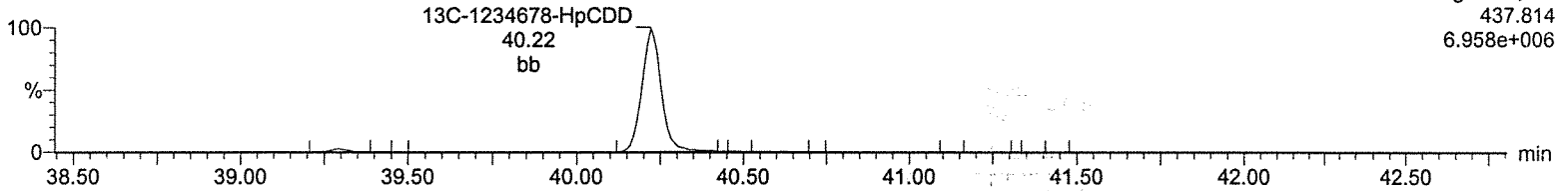
F4:Voltage SIR,EI+
435.817
6.971e+006



13C-1234678-HpCDD

A08JUL19A-3

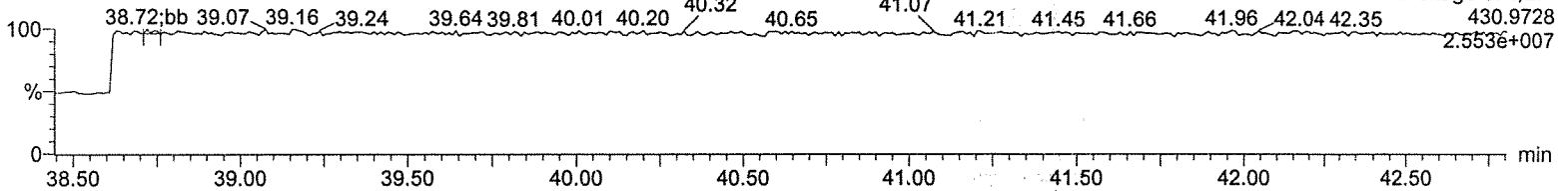
F4:Voltage SIR,EI+
437.814
6.958e+006



Lock Mass F4

A08JUL19A-3

F4:Voltage SIR,EI+
430.9728
2.553e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

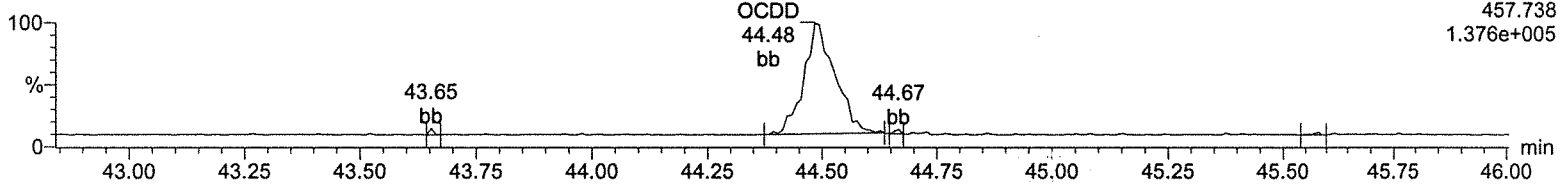
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

OCDD

A08JUL19A-3

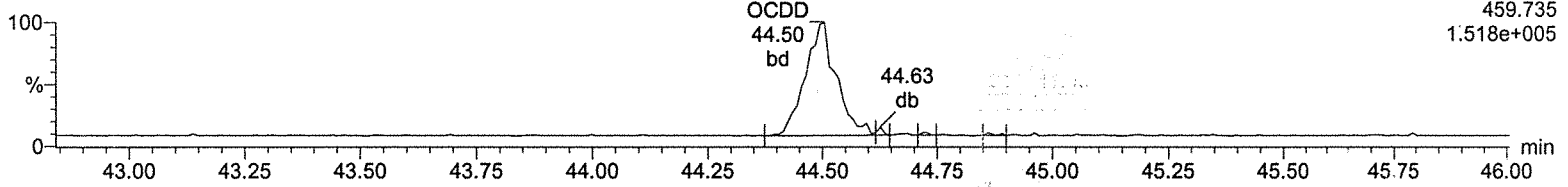
F5:Voltage SIR,EI+
457.738
1.376e+005



OCDD

A08JUL19A-3

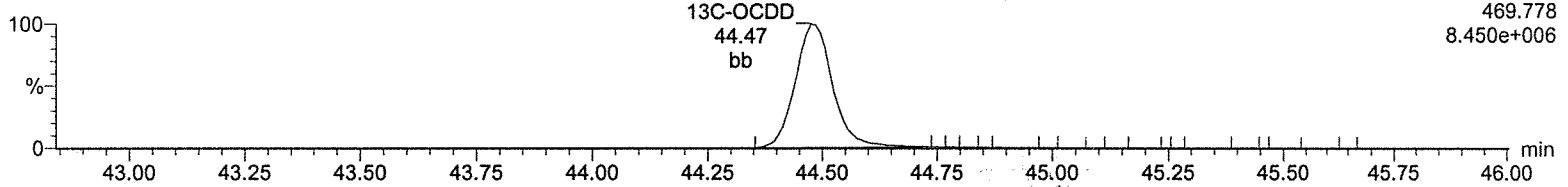
F5:Voltage SIR,EI+
459.735
1.518e+005



13C-OCDD

A08JUL19A-3

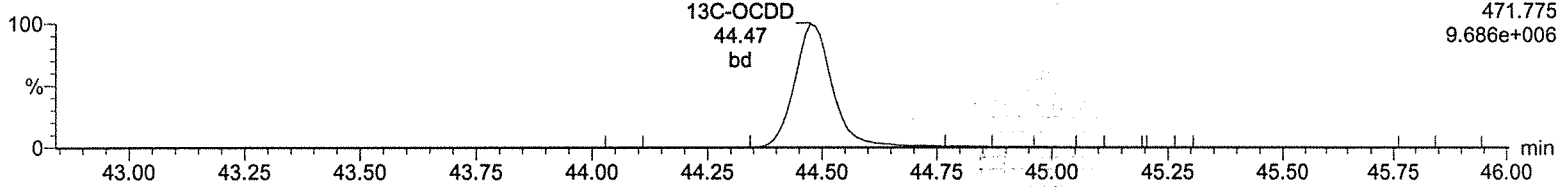
F5:Voltage SIR,EI+
469.778
8.450e+006



13C-OCDD

A08JUL19A-3

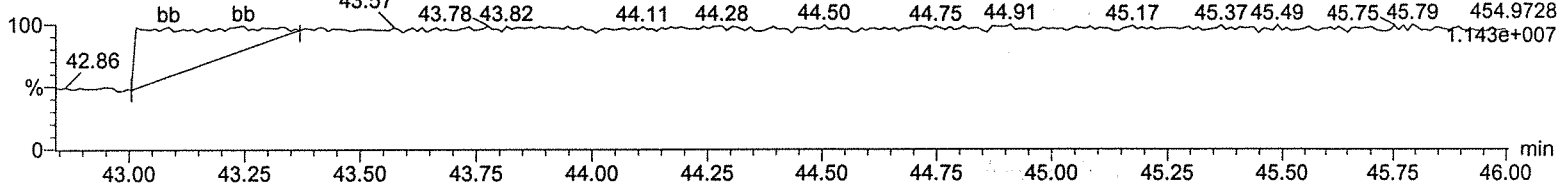
F5:Voltage SIR,EI+
471.775
9.686e+006



Lock Mass F5

A08JUL19A-3

F5:Voltage SIR,EI+
454.9728
1.143e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

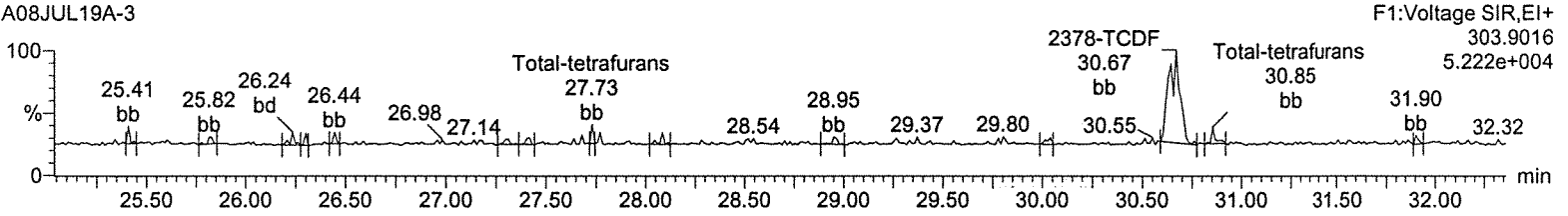
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

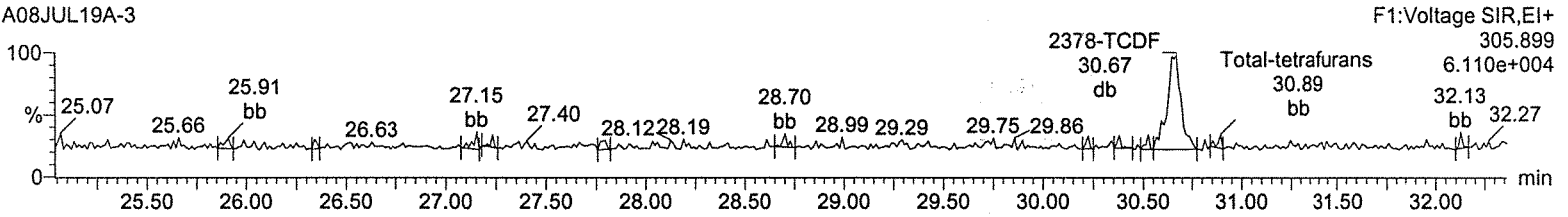
Total-tetrafurans

A08JUL19A-3



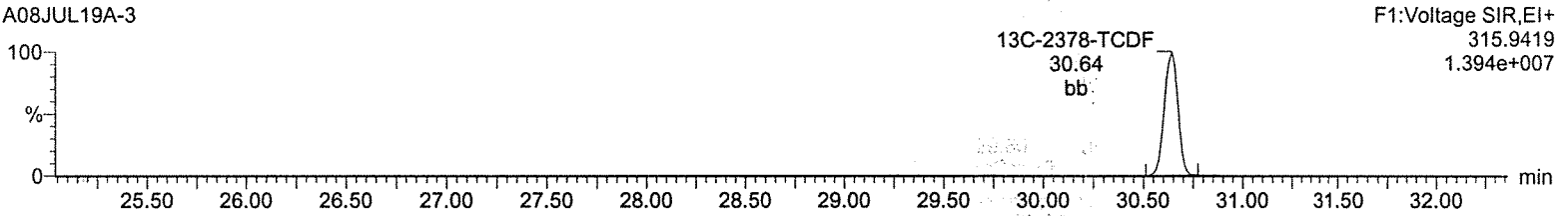
Total-tetrafurans

A08JUL19A-3



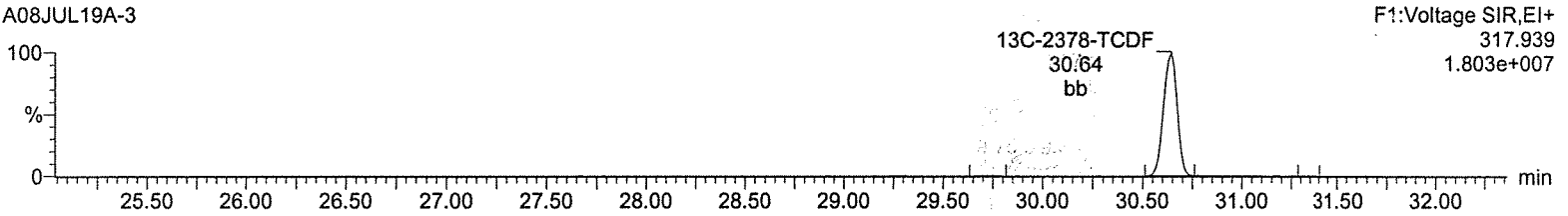
13C-2378-TCDF

A08JUL19A-3



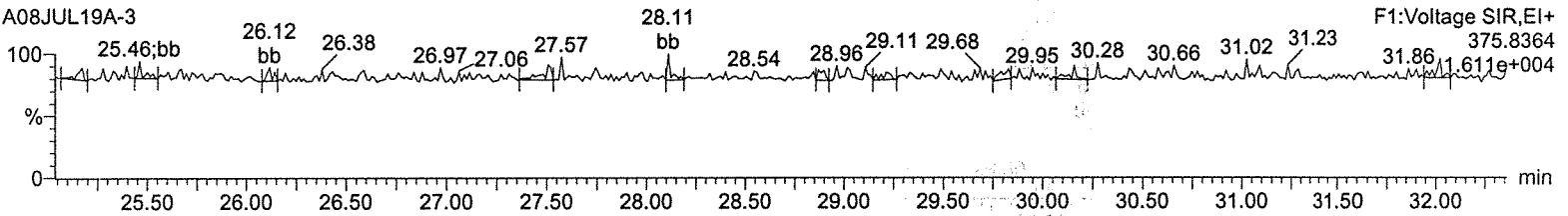
13C-2378-TCDF

A08JUL19A-3



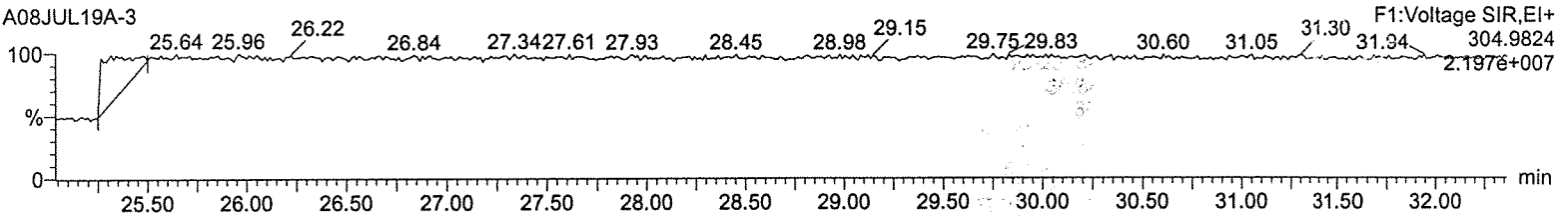
HxDPE

A08JUL19A-3



Lock Mass F1

A08JUL19A-3



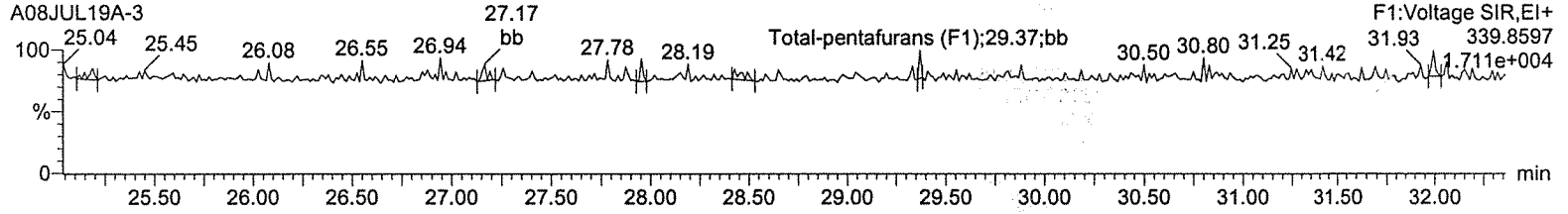
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

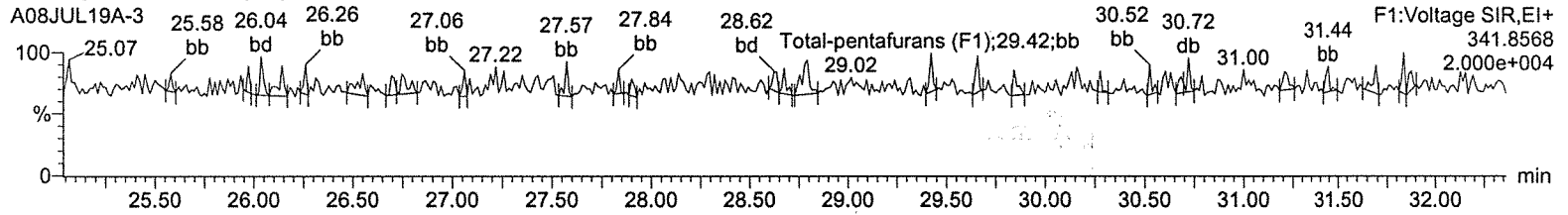
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

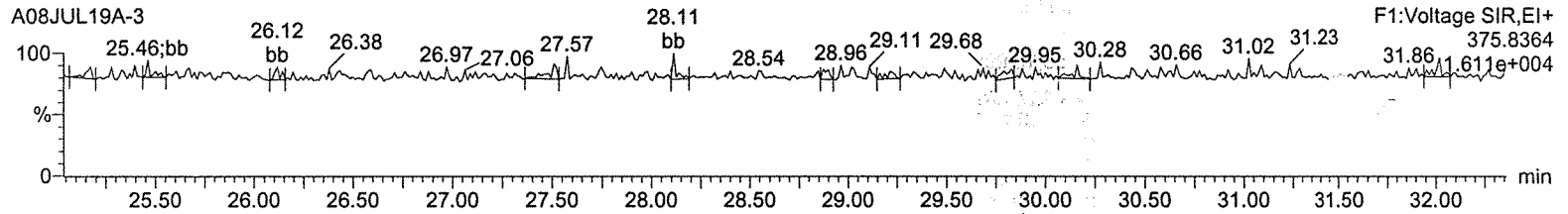
Total-pentafurans (F1)



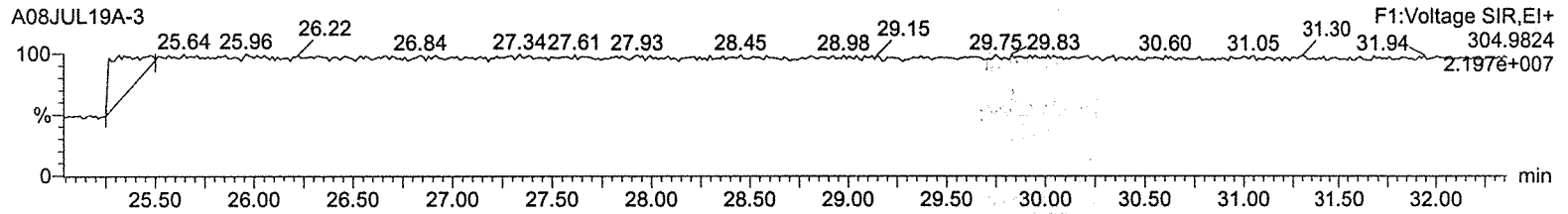
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

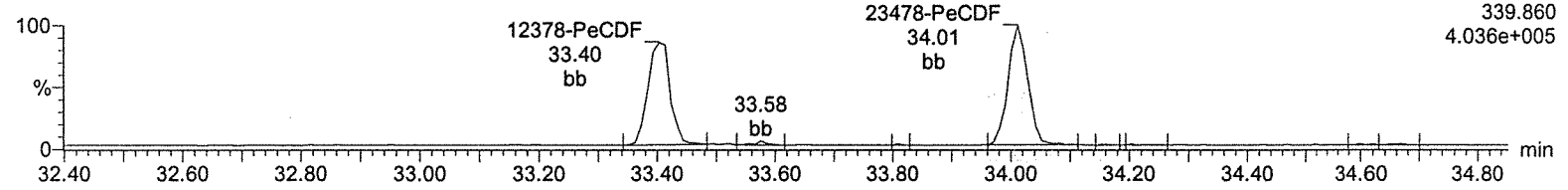
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

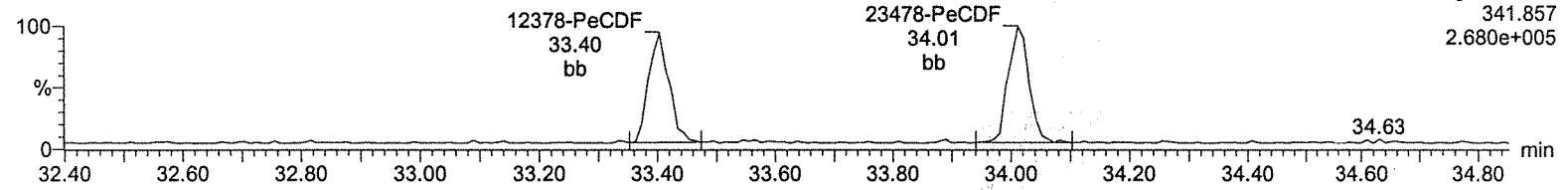
Total-pentafurans

A08JUL19A-3



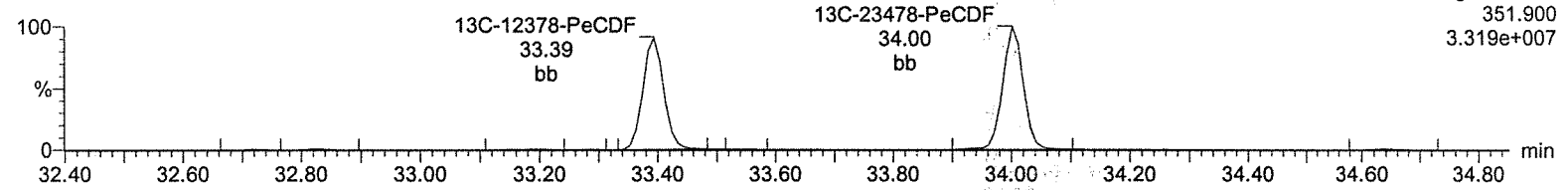
Total-pentafurans

A08JUL19A-3



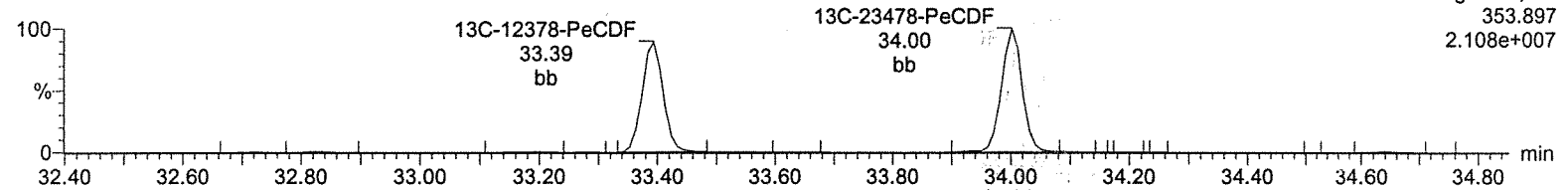
13C-12378-PeCDF

A08JUL19A-3



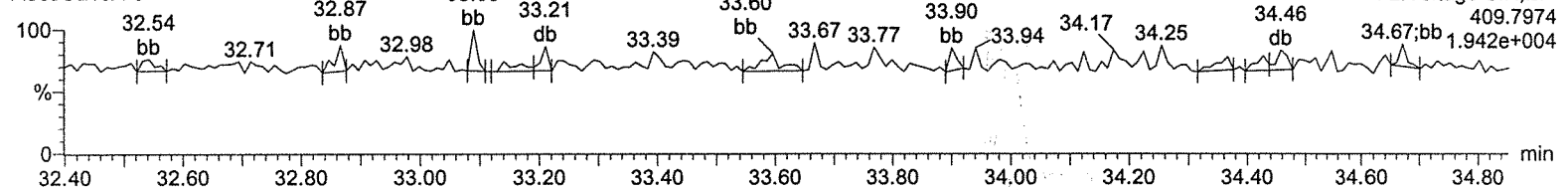
13C-12378-PeCDF

A08JUL19A-3



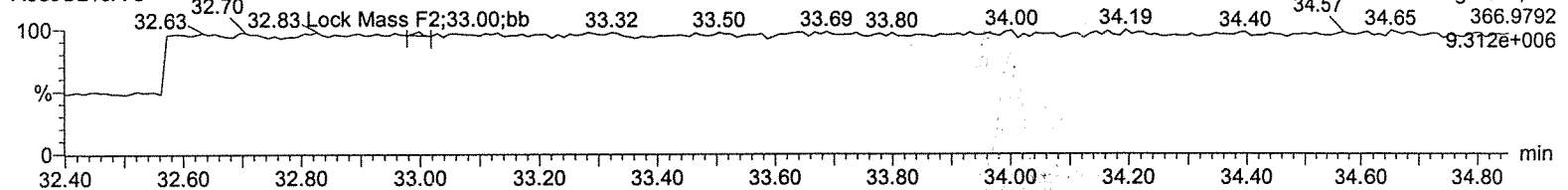
HpDPE

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

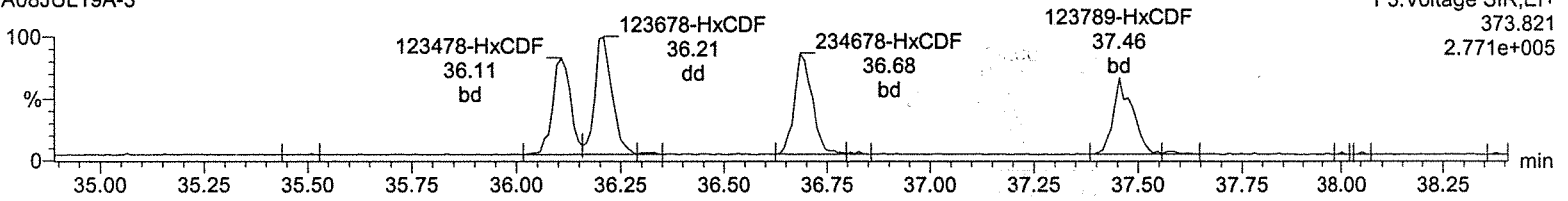
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

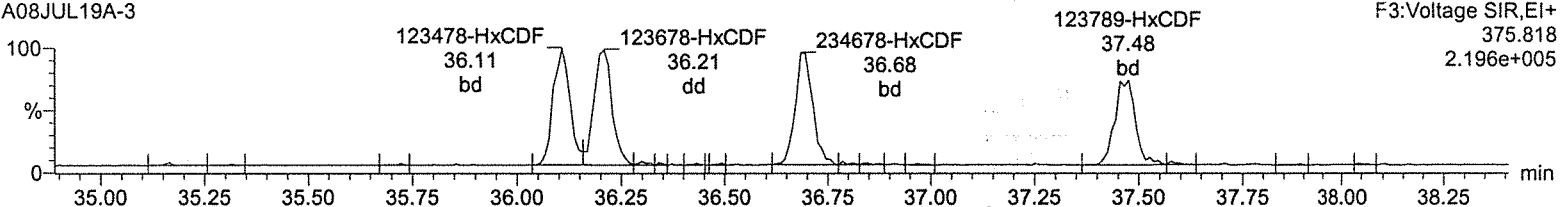
Total-hexafurans

A08JUL19A-3



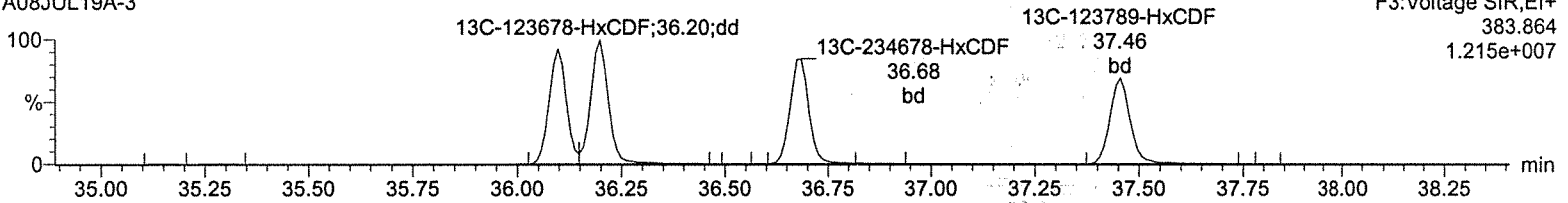
Total-hexafurans

A08JUL19A-3



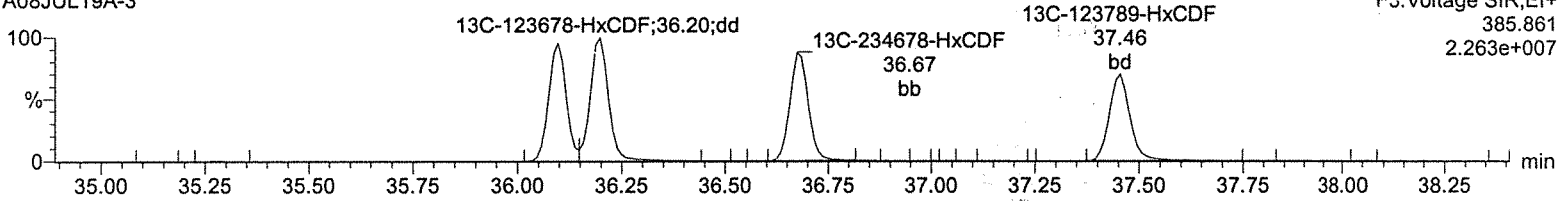
13C-123478-HxCDF

A08JUL19A-3



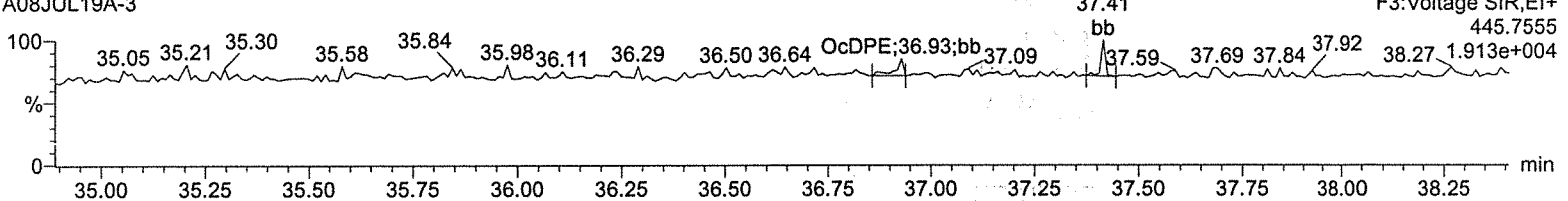
13C-123478-HxCDF

A08JUL19A-3



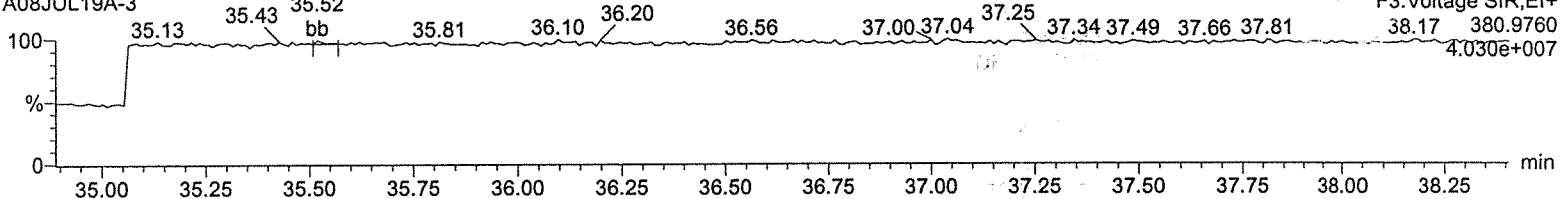
OcDPE

A08JUL19A-3



Lock Mass F3

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

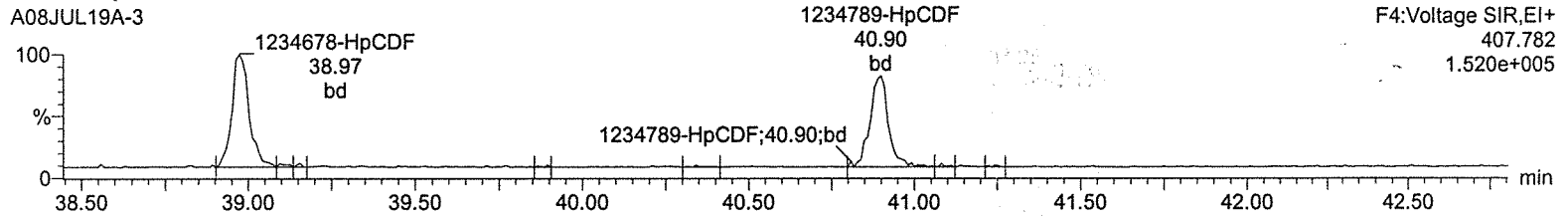
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

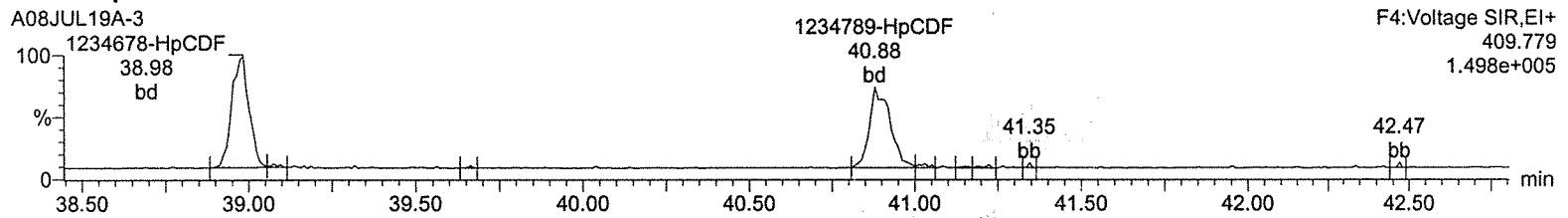
Total-heptafurans

A08JUL19A-3



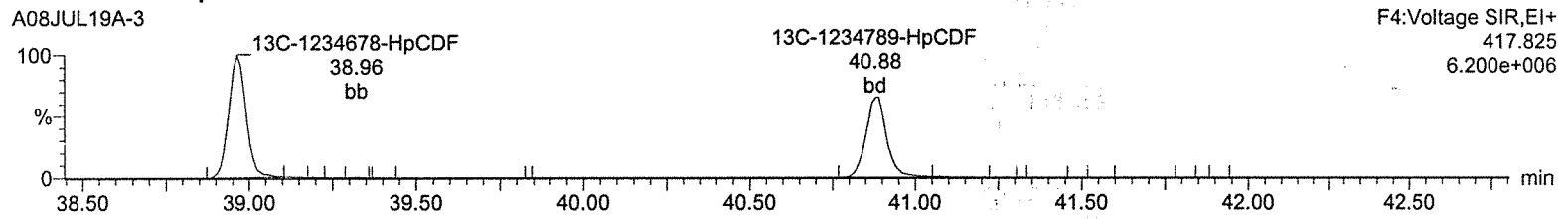
Total-heptafurans

A08JUL19A-3



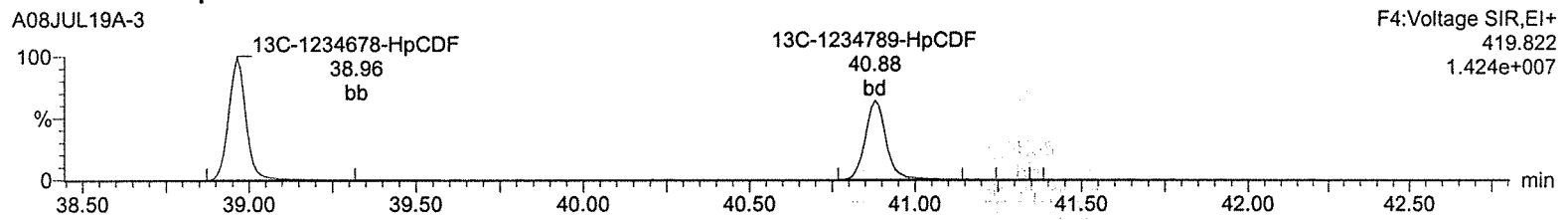
¹³C-1234678-HpCDF

A08JUL19A-3



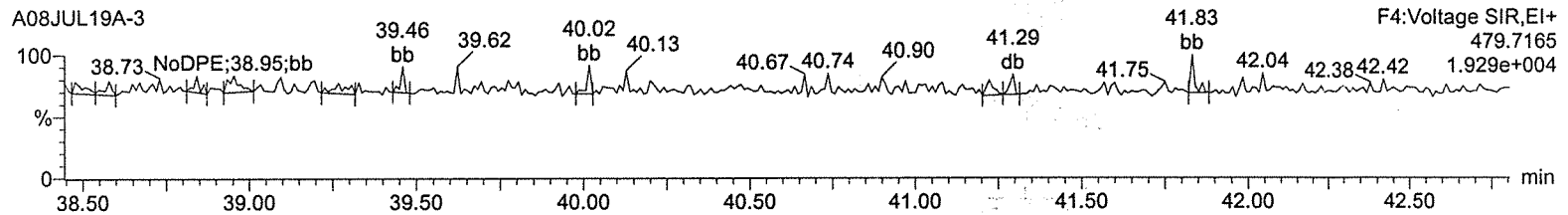
¹³C-1234678-HpCDF

A08JUL19A-3



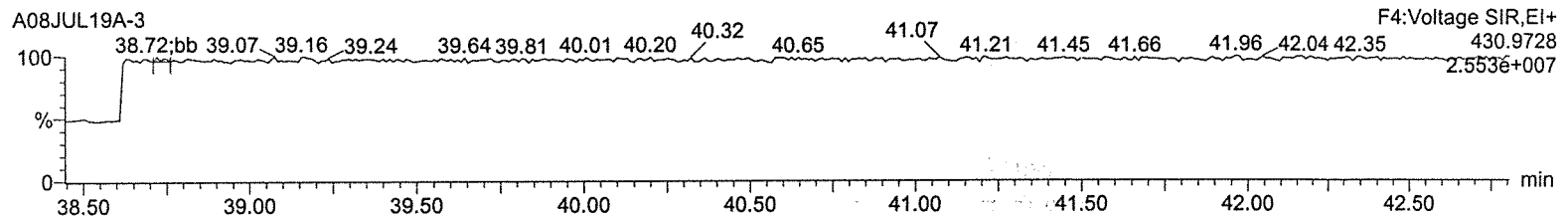
NoDPE

A08JUL19A-3



Lock Mass F4

A08JUL19A-3



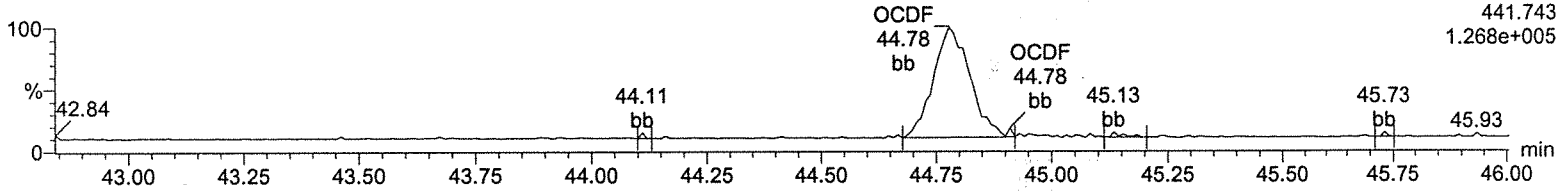
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

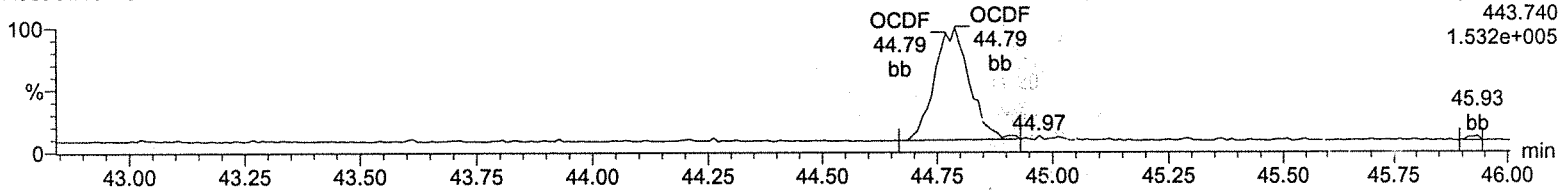
OCDF

A08JUL19A-3



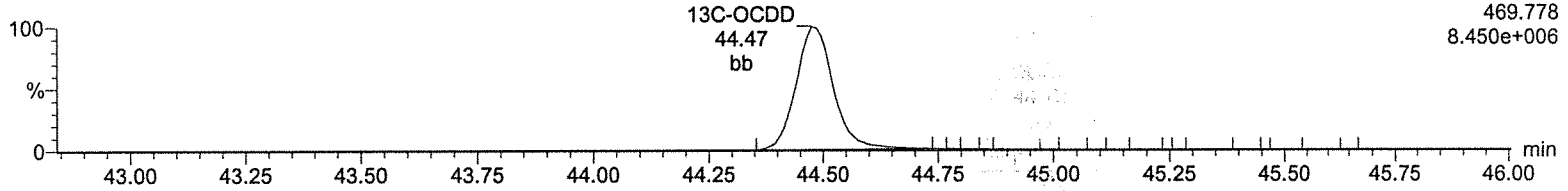
OCDF

A08JUL19A-3



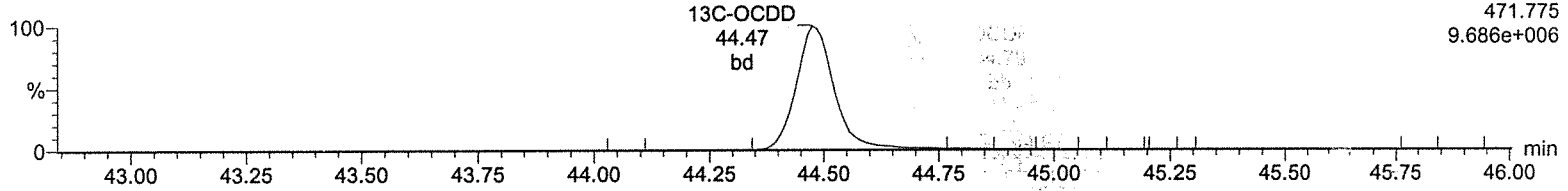
13C-OCDD

A08JUL19A-3



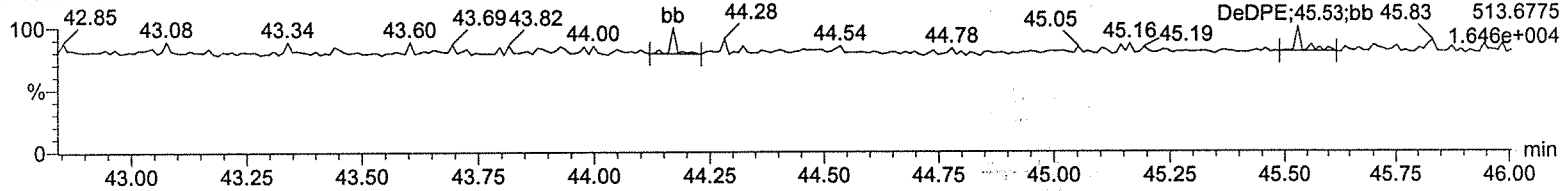
13C-OCDD

A08JUL19A-3



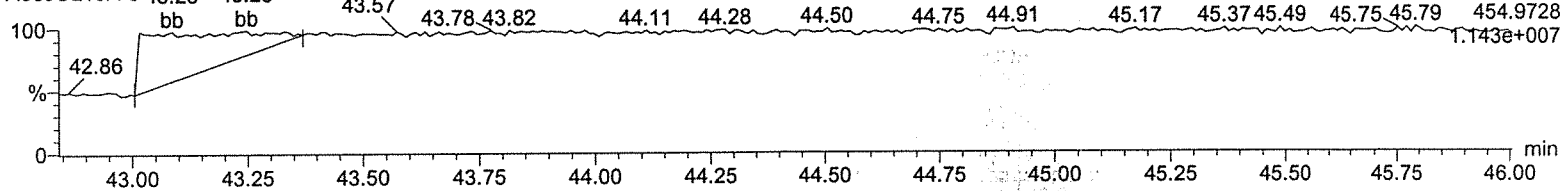
DeDPE

A08JUL19A-3



Lock Mass F5

A08JUL19A-3



Quantify Sample Summary Report

Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

7/21/19

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.57e3	4.22e3	7.80e3	31.36	1.001	0.85	NO	0.465	0.823	0.884	5.07	0.0381	8.65e4	2341	36.9	7.83e4	1703	45.9	bb	bd
2	12378-PeCDD	1.58e4	9.75e3	2.55e4	34.22	1.000	1.62	NO	2.444	0.834	0.853	1.65	0.0498	3.90e5	2742	142.4	2.48e5	1479	167.7	bd	bb
3	123478-HxCDD	1.23e4	1.02e4	2.25e4	36.84	1.000	1.21	NO	2.373	0.892	0.940	3.11	0.0590	2.55e5	2027	125.9	2.33e5	1848	125.8	bd	bd
4	123678-HxCDD	1.38e4	1.18e4	2.56e4	36.92	1.000	1.16	NO	2.463	0.930	0.944	2.57	0.0565	2.81e5	2027	138.8	2.54e5	1848	137.3	dd	dd
5	123789-HxCDD	1.28e4	1.04e4	2.32e4	37.16	1.007	1.24	NO	2.375	0.881	0.927	3.30	0.0586	2.66e5	2027	131.4	2.12e5	1848	114.5	bd	dd
6	1234678-HpCDD	9.30e3	9.39e3	1.87e4	40.25	1.000	0.99	NO	2.381	0.991	1.040	2.88	0.0813	1.41e5	1799	78.5	1.51e5	1462	103.4	bb	bd
7	OCDD	1.59e4	1.70e4	3.29e4	44.49	1.000	0.93	NO	4.867	0.946	0.971	2.39	0.153	1.93e5	1820	106.0	1.82e5	1858	97.7	bd	bb
8	2378-TCDF	4.46e3	5.19e3	9.65e3	30.67	1.001	0.86	NO	0.468	0.916	0.978	5.59	0.0667	7.01e4	2698	26.0	7.50e4	3399	22.1	bb	bb
9	12378-PeCDF	2.14e4	1.57e4	3.71e4	33.41	1.000	1.36	NO	2.350	0.888	0.945	3.41	0.0418	5.52e5	2463	223.9	3.85e5	3187	120.8	bd	bb
10	23478-PeCDF	2.55e4	1.61e4	4.16e4	34.02	1.000	1.58	NO	2.465	0.973	0.987	3.73	0.0389	6.39e5	2463	259.3	4.09e5	3187	128.4	bb	bd
11	123478-HxCDF	1.80e4	1.52e4	3.32e4	36.11	1.000	1.18	NO	2.413	1.049	1.087	3.86	0.0490	3.72e5	2602	143.0	3.37e5	2286	147.4	bd	bd
12	123678-HxCDF	1.83e4	1.55e4	3.38e4	36.22	1.000	1.18	NO	2.347	0.977	1.041	3.23	0.0513	4.45e5	2602	170.9	3.20e5	2286	139.8	db	db
13	234678-HxCDF	1.88e4	1.48e4	3.36e4	36.69	1.000	1.27	NO	2.436	1.107	1.136	3.17	0.0512	3.63e5	2602	139.4	3.00e5	2286	131.3	bd	bd
14	123789-HxCDF	1.51e4	1.25e4	2.76e4	37.47	1.000	1.21	NO	2.437	1.034	1.061	2.29	0.0691	2.81e5	2602	108.0	2.34e5	2286	102.5	bb	bd
15	1234678-HpCDF	1.32e4	1.44e4	2.75e4	38.98	1.000	0.92	NO	2.449	1.126	1.150	3.86	0.0571	2.36e5	1436	164.0	2.50e5	2218	112.8	bb	bd
16	1234789-HpCDF	1.11e4	1.12e4	2.24e4	40.89	1.000	0.99	NO	2.471	1.188	1.202	1.91	0.0865	1.56e5	1436	108.6	1.54e5	2218	69.5	bd	bd
17	OCDF	1.74e4	1.92e4	3.66e4	44.81	1.007	0.90	NO	4.644	1.052	1.133	6.78	0.201	1.76e5	3765	46.8	2.08e5	1885	110.1	bd	bb
18	13C-2378-TCDD	8.21e5	1.07e6	1.89e6	31.34	1.015	0.77	NO	96.744	1.092	1.128	2.36	0.138	1.56e7	9025	1728.5	2.08e7	4935	4206.5	bb	bb
19	13C-2378-PeCDD	7.37e5	4.88e5	1.22e6	34.21	1.109	1.51	NO	93.933	0.706	0.751	5.03	0.138	1.79e7	3968	4522.8	1.17e7	5328	2187.5	bb	bb
20	13C-123478-HxCDD	5.54e5	4.55e5	1.01e6	36.83	0.991	1.22	NO	101.285	0.908	0.896	1.38	0.180	1.15e7	5441	2114.1	9.33e6	5749	1623.8	bd	bd
21	13C-123678-HxCDD	6.06e5	4.95e5	1.10e6	36.91	0.993	1.22	NO	100.379	0.990	0.986	0.84	0.163	1.20e7	5441	2206.7	9.90e6	5749	1721.4	dd	dd
22	13C-1234678-HpCDD	3.80e5	3.75e5	7.55e5	40.23	1.083	1.01	NO	101.038	0.679	0.672	1.29	0.265	5.82e6	6152	946.8	5.53e6	6204	892.2	bb	bd
23	13C-OCDD	6.49e5	7.44e5	1.39e6	44.49	1.197	0.87	NO	195.027	0.626	0.642	4.87	0.267	6.93e6	5999	1155.6	8.01e6	5912	1355.8	bd	bd
24	13C-2378-TCDF	9.11e5	1.20e6	2.11e6	30.64	0.993	0.76	NO	97.118	1.214	1.250	1.88	0.194	1.21e7	14708	823.8	1.61e7	7000	2294.6	bb	bb
25	13C-12378-PeCDF	1.02e6	6.53e5	1.67e6	33.40	1.082	1.56	NO	95.178	0.962	1.011	4.24	0.227	2.62e7	15253	1715.1	1.64e7	5304	3093.6	bb	bd
26	13C-23478-PeCDF	1.05e6	6.60e5	1.71e6	34.01	1.102	1.59	NO	92.689	0.985	1.063	5.28	0.216	2.71e7	15253	1776.2	1.71e7	5304	3222.8	db	db
27	13C-123478-HxCDF	4.33e5	8.34e5	1.27e6	36.11	0.972	0.52	NO	102.576	1.139	1.111	1.42	0.257	9.40e6	8141	1154.2	1.76e7	11678	1502.8	bd	bd
28	13C-123678-HxCDF	4.78e5	9.08e5	1.39e6	36.21	0.975	0.53	NO	99.908	1.246	1.247	1.06	0.229	9.47e6	8141	1163.6	1.83e7	11678	1564.1	dd	db
29	13C-234678-HxCDF	4.19e5	7.95e5	1.21e6	36.69	0.988	0.53	NO	100.882	1.092	1.082	1.01	0.263	8.70e6	8141	1069.1	1.65e7	11678	1414.7	bb	bb
30	13C-123789-HxCDF	3.73e5	6.94e5	1.07e6	37.46	1.008	0.54	NO	99.201	0.959	0.967	1.08	0.295	6.99e6	8141	859.2	1.29e7	11678	1106.7	bd	bb
31	13C-1234678-HpCDF	3.03e5	6.75e5	9.78e5	38.97	1.049	0.45	NO	101.064	0.879	0.870	1.11	0.205	5.17e6	5374	961.9	1.14e7	7011	1632.7	bb	bb
32	13C-1234789-HpCDF	2.33e5	5.21e5	7.54e5	40.89	1.101	0.45	NO	100.102	0.678	0.677	1.01	0.263	3.26e6	5374	606.3	7.49e6	7011	1069.0	bd	bb
33	13C-1234-TCDD	7.57e5	9.78e5	1.74e6	30.87	0.000	0.77	NO	100.000	1.000	1.000	0.00	0.156	1.17e7	9025	1300.0	1.53e7	4935	3106.6	bb	bb
34	13C-123789-HxCDD	6.11e5	5.01e5	1.11e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.161	1.15e7	5441	2105.6	9.54e6	5749	1659.5	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Ch#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	8.78e3	8.78e3	8.78e3	31.35	1.016			0.477	1.012	1.061	4.54	0.0460	1.91e5	4378	43.7						bb

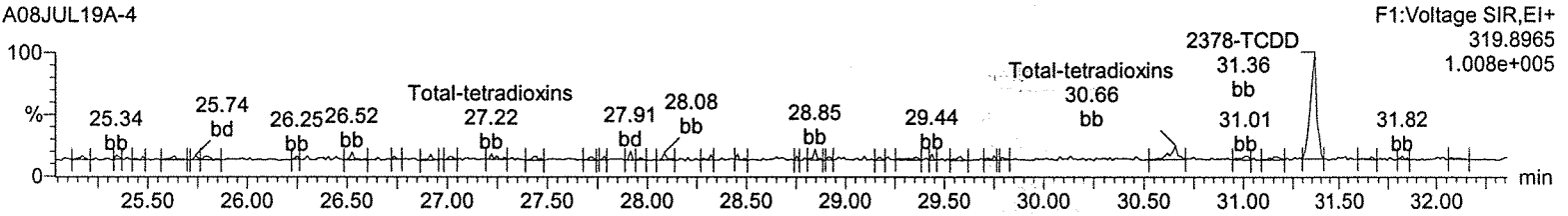
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

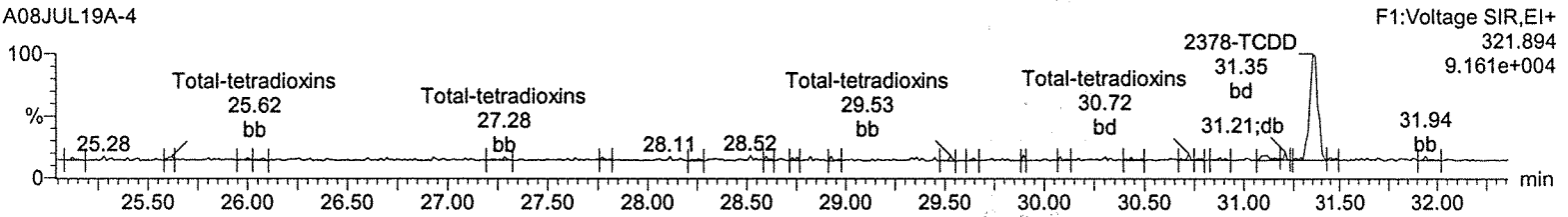
Total-tetradoxins

A08JUL19A-4



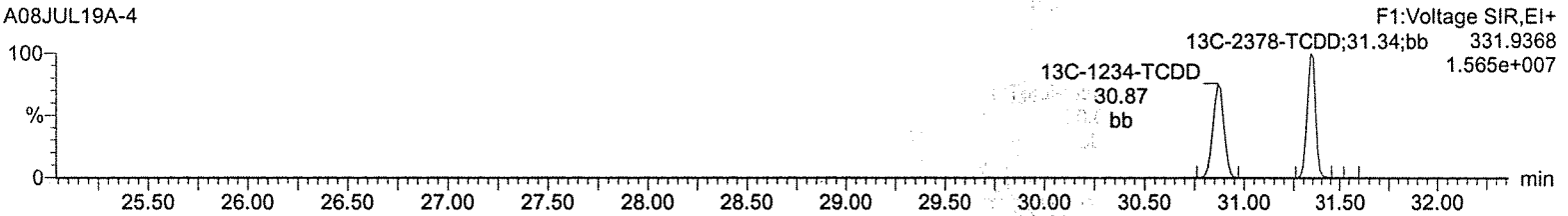
Total-tetradoxins

A08JUL19A-4



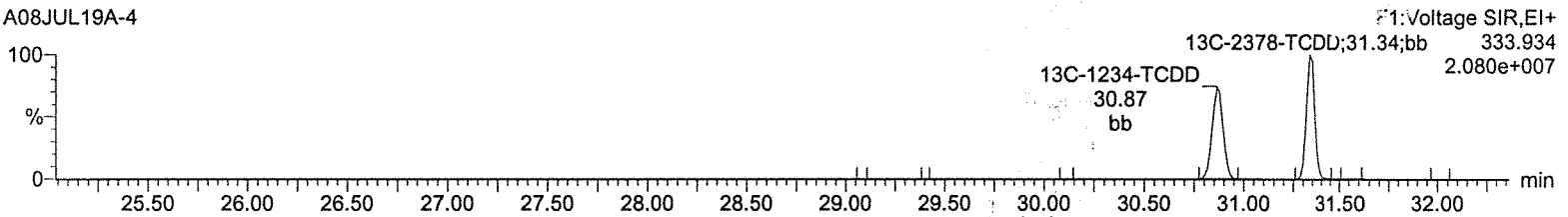
13C-2378-TCDD

A08JUL19A-4



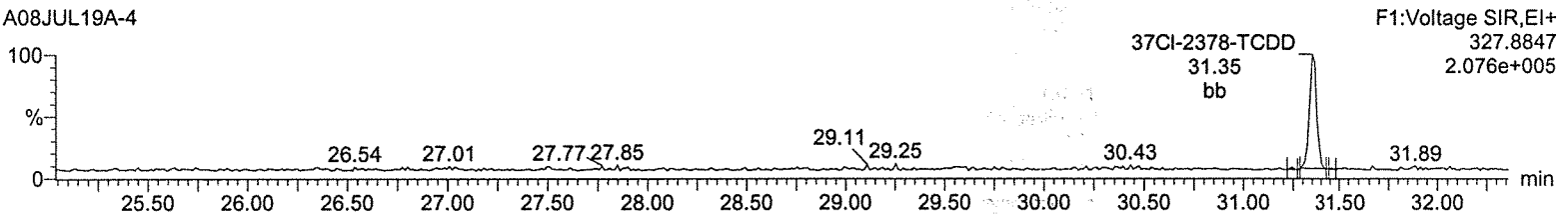
13C-2378-TCDD

A08JUL19A-4



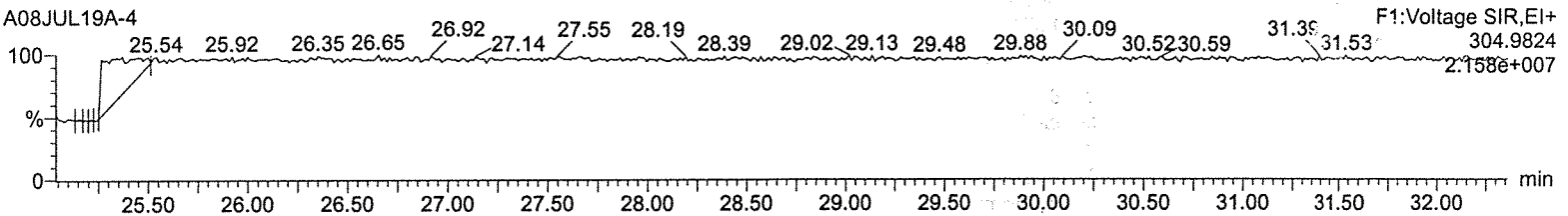
37Cl-2378-TCDD

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

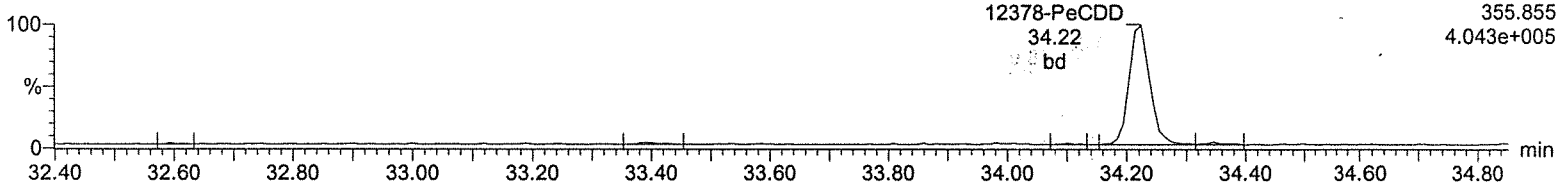
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

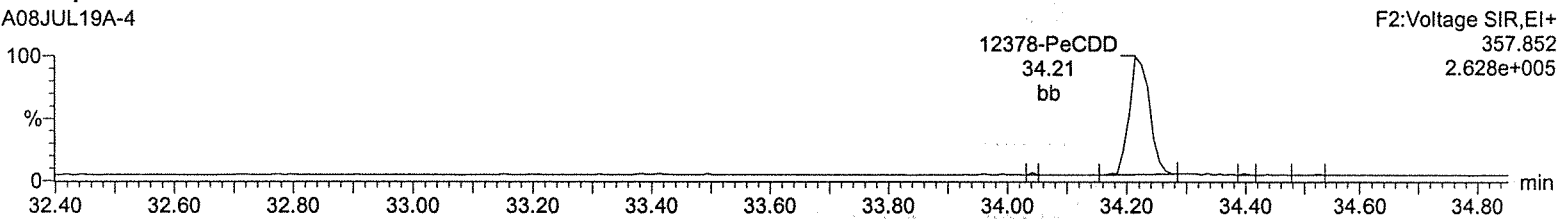
Total-pentadioxins

A08JUL19A-4



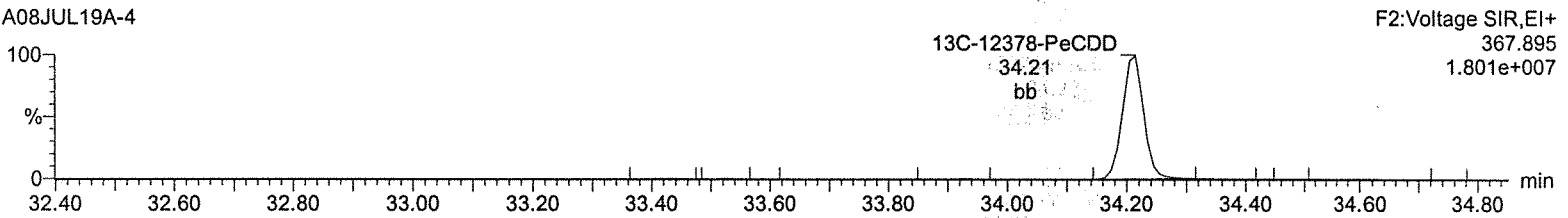
Total-pentadioxins

A08JUL19A-4



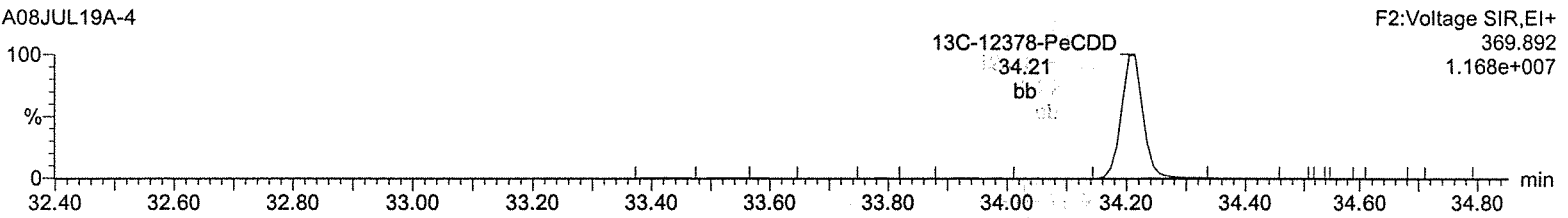
13C-12378-PeCDD

A08JUL19A-4



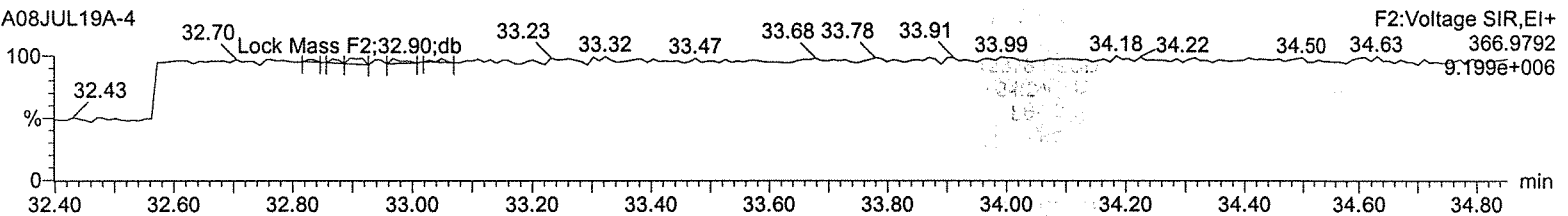
13C-12378-PeCDD

A08JUL19A-4



Lock Mass F2

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

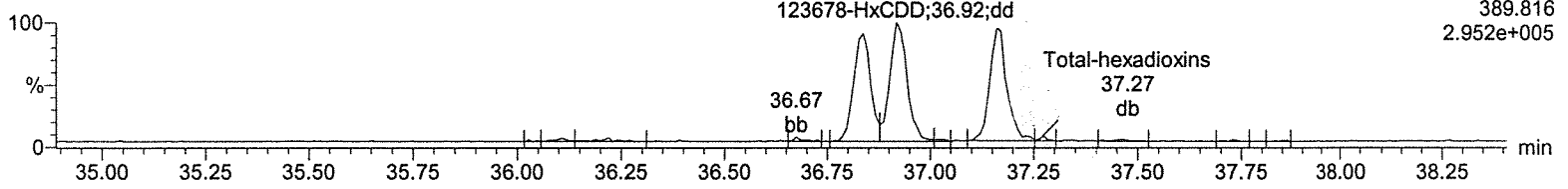
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexadioxins

A08JUL19A-4

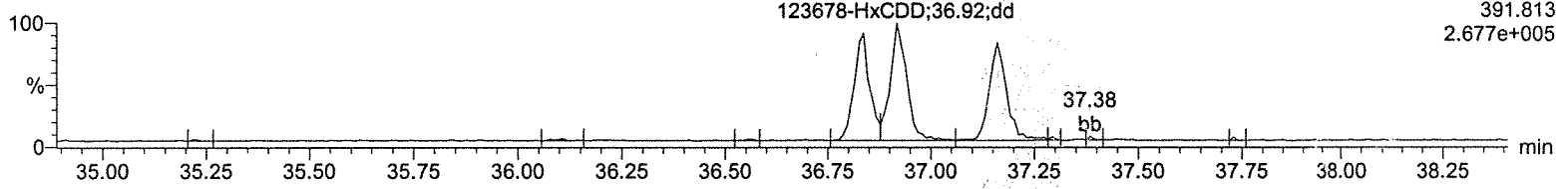
F3:Voltage SIR,EI+
389.816
2.952e+005



Total-hexadioxins

A08JUL19A-4

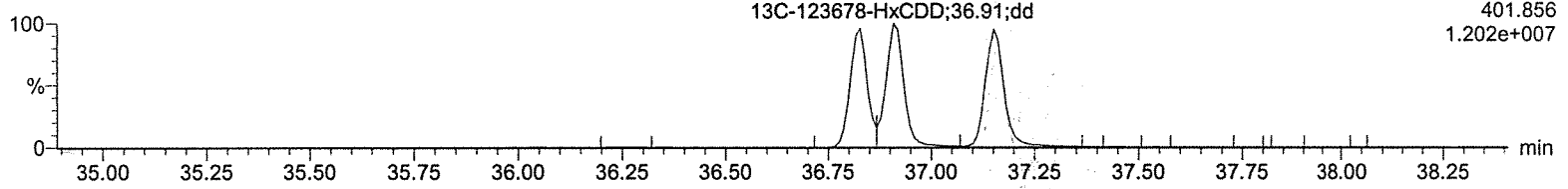
F3:Voltage SIR,EI+
391.813
2.677e+005



13C-123478-HxCDD

A08JUL19A-4

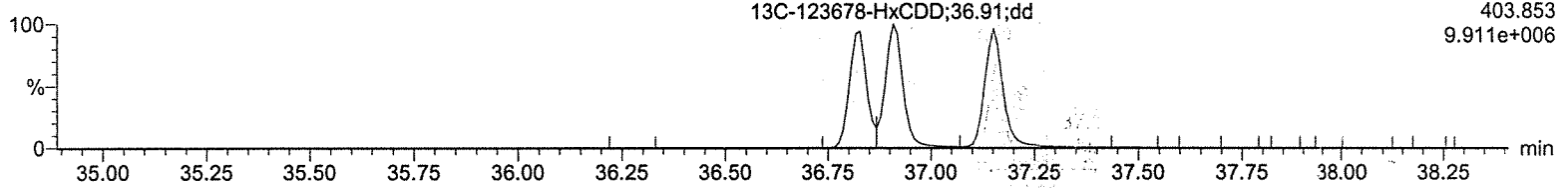
F3:Voltage SIR,EI+
401.856
1.202e+007



13C-123478-HxCDD

A08JUL19A-4

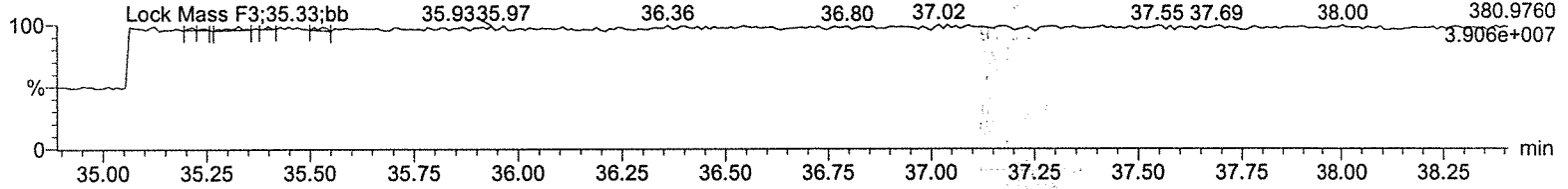
F3:Voltage SIR,EI+
403.853
9.911e+006



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

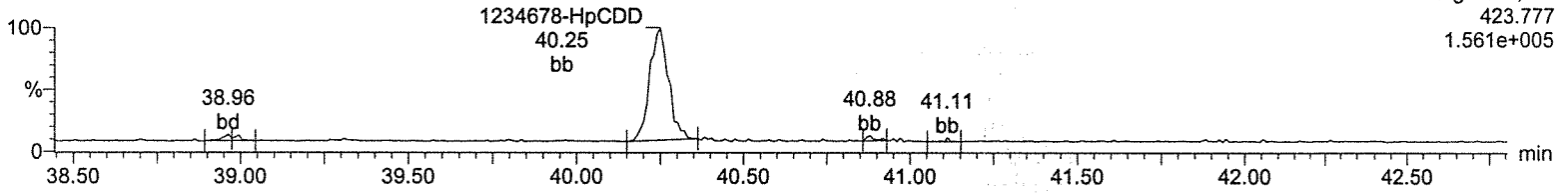
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptadioxins

A08JUL19A-4

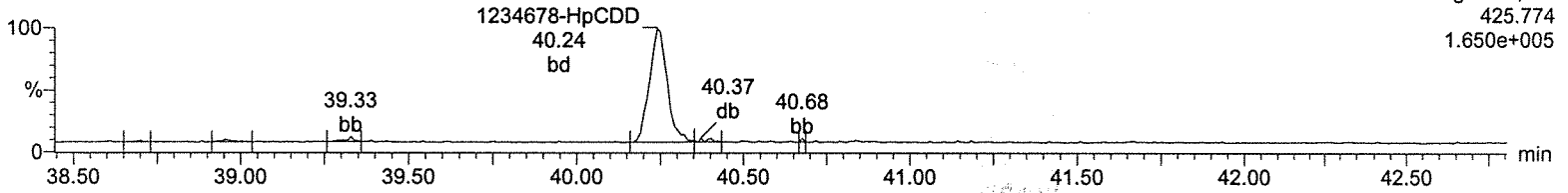
F4:Voltage SIR,EI+
423.777
1.561e+005



Total-heptadioxins

A08JUL19A-4

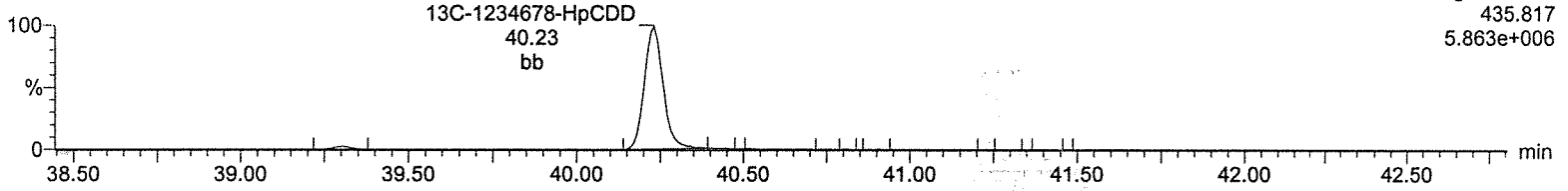
F4:Voltage SIR,EI+
425.774
1.650e+005



13C-1234678-HpCDD

A08JUL19A-4

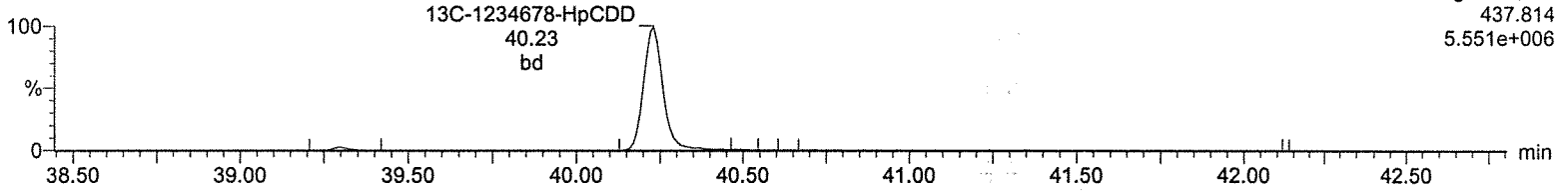
F4:Voltage SIR,EI+
435.817
5.863e+006



13C-1234678-HpCDD

A08JUL19A-4

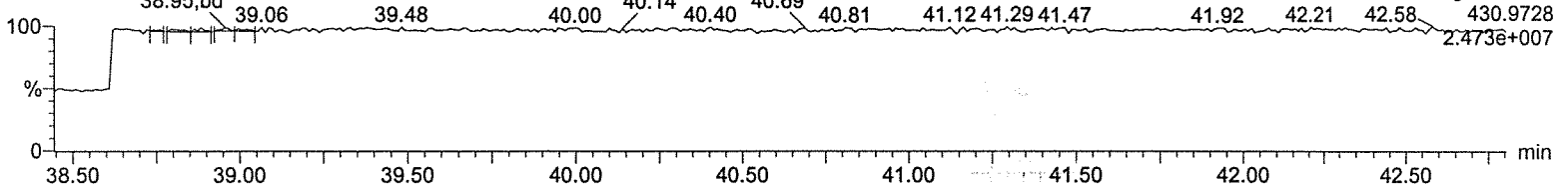
F4:Voltage SIR,EI+
437.814
5.551e+006



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

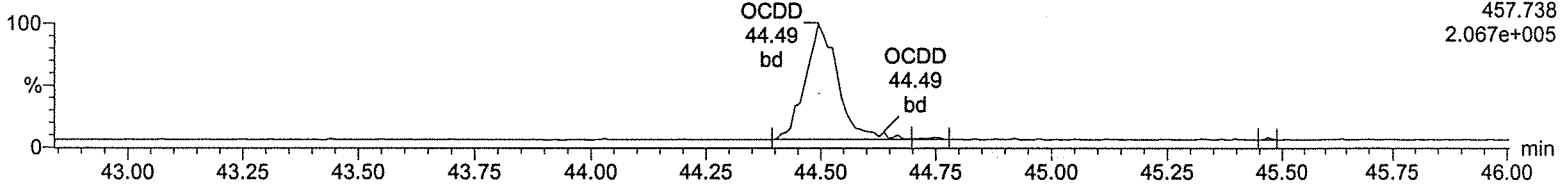
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

OCDD

A08JUL19A-4

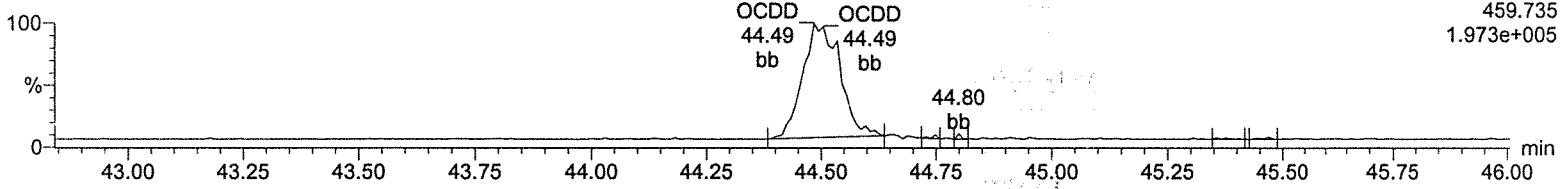
F5:Voltage SIR,EI+
457.738
2.067e+005



OCDD

A08JUL19A-4

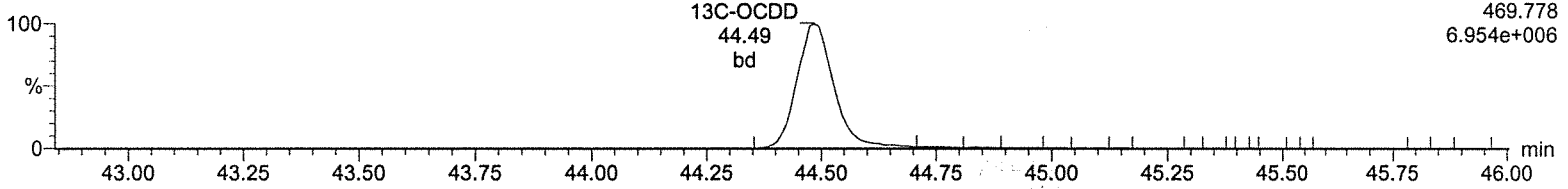
F5:Voltage SIR,EI+
459.735
1.973e+005



13C-OCDD

A08JUL19A-4

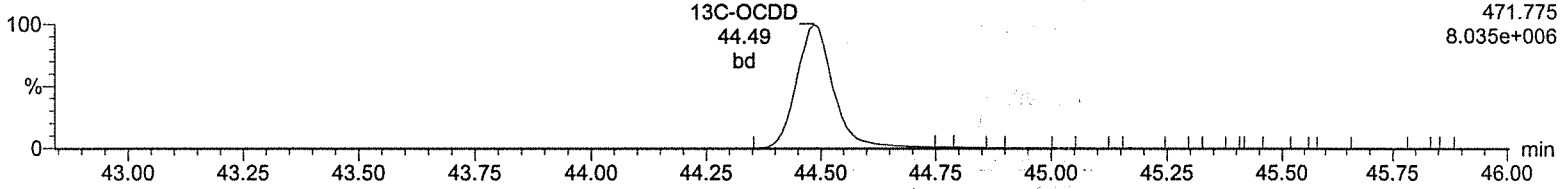
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

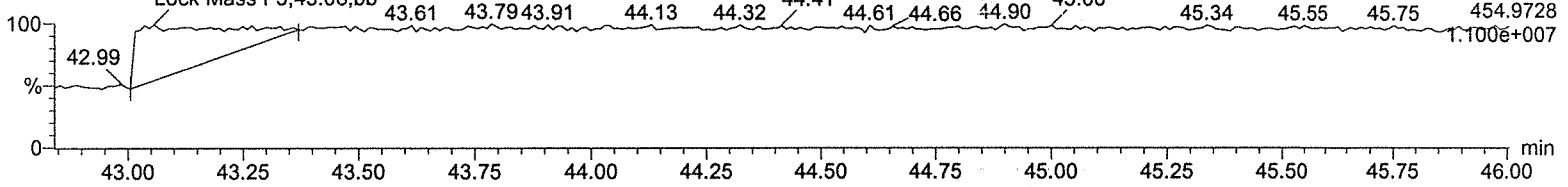
F5:Voltage SIR,EI+
471.775
8.035e+006



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
454.9728
1.100e+007



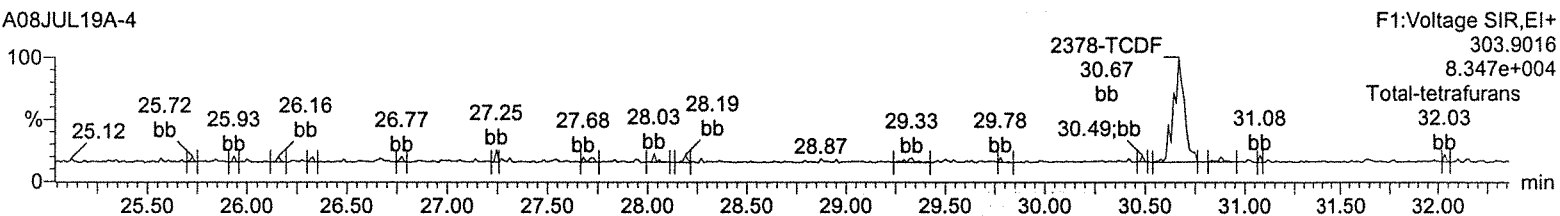
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Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

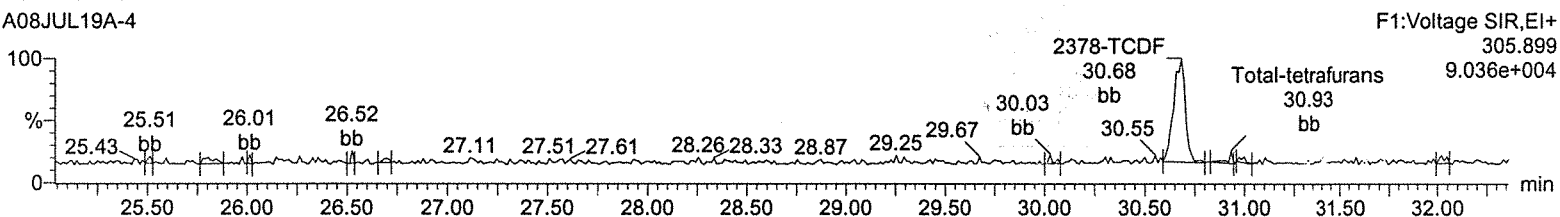
Total-tetrafurans

A08JUL19A-4



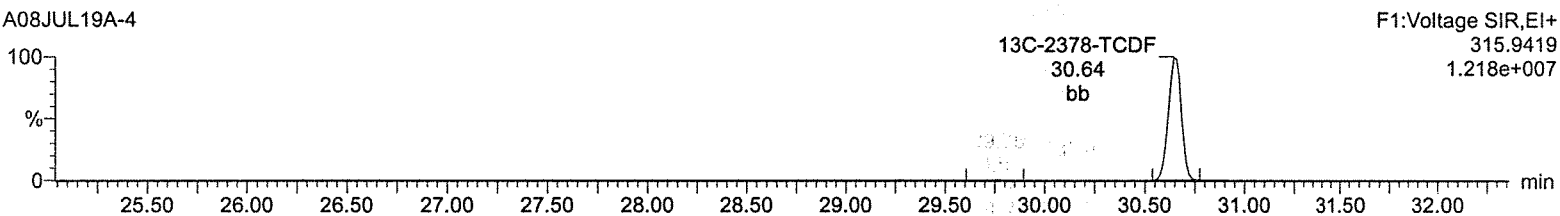
Total-tetrafurans

A08JUL19A-4



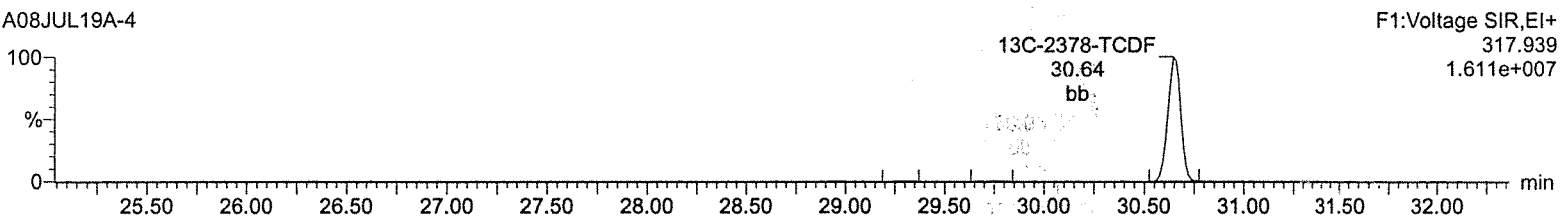
13C-2378-TCDF

A08JUL19A-4



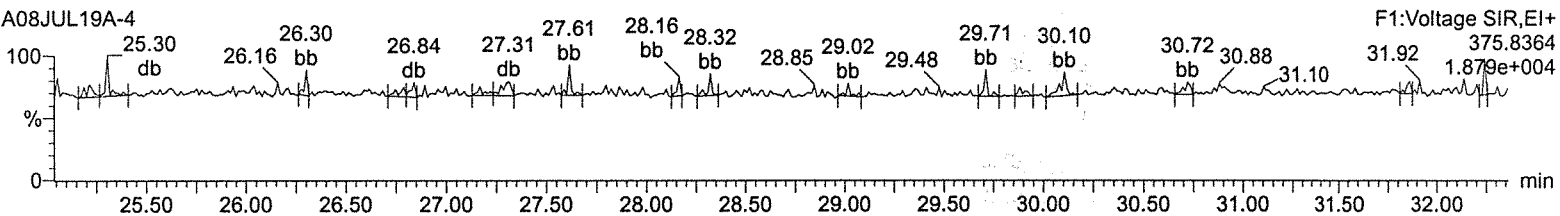
13C-2378-TCDF

A08JUL19A-4



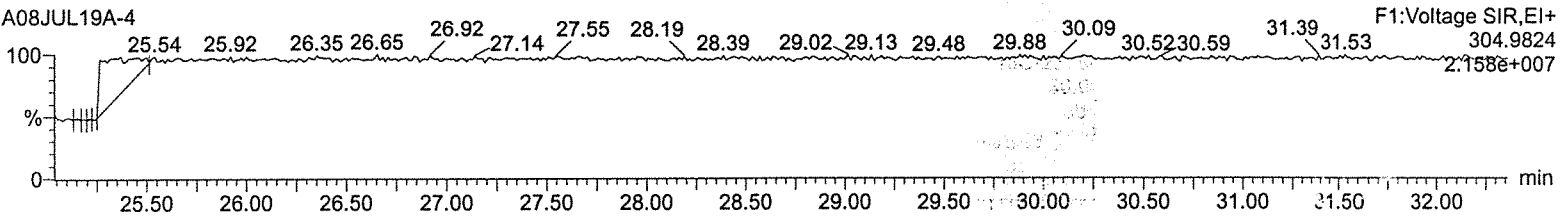
HxDPE

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



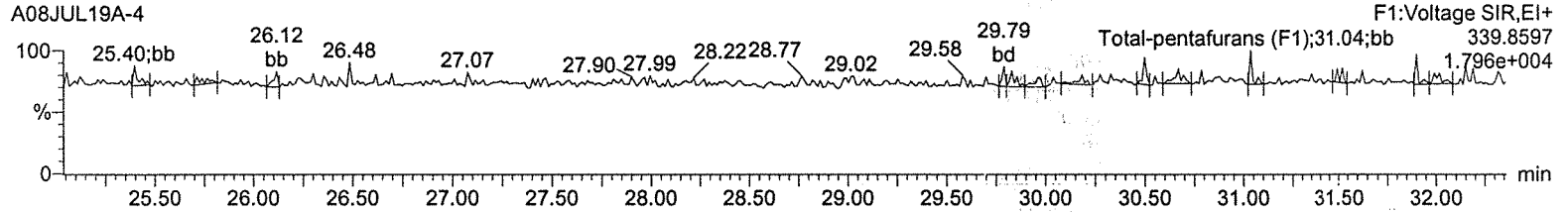
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

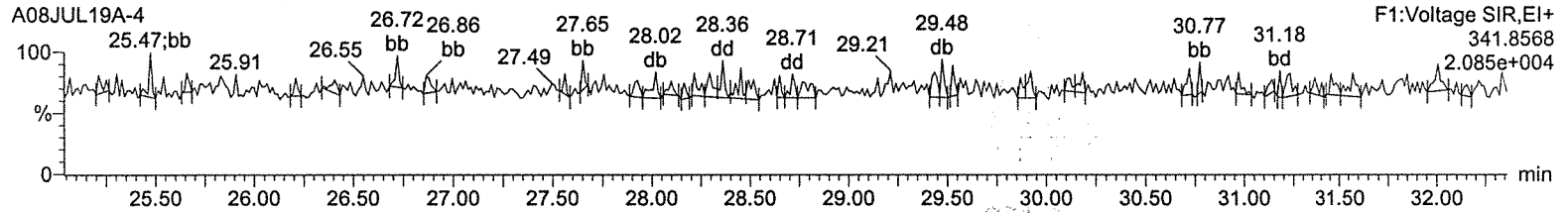
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

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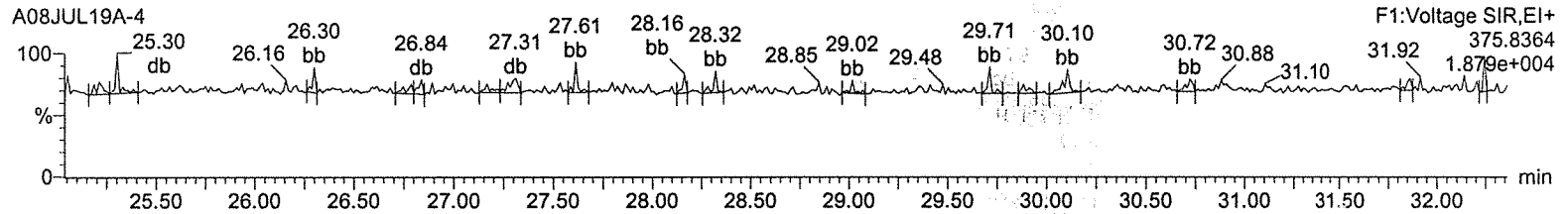
Total-pentafurans (F1)



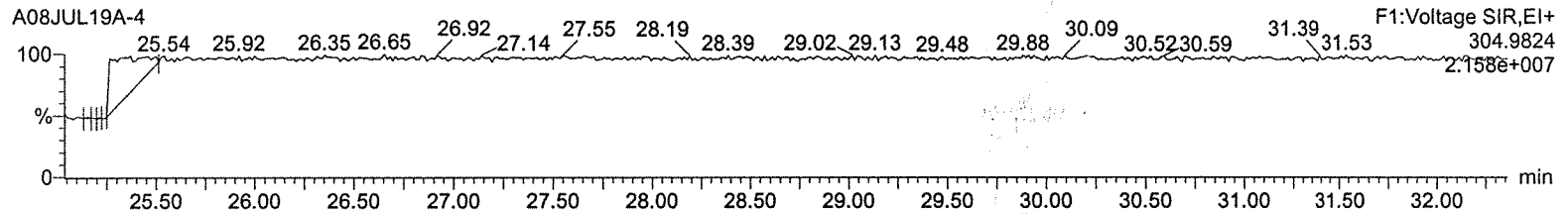
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

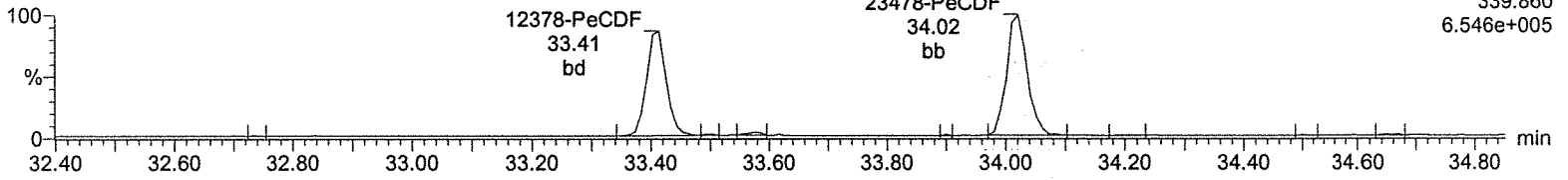
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-pentafurans

A08JUL19A-4

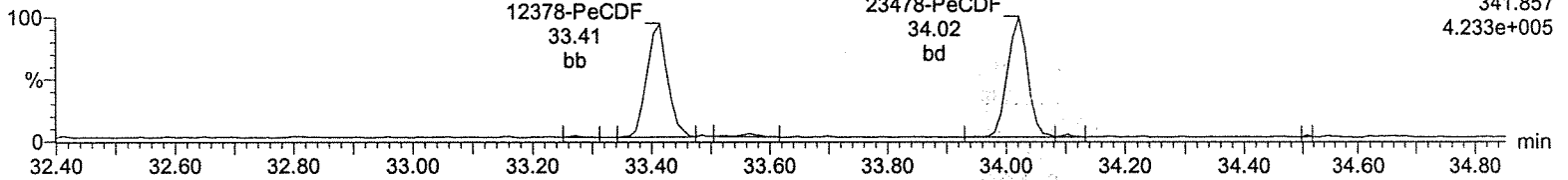
F2:Voltage SIR,EI+
339.860
6.546e+005



Total-pentafurans

A08JUL19A-4

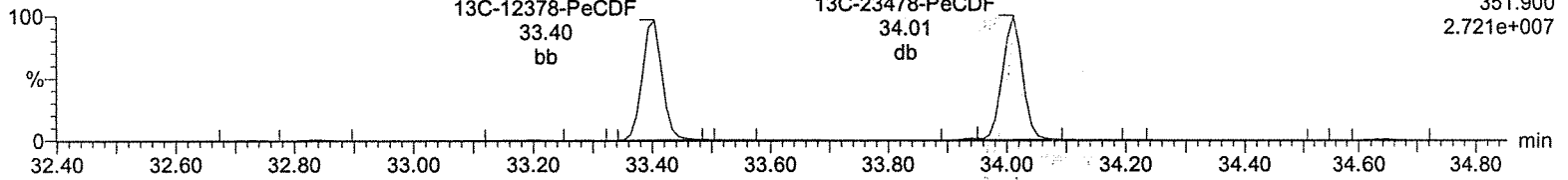
F2:Voltage SIR,EI+
341.857
4.233e+005



13C-12378-PeCDF

A08JUL19A-4

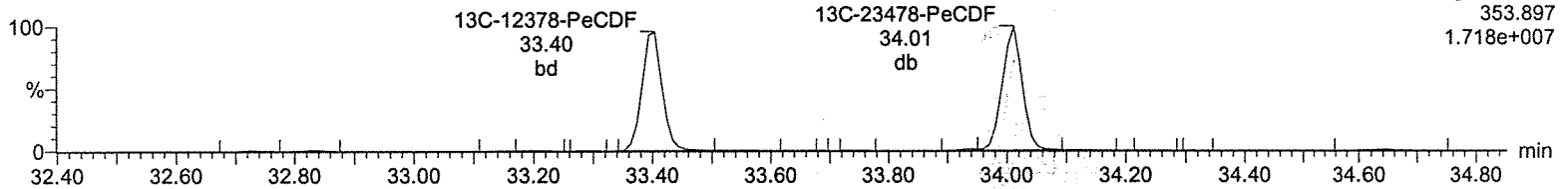
F2:Voltage SIR,EI+
351.900
2.721e+007



13C-12378-PeCDF

A08JUL19A-4

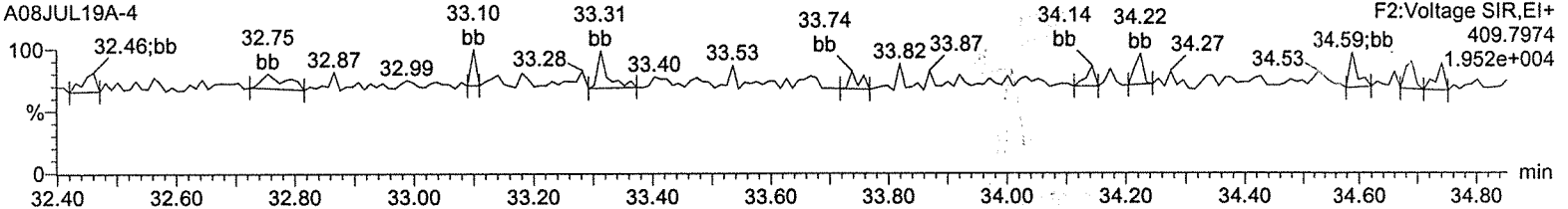
F2:Voltage SIR,EI+
353.897
1.718e+007



HpDPE

A08JUL19A-4

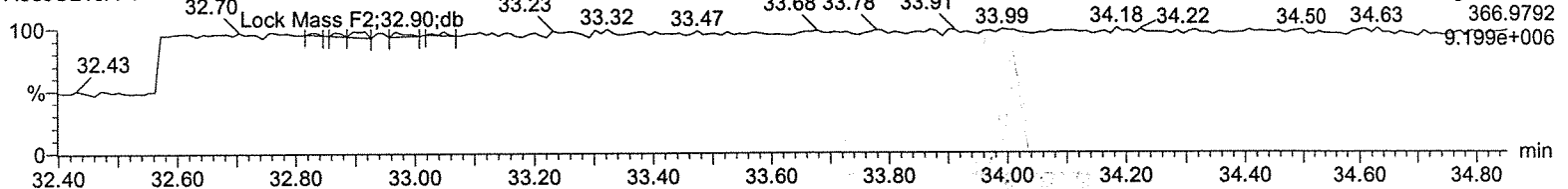
F2:Voltage SIR,EI+
409.7974
1.952e+004



Lock Mass F2

A08JUL19A-4

F2:Voltage SIR,EI+
366.9792
9.199e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

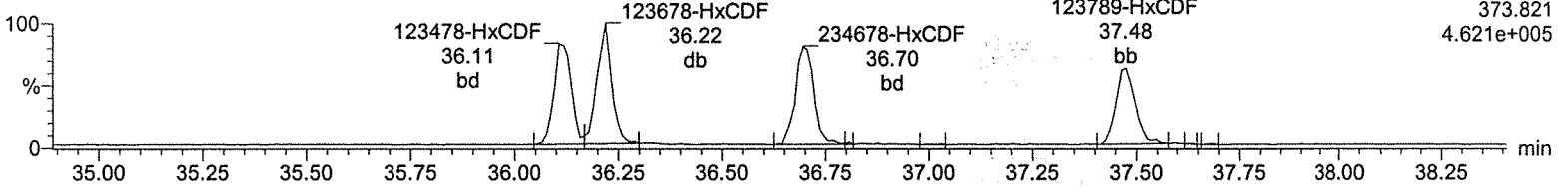
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexafurans

A08JUL19A-4

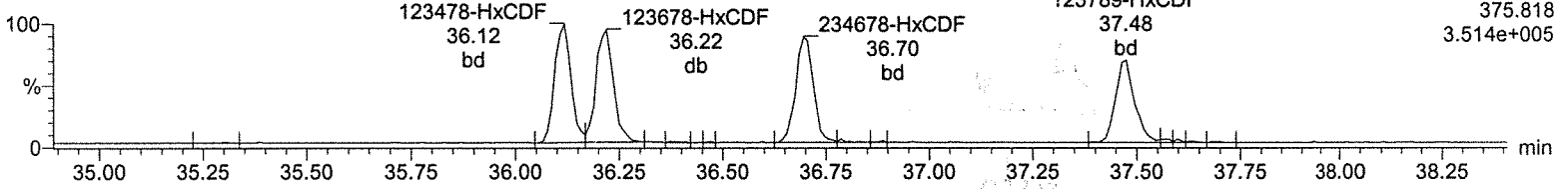
F3:Voltage SIR,EI+
373.821
4.621e+005



Total-hexafurans

A08JUL19A-4

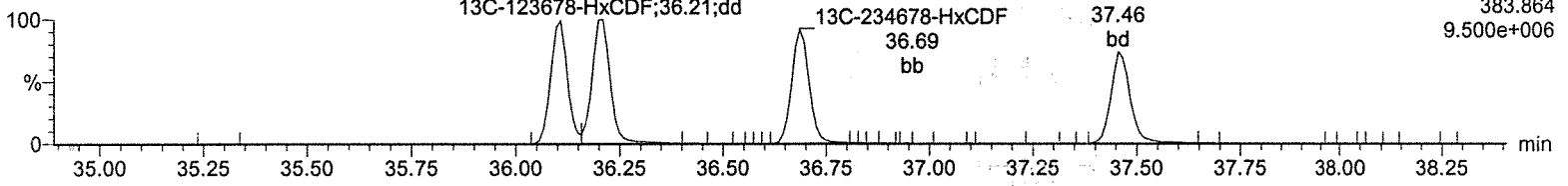
F3:Voltage SIR,EI+
375.818
3.514e+005



13C-123478-HxCDF

A08JUL19A-4

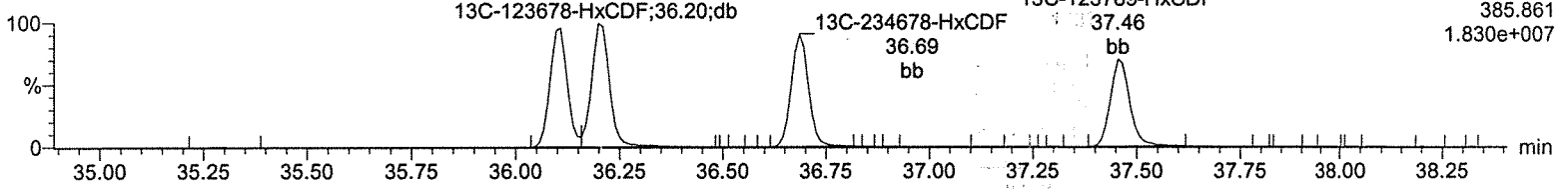
F3:Voltage SIR,EI+
383.864
9.500e+006



13C-123478-HxCDF

A08JUL19A-4

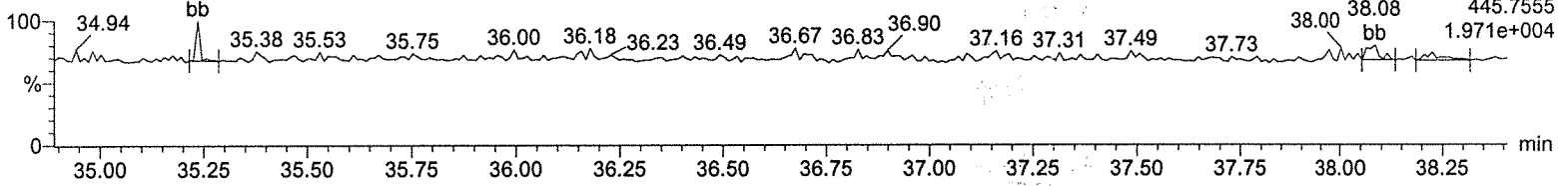
F3:Voltage SIR,EI+
385.861
1.830e+007



OcDPE

A08JUL19A-4

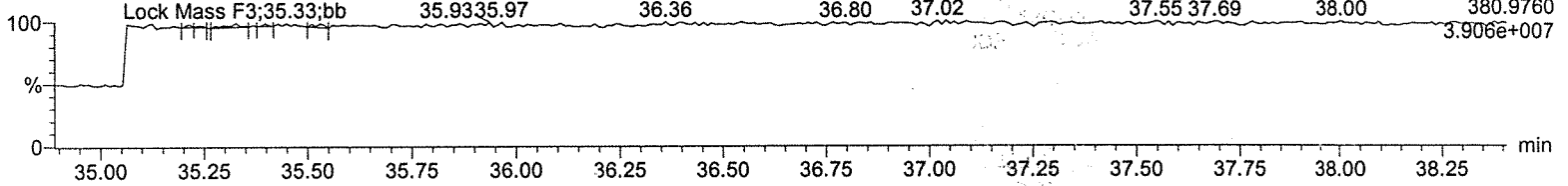
F3:Voltage SIR,EI+
445.7555
1.971e+004



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

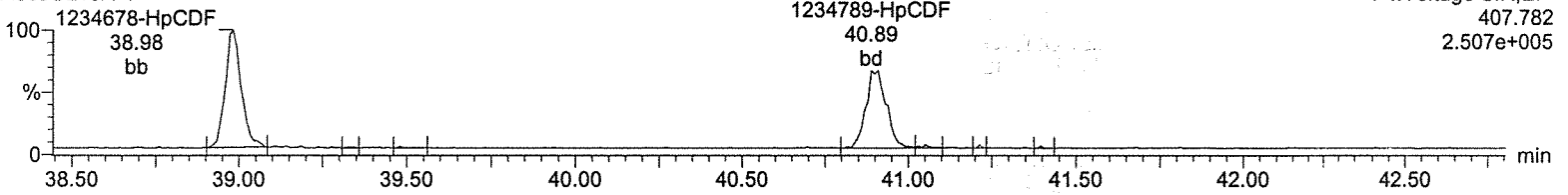
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptafurans

A08JUL19A-4

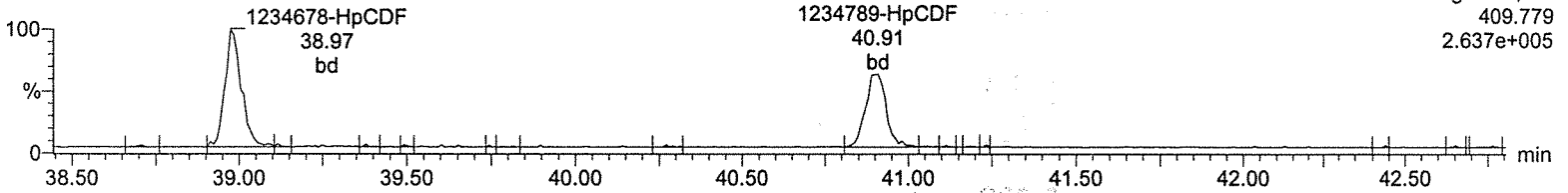
F4:Voltage SIR,EI+
407.782
2.507e+005



Total-heptafurans

A08JUL19A-4

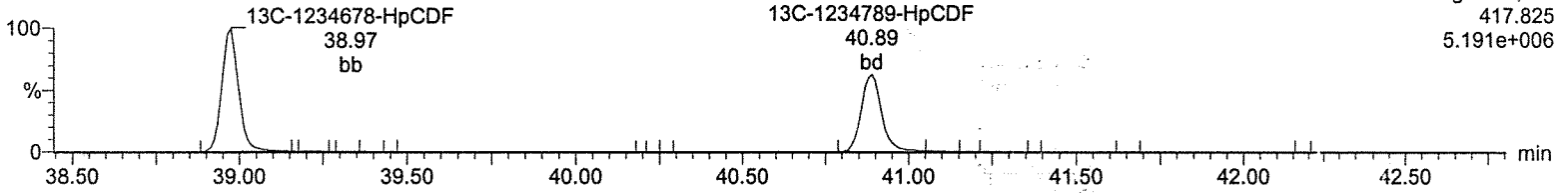
F4:Voltage SIR,EI+
409.779
2.637e+005



13C-1234678-HpCDF

A08JUL19A-4

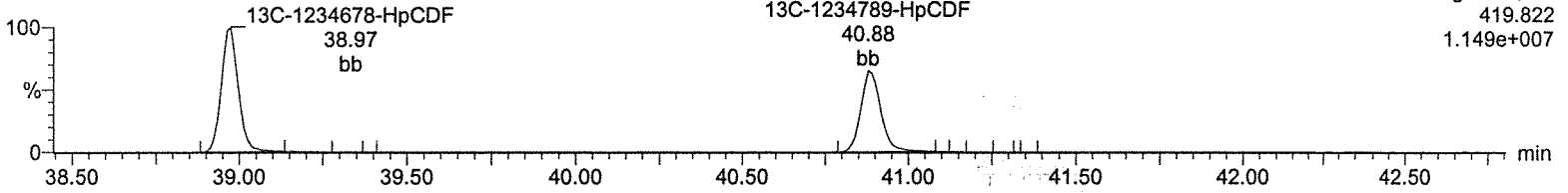
F4:Voltage SIR,EI+
417.825
5.191e+006



13C-1234678-HpCDF

A08JUL19A-4

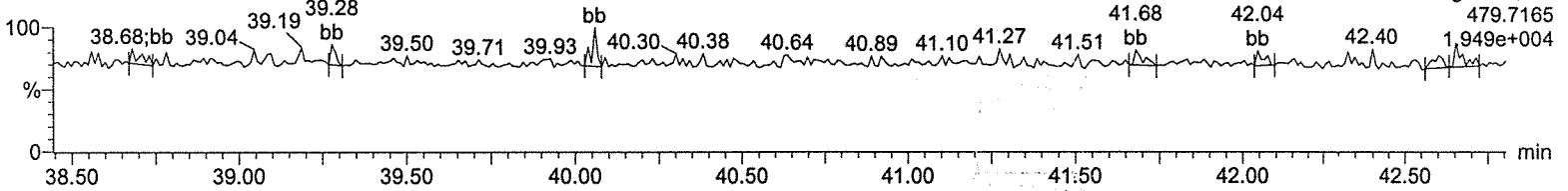
F4:Voltage SIR,EI+
419.822
1.149e+007



NoDPE

A08JUL19A-4

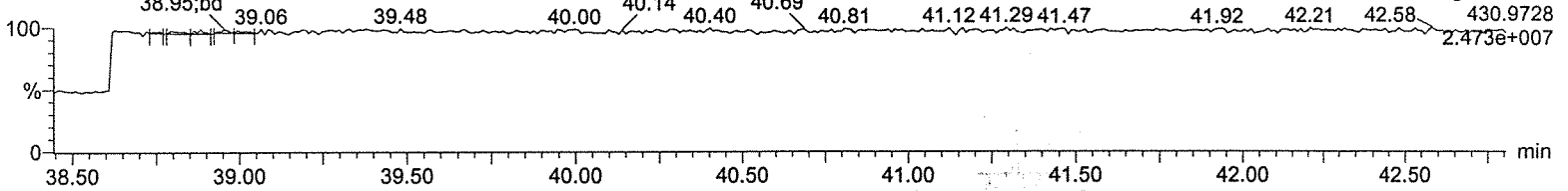
F4:Voltage SIR,EI+
479.7165
1.949e+004



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

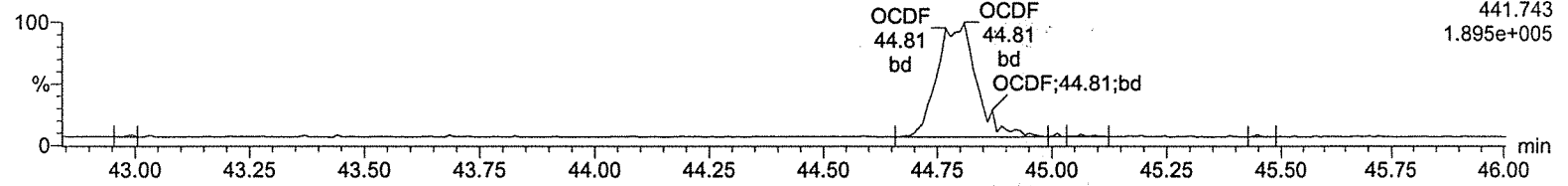
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

OCDF

A08JUL19A-4

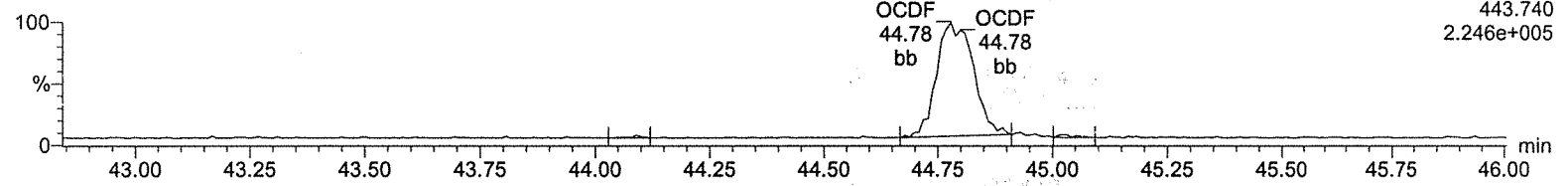
F5:Voltage SIR,EI+
441.743
1.895e+005



OCDF

A08JUL19A-4

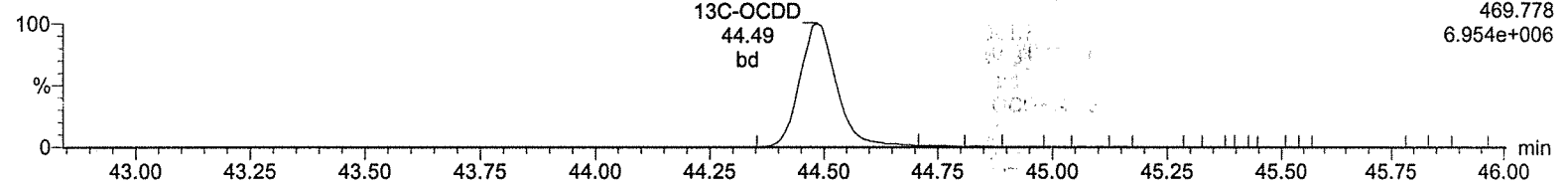
F5:Voltage SIR,EI+
443.740
2.246e+005



13C-OCDD

A08JUL19A-4

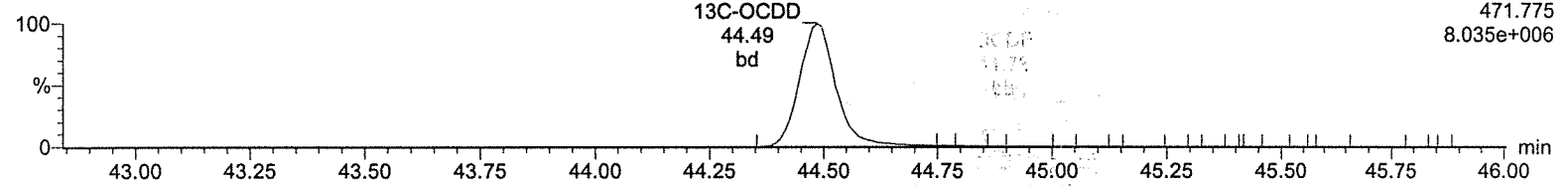
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

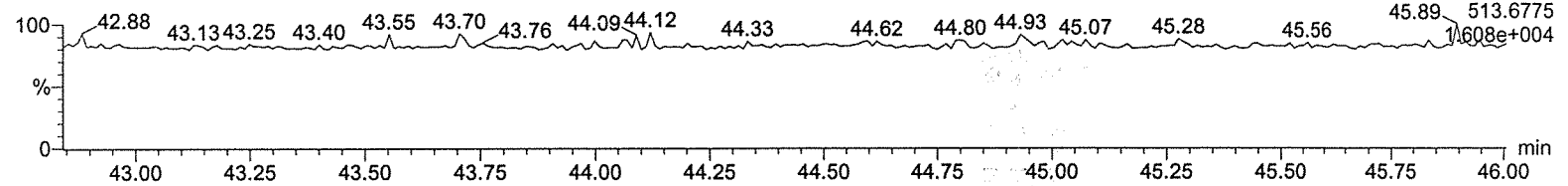
F5:Voltage SIR,EI+
471.775
8.035e+006



DeDPE

A08JUL19A-4

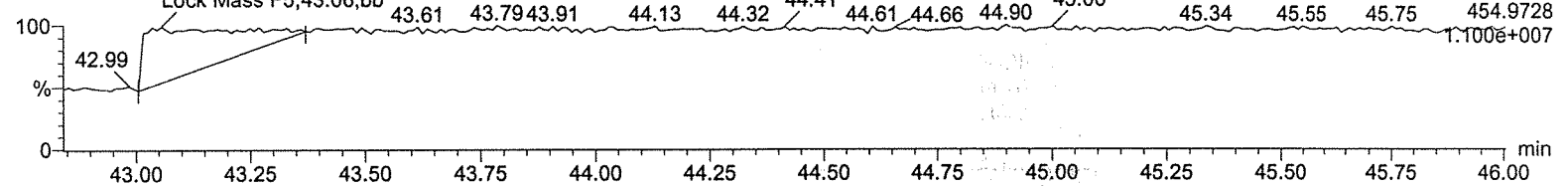
F5:Voltage SIR,EI+
45.89 513.6775
1.608e+004



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
45.75 454.9728
1.100e+007



Quantify Sample Summary Report
 Method 1613 ICA Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2019 July 9

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	SM2	M	M2
1	2378-TCDD	1.64e4	1.96e4	3.60e4	31.35	1.000	0.84	NO	1.926	0.852	0.884	5.07	0.0366	3.15e5	2708	116.2	3.71e5	1865	198.8	bd	bb
2	12378-PeCDD	7.01e4	4.54e4	1.16e5	34.21	1.000	1.54	NO	9.858	0.841	0.853	1.65	0.0620	1.64e6	4036	407.1	1.04e6	1793	580.0	bd	bd
3	123478-HxCDD	6.07e4	4.76e4	1.08e5	36.83	1.000	1.27	NO	10.128	0.952	0.940	3.11	0.0942	1.22e6	2456	497.4	9.73e5	4175	232.9	bd	bd
4	123678-HxCDD	6.34e4	5.11e4	1.15e5	36.92	1.000	1.24	NO	9.763	0.922	0.944	2.57	0.0868	1.18e6	2456	481.4	1.03e6	4175	246.2	dd	db
5	123789-HxCDD	6.39e4	4.66e4	1.10e5	37.16	1.007	1.37	NO	10.002	0.927	0.927	3.30	0.0918	1.18e6	2456	480.1	9.15e5	4175	219.1	dd	bb
6	1234678-HpCDD	4.59e4	4.40e4	8.99e4	40.24	1.000	1.04	NO	9.996	1.040	1.040	2.88	0.110	6.56e5	2814	233.2	6.28e5	2050	306.2	bd	bd
7	OCDD	7.02e4	7.76e4	1.48e5	44.49	1.000	0.90	NO	19.465	0.945	0.971	2.39	0.188	8.27e5	1894	436.6	8.97e5	3432	261.3	bb	bd
8	2378-TCDF	1.89e4	2.56e4	4.45e4	30.66	1.000	0.74	NO	1.930	0.944	0.978	5.59	0.0473	2.49e5	1586	157.1	3.39e5	3348	101.3	bb	bb
9	12378-PeCDF	1.06e5	6.71e4	1.73e5	33.40	1.000	1.58	NO	9.783	0.925	0.945	3.41	0.0636	2.70e6	3895	693.8	1.78e6	5562	320.5	bd	bb
10	23478-PeCDF	1.18e5	7.25e4	1.90e5	34.01	1.000	1.63	NO	9.783	0.965	0.987	3.73	0.0611	2.97e6	3895	763.7	1.80e6	5562	323.0	bb	bb
11	123478-HxCDF	8.27e4	6.81e4	1.51e5	36.11	1.000	1.21	NO	9.763	1.061	1.087	3.86	0.0759	1.84e6	4254	433.3	1.52e6	3988	381.2	bd	bd
12	123678-HxCDF	9.22e4	7.42e4	1.66e5	36.21	1.000	1.24	NO	9.951	1.035	1.041	3.23	0.0734	1.84e6	4254	432.3	1.62e6	3988	407.3	db	db
13	234678-HxCDF	8.43e4	7.08e4	1.55e5	36.69	1.000	1.19	NO	9.949	1.130	1.136	3.17	0.0789	1.74e6	4254	408.5	1.48e6	3988	370.3	bd	bd
14	123789-HxCDF	7.38e4	5.81e4	1.32e5	37.48	1.000	1.27	NO	10.037	1.065	1.061	2.29	0.105	1.25e6	4254	294.9	1.09e6	3988	272.3	bb	bb
15	1234678-HpCDF	6.54e4	6.32e4	1.29e5	38.98	1.000	1.03	NO	9.981	1.148	1.150	3.86	0.0875	1.11e6	3400	327.0	1.11e6	2921	379.1	bd	bd
16	1234789-HpCDF	5.22e4	4.99e4	1.02e5	40.90	1.000	1.04	NO	9.741	1.171	1.202	1.91	0.129	7.25e5	3400	213.2	7.43e5	2921	254.5	bd	bd
17	OCDF	8.37e4	9.25e4	1.76e5	44.78	1.007	0.90	NO	19.911	1.128	1.133	6.78	0.224	8.60e5	5124	167.8	1.02e6	2272	447.0	bd	bd
18	13C-2378-TCDD	9.19e5	1.19e6	2.11e6	31.34	1.015	0.77	NO	99.089	1.118	1.128	2.36	0.123	1.85e7	8904	2075.2	2.42e7	4676	5171.3	bb	bb
19	13C-12378-PeCDD	8.32e5	5.41e5	1.37e6	34.20	1.108	1.54	NO	96.776	0.727	0.751	5.03	0.0911	2.00e7	3434	5827.9	1.32e7	3264	4047.5	bb	bb
20	13C-123478-HxCDD	6.41e5	4.98e5	1.14e6	36.82	0.991	1.29	NO	99.739	0.894	0.896	1.38	0.237	1.27e7	7585	1668.3	1.03e7	8736	1182.7	bd	bd
21	13C-123678-HxCDD	6.70e5	5.73e5	1.24e6	36.91	0.993	1.17	NO	98.976	0.976	0.986	0.84	0.216	1.31e7	7585	1725.4	1.07e7	8736	1227.3	dd	dd
22	13C-1234678-HpCDD	4.39e5	4.25e5	8.65e5	40.23	1.093	1.03	NO	101.051	0.679	0.672	1.29	0.236	6.46e6	6562	985.2	6.05e6	5587	1082.0	bb	bd
23	13C-OCDD	7.21e5	8.42e5	1.56e6	44.49	1.197	0.86	NO	191.086	0.614	0.642	4.87	0.302	8.07e6	5375	1501.9	8.99e6	9504	945.8	bb	bd
24	13C-2378-TCDF	1.03e6	1.33e6	2.36e6	30.64	0.993	0.77	NO	99.848	1.248	1.250	1.88	0.185	1.40e7	15077	925.5	1.82e7	7573	2401.2	bb	bb
25	13C-12378-PeCDF	1.14e6	7.27e5	1.87e6	33.39	1.082	1.57	NO	98.012	0.991	1.011	4.24	0.186	2.88e7	10165	2836.7	1.87e7	8269	2257.4	bb	bb
26	13C-23478-PeCDF	1.20e6	7.67e5	1.97e6	34.00	1.102	1.57	NO	98.156	1.044	1.063	5.28	0.177	2.88e7	10165	2830.5	1.86e7	8269	2249.2	bb	bb
27	13C-123478-HxCDF	4.84e5	9.37e5	1.42e6	36.10	0.972	0.52	NO	100.421	1.115	1.111	1.42	0.255	1.02e7	10424	978.9	1.98e7	11320	1746.0	bd	bd
28	13C-123678-HxCDF	5.51e5	1.06e6	1.61e6	36.20	0.974	0.52	NO	101.235	1.262	1.247	1.06	0.227	1.11e7	10424	1065.6	2.11e7	11320	1864.5	dd	dd
29	13C-234678-HxCDF	4.74e5	8.99e5	1.37e6	36.69	0.987	0.53	NO	99.614	1.078	1.082	1.01	0.262	9.53e6	10424	914.6	1.83e7	11320	1619.4	bb	bb
30	13C-123789-HxCDF	4.34e5	8.05e5	1.24e6	37.46	1.008	0.54	NO	100.569	0.973	0.967	1.08	0.293	7.78e6	10424	746.4	1.45e7	11320	1279.8	bd	bb
31	13C-1234678-HpCDF	3.48e5	7.72e5	1.12e6	38.96	1.049	0.45	NO	101.100	0.880	0.870	1.11	0.203	5.86e6	7080	827.3	1.29e7	6451	1996.6	bd	bb
32	13C-1234789-HpCDF	2.69e5	6.03e5	8.72e5	40.88	1.100	0.45	NO	101.106	0.685	0.677	1.01	0.260	3.78e6	7080	534.3	8.61e6	6451	1335.0	bd	bb
33	13C-1234-TCDD	8.25e5	1.06e6	1.89e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.139	1.28e7	8904	1440.8	1.64e7	4676	3505.8	bb	bb
34	13C-123789-HxCDD	7.00e5	5.74e5	1.27e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.213	1.26e7	7585	1667.6	1.04e7	8736	1189.4	db	dd

Quantify Sample Summary Report MassLynx 4.1
 Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Ch#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	3.85e4		3.85e4	31.35	1.016			1.919	1.018	1.061	4.54	0.0384	7.43e5	3989	186.2						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

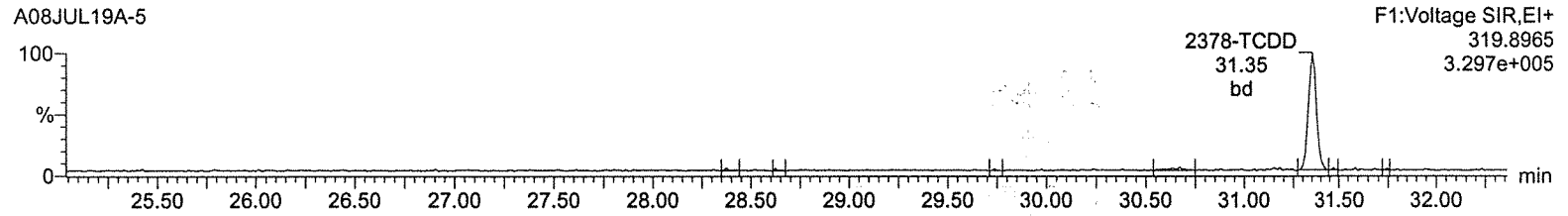
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

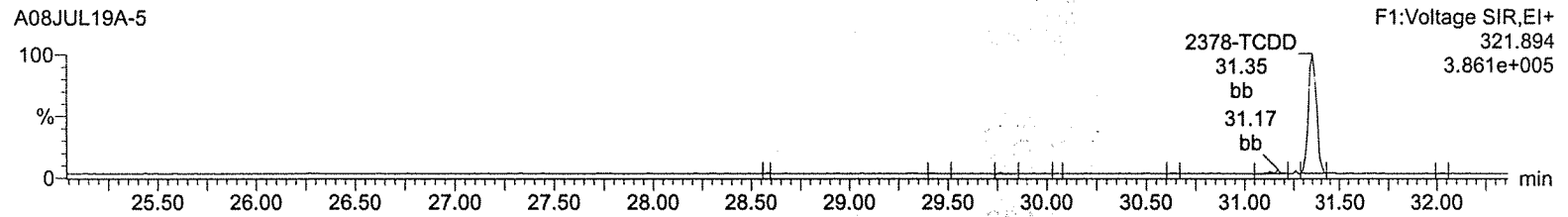
Total-tetradoxins

A08JUL19A-5



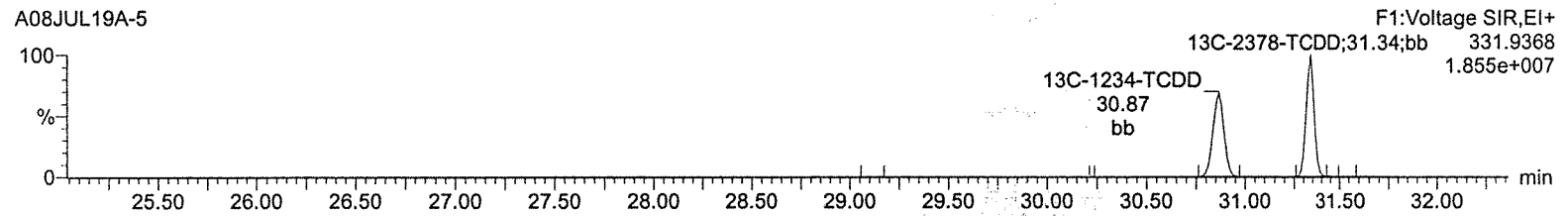
Total-tetradoxins

A08JUL19A-5



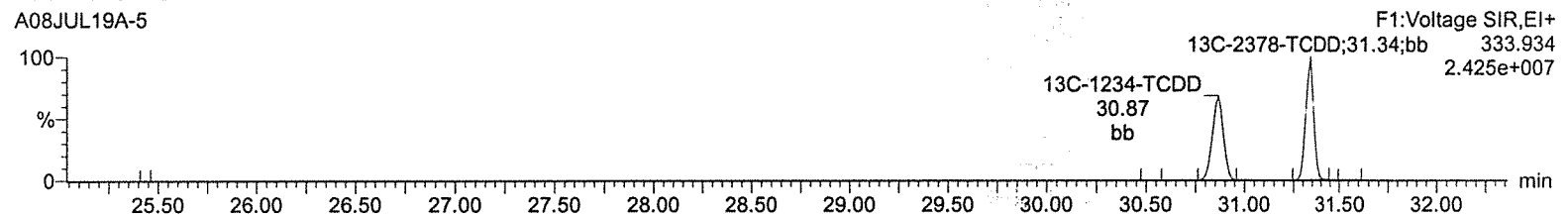
13C-2378-TCDD

A08JUL19A-5



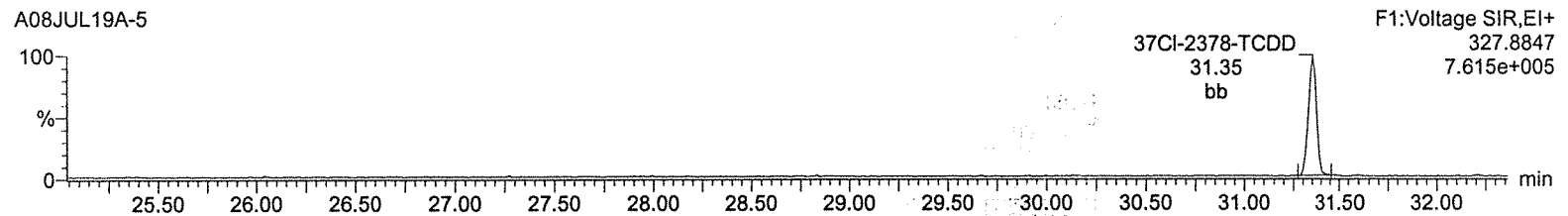
13C-2378-TCDD

A08JUL19A-5



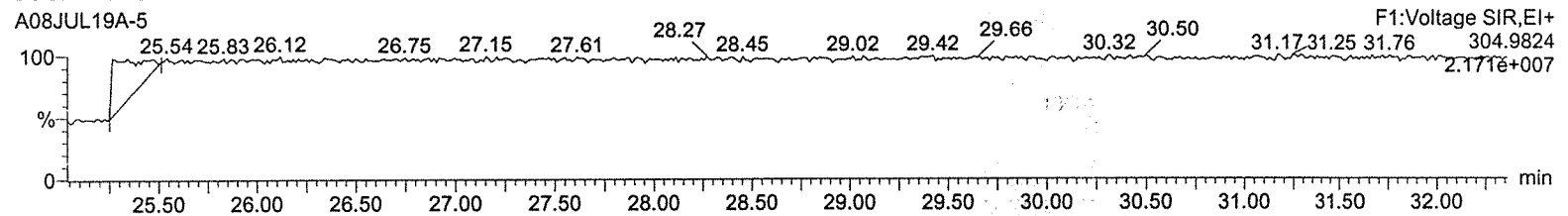
37Cl-2378-TCDD

A08JUL19A-5



Lock Mass F1

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

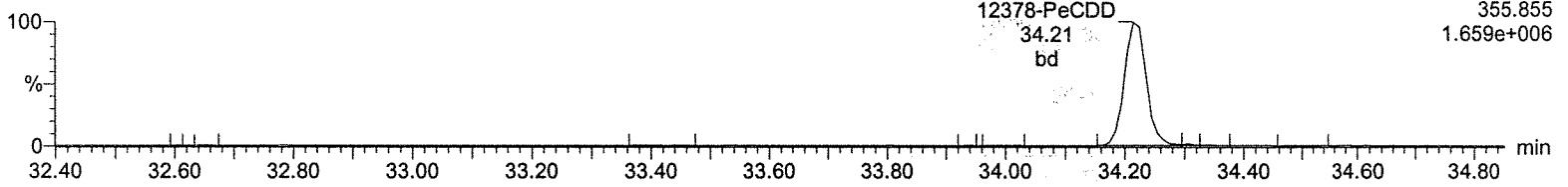
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-pentadioxins

A08JUL19A-5

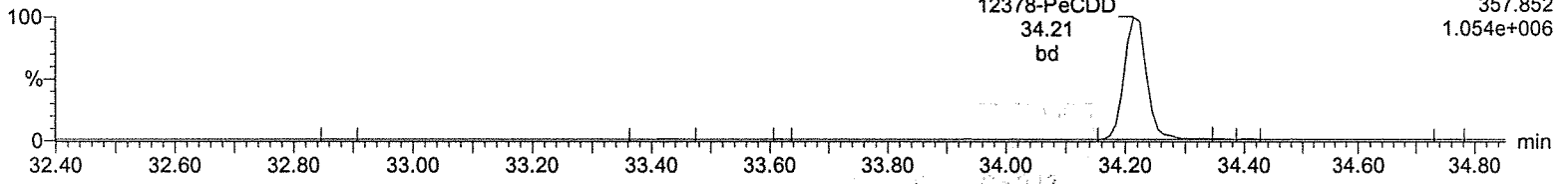
F2:Voltage SIR,EI+
355.855
1.659e+006



Total-pentadioxins

A08JUL19A-5

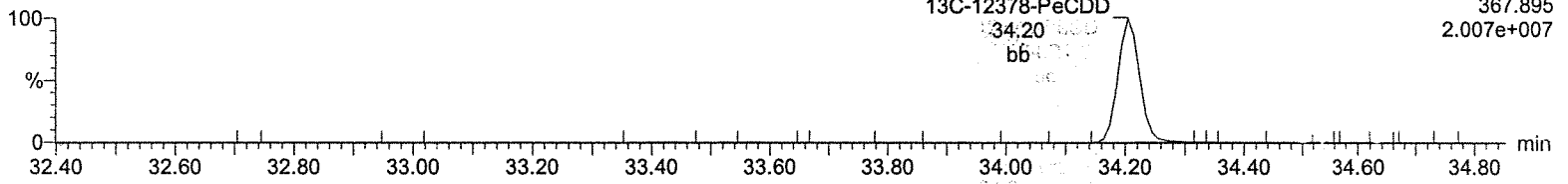
F2:Voltage SIR,EI+
357.852
1.054e+006



13C-12378-PeCDD

A08JUL19A-5

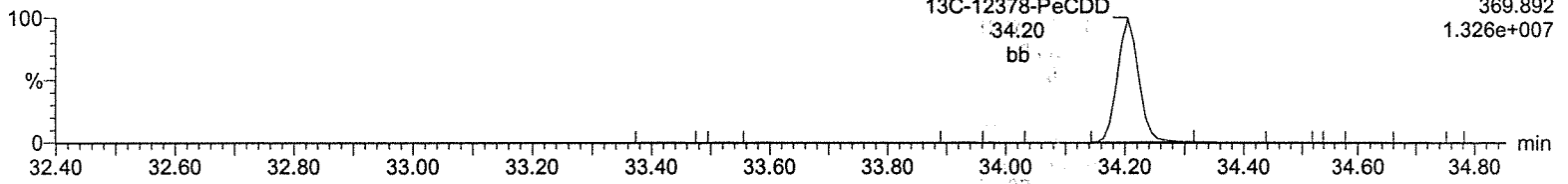
F2:Voltage SIR,EI+
367.895
2.007e+007



13C-12378-PeCDD

A08JUL19A-5

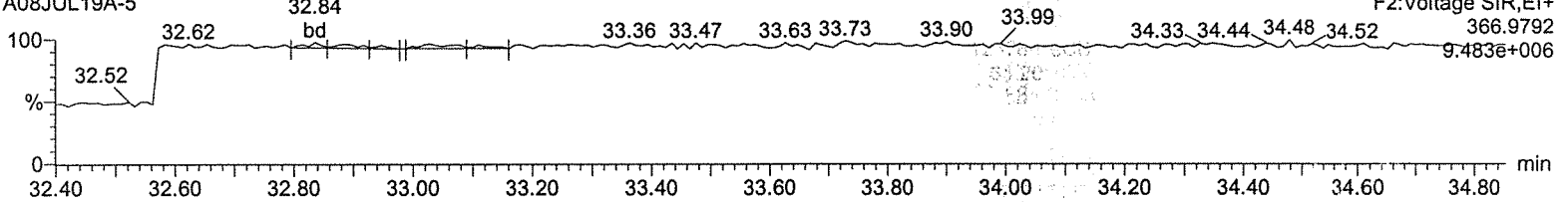
F2:Voltage SIR,EI+
369.892
1.326e+007



Lock Mass F2

A08JUL19A-5

F2:Voltage SIR,EI+
366.9792
9.483e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

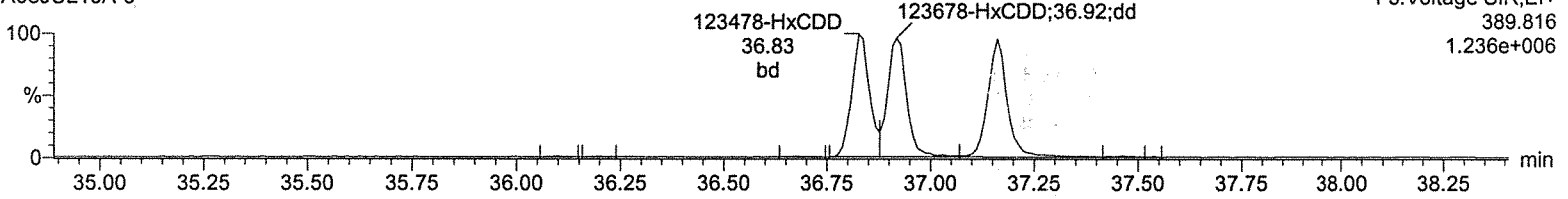
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

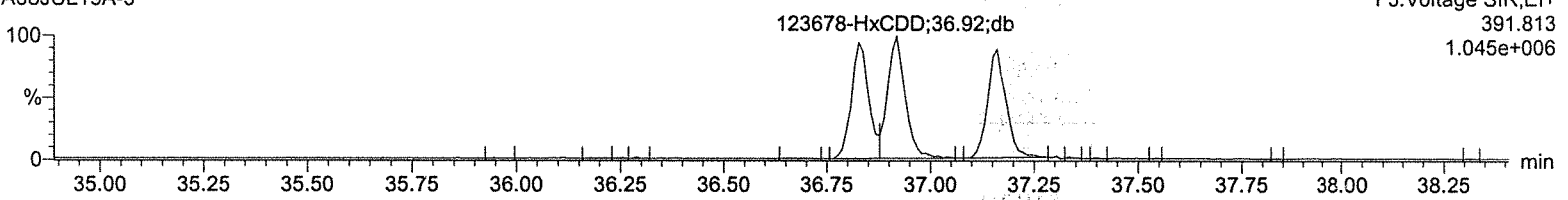
Total-hexadioxins

A08JUL19A-5



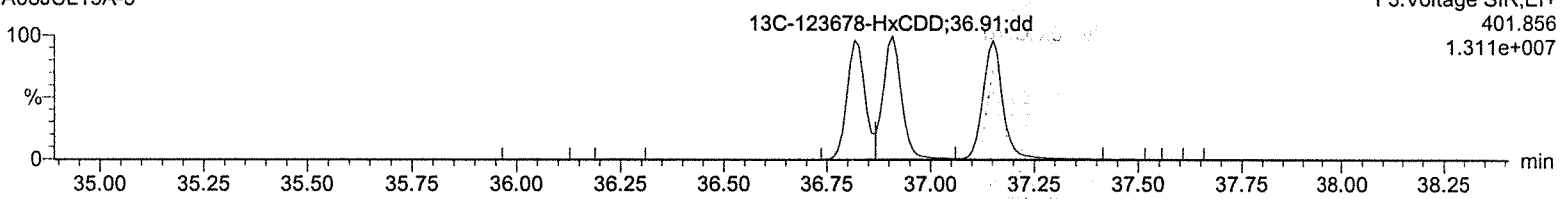
Total-hexadioxins

A08JUL19A-5



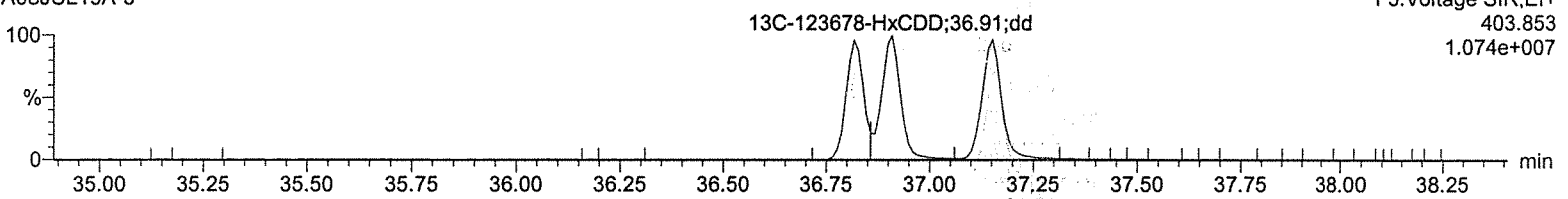
13C-123478-HxCDD

A08JUL19A-5



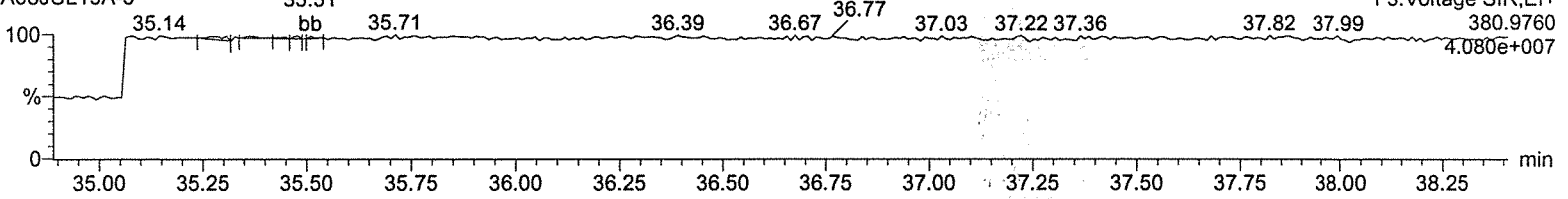
13C-123478-HxCDD

A08JUL19A-5



Lock Mass F3

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

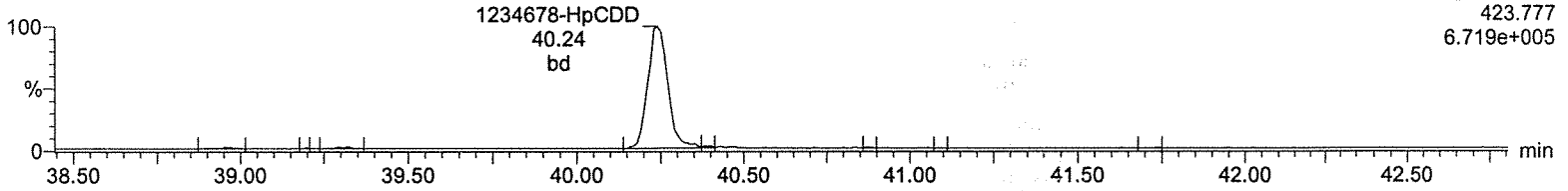
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-heptadioxins

A08JUL19A-5

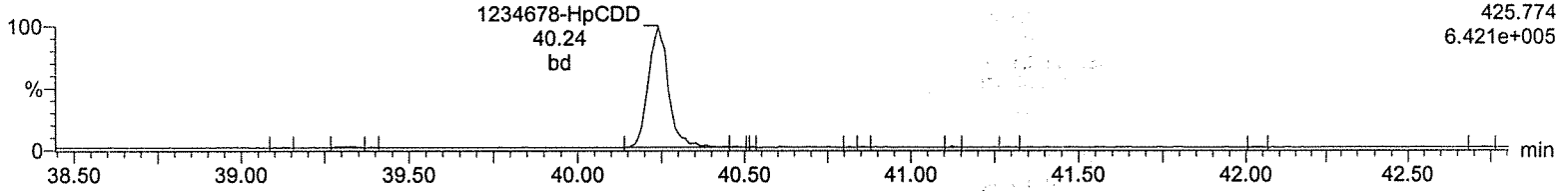
F4:Voltage SIR,EI+
423.777
6.719e+005



Total-heptadioxins

A08JUL19A-5

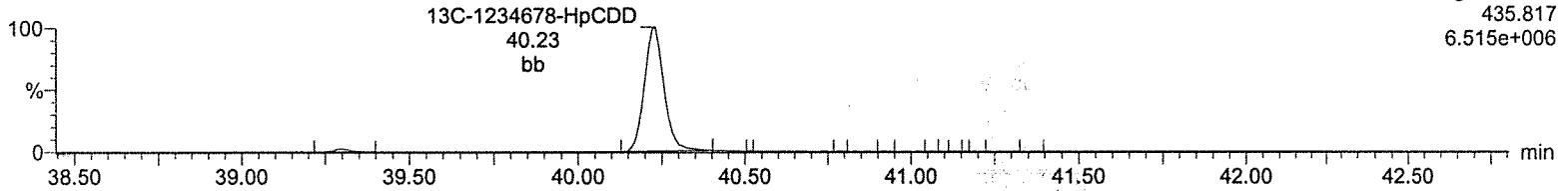
F4:Voltage SIR,EI+
425.774
6.421e+005



¹³C-1234678-HpCDD

A08JUL19A-5

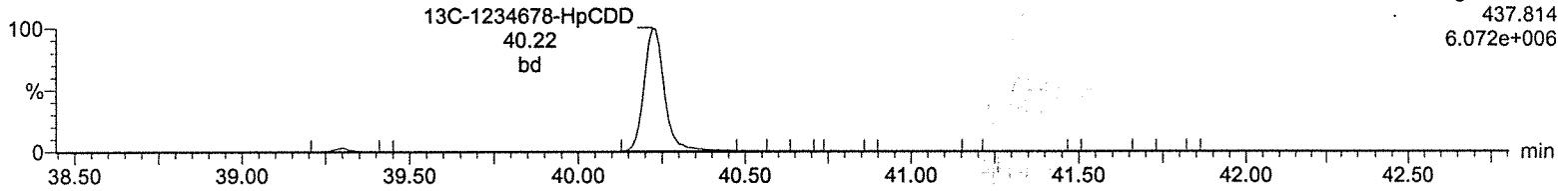
F4:Voltage SIR,EI+
435.817
6.515e+006



¹³C-1234678-HpCDD

A08JUL19A-5

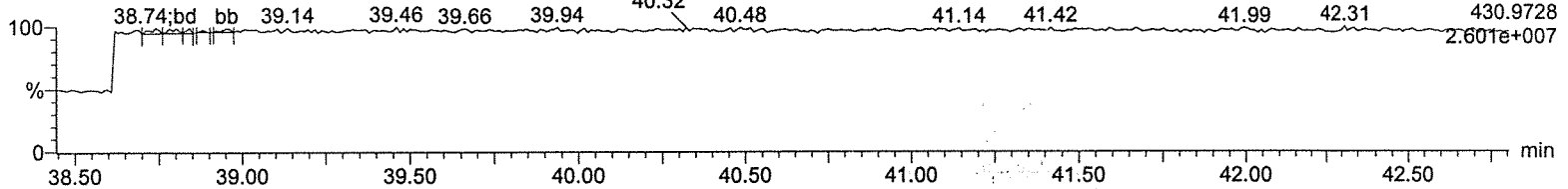
F4:Voltage SIR,EI+
437.814
6.072e+006



Lock Mass F4

A08JUL19A-5

F4:Voltage SIR,EI+
430.9728
2.601e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

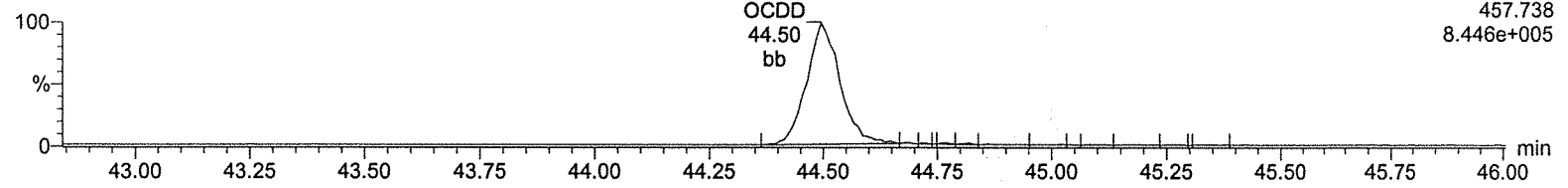
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

OCDD

A08JUL19A-5

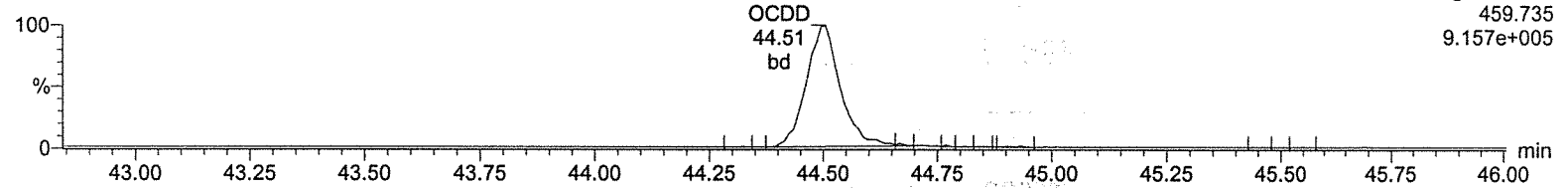
F5:Voltage SIR,EI+
457.738
8.446e+005



OCDD

A08JUL19A-5

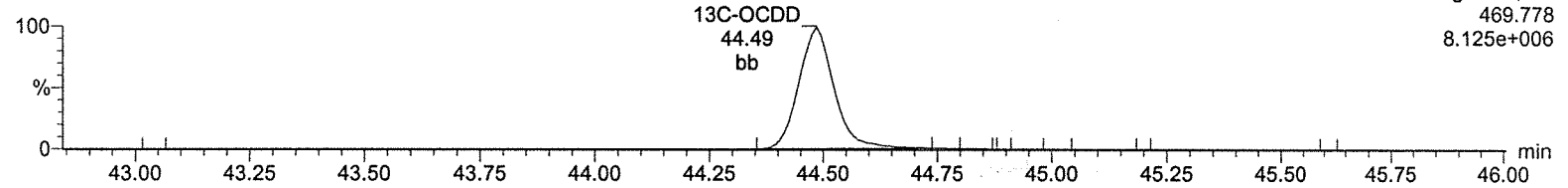
F5:Voltage SIR,EI+
459.735
9.157e+005



13C-OCDD

A08JUL19A-5

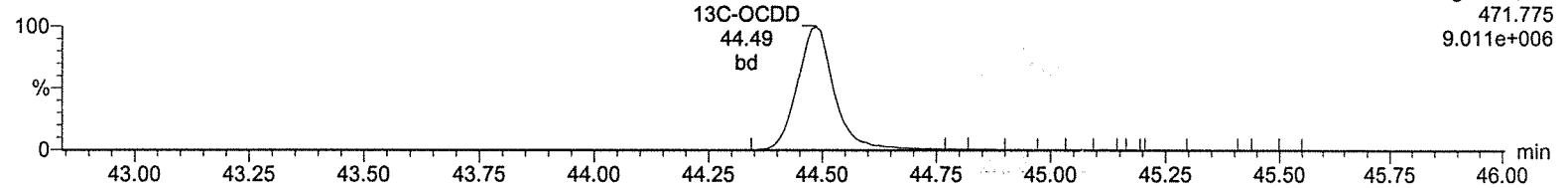
F5:Voltage SIR,EI+
469.778
8.125e+006



13C-OCDD

A08JUL19A-5

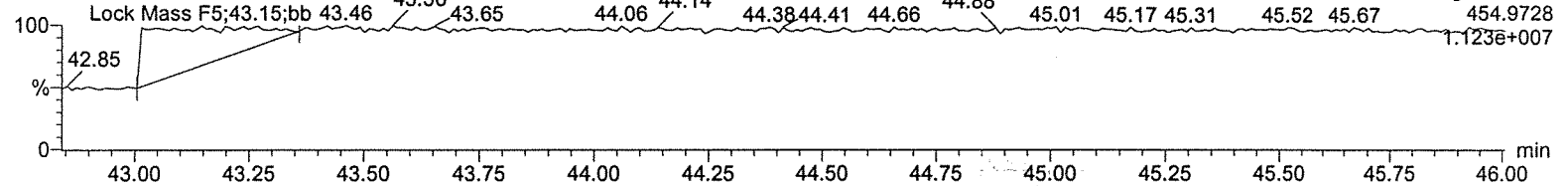
F5:Voltage SIR,EI+
471.775
9.011e+006



Lock Mass F5

A08JUL19A-5

F5:Voltage SIR,EI+
454.9728
1.123e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

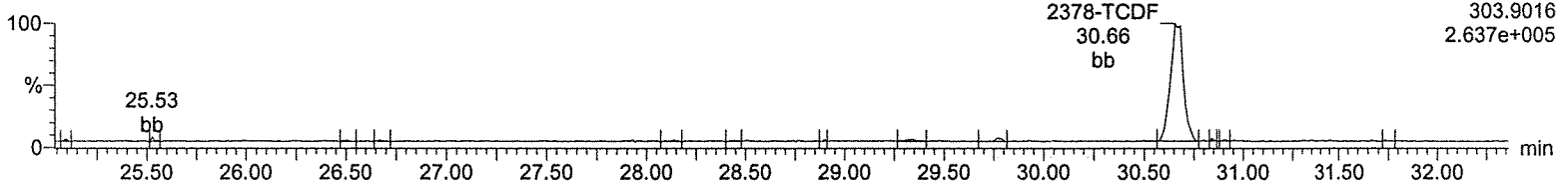
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-tetrafurans

A08JUL19A-5

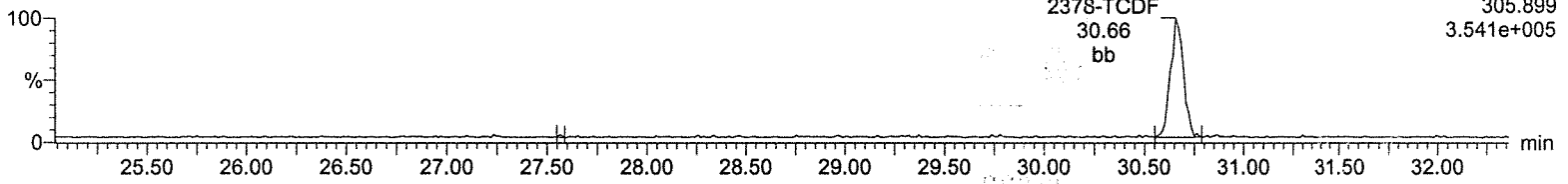
F1:Voltage SIR,EI+
303.9016
2.637e+005



Total-tetrafurans

A08JUL19A-5

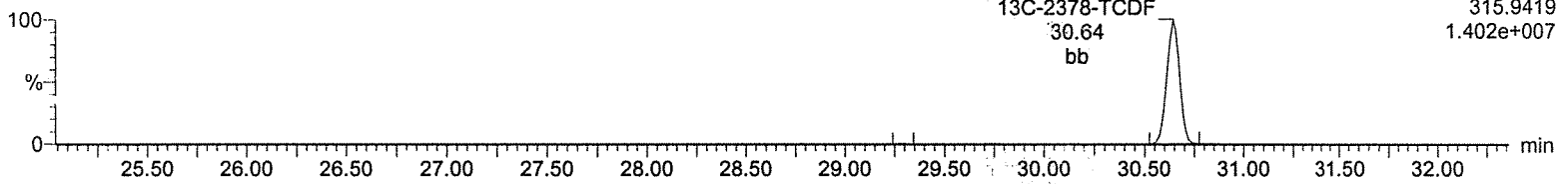
F1:Voltage SIR,EI+
305.899
3.541e+005



13C-2378-TCDF

A08JUL19A-5

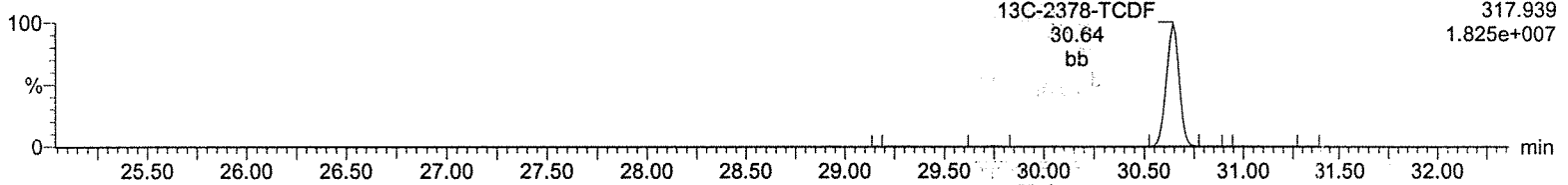
F1:Voltage SIR,EI+
315.9419
1.402e+007



13C-2378-TCDF

A08JUL19A-5

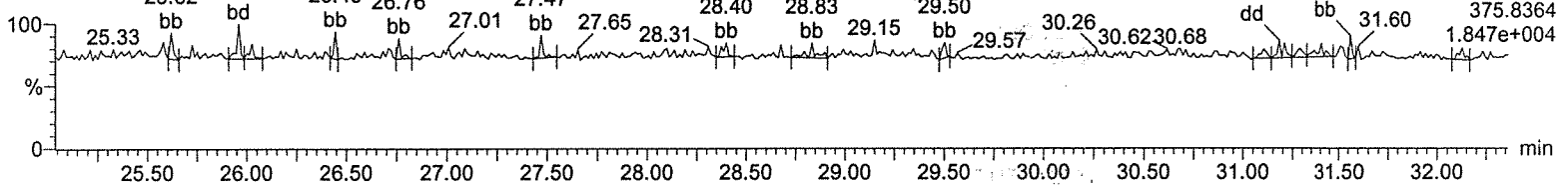
F1:Voltage SIR,EI+
317.939
1.825e+007



HxDPE

A08JUL19A-5

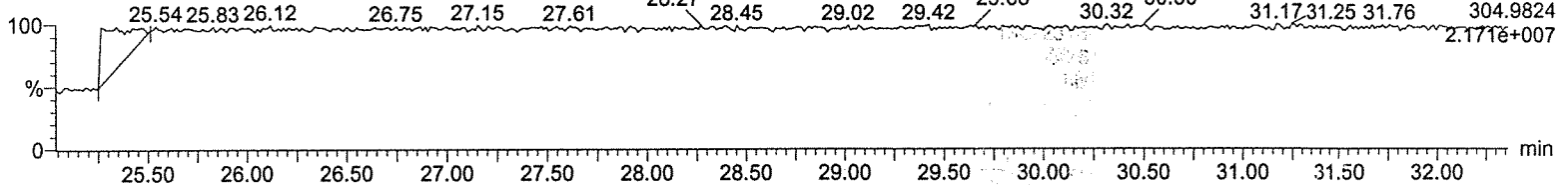
F1:Voltage SIR,EI+
375.8364
1.847e+004



Lock Mass F1

A08JUL19A-5

F1:Voltage SIR,EI+
304.9824
2.171e+007



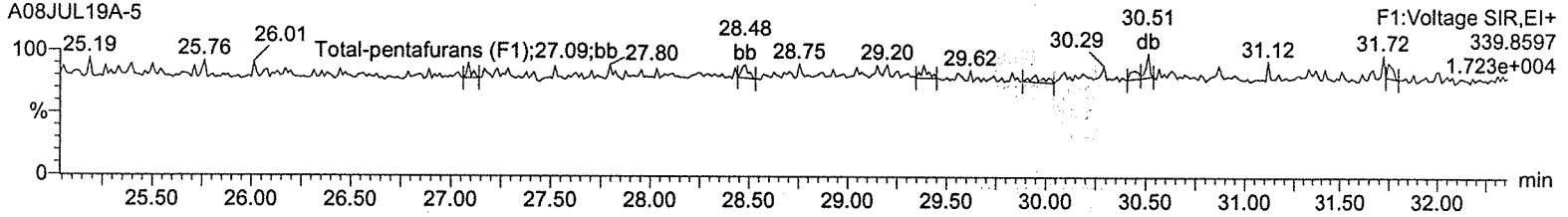
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

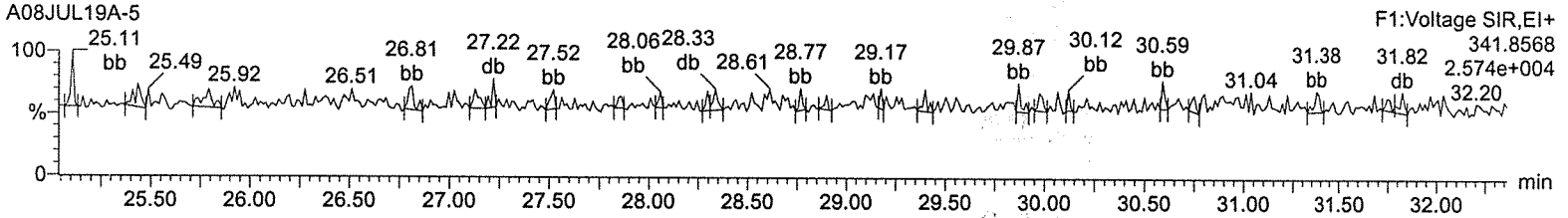
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

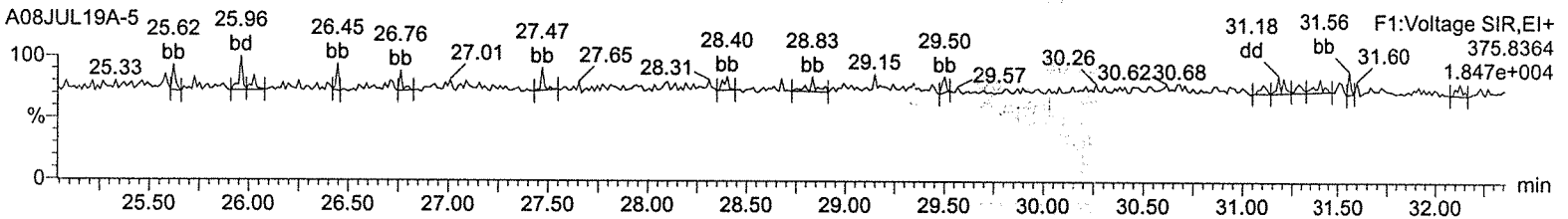
Total-pentafurans (F1)



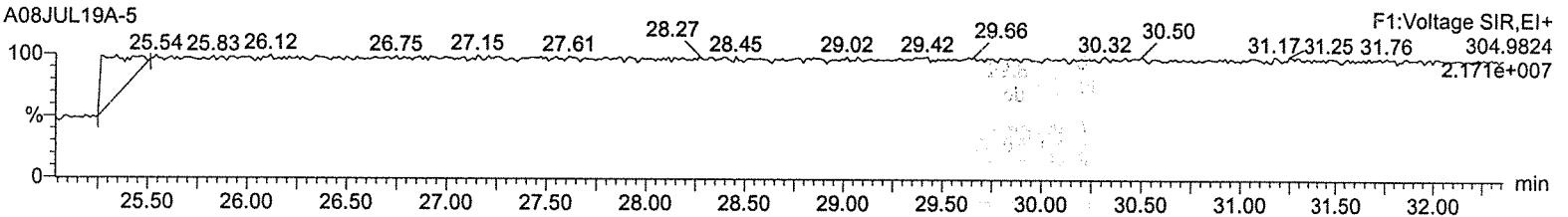
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

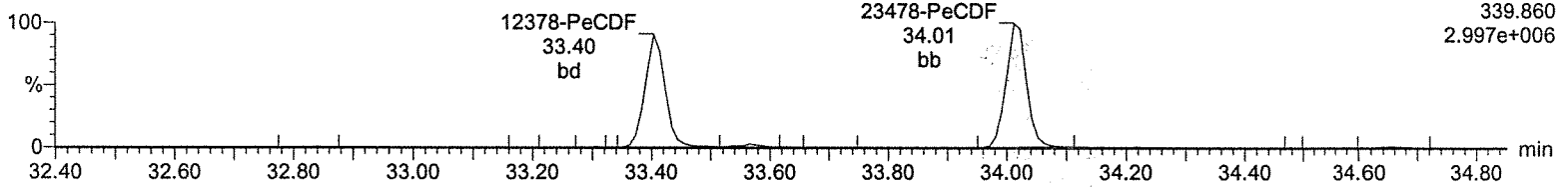
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-pentafurans

A08JUL19A-5

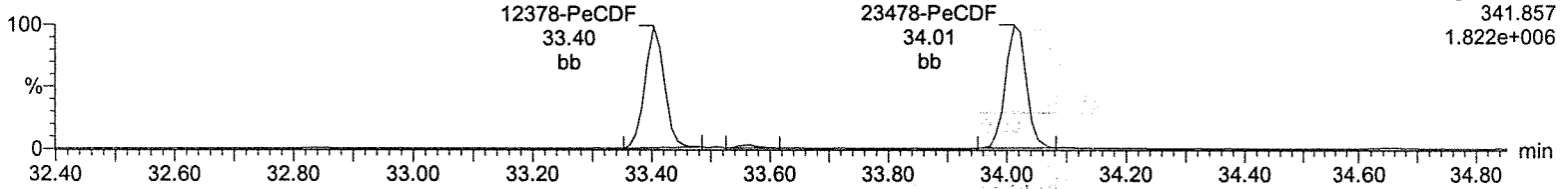
F2:Voltage SIR,EI+
339.860
2.997e+006



Total-pentafurans

A08JUL19A-5

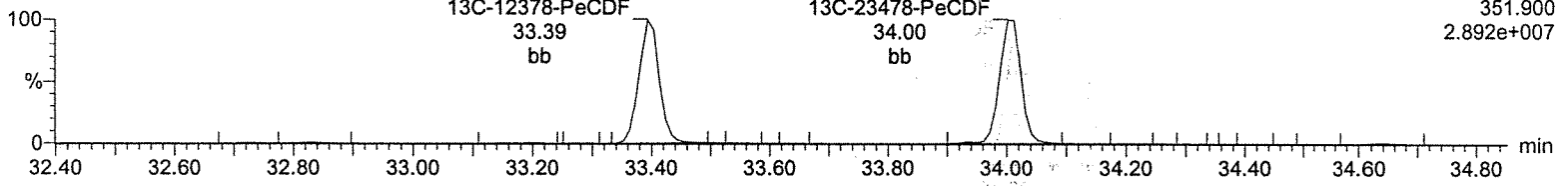
F2:Voltage SIR,EI+
341.857
1.822e+006



13C-12378-PeCDF

A08JUL19A-5

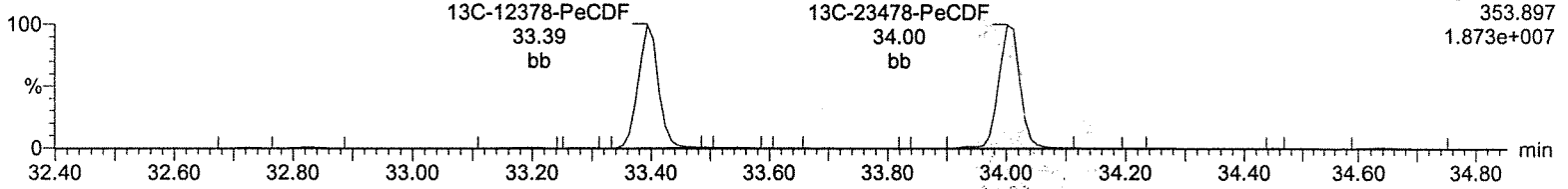
F2:Voltage SIR,EI+
351.900
2.892e+007



13C-12378-PeCDF

A08JUL19A-5

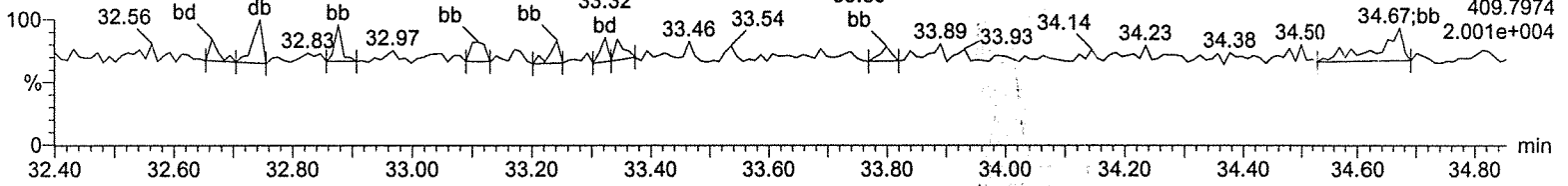
F2:Voltage SIR,EI+
353.897
1.873e+007



HpDPE

A08JUL19A-5

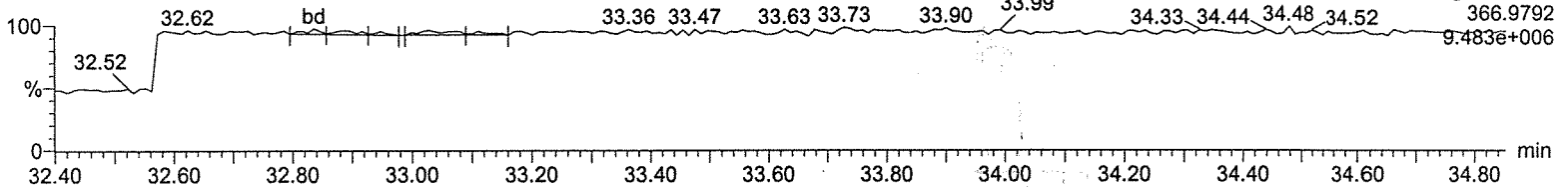
F2:Voltage SIR,EI+
409.7974
2.001e+004



Lock Mass F2

A08JUL19A-5

F2:Voltage SIR,EI+
366.9792
9.483e+006



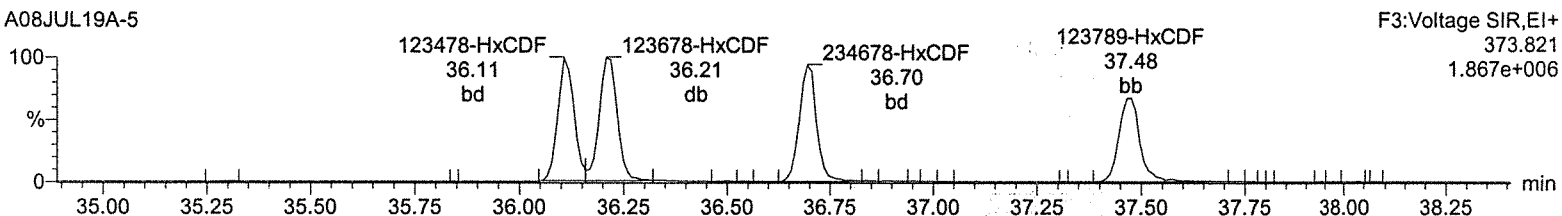
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

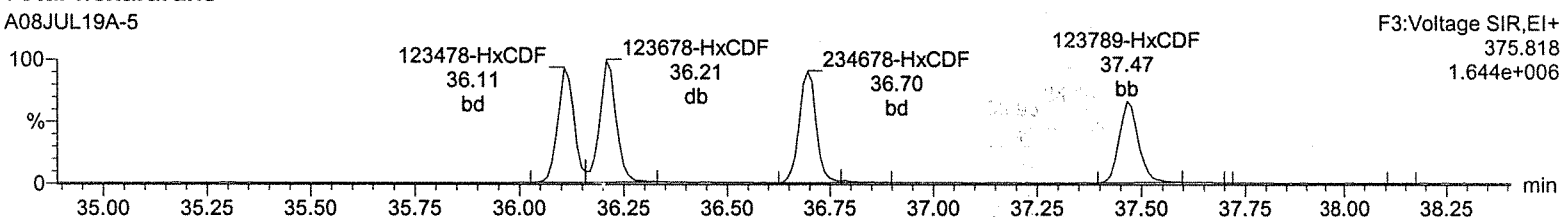
Total-hexafurans

A08JUL19A-5



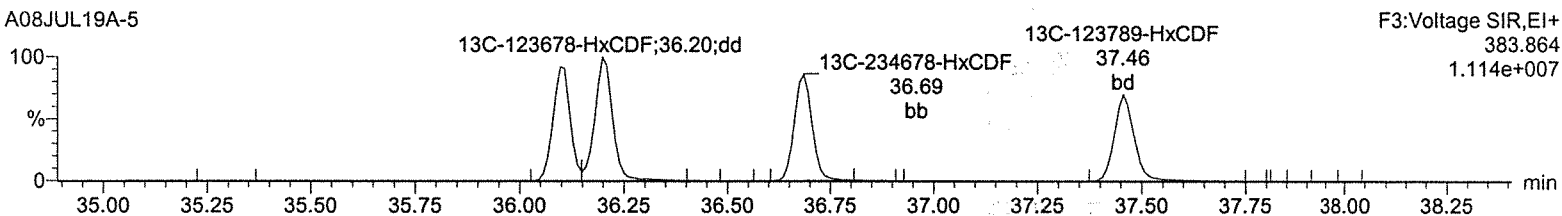
Total-hexafurans

A08JUL19A-5



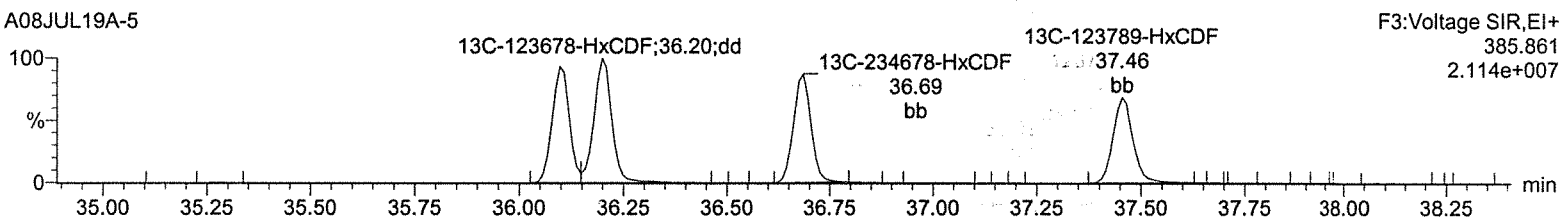
¹³C-123478-HxCDF

A08JUL19A-5



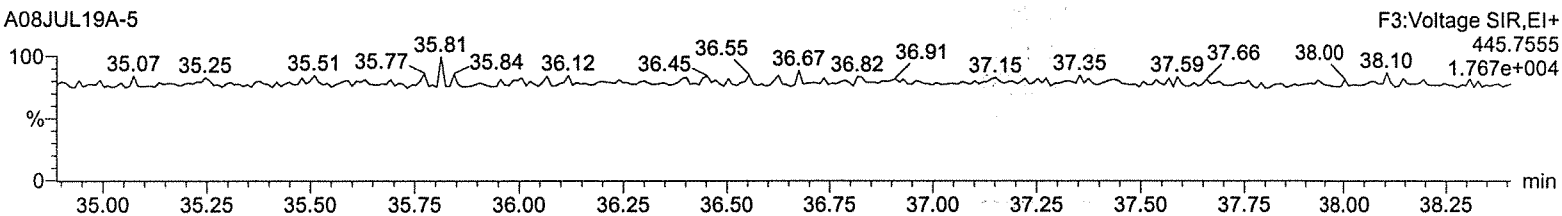
¹³C-123478-HxCDF

A08JUL19A-5



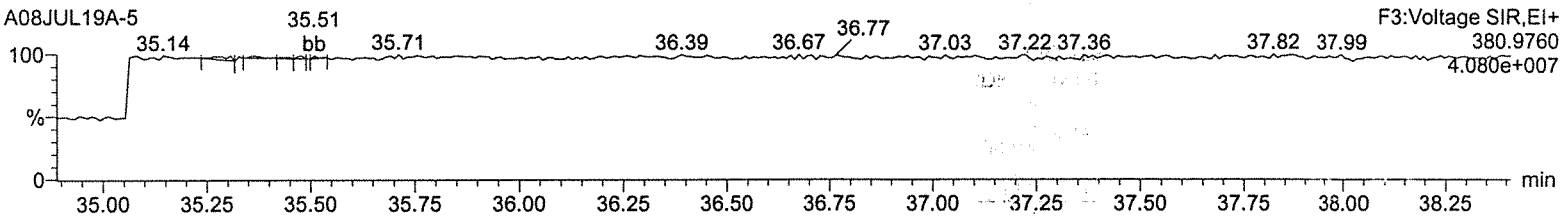
OcDPE

A08JUL19A-5



Lock Mass F3

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

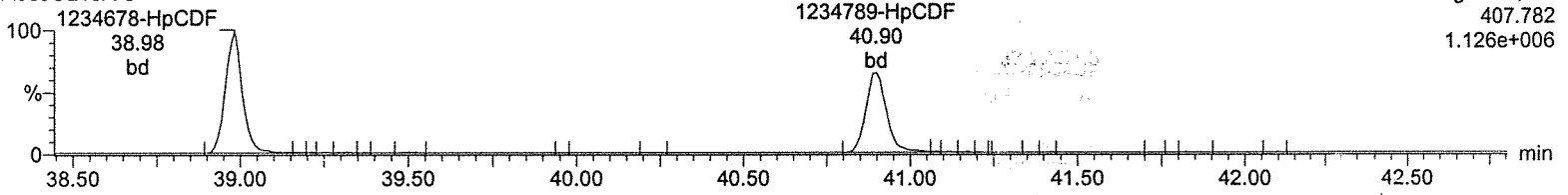
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-heptafurans

A08JUL19A-5

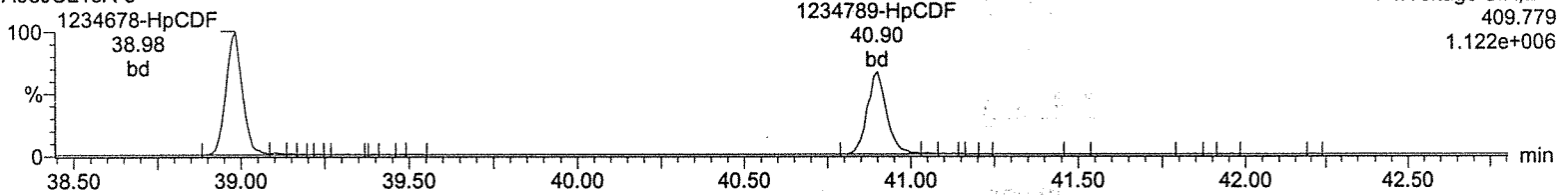
F4:Voltage SIR,EI+
407.782
1.126e+006



Total-heptafurans

A08JUL19A-5

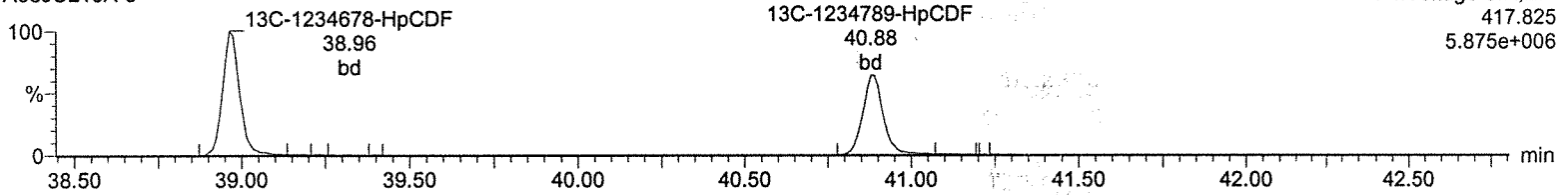
F4:Voltage SIR,EI+
409.779
1.122e+006



13C-1234678-HpCDF

A08JUL19A-5

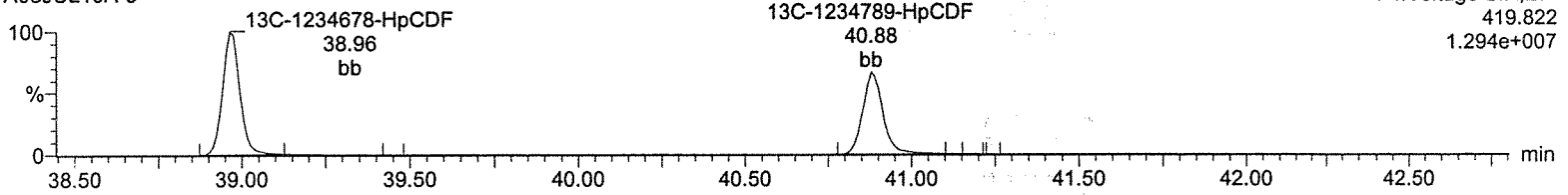
F4:Voltage SIR,EI+
417.825
5.875e+006



13C-1234678-HpCDF

A08JUL19A-5

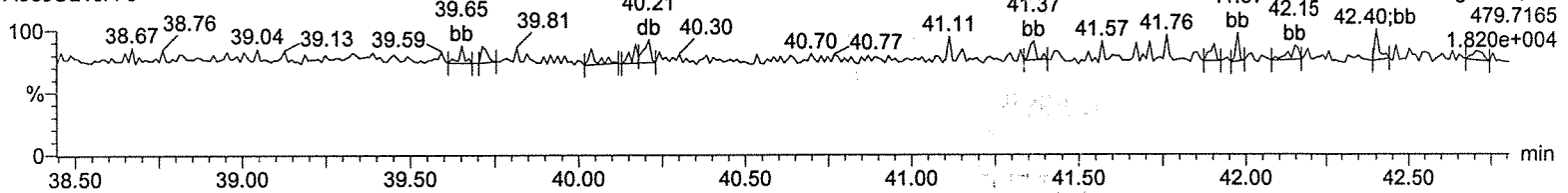
F4:Voltage SIR,EI+
419.822
1.294e+007



NoDPE

A08JUL19A-5

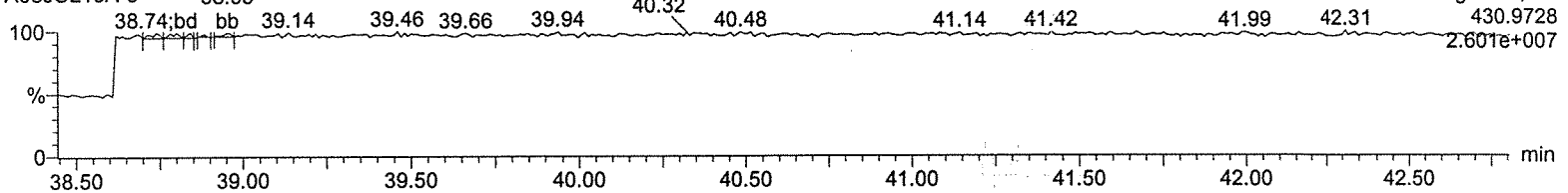
F4:Voltage SIR,EI+
479.7165
1.820e+004



Lock Mass F4

A08JUL19A-5

F4:Voltage SIR,EI+
430.9728
2.601e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

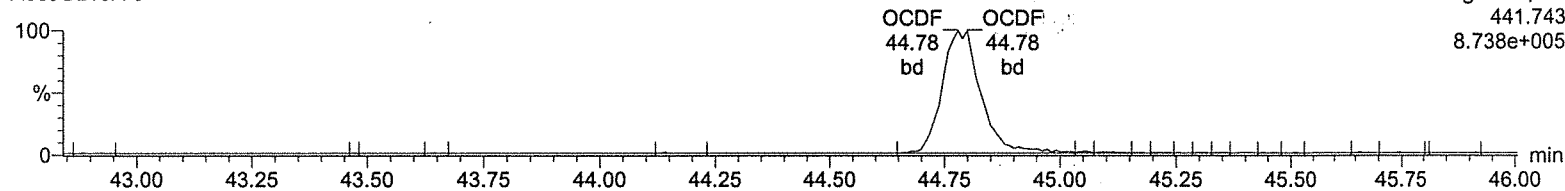
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

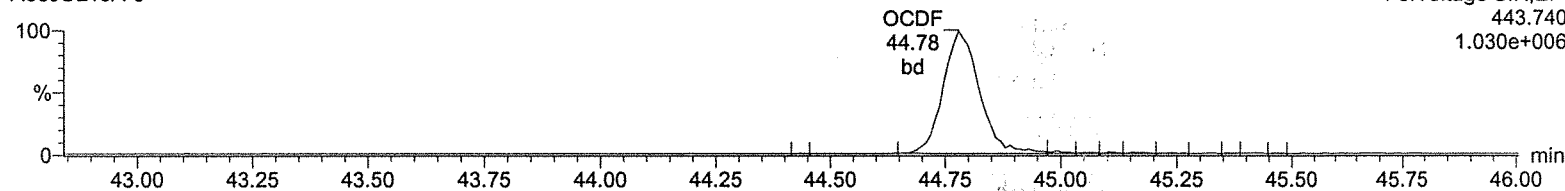
OCDF

A08JUL19A-5



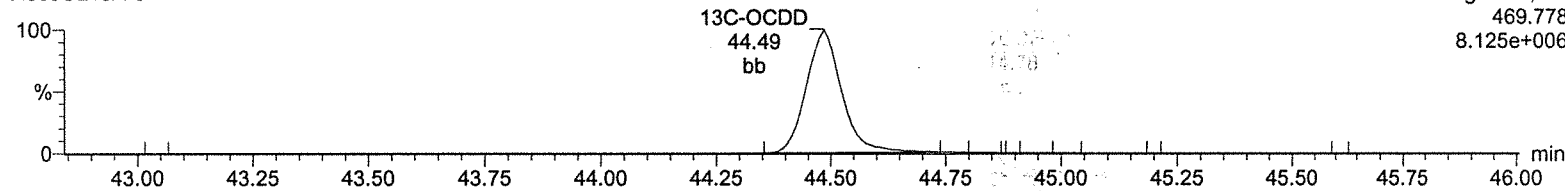
OCDF

A08JUL19A-5



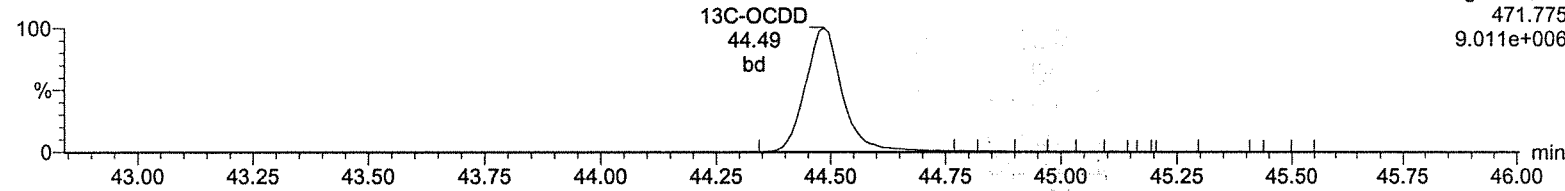
13C-OCDD

A08JUL19A-5



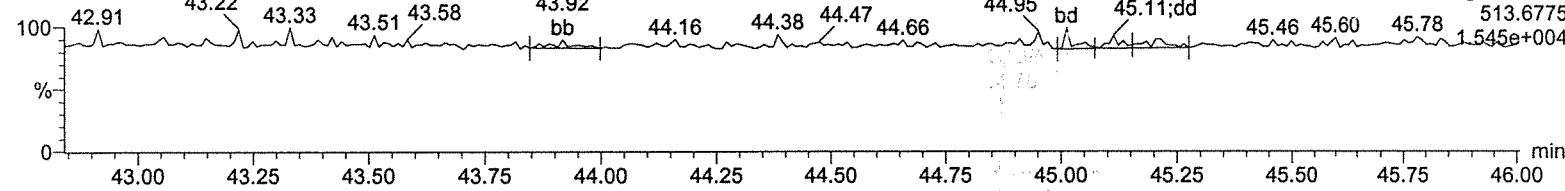
13C-OCDD

A08JUL19A-5



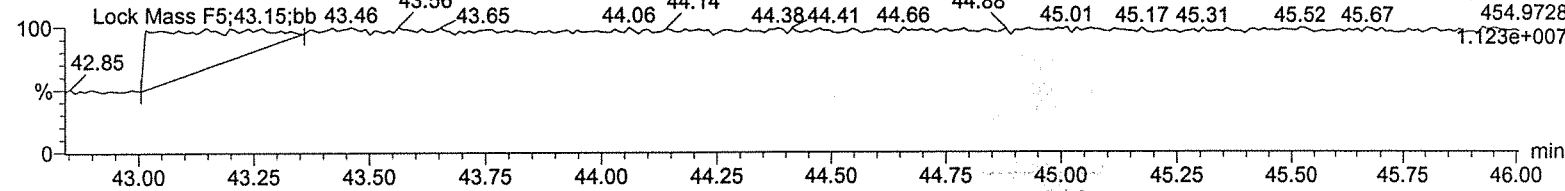
DeDPE

A08JUL19A-5



Lock Mass F5

A08JUL19A-5



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Handwritten signature

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	8.68e4	1.13e5	2.00e5	31.35	1.000	0.77	NO	9.942	0.879	0.884	5.07	0.0390	1.57e6	2450	641.8	2.15e6	2611	823.3	bb	bb
2	12378-PeCDD	3.84e5	2.47e5	6.31e5	34.21	1.000	1.55	NO	50.221	0.857	0.853	1.65	0.0618	9.31e6	2979	3125.8	6.05e6	3309	1827.4	bb	bb
3	123478-HxCDD	3.18e5	2.55e5	5.73e5	36.83	1.000	1.25	NO	50.558	0.950	0.940	3.11	0.139	6.71e6	4648	1442.7	5.39e6	6081	886.4	bd	bd
4	123678-HxCDD	3.66e5	2.94e5	6.60e5	36.92	1.000	1.25	NO	51.250	0.968	0.944	2.57	0.135	6.98e6	4648	1501.3	5.54e6	6081	911.6	dd	dd
5	123789-HxCDD	3.38e5	2.74e5	6.12e5	37.16	1.007	1.24	NO	51.427	0.954	0.927	3.30	0.139	6.19e6	4648	1331.0	5.01e6	6081	823.3	dd	dd
6	1234678-HpCDD	2.49e5	2.42e5	4.91e5	40.23	1.000	1.03	NO	51.498	1.071	1.040	2.88	0.178	3.60e6	4071	884.4	3.45e6	4114	898.4	bd	bd
7	OCDD	4.42e5	4.94e5	9.36e5	44.49	1.000	0.90	NO	102.635	0.997	0.971	2.39	0.414	4.83e6	5533	872.8	5.28e6	7922	666.2	bd	bd
8	2378-TCDF	1.06e5	1.37e5	2.43e5	30.67	1.001	0.77	NO	9.949	0.973	0.978	5.59	0.0625	1.36e6	2841	478.3	1.75e6	3684	475.9	bb	bb
9	12378-PeCDF	5.82e5	3.75e5	9.56e5	33.40	1.000	1.55	NO	50.773	0.960	0.945	3.41	0.103	1.43e7	8482	1685.4	9.31e6	7788	1195.1	bd	bb
10	123478-PeCDF	6.27e5	4.19e5	1.05e6	34.01	1.000	1.50	NO	50.780	1.002	0.987	3.73	0.0954	1.57e7	8482	1848.3	1.04e7	7788	1331.7	bb	bb
11	123478-HxCDF	4.65e5	3.78e5	8.43e5	36.11	1.000	1.23	NO	51.251	1.114	1.087	3.86	0.106	1.00e7	5453	1833.5	8.26e6	7295	1131.6	bd	bd
12	123678-HxCDF	5.03e5	4.09e5	9.12e5	36.21	1.000	1.23	NO	51.606	1.074	1.041	3.23	0.109	1.03e7	5453	1882.3	8.37e6	7295	1147.0	dd	db
13	1234678-HxCDF	4.63e5	3.89e5	8.52e5	36.69	1.001	1.19	NO	50.727	1.152	1.136	3.17	0.117	9.28e6	5453	1701.9	7.55e6	7295	1035.1	bb	bd
14	123789-HxCDF	3.95e5	3.29e5	7.24e5	37.47	1.000	1.20	NO	51.190	1.086	1.061	2.29	0.151	7.02e6	5453	1288.2	5.96e6	7295	817.0	bb	bb
15	1234678-HpCDF	3.50e5	3.56e5	7.06e5	38.97	1.000	0.98	NO	51.632	1.187	1.150	3.86	0.160	6.00e6	6270	956.4	6.00e6	6223	963.4	bb	bd
16	1234789-HpCDF	2.81e5	2.79e5	5.60e5	40.89	1.000	1.01	NO	49.736	1.196	1.202	1.91	0.237	4.07e6	6270	648.8	3.95e6	6223	634.8	bb	bb
17	OCDF	4.97e5	5.71e5	1.07e6	44.78	1.007	0.87	NO	100.464	1.138	1.133	6.78	0.245	5.22e6	4930	1059.5	5.92e6	4365	1356.2	bd	bb
18	13C-2378-TCDD	9.90e5	1.28e6	2.27e6	31.34	1.015	0.77	NO	102.354	1.155	1.128	2.36	0.127	1.92e7	8469	2264.4	2.44e7	5255	4640.6	bb	bb
19	13C-12378-PeCDD	8.92e5	5.81e5	1.47e6	34.20	1.108	1.54	NO	99.635	0.749	0.751	5.03	0.124	2.17e7	5732	3778.6	1.40e7	3222	4330.4	bb	bb
20	13C-123478-HxCDD	6.63e5	5.43e5	1.21e6	36.82	0.991	1.22	NO	97.866	0.877	0.896	1.38	0.150	1.36e7	6280	2158.5	1.10e7	4593	2391.6	bd	bd
21	13C-123678-HxCDD	7.53e5	6.11e5	1.36e6	36.91	0.994	1.23	NO	100.617	0.992	0.986	0.84	0.137	1.39e7	6280	2215.9	1.16e7	4593	2523.5	dd	dd
22	13C-1234678-HpCDD	4.70e5	4.47e5	9.17e5	40.22	1.083	1.05	NO	99.377	0.667	0.672	1.29	0.265	6.78e6	6524	1039.1	6.60e6	7834	842.1	bb	bb
23	13C-OCDD	8.79e5	9.99e5	1.88e6	44.47	1.197	0.88	NO	212.754	0.683	0.642	4.87	0.207	9.40e6	5805	1618.6	1.06e7	4926	2154.4	bb	bd
24	13C-2378-TCDF	1.08e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	101.401	1.267	1.250	1.88	0.189	1.39e7	15695	887.2	1.76e7	6952	2535.5	bb	bb
25	13C-12378-PeCDF	1.22e6	7.73e5	1.99e6	33.39	1.082	1.58	NO	100.209	1.013	1.011	4.24	0.182	3.06e7	12046	2538.6	1.95e7	5629	3457.2	bb	bb
26	13C-23478-PeCDF	1.28e6	8.10e5	2.09e6	34.00	1.102	1.57	NO	99.710	1.060	1.063	5.28	0.173	3.17e7	12046	2632.4	2.00e7	5629	3558.0	bb	bb
27	13C-123478-HxCDF	5.20e5	9.92e5	1.51e6	36.10	0.972	0.52	NO	99.093	1.101	1.111	1.42	0.219	1.14e7	8433	1357.0	2.19e7	11233	1938.7	bd	bd
28	13C-123678-HxCDF	5.84e5	1.11e6	1.70e6	36.20	0.975	0.52	NO	99.133	1.236	1.247	1.06	0.196	1.17e7	8433	1381.4	2.19e7	11233	1948.6	db	dd
29	13C-234678-HxCDF	5.07e5	9.72e5	1.48e6	36.67	0.987	0.52	NO	99.455	1.076	1.082	1.01	0.225	9.88e6	8433	1171.9	1.91e7	11233	1703.9	bb	bb
30	13C-123789-HxCDF	4.66e5	8.67e5	1.33e6	37.46	1.008	0.54	NO	100.322	0.970	0.967	1.08	0.252	8.35e6	8433	990.6	1.57e7	11233	1400.3	bd	bb
31	13C-1234678-HpCDF	3.65e5	8.24e5	1.19e6	38.96	1.049	0.44	NO	99.467	0.865	0.870	1.11	0.193	6.26e6	5883	1064.8	1.38e7	7684	1800.2	bb	bd
32	13C-1234789-HpCDF	2.84e5	6.52e5	9.36e5	40.88	1.101	0.44	NO	100.559	0.681	0.677	1.01	0.248	4.00e6	5883	679.7	9.16e6	7684	1192.4	bd	bd
33	13C-1234-TCDD	8.63e5	1.10e6	1.97e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.143	1.26e7	8469	1491.7	1.63e7	5255	3108.4	bb	bb
34	13C-123789-HxCDD	7.56e5	6.18e5	1.37e6	37.14	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.135	1.33e7	6280	2120.3	1.08e7	4593	2349.2	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

Ch	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	2.18e5	2.18e5	2.18e5	31.34	1.015			10.427	1.107	1.061	4.54	0.0452	3.98e6	4599	864.6				M	M2	
																					bb	

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

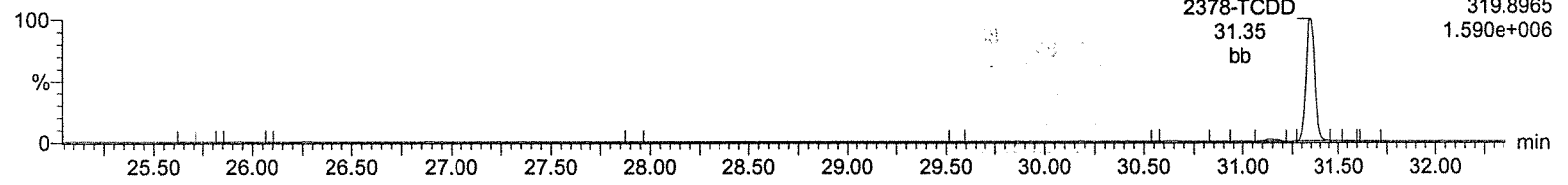
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

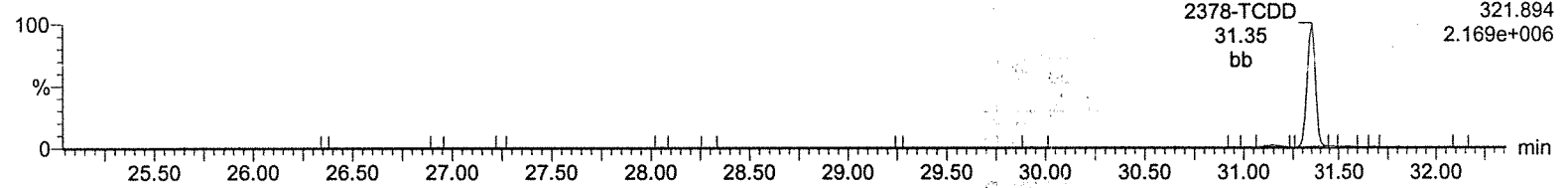
Total-tetradoxins

A08JUL19A-6



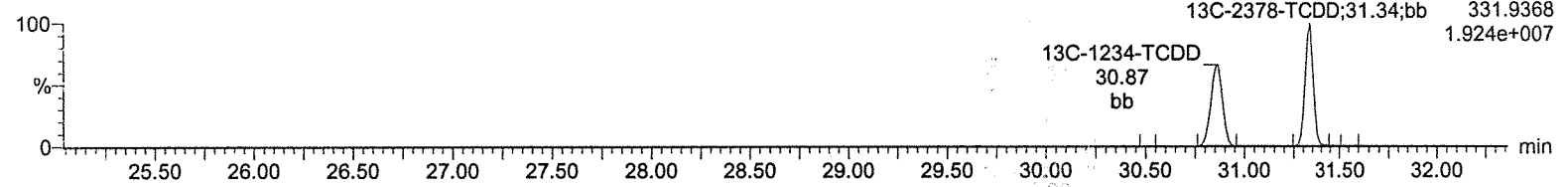
Total-tetradoxins

A08JUL19A-6



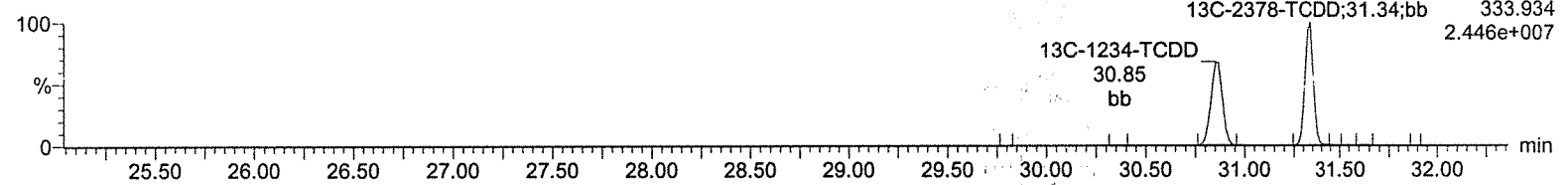
13C-2378-TCDD

A08JUL19A-6



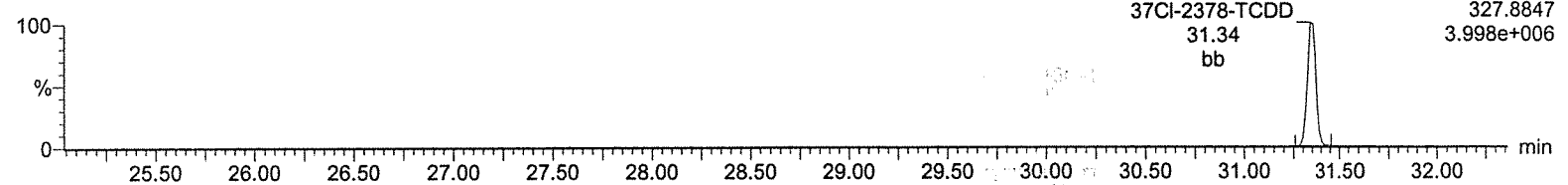
13C-2378-TCDD

A08JUL19A-6



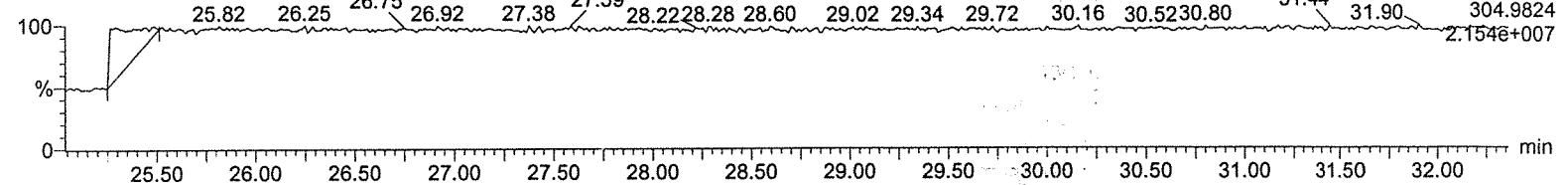
37Cl-2378-TCDD

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

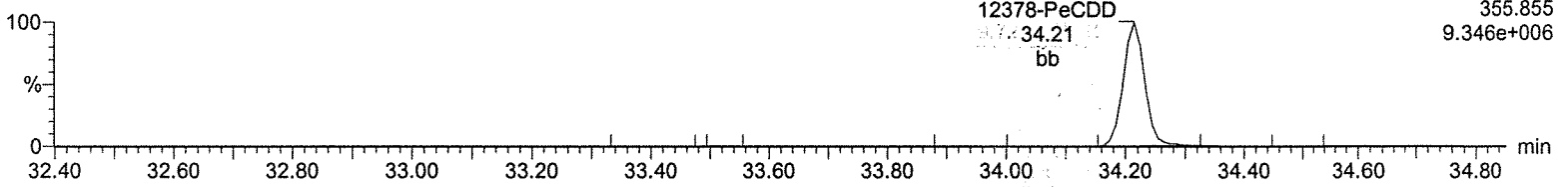
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

Total-pentadioxins

A08JUL19A-6

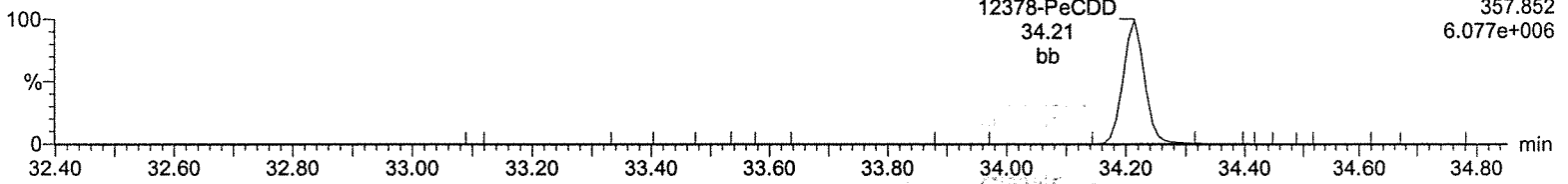
F2:Voltage SIR,EI+
355.855
9.346e+006



Total-pentadioxins

A08JUL19A-6

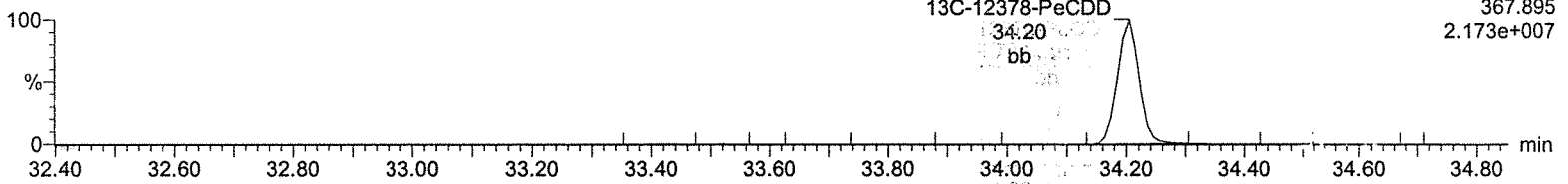
F2:Voltage SIR,EI+
357.852
6.077e+006



13C-12378-PeCDD

A08JUL19A-6

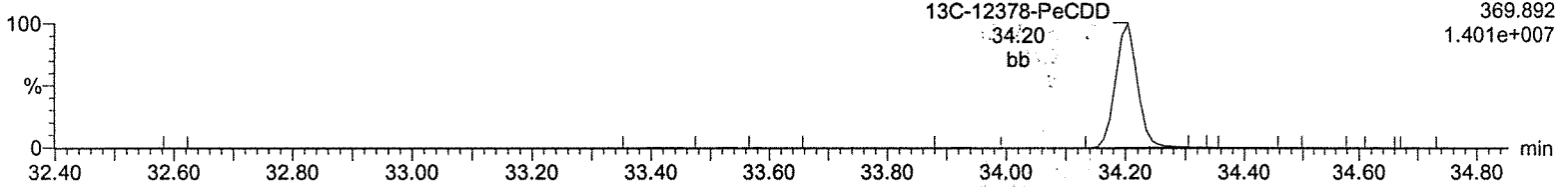
F2:Voltage SIR,EI+
367.895
2.173e+007



13C-12378-PeCDD

A08JUL19A-6

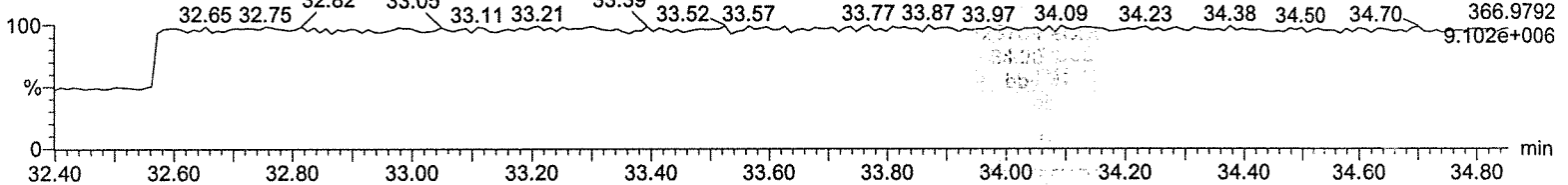
F2:Voltage SIR,EI+
369.892
1.401e+007



Lock Mass F2

A08JUL19A-6

F2:Voltage SIR,EI+
366.9792
9.102e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

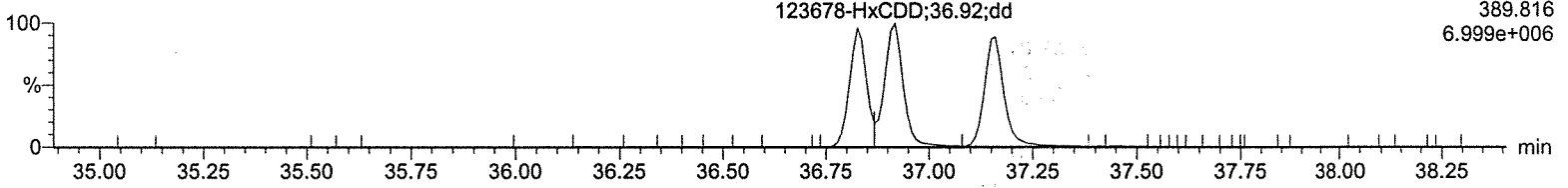
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

Total-hexadioxins

A08JUL19A-6

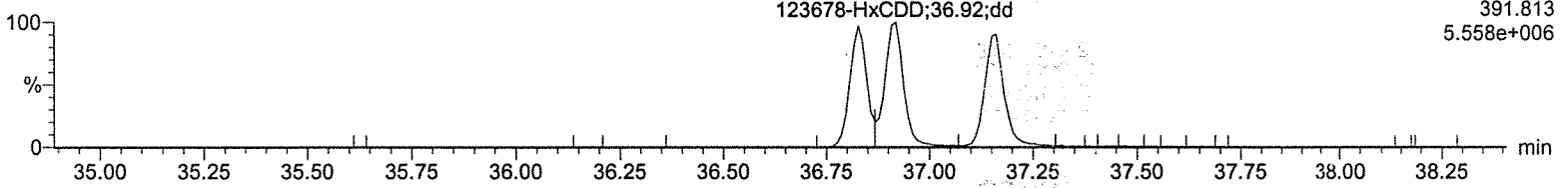
F3:Voltage SIR,EI+
389.816
6.999e+006



Total-hexadioxins

A08JUL19A-6

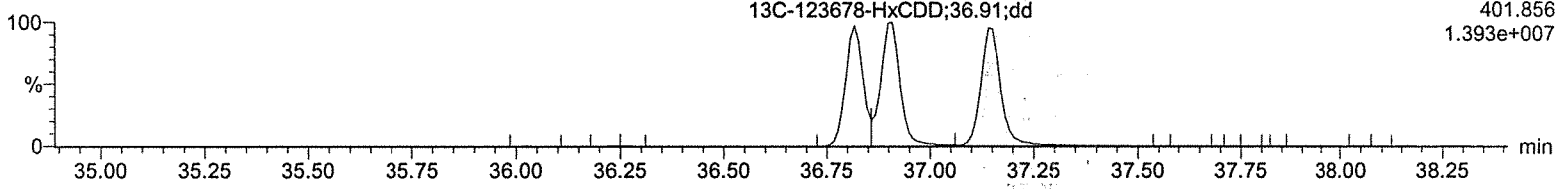
F3:Voltage SIR,EI+
391.813
5.558e+006



13C-123478-HxCDD

A08JUL19A-6

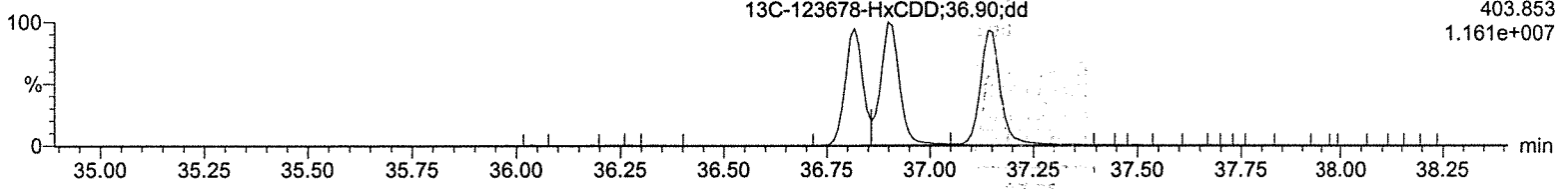
F3:Voltage SIR,EI+
401.856
1.393e+007



13C-123478-HxCDD

A08JUL19A-6

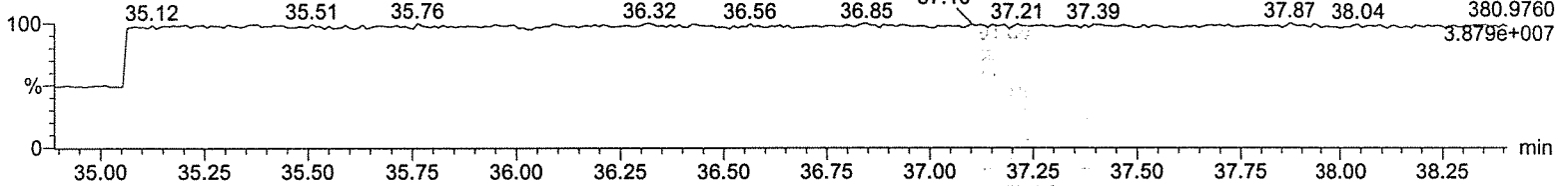
F3:Voltage SIR,EI+
403.853
1.161e+007



Lock Mass F3

A08JUL19A-6

F3:Voltage SIR,EI+
380.9760
3.879e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

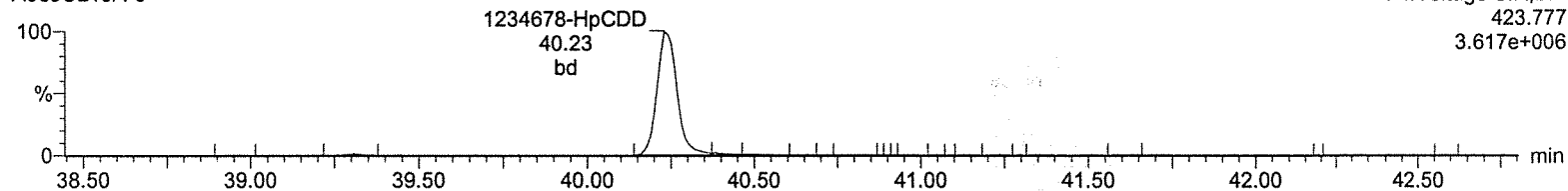
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

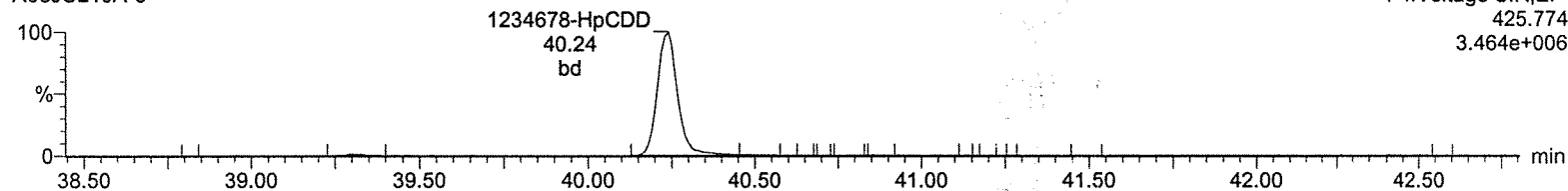
Total-heptadioxins

A08JUL19A-6



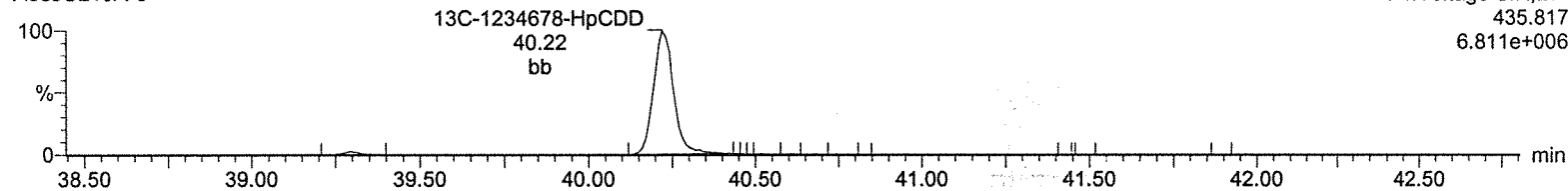
Total-heptadioxins

A08JUL19A-6



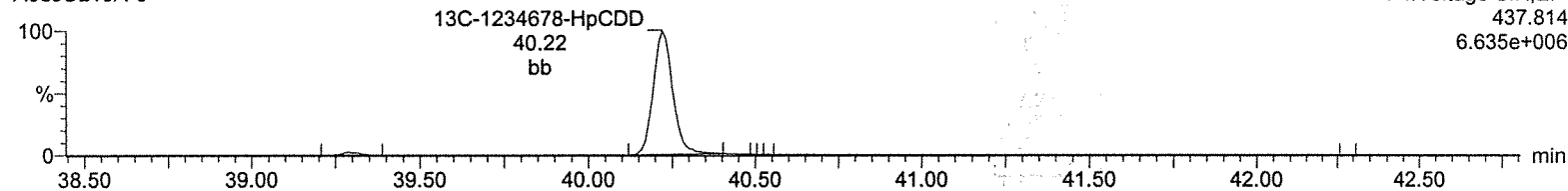
13C-1234678-HpCDD

A08JUL19A-6



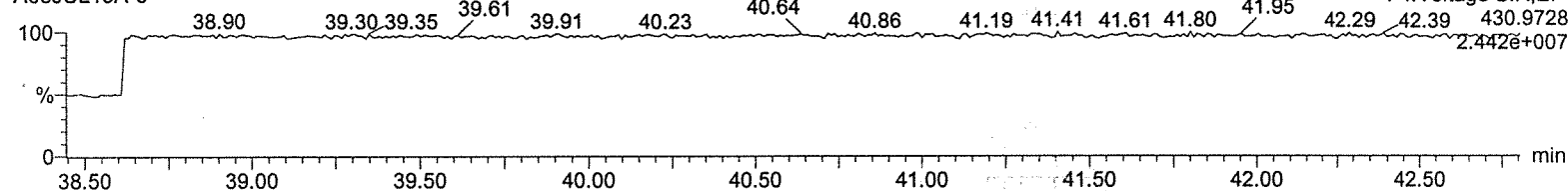
13C-1234678-HpCDD

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

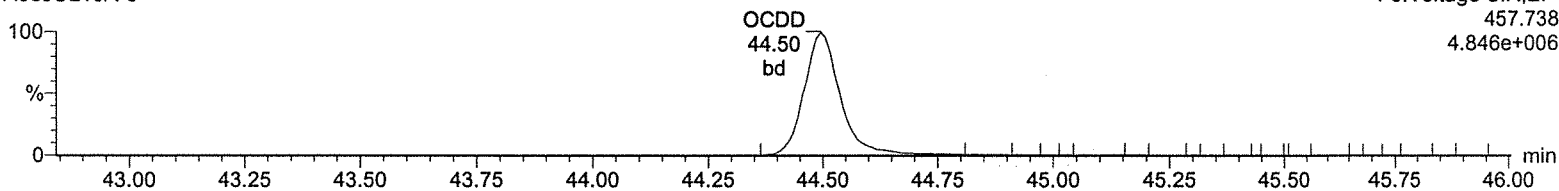
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

OCDD

A08JUL19A-6

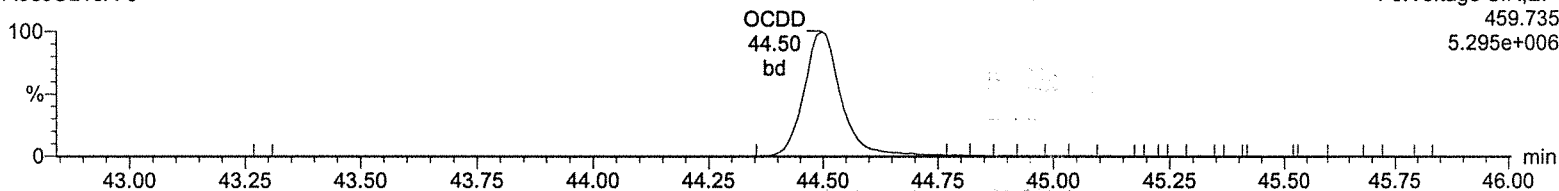
F5:Voltage SIR,EI+
457.738
4.846e+006



OCDD

A08JUL19A-6

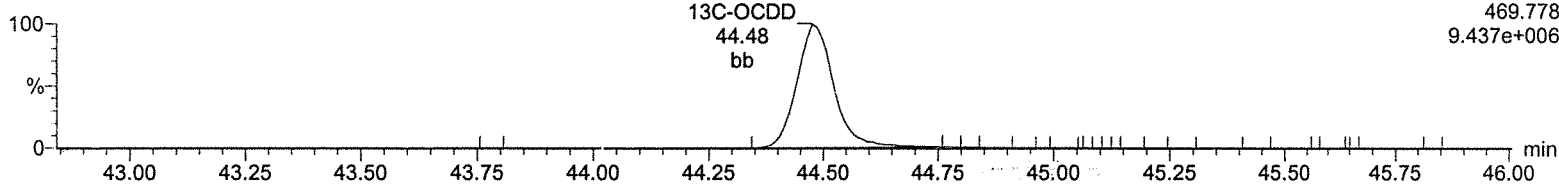
F5:Voltage SIR,EI+
459.735
5.295e+006



13C-OCDD

A08JUL19A-6

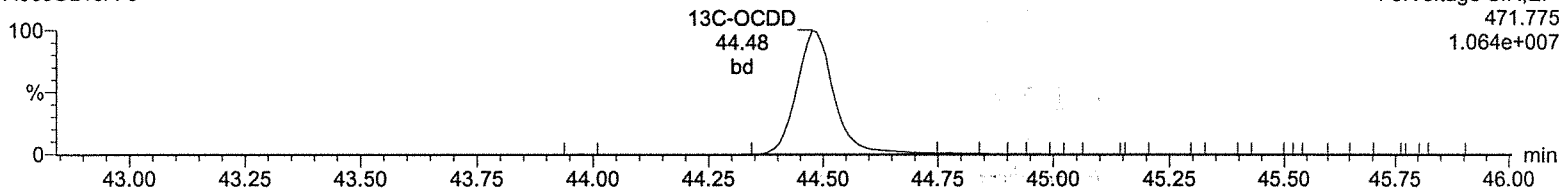
F5:Voltage SIR,EI+
469.778
9.437e+006



13C-OCDD

A08JUL19A-6

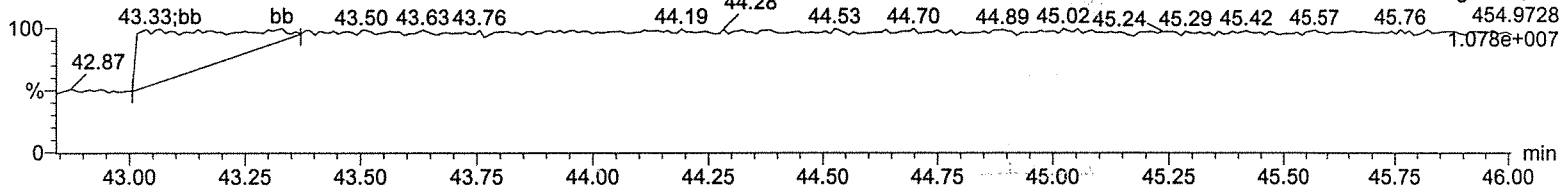
F5:Voltage SIR,EI+
471.775
1.064e+007



Lock Mass F5

A08JUL19A-6

F5:Voltage SIR,EI+
454.9728
1.078e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

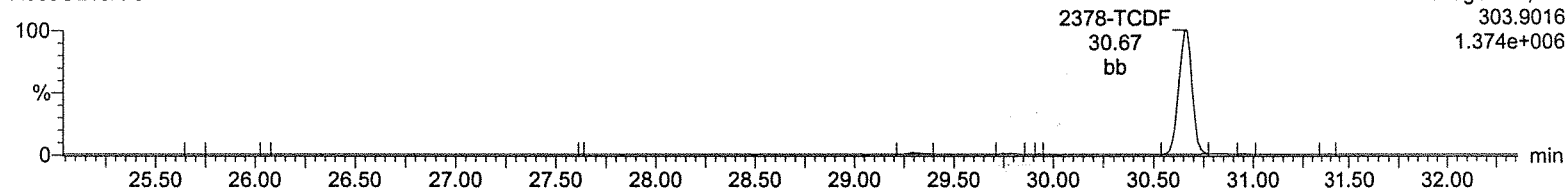
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

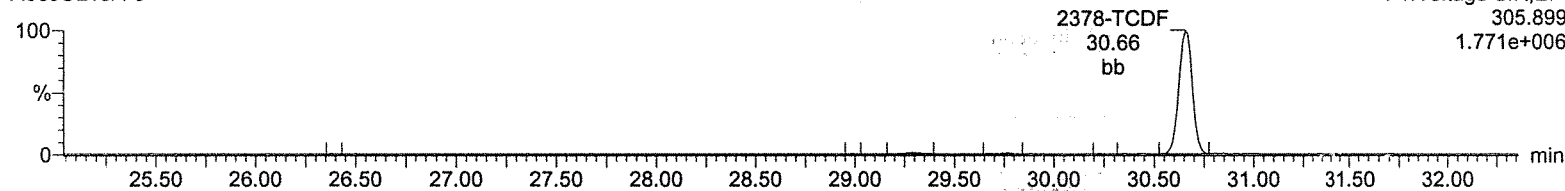
Total-tetrafurans

A08JUL19A-6



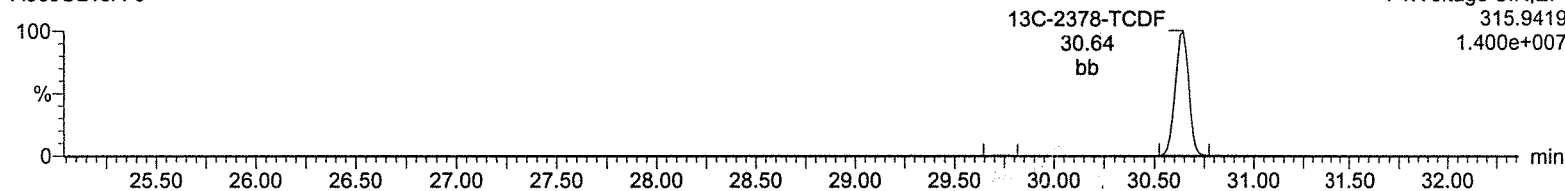
Total-tetrafurans

A08JUL19A-6



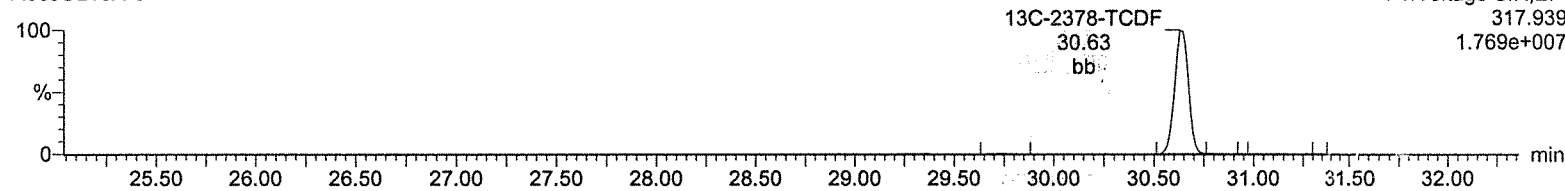
13C-2378-TCDF

A08JUL19A-6



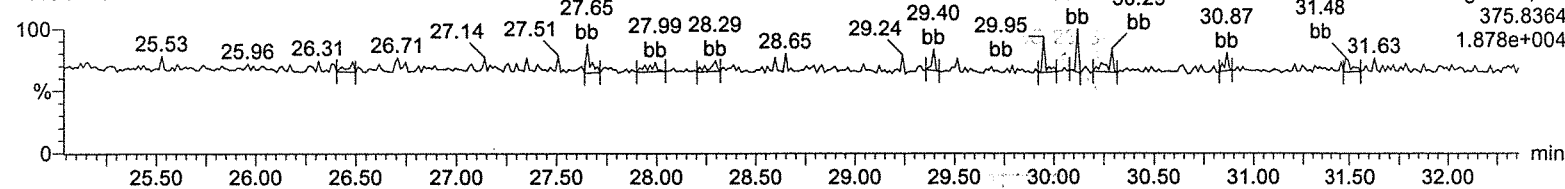
13C-2378-TCDF

A08JUL19A-6



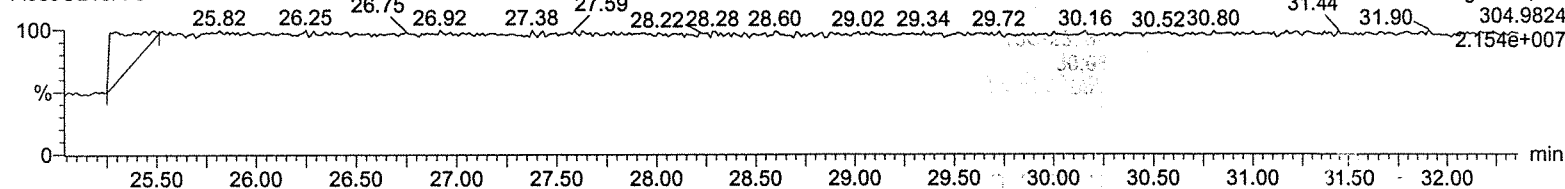
HxDPE

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



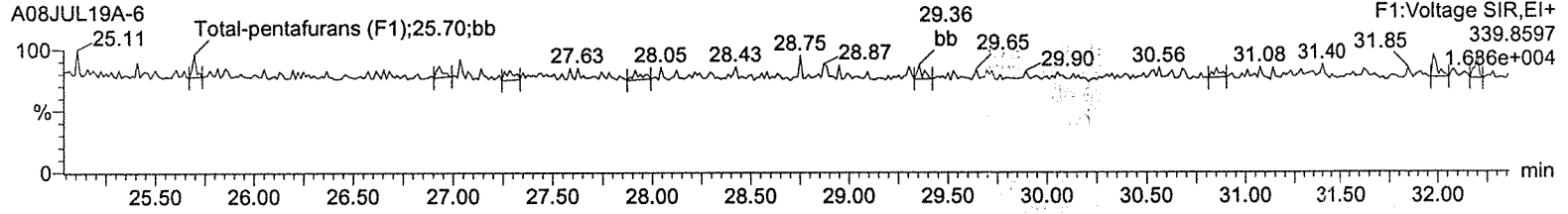
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

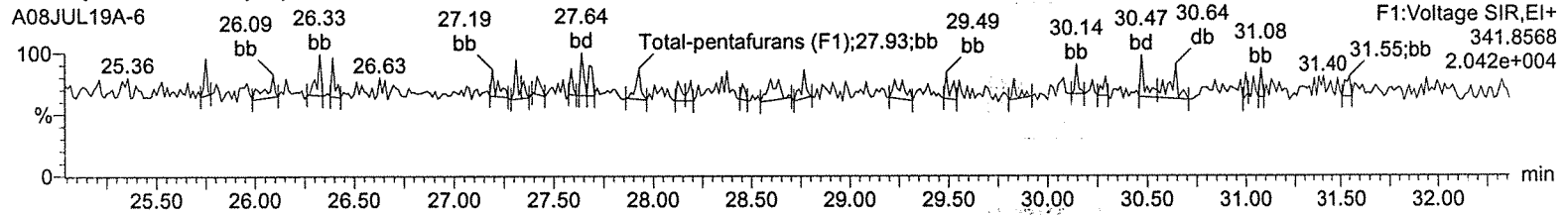
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

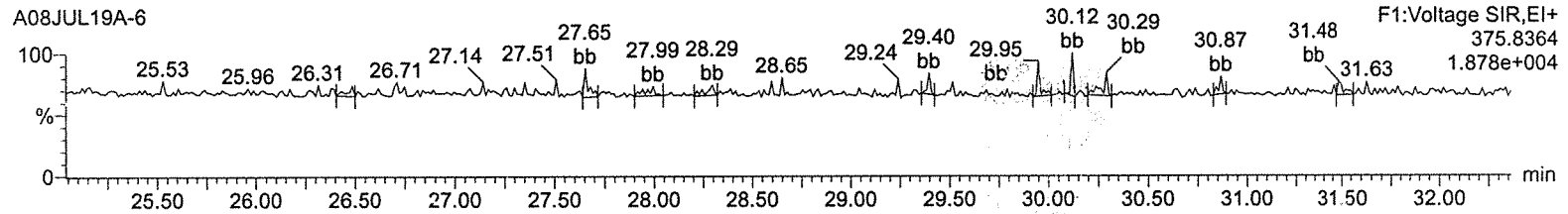
Total-pentafurans (F1)



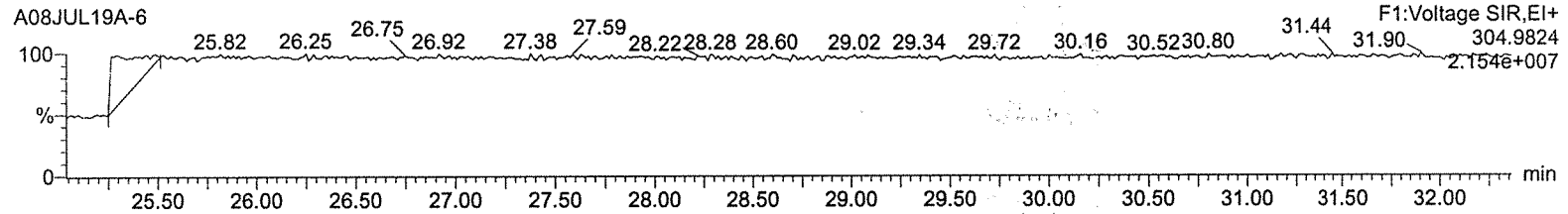
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

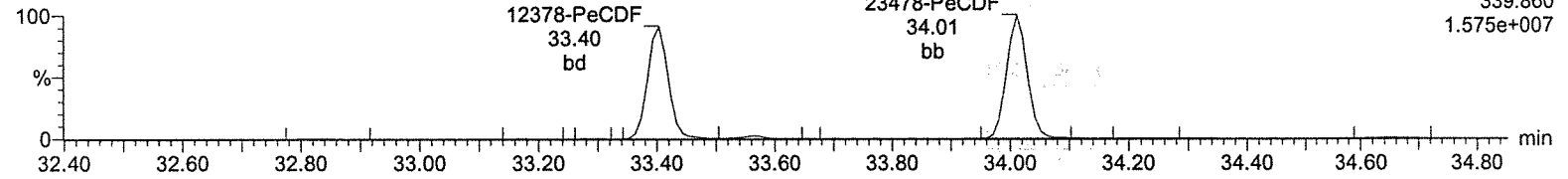
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

Total-pentafurans

A08JUL19A-6

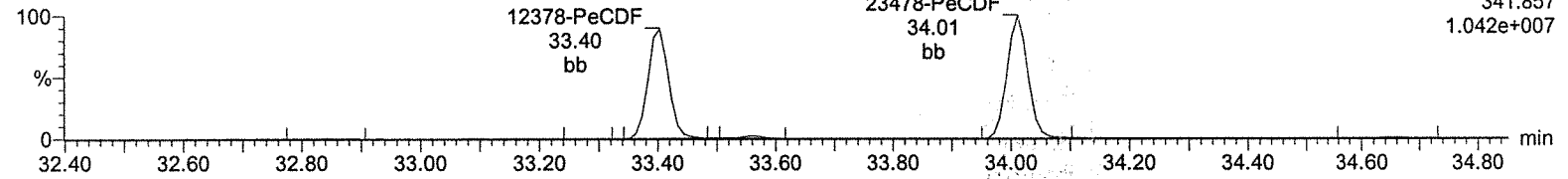
F2:Voltage SIR,EI+
339.860
1.575e+007



Total-pentafurans

A08JUL19A-6

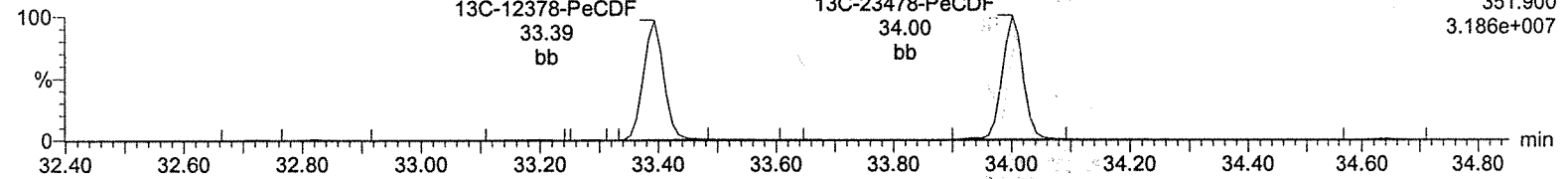
F2:Voltage SIR,EI+
341.857
1.042e+007



13C-12378-PeCDF

A08JUL19A-6

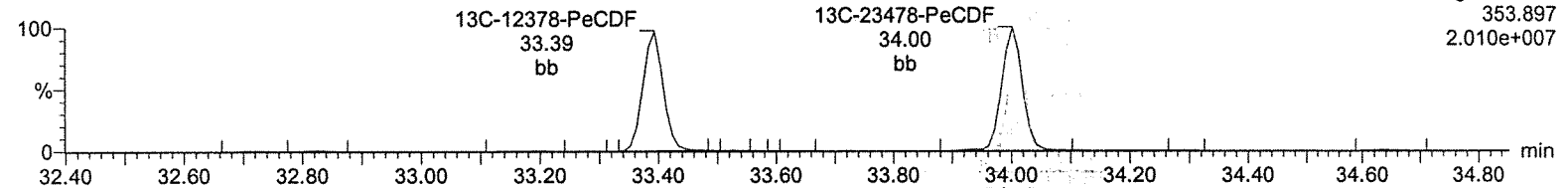
F2:Voltage SIR,EI+
351.900
3.186e+007



13C-12378-PeCDF

A08JUL19A-6

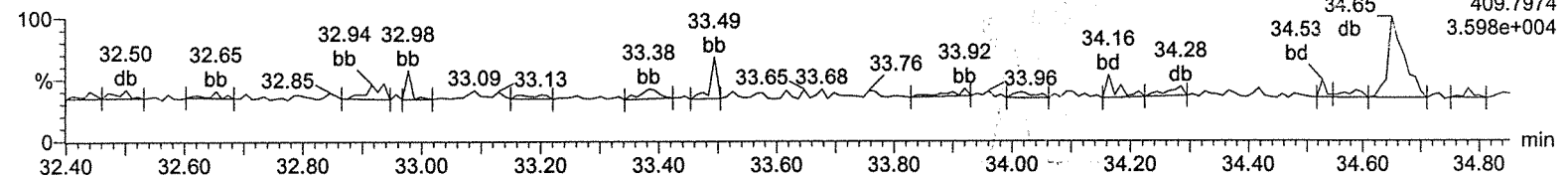
F2:Voltage SIR,EI+
353.897
2.010e+007



HpDPE

A08JUL19A-6

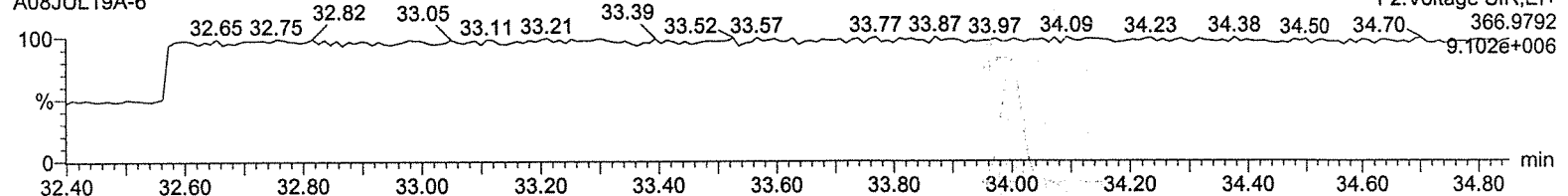
F2:Voltage SIR,EI+
409.7974
3.598e+004



Lock Mass F2

A08JUL19A-6

F2:Voltage SIR,EI+
366.9792
9.102e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

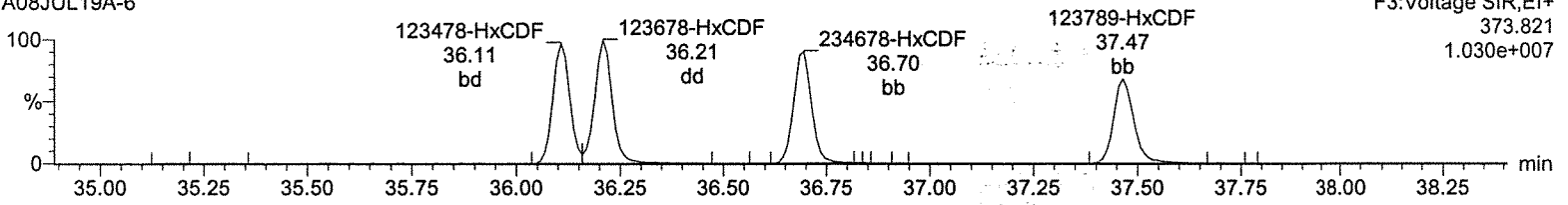
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

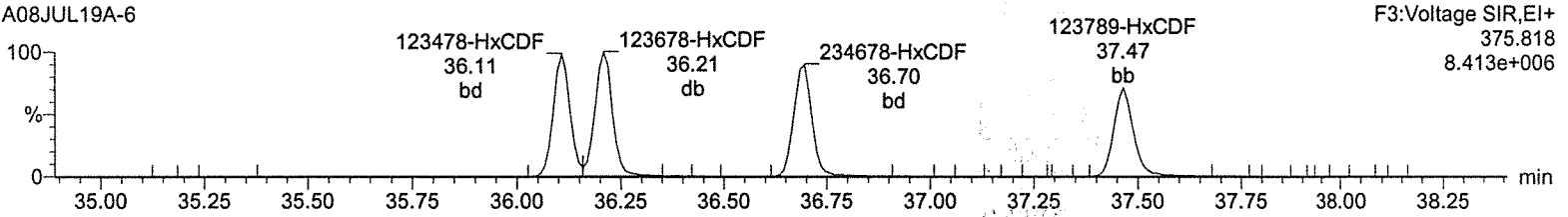
Total-hexafurans

A08JUL19A-6



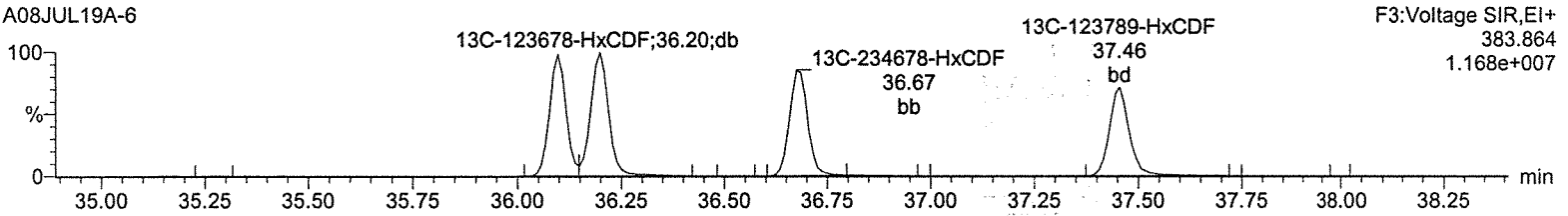
Total-hexafurans

A08JUL19A-6



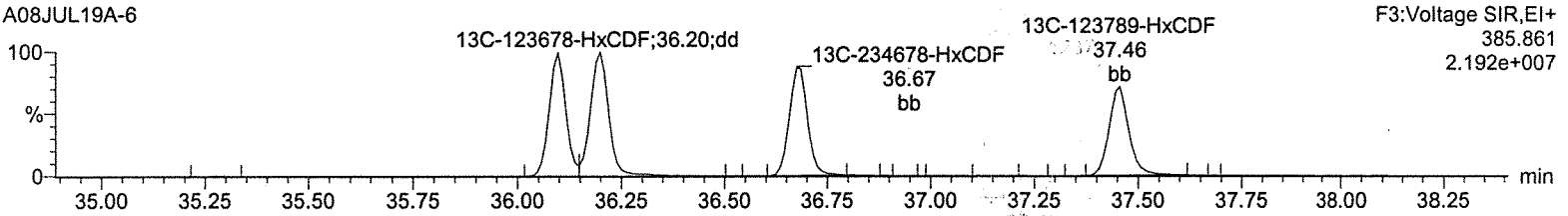
13C-123478-HxCDF

A08JUL19A-6



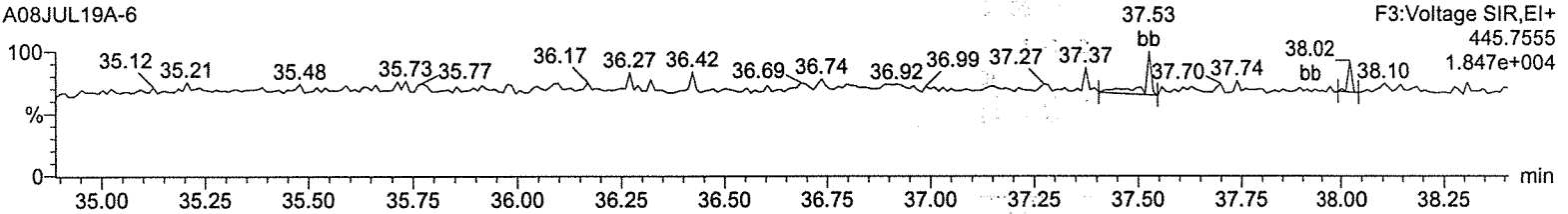
13C-123478-HxCDF

A08JUL19A-6



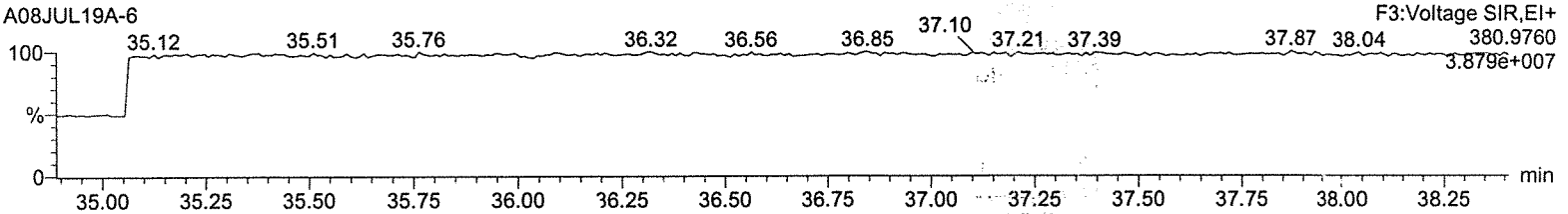
OcDPE

A08JUL19A-6



Lock Mass F3

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

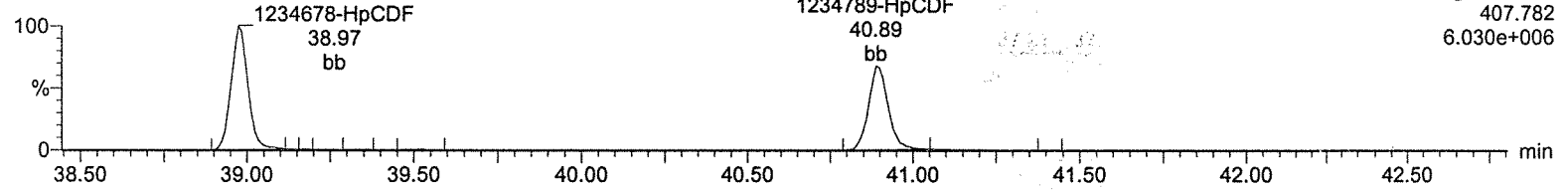
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

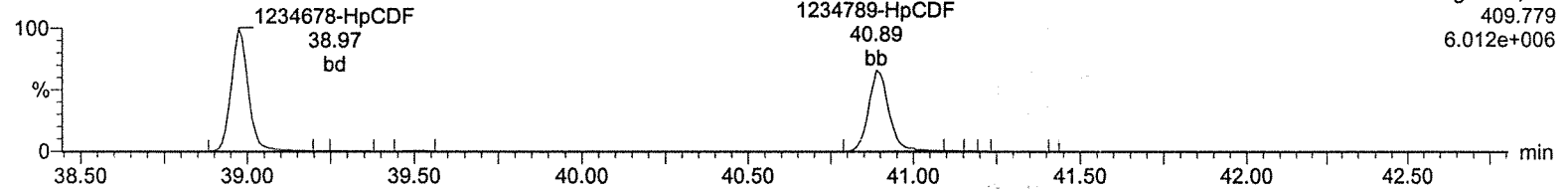
Total-heptafurans

A08JUL19A-6



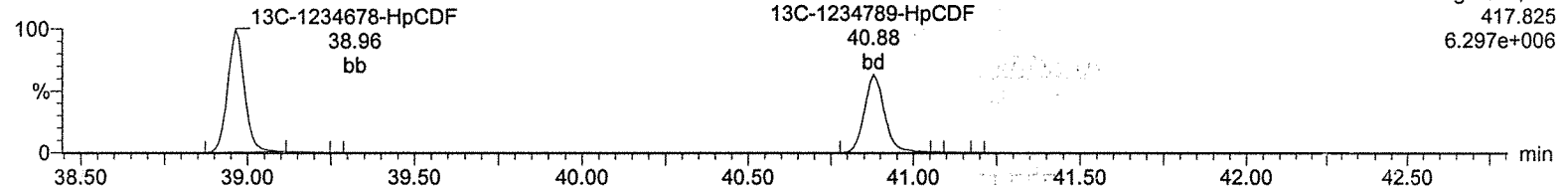
Total-heptafurans

A08JUL19A-6



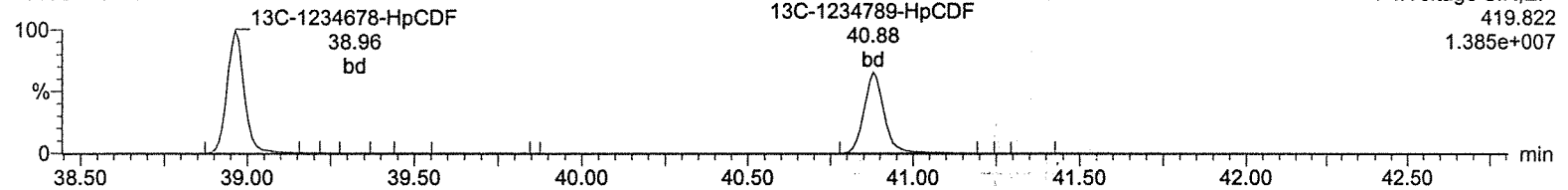
13C-1234678-HpCDF

A08JUL19A-6



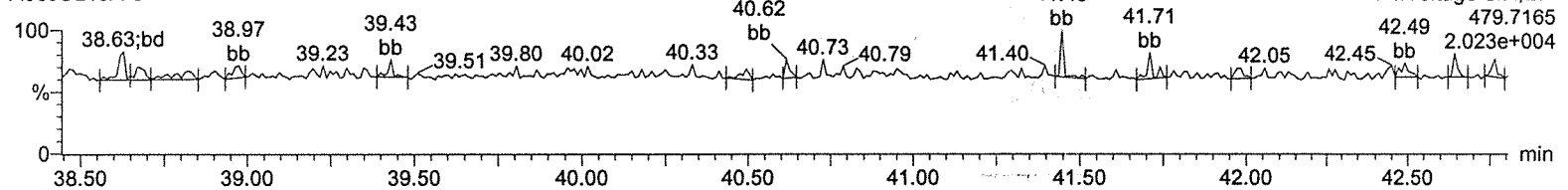
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A08JUL19A-6



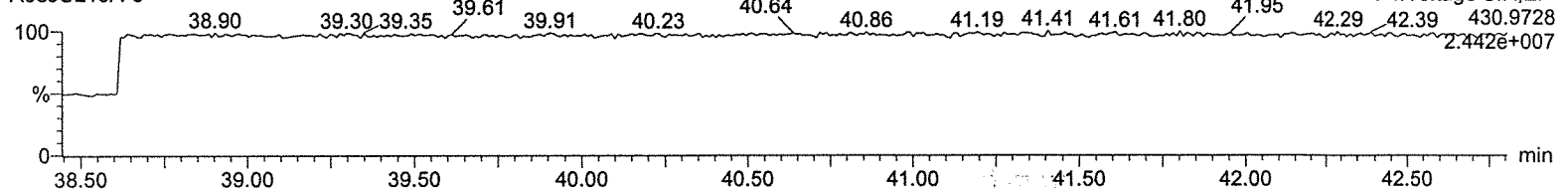
NoDPE

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

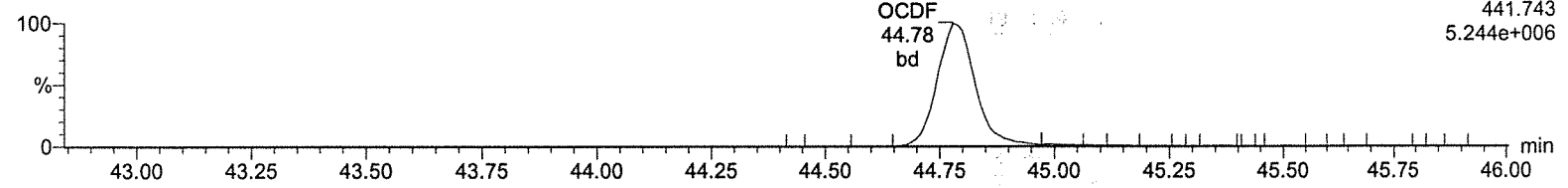
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

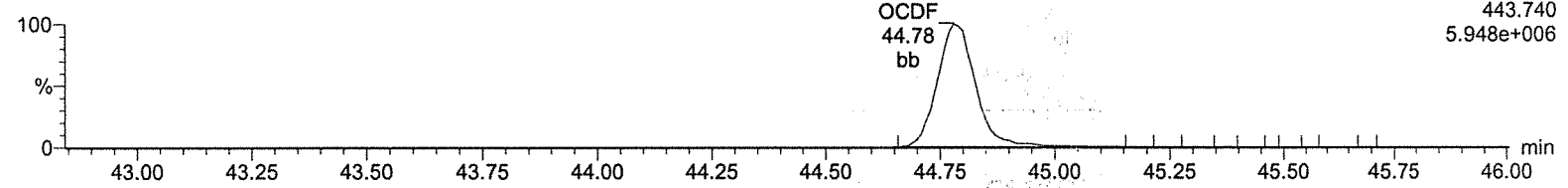
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A08JUL19A-6



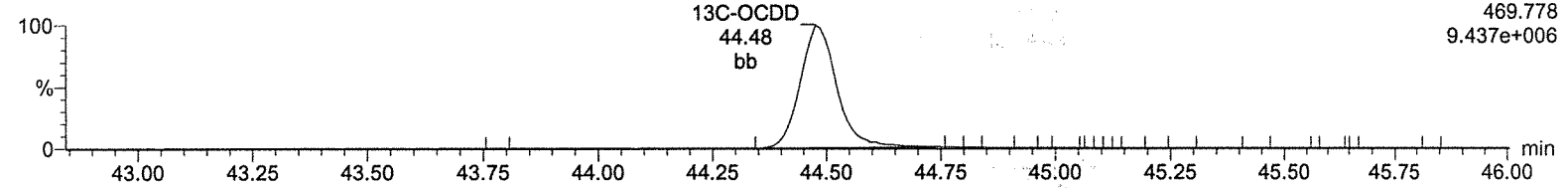
OCDF

A08JUL19A-6



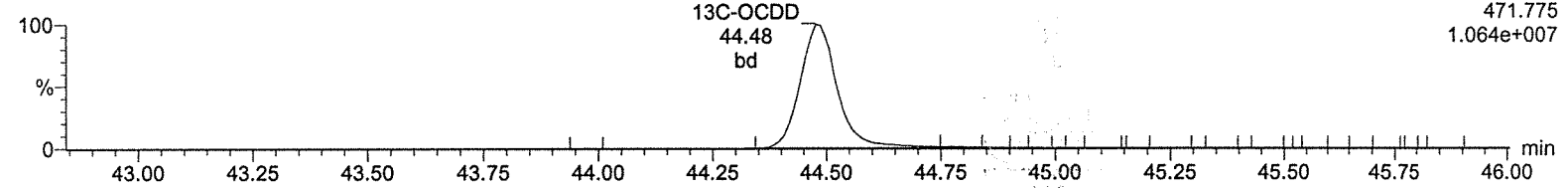
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A08JUL19A-6



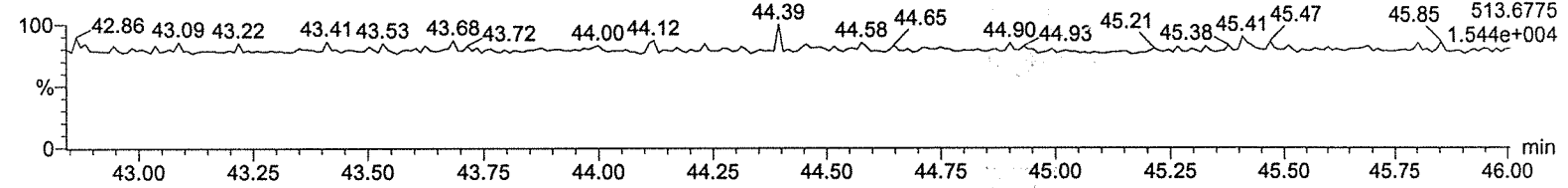
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A08JUL19A-6



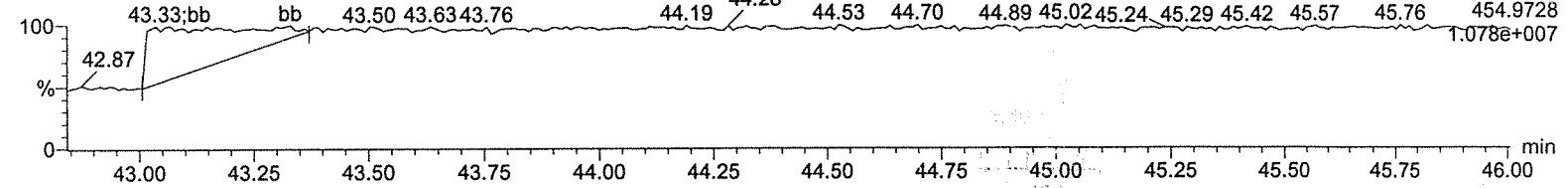
DeDPE

A08JUL19A-6



Lock Mass F5

A08JUL19A-6



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2011/8/19

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.20e5	4.23e5	7.43e5	31.35	1.000	0.76	NO	40.313	0.891	0.884	5.07	0.0467	6.28e6	2669	2351.7	8.28e6	3196	2591.3	bb	bd
2	12378-PeCDD	1.43e6	9.27e5	2.36e6	34.21	1.000	1.55	NO	199.882	0.853	0.853	1.65	0.134	3.45e7	7066	4888.6	2.27e7	5786	3925.7	bb	bb
3	123478-HxCDD	1.20e6	9.61e5	2.16e6	36.84	1.000	1.25	NO	204.080	0.959	0.940	3.11	0.210	2.48e7	6620	3745.7	1.94e7	8330	2329.2	dd	bd
4	123678-HxCDD	1.32e6	1.06e6	2.38e6	36.92	1.000	1.25	NO	203.463	0.960	0.944	2.57	0.193	2.62e7	6620	3954.5	2.14e7	8330	2574.5	dd	dd
5	123789-HxCDD	1.25e6	9.97e5	2.25e6	37.16	1.007	1.25	NO	204.709	0.949	0.927	3.30	0.204	2.37e7	6620	3578.2	1.91e7	8330	2291.3	dd	dd
6	1234678-HpCDD	8.98e5	8.65e5	1.76e6	40.25	1.000	1.04	NO	200.188	1.041	1.040	2.88	0.324	1.35e7	6485	2081.7	1.29e7	7778	1662.5	bb	bd
7	OCDD	1.60e6	1.73e6	3.34e6	44.51	1.000	0.93	NO	407.176	0.989	0.971	2.39	0.535	1.76e7	8985	1960.9	1.94e7	7406	2624.3	bd	bb
8	2378-TCDF	3.91e5	5.06e5	8.96e5	30.67	1.001	0.77	NO	39.698	0.971	0.978	5.59	0.0830	5.42e6	3365	1611.9	6.79e6	5160	1315.9	bb	bb
9	12378-PeCDF	2.15e6	1.42e6	3.56e6	33.40	1.000	1.51	NO	204.220	0.965	0.945	3.41	0.104	5.57e7	6926	8041.1	3.68e7	8542	4302.7	bb	bd
10	123478-PeCDF	2.37e6	1.56e6	3.92e6	34.02	1.000	1.52	NO	205.338	1.013	0.987	3.73	0.0933	6.14e7	6926	8866.5	3.90e7	8542	4567.7	bb	bb
11	123478-HxCDF	1.70e6	1.40e6	3.10e6	36.12	1.001	1.22	NO	208.354	1.133	1.087	3.86	0.274	3.75e7	14090	2658.9	3.03e7	15421	1963.2	bd	bd
12	123678-HxCDF	1.82e6	1.49e6	3.31e6	36.21	1.000	1.22	NO	202.580	1.054	1.041	3.23	0.271	3.78e7	14090	2683.1	3.11e7	15421	2019.8	db	db
13	1234678-HxCDF	1.73e6	1.43e6	3.16e6	36.69	1.000	1.21	NO	207.523	1.178	1.136	3.17	0.277	3.67e7	14090	2608.0	3.05e7	15421	1976.9	bd	bd
14	123789-HxCDF	1.41e6	1.15e6	2.56e6	37.48	1.000	1.22	NO	201.238	1.067	1.061	2.29	0.378	2.64e7	14090	1872.9	2.13e7	15421	1383.0	bb	bb
15	1234678-HpCDF	1.28e6	1.26e6	2.54e6	38.98	1.000	1.01	NO	205.556	1.182	1.150	3.86	0.276	2.27e7	10691	2125.0	2.21e7	9042	2443.4	bb	bb
16	1234789-HpCDF	1.04e6	1.03e6	2.08e6	40.91	1.000	1.01	NO	204.324	1.228	1.202	1.91	0.419	1.49e7	10691	1395.5	1.48e7	9042	1631.4	bd	bd
17	OCDF	1.90e6	2.09e6	3.98e6	44.80	1.007	0.91	NO	416.811	1.180	1.133	6.78	0.402	2.07e7	8487	2437.5	2.34e7	5859	3990.3	bd	bb
18	13C-2378-TCDD	9.08e5	1.18e6	2.08e6	31.34	1.015	0.77	NO	98.652	1.113	1.128	2.36	0.112	1.86e7	7944	2339.0	2.37e7	4559	5208.0	bb	bb
19	13C-12378-PeCDD	8.37e5	5.47e5	1.38e6	34.20	1.108	1.53	NO	98.417	0.739	0.751	5.03	0.104	2.04e7	4338	4692.3	1.34e7	3347	4003.3	bb	bb
20	13C-123478-HxCDD	6.25e5	5.03e5	1.13e6	36.83	0.991	1.24	NO	100.728	0.903	0.896	1.38	0.172	1.26e7	6951	1815.9	1.00e7	5143	1950.2	bd	bd
21	13C-123678-HxCDD	6.83e5	5.57e5	1.24e6	36.91	0.993	1.23	NO	100.685	0.993	0.986	0.84	0.156	1.36e7	6951	1953.6	1.11e7	5143	2156.6	dd	dd
22	13C-1234678-HpCDD	4.33e5	4.13e5	8.47e5	40.23	1.083	1.05	NO	100.892	0.678	0.672	1.29	0.183	6.49e6	4520	1436.4	6.16e6	5151	1196.0	bd	bd
23	13C-OCDD	7.80e5	9.07e5	1.69e6	44.49	1.197	0.86	NO	210.311	0.675	0.642	4.87	0.272	8.74e6	8904	981.8	9.98e6	4818	2071.9	bb	bd
24	13C-2378-TCDF	1.01e6	1.30e6	2.31e6	30.64	0.993	0.77	NO	98.614	1.233	1.250	1.88	0.165	1.37e7	13730	999.5	1.79e7	6681	2683.0	bb	bb
25	13C-12378-PeCDF	1.13e6	7.17e5	1.85e6	33.39	1.082	1.58	NO	97.584	0.986	1.011	4.24	0.190	2.89e7	13181	2193.7	1.86e7	5800	3205.6	bb	bb
26	13C-23478-PeCDF	1.19e6	7.44e5	1.94e6	34.01	1.102	1.60	NO	97.318	1.035	1.063	5.28	0.181	3.10e7	13181	2355.2	1.88e7	5800	3248.7	db	bb
27	13C-123478-HxCDF	4.71e5	8.99e5	1.37e6	36.10	0.972	0.52	NO	98.724	1.097	1.111	1.42	0.276	1.02e7	10993	928.5	1.98e7	13101	1511.7	bd	bd
28	13C-123678-HxCDF	5.42e5	1.03e6	1.57e6	36.20	0.974	0.53	NO	100.717	1.256	1.247	1.06	0.246	1.08e7	10993	985.4	2.09e7	13101	1591.5	dd	dd
29	13C-234678-HxCDF	4.70e5	8.72e5	1.34e6	36.69	0.987	0.54	NO	99.282	1.074	1.082	1.01	0.284	9.85e6	10993	896.3	1.88e7	13101	1435.8	bd	bb
30	13C-123789-HxCDF	4.17e5	7.84e5	1.20e6	37.47	1.008	0.53	NO	99.370	0.961	0.967	1.08	0.317	7.67e6	10993	697.3	1.47e7	13101	1123.3	bd	bb
31	13C-1234678-HpCDF	3.30e5	7.46e5	1.08e6	38.97	1.049	0.44	NO	99.003	0.861	0.870	1.11	0.194	5.71e6	6045	944.3	1.31e7	7193	1816.3	bb	bb
32	13C-1234789-HpCDF	2.66e5	5.79e5	8.45e5	40.89	1.101	0.46	NO	99.849	0.676	0.677	1.01	0.249	3.70e6	6045	611.9	8.36e6	7193	1162.3	bd	bb
33	13C-1234-TCDD	8.26e5	1.05e6	1.87e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.127	1.31e7	7944	1645.5	1.65e7	4559	3617.1	bb	bb
34	13C-123789-HxCDD	6.86e5	5.64e5	1.25e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.154	1.29e7	6951	1859.3	1.06e7	5143	2053.6	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	7.96e5	7.96e5	7.96e5	31.35	1.016			40.065	1.063	1.061	4.54	0.0384	1.57e7	4023	3910.2						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

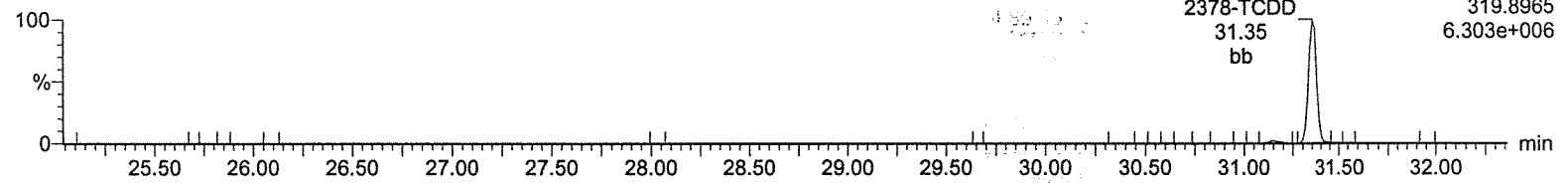
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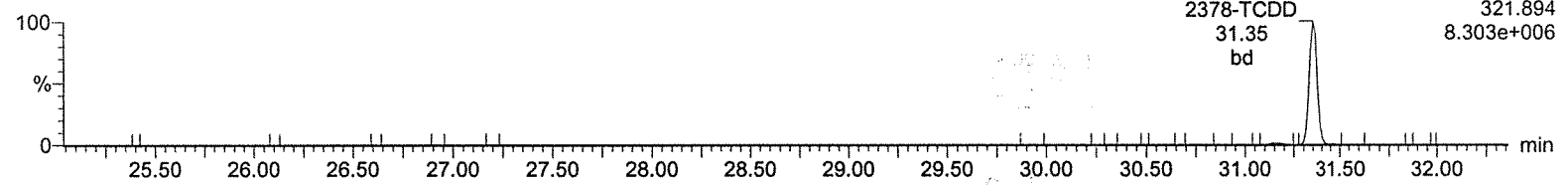
Total-tetradoxins

A08JUL19A-7



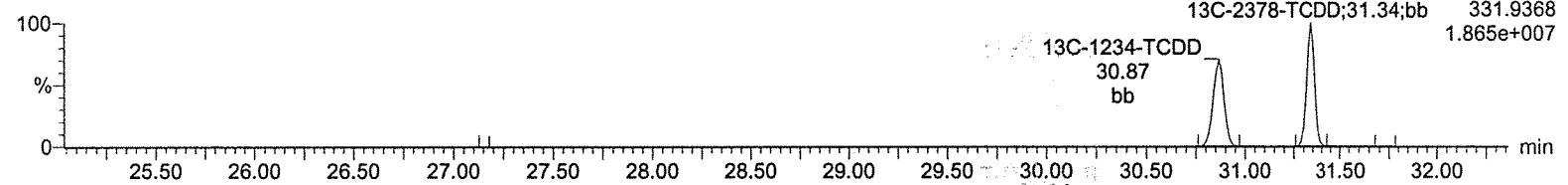
Total-tetradoxins

A08JUL19A-7



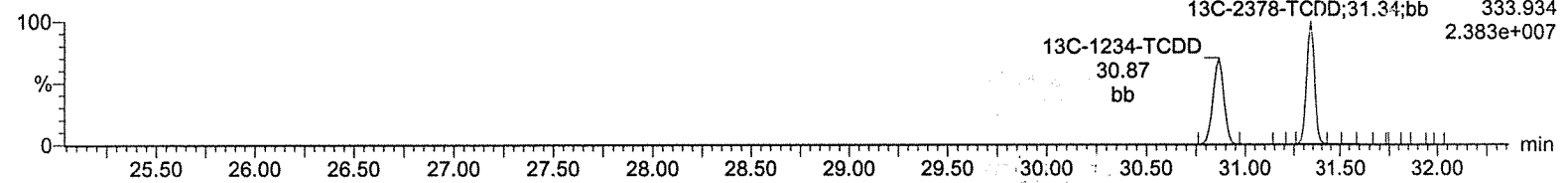
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A08JUL19A-7



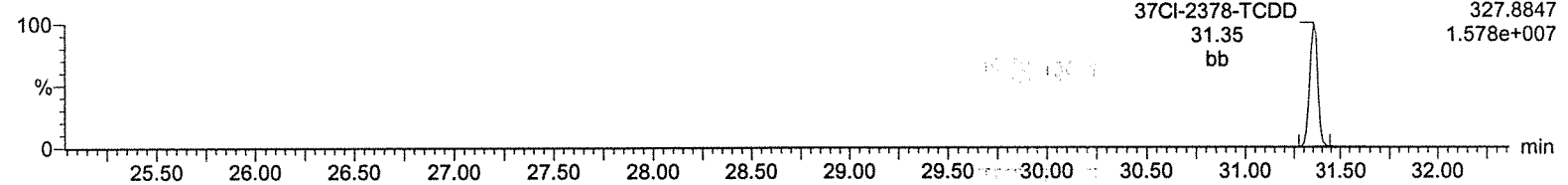
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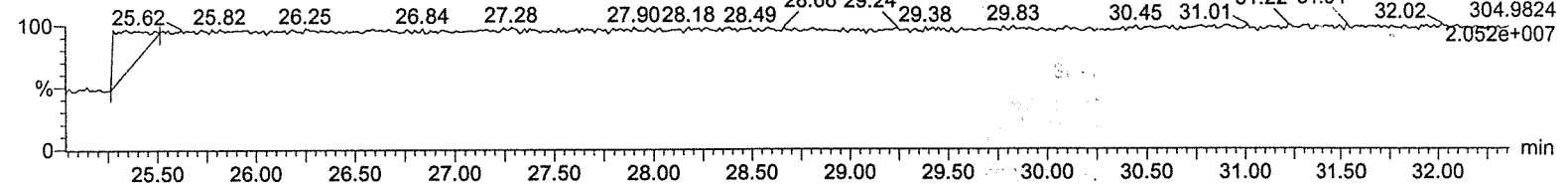
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A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

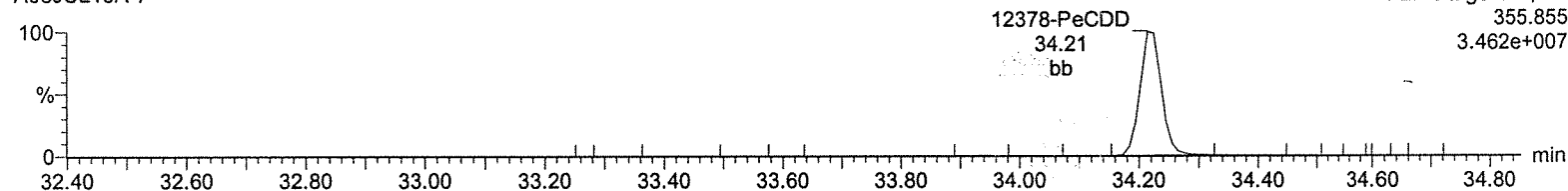
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

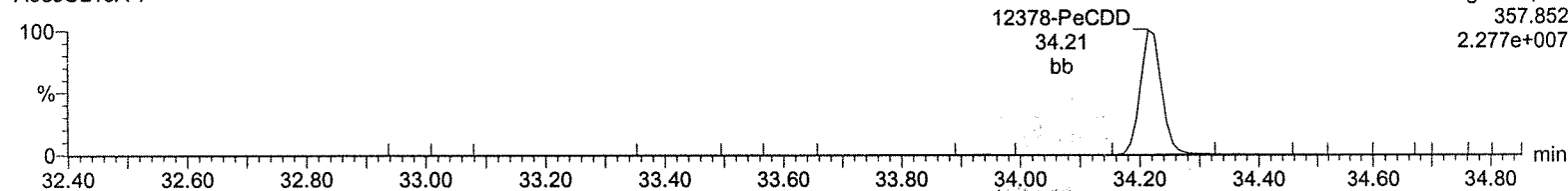
Total-pentadioxins

A08JUL19A-7



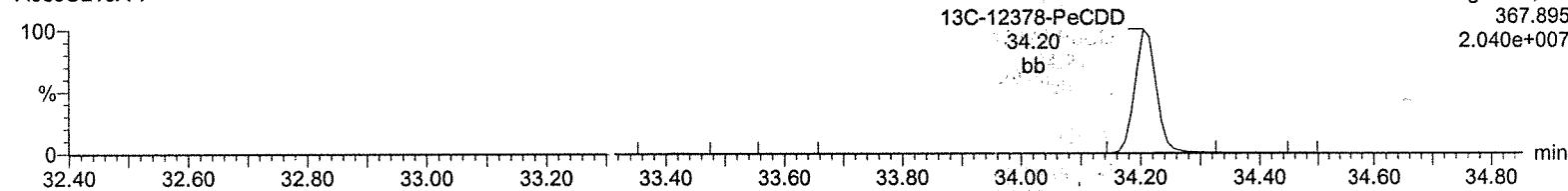
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A08JUL19A-7



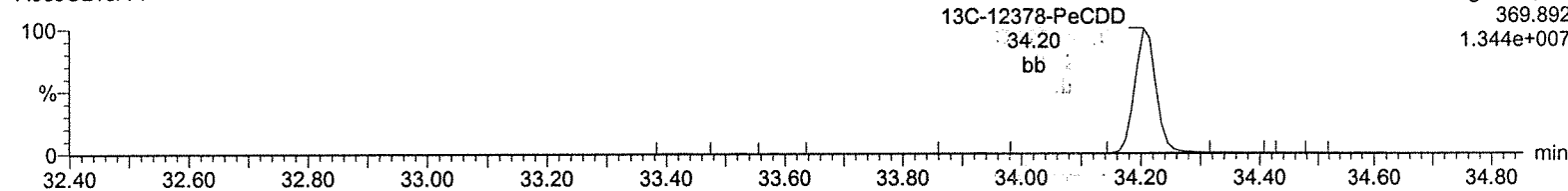
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A08JUL19A-7



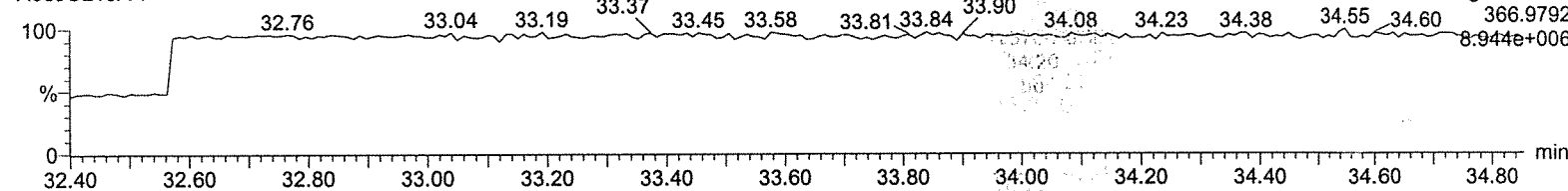
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A08JUL19A-7



Lock Mass F2

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

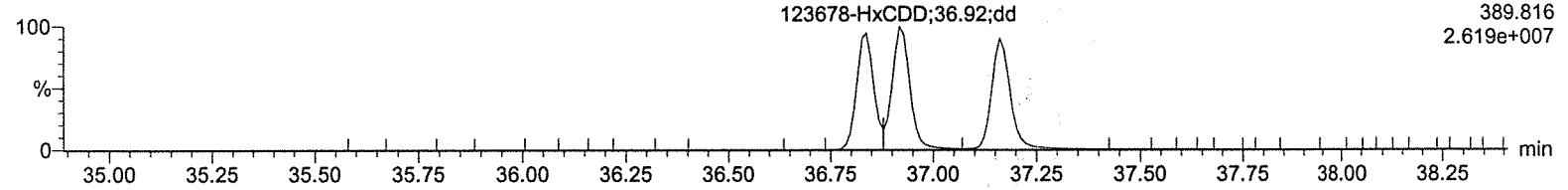
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Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

Total-hexadioxins

A08JUL19A-7

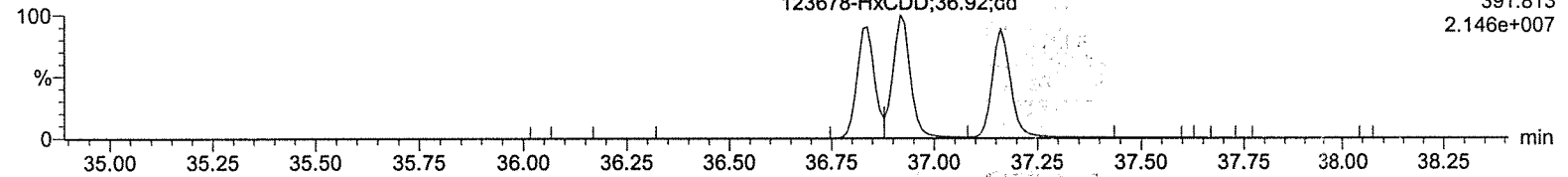
F3:Voltage SIR,EI+
389.816
2.619e+007



Total-hexadioxins

A08JUL19A-7

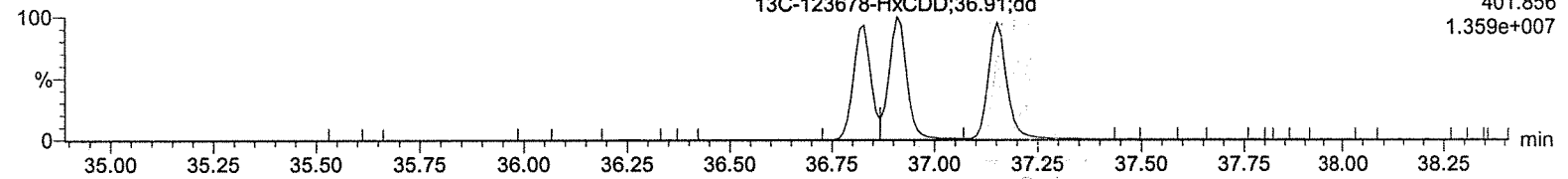
F3:Voltage SIR,EI+
391.813
2.146e+007



13C-123478-HxCDD

A08JUL19A-7

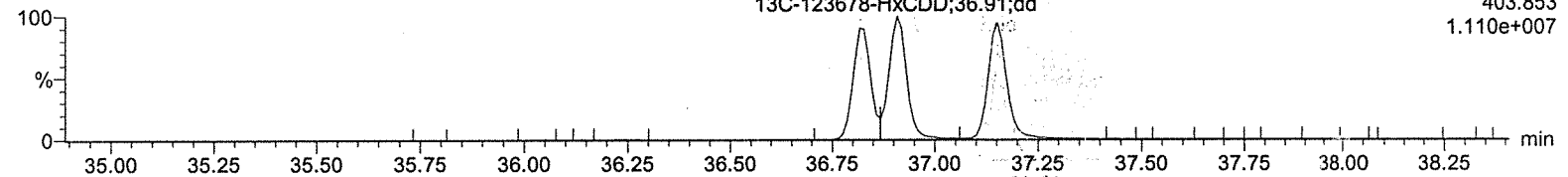
F3:Voltage SIR,EI+
401.856
1.359e+007



13C-123478-HxCDD

A08JUL19A-7

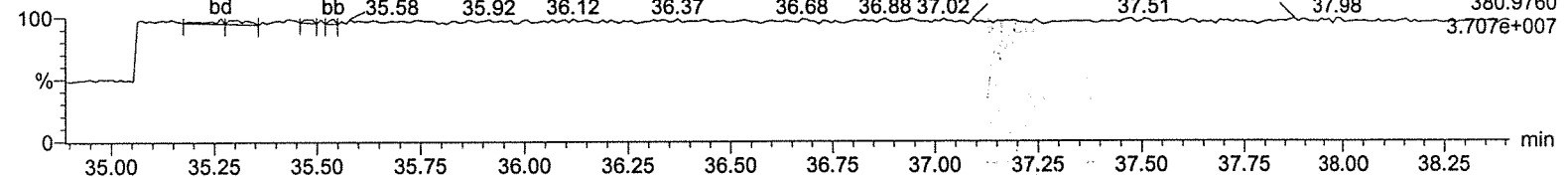
F3:Voltage SIR,EI+
403.853
1.110e+007



Lock Mass F3

A08JUL19A-7

F3:Voltage SIR,EI+
380.9760
3.707e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

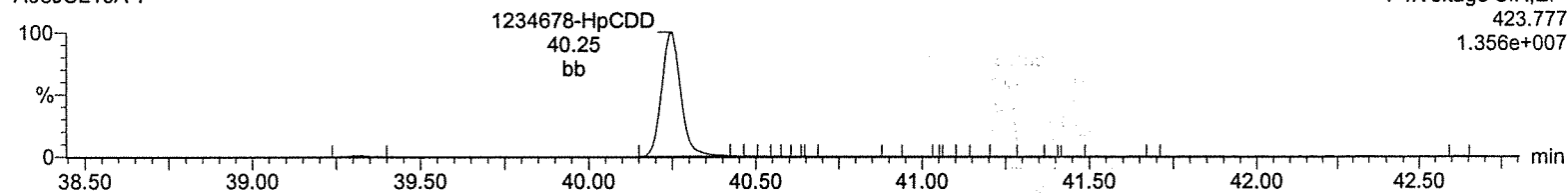
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

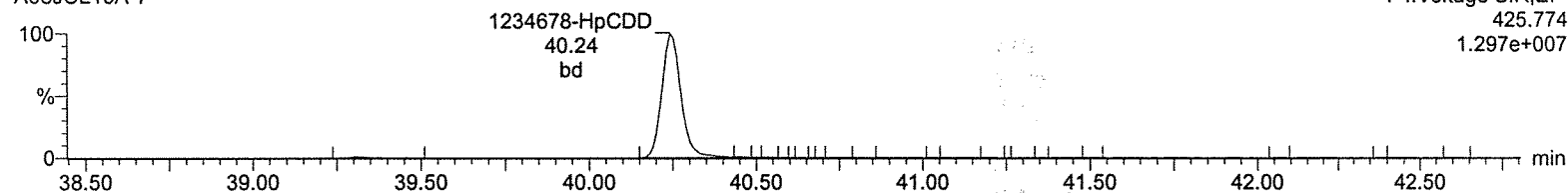
Total-heptadioxins

A08JUL19A-7



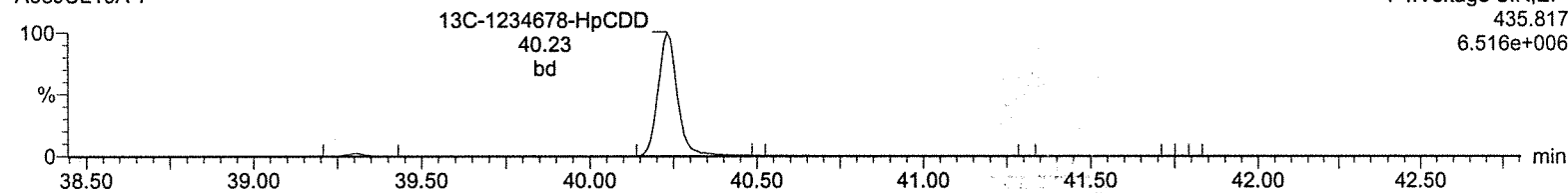
Total-heptadioxins

A08JUL19A-7



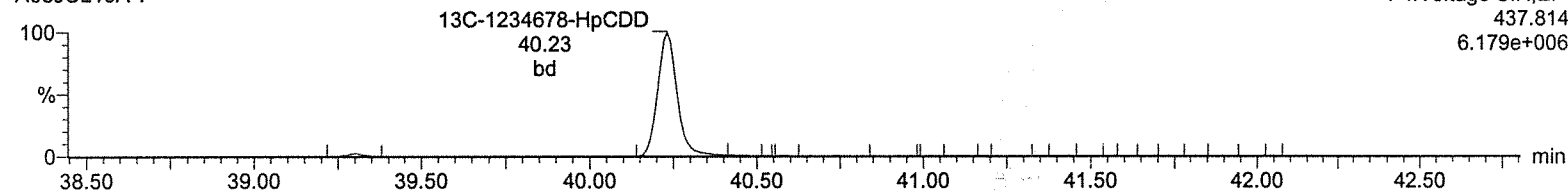
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A08JUL19A-7



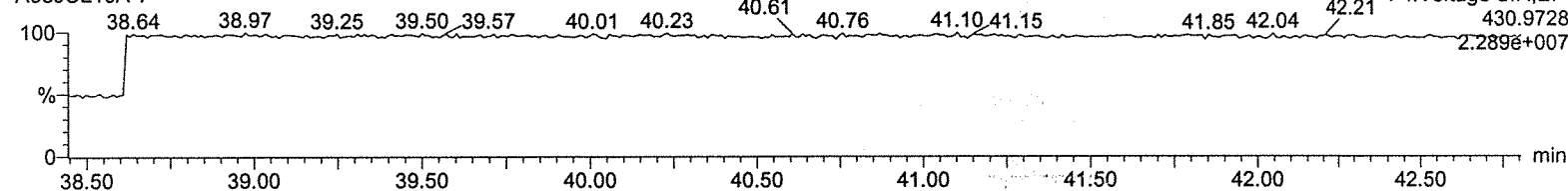
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A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

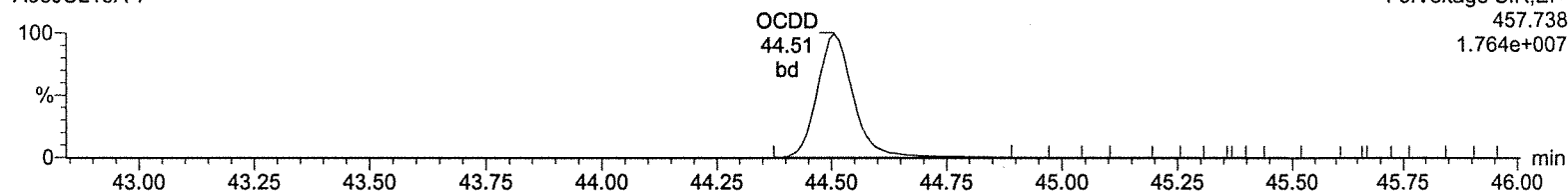
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Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

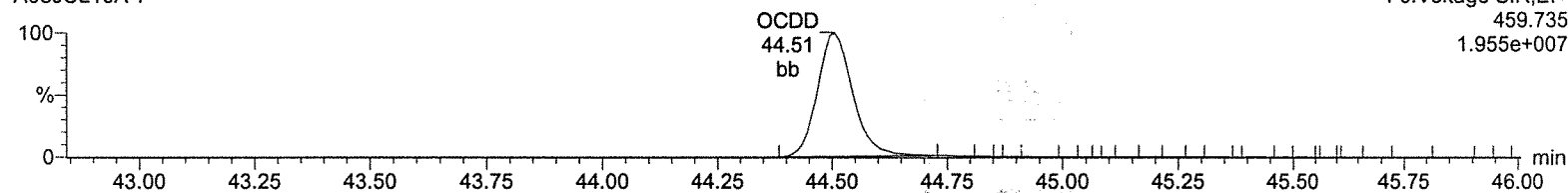
OCDD

A08JUL19A-7



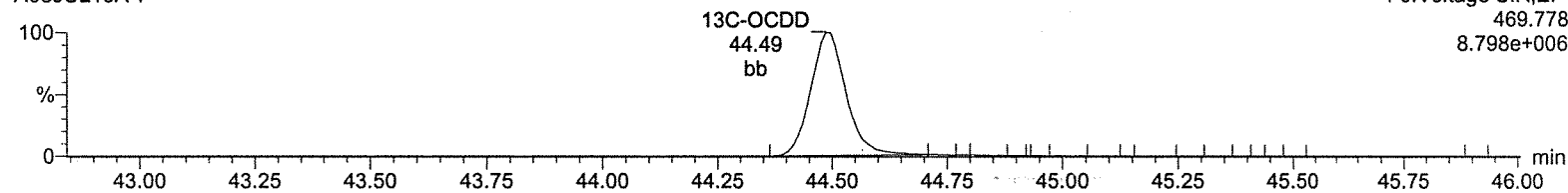
OCDD

A08JUL19A-7



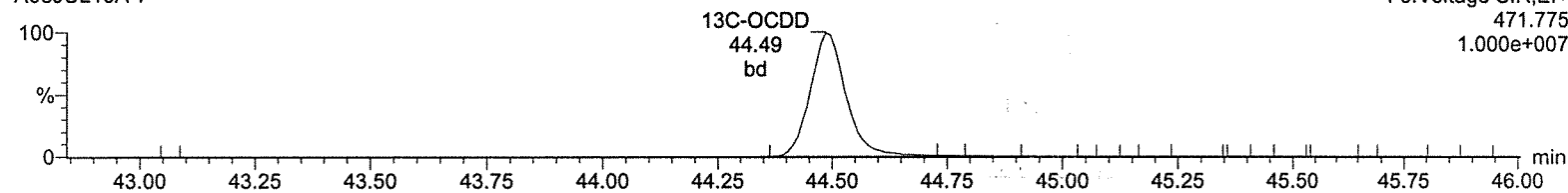
13C-OCDD

A08JUL19A-7



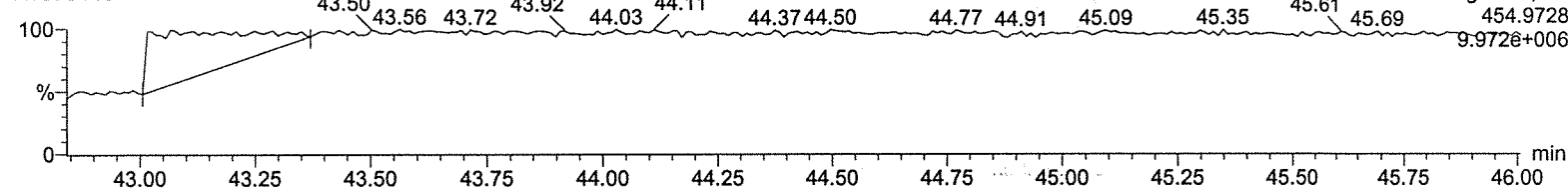
13C-OCDD

A08JUL19A-7



Lock Mass F5

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qid

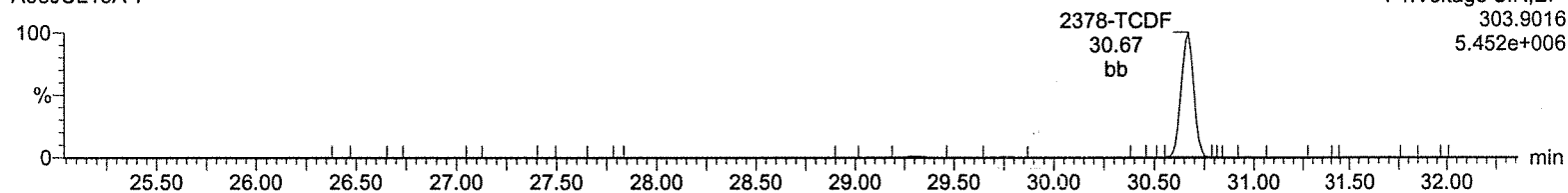
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

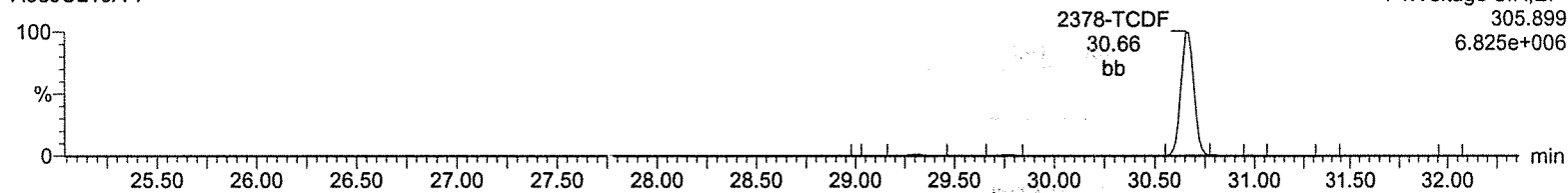
Total-tetrafurans

A08JUL19A-7



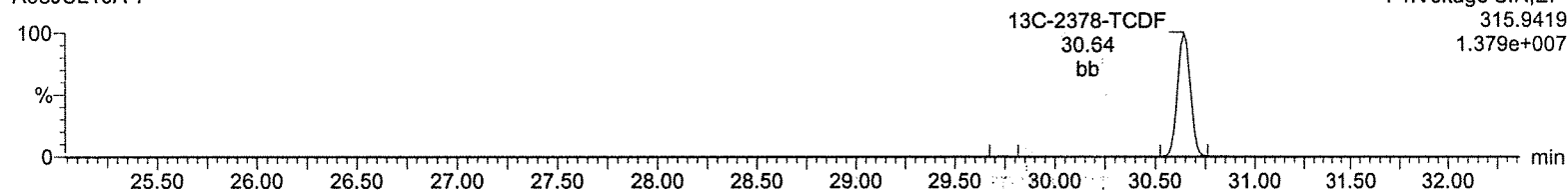
Total-tetrafurans

A08JUL19A-7



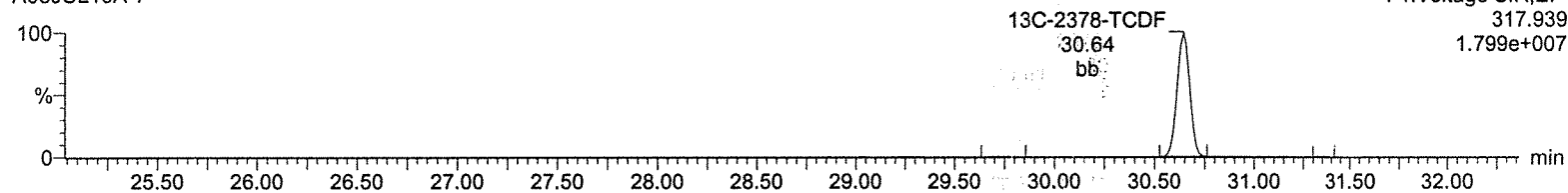
13C-2378-TCDF

A08JUL19A-7



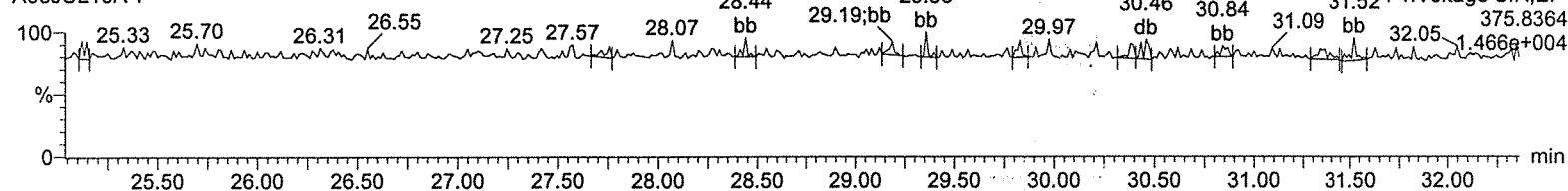
13C-2378-TCDF

A08JUL19A-7



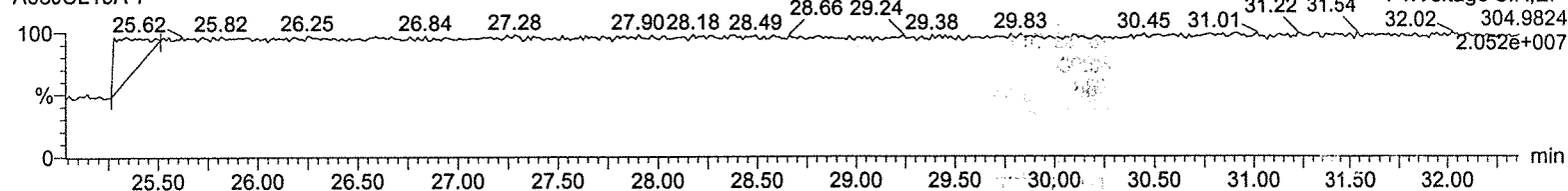
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

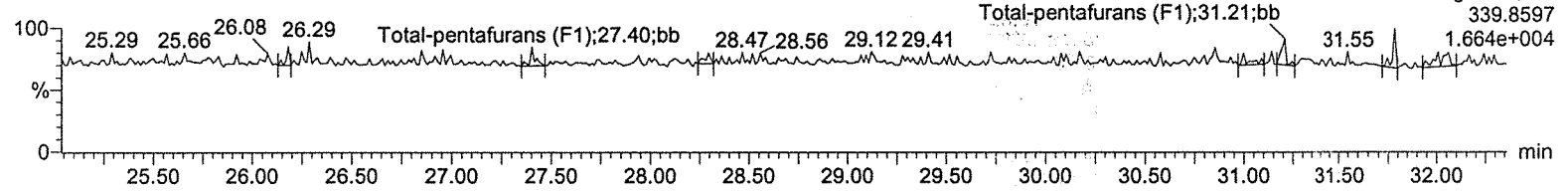
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

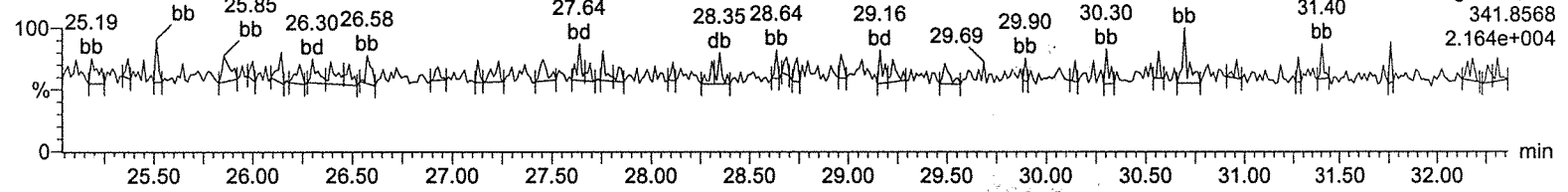
Total-pentafurans (F1)

A08JUL19A-7



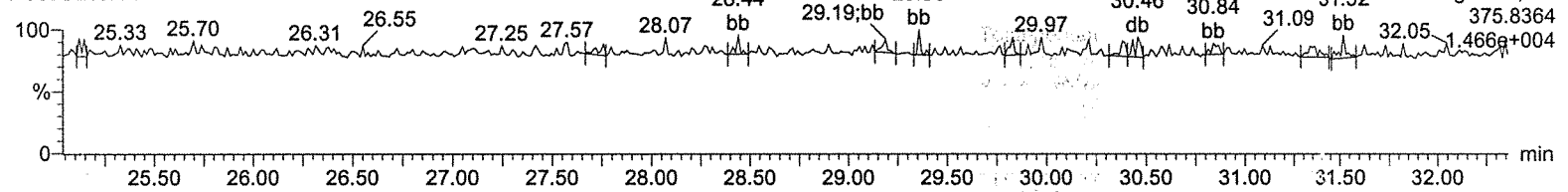
Total-pentafurans (F1)

A08JUL19A-7



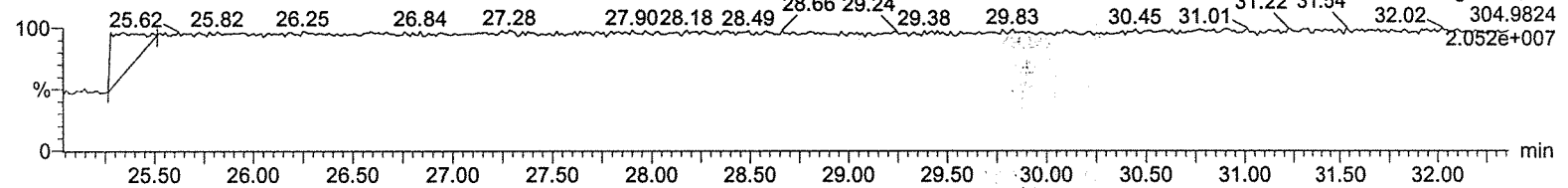
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

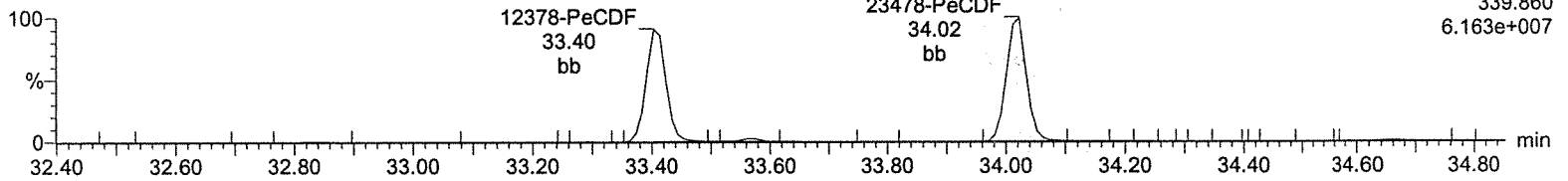
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

Total-pentafurans

A08JUL19A-7

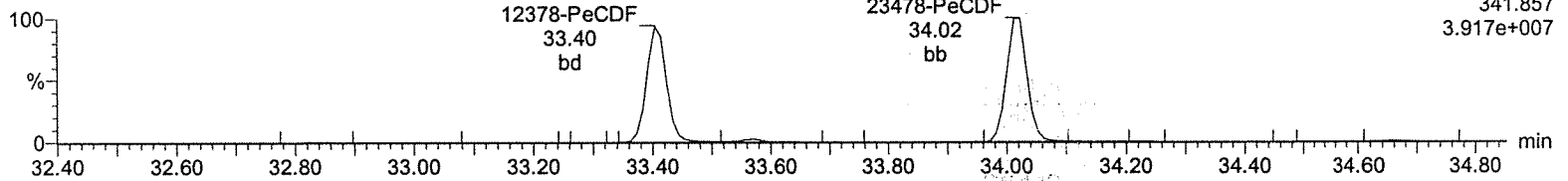
F2:Voltage SIR,EI+
339.860
6.163e+007



Total-pentafurans

A08JUL19A-7

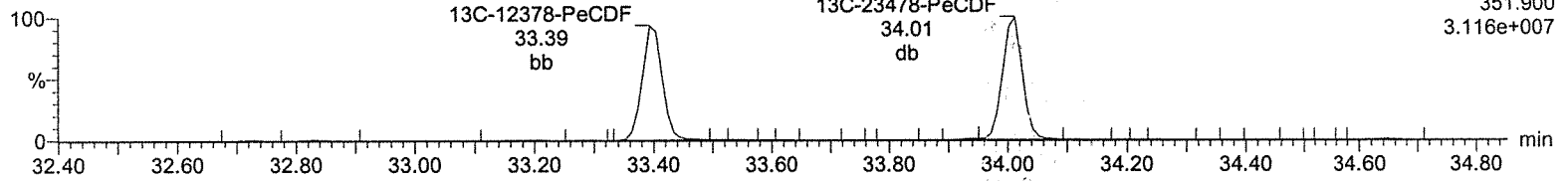
F2:Voltage SIR,EI+
341.857
3.917e+007



13C-12378-PeCDF

A08JUL19A-7

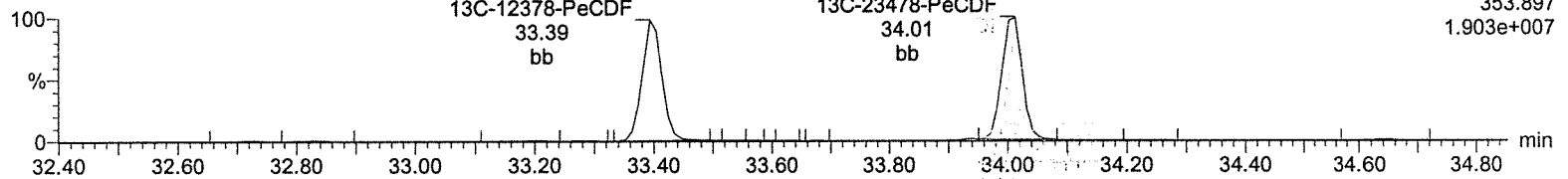
F2:Voltage SIR,EI+
351.900
3.116e+007



13C-12378-PeCDF

A08JUL19A-7

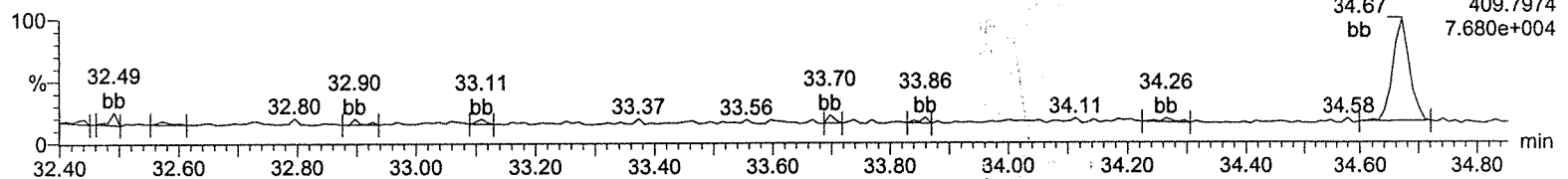
F2:Voltage SIR,EI+
353.897
1.903e+007



HpDPE

A08JUL19A-7

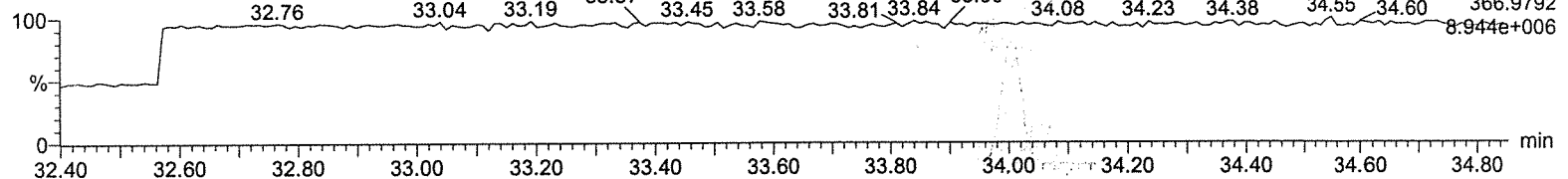
F2:Voltage SIR,EI+
34.67
409.7974
7.680e+004



Lock Mass F2

A08JUL19A-7

F2:Voltage SIR,EI+
366.9792
8.944e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

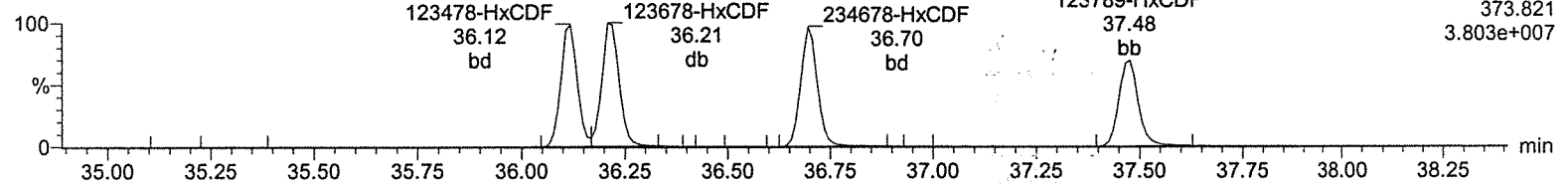
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

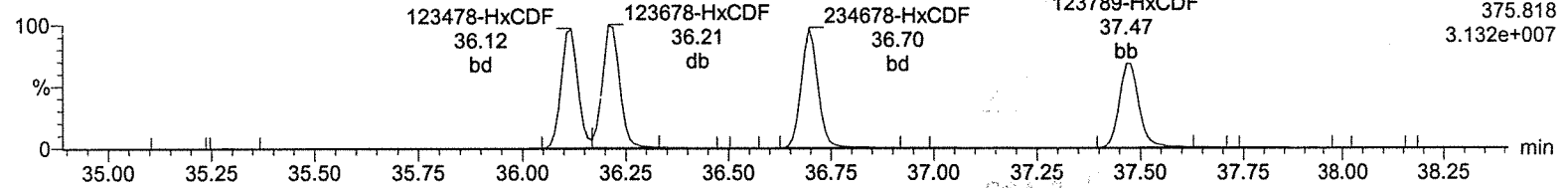
Total-hexafurans

A08JUL19A-7



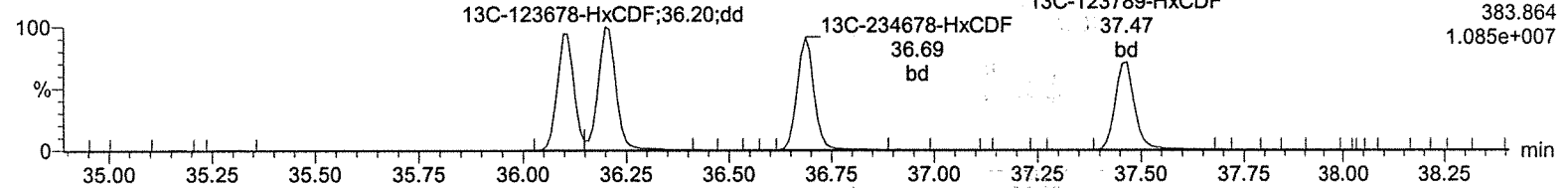
Total-hexafurans

A08JUL19A-7



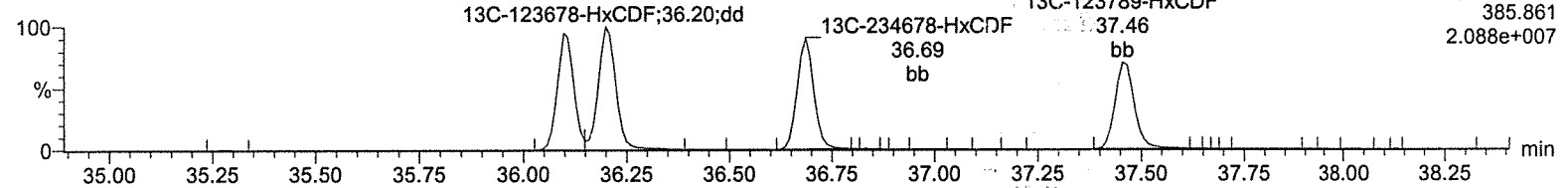
¹³C-123478-HxCDF

A08JUL19A-7



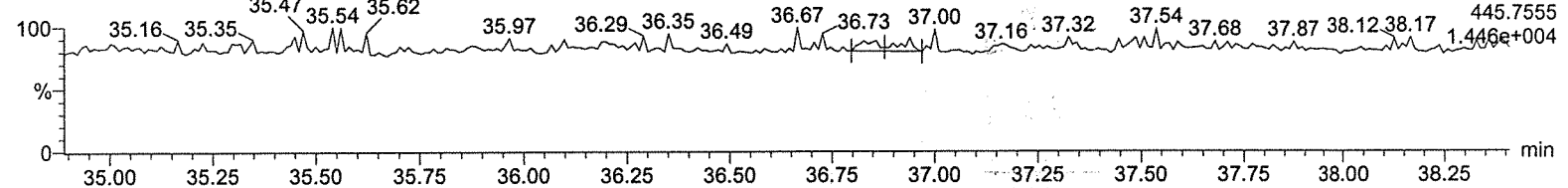
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A08JUL19A-7



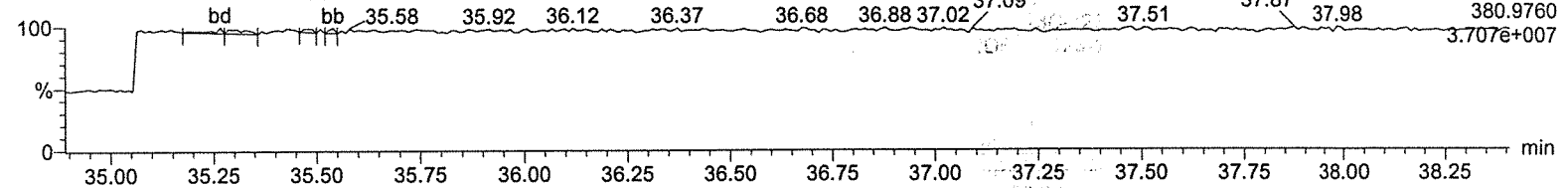
OcDPE

A08JUL19A-7



Lock Mass F3

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

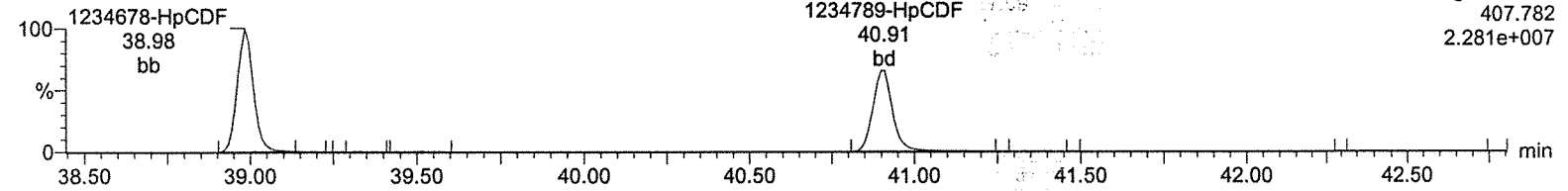
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

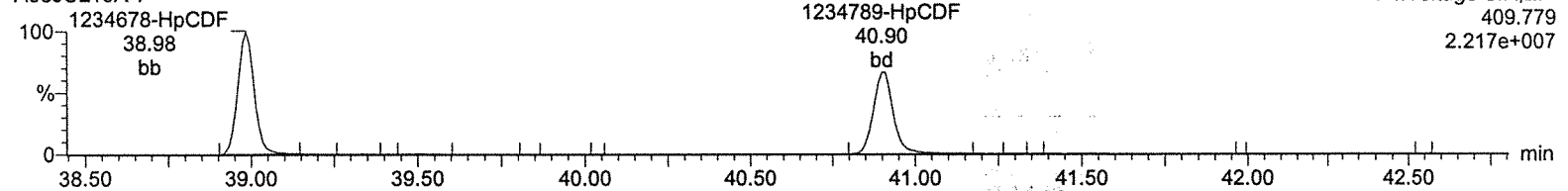
Total-heptafurans

A08JUL19A-7



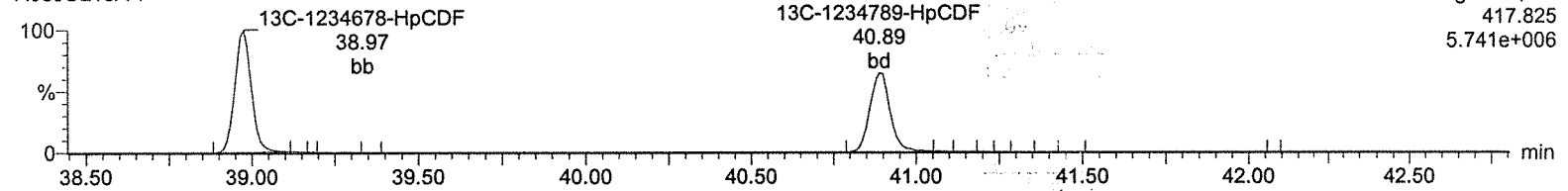
Total-heptafurans

A08JUL19A-7



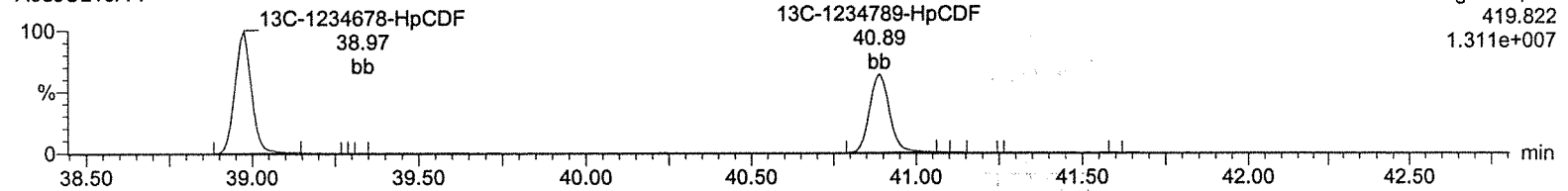
13C-1234678-HpCDF

A08JUL19A-7



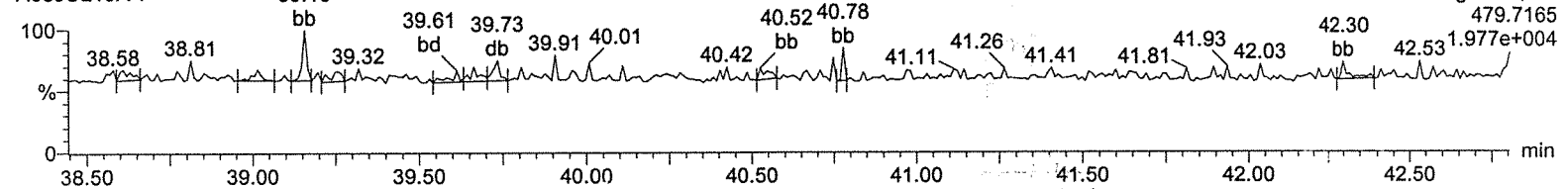
13C-1234678-HpCDF

A08JUL19A-7



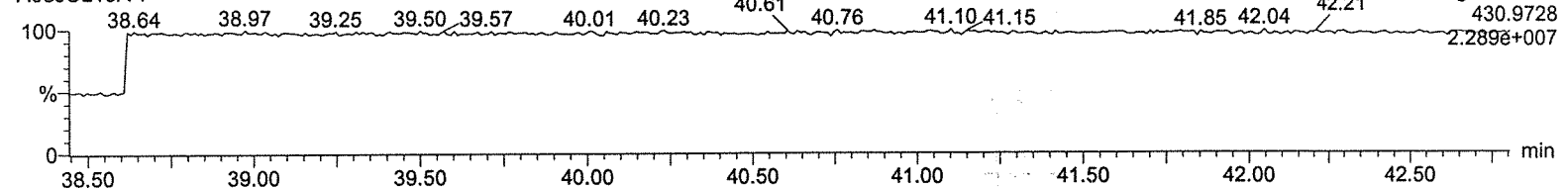
NoDPE

A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

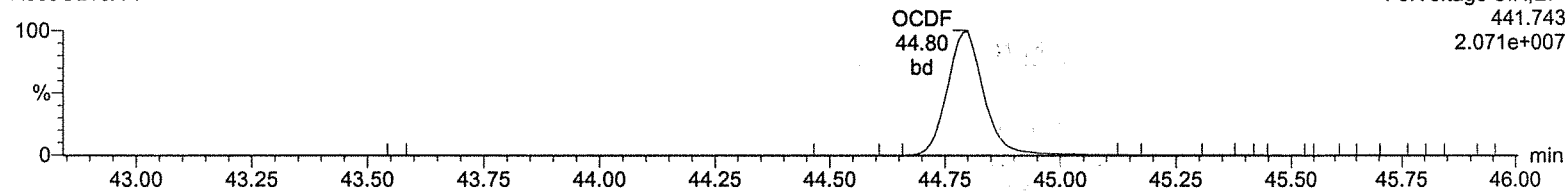
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

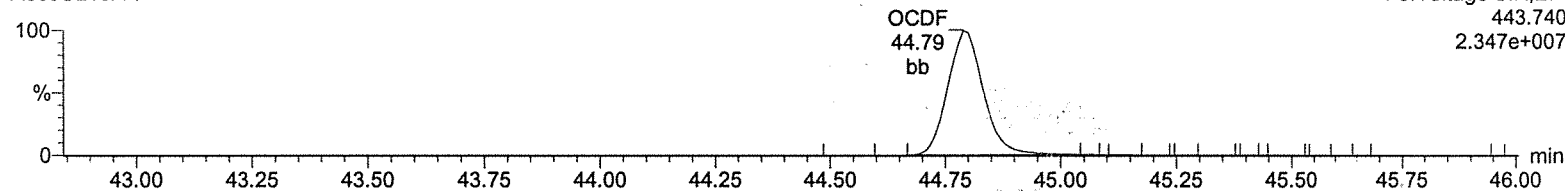
OCDF

A08JUL19A-7



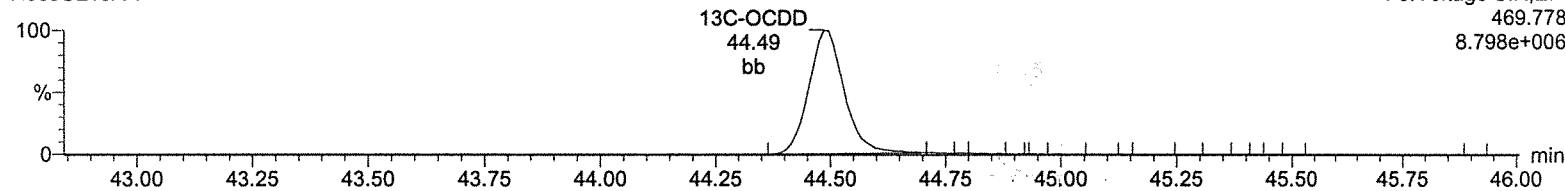
OCDF

A08JUL19A-7



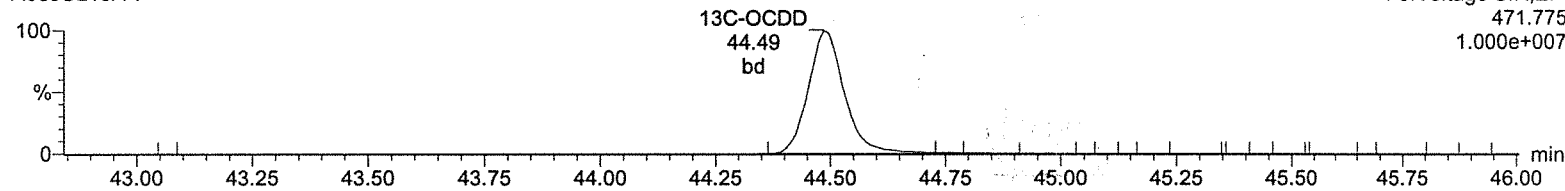
13C-OCDD

A08JUL19A-7



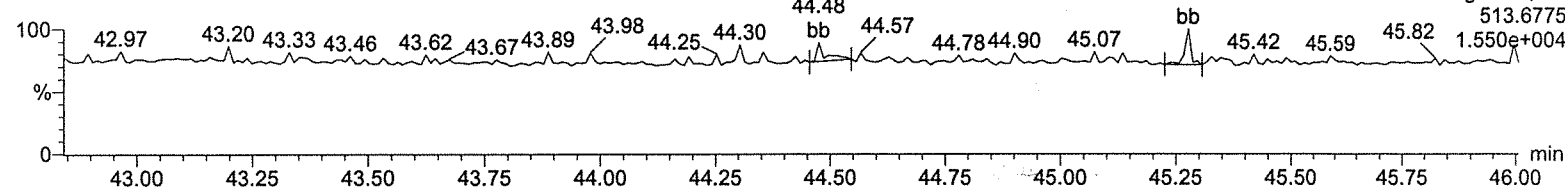
13C-OCDD

A08JUL19A-7



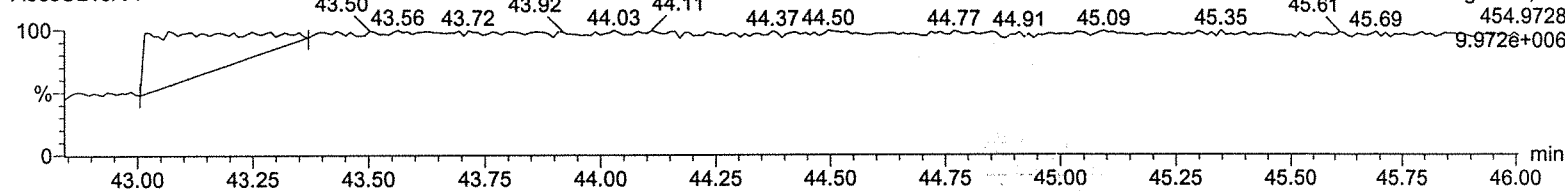
DeDPE

A08JUL19A-7



Lock Mass F5

A08JUL19A-7



Quantify Sample Summary Report

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2281849

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.78e6	2.34e6	4.12e6	31.35	1.000	0.76	NO	205.757	0.910	0.884	5.07	0.0469	3.47e7	3058	11358.0	4.56e7	3176	14350.1	bb	bb
2	12378-PeCDD	8.29e6	5.35e6	1.36e7	34.22	1.000	1.55	NO	1009.561	0.862	0.853	1.65	0.130	2.10e8	4103	51087.5	1.33e8	10010	13303.8	bb	bb
3	123478-HxCDD	7.14e6	5.72e6	1.29e7	36.84	1.000	1.25	NO	1030.901	0.969	0.940	3.11	0.258	1.49e8	10705	13935.4	1.18e8	11148	10602.9	bd	bd
4	123678-HxCDD	7.78e6	6.24e6	1.40e7	36.92	1.000	1.25	NO	1026.323	0.969	0.944	2.57	0.240	1.53e8	10705	14298.1	1.25e8	11148	1183.8	dd	dd
5	123789-HxCDD	7.35e6	5.86e6	1.32e7	37.16	1.007	1.25	NO	1026.758	0.952	0.927	3.30	0.253	1.43e8	10705	13389.8	1.15e8	11148	10340.8	dd	dd
6	1234678-HpCDD	5.26e6	5.01e6	1.03e7	40.24	1.000	1.05	NO	1029.037	1.070	1.040	2.88	0.612	8.19e7	13310	6152.6	7.83e7	18608	4207.3	bb	bb
7	OCDD	8.83e6	9.80e6	1.86e7	44.51	1.000	0.90	NO	2036.586	0.989	0.971	2.39	0.715	1.05e8	11377	9196.2	1.17e8	13516	8665.0	bb	bb
8	2378-TCDF	2.10e6	2.75e6	4.85e6	30.67	1.001	0.76	NO	202.186	0.989	0.978	5.59	0.0956	2.82e7	4854	5802.8	3.67e7	5522	6647.2	bb	bb
9	12378-PeCDF	1.23e7	8.04e6	2.04e7	33.40	1.000	1.54	NO	1020.233	0.964	0.945	3.41	0.271	3.19e8	31922	9979.2	2.11e8	13143	16048.5	bb	bb
10	123478-PeCDF	1.38e7	9.07e6	2.29e7	34.02	1.000	1.53	NO	1048.349	1.034	0.987	3.73	0.236	3.64e8	31922	11387.7	2.33e8	13143	17714.6	bb	bb
11	123478-HxCDF	9.95e6	8.17e6	1.81e7	36.12	1.000	1.22	NO	1036.336	1.127	1.087	3.86	0.482	2.21e8	28521	7761.7	1.79e8	32460	5528.1	bd	bd
12	123678-HxCDF	1.06e7	8.66e6	1.93e7	36.22	1.000	1.23	NO	1010.825	1.052	1.041	3.23	0.454	2.29e8	28521	8033.9	1.86e8	32460	5739.4	db	db
13	1234678-HxCDF	1.01e7	8.11e6	1.82e7	36.69	1.000	1.25	NO	1024.664	1.164	1.136	3.17	0.472	2.17e8	28521	7620.3	1.80e8	32460	5559.1	bd	bd
14	123789-HxCDF	8.33e6	6.80e6	1.51e7	37.48	1.000	1.23	NO	1021.587	1.084	1.061	2.29	0.652	1.66e8	28521	5836.8	1.34e8	32460	4119.4	bb	bb
15	1234678-HpCDF	7.47e6	7.34e6	1.48e7	38.98	1.000	1.02	NO	1028.218	1.182	1.150	3.86	0.526	1.33e8	22716	5841.8	1.30e8	21882	5933.2	bb	bb
16	1234789-HpCDF	6.03e6	5.91e6	1.19e7	40.91	1.000	1.02	NO	1022.696	1.229	1.202	1.91	0.765	8.92e7	22716	3925.2	8.80e7	21882	4023.5	bb	bb
17	OCDF	1.11e7	1.25e7	2.35e7	44.80	1.007	0.89	NO	2206.183	1.250	1.133	6.78	0.605	1.31e8	9724	13509.9	1.47e8	14872	9854.1	bb	bb
18	13C-2378-TCDD	9.90e5	1.27e6	2.26e6	31.34	1.015	0.78	NO	103.020	1.162	1.128	2.36	0.109	1.97e7	8334	2369.3	2.52e7	4305	5853.2	bb	bb
19	13C-12378-PeCDD	9.58e5	6.25e5	1.58e6	34.21	1.109	1.53	NO	108.196	0.813	0.751	5.03	0.0899	2.31e7	4492	5145.4	1.50e7	2453	6119.5	bb	bb
20	13C-123478-HxCDD	7.35e5	5.93e5	1.33e6	36.83	0.991	1.24	NO	101.352	0.908	0.896	1.38	0.166	1.50e7	7897	1897.6	1.22e7	6151	1976.9	bd	bd
21	13C-123678-HxCDD	7.98e5	6.49e5	1.45e6	36.91	0.993	1.23	NO	100.457	0.990	0.986	0.84	0.151	1.60e7	7897	2020.5	1.31e7	6151	2136.4	dd	dd
22	13C-1234678-HpCDD	4.87e5	4.73e5	9.60e5	40.23	1.083	1.03	NO	97.789	0.657	0.672	1.29	0.151	7.63e6	4493	1698.8	7.17e6	5124	1399.8	bb	bb
23	13C-OCDD	8.91e5	9.93e5	1.88e6	44.49	1.198	0.90	NO	200.806	0.645	0.642	4.87	0.183	1.02e7	6392	1591.5	1.14e7	4751	2406.3	bd	bd
24	13C-2378-TCDF	1.07e6	1.39e6	2.45e6	30.64	0.993	0.77	NO	100.812	1.260	1.250	1.88	0.164	1.45e7	13730	1053.1	1.91e7	7393	2582.1	bb	bb
25	13C-12378-PeCDF	1.29e6	8.22e5	2.11e6	33.39	1.082	1.57	NO	107.363	1.085	1.011	4.24	0.205	3.23e7	11309	2852.5	2.12e7	10040	2107.4	bb	bb
26	13C-23478-PeCDF	1.36e6	8.59e5	2.22e6	34.01	1.102	1.58	NO	107.006	1.138	1.063	5.28	0.195	3.55e7	11309	3143.2	2.23e7	10040	2223.5	db	bb
27	13C-123478-HxCDF	5.56e5	1.05e6	1.61e6	36.11	0.972	0.53	NO	99.083	1.101	1.111	1.42	0.196	1.21e7	11074	1089.3	2.33e7	9505	2456.5	bd	bd
28	13C-123678-HxCDF	6.26e5	1.21e6	1.83e6	36.21	0.975	0.52	NO	100.592	1.254	1.247	1.06	0.174	1.32e7	11074	1193.6	2.46e7	9505	2583.0	dd	dd
29	13C-234678-HxCDF	5.29e5	1.04e6	1.57e6	36.69	0.987	0.51	NO	99.147	1.073	1.082	1.01	0.201	1.15e7	11074	1041.6	2.24e7	9505	2355.3	bb	bd
30	13C-123789-HxCDF	4.81e5	9.15e5	1.40e6	37.47	1.008	0.53	NO	98.821	0.956	0.967	1.08	0.225	9.11e6	11074	822.3	1.74e7	9505	1832.5	bb	bb
31	13C-1234678-HpCDF	3.85e5	8.69e5	1.25e6	38.97	1.049	0.44	NO	98.609	0.858	0.870	1.11	0.141	6.80e6	5478	1240.5	1.53e7	6127	2499.4	bb	bb
32	13C-1234789-HpCDF	2.97e5	6.74e5	9.71e5	40.89	1.101	0.44	NO	98.139	0.665	0.677	1.01	0.181	4.44e6	5478	811.4	9.75e6	6127	1591.7	bb	bb
33	13C-1234-TCDD	8.51e5	1.10e6	1.95e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.123	1.35e7	8334	1618.7	1.69e7	4305	3920.6	bb	bb
34	13C-123789-HxCDD	8.04e5	6.57e5	1.46e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.148	1.56e7	7897	1978.2	1.28e7	6151	2088.1	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	4.40e6	4.40e6	4.40e6	31.35	1.016			212.931	1.130	1.061	4.54	0.0449	8.48e7	4902	17292.5				M	M2	
																						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

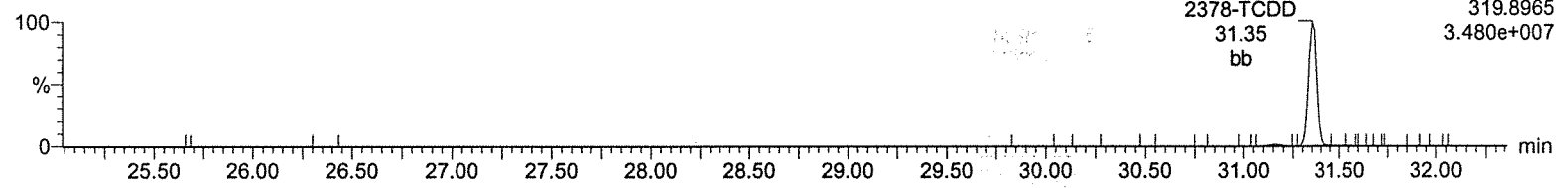
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

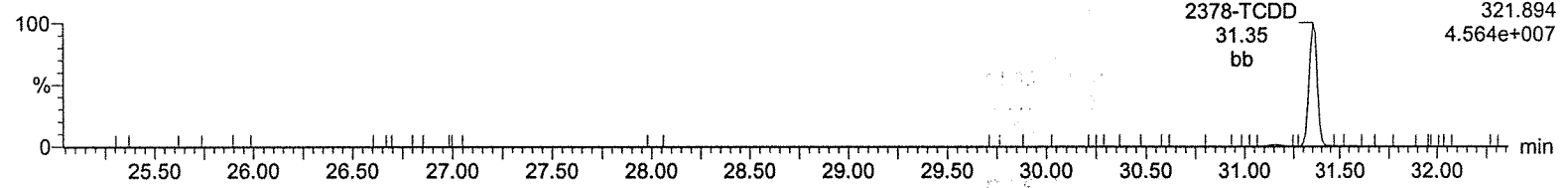
Total-tetradoxins

A08JUL19A-8



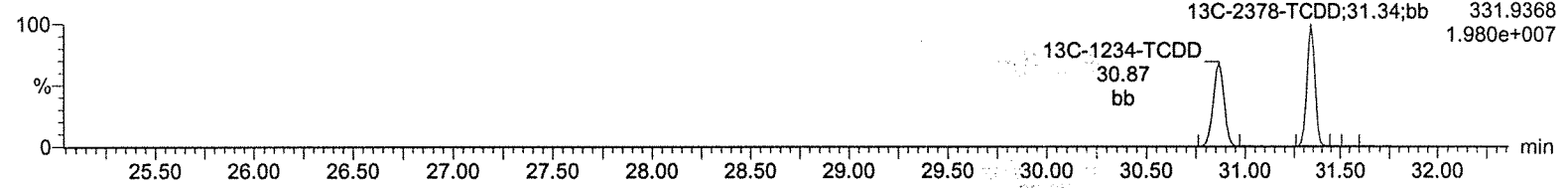
Total-tetradoxins

A08JUL19A-8



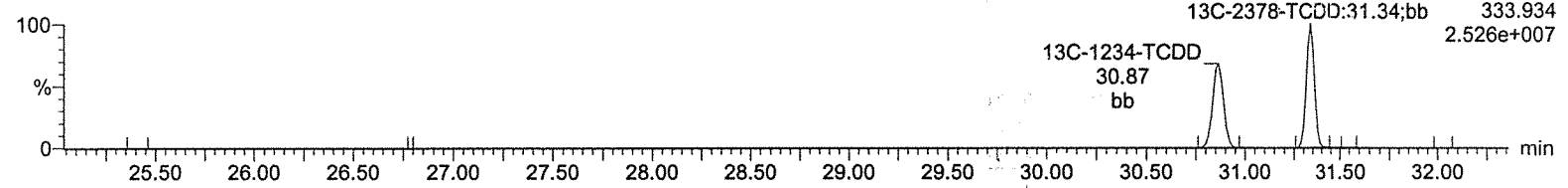
13C-2378-TCDD

A08JUL19A-8



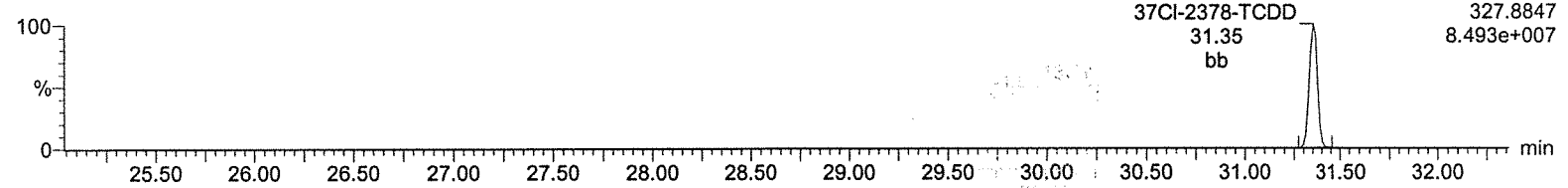
13C-2378-TCDD

A08JUL19A-8



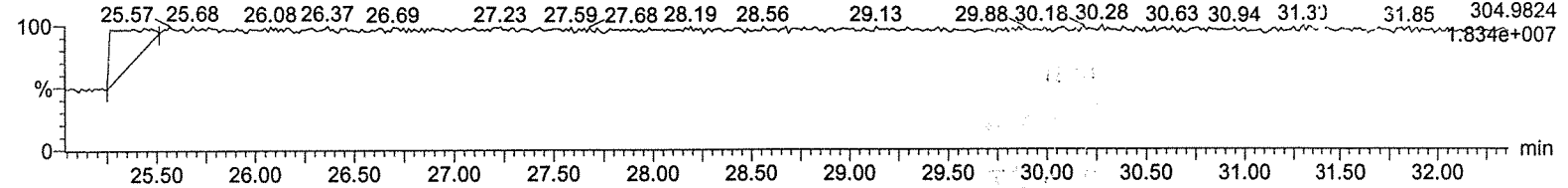
37Cl-2378-TCDD

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

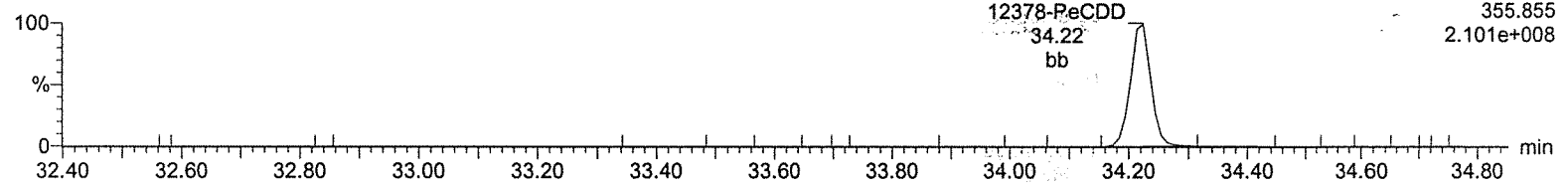
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

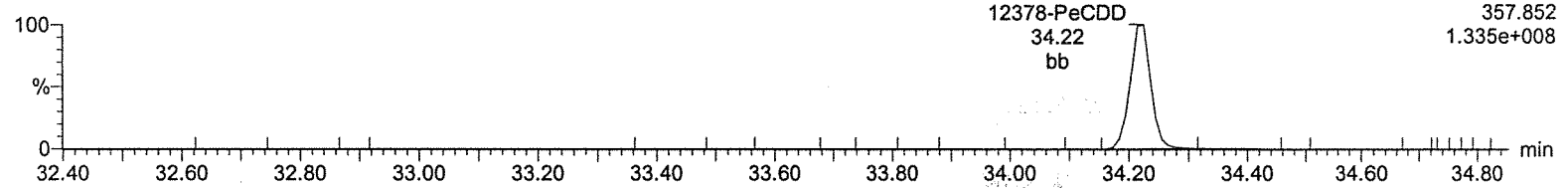
Total-pentadioxins

A08JUL19A-8



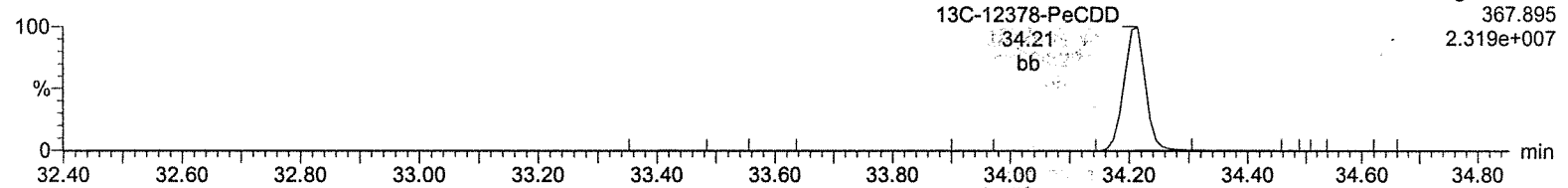
Total-pentadioxins

A08JUL19A-8



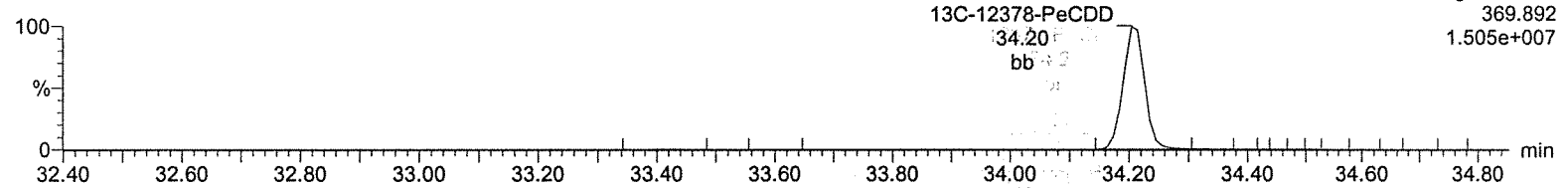
¹³C-12378-PeCDD

A08JUL19A-8



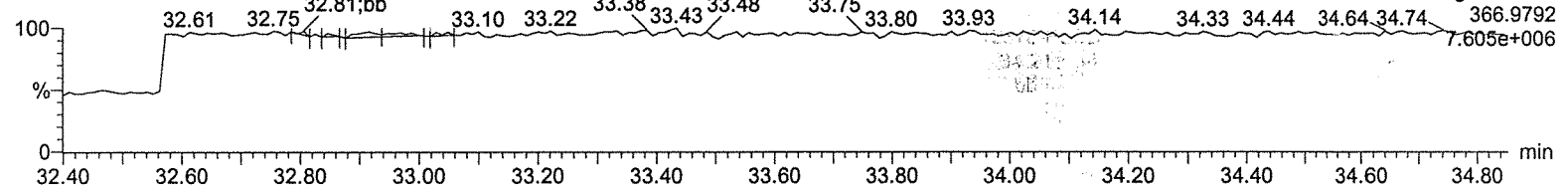
¹³C-12378-PeCDD

A08JUL19A-8



Lock Mass F2

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

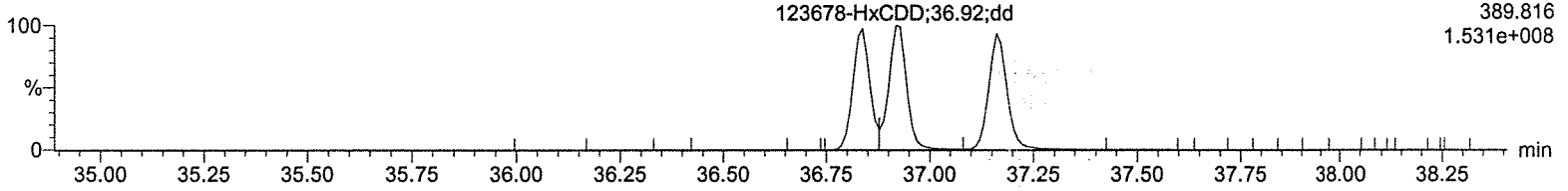
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-hexadioxins

A08JUL19A-8

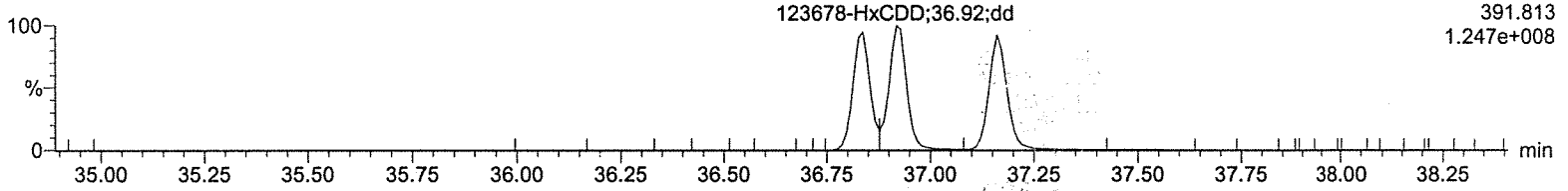
F3:Voltage SIR,EI+
389.816
1.531e+008



Total-hexadioxins

A08JUL19A-8

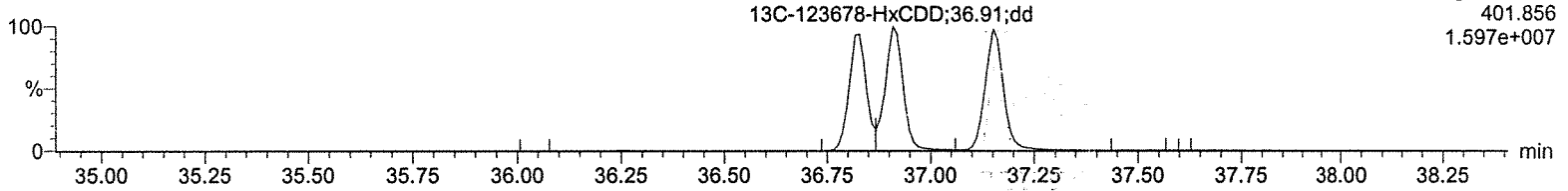
F3:Voltage SIR,EI+
391.813
1.247e+008



13C-123478-HxCDD

A08JUL19A-8

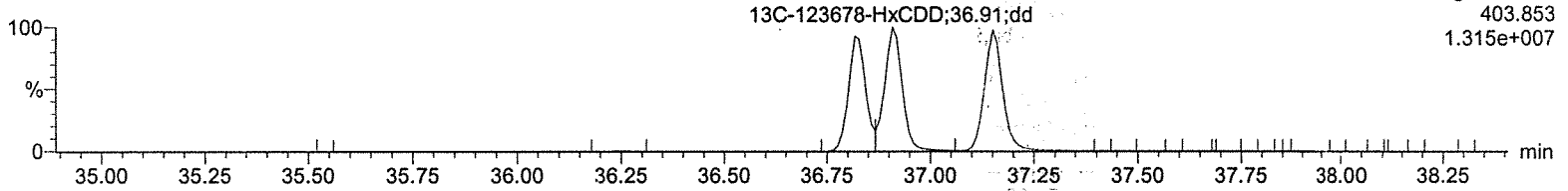
F3:Voltage SIR,EI+
401.856
1.597e+007



13C-123478-HxCDD

A08JUL19A-8

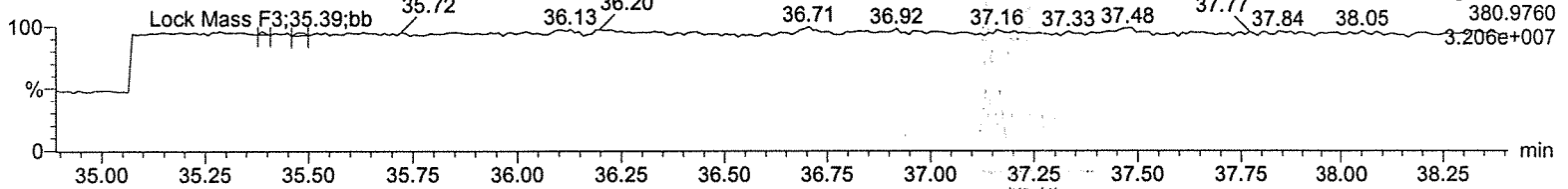
F3:Voltage SIR,EI+
403.853
1.315e+007



Lock Mass F3

A08JUL19A-8

F3:Voltage SIR,EI+
380.9760
3.206e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

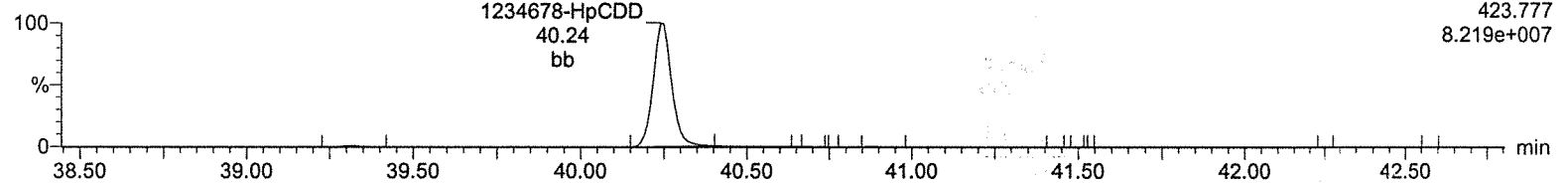
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-heptadioxins

A08JUL19A-8

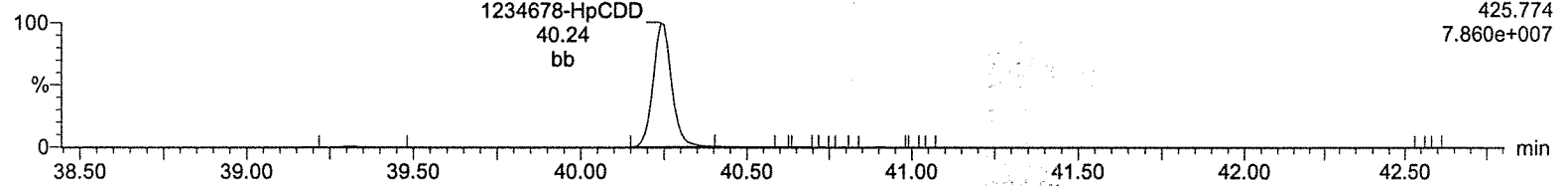
F4:Voltage SIR,EI+
423.777
8.219e+007



Total-heptadioxins

A08JUL19A-8

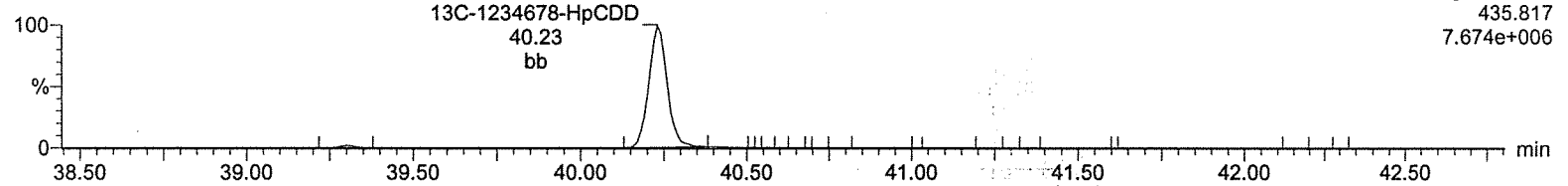
F4:Voltage SIR,EI+
425.774
7.860e+007



13C-1234678-HpCDD

A08JUL19A-8

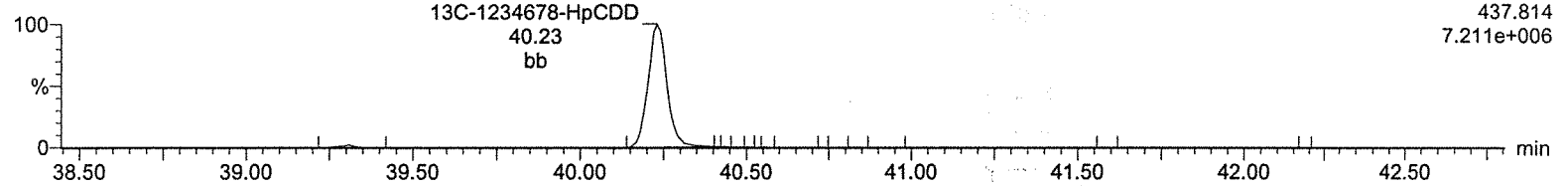
F4:Voltage SIR,EI+
435.817
7.674e+006



13C-1234678-HpCDD

A08JUL19A-8

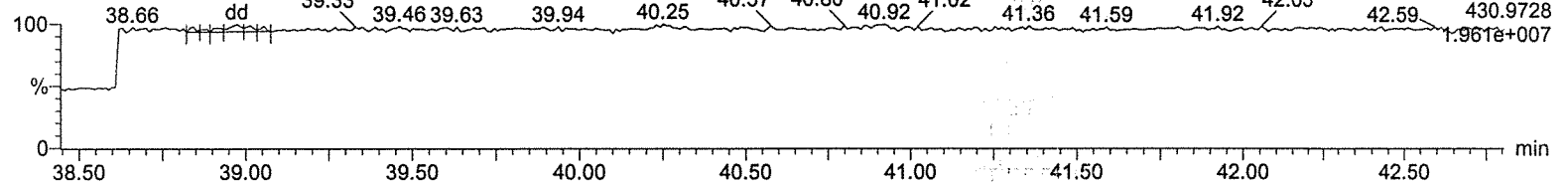
F4:Voltage SIR,EI+
437.814
7.211e+006



Lock Mass F4

A08JUL19A-8

F4:Voltage SIR,EI+
430.9728
1.961e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

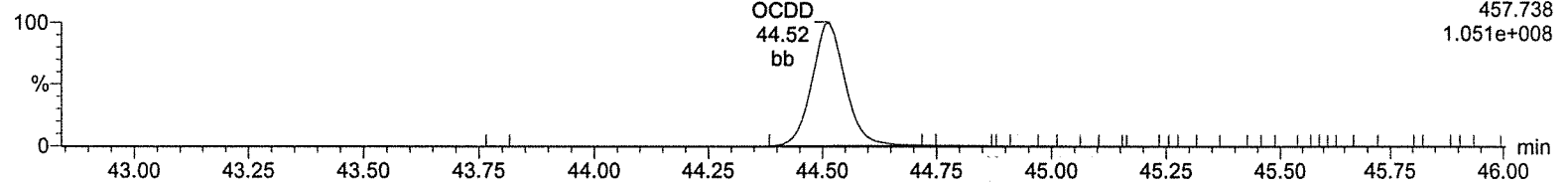
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDD

A08JUL19A-8

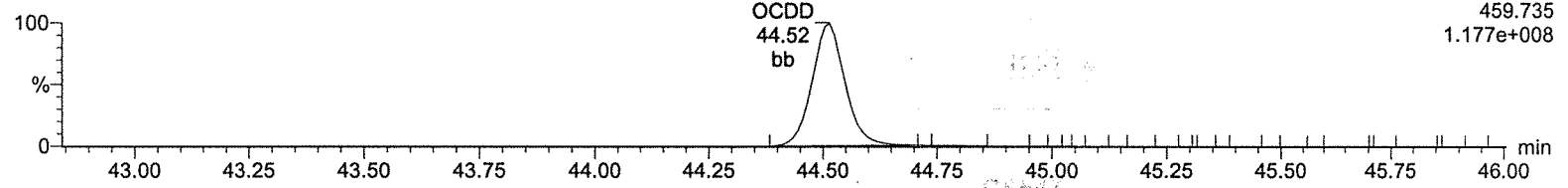
F5:Voltage SIR,EI+
457.738
1.051e+008



OCDD

A08JUL19A-8

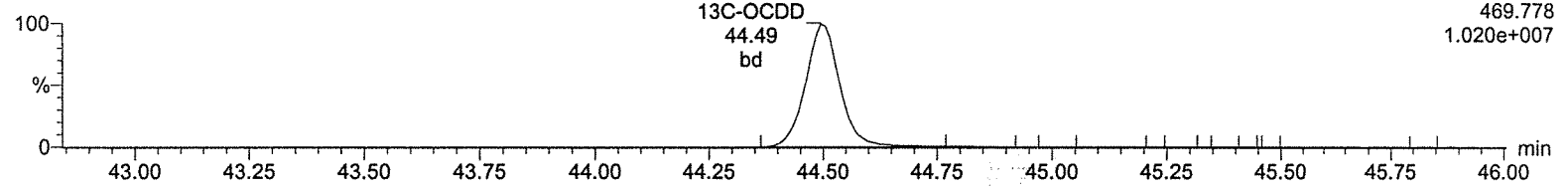
F5:Voltage SIR,EI+
459.735
1.177e+008



13C-OCDD

A08JUL19A-8

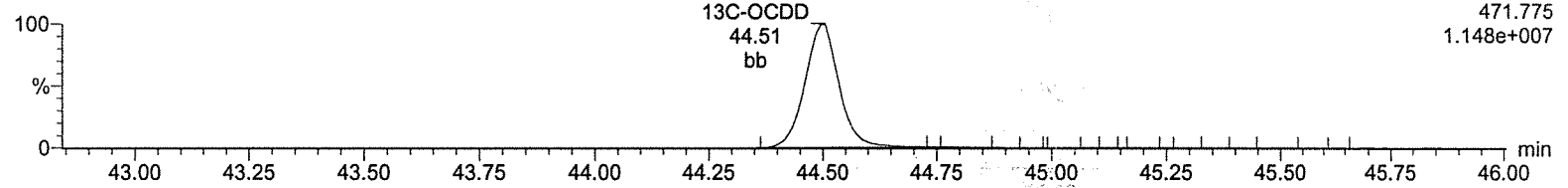
F5:Voltage SIR,EI+
469.778
1.020e+007



13C-OCDD

A08JUL19A-8

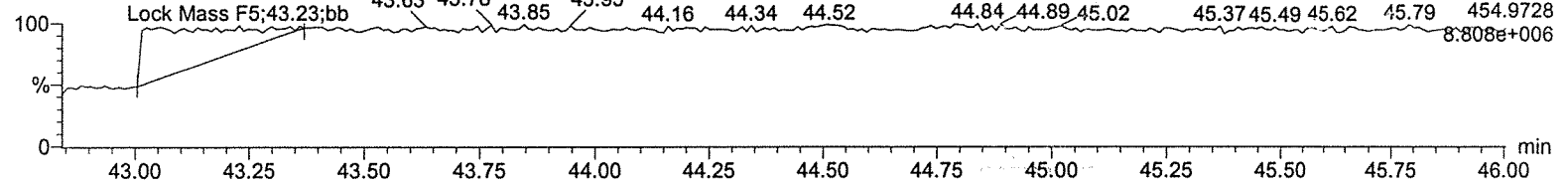
F5:Voltage SIR,EI+
471.775
1.148e+007



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
8.808e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

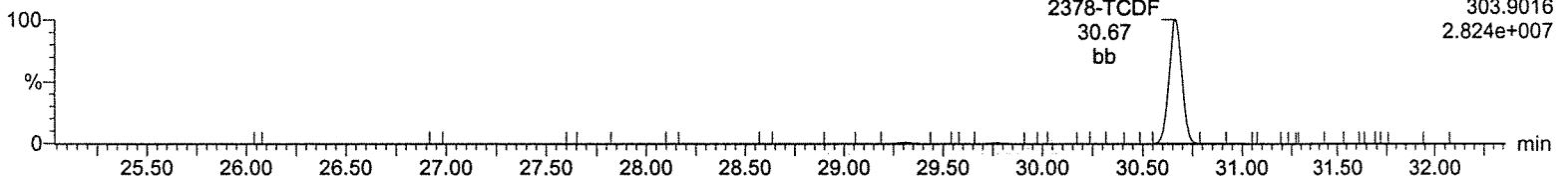
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-tetrafurans

A08JUL19A-8

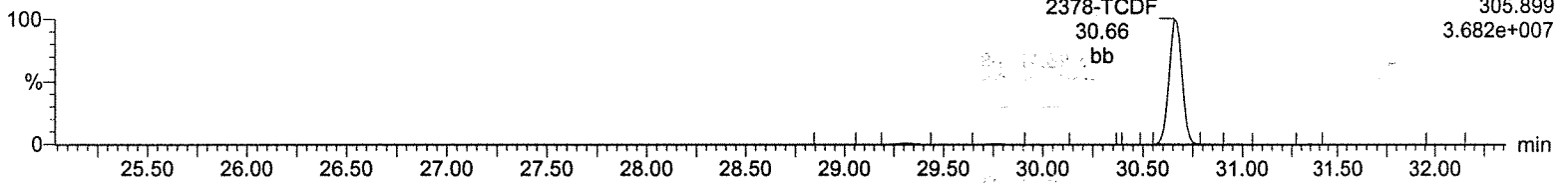
F1:Voltage SIR,EI+
303.9016
2.824e+007



Total-tetrafurans

A08JUL19A-8

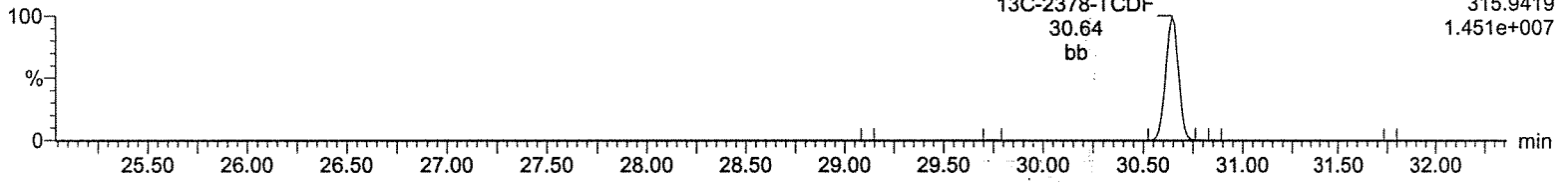
F1:Voltage SIR,EI+
305.899
3.682e+007



13C-2378-TCDF

A08JUL19A-8

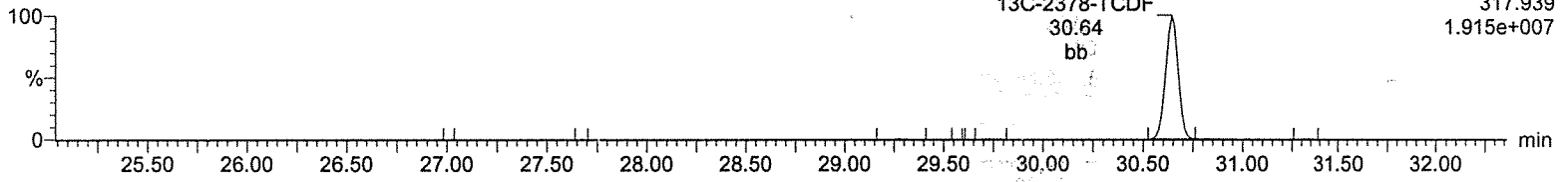
F1:Voltage SIR,EI+
315.9419
1.451e+007



13C-2378-TCDF

A08JUL19A-8

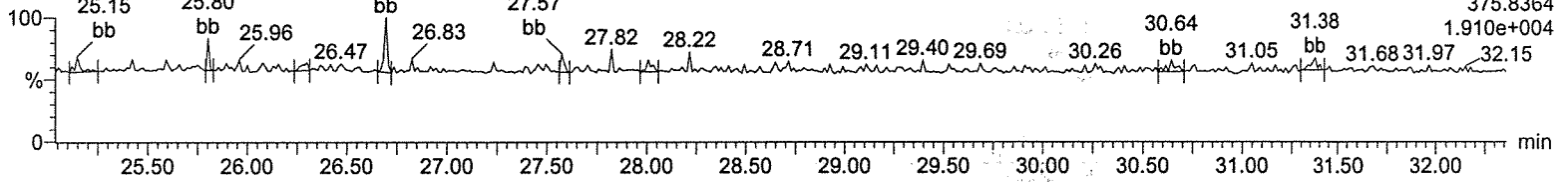
F1:Voltage SIR,EI+
317.939
1.915e+007



HxDPE

A08JUL19A-8

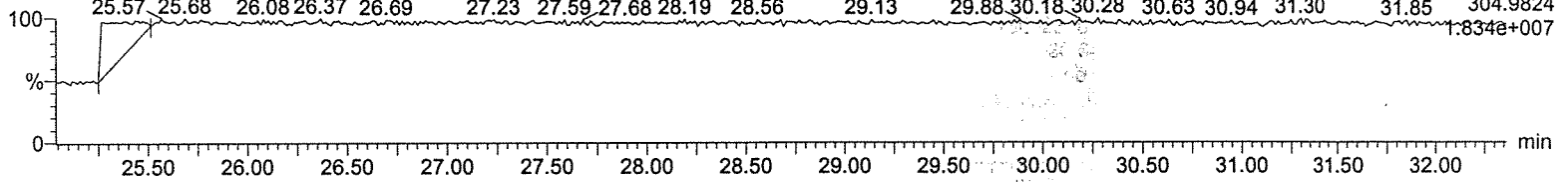
F1:Voltage SIR,EI+
375.8364
1.910e+004



Lock Mass F1

A08JUL19A-8

F1:Voltage SIR,EI+
304.9824
1.834e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

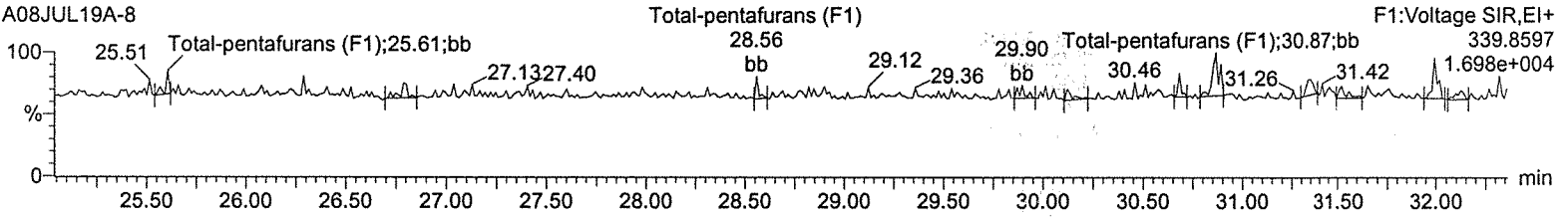
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

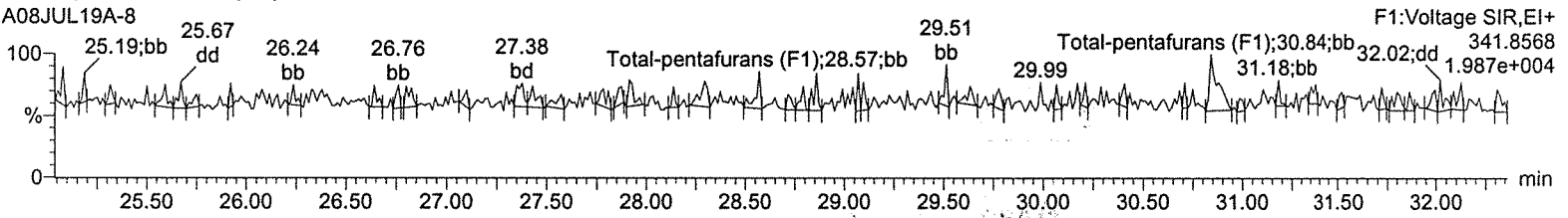
Total-pentafurans (F1)

A08JUL19A-8



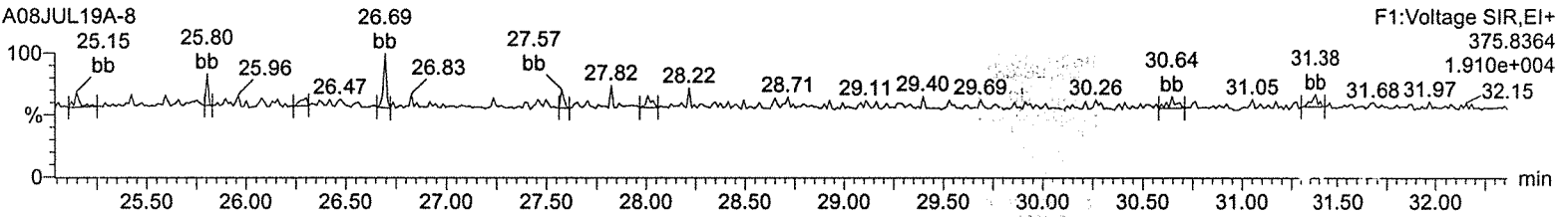
Total-pentafurans (F1)

A08JUL19A-8



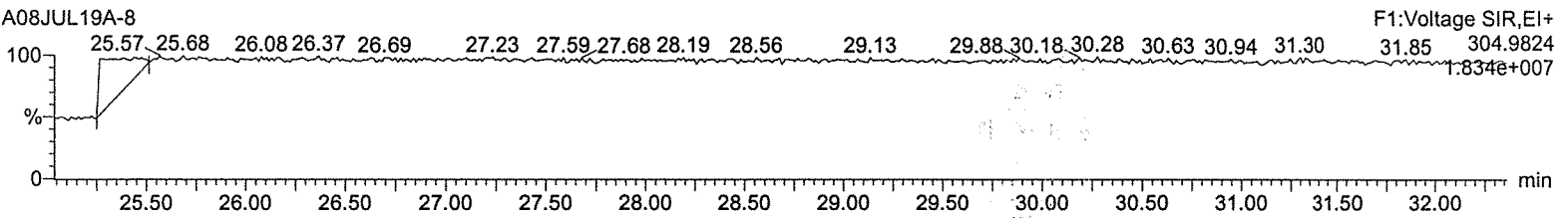
HxDPE

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

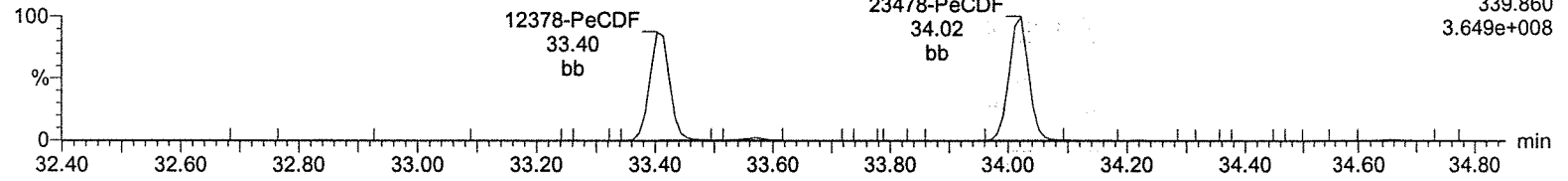
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-pentafurans

A08JUL19A-8

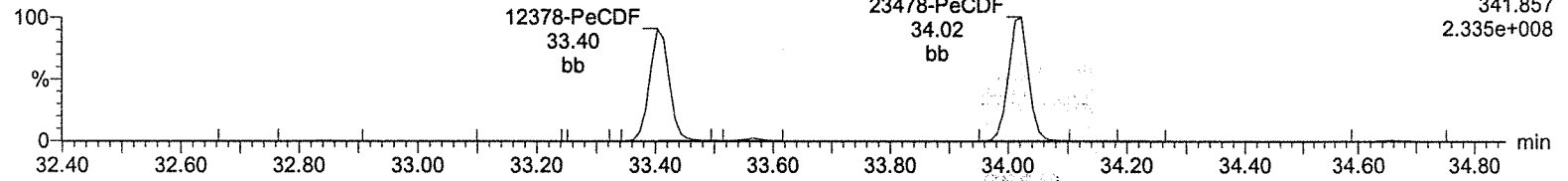
F2:Voltage SIR,EI+
339.860
3.649e+008



Total-pentafurans

A08JUL19A-8

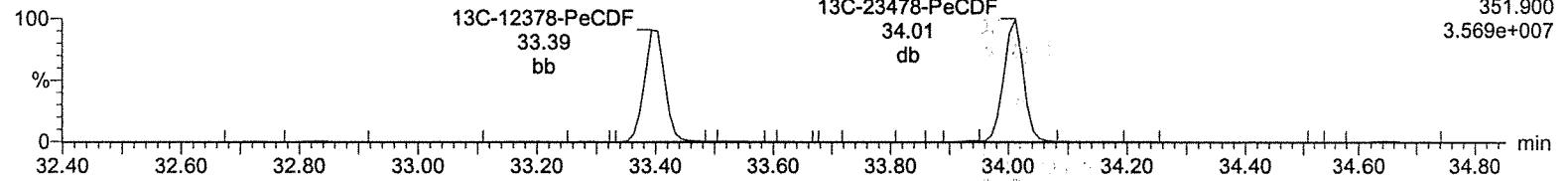
F2:Voltage SIR,EI+
341.857
2.335e+008



13C-12378-PeCDF

A08JUL19A-8

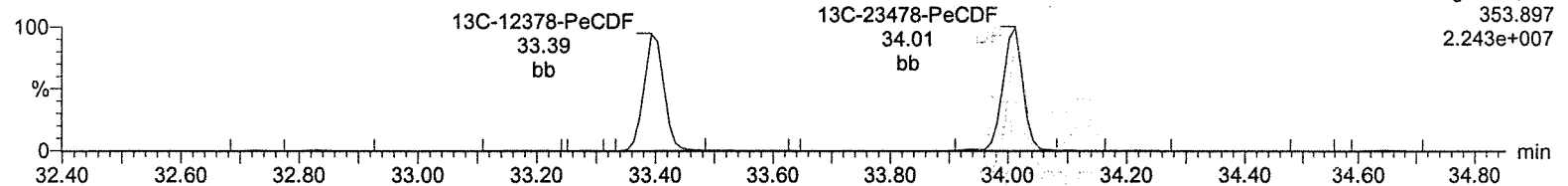
F2:Voltage SIR,EI+
351.900
3.569e+007



13C-12378-PeCDF

A08JUL19A-8

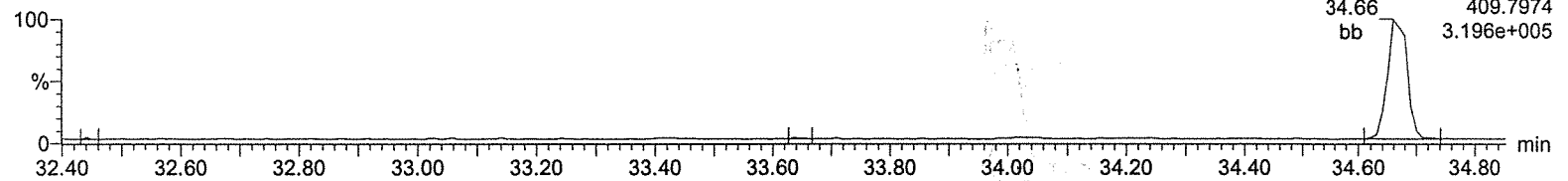
F2:Voltage SIR,EI+
353.897
2.243e+007



HpDPE

A08JUL19A-8

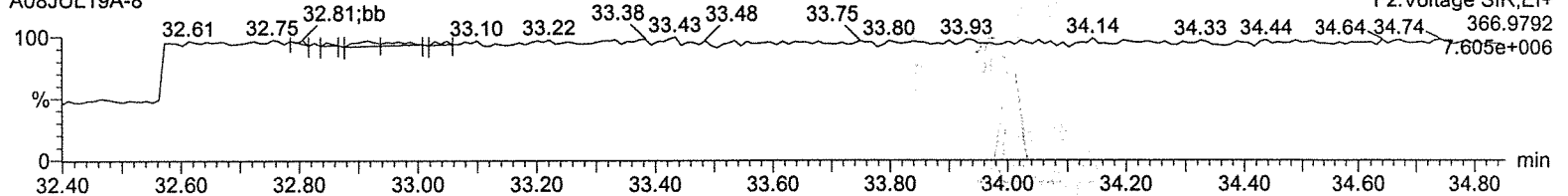
F2:Voltage SIR,EI+
346.6
409.7974
3.196e+005



Lock Mass F2

A08JUL19A-8

F2:Voltage SIR,EI+
366.9792
7.605e+006



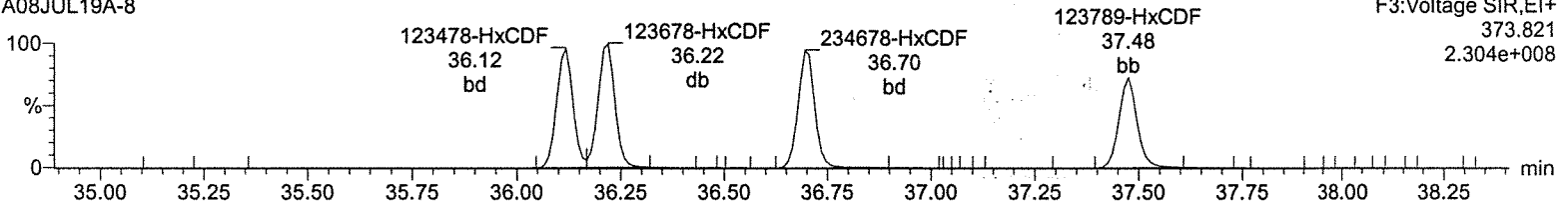
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

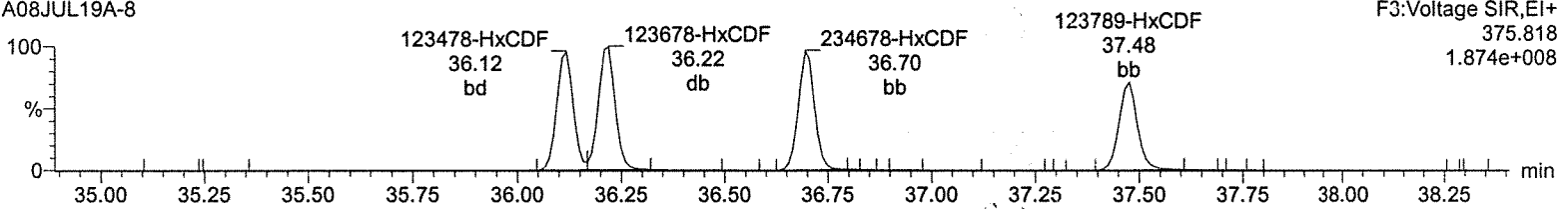
Total-hexafurans

A08JUL19A-8



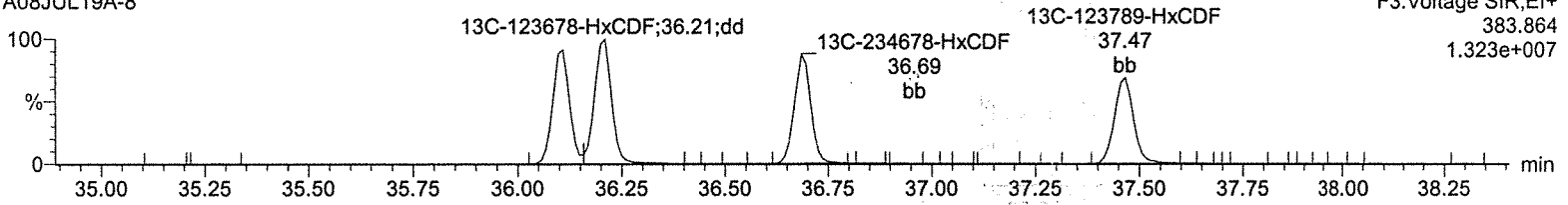
Total-hexafurans

A08JUL19A-8



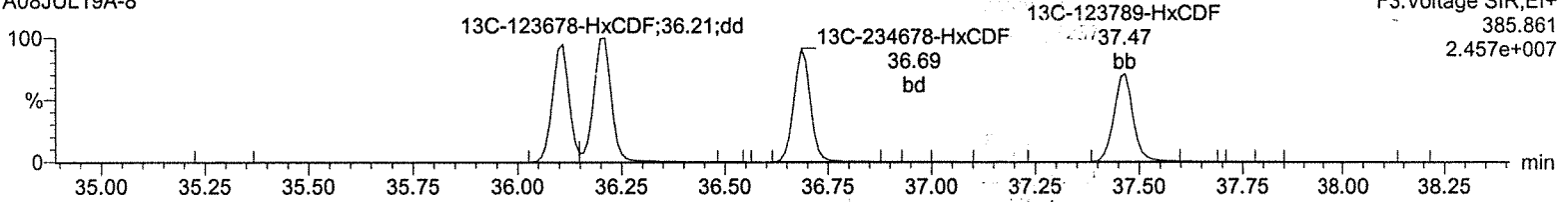
13C-123478-HxCDF

A08JUL19A-8



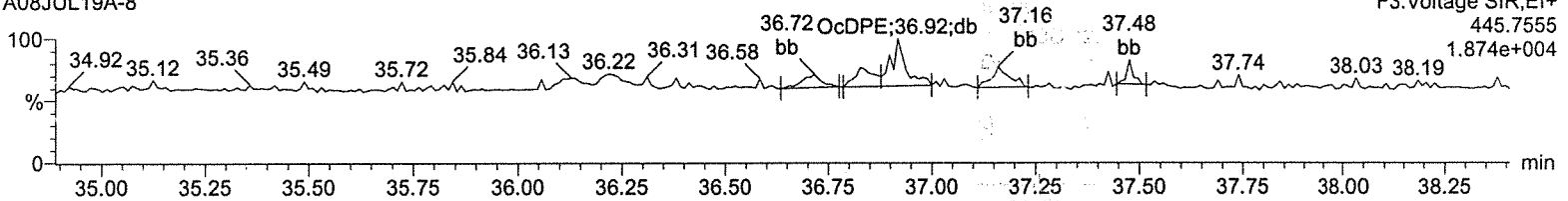
13C-123478-HxCDF

A08JUL19A-8



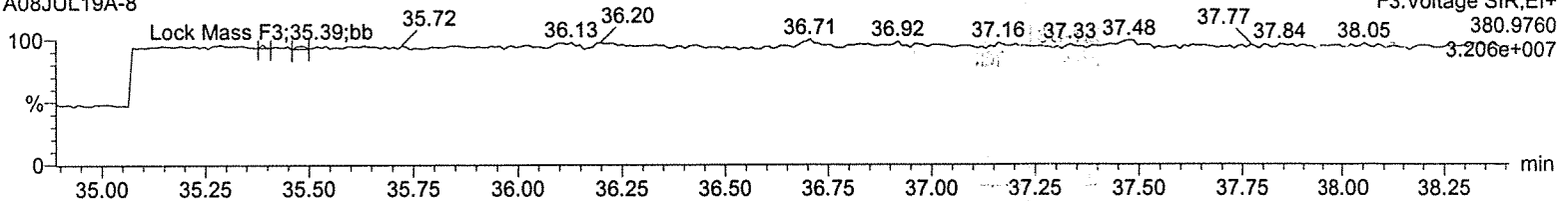
OcDPE

A08JUL19A-8



Lock Mass F3

A08JUL19A-8



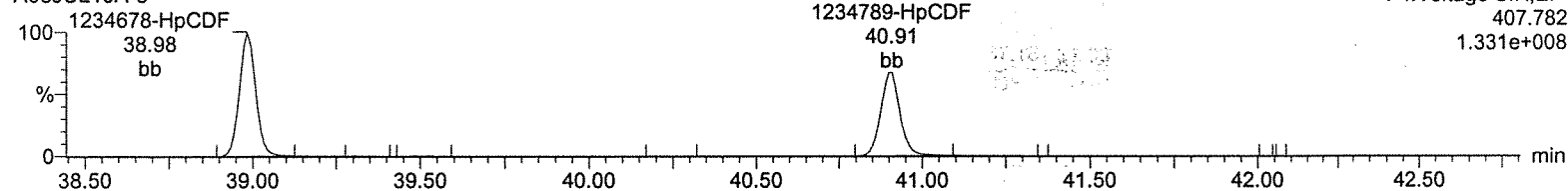
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

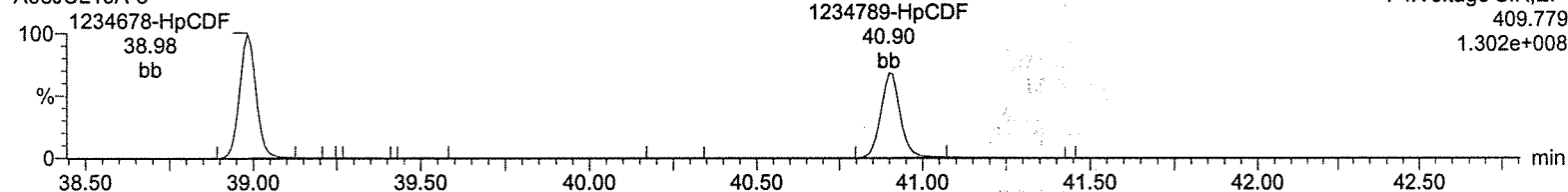
Total-heptafurans

A08JUL19A-8



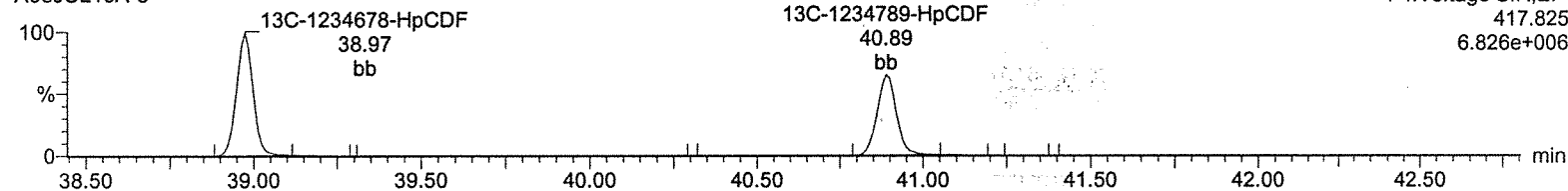
Total-heptafurans

A08JUL19A-8



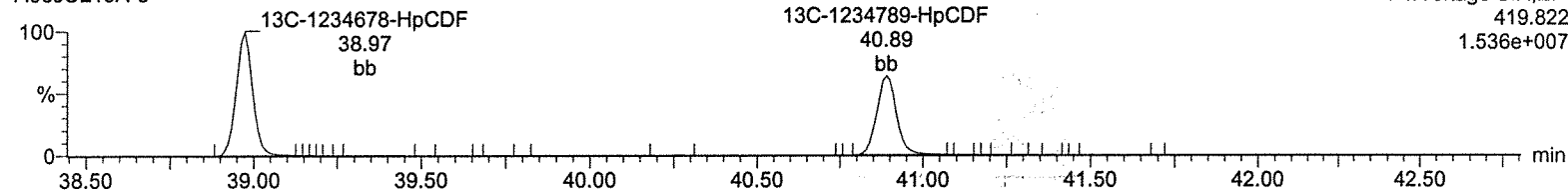
13C-1234678-HpCDF

A08JUL19A-8



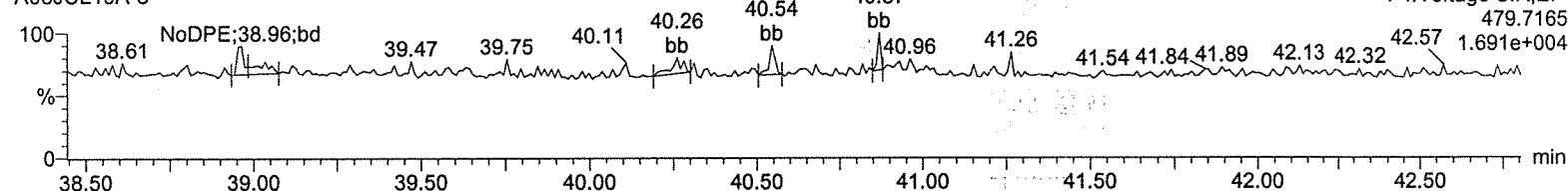
13C-1234678-HpCDF

A08JUL19A-8



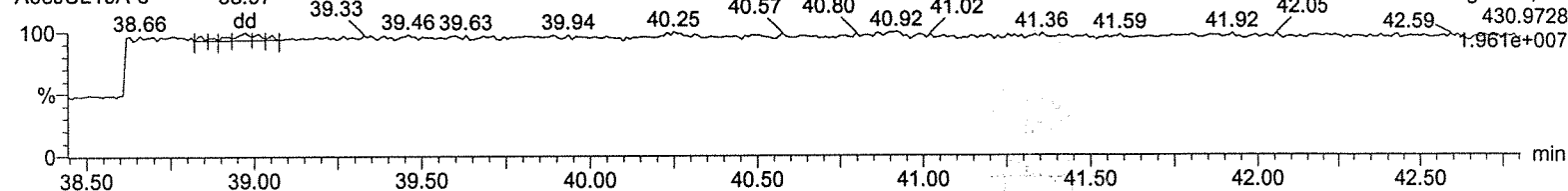
NoDPE

A08JUL19A-8



Lock Mass F4

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

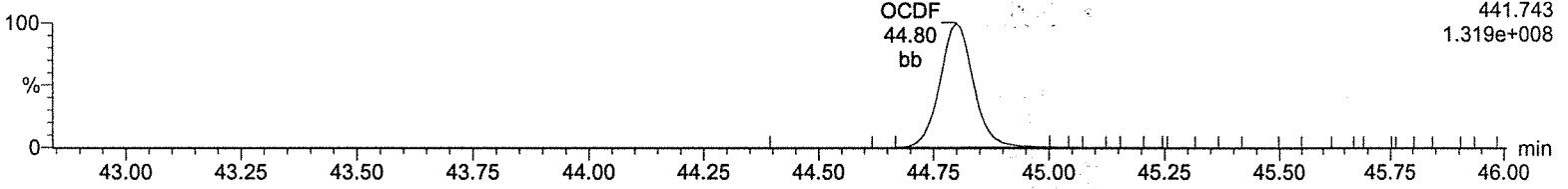
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDF

A08JUL19A-8

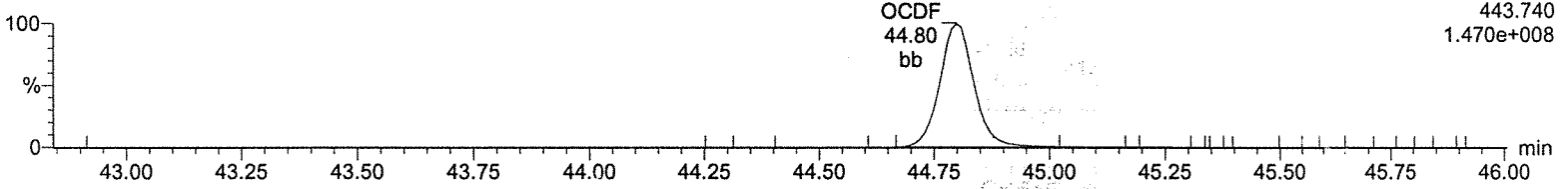
F5:Voltage SIR,EI+
441.743
1.319e+008



OCDF

A08JUL19A-8

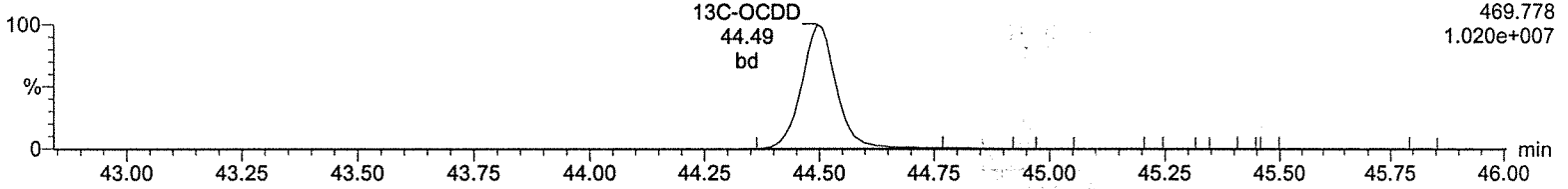
F5:Voltage SIR,EI+
443.740
1.470e+008



13C-OCDD

A08JUL19A-8

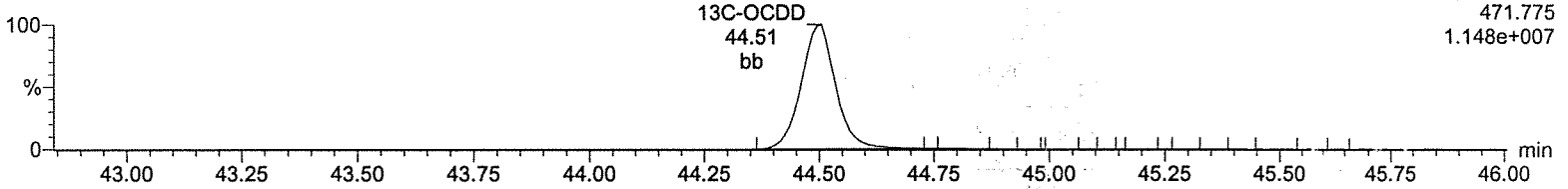
F5:Voltage SIR,EI+
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1.020e+007



13C-OCDD

A08JUL19A-8

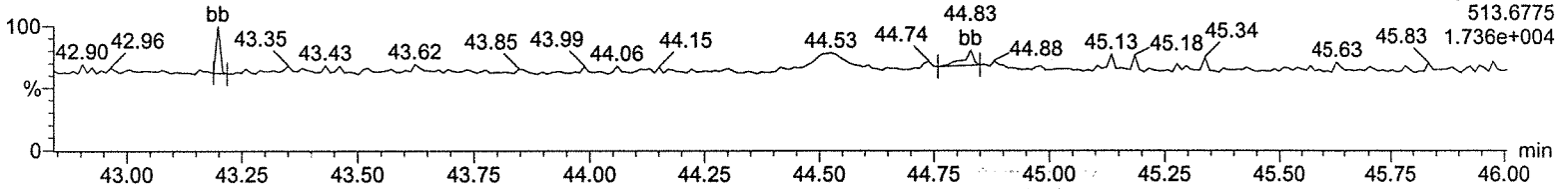
F5:Voltage SIR,EI+
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1.148e+007



DeDPE

A08JUL19A-8

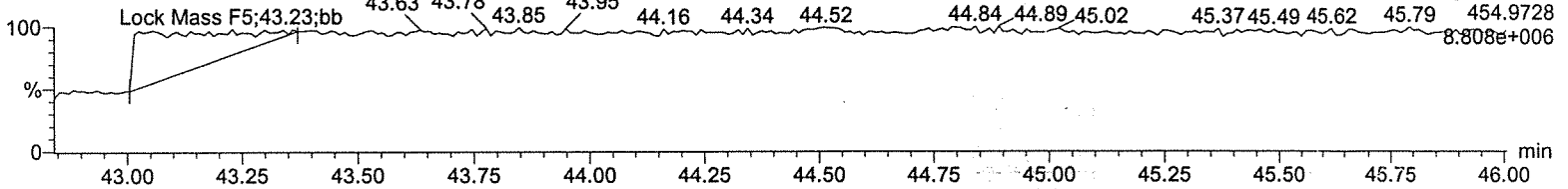
F5:Voltage SIR,EI+
513.6775
1.736e+004



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
454.9728
8.808e+006



Quantify Sample Summary Report
 Method 1613 CCAL Report
 MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Bill Gull

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	1.41e5	1.82e5	3.24e5	31.35	1.000	0.77	NO	9.832	0.0339	0.870	0.884	-1.7	2.69e6	3060	878.9	3.53e6	5470	645.8	db	db
2	12378-PeCDD	6.28e5	4.05e5	1.03e6	34.21	1.000	1.55	NO	49.971	0.0946	0.853	0.853	-0.1	1.53e7	12457	1224.5	9.64e6	6367	1513.5	bb	bb
3	123478-HxCDD	5.43e5	4.16e5	9.59e5	36.83	1.003	1.31	NO	51.806	0.105	0.974	0.940	3.6	1.08e7	8144	1328.2	8.57e6	8244	1039.0	bd	bd
4	123678-HxCDD	5.67e5	4.68e5	1.03e6	36.92	1.000	1.21	NO	49.386	0.103	0.932	0.944	-1.2	1.12e7	8144	1379.0	9.12e6	8244	1106.7	dd	dd
5	123789-HxCDD	5.58e5	4.36e5	9.94e5	37.16	1.007	1.28	NO	51.189	0.106	0.949	0.927	2.4	1.07e7	8144	1312.0	8.23e6	8244	998.2	dd	db
6	1234678-HpCDD	3.98e5	3.76e5	7.74e5	40.24	1.000	1.06	NO	49.581	0.150	1.031	1.040	-0.8	5.98e6	7083	844.3	5.67e6	6641	854.3	bd	bd
7	OCDD	6.28e5	7.01e5	1.33e6	44.51	1.000	0.90	NO	102.285	0.401	0.994	0.971	2.3	6.90e6	17082	404.1	7.71e6	5735	1344.7	bd	bd
8	2378-TCDF	1.72e5	2.22e5	3.94e5	30.66	1.000	0.77	NO	9.823	0.0430	0.961	0.978	-1.8	2.30e6	3145	731.2	2.96e6	5788	511.5	bb	bb
9	12378-PeCDF	9.44e5	6.09e5	1.55e6	33.40	1.000	1.55	NO	50.062	0.0563	0.946	0.945	0.1	2.45e7	10653	2295.4	1.55e7	7239	2135.3	bb	bb
10	23478-PeCDF	1.04e6	6.88e5	1.73e6	34.01	1.000	1.51	NO	50.564	0.0527	0.998	0.987	1.1	2.61e7	10653	2446.1	1.76e7	7239	2425.8	bb	bb
11	123478-HxCDF	7.43e5	6.15e5	1.36e6	36.11	1.000	1.21	NO	50.445	0.0894	1.097	1.087	0.9	1.57e7	9481	1652.2	1.28e7	11235	1143.5	bd	bd
12	123678-HxCDF	8.06e5	6.66e5	1.47e6	36.21	1.000	1.21	NO	50.994	0.0885	1.061	1.041	2.0	1.68e7	9481	1768.9	1.39e7	11235	1235.2	db	db
13	234678-HxCDF	7.55e5	6.18e5	1.37e6	36.70	1.000	1.22	NO	50.671	0.0922	1.151	1.136	1.3	1.58e7	9481	1664.0	1.25e7	11235	1111.0	bb	bb
14	123789-HxCDF	6.33e5	5.14e5	1.15e6	37.47	1.000	1.23	NO	50.766	0.123	1.077	1.061	1.5	1.12e7	9481	1180.5	9.35e6	11235	832.1	bd	bb
15	1234678-HpCDF	5.58e5	5.57e5	1.12e6	38.98	1.001	1.00	NO	50.942	0.0954	1.171	1.150	1.9	9.40e6	6651	1412.9	9.27e6	7143	1297.6	bb	bd
16	1234789-HpCDF	4.59e5	4.46e5	9.05e5	40.90	1.000	1.03	NO	50.253	0.138	1.208	1.202	0.5	6.56e6	6651	985.8	6.41e6	7143	896.9	bb	bd
17	OCDF	7.28e5	8.04e5	1.53e6	44.79	1.007	0.91	NO	101.154	0.168	1.146	1.133	1.2	8.07e6	4510	1788.9	8.87e6	6658	1332.1	bd	bb
18	13C-2378-TCDD	1.62e6	2.10e6	3.72e6	31.34	1.015	0.77	NO	100.391	0.0536	1.133	1.128	0.4	3.09e7	7595	4072.7	4.03e7	4391	9166.0	bb	bb
19	13C-12378-PeCDD	1.47e6	9.56e5	2.42e6	34.20	1.108	1.53	NO	98.091	0.0648	0.737	0.751	-1.9	3.53e7	4920	7177.0	2.29e7	4727	4839.8	bb	bb
20	13C-123478-HxCDD	1.09e6	8.81e5	1.97e6	36.82	0.991	1.24	NO	99.188	0.128	0.889	0.896	-0.8	2.29e7	5728	3998.3	1.85e7	12292	1505.5	bd	bd
21	13C-123678-HxCDD	1.22e6	9.99e5	2.22e6	36.91	0.993	1.22	NO	101.615	0.116	1.002	0.986	1.6	2.32e7	5728	4044.5	1.91e7	12292	1555.2	dd	dd
22	13C-1234678-HpCDD	7.66e5	7.34e5	1.50e6	40.23	1.083	1.04	NO	100.813	0.141	0.677	0.672	0.8	1.12e7	8086	1388.7	1.07e7	6816	1575.1	bd	bd
23	13C-OCDD	1.26e6	1.42e6	2.67e6	44.49	1.197	0.89	NO	187.951	0.195	0.603	0.642	-6.0	1.38e7	9703	1418.2	1.56e7	10005	1564.1	bb	bb
24	13C-2378-TCDF	1.79e6	2.31e6	4.10e6	30.64	0.993	0.78	NO	99.787	0.0758	1.247	1.250	-0.2	2.32e7	12127	1915.0	3.00e7	6648	4519.7	bb	bb
25	13C-12378-PeCDF	2.01e6	1.27e6	3.28e6	33.39	1.082	1.58	NO	98.830	0.132	0.999	1.011	-1.2	5.15e7	10054	5118.1	3.27e7	16300	2004.3	bb	bb
26	13C-23478-PeCDF	2.12e6	1.34e6	3.48e6	34.00	1.102	1.58	NO	99.016	0.125	1.053	1.063	-1.0	5.26e7	10054	5234.8	3.35e7	16300	2054.1	bb	bb
27	13C-123478-HxCDF	8.52e5	1.62e6	2.48e6	36.10	0.972	0.53	NO	100.589	0.156	1.117	1.111	0.6	1.83e7	10145	1807.7	3.44e7	17090	2014.8	bd	bd
28	13C-123678-HxCDF	9.54e5	1.82e6	2.77e6	36.20	0.974	0.52	NO	100.412	0.139	1.252	1.247	0.4	1.93e7	10145	1906.8	3.71e7	17090	2170.1	dd	dd
29	13C-234678-HxCDF	8.17e5	1.57e6	2.39e6	36.69	0.987	0.52	NO	99.533	0.160	1.077	1.082	-0.5	1.69e7	10145	1670.0	3.21e7	17090	1878.8	bb	bb
30	13C-123789-HxCDF	7.27e5	1.40e6	2.13e6	37.46	1.008	0.52	NO	99.456	0.179	0.962	0.967	-0.5	1.36e7	10145	1338.3	2.55e7	17090	1490.9	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	5.97e5	1.31e6	1.90e6	38.96	1.049	0.46	NO	98.762	0.113	0.859	0.870	-1.2	9.86e6	5992	1645.9	2.20e7	9443	2325.7	bd	bb
32	13C-1234789-HpCDF	4.61e5	1.04e6	1.50e6	40.88	1.100	0.44	NO	99.800	0.145	0.676	0.677	-0.2	6.40e6	5992	1068.7	1.42e7	9443	1505.6	bd	bb
33	13C-1234-TCDD	1.43e6	1.85e6	3.29e6	30.87	0.000	0.77	NO	100.000	0.0605	1.000	1.000	0.0	2.16e7	7595	2846.5	2.76e7	4391	6279.9	bb	bb
34	13C-123789-HxCDD	1.22e6	9.94e5	2.22e6	37.15	0.000	1.23	NO	100.000	0.114	1.000	1.000	0.0	2.17e7	5728	3793.8	1.77e7	12292	1436.7	dd	dd
35	37Cl-2378-TCDD	3.41e5		3.41e5	31.35	1.016			9.764	0.0169	1.036	1.061	-2.4	6.62e6	3545	1868.0				db	

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

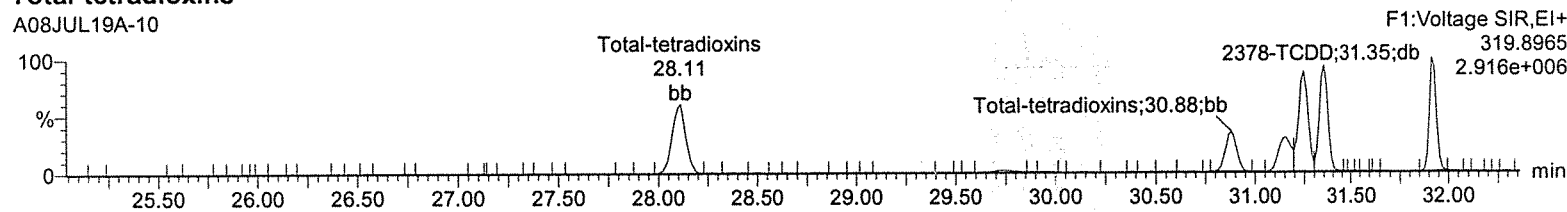
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

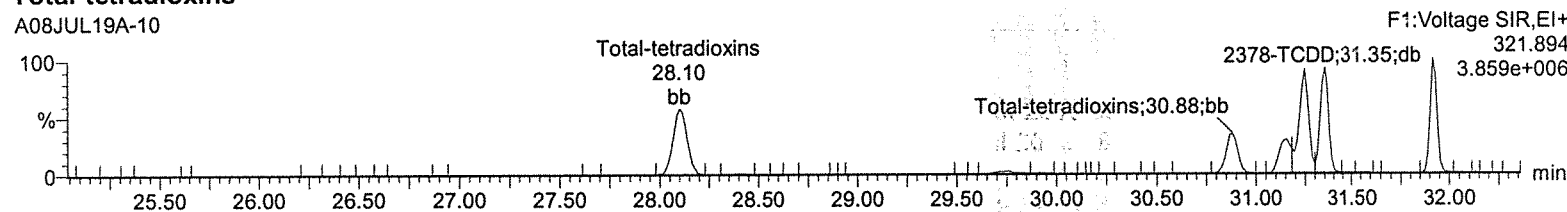
Total-tetradoxins

A08JUL19A-10



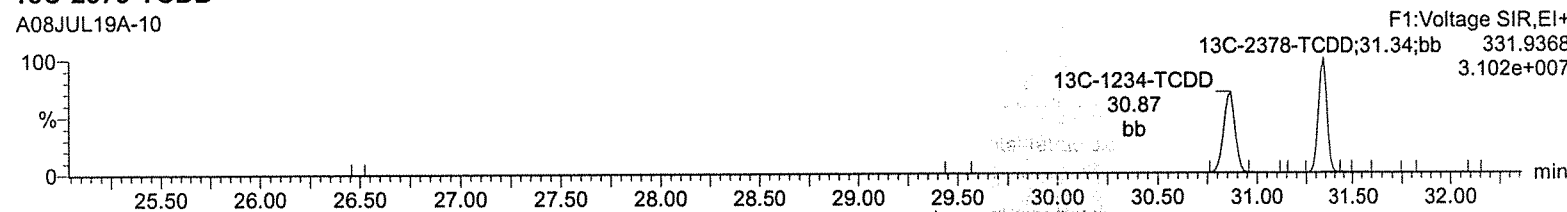
Total-tetradoxins

A08JUL19A-10



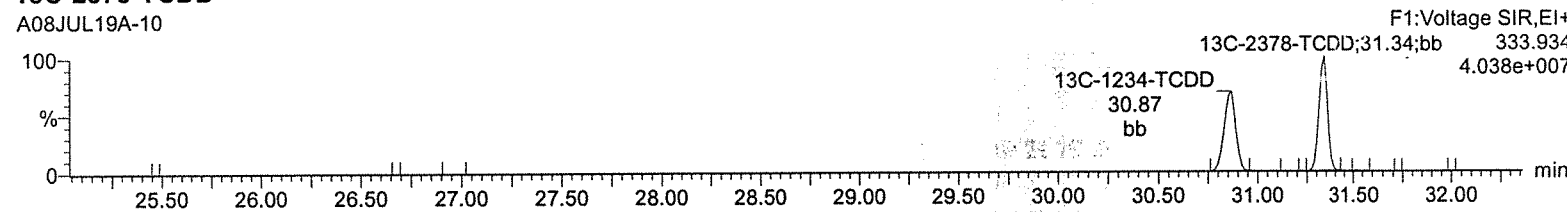
13C-2378-TCDD

A08JUL19A-10



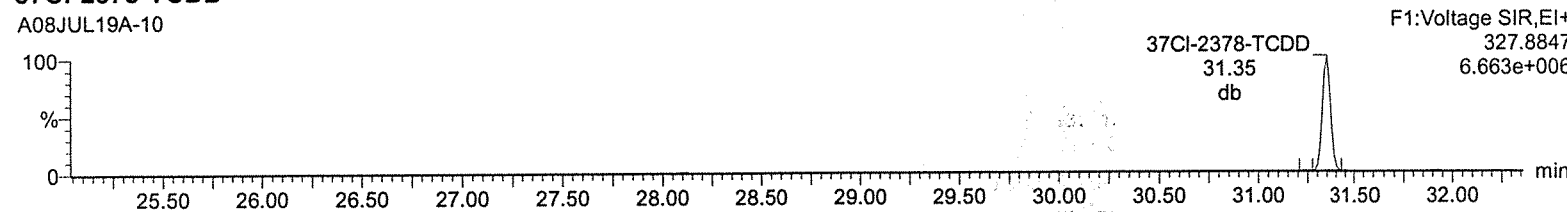
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A08JUL19A-10



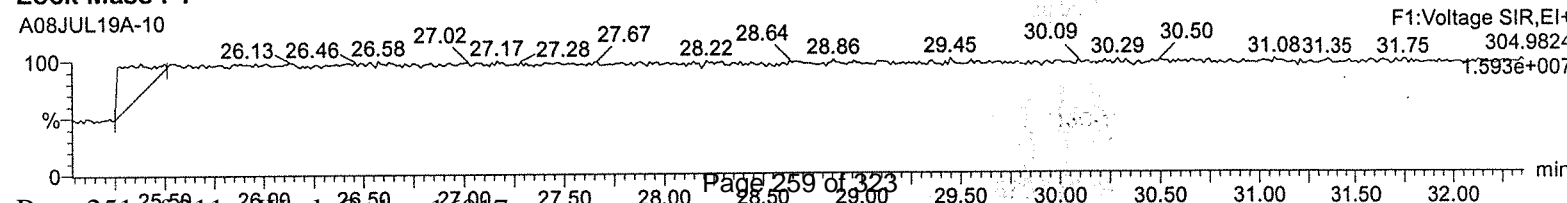
37Cl-2378-TCDD

A08JUL19A-10



Lock Mass F1

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

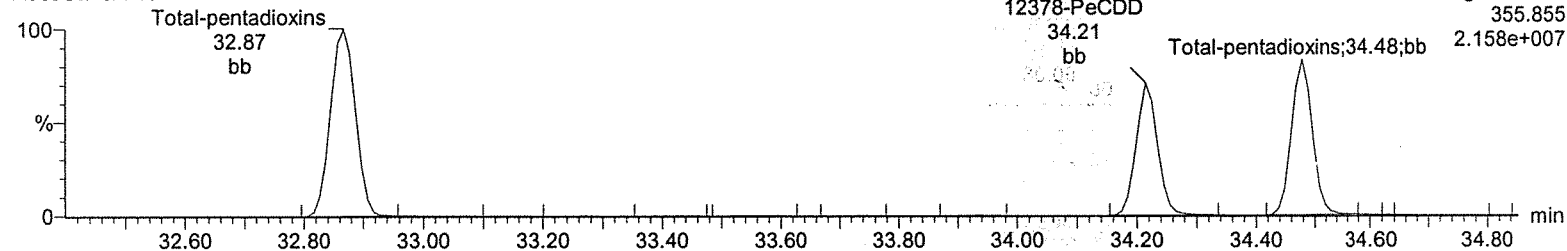
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

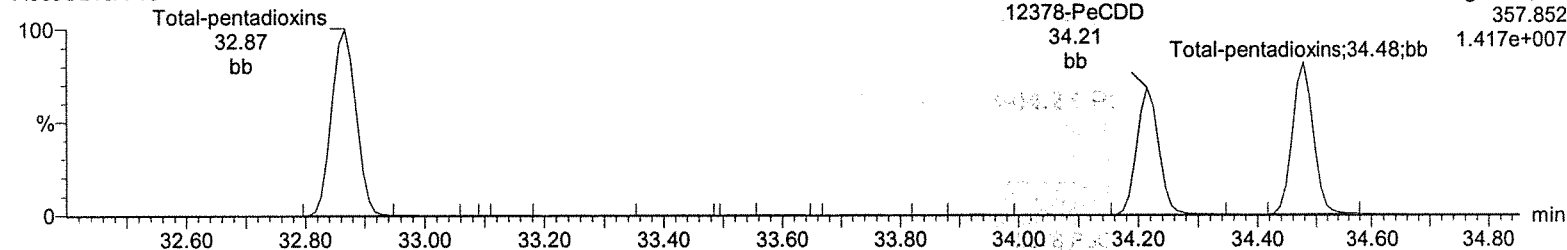
Total-pentadioxins

A08JUL19A-10



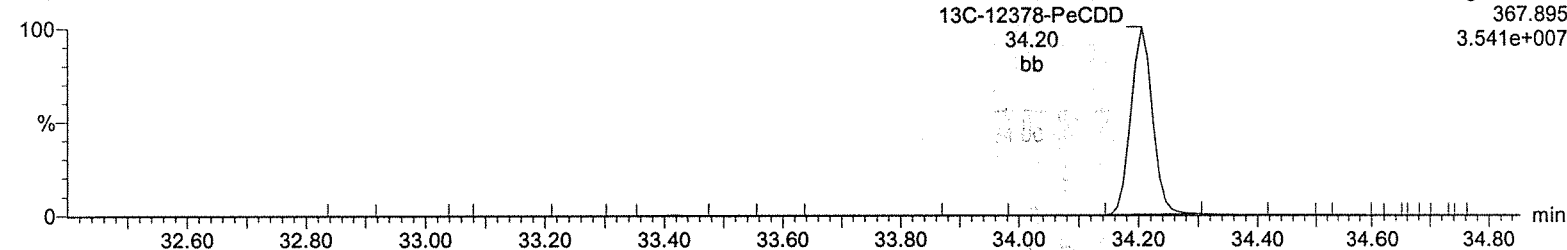
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A08JUL19A-10



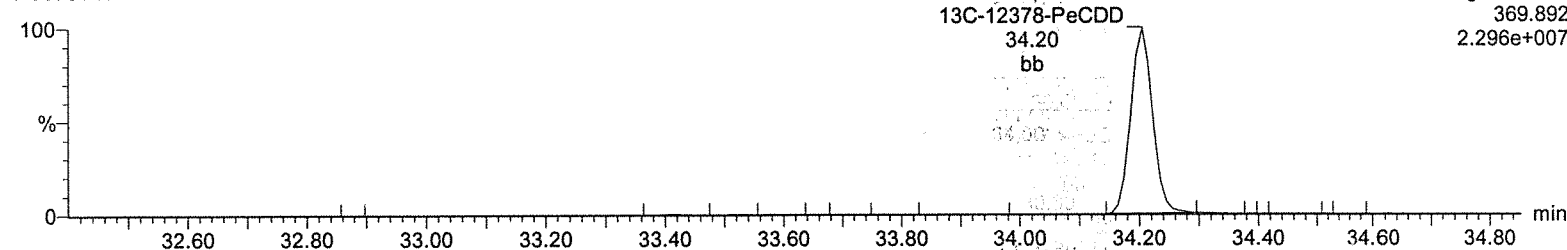
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A08JUL19A-10



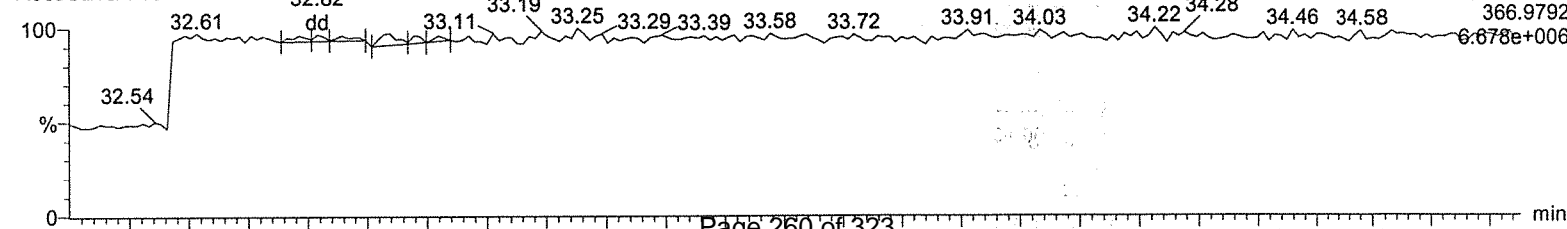
13C-12378-PeCDD

A08JUL19A-10



Lock Mass F2

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

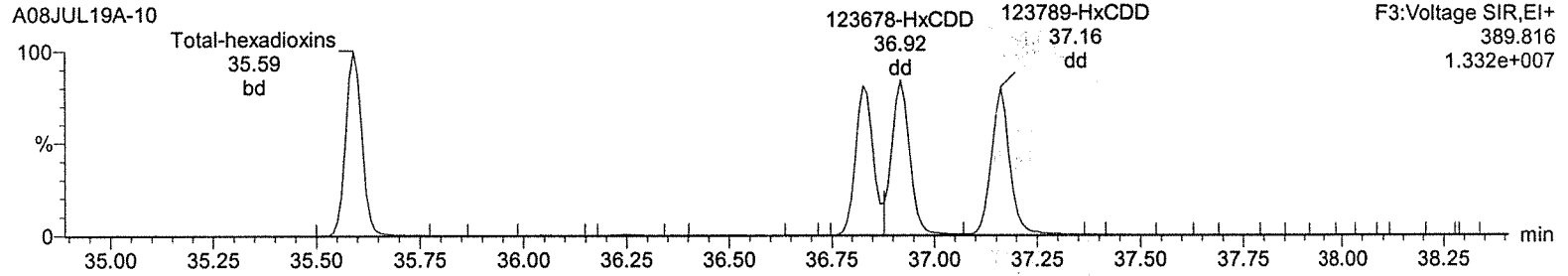
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

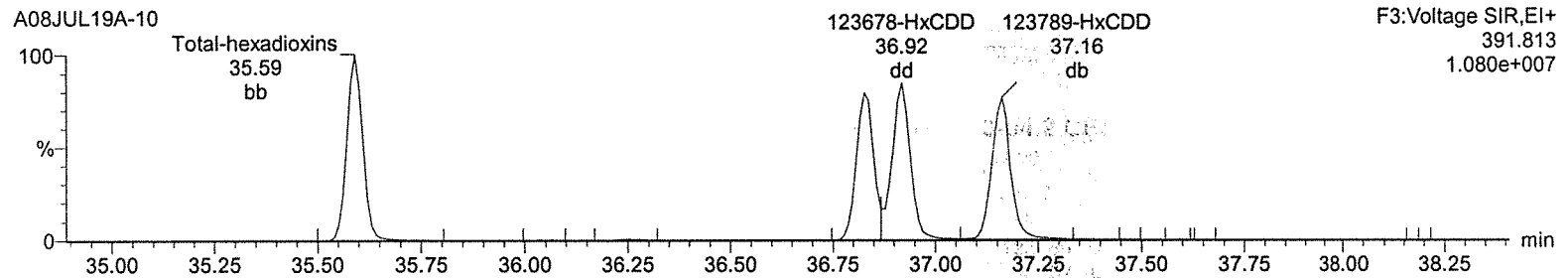
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A08JUL19A-10



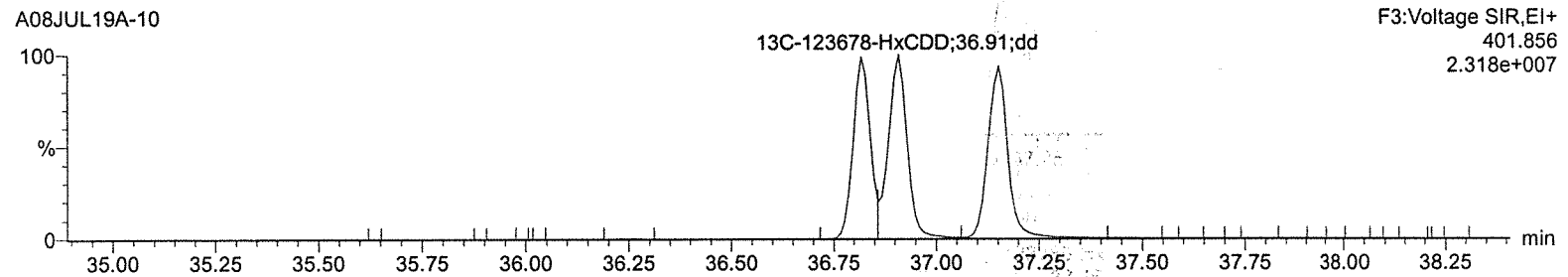
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A08JUL19A-10



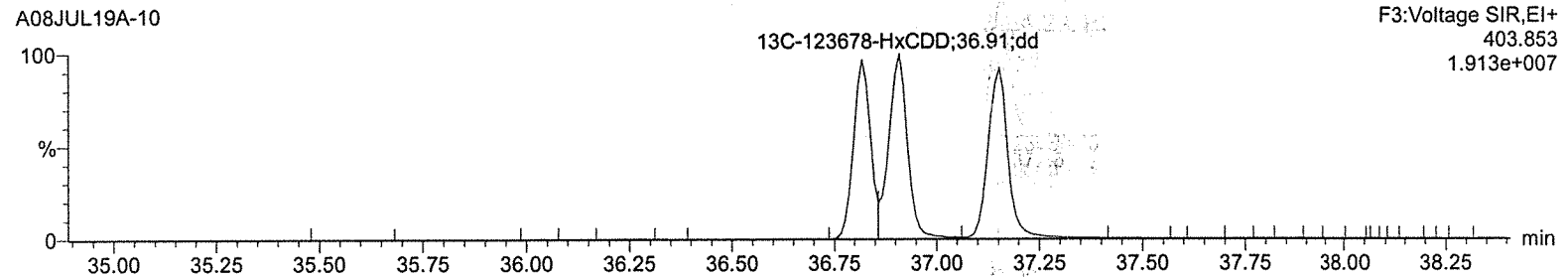
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A08JUL19A-10



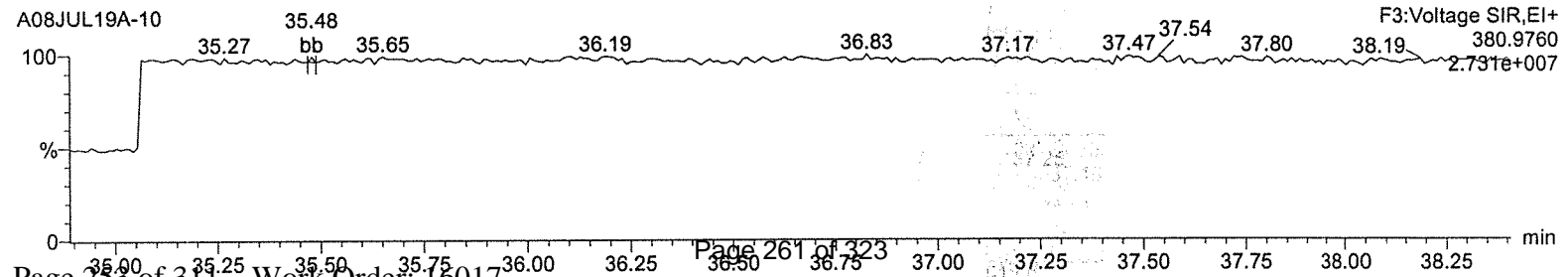
13C-123478-HxCDD

A08JUL19A-10



Lock Mass F3

A08JUL19A-10



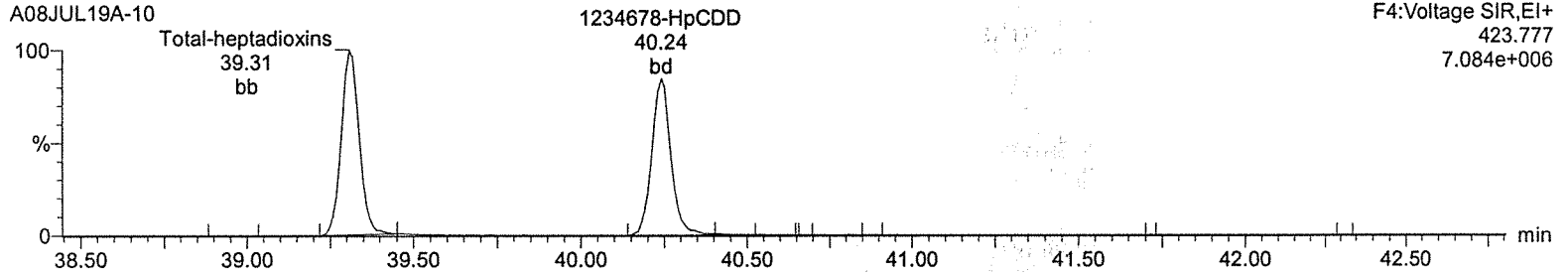
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

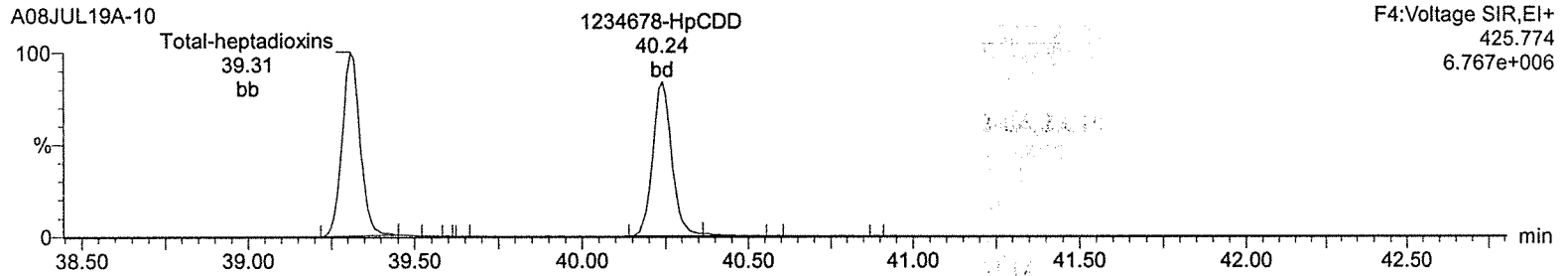
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

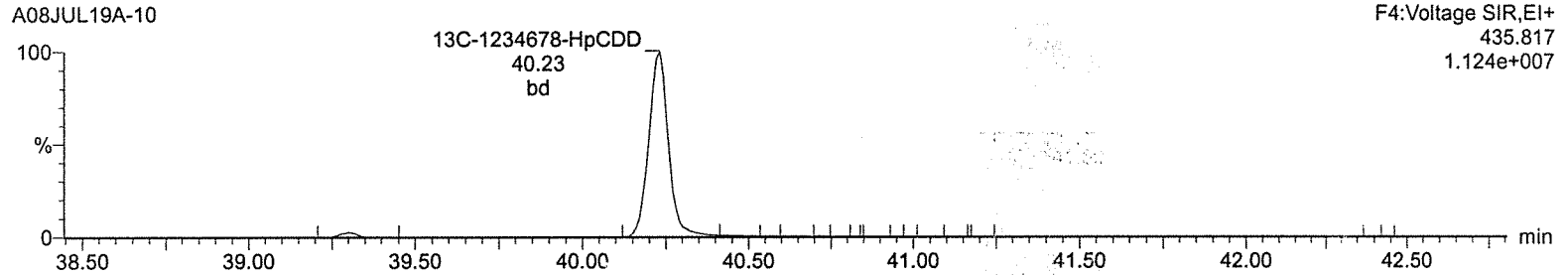
Total-heptadioxins



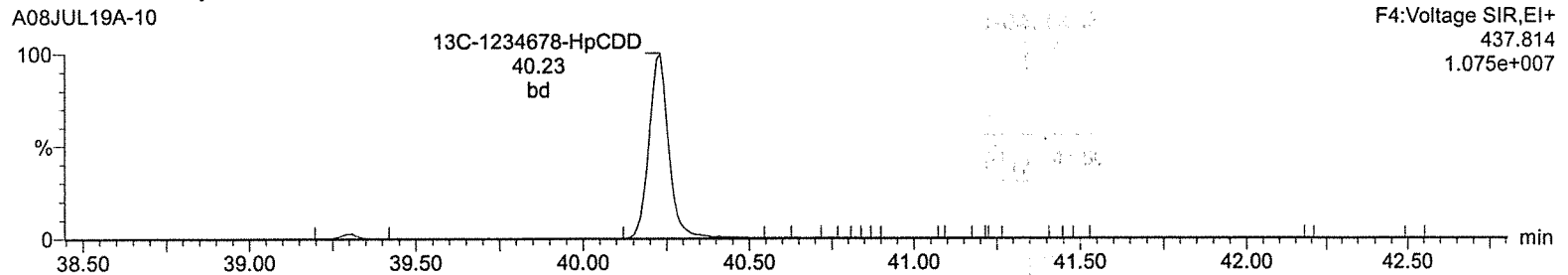
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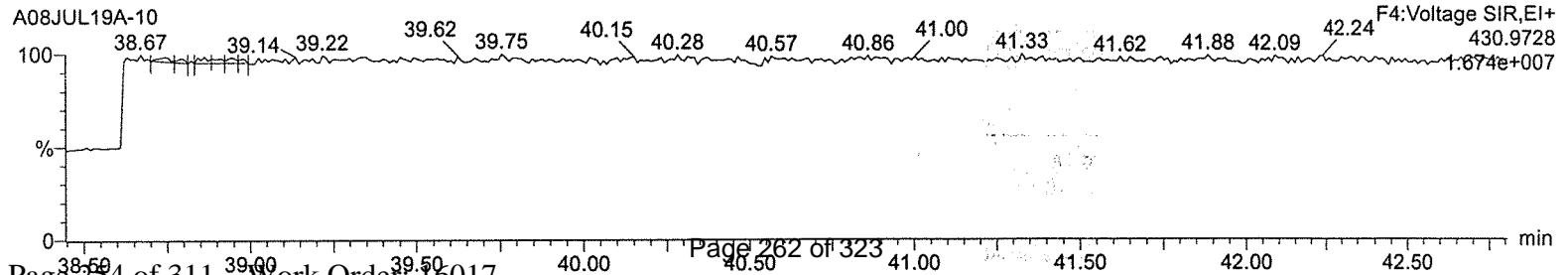
¹³C-1234678-HpCDD



¹³C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

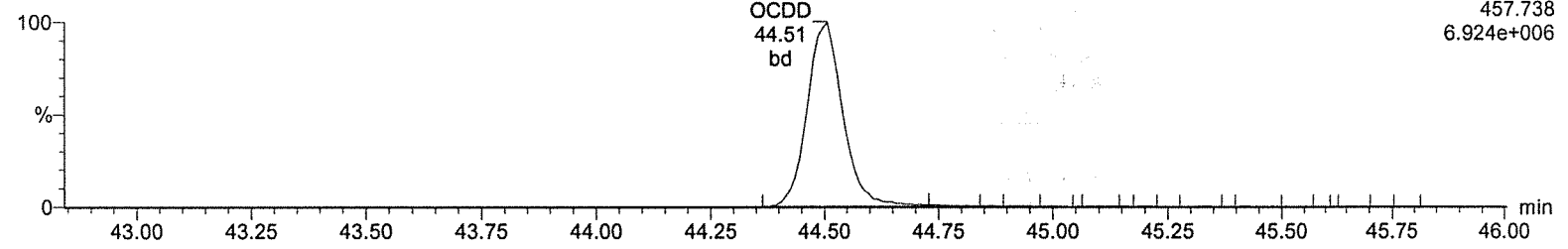
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

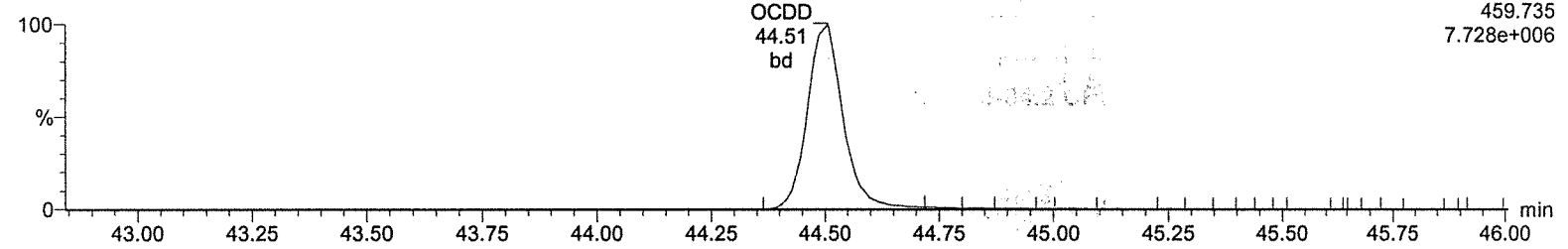
OCDD

A08JUL19A-10



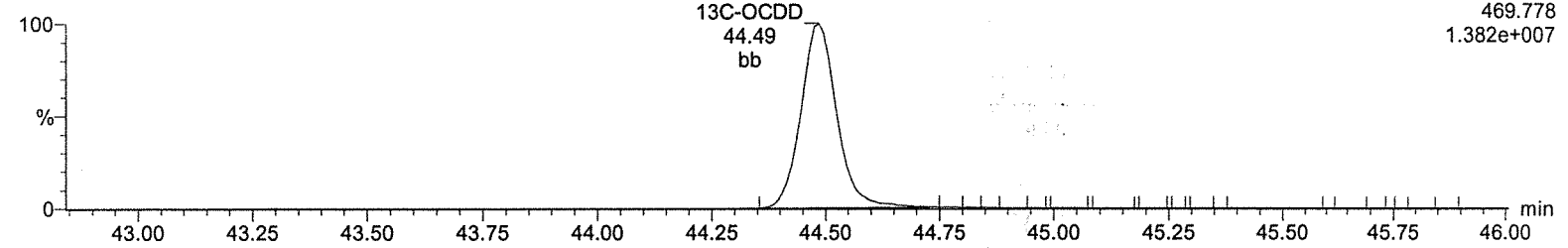
OCDD

A08JUL19A-10



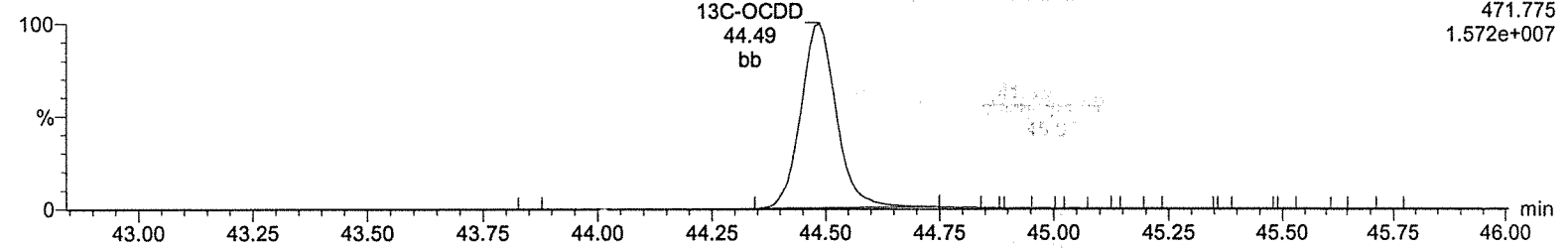
13C-OCDD

A08JUL19A-10



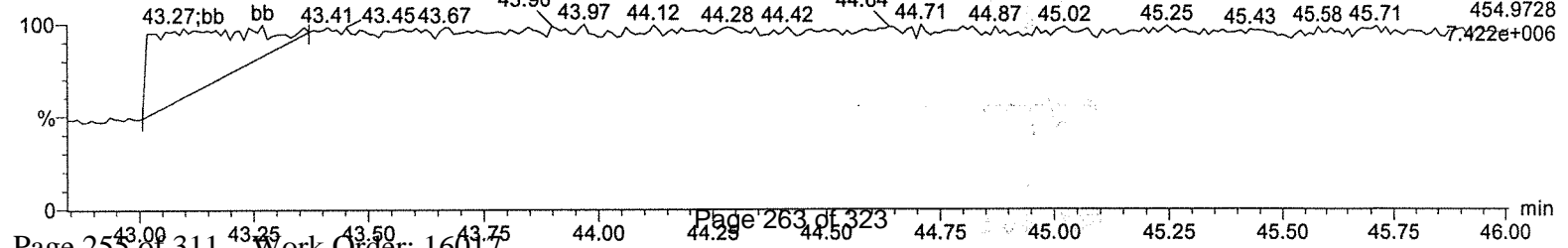
13C-OCDD

A08JUL19A-10



Lock Mass F5

A08JUL19A-10



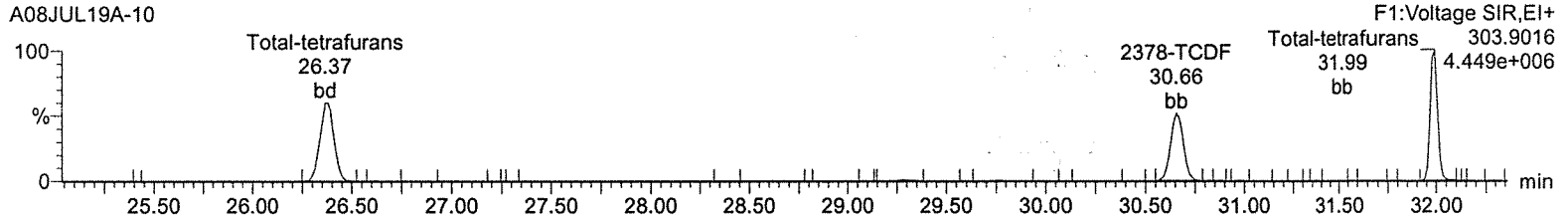
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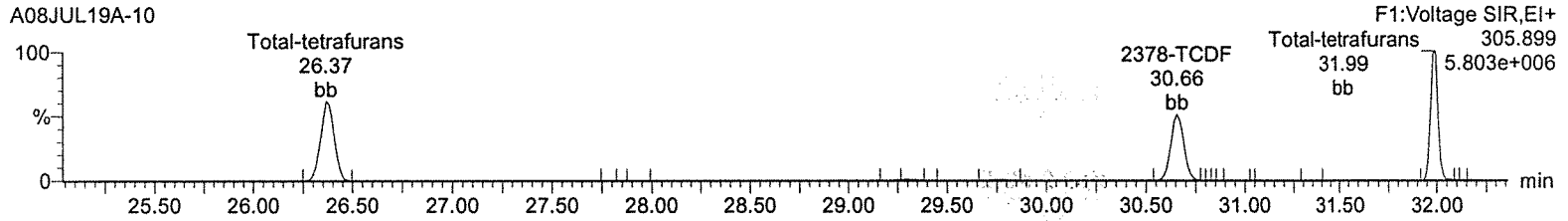
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

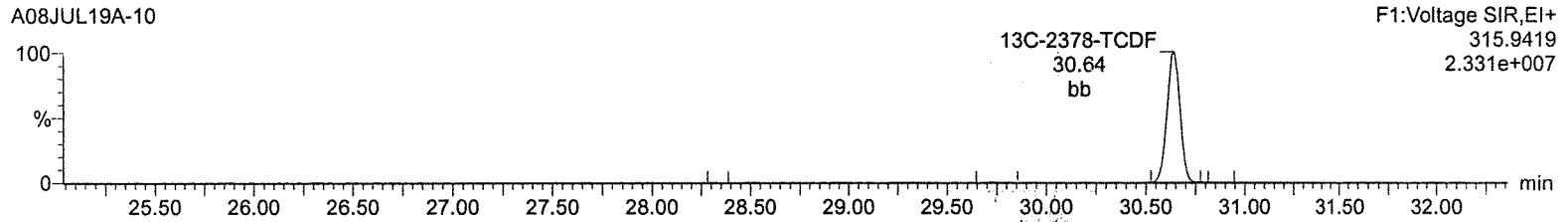
Total-tetrafurans



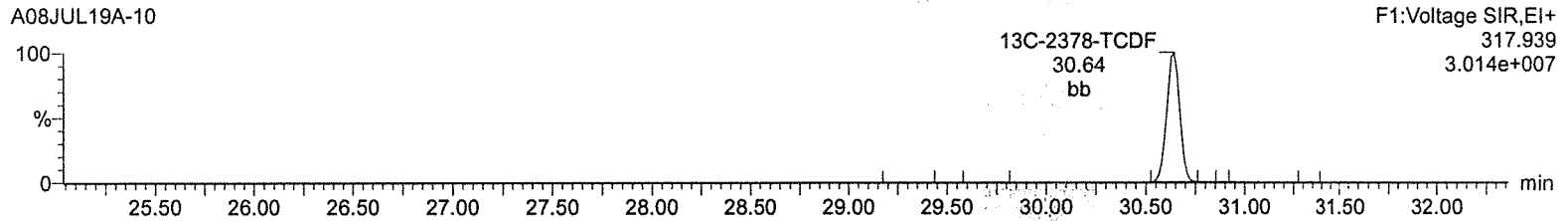
Total-tetrafurans



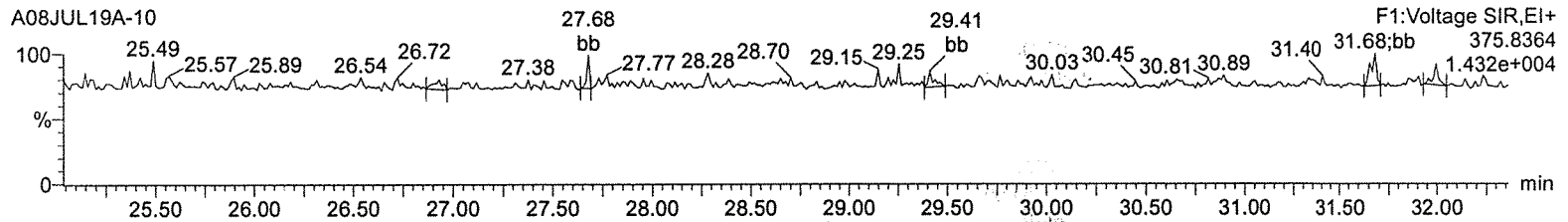
13C-2378-TCDF



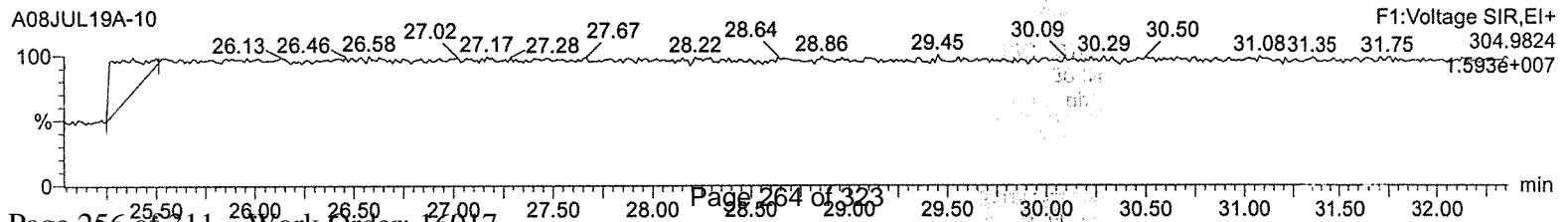
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

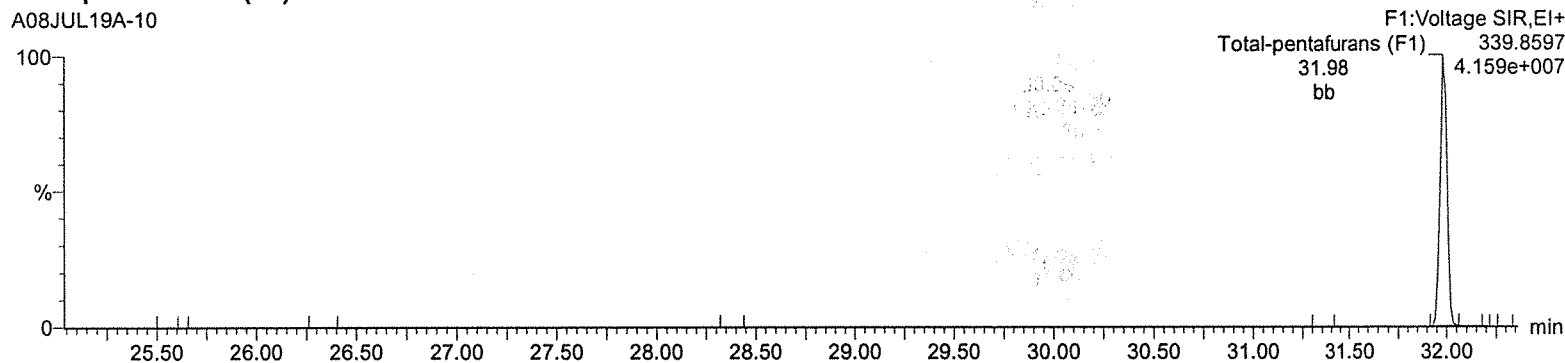
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

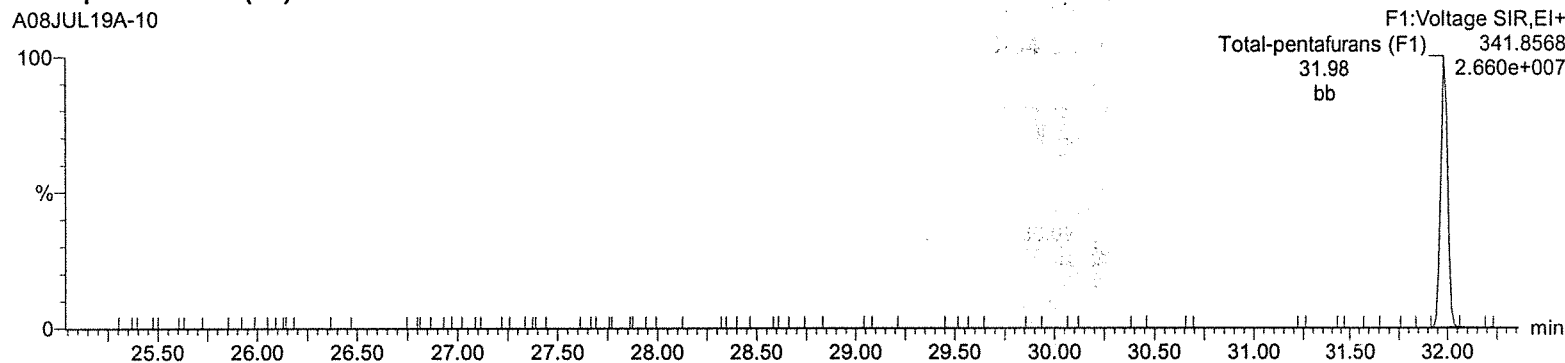
Total-pentafurans (F1)

A08JUL19A-10



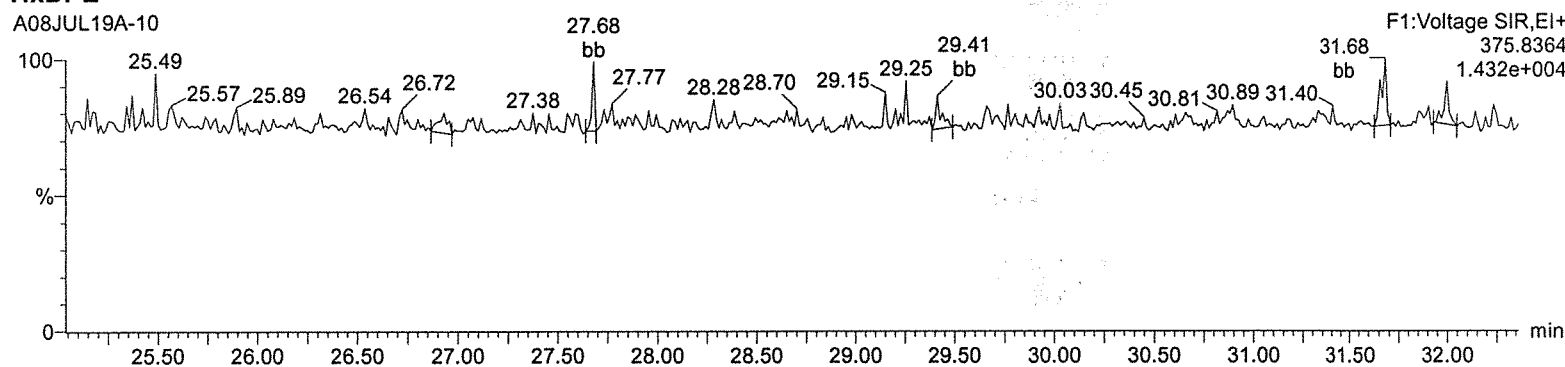
Total-pentafurans (F1)

A08JUL19A-10



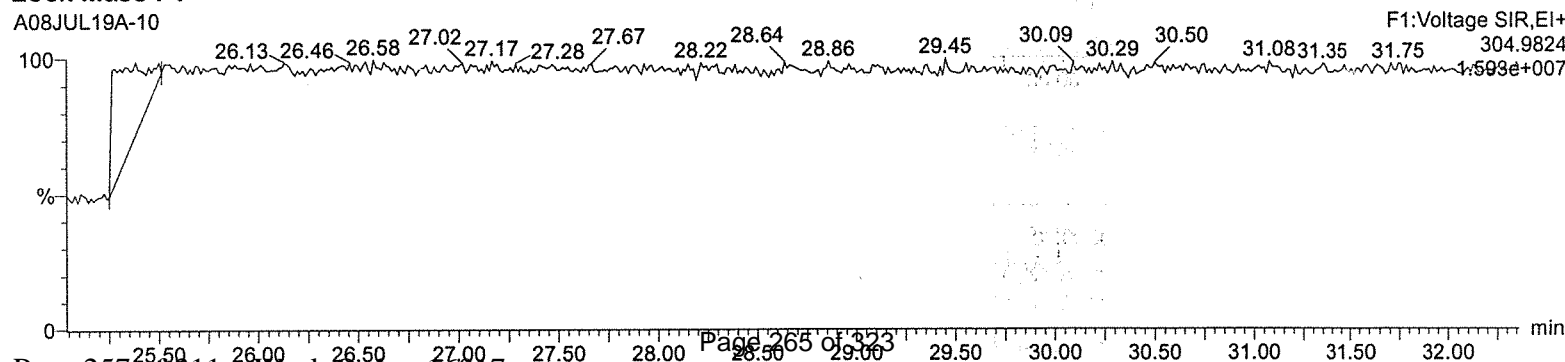
HxDPE

A08JUL19A-10



Lock Mass F1

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

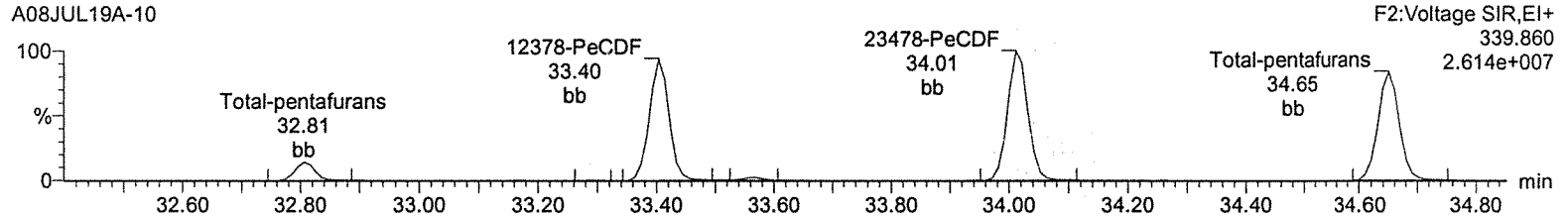
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

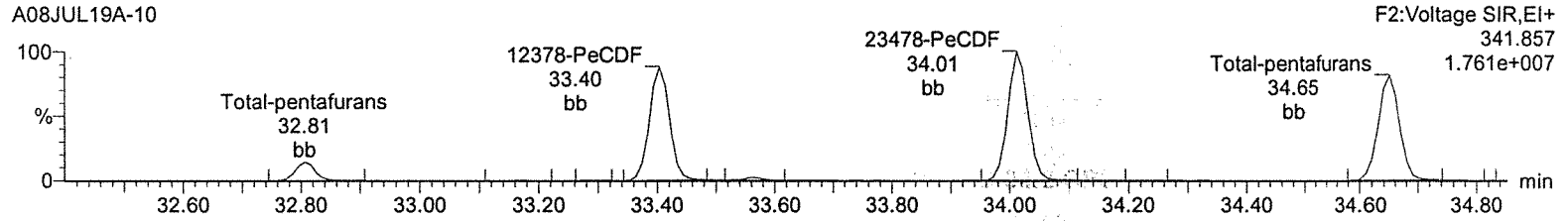
Total-pentafurans

A08JUL19A-10



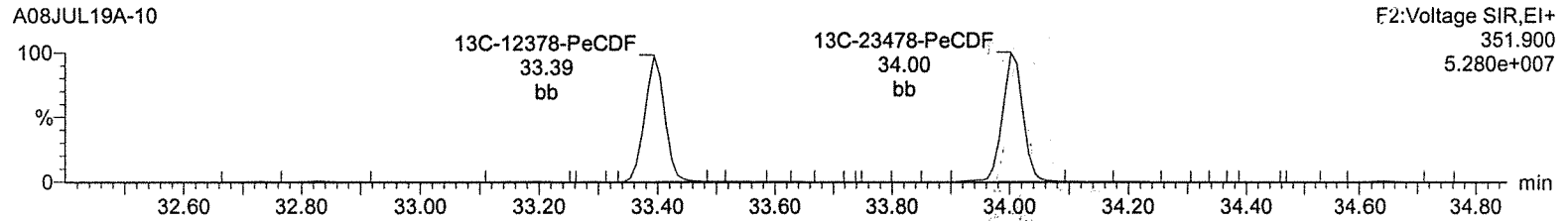
Total-pentafurans

A08JUL19A-10



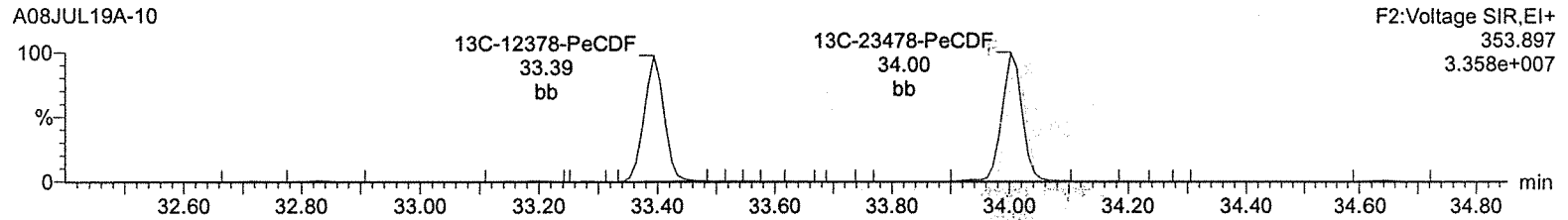
13C-12378-PeCDF

A08JUL19A-10



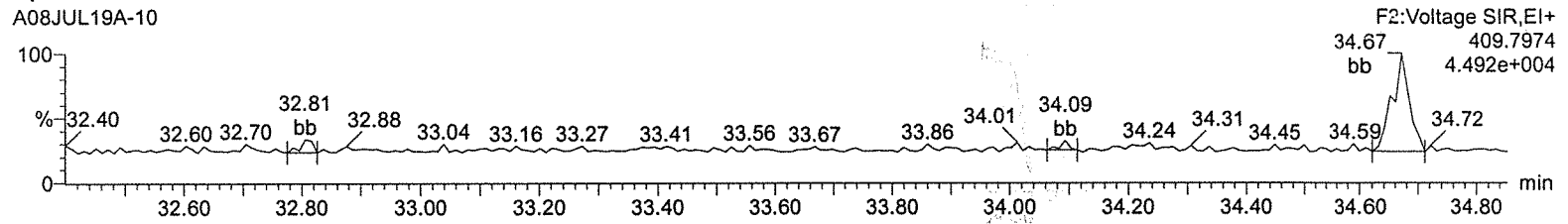
13C-12378-PeCDF

A08JUL19A-10



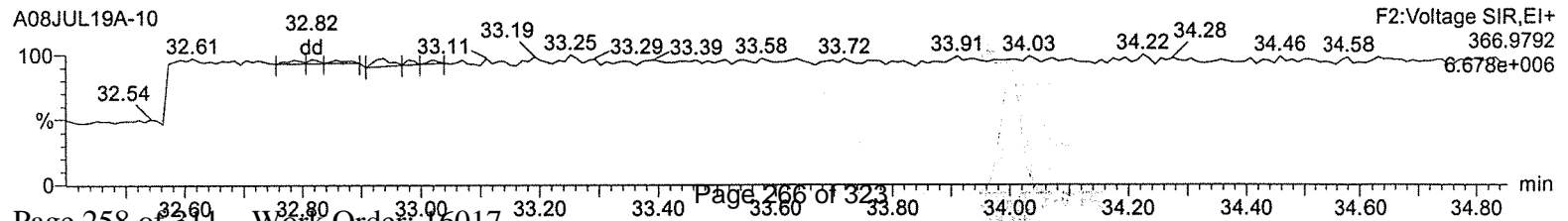
HpdPE

A08JUL19A-10



Lock Mass F2

A08JUL19A-10



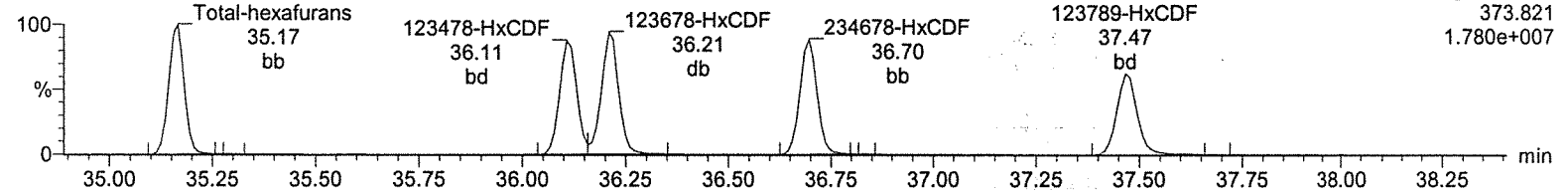
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

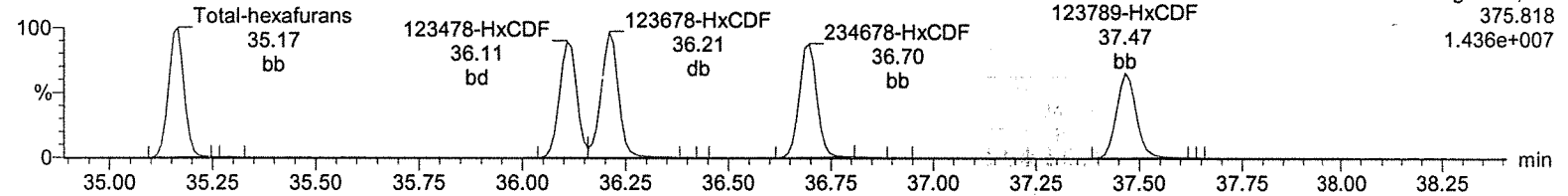
Total-hexafurans

A08JUL19A-10



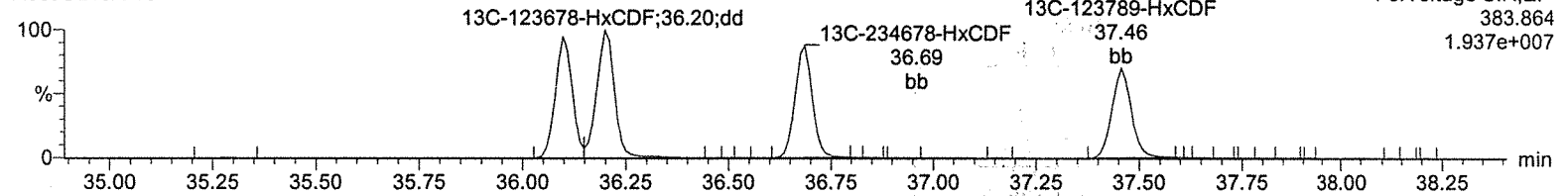
Total-hexafurans

A08JUL19A-10



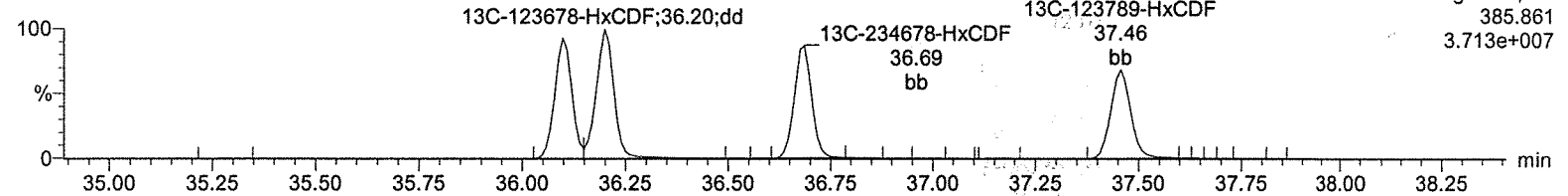
13C-123478-HxCDF

A08JUL19A-10



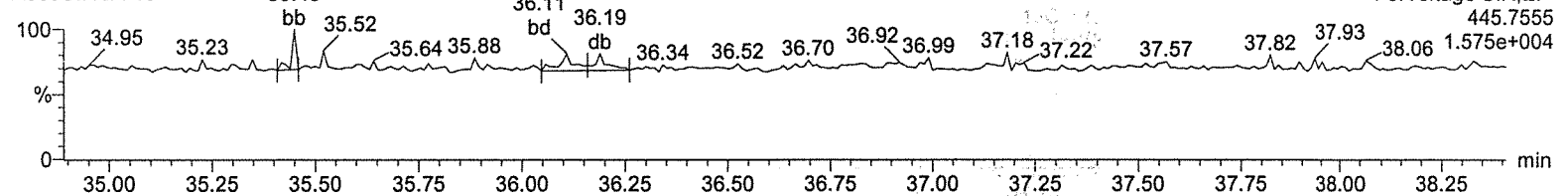
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A08JUL19A-10



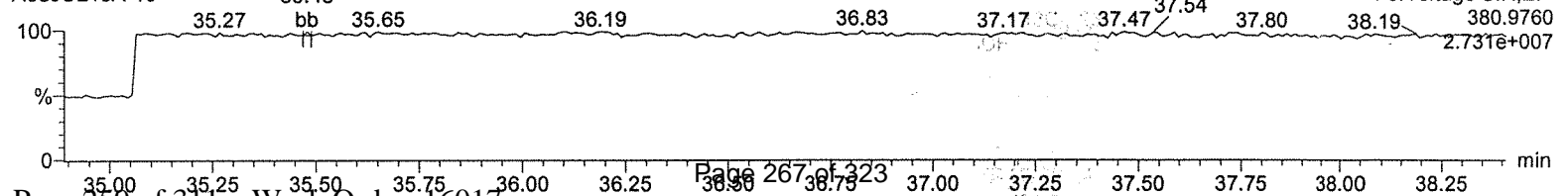
OcDPE

A08JUL19A-10



Lock Mass F3

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

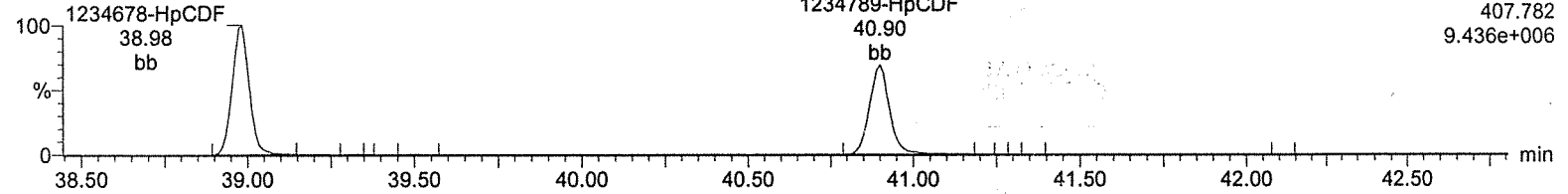
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

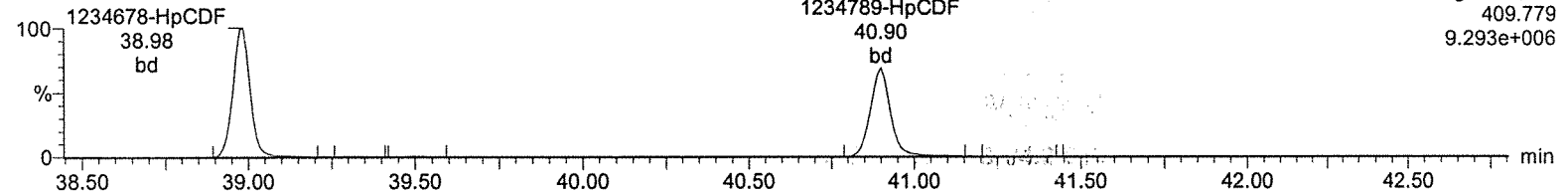
Total-heptafurans

A08JUL19A-10



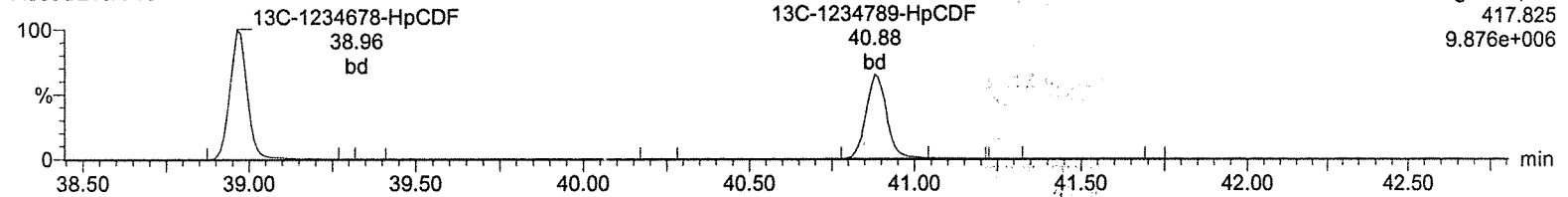
Total-heptafurans

A08JUL19A-10



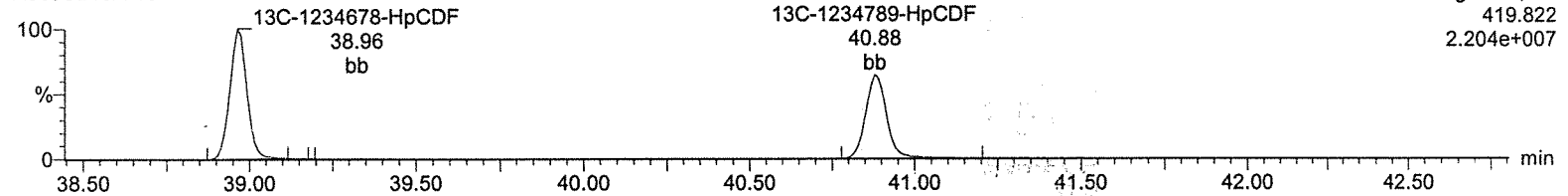
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A08JUL19A-10



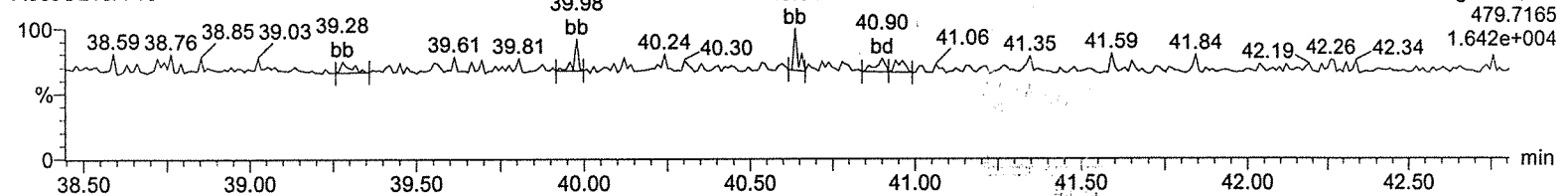
13C-1234678-HpCDF

A08JUL19A-10



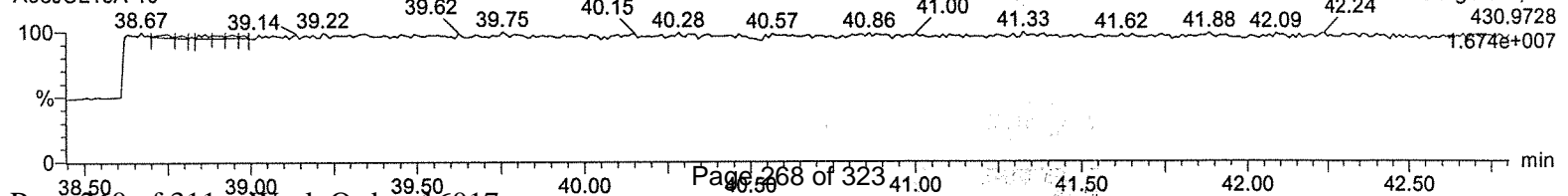
NoDPE

A08JUL19A-10



Lock Mass F4

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

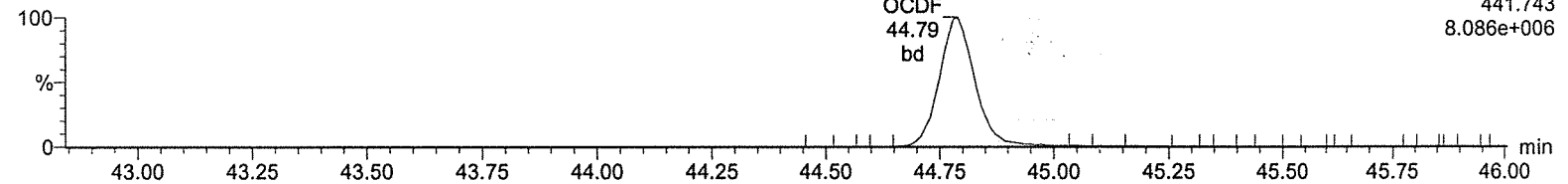
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

OCDF

A08JUL19A-10

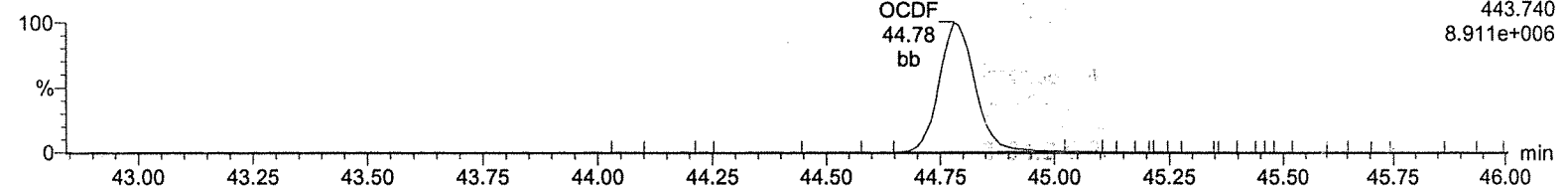
F5:Voltage SIR,EI+
441.743
8.086e+006



OCDF

A08JUL19A-10

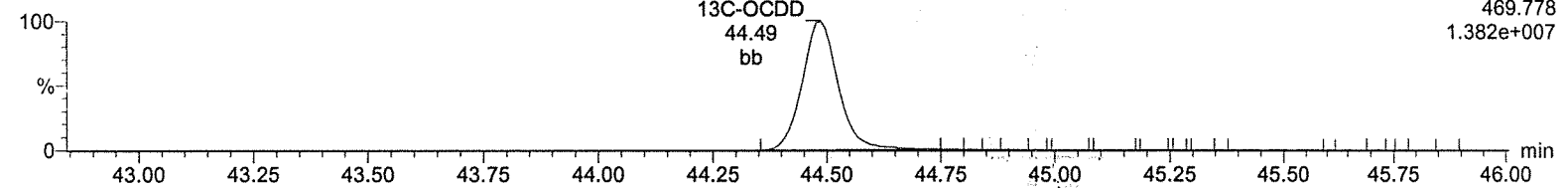
F5:Voltage SIR,EI+
443.740
8.911e+006



13C-OCDD

A08JUL19A-10

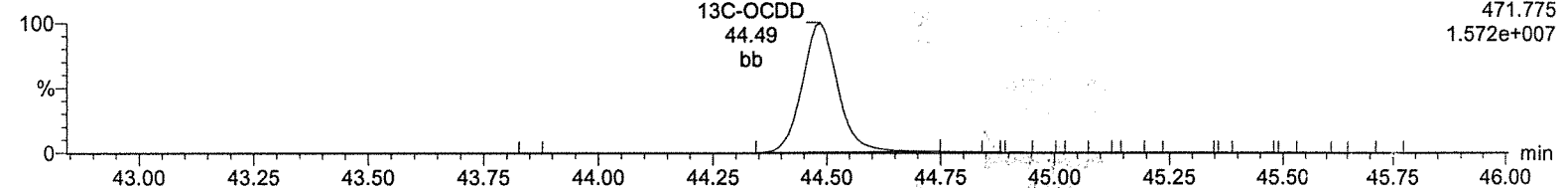
F5:Voltage SIR,EI+
469.778
1.382e+007



13C-OCDD

A08JUL19A-10

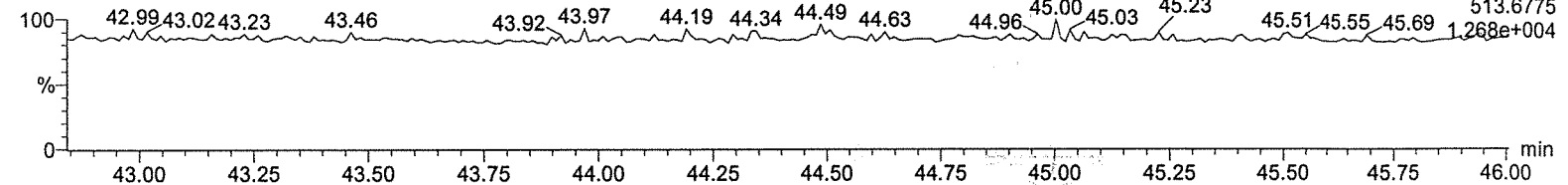
F5:Voltage SIR,EI+
471.775
1.572e+007



DeDPE

A08JUL19A-10

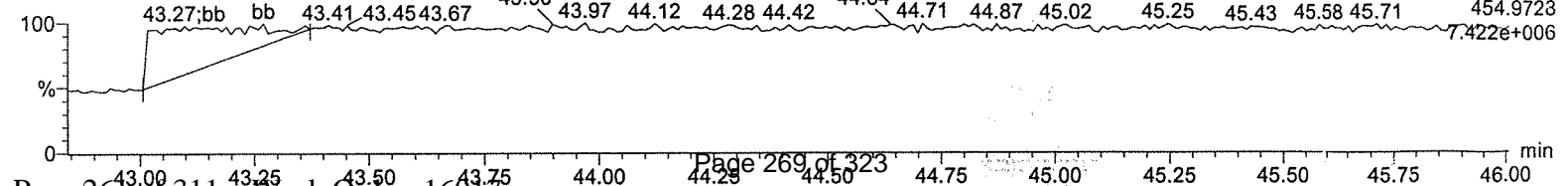
F5:Voltage SIR,EI+
513.6775
1.268e+004



Lock Mass F5

A08JUL19A-10

F5:Voltage SIR,EI+
454.9728
7.422e+006



Continuing Calibration Data

RUN LOG

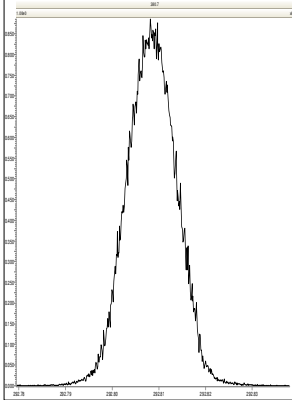
Instrument: HRP750_2

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
A14JAN20A-1	14-JAN-2020 15:06:00	Matt Cash	CS3WT UD191018-02.2		1 uL	dioxin_db5ms	10K_dx
A14JAN20A-2	14-JAN-2020 16:12:21	Matt Cash	12025721-1 LCS		1 uL	dioxin_db5ms	10K_dx
A14JAN20A-3	14-JAN-2020 16:59:28	Matt Cash	12025722-1 LCSD		1 uL	dioxin_db5ms	10K_dx
A14JAN20A-4	14-JAN-2020 17:47:26	Matt Cash	12025720-1 MB		1 uL	dioxin_db5ms	10K_dx
A14JAN20A-5	14-JAN-2020 18:35:21	Matt Cash	15974001-1	42778	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-6	14-JAN-2020 19:23:13	Matt Cash	15974002-1	42778	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-7	14-JAN-2020 20:11:05	Matt Cash	15974003-1	42778	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-8	14-JAN-2020 20:58:59	Matt Cash	15974004-1	42778	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-9	14-JAN-2020 21:46:53	Matt Cash	16009001-1	42778	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-10	14-JAN-2020 22:34:46	Matt Cash	16011001-1	42778	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-11	14-JAN-2020 23:22:40	Matt Cash	16018001-1	42778	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-12	15-JAN-2020 00:10:41	Matt Cash	16018002-1	42778	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-13	15-JAN-2020 00:58:35	Matt Cash	16021001-1	42778	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-14	15-JAN-2020 01:46:36	Matt Cash	16014001-1	42779	1 uL	dioxin_db5ms	10K_dx
A14JAN20A-15	15-JAN-2020 02:34:29	Matt Cash	16025003-1	42779	1 uL	dioxin_db5ms	10K_dx

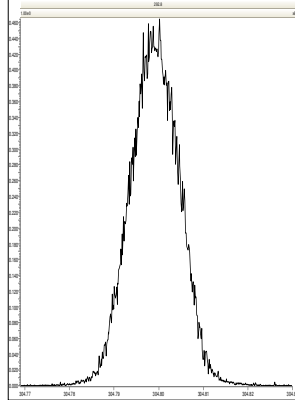
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Tuesday, January 14, 2020 15:03:50 Eastern Standard Time

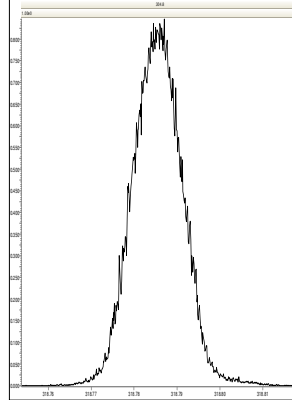
M 292.9824 R 12254



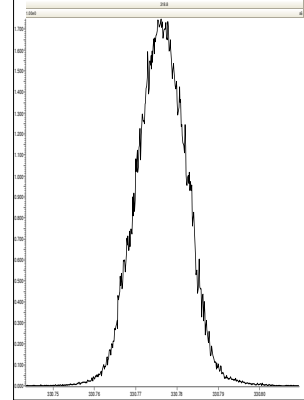
M 304.9824 R 12379



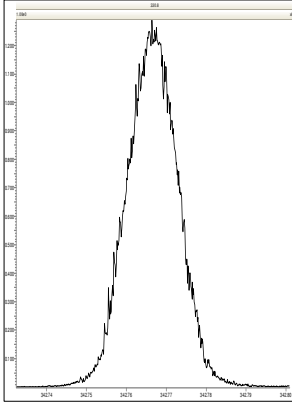
M 318.9792 R 12256



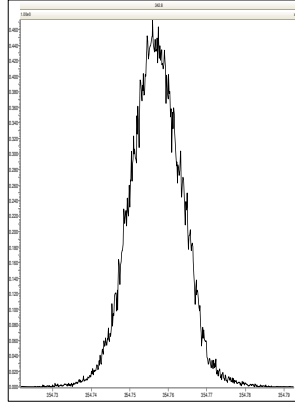
M 330.9792 R 12253



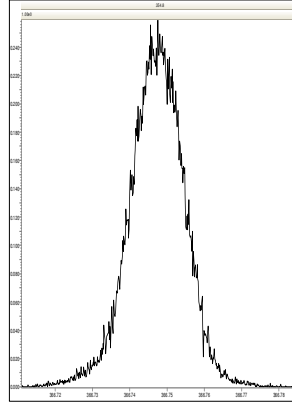
M 342.9792 R 11575



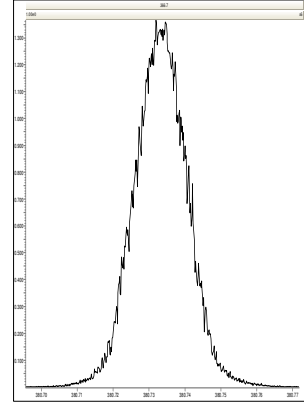
M 354.9792 R 11210



M 366.9792 R 10914



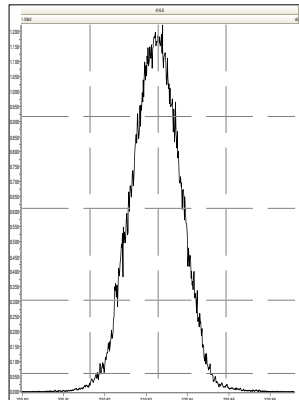
M 380.9760 R 11359



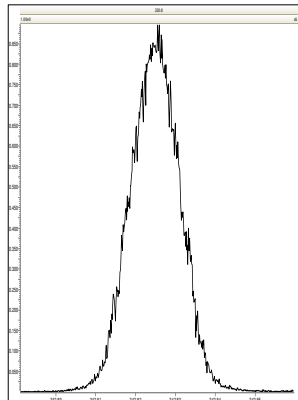
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Tuesday, January 14, 2020 15:04:12 Eastern Standard Time

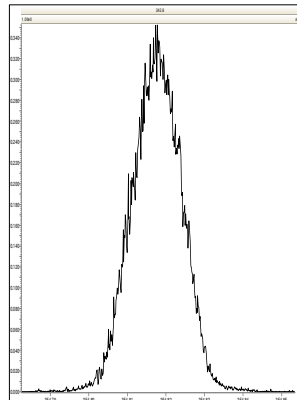
M 330.9792 R 12014



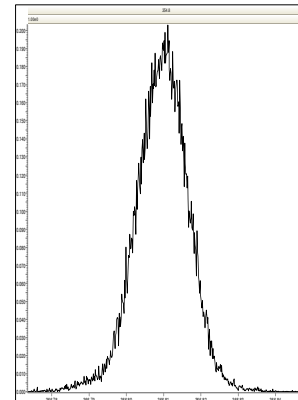
M 342.9792 R 12017



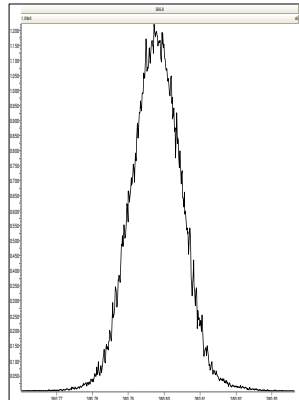
M 354.9792 R 12317



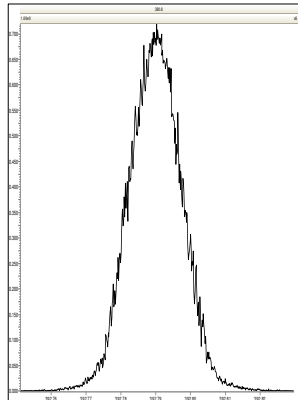
M 366.9792 R 11363



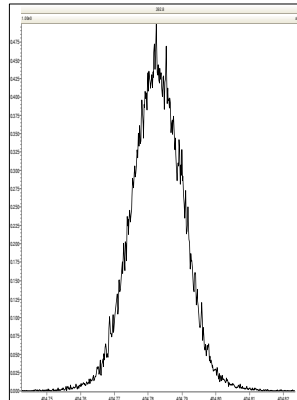
M 380.9760 R 12133



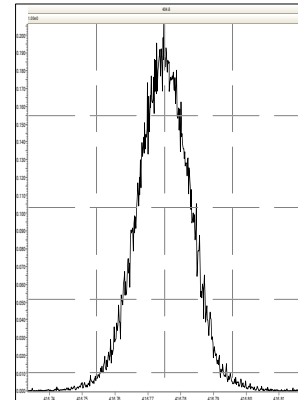
M 392.9760 R 11262



M 404.9760 R 11209



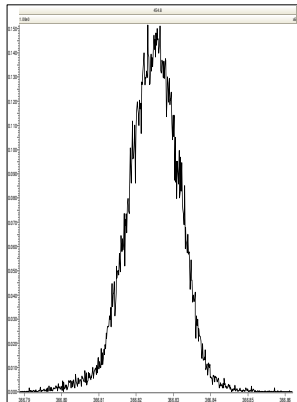
M 416.9760 R 11313



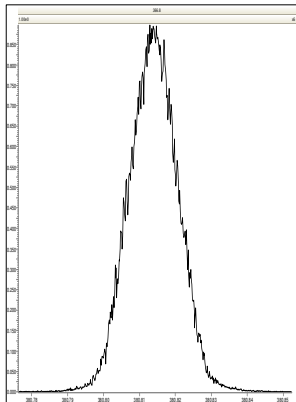
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Tuesday, January 14, 2020 15:04:35 Eastern Standard Time

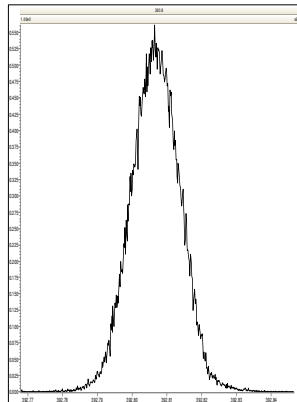
M 366.9792 R 11737



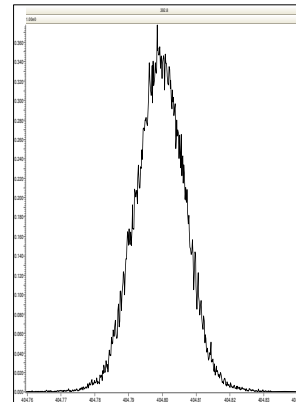
M 380.9760 R 12253



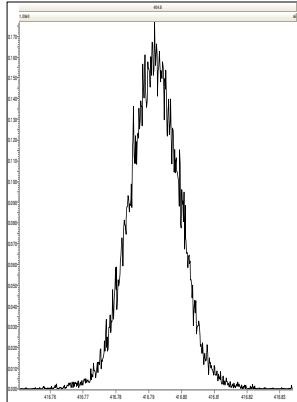
M 392.9760 R 12439



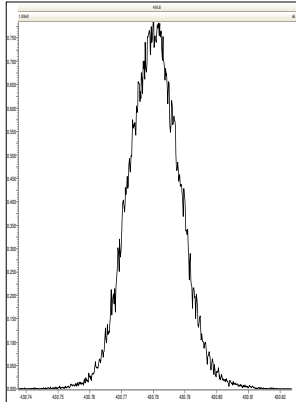
M 404.9760 R 11791



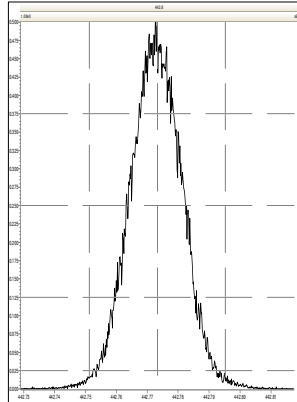
M 416.9760 R 12373



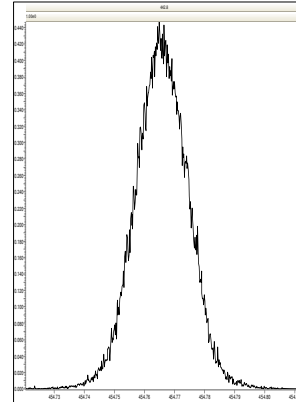
M 430.9728 R 11468



M 442.9728 R 11362



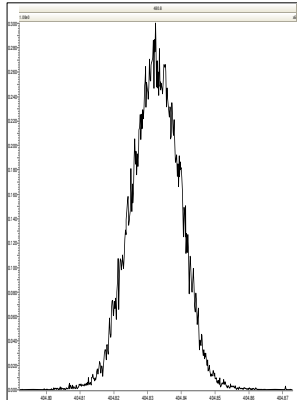
M 454.9728 R 10870



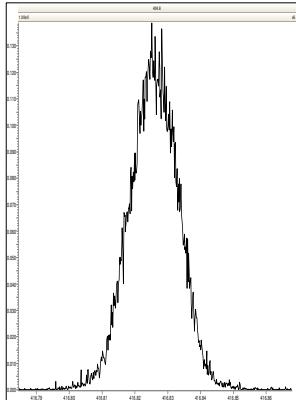
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Tuesday, January 14, 2020 15:04:59 Eastern Standard Time

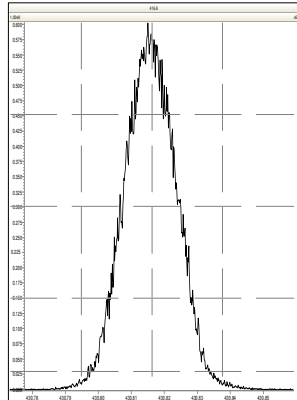
M 404.9760 R 12755



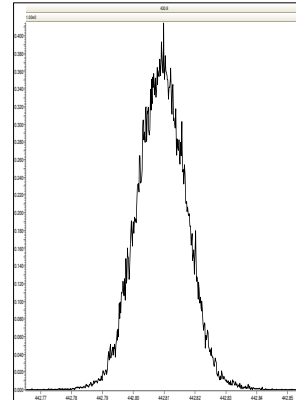
M 416.9760 R 12566



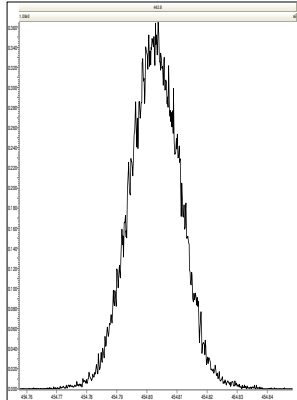
M 430.9728 R 11849



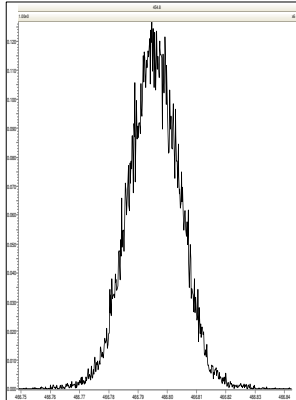
M 442.9728 R 12437



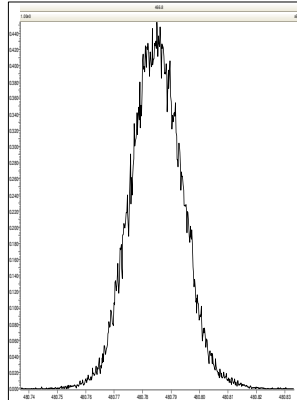
M 454.9728 R 11572



M 466.9728 R 11364



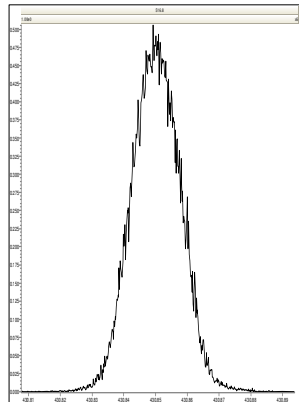
M 480.9696 R 11627



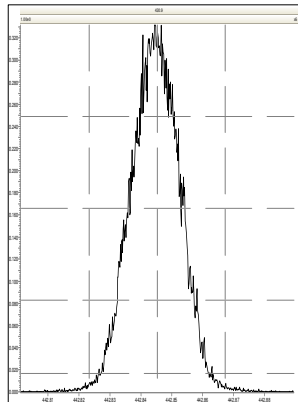
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Tuesday, January 14, 2020 15:05:21 Eastern Standard Time

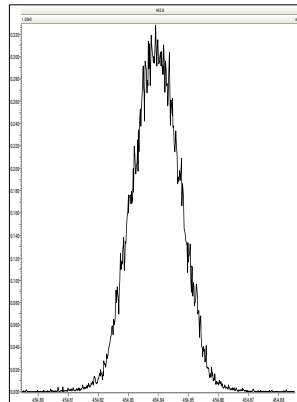
M 430.9728 R 12753



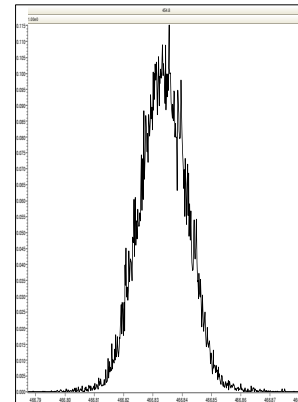
M 442.9728 R 12627



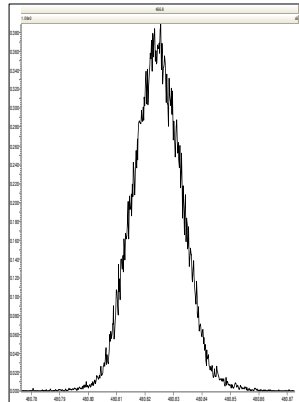
M 454.9728 R 12956



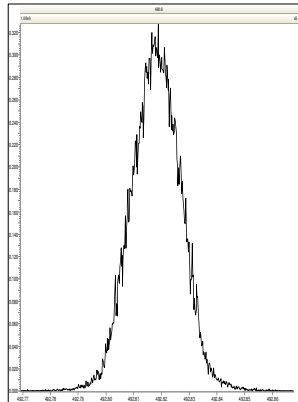
M 466.9728 R 12564



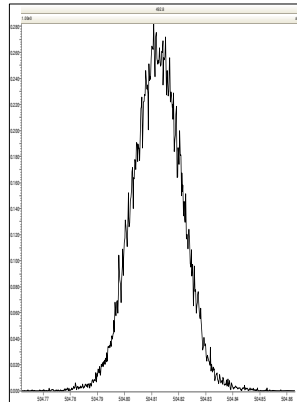
M 480.9696 R 12315



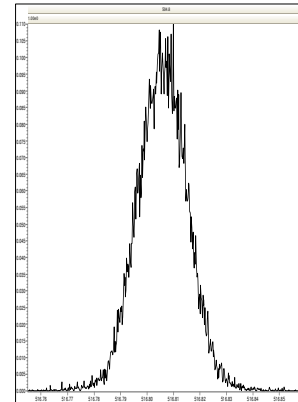
M 492.9696 R 12889



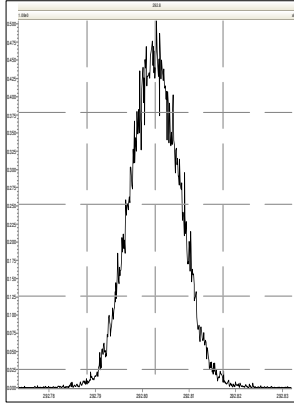
M 504.9696 R 11962



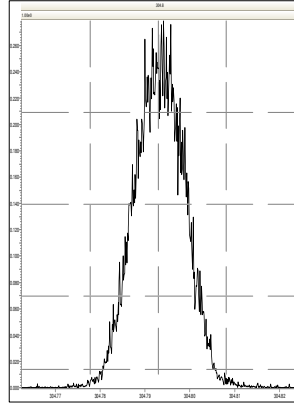
M 516.9697 R 12379



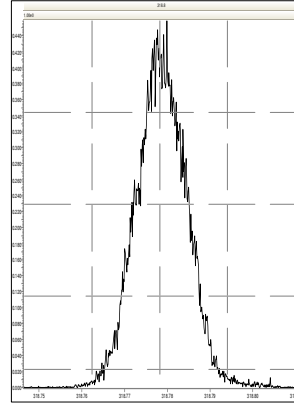
M 292.9824 R 12049



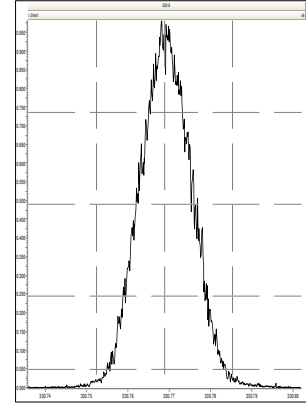
M 304.9824 R 12329



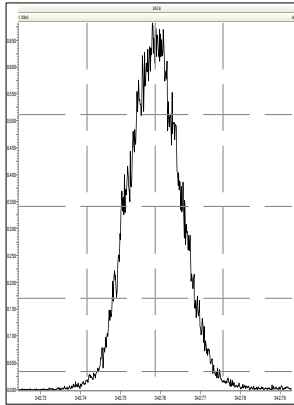
M 318.9792 R 11961



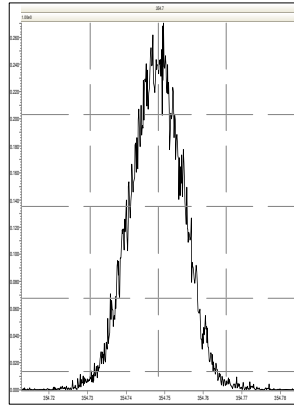
M 330.9792 R 11746



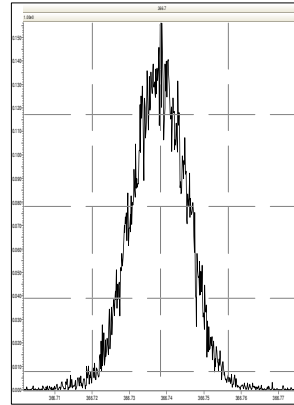
M 342.9792 R 11444



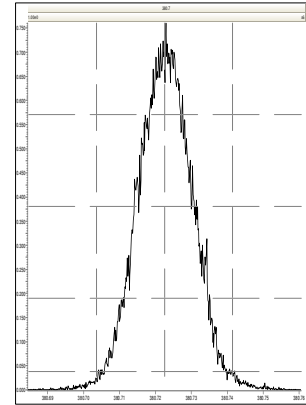
M 354.9792 R 11363



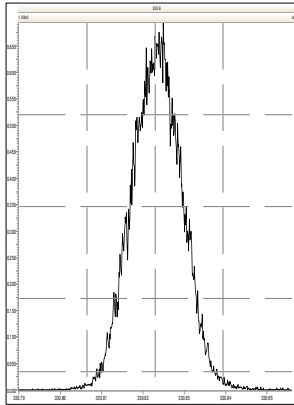
M 366.9792 R 11468



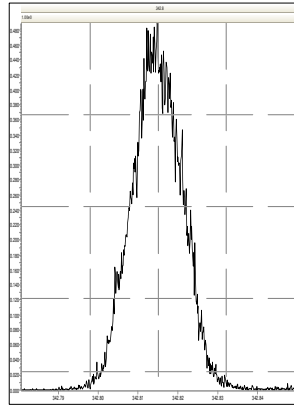
M 380.9760 R 10869



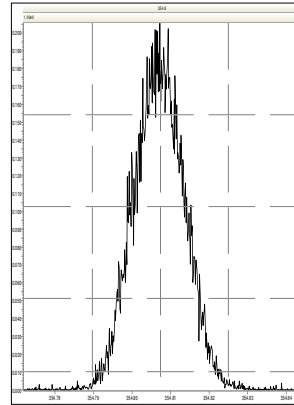
M 330.9792 R 11792



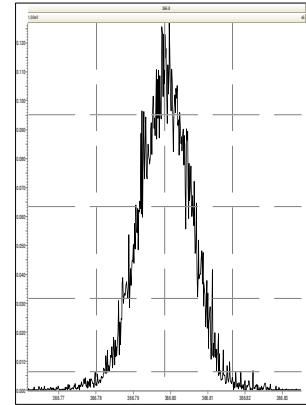
M 342.9792 R 12181



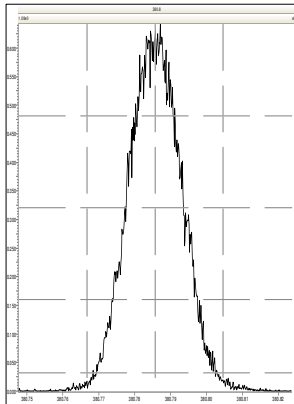
M 354.9792 R 12787



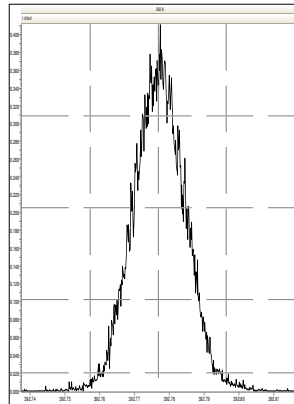
M 366.9792 R 12136



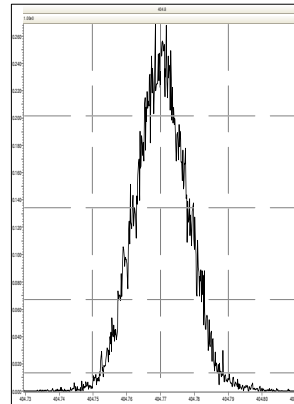
M 380.9760 R 11574



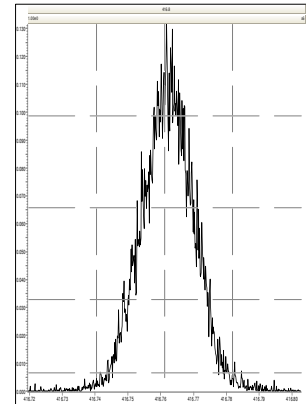
M 392.9760 R 11629



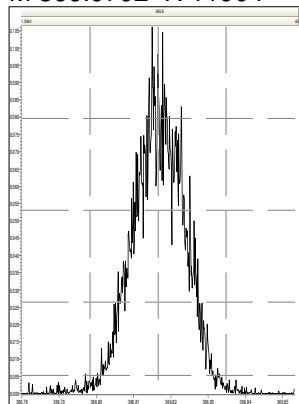
M 404.9760 R 11504



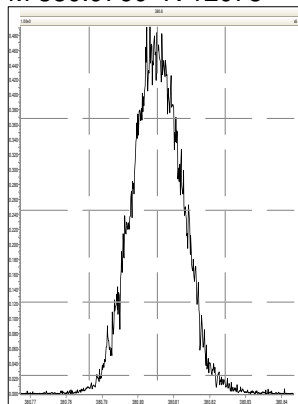
M 416.9760 R 12107



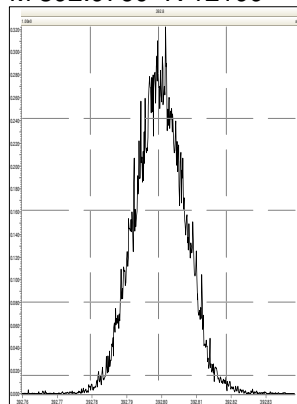
M 366.9792 R 11904



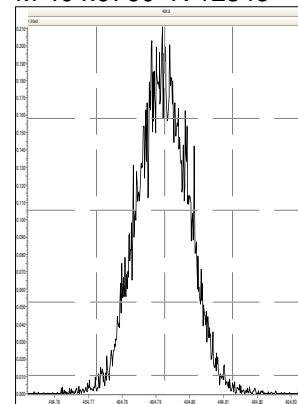
M 380.9760 R 12078



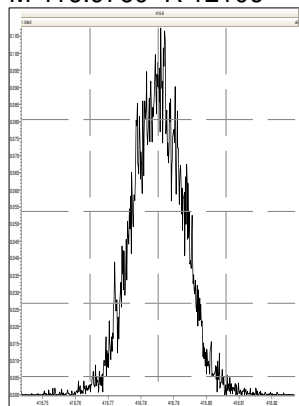
M 392.9760 R 12199



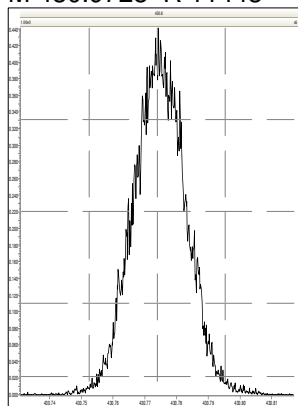
M 404.9760 R 12345



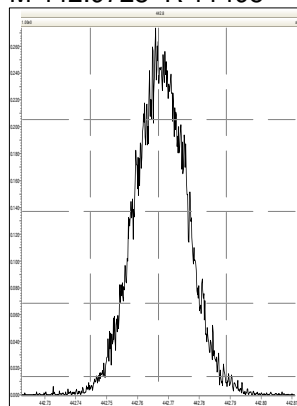
M 416.9760 R 12106



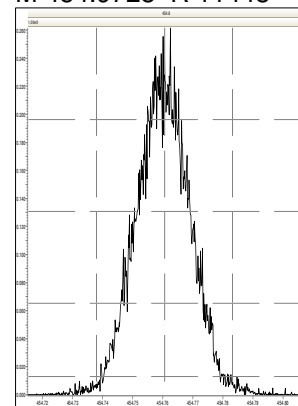
M 430.9728 R 11443



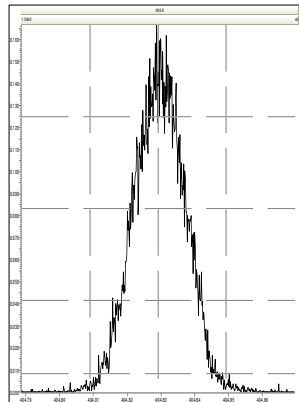
M 442.9728 R 11495



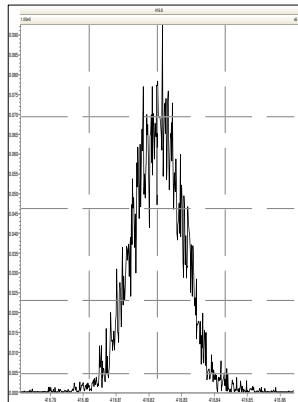
M 454.9728 R 11448



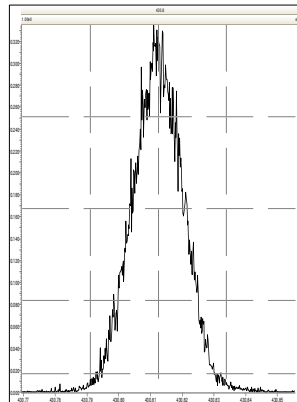
M 404.9760 R 12740



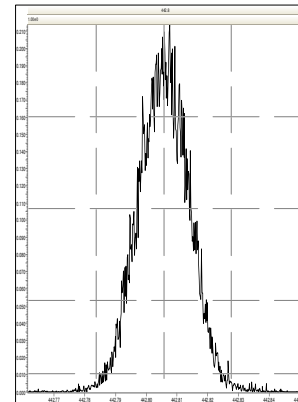
M 416.9760 R 13454



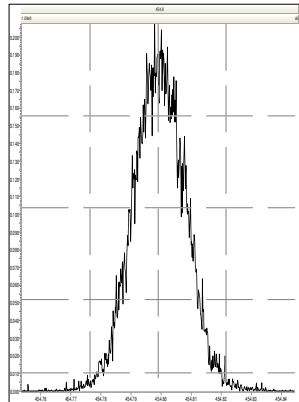
M 430.9728 R 11990



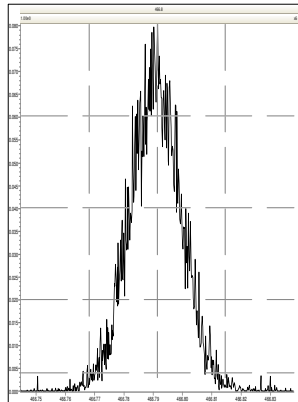
M 442.9728 R 12167



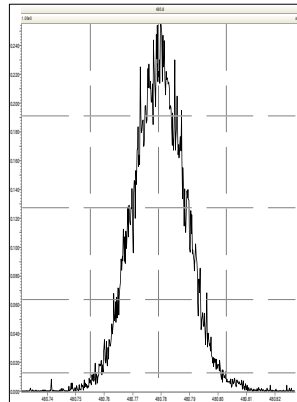
M 454.9728 R 11279



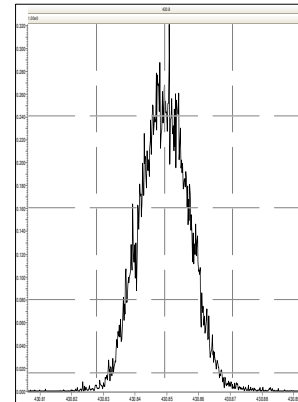
M 466.9728 R 12078



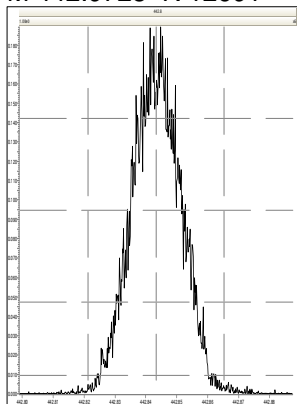
M 480.9696 R 11211



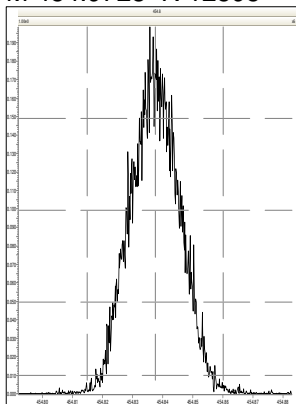
M 430.9728 R 12531



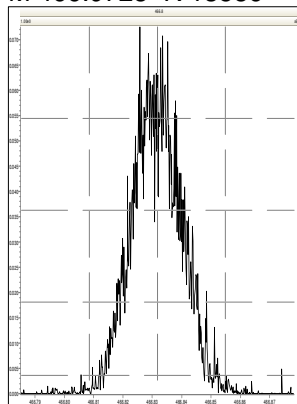
M 442.9728 R 12691



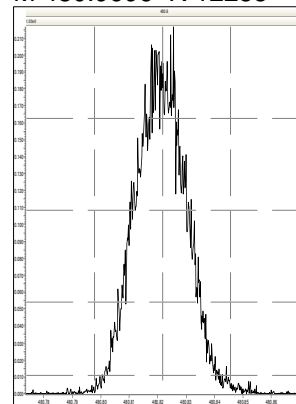
M 454.9728 R 12595



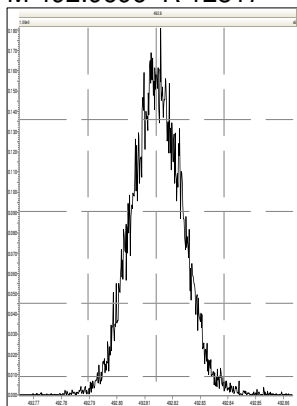
M 466.9728 R 13586



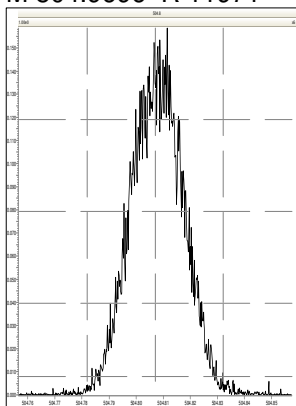
M 480.9696 R 12255



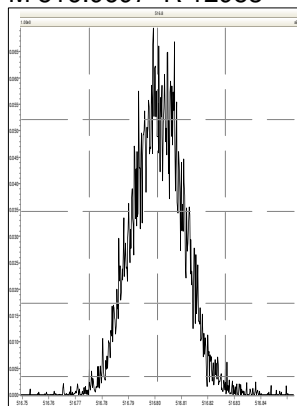
M 492.9696 R 12817



M 504.9696 R 11971



M 516.9697 R 12953



Quantify Sample Summary Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14JAN20A-1.qld
Last Altered: Wednesday, January 15, 2020 08:34:04 Eastern Standard Time
Printed: Wednesday, January 15, 2020 08:36:23 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A13JAN20.mdb 14 Jan 2020 09:27:05
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	25.49
2	Last TCDF	31.52
3	First PeCDF	31.52
4	Last PeCDF	34.19
5	First HxCDF	34.68
6	Last HxCDF	36.89
7	First HpCDF	38.33
8	Last HpCDF	40.14
9	OCDF	43.82
10	First TCDD	27.21
11	2378-TCDD	30.70
12	Last TCDD	31.43
13	First PeCDD	32.46
14	Last PeCDD	34.03
15	First HxCDD	35.10
16	Last HxCDD	36.60
17	First HpCDD	38.64
18	Last HpCDD	39.51
19	OCDD	43.55

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14JAN20A-1.qld

Last Altered: Wednesday, January 15, 2020 08:34:04 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:36:23 Eastern Standard Time

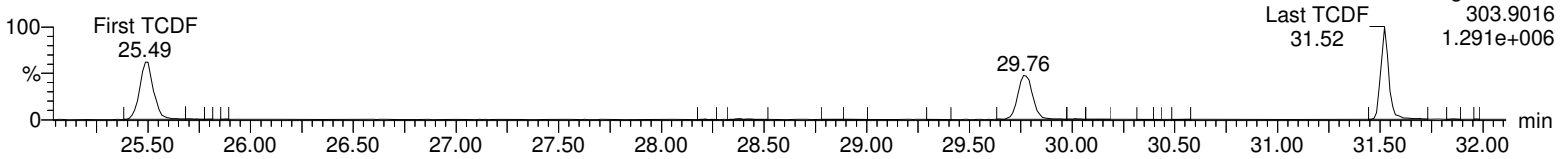
Method: C:\MassLynx\Default.pro\Methdb\WDM_A13JAN20.mdb 14 Jan 2020 09:27:05

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A, Task: HRP750_2, User: MJC

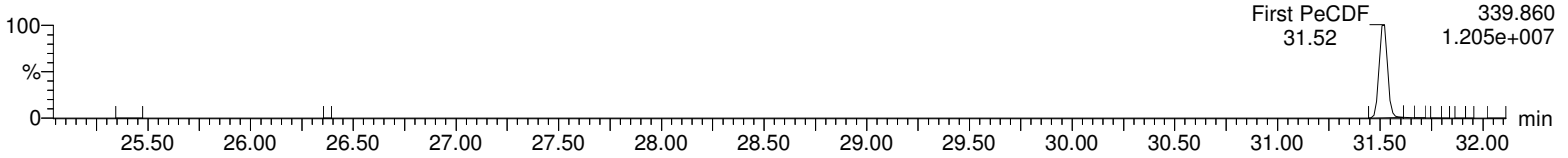
First TCDF

A14JAN20A-1



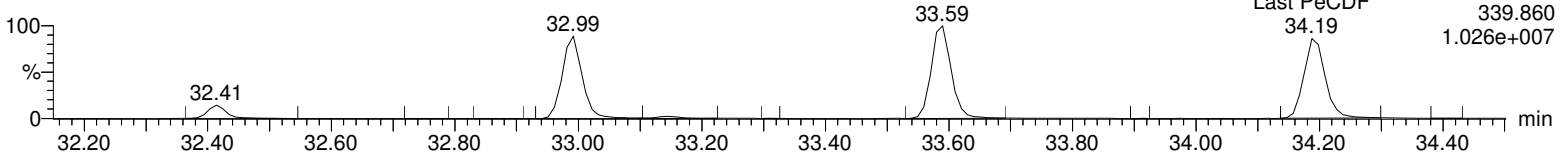
First PeCDF

A14JAN20A-1



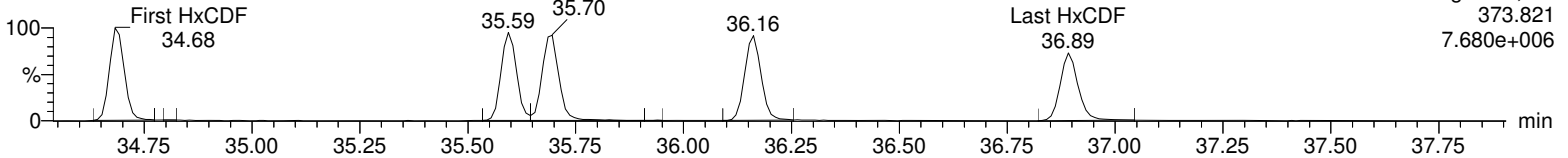
Last PeCDF

A14JAN20A-1



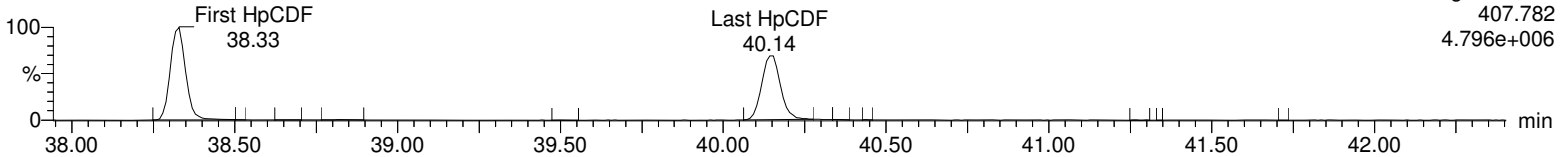
First HxCDF

A14JAN20A-1



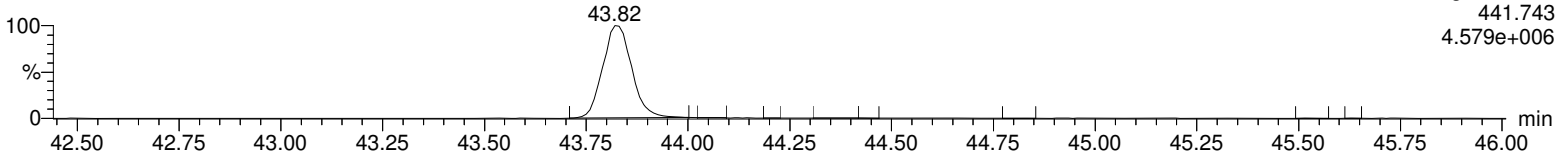
First HpCDF

A14JAN20A-1



OCDF

A14JAN20A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14JAN20A-1.qld

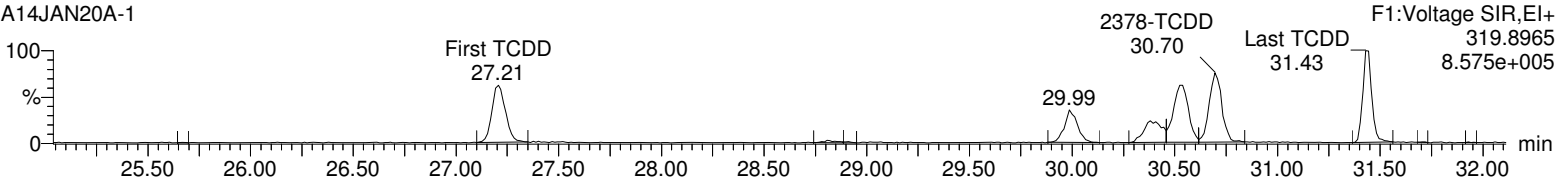
Last Altered: Wednesday, January 15, 2020 08:34:04 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:36:23 Eastern Standard Time

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A, Task: HRP750_2, User: MJC

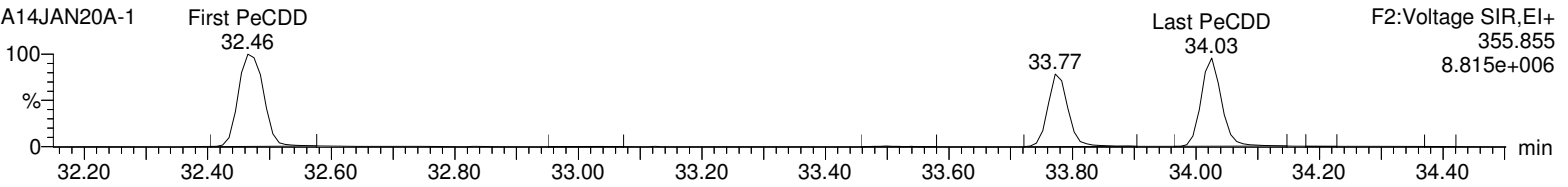
First TCDD

A14JAN20A-1



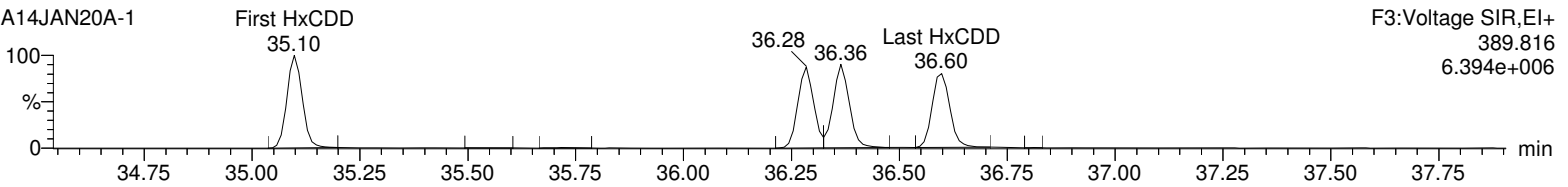
First PeCDD

A14JAN20A-1



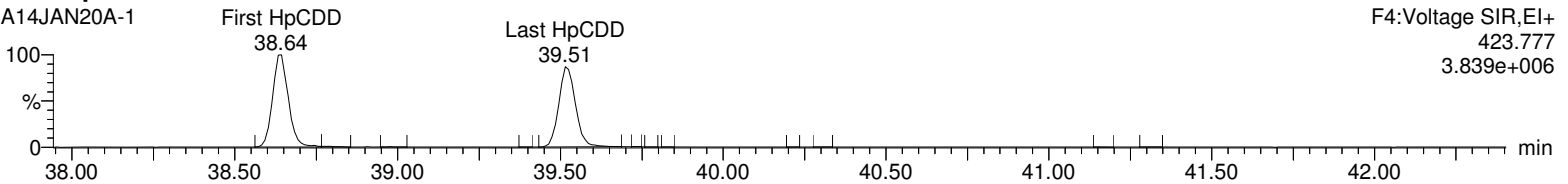
First HxCDD

A14JAN20A-1



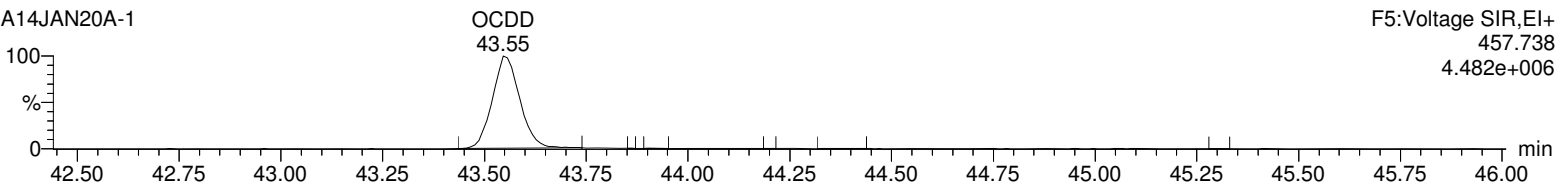
First HpCDD

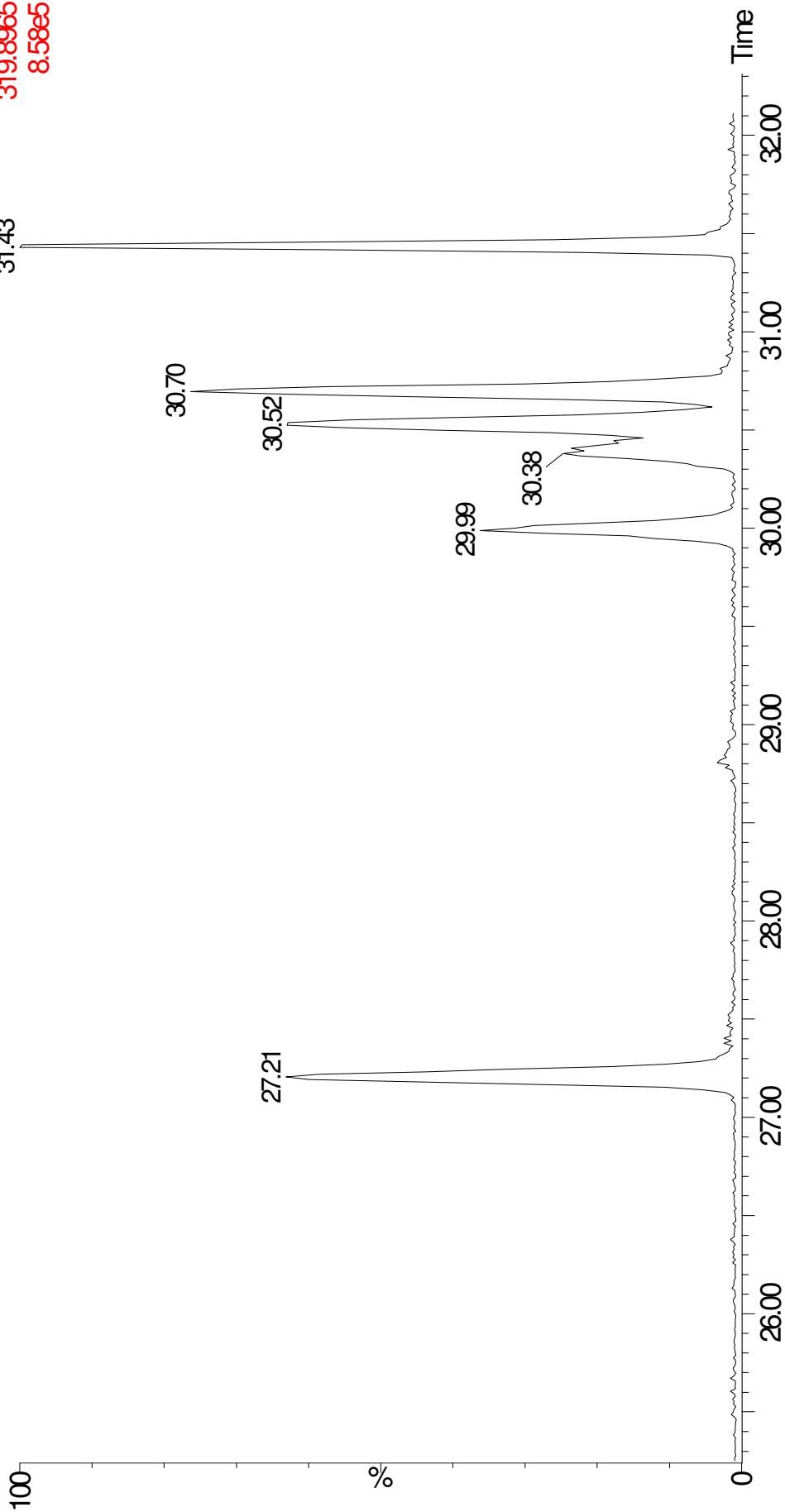
A14JAN20A-1



OCDD

A14JAN20A-1





Quantify Sample Summary Report
 Method 1613 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld
 Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A13JAN20.mdb 13 Jan 2020 13:57:24
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	4.54e4	5.90e4	1.04e5	30.70	1.000	0.77	NO	10.412	0.161	0.921	0.884	4.1	6.41e5	4505	142.2	8.80e5	4460	197.4	db	dd
2	12378-PeCDD	2.58e5	1.66e5	4.25e5	33.77	1.000	1.56	NO	54.260	0.131	0.926	0.853	8.5	6.91e6	5638	1225.5	4.43e6	5323	832.2	bb	bb
3	123478-HxCDD	2.37e5	1.91e5	4.28e5	36.28	1.000	1.24	NO	51.304	0.136	0.964	0.940	2.6	5.58e6	5378	1037.0	4.37e6	4921	887.9	bd	bd
4	123678-HxCDD	2.55e5	2.06e5	4.60e5	36.36	1.000	1.24	NO	50.420	0.127	0.952	0.944	0.8	5.75e6	5378	1069.6	4.52e6	4921	918.2	dd	dd
5	123789-HxCDD	2.51e5	2.01e5	4.53e5	36.60	1.007	1.25	NO	52.694	0.133	0.977	0.927	5.4	5.14e6	5378	956.7	4.27e6	4921	866.8	dd	db
6	1234678-HpCDD	1.97e5	1.90e5	3.86e5	39.51	1.000	1.04	NO	46.739	0.157	0.972	1.040	-6.5	3.33e6	4199	792.7	3.14e6	4446	705.9	bb	bb
7	OCDD	3.49e5	4.03e5	7.52e5	43.55	1.000	0.87	NO	100.444	0.184	0.976	0.971	0.4	4.46e6	3130	1424.9	5.07e6	3689	1374.7	bb	bd
8	2378-TCDF	5.16e4	6.57e4	1.17e5	29.76	1.000	0.79	NO	8.781	0.102	0.859	0.978	-12.2	6.11e5	2701	226.3	8.02e5	4062	197.3	bd	bb
9	12378-PeCDF	3.37e5	2.19e5	5.56e5	32.99	1.000	1.54	NO	47.493	0.103	0.898	0.945	-5.0	9.10e6	6419	1417.4	5.76e6	6513	884.4	bd	bd
10	23478-PeCDF	3.77e5	2.48e5	6.25e5	33.59	1.000	1.52	NO	47.770	0.0873	0.943	0.987	-4.5	1.02e7	6419	1594.1	6.78e6	6513	1040.9	bb	bb
11	123478-HxCDF	3.05e5	2.47e5	5.52e5	35.59	1.000	1.24	NO	48.887	0.157	1.063	1.087	-2.2	7.29e6	8845	823.7	5.91e6	8841	669.0	bd	bd
12	123678-HxCDF	3.22e5	2.58e5	5.80e5	35.70	1.001	1.25	NO	49.573	0.166	1.032	1.041	-0.9	7.08e6	8845	800.0	6.00e6	8841	678.2	dd	db
13	234678-HxCDF	3.07e5	2.50e5	5.57e5	36.16	1.001	1.23	NO	49.058	0.176	1.114	1.136	-1.9	7.02e6	8845	793.4	5.74e6	8841	649.1	bb	bb
14	123789-HxCDF	2.67e5	2.11e5	4.78e5	36.89	1.000	1.26	NO	48.780	0.215	1.035	1.061	-2.4	5.60e6	8845	633.2	4.48e6	8841	507.0	bb	bb
15	1234678-HpCDF	2.60e5	2.48e5	5.09e5	38.33	1.001	1.05	NO	51.908	0.166	1.194	1.150	3.8	4.78e6	6404	747.1	4.68e6	5704	820.7	bd	bb
16	1234789-HpCDF	2.18e5	2.13e5	4.31e5	40.14	1.000	1.02	NO	50.380	0.224	1.211	1.202	0.8	3.30e6	6404	515.1	3.27e6	5704	573.3	bb	bb
17	OCDF	3.75e5	4.22e5	7.97e5	43.82	1.007	0.89	NO	91.301	0.185	1.034	1.133	-8.7	4.55e6	3239	1405.8	5.06e6	4753	1064.3	bb	bb
18	13C-2378-TCDD	4.91e5	6.43e5	1.13e6	30.68	1.024	0.76	NO	98.984	0.210	1.117	1.128	-1.0	6.82e6	8247	827.0	8.84e6	4037	2190.6	bb	bb
19	13C-12378-PeCDD	5.59e5	3.58e5	9.17e5	33.76	1.126	1.56	NO	120.188	0.239	0.903	0.751	20.2	1.50e7	5122	2925.1	9.88e6	4202	2351.7	bb	bb
20	13C-123478-HxCDD	4.96e5	3.91e5	8.87e5	36.27	0.991	1.27	NO	97.853	0.173	0.877	0.896	-2.1	1.12e7	8217	1368.3	8.86e6	4619	1917.5	bd	bd
21	13C-123678-HxCDD	5.36e5	4.31e5	9.67e5	36.35	0.994	1.25	NO	96.947	0.157	0.956	0.986	-3.1	1.19e7	8217	1452.2	9.68e6	4619	2095.3	dd	dd
22	13C-1234678-HpCDD	4.04e5	3.91e5	7.95e5	39.50	1.080	1.03	NO	117.017	0.188	0.786	0.672	17.0	6.74e6	5496	1226.2	6.45e6	4968	1297.4	bb	bb
23	13C-OCDD	7.18e5	8.23e5	1.54e6	43.54	1.190	0.87	NO	237.300	0.205	0.762	0.642	18.7	8.90e6	4810	1850.7	1.02e7	6084	1682.7	bb	bd
24	13C-2378-TCDF	5.88e5	7.77e5	1.37e6	29.75	0.993	0.76	NO	107.601	0.303	1.345	1.250	7.6	7.31e6	12202	599.5	9.54e6	7458	1278.8	bb	bb
25	13C-12378-PeCDF	7.47e5	4.91e5	1.24e6	32.98	1.100	1.52	NO	120.686	0.457	1.220	1.011	20.7	2.01e7	11508	1749.3	1.29e7	12484	1034.5	bb	bd
26	13C-23478-PeCDF	8.04e5	5.22e5	1.33e6	33.58	1.120	1.54	NO	122.864	0.435	1.306	1.063	22.9	2.27e7	11508	1976.8	1.42e7	12484	1138.7	db	db
27	13C-123478-HxCDF	3.53e5	6.86e5	1.04e6	35.58	0.973	0.51	NO	92.449	0.173	1.027	1.111	-7.6	8.77e6	7356	1192.0	1.64e7	8543	1921.5	bd	bd
28	13C-123678-HxCDF	3.76e5	7.48e5	1.12e6	35.68	0.975	0.50	NO	89.111	0.154	1.111	1.247	-10.9	8.57e6	7356	1164.4	1.72e7	8543	2016.1	db	dd
29	13C-234678-HxCDF	3.39e5	6.61e5	9.99e5	36.14	0.988	0.51	NO	91.307	0.178	0.988	1.082	-8.7	7.51e6	7356	1020.4	1.48e7	8543	1736.2	bb	bb
30	13C-123789-HxCDF	3.11e5	6.13e5	9.24e5	36.88	1.008	0.51	NO	94.426	0.199	0.913	0.967	-5.6	6.52e6	7356	886.5	1.26e7	8543	1474.4	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld
 Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	2.59e5	5.93e5	8.52e5	38.31	1.047	0.44	NO	96.857	0.137	0.843	0.870	-3.1	4.82e6	3924	1228.4	1.11e7	5928	1876.7	bb	bb
32	13C-1234789-HpCDF	2.14e5	4.98e5	7.11e5	40.13	1.097	0.43	NO	103.817	0.176	0.703	0.677	3.8	3.38e6	3924	861.0	7.77e6	5928	1310.5	bb	bd
33	13C-1234-TCDD	4.43e5	5.73e5	1.02e6	29.97	0.000	0.77	NO	100.000	0.237	1.000	1.000	0.0	5.65e6	8247	685.7	7.61e6	4037	1884.3	bb	bb
34	13C-123789-HxCDD	5.63e5	4.49e5	1.01e6	36.59	0.000	1.26	NO	100.000	0.155	1.000	1.000	0.0	1.15e7	8217	1401.0	9.17e6	4619	1985.2	dd	dd
35	37Cl+2378-TCDD	1.04e5		1.04e5	30.70	1.024			9.612	0.0568	1.020	1.061	-3.9	1.48e6	3130	472.7				bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld

Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

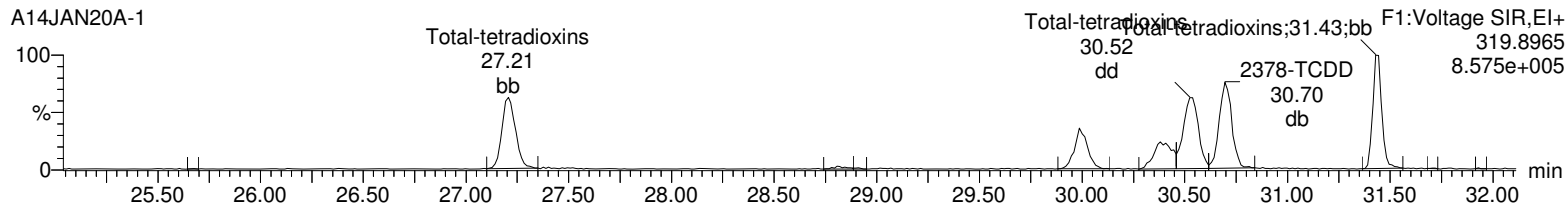
Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A13JAN20.mdb 13 Jan 2020 13:57:24

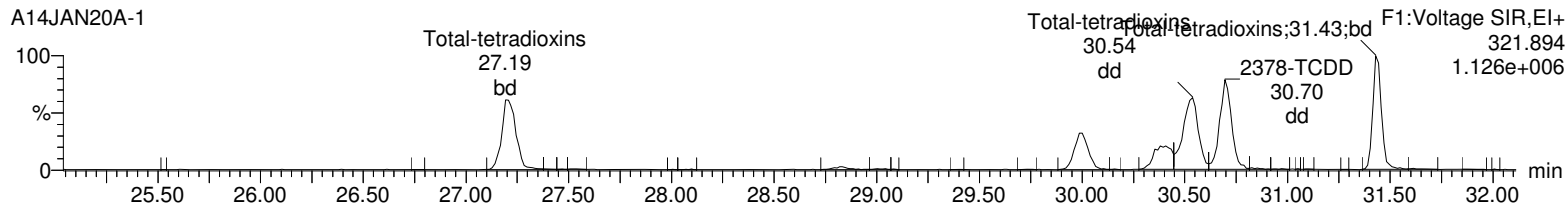
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A,
Task: HRP750_2, User: MJC

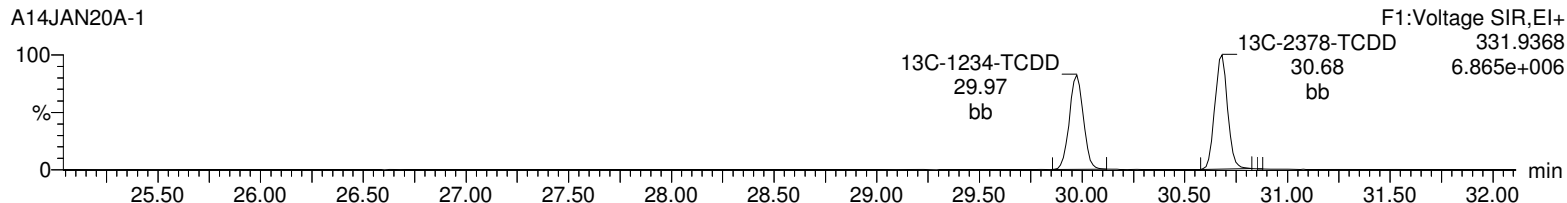
Total-tetradoxins



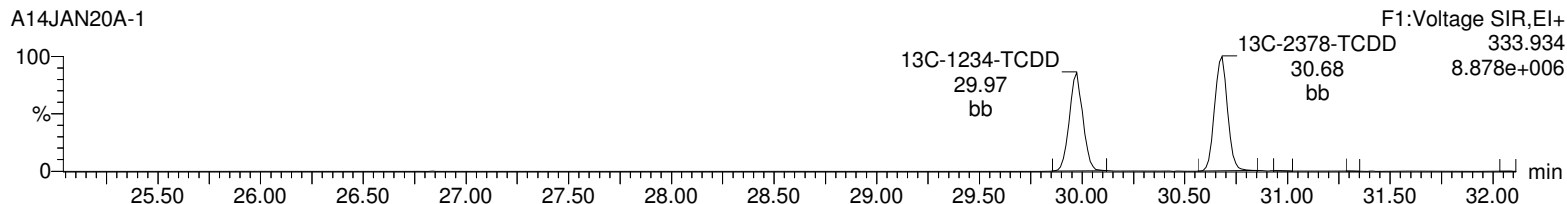
Total-tetradoxins



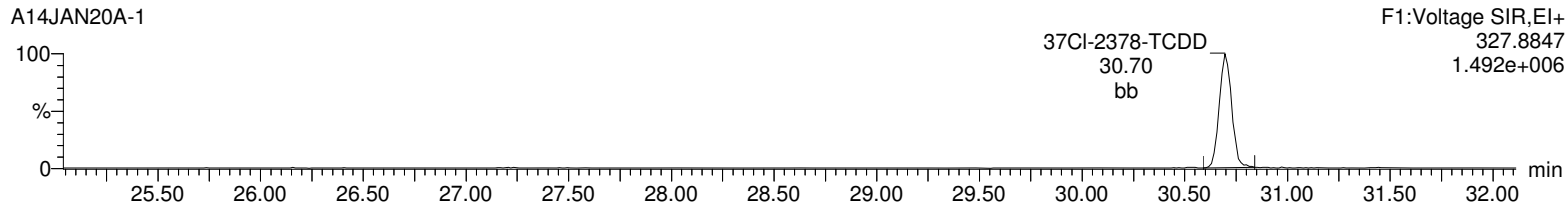
13C-2378-TCDD



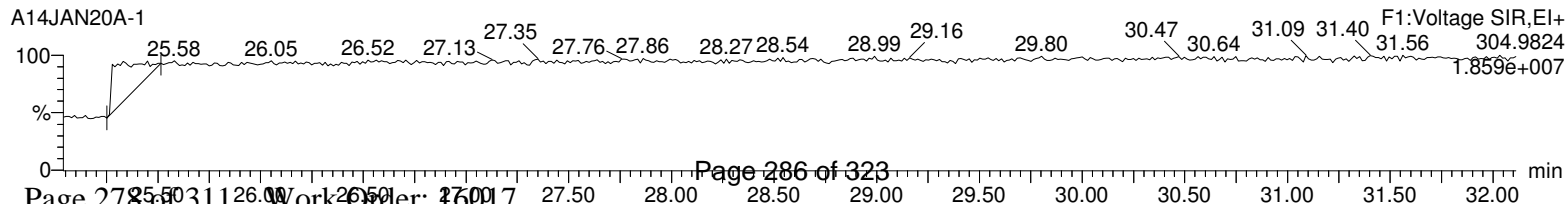
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld

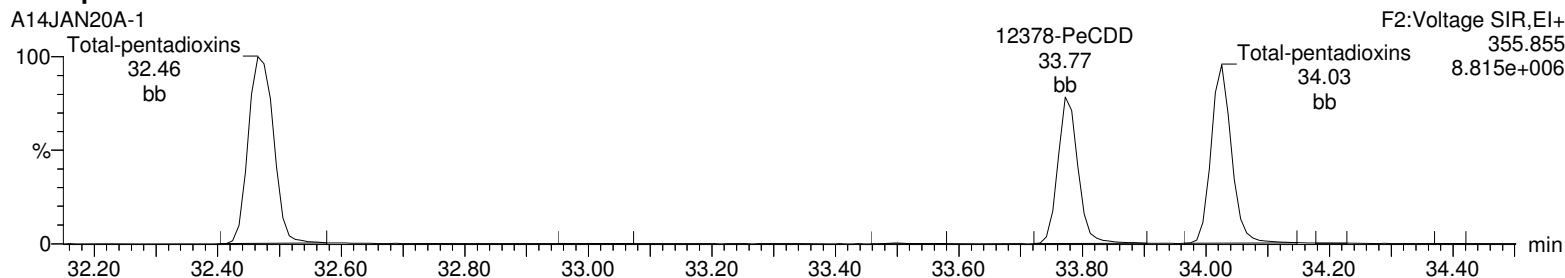
Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A,
Task: HRP750_2, User: MJC

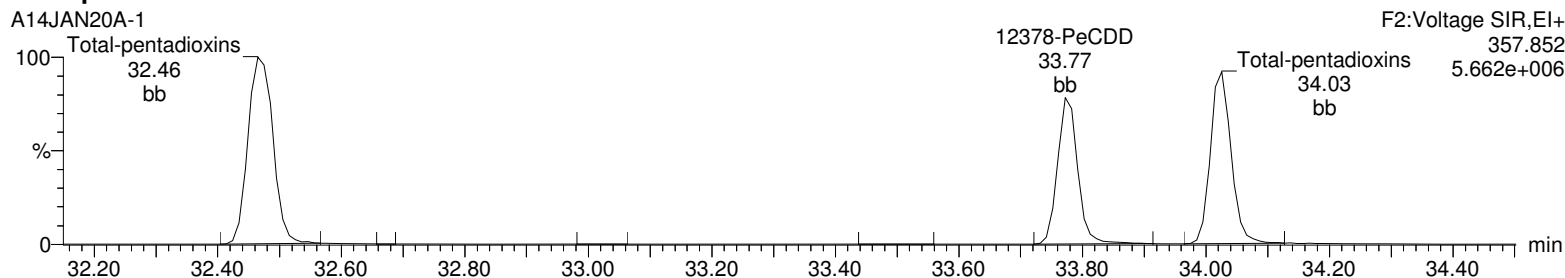
Total-pentadioxins

A14JAN20A-1



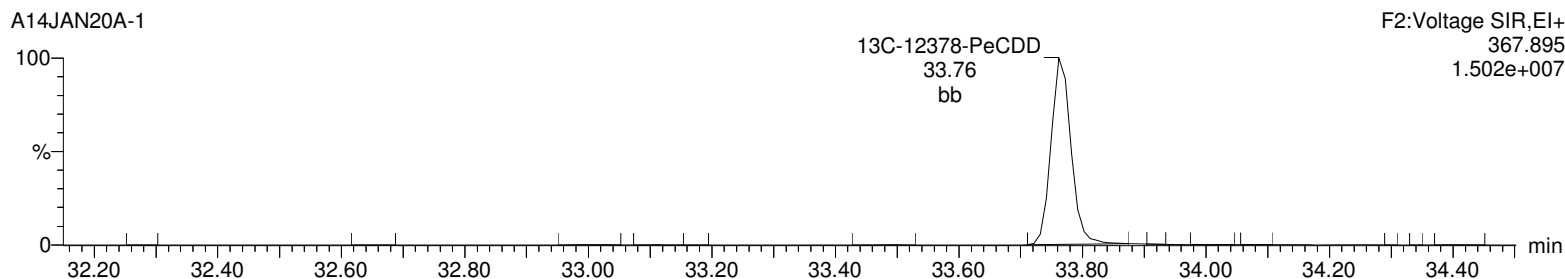
Total-pentadioxins

A14JAN20A-1



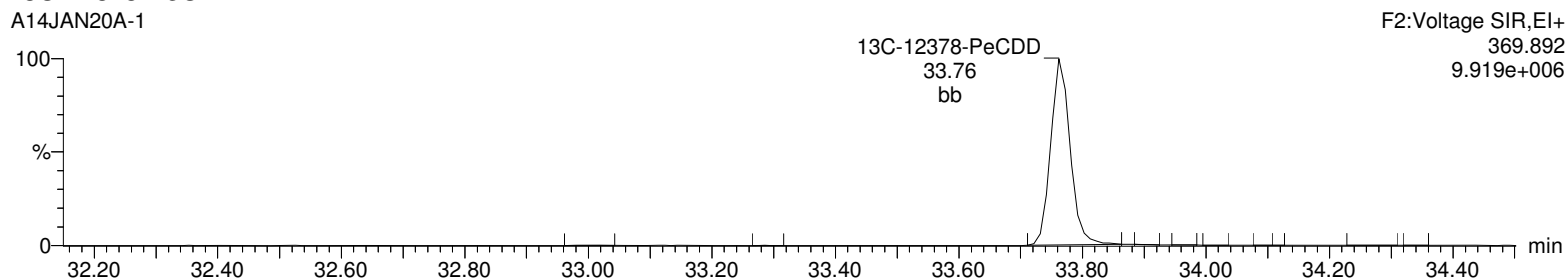
13C-12378-PeCDD

A14JAN20A-1



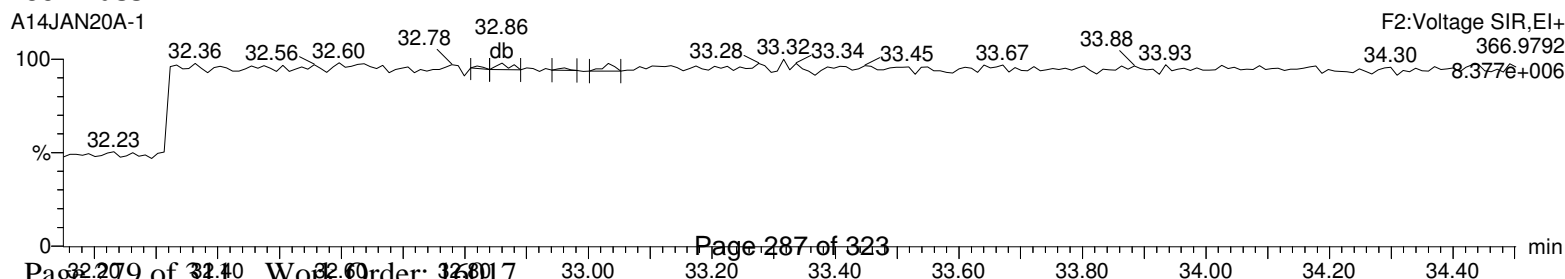
13C-12378-PeCDD

A14JAN20A-1



Lock Mass F2

A14JAN20A-1



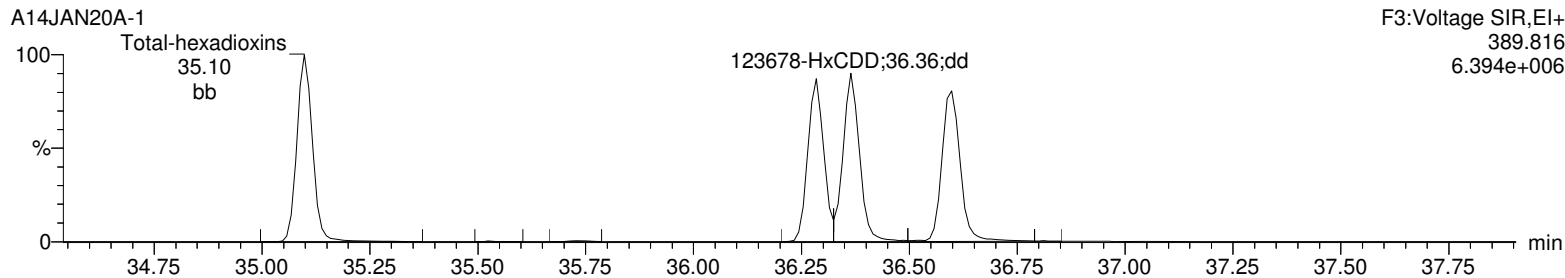
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld

Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

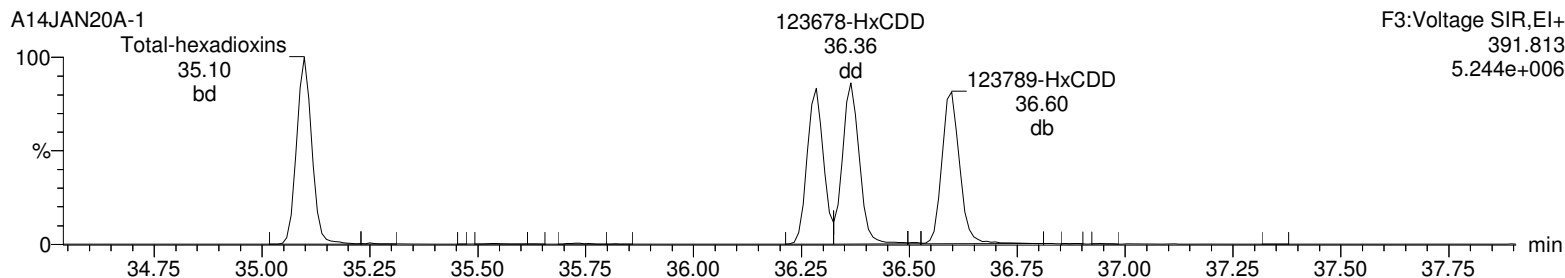
Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A,
Task: HRP750_2, User: MJC

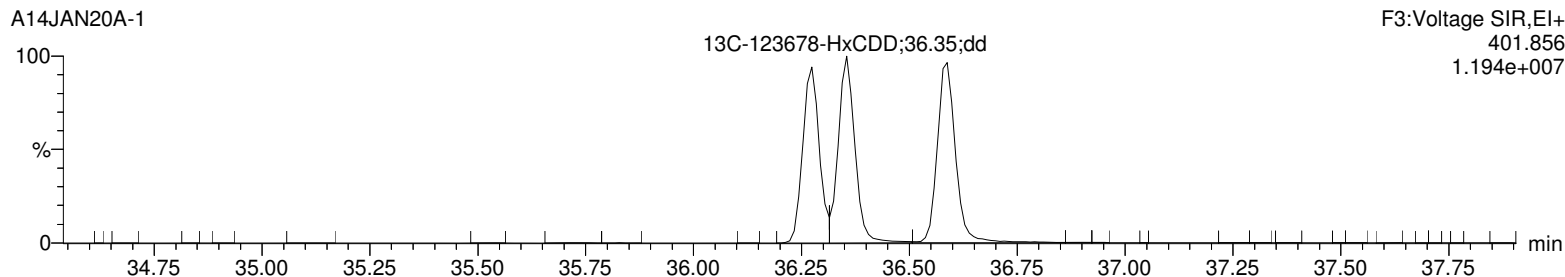
Total-hexadioxins



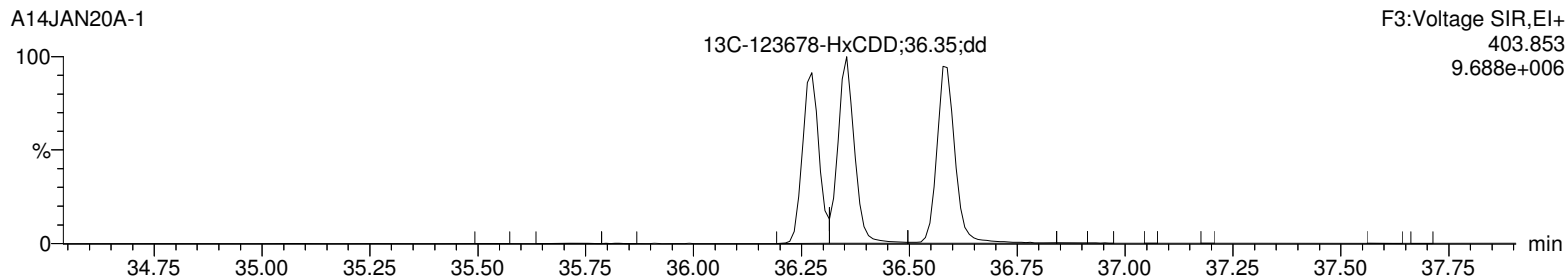
Total-hexadioxins



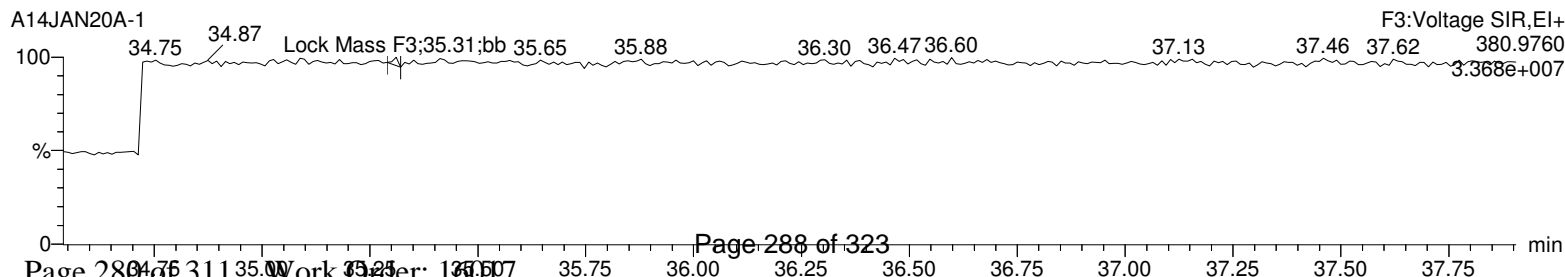
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



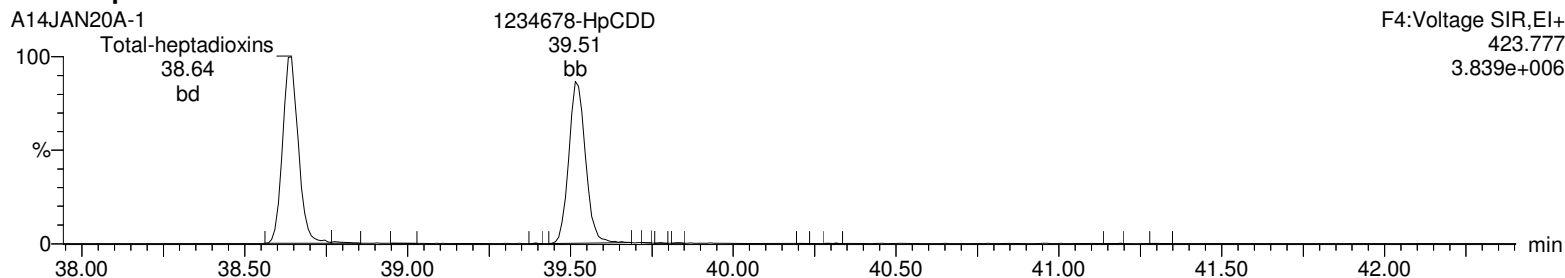
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Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

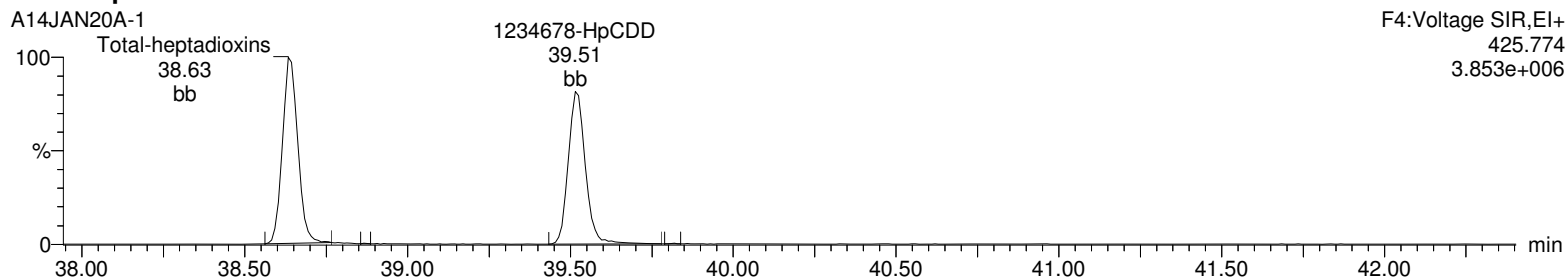
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Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A,
Task: HRP750_2, User: MJC

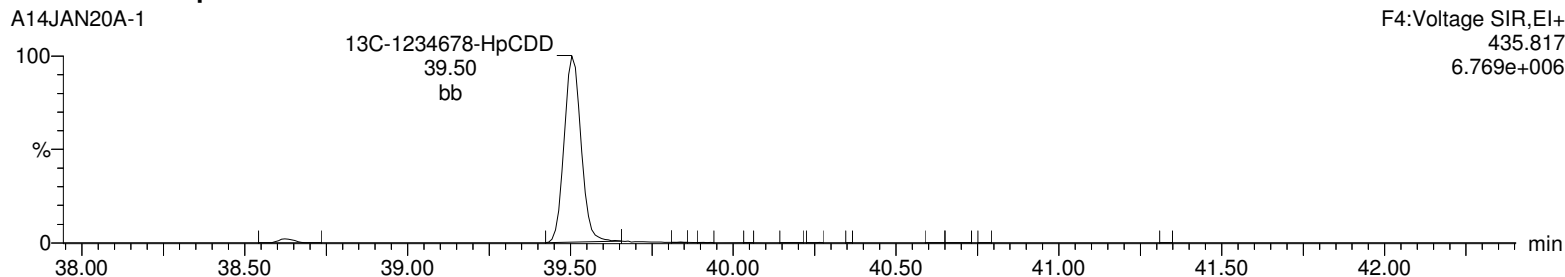
Total-heptadioxins



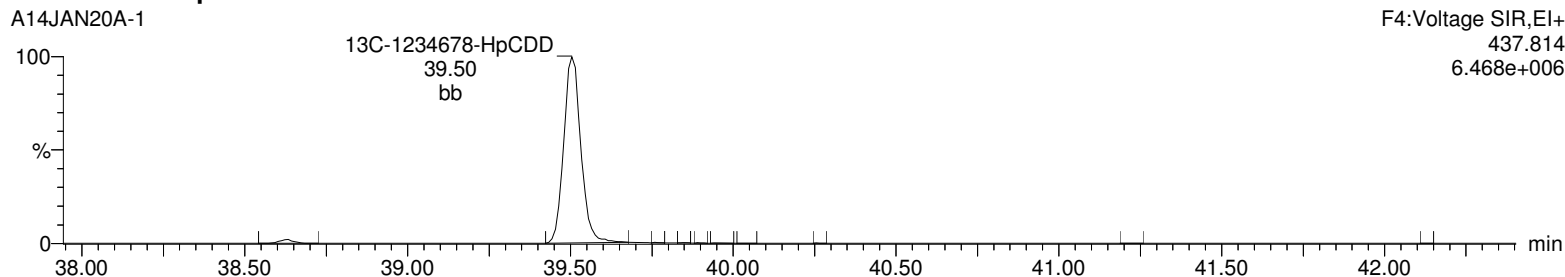
Total-heptadioxins



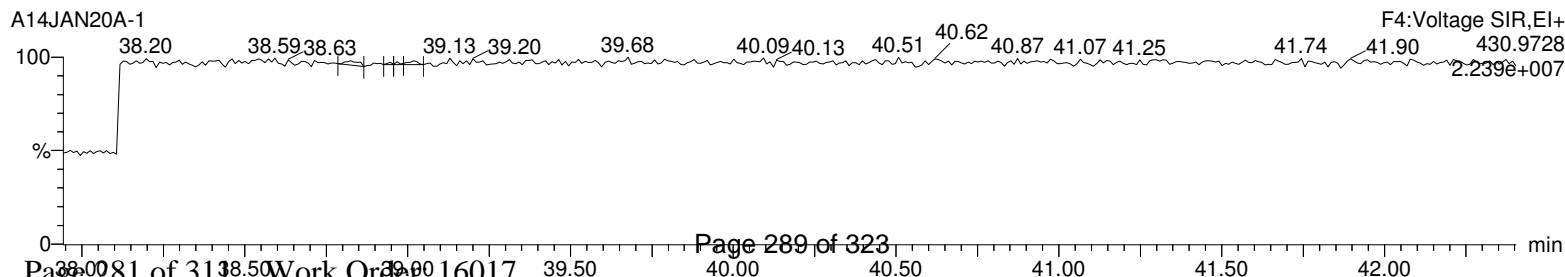
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld

Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

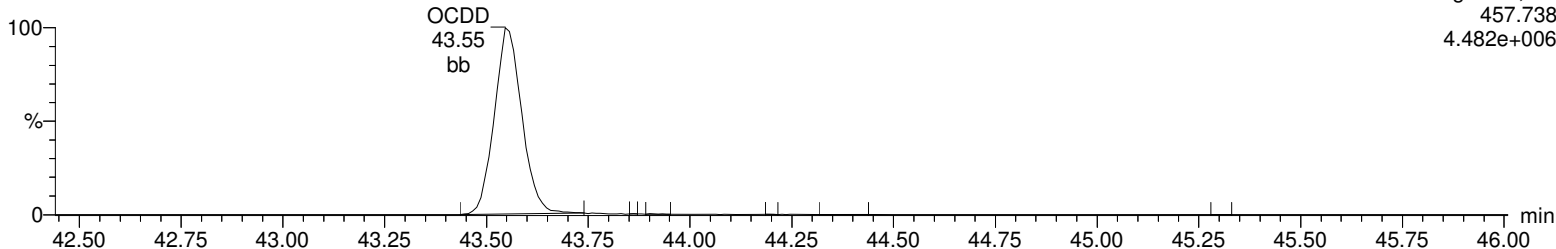
Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A,
Task: HRP750_2, User: MJC

OCDD

A14JAN20A-1

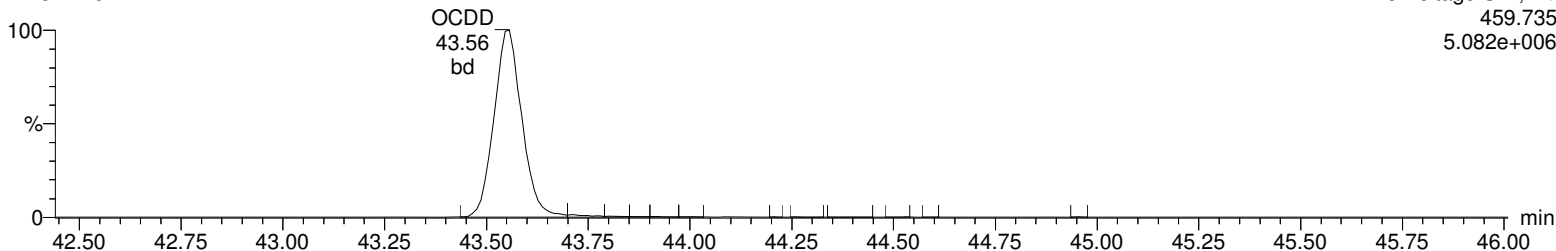
F5:Voltage SIR,EI+
457.738
4.482e+006



OCDD

A14JAN20A-1

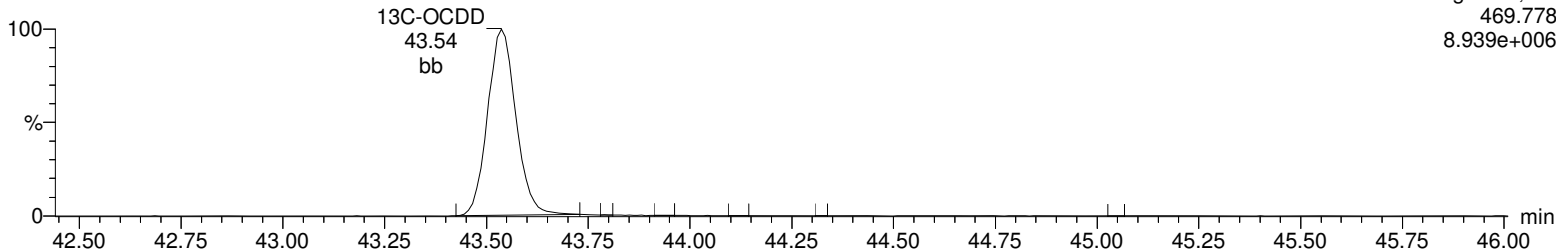
F5:Voltage SIR,EI+
459.735
5.082e+006



13C-OCDD

A14JAN20A-1

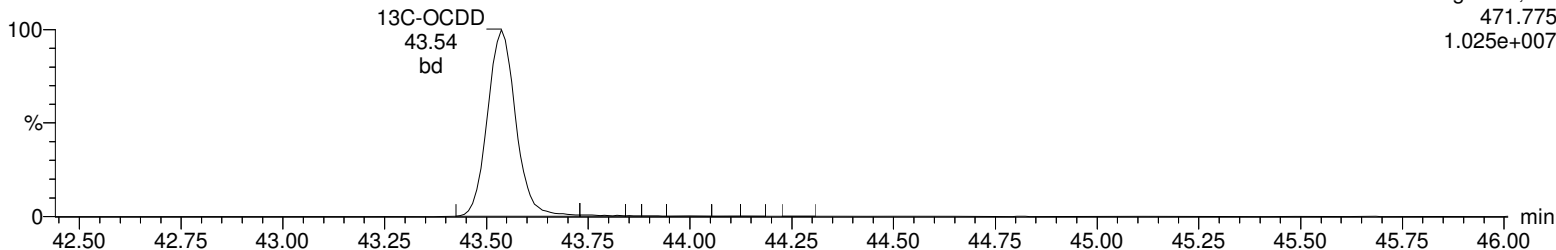
F5:Voltage SIR,EI+
469.778
8.939e+006



13C-OCDD

A14JAN20A-1

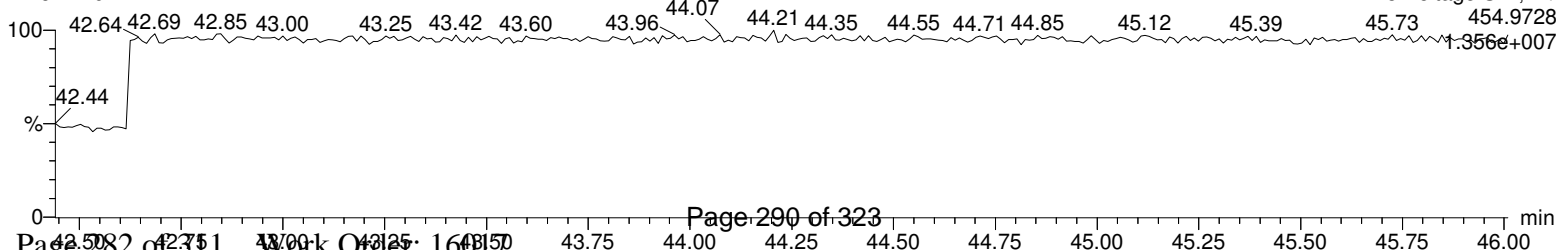
F5:Voltage SIR,EI+
471.775
1.025e+007



Lock Mass F5

A14JAN20A-1

F5:Voltage SIR,EI+
454.9728
1.356e+007



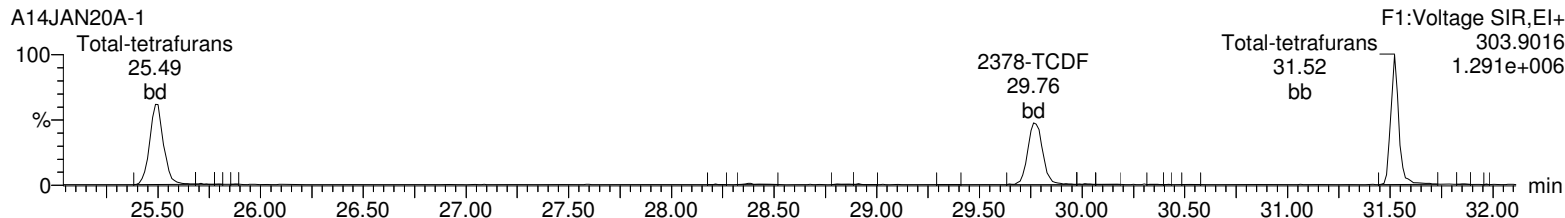
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Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

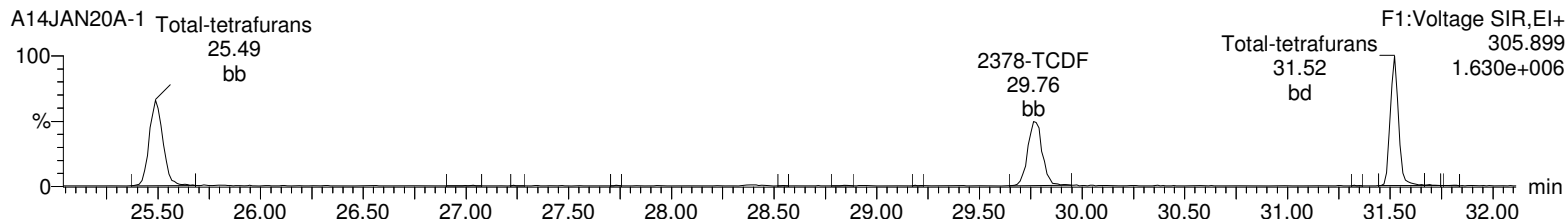
Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A,
Task: HRP750_2, User: MJC

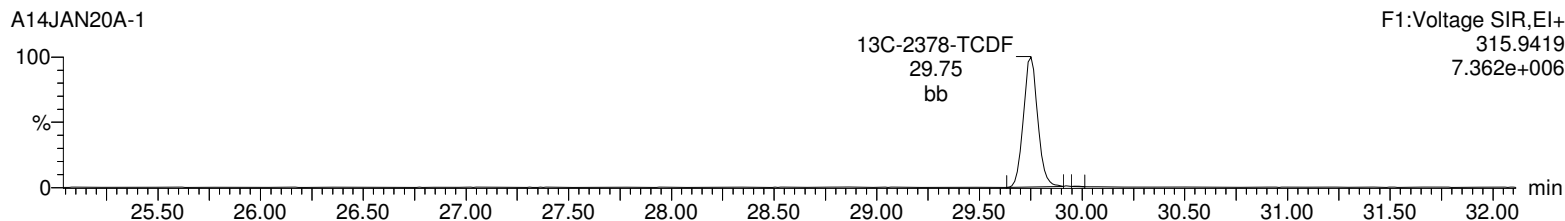
Total-tetrafurans



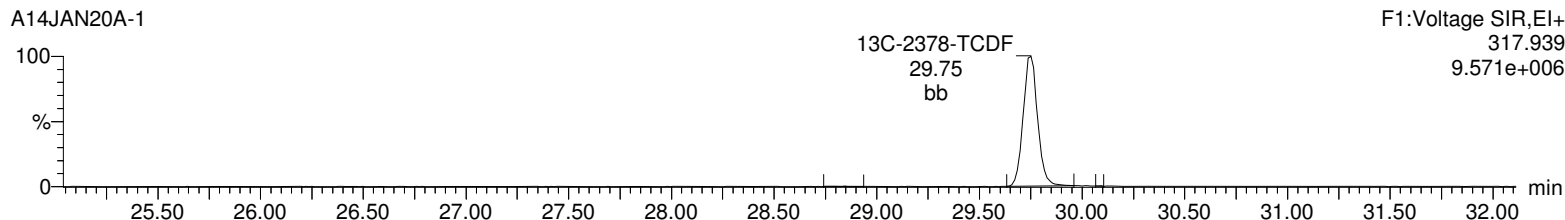
Total-tetrafurans



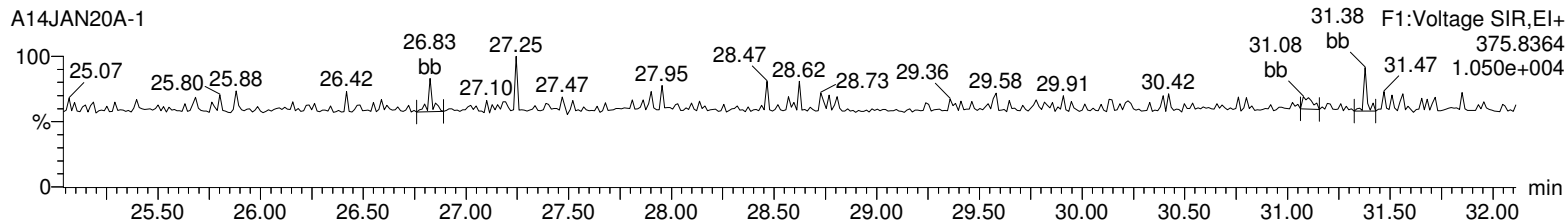
13C-2378-TCDF



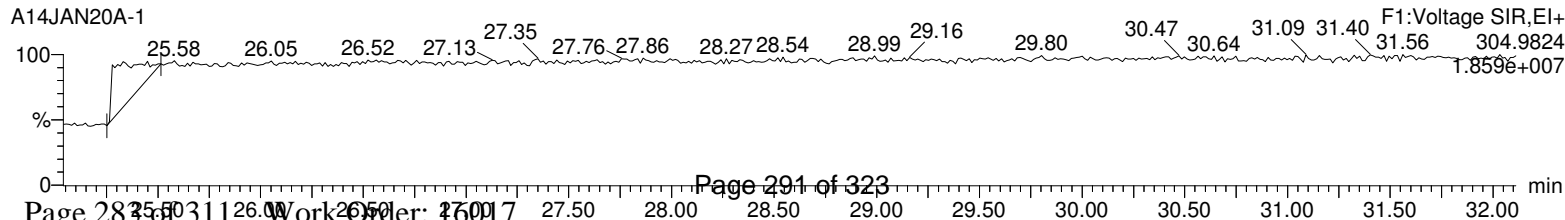
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld

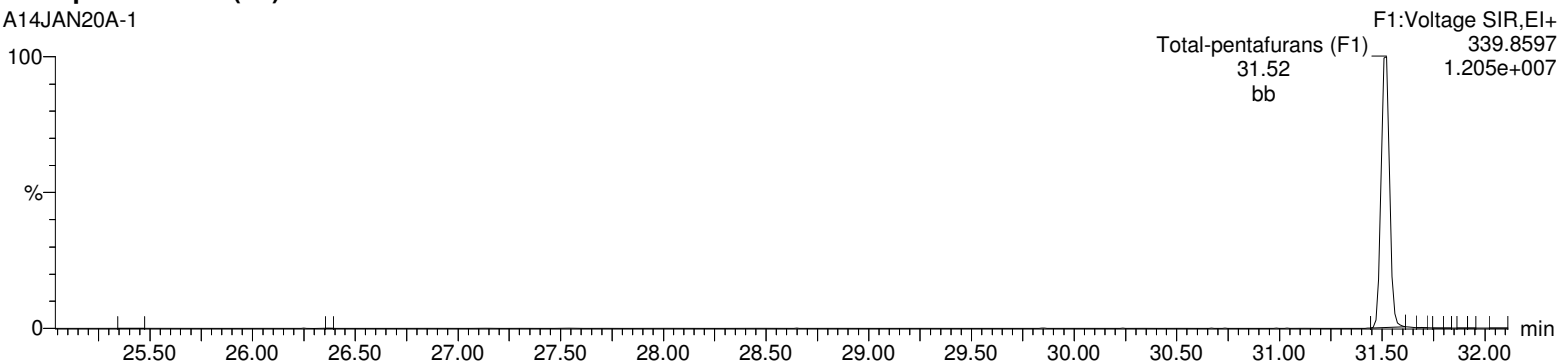
Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

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Task: HRP750_2, User: MJC

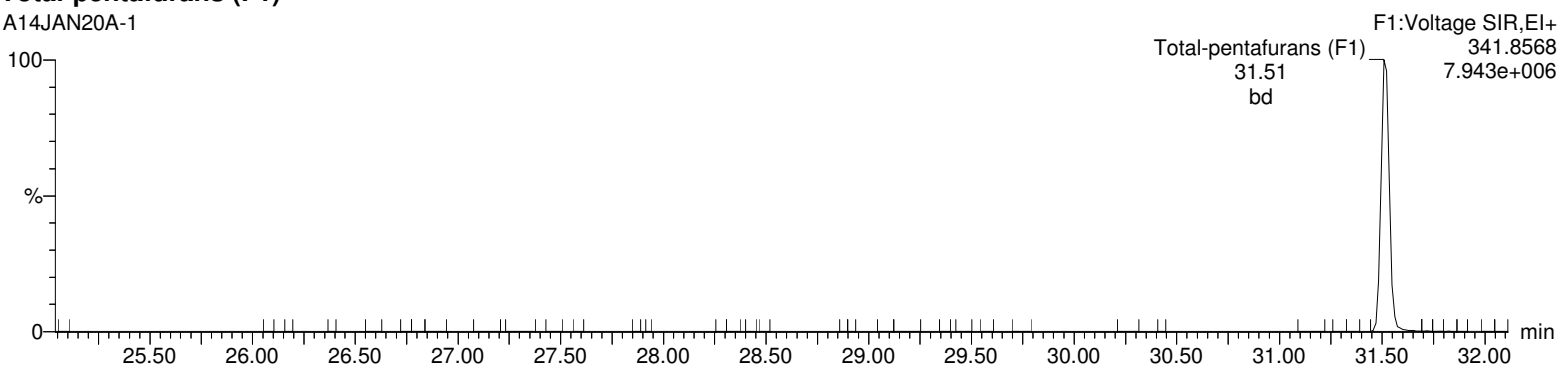
Total-pentafurans (F1)

A14JAN20A-1



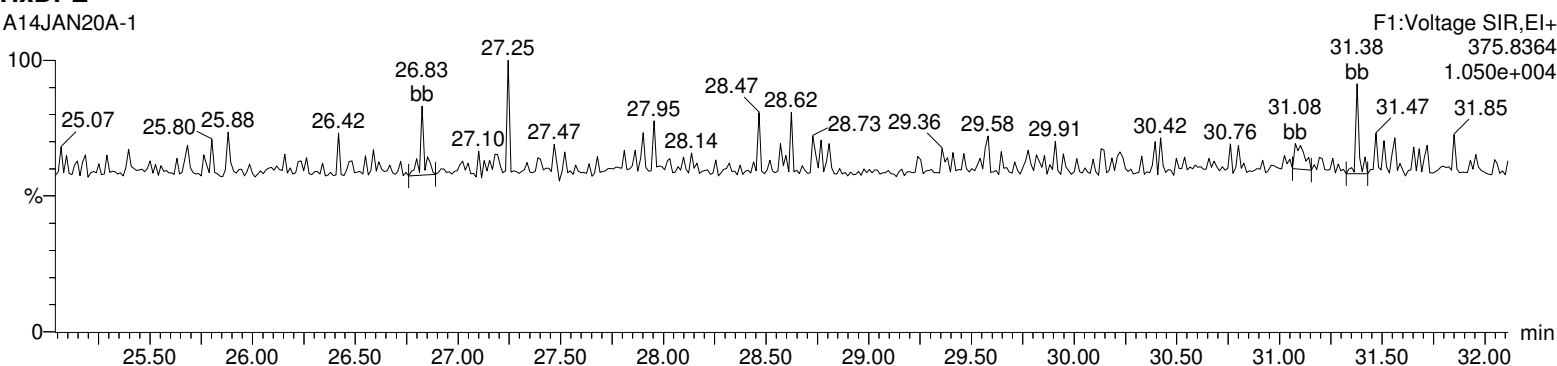
Total-pentafurans (F1)

A14JAN20A-1



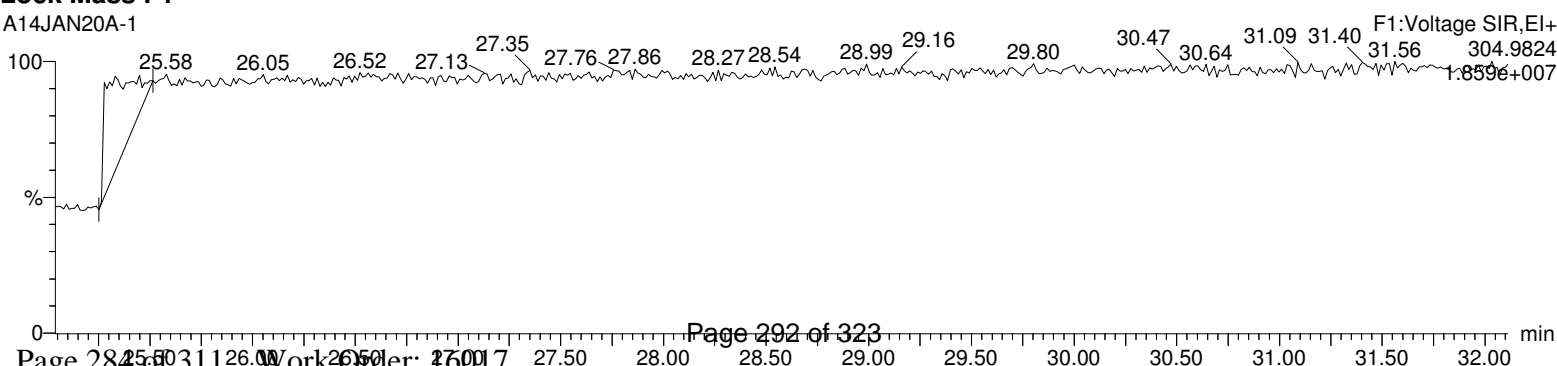
HxDPE

A14JAN20A-1



Lock Mass F1

A14JAN20A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld

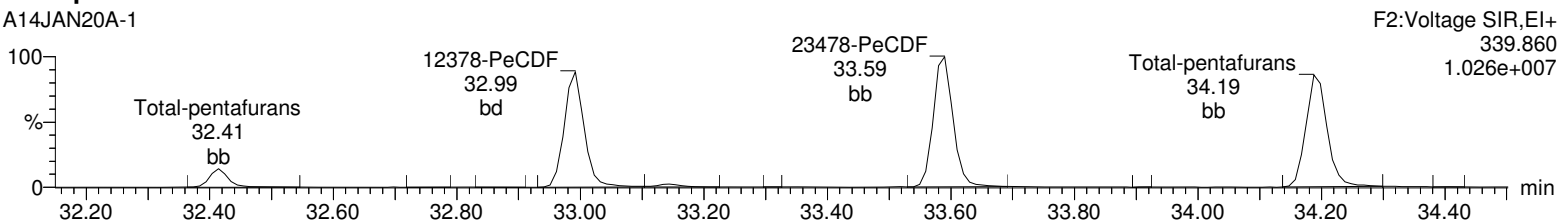
Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

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Task: HRP750_2, User: MJC

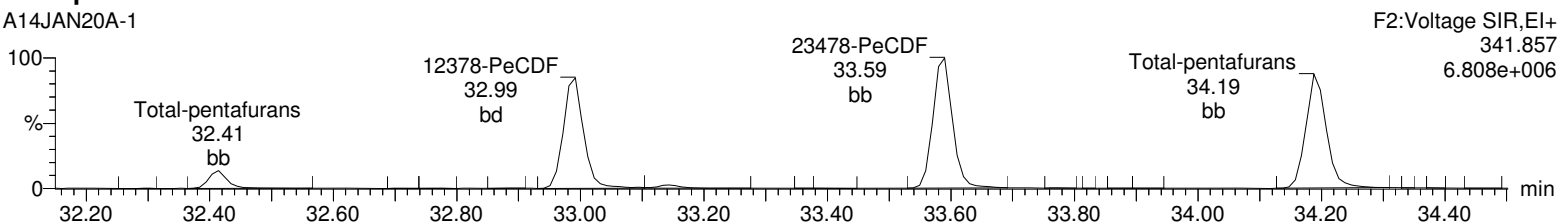
Total-pentafurans

A14JAN20A-1



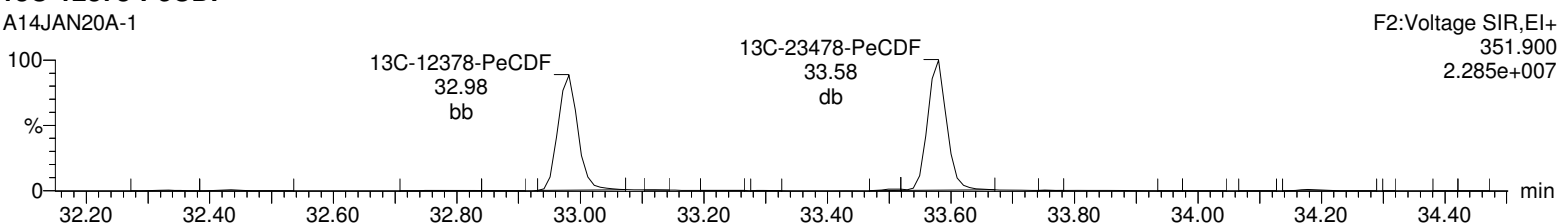
Total-pentafurans

A14JAN20A-1



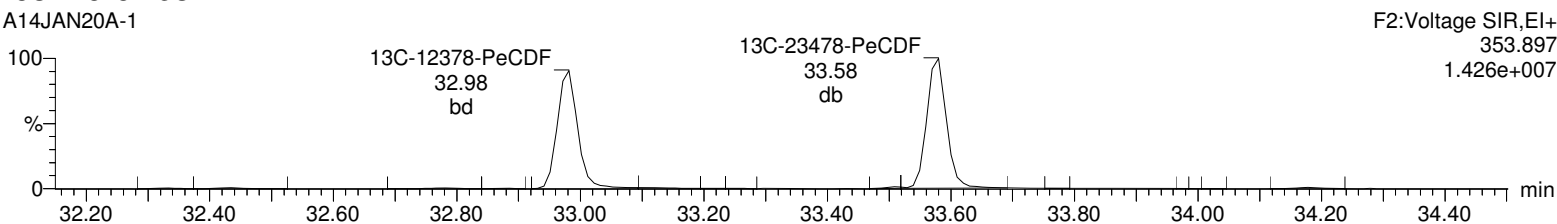
13C-12378-PeCDF

A14JAN20A-1



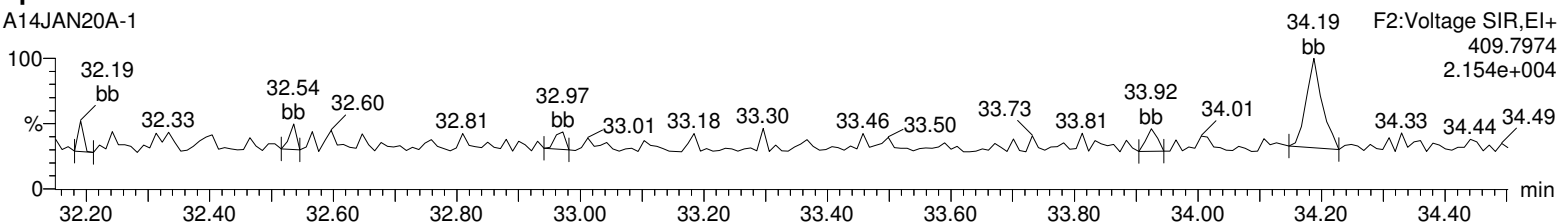
13C-12378-PeCDF

A14JAN20A-1



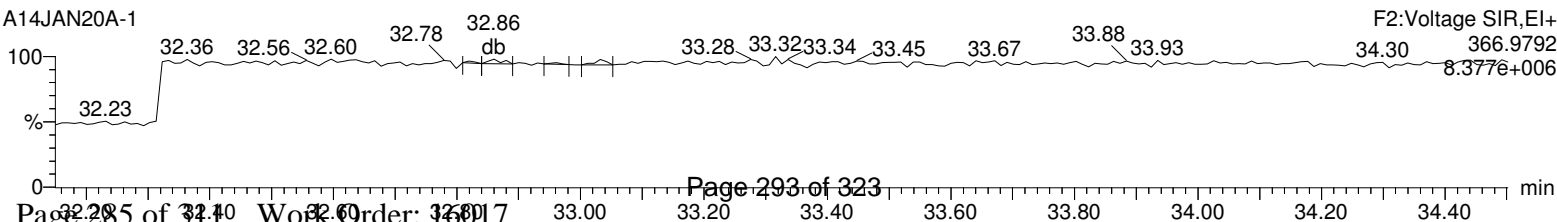
HpDPE

A14JAN20A-1



Lock Mass F2

A14JAN20A-1



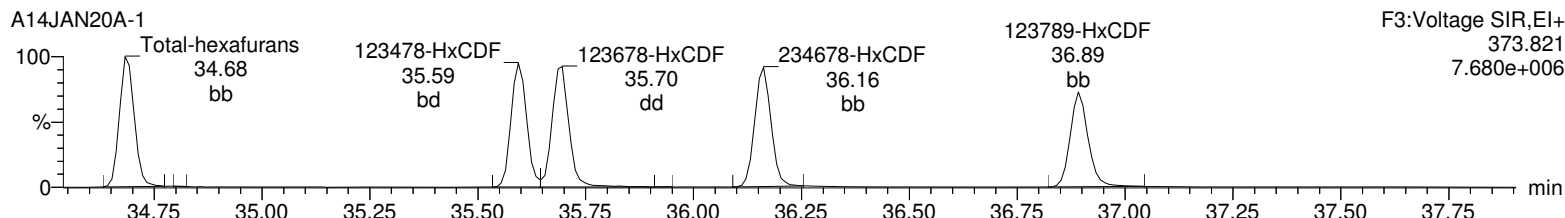
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Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

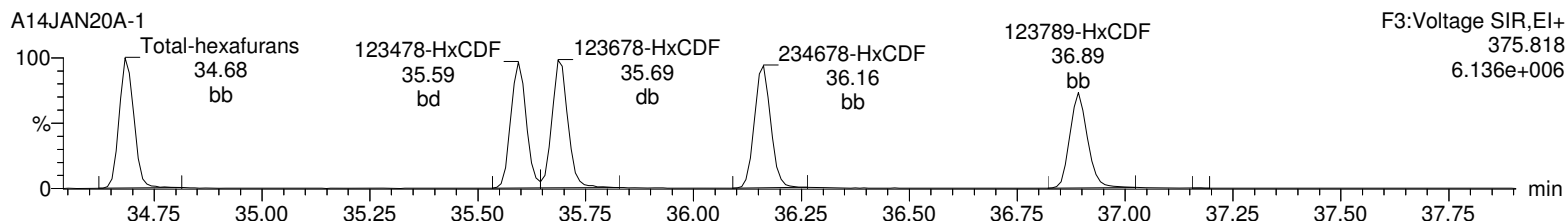
Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A,
Task: HRP750_2, User: MJC

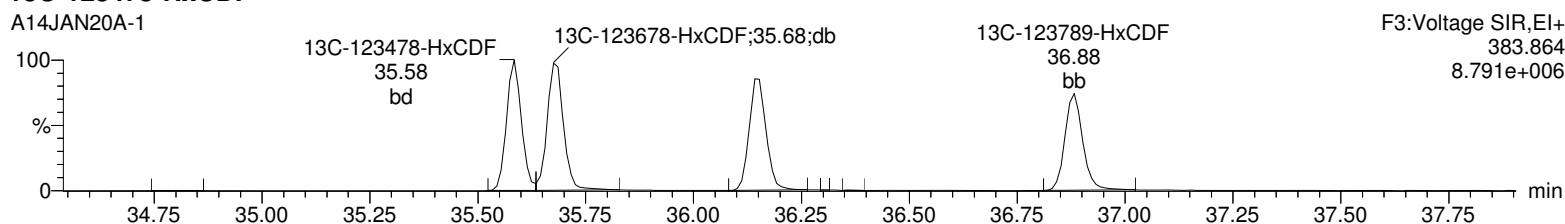
Total-hexafurans



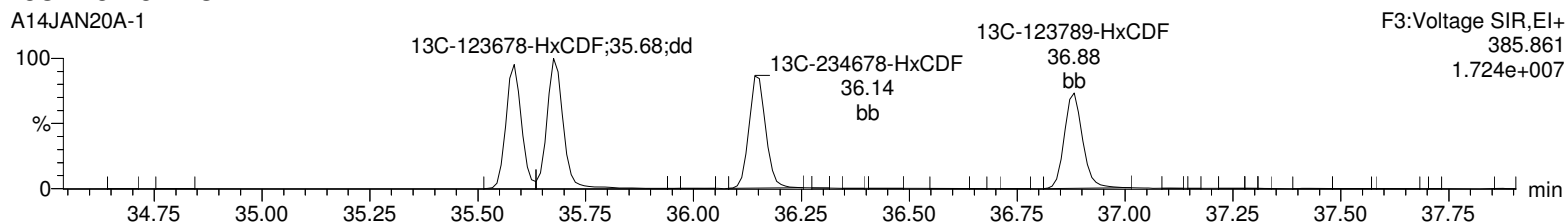
Total-hexafurans



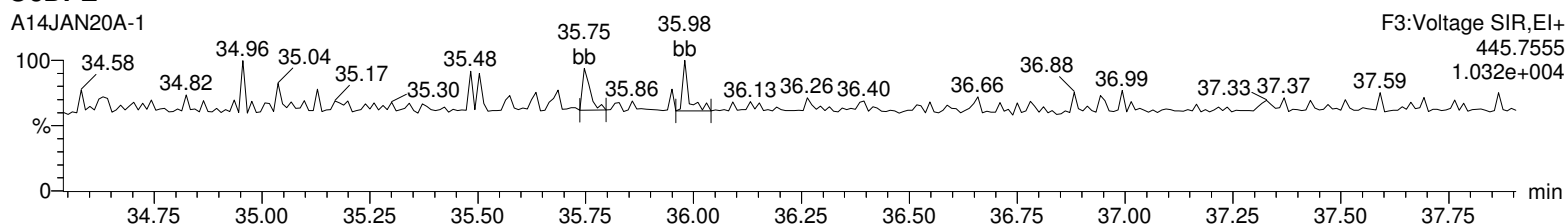
13C-123478-HxCDF



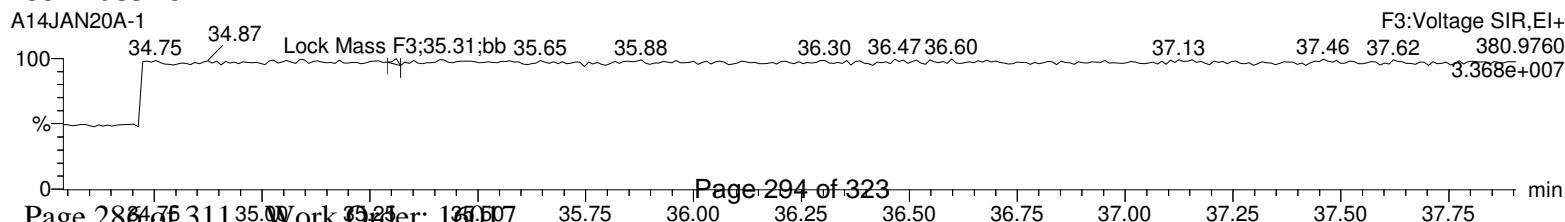
13C-123478-HxCDF



OcDPE



Lock Mass F3



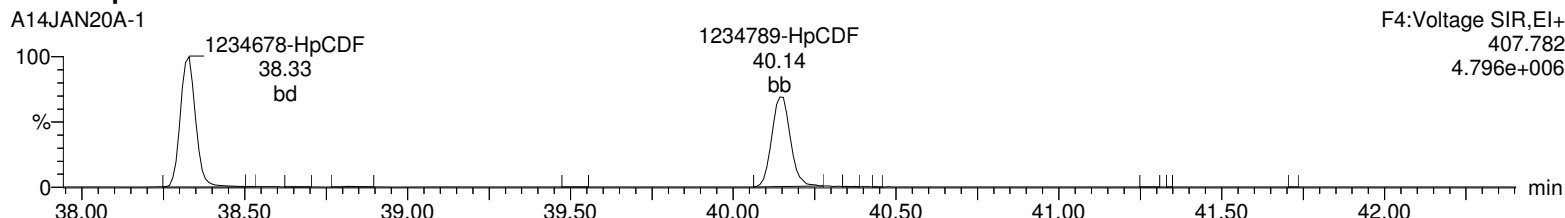
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld

Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

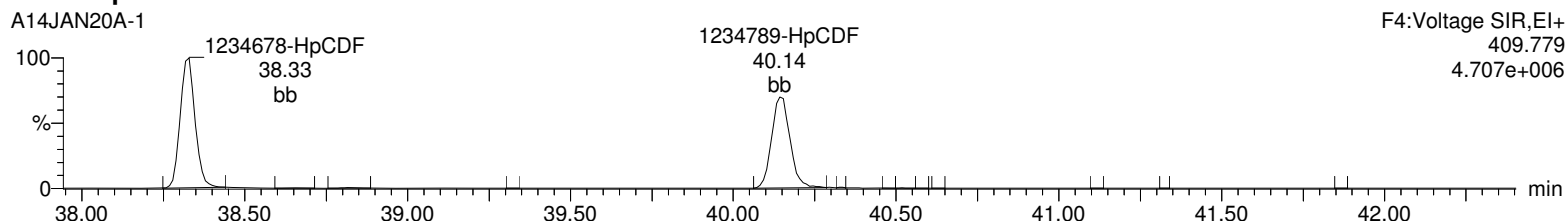
Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A,
Task: HRP750_2, User: MJC

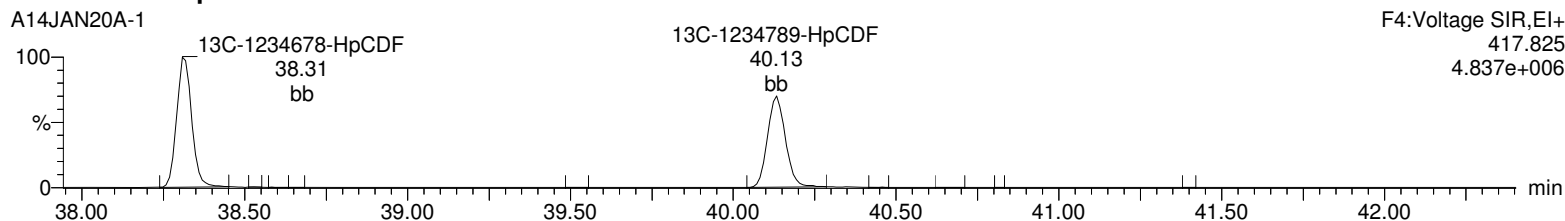
Total-heptafurans



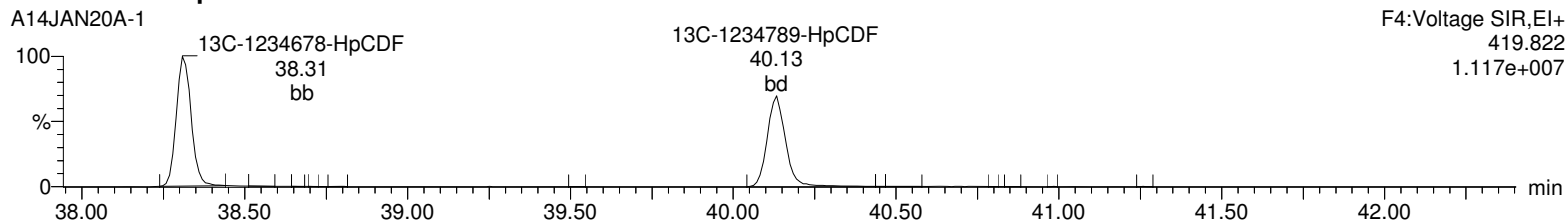
Total-heptafurans



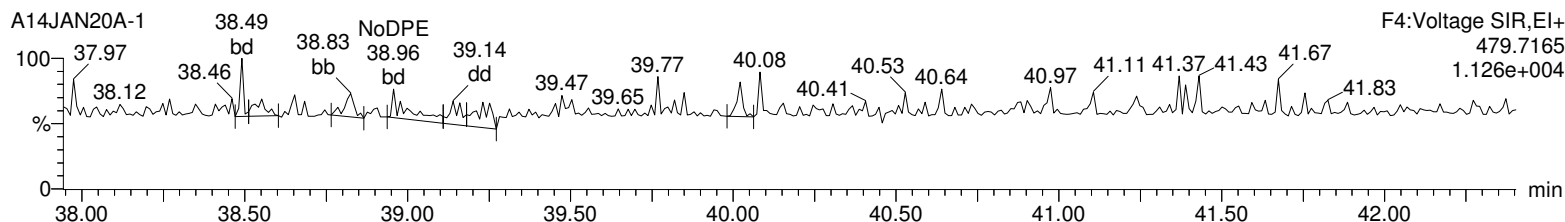
13C-1234678-HpCDF



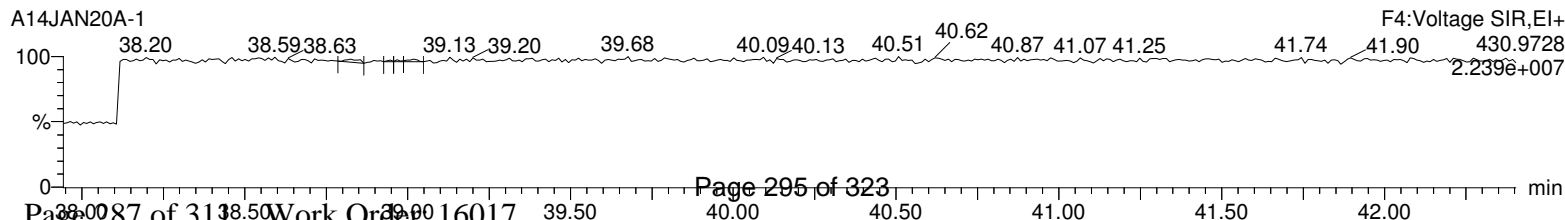
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A-1.qld

Last Altered: Wednesday, January 15, 2020 08:36:41 Eastern Standard Time

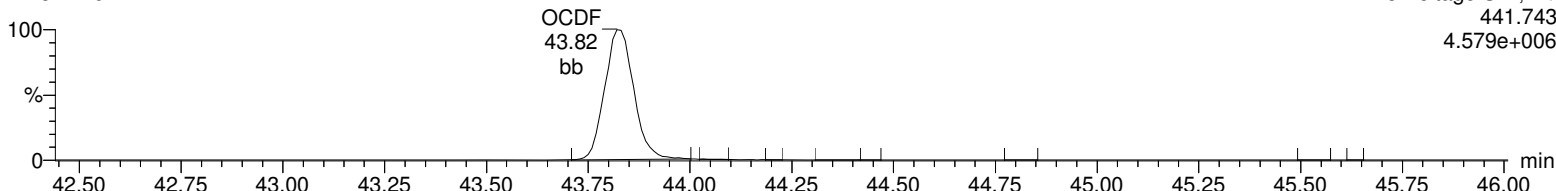
Printed: Wednesday, January 15, 2020 08:37:23 Eastern Standard Time

Name: A14JAN20A-1, Date: 14-Jan-2020, Time: 15:06:00, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A,
Task: HRP750_2, User: MJC

OCDF

A14JAN20A-1

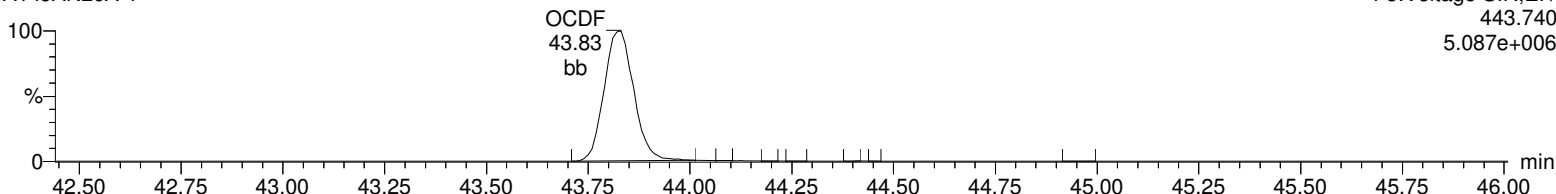
F5:Voltage SIR,EI+
441.743
4.579e+006



OCDF

A14JAN20A-1

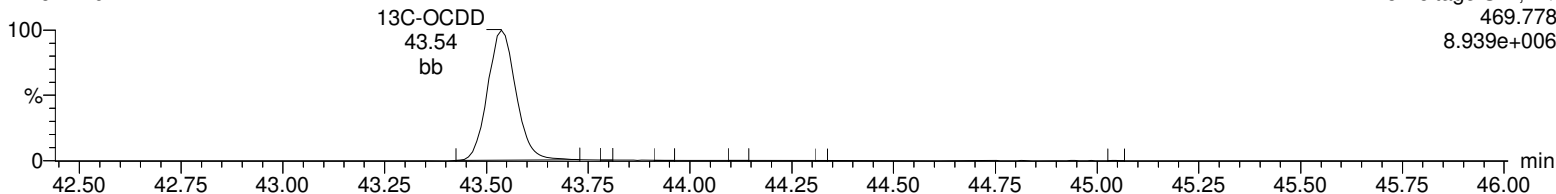
F5:Voltage SIR,EI+
443.740
5.087e+006



13C-OCDD

A14JAN20A-1

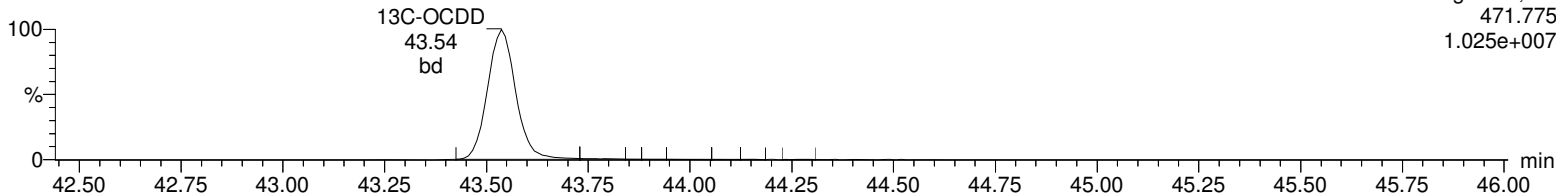
F5:Voltage SIR,EI+
469.778
8.939e+006



13C-OCDD

A14JAN20A-1

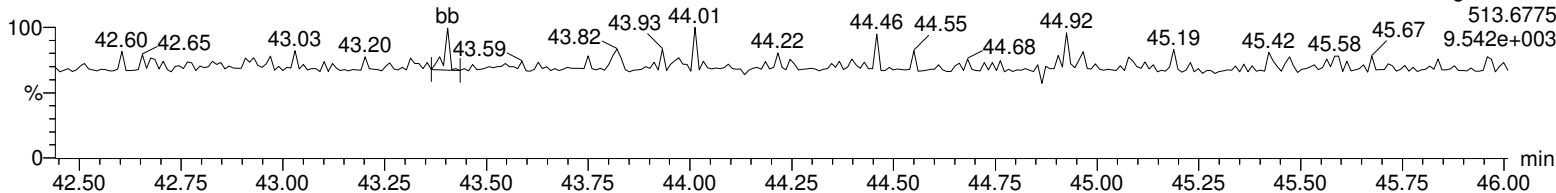
F5:Voltage SIR,EI+
471.775
1.025e+007



DeDPE

A14JAN20A-1

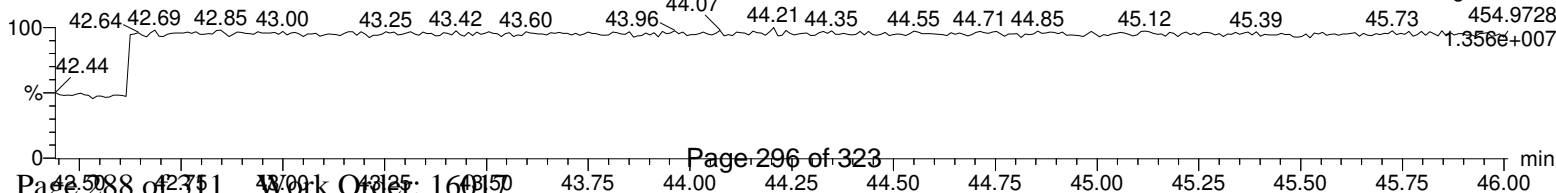
F5:Voltage SIR,EI+
513.6775
9.542e+003



Lock Mass F5

A14JAN20A-1

F5:Voltage SIR,EI+
454.9728
1.356e+007

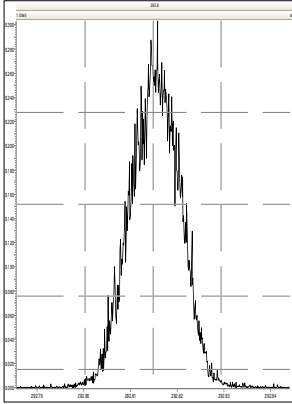


RUN LOG

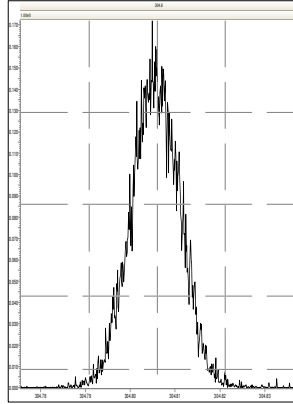
Instrument: HRP750_2

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
A14JAN20A_2-1	15-JAN-2020 03:30:35	Matt Cash	CS3WT UD191018-02.2		1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-2	15-JAN-2020 04:17:47	Matt Cash	12025733-1 LCS	42804	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-3	15-JAN-2020 05:05:39	Matt Cash	12025734-1 LCSD	42804	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-4	15-JAN-2020 05:53:33	Matt Cash	12025732-1 MB	42804	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-5	15-JAN-2020 06:41:27	Matt Cash	16025001-1	42804	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-6	15-JAN-2020 07:29:19	Matt Cash	12025735-1 MS	42804	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-7	15-JAN-2020 08:17:13	Matt Cash	12025736-1 MSD	42804	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-8	15-JAN-2020 09:05:06	Matt Cash	16025002-1	42804	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-9	15-JAN-2020 09:53:00	Matt Cash	16026001-1	42804	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-10	15-JAN-2020 10:40:53	Matt Cash	16026002-1	42804	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-11	15-JAN-2020 11:28:46	Matt Cash	16020001-1	42780	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-12	15-JAN-2020 12:16:40	Matt Cash	16017001-1	42781	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-13	15-JAN-2020 13:04:33	Matt Cash	16017002-1	42781	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-14	15-JAN-2020 13:52:25	Matt Cash	16017003-1	42781	1 uL	dioxin_db5ms	10K_dx
A14JAN20A_2-15	15-JAN-2020 14:40:19	Matt Cash	CS3WT UD191018-02.2		1 uL	dioxin_db5ms	10K_dx

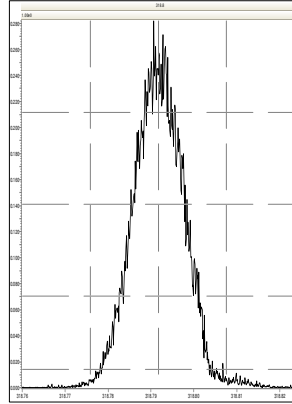
M 292.9824 R 12199



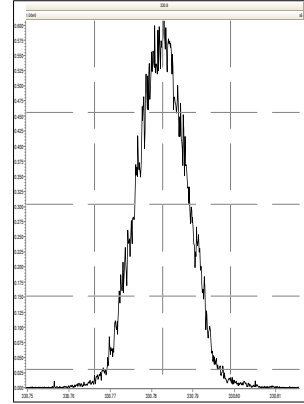
M 304.9824 R 12452



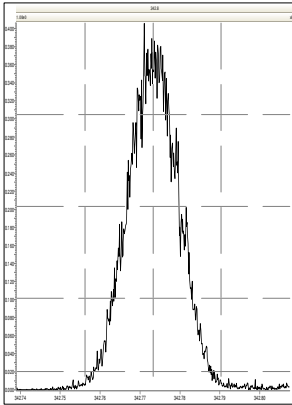
M 318.9792 R 12594



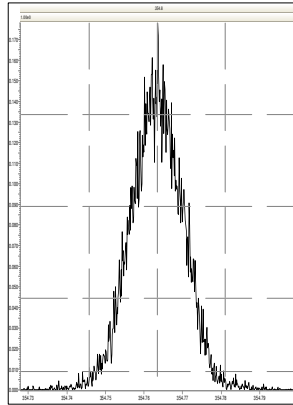
M 330.9792 R 11961



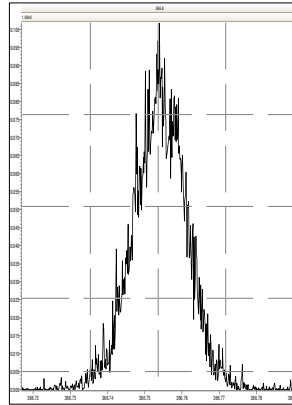
M 342.9792 R 11852



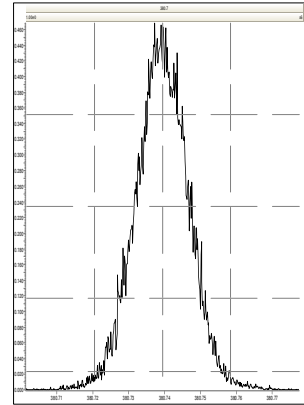
M 354.9792 R 11995



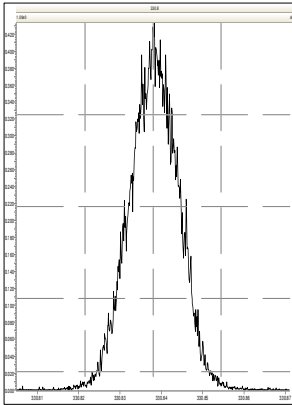
M 366.9792 R 12395



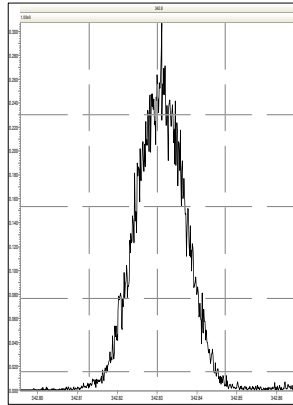
M 380.9760 R 11238



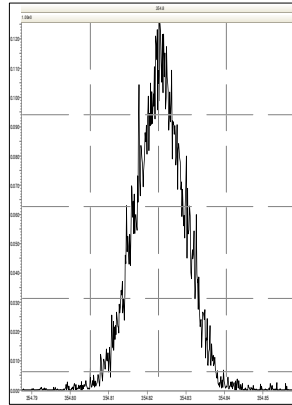
M 330.9792 R 12259



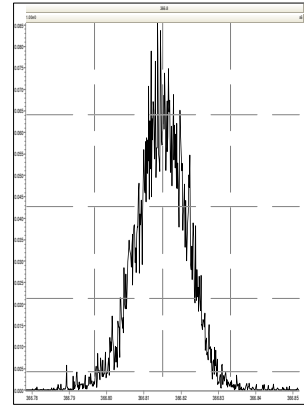
M 342.9792 R 12540



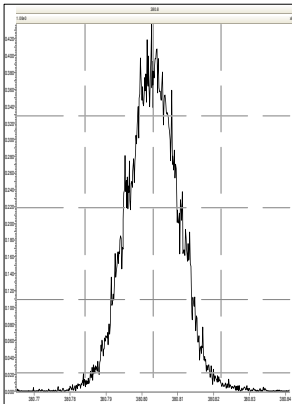
M 354.9792 R 12953



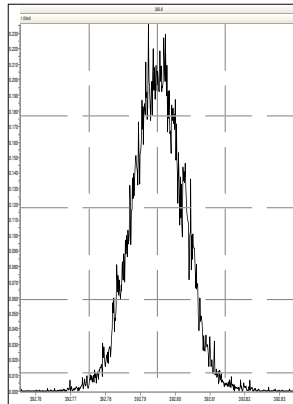
M 366.9792 R 12165



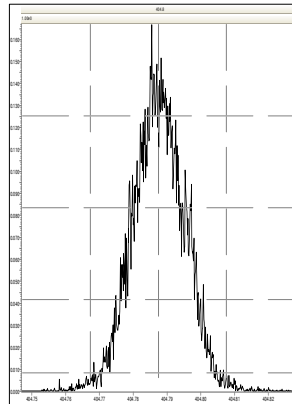
M 380.9760 R 11737



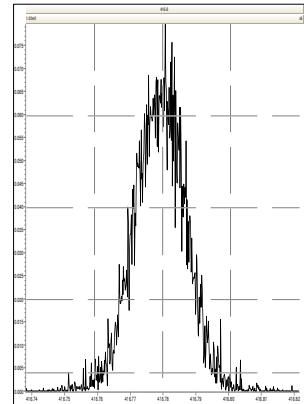
M 392.9760 R 12457



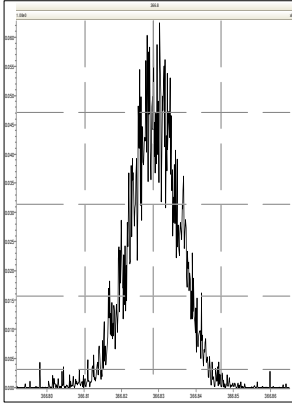
M 404.9760 R 11628



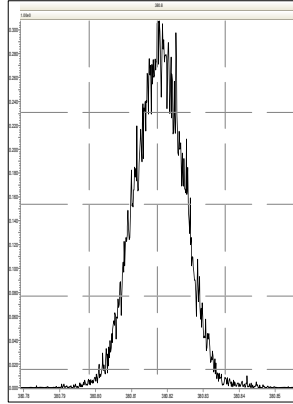
M 416.9760 R 12789



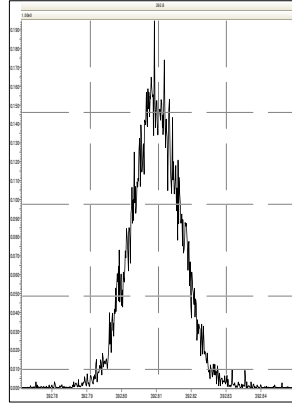
M 366.9792 R 12923



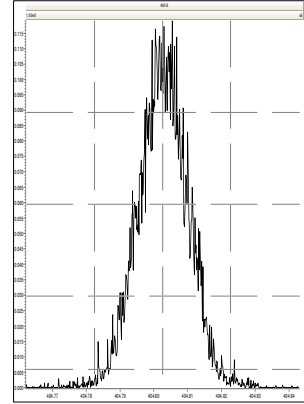
M 380.9760 R 12788



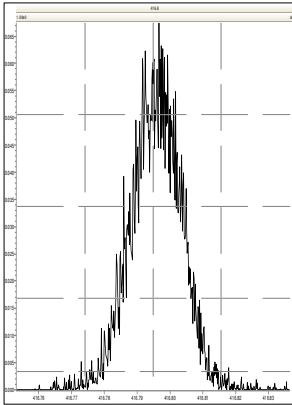
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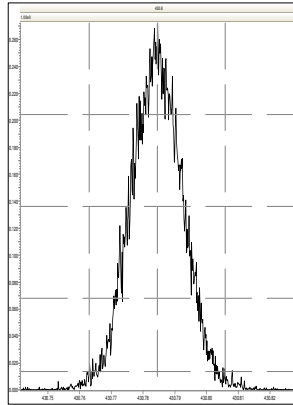
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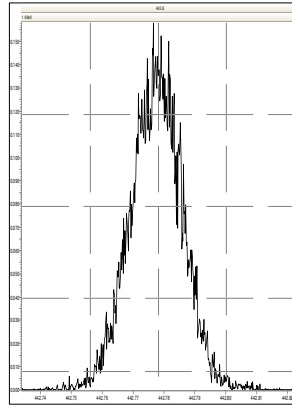
M 416.9760 R 13370



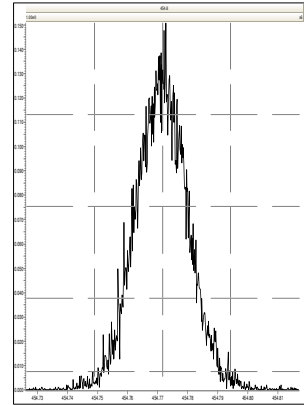
M 430.9728 R 11709



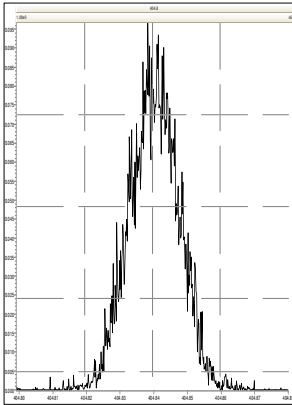
M 442.9728 R 11966



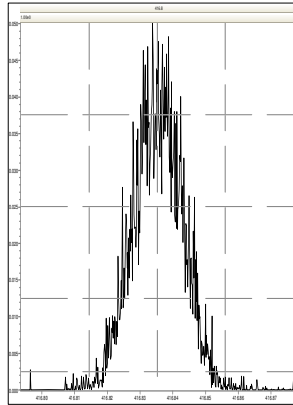
M 454.9728 R 11952



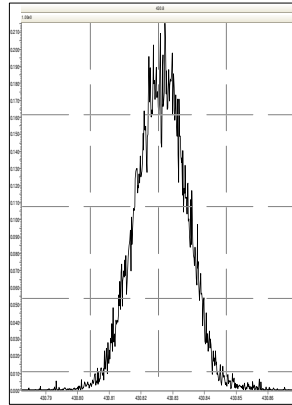
M 404.9760 R 12322



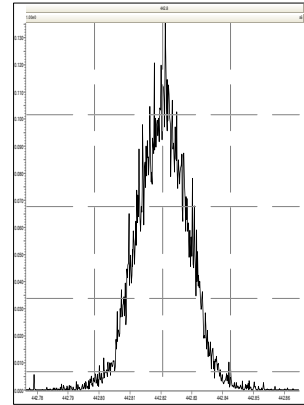
M 416.9760 R 12923



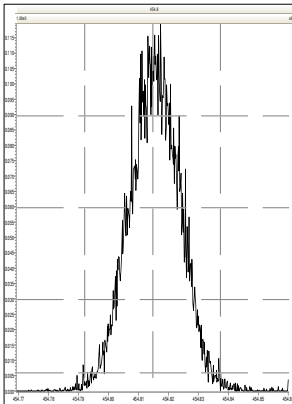
M 430.9728 R 12230



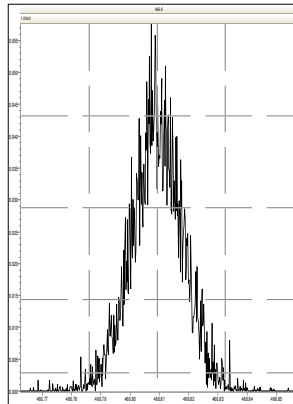
M 442.9728 R 12627



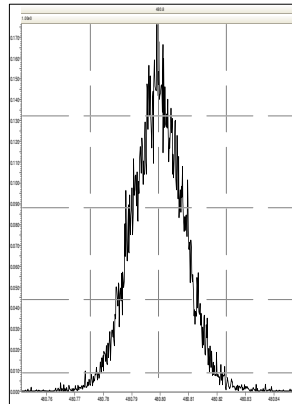
M 454.9728 R 12588



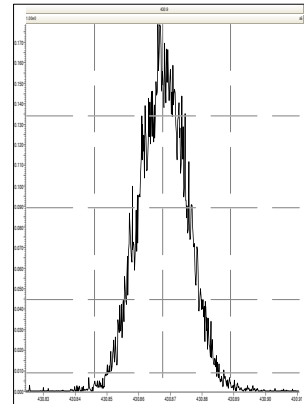
M 466.9728 R 13192



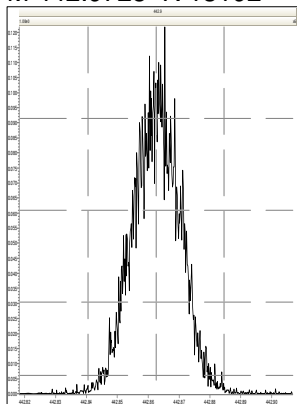
M 480.9696 R 11683



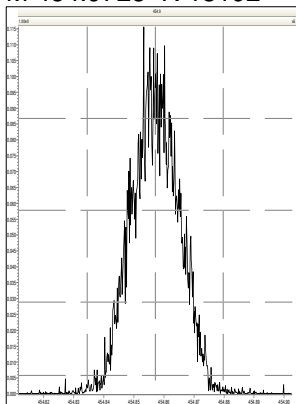
M 430.9728 R 12698



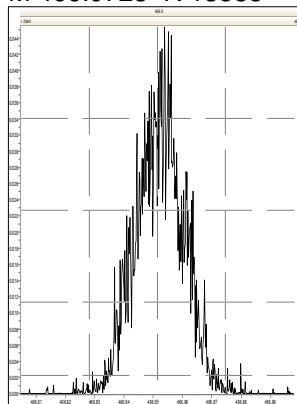
M 442.9728 R 13192



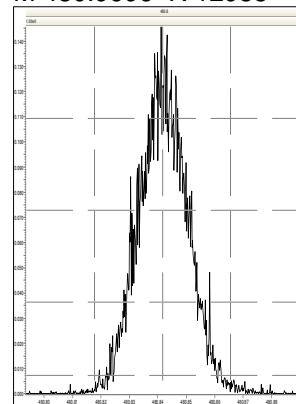
M 454.9728 R 13192



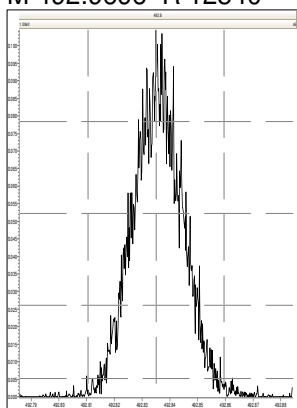
M 466.9728 R 13588



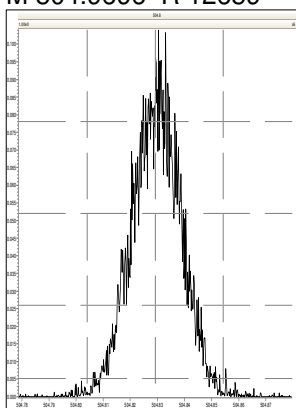
M 480.9696 R 12988



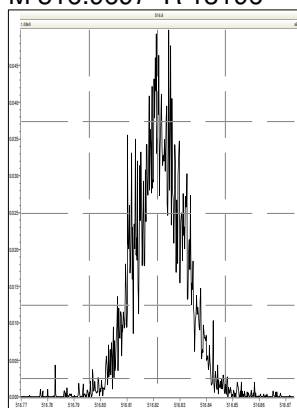
M 492.9696 R 12540



M 504.9696 R 12659



M 516.9697 R 13196



Quantify Sample Summary Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14JAN20A_2-1.qld

Last Altered: Wednesday, January 15, 2020 15:38:42 Eastern Standard Time
Printed: Wednesday, January 15, 2020 15:39:18 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A13JAN20.mdb 14 Jan 2020 09:27:05
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	25.49
2	Last TCDF	31.51
3	First PeCDF	31.51
4	Last PeCDF	34.18
5	First HxCDF	34.68
6	Last HxCDF	36.88
7	First HpCDF	38.31
8	Last HpCDF	40.13
9	OCDF	43.81
10	First TCDD	27.21
11	2378-TCDD	30.70
12	Last TCDD	31.43
13	First PeCDD	32.47
14	Last PeCDD	34.02
15	First HxCDD	35.09
16	Last HxCDD	36.59
17	First HpCDD	38.62
18	Last HpCDD	39.51
19	OCDD	43.54

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14JAN20A_2-1.qld

Last Altered: Wednesday, January 15, 2020 15:38:42 Eastern Standard Time

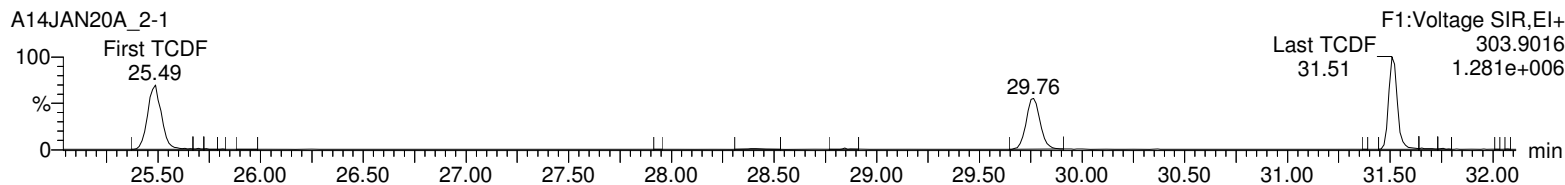
Printed: Wednesday, January 15, 2020 15:39:18 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A13JAN20.mdb 14 Jan 2020 09:27:05

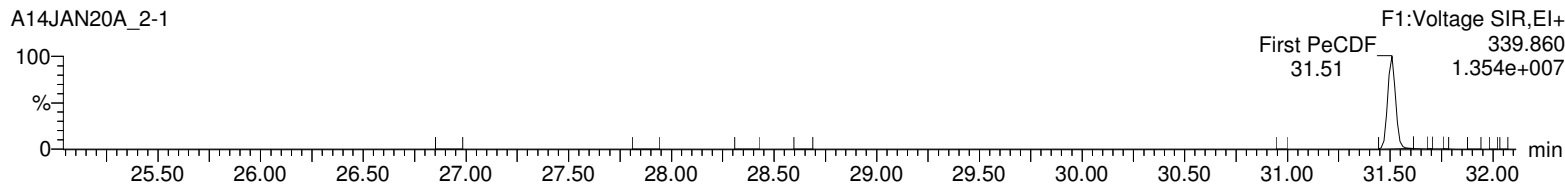
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

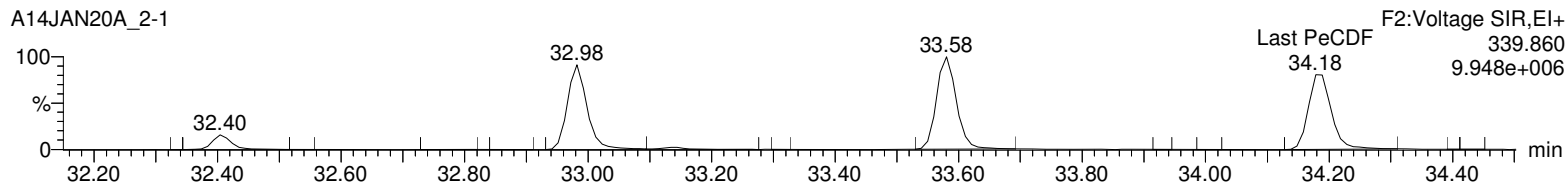
First TCDF



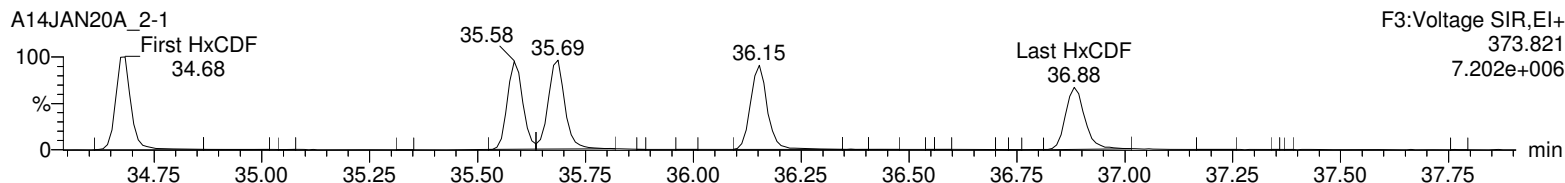
First PeCDF



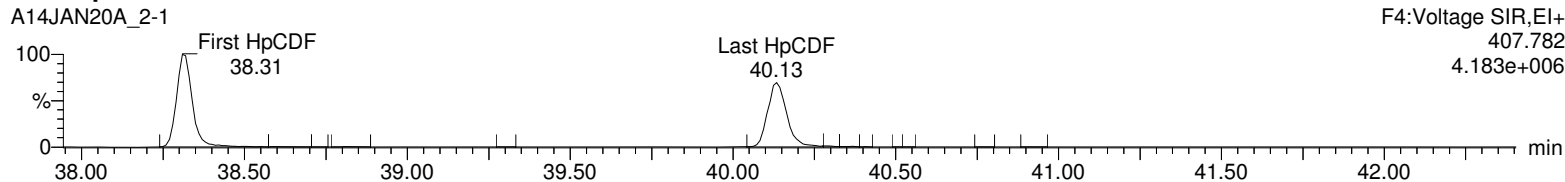
Last PeCDF



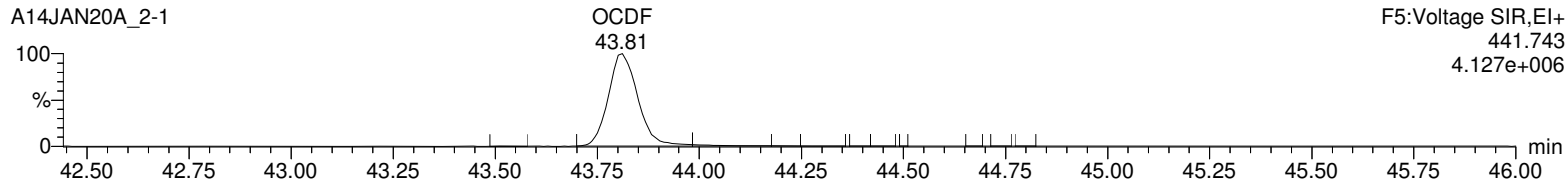
First HxCDF



First HpCDF



OCDF



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A14JAN20A_2-1.qld

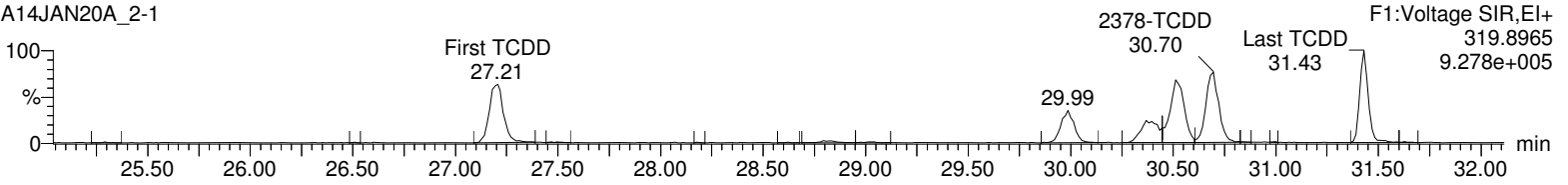
Last Altered: Wednesday, January 15, 2020 15:38:42 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:39:18 Eastern Standard Time

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

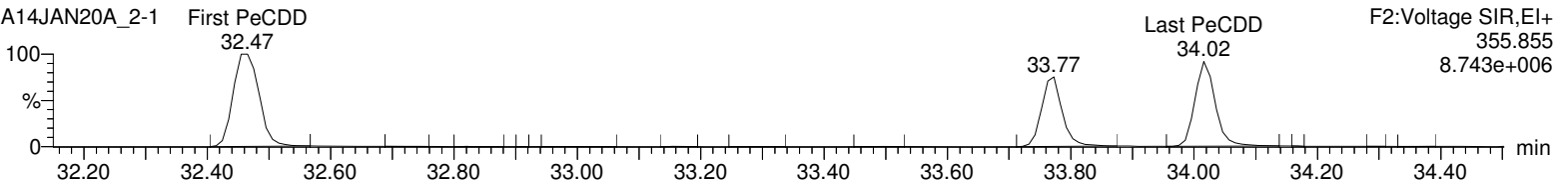
First TCDD

A14JAN20A_2-1



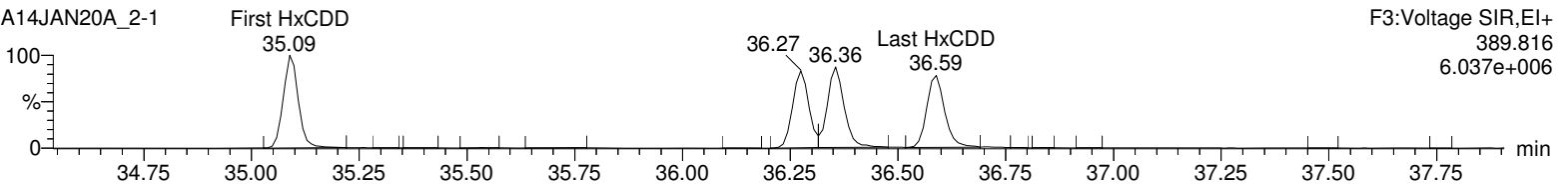
First PeCDD

A14JAN20A_2-1



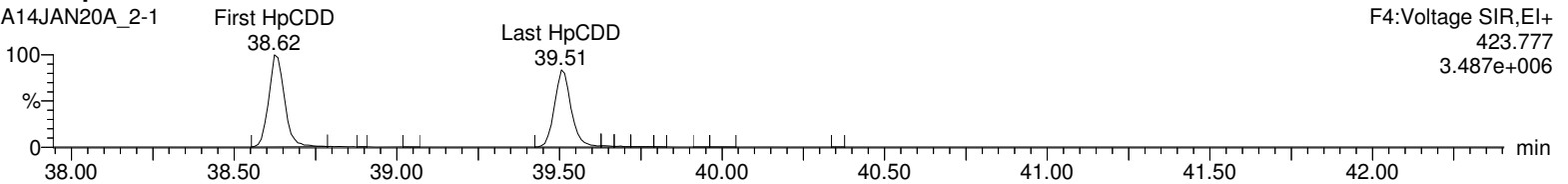
First HxCDD

A14JAN20A_2-1



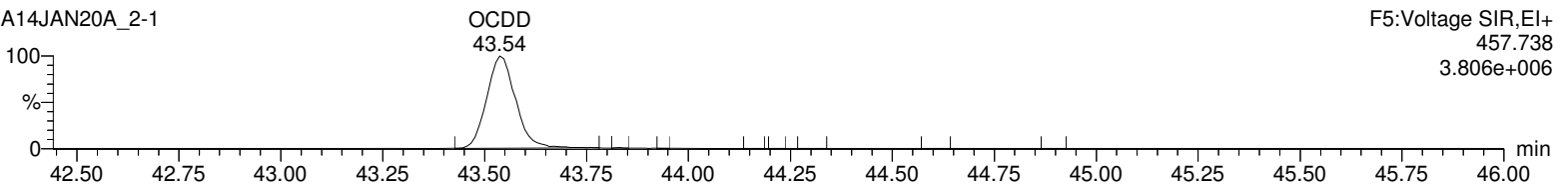
First HpCDD

A14JAN20A_2-1



OCDD

A14JAN20A_2-1



COLUMN CHECK (2378-TCDD 3%)

CS3WT UD191018-02.2

A14JAN20A_2-1

HRP750_2

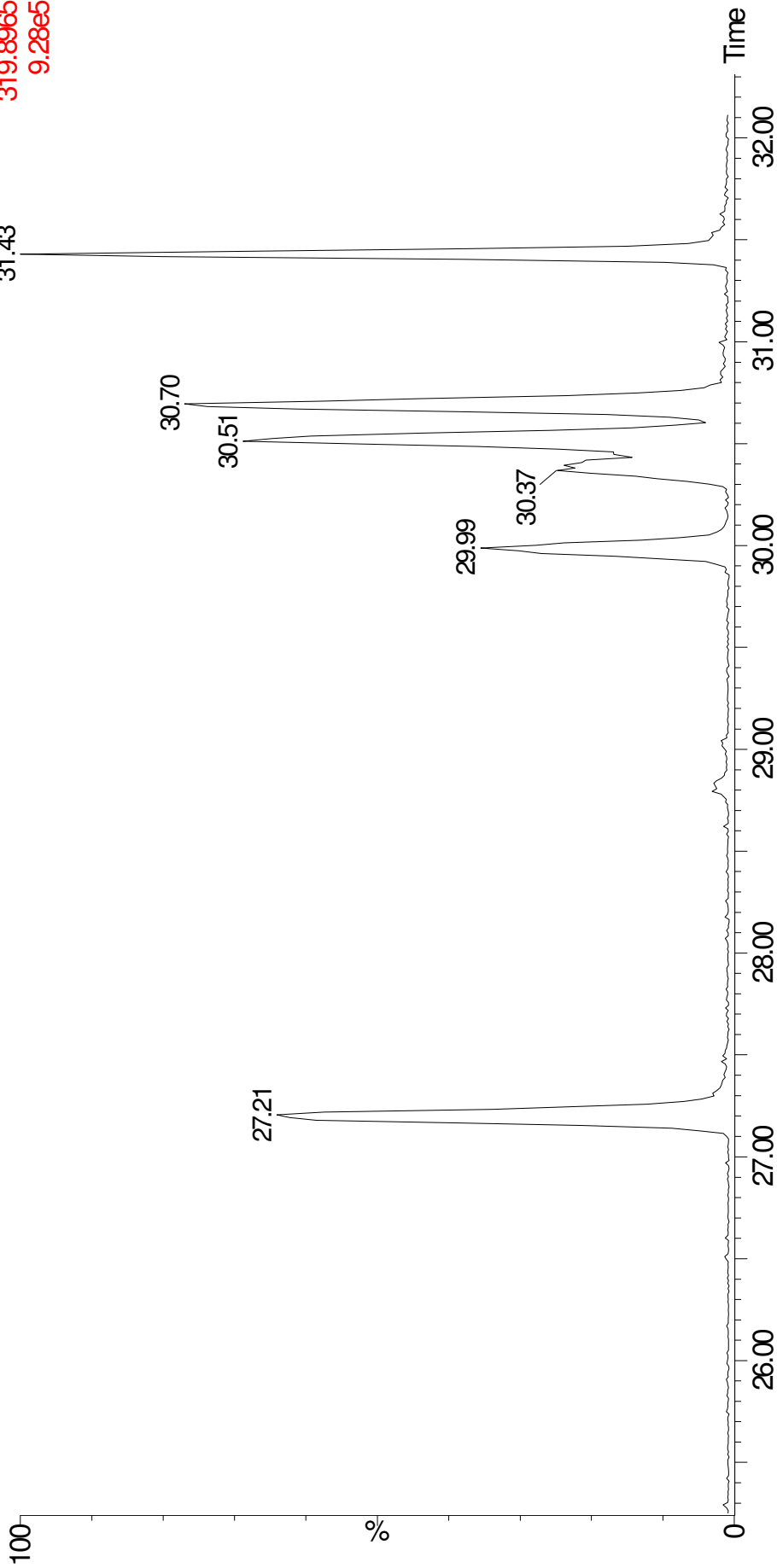
15-Jan-202003:30:35

1: Voltage SIR 13 Channels EI+

31.43

319.8965

9.28e5



Quantify Sample Summary Report
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A_2-1.qld
Last Altered: Wednesday, January 15, 2020 15:35:36 Eastern Standard Time
Printed: Wednesday, January 15, 2020 15:36:10 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A13JAN20.mdb 13 Jan 2020 13:57:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	5.13e4	6.48e4	1.16e5	30.70	1.001	0.79	NO	10.747	0.110	0.951	0.884	7.5	7.03e5	3316	212.1	8.50e5	3142	270.7	dd	dd
2	12378-PeCDD	2.52e5	1.62e5	4.14e5	33.77	1.001	1.55	NO	53.458	0.153	0.913	0.853	6.9	6.56e6	5517	1189.0	4.10e6	6207	660.8	bb	bb
3	123478-HxCDD	2.19e5	1.79e5	3.97e5	36.27	1.000	1.22	NO	51.138	0.200	0.961	0.940	2.3	5.02e6	6040	831.1	4.13e6	8057	513.2	bd	bd
4	123678-HxCDD	2.47e5	2.00e5	4.48e5	36.36	1.000	1.23	NO	51.089	0.185	0.965	0.944	2.2	5.27e6	6040	872.5	4.22e6	8057	523.2	dd	dd
5	123789-HxCDD	2.37e5	1.91e5	4.28e5	36.59	1.007	1.24	NO	52.574	0.195	0.975	0.927	5.1	4.74e6	6040	784.3	3.80e6	8057	471.9	dd	dd
6	1234678-HpCDD	1.71e5	1.69e5	3.40e5	39.51	1.000	1.01	NO	45.874	0.188	0.954	1.040	-8.3	2.90e6	5006	579.9	2.91e6	4252	683.5	bd	bd
7	OCDD	3.13e5	3.55e5	6.68e5	43.54	1.000	0.88	NO	100.581	0.232	0.977	0.971	0.6	3.79e6	3106	1219.4	4.28e6	4288	998.9	bb	bb
8	2378-TCDF	5.50e4	7.30e4	1.28e5	29.76	1.001	0.75	NO	8.785	0.0948	0.860	0.978	-12.2	7.00e5	2811	248.9	9.19e5	4298	213.7	bb	bb
9	12378-PeCDF	3.31e5	2.14e5	5.46e5	32.98	1.000	1.54	NO	46.721	0.111	0.883	0.945	-6.6	9.08e6	7902	1149.6	5.80e6	6515	890.4	bd	bd
10	23478-PeCDF	3.69e5	2.40e5	6.06e5	33.58	1.000	1.52	NO	47.270	0.0973	0.933	0.987	-5.5	9.91e6	7902	1254.0	6.53e6	6515	1001.9	bb	bb
11	123478-HxCDF	2.84e5	2.32e5	5.16e5	35.58	1.000	1.23	NO	48.597	0.208	1.057	1.087	-2.8	6.82e6	10410	654.8	5.51e6	10485	525.8	bd	bd
12	123678-HxCDF	3.10e5	2.48e5	5.59e5	35.69	1.000	1.25	NO	48.788	0.215	1.015	1.041	-2.4	6.91e6	10410	663.7	5.50e6	10485	524.4	db	db
13	234678-HxCDF	2.95e5	2.36e5	5.31e5	36.15	1.000	1.25	NO	48.800	0.219	1.109	1.136	-2.4	6.56e6	10410	630.4	5.24e6	10485	499.7	bd	bb
14	123789-HxCDF	2.47e5	2.00e5	4.47e5	36.88	1.000	1.24	NO	48.338	0.286	1.025	1.061	-3.3	4.83e6	10410	464.0	3.93e6	10485	374.8	bb	bb
15	1234678-HpCDF	2.35e5	2.26e5	4.61e5	38.31	1.000	1.04	NO	50.330	0.132	1.157	1.150	0.7	4.17e6	3491	1195.1	4.14e6	5233	791.0	bd	bb
16	1234789-HpCDF	1.95e5	1.92e5	3.87e5	40.13	1.001	1.01	NO	50.164	0.182	1.206	1.202	0.3	2.89e6	3491	828.5	2.81e6	5233	537.9	bd	bd
17	OCDF	3.44e5	3.85e5	7.29e5	43.81	1.007	0.89	NO	94.192	0.208	1.067	1.133	-5.8	4.12e6	2525	1629.9	4.59e6	5219	868.1	bd	bd
18	13C-2378-TCDD	5.29e5	6.93e5	1.22e6	30.66	1.023	0.76	NO	97.875	0.166	1.104	1.128	-2.1	7.17e6	6510	1101.2	9.33e6	4109	2271.3	bb	bb
19	13C-12378-PeCDD	5.62e5	3.45e5	9.07e5	33.75	1.127	1.63	NO	109.040	0.262	0.819	0.751	9.0	1.39e7	6545	2122.2	8.92e6	4581	1947.0	bd	bb
20	13C-123478-HxCDD	4.60e5	3.67e5	8.27e5	36.26	0.991	1.25	NO	98.402	0.178	0.882	0.896	-1.6	1.04e7	6196	1683.0	8.27e6	5508	1501.7	bd	bd
21	13C-123678-HxCDD	5.15e5	4.14e5	9.29e5	36.35	0.994	1.24	NO	100.454	0.162	0.990	0.986	0.5	1.12e7	6196	1802.5	8.79e6	5508	1594.9	dd	dd
22	13C-1234678-HpCDD	3.69e5	3.44e5	7.12e5	39.50	1.080	1.07	NO	113.079	0.158	0.760	0.672	13.1	6.11e6	3190	1916.5	5.72e6	4608	1240.9	bd	bb
23	13C-OCDD	6.44e5	7.24e5	1.37e6	43.52	1.190	0.89	NO	227.064	0.259	0.729	0.642	13.5	7.73e6	6181	1251.4	8.78e6	6050	1452.1	bb	bb
24	13C-2378-TCDF	6.48e5	8.43e5	1.49e6	29.74	0.993	0.77	NO	107.651	0.256	1.346	1.250	7.7	8.31e6	11854	701.3	1.09e7	6207	1752.2	bb	bb
25	13C-12378-PeCDF	7.43e5	4.93e5	1.24e6	32.97	1.101	1.51	NO	110.452	0.334	1.116	1.011	10.5	2.07e7	9931	2083.6	1.37e7	9144	1502.9	bb	bd
26	13C-23478-PeCDF	7.81e5	5.18e5	1.30e6	33.57	1.120	1.51	NO	110.350	0.317	1.173	1.063	10.4	2.26e7	9931	2273.1	1.47e7	9144	1611.8	bb	db
27	13C-123478-HxCDF	3.32e5	6.44e5	9.76e5	35.57	0.973	0.52	NO	93.746	0.275	1.041	1.111	-6.3	7.84e6	7921	989.6	1.54e7	14480	1066.4	bd	bd
28	13C-123678-HxCDF	3.74e5	7.26e5	1.10e6	35.68	0.975	0.52	NO	94.130	0.245	1.174	1.247	-5.9	7.93e6	7921	1001.6	1.54e7	14480	1067.0	db	dd
29	13C-234678-HxCDF	3.27e5	6.31e5	9.58e5	36.14	0.988	0.52	NO	94.394	0.282	1.021	1.082	-5.6	7.16e6	7921	903.7	1.35e7	14480	934.3	bb	bb
30	13C-123789-HxCDF	2.97e5	5.74e5	8.72e5	36.87	1.008	0.52	NO	96.146	0.316	0.930	0.967	-3.9	5.88e6	7921	742.8	1.13e7	14480	777.0	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A_2-1.qld

Last Altered: Wednesday, January 15, 2020 15:35:36 Eastern Standard Time
 Printed: Wednesday, January 15, 2020 15:36:10 Eastern Standard Time

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	2.38e5	5.59e5	7.97e5	38.30	1.047	0.43	NO	97.679	0.184	0.850	0.870	-2.3	4.29e6	5156	832.7	1.00e7	6592	1518.0	bb	bd
32	13C-1234789-HpCDF	1.97e5	4.45e5	6.42e5	40.11	1.097	0.44	NO	101.024	0.236	0.684	0.677	1.0	3.06e6	5156	593.4	6.45e6	6592	978.0	bd	bd
33	13C-1234-TCDD	4.86e5	6.21e5	1.11e6	29.96	0.000	0.78	NO	100.000	0.188	1.000	1.000	0.0	6.20e6	6510	952.2	8.01e6	4109	1949.4	bb	bb
34	13C-123789-HxCDD	5.26e5	4.12e5	9.38e5	36.58	0.000	1.28	NO	100.000	0.159	1.000	1.000	0.0	1.03e7	6196	1661.6	8.14e6	5508	1478.1	dd	dd
35	37Cl+2378-TCDD	1.08e5		1.08e5	30.70	1.025			9.224	0.0598	0.979	1.061	-7.8	1.51e6	3587	419.5				bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A_2-1.qld

Last Altered: Wednesday, January 15, 2020 15:35:36 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:36:10 Eastern Standard Time

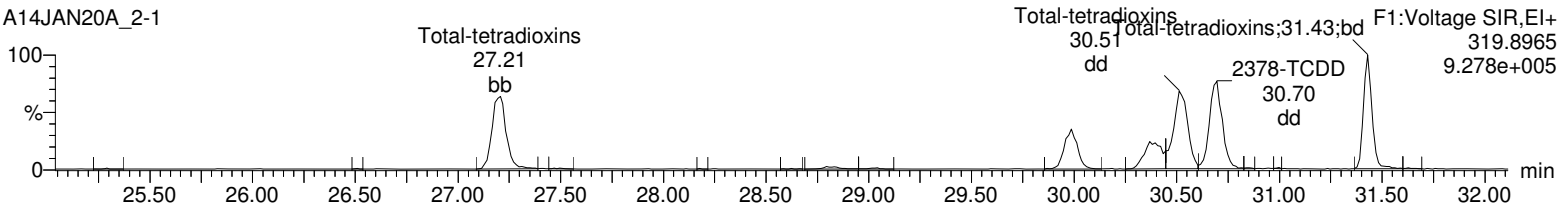
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2,
Task: HRP750_2, User: MJC

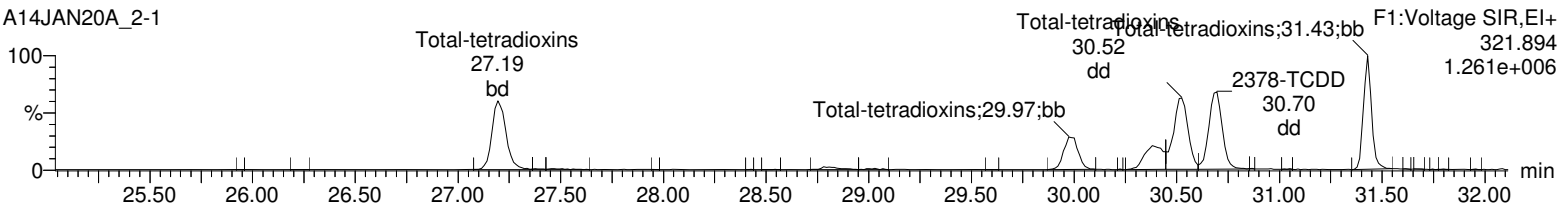
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A14JAN20A_2-1



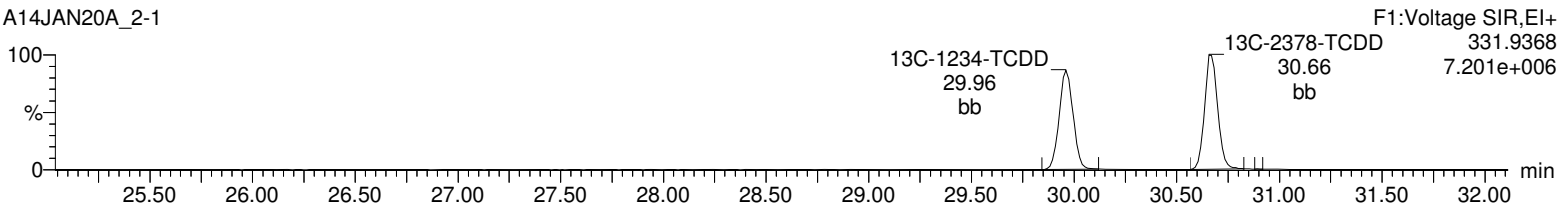
Total-tetradoxins

A14JAN20A_2-1



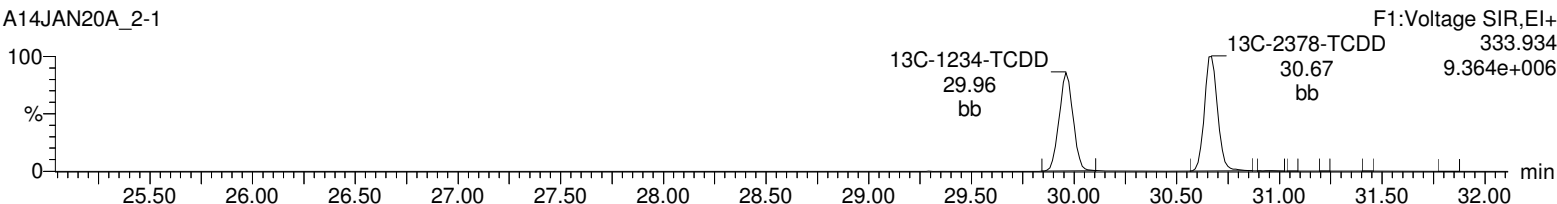
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A14JAN20A_2-1



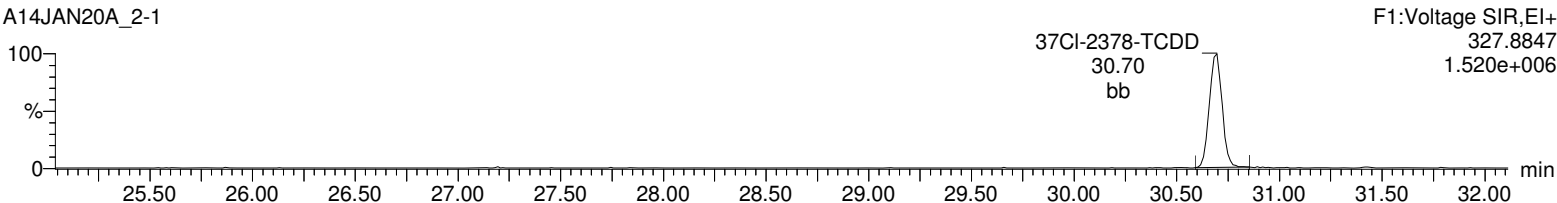
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A14JAN20A_2-1



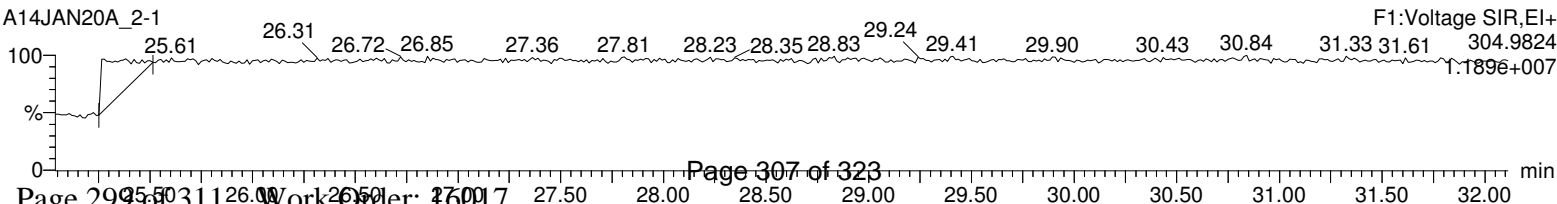
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A14JAN20A_2-1



Lock Mass F1

A14JAN20A_2-1



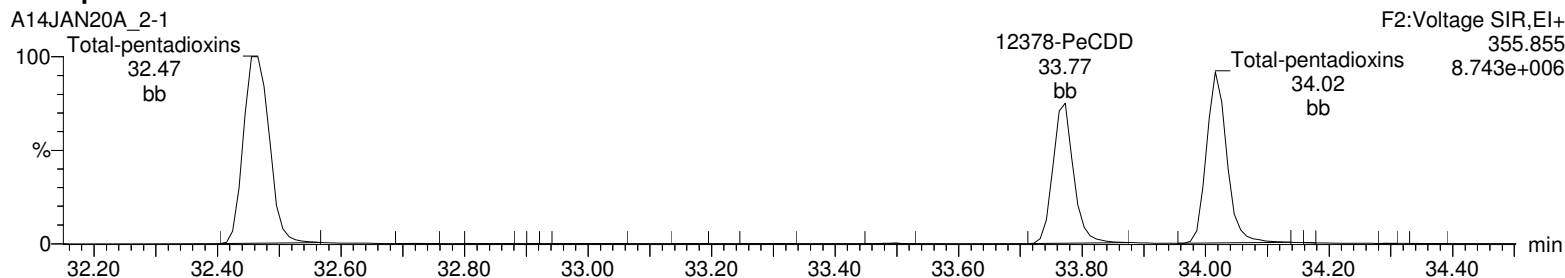
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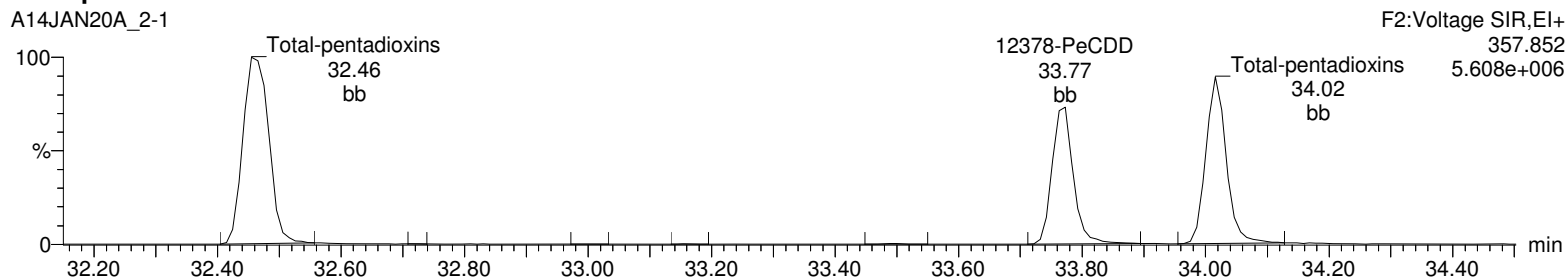
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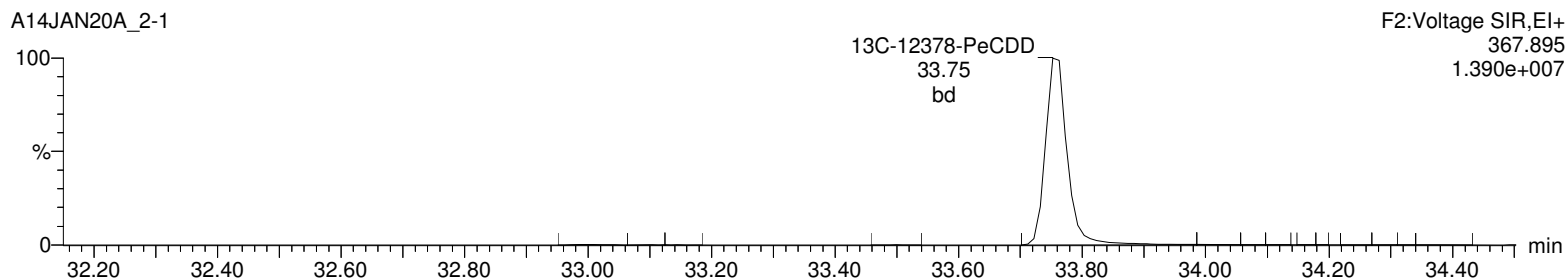
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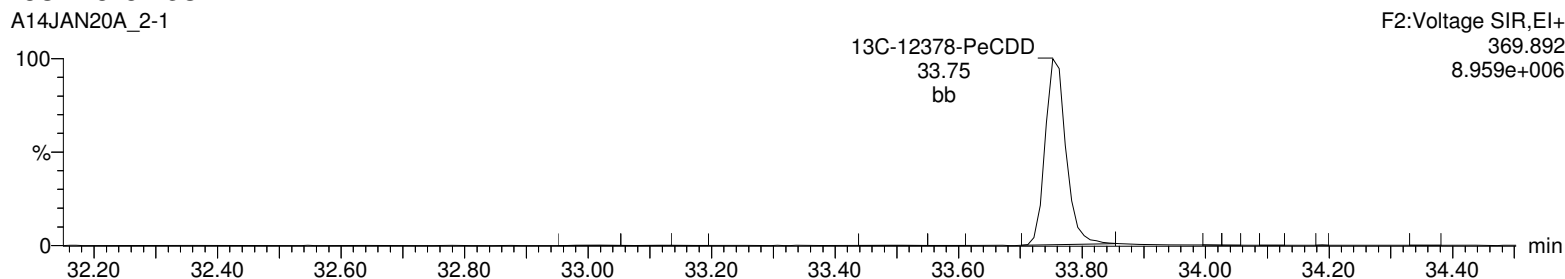
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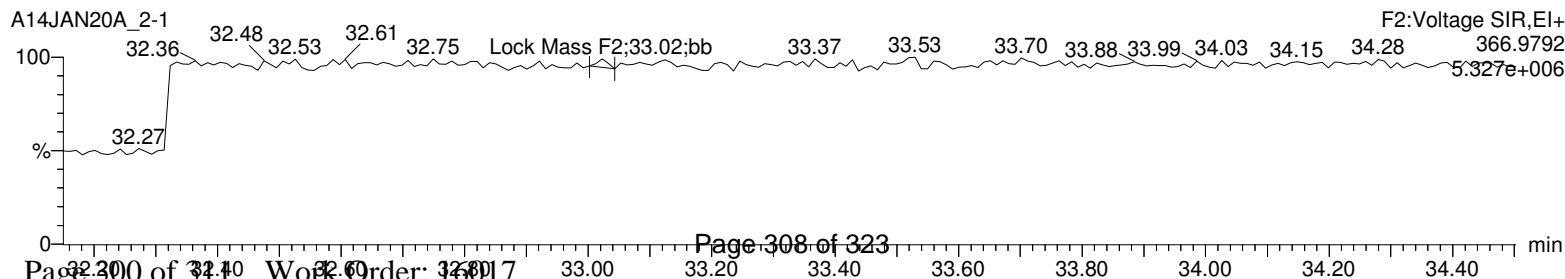
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13C-12378-PeCDD



Lock Mass F2



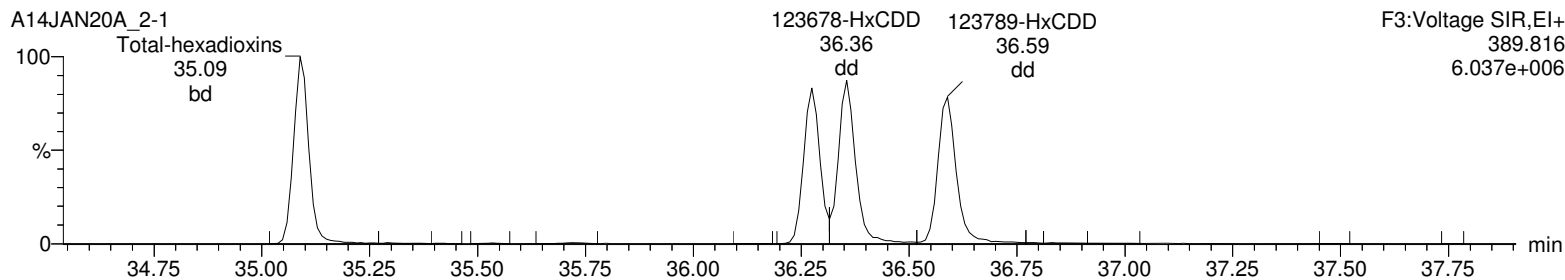
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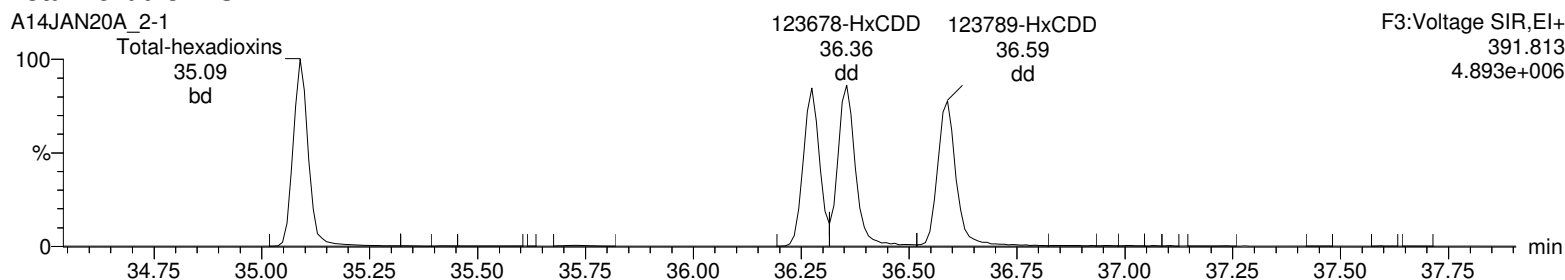
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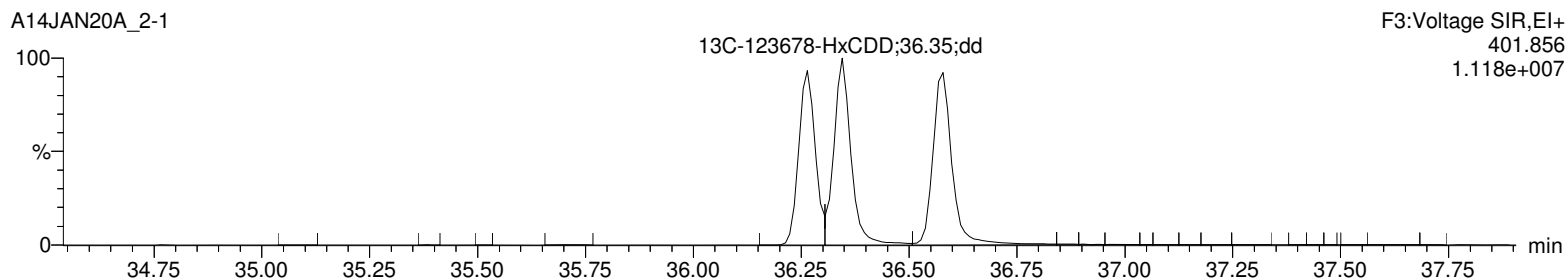
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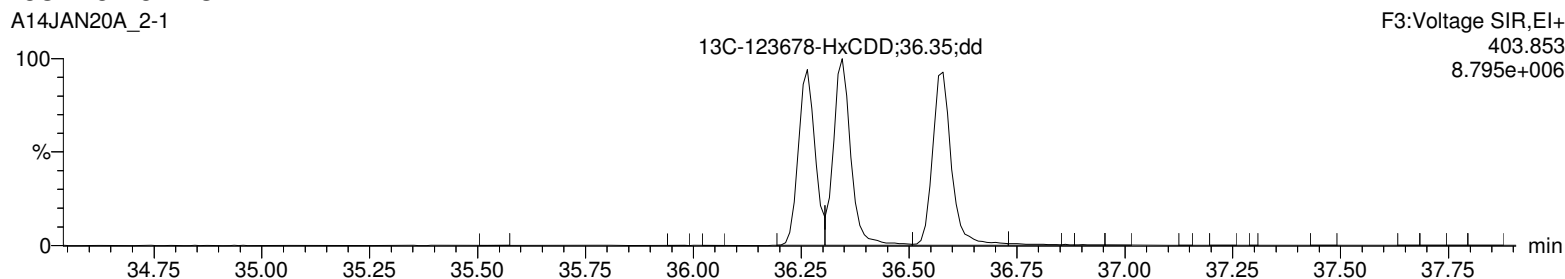
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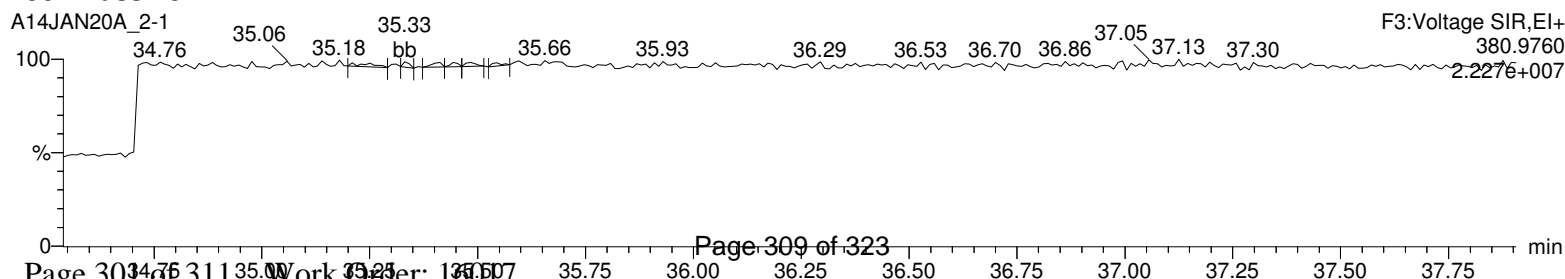
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



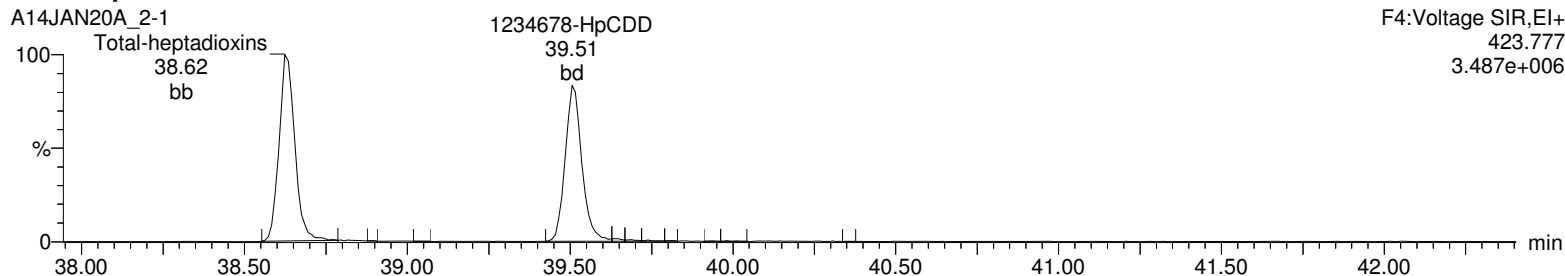
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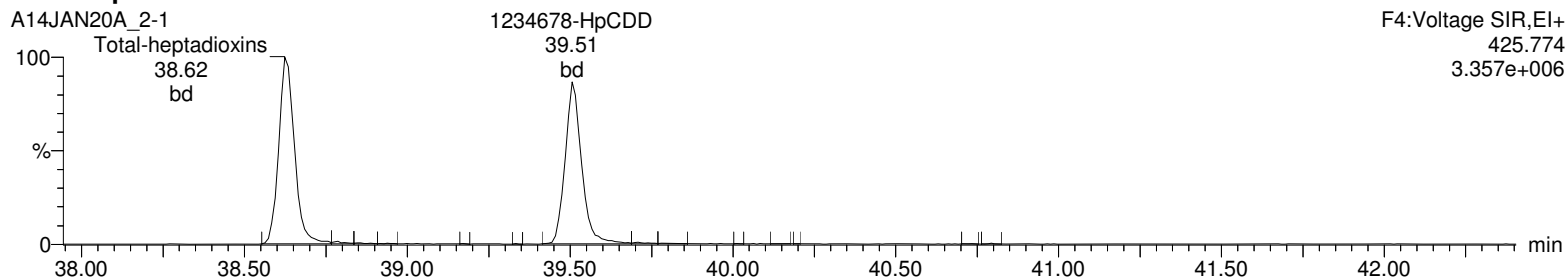
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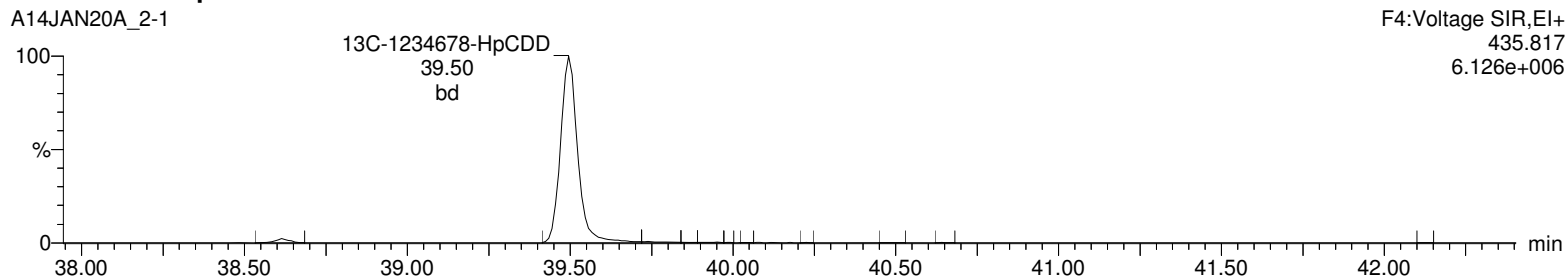
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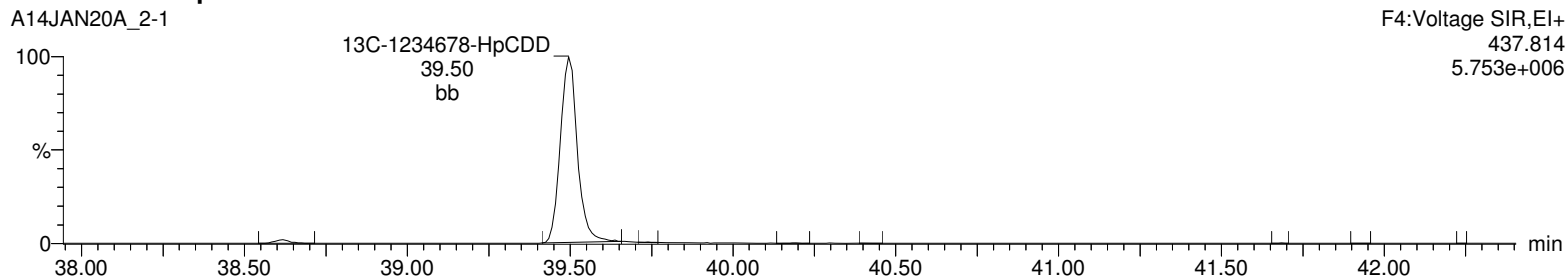
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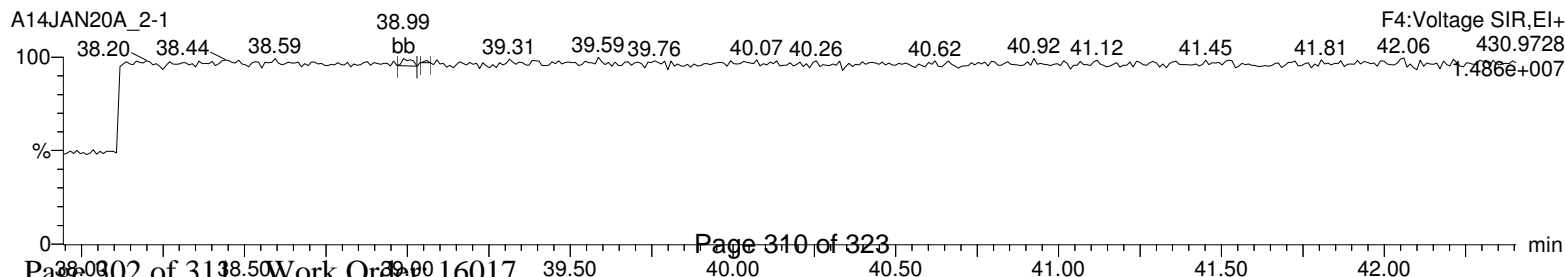
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A_2-1.qld

Last Altered: Wednesday, January 15, 2020 15:35:36 Eastern Standard Time

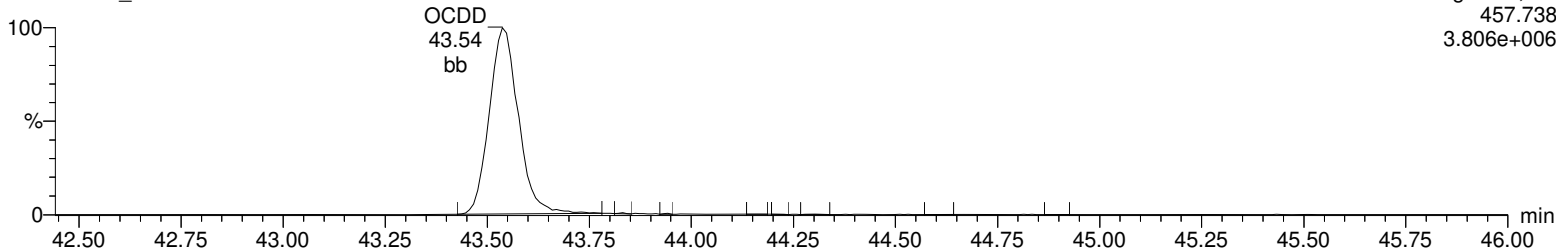
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Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

OCDD

A14JAN20A_2-1

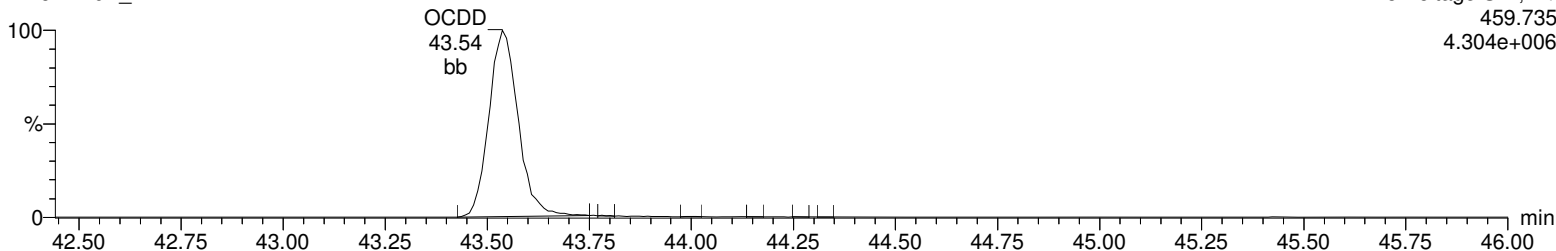
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3.806e+006



OCDD

A14JAN20A_2-1

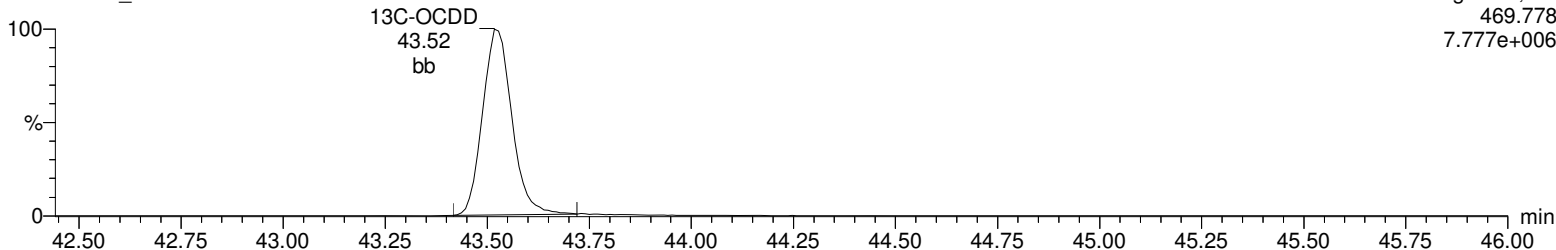
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4.304e+006



13C-OCDD

A14JAN20A_2-1

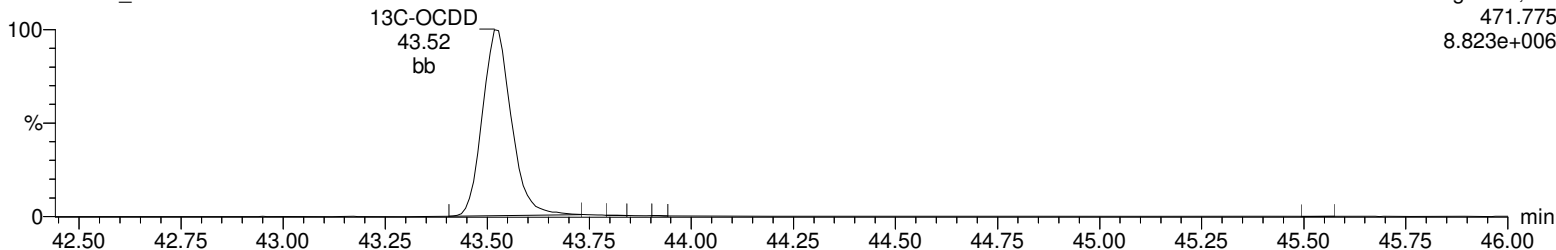
F5:Voltage SIR,EI+
469.778
7.777e+006



13C-OCDD

A14JAN20A_2-1

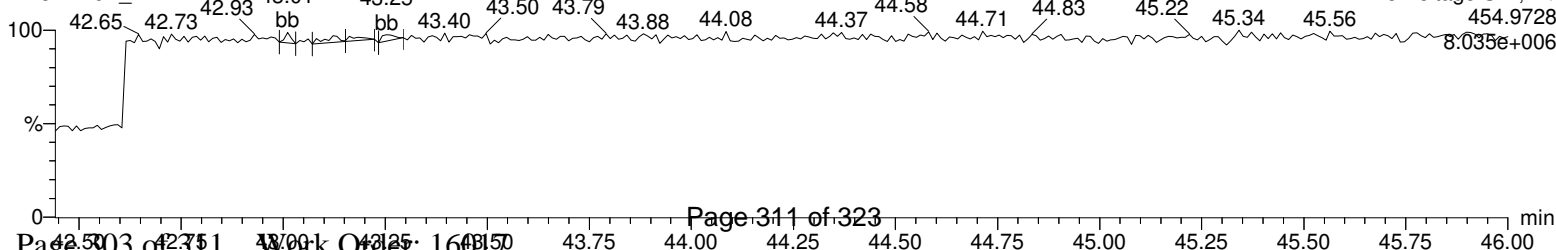
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471.775
8.823e+006



Lock Mass F5

A14JAN20A_2-1

F5:Voltage SIR,EI+
454.9728
8.035e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A_2-1.qld

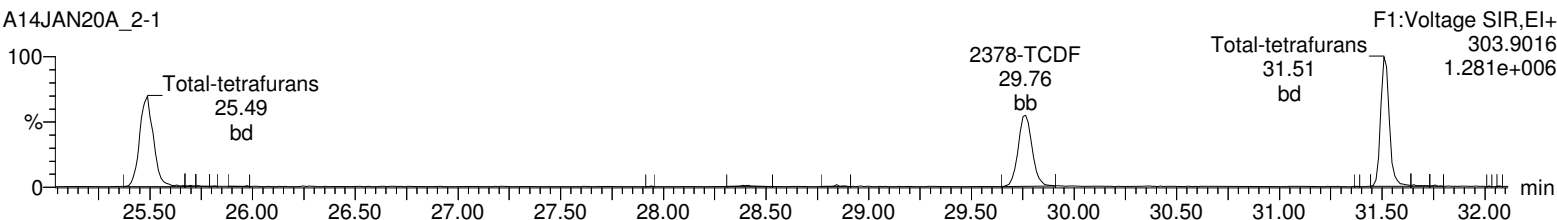
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Printed: Wednesday, January 15, 2020 15:36:10 Eastern Standard Time

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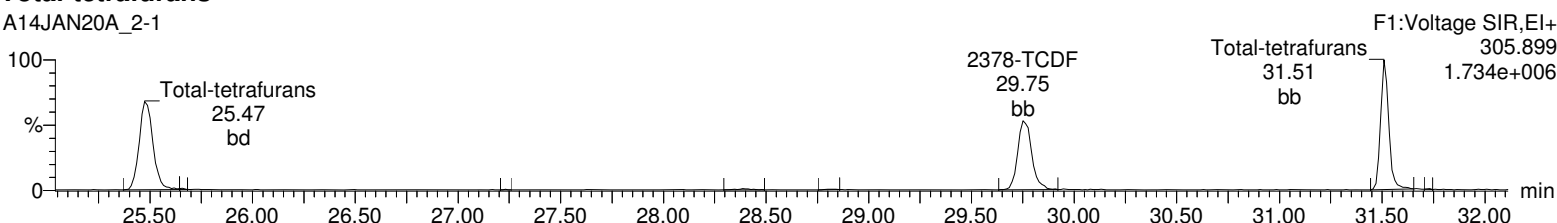
Total-tetrafurans

A14JAN20A_2-1



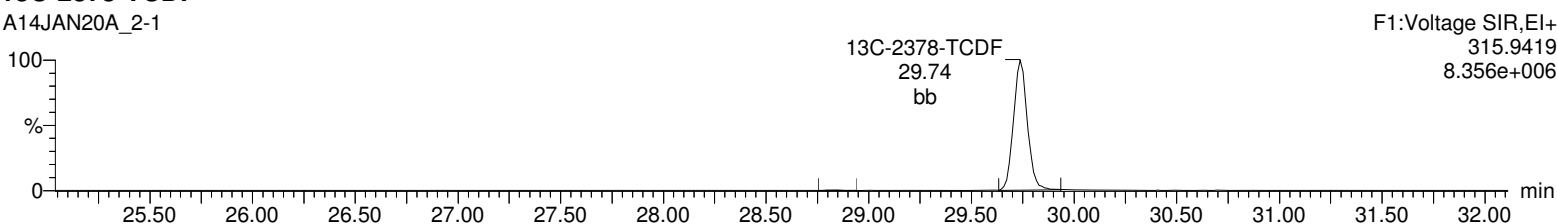
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A14JAN20A_2-1



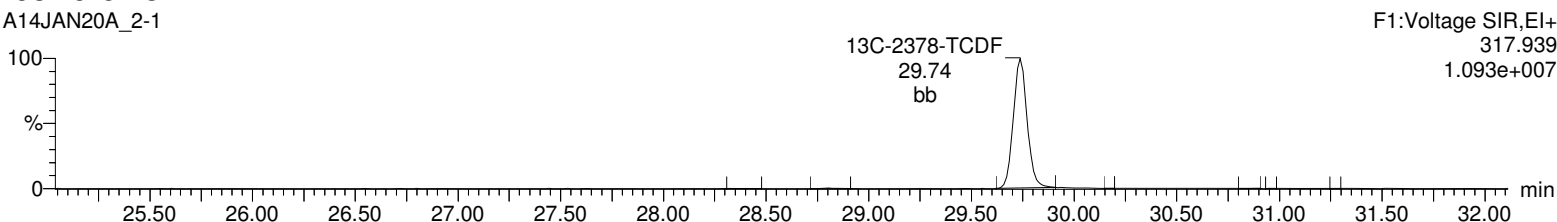
13C-2378-TCDF

A14JAN20A_2-1



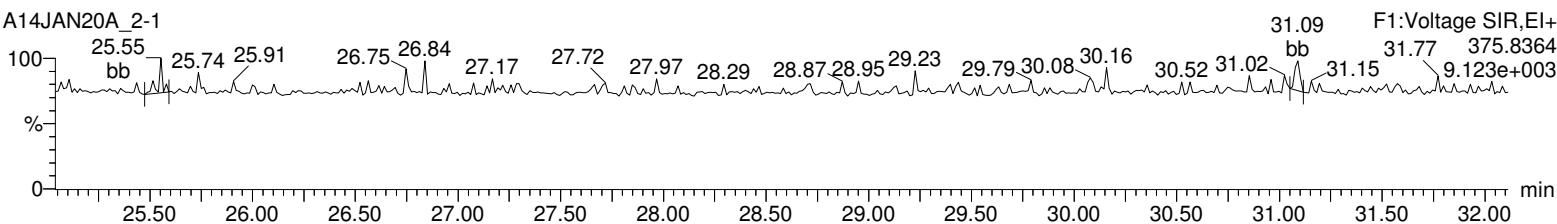
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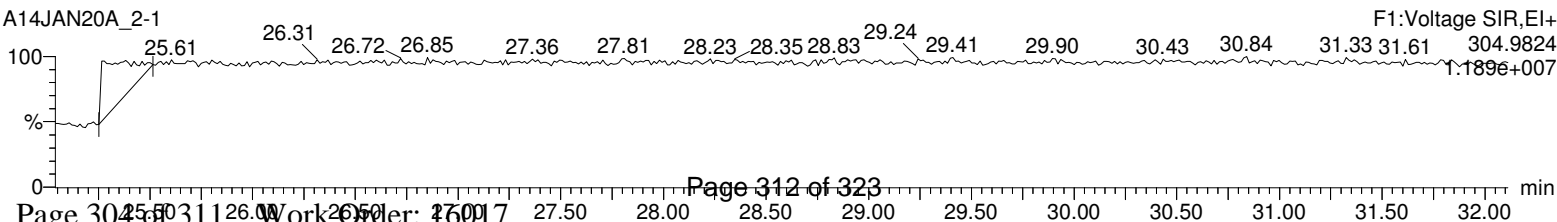
HxDPE

A14JAN20A_2-1



Lock Mass F1

A14JAN20A_2-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A_2-1.qld

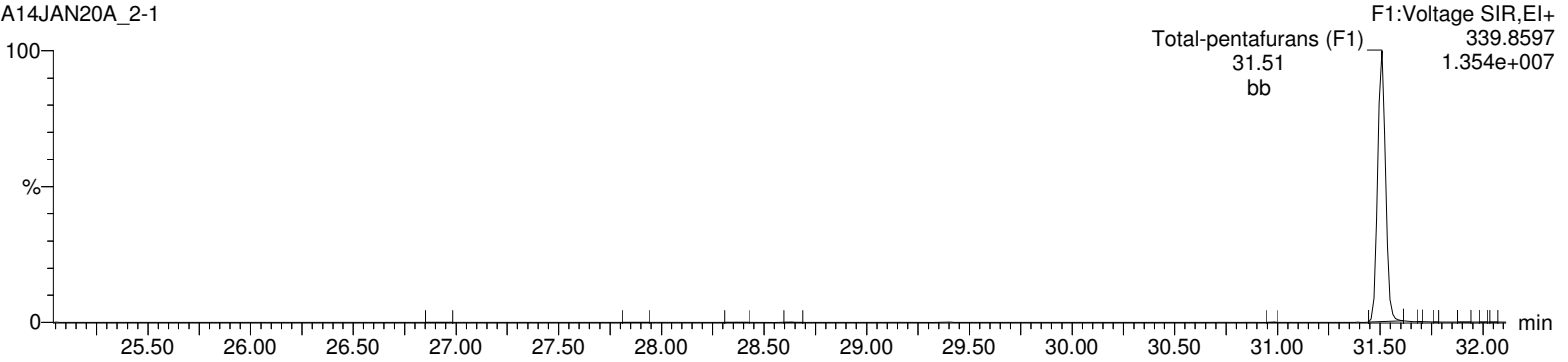
Last Altered: Wednesday, January 15, 2020 15:35:36 Eastern Standard Time

Printed: Wednesday, January 15, 2020 15:36:10 Eastern Standard Time

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

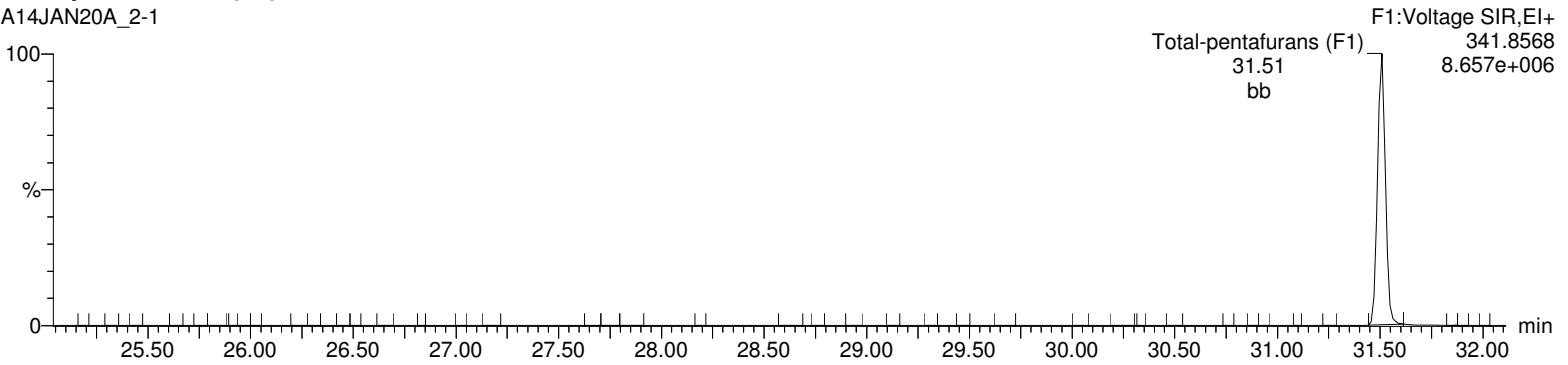
Total-pentafurans (F1)

A14JAN20A_2-1



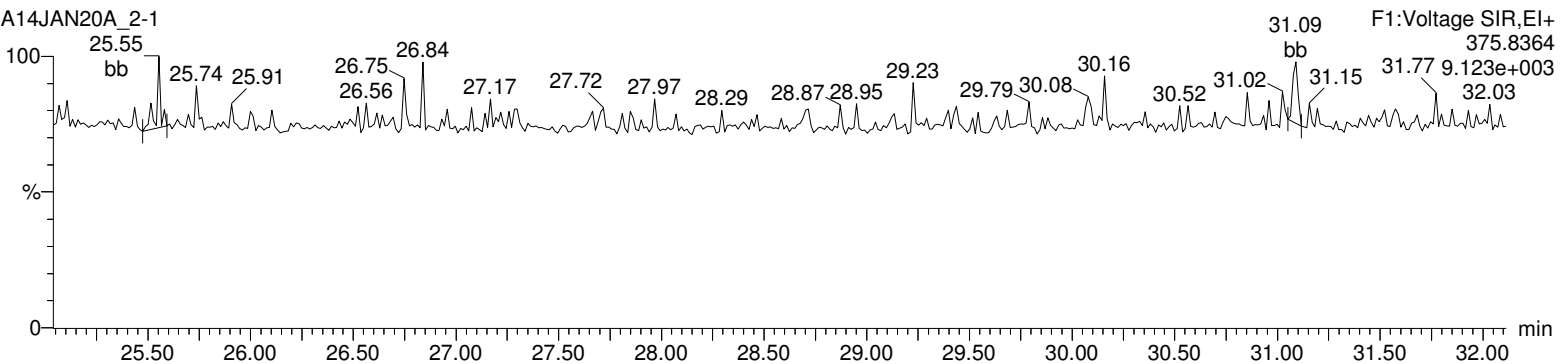
Total-pentafurans (F1)

A14JAN20A_2-1



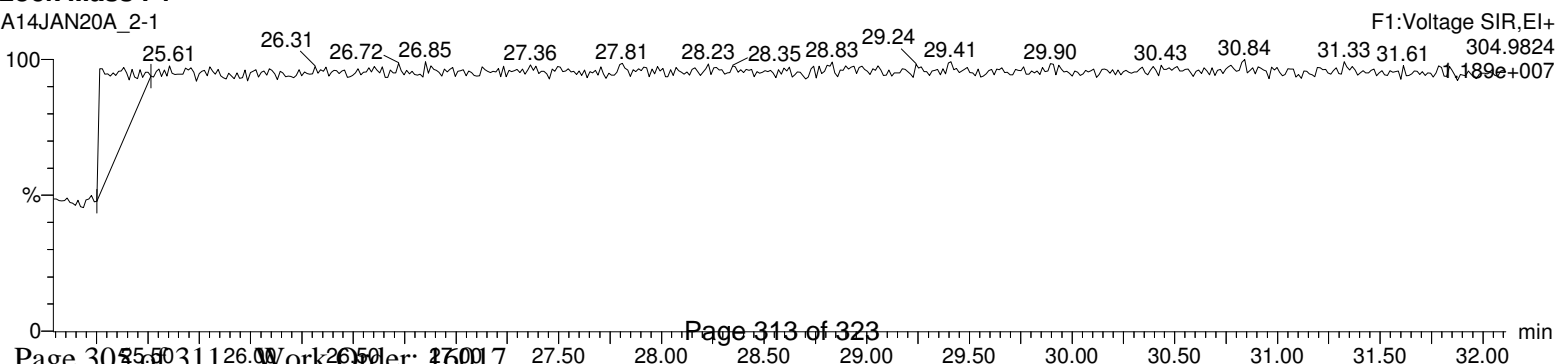
HxDPE

A14JAN20A_2-1



Lock Mass F1

A14JAN20A_2-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A_2-1.qld

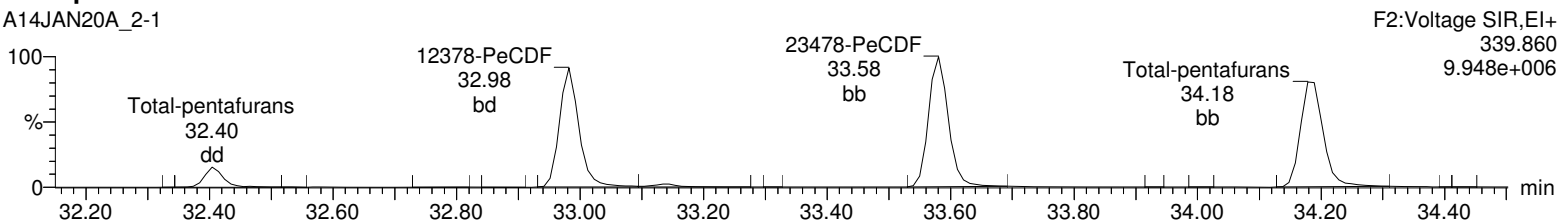
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Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

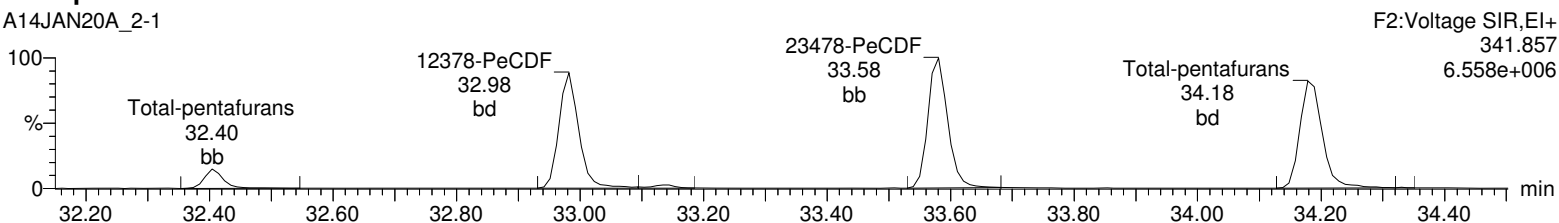
Total-pentafurans

A14JAN20A_2-1



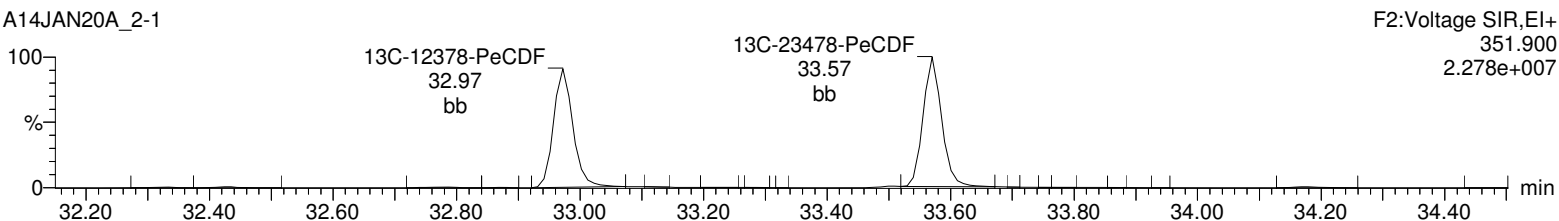
Total-pentafurans

A14JAN20A_2-1



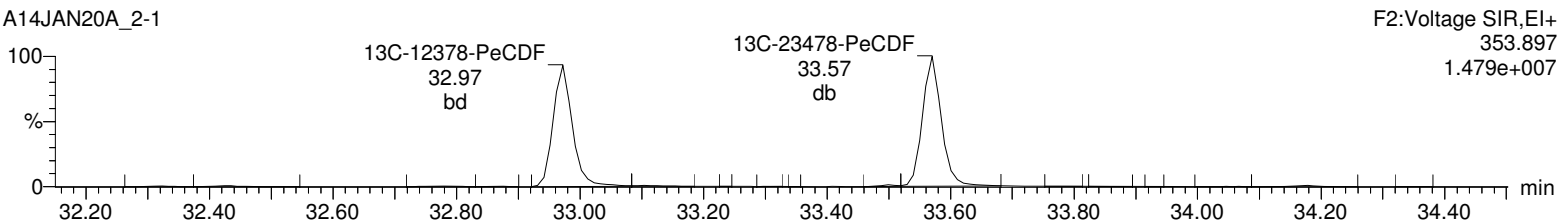
13C-12378-PeCDF

A14JAN20A_2-1



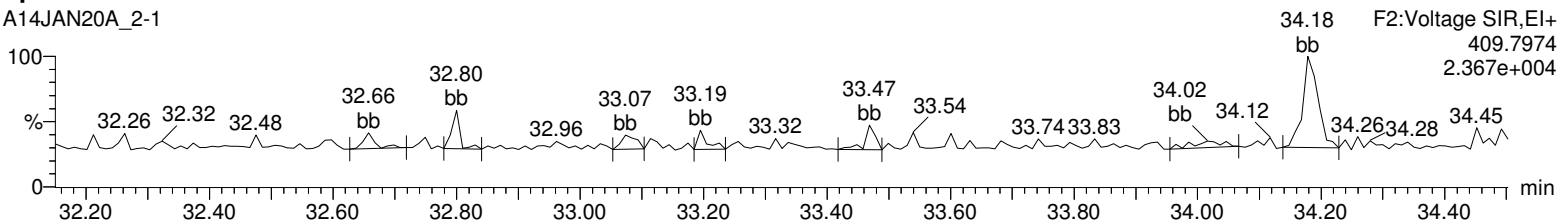
13C-12378-PeCDF

A14JAN20A_2-1



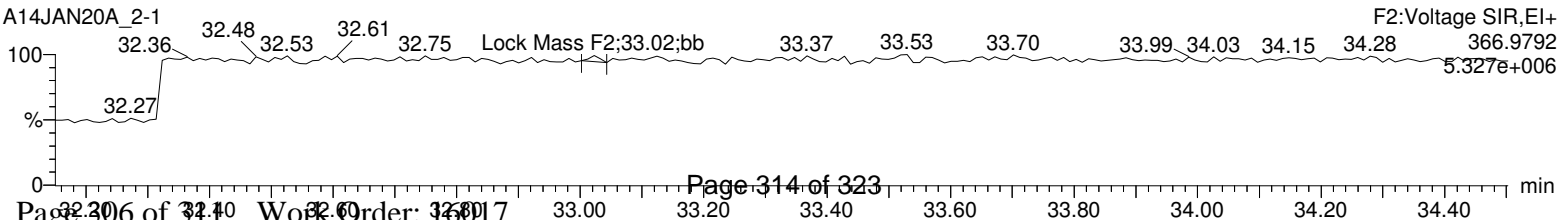
HpDPE

A14JAN20A_2-1



Lock Mass F2

A14JAN20A_2-1



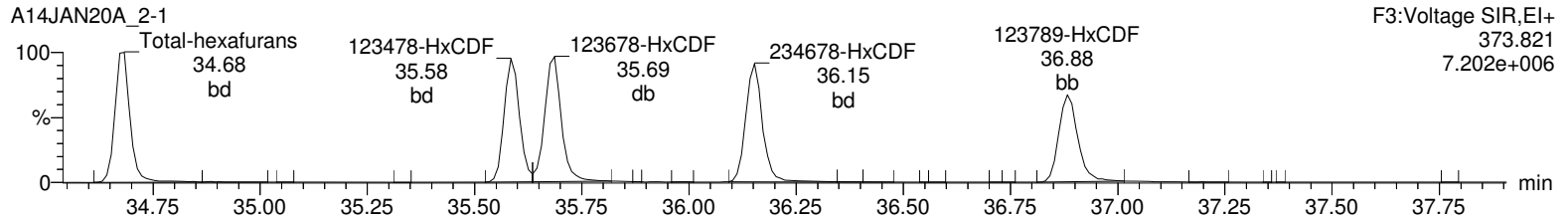
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Last Altered: Wednesday, January 15, 2020 15:35:36 Eastern Standard Time

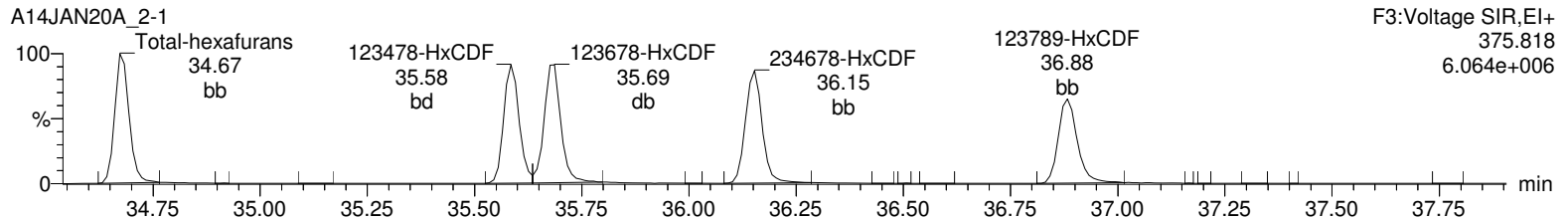
Printed: Wednesday, January 15, 2020 15:36:10 Eastern Standard Time

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

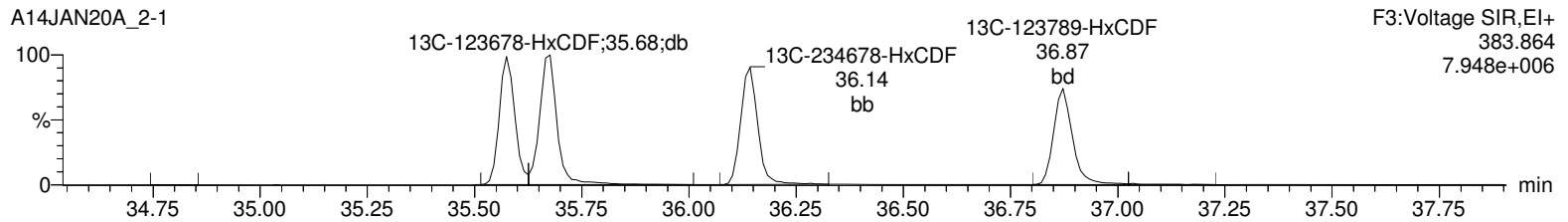
Total-hexafurans



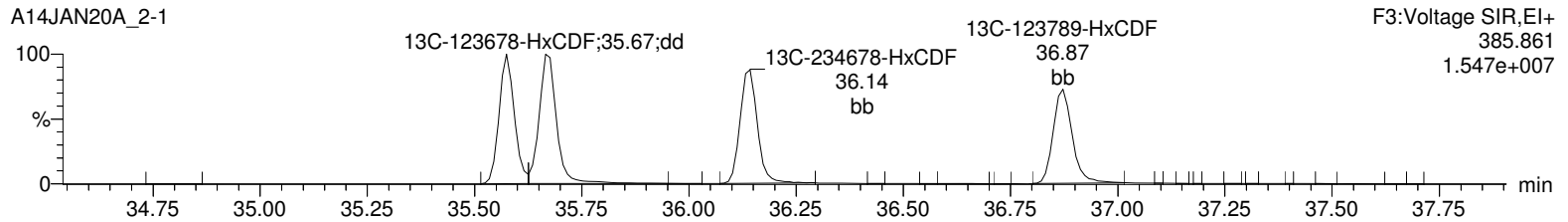
Total-hexafurans



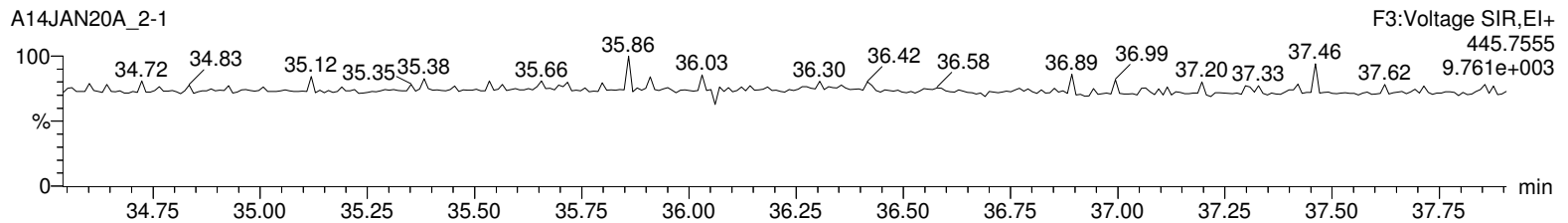
13C-123478-HxCDF



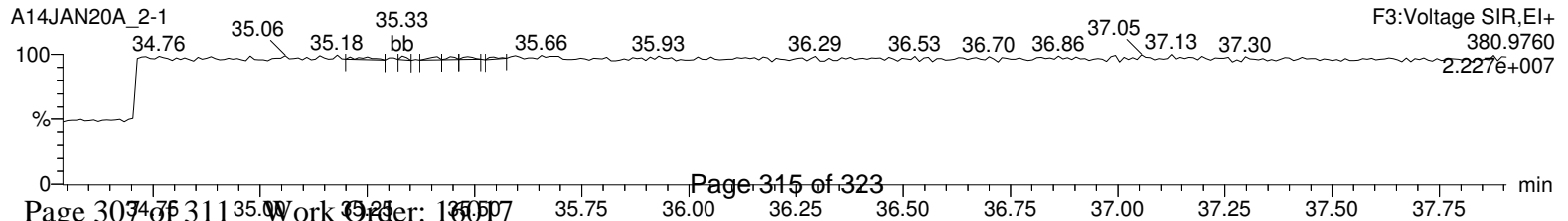
13C-123478-HxCDF



OcDPE



Lock Mass F3



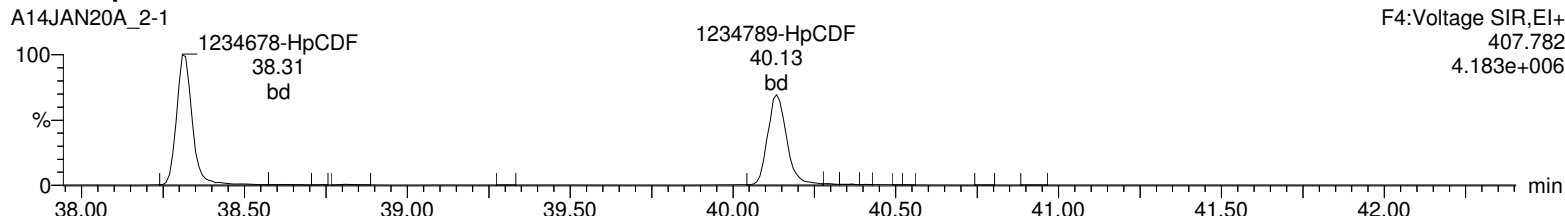
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Last Altered: Wednesday, January 15, 2020 15:35:36 Eastern Standard Time

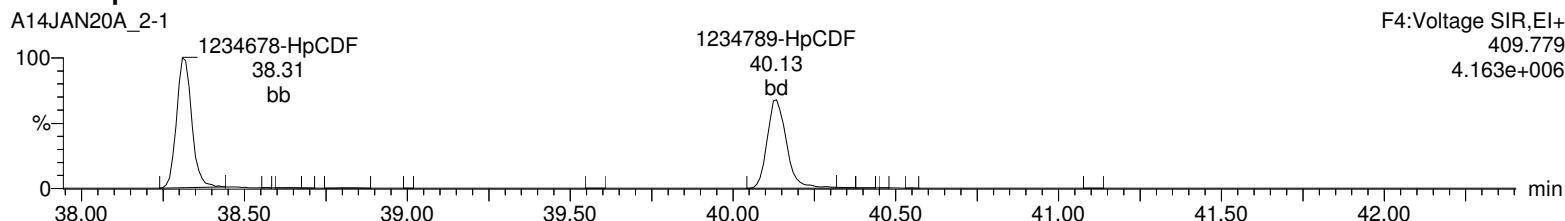
Printed: Wednesday, January 15, 2020 15:36:10 Eastern Standard Time

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

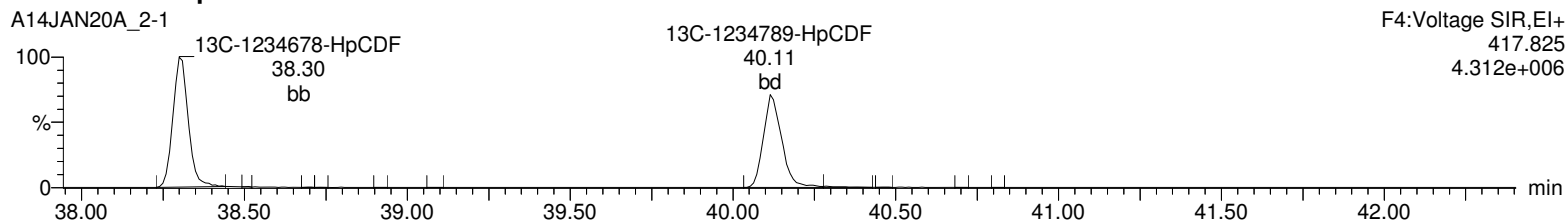
Total-heptafurans



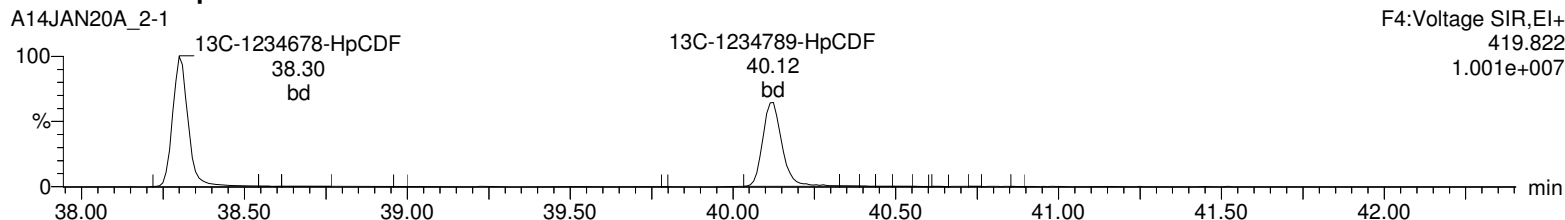
Total-heptafurans



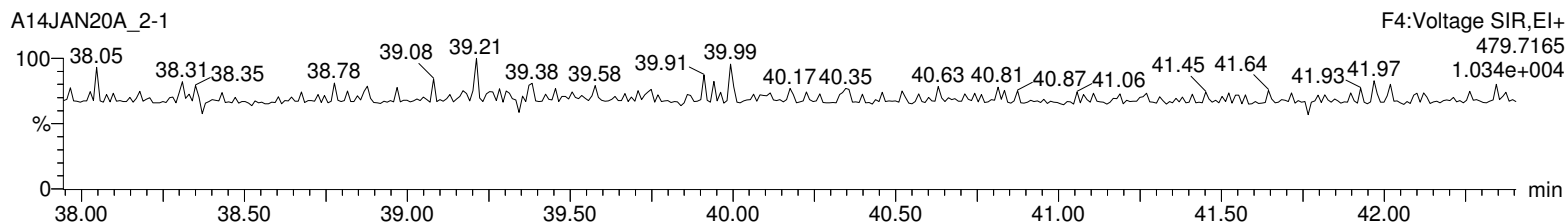
13C-1234678-HpCDF



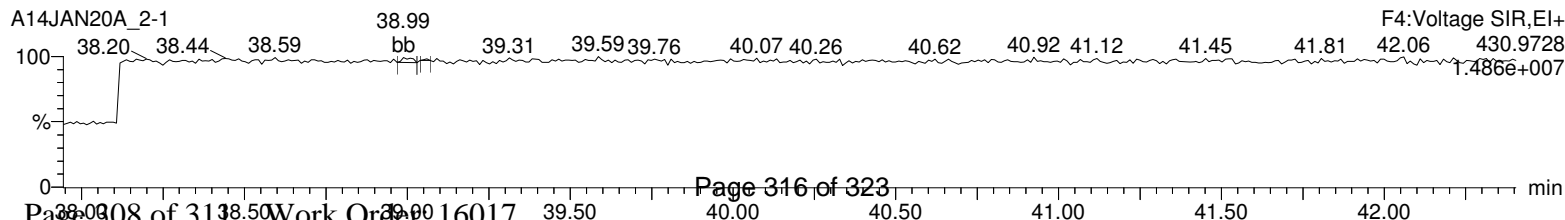
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A14JAN20A_2-1.qld

Last Altered: Wednesday, January 15, 2020 15:35:36 Eastern Standard Time

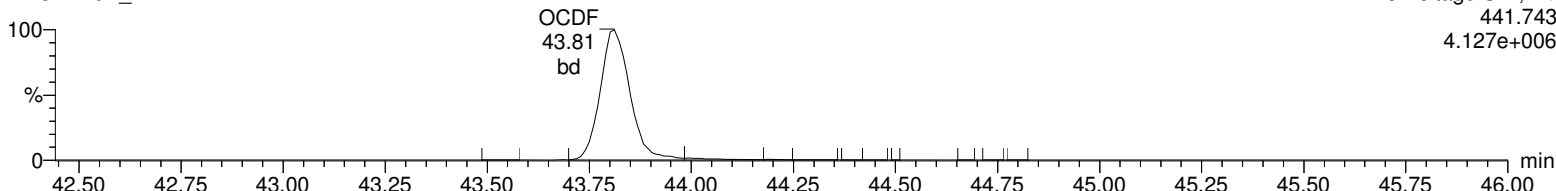
Printed: Wednesday, January 15, 2020 15:36:10 Eastern Standard Time

Name: A14JAN20A_2-1, Date: 15-Jan-2020, Time: 03:30:35, ID: CS3WT UD191018-02.2, Description: , Job: A14JAN20A_2, Task: HRP750_2, User: MJC

OCDF

A14JAN20A_2-1

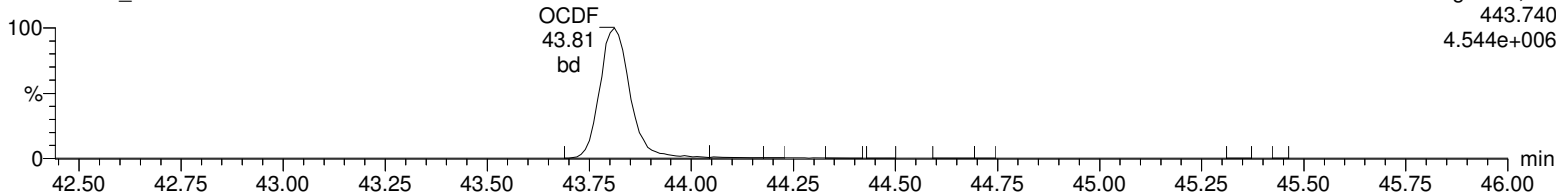
F5:Voltage SIR,EI+
441.743
4.127e+006



OCDF

A14JAN20A_2-1

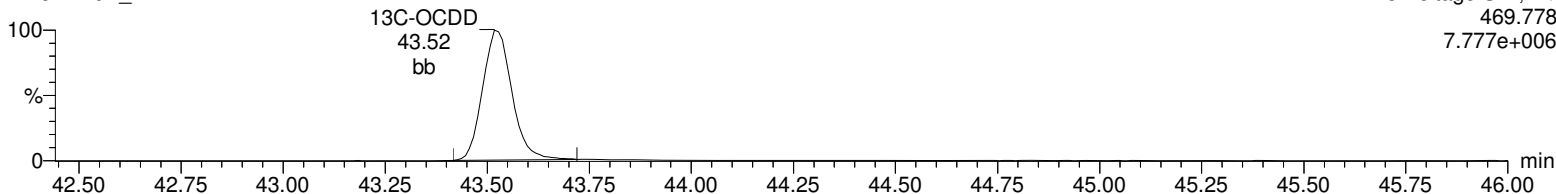
F5:Voltage SIR,EI+
443.740
4.544e+006



13C-OCDD

A14JAN20A_2-1

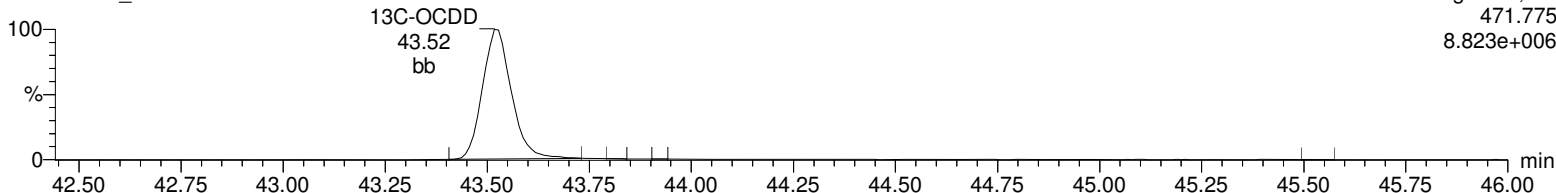
F5:Voltage SIR,EI+
469.778
7.777e+006



13C-OCDD

A14JAN20A_2-1

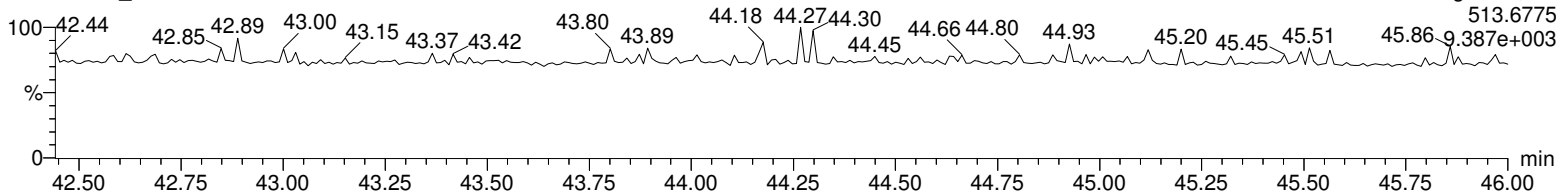
F5:Voltage SIR,EI+
471.775
8.823e+006



DeDPE

A14JAN20A_2-1

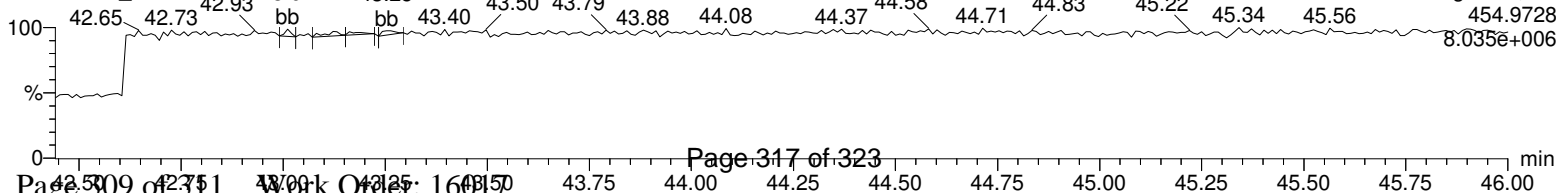
F5:Voltage SIR,EI+
513.6775
9.387e+003



Lock Mass F5

A14JAN20A_2-1

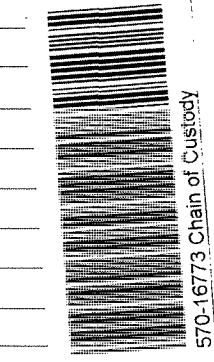
F5:Voltage SIR,EI+
454.9728
8.035e+006



Miscellaneous

No non conformance reports were generated for this work order

Shipping and Receiving Documents



Project Name	SSFL	Location	Santa Susana Field Lab	Task Order	661						
Project	CH661 PO 100067108373										
Project Number	692670.61.SW										
Project Manager	Randy Dean										
Sample Manager	Jamie Beckett										
Turnaround Time	10 Days										
PO Number	100067108373										
Sample ID		Sample Date/Time	26-Dec-19 8:30	Type Matrix	N Water	Preservative		# Containers		Field Filtered	
EVBMP0007S011											
Dioxins				4C				2			
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C				1			
Include Cd, Cu, Pb, Hg				HNO3, 4C				2			
Particle Size Distribution TSS				4C				2			
Total Containers: 7											
EVBMP0006S014											
Dioxins				4C				2			
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C				1			
Include Cd, Cu, Pb, Hg				HNO3, 4C				2			
Particle Size Distribution TSS				4C				2			
Turbidity				4C				1			
Total Containers: 8											

MS = Matrix Spike SD = Matrix Spike Duplicate

Sampled by	Relinquished by	Received by	Relinquished by	Received by	Signatures	Date/Time	Shipping Details	Special Instructions:
							Shipping Method: FedEx	ATTN: Sample Custody and
							Airbill No:	Report Copy to Mark Fesler (530) 229-3273
							Lab Name: Eurofins Calscience Lab	
							Lab Phone: (949) 870-8766	
							On Ice: yes / no	Cooler Temp _____

2.2 / 2.7 566

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-16773-2

Login Number: 16773
List Number: 1
Creator: Ramos, Maribel

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 570-23510-1

Job Description: SSFL CH661 / 692670.61 sw

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Jimmy Jin
Project Manager I
3/30/2020 1:21 PM

Designee for
Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
03/30/2020

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

Tel (714) 895-5494 Fax (714) 894-7501 www.EurofinsUS.com

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Geotechnical

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: SSFL CH661 / 692670.61 sw

Report Number: 570-23510-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 3/13/2020 at 5:57 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2°C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 degrees Celsius of the required temperature or method specified range. For samples with a specified temperature of 4 degrees Celsius, samples with a temperature ranging from just above freezing temperature of water to 6 degrees Celsius shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DISSOLVED METALS (ICPMS)

Samples EVBMP0007S012 (570-23510-1), EVBMP0008S015 (570-23510-2) and EVBMP0009S013 (570-23510-3) were analyzed for dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were analyzed on 03/19/2020.

Cadmium, Copper and Lead failed the recovery criteria low for the MS of sample EVBMP0007S012MS (570-23510-1) in batch 570-58367.

Cadmium, Copper and Lead failed the recovery criteria low for the MSD of sample EVBMP0007S012MSD (570-23510-1) in batch 570-58367. Cadmium, Copper and Lead exceeded the RPD limit.

Refer to the QC report for details.

The following samples were not filtered within 15 minutes of sample collection as required by the method: EVBMP0007S012 (570-23510-1), EVBMP0008S015 (570-23510-2) and EVBMP0009S013 (570-23510-3). The sample(s) was filtered prior to analysis at the laboratory, and the results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Samples EVBMP0007S012 (570-23510-1), EVBMP0008S015 (570-23510-2) and EVBMP0009S013 (570-23510-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 03/18/2020 and analyzed on 03/19/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples EVBMP0007S012 (570-23510-1), EVBMP0008S015 (570-23510-2) and EVBMP0009S013 (570-23510-3) were analyzed for dissolved mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 03/19/2020.

Mercury failed the recovery criteria low for the MS of sample EVBMP0007S012MS (570-23510-1) in batch 570-58328.

Mercury exceeded the RPD limit for the MSD of sample EVBMP0007S012MSD (570-23510-1) in batch 570-58328.

Refer to the QC report for details.

The following samples were not filtered within 15 minutes of sample collection as required by the method: EVBMP0007S012 (570-23510-1), EVBMP0008S015 (570-23510-2) and EVBMP0009S013 (570-23510-3). The sample(s) was filtered prior to analysis at the laboratory, and the results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Samples EVBMP0007S012 (570-23510-1), EVBMP0008S015 (570-23510-2) and EVBMP0009S013 (570-23510-3) were analyzed for total mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 03/19/2020.

Mercury exceeded the RPD limit for the MSD of sample 570-23609-1 in batch 570-58328.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS

Samples EVBMP0007S012 (570-23510-1), EVBMP0008S015 (570-23510-2) and EVBMP0009S013 (570-23510-3) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 03/15/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PARTICLE SIZE

Samples EVBMP0007S012 (570-23510-1), EVBMP0008S015 (570-23510-2) and EVBMP0009S013 (570-23510-3) were analyzed for Particle Size in accordance with ASTM D 4464. The samples were analyzed on 03/19/2020.

Fine Sand (0.125 to 0.25mm) exceeded the RPD limit for the duplicate of sample 570-23605-1. Refer to the QC report for details.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TURBIDITY

Samples EVBMP0008S015 (570-23510-2) and EVBMP0009S013 (570-23510-3) were analyzed for turbidity in accordance with SM 2130B. The samples were analyzed on 03/14/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Client Sample ID: EVBMP0007S012

Lab Sample ID: 570-23510-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00226		0.00100	0.000610	mg/L	1		200.8	Total Recoverable
Lead	0.000686	J	0.00100	0.000190	mg/L	1		200.8	Total Recoverable
Copper	0.00164	H F1 F2	0.00100	0.000610	mg/L	1		200.8	Dissolved
Lead	0.000274	J H F1 F2	0.00100	0.000190	mg/L	1		200.8	Dissolved
Total Suspended Solids	3.20		1.00	0.829	mg/L	1		SM 2540D	Total/NA
Clay(less than 0.00391 mm)	3.68		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	84.45		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	88.13		0.01	0.01	%	1		D4464	Total/NA
Very Fine Sand (0.0625 to 0.125 mm)	11.87		0.01	0.01	%	1		D4464	Total/NA

Client Sample ID: EVBMP0008S015

Lab Sample ID: 570-23510-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00207		0.00100	0.000610	mg/L	1		200.8	Total Recoverable
Lead	0.000498	J	0.00100	0.000190	mg/L	1		200.8	Total Recoverable
Copper	0.00131	H	0.00100	0.000610	mg/L	1		200.8	Dissolved
Lead	0.000516	J H	0.00100	0.000190	mg/L	1		200.8	Dissolved
Turbidity	62.5		0.0500	0.0439	NTU	1		SM 2130B	Total/NA
Total Suspended Solids	47.4		2.00	1.66	mg/L	1		SM 2540D	Total/NA
Clay(less than 0.00391 mm)	38.64		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	61.35		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%	1		D4464	Total/NA

Client Sample ID: EVBMP0009S013

Lab Sample ID: 570-23510-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00196		0.00100	0.000610	mg/L	1		200.8	Total Recoverable
Lead	0.000544	J	0.00100	0.000190	mg/L	1		200.8	Total Recoverable
Copper	0.00161	H	0.00100	0.000610	mg/L	1		200.8	Dissolved
Lead	0.000375	J H	0.00100	0.000190	mg/L	1		200.8	Dissolved
Turbidity	4.88		0.0500	0.0439	NTU	1		SM 2130B	Total/NA
Total Suspended Solids	4.00		1.00	0.829	mg/L	1		SM 2540D	Total/NA
Clay(less than 0.00391 mm)	5.27		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	94.73		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%	1		D4464	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: EVBMP0007S012
Date Collected: 03/13/20 07:39
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000980	mg/L		03/18/20 20:00	03/19/20 11:11	1
Copper	0.00226		0.00100	0.000610	mg/L		03/18/20 20:00	03/19/20 11:11	1
Lead	0.000686	J	0.00100	0.000190	mg/L		03/18/20 20:00	03/19/20 11:11	1

Client Sample ID: EVBMP0008S015
Date Collected: 03/13/20 07:29
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000980	mg/L		03/18/20 20:00	03/19/20 11:14	1
Copper	0.00207		0.00100	0.000610	mg/L		03/18/20 20:00	03/19/20 11:14	1
Lead	0.000498	J	0.00100	0.000190	mg/L		03/18/20 20:00	03/19/20 11:14	1

Client Sample ID: EVBMP0009S013
Date Collected: 03/13/20 08:25
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000980	mg/L		03/18/20 20:00	03/19/20 11:16	1
Copper	0.00196		0.00100	0.000610	mg/L		03/18/20 20:00	03/19/20 11:16	1
Lead	0.000544	J	0.00100	0.000190	mg/L		03/18/20 20:00	03/19/20 11:16	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Client Sample ID: EVBMP0007S012
Date Collected: 03/13/20 07:39
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H F1 F2	0.00100	0.000980	mg/L			03/19/20 15:27	1
Copper	0.00164	H F1 F2	0.00100	0.000610	mg/L			03/19/20 15:27	1
Lead	0.000274	J H F1 F2	0.00100	0.000190	mg/L			03/19/20 15:27	1

Client Sample ID: EVBMP0008S015
Date Collected: 03/13/20 07:29
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000980	mg/L			03/19/20 15:35	1
Copper	0.00131	H	0.00100	0.000610	mg/L			03/19/20 15:35	1
Lead	0.000516	J H	0.00100	0.000190	mg/L			03/19/20 15:35	1

Client Sample ID: EVBMP0009S013
Date Collected: 03/13/20 08:25
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000980	mg/L			03/19/20 15:38	1
Copper	0.00161	H	0.00100	0.000610	mg/L			03/19/20 15:38	1
Lead	0.000375	J H	0.00100	0.000190	mg/L			03/19/20 15:38	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: EVBMP0007S012
Date Collected: 03/13/20 07:39
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		03/19/20 09:00	03/19/20 11:21	1

Client Sample ID: EVBMP0008S015
Date Collected: 03/13/20 07:29
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		03/19/20 09:00	03/19/20 11:23	1

Client Sample ID: EVBMP0009S013
Date Collected: 03/13/20 08:25
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		03/19/20 09:00	03/19/20 11:24	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: 245.1 - Mercury (CVAA) - Dissolved

Client Sample ID: EVBMP0007S012

Date Collected: 03/13/20 07:39

Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H F2 F1	0.000200	0.0000453	mg/L		03/19/20 11:00	03/19/20 17:07	1

Client Sample ID: EVBMP0008S015

Date Collected: 03/13/20 07:29

Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		03/19/20 11:00	03/19/20 17:17	1

Client Sample ID: EVBMP0009S013

Date Collected: 03/13/20 08:25

Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		03/19/20 11:00	03/19/20 17:18	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

General Chemistry

Client Sample ID: EVBMP0007S012

Date Collected: 03/13/20 07:39

Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	3.20		1.00	0.829	mg/L			03/15/20 16:16	1

Client Sample ID: EVBMP0008S015

Date Collected: 03/13/20 07:29

Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	62.5		0.0500	0.0439	NTU			03/14/20 13:04	1
Total Suspended Solids	47.4		2.00	1.66	mg/L			03/15/20 16:16	1

Client Sample ID: EVBMP0009S013

Date Collected: 03/13/20 08:25

Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	4.88		0.0500	0.0439	NTU			03/14/20 13:04	1
Total Suspended Solids	4.00		1.00	0.829	mg/L			03/15/20 16:16	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Client Sample ID: EVBMP0007S012
Date Collected: 03/13/20 07:39
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	3.68		0.01	0.01	%			03/19/20 20:55	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			03/19/20 20:55	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			03/19/20 20:55	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			03/19/20 20:55	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			03/19/20 20:55	1
Silt (0.00391 to 0.0625mm)	84.45		0.01	0.01	%			03/19/20 20:55	1
Total Silt and Clay (0 to 0.0626mm)	88.13		0.01	0.01	%			03/19/20 20:55	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			03/19/20 20:55	1
Very Fine Sand (0.0625 to 0.125 mm)	11.87		0.01	0.01	%			03/19/20 20:55	1

Client Sample ID: EVBMP0008S015
Date Collected: 03/13/20 07:29
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	38.64		0.01	0.01	%			03/19/20 21:20	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			03/19/20 21:20	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			03/19/20 21:20	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			03/19/20 21:20	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			03/19/20 21:20	1
Silt (0.00391 to 0.0625mm)	61.35		0.01	0.01	%			03/19/20 21:20	1
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%			03/19/20 21:20	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			03/19/20 21:20	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			03/19/20 21:20	1

Client Sample ID: EVBMP0009S013
Date Collected: 03/13/20 08:25
Date Received: 03/13/20 17:57

Lab Sample ID: 570-23510-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	5.27		0.01	0.01	%			03/19/20 21:28	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			03/19/20 21:28	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			03/19/20 21:28	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			03/19/20 21:28	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			03/19/20 21:28	1
Silt (0.00391 to 0.0625mm)	94.73		0.01	0.01	%			03/19/20 21:28	1
Total Silt and Clay (0 to 0.0626mm)	100.00		0.01	0.01	%			03/19/20 21:28	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			03/19/20 21:28	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			03/19/20 21:28	1

ASTM D4464-10(M) Raw Data Logbook

METHOD	MATRIX	DATE	ANALYST(S)	INSTRUMENT / EQUIPMENT ID #	BATCH NUMBER	COMMENTS
	<input checked="" type="checkbox"/> Aqueous	Preparation: 3/19/2020 3/19/2020	1106 1106	Instrument: LPSA 1 10196848		
STD SAND-DT		1	STD SAND		602502	Fine Sand
STD-23510E1-DT		2	STD-23510E1			
	F2 ↓	3	F2			
	F3 ↓	4	F3			
STD-23505A1-DT		5	STD-23505A1			
	A2 ↓	6	A2			
	A3 ↓	7	A3			
STD SAND-DT		8	STD SAND		602502	Fine Sand
STD-23605A1-DUP-DT		9	STD-23605A1-DUP			
		10	STD SAND			
STD SAND-DT		11	STD SAND		602502	Fine Sand

COMMENTS:

Instrument QC: Analyze one DPV control sample daily prior to sample analysis, after every batch of 10 samples or portion thereof within a 24-hour shift, and at the end of sequence. Record the standard sand ID number.
 Sample Batch QC: Prepare one Sample Duplicate for every batch of 20 field samples per matrix or portion thereof, and analyze immediately following a DPV control sample. Record the batch number.

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

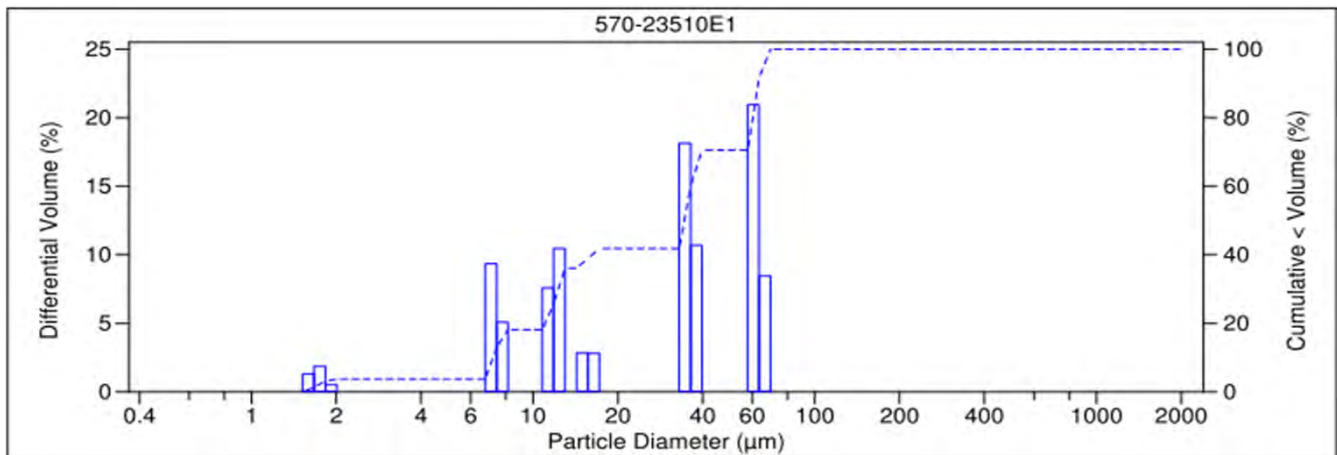
Jacobs Engineering Group, Inc.

Date Sampled: 03/13/20
 Date Received: 03/13/20
 Work Order No: 570-23510
 Date Analyzed: 03/19/20
 Method: ASTM D4464M

Project: SSFL

Sample ID	Depth ft	Description	Mean Grain Size mm
EVBMP0007S012		Silt	0.033

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	11.87	84.45	3.68	88.13



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

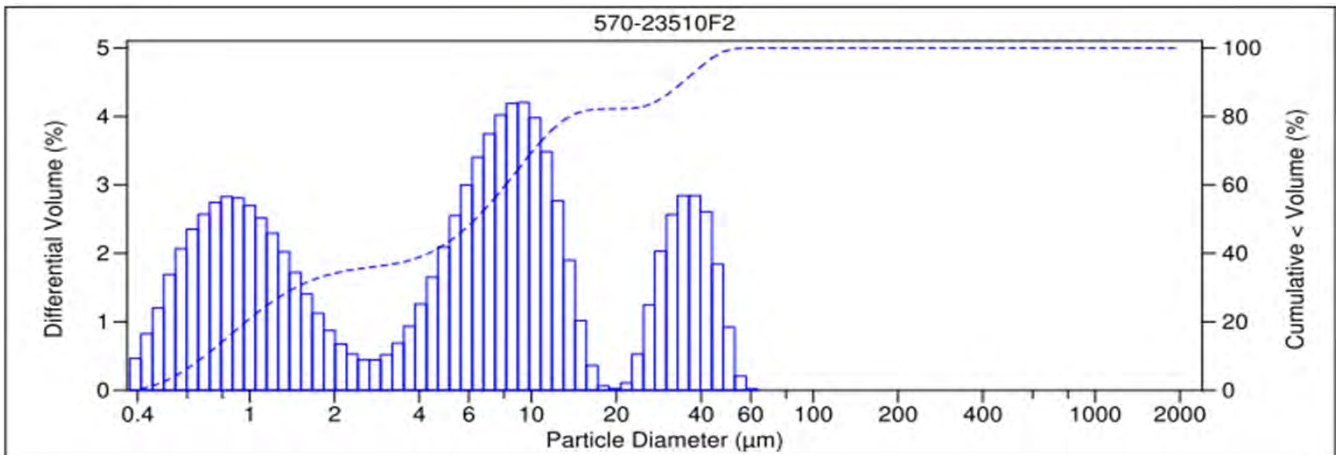
Jacobs Engineering Group, Inc.

Date Sampled: 03/13/20
 Date Received: 03/13/20
 Work Order No: 570-23510
 Date Analyzed: 03/19/20
 Method: ASTM D4464M

Project: SSFL

Sample ID	Depth ft	Description	Mean Grain Size mm
EVBMP0008S015		Silt	0.011

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	0.00	61.35	38.64	100.00



V.3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

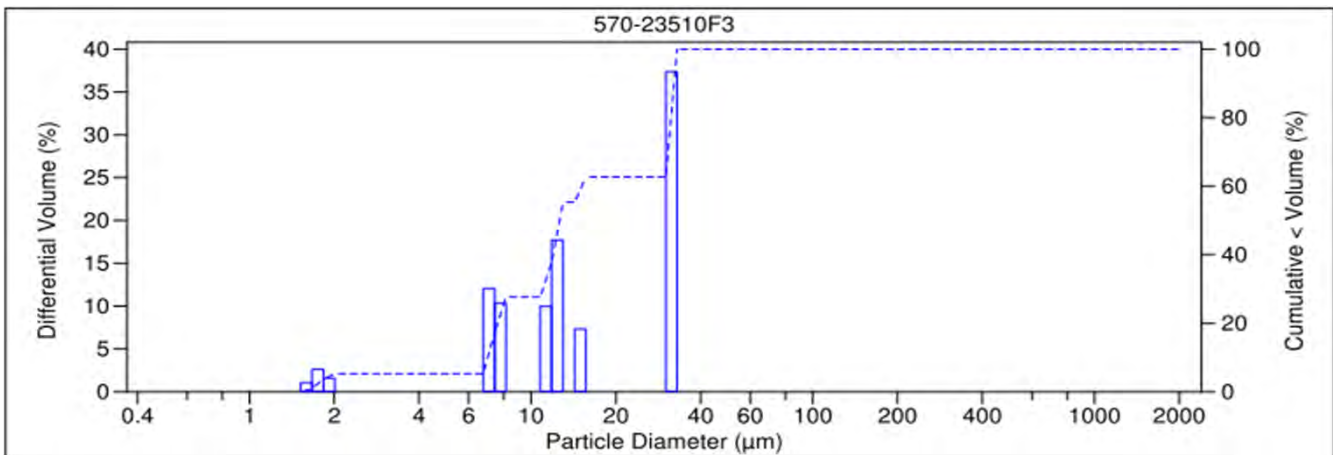
Jacobs Engineering Group, Inc.

Date Sampled: 03/13/20
 Date Received: 03/13/20
 Work Order No: 570-23510
 Date Analyzed: 03/19/20
 Method: ASTM D4464M

Project: SSFL

Sample ID	Depth ft	Description	Mean Grain Size mm
EVBMP0009S013		Silt	0.018

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	0.00	94.73	5.27	100.00



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

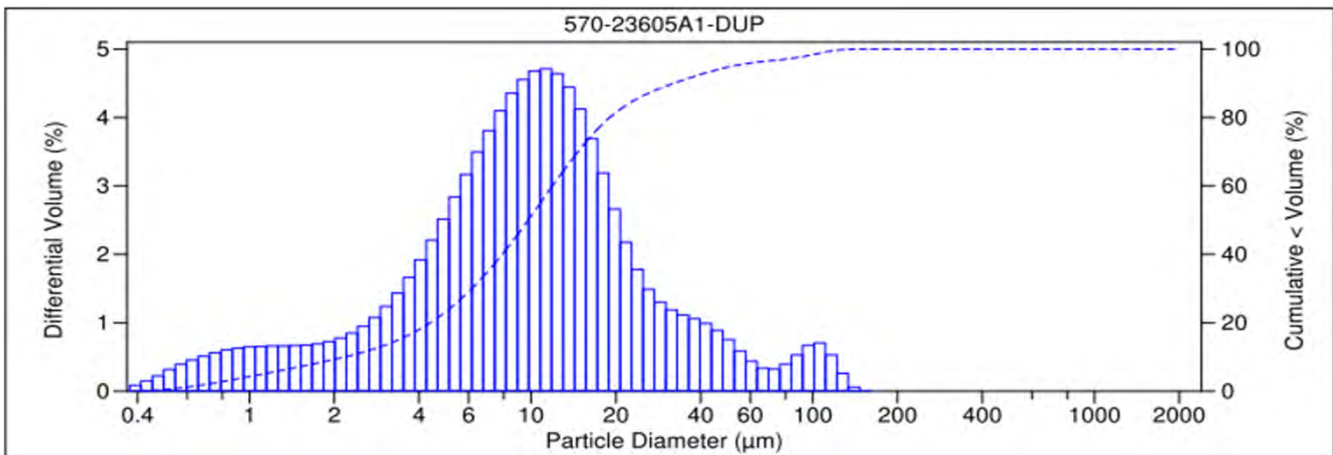
Enthalpy Analytical

Date Sampled: 03/10/20
 Date Received: 03/16/20
 Work Order No: 570-23605
 Date Analyzed: 03/19/20
 Method: ASTM D4464M

Project:

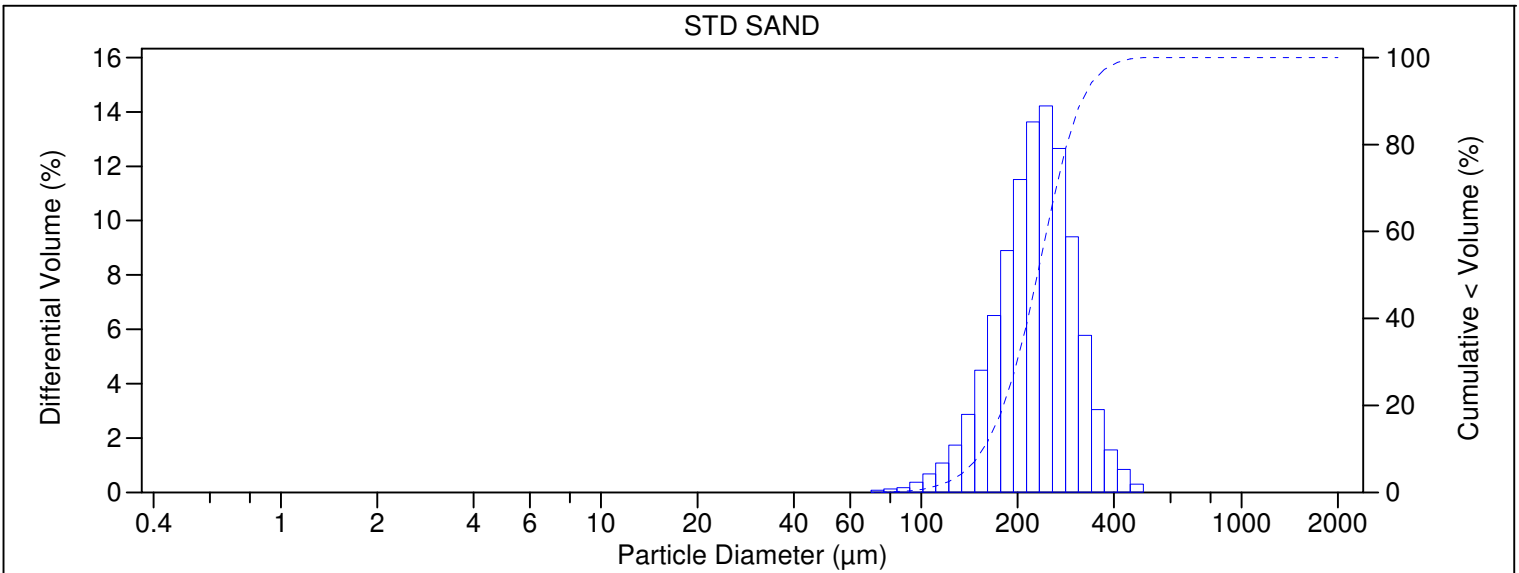
Sample ID	Depth ft	Description	Mean Grain Size mm
1-A (425864-001)		Silt	0.015

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.26	3.63	78.56	17.55	96.11



V.3.0

File name:	C:\LS13320\STD SAND_20 Mar 2020_12.39.31.\$ls		
	STD SAND_20 Mar 2020_12.39.31.\$ls		
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	1106		
Run number:	9		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	0.71%		
LS 13 320	Aqueous Liquid Module		
Start time:	12:38 20 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

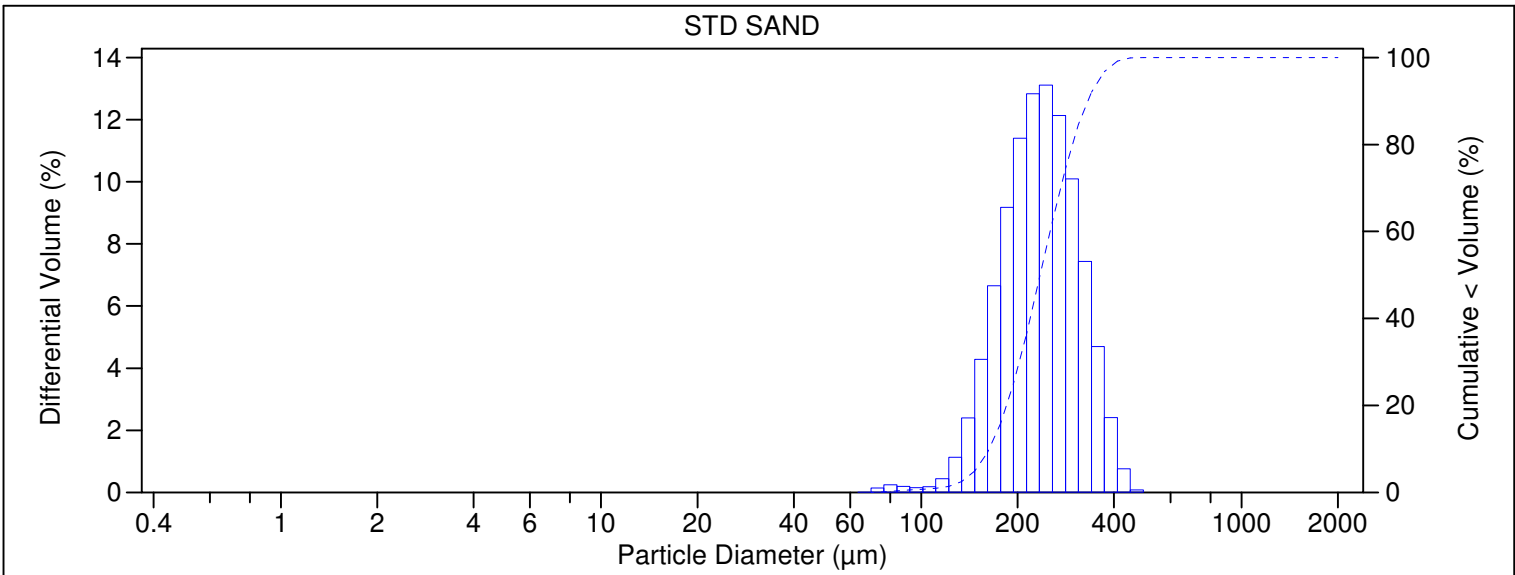


Volume Statistics (Arithmetic)		STD SAND_20 Mar 2020_12.39.31.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.08 µm
Mean:	234.7 µm	Variance:	4106 µm ²
Median:	230.7 µm	Skewness:	0.481 Right skewed
Mean/Median ratio:	1.017	Kurtosis:	0.478 Leptokurtic
Mode:	245.2 µm		
d ₁₀ :	156.0 µm	d ₅₀ :	230.7 µm
		d ₉₀ :	317.7 µm
Folk and Ward Statistics (Phi)			
Mean:	2.14	Median:	2.12
Skewness:	0.10	Kurtosis:	1.05
Deviation:	0.40		
<5%	<16%	<25%	<40%
137.1 µm	171.8 µm	190.3 µm	215.5 µm
<50%	<75%	<84%	<95%
230.7 µm	274.0 µm	296.6 µm	348.3 µm

Particle Diameter µm	STD SAND _20 Mar 2020_12.39 .31.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.98
125	59.1
250	37.9
500	0
1000	0
2000	0

STD SAND_20 Mar 2020_12.39.31.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0.082		
1.149	0	76.43	0.13		
1.261	0	83.90	0.18		
1.385	0	92.10	0.37		
1.520	0	101.1	0.68		
1.669	0	111.0	1.08		
1.832	0	121.8	1.74		
2.011	0	133.7	2.87		
2.208	0	146.8	4.49		
2.423	0	161.2	6.51		
2.660	0	176.9	8.90		
2.920	0	194.2	11.5		
3.206	0	213.2	13.6		
3.519	0	234.1	14.2		
3.863	0	256.9	12.7		
4.241	0	282.1	9.40		
4.656	0	309.6	5.78		
5.111	0	339.9	3.05		
5.611	0	373.1	1.56		
6.159	0	409.6	0.85		
6.761	0	449.7	0.30		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\STD SAND_20 Mar 2020_12.58.30.\$ls		
	STD SAND_20 Mar 2020_12.58.30.\$ls		
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	1106		
Run number:	11		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.48%		
LS 13 320	Aqueous Liquid Module		
Start time:	12:57 20 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00



Volume Statistics (Arithmetic)		STD SAND_20 Mar 2020_12.58.30.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	65.05 µm
Mean:	241.5 µm	Variance:	4231 µm ²
Median:	235.4 µm	Skewness:	0.403 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.048 Platykurtic
Mode:	245.2 µm		
d ₁₀ :	163.1 µm	d ₅₀ :	235.4 µm
		d ₉₀ :	331.6 µm
Folk and Ward Statistics (Phi)			
Mean:	2.09	Median:	2.09
Skewness:	0.04	Kurtosis:	0.97
Deviation:	0.40		
<5%	<16%	<25%	<40%
147.1 µm	177.2 µm	194.2 µm	219.0 µm
<50%	<75%	<84%	<95%
235.4 µm	283.4 µm	308.0 µm	360.9 µm

Particle Diameter µm	STD SAND _20 Mar 2020_12.58 .30.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	1.67
125	56.7
250	41.6
500	0.00077
1000	0
2000	0

STD SAND_20 Mar 2020_12.58.30.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.015		
1.047	0	69.62	0.14		
1.149	0	76.43	0.24		
1.261	0	83.90	0.20		
1.385	0	92.10	0.15		
1.520	0	101.1	0.18		
1.669	0	111.0	0.44		
1.832	0	121.8	1.14		
2.011	0	133.7	2.40		
2.208	0	146.8	4.29		
2.423	0	161.2	6.65		
2.660	0	176.9	9.18		
2.920	0	194.2	11.4		
3.206	0	213.2	12.8		
3.519	0	234.1	13.1		
3.863	0	256.9	12.1		
4.241	0	282.1	10.1		
4.656	0	309.6	7.43		
5.111	0	339.9	4.70		
5.611	0	373.1	2.41		
6.159	0	409.6	0.77		
6.761	0	449.7	0.082		
7.422	0	493.6	0.00089		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

Default Detection Limits

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Prep: 200.8

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000980	mg/L
Copper	0.00100	0.000610	mg/L
Lead	0.00100	0.000190	mg/L

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000980	mg/L
Copper	0.00100	0.000610	mg/L
Lead	0.00100	0.000190	mg/L

Method: 245.1 - Mercury (CVAA)

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

Method: 245.1 - Mercury (CVAA) - Dissolved

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

General Chemistry

Analyte	RL	MDL	Units
Turbidity	0.0500	0.0439	NTU
Total Suspended Solids	1.00	0.829	mg/L

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	RL	MDL	Units
Clay(less than 0.00391 mm)	0.01	0.01	%
Coarse Sand (0.5mm to 1mm)	0.01	0.01	%
Fine Sand (0.125 to 0.25mm)	0.01	0.01	%
Gravel (greater than 2 mm)	0.01	0.01	%
Medium Sand (0.25 to 0.5 mm)	0.01	0.01	%
Silt (0.00391 to 0.0625mm)	0.01	0.01	%
Total Silt and Clay (0 to 0.0626mm)	0.01	0.01	%
Very Coarse Sand (1 to 2mm)	0.01	0.01	%
Very Fine Sand (0.0625 to 0.125 mm)	0.01	0.01	%

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 570-58210/1-A
Matrix: Water
Analysis Batch: 58367

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 58210

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		0.00100	0.000980	mg/L		03/18/20 20:00	03/19/20 10:54	1
Copper	ND		0.00100	0.000610	mg/L		03/18/20 20:00	03/19/20 10:54	1
Lead	ND		0.00100	0.000190	mg/L		03/18/20 20:00	03/19/20 10:54	1

Lab Sample ID: LCS 570-58210/2-A
Matrix: Water
Analysis Batch: 58367

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 58210

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	RPD
Cadmium	0.100	0.1028		mg/L		103	80 - 120	
Copper	0.100	0.1030		mg/L		103	80 - 120	
Lead	0.100	0.1006		mg/L		101	80 - 120	

Lab Sample ID: LCSD 570-58210/3-A
Matrix: Water
Analysis Batch: 58367

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 58210

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits	RPD	Limit	
Cadmium	0.100	0.1033		mg/L		103	80 - 120	1	20	
Copper	0.100	0.1036		mg/L		104	80 - 120	0	20	
Lead	0.100	0.1008		mg/L		101	80 - 120	0	20	

Lab Sample ID: 570-23815-A-1-B MS
Matrix: Water
Analysis Batch: 58367

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 58210

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	RPD
Cadmium	ND		0.100	0.09457		mg/L		95	80 - 120	
Copper	0.0626		0.100	0.1497		mg/L		87	80 - 120	
Lead	0.000251	J	0.100	0.1040		mg/L		104	80 - 120	

Lab Sample ID: 570-23815-A-1-C MSD
Matrix: Water
Analysis Batch: 58367

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 58210

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
									Limits	RPD	Limit	
Cadmium	ND		0.100	0.09113		mg/L		91	80 - 120	4	20	
Copper	0.0626		0.100	0.1446		mg/L		82	80 - 120	3	20	
Lead	0.000251	J	0.100	0.1002		mg/L		100	80 - 120	4	20	

Lab Sample ID: MB 570-58300/1-A
Matrix: Water
Analysis Batch: 58367

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		0.00100	0.000980	mg/L			03/19/20 15:17	1
Copper	ND		0.00100	0.000610	mg/L			03/19/20 15:17	1
Lead	ND		0.00100	0.000190	mg/L			03/19/20 15:17	1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 570-58300/2-A
Matrix: Water
Analysis Batch: 58367

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.1033		mg/L		103	80 - 120
Copper	0.100	0.1022		mg/L		102	80 - 120
Lead	0.100	0.09844		mg/L		98	80 - 120

Lab Sample ID: LCSD 570-58300/3-A
Matrix: Water
Analysis Batch: 58367

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.1035		mg/L		103	80 - 120	0	20
Copper	0.100	0.1014		mg/L		101	80 - 120	1	20
Lead	0.100	0.09951		mg/L		100	80 - 120	1	20

Lab Sample ID: 570-23510-1 MS
Matrix: Water
Analysis Batch: 58367

Client Sample ID: EVBMP0007S012
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND	H F1 F2	0.100	0.05988	F1	mg/L		60	80 - 120
Copper	0.00164	H F1 F2	0.100	0.06095	F1	mg/L		59	80 - 120
Lead	0.000274	J H F1 F2	0.100	0.05689	F1	mg/L		57	80 - 120

Lab Sample ID: 570-23510-1 MSD
Matrix: Water
Analysis Batch: 58367

Client Sample ID: EVBMP0007S012
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND	H F1 F2	0.100	0.04822	F2 F1	mg/L		48	80 - 120	22	20
Copper	0.00164	H F1 F2	0.100	0.04891	F2 F1	mg/L		47	80 - 120	22	20
Lead	0.000274	J H F1 F2	0.100	0.04531	F2 F1	mg/L		45	80 - 120	23	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 570-58265/1-A
Matrix: Water
Analysis Batch: 58328

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58265

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		03/19/20 09:00	03/19/20 11:06	1

Lab Sample ID: LCS 570-58265/2-A
Matrix: Water
Analysis Batch: 58328

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.01021		mg/L		102	85 - 121

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 570-58265/3-A
Matrix: Water
Analysis Batch: 58328

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58265

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.01014		mg/L		101	85 - 121	1	10

Lab Sample ID: 570-23609-F-1-B MS
Matrix: Water
Analysis Batch: 58328

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F2	0.0100	0.007468		mg/L		75	57 - 141

Lab Sample ID: 570-23609-F-1-C MSD
Matrix: Water
Analysis Batch: 58328

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58265

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	F2	0.0100	0.005840	F2	mg/L		58	57 - 141	24	10

Lab Sample ID: MB 570-58304/1-B
Matrix: Water
Analysis Batch: 58328

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 58307

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		03/19/20 11:00	03/19/20 16:53	1

Lab Sample ID: LCS 570-58304/2-B
Matrix: Water
Analysis Batch: 58328

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 58307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.01019		mg/L		102	85 - 121

Lab Sample ID: LCSD 570-58304/3-B
Matrix: Water
Analysis Batch: 58328

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 58307

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.009729		mg/L		97	85 - 121	5	10

Lab Sample ID: 570-23510-1 MS
Matrix: Water
Analysis Batch: 58328

Client Sample ID: EVBMP0007S012
Prep Type: Dissolved
Prep Batch: 58307

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	H F2 F1	0.0100	0.003931	F1	mg/L		39	57 - 141

Lab Sample ID: 570-23510-1 MSD
Matrix: Water
Analysis Batch: 58328

Client Sample ID: EVBMP0007S012
Prep Type: Dissolved
Prep Batch: 58307

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	H F2 F1	0.0100	0.005926	F2	mg/L		59	57 - 141	40	10

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: SM 2130B - Turbidity

Lab Sample ID: LCSSRM 570-57531/1
Matrix: Water
Analysis Batch: 57531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	1000	1008		NTU		100.8	99.0 - 101.0

Lab Sample ID: LCSSRM 570-57531/2
Matrix: Water
Analysis Batch: 57531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	10.0	9.990		NTU		99.9	99.0 - 101.0

Lab Sample ID: LCSSRM 570-57531/3
Matrix: Water
Analysis Batch: 57531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	0.0200	ND		NTU		150.0	0.0 - 200.0

Lab Sample ID: 570-23483-F-1 DU
Matrix: Water
Analysis Batch: 57531

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	0.570		0.6000		NTU		5	25

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 570-57396/1
Matrix: Water
Analysis Batch: 57396

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.00	0.829	mg/L			03/15/20 16:16	1

Lab Sample ID: LCS 570-57396/2
Matrix: Water
Analysis Batch: 57396

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	108.0		mg/L		108	85 - 115

Lab Sample ID: LCSD 570-57396/3
Matrix: Water
Analysis Batch: 57396

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	113.0		mg/L		113	85 - 115	5	10

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: 570-23521-E-1 DU
Matrix: Water
Analysis Batch: 57396

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	78.7		72.67		mg/L		8	10

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Lab Sample ID: 570-23605-A-1 DU
Matrix: Water
Analysis Batch: 58630

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Clay(less than 0.00391 mm)	16.14		17.55		%		8	20
Coarse Sand (0.5mm to 1mm)	ND		ND		%		NC	20
Fine Sand (0.125 to 0.25mm)	0.14		0.26	F3	%		60	20
Gravel (greater than 2 mm)	ND		ND		%		NC	20
Medium Sand (0.25 to 0.5 mm)	ND		ND		%		NC	20
Silt (0.00391 to 0.0625mm)	79.70		78.56		%		1	20
Total Silt and Clay (0 to 0.0626mm)	95.84		96.11		%		0.3	20
Very Coarse Sand (1 to 2mm)	ND		ND		%		NC	20
Very Fine Sand (0.0625 to 0.125 mm)	4.02		3.63		%		10	20

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Metals

Prep Batch: 58210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1	EVBMP0007S012	Total Recoverable	Water	200.8	
570-23510-2	EVBMP0008S015	Total Recoverable	Water	200.8	
570-23510-3	EVBMP0009S013	Total Recoverable	Water	200.8	
MB 570-58210/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 570-58210/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 570-58210/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
570-23815-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
570-23815-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	

Prep Batch: 58265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1	EVBMP0007S012	Total/NA	Water	245.1	
570-23510-2	EVBMP0008S015	Total/NA	Water	245.1	
570-23510-3	EVBMP0009S013	Total/NA	Water	245.1	
MB 570-58265/1-A	Method Blank	Total/NA	Water	245.1	
LCS 570-58265/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 570-58265/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
570-23609-F-1-B MS	Matrix Spike	Total/NA	Water	245.1	
570-23609-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Filtration Batch: 58300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1	EVBMP0007S012	Dissolved	Water	Filtration	
570-23510-2	EVBMP0008S015	Dissolved	Water	Filtration	
570-23510-3	EVBMP0009S013	Dissolved	Water	Filtration	
MB 570-58300/1-A	Method Blank	Dissolved	Water	Filtration	
LCS 570-58300/2-A	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-58300/3-A	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-23510-1 MS	EVBMP0007S012	Dissolved	Water	Filtration	
570-23510-1 MSD	EVBMP0007S012	Dissolved	Water	Filtration	

Filtration Batch: 58304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1	EVBMP0007S012	Dissolved	Water	Filtration	
570-23510-2	EVBMP0008S015	Dissolved	Water	Filtration	
570-23510-3	EVBMP0009S013	Dissolved	Water	Filtration	
MB 570-58304/1-B	Method Blank	Dissolved	Water	Filtration	
LCS 570-58304/2-B	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-58304/3-B	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-23510-1 MS	EVBMP0007S012	Dissolved	Water	Filtration	
570-23510-1 MSD	EVBMP0007S012	Dissolved	Water	Filtration	

Prep Batch: 58307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1	EVBMP0007S012	Dissolved	Water	245.1	58304
570-23510-2	EVBMP0008S015	Dissolved	Water	245.1	58304
570-23510-3	EVBMP0009S013	Dissolved	Water	245.1	58304
MB 570-58304/1-B	Method Blank	Dissolved	Water	245.1	58304
LCS 570-58304/2-B	Lab Control Sample	Dissolved	Water	245.1	58304
LCSD 570-58304/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	58304
570-23510-1 MS	EVBMP0007S012	Dissolved	Water	245.1	58304

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Metals (Continued)

Prep Batch: 58307 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1 MSD	EVBMP0007S012	Dissolved	Water	245.1	58304

Analysis Batch: 58328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1	EVBMP0007S012	Dissolved	Water	245.1	58307
570-23510-1	EVBMP0007S012	Total/NA	Water	245.1	58265
570-23510-2	EVBMP0008S015	Dissolved	Water	245.1	58307
570-23510-2	EVBMP0008S015	Total/NA	Water	245.1	58265
570-23510-3	EVBMP0009S013	Dissolved	Water	245.1	58307
570-23510-3	EVBMP0009S013	Total/NA	Water	245.1	58265
MB 570-58265/1-A	Method Blank	Total/NA	Water	245.1	58265
MB 570-58304/1-B	Method Blank	Dissolved	Water	245.1	58307
LCS 570-58265/2-A	Lab Control Sample	Total/NA	Water	245.1	58265
LCS 570-58304/2-B	Lab Control Sample	Dissolved	Water	245.1	58307
LCSD 570-58265/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	58265
LCSD 570-58304/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	58307
570-23510-1 MS	EVBMP0007S012	Dissolved	Water	245.1	58307
570-23510-1 MSD	EVBMP0007S012	Dissolved	Water	245.1	58307
570-23609-F-1-B MS	Matrix Spike	Total/NA	Water	245.1	58265
570-23609-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	58265

Analysis Batch: 58367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1	EVBMP0007S012	Dissolved	Water	200.8	58300
570-23510-1	EVBMP0007S012	Total Recoverable	Water	200.8	58210
570-23510-2	EVBMP0008S015	Dissolved	Water	200.8	58300
570-23510-2	EVBMP0008S015	Total Recoverable	Water	200.8	58210
570-23510-3	EVBMP0009S013	Dissolved	Water	200.8	58300
570-23510-3	EVBMP0009S013	Total Recoverable	Water	200.8	58210
MB 570-58210/1-A	Method Blank	Total Recoverable	Water	200.8	58210
MB 570-58300/1-A	Method Blank	Dissolved	Water	200.8	58300
LCS 570-58210/2-A	Lab Control Sample	Total Recoverable	Water	200.8	58210
LCS 570-58300/2-A	Lab Control Sample	Dissolved	Water	200.8	58300
LCSD 570-58210/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	58210
LCSD 570-58300/3-A	Lab Control Sample Dup	Dissolved	Water	200.8	58300
570-23510-1 MS	EVBMP0007S012	Dissolved	Water	200.8	58300
570-23510-1 MSD	EVBMP0007S012	Dissolved	Water	200.8	58300
570-23815-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	58210
570-23815-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	58210

General Chemistry

Analysis Batch: 57396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1	EVBMP0007S012	Total/NA	Water	SM 2540D	
570-23510-2	EVBMP0008S015	Total/NA	Water	SM 2540D	
570-23510-3	EVBMP0009S013	Total/NA	Water	SM 2540D	
MB 570-57396/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-57396/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-57396/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-23521-E-1 DU	Duplicate	Total/NA	Water	SM 2540D	

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

General Chemistry

Analysis Batch: 57531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-2	EVBMP0008S015	Total/NA	Water	SM 2130B	
570-23510-3	EVBMP0009S013	Total/NA	Water	SM 2130B	
LCSSRM 570-57531/1	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-57531/2	Lab Control Sample	Total/NA	Water	SM 2130B	
LCSSRM 570-57531/3	Lab Control Sample	Total/NA	Water	SM 2130B	
570-23483-F-1 DU	Duplicate	Total/NA	Water	SM 2130B	

Geotechnical

Analysis Batch: 58630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-23510-1	EVBMP0007S012	Total/NA	Water	D4464	
570-23510-2	EVBMP0008S015	Total/NA	Water	D4464	
570-23510-3	EVBMP0009S013	Total/NA	Water	D4464	
LCS 570-58630/9	Lab Control Sample	Total/NA	Water	D4464	
LCSD 570-58630/11	Lab Control Sample Dup	Total/NA	Water	D4464	
570-23605-A-1 DU	Duplicate	Total/NA	Water	D4464	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Client Sample ID: EVBMP0007S012

Lab Sample ID: 570-23510-1

Date Collected: 03/13/20 07:39

Matrix: Water

Date Received: 03/13/20 17:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	58300	03/14/20 10:35	WL8G	ECL 1
Dissolved	Analysis	200.8		1			58367	03/19/20 15:27	UFLE	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	58210	03/18/20 20:00	ZHW5	ECL 1
Total Recoverable	Analysis	200.8		1			58367	03/19/20 11:11	UFLE	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	58304	03/14/20 10:35	WL8G	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	58307	03/19/20 11:00	WL8G	ECL 1
Dissolved	Analysis	245.1		1			58328	03/19/20 17:07	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Prep	245.1			50 mL	100 mL	58265	03/19/20 09:00	WL8G	ECL 1
Total/NA	Analysis	245.1		1			58328	03/19/20 11:21	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	57396	03/15/20 16:16	YR9U	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			58630	03/19/20 20:55	C4LT	ECL 1
Instrument ID: NOEQUIP										

Client Sample ID: EVBMP0008S015

Lab Sample ID: 570-23510-2

Date Collected: 03/13/20 07:29

Matrix: Water

Date Received: 03/13/20 17:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	58300	03/14/20 10:35	WL8G	ECL 1
Dissolved	Analysis	200.8		1			58367	03/19/20 15:35	UFLE	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	58210	03/18/20 20:00	ZHW5	ECL 1
Total Recoverable	Analysis	200.8		1			58367	03/19/20 11:14	UFLE	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	58304	03/14/20 10:35	WL8G	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	58307	03/19/20 11:00	WL8G	ECL 1
Dissolved	Analysis	245.1		1			58328	03/19/20 17:17	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Prep	245.1			50 mL	100 mL	58265	03/19/20 09:00	WL8G	ECL 1
Total/NA	Analysis	245.1		1			58328	03/19/20 11:23	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2130B		1			57531	03/14/20 13:04	KZ4O	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	SM 2540D		1	500 mL	1000 mL	57396	03/15/20 16:16	YR9U	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			58630	03/19/20 21:20	C4LT	ECL 1
Instrument ID: NOEQUIP										

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Client Sample ID: EVBMP0009S013

Lab Sample ID: 570-23510-3

Date Collected: 03/13/20 08:25

Matrix: Water

Date Received: 03/13/20 17:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	58300	03/14/20 10:35	WL8G	ECL 1
Dissolved	Analysis	200.8		1			58367	03/19/20 15:38	UFLE	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	58210	03/18/20 20:00	ZHW5	ECL 1
Total Recoverable	Analysis	200.8		1			58367	03/19/20 11:16	UFLE	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	58304	03/14/20 10:35	WL8G	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	58307	03/19/20 11:00	WL8G	ECL 1
Dissolved	Analysis	245.1		1			58328	03/19/20 17:18	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Prep	245.1			50 mL	100 mL	58265	03/19/20 09:00	WL8G	ECL 1
Total/NA	Analysis	245.1		1			58328	03/19/20 11:24	MD3A	ECL 1
Instrument ID: HG8										
Total/NA	Analysis	SM 2130B		1			57531	03/14/20 13:04	KZ4O	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	57396	03/15/20 16:16	YR9U	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			58630	03/19/20 21:28	C4LT	ECL 1
Instrument ID: NOEQUIP										

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	ECL 1
245.1	Mercury (CVAA)	EPA	ECL 1
SM 2130B	Turbidity	SM	ECL 1
SM 2540D	Solids, Total Suspended (TSS)	SM	ECL 1
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
200.8	Preparation, Total Recoverable Metals	EPA	ECL 1
245.1	Preparation, Mercury	EPA	ECL 1
Filtration	Sample Filtration	None	ECL 1

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- None = None
- SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

- ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-23510-1	EVBMP0007S012	Water	03/13/20 07:39	03/13/20 17:57	
570-23510-2	EVBMP0008S015	Water	03/13/20 07:29	03/13/20 17:57	
570-23510-3	EVBMP0009S013	Water	03/13/20 08:25	03/13/20 17:57	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
Hg 1ppm ICV 00015	04/04/20	03/04/20	DI Water, Lot n/a	100 mL	MT-Hg-CS_00002	0.1 mL	Mercury	1 mg/L
.MT-Hg-CS_00002	12/31/20		High Purity Standards, Lot 1914918-100		(Purchased Reagent)		Mercury	1000 ug/mL
Hg 1ppm STD 00011	04/04/20	03/04/20	DI Water, Lot n/a	100 mL	MT-Hg-SS_00001	1 mL	Mercury	1 mg/L
.MT-Hg-SS_00001	07/14/22		AccuStandard, Lot 217075028		(Purchased Reagent)		Mercury	100 ug/mL
Hg H2SO4_00001	02/21/21		Fisher, Lot 3117052		(Purchased Reagent)		Sulfuric acid	98 mg/L
Hg K2S2O3_00003	02/19/21	02/18/20	DI Water, Lot N/A	10 L	HG_7440K2S2O8_00001	500 g	Potassium persulfate	4950000 mg/L
.HG_7440K2S2O8_00001	02/27/22		AcrosOrganic, Lot A0379062		(Purchased Reagent)		Potassium persulfate	99 g/g
Hg KMnO4_00005	07/31/21	02/24/20	DI Water, Lot N/A	10 L	HG_7471_KMNO4_00002	500 g	Potassium Permanganate	5000000 mg/L
.HG_7471_KMNO4_00002	08/22/23		VWR, Lot 0277-C094		(Purchased Reagent)		Potassium Permanganate	100 g/g
Hg NaCl-NH2OH_00007	10/02/20	02/24/20	DI Water, Lot N/A	10 L	HG_7470_NH3OH_00002	1.2 Kg	Hydroxylamine hydrochloride	0.01188 L
.HG_7470_NH3OH_00002	10/02/20		VWR Chemicals, LLC, Lot 19F1856849		HG_7470_NaCl_00002	1.2 Kg	Sodium Chloride	11880 L
.HG_7470_NaCl_00002	02/21/25		Fisher, Lot 188772		(Purchased Reagent)		Hydroxylamine hydrochloride	99 g/g
MI_Fine Sand_00002	09/18/20	03/18/20		500 g	MI_WashedSand_00001	500 g	Fine Sand (0.125 to 0.25mm)	100 %
.MI_WashedSand_00001	06/19/25		Fisher, Lot 177317		(Purchased Reagent)		Medium Sand (0.25 to 0.5 mm)	100 %
							Fine Sand (0.125 to 0.25mm)	100 %
							Medium Sand (0.25 to 0.5 mm)	100 %
MT-HNO3 CON. 00001	09/05/21		Fisher Chemical, Lot 1118120		(Purchased Reagent)		Nitric acid	70 mL
MT: 1:1 HCl 00003	03/03/21	03/03/20	DI Water, Lot Di water	500 mL	MT: HCl Conc. 00002	250 mL	Hydrogen Chloride	18.5 mL
.MT: HCl Conc. 00002	11/14/22		Fisher Scientific, Lot 4118110		(Purchased Reagent)		Hydrogen Chloride	37 mL
MT: 1:1 HNO3 00002	03/17/21	03/17/20	DI Water, Lot DI Water	500 mL	MT_H2NO3 Con 00001	250 mL	Nitric acid	35 mL
.MT_H2NO3 Con 00001	05/02/21		Fisher Chemical, Lot 1118101		(Purchased Reagent)		Nitric acid	70 mL
MT_ICP_Spike1_00008	09/30/20	01/30/20	HNO3, Lot 1118092	1000 mL	MT-As-SpS_00001	10 mL	As	100 ug/mL
					MT-Be-SpS_00001	10 mL	Be	100 ug/mL
					MT-Bi-CS-SpS_00001	10 mL	Bi	100 ug/mL
					MT-Ca-SpS_00001	10 mL	Ca	100 ug/mL
					MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Co-SpS_00001	10 mL	Co	100 ug/mL
					MT-Cr-SpS_00001	10 mL	Cr	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Fe-SpS_00001	10 mL	Fe	100 ug/mL
					MT-Li-CS-SpS_00001	10 mL	Li	100 ug/mL
					MT-Mg-SpS_00001	10 mL	Mg	100 ug/mL
					MT-Mn-SpS_00001	10 mL	Mn	100 ug/mL
					MT-Mo-SpS_00001	10 mL	Mo	100 ug/mL
					MT-Ni-SpS_00001	10 mL	Ni	100 ug/mL
					MT-P-SpS_00001	10 mL	P	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
					MT-S-CS-SpS_00001	10 mL	Sulfur	100 ug/mL
					MT-Sb-SpS_00001	10 mL	Sb	100 ug/mL
					MT-Se-SpS_00001	10 mL	Se	100 ug/mL
					MT-Sn-SpS_00001	10 mL	Sn	100 ug/mL
					MT-Sr-SpS_00001	10 mL	Sr	100 ug/mL
					MT-Ti-SpS_00001	10 mL	Ti	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MT-Tl-SpS_00001	10 mL	Tl	100 ug/mL
					MT-V-SpS_00001	10 mL	V	100 ug/mL
					MT-Zn-SpS_00001	10 mL	Zn	100 ug/mL
.MT-As-SpS_00001	04/30/23		AccuStandard, Lot 218045118		(Purchased Reagent)		As	10000 ug/mL
.MT-Be-SpS_00001	02/28/23		Ultra, Lot CP-0170		(Purchased Reagent)		Be	10000 ug/mL
.MT-Bi-CS-SpS_00001	06/30/23		Ultra, Lot CP-2124		(Purchased Reagent)		Bi	10000 ug/mL
.MT-Ca-SpS_00001	04/30/23		Ultra, Lot CP-0877		(Purchased Reagent)		Ca	10000 ug/mL
.MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
.MT-Co-SpS_00001	05/31/23		Ultra, Lot CP-2011		(Purchased Reagent)		Co	10000 ug/mL
.MT-Cr-SpS_00001	05/31/23		Ultra, Lot CP-1768		(Purchased Reagent)		Cr	10000 ug/mL
.MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
.MT-Fe-SpS_00001	08/31/24		Ultra, Lot CR-3137		(Purchased Reagent)		Fe	10000 ug/mL
.MT-Li-CS-SpS_00001	05/31/21		Ultra, Lot T00356		(Purchased Reagent)		Li	10000 ug/mL
.MT-Mg-SpS_00001	09/30/22		Ultra, Lot CM-4445		(Purchased Reagent)		Mg	10000 ug/mL
.MT-Mn-SpS_00001	01/31/24		Ultra, Lot M00334A		(Purchased Reagent)		Mn	10000 ug/mL
.MT-Mo-SpS_00001	08/31/21		Ultra, Lot CL-2860		(Purchased Reagent)		Mo	10000 ug/mL
.MT-Ni-SpS_00001	02/28/23		Ultra, Lot CP-0006		(Purchased Reagent)		Ni	10000 ug/mL
.MT-P-SpS_00001	09/10/23		Ultra, Lot CP-4381		(Purchased Reagent)		P	10000 ug/mL
.MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
.MT-S-CS-SpS_00001	11/30/22		Ultra, Lot CM-5393		(Purchased Reagent)		Sulfur	10000 ug/mL
.MT-Sb-SpS_00001	06/30/23		Ultra, Lot CP-2412		(Purchased Reagent)		Sb	10000 ug/mL
.MT-Se-SpS_00001	11/30/22		Ultra, Lot CM-5316		(Purchased Reagent)		Se	10000 ug/mL
.MT-Sn-SpS_00001	07/31/21		Ultra, Lot T00753		(Purchased Reagent)		Sn	10000 ug/mL
.MT-Sr-SpS_00001	09/30/22		Ultra, Lot CM-4363		(Purchased Reagent)		Sr	10000 ug/mL
.MT-Ti-SpS_00001	04/30/22		Ultra, Lot CM-1138		(Purchased Reagent)		Ti	10000 ug/mL
.MT-Tl-SpS_00001	05/31/23		Ultra, Lot CP-2010		(Purchased Reagent)		Tl	10000 ug/mL
.MT-V-SpS_00001	08/31/23		Ultra, Lot CP-3591		(Purchased Reagent)		V	10000 ug/mL
.MT-Zn-SpS_00001	02/28/23		Ultra, Lot CP-0155		(Purchased Reagent)		Zn	10000 ug/mL
MT_ICP_Spike2_00007	01/30/21	01/30/20	HNO3, Lot 1118092	1000 mL	MT_ICP_Ag_SpS_00001	5 mL	Ag	50 ug/mL
					MT_ICP_Al_SpS_00001	10 mL	Al	100 ug/mL
					MT_ICP_B_SpS_00001	10 mL	B	100 ug/mL
					MT_ICP_Ba_SpS_00001	10 mL	Ba	100 ug/mL
					MT_ICP_K_SpS_00001	100 mL	K	1000 ug/mL
					MT_ICP_Na_SpS_00001	100 mL	Na	1000 ug/mL
					MT_ICP_Si_SpS_00004	10 mL	Si	100 ug/mL
							SiO2	214 ug/mL
.MT_ICP_Ag_SpS_00001	09/30/23		Ultra, Lot CP-4409		(Purchased Reagent)		Ag	10000 ug/mL
.MT_ICP_Al_SpS_00001	09/30/23		Ultra, Lot CP-3976		(Purchased Reagent)		Al	10000 ug/mL
.MT_ICP_B_SpS_00001	12/31/21		Ultra, Lot K00924A		(Purchased Reagent)		B	10000 ug/mL
.MT_ICP_Ba_SpS_00001	01/31/23		Ultra, Lot CM-6544		(Purchased Reagent)		Ba	10000 ug/mL
.MT_ICP_K_SpS_00001	04/30/24		Ultra, Lot CR-0917		(Purchased Reagent)		K	10000 ug/mL
.MT_ICP_Na_SpS_00001	09/30/23		Ultra, Lot CP-3978		(Purchased Reagent)		Na	10000 ug/mL
.MT_ICP_Si_SpS_00004	04/30/23		Ultra, Lot CP-1238		(Purchased Reagent)		Si	10000 ug/mL
							SiO2	21400 ug/mL
MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
..MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
.MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_ICS_A_00002	05/30/20	07/01/19	1% HNO3, Lot DIWATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
							Ti	20 mg/L
MT_MS_ICS_AB_00002	05/14/20	07/01/19	1% HNO3, Lot DIWAATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
					MT_MS_Int_B_00002	0.5 mL	Ag	0.005 mg/L
							As	0.01 mg/L
							Cadmium	0.01 mg/L
							Co	0.02 mg/L
							Copper	0.02 mg/L
							Cr	0.02 mg/L
							Mn	0.02 mg/L
							Ni	0.02 mg/L
							Se	0.01 mg/L
							V	0.02 mg/L
							Zn	0.01 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration	
					Reagent ID	Volume Added			
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY			(Purchased Reagent)	Al	1000 mg/L	
							Ca	3000 mg/L	
							Fe	2500 mg/L	
							K	1000 mg/L	
							Mg	1000 mg/L	
							Mo	20 mg/L	
							Na	2500 mg/L	
.MT_MS_Int_B_00002	05/30/20		Spex, Lot CL6-114MKBY			(Purchased Reagent)	Ti	20 mg/L	
							Ag	5 mg/L	
							As	10 mg/L	
							Cadmium	10 mg/L	
							Co	20 mg/L	
							Copper	20 mg/L	
							Cr	20 mg/L	
							Mn	20 mg/L	
							Ni	20 mg/L	
							Se	10 mg/L	
							V	20 mg/L	
Zn	10 mg/L								
MT_MS_ICV1_00004	09/30/20	01/13/20	1% Nitric Acid, Lot DIWATER	2000 mL	MT_ICP_Spike1_00007	2 mL	Cadmium	0.1 ug/mL	
							Copper	0.1 ug/mL	
							Lead	0.1 ug/mL	
.MT_ICP_Spike1_00007	09/30/20	01/13/20	HNO3, Lot 1118092	1000 mL	MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL	
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL	
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL	
..MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156				(Purchased Reagent)	Cadmium	10000 ug/mL
..MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892				(Purchased Reagent)	Copper	10000 ug/mL
..MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300				(Purchased Reagent)	Lead	10000 ug/mL
MT_MS_LL_00006	08/30/20	09/24/19	1% HNO3, Lot DIWATER	100 mL	MT_MS_CCV_00005	1 mL	Cadmium	0.001 mg/L	
							Copper	0.001 mg/L	
							Lead	0.001 mg/L	
.MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L	
							Copper	0.1 mg/L	
							Lead	0.1 mg/L	
..MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L	
							Copper	0.2 mg/L	
							Lead	0.2 mg/L	
...MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY				(Purchased Reagent)	Cadmium	100 mg/L
							Copper	100 mg/L	
							Lead	100 mg/L	
MT_MS_SPIKE_3_00002	12/31/22	07/09/19	2% Nitric Acid, Lot DIWATER	1000 mL	MT_MS_Ca10000_00001	100 mL	Ca	1000 mg/L	
					MT_MS_Fe10000_00001	100 mL	Fe	1000 mg/L	
					MT_MS_Mg10000_00001	100 mL	Mg	1000 mg/L	
.MT_MS_Ca10000_00001	09/30/24		Ultra, Lot CR-3808				(Purchased Reagent)	Ca	10000 mg/L
.MT_MS_Fe10000_00001	08/31/24		Ultra, Lot ICP-126-L				(Purchased Reagent)	Fe	10000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT MS Mg10000 00001	04/20/23		Ultra, Lot ICP-112-L		(Purchased Reagent)		Mg	10000 mg/L
WC TSS STD 00015	08/06/20	03/05/20	DI Water, Lot 01182020	2 L	WC TSS STK 00001	0.2 g	Total Suspended Solids	100 mg/L
.WC TSS STK 00001	11/04/21		FISHER, Lot 160676		(Purchased Reagent)		Total Suspended Solids	1 g/g
WC TUR STD 00008	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	10 NTU
WC TUR STD 00009	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	1000 NTU
WC TUR STD 00010	02/28/21		PROCAL, Lot 90215		(Purchased Reagent)		Turbidity	0.02 NTU
WC TUR STD2 00102	03/15/20	03/14/20	H2O, Lot 1	100 mL	WC_TUR_STD1_00001	2.5 mL	Turbidity	100 NTU
.WC TUR STD1 00001	11/27/20		HACH, Lot A8330		(Purchased Reagent)		Turbidity	4000 NTU

Reagent

MI_Fine Sand_00002

DPV Control Limits Calculations

500 Nominal Glass Beads

Lot Number	GB500	+/- um
9372062	585.0	34.5

Date	Time	ID	Run	Mean
03/18/20	20:27	602082	1	587.7
03/19/20	13:45	602082	12	588
03/19/20	15:46	602082/602083	23	593.3

Pass
Pass
Pass

Standard Sand Batch (Fine)

This sand retained on the 120 mesh

Date	Time	ID	Run	Mean
3/18/20	20:36	602502	2	232.5
3/18/20	20:44	602502	3	237.2
3/18/20	20:52	602502	4	234.6
3/18/20	21:01	602502	5	233.2
3/18/20	21:10	602502	6	237.0
3/18/20	21:16	602502	7	236.6
3/18/20	21:26	602502	8	237.2
3/18/20	21:32	602502	9	235.5
3/18/20	21:38	602502	10	237.5
3/18/20	21:44	602502	11	235.9

Standard Sand Batch (Medium)

This sand retained on the 60 mesh

Date	Time	ID	Run	Mean
3/19/20	13:54	602383	13	410.2
3/19/20	14:02	602383	14	387.7
3/19/20	14:11	602383	15	393.1
3/19/20	14:19	602383	16	378.8
3/19/20	14:27	602383	17	376.8
3/19/20	14:36	602383	18	374.8
3/19/20	14:45	602383	19	385.3
3/19/20	14:54	602383	20	376.9
3/19/20	15:15	602383	21	379.6
3/19/20	15:24	602383	22	366.0

11/7/19		Mean
	Average	235.7
	SD	1.8
	RSD	0.7%

11/8/19		Mean
	Average	382.9
	SD	12.2
	RSD	3.2%

5/3/5 method	UCL	242.8
	LCL	228.6

5/3/5 method	UCL	394.4
	LCL	371.4

Fine Sand
Sieved Sand Batch 029A
602502/602396

3/18/20

Mean
 235.7
 1.8
 0.7%

2.772*S	As per ASTM E177
240.6	
230.8	

UCL 242.8
LCL 228.6

Medium Sand
Sieved Sand Batch 029B
602383

3/19/20

Mean
 382.9
 12.2
 3.2%

2.772*S	As per ASTM E177
416.6	
349.2	

UCL 394.4
LCL 371.4

Lot #	GB500	+/- um
9372062	585.0	34.5

Mean
 587.7 Pass
 588 Pass
 593.3 Pass

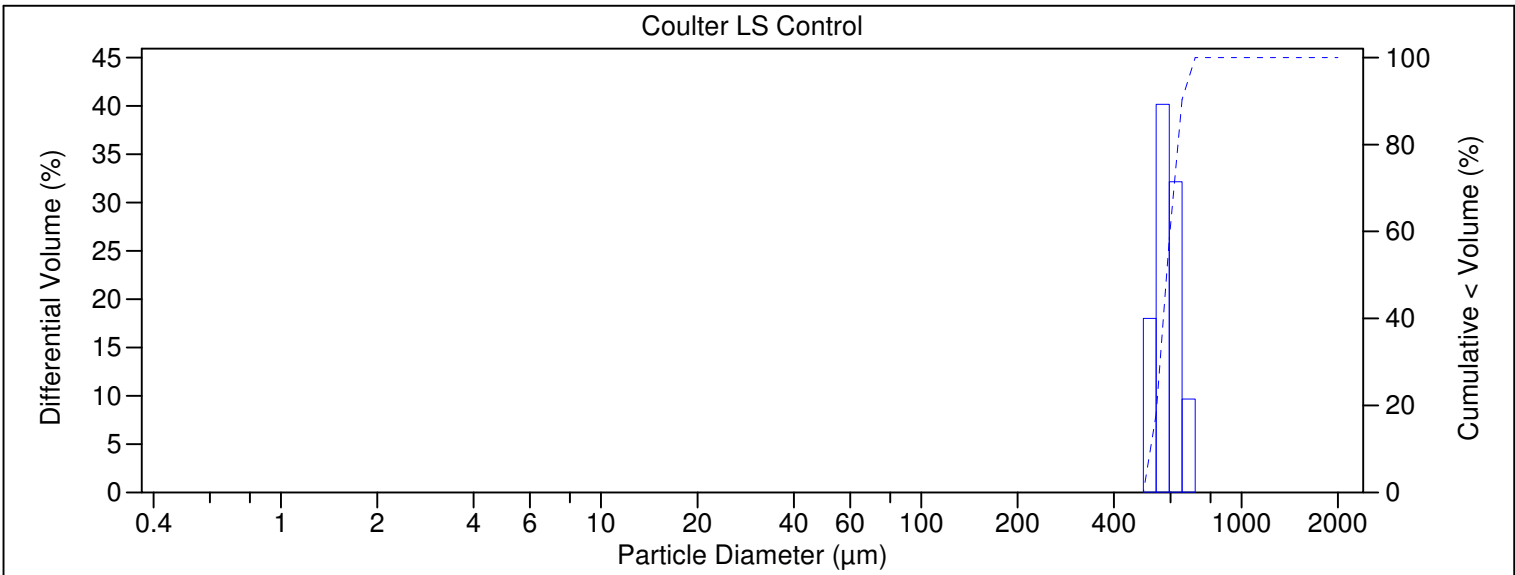
ASTM D4464-10(M) Raw Data Logbook

METHOD	MATRIX	DATE	ANALYST(S)	INSTRUMENT / EQUIPMENT ID #	BATCH NUMBER	COMMENTS
ASTM D4464-10(M)	<input checked="" type="checkbox"/> Solid	Preparation: 3/18/2020 Analysis: 3/19/2020	1106 1106	Instrument: LPSA 1 Balance: — Sieve (if used): —		
Coulter LS Control -DT		1	Coulter LS Control	—	602082	500 µm Nominal Glass Beads
Five Sand -DT		2	Five Sand	—	602502	
		3				
		4				
		5				
		6				
		7				
		8				
		9				
		10				
		11				
Coulter LS Control -DT		12	Coulter LS Control	—	602082	500 µm Nominal Glass Beads
Medium Sand -DT		13	Medium Sand	—	602383	
		14				
		15				
		16				
		17				
		18				
		19				
		20				
		21				
		22				
Coulter LS Control -DT		23	Coulter LS Control	—	602082/602083	500 µm Nominal Glass Beads

COMMENTS:

Instrument QC: Analyze one DPV control sample daily prior to sample analysis, after every batch of 10 samples or portion thereof within a 24-hour shift, and at the end of sequence. Record the standard sand ID number.
 Sample Batch QC: Prepare one Sample Duplicate for every batch of 20 field samples per matrix or portion thereof, and analyze immediately following a DPV control sample. Record the batch number.

File name:	C:\LS13320\Coulter LS Control_18 Mar 2020_20.27.20.\$ls		
	Coulter LS Control_18 Mar 2020_20.27.20.\$ls		
File ID:	Coulter LS Control		
Sample ID:	Coulter LS Control		
Operator:	1106		
Run number:	1		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	500um Nominal Glass Beads		
Optical model:	Fraunhofer.rf780d		
Residual:	1.20%		
LS 13 320	Aqueous Liquid Module		
Start time:	20:26 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

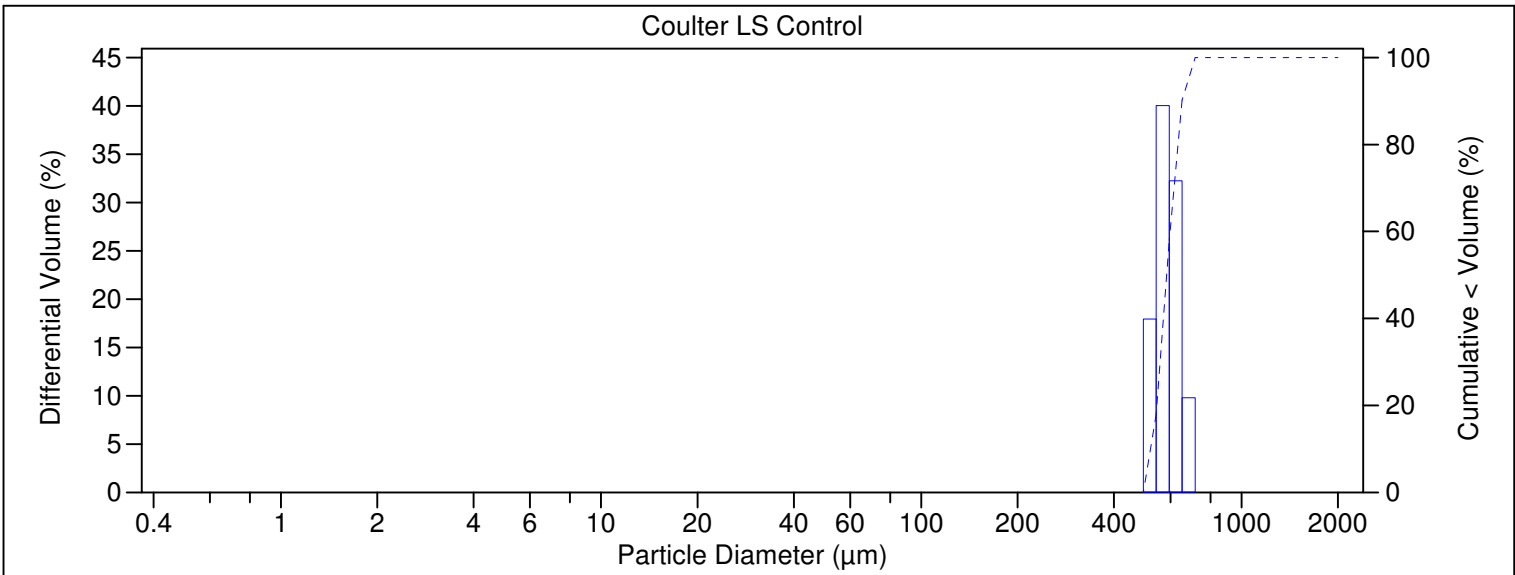


Volume Statistics (Arithmetic)		Coulter LS Control_18 Mar 2020_20.27.20.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	48.59 µm
Mean:	587.7 µm	Variance:	2361 µm ²
Median:	584.1 µm	Skewness:	0.302 Right skewed
Mean/Median ratio:	1.006	Kurtosis:	-0.597 Platykurtic
Mode:	567.8 µm		
d ₁₀ :	520.4 µm	d ₅₀ :	584.1 µm
		d ₉₀ :	652.4 µm
Folk and Ward Statistics (Phi)			
Mean:	0.77	Median:	0.78
Skewness:	-0.05	Deviation:	0.13
		Kurtosis:	0.97
<5%	<16%	<25%	<40%
<50%	<75%	<84%	<95%
507.0 µm	536.5 µm	551.1 µm	570.9 µm
584.1 µm	625.3 µm	641.6 µm	683.8 µm

Particle Diameter µm	Coulter LS Control_18 Mar 2020 _20.27... Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	0
250	2.38
500	97.6
1000	0
2000	0

Coulter LS Control_18 Mar 2020_20.27...					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0		
2.660	0	176.9	0		
2.920	0	194.2	0		
3.206	0	213.2	0		
3.519	0	234.1	0		
3.863	0	256.9	0		
4.241	0	282.1	0		
4.656	0	309.6	0		
5.111	0	339.9	0		
5.611	0	373.1	0		
6.159	0	409.6	0		
6.761	0	449.7	0		
7.422	0	493.6	18.0		
8.148	0	541.9	40.2		
8.944	0	594.9	32.2		
9.819	0	653.0	9.66		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Coulter LS Control_19 Mar 2020_13.45.45.\$ls		
	Coulter LS Control_19 Mar 2020_13.45.45.\$ls		
File ID:	Coulter LS Control		
Sample ID:	Coulter LS Control		
Operator:	1106		
Run number:	12		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	500um Nominal Glass Beads		
Optical model:	Fraunhofer.rf780d		
Residual:	1.20%		
LS 13 320	Aqueous Liquid Module		
Start time:	13:44 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

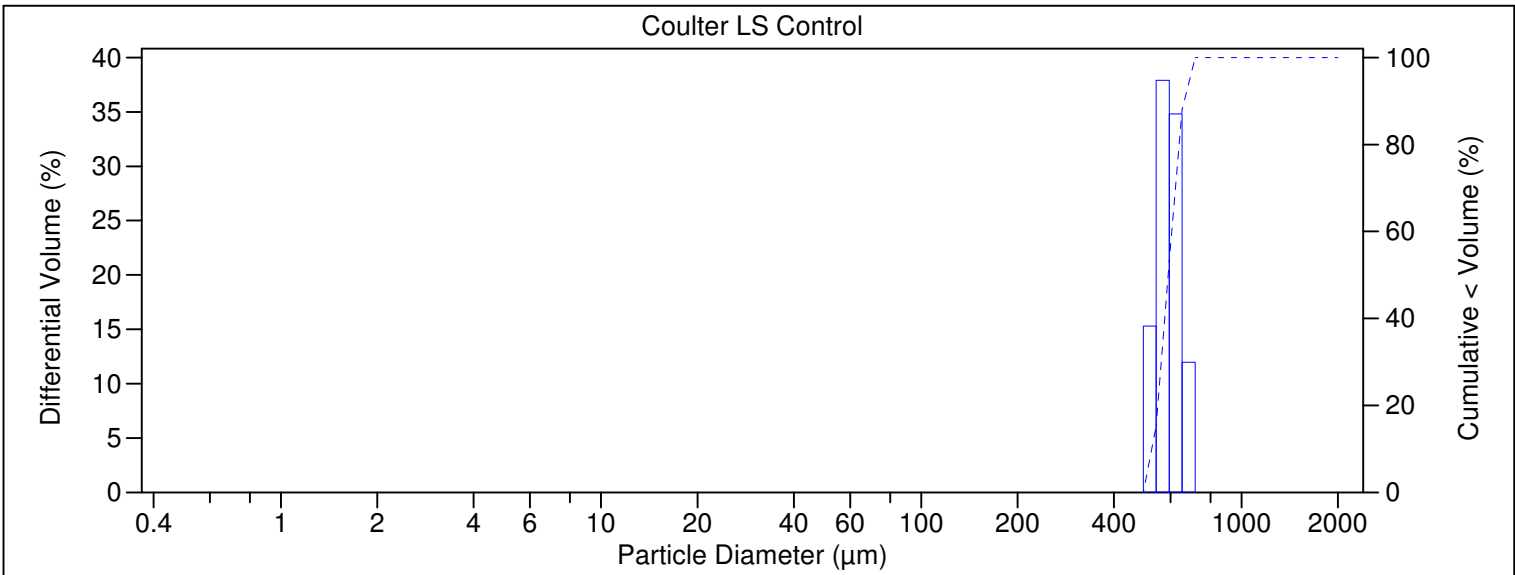


Volume Statistics (Arithmetic)		Coulter LS Control_19 Mar 2020_13.45.45.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	48.69 µm
Mean:	588.0 µm	Variance:	2370 µm ²
Median:	584.3 µm	Skewness:	0.298 Right skewed
Mean/Median ratio:	1.006	Kurtosis:	-0.604 Platykurtic
Mode:	567.8 µm		
d ₁₀ :	520.5 µm	d ₅₀ :	584.3 µm
		d ₉₀ :	652.6 µm
Folk and Ward Statistics (Phi)			
Mean:	0.77	Median:	0.78
Skewness:	-0.05	Deviation:	0.13
		Kurtosis:	0.97
<5%	<16%	<25%	<40%
507.1 µm	536.7 µm	551.2 µm	571.1 µm
<50%	<75%	<84%	<95%
584.3 µm	625.6 µm	641.8 µm	684.3 µm

Particle Diameter µm	Coulter LS Control_19 Mar 2020 _13.45... Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	0
250	2.37
500	97.6
1000	0
2000	0

Coulter LS Control_19 Mar 2020_13.45...					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0		
2.660	0	176.9	0		
2.920	0	194.2	0		
3.206	0	213.2	0		
3.519	0	234.1	0		
3.863	0	256.9	0		
4.241	0	282.1	0		
4.656	0	309.6	0		
5.111	0	339.9	0		
5.611	0	373.1	0		
6.159	0	409.6	0		
6.761	0	449.7	0		
7.422	0	493.6	17.9		
8.148	0	541.9	40.0		
8.944	0	594.9	32.2		
9.819	0	653.0	9.79		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Coulter LS Control_19 Mar 2020_15.46.03.\$ls		
	Coulter LS Control_19 Mar 2020_15.46.03.\$ls		
File ID:	Coulter LS Control		
Sample ID:	Coulter LS Control		
Operator:	1106		
Run number:	23		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	500um Nominal Glass Beads		
Optical model:	Fraunhofer.rf780d		
Residual:	11.82%		
LS 13 320	Aqueous Liquid Module		
Start time:	15:44 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

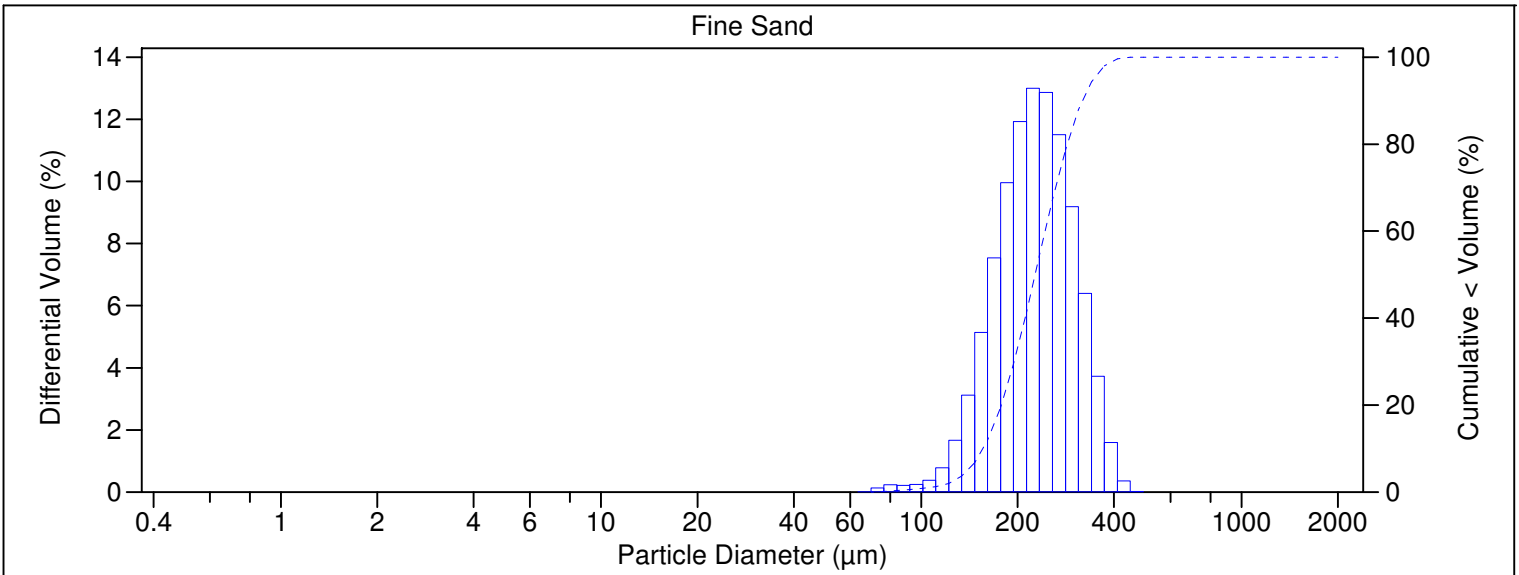


Volume Statistics (Arithmetic)		Coulter LS Control_19 Mar 2020_15.46.03.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	49.35 µm
Mean:	593.3 µm	Variance:	2436 µm ²
Median:	590.4 µm	Skewness:	0.213 Right skewed
Mean/Median ratio:	1.005	Kurtosis:	-0.682 Platykurtic
Mode:	567.8 µm		
d ₁₀ :	525.2 µm	d ₅₀ :	590.4 µm
		d ₉₀ :	663.6 µm
Folk and Ward Statistics (Phi)			
Mean:	0.76	Median:	0.76
Skewness:	-0.03	Deviation:	0.13
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
<50%	<75%	<84%	<95%
509.4 µm	542.9 µm	555.4 µm	576.4 µm
590.4 µm	631.3 µm	646.3 µm	690.2 µm

Particle Diameter µm	Coulter LS Control_19 Mar 2020 _15.46... Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	0
250	2.02
500	98.0
1000	0
2000	0

Coulter LS Control_19 Mar 2020_15.46...					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0		
2.660	0	176.9	0		
2.920	0	194.2	0		
3.206	0	213.2	0		
3.519	0	234.1	0		
3.863	0	256.9	0		
4.241	0	282.1	0		
4.656	0	309.6	0		
5.111	0	339.9	0		
5.611	0	373.1	0		
6.159	0	409.6	0		
6.761	0	449.7	0		
7.422	0	493.6	15.3		
8.148	0	541.9	37.9		
8.944	0	594.9	34.8		
9.819	0	653.0	12.0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_20.36.16.\$ls		
	Fine Sand_18 Mar 2020_20.36.16.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	2		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	0.84%		
LS 13 320	Aqueous Liquid Module		
Start time:	20:35 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	10%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

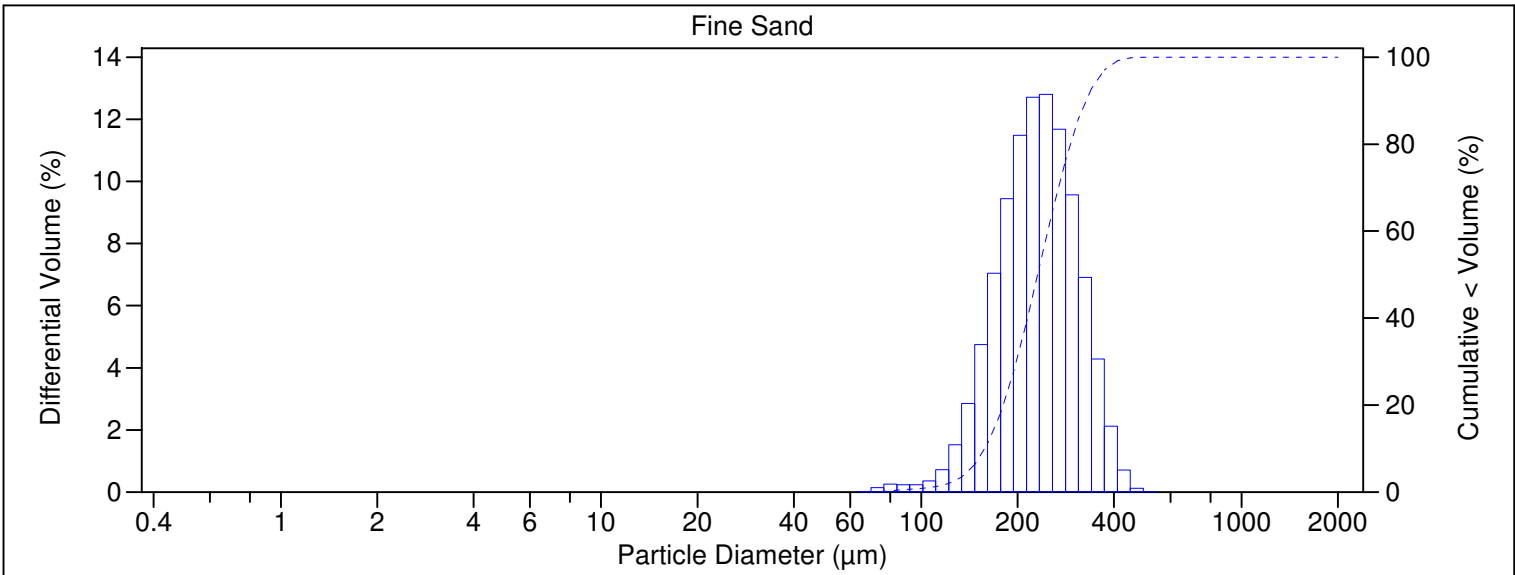


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_20.36.16.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	62.91 µm
Mean:	232.5 µm	Variance:	3957 µm ²
Median:	227.1 µm	Skewness:	0.377 Right skewed
Mean/Median ratio:	1.024	Kurtosis:	-0.093 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	155.8 µm	d ₅₀ :	227.1 µm
		d ₉₀ :	319.6 µm
Folk and Ward Statistics (Phi)			
Mean:	2.15	Median:	2.14
Skewness:	0.05	Deviation:	0.40
		Kurtosis:	0.97
<5%	<16%	<25%	<40%
139.3 µm	169.7 µm	186.5 µm	211.1 µm
<50%	<75%	<84%	<95%
227.1 µm	274.0 µm	297.9 µm	346.2 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_20.36 .16.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.46
125	60.8
250	36.7
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_20.36.16.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.014		
1.047	0	69.62	0.13		
1.149	0	76.43	0.24		
1.261	0	83.90	0.22		
1.385	0	92.10	0.24		
1.520	0	101.1	0.38		
1.669	0	111.0	0.79		
1.832	0	121.8	1.66		
2.011	0	133.7	3.12		
2.208	0	146.8	5.14		
2.423	0	161.2	7.54		
2.660	0	176.9	9.96		
2.920	0	194.2	11.9		
3.206	0	213.2	13.0		
3.519	0	234.1	12.9		
3.863	0	256.9	11.5		
4.241	0	282.1	9.19		
4.656	0	309.6	6.40		
5.111	0	339.9	3.72		
5.611	0	373.1	1.60		
6.159	0	409.6	0.36		
6.761	0	449.7	0.019		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_20.44.27.\$ls		
	Fine Sand_18 Mar 2020_20.44.27.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	3		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	0.98%		
LS 13 320	Aqueous Liquid Module		
Start time:	20:43 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

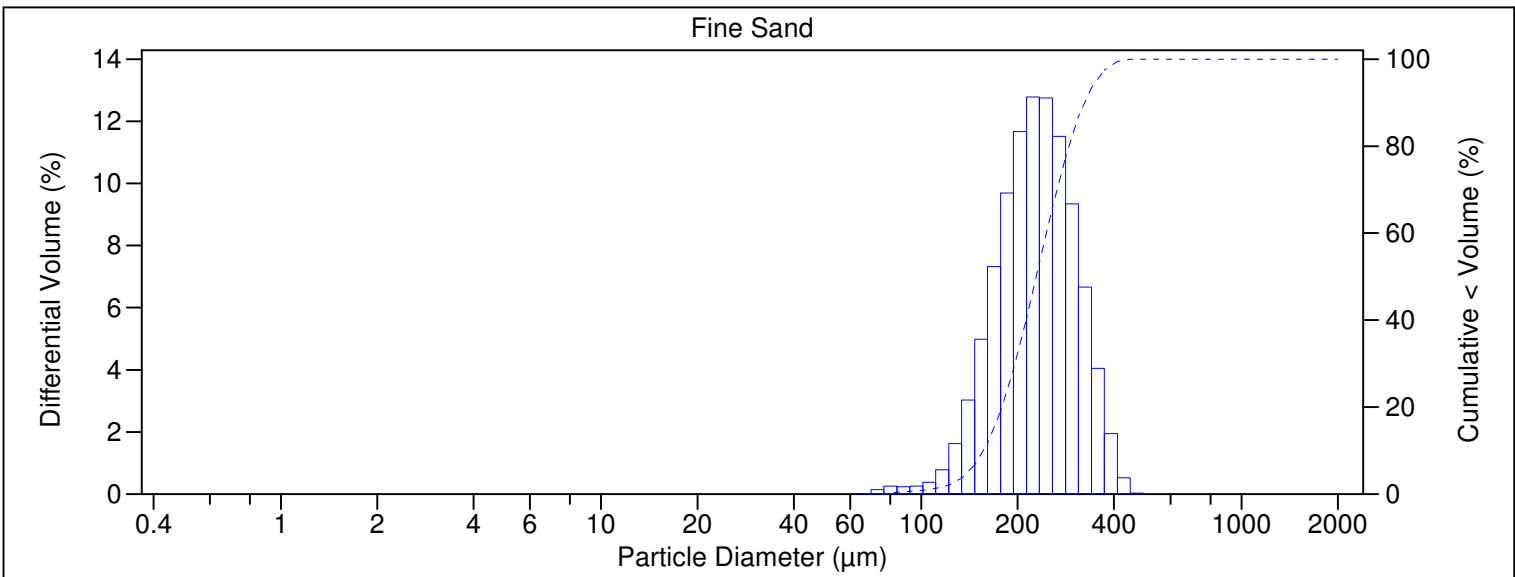


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_20.44.27.\$ls					
Calculations from 0.375 µm to 2000 µm							
Volume:	100%	S.D.:	65.69 µm				
Mean:	237.2 µm	Variance:	4315 µm ²				
Median:	231.1 µm	Skewness:	0.420 Right skewed				
Mean/Median ratio:	1.026	Kurtosis:	0.023 Leptokurtic				
Mode:	245.2 µm						
d ₁₀ :	157.9 µm	d ₅₀ :	231.1 µm				
		d ₉₀ :	327.9 µm				
Folk and Ward Statistics (Phi)							
Mean:	2.12	Median:	2.11				
Skewness:	0.05	Deviation:	0.41				
		Kurtosis:	0.98				
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
140.7 µm	172.2 µm	189.5 µm	214.8 µm	231.1 µm	279.3 µm	304.3 µm	357.3 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_20.44 .27.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.38
125	58.3
250	39.3
500	0.0051
1000	0
2000	0

Fine Sand_18 Mar 2020_20.44.27.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.016		
1.047	0	69.62	0.15		
1.149	0	76.43	0.26		
1.261	0	83.90	0.23		
1.385	0	92.10	0.24		
1.520	0	101.1	0.36		
1.669	0	111.0	0.72		
1.832	0	121.8	1.52		
2.011	0	133.7	2.85		
2.208	0	146.8	4.74		
2.423	0	161.2	7.05		
2.660	0	176.9	9.44		
2.920	0	194.2	11.5		
3.206	0	213.2	12.7		
3.519	0	234.1	12.8		
3.863	0	256.9	11.7		
4.241	0	282.1	9.57		
4.656	0	309.6	6.91		
5.111	0	339.9	4.28		
5.611	0	373.1	2.12		
6.159	0	409.6	0.71		
6.761	0	449.7	0.12		
7.422	0	493.6	0.0058		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_20.52.56.\$ls		
	Fine Sand_18 Mar 2020_20.52.56.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	4		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.13%		
LS 13 320	Aqueous Liquid Module		
Start time:	20:51 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	10%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

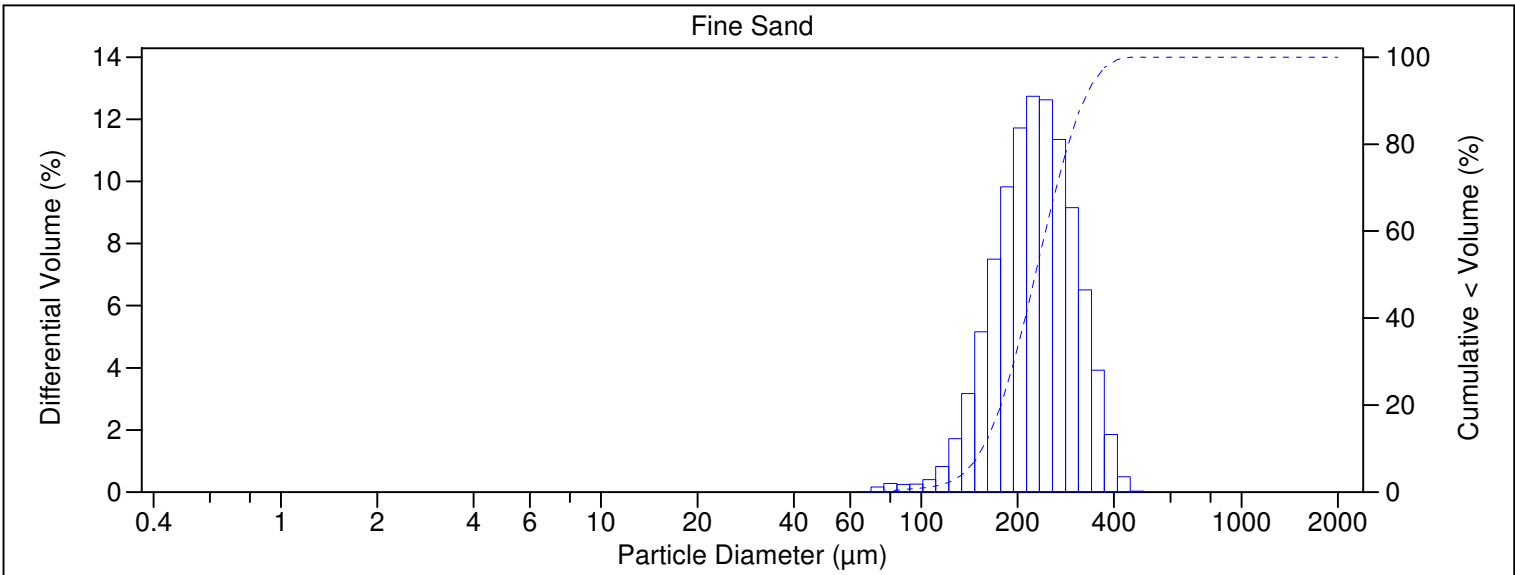


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_20.52.56.\$ls					
Calculations from 0.375 µm to 2000 µm							
Volume:	100%	S.D.:	64.54 µm				
Mean:	234.6 µm	Variance:	4165 µm ²				
Median:	228.9 µm	Skewness:	0.389 Right skewed				
Mean/Median ratio:	1.025	Kurtosis:	-0.078 Platykurtic				
Mode:	223.4 µm						
d ₁₀ :	156.2 µm	d ₅₀ :	228.9 µm				
		d ₉₀ :	324.2 µm				
Folk and Ward Statistics (Phi)							
Mean:	2.14	Median:	2.13				
Skewness:	0.05	Deviation:	0.41				
		Kurtosis:	0.98				
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
139.3 µm	170.4 µm	187.6 µm	212.6 µm	228.9 µm	276.7 µm	301.4 µm	352.6 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_20.52 .56.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.51
125	59.5
250	37.9
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_20.52.56.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.015		
1.047	0	69.62	0.15		
1.149	0	76.43	0.26		
1.261	0	83.90	0.24		
1.385	0	92.10	0.25		
1.520	0	101.1	0.38		
1.669	0	111.0	0.78		
1.832	0	121.8	1.63		
2.011	0	133.7	3.03		
2.208	0	146.8	4.98		
2.423	0	161.2	7.32		
2.660	0	176.9	9.70		
2.920	0	194.2	11.7		
3.206	0	213.2	12.8		
3.519	0	234.1	12.7		
3.863	0	256.9	11.5		
4.241	0	282.1	9.34		
4.656	0	309.6	6.67		
5.111	0	339.9	4.05		
5.611	0	373.1	1.94		
6.159	0	409.6	0.52		
6.761	0	449.7	0.034		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.01.44.\$ls		
	Fine Sand_18 Mar 2020_21.01.44.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	5		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.26%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:00 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

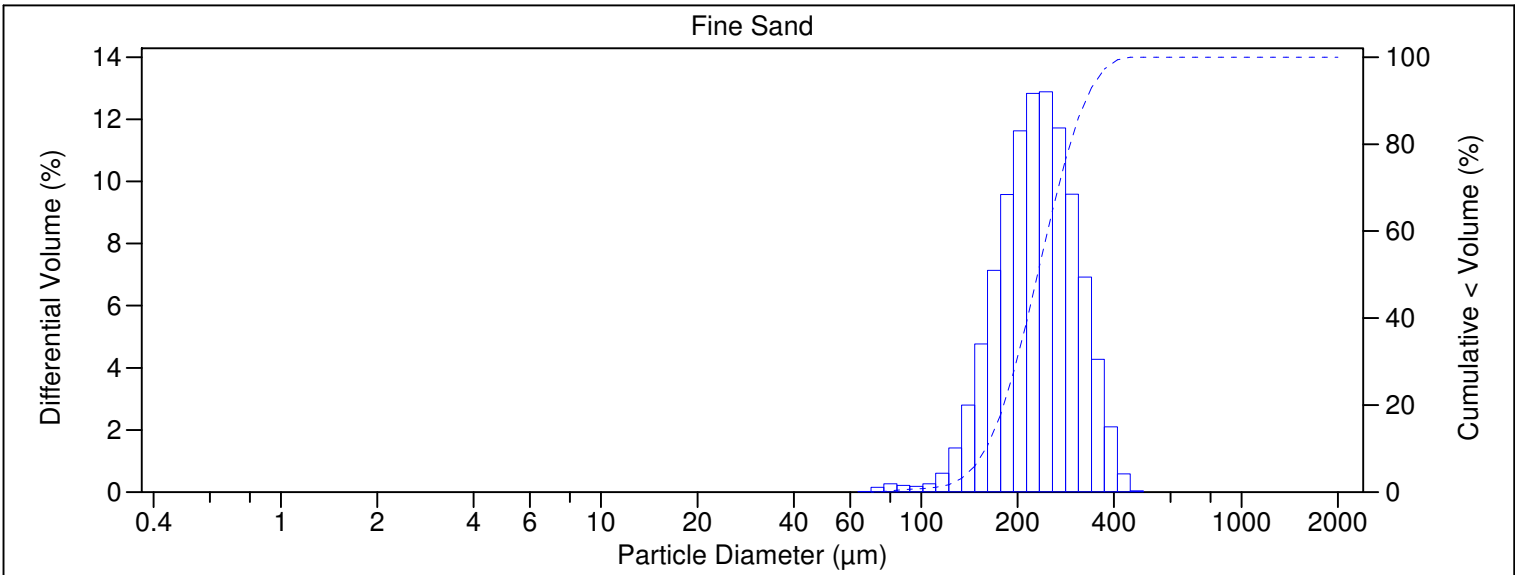


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.01.44.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.49 µm
Mean:	233.2 µm	Variance:	4159 µm ²
Median:	227.5 µm	Skewness:	0.393 Right skewed
Mean/Median ratio:	1.025	Kurtosis:	-0.072 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	154.9 µm	d ₅₀ :	227.5 µm
		d ₉₀ :	322.8 µm
Folk and Ward Statistics (Phi)			
Mean:	2.15	Median:	2.14
Skewness:	0.05	Deviation:	0.41
		Kurtosis:	0.98
<5%	<16%	<25%	<40%
138.2 µm	169.1 µm	186.2 µm	211.1 µm
<50%	<75%	<84%	<95%
227.5 µm	275.4 µm	300.1 µm	351.0 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.01 .44.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.64
125	60.2
250	37.2
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.01.44.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.017		
1.047	0	69.62	0.16		
1.149	0	76.43	0.28		
1.261	0	83.90	0.25		
1.385	0	92.10	0.26		
1.520	0	101.1	0.40		
1.669	0	111.0	0.82		
1.832	0	121.8	1.72		
2.011	0	133.7	3.17		
2.208	0	146.8	5.16		
2.423	0	161.2	7.50		
2.660	0	176.9	9.83		
2.920	0	194.2	11.7		
3.206	0	213.2	12.7		
3.519	0	234.1	12.6		
3.863	0	256.9	11.4		
4.241	0	282.1	9.16		
4.656	0	309.6	6.51		
5.111	0	339.9	3.93		
5.611	0	373.1	1.86		
6.159	0	409.6	0.49		
6.761	0	449.7	0.032		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.10.06.\$ls		
	Fine Sand_18 Mar 2020_21.10.06.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	6		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.38%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:08 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

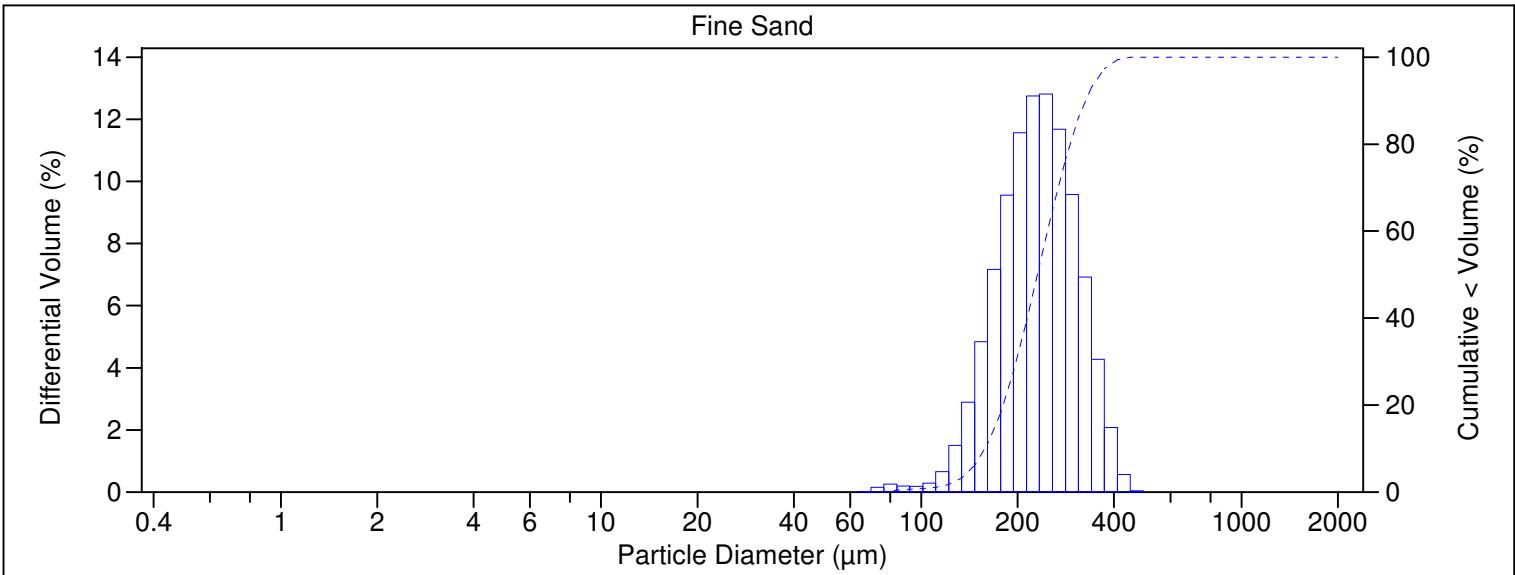


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.10.06.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.56 µm
Mean:	237.0 µm	Variance:	4168 µm ²
Median:	231.0 µm	Skewness:	0.396 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.069 Platykurtic
Mode:	245.2 µm		
d ₁₀ :	159.1 µm	d ₅₀ :	231.0 µm
		d ₉₀ :	326.8 µm
Folk and Ward Statistics (Phi)			
Mean:	2.12	Median:	2.11
Skewness:	0.04	Deviation:	0.40
		Kurtosis:	0.97
<5%	<16%	<25%	<40%
142.5 µm	172.9 µm	189.9 µm	214.8 µm
<50%	<75%	<84%	<95%
231.0 µm	278.9 µm	303.7 µm	355.5 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.10 .06.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.09
125	58.8
250	39.1
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.10.06.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.017		
1.047	0	69.62	0.16		
1.149	0	76.43	0.27		
1.261	0	83.90	0.21		
1.385	0	92.10	0.19		
1.520	0	101.1	0.27		
1.669	0	111.0	0.60		
1.832	0	121.8	1.42		
2.011	0	133.7	2.80		
2.208	0	146.8	4.77		
2.423	0	161.2	7.14		
2.660	0	176.9	9.58		
2.920	0	194.2	11.6		
3.206	0	213.2	12.8		
3.519	0	234.1	12.9		
3.863	0	256.9	11.7		
4.241	0	282.1	9.59		
4.656	0	309.6	6.92		
5.111	0	339.9	4.27		
5.611	0	373.1	2.10		
6.159	0	409.6	0.59		
6.761	0	449.7	0.041		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.16.19.\$ls		
	Fine Sand_18 Mar 2020_21.16.19.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	7		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.49%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:15 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

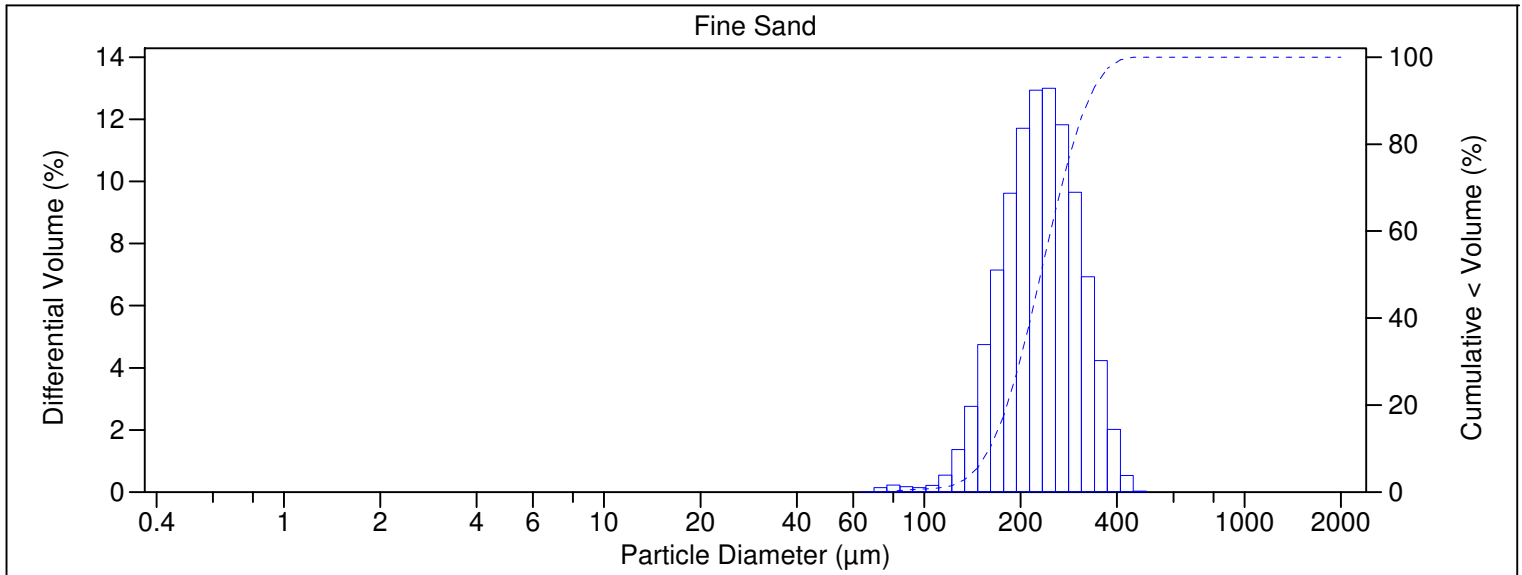


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.16.19.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.68 µm
Mean:	236.6 µm	Variance:	4184 µm ²
Median:	230.7 µm	Skewness:	0.391 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.093 Platykurtic
Mode:	245.2 µm		
d ₁₀ :	158.2 µm	d ₅₀ :	230.7 µm
		d ₉₀ :	326.7 µm
Folk and Ward Statistics (Phi)			
Mean:	2.12	Median:	2.12
Skewness:	0.05	Deviation:	0.41
		Kurtosis:	0.97
<5%	<16%	<25%	<40%
141.6 µm	172.2 µm	189.3 µm	214.4 µm
<50%	<75%	<84%	<95%
230.7 µm	278.8 µm	303.6 µm	355.2 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.16 .19.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.16
125	58.8
250	39.0
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.16.19.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.016		
1.047	0	69.62	0.16		
1.149	0	76.43	0.25		
1.261	0	83.90	0.20		
1.385	0	92.10	0.19		
1.520	0	101.1	0.29		
1.669	0	111.0	0.66		
1.832	0	121.8	1.50		
2.011	0	133.7	2.90		
2.208	0	146.8	4.84		
2.423	0	161.2	7.17		
2.660	0	176.9	9.56		
2.920	0	194.2	11.6		
3.206	0	213.2	12.7		
3.519	0	234.1	12.8		
3.863	0	256.9	11.7		
4.241	0	282.1	9.57		
4.656	0	309.6	6.93		
5.111	0	339.9	4.28		
5.611	0	373.1	2.08		
6.159	0	409.6	0.57		
6.761	0	449.7	0.038		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name: C:\LS13320\Fine Sand_18 Mar 2020_21.26.01.\$ls
 File ID: Fine Sand_18 Mar 2020_21.26.01.\$ls
 File ID: Fine Sand
 Sample ID: Fine Sand
 Operator: 1106
 Run number: 8
 Comment 1: ASTM D4464M , LPSA 1
 Comment 2: 602502 , BATCH#029A
 Optical model: Fraunhofer.rf780d
 Residual: 1.72%
 LS 13 320 Aqueous Liquid Module
 Start time: 21:24 18 Mar 2020 Run length: 60 seconds
 Pump speed: 49
 Obscuration: 8%
 Fluid: Water
 Software: 6.01 Firmware: 4.00



Volume Statistics (Arithmetic) Fine Sand_18 Mar 2020_21.26.01.\$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%	S.D.:	63.78 µm
Mean:	237.2 µm	Variance:	4068 µm ²
Median:	231.2 µm	Skewness:	0.402 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.081 Platykurtic
Mode:	245.2 µm		

d₁₀: 160.1 µm d₅₀: 231.2 µm d₉₀: 326.1 µm

Folk and Ward Statistics (Phi)

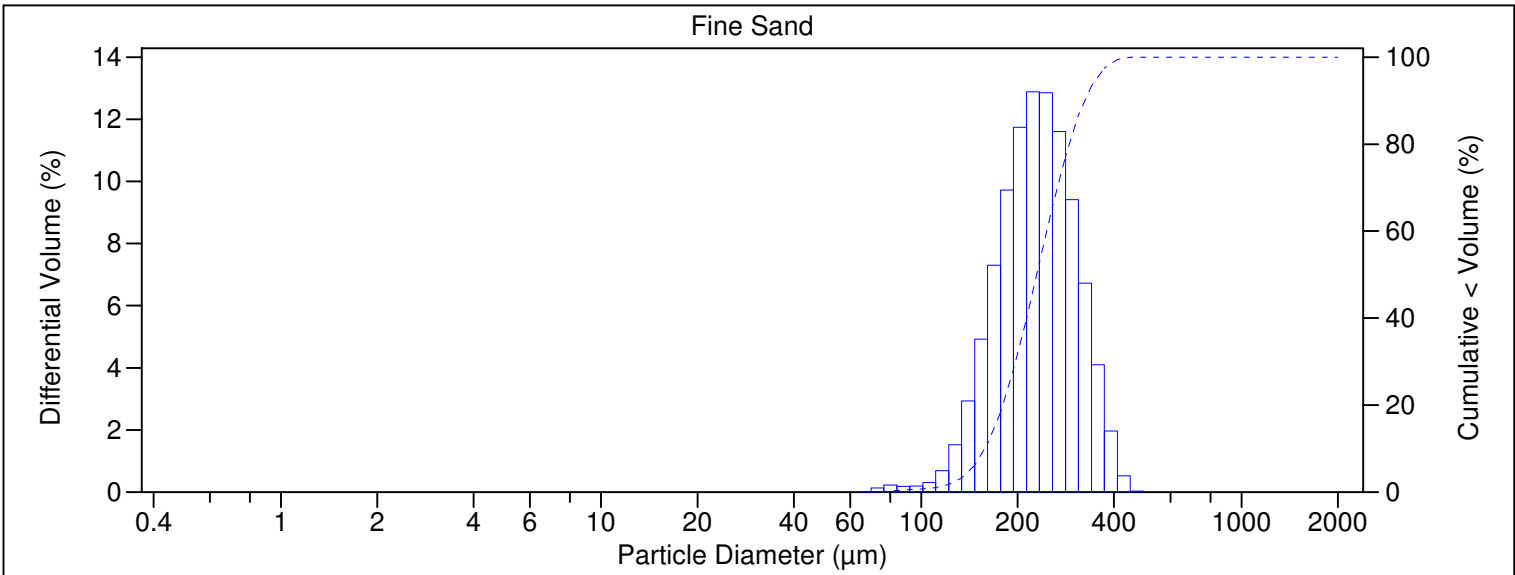
Mean:	2.12	Median:	2.11	Deviation:	0.40
Skewness:	0.04	Kurtosis:	0.97		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
144.0 µm	173.6 µm	190.4 µm	215.1 µm	231.2 µm	278.7 µm	303.3 µm	354.3 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.26 .01.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	1.83
125	59.0
250	39.2
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.26.01.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.015		
1.047	0	69.62	0.14		
1.149	0	76.43	0.23		
1.261	0	83.90	0.17		
1.385	0	92.10	0.14		
1.520	0	101.1	0.22		
1.669	0	111.0	0.55		
1.832	0	121.8	1.37		
2.011	0	133.7	2.76		
2.208	0	146.8	4.75		
2.423	0	161.2	7.15		
2.660	0	176.9	9.62		
2.920	0	194.2	11.7		
3.206	0	213.2	12.9		
3.519	0	234.1	13.0		
3.863	0	256.9	11.8		
4.241	0	282.1	9.65		
4.656	0	309.6	6.94		
5.111	0	339.9	4.24		
5.611	0	373.1	2.02		
6.159	0	409.6	0.54		
6.761	0	449.7	0.035		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.32.46.\$ls		
	Fine Sand_18 Mar 2020_21.32.46.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	9		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.82%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:31 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	11%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

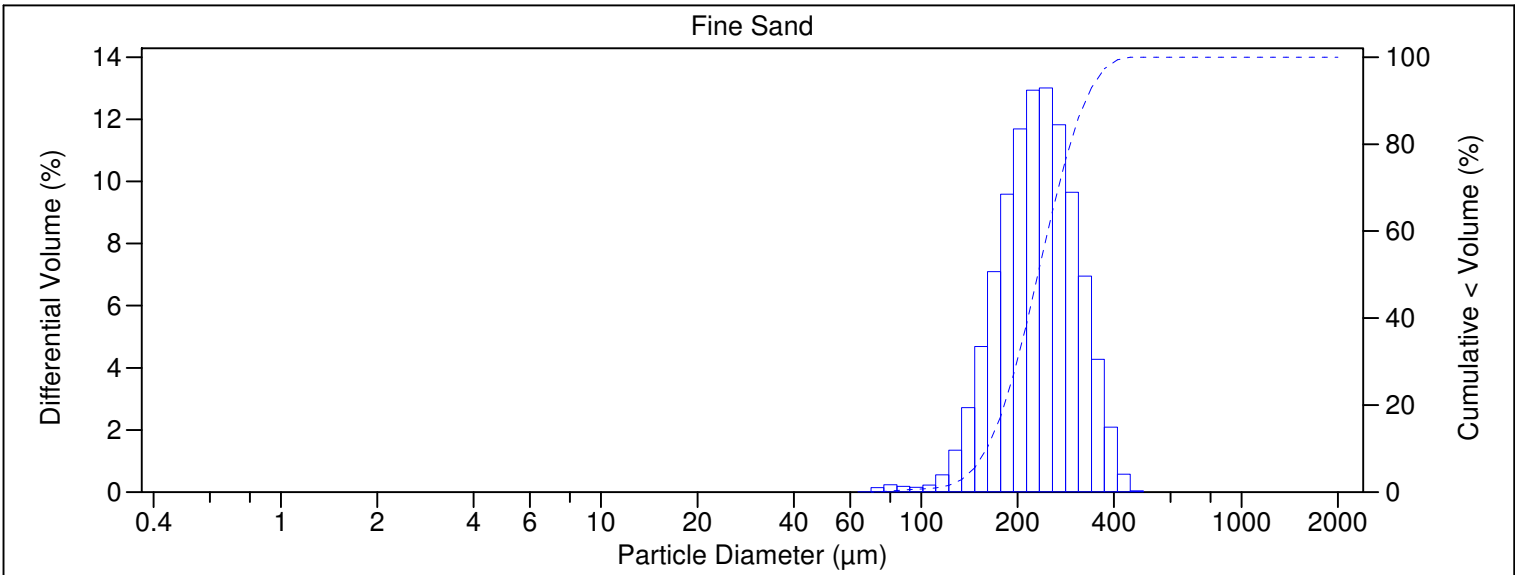


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.32.46.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.06 µm
Mean:	235.5 µm	Variance:	4103 µm ²
Median:	229.6 µm	Skewness:	0.406 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.076 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	157.9 µm	d ₅₀ :	229.6 µm
		d ₉₀ :	324.7 µm
Folk and Ward Statistics (Phi)			
Mean:	2.13	Median:	2.12
Skewness:	0.04	Deviation:	0.40
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
141.4 µm	171.7 µm	188.6 µm	213.4 µm
<50%	<75%	<84%	<95%
229.6 µm	277.2 µm	301.9 µm	353.1 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.32 .46.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.15
125	59.6
250	38.3
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.32.46.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.014		
1.047	0	69.62	0.13		
1.149	0	76.43	0.22		
1.261	0	83.90	0.19		
1.385	0	92.10	0.19		
1.520	0	101.1	0.31		
1.669	0	111.0	0.69		
1.832	0	121.8	1.53		
2.011	0	133.7	2.94		
2.208	0	146.8	4.92		
2.423	0	161.2	7.30		
2.660	0	176.9	9.72		
2.920	0	194.2	11.7		
3.206	0	213.2	12.9		
3.519	0	234.1	12.9		
3.863	0	256.9	11.6		
4.241	0	282.1	9.42		
4.656	0	309.6	6.73		
5.111	0	339.9	4.10		
5.611	0	373.1	1.97		
6.159	0	409.6	0.53		
6.761	0	449.7	0.034		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.38.09.\$ls		
	Fine Sand_18 Mar 2020_21.38.09.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	10		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	2.02%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:37 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

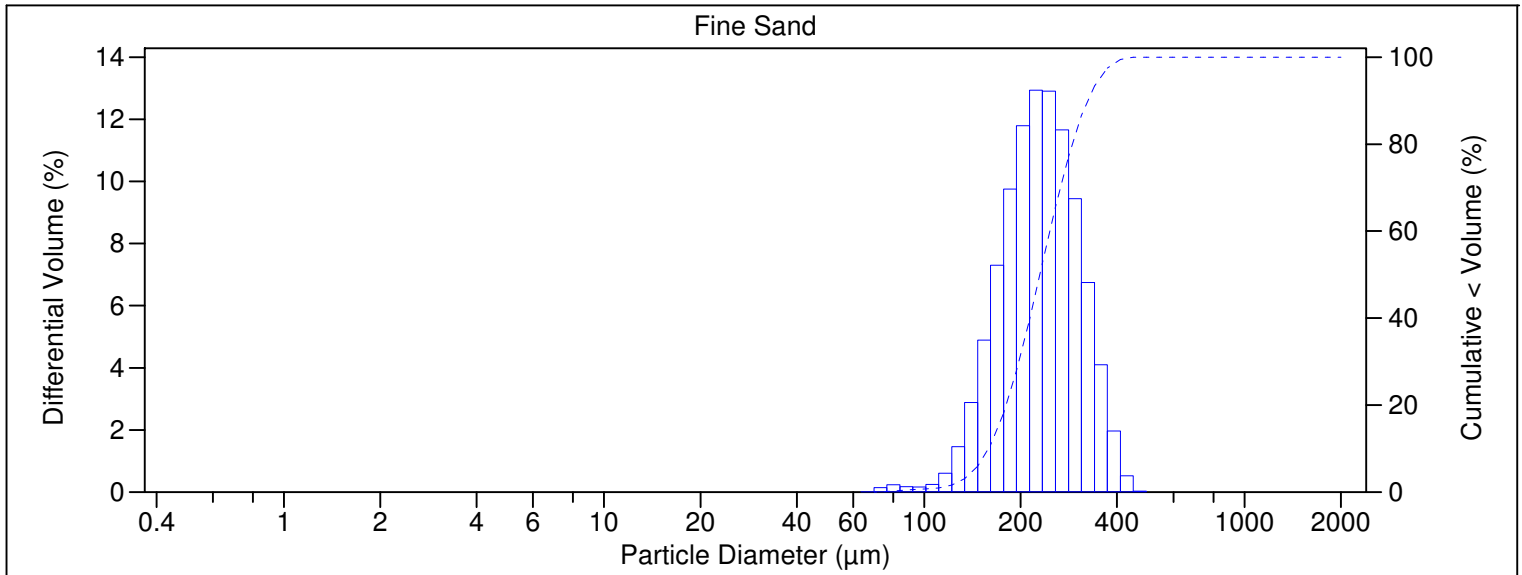


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.38.09.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.06 µm
Mean:	237.5 µm	Variance:	4104 µm ²
Median:	231.5 µm	Skewness:	0.403 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.069 Platykurtic
Mode:	245.2 µm		
d ₁₀ :	160.3 µm	d ₅₀ :	231.5 µm
		d ₉₀ :	326.7 µm
Folk and Ward Statistics (Phi)			
Mean:	2.12	Median:	2.11
Skewness:	0.04	Deviation:	0.40
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
144.0 µm	173.9 µm	190.7 µm	215.4 µm
<50%	<75%	<84%	<95%
231.5 µm	279.1 µm	303.7 µm	355.3 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.38 .09.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	1.88
125	58.8
250	39.4
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.38.09.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.015		
1.047	0	69.62	0.14		
1.149	0	76.43	0.24		
1.261	0	83.90	0.18		
1.385	0	92.10	0.16		
1.520	0	101.1	0.23		
1.669	0	111.0	0.55		
1.832	0	121.8	1.35		
2.011	0	133.7	2.72		
2.208	0	146.8	4.69		
2.423	0	161.2	7.09		
2.660	0	176.9	9.58		
2.920	0	194.2	11.7		
3.206	0	213.2	12.9		
3.519	0	234.1	13.0		
3.863	0	256.9	11.8		
4.241	0	282.1	9.65		
4.656	0	309.6	6.95		
5.111	0	339.9	4.28		
5.611	0	373.1	2.09		
6.159	0	409.6	0.57		
6.761	0	449.7	0.038		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name: C:\LS13320\Fine Sand_18 Mar 2020_21.44.21.\$ls
 File ID: Fine Sand
 Sample ID: Fine Sand
 Operator: 1106
 Run number: 11
 Comment 1: ASTM D4464M , LPSA 1
 Comment 2: 602502 , BATCH#029A
 Optical model: Fraunhofer.rf780d
 Residual: 2.12%
 LS 13 320 Aqueous Liquid Module
 Start time: 21:43 18 Mar 2020 Run length: 60 seconds
 Pump speed: 49
 Obscuration: 9%
 Fluid: Water
 Software: 6.01 Firmware: 4.00



Volume Statistics (Arithmetic) Fine Sand_18 Mar 2020_21.44.21.\$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%	S.D.:	63.82 µm
Mean:	235.9 µm	Variance:	4073 µm ²
Median:	229.8 µm	Skewness:	0.411 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.065 Platykurtic
Mode:	223.4 µm		

d₁₀: 158.7 µm d₅₀: 229.8 µm d₉₀: 324.8 µm

Folk and Ward Statistics (Phi)

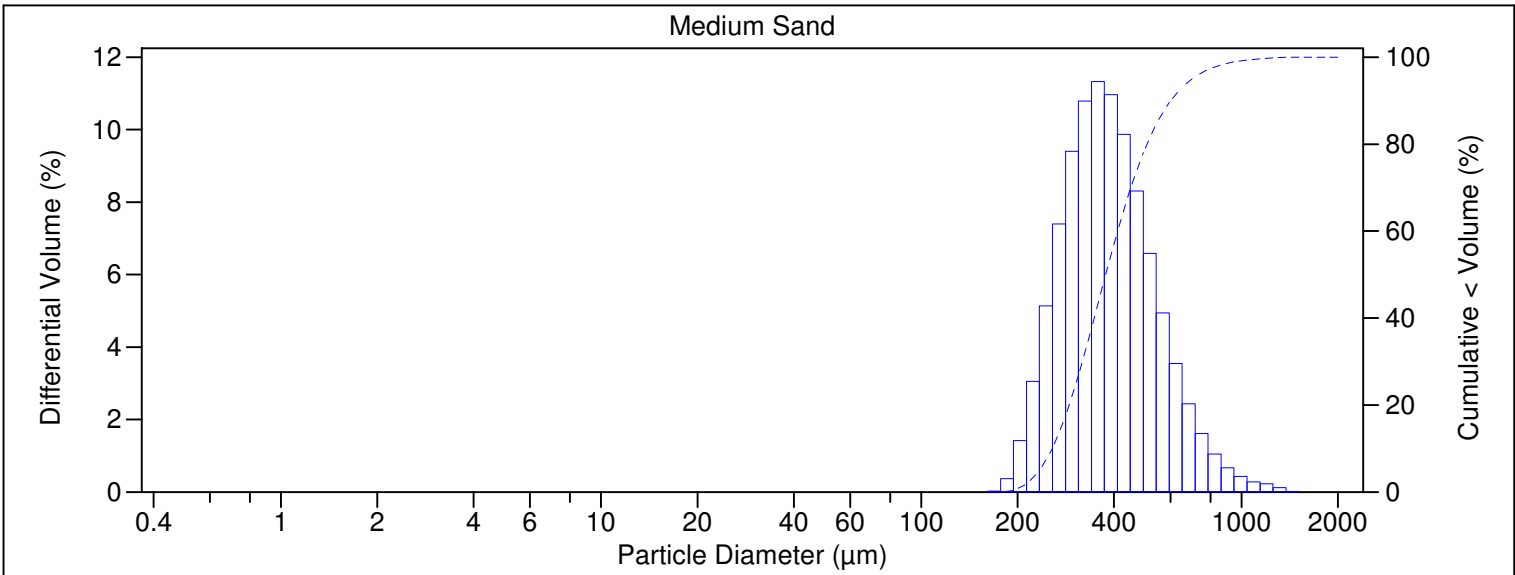
Mean:	2.13	Median:	2.12	Deviation:	0.40
Skewness:	0.04	Kurtosis:	0.97		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
142.6 µm	172.3 µm	189.1 µm	213.7 µm	229.8 µm	277.4 µm	302.0 µm	353.1 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.44 .21.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	1.99
125	59.6
250	38.4
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.44.21.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.015		
1.047	0	69.62	0.15		
1.149	0	76.43	0.24		
1.261	0	83.90	0.18		
1.385	0	92.10	0.16		
1.520	0	101.1	0.25		
1.669	0	111.0	0.61		
1.832	0	121.8	1.46		
2.011	0	133.7	2.88		
2.208	0	146.8	4.89		
2.423	0	161.2	7.30		
2.660	0	176.9	9.76		
2.920	0	194.2	11.8		
3.206	0	213.2	12.9		
3.519	0	234.1	12.9		
3.863	0	256.9	11.7		
4.241	0	282.1	9.45		
4.656	0	309.6	6.74		
5.111	0	339.9	4.10		
5.611	0	373.1	1.96		
6.159	0	409.6	0.53		
6.761	0	449.7	0.035		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_13.54.56.\$ls		
	Medium Sand_19 Mar 2020_13.54.56.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	13		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	0.96%		
LS 13 320	Aqueous Liquid Module		
Start time:	13:53 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

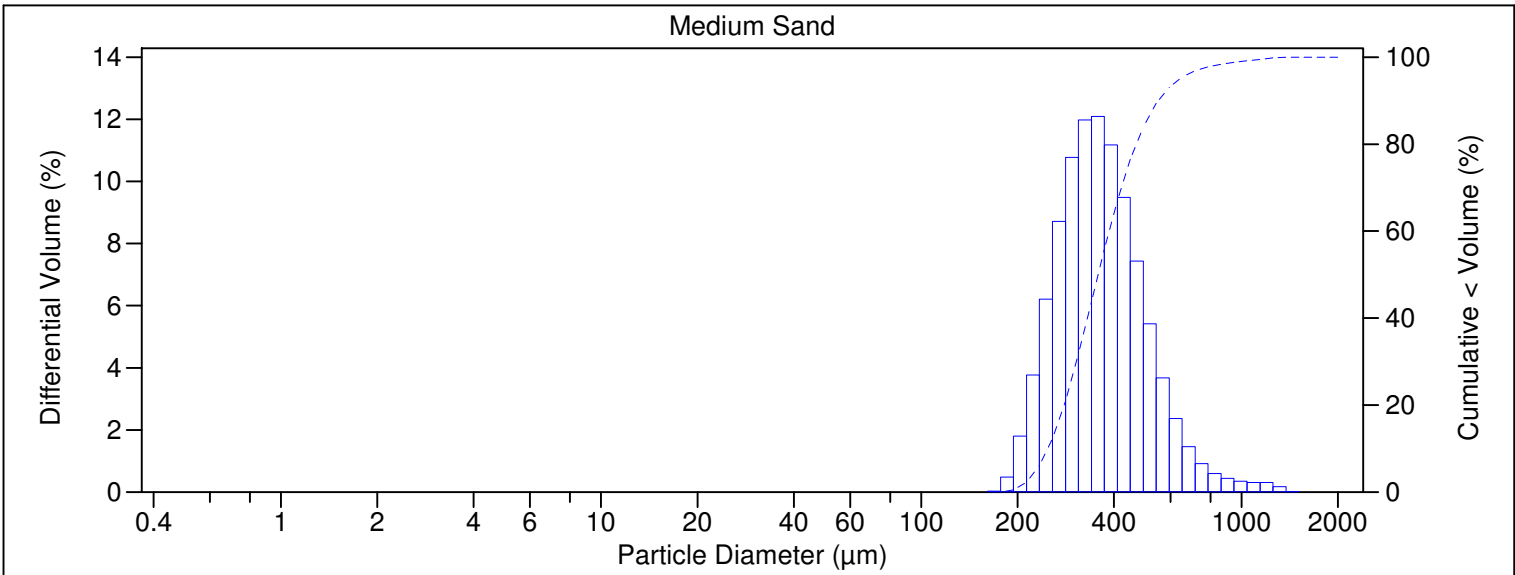


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_13.54.56.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	153.6 µm
Mean:	410.2 µm	Variance:	23593 µm ²
Median:	376.7 µm	Skewness:	1.723 Right skewed
Mean/Median ratio:	1.089	Kurtosis:	4.778 Leptokurtic
Mode:	356.1 µm		
d ₁₀ :	256.9 µm	d ₅₀ :	376.7 µm
		d ₉₀ :	601.4 µm
Folk and Ward Statistics (Phi)			
Mean:	1.39	Median:	1.41
Skewness:	-0.10	Deviation:	0.48
		Kurtosis:	1.00
<5%	<16%	<25%	<40%
234.6 µm	277.3 µm	304.3 µm	347.0 µm
<50%	<75%	<84%	<95%
376.7 µm	477.4 µm	537.1 µm	701.5 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _13.54.56 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	8.45
250	70.5
500	20.2
1000	0.84
2000	

Medium Sand_19 Mar 2020_13.54.56.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.024		
2.660	0	176.9	0.37		
2.920	0	194.2	1.42		
3.206	0	213.2	3.05		
3.519	0	234.1	5.14		
3.863	0	256.9	7.40		
4.241	0	282.1	9.40		
4.656	0	309.6	10.8		
5.111	0	339.9	11.3		
5.611	0	373.1	11.0		
6.159	0	409.6	9.87		
6.761	0	449.7	8.31		
7.422	0	493.6	6.59		
8.148	0	541.9	4.95		
8.944	0	594.9	3.55		
9.819	0	653.0	2.44		
10.78	0	716.9	1.62		
11.83	0	786.9	1.05		
12.99	0	863.9	0.67		
14.26	0	948.3	0.43		
15.65	0	1041	0.29		
17.18	0	1143	0.23		
18.86	0	1255	0.13		
20.71	0	1377	0.015		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.02.47.\$ls		
	Medium Sand_19 Mar 2020_14.02.47.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	14		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	1.30%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:01 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

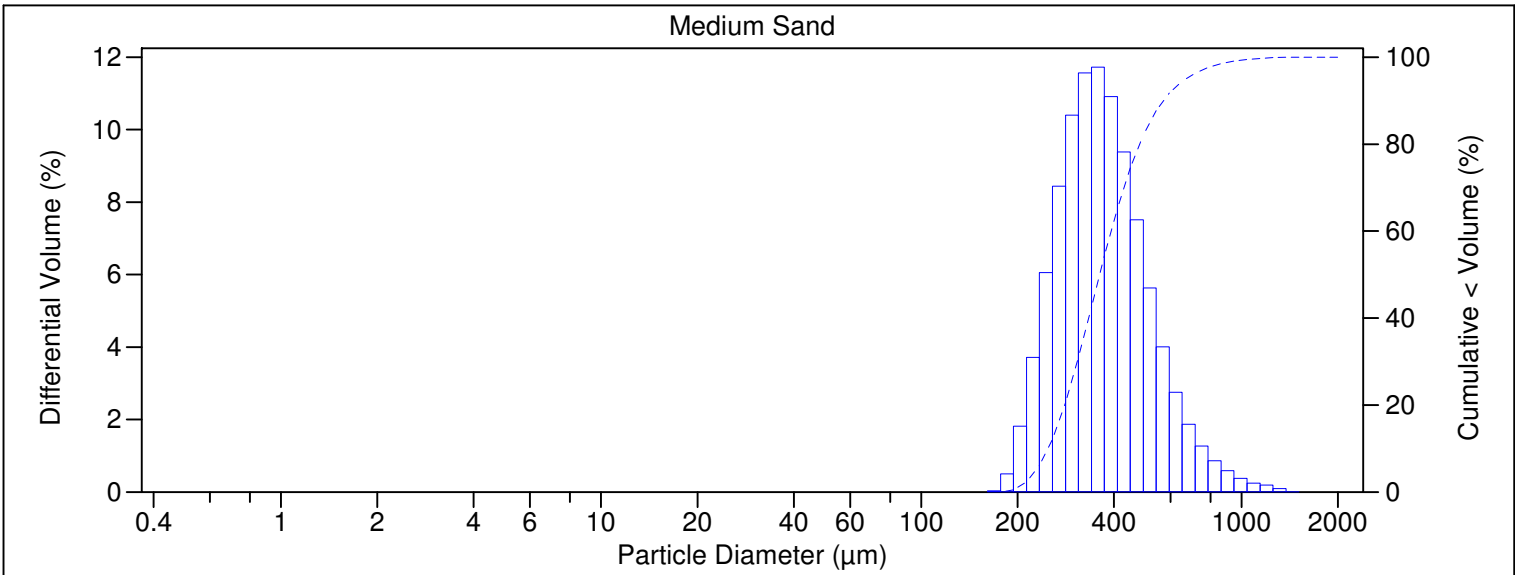


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.02.47.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	146.3 µm
Mean:	387.7 µm	Variance:	21390 µm ²
Median:	357.1 µm	Skewness:	2.250 Right skewed
Mean/Median ratio:	1.086	Kurtosis:	8.345 Leptokurtic
Mode:	356.1 µm		
d ₁₀ :	248.5 µm	d ₅₀ :	357.1 µm
		d ₉₀ :	551.1 µm
Folk and Ward Statistics (Phi)			
Mean:	1.47	Median:	1.49
Skewness:	-0.10	Deviation:	0.45
		Kurtosis:	1.02
<5%	<16%	<25%	<40%
228.1 µm	267.6 µm	292.3 µm	330.4 µm
<50%	<75%	<84%	<95%
357.1 µm	443.3 µm	494.1 µm	643.1 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.02.47 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	10.4
250	74.3
500	14.4
1000	0.98
2000	

Medium Sand_19 Mar 2020_14.02.47.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.031		
2.660	0	176.9	0.48		
2.920	0	194.2	1.80		
3.206	0	213.2	3.77		
3.519	0	234.1	6.21		
3.863	0	256.9	8.71		
4.241	0	282.1	10.8		
4.656	0	309.6	12.0		
5.111	0	339.9	12.1		
5.611	0	373.1	11.2		
6.159	0	409.6	9.49		
6.761	0	449.7	7.44		
7.422	0	493.6	5.41		
8.148	0	541.9	3.68		
8.944	0	594.9	2.36		
9.819	0	653.0	1.47		
10.78	0	716.9	0.91		
11.83	0	786.9	0.60		
12.99	0	863.9	0.44		
14.26	0	948.3	0.35		
15.65	0	1041	0.31		
17.18	0	1143	0.31		
18.86	0	1255	0.18		
20.71	0	1377	0.020		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.10.59.\$ls		
	Medium Sand_19 Mar 2020_14.10.59.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	15		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	1.81%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:09 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

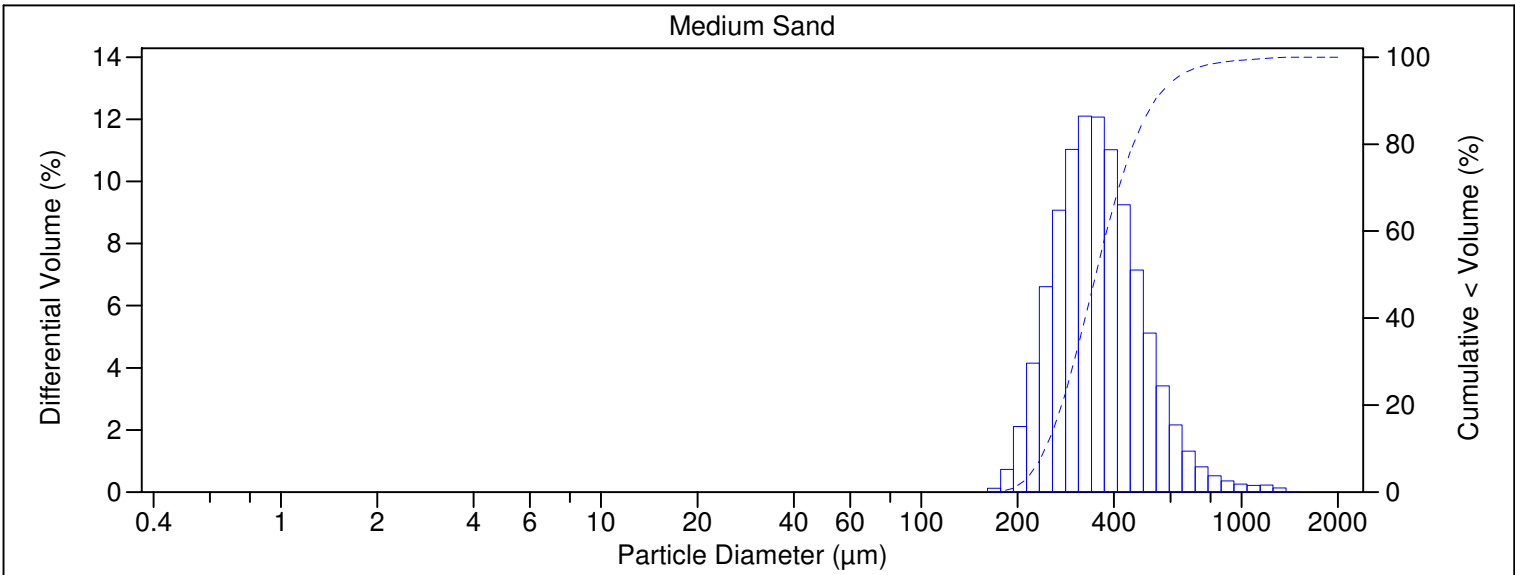


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.10.59.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	146.9 µm
Mean:	393.1 µm	Variance:	21590 µm ²
Median:	361.1 µm	Skewness:	1.881 Right skewed
Mean/Median ratio:	1.089	Kurtosis:	5.699 Leptokurtic
Mode:	356.1 µm		
d ₁₀ :	248.9 µm	d ₅₀ :	361.1 µm
		d ₉₀ :	572.3 µm
Folk and Ward Statistics (Phi)			
Mean:	1.45	Median:	1.47
Skewness:	-0.11	Deviation:	0.47
		Kurtosis:	1.03
<5%	<16%	<25%	<40%
228.0 µm	268.5 µm	293.8 µm	333.3 µm
<50%	<75%	<84%	<95%
361.1 µm	452.3 µm	510.2 µm	671.1 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.10.59 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	10.3
250	72.5
500	16.5
1000	0.72
2000	

Medium Sand_19 Mar 2020_14.10.59.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.034		
2.660	0	176.9	0.50		
2.920	0	194.2	1.82		
3.206	0	213.2	3.72		
3.519	0	234.1	6.05		
3.863	0	256.9	8.44		
4.241	0	282.1	10.4		
4.656	0	309.6	11.6		
5.111	0	339.9	11.7		
5.611	0	373.1	10.9		
6.159	0	409.6	9.39		
6.761	0	449.7	7.51		
7.422	0	493.6	5.63		
8.148	0	541.9	4.01		
8.944	0	594.9	2.76		
9.819	0	653.0	1.87		
10.78	0	716.9	1.27		
11.83	0	786.9	0.87		
12.99	0	863.9	0.59		
14.26	0	948.3	0.38		
15.65	0	1041	0.25		
17.18	0	1143	0.20		
18.86	0	1255	0.099		
20.71	0	1377	0.010		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.19.26.\$ls		
	Medium Sand_19 Mar 2020_14.19.26.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	16		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	2.28%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:18 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

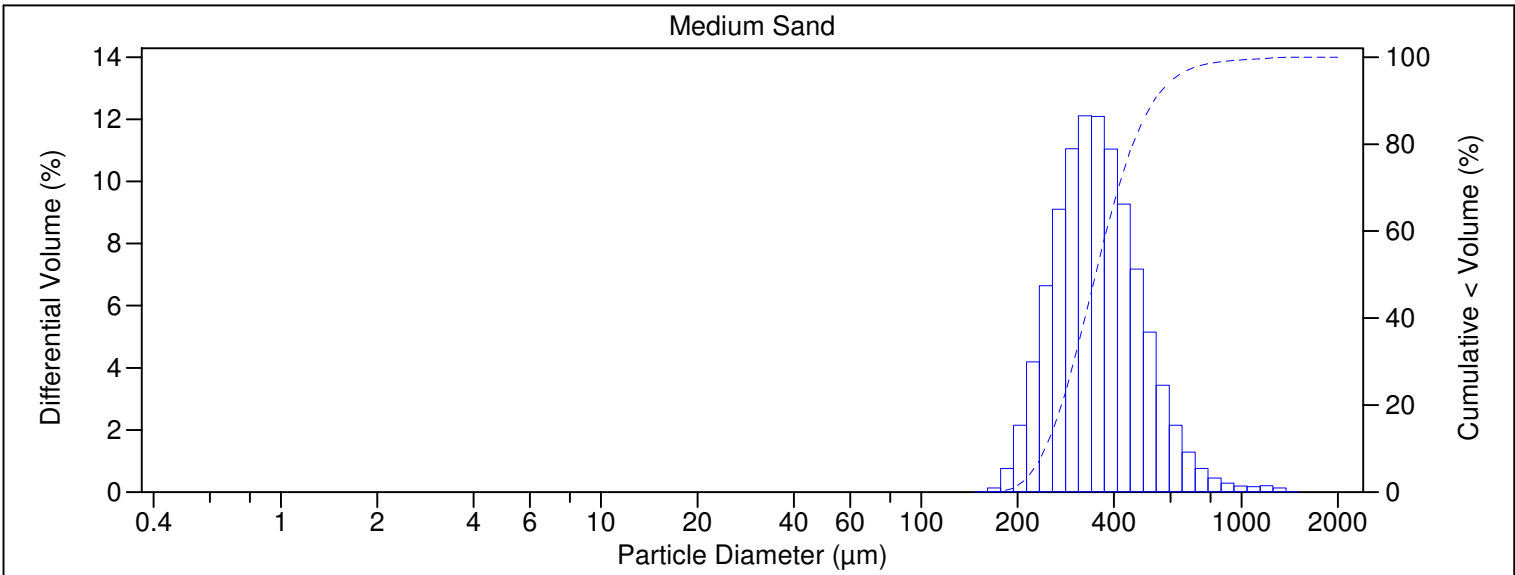


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.19.26.\$ls					
Calculations from 0.375 µm to 2000 µm							
Volume:	100%	S.D.:	138.3 µm				
Mean:	378.8 µm	Variance:	19128 µm ²				
Median:	351.1 µm	Skewness:	2.171 Right skewed				
Mean/Median ratio:	1.079	Kurtosis:	8.369 Leptokurtic				
Mode:	324.4 µm						
d ₁₀ :	244.0 µm	d ₅₀ :	351.1 µm				
		d ₉₀ :	536.7 µm				
Folk and Ward Statistics (Phi)							
Mean:	1.49	Median:	1.51				
Skewness:	-0.09	Deviation:	0.44				
		Kurtosis:	1.01				
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
223.4 µm	263.2 µm	287.5 µm	325.1 µm	351.1 µm	435.5 µm	484.9 µm	622.7 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.19.26 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	11.7
250	74.4
500	13.2
1000	0.71
2000	

Medium Sand_19 Mar 2020_14.19.26.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0.0051		
2.423	0	161.2	0.12		
2.660	0	176.9	0.73		
2.920	0	194.2	2.11		
3.206	0	213.2	4.15		
3.519	0	234.1	6.61		
3.863	0	256.9	9.07		
4.241	0	282.1	11.0		
4.656	0	309.6	12.1		
5.111	0	339.9	12.1		
5.611	0	373.1	11.0		
6.159	0	409.6	9.25		
6.761	0	449.7	7.15		
7.422	0	493.6	5.12		
8.148	0	541.9	3.42		
8.944	0	594.9	2.16		
9.819	0	653.0	1.32		
10.78	0	716.9	0.82		
11.83	0	786.9	0.53		
12.99	0	863.9	0.36		
14.26	0	948.3	0.26		
15.65	0	1041	0.21		
17.18	0	1143	0.23		
18.86	0	1255	0.13		
20.71	0	1377	0.014		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.27.13.\$ls		
	Medium Sand_19 Mar 2020_14.27.13.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	17		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	2.75%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:26 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

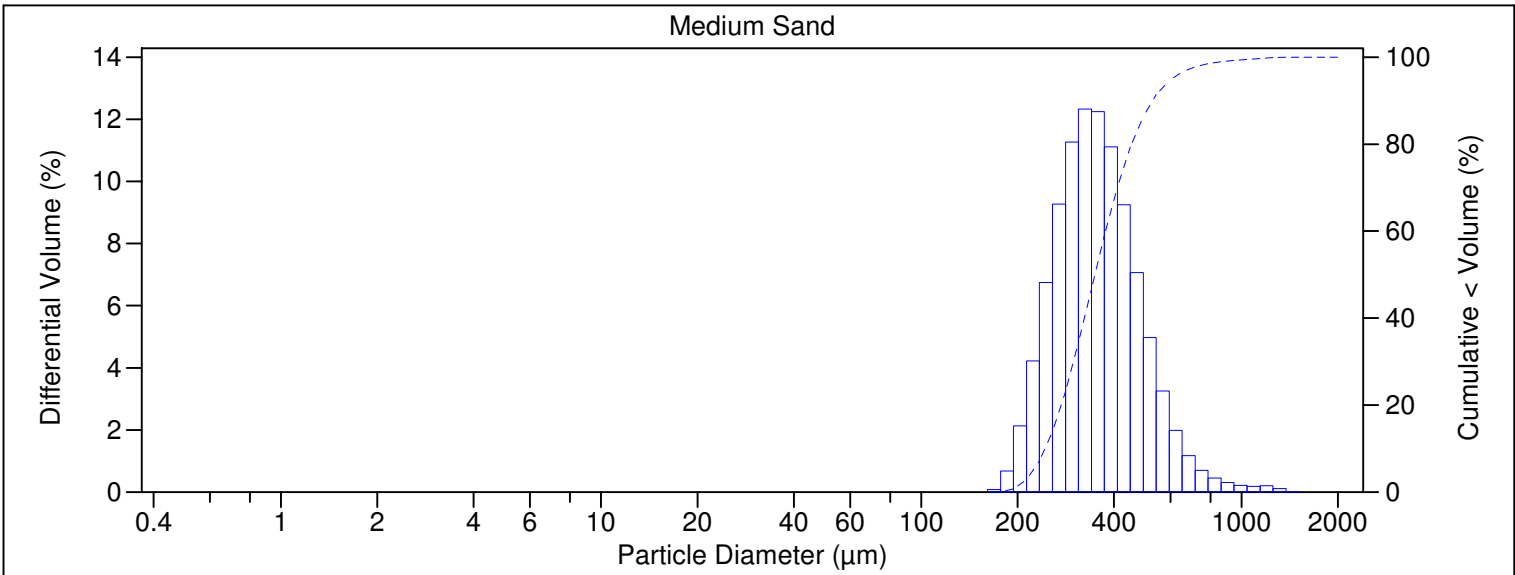


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.27.13.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	134.6 µm
Mean:	376.8 µm	Variance:	18131 µm ²
Median:	350.5 µm	Skewness:	2.133 Right skewed
Mean/Median ratio:	1.075	Kurtosis:	8.519 Leptokurtic
Mode:	324.4 µm		
d ₁₀ :	243.6 µm	d ₅₀ :	350.5 µm
		d ₉₀ :	533.5 µm
Folk and Ward Statistics (Phi)			
Mean:	1.50	Median:	1.51
Skewness:	-0.08	Deviation:	0.44
		Kurtosis:	1.00
<5%	<16%	<25%	<40%
222.9 µm	262.8 µm	287.1 µm	324.5 µm
<50%	<75%	<84%	<95%
350.5 µm	434.3 µm	483.0 µm	613.1 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.27.13 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	11.9
250	74.6
500	13.0
1000	0.61
2000	

Medium Sand_19 Mar 2020_14.27.13.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0.0058		
2.423	0	161.2	0.13		
2.660	0	176.9	0.76		
2.920	0	194.2	2.15		
3.206	0	213.2	4.19		
3.519	0	234.1	6.64		
3.863	0	256.9	9.10		
4.241	0	282.1	11.1		
4.656	0	309.6	12.1		
5.111	0	339.9	12.1		
5.611	0	373.1	11.0		
6.159	0	409.6	9.27		
6.761	0	449.7	7.18		
7.422	0	493.6	5.15		
8.148	0	541.9	3.44		
8.944	0	594.9	2.15		
9.819	0	653.0	1.29		
10.78	0	716.9	0.76		
11.83	0	786.9	0.46		
12.99	0	863.9	0.29		
14.26	0	948.3	0.20		
15.65	0	1041	0.17		
17.18	0	1143	0.21		
18.86	0	1255	0.13		
20.71	0	1377	0.014		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.36.37.\$ls		
	Medium Sand_19 Mar 2020_14.36.37.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	18		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	3.37%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:35 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

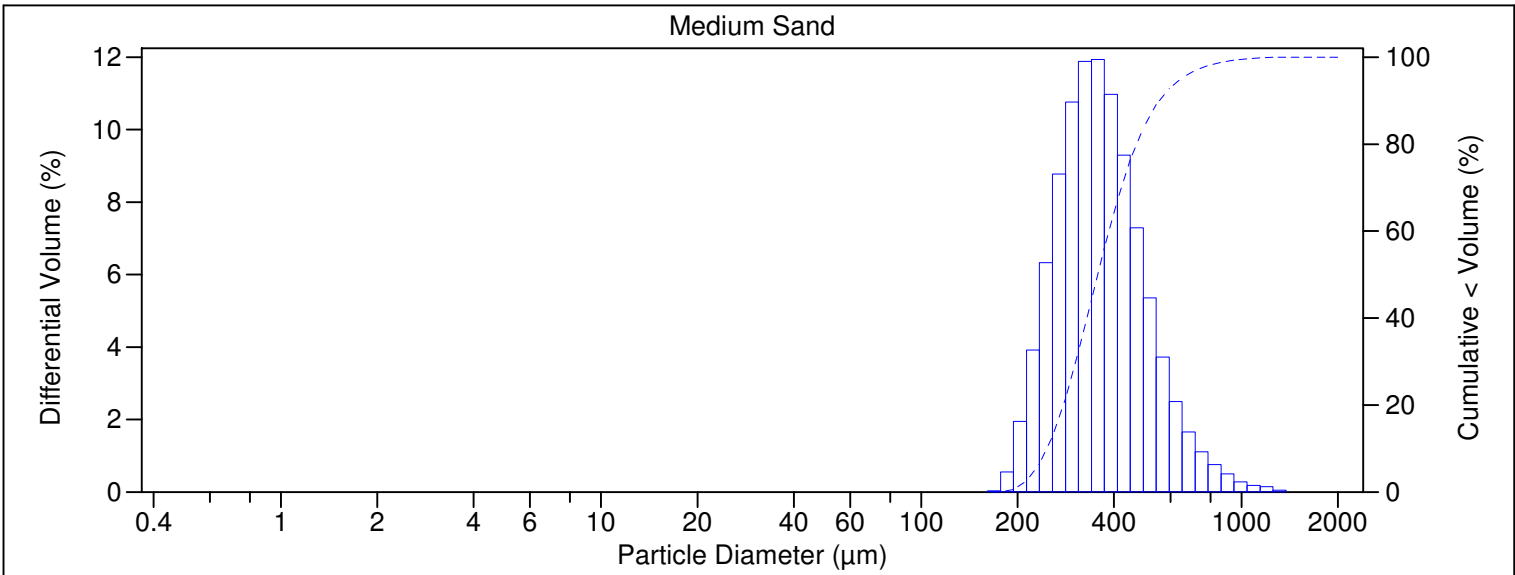


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.36.37.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	133.0 µm
Mean:	374.8 µm	Variance:	17702 µm ²
Median:	348.8 µm	Skewness:	2.174 Right skewed
Mean/Median ratio:	1.075	Kurtosis:	8.711 Leptokurtic
Mode:	324.4 µm		
d ₁₀ :	243.8 µm	d ₅₀ :	348.8 µm
		d ₉₀ :	528.5 µm
Folk and Ward Statistics (Phi)			
Mean:	1.50	Median:	1.52
Skewness:	-0.08	Deviation:	0.43
Kurtosis:	1.00		
<5%	<16%	<25%	<40%
223.6 µm	262.7 µm	286.6 µm	323.4 µm
<50%	<75%	<84%	<95%
348.8 µm	430.9 µm	478.7 µm	605.5 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.36.37 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	11.8
250	75.2
500	12.3
1000	0.61
2000	

Medium Sand_19 Mar 2020_14.36.37.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0.0015		
2.423	0	161.2	0.082		
2.660	0	176.9	0.68		
2.920	0	194.2	2.13		
3.206	0	213.2	4.23		
3.519	0	234.1	6.75		
3.863	0	256.9	9.27		
4.241	0	282.1	11.3		
4.656	0	309.6	12.3		
5.111	0	339.9	12.2		
5.611	0	373.1	11.1		
6.159	0	409.6	9.24		
6.761	0	449.7	7.07		
7.422	0	493.6	4.98		
8.148	0	541.9	3.25		
8.944	0	594.9	1.99		
9.819	0	653.0	1.18		
10.78	0	716.9	0.70		
11.83	0	786.9	0.45		
12.99	0	863.9	0.31		
14.26	0	948.3	0.22		
15.65	0	1041	0.19		
17.18	0	1143	0.21		
18.86	0	1255	0.11		
20.71	0	1377	0.010		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.45.29.\$ls		
	Medium Sand_19 Mar 2020_14.45.29.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	19		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	4.01%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:44 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

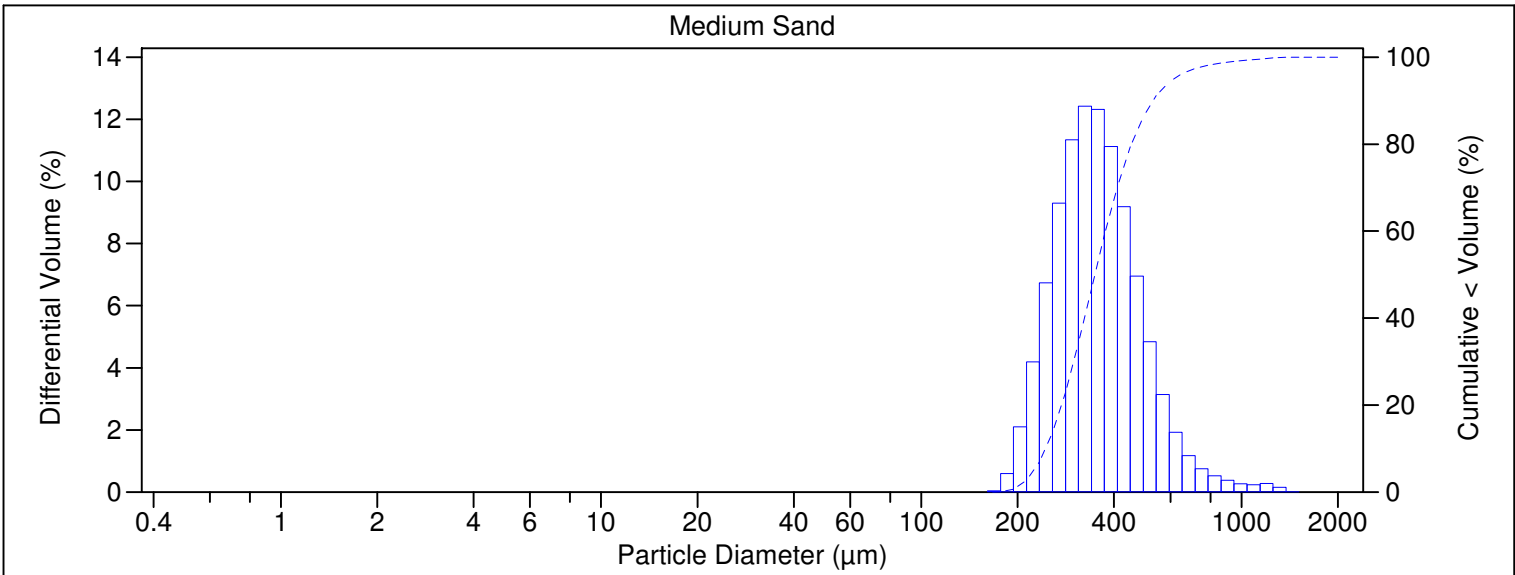


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.45.29.\$ls					
Calculations from 0.375 µm to 2000 µm							
Volume:	100%	S.D.:	138.8 µm				
Mean:	385.3 µm	Variance:	19276 µm ²				
Median:	356.0 µm	Skewness:	1.816 Right skewed				
Mean/Median ratio:	1.082	Kurtosis:	5.466 Leptokurtic				
Mode:	356.1 µm						
d ₁₀ :	246.8 µm	d ₅₀ :	356.0 µm				
		d ₉₀ :	555.2 µm				
Folk and Ward Statistics (Phi)							
Mean:	1.47	Median:	1.49				
Skewness:	-0.10	Deviation:	0.45				
		Kurtosis:	1.02				
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
226.2 µm	266.1 µm	290.9 µm	329.2 µm	356.0 µm	443.6 µm	496.3 µm	646.2 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.45.29 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	10.9
250	73.5
500	15.1
1000	0.51
2000	

Medium Sand_19 Mar 2020_14.45.29.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.039		
2.660	0	176.9	0.56		
2.920	0	194.2	1.95		
3.206	0	213.2	3.92		
3.519	0	234.1	6.33		
3.863	0	256.9	8.77		
4.241	0	282.1	10.8		
4.656	0	309.6	11.9		
5.111	0	339.9	11.9		
5.611	0	373.1	11.0		
6.159	0	409.6	9.29		
6.761	0	449.7	7.30		
7.422	0	493.6	5.36		
8.148	0	541.9	3.73		
8.944	0	594.9	2.50		
9.819	0	653.0	1.66		
10.78	0	716.9	1.11		
11.83	0	786.9	0.76		
12.99	0	863.9	0.50		
14.26	0	948.3	0.29		
15.65	0	1041	0.18		
17.18	0	1143	0.15		
18.86	0	1255	0.053		
20.71	0	1377	0.0029		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.54.15.\$ls		
	Medium Sand_19 Mar 2020_14.54.15.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	20		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	4.53%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:53 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

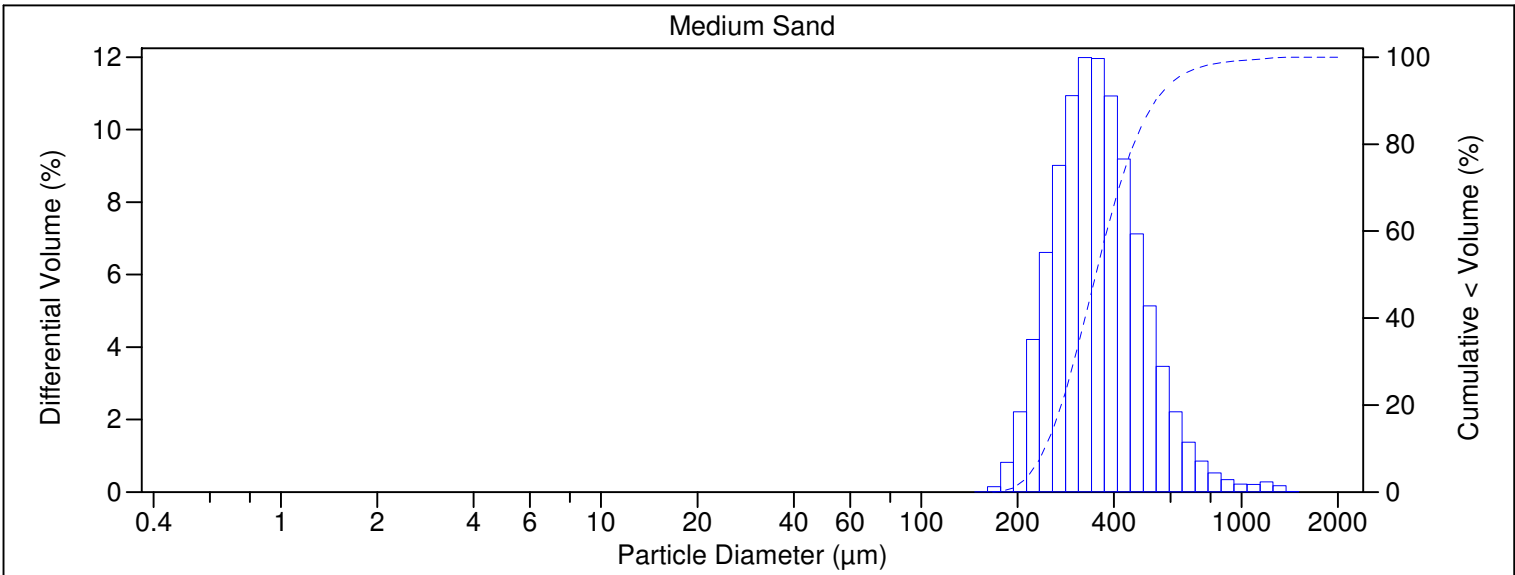


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.54.15.\$ls					
Calculations from 0.375 µm to 2000 µm							
Volume:	100%	S.D.:	139.0 µm				
Mean:	376.9 µm	Variance:	19313 µm ²				
Median:	348.7 µm	Skewness:	2.345 Right skewed				
Mean/Median ratio:	1.081	Kurtosis:	9.384 Leptokurtic				
Mode:	324.4 µm						
d ₁₀ :	244.5 µm	d ₅₀ :	348.7 µm				
		d ₉₀ :	530.5 µm				
Folk and Ward Statistics (Phi)							
Mean:	1.50	Median:	1.52				
Skewness:	-0.09	Deviation:	0.44				
		Kurtosis:	1.02				
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
224.5 µm	263.2 µm	287.0 µm	323.5 µm	348.7 µm	430.7 µm	479.1 µm	616.5 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.54.15 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	11.6
250	75.3
500	12.3
1000	0.81
2000	

Medium Sand_19 Mar 2020_14.54.15.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.042		
2.660	0	176.9	0.60		
2.920	0	194.2	2.10		
3.206	0	213.2	4.19		
3.519	0	234.1	6.74		
3.863	0	256.9	9.30		
4.241	0	282.1	11.3		
4.656	0	309.6	12.4		
5.111	0	339.9	12.3		
5.611	0	373.1	11.1		
6.159	0	409.6	9.18		
6.761	0	449.7	6.95		
7.422	0	493.6	4.84		
8.148	0	541.9	3.14		
8.944	0	594.9	1.93		
9.819	0	653.0	1.17		
10.78	0	716.9	0.75		
11.83	0	786.9	0.52		
12.99	0	863.9	0.38		
14.26	0	948.3	0.27		
15.65	0	1041	0.24		
17.18	0	1143	0.28		
18.86	0	1255	0.15		
20.71	0	1377	0.014		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_15.15.43.\$ls		
	Medium Sand_19 Mar 2020_15.15.43.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	21		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	6.09%		
LS 13 320	Aqueous Liquid Module		
Start time:	15:14 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	7%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

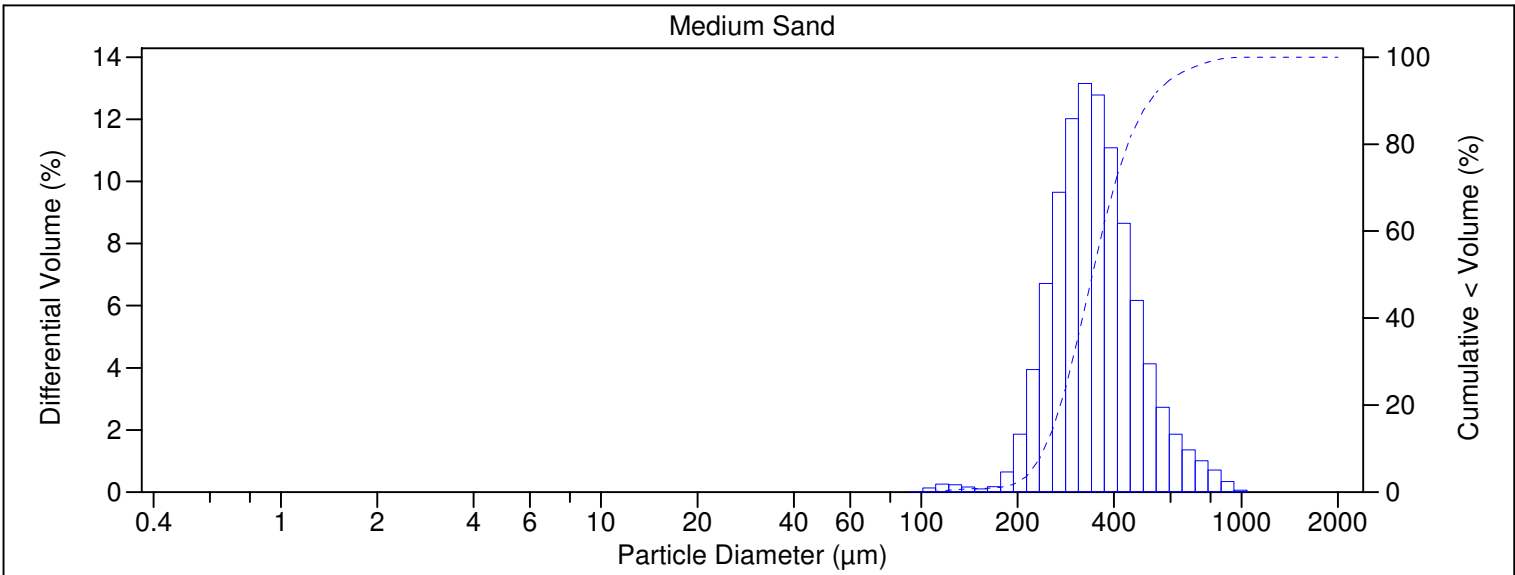


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_15.15.43.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	141.2 µm
Mean:	379.6 µm	Variance:	19940 µm ²
Median:	351.1 µm	Skewness:	2.236 Right skewed
Mean/Median ratio:	1.081	Kurtosis:	8.814 Leptokurtic
Mode:	324.4 µm		
d ₁₀ :	243.1 µm	d ₅₀ :	351.1 µm
		d ₉₀ :	539.1 µm
Folk and Ward Statistics (Phi)			
Mean:	1.49	Median:	1.51
Skewness:	-0.09	Deviation:	0.45
Kurtosis:	1.01		
<5%	<16%	<25%	<40%
222.2 µm	262.5 µm	287.0 µm	324.9 µm
<50%	<75%	<84%	<95%
351.1 µm	436.4 µm	486.4 µm	627.2 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _15.15.43 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	12.0
250	73.8
500	13.4
1000	0.79
2000	

Medium Sand_19 Mar 2020_15.15.43.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0.0065		
2.423	0	161.2	0.15		
2.660	0	176.9	0.82		
2.920	0	194.2	2.21		
3.206	0	213.2	4.21		
3.519	0	234.1	6.62		
3.863	0	256.9	9.02		
4.241	0	282.1	10.9		
4.656	0	309.6	12.0		
5.111	0	339.9	12.0		
5.611	0	373.1	10.9		
6.159	0	409.6	9.19		
6.761	0	449.7	7.13		
7.422	0	493.6	5.13		
8.148	0	541.9	3.47		
8.944	0	594.9	2.22		
9.819	0	653.0	1.38		
10.78	0	716.9	0.85		
11.83	0	786.9	0.53		
12.99	0	863.9	0.34		
14.26	0	948.3	0.22		
15.65	0	1041	0.21		
17.18	0	1143	0.28		
18.86	0	1255	0.18		
20.71	0	1377	0.018		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_15.24.02.\$ls		
	Medium Sand_19 Mar 2020_15.24.02.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	22		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	6.38%		
LS 13 320	Aqueous Liquid Module		
Start time:	15:22 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	13%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00



Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_15.24.02.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	121.8 µm
Mean:	366.0 µm	Variance:	14823 µm ²
Median:	342.3 µm	Skewness:	1.408 Right skewed
Mean/Median ratio:	1.069	Kurtosis:	2.984 Leptokurtic
Mode:	324.4 µm		
d ₁₀ :	242.4 µm	d ₅₀ :	342.3 µm
		d ₉₀ :	519.5 µm
Folk and Ward Statistics (Phi)			
Mean:	1.53	Median:	1.55
Skewness:	-0.10	Deviation:	0.43
Kurtosis:	1.07		
<5%	<16%	<25%	<40%
220.6 µm	261.4 µm	284.5 µm	319.0 µm
<50%	<75%	<84%	<95%
342.3 µm	419.1 µm	466.7 µm	605.8 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _15.24.02 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0.47
125	11.8
250	76.1
500	11.6
1000	0.027
2000	

Medium Sand_19 Mar 2020_15.24.02.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0.013		
1.520	0	101.1	0.13		
1.669	0	111.0	0.26		
1.832	0	121.8	0.24		
2.011	0	133.7	0.16		
2.208	0	146.8	0.10		
2.423	0	161.2	0.18		
2.660	0	176.9	0.65		
2.920	0	194.2	1.87		
3.206	0	213.2	3.95		
3.519	0	234.1	6.72		
3.863	0	256.9	9.65		
4.241	0	282.1	12.0		
4.656	0	309.6	13.2		
5.111	0	339.9	12.8		
5.611	0	373.1	11.1		
6.159	0	409.6	8.65		
6.761	0	449.7	6.17		
7.422	0	493.6	4.14		
8.148	0	541.9	2.73		
8.944	0	594.9	1.87		
9.819	0	653.0	1.35		
10.78	0	716.9	1.01		
11.83	0	786.9	0.72		
12.99	0	863.9	0.34		
14.26	0	948.3	0.058		
15.65	0	1041	0.0012		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

Reagent

MT_MS_ICs2_00002



SPEXertificate®

Certificate of Reference Material



Catalog Number: CL-CAL-2 **Lot No.** CL2-69WGY
Description: Instrument Calibration Standard 2
Matrix: 5% HNO₃ / Tr. Tart. Acid / Tr. HF

This CLARITAS PPT® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.6 µg/mL	±0.5 µg/mL	3151*	Mn	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3132*
Al	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3101a*	Mo	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3134*
As	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3103a*	Na	100 µg/mL	100 µg/mL	±0.5 µg/mL	3152a*
Ba	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3104a*	Ni	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3136*
Be	100 µg/mL	100 µg/mL	±0.5 µg/mL	3105a*	Pb	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3128*
Ca	100 µg/mL	100 µg/mL	±0.5 µg/mL	3109a*	Sb	100 µg/mL	100 µg/mL	±0.5 µg/mL	3102a*
Cd	100 µg/mL	99.0 µg/mL	±0.5 µg/mL	3108*	Se	100 µg/mL	100 µg/mL	±0.5 µg/mL	3149*
Co	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3113*	Sn	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3161a*
Cr	100 µg/mL	100 µg/mL	±0.5 µg/mL	3112a*	Sr	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3153a*
Cu	100 µg/mL	101 µg/mL	±0.5 µg/mL	3114*	Ti	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3162a*
Fe	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3126a*	Tl	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3158*
K	100 µg/mL	100 µg/mL	±0.5 µg/mL	3141a*	V	100 µg/mL	100 µg/mL	±0.5 µg/mL	3165*
Mg	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3131a*	Zn	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3168a*

* - indicates NIST SRM

† - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# CL5-135MKB, CL6-41MKB, CL-1-112YJ, CL1372YP

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.08	Eu	<0.1	In	<20	P	<400	Ru	2
B	<4	Ga	<0.01	Ir	<0.1	Pd	<50	Sc	<0.4
Bi	2	Gd	0.4	La	5	Pr	0.04	Si	<300
Ce	0.9	Ge	<0.7	Li	0.5	Pt	<0.1	Sm	3
Cs	0.3	Hf	0.07	Lu	<0.02	Rb	3	Ta	0.6
Dy	<0.01	Hg	<0.2	Nb	0.4	Re	1	Tb	<0.01
Er	<0.01	Ho	<0.01	Nd	0.1	Rh	4	Te	<1
								Th	<0.03
								Tm	<0.01
								U	<0.03
								W	9
								Y	0.3
								Yb	<0.03
								Zr	3



116696

ID: MI_MS_JCS2_00002
 Exp: 08/30/20 Pppl U/LE Cph 0881319
 1000ppm Cal Std 2 SPEX

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: AUG -- 2019

Certifying Officer: Katherine Cullinan
 Katherine Cullinan, QC Manager

Page 1 of 2
 Rev. 0

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METALS

COVER PAGE
METALS

Lab Name: Eurofins Calscience Job Number: 570-23510-1

SDG No.: _____

Project: SSFL CH661 / 692670.61 sw

Client Sample ID	Lab Sample ID
<u>EVBMP0007S012</u>	<u>570-23510-1</u>
<u>EVBMP0008S015</u>	<u>570-23510-2</u>
<u>EVBMP0009S013</u>	<u>570-23510-3</u>

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: EV BMP0007S012

Lab Sample ID: 570-23510-1

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:39

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: EV BMP0007S012

Lab Sample ID: 570-23510-1

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:39

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L			1	200.8
7440-50-8	Copper	0.00226	0.00100	0.000610	mg/L			1	200.8
7439-92-1	Lead	0.000686	0.00100	0.000190	mg/L	J		1	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: EV BMP0007S012

Lab Sample ID: 570-23510-1

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:39

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L		H F1 F2	1	200.8
7440-50-8	Copper	0.00164	0.00100	0.000610	mg/L		H F1 F2	1	200.8
7439-92-1	Lead	0.000274	0.00100	0.000190	mg/L	J	H F1 F2	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H F2 F1	1	245.1

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: EV BMP0008S015

Lab Sample ID: 570-23510-2

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:29

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: EV BMP0008S015

Lab Sample ID: 570-23510-2

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:29

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L			1	200.8
7440-50-8	Copper	0.00207	0.00100	0.000610	mg/L			1	200.8
7439-92-1	Lead	0.000498	0.00100	0.000190	mg/L	J		1	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: EV BMP0008S015

Lab Sample ID: 570-23510-2

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:29

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L		H	1	200.8
7440-50-8	Copper	0.00131	0.00100	0.000610	mg/L		H	1	200.8
7439-92-1	Lead	0.000516	0.00100	0.000190	mg/L	J	H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: EV BMP0009S013

Lab Sample ID: 570-23510-3

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 08:25

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: EV BMP0009S013

Lab Sample ID: 570-23510-3

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 08:25

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L			1	200.8
7440-50-8	Copper	0.00196	0.00100	0.000610	mg/L			1	200.8
7439-92-1	Lead	0.000544	0.00100	0.000190	mg/L	J		1	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: EV BMP0009S013

Lab Sample ID: 570-23510-3

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 08:25

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L		H	1	200.8
7440-50-8	Copper	0.00161	0.00100	0.000610	mg/L		H	1	200.8
7439-92-1	Lead	0.000375	0.00100	0.000190	mg/L	J	H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00004 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-58367/3 03/19/2020 08:33				CCV 570-58367/18 03/19/2020 10:46				CCV 570-58367/30 03/19/2020 11:19			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	104.3		100	104	100.7		100	101	98.60		100	99
Copper	104.8		100	105	102.2		100	102	102.5		100	102
Lead	99.30		100	99	99.75		100	100	97.77		100	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00004 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-58367/73 03/19/2020 14:57				CCV 570-58367/84 03/19/2020 15:47							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	100.8		100	101	101.8		100	102				
Copper	103.8		100	104	104.3		100	104				
Lead	99.53		100	100	100.4		100	100				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-58367/18 03/19/2020 10:46				ICVL 570-58367/20 03/19/2020 10:52				CCV 570-58367/30 03/19/2020 11:19			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	100.7		100	101	1.040		1.00	104	98.60		100	99
Copper	102.2		100	102	0.9822	J	1.00	98	102.5		100	102
Lead	99.75		100	100	0.9725	J	1.00	97	97.77		100	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICVL 570-58367/57 03/19/2020 13:22				CCV 570-58367/73 03/19/2020 14:57				CCV 570-58367/84 03/19/2020 15:47			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	1.063		1.00	106	100.8		100	101	101.8		100	102
Copper	1.067		1.00	107	103.8		100	104	104.3		100	104
Lead	0.9671	J	1.00	97	99.53		100	100	100.4		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00015 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00011

Analyte	ICV 570-58250/2-A 03/19/2020 10:20				CCV 570-58250/10-A 03/19/2020 10:26				CCV 570-58250/10-A 03/19/2020 11:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00984 0		0.0100	98	0.00414 0		0.00400	103	0.00422 6		0.00400	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00015 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00011

Analyte	CCV 570-58250/10-A 03/19/2020 16:39				CCV 570-58250/10-A 03/19/2020 17:09				CCV 570-58250/10-A 03/19/2020 17:31			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00402 0		0.00400	101	0.00400 2		0.00400	100	0.00404 6		0.00400	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1
 SDG No.: _____
 Method: 245.1 Instrument ID: HG8
 Lab Sample ID: CRA 570-58250/12-A Concentration Units: mg/L
 CRQL Check Standard Source: HG_lppm STD_00011

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0004768		95	65-135

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-58367/5 03/19/2020 08:39		CCB 570-58367/19 03/19/2020 10:49		CCB 570-58367/31 03/19/2020 11:22		CCB 570-58367/74 03/19/2020 15:00	
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		ND		ND		ND	
Copper	1.00	ND		ND		ND		ND	
Lead	1.00	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 570-58367/85 03/19/2020 15:49							
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND							
Copper	1.00	ND							
Lead	1.00	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-58250/3-A 03/19/2020 10:22		CCB 570-58250/11-A 03/19/2020 10:28		CCB 570-58250/11-A 03/19/2020 11:32		CCB 570-58250/11-A 03/19/2020 16:41	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.000200	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	CCB 570-58250/11-A 03/19/2020 17:11		CCB 570-58250/11-A 03/19/2020 17:33					
		Found	C	Found	C	Found	C	Found	C
Mercury	0.000200	ND		0.00009698	J				

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job No.: 570-23510-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-58210/1-A
Instrument Code: ICPMS05 Batch No.: 58367

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-23510-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-58300/1-A
Instrument Code: ICPMS05 Batch No.: 58367

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-58265/1-A
Instrument Code: HG8 Batch No.: 58328

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-23510-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-58304/1-B
Instrument Code: HG8 Batch No.: 58328

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG No.: _____

Lab Sample ID: ICSA 570-58367/8

Instrument ID: ICPMS05

Lab File ID: 200319E1_iCal.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Cadmium		-0.0575	
Copper		-0.230	
Lead		0.0283	
<i>Aluminum</i>	<i>10000</i>	<i>10072</i>	<i>101</i>
<i>Antimony</i>		<i>0.149</i>	
<i>Arsenic</i>		<i>0.324</i>	
<i>Barium</i>		<i>0.148</i>	
<i>Beryllium</i>		<i>0.0070</i>	
<i>Boron</i>		<i>4.82</i>	
<i>Calcium</i>	<i>30000</i>	<i>29678</i>	<i>99</i>
<i>Chromium</i>		<i>-0.0558</i>	
<i>Cobalt</i>		<i>0.0566</i>	
<i>Iron</i>	<i>25000</i>	<i>26391</i>	<i>106</i>
<i>Magnesium</i>	<i>10000</i>	<i>10013</i>	<i>100</i>
<i>Manganese</i>		<i>0.703</i>	
<i>Molybdenum</i>	<i>200</i>	<i>195</i>	<i>98</i>
<i>Nickel</i>		<i>0.411</i>	
<i>Potassium</i>	<i>10000</i>	<i>10174</i>	<i>102</i>
<i>Selenium</i>		<i>-0.0783</i>	
<i>Silver</i>		<i>0.0519</i>	
<i>Sodium</i>	<i>25000</i>	<i>25383</i>	<i>102</i>
<i>Strontium</i>		<i>0.407</i>	
<i>Thallium</i>		<i>0.0150</i>	
<i>Tin</i>		<i>0.283</i>	
<i>Titanium</i>	<i>200</i>	<i>204</i>	<i>102</i>
<i>Vanadium</i>		<i>0.333</i>	
<i>Zinc</i>		<i>0.932</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG No.: _____

Lab Sample ID: ICSAB 570-58367/9

Instrument ID: ICPMS05

Lab File ID: 200319E1_iCal.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Cadmium	10.0	10.0	100
Copper	20.0	19.3	97
Lead		0.0201	
<i>Aluminum</i>	<i>10000</i>	<i>10144</i>	<i>101</i>
<i>Antimony</i>		<i>0.112</i>	
<i>Arsenic</i>	<i>10.0</i>	<i>10.2</i>	<i>102</i>
<i>Barium</i>		<i>0.168</i>	
<i>Beryllium</i>		<i>0.0059</i>	
<i>Boron</i>		<i>5.64</i>	
<i>Calcium</i>	<i>30000</i>	<i>30067</i>	<i>100</i>
<i>Chromium</i>	<i>20.0</i>	<i>19.7</i>	<i>99</i>
<i>Cobalt</i>	<i>20.0</i>	<i>20.0</i>	<i>100</i>
<i>Iron</i>	<i>25000</i>	<i>26187</i>	<i>105</i>
<i>Magnesium</i>	<i>10000</i>	<i>10054</i>	<i>101</i>
<i>Manganese</i>	<i>20.0</i>	<i>20.3</i>	<i>101</i>
<i>Molybdenum</i>	<i>200</i>	<i>196</i>	<i>98</i>
<i>Nickel</i>	<i>20.0</i>	<i>20.1</i>	<i>100</i>
<i>Potassium</i>	<i>10000</i>	<i>10275</i>	<i>103</i>
<i>Selenium</i>	<i>10.0</i>	<i>9.87</i>	<i>99</i>
<i>Silver</i>	<i>5.00</i>	<i>4.88</i>	<i>98</i>
<i>Sodium</i>	<i>25000</i>	<i>25698</i>	<i>103</i>
<i>Strontium</i>		<i>0.438</i>	
<i>Thallium</i>		<i>0.0140</i>	
<i>Tin</i>		<i>0.119</i>	
<i>Titanium</i>	<i>200</i>	<i>207</i>	<i>103</i>
<i>Vanadium</i>	<i>20.0</i>	<i>21.1</i>	<i>106</i>
<i>Zinc</i>	<i>10.0</i>	<i>10.7</i>	<i>107</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: EVBMP0007S012 MS

Lab ID: 570-23510-1 MS

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG No.: _____

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.05988	ND	0.100	60	80-120	F1	200.8
Copper	0.06095	0.00164	0.100	59	80-120	F1	200.8
Lead	0.05689	0.000274 J	0.100	57	80-120	F1	200.8
Mercury	0.003931	ND	0.0100	39	57-141	F1	245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-23815-A-1-B MS
 Lab Name: Eurofins Calscience Job No.: 570-23510-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.09457	ND	0.100	95	80-120		200.8
Copper	0.1497	0.0626	0.100	87	80-120		200.8
Lead	0.1040	0.000251	J 0.100	104	80-120		200.8

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS

Client ID: _____ Lab ID: 570-23609-F-1-B MS
 Lab Name: Eurofins Calscience Job No.: 570-23510-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.007468	ND	0.0100	75	57-141		245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: EVBMP0007S012 MSD

Lab ID: 570-23510-1 MSD

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG No.: _____

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.04822	0.100	48	80-120	22	20	F2 F1	200.8
Copper	0.04891	0.100	47	80-120	22	20	F2 F1	200.8
Lead	0.04531	0.100	45	80-120	23	20	F2 F1	200.8
Mercury	0.005926	0.0100	59	57-141	40	10	F2	245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-23815-A-1-C MSD
 Lab Name: Eurofins Calscience Job No.: 570-23510-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.09113	0.100	91	80-120	4	20		200.8
Copper	0.1446	0.100	82	80-120	3	20		200.8
Lead	0.1002	0.100	100	80-120	4	20		200.8

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS

Client ID: _____ Lab ID: 570-23609-F-1-C MSD
 Lab Name: Eurofins Calscience Job No.: 570-23510-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.005840	0.0100	58	57-141	24	10	F2	245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 METALS - TOTAL RECOVERABLE

Lab ID: LCS 570-58210/2-A

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1028		103	80	120		200.8
Copper	0.100	0.1030		103	80	120		200.8
Lead	0.100	0.1006		101	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - TOTAL RECOVERABLE

Lab ID: LCSD 570-58210/3-A

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1033	0.100	103	80-120	1	20		200.8
Copper	0.1036	0.100	104	80-120	0	20		200.8
Lead	0.1008	0.100	101	80-120	0	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-58300/2-A

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1033		103	80	120		200.8
Copper	0.100	0.1022		102	80	120		200.8
Lead	0.100	0.09844		98	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-58300/3-A

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1035	0.100	103	80-120	0	20		200.8
Copper	0.1014	0.100	101	80-120	1	20		200.8
Lead	0.09951	0.100	100	80-120	1	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 570-58265/2-A

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00011

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.01021		102	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS

Lab ID: LCSD 570-58265/3-A

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00011

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.01014	0.0100	101	85-121	1	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-58304/2-B

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00011

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.01019		102	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-58304/3-B

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00011

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009729	0.0100	97	85-121	5	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience

Job Number: 570-23510-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 12/06/2019 00:00

Prep Method: 200.8

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.00098
Copper	65	0.001	0.00061
Lead	207	0.001	0.00019

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job Number: 570-23510-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 12/06/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.9785
Copper	65	1	0.6066
Lead	207	1	0.1929

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-23510-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 12/06/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.00098
Copper	65	0.001	0.00061
Lead	207	0.001	0.00019

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-23510-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 12/06/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.9785
Copper	65	1	0.6066
Lead	207	1	0.1929

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience

Job Number: 570-23510-1

SDG Number: _____

Matrix: Water

Instrument ID: HG8

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience Job Number: 570-23510-1
SDG Number: _____
Matrix: Water Instrument ID: HG8
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-23510-1

SDG Number: _____

Matrix: Water

Instrument ID: HG8

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-23510-1
SDG Number: _____
Matrix: Water Instrument ID: HG8
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-23510-1

SDG No.: _____

Instrument ID: ICPMS05

Date: 04/17/2017 06:04

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Cadmium		10	200.8
Copper		50	200.8
Lead		20	200.8

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-23510-1

SDG No.: _____

Instrument ID: HG8

Date: 04/17/2017 05:54

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Mercury		10	245.1

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Prep Method: 200.8

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-58210/1-A	03/18/2020 20:00	58210		50	50
LCS 570-58210/2-A	03/18/2020 20:00	58210		50	50
LCSD 570-58210/3-A	03/18/2020 20:00	58210		50	50
570-23815-A-1-B MS	03/18/2020 20:00	58210		50	50
570-23815-A-1-C MSD	03/18/2020 20:00	58210		50	50
570-23510-1	03/18/2020 20:00	58210		50	50
570-23510-2	03/18/2020 20:00	58210		50	50
570-23510-3	03/18/2020 20:00	58210		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-58265/1-A	03/19/2020 09:00	58265		50	100
LCS 570-58265/2-A	03/19/2020 09:00	58265		50	100
LCSD 570-58265/3-A	03/19/2020 09:00	58265		50	100
570-23609-F-1-B MS	03/19/2020 09:00	58265		50	100
570-23609-F-1-C MSD	03/19/2020 09:00	58265		50	100
570-23510-1	03/19/2020 09:00	58265		50	100
570-23510-2	03/19/2020 09:00	58265		50	100
570-23510-3	03/19/2020 09:00	58265		50	100

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-58304/1-B	03/19/2020 11:00	58307		50	100
LCS 570-58304/2-B	03/19/2020 11:00	58307		50	100
LCSD 570-58304/3-B	03/19/2020 11:00	58307		50	100
570-23510-1	03/19/2020 11:00	58307		50	100
570-23510-1 MS	03/19/2020 11:00	58307		50	100
570-23510-1 MSD	03/19/2020 11:00	58307		50	100
570-23510-2	03/19/2020 11:00	58307		50	100
570-23510-3	03/19/2020 11:00	58307		50	100

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG No.: _____

Instrument ID: ICPMS05

Analysis Method: 200.8

Start Date: 03/19/2020 08:28

End Date: 03/19/2020 15:49

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICIS 570-58367/1			08:28	X	X	X																									
IC 570-58367/2			08:30	X	X	X																									
ICV 570-58367/3	1		08:33	X	X	X																									
ICV 570-58367/4	1		08:36	X	X	X																									
ICB 570-58367/5	1		08:39	X	X	X																									
CCV 570-58367/6			08:41																												
CCB 570-58367/7			08:44																												
ICSA 570-58367/8	1		08:47	X	X	X																									
ICSAB 570-58367/9	1		08:50	X	X	X																									
CCB 570-58367/10			08:54																												
ICVL 570-58367/11			08:57																												
ZZZZZZ			09:56																												
CCV 570-58367/13			09:59																												
CCB 570-58367/14			10:02																												
ZZZZZZ			10:38																												
ICIS 570-58367/16			10:41	X	X	X																									
IC 570-58367/17	1		10:43	X	X	X																									
CCV 570-58367/18	1		10:46	X	X	X																									
CCB 570-58367/19	1		10:49	X	X	X																									
ICVL 570-58367/20	1		10:52	X	X	X																									
MB 570-58210/1-A	1	R	10:54	X	X	X																									
LCS 570-58210/2-A	1	R	10:57	X	X	X																									
LCSD 570-58210/3-A	1	R	11:00	X	X	X																									
ZZZZZZ			11:03																												
570-23815-A-1-B MS	1	R	11:05	X	X	X																									
570-23815-A-1-C MSD	1	R	11:08	X	X	X																									
570-23510-1	1	R	11:11	X	X	X																									
570-23510-2	1	R	11:14	X	X	X																									
570-23510-3	1	R	11:16	X	X	X																									
CCV 570-58367/30	1		11:19	X	X	X																									
CCB 570-58367/31	1		11:22	X	X	X																									
ICIS 570-58367/32			12:12	X	X	X																									
IC 570-58367/33			12:15	X	X	X																									
CCV 570-58367/34			12:18																												
CCB 570-58367/35			12:21																												
ICVL 570-58367/36			12:23																												
ZZZZZZ			12:26																												
ZZZZZZ			12:29																												
ZZZZZZ			12:32																												
ZZZZZZ			12:34																												
ZZZZZZ			12:37																												
CCV 570-58367/42			12:40																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 03/19/2020 08:28 End Date: 03/19/2020 15:49

Lab Sample Id	D/F	Type	Time	Analytes																											
				C	C	P																									
CCB 570-58367/43			12:43																												
ZZZZZZ			12:46																												
ZZZZZZ			12:48																												
ZZZZZZ			12:51																												
ZZZZZZ			12:54																												
ZZZZZZ			12:57																												
ZZZZZZ			12:59																												
CCV 570-58367/50			13:02																												
CCB 570-58367/51			13:05																												
ZZZZZZ			13:09																												
ICIS 570-58367/53			13:11					X	X	X																					
IC 570-58367/54	1		13:14					X	X	X																					
CCV 570-58367/55			13:17																												
CCB 570-58367/56			13:20																												
ICVL 570-58367/57	1		13:22					X	X	X																					
ZZZZZZ			13:25																												
CCV 570-58367/59			13:28																												
CCB 570-58367/60			13:31																												
ZZZZZZ			13:44																												
ZZZZZZ			13:46																												
ZZZZZZ			13:49																												
ZZZZZZ			13:52																												
CCV 570-58367/65			13:55																												
CCB 570-58367/66			13:57																												
ZZZZZZ			14:26																												
CCV 570-58367/68			14:29																												
CCB 570-58367/69			14:32																												
ZZZZZZ			14:49																												
ZZZZZZ			14:51																												
ZZZZZZ			14:54																												
CCV 570-58367/73	1		14:57					X	X	X																					
CCB 570-58367/74	1		15:00					X	X	X																					
MB 570-58300/1-A	1	D	15:17					X	X	X																					
LCS 570-58300/2-A	1	D	15:20					X	X	X																					
LCSD 570-58300/3-A	1	D	15:23					X	X	X																					
570-23510-1	1	D	15:27					X	X	X																					
570-23510-1 MS	1	D	15:30					X	X	X																					
570-23510-1 MSD	1	D	15:32					X	X	X																					
570-23510-2	1	D	15:35					X	X	X																					
570-23510-3	1	D	15:38					X	X	X																					
ZZZZZZ			15:43																												
CCV 570-58367/84	1		15:47					X	X	X																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 03/19/2020 08:28 End Date: 03/19/2020 15:49

Lab Sample Id	D/F	Type	Time	Analytes																											
				C d	C u	P b																									
CCB 570-58367/85	1		15:49	X	X	X																									

Prep Types: _____
 D = Dissolved
 R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 03/19/2020 09:54 End Date: 03/19/2020 22:04

Lab Sample Id	D/F	Type	Time	Hg	Analytes																			
ICIS 570-58250/1-A			09:54	X																				
IC 570-58250/4-A			09:56	X																				
IC 570-58250/5-A			09:58	X																				
IC 570-58250/6-A			10:00	X																				
IC 570-58250/7-A			10:01	X																				
IC 570-58250/8-A			10:03	X																				
IC 570-58250/9-A			10:05	X																				
ICV 570-58250/2-A	1		10:20	X																				
ICB 570-58250/3-A	1		10:22	X																				
CRA 570-58250/12-A	1		10:24	X																				
CCV 570-58250/10-A	1		10:26	X																				
CCB 570-58250/11-A	1		10:28	X																				
MB 570-58265/1-A	1	T	11:06	X																				
LCS 570-58265/2-A	1	T	11:08	X																				
LCSD 570-58265/3-A	1	T	11:13	X																				
ZZZZZZ			11:15																					
570-23609-F-1-B MS	1	T	11:17	X																				
570-23609-F-1-C MSD	1	T	11:19	X																				
570-23510-1	1	T	11:21	X																				
570-23510-2	1	T	11:23	X																				
570-23510-3	1	T	11:24	X																				
ZZZZZZ			11:26																					
ZZZZZZ			11:28																					
CCV 570-58250/10-A	1		11:30	X																				
CCB 570-58250/11-A	1		11:32	X																				
ZZZZZZ			11:34																					
ZZZZZZ			11:36																					
ZZZZZZ			11:38																					
ZZZZZZ			11:39																					
ZZZZZZ			11:41																					
ZZZZZZ			11:43																					
ZZZZZZ			11:45																					
ZZZZZZ			11:47																					
ZZZZZZ			11:49																					
ZZZZZZ			11:50																					
CCV 570-58250/10-A			11:52																					
CCB 570-58250/11-A			11:54																					
ZZZZZZ			11:56																					
ZZZZZZ			11:58																					
ZZZZZZ			11:59																					
ZZZZZZ			12:01																					
ZZZZZZ			12:03																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 03/19/2020 09:54 End Date: 03/19/2020 22:04

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			12:05																												
ZZZZZZ			12:07																												
CCV 570-58250/10-A			12:09																												
CCB 570-58250/11-A			12:10																												
CCV 570-58250/10-A			14:37																												
CCB 570-58250/11-A			14:39																												
ZZZZZZ			14:44																												
ZZZZZZ			14:46																												
ZZZZZZ			14:48																												
ZZZZZZ			14:50																												
ZZZZZZ			14:51																												
ZZZZZZ			14:53																												
ZZZZZZ			14:55																												
ZZZZZZ			14:57																												
ZZZZZZ			14:59																												
ZZZZZZ			15:01																												
CCV 570-58250/10-A			15:02																												
CCB 570-58250/11-A			15:04																												
ZZZZZZ			15:06																												
ZZZZZZ			15:08																												
ZZZZZZ			15:10																												
ZZZZZZ			15:12																												
ZZZZZZ			15:13																												
ZZZZZZ			15:15																												
ZZZZZZ			15:17																												
ZZZZZZ			15:19																												
ZZZZZZ			15:21																												
ZZZZZZ			15:22																												
CCV 570-58250/10-A			15:24																												
CCB 570-58250/11-A			15:26																												
ZZZZZZ			15:28																												
ZZZZZZ			15:30																												
ZZZZZZ			15:31																												
ZZZZZZ			15:33																												
ZZZZZZ			15:35																												
CCV 570-58250/10-A			15:37																												
CCB 570-58250/11-A			15:39																												
ZZZZZZ			16:21																												
ZZZZZZ			16:22																												
ZZZZZZ			16:24																												
ZZZZZZ			16:26																												
ZZZZZZ			16:28																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 03/19/2020 09:54 End Date: 03/19/2020 22:04

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			16:30																												
ZZZZZZ			16:32																												
ZZZZZZ			16:33																												
ZZZZZZ			16:35																												
ZZZZZZ			16:37																												
CCV 570-58250/10-A	1		16:39	X																											
CCB 570-58250/11-A	1		16:41	X																											
ZZZZZZ			16:43																												
ZZZZZZ			16:44																												
ZZZZZZ			16:46																												
ZZZZZZ			16:48																												
ZZZZZZ			16:50																												
ZZZZZZ			16:52																												
MB 570-58304/1-B	1	D	16:53	X																											
LCS 570-58304/2-B	1	D	16:55	X																											
ZZZZZZ			16:57																												
ZZZZZZ			16:59																												
ZZZZZZ			17:04																												
LCSD 570-58304/3-B	1	D	17:05	X																											
570-23510-1	1	D	17:07	X																											
CCV 570-58250/10-A	1		17:09	X																											
CCB 570-58250/11-A	1		17:11	X																											
570-23510-1 MS	1	D	17:13	X																											
570-23510-1 MSD	1	D	17:15	X																											
570-23510-2	1	D	17:17	X																											
570-23510-3	1	D	17:18	X																											
ZZZZZZ			17:20																												
ZZZZZZ			17:22																												
ZZZZZZ			17:24																												
ZZZZZZ			17:26																												
ZZZZZZ			17:28																												
ZZZZZZ			17:29																												
CCV 570-58250/10-A	1		17:31	X																											
CCB 570-58250/11-A	1		17:33	X																											
ZZZZZZ			17:35																												
ZZZZZZ			17:37																												
ZZZZZZ			17:38																												
ZZZZZZ			17:40																												
ZZZZZZ			17:42																												
ZZZZZZ			17:44																												
ZZZZZZ			17:46																												
CCV 570-58250/10-A			17:48																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Instrument ID: HG8 Analysis Method: 245.1

Start Date: 03/19/2020 09:54 End Date: 03/19/2020 22:04

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
CCB 570-58250/11-A			17:49																												
ZZZZZZ			21:26																												
ZZZZZZ			21:28																												
ZZZZZZ			21:29																												
ZZZZZZ			21:31																												
ZZZZZZ			21:33																												
ZZZZZZ			21:35																												
ZZZZZZ			21:37																												
ZZZZZZ			21:39																												
ZZZZZZ			21:40																												
ZZZZZZ			21:42																												
CCV 570-58250/10-A			21:44																												
CCB 570-58250/11-A			21:46																												
ZZZZZZ			21:48																												
ZZZZZZ			21:50																												
ZZZZZZ			21:51																												
ZZZZZZ			21:53																												
ZZZZZZ			21:55																												
ZZZZZZ			21:57																												
ZZZZZZ			21:59																												
ZZZZZZ			22:01																												
CCV 570-58250/10-A			22:03																												
CCB 570-58250/11-A			22:04																												

Prep Types: _____
D = Dissolved
T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 03/19/2020 End Date: 03/19/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICV 570-58367/3	08:33			100				100		99	
ICV 570-58367/4	08:36			101				101		101	
ICB 570-58367/5	08:39			100				101		100	
ICSA 570-58367/8	08:47			108				102		104	
ICSAB 570-58367/9	08:50			109				107		105	
IC 570-58367/17	10:43										
CCV 570-58367/18	10:46			99				99		100	
CCB 570-58367/19	10:49			96				97		99	
ICVL 570-58367/20	10:52			97				97		100	
MB 570-58210/1-A	10:54			97				99		101	
LCS 570-58210/2-A	10:57			99				101		100	
LCSD 570-58210/3-A	11:00			98				99		100	
570-23815-A-1-B MS	11:05			106				102		97	
570-23815-A-1-C MSD	11:08			105				100		97	
570-23510-1	11:11			97				99		99	
570-23510-2	11:14			101				99		100	
570-23510-3	11:16			97				98		99	
CCV 570-58367/30	11:19			97				98		97	
CCB 570-58367/31	11:22			95				98		96	
IC 570-58367/54	13:14										
ICVL 570-58367/57	13:22			99				99		99	
CCV 570-58367/73	14:57			103				102		102	
CCB 570-58367/74	15:00			101				100		99	
MB 570-58300/1-A	15:17			102				100		99	
LCS 570-58300/2-A	15:20			103				104		102	
LCSD 570-58300/3-A	15:23			103				101		102	
570-23510-1	15:27			103				99		99	
570-23510-1 MS	15:30			101				101		100	
570-23510-1 MSD	15:32			102				101		99	
570-23510-2	15:35			106				100		101	
570-23510-3	15:38			104				102		100	
CCV 570-58367/84	15:47			102				100		101	
CCB 570-58367/85	15:49			101				101		98	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 03/19/2020 End Date: 03/19/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-58367/3	08:33					101					
ICV 570-58367/4	08:36					101					
ICB 570-58367/5	08:39					101					
ICSA 570-58367/8	08:47					103					
ICSAB 570-58367/9	08:50					103					
IC 570-58367/17	10:43										
CCV 570-58367/18	10:46					100					
CCB 570-58367/19	10:49					99					
ICVL 570-58367/20	10:52					101					
MB 570-58210/1-A	10:54					100					
LCS 570-58210/2-A	10:57					102					
LCSD 570-58210/3-A	11:00					101					
570-23815-A-1-B MS	11:05					90					
570-23815-A-1-C MSD	11:08					89					
570-23510-1	11:11					97					
570-23510-2	11:14					96					
570-23510-3	11:16					98					
CCV 570-58367/30	11:19					97					
CCB 570-58367/31	11:22					96					
IC 570-58367/54	13:14										
ICVL 570-58367/57	13:22					101					
CCV 570-58367/73	14:57					101					
CCB 570-58367/74	15:00					99					
MB 570-58300/1-A	15:17					98					
LCS 570-58300/2-A	15:20					102					
LCSD 570-58300/3-A	15:23					102					
570-23510-1	15:27					100					
570-23510-1 MS	15:30					101					
570-23510-1 MSD	15:32					100					
570-23510-2	15:35					99					
570-23510-3	15:38					100					
CCV 570-58367/84	15:47					100					
CCB 570-58367/85	15:49					99					

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58210 Batch Start Date: 03/18/20 20:00 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: 03/19/20 14:59

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MT: 1:1 HCl 00003	MT: 1:1 HNO3 00002	MT_ICP_Spike1 00008
MB 570-58210/1		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	
LCS 570-58210/2		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
LCSD 570-58210/3		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
570-23815-A-1 MS		200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	50 uL
570-23815-A-1 MSD		200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	50 uL
570-23510-A-1	EVBMP0007S012	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	
570-23510-A-2	EVBMP0008S015	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	
570-23510-A-3	EVBMP0009S013	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00007	MT_MS_SPIKE_3 00002				
MB 570-58210/1		200.8, 200.8							
LCS 570-58210/2		200.8, 200.8		50 uL	0.25 mL				
LCSD 570-58210/3		200.8, 200.8		50 uL	0.25 mL				
570-23815-A-1 MS		200.8, 200.8	R	50 uL	0.25 mL				
570-23815-A-1 MSD		200.8, 200.8	R	50 uL	0.25 mL				
570-23510-A-1	EVBMP0007S012	200.8, 200.8	R						
570-23510-A-2	EVBMP0008S015	200.8, 200.8	R						
570-23510-A-3	EVBMP0009S013	200.8, 200.8	R						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58210 Batch Start Date: 03/18/20 20:00 Batch Analyst: Gonzales, Julian

Batch Method: 200.8 Batch End Date: 03/19/20 14:59

Batch Notes	
Batch Comment	DISPENSERS- D-30/MD-032
Lot # of hydrochloric acid	MR013019A
Lot # of Nitric Acid	MR013019B
Hot Block ID	12
Oven, Bath or Block Temperature 1	97.5 Degrees C
Oven, Bath or Block Temperature 2	97.5 Degrees C
pH Paper ID	M006-47-07
Pipette ID	P-116/P-137
Thermometer ID	Y20-12
Digestion Tube/Cup ID	J3330884566
Uncorrected Temperature	95 Degrees C
Uncorrected Temperature 2	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58300 Batch Start Date: 03/14/20 10:35 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00002	MT_ICP_Spike1 00008
MB 570-58300/1		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-58300/2		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
LCSD 570-58300/3		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-23510-C-1	EVBMP0007S012	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-23510-C-1 MS	EVBMP0007S012	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-23510-C-1 MSD	EVBMP0007S012	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-23510-C-2	EVBMP0008S015	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-23510-C-3	EVBMP0009S013	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00007	MT_MS_SPIKE_3 00002				
MB 570-58300/1		Filtration, 200.8							
LCS 570-58300/2		Filtration, 200.8		50 uL	0.25 mL				
LCSD 570-58300/3		Filtration, 200.8		50 uL	0.25 mL				
570-23510-C-1	EVBMP0007S012	Filtration, 200.8	D						
570-23510-C-1 MS	EVBMP0007S012	Filtration, 200.8	D	50 uL	0.25 mL				
570-23510-C-1 MSD	EVBMP0007S012	Filtration, 200.8	D	50 uL	0.25 mL				
570-23510-C-2	EVBMP0008S015	Filtration, 200.8	D						
570-23510-C-3	EVBMP0009S013	Filtration, 200.8	D						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58300 Batch Start Date: 03/14/20 10:35 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58367 Batch Start Date: 03/19/20 08:28 Batch Analyst: Lee, Francis

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_BLK_1 00002	MT_MS_CCV 00005	MT_MS_IC 00008	MT_MS_ICS_A 00002	MT_MS_ICS_AB 00002	MT_MS_ICV1 00004
ICV 570-58367/3		200.8							# mL
ICV 570-58367/4		200.8							
ICB 570-58367/5		200.8		# mL					
ICSA 570-58367/8		200.8					# mL		
ICSAB 570-58367/9		200.8						# mL	
IC 570-58367/17		200.8				# mL			
CCV 570-58367/18		200.8			# mL				
CCB 570-58367/19		200.8		# mL					
ICVL 570-58367/20		200.8							
CCV 570-58367/30		200.8			# mL				
CCB 570-58367/31		200.8		# mL					
IC 570-58367/54		200.8				# mL			
ICVL 570-58367/57		200.8							
CCV 570-58367/73		200.8			# mL				
CCB 570-58367/74		200.8		# mL					
CCV 570-58367/84		200.8			# mL				
CCB 570-58367/85		200.8		# mL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_ICV2 00004	MT_MS_LL 00006				
ICV 570-58367/3		200.8							
ICV 570-58367/4		200.8		# mL					
ICB 570-58367/5		200.8							
ICSA 570-58367/8		200.8							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58367 Batch Start Date: 03/19/20 08:28 Batch Analyst: Lee, Francis

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_ICV2 00004	MT_MS_LL 00006				
ICCSAB 570-58367/9		200.8							
IC 570-58367/17		200.8							
CCV 570-58367/18		200.8							
CCB 570-58367/19		200.8							
ICVL 570-58367/20		200.8			# mL				
CCV 570-58367/30		200.8							
CCB 570-58367/31		200.8							
IC 570-58367/54		200.8							
ICVL 570-58367/57		200.8			# mL				
CCV 570-58367/73		200.8							
CCB 570-58367/74		200.8							
CCV 570-58367/84		200.8							
CCB 570-58367/85		200.8							

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58250 Batch Start Date: 03/19/20 06:30 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00015	HG_1ppm STD 00011	Hg_H2SO4 00001	Hg_K2S2O3 00003
ICV 570-58250/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-58250/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-58250/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-58250/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CRA 570-58250/12		7470A, 245.1		50 mL	100 mL		25 uL	2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00005	Hg_NaCl-NH2OH 00007	MT-HN03 CON. 00001			
ICV 570-58250/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-58250/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-58250/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-58250/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CRA 570-58250/12		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58250 Batch Start Date: 03/19/20 06:30 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: _____

Batch Notes	
Temperature - Corrected - End	95.1 Degrees C
Temperature - Corrected - Start	95.1 Degrees C
Digestion End Time	8:45
Digestion Start Time	6:45
Digestion Unit ID	16
Sulfuric Acid ID	022376
Nitric Acid ID	170341
Hydroxylamine ID	548442
Potassium Persulfate ID	532852
Potassium Permanganate ID	548814
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1220
Sufficient Volume for Batch QC	yes
Thermometer ID	Y20-16
Digestion Tube/Cup ID	191111
Temperature - Uncorrected - End	95.1 Degrees C
Temperature - Uncorrected - Start	93.7 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58265 Batch Start Date: 03/19/20 09:00 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 03/19/20 11:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	HG_lppm STD 00011	Hg_H2SO4 00001	Hg_K2S2O3 00003
MB 570-58265/1		245.1, 245.1			50 mL	100 mL		2.5 mL	4 mL
LCS 570-58265/2		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-58265/3		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
570-23609-F-1 MS		245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-23609-F-1 MSD		245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-23510-B-1	EVBMP0007S012	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL
570-23510-B-2	EVBMP0008S015	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL
570-23510-B-3	EVBMP0009S013	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00005	Hg_NaCl-NH2OH 00007	MT-HNO3 CON. 00001			
MB 570-58265/1		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-58265/2		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-58265/3		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-23609-F-1 MS		245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-23609-F-1 MSD		245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-23510-B-1	EVBMP0007S012	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-23510-B-2	EVBMP0008S015	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-23510-B-3	EVBMP0009S013	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58265 Batch Start Date: 03/19/20 09:00 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 03/19/20 11:00

Batch Notes	
Batch Comment	-
Temperature - Corrected - End	95.5 Degrees C
Temperature - Corrected - Start	95.5 Degrees C
Digestion End Time	03/19/2020 11:00
Digestion Start Time	03/19/2020 09:00
Digestion Unit ID	Block 16
Sulfuric Acid Lot Number	022376
Nitric Acid ID	170341
Hydroxylamine ID	548442
Potassium Persulfate ID	532852
Potassium Permanganate ID	548814
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1220
Sufficient Volume for Batch QC	yes
Thermometer ID	Y20-16
Digestion Tube/Cup ID	191111
Temperature - Uncorrected - End	95.5 Degrees C
Temperature - Uncorrected - Start	95 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58304 Batch Start Date: 03/14/20 10:35 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00002	
MB 570-58304/1		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-58304/2		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCSD 570-58304/3		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-23510-C-1	EVBMP0007S012	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-23510-C-1 MS	EVBMP0007S012	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-23510-C-1 MSD	EVBMP0007S012	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-23510-C-2	EVBMP0008S015	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-23510-C-3	EVBMP0009S013	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58307 Batch Start Date: 03/19/20 11:00 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 03/19/20 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg_lppm STD 00011	Hg_H2SO4 00001	Hg_K2S2O3 00003
MB 570-58304/1-A		245.1, 245.1		<2	50 mL	100 mL		2.5 mL	4 mL
LCS 570-58304/2-A		245.1, 245.1		<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-58304/3-A		245.1, 245.1		<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-23510-C-1-D	EVBMP0007S012	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL
570-23510-C-1-E MS	EVBMP0007S012	245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-23510-C-1-F MSD	EVBMP0007S012	245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-23510-C-2-B	EVBMP0008S015	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL
570-23510-C-3-B	EVBMP0009S013	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00005	Hg_NaCl-NH2OH 00007	MT-HN03 CON. 00001			
MB 570-58304/1-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-58304/2-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-58304/3-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-23510-C-1-D	EVBMP0007S012	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-23510-C-1-E MS	EVBMP0007S012	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-23510-C-1-F MSD	EVBMP0007S012	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-23510-C-2-B	EVBMP0008S015	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-23510-C-3-B	EVBMP0009S013	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 58307 Batch Start Date: 03/19/20 11:00 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 03/19/20 13:00

Batch Notes	
Batch Comment	-
Temperature - Corrected - End	95.5 Degrees C
Temperature - Corrected - Start	95.5 Degrees C
Digestion End Time	03/19/2020 13:00
Digestion Start Time	03/19/2020 11:00
Digestion Unit ID	Block 16
Sulfuric Acid Lot Number	022376
Nitric Acid ID	170341
Hydroxylamine ID	548442
Potassium Persulfate ID	532852
Potassium Permanganate ID	548814
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1220
Sufficient Volume for Batch QC	yes
Thermometer ID	Y20-16
Digestion Tube/Cup ID	191111
Temperature - Uncorrected - End	95.5 Degrees C
Temperature - Uncorrected - Start	95 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Thursday, March 19, 2020 07:43:27

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2020\200319E1\STD Performance Check.005

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode	
Be	9.0		2044.1		2044.146		29.453		1.4	Standard	
In	114.9		27514.2		27514.205		183.175		0.7	Standard	
U	238.1		21599.8		21599.787		349.028		1.6	Standard	
[	CeO	155.9		374.2		0.018		0.000		1.7	Standard
|>	Ce	139.9		21310.2		21310.217		185.626		0.9	Standard
[	Ce++	70.0		269.5		0.013		0.001		4.2	Standard
	Bkgd	220.0		0.3		0.333		0.391		117.3	Standard

Current Conditions File Data

Current Value	Description
0.94	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.00	Deflector Voltage
1600.00	ICP RF Power
-1550.00	Analog Stage Voltage
950.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-19.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-24.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.00	DRC Mode QRO
-2.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-12.00	KED Mode CRO
-22.50	KED Mode QRO
-15.00	KED Mode Cell Entrance Voltage
-38.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Thursday, March 19, 2020 07:45:31

Page 1

475.00 KED Mode Axial Field Voltage

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, March 19, 2020 08:28:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICIS-23447.012

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18732.279		ppb			2.729	
9	Be	|		2.222		ppb			86.603	
10	B	|		248.891		ppb			6.873	
27	Al	|		1177.833		ppb			44.050	
43	Ca-2	|		30.000		ppb			33.333	
49	Ti	|		95.556		ppb			10.070	
52	Cr	|		6612.642		ppb			1.891	
55	Mn	|		260.002		ppb			9.245	
57	Fe	|		3979.444		ppb			4.071	
45	Sc-IS	>		773541.108		ppb			0.529	
66	Zn	|		190.001		ppb			8.040	
86	Sr	|		5.329		ppb			46.617	
65	Cu	|		16.519		ppb			35.047	
69	Ga-IS	|		228359.824		ppb			1.360	
95	Mo	|		28.889		ppb			75.074	
115	In-IS	>		151624.173		ppb			0.428	
111	Cd	|		2.162		ppb			177.985	
118	Sn	|		288.892		ppb			12.657	
121	Sb	|		48.889		ppb			32.222	
135	Ba	|		31.111		ppb			53.927	
165	Ho-IS	|		165185.134		ppb			0.922	
159	Tb-IS	|		140467.267		ppb			1.141	
207	Pb	|		40.000		ppb			44.096	
203	Tl	|		1.111		ppb			173.205	
209	Bi-IS	>		105480.222		ppb			0.879	
51	V	|		4.444		ppb			43.301	
59	Co	|		5.556		ppb			124.900	
60	Ni	|		5.556		ppb			91.652	
75	As	|		431.393		ppb			8.827	
71	Ga-ISK	>		60055.979		ppb			0.987	
82	Se-2	|		2.604		ppb			80.953	
107	Ag-1	|		16.667		ppb			52.915	
115	In-ISK	|		51861.161		ppb			1.208	
45	Sc-ISK	>		149402.898		ppb			1.785	
23	Na	|		871.693		ppb			11.069	
39	K	|		56272.839		ppb			0.539	
24	Mg	|		31.667		ppb			45.580	
159	Tb-ISK	|		111737.295		ppb			0.704	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, March 19, 2020 08:30:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\IC-210761.013

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	18457.474		ppb		1.552		18732.279
9	Be	|	202757.747	200.000000	ppb		1.144	0.881	2.222
10	B	|	141487.290	500.000000	ppb		1.398	0.729	248.891
27	Al	|	956102.505	200.000000	ppb		0.924	1.419	1177.833
43	Ca-2	|	97102.240	10200.000000	ppb		0.837	0.233	30.000
49	Ti	|	76256.383	200.000000	ppb		2.193	2.368	95.556
52	Cr	|	1008708.873	200.000000	ppb		0.686	1.399	6612.642
55	Mn	|	1425753.273	200.000000	ppb		0.110	0.800	260.002
57	Fe	|	1388970.271	10200.000000	ppb		0.410	0.676	3979.444
45	Sc-IS	>	782318.325		ppb		0.715		773541.108
66	Zn	|	143433.170	200.000000	ppb		0.952	1.088	190.001
86	Sr	|	247463.876	200.000000	ppb		1.386	0.682	5.329
65	Cu	|	215745.657	200.000000	ppb		1.266	1.227	16.519
69	Ga-IS	|	258571.402		ppb		0.797		228359.824
95	Mo	|	231469.250	200.000000	ppb		1.282	0.595	28.889
115	In-IS	>	150396.260		ppb		0.322		151624.173
111	Cd	|	208770.933	200.000000	ppb		0.294	0.402	2.162
118	Sn	|	667869.755	200.000000	ppb		0.401	0.671	288.892
121	Sb	|	739551.159	200.000000	ppb		0.492	0.606	48.889
135	Ba	|	151065.793	200.000000	ppb		1.705	1.912	31.111
165	Ho-IS	|	168875.650		ppb		0.510		165185.134
159	Tb-IS	|	141698.209		ppb		0.982		140467.267
207	Pb	|	2293209.100	200.000000	ppb		0.774	1.210	40.000
203	Tl	|	686012.257	200.000000	ppb		1.587	2.229	1.111
209	Bi-IS	>	104650.818		ppb		0.782		105480.222
51	V	|	83610.630	200.000000	ppb		0.338	1.273	4.444
59	Co	|	218657.476	200.000000	ppb		1.095	2.593	5.556
60	Ni	|	115375.254	200.000000	ppb		1.948	0.614	5.556
75	As	|	54004.029	200.000000	ppb		0.940	1.402	431.393
71	Ga-ISK	>	59944.411		ppb		1.517		60055.979
82	Se-2	|	5223.525	200.000000	ppb		1.547	2.361	2.604
107	Ag-1	|	481082.214	200.000000	ppb		0.872	0.648	16.667
115	In-ISK	|	53429.431		ppb		1.616		51861.161
45	Sc-ISK	>	152030.514		ppb		2.279		149402.898
23	Na	|	2788344.503	10200.000000	ppb		1.269	1.070	871.693
39	K	|	7033419.239	10200.000000	ppb		0.412	1.974	56272.839
24	Mg	|	3472549.457	10200.000000	ppb		0.420	2.122	31.667
159	Tb-ISK	|	113945.305		ppb		0.815		111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-446960

Autosampler Position: 206

Sample Date/Time: Thursday, March 19, 2020 08:33:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICV-446960.014

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18626.581		ppb	1.384		18732.279
9	Be	104623.964	104.845348	ppb	0.969	1.677	2.222
10	B	524.454	0.995980	ppb	15.495	30.221	248.891
27	Al	3954.992	0.591972	ppb	1.414	1.867	1177.833
43	Ca-2	48104.191	5131.646123	ppb	0.781	0.309	30.000
49	Ti	38257.827	101.808461	ppb	0.278	1.089	95.556
52	Cr	516308.106	103.348533	ppb	0.701	0.793	6612.642
55	Mn	704659.839	100.393332	ppb	1.088	0.852	260.002
57	Fe	701918.377	5221.672621	ppb	1.426	0.931	3979.444
45	Sc-IS	> 770107.877		ppb	0.849		773541.108
66	Zn	75553.759	106.893324	ppb	1.925	1.736	190.001
86	Sr	121877.990	100.070373	ppb	1.359	1.715	5.329
65	Cu	111241.673	104.751192	ppb	1.748	1.707	16.519
69	Ga-IS	227677.023		ppb	1.865		228359.824
95	Mo	116991.619	102.684625	ppb	1.605	1.859	28.889
115	In-IS	> 150733.040		ppb	2.005		151624.173
111	Cd	109094.500	104.296996	ppb	0.590	1.532	2.162
118	Sn	350517.768	104.693419	ppb	1.701	0.329	288.892
121	Sb	373940.980	100.894807	ppb	1.958	0.543	48.889
135	Ba	47.778	0.022354	ppb	32.971	95.266	31.111
165	Ho-IS	167586.272		ppb	1.444		165185.134
159	Tb-IS	141623.175		ppb	2.052		140467.267
207	Pb	1159668.704	99.299970	ppb	0.645	1.007	40.000
203	Tl	339113.676	97.069426	ppb	1.242	1.979	1.111
209	Bi-IS	> 106589.540		ppb	1.210		105480.222
51	V	42809.616	102.198885	ppb	1.753	1.946	4.444
59	Co	108266.506	98.819943	ppb	0.859	1.090	5.556
60	Ni	60302.563	104.342233	ppb	0.471	0.821	5.556
75	As	28190.341	103.427877	ppb	1.006	1.011	431.393
71	Ga-ISK	> 60054.856		ppb	0.428		60055.979
82	Se-2	2671.515	102.024498	ppb	3.882	3.568	2.604
107	Ag-1	408.895	0.162713	ppb	21.971	22.756	16.667
115	In-ISK	52800.211		ppb	0.896		51861.161
45	Sc-ISK	> 151134.240		ppb	1.401		149402.898
23	Na	2183.500	4.790709	ppb	2.053	2.404	871.693
39	K	60773.446	5.662964	ppb	0.888	8.150	56272.839
24	Mg	1739131.604	5137.557248	ppb	1.609	1.949	31.667
159	Tb-ISK	113573.714		ppb	1.115		111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-446961

Autosampler Position: 213

Sample Date/Time: Thursday, March 19, 2020 08:36:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICV-446961.015

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18777.890		ppb		0.961		18732.279
9	Be	|		17.778	0.015355	ppb	28.641	34.291		2.222
10	B	|		28876.941	101.273665	ppb	1.955	1.771		248.891
27	Al	|		507390.471	105.961651	ppb	0.888	2.263		1177.833
43	Ca-2	|		43.333	1.348877	ppb	37.091	121.551		30.000
49	Ti	|		120.001	0.060564	ppb	19.445	93.249		95.556
52	Cr	|		5428.809	-0.252040	ppb	2.067	5.347		6612.642
55	Mn	|		417.784	0.021701	ppb	2.802	10.681		260.002
57	Fe	|		4042.795	0.112107	ppb	4.616	1148.503		3979.444
45	Sc-IS	>		782880.355		ppb	1.542			773541.108
66	Zn	|		502.231	0.432454	ppb	7.919	12.787		190.001
86	Sr	|		28.675	0.018755	ppb	56.032	69.092		5.329
65	Cu	|		72.836	0.051960	ppb	12.209	15.068		16.519
69	Ga-IS	|		247885.585		ppb	0.827			228359.824
95	Mo	|		484.453	0.393541	ppb	18.416	20.565		28.889
115	In-IS	>		153157.723		ppb	0.286			151624.173
111	Cd	|		25.649	0.022069	ppb	13.219	14.150		2.162
118	Sn	|		3361.507	0.903093	ppb	5.654	6.296		288.892
121	Sb	|		4708.555	1.237364	ppb	4.378	4.441		48.889
135	Ba	|		82243.899	106.901645	ppb	1.940	2.064		31.111
165	Ho-IS	|		169212.060		ppb	1.989			165185.134
159	Tb-IS	|		142147.060		ppb	0.742			140467.267
207	Pb	|		550.004	0.043476	ppb	2.185	1.577		40.000
203	Tl	|		186.668	0.052937	ppb	3.093	3.658		1.111
209	Bi-IS	>		106939.901		ppb	0.824			105480.222
51	V	|		5.556	0.002438	ppb	69.282	367.796		4.444
59	Co	|		22.222	0.014941	ppb	8.660	12.640		5.556
60	Ni	|		14.444	0.014980	ppb	26.647	42.065		5.556
75	As	|		434.810	-0.009390	ppb	5.508	1019.322		431.393
71	Ga-ISK	>		60902.892		ppb	1.278			60055.979
82	Se-2	|		4.604	0.074537	ppb	90.551	210.624		2.604
107	Ag-1	|		117720.829	48.167494	ppb	0.382	1.521		16.667
115	In-ISK	|		53065.524		ppb	0.322			51861.161
45	Sc-ISK	>		151718.242		ppb	1.874			149402.898
23	Na	|		289792.304	1059.156259	ppb	2.133	0.260		871.693
39	K	|		765304.236	1037.379798	ppb	0.861	1.100		56272.839
24	Mg	|		415.006	1.127596	ppb	12.228	14.130		31.667
159	Tb-ISK	|		113745.721		ppb	0.756			111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Thursday, March 19, 2020 08:39:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICB-23446.016

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18446.347		ppb	0.748		18732.279
9	Be	28.889	0.026507	ppb	35.251	38.582	2.222
10	B	432.229	0.649936	ppb	12.959	30.876	248.891
27	Al	2783.605	0.337582	ppb	2.904	4.377	1177.833
43	Ca-2	46.667	1.750804	ppb	6.186	18.301	30.000
49	Ti	96.667	0.001885	ppb	28.225	3842.502	95.556
52	Cr	5677.795	-0.193521	ppb	2.937	17.934	6612.642
55	Mn	430.007	0.023839	ppb	14.972	37.028	260.002
57	Fe	3802.730	-1.434207	ppb	6.472	130.450	3979.444
45	Sc-IS	> 776831.446		ppb	0.463		773541.108
66	Zn	273.336	0.116296	ppb	22.586	75.989	190.001
86	Sr	21.958	0.013490	ppb	50.460	66.080	5.329
65	Cu	57.452	0.038156	ppb	9.027	12.945	16.519
69	Ga-IS	229687.520		ppb	1.344		228359.824
95	Mo	170.001	0.122667	ppb	10.376	12.112	28.889
115	In-IS	> 151077.490		ppb	0.214		151624.173
111	Cd	25.199	0.021964	ppb	40.540	44.117	2.162
118	Sn	1635.650	0.401899	ppb	10.031	11.938	288.892
121	Sb	1236.720	0.319832	ppb	4.677	4.712	48.889
135	Ba	65.556	0.045583	ppb	28.005	53.509	31.111
165	Ho-IS	168010.025		ppb	1.003		165185.134
159	Tb-IS	141144.959		ppb	0.434		140467.267
207	Pb	310.001	0.022976	ppb	7.527	7.529	40.000
203	Tl	96.667	0.027248	ppb	15.031	15.283	1.111
209	Bi-IS	> 106978.035		ppb	1.848		105480.222
51	V	12.222	0.018125	ppb	62.984	98.535	4.444
59	Co	18.889	0.012071	ppb	44.411	62.463	5.556
60	Ni	14.444	0.015227	ppb	58.076	93.564	5.556
75	As	479.545	0.167794	ppb	7.264	66.671	431.393
71	Ga-ISK	> 60434.268		ppb	2.201		60055.979
82	Se-2	1.258	-0.049211	ppb	530.922	518.305	2.604
107	Ag-1	240.002	0.092106	ppb	6.365	7.772	16.667
115	In-ISK	53184.493		ppb	0.814		51861.161
45	Sc-ISK	> 149987.754		ppb	0.987		149402.898
23	Na	1886.792	3.748412	ppb	8.503	14.084	871.693
39	K	58221.748	2.562870	ppb	1.325	39.497	56272.839
24	Mg	423.340	1.165968	ppb	15.415	16.990	31.667
159	Tb-ISK	111646.614		ppb	1.159		111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 08:41:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.017

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19005.970		ppb		1.583		18732.279
9	Be	|	102778.405	100.329445	ppb		0.690	2.693	2.222
10	B	|	72303.634	252.438731	ppb		0.965	2.893	248.891
27	Al	|	476387.854	98.503217	ppb		1.836	3.836	1177.833
43	Ca-2	|	48647.697	5055.877360	ppb		1.086	3.062	30.000
49	Ti	|	38081.806	98.716749	ppb		1.203	3.143	95.556
52	Cr	|	510148.374	99.412247	ppb		0.907	1.762	6612.642
55	Mn	|	720759.471	100.024395	ppb		0.326	1.830	260.002
57	Fe	|	703617.091	5097.788409	ppb		0.534	1.494	3979.444
45	Sc-IS	>	790794.665		ppb		2.035		773541.108
66	Zn	|	72958.087	100.520891	ppb		1.772	1.971	190.001
86	Sr	|	123388.153	98.677803	ppb		1.773	2.501	5.329
65	Cu	|	110214.427	101.081569	ppb		1.443	1.565	16.519
69	Ga-IS	|	246831.610		ppb		2.408		228359.824
95	Mo	|	114020.062	97.494369	ppb		2.480	3.867	28.889
115	In-IS	>	152222.997		ppb		2.366		151624.173
111	Cd	|	103696.217	98.188375	ppb		1.395	3.032	2.162
118	Sn	|	335286.888	99.193655	ppb		0.749	2.546	288.892
121	Sb	|	369992.534	98.881169	ppb		0.916	2.122	48.889
135	Ba	|	75194.090	98.359777	ppb		1.905	2.468	31.111
165	Ho-IS	|	168949.925		ppb		1.162		165185.134
159	Tb-IS	|	142666.809		ppb		2.001		140467.267
207	Pb	|	1151065.600	97.734840	ppb		0.879	1.654	40.000
203	Tl	|	344591.510	97.805417	ppb		1.469	2.239	1.111
209	Bi-IS	>	107495.157		ppb		0.830		105480.222
51	V	|	42324.868	99.592594	ppb		3.073	2.900	4.444
59	Co	|	109655.998	98.655266	ppb		1.748	1.549	5.556
60	Ni	|	58736.070	100.174911	ppb		1.373	0.896	5.556
75	As	|	27563.175	99.628445	ppb		0.672	1.275	431.393
71	Ga-ISK	>	60925.198		ppb		0.595		60055.979
82	Se-2	|	2663.834	100.293306	ppb		2.592	3.032	2.604
107	Ag-1	|	242243.341	99.079855	ppb		0.762	1.113	16.667
115	In-ISK	|	54012.594		ppb		1.615		51861.161
45	Sc-ISK	>	154247.149		ppb		0.301		149402.898
23	Na	|	1439425.689	5187.479334	ppb		0.435	0.502	871.693
39	K	|	3636657.665	5155.633540	ppb		0.943	1.109	56272.839
24	Mg	|	1757264.499	5085.821723	ppb		0.357	0.294	31.667
159	Tb-ISK	|	115093.103		ppb		0.421		111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 08:44:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.018

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		18283.916		ppb			1.200			18732.279
9	Be	|		15.556	0.013370	ppb		44.607	51.714			2.222
10	B	|		406.672	0.572139	ppb		6.709	16.690			248.891
27	Al	|		788.911	-0.081562	ppb		7.515	14.851			1177.833
43	Ca-2	|		26.667	-0.340209	ppb		39.031	326.159			30.000
49	Ti	|		87.778	-0.019469	ppb		19.487	234.829			95.556
52	Cr	|		5189.832	-0.281894	ppb		4.056	15.532			6612.642
55	Mn	|		238.891	-0.002820	ppb		14.046	171.944			260.002
57	Fe	|		3894.975	-0.483712	ppb		0.891	37.087			3979.444
45	Sc-IS	>		769674.647		ppb			0.317			773541.108
66	Zn	|		203.335	0.020316	ppb		9.972	144.737			190.001
86	Sr	|		0.323	-0.004107	ppb		4912.072	317.803			5.329
65	Cu	|		28.686	0.011559	ppb		29.473	69.628			16.519
69	Ga-IS	|		226035.443		ppb			1.123			228359.824
95	Mo	|		305.559	0.243152	ppb		6.203	6.891			28.889
115	In-IS	>		149665.457		ppb			1.372			151624.173
111	Cd	|		13.803	0.011229	ppb		14.149	16.175			2.162
118	Sn	|		2086.819	0.542403	ppb		1.728	1.619			288.892
121	Sb	|		442.229	0.107100	ppb		3.138	4.378			48.889
135	Ba	|		22.222	-0.011173	ppb		43.301	119.141			31.111
165	Ho-IS	|		163567.823		ppb			1.154			165185.134
159	Tb-IS	|		138497.018		ppb			0.633			140467.267
207	Pb	|		353.335	0.027224	ppb		18.844	20.881			40.000
203	Tl	|		87.778	0.025182	ppb		18.733	19.356			1.111
209	Bi-IS	>		105048.151		ppb			0.354			105480.222
51	V	|		14.444	0.023928	ppb		48.038	67.204			4.444
59	Co	|		18.889	0.012162	ppb		53.913	73.054			5.556
60	Ni	|		8.889	0.005898	ppb		78.062	207.400			5.556
75	As	|		489.339	0.230024	ppb		1.848	8.202			431.393
71	Ga-ISK	>		59600.783		ppb			2.382			60055.979
82	Se-2	|		-4.104	-0.259760	ppb		84.785	52.338			2.604
107	Ag-1	|		245.558	0.095632	ppb		10.972	9.548			16.667
115	In-ISK	|		53264.995		ppb			0.911			51861.161
45	Sc-ISK	>		149791.299		ppb			1.280			149402.898
23	Na	|		1356.731	1.794125	ppb		2.030	9.303			871.693
39	K	|		59469.094	4.524330	ppb		1.352	4.656			56272.839
24	Mg	|		191.668	0.476615	ppb		1.506	1.184			31.667
159	Tb-ISK	|		112031.572		ppb			0.101			111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Thursday, March 19, 2020 08:47:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICSA-30518.019

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		19218.485		ppb			3.632			18732.279
9	Be	|		10.000	0.007045	ppb			33.333	43.960		2.222
10	B	|		1718.992	4.821924	ppb			2.074	2.410		248.891
27	Al	|		51232632.917	10072.493820	ppb			0.396	0.339		1177.833
43	Ca-2	|		300895.850	29678.099683	ppb			0.401	0.326		30.000
49	Ti	|		82880.842	204.061292	ppb			0.443	0.520		95.556
52	Cr	|		6826.076	-0.055771	ppb			2.697	64.339		6612.642
55	Mn	|		5617.772	0.703021	ppb			2.595	2.850		260.002
57	Fe	|		3821496.610	26391.451362	ppb			0.800	0.908		3979.444
45	Sc-IS	>		833345.193		ppb			0.112			773541.108
66	Zn	|		915.585	0.931756	ppb			10.197	13.085		190.001
86	Sr	|		541.922	0.406779	ppb			16.693	16.777		5.329
65	Cu	|		-246.330	-0.229890	ppb			20.788	19.445		16.519
69	Ga-IS	|		234952.145		ppb			1.440			228359.824
95	Mo	|		240507.115	195.086225	ppb			2.131	2.022		28.889
115	In-IS	>		157219.201		ppb			0.402			151624.173
111	Cd	|		-60.614	-0.057522	ppb			56.926	54.725		2.162
118	Sn	|		1286.725	0.282919	ppb			4.265	5.687		288.892
121	Sb	|		625.569	0.148790	ppb			14.122	15.818		48.889
135	Ba	|		148.890	0.147665	ppb			14.907	18.584		31.111
165	Ho-IS	|		183363.740		ppb			0.517			165185.134
159	Tb-IS	|		155178.278		ppb			0.612			140467.267
207	Pb	|		377.780	0.028332	ppb			10.601	11.855		40.000
203	Tl	|		54.445	0.014994	ppb			7.070	7.140		1.111
209	Bi-IS	>		108446.735		ppb			0.090			105480.222
51	V	|		146.667	0.333141	ppb			17.159	18.380		4.444
59	Co	|		68.889	0.056639	ppb			10.073	11.686		5.556
60	Ni	|		247.780	0.410712	ppb			16.713	16.563		5.556
75	As	|		528.574	0.324318	ppb			14.423	84.793		431.393
71	Ga-ISK	>		61222.019		ppb			0.647			60055.979
82	Se-2	|		0.578	-0.078263	ppb			503.451	138.835		2.604
107	Ag-1	|		144.445	0.051890	ppb			28.669	32.585		16.667
115	In-ISK	|		53964.455		ppb			1.186			51861.161
45	Sc-ISK	>		159494.370		ppb			1.154			149402.898
23	Na	|		7278646.513	25382.973621	ppb			0.429	1.246		871.693
39	K	|		7361869.193	10174.224897	ppb			1.066	1.428		56272.839
24	Mg	|		3576829.990	10012.516236	ppb			0.980	1.674		31.667
159	Tb-ISK	|		119177.757		ppb			1.080			111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Thursday, March 19, 2020 08:50:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICSAB-30517.020

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		19970.617		ppb		1.149		18732.279
9	Be	|		8.889	0.005883	ppb	108.253	148.308		2.222
10	B	|		1987.916	5.639656	ppb	2.233	2.098		248.891
27	Al	|		52194133.761	10144.227745	ppb	0.345	0.944		1177.833
43	Ca-2	|		308388.602	30067.132016	ppb	1.560	0.924		30.000
49	Ti	|		84899.346	206.647215	ppb	1.532	1.894		95.556
52	Cr	|		113651.410	19.716365	ppb	0.495	1.423		6612.642
55	Mn	|		156021.816	20.277303	ppb	0.098	0.886		260.002
57	Fe	|		3835867.846	26186.866869	ppb	0.535	0.619		3979.444
45	Sc-IS	>		843030.849		ppb	0.977			773541.108
66	Zn	|		8489.189	10.730127	ppb	2.026	1.155		190.001
86	Sr	|		590.338	0.438472	ppb	7.072	7.297		5.329
65	Cu	|		22490.396	19.333949	ppb	1.911	1.934		16.519
69	Ga-IS	|		237954.550		ppb	1.384			228359.824
95	Mo	|		244904.781	196.382121	ppb	0.586	0.779		28.889
115	In-IS	>		159455.006		ppb	1.282			151624.173
111	Cd	|		11098.196	10.027625	ppb	1.006	2.116		2.162
118	Sn	|		724.463	0.118851	ppb	6.281	10.319		288.892
121	Sb	|		488.897	0.111633	ppb	8.767	10.215		48.889
135	Ba	|		167.779	0.168376	ppb	18.460	21.526		31.111
165	Ho-IS	|		185298.522		ppb	0.988			165185.134
159	Tb-IS	|		157163.203		ppb	1.259			140467.267
207	Pb	|		281.112	0.020130	ppb	7.148	8.048		40.000
203	Tl	|		51.111	0.014014	ppb	3.765	2.575		1.111
209	Bi-IS	>		108744.587		ppb	1.290			105480.222
51	V	|		9503.161	21.108119	ppb	2.786	2.329		4.444
59	Co	|		23547.170	20.002126	ppb	1.120	0.635		5.556
60	Ni	|		12453.204	20.050061	ppb	1.740	1.552		5.556
75	As	|		3391.254	10.152575	ppb	4.090	3.821		431.393
71	Ga-ISK	>		64515.357		ppb	0.877			60055.979
82	Se-2	|		280.258	9.874493	ppb	3.228	3.394		2.604
107	Ag-1	|		12640.036	4.876162	ppb	2.537	3.161		16.667
115	In-ISK	|		55632.089		ppb	0.906			51861.161
45	Sc-ISK	>		161968.569		ppb	0.307			149402.898
23	Na	|		7483868.939	25697.732965	ppb	0.323	0.217		871.693
39	K	|		7550261.011	10275.308699	ppb	0.817	0.846		56272.839
24	Mg	|		3647696.509	10053.953324	ppb	0.300	0.553		31.667
159	Tb-ISK	|		123289.061		ppb	0.426			111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, March 19, 2020 08:54:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.021

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		19110.555		ppb		2.057		18732.279
9	Be	|		7.778	0.005213	ppb	65.465	92.500		2.222
10	B	|		237.780	-0.074239	ppb	4.283	54.471		248.891
27	Al	|		5910.111	0.951507	ppb	1.644	2.743		1177.833
43	Ca-2	|		68.333	3.777408	ppb	11.177	20.229		30.000
49	Ti	|		120.001	0.052402	ppb	36.111	213.512		95.556
52	Cr	|		5707.807	-0.229523	ppb	3.186	14.764		6612.642
55	Mn	|		472.230	0.027410	ppb	7.871	19.925		260.002
57	Fe	|		3820.511	-2.339750	ppb	0.911	17.658		3979.444
45	Sc-IS	>		806347.348		ppb	0.688			773541.108
66	Zn	|		754.465	0.753503	ppb	12.975	17.296		190.001
86	Sr	|		45.954	0.031640	ppb	76.644	87.224		5.329
65	Cu	|		56.329	0.035253	ppb	32.884	48.184		16.519
69	Ga-IS	|		236229.776		ppb	1.802			228359.824
95	Mo	|		236.669	0.173125	ppb	12.676	14.173		28.889
115	In-IS	>		156206.098		ppb	1.282			151624.173
111	Cd	|		3.947	0.001557	ppb	195.019	452.897		2.162
118	Sn	|		642.237	0.099258	ppb	11.435	19.297		288.892
121	Sb	|		170.001	0.031164	ppb	8.985	13.171		48.889
135	Ba	|		27.778	-0.005328	ppb	38.575	266.746		31.111
165	Ho-IS	|		171461.810		ppb	1.146			165185.134
159	Tb-IS	|		144263.671		ppb	0.670			140467.267
207	Pb	|		127.778	0.007394	ppb	18.508	25.454		40.000
203	Tl	|		22.222	0.005981	ppb	34.641	35.632		1.111
209	Bi-IS	>		107291.434		ppb	1.231			105480.222
51	V	|		16.667	0.027034	ppb	69.282	96.413		4.444
59	Co	|		12.222	0.005448	ppb	83.320	159.219		5.556
60	Ni	|		32.222	0.043231	ppb	15.802	20.158		5.556
75	As	|		515.758	0.212001	ppb	4.581	32.689		431.393
71	Ga-ISK	>		63422.705		ppb	0.975			60055.979
82	Se-2	|		4.586	0.065973	ppb	45.793	112.334		2.604
107	Ag-1	|		61.111	0.017102	ppb	26.907	38.033		16.667
115	In-ISK	|		54416.134		ppb	0.699			51861.161
45	Sc-ISK	>		157193.513		ppb	1.102			149402.898
23	Na	|		4027.235	11.009427	ppb	3.083	5.436		871.693
39	K	|		59597.395	0.556637	ppb	0.853	171.618		56272.839
24	Mg	|		415.006	1.084182	ppb	3.188	4.079		31.667
159	Tb-ISK	|		118042.354		ppb	0.335			111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, March 19, 2020 08:57:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICVL-210771.022

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18903.611		ppb	0.884		18732.279
9	Be	1043.372	0.992208	ppb	12.895	12.596	2.222
10	B	14371.672	48.286406	ppb	1.861	2.257	248.891
27	Al	242048.940	48.744845	ppb	0.554	0.577	1177.833
43	Ca-2	513.343	48.944554	ppb	5.365	5.659	30.000
49	Ti	466.674	0.930667	ppb	2.857	3.822	95.556
52	Cr	10948.639	0.777160	ppb	1.572	3.716	6612.642
55	Mn	7566.449	0.989004	ppb	2.594	2.120	260.002
57	Fe	10739.591	46.801085	ppb	1.227	1.040	3979.444
45	Sc-IS	> 809448.738		ppb	0.593		773541.108
66	Zn	4606.298	5.947496	ppb	2.410	2.414	190.001
86	Sr	1267.051	0.985427	ppb	0.405	0.732	5.329
65	Cu	1220.530	1.077972	ppb	11.881	11.835	16.519
69	Ga-IS	237433.652		ppb	1.010		228359.824
95	Mo	1217.830	0.991527	ppb	10.403	10.113	28.889
115	In-IS	> 155721.048		ppb	0.911		151624.173
111	Cd	1085.262	1.002289	ppb	3.445	4.194	2.162
118	Sn	3424.855	0.905120	ppb	0.648	0.442	288.892
121	Sb	3952.769	1.019302	ppb	3.416	3.077	48.889
135	Ba	815.579	1.002321	ppb	1.652	2.632	31.111
165	Ho-IS	171112.050		ppb	0.784		165185.134
159	Tb-IS	145171.762		ppb	1.391		140467.267
207	Pb	11595.209	0.970867	ppb	0.783	0.852	40.000
203	Tl	3479.313	0.976877	ppb	1.587	1.121	1.111
209	Bi-IS	> 108615.795		ppb	0.467		105480.222
51	V	441.118	0.987910	ppb	8.758	9.596	4.444
59	Co	1185.605	1.019679	ppb	11.269	10.218	5.556
60	Ni	601.124	0.976655	ppb	5.153	6.519	5.556
75	As	829.652	1.323920	ppb	4.700	14.108	431.393
71	Ga-ISK	> 63376.965		ppb	1.709		60055.979
82	Se-2	30.237	0.995610	ppb	10.661	11.199	2.604
107	Ag-1	2585.790	1.010208	ppb	2.488	3.871	16.667
115	In-ISK	55472.663		ppb	0.244		51861.161
45	Sc-ISK	> 156371.170		ppb	0.430		149402.898
23	Na	16576.283	55.718500	ppb	2.737	2.877	871.693
39	K	94243.181	50.234161	ppb	0.584	2.709	56272.839
24	Mg	18098.132	51.570117	ppb	3.304	2.930	31.667
159	Tb-ISK	116587.826		ppb	0.670		111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, March 19, 2020 09:56:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\b.023

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		19484.390		ppb		0.955		18732.279
9	Be	|		10.000	0.006883	ppb	33.333	41.866		2.222
10	B	|		166.668	-0.344723	ppb	6.928	11.109		248.891
27	Al	|		4496.264	0.622077	ppb	5.410	5.102		1177.833
43	Ca-2	|		53.333	1.987938	ppb	23.593	57.185		30.000
49	Ti	|		100.000	-0.011050	ppb	16.667	327.753		95.556
52	Cr	|		7122.887	-0.018005	ppb	2.795	278.488		6612.642
55	Mn	|		400.006	0.015005	ppb	12.583	37.311		260.002
57	Fe	|		4412.904	0.455502	ppb	1.798	112.062		3979.444
45	Sc-IS	>		844894.036		ppb	1.776			773541.108
66	Zn	|		663.349	0.589108	ppb	4.467	4.663		190.001
86	Sr	|		-4.172	-0.007405	ppb	295.778	125.471		5.329
65	Cu	|		32.020	0.012060	ppb	26.279	62.100		16.519
69	Ga-IS	|		251658.427		ppb	0.592			228359.824
95	Mo	|		94.445	0.050088	ppb	32.794	46.713		28.889
115	In-IS	>		159582.388		ppb	1.542			151624.173
111	Cd	|		4.246	0.001841	ppb	181.919	384.415		2.162
118	Sn	|		1097.820	0.224232	ppb	2.359	5.341		288.892
121	Sb	|		206.668	0.039600	ppb	5.815	9.747		48.889
135	Ba	|		40.000	0.009086	ppb	8.333	50.448		31.111
165	Ho-IS	|		178980.947		ppb	0.930			165185.134
159	Tb-IS	|		156464.488		ppb	1.287			140467.267
207	Pb	|		141.111	0.008649	ppb	9.547	12.756		40.000
203	Tl	|		16.667	0.004458	ppb	20.000	20.855		1.111
209	Bi-IS	>		106323.096		ppb	0.702			105480.222
51	V	|		1.111	-0.008124	ppb	173.205	53.018		4.444
59	Co	|		4.444	-0.001286	ppb	86.603	254.777		5.556
60	Ni	|		15.556	0.015604	ppb	12.372	18.749		5.556
75	As	|		468.781	0.030699	ppb	5.801	359.662		431.393
71	Ga-ISK	>		64064.448		ppb	0.980			60055.979
82	Se-2	|		-2.446	-0.187198	ppb	46.199	21.638		2.604
107	Ag-1	|		54.445	0.014289	ppb	19.681	30.643		16.667
115	In-ISK	|		55505.730		ppb	0.671			51861.161
45	Sc-ISK	>		158205.693		ppb	0.988			149402.898
23	Na	|		1156.714	0.821236	ppb	6.646	31.728		871.693
39	K	|		56957.767	-3.688175	ppb	0.535	29.944		56272.839
24	Mg	|		136.667	0.290840	ppb	23.804	30.958		31.667
159	Tb-ISK	|		115495.703		ppb	1.163			111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 09:59:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.024

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19341.974		ppb		0.752		18732.279
9	Be	|		108694.188	99.929234	ppb	1.021	2.130		2.222
10	B	|		74299.453	244.234365	ppb	2.387	2.005		248.891
27	Al	|		496001.065	96.563418	ppb	1.838	2.189		1177.833
43	Ca-2	|		52399.281	5127.577429	ppb	1.969	1.050		30.000
49	Ti	|		41066.726	100.240636	ppb	1.250	0.072		95.556
52	Cr	|		541335.064	99.346815	ppb	1.509	0.553		6612.642
55	Mn	|		763158.655	99.739994	ppb	1.370	0.584		260.002
57	Fe	|		745883.197	5089.588297	ppb	0.948	0.442		3979.444
45	Sc-IS	>		839497.048		ppb	1.278			773541.108
66	Zn	|		79251.462	102.850954	ppb	1.187	0.973		190.001
86	Sr	|		130569.843	98.350437	ppb	0.197	1.290		5.329
65	Cu	|		120051.678	103.704298	ppb	0.918	0.362		16.519
69	Ga-IS	|		265329.131		ppb	0.500			228359.824
95	Mo	|		122514.209	98.647975	ppb	0.112	1.240		28.889
115	In-IS	>		159654.567		ppb	0.045			151624.173
111	Cd	|		110618.010	99.823916	ppb	0.829	0.836		2.162
118	Sn	|		352733.074	99.459573	ppb	1.114	1.130		288.892
121	Sb	|		393427.273	100.219036	ppb	0.375	0.370		48.889
135	Ba	|		80878.309	100.844438	ppb	0.821	0.823		31.111
165	Ho-IS	|		180874.639		ppb	1.311			165185.134
159	Tb-IS	|		154432.493		ppb	0.738			140467.267
207	Pb	|		1165711.813	97.757884	ppb	0.413	0.635		40.000
203	Tl	|		352934.384	98.936069	ppb	0.625	0.949		1.111
209	Bi-IS	>		108830.767		ppb	0.802			105480.222
51	V	|		45569.255	98.743516	ppb	2.261	2.456		4.444
59	Co	|		118207.048	97.939120	ppb	0.583	1.759		5.556
60	Ni	|		62024.377	97.429056	ppb	1.593	2.872		5.556
75	As	|		29471.688	98.048318	ppb	2.675	1.622		431.393
71	Ga-ISK	>		66167.344		ppb	1.379			60055.979
82	Se-2	|		2860.230	99.171496	ppb	1.819	3.062		2.604
107	Ag-1	|		259888.252	97.888164	ppb	0.505	1.823		16.667
115	In-ISK	|		57896.751		ppb	1.090			51861.161
45	Sc-ISK	>		164421.975		ppb	1.042			149402.898
23	Na	|		1549413.351	5238.681886	ppb	0.591	1.156		871.693
39	K	|		3827569.924	5089.541673	ppb	0.979	0.950		56272.839
24	Mg	|		1879557.992	5103.408066	ppb	1.154	1.386		31.667
159	Tb-ISK	|		120969.375		ppb	0.860			111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 10:02:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.025

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18782.340		ppb		0.755		18732.279
9	Be	|		5.556	0.002987	ppb	34.641	61.283		2.222
10	B	|		306.670	0.137694	ppb	8.489	58.845		248.891
27	Al	|		823.357	-0.086084	ppb	6.285	9.899		1177.833
43	Ca-2	|		30.000	-0.207444	ppb	33.333	465.149		30.000
49	Ti	|		92.223	-0.024478	ppb	53.652	496.562		95.556
52	Cr	|		5830.078	-0.231828	ppb	1.483	1.058		6612.642
55	Mn	|		228.891	-0.006457	ppb	10.735	49.020		260.002
57	Fe	|		4031.680	-1.487845	ppb	2.068	62.106		3979.444
45	Sc-IS	>		825336.622		ppb	1.294			773541.108
66	Zn	|		226.668	0.031729	ppb	4.412	43.785		190.001
86	Sr	|		8.638	0.002217	ppb	129.285	382.396		5.329
65	Cu	|		28.569	0.009564	ppb	35.589	91.112		16.519
69	Ga-IS	|		245701.825		ppb	1.336			228359.824
95	Mo	|		333.337	0.247756	ppb	10.817	11.504		28.889
115	In-IS	>		156722.009		ppb	0.843			151624.173
111	Cd	|		11.522	0.008539	ppb	16.235	20.188		2.162
118	Sn	|		1816.783	0.436279	ppb	7.185	7.587		288.892
121	Sb	|		170.001	0.030988	ppb	15.686	21.648		48.889
135	Ba	|		30.000	-0.002752	ppb	29.397	404.246		31.111
165	Ho-IS	|		174907.678		ppb	1.280			165185.134
159	Tb-IS	|		151976.385		ppb	0.980			140467.267
207	Pb	|		338.890	0.025410	ppb	5.763	6.626		40.000
203	Tl	|		84.445	0.023723	ppb	4.558	4.273		1.111
209	Bi-IS	>		107132.433		ppb	0.357			105480.222
51	V	|		11.111	0.014373	ppb	45.826	80.249		4.444
59	Co	|		16.667	0.009305	ppb	72.111	111.764		5.556
60	Ni	|		12.222	0.010287	ppb	68.635	133.275		5.556
75	As	|		515.594	0.201040	ppb	1.688	14.137		431.393
71	Ga-ISK	>		63798.816		ppb	0.836			60055.979
82	Se-2	|		3.924	0.040631	ppb	153.593	530.085		2.604
107	Ag-1	|		242.224	0.087631	ppb	14.124	14.331		16.667
115	In-ISK	|		56687.953		ppb	1.366			51861.161
45	Sc-ISK	>		160826.954		ppb	1.077			149402.898
23	Na	|		1245.054	1.060220	ppb	3.831	12.604		871.693
39	K	|		62597.960	2.800657	ppb	0.267	33.200		56272.839
24	Mg	|		218.335	0.511821	ppb	20.780	25.091		31.667
159	Tb-ISK	|		117721.752		ppb	0.985			111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, March 19, 2020 10:38:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\b.026

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18977.047		ppb	2.672		18732.279
9	Be	12.222	0.008934	ppb	56.773	70.455	2.222
10	B	156.668	-0.378505	ppb	31.773	41.537	248.891
27	Al	3940.544	0.515785	ppb	2.932	4.827	1177.833
43	Ca-2	50.000	1.676590	ppb	20.000	55.458	30.000
49	Ti	102.223	-0.004881	ppb	4.981	252.202	95.556
52	Cr	7277.412	0.011805	ppb	4.861	502.206	6612.642
55	Mn	413.339	0.016882	ppb	4.267	14.505	260.002
57	Fe	4549.614	1.421126	ppb	3.261	44.507	3979.444
45	Sc-IS	> 843824.860		ppb	1.816		773541.108
66	Zn	716.685	0.659866	ppb	3.050	6.426	190.001
86	Sr	29.225	0.017717	ppb	87.923	109.330	5.329
65	Cu	46.347	0.024381	ppb	14.245	24.301	16.519
69	Ga-IS	252631.006		ppb	0.958		228359.824
95	Mo	120.001	0.070827	ppb	9.623	11.102	28.889
115	In-IS	> 160625.118		ppb	0.678		151624.173
111	Cd	3.081	0.000717	ppb	108.181	419.810	2.162
118	Sn	1407.847	0.308975	ppb	6.307	7.269	288.892
121	Sb	171.112	0.030190	ppb	20.830	29.163	48.889
135	Ba	27.778	-0.006394	ppb	24.980	136.656	31.111
165	Ho-IS	182556.867		ppb	0.805		165185.134
159	Tb-IS	159816.796		ppb	0.840		140467.267
207	Pb	121.111	0.006848	ppb	28.647	39.974	40.000
203	Tl	20.000	0.005400	ppb	28.868	31.709	1.111
209	Bi-IS	> 106859.390		ppb	2.004		105480.222
51	V	8.889	0.008950	ppb	108.253	237.398	4.444
59	Co	4.444	-0.001347	ppb	114.564	315.884	5.556
60	Ni	22.222	0.025769	ppb	62.450	86.061	5.556
75	As	527.747	0.199829	ppb	9.752	91.477	431.393
71	Ga-ISK	> 65361.407		ppb	0.440		60055.979
82	Se-2	3.594	0.026422	ppb	85.182	405.263	2.604
107	Ag-1	100.000	0.031215	ppb	24.037	29.378	16.667
115	In-ISK	57537.600		ppb	0.754		51861.161
45	Sc-ISK	> 160811.285		ppb	1.484		149402.898
23	Na	1218.385	0.970783	ppb	5.099	26.483	871.693
39	K	59302.870	-1.746844	ppb	2.086	89.540	56272.839
24	Mg	125.001	0.252490	ppb	14.422	20.258	31.667
159	Tb-ISK	118885.980		ppb	0.573		111737.295

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, March 19, 2020 10:41:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICIS-23447.027

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19491.075		ppb		3.286		
9	Be	|		4.444		ppb		43.301		
10	B	|		143.334		ppb		9.302		
27	Al	|		993.368		ppb		4.650		
43	Ca-2	|		31.667		ppb		9.116		
49	Ti	|		95.556		ppb		14.098		
52	Cr	|		7176.247		ppb		1.603		
55	Mn	|		223.335		ppb		19.403		
57	Fe	|		4600.742		ppb		4.251		
45	Sc-IS	>		852224.834		ppb		1.180		
66	Zn	|		194.446		ppb		8.628		
86	Sr	|		-0.226		ppb	8932.275			
65	Cu	|		18.723		ppb		45.117		
69	Ga-IS	|		252563.057		ppb		0.496		
95	Mo	|		32.222		ppb		43.069		
115	In-IS	>		159287.216		ppb		0.996		
111	Cd	|		3.266		ppb		0.892		
118	Sn	|		668.905		ppb		11.606		
121	Sb	|		88.889		ppb		5.728		
135	Ba	|		33.333		ppb		26.458		
165	Ho-IS	|		180642.789		ppb		0.988		
159	Tb-IS	|		156396.999		ppb		0.250		
207	Pb	|		50.000		ppb		17.638		
203	Tl	|		3.333		ppb				
209	Bi-IS	>		107554.478		ppb		0.505		
51	V	|		8.889		ppb		94.373		
59	Co	|		5.556		ppb		69.282		
60	Ni	|		3.333		ppb	100.000			
75	As	|		494.218		ppb		7.257		
71	Ga-ISK	>		66915.258		ppb		1.312		
82	Se-2	|		5.279		ppb		93.603		
107	Ag-1	|		43.333		ppb		20.352		
115	In-ISK	|		57556.557		ppb		1.587		
45	Sc-ISK	>		164281.522		ppb		1.303		
23	Na	|		833.358		ppb		7.258		
39	K	|		60432.011		ppb		1.329		
24	Mg	|		25.000		ppb		72.111		
159	Tb-ISK	|		119999.290		ppb		1.460		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, March 19, 2020 10:43:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\IC-210761.028

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19338.640		ppb		2.134		19491.075
9	Be	|	215730.164	200.000000	ppb	1.208	2.071		4.444
10	B	|	149039.003	500.000000	ppb	0.886	1.656		143.334
27	Al	|	983251.878	200.000000	ppb	1.504	2.307		993.368
43	Ca-2	|	104008.941	10200.000000	ppb	0.958	0.854		31.667
49	Ti	|	81977.889	200.000000	ppb	1.008	0.714		95.556
52	Cr	|	1076830.853	200.000000	ppb	0.237	1.124		7176.247
55	Mn	|	1520587.576	200.000000	ppb	0.281	0.962		223.335
57	Fe	|	1500964.918	10200.000000	ppb	0.252	0.782		4600.742
45	Sc-IS	>	845997.657		ppb	0.978			852224.834
66	Zn	|	157538.394	200.000000	ppb	1.116	0.318		194.446
86	Sr	|	261529.281	200.000000	ppb	0.487	0.596		-0.226
65	Cu	|	238876.931	200.000000	ppb	1.259	0.752		18.723
69	Ga-IS	|	281094.436		ppb	1.358			252563.057
95	Mo	|	244049.188	200.000000	ppb	0.391	1.365		32.222
115	In-IS	>	157642.855		ppb	0.726			159287.216
111	Cd	|	218957.230	200.000000	ppb	0.821	0.942		3.266
118	Sn	|	707512.900	200.000000	ppb	1.257	1.736		668.905
121	Sb	|	785367.031	200.000000	ppb	0.851	1.551		88.889
135	Ba	|	165415.663	200.000000	ppb	1.598	2.319		33.333
165	Ho-IS	|	181913.133		ppb	0.248			180642.789
159	Tb-IS	|	157899.011		ppb	1.123			156396.999
207	Pb	|	2324954.409	200.000000	ppb	0.702	0.487		50.000
203	Tl	|	709327.515	200.000000	ppb	1.921	2.302		3.333
209	Bi-IS	>	105461.187		ppb	0.709			107554.478
51	V	|	92004.228	200.000000	ppb	1.071	1.410		8.889
59	Co	|	239396.307	200.000000	ppb	1.831	0.688		5.556
60	Ni	|	122351.731	200.000000	ppb	0.694	1.178		3.333
75	As	|	59761.272	200.000000	ppb	1.538	0.673		494.218
71	Ga-ISK	>	65392.676		ppb	1.324			66915.258
82	Se-2	|	5703.360	200.000000	ppb	1.439	2.161		5.279
107	Ag-1	|	513970.742	200.000000	ppb	0.962	0.694		43.333
115	In-ISK	|	58213.281		ppb	2.151			57556.557
45	Sc-ISK	>	166045.039		ppb	1.097			164281.522
23	Na	|	3079618.582	10200.000000	ppb	1.544	0.515		833.358
39	K	|	7576525.251	10200.000000	ppb	0.683	1.741		60432.011
24	Mg	|	3720196.430	10200.000000	ppb	1.002	0.357		25.000
159	Tb-ISK	|	121521.364		ppb	0.879			119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 10:46:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.029

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19031.563		ppb		2.490		19491.075
9	Be	|	107823.187	100.609775	ppb		1.143	0.766	4.444
10	B	|	74956.141	252.887970	ppb		0.890	1.358	143.334
27	Al	|	496244.227	101.499565	ppb		0.444	0.485	993.368
43	Ca-2	|	52126.602	5144.497843	ppb		1.028	1.356	31.667
49	Ti	|	40712.376	99.868383	ppb		0.564	0.066	95.556
52	Cr	|	544120.348	101.068925	ppb		0.917	0.500	7176.247
55	Mn	|	768035.329	101.671935	ppb		0.187	0.655	223.335
57	Fe	|	756561.571	5159.903749	ppb		0.592	0.156	4600.742
45	Sc-IS	>	840407.327		ppb		0.501		852224.834
66	Zn	|	80379.995	102.609123	ppb		1.862	2.099	194.446
86	Sr	|	132485.801	101.990634	ppb		0.967	1.368	-0.226
65	Cu	|	121212.959	102.153796	ppb		1.573	1.528	18.723
69	Ga-IS	|	264277.666		ppb		0.355		252563.057
95	Mo	|	122471.768	101.014726	ppb		2.039	2.156	32.222
115	In-IS	>	158533.667		ppb		0.934		159287.216
111	Cd	|	110921.544	100.747216	ppb		0.565	0.425	3.266
118	Sn	|	359167.110	100.872337	ppb		1.099	2.034	668.905
121	Sb	|	391832.232	99.212558	ppb		0.726	1.507	88.889
135	Ba	|	82516.575	99.185754	ppb		1.917	2.346	33.333
165	Ho-IS	|	180237.675		ppb		0.617		180642.789
159	Tb-IS	|	156613.901		ppb		1.357		156396.999
207	Pb	|	1177030.002	99.750573	ppb		0.545	1.446	50.000
203	Tl	|	358523.445	99.588334	ppb		1.072	1.994	3.333
209	Bi-IS	>	107055.213		ppb		0.990		107554.478
51	V	|	46071.966	98.517215	ppb		1.787	2.011	8.889
59	Co	|	118952.158	97.773465	ppb		1.618	1.801	5.556
60	Ni	|	61935.080	99.593262	ppb		0.380	0.592	3.333
75	As	|	29856.587	97.474181	ppb		1.008	0.699	494.218
71	Ga-ISK	>	66467.604		ppb		0.331		66915.258
82	Se-2	|	2848.882	98.183761	ppb		3.356	3.516	5.279
107	Ag-1	|	257838.232	98.697409	ppb		0.079	0.365	43.333
115	In-ISK	|	57690.119		ppb		1.635		57556.557
45	Sc-ISK	>	165001.871		ppb		0.172		164281.522
23	Na	|	1557146.352	5188.804257	ppb		0.960	0.901	833.358
39	K	|	3859765.661	5188.095660	ppb		0.301	0.480	60432.011
24	Mg	|	1896742.671	5233.261255	ppb		0.614	0.604	25.000
159	Tb-ISK	|	120983.478		ppb		0.529		119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 10:49:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.030

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18924.754		ppb		2.465		19491.075
9	Be	|		11.111	0.006544	ppb	45.826	73.681		4.444
10	B	|		380.005	0.841343	ppb	9.283	13.397		143.334
27	Al	|		796.689	-0.033032	ppb	4.247	17.864		993.368
43	Ca-2	|		45.000	1.472764	ppb	40.062	122.293		31.667
49	Ti	|		100.000	0.020943	ppb	6.667	80.531		95.556
52	Cr	|		5543.298	-0.259904	ppb	3.553	15.083		7176.247
55	Mn	|		261.114	0.006381	ppb	9.582	58.042		223.335
57	Fe	|		4072.803	-2.418907	ppb	2.414	23.463		4600.742
45	Sc-IS	>		817958.351		ppb	0.796			852224.834
66	Zn	|		197.779	0.014890	ppb	22.945	410.271		194.446
86	Sr	|		23.095	0.018360	ppb	116.345	115.197		-0.226
65	Cu	|		39.724	0.018880	ppb	21.956	41.610		18.723
69	Ga-IS	|		243795.317		ppb	1.782			252563.057
95	Mo	|		434.451	0.342028	ppb	8.204	8.682		32.222
115	In-IS	>		156859.483		ppb	1.153			159287.216
111	Cd	|		20.199	0.015663	ppb	50.232	60.609		3.266
118	Sn	|		2269.069	0.457752	ppb	4.041	4.137		668.905
121	Sb	|		193.335	0.027039	ppb	13.685	23.374		88.889
135	Ba	|		41.111	0.010087	ppb	4.681	27.710		33.333
165	Ho-IS	|		177621.880		ppb	0.574			180642.789
159	Tb-IS	|		153299.318		ppb	1.161			156396.999
207	Pb	|		444.447	0.033829	ppb	6.379	9.061		50.000
203	Tl	|		106.667	0.028963	ppb	6.250	4.647		3.333
209	Bi-IS	>		106074.676		ppb	1.921			107554.478
51	V	|		11.111	0.005615	ppb	34.641	153.599		8.889
59	Co	|		12.222	0.005786	ppb	31.492	54.642		5.556
60	Ni	|		15.556	0.020422	ppb	81.127	102.097		3.333
75	As	|		508.151	0.106669	ppb	5.488	99.079		494.218
71	Ga-ISK	>		64592.372		ppb	0.956			66915.258
82	Se-2	|		3.260	-0.064923	ppb	108.928	194.025		5.279
107	Ag-1	|		321.115	0.109931	ppb	13.062	13.958		43.333
115	In-ISK	|		57194.074		ppb	0.818			57556.557
45	Sc-ISK	>		160466.337		ppb	1.537			164281.522
23	Na	|		1523.415	2.431942	ppb	5.417	11.097		833.358
39	K	|		65101.347	8.551587	ppb	1.229	28.424		60432.011
24	Mg	|		308.337	0.804207	ppb	16.243	15.983		25.000
159	Tb-ISK	|		118067.932		ppb	1.094			119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, March 19, 2020 10:52:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICVL-210771.031

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18728.936		ppb	0.642		19491.075
9	Be	1082.263	1.018297	ppb	2.583	2.472	4.444
10	B	15232.565	51.641807	ppb	2.795	2.360	143.334
27	Al	243451.344	50.308760	ppb	0.440	0.360	993.368
43	Ca-2	570.011	53.920938	ppb	10.342	11.449	31.667
49	Ti	475.563	0.952168	ppb	3.313	4.631	95.556
52	Cr	11042.044	0.772061	ppb	1.379	4.911	7176.247
55	Mn	7817.695	1.018863	ppb	1.880	2.263	223.335
57	Fe	11112.098	46.056561	ppb	0.774	0.671	4600.742
45	Sc-IS	> 830146.037		ppb	0.525		852224.834
66	Zn	4816.369	5.992465	ppb	5.865	5.549	194.446
86	Sr	1343.176	1.047100	ppb	5.134	5.581	-0.226
65	Cu	1169.266	0.982203	ppb	4.618	4.747	18.723
69	Ga-IS	249107.390		ppb	2.557		252563.057
95	Mo	1223.386	0.995645	ppb	5.305	5.706	32.222
115	In-IS	> 158460.385		ppb	0.317		159287.216
111	Cd	1147.477	1.039631	ppb	6.155	5.847	3.266
118	Sn	4181.723	0.989743	ppb	2.751	3.387	668.905
121	Sb	4168.386	1.033678	ppb	1.800	1.848	88.889
135	Ba	797.800	0.919968	ppb	7.537	8.170	33.333
165	Ho-IS	178520.925		ppb	1.609		180642.789
159	Tb-IS	154243.858		ppb	1.227		156396.999
207	Pb	11653.002	0.972462	ppb	2.352	2.446	50.000
203	Tl	3582.672	0.983276	ppb	1.815	2.350	3.333
209	Bi-IS	> 108247.478		ppb	0.948		107554.478
51	V	453.341	0.972576	ppb	5.147	5.090	8.889
59	Co	1171.159	0.980075	ppb	3.431	4.055	5.556
60	Ni	608.902	0.996109	ppb	9.068	9.226	3.333
75	As	790.353	1.052703	ppb	6.628	15.438	494.218
71	Ga-ISK	> 64996.416		ppb	0.604		66915.258
82	Se-2	35.250	1.063969	ppb	9.987	12.256	5.279
107	Ag-1	2648.023	1.020405	ppb	2.899	3.556	43.333
115	In-ISK	57029.917		ppb	0.690		57556.557
45	Sc-ISK	> 161578.731		ppb	1.298		164281.522
23	Na	16669.722	53.963868	ppb	1.517	0.530	833.358
39	K	99519.890	55.911543	ppb	0.236	3.185	60432.011
24	Mg	18970.923	53.382102	ppb	1.570	0.716	25.000
159	Tb-ISK	118500.190		ppb	1.498		119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-58210_1-A

Autosampler Position: 101

Sample Date/Time: Thursday, March 19, 2020 10:54:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\MB 570-58210_1-A.032

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	19438.773		ppb	1.027		19491.075
9	Be	4.444	0.000158	ppb	114.564	3100.522	4.444
10	B	248.891	0.375323	ppb	11.701	25.790	143.334
27	Al	1552.307	0.121838	ppb	3.820	6.980	993.368
43	Ca-2	21.667	-0.913376	ppb	13.323	31.831	31.667
49	Ti	71.111	-0.054622	ppb	19.516	59.078	95.556
52	Cr	5893.438	-0.206640	ppb	2.606	18.977	7176.247
55	Mn	234.446	0.002312	ppb	16.601	221.949	223.335
57	Fe	4081.694	-2.726883	ppb	2.526	16.339	4600.742
45	Sc-IS	> 828606.906		ppb	1.289		852224.834
66	Zn	364.449	0.227485	ppb	4.694	7.126	194.446
86	Sr	8.063	0.006611	ppb	374.196	354.614	-0.226
65	Cu	17.563	-0.000620	ppb	60.924	1437.704	18.723
69	Ga-IS	246403.670		ppb	1.063		252563.057
95	Mo	157.779	0.105817	ppb	17.077	21.360	32.222
115	In-IS	> 160370.547		ppb	0.791		159287.216
111	Cd	3.002	-0.000259	ppb	109.409	1141.420	3.266
118	Sn	1453.408	0.217069	ppb	10.286	20.071	668.905
121	Sb	94.445	0.001233	ppb	13.362	249.865	88.889
135	Ba	18.889	-0.017469	ppb	40.754	51.889	33.333
165	Ho-IS	176619.630		ppb	1.097		180642.789
159	Tb-IS	152903.990		ppb	1.045		156396.999
207	Pb	192.223	0.011949	ppb	16.113	22.992	50.000
203	Tl	35.556	0.008886	ppb	14.321	17.623	3.333
209	Bi-IS	> 107995.644		ppb	1.776		107554.478
51	V	3.333	-0.011711	ppb		0.636	8.889
59	Co	5.556	0.000065	ppb	91.652	6449.019	5.556
60	Ni	7.778	0.007312	ppb	65.465	114.874	3.333
75	As	504.407	0.055071	ppb	5.995	187.429	494.218
71	Ga-ISK	> 66069.104		ppb	1.032		66915.258
82	Se-2	1.924	-0.113952	ppb	138.032	80.800	5.279
107	Ag-1	78.889	0.013919	ppb	9.758	22.539	43.333
115	In-ISK	57609.237		ppb	1.438		57556.557
45	Sc-ISK	> 163268.805		ppb	0.423		164281.522
23	Na	1280.057	1.521930	ppb	5.538	14.698	833.358
39	K	61598.071	2.124453	ppb	0.100	17.509	60432.011
24	Mg	51.667	0.074887	ppb	24.354	47.714	25.000
159	Tb-ISK	119477.560		ppb	0.779		119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-58210_2-A

Autosampler Position: 102

Sample Date/Time: Thursday, March 19, 2020 10:57:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\LCS 570-58210_2-A.033

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19309.709		ppb		0.812		19491.075
9	Be	|	110015.437	102.325379	ppb	1.981	2.160		4.444
10	B	|	28566.317	95.764861	ppb	1.890	2.029		143.334
27	Al	|	503626.079	102.681593	ppb	0.673	1.520		993.368
43	Ca-2	|	6658.218	652.313145	ppb	1.278	2.007		31.667
49	Ti	|	41364.252	101.136251	ppb	1.470	1.001		95.556
52	Cr	|	558400.065	103.409687	ppb	1.454	0.726		7176.247
55	Mn	|	768062.975	101.337348	ppb	1.518	0.928		223.335
57	Fe	|	88627.454	574.955405	ppb	1.698	1.005		4600.742
45	Sc-IS	>	843175.443		ppb	0.891			852224.834
66	Zn	|	82248.366	104.644798	ppb	1.889	1.111		194.446
86	Sr	|	131038.071	100.545598	ppb	1.181	1.401		-0.226
65	Cu	|	122674.771	103.039512	ppb	2.054	1.239		18.723
69	Ga-IS	|	267209.914		ppb	2.073			252563.057
95	Mo	|	123337.950	101.392348	ppb	0.950	0.084		32.222
115	In-IS	>	159720.800		ppb	0.766			159287.216
111	Cd	|	114034.150	102.805430	ppb	0.193	0.664		3.266
118	Sn	|	408948.717	114.011790	ppb	0.676	0.620		668.905
121	Sb	|	396812.280	99.722093	ppb	0.131	0.777		88.889
135	Ba	|	85175.414	101.610696	ppb	1.272	0.660		33.333
165	Ho-IS	|	181962.645		ppb	0.216			180642.789
159	Tb-IS	[	157173.363		ppb	1.564			156396.999
207	Pb	|	1210943.601	100.610334	ppb	0.569	0.518		50.000
203	Tl	|	352206.939	95.916006	ppb	1.021	1.688		3.333
209	Bi-IS	>	109190.157		ppb	0.714			107554.478
51	V	|	45950.452	96.617358	ppb	0.892	0.169		8.889
59	Co	|	118838.927	96.052225	ppb	0.648	0.177		5.556
60	Ni	|	64233.018	101.573990	ppb	2.211	2.485		3.333
75	As	|	30980.718	99.492452	ppb	2.564	2.327		494.218
71	Ga-ISK	>	67592.869		ppb	0.727			66915.258
82	Se-2	|	2811.872	95.293073	ppb	0.821	1.540		5.279
107	Ag-1	|	121667.023	45.789250	ppb	0.492	0.649		43.333
115	In-ISK	|	57589.133		ppb	0.580			57556.557
45	Sc-ISK	>	164953.586		ppb	0.869			164281.522
23	Na	|	307276.619	1021.988511	ppb	1.457	1.201		833.358
39	K	|	806759.280	1019.183903	ppb	0.452	0.466		60432.011
24	Mg	|	211406.239	583.406859	ppb	1.230	1.160		25.000
159	Tb-ISK	|	121066.839		ppb	0.255			119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-58210_3-A

Autosampler Position: 103

Sample Date/Time: Thursday, March 19, 2020 11:00:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\LCSD 570-58210_3-A.034

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19118.343		ppb		2.052		19491.075
9	Be	|		110440.833	104.094255	ppb		0.847	1.563	4.444
10	B	|		28555.191	97.008753	ppb		2.665	2.699	143.334
27	Al	|		509123.452	105.199643	ppb		1.422	2.485	993.368
43	Ca-2	|		6611.530	656.302963	ppb		1.442	0.403	31.667
49	Ti	|		41193.761	102.061534	ppb		1.576	0.627	95.556
52	Cr	|		551274.326	103.458878	ppb		0.494	0.772	7176.247
55	Mn	|		756243.468	101.116022	ppb		0.779	1.189	223.335
57	Fe	|		87695.024	576.611554	ppb		0.946	0.839	4600.742
45	Sc-IS	>		832098.964		ppb		1.236		852224.834
66	Zn	|		82789.248	106.741156	ppb		1.764	0.592	194.446
86	Sr	|		130213.896	101.239137	ppb		1.168	0.080	-0.226
65	Cu	|		121660.087	103.554174	ppb		1.402	0.675	18.723
69	Ga-IS	|		264274.439		ppb		1.081		252563.057
95	Mo	|		122787.653	102.294156	ppb		0.130	1.186	32.222
115	In-IS	>		159619.813		ppb		0.519		159287.216
111	Cd	|		114547.176	103.329757	ppb		0.675	0.388	3.266
118	Sn	|		405892.290	113.228839	ppb		0.723	0.679	668.905
121	Sb	|		398441.297	100.190475	ppb		0.683	0.185	88.889
135	Ba	|		84317.034	100.648752	ppb		1.728	1.329	33.333
165	Ho-IS	|		181368.524		ppb		0.659		180642.789
159	Tb-IS	|		156894.634		ppb		0.260		156396.999
207	Pb	|		1208985.724	100.804183	ppb		0.244	1.833	50.000
203	Tl	|		352270.518	96.270592	ppb		0.622	2.130	3.333
209	Bi-IS	>		108824.106		ppb		1.641		107554.478
51	V	|		45525.776	97.320151	ppb		1.912	2.031	8.889
59	Co	|		116226.464	95.503969	ppb		0.866	0.882	5.556
60	Ni	|		64063.333	102.983360	ppb		1.074	0.652	3.333
75	As	|		30877.156	100.835323	ppb		0.141	0.486	494.218
71	Ga-ISK	>		66486.581		ppb		0.421		66915.258
82	Se-2	|		2846.869	98.082275	ppb		1.441	1.357	5.279
107	Ag-1	|		120772.962	46.211403	ppb		2.128	2.544	43.333
115	In-ISK	|		58728.351		ppb		0.711		57556.557
45	Sc-ISK	>		165032.223		ppb		0.301		164281.522
23	Na	|		302925.098	1006.993465	ppb		1.387	1.376	833.358
39	K	|		789692.109	995.336361	ppb		0.580	0.735	60432.011
24	Mg	|		210626.413	580.977240	ppb		0.726	1.010	25.000
159	Tb-ISK	|		121182.489		ppb		0.582		119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23815-A-1-A

Autosampler Position: 104

Sample Date/Time: Thursday, March 19, 2020 11:03:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23815-A-1-A.035

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	22817.103		ppb	2.418		19491.075
9	Be	16.667	0.009804	ppb	34.641	49.254	4.444
10	B	43126.108	129.700324	ppb	0.219	0.886	143.334
27	Al	6842634.238	1252.095355	ppb	0.574	0.224	993.368
43	Ca-2	348385.309	30718.856369	ppb	0.659	0.279	31.667
49	Ti	3534.882	7.529389	ppb	2.237	1.834	95.556
52	Cr	32968.003	4.208722	ppb	1.485	1.263	7176.247
55	Mn	326238.885	38.547266	ppb	1.063	0.412	223.335
57	Fe	94097.817	545.422549	ppb	1.418	0.987	4600.742
45	Sc-IS	> 941090.162		ppb	0.669		852224.834
66	Zn	54448.020	61.968925	ppb	1.353	0.891	194.446
86	Sr	646145.619	444.204667	ppb	1.483	1.782	-0.226
65	Cu	83205.149	62.611296	ppb	1.705	1.110	18.723
69	Ga-IS	251774.968		ppb	0.914		252563.057
95	Mo	20653.817	15.190150	ppb	2.917	2.859	32.222
115	In-IS	> 160815.926		ppb	0.442		159287.216
111	Cd	27.738	0.021895	ppb	91.118	103.184	3.266
118	Sn	31918.953	8.665482	ppb	0.535	0.988	668.905
121	Sb	6940.576	1.710325	ppb	4.131	4.284	88.889
135	Ba	16100.188	19.046148	ppb	3.878	4.275	33.333
165	Ho-IS	180403.051		ppb	0.185		180642.789
159	Tb-IS	150719.836		ppb	0.907		156396.999
207	Pb	2762.326	0.250855	ppb	1.742	1.918	50.000
203	Tl	114.445	0.033815	ppb	36.418	38.297	3.333
209	Bi-IS	> 98254.541		ppb	1.211		107554.478
51	V	4690.771	9.912557	ppb	5.108	3.592	8.889
59	Co	3089.223	2.511577	ppb	4.799	6.176	5.556
60	Ni	1222.275	1.940946	ppb	5.192	4.552	3.333
75	As	971.185	1.563129	ppb	2.148	3.736	494.218
71	Ga-ISK	> 67117.322		ppb	1.577		66915.258
82	Se-2	17.127	0.408079	ppb	62.385	90.784	5.279
107	Ag-1	287.781	0.092738	ppb	8.771	12.045	43.333
115	In-ISK	56154.428		ppb	0.826		57556.557
45	Sc-ISK	> 181429.310		ppb	0.848		164281.522
23	Na	161855804.466	490814.004398	ppb	0.806	1.578	833.358
39	K	1465290.996	1736.934905	ppb	1.169	0.619	60432.011
24	Mg	2770726.552	6952.844544	ppb	0.374	0.982	25.000
159	Tb-ISK	125422.872		ppb	0.921		119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23815-A-1-B MS

Autosampler Position: 105

Sample Date/Time: Thursday, March 19, 2020 11:05:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23815-A-1-B MS.036

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	22003.607		ppb		2.663		19491.075
9	Be	|	115511.793	100.605108	ppb	0.320	0.992		4.444
10	B	|	69461.799	218.667621	ppb	0.487	1.227		143.334
27	Al	|	7168413.681	1370.939397	ppb	1.209	0.875		993.368
43	Ca-2	|	386776.063	35644.380645	ppb	0.657	0.140		31.667
49	Ti	|	42802.923	97.998419	ppb	1.293	1.672		95.556
52	Cr	|	612860.870	106.321294	ppb	1.094	1.265		7176.247
55	Mn	|	1115010.569	137.776270	ppb	0.211	0.682		223.335
57	Fe	|	875930.920	5578.625426	ppb	0.373	1.162		4600.742
45	Sc-IS	>	900436.013		ppb	0.796			852224.834
66	Zn	>	124233.508	148.135291	ppb	1.697	2.297		194.446
86	Sr	|	766494.259	550.746749	ppb	1.033	1.647		-0.226
65	Cu	|	190301.329	149.710952	ppb	1.810	2.476		18.723
69	Ga-IS	|	260371.710		ppb	1.545			252563.057
95	Mo	|	146196.773	112.551836	ppb	2.415	2.673		32.222
115	In-IS	>	154739.773		ppb	0.666			159287.216
111	Cd	|	101636.567	94.574700	ppb	1.025	0.771		3.266
118	Sn	|	211200.954	60.687319	ppb	0.961	0.311		668.905
121	Sb	|	396224.541	102.776510	ppb	1.156	0.976		88.889
135	Ba	|	97601.301	120.184325	ppb	2.491	1.974		33.333
165	Ho-IS	|	175950.348		ppb	1.175			180642.789
159	Tb-IS	|	146028.141		ppb	0.817			156396.999
207	Pb	|	1113154.910	104.015547	ppb	0.323	0.347		50.000
203	Tl	|	318258.418	97.469012	ppb	0.824	0.688		3.333
209	Bi-IS	>	97085.445		ppb	0.164			107554.478
51	V	|	55564.525	115.652809	ppb	1.091	1.080		8.889
59	Co	|	123835.540	99.080140	ppb	0.568	1.251		5.556
60	Ni	|	63712.904	99.715658	ppb	1.840	0.862		3.333
75	As	|	33852.486	107.750390	ppb	0.778	1.017		494.218
71	Ga-ISK	>	68287.277		ppb	1.020			66915.258
82	Se-2	|	2834.398	95.084013	ppb	0.842	1.836		5.279
107	Ag-1	|	120961.107	45.063277	ppb	1.209	1.742		43.333
115	In-ISK	|	56961.003		ppb	1.820			57556.557
45	Sc-ISK	>	183086.940		ppb	0.953			164281.522
23	Na	|	159996984.740	480758.424452	ppb	0.839	0.862		833.358
39	K	|	2440107.332	2920.234244	ppb	0.814	0.222		60432.011
24	Mg	|	4806987.873	11952.705063	ppb	1.271	0.586		25.000
159	Tb-ISK	|	125200.246		ppb	0.544			119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23815-A-1-C MSD

Autosampler Position: 106

Sample Date/Time: Thursday, March 19, 2020 11:08:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23815-A-1-C MSD.037

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	21373.756		ppb	0.880		19491.075
9	Be	110587.516	96.941841	ppb	0.823	0.643	4.444
10	B	66967.716	212.165634	ppb	0.905	0.323	143.334
27	Al	7027912.444	1352.934592	ppb	0.562	1.232	993.368
43	Ca-2	376464.975	34919.002889	ppb	1.531	0.643	31.667
49	Ti	40085.053	92.358521	ppb	1.155	1.120	95.556
52	Cr	580020.018	101.216708	ppb	0.899	0.847	7176.247
55	Mn	1070447.653	133.135362	ppb	0.619	1.135	223.335
57	Fe	836321.240	5359.416157	ppb	1.372	0.329	4600.742
45	Sc-IS	> 894616.133		ppb	1.223		852224.834
66	Zn	119590.837	143.498521	ppb	2.003	1.080	194.446
86	Sr	751959.857	543.777115	ppb	1.739	1.226	-0.226
65	Cu	182669.411	144.628296	ppb	0.921	0.356	18.723
69	Ga-IS	256440.743		ppb	2.107		252563.057
95	Mo	142094.492	110.092647	ppb	2.068	1.217	32.222
115	In-IS	> 153950.699		ppb	1.269		159287.216
111	Cd	97440.421	91.132719	ppb	1.552	0.349	3.266
118	Sn	196914.575	56.863450	ppb	0.823	0.505	668.905
121	Sb	376799.338	98.239420	ppb	1.054	0.222	88.889
135	Ba	93351.869	115.540524	ppb	1.928	0.735	33.333
165	Ho-IS	173370.232		ppb	1.372		180642.789
159	Tb-IS	144225.558		ppb	1.196		156396.999
207	Pb	1057320.047	100.180056	ppb	0.245	1.091	50.000
203	Tl	301323.862	93.571359	ppb	1.159	1.257	3.333
209	Bi-IS	> 95753.189		ppb	1.058		107554.478
51	V	52354.656	111.730642	ppb	1.036	1.866	8.889
59	Co	117152.899	96.109478	ppb	1.240	2.444	5.556
60	Ni	59135.479	94.897197	ppb	0.602	0.924	3.333
75	As	32066.060	104.589233	ppb	3.058	2.989	494.218
71	Ga-ISK	> 66608.276		ppb	1.413		66915.258
82	Se-2	2628.923	90.395839	ppb	2.697	2.437	5.279
107	Ag-1	113717.483	43.432780	ppb	0.293	1.120	43.333
115	In-ISK	55342.366		ppb	0.315		57556.557
45	Sc-ISK	> 178871.947		ppb	1.628		164281.522
23	Na	151803679.557	466951.517968	ppb	1.193	1.947	833.358
39	K	2338835.486	2863.681421	ppb	1.273	1.396	60432.011
24	Mg	4560704.212	11608.983923	ppb	0.992	1.297	25.000
159	Tb-ISK	121948.979		ppb	0.771		119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23510-A-1-A

Autosampler Position: 118

Sample Date/Time: Thursday, March 19, 2020 11:11:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23510-A-1-A.038

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18651.058		ppb	1.675		19491.075
9	Be	28.889	0.023262	ppb	43.684	50.643	4.444
10	B	5177.605	17.300702	ppb	0.451	2.308	143.334
27	Al	405303.875	84.186537	ppb	0.985	2.820	993.368
43	Ca-2	42857.524	4296.059362	ppb	0.038	1.905	31.667
49	Ti	1025.593	2.329853	ppb	8.760	9.721	95.556
52	Cr	9817.818	0.544743	ppb	2.609	6.947	7176.247
55	Mn	51429.076	6.889194	ppb	0.663	2.538	223.335
57	Fe	27221.466	158.611434	ppb	0.279	2.573	4600.742
45	Sc-IS	> 827496.762		ppb	1.858		852224.834
66	Zn	4845.267	6.056375	ppb	5.028	7.136	194.446
86	Sr	21290.135	16.647675	ppb	2.130	2.468	-0.226
65	Cu	2656.951	2.258747	ppb	2.829	1.626	18.723
69	Ga-IS	246617.362		ppb	1.226		252563.057
95	Mo	1740.106	1.432796	ppb	5.340	6.917	32.222
115	In-IS	> 157730.132		ppb	1.343		159287.216
111	Cd	25.235	0.020051	ppb	20.418	22.287	3.266
118	Sn	2909.187	0.636163	ppb	10.210	14.941	668.905
121	Sb	5830.082	1.462614	ppb	7.184	8.642	88.889
135	Ba	5965.692	7.173088	ppb	4.575	5.783	33.333
165	Ho-IS	169369.341		ppb	1.447		180642.789
159	Tb-IS	144057.292		ppb	1.797		156396.999
207	Pb	7899.748	0.686379	ppb	1.429	1.969	50.000
203	Tl	103.334	0.028632	ppb	11.631	9.643	3.333
209	Bi-IS	> 103817.216		ppb	3.107		107554.478
51	V	800.022	1.703225	ppb	3.411	2.123	8.889
59	Co	125.556	0.099272	ppb	17.677	17.826	5.556
60	Ni	557.789	0.898007	ppb	3.008	4.395	3.333
75	As	1779.012	4.316406	ppb	0.908	3.211	494.218
71	Ga-ISK	> 66027.816		ppb	1.535		66915.258
82	Se-2	6.245	0.033975	ppb	157.683	1007.072	5.279
107	Ag-1	182.223	0.053740	ppb	7.616	9.452	43.333
115	In-ISK	56678.977		ppb	2.057		57556.557
45	Sc-ISK	> 166471.036		ppb	0.855		164281.522
23	Na	521374.515	1720.147361	ppb	1.237	0.773	833.358
39	K	1471077.475	1908.220189	ppb	1.640	0.828	60432.011
24	Mg	301480.261	824.531046	ppb	1.777	2.627	25.000
159	Tb-ISK	119028.499		ppb	0.715		119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23510-A-2-A

Autosampler Position: 119

Sample Date/Time: Thursday, March 19, 2020 11:14:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23510-A-2-A.039

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19525.564		ppb	2.880			19491.075
9	Be	|	114.445	0.100662	ppb	26.429	29.331		4.444
10	B	|	25008.541	82.189666	ppb	1.641	2.563		143.334
27	Al	|	2354854.210	471.700841	ppb	0.930	0.798		993.368
43	Ca-2	|	105085.093	10144.281125	ppb	0.578	1.178		31.667
49	Ti	|	404.450	0.740454	ppb	4.539	4.726		95.556
52	Cr	|	9946.795	0.498764	ppb	1.093	6.329		7176.247
55	Mn	|	69369.158	8.955173	ppb	1.685	3.327		223.335
57	Fe	|	35494.045	207.062846	ppb	1.408	3.364		4600.742
45	Sc-IS	>	859536.414		ppb	1.711			852224.834
66	Zn	|	4037.239	4.809121	ppb	7.122	8.776		194.446
86	Sr	|	67461.241	50.791276	ppb	1.575	2.990		-0.226
65	Cu	|	2528.083	2.068569	ppb	1.557	3.028		18.723
69	Ga-IS	|	250693.995		ppb	0.963			252563.057
95	Mo	|	692.239	0.531697	ppb	9.090	7.805		32.222
115	In-IS	>	158447.610		ppb	1.175			159287.216
111	Cd	|	58.546	0.050266	ppb	5.769	6.639		3.266
118	Sn	|	1255.611	0.166137	ppb	5.191	10.687		668.905
121	Sb	|	2725.816	0.668000	ppb	5.779	4.744		88.889
135	Ba	|	14525.165	17.432080	ppb	3.690	2.882		33.333
165	Ho-IS	|	173875.120		ppb	0.833			180642.789
159	Tb-IS	|	146124.647		ppb	0.290			156396.999
207	Pb	|	5714.896	0.497529	ppb	3.071	1.942		50.000
203	Tl	|	156.668	0.044148	ppb	20.519	20.652		3.333
209	Bi-IS	>	103317.854		ppb	1.182			107554.478
51	V	|	1206.718	2.571204	ppb	5.271	4.700		8.889
59	Co	|	302.225	0.244881	ppb	8.915	9.359		5.556
60	Ni	|	561.122	0.900270	ppb	5.358	4.795		3.333
75	As	|	4506.033	13.384190	ppb	2.134	2.071		494.218
71	Ga-ISK	>	66216.447		ppb	0.812			66915.258
82	Se-2	|	6.554	0.046213	ppb	8.774	45.815		5.279
107	Ag-1	|	103.334	0.023202	ppb	14.783	23.993		43.333
115	In-ISK	|	56895.694		ppb	0.329			57556.557
45	Sc-ISK	>	169932.559		ppb	0.948			164281.522
23	Na	|	3159392.359	10225.350099	ppb	0.801	0.564		833.358
39	K	|	1858258.547	2381.141398	ppb	0.979	0.049		60432.011
24	Mg	|	294793.984	789.713757	ppb	0.680	0.276		25.000
159	Tb-ISK	|	119860.745		ppb	0.676			119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23510-A-3-A

Autosampler Position: 120

Sample Date/Time: Thursday, March 19, 2020 11:16:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23510-A-3-A.040

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19808.170		ppb	1.625			19491.075
9	Be	|		15.556	0.010695	ppb	49.487	68.744		4.444
10	B	|		4916.402	16.425179	ppb	2.549	2.928		143.334
27	Al	|		338488.812	70.359455	ppb	0.605	1.428		993.368
43	Ca-2	|		40378.671	4052.269852	ppb	2.271	1.918		31.667
49	Ti	|		948.920	2.141164	ppb	6.641	7.112		95.556
52	Cr	|		9138.479	0.417195	ppb	3.064	9.519		7176.247
55	Mn	|		74206.678	9.965388	ppb	0.276	1.098		223.335
57	Fe	|		21014.334	115.530136	ppb	0.887	1.737		4600.742
45	Sc-IS	>		826286.693		ppb	0.826			852224.834
66	Zn	|		5062.009	6.341869	ppb	4.104	3.815		194.446
86	Sr	|		19906.483	15.584930	ppb	3.003	2.544		-0.226
65	Cu	|		2302.937	1.958614	ppb	6.136	5.958		18.723
69	Ga-IS	|		247371.335		ppb	1.202			252563.057
95	Mo	|		623.347	0.496708	ppb	5.882	5.474		32.222
115	In-IS	>		157347.409		ppb	0.464			159287.216
111	Cd	|		33.135	0.027399	ppb	51.849	57.627		3.266
118	Sn	|		1036.704	0.106594	ppb	4.467	13.178		668.905
121	Sb	|		1601.201	0.386150	ppb	3.863	4.198		88.889
135	Ba	|		5376.569	6.472655	ppb	5.251	4.830		33.333
165	Ho-IS	|		167564.877		ppb	1.243			180642.789
159	Tb-IS	|		144367.063		ppb	1.798			156396.999
207	Pb	|		6392.788	0.544358	ppb	2.884	3.145		50.000
203	Tl	|		27.778	0.006891	ppb	24.980	28.483		3.333
209	Bi-IS	>		105730.959		ppb	0.975			107554.478
51	V	|		683.350	1.455004	ppb	12.254	11.388		8.889
59	Co	|		146.667	0.117117	ppb	6.818	6.729		5.556
60	Ni	|		556.678	0.898140	ppb	12.575	12.655		3.333
75	As	|		1175.093	2.307956	ppb	2.354	5.799		494.218
71	Ga-ISK	>		65860.366		ppb	1.054			66915.258
82	Se-2	|		3.250	-0.068012	ppb	170.520	283.501		5.279
107	Ag-1	|		76.667	0.013129	ppb	19.924	43.910		43.333
115	In-ISK	|		56453.277		ppb	1.171			57556.557
45	Sc-ISK	>		168680.027		ppb	0.539			164281.522
23	Na	|		451209.992	1468.771495	ppb	0.488	0.317		833.358
39	K	|		1367367.285	1743.719073	ppb	0.163	0.449		60432.011
24	Mg	|		290476.816	783.936351	ppb	0.301	0.835		25.000
159	Tb-ISK	|		117734.523		ppb	0.992			119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 11:19:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.041

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		18440.789		ppb		2.600		19491.075
9	Be	|		105435.491	100.184770	ppb		1.550	1.369	4.444
10	B	|		73876.090	253.804210	ppb		0.832	0.904	143.334
27	Al	|		493215.812	102.729395	ppb		1.032	0.854	993.368
43	Ca-2	|		50910.556	5116.408048	ppb		0.473	0.616	31.667
49	Ti	|		40888.435	102.143082	ppb		0.866	0.675	95.556
52	Cr	|		552061.686	104.469093	ppb		0.544	0.596	7176.247
55	Mn	|		784274.914	105.724810	ppb		0.826	1.025	223.335
57	Fe	|		771366.716	5358.504988	ppb		0.201	0.181	4600.742
45	Sc-IS	>		825282.349		ppb		0.210		852224.834
66	Zn	|		78857.102	102.503146	ppb		1.972	1.767	194.446
86	Sr	|		131143.459	102.803482	ppb		0.197	0.077	-0.226
65	Cu	|		119409.662	102.476954	ppb		1.270	1.126	18.723
69	Ga-IS	|		258881.625		ppb		1.477		252563.057
95	Mo	|		122802.229	103.142382	ppb		0.464	0.652	32.222
115	In-IS	>		154774.539		ppb		0.906		159287.216
111	Cd	|		105985.743	98.600254	ppb		0.915	0.419	3.266
118	Sn	|		351022.551	100.975474	ppb		0.537	1.433	668.905
121	Sb	|		388932.241	100.869895	ppb		0.437	1.344	88.889
135	Ba	|		80460.417	99.067215	ppb		1.237	2.146	33.333
165	Ho-IS	|		168903.772		ppb		0.699		180642.789
159	Tb-IS	|		144622.814		ppb		0.307		156396.999
207	Pb	|		1123617.039	97.769565	ppb		1.038	0.978	50.000
203	Tl	|		343072.970	97.842497	ppb		0.774	0.993	3.333
209	Bi-IS	>		104257.948		ppb		0.291		107554.478
51	V	|		46170.044	99.874291	ppb		0.300	1.100	8.889
59	Co	|		117481.132	97.683954	ppb		1.207	1.281	5.556
60	Ni	|		61072.510	99.341164	ppb		1.582	1.072	3.333
75	As	|		29977.423	99.030229	ppb		0.826	0.229	494.218
71	Ga-ISK	>		65706.323		ppb		0.904		66915.258
82	Se-2	|		2769.500	96.557593	ppb		1.480	2.155	5.279
107	Ag-1	|		254016.265	98.367455	ppb		0.516	1.293	43.333
115	In-ISK	|		56267.209		ppb		1.029		57556.557
45	Sc-ISK	>		168093.387		ppb		1.897		164281.522
23	Na	|		1588650.958	5197.061939	ppb		1.189	1.194	833.358
39	K	|		3938870.097	5198.218508	ppb		0.571	1.677	60432.011
24	Mg	|		1903833.628	5156.944178	ppb		0.852	1.183	25.000
159	Tb-ISK	|		117946.281		ppb		1.291		119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 11:22:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.042

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		18655.507		ppb			1.085			19491.075
9	Be	|		13.333	0.008813	ppb		90.139	130.434			4.444
10	B	|		371.116	0.830520	ppb		3.401	7.181			143.334
27	Al	|		1054.484	0.024635	ppb		11.720	110.583			993.368
43	Ca-2	|		36.667	0.687172	ppb		20.830	109.054			31.667
49	Ti	|		82.222	-0.020278	ppb		37.669	404.865			95.556
52	Cr	|		5964.579	-0.161219	ppb		1.985	22.601			7176.247
55	Mn	|		430.007	0.030171	ppb		10.255	18.675			223.335
57	Fe	|		4391.787	0.296685	ppb		3.072	438.498			4600.742
45	Sc-IS	>		806082.210		ppb		1.227				852224.834
66	Zn	|		207.779	0.031748	ppb		12.041	101.806			194.446
86	Sr	|		18.638	0.014850	ppb		235.762	236.713			-0.226
65	Cu	|		140.344	0.107833	ppb		7.322	9.358			18.723
69	Ga-IS	|		240037.765		ppb		1.083				252563.057
95	Mo	|		668.905	0.548250	ppb		22.070	22.123			32.222
115	In-IS	>		153067.078		ppb		1.168				159287.216
111	Cd	|		13.040	0.009317	ppb		38.353	50.274			3.266
118	Sn	|		2223.507	0.460421	ppb		7.411	9.492			668.905
121	Sb	|		777.799	0.181503	ppb		8.808	8.912			88.889
135	Ba	|		41.111	0.011458	ppb		40.810	187.242			33.333
165	Ho-IS	|		163783.597		ppb		1.076				180642.789
159	Tb-IS	|		140625.559		ppb		1.742				156396.999
207	Pb	|		441.114	0.034533	ppb		6.857	6.987			50.000
203	Tl	|		76.667	0.021139	ppb		32.825	34.054			3.333
209	Bi-IS	>		103249.569		ppb		0.866				107554.478
51	V	|		20.000	0.024776	ppb		16.667	31.931			8.889
59	Co	|		16.667	0.009435	ppb		52.915	78.359			5.556
60	Ni	|		12.222	0.014623	ppb		41.660	55.263			3.333
75	As	|		642.507	0.543698	ppb		0.508	3.907			494.218
71	Ga-ISK	>		65235.296		ppb		1.477				66915.258
82	Se-2	|		1.242	-0.137313	ppb		90.428	28.801			5.279
107	Ag-1	|		311.115	0.104840	ppb		5.063	4.272			43.333
115	In-ISK	|		55547.903		ppb		1.459				57556.557
45	Sc-ISK	>		162648.570		ppb		1.430				164281.522
23	Na	|		17614.193	56.798947	ppb		3.255	4.064			833.358
39	K	|		70663.229	15.017133	ppb		0.709	8.690			60432.011
24	Mg	|		273.336	0.696977	ppb		16.997	20.189			25.000
159	Tb-ISK	|		114630.071		ppb		0.463				119999.290

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, March 19, 2020 12:12:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICIS-23447.057

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		18602.112		ppb			3.201	
9	Be	|		6.667		ppb			50.000	
10	B	|		261.114		ppb			6.425	
27	Al	|		903.362		ppb			5.232	
43	Ca-2	|		50.000		ppb			26.458	
49	Ti	|		56.667		ppb			11.765	
52	Cr	|		6932.794		ppb			2.846	
55	Mn	|		251.113		ppb			5.365	
57	Fe	|		5828.967		ppb			0.231	
45	Sc-IS	|>		829386.949		ppb			0.393	
66	Zn	|		343.337		ppb			3.501	
86	Sr	|		24.818		ppb			55.313	
65	Cu	|		158.318		ppb			4.862	
69	Ga-IS	|		251576.085		ppb			1.321	
95	Mo	|		12.222		ppb			41.660	
115	In-IS	|>		152493.425		ppb			0.816	
111	Cd	|		6.641		ppb			50.351	
118	Sn	|		365.560		ppb			12.447	
121	Sb	|		54.445		ppb			35.874	
135	Ba	|		25.556		ppb			15.061	
165	Ho-IS	|		169297.308		ppb			0.971	
159	Tb-IS	|		149324.609		ppb			3.011	
207	Pb	|		34.444		ppb			24.354	
203	Tl	|		11.111		ppb			75.498	
209	Bi-IS	|>		93744.391		ppb			1.380	
51	V	|		17.778		ppb			39.031	
59	Co	|		4.444		ppb			114.564	
60	Ni	|		2.222		ppb			173.205	
75	As	|		475.985		ppb			7.562	
71	Ga-ISK	|>		68164.462		ppb			0.494	
82	Se-2	|		4.268		ppb			143.481	
107	Ag-1	|		12.222		ppb			31.492	
115	In-ISK	|		57117.634		ppb			1.106	
45	Sc-ISK	|>		172559.413		ppb			1.484	
23	Na	|		20736.713		ppb			2.582	
39	K	|		65159.375		ppb			0.341	
24	Mg	|		63.333		ppb			4.558	
159	Tb-ISK	|		115863.960		ppb			0.209	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, March 19, 2020 12:15:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\IC-210761.058

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	17718.765		ppb		2.873		18602.112
9	Be	|	213949.094	200.000000	ppb	0.380	1.109		6.667
10	B	|	150055.132	500.000000	ppb	1.072	2.071		261.114
27	Al	|	931523.711	200.000000	ppb	0.638	1.715		903.362
43	Ca-2	|	100032.355	10200.000000	ppb	0.861	0.640		50.000
49	Ti	|	82505.401	200.000000	ppb	1.933	3.019		56.667
52	Cr	|	1108899.737	200.000000	ppb	1.426	2.239		6932.794
55	Mn	|	1567085.997	200.000000	ppb	0.714	1.669		251.113
57	Fe	|	1568584.616	10200.000000	ppb	0.270	1.086		5828.967
45	Sc-IS	>	838418.351		ppb	1.212			829386.949
66	Zn	|	162680.338	200.000000	ppb	2.637	2.815		343.337
86	Sr	|	258087.085	200.000000	ppb	1.712	2.739		24.818
65	Cu	|	249684.708	200.000000	ppb	1.371	1.473		158.318
69	Ga-IS	|	286080.707		ppb	0.996			251576.085
95	Mo	|	248809.134	200.000000	ppb	0.369	1.121		12.222
115	In-IS	>	151028.768		ppb	0.520			152493.425
111	Cd	|	211600.965	200.000000	ppb	1.392	1.533		6.641
118	Sn	|	683083.684	200.000000	ppb	1.284	1.799		365.560
121	Sb	|	757165.439	200.000000	ppb	1.031	1.543		54.445
135	Ba	|	165429.543	200.000000	ppb	2.954	3.307		25.556
165	Ho-IS	|	172478.504		ppb	1.754			169297.308
159	Tb-IS	|	153424.142		ppb	2.080			149324.609
207	Pb	|	2001123.645	200.000000	ppb	0.451	2.229		34.444
203	Tl	|	629402.667	200.000000	ppb	1.867	3.658		11.111
209	Bi-IS	>	90905.040		ppb	1.774			93744.391
51	V	|	94305.855	200.000000	ppb	1.527	1.209		17.778
59	Co	|	242904.364	200.000000	ppb	0.361	0.419		4.444
60	Ni	|	124807.323	200.000000	ppb	1.284	1.611		2.222
75	As	|	61075.124	200.000000	ppb	1.243	0.899		475.985
71	Ga-ISK	>	67476.763		ppb	0.359			68164.462
82	Se-2	|	5779.090	200.000000	ppb	0.511	0.526		4.268
107	Ag-1	|	499805.100	200.000000	ppb	0.163	0.198		12.222
115	In-ISK	|	58247.479		ppb	1.597			57117.634
45	Sc-ISK	>	173081.115		ppb	0.778			172559.413
23	Na	|	3247355.196	10200.000000	ppb	0.432	0.771		20736.713
39	K	|	8063380.012	10200.000000	ppb	0.520	0.349		65159.375
24	Mg	|	3907857.660	10200.000000	ppb	0.732	0.943		63.333
159	Tb-ISK	|	118384.500		ppb	0.300			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 12:18:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.059

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	18061.412		ppb		1.689		18602.112
9	Be	|	109398.417	103.820553	ppb	0.909	1.381		6.667
10	B	|	75898.893	256.294491	ppb	1.409	1.149		261.114
27	Al	|	472809.568	102.956057	ppb	1.008	1.068		903.362
43	Ca-2	|	50418.843	5216.432811	ppb	2.160	1.385		50.000
49	Ti	|	41220.500	101.353326	ppb	1.172	0.476		56.667
52	Cr	|	554153.021	100.825274	ppb	2.054	1.467		6932.794
55	Mn	|	776365.173	100.565572	ppb	1.141	0.365		251.113
57	Fe	|	775160.404	5098.043178	ppb	0.826	0.810		5828.967
45	Sc-IS	>	825814.880		ppb	0.778			829386.949
66	Zn	|	82094.131	102.248001	ppb	1.556	1.002		343.337
86	Sr	|	128438.012	101.028704	ppb	1.701	2.221		24.818
65	Cu	|	125261.410	101.793173	ppb	1.731	0.963		158.318
69	Ga-IS	|	266813.114		ppb	0.784			251576.085
95	Mo	|	121944.975	99.504586	ppb	1.204	0.787		12.222
115	In-IS	>	148451.323		ppb	1.588			152493.425
111	Cd	|	103290.077	99.330288	ppb	1.131	1.673		6.641
118	Sn	|	341992.075	101.824051	ppb	1.025	1.440		365.560
121	Sb	|	377438.003	101.425551	ppb	0.910	1.030		54.445
135	Ba	|	83044.032	102.148798	ppb	1.317	2.884		25.556
165	Ho-IS	|	170154.148		ppb	1.477			169297.308
159	Tb-IS	|	153229.623		ppb	0.395			149324.609
207	Pb	|	1006474.723	99.298038	ppb	0.355	1.259		34.444
203	Tl	|	312619.515	98.048471	ppb	1.343	2.077		11.111
209	Bi-IS	>	92071.328		ppb	1.142			93744.391
51	V	|	46865.640	100.740360	ppb	0.824	2.814		17.778
59	Co	|	120502.798	100.577552	ppb	1.000	2.787		4.444
60	Ni	|	61787.778	100.360000	ppb	0.340	2.223		2.222
75	As	|	30915.294	101.849300	ppb	1.461	1.628		475.985
71	Ga-ISK	>	66588.208		ppb	2.112			68164.462
82	Se-2	|	2867.535	100.499880	ppb	1.393	0.814		4.268
107	Ag-1	|	256809.999	104.168134	ppb	0.526	2.462		12.222
115	In-ISK	|	57728.358		ppb	1.927			57117.634
45	Sc-ISK	>	169401.837		ppb	0.666			172559.413
23	Na	|	1654103.776	5276.735810	ppb	0.655	0.426		20736.713
39	K	|	4091396.844	5247.891053	ppb	1.189	1.417		65159.375
24	Mg	|	1966311.490	5243.774418	ppb	0.662	1.148		63.333
159	Tb-ISK	|	117814.488		ppb	0.499			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 12:21:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.060

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		17697.622		ppb		0.702		18602.112
9	Be	|		16.667	0.009714	ppb	52.915	87.499		6.667
10	B	|		512.231	0.874945	ppb	3.339	6.409		261.114
27	Al	|		897.806	0.001937	ppb	7.029	729.537		903.362
43	Ca-2	|		48.333	-0.087816	ppb	41.808	2424.646		50.000
49	Ti	|		82.222	0.065927	ppb	16.384	51.493		56.667
52	Cr	|		5772.277	-0.195916	ppb	2.018	9.676		6932.794
55	Mn	|		323.337	0.009998	ppb	7.783	34.646		251.113
57	Fe	|		4823.037	-6.126513	ppb	3.255	16.259		5828.967
45	Sc-IS	>		816270.721		ppb	0.429			829386.949
66	Zn	|		250.002	-0.111207	ppb	12.000	34.485		343.337
86	Sr	|		3.082	-0.016997	ppb	901.730	130.305		24.818
65	Cu	|		168.048	0.010083	ppb	3.046	46.864		158.318
69	Ga-IS	|		246182.117		ppb	1.051			251576.085
95	Mo	|		435.562	0.349683	ppb	10.447	10.800		12.222
115	In-IS	>		147810.303		ppb	0.687			152493.425
111	Cd	|		16.863	0.010094	ppb	49.895	81.060		6.641
118	Sn	|		2272.403	0.574124	ppb	0.472	1.367		365.560
121	Sb	|		170.001	0.031653	ppb	10.376	15.649		54.445
135	Ba	|		38.889	0.017463	ppb	17.843	50.029		25.556
165	Ho-IS	|		164487.206		ppb	1.328			169297.308
159	Tb-IS	|		148021.859		ppb	1.056			149324.609
207	Pb	|		438.892	0.040583	ppb	14.437	17.669		34.444
203	Tl	|		108.889	0.031123	ppb	15.408	16.066		11.111
209	Bi-IS	>		90952.012		ppb	1.886			93744.391
51	V	|		8.889	-0.018249	ppb	57.282	60.847		17.778
59	Co	|		26.667	0.018506	ppb	25.000	30.122		4.444
60	Ni	|		26.667	0.039420	ppb	25.000	25.904		2.222
75	As	|		496.392	0.094555	ppb	10.330	174.527		475.985
71	Ga-ISK	>		67002.333		ppb	1.361			68164.462
82	Se-2	|		1.893	-0.080394	ppb	281.104	229.719		4.268
107	Ag-1	|		293.336	0.113371	ppb	5.905	5.939		12.222
115	In-ISK	|		57331.367		ppb	0.803			57117.634
45	Sc-ISK	>		168886.878		ppb	0.187			172559.413
23	Na	|		21130.616	2.705719	ppb	0.392	5.293		20736.713
39	K	|		67457.786	4.816230	ppb	0.517	7.582		65159.375
24	Mg	|		403.339	0.912943	ppb	13.599	15.907		63.333
159	Tb-ISK	|		115135.441		ppb	0.337			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, March 19, 2020 12:23:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICVL-210771.061

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	17724.327		ppb	2.769			18602.112
9	Be	|	1115.599	1.054981	ppb	5.092	6.445		6.667
10	B	|	15353.806	51.236023	ppb	2.669	1.884		261.114
27	Al	|	229385.038	49.952575	ppb	1.622	3.010		903.362
43	Ca-2	|	515.009	48.282943	ppb	2.569	2.593		50.000
49	Ti	|	473.341	1.030198	ppb	12.519	15.697		56.667
52	Cr	|	11270.004	0.809140	ppb	3.906	12.571		6932.794
55	Mn	|	7945.543	0.999405	ppb	2.279	3.789		251.113
57	Fe	|	12331.988	43.424329	ppb	1.832	5.364		5828.967
45	Sc-IS	>	824310.301		ppb	1.414			829386.949
66	Zn	|	5036.443	5.883219	ppb	1.770	1.193		343.337
86	Sr	|	1295.992	1.001585	ppb	8.130	7.517		24.818
65	Cu	|	1452.374	1.056018	ppb	4.464	5.718		158.318
69	Ga-IS	|	251581.667		ppb	1.121			251576.085
95	Mo	|	1198.939	0.970871	ppb	9.041	9.964		12.222
115	In-IS	>	148979.127		ppb	1.838			152493.425
111	Cd	|	1058.633	1.007460	ppb	9.661	8.489		6.641
118	Sn	|	3874.971	1.044062	ppb	6.085	4.677		365.560
121	Sb	|	3866.079	1.021287	ppb	3.318	3.954		54.445
135	Ba	|	834.469	0.992823	ppb	4.799	6.290		25.556
165	Ho-IS	|	167893.078		ppb	0.752			169297.308
159	Tb-IS	|	149538.632		ppb	0.929			149324.609
207	Pb	|	9646.832	0.937841	ppb	0.491	0.878		34.444
203	Tl	|	3041.435	0.939845	ppb	1.848	1.940		11.111
209	Bi-IS	>	93103.528		ppb	0.793			93744.391
51	V	|	505.565	1.047619	ppb	4.488	4.235		17.778
59	Co	|	1226.719	1.018565	ppb	5.206	5.751		4.444
60	Ni	|	654.459	1.057552	ppb	4.894	4.801		2.222
75	As	|	804.389	1.130828	ppb	4.647	10.584		475.985
71	Ga-ISK	>	66689.748		ppb	0.543			68164.462
82	Se-2	|	37.586	1.171914	ppb	24.481	28.031		4.268
107	Ag-1	|	2528.002	1.018681	ppb	2.799	2.595		12.222
115	In-ISK	|	56877.296		ppb	1.098			57117.634
45	Sc-ISK	>	167581.703		ppb	0.991			172559.413
23	Na	|	34585.162	47.185205	ppb	2.301	7.292		20736.713
39	K	|	105134.337	55.135919	ppb	0.356	2.151		65159.375
24	Mg	|	19770.340	53.133101	ppb	1.493	1.760		63.333
159	Tb-ISK	|	114676.467		ppb	1.046			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23393-A-1-A @50

Autosampler Position: 110

Sample Date/Time: Thursday, March 19, 2020 12:26:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23393-A-1-A @50.062

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23194.376		ppb	2.298		18602.112
9	Be	10.000	0.001932	ppb	57.735	246.730	6.667
10	B	26834.078	77.859541	ppb	2.519	2.145	261.114
27	Al	7255.177	1.174483	ppb	3.303	3.532	903.362
43	Ca-2	86722.431	7773.717577	ppb	0.126	0.357	50.000
49	Ti	724.463	1.405907	ppb	8.759	9.624	56.667
52	Cr	13317.316	0.853117	ppb	1.521	3.114	6932.794
55	Mn	1368.955	0.121235	ppb	5.133	6.720	251.113
57	Fe	13930.126	41.477859	ppb	3.119	5.464	5828.967
45	Sc-IS	> 953547.483		ppb	0.406		829386.949
66	Zn	434.451	0.043060	ppb	6.435	72.394	343.337
86	Sr	195416.485	133.114474	ppb	1.243	0.875	24.818
65	Cu	656.846	0.334557	ppb	5.047	6.409	158.318
69	Ga-IS	260520.152		ppb	1.947		251576.085
95	Mo	546.677	0.376319	ppb	11.424	11.294	12.222
115	In-IS	> 159058.961		ppb	0.516		152493.425
111	Cd	9.963	0.002700	ppb	84.040	276.525	6.641
118	Sn	1398.958	0.283056	ppb	7.307	10.056	365.560
121	Sb	147.779	0.022829	ppb	14.676	24.108	54.445
135	Ba	170.001	0.164432	ppb	20.751	24.088	25.556
165	Ho-IS	181407.889		ppb	0.437		169297.308
159	Tb-IS	157614.726		ppb	0.461		149324.609
207	Pb	276.668	0.024384	ppb	4.819	4.572	34.444
203	Tl	43.333	0.010391	ppb	7.692	11.608	11.111
209	Bi-IS	> 90633.284		ppb	1.090		93744.391
51	V	718.907	1.407941	ppb	9.067	9.279	17.778
59	Co	11.111	0.005045	ppb	45.826	78.557	4.444
60	Ni	107.778	0.160141	ppb	17.586	17.873	2.222
75	As	608.444	0.348111	ppb	10.129	55.449	475.985
71	Ga-ISK	> 71195.858		ppb	0.108		68164.462
82	Se-2	79.151	2.451438	ppb	15.083	15.875	4.268
107	Ag-1	84.445	0.027185	ppb	2.279	2.801	12.222
115	In-ISK	60067.942		ppb	0.250		57117.634
45	Sc-ISK	> 193628.994		ppb	0.721		172559.413
23	Na	72760349.647	205539.179005	ppb	0.565	0.842	20736.713
39	K	6489591.829	7314.803938	ppb	0.046	0.764	65159.375
24	Mg	10436078.810	24349.140781	ppb	1.045	1.282	63.333
159	Tb-ISK	125541.907		ppb	0.851		115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23393-A-2-A @50

Autosampler Position: 111

Sample Date/Time: Thursday, March 19, 2020 12:29:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23393-A-2-A @50.063

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		22967.337		ppb		0.670		18602.112
9	Be	|		8.889	0.000945	ppb	108.253	829.467		6.667
10	B	|		27509.796	79.184378	ppb	0.446	1.200		261.114
27	Al	|		6709.369	1.060173	ppb	12.329	13.774		903.362
43	Ca-2	|		87057.953	7738.986428	ppb	2.996	2.759		50.000
49	Ti	|		691.128	1.323543	ppb	10.393	12.294		56.667
52	Cr	|		13479.690	0.861435	ppb	0.178	3.018		6932.794
55	Mn	|		1491.189	0.133589	ppb	1.056	2.996		251.113
57	Fe	|		14772.080	45.603366	ppb	2.193	1.660		5828.967
45	Sc-IS	>		961537.386		ppb	1.390			829386.949
66	Zn	|		450.007	0.056197	ppb	7.066	72.625		343.337
86	Sr	|		195994.108	132.404030	ppb	2.285	1.992		24.818
65	Cu	|		648.951	0.325257	ppb	2.287	2.665		158.318
69	Ga-IS	|		261402.959		ppb	2.294			251576.085
95	Mo	|		440.007	0.298586	ppb	3.030	4.567		12.222
115	In-IS	>		159186.026		ppb	0.041			152493.425
111	Cd	|		6.854	-0.000070	ppb	28.082	2462.657		6.641
118	Sn	|		910.029	0.146861	ppb	4.161	7.231		365.560
121	Sb	|		106.667	0.012490	ppb	31.250	66.936		54.445
135	Ba	|		145.556	0.136377	ppb	21.766	26.697		25.556
165	Ho-IS	|		180953.555		ppb	1.921			169297.308
159	Tb-IS	|		157602.487		ppb	1.508			149324.609
207	Pb	|		163.334	0.012962	ppb	7.070	9.835		34.444
203	Tl	|		33.333	0.007145	ppb	10.000	14.155		11.111
209	Bi-IS	>		91055.948		ppb	0.771			93744.391
51	V	|		833.358	1.614949	ppb	1.442	2.913		17.778
59	Co	|		6.667	0.001521	ppb	86.603	292.939		4.444
60	Ni	|		115.556	0.169604	ppb	9.273	10.246		2.222
75	As	|		655.589	0.466907	ppb	4.696	20.399		475.985
71	Ga-ISK	>		72210.960		ppb	1.471			68164.462
82	Se-2	|		85.500	2.620694	ppb	2.432	2.194		4.268
107	Ag-1	|		53.333	0.015089	ppb	16.536	20.982		12.222
115	In-ISK	|		61078.817		ppb	1.307			57117.634
45	Sc-ISK	>		194678.845		ppb	1.581			172559.413
23	Na	|		73885686.084	207611.553665	ppb	0.860	1.333		20736.713
39	K	|		6596848.609	7396.993893	ppb	0.781	1.051		65159.375
24	Mg	|		10670928.653	24766.605795	ppb	0.236	1.790		63.333
159	Tb-ISK	|		127444.648		ppb	0.913			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23393-A-3-A @50

Autosampler Position: 112

Sample Date/Time: Thursday, March 19, 2020 12:32:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23393-A-3-A @50.064

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23541.614		ppb	2.793		18602.112
9	Be	10.000	0.001894	ppb	66.667	293.044	6.667
10	B	27793.683	80.010038	ppb	1.693	1.748	261.114
27	Al	3881.639	0.531161	ppb	4.778	6.641	903.362
43	Ca-2	87748.713	7801.032920	ppb	1.570	1.580	50.000
49	Ti	687.794	1.316292	ppb	4.855	6.685	56.667
52	Cr	13656.525	0.889646	ppb	0.739	5.048	6932.794
55	Mn	1321.172	0.114586	ppb	7.174	8.049	251.113
57	Fe	15372.714	49.024984	ppb	2.086	1.580	5828.967
45	Sc-IS	> 961506.215		ppb	1.336		829386.949
66	Zn	458.896	0.065146	ppb	6.749	41.336	343.337
86	Sr	197556.400	133.465915	ppb	0.959	0.474	24.818
65	Cu	662.199	0.334388	ppb	9.891	12.854	158.318
69	Ga-IS	263099.904		ppb	1.527		251576.085
95	Mo	428.895	0.290725	ppb	5.833	6.209	12.222
115	In-IS	> 159365.063		ppb	0.321		152493.425
111	Cd	6.877	-0.000062	ppb	73.765	7278.822	6.641
118	Sn	722.241	0.094448	ppb	4.737	10.193	365.560
121	Sb	107.778	0.012744	ppb	12.499	27.114	54.445
135	Ba	151.112	0.142529	ppb	4.592	5.201	25.556
165	Ho-IS	182765.048		ppb	0.708		169297.308
159	Tb-IS	158881.979		ppb	0.405		149324.609
207	Pb	127.778	0.009358	ppb	23.381	33.053	34.444
203	Tl	27.778	0.005338	ppb	59.195	97.544	11.111
209	Bi-IS	> 91599.423		ppb	1.224		93744.391
51	V	887.805	1.687981	ppb	7.216	7.351	17.778
59	Co	11.111	0.004756	ppb	45.826	80.546	4.444
60	Ni	105.556	0.151431	ppb	10.151	10.296	2.222
75	As	660.406	0.441702	ppb	4.719	20.969	475.985
71	Ga-ISK	> 73651.594		ppb	0.105		68164.462
82	Se-2	80.818	2.418065	ppb	13.047	13.898	4.268
107	Ag-1	38.889	0.009419	ppb	34.641	52.595	12.222
115	In-ISK	61472.360		ppb	1.711		57117.634
45	Sc-ISK	> 196632.996		ppb	1.053		172559.413
23	Na	74443751.737	207090.361224	ppb	0.542	1.116	20736.713
39	K	6590079.934	7314.579528	ppb	0.642	0.604	65159.375
24	Mg	10501530.664	24130.892844	ppb	1.565	2.574	63.333
159	Tb-ISK	127095.613		ppb	1.508		115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23393-A-4-A @50

Autosampler Position: 113

Sample Date/Time: Thursday, March 19, 2020 12:34:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23393-A-4-A @50.065

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23500.430		ppb	2.006		18602.112
9	Be	7.778	0.000009	ppb	24.74416743	6.52	6.667
10	B	28187.782	80.777596	ppb	0.526	0.441	261.114
27	Al	5411.026	0.812851	ppb	4.600	4.901	903.362
43	Ca-2	89427.470	7912.905301	ppb	2.390	1.730	50.000
49	Ti	667.793	1.266923	ppb	6.018	6.793	56.667
52	Cr	13438.541	0.845248	ppb	1.677	5.875	6932.794
55	Mn	1541.194	0.138336	ppb	3.254	3.832	251.113
57	Fe	15938.891	51.845264	ppb	2.541	5.095	5828.967
45	Sc-IS	> 965922.667		ppb	0.666		829386.949
66	Zn	506.676	0.114098	ppb	7.472	33.012	343.337
86	Sr	199159.709	133.927034	ppb	2.256	2.039	24.818
65	Cu	620.227	0.303314	ppb	7.272	10.965	158.318
69	Ga-IS	265020.801		ppb	2.078		251576.085
95	Mo	432.229	0.291622	ppb	2.226	1.889	12.222
115	In-IS	> 161000.755		ppb	1.662		152493.425
111	Cd	4.648	-0.002117	ppb	83.030	158.860	6.641
118	Sn	673.349	0.079123	ppb	6.931	19.650	365.560
121	Sb	101.111	0.010766	ppb	18.746	40.376	54.445
135	Ba	167.779	0.159461	ppb	12.773	13.457	25.556
165	Ho-IS	181068.151		ppb	1.160		169297.308
159	Tb-IS	159801.209		ppb	1.768		149324.609
207	Pb	98.889	0.006750	ppb	7.017	10.932	34.444
203	Tl	20.000	0.003062	ppb	28.868	61.162	11.111
209	Bi-IS	> 89057.847		ppb	0.373		93744.391
51	V	906.696	1.733885	ppb	6.809	8.676	17.778
59	Co	4.444	-0.000233	ppb	86.603	1260.648	4.444
60	Ni	100.000	0.144094	ppb	8.819	10.927	2.222
75	As	675.377	0.496344	ppb	6.694	29.456	475.985
71	Ga-ISK	> 73340.036		ppb	1.765		68164.462
82	Se-2	75.182	2.250554	ppb	3.265	5.198	4.268
107	Ag-1	24.444	0.004139	ppb	31.492	65.630	12.222
115	In-ISK	61753.025		ppb	0.739		57117.634
45	Sc-ISK	> 197248.212		ppb	1.687		172559.413
23	Na	75543069.463	209520.851072	ppb	0.322	1.787	20736.713
39	K	6776699.428	7501.392367	ppb	0.164	1.555	65159.375
24	Mg	10693680.536	24493.673080	ppb	0.961	0.850	63.333
159	Tb-ISK	128722.018		ppb	0.801		115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23393-A-5-A @50

Autosampler Position: 114

Sample Date/Time: Thursday, March 19, 2020 12:37:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23393-A-5-A @50.066

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23404.716		ppb	1.714		18602.112
9	Be	6.667	-0.000888	ppb	50.000	301.441	6.667
10	B	25207.777	72.355163	ppb	0.866	1.347	261.114
27	Al	4809.698	0.703456	ppb	0.080	1.129	903.362
43	Ca-2	79281.064	7035.371238	ppb	0.972	1.384	50.000
49	Ti	608.902	1.147486	ppb	13.569	16.165	56.667
52	Cr	13286.177	0.826862	ppb	2.111	3.860	6932.794
55	Mn	1420.071	0.125400	ppb	5.769	7.852	251.113
57	Fe	15311.536	48.539700	ppb	1.836	4.444	5828.967
45	Sc-IS	> 963188.492		ppb	0.799		829386.949
66	Zn	456.674	0.062260	ppb	7.039	58.989	343.337
86	Sr	177707.095	119.834145	ppb	1.724	0.940	24.818
65	Cu	529.419	0.241105	ppb	0.383	1.816	158.318
69	Ga-IS	264726.772		ppb	2.412		251576.085
95	Mo	334.448	0.223918	ppb	13.273	13.095	12.222
115	In-IS	> 160131.741		ppb	0.262		152493.425
111	Cd	4.853	-0.001893	ppb	40.768	92.712	6.641
118	Sn	533.343	0.041318	ppb	8.861	32.524	365.560
121	Sb	86.667	0.007352	ppb	26.647	78.499	54.445
135	Ba	154.445	0.145487	ppb	9.969	11.771	25.556
165	Ho-IS	182661.608		ppb	1.309		169297.308
159	Tb-IS	159850.663		ppb	1.842		149324.609
207	Pb	105.556	0.007267	ppb	11.090	15.510	34.444
203	Tl	24.444	0.004402	ppb	28.386	51.889	11.111
209	Bi-IS	> 90378.338		ppb	0.978		93744.391
51	V	861.137	1.642542	ppb	5.256	5.945	17.778
59	Co	7.778	0.002277	ppb	65.465	170.964	4.444
60	Ni	84.445	0.120816	ppb	19.472	19.501	2.222
75	As	555.802	0.131445	ppb	6.802	85.850	475.985
71	Ga-ISK	> 73388.024		ppb	0.577		68164.462
82	Se-2	76.539	2.291871	ppb	16.146	17.486	4.268
107	Ag-1	34.444	0.007841	ppb	20.145	33.377	12.222
115	In-ISK	61633.703		ppb	0.968		57117.634
45	Sc-ISK	> 199074.240		ppb	1.057		172559.413
23	Na	67837914.478	186382.746841	ppb	0.914	0.310	20736.713
39	K	6054980.551	6630.566428	ppb	0.897	0.967	65159.375
24	Mg	9727207.838	22074.585507	ppb	1.104	1.177	63.333
159	Tb-ISK	127846.856		ppb	0.256		115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 12:40:28

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.067

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19135.034		ppb		2.417		18602.112
9	Be	|	114312.255	104.215542	ppb	1.355	2.270		6.667
10	B	|	79438.072	257.721925	ppb	1.706	2.744		261.114
27	Al	|	474351.550	99.227349	ppb	1.733	2.726		903.362
43	Ca-2	|	52121.583	5180.437348	ppb	1.028	0.874		50.000
49	Ti	|	42620.149	100.671996	ppb	0.212	1.225		56.667
52	Cr	|	564164.184	98.593844	ppb	1.800	2.781		6932.794
55	Mn	|	795268.084	98.969444	ppb	1.131	2.248		251.113
57	Fe	|	781060.985	4933.327504	ppb	1.114	1.541		5828.967
45	Sc-IS	>	859723.685		ppb	1.186			829386.949
66	Zn	|	83722.415	100.169826	ppb	1.201	1.958		343.337
86	Sr	|	129585.513	97.920677	ppb	1.452	2.563		24.818
65	Cu	|	127561.212	99.579800	ppb	1.774	1.734		158.318
69	Ga-IS	|	272694.970		ppb	1.142			251576.085
95	Mo	|	123088.026	96.491074	ppb	0.883	1.994		12.222
115	In-IS	>	151856.898		ppb	1.347			152493.425
111	Cd	|	105652.692	99.330431	ppb	0.990	2.294		6.641
118	Sn	|	344226.836	100.192531	ppb	0.592	1.751		365.560
121	Sb	|	381870.345	100.328706	ppb	1.178	2.526		54.445
135	Ba	|	84254.455	101.312164	ppb	1.917	3.254		25.556
165	Ho-IS	|	176160.631		ppb	0.713			169297.308
159	Tb-IS	|	158747.163		ppb	0.477			149324.609
207	Pb	|	1015502.640	100.878831	ppb	0.191	0.853		34.444
203	Tl	|	314399.002	99.281665	ppb	1.262	1.444		11.111
209	Bi-IS	>	91438.388		ppb	1.021			93744.391
51	V	|	49177.841	101.941496	ppb	1.087	1.719		17.778
59	Co	|	124928.341	100.552652	ppb	0.854	1.360		4.444
60	Ni	|	64431.642	100.925667	ppb	0.396	0.640		2.222
75	As	|	31859.375	101.225123	ppb	1.062	1.133		475.985
71	Ga-ISK	>	69028.599		ppb	0.682			68164.462
82	Se-2	|	2979.234	100.723911	ppb	1.816	2.476		4.268
107	Ag-1	|	265281.671	103.769744	ppb	0.852	1.303		12.222
115	In-ISK	|	60692.713		ppb	1.606			57117.634
45	Sc-ISK	>	178742.481		ppb	1.235			172559.413
23	Na	|	1750851.050	5293.542007	ppb	1.951	1.276		20736.713
39	K	|	4202269.522	5106.363103	ppb	0.694	0.901		65159.375
24	Mg	|	2065083.801	5219.131551	ppb	1.426	0.601		63.333
159	Tb-ISK	|	121894.529		ppb	0.963			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 12:43:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.068

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18669.972		ppb	1.771		18602.112
9	Be	17.778	0.010454	ppb	39.031	61.766	6.667
10	B	485.564	0.755888	ppb	10.643	24.575	261.114
27	Al	870.026	-0.007474	ppb	1.991	73.836	903.362
43	Ca-2	40.000	-1.033764	ppb	12.500	53.313	50.000
49	Ti	110.000	0.130605	ppb	13.209	28.975	56.667
52	Cr	6235.806	-0.129504	ppb	3.420	28.528	6932.794
55	Mn	285.558	0.004389	ppb	11.923	99.094	251.113
57	Fe	5192.055	-4.247778	ppb	3.291	28.504	5828.967
45	Sc-IS	> 830563.573		ppb	0.959		829386.949
66	Zn	223.335	-0.149868	ppb	7.756	13.918	343.337
86	Sr	23.707	-0.001048	ppb	129.013	2256.643	24.818
65	Cu	174.819	0.013100	ppb	18.058	191.304	158.318
69	Ga-IS	251666.308		ppb	0.347		251576.085
95	Mo	392.228	0.307966	ppb	23.404	23.318	12.222
115	In-IS	> 147221.678		ppb	1.027		152493.425
111	Cd	10.287	0.003793	ppb	50.230	135.169	6.641
118	Sn	1981.249	0.489284	ppb	5.697	6.641	365.560
121	Sb	152.223	0.027017	ppb	10.802	17.001	54.445
135	Ba	34.444	0.012195	ppb	24.354	89.127	25.556
165	Ho-IS	169251.308		ppb	1.552		169297.308
159	Tb-IS	152154.958		ppb	1.161		149324.609
207	Pb	341.113	0.030902	ppb	6.864	6.775	34.444
203	Tl	77.778	0.021370	ppb	27.885	31.636	11.111
209	Bi-IS	> 90464.434		ppb	0.907		93744.391
51	V	28.889	0.022132	ppb	24.019	63.512	17.778
59	Co	11.111	0.005280	ppb	62.450	106.234	4.444
60	Ni	14.444	0.018931	ppb	13.323	14.470	2.222
75	As	508.567	0.075073	ppb	3.623	93.989	475.985
71	Ga-ISK	> 69493.080		ppb	1.350		68164.462
82	Se-2	8.265	0.132187	ppb	30.479	66.553	4.268
107	Ag-1	248.891	0.091951	ppb	8.610	10.498	12.222
115	In-ISK	59317.506		ppb	1.431		57117.634
45	Sc-ISK	> 174037.068		ppb	0.777		172559.413
23	Na	24698.001	11.894262	ppb	1.536	7.682	20736.713
39	K	68794.144	3.902037	ppb	0.976	11.677	65159.375
24	Mg	573.345	1.322043	ppb	18.650	20.773	63.333
159	Tb-ISK	117745.947		ppb	0.942		115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23586-A-1-A @5

Autosampler Position: 121

Sample Date/Time: Thursday, March 19, 2020 12:46:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23586-A-1-A @5.069

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	24989.616		ppb	0.356			18602.112
9	Be	|	11.111	0.003518	ppb	17.321	46.357		6.667
10	B	|	76088.771	239.332595	ppb	0.857	1.043		261.114
27	Al	|	195660.948	39.576415	ppb	1.308	1.793		903.362
43	Ca-2	|	203676.680	19649.766446	ppb	0.333	0.987		50.000
49	Ti	|	665.571	1.387003	ppb	7.764	7.197		56.667
52	Cr	|	9557.642	0.369230	ppb	2.205	15.283		6932.794
55	Mn	|	206356.548	24.881469	ppb	1.295	1.641		251.113
57	Fe	|	24424.194	112.338459	ppb	0.143	1.819		5828.967
45	Sc-IS	>	886400.540		ppb	1.284			829386.949
66	Zn	|	7306.313	8.088153	ppb	1.489	2.941		343.337
86	Sr	|	309737.598	227.013551	ppb	1.166	1.700		24.818
65	Cu	|	754.794	0.443864	ppb	7.696	9.404		158.318
69	Ga-IS	|	258496.777		ppb	0.950			251576.085
95	Mo	|	7473.066	5.672150	ppb	2.191	2.274		12.222
115	In-IS	>	150545.160		ppb	0.643			152493.425
111	Cd	|	4.307	-0.002130	ppb	160.513	306.783		6.641
118	Sn	|	1243.388	0.259280	ppb	4.574	5.620		365.560
121	Sb	|	2196.836	0.568040	ppb	4.532	5.320		54.445
135	Ba	|	29889.017	36.221855	ppb	1.479	0.854		25.556
165	Ho-IS	|	178804.261		ppb	0.443			169297.308
159	Tb-IS	|	158978.596		ppb	0.294			149324.609
207	Pb	|	686.673	0.067433	ppb	12.252	13.352		34.444
203	Tl	|	20.000	0.003129	ppb	60.093	126.225		11.111
209	Bi-IS	>	88171.266		ppb	0.624			93744.391
51	V	|	304.448	0.591420	ppb	3.345	3.968		17.778
59	Co	|	287.781	0.227045	ppb	1.769	1.439		4.444
60	Ni	|	1854.565	2.889209	ppb	5.634	5.267		2.222
75	As	|	868.533	1.235581	ppb	8.927	20.446		475.985
71	Ga-ISK	>	69313.303		ppb	0.496			68164.462
82	Se-2	|	169.566	5.569254	ppb	8.055	7.792		4.268
107	Ag-1	|	48.889	0.014198	ppb	17.159	22.621		12.222
115	In-ISK	|	59761.153		ppb	0.623			57117.634
45	Sc-ISK	>	181754.498		ppb	0.693			172559.413
23	Na	|	31023471.533	93326.495405	ppb	0.272	0.508		20736.713
39	K	|	5785961.345	6943.573811	ppb	0.959	1.212		65159.375
24	Mg	|	3300476.289	8203.888258	ppb	1.195	1.791		63.333
159	Tb-ISK	|	122221.983		ppb	1.075			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23587-A-1-A @5

Autosampler Position: 122

Sample Date/Time: Thursday, March 19, 2020 12:48:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23587-A-1-A @5.070

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		24483.197		ppb		3.048		18602.112
9	Be	|		10.000	0.002625	ppb	57.735	196.697		6.667
10	B	|		55463.095	175.765375	ppb	3.398	3.148		261.114
27	Al	|		221832.604	45.295281	ppb	1.337	1.143		903.362
43	Ca-2	|		192349.660	18721.480602	ppb	0.706	0.568		50.000
49	Ti	|		767.798	1.638274	ppb	4.782	5.423		56.667
52	Cr	|		9346.390	0.346912	ppb	0.915	5.243		6932.794
55	Mn	|		169592.986	20.624490	ppb	0.790	0.571		251.113
57	Fe	|		20667.165	90.267471	ppb	2.098	2.622		5828.967
45	Sc-IS	|>		878524.109		ppb	0.262			829386.949
66	Zn	|		10765.166	12.228995	ppb	0.626	0.538		343.337
86	Sr	|		289412.659	213.991730	ppb	1.077	0.816		24.818
65	Cu	|		1054.432	0.678335	ppb	5.762	7.143		158.318
69	Ga-IS	|		255404.523		ppb	1.906			251576.085
95	Mo	|		7565.336	5.793426	ppb	0.775	0.514		12.222
115	In-IS	|>		150099.174		ppb	0.968			152493.425
111	Cd	|		15.224	0.008280	ppb	25.015	44.845		6.641
118	Sn	|		781.133	0.124309	ppb	7.826	16.356		365.560
121	Sb	|		2486.883	0.646650	ppb	2.838	1.925		54.445
135	Ba	|		29531.616	35.901324	ppb	2.509	3.115		25.556
165	Ho-IS	|		176980.712		ppb	1.011			169297.308
159	Tb-IS	|		157405.764		ppb	0.199			149324.609
207	Pb	|		5772.677	0.592069	ppb	3.149	2.845		34.444
203	Tl	|		14.444	0.001316	ppb	66.617	239.991		11.111
209	Bi-IS	|>		88062.838		ppb	1.121			93744.391
51	V	|		382.227	0.760730	ppb	6.125	5.792		17.778
59	Co	|		254.447	0.202555	ppb	10.508	10.063		4.444
60	Ni	|		1641.206	2.585712	ppb	9.139	9.098		2.222
75	As	|		813.906	1.088913	ppb	5.570	11.967		475.985
71	Ga-ISK	|>		68537.353		ppb	0.660			68164.462
82	Se-2	|		65.898	2.099790	ppb	22.495	23.792		4.268
107	Ag-1	|		28.889	0.006547	ppb	46.632	81.328		12.222
115	In-ISK	|		58652.429		ppb	0.552			57117.634
45	Sc-ISK	|>		181706.105		ppb	0.647			172559.413
23	Na	|		23191464.751	69768.352738	ppb	1.059	1.267		20736.713
39	K	|		3753016.532	4475.631683	ppb	0.868	0.278		65159.375
24	Mg	|		2869450.944	7133.970569	ppb	0.923	0.991		63.333
159	Tb-ISK	|		121248.373		ppb	0.441			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23588-B-1-A @5

Autosampler Position: 123

Sample Date/Time: Thursday, March 19, 2020 12:51:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23588-B-1-A @5.071

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	24838.254		ppb	3.069		18602.112
9	Be	7.778	0.000723	ppb	24.744	250.146	6.667
10	B	58874.412	188.621681	ppb	1.182	0.619	261.114
27	Al	160737.143	33.114655	ppb	1.587	1.060	903.362
43	Ca-2	200079.835	19679.807447	ppb	1.179	0.405	50.000
49	Ti	643.348	1.365972	ppb	0.518	1.570	56.667
52	Cr	9408.653	0.374899	ppb	1.280	4.108	6932.794
55	Mn	165207.577	20.303731	ppb	0.524	0.437	251.113
57	Fe	18837.972	80.120090	ppb	2.272	3.207	5828.967
45	Sc-IS	> 869334.668		ppb	0.929		829386.949
66	Zn	11611.384	13.367845	ppb	1.411	0.579	343.337
86	Sr	289933.168	216.641698	ppb	1.428	0.761	24.818
65	Cu	918.389	0.581493	ppb	8.474	9.837	158.318
69	Ga-IS	257590.554		ppb	0.653		251576.085
95	Mo	6154.659	4.760897	ppb	2.121	1.212	12.222
115	In-IS	> 148711.911		ppb	1.696		152493.425
111	Cd	3.742	-0.002605	ppb	91.046	125.606	6.641
118	Sn	914.474	0.165565	ppb	15.681	22.991	365.560
121	Sb	1903.460	0.496222	ppb	4.591	3.045	54.445
135	Ba	31027.006	38.063327	ppb	2.669	1.046	25.556
165	Ho-IS	176849.169		ppb	1.423		169297.308
159	Tb-IS	158780.978		ppb	1.455		149324.609
207	Pb	1970.053	0.199009	ppb	5.731	5.852	34.444
203	Tl	16.667	0.002001	ppb	40.000	105.503	11.111
209	Bi-IS	> 88441.847		ppb	1.371		93744.391
51	V	421.117	0.832023	ppb	11.856	12.642	17.778
59	Co	263.336	0.207311	ppb	7.905	7.631	4.444
60	Ni	1613.425	2.511914	ppb	5.215	4.947	2.222
75	As	782.580	0.958140	ppb	9.424	25.012	475.985
71	Ga-ISK	> 69347.914		ppb	0.396		68164.462
82	Se-2	29.213	0.838264	ppb	13.842	16.457	4.268
107	Ag-1	13.333	0.000352	ppb	66.144	978.476	12.222
115	In-ISK	59166.767		ppb	1.135		57117.634
45	Sc-ISK	> 182076.511		ppb	1.665		172559.413
23	Na	23070455.370	69274.346001	ppb	0.656	1.907	20736.713
39	K	3874095.659	4614.330897	ppb	0.568	2.249	65159.375
24	Mg	3041819.925	7548.644594	ppb	0.783	2.088	63.333
159	Tb-ISK	121758.017		ppb	0.541		115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23590-A-1-A @5

Autosampler Position: 124

Sample Date/Time: Thursday, March 19, 2020 12:54:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23590-A-1-A @5.072

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	22227.280		ppb	1.262			18602.112
9	Be	|	5.556	-0.001349	ppb	173.205	635.907		6.667
10	B	|	41611.644	130.560247	ppb	2.081	3.297		261.114
27	Al	|	17505.163	3.363449	ppb	0.825	1.865		903.362
43	Ca-2	|	80860.037	7802.179675	ppb	3.389	4.295		50.000
49	Ti	|	432.229	0.852136	ppb	11.078	11.396		56.667
52	Cr	|	18463.046	1.899009	ppb	3.849	7.066		6932.794
55	Mn	|	85517.423	10.296348	ppb	0.347	1.574		251.113
57	Fe	|	53949.486	294.770446	ppb	2.144	3.338		5828.967
45	Sc-IS	>	886089.757		ppb	1.251			829386.949
66	Zn	|	54947.707	63.635847	ppb	1.414	2.570		343.337
86	Sr	|	76999.934	56.450039	ppb	2.210	3.418		24.818
65	Cu	|	2136.181	1.492535	ppb	5.127	6.818		158.318
69	Ga-IS	|	250422.608		ppb	0.878			251576.085
95	Mo	|	1270.057	0.956880	ppb	9.551	10.825		12.222
115	In-IS	>	148056.161		ppb	0.461			152493.425
111	Cd	|	15.111	0.008359	ppb	23.787	41.866		6.641
118	Sn	|	512.231	0.047002	ppb	3.075	9.505		365.560
121	Sb	|	1346.730	0.348604	ppb	7.504	7.606		54.445
135	Ba	|	3512.655	4.302437	ppb	5.695	6.169		25.556
165	Ho-IS	|	177070.657		ppb	0.598			169297.308
159	Tb-IS	|	158195.528		ppb	0.201			149324.609
207	Pb	|	424.447	0.040171	ppb	8.686	11.896		34.444
203	Tl	|	5.556	-0.001639	ppb	91.652	99.065		11.111
209	Bi-IS	>	88760.544		ppb	2.315			93744.391
51	V	|	261.114	0.494928	ppb	7.031	8.312		17.778
59	Co	|	328.893	0.256494	ppb	6.437	6.236		4.444
60	Ni	|	1248.943	1.919481	ppb	1.470	2.969		2.222
75	As	|	853.100	1.144156	ppb	41.001	94.366		475.985
71	Ga-ISK	>	70246.758		ppb	1.510			68164.462
82	Se-2	|	3037.550	100.913312	ppb	0.699	0.992		4.268
107	Ag-1	|	24.444	0.004545	ppb	34.317	69.327		12.222
115	In-ISK	|	59032.637		ppb	0.409			57117.634
45	Sc-ISK	>	182550.081		ppb	0.465			172559.413
23	Na	|	23691686.855	70946.640577	ppb	1.359	1.817		20736.713
39	K	|	2402300.720	2821.422930	ppb	0.158	0.495		65159.375
24	Mg	|	1405721.780	3478.566976	ppb	1.271	1.169		63.333
159	Tb-ISK	|	122043.111		ppb	0.760			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23591-A-1-A @5

Autosampler Position: 125

Sample Date/Time: Thursday, March 19, 2020 12:57:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23591-A-1-A @5.073

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		22548.897		ppb		1.740		18602.112
9	Be	|		6.667	-0.000381	ppb	100.000	1557.653		6.667
10	B	|		40530.756	128.047179	ppb	1.430	2.191		261.114
27	Al	|		19436.547	3.784283	ppb	0.069	0.822		903.362
43	Ca-2	|		74349.646	7223.362656	ppb	0.678	0.693		50.000
49	Ti	|		466.674	0.939828	ppb	6.429	7.658		56.667
52	Cr	|		19582.304	2.114993	ppb	1.939	3.034		6932.794
55	Mn	|		80135.243	9.715068	ppb	0.420	0.840		251.113
57	Fe	|		35534.144	182.574285	ppb	1.309	1.943		5828.967
45	Sc-IS	>		879755.114		ppb	0.756			829386.949
66	Zn	|		83672.135	97.804985	ppb	1.513	0.891		343.337
86	Sr	|		77332.242	57.085535	ppb	1.107	0.640		24.818
65	Cu	|		3769.877	2.750813	ppb	3.681	3.083		158.318
69	Ga-IS	|		251798.743		ppb	1.015			251576.085
95	Mo	|		1633.427	1.241681	ppb	5.338	6.106		12.222
115	In-IS	>		149002.330		ppb	0.755			152493.425
111	Cd	|		15.459	0.008591	ppb	12.028	20.332		6.641
118	Sn	|		452.229	0.028240	ppb	3.324	18.593		365.560
121	Sb	|		1276.724	0.327589	ppb	4.202	4.353		54.445
135	Ba	|		4751.903	5.792912	ppb	6.106	6.127		25.556
165	Ho-IS	|		179231.878		ppb	1.166			169297.308
159	Tb-IS	|		160016.814		ppb	1.023			149324.609
207	Pb	|		395.558	0.036845	ppb	5.418	4.244		34.444
203	Tl	|		8.889	-0.000535	ppb	57.282	312.773		11.111
209	Bi-IS	>		89382.127		ppb	1.568			93744.391
51	V	|		272.225	0.528624	ppb	14.711	17.006		17.778
59	Co	|		534.454	0.427142	ppb	2.597	1.931		4.444
60	Ni	|		2135.715	3.347455	ppb	2.154	3.118		2.222
75	As	|		956.426	1.530495	ppb	18.157	34.379		475.985
71	Ga-ISK	>		68929.244		ppb	1.254			68164.462
82	Se-2	|		2970.877	100.597752	ppb	2.761	3.581		4.268
107	Ag-1	|		21.111	0.003435	ppb	18.232	45.306		12.222
115	In-ISK	|		58943.353		ppb	0.757			57117.634
45	Sc-ISK	>		180796.892		ppb	0.555			172559.413
23	Na	|		24513302.327	74119.211853	ppb	0.335	0.654		20736.713
39	K	|		2224827.843	2632.955939	ppb	0.247	0.810		65159.375
24	Mg	|		1311571.183	3277.148443	ppb	0.879	1.165		63.333
159	Tb-ISK	|		121157.604		ppb	0.287			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23592-B-1-A @5

Autosampler Position: 126

Sample Date/Time: Thursday, March 19, 2020 12:59:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23592-B-1-A @5.074

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	21973.554		ppb	0.945		18602.112
9	Be	2.222	-0.004326	ppb	86.603	39.509	6.667
10	B	41126.908	129.226981	ppb	1.985	2.678	261.114
27	Al	22245.085	4.334559	ppb	1.019	1.636	903.362
43	Ca-2	75416.880	7287.059155	ppb	0.314	0.988	50.000
49	Ti	428.895	0.846978	ppb	0.449	1.404	56.667
52	Cr	21852.260	2.486954	ppb	1.768	2.989	6932.794
55	Mn	76779.134	9.255359	ppb	1.409	1.382	251.113
57	Fe	51172.604	278.096812	ppb	0.869	1.236	5828.967
45	Sc-IS	> 884622.871		ppb	0.939		829386.949
66	Zn	96059.681	111.730495	ppb	1.068	0.324	343.337
86	Sr	71647.092	52.597916	ppb	1.153	1.058	24.818
65	Cu	3015.879	2.162920	ppb	1.687	2.518	158.318
69	Ga-IS	246871.832		ppb	1.565		251576.085
95	Mo	1822.339	1.378098	ppb	4.213	3.392	12.222
115	In-IS	> 146963.372		ppb	0.417		152493.425
111	Cd	1.729	-0.004533	ppb	119.271	44.204	6.641
118	Sn	386.672	0.010320	ppb	11.207	122.644	365.560
121	Sb	1293.392	0.336854	ppb	1.364	1.338	54.445
135	Ba	3883.862	4.794874	ppb	3.437	3.204	25.556
165	Ho-IS	177461.014		ppb	0.624		169297.308
159	Tb-IS	159216.934		ppb	1.632		149324.609
207	Pb	431.114	0.040421	ppb	5.148	5.859	34.444
203	Tl	11.111	0.000173	ppb	105.357	2202.868	11.111
209	Bi-IS	> 89497.255		ppb	0.783		93744.391
51	V	280.003	0.540761	ppb	7.241	8.647	17.778
59	Co	441.118	0.349856	ppb	3.728	5.041	4.444
60	Ni	1763.442	2.746673	ppb	4.502	5.685	2.222
75	As	803.645	1.032909	ppb	42.486	109.459	475.985
71	Ga-ISK	> 69362.444		ppb	1.250		68164.462
82	Se-2	3131.557	105.363247	ppb	0.827	0.436	4.268
107	Ag-1	20.000	0.002948	ppb	16.667	44.759	12.222
115	In-ISK	58567.311		ppb	1.846		57117.634
45	Sc-ISK	> 182233.859		ppb	0.443		172559.413
23	Na	25591125.284	76770.860511	ppb	1.043	1.311	20736.713
39	K	2361563.984	2777.105781	ppb	0.308	0.419	65159.375
24	Mg	1323688.760	3281.284589	ppb	0.358	0.511	63.333
159	Tb-ISK	120805.977		ppb	0.179		115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 13:02:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.075

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19466.588		ppb		0.964		18602.112
9	Be	|	116479.693	106.857293	ppb	1.711	1.954		6.667
10	B	|	81297.563	265.350020	ppb	3.857	2.727		261.114
27	Al	|	475302.006	100.050038	ppb	0.227	1.317		903.362
43	Ca-2	|	52444.440	5245.323014	ppb	1.686	0.735		50.000
49	Ti	|	42247.939	100.419369	ppb	1.016	0.731		56.667
52	Cr	|	557023.708	97.945213	ppb	1.595	1.909		6932.794
55	Mn	|	777729.123	97.390222	ppb	1.284	1.476		251.113
57	Fe	|	771520.784	4904.218057	ppb	1.476	2.448		5828.967
45	Sc-IS	>	854325.120		ppb	1.501			829386.949
66	Zn	|	83014.986	99.951170	ppb	1.545	2.042		343.337
86	Sr	|	126599.543	96.254301	ppb	1.403	1.052		24.818
65	Cu	|	125307.746	98.464467	ppb	2.531	3.686		158.318
69	Ga-IS	|	264946.012		ppb	1.943			251576.085
95	Mo	|	118651.940	93.609183	ppb	1.976	2.959		12.222
115	In-IS	>	147636.633		ppb	1.221			152493.425
111	Cd	|	104475.510	101.024686	ppb	0.443	1.652		6.641
118	Sn	|	334503.252	100.145701	ppb	0.672	1.884		365.560
121	Sb	|	371457.476	100.368991	ppb	0.657	1.286		54.445
135	Ba	|	82499.763	102.016983	ppb	0.759	1.268		25.556
165	Ho-IS	|	177277.629		ppb	0.376			169297.308
159	Tb-IS	|	158648.432		ppb	1.598			149324.609
207	Pb	|	1013768.328	99.597802	ppb	1.002	1.755		34.444
203	Tl	|	313617.700	97.946099	ppb	1.329	2.028		11.111
209	Bi-IS	>	92459.365		ppb	0.819			93744.391
51	V	|	47105.327	98.864288	ppb	1.701	2.183		17.778
59	Co	|	121946.155	99.382141	ppb	1.785	2.333		4.444
60	Ni	|	64131.440	101.708528	ppb	1.915	1.845		2.222
75	As	|	31283.911	100.624623	ppb	1.487	0.983		475.985
71	Ga-ISK	>	68176.744		ppb	0.612			68164.462
82	Se-2	|	2952.886	101.076696	ppb	2.786	3.062		4.268
107	Ag-1	|	260049.166	102.990158	ppb	1.364	1.355		12.222
115	In-ISK	|	59561.799		ppb	1.409			57117.634
45	Sc-ISK	>	176965.104		ppb	1.721			172559.413
23	Na	|	1730128.726	5283.993011	ppb	1.320	1.411		20736.713
39	K	|	4147665.908	5090.873470	ppb	0.426	1.416		65159.375
24	Mg	|	2051000.527	5236.441551	ppb	0.374	1.357		63.333
159	Tb-ISK	|	119585.796		ppb	0.820			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 13:05:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.076

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		18618.792		ppb			0.730			18602.112
9	Be	|		7.778	0.001095	ppb	89.214	603.066				6.667
10	B	|		558.900	1.021007	ppb	4.516	7.571				261.114
27	Al	|		913.363	0.003925	ppb	8.226	422.969				903.362
43	Ca-2	|		35.000	-1.509866	ppb	37.796	92.726				50.000
49	Ti	|		92.223	0.089178	ppb	5.521	14.762				56.667
52	Cr	|		6009.041	-0.159764	ppb	0.178	3.319				6932.794
55	Mn	|		270.003	0.002746	ppb	14.022	180.222				251.113
57	Fe	|		4808.587	-6.453190	ppb	0.728	3.330				5828.967
45	Sc-IS	>		822164.982		ppb	0.598					829386.949
66	Zn	|		247.780	-0.116483	ppb	17.298	44.651				343.337
86	Sr	|		10.860	-0.010822	ppb	207.496	165.238				24.818
65	Cu	|		99.595	-0.046888	ppb	13.397	22.714				158.318
69	Ga-IS	|		246205.017		ppb	1.786					251576.085
95	Mo	|		355.560	0.281577	ppb	7.578	8.202				12.222
115	In-IS	>		146299.436		ppb	0.670					152493.425
111	Cd	|		3.698	-0.002604	ppb	104.319	144.594				6.641
118	Sn	|		1783.445	0.433299	ppb	1.597	2.693				365.560
121	Sb	|		132.223	0.021820	ppb	5.822	10.414				54.445
135	Ba	|		41.111	0.020759	ppb	20.405	52.175				25.556
165	Ho-IS	|		169504.195		ppb	1.048					169297.308
159	Tb-IS	|		153221.801		ppb	0.936					149324.609
207	Pb	|		251.112	0.022161	ppb	1.533	1.822				34.444
203	Tl	|		66.667	0.018110	ppb	22.913	27.793				11.111
209	Bi-IS	>		89453.648		ppb	0.721					93744.391
51	V	|		12.222	-0.011620	ppb	62.984	139.053				17.778
59	Co	|		15.556	0.009120	ppb	65.465	91.751				4.444
60	Ni	|		10.000	0.012430	ppb	66.667	85.969				2.222
75	As	|		494.469	0.066134	ppb	12.898	323.070				475.985
71	Ga-ISK	>		67937.831		ppb	0.593					68164.462
82	Se-2	|		2.583	-0.057749	ppb	80.613	122.795				4.268
107	Ag-1	|		215.557	0.080885	ppb	16.243	17.774				12.222
115	In-ISK	|		57370.321		ppb	0.944					57117.634
45	Sc-ISK	>		168151.661		ppb	0.872					172559.413
23	Na	|		10066.881	-32.990964	ppb	2.684	3.049				20736.713
39	K	|		67563.875	5.344938	ppb	1.876	33.230				65159.375
24	Mg	|		283.336	0.595399	ppb	4.441	5.510				63.333
159	Tb-ISK	|		116136.182		ppb	0.922					115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, March 19, 2020 13:09:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\b.077

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		19049.366		ppb		2.984		18602.112
9	Be	|		6.667	-0.000134	ppb	50.000	2285.608		6.667
10	B	|		384.450	0.390257	ppb	8.056	25.070		261.114
27	Al	|		3726.041	0.597193	ppb	0.831	1.672		903.362
43	Ca-2	|		26.667	-2.458530	ppb	28.641	31.822		50.000
49	Ti	|		103.334	0.109383	ppb	14.783	33.434		56.667
52	Cr	|		6331.403	-0.133308	ppb	2.334	17.868		6932.794
55	Mn	|		427.784	0.021693	ppb	6.298	14.455		251.113
57	Fe	|		4634.085	-8.489590	ppb	3.474	11.026		5828.967
45	Sc-IS	|>		846103.746		ppb	0.529			829386.949
66	Zn	|		723.352	0.455318	ppb	9.578	18.104		343.337
86	Sr	|		27.564	0.001669	ppb	84.725	1066.771		24.818
65	Cu	|		77.483	-0.066730	ppb	23.614	21.867		158.318
69	Ga-IS	|		248590.084		ppb	1.434			251576.085
95	Mo	|		131.112	0.094536	ppb	9.625	11.178		12.222
115	In-IS	|>		146070.189		ppb	0.515			152493.425
111	Cd	|		5.280	-0.001067	ppb	95.939	462.224		6.641
118	Sn	|		1321.172	0.294055	ppb	4.985	6.367		365.560
121	Sb	|		101.111	0.013367	ppb	10.072	20.173		54.445
135	Ba	|		24.444	-0.000102	ppb	56.77316	778.826		25.556
165	Ho-IS	|		171798.059		ppb	1.287			169297.308
159	Tb-IS	|		154149.523		ppb	1.293			149324.609
207	Pb	|		94.445	0.006120	ppb	23.500	33.995		34.444
203	Tl	|		17.778	0.002207	ppb	70.986	179.683		11.111
209	Bi-IS	|>		90527.088		ppb	1.670			93744.391
51	V	|		20.000	0.004830	ppb	16.667	134.929		17.778
59	Co	|		6.667	0.001840	ppb	0.000	6.551		4.444
60	Ni	|		21.111	0.030321	ppb	71.199	81.302		2.222
75	As	|		481.329	0.026074	ppb	2.764	272.003		475.985
71	Ga-ISK	|>		67832.939		ppb	2.210			68164.462
82	Se-2	|		-1.446	-0.198665	ppb	356.862	90.485		4.268
107	Ag-1	|		95.556	0.033204	ppb	25.236	28.988		12.222
115	In-ISK	|		58269.249		ppb	0.368			57117.634
45	Sc-ISK	|>		170693.774		ppb	0.928			172559.413
23	Na	|		7572.008	-41.473773	ppb	3.403	2.429		20736.713
39	K	|		66295.704	2.383883	ppb	0.912	39.314		65159.375
24	Mg	|		120.001	0.152056	ppb	16.667	36.197		63.333
159	Tb-ISK	|		115954.722		ppb	1.016			115863.960

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, March 19, 2020 13:11:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICIS-23447.078

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		18671.083		ppb			0.662	
9	Be	|		7.778		ppb			65.465	
10	B	|		362.227		ppb			10.137	
27	Al	|		880.027		ppb			5.124	
43	Ca-2	|		28.333		ppb			10.189	
49	Ti	|		93.334		ppb			17.857	
52	Cr	|		6330.291		ppb			0.628	
55	Mn	|		252.224		ppb			4.641	
57	Fe	|		4655.203		ppb			0.861	
45	Sc-IS	>		823660.369		ppb			0.102	
66	Zn	|		206.668		ppb			17.069	
86	Sr	|		-0.289		ppb		5693.755		
65	Cu	|		54.230		ppb			23.256	
69	Ga-IS	|		248836.760		ppb			1.892	
95	Mo	|		44.445		ppb			45.826	
115	In-IS	>		145941.333		ppb			0.852	
111	Cd	|		3.240		ppb			1.320	
118	Sn	|		586.679		ppb			5.932	
121	Sb	|		45.556		ppb			11.177	
135	Ba	|		30.000		ppb			19.245	
165	Ho-IS	|		170305.806		ppb			0.434	
159	Tb-IS	|		151873.028		ppb			0.350	
207	Pb	|		46.667		ppb			25.754	
203	Tl	|		10.000		ppb			33.333	
209	Bi-IS	>		89965.736		ppb			0.623	
51	V	|		11.111		ppb			75.498	
59	Co	|		2.222		ppb		173.205		
60	Ni	|		10.000		ppb			57.735	
75	As	|		507.587		ppb			4.444	
71	Ga-ISK	>		66825.946		ppb			1.025	
82	Se-2	|		2.245		ppb		137.100		
107	Ag-1	|		47.778		ppb			17.558	
115	In-ISK	|		57447.024		ppb			0.368	
45	Sc-ISK	>		169580.601		ppb			0.609	
23	Na	|		6134.650		ppb			0.872	
39	K	|		66731.053		ppb			0.648	
24	Mg	|		66.667		ppb			30.311	
159	Tb-ISK	|		114722.804		ppb			0.104	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, March 19, 2020 13:14:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\IC-210761.079

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	18870.236		ppb		2.158		18671.083
9	Be	|	224940.458	200.000000	ppb	0.426	0.614		7.778
10	B	|	154153.964	500.000000	ppb	0.856	0.773		362.227
27	Al	|	919382.490	200.000000	ppb	2.781	2.967		880.027
43	Ca-2	|	100683.584	10200.000000	ppb	1.095	1.155		28.333
49	Ti	|	81109.618	200.000000	ppb	0.910	1.214		93.334
52	Cr	|	1086124.352	200.000000	ppb	0.366	0.720		6330.291
55	Mn	|	1519311.992	200.000000	ppb	1.136	1.503		252.224
57	Fe	|	1497720.872	10200.000000	ppb	0.611	0.782		4655.203
45	Sc-IS	>	837335.550		ppb	0.388			823660.369
66	Zn	|	159389.883	200.000000	ppb	1.175	1.056		206.668
86	Sr	|	250700.519	200.000000	ppb	0.941	1.314		-0.289
65	Cu	|	239166.905	200.000000	ppb	1.337	1.565		54.230
69	Ga-IS	|	277635.230		ppb	0.276			248836.760
95	Mo	|	236886.826	200.000000	ppb	0.622	0.507		44.445
115	In-IS	>	145694.602		ppb	1.248			145941.333
111	Cd	|	202911.586	200.000000	ppb	0.660	0.629		3.240
118	Sn	|	662614.191	200.000000	ppb	1.042	0.948		586.679
121	Sb	|	734765.633	200.000000	ppb	0.451	1.178		45.556
135	Ba	|	162748.519	200.000000	ppb	0.953	2.136		30.000
165	Ho-IS	|	173570.440		ppb	1.475			170305.806
159	Tb-IS	|	156909.295		ppb	1.037			151873.028
207	Pb	|	1961275.116	200.000000	ppb	0.644	1.305		46.667
203	Tl	|	609508.291	200.000000	ppb	1.894	2.706		10.000
209	Bi-IS	>	89067.926		ppb	1.016			89965.736
51	V	|	93622.464	200.000000	ppb	0.958	1.500		11.111
59	Co	|	238031.265	200.000000	ppb	1.058	1.307		2.222
60	Ni	|	123341.408	200.000000	ppb	1.905	1.569		10.000
75	As	|	59577.426	200.000000	ppb	0.132	1.985		507.587
71	Ga-ISK	>	66462.066		ppb	2.095			66825.946
82	Se-2	|	5757.698	200.000000	ppb	0.941	2.914		2.245
107	Ag-1	|	505449.009	200.000000	ppb	0.910	2.926		47.778
115	In-ISK	|	57604.023		ppb	1.071			57447.024
45	Sc-ISK	>	171810.635		ppb	2.162			169580.601
23	Na	|	3289304.469	10200.000000	ppb	2.163	0.219		6134.650
39	K	|	8034862.515	10200.000000	ppb	0.667	1.617		66731.053
24	Mg	|	3978749.902	10200.000000	ppb	0.793	1.574		66.667
159	Tb-ISK	|	118533.073		ppb	0.757			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 13:17:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.080

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18776.779		ppb		1.678		18671.083
9	Be	|		113104.874	100.981784	ppb	0.456	0.267		7.778
10	B	|		78531.940	255.207266	ppb	0.875	1.035		362.227
27	Al	|		469859.906	102.543221	ppb	0.715	0.814		880.027
43	Ca-2	|		50751.662	5161.667124	ppb	0.853	0.947		28.333
49	Ti	|		41542.547	102.748591	ppb	1.609	1.525		93.334
52	Cr	|		549095.411	100.946907	ppb	0.934	0.898		6330.291
55	Mn	|		761869.178	100.690271	ppb	1.918	1.751		252.224
57	Fe	|		750891.923	5119.166979	ppb	0.763	0.602		4655.203
45	Sc-IS	>		833832.463		ppb	0.190			823660.369
66	Zn	|		81530.948	102.603277	ppb	2.073	1.897		206.668
86	Sr	|		125317.052	100.389284	ppb	1.650	1.544		-0.289
65	Cu	|		122819.696	103.110419	ppb	1.949	1.767		54.230
69	Ga-IS	|		263390.785		ppb	1.604			248836.760
95	Mo	|		118834.479	100.732256	ppb	1.195	1.126		44.445
115	In-IS	>		146028.437		ppb	0.539			145941.333
111	Cd	|		102836.603	101.125090	ppb	0.148	0.686		3.240
118	Sn	|		331311.278	99.679012	ppb	0.734	0.336		586.679
121	Sb	|		365730.438	99.311537	ppb	0.954	1.371		45.556
135	Ba	|		81785.953	100.253409	ppb	4.299	4.701		30.000
165	Ho-IS	|		172576.218		ppb	1.129			170305.806
159	Tb-IS	|		155686.099		ppb	1.581			151873.028
207	Pb	|		992293.429	100.381016	ppb	0.131	0.463		46.667
203	Tl	|		313325.676	101.981223	ppb	1.012	0.566		10.000
209	Bi-IS	>		89776.772		ppb	0.483			89965.736
51	V	|		46811.050	97.527690	ppb	2.662	2.949		11.111
59	Co	|		119961.739	98.302825	ppb	2.242	1.539		2.222
60	Ni	|		62408.270	98.695507	ppb	1.720	1.098		10.000
75	As	|		30708.085	99.701305	ppb	1.347	2.535		507.587
71	Ga-ISK	>		68132.097		ppb	1.154			66825.946
82	Se-2	|		2889.542	97.849921	ppb	2.028	2.856		2.245
107	Ag-1	|		254479.932	98.186197	ppb	0.226	1.241		47.778
115	In-ISK	|		58071.091		ppb	0.830			57447.024
45	Sc-ISK	>		172813.445		ppb	0.633			169580.601
23	Na	|		1672750.211	5147.597764	ppb	1.657	1.754		6134.650
39	K	|		4053403.203	5071.646663	ppb	0.718	0.985		66731.053
24	Mg	|		1957929.976	4989.009949	ppb	1.022	0.398		66.667
159	Tb-ISK	|		116953.451		ppb	0.286			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 13:20:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.081

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18335.093		ppb		1.327		18671.083
9	Be	|		12.222	0.004235	ppb	95.779	255.010		7.778
10	B	|		533.343	0.594479	ppb	6.615	20.642		362.227
27	Al	|		886.694	0.004642	ppb	5.058	197.784		880.027
43	Ca-2	|		20.000	-0.822591	ppb	43.301	111.452		28.333
49	Ti	|		83.334	-0.021785	ppb	22.271	214.056		93.334
52	Cr	|		5623.329	-0.115982	ppb	3.003	23.410		6330.291
55	Mn	|		313.337	0.008887	ppb	15.887	78.542		252.224
57	Fe	|		4530.718	-0.352092	ppb	0.515	57.169		4655.203
45	Sc-IS	>		810472.066		ppb	0.534			823660.369
66	Zn	|		223.335	0.025890	ppb	13.012	143.766		206.668
86	Sr	|		13.120	0.011012	ppb	121.636	119.281		-0.289
65	Cu	|		97.317	0.037992	ppb	16.816	37.448		54.230
69	Ga-IS	|		242506.664		ppb	0.864			248836.760
95	Mo	|		434.451	0.340697	ppb	13.924	14.864		44.445
115	In-IS	>		143640.734		ppb	0.623			145941.333
111	Cd	|		21.310	0.018132	ppb	39.867	47.294		3.240
118	Sn	|		2161.276	0.485202	ppb	10.335	13.806		586.679
121	Sb	|		156.668	0.030909	ppb	19.500	28.103		45.556
135	Ba	|		35.556	0.007522	ppb	19.516	115.442		30.000
165	Ho-IS	|		167487.238		ppb	0.675			170305.806
159	Tb-IS	|		150344.786		ppb	0.693			151873.028
207	Pb	|		398.891	0.035645	ppb	10.874	12.797		46.667
203	Tl	|		64.445	0.017733	ppb	15.802	19.178		10.000
209	Bi-IS	>		89799.133		ppb	0.434			89965.736
51	V	|		20.000	0.018901	ppb	28.868	66.280		11.111
59	Co	|		23.333	0.017594	ppb	24.744	26.440		2.222
60	Ni	|		17.778	0.012440	ppb	60.273	136.549		10.000
75	As	|		515.134	0.023739	ppb	4.492	362.135		507.587
71	Ga-ISK	>		66902.974		ppb	1.105			66825.946
82	Se-2	|		1.226	-0.035278	ppb	340.480	406.516		2.245
107	Ag-1	|		235.558	0.073730	ppb	9.939	11.628		47.778
115	In-ISK	|		58078.401		ppb	0.824			57447.024
45	Sc-ISK	>		169155.785		ppb	1.749			169580.601
23	Na	|		9132.923	9.523325	ppb	4.982	18.146		6134.650
39	K	|		68932.591	3.098332	ppb	1.173	62.517		66731.053
24	Mg	|		330.004	0.686171	ppb	1.515	2.975		66.667
159	Tb-ISK	|		115688.557		ppb	0.601			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, March 19, 2020 13:22:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\ICVL-210771.082

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		18529.790		ppb			1.674			18671.083
9	Be	|		1124.489	1.023320	ppb			2.969	2.335		7.778
10	B	|		15784.274	51.697610	ppb			2.477	2.910		362.227
27	Al	|		226440.640	50.623415	ppb			0.987	1.501		880.027
43	Ca-2	|		601.679	59.911017	ppb			9.192	9.396		28.333
49	Ti	|		480.008	0.987141	ppb			9.722	12.174		93.334
52	Cr	|		11008.686	0.909554	ppb			2.545	5.452		6330.291
55	Mn	|		7646.491	1.003804	ppb			2.170	2.314		252.224
57	Fe	|		11669.211	49.843254	ppb			2.853	5.629		4655.203
45	Sc-IS	>		812454.822		ppb			0.708			823660.369
66	Zn	|		4786.357	5.933736	ppb			1.583	0.923		206.668
86	Sr	|		1205.873	0.991917	ppb			4.712	5.419		-0.289
65	Cu	|		1291.591	1.067417	ppb			2.850	3.575		54.230
69	Ga-IS	|		245194.217		ppb			0.998			248836.760
95	Mo	|		1195.606	1.002444	ppb			0.580	1.242		44.445
115	In-IS	>		144738.508		ppb			0.876			145941.333
111	Cd	|		1074.197	1.062768	ppb			5.383	5.846		3.240
118	Sn	|		3833.848	0.989014	ppb			3.847	4.926		586.679
121	Sb	|		3763.829	1.018921	ppb			2.961	3.166		45.556
135	Ba	|		862.248	1.029916	ppb			4.481	4.860		30.000
165	Ho-IS	|		170495.850		ppb			0.689			170305.806
159	Tb-IS	|		153129.727		ppb			1.090			151873.028
207	Pb	|		9716.884	0.967091	ppb			0.903	2.931		46.667
203	Tl	|		3079.221	0.987519	ppb			2.657	3.441		10.000
209	Bi-IS	>		90846.914		ppb			2.053			89965.736
51	V	|		456.674	0.952458	ppb			6.363	6.758		11.111
59	Co	|		1165.603	0.978016	ppb			7.460	7.816		2.222
60	Ni	|		617.791	0.986368	ppb			8.242	8.900		10.000
75	As	|		820.573	1.068979	ppb			10.251	25.159		507.587
71	Ga-ISK	>		66430.769		ppb			0.591			66825.946
82	Se-2	|		37.594	1.228832	ppb			3.023	2.785		2.245
107	Ag-1	|		2615.796	1.016642	ppb			7.711	8.246		47.778
115	In-ISK	|		57275.762		ppb			1.563			57447.024
45	Sc-ISK	>		166831.835		ppb			0.318			169580.601
23	Na	|		23940.047	57.290102	ppb			1.802	2.750		6134.650
39	K	|		105621.280	52.687170	ppb			1.257	2.807		66731.053
24	Mg	|		19530.014	51.380895	ppb			2.785	3.037		66.667
159	Tb-ISK	|		114128.746		ppb			0.406			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23390-A-1-A

Autosampler Position: 127

Sample Date/Time: Thursday, March 19, 2020 13:25:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23390-A-1-A.083

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	19125.025		ppb	3.261		18671.083
9	Be	8.889	0.000881	ppb	43.301	377.767	7.778
10	B	6802.730	21.012819	ppb	0.806	2.009	362.227
27	Al	15213.659	3.133222	ppb	3.558	5.793	880.027
43	Ca-2	126.667	10.002557	ppb	20.256	28.710	28.333
49	Ti	186.668	0.227834	ppb	13.482	24.156	93.334
52	Cr	7882.174	0.274177	ppb	1.745	14.674	6330.291
55	Mn	811.134	0.073444	ppb	3.992	4.379	252.224
57	Fe	5166.490	3.109864	ppb	1.698	21.149	4655.203
45	Sc-IS	> 834033.624		ppb	1.926		823660.369
66	Zn	383.339	0.219514	ppb	11.503	24.396	206.668
86	Sr	42.608	0.034094	ppb	65.312	64.218	-0.289
65	Cu	252.414	0.165804	ppb	3.476	2.036	54.230
69	Ga-IS	249864.502		ppb	1.948		248836.760
95	Mo	251.113	0.174811	ppb	14.069	17.259	44.445
115	In-IS	> 146096.144		ppb	1.998		145941.333
111	Cd	17.250	0.013770	ppb	67.667	84.267	3.240
118	Sn	1404.513	0.246254	ppb	1.350	2.619	586.679
121	Sb	105.556	0.016350	ppb	18.504	35.549	45.556
135	Ba	51.111	0.025682	ppb	20.964	45.917	30.000
165	Ho-IS	172713.572		ppb	1.875		170305.806
159	Tb-IS	156064.567		ppb	1.090		151873.028
207	Pb	323.335	0.027538	ppb	6.760	10.135	46.667
203	Tl	23.333	0.004209	ppb	24.744	40.984	10.000
209	Bi-IS	> 91160.008		ppb	2.012		89965.736
51	V	10.000	-0.002319	ppb	88.192	808.537	11.111
59	Co	12.222	0.008292	ppb	56.773	71.134	2.222
60	Ni	66.667	0.090370	ppb	5.000	6.804	10.000
75	As	454.351	-0.192996	ppb	3.811	45.896	507.587
71	Ga-ISK	> 67489.089		ppb	2.117		66825.946
82	Se-2	5.247	0.103606	ppb	80.062	141.962	2.245
107	Ag-1	92.223	0.017164	ppb	18.192	39.948	47.778
115	In-ISK	58293.182		ppb	0.874		57447.024
45	Sc-ISK	> 170033.693		ppb	0.086		169580.601
23	Na	7865.498	5.382076	ppb	0.866	3.576	6134.650
39	K	66543.511	-0.473127	ppb	0.324	58.714	66731.053
24	Mg	4399.011	11.219734	ppb	1.883	1.828	66.667
159	Tb-ISK	115764.498		ppb	0.509		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 13:28:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.084

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		18572.079		ppb			4.194			18671.083
9	Be	|		111524.747	100.305013	ppb			0.493	0.543		7.778
10	B	|		79859.270	261.459155	ppb			0.934	0.957		362.227
27	Al	|		463778.157	101.960382	ppb			0.720	0.825		880.027
43	Ca-2	|		50368.643	5160.446295	ppb			0.842	0.943		28.333
49	Ti	|		41509.130	103.425328	ppb			2.400	2.448		93.334
52	Cr	|		554359.070	102.685875	ppb			0.190	0.216		6330.291
55	Mn	|		769132.171	102.401823	ppb			0.369	0.472		252.224
57	Fe	|		753259.729	5173.536328	ppb			0.827	0.908		4655.203
45	Sc-IS	>		827734.935		ppb			0.104			823660.369
66	Zn	|		80645.900	102.238323	ppb			1.153	1.129		206.668
86	Sr	|		125026.756	100.895085	ppb			0.838	0.739		-0.289
65	Cu	|		122862.651	103.909114	ppb			1.767	1.785		54.230
69	Ga-IS	|		262736.924		ppb			2.026			248836.760
95	Mo	|		117757.850	100.554885	ppb			1.324	1.272		44.445
115	In-IS	>		146552.115		ppb			0.374			145941.333
111	Cd	|		101568.718	99.518689	ppb			1.035	0.928		3.240
118	Sn	|		329601.299	98.811574	ppb			0.768	1.095		586.679
121	Sb	|		366321.790	99.114225	ppb			0.555	0.833		45.556
135	Ba	|		80643.689	98.488794	ppb			1.706	1.864		30.000
165	Ho-IS	|		172128.568		ppb			0.417			170305.806
159	Tb-IS	|		154240.519		ppb			1.438			151873.028
207	Pb	|		987311.031	99.057172	ppb			0.528	1.082		46.667
203	Tl	|		306862.006	99.060410	ppb			0.881	1.277		10.000
209	Bi-IS	>		90524.822		ppb			1.111			89965.736
51	V	|		45593.759	96.542902	ppb			1.138	1.090		11.111
59	Co	|		117941.552	98.241938	ppb			0.961	1.160		2.222
60	Ni	|		61968.560	99.630886	ppb			0.523	2.403		10.000
75	As	|		30271.325	99.888335	ppb			0.843	1.526		507.587
71	Ga-ISK	>		67038.073		ppb			1.882			66825.946
82	Se-2	|		2856.863	98.346147	ppb			2.212	3.754		2.245
107	Ag-1	|		254810.366	99.934806	ppb			1.119	2.322		47.778
115	In-ISK	|		58075.376		ppb			1.512			57447.024
45	Sc-ISK	>		171349.273		ppb			0.148			169580.601
23	Na	|		1675804.348	5201.135861	ppb			0.298	0.171		6134.650
39	K	|		4042947.381	5102.152880	ppb			1.095	1.079		66731.053
24	Mg	|		1957756.266	5031.294756	ppb			0.724	0.779		66.667
159	Tb-ISK	|		116858.692		ppb			0.671			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 13:31:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.085

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18267.228		ppb		0.562		18671.083
9	Be	|		12.222	0.004238	ppb	31.492	88.983		7.778
10	B	|		476.675	0.404911	ppb	9.251	41.560		362.227
27	Al	|		905.584	0.008947	ppb	3.131	102.475		880.027
43	Ca-2	|		33.333	0.556516	ppb	56.789	348.542		28.333
49	Ti	|		77.778	-0.035389	ppb	21.141	129.592		93.334
52	Cr	|		5648.895	-0.110784	ppb	3.668	49.755		6330.291
55	Mn	|		282.225	0.004692	ppb	15.595	142.302		252.224
57	Fe	|		4514.046	-0.473601	ppb	0.369	121.643		4655.203
45	Sc-IS	>		810726.534		ppb	1.757			823660.369
66	Zn	|		221.113	0.023127	ppb	18.423	231.463		206.668
86	Sr	|		4.218	0.003600	ppb	527.770	506.084		-0.289
65	Cu	|		77.489	0.020981	ppb	17.420	61.824		54.230
69	Ga-IS	|		243260.567		ppb	1.324			248836.760
95	Mo	|		332.226	0.251949	ppb	25.410	29.737		44.445
115	In-IS	>		145873.476		ppb	0.862			145941.333
111	Cd	|		7.080	0.003808	ppb	116.821	214.113		3.240
118	Sn	|		1822.339	0.373138	ppb	7.208	11.802		586.679
121	Sb	|		130.001	0.022986	ppb	15.597	25.013		45.556
135	Ba	|		38.889	0.010997	ppb	43.142	188.871		30.000
165	Ho-IS	|		166367.605		ppb	0.710			170305.806
159	Tb-IS	|		152774.797		ppb	0.534			151873.028
207	Pb	|		317.779	0.027783	ppb	18.329	21.737		46.667
203	Tl	|		63.333	0.017581	ppb	18.977	22.481		10.000
209	Bi-IS	>		88851.008		ppb	0.281			89965.736
51	V	|		24.444	0.029061	ppb	51.626	92.401		11.111
59	Co	|		8.889	0.005674	ppb	57.282	75.293		2.222
60	Ni	|		7.778	-0.003333	ppb	89.214	340.955		10.000
75	As	|		516.202	0.060003	ppb	8.408	219.681		507.587
71	Ga-ISK	>		65623.730		ppb	1.237			66825.946
82	Se-2	|		-0.761	-0.102941	ppb	794.579	206.930		2.245
107	Ag-1	|		203.335	0.062702	ppb	5.911	8.990		47.778
115	In-ISK	|		55903.536		ppb	1.031			57447.024
45	Sc-ISK	>		166360.831		ppb	0.214			169580.601
23	Na	|		7128.451	3.564453	ppb	7.007	46.120		6134.650
39	K	|		68254.892	3.690084	ppb	0.537	18.204		66731.053
24	Mg	|		226.669	0.426760	ppb	30.909	43.324		66.667
159	Tb-ISK	|		113625.441		ppb	0.861			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23393-A-6-A @50

Autosampler Position: 115

Sample Date/Time: Thursday, March 19, 2020 13:44:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23393-A-6-A @50.086

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23171.001		ppb	1.404		18671.083
9	Be	5.556	-0.002560	ppb	124.900	216.932	7.778
10	B	27884.967	81.321148	ppb	0.690	0.904	362.227
27	Al	4401.789	0.677617	ppb	1.819	3.046	880.027
43	Ca-2	86650.340	7989.211226	ppb	0.803	1.106	28.333
49	Ti	802.245	1.568622	ppb	3.174	4.525	93.334
52	Cr	12434.299	0.904363	ppb	1.416	3.914	6330.291
55	Mn	1503.413	0.146325	ppb	6.533	6.845	252.224
57	Fe	13120.469	49.248403	ppb	2.530	3.579	4655.203
45	Sc-IS	> 920007.644		ppb	0.989		823660.369
66	Zn	434.451	0.232296	ppb	18.308	37.041	206.668
86	Sr	195077.407	141.646929	ppb	0.605	1.253	-0.289
65	Cu	602.602	0.412476	ppb	6.575	6.351	54.230
69	Ga-IS	253196.317		ppb	0.283		248836.760
95	Mo	404.450	0.272602	ppb	5.362	4.990	44.445
115	In-IS	> 154949.875		ppb	1.675		145941.333
111	Cd	11.373	0.007424	ppb	61.392	90.255	3.240
118	Sn	1237.832	0.174235	ppb	12.758	22.613	586.679
121	Sb	150.001	0.025952	ppb	15.556	20.762	45.556
135	Ba	141.112	0.126647	ppb	22.451	31.020	30.000
165	Ho-IS	178457.743		ppb	0.385		170305.806
159	Tb-IS	156981.260		ppb	1.518		151873.028
207	Pb	168.889	0.012750	ppb	7.977	11.199	46.667
203	Tl	34.444	0.008206	ppb	24.354	33.820	10.000
209	Bi-IS	> 87857.111		ppb	0.202		89965.736
51	V	767.798	1.575449	ppb	3.287	2.522	11.111
59	Co	11.111	0.007225	ppb	34.641	42.651	2.222
60	Ni	95.556	0.135065	ppb	15.730	18.200	10.000
75	As	560.564	0.140403	ppb	8.390	95.649	507.587
71	Ga-ISK	> 68160.007		ppb	1.133		66825.946
82	Se-2	76.529	2.517442	ppb	15.126	16.727	2.245
107	Ag-1	84.445	0.013822	ppb	28.005	68.187	47.778
115	In-ISK	58422.250		ppb	1.800		57447.024
45	Sc-ISK	> 185349.275		ppb	1.504		169580.601
23	Na	74075848.866	213306.374998	ppb	1.835	0.654	6134.650
39	K	6563548.509	7701.056166	ppb	1.209	0.305	66731.053
24	Mg	10598956.051	25184.043992	ppb	0.883	1.120	66.667
159	Tb-ISK	119983.810		ppb	1.270		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23393-A-6-B MS @50

Autosampler Position: 116

Sample Date/Time: Thursday, March 19, 2020 13:46:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23393-A-6-B MS @50.087

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	23937.817		ppb	0.485		18671.083
9	Be	2492.440	1.922904	ppb	2.356	3.042	7.778
10	B	29099.621	81.183630	ppb	2.646	2.589	362.227
27	Al	14821.018	2.615065	ppb	1.340	0.443	880.027
43	Ca-2	88927.608	7843.599926	ppb	0.948	0.168	28.333
49	Ti	1540.083	3.077571	ppb	5.892	7.392	93.334
52	Cr	25043.044	2.847080	ppb	1.160	0.933	6330.291
55	Mn	17478.466	1.970212	ppb	1.677	2.628	252.224
57	Fe	30198.553	147.313679	ppb	0.768	0.948	4655.203
45	Sc-IS	> 961670.097		ppb	1.115		823660.369
66	Zn	2024.588	1.950490	ppb	4.180	3.691	206.668
86	Sr	197340.154	137.076341	ppb	1.209	1.049	-0.289
65	Cu	3058.138	2.181515	ppb	3.313	4.102	54.230
69	Ga-IS	257605.326		ppb	0.925		248836.760
95	Mo	2864.732	2.067908	ppb	3.160	2.218	44.445
115	In-IS	> 157330.854		ppb	1.093		145941.333
111	Cd	2083.026	1.898382	ppb	1.657	2.664	3.240
118	Sn	4460.697	1.070823	ppb	3.523	3.432	586.679
121	Sb	7804.355	1.955284	ppb	2.902	3.942	45.556
135	Ba	1740.106	1.944225	ppb	4.743	5.879	30.000
165	Ho-IS	181914.363		ppb	1.197		170305.806
159	Tb-IS	159751.613		ppb	0.672		151873.028
207	Pb	19919.974	2.041849	ppb	1.848	0.985	46.667
203	Tl	5702.249	1.882027	ppb	2.370	2.881	10.000
209	Bi-IS	> 88395.992		ppb	0.986		89965.736
51	V	1895.682	3.799946	ppb	4.644	4.840	11.111
59	Co	2603.571	2.063300	ppb	2.928	2.897	2.222
60	Ni	1377.844	2.093715	ppb	2.195	3.288	10.000
75	As	1330.836	2.545885	ppb	4.295	9.000	507.587
71	Ga-ISK	> 70394.137		ppb	1.154		66825.946
82	Se-2	123.185	3.964785	ppb	6.905	8.217	2.245
107	Ag-1	2442.431	0.893629	ppb	5.110	5.849	47.778
115	In-ISK	60512.020		ppb	1.764		57447.024
45	Sc-ISK	> 192572.686		ppb	1.054		169580.601
23	Na	74581598.888	206716.272673	ppb	1.505	1.378	6134.650
39	K	6616094.802	7469.325512	ppb	1.325	1.754	66731.053
24	Mg	10609206.616	24262.365911	ppb	0.675	1.223	66.667
159	Tb-ISK	124101.435		ppb	1.292		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23393-A-6-C MSD @50

Autosampler Position: 117

Sample Date/Time: Thursday, March 19, 2020 13:49:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23393-A-6-C MSD @50.088

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	24054.685		ppb	2.036		18671.083
9	Be	2709.146	2.067597	ppb	4.045	4.976	7.778
10	B	30177.403	83.276521	ppb	1.917	1.228	362.227
27	Al	16312.643	2.863483	ppb	1.636	1.637	880.027
43	Ca-2	92889.370	8102.185438	ppb	0.999	1.368	28.333
49	Ti	1525.637	3.009265	ppb	5.051	6.057	93.334
52	Cr	26208.463	2.988118	ppb	0.063	1.250	6330.291
55	Mn	18511.987	2.064907	ppb	0.935	1.779	252.224
57	Fe	32123.858	156.642790	ppb	1.158	1.963	4655.203
45	Sc-IS	> 972508.535		ppb	0.916		823660.369
66	Zn	2150.162	2.062585	ppb	3.181	4.490	206.668
86	Sr	205325.254	141.038017	ppb	0.645	1.203	-0.289
65	Cu	3193.078	2.253534	ppb	4.541	4.733	54.230
69	Ga-IS	261769.063		ppb	1.406		248836.760
95	Mo	3099.225	2.214896	ppb	3.478	2.725	44.445
115	In-IS	> 156939.732		ppb	0.786		145941.333
111	Cd	2113.649	1.930940	ppb	6.543	6.653	3.240
118	Sn	4471.812	1.076919	ppb	5.015	5.072	586.679
121	Sb	8067.834	2.026183	ppb	1.921	1.497	45.556
135	Ba	1957.912	2.197037	ppb	5.597	5.811	30.000
165	Ho-IS	182924.869		ppb	0.854		170305.806
159	Tb-IS	160824.782		ppb	1.553		151873.028
207	Pb	21027.244	2.101715	ppb	1.815	0.350	46.667
203	Tl	6051.282	1.947534	ppb	1.829	2.378	10.000
209	Bi-IS	> 90659.020		ppb	1.463		89965.736
51	V	2174.610	4.219107	ppb	4.404	4.092	11.111
59	Co	2555.785	1.959386	ppb	6.959	6.936	2.222
60	Ni	1374.511	2.019766	ppb	3.013	3.193	10.000
75	As	1452.187	2.780797	ppb	2.628	3.492	507.587
71	Ga-ISK	> 72760.381		ppb	0.530		66825.946
82	Se-2	139.860	4.359807	ppb	2.142	1.651	2.245
107	Ag-1	2633.576	0.932784	ppb	1.427	1.438	47.778
115	In-ISK	61206.047		ppb	1.038		57447.024
45	Sc-ISK	> 195831.000		ppb	1.158		169580.601
23	Na	78910684.082	215078.110124	ppb	0.795	0.486	6134.650
39	K	7013264.619	7788.961594	ppb	1.619	1.025	66731.053
24	Mg	11218105.637	25226.048724	ppb	1.409	0.666	66.667
159	Tb-ISK	127107.700		ppb	1.321		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, March 19, 2020 13:52:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\b.089

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		20182.024		ppb		0.469		18671.083
9	Be	|		6.667	-0.001319	ppb	50.000	215.441		7.778
10	B	|		376.672	-0.016864	ppb	13.036	906.261		362.227
27	Al	|		4018.343	0.648533	ppb	3.935	4.868		880.027
43	Ca-2	|		46.667	1.642701	ppb	37.627	105.409		28.333
49	Ti	|		148.890	0.120277	ppb	23.516	70.460		93.334
52	Cr	|		9873.413	0.570966	ppb	3.101	10.712		6330.291
55	Mn	|		527.788	0.033214	ppb	7.614	14.977		252.224
57	Fe	|		7771.002	18.842679	ppb	1.120	3.300		4655.203
45	Sc-IS	>		868696.418		ppb	0.404			823660.369
66	Zn	|		764.465	0.661674	ppb	7.657	10.157		206.668
86	Sr	|		34.743	0.026892	ppb	82.153	81.215		-0.289
65	Cu	|		212.493	0.125196	ppb	2.685	3.253		54.230
69	Ga-IS	|		259224.206		ppb	0.880			248836.760
95	Mo	|		53.333	0.005269	ppb	40.984	337.827		44.445
115	In-IS	>		151726.128		ppb	1.848			145941.333
111	Cd	|		2.110	-0.001211	ppb	90.937	148.659		3.240
118	Sn	|		557.789	-0.015248	ppb	8.136	67.920		586.679
121	Sb	|		58.889	0.003041	ppb	18.196	98.162		45.556
135	Ba	|		25.556	-0.006791	ppb	41.929	179.829		30.000
165	Ho-IS	|		170968.187		ppb	1.266			170305.806
159	Tb-IS	|		154441.675		ppb	2.025			151873.028
207	Pb	|		93.333	0.004581	ppb	28.347	54.667		46.667
203	Tl	|		16.667	0.002125	ppb	52.915	134.878		10.000
209	Bi-IS	>		91048.185		ppb	1.991			89965.736
51	V	|		26.667	0.030060	ppb	25.000	45.064		11.111
59	Co	|		5.556	0.002553	ppb	124.900	217.087		2.222
60	Ni	|		17.778	0.011005	ppb	21.651	52.143		10.000
75	As	|		578.691	0.136765	ppb	2.486	44.516		507.587
71	Ga-ISK	>		70556.049		ppb	1.321			66825.946
82	Se-2	|		1.218	-0.037089	ppb	172.497	185.562		2.245
107	Ag-1	|		67.778	0.006399	ppb	28.817	107.838		47.778
115	In-ISK	|		59191.197		ppb	1.608			57447.024
45	Sc-ISK	>		177889.653		ppb	0.845			169580.601
23	Na	|		46162.938	119.256371	ppb	5.312	7.107		6134.650
39	K	|		74969.535	6.148454	ppb	0.334	17.341		66731.053
24	Mg	|		1405.069	3.306227	ppb	8.021	8.998		66.667
159	Tb-ISK	|		117426.016		ppb	1.226			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 13:55:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.090

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19048.254		ppb		2.923			18671.083
9	Be	|		114190.335	100.839034	ppb		2.678	4.011		7.778
10	B	|		80124.178	257.569413	ppb		2.725	4.385		362.227
27	Al	|		474050.866	102.335515	ppb		2.359	4.120		880.027
43	Ca-2	|		51671.624	5197.010417	ppb		1.320	2.400		28.333
49	Ti	|		42391.695	103.685705	ppb		0.737	1.769		93.334
52	Cr	|		562600.552	102.294657	ppb		1.035	1.875		6330.291
55	Mn	|		785082.538	102.603328	ppb		0.530	1.357		252.224
57	Fe	|		772972.922	5211.146482	ppb		1.158	0.847		4655.203
45	Sc-IS	>		843367.414		ppb		1.730			823660.369
66	Zn	|		83246.327	103.585760	ppb		1.549	0.603		206.668
86	Sr	|		127962.573	101.367735	ppb		1.236	1.882		-0.289
65	Cu	|		126049.124	104.627034	ppb		1.894	0.547		54.230
69	Ga-IS	|		268376.647		ppb		1.369			248836.760
95	Mo	|		120041.164	100.628657	ppb		1.094	2.279		44.445
115	In-IS	>		147948.818		ppb		1.382			145941.333
111	Cd	|		104670.714	101.607577	ppb		0.734	1.937		3.240
118	Sn	|		330025.766	98.015235	ppb		1.475	2.147		586.679
121	Sb	|		370542.961	99.320929	ppb		0.281	1.423		45.556
135	Ba	|		83061.904	100.491169	ppb		1.062	1.306		30.000
165	Ho-IS	|		173377.076		ppb		1.805			170305.806
159	Tb-IS	|		156369.017		ppb		1.353			151873.028
207	Pb	|		999829.158	100.078747	ppb		0.880	2.071		46.667
203	Tl	|		310996.947	100.162907	ppb		1.437	2.487		10.000
209	Bi-IS	>		90746.229		ppb		1.302			89965.736
51	V	|		47157.713	98.277073	ppb		1.149	2.150		11.111
59	Co	|		122142.281	100.131852	ppb		1.916	2.646		2.222
60	Ni	|		64301.059	101.723926	ppb		0.735	1.538		10.000
75	As	|		30601.334	99.357733	ppb		0.658	0.914		507.587
71	Ga-ISK	>		68116.465		ppb		1.043			66825.946
82	Se-2	|		2984.238	101.075867	ppb		0.722	1.692		2.245
107	Ag-1	|		258684.057	99.832519	ppb		2.205	2.621		47.778
115	In-ISK	|		58348.167		ppb		1.132			57447.024
45	Sc-ISK	>		176308.013		ppb		0.920			169580.601
23	Na	|		1716369.923	5177.404372	ppb		0.611	1.055		6134.650
39	K	|		4115657.200	5047.265034	ppb		1.317	1.732		66731.053
24	Mg	|		2043450.864	5104.157492	ppb		0.792	1.356		66.667
159	Tb-ISK	|		118205.720		ppb		0.933			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 13:57:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.091

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		18843.531		ppb			0.332			18671.083
9	Be	|		15.556	0.006841	ppb		32.733	65.179			7.778
10	B	|		444.451	0.256735	ppb		11.867	74.001			362.227
27	Al	|		860.026	-0.006640	ppb		5.814	141.023			880.027
43	Ca-2	|		26.667	-0.211603	ppb		28.641	343.595			28.333
49	Ti	|		103.334	0.022623	ppb		14.783	186.564			93.334
52	Cr	|		5926.785	-0.088799	ppb		2.188	8.066			6330.291
55	Mn	|		286.670	0.004206	ppb		6.153	70.582			252.224
57	Fe	|		4844.155	0.935565	ppb		0.657	76.839			4655.203
45	Sc-IS	>		833191.151		ppb		1.756				823660.369
66	Zn	|		220.002	0.013834	ppb		13.122	263.257			206.668
86	Sr	|		44.281	0.035609	ppb		52.823	51.176			-0.289
65	Cu	|		108.410	0.045022	ppb		12.441	25.178			54.230
69	Ga-IS	|		247931.226		ppb		1.911				248836.760
95	Mo	|		372.227	0.277353	ppb		15.416	15.864			44.445
115	In-IS	>		147386.059		ppb		1.001				145941.333
111	Cd	|		8.107	0.004731	ppb		84.103	141.912			3.240
118	Sn	|		1866.789	0.380449	ppb		5.748	7.684			586.679
121	Sb	|		125.556	0.021395	ppb		11.053	16.929			45.556
135	Ba	|		41.111	0.013137	ppb		20.405	77.879			30.000
165	Ho-IS	|		168385.560		ppb		1.280				170305.806
159	Tb-IS	|		153403.710		ppb		0.599				151873.028
207	Pb	|		287.779	0.024769	ppb		2.411	4.251			46.667
203	Tl	|		60.000	0.016510	ppb		9.623	10.199			10.000
209	Bi-IS	>		88682.213		ppb		1.250				89965.736
51	V	|		14.444	0.006153	ppb		53.294	248.847			11.111
59	Co	|		15.556	0.010902	ppb		61.859	74.385			2.222
60	Ni	|		13.333	0.005035	ppb		86.603	370.454			10.000
75	As	|		517.983	-0.008139	ppb		4.594	925.384			507.587
71	Ga-ISK	>		68525.104		ppb		1.846				66825.946
82	Se-2	|		4.914	0.089370	ppb		142.933	268.920			2.245
107	Ag-1	|		203.335	0.059153	ppb		8.197	8.382			47.778
115	In-ISK	|		57788.463		ppb		0.707				57447.024
45	Sc-ISK	>		171108.871		ppb		1.863				169580.601
23	Na	|		18296.710	37.786942	ppb		1.054	4.162			6134.650
39	K	|		69286.506	2.536474	ppb		0.434	79.729			66731.053
24	Mg	|		381.672	0.810614	ppb		11.295	15.615			66.667
159	Tb-ISK	|		115695.290		ppb		0.882				114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23495-C-1-C

Autosampler Position: 136

Sample Date/Time: Thursday, March 19, 2020 14:26:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23495-C-1-C.092

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	19194.005		ppb	3.102		18671.083
9	Be	31.111	0.019864	ppb	34.442	45.933	7.778
10	B	3185.911	8.877578	ppb	4.136	3.141	362.227
27	Al	1652891.415	350.014255	ppb	0.472	1.993	880.027
43	Ca-2	50164.641	4942.375902	ppb	2.960	2.177	28.333
49	Ti	4400.678	10.337097	ppb	2.470	3.317	93.334
52	Cr	12247.470	1.015470	ppb	0.284	3.983	6330.291
55	Mn	154892.970	19.809251	ppb	0.327	1.817	252.224
57	Fe	77640.416	483.760212	ppb	0.671	1.181	4655.203
45	Sc-IS	> 860693.806		ppb	1.637		823660.369
66	Zn	140995.801	172.095216	ppb	1.409	1.267	206.668
86	Sr	27349.382	21.233696	ppb	1.857	3.473	-0.289
65	Cu	17321.702	14.053088	ppb	1.358	2.939	54.230
69	Ga-IS	255953.709		ppb	0.418		248836.760
95	Mo	1420.071	1.128852	ppb	1.409	3.114	44.445
115	In-IS	> 148593.973		ppb	0.160		145941.333
111	Cd	129.241	0.121697	ppb	12.220	12.418	3.240
118	Sn	1067.818	0.139356	ppb	1.096	2.809	586.679
121	Sb	3076.998	0.808824	ppb	3.866	4.032	45.556
135	Ba	13697.676	16.467652	ppb	1.377	1.240	30.000
165	Ho-IS	174086.556		ppb	0.788		170305.806
159	Tb-IS	159540.394		ppb	0.790		151873.028
207	Pb	42885.353	4.306903	ppb	0.919	1.461	46.667
203	Tl	18.889	0.002859	ppb	66.811	142.646	10.000
209	Bi-IS	> 90340.309		ppb	0.545		89965.736
51	V	861.137	1.772061	ppb	3.597	3.776	11.111
59	Co	527.788	0.431091	ppb	18.243	18.530	2.222
60	Ni	1013.369	1.587965	ppb	7.902	8.099	10.000
75	As	668.753	0.500582	ppb	3.989	15.174	507.587
71	Ga-ISK	> 68086.314		ppb	0.627		66825.946
82	Se-2	2.237	-0.001403	ppb	255.15713755	992	2.245
107	Ag-1	44.445	-0.001650	ppb	21.651	219.486	47.778
115	In-ISK	58794.245		ppb	0.256		57447.024
45	Sc-ISK	> 172815.669		ppb	0.197		169580.601
23	Na	1159071.520	3560.764580	ppb	0.921	0.817	6134.650
39	K	725901.444	837.179336	ppb	0.409	0.477	66731.053
24	Mg	157363.656	400.825291	ppb	0.598	0.793	66.667
159	Tb-ISK	116769.967		ppb	0.561		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 14:29:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.093

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18955.906		ppb		2.283		18671.083
9	Be	|		115813.128	101.276036	ppb	0.870	0.207		7.778
10	B	|		80365.475	255.786543	ppb	1.967	1.235		362.227
27	Al	|		468517.174	100.143198	ppb	1.067	0.152		880.027
43	Ca-2	|		51696.713	5149.666733	ppb	1.258	0.689		28.333
49	Ti	|		41928.108	101.579813	ppb	0.738	1.653		93.334
52	Cr	|		556004.896	100.114976	ppb	0.741	1.423		6330.291
55	Mn	|		774173.127	100.217668	ppb	0.680	0.393		252.224
57	Fe	|		763699.581	5099.759351	ppb	0.914	1.423		4655.203
45	Sc-IS	>		851326.132		ppb	0.952			823660.369
66	Zn	|		83299.960	102.676824	ppb	1.294	0.671		206.668
86	Sr	|		127349.411	99.924716	ppb	0.898	0.828		-0.289
65	Cu	|		126297.498	103.846509	ppb	2.701	2.064		54.230
69	Ga-IS	|		272199.124		ppb	1.471			248836.760
95	Mo	|		119832.729	99.493596	ppb	0.555	0.399		44.445
115	In-IS	>		149225.430		ppb	0.488			145941.333
111	Cd	|		104564.814	100.621284	ppb	0.554	0.843		3.240
118	Sn	|		333721.871	98.252723	ppb	0.319	0.592		586.679
121	Sb	|		371056.030	98.596460	ppb	0.316	0.603		45.556
135	Ba	|		82842.861	99.364384	ppb	1.105	1.509		30.000
165	Ho-IS	|		174229.393		ppb	0.787			170305.806
159	Tb-IS	|		159415.729		ppb	1.209			151873.028
207	Pb	|		991955.943	100.792580	ppb	1.089	1.259		46.667
203	Tl	|		305323.056	99.821056	ppb	1.259	1.432		10.000
209	Bi-IS	>		89379.847		ppb	0.217			89965.736
51	V	|		47404.098	98.142101	ppb	2.077	0.741		11.111
59	Co	|		123157.518	100.314715	ppb	1.003	1.136		2.222
60	Ni	|		63706.194	100.135167	ppb	1.400	0.983		10.000
75	As	|		31252.690	100.860349	ppb	0.576	1.481		507.587
71	Ga-ISK	>		68557.490		ppb	2.048			66825.946
82	Se-2	|		2899.539	97.617146	ppb	2.165	4.171		2.245
107	Ag-1	|		259295.953	99.462627	ppb	1.950	3.756		47.778
115	In-ISK	|		58611.755		ppb	0.705			57447.024
45	Sc-ISK	>		175792.890		ppb	1.283			169580.601
23	Na	|		1718147.832	5198.117971	ppb	0.659	0.932		6134.650
39	K	|		4150409.003	5106.132720	ppb	0.319	1.608		66731.053
24	Mg	|		2021051.965	5063.301204	ppb	0.942	1.756		66.667
159	Tb-ISK	|		117262.675		ppb	1.129			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 14:32:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.094

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		18711.135		ppb		0.409		18671.083
9	Be	|		10.000	0.001871	ppb	88.192	418.056		7.778
10	B	|		357.782	-0.029122	ppb	12.649	488.889		362.227
27	Al	|		1006.702	0.025401	ppb	1.844	16.285		880.027
43	Ca-2	|		46.667	1.841824	ppb	43.301	113.772		28.333
49	Ti	|		91.111	-0.008079	ppb	23.521	673.549		93.334
52	Cr	|		5985.700	-0.078548	ppb	4.985	58.150		6330.291
55	Mn	|		268.891	0.001828	ppb	14.790	300.062		252.224
57	Fe	|		4542.945	-1.157467	ppb	2.458	40.393		4655.203
45	Sc-IS	>		833562.025		ppb		0.970		823660.369
66	Zn	|		227.780	0.023507	ppb	10.984	132.898		206.668
86	Sr	|		26.453	0.021556	ppb	114.153	113.258		-0.289
65	Cu	|		54.113	-0.000554	ppb	30.611	2607.269		54.230
69	Ga-IS	|		249791.775		ppb		1.120		248836.760
95	Mo	|		394.450	0.296376	ppb	5.752	5.738		44.445
115	In-IS	>		144512.771		ppb		0.606		145941.333
111	Cd	|		13.616	0.010341	ppb	37.386	49.022		3.240
118	Sn	|		1763.442	0.360041	ppb	6.135	8.391		586.679
121	Sb	|		136.667	0.025139	ppb	12.674	19.587		45.556
135	Ba	|		28.889	-0.000999	ppb	13.323	493.920		30.000
165	Ho-IS	|		168030.403		ppb		1.781		170305.806
159	Tb-IS	|		152903.212		ppb		2.730		151873.028
207	Pb	|		321.113	0.028127	ppb	12.384	16.774		46.667
203	Tl	|		52.222	0.013957	ppb	19.500	26.606		10.000
209	Bi-IS	>		88993.156		ppb		2.932		89965.736
51	V	|		4.444	-0.014227	ppb	114.564	75.591		11.111
59	Co	|		8.889	0.005542	ppb	43.301	57.433		2.222
60	Ni	|		5.556	-0.007179	ppb	91.652	113.883		10.000
75	As	|		500.648	-0.029116	ppb	6.029	304.178		507.587
71	Ga-ISK	>		67036.926		ppb		0.781		66825.946
82	Se-2	|		3.570	0.046358	ppb	154.165	412.716		2.245
107	Ag-1	|		206.668	0.062237	ppb	7.391	9.044		47.778
115	In-ISK	|		57146.677		ppb		1.417		57447.024
45	Sc-ISK	>		169587.433		ppb		1.289		169580.601
23	Na	|		5567.752	-1.778333	ppb	3.245	44.844		6134.650
39	K	|		68163.347	1.862741	ppb	0.617	62.564		66731.053
24	Mg	|		245.002	0.464090	ppb	18.368	26.920		66.667
159	Tb-ISK	|		114142.883		ppb		0.992		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23815-A-1-A @10

Autosampler Position: 104

Sample Date/Time: Thursday, March 19, 2020 14:49:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23815-A-1-A @10.095

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		19255.193		ppb			1.658			18671.083
9	Be	|		6.667	-0.001283	ppb	100.000	449.515				7.778
10	B	|		4466.254	12.899357	ppb	1.610	1.852				362.227
27	Al	|		558251.390	117.798194	ppb	1.599	0.839				880.027
43	Ca-2	|		31795.346	3124.925548	ppb	1.040	1.234				28.333
49	Ti	|		428.895	0.793429	ppb	8.310	10.429				93.334
52	Cr	|		8471.400	0.331206	ppb	1.124	1.649				6330.291
55	Mn	|		30115.053	3.815172	ppb	2.314	2.378				252.224
57	Fe	|		11480.168	43.800711	ppb	1.955	2.252				4655.203
45	Sc-IS	>		862569.846		ppb	0.767					823660.369
66	Zn	|		7099.541	8.395701	ppb	0.353	1.075				206.668
86	Sr	|		58853.809	45.582142	ppb	1.620	2.378				-0.289
65	Cu	|		8807.165	7.105925	ppb	2.579	3.332				54.230
69	Ga-IS	|		249655.059		ppb	1.369					248836.760
95	Mo	|		1400.069	1.109228	ppb	6.205	5.616				44.445
115	In-IS	>		146685.054		ppb	1.714					145941.333
111	Cd	|		8.171	0.004773	ppb	46.185	75.396				3.240
118	Sn	|		2310.187	0.516132	ppb	3.381	2.685				586.679
121	Sb	|		264.447	0.059109	ppb	14.168	16.811				45.556
135	Ba	|		1574.532	1.883859	ppb	7.231	5.664				30.000
165	Ho-IS	|		174272.180		ppb	1.144					170305.806
159	Tb-IS	|		158417.176		ppb	2.379					151873.028
207	Pb	|		355.558	0.032067	ppb	6.100	8.019				46.667
203	Tl	|		12.222	0.000829	ppb	56.773	282.082				10.000
209	Bi-IS	>		87841.477		ppb	1.001					89965.736
51	V	|		456.674	0.950552	ppb	5.110	6.280				11.111
59	Co	|		270.003	0.224651	ppb	11.315	11.775				2.222
60	Ni	|		132.223	0.198002	ppb	7.702	9.357				10.000
75	As	|		496.420	-0.031702	ppb	4.081	173.521				507.587
71	Ga-ISK	>		66580.359		ppb	1.034					66825.946
82	Se-2	|		5.245	0.103148	ppb	115.111	202.431				2.245
107	Ag-1	|		33.333	-0.005628	ppb	17.321	41.287				47.778
115	In-ISK	|		56992.410		ppb	1.306					57447.024
45	Sc-ISK	>		171752.991		ppb	0.612					169580.601
23	Na	|		15398842.869	47839.594413	ppb	0.483	0.826				6134.650
39	K	|		198698.973	167.878381	ppb	0.242	0.614				66731.053
24	Mg	|		255973.069	656.126252	ppb	1.020	0.574				66.667
159	Tb-ISK	|		114986.252		ppb	0.565					114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23815-A-1-B MS @10

Autosampler Position: 105

Sample Date/Time: Thursday, March 19, 2020 14:51:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23815-A-1-B MS @10.096

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19551.148		ppb		0.565		18671.083
9	Be	|		12187.419	10.526089	ppb	1.130	1.107		7.778
10	B	|		7529.764	22.597896	ppb	4.425	4.500		362.227
27	Al	|		608555.506	128.605503	ppb	1.454	1.549		880.027
43	Ca-2	|		36635.253	3605.497077	ppb	1.241	0.565		28.333
49	Ti	|		4205.063	9.856480	ppb	1.514	1.984		93.334
52	Cr	|		63681.656	10.274411	ppb	1.917	2.483		6330.291
55	Mn	|		105176.883	13.426289	ppb	0.794	1.228		252.224
57	Fe	|		83858.780	524.589549	ppb	1.506	2.269		4655.203
45	Sc-IS	>		861455.315		ppb	0.679			823660.369
66	Zn	|		15936.662	19.199213	ppb	0.788	0.776		206.668
86	Sr	|		70575.668	54.726909	ppb	0.508	1.000		-0.289
65	Cu	|		21585.120	17.502988	ppb	0.738	1.106		54.230
69	Ga-IS	|		251725.220		ppb	0.938			248836.760
95	Mo	|		12426.514	10.162004	ppb	0.650	1.137		44.445
115	In-IS	>		146944.460		ppb	0.422			145941.333
111	Cd	|		10443.297	10.201863	ppb	2.870	2.580		3.240
118	Sn	|		16127.989	4.653620	ppb	1.180	0.859		586.679
121	Sb	|		37234.017	10.036396	ppb	0.783	1.198		45.556
135	Ba	|		10140.268	12.319127	ppb	3.976	4.136		30.000
165	Ho-IS	|		176187.684		ppb	1.134			170305.806
159	Tb-IS	|		157902.469		ppb	1.669			151873.028
207	Pb	|		97408.618	9.946887	ppb	0.468	1.475		46.667
203	Tl	|		28945.967	9.511187	ppb	1.511	1.706		10.000
209	Bi-IS	>		88909.175		ppb	1.291			89965.736
51	V	|		4958.639	10.453480	ppb	2.322	3.674		11.111
59	Co	|		12424.290	10.321532	ppb	1.254	2.648		2.222
60	Ni	|		6341.408	10.154190	ppb	1.985	3.225		10.000
75	As	|		3815.807	11.063928	ppb	0.904	1.868		507.587
71	Ga-ISK	>		67215.563		ppb	1.667			66825.946
82	Se-2	|		331.587	11.319374	ppb	4.999	6.640		2.245
107	Ag-1	|		12347.557	4.812105	ppb	1.226	2.740		47.778
115	In-ISK	|		57779.934		ppb	0.463			57447.024
45	Sc-ISK	>		174895.232		ppb	0.781			169580.601
23	Na	|		15607851.374	47617.409094	ppb	1.539	1.558		6134.650
39	K	|		280587.685	266.271926	ppb	0.596	0.323		66731.053
24	Mg	|		457690.611	1152.262148	ppb	1.502	1.430		66.667
159	Tb-ISK	|		117428.673		ppb	0.718			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23815-A-1-C MSD @10

Autosampler Position: 106

Sample Date/Time: Thursday, March 19, 2020 14:54:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23815-A-1-C MSD @10.097

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		19584.531		ppb		2.369		18671.083
9	Be	|		11878.272	10.344721	ppb		2.443	1.978	7.778
10	B	|		7460.839	22.578585	ppb		4.279	4.291	362.227
27	Al	|		604492.649	128.823957	ppb		1.399	1.508	880.027
43	Ca-2	|		35801.481	3553.105353	ppb		1.730	1.378	28.333
49	Ti	|		3869.413	9.128143	ppb		3.479	3.224	93.334
52	Cr	|		60914.044	9.868212	ppb		0.931	1.299	6330.291
55	Mn	|		101894.320	13.115774	ppb		0.390	0.558	252.224
57	Fe	|		84103.530	530.882911	ppb		1.123	1.307	4655.203
45	Sc-IS	>		854249.872		ppb		0.472		823660.369
66	Zn	|		15590.730	18.936162	ppb		3.073	2.824	206.668
86	Sr	|		70235.687	54.918516	ppb		1.700	1.264	-0.289
65	Cu	|		21174.510	17.312990	ppb		2.053	1.660	54.230
69	Ga-IS	|		251255.900		ppb		0.709		248836.760
95	Mo	|		12770.150	10.532226	ppb		1.388	1.517	44.445
115	In-IS	>		147579.737		ppb		0.979		145941.333
111	Cd	|		10255.774	9.974818	ppb		3.500	2.826	3.240
118	Sn	|		16379.386	4.707879	ppb		1.238	0.768	586.679
121	Sb	|		36552.260	9.810673	ppb		0.847	1.732	45.556
135	Ba	|		9886.756	11.956698	ppb		3.250	2.586	30.000
165	Ho-IS	|		176348.466		ppb		0.510		170305.806
159	Tb-IS	|		158673.155		ppb		1.633		151873.028
207	Pb	|		94837.816	9.789162	ppb		0.942	1.347	46.667
203	Tl	|		28295.775	9.398829	ppb		1.017	1.627	10.000
209	Bi-IS	>		87949.907		ppb		0.614		89965.736
51	V	|		4838.597	10.142225	ppb		1.961	1.710	11.111
59	Co	|		11592.480	9.577138	ppb		1.401	1.335	2.222
60	Ni	|		6241.363	9.937735	ppb		2.011	1.719	10.000
75	As	|		3730.632	10.710954	ppb		2.068	2.096	507.587
71	Ga-ISK	>		67570.537		ppb		0.315		66825.946
82	Se-2	|		300.201	10.180474	ppb		7.347	7.656	2.245
107	Ag-1	|		12387.591	4.800897	ppb		0.432	0.124	47.778
115	In-ISK	|		58582.479		ppb		0.841		57447.024
45	Sc-ISK	>		175204.507		ppb		0.300		169580.601
23	Na	|		15545121.002	47339.939844	ppb		1.578	1.281	6134.650
39	K	|		277888.066	262.253383	ppb		1.139	1.258	66731.053
24	Mg	|		451109.135	1133.649753	ppb		1.238	0.947	66.667
159	Tb-ISK	|		118668.849		ppb		0.463		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 14:57:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.098

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		19353.100		ppb			0.466			18671.083
9	Be	|		114586.626	100.407775	ppb			0.798	1.583		7.778
10	B	|		79850.334	254.650543	ppb			1.034	0.428		362.227
27	Al	|		466157.309	99.843688	ppb			0.998	1.779		880.027
43	Ca-2	|		51639.843	5154.396414	ppb			1.327	1.629		28.333
49	Ti	|		41551.458	100.856284	ppb			1.251	1.399		93.334
52	Cr	|		553694.050	99.887532	ppb			0.307	0.719		6330.291
55	Mn	|		766597.329	99.429696	ppb			0.756	0.125		252.224
57	Fe	|		769622.369	5149.398218	ppb			1.143	0.984		4655.203
45	Sc-IS	>		849658.436		ppb			0.785			823660.369
66	Zn	|		83194.904	102.748526	ppb			1.259	0.764		206.668
86	Sr	|		126219.927	99.236619	ppb			0.913	1.461		-0.289
65	Cu	|		126036.702	103.842467	ppb			0.854	0.073		54.230
69	Ga-IS	|		270478.377		ppb			2.096			248836.760
95	Mo	|		120005.280	99.835921	ppb			0.552	1.206		44.445
115	In-IS	>		148068.479		ppb			0.289			145941.333
111	Cd	|		103957.856	100.814804	ppb			1.379	1.114		3.240
118	Sn	|		336694.841	99.904438	ppb			0.050	0.277		586.679
121	Sb	|		366929.932	98.263227	ppb			1.523	1.775		45.556
135	Ba	|		82770.239	100.052231	ppb			1.559	1.827		30.000
165	Ho-IS	|		176915.444		ppb			0.844			170305.806
159	Tb-IS	|		160266.334		ppb			1.547			151873.028
207	Pb	|		999923.211	99.527063	ppb			0.707	0.824		46.667
203	Tl	|		309150.171	99.028694	ppb			2.036	3.267		10.000
209	Bi-IS	>		91249.431		ppb			1.514			89965.736
51	V	|		47066.311	97.951828	ppb			1.769	1.780		11.111
59	Co	|		121850.909	99.749248	ppb			1.834	1.234		2.222
60	Ni	|		63414.886	100.188223	ppb			0.565	0.408		10.000
75	As	|		31251.984	101.370957	ppb			1.328	0.830		507.587
71	Ga-ISK	>		68201.306		ppb			0.664			66825.946
82	Se-2	|		2900.562	98.110582	ppb			2.390	2.571		2.245
107	Ag-1	|		257888.333	99.396718	ppb			1.456	1.825		47.778
115	In-ISK	|		59346.714		ppb			0.252			57447.024
45	Sc-ISK	>		175330.543		ppb			0.969			169580.601
23	Na	|		1721408.669	5221.642656	ppb			0.952	1.068		6134.650
39	K	|		4173119.689	5148.024854	ppb			0.685	1.405		66731.053
24	Mg	|		2053945.796	5159.160171	ppb			0.776	1.670		66.667
159	Tb-ISK	|		119761.241		ppb			0.464			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 15:00:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.099

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18606.556		ppb	1.525		18671.083
9	Be	14.444	0.005917	ppb	26.647	55.481	7.778
10	B	362.227	-0.006791	ppb	10.979	1895.304	362.227
27	Al	934.475	0.011026	ppb	3.591	103.394	880.027
43	Ca-2	28.333	-0.006263	ppb	36.73517853	680	28.333
49	Ti	78.889	-0.037495	ppb	8.796	38.502	93.334
52	Cr	5681.129	-0.128117	ppb	0.610	12.337	6330.291
55	Mn	271.114	0.002379	ppb	11.020	193.248	252.224
57	Fe	4806.364	0.862955	ppb	1.546	37.485	4655.203
45	Sc-IS	> 828364.449		ppb	1.966		823660.369
66	Zn	220.002	0.015502	ppb	2.624	58.018	206.668
86	Sr	10.298	0.008282	ppb	242.864	240.194	-0.289
65	Cu	76.280	0.018454	ppb	7.570	32.409	54.230
69	Ga-IS	248041.642		ppb	1.023		248836.760
95	Mo	377.783	0.284138	ppb	20.069	22.095	44.445
115	In-IS	> 144147.905		ppb	0.980		145941.333
111	Cd	9.207	0.005963	ppb	37.881	56.742	3.240
118	Sn	1772.332	0.364356	ppb	5.459	9.016	586.679
121	Sb	284.447	0.065889	ppb	15.250	18.383	45.556
135	Ba	48.889	0.023952	ppb	20.830	53.999	30.000
165	Ho-IS	168305.678		ppb	0.841		170305.806
159	Tb-IS	152144.860		ppb	1.230		151873.028
207	Pb	386.669	0.034951	ppb	5.244	7.243	46.667
203	Tl	73.334	0.020971	ppb	24.052	28.521	10.000
209	Bi-IS	> 88583.821		ppb	1.102		89965.736
51	V	17.778	0.014183	ppb	47.186	122.945	11.111
59	Co	11.111	0.007465	ppb	17.321	21.382	2.222
60	Ni	7.778	-0.003563	ppb	65.465	230.116	10.000
75	As	526.911	0.071952	ppb	5.563	111.207	507.587
71	Ga-ISK	> 66545.759		ppb	1.243		66825.946
82	Se-2	5.575	0.114997	ppb	81.415	136.338	2.245
107	Ag-1	208.890	0.063773	ppb	20.332	26.771	47.778
115	In-ISK	57658.430		ppb	1.292		57447.024
45	Sc-ISK	> 168249.421		ppb	0.157		169580.601
23	Na	9441.454	10.643310	ppb	2.995	8.132	6134.650
39	K	67935.602	2.259164	ppb	0.833	32.979	66731.053
24	Mg	251.669	0.485645	ppb	8.959	12.354	66.667
159	Tb-ISK	112804.966		ppb	0.613		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-58300_1-A

Autosampler Position: 128

Sample Date/Time: Thursday, March 19, 2020 15:17:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\MB 570-58300_1-A.100

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	19143.930		ppb	0.053		18671.083
9	Be	15.556	0.006762	ppb	44.607	93.157	7.778
10	B	250.002	-0.389426	ppb	6.110	13.095	362.227
27	Al	1933.464	0.223584	ppb	0.622	1.661	880.027
43	Ca-2	33.333	0.440878	ppb	8.660	75.852	28.333
49	Ti	97.778	0.006091	ppb	19.385	813.428	93.334
52	Cr	6722.693	0.045546	ppb	1.071	45.481	6330.291
55	Mn	290.003	0.004175	ppb	8.289	71.563	252.224
57	Fe	4555.171	-1.398733	ppb	3.059	86.317	4655.203
45	Sc-IS	> 842627.361		ppb	1.400		823660.369
66	Zn	302.225	0.113182	ppb	10.008	30.387	206.668
86	Sr	19.275	0.015449	ppb	96.698	94.983	-0.289
65	Cu	40.933	-0.012042	ppb	26.021	76.162	54.230
69	Ga-IS	252695.489		ppb	1.039		248836.760
95	Mo	56.667	0.009374	ppb	10.189	47.678	44.445
115	In-IS	> 144632.409		ppb	1.047		145941.333
111	Cd	2.103	-0.001087	ppb	91.792	177.282	3.240
118	Sn	1078.930	0.151350	ppb	8.790	18.416	586.679
121	Sb	137.778	0.025402	ppb	1.397	2.883	45.556
135	Ba	33.333	0.004535	ppb	45.826	421.255	30.000
165	Ho-IS	170470.207		ppb	1.928		170305.806
159	Tb-IS	157729.372		ppb	1.107		151873.028
207	Pb	66.667	0.002147	ppb	25.000	81.739	46.667
203	Tl	5.556	-0.001411	ppb	34.641	45.015	10.000
209	Bi-IS	> 88359.102		ppb	1.097		89965.736
51	V	11.111	0.000126	ppb	62.450	11825.307	11.111
59	Co	3.333	0.000937	ppb	100.000	299.213	2.222
60	Ni	15.556	0.009045	ppb	12.372	35.934	10.000
75	As	494.949	-0.037305	ppb	6.495	313.649	507.587
71	Ga-ISK	> 66632.817		ppb	0.591		66825.946
82	Se-2	0.906	-0.046496	ppb	331.557	223.106	2.245
107	Ag-1	31.111	-0.006506	ppb	32.733	62.662	47.778
115	In-ISK	56635.611		ppb	0.199		57447.024
45	Sc-ISK	> 166177.628		ppb	0.628		169580.601
23	Na	2901.961	-9.988696	ppb	1.393	0.767	6134.650
39	K	63886.988	-1.991589	ppb	0.941	29.685	66731.053
24	Mg	85.000	0.052009	ppb	15.563	64.977	66.667
159	Tb-ISK	112514.708		ppb	0.975		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-58300_2-A

Autosampler Position: 129

Sample Date/Time: Thursday, March 19, 2020 15:20:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\LCS 570-58300_2-A.101

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19634.597		ppb		1.396		18671.083
9	Be	|	118166.752	103.572682	ppb		1.202	1.696	7.778
10	B	|	30568.230	96.782060	ppb		1.563	2.055	362.227
27	Al	|	468543.098	100.382753	ppb		2.179	2.566	880.027
43	Ca-2	|	51621.439	5153.910406	ppb		1.050	1.211	28.333
49	Ti	|	41446.730	100.636858	ppb		2.578	3.027	93.334
52	Cr	|	553954.067	99.965185	ppb		0.652	1.184	6330.291
55	Mn	|	751257.143	97.470553	ppb		0.806	1.132	252.224
57	Fe	|	767769.706	5138.350467	ppb		1.078	0.825	4655.203
45	Sc-IS	>	849410.457		ppb		0.522		823660.369
66	Zn	|	84358.344	104.223639	ppb		0.587	0.917	206.668
86	Sr	|	123965.719	97.486658	ppb		0.701	0.518	-0.289
65	Cu	|	124054.753	102.239219	ppb		1.116	1.019	54.230
69	Ga-IS	|	272183.879		ppb		2.392		248836.760
95	Mo	|	119626.559	99.545603	ppb		0.193	0.522	44.445
115	In-IS	>	148099.725		ppb		1.178		145941.333
111	Cd	|	106564.442	103.335185	ppb		1.097	1.847	3.240
118	Sn	|	369593.626	109.678753	ppb		1.095	2.235	586.679
121	Sb	|	363005.020	97.209711	ppb		1.683	2.816	45.556
135	Ba	|	82947.953	100.264829	ppb		1.939	2.995	30.000
165	Ho-IS	|	178231.693		ppb		1.115		170305.806
159	Tb-IS	|	162748.525		ppb		1.001		151873.028
207	Pb	|	996461.600	98.439019	ppb		1.130	1.374	46.667
203	Tl	|	299573.090	95.219252	ppb		0.984	0.947	10.000
209	Bi-IS	>	91934.884		ppb		0.797		89965.736
51	V	|	46990.503	95.805132	ppb		1.571	1.278	11.111
59	Co	|	119588.500	95.913134	ppb		1.060	0.636	2.222
60	Ni	|	65582.416	101.514914	ppb		0.393	1.300	10.000
75	As	|	31282.850	99.387141	ppb		0.605	1.451	507.587
71	Ga-ISK	>	69620.376		ppb		1.699		66825.946
82	Se-2	|	2917.530	96.683117	ppb		1.704	2.212	2.245
107	Ag-1	|	119984.024	45.298298	ppb		1.140	2.053	47.778
115	In-ISK	|	59248.197		ppb		0.397		57447.024
45	Sc-ISK	>	174779.375		ppb		0.711		169580.601
23	Na	|	329210.479	986.090939	ppb		1.286	0.617	6134.650
39	K	|	831277.750	959.419885	ppb		0.353	0.864	66731.053
24	Mg	|	2034245.243	5125.686799	ppb		2.349	2.739	66.667
159	Tb-ISK	|	118869.869		ppb		1.006		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-58300_3-A

Autosampler Position: 130

Sample Date/Time: Thursday, March 19, 2020 15:23:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\LCSD 570-58300_3-A.102

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19177.312		ppb		2.282		18671.083
9	Be	|	117564.165	103.028521	ppb		2.367	2.811	7.778
10	B	|	30508.100	96.578936	ppb		1.172	2.367	362.227
27	Al	|	463525.636	99.306737	ppb		2.239	3.587	880.027
43	Ca-2	|	52855.974	5275.345550	ppb		2.464	1.140	28.333
49	Ti	|	42500.907	103.175726	ppb		0.603	0.819	93.334
52	Cr	|	556233.192	100.364037	ppb		0.227	1.217	6330.291
55	Mn	|	747430.143	96.964909	ppb		1.057	2.137	252.224
57	Fe	|	755931.845	5057.888062	ppb		0.663	1.083	4655.203
45	Sc-IS	>	849617.103		ppb		1.414		823660.369
66	Zn	|	84143.757	103.937069	ppb		0.840	0.883	206.668
86	Sr	|	124225.874	97.682577	ppb		0.230	1.657	-0.289
65	Cu	|	123108.797	101.442337	ppb		0.590	0.834	54.230
69	Ga-IS	|	267922.426		ppb		0.542		248836.760
95	Mo	|	118853.513	98.896521	ppb		1.028	2.278	44.445
115	In-IS	>	148642.554		ppb		1.478		145941.333
111	Cd	|	107108.981	103.485725	ppb		0.659	1.529	3.240
118	Sn	|	374690.448	110.778938	ppb		0.978	1.332	586.679
121	Sb	|	370075.519	98.732674	ppb		0.275	1.330	45.556
135	Ba	|	83289.900	100.314781	ppb		1.278	2.717	30.000
165	Ho-IS	|	174985.274		ppb		1.209		170305.806
159	Tb-IS	|	160196.602		ppb		1.115		151873.028
207	Pb	|	1000991.092	99.513658	ppb		0.705	2.102	46.667
203	Tl	|	301818.466	96.542092	ppb		0.875	2.054	10.000
209	Bi-IS	>	91370.197		ppb		1.472		89965.736
51	V	|	46788.742	98.446900	ppb		2.172	2.521	11.111
59	Co	|	117748.932	97.458324	ppb		1.767	2.116	2.222
60	Ni	|	64948.454	103.741435	ppb		1.948	2.257	10.000
75	As	|	31595.492	103.650098	ppb		0.801	0.818	507.587
71	Ga-ISK	>	67461.133		ppb		0.355		66825.946
82	Se-2	|	2930.565	100.211291	ppb		1.536	1.611	2.245
107	Ag-1	|	118480.405	46.154612	ppb		0.458	0.800	47.778
115	In-ISK	|	58563.868		ppb		2.399		57447.024
45	Sc-ISK	>	169795.349		ppb		0.577		169580.601
23	Na	|	325446.988	1003.809464	ppb		0.293	0.293	6134.650
39	K	|	828322.254	986.264552	ppb		0.431	0.220	66731.053
24	Mg	|	2025251.110	5252.471122	ppb		1.765	1.832	66.667
159	Tb-ISK	|	117823.219		ppb		0.142		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23510-C-1-A

Autosampler Position: 131

Sample Date/Time: Thursday, March 19, 2020 15:27:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23510-C-1-A.103

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	19526.672		ppb		1.695		18671.083
9	Be	|	21.111	0.011531	ppb	63.812	103.015		7.778
10	B	|	5118.695	15.233032	ppb	1.891	1.892		362.227
27	Al	|	496300.246	106.496459	ppb	1.282	1.428		880.027
43	Ca-2	|	41052.239	4104.110694	ppb	1.110	0.735		28.333
49	Ti	|	1594.534	3.652335	ppb	3.947	4.545		93.334
52	Cr	|	10321.508	0.695645	ppb	3.325	9.777		6330.291
55	Mn	|	12144.052	1.544807	ppb	3.032	3.322		252.224
57	Fe	|	22187.221	117.322165	ppb	2.046	2.771		4655.203
45	Sc-IS	>	848129.644		ppb	0.379			823660.369
66	Zn	|	2828.058	3.244280	ppb	4.459	4.990		206.668
86	Sr	|	18906.844	14.890521	ppb	1.781	1.451		-0.289
65	Cu	|	2045.625	1.643064	ppb	1.498	1.342		54.230
69	Ga-IS	|	248549.426		ppb	1.531			248836.760
95	Mo	|	783.355	0.615068	ppb	8.606	9.499		44.445
115	In-IS	>	144710.169		ppb	0.434			145941.333
111	Cd	|	17.244	0.013921	ppb	29.830	36.652		3.240
118	Sn	|	1053.372	0.143406	ppb	6.631	14.122		586.679
121	Sb	|	1931.243	0.516905	ppb	10.222	10.613		45.556
135	Ba	|	5059.786	6.223940	ppb	3.630	3.928		30.000
165	Ho-IS	|	170715.131		ppb	0.870			170305.806
159	Tb-IS	|	155642.225		ppb	1.138			151873.028
207	Pb	|	2750.106	0.273634	ppb	5.812	5.014		46.667
203	Tl	|	30.000	0.006520	ppb	11.111	15.524		10.000
209	Bi-IS	>	89708.588		ppb	1.149			89965.736
51	V	|	523.343	1.103155	ppb	5.661	6.338		11.111
59	Co	|	67.778	0.055515	ppb	10.238	10.456		2.222
60	Ni	|	513.343	0.822376	ppb	14.242	14.180		10.000
75	As	|	1026.663	1.793944	ppb	6.557	13.878		507.587
71	Ga-ISK	>	65955.239		ppb	0.576			66825.946
82	Se-2	|	8.263	0.211487	ppb	25.398	34.191		2.245
107	Ag-1	|	52.222	0.002023	ppb	25.797	267.221		47.778
115	In-ISK	|	57074.959		ppb	0.860			57447.024
45	Sc-ISK	>	166968.980		ppb	0.352			169580.601
23	Na	|	470123.859	1483.629930	ppb	0.594	0.307		6134.650
39	K	|	1417508.330	1780.406954	ppb	0.611	0.405		66731.053
24	Mg	|	289739.095	763.982857	ppb	1.425	1.215		66.667
159	Tb-ISK	|	114630.772		ppb	1.087			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23510-C-1-B MS

Autosampler Position: 132

Sample Date/Time: Thursday, March 19, 2020 15:30:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23510-C-1-B MS.104

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		18793.467		ppb			1.604			18671.083
9	Be	|		70154.063	62.840360	ppb		0.790	1.091			7.778
10	B	|		18809.043	60.420840	ppb		1.487	2.175			362.227
27	Al	|		689697.838	151.109293	ppb		1.544	1.526			880.027
43	Ca-2	|		54204.346	5531.209581	ppb		2.436	2.446			28.333
49	Ti	|		21699.806	53.743033	ppb		2.003	2.699			93.334
52	Cr	|		312048.074	57.044419	ppb		0.789	0.628			6330.291
55	Mn	|		431737.367	57.238451	ppb		1.181	1.869			252.224
57	Fe	|		193053.484	1296.545995	ppb		0.525	1.192			4655.203
45	Sc-IS	>		831099.459		ppb		0.698				823660.369
66	Zn	|		56181.383	70.855518	ppb		1.479	1.464			206.668
86	Sr	|		87573.394	70.382966	ppb		1.709	1.252			-0.289
65	Cu	|		72375.574	60.945190	ppb		1.225	1.368			54.230
69	Ga-IS	|		253601.276		ppb		0.844				248836.760
95	Mo	|		61958.514	52.676036	ppb		0.286	0.418			44.445
115	In-IS	>		145238.229		ppb		0.360				145941.333
111	Cd	|		60561.871	59.875999	ppb		0.236	0.578			3.240
118	Sn	|		86173.613	25.937346	ppb		1.599	1.726			586.679
121	Sb	|		214639.327	58.593504	ppb		0.308	0.174			45.556
135	Ba	|		41685.177	51.350615	ppb		0.908	0.628			30.000
165	Ho-IS	|		171299.815		ppb		0.551				170305.806
159	Tb-IS	|		156421.756		ppb		0.913				151873.028
207	Pb	|		569069.124	56.886350	ppb		1.162	0.293			46.667
203	Tl	|		170219.250	54.755572	ppb		0.712	1.581			10.000
209	Bi-IS	>		90845.731		ppb		0.918				89965.736
51	V	|		25992.523	54.644969	ppb		2.448	3.159			11.111
59	Co	|		66435.306	54.954281	ppb		2.712	3.556			2.222
60	Ni	|		35641.098	56.865199	ppb		2.988	1.277			10.000
75	As	|		20125.480	65.339137	ppb		3.080	1.716			507.587
71	Ga-ISK	>		67519.232		ppb		2.149				66825.946
82	Se-2	|		1907.014	65.155312	ppb		1.138	3.130			2.245
107	Ag-1	|		57601.467	22.415650	ppb		1.527	2.432			47.778
115	In-ISK	|		57602.342		ppb		0.529				57447.024
45	Sc-ISK	>		170269.909		ppb		1.193				169580.601
23	Na	|		613883.887	1905.468934	ppb		1.327	2.227			6134.650
39	K	|		1739172.539	2159.993149	ppb		1.471	2.376			66731.053
24	Mg	|		791886.647	2048.347505	ppb		1.707	2.868			66.667
159	Tb-ISK	|		115331.007		ppb		0.270				114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23510-C-1-C MSD

Autosampler Position: 133

Sample Date/Time: Thursday, March 19, 2020 15:32:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23510-C-1-C MSD.105

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		19022.658		ppb		1.010		18671.083
9	Be	|		56192.522	49.648726	ppb		0.217	1.064	7.778
10	B	|		17120.255	54.128054	ppb		1.736	2.701	362.227
27	Al	|		657880.602	142.160280	ppb		1.074	0.193	880.027
43	Ca-2	|		59612.477	6000.069601	ppb		1.741	0.836	28.333
49	Ti	|		17709.860	43.213592	ppb		1.026	0.874	93.334
52	Cr	|		253319.771	45.439849	ppb		1.154	0.719	6330.291
55	Mn	|		346993.273	45.364628	ppb		1.717	1.154	252.224
57	Fe	|		288693.702	1927.793370	ppb		1.229	1.395	4655.203
45	Sc-IS	>		842576.112		ppb		0.921		823660.369
66	Zn	|		45494.549	56.544252	ppb		0.430	0.750	206.668
86	Sr	|		73378.639	58.174134	ppb		0.633	0.344	-0.289
65	Cu	|		58894.069	48.913106	ppb		1.230	2.127	54.230
69	Ga-IS	|		253034.732		ppb		0.981		248836.760
95	Mo	|		54056.527	45.327504	ppb		0.465	0.737	44.445
115	In-IS	>		143854.510		ppb		0.664		145941.333
111	Cd	|		48306.183	48.216454	ppb		1.081	0.499	3.240
118	Sn	|		69682.898	21.142214	ppb		1.599	1.200	586.679
121	Sb	|		176310.334	48.591638	ppb		1.359	1.353	45.556
135	Ba	|		37437.893	46.563274	ppb		1.956	2.459	30.000
165	Ho-IS	|		172648.134		ppb		0.673		170305.806
159	Tb-IS	|		157235.025		ppb		0.539		151873.028
207	Pb	|		448643.119	45.312027	ppb		0.369	1.653	46.667
203	Tl	|		133601.852	43.417092	ppb		0.830	1.880	10.000
209	Bi-IS	>		89927.744		ppb		1.295		89965.736
51	V	|		21531.775	45.468571	ppb		2.255	2.675	11.111
59	Co	|		54233.868	45.060197	ppb		0.946	1.092	2.222
60	Ni	|		28858.007	46.262785	ppb		0.296	0.131	10.000
75	As	|		16141.228	52.325157	ppb		0.455	0.262	507.587
71	Ga-ISK	>		67199.907		ppb		0.427		66825.946
82	Se-2	|		1539.978	52.834846	ppb		4.612	5.031	2.245
107	Ag-1	|		51439.116	20.106013	ppb		0.982	1.373	47.778
115	In-ISK	|		57276.455		ppb		1.238		57447.024
45	Sc-ISK	>		169608.719		ppb		0.721		169580.601
23	Na	|		587315.579	1829.039773	ppb		1.069	0.434	6134.650
39	K	|		1699210.125	2116.697629	ppb		0.463	1.046	66731.053
24	Mg	|		1047392.790	2719.233151	ppb		2.200	2.008	66.667
159	Tb-ISK	|		116102.569		ppb		0.781		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23510-C-2-A

Autosampler Position: 134

Sample Date/Time: Thursday, March 19, 2020 15:35:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23510-C-2-A.106

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	20206.503		ppb	0.635		18671.083
9	Be	53.333	0.038314	ppb	25.000	29.958	7.778
10	B	26997.714	82.716643	ppb	1.793	1.477	362.227
27	Al	2610741.569	543.302133	ppb	0.407	1.361	880.027
43	Ca-2	88184.675	8541.001023	ppb	0.156	1.516	28.333
49	Ti	6375.868	14.813707	ppb	3.900	4.114	93.334
52	Cr	14069.147	1.299561	ppb	0.283	2.389	6330.291
55	Mn	30608.322	3.818457	ppb	2.267	1.592	252.224
57	Fe	43669.981	252.926770	ppb	0.637	2.168	4655.203
45	Sc-IS	> 875909.393		ppb	1.420		823660.369
66	Zn	4209.509	4.793312	ppb	1.539	2.866	206.668
86	Sr	36628.496	27.934917	ppb	0.822	0.594	-0.289
65	Cu	1695.030	1.309331	ppb	0.341	1.173	54.230
69	Ga-IS	248760.626		ppb	0.934		248836.760
95	Mo	2771.381	2.201101	ppb	8.525	10.005	44.445
115	In-IS	> 146635.219		ppb	0.825		145941.333
111	Cd	26.402	0.022727	ppb	50.258	58.172	3.240
118	Sn	2573.567	0.596026	ppb	10.859	15.200	586.679
121	Sb	5835.637	1.566074	ppb	4.050	4.549	45.556
135	Ba	3046.992	3.683619	ppb	1.656	1.422	30.000
165	Ho-IS	174810.848		ppb	0.465		170305.806
159	Tb-IS	158397.856		ppb	1.365		151873.028
207	Pb	5085.920	0.516464	ppb	2.293	2.831	46.667
203	Tl	230.002	0.072624	ppb	16.139	17.377	10.000
209	Bi-IS	> 88638.594		ppb	0.797		89965.736
51	V	1124.489	2.366310	ppb	0.746	2.586	11.111
59	Co	165.557	0.136792	ppb	19.864	21.779	2.222
60	Ni	500.009	0.789719	ppb	7.689	5.934	10.000
75	As	4054.705	11.951057	ppb	3.805	6.312	507.587
71	Ga-ISK	> 66819.273		ppb	1.849		66825.946
82	Se-2	10.234	0.275777	ppb	45.352	57.923	2.245
107	Ag-1	175.557	0.050201	ppb	12.207	14.455	47.778
115	In-ISK	57747.379		ppb	1.167		57447.024
45	Sc-ISK	> 170528.522		ppb	1.191		169580.601
23	Na	3299791.788	10310.167103	ppb	0.564	0.632	6134.650
39	K	1644829.041	2034.727662	ppb	0.810	1.133	66731.053
24	Mg	263397.860	680.058460	ppb	0.906	1.050	66.667
159	Tb-ISK	116566.980		ppb	0.368		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23510-C-3-A

Autosampler Position: 135

Sample Date/Time: Thursday, March 19, 2020 15:38:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23510-C-3-A.107

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	19540.022		ppb	0.830		18671.083
9	Be	17.778	0.008491	ppb	43.301	79.280	7.778
10	B	5319.882	15.792632	ppb	6.771	8.434	362.227
27	Al	291519.066	62.120713	ppb	1.131	0.224	880.027
43	Ca-2	39977.529	3974.246515	ppb	0.987	0.424	28.333
49	Ti	1162.272	2.577268	ppb	28.091	29.449	93.334
52	Cr	10711.794	0.756336	ppb	2.165	8.343	6330.291
55	Mn	10160.279	1.279575	ppb	0.528	1.364	252.224
57	Fe	18744.518	93.376674	ppb	2.857	2.768	4655.203
45	Sc-IS	> 852920.897		ppb	1.077		823660.369
66	Zn	6200.235	7.385661	ppb	2.165	3.318	206.668
86	Sr	18158.068	14.222922	ppb	1.327	2.192	-0.289
65	Cu	2014.464	1.607815	ppb	3.490	2.790	54.230
69	Ga-IS	252795.090		ppb	1.289		248836.760
95	Mo	1213.385	0.967743	ppb	2.074	1.674	44.445
115	In-IS	> 146154.959		ppb	1.175		145941.333
111	Cd	21.896	0.018337	ppb	8.568	11.037	3.240
118	Sn	1763.443	0.354446	ppb	7.002	12.184	586.679
121	Sb	2958.085	0.790672	ppb	6.025	7.214	45.556
135	Ba	4906.400	5.977098	ppb	6.448	7.564	30.000
165	Ho-IS	171036.753		ppb	1.103		170305.806
159	Tb-IS	155542.199		ppb	0.525		151873.028
207	Pb	3774.647	0.374739	ppb	5.620	4.148	46.667
203	Tl	37.778	0.008984	ppb	18.368	25.445	10.000
209	Bi-IS	> 90307.923		ppb	1.564		89965.736
51	V	795.578	1.629206	ppb	1.280	1.358	11.111
59	Co	41.111	0.031787	ppb	40.810	43.682	2.222
60	Ni	608.902	0.944169	ppb	2.073	2.544	10.000
75	As	986.059	1.537742	ppb	5.058	11.538	507.587
71	Ga-ISK	> 68337.509		ppb	0.588		66825.946
82	Se-2	3.581	0.044056	ppb	141.400	389.792	2.245
107	Ag-1	126.667	0.029882	ppb	29.657	47.310	47.778
115	In-ISK	58248.568		ppb	1.505		57447.024
45	Sc-ISK	> 173214.969		ppb	0.981		169580.601
23	Na	430062.835	1305.991176	ppb	1.030	0.407	6134.650
39	K	1360130.574	1640.443572	ppb	0.762	1.835	66731.053
24	Mg	283826.872	721.483791	ppb	0.687	1.637	66.667
159	Tb-ISK	116428.530		ppb	0.535		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23609-G-1-B

Autosampler Position: 160

Sample Date/Time: Thursday, March 19, 2020 15:43:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\570-23609-G-1-B.108

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	18868.039		ppb	6.175		18671.083
9	Be	37.778	0.026338	ppb	36.735	44.750	7.778
10	B	1242.276	2.821658	ppb	8.376	9.882	362.227
27	Al	1222883.782	264.973869	ppb	2.354	2.880	880.027
43	Ca-2	20498.033	2065.741833	ppb	2.164	2.948	28.333
49	Ti	3871.640	9.298771	ppb	11.196	13.654	93.334
52	Cr	17728.774	2.079383	ppb	1.685	6.204	6330.291
55	Mn	92470.562	12.094257	ppb	1.170	3.845	252.224
57	Fe	47303.756	289.593943	ppb	1.563	4.168	4655.203
45	Sc-IS	> 841096.352		ppb	2.643		823660.369
66	Zn	151686.874	189.629640	ppb	2.217	4.848	206.668
86	Sr	10979.616	8.726926	ppb	3.316	5.320	-0.289
65	Cu	18216.005	15.136409	ppb	2.806	5.524	54.230
69	Ga-IS	252086.380		ppb	3.399		248836.760
95	Mo	672.238	0.527553	ppb	3.188	6.281	44.445
115	In-IS	> 146411.788		ppb	3.375		145941.333
111	Cd	677.493	0.662574	ppb	5.759	9.011	3.240
118	Sn	4293.981	1.116739	ppb	6.788	11.672	586.679
121	Sb	3938.322	1.056447	ppb	6.503	9.689	45.556
135	Ba	12452.092	15.204824	ppb	1.393	4.283	30.000
165	Ho-IS	169847.616		ppb	2.915		170305.806
159	Tb-IS	154755.607		ppb	3.782		151873.028
207	Pb	75224.377	7.567311	ppb	1.038	4.683	46.667
203	Tl	64.445	0.017549	ppb	26.543	28.876	10.000
209	Bi-IS	> 90329.376		ppb	3.659		89965.736
51	V	503.342	1.043152	ppb	4.028	5.338	11.111
59	Co	385.561	0.319159	ppb	13.569	12.847	2.222
60	Ni	1993.472	3.189796	ppb	2.858	3.053	10.000
75	As	595.078	0.287725	ppb	11.438	73.699	507.587
71	Ga-ISK	> 67015.726		ppb	1.235		66825.946
82	Se-2	5.927	0.127402	ppb	73.347	119.022	2.245
107	Ag-1	117.778	0.027397	ppb	5.892	8.682	47.778
115	In-ISK	57744.827		ppb	1.408		57447.024
45	Sc-ISK	> 171995.986		ppb	1.347		169580.601
23	Na	98310.512	285.793499	ppb	1.709	1.058	6134.650
39	K	214647.307	187.939368	ppb	0.941	2.423	66731.053
24	Mg	64396.491	164.734927	ppb	0.969	2.169	66.667
159	Tb-ISK	114439.216		ppb	0.442		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, March 19, 2020 15:47:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCV-210770.109

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		19592.324		ppb			3.160			18671.083
9	Be	|		116112.190	103.110970	ppb			0.462	0.724		7.778
10	B	|		80568.786	260.448005	ppb			0.621	1.135		362.227
27	Al	|		466457.513	101.252629	ppb			1.522	1.733		880.027
43	Ca-2	|		51880.715	5248.542400	ppb			1.405	2.073		28.333
49	Ti	|		41404.362	101.858013	ppb			0.875	1.283		93.334
52	Cr	|		550872.928	100.728437	ppb			0.847	1.107		6330.291
55	Mn	|		767970.945	100.955220	ppb			0.278	0.857		252.224
57	Fe	|		755166.999	5120.899690	ppb			0.353	1.208		4655.203
45	Sc-IS	>		838361.942		ppb			0.890			823660.369
66	Zn	|		83034.006	103.951522	ppb			1.924	2.731		206.668
86	Sr	|		126337.753	100.667692	ppb			1.816	2.110		-0.289
65	Cu	|		124892.943	104.292007	ppb			0.612	0.982		54.230
69	Ga-IS	|		267623.658		ppb			0.913			248836.760
95	Mo	|		119054.052	100.374942	ppb			0.879	0.657		44.445
115	In-IS	>		146920.217		ppb			1.196			145941.333
111	Cd	|		104129.950	101.779096	ppb			0.908	1.109		3.240
118	Sn	|		332181.032	99.342090	ppb			0.380	1.091		586.679
121	Sb	|		369153.507	99.639045	ppb			0.992	1.662		45.556
135	Ba	|		82759.068	100.835253	ppb			1.646	2.570		30.000
165	Ho-IS	|		175265.274		ppb			0.706			170305.806
159	Tb-IS	|		159030.294		ppb			0.610			151873.028
207	Pb	|		990742.840	100.408143	ppb			0.458	0.706		46.667
203	Tl	|		307021.958	100.123497	ppb			0.569	1.699		10.000
209	Bi-IS	>		89615.786		ppb			1.149			89965.736
51	V	|		46813.249	99.270629	ppb			1.041	2.173		11.111
59	Co	|		121503.411	101.349946	ppb			0.280	1.484		2.222
60	Ni	|		63404.845	102.059541	ppb			0.823	1.046		10.000
75	As	|		30287.557	100.062593	ppb			1.833	0.377		507.587
71	Ga-ISK	>		66945.403		ppb			1.460			66825.946
82	Se-2	|		2926.883	100.845888	ppb			2.496	1.066		2.245
107	Ag-1	|		256883.605	100.873032	ppb			0.893	1.449		47.778
115	In-ISK	|		57704.220		ppb			1.114			57447.024
45	Sc-ISK	>		172333.547		ppb			2.165			169580.601
23	Na	|		1694634.803	5231.334486	ppb			0.117	2.232		6134.650
39	K	|		4117117.809	5168.792893	ppb			0.956	2.372		66731.053
24	Mg	|		2002825.992	5120.557088	ppb			2.745	4.390		66.667
159	Tb-ISK	|		116249.073		ppb			0.393			114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, March 19, 2020 15:49:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200319E1\CCB-23446.110

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	19058.263		ppb	2.116		18671.083
9	Be	16.667	0.007849	ppb	52.915	99.572	7.778
10	B	455.563	0.291748	ppb	7.824	37.017	362.227
27	Al	2370.197	0.324275	ppb	5.343	9.379	880.027
43	Ca-2	41.667	1.323093	ppb	30.199	95.518	28.333
49	Ti	112.223	0.044273	ppb	11.245	68.180	93.334
52	Cr	6274.712	-0.023315	ppb	3.307	154.879	6330.291
55	Mn	362.227	0.014183	ppb	7.718	24.095	252.224
57	Fe	5158.709	3.111206	ppb	2.429	31.778	4655.203
45	Sc-IS	> 832689.091		ppb	0.617		823660.369
66	Zn	408.895	0.252603	ppb	3.295	5.858	206.668
86	Sr	16.990	0.013842	ppb	108.185	106.075	-0.289
65	Cu	67.317	0.010550	ppb	31.377	169.939	54.230
69	Ga-IS	245206.648		ppb	0.990		248836.760
95	Mo	525.565	0.407964	ppb	9.955	10.257	44.445
115	In-IS	> 142855.820		ppb	0.653		145941.333
111	Cd	11.119	0.007996	ppb	34.340	48.443	3.240
118	Sn	2432.430	0.572273	ppb	7.055	8.355	586.679
121	Sb	623.347	0.160682	ppb	8.405	9.281	45.556
135	Ba	43.333	0.017526	ppb	13.323	42.627	30.000
165	Ho-IS	169096.113		ppb	1.338		170305.806
159	Tb-IS	155705.164		ppb	1.399		151873.028
207	Pb	356.668	0.031605	ppb	6.129	7.432	46.667
203	Tl	71.111	0.020039	ppb	7.160	7.578	10.000
209	Bi-IS	> 89211.028		ppb	0.751		89965.736
51	V	16.667	0.011662	ppb	40.000	123.931	11.111
59	Co	13.333	0.009233	ppb	25.000	31.078	2.222
60	Ni	26.667	0.026684	ppb	25.000	41.513	10.000
75	As	505.920	-0.012312	ppb	11.853	1869.909	507.587
71	Ga-ISK	> 67206.647		ppb	2.038		66825.946
82	Se-2	-2.440	-0.159384	ppb	211.229	109.011	2.245
107	Ag-1	180.001	0.051644	ppb	3.208	5.716	47.778
115	In-ISK	56813.291		ppb	0.917		57447.024
45	Sc-ISK	> 169410.926		ppb	1.364		169580.601
23	Na	2943.637	-10.033171	ppb	0.855	2.034	6134.650
39	K	67000.115	0.446021	ppb	1.796	428.672	66731.053
24	Mg	308.337	0.628815	ppb	4.954	7.993	66.667
159	Tb-ISK	113343.863		ppb	0.098		114722.804

QC Out of Limits

AnalyteMassOut of Limits Message

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Thursday, March 19, 2020 07:34:54

File Name: Default.tun

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1242	2062	0.719	
Mg 24	23.985	24.025	4625	2062	0.716	
In 115	114.904	114.925	22802	2059	0.709	
U	238.050	238.075	47437	2049	0.694	

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:
Results Data Set: 200319H2
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Method Loaded
Method Name: epa 7470A+7471A-Hg-8 Method Last Saved: 3/18/2020 2:42:30 PM
Method Description:

=====
Sequence No.: 1 Autosampler Location: 1
Sample ID: icis 570-58250_1-a Date Collected: 3/19/2020 8:47:26 AM
Analyst: Data Type: Original

Replicate Data: icis 570-58250_1-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	-0.0011	0.0000	8:48:19 AM	Yes
2		[0.00]	0.0000	-0.0007	0.0000	8:48:53 AM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	23.69				

Auto-zero performed.

=====
Sequence No.: 2 Autosampler Location: 2
Sample ID: ic 570-58250_4-a Date Collected: 3/19/2020 8:49:14 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_4-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0000	-0.0008	0.0000	8:50:07 AM	Yes
2		[0.025]	0.0001	-0.0004	0.0001	8:50:41 AM	Yes
Mean:		[0.025]	0.0000				
SD:		0.00000	0.0000				
%RSD:		0.00%	64.62				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00161 Intercept: 0.00000

=====
Sequence No.: 3 Autosampler Location: 3
Sample ID: ic 570-58250_5-a Date Collected: 3/19/2020 8:51:02 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_5-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0001	0.0001	0.0001	8:51:56 AM	Yes
2		[0.100]	0.0001	-0.0005	0.0001	8:52:30 AM	Yes
Mean:		[0.100]	0.0001				
SD:		0.00000	0.0000				
%RSD:		0.00%	5.07				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.973978 Slope: 0.00083 Intercept: 0.00001

=====
Sequence No.: 4 Autosampler Location: 4
Sample ID: ic 570-58250_6-a Date Collected: 3/19/2020 8:52:52 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_6-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0007	0.0034	0.0007	8:53:46 AM	Yes
2		[1.000]	0.0007	0.0033	0.0007	8:54:21 AM	Yes
Mean:		[1.000]	0.0007				
SD:		0.00000	0.0000				
%RSD:		0.00%	2.89				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999462 Slope: 0.00067 Intercept: 0.00001

Sequence No.: 5 Autosampler Location: 5
Sample ID: ic 570-58250_7-a Date Collected: 3/19/2020 8:54:42 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_7-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0012	0.0067	0.0012	8:55:37 AM	Yes
2		[2.000]	0.0012	0.0062	0.0012	8:56:11 AM	Yes
Mean:		[2.000]	0.0012				
SD:		0.00000	0.0000				
%RSD:		0.00%	3.99				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.997906 Slope: 0.00060 Intercept: 0.00003

Sequence No.: 6 Autosampler Location: 6
Sample ID: ic 570-58250_8-a Date Collected: 3/19/2020 8:56:33 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_8-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0050	0.0309	0.0050	8:57:25 AM	Yes
2		[5.000]	0.0045	0.0252	0.0045	8:58:00 AM	Yes
Mean:		[5.000]	0.0047				
SD:		0.00000	0.0004				
%RSD:		0.00%	7.70				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.988249 Slope: 0.00093 Intercept: -0.00013

Sequence No.: 7 Autosampler Location: 7
Sample ID: ic 570-58250_9-a Date Collected: 3/19/2020 8:58:20 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_9-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.00]	0.0046	0.0274	0.0046	8:59:13 AM	Yes
2		[10.00]	0.0040	0.0223	0.0040	8:59:47 AM	Yes
Mean:		[10.00]	0.0043				
SD:		0.0000	0.0004				
%RSD:		0.00%	9.53				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.896772 Slope: 0.00050 Intercept: 0.00030
Standard absorbance and concentration values are not in the same order.

Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. µg/L	Calculated Conc. µg/L	Standard Deviation	%RSD
icis 570-58250_1-a	0.0000	0	-0.5950	0.00	23.69
ic 570-58250_4-a	0.0000	0.025	-0.5140	0.00	64.62
ic 570-58250_5-a	0.0001	0.100	-0.4168	0.00	5.07
ic 570-58250_6-a	0.0007	1.000	0.7854	0.00	2.89
ic 570-58250_7-a	0.0012	2.000	1.8293	0.00	3.99
ic 570-58250_8-a	0.0047	5.000	8.9479	0.00	7.70
ic 570-58250_9-a	0.0043	10.00	8.0882	0.00	9.53

Correlation Coef.: 0.896772 Slope: 0.00050 Intercept: 0.00030

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:
Results Data Set: 200319H2
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Method Loaded

Method Name: epa 7470A+7471A-Hg-8
Method Description:

Method Last Saved: 3/19/2020 8:48:56 AM

=====
Sequence No.: 1
Sample ID: icis 570-58250_1-a
Analyst:

Autosampler Location: 1
Date Collected: 3/19/2020 9:17:31 AM
Data Type: Original

Replicate Data: icis 570-58250_1-a

Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	-0.0001	0.0000	9:18:23 AM	Yes
2		[0.00]	0.0000	-0.0010	0.0000	9:18:58 AM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	62.91				

Auto-zero performed.

=====
Sequence No.: 2
Sample ID: ic 570-58250_4-a
Analyst:

Autosampler Location: 2
Date Collected: 3/19/2020 9:19:18 AM
Data Type: Original

Replicate Data: ic 570-58250_4-a

Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0000	-0.0003	0.0000	9:20:11 AM	Yes
2		[0.025]	0.0000	0.0001	0.0000	9:20:45 AM	Yes
Mean:		[0.025]	0.0000				
SD:		0.00000	0.0000				
%RSD:		0.00%	111.34				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00063 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: ic 570-58250_5-a
Analyst:

Autosampler Location: 3
Date Collected: 3/19/2020 9:21:05 AM
Data Type: Original

Replicate Data: ic 570-58250_5-a

Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0000	-0.0004	0.0000	9:21:59 AM	Yes
2		[0.100]	0.0000	-0.0009	0.0000	9:22:33 AM	Yes
Mean:		[0.100]	0.0000				
SD:		0.00000	0.0000				
%RSD:		0.00%	115.94				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.137230 Slope: 0.00002 Intercept: 0.00001
Standard absorbance and concentration values are not in the same order.

=====
Sequence No.: 4
Sample ID: ic 570-58250_6-a
Analyst:

Autosampler Location: 4
Date Collected: 3/19/2020 9:22:54 AM
Data Type: Original

User canceled analysis.

=====
Analysis BegunLogged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:

Results Data Set: 200319H2

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Autosampler Location: 1

Sample ID: icis 570-58250_1-a

Date Collected: 3/19/2020 9:27:24 AM

Analyst:

Data Type: Original

Replicate Data: icis 570-58250_1-a

Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0003	0.0008	0.0003	9:28:16 AM	Yes
2		[0.00]	0.0004	0.0008	0.0004	9:28:50 AM	Yes
Mean:		[0.00]	0.0003				
SD:		0.0000	0.0000				
%RSD:		0.00%	7.70				

Auto-zero performed.

=====
Sequence No.: 2

Autosampler Location: 2

Sample ID: ic 570-58250_4-a

Date Collected: 3/19/2020 9:29:10 AM

Analyst:

Data Type: Original

Replicate Data: ic 570-58250_4-a

Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0012	0.0063	0.0016	9:30:03 AM	Yes
2		[0.025]	0.0012	0.0058	0.0015	9:30:38 AM	Yes
Mean:		[0.025]	0.0012				
SD:		0.00000	0.0000				
%RSD:		0.00%	1.57				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.04881 Intercept: 0.00000

=====
Sequence No.: 3

Autosampler Location: 3

Sample ID: ic 570-58250_5-a

Date Collected: 3/19/2020 9:30:58 AM

Analyst:

Data Type: Original

Replicate Data: ic 570-58250_5-a

Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0025	0.0105	0.0029	9:31:51 AM	Yes
2		[0.100]	0.0025	0.0101	0.0028	9:32:26 AM	Yes
Mean:		[0.100]	0.0025				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.71				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.964829 Slope: 0.02323 Intercept: 0.00027

=====
Sequence No.: 4

Autosampler Location: 4

Sample ID: ic 570-58250_6-a

Date Collected: 3/19/2020 9:32:47 AM

Analyst:

Data Type: Original

Replicate Data: ic 570-58250_6-a

Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0172	0.0675	0.0175	9:33:40 AM	Yes
2		[1.000]	0.0170	0.0652	0.0173	9:34:14 AM	Yes
Mean:		[1.000]	0.0171				

SD: 0.00000 0.0001
%RSD: 0.00% 0.84
Standard number 3 applied. [1.000]
Correlation Coef.: 0.998809 Slope: 0.01661 Intercept: 0.00054

Sequence No.: 5 Autosampler Location: 5
Sample ID: ic 570-58250_7-a Date Collected: 3/19/2020 9:34:36 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_7-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
ug/L ug/L Signal Area Height
1 [2.000] 0.0333 0.1298 0.0337 9:35:30 AM Yes
2 [2.000] 0.0334 0.1304 0.0337 9:36:04 AM Yes
Mean: [2.000] 0.0333
SD: 0.00000 0.0000
%RSD: 0.00% 0.01
Standard number 4 applied. [2.000]
Correlation Coef.: 0.999706 Slope: 0.01643 Intercept: 0.00057

Sequence No.: 6 Autosampler Location: 6
Sample ID: ic 570-58250_8-a Date Collected: 3/19/2020 9:36:26 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_8-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
ug/L ug/L Signal Area Height
1 [5.000] 0.1583 0.6152 0.1586 9:37:19 AM Yes
2 [5.000] 0.1564 0.6067 0.1567 9:37:53 AM Yes
Mean: [5.000] 0.1574
SD: 0.00000 0.0013
%RSD: 0.00% 0.85
Standard number 5 applied. [5.000]
Correlation Coef.: 0.979825 Slope: 0.03074 Intercept: -0.00638

Sequence No.: 7 Autosampler Location: 7
Sample ID: ic 570-58250_9-a Date Collected: 3/19/2020 9:38:13 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_9-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
ug/L ug/L Signal Area Height
1 [10.00] 0.1583 0.6248 0.1587 9:39:06 AM Yes
2 [10.00] 0.1547 0.5946 0.1551 9:39:40 AM Yes
Mean: [10.00] 0.1565
SD: 0.0000 0.0025
%RSD: 0.00% 1.62
Standard number 6 applied. [10.00]
Correlation Coef.: 0.919416 Slope: 0.01785 Intercept: 0.00636

Standard absorbance and concentration values are not in the same order.

Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

Table with 6 columns: ID, Mean Signal (Abs), Entered Conc. ug/L, Calculated Conc. ug/L, Standard Deviation, %RSD. Rows include sample IDs ic 570-58250_1-a through 9-a.

Correlation Coef.: 0.919416 Slope: 0.01785 Intercept: 0.00636

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:
Results Data Set: 200319H2
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icis 570-58250_1-a
Analyst:
Autosampler Location: 1
Date Collected: 3/19/2020 9:54:41 AM
Data Type: Original

Replicate Data: icis 570-58250_1-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	[0.00]	[0.00]	0.0003	0.0009	0.0003	9:55:34 AM	Yes
2	[0.00]	[0.00]	0.0004	0.0011	0.0004	9:56:08 AM	Yes
Mean:	[0.00]	[0.00]	0.0004				
SD:	0.0000	0.0000	0.0000				
%RSD:	0.00%	0.00%	8.02				

Auto-zero performed.

=====
Sequence No.: 2
Sample ID: ic 570-58250_4-a
Analyst:
Autosampler Location: 2
Date Collected: 3/19/2020 9:56:29 AM
Data Type: Original

Replicate Data: ic 570-58250_4-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	[0.025]	[0.025]	0.0014	0.0068	0.0018	9:57:22 AM	Yes
2	[0.025]	[0.025]	0.0014	0.0062	0.0018	9:57:57 AM	Yes
Mean:	[0.025]	[0.025]	0.0014				
SD:	0.00000	0.00000	0.0000				
%RSD:	0.00%	0.00%	1.07				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.05635 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: ic 570-58250_5-a
Analyst:
Autosampler Location: 3
Date Collected: 3/19/2020 9:58:17 AM
Data Type: Original

Replicate Data: ic 570-58250_5-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	[0.100]	[0.100]	0.0026	0.0111	0.0029	9:59:11 AM	Yes
2	[0.100]	[0.100]	0.0026	0.0105	0.0029	9:59:45 AM	Yes
Mean:	[0.100]	[0.100]	0.0026				
SD:	0.00000	0.00000	0.0000				
%RSD:	0.00%	0.00%	0.22				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.943581 Slope: 0.02330 Intercept: 0.00035

=====
Sequence No.: 4
Sample ID: ic 570-58250_6-a
Analyst:
Autosampler Location: 4
Date Collected: 3/19/2020 10:00:06 AM
Data Type: Original

Replicate Data: ic 570-58250_6-a Analyte: Hg 253.7

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	[1.000]	[1.000]	0.0177	0.0837	0.0181	10:01:00 AM	Yes
2	[1.000]	[1.000]	0.0173	0.0815	0.0177	10:01:35 AM	Yes
Mean:	[1.000]	[1.000]	0.0175				

SD: 0.00000 0.0003
%RSD: 0.00% 1.65
Standard number 3 applied. [1.000]
Correlation Coef.: 0.998549 Slope: 0.01697 Intercept: 0.00061

Sequence No.: 5 Autosampler Location: 5
Sample ID: ic 570-58250_7-a Date Collected: 3/19/2020 10:01:56 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_7-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
ug/L ug/L Signal Area Height
1 [2.000] 0.0341 0.1608 0.0345 10:02:50 AM Yes
2 [2.000] 0.0335 0.1552 0.0338 10:03:25 AM Yes
Mean: [2.000] 0.0338
SD: 0.00000 0.0005
%RSD: 0.00% 1.36
Standard number 4 applied. [2.000]
Correlation Coef.: 0.999596 Slope: 0.01663 Intercept: 0.00067

Sequence No.: 6 Autosampler Location: 6
Sample ID: ic 570-58250_8-a Date Collected: 3/19/2020 10:03:47 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_8-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
ug/L ug/L Signal Area Height
1 [5.000] 0.0917 0.3560 0.0921 10:04:39 AM Yes
2 [5.000] 0.0918 0.3417 0.0922 10:05:13 AM Yes
Mean: [5.000] 0.0918
SD: 0.00000 0.0001
%RSD: 0.00% 0.06
Standard number 5 applied. [5.000]
Correlation Coef.: 0.999271 Slope: 0.01815 Intercept: -0.00007

Sequence No.: 7 Autosampler Location: 7
Sample ID: ic 570-58250_9-a Date Collected: 3/19/2020 10:05:33 AM
Analyst: Data Type: Original

Replicate Data: ic 570-58250_9-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
ug/L ug/L Signal Area Height
1 [10.00] 0.1794 0.6883 0.1798 10:06:26 AM Yes
2 [10.00] 0.1733 0.6619 0.1736 10:07:00 AM Yes
Mean: [10.00] 0.1763
SD: 0.0000 0.0044
%RSD: 0.00% 2.47
Standard number 6 applied. [10.00]
Correlation Coef.: 0.999725 Slope: 0.01770 Intercept: 0.00038

Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

Table with 7 columns: ID, Mean Signal (Abs), Entered Conc. ug/L, Calculated Conc. ug/L, Standard Deviation, %RSD. Rows include calibration points for samples ic 570-58250_1-a through ic 570-58250_9-a.

Correlation Coef.: 0.999725 Slope: 0.01770 Intercept: 0.00038

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:
Results Data Set: 200319H2
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Method Loaded

Method Name: epa 7470A+7471A-Hg-8
Method Description:

Method Last Saved: 3/19/2020 9:19:01 AM

=====
Sequence No.: 1
Sample ID: icv 570-58250_2-a
Analyst: 1220 HG-8

Autosampler Location: 8
Date Collected: 3/19/2020 10:14:22 AM
Data Type: Original

Replicate Data: icv 570-58250_2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.58	0.0814	0.3187	0.0817	10:15:15 AM	Yes
2	0.0045	4.53	0.0805	0.3053	0.0809	10:15:49 AM	Yes
Mean:	0.0046	4.55	0.0810				
SD:	0.00003	0.034	0.0006				
%RSD:	0.75%	0.75%	0.75				

QC value within limits for Hg 253.7 Recovery = 91.07%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-58250_3-a
Analyst: 1220 HG-8
User canceled analysis.

Autosampler Location: 1
Date Collected: 3/19/2020 10:16:11 AM
Data Type: Original

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:

Results Data Set: 200319H2

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Autosampler Location: 8

Sample ID: icv 570-58250_2-a

Date Collected: 3/19/2020 10:20:53 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: icv 570-58250_2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.95	0.0880	0.3440	0.0884	10:21:47 AM	Yes
2	0.0049	4.89	0.0869	0.3334	0.0872	10:22:21 AM	Yes
Mean:	0.0049	4.92	0.0874				
SD:	0.00005	0.046	0.0008				
%RSD:	0.94%	0.94%	0.94				

QC value within limits for Hg 253.7 Recovery = 98.40%
All analyte(s) passed QC.

=====
Sequence No.: 2

Autosampler Location: 1

Sample ID: icb 570-58250_3-a

Date Collected: 3/19/2020 10:22:42 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: icb 570-58250_3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0188	0.0000	0.0016	0.0004	10:23:35 AM	Yes
2	-0.0000	-0.0152	0.0001	0.0021	0.0005	10:24:10 AM	Yes
Mean:	-0.0000	-0.0170	0.0001				
SD:	0.00000	0.00259	0.0000				
%RSD:	15.19%	15.19%	59.20				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3

Autosampler Location: 9

Sample ID: cra 570-58250_12-a

Date Collected: 3/19/2020 10:24:30 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: cra 570-58250_12-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.243	0.0047	0.0192	0.0050	10:25:23 AM	Yes
2	0.0005	0.234	0.0045	0.0184	0.0049	10:25:57 AM	Yes
Mean:	0.0005	0.238	0.0046				
SD:	0.00001	0.0061	0.0001				
%RSD:	2.57%	2.57%	2.36				

=====
Sequence No.: 4

Autosampler Location: 5

Sample ID: ccv 570-58250_10-a

Date Collected: 3/19/2020 10:26:19 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: ccv 570-58250_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.10	0.0376	0.1465	0.0380	10:27:13 AM	Yes
2	0.0020	2.04	0.0364	0.1396	0.0367	10:27:47 AM	Yes
Mean:	0.0021	2.07	0.0370				
SD:	0.00005	0.049	0.0009				

%RSD: 2.37% 2.37% 2.34
QC value within limits for Hg 253.7 Recovery = 103.50%
All analyte(s) passed QC.

=====
Sequence No.: 5 Autosampler Location: 1
Sample ID: ccb 570-58250_11-a Date Collected: 3/19/2020 10:28:09 AM
Analyst: 1220 HG-8 Data Type: Original

Replicate Data: ccb 570-58250_11-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L µg/L Signal Area Height Time Stored
1 -0.0000 -0.0204 0.0000 0.0012 0.0004 10:29:01 AM Yes
2 -0.0000 -0.0206 0.0000 0.0011 0.0004 10:29:35 AM Yes
Mean: -0.0000 -0.0205 0.0000
SD: 0.00000 0.00016 0.0000
%RSD: 0.78% 0.78% 17.75
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:

Results Data Set: 200319H2

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Method Loaded

Method Name: epa 7470A+7471A-Hg-8

Method Last Saved: 3/19/2020 10:15:52 AM

Method Description:

=====
Sequence No.: 1

Autosampler Location: 10

Sample ID: mb 570-58265_1-a

Date Collected: 3/19/2020 11:06:24 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: mb 570-58265_1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0180	0.0001	0.0028	0.0004	11:07:19 AM	Yes
2	-0.0000	-0.0181	0.0001	0.0019	0.0004	11:07:53 AM	Yes
Mean:	-0.0000	-0.0181	0.0001				
SD:	0.00000	0.00004	0.0000				
%RSD:	0.21%	0.21%	1.13				

=====
Sequence No.: 2

Autosampler Location: 11

Sample ID: lcs 570-58265_2-a

Date Collected: 3/19/2020 11:08:15 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: lcs 570-58265_2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0052	5.20	0.0924	0.3403	0.0928	11:09:09 AM	Yes
2	0.0050	5.01	0.0890	0.3239	0.0893	11:09:44 AM	Yes
Mean:	0.0051	5.10	0.0907				
SD:	0.00014	0.139	0.0025				
%RSD:	2.71%	2.71%	2.70				

=====
Sequence No.: 3

Autosampler Location: 12

Sample ID: lcsd 570-58265_3-a

Date Collected: 3/19/2020 11:10:05 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: lcsd 570-58265_3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0351	-0.0002	0.0012	0.0001	11:10:59 AM	Yes
2	-0.0000	-0.0367	-0.0003	0.0006	0.0001	11:11:34 AM	Yes
Mean:	-0.0000	-0.0359	-0.0003				
SD:	0.00000	0.00111	0.0000				
%RSD:	3.10%	3.10%	7.65				

=====
Sequence No.: 4

Autosampler Location: 13

Sample ID: 570-23609-f-1-a

Date Collected: 3/19/2020 11:11:55 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: 570-23609-f-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0359	-0.0003	0.0009	0.0001	11:12:49 AM	Yes

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:
Results Data Set: 200319H2
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1 Autosampler Location: 12
Sample ID: lcsd 570-58265_3-a Date Collected: 3/19/2020 11:13:58 AM
Analyst: 1220 HG-8 Data Type: Original

Replicate Data: lcsd 570-58265_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0051	5.07	0.0901	0.3426	0.0905	11:14:52 AM	Yes
2	0.0051	5.07	0.0901	0.3281	0.0905	11:15:27 AM	Yes
Mean:	0.0051	5.07	0.0901				
SD:	0.00000	0.001	0.0000				
%RSD:	0.03%	0.03%	0.03				

=====
Sequence No.: 2 Autosampler Location: 13
Sample ID: 570-23609-f-1-a Date Collected: 3/19/2020 11:15:48 AM
Analyst: 1220 HG-8 Data Type: Original

Replicate Data: 570-23609-f-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0169	0.0001	0.0023	0.0004	11:16:43 AM	Yes
2	-0.0000	-0.0166	0.0001	0.0020	0.0004	11:17:17 AM	Yes
Mean:	-0.0000	-0.0168	0.0001				
SD:	0.00000	0.00021	0.0000				
%RSD:	1.23%	1.23%	4.50				

=====
Sequence No.: 3 Autosampler Location: 14
Sample ID: 570-23609-f-1-b ms Date Collected: 3/19/2020 11:17:40 AM
Analyst: 1220 HG-8 Data Type: Original

Replicate Data: 570-23609-f-1-b ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0037	3.74	0.0665	0.2481	0.0668	11:18:33 AM	Yes
2	0.0037	3.73	0.0664	0.2467	0.0668	11:19:07 AM	Yes
Mean:	0.0037	3.73	0.0665				
SD:	0.00000	0.003	0.0000				
%RSD:	0.07%	0.07%	0.07				

=====
Sequence No.: 4 Autosampler Location: 15
Sample ID: 570-23609-f-1-c msd Date Collected: 3/19/2020 11:19:28 AM
Analyst: 1220 HG-8 Data Type: Original

Replicate Data: 570-23609-f-1-c msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0029	2.95	0.0526	0.1978	0.0529	11:20:22 AM	Yes
2	0.0029	2.89	0.0516	0.1951	0.0519	11:20:56 AM	Yes
Mean:	0.0029	2.92	0.0521				
SD:	0.00004	0.040	0.0007				
%RSD:	1.36%	1.36%	1.35				

=====
Sequence No.: 5 Autosampler Location: 16

Sample ID: 570-23510-b-1-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:21:18 AM
Data Type: Original

Replicate Data: 570-23510-b-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0002	0.0004	0.0034	0.0007	11:22:11 AM	Yes
2	0.0000	0.0043	0.0005	0.0037	0.0008	11:22:46 AM	Yes
Mean:	0.0000	0.0023	0.0004				
SD:	0.00000	0.00293	0.0001				
%RSD:	129.71%	129.71%	12.39				

=====
Sequence No.: 6

Autosampler Location: 17

Sample ID: 570-23510-b-2-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:23:07 AM
Data Type: Original

Replicate Data: 570-23510-b-2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0088	0.0002	0.0031	0.0006	11:24:00 AM	Yes
2	-0.0000	-0.0062	0.0003	0.0028	0.0006	11:24:34 AM	Yes
Mean:	-0.0000	-0.0075	0.0002				
SD:	0.00000	0.00183	0.0000				
%RSD:	24.59%	24.59%	13.18				

=====
Sequence No.: 7

Autosampler Location: 18

Sample ID: 570-23510-b-3-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:24:55 AM
Data Type: Original

Replicate Data: 570-23510-b-3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0101	0.0002	0.0028	0.0006	11:25:49 AM	Yes
2	-0.0000	-0.0079	0.0002	0.0025	0.0006	11:26:23 AM	Yes
Mean:	-0.0000	-0.0090	0.0002				
SD:	0.00000	0.00154	0.0000				
%RSD:	17.18%	17.18%	12.46				

=====
Sequence No.: 8

Autosampler Location: 19

Sample ID: 570-23574-a-9-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:26:44 AM
Data Type: Original

Replicate Data: 570-23574-a-9-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0025	2.45	0.0438	0.1678	0.0441	11:27:38 AM	Yes
2	0.0026	2.55	0.0456	0.1744	0.0459	11:28:12 AM	Yes
Mean:	0.0025	2.50	0.0447				
SD:	0.00007	0.073	0.0013				
%RSD:	2.90%	2.90%	2.88				

=====
Sequence No.: 9

Autosampler Location: 19

Sample ID: 570-23574-a-9-a@10
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:28:33 AM
Data Type: Original

Replicate Data: 570-23574-a-9-a@10

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0024	2.45	0.0437	0.1688	0.0440	11:29:27 AM	Yes
2	0.0002	0.177	0.0035	0.0120	0.0039	11:30:01 AM	Yes
Mean:	0.0013	1.31	0.0236				
SD:	0.00160	1.605	0.0284				
%RSD:	122.31%	122.31%	120.35				

=====
Sequence No.: 10

Autosampler Location: 5

Sample ID: ccv 570-58250_10-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:30:22 AM
Data Type: Original

Replicate Data: ccv 570-58250_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.11	0.0377	0.1524	0.0381	11:31:16 AM	Yes
2	0.0021	2.12	0.0378	0.1463	0.0382	11:31:50 AM	Yes
Mean:	0.0021	2.11	0.0378				
SD:	0.00000	0.003	0.0001				
%RSD:	0.16%	0.16%	0.16				

QC value within limits for Hg 253.7 Recovery = 105.64%
All analyte(s) passed QC.

=====

Sequence No.: 11
Sample ID: ccb 570-58250_11-a
Analyst: 1220 HG-8

Autosampler Location: 1

Date Collected: 3/19/2020 11:32:12 AM
Data Type: Original

Replicate Data: ccb 570-58250_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0158	0.0001	0.0017	0.0005	11:33:05 AM	Yes
2	-0.0000	-0.0085	0.0002	0.0025	0.0006	11:33:39 AM	Yes
Mean:	-0.0000	-0.0122	0.0002				
SD:	0.00001	0.00512	0.0001				
%RSD:	42.15%	42.15%	55.51				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis BegunLogged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:

Results Data Set: 200319H2

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Autosampler Location: 20

Sample ID: mb 570-58052_1-a

Date Collected: 3/19/2020 11:34:31 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: mb 570-58052_1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0153	0.0001	0.0018	0.0005	11:35:24 AM	Yes
2	-0.0000	-0.0154	0.0001	0.0014	0.0005	11:35:59 AM	Yes
Mean:	-0.0000	-0.0153	0.0001				
SD:	0.00000	0.00004	0.0000				
%RSD:	0.23%	0.23%	0.59				

=====
Sequence No.: 2

Autosampler Location: 21

Sample ID: lcs 570-58052_2-a

Date Collected: 3/19/2020 11:36:20 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: lcs 570-58052_2-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.86	0.0863	0.3347	0.0867	11:37:14 AM	Yes
2	0.0048	4.81	0.0854	0.3247	0.0858	11:37:48 AM	Yes
Mean:	0.0048	4.83	0.0859				
SD:	0.00004	0.037	0.0007				
%RSD:	0.77%	0.77%	0.76				

=====
Sequence No.: 3

Autosampler Location: 22

Sample ID: lcsd 570-58052_3-a

Date Collected: 3/19/2020 11:38:10 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: lcsd 570-58052_3-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.89	0.0869	0.3325	0.0872	11:39:04 AM	Yes
2	0.0048	4.76	0.0846	0.3191	0.0849	11:39:38 AM	Yes
Mean:	0.0048	4.82	0.0857				
SD:	0.00009	0.091	0.0016				
%RSD:	1.89%	1.89%	1.88				

=====
Sequence No.: 4

Autosampler Location: 23

Sample ID: 570-23646-a-1-f

Date Collected: 3/19/2020 11:39:59 AM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: 570-23646-a-1-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0944	0.0020	0.0088	0.0024	11:40:53 AM	Yes
2	0.0001	0.102	0.0022	0.0095	0.0025	11:41:27 AM	Yes
Mean:	0.0001	0.0980	0.0021				
SD:	0.00001	0.00510	0.0001				
%RSD:	5.20%	5.20%	4.27				

=====
Sequence No.: 5

Autosampler Location: 24

Sample ID: 570-23646-a-1-g ms
Analyst:

Date Collected: 3/19/2020 11:41:49 AM
Data Type: Original

Replicate Data: 570-23646-a-1-g ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0044	4.35	0.0774	0.3050	0.0777	11:42:43 AM	Yes
2	0.0043	4.35	0.0773	0.2975	0.0777	11:43:17 AM	Yes
Mean:	0.0043	4.35	0.0773				
SD:	0.00000	0.003	0.0000				
%RSD:	0.06%	0.06%	0.06				

=====

Sequence No.: 6

Autosampler Location: 25

Sample ID: 570-23646-a-1-h msd
Analyst:

Date Collected: 3/19/2020 11:43:39 AM
Data Type: Original

Replicate Data: 570-23646-a-1-h msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0044	4.37	0.0777	0.3026	0.0780	11:44:33 AM	Yes
2	0.0043	4.32	0.0768	0.2931	0.0771	11:45:07 AM	Yes
Mean:	0.0043	4.34	0.0772				
SD:	0.00004	0.036	0.0006				
%RSD:	0.84%	0.84%	0.83				

=====

Sequence No.: 7

Autosampler Location: 26

Sample ID: 570-23646-a-1-h msd
Analyst:

Date Collected: 3/19/2020 11:45:29 AM
Data Type: Original

Replicate Data: 570-23646-a-1-h msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0606	0.0015	0.0070	0.0018	11:46:22 AM	Yes
2	0.0001	0.0667	0.0016	0.0070	0.0019	11:46:56 AM	Yes
Mean:	0.0001	0.0636	0.0015				
SD:	0.00000	0.00433	0.0001				
%RSD:	6.81%	6.81%	5.10				

=====

Sequence No.: 8

Autosampler Location: 27

Sample ID: 570-23585-a-1-b
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:47:17 AM
Data Type: Original

Replicate Data: 570-23585-a-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0802	0.0018	0.0088	0.0022	11:48:10 AM	Yes
2	0.0001	0.0763	0.0017	0.0075	0.0021	11:48:44 AM	Yes
Mean:	0.0001	0.0783	0.0018				
SD:	0.00000	0.00273	0.0000				
%RSD:	3.49%	3.49%	2.74				

=====

Sequence No.: 9

Autosampler Location: 28

Sample ID: 570-23585-a-17-b
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:49:05 AM
Data Type: Original

Replicate Data: 570-23585-a-17-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.540	0.0099	0.0387	0.0103	11:49:57 AM	Yes
2	0.0005	0.542	0.0100	0.0385	0.0103	11:50:32 AM	Yes
Mean:	0.0005	0.541	0.0100				
SD:	0.00000	0.0014	0.0000				
%RSD:	0.26%	0.26%	0.25				

=====

Sequence No.: 10

Autosampler Location: 29

Sample ID: 570-23585-a-17-b
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:50:52 AM
Data Type: Original

Replicate Data: 570-23585-a-17-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.388	0.0073	0.0287	0.0076	11:51:46 AM	Yes
2	0.0004	0.388	0.0072	0.0287	0.0076	11:52:20 AM	Yes
Mean:	0.0004	0.388	0.0072				
SD:	0.00000	0.0005	0.0000				
%RSD:	0.13%	0.13%	0.12				

=====

Sequence No.: 11

Autosampler Location: 5

Sample ID: ccv 570-58250_10-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:52:41 AM
Data Type: Original

Replicate Data: ccv 570-58250_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.12	0.0380	0.1431	0.0383	11:53:35 AM	Yes
2	0.0021	2.07	0.0370	0.1376	0.0373	11:54:09 AM	Yes
Mean:	0.0021	2.10	0.0375				
SD:	0.00004	0.039	0.0007				
%RSD:	1.87%	1.87%	1.85				

QC value within limits for Hg 253.7 Recovery = 104.84%
All analyte(s) passed QC.

=====

Sequence No.: 12

Autosampler Location: 1

Sample ID: ccb 570-58250_11-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:54:31 AM
Data Type: Original

Replicate Data: ccb 570-58250_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0210	0.0000	0.0012	0.0004	11:55:23 AM	Yes
2	-0.0000	-0.0191	0.0000	0.0012	0.0004	11:55:57 AM	Yes
Mean:	-0.0000	-0.0201	0.0000				
SD:	0.00000	0.00134	0.0000				
%RSD:	6.68%	6.68%	101.35				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====

Sequence No.: 13

Autosampler Location: 30

Sample ID: 570-23585-a-25-b
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:56:18 AM
Data Type: Original

Replicate Data: 570-23585-a-25-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.291	0.0055	0.0220	0.0059	11:57:11 AM	Yes
2	0.0003	0.292	0.0055	0.0219	0.0059	11:57:45 AM	Yes
Mean:	0.0003	0.291	0.0055				
SD:	0.00000	0.0012	0.0000				
%RSD:	0.41%	0.41%	0.38				

=====

Sequence No.: 14

Autosampler Location: 31

Sample ID: 570-23585-a-33-b
Analyst: 1220 HG-8

Date Collected: 3/19/2020 11:58:05 AM
Data Type: Original

Replicate Data: 570-23585-a-33-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.384	0.0072	0.0281	0.0075	11:58:59 AM	Yes
2	0.0004	0.374	0.0070	0.0277	0.0073	11:59:33 AM	Yes
Mean:	0.0004	0.379	0.0071				
SD:	0.00001	0.0073	0.0001				

%RSD: 1.91% 1.91% 1.81

Sequence No.: 15

Sample ID: 570-23585-a-37-b

Analyst: 1220 HG-8

Autosampler Location: 32

Date Collected: 3/19/2020 11:59:54 AM

Data Type: Original

Replicate Data: 570-23585-a-37-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.240	0.0046	0.0192	0.0050	12:00:47 PM	Yes
2	0.0002	0.218	0.0042	0.0167	0.0046	12:01:21 PM	Yes
Mean:	0.0002	0.229	0.0044				
SD:	0.00002	0.0157	0.0003				
%RSD:	6.86%	6.86%	6.28				

Sequence No.: 16

Sample ID: 570-23585-a-41-b

Analyst: 1220 HG-8

Autosampler Location: 33

Date Collected: 3/19/2020 12:01:42 PM

Data Type: Original

Replicate Data: 570-23585-a-41-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.307	0.0058	0.0233	0.0062	12:02:35 PM	Yes
2	0.0003	0.280	0.0053	0.0207	0.0057	12:03:10 PM	Yes
Mean:	0.0003	0.293	0.0056				
SD:	0.00002	0.0194	0.0003				
%RSD:	6.60%	6.60%	6.15				

Sequence No.: 17

Sample ID: 570-23585-a-45-b

Analyst: 1220 HG-8

Autosampler Location: 34

Date Collected: 3/19/2020 12:03:31 PM

Data Type: Original

Replicate Data: 570-23585-a-45-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.386	0.0072	0.0294	0.0076	12:04:24 PM	Yes
2	0.0004	0.359	0.0067	0.0255	0.0071	12:04:58 PM	Yes
Mean:	0.0004	0.373	0.0070				
SD:	0.00002	0.0190	0.0003				
%RSD:	5.08%	5.08%	4.81				

Sequence No.: 18

Sample ID: 570-23585-a-49-b

Analyst: 1220 HG-8

Autosampler Location: 35

Date Collected: 3/19/2020 12:05:21 PM

Data Type: Original

Replicate Data: 570-23585-a-49-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.195	0.0038	0.0158	0.0042	12:06:15 PM	Yes
2	0.0002	0.178	0.0035	0.0138	0.0039	12:06:49 PM	Yes
Mean:	0.0002	0.187	0.0037				
SD:	0.00001	0.0127	0.0002				
%RSD:	6.79%	6.79%	6.09				

Sequence No.: 19

Sample ID: 570-23750-a-1-d

Analyst: 868 HG-8

Autosampler Location: 36

Date Collected: 3/19/2020 12:07:10 PM

Data Type: Original

Replicate Data: 570-23750-a-1-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0016	1.58	0.0284	0.1181	0.0288	12:08:04 PM	Yes
2	0.0015	1.48	0.0265	0.1055	0.0268	12:08:38 PM	Yes
Mean:	0.0015	1.53	0.0274				
SD:	0.00008	0.076	0.0013				

%RSD: 4.99% 4.99% 4.92

Sequence No.: 20

Sample ID: ccv 570-58250_10-a

Analyst: 1220 HG-8

Autosampler Location: 5

Date Collected: 3/19/2020 12:09:00 PM

Data Type: Original

Replicate Data: ccv 570-58250_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.07	0.0371	0.1408	0.0374	12:09:54 PM	Yes
2	0.0019	1.92	0.0343	0.1229	0.0347	12:10:29 PM	Yes
Mean:	0.0020	2.00	0.0357				
SD:	0.00011	0.110	0.0019				
%RSD:	5.51%	5.51%	5.45				

QC value within limits for Hg 253.7 Recovery = 99.78%
All analyte(s) passed QC.

Sequence No.: 21

Sample ID: ccb 570-58250_11-a

Analyst: 1220 HG-8

Autosampler Location: 1

Date Collected: 3/19/2020 12:10:50 PM

Data Type: Original

Replicate Data: ccb 570-58250_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0192	0.0000	0.0011	0.0004	12:11:43 PM	Yes
2	-0.0000	-0.0202	0.0000	0.0009	0.0004	12:12:17 PM	Yes
Mean:	-0.0000	-0.0197	0.0000				
SD:	0.00000	0.00075	0.0000				
%RSD:	3.82%	3.82%	44.24				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:

Results Data Set: 200319H2

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1

Autosampler Location: 5

Sample ID: ccv 570-58250_10-a

Date Collected: 3/19/2020 2:37:40 PM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: ccv 570-58250_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.01	0.0359	0.1306	0.0363	2:38:34 PM	Yes
2	0.0020	2.02	0.0361	0.1320	0.0364	2:39:09 PM	Yes
Mean:	0.0020	2.01	0.0360				
SD:	0.00001	0.006	0.0001				
%RSD:	0.27%	0.27%	0.27				

QC value within limits for Hg 253.7 Recovery = 100.65%
All analyte(s) passed QC.

=====
Sequence No.: 2

Autosampler Location: 1

Sample ID: ccb 570-58250_11-a

Date Collected: 3/19/2020 2:39:30 PM

Analyst: 1220 HG-8

Data Type: Original

Replicate Data: ccb 570-58250_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0185	0.0001	0.0016	0.0004	2:40:23 PM	Yes
2	-0.0000	-0.0155	0.0001	0.0019	0.0005	2:40:57 PM	Yes
Mean:	-0.0000	-0.0170	0.0001				
SD:	0.00000	0.00211	0.0000				
%RSD:	12.40%	12.40%	47.93				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:
Results Data Set: 200319H2
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1 Autosampler Location: 37
Sample ID: mb 570-58313_1-a Date Collected: 3/19/2020 2:44:39 PM
Analyst: 868 HG-8 Data Type: Original

Replicate Data: mb 570-58313_1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0186	0.0000	0.0015	0.0004	2:45:33 PM	Yes
2	-0.0000	-0.0161	0.0001	0.0019	0.0004	2:46:07 PM	Yes
Mean:	-0.0000	-0.0173	0.0001				
SD:	0.00000	0.00176	0.0000				
%RSD:	10.16%	10.16%	43.42				

=====
Sequence No.: 2 Autosampler Location: 38
Sample ID: lcs 570-58313_2-a Date Collected: 3/19/2020 2:46:30 PM
Analyst: 868 HG-8 Data Type: Original

Replicate Data: lcs 570-58313_2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	5.04	0.0896	0.3295	0.0899	2:47:23 PM	Yes
2	0.0051	5.09	0.0905	0.3315	0.0909	2:47:58 PM	Yes
Mean:	0.0051	5.07	0.0901				
SD:	0.00004	0.038	0.0007				
%RSD:	0.75%	0.75%	0.75				

=====
Sequence No.: 3 Autosampler Location: 39
Sample ID: lcsd 570-58313_3-a Date Collected: 3/19/2020 2:48:19 PM
Analyst: 868 HG-8 Data Type: Original

Replicate Data: lcsd 570-58313_3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0051	5.05	0.0898	0.3312	0.0901	2:49:12 PM	Yes
2	0.0051	5.09	0.0905	0.3335	0.0908	2:49:46 PM	Yes
Mean:	0.0051	5.07	0.0901				
SD:	0.00003	0.027	0.0005				
%RSD:	0.54%	0.54%	0.54				

=====
Sequence No.: 4 Autosampler Location: 40
Sample ID: 570-23805-a-1-c Date Collected: 3/19/2020 2:50:07 PM
Analyst: 868 HG-8 Data Type: Original

Replicate Data: 570-23805-a-1-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0120	0.0002	0.0013	0.0005	2:51:01 PM	Yes
2	-0.0000	-0.0100	0.0002	0.0022	0.0006	2:51:35 PM	Yes
Mean:	-0.0000	-0.0110	0.0002				
SD:	0.00000	0.00141	0.0000				
%RSD:	12.84%	12.84%	13.58				

=====
Sequence No.: 5 Autosampler Location: 41

Sample ID: 570-23805-a-1-d ms
Analyst: 868 HG-8

Date Collected: 3/19/2020 2:51:56 PM
Data Type: Original

Replicate Data: 570-23805-a-1-d ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.67	0.0831	0.3126	0.0834	2:52:50 PM	Yes
2	0.0046	4.61	0.0819	0.3135	0.0823	2:53:25 PM	Yes
Mean:	0.0046	4.64	0.0825				
SD:	0.00004	0.045	0.0008				
%RSD:	0.96%	0.96%	0.96				

=====
Sequence No.: 6

Autosampler Location: 42

Sample ID: 570-23805-a-1-e msd
Analyst: 868 HG-8

Date Collected: 3/19/2020 2:53:46 PM
Data Type: Original

Replicate Data: 570-23805-a-1-e msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.63	0.0823	0.3151	0.0826	2:54:40 PM	Yes
2	0.0046	4.62	0.0822	0.3120	0.0825	2:55:14 PM	Yes
Mean:	0.0046	4.62	0.0822				
SD:	0.00000	0.004	0.0001				
%RSD:	0.09%	0.09%	0.09				

=====
Sequence No.: 7

Autosampler Location: 43

Sample ID: 570-22965-a-1-h
Analyst: 868 HG-8

Date Collected: 3/19/2020 2:55:36 PM
Data Type: Original

Replicate Data: 570-22965-a-1-h

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0486	0.0012	0.0060	0.0016	2:56:29 PM	Yes
2	0.0001	0.0512	0.0013	0.0066	0.0016	2:57:04 PM	Yes
Mean:	0.0000	0.0499	0.0013				
SD:	0.00000	0.00183	0.0000				
%RSD:	3.67%	3.67%	2.57				

=====
Sequence No.: 8

Autosampler Location: 44

Sample ID: 570-22965-a-2-h
Analyst: 868 HG-8

Date Collected: 3/19/2020 2:57:25 PM
Data Type: Original

Replicate Data: 570-22965-a-2-h

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0233	0.0008	0.0037	0.0011	2:58:19 PM	Yes
2	0.0000	0.0229	0.0008	0.0037	0.0011	2:58:53 PM	Yes
Mean:	0.0000	0.0231	0.0008				
SD:	0.00000	0.00033	0.0000				
%RSD:	1.43%	1.43%	0.75				

=====
Sequence No.: 9

Autosampler Location: 45

Sample ID: 570-23720-b-1-b
Analyst: 868 HG-8

Date Collected: 3/19/2020 2:59:14 PM
Data Type: Original

Replicate Data: 570-23720-b-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.114	0.0024	0.0096	0.0027	3:00:07 PM	Yes
2	0.0001	0.114	0.0024	0.0098	0.0028	3:00:42 PM	Yes
Mean:	0.0001	0.114	0.0024				
SD:	0.00000	0.0004	0.0000				
%RSD:	0.33%	0.33%	0.28				

=====
Sequence No.: 10

Autosampler Location: 46

Sample ID: 570-23720-b-2-b
Analyst: 868 HG-8

Date Collected: 3/19/2020 3:01:03 PM
Data Type: Original

Replicate Data: 570-23720-b-2-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.215	0.0042	0.0168	0.0045	3:01:58 PM	Yes
2	0.0002	0.214	0.0042	0.0164	0.0045	3:02:32 PM	Yes
Mean:	0.0002	0.214	0.0042				
SD:	0.00000	0.0005	0.0000				
%RSD:	0.25%	0.25%	0.23				

=====

Sequence No.: 11

Autosampler Location: 5

Sample ID: ccv 570-58250_10-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 3:02:53 PM
Data Type: Original

Replicate Data: ccv 570-58250_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.00	0.0358	0.1364	0.0361	3:03:47 PM	Yes
2	0.0020	2.02	0.0362	0.1366	0.0365	3:04:22 PM	Yes
Mean:	0.0020	2.01	0.0360				
SD:	0.00001	0.015	0.0003				
%RSD:	0.73%	0.73%	0.72				

QC value within limits for Hg 253.7 Recovery = 100.56%
All analyte(s) passed QC.

=====

Sequence No.: 12

Autosampler Location: 1

Sample ID: ccb 570-58250_11-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 3:04:43 PM
Data Type: Original

Replicate Data: ccb 570-58250_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0185	0.0001	0.0010	0.0004	3:05:36 PM	Yes
2	-0.0000	-0.0169	0.0001	0.0009	0.0004	3:06:10 PM	Yes
Mean:	-0.0000	-0.0177	0.0001				
SD:	0.00000	0.00113	0.0000				
%RSD:	6.38%	6.38%	30.35				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====

Sequence No.: 13

Autosampler Location: 47

Sample ID: 570-23720-b-3-b
Analyst: 868 HG-8

Date Collected: 3/19/2020 3:06:30 PM
Data Type: Original

Replicate Data: 570-23720-b-3-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.167	0.0033	0.0131	0.0037	3:07:24 PM	Yes
2	0.0002	0.158	0.0032	0.0132	0.0035	3:07:58 PM	Yes
Mean:	0.0002	0.162	0.0033				
SD:	0.00001	0.0062	0.0001				
%RSD:	3.79%	3.79%	3.35				

=====

Sequence No.: 14

Autosampler Location: 48

Sample ID: 570-23720-b-4-b
Analyst: 868 HG-8

Date Collected: 3/19/2020 3:08:20 PM
Data Type: Original

Replicate Data: 570-23720-b-4-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.152	0.0031	0.0128	0.0034	3:09:14 PM	Yes
2	0.0002	0.153	0.0031	0.0130	0.0034	3:09:48 PM	Yes
Mean:	0.0002	0.153	0.0031				
SD:	0.00000	0.0010	0.0000				

%RSD: 0.67% 0.67% 0.59

Sequence No.: 15

Sample ID: 570-23720-a-5-d

Analyst: 868 HG-8

Autosampler Location: 49

Date Collected: 3/19/2020 3:10:10 PM

Data Type: Original

Replicate Data: 570-23720-a-5-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.202	0.0039	0.0157	0.0043	3:11:04 PM	Yes
2	0.0002	0.196	0.0038	0.0161	0.0042	3:11:38 PM	Yes
Mean:	0.0002	0.199	0.0039				
SD:	0.00000	0.0041	0.0001				
%RSD:	2.07%	2.07%	1.87				

Sequence No.: 16

Sample ID: 570-23720-b-6-b

Analyst: 868 HG-8

Autosampler Location: 50

Date Collected: 3/19/2020 3:12:00 PM

Data Type: Original

Replicate Data: 570-23720-b-6-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.183	0.0036	0.0147	0.0040	3:12:53 PM	Yes
2	0.0002	0.187	0.0037	0.0156	0.0040	3:13:27 PM	Yes
Mean:	0.0002	0.185	0.0037				
SD:	0.00000	0.0026	0.0000				
%RSD:	1.41%	1.41%	1.26				

Sequence No.: 17

Sample ID: 570-23720-a-7-f

Analyst: 868 HG-8

Autosampler Location: 51

Date Collected: 3/19/2020 3:13:49 PM

Data Type: Original

Replicate Data: 570-23720-a-7-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.277	0.0053	0.0206	0.0056	3:14:42 PM	Yes
2	0.0003	0.273	0.0052	0.0207	0.0056	3:15:16 PM	Yes
Mean:	0.0003	0.275	0.0052				
SD:	0.00000	0.0032	0.0001				
%RSD:	1.15%	1.15%	1.07				

Sequence No.: 18

Sample ID: 570-23720-b-8-b

Analyst: 868 HG-8

Autosampler Location: 52

Date Collected: 3/19/2020 3:15:37 PM

Data Type: Original

Replicate Data: 570-23720-b-8-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.219	0.0042	0.0177	0.0046	3:16:31 PM	Yes
2	0.0002	0.218	0.0042	0.0166	0.0046	3:17:05 PM	Yes
Mean:	0.0002	0.218	0.0042				
SD:	0.00000	0.0005	0.0000				
%RSD:	0.22%	0.22%	0.20				

Sequence No.: 19

Sample ID: 570-23720-b-9-b

Analyst: 868 HG-8

Autosampler Location: 53

Date Collected: 3/19/2020 3:17:26 PM

Data Type: Original

Replicate Data: 570-23720-b-9-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.188	0.0037	0.0153	0.0041	3:18:19 PM	Yes
2	0.0002	0.189	0.0037	0.0150	0.0041	3:18:53 PM	Yes
Mean:	0.0002	0.188	0.0037				
SD:	0.00000	0.0008	0.0000				

%RSD: 0.42% 0.42% 0.38

Sequence No.: 20 Autosampler Location: 54
Sample ID: 570-23804-d-3-a Date Collected: 3/19/2020 3:19:15 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 21 Autosampler Location: 55
Sample ID: 570-23804-d-3-a Date Collected: 3/19/2020 3:21:04 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 22 Autosampler Location: 56
Sample ID: 570-23804-d-4-a Date Collected: 3/19/2020 3:22:52 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 23 Autosampler Location: 5
Sample ID: ccv 570-58250_10-a Date Collected: 3/19/2020 3:24:41 PM
Analyst: 1220 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

QC value within limits for Hg 253.7 Recovery = 101.05%
All analyte(s) passed QC.

Sequence No.: 24 Autosampler Location: 1
Sample ID: ccb 570-58250_11-a Date Collected: 3/19/2020 3:26:31 PM
Analyst: 1220 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2.

Mean: -0.0000 -0.0191 0.0000
SD: 0.00000 0.00016 0.0000
%RSD: 0.84% 0.84% 6.85

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 57
Sample ID: 570-23804-d-7-a Date Collected: 3/19/2020 3:28:18 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for Hg 253.7 replicates 1 and 2.

Sequence No.: 26 Autosampler Location: 58
Sample ID: 570-23804-d-8-a Date Collected: 3/19/2020 3:30:07 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for Hg 253.7 replicates 1 and 2.

Sequence No.: 27 Autosampler Location: 59
Sample ID: 570-23621-a-1-b Date Collected: 3/19/2020 3:31:57 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for Hg 253.7 replicates 1 and 2.

Sequence No.: 28 Autosampler Location: 60
Sample ID: 570-23610-a-3-h Date Collected: 3/19/2020 3:33:46 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for Hg 253.7 replicates 1 and 2.

Sequence No.: 29 Autosampler Location: 61
Sample ID: 570-22963-a-1-h Date Collected: 3/19/2020 3:35:36 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for Hg 253.7 replicates 1 and 2.

1	-0.0000	-0.0023	0.0003	0.0022	0.0007	3:36:30 PM	Yes
2	-0.0000	-0.0043	0.0003	0.0019	0.0007	3:37:05 PM	Yes
Mean:	-0.0000	-0.0033	0.0003				
SD:	0.00000	0.00139	0.0000				
%RSD:	42.24%	42.24%	7.69				

Sequence No.: 30

Sample ID: ccv 570-58250_10-a

Analyst: 1220 HG-8

Autosampler Location: 5

Date Collected: 3/19/2020 3:37:27 PM

Data Type: Original

Replicate Data: ccv 570-58250_10-a

Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	mg/L	µg/L	Signal	Area	Height		Stored
1	0.0020	2.02	0.0361	0.1373	0.0365	3:38:21 PM	Yes
2	0.0020	2.01	0.0360	0.1361	0.0363	3:38:55 PM	Yes
Mean:	0.0020	2.02	0.0361				
SD:	0.00001	0.007	0.0001				
%RSD:	0.36%	0.36%	0.35				

QC value within limits for Hg 253.7 Recovery = 100.79%

All analyte(s) passed QC.

Sequence No.: 31

Sample ID: ccb 570-58250_11-a

Analyst: 1220 HG-8

Autosampler Location: 1

Date Collected: 3/19/2020 3:39:16 PM

Data Type: Original

Replicate Data: ccb 570-58250_11-a

Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	mg/L	µg/L	Signal	Area	Height		Stored
1	-0.0000	-0.0220	-0.0000	0.0007	0.0003	3:40:09 PM	Yes
2	-0.0000	-0.0178	0.0001	0.0012	0.0004	3:40:43 PM	Yes
Mean:	-0.0000	-0.0199	0.0000				
SD:	0.00000	0.00302	0.0001				
%RSD:	15.20%	15.20%	202.63				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sample ID: 570-23595-a-1-h ms
Analyst: 868 HG-8

Date Collected: 3/19/2020 4:28:21 PM
Data Type: Original

Replicate Data: 570-23595-a-1-h ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0045	4.51	0.0802	0.3005	0.0806	4:29:15 PM	Yes
2	0.0045	4.54	0.0808	0.3014	0.0811	4:29:50 PM	Yes
Mean:	0.0045	4.53	0.0805				
SD:	0.00002	0.021	0.0004				
%RSD:	0.47%	0.47%	0.47				

=====
Sequence No.: 6

Autosampler Location: 67

Sample ID: 570-23595-a-1-i msd
Analyst: 868 HG-8

Date Collected: 3/19/2020 4:30:12 PM
Data Type: Original

Replicate Data: 570-23595-a-1-i msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.57	0.0812	0.3057	0.0816	4:31:06 PM	Yes
2	0.0046	4.56	0.0810	0.3051	0.0814	4:31:40 PM	Yes
Mean:	0.0046	4.56	0.0811				
SD:	0.00001	0.008	0.0001				
%RSD:	0.17%	0.17%	0.17				

=====
Sequence No.: 7

Autosampler Location: 68

Sample ID: 570-23595-a-2-e
Analyst: 868 HG-8

Date Collected: 3/19/2020 4:32:02 PM
Data Type: Original

Replicate Data: 570-23595-a-2-e

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0145	0.0001	0.0026	0.0005	4:32:56 PM	Yes
2	-0.0000	-0.0063	0.0003	0.0033	0.0006	4:33:30 PM	Yes
Mean:	-0.0000	-0.0104	0.0002				
SD:	0.00001	0.00581	0.0001				
%RSD:	55.88%	55.88%	52.81				

=====
Sequence No.: 8

Autosampler Location: 69

Sample ID: 570-23595-a-3-e
Analyst: 868 HG-8

Date Collected: 3/19/2020 4:33:52 PM
Data Type: Original

Replicate Data: 570-23595-a-3-e

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0003	0.275	0.0053	0.0223	0.0056	4:34:46 PM	Yes
2	0.0003	0.276	0.0053	0.0214	0.0056	4:35:21 PM	Yes
Mean:	0.0003	0.276	0.0053				
SD:	0.00000	0.0004	0.0000				
%RSD:	0.14%	0.14%	0.13				

=====
Sequence No.: 9

Autosampler Location: 70

Sample ID: 570-23595-a-4-g
Analyst: 868 HG-8

Date Collected: 3/19/2020 4:35:43 PM
Data Type: Original

Replicate Data: 570-23595-a-4-g

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0161	0.0001	0.0030	0.0004	4:36:37 PM	Yes
2	-0.0000	-0.0170	0.0001	0.0020	0.0004	4:37:11 PM	Yes
Mean:	-0.0000	-0.0165	0.0001				
SD:	0.00000	0.00068	0.0000				
%RSD:	4.14%	4.14%	14.15				

=====
Sequence No.: 10

Autosampler Location: 71

Sample ID: 570-23595-a-5-f
Analyst: 868 HG-8

Date Collected: 3/19/2020 4:37:33 PM
Data Type: Original

Replicate Data: 570-23595-a-5-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0275	-0.0001	0.0014	0.0002	4:38:27 PM	Yes
2	-0.0000	-0.0266	-0.0001	0.0015	0.0003	4:39:01 PM	Yes
Mean:	-0.0000	-0.0270	-0.0001				
SD:	0.00000	0.00060	0.0000				
%RSD:	2.23%	2.23%	10.64				

=====

Sequence No.: 11

Autosampler Location: 5

Sample ID: ccv 570-58250_10-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 4:39:23 PM
Data Type: Original

Replicate Data: ccv 570-58250_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.00	0.0358	0.1380	0.0362	4:40:18 PM	Yes
2	0.0020	2.02	0.0361	0.1377	0.0364	4:40:52 PM	Yes
Mean:	0.0020	2.01	0.0360				
SD:	0.00001	0.008	0.0001				
%RSD:	0.41%	0.41%	0.41				

QC value within limits for Hg 253.7 Recovery = 100.50%
All analyte(s) passed QC.

=====

Sequence No.: 12

Autosampler Location: 1

Sample ID: ccb 570-58250_11-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 4:41:14 PM
Data Type: Original

Replicate Data: ccb 570-58250_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0005	0.0004	0.0030	0.0007	4:42:06 PM	Yes
2	0.0000	0.0193	0.0007	0.0041	0.0011	4:42:41 PM	Yes
Mean:	0.0000	0.0099	0.0006				
SD:	0.00001	0.01334	0.0002				
%RSD:	134.80%	134.80%	42.64				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====

Sequence No.: 13

Autosampler Location: 72

Sample ID: 570-23595-a-6-f
Analyst: 868 HG-8

Date Collected: 3/19/2020 4:43:01 PM
Data Type: Original

Replicate Data: 570-23595-a-6-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0287	-0.0001	0.0021	0.0002	4:43:55 PM	Yes
2	-0.0000	-0.0282	-0.0001	0.0017	0.0002	4:44:29 PM	Yes
Mean:	-0.0000	-0.0284	-0.0001				
SD:	0.00000	0.00039	0.0000				
%RSD:	1.37%	1.37%	5.53				

=====

Sequence No.: 14

Autosampler Location: 73

Sample ID: 570-23595-a-7-f
Analyst: 868 HG-8

Date Collected: 3/19/2020 4:44:51 PM
Data Type: Original

Replicate Data: 570-23595-a-7-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0273	-0.0001	0.0014	0.0002	4:45:45 PM	Yes
2	-0.0000	-0.0232	-0.0000	0.0014	0.0003	4:46:19 PM	Yes
Mean:	-0.0000	-0.0252	-0.0001				
SD:	0.00000	0.00290	0.0001				

%RSD: 11.49% 11.49% 75.39

Sequence No.: 15 Autosampler Location: 74
Sample ID: 570-23595-a-8-f Date Collected: 3/19/2020 4:46:41 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-23595-a-8-f, analyte Hg 253.7.

Sequence No.: 16 Autosampler Location: 75
Sample ID: 570-23595-a-9-f Date Collected: 3/19/2020 4:48:30 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-23595-a-9-f, analyte Hg 253.7.

Sequence No.: 17 Autosampler Location: 76
Sample ID: 570-23595-a-10-g Date Collected: 3/19/2020 4:50:20 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-23595-a-10-g, analyte Hg 253.7.

Sequence No.: 18 Autosampler Location: 77
Sample ID: 570-23244-a-1-k Date Collected: 3/19/2020 4:52:10 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-23244-a-1-k, analyte Hg 253.7.

Sequence No.: 19 Autosampler Location: 78
Sample ID: mb 570-58304_1-b Date Collected: 3/19/2020 4:53:59 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate mb 570-58304_1-b, analyte Hg 253.7.

%RSD: 46.10% 46.10% 67.81

Sequence No.: 20 Autosampler Location: 79
Sample ID: lcs 570-58304_2-b Date Collected: 3/19/2020 4:55:49 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 21 Autosampler Location: 80
Sample ID: lcsd 570-58304_3-b Date Collected: 3/19/2020 4:57:38 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 22 Autosampler Location: 81
Sample ID: 570-23510-c-1-g Date Collected: 3/19/2020 4:59:27 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD. Includes note: User canceled analysis.

Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT Technique: AA FIMS-MHS
Spectrometer: FIMS-400, S/N B050-9560 Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\200319H2.sifx

Batch ID:
Results Data Set: 200319H2
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

Sequence No.: 21 Autosampler Location: 80
Sample ID: lcsd 570-58304_3-b Date Collected: 3/19/2020 5:04:02 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl, SampleConc, StndConc, BlnkCorr, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD. Includes note: User canceled analysis.

=====
Analysis Begun

Logged In Analyst: US26_USR_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200319H2.sifx

Batch ID:
Results Data Set: 200319H2
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 21
Sample ID: lcsd 570-58304_3-b
Analyst: 868 HG-8
Autosampler Location: 80
Date Collected: 3/19/2020 5:05:59 PM
Data Type: Original

Replicate Data: lcsd 570-58304_3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.98	0.0885	0.3488	0.0888	5:06:53 PM	Yes
2	0.0048	4.75	0.0845	0.3233	0.0848	5:07:27 PM	Yes
Mean:	0.0049	4.86	0.0865				
SD:	0.00016	0.161	0.0028				
%RSD:	3.30%	3.30%	3.29				

=====
Sequence No.: 22
Sample ID: 570-23510-c-1-g
Analyst: 868 HG-8
Autosampler Location: 81
Date Collected: 3/19/2020 5:07:49 PM
Data Type: Original

Replicate Data: 570-23510-c-1-g Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0254	-0.0001	0.0006	0.0003	5:08:43 PM	Yes
2	-0.0000	-0.0209	0.0000	0.0009	0.0004	5:09:18 PM	Yes
Mean:	-0.0000	-0.0231	-0.0000				
SD:	0.00000	0.00318	0.0001				
%RSD:	13.73%	13.73%	181.19				

=====
Sequence No.: 23
Sample ID: ccv 570-58250_10-a
Analyst: 1220 HG-8
Autosampler Location: 5
Date Collected: 3/19/2020 5:09:40 PM
Data Type: Original

Replicate Data: ccv 570-58250_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.01	0.0359	0.1379	0.0363	5:10:34 PM	Yes
2	0.0020	1.99	0.0356	0.1364	0.0360	5:11:08 PM	Yes
Mean:	0.0020	2.00	0.0358				
SD:	0.00001	0.012	0.0002				
%RSD:	0.60%	0.60%	0.60				

QC value within limits for Hg 253.7 Recovery = 100.04%
All analyte(s) passed QC.

=====
Sequence No.: 24
Sample ID: ccb 570-58250_11-a
Analyst: 1220 HG-8
Autosampler Location: 1
Date Collected: 3/19/2020 5:11:31 PM
Data Type: Original

Replicate Data: ccb 570-58250_11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0098	0.0002	0.0021	0.0006	5:12:24 PM	Yes
2	-0.0000	-0.0019	0.0003	0.0024	0.0007	5:12:58 PM	Yes
Mean:	-0.0000	-0.0059	0.0003				
SD:	0.00001	0.00558	0.0001				
%RSD:	94.83%	94.83%	35.97				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

```

=====
Sequence No.: 25                               Autosampler Location: 82
Sample ID: 570-23510-c-1-h ms                 Date Collected: 3/19/2020 5:13:19 PM
Analyst: 868 HG-8                             Data Type: Original

```

```

-----
Replicate Data: 570-23510-c-1-h ms           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height    Time      Stored
1      0.0020        1.97      0.0353    0.1373    0.0356    5:14:13 PM  Yes
2      0.0020        1.96      0.0350    0.1353    0.0354    5:14:48 PM  Yes
Mean:  0.0020        1.97      0.0352
SD:    0.00001       0.011     0.0002
%RSD:  0.54%       0.54%     0.54

```

```

=====
Sequence No.: 26                               Autosampler Location: 83
Sample ID: 570-23510-c-1-i ms                 Date Collected: 3/19/2020 5:15:10 PM
Analyst: 868 HG-8                             Data Type: Original

```

```

-----
Replicate Data: 570-23510-c-1-i ms           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height    Time      Stored
1      0.0030        2.96      0.0528    0.2056    0.0531    5:16:04 PM  Yes
2      0.0030        2.96      0.0528    0.2040    0.0532    5:16:38 PM  Yes
Mean:  0.0030        2.96      0.0528
SD:    0.00000       0.002     0.0000
%RSD:  0.07%       0.07%     0.07

```

```

=====
Sequence No.: 27                               Autosampler Location: 84
Sample ID: 570-23510-c-2-c                 Date Collected: 3/19/2020 5:17:00 PM
Analyst: 868 HG-8                             Data Type: Original

```

```

-----
Replicate Data: 570-23510-c-2-c           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height    Time      Stored
1      -0.0000       -0.0294   -0.0001    0.0007    0.0002    5:17:55 PM  Yes
2      -0.0000       -0.0240   -0.0000    0.0013    0.0003    5:18:29 PM  Yes
Mean:  -0.0000       -0.0267   -0.0001
SD:    0.00000       0.00384   0.0001
%RSD:  14.36%     14.36%    71.95

```

```

=====
Sequence No.: 28                               Autosampler Location: 85
Sample ID: 570-23510-c-3-c                 Date Collected: 3/19/2020 5:18:51 PM
Analyst: 868 HG-8                             Data Type: Original

```

```

-----
Replicate Data: 570-23510-c-3-c           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height    Time      Stored
1      -0.0000       -0.0221   -0.0000    0.0013    0.0003    5:19:46 PM  Yes
2      -0.0000       -0.0185   0.0001     0.0013    0.0004    5:20:20 PM  Yes
Mean:  -0.0000       -0.0203   0.0000
SD:    0.00000       0.00254   0.0000
%RSD:  12.51%     12.51%    237.29

```

```

=====
Sequence No.: 29                               Autosampler Location: 86
Sample ID: lb4 570-57858_1-c                 Date Collected: 3/19/2020 5:20:43 PM
Analyst: 868 HG-8                             Data Type: Original

```

```

-----
Replicate Data: lb4 570-57858_1-c           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height    Time      Stored
1      0.0000        0.0014    0.0004    0.0033    0.0008    5:21:37 PM  Yes
2      -0.0000       -0.0206   0.0000    0.0012    0.0004    5:22:11 PM  Yes
Mean:  -0.0000       -0.0096   0.0002
SD:    0.00002       0.01553   0.0003

```

%RSD: 162.06% 162.06% 131.55

Sequence No.: 30 Autosampler Location: 87
Sample ID: lcs 570-57858_2-c Date Collected: 3/19/2020 5:22:34 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 31 Autosampler Location: 88
Sample ID: lcsd 570-57858_3-c Date Collected: 3/19/2020 5:24:24 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 32 Autosampler Location: 89
Sample ID: 570-23244-a-1-o Date Collected: 3/19/2020 5:26:14 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 33 Autosampler Location: 90
Sample ID: 570-23244-a-1-p ms Date Collected: 3/19/2020 5:28:03 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 34 Autosampler Location: 91
Sample ID: 570-23244-a-1-q msd Date Collected: 3/19/2020 5:29:53 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

%RSD: 1.11% 1.11% 1.10

Sequence No.: 35 Autosampler Location: 5
Sample ID: ccv 570-58250_10-a Date Collected: 3/19/2020 5:31:43 PM
Analyst: 1220 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

QC value within limits for Hg 253.7 Recovery = 101.15%
All analyte(s) passed QC.

Sequence No.: 36 Autosampler Location: 1
Sample ID: ccb 570-58250_11-a Date Collected: 3/19/2020 5:33:32 PM
Analyst: 1220 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 37 Autosampler Location: 92
Sample ID: lb 570-58160_1-c Date Collected: 3/19/2020 5:35:19 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 38 Autosampler Location: 93
Sample ID: lcs 570-58160_2-c Date Collected: 3/19/2020 5:37:09 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 39 Autosampler Location: 94
Sample ID: lcsd 570-58160_3-c Date Collected: 3/19/2020 5:38:58 PM
Analyst: 868 HG-8 Data Type: Original

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

1	0.0051	5.07	0.0900	0.3504	0.0904	5:39:52 PM	Yes
2	0.0050	5.02	0.0893	0.3488	0.0897	5:40:26 PM	Yes
Mean:	0.0050	5.05	0.0897				
SD:	0.00003	0.030	0.0005				
%RSD:	0.59%	0.59%	0.59				

Sequence No.: 40
 Sample ID: 570-23529-a-1-j
 Analyst: 868 HG-8
 Autosampler Location: 95
 Date Collected: 3/19/2020 5:40:48 PM
 Data Type: Original

Replicate Data: 570-23529-a-1-j Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0068	0.0005	0.0038	0.0009	5:41:42 PM	Yes
2	0.0000	0.0161	0.0007	0.0039	0.0010	5:42:16 PM	Yes
Mean:	0.0000	0.0114	0.0006				
SD:	0.00001	0.00658	0.0001				
%RSD:	57.67%	57.67%	20.06				

Sequence No.: 41
 Sample ID: 570-23529-a-1-k ms
 Analyst: 868 HG-8
 Autosampler Location: 96
 Date Collected: 3/19/2020 5:42:37 PM
 Data Type: Original

Replicate Data: 570-23529-a-1-k ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0015	1.48	0.0265	0.1038	0.0269	5:43:31 PM	Yes
2	0.0015	1.47	0.0265	0.1030	0.0268	5:44:05 PM	Yes
Mean:	0.0015	1.48	0.0265				
SD:	0.00000	0.003	0.0001				
%RSD:	0.19%	0.19%	0.19				

Sequence No.: 42
 Sample ID: 570-23529-a-1-l msd
 Analyst: 868 HG-8
 Autosampler Location: 97
 Date Collected: 3/19/2020 5:44:27 PM
 Data Type: Original

Replicate Data: 570-23529-a-1-l msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0028	2.77	0.0493	0.1866	0.0497	5:45:21 PM	Yes
2	0.0027	2.68	0.0478	0.1857	0.0482	5:45:55 PM	Yes
Mean:	0.0027	2.72	0.0486				
SD:	0.00006	0.060	0.0011				
%RSD:	2.21%	2.21%	2.19				

Sequence No.: 43
 Sample ID: 570-23805-a-1-j
 Analyst: 868 HG-8
 Autosampler Location: 98
 Date Collected: 3/19/2020 5:46:17 PM
 Data Type: Original

Replicate Data: 570-23805-a-1-j Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0134	0.0001	0.0022	0.0005	5:47:11 PM	Yes
2	-0.0000	-0.0038	0.0003	0.0030	0.0007	5:47:46 PM	Yes
Mean:	-0.0000	-0.0086	0.0002				
SD:	0.00001	0.00683	0.0001				
%RSD:	79.33%	79.33%	53.52				

Sequence No.: 44
 Sample ID: ccv 570-58250_10-a
 Analyst: 1220 HG-8
 Autosampler Location: 5
 Date Collected: 3/19/2020 5:48:08 PM
 Data Type: Original

Replicate Data: ccv 570-58250_10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0134	0.0001	0.0022	0.0005	5:47:11 PM	Yes
2	-0.0000	-0.0038	0.0003	0.0030	0.0007	5:47:46 PM	Yes
Mean:	-0.0000	-0.0086	0.0002				
SD:	0.00001	0.00683	0.0001				
%RSD:	79.33%	79.33%	53.52				

1	0.0020	1.99	0.0355	0.1390	0.0359	5:49:02 PM	Yes
2	0.0020	1.99	0.0357	0.1388	0.0360	5:49:36 PM	Yes
Mean:	0.0020	1.99	0.0356				
SD:	0.00001	0.007	0.0001				
%RSD:	0.34%	0.34%	0.33				

QC value within limits for Hg 253.7 Recovery = 99.51%
All analyte(s) passed QC.

=====

Sequence No.: 45

Sample ID: ccb 570-58250_11-a

Analyst: 1220 HG-8

Autosampler Location: 1

Date Collected: 3/19/2020 5:49:58 PM

Data Type: Original

Replicate Data: ccb 570-58250_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0244	0.0008	0.0057	0.0012	5:50:51 PM	Yes
2	0.0001	0.0672	0.0016	0.0083	0.0019	5:51:26 PM	Yes
Mean:	0.0000	0.0458	0.0012				
SD:	0.00003	0.03031	0.0005				
%RSD:	66.19%	66.19%	45.12				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sample ID: 570-23773-a-1-h ms
Analyst: 868 HG-8

Date Collected: 3/19/2020 9:33:37 PM
Data Type: Original

Replicate Data: 570-23773-a-1-h ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.92	0.0874	0.3309	0.0878	9:34:32 PM	Yes
2	0.0048	4.84	0.0859	0.3307	0.0863	9:35:06 PM	Yes
Mean:	0.0049	4.88	0.0867				
SD:	0.00006	0.059	0.0010				
%RSD:	1.21%	1.21%	1.21				

=====
Sequence No.: 6

Autosampler Location: 104

Sample ID: 570-23773-a-1-i msd
Analyst: 868 HG-8

Date Collected: 3/19/2020 9:35:28 PM
Data Type: Original

Replicate Data: 570-23773-a-1-i msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.91	0.0873	0.3365	0.0876	9:36:22 PM	Yes
2	0.0049	4.93	0.0876	0.3338	0.0879	9:36:56 PM	Yes
Mean:	0.0049	4.92	0.0874				
SD:	0.00001	0.012	0.0002				
%RSD:	0.25%	0.25%	0.25				

=====
Sequence No.: 7

Autosampler Location: 105

Sample ID: 570-23773-a-2-c
Analyst: 868 HG-8

Date Collected: 3/19/2020 9:37:18 PM
Data Type: Original

Replicate Data: 570-23773-a-2-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0594	0.0014	0.0071	0.0018	9:38:12 PM	Yes
2	0.0001	0.0610	0.0015	0.0068	0.0018	9:38:46 PM	Yes
Mean:	0.0001	0.0602	0.0014				
SD:	0.00000	0.00106	0.0000				
%RSD:	1.77%	1.77%	1.30				

=====
Sequence No.: 8

Autosampler Location: 106

Sample ID: 570-23773-a-3-c
Analyst: 868 HG-8

Date Collected: 3/19/2020 9:39:08 PM
Data Type: Original

Replicate Data: 570-23773-a-3-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.107	0.0023	0.0104	0.0026	9:40:02 PM	Yes
2	0.0001	0.107	0.0023	0.0099	0.0026	9:40:37 PM	Yes
Mean:	0.0001	0.107	0.0023				
SD:	0.00000	0.0001	0.0000				
%RSD:	0.10%	0.10%	0.08				

=====
Sequence No.: 9

Autosampler Location: 107

Sample ID: 570-23773-a-4-c
Analyst: 868 HG-8

Date Collected: 3/19/2020 9:40:59 PM
Data Type: Original

Replicate Data: 570-23773-a-4-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0548	0.0013	0.0063	0.0017	9:41:53 PM	Yes
2	0.0001	0.0550	0.0014	0.0059	0.0017	9:42:27 PM	Yes
Mean:	0.0001	0.0549	0.0013				
SD:	0.00000	0.00010	0.0000				
%RSD:	0.18%	0.18%	0.13				

=====
Sequence No.: 10

Autosampler Location: 108

Sample ID: 570-23745-a-1-d
Analyst: 868 HG-8

Date Collected: 3/19/2020 9:42:49 PM
Data Type: Original

Replicate Data: 570-23745-a-1-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0007	0.717	0.0131	0.0543	0.0134	9:43:43 PM	Yes
2	0.0007	0.720	0.0131	0.0547	0.0135	9:44:18 PM	Yes
Mean:	0.0007	0.719	0.0131				
SD:	0.00000	0.0024	0.0000				
%RSD:	0.33%	0.33%	0.32				

=====

Sequence No.: 11

Autosampler Location: 5

Sample ID: ccv 570-58250_10-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 9:44:40 PM
Data Type: Original

Replicate Data: ccv 570-58250_10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.96	0.0351	0.1338	0.0355	9:45:34 PM	Yes
2	0.0020	1.97	0.0353	0.1327	0.0356	9:46:08 PM	Yes
Mean:	0.0020	1.97	0.0352				
SD:	0.00001	0.007	0.0001				
%RSD:	0.36%	0.36%	0.35				

QC value within limits for Hg 253.7 Recovery = 98.36%
All analyte(s) passed QC.

=====

Sequence No.: 12

Autosampler Location: 1

Sample ID: ccb 570-58250_11-a
Analyst: 1220 HG-8

Date Collected: 3/19/2020 9:46:29 PM
Data Type: Original

Replicate Data: ccb 570-58250_11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0180	0.0001	0.0008	0.0004	9:47:22 PM	Yes
2	-0.0000	-0.0174	0.0001	0.0012	0.0004	9:47:56 PM	Yes
Mean:	-0.0000	-0.0177	0.0001				
SD:	0.00000	0.00043	0.0000				
%RSD:	2.44%	2.44%	11.78				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====

Sequence No.: 13

Autosampler Location: 109

Sample ID: 570-23856-a-1-b
Analyst: 868 HG-8

Date Collected: 3/19/2020 9:48:16 PM
Data Type: Original

Replicate Data: 570-23856-a-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0677	0.0016	0.0066	0.0019	9:49:11 PM	Yes
2	0.0001	0.0701	0.0016	0.0070	0.0020	9:49:45 PM	Yes
Mean:	0.0001	0.0689	0.0016				
SD:	0.00000	0.00170	0.0000				
%RSD:	2.47%	2.47%	1.88				

=====

Sequence No.: 14

Autosampler Location: 110

Sample ID: 570-23604-a-1-b
Analyst: 868 HG-8

Date Collected: 3/19/2020 9:50:07 PM
Data Type: Original

Replicate Data: 570-23604-a-1-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0096	0.0002	0.0018	0.0006	9:51:01 PM	Yes
2	-0.0000	-0.0081	0.0002	0.0018	0.0006	9:51:35 PM	Yes
Mean:	-0.0000	-0.0088	0.0002				
SD:	0.00000	0.00103	0.0000				

%RSD: 11.62% 11.62% 8.17

Sequence No.: 15
Sample ID: 570-23604-a-2-b
Analyst: 868 HG-8

Autosampler Location: 111
Date Collected: 3/19/2020 9:51:58 PM
Data Type: Original

Replicate Data: 570-23604-a-2-b

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics.

Sequence No.: 16
Sample ID: 570-23604-a-3-b
Analyst: 868 HG-8

Autosampler Location: 112
Date Collected: 3/19/2020 9:53:48 PM
Data Type: Original

Replicate Data: 570-23604-a-3-b

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics.

Sequence No.: 17
Sample ID: 570-23604-a-4-b
Analyst: 868 HG-8

Autosampler Location: 113
Date Collected: 3/19/2020 9:55:39 PM
Data Type: Original

Replicate Data: 570-23604-a-4-b

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics.

Sequence No.: 18
Sample ID: 570-23604-a-5-b
Analyst: 868 HG-8

Autosampler Location: 114
Date Collected: 3/19/2020 9:57:29 PM
Data Type: Original

Replicate Data: 570-23604-a-5-b

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics.

Sequence No.: 19
Sample ID: 570-23604-a-6-b
Analyst: 868 HG-8

Autosampler Location: 115
Date Collected: 3/19/2020 9:59:20 PM
Data Type: Original

Replicate Data: 570-23604-a-6-b

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics.

%RSD: 2.45% 2.45% 46.39

```

=====
Sequence No.: 20                               Autosampler Location: 116
Sample ID: 570-23604-a-7-b                   Date Collected: 3/19/2020 10:01:11 PM
Analyst: 868 HG-8                             Data Type: Original
=====

```

```

-----
Replicate Data: 570-23604-a-7-b               Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      -0.0000      -0.0189  0.0000   0.0008 0.0004  10:02:05 PM  Yes
2      -0.0000      -0.0196  0.0000   0.0007 0.0004  10:02:39 PM  Yes
Mean:  -0.0000      -0.0193  0.0000
SD:     0.00000     0.00049  0.0000
%RSD:  2.56%      2.56%    23.11
=====

```

```

=====
Sequence No.: 21                               Autosampler Location: 5
Sample ID: ccv 570-58250_10-a                Date Collected: 3/19/2020 10:03:01 PM
Analyst: 1220 HG-8                           Data Type: Original
=====

```

```

-----
Replicate Data: ccv 570-58250_10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      0.0019       1.93     0.0345   0.1326 0.0348  10:03:55 PM  Yes
2      0.0020       1.95     0.0350   0.1326 0.0353  10:04:30 PM  Yes
Mean:  0.0019       1.94     0.0347
SD:     0.00002     0.020    0.0004
%RSD:  1.04%      1.04%    1.03
QC value within limits for Hg 253.7 Recovery = 97.01%
All analyte(s) passed QC.
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 1
Sample ID: ccb 570-58250_11-a                Date Collected: 3/19/2020 10:04:51 PM
Analyst: 1220 HG-8                           Data Type: Original
=====

```

```

-----
Replicate Data: ccb 570-58250_11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height  Time      Stored
1      -0.0000      -0.0175  0.0001   0.0007 0.0004  10:05:44 PM  Yes
2      -0.0000      -0.0151  0.0001   0.0013 0.0005  10:06:18 PM  Yes
Mean:  -0.0000      -0.0163  0.0001
SD:     0.00000     0.00166  0.0000
%RSD:  10.16%     10.16%   32.64
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.
=====

```

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience _____ Job Number: 570-23510-1 _____

SDG No.: _____

Project: SSFL CH661 / 692670.61 sw _____

Client Sample ID	Lab Sample ID
EVBMP0007S012	570-23510-1
EVBMP0008S015	570-23510-2
EVBMP0009S013	570-23510-3

Comments:

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: EVBMP0007S012

Lab Sample ID: 570-23510-1

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:39

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Suspended Solids	3.20	1.00	0.829	mg/L			1	SM 2540D

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: EV BMP0008S015

Lab Sample ID: 570-23510-2

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:29

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Turbidity	62.5	0.0500	0.0439	NTU			1	SM 2130B
	Total Suspended Solids	47.4	2.00	1.66	mg/L			1	SM 2540D

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: EV BMP0009S013

Lab Sample ID: 570-23510-3

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 08:25

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Turbidity	4.88	0.0500	0.0439	NTU			1	SM 2130B
	Total Suspended Solids	4.00	1.00	0.829	mg/L			1	SM 2540D

2-IN
 CALIBRATION QUALITY CONTROL
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-23510-1
 SDG No.: _____
 Analyst: KZ40 Batch Start Date: 03/14/2020
 Reporting Units: NTU Analytical Batch No.: 57531

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
4	CCV	13:04	Turbidity	97.90	100	98	95-105		WC_TUR_STD2_00102
9	CCV	13:04	Turbidity	96.60	100	97	95-105		WC_TUR_STD2_00102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 57396 Date: 03/15/2020 16:16							
SM 2540D	MB 570-57396/1	Total Suspended Solids	ND		mg/L	1.00	1

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 57531 Date: 03/14/2020 13:04								
SM 2130B		570-23483-F-1	Turbidity	0.570	NTU			
SM 2130B		570-23483-F-1 DU	Turbidity	0.6000	NTU	5	25	
Batch ID: 57396 Date: 03/15/2020 16:16								
SM 2540D		570-23521-E-1	Total Suspended Solids	78.7	mg/L			
SM 2540D		570-23521-E-1 DU	Total Suspended Solids	72.67	mg/L	8	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-23510-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 57396		Date: 03/15/2020 16:16									
						LCS Source: WC_TSS_STD_00015					
SM 2540D	LCS 570-57396/2	Total Suspended Solids	108.0		mg/L	100	108	85-115	5	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE DUPLICATE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-23510-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 57396		Date: 03/15/2020 16:16									
						LCSD Source: WC_TSS_STD_00015					
SM 2540D	LCSD 570-57396/3	Total Suspended Solids	113.0		mg/L	100	113	85-115	5	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LCS-CERTIFIED REFERENCE MATERIAL
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 57531 Date: 03/14/2020 13:04											
SM	LCSSRM	Turbidity	1008		NTU	1000	100.8	99.0-10			
2130B	570-57531/1							1.0			
Batch ID: 57531 Date: 03/14/2020 13:04											
SM	LCSSRM	Turbidity	9.990		NTU	10.0	99.9	99.0-10			
2130B	570-57531/2							1.0			
Batch ID: 57531 Date: 03/14/2020 13:04											
SM	LCSSRM	Turbidity	ND		NTU	0.0200	150.0	0.0-200			
2130B	570-57531/3							.0			

Calculations are performed before rounding to avoid round-off errors in calculated results.

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-23510-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2130B MDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	RL (NTU)	MDL (NTU)
Turbidity		0.05	0.04392

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-23510-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2130B XMDL Date: 05/10/2018 00:00

Analyte	Wavelength/ Mass	XRL (NTU)	XMDL (NTU)
Turbidity		0.05	0.04391639

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience

Job Number: 570-23510-1

SDG Number: _____

Matrix: Water

Instrument ID: NOEQUIP

Method: SM 2540D

MDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Suspended Solids		1	0.82873

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-23510-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2540D XMDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Suspended Solids		1	0.82873

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Instrument ID: NOEQUIP Analysis Method: SM 2540D

Start Date: 03/15/2020 16:16 End Date: 03/15/2020 16:16

Lab Sample Id	D/F	T y p e	Time	Analytes																											
				T S S																											
MB 570-57396/1	1	T	16:16	X																											
LCS 570-57396/2	1	T	16:16	X																											
LCSD 570-57396/3	1	T	16:16	X																											
ZZZZZZ			16:16																												
ZZZZZZ			16:16																												
ZZZZZZ			16:16																												
ZZZZZZ			16:16																												
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ZZZZZZ			16:16																												
ZZZZZZ			16:16																												
570-23521-E-1 DU	1	T	16:16	X																											
ZZZZZZ			16:16																												
570-23510-1	1	T	16:16	X																											
570-23510-2	1	T	16:16	X																											
570-23510-3	1	T	16:16	X																											
ZZZZZZ			16:16																												
ZZZZZZ			16:16																												
ZZZZZZ			16:16																												
ZZZZZZ			16:16																												
ZZZZZZ			16:16																												

Prep Types: _____
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 57531 Batch Start Date: 03/14/20 13:04 Batch Analyst: DeVera, Christopher A

Batch Method: SM 2130B Batch End Date: 03/14/20 13:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	WC_TUR_STD 00008	WC_TUR_STD 00009	WC_TUR_STD 00010	WC_TUR_STD2 00102	
LCSSRM 570-57531/1		SM 2130B		30 mL		30 mL			
LCSSRM 570-57531/2		SM 2130B		30 mL	30 mL				
LCSSRM 570-57531/3		SM 2130B		30 mL			30 mL		
CCV 570-57531/4		SM 2130B		30 mL				30 mL	
570-23510-E-2	EVBMP0008S015	SM 2130B	T	30 mL					
570-23510-D-3	EVBMP0009S013	SM 2130B	T	30 mL					
570-23483-F-1 DU		SM 2130B	T	30 mL					
CCV 570-57531/9		SM 2130B		30 mL				30 mL	

Batch Notes	
Calibration Date	01-02-2020
Instrument ID	TUR04
Pipette/Syringe/Dispenser ID	P-121

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 57396 Batch Start Date: 03/15/20 16:16 Batch Analyst: Le, Uyen

Batch Method: SM 2540D Batch End Date: 03/16/20 10:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	CrucibleID	TareWeight	InitialAmount	Weight1	Weight2	WeightOne%Diff
MB 570-57396/1		SM 2540D		C0635224 0.3962	0.3962 g	1000 mL	0.3962 g	0.3962 g	PASS <0.5mg
LCS 570-57396/2		SM 2540D		C0635223 0.3938	0.3938 g	100 mL	0.4046 g	0.4046 g	PASS <0.5mg
LCSD 570-57396/3		SM 2540D		C0635222 0.3924	0.3924 g	100 mL	0.4037 g	0.4037 g	PASS <0.5mg
570-23521-E-1 DU		SM 2540D	T	C0635209 0.3956	0.3956 g	300 mL	0.4173 g	0.4174 g	PASS <0.5mg
570-23510-D-1	EVBMP0007S012	SM 2540D	T	C0635207 0.3953	0.3953 g	1000 mL	0.3984 g	0.3985 g	PASS <0.5mg
570-23510-D-2	EVBMP0008S015	SM 2540D	T	C0635206 0.3935	0.3935 g	500 mL	0.4172 g	0.4172 g	PASS <0.5mg
570-23510-E-3	EVBMP0009S013	SM 2540D	T	C0635205 0.3925	0.3925 g	1000 mL	0.3965 g	0.3965 g	PASS <0.5mg

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue	Residue2	FinalAmount	ResDishWt	DishWeight	WC_TSS_STD 00015
MB 570-57396/1		SM 2540D		0 g	0 g	1000 mL	0.3962 g	0.3962 g	
LCS 570-57396/2		SM 2540D		0.0108 g	0.0108 g	1000 mL	0.4046 g	0.3938 g	100 mL
LCSD 570-57396/3		SM 2540D		0.0113 g	0.0113 g	1000 mL	0.4037 g	0.3924 g	100 mL
570-23521-E-1 DU		SM 2540D	T	0.0217 g	0.0218 g	1000 mL	0.4174 g	0.3956 g	
570-23510-D-1	EVBMP0007S012	SM 2540D	T	0.0031 g	0.0032 g	1000 mL	0.3985 g	0.3953 g	
570-23510-D-2	EVBMP0008S015	SM 2540D	T	0.0237 g	0.0237 g	1000 mL	0.4172 g	0.3935 g	
570-23510-E-3	EVBMP0009S013	SM 2540D	T	0.004 g	0.004 g	1000 mL	0.3965 g	0.3925 g	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-23510-1

SDG No.: _____

Batch Number: 57396 Batch Start Date: 03/15/20 16:16 Batch Analyst: Le, Uyen

Batch Method: SM 2540D Batch End Date: 03/16/20 10:30

Batch Notes	
Balance ID	87
Date/Time - In - CW (WT2)	03/16/2020 08:30
Date/Time - Out - CW (WT2)	03/16/2020 09:30
Temperature - Start - CW (WT2) - Correct	104 Celsius
Temperature - End - CW (WT2) - Correct	104 Celsius
Temperature - Start-CW(WT2) -Uncorrected	104 Celsius
Temperature - End-CW(WT2) -Uncorrected	104 Celsius
Temperature - Start - Corrected	104 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	03/15/2020 17:41
Date/Time - Out	03/16/2020 07:30
Filter ID	37634
Nominal Amount Used	1000 mL
Oven ID	IO07
Perform Calculation (0=No, 1=Yes)	1
Thermometer ID	TSS IO 7A
Temperature - Start - Uncorrected	104 Celsius
Temperature - End - Uncorrected	104 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

BALANCE CALIBRATION CHECK LOG

Eurofins Calscience

Date performed: 03/15/20 Initials: KOT

ID	Class 2 Weight (g)	Reading (g)	Acceptance Range	Pass? <small>(circle one)</small>	Comment <small>(If not passed, note removal or corrective action)</small>
83	1		0.98 - 1.02	Y N	IO Lab
	100		98.00 - 102.00	Y N	
62	0.002		0.0015 - 0.0025	Y N	IO Lab
	1		0.9990 - 1.0010	Y N	
	100		99.9000 - 100.1000	Y N	
11	1		0.98 - 1.02	Y N	IO Lab
	100		98.00 - 102.00	Y N	
55	1		0.98 - 1.02	Y N	IO Lab
	100		98.00 - 102.00	Y N	
	500		490.00 - 510.00	Y N	
86	1		0.98 - 1.02	Y N	IO Lab
	100		98.00 - 102.00	Y N	
	500		490.00 - 510.00	Y N	
71	0.002	0.0019	0.0015 - 0.0025	<input checked="" type="radio"/> Y N	BOD Room
	1	0.9993	0.9990 - 1.0010	<input checked="" type="radio"/> Y N	
	100	99.9922	99.9000 - 100.1000	<input checked="" type="radio"/> Y N	
63	0.1		0.08 - 0.12	Y N	BOD Room
	100		98.00 - 102.00	Y N	
73	0.1		0.08 - 0.12	Y N	Oil & Grease Room
	1		0.98 - 1.02	Y N	
	100		98.00 - 102.00	Y N	
87	0.002	0.0019	0.0015 - 0.0025	<input checked="" type="radio"/> Y N	Solids Room
	1	1.0001	0.9990 - 1.0010	<input checked="" type="radio"/> Y N	
	100	99.9925	99.9000 - 100.1000	<input checked="" type="radio"/> Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

Comments:

WT SET ID USED: 2 mg	COMMENT:
WT SET ID USED: 10 mg - 100 g	
WT SET ID USED: 500 g	

BALANCE CALIBRATION CHECK LOG

Eurofins Calscience

Date performed: 03, 16, 20 Initials: KA

ID	Class 2 Weight (g)	Reading (g)	Acceptance Range	Pass? (circle one)	Comment (If not passed, note removal or corrective action)
83	1	1.00	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
	100	99.99	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
62	0.002	0.0021	0.0015 - 0.0025	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
	1	0.9990	0.9990 - 1.0010	<input checked="" type="radio"/> Y <input type="radio"/> N	
11	100	99.9925	99.9000 - 100.1000	<input checked="" type="radio"/> Y <input type="radio"/> N	
	1	1.00	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
55	100	99.98	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
	1	1.01	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
86	100	99.97	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
	500	499.94	490.00 - 510.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
	1	1.00	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
71	100	99.99	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
	500	500.00	490.00 - 510.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
	0.002	0.0020	0.0015 - 0.0025	<input checked="" type="radio"/> Y <input type="radio"/> N	BOD Room
63	1	0.9993	0.9990 - 1.0010	<input checked="" type="radio"/> Y <input type="radio"/> N	
	100	99.9921	99.9000 - 100.1000	<input checked="" type="radio"/> Y <input type="radio"/> N	
	0.1	Not In Use	0.08 - 0.12	<input type="radio"/> Y <input type="radio"/> N	BOD Room
73	100	use	98.00 - 102.00	<input type="radio"/> Y <input type="radio"/> N	
	0.1	0.10	0.08 - 0.12	<input checked="" type="radio"/> Y <input type="radio"/> N	Oil & Grease Room
	1	1.00	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	
87	100	99.99	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
	0.002	0.0020	0.0015 - 0.0025	<input checked="" type="radio"/> Y <input type="radio"/> N	Solids Room
	1	0.9993	0.9990 - 1.0010	<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input checked="" type="radio"/> Y <input type="radio"/> N	

Comments:

WT SET ID USED: 2 mg	COMMENT:
WT SET ID USED: 10 mg - 100 g	
WT SET ID USED: 500 g	

COVER PAGE
GEOTECHNICAL

Lab Name: Eurofins Calscience _____ Job Number: 570-23510-1 _____

SDG No.: _____

Project: SSFL CH661 / 692670.61 sw _____

Client Sample ID	Lab Sample ID
EVBMP0007S012	570-23510-1
EVBMP0008S015	570-23510-2
EVBMP0009S013	570-23510-3

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: EV BMP0007S012

Lab Sample ID: 570-23510-1

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:39

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	3.68	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	ND	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	ND	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	84.45	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	88.13	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	11.87	0.01	0.01	%			1	D4464

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: EV BMP0008S015

Lab Sample ID: 570-23510-2

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 07:29

Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	38.64	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	ND	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	ND	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	61.35	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	100.00	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	ND	0.01	0.01	%			1	D4464

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: EV BMP0009S013

Lab Sample ID: 570-23510-3

Lab Name: Eurofins Calscience

Job No.: 570-23510-1

SDG ID.: _____

Matrix: Water

Date Sampled: 03/13/2020 08:25

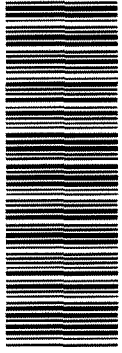
Reporting Basis: WET

Date Received: 03/13/2020 17:57

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	5.27	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	ND	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	ND	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	94.73	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	100.00	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	ND	0.01	0.01	%			1	D4464

Shipping and Receiving Documents

Project Name SSFL **Location** Santa Susana Field Lab
Project CH661 PO 100067108373
Project Number 692670.61.SW **Task Order** 661
Project Manager Randy Dean
Sample Manager Jamie Beckett
Turnaround Time 10 Days
PO Number 100067108373



570-23510 Chain of Custody

SW8290/1613B
 SM2540
 ASTM D4464
 200.8/245.1F
 200.8/245.1
 180.1

Containers
Field Filtered

Sample Date/Time 13-Mar-20 7:39
Type N
Matrix Water
Preservative 4C

Sample ID	Sample Date/Time	Type	Matrix	Preservative	# Containers	Field Filtered
EVBMP0007S012	13-Mar-20 7:39	N	Water	4C	2	<input type="checkbox"/>
Dioxins				4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C	<input type="checkbox"/>	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg				HNO3, 4C	<input type="checkbox"/>	<input type="checkbox"/>
Particle Size Distribution TSS				4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Total Containers: 7						
EVBMP0008S015	13-Mar-20 7:29	N	Water	4C	2	<input type="checkbox"/>
Dioxins				4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C	<input type="checkbox"/>	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg				HNO3, 4C	<input type="checkbox"/>	<input type="checkbox"/>
Particle Size Distribution TSS				4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Turbidity				4C	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Total Containers: 6						

MS = Matrix Spike **SD = Matrix Spike Duplicate**

Signatures	Date/Time	Shipping Details	Special Instructions:
Sampled by: <i>BRYAN BENSON</i>	3/13/20	Shipping Method: FedEx	ATTN: Sample Custody and Report Copy to Mark Fesler (530) 229-3273
Relinquished by: <i>BRYAN BENSON</i>	11:00 3/13/20	Airbill No:	
Received by: <i>DAVID MUMFORD</i>	11:00 3/13/20	Lab Name: Eurofins Calscience Lab	
Relinquished by: <i>David Mumford</i>	12:15 3/13/20	Lab Phone: (949) 870-8766	
Received by: <i>Sam Luna</i>	12:15 3/13/20	On Ice: yes / no	Cooler Temp: _____
Relinquished by: <i>Santos Luna</i>	17:57 3/13/20		
Received by: <i>Mumford sci</i>	17:57 3/13/20		

5.1/4.2 SU

Chain of Custody Record

Sample ID	Sample Date/Time	Sample Type	Matrix	Preservative	# Containers	Field Filtered																	
EVBMP0009S013	13-Mar-20 8:25	N	Water				180.1	200.8/245.1	200.8/245.1F	ASTMD4464	SM2540	SW8290/1613B											
Dioxins				4°C	2																		
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4°C	1																		
Include Cd, Cu, Pb, Hg				HNO3, 4°C	2																		
Particle Size Distribution TSS				4°C	2																		
Turbidity				4°C	1																		
					Total Containers:		8																

MS = Matrix Spike	SD = Matrix Spike Duplicate	Signatures	Date/Time	Shipping Details	ATTN:	Special Instructions:
Sampled by		BRYAN BENSON	11:00 3/13/20	Shipment Method: FedEx	Sample Custody and	Report Copy to Mark Fesler (530) 229-3273
Relinquished by		BRYAN BENSON	11:00 3/13/20	Airbill No:		
Received by		DELORETTA	11:00 3/13/20	Lab Name: Eurofins CalScience Lab		
Relinquished by		[Signature]	12:15 3/13/20	Lab Phone: (949) 870-8766		
Received by		[Signature]	12:15 3/13/20	On Ice: yes / no	Cooler Temp	
Relinquished by		[Signature]	17:57 3/13/2020			
		[Signature]	17:59 3/13/2020			

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-23510-1

Login Number: 23510
List Number: 1
Creator: Ramos, Maribel

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

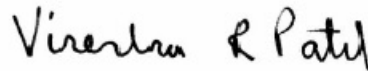
ANALYTICAL REPORT

Job Number: 570-23510-2

Job Description: SSFL CH661 / 692670.61 sw

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Virendra Patel
Project Manager I
4/20/2020 7:26 AM

Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
04/20/2020

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

Tel (714) 895-5494 Fax (714) 894-7501 www.EurofinsUS.com

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
570-23510-2

Comments

No additional comments.

Receipt

The samples were received on 3/13/2020 5:57 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2° C.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Method EPA 1613B - Dioxins/Furans - Report with J - Level IV: This method was subcontracted to Cape Fear Analytical, LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-2

Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-2

Method	Method Description	Protocol	Laboratory
1613B	EPA 1613B Dioxin/Furan	EPA	CFAnalytic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

CFAnalytic = Cape Fear Analytical, LLC, 3306 Kitty Hawk Road, Wilmington, NC 28405

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: SSFL CH661 / 692670.61 sw

Job ID: 570-23510-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-23510-1	EVBMP0007S012	Water	03/13/20 07:39	03/13/20 17:57	
570-23510-2	EVBMP0008S015	Water	03/13/20 07:29	03/13/20 17:57	
570-23510-3	EVBMP0009S013	Water	03/13/20 08:25	03/13/20 17:57	

Subcontract Data

April 17, 2020

Mr. Virendra Patel
Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, California 92841-1432

Re: Stormwater RFP Boeing SSFL MECX DXN
Work Order: 16343
SDG: 57003451

Dear Mr. Patel:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 17, 2020. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421 Ext. 2.

Sincerely,



Cynde Larkins
Project Manager

Purchase Order: 57003451
Chain of Custody: 570-26655.1
Enclosures

Chain of Custody Record



CFA WO#16343
eurofins Calscience

Client Information (Sub Contract Lab)	Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:					
Client Contact: Patel, Virendra	Phone:	E-Mail: virendrapatel@eurofins.com	State of Origin: California	570-26655-1					
Company: Cape Fear Analytical, LLC	Due Date Requested: 3/20/2020	TAT Requested (days):	Page: 1 of 1	Job #: 570-23510-2					
Address: 3306 Kitty Hawk Road, Wilmington NC, 28405	PO #:	WO #:	Project #: 57003451	Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - ADA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - PH 4-5, Z - other (specify)					
Site: SSFL CH661 / 692670.61 sw	Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)	Sample Type (C=Comp, G=grab)	Sample Time	Sample Date					
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type	Matrix	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Level IV/EPA 1613B - Dioxins/Furans	Total Number of Containers	Special Instructions/Note:
EVBMP007S012 (570-23510-1)	3/13/20	07:39 Pacific	Water	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	2	Ch2m Hill Lab Spec 7 EDD, Standard TAT
EVBMP008S015 (570-23510-2)	3/13/20	07:29 Pacific	Water	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	2	Ch2m Hill Lab Spec 7 EDD, Standard TAT
EVBMP009S013 (570-23510-3)	3/13/20	08:25 Pacific	Water	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	2	Ch2m Hill Lab Spec 7 EDD, Standard TAT

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification

Unconfirmed Return To Client Disposal By Lab Archive For Months

Deliverable Requested: I, II, III, IV, Other (specify)

Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: Date/Time: 3/16/20 1505 Company: CFA

Relinquished by: Date/Time: 3/17/20 10:17 Company: CFA

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: _____

Cooler Temperature(s) °C and Other Remarks: _____

SAMPLE RECEIPT CHECKLIST
Cape Fear Analytical

Client: <u>Eurofins Calscience</u>	Work Order: <u>16343</u>
Shipping Company: <u>FedEx</u>	Date/Time Received: <u>3/17/20 10:17</u>

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Samples < 2x background?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Air Witness: _____

#	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: seals broken damaged container leaking container other(describe)
2	Custody seal/s present on cooler?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Seal intact? Yes No
3	Chain of Custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Samples requiring cold preservation within 0-6°C?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: ice bags blue ice dry ice none other (describe) <u>4.7 + 0.2 = 4.9</u> Temperature Blank present: <input checked="" type="checkbox"/> Yes No
5	Aqueous samples found to have visible solids?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: <u>570-23510-1 and 2 Minimal Solids</u>
5	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected and pH observed: <u>pH = 7</u> If preservative added, Lot#:
7	Samples requiring preservation have no residual chlorine?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: If preservative added, Lot#:
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, tests affected:
9	Sample IDs on COC match IDs on containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
10	Date & time of COC match date & time on containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	List type and number of containers / Sample IDs, containers affected: <u>received 6-12 Number</u>
12	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Comments:

Checklist performed by: Initials: AL Date: 3/17/20

High Resolution Dioxins and Furans Analysis

Case Narrative

**HDOX Case Narrative
Eurofins Calscience (CALs)
SDG 57003451
Work Order 16343**

Method/Analysis Information

Product: Dioxins/Furans by EPA Method 1613B in Liquids
Analytical Method: EPA Method 1613B
Extraction Method: SW846 3520C
Analytical Batch Number: 43539
Clean Up Batch Number: 43537
Extraction Batch Number: 43536

Sample Analysis

Samples were received at 4.9°C (16343001, 16343002, 16343003). The following samples were analyzed using the analytical protocol as established in EPA Method 1613B:

Sample ID	Client ID
12026415	Method Blank (MB)
12026416	Laboratory Control Sample (LCS)
12026417	Laboratory Control Sample Duplicate (LCSD)
16343001	EV BMP0007S012 (570-23510-1)
16343002	EV BMP0008S015 (570-23510-2)
16343003	EV BMP0009S013 (570-23510-3)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 15.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement

The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement

The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery

The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement

The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation

A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation

A NCR was not required for this SDG.

Manual Integrations

Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

System Configuration

This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP763_1	Primary Dioxin Analysis	Dioxin Analysis	DB-5MS	60m x 0.25mm, 0.25um

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report for

CALS001 Eurofins Calscience

Client SDG: 57003451 CFA Work Order: 16343

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- J Value is estimated
- K Estimated Maximum Possible Concentration
- U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: 

Name: Heather Patterson

Date: 17 APR 2020

Title: Group Leader

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 16343001	Date Collected: 03/13/2020 07:39	Matrix: WATER
Client Sample: 1613B Water	Date Received: 03/17/2020 10:17	
Client ID: EVBMP0007S012 (570-23510-1)		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 20:34	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-5		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1047.5 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00138	ng/L	0.00138	0.00955
40321-76-4	1,2,3,7,8-PeCDD	U	0.00103	ng/L	0.00103	0.0477
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00172	ng/L	0.00172	0.0477
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00160	ng/L	0.00160	0.0477
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00171	ng/L	0.00171	0.0477
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	0.0130	ng/L	0.00395	0.0477
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.149	ng/L	0.00762	0.0955
51207-31-9	2,3,7,8-TCDF	U	0.00164	ng/L	0.00164	0.00955
57117-41-6	1,2,3,7,8-PeCDF	U	0.000995	ng/L	0.000995	0.0477
57117-31-4	2,3,4,7,8-PeCDF	U	0.000926	ng/L	0.000926	0.0477
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000911	ng/L	0.000911	0.0477
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000928	ng/L	0.000928	0.0477
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000987	ng/L	0.000987	0.0477
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00145	ng/L	0.00145	0.0477
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJK	0.00334	ng/L	0.00145	0.0477
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00190	ng/L	0.00190	0.0477
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.00871	ng/L	0.00420	0.0955
41903-57-5	Total TeCDD	U	0.00138	ng/L	0.00138	0.00955
36088-22-9	Total PeCDD	U	0.00103	ng/L	0.00103	0.0477
34465-46-8	Total HxCDD	BJ	0.00174	ng/L	0.00160	0.0477
37871-00-4	Total HpCDD	J	0.0351	ng/L	0.00395	0.0477
30402-14-3	Total TeCDF	U	0.00164	ng/L	0.00164	0.00955
30402-15-4	Total PeCDF	U	0.000890	ng/L	0.000890	0.0477
55684-94-1	Total HxCDF	U	0.000911	ng/L	0.000911	0.0477
38998-75-3	Total HpCDF	BJK	0.00768	ng/L	0.00145	0.0477
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000210	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00212	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.47	1.91	ng/L	76.9	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.61	1.91	ng/L	84.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.29	1.91	ng/L	67.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.40	1.91	ng/L	73.2	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.35	1.91	ng/L	71.0	(23%-140%)
13C-OCDD		2.22	3.82	ng/L	58.3	(17%-157%)
13C-2,3,7,8-TCDF		1.39	1.91	ng/L	72.9	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.69	1.91	ng/L	88.4	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.53	1.91	ng/L	80.0	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.34	1.91	ng/L	69.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.45	1.91	ng/L	76.1	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.49	1.91	ng/L	78.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.47	1.91	ng/L	76.8	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 16343001	Date Collected: 03/13/2020 07:39	Matrix: WATER
Client Sample: 1613B Water	Date Received: 03/17/2020 10:17	
Client ID: EVBMP0007S012 (570-23510-1)		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 20:34	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-5		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1047.5 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.34	1.91	ng/L	70.0 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.46	1.91	ng/L	76.5 (26%-138%)
37Cl-2,3,7,8-TCDD			0.174	0.191	ng/L	90.9 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451
Lab Sample ID: 16343002
Client Sample: 1613B Water
Client ID: EVBMP0008S015 (570-23510-2)
Batch ID: 43539
Run Date: 04/15/2020 21:22
Data File: b12apr20a_9-6
Prep Batch: 43536
Prep Date: 14-APR-20

Client: CALS001
Date Collected: 03/13/2020 07:29
Date Received: 03/17/2020 10:17
Method: EPA Method 1613B
Analyst: MLL
Prep Method: SW846 3520C
Prep Aliquot: 1050.5 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00219	ng/L	0.00219	0.00952
40321-76-4	1,2,3,7,8-PeCDD	U	0.00127	ng/L	0.00127	0.0476
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00162	ng/L	0.00162	0.0476
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00146	ng/L	0.00146	0.0476
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00158	ng/L	0.00158	0.0476
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.00604	ng/L	0.00604	0.0476
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	0.0703	ng/L	0.00813	0.0952
51207-31-9	2,3,7,8-TCDF	U	0.00238	ng/L	0.00238	0.00952
57117-41-6	1,2,3,7,8-PeCDF	U	0.00126	ng/L	0.00126	0.0476
57117-31-4	2,3,4,7,8-PeCDF	U	0.00120	ng/L	0.00120	0.0476
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000942	ng/L	0.000942	0.0476
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000933	ng/L	0.000933	0.0476
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000910	ng/L	0.000910	0.0476
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00140	ng/L	0.00140	0.0476
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.00135	ng/L	0.00135	0.0476
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00192	ng/L	0.00192	0.0476
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00463	ng/L	0.00463	0.0952
41903-57-5	Total TeCDD	U	0.00219	ng/L	0.00219	0.00952
36088-22-9	Total PeCDD	U	0.00127	ng/L	0.00127	0.0476
34465-46-8	Total HxCDD	U	0.00146	ng/L	0.00146	0.0476
37871-00-4	Total HpCDD	J	0.00765	ng/L	0.00604	0.0476
30402-14-3	Total TeCDF	U	0.00238	ng/L	0.00238	0.00952
30402-15-4	Total PeCDF	U	0.00120	ng/L	0.00120	0.0476
55684-94-1	Total HxCDF	U	0.000910	ng/L	0.000910	0.0476
38998-75-3	Total HpCDF	BJ	0.00169	ng/L	0.00135	0.0476
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0000211	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00256	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.35	1.90	ng/L	70.8	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.57	1.90	ng/L	82.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.20	1.90	ng/L	63.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.35	1.90	ng/L	70.8	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.31	1.90	ng/L	68.9	(23%-140%)
13C-OCDD		2.18	3.81	ng/L	57.2	(17%-157%)
13C-2,3,7,8-TCDF		1.29	1.90	ng/L	67.5	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.61	1.90	ng/L	84.6	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.52	1.90	ng/L	79.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.24	1.90	ng/L	65.4	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.38	1.90	ng/L	72.5	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.40	1.90	ng/L	73.7	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.35	1.90	ng/L	71.1	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 16343002	Date Collected: 03/13/2020 07:29	Matrix: WATER
Client Sample: 1613B Water	Date Received: 03/17/2020 10:17	
Client ID: EVBMP0008S015 (570-23510-2)		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 21:22	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-6		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1050.5 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.28	1.90	ng/L	67.4 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.40	1.90	ng/L	73.6 (26%-138%)
37Cl-2,3,7,8-TCDD			0.175	0.190	ng/L	91.7 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
- J** Value is estimated
- U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451
Lab Sample ID: 16343003
Client Sample: 1613B Water
Client ID: EVBMP0009S013 (570-23510-3)
Batch ID: 43539
Run Date: 04/15/2020 22:10
Data File: b12apr20a_9-7
Prep Batch: 43536
Prep Date: 14-APR-20

Client: CALS001
Date Collected: 03/13/2020 08:25
Date Received: 03/17/2020 10:17
Method: EPA Method 1613B
Analyst: MLL
Prep Method: SW846 3520C
Prep Aliquot: 1049.2 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00174	ng/L	0.00174	0.00953
40321-76-4	1,2,3,7,8-PeCDD	U	0.00133	ng/L	0.00133	0.0477
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00181	ng/L	0.00181	0.0477
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00170	ng/L	0.00170	0.0477
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00181	ng/L	0.00181	0.0477
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	0.00560	ng/L	0.00452	0.0477
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJ	0.0563	ng/L	0.00742	0.0953
51207-31-9	2,3,7,8-TCDF	U	0.00227	ng/L	0.00227	0.00953
57117-41-6	1,2,3,7,8-PeCDF	U	0.00124	ng/L	0.00124	0.0477
57117-31-4	2,3,4,7,8-PeCDF	U	0.00108	ng/L	0.00108	0.0477
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000884	ng/L	0.000884	0.0477
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000913	ng/L	0.000913	0.0477
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000928	ng/L	0.000928	0.0477
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00137	ng/L	0.00137	0.0477
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.00144	ng/L	0.00144	0.0477
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00208	ng/L	0.00208	0.0477
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00581	ng/L	0.00581	0.0953
41903-57-5	Total TeCDD	U	0.00174	ng/L	0.00174	0.00953
36088-22-9	Total PeCDD	U	0.00133	ng/L	0.00133	0.0477
34465-46-8	Total HxCDD	U	0.00170	ng/L	0.00170	0.0477
37871-00-4	Total HpCDD	JK	0.0135	ng/L	0.00452	0.0477
30402-14-3	Total TeCDF	U	0.00227	ng/L	0.00227	0.00953
30402-15-4	Total PeCDF	U	0.00108	ng/L	0.00108	0.0477
55684-94-1	Total HxCDF	U	0.000884	ng/L	0.000884	0.0477
38998-75-3	Total HpCDF	BJ	0.00185	ng/L	0.00144	0.0477
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0000729	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00239	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.35	1.91	ng/L	71.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.50	1.91	ng/L	78.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.21	1.91	ng/L	63.3	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.34	1.91	ng/L	70.3	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.23	1.91	ng/L	64.3	(23%-140%)
13C-OCDD		2.09	3.81	ng/L	54.9	(17%-157%)
13C-2,3,7,8-TCDF		1.28	1.91	ng/L	67.2	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.56	1.91	ng/L	82.0	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.45	1.91	ng/L	75.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.27	1.91	ng/L	66.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.39	1.91	ng/L	72.7	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.39	1.91	ng/L	72.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.37	1.91	ng/L	72.0	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 16343003	Date Collected: 03/13/2020 08:25	Matrix: WATER
Client Sample: 1613B Water	Date Received: 03/17/2020 10:17	
Client ID: EVBMP0009S013 (570-23510-3)		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 22:10	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-7		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1049.2 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.22	1.91	ng/L	64.1 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.34	1.91	ng/L	70.2 (26%-138%)
37Cl-2,3,7,8-TCDD			0.176	0.191	ng/L	92.4 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 57003451

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12026416	LCS for batch 43536	13C-2,3,7,8-TCDD		74.5	(20%-175%)
		13C-1,2,3,7,8-PeCDD		83.0	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		69.3	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		75.4	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		70.6	(22%-166%)
		13C-OCDD		59.2	(13%-199%)
		13C-2,3,7,8-TCDF		71.3	(22%-152%)
		13C-1,2,3,7,8-PeCDF		84.5	(21%-192%)
		13C-2,3,4,7,8-PeCDF		80.2	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		60.1	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		82.5	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		83.3	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		82.1	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		69.7	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		72.1	(20%-186%)
		37Cl-2,3,7,8-TCDD		89.5	(31%-191%)
12026417	LCSD for batch 43536	13C-2,3,7,8-TCDD		80.5	(20%-175%)
		13C-1,2,3,7,8-PeCDD		87.3	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		70.1	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		78.3	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		71.3	(22%-166%)
		13C-OCDD		60.2	(13%-199%)
		13C-2,3,7,8-TCDF		75.6	(22%-152%)
		13C-1,2,3,7,8-PeCDF		95.0	(21%-192%)
		13C-2,3,4,7,8-PeCDF		83.4	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		72.6	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		79.3	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		82.4	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		80.1	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		71.6	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		76.6	(20%-186%)
		37Cl-2,3,7,8-TCDD		93.2	(31%-191%)
12026415	MB for batch 43536	13C-2,3,7,8-TCDD		74.7	(25%-164%)
		13C-1,2,3,7,8-PeCDD		80.3	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		66.7	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		67.6	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		63.3	(23%-140%)
		13C-OCDD		53.2	(17%-157%)
		13C-2,3,7,8-TCDF		71.0	(24%-169%)
		13C-1,2,3,7,8-PeCDF		83.5	(24%-185%)
		13C-2,3,4,7,8-PeCDF		76.4	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		65.5	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		73.4	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		73.9	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		71.4	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		62.8	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		69.4	(26%-138%)
		37Cl-2,3,7,8-TCDD		91.1	(35%-197%)
16343001	EVBMP0007S012 (570-23510-1)	13C-2,3,7,8-TCDD		76.9	(25%-164%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 57003451

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
16343001	EVBMP0007S012 (570-23510-1)	13C-1,2,3,7,8-PeCDD		84.3	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		67.8	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		73.2	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		71.0	(23%-140%)
		13C-OCDD		58.3	(17%-157%)
		13C-2,3,7,8-TCDF		72.9	(24%-169%)
		13C-1,2,3,7,8-PeCDF		88.4	(24%-185%)
		13C-2,3,4,7,8-PeCDF		80.0	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		69.9	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		76.1	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		78.1	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		76.8	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		70.0	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		76.5	(26%-138%)
		37Cl-2,3,7,8-TCDD		90.9	(35%-197%)
16343002	EVBMP0008S015 (570-23510-2)	13C-2,3,7,8-TCDD		70.8	(25%-164%)
		13C-1,2,3,7,8-PeCDD		82.5	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		63.1	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		70.8	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		68.9	(23%-140%)
		13C-OCDD		57.2	(17%-157%)
		13C-2,3,7,8-TCDF		67.5	(24%-169%)
		13C-1,2,3,7,8-PeCDF		84.6	(24%-185%)
		13C-2,3,4,7,8-PeCDF		79.8	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		65.4	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		72.5	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		73.7	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		71.1	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		67.4	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		73.6	(26%-138%)
37Cl-2,3,7,8-TCDD		91.7	(35%-197%)		
16343003	EVBMP0009S013 (570-23510-3)	13C-2,3,7,8-TCDD		71.0	(25%-164%)
		13C-1,2,3,7,8-PeCDD		78.8	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		63.3	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		70.3	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		64.3	(23%-140%)
		13C-OCDD		54.9	(17%-157%)
		13C-2,3,7,8-TCDF		67.2	(24%-169%)
		13C-1,2,3,7,8-PeCDF		82.0	(24%-185%)
		13C-2,3,4,7,8-PeCDF		75.9	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		66.7	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		72.7	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		72.8	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		72.0	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		64.1	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		70.2	(26%-138%)
37Cl-2,3,7,8-TCDD		92.4	(35%-197%)		

* Recovery outside Acceptance Limits

**Hi-Res Dioxins/Furans
Surrogate Recovery Report**

SDG Number: 57003451

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
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* Recovery outside Acceptance Limits
Column to be used to flag recovery values
D Sample Diluted

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 57003451

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 43536

Matrix: WATER

Lab Sample ID: 12026416

Instrument: HRP763

Analysis Date: 04/15/2020 17:22

Dilution: 1

Analyst: MLL

Prep Batch ID:43536

Batch ID: 43539

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits
1746-01-6	LCS 2,3,7,8-TCDD	0.200	0.192	95.8	67-158
40321-76-4	LCS 1,2,3,7,8-PeCDD	1.00	1.01	101	70-142
39227-28-6	LCS 1,2,3,4,7,8-HxCDD	1.00	0.989	98.9	70-164
57653-85-7	LCS 1,2,3,6,7,8-HxCDD	1.00	1.00	100	74-134
19408-74-3	LCS 1,2,3,7,8,9-HxCDD	1.00	1.14	114	64-162
35822-46-9	LCS 1,2,3,4,6,7,8-HpCDD	1.00	0.969	96.9	70-140
3268-87-9	LCS 1,2,3,4,6,7,8,9-OCDD	2.00	1.99	99.3	78-144
51207-31-9	LCS 2,3,7,8-TCDF	0.200	0.188	94.1	75-158
57117-41-6	LCS 1,2,3,7,8-PeCDF	1.00	0.998	99.8	80-134
57117-31-4	LCS 2,3,4,7,8-PeCDF	1.00	1.04	104	68-160
70648-26-9	LCS 1,2,3,4,7,8-HxCDF	1.00	0.965	96.5	72-134
57117-44-9	LCS 1,2,3,6,7,8-HxCDF	1.00	0.982	98.2	84-130
60851-34-5	LCS 2,3,4,6,7,8-HxCDF	1.00	0.890	89	70-156
72918-21-9	LCS 1,2,3,7,8,9-HxCDF	1.00	0.970	97	78-130
67562-39-4	LCS 1,2,3,4,6,7,8-HpCDF	1.00	1.01	101	82-122
55673-89-7	LCS 1,2,3,4,7,8,9-HpCDF	1.00	1.00	100	78-138
39001-02-0	LCS 1,2,3,4,6,7,8,9-OCDF	2.00	2.20	110	63-170

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 57003451

Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 43536

Matrix: WATER

Lab Sample ID: 12026417

Instrument: HRP763

Analysis Date: 04/15/2020 18:10

Dilution: 1

Analyst: MLL

Prep Batch ID:43536

Batch ID: 43539

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD 2,3,7,8-TCDD	0.200	0.188	94.2	67-158	1.65	0-20
40321-76-4	LCSD 1,2,3,7,8-PeCDD	1.00	0.997	99.7	70-142	0.994	0-20
39227-28-6	LCSD 1,2,3,4,7,8-HxCDD	1.00	1.00	100	70-164	1.38	0-20
57653-85-7	LCSD 1,2,3,6,7,8-HxCDD	1.00	0.989	98.9	74-134	1.52	0-20
19408-74-3	LCSD 1,2,3,7,8,9-HxCDD	1.00	1.04	104	64-162	8.71	0-20
35822-46-9	LCSD 1,2,3,4,6,7,8-HpCDD	1.00	0.971	97.1	70-140	0.233	0-20
3268-87-9	LCSD 1,2,3,4,6,7,8,9-OCDD	2.00	1.96	98	78-144	1.27	0-20
51207-31-9	LCSD 2,3,7,8-TCDF	0.200	0.192	96	75-158	2.02	0-20
57117-41-6	LCSD 1,2,3,7,8-PeCDF	1.00	0.938	93.8	80-134	6.21	0-20
57117-31-4	LCSD 2,3,4,7,8-PeCDF	1.00	1.06	106	68-160	1.12	0-20
70648-26-9	LCSD 1,2,3,4,7,8-HxCDF	1.00	0.980	98	72-134	1.62	0-20
57117-44-9	LCSD 1,2,3,6,7,8-HxCDF	1.00	0.996	99.6	84-130	1.48	0-20
60851-34-5	LCSD 2,3,4,6,7,8-HxCDF	1.00	0.905	90.5	70-156	1.60	0-20
72918-21-9	LCSD 1,2,3,7,8,9-HxCDF	1.00	0.964	96.4	78-130	0.604	0-20
67562-39-4	LCSD 1,2,3,4,6,7,8-HpCDF	1.00	1.05	105	82-122	3.18	0-20
55673-89-7	LCSD 1,2,3,4,7,8,9-HpCDF	1.00	0.965	96.5	78-138	3.63	0-20
39001-02-0	LCSD 1,2,3,4,6,7,8,9-OCDF	2.00	2.10	105	63-170	4.95	0-20

Method Blank Summary

Page 1 of 1

SDG Number: 57003451
Client ID: MB for batch 43536
Lab Sample ID: 12026415
Column:

Client: CALS001
Instrument ID: HRP763
Prep Date: 14-APR-20

Matrix: WATER
Data File: b12apr20a_9-3
Analyzed: 04/15/20 18:58

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 43536	12026416	b12apr20a_9-1	04/15/20	1722
02 LCSD for batch 43536	12026417	b12apr20a_9-2	04/15/20	1810
03 EVBMP0007S012 (570-23510-1)	16343001	b12apr20a_9-5	04/15/20	2034
04 EVBMP0008S015 (570-23510-2)	16343002	b12apr20a_9-6	04/15/20	2122
05 EVBMP0009S013 (570-23510-3)	16343003	b12apr20a_9-7	04/15/20	2210

Sample Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451
Lab Sample ID: 16343001
Client Sample: 1613B Water
Client ID: EVBMP0007S012 (570-23510-1)
Batch ID: 43539
Run Date: 04/15/2020 20:34
Data File: b12apr20a_9-5
Prep Batch: 43536
Prep Date: 14-APR-20

Client: CALS001
Date Collected: 03/13/2020 07:39
Date Received: 03/17/2020 10:17
Method: EPA Method 1613B
Analyst: MLL
Prep Method: SW846 3520C
Prep Aliquot: 1047.5 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00138	ng/L	0.00138	0.00955
40321-76-4	1,2,3,7,8-PeCDD	U	0.00103	ng/L	0.00103	0.0477
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00172	ng/L	0.00172	0.0477
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00160	ng/L	0.00160	0.0477
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00171	ng/L	0.00171	0.0477
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	0.0130	ng/L	0.00395	0.0477
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.149	ng/L	0.00762	0.0955
51207-31-9	2,3,7,8-TCDF	U	0.00164	ng/L	0.00164	0.00955
57117-41-6	1,2,3,7,8-PeCDF	U	0.000995	ng/L	0.000995	0.0477
57117-31-4	2,3,4,7,8-PeCDF	U	0.000926	ng/L	0.000926	0.0477
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000911	ng/L	0.000911	0.0477
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000928	ng/L	0.000928	0.0477
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000987	ng/L	0.000987	0.0477
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00145	ng/L	0.00145	0.0477
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJK	0.00334	ng/L	0.00145	0.0477
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00190	ng/L	0.00190	0.0477
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.00871	ng/L	0.00420	0.0955
41903-57-5	Total TeCDD	U	0.00138	ng/L	0.00138	0.00955
36088-22-9	Total PeCDD	U	0.00103	ng/L	0.00103	0.0477
34465-46-8	Total HxCDD	BJ	0.00174	ng/L	0.00160	0.0477
37871-00-4	Total HpCDD	J	0.0351	ng/L	0.00395	0.0477
30402-14-3	Total TeCDF	U	0.00164	ng/L	0.00164	0.00955
30402-15-4	Total PeCDF	U	0.000890	ng/L	0.000890	0.0477
55684-94-1	Total HxCDF	U	0.000911	ng/L	0.000911	0.0477
38998-75-3	Total HpCDF	BJK	0.00768	ng/L	0.00145	0.0477
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.000210	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00212	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.47	1.91	ng/L	76.9	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.61	1.91	ng/L	84.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.29	1.91	ng/L	67.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.40	1.91	ng/L	73.2	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.35	1.91	ng/L	71.0	(23%-140%)
13C-OCDD		2.22	3.82	ng/L	58.3	(17%-157%)
13C-2,3,7,8-TCDF		1.39	1.91	ng/L	72.9	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.69	1.91	ng/L	88.4	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.53	1.91	ng/L	80.0	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.34	1.91	ng/L	69.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.45	1.91	ng/L	76.1	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.49	1.91	ng/L	78.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.47	1.91	ng/L	76.8	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 16343001	Date Collected: 03/13/2020 07:39	Matrix: WATER
Client Sample: 1613B Water	Date Received: 03/17/2020 10:17	
Client ID: EVBMP0007S012 (570-23510-1)		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 20:34	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-5		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1047.5 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.34	1.91	ng/L	70.0 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.46	1.91	ng/L	76.5 (26%-138%)
37Cl-2,3,7,8-TCDD			0.174	0.191	ng/L	90.9 (35%-197%)

Comments:

- B** The target analyte was detected in the associated blank.
- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 13:38:40 Eastern Standard Time
 Printed: Thursday, April 16, 2020 13:39:06 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b12apr20.mdb 16 Apr 2020 09:09:51
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.0721		1747			1094			
2	12378-PeCDD							NO		0.0537		1222			462			
3	123478-HxCDD							NO		0.0902		1205			1002			
4	123678-HxCDD	1.02e2	1.28e2	2.30e2	36.76	1.000	0.80	YES	0.052	0.0837	2.92e3	1205	2.4	2.13e3	1002	2.1	bb	bb
5	123789-HxCDD	9.04e1	6.30e1	1.53e2	36.99	1.006	1.44	YES	0.042	0.0895	2.12e3	1205	1.8	2.10e3	1002	2.1	bb	bb
6	1234678-HpCDD	9.71e2	9.23e2	1.89e3	40.06	1.001	1.05	NO	0.679	0.207	1.39e4	1392	10.0	1.22e4	1191	10.3	bd	MM
7	OCDD	7.31e3	8.10e3	1.54e4	44.22	1.000	0.90	NO	7.824	0.399	8.12e4	1511	53.7	7.62e4	1182	64.5	bd	bd
8	2378-TCDF							NO		0.0860		694			1870			
9	12378-PeCDF	8.15e1	5.84e1	1.40e2	33.31	1.000	1.40	NO	0.023	0.0521	3.69e3	996	3.7	3.07e3	1616	1.9	bb	bd
10	23478-PeCDF							NO		0.0485		996			1616			
11	123478-HxCDF							NO		0.0477		929			904			
12	123678-HxCDF							NO		0.0486		929			904			
13	234678-HxCDF							NO		0.0517		929			904			
14	123789-HxCDF							NO		0.0762		929			904			
15	1234678-HpCDF	4.05e2	3.17e2	7.22e2	38.77	1.000	1.28	YES	0.175	0.0762	5.77e3	769	7.5	6.55e3	929	7.0	MM	bb
16	1234789-HpCDF							NO		0.0994		769			929			
17	OCDF	5.05e2	5.44e2	1.05e3	44.51	1.007	0.93	NO	0.456	0.220	6.57e3	657	10.0	7.43e3	1076	6.9	MM	MM
18	13C-2378-TCDD	3.10e5	4.04e5	7.14e5	31.23	1.017	0.77	NO	76.892	0.133	4.79e6	4065	1177.4	6.15e6	2600	2364.6	bd	bd
19	13C-12378-PeCDD	2.95e5	1.89e5	4.84e5	34.10	1.111	1.56	NO	84.305	0.220	5.68e6	4141	1372.3	3.59e6	2665	1347.9	bd	bd
20	13C-123478-HxCDD	1.99e5	1.58e5	3.56e5	36.68	0.991	1.26	NO	67.805	0.417	3.87e6	7055	548.6	3.06e6	4364	700.5	bd	bd
21	13C-123678-HxCDD	2.77e5	2.21e5	4.98e5	36.76	0.993	1.25	NO	73.217	0.322	4.14e6	7055	587.5	3.29e6	4364	754.7	dd	dd
22	13C-1234678-HpCDD	1.56e5	1.46e5	3.02e5	40.03	1.082	1.06	NO	70.952	0.424	1.74e6	4750	366.9	1.69e6	4643	364.9	bd	bd
23	13C-OCDD	2.10e5	2.39e5	4.50e5	44.20	1.195	0.88	NO	116.530	0.627	1.80e6	5453	330.5	1.95e6	7149	273.2	bd	bd
24	13C-2378-TCDF	3.34e5	4.34e5	7.68e5	30.49	0.993	0.77	NO	72.898	0.155	3.74e6	5561	672.7	4.94e6	3213	1537.3	bb	bb
25	13C-12378-PeCDF	4.24e5	2.61e5	6.85e5	33.30	1.085	1.62	NO	88.371	0.414	8.87e6	9749	910.2	5.64e6	7538	747.8	bb	bb
26	13C-23478-PeCDF	3.88e5	2.43e5	6.31e5	33.91	1.104	1.60	NO	80.017	0.407	8.66e6	9749	887.8	5.50e6	7538	729.4	bb	db
27	13C-123478-HxCDF	1.46e5	2.81e5	4.27e5	35.97	0.972	0.52	NO	69.934	0.541	2.98e6	5296	562.7	5.52e6	11883	464.4	bd	bd
28	13C-123678-HxCDF	2.04e5	3.80e5	5.83e5	36.07	0.975	0.54	NO	76.119	0.430	3.13e6	5296	591.3	5.96e6	11883	501.9	dd	dd
29	13C-234678-HxCDF	1.72e5	3.24e5	4.96e5	36.55	0.988	0.53	NO	78.057	0.519	2.68e6	5296	506.0	5.20e6	11883	437.3	dd	dd
30	13C-123789-HxCDF	1.49e5	2.78e5	4.28e5	37.31	1.008	0.54	NO	76.783	0.592	2.01e6	5296	379.5	3.77e6	11883	317.2	bd	bd
31	13C-1234678-HpCDF	1.08e5	2.49e5	3.57e5	38.78	1.048	0.43	NO	70.008	0.422	1.48e6	4028	362.8	3.28e6	7187	456.6	bb	bd

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 13:38:40 Eastern Standard Time
 Printed: Thursday, April 16, 2020 13:39:06 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	8.53e4	2.07e5	2.92e5	40.69	1.100	0.41	NO	76.473	0.564	1.04e6	4028	259.4	2.32e6	7187	322.2	bd	bd
33	13C-1234-TCDD	3.55e5	4.67e5	8.22e5	30.71	0.000	0.76	NO	100.000	0.150	4.78e6	4065	1175.8	6.26e6	2600	2408.1	bb	bd
34	13C-123789-HxCDD	3.62e5	2.91e5	6.53e5	37.00	0.000	1.24	NO	100.000	0.336	4.71e6	7055	668.1	3.75e6	4364	858.7	dd	dd
35	37Cl-2378-TCDD	7.90e4		7.90e4	31.25	1.018			9.094	0.0359	1.23e6	1680	730.1				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 13:38:40 Eastern Standard Time
Printed: Thursday, April 16, 2020 13:39:06 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b12apr20.mdb 16 Apr 2020 09:09:51
Calibration: C:\MassLynx\DEFAULT.PRO\CurvedB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

TD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	7.96e1	6.33e1	1.43e2	32.27	1.26	YES	0.022	0.0721	3.82e3	1747	2.2	1.08e3	1094	1.0	bd	bb
2	5.11e1	5.52e1	1.06e2	30.12	0.93	YES	0.017	0.0721	1.40e3	1747	0.8	2.11e3	1094	1.9	bb	bb

PD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	5.78e1	5.27e1	1.11e2	32.80	1.10	YES	0.027	0.0537	1.88e3	1222	1.5	9.68e2	462	2.1	bb	bb

HD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	9.04e1	6.30e1	1.53e2	36.99	1.44	YES	0.042	0.0895	2.12e3	1205	1.8	2.10e3	1002	2.1	bb	bb
2	1.02e2	1.28e2	2.30e2	36.76	0.80	YES	0.052	0.0837	2.92e3	1205	2.4	2.13e3	1002	2.1	bb	bb
3	1.94e2	1.44e2	3.37e2	36.12	1.34	NO	0.091	0.0874	5.57e3	1205	4.6	2.78e3	1002	2.8	db	bb

HPD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	9.71e2	9.23e2	1.89e3	40.06	1.05	NO	0.679	0.207	1.39e4	1392	10.0	1.22e4	1191	10.3	bd	MM
2	1.42e2	8.73e1	2.29e2	39.23	1.63	YES	0.082	0.207	3.28e3	1392	2.4	3.85e3	1191	3.2	db	db
3	1.73e3	1.50e3	3.23e3	39.12	1.15	NO	1.159	0.207	2.90e4	1392	20.8	2.65e4	1191	22.3	bd	bd

TF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	6.24e1	1.09e2	1.71e2	30.08	0.57	YES	0.026	0.0860	1.62e3	694	2.3	4.23e3	1870	2.3	db	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 13:38:40 Eastern Standard Time
Printed: Thursday, April 16, 2020 13:39:06 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

PF1

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	Total-pentaturans (F1)	2.36e2	1.08e2	3.44e2	31.90	2.19	YES	0.057	0.0466	7.27e3	772	9.4	2.64e3	1654	1.6	bb	db

PF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	12378-PeCDF	8.15e1	5.84e1	1.40e2	33.31	1.40	NO	0.023	0.0521	3.69e3	996	3.7	3.07e3	1616	1.9	bb	bd

HPF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	Total-hexaturans	1.18e2	1.23e2	2.41e2	35.59	0.96	YES	0.046	0.0551	2.96e3	929	3.2	2.69e3	904	3.0	bb	bb
	Total-hexaturans	1.65e2	1.01e2	2.66e2	35.16	1.63	YES	0.051	0.0551	2.89e3	929	3.1	2.65e3	904	2.9	db	bb

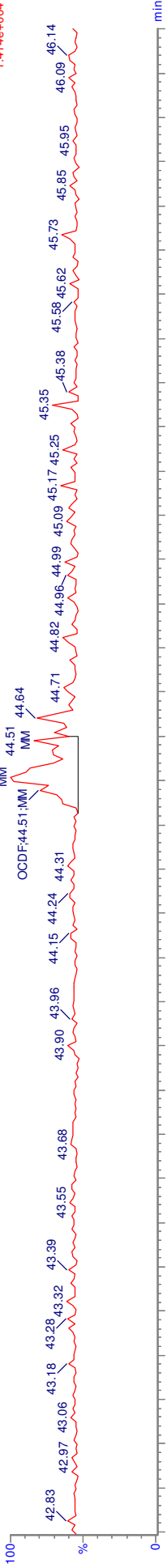
HPF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
	Total-heptaturans	4.42e2	4.24e2	8.66e2	39.33	1.04	NO	0.227	0.0867	7.87e3	769	10.2	9.07e3	929	9.8	MM	bb
	1234678-HpCDF	4.05e2	3.17e2	7.22e2	38.77	1.28	YES	0.175	0.0762	5.77e3	769	7.5	6.55e3	929	7.0	MM	bb

MANUAL INTEGRATION
 METHOD 8290
 HRP763_1

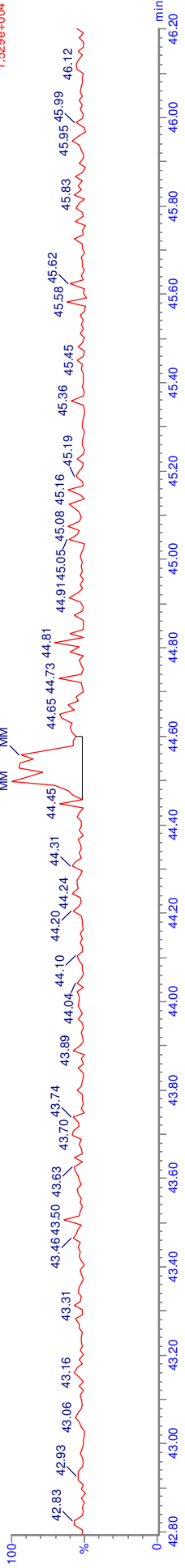
b12ap20a_9-5
 43539 16343001-1

F5:Voltage SIR.EI+
 441.743
 1.4114e+004



b12ap20a_9-5
 43539 16343001-1

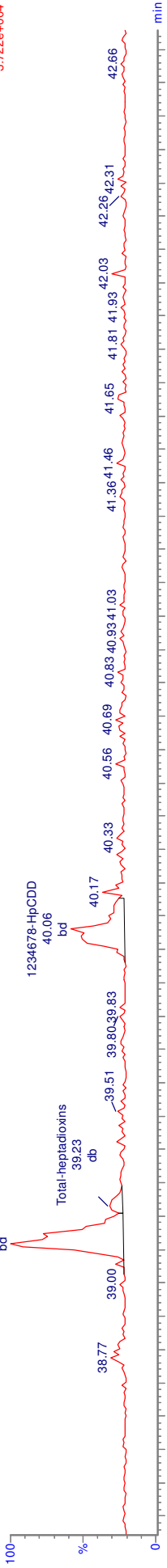
F5:Voltage SIR.EI+
 443.740
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MANUAL INTEGRATION
 METHOD 8290
 HRP763_1

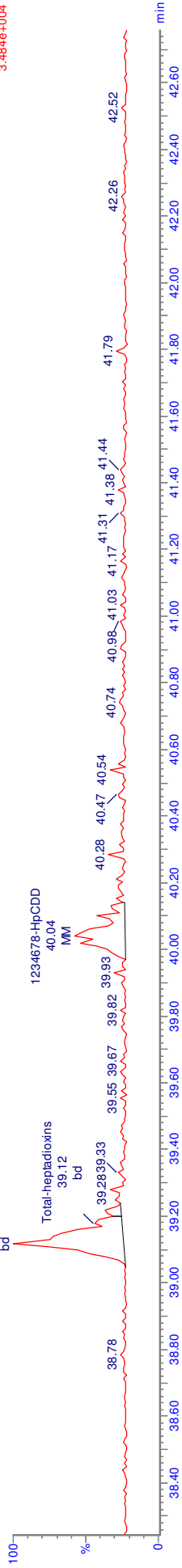
b12ap20a_9-5
 43539 16343001-1

F4:Voltage SIR.EI+
 423.777
 3.722e+004

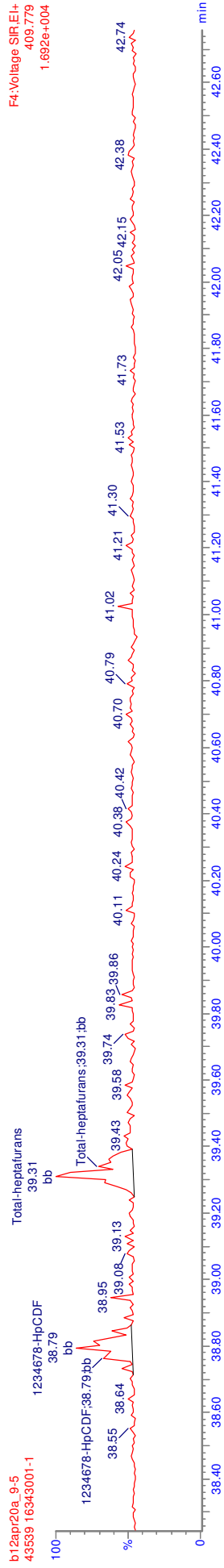
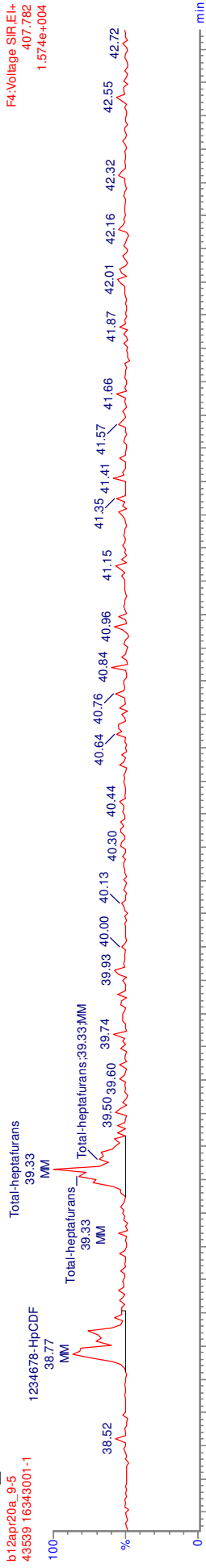


b12ap20a_9-5
 43539 16343001-1

F4:Voltage SIR.EI+
 425.774
 3.484e+004



MANUAL INTEGRATION
 METHOD 8290
 HRP763_1



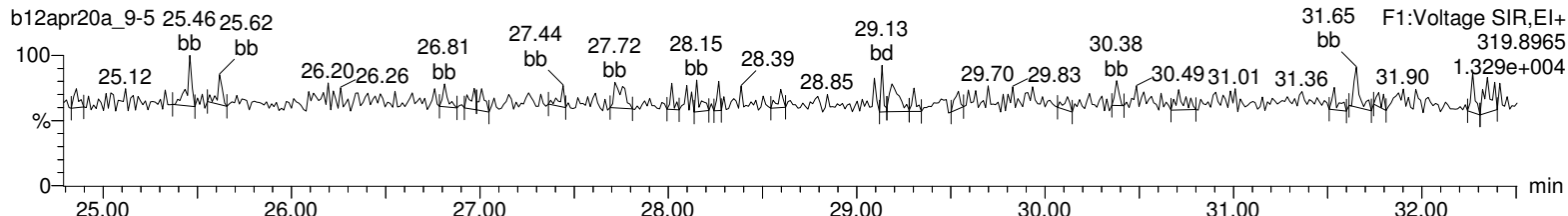
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Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

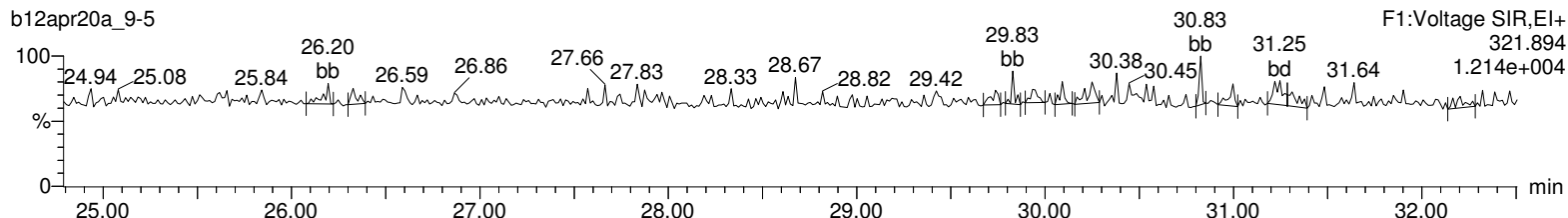
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Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

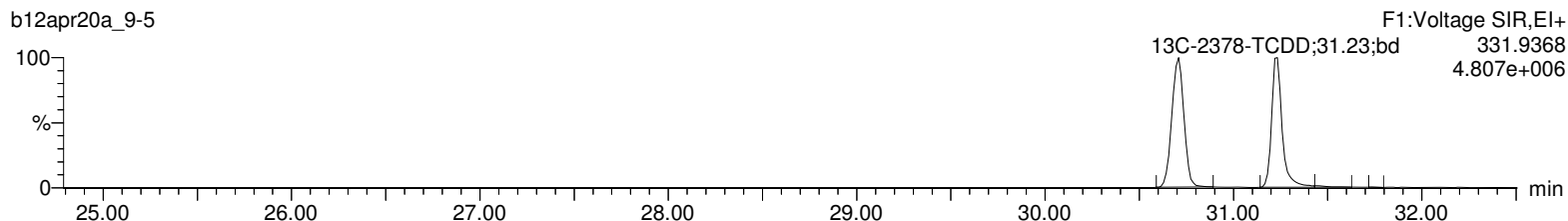
Total-tetradoxins



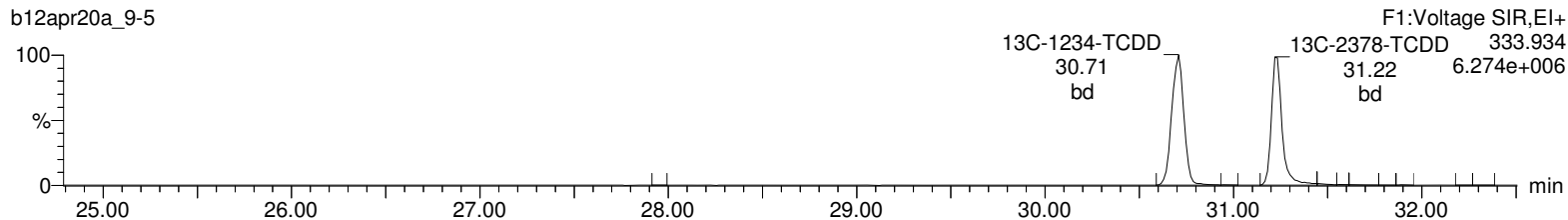
Total-tetradoxins



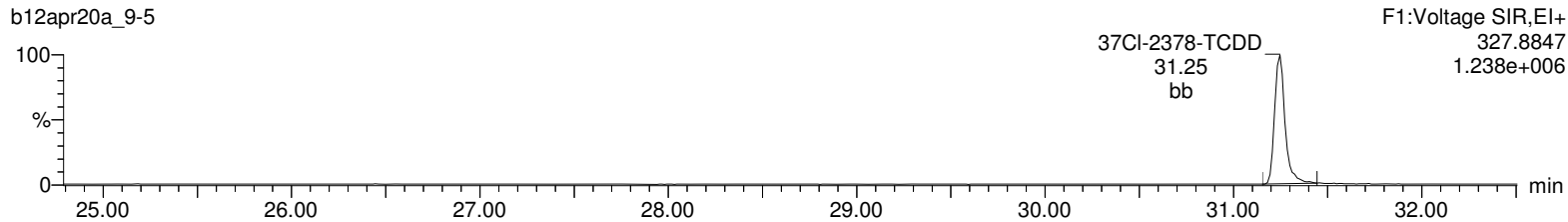
13C-2378-TCDD



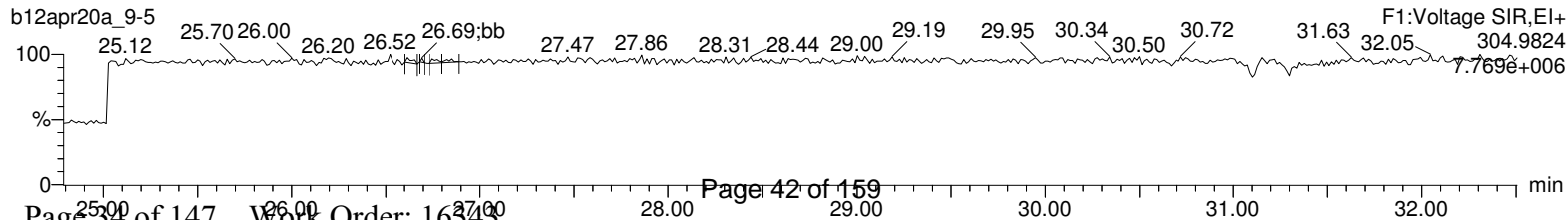
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



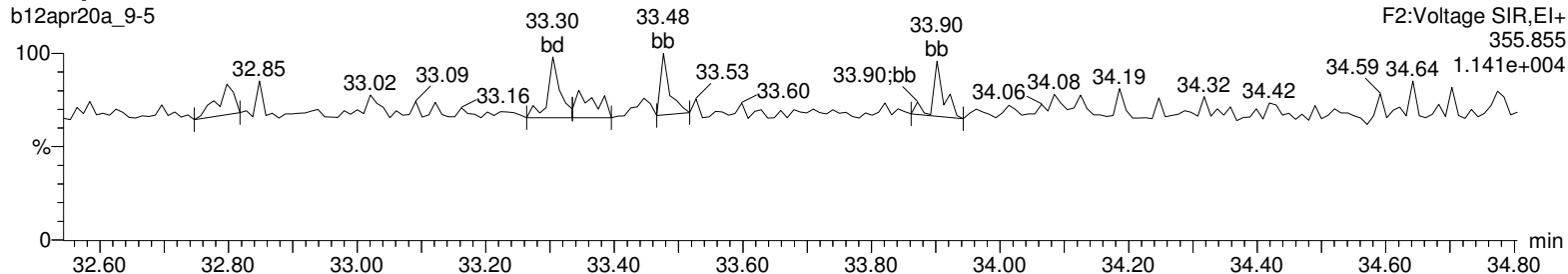
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

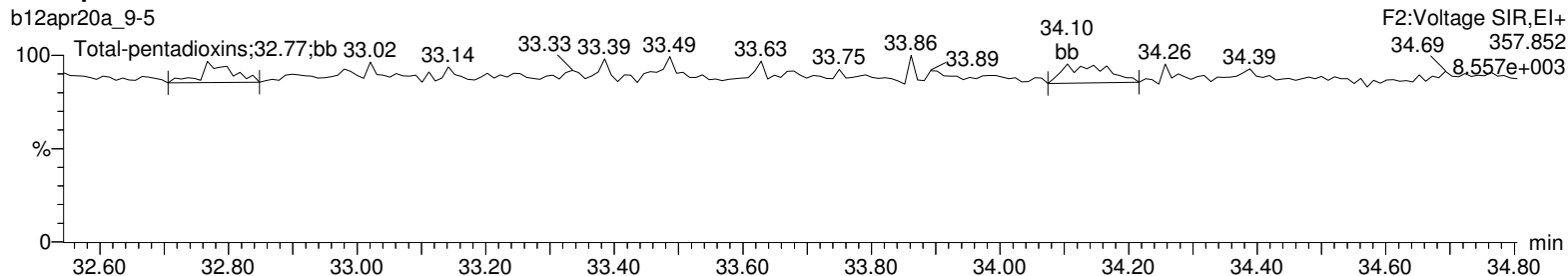
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

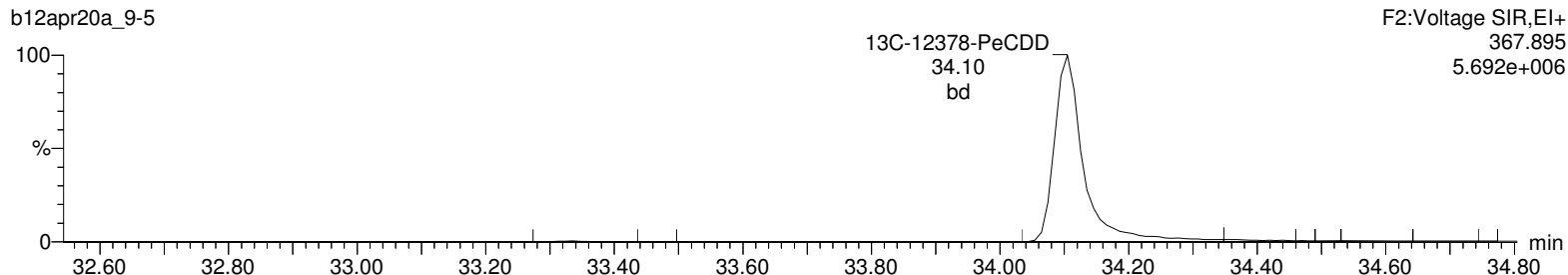
Total-pentadioxins



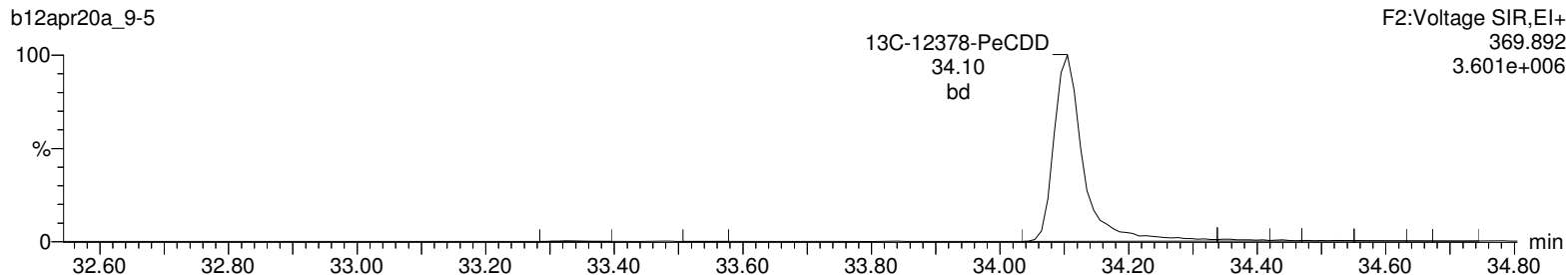
Total-pentadioxins



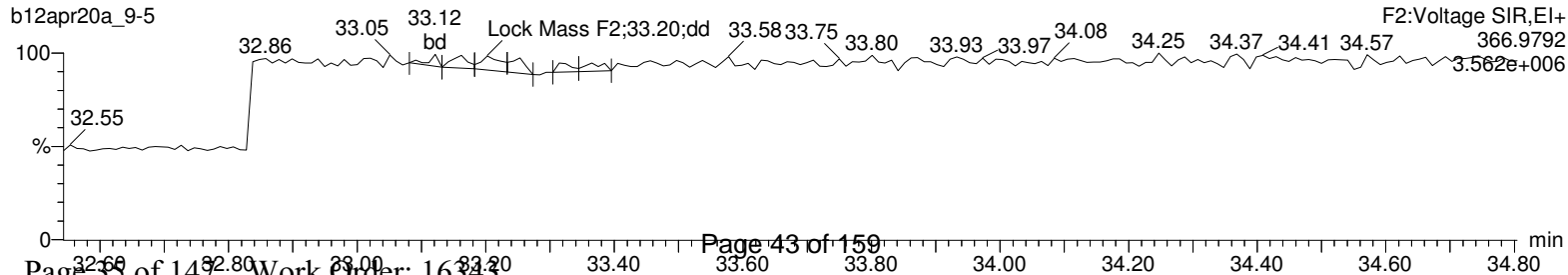
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



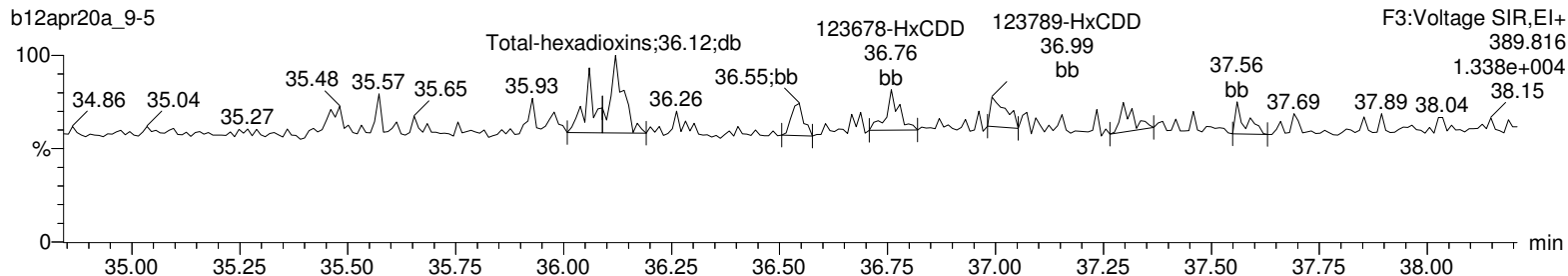
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

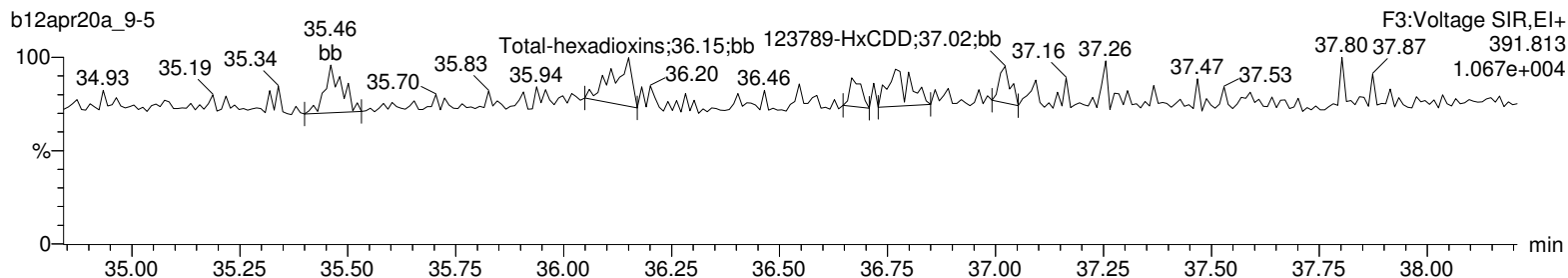
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

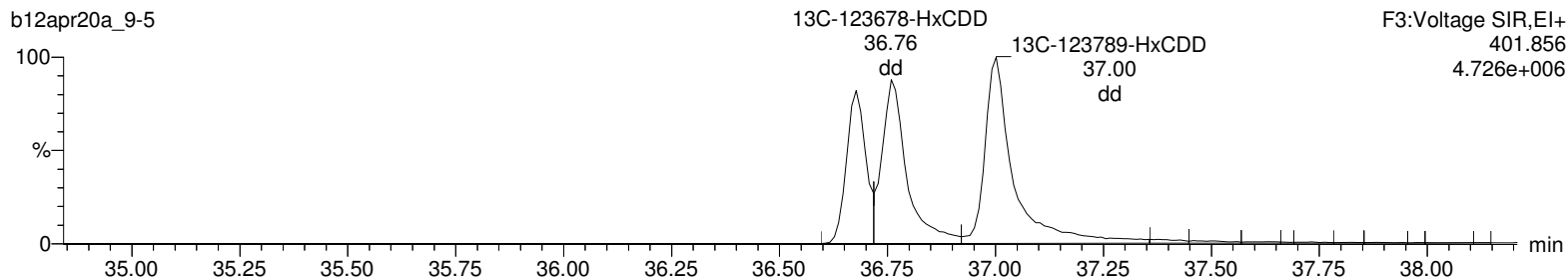
Total-hexadioxins



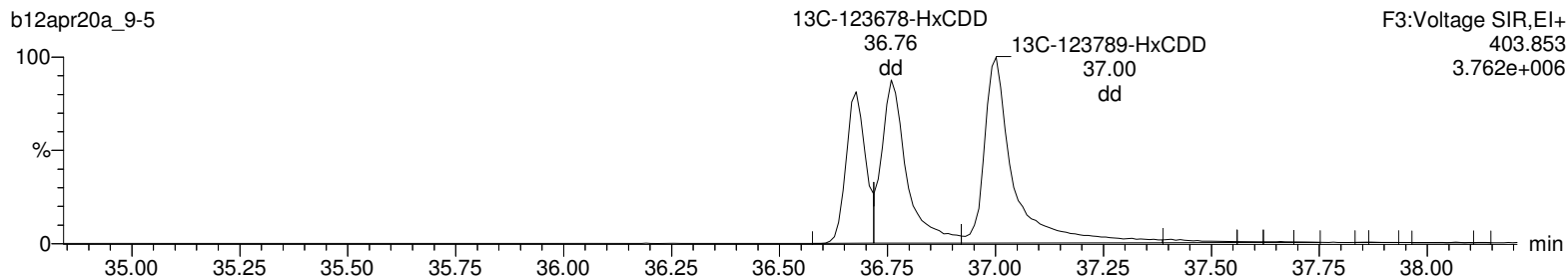
Total-hexadioxins



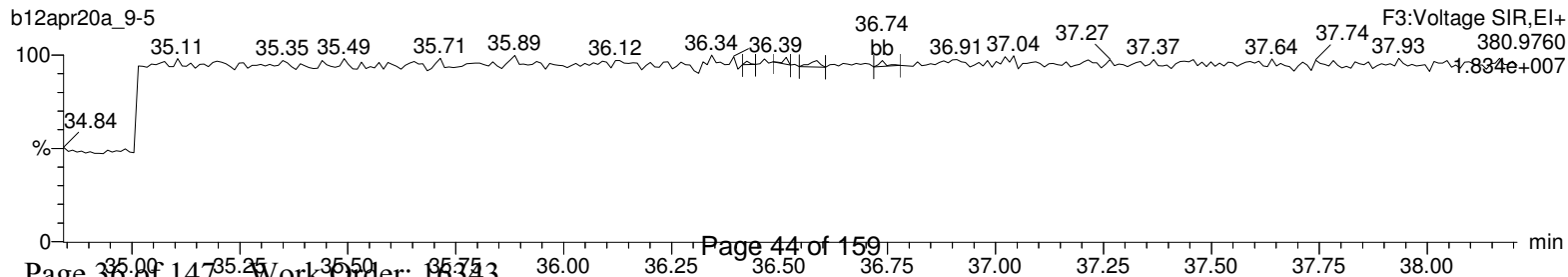
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



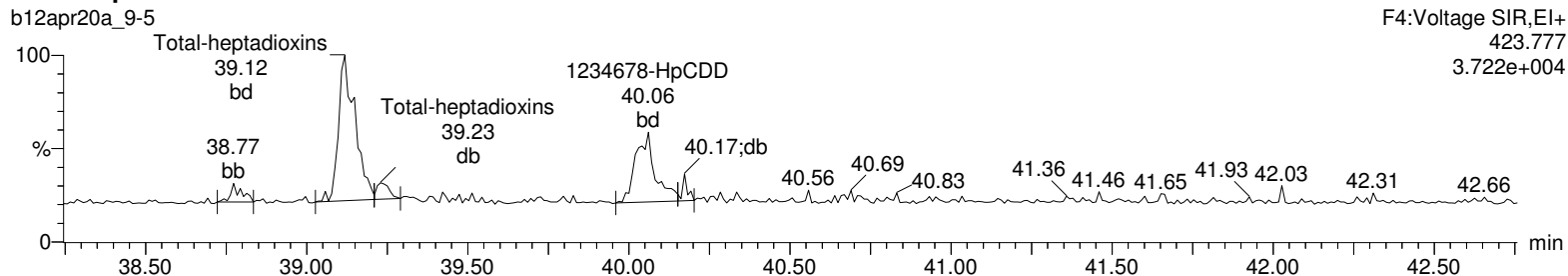
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

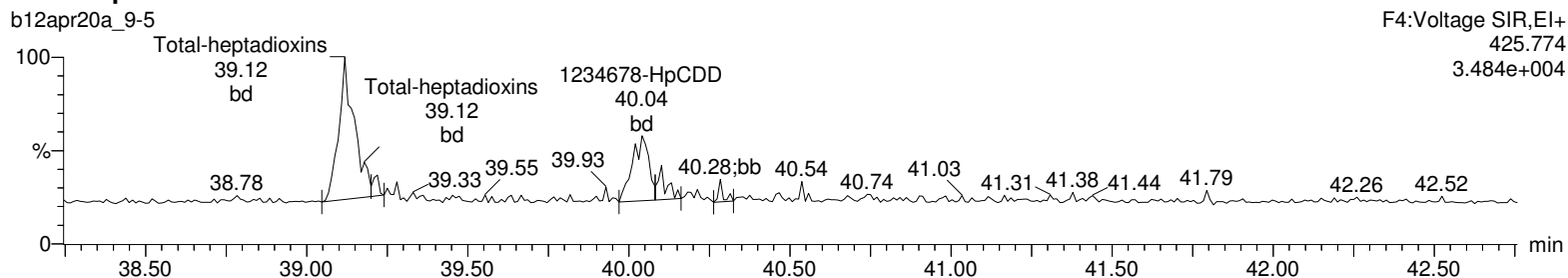
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

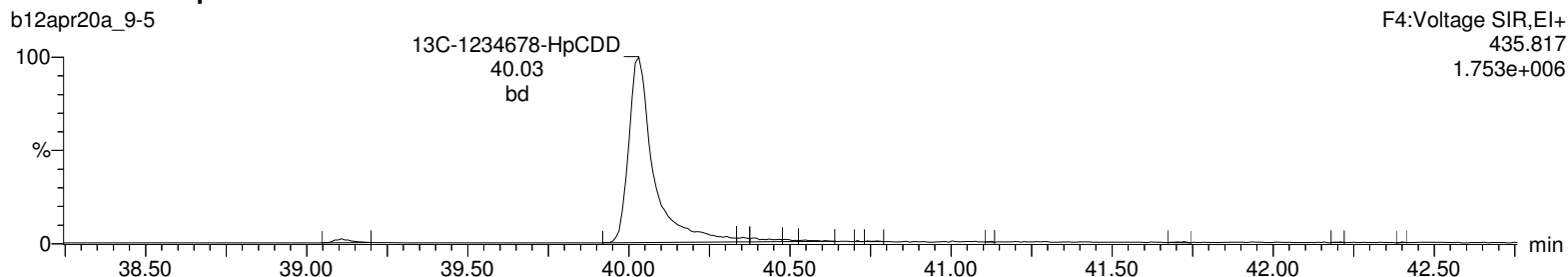
Total-heptadioxins



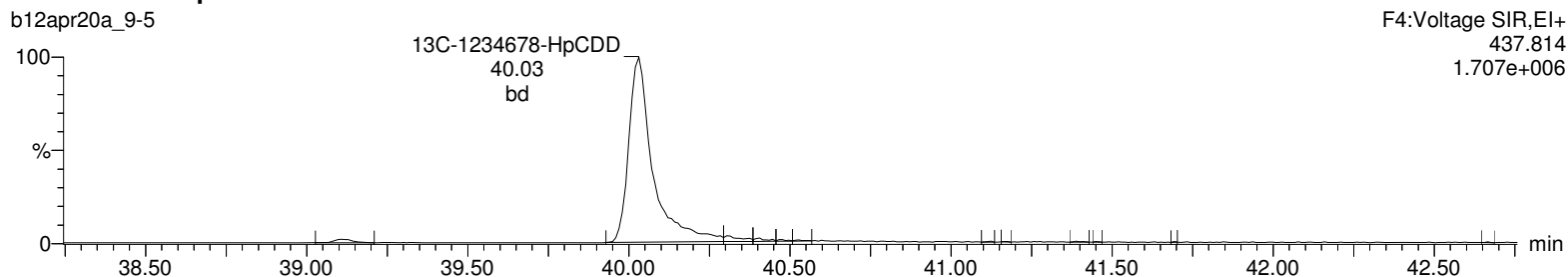
Total-heptadioxins



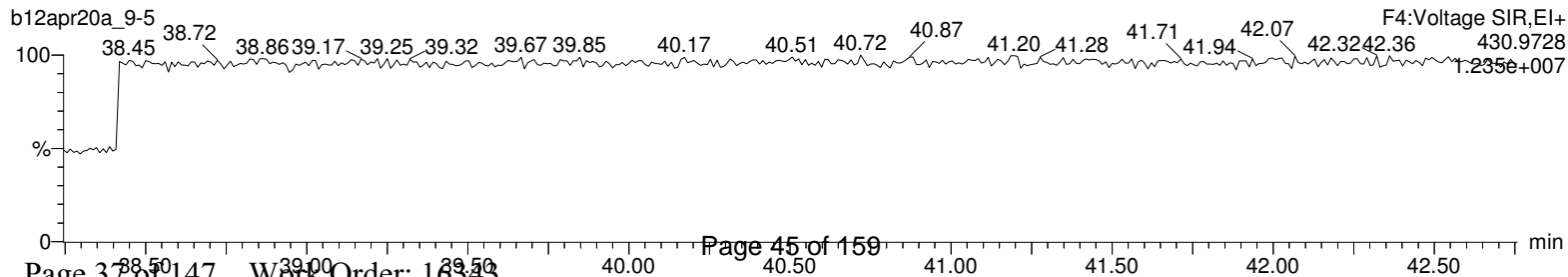
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

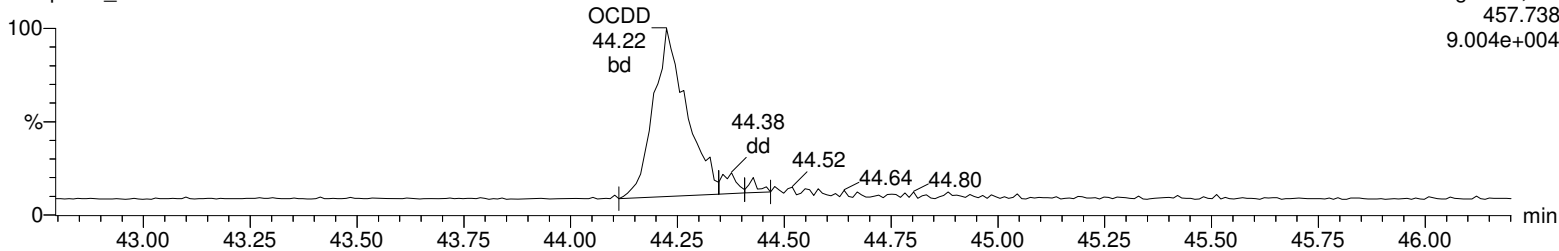
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

OCDD

b12apr20a_9-5

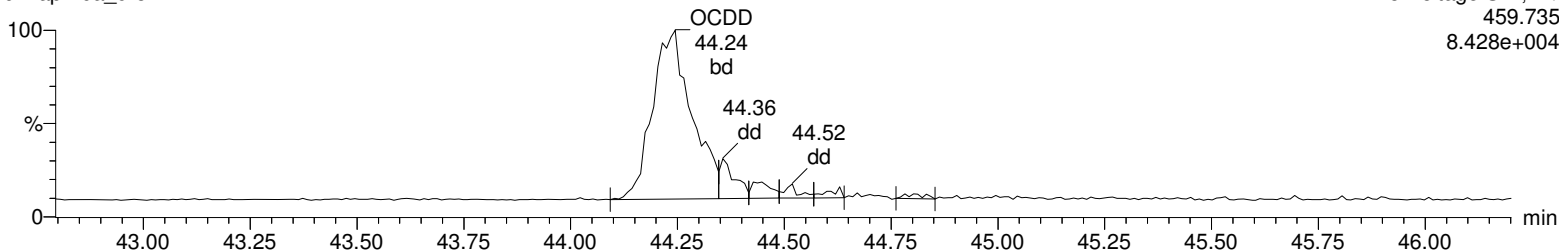
F5:Voltage SIR,EI+
457.738
9.004e+004



OCDD

b12apr20a_9-5

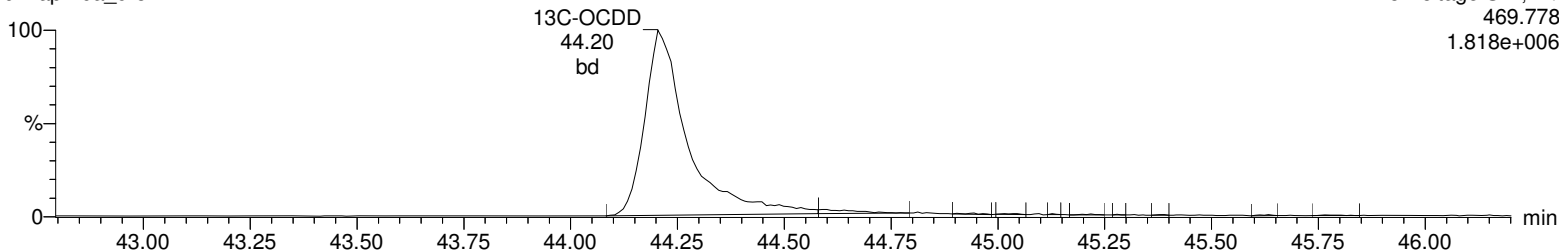
F5:Voltage SIR,EI+
459.735
8.428e+004



13C-OCDD

b12apr20a_9-5

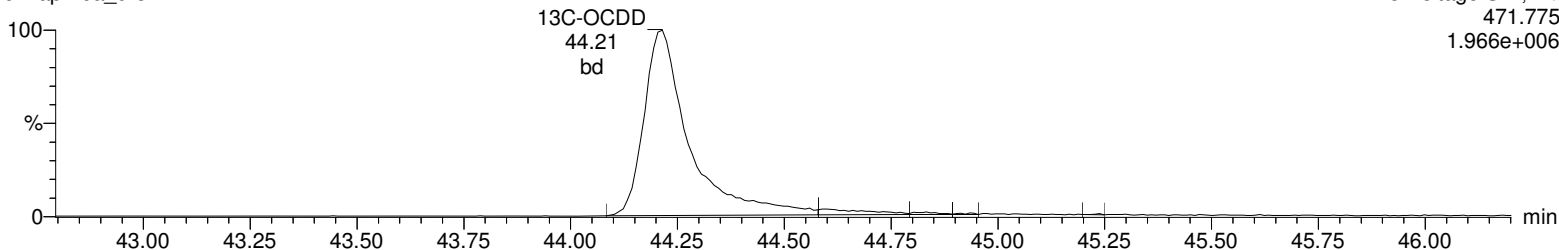
F5:Voltage SIR,EI+
469.778
1.818e+006



13C-OCDD

b12apr20a_9-5

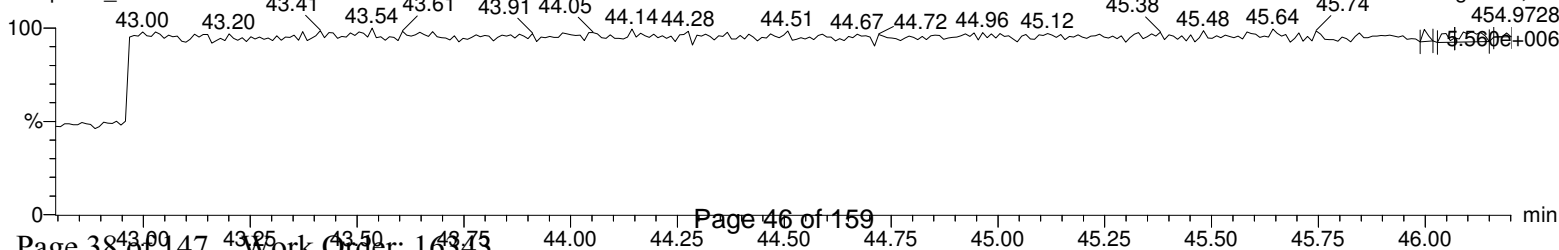
F5:Voltage SIR,EI+
471.775
1.966e+006



Lock Mass F5

b12apr20a_9-5

F5:Voltage SIR,EI+
454.9728
1.566e+006



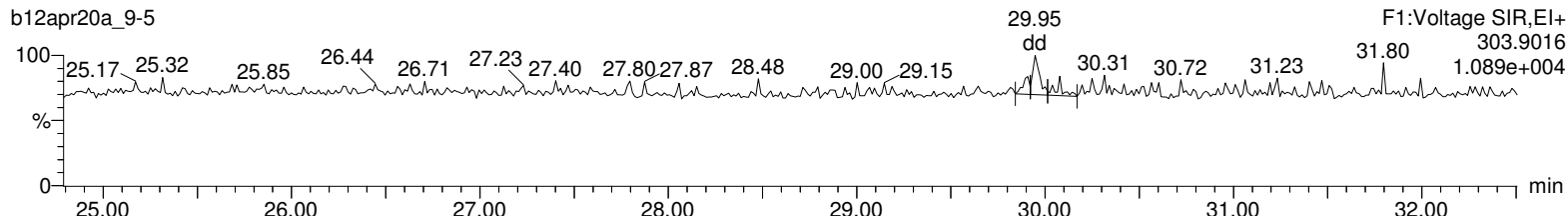
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

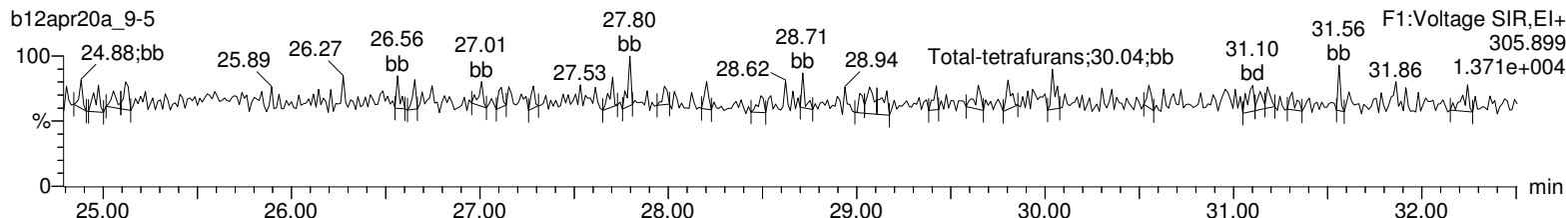
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

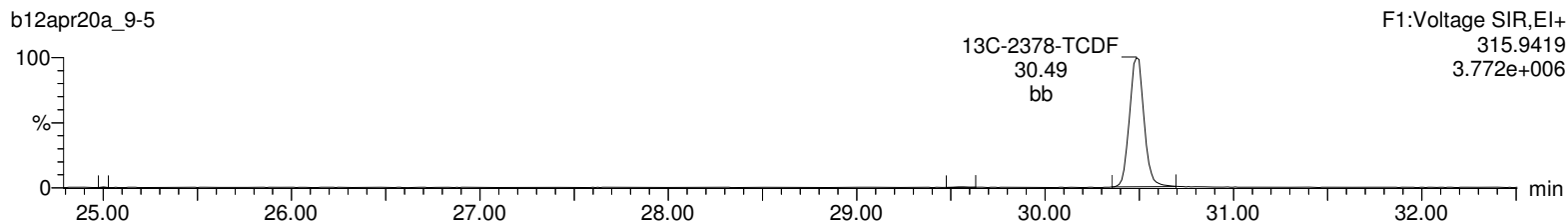
Total-tetrafurans



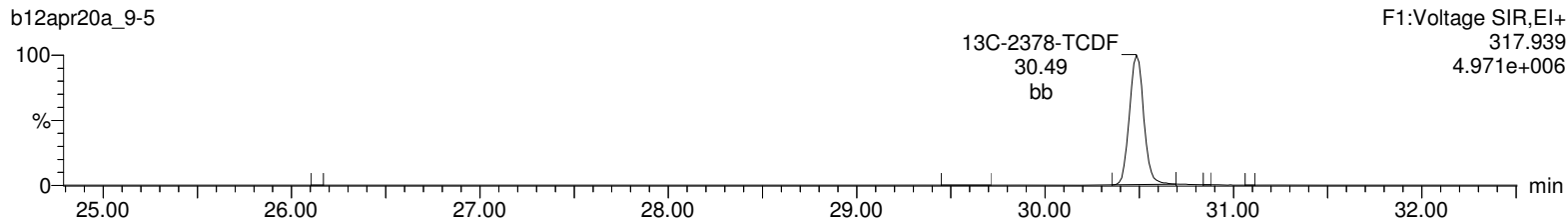
Total-tetrafurans



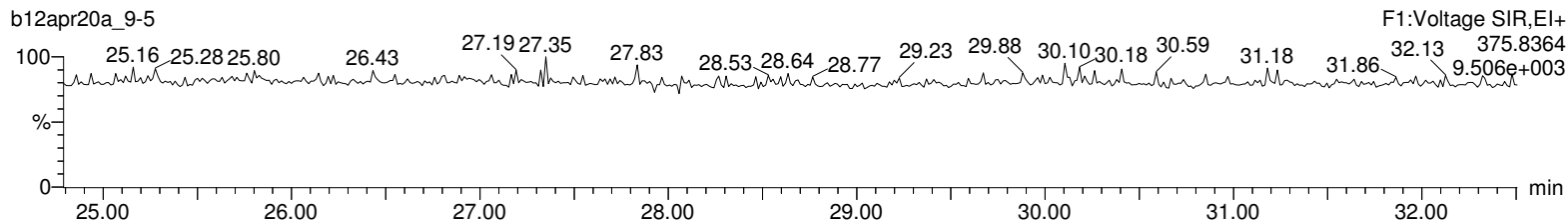
13C-2378-TCDF



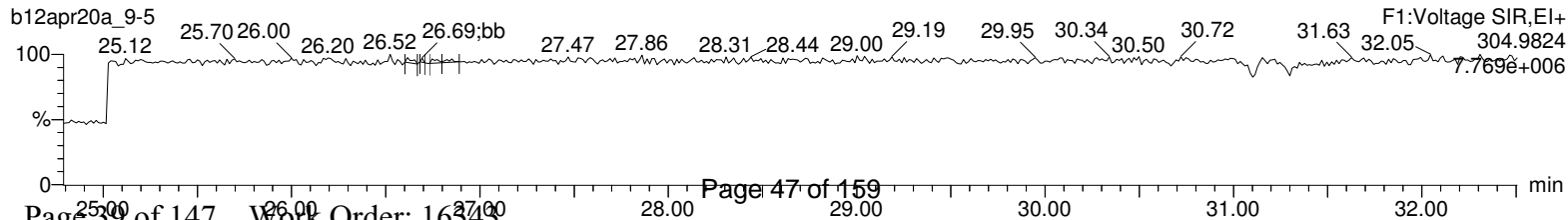
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

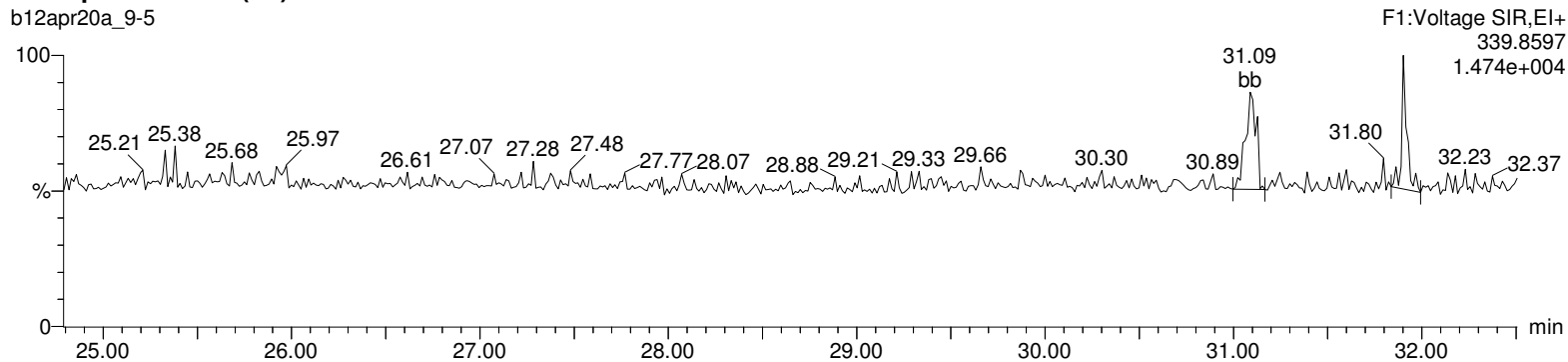
Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

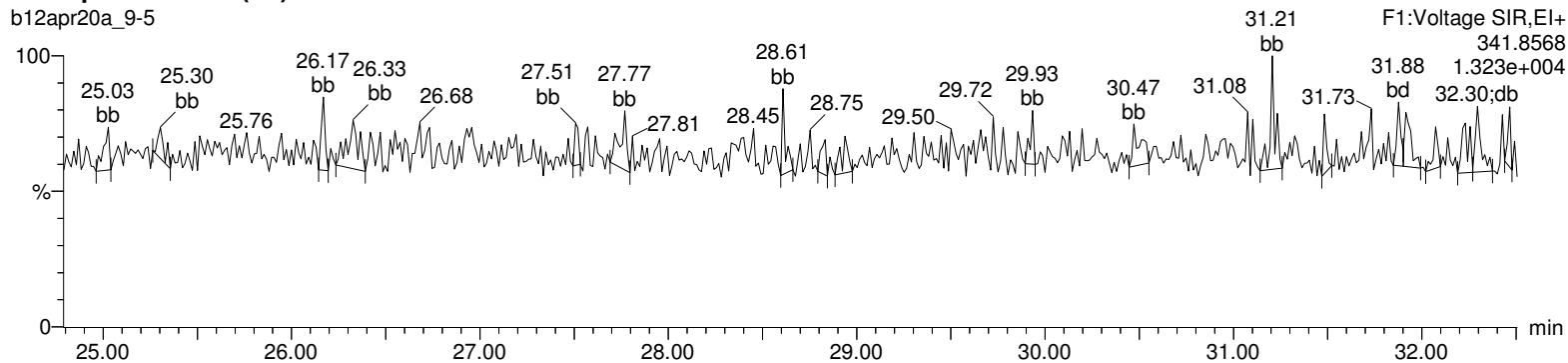
Total-pentafurans (F1)

b12apr20a_9-5



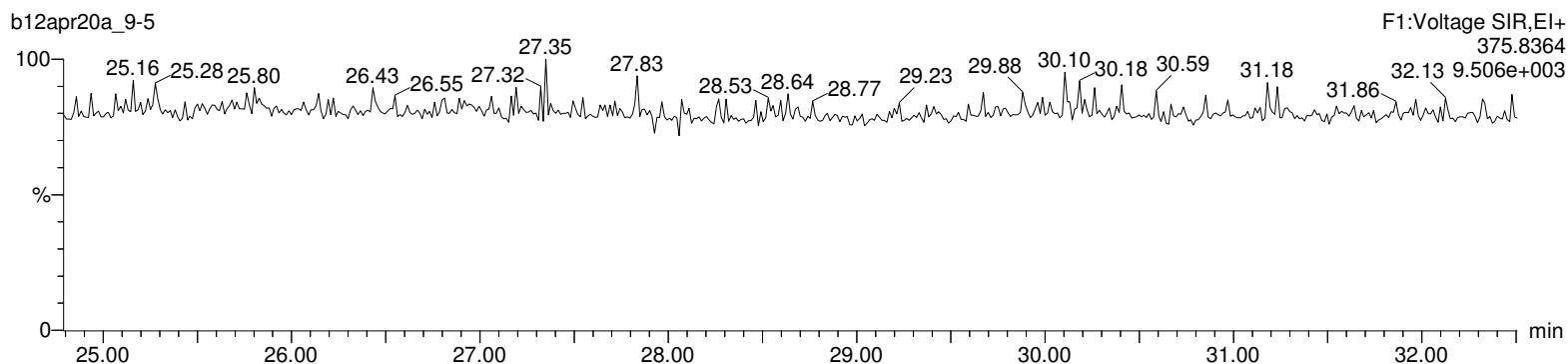
Total-pentafurans (F1)

b12apr20a_9-5



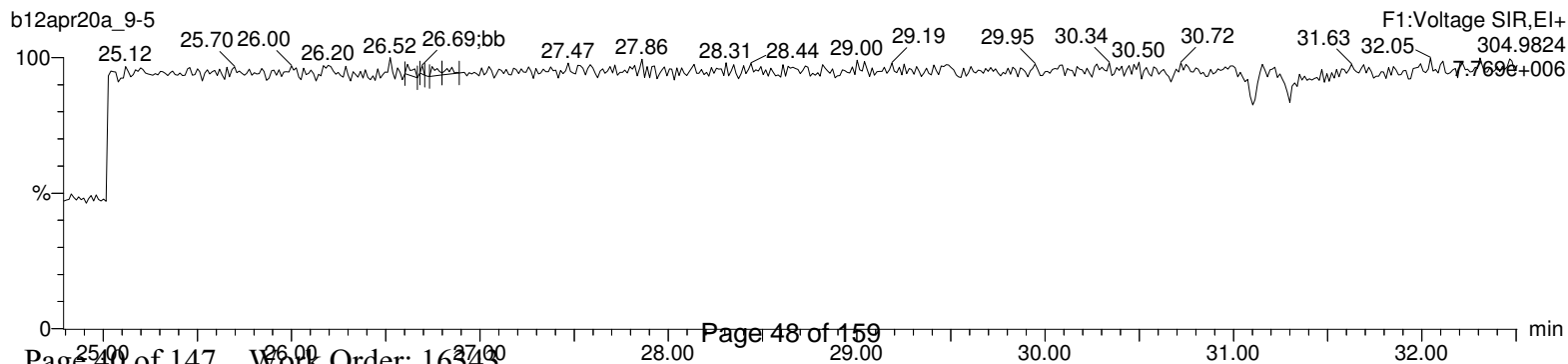
HxDPE

b12apr20a_9-5



Lock Mass F1

b12apr20a_9-5



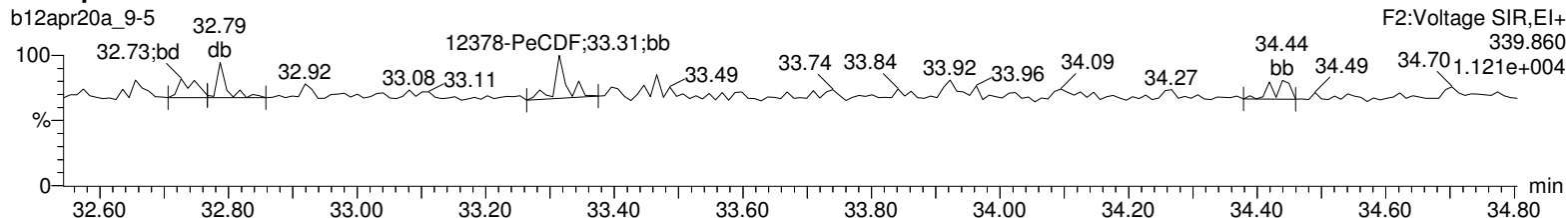
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

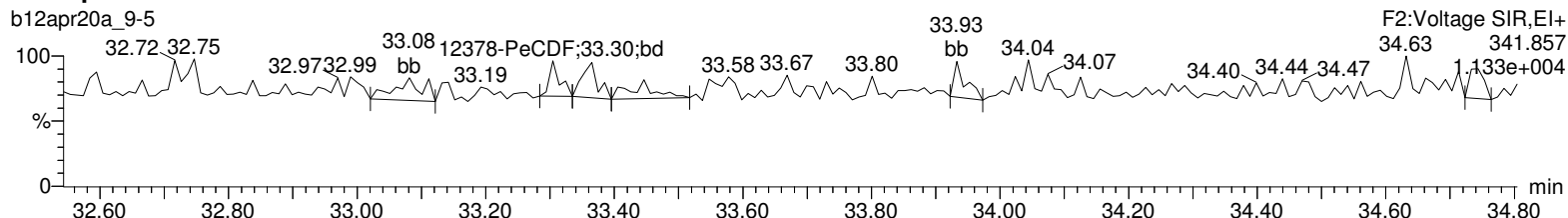
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

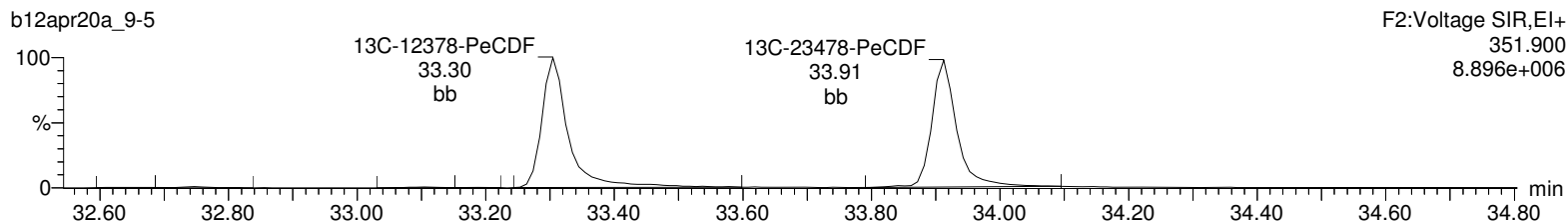
Total-pentafurans



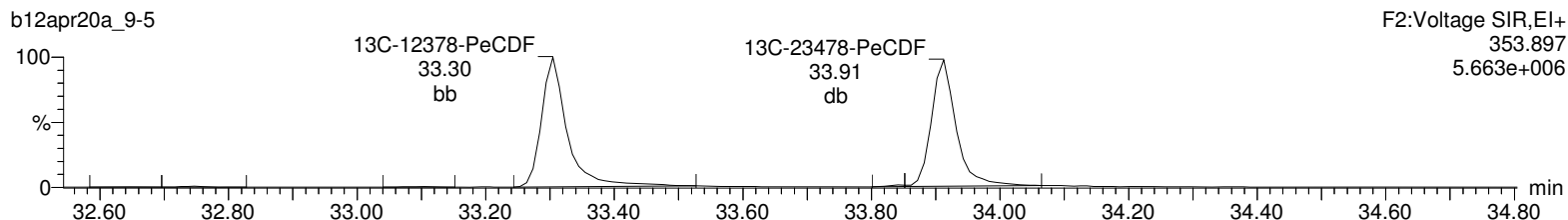
Total-pentafurans



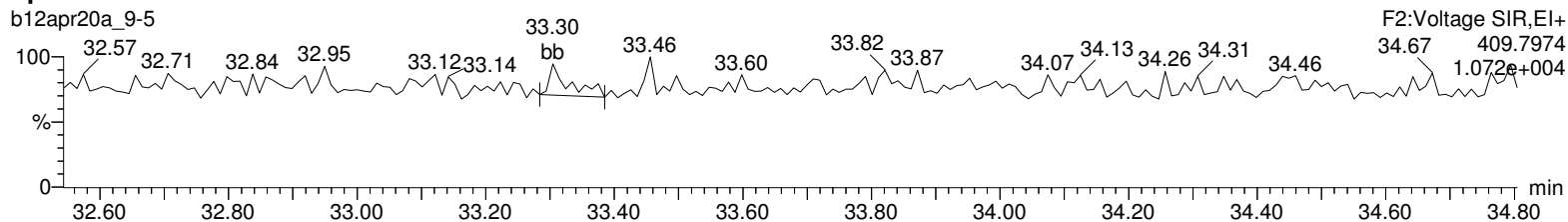
13C-12378-PeCDF



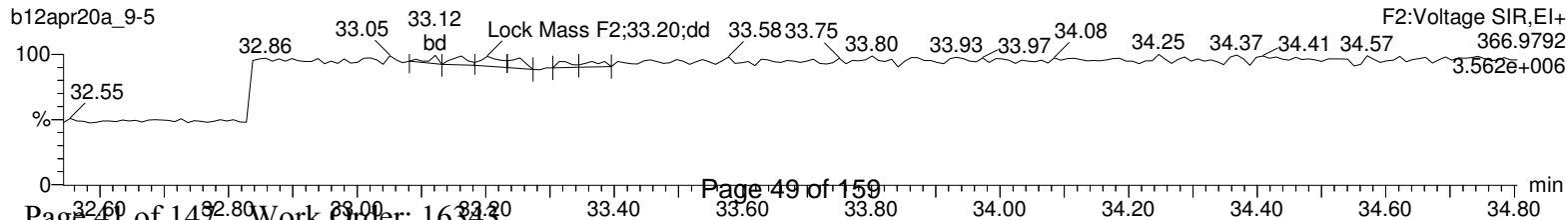
13C-12378-PeCDF



HpDPE



Lock Mass F2



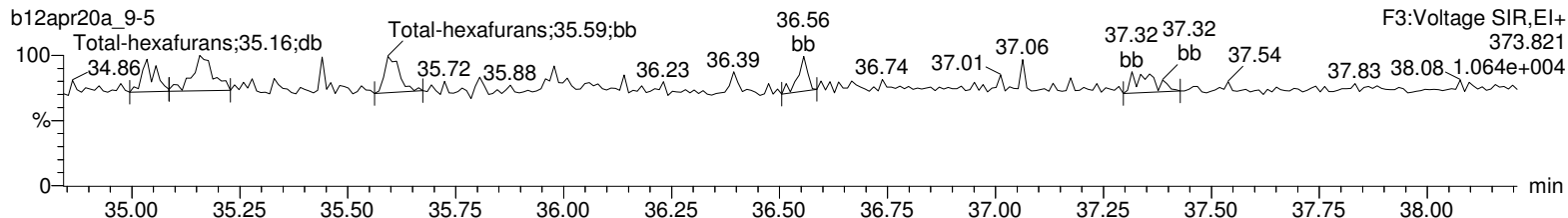
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

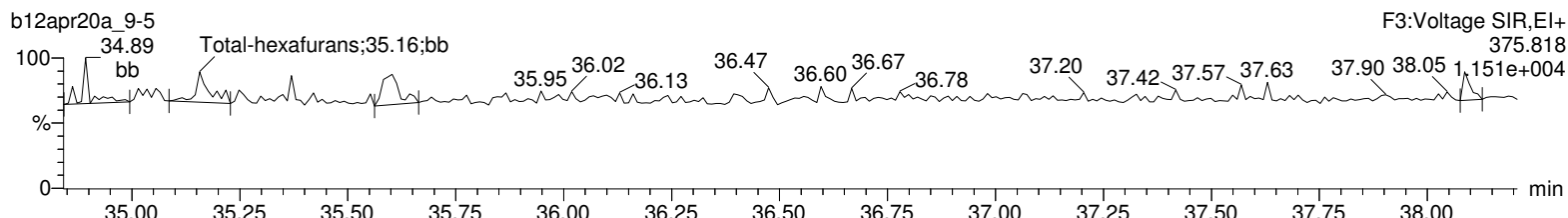
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

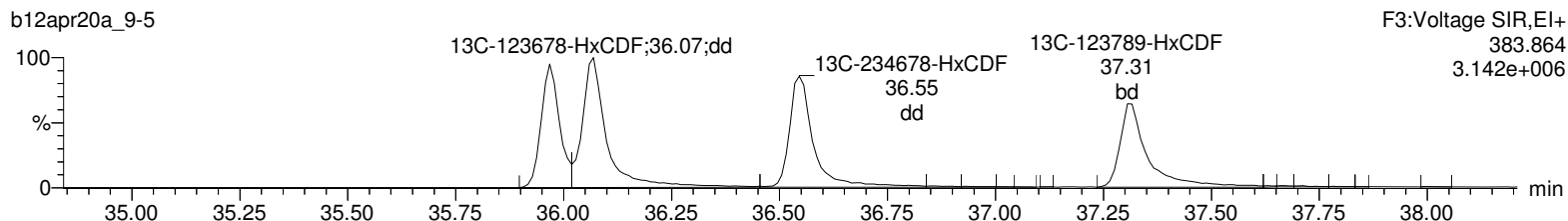
Total-hexafurans



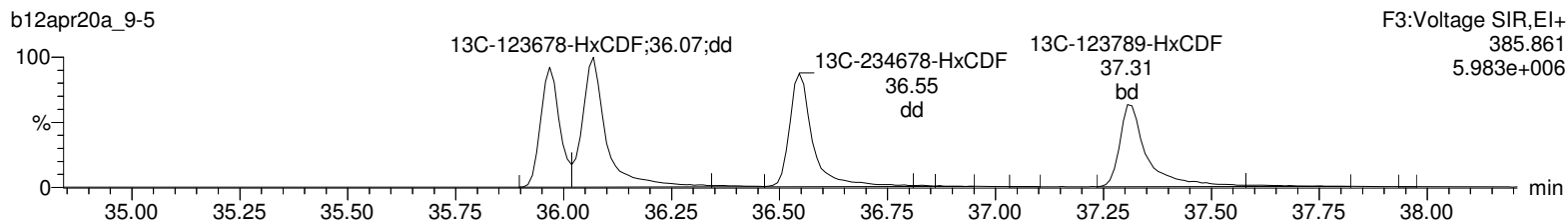
Total-hexafurans



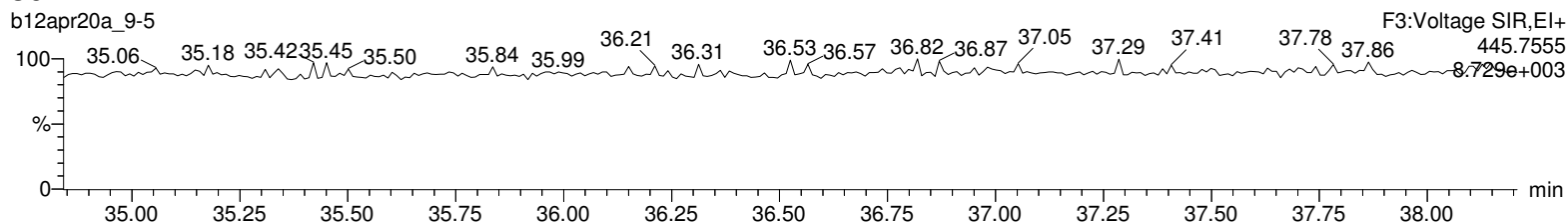
13C-123478-HxCDF



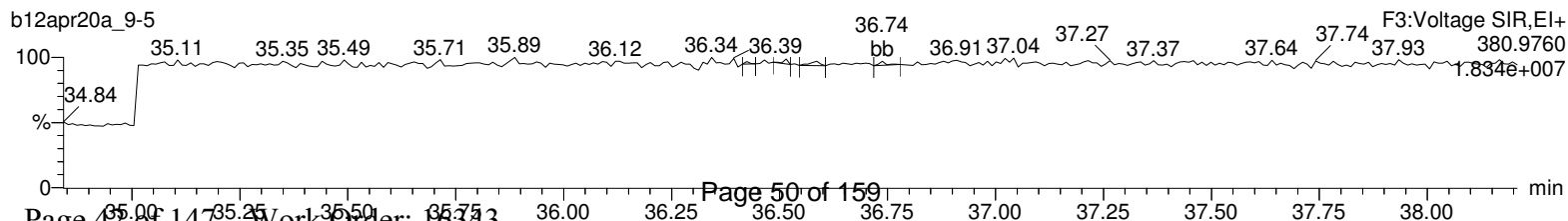
13C-123478-HxCDF



OcDPE



Lock Mass F3



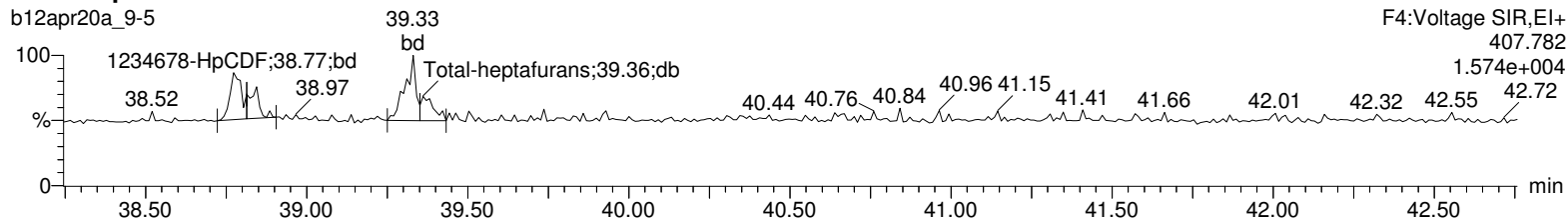
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

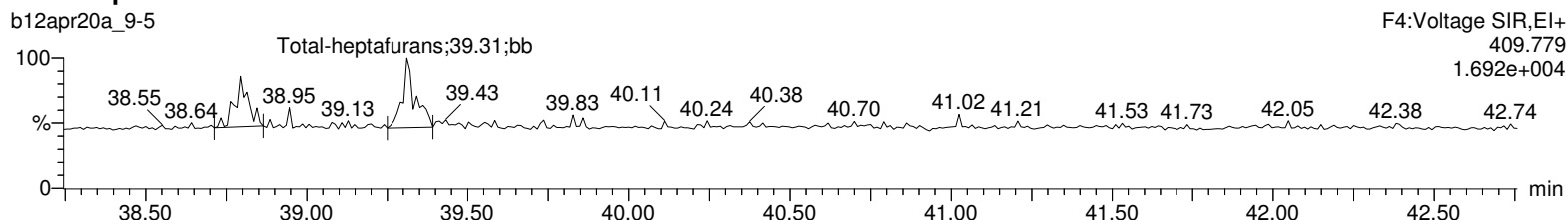
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

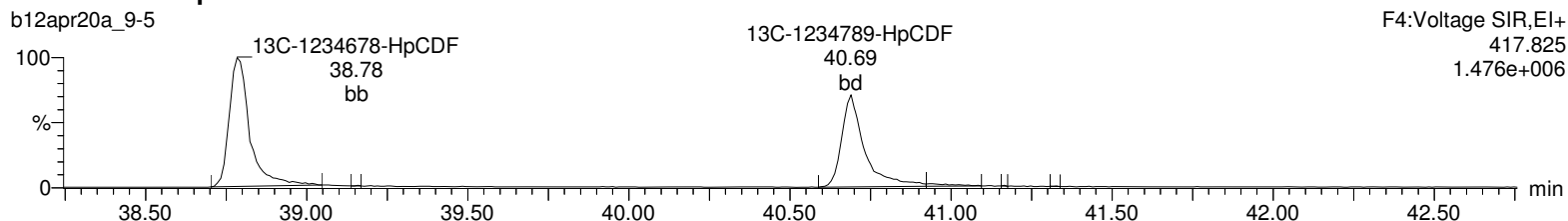
Total-heptafurans



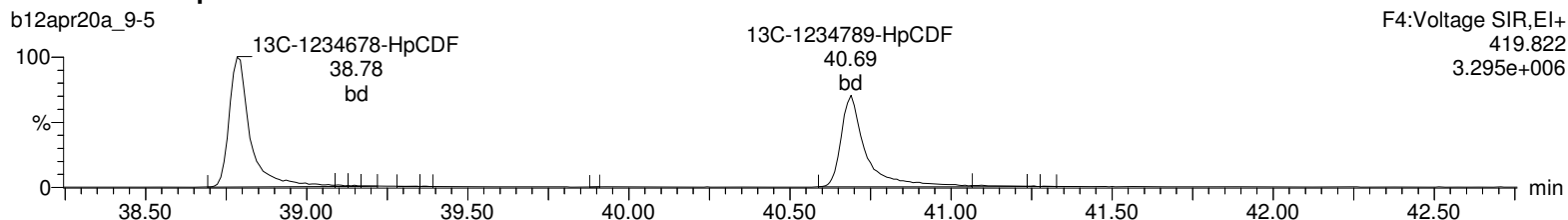
Total-heptafurans



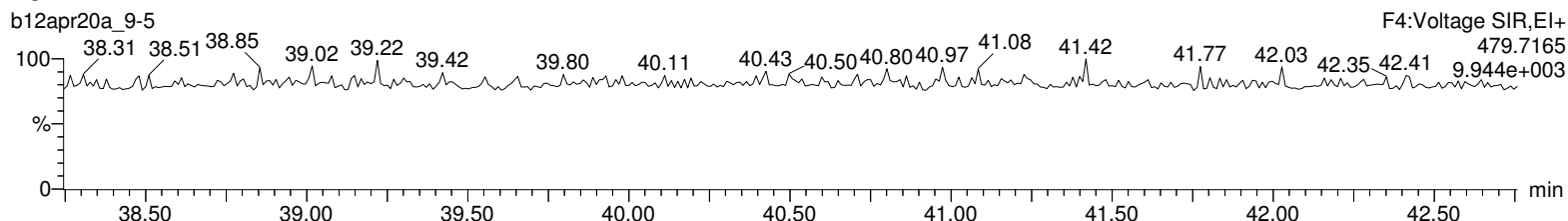
13C-1234678-HpCDF



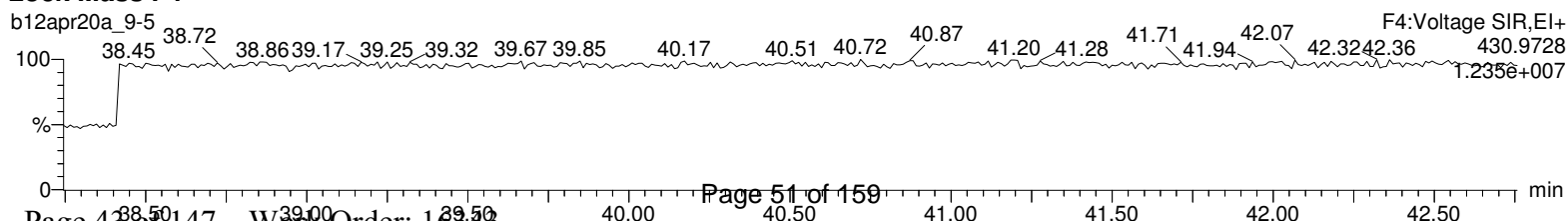
13C-1234678-HpCDF



NoDPE



Lock Mass F4



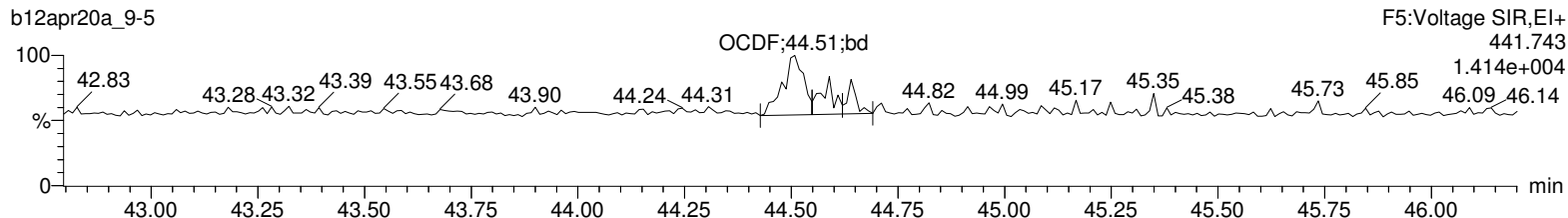
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

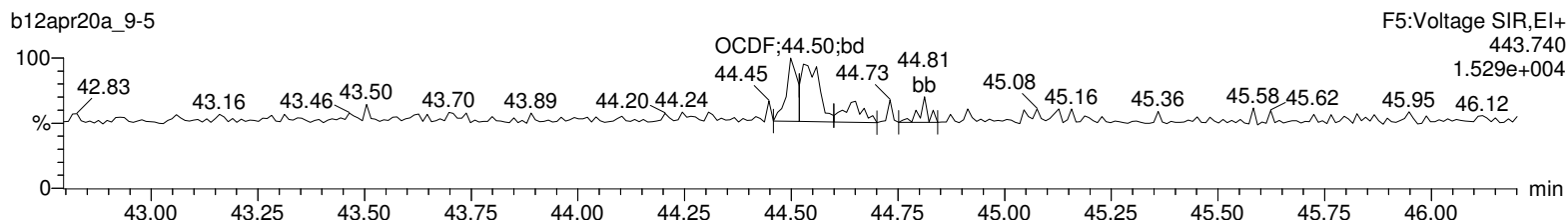
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-5, Date: 15-Apr-2020, Time: 20:34:29, ID: 16343001-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

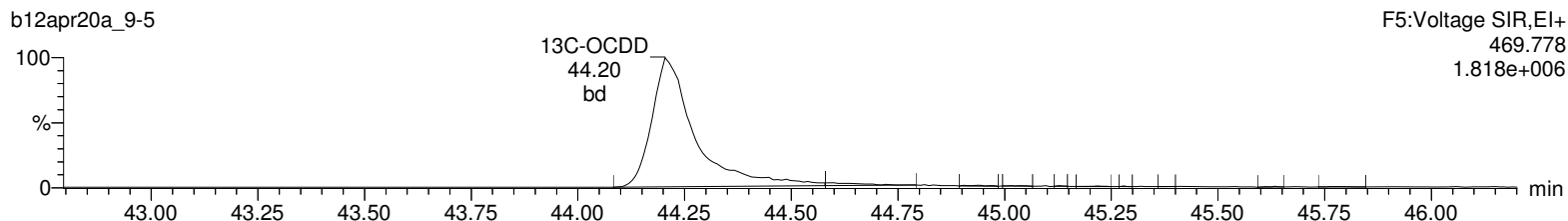
OCDF



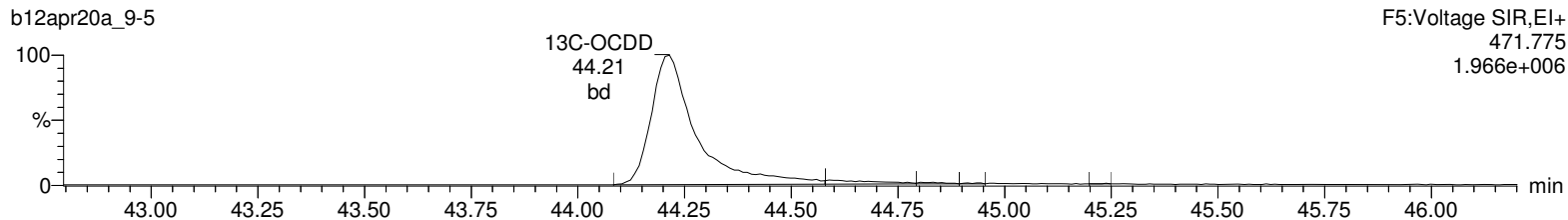
OCDF



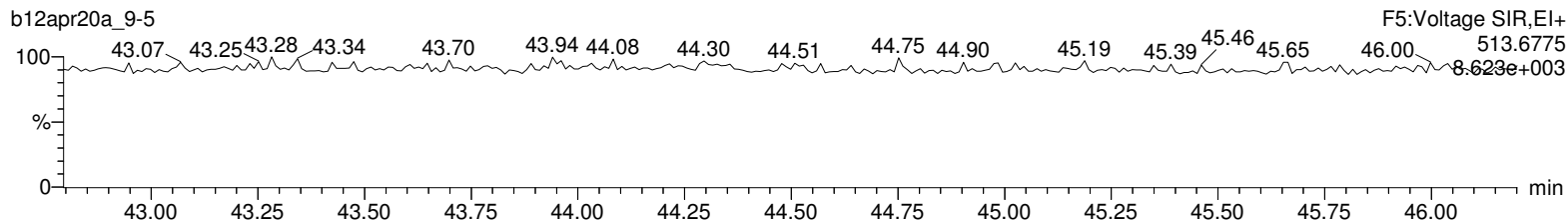
13C-OCDD



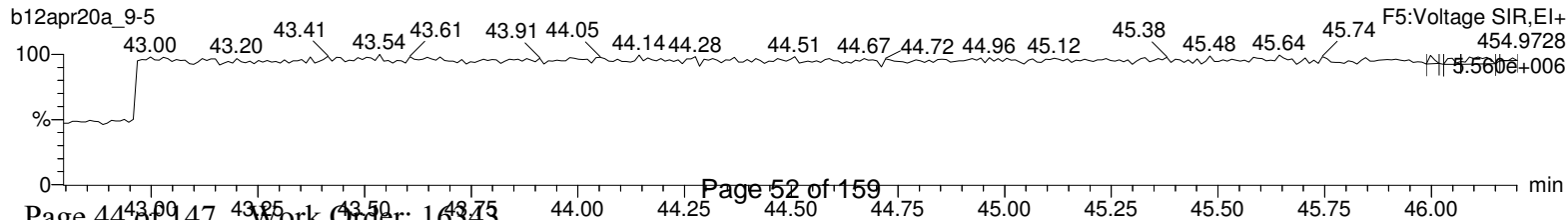
13C-OCDD



DeDPE



Lock Mass F5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451
Lab Sample ID: 16343002
Client Sample: 1613B Water
Client ID: EVBMP0008S015 (570-23510-2)
Batch ID: 43539
Run Date: 04/15/2020 21:22
Data File: b12apr20a_9-6
Prep Batch: 43536
Prep Date: 14-APR-20

Client: CALS001
Date Collected: 03/13/2020 07:29
Date Received: 03/17/2020 10:17
Method: EPA Method 1613B
Analyst: MLL
Prep Method: SW846 3520C
Prep Aliquot: 1050.5 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00219	ng/L	0.00219	0.00952
40321-76-4	1,2,3,7,8-PeCDD	U	0.00127	ng/L	0.00127	0.0476
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00162	ng/L	0.00162	0.0476
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00146	ng/L	0.00146	0.0476
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00158	ng/L	0.00158	0.0476
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.00604	ng/L	0.00604	0.0476
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	0.0703	ng/L	0.00813	0.0952
51207-31-9	2,3,7,8-TCDF	U	0.00238	ng/L	0.00238	0.00952
57117-41-6	1,2,3,7,8-PeCDF	U	0.00126	ng/L	0.00126	0.0476
57117-31-4	2,3,4,7,8-PeCDF	U	0.00120	ng/L	0.00120	0.0476
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000942	ng/L	0.000942	0.0476
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000933	ng/L	0.000933	0.0476
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000910	ng/L	0.000910	0.0476
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00140	ng/L	0.00140	0.0476
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.00135	ng/L	0.00135	0.0476
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00192	ng/L	0.00192	0.0476
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00463	ng/L	0.00463	0.0952
41903-57-5	Total TeCDD	U	0.00219	ng/L	0.00219	0.00952
36088-22-9	Total PeCDD	U	0.00127	ng/L	0.00127	0.0476
34465-46-8	Total HxCDD	U	0.00146	ng/L	0.00146	0.0476
37871-00-4	Total HpCDD	J	0.00765	ng/L	0.00604	0.0476
30402-14-3	Total TeCDF	U	0.00238	ng/L	0.00238	0.00952
30402-15-4	Total PeCDF	U	0.00120	ng/L	0.00120	0.0476
55684-94-1	Total HxCDF	U	0.000910	ng/L	0.000910	0.0476
38998-75-3	Total HpCDF	BJ	0.00169	ng/L	0.00135	0.0476
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0000211	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00256	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.35	1.90	ng/L	70.8	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.57	1.90	ng/L	82.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.20	1.90	ng/L	63.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.35	1.90	ng/L	70.8	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.31	1.90	ng/L	68.9	(23%-140%)
13C-OCDD		2.18	3.81	ng/L	57.2	(17%-157%)
13C-2,3,7,8-TCDF		1.29	1.90	ng/L	67.5	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.61	1.90	ng/L	84.6	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.52	1.90	ng/L	79.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.24	1.90	ng/L	65.4	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.38	1.90	ng/L	72.5	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.40	1.90	ng/L	73.7	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.35	1.90	ng/L	71.1	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 16343002	Date Collected: 03/13/2020 07:29	Matrix: WATER
Client Sample: 1613B Water	Date Received: 03/17/2020 10:17	
Client ID: EVBMP0008S015 (570-23510-2)		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 21:22	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-6		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1050.5 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
	13C-1,2,3,4,6,7,8-HpCDF		1.28	1.90	ng/L	67.4 (28%-143%)
	13C-1,2,3,4,7,8,9-HpCDF		1.40	1.90	ng/L	73.6 (26%-138%)
	37Cl-2,3,7,8-TCDD		0.175	0.190	ng/L	91.7 (35%-197%)

Comments:
B The target analyte was detected in the associated blank.
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 13:43:10 Eastern Standard Time
 Printed: Thursday, April 16, 2020 13:43:46 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b12apr20.mdb 16 Apr 2020 09:09:51
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	8.14e1	6.99e1	1.51e2	31.25	1.001	1.16	YES	0.029	0.115	1.84e3	2426	0.8	2.01e3	1297	1.5	bb	bb
2	12378-PeCDD							NO	0.0668			1253			563			
3	123478-HxCDD							NO	0.0850			841			963			
4	123678-HxCDD							NO	0.0769			841			963			
5	123789-HxCDD	5.36e1	5.60e1	1.10e2	37.02	1.007	0.96	YES	0.033	0.0831	1.08e3	841	1.3	1.45e3	963	1.5	bb	bb
6	1234678-HpCDD	2.95e2	3.18e2	6.13e2	40.03	1.000	0.93	NO	0.239	0.317	3.71e3	1638	2.3	6.68e3	2120	3.1	bb	bb
7	OCDD	3.23e3	3.53e3	6.76e3	44.23	1.001	0.91	NO	3.692	0.427	3.14e4	957	32.8	3.57e4	1705	20.9	bd	bd
8	2378-TCDF							NO	0.125			858			2190			
9	12378-PeCDF	5.88e1	8.87e1	1.48e2	33.30	1.000	0.66	YES	0.029	0.0662	2.64e3	877	3.0	3.37e3	1754	1.9	bb	bb
10	23478-PeCDF							NO	0.0628			877			1754			
11	123478-HxCDF							NO	0.0495			793			819			
12	123678-HxCDF							NO	0.0490			793			819			
13	234678-HxCDF							NO	0.0478			793			819			
14	123789-HxCDF							NO	0.0737			793			819			
15	1234678-HpCDF	1.12e2	8.54e1	1.97e2	38.81	1.001	1.31	YES	0.052	0.0711	2.83e3	710	4.0	1.53e3	728	2.1	bb	MM
16	1234789-HpCDF							NO	0.101			710			728			
17	OCDF	1.16e2	2.47e2	3.63e2	44.49	1.006	0.47	YES	0.170	0.243	3.80e3	603	6.3	3.47e3	1163	3.0	bb	MM
18	13C-2378-TCDD	2.54e5	3.30e5	5.84e5	31.22	1.017	0.77	NO	70.789	0.209	3.93e6	4688	838.1	5.20e6	4317	1205.0	bb	bd
19	13C-12378-PeCDD	2.58e5	1.63e5	4.20e5	34.09	1.111	1.58	NO	82.455	0.333	4.96e6	4170	1189.6	3.26e6	4711	691.4	bd	bd
20	13C-123478-HxCDD	1.74e5	1.40e5	3.14e5	36.67	0.991	1.25	NO	63.100	0.431	3.34e6	6641	503.0	2.66e6	4736	561.4	bd	bd
21	13C-123678-HxCDD	2.54e5	2.02e5	4.56e5	36.76	0.994	1.26	NO	70.812	0.333	3.69e6	6641	556.2	2.90e6	4736	613.3	dd	dd
22	13C-1234678-HpCDD	1.43e5	1.35e5	2.77e5	40.02	1.082	1.06	NO	68.937	0.452	1.65e6	5365	307.7	1.66e6	4282	386.9	bd	bd
23	13C-OCDD	1.99e5	2.19e5	4.18e5	44.20	1.195	0.91	NO	114.456	0.547	1.69e6	4708	358.8	1.83e6	5884	311.6	bd	bd
24	13C-2378-TCDF	2.74e5	3.58e5	6.32e5	30.49	0.993	0.76	NO	67.503	0.222	3.05e6	7034	433.9	3.98e6	3804	1047.2	bb	bb
25	13C-12378-PeCDF	3.61e5	2.21e5	5.83e5	33.29	1.085	1.63	NO	84.636	0.516	7.05e6	10106	697.9	4.67e6	8441	553.3	bb	bd
26	13C-23478-PeCDF	3.47e5	2.12e5	5.60e5	33.90	1.104	1.64	NO	79.843	0.507	6.79e6	10106	672.0	4.45e6	8441	526.8	bd	db
27	13C-123478-HxCDF	1.29e5	2.49e5	3.77e5	35.96	0.972	0.52	NO	65.359	0.502	2.51e6	4660	538.3	4.95e6	10712	462.4	bd	bd
28	13C-123678-HxCDF	1.81e5	3.45e5	5.26e5	36.06	0.975	0.52	NO	72.469	0.399	2.69e6	4660	577.7	5.18e6	10712	483.3	dd	dd
29	13C-234678-HxCDF	1.51e5	2.93e5	4.44e5	36.53	0.988	0.51	NO	73.730	0.481	2.49e6	4660	535.2	4.79e6	10712	446.9	dd	dd
30	13C-123789-HxCDF	1.27e5	2.48e5	3.75e5	37.31	1.008	0.51	NO	71.110	0.550	1.77e6	4660	379.5	3.33e6	10712	310.7	bd	bd
31	13C-1234678-HpCDF	1.01e5	2.25e5	3.25e5	38.78	1.048	0.45	NO	67.365	0.368	1.36e6	4431	306.5	2.96e6	5010	590.7	bd	bd

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 13:43:10 Eastern Standard Time
 Printed: Thursday, April 16, 2020 13:43:46 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	8.01e4	1.86e5	2.66e5	40.69	1.100	0.43	NO	73.619	0.492	8.96e5	4431	202.2	2.05e6	5010	408.3	bd	bd
33	13C-1234-TCDD	3.17e5	4.14e5	7.31e5	30.69	0.000	0.77	NO	100.000	0.236	4.14e6	4688	882.2	5.44e6	4317	1259.6	bb	bb
34	13C-123789-HxCDD	3.45e5	2.73e5	6.18e5	36.99	0.000	1.26	NO	100.000	0.347	4.58e6	6641	689.7	3.68e6	4736	777.7	dd	dd
35	37Cl-2378-TCDD	7.09e4		7.09e4	31.25	1.018			9.174	0.0639	1.08e6	2579	420.1				bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 13:43:10 Eastern Standard Time
Printed: Thursday, April 16, 2020 13:43:46 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b12apr20.mdb 16 Apr 2020 09:09:51
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradoxins	1.11e2	5.75e1	1.68e2	25.84	1.93	YES	0.032	0.115	3.03e3	2426	1.2	1.66e3	1297	1.3	db	bb
2	Total-tetradoxins	7.20e1	5.06e1	1.23e2	25.67	1.42	YES	0.024	0.115	2.35e3	2426	1.0	1.76e3	1297	1.4	db	bb
3	Total-tetradoxins	8.40e1	6.85e1	1.52e2	29.76	1.23	YES	0.029	0.115	2.36e3	2426	1.0	2.04e3	1297	1.6	bd	bb
4	Total-tetradoxins	8.78e1	5.13e1	1.39e2	28.84	1.71	YES	0.027	0.115	3.14e3	2426	1.3	1.95e3	1297	1.5	bb	bb
5	Total-tetradoxins	6.65e1	1.02e2	1.69e2	27.74	0.65	YES	0.032	0.115	2.64e3	2426	1.1	2.34e3	1297	1.8	bb	bd
6	Total-tetradoxins	1.40e2	5.52e1	1.95e2	31.95	2.54	YES	0.037	0.115	3.39e3	2426	1.4	1.36e3	1297	1.1	bb	bb
7	Total-tetradoxins	7.83e1	6.79e1	1.46e2	31.38	1.15	YES	0.028	0.115	2.14e3	2426	0.9	2.61e3	1297	2.0	bb	bb
8	2378-TCDD	8.14e1	6.99e1	1.51e2	31.25	1.16	YES	0.029	0.115	1.84e3	2426	0.8	2.01e3	1297	1.5	bb	bb
9	Total-tetradoxins	1.26e2	7.33e1	1.99e2	31.04	1.72	YES	0.038	0.115	2.85e3	2426	1.2	2.86e3	1297	2.2	dd	bb
10	Total-tetradoxins	1.00e2	5.76e1	1.58e2	30.62	1.74	YES	0.030	0.115	2.74e3	2426	1.1	1.83e3	1297	1.4	bb	bb

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDD	5.36e1	5.60e1	1.10e2	37.02	0.96	YES	0.033	0.0831	1.08e3	841	1.3	1.45e3	963	1.5	bb	bb
2	Total-hexadoxins	6.97e1	1.09e2	1.79e2	36.12	0.64	YES	0.053	0.0812	2.40e3	841	2.9	2.33e3	963	2.4	bb	bb

HPD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	2.95e2	3.18e2	6.13e2	40.03	0.93	NO	0.239	0.317	3.71e3	1638	2.3	6.68e3	2120	3.1	bb	bb
2	Total-heptadoxins	4.90e2	5.41e2	1.03e3	39.10	0.91	NO	0.402	0.317	7.85e3	1638	4.8	8.87e3	2120	4.2	bb	bb
3	Total-heptadoxins	7.93e1	5.55e1	1.35e2	38.78	1.43	YES	0.053	0.317	2.51e3	1638	1.5	3.52e3	2120	1.7	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 13:43:10 Eastern Standard Time
Printed: Thursday, April 16, 2020 13:43:46 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

TF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	6.44e1	5.65e1	1.21e2	30.24	1.14	YES	0.022	0.125	2.97e3	858	3.5	2.65e3	2190	1.2	bb	bd
2	Total-tetrafurans	7.55e1	8.12e1	1.57e2	29.16	0.93	YES	0.029	0.125	2.89e3	858	3.4	1.79e3	2190	0.8	db	bb
3	Total-tetrafurans	6.84e1	7.08e1	1.39e2	29.11	0.97	YES	0.025	0.125	1.22e3	858	1.4	2.53e3	2190	1.2	bd	db
4	Total-tetrafurans	5.81e1	1.12e2	1.70e2	28.36	0.52	YES	0.031	0.125	1.63e3	858	1.9	2.85e3	2190	1.3	db	dd
5	Total-tetrafurans	5.36e1	7.07e1	1.24e2	28.28	0.76	NO	0.023	0.125	1.32e3	858	1.5	3.52e3	2190	1.6	bd	bd
6	Total-tetrafurans	5.18e1	6.31e1	1.15e2	27.51	0.82	NO	0.021	0.125	2.12e3	858	2.5	1.94e3	2190	0.9	bb	bb
7	Total-tetrafurans	8.71e1	5.65e1	1.44e2	26.26	1.54	YES	0.026	0.125	3.24e3	858	3.8	7.91e2	2190	0.4	bb	bb
8	Total-tetrafurans	5.14e1	7.45e1	1.26e2	32.01	0.69	NO	0.023	0.125	1.46e3	858	1.7	3.80e3	2190	1.7	bb	bb

Page 8 of 15
PEI

PF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentatfurans (F1)	5.34e1	8.03e1	1.34e2	31.61	0.67	YES	0.026	0.0647	1.22e3	804	1.5	2.42e3	1838	1.3	bb	bb

HF

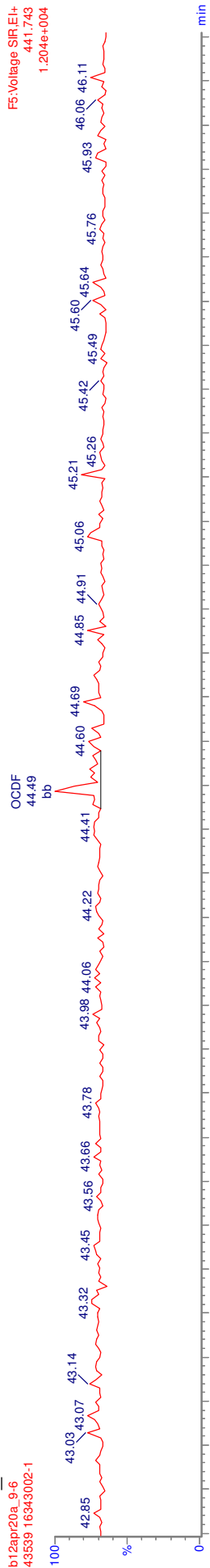
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1	12378-PeCDF	5.88e1	8.87e1	1.48e2	33.30	0.66	YES	0.029	0.0662	2.64e3	877	3.0	3.37e3	1754	1.9	bb	bb

HPF

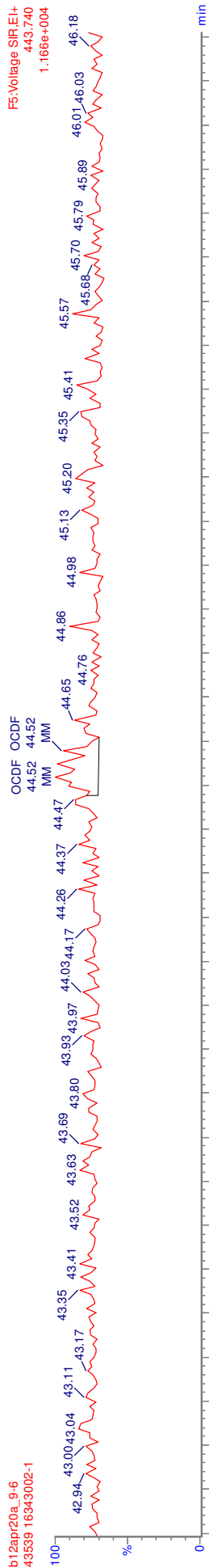
1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	1.12e2	8.54e1	1.97e2	38.81	1.31	YES	0.052	0.0711	2.83e3	710	4.0	1.53e3	728	2.1	bb	MM
2	Total-heptatfurans	1.48e2	1.60e2	3.08e2	39.36	0.93	NO	0.089	0.0847	2.36e3	710	3.3	2.17e3	728	3.0	MM	MM

MANUAL INTEGRATION
 METHOD 8290
 HRP763_1

b12ap20a_9-6
 43539 16343002-1



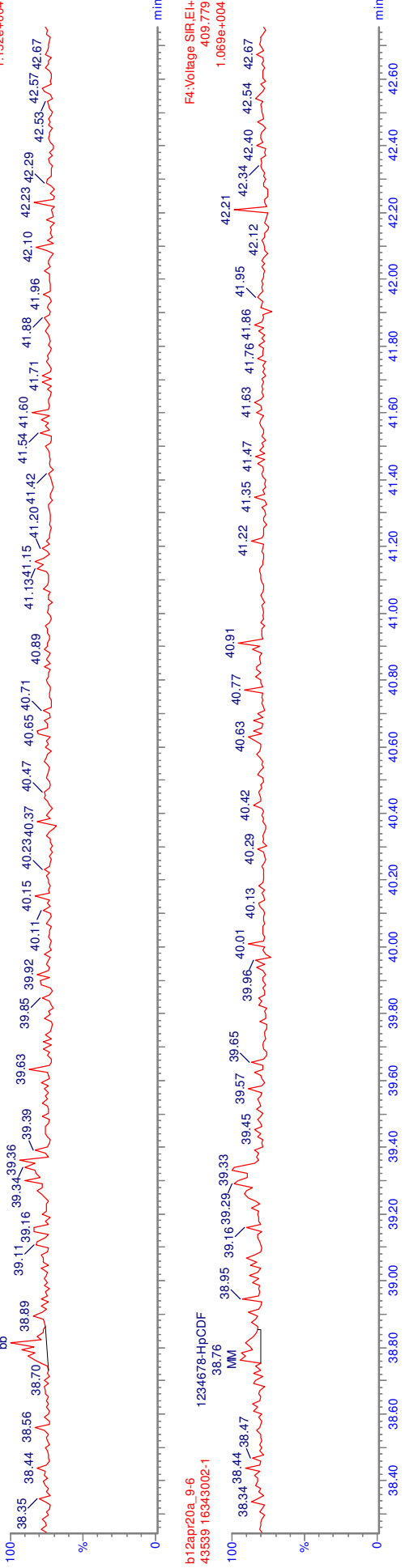
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MANUAL INTEGRATION
 METHOD 8290
 HRP763_1

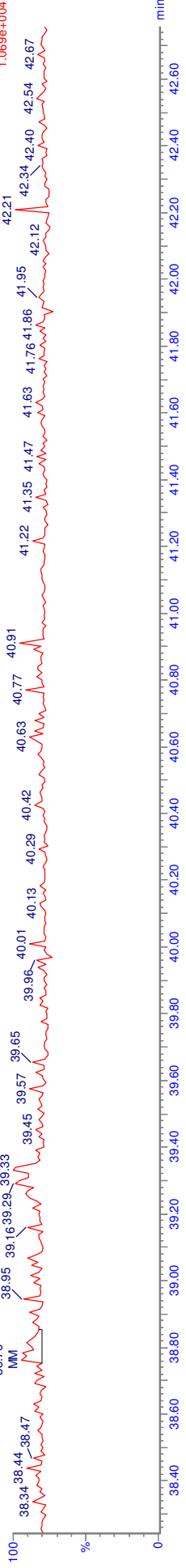
b12ap20a_9-6
 43539 16343002-1

F4:Voltage SIR.EI+
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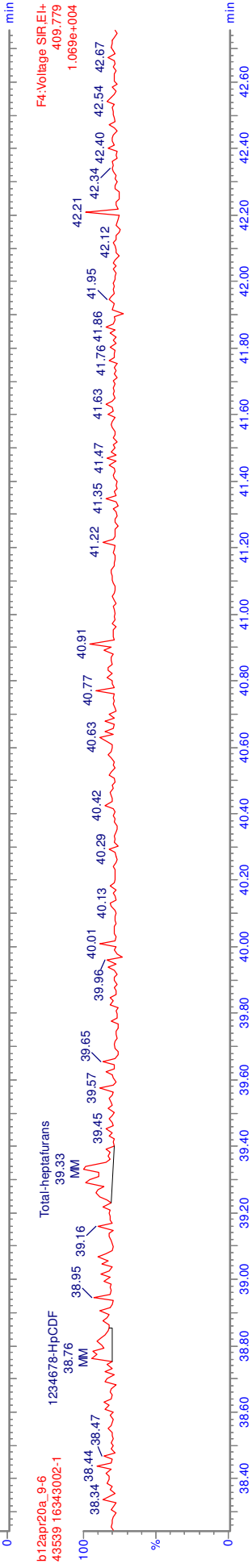


b12ap20a_9-6
 43539 16343002-1

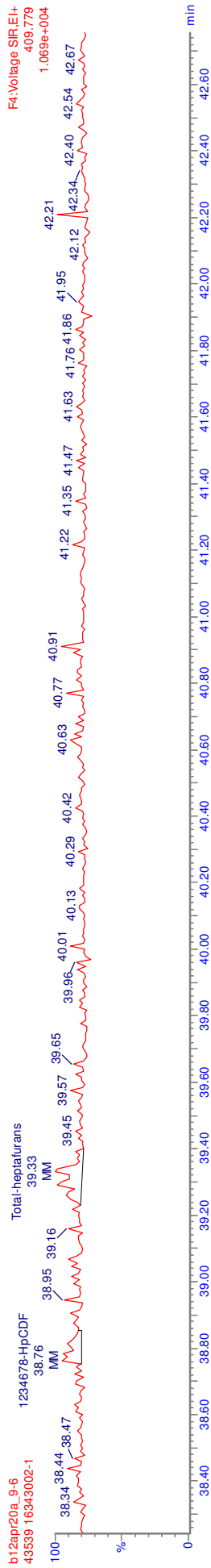
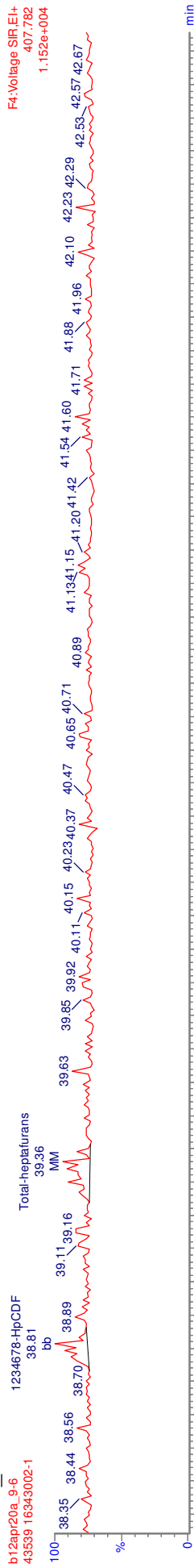
F4:Voltage SIR.EI+
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MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
 METHOD 1613
 HRP763_1



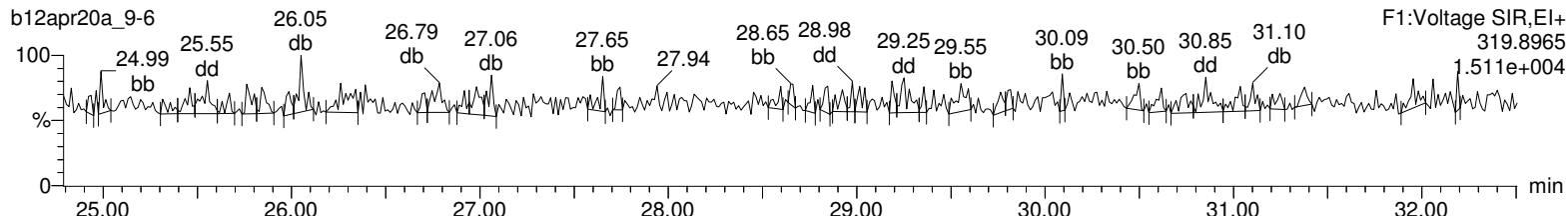
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Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

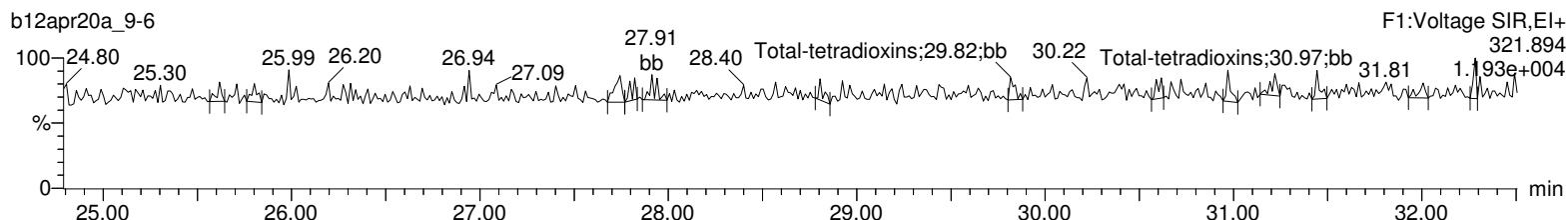
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

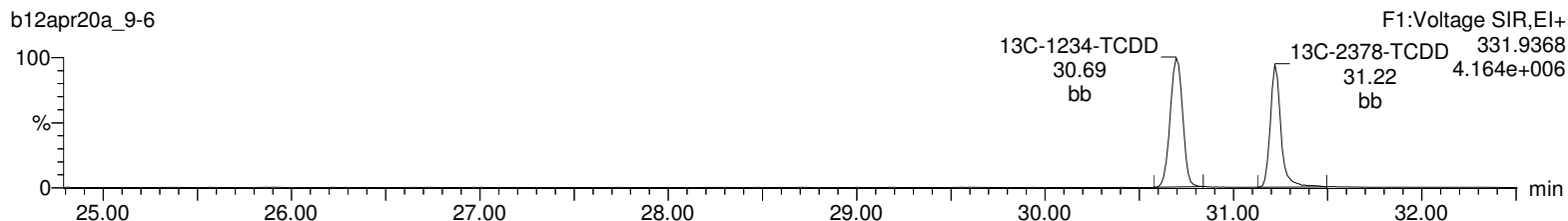
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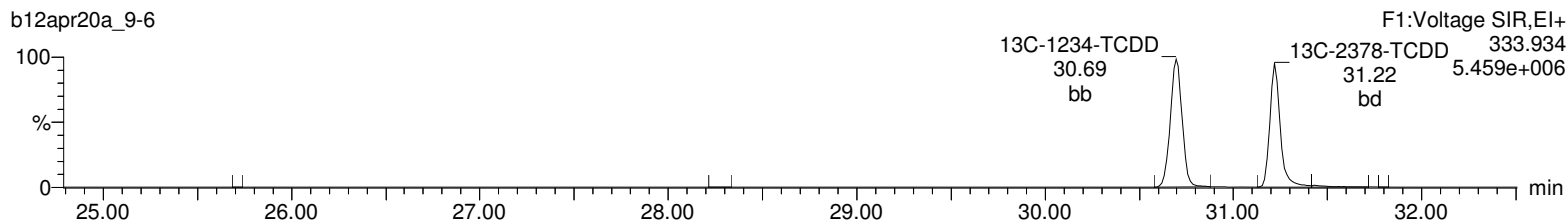
Total-tetradoxins



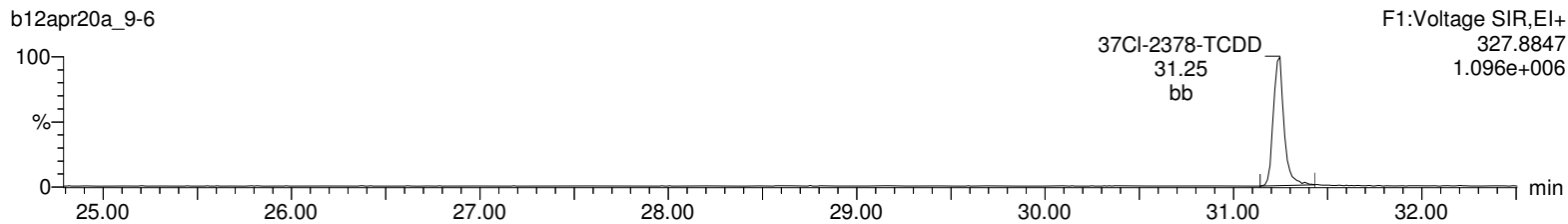
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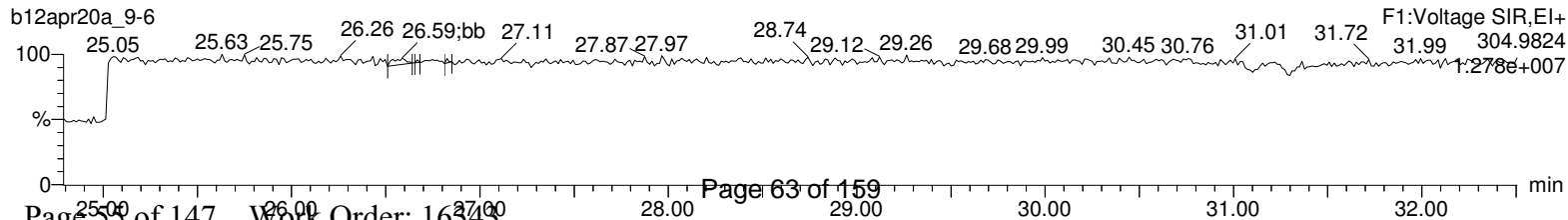
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



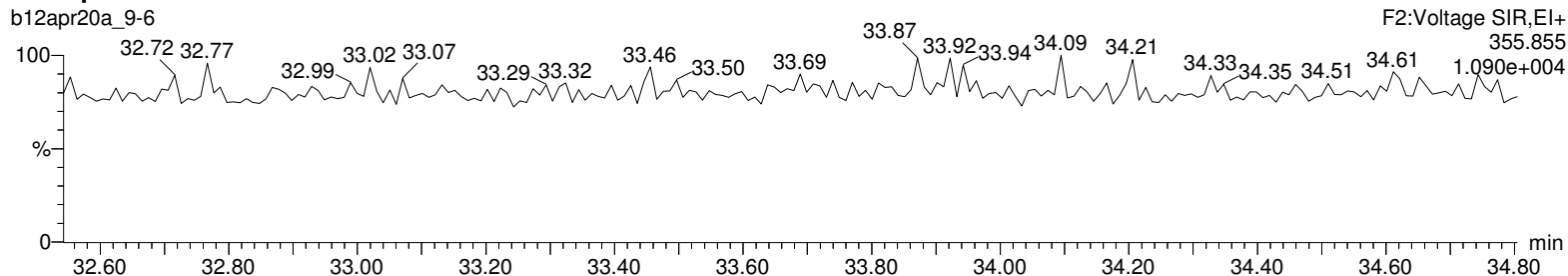
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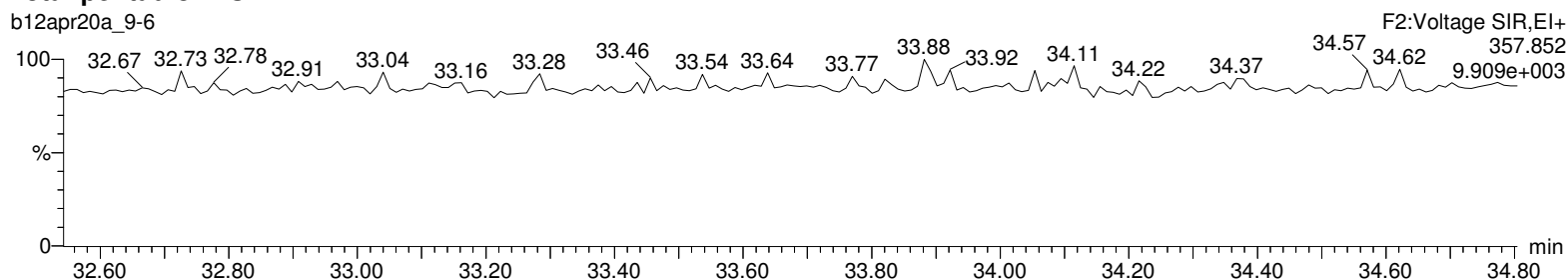
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

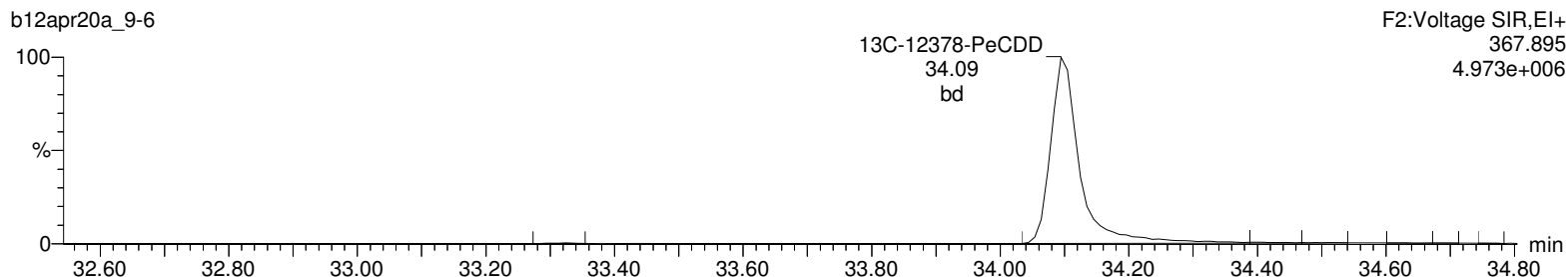
Total-pentadioxins



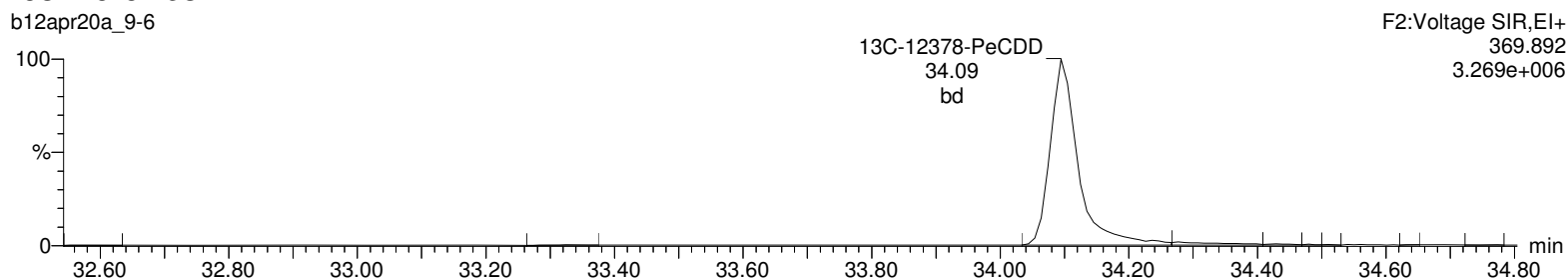
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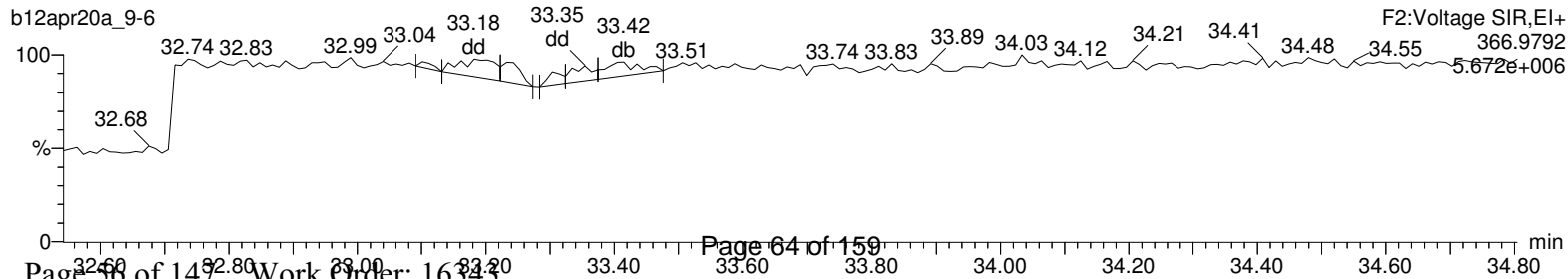
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



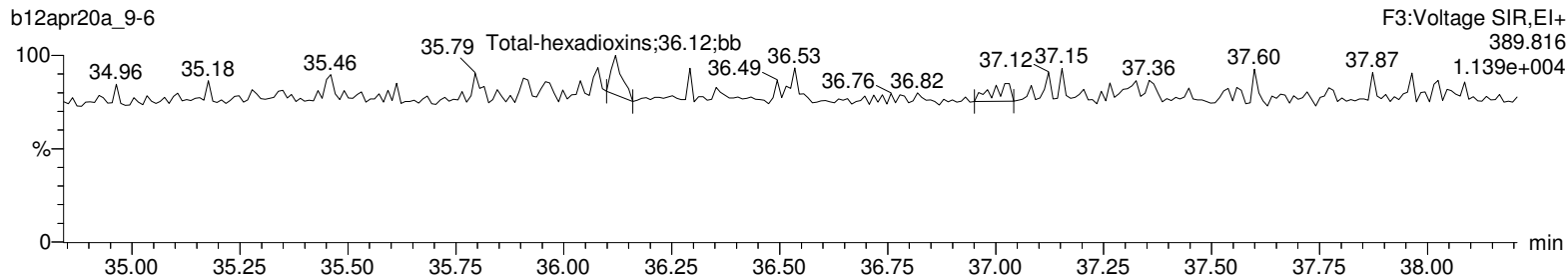
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

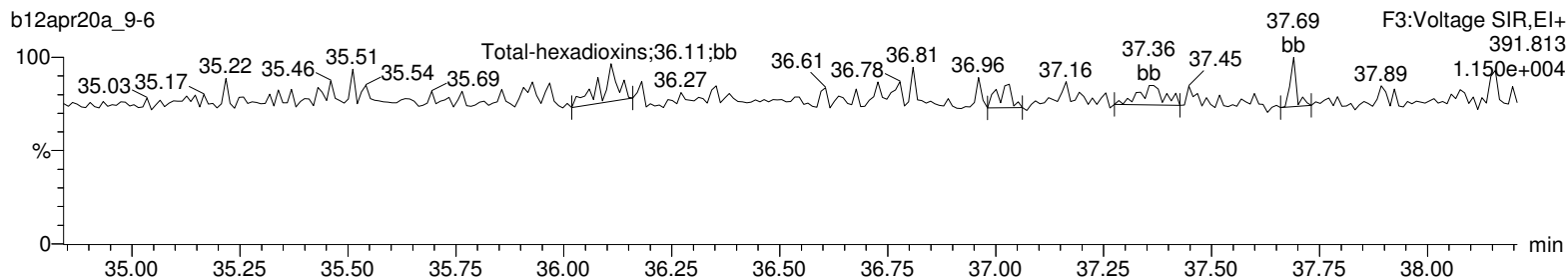
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

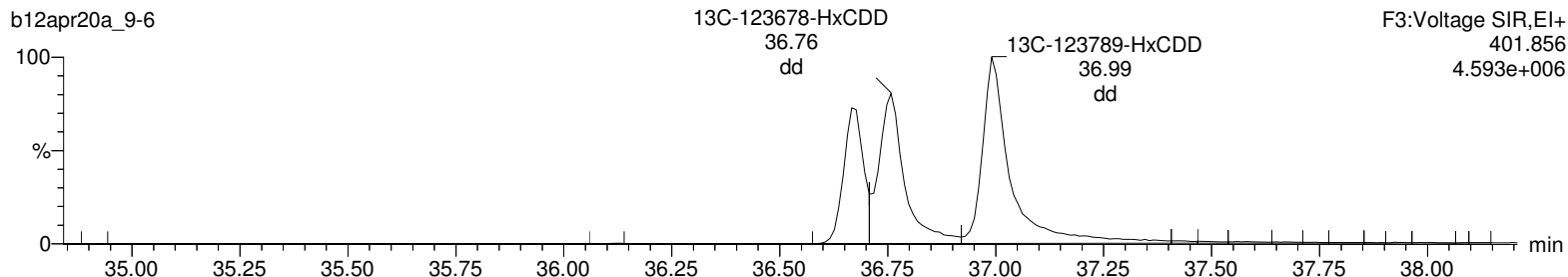
Total-hexadioxins



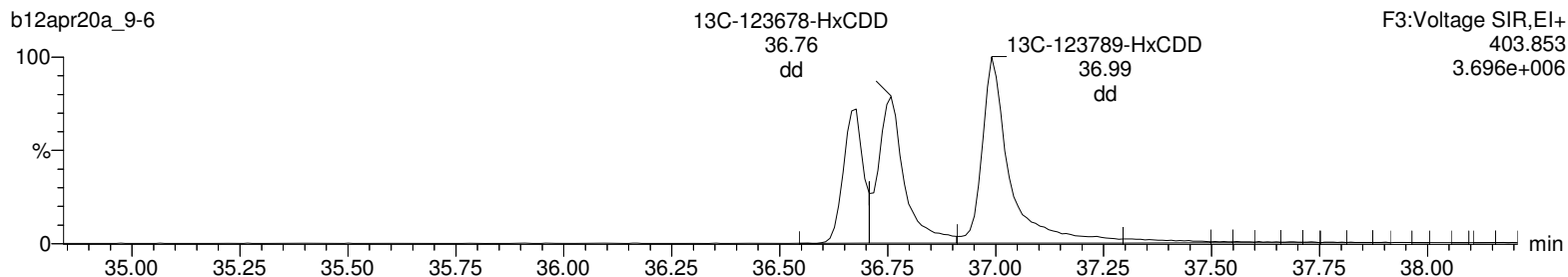
Total-hexadioxins



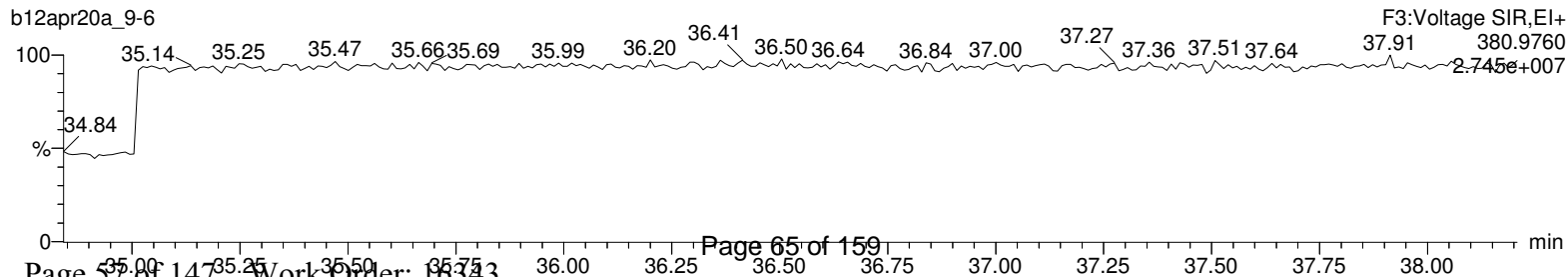
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



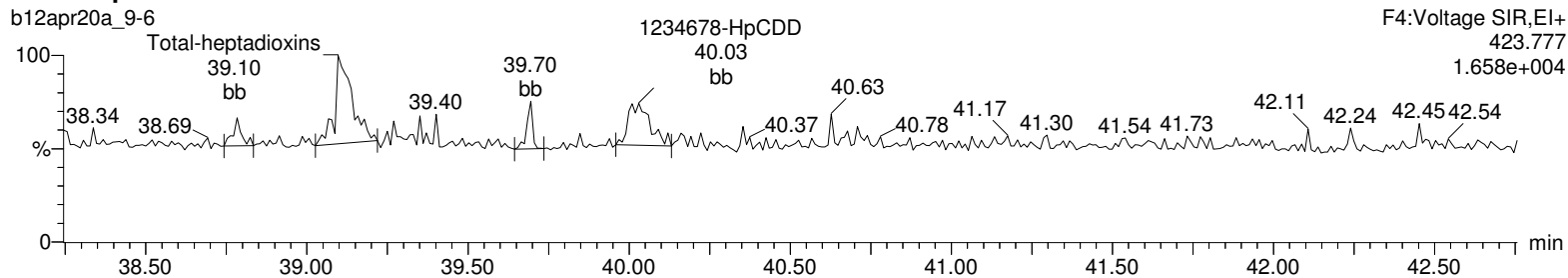
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

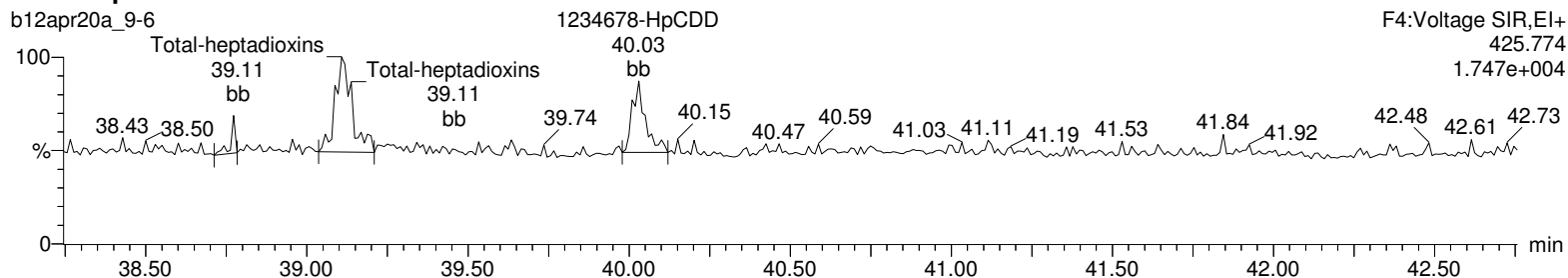
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

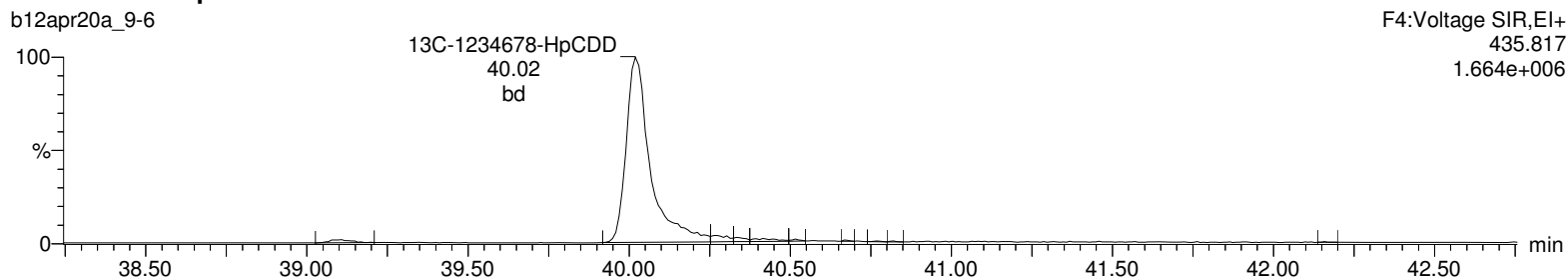
Total-heptadioxins



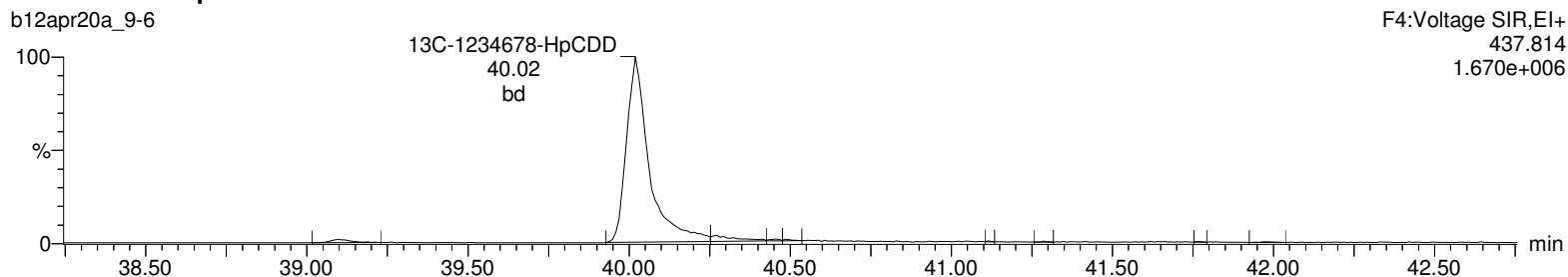
Total-heptadioxins



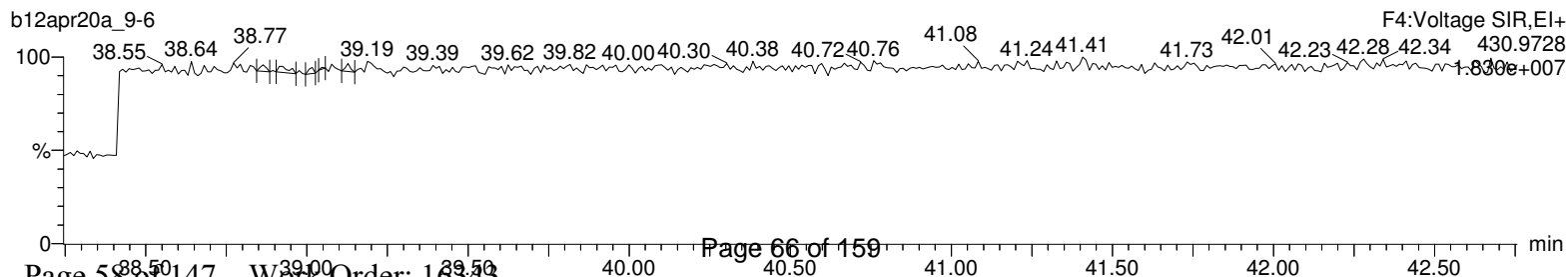
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

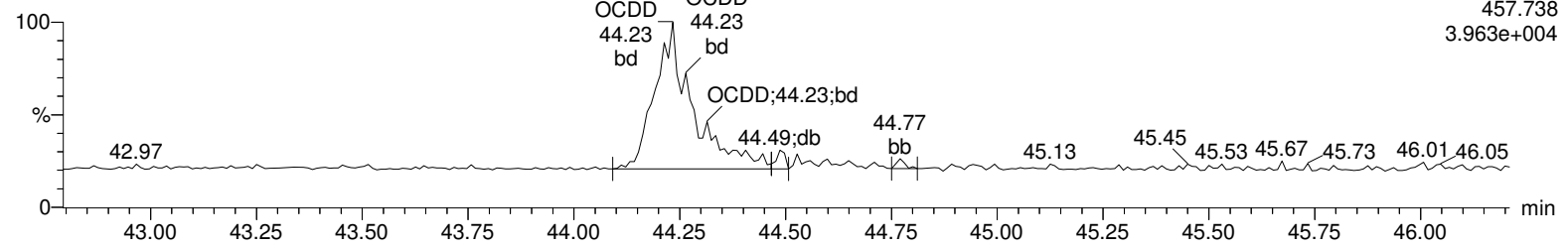
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

OCDD

b12apr20a_9-6

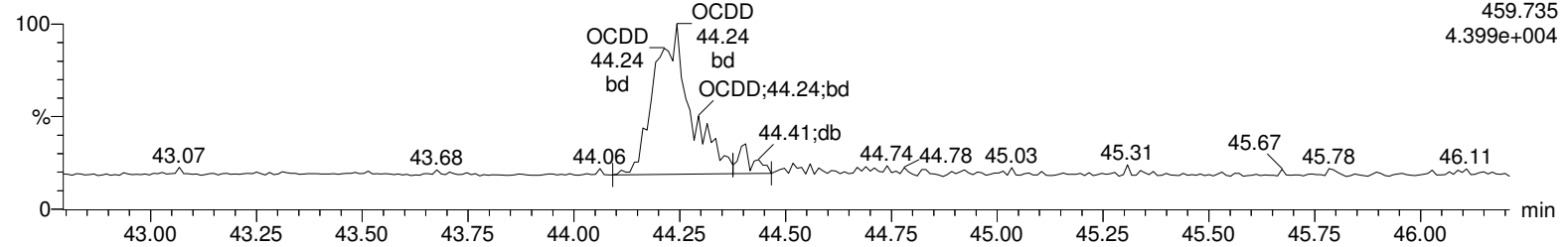
F5:Voltage SIR,EI+
457.738
3.963e+004



OCDD

b12apr20a_9-6

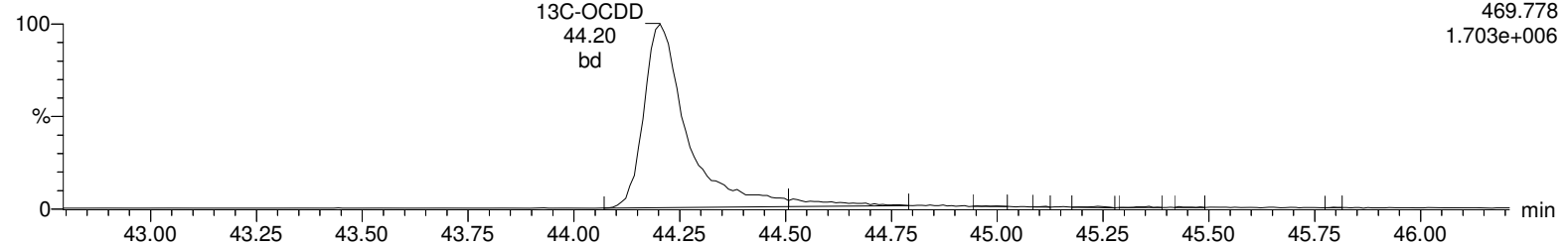
F5:Voltage SIR,EI+
459.735
4.399e+004



13C-OCDD

b12apr20a_9-6

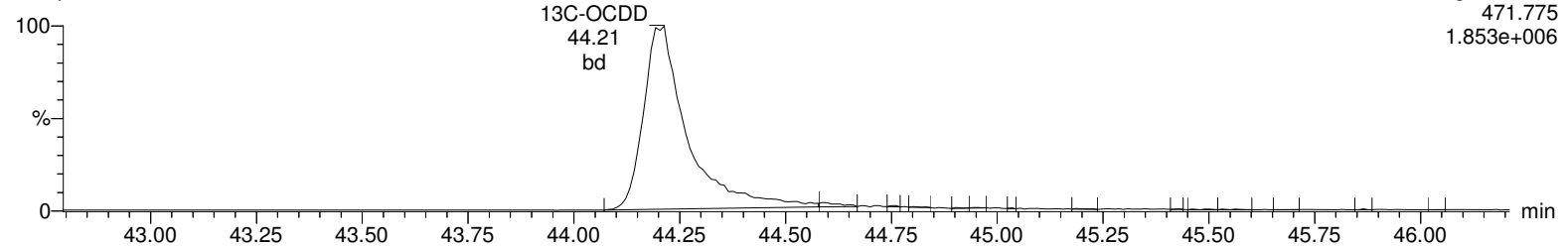
F5:Voltage SIR,EI+
469.778
1.703e+006



13C-OCDD

b12apr20a_9-6

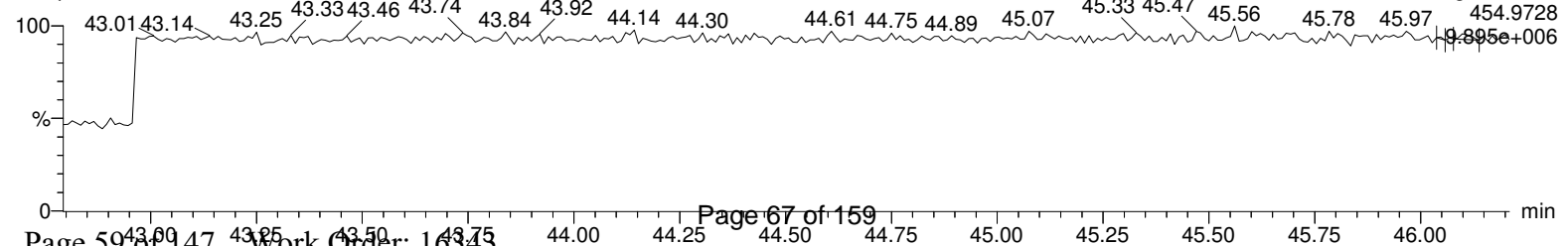
F5:Voltage SIR,EI+
471.775
1.853e+006



Lock Mass F5

b12apr20a_9-6

F5:Voltage SIR,EI+
454.9728
9.895e+006



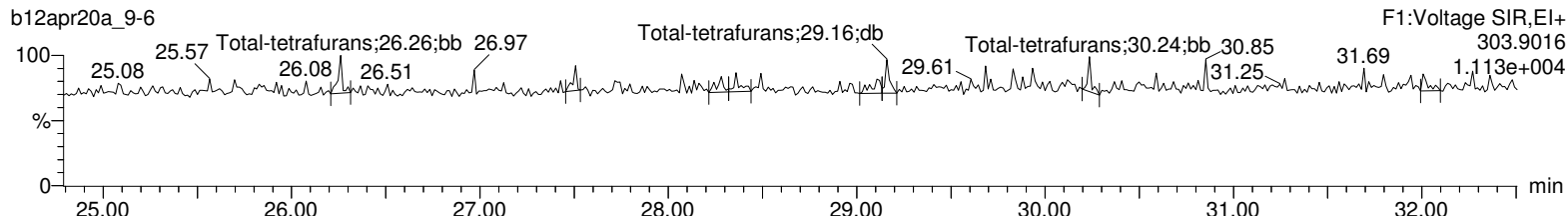
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

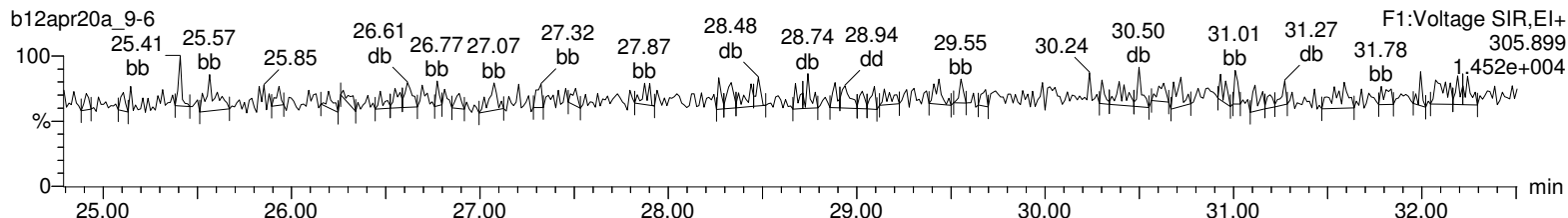
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

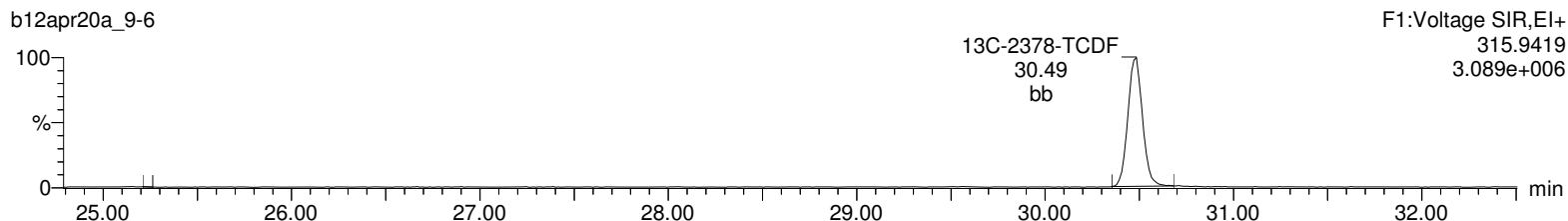
Total-tetrafurans



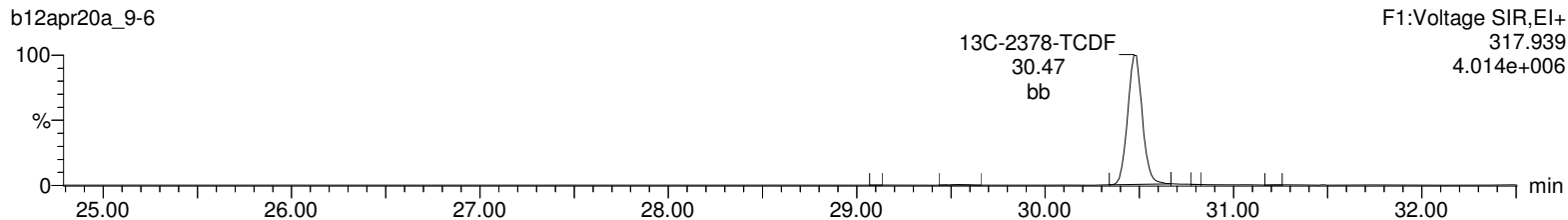
Total-tetrafurans



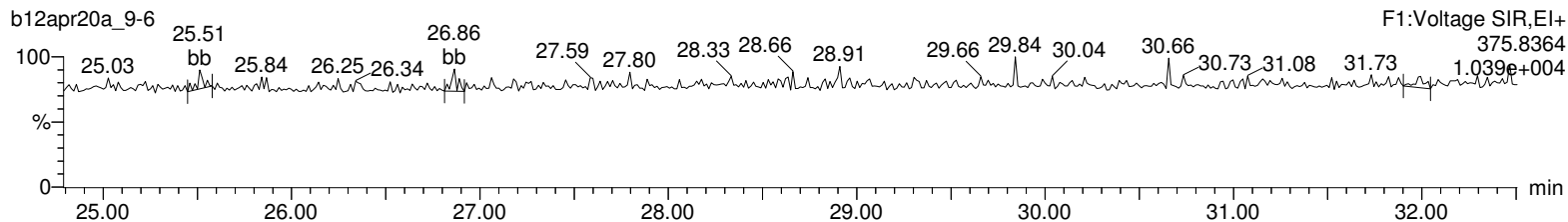
13C-2378-TCDF



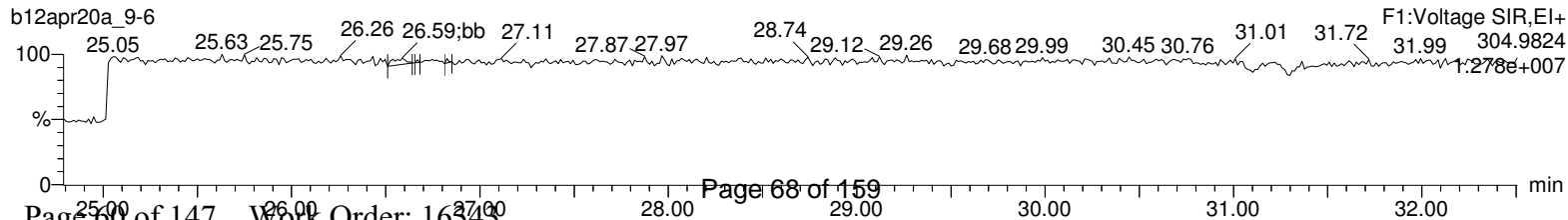
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

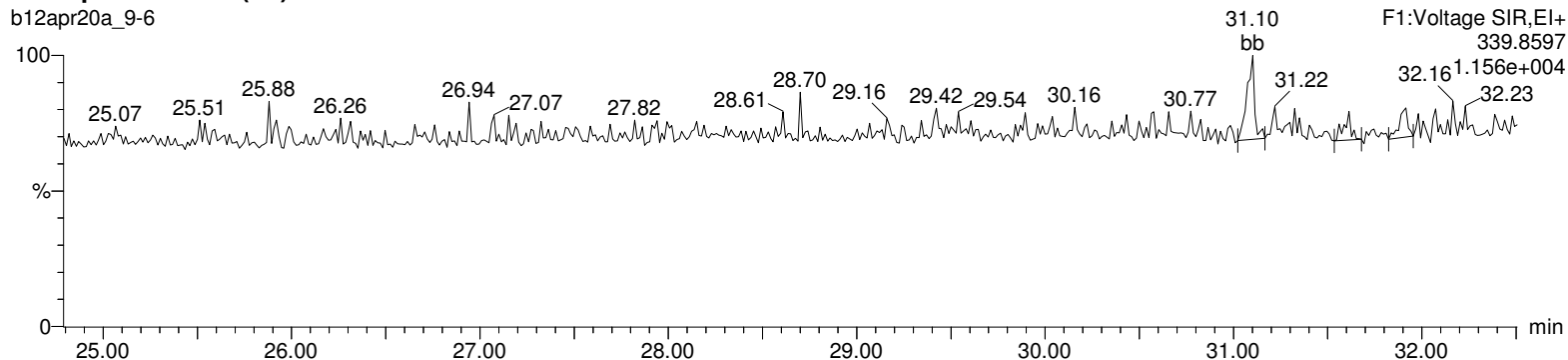
Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

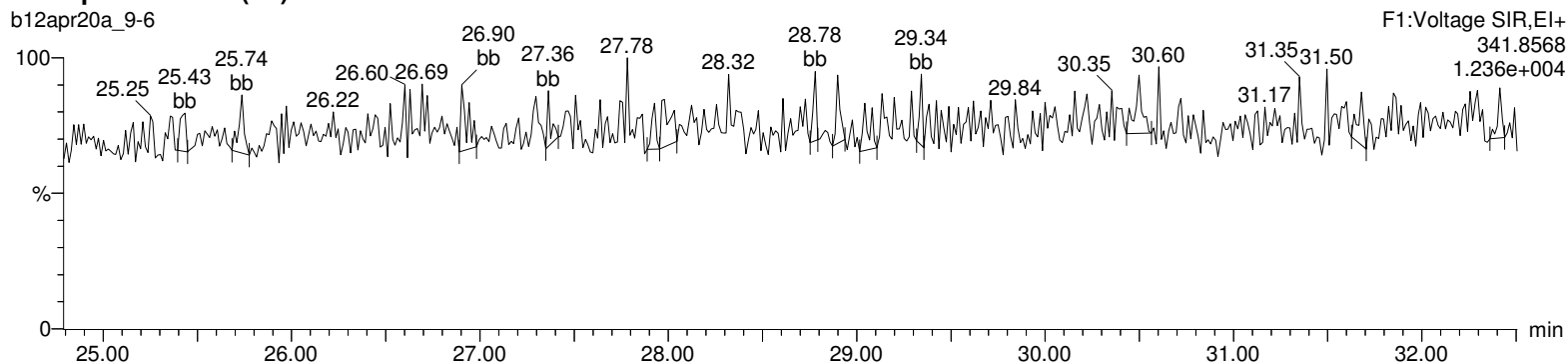
Total-pentafurans (F1)

b12apr20a_9-6



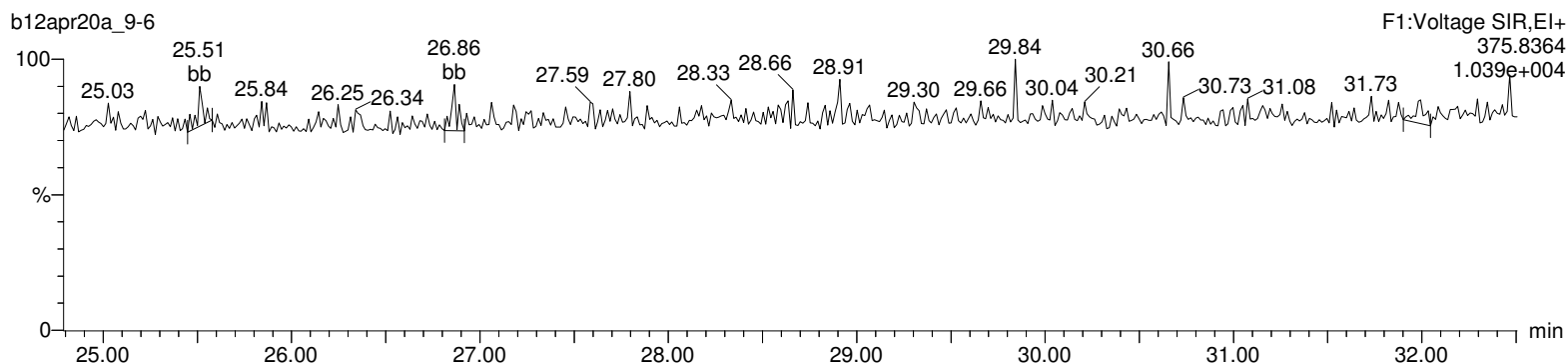
Total-pentafurans (F1)

b12apr20a_9-6



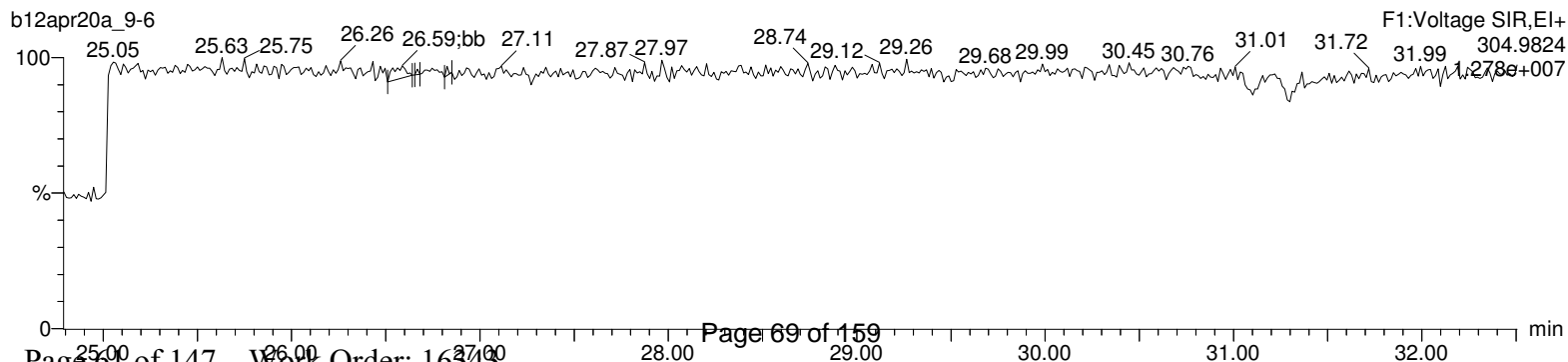
HxDPE

b12apr20a_9-6



Lock Mass F1

b12apr20a_9-6



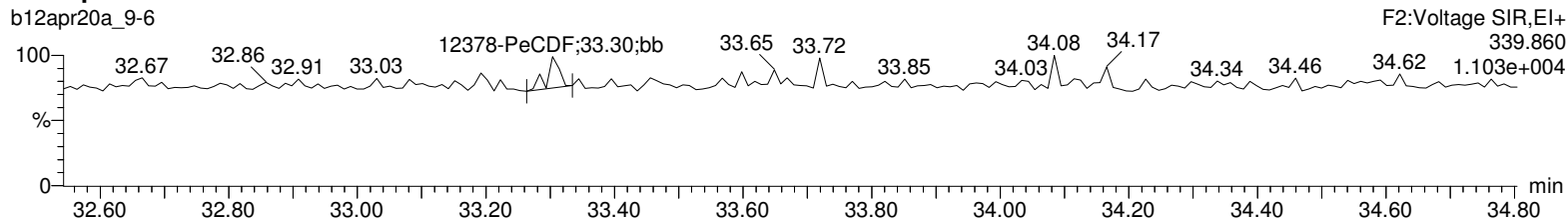
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

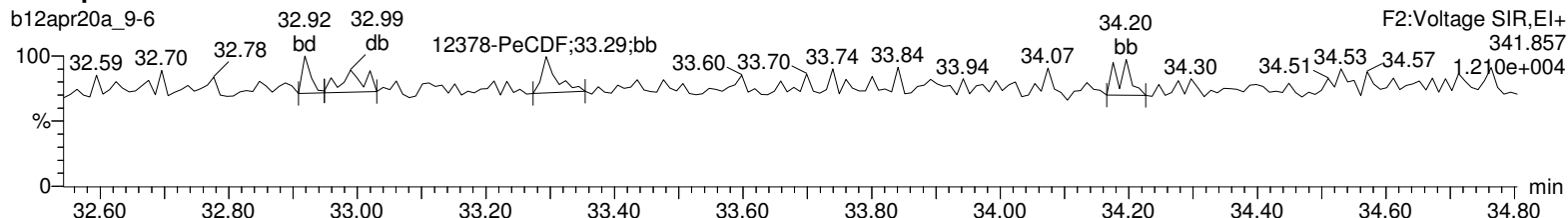
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

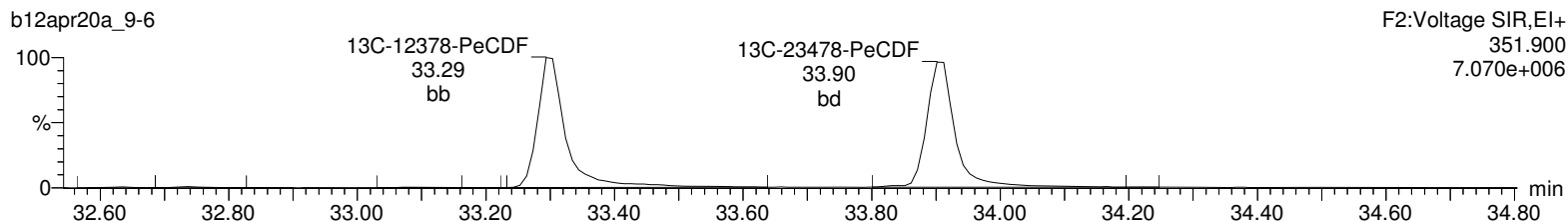
Total-pentafurans



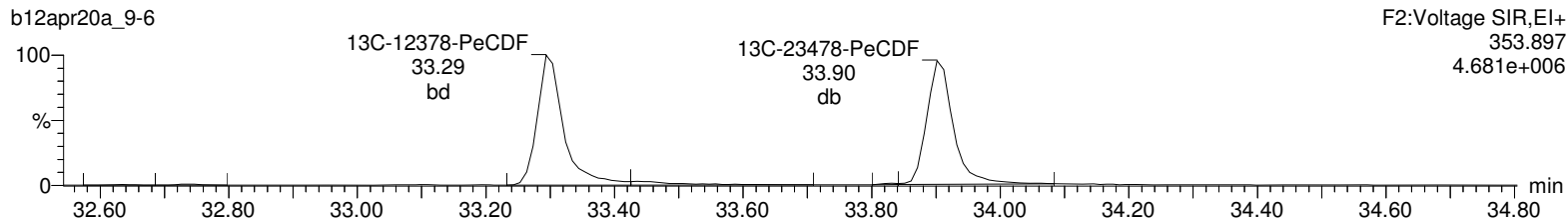
Total-pentafurans



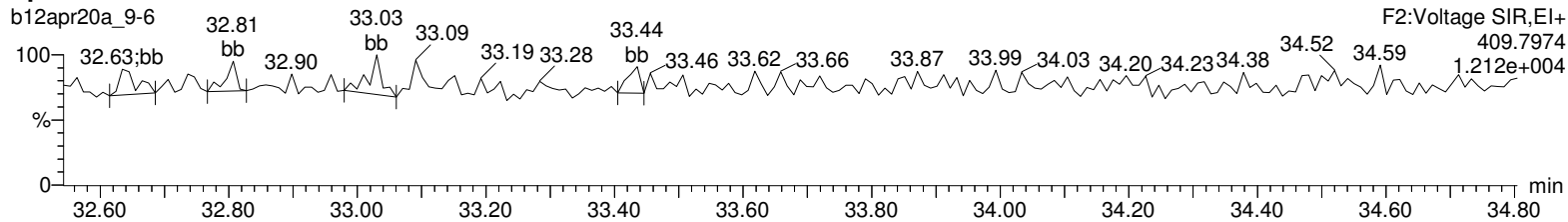
13C-12378-PeCDF



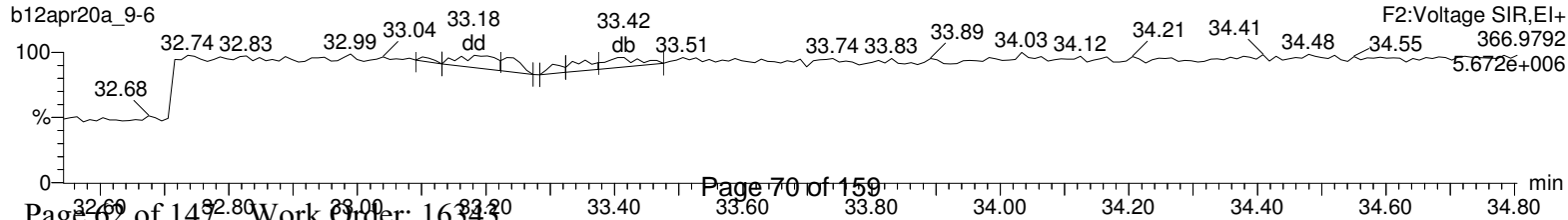
13C-12378-PeCDF



HpDPE



Lock Mass F2



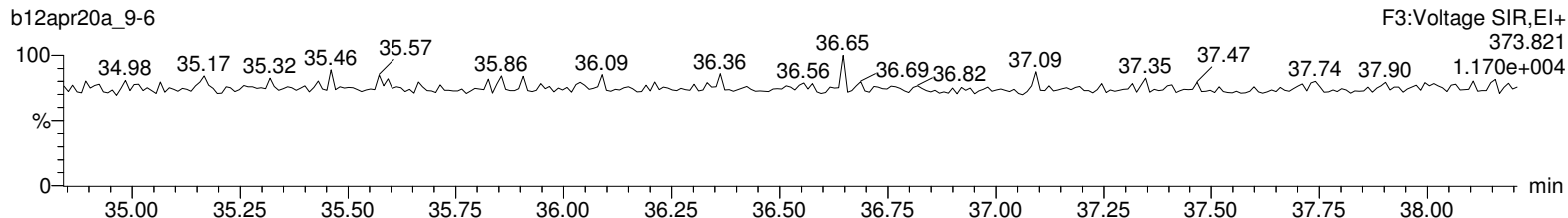
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

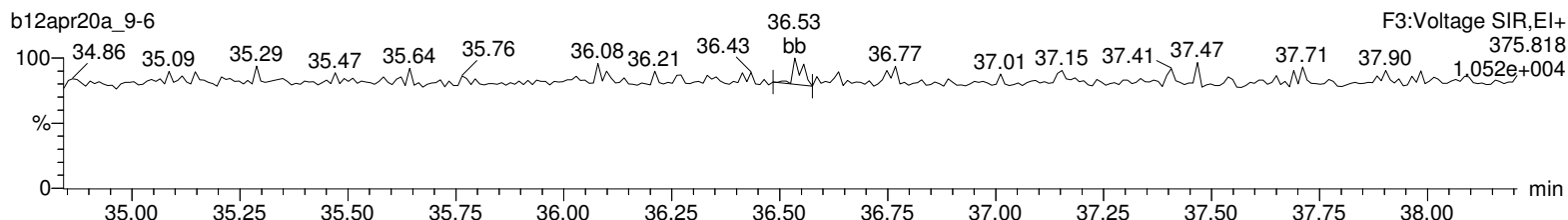
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

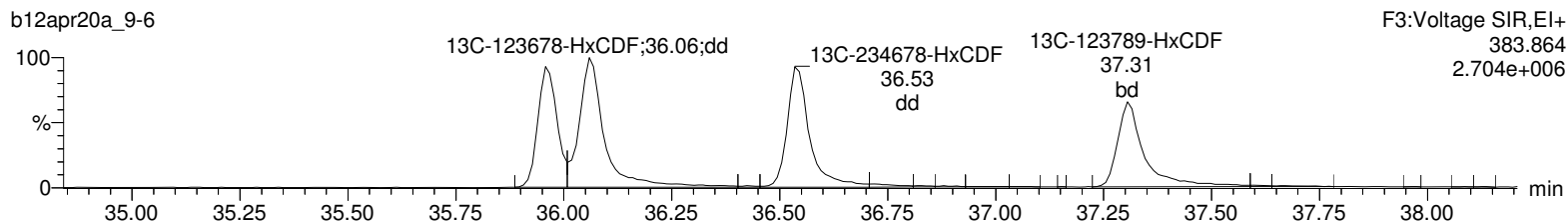
Total-hexafurans



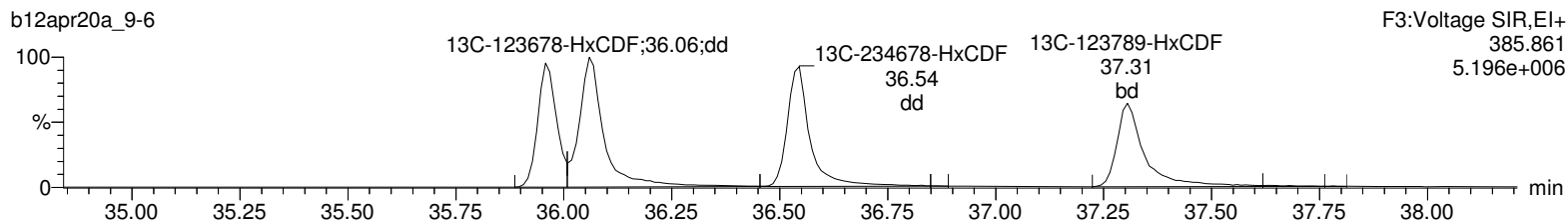
Total-hexafurans



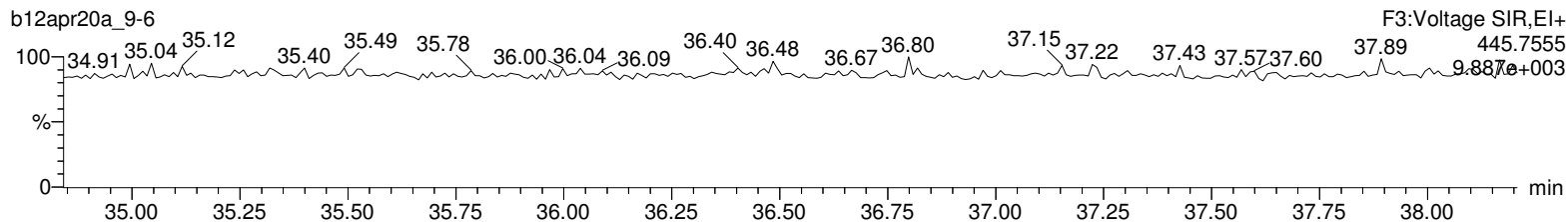
13C-123478-HxCDF



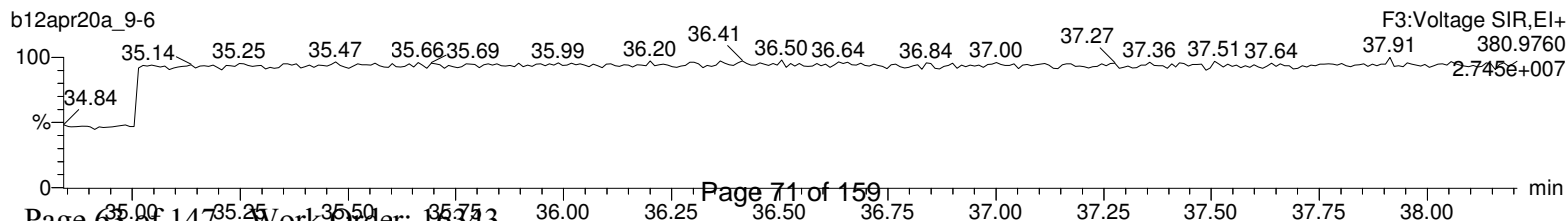
13C-123478-HxCDF



OcDPE



Lock Mass F3



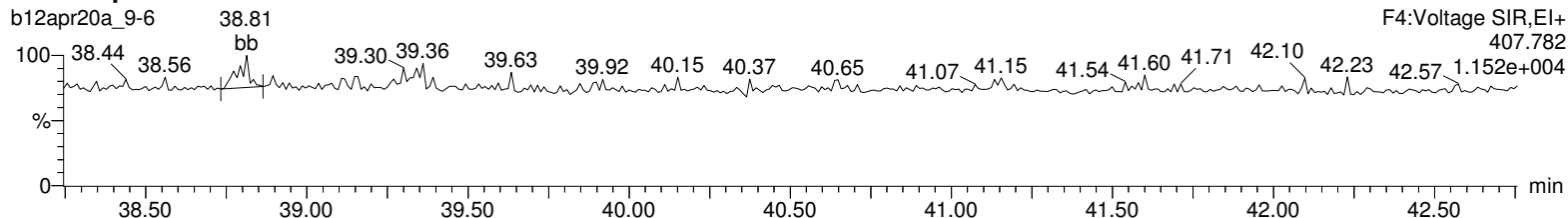
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

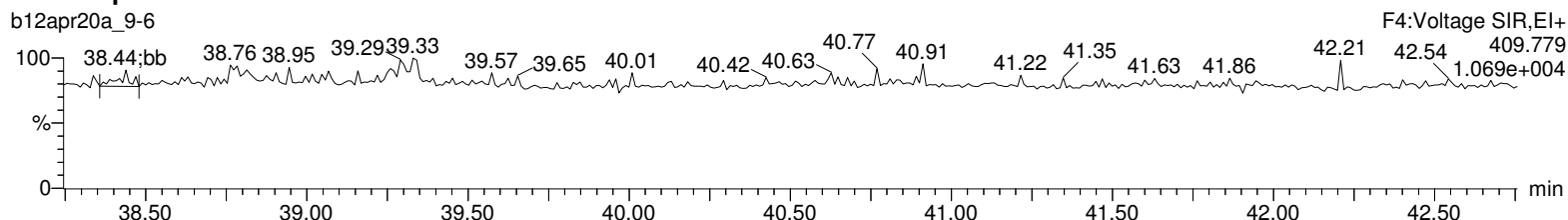
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

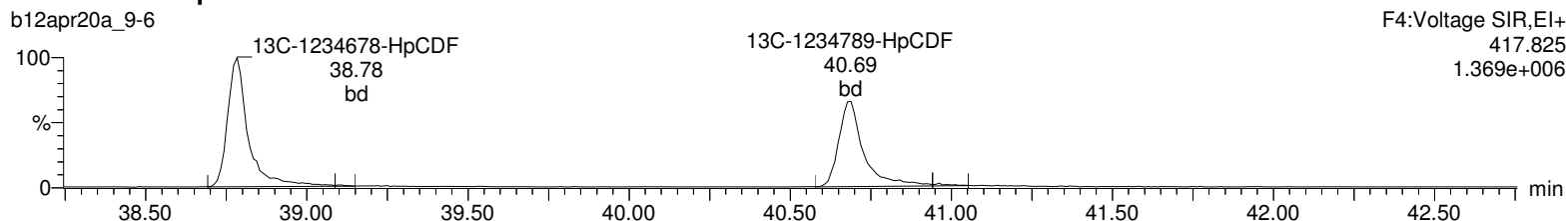
Total-heptafurans



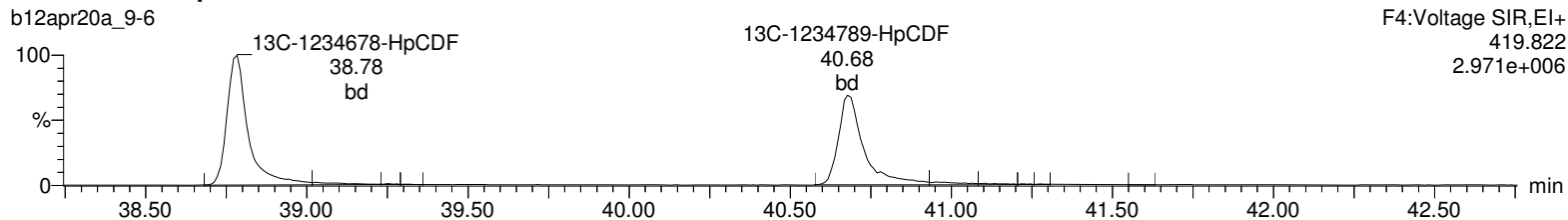
Total-heptafurans



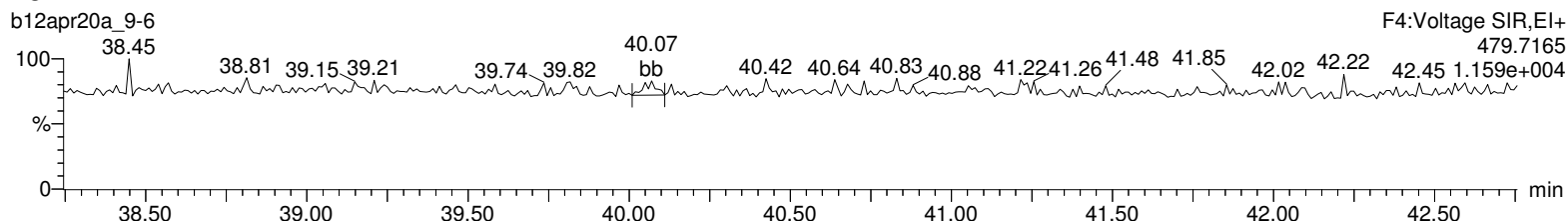
13C-1234678-HpCDF



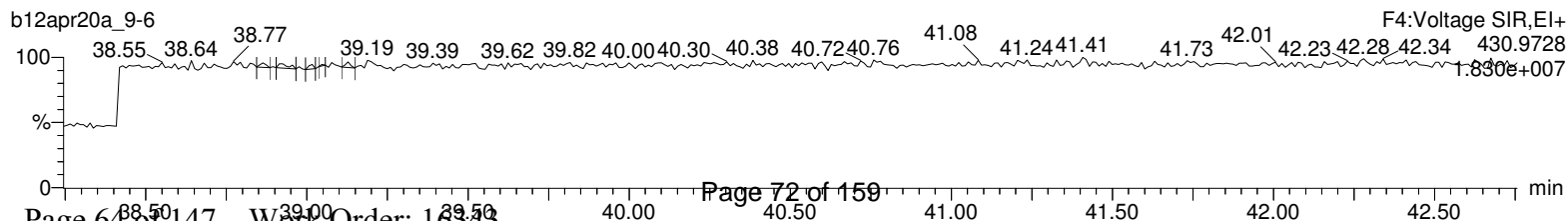
13C-1234678-HpCDF



NoDPE



Lock Mass F4



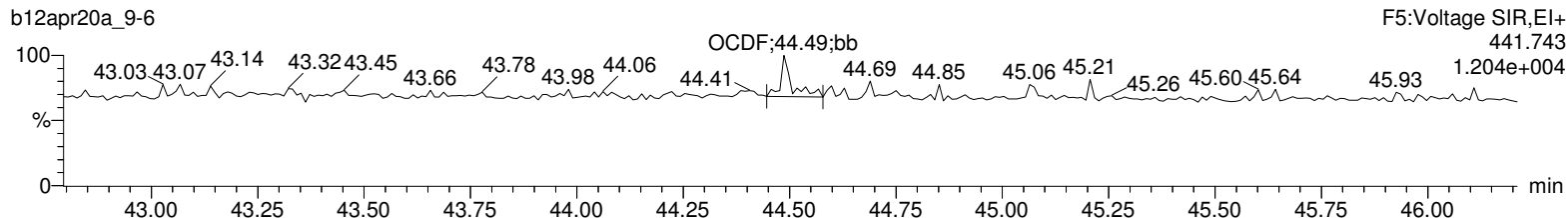
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

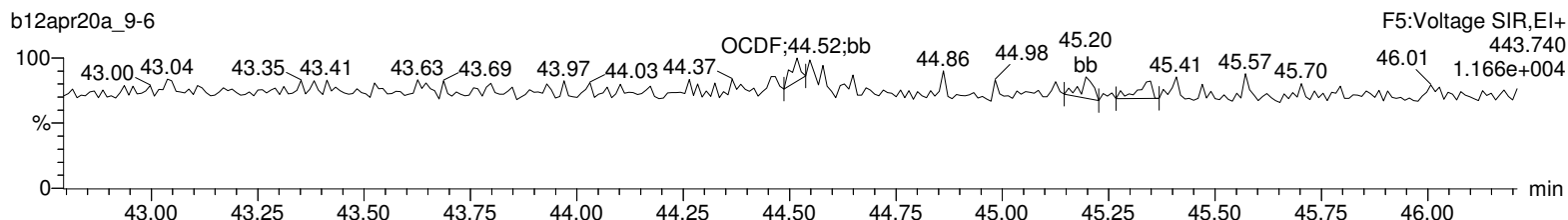
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-6, Date: 15-Apr-2020, Time: 21:22:37, ID: 16343002-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

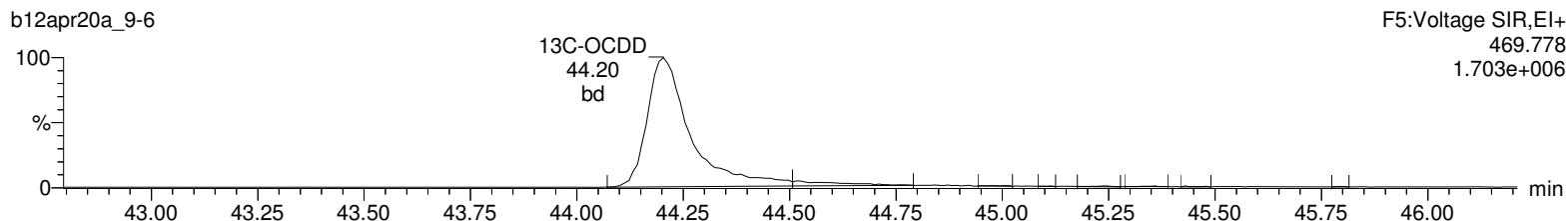
OCDF



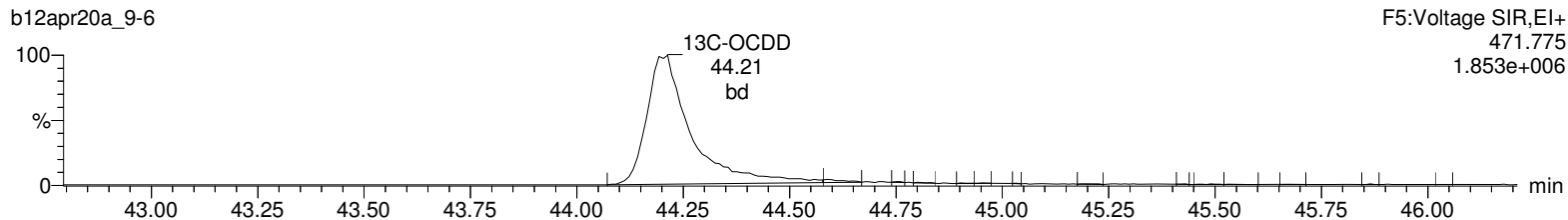
OCDF



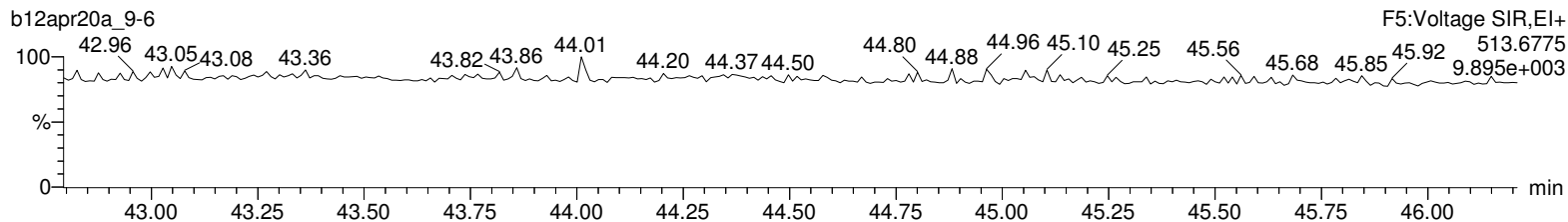
13C-OCDD



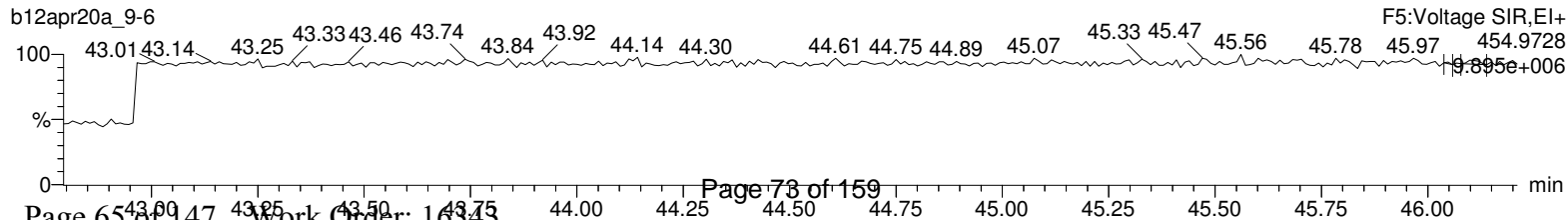
13C-OCDD



DeDPE



Lock Mass F5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451
Lab Sample ID: 16343003
Client Sample: 1613B Water
Client ID: EVBMP0009S013 (570-23510-3)
Batch ID: 43539
Run Date: 04/15/2020 22:10
Data File: b12apr20a_9-7
Prep Batch: 43536
Prep Date: 14-APR-20

Client: CALS001
Date Collected: 03/13/2020 08:25
Date Received: 03/17/2020 10:17
Method: EPA Method 1613B
Analyst: MLL
Prep Method: SW846 3520C
Prep Aliquot: 1049.2 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00174	ng/L	0.00174	0.00953
40321-76-4	1,2,3,7,8-PeCDD	U	0.00133	ng/L	0.00133	0.0477
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00181	ng/L	0.00181	0.0477
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00170	ng/L	0.00170	0.0477
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00181	ng/L	0.00181	0.0477
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	0.00560	ng/L	0.00452	0.0477
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJ	0.0563	ng/L	0.00742	0.0953
51207-31-9	2,3,7,8-TCDF	U	0.00227	ng/L	0.00227	0.00953
57117-41-6	1,2,3,7,8-PeCDF	U	0.00124	ng/L	0.00124	0.0477
57117-31-4	2,3,4,7,8-PeCDF	U	0.00108	ng/L	0.00108	0.0477
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.000884	ng/L	0.000884	0.0477
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.000913	ng/L	0.000913	0.0477
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.000928	ng/L	0.000928	0.0477
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00137	ng/L	0.00137	0.0477
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.00144	ng/L	0.00144	0.0477
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00208	ng/L	0.00208	0.0477
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00581	ng/L	0.00581	0.0953
41903-57-5	Total TeCDD	U	0.00174	ng/L	0.00174	0.00953
36088-22-9	Total PeCDD	U	0.00133	ng/L	0.00133	0.0477
34465-46-8	Total HxCDD	U	0.00170	ng/L	0.00170	0.0477
37871-00-4	Total HpCDD	JK	0.0135	ng/L	0.00452	0.0477
30402-14-3	Total TeCDF	U	0.00227	ng/L	0.00227	0.00953
30402-15-4	Total PeCDF	U	0.00108	ng/L	0.00108	0.0477
55684-94-1	Total HxCDF	U	0.000884	ng/L	0.000884	0.0477
38998-75-3	Total HpCDF	BJ	0.00185	ng/L	0.00144	0.0477
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0000729	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00239	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.35	1.91	ng/L	71.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.50	1.91	ng/L	78.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.21	1.91	ng/L	63.3	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.34	1.91	ng/L	70.3	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.23	1.91	ng/L	64.3	(23%-140%)
13C-OCDD		2.09	3.81	ng/L	54.9	(17%-157%)
13C-2,3,7,8-TCDF		1.28	1.91	ng/L	67.2	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.56	1.91	ng/L	82.0	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.45	1.91	ng/L	75.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.27	1.91	ng/L	66.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.39	1.91	ng/L	72.7	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.39	1.91	ng/L	72.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.37	1.91	ng/L	72.0	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 16343003	Date Collected: 03/13/2020 08:25	Matrix: WATER
Client Sample: 1613B Water	Date Received: 03/17/2020 10:17	
Client ID: EVBMP0009S013 (570-23510-3)		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 22:10	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-7		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1049.2 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.22	1.91	ng/L	64.1 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.34	1.91	ng/L	70.2 (26%-138%)
37Cl-2,3,7,8-TCDD			0.176	0.191	ng/L	92.4 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report
Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Friday, April 17, 2020 1:30:46 PM Eastern Standard Time
Printed: Friday, April 17, 2020 1:31:26 PM Eastern Standard Time

Method: Untitled 16 Apr 2020 09:09:51
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.0913		2139			1055			
2	12378-PeCDD							NO		0.0700		1315			652			
3	123478-HxCDD							NO		0.0951		933			1089			
4	123678-HxCDD							NO		0.0894		933			1089			
5	123789-HxCDD							NO		0.0950		933			1089			
6	1234678-HpCDD	3.63e2	3.32e2	6.95e2	40.03	1.000	1.09	NO	0.294	0.237	5.98e3	1226	4.9	4.83e3	1569	3.1	bd	MM
7	OCDD	2.37e3	2.76e3	5.13e3	44.20	1.000	0.86	NO	2.956	0.389	2.37e4	946	25.1	2.87e4	1296	22.2	MM	bd
8	2378-TCDF							NO		0.119		797			2286			
9	12378-PeCDF							NO		0.0651		1007			1711			
10	23478-PeCDF							NO		0.0569		1007			1711			
11	123478-HxCDF							NO		0.0464		757			833			
12	123678-HxCDF							NO		0.0479		757			833			
13	234678-HxCDF							NO		0.0487		757			833			
14	123789-HxCDF							NO		0.0717		757			833			
15	1234678-HpCDF	9.98e1	1.24e2	2.24e2	38.83	1.001	0.80	YES	0.063	0.0756	2.04e3	688	3.0	1.85e3	858	2.2	MM	MM
16	1234789-HpCDF							NO		0.109		688			858			
17	OCDF							NO		0.305		835			1215			
18	13C-2378-TCDD	2.73e5	3.49e5	6.22e5	31.22	1.017	0.78	NO	71.050	0.163	4.30e6	4893	878.9	5.50e6	2897	1899.0	bd	bd
19	13C-12378-PeCDD	2.64e5	1.63e5	4.27e5	34.09	1.111	1.62	NO	78.841	0.313	5.17e6	4067	1270.8	3.35e6	5186	645.9	bd	bb
20	13C-123478-HxCDD	1.72e5	1.39e5	3.11e5	36.67	0.991	1.23	NO	63.318	0.387	3.33e6	5885	565.3	2.74e6	4014	683.5	bd	bd
21	13C-123678-HxCDD	2.47e5	2.01e5	4.47e5	36.75	0.993	1.23	NO	70.340	0.299	3.53e6	5885	599.0	2.88e6	4014	716.4	dd	dd
22	13C-1234678-HpCDD	1.30e5	1.26e5	2.56e5	40.02	1.082	1.03	NO	64.298	0.440	1.62e6	4188	386.4	1.57e6	4917	319.0	bd	bd
23	13C-OCDD	1.86e5	2.10e5	3.96e5	44.20	1.195	0.89	NO	109.762	0.653	1.55e6	5918	261.3	1.81e6	6325	285.9	bd	bd
24	13C-2378-TCDF	2.87e5	3.81e5	6.68e5	30.47	0.993	0.75	NO	67.225	0.213	3.23e6	7630	423.7	4.40e6	3924	1120.5	bb	bb
25	13C-12378-PeCDF	3.64e5	2.35e5	5.99e5	33.29	1.085	1.55	NO	81.971	0.310	7.26e6	6599	1100.3	4.74e6	5785	819.9	bb	bd
26	13C-23478-PeCDF	3.37e5	2.27e5	5.65e5	33.90	1.104	1.48	NO	75.880	0.305	7.46e6	6599	1130.8	4.85e6	5785	838.5	db	bd
27	13C-123478-HxCDF	1.31e5	2.50e5	3.81e5	35.96	0.972	0.52	NO	66.746	0.491	2.66e6	5987	444.7	5.24e6	8575	611.2	bd	bd
28	13C-123678-HxCDF	1.79e5	3.42e5	5.21e5	36.06	0.975	0.52	NO	72.733	0.391	2.71e6	5987	453.1	5.20e6	8575	606.1	dd	dd
29	13C-234678-HxCDF	1.48e5	2.85e5	4.33e5	36.53	0.988	0.52	NO	72.808	0.471	2.43e6	5987	406.6	4.70e6	8575	548.4	bd	bd
30	13C-123789-HxCDF	1.30e5	2.44e5	3.75e5	37.31	1.008	0.53	NO	71.978	0.538	1.84e6	5987	307.9	3.44e6	8575	401.6	bd	bd
31	13C-1234678-HpCDF	9.24e4	2.14e5	3.06e5	38.78	1.048	0.43	NO	64.139	0.372	1.34e6	4200	318.4	2.91e6	5035	578.5	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Friday, April 17, 2020 1:30:46 PM Eastern Standard Time
 Printed: Friday, April 17, 2020 1:31:26 PM Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	7.52e4	1.76e5	2.51e5	40.68	1.100	0.43	NO	70.197	0.497	8.94e5	4200	212.9	2.04e6	5035	404.9	bd	bd
33	13C-1234-TCDD	3.40e5	4.36e5	7.76e5	30.69	0.000	0.78	NO	100.000	0.184	4.64e6	4893	947.6	5.92e6	2897	2044.2	bb	bb
34	13C-123789-HxCDD	3.35e5	2.76e5	6.11e5	36.99	0.000	1.21	NO	100.000	0.312	4.35e6	5885	739.9	3.60e6	4014	897.7	dd	dd
35	37Cl-2378-TCDD	7.58e4		7.58e4	31.23	1.018			9.238	0.0454	1.17e6	2031	577.5				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Friday, April 17, 2020 1:30:46 PM Eastern Standard Time
Printed: Friday, April 17, 2020 1:31:26 PM Eastern Standard Time

Method: Untitled 16 Apr 2020 09:09:51
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	6.90e1	8.35e1	1.53e2	26.31	0.83	NO	0.027	0.0913	4.63e3	2139	2.2	1.15e3	1055	1.1	bb	bb
2	Total-tetradioxins	1.27e2	5.04e1	1.77e2	27.78	2.52	YES	0.032	0.0913	3.74e3	2139	1.7	2.82e3	1055	2.7	bb	bb
3	Total-tetradioxins	6.45e1	7.45e1	1.39e2	28.87	0.87	NO	0.025	0.0913	2.99e3	2139	1.4	2.99e3	1055	2.8	bb	bb
4	Total-tetradioxins	9.12e1	5.75e1	1.49e2	29.23	1.59	YES	0.027	0.0913	3.18e3	2139	1.5	1.33e3	1055	1.3	bb	bb
5	Total-tetradioxins	5.37e1	5.61e1	1.10e2	31.06	0.96	YES	0.020	0.0913	3.22e3	2139	1.5	1.32e3	1055	1.3	bb	bb
6	Total-tetradioxins	7.20e1	5.06e1	1.23e2	31.53	1.42	YES	0.022	0.0913	2.57e3	2139	1.2	1.11e3	1055	1.0	bb	bb

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PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	6.13e1	8.28e1	1.44e2	35.46	0.74	YES	0.044	0.0928	1.51e3	933	1.6	2.52e3	1089	2.3	bb	bb
2	Total-hexadioxins	6.47e1	5.88e1	1.24e2	36.13	1.10	NO	0.037	0.0928	2.95e3	933	3.2	1.24e3	1089	1.1	bb	bb

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	5.49e2	4.32e2	9.82e2	39.12	1.27	YES	0.415	0.237	9.63e3	1226	7.9	9.87e3	1569	6.3	MM	bd
2	Total-heptadioxins	3.26e1	8.21e1	1.15e2	39.20	0.40	YES	0.049	0.237	2.71e3	1226	2.2	4.11e3	1569	2.6	MM	dd
3	Total-heptadioxins	2.84e1	5.83e1	8.67e1	39.24	0.49	YES	0.037	0.237	1.20e3	1226	1.0	2.08e3	1569	1.3	MM	db
4	1234678-HpCDD	3.63e2	3.32e2	6.95e2	40.03	1.09	NO	0.294	0.237	5.98e3	1226	4.9	4.83e3	1569	3.1	bd	MM

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	7.62e1	7.24e1	1.49e2	25.97	1.05	YES	0.026	0.119	2.81e3	797	3.5	4.87e3	2286	2.1	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Friday, April 17, 2020 1:30:46 PM Eastern Standard Time
Printed: Friday, April 17, 2020 1:31:26 PM Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

PF1

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentaturans (F1)	5.40e1	1.14e2	1.68e2	26.12	0.47	YES	0.032	0.0597	9.29e2	799	1.2	2.49e3	1868	1.3	bd	bb
2	Total-pentaturans (F1)	5.57e1	5.39e1	1.10e2	29.97	1.03	YES	0.021	0.0597	1.43e3	799	1.8	1.93e3	1868	1.0	bb	bd

PF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HPF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

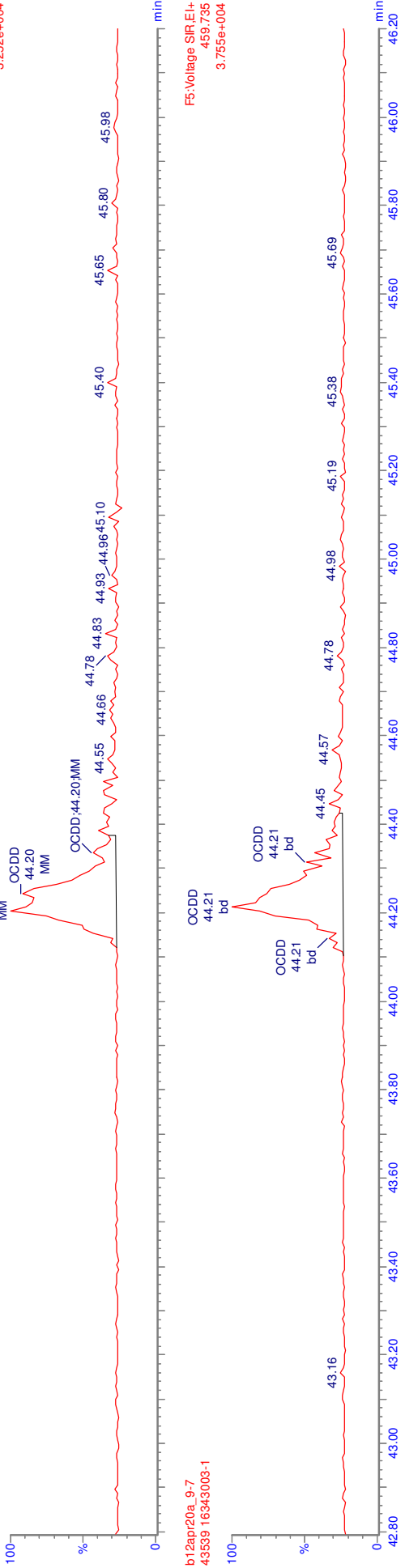
HPF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptaturans	1.71e2	1.46e2	3.17e2	39.30	1.17	NO	0.097	0.0906	4.45e3	688	6.5	3.48e3	858	4.1	MM	bb
2	1234678-HpCDF	9.98e1	1.24e2	2.24e2	38.83	0.80	YES	0.063	0.0756	2.04e3	688	3.0	1.85e3	858	2.2	MM	MM

MANUAL INTEGRATION
METHOD 8290
HRP763_1

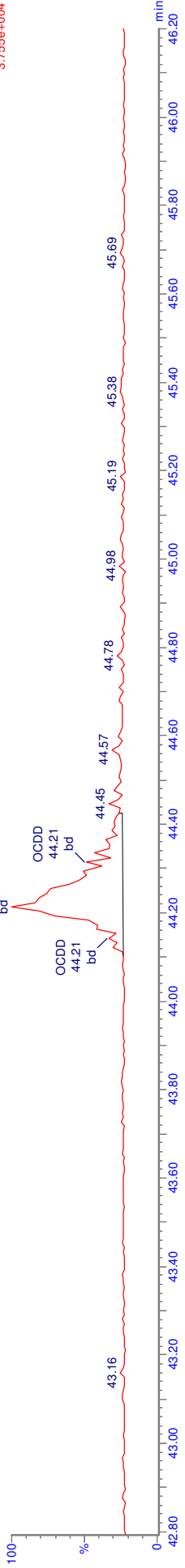
b12ap20a_9-7
43539 16343008-1

F5:Voltage SIR.EI+
457.738
3.252e+004



b12ap20a_9-7
43539 16343008-1

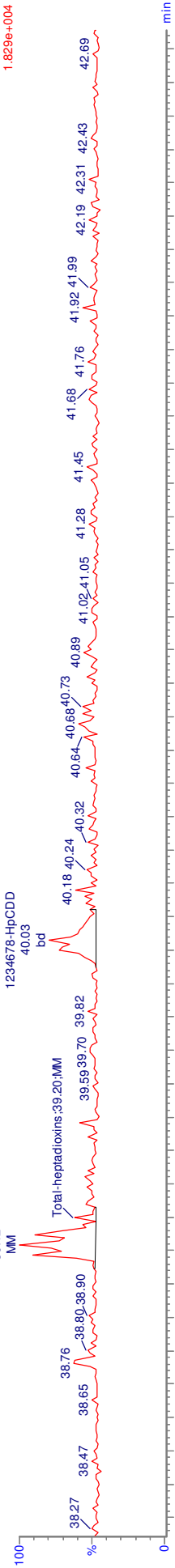
F5:Voltage SIR.EI+
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3.755e+004



MANUAL INTEGRATION
 METHOD 8290
 HRP763_1

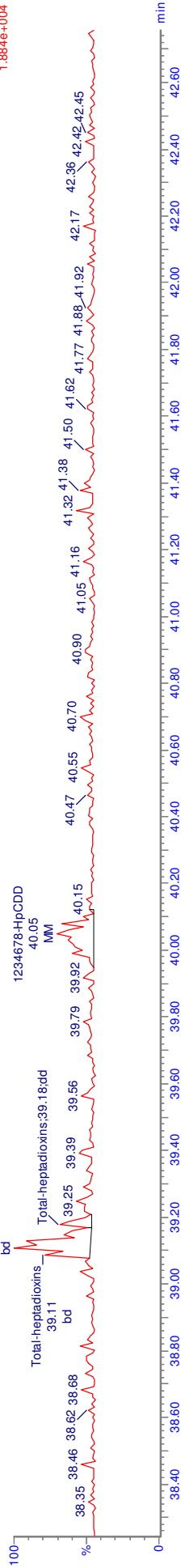
b12ap20a_9-7
 43539 16343008-1

F4:Voltage SIR.EI+
 423.777
 1.829e+004

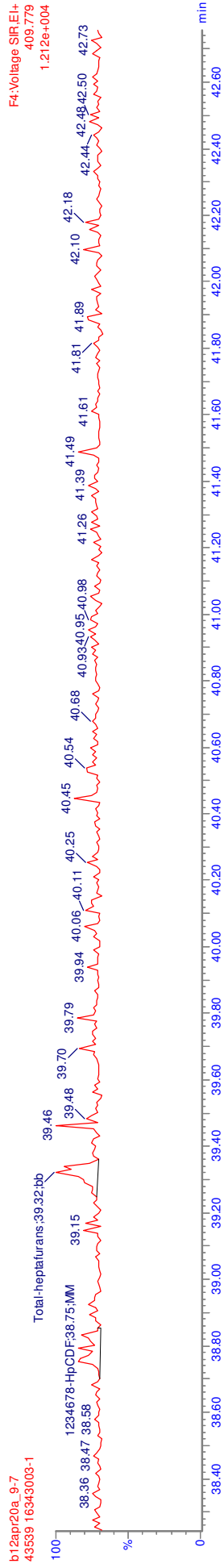
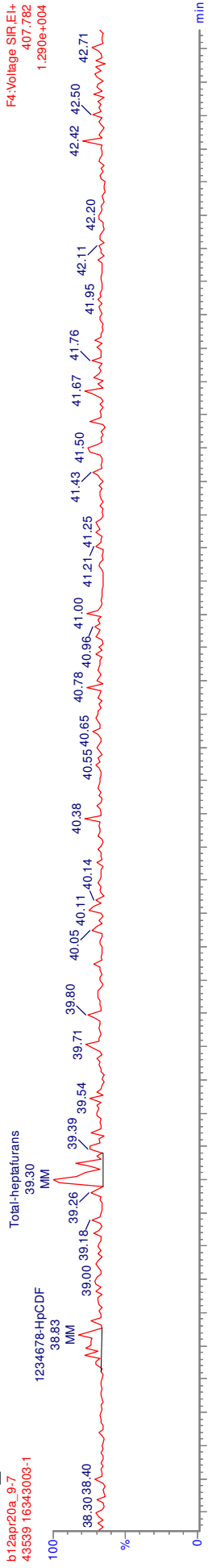


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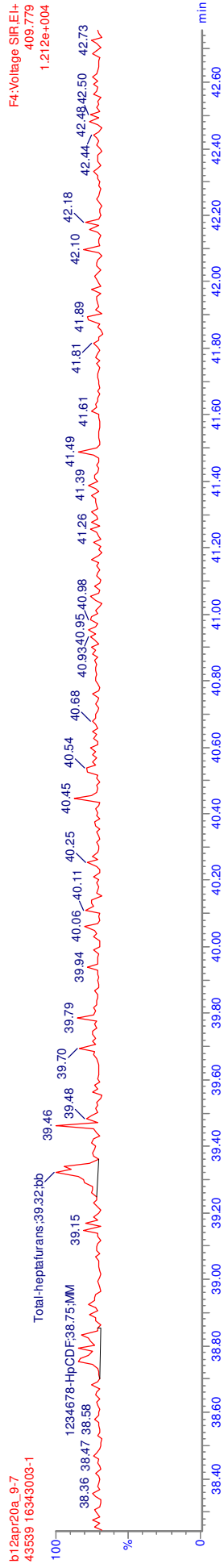
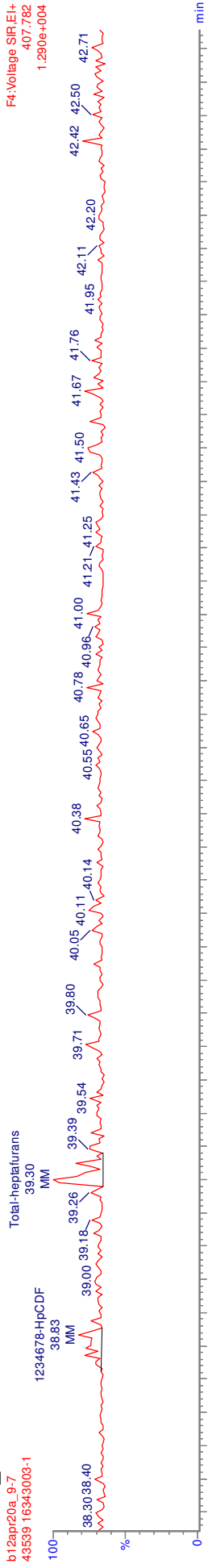
F4:Voltage SIR.EI+
 425.774
 1.884e+004



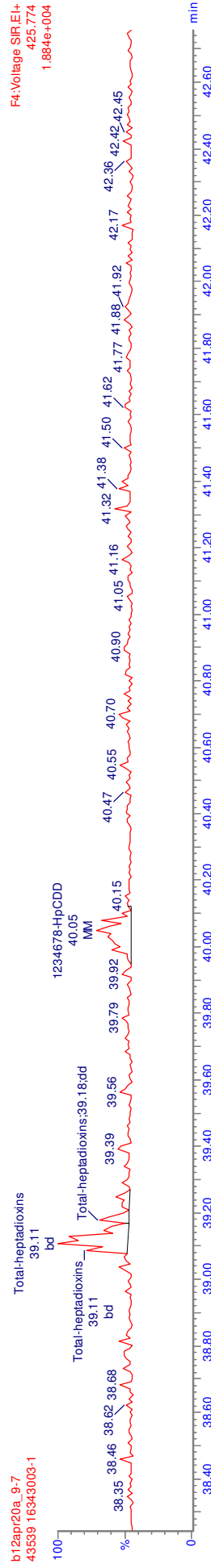
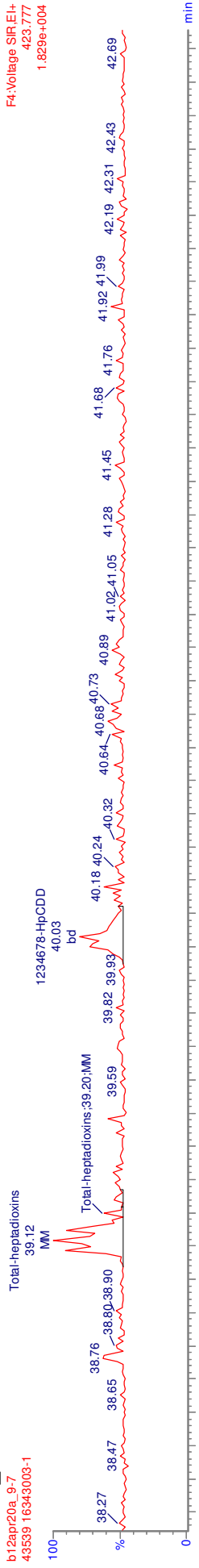
MANUAL INTEGRATION
 METHOD 8290
 HRP763_1



MANUAL INTEGRATION
 METHOD 8290
 HRP763_1



MANUAL INTEGRATION
 METHOD 1613
 HRP763_1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

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Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

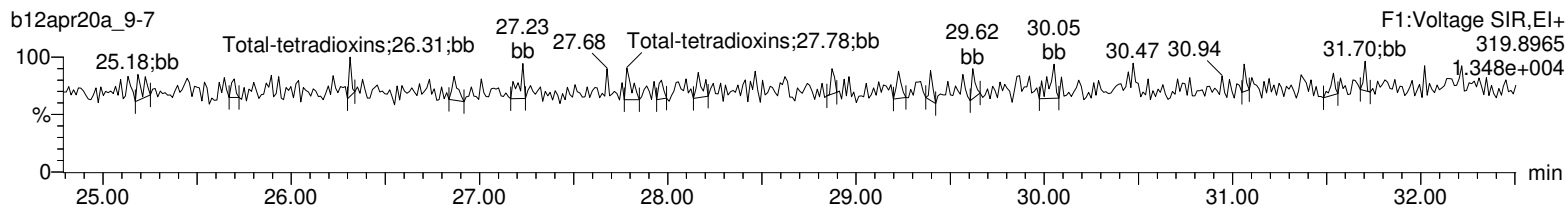
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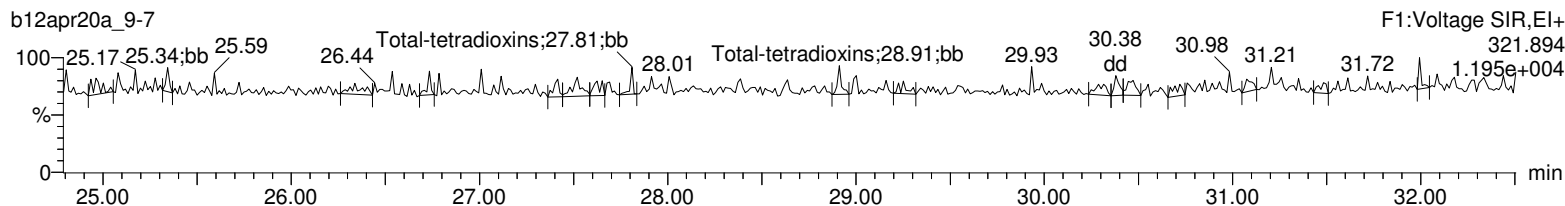
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Task: HRP763_1, User: MLL

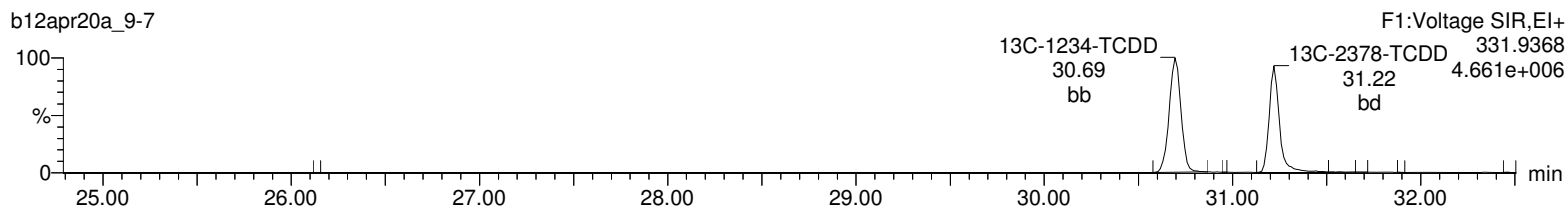
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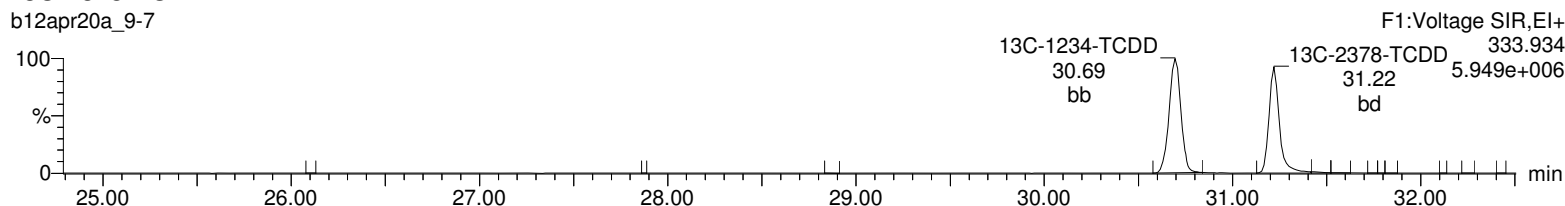
Total-tetradoxins



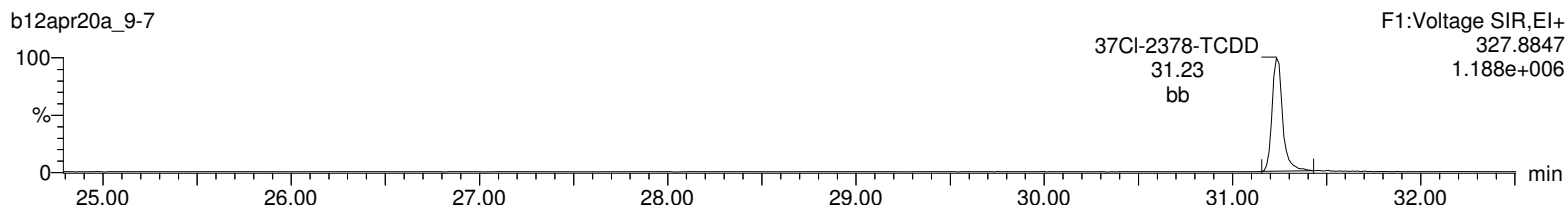
13C-2378-TCDD



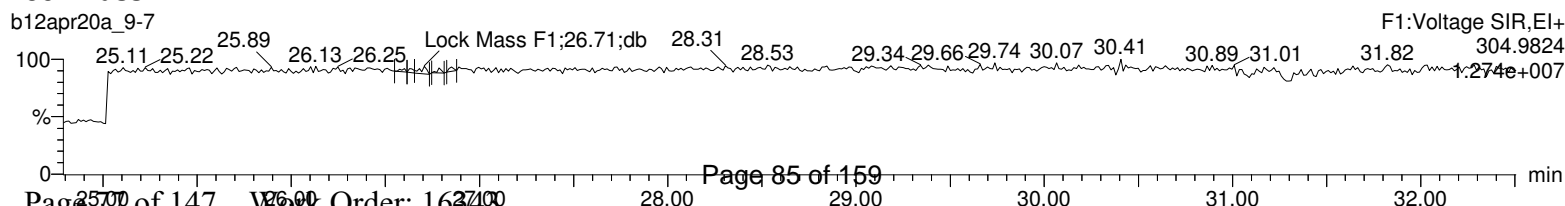
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

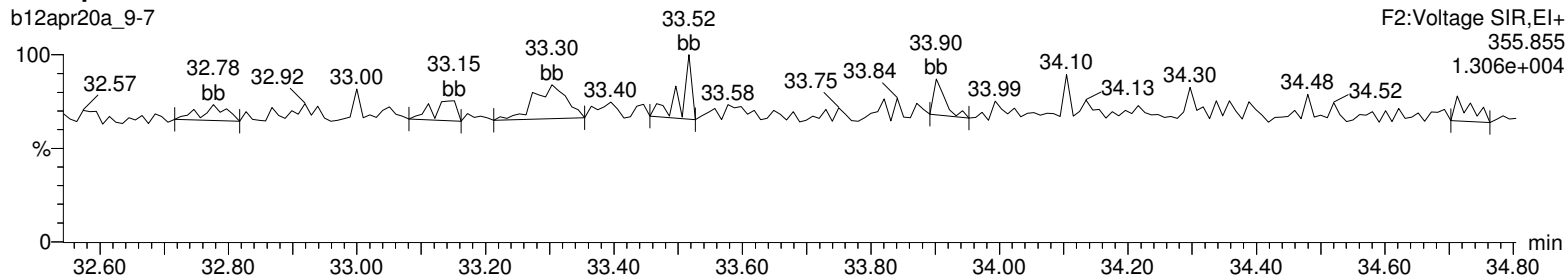
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Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

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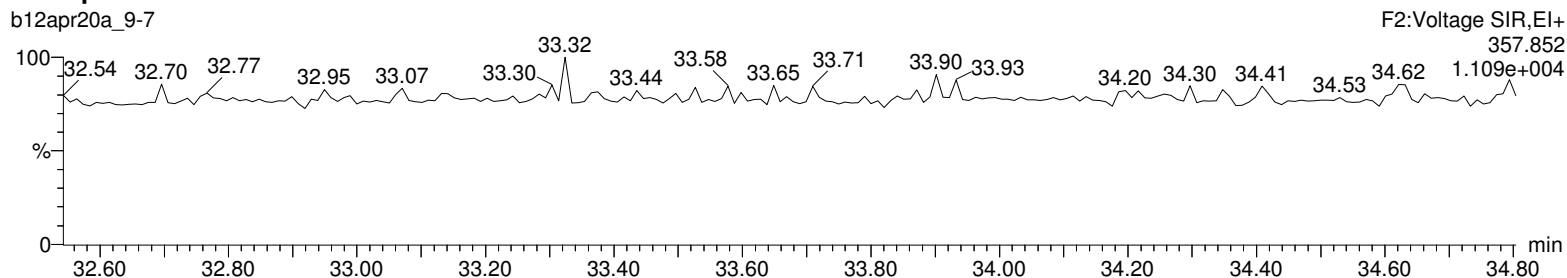
Total-pentadioxins

b12apr20a_9-7



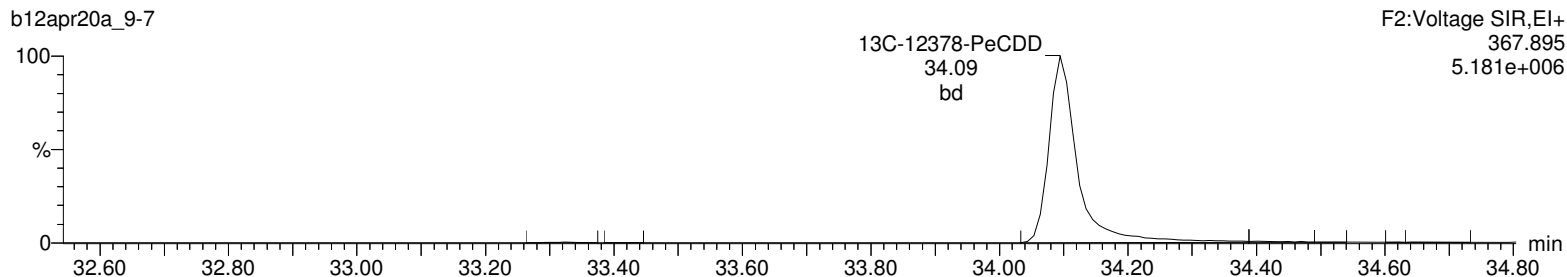
Total-pentadioxins

b12apr20a_9-7



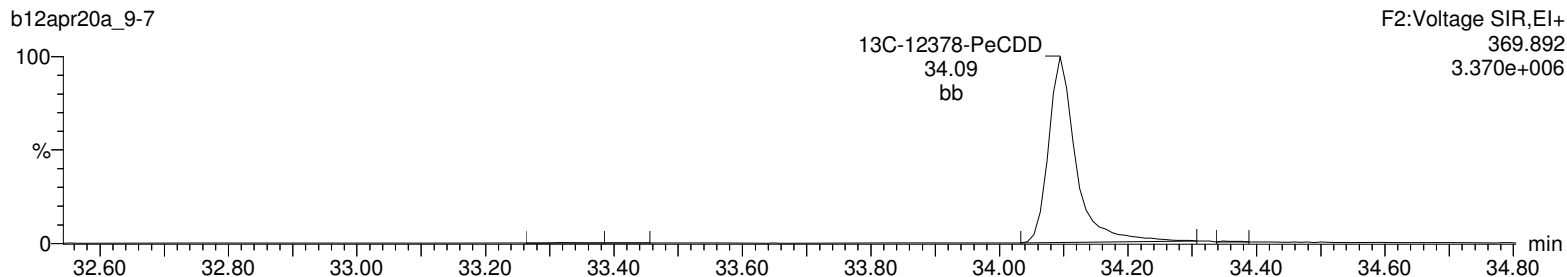
13C-12378-PeCDD

b12apr20a_9-7



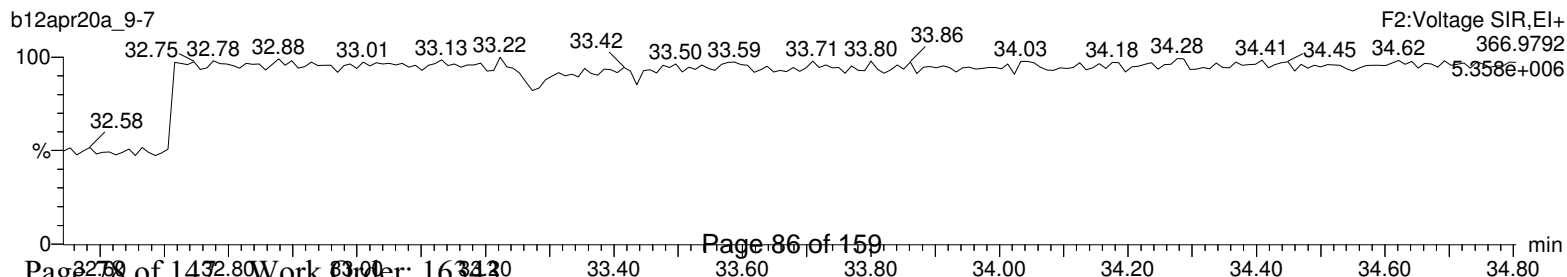
13C-12378-PeCDD

b12apr20a_9-7



Lock Mass F2

b12apr20a_9-7



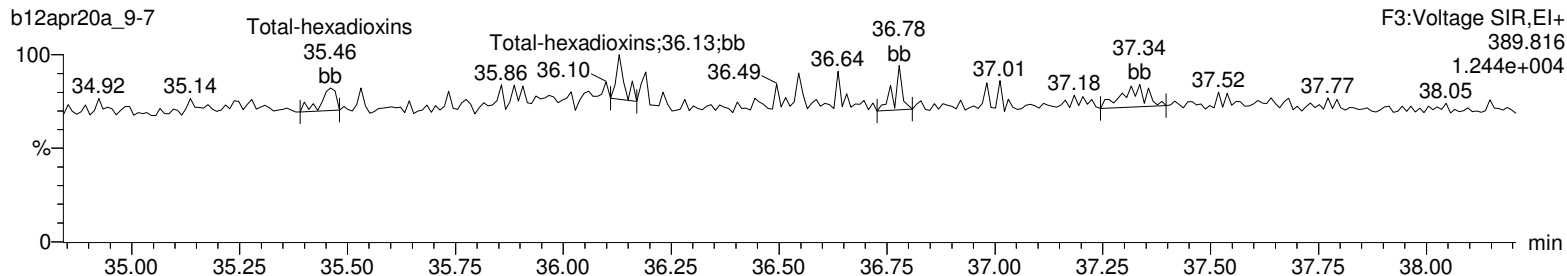
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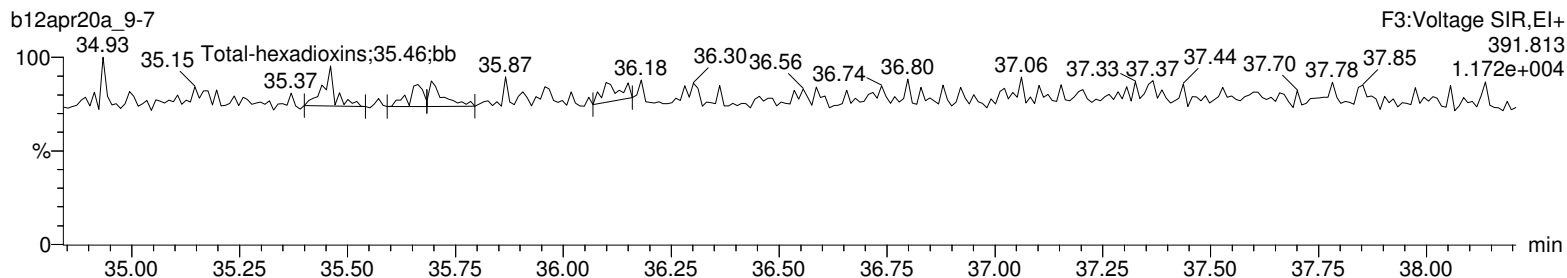
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Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

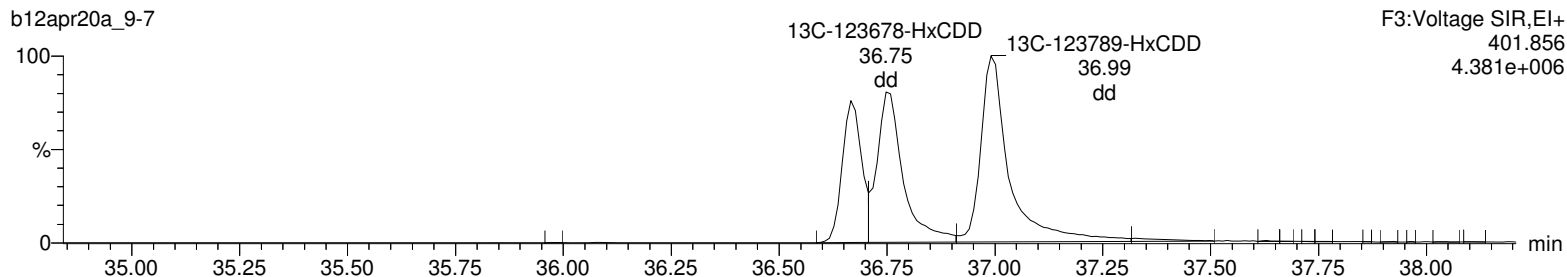
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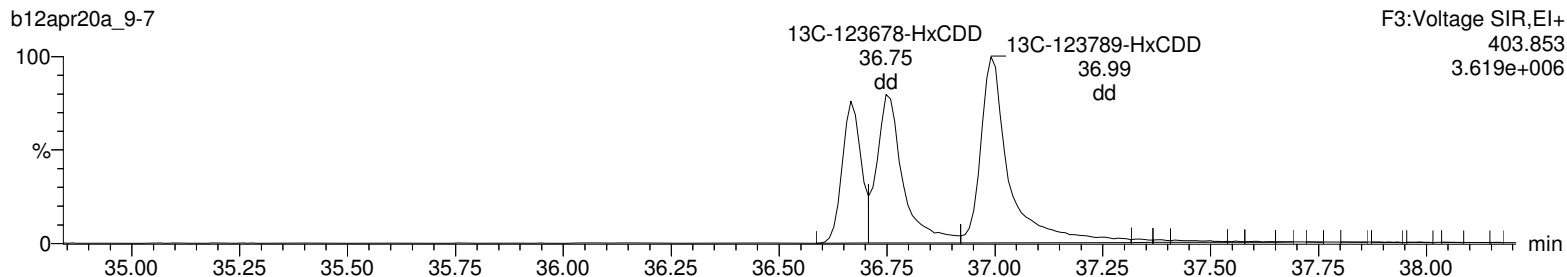
Total-hexadioxins



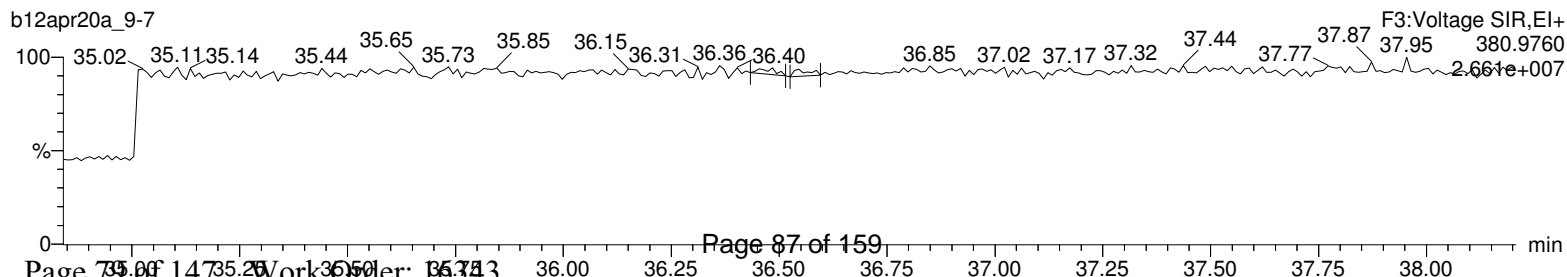
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



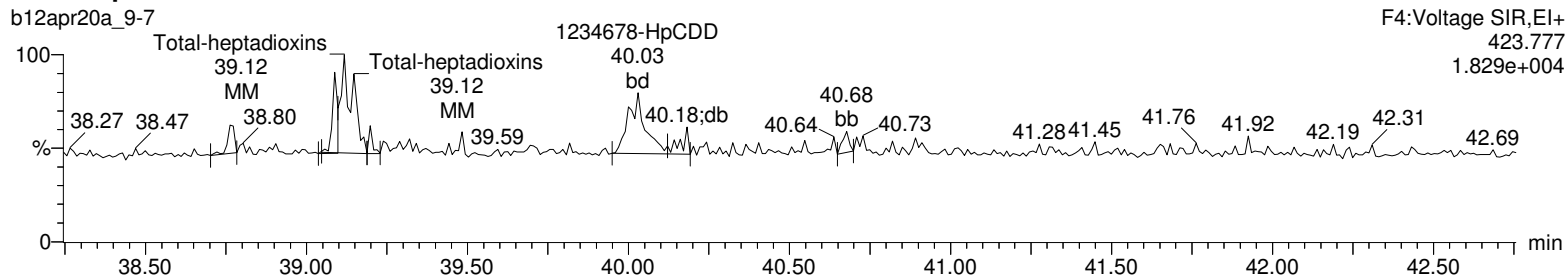
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 14:22:27 Eastern Standard Time

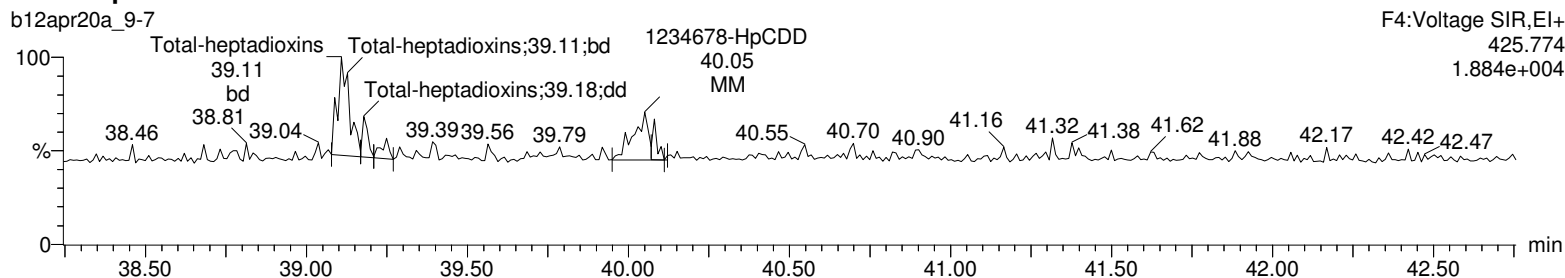
Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

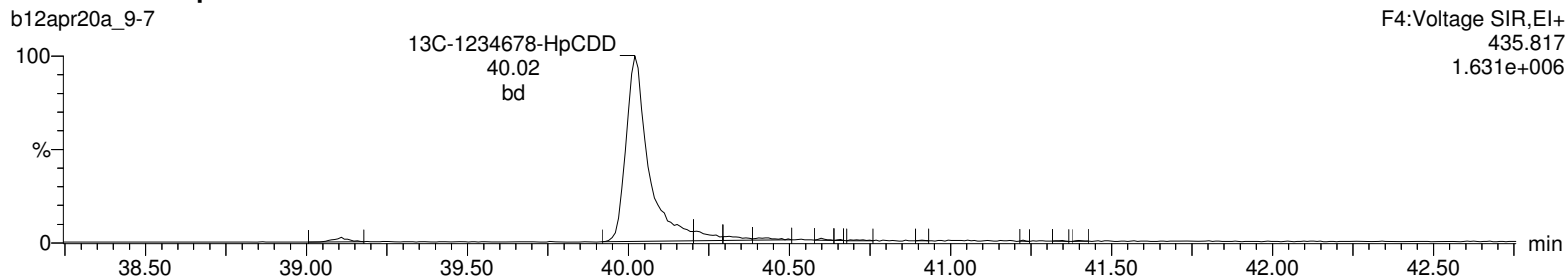
Total-heptadioxins



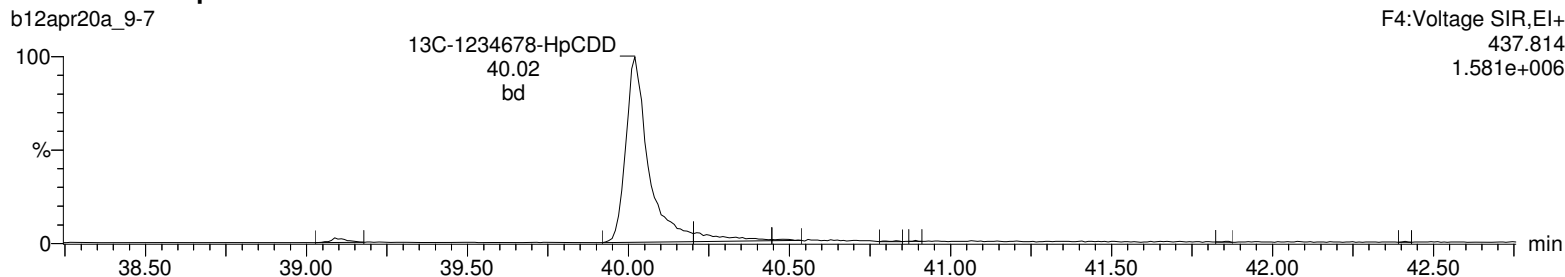
Total-heptadioxins



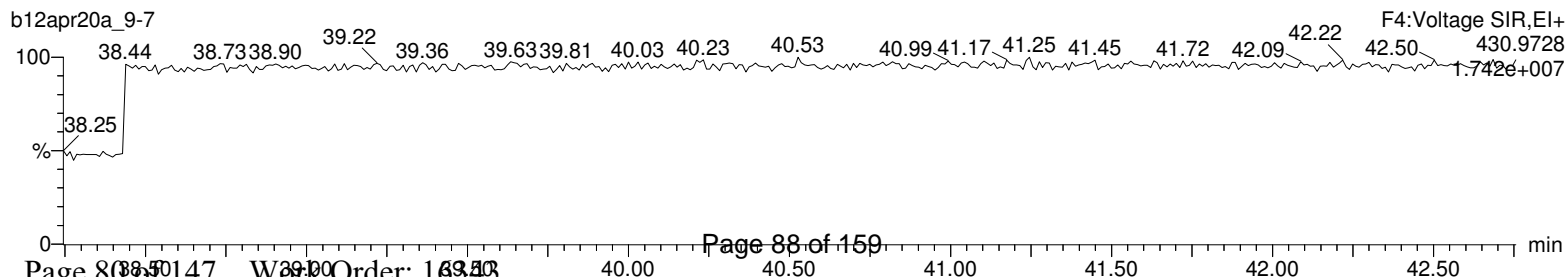
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 14:22:27 Eastern Standard Time

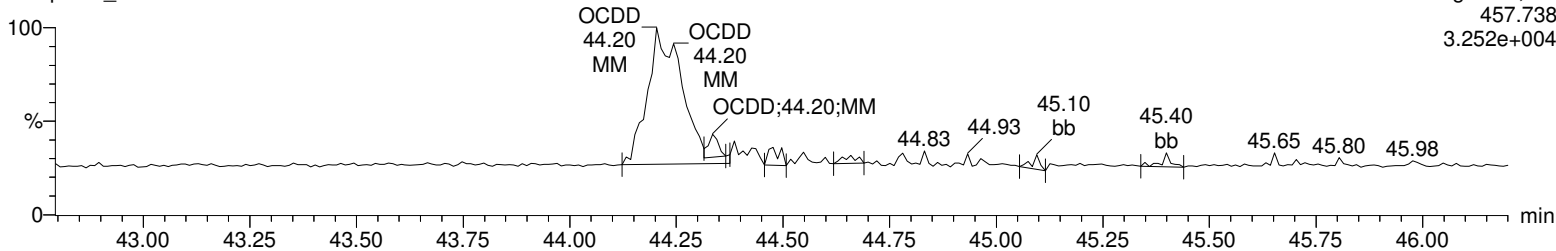
Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

OCDD

b12apr20a_9-7

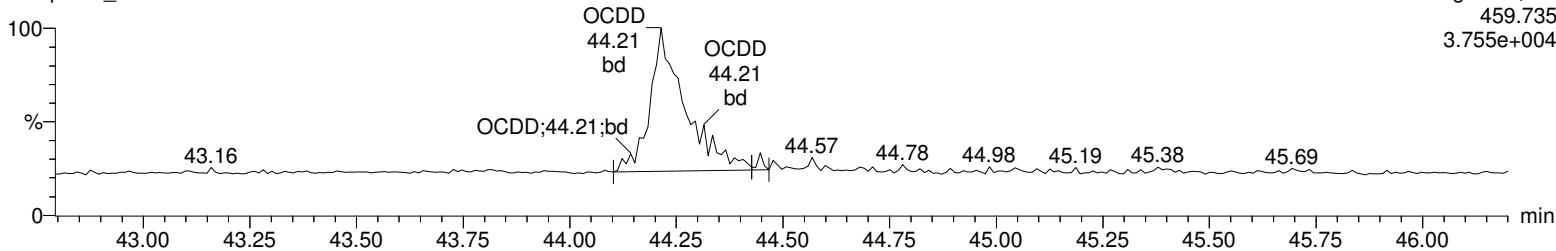
F5:Voltage SIR,EI+
457.738
3.252e+004



OCDD

b12apr20a_9-7

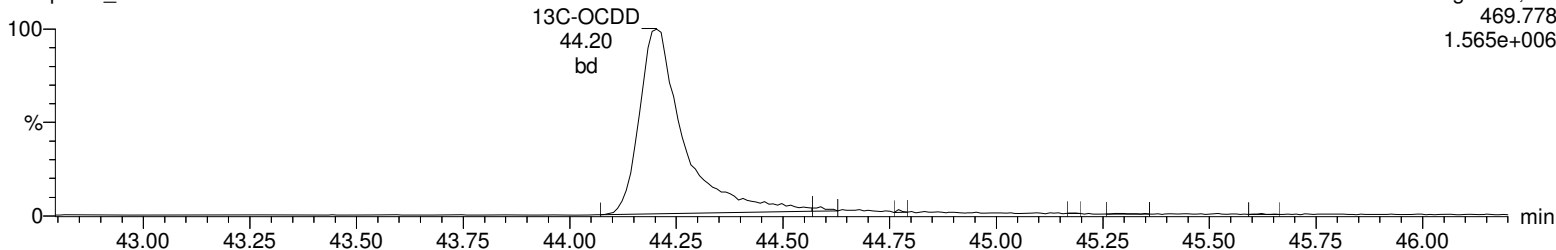
F5:Voltage SIR,EI+
459.735
3.755e+004



13C-OCDD

b12apr20a_9-7

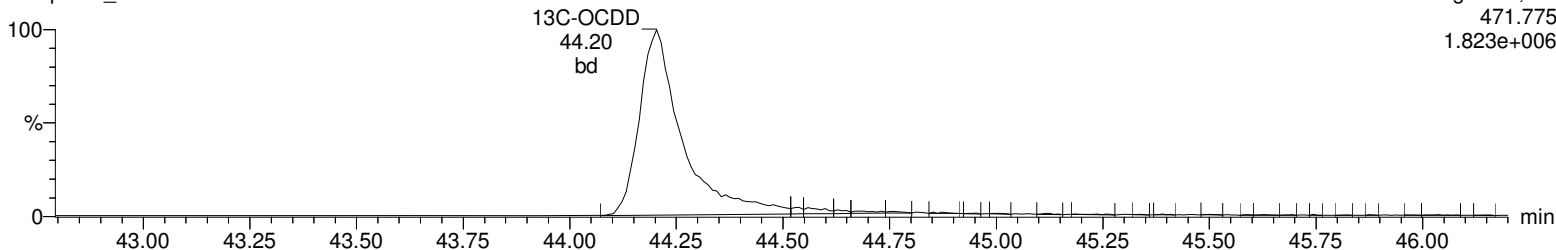
F5:Voltage SIR,EI+
469.778
1.565e+006



13C-OCDD

b12apr20a_9-7

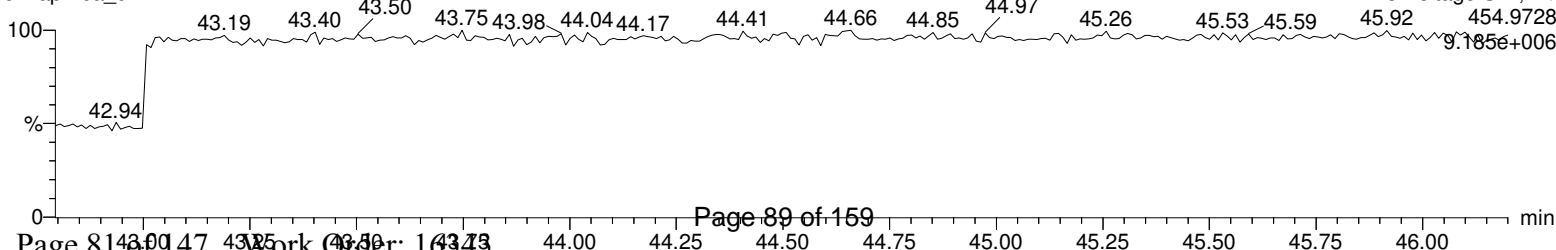
F5:Voltage SIR,EI+
471.775
1.823e+006



Lock Mass F5

b12apr20a_9-7

F5:Voltage SIR,EI+
454.9728
9.185e+006



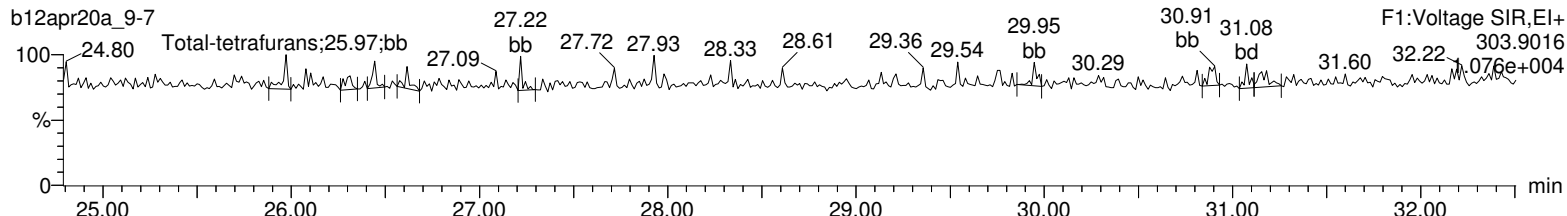
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 14:22:27 Eastern Standard Time

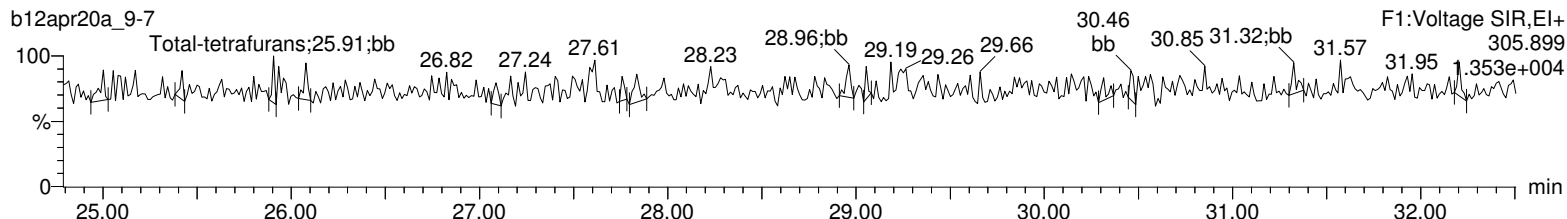
Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

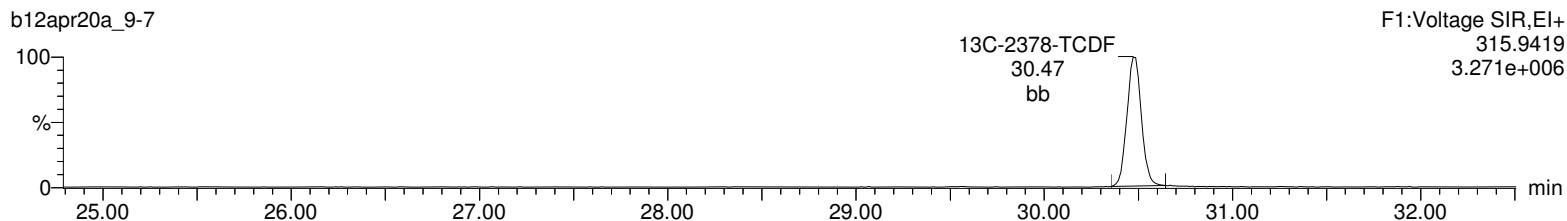
Total-tetrafurans



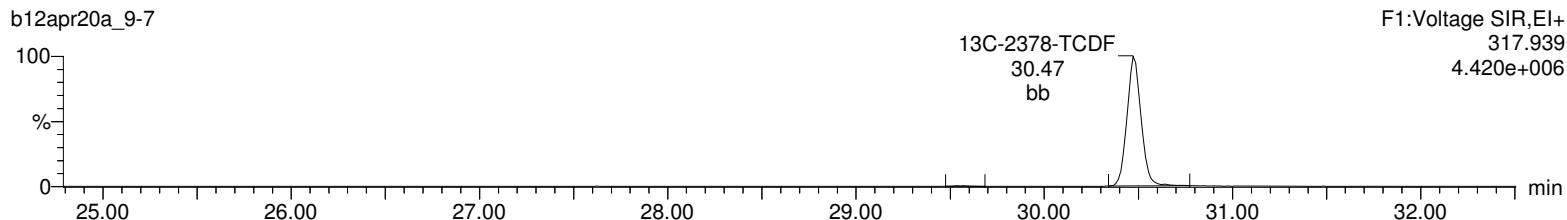
Total-tetrafurans



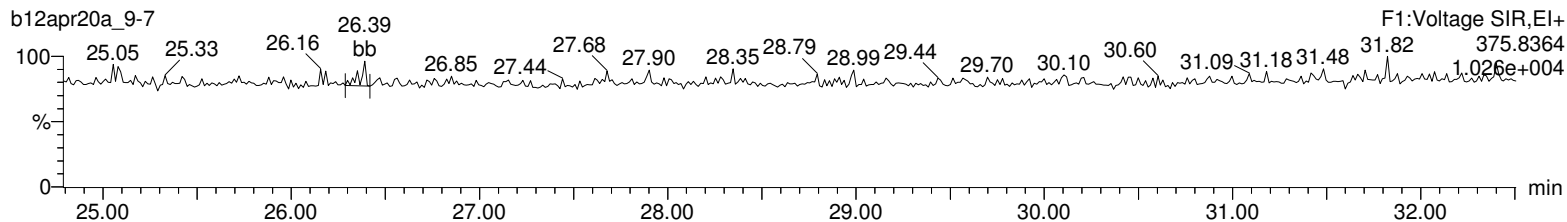
13C-2378-TCDF



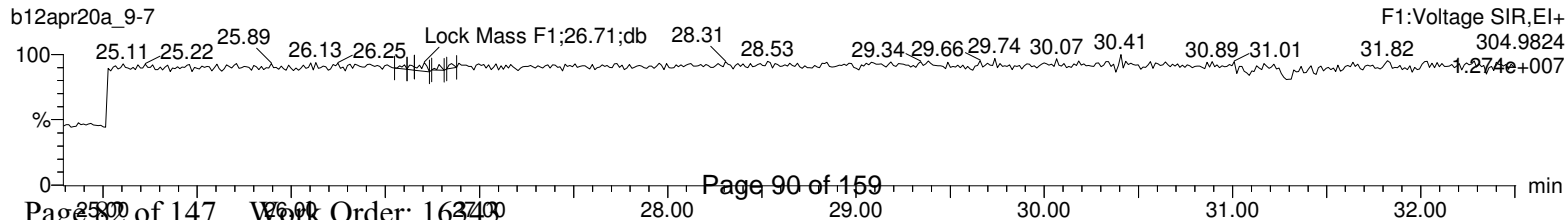
13C-2378-TCDF



HxDPE



Lock Mass F1



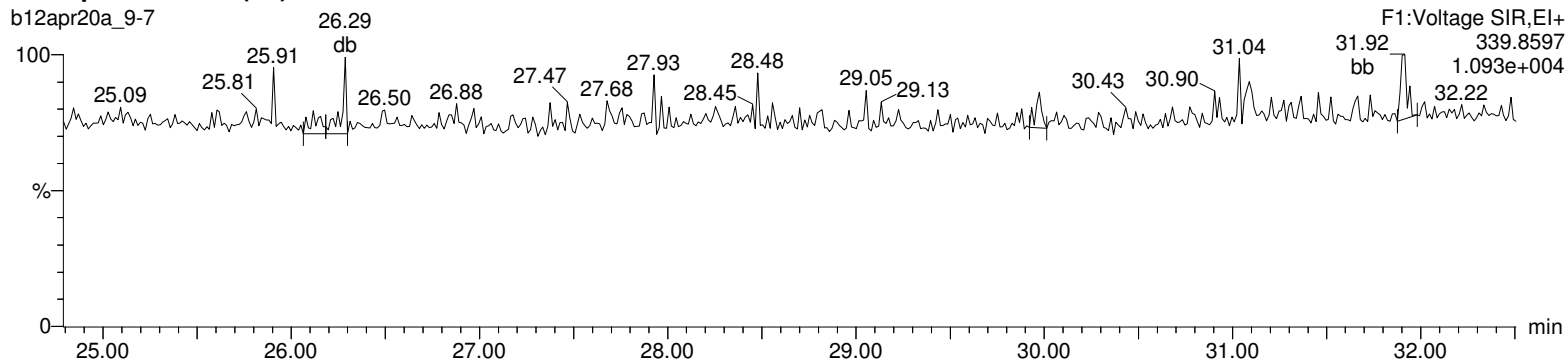
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 14:22:27 Eastern Standard Time

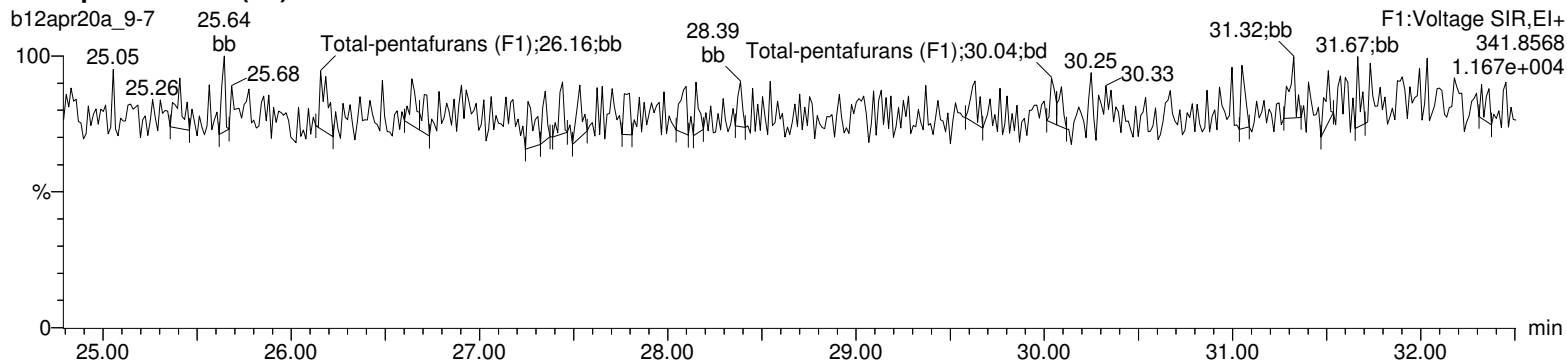
Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

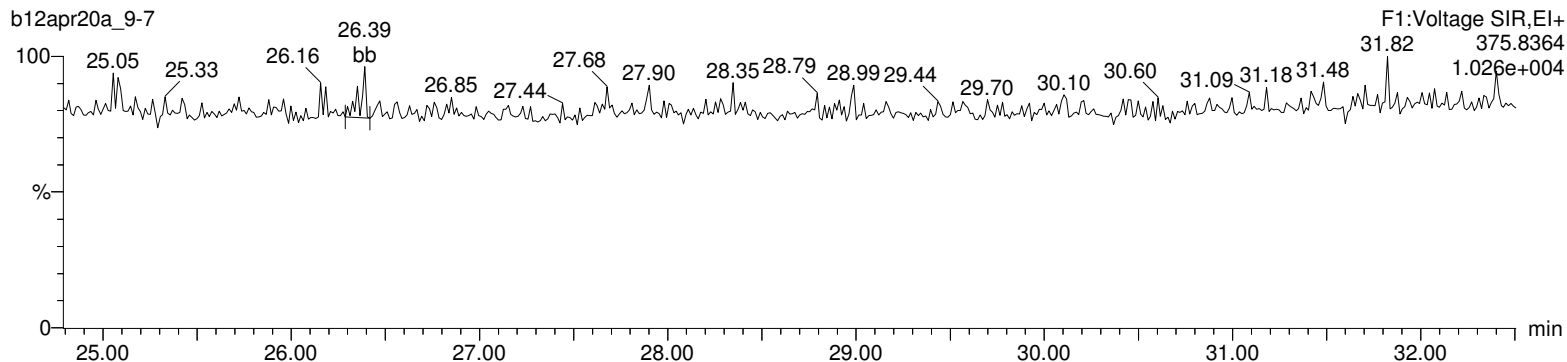
Total-pentafurans (F1)



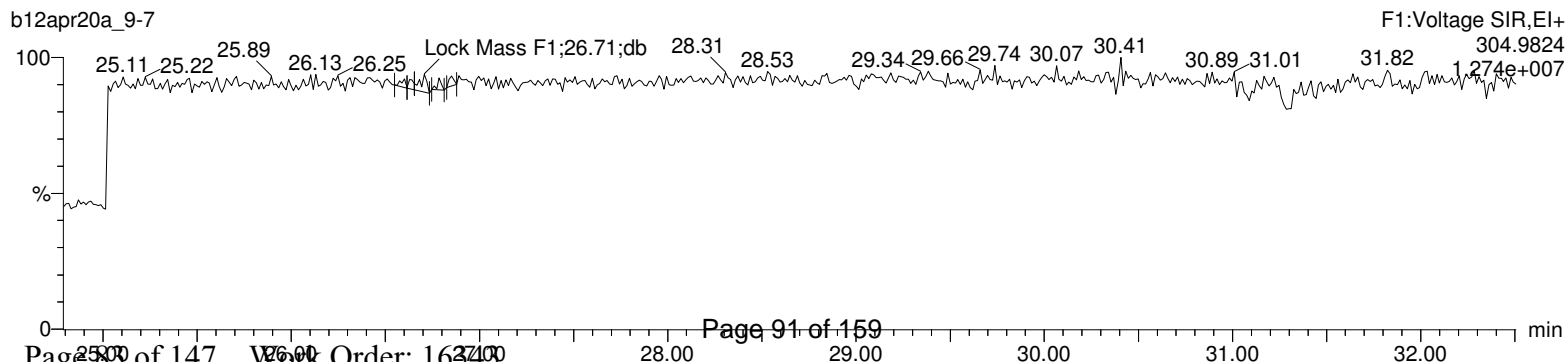
Total-pentafurans (F1)



HxDPE



Lock Mass F1



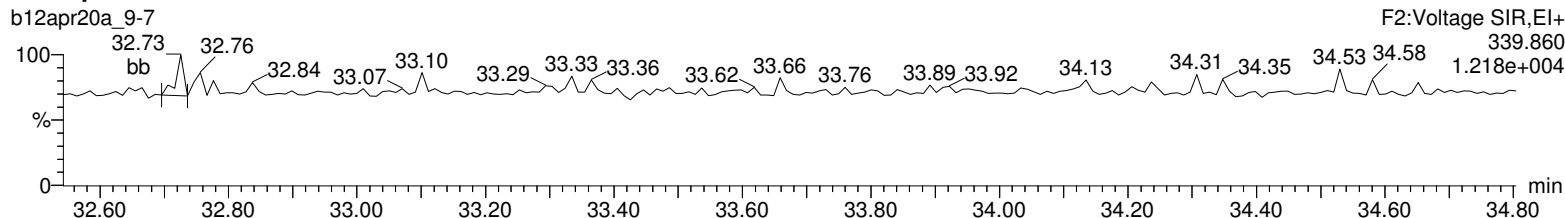
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 14:22:27 Eastern Standard Time

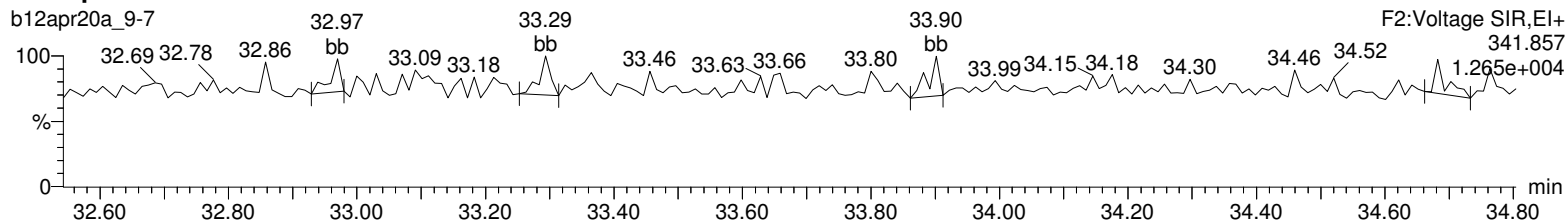
Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

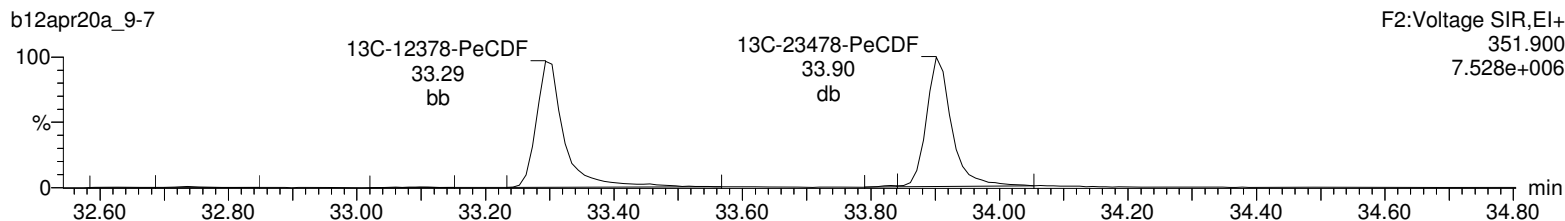
Total-pentafurans



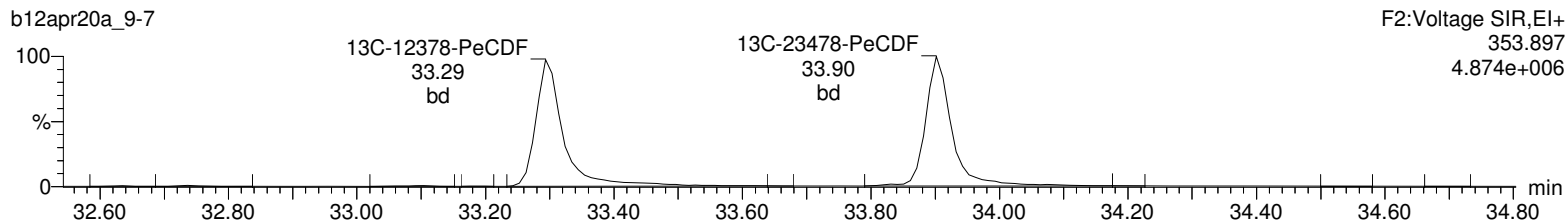
Total-pentafurans



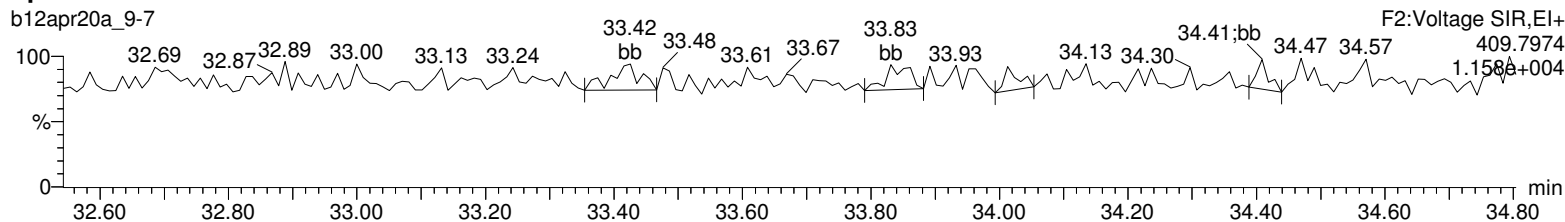
13C-12378-PeCDF



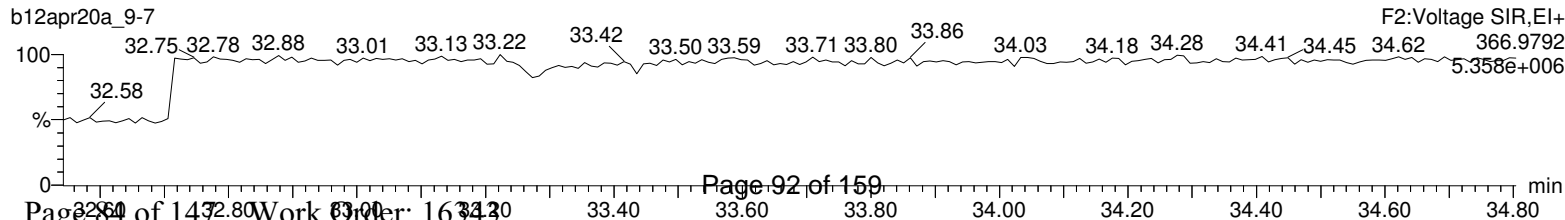
13C-12378-PeCDF



HpDPE



Lock Mass F2



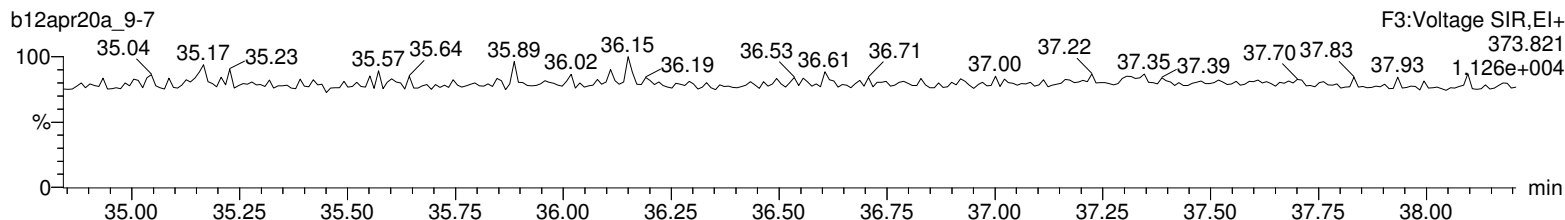
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 14:22:27 Eastern Standard Time

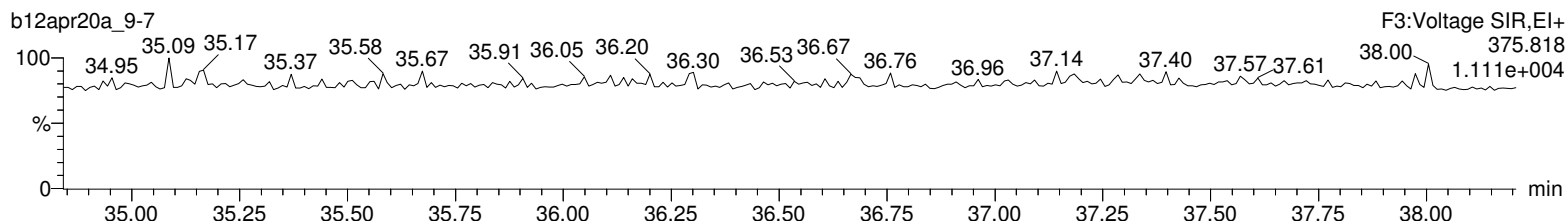
Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

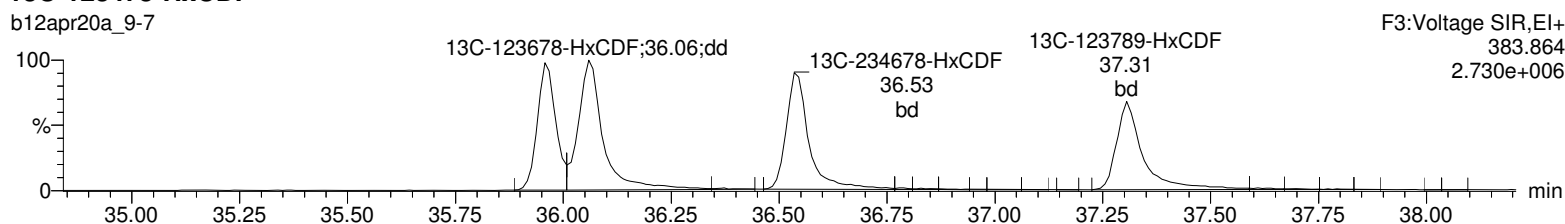
Total-hexafurans



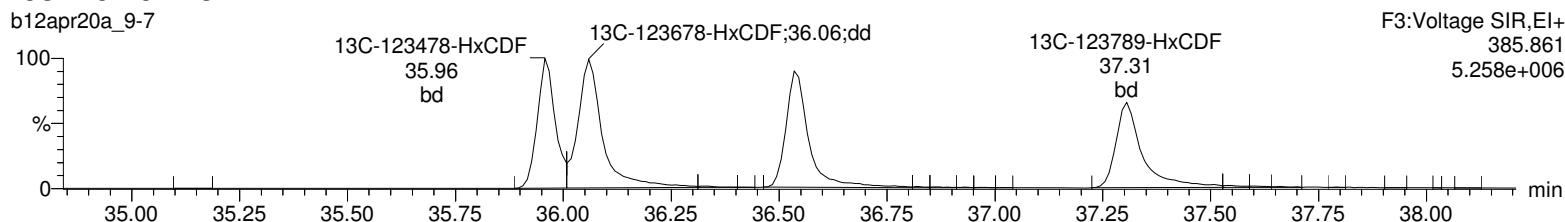
Total-hexafurans



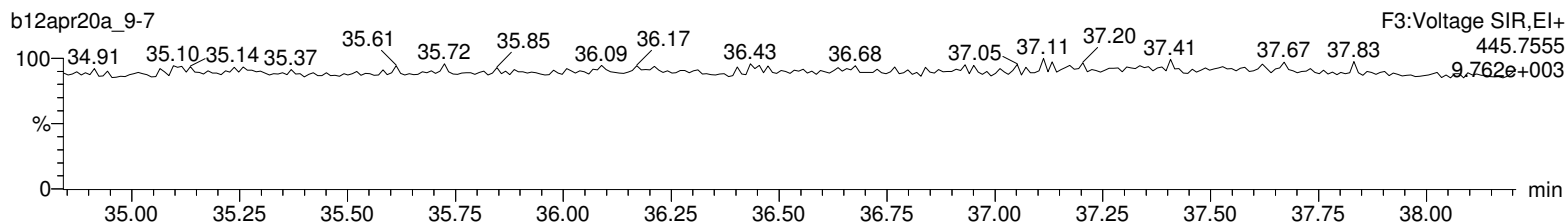
13C-123478-HxCDF



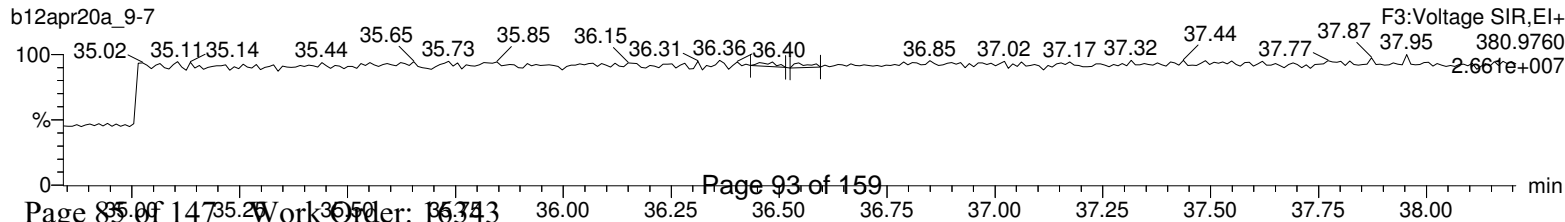
13C-123478-HxCDF



OcDPE



Lock Mass F3



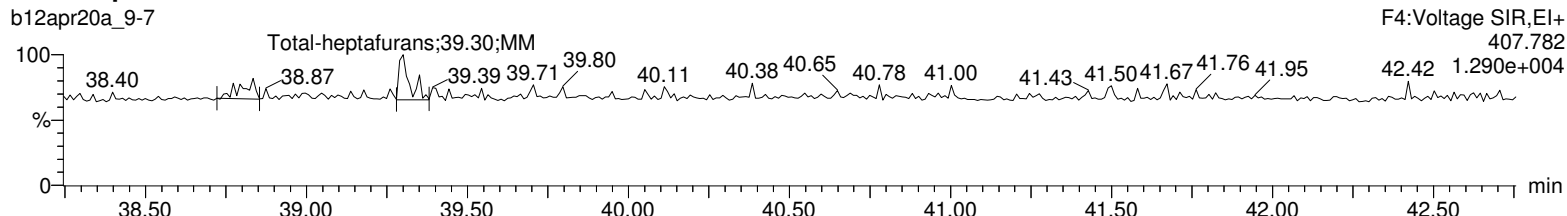
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 14:22:27 Eastern Standard Time

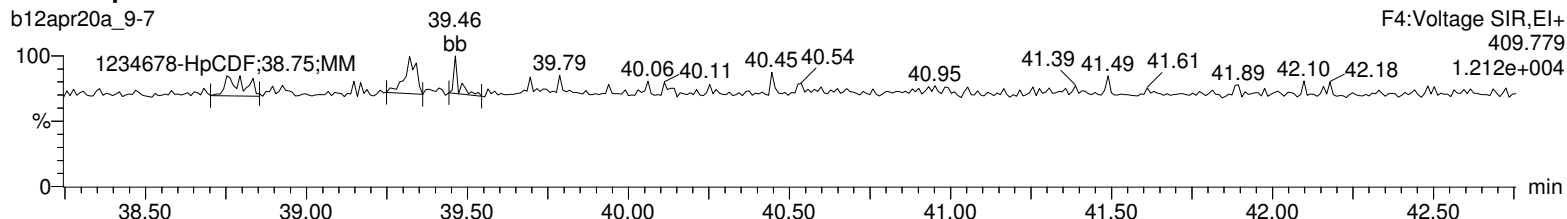
Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

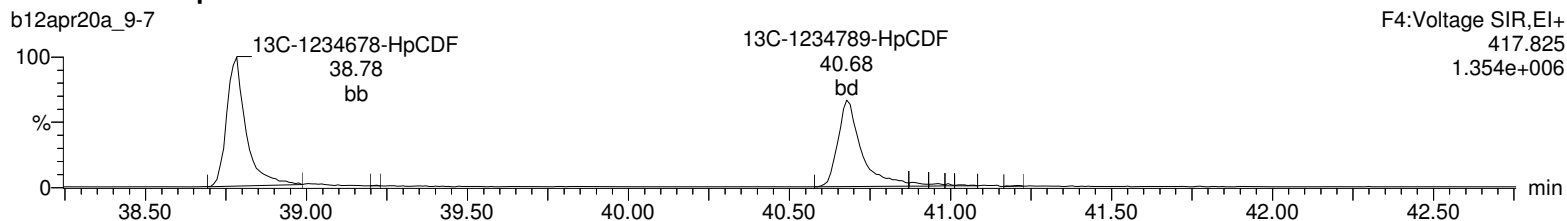
Total-heptafurans



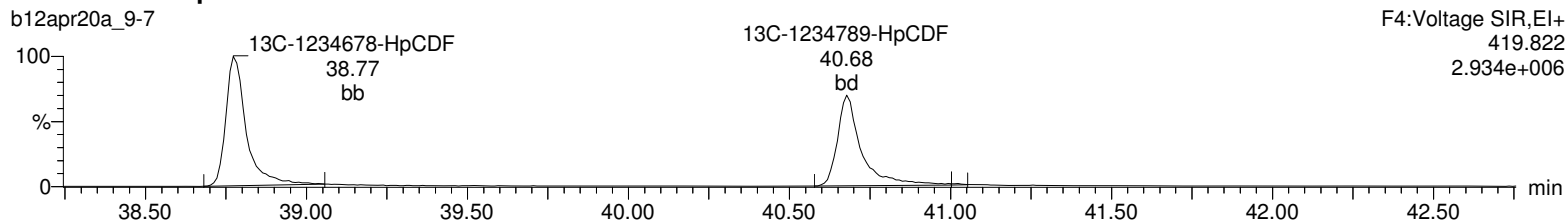
Total-heptafurans



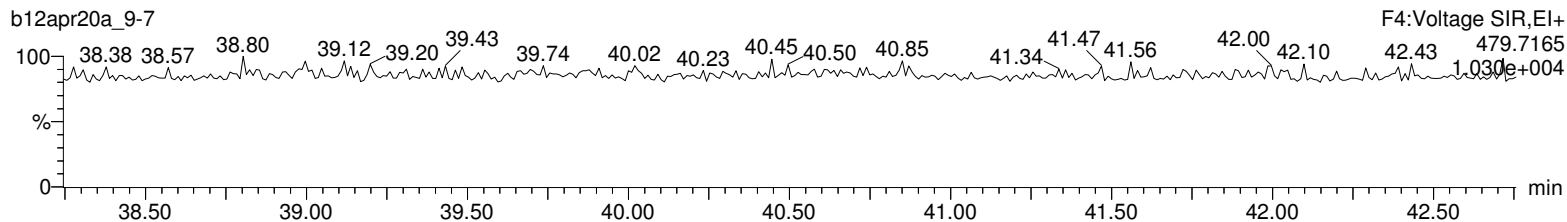
13C-1234678-HpCDF



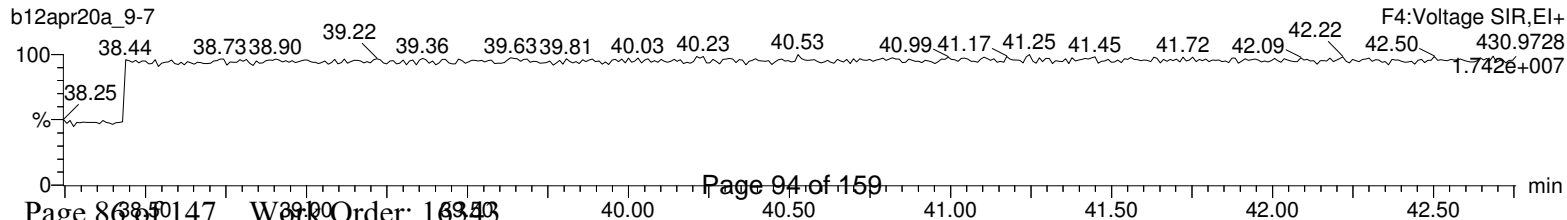
13C-1234678-HpCDF



NoDPE



Lock Mass F4



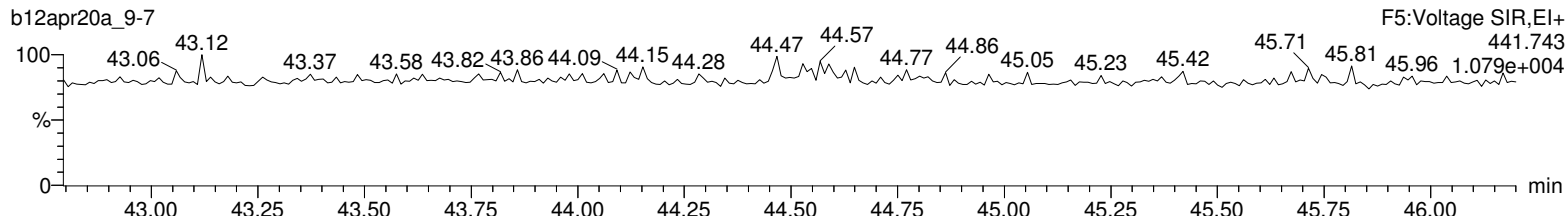
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 14:22:27 Eastern Standard Time

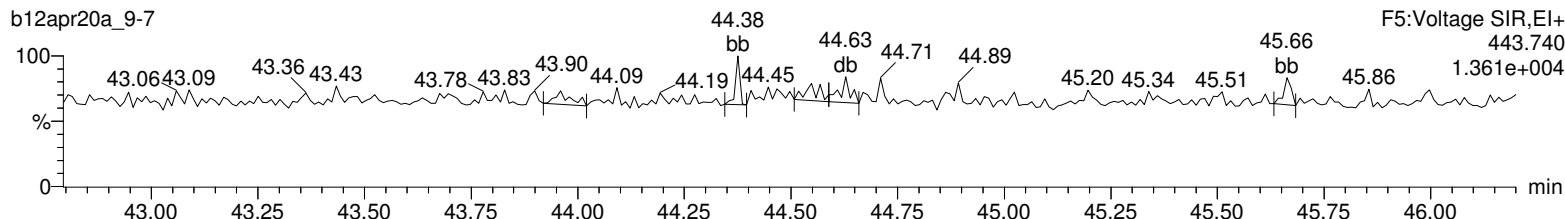
Printed: Friday, April 17, 2020 11:25:30 Eastern Standard Time

Name: b12apr20a_9-7, Date: 15-Apr-2020, Time: 22:10:48, ID: 16343003-1, Description: 43539, Job: HMS1613_1L, Task: HRP763_1, User: MLL

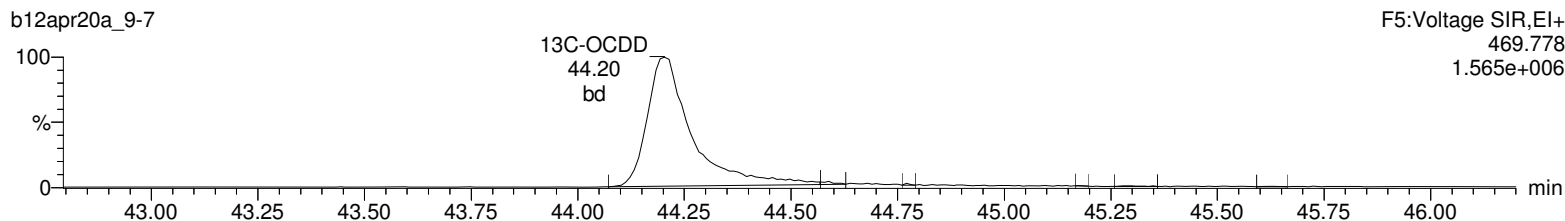
OCDF



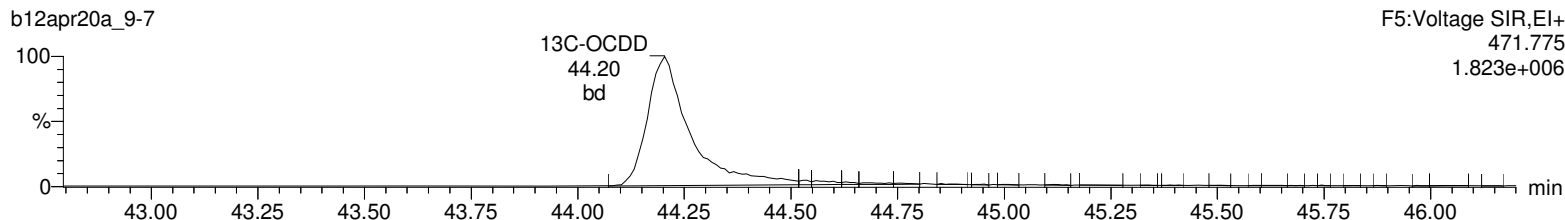
OCDF



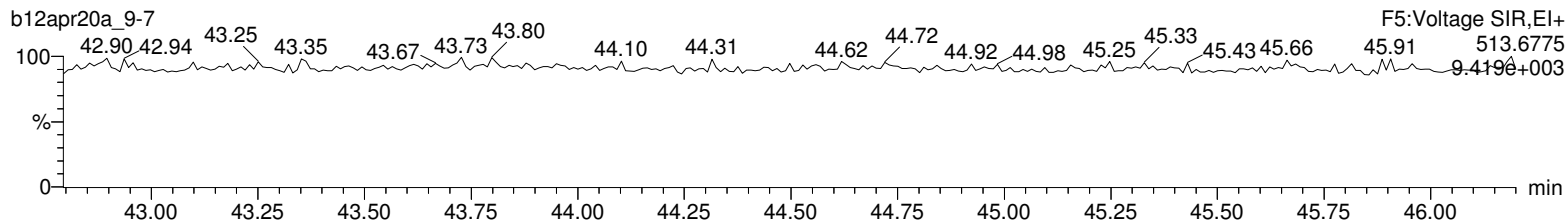
13C-OCDD



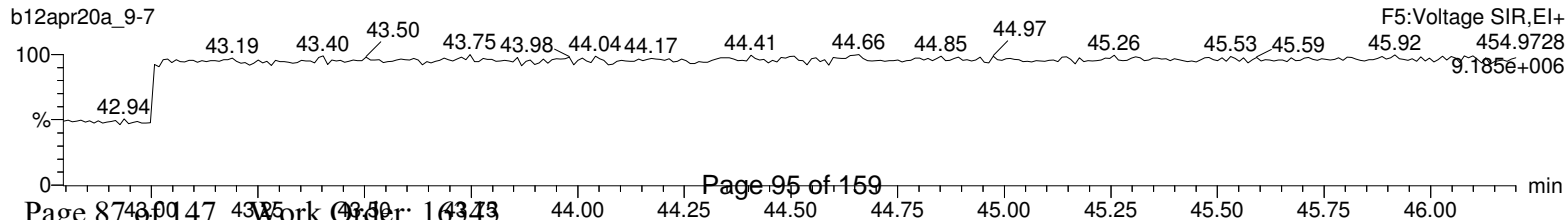
13C-OCDD



DeDPE



Lock Mass F5



Quality Control Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 12026415		Matrix: WATER
Client Sample: QC for batch 43536		
Client ID: MB for batch 43536		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 18:58	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-3		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00146	ng/L	0.00146	0.0100
40321-76-4	1,2,3,7,8-PeCDD	JK	0.00148	ng/L	0.00124	0.0500
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00177	ng/L	0.00177	0.0500
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00157	ng/L	0.00157	0.0500
19408-74-3	1,2,3,7,8,9-HxCDD	JK	0.00204	ng/L	0.00171	0.0500
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.00280	ng/L	0.00280	0.0500
3268-87-9	1,2,3,4,6,7,8,9-OCDD	JK	0.00630	ng/L	0.00474	0.100
51207-31-9	2,3,7,8-TCDF	U	0.00189	ng/L	0.00189	0.0100
57117-41-6	1,2,3,7,8-PeCDF	JK	0.00150	ng/L	0.00126	0.0500
57117-31-4	2,3,4,7,8-PeCDF	J	0.00202	ng/L	0.00113	0.0500
70648-26-9	1,2,3,4,7,8-HxCDF	JK	0.00176	ng/L	0.00102	0.0500
57117-44-9	1,2,3,6,7,8-HxCDF	J	0.00144	ng/L	0.00100	0.0500
60851-34-5	2,3,4,6,7,8-HxCDF	J	0.00160	ng/L	0.000988	0.0500
72918-21-9	1,2,3,7,8,9-HxCDF	J	0.00170	ng/L	0.00148	0.0500
67562-39-4	1,2,3,4,6,7,8-HpCDF	JK	0.00208	ng/L	0.00149	0.0500
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00220	ng/L	0.00220	0.0500
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00524	ng/L	0.00524	0.100
41903-57-5	Total TeCDD	U	0.00146	ng/L	0.00146	0.0100
36088-22-9	Total PeCDD	JK	0.00148	ng/L	0.00124	0.0500
34465-46-8	Total HxCDD	JK	0.00204	ng/L	0.00157	0.0500
37871-00-4	Total HpCDD	U	0.00280	ng/L	0.00280	0.0500
30402-14-3	Total TeCDF	U	0.00189	ng/L	0.00189	0.0100
30402-15-4	Total PeCDF	JK	0.00352	ng/L	0.00111	0.0500
55684-94-1	Total HxCDF	JK	0.00650	ng/L	0.000988	0.0500
38998-75-3	Total HpCDF	JK	0.00208	ng/L	0.00149	0.0500
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.00301	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00402	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.49	2.00	ng/L	74.7	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.61	2.00	ng/L	80.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.33	2.00	ng/L	66.7	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.35	2.00	ng/L	67.6	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.27	2.00	ng/L	63.3	(23%-140%)
13C-OCDD		2.13	4.00	ng/L	53.2	(17%-157%)
13C-2,3,7,8-TCDF		1.42	2.00	ng/L	71.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.67	2.00	ng/L	83.5	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.53	2.00	ng/L	76.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.31	2.00	ng/L	65.5	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.47	2.00	ng/L	73.4	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.48	2.00	ng/L	73.9	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.43	2.00	ng/L	71.4	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 12026415		Matrix: WATER
Client Sample: QC for batch 43536		
Client ID: MB for batch 43536		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 18:58	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-3		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.26	2.00	ng/L	62.8 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.39	2.00	ng/L	69.4 (26%-138%)
37Cl-2,3,7,8-TCDD			0.182	0.200	ng/L	91.1 (35%-197%)

Comments:

- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 11:32:58 Eastern Standard Time
 Printed: Thursday, April 16, 2020 11:35:19 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b12apr20.mdb 16 Apr 2020 09:09:51
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD									0.0730		1791			1017			
2	12378-PeCDD	1.70e2	1.37e2	3.07e2	34.12	1.000	1.24	NO	0.074	0.0618	4.75e3	1002	4.7	4.47e3	872	5.1	bb	bb
3	123478-HxCDD	1.16e2	1.23e2	2.38e2	36.69	1.000	0.95	YES	0.072	0.0883	2.53e3	1065	2.4	5.20e3	986	5.3	bd	MM
4	123678-HxCDD	1.08e2	1.22e2	2.30e2	36.76	1.000	0.88	YES	0.053	0.0786	3.91e3	1065	3.7	2.66e3	986	2.7	dd	MM
5	123789-HxCDD	2.54e2	1.24e2	3.77e2	37.01	1.007	2.05	YES	0.102	0.0857	6.11e3	1065	5.7	3.86e3	986	3.9	bb	bd
6	1234678-HpCDD	1.13e2	1.38e2	2.50e2	40.02	1.000	0.82	YES	0.094	0.1140	3.12e3	783	4.0	3.21e3	917	3.5	bd	MM
7	OCDD	2.12e2	3.95e2	6.06e2	44.18	1.000	0.54	YES	0.315	0.237	3.28e3	713	4.6	5.55e3	785	7.1	MM	MM
8	2378-TCDF	8.53e1	9.40e1	1.79e2	30.45	0.999	0.91	YES	0.026	0.0944	1.26e3	810	1.6	3.10e3	2020	1.5	bb	bb
9	12378-PeCDF	3.06e2	1.45e2	4.51e2	33.29	1.000	2.11	YES	0.075	0.0629	7.70e3	1431	5.4	4.12e3	1430	2.9	bb	bb
10	23478-PeCDF	3.87e2	2.36e2	6.23e2	33.91	1.000	1.64	NO	0.101	0.0566	7.77e3	1431	5.4	5.22e3	1430	3.6	bb	bb
11	123478-HxCDF	1.97e2	2.17e2	4.14e2	35.98	1.000	0.91	YES	0.088	0.0509	5.82e3	965	6.0	5.71e3	865	6.6	bd	bd
12	123678-HxCDF	2.40e2	2.14e2	4.54e2	36.07	1.000	1.12	NO	0.072	0.0502	7.40e3	965	7.7	4.14e3	865	4.8	db	db
13	234678-HxCDF	2.60e2	2.00e2	4.59e2	36.55	1.000	1.30	NO	0.080	0.0494	4.98e3	965	5.2	4.93e3	865	5.7	MM	bd
14	123789-HxCDF	1.96e2	1.80e2	3.76e2	37.32	1.000	1.09	NO	0.085	0.0738	5.14e3	965	5.3	4.08e3	865	4.7	bb	MM
15	1234678-HpCDF	2.33e2	1.79e2	4.12e2	38.80	1.001	1.31	YES	0.104	0.0747	4.89e3	864	5.7	3.52e3	710	5.0	MM	bb
16	1234789-HpCDF	1.80e2	1.60e2	3.41e2	40.67	1.000	1.13	NO	0.101	0.110	4.04e3	864	4.7	3.00e3	710	4.2	MM	MM
17	OCDF	2.17e2	2.56e2	4.73e2	44.51	1.007	0.84	NO	0.211	0.262	4.06e3	638	6.4	3.75e3	1290	2.9	MM	MM
18	13C-2378-TCDD	3.22e5	4.19e5	7.41e5	31.22	1.017	0.77	NO	74.697	0.158	4.68e6	4724	991.5	6.11e6	3215	1900.3	bd	bd
19	13C-12378-PeCDD	2.99e5	1.94e5	4.93e5	34.10	1.111	1.54	NO	80.316	0.246	5.47e6	5474	1000.0	3.59e6	2165	1656.6	bd	bd
20	13C-123478-HxCDD	2.08e5	1.67e5	3.75e5	36.68	0.991	1.25	NO	66.713	0.343	3.66e6	4223	865.7	2.95e6	5276	559.9	bd	bd
21	13C-123678-HxCDD	2.74e5	2.17e5	4.91e5	36.76	0.993	1.26	NO	67.588	0.265	4.12e6	4223	974.4	3.26e6	5276	618.7	dd	dd
22	13C-1234678-HpCDD	1.48e5	1.40e5	2.88e5	40.02	1.082	1.06	NO	63.345	0.417	1.69e6	5291	319.2	1.63e6	4078	400.9	bb	bd
23	13C-OCDD	2.04e5	2.35e5	4.39e5	44.20	1.195	0.87	NO	106.301	0.522	1.67e6	5661	295.4	1.95e6	4967	392.2	bd	bd
24	13C-2378-TCDF	3.43e5	4.56e5	7.99e5	30.47	0.993	0.75	NO	70.963	0.152	3.72e6	5579	666.5	4.93e6	3092	1595.2	bb	bb
25	13C-12378-PeCDF	4.23e5	2.68e5	6.92e5	33.30	1.085	1.58	NO	83.475	0.430	7.96e6	10024	793.9	5.16e6	8020	643.0	bb	bb
26	13C-23478-PeCDF	3.93e5	2.52e5	6.44e5	33.90	1.104	1.56	NO	76.426	0.422	8.04e6	10024	802.5	5.19e6	8020	647.2	bb	bb
27	13C-123478-HxCDF	1.45e5	2.82e5	4.27e5	35.97	0.972	0.52	NO	65.490	0.499	2.77e6	7824	353.6	5.33e6	8256	646.1	bd	bd
28	13C-123678-HxCDF	2.06e5	3.96e5	6.02e5	36.06	0.975	0.52	NO	73.446	0.398	2.97e6	7824	379.5	5.71e6	8256	691.9	dd	dd
29	13C-234678-HxCDF	1.68e5	3.34e5	5.02e5	36.55	0.988	0.50	NO	73.891	0.479	2.70e6	7824	345.4	5.06e6	8256	612.5	dd	dd
30	13C-123789-HxCDF	1.41e5	2.84e5	4.25e5	37.31	1.008	0.50	NO	71.426	0.547	1.96e6	7824	250.9	3.83e6	8256	463.6	bd	bd
31	13C-1234678-HpCDF	1.08e5	2.35e5	3.43e5	38.78	1.048	0.46	NO	62.794	0.334	1.43e6	3656	391.6	3.33e6	5343	623.3	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 11:32:58 Eastern Standard Time
 Printed: Thursday, April 16, 2020 11:35:19 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	8.76e4	1.96e5	2.84e5	40.68	1.099	0.45	NO	69.425	0.446	9.23e5	3656	252.5	2.13e6	5343	398.8	bd	bb
33	13C-1234-TCDD	3.80e5	4.99e5	8.79e5	30.69	0.000	0.76	NO	100.000	0.178	4.81e6	4724	1019.3	6.31e6	3215	1963.3	bb	bd
34	13C-123789-HxCDD	3.93e5	3.06e5	6.99e5	37.00	0.000	1.29	NO	100.000	0.276	4.85e6	4223	1148.2	3.85e6	5276	729.5	dd	dd
35	37Cl-2378-TCDD	8.46e4		8.46e4	31.23	1.018			9.109	0.0411	1.30e6	1934	669.9				bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 11:32:58 Eastern Standard Time
Printed: Thursday, April 16, 2020 11:35:19 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b12apr20.mdb 16 Apr 2020 09:09:51
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

TD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-tetradioxins	5.71e1	5.33e1	1.10e2	32.26	1.07	YES	0.017	0.0730	2.31e3	1791	1.3	1.03e3	1017	1.0	bb	bb

PD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
12378-PeCDD	1.70e2	1.37e2	3.07e2	34.12	1.24	YES	0.074	0.0618	4.75e3	1002	4.7	4.47e3	872	5.1	bb	bb

HPD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
123789-HxCDD	2.54e2	1.24e2	3.77e2	37.01	2.05	YES	0.102	0.0857	6.11e3	1065	5.7	3.86e3	986	3.9	bb	bd
123678-HxCDD	1.08e2	1.22e2	2.30e2	36.76	0.88	YES	0.053	0.0786	3.91e3	1065	3.7	2.66e3	986	2.7	dd	MM
123478-HxCDD	1.16e2	1.23e2	2.38e2	36.69	0.95	YES	0.072	0.0883	2.53e3	1065	2.4	5.20e3	986	5.3	bd	MM

HPD

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1234678-HpCDD	1.13e2	1.38e2	2.50e2	40.02	0.82	YES	0.094	0.140	3.12e3	783	4.0	3.21e3	917	3.5	bd	MM

TF

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-tetrafurans	5.29e1	7.68e1	1.30e2	31.25	0.69	NO	0.019	0.0944	1.06e3	810	1.3	2.10e3	2020	1.0	bb	bb
2378-TCDF	8.53e1	9.40e1	1.79e2	30.45	0.91	YES	0.026	0.0944	1.26e3	810	1.6	3.10e3	2020	1.5	bb	bb
Total-tetrafurans	7.01e1	5.25e1	1.23e2	28.69	1.33	YES	0.018	0.0944	9.15e2	810	1.1	1.68e3	2020	0.8	bb	bb

PF1

Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
Total-pentafurans (F1)	3.58e2	1.10e2	4.69e2	31.10	3.25	YES	0.077	0.0556	6.95e3	890	7.8	2.63e3	1778	1.5	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 11:32:58 Eastern Standard Time
Printed: Thursday, April 16, 2020 11:35:19 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	3.87e2	2.36e2	6.23e2	33.91	1.64	NO	0.101	0.0566	7.77e3	1431	5.4	5.22e3	1430	3.6	bb	bb
2	12378-PeCDF	3.06e2	1.45e2	4.51e2	33.29	2.11	YES	0.075	0.0629	7.70e3	1431	5.4	4.12e3	1430	2.9	bb	bb

HIF

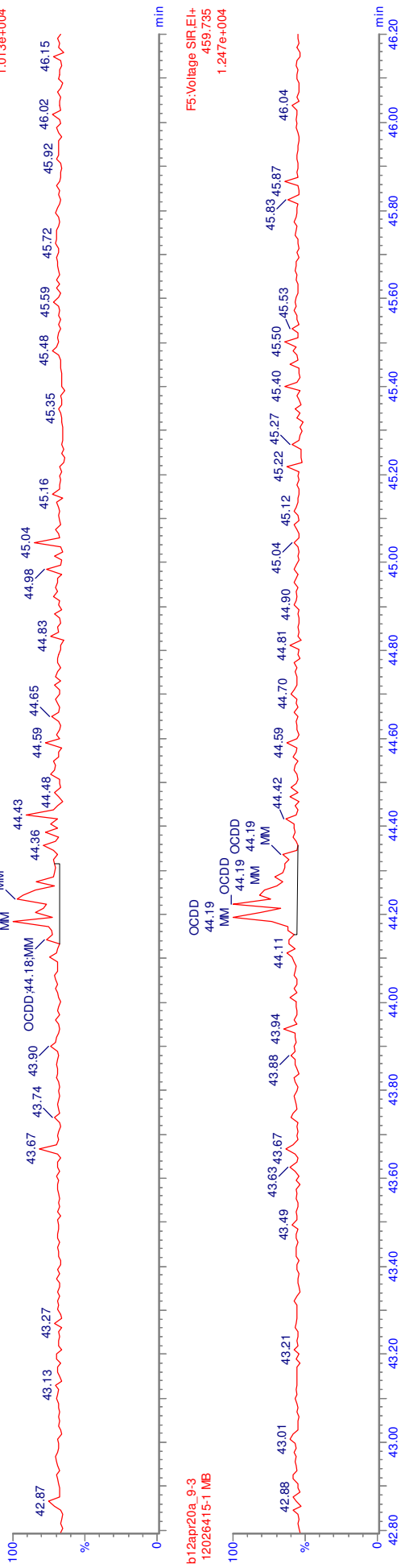
	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDF	1.96e2	1.80e2	3.76e2	37.32	1.09	NO	0.085	0.0738	5.14e3	965	5.3	4.08e3	865	4.7	bb	MM
2	Total-hexaturans	6.26e1	7.21e1	1.35e2	36.62	0.87	YES	0.025	0.0550	2.09e3	965	2.2	1.13e3	865	1.3	dd	db
3	234678-HxCDF	2.60e2	2.00e2	4.59e2	36.55	1.30	NO	0.080	0.0494	4.98e3	965	5.2	4.93e3	865	5.7	MM	bd
4	123678-HxCDF	2.40e2	2.14e2	4.54e2	36.07	1.12	NO	0.072	0.0502	7.40e3	965	7.7	4.14e3	865	4.8	db	db
5	123478-HxCDF	1.97e2	2.17e2	4.14e2	35.98	0.91	YES	0.088	0.0509	5.82e3	965	6.0	5.71e3	865	6.6	bd	bd

HPF

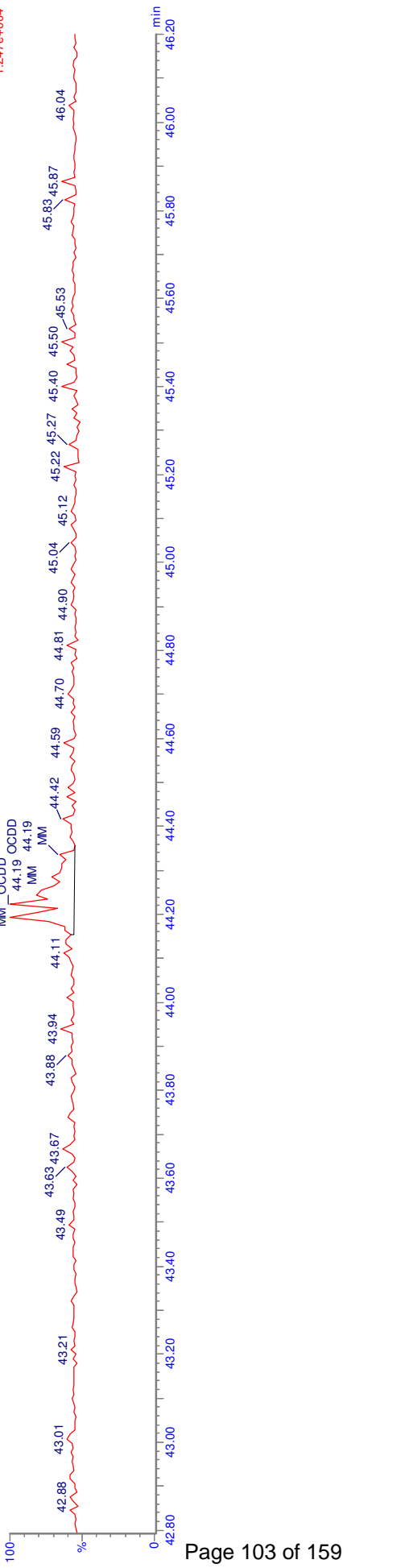
	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234789-HpCDF	1.80e2	1.60e2	3.41e2	40.67	1.13	NO	0.101	0.110	4.04e3	864	4.7	3.00e3	710	4.2	MM	MM
2	1234678-HpCDF	2.33e2	1.79e2	4.12e2	38.80	1.31	YES	0.104	0.0747	4.89e3	864	5.7	3.52e3	710	5.0	MM	bb

MANUAL INTEGRATION
 METHOD 8290
 HRP763_1

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 F5:Voltage SIR.EI+
 457.738
 1.013e+004



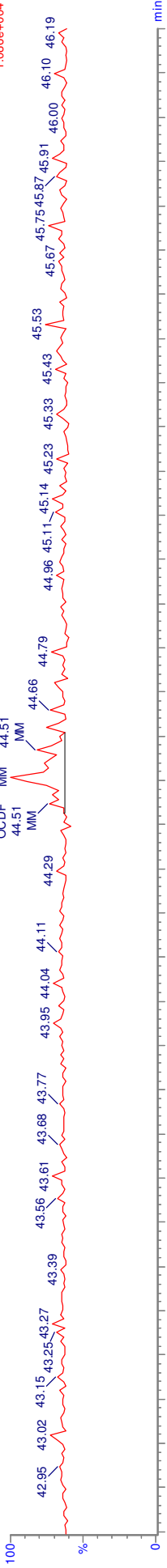
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 F5:Voltage SIR.EI+
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MANUAL INTEGRATION
 METHOD 8290
 HRP763_1

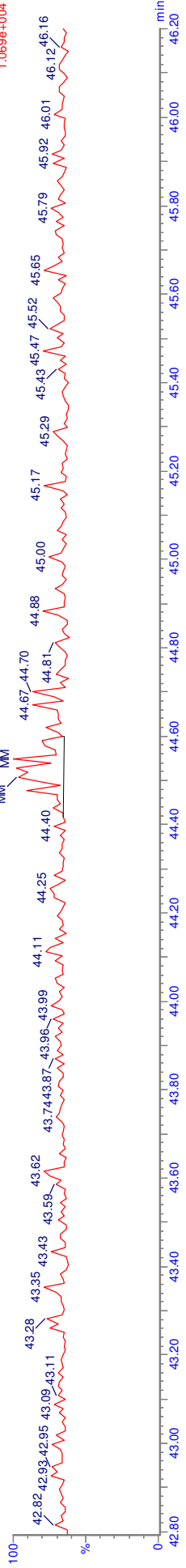
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F5:Voltage SIR.EI+
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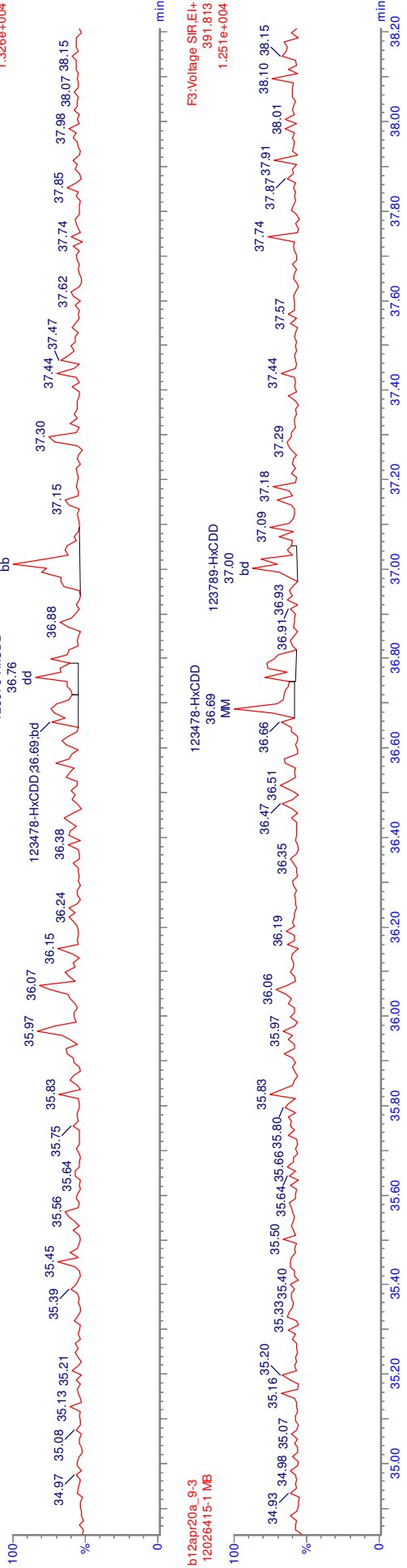
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MANUAL INTEGRATION
METHOD 8290
HRP763_1

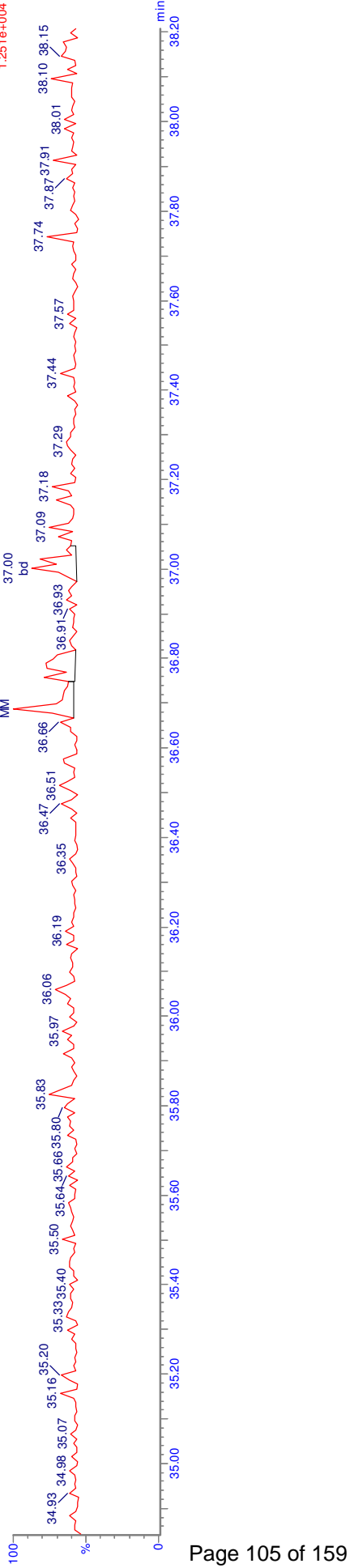
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F3:Voltage SIR.EI+
389.816
1.326e+004



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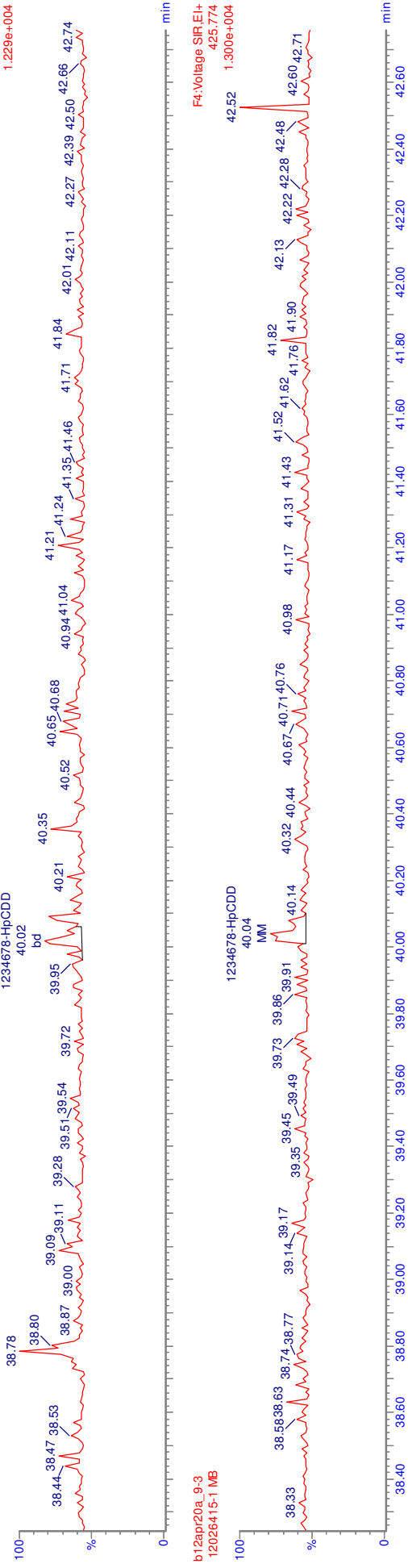
F3:Voltage SIR.EI+
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MANUAL INTEGRATION
METHOD 8290
HRP763_1

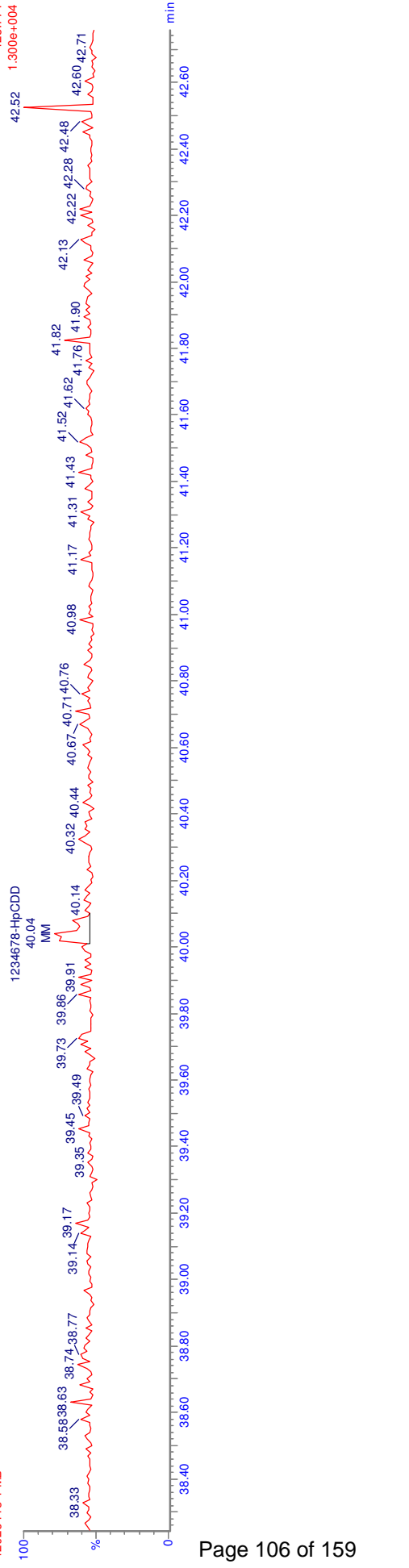
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F4:Voltage SR,EI+
423.777
1.229e+004



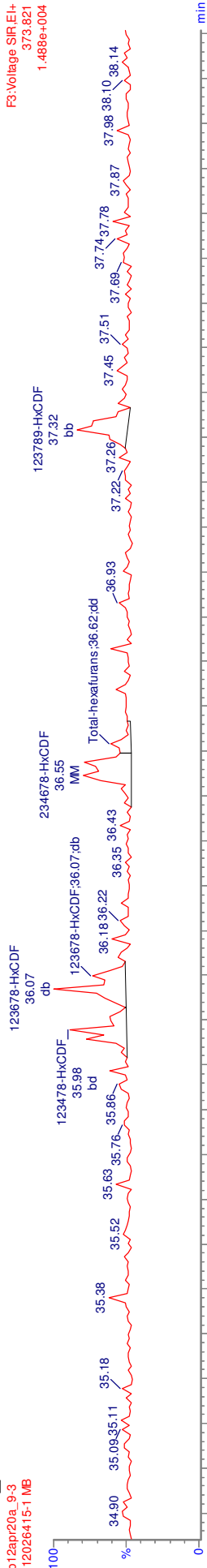
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F4:Voltage SR,EI+
425.774
1.300e+004

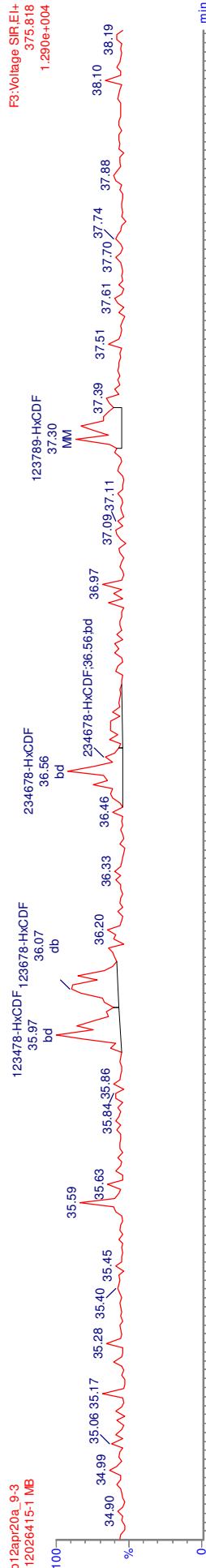


MANUAL INTEGRATION
 METHOD 8290
 HRP763_1

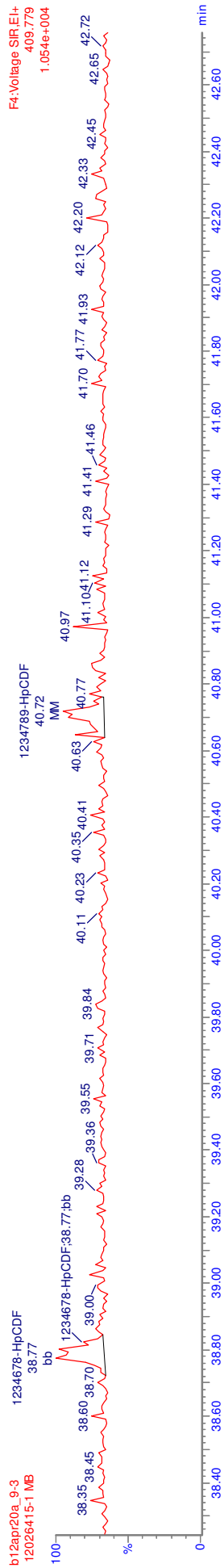
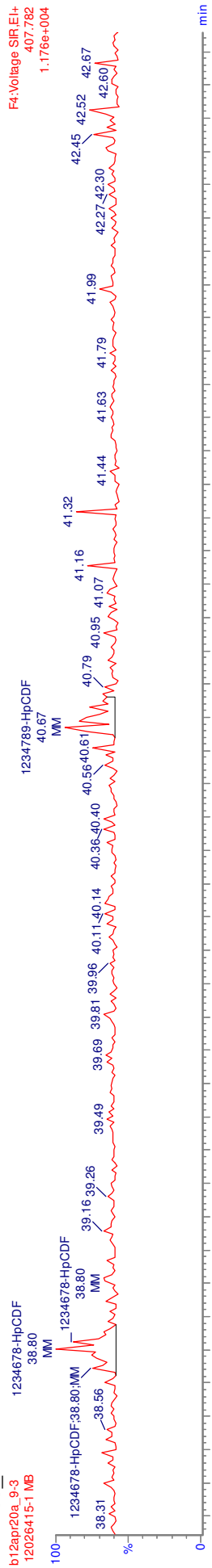
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b12ap20a_9-3
 12026415-1.MB



MANUAL INTEGRATION
METHOD 8290
HRP763_1



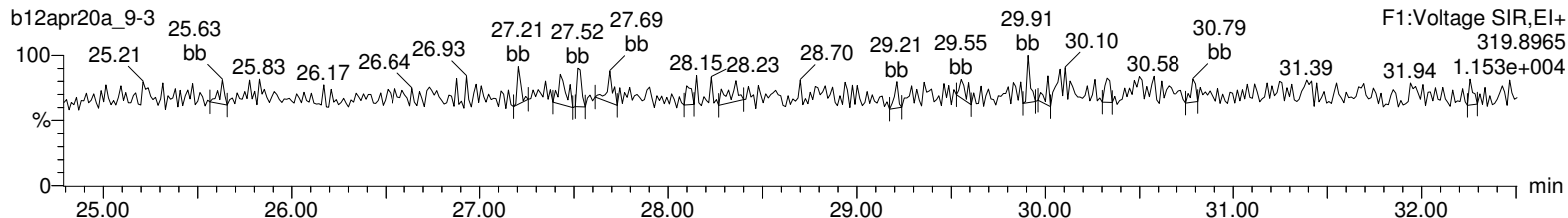
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Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

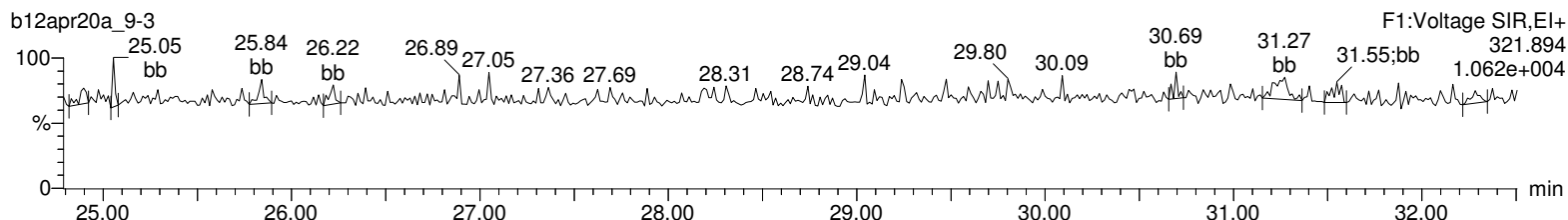
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Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

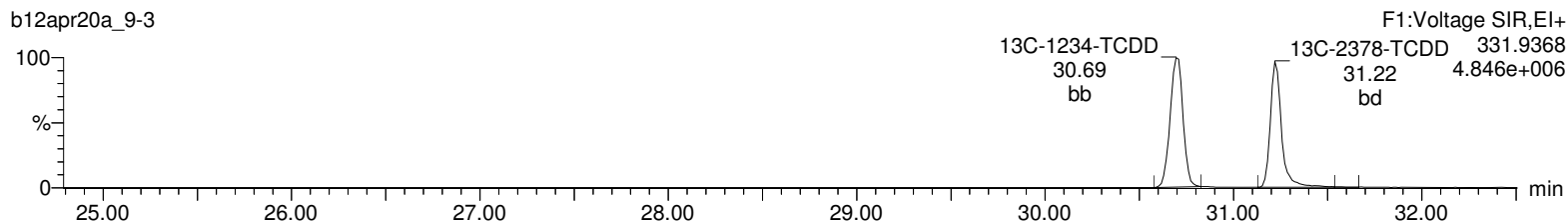
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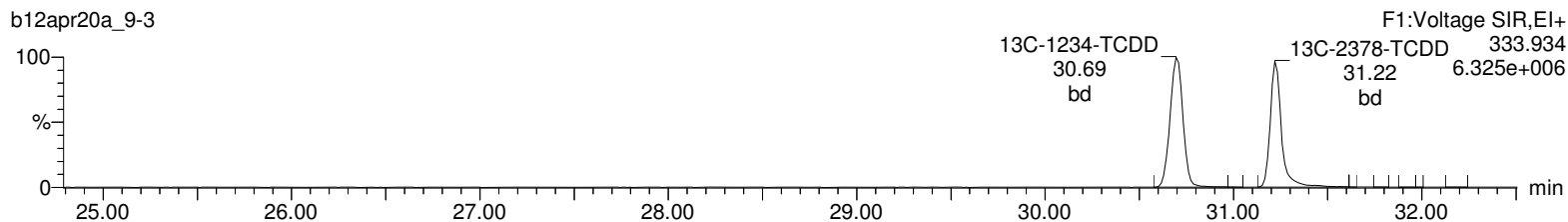
Total-tetradoxins



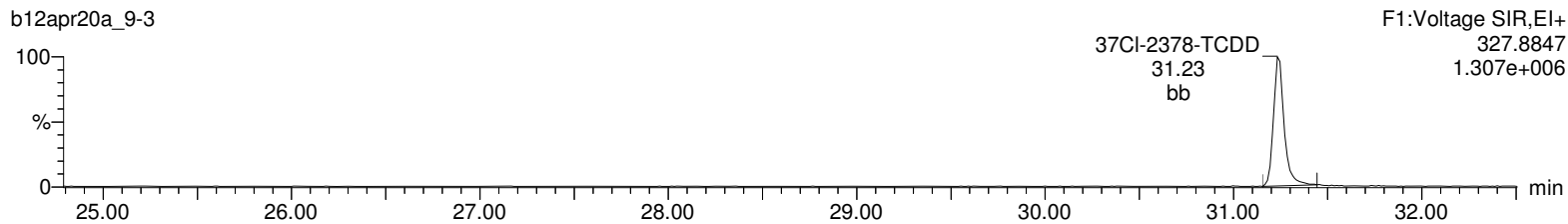
13C-2378-TCDD



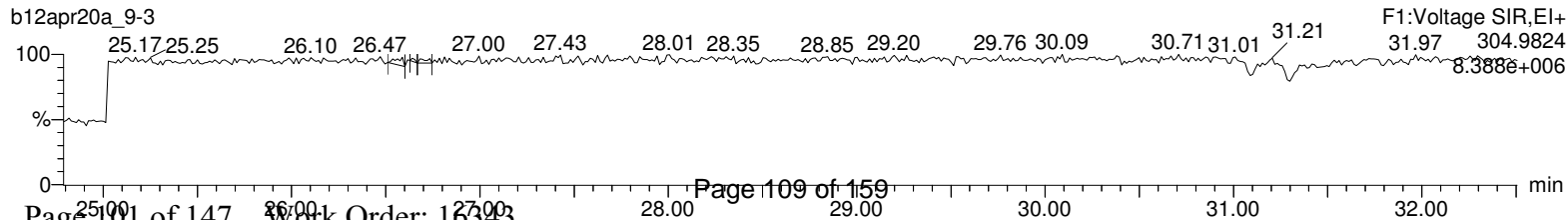
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

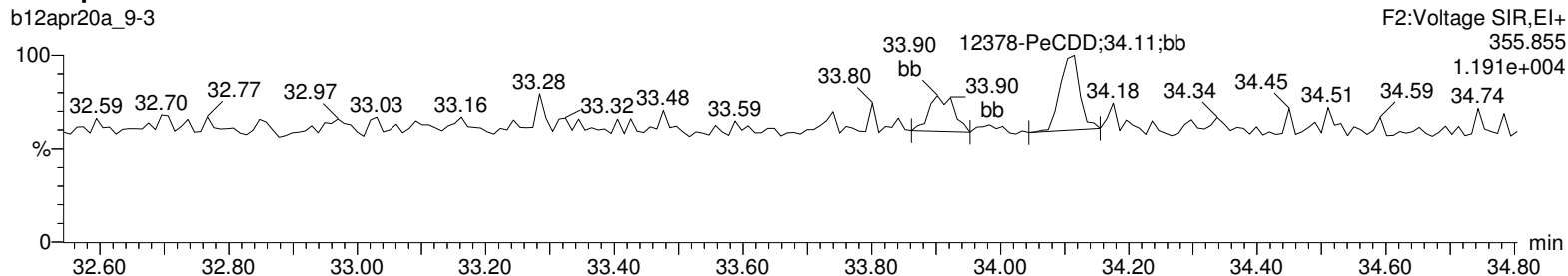
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Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

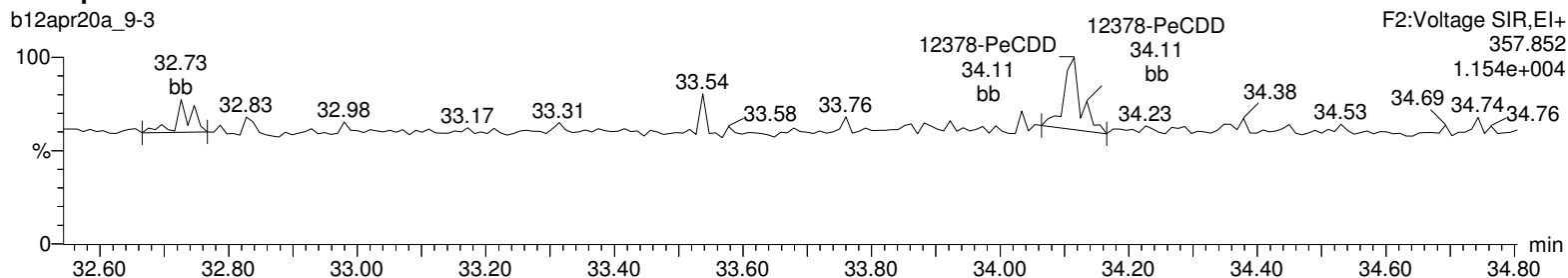
Total-pentadioxins

b12apr20a_9-3



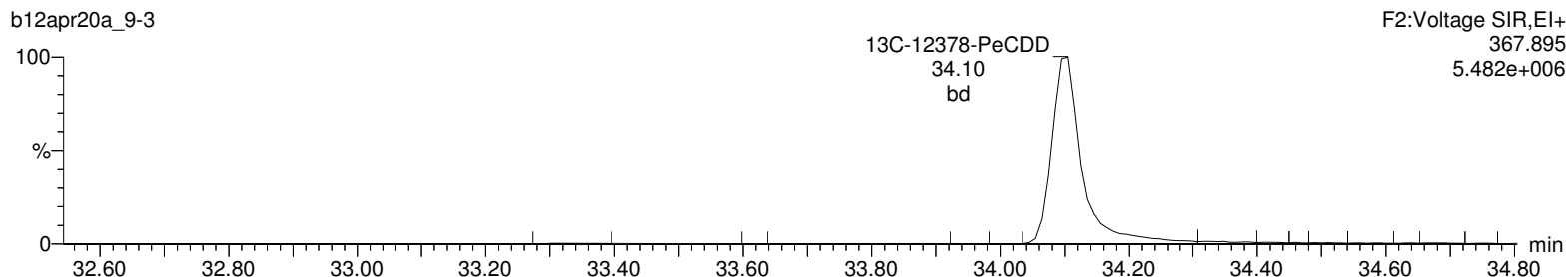
Total-pentadioxins

b12apr20a_9-3



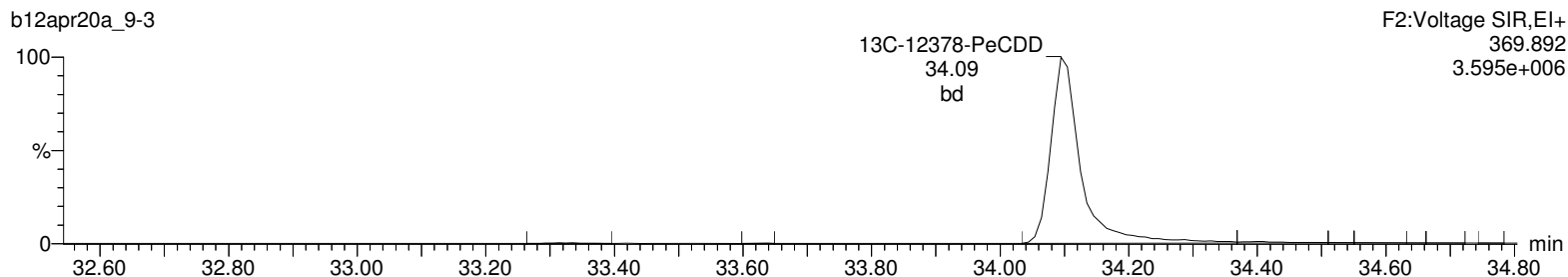
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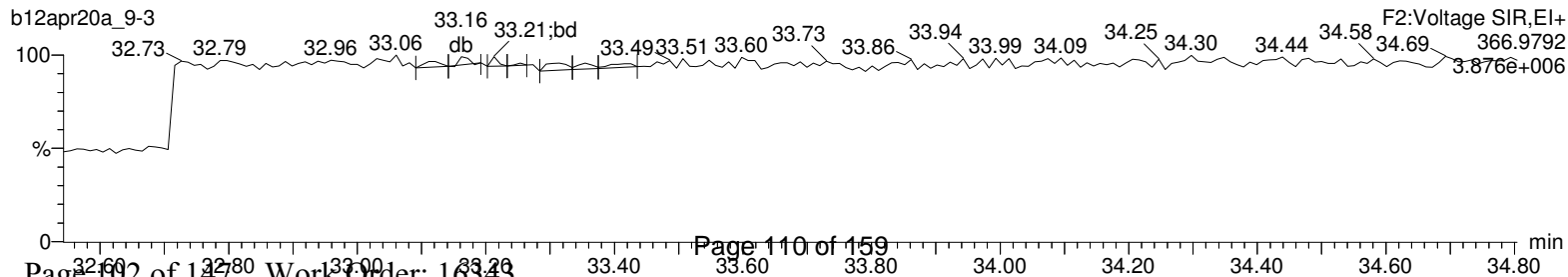
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b12apr20a_9-3



Lock Mass F2

b12apr20a_9-3



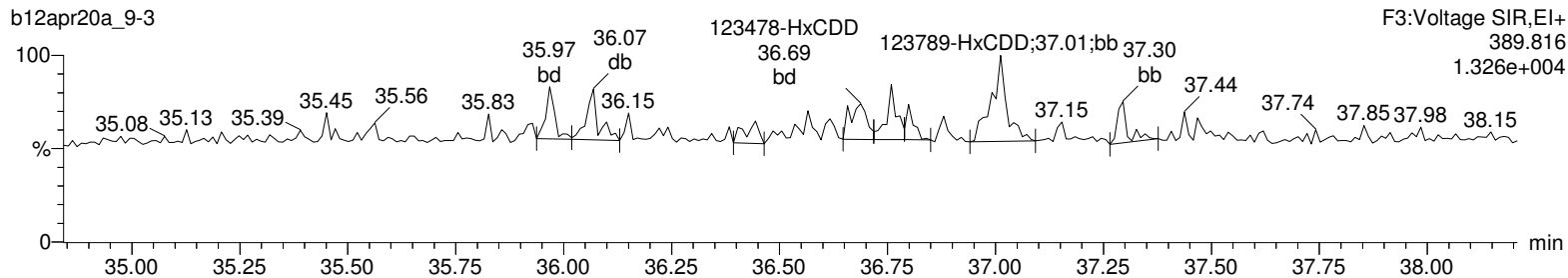
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

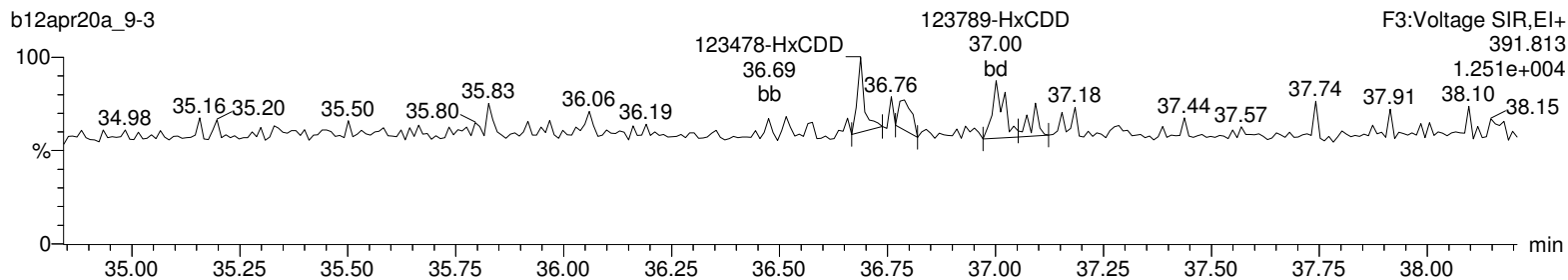
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

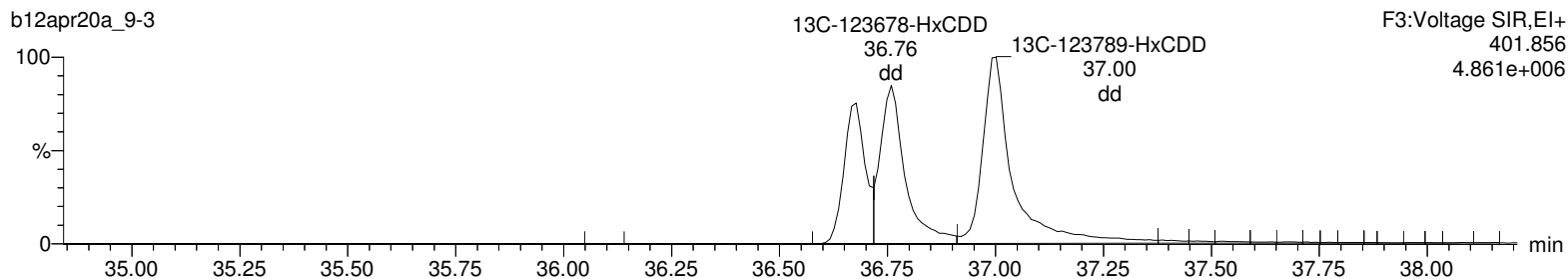
Total-hexadioxins



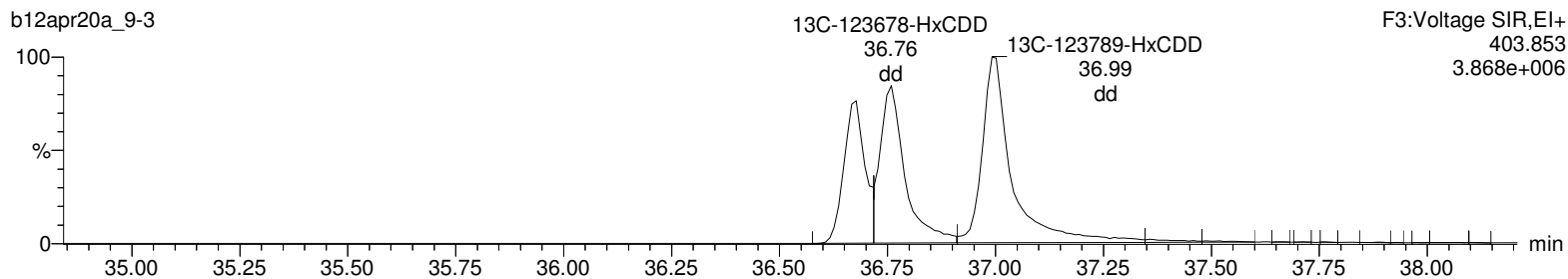
Total-hexadioxins



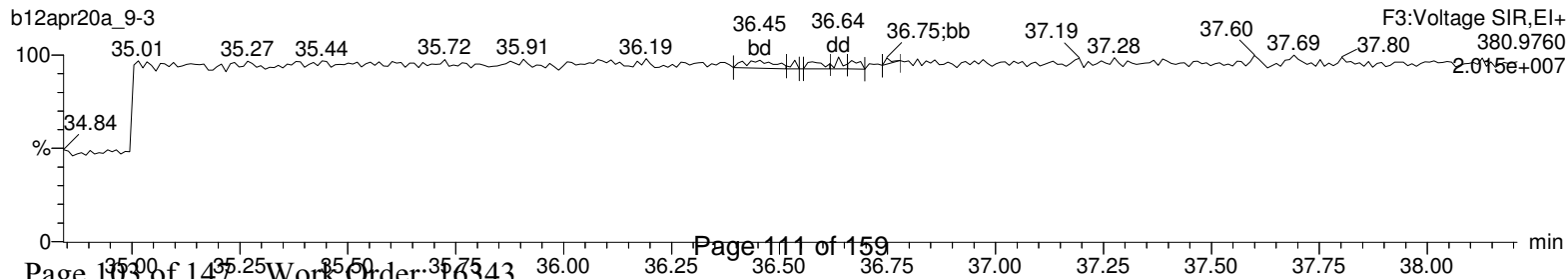
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



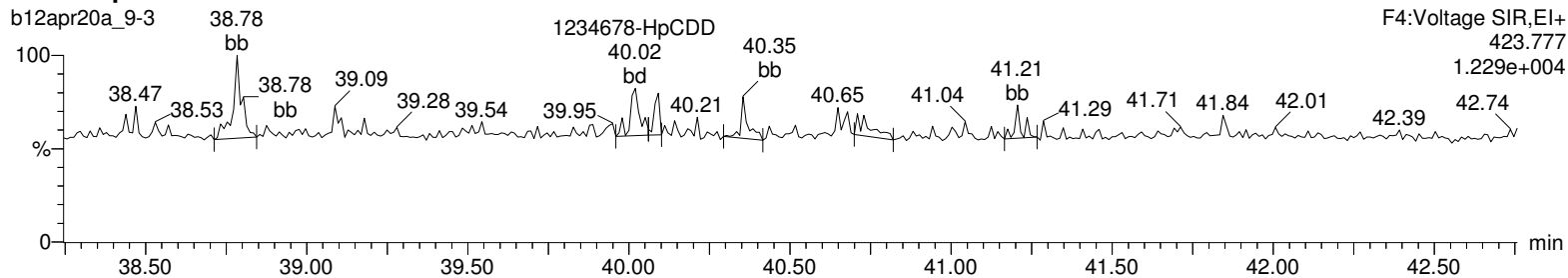
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

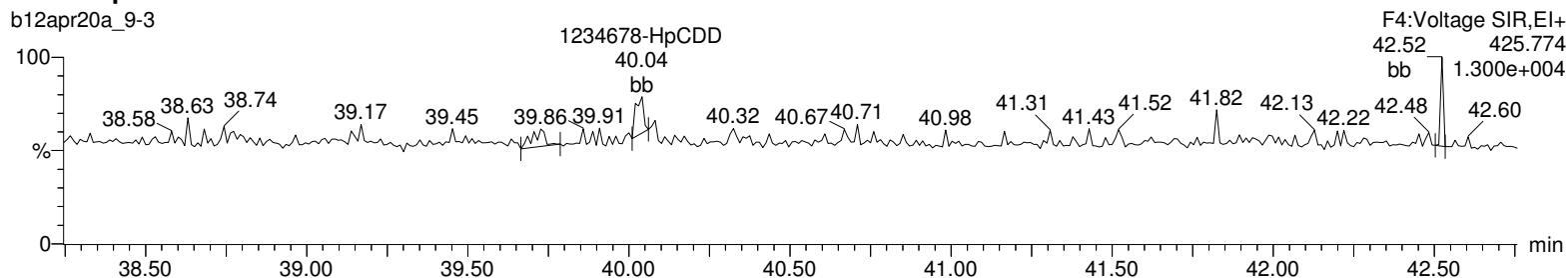
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

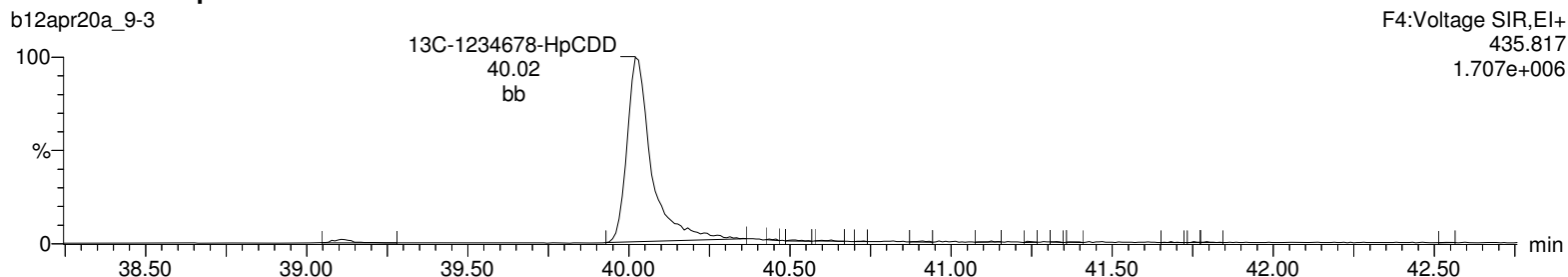
Total-heptadioxins



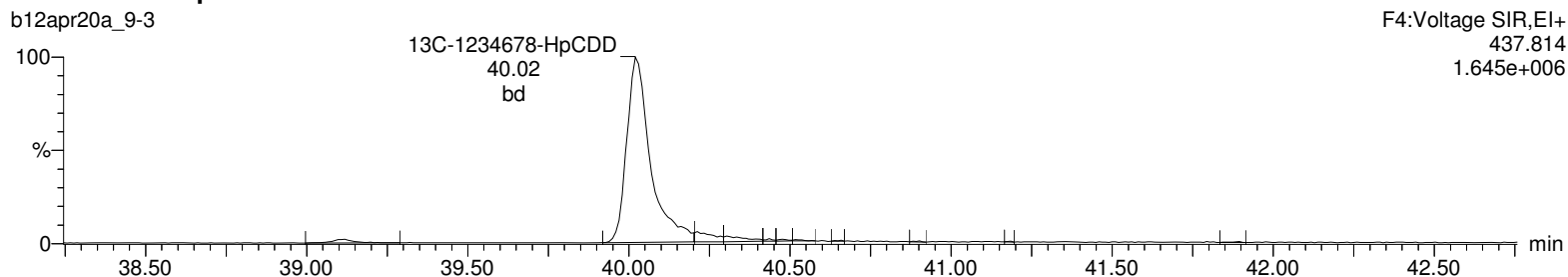
Total-heptadioxins



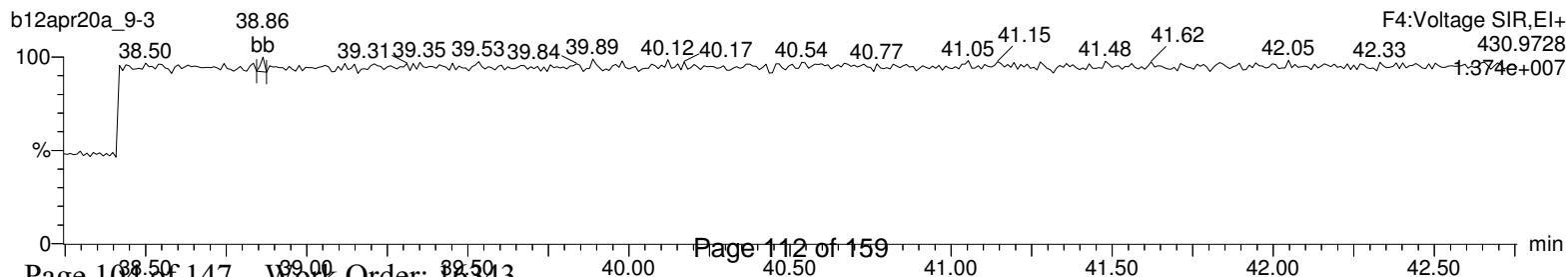
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



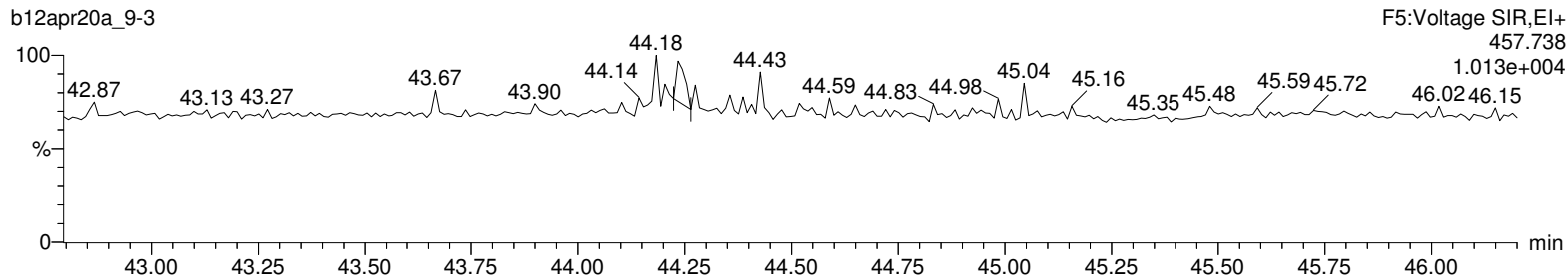
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

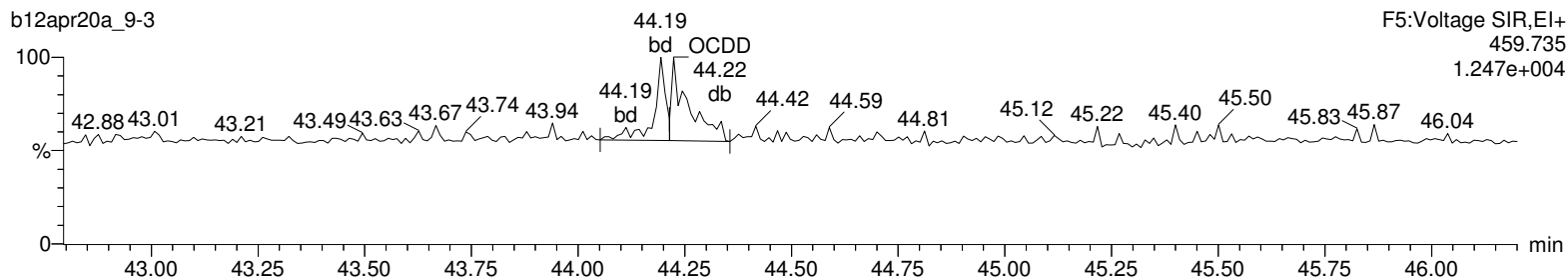
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

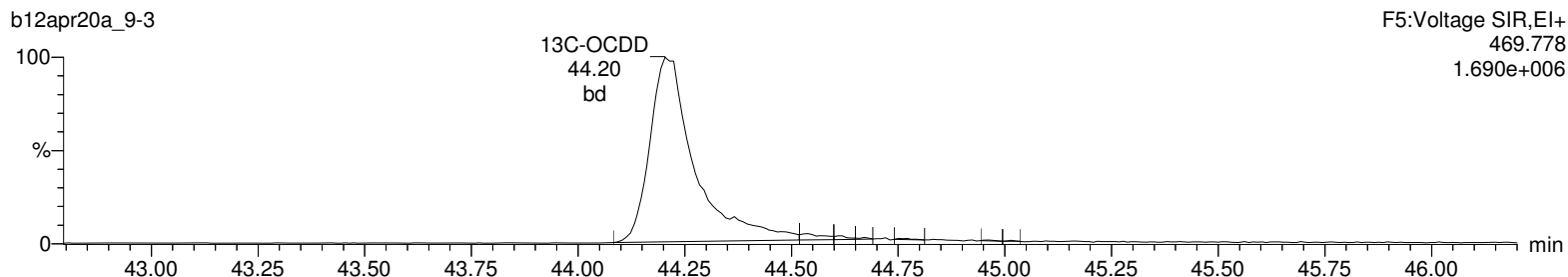
OCDD



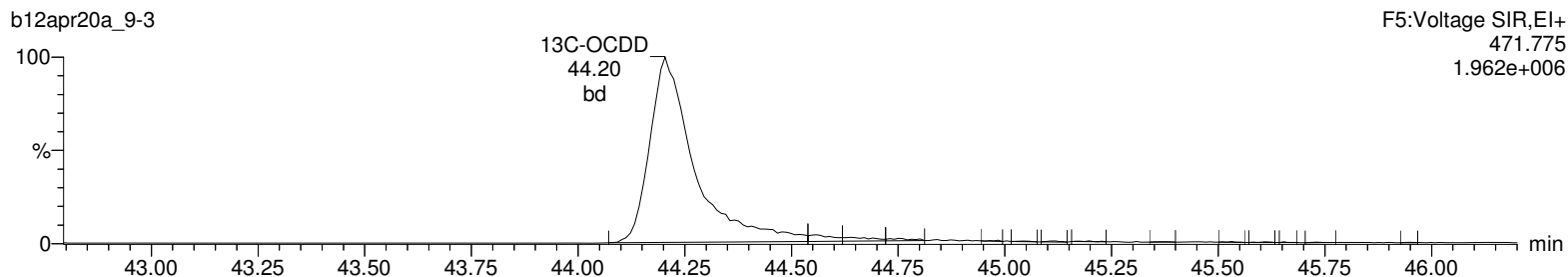
OCDD



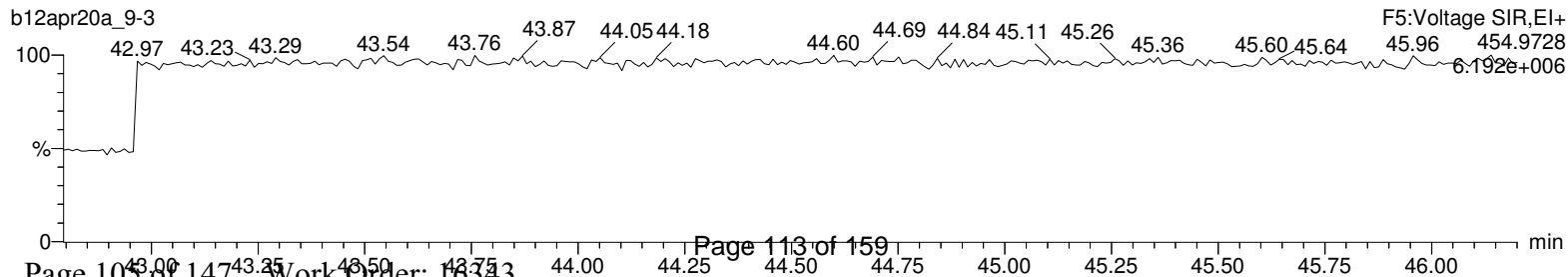
13C-OCDD



13C-OCDD



Lock Mass F5



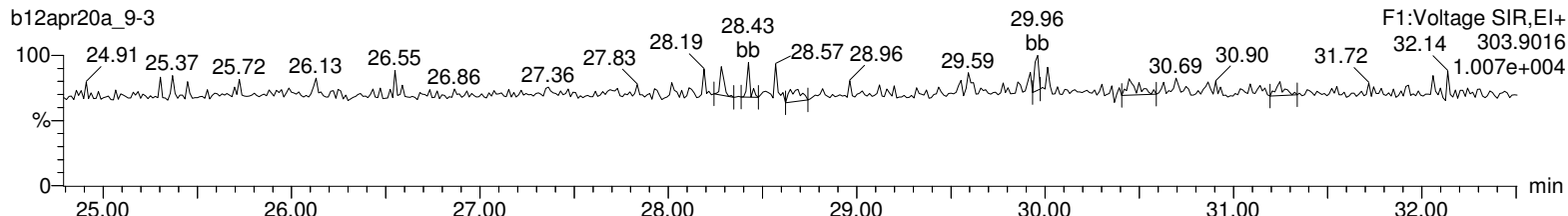
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

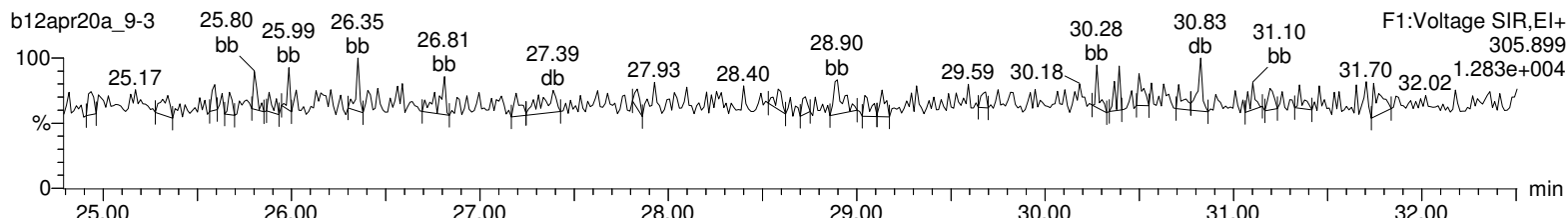
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

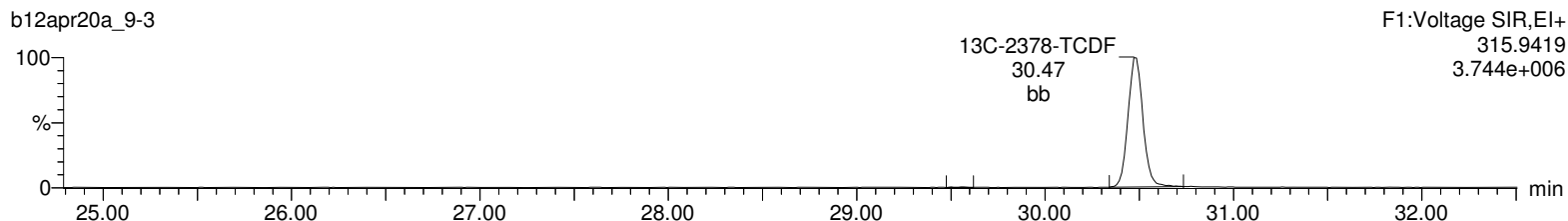
Total-tetrafurans



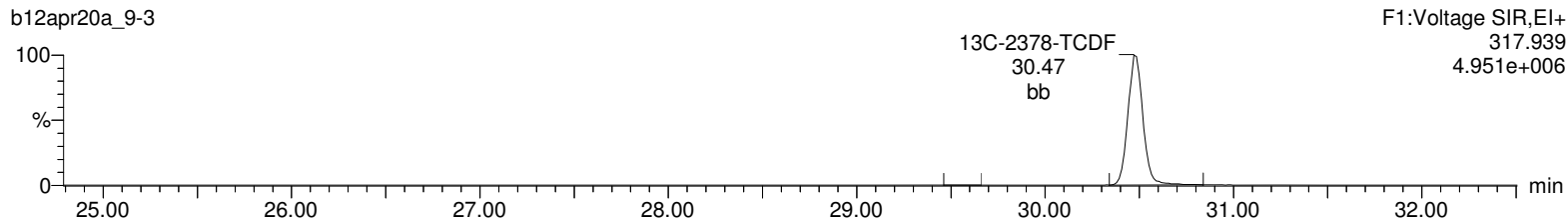
Total-tetrafurans



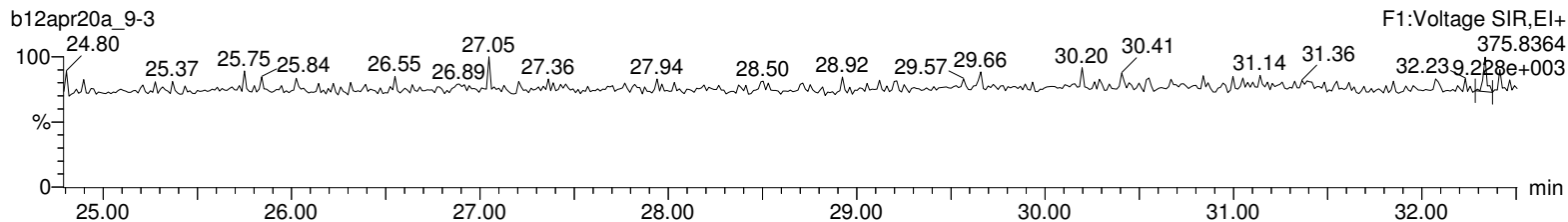
13C-2378-TCDF



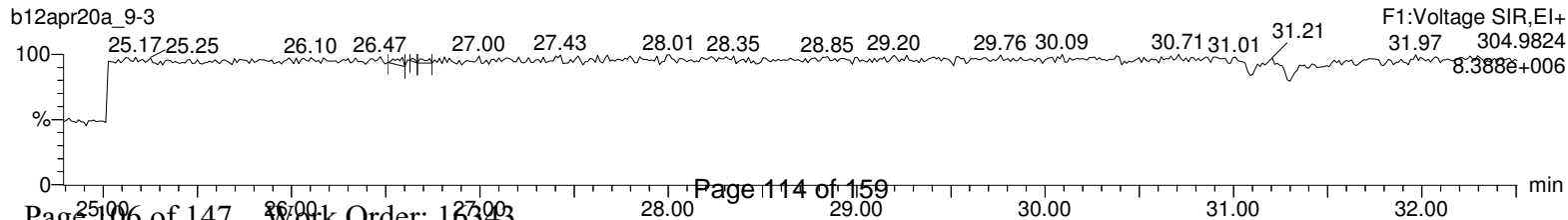
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

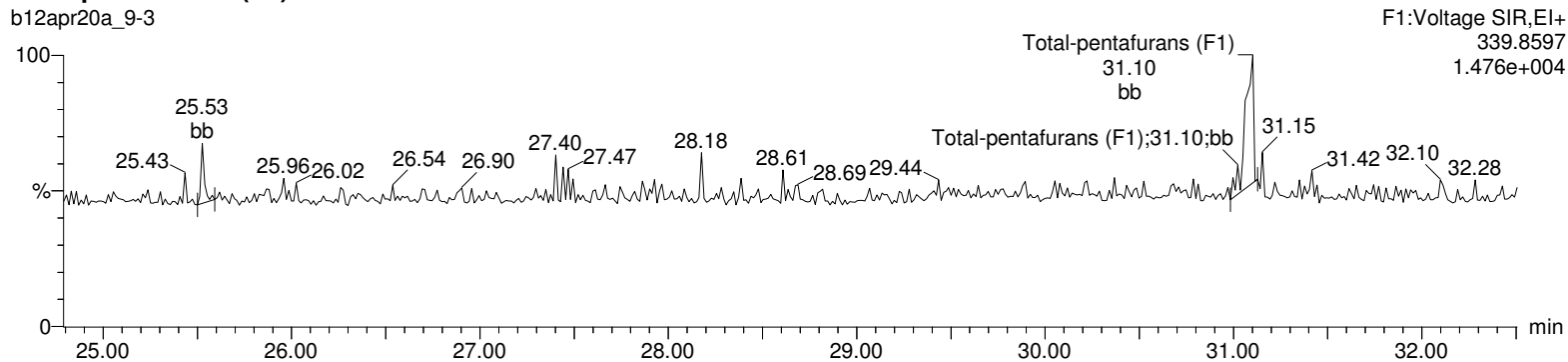
Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

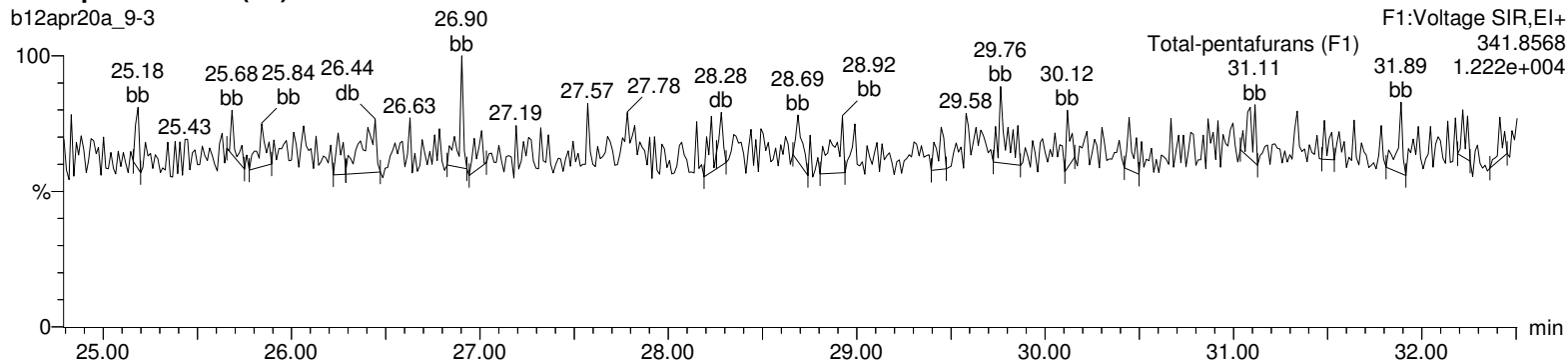
Total-pentafurans (F1)

b12apr20a_9-3



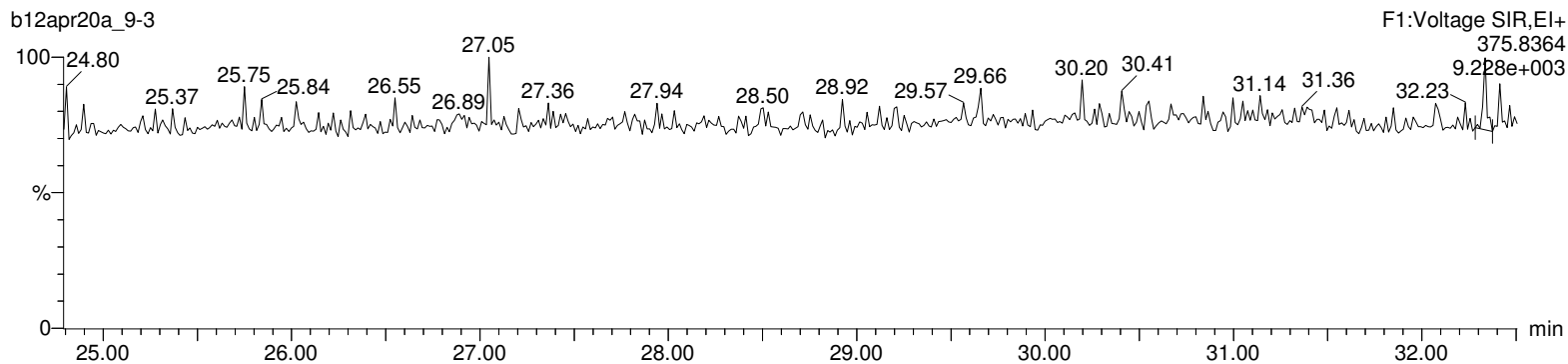
Total-pentafurans (F1)

b12apr20a_9-3



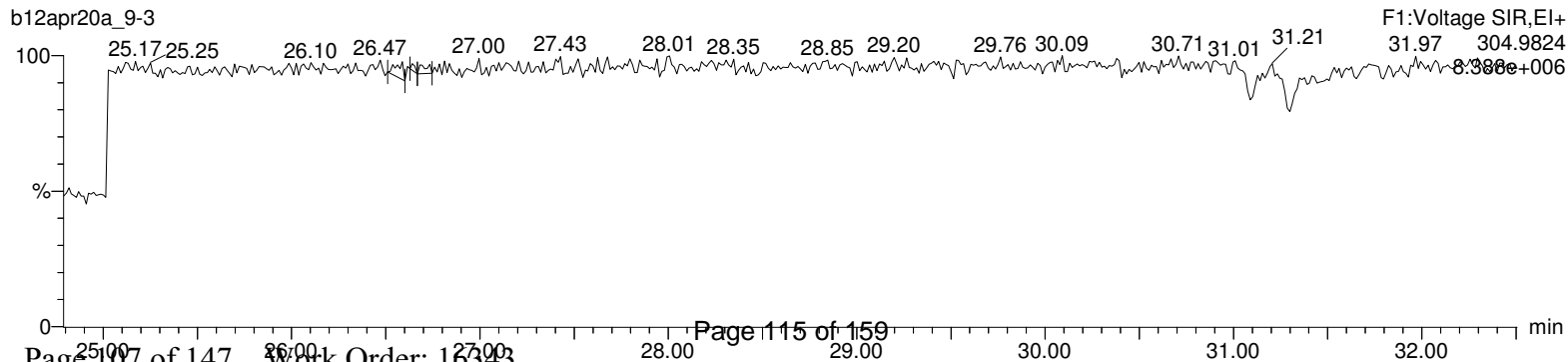
HxDPE

b12apr20a_9-3



Lock Mass F1

b12apr20a_9-3



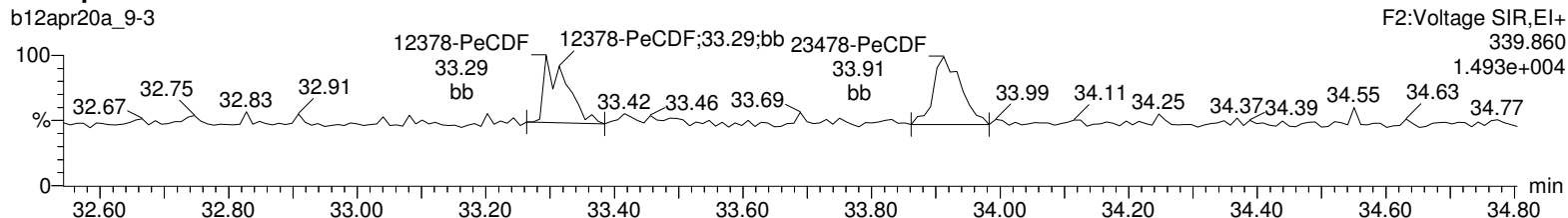
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

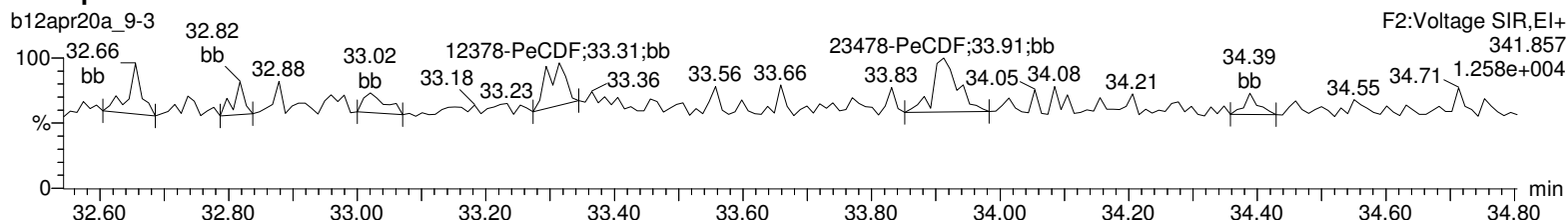
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

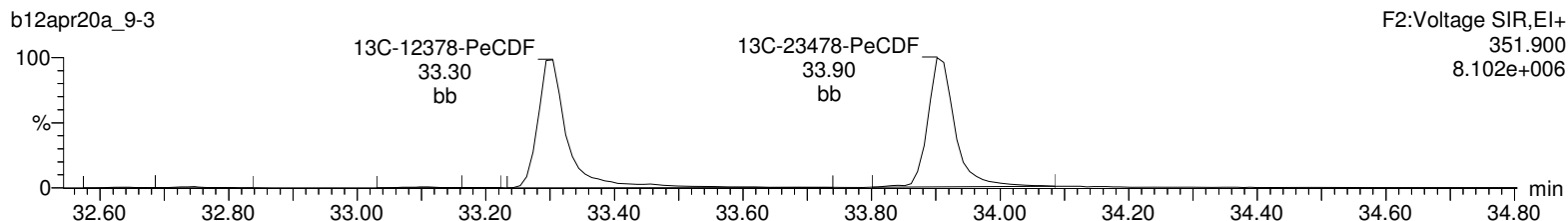
Total-pentafurans



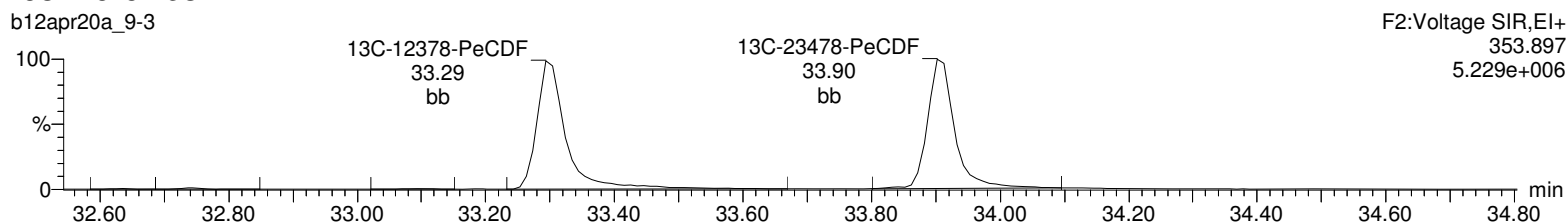
Total-pentafurans



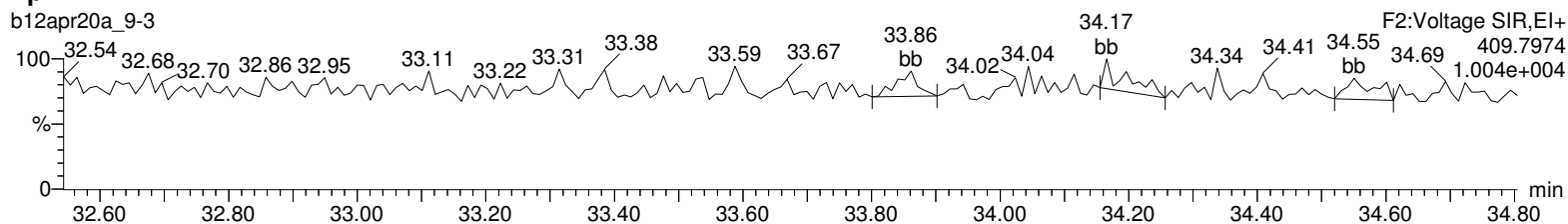
13C-12378-PeCDF



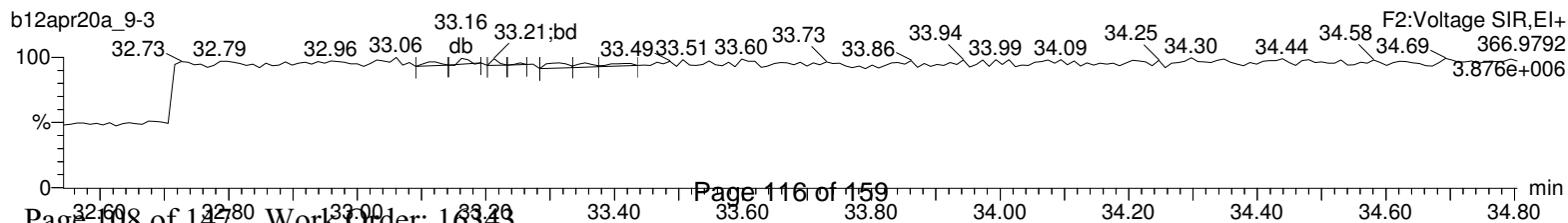
13C-12378-PeCDF



HpDPE



Lock Mass F2



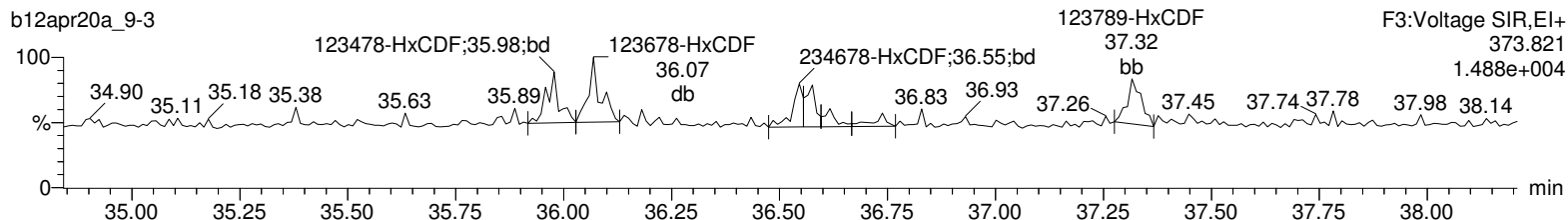
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

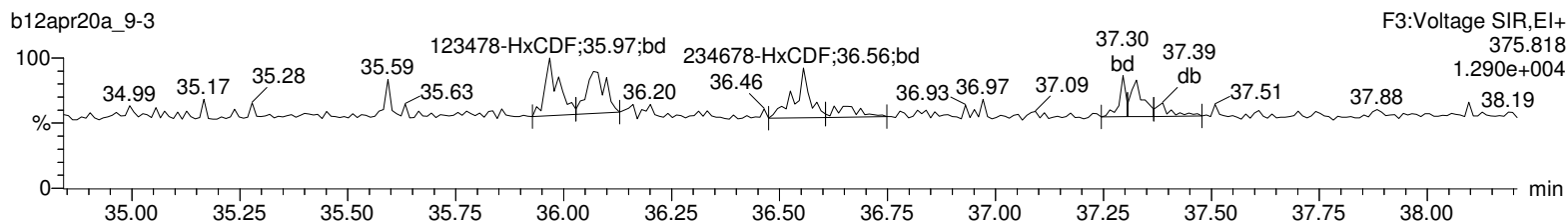
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

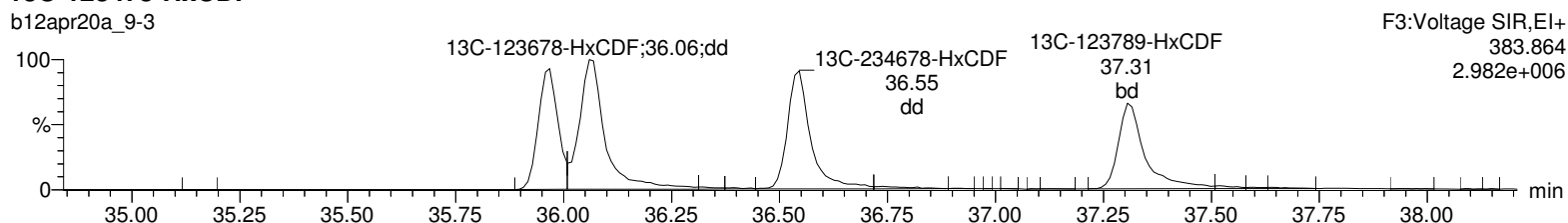
Total-hexafurans



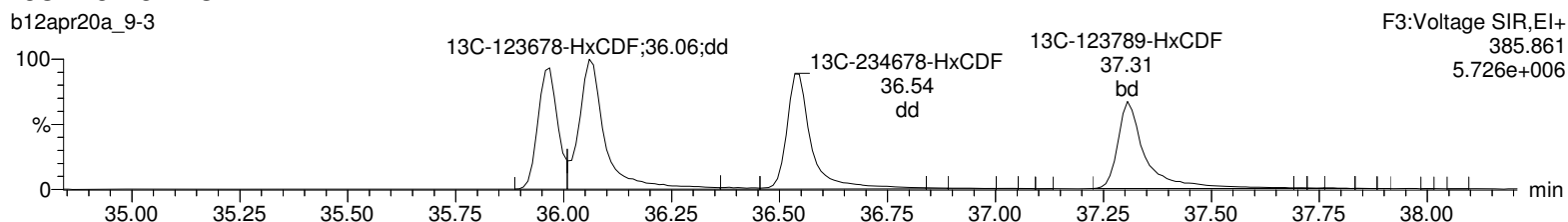
Total-hexafurans



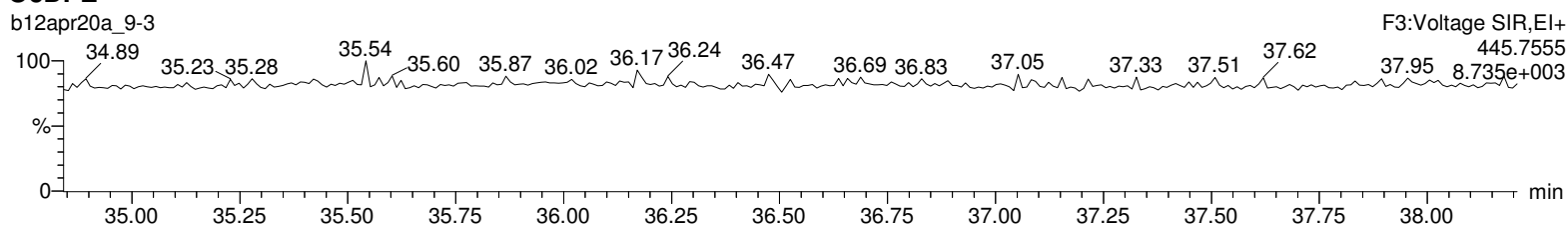
13C-123478-HxCDF



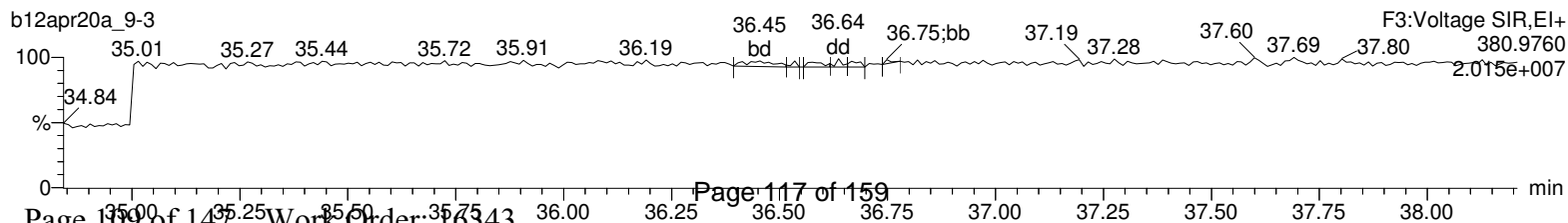
13C-123478-HxCDF



OcDPE



Lock Mass F3



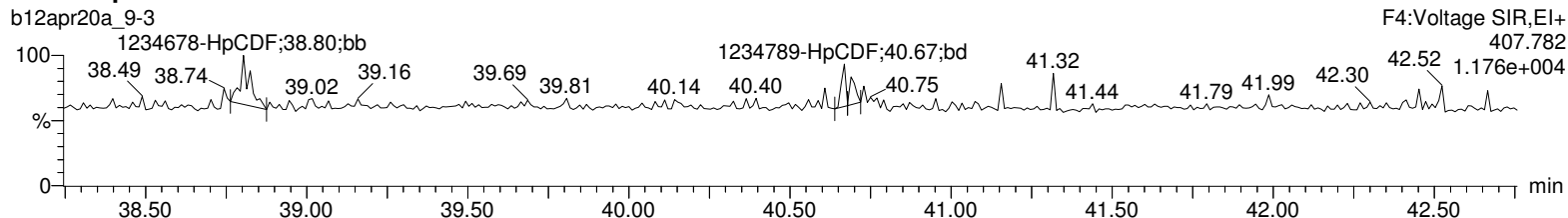
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

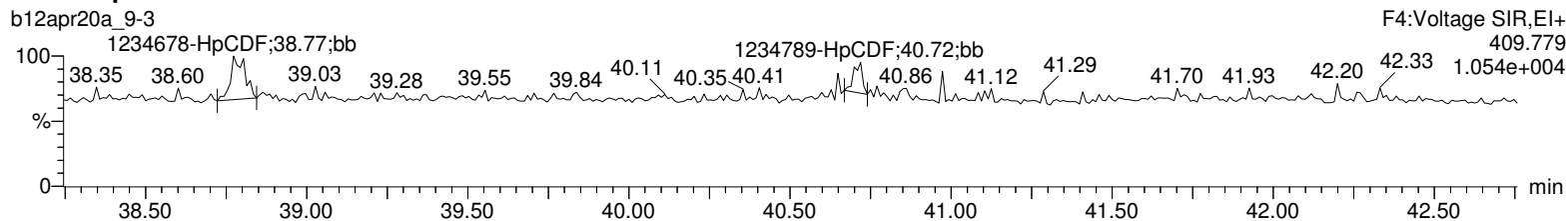
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

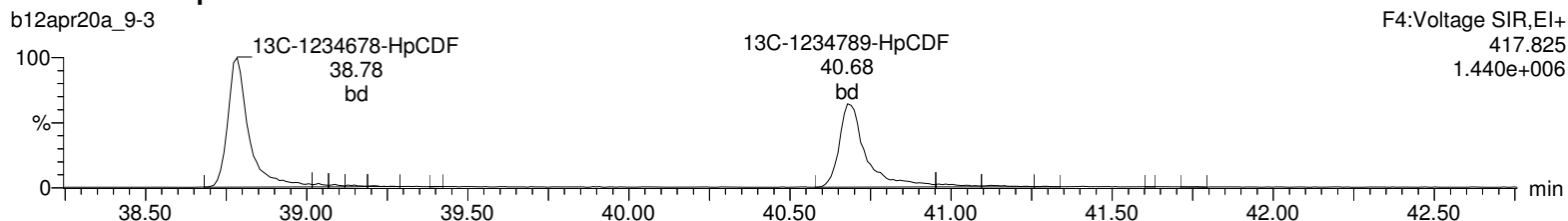
Total-heptafurans



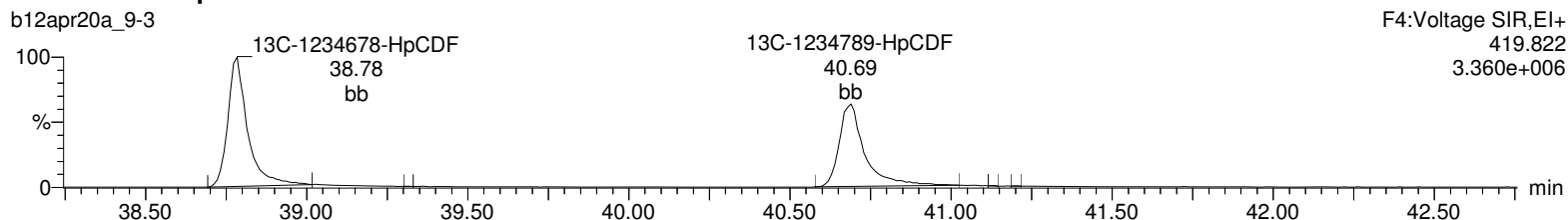
Total-heptafurans



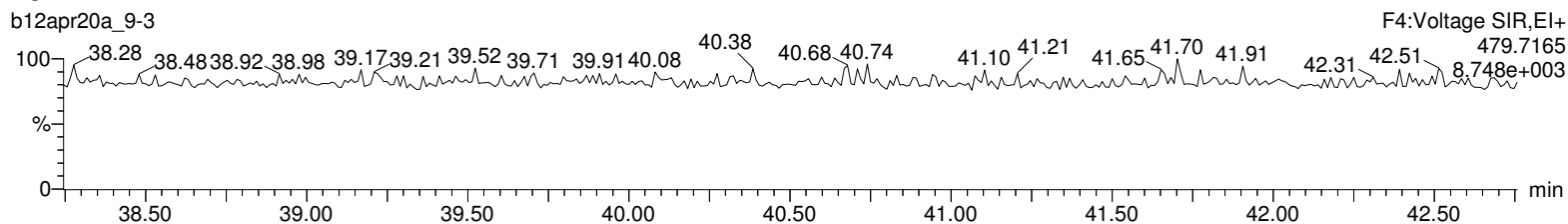
13C-1234678-HpCDF



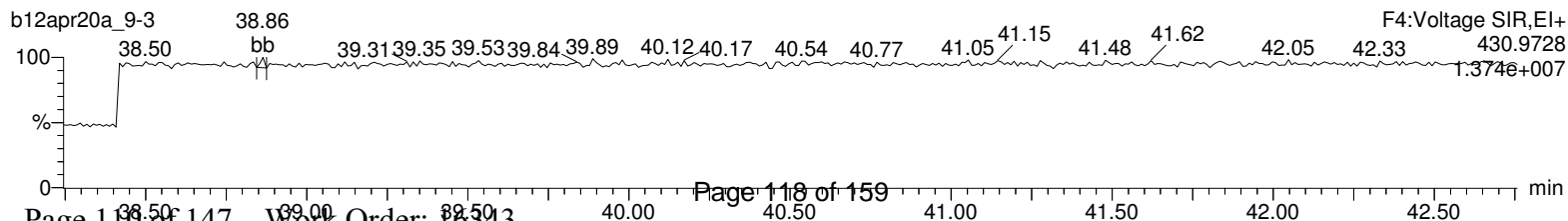
13C-1234678-HpCDF



NoDPE



Lock Mass F4



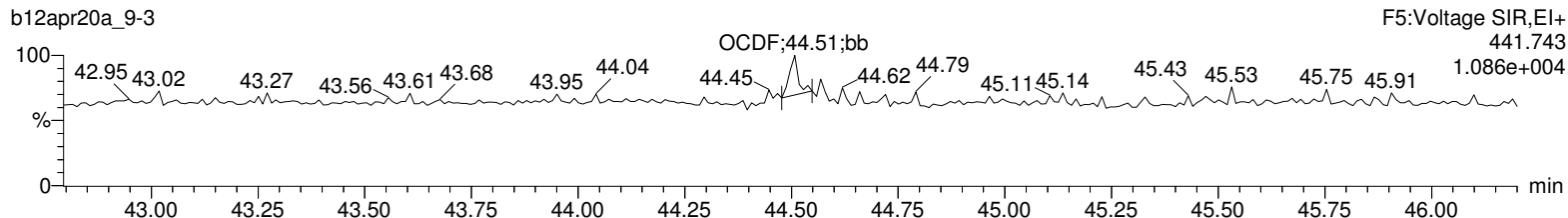
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

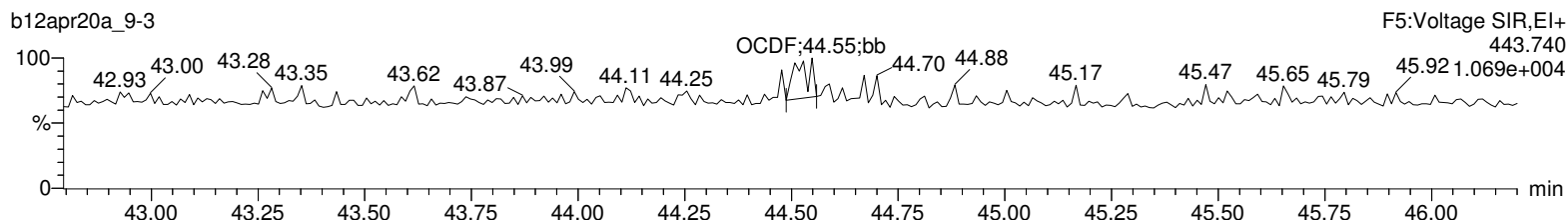
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-3, Date: 15-Apr-2020, Time: 18:58:08, ID: 12026415-1 MB, Description: , Job: %613%, Task: HRP763_1, User: MLL

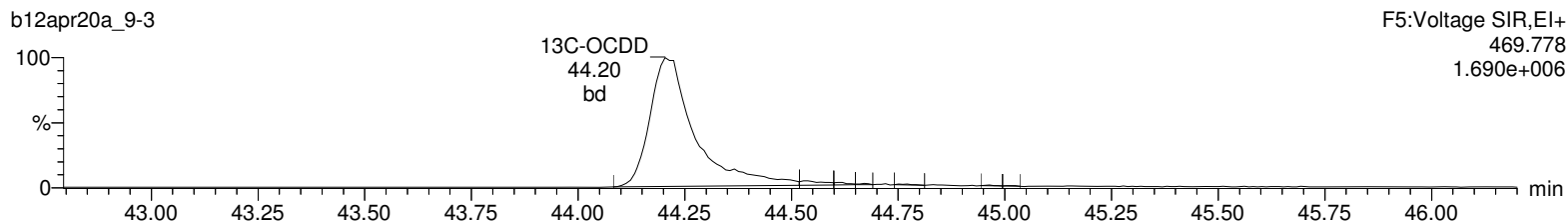
OCDF



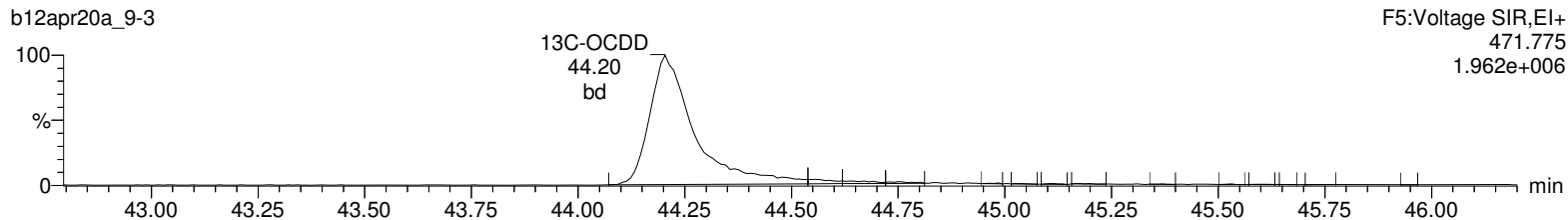
OCDF



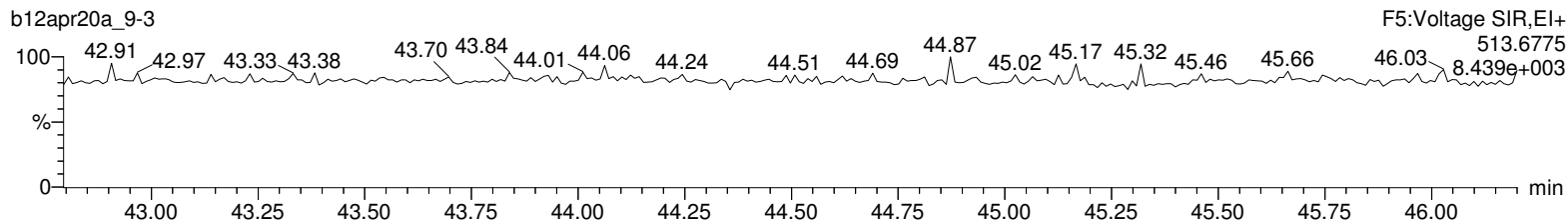
13C-OCDD



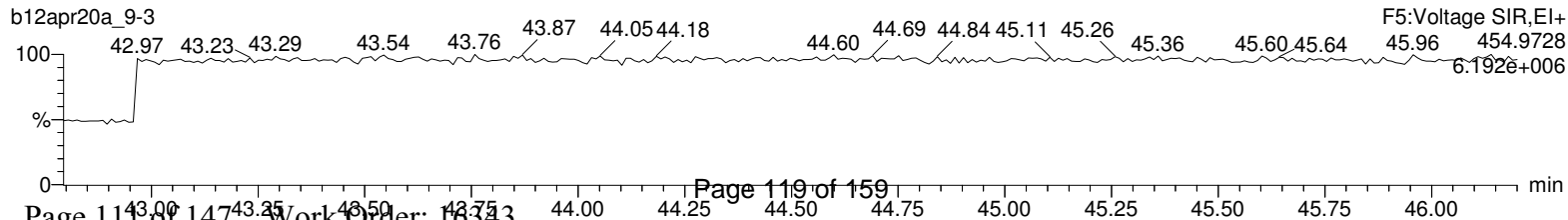
13C-OCDD



DeDPE



Lock Mass F5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 12026416		Matrix: WATER
Client Sample: QC for batch 43536		
Client ID: LCS for batch 43536		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 17:22	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-1		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.192	ng/L	0.00208	0.0100
40321-76-4	1,2,3,7,8-PeCDD		1.01	ng/L	0.00314	0.0500
39227-28-6	1,2,3,4,7,8-HxCDD		0.989	ng/L	0.0157	0.0500
57653-85-7	1,2,3,6,7,8-HxCDD		1.00	ng/L	0.0149	0.0500
19408-74-3	1,2,3,7,8,9-HxCDD		1.14	ng/L	0.0158	0.0500
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.969	ng/L	0.0108	0.0500
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1.99	ng/L	0.0306	0.100
51207-31-9	2,3,7,8-TCDF		0.188	ng/L	0.00272	0.0100
57117-41-6	1,2,3,7,8-PeCDF		0.998	ng/L	0.00430	0.0500
57117-31-4	2,3,4,7,8-PeCDF		1.04	ng/L	0.00384	0.0500
70648-26-9	1,2,3,4,7,8-HxCDF		0.965	ng/L	0.00836	0.0500
57117-44-9	1,2,3,6,7,8-HxCDF		0.982	ng/L	0.00778	0.0500
60851-34-5	2,3,4,6,7,8-HxCDF		0.890	ng/L	0.00802	0.0500
72918-21-9	1,2,3,7,8,9-HxCDF		0.970	ng/L	0.0125	0.0500
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.01	ng/L	0.00908	0.0500
55673-89-7	1,2,3,4,7,8,9-HpCDF		1.00	ng/L	0.0156	0.0500
39001-02-0	1,2,3,4,6,7,8,9-OCDF		2.20	ng/L	0.0214	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.49	2.00	ng/L	74.5	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.66	2.00	ng/L	83.0	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.39	2.00	ng/L	69.3	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.51	2.00	ng/L	75.4	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.41	2.00	ng/L	70.6	(22%-166%)
13C-OCDD		2.37	4.00	ng/L	59.2	(13%-199%)
13C-2,3,7,8-TCDF		1.43	2.00	ng/L	71.3	(22%-152%)
13C-1,2,3,7,8-PeCDF		1.69	2.00	ng/L	84.5	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.60	2.00	ng/L	80.2	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.20	2.00	ng/L	60.1	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.65	2.00	ng/L	82.5	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.67	2.00	ng/L	83.3	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.64	2.00	ng/L	82.1	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.39	2.00	ng/L	69.7	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.44	2.00	ng/L	72.1	(20%-186%)
37Cl-2,3,7,8-TCDD		0.179	0.200	ng/L	89.5	(31%-191%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time
 Printed: Thursday, April 16, 2020 11:25:48 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b12apr20.mdb 16 Apr 2020 09:09:51
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	2.33e4	3.04e4	5.37e4	31.23	1.000	0.76	NO	9.575	0.104	3.45e5	2235	154.8	4.91e5	1522	322.3	bb	dd
2	12378-PeCDD	1.13e5	7.02e4	1.83e5	34.10	1.000	1.61	NO	50.337	0.157	2.31e6	2841	811.8	1.47e6	1954	754.1	bd	bd
3	123478-HxCDD	7.52e4	5.88e4	1.34e5	36.68	1.000	1.28	NO	49.438	0.786	1.54e6	6563	234.9	1.26e6	10973	114.9	bd	bd
4	123678-HxCDD	1.05e5	8.71e4	1.92e5	36.76	1.000	1.21	NO	50.208	0.746	1.58e6	6563	241.2	1.35e6	10973	122.9	dd	dd
5	123789-HxCDD	1.02e5	7.71e4	1.79e5	37.00	1.007	1.33	NO	56.847	0.790	1.27e6	6563	193.3	1.05e6	10973	95.4	dd	dd
6	1234678-HpCDD	5.75e4	5.60e4	1.14e5	40.03	1.000	1.03	NO	48.444	0.539	7.25e5	2990	242.3	7.06e5	2897	243.6	bd	bd
7	OCDD	8.01e4	8.77e4	1.68e5	44.22	1.000	0.91	NO	99.296	1.53	6.92e5	4414	156.7	7.62e5	4054	187.9	bd	bd
8	2378-TCDF	2.39e4	3.16e4	5.55e4	30.50	1.000	0.75	NO	9.408	0.136	2.95e5	1167	252.9	3.58e5	2489	144.0	bd	bb
9	12378-PeCDF	1.58e5	1.02e5	2.59e5	33.30	1.000	1.55	NO	49.917	0.215	3.37e6	5010	672.7	2.24e6	4614	486.6	bd	bd
10	23478-PeCDF	1.75e5	1.11e5	2.87e5	33.91	1.000	1.57	NO	52.199	0.192	3.83e6	5010	764.0	2.52e6	4614	546.9	bd	bb
11	123478-HxCDF	8.97e4	7.53e4	1.65e5	35.98	1.001	1.19	NO	48.229	0.418	1.82e6	7864	230.8	1.50e6	6045	248.4	bd	bd
12	123678-HxCDF	1.56e5	1.20e5	2.76e5	36.07	1.000	1.30	NO	49.077	0.389	2.57e6	7864	326.7	2.02e6	6045	334.8	db	db
13	234678-HxCDF	1.28e5	9.98e4	2.28e5	36.54	1.000	1.29	NO	44.511	0.401	2.27e6	7864	288.8	1.83e6	6045	302.0	bd	bd
14	123789-HxCDF	1.09e5	8.68e4	1.96e5	37.33	1.000	1.26	NO	48.477	0.625	1.40e6	7864	177.6	1.11e6	6045	183.4	bd	bb
15	1234678-HpCDF	8.97e4	8.63e4	1.76e5	38.78	1.000	1.04	NO	50.741	0.454	1.30e6	4914	263.6	1.30e6	4363	297.2	bd	bd
16	1234789-HpCDF	7.25e4	6.65e4	1.39e5	40.70	1.000	1.09	NO	50.058	0.781	9.06e5	4914	184.3	7.22e5	4363	165.5	bb	bd
17	OCDF	1.02e5	1.15e5	2.17e5	44.53	1.007	0.88	NO	110.071	1.07	8.61e5	2917	295.2	9.47e5	3977	238.2	bd	bd
18	13C-2378-TCDD	2.72e5	3.56e5	6.28e5	31.22	1.017	0.76	NO	74.476	0.173	4.37e6	4854	899.2	5.62e6	3109	1807.3	bd	bd
19	13C-12378-PeCDD	2.58e5	1.74e5	4.32e5	34.09	1.111	1.49	NO	82.978	0.237	5.44e6	4418	1231.4	3.40e6	2330	1459.2	bb	bd
20	13C-123478-HxCDD	1.72e5	1.36e5	3.07e5	36.67	0.991	1.26	NO	69.291	0.533	3.53e6	7786	453.4	2.79e6	4950	563.6	bd	bd
21	13C-123678-HxCDD	2.48e5	1.85e5	4.33e5	36.76	0.994	1.34	NO	75.405	0.412	3.80e6	7786	488.6	2.94e6	4950	594.1	dd	db
22	13C-1234678-HpCDD	1.35e5	1.19e5	2.53e5	40.02	1.082	1.13	NO	70.559	0.493	1.57e6	5046	311.0	1.48e6	4481	330.8	bd	bd
23	13C-OCDD	1.78e5	2.08e5	3.85e5	44.21	1.195	0.86	NO	118.303	0.594	1.45e6	5401	269.8	1.74e6	5018	347.0	bd	bd
24	13C-2378-TCDF	2.95e5	3.87e5	6.82e5	30.49	0.993	0.76	NO	71.317	0.188	3.36e6	6274	536.0	4.30e6	3550	1212.5	bb	bb
25	13C-12378-PeCDF	3.63e5	2.32e5	5.95e5	33.29	1.085	1.56	NO	84.506	0.343	7.80e6	7493	1040.8	5.03e6	5711	880.3	bd	bd
26	13C-23478-PeCDF	3.46e5	2.29e5	5.74e5	33.90	1.105	1.51	NO	80.198	0.337	7.87e6	7493	1049.7	4.94e6	5711	865.5	bb	bb
27	13C-123478-HxCDF	1.07e5	2.02e5	3.10e5	35.96	0.972	0.53	NO	60.091	0.573	2.61e6	8705	300.3	4.21e6	7198	585.1	bd	bd
28	13C-123678-HxCDF	1.81e5	3.53e5	5.34e5	36.06	0.975	0.51	NO	82.516	0.456	2.89e6	8705	331.2	5.51e6	7198	766.2	dd	dd
29	13C-234678-HxCDF	1.47e5	3.00e5	4.47e5	36.53	0.988	0.49	NO	83.251	0.550	2.49e6	8705	286.4	5.04e6	7198	700.0	bd	dd
30	13C-123789-HxCDF	1.33e5	2.53e5	3.86e5	37.31	1.008	0.53	NO	82.115	0.628	1.84e6	8705	210.8	3.31e6	7198	459.2	bd	bd
31	13C-1234678-HpCDF	9.25e4	2.08e5	3.00e5	38.78	1.048	0.44	NO	69.717	0.374	1.36e6	3163	430.2	3.02e6	5507	548.8	bd	bd

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time
 Printed: Thursday, April 16, 2020 11:25:48 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	7.21e4	1.60e5	2.33e5	40.69	1.100	0.45	NO	72.111	0.499	7.72e5	3163	244.1	1.74e6	5507	316.6	bd	bd
33	13C-1234-TCDD	3.26e5	4.20e5	7.46e5	30.69	0.000	0.78	NO	100.000	0.195	4.46e6	4854	918.4	5.64e6	3109	1813.1	bb	bb
34	13C-123789-HxCDD	3.19e5	2.32e5	5.52e5	36.99	0.000	1.37	NO	100.000	0.429	4.29e6	7786	551.6	3.48e6	4950	702.2	db	bd
35	37Cl-2378-TCDD	7.07e4		7.07e4	31.23	1.018			8.954	0.0494	1.16e6	2132	543.9				bd	

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

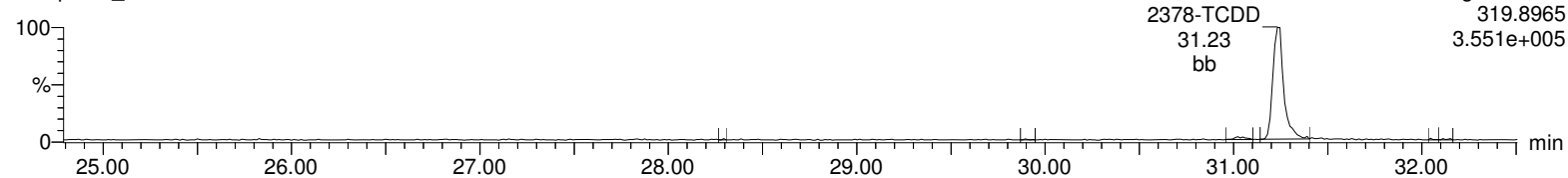
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b12apr20.mdb 16 Apr 2020 09:09:51

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

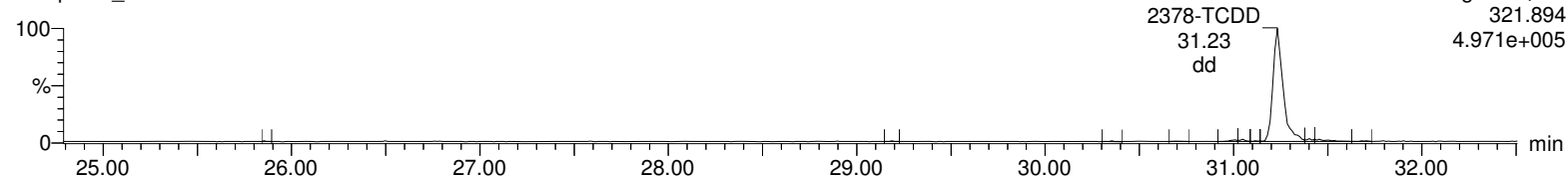
Total-tetradoxins

b12apr20a_9-1



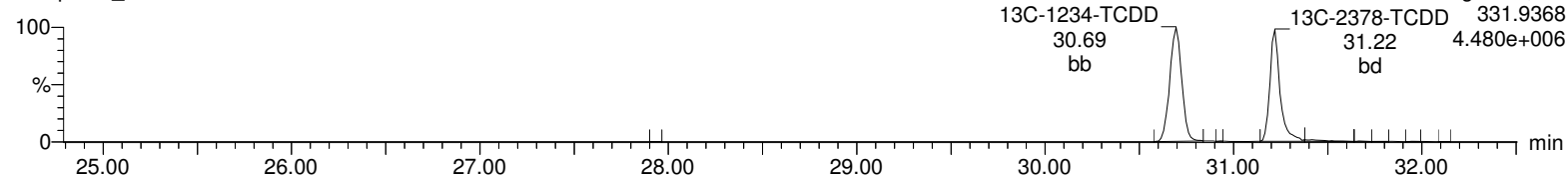
Total-tetradoxins

b12apr20a_9-1



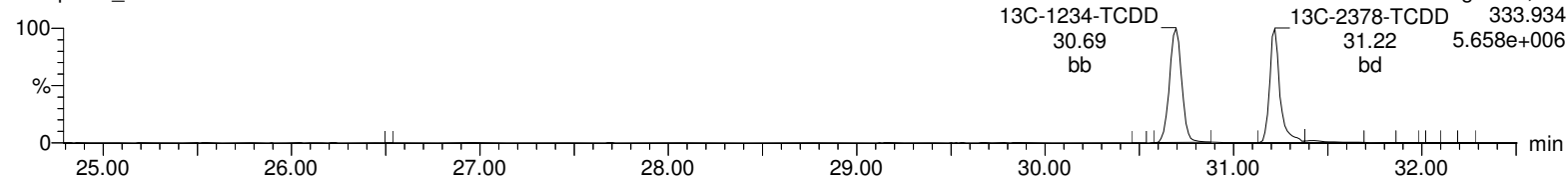
13C-2378-TCDD

b12apr20a_9-1



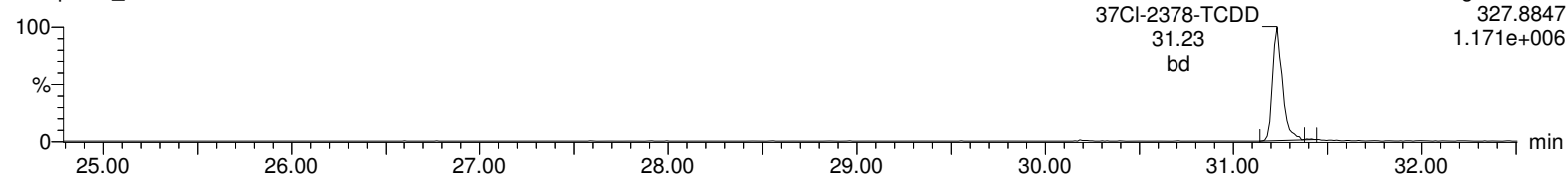
13C-2378-TCDD

b12apr20a_9-1



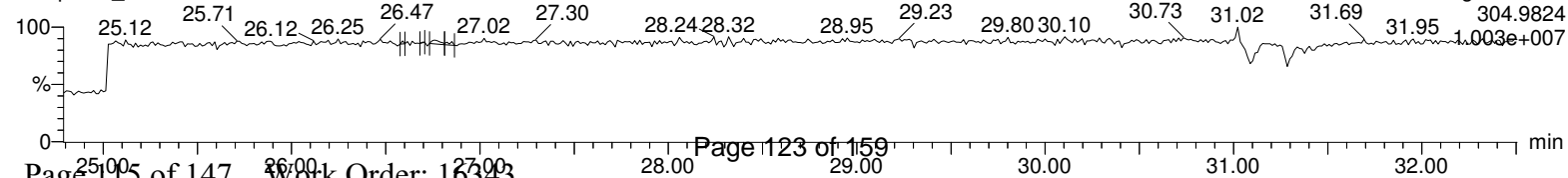
37Cl-2378-TCDD

b12apr20a_9-1



Lock Mass F1

b12apr20a_9-1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

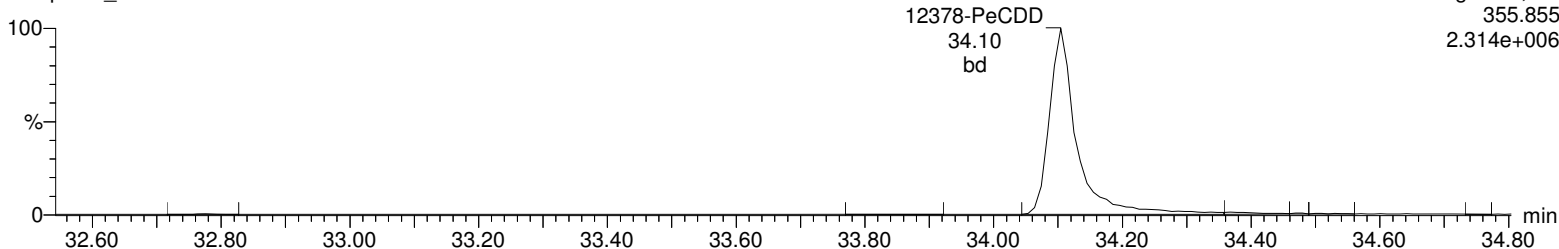
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-pentadioxins

b12apr20a_9-1

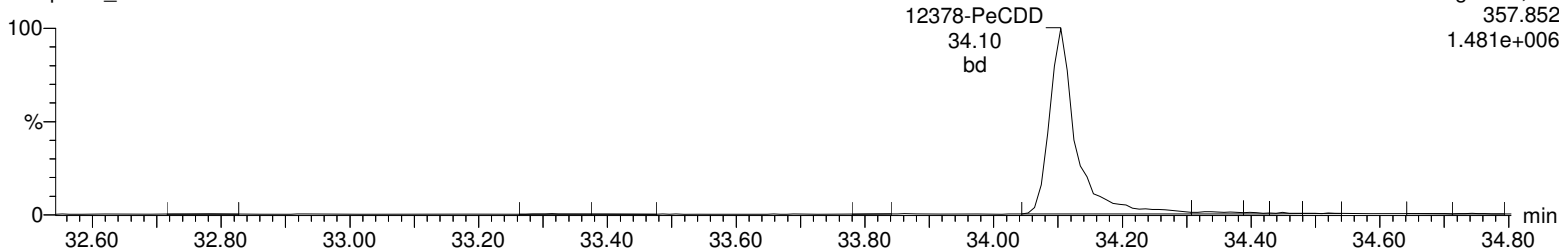
F2:Voltage SIR,EI+
355.855
2.314e+006



Total-pentadioxins

b12apr20a_9-1

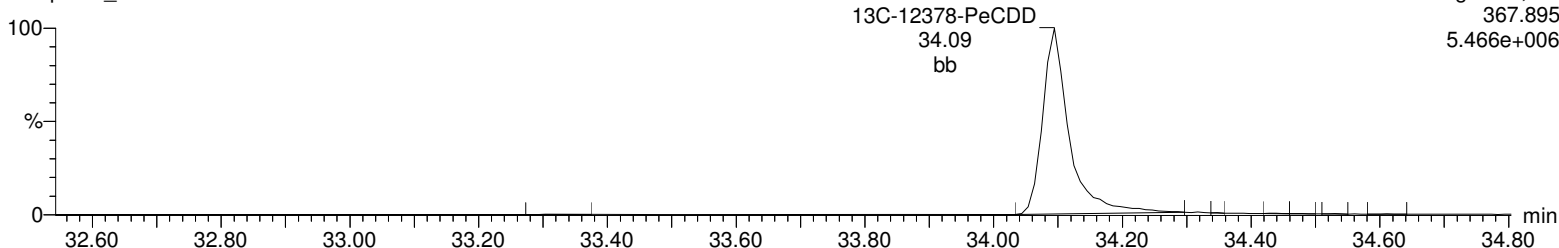
F2:Voltage SIR,EI+
357.852
1.481e+006



13C-12378-PeCDD

b12apr20a_9-1

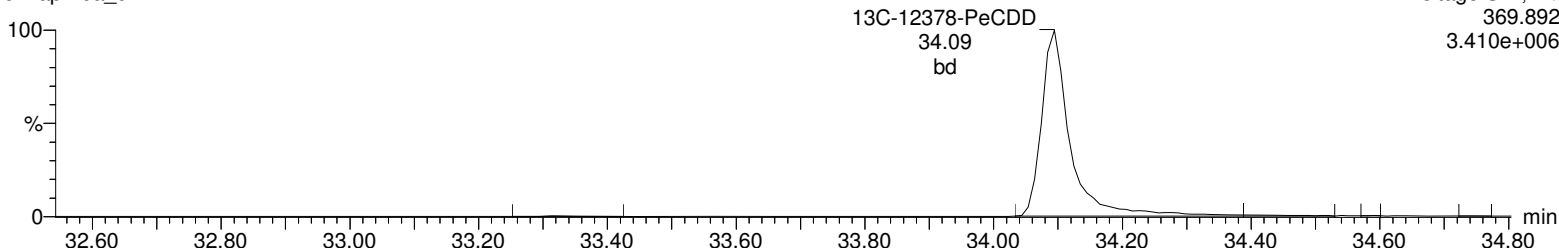
F2:Voltage SIR,EI+
367.895
5.466e+006



13C-12378-PeCDD

b12apr20a_9-1

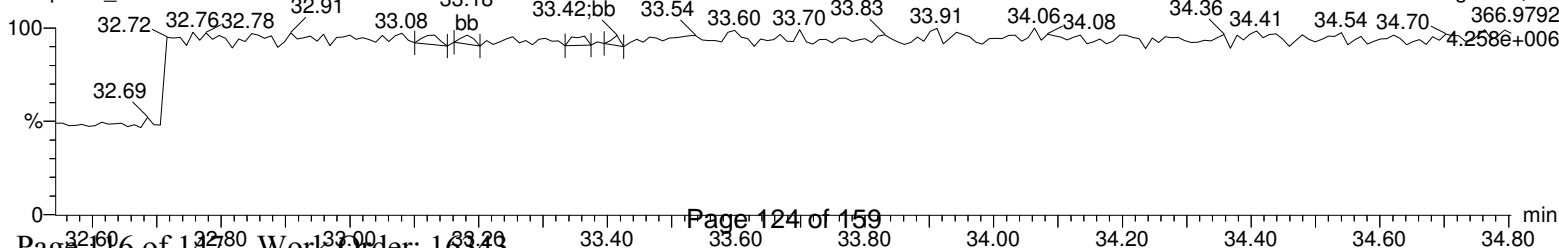
F2:Voltage SIR,EI+
369.892
3.410e+006



Lock Mass F2

b12apr20a_9-1

F2:Voltage SIR,EI+
366.9792
4.258e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

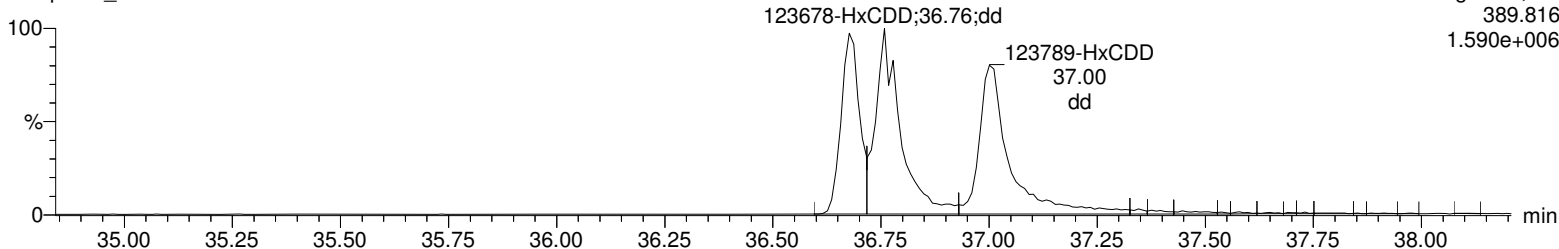
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-hexadioxins

b12apr20a_9-1

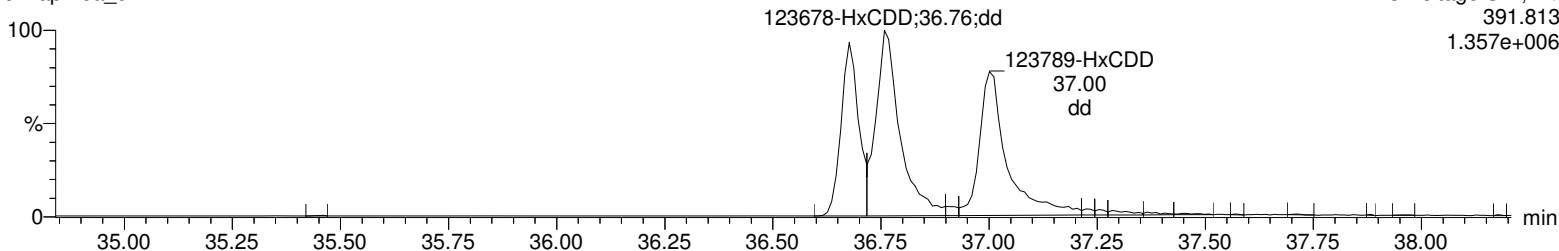
F3:Voltage SIR,EI+
389.816
1.590e+006



Total-hexadioxins

b12apr20a_9-1

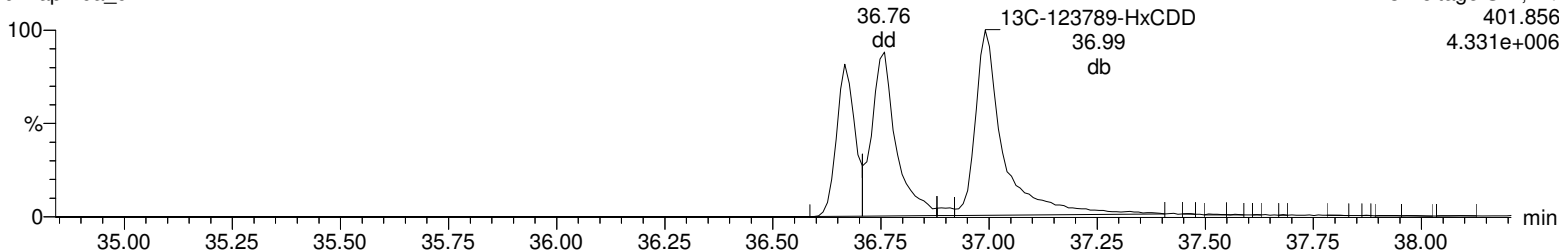
F3:Voltage SIR,EI+
391.813
1.357e+006



13C-123478-HxCDD

b12apr20a_9-1

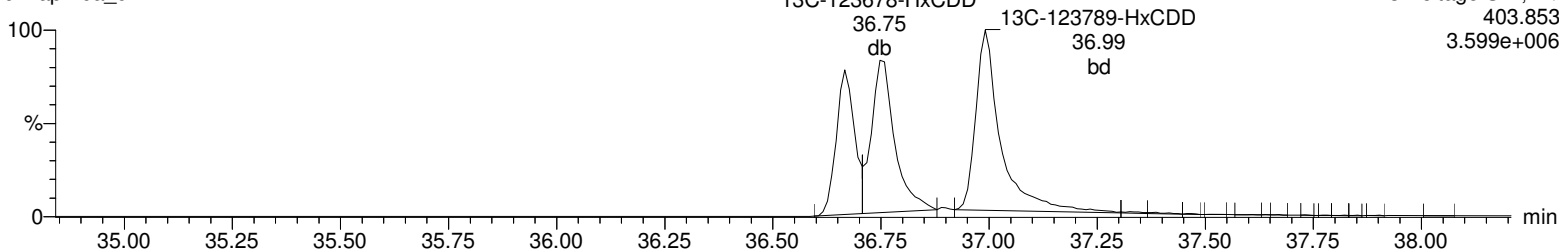
F3:Voltage SIR,EI+
401.856
4.331e+006



13C-123478-HxCDD

b12apr20a_9-1

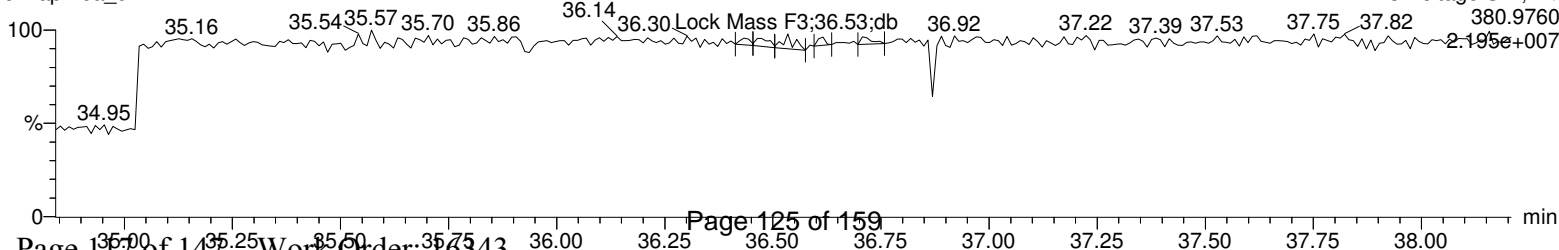
F3:Voltage SIR,EI+
403.853
3.599e+006



Lock Mass F3

b12apr20a_9-1

F3:Voltage SIR,EI+
380.9760
2.195e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

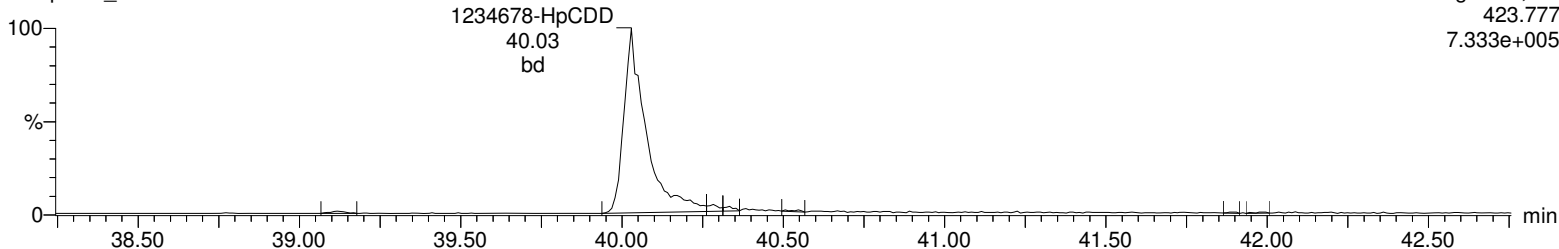
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-heptadioxins

b12apr20a_9-1

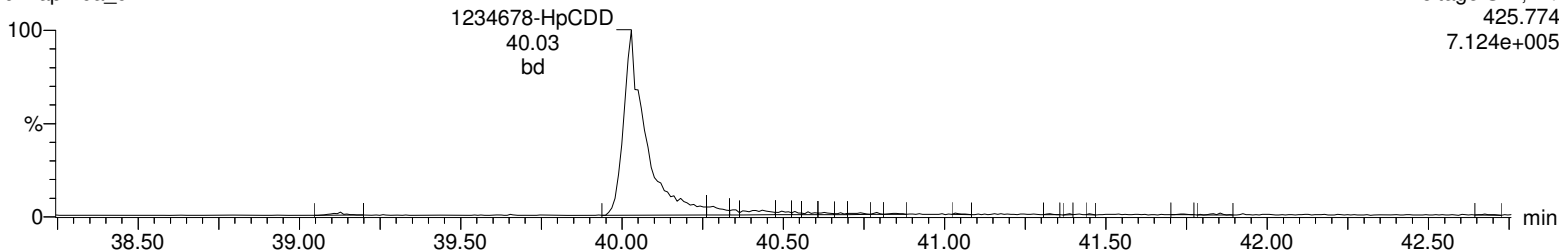
F4:Voltage SIR,EI+
423.777
7.333e+005



Total-heptadioxins

b12apr20a_9-1

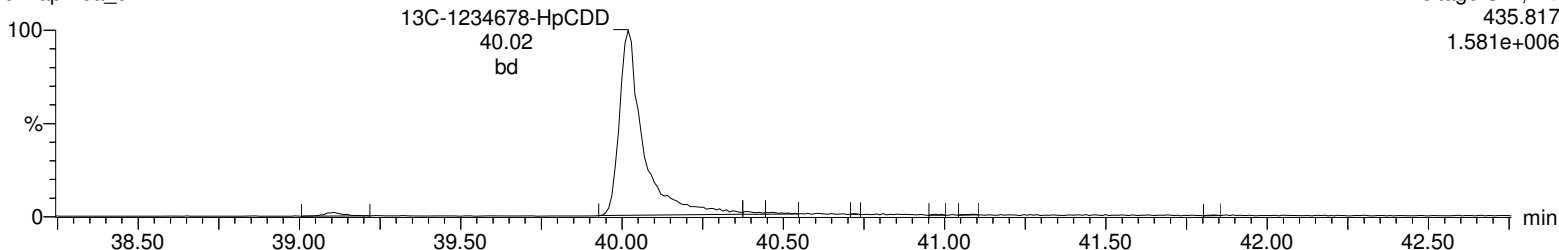
F4:Voltage SIR,EI+
425.774
7.124e+005



13C-1234678-HpCDD

b12apr20a_9-1

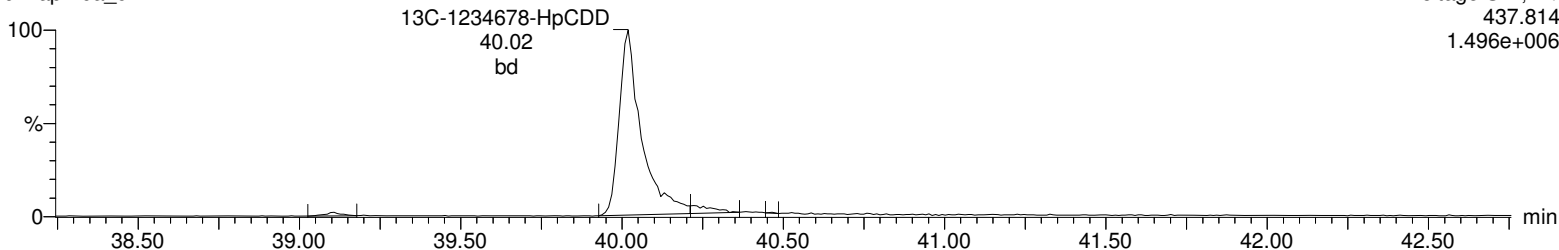
F4:Voltage SIR,EI+
435.817
1.581e+006



13C-1234678-HpCDD

b12apr20a_9-1

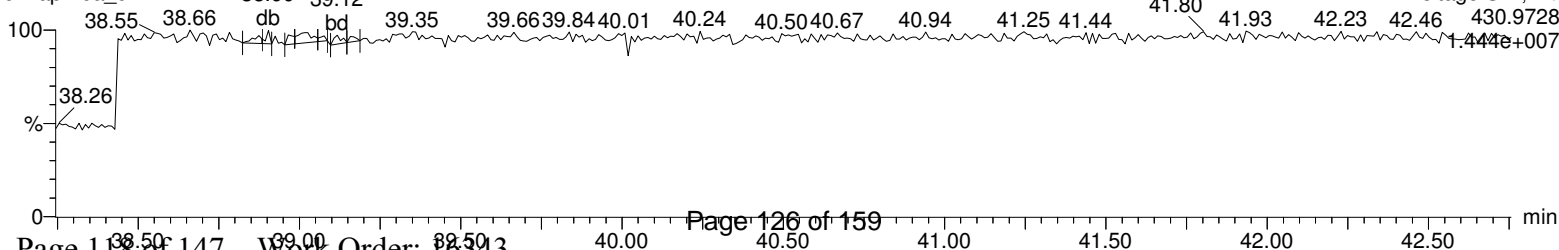
F4:Voltage SIR,EI+
437.814
1.496e+006



Lock Mass F4

b12apr20a_9-1

F4:Voltage SIR,EI+
430.9728
1.444e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

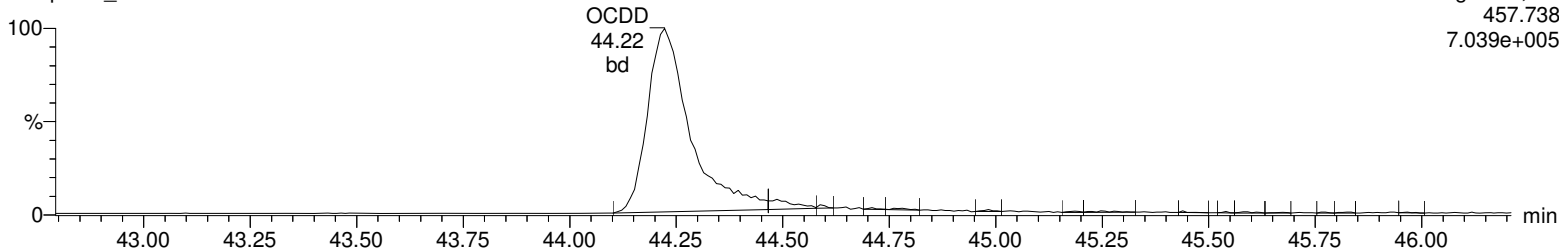
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

OCDD

b12apr20a_9-1

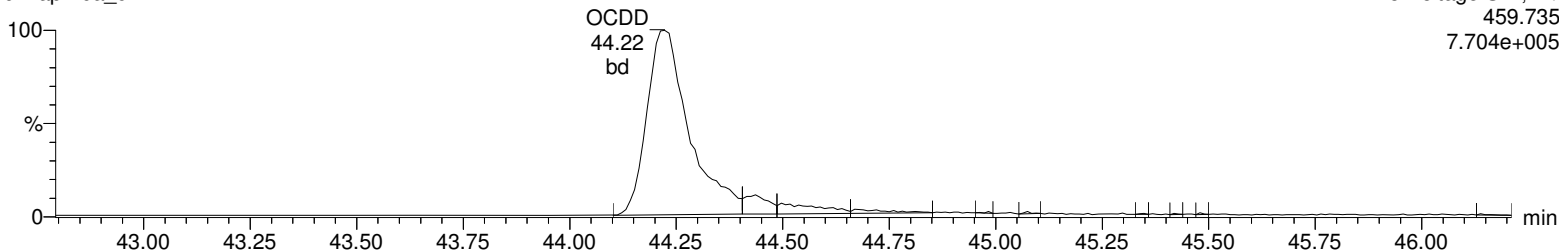
F5:Voltage SIR,EI+
457.738
7.039e+005



OCDD

b12apr20a_9-1

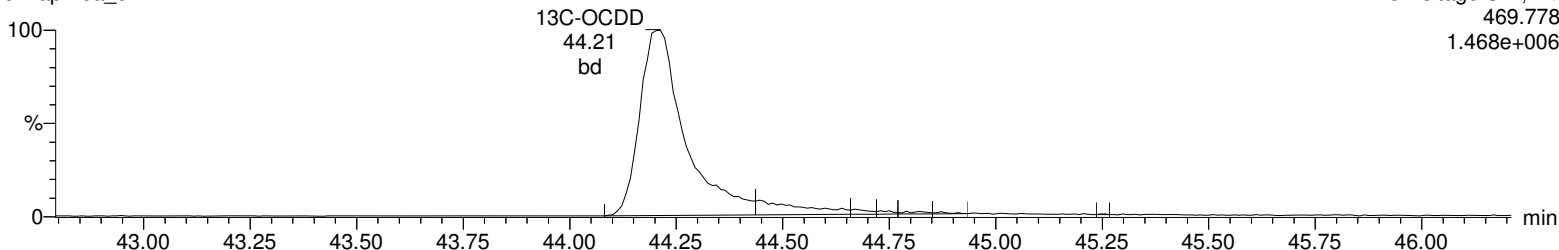
F5:Voltage SIR,EI+
459.735
7.704e+005



13C-OCDD

b12apr20a_9-1

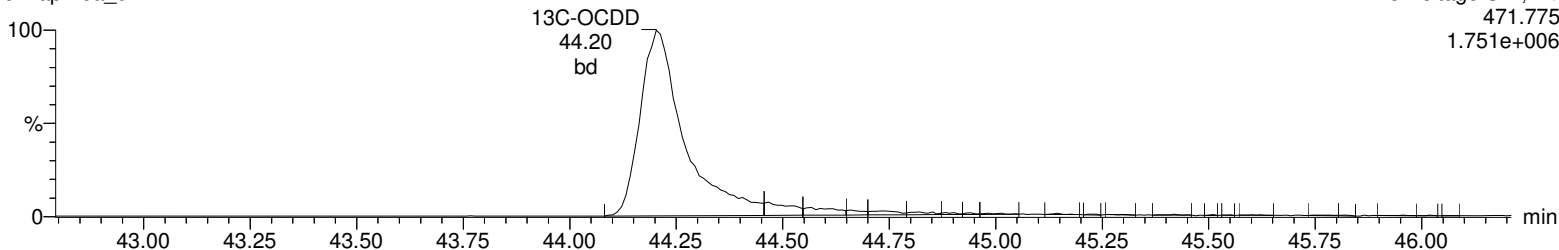
F5:Voltage SIR,EI+
469.778
1.468e+006



13C-OCDD

b12apr20a_9-1

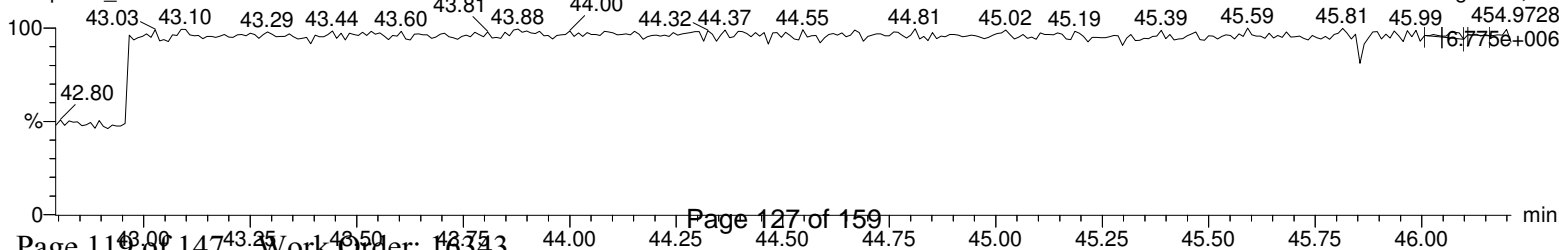
F5:Voltage SIR,EI+
471.775
1.751e+006



Lock Mass F5

b12apr20a_9-1

F5:Voltage SIR,EI+
454.9728
1.6775e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

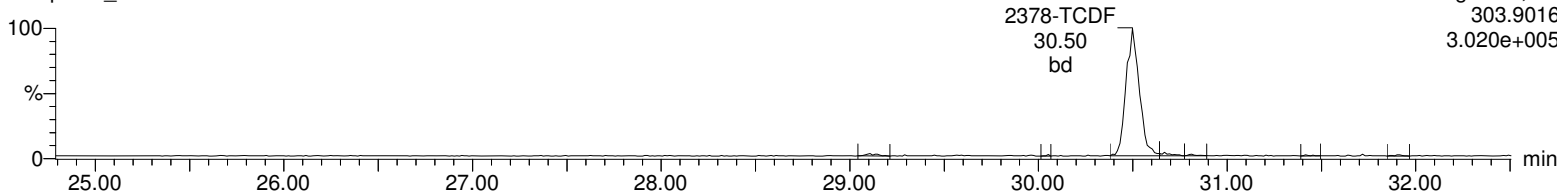
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-tetrafurans

b12apr20a_9-1

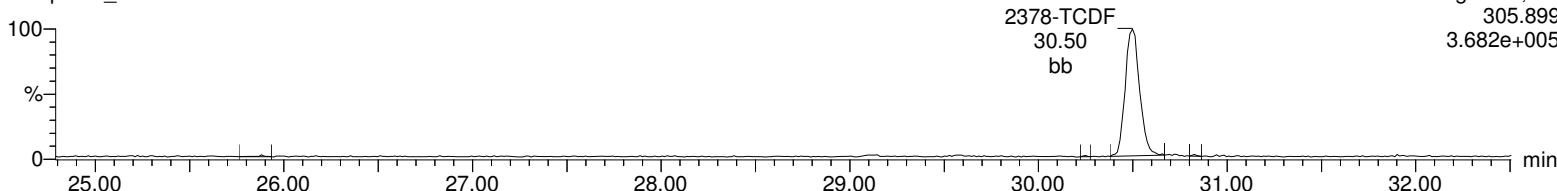
F1:Voltage SIR,EI+
303.9016
3.020e+005



Total-tetrafurans

b12apr20a_9-1

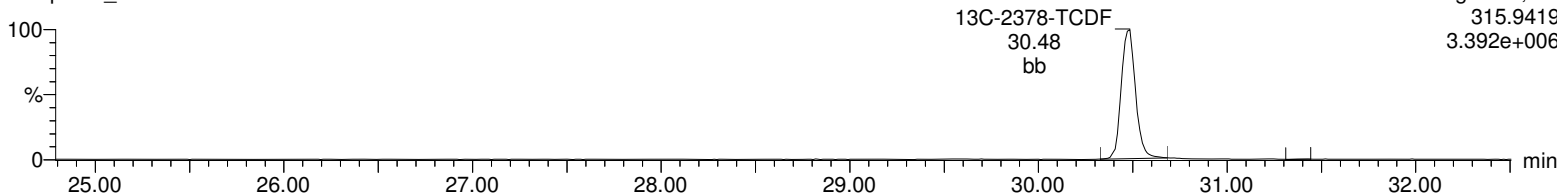
F1:Voltage SIR,EI+
305.899
3.682e+005



13C-2378-TCDF

b12apr20a_9-1

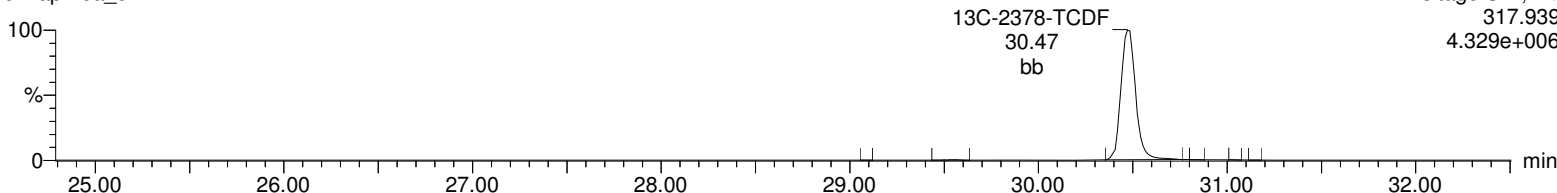
F1:Voltage SIR,EI+
315.9419
3.392e+006



13C-2378-TCDF

b12apr20a_9-1

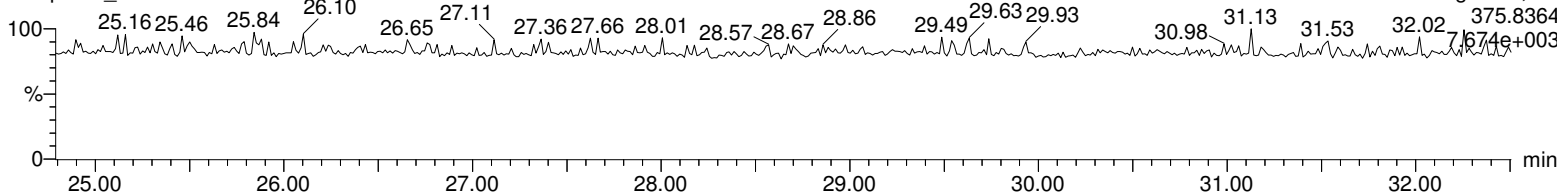
F1:Voltage SIR,EI+
317.939
4.329e+006



HxDPE

b12apr20a_9-1

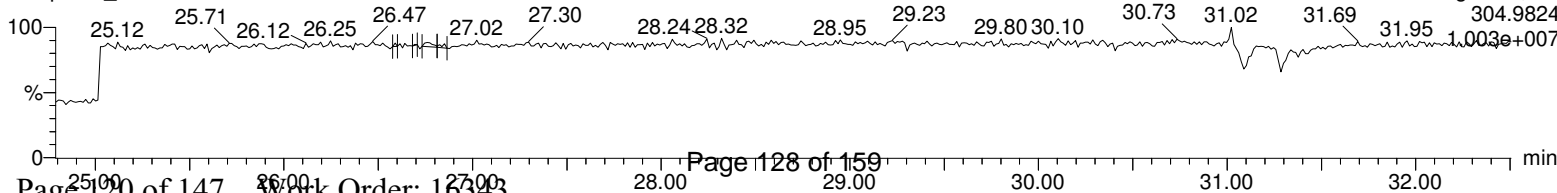
F1:Voltage SIR,EI+
375.8364
7.674e+003



Lock Mass F1

b12apr20a_9-1

F1:Voltage SIR,EI+
304.9824
1.003e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

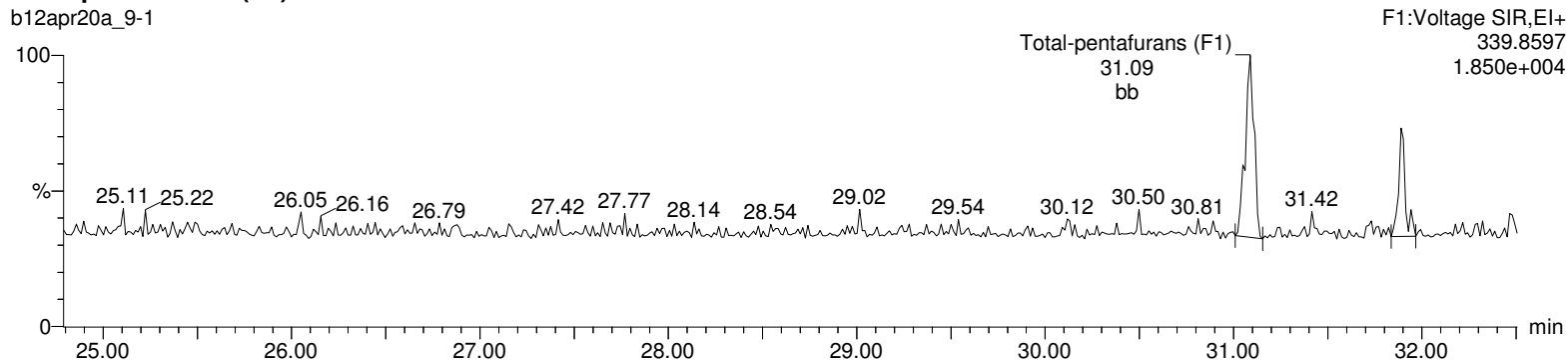
Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

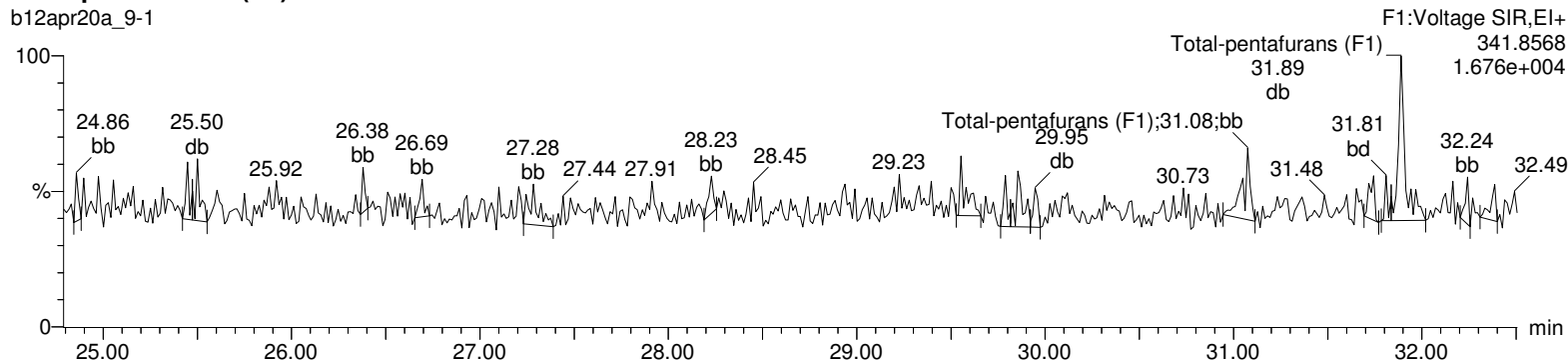
Total-pentafurans (F1)

b12apr20a_9-1



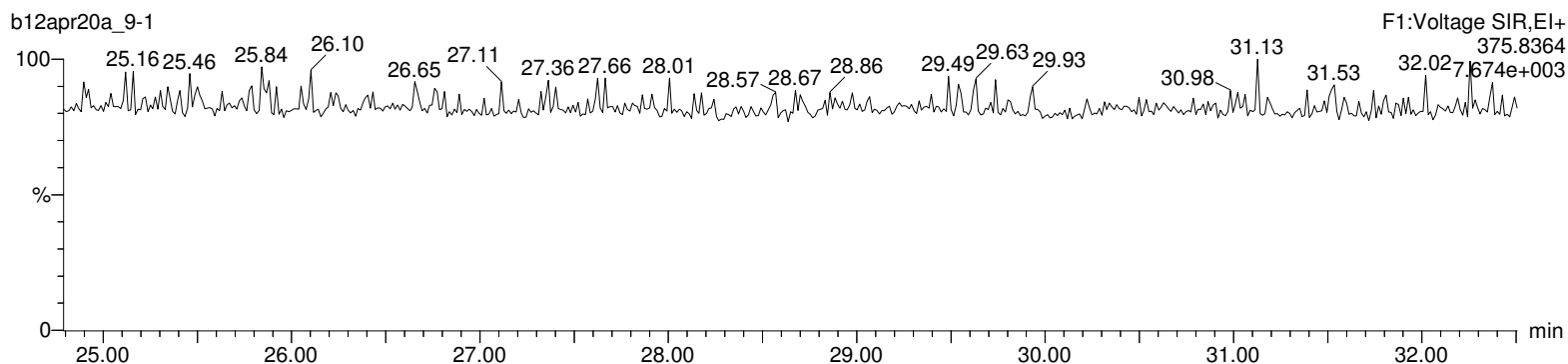
Total-pentafurans (F1)

b12apr20a_9-1



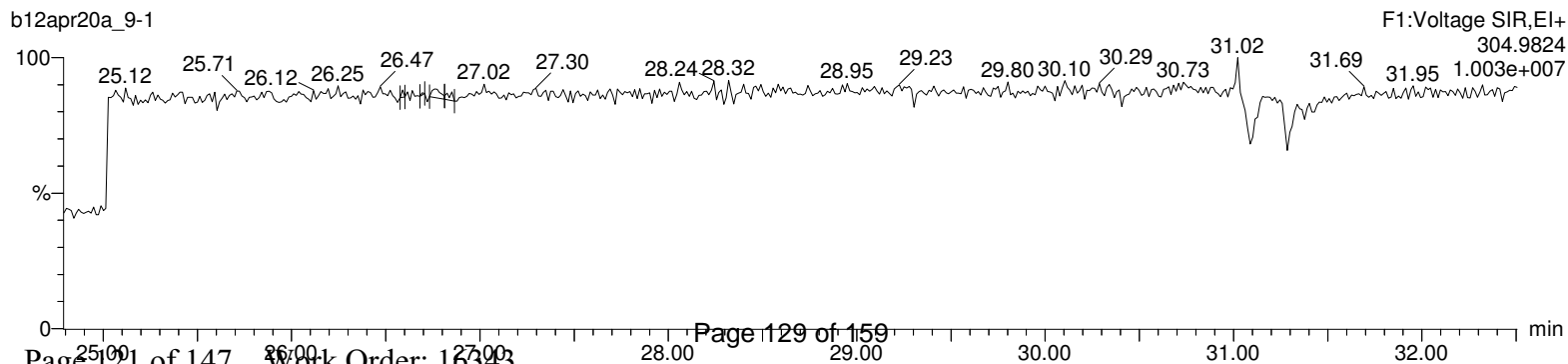
HxDPE

b12apr20a_9-1



Lock Mass F1

b12apr20a_9-1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

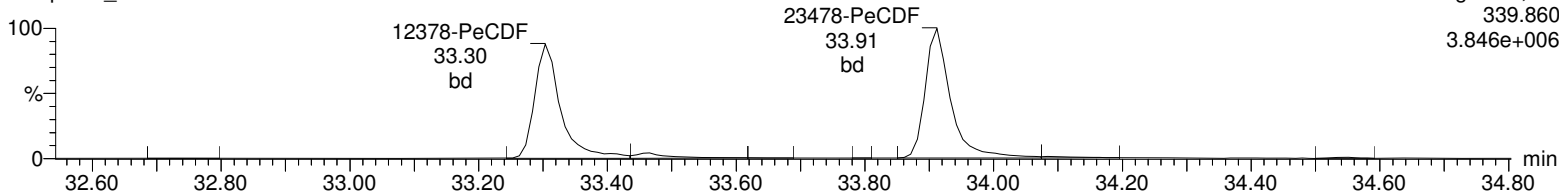
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-pentafurans

b12apr20a_9-1

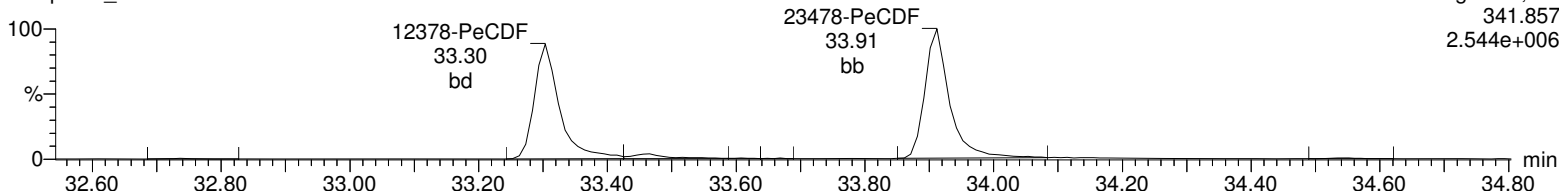
F2:Voltage SIR,EI+
339.860
3.846e+006



Total-pentafurans

b12apr20a_9-1

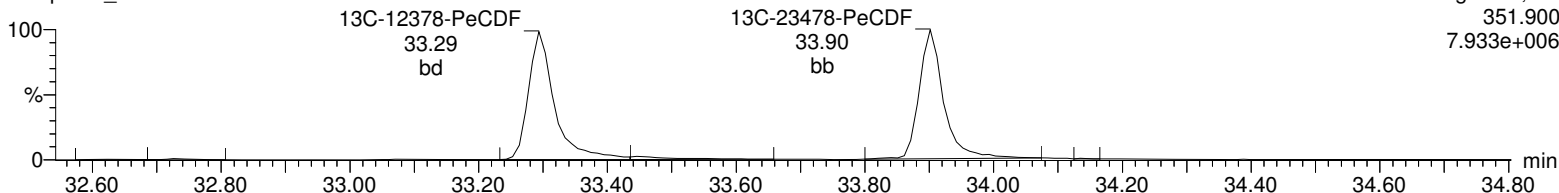
F2:Voltage SIR,EI+
341.857
2.544e+006



13C-12378-PeCDF

b12apr20a_9-1

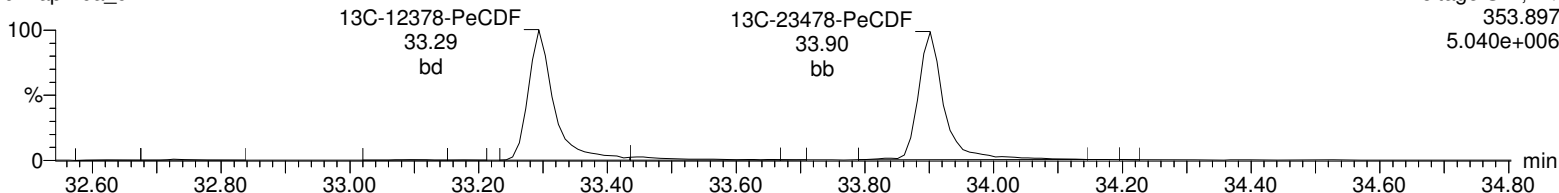
F2:Voltage SIR,EI+
351.900
7.933e+006



13C-12378-PeCDF

b12apr20a_9-1

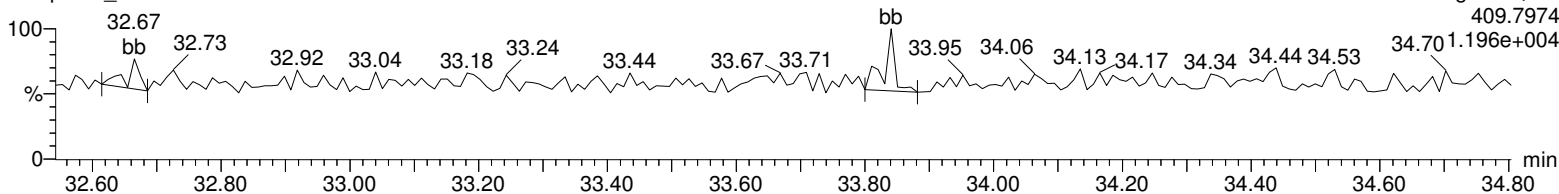
F2:Voltage SIR,EI+
353.897
5.040e+006



HpDPE

b12apr20a_9-1

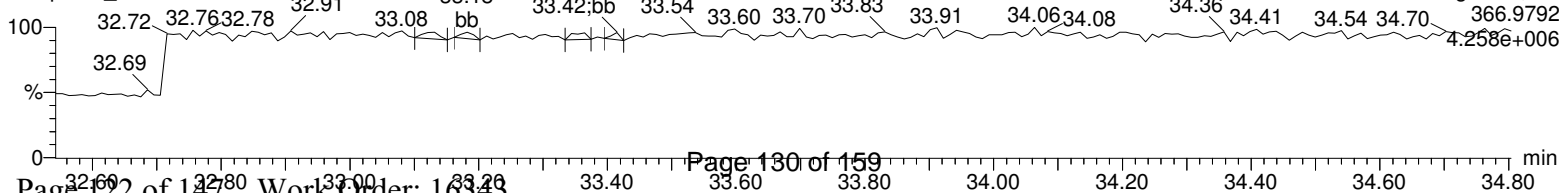
F2:Voltage SIR,EI+
409.7974
1.196e+004



Lock Mass F2

b12apr20a_9-1

F2:Voltage SIR,EI+
366.9792
4.258e+006



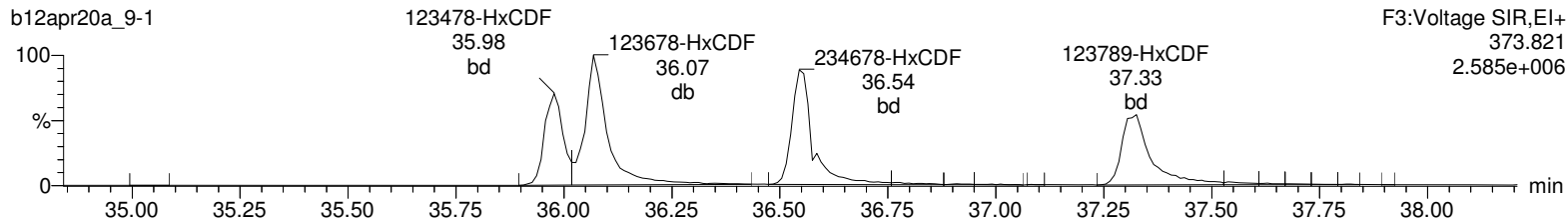
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

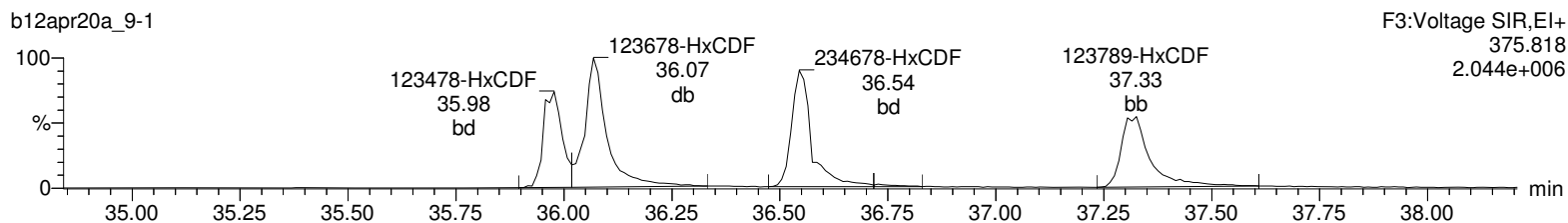
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

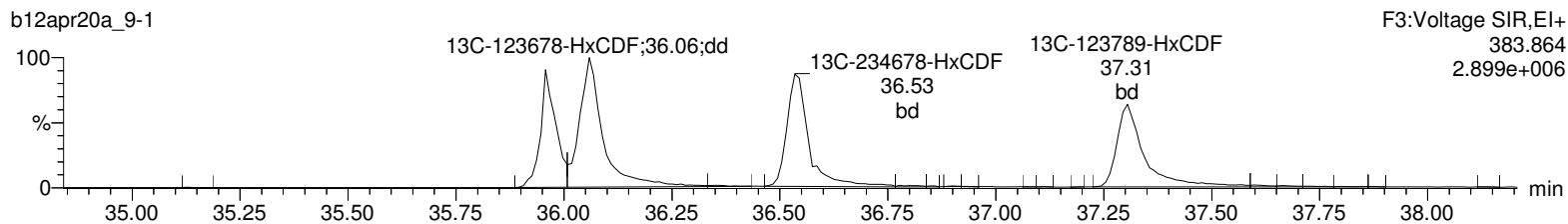
Total-hexafurans



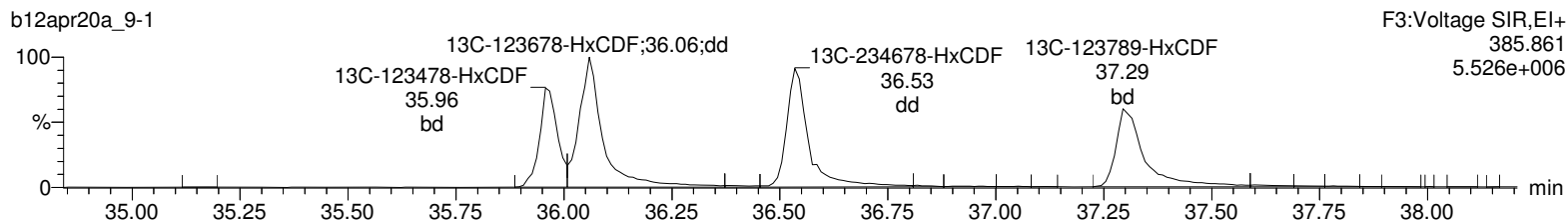
Total-hexafurans



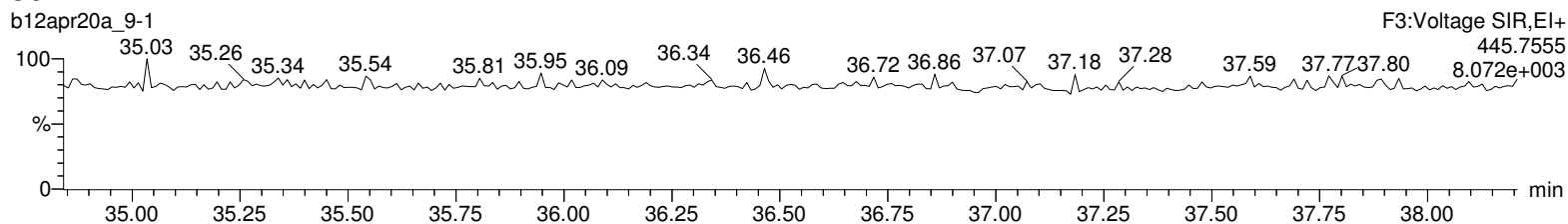
13C-123478-HxCDF



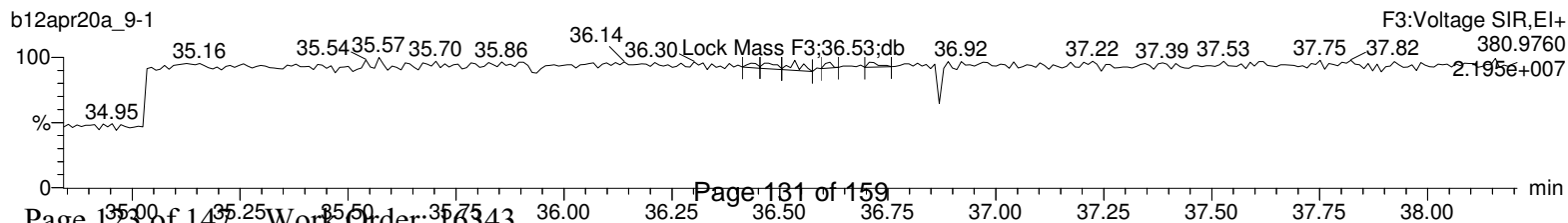
13C-123478-HxCDF



OcDPE



Lock Mass F3



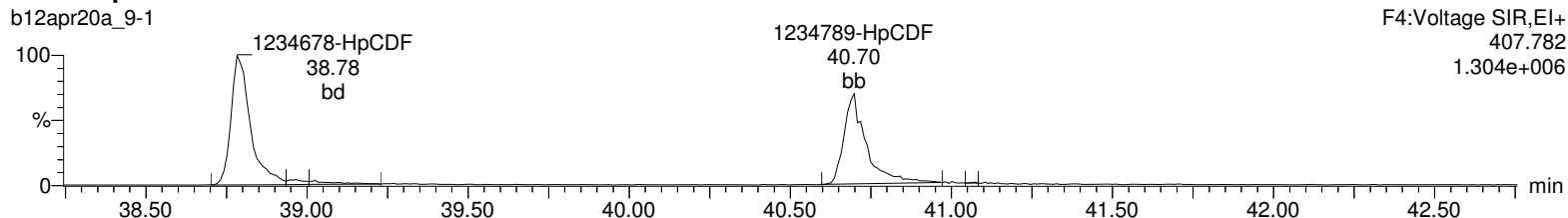
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

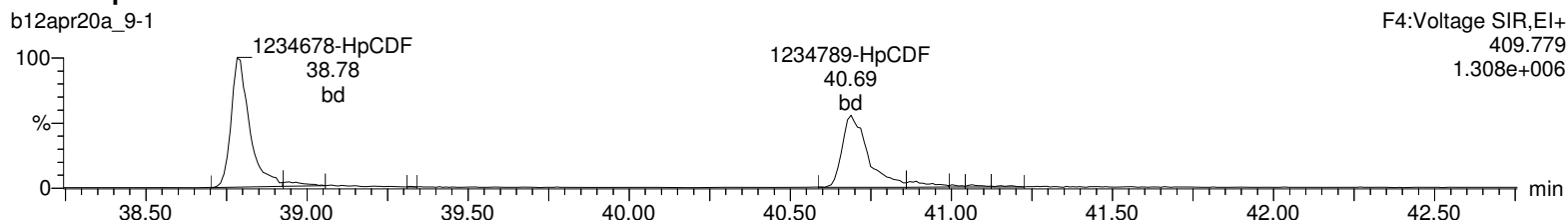
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

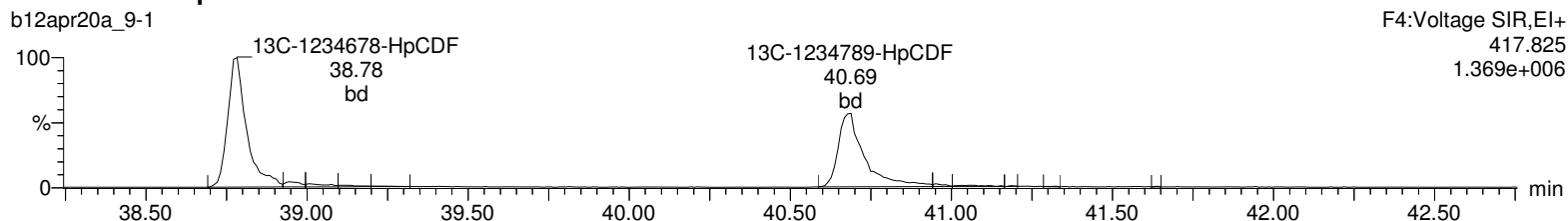
Total-heptafurans



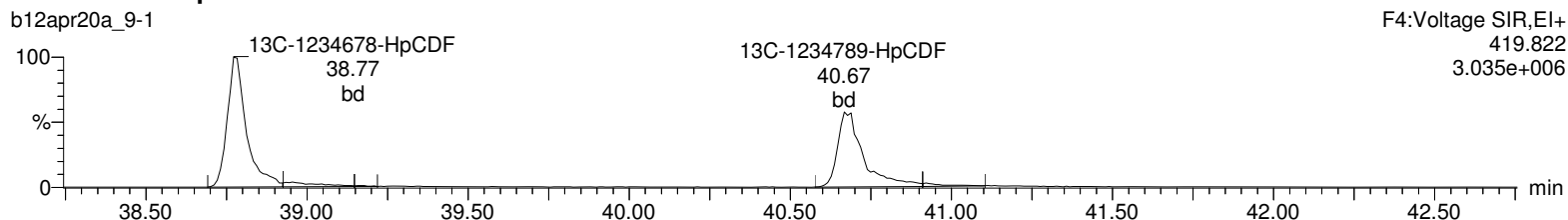
Total-heptafurans



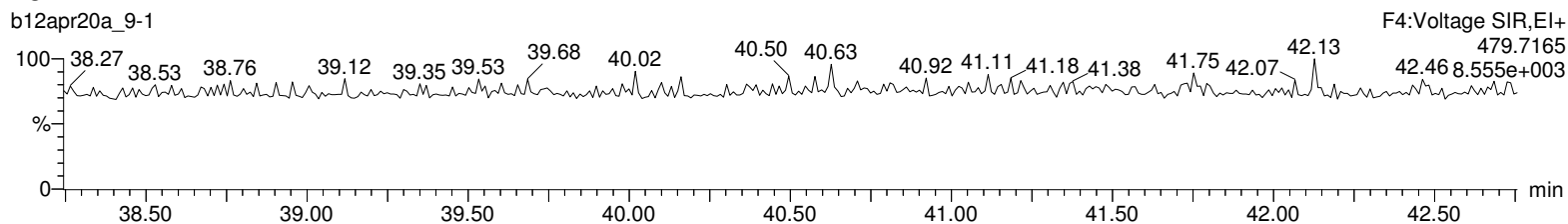
13C-1234678-HpCDF



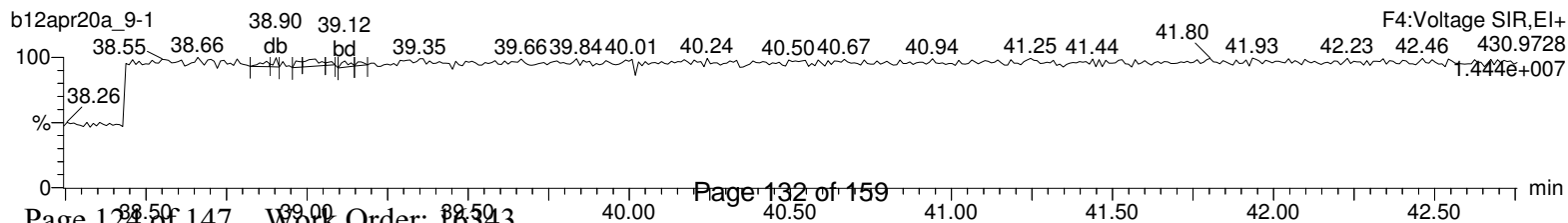
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

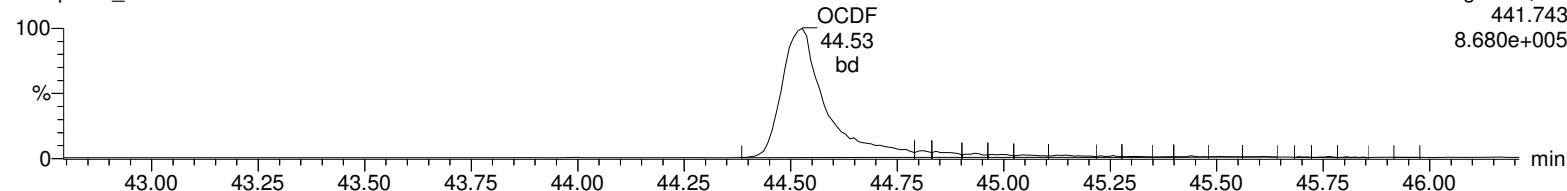
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-1, Date: 15-Apr-2020, Time: 17:22:32, ID: 12026416-1 LCS, Description: , Job: %613%, Task: HRP763_1, User: MLL

OCDF

b12apr20a_9-1

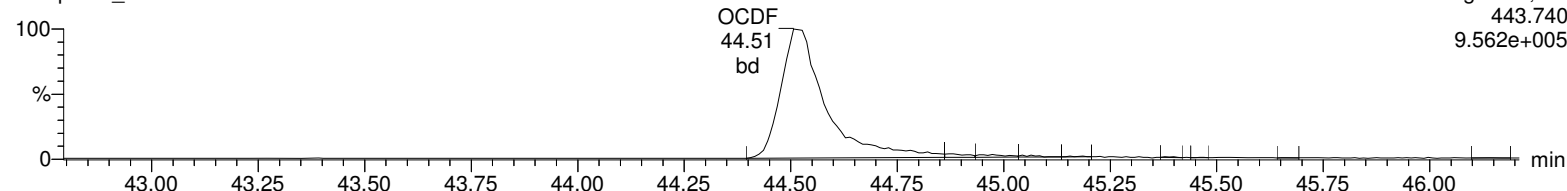
F5:Voltage SIR,EI+
441.743
8.680e+005



OCDF

b12apr20a_9-1

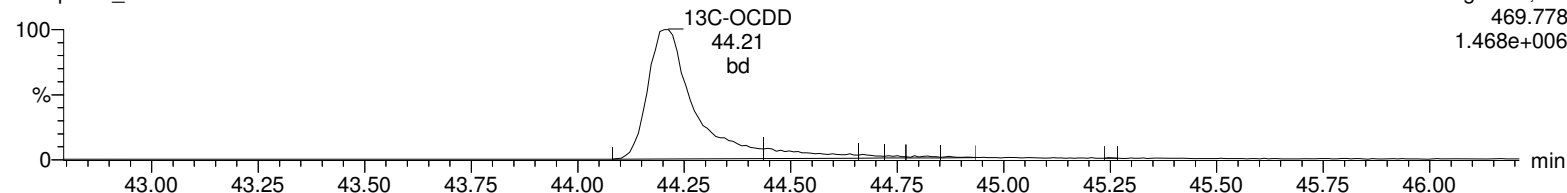
F5:Voltage SIR,EI+
443.740
9.562e+005



13C-OCDD

b12apr20a_9-1

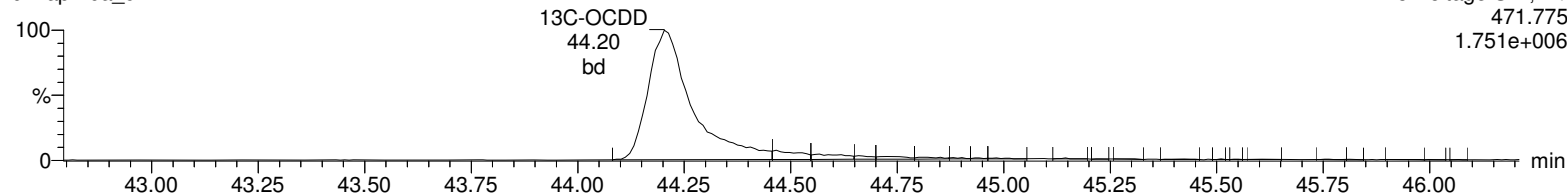
F5:Voltage SIR,EI+
469.778
1.468e+006



13C-OCDD

b12apr20a_9-1

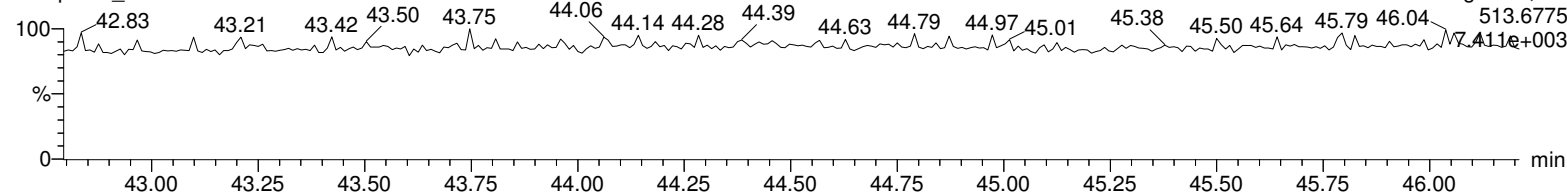
F5:Voltage SIR,EI+
471.775
1.751e+006



DeDPE

b12apr20a_9-1

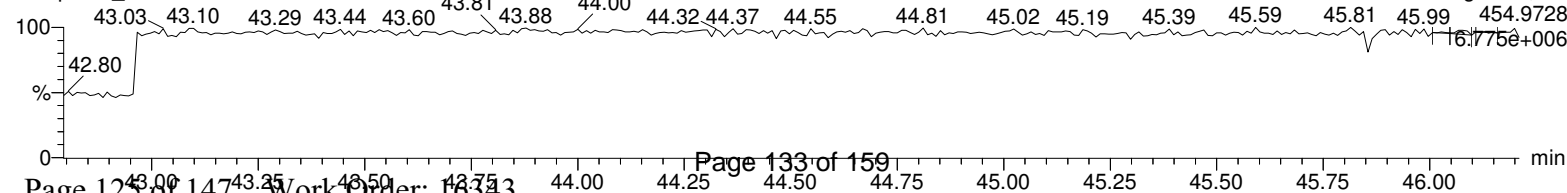
F5:Voltage SIR,EI+
513.6775
7.411e+003



Lock Mass F5

b12apr20a_9-1

F5:Voltage SIR,EI+
454.9728
16.775e+006



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 57003451	Client: CALS001	Project: CALS00214
Lab Sample ID: 12026417		Matrix: WATER
Client Sample: QC for batch 43536		
Client ID: LCSD for batch 43536		Prep Basis: As Received
Batch ID: 43539	Method: EPA Method 1613B	
Run Date: 04/15/2020 18:10	Analyst: MLL	Instrument: HRP763
Data File: b12apr20a_9-2		Dilution: 1
Prep Batch: 43536	Prep Method: SW846 3520C	
Prep Date: 14-APR-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.188	ng/L	0.00175	0.0100
40321-76-4	1,2,3,7,8-PeCDD		0.997	ng/L	0.00402	0.0500
39227-28-6	1,2,3,4,7,8-HxCDD		1.00	ng/L	0.0106	0.0500
57653-85-7	1,2,3,6,7,8-HxCDD		0.989	ng/L	0.00990	0.0500
19408-74-3	1,2,3,7,8,9-HxCDD		1.04	ng/L	0.0105	0.0500
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.971	ng/L	0.0116	0.0500
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1.96	ng/L	0.0234	0.100
51207-31-9	2,3,7,8-TCDF		0.192	ng/L	0.00242	0.0100
57117-41-6	1,2,3,7,8-PeCDF		0.938	ng/L	0.00288	0.0500
57117-31-4	2,3,4,7,8-PeCDF		1.06	ng/L	0.00284	0.0500
70648-26-9	1,2,3,4,7,8-HxCDF		0.980	ng/L	0.00704	0.0500
57117-44-9	1,2,3,6,7,8-HxCDF		0.996	ng/L	0.00656	0.0500
60851-34-5	2,3,4,6,7,8-HxCDF		0.905	ng/L	0.00634	0.0500
72918-21-9	1,2,3,7,8,9-HxCDF		0.964	ng/L	0.0103	0.0500
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.05	ng/L	0.00908	0.0500
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.965	ng/L	0.0133	0.0500
39001-02-0	1,2,3,4,6,7,8,9-OCDF		2.10	ng/L	0.0226	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.61	2.00	ng/L	80.5	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.75	2.00	ng/L	87.3	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.40	2.00	ng/L	70.1	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.57	2.00	ng/L	78.3	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.43	2.00	ng/L	71.3	(22%-166%)
13C-OCDD		2.41	4.00	ng/L	60.2	(13%-199%)
13C-2,3,7,8-TCDF		1.51	2.00	ng/L	75.6	(22%-152%)
13C-1,2,3,7,8-PeCDF		1.90	2.00	ng/L	95.0	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.67	2.00	ng/L	83.4	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.45	2.00	ng/L	72.6	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.59	2.00	ng/L	79.3	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.65	2.00	ng/L	82.4	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.60	2.00	ng/L	80.1	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.43	2.00	ng/L	71.6	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.53	2.00	ng/L	76.6	(20%-186%)
37Cl-2,3,7,8-TCDD		0.186	0.200	ng/L	93.2	(31%-191%)

Comments:
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time
 Printed: Thursday, April 16, 2020 11:27:17 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b12apr20.mdb 16 Apr 2020 09:09:51
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b10oct19a.cdb 11 Oct 2019 08:21:46

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	2.42e4	3.34e4	5.76e4	31.25	1.000	0.72	NO	9.418	0.0877	4.35e5	2178	199.8	5.15e5	1337	384.8	bb	bd
2	12378-PeCDD	1.17e5	7.53e4	1.92e5	34.11	1.000	1.56	NO	49.839	0.201	2.35e6	2769	849.0	1.54e6	3413	452.3	bd	bd
3	123478-HxCDD	8.23e4	6.70e4	1.49e5	36.69	1.000	1.23	NO	50.126	0.529	1.66e6	7941	209.3	1.35e6	4252	317.1	bd	bd
4	123678-HxCDD	1.19e5	9.47e4	2.13e5	36.78	1.000	1.25	NO	49.452	0.495	1.74e6	7941	219.4	1.38e6	4252	324.9	dd	dd
5	123789-HxCDD	9.89e4	8.46e4	1.83e5	37.01	1.007	1.17	NO	52.101	0.527	1.51e6	7941	190.5	1.13e6	4252	265.2	dd	dd
6	1234678-HpCDD	6.33e4	6.16e4	1.25e5	40.04	1.000	1.03	NO	48.557	0.580	7.84e5	3453	227.0	7.06e5	3321	212.6	bd	bd
7	OCDD	8.80e4	9.49e4	1.83e5	44.23	1.000	0.93	NO	98.039	1.17	7.33e5	3085	237.5	8.16e5	4361	187.1	bd	bd
8	2378-TCDF	2.57e4	3.49e4	6.06e4	30.51	1.001	0.74	NO	9.600	0.121	3.05e5	1162	262.8	3.98e5	2460	161.9	bb	bb
9	12378-PeCDF	1.69e5	1.08e5	2.77e5	33.31	1.000	1.56	NO	46.910	0.144	3.63e6	3229	1125.3	2.31e6	3723	619.7	bd	bd
10	23478-PeCDF	1.87e5	1.18e5	3.05e5	33.92	1.000	1.59	NO	52.787	0.142	4.06e6	3229	1257.0	2.55e6	3723	685.9	bd	bb
11	123478-HxCDF	1.22e5	9.76e4	2.20e5	35.98	1.000	1.25	NO	49.016	0.352	2.44e6	6921	353.0	1.92e6	5270	364.4	bd	bd
12	123678-HxCDF	1.63e5	1.29e5	2.92e5	36.08	1.000	1.27	NO	49.809	0.328	2.59e6	6921	374.5	2.05e6	5270	389.1	dd	dd
13	234678-HxCDF	1.38e5	1.11e5	2.49e5	36.56	1.000	1.24	NO	45.231	0.317	2.36e6	6921	341.1	1.90e6	5270	359.6	bd	bb
14	123789-HxCDF	1.17e5	8.94e4	2.06e5	37.33	1.000	1.31	NO	48.185	0.514	1.74e6	6921	251.1	1.28e6	5270	242.0	bd	bd
15	1234678-HpCDF	1.03e5	9.99e4	2.03e5	38.80	1.000	1.03	NO	52.382	0.454	1.46e6	4909	297.8	1.40e6	4772	292.9	bb	bb
16	1234789-HpCDF	7.92e4	7.53e4	1.55e5	40.70	1.000	1.05	NO	48.271	0.664	8.95e5	4909	182.4	8.76e5	4772	183.6	bd	bd
17	OCDF	1.10e5	1.18e5	2.28e5	44.54	1.007	0.93	NO	104.753	1.13	9.16e5	4362	210.0	1.03e6	4028	256.5	bd	bd
18	13C-2378-TCDD	2.89e5	3.96e5	6.85e5	31.23	1.017	0.73	NO	80.496	0.154	4.74e6	4268	1110.1	6.10e6	2996	2037.7	bb	bd
19	13C-12378-PeCDD	2.74e5	1.85e5	4.59e5	34.10	1.111	1.48	NO	87.302	0.262	5.46e6	3859	1413.7	3.55e6	3798	935.7	bb	bd
20	13C-123478-HxCDD	1.88e5	1.50e5	3.38e5	36.68	0.991	1.25	NO	70.108	0.506	3.63e6	8883	408.8	2.93e6	4258	688.9	bd	bd
21	13C-123678-HxCDD	2.72e5	2.16e5	4.88e5	36.76	0.993	1.26	NO	78.302	0.391	3.88e6	8883	436.7	3.14e6	4258	736.9	dd	dd
22	13C-1234678-HpCDD	1.44e5	1.34e5	2.78e5	40.03	1.082	1.07	NO	71.331	0.517	1.63e6	5599	291.6	1.56e6	5268	296.8	bd	bd
23	13C-OCDD	1.97e5	2.29e5	4.26e5	44.21	1.195	0.86	NO	120.329	0.633	1.67e6	4889	342.6	1.84e6	7186	255.7	bd	bd
24	13C-2378-TCDF	3.13e5	4.17e5	7.30e5	30.49	0.993	0.75	NO	75.576	0.172	3.71e6	5500	674.7	4.78e6	3702	1292.2	bb	bb
25	13C-12378-PeCDF	4.12e5	2.63e5	6.75e5	33.30	1.084	1.57	NO	95.041	0.372	8.43e6	8447	998.3	5.38e6	6221	864.2	bb	bd
26	13C-23478-PeCDF	3.70e5	2.33e5	6.03e5	33.91	1.104	1.59	NO	83.429	0.366	7.87e6	8447	932.0	5.12e6	6221	822.5	db	db
27	13C-123478-HxCDF	1.39e5	2.67e5	4.06e5	35.97	0.972	0.52	NO	72.552	0.522	2.68e6	7444	360.4	5.21e6	8292	628.1	bd	bd
28	13C-123678-HxCDF	1.88e5	3.69e5	5.57e5	36.07	0.975	0.51	NO	79.311	0.416	2.99e6	7444	400.9	5.79e6	8292	697.7	dd	dd
29	13C-234678-HxCDF	1.56e5	3.24e5	4.81e5	36.54	0.988	0.48	NO	82.440	0.501	2.73e6	7444	366.9	5.36e6	8292	646.5	bd	dd
30	13C-123789-HxCDF	1.36e5	2.73e5	4.09e5	37.31	1.008	0.50	NO	80.135	0.572	1.88e6	7444	253.0	3.59e6	8292	432.7	bb	bd
31	13C-1234678-HpCDF	9.94e4	2.36e5	3.35e5	38.78	1.048	0.42	NO	71.585	0.369	1.37e6	3727	367.7	3.23e6	5564	580.9	bd	bd

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time
 Printed: Thursday, April 16, 2020 11:27:17 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	8.29e4	1.85e5	2.68e5	40.69	1.100	0.45	NO	76.573	0.492	9.43e5	3727	253.0	2.17e6	5564	390.5	bd	bb
33	13C-1234-TCDD	3.29e5	4.24e5	7.54e5	30.71	0.000	0.78	NO	100.000	0.174	4.57e6	4268	1070.6	5.80e6	2996	1937.3	bb	bb
34	13C-123789-HxCDD	3.34e5	2.65e5	5.99e5	37.00	0.000	1.26	NO	100.000	0.407	4.50e6	8883	506.3	3.60e6	4258	844.6	dd	dd
35	37Cl-2378-TCDD	7.43e4		7.43e4	31.25	1.018			9.322	0.0368	1.19e6	1628	733.0				bb	bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

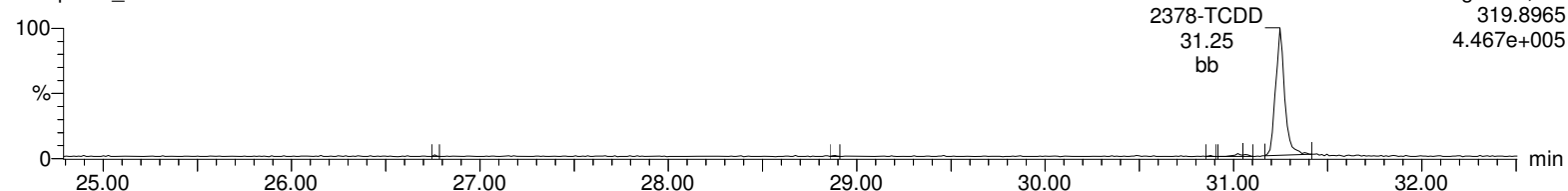
Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-tetradoxins

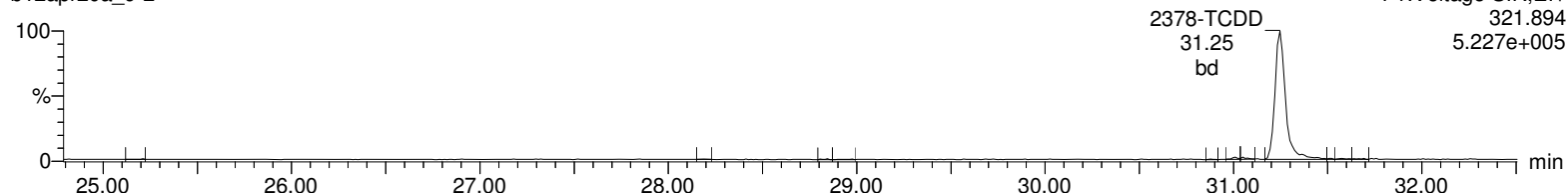
b12apr20a_9-2



F1:Voltage SIR,EI+
319.8965
4.467e+005

Total-tetradoxins

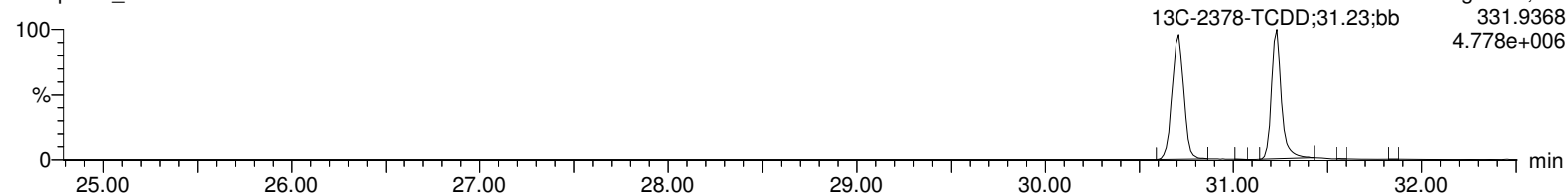
b12apr20a_9-2



F1:Voltage SIR,EI+
321.894
5.227e+005

13C-2378-TCDD

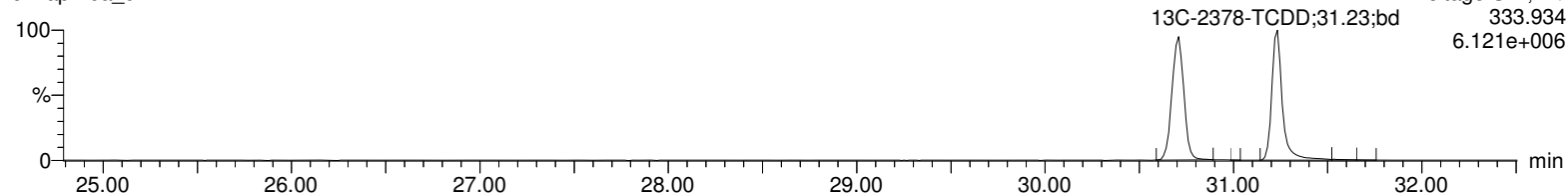
b12apr20a_9-2



F1:Voltage SIR,EI+
331.9368
4.778e+006

13C-2378-TCDD

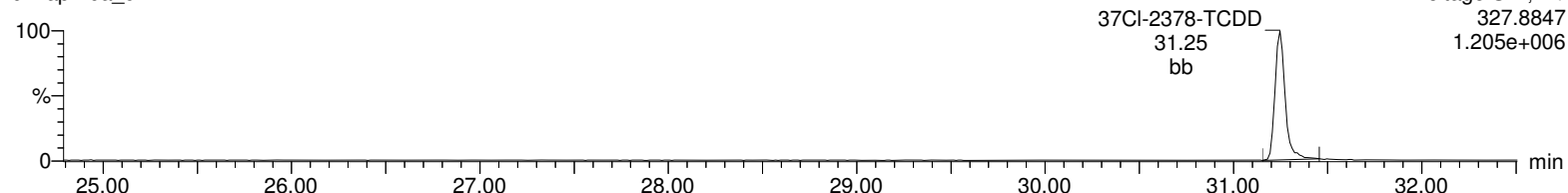
b12apr20a_9-2



F1:Voltage SIR,EI+
333.934
6.121e+006

37Cl-2378-TCDD

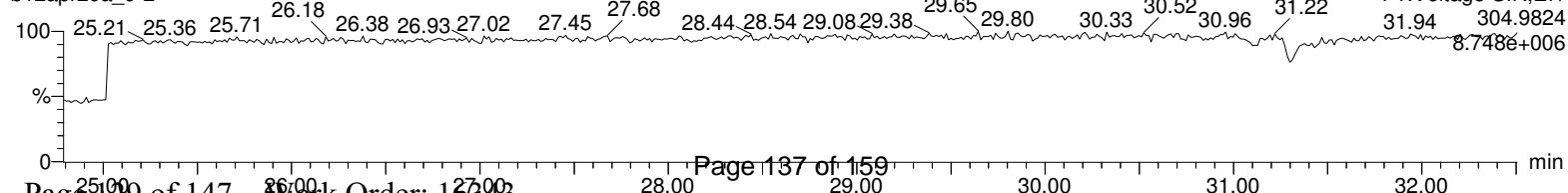
b12apr20a_9-2



F1:Voltage SIR,EI+
327.8847
1.205e+006

Lock Mass F1

b12apr20a_9-2



F1:Voltage SIR,EI+
319.4
8.748e+006

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

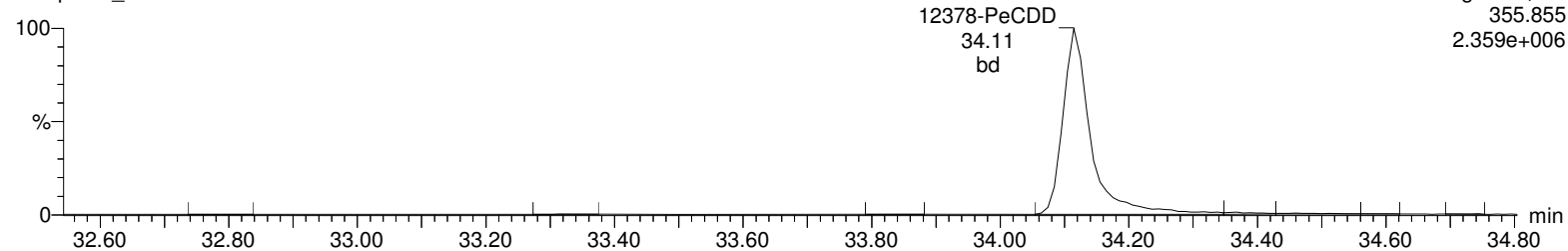
Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

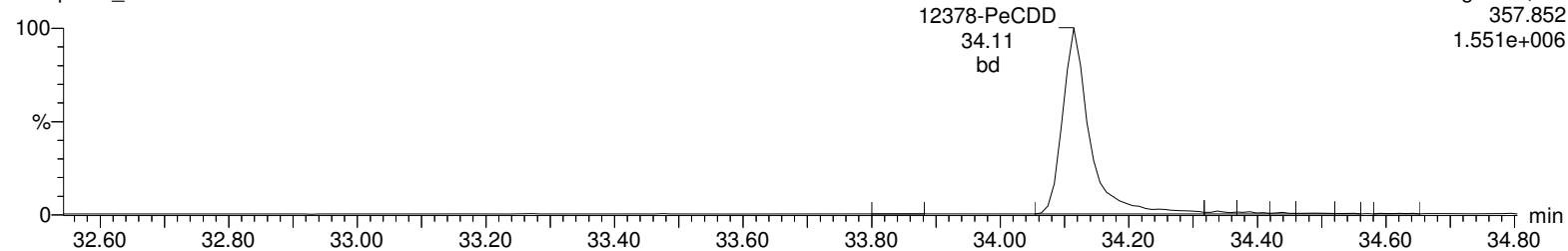
Total-pentadioxins

b12apr20a_9-2



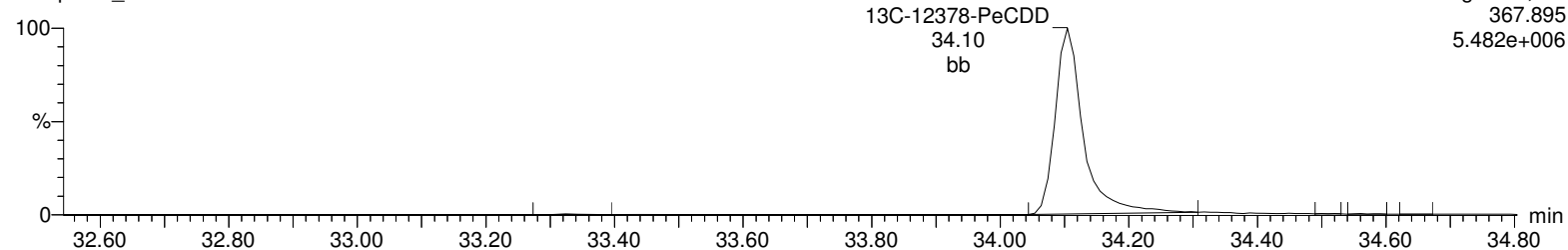
Total-pentadioxins

b12apr20a_9-2



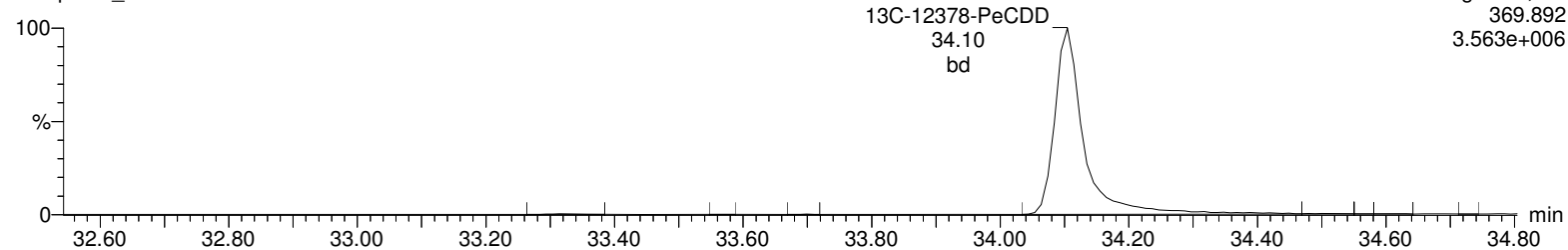
13C-12378-PeCDD

b12apr20a_9-2



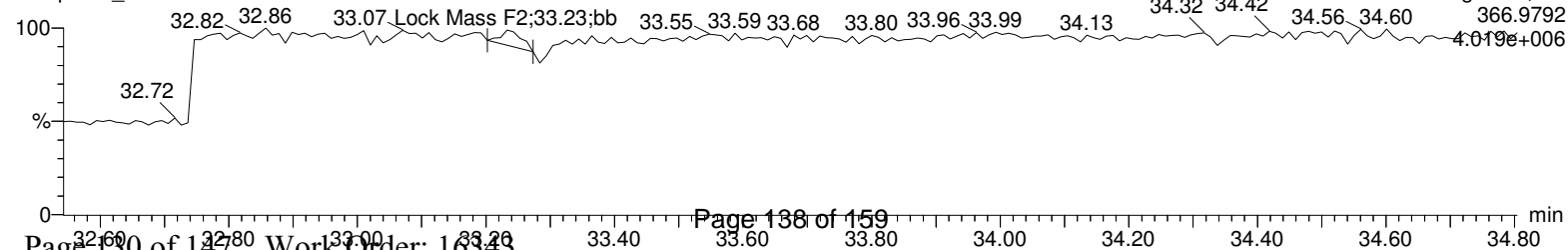
13C-12378-PeCDD

b12apr20a_9-2



Lock Mass F2

b12apr20a_9-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

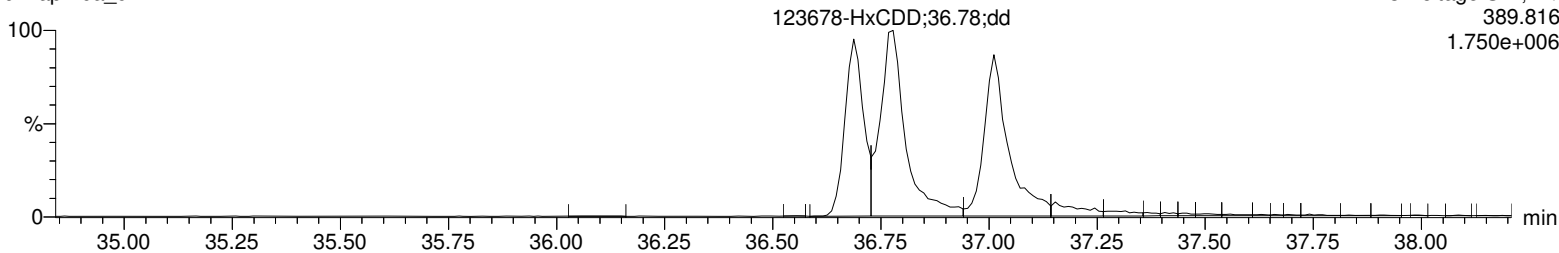
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-hexadioxins

b12apr20a_9-2

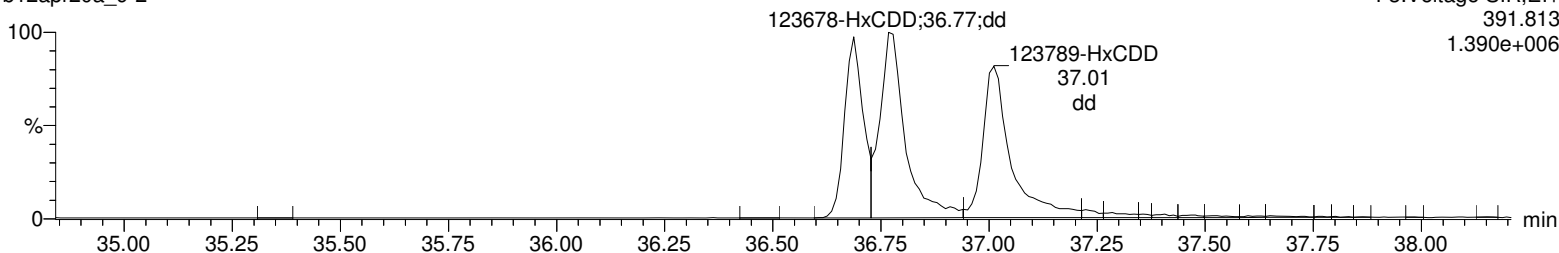
F3:Voltage SIR,EI+
389.816
1.750e+006



Total-hexadioxins

b12apr20a_9-2

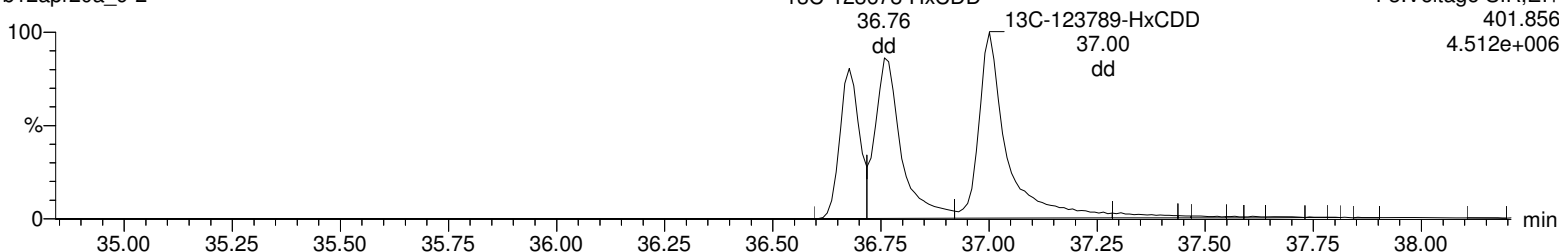
F3:Voltage SIR,EI+
391.813
1.390e+006



13C-123478-HxCDD

b12apr20a_9-2

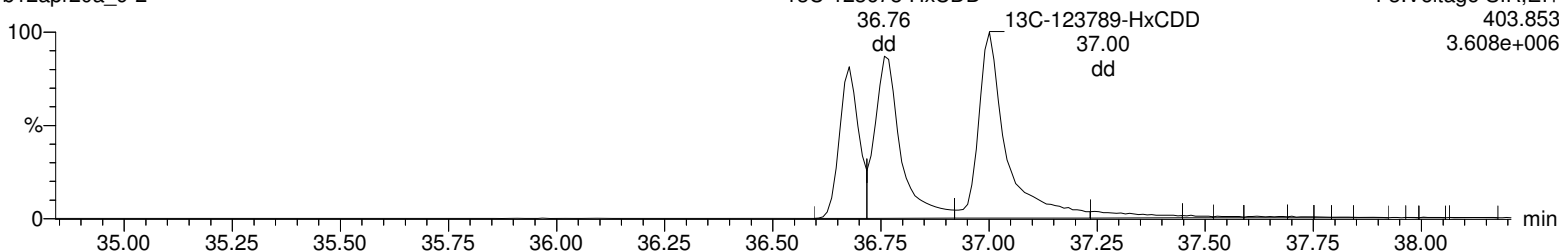
F3:Voltage SIR,EI+
401.856
4.512e+006



13C-123478-HxCDD

b12apr20a_9-2

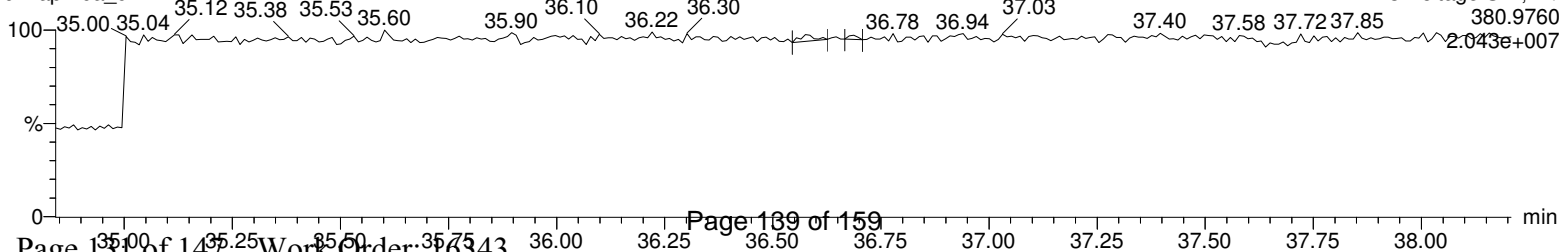
F3:Voltage SIR,EI+
403.853
3.608e+006



Lock Mass F3

b12apr20a_9-2

F3:Voltage SIR,EI+
380.9760
2.043e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

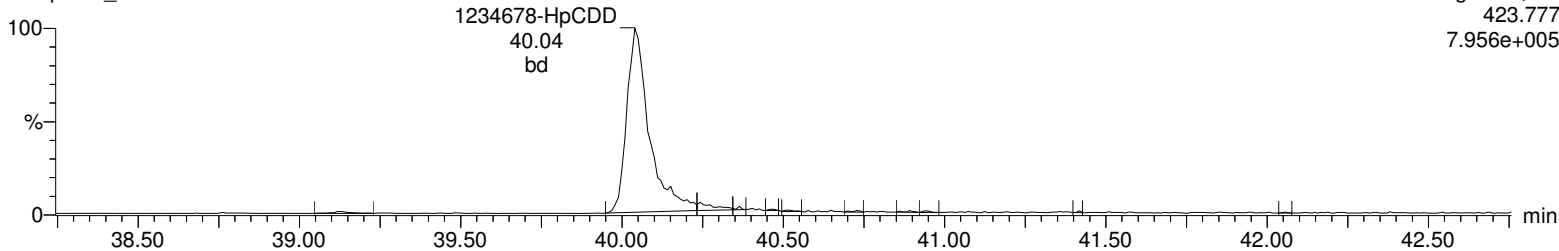
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-heptadioxins

b12apr20a_9-2

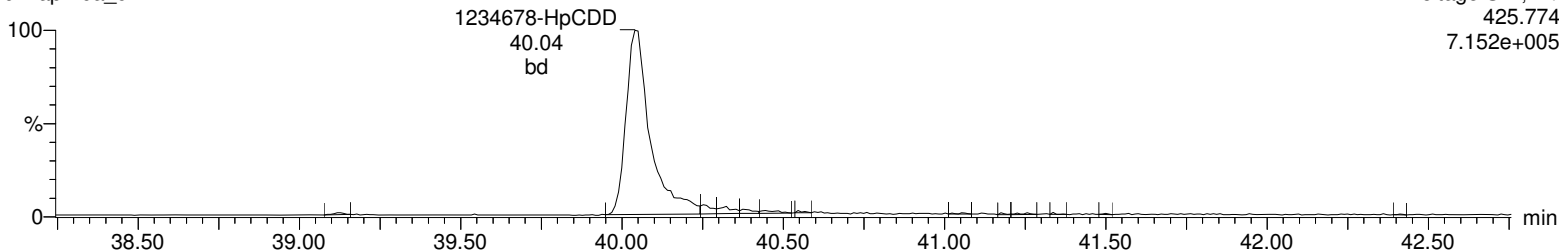
F4:Voltage SIR,EI+
423.777
7.956e+005



Total-heptadioxins

b12apr20a_9-2

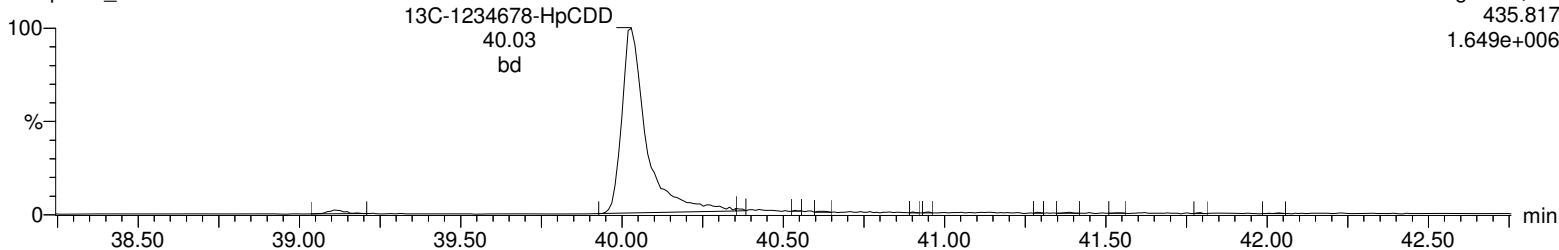
F4:Voltage SIR,EI+
425.774
7.152e+005



13C-1234678-HpCDD

b12apr20a_9-2

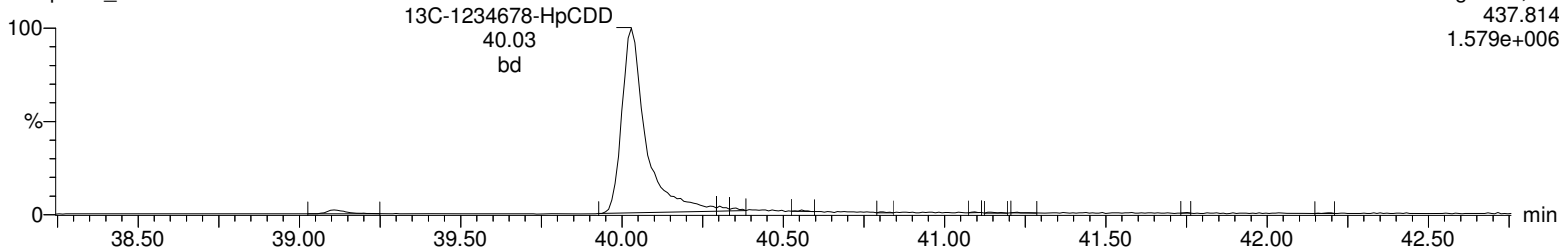
F4:Voltage SIR,EI+
435.817
1.649e+006



13C-1234678-HpCDD

b12apr20a_9-2

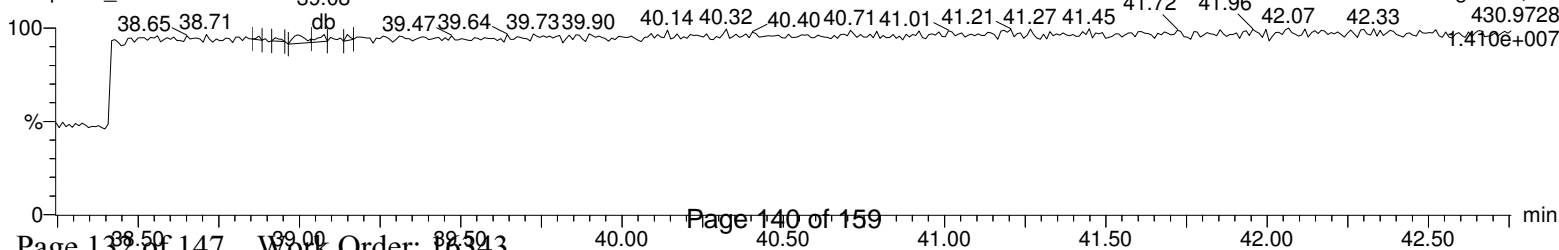
F4:Voltage SIR,EI+
437.814
1.579e+006



Lock Mass F4

b12apr20a_9-2

F4:Voltage SIR,EI+
430.9728
1.410e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

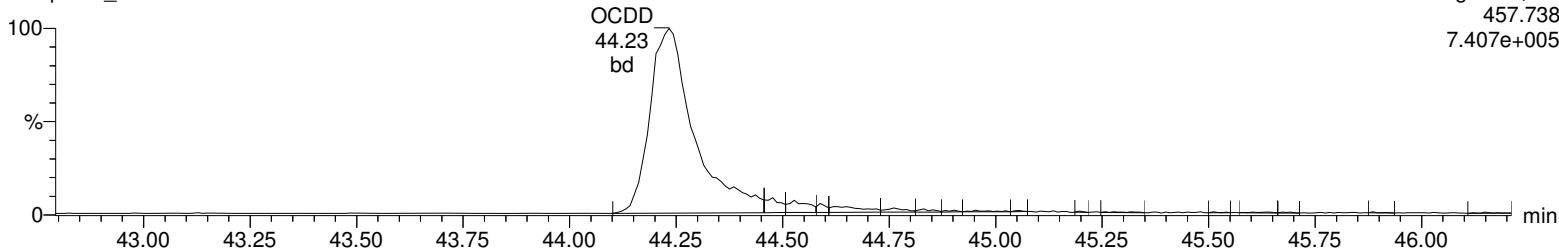
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

OCDD

b12apr20a_9-2

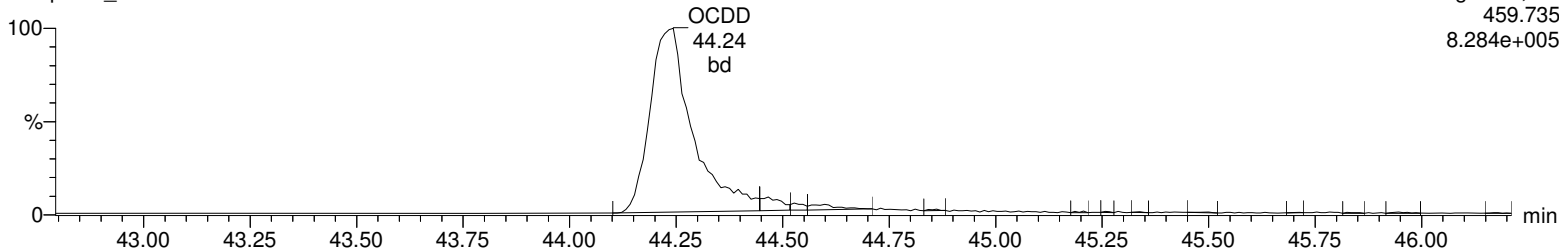
F5:Voltage SIR,EI+
457.738
7.407e+005



OCDD

b12apr20a_9-2

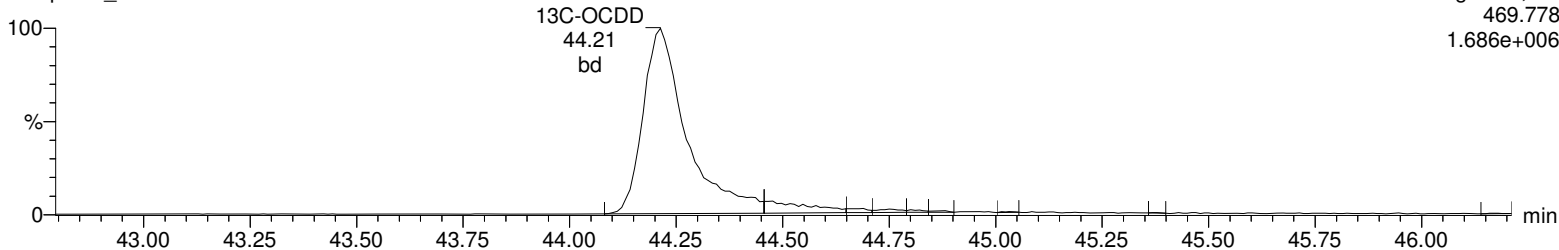
F5:Voltage SIR,EI+
459.735
8.284e+005



13C-OCDD

b12apr20a_9-2

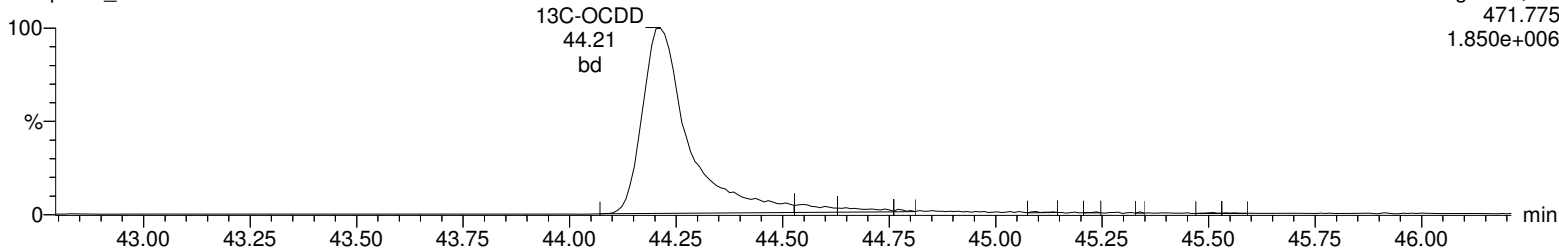
F5:Voltage SIR,EI+
469.778
1.686e+006



13C-OCDD

b12apr20a_9-2

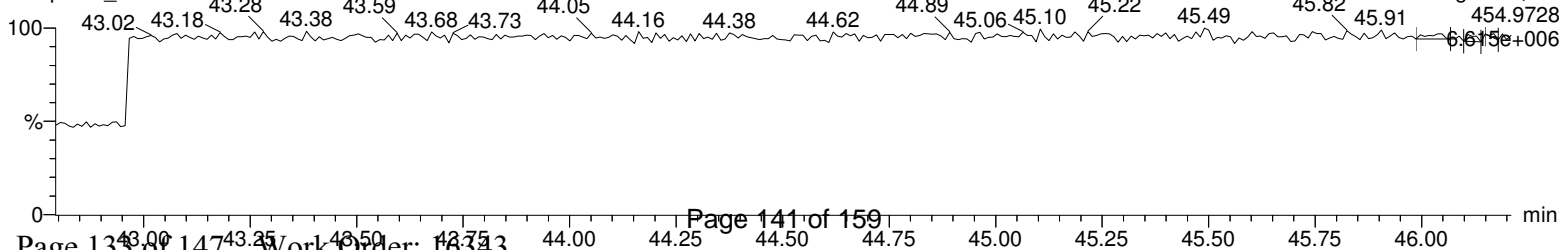
F5:Voltage SIR,EI+
471.775
1.850e+006



Lock Mass F5

b12apr20a_9-2

F5:Voltage SIR,EI+
454.9728
6.615e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

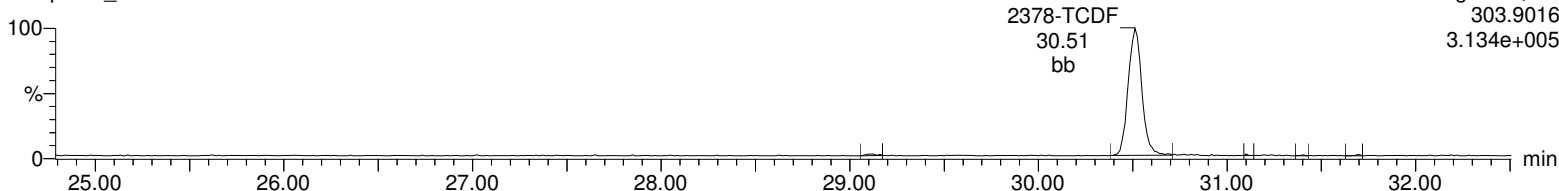
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-tetrafurans

b12apr20a_9-2

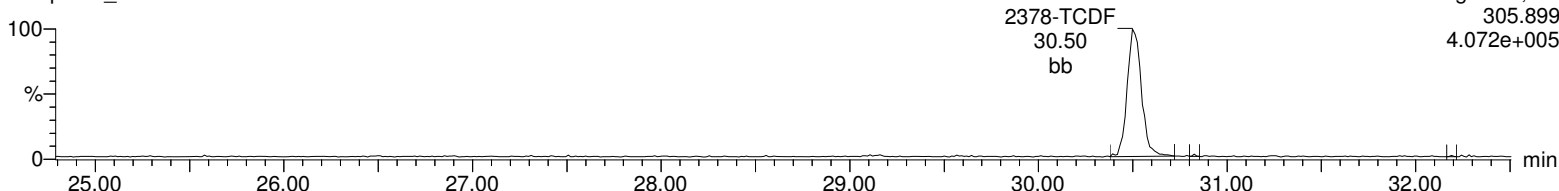
F1:Voltage SIR,EI+
303.9016
3.134e+005



Total-tetrafurans

b12apr20a_9-2

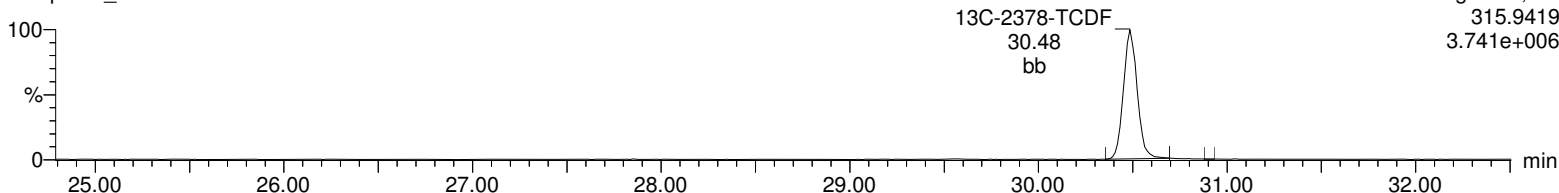
F1:Voltage SIR,EI+
305.899
4.072e+005



13C-2378-TCDF

b12apr20a_9-2

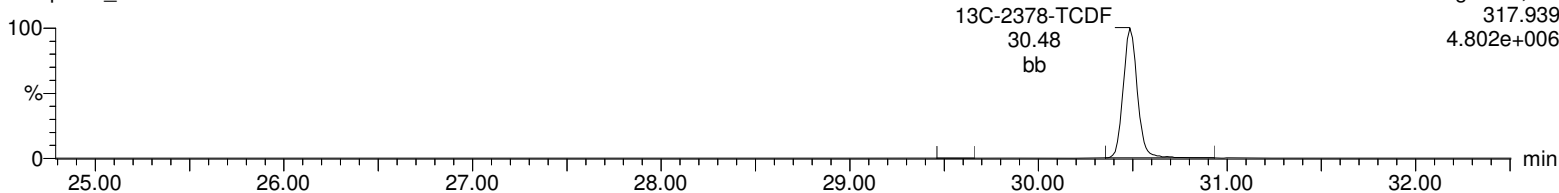
F1:Voltage SIR,EI+
315.9419
3.741e+006



13C-2378-TCDF

b12apr20a_9-2

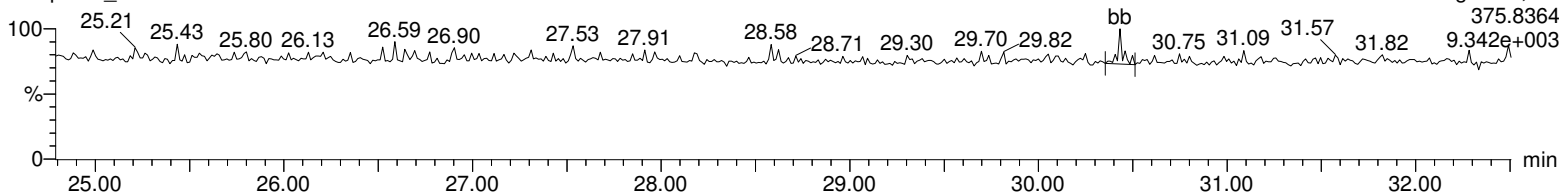
F1:Voltage SIR,EI+
317.939
4.802e+006



HxDPE

b12apr20a_9-2

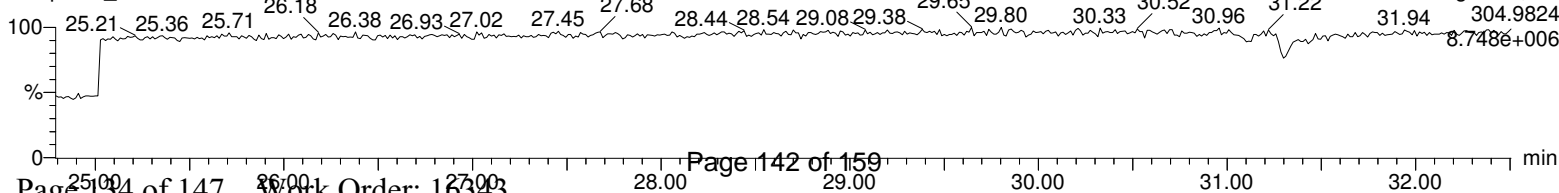
F1:Voltage SIR,EI+
375.8364
9.342e+003



Lock Mass F1

b12apr20a_9-2

F1:Voltage SIR,EI+
31.94
304.9824
8.748e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

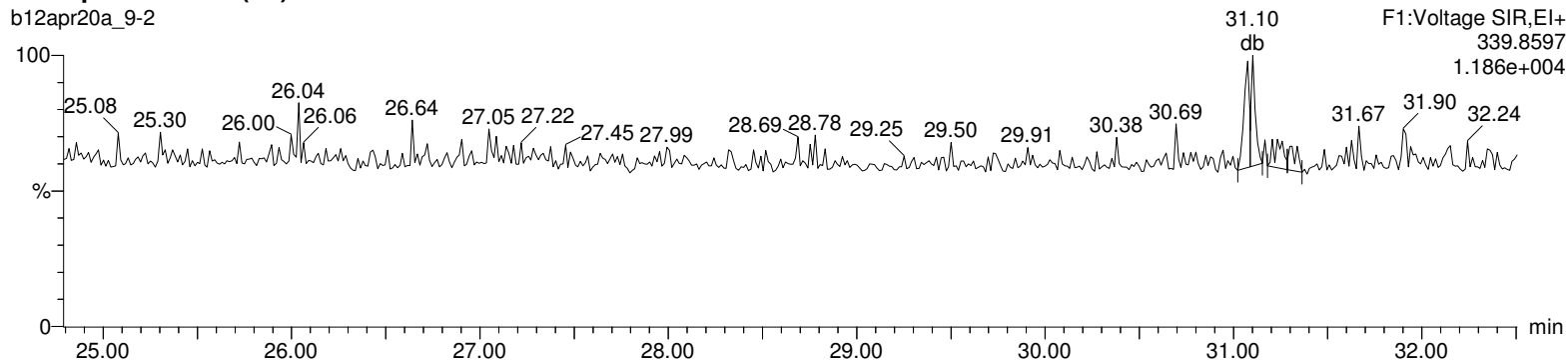
Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

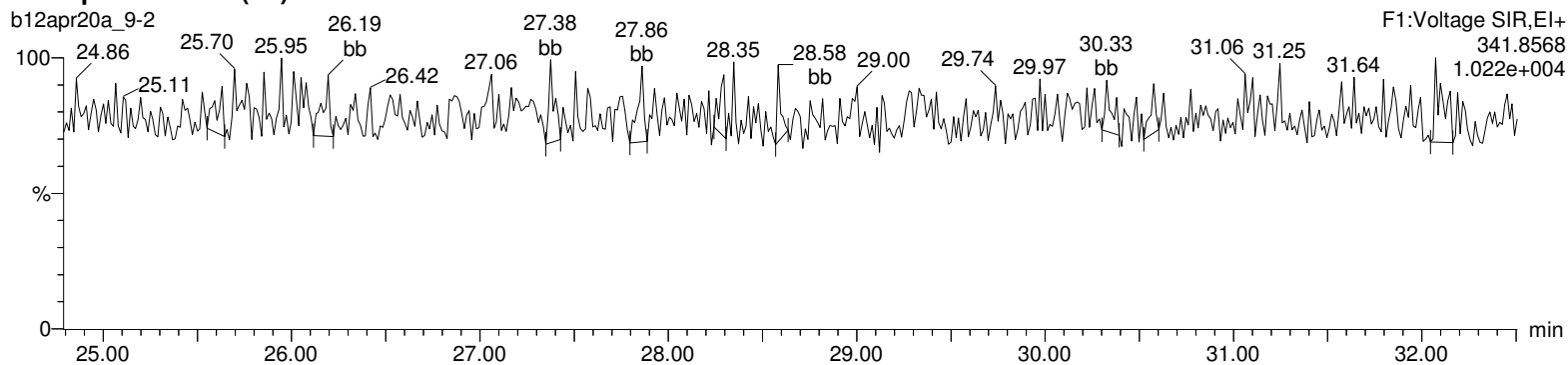
Total-pentafurans (F1)

b12apr20a_9-2



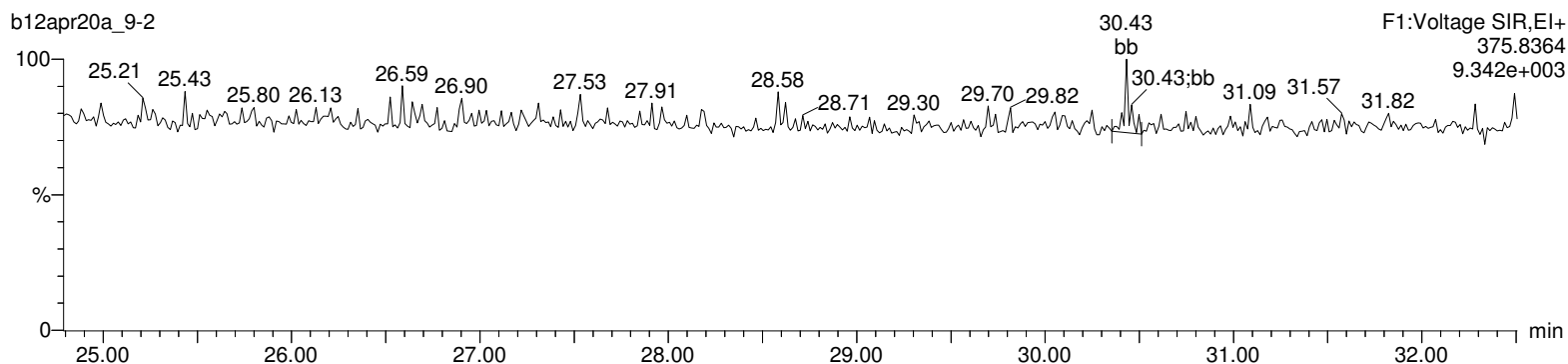
Total-pentafurans (F1)

b12apr20a_9-2



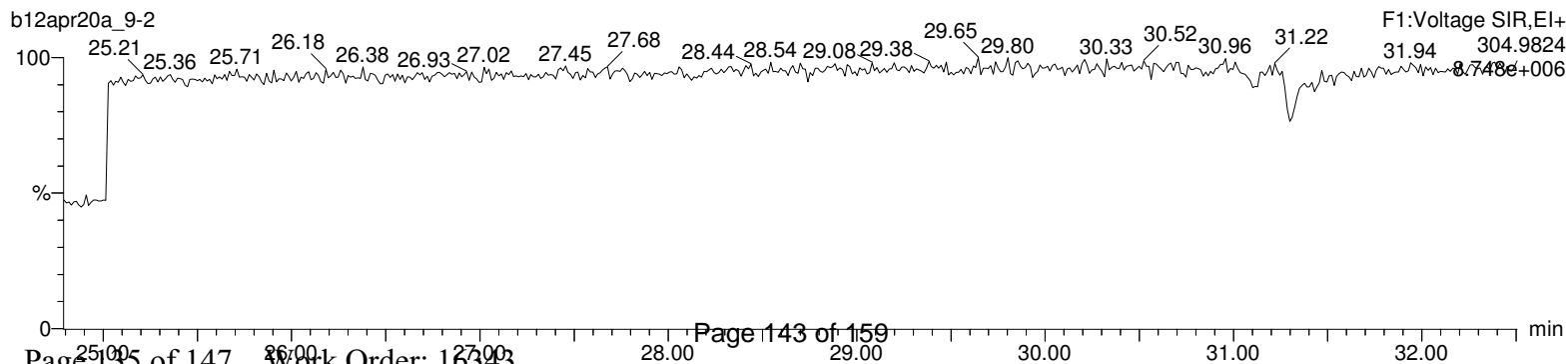
HxDPE

b12apr20a_9-2



Lock Mass F1

b12apr20a_9-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

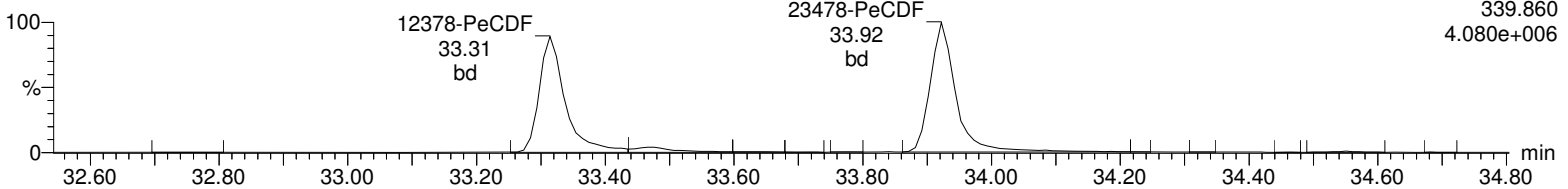
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

Total-pentafurans

b12apr20a_9-2

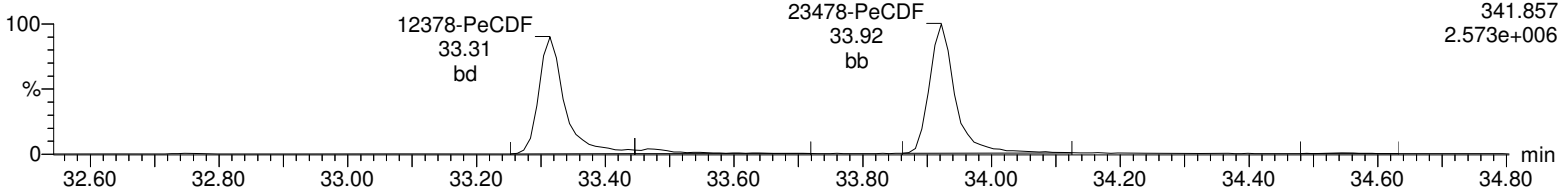
F2:Voltage SIR,EI+
339.860
4.080e+006



Total-pentafurans

b12apr20a_9-2

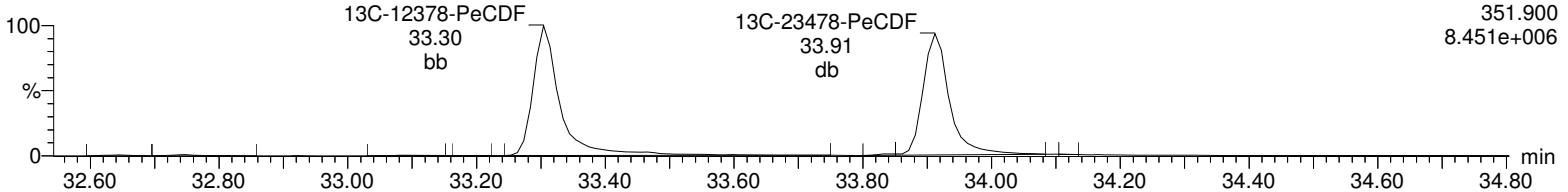
F2:Voltage SIR,EI+
341.857
2.573e+006



13C-12378-PeCDF

b12apr20a_9-2

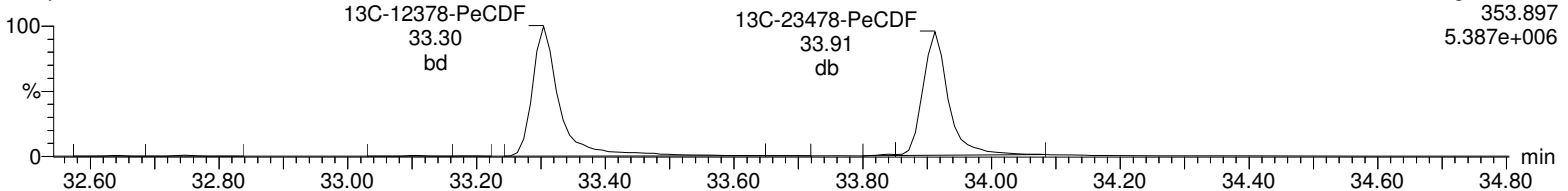
F2:Voltage SIR,EI+
351.900
8.451e+006



13C-12378-PeCDF

b12apr20a_9-2

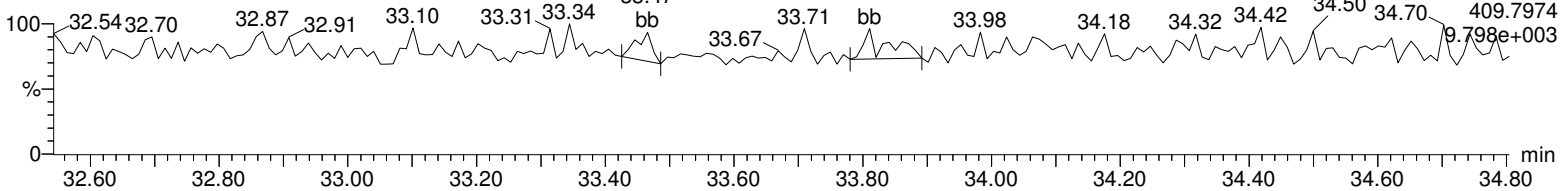
F2:Voltage SIR,EI+
353.897
5.387e+006



HpDPE

b12apr20a_9-2

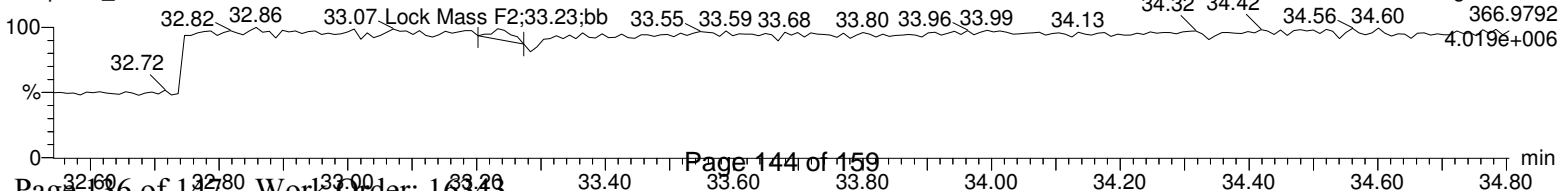
F2:Voltage SIR,EI+
409.7974
9.798e+003



Lock Mass F2

b12apr20a_9-2

F2:Voltage SIR,EI+
366.9792
4.019e+006



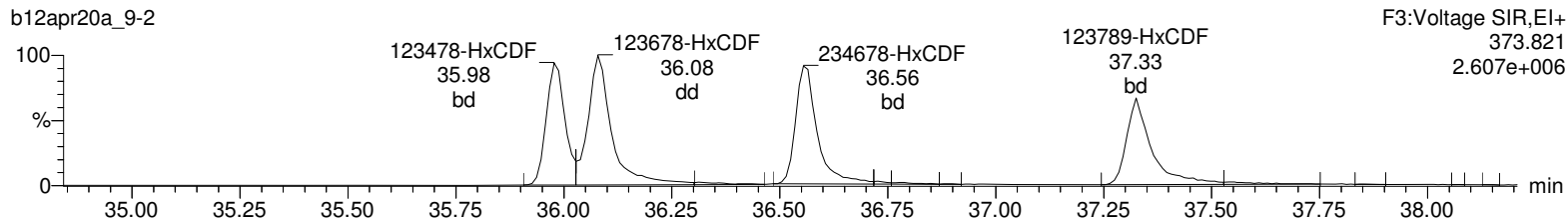
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

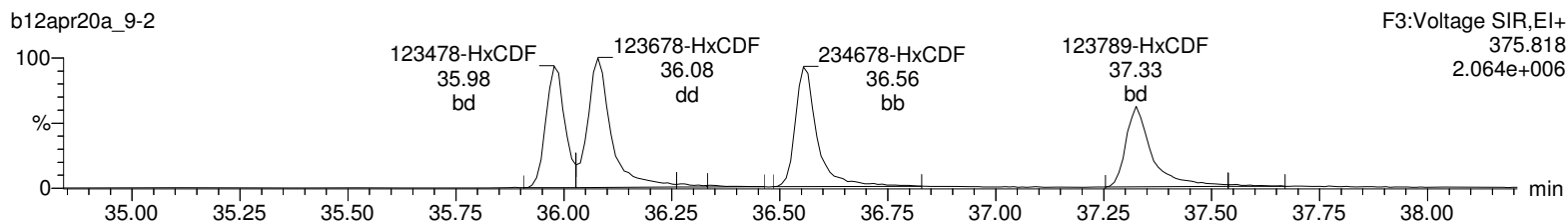
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

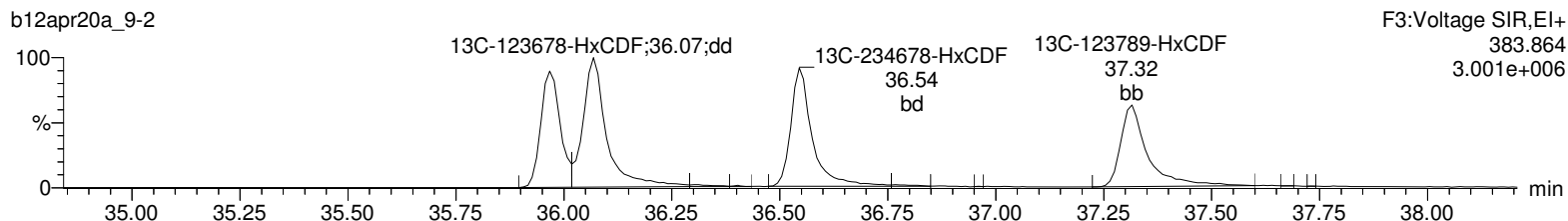
Total-hexafurans



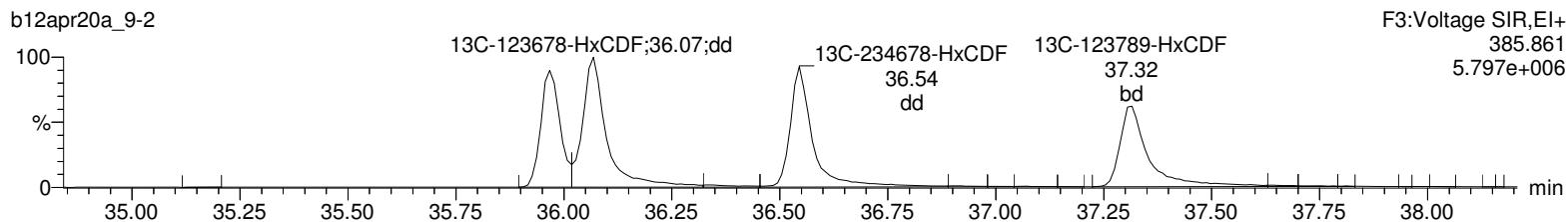
Total-hexafurans



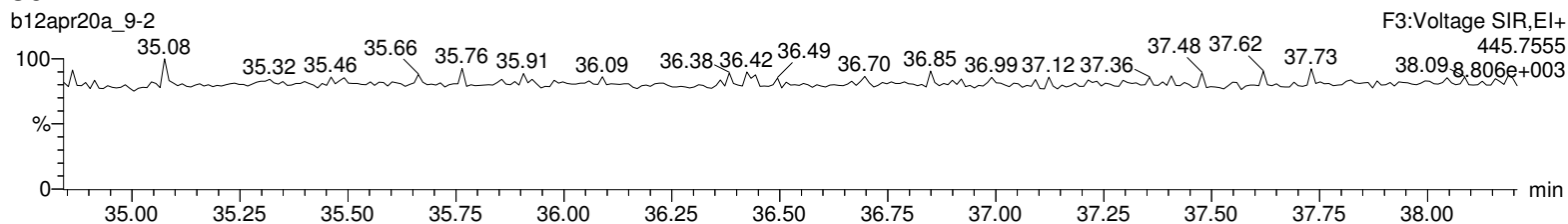
13C-123478-HxCDF



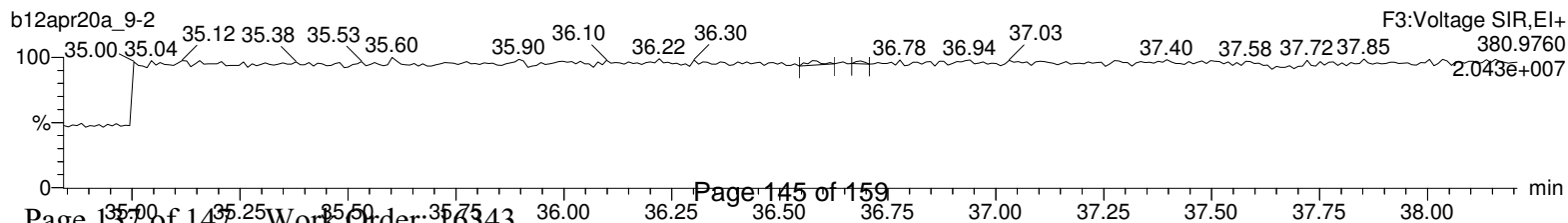
13C-123478-HxCDF



OcDPE



Lock Mass F3



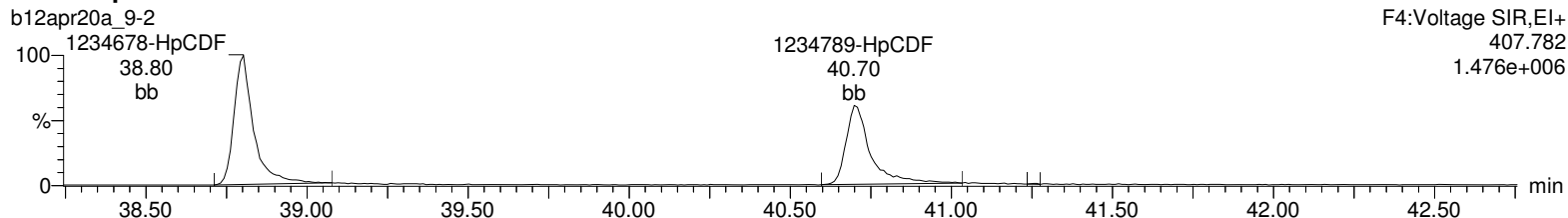
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

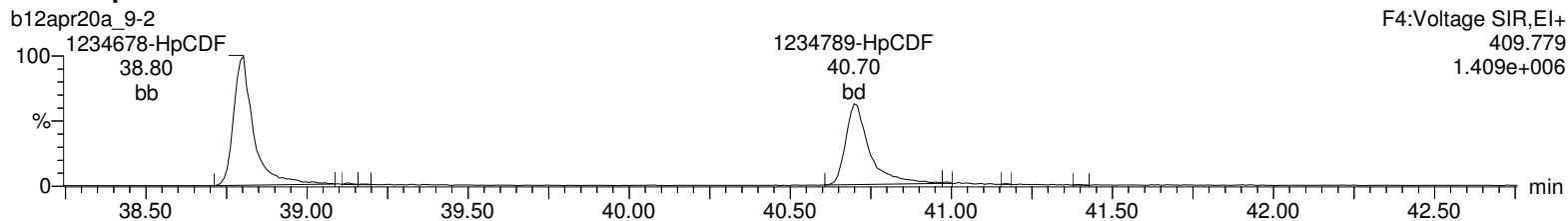
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

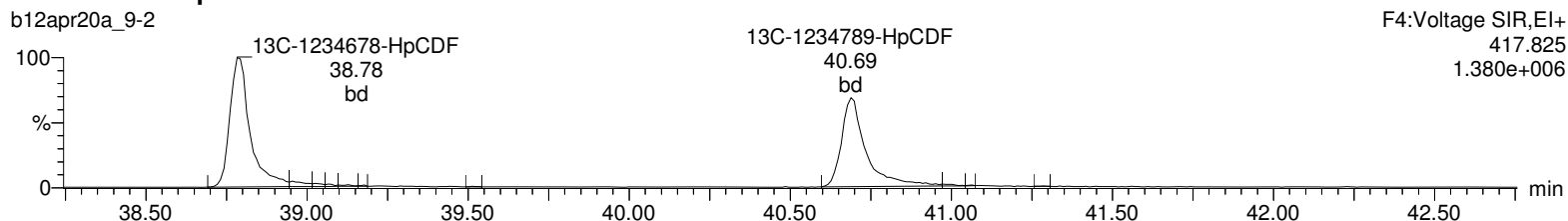
Total-heptafurans



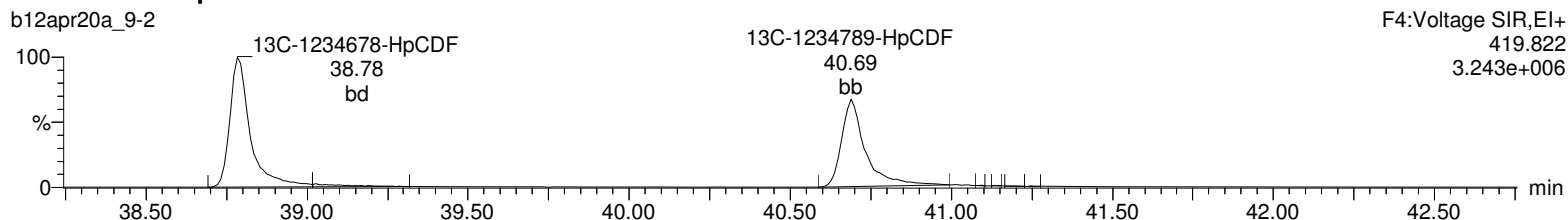
Total-heptafurans



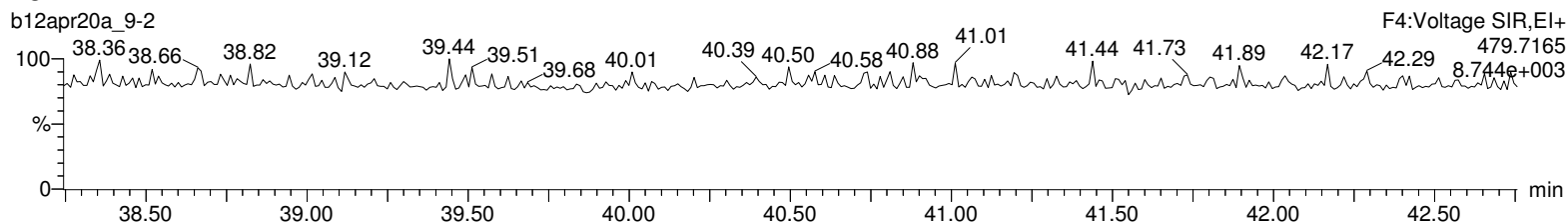
13C-1234678-HpCDF



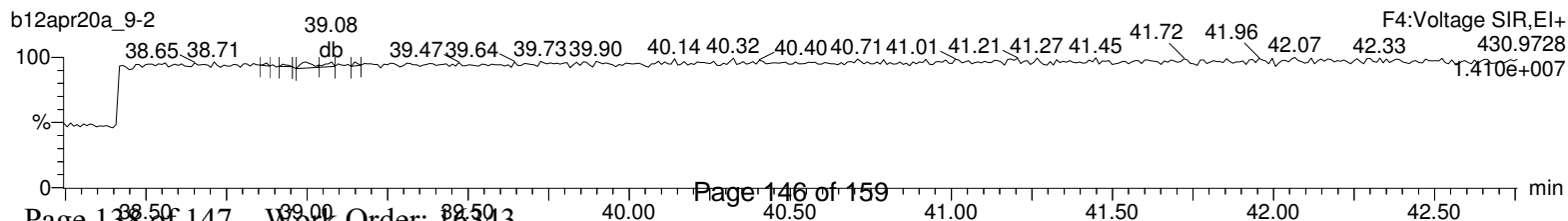
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b12apr20a_9.qld

Last Altered: Thursday, April 16, 2020 09:44:19 Eastern Standard Time

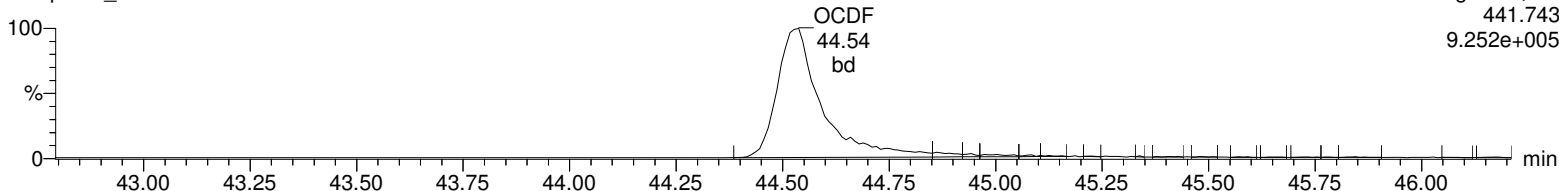
Printed: Thursday, April 16, 2020 09:45:53 Eastern Standard Time

Name: b12apr20a_9-2, Date: 15-Apr-2020, Time: 18:10:00, ID: 12026417-1 LCSD, Description: , Job: %613%, Task: HRP763_1, User: MLL

OCDF

b12apr20a_9-2

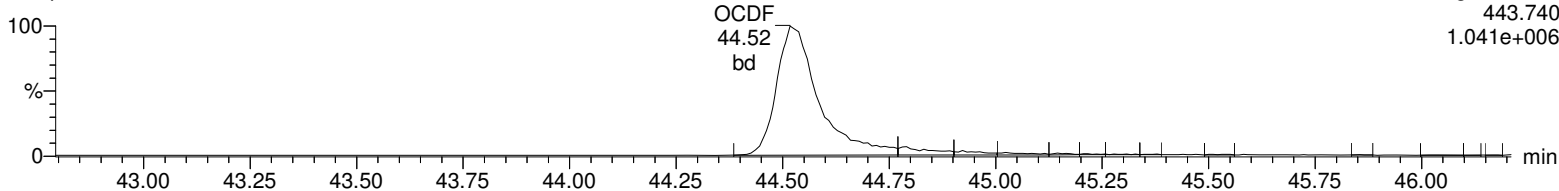
F5:Voltage SIR,EI+
441.743
9.252e+005



OCDF

b12apr20a_9-2

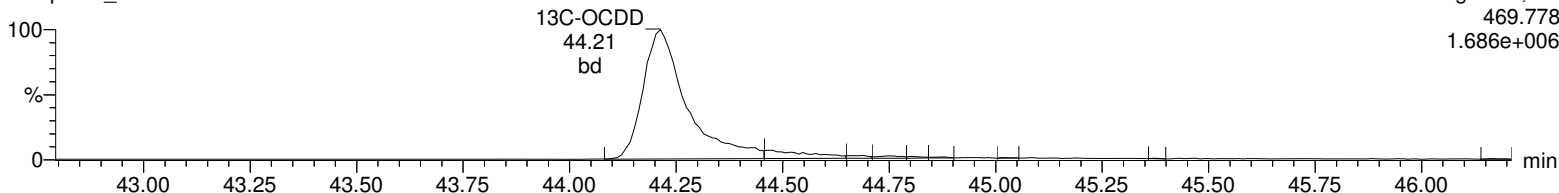
F5:Voltage SIR,EI+
443.740
1.041e+006



13C-OCDD

b12apr20a_9-2

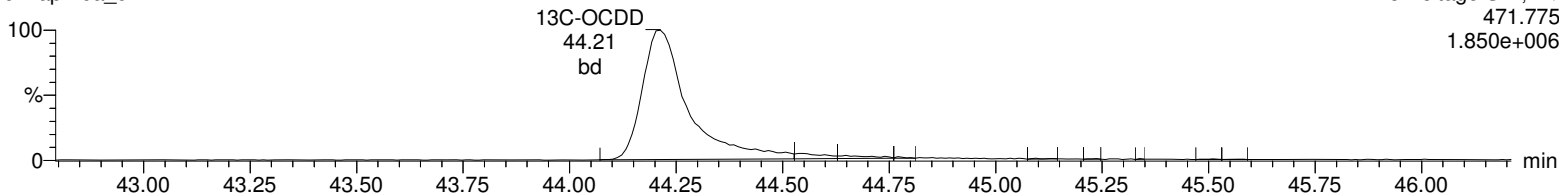
F5:Voltage SIR,EI+
469.778
1.686e+006



13C-OCDD

b12apr20a_9-2

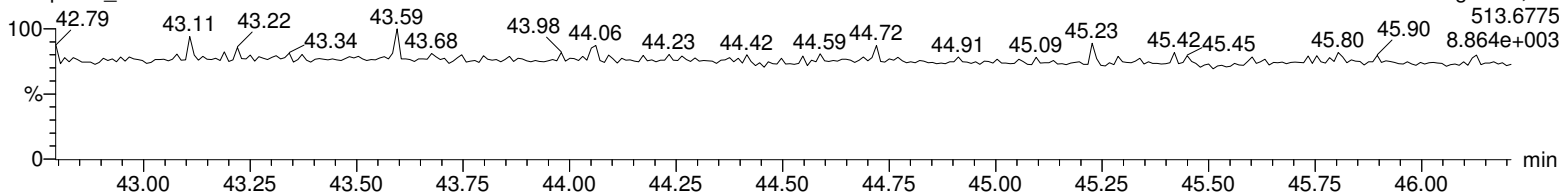
F5:Voltage SIR,EI+
471.775
1.850e+006



DeDPE

b12apr20a_9-2

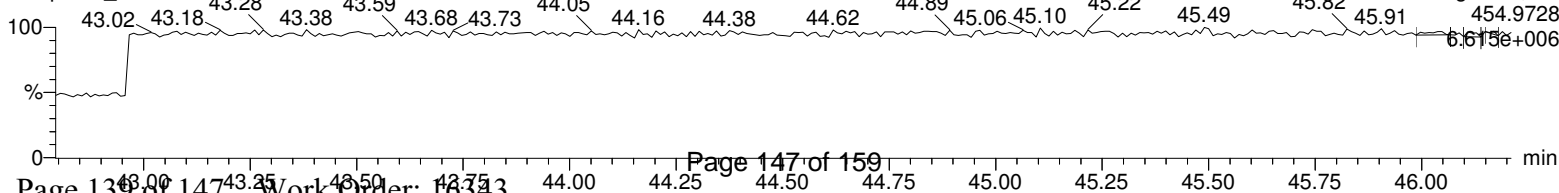
F5:Voltage SIR,EI+
513.6775
8.864e+003



Lock Mass F5

b12apr20a_9-2

F5:Voltage SIR,EI+
454.9728
6.615e+006



Logbooks

Prep Logbook

3520C Aqueous Extraction for Method 1613B

Batch ID: 43536 **Verified by:** _____
Analyst: Andrea Scarpello **Lab SOP:** CF-OA-E-002 REV# 15
Method: SW846 3520C **Instrument:** Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
12026415 MB	14-APR-2020 14:02	1400	400	1000	5	40			WD200414 N -01	
12026415 MB	14-APR-2020 14:02	1400	400	1000	5	40			.05 ng/uL WD200414 N -01	
12026416 LCS	14-APR-2020 14:02	1400	400	1000	5	40	40	WD200409 -02	.05 ng/uL WD200414 N -01	
12026416 LCS	14-APR-2020 14:02	1400	400	1000	5	40	40	WD200409 -02	.05 ng/uL WD200414 N -01	
12026417 LCSD	14-APR-2020 14:02	1400	400	1000	5	40	40	WD200409 -02	.05 ng/uL WD200414 N -01	
12026417 LCSD	14-APR-2020 14:02	1400	400	1000	5	40	40	WD200409 -02	.05 ng/uL WD200414 N -01	
16301001	14-APR-2020 14:02	1369	420.8	948.2	7	40			.05 ng/uL WD200414 N -01	
16343001	14-APR-2020 14:02	1560.2	512.7	1047.5	7	40			.05 ng/uL WD200414 N -01	
16343002	14-APR-2020 14:02	1555.8	505.3	1050.5	7	40			.05 ng/uL WD200414 N -01	
16343003	14-APR-2020 14:02	1554.9	505.7	1049.2	7	40			.05 ng/uL WD200414 N -01	
16351001	14-APR-2020 14:02	1483.8	456.2	1027.6	7	40			.05 ng/uL WD200414 N -01	
16352001	14-APR-2020 14:02	1484.7	458.4	1026.3	7	40			.05 ng/uL WD200414 N -01	
16352002	14-APR-2020 14:02	1440.2	459.1	981.1	7	40			.05 ng/uL WD200414 N -01	
16354001	14-APR-2020 14:02	1465.2	459.2	1006	7	40			.05 ng/uL WD200414 N -01	
16366001	14-APR-2020 14:02	1451.9	449.3	1002.6	7	40			.05 ng/uL WD200414 N -01	
16371001	14-APR-2020 14:02	1453.1	458.7	994.4	4	40			.05 ng/uL WD200414 N -01	

Prep Logbook

Batch ID: 43536 **Verified by:** _____
Analyst: Andrea Scarpello
Method: SW846 3520C
Lab SOP: CF-OA-E-002 REV# 15
Instrument: Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
16373001	14-APR-2020 14:02	1461.9	471.6	990.3	7	40			WD200414 N -01	
16374001	14-APR-2020 14:02	1564	507.1	1056.9	7	40			.05 ng/uL WD200414 N -01	
16376001	14-APR-2020 14:02	1564.7	507.7	1057	7	40			.05 ng/uL WD200414 N -01	
16381001	14-APR-2020 14:02	1256.2	408.2	848	8	40			.05 ng/uL WD200414 N -01	
16382001	14-APR-2020 14:02	1097.5	407.7	689.8	8	40			.05 ng/uL WD200414 N -01	
16383001	14-APR-2020 14:02	1335	405.5	929.5	8	40			.05 ng/uL WD200414 N -01	
16384001	14-APR-2020 14:02	1321.8	395	926.8	7	40			.05 ng/uL WD200414 N -01	
16385001	14-APR-2020 14:02	1374.3	443.2	931.1	7	40			.05 ng/uL WD200414 N -01	
16386001	14-APR-2020 14:02	1468.7	482.6	986.1	9	40			.05 ng/uL WD200414 N -01	
16397001	14-APR-2020 14:02	1342.7	394.6	948.1	7	40			.05 ng/uL WD200414 N -01	

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Acetone	1155193-A.3	100	uL	H2SO4 added to 16386001 to lower the pH
REAGENT		Acetone	1155199-A.6	250	mL	16385001 has slight petroleum
REAGENT		Methylene Chloride	1155258-A	1	mL	Finish Time: 15-APR-20 08:10:00
REAGENT		Salt	1155452	10	g	

Prep Logbook

Cleanup Procedure for Liquids

Batch ID: 43537
 Analyst: Mike Medwedeff

Verified by: _____
 Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
12026415 MB	15-APR-2020 10:00	AB Silica	22	100	20	WD200413-03
		Florisil				.01 ng/uL
12026415 MB	15-APR-2020 10:00	AB Silica	22	100	20	WD200413-03
		Florisil				.01 ng/uL
12026416 LCS	15-APR-2020 10:00	AB Silica	43	100	20	WD200413-03
		Florisil				.01 ng/uL
12026416 LCS	15-APR-2020 10:00	AB Silica	43	100	20	WD200413-03
		Florisil				.01 ng/uL
12026417 LCSD	15-APR-2020 10:00	AB Silica	121	100	20	WD200413-03
		Florisil				.01 ng/uL
12026417 LCSD	15-APR-2020 10:00	AB Silica	121	100	20	WD200413-03
		Florisil				.01 ng/uL
16301001	15-APR-2020 10:00	AB Silica	145	100	20	WD200413-03
		Florisil				.01 ng/uL
16343001	15-APR-2020 10:00	AB Silica	174	100	20	WD200413-03
		Florisil				.01 ng/uL
16343002	15-APR-2020 10:00	AB Silica	26	100	20	WD200413-03
		Florisil				.01 ng/uL
16343003	15-APR-2020 10:00	AB Silica	1	100	20	WD200413-03
		Florisil				.01 ng/uL
16351001	15-APR-2020 10:00	AB Silica	21	100	20	WD200413-03
		Florisil				.01 ng/uL
16352001	15-APR-2020 10:00	AB Silica	204	100	20	WD200413-03
		Florisil				.01 ng/uL
16352002	15-APR-2020 10:00	AB Silica	80	100	20	WD200413-03
		Florisil				.01 ng/uL
16354001	15-APR-2020 10:00	AB Silica	143	100	20	WD200413-03
		Florisil				.01 ng/uL
16366001	15-APR-2020 10:00	AB Silica	118	100	20	WD200413-03
		Florisil				.01 ng/uL
16371001	15-APR-2020 10:00	AB Silica	34	100	20	WD200413-03
		Florisil				.01 ng/uL
16373001	15-APR-2020 10:00	AB Silica	172	100	20	WD200413-03
		Florisil				.01 ng/uL
16374001	15-APR-2020 10:00	AB Silica	75	100	20	WD200413-03
		Florisil				.01 ng/uL
16376001	15-APR-2020 10:00	AB Silica	68	100	20	WD200413-03
		Florisil				.01 ng/uL
16381001	15-APR-2020 10:00	AB Silica	97	100	20	WD200413-03
		Florisil				.01 ng/uL
16382001	15-APR-2020 10:00	AB Silica	92	100	20	WD200413-03
		Florisil				.01 ng/uL
16383001	15-APR-2020 10:00	AB Silica	194	100	20	WD200413-03
		Florisil				.01 ng/uL
16384001	15-APR-2020 10:00	AB Silica	138	100	20	WD200413-03
		Florisil				.01 ng/uL
16385001	15-APR-2020 10:00	AB Silica	136	100	20	WD200413-03
		Florisil				.01 ng/uL

Prep Logbook

Batch ID: 43537

Verified by: _____

Analyst: Mike Medwedeff

Lab SOP:

Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
16386001	15-APR-2020 10:00	AB Silica Florisil	129	100	20	WD200413-03 .01 ng/uL
16397001	15-APR-2020 10:00	AB Silica Florisil	13	100	20	WD200413-03 .01 ng/uL

Comments:

Type	Sample Id	Description	Serial Number	Spike Amt	Units
REAGENT		Glass Wool	1151777-A.1	1	each
REAGENT		Base silica	1152566-C	3	g
REAGENT		Acid silica	1154064	7	g
REAGENT		Silica Gel	1154711-A	2	g
REAGENT		Activated Florisil	1154745	1	g
REAGENT		Hexane	1155135-A.10	130	mL
REAGENT		Hexane	1155137-A.11	130	mL
REAGENT		Hexane	1155139-A.12	130	mL
REAGENT		Methylene Chloride	1155258-A	100	mL
REAGENT		Salt	1155452	1	g

Prep Logbook

Method 1613B HRMS Aqueous Analysis

Batch ID: 43539 Verified by: _____
Analyst: Mary Lanier **Lab SOP:** CF-OA-E-002 REV# 15
Method: EPA Method 1613B **Instrument:** Waters Autospec Premier High-Resolution GC/MS

Sample ID	Start Run Date	Final Volume (uL)	Prep Factor (Final Volume /Aliquot) (uL/uL)	Dilution	Dilution Type	Injection Volume (uL)	Vial Prep Date
12026416 LCS	15-APR-2020 17:22	20	2.00E-05	1	Internal	1	15-APR-2020
12026417 LCSD	15-APR-2020 18:10	20	2.00E-05	1	Internal	1	15-APR-2020
12026415 MB	15-APR-2020 18:58	20	2.00E-05	1	Internal	1	15-APR-2020
16343001	15-APR-2020 20:34	20	1.91E-05	1	Internal	1	15-APR-2020
16343002	15-APR-2020 21:22	20	1.90E-05	1	Internal	1	15-APR-2020
16343003	15-APR-2020 22:10	20	1.91E-05	1	Internal	1	15-APR-2020

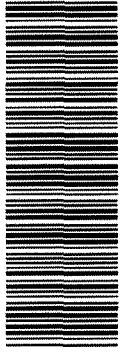
Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT	8290	Injection Standard	WD200414-05	20	uL	Witnessed by CLP
STANDARD	8290	Injection Standard	WD200414-05	20	uL	

Miscellaneous

No non conformance reports were generated for this work order

Shipping and Receiving Documents

Project Name SSFL **Location** Santa Susana Field Lab
Project CH661 PO 100067108373
Project Number 692670.61.SW **Task Order** 661
Project Manager Randy Dean
Sample Manager Jamie Beckett
Turnaround Time 10 Days
PO Number 100067108373



SW8290/1613B
 SM2540
 ASTM D4464
 200.8/245.1F
 200.8/245.1
 180.1

Containers
Field Filtered

Sample Date/Time 13-Mar-20 7:39
Type N
Matrix Water
Preservative 4C

Sample ID	Sample Date/Time	Type	Matrix	Preservative	# Containers	Field Filtered
EVBMPO007S012	13-Mar-20 7:39	N	Water	4C	2	<input type="checkbox"/>
Dioxins				4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C	<input type="checkbox"/>	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg				HNO3, 4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Particle Size Distribution TSS				4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Total Containers: 7						
EVBMPO008S015	13-Mar-20 7:29	N	Water	4C	2	<input type="checkbox"/>
Dioxins				4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg				4C	<input type="checkbox"/>	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg				HNO3, 4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Particle Size Distribution TSS				4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Turbidity				4C	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Total Containers: 6						

MS = Matrix Spike **SD = Matrix Spike Duplicate**
Signatures **Date/Time**

Sampled by: *BRYAN BENSON* 3/13/20
 Relinquished by: *BRYAN BENSON* 11:00 3/13/20
 Received by: *DAVID MUMFORD* 12:15 3/13/20
 Relinquished by: *David* 12:15 3/13/20
 Received by: *Sam Luna* 17:57 3/13/2020
 Relinquished by: *Santos Luna* 17:57 3/13/2020
 Received by: *Mumford sci* 17:57 3/13/2020

Shipping Details
 Shipment Method: FedEx
 Airbill No:
 Lab Name: Eurofins Calscience Lab
 Lab Phone: (949) 870-8766
 On Ice: yes / no Cooler Temp:

ATTN: Sample Custody and

Special Instructions: Report Copy to Mark Fesler (530) 229-3273

5.1/4.2.SU

23510

Project Name	SSFL	Location	Santa Susana Field Lab
Project	CH661 PO 100067108373	Task Order	661
Project Number	692670.61.SW	Sample Manager	Randy Dean
Sample Manager	Jamie Beckett	Sample Date/Time	13-Mar-20 8:25
Sample Turnaround Time	10 Days	Type	N
PO Number	100067108373	Matrix	Water
Sample ID	EVBMP0009S013	Preservative	
Dioxins		Field Filtered	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg		Temperature	4°C
Include Cd, Cu, Pb, Hg		Containers	2
Particle Size Distribution TSS		Matrix	Water
Turbidity		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	1
		Matrix	HNO3, 4°C
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	2
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
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		Containers	2
		Matrix	Water
		Preservative	
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		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
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		Containers	2
		Matrix	Water
		Preservative	
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		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	2
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	1
		Matrix	Water
		Preservative	
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		Temperature	4°C
		Containers	2
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
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		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
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		Preservative	
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		Containers	1
		Matrix	Water
		Preservative	
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		Containers	2
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		Containers	1
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		Preservative	
		Field Filtered	<input type="checkbox"/>
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		Preservative	
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		Preservative	
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		Containers	1
		Matrix	Water
		Preservative	
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		Preservative	
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		Preservative	
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		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
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		Preservative	
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		Preservative	
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		Preservative	
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		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
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		Containers	2
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
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		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
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		Containers	2
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	2
		Matrix	Water
		Preservative	
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		Temperature	4°C
		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	2
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	2
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	2
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	1
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	4°C
		Containers	2
		Matrix	Water
		Preservative	
		Field Filtered	<input type="checkbox"/>
		Temperature	

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-23510-2

Login Number: 23510

List Source: Eurofins Calscience

List Number: 1

Creator: Ramos, Maribel

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 570-25593-1

Job Description: CH661 / 692670.61.SW

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Jimmy Jin
Project Manager I
4/22/2020 8:57 AM

Designee for
Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
04/22/2020

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CH661 / 692670.61.SW

Report Number: 570-25593-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The sample was received on 4/10/2020 at 6:00 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4°C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 degrees Celsius of the required temperature or method specified range. For samples with a specified temperature of 4 degrees Celsius, samples with a temperature ranging from just above freezing temperature of water to 6 degrees Celsius shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DISSOLVED METALS (ICPMS)

Sample A2BMP0006S011 (570-25593-1) was analyzed for dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were analyzed on 04/17/2020.

The following samples were not filtered within 15 minutes of sample collection as required by the method: A2BMP0006S011 (570-25593-1), (570-25593-C-1 MS) and (570-25593-C-1 MSD). The sample(s) was filtered prior to analysis at the laboratory, and the results have been reported.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Sample A2BMP0006S011 (570-25593-1) was analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 04/15/2020 and analyzed on 04/17/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Sample A2BMP0006S011 (570-25593-1) was analyzed for dissolved mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 04/16/2020.

The following samples were not filtered within 15 minutes of sample collection as required by the method: A2BMP0006S011 (570-25593-1), (570-25593-C-1 MS) and (570-25593-C-1 MSD). The sample(s) was filtered prior to analysis at the laboratory, and the results have been reported.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Sample A2BMP0006S011 (570-25593-1) was analyzed for total mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared on 04/14/2020 and analyzed on 04/16/2020.

Mercury failed the recovery criteria low for the MS of sample 570-25445-1 in batch 570-63244.

Mercury failed the recovery criteria low for the MSD of sample 570-25445-1 in batch 570-63244.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS

Sample A2BMP0006S011 (570-25593-1) was analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 04/13/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PARTICLE SIZE

Sample A2BMP0006S011 (570-25593-1) was analyzed for Particle Size in accordance with ASTM D 4464. The samples were analyzed on 04/16/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Client Sample ID: A2BMP0006S011

Lab Sample ID: 570-25593-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.00315		0.00100	0.000610	mg/L	1		200.8	Total Recoverable
Lead	0.00104		0.00100	0.000190	mg/L	1		200.8	Total Recoverable
Copper	0.00244	H	0.00100	0.000610	mg/L	1		200.8	Dissolved
Total Suspended Solids	29.4		1.54	1.27	mg/L	1		SM 2540D	Total/NA
Fine Sand (0.125 to 0.25mm)	35.04		0.01	0.01	%	1		D4464	Total/NA
Medium Sand (0.25 to 0.5 mm)	0.49		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	30.11		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	30.11		0.01	0.01	%	1		D4464	Total/NA
Very Fine Sand (0.0625 to 0.125 mm)	34.36		0.01	0.01	%	1		D4464	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: A2BMP0006S011

Date Collected: 04/09/20 07:55

Date Received: 04/10/20 18:00

Lab Sample ID: 570-25593-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.000980	mg/L		04/15/20 20:30	04/17/20 10:53	1
Copper	0.00315		0.00100	0.000610	mg/L		04/15/20 20:30	04/17/20 10:53	1
Lead	0.00104		0.00100	0.000190	mg/L		04/15/20 20:30	04/17/20 10:53	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Client Sample ID: A2BMP0006S011

Date Collected: 04/09/20 07:55

Date Received: 04/10/20 18:00

Lab Sample ID: 570-25593-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND	H	0.00100	0.000980	mg/L			04/17/20 12:52	1
Copper	0.00244	H	0.00100	0.000610	mg/L			04/17/20 12:52	1
Lead	ND	H	0.00100	0.000190	mg/L			04/17/20 12:52	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: A2BMP0006S011
Date Collected: 04/09/20 07:55
Date Received: 04/10/20 18:00

Lab Sample ID: 570-25593-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		04/14/20 15:15	04/16/20 11:44	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: 245.1 - Mercury (CVAA) - Dissolved

Client Sample ID: A2BMP0006S011

Date Collected: 04/09/20 07:55

Date Received: 04/10/20 18:00

Lab Sample ID: 570-25593-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H	0.000200	0.0000453	mg/L		04/16/20 08:45	04/16/20 11:32	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

General Chemistry

Client Sample ID: A2BMP0006S011

Date Collected: 04/09/20 07:55

Date Received: 04/10/20 18:00

Lab Sample ID: 570-25593-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	29.4		1.54	1.27	mg/L			04/13/20 12:53	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Client Sample ID: A2BMP0006S011
Date Collected: 04/09/20 07:55
Date Received: 04/10/20 18:00

Lab Sample ID: 570-25593-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	ND		0.01	0.01	%			04/16/20 15:41	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			04/16/20 15:41	1
Fine Sand (0.125 to 0.25mm)	35.04		0.01	0.01	%			04/16/20 15:41	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			04/16/20 15:41	1
Medium Sand (0.25 to 0.5 mm)	0.49		0.01	0.01	%			04/16/20 15:41	1
Silt (0.00391 to 0.0625mm)	30.11		0.01	0.01	%			04/16/20 15:41	1
Total Silt and Clay (0 to 0.0626mm)	30.11		0.01	0.01	%			04/16/20 15:41	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			04/16/20 15:41	1
Very Fine Sand (0.0625 to 0.125 mm)	34.36		0.01	0.01	%			04/16/20 15:41	1

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

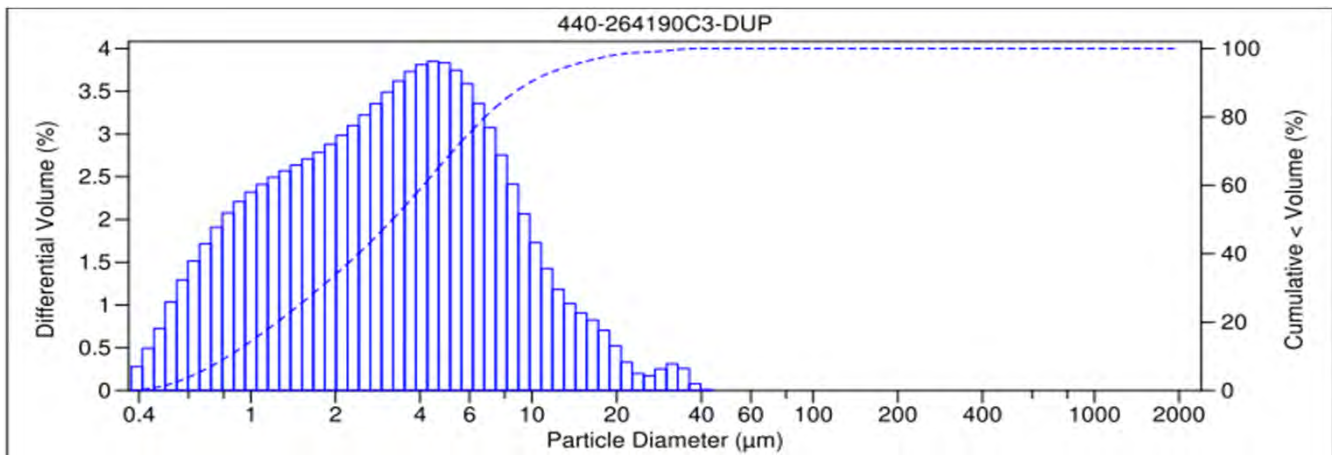
Haley & Aldrich, Inc.

Date Sampled: 04/06/20
 Date Received: 04/07/20
 Work Order No: 440-264190
 Date Analyzed: 03/04/20
 Method: ASTM D4464M

Project:

Sample ID	Depth ft	Description	Mean Grain Size mm
LXBMP0012_20200406		Silt	0.005

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	0.00	0.00	41.97	58.03	100.00



V.3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

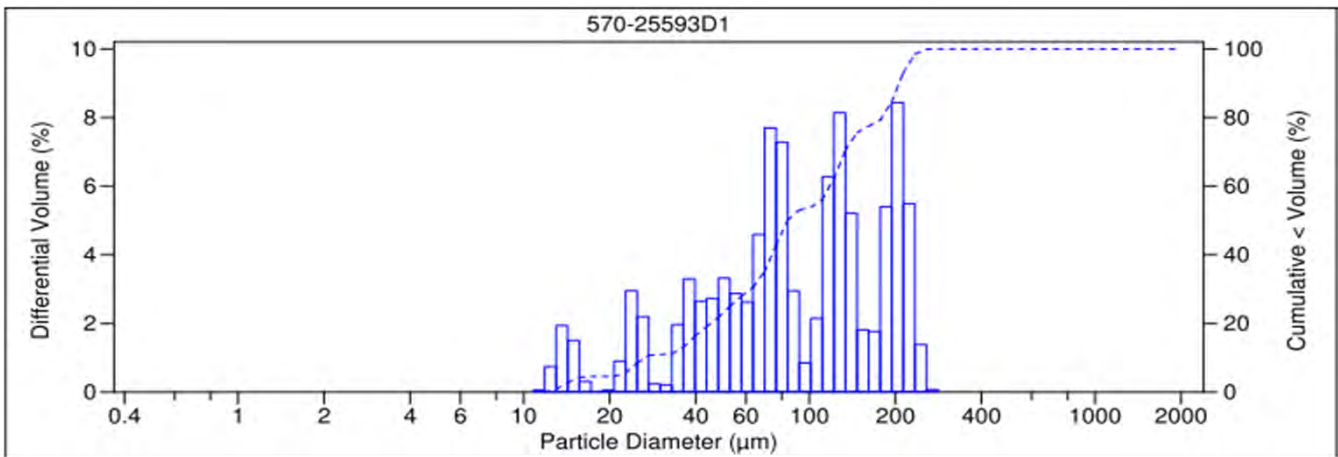
Jacobs Engineering Group, Inc.

Date Sampled: 04/09/20
 Date Received: 04/10/20
 Work Order No: 570-25593
 Date Analyzed: 04/16/20
 Method: ASTM D4464M

Project: SSFL

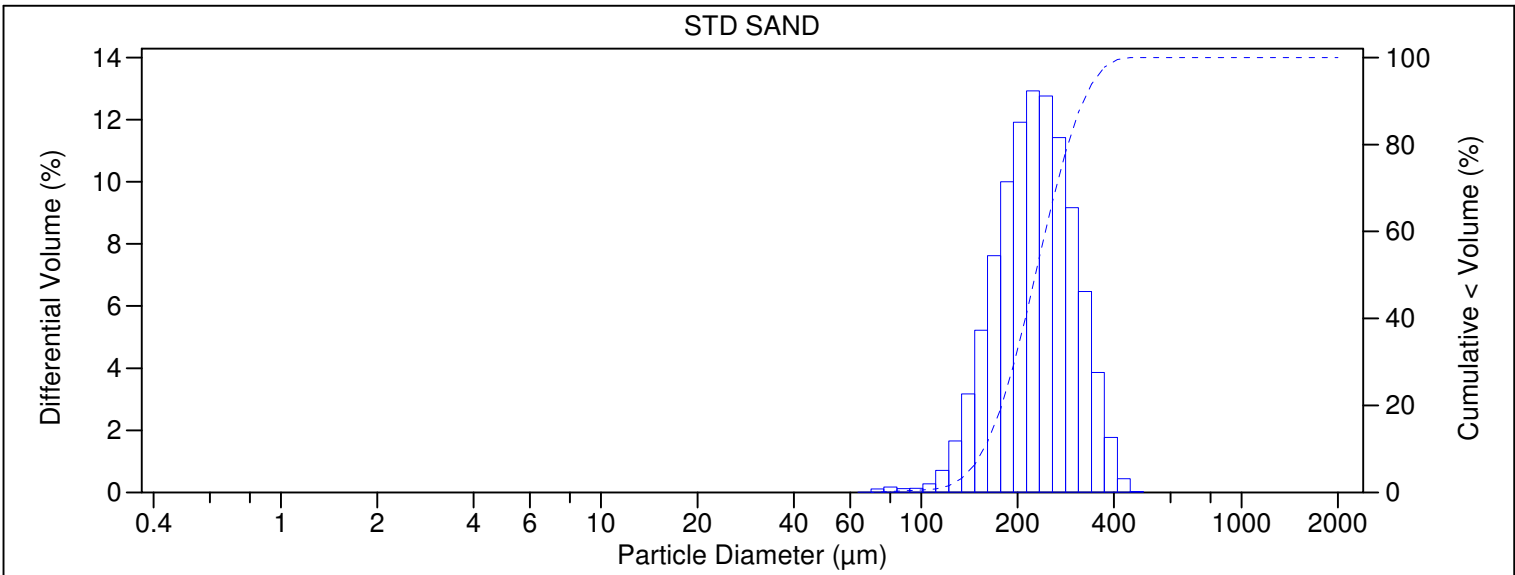
Sample ID	Depth ft	Description	Mean Grain Size mm
A2BMP0006S011		Very Fine Sand	0.105

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.49	35.04	34.36	30.11	0.00	30.11



V.3.0

File name:	C:\LS13320\STD SAND_16 Apr 2020_16.26.59.\$ls		
	STD SAND_16 Apr 2020_16.26.59.\$ls		
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	1106		
Run number:	6		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602396 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	2.21%		
LS 13 320	Aqueous Liquid Module		
Start time:	16:25 16 Apr 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

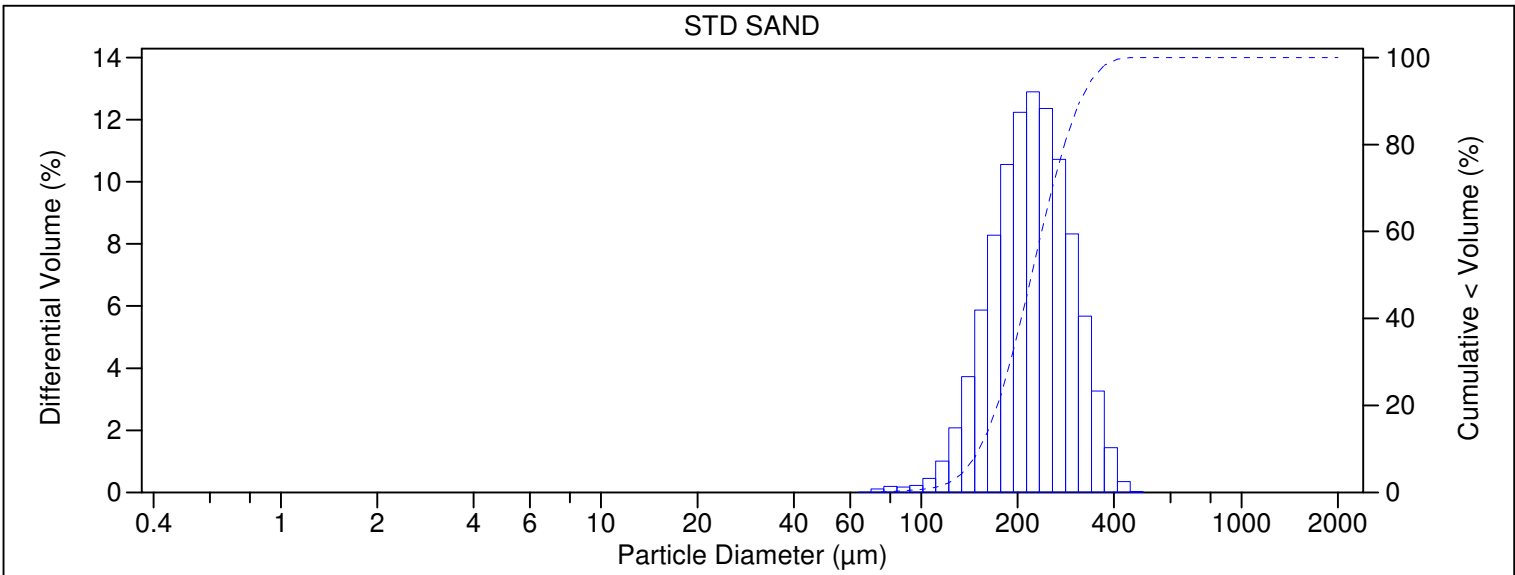


Volume Statistics (Arithmetic)		STD SAND_16 Apr 2020_16.26.59.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	63.16 µm
Mean:	233.6 µm	Variance:	3989 µm ²
Median:	227.5 µm	Skewness:	0.432 Right skewed
Mean/Median ratio:	1.027	Kurtosis:	-0.084 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	156.8 µm	d ₅₀ :	227.5 µm
		d ₉₀ :	321.7 µm
Folk and Ward Statistics (Phi)			
Mean:	2.14	Median:	2.14
Skewness:	0.04	Kurtosis:	0.96
Deviation:	0.40		
<5%	<16%	<25%	<40%
141.1 µm	170.3 µm	186.9 µm	211.4 µm
<50%	<75%	<84%	<95%
227.5 µm	274.9 µm	299.3 µm	349.4 µm

Particle Diameter µm	STD SAND _16 Apr 2020_16.26 .59.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.00
125	61.0
250	37.0
500	0
1000	0
2000	0

STD SAND_16 Apr 2020_16.26.59.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.012		
1.047	0	69.62	0.12		
1.149	0	76.43	0.18		
1.261	0	83.90	0.13		
1.385	0	92.10	0.13		
1.520	0	101.1	0.27		
1.669	0	111.0	0.72		
1.832	0	121.8	1.66		
2.011	0	133.7	3.17		
2.208	0	146.8	5.22		
2.423	0	161.2	7.62		
2.660	0	176.9	10.0		
2.920	0	194.2	11.9		
3.206	0	213.2	12.9		
3.519	0	234.1	12.8		
3.863	0	256.9	11.4		
4.241	0	282.1	9.17		
4.656	0	309.6	6.47		
5.111	0	339.9	3.87		
5.611	0	373.1	1.77		
6.159	0	409.6	0.44		
6.761	0	449.7	0.027		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\STD SAND_16 Apr 2020_16.47.00.\$ls		
	STD SAND_16 Apr 2020_16.47.00.\$ls		
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	1106		
Run number:	8		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602396 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	2.65%		
LS 13 320	Aqueous Liquid Module		
Start time:	16:45 16 Apr 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00



Volume Statistics (Arithmetic)		STD SAND_16 Apr 2020_16.47.00.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	62.57 µm
Mean:	227.5 µm	Variance:	3915 µm ²
Median:	221.4 µm	Skewness:	0.456 Right skewed
Mean/Median ratio:	1.028	Kurtosis:	-0.023 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	151.7 µm	d ₅₀ :	221.4 µm
		d ₉₀ :	313.6 µm
Folk and Ward Statistics (Phi)			
Mean:	2.18	Median:	2.18
Skewness:	0.04	Deviation:	0.41
		Kurtosis:	0.96
<5%	<16%	<25%	<40%
136.3 µm	165.2 µm	181.6 µm	205.5 µm
<50%	<75%	<84%	<95%
221.4 µm	268.2 µm	292.2 µm	340.6 µm

Particle Diameter µm	STD SAND _16 Apr 2020_16.47 .00.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.75
125	63.7
250	33.5
500	0
1000	0
2000	0

STD SAND_16 Apr 2020_16.47.00.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.012		
1.047	0	69.62	0.11		
1.149	0	76.43	0.19		
1.261	0	83.90	0.18		
1.385	0	92.10	0.23		
1.520	0	101.1	0.45		
1.669	0	111.0	1.01		
1.832	0	121.8	2.08		
2.011	0	133.7	3.72		
2.208	0	146.8	5.87		
2.423	0	161.2	8.29		
2.660	0	176.9	10.6		
2.920	0	194.2	12.2		
3.206	0	213.2	12.9		
3.519	0	234.1	12.4		
3.863	0	256.9	10.7		
4.241	0	282.1	8.32		
4.656	0	309.6	5.67		
5.111	0	339.9	3.27		
5.611	0	373.1	1.44		
6.159	0	409.6	0.35		
6.761	0	449.7	0.021		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

Default Detection Limits

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Prep: 200.8

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000980	mg/L
Copper	0.00100	0.000610	mg/L
Lead	0.00100	0.000190	mg/L

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	RL	MDL	Units
Cadmium	0.00100	0.000980	mg/L
Copper	0.00100	0.000610	mg/L
Lead	0.00100	0.000190	mg/L

Method: 245.1 - Mercury (CVAA)

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

Method: 245.1 - Mercury (CVAA) - Dissolved

Prep: 245.1

Analyte	RL	MDL	Units
Mercury	0.000200	0.0000453	mg/L

General Chemistry

Analyte	RL	MDL	Units
Total Suspended Solids	1.00	0.829	mg/L

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Analyte	RL	MDL	Units
Clay(less than 0.00391 mm)	0.01	0.01	%
Coarse Sand (0.5mm to 1mm)	0.01	0.01	%
Fine Sand (0.125 to 0.25mm)	0.01	0.01	%
Gravel (greater than 2 mm)	0.01	0.01	%
Medium Sand (0.25 to 0.5 mm)	0.01	0.01	%
Silt (0.00391 to 0.0625mm)	0.01	0.01	%
Total Silt and Clay (0 to 0.0626mm)	0.01	0.01	%
Very Coarse Sand (1 to 2mm)	0.01	0.01	%
Very Fine Sand (0.0625 to 0.125 mm)	0.01	0.01	%

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 570-63381/1-A
Matrix: Water
Analysis Batch: 63497

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 63381

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		0.00100	0.000980	mg/L		04/15/20 20:30	04/16/20 19:48	1
Copper	ND		0.00100	0.000610	mg/L		04/15/20 20:30	04/16/20 19:48	1
Lead	ND		0.00100	0.000190	mg/L		04/15/20 20:30	04/16/20 19:48	1

Lab Sample ID: LCS 570-63381/2-A
Matrix: Water
Analysis Batch: 63497

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 63381

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Cadmium	0.100	0.1058		mg/L		106	80 - 120	
Copper	0.100	0.1050		mg/L		105	80 - 120	
Lead	0.100	0.1040		mg/L		104	80 - 120	

Lab Sample ID: LCSD 570-63381/3-A
Matrix: Water
Analysis Batch: 63497

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 63381

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits		RPD	Limit
Cadmium	0.100	0.1058		mg/L		106	80 - 120	0	20	
Copper	0.100	0.1031		mg/L		103	80 - 120	2	20	
Lead	0.100	0.1028		mg/L		103	80 - 120	1	20	

Lab Sample ID: 570-25110-G-1-B MS
Matrix: Water
Analysis Batch: 63497

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 63381

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	
Cadmium	ND		0.100	0.1046		mg/L		105	80 - 120	
Copper	0.0289		0.100	0.1291		mg/L		100	80 - 120	
Lead	0.0171		0.100	0.1197		mg/L		103	80 - 120	

Lab Sample ID: 570-25110-G-1-C MSD
Matrix: Water
Analysis Batch: 63497

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 63381

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
									Limits		RPD	Limit
Cadmium	ND		0.100	0.1040		mg/L		104	80 - 120	1	20	
Copper	0.0289		0.100	0.1294		mg/L		100	80 - 120	0	20	
Lead	0.0171		0.100	0.1198		mg/L		103	80 - 120	0	20	

Lab Sample ID: MB 570-63570/1-A
Matrix: Water
Analysis Batch: 63759

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		0.00100	0.000980	mg/L		04/17/20 12:43		1
Copper	ND		0.00100	0.000610	mg/L		04/17/20 12:43		1
Lead	ND		0.00100	0.000190	mg/L		04/17/20 12:43		1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 570-63570/2-A
Matrix: Water
Analysis Batch: 63759

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.1063		mg/L		106	80 - 120
Copper	0.100	0.1110		mg/L		111	80 - 120
Lead	0.100	0.1043		mg/L		104	80 - 120

Lab Sample ID: LCSD 570-63570/3-A
Matrix: Water
Analysis Batch: 63759

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.1090		mg/L		109	80 - 120	2	20
Copper	0.100	0.1109		mg/L		111	80 - 120	0	20
Lead	0.100	0.1048		mg/L		105	80 - 120	0	20

Lab Sample ID: 570-25593-1 MS
Matrix: Water
Analysis Batch: 64006

Client Sample ID: A2BMP0006S011
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND	H	0.100	0.1089		mg/L		109	80 - 120
Copper	0.00244	H	0.100	0.1032		mg/L		101	80 - 120
Lead	ND	H	0.100	0.1056		mg/L		106	80 - 120

Lab Sample ID: 570-25593-1 MSD
Matrix: Water
Analysis Batch: 64006

Client Sample ID: A2BMP0006S011
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND	H	0.100	0.1091		mg/L		109	80 - 120	0	20
Copper	0.00244	H	0.100	0.1046		mg/L		102	80 - 120	1	20
Lead	ND	H	0.100	0.1067		mg/L		107	80 - 120	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 570-63082/1-A
Matrix: Water
Analysis Batch: 63244

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		04/14/20 15:15	04/15/20 10:19	1

Lab Sample ID: LCS 570-63082/2-A
Matrix: Water
Analysis Batch: 63244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.009862		mg/L		99	85 - 121

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 570-63082/3-A
Matrix: Water
Analysis Batch: 63244

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63082

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.009891		mg/L		99	85 - 121	0	10

Lab Sample ID: 570-25445-H-1-B MS
Matrix: Water
Analysis Batch: 63244

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 63082

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F1	0.0100	0.003766	F1	mg/L		38	57 - 141

Lab Sample ID: 570-25445-H-1-C MSD
Matrix: Water
Analysis Batch: 63244

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 63082

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	F1	0.0100	0.003788	F1	mg/L		38	57 - 141	1	10

Lab Sample ID: MB 570-63413/1-B
Matrix: Water
Analysis Batch: 63531

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 63414

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000453	mg/L		04/16/20 08:45	04/16/20 11:25	1

Lab Sample ID: LCS 570-63413/2-B
Matrix: Water
Analysis Batch: 63531

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 63414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.01059		mg/L		106	85 - 121

Lab Sample ID: LCSD 570-63413/3-B
Matrix: Water
Analysis Batch: 63531

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 63414

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.01062		mg/L		106	85 - 121	0	10

Lab Sample ID: 570-25593-1 MS
Matrix: Water
Analysis Batch: 63531

Client Sample ID: A2BMP0006S011
Prep Type: Dissolved
Prep Batch: 63414

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	H	0.0100	0.006256		mg/L		63	57 - 141

Lab Sample ID: 570-25593-1 MSD
Matrix: Water
Analysis Batch: 63531

Client Sample ID: A2BMP0006S011
Prep Type: Dissolved
Prep Batch: 63414

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	H	0.0100	0.006319		mg/L		63	57 - 141	1	10

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 570-62795/1
Matrix: Water
Analysis Batch: 62795

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.00	0.829	mg/L			04/13/20 12:53	1

Lab Sample ID: LCS 570-62795/2
Matrix: Water
Analysis Batch: 62795

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	103.0		mg/L		103	85 - 115

Lab Sample ID: LCSD 570-62795/3
Matrix: Water
Analysis Batch: 62795

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	103.0		mg/L		103	85 - 115	0	10

Lab Sample ID: 570-25523-A-3 DU
Matrix: Water
Analysis Batch: 62795

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	4500		4760		mg/L		6	10

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Lab Sample ID: 440-264190-C-3 DU
Matrix: Water
Analysis Batch: 63641

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Clay(less than 0.00391 mm)	51.99		58.03		%		11	20
Coarse Sand (0.5mm to 1mm)	ND		ND		%		NC	20
Fine Sand (0.125 to 0.25mm)	ND		ND		%		NC	20
Gravel (greater than 2 mm)	ND		ND		%		NC	20
Medium Sand (0.25 to 0.5 mm)	ND		ND		%		NC	20
Silt (0.00391 to 0.0625mm)	48.01		41.97		%		13	20
Total Silt and Clay (0 to 0.0626mm)	100.00		100.00		%		0	20
Very Coarse Sand (1 to 2mm)	ND		ND		%		NC	20
Very Fine Sand (0.0625 to 0.125 mm)	ND		ND		%		NC	20

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Metals

Prep Batch: 63082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1	A2BMP0006S011	Total/NA	Water	245.1	
MB 570-63082/1-A	Method Blank	Total/NA	Water	245.1	
LCS 570-63082/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 570-63082/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
570-25445-H-1-B MS	Matrix Spike	Total/NA	Water	245.1	
570-25445-H-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 63244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-63082/1-A	Method Blank	Total/NA	Water	245.1	63082
LCS 570-63082/2-A	Lab Control Sample	Total/NA	Water	245.1	63082
LCSD 570-63082/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	63082
570-25445-H-1-B MS	Matrix Spike	Total/NA	Water	245.1	63082
570-25445-H-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	63082

Prep Batch: 63381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1	A2BMP0006S011	Total Recoverable	Water	200.8	
MB 570-63381/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 570-63381/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 570-63381/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
570-25110-G-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
570-25110-G-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	

Filtration Batch: 63413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1	A2BMP0006S011	Dissolved	Water	Filtration	
MB 570-63413/1-B	Method Blank	Dissolved	Water	Filtration	
LCS 570-63413/2-B	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-63413/3-B	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-25593-1 MS	A2BMP0006S011	Dissolved	Water	Filtration	
570-25593-1 MSD	A2BMP0006S011	Dissolved	Water	Filtration	

Prep Batch: 63414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1	A2BMP0006S011	Dissolved	Water	245.1	63413
MB 570-63413/1-B	Method Blank	Dissolved	Water	245.1	63413
LCS 570-63413/2-B	Lab Control Sample	Dissolved	Water	245.1	63413
LCSD 570-63413/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	63413
570-25593-1 MS	A2BMP0006S011	Dissolved	Water	245.1	63413
570-25593-1 MSD	A2BMP0006S011	Dissolved	Water	245.1	63413

Analysis Batch: 63497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-63381/1-A	Method Blank	Total Recoverable	Water	200.8	63381
LCS 570-63381/2-A	Lab Control Sample	Total Recoverable	Water	200.8	63381
LCSD 570-63381/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	63381
570-25110-G-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	63381
570-25110-G-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	63381

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Metals

Analysis Batch: 63531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1	A2BMP0006S011	Dissolved	Water	245.1	63414
570-25593-1	A2BMP0006S011	Total/NA	Water	245.1	63082
MB 570-63413/1-B	Method Blank	Dissolved	Water	245.1	63414
LCS 570-63413/2-B	Lab Control Sample	Dissolved	Water	245.1	63414
LCSD 570-63413/3-B	Lab Control Sample Dup	Dissolved	Water	245.1	63414
570-25593-1 MS	A2BMP0006S011	Dissolved	Water	245.1	63414
570-25593-1 MSD	A2BMP0006S011	Dissolved	Water	245.1	63414

Filtration Batch: 63570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1	A2BMP0006S011	Dissolved	Water	Filtration	
MB 570-63570/1-A	Method Blank	Dissolved	Water	Filtration	
LCS 570-63570/2-A	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-63570/3-A	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-25593-1 MS	A2BMP0006S011	Dissolved	Water	Filtration	
570-25593-1 MSD	A2BMP0006S011	Dissolved	Water	Filtration	

Analysis Batch: 63759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1	A2BMP0006S011	Dissolved	Water	200.8	63570
570-25593-1	A2BMP0006S011	Total Recoverable	Water	200.8	63381
MB 570-63570/1-A	Method Blank	Dissolved	Water	200.8	63570
LCS 570-63570/2-A	Lab Control Sample	Dissolved	Water	200.8	63570
LCSD 570-63570/3-A	Lab Control Sample Dup	Dissolved	Water	200.8	63570

Analysis Batch: 64006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1 MS	A2BMP0006S011	Dissolved	Water	200.8	63570
570-25593-1 MSD	A2BMP0006S011	Dissolved	Water	200.8	63570

General Chemistry

Analysis Batch: 62795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1	A2BMP0006S011	Total/NA	Water	SM 2540D	
MB 570-62795/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-62795/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-62795/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-25523-A-3 DU	Duplicate	Total/NA	Water	SM 2540D	

Geotechnical

Analysis Batch: 63641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-25593-1	A2BMP0006S011	Total/NA	Water	D4464	
LCS 570-63641/6	Lab Control Sample	Total/NA	Water	D4464	
LCSD 570-63641/8	Lab Control Sample Dup	Total/NA	Water	D4464	
440-264190-C-3 DU	Duplicate	Total/NA	Water	D4464	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Client Sample ID: A2BMP0006S011

Lab Sample ID: 570-25593-1

Date Collected: 04/09/20 07:55

Matrix: Water

Date Received: 04/10/20 18:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	63570	04/10/20 19:00	WL8G	ECL 1
Dissolved	Analysis	200.8		1			63759	04/17/20 12:52	UFLE	ECL 1
Instrument ID: ICPMS05										
Total Recoverable	Prep	200.8			50 mL	50 mL	63381	04/15/20 20:30	X7RL	ECL 1
Total Recoverable	Analysis	200.8		1			63759	04/17/20 10:53	UFLE	ECL 1
Instrument ID: ICPMS05										
Dissolved	Filtration	Filtration			50 mL	50 mL	63413	04/10/20 20:00	WL8G	ECL 1
Dissolved	Prep	245.1			50 mL	100 mL	63414	04/16/20 08:45	WL8G	ECL 1
Dissolved	Analysis	245.1		1			63531	04/16/20 11:32	MD3A	ECL 1
Instrument ID: HG7										
Total/NA	Prep	245.1			50 mL	100 mL	63082	04/14/20 15:15	WL8G	ECL 1
Total/NA	Analysis	245.1		1			63531	04/16/20 11:44	MD3A	ECL 1
Instrument ID: HG7										
Total/NA	Analysis	SM 2540D		1	650 mL	1000 mL	62795	04/13/20 12:53	S8WJ	ECL 1
Instrument ID: NOEQUIP										
Total/NA	Analysis	D4464		1			63641	04/16/20 15:41	C4LT	ECL 1
Instrument ID: NOEQUIP										

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	ECL 1
245.1	Mercury (CVAA)	EPA	ECL 1
SM 2540D	Solids, Total Suspended (TSS)	SM	ECL 1
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
200.8	Preparation, Total Recoverable Metals	EPA	ECL 1
245.1	Preparation, Mercury	EPA	ECL 1
Filtration	Sample Filtration	None	ECL 1

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-25593-1	A2BMP0006S011	Water	04/09/20 07:55	04/10/20 18:00	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
Hg 1ppm ICV 00016	05/06/20	04/06/20	DI Water, Lot n/a	100 mL	MT-Hg-CS_00002	0.1 mL	Mercury	1 mg/L
.MT-Hg-CS_00002	12/31/20		High Purity Standards, Lot 1914918-100		(Purchased Reagent)		Mercury	1000 ug/mL
Hg 1ppm STD 00013	05/06/20	04/06/20	DI Water, Lot n/a	100 mL	MT-Hg-SS_00001	1 mL	Mercury	1 mg/L
.MT-Hg-SS_00001	07/14/22		AccuStandard, Lot 217075028		(Purchased Reagent)		Mercury	100 ug/mL
Hg H2SO4_00001	02/21/21		Fisher, Lot 3117052		(Purchased Reagent)		Sulfuric acid	98 mg/L
Hg K2S2O3_00003	02/19/21	02/18/20	DI Water, Lot N/A	10 L	HG_7440K2S2O8_00001	500 g	Potassium persulfate	4950000 mg/L
.HG_7440K2S2O8_00001	02/27/22		AcrosOrganic, Lot A0379062		(Purchased Reagent)		Potassium persulfate	99 g/g
Hg KMnO4_00005	07/31/21	02/24/20	DI Water, Lot N/A	10 L	HG_7471_KMNO4_00002	500 g	Potassium Permanganate	5000000 mg/L
.HG_7471_KMNO4_00002	08/22/23		VWR, Lot 0277-C094		(Purchased Reagent)		Potassium Permanganate	100 g/g
Hg NaCl-NH2OH_00007	10/02/20	02/24/20	DI Water, Lot N/A	10 L	HG_7470_NH3OH_00002	1.2 Kg	Hydroxylamine hydrochloride	0.01188 L
.HG_7470_NH3OH_00002	10/02/20		VWR Chemicals, LLC, Lot 19F1856849		HG_7470_NaCl_00002	1.2 Kg	Sodium Chloride	11880 L
.HG_7470_NaCl_00002	02/21/25		Fisher, Lot 188772		(Purchased Reagent)		Hydroxylamine hydrochloride	99 g/g
					(Purchased Reagent)		Sodium Chloride	99 g/g
MI_Fine Sand_00002	09/18/20	03/18/20		500 g	MI_WashedSand_00001	500 g	Fine Sand (0.125 to 0.25mm)	100 %
.MI_WashedSand_00001	06/19/25		Fisher, Lot 177317		(Purchased Reagent)		Medium Sand (0.25 to 0.5 mm)	100 %
							Fine Sand (0.125 to 0.25mm)	100 %
							Medium Sand (0.25 to 0.5 mm)	100 %
MT-HNO3 CON. 00001	09/05/21		Fisher Chemical, Lot 1118120		(Purchased Reagent)		Nitric acid	70 mL
MT: 1:1 HCl 00003	03/03/21	03/03/20	DI Water, Lot Di water	500 mL	MT: HCl Conc. 00002	250 mL	Hydrogen Chloride	18.5 mL
.MT: HCl Conc. 00002	11/14/22		Fisher Scientific, Lot 4118110		(Purchased Reagent)		Hydrogen Chloride	37 mL
MT: 1:1 HNO3 00002	03/17/21	03/17/20	DI Water, Lot DI Water	500 mL	MT_H2NO3 Con 00001	250 mL	Nitric acid	35 mL
.MT_H2NO3 Con 00001	05/02/21		Fisher Chemical, Lot 1118101		(Purchased Reagent)		Nitric acid	70 mL
MT_ICP_Spike1_00008	09/30/20	01/30/20	HNO3, Lot 1118092	1000 mL	MT-As-SpS_00001	10 mL	As	100 ug/mL
					MT-Be-SpS_00001	10 mL	Be	100 ug/mL
					MT-Bi-CS-SpS_00001	10 mL	Bi	100 ug/mL
					MT-Ca-SpS_00001	10 mL	Ca	100 ug/mL
					MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Co-SpS_00001	10 mL	Co	100 ug/mL
					MT-Cr-SpS_00001	10 mL	Cr	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Fe-SpS_00001	10 mL	Fe	100 ug/mL
					MT-Li-CS-SpS_00001	10 mL	Li	100 ug/mL
					MT-Mg-SpS_00001	10 mL	Mg	100 ug/mL
					MT-Mn-SpS_00001	10 mL	Mn	100 ug/mL
					MT-Mo-SpS_00001	10 mL	Mo	100 ug/mL
					MT-Ni-SpS_00001	10 mL	Ni	100 ug/mL
					MT-P-SpS_00001	10 mL	P	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
					MT-S-CS-SpS_00001	10 mL	Sulfur	100 ug/mL
					MT-Sb-SpS_00001	10 mL	Sb	100 ug/mL
					MT-Se-SpS_00001	10 mL	Se	100 ug/mL
					MT-Sn-SpS_00001	10 mL	Sn	100 ug/mL
					MT-Sr-SpS_00001	10 mL	Sr	100 ug/mL
					MT-Ti-SpS_00001	10 mL	Ti	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MT-Tl-SpS_00001	10 mL	Tl	100 ug/mL
					MT-V-SpS_00001	10 mL	V	100 ug/mL
					MT-Zn-SpS_00001	10 mL	Zn	100 ug/mL
.MT-As-SpS_00001	04/30/23		AccuStandard, Lot 218045118		(Purchased Reagent)		As	10000 ug/mL
.MT-Be-SpS_00001	02/28/23		Ultra, Lot CP-0170		(Purchased Reagent)		Be	10000 ug/mL
.MT-Bi-CS-SpS_00001	06/30/23		Ultra, Lot CP-2124		(Purchased Reagent)		Bi	10000 ug/mL
.MT-Ca-SpS_00001	04/30/23		Ultra, Lot CP-0877		(Purchased Reagent)		Ca	10000 ug/mL
.MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
.MT-Co-SpS_00001	05/31/23		Ultra, Lot CP-2011		(Purchased Reagent)		Co	10000 ug/mL
.MT-Cr-SpS_00001	05/31/23		Ultra, Lot CP-1768		(Purchased Reagent)		Cr	10000 ug/mL
.MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
.MT-Fe-SpS_00001	08/31/24		Ultra, Lot CR-3137		(Purchased Reagent)		Fe	10000 ug/mL
.MT-Li-CS-SpS_00001	05/31/21		Ultra, Lot T00356		(Purchased Reagent)		Li	10000 ug/mL
.MT-Mg-SpS_00001	09/30/22		Ultra, Lot CM-4445		(Purchased Reagent)		Mg	10000 ug/mL
.MT-Mn-SpS_00001	01/31/24		Ultra, Lot M00334A		(Purchased Reagent)		Mn	10000 ug/mL
.MT-Mo-SpS_00001	08/31/21		Ultra, Lot CL-2860		(Purchased Reagent)		Mo	10000 ug/mL
.MT-Ni-SpS_00001	02/28/23		Ultra, Lot CP-0006		(Purchased Reagent)		Ni	10000 ug/mL
.MT-P-SpS_00001	09/10/23		Ultra, Lot CP-4381		(Purchased Reagent)		P	10000 ug/mL
.MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
.MT-S-CS-SpS_00001	11/30/22		Ultra, Lot CM-5393		(Purchased Reagent)		Sulfur	10000 ug/mL
.MT-Sb-SpS_00001	06/30/23		Ultra, Lot CP-2412		(Purchased Reagent)		Sb	10000 ug/mL
.MT-Se-SpS_00001	11/30/22		Ultra, Lot CM-5316		(Purchased Reagent)		Se	10000 ug/mL
.MT-Sn-SpS_00001	07/31/21		Ultra, Lot T00753		(Purchased Reagent)		Sn	10000 ug/mL
.MT-Sr-SpS_00001	09/30/22		Ultra, Lot CM-4363		(Purchased Reagent)		Sr	10000 ug/mL
.MT-Ti-SpS_00001	04/30/22		Ultra, Lot CM-1138		(Purchased Reagent)		Ti	10000 ug/mL
.MT-Tl-SpS_00001	05/31/23		Ultra, Lot CP-2010		(Purchased Reagent)		Tl	10000 ug/mL
.MT-V-SpS_00001	08/31/23		Ultra, Lot CP-3591		(Purchased Reagent)		V	10000 ug/mL
.MT-Zn-SpS_00001	02/28/23		Ultra, Lot CP-0155		(Purchased Reagent)		Zn	10000 ug/mL
MT_ICP_Spike2_00007	01/30/21	01/30/20	HNO3, Lot 1118092	1000 mL	MT_ICP_Ag_SpS_00001	5 mL	Ag	50 ug/mL
					MT_ICP_Al_SpS_00001	10 mL	Al	100 ug/mL
					MT_ICP_B_SpS_00001	10 mL	B	100 ug/mL
					MT_ICP_Ba_SpS_00001	10 mL	Ba	100 ug/mL
					MT_ICP_K_SpS_00001	100 mL	K	1000 ug/mL
					MT_ICP_Na_SpS_00001	100 mL	Na	1000 ug/mL
					MT_ICP_Si_SpS_00004	10 mL	Si	100 ug/mL
							SiO2	214 ug/mL
.MT_ICP_Ag_SpS_00001	09/30/23		Ultra, Lot CP-4409		(Purchased Reagent)		Ag	10000 ug/mL
.MT_ICP_Al_SpS_00001	09/30/23		Ultra, Lot CP-3976		(Purchased Reagent)		Al	10000 ug/mL
.MT_ICP_B_SpS_00001	12/31/21		Ultra, Lot K00924A		(Purchased Reagent)		B	10000 ug/mL
.MT_ICP_Ba_SpS_00001	01/31/23		Ultra, Lot CM-6544		(Purchased Reagent)		Ba	10000 ug/mL
.MT_ICP_K_SpS_00001	04/30/24		Ultra, Lot CR-0917		(Purchased Reagent)		K	10000 ug/mL
.MT_ICP_Na_SpS_00001	09/30/23		Ultra, Lot CP-3978		(Purchased Reagent)		Na	10000 ug/mL
.MT_ICP_Si_SpS_00004	04/30/23		Ultra, Lot CP-1238		(Purchased Reagent)		Si	10000 ug/mL
							SiO2	21400 ug/mL
MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
..MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
.MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_ICS_A_00002	05/30/20	07/01/19	1% HNO3, Lot DIWATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
							Ti	20 mg/L
MT_MS_ICS_AB_00002	05/14/20	07/01/19	1% HNO3, Lot DIWAATER	500 mL	MT_MS_INT_A_00003	5 mL	Al	10 mg/L
							Ca	30 mg/L
							Fe	25 mg/L
							K	10 mg/L
							Mg	10 mg/L
							Mo	0.2 mg/L
							Na	25 mg/L
							Ti	0.2 mg/L
					MT_MS_Int_B_00002	0.5 mL	Ag	0.005 mg/L
							As	0.01 mg/L
							Cadmium	0.01 mg/L
							Co	0.02 mg/L
							Copper	0.02 mg/L
							Cr	0.02 mg/L
							Mn	0.02 mg/L
							Ni	0.02 mg/L
							Se	0.01 mg/L
							V	0.02 mg/L
							Zn	0.01 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_MS_INT_A_00003	05/30/20		Spex, Lot CL1-119YJY		(Purchased Reagent)		Al	1000 mg/L
							Ca	3000 mg/L
							Fe	2500 mg/L
							K	1000 mg/L
							Mg	1000 mg/L
							Mo	20 mg/L
							Na	2500 mg/L
.MT_MS_Int_B_00002	05/30/20		Spex, Lot CL6-114MKBY		(Purchased Reagent)		Ag	5 mg/L
							As	10 mg/L
							Cadmium	10 mg/L
							Co	20 mg/L
							Copper	20 mg/L
							Cr	20 mg/L
							Mn	20 mg/L
							Ni	20 mg/L
							Se	10 mg/L
							V	20 mg/L
							Zn	10 mg/L
MT_MS_ICV1_00004	09/30/20	01/13/20	1% Nitric Acid, Lot DIWATER	2000 mL	MT_ICP_Spike1_00007	2 mL	Cadmium	0.1 ug/mL
							Copper	0.1 ug/mL
							Lead	0.1 ug/mL
.MT_ICP_Spike1_00007	09/30/20	01/13/20	HNO3, Lot 1118092	1000 mL	MT-Cd-SpS_00001	10 mL	Cadmium	100 ug/mL
					MT-Cu-SpS_00001	10 mL	Copper	100 ug/mL
					MT-Pb-SpS_00001	10 mL	Lead	100 ug/mL
..MT-Cd-SpS_00001	02/28/23		Ultra, Lot CP-0156		(Purchased Reagent)		Cadmium	10000 ug/mL
..MT-Cu-SpS_00001	09/30/20		Ultra, Lot R00892		(Purchased Reagent)		Copper	10000 ug/mL
..MT-Pb-SpS_00001	07/31/22		Ultra, Lot CM-3300		(Purchased Reagent)		Lead	10000 ug/mL
MT_MS_LL_00006	08/30/20	09/24/19	1% HNO3, Lot DIWATER	100 mL	MT_MS_CCV_00005	1 mL	Cadmium	0.001 mg/L
							Copper	0.001 mg/L
							Lead	0.001 mg/L
.MT_MS_CCV_00005	08/30/20	09/24/19	1% HNO3, Lot DIWATER	1000 mL	MT_MS_IC_00008	500 mL	Cadmium	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
..MT_MS_IC_00008	08/30/20	08/24/19	1% HNO3, Lot -	2000 mL	MT_MS_ICS2_00002	4 mL	Cadmium	0.2 mg/L
							Copper	0.2 mg/L
							Lead	0.2 mg/L
...MT_MS_ICS2_00002	08/30/20		SPEX, Lot CL2-69WGY		(Purchased Reagent)		Cadmium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
MT_MS_SPIKE_3_00002	12/31/22	07/09/19	2% Nitric Acid, Lot DIWATER	1000 mL	MT_MS_Ca10000_00001	100 mL	Ca	1000 mg/L
					MT_MS_Fe10000_00001	100 mL	Fe	1000 mg/L
					MT_MS_Mg10000_00001	100 mL	Mg	1000 mg/L
.MT_MS_Ca10000_00001	09/30/24		Ultra, Lot CR-3808		(Purchased Reagent)		Ca	10000 mg/L
.MT_MS_Fe10000_00001	08/31/24		Ultra, Lot ICP-126-L		(Purchased Reagent)		Fe	10000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT MS Mg10000 00001	04/20/23		Ultra, Lot ICP-112-L		(Purchased Reagent)		Mg	10000 mg/L
WC TSS STD 00017	08/19/20	03/19/20	DI Water, Lot 01182020	2 L	WC TSS STK 00001	0.2 g	Total Suspended Solids	100 mg/L
.WC TSS STK 00001	11/04/21		FISHER, Lot 160676		(Purchased Reagent)		Total Suspended Solids	1 g/g

Reagent

MI_Fine Sand_00002

DPV Control Limits Calculations

500 Nominal Glass Beads

Lot Number	GB500	+/- um
9372062	585.0	34.5

Date	Time	ID	Run	Mean
03/18/20	20:27	602082	1	587.7
03/19/20	13:45	602082	12	588
03/19/20	15:46	602082/602083	23	593.3

Pass
Pass
Pass

Standard Sand Batch (Fine)

This sand retained on the 120 mesh

Date	Time	ID	Run	Mean
3/18/20	20:36	602502	2	232.5
3/18/20	20:44	602502	3	237.2
3/18/20	20:52	602502	4	234.6
3/18/20	21:01	602502	5	233.2
3/18/20	21:10	602502	6	237.0
3/18/20	21:16	602502	7	236.6
3/18/20	21:26	602502	8	237.2
3/18/20	21:32	602502	9	235.5
3/18/20	21:38	602502	10	237.5
3/18/20	21:44	602502	11	235.9

Standard Sand Batch (Medium)

This sand retained on the 60 mesh

Date	Time	ID	Run	Mean
3/19/20	13:54	602383	13	410.2
3/19/20	14:02	602383	14	387.7
3/19/20	14:11	602383	15	393.1
3/19/20	14:19	602383	16	378.8
3/19/20	14:27	602383	17	376.8
3/19/20	14:36	602383	18	374.8
3/19/20	14:45	602383	19	385.3
3/19/20	14:54	602383	20	376.9
3/19/20	15:15	602383	21	379.6
3/19/20	15:24	602383	22	366.0

11/7/19
Average 235.7
SD 1.8
RSD 0.7%

5/3/5 method
UCL 242.8
LCL 228.6

11/8/19
Average 382.9
SD 12.2
RSD 3.2%

5/3/5 method
UCL 394.4
LCL 371.4

Fine Sand
Sieved Sand Batch 029A
602502/602396

3/18/20

Mean
 235.7
 1.8
 0.7%

2.772*S	As per ASTM E177
240.6	
230.8	

UCL 242.8
LCL 228.6

Medium Sand
Sieved Sand Batch 029B
602383

3/19/20

Mean
 382.9
 12.2
 3.2%

2.772*S	As per ASTM E177
416.6	
349.2	

UCL 394.4
LCL 371.4

Lot #	GB500	+/- um
9372062	585.0	34.5

Mean
 587.7 Pass
 588 Pass
 593.3 Pass

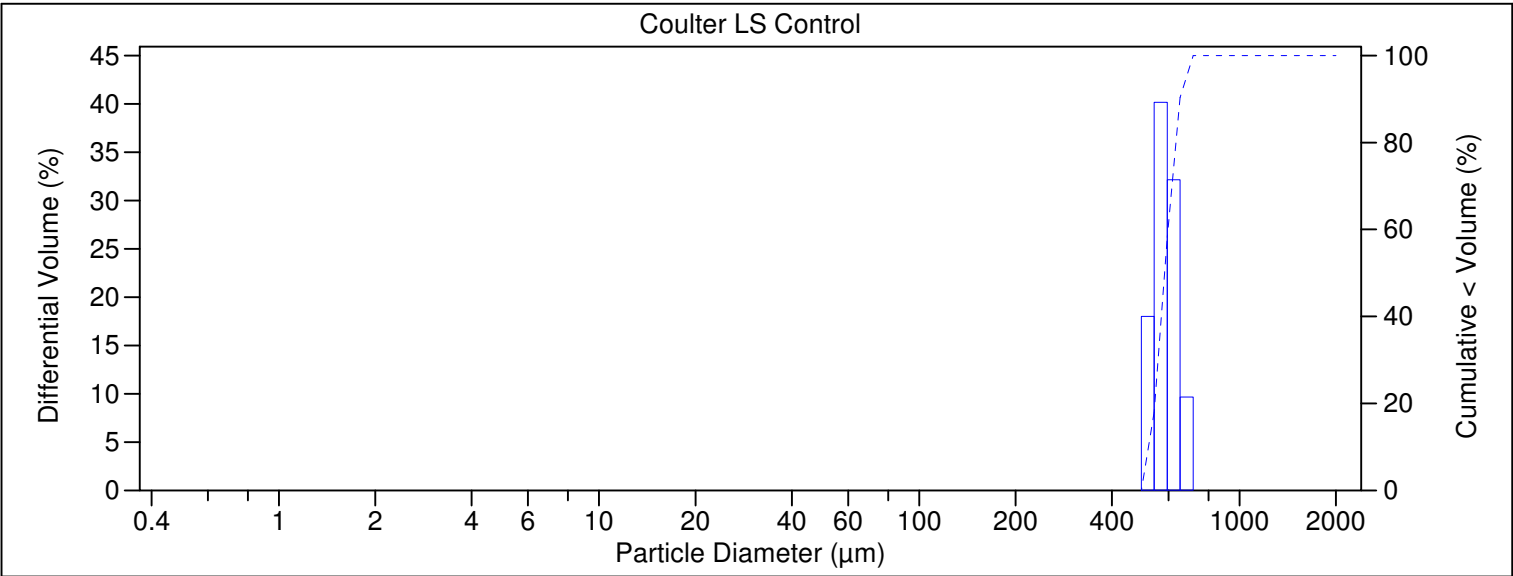
ASTM D4464-10(M) Raw Data Logbook

METHOD	MATRIX	DATE	ANALYST(S)	INSTRUMENT / EQUIPMENT ID #	BATCH NUMBER	COMMENTS
ASTM D4464-10(M)	<input checked="" type="checkbox"/> Solids	Preparation: 3/18/2020 Analysis: 3/19/2020	1106 1106	Instrument: LPSA 1 Balance: — Sieve (if used): —		
Coulter LS Control -DT		1	Coulter LS Control	—	602082	500 µm Nominal Glass Beads
Five Sand -DT		2	Five Sand	—	602502	
		3				
		4				
		5				
		6				
		7				
		8				
		9				
		10				
		11				
Coulter LS Control -DT		12	Coulter LS Control	—	602082	500 µm Nominal Glass Beads
Medium Sand -DT		13	Medium Sand	—	602383	
		14				
		15				
		16				
		17				
		18				
		19				
		20				
		21				
		22				
Coulter LS Control -DT		23	Coulter LS Control	—	602082/602083	500 µm Nominal Glass Beads

COMMENTS:

Instrument QC: Analyze one DPV control sample daily prior to sample analysis, after every batch of 10 samples or portion thereof within a 24-hour shift, and at the end of sequence. Record the standard sand ID number.
 Sample Batch QC: Prepare one Sample Duplicate for every batch of 20 field samples per matrix or portion thereof, and analyze immediately following a DPV control sample. Record the batch number.

File name: C:\LS13320\Coulter LS Control_18 Mar 2020_20.27.20.\$ls
 Coulter LS Control_18 Mar 2020_20.27.20.\$ls
 File ID: Coulter LS Control
 Sample ID: Coulter LS Control
 Operator: 1106
 Run number: 1
 Control Sample
 Comment 1: ASTM D4464M , LPSA 1
 Comment 2: 500um Nominal Glass Beads
 Optical model: Fraunhofer.rf780d
 Residual: 1.20%
 LS 13 320 Aqueous Liquid Module
 Start time: 20:26 18 Mar 2020 Run length: 60 seconds
 Pump speed: 49
 Obscuration: 8%
 Fluid: Water
 Software: 6.01 Firmware: 4.00

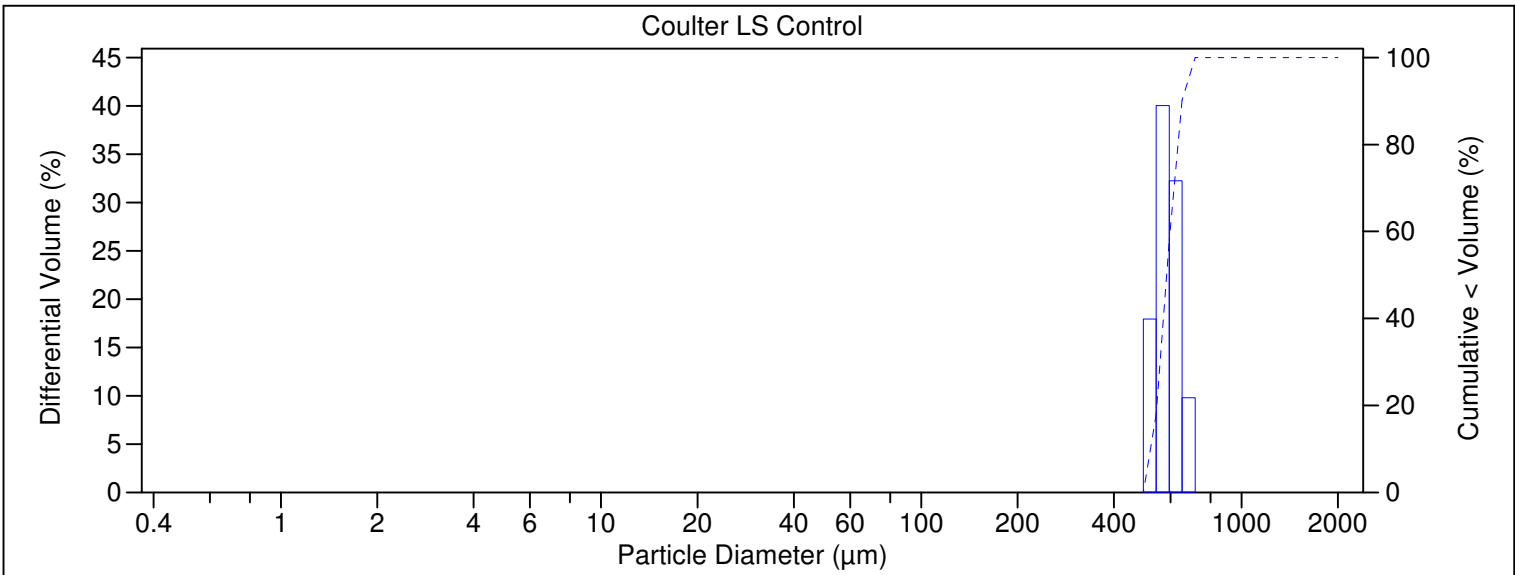


Volume Statistics (Arithmetic)		Coulter LS Control_18 Mar 2020_20.27.20.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	48.59 µm
Mean:	587.7 µm	Variance:	2361 µm ²
Median:	584.1 µm	Skewness:	0.302 Right skewed
Mean/Median ratio:	1.006	Kurtosis:	-0.597 Platykurtic
Mode:	567.8 µm		
d ₁₀ :	520.4 µm	d ₅₀ :	584.1 µm
		d ₉₀ :	652.4 µm
Folk and Ward Statistics (Phi)			
Mean:	0.77	Median:	0.78
Skewness:	-0.05	Deviation:	0.13
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
<50%	<75%	<84%	<95%
507.0 µm	536.5 µm	551.1 µm	570.9 µm
584.1 µm	625.3 µm	641.6 µm	683.8 µm

Particle Diameter µm	Coulter LS Control_18 Mar 2020 _20.27... Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	0
250	2.38
500	97.6
1000	0
2000	0

Coulter LS Control_18 Mar 2020_20.27...					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0		
2.660	0	176.9	0		
2.920	0	194.2	0		
3.206	0	213.2	0		
3.519	0	234.1	0		
3.863	0	256.9	0		
4.241	0	282.1	0		
4.656	0	309.6	0		
5.111	0	339.9	0		
5.611	0	373.1	0		
6.159	0	409.6	0		
6.761	0	449.7	0		
7.422	0	493.6	18.0		
8.148	0	541.9	40.2		
8.944	0	594.9	32.2		
9.819	0	653.0	9.66		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Coulter LS Control_19 Mar 2020_13.45.45.\$ls		
	Coulter LS Control_19 Mar 2020_13.45.45.\$ls		
File ID:	Coulter LS Control		
Sample ID:	Coulter LS Control		
Operator:	1106		
Run number:	12		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	500um Nominal Glass Beads		
Optical model:	Fraunhofer.rf780d		
Residual:	1.20%		
LS 13 320	Aqueous Liquid Module		
Start time:	13:44 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

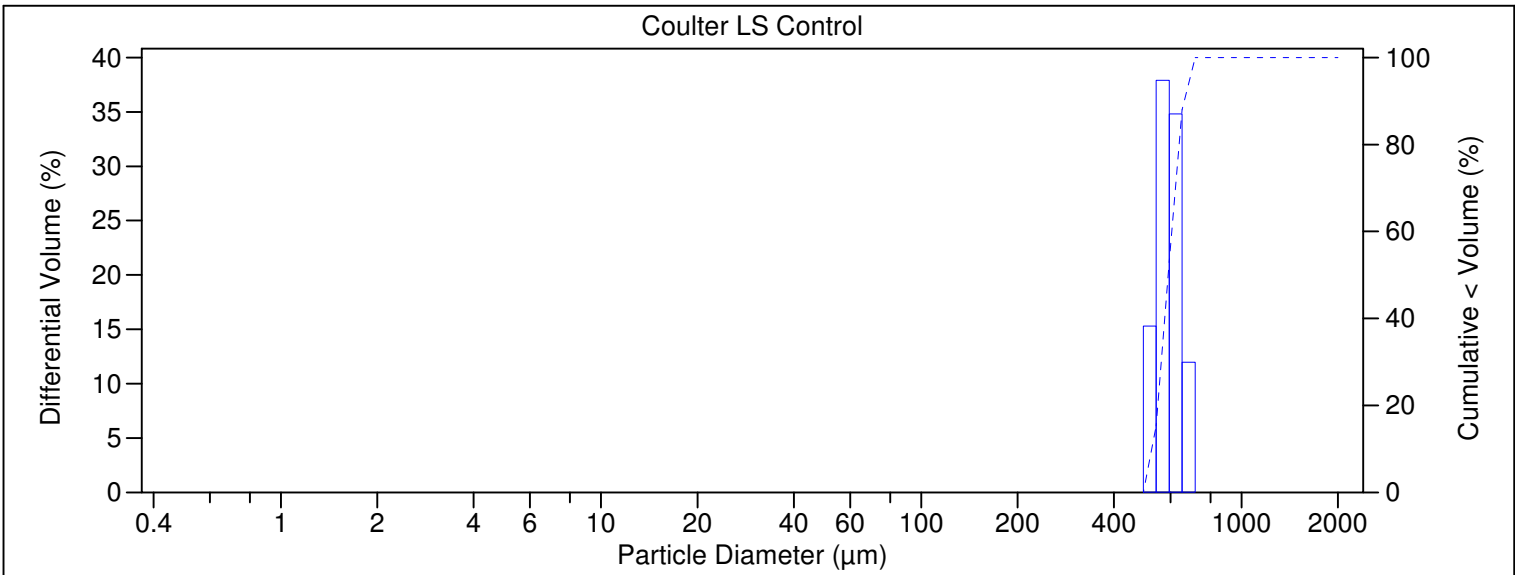


Volume Statistics (Arithmetic)		Coulter LS Control_19 Mar 2020_13.45.45.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	48.69 µm
Mean:	588.0 µm	Variance:	2370 µm ²
Median:	584.3 µm	Skewness:	0.298 Right skewed
Mean/Median ratio:	1.006	Kurtosis:	-0.604 Platykurtic
Mode:	567.8 µm		
d ₁₀ :	520.5 µm	d ₅₀ :	584.3 µm
		d ₉₀ :	652.6 µm
Folk and Ward Statistics (Phi)			
Mean:	0.77	Median:	0.78
Skewness:	-0.05	Deviation:	0.13
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
<50%	<75%	<84%	<95%
507.1 µm	536.7 µm	551.2 µm	571.1 µm
584.3 µm	625.6 µm	641.8 µm	684.3 µm

Particle Diameter µm	Coulter LS Control_19 Mar 2020 _13.45... Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	0
250	2.37
500	97.6
1000	0
2000	0

Coulter LS Control_19 Mar 2020_13.45...					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0		
2.660	0	176.9	0		
2.920	0	194.2	0		
3.206	0	213.2	0		
3.519	0	234.1	0		
3.863	0	256.9	0		
4.241	0	282.1	0		
4.656	0	309.6	0		
5.111	0	339.9	0		
5.611	0	373.1	0		
6.159	0	409.6	0		
6.761	0	449.7	0		
7.422	0	493.6	17.9		
8.148	0	541.9	40.0		
8.944	0	594.9	32.2		
9.819	0	653.0	9.79		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Coulter LS Control_19 Mar 2020_15.46.03.\$ls		
	Coulter LS Control_19 Mar 2020_15.46.03.\$ls		
File ID:	Coulter LS Control		
Sample ID:	Coulter LS Control		
Operator:	1106		
Run number:	23		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	500um Nominal Glass Beads		
Optical model:	Fraunhofer.rf780d		
Residual:	11.82%		
LS 13 320	Aqueous Liquid Module		
Start time:	15:44 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

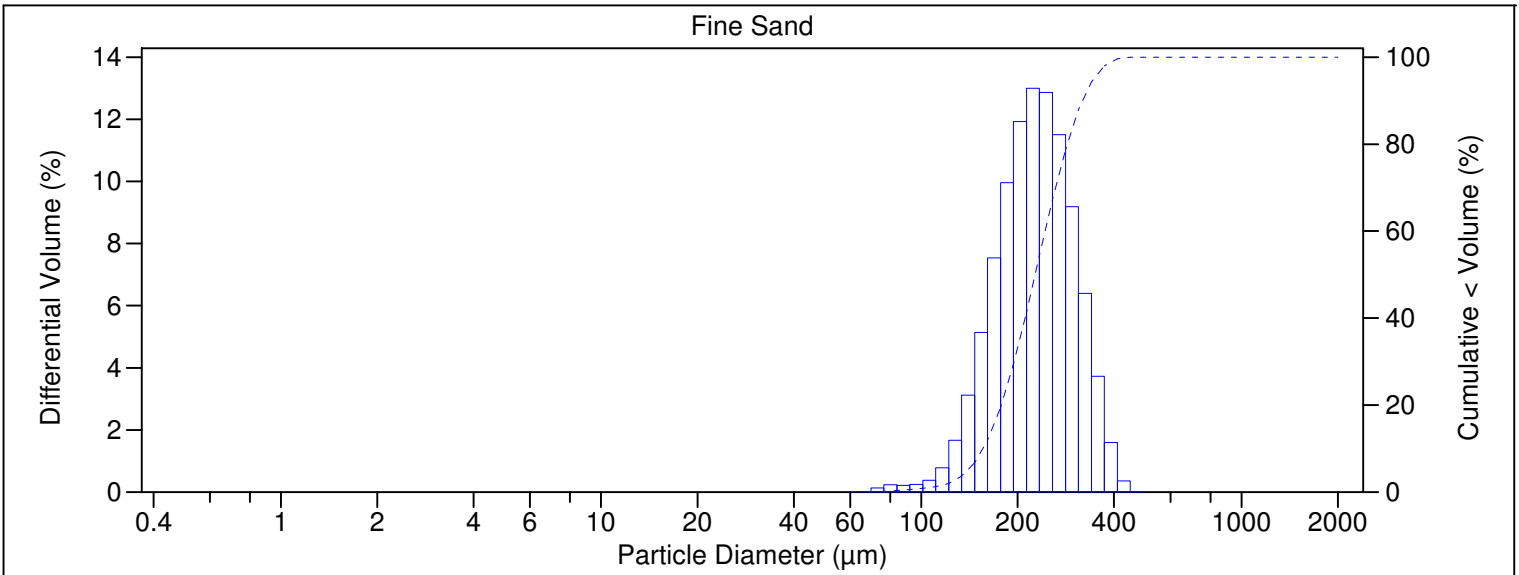


Volume Statistics (Arithmetic)		Coulter LS Control_19 Mar 2020_15.46.03.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	49.35 µm
Mean:	593.3 µm	Variance:	2436 µm ²
Median:	590.4 µm	Skewness:	0.213 Right skewed
Mean/Median ratio:	1.005	Kurtosis:	-0.682 Platykurtic
Mode:	567.8 µm		
d ₁₀ :	525.2 µm	d ₅₀ :	590.4 µm
		d ₉₀ :	663.6 µm
Folk and Ward Statistics (Phi)			
Mean:	0.76	Median:	0.76
Skewness:	-0.03	Deviation:	0.13
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
<50%	<75%	<84%	<95%
509.4 µm	542.9 µm	555.4 µm	576.4 µm
590.4 µm	631.3 µm	646.3 µm	690.2 µm

Particle Diameter µm	Coulter LS Control_19 Mar 2020 _15.46... Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	0
250	2.02
500	98.0
1000	0
2000	0

Coulter LS Control_19 Mar 2020_15.46...					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0		
2.660	0	176.9	0		
2.920	0	194.2	0		
3.206	0	213.2	0		
3.519	0	234.1	0		
3.863	0	256.9	0		
4.241	0	282.1	0		
4.656	0	309.6	0		
5.111	0	339.9	0		
5.611	0	373.1	0		
6.159	0	409.6	0		
6.761	0	449.7	0		
7.422	0	493.6	15.3		
8.148	0	541.9	37.9		
8.944	0	594.9	34.8		
9.819	0	653.0	12.0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name: C:\LS13320\Fine Sand_18 Mar 2020_20.36.16.\$ls
 File ID: Fine Sand_18 Mar 2020_20.36.16.\$ls
 File ID: Fine Sand
 Sample ID: Fine Sand
 Operator: 1106
 Run number: 2
 Comment 1: ASTM D4464M , LPSA 1
 Comment 2: 602502 , BATCH#029A
 Optical model: Fraunhofer.rf780d
 Residual: 0.84%
 LS 13 320 Aqueous Liquid Module
 Start time: 20:35 18 Mar 2020 Run length: 60 seconds
 Pump speed: 49
 Obscuration: 10%
 Fluid: Water
 Software: 6.01 Firmware: 4.00



Volume Statistics (Arithmetic) Fine Sand_18 Mar 2020_20.36.16.\$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%	S.D.:	62.91 µm
Mean:	232.5 µm	Variance:	3957 µm ²
Median:	227.1 µm	Skewness:	0.377 Right skewed
Mean/Median ratio:	1.024	Kurtosis:	-0.093 Platykurtic
Mode:	223.4 µm		

d₁₀: 155.8 µm d₅₀: 227.1 µm d₉₀: 319.6 µm

Folk and Ward Statistics (Phi)

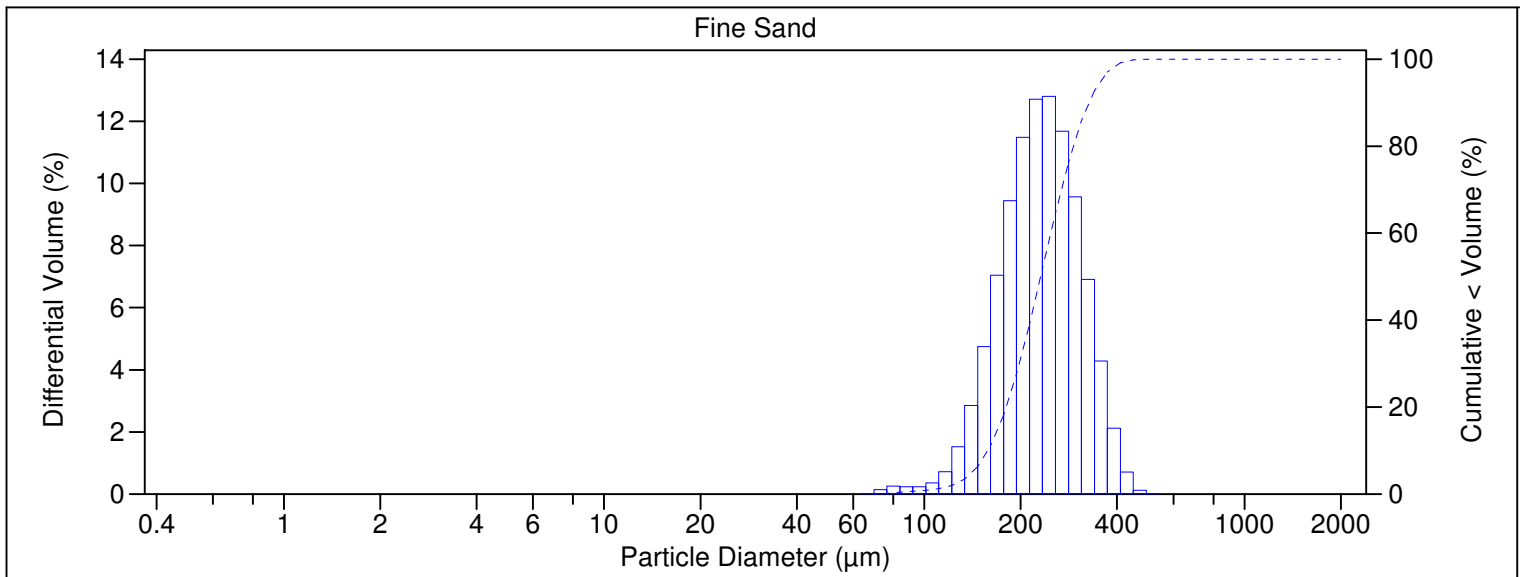
Mean:	2.15	Median:	2.14	Deviation:	0.40
Skewness:	0.05	Kurtosis:	0.97		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
139.3 µm	169.7 µm	186.5 µm	211.1 µm	227.1 µm	274.0 µm	297.9 µm	346.2 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_20.36 .16.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.46
125	60.8
250	36.7
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_20.36.16.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.014		
1.047	0	69.62	0.13		
1.149	0	76.43	0.24		
1.261	0	83.90	0.22		
1.385	0	92.10	0.24		
1.520	0	101.1	0.38		
1.669	0	111.0	0.79		
1.832	0	121.8	1.66		
2.011	0	133.7	3.12		
2.208	0	146.8	5.14		
2.423	0	161.2	7.54		
2.660	0	176.9	9.96		
2.920	0	194.2	11.9		
3.206	0	213.2	13.0		
3.519	0	234.1	12.9		
3.863	0	256.9	11.5		
4.241	0	282.1	9.19		
4.656	0	309.6	6.40		
5.111	0	339.9	3.72		
5.611	0	373.1	1.60		
6.159	0	409.6	0.36		
6.761	0	449.7	0.019		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name: C:\LS13320\Fine Sand_18 Mar 2020_20.44.27.\$ls
 File ID: Fine Sand_18 Mar 2020_20.44.27.\$ls
 File ID: Fine Sand
 Sample ID: Fine Sand
 Operator: 1106
 Run number: 3
 Comment 1: ASTM D4464M , LPSA 1
 Comment 2: 602502 , BATCH#029A
 Optical model: Fraunhofer.rf780d
 Residual: 0.98%
 LS 13 320 Aqueous Liquid Module
 Start time: 20:43 18 Mar 2020 Run length: 60 seconds
 Pump speed: 49
 Obscuration: 9%
 Fluid: Water
 Software: 6.01 Firmware: 4.00



Volume Statistics (Arithmetic) Fine Sand_18 Mar 2020_20.44.27.\$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%	S.D.:	65.69 µm
Mean:	237.2 µm	Variance:	4315 µm ²
Median:	231.1 µm	Skewness:	0.420 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	0.023 Leptokurtic
Mode:	245.2 µm		

d₁₀: 157.9 µm d₅₀: 231.1 µm d₉₀: 327.9 µm

Folk and Ward Statistics (Phi)

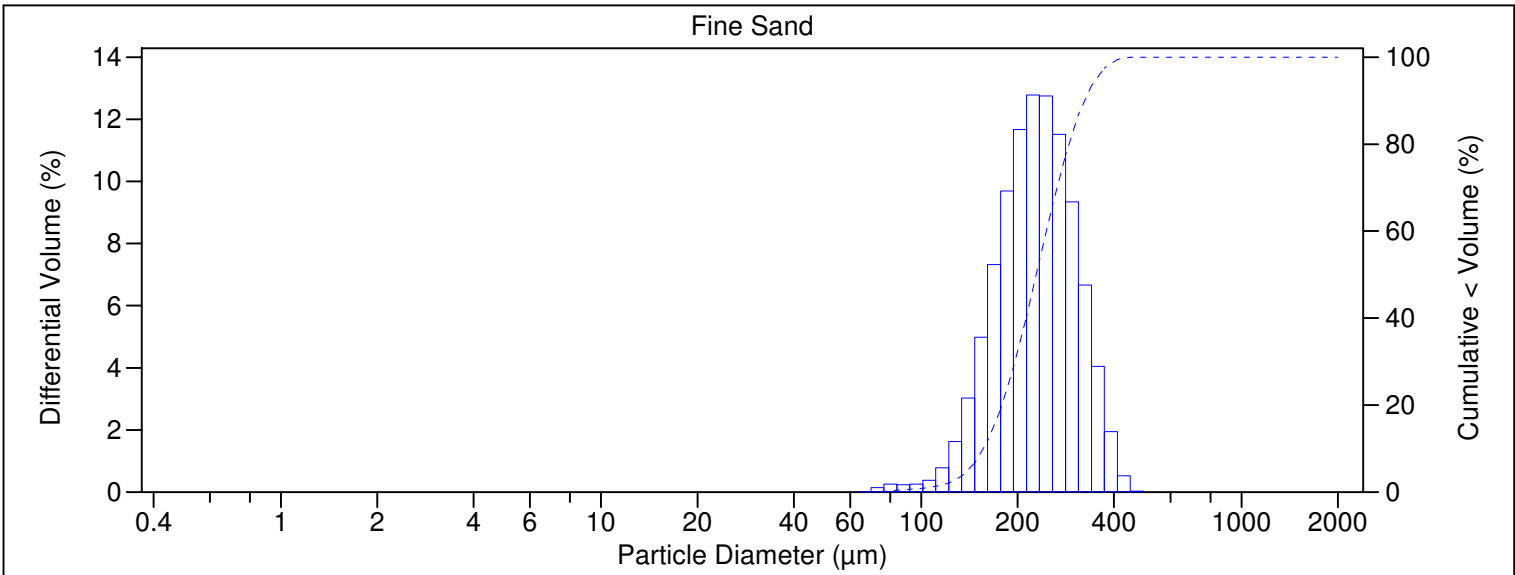
Mean:	2.12	Median:	2.11	Deviation:	0.41
Skewness:	0.05	Kurtosis:	0.98		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
140.7 µm	172.2 µm	189.5 µm	214.8 µm	231.1 µm	279.3 µm	304.3 µm	357.3 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_20.44 .27.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.38
125	58.3
250	39.3
500	0.0051
1000	0
2000	0

Fine Sand_18 Mar 2020_20.44.27.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.016		
1.047	0	69.62	0.15		
1.149	0	76.43	0.26		
1.261	0	83.90	0.23		
1.385	0	92.10	0.24		
1.520	0	101.1	0.36		
1.669	0	111.0	0.72		
1.832	0	121.8	1.52		
2.011	0	133.7	2.85		
2.208	0	146.8	4.74		
2.423	0	161.2	7.05		
2.660	0	176.9	9.44		
2.920	0	194.2	11.5		
3.206	0	213.2	12.7		
3.519	0	234.1	12.8		
3.863	0	256.9	11.7		
4.241	0	282.1	9.57		
4.656	0	309.6	6.91		
5.111	0	339.9	4.28		
5.611	0	373.1	2.12		
6.159	0	409.6	0.71		
6.761	0	449.7	0.12		
7.422	0	493.6	0.0058		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_20.52.56.\$ls		
	Fine Sand_18 Mar 2020_20.52.56.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	4		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.13%		
LS 13 320	Aqueous Liquid Module		
Start time:	20:51 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	10%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

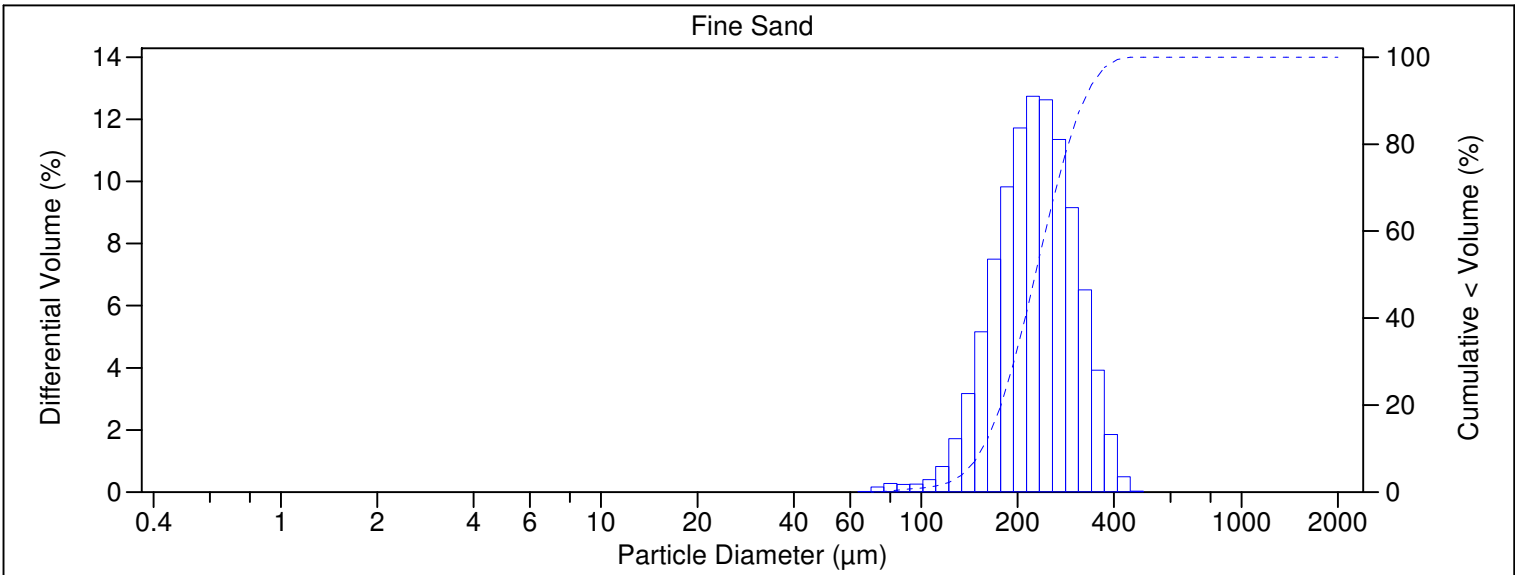


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_20.52.56.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.54 µm
Mean:	234.6 µm	Variance:	4165 µm ²
Median:	228.9 µm	Skewness:	0.389 Right skewed
Mean/Median ratio:	1.025	Kurtosis:	-0.078 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	156.2 µm	d ₅₀ :	228.9 µm
		d ₉₀ :	324.2 µm
Folk and Ward Statistics (Phi)			
Mean:	2.14	Median:	2.13
Skewness:	0.05	Deviation:	0.41
		Kurtosis:	0.98
<5%	<16%	<25%	<40%
139.3 µm	170.4 µm	187.6 µm	212.6 µm
<50%	<75%	<84%	<95%
228.9 µm	276.7 µm	301.4 µm	352.6 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_20.52 .56.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.51
125	59.5
250	37.9
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_20.52.56.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.015		
1.047	0	69.62	0.15		
1.149	0	76.43	0.26		
1.261	0	83.90	0.24		
1.385	0	92.10	0.25		
1.520	0	101.1	0.38		
1.669	0	111.0	0.78		
1.832	0	121.8	1.63		
2.011	0	133.7	3.03		
2.208	0	146.8	4.98		
2.423	0	161.2	7.32		
2.660	0	176.9	9.70		
2.920	0	194.2	11.7		
3.206	0	213.2	12.8		
3.519	0	234.1	12.7		
3.863	0	256.9	11.5		
4.241	0	282.1	9.34		
4.656	0	309.6	6.67		
5.111	0	339.9	4.05		
5.611	0	373.1	1.94		
6.159	0	409.6	0.52		
6.761	0	449.7	0.034		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.01.44.\$ls		
	Fine Sand_18 Mar 2020_21.01.44.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	5		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.26%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:00 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

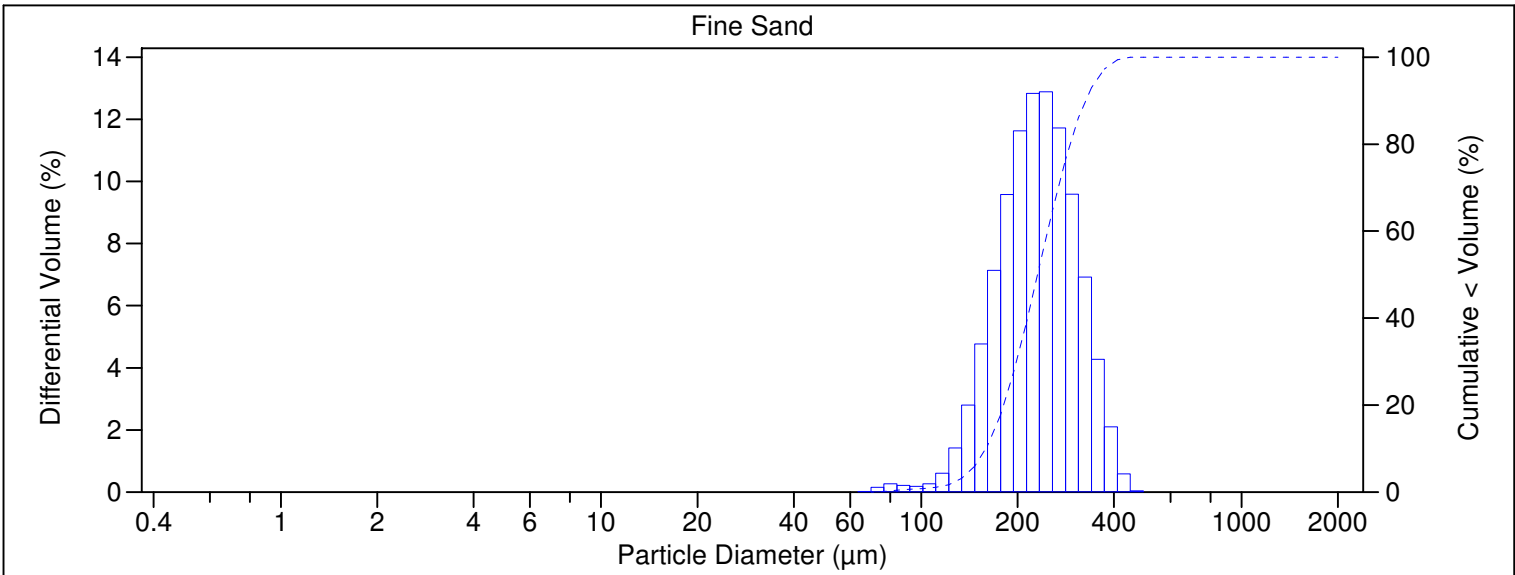


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.01.44.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.49 µm
Mean:	233.2 µm	Variance:	4159 µm ²
Median:	227.5 µm	Skewness:	0.393 Right skewed
Mean/Median ratio:	1.025	Kurtosis:	-0.072 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	154.9 µm	d ₅₀ :	227.5 µm
		d ₉₀ :	322.8 µm
Folk and Ward Statistics (Phi)			
Mean:	2.15	Median:	2.14
Skewness:	0.05	Deviation:	0.41
		Kurtosis:	0.98
<5%	<16%	<25%	<40%
138.2 µm	169.1 µm	186.2 µm	211.1 µm
<50%	<75%	<84%	<95%
227.5 µm	275.4 µm	300.1 µm	351.0 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.01 .44.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.64
125	60.2
250	37.2
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.01.44.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.017		
1.047	0	69.62	0.16		
1.149	0	76.43	0.28		
1.261	0	83.90	0.25		
1.385	0	92.10	0.26		
1.520	0	101.1	0.40		
1.669	0	111.0	0.82		
1.832	0	121.8	1.72		
2.011	0	133.7	3.17		
2.208	0	146.8	5.16		
2.423	0	161.2	7.50		
2.660	0	176.9	9.83		
2.920	0	194.2	11.7		
3.206	0	213.2	12.7		
3.519	0	234.1	12.6		
3.863	0	256.9	11.4		
4.241	0	282.1	9.16		
4.656	0	309.6	6.51		
5.111	0	339.9	3.93		
5.611	0	373.1	1.86		
6.159	0	409.6	0.49		
6.761	0	449.7	0.032		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.10.06.\$ls		
	Fine Sand_18 Mar 2020_21.10.06.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	6		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.38%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:08 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

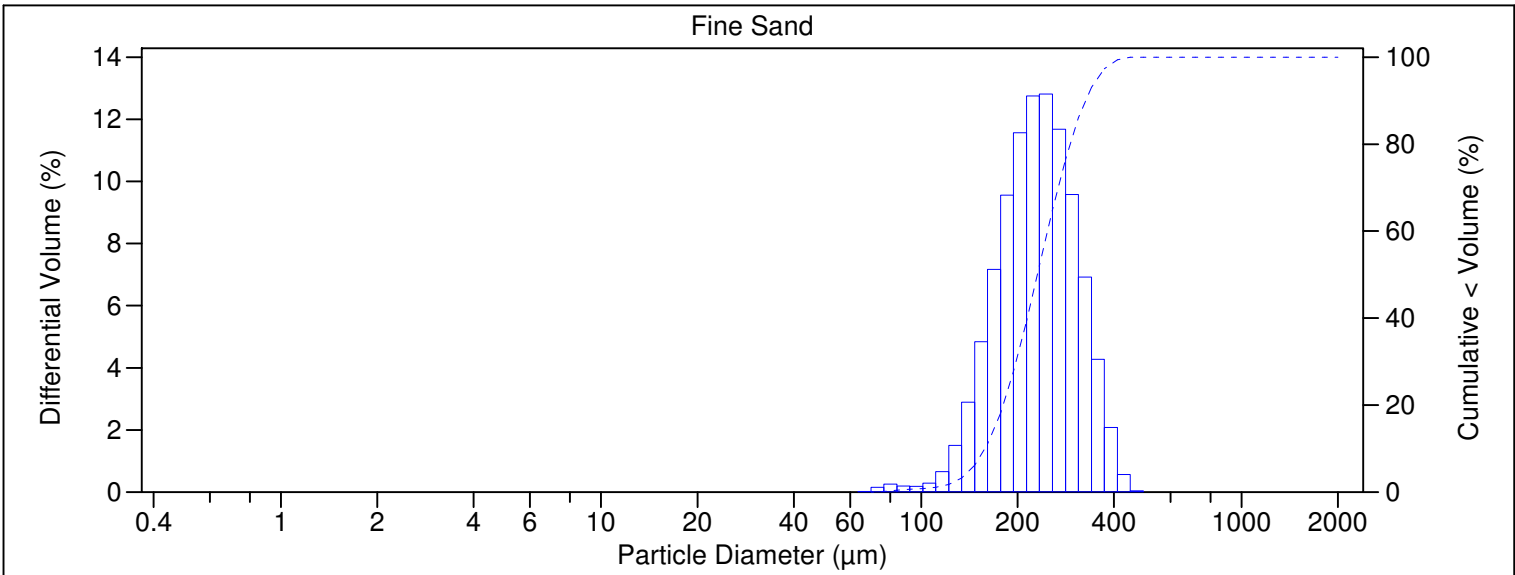


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.10.06.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.56 µm
Mean:	237.0 µm	Variance:	4168 µm ²
Median:	231.0 µm	Skewness:	0.396 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.069 Platykurtic
Mode:	245.2 µm		
d ₁₀ :	159.1 µm	d ₅₀ :	231.0 µm
		d ₉₀ :	326.8 µm
Folk and Ward Statistics (Phi)			
Mean:	2.12	Median:	2.11
Skewness:	0.04	Deviation:	0.40
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
142.5 µm	172.9 µm	189.9 µm	214.8 µm
<50%	<75%	<84%	<95%
231.0 µm	278.9 µm	303.7 µm	355.5 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.10 .06.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.09
125	58.8
250	39.1
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.10.06.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.017		
1.047	0	69.62	0.16		
1.149	0	76.43	0.27		
1.261	0	83.90	0.21		
1.385	0	92.10	0.19		
1.520	0	101.1	0.27		
1.669	0	111.0	0.60		
1.832	0	121.8	1.42		
2.011	0	133.7	2.80		
2.208	0	146.8	4.77		
2.423	0	161.2	7.14		
2.660	0	176.9	9.58		
2.920	0	194.2	11.6		
3.206	0	213.2	12.8		
3.519	0	234.1	12.9		
3.863	0	256.9	11.7		
4.241	0	282.1	9.59		
4.656	0	309.6	6.92		
5.111	0	339.9	4.27		
5.611	0	373.1	2.10		
6.159	0	409.6	0.59		
6.761	0	449.7	0.041		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.16.19.\$ls		
	Fine Sand_18 Mar 2020_21.16.19.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	7		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.49%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:15 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

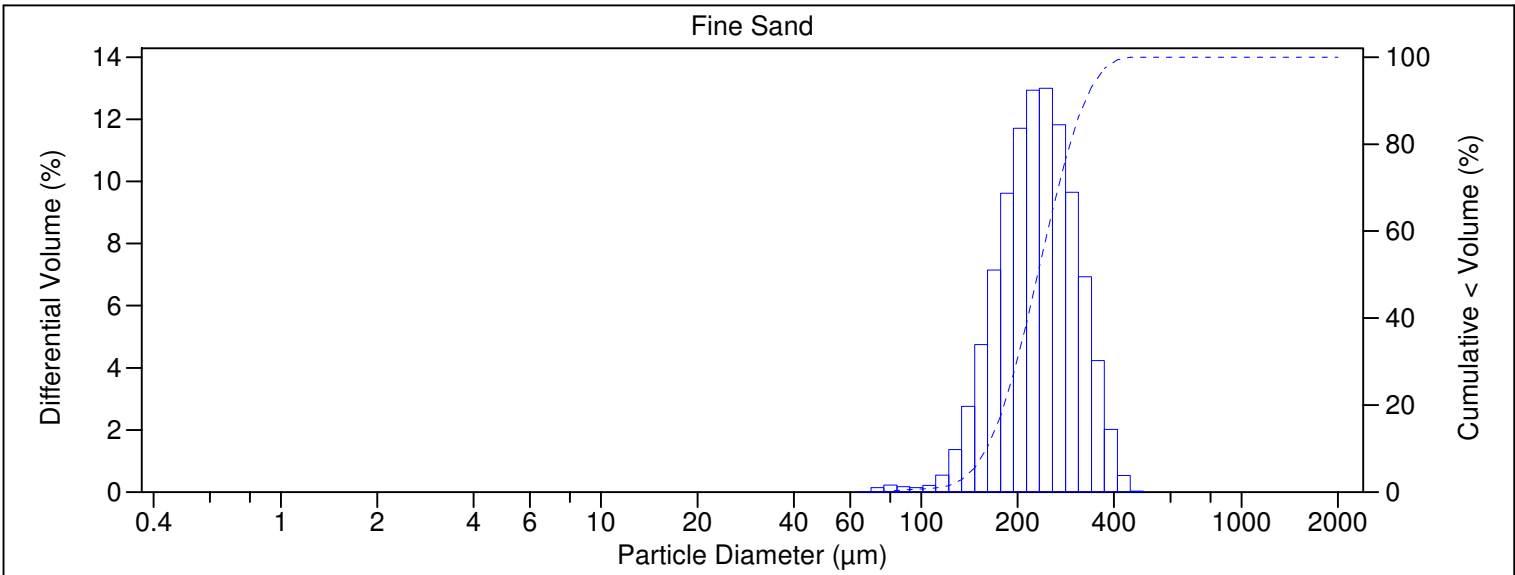


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.16.19.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.68 µm
Mean:	236.6 µm	Variance:	4184 µm ²
Median:	230.7 µm	Skewness:	0.391 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.093 Platykurtic
Mode:	245.2 µm		
d ₁₀ :	158.2 µm	d ₅₀ :	230.7 µm
		d ₉₀ :	326.7 µm
Folk and Ward Statistics (Phi)			
Mean:	2.12	Median:	2.12
Skewness:	0.05	Deviation:	0.41
		Kurtosis:	0.97
<5%	<16%	<25%	<40%
141.6 µm	172.2 µm	189.3 µm	214.4 µm
<50%	<75%	<84%	<95%
230.7 µm	278.8 µm	303.6 µm	355.2 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.16 .19.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.16
125	58.8
250	39.0
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.16.19.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	0
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.016		
1.047	0	69.62	0.16		
1.149	0	76.43	0.25		
1.261	0	83.90	0.20		
1.385	0	92.10	0.19		
1.520	0	101.1	0.29		
1.669	0	111.0	0.66		
1.832	0	121.8	1.50		
2.011	0	133.7	2.90		
2.208	0	146.8	4.84		
2.423	0	161.2	7.17		
2.660	0	176.9	9.56		
2.920	0	194.2	11.6		
3.206	0	213.2	12.7		
3.519	0	234.1	12.8		
3.863	0	256.9	11.7		
4.241	0	282.1	9.57		
4.656	0	309.6	6.93		
5.111	0	339.9	4.28		
5.611	0	373.1	2.08		
6.159	0	409.6	0.57		
6.761	0	449.7	0.038		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.26.01.\$ls		
	Fine Sand_18 Mar 2020_21.26.01.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	8		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.72%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:24 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

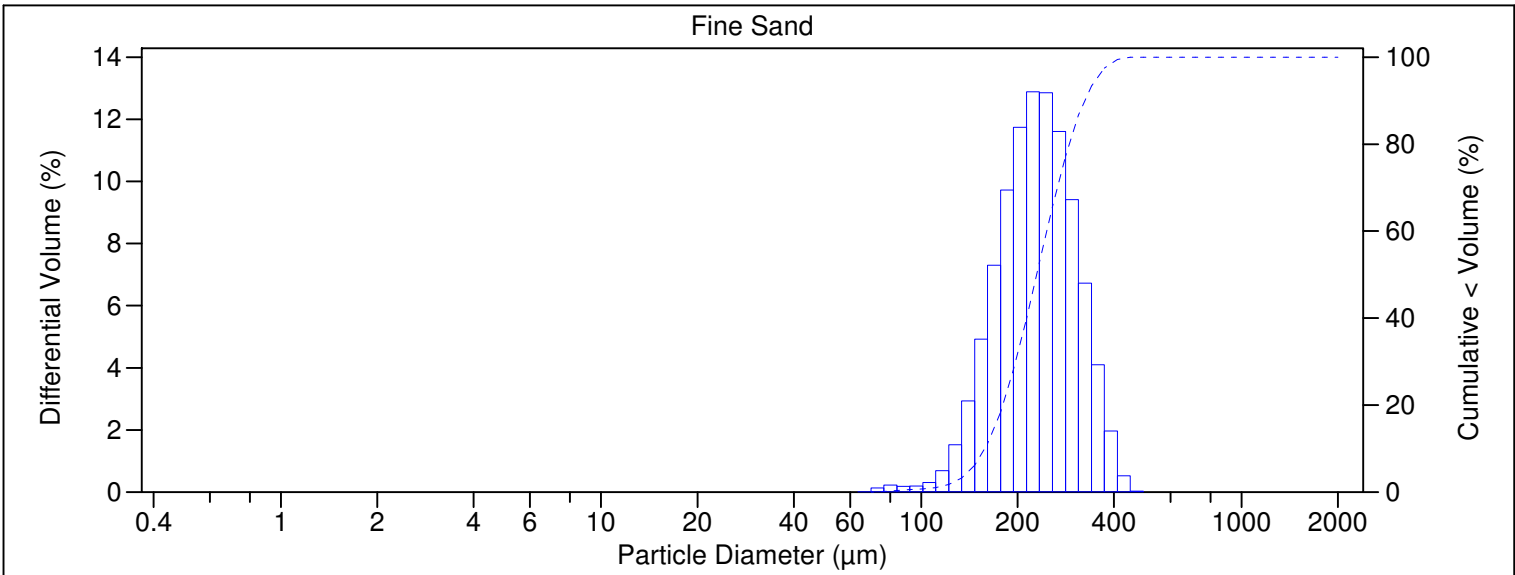


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.26.01.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	63.78 µm
Mean:	237.2 µm	Variance:	4068 µm ²
Median:	231.2 µm	Skewness:	0.402 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.081 Platykurtic
Mode:	245.2 µm		
d ₁₀ :	160.1 µm	d ₅₀ :	231.2 µm
		d ₉₀ :	326.1 µm
Folk and Ward Statistics (Phi)			
Mean:	2.12	Median:	2.11
Skewness:	0.04	Deviation:	0.40
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
144.0 µm	173.6 µm	190.4 µm	215.1 µm
<50%	<75%	<84%	<95%
231.2 µm	278.7 µm	303.3 µm	354.3 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.26 .01.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	1.83
125	59.0
250	39.2
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.26.01.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.015		
1.047	0	69.62	0.14		
1.149	0	76.43	0.23		
1.261	0	83.90	0.17		
1.385	0	92.10	0.14		
1.520	0	101.1	0.22		
1.669	0	111.0	0.55		
1.832	0	121.8	1.37		
2.011	0	133.7	2.76		
2.208	0	146.8	4.75		
2.423	0	161.2	7.15		
2.660	0	176.9	9.62		
2.920	0	194.2	11.7		
3.206	0	213.2	12.9		
3.519	0	234.1	13.0		
3.863	0	256.9	11.8		
4.241	0	282.1	9.65		
4.656	0	309.6	6.94		
5.111	0	339.9	4.24		
5.611	0	373.1	2.02		
6.159	0	409.6	0.54		
6.761	0	449.7	0.035		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.32.46.\$ls		
	Fine Sand_18 Mar 2020_21.32.46.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	9		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	1.82%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:31 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	11%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

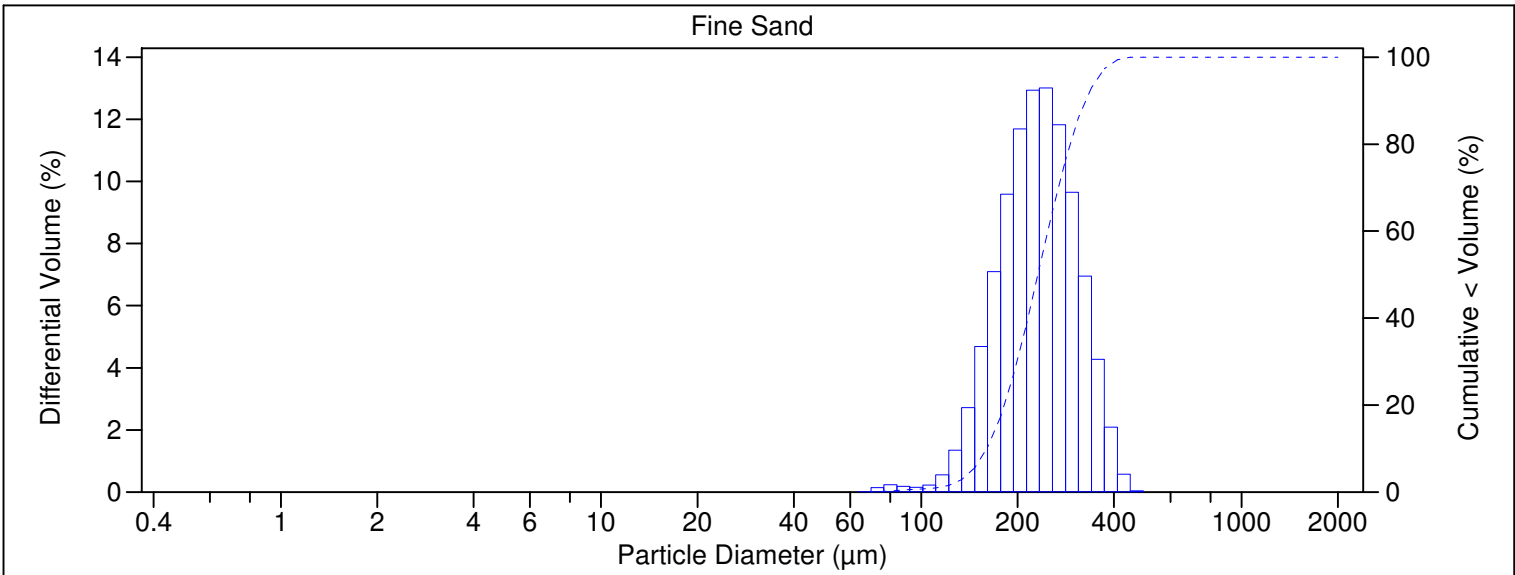


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.32.46.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.06 µm
Mean:	235.5 µm	Variance:	4103 µm ²
Median:	229.6 µm	Skewness:	0.406 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.076 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	157.9 µm	d ₅₀ :	229.6 µm
		d ₉₀ :	324.7 µm
Folk and Ward Statistics (Phi)			
Mean:	2.13	Median:	2.12
Skewness:	0.04	Deviation:	0.40
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
141.4 µm	171.7 µm	188.6 µm	213.4 µm
<50%	<75%	<84%	<95%
229.6 µm	277.2 µm	301.9 µm	353.1 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.32 .46.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.15
125	59.6
250	38.3
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.32.46.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.014		
1.047	0	69.62	0.13		
1.149	0	76.43	0.22		
1.261	0	83.90	0.19		
1.385	0	92.10	0.19		
1.520	0	101.1	0.31		
1.669	0	111.0	0.69		
1.832	0	121.8	1.53		
2.011	0	133.7	2.94		
2.208	0	146.8	4.92		
2.423	0	161.2	7.30		
2.660	0	176.9	9.72		
2.920	0	194.2	11.7		
3.206	0	213.2	12.9		
3.519	0	234.1	12.9		
3.863	0	256.9	11.6		
4.241	0	282.1	9.42		
4.656	0	309.6	6.73		
5.111	0	339.9	4.10		
5.611	0	373.1	1.97		
6.159	0	409.6	0.53		
6.761	0	449.7	0.034		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.38.09.\$ls		
	Fine Sand_18 Mar 2020_21.38.09.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	10		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	2.02%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:37 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

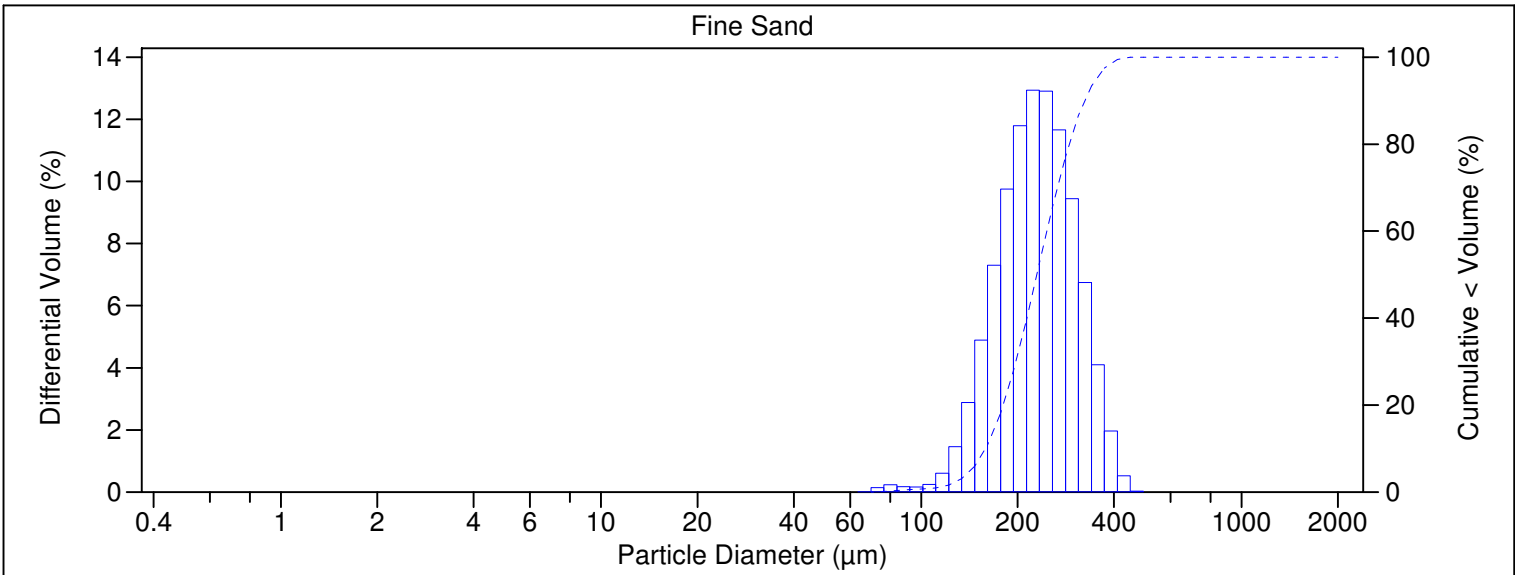


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.38.09.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	64.06 µm
Mean:	237.5 µm	Variance:	4104 µm ²
Median:	231.5 µm	Skewness:	0.403 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.069 Platykurtic
Mode:	245.2 µm		
d ₁₀ :	160.3 µm	d ₅₀ :	231.5 µm
		d ₉₀ :	326.7 µm
Folk and Ward Statistics (Phi)			
Mean:	2.12	Median:	2.11
Skewness:	0.04	Deviation:	0.40
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
144.0 µm	173.9 µm	190.7 µm	215.4 µm
<50%	<75%	<84%	<95%
231.5 µm	279.1 µm	303.7 µm	355.3 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.38 .09.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	1.88
125	58.8
250	39.4
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.38.09.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.015		
1.047	0	69.62	0.14		
1.149	0	76.43	0.24		
1.261	0	83.90	0.18		
1.385	0	92.10	0.16		
1.520	0	101.1	0.23		
1.669	0	111.0	0.55		
1.832	0	121.8	1.35		
2.011	0	133.7	2.72		
2.208	0	146.8	4.69		
2.423	0	161.2	7.09		
2.660	0	176.9	9.58		
2.920	0	194.2	11.7		
3.206	0	213.2	12.9		
3.519	0	234.1	13.0		
3.863	0	256.9	11.8		
4.241	0	282.1	9.65		
4.656	0	309.6	6.95		
5.111	0	339.9	4.28		
5.611	0	373.1	2.09		
6.159	0	409.6	0.57		
6.761	0	449.7	0.038		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Fine Sand_18 Mar 2020_21.44.21.\$ls		
	Fine Sand_18 Mar 2020_21.44.21.\$ls		
File ID:	Fine Sand		
Sample ID:	Fine Sand		
Operator:	1106		
Run number:	11		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602502 , BATCH#029A		
Optical model:	Fraunhofer.rf780d		
Residual:	2.12%		
LS 13 320	Aqueous Liquid Module		
Start time:	21:43 18 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

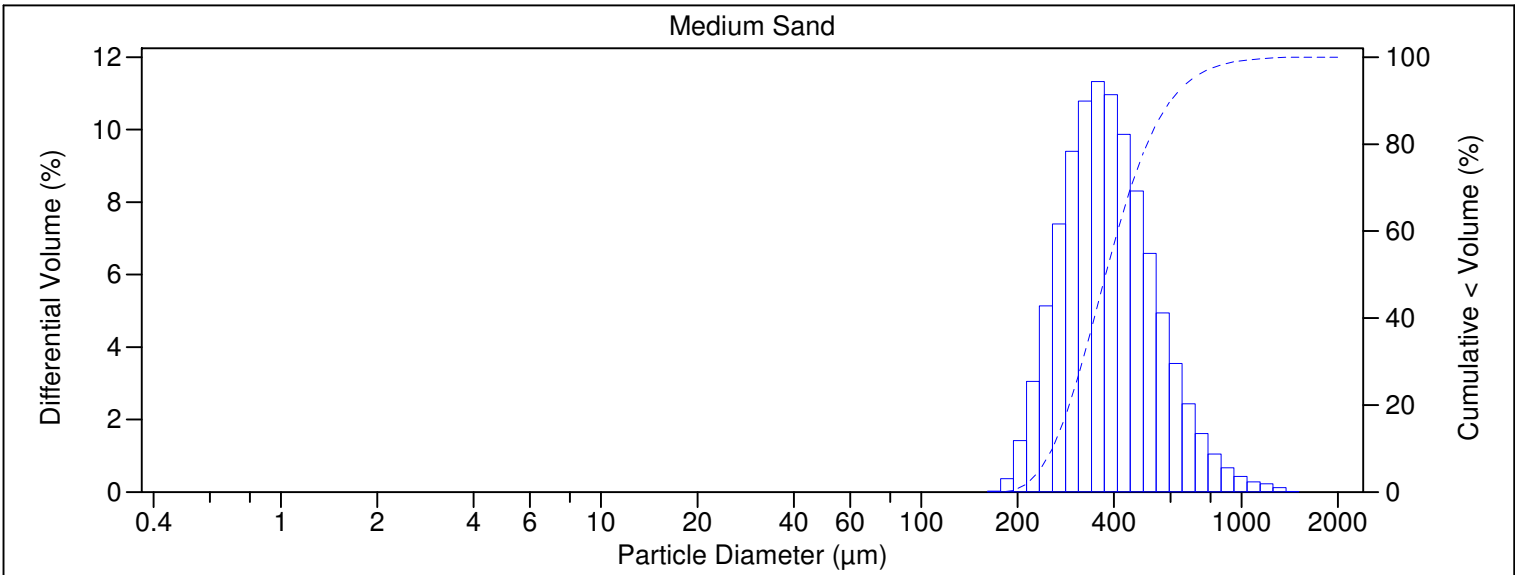


Volume Statistics (Arithmetic)		Fine Sand_18 Mar 2020_21.44.21.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	63.82 µm
Mean:	235.9 µm	Variance:	4073 µm ²
Median:	229.8 µm	Skewness:	0.411 Right skewed
Mean/Median ratio:	1.026	Kurtosis:	-0.065 Platykurtic
Mode:	223.4 µm		
d ₁₀ :	158.7 µm	d ₅₀ :	229.8 µm
		d ₉₀ :	324.8 µm
Folk and Ward Statistics (Phi)			
Mean:	2.13	Median:	2.12
Skewness:	0.04	Deviation:	0.40
Kurtosis:	0.97		
<5%	<16%	<25%	<40%
142.6 µm	172.3 µm	189.1 µm	213.7 µm
<50%	<75%	<84%	<95%
229.8 µm	277.4 µm	302.0 µm	353.1 µm

Particle Diameter µm	Fine Sand _18 Mar 2020_21.44 .21.\$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	1.99
125	59.6
250	38.4
500	0
1000	0
2000	0

Fine Sand_18 Mar 2020_21.44.21.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.015		
1.047	0	69.62	0.15		
1.149	0	76.43	0.24		
1.261	0	83.90	0.18		
1.385	0	92.10	0.16		
1.520	0	101.1	0.25		
1.669	0	111.0	0.61		
1.832	0	121.8	1.46		
2.011	0	133.7	2.88		
2.208	0	146.8	4.89		
2.423	0	161.2	7.30		
2.660	0	176.9	9.76		
2.920	0	194.2	11.8		
3.206	0	213.2	12.9		
3.519	0	234.1	12.9		
3.863	0	256.9	11.7		
4.241	0	282.1	9.45		
4.656	0	309.6	6.74		
5.111	0	339.9	4.10		
5.611	0	373.1	1.96		
6.159	0	409.6	0.53		
6.761	0	449.7	0.035		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_13.54.56.\$ls		
	Medium Sand_19 Mar 2020_13.54.56.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	13		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	0.96%		
LS 13 320	Aqueous Liquid Module		
Start time:	13:53 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

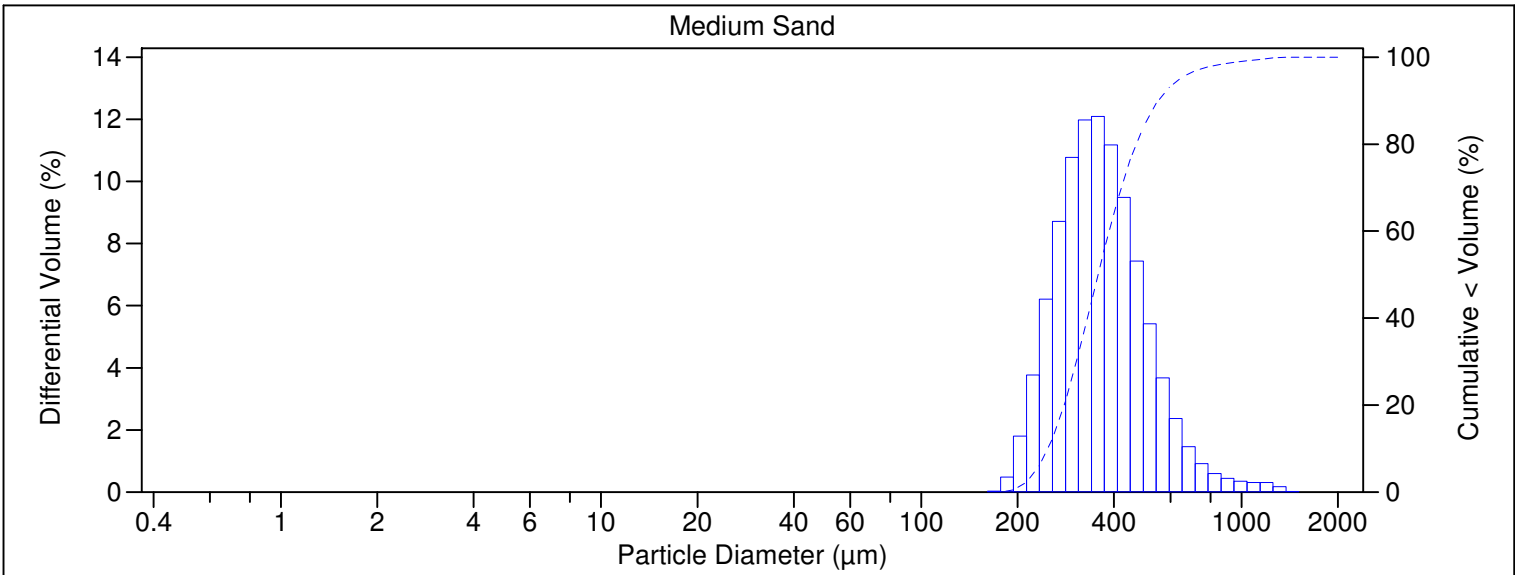


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_13.54.56.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	153.6 µm
Mean:	410.2 µm	Variance:	23593 µm ²
Median:	376.7 µm	Skewness:	1.723 Right skewed
Mean/Median ratio:	1.089	Kurtosis:	4.778 Leptokurtic
Mode:	356.1 µm		
d ₁₀ :	256.9 µm	d ₅₀ :	376.7 µm
		d ₉₀ :	601.4 µm
Folk and Ward Statistics (Phi)			
Mean:	1.39	Median:	1.41
Skewness:	-0.10	Deviation:	0.48
		Kurtosis:	1.00
<5%	<16%	<25%	<40%
234.6 µm	277.3 µm	304.3 µm	347.0 µm
<50%	<75%	<84%	<95%
376.7 µm	477.4 µm	537.1 µm	701.5 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _13.54.56 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	8.45
250	70.5
500	20.2
1000	0.84
2000	

Medium Sand_19 Mar 2020_13.54.56.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.024		
2.660	0	176.9	0.37		
2.920	0	194.2	1.42		
3.206	0	213.2	3.05		
3.519	0	234.1	5.14		
3.863	0	256.9	7.40		
4.241	0	282.1	9.40		
4.656	0	309.6	10.8		
5.111	0	339.9	11.3		
5.611	0	373.1	11.0		
6.159	0	409.6	9.87		
6.761	0	449.7	8.31		
7.422	0	493.6	6.59		
8.148	0	541.9	4.95		
8.944	0	594.9	3.55		
9.819	0	653.0	2.44		
10.78	0	716.9	1.62		
11.83	0	786.9	1.05		
12.99	0	863.9	0.67		
14.26	0	948.3	0.43		
15.65	0	1041	0.29		
17.18	0	1143	0.23		
18.86	0	1255	0.13		
20.71	0	1377	0.015		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.02.47.\$ls		
	Medium Sand_19 Mar 2020_14.02.47.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	14		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	1.30%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:01 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

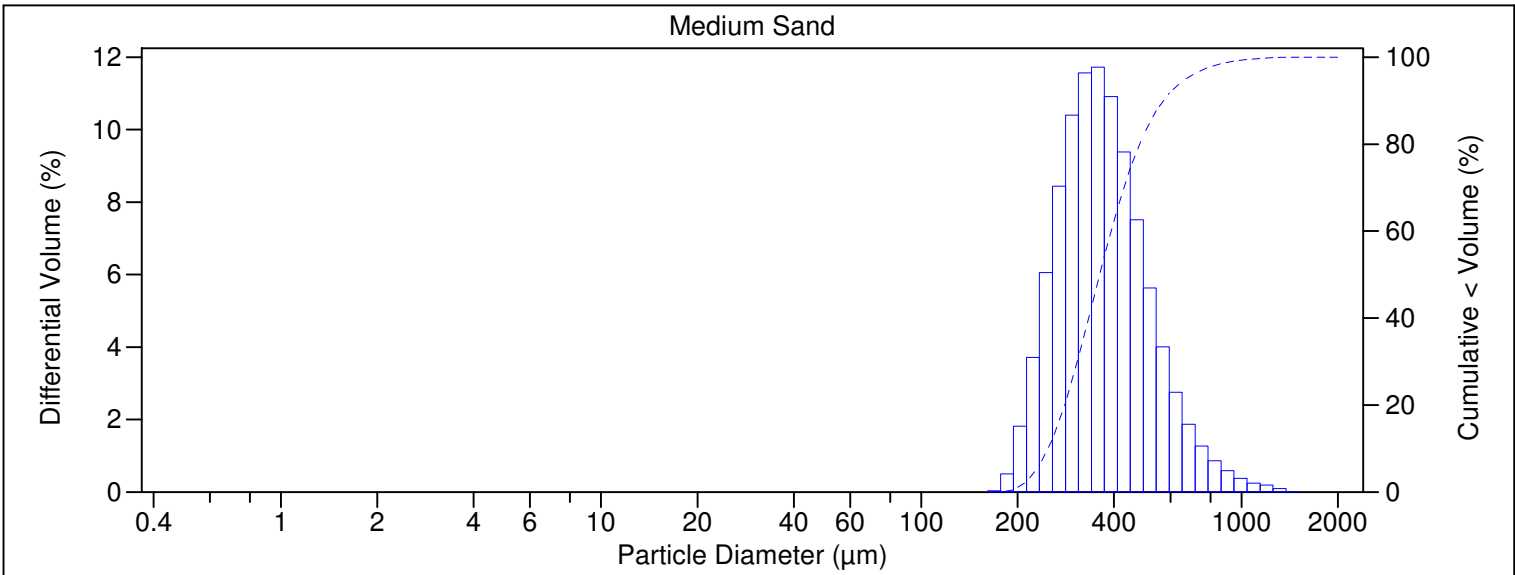


Volume Statistics (Arithmetic)	Medium Sand_19 Mar 2020_14.02.47.\$ls						
Calculations from 0.375 µm to 2000 µm							
Volume:	100%						
Mean:	387.7 µm	S.D.:	146.3 µm				
Median:	357.1 µm	Variance:	21390 µm ²				
Mean/Median ratio:	1.086	Skewness:	2.250 Right skewed				
Mode:	356.1 µm	Kurtosis:	8.345 Leptokurtic				
d ₁₀ :	248.5 µm	d ₅₀ :	357.1 µm				
		d ₉₀ :	551.1 µm				
Folk and Ward Statistics (Phi)							
Mean:	1.47	Median:	1.49				
Skewness:	-0.10	Deviation:	0.45				
		Kurtosis:	1.02				
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
228.1 µm	267.6 µm	292.3 µm	330.4 µm	357.1 µm	443.3 µm	494.1 µm	643.1 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.02.47 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	10.4
250	74.3
500	14.4
1000	0.98
2000	

Medium Sand_19 Mar 2020_14.02.47.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.031		
2.660	0	176.9	0.48		
2.920	0	194.2	1.80		
3.206	0	213.2	3.77		
3.519	0	234.1	6.21		
3.863	0	256.9	8.71		
4.241	0	282.1	10.8		
4.656	0	309.6	12.0		
5.111	0	339.9	12.1		
5.611	0	373.1	11.2		
6.159	0	409.6	9.49		
6.761	0	449.7	7.44		
7.422	0	493.6	5.41		
8.148	0	541.9	3.68		
8.944	0	594.9	2.36		
9.819	0	653.0	1.47		
10.78	0	716.9	0.91		
11.83	0	786.9	0.60		
12.99	0	863.9	0.44		
14.26	0	948.3	0.35		
15.65	0	1041	0.31		
17.18	0	1143	0.31		
18.86	0	1255	0.18		
20.71	0	1377	0.020		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.10.59.\$ls		
	Medium Sand_19 Mar 2020_14.10.59.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	15		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	1.81%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:09 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

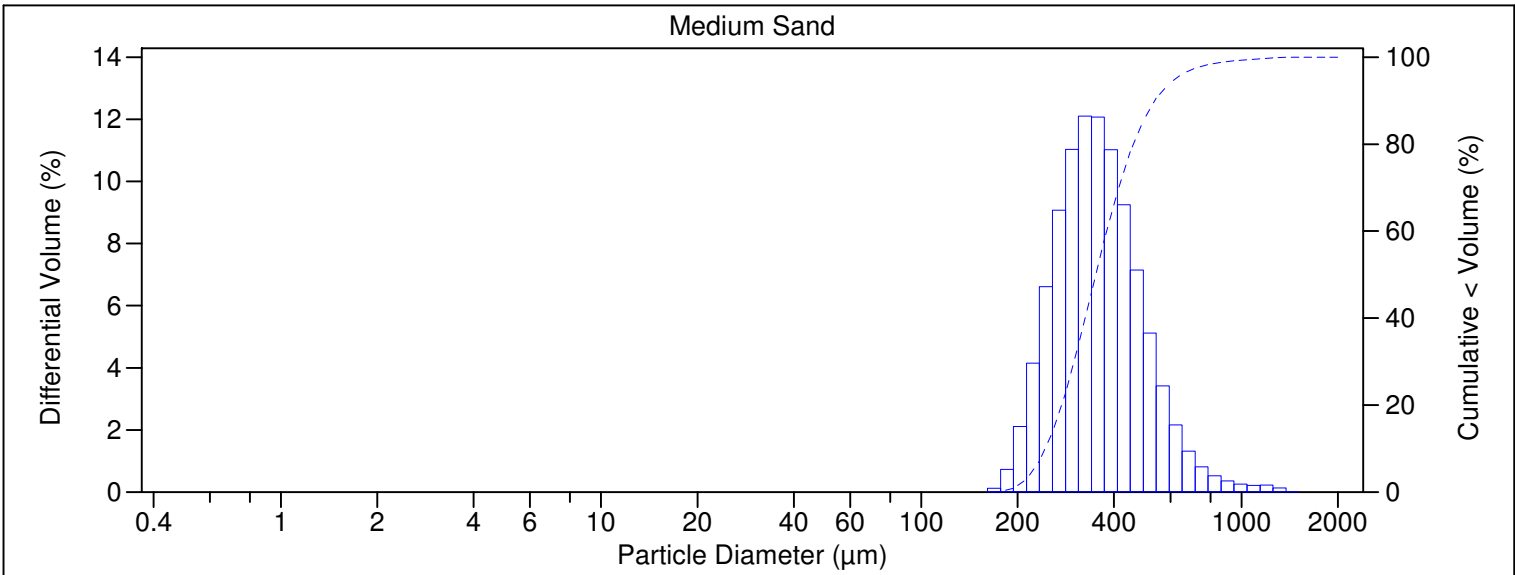


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.10.59.\$ls					
Calculations from 0.375 µm to 2000 µm							
Volume:	100%	S.D.:	146.9 µm				
Mean:	393.1 µm	Variance:	21590 µm ²				
Median:	361.1 µm	Skewness:	1.881 Right skewed				
Mean/Median ratio:	1.089	Kurtosis:	5.699 Leptokurtic				
Mode:	356.1 µm						
d ₁₀ :	248.9 µm	d ₅₀ :	361.1 µm				
		d ₉₀ :	572.3 µm				
Folk and Ward Statistics (Phi)							
Mean:	1.45	Median:	1.47				
Skewness:	-0.11	Deviation:	0.47				
		Kurtosis:	1.03				
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
228.0 µm	268.5 µm	293.8 µm	333.3 µm	361.1 µm	452.3 µm	510.2 µm	671.1 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.10.59 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	10.3
250	72.5
500	16.5
1000	0.72
2000	

Medium Sand_19 Mar 2020_14.10.59.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.034		
2.660	0	176.9	0.50		
2.920	0	194.2	1.82		
3.206	0	213.2	3.72		
3.519	0	234.1	6.05		
3.863	0	256.9	8.44		
4.241	0	282.1	10.4		
4.656	0	309.6	11.6		
5.111	0	339.9	11.7		
5.611	0	373.1	10.9		
6.159	0	409.6	9.39		
6.761	0	449.7	7.51		
7.422	0	493.6	5.63		
8.148	0	541.9	4.01		
8.944	0	594.9	2.76		
9.819	0	653.0	1.87		
10.78	0	716.9	1.27		
11.83	0	786.9	0.87		
12.99	0	863.9	0.59		
14.26	0	948.3	0.38		
15.65	0	1041	0.25		
17.18	0	1143	0.20		
18.86	0	1255	0.099		
20.71	0	1377	0.010		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.19.26.\$ls		
	Medium Sand_19 Mar 2020_14.19.26.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	16		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	2.28%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:18 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

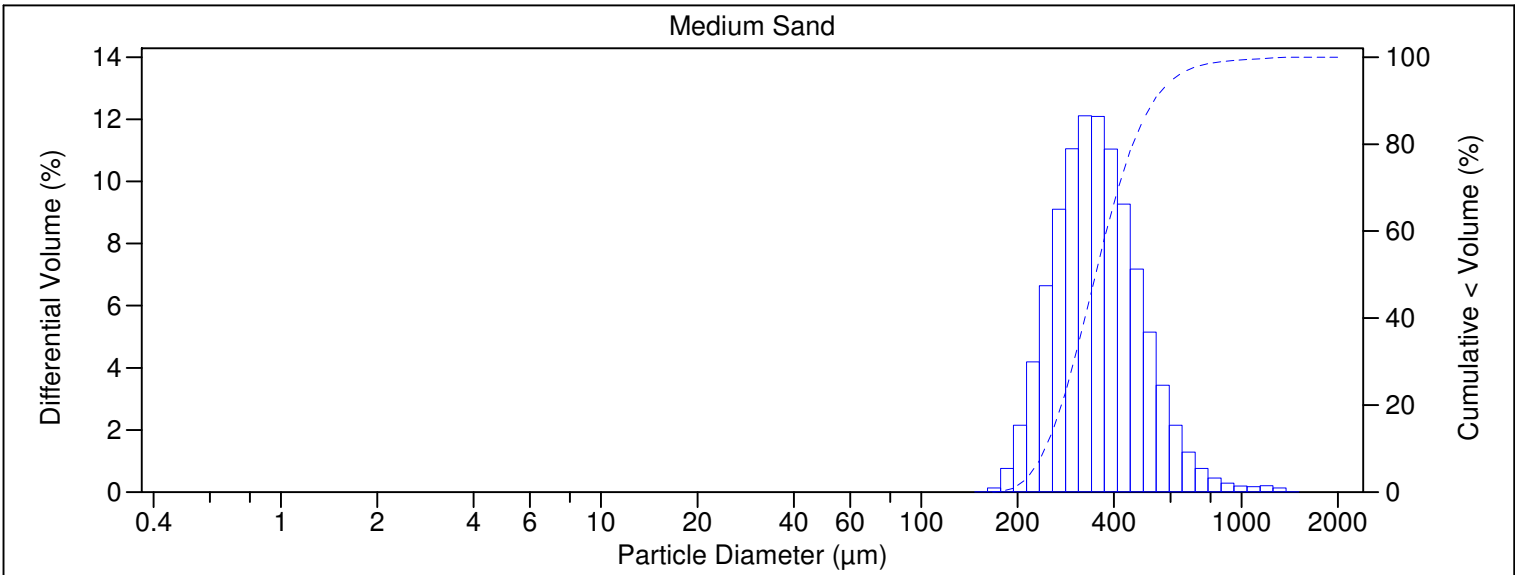


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.19.26.\$ls					
Calculations from 0.375 µm to 2000 µm							
Volume:	100%	S.D.:	138.3 µm				
Mean:	378.8 µm	Variance:	19128 µm ²				
Median:	351.1 µm	Skewness:	2.171 Right skewed				
Mean/Median ratio:	1.079	Kurtosis:	8.369 Leptokurtic				
Mode:	324.4 µm						
d ₁₀ :	244.0 µm	d ₅₀ :	351.1 µm				
		d ₉₀ :	536.7 µm				
Folk and Ward Statistics (Phi)							
Mean:	1.49	Median:	1.51				
Skewness:	-0.09	Deviation:	0.44				
		Kurtosis:	1.01				
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
223.4 µm	263.2 µm	287.5 µm	325.1 µm	351.1 µm	435.5 µm	484.9 µm	622.7 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.19.26 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	11.7
250	74.4
500	13.2
1000	0.71
2000	

Medium Sand_19 Mar 2020_14.19.26.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0.0051		
2.423	0	161.2	0.12		
2.660	0	176.9	0.73		
2.920	0	194.2	2.11		
3.206	0	213.2	4.15		
3.519	0	234.1	6.61		
3.863	0	256.9	9.07		
4.241	0	282.1	11.0		
4.656	0	309.6	12.1		
5.111	0	339.9	12.1		
5.611	0	373.1	11.0		
6.159	0	409.6	9.25		
6.761	0	449.7	7.15		
7.422	0	493.6	5.12		
8.148	0	541.9	3.42		
8.944	0	594.9	2.16		
9.819	0	653.0	1.32		
10.78	0	716.9	0.82		
11.83	0	786.9	0.53		
12.99	0	863.9	0.36		
14.26	0	948.3	0.26		
15.65	0	1041	0.21		
17.18	0	1143	0.23		
18.86	0	1255	0.13		
20.71	0	1377	0.014		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.27.13.\$ls		
	Medium Sand_19 Mar 2020_14.27.13.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	17		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	2.75%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:26 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

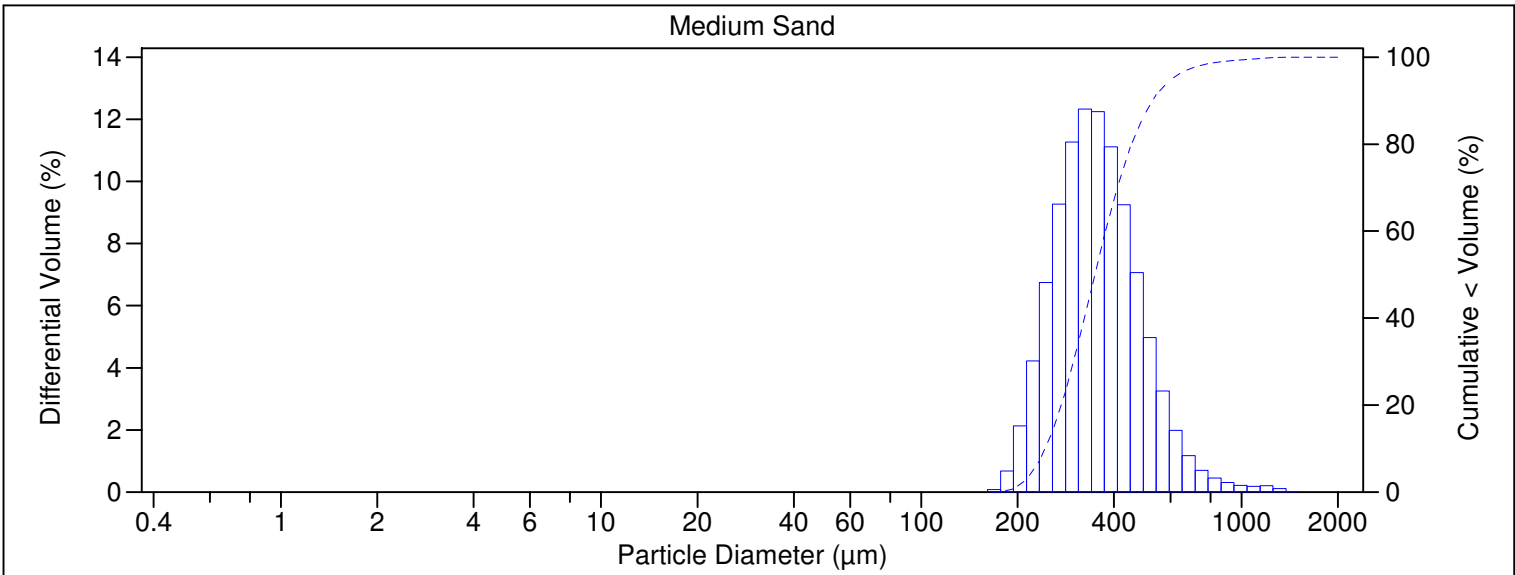


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.27.13.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	134.6 µm
Mean:	376.8 µm	Variance:	18131 µm ²
Median:	350.5 µm	Skewness:	2.133 Right skewed
Mean/Median ratio:	1.075	Kurtosis:	8.519 Leptokurtic
Mode:	324.4 µm		
d ₁₀ :	243.6 µm	d ₅₀ :	350.5 µm
		d ₉₀ :	533.5 µm
Folk and Ward Statistics (Phi)			
Mean:	1.50	Median:	1.51
Skewness:	-0.08	Deviation:	0.44
Kurtosis:	1.00		
<5%	<16%	<25%	<40%
222.9 µm	262.8 µm	287.1 µm	324.5 µm
<50%	<75%	<84%	<95%
350.5 µm	434.3 µm	483.0 µm	613.1 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.27.13 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	11.9
250	74.6
500	13.0
1000	0.61
2000	

Medium Sand_19 Mar 2020_14.27.13.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0.0058		
2.423	0	161.2	0.13		
2.660	0	176.9	0.76		
2.920	0	194.2	2.15		
3.206	0	213.2	4.19		
3.519	0	234.1	6.64		
3.863	0	256.9	9.10		
4.241	0	282.1	11.1		
4.656	0	309.6	12.1		
5.111	0	339.9	12.1		
5.611	0	373.1	11.0		
6.159	0	409.6	9.27		
6.761	0	449.7	7.18		
7.422	0	493.6	5.15		
8.148	0	541.9	3.44		
8.944	0	594.9	2.15		
9.819	0	653.0	1.29		
10.78	0	716.9	0.76		
11.83	0	786.9	0.46		
12.99	0	863.9	0.29		
14.26	0	948.3	0.20		
15.65	0	1041	0.17		
17.18	0	1143	0.21		
18.86	0	1255	0.13		
20.71	0	1377	0.014		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.36.37.\$ls		
	Medium Sand_19 Mar 2020_14.36.37.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	18		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	3.37%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:35 19 Mar 2020	Run length:	61 seconds
Pump speed:	49		
Obscuration:	8%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

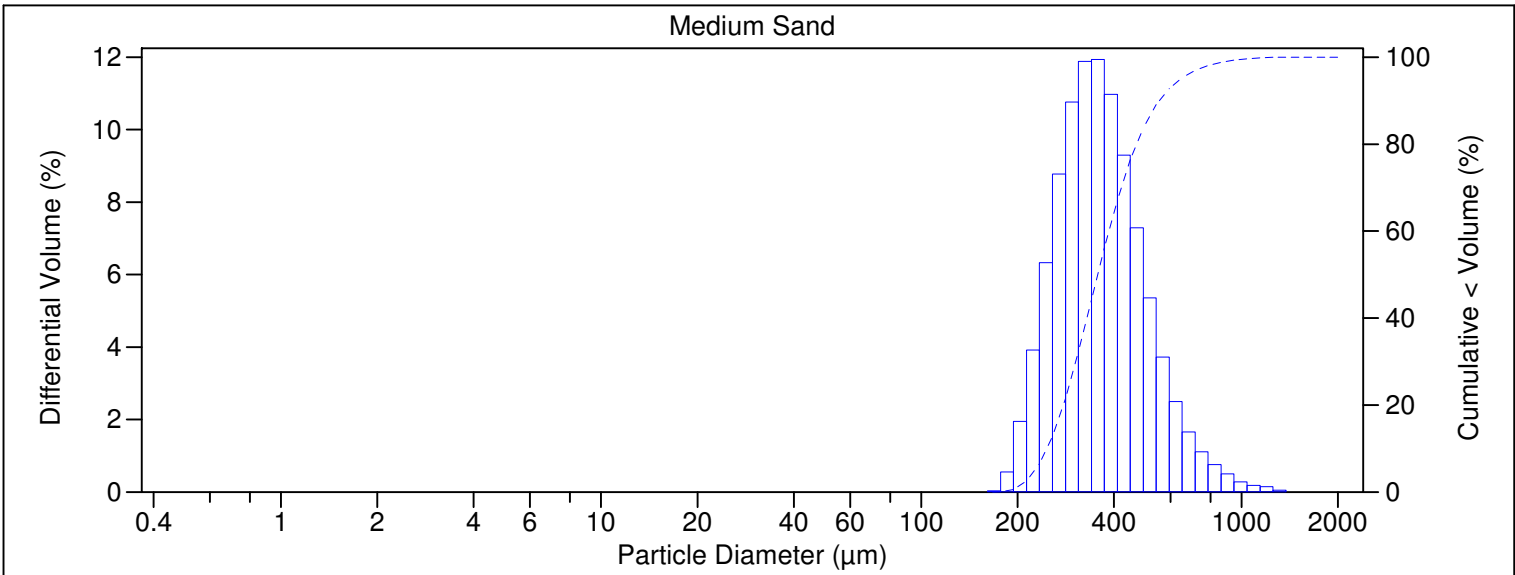


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.36.37.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	133.0 µm
Mean:	374.8 µm	Variance:	17702 µm ²
Median:	348.8 µm	Skewness:	2.174 Right skewed
Mean/Median ratio:	1.075	Kurtosis:	8.711 Leptokurtic
Mode:	324.4 µm		
d ₁₀ :	243.8 µm	d ₅₀ :	348.8 µm
		d ₉₀ :	528.5 µm
Folk and Ward Statistics (Phi)			
Mean:	1.50	Median:	1.52
Skewness:	-0.08	Deviation:	0.43
Kurtosis:	1.00		
<5%	<16%	<25%	<40%
223.6 µm	262.7 µm	286.6 µm	323.4 µm
<50%	<75%	<84%	<95%
348.8 µm	430.9 µm	478.7 µm	605.5 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.36.37 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	11.8
250	75.2
500	12.3
1000	0.61
2000	

Medium Sand_19 Mar 2020_14.36.37.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0.0015		
2.423	0	161.2	0.082		
2.660	0	176.9	0.68		
2.920	0	194.2	2.13		
3.206	0	213.2	4.23		
3.519	0	234.1	6.75		
3.863	0	256.9	9.27		
4.241	0	282.1	11.3		
4.656	0	309.6	12.3		
5.111	0	339.9	12.2		
5.611	0	373.1	11.1		
6.159	0	409.6	9.24		
6.761	0	449.7	7.07		
7.422	0	493.6	4.98		
8.148	0	541.9	3.25		
8.944	0	594.9	1.99		
9.819	0	653.0	1.18		
10.78	0	716.9	0.70		
11.83	0	786.9	0.45		
12.99	0	863.9	0.31		
14.26	0	948.3	0.22		
15.65	0	1041	0.19		
17.18	0	1143	0.21		
18.86	0	1255	0.11		
20.71	0	1377	0.010		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.45.29.\$ls		
	Medium Sand_19 Mar 2020_14.45.29.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	19		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	4.01%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:44 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

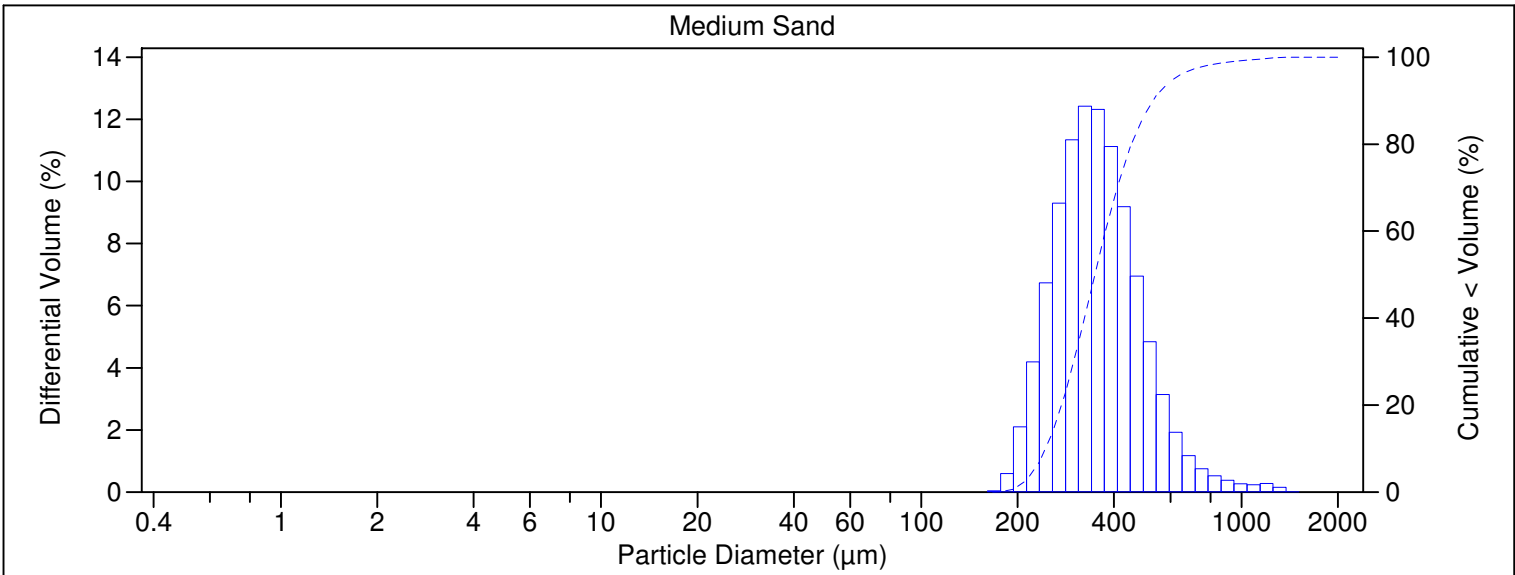


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.45.29.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	138.8 µm
Mean:	385.3 µm	Variance:	19276 µm ²
Median:	356.0 µm	Skewness:	1.816 Right skewed
Mean/Median ratio:	1.082	Kurtosis:	5.466 Leptokurtic
Mode:	356.1 µm		
d ₁₀ :	246.8 µm	d ₅₀ :	356.0 µm
		d ₉₀ :	555.2 µm
Folk and Ward Statistics (Phi)			
Mean:	1.47	Median:	1.49
Skewness:	-0.10	Deviation:	0.45
Kurtosis:	1.02		
<5%	<16%	<25%	<40%
<50%	<75%	<84%	<95%
226.2 µm	266.1 µm	290.9 µm	329.2 µm
356.0 µm	443.6 µm	496.3 µm	646.2 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.45.29 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	10.9
250	73.5
500	15.1
1000	0.51
2000	

Medium Sand_19 Mar 2020_14.45.29.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.039		
2.660	0	176.9	0.56		
2.920	0	194.2	1.95		
3.206	0	213.2	3.92		
3.519	0	234.1	6.33		
3.863	0	256.9	8.77		
4.241	0	282.1	10.8		
4.656	0	309.6	11.9		
5.111	0	339.9	11.9		
5.611	0	373.1	11.0		
6.159	0	409.6	9.29		
6.761	0	449.7	7.30		
7.422	0	493.6	5.36		
8.148	0	541.9	3.73		
8.944	0	594.9	2.50		
9.819	0	653.0	1.66		
10.78	0	716.9	1.11		
11.83	0	786.9	0.76		
12.99	0	863.9	0.50		
14.26	0	948.3	0.29		
15.65	0	1041	0.18		
17.18	0	1143	0.15		
18.86	0	1255	0.053		
20.71	0	1377	0.0029		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_14.54.15.\$ls		
	Medium Sand_19 Mar 2020_14.54.15.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	20		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	4.53%		
LS 13 320	Aqueous Liquid Module		
Start time:	14:53 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

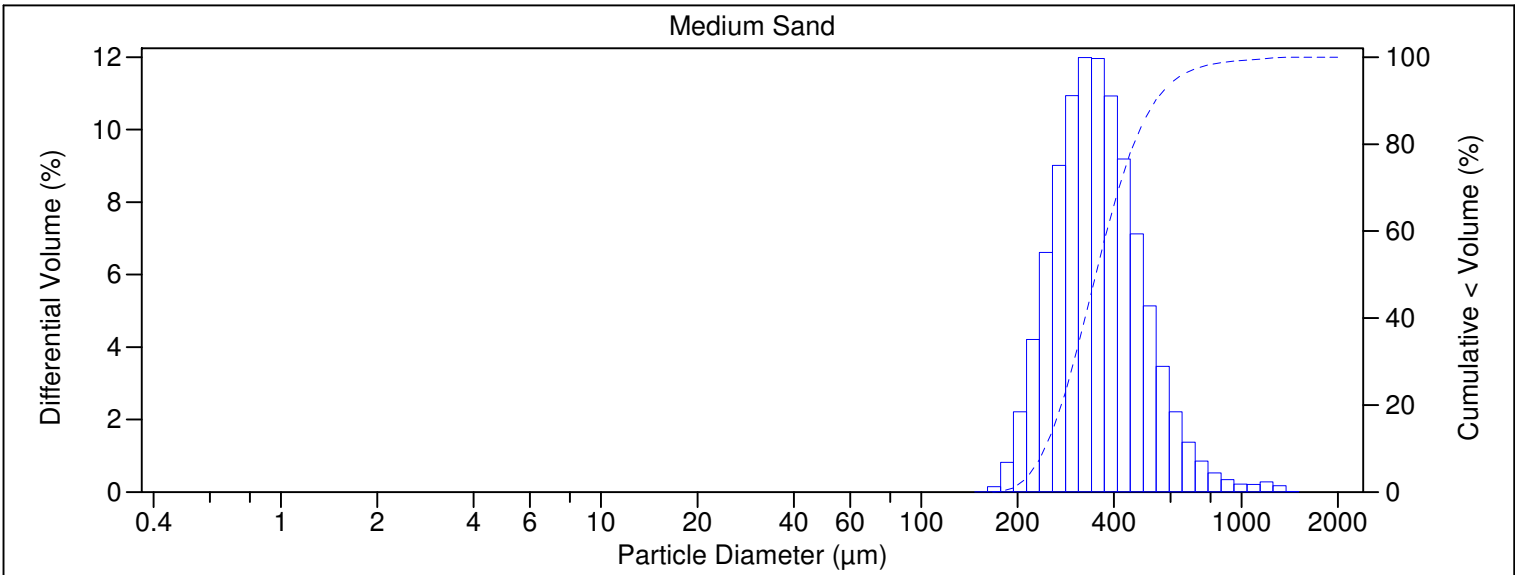


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_14.54.15.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	139.0 µm
Mean:	376.9 µm	Variance:	19313 µm ²
Median:	348.7 µm	Skewness:	2.345 Right skewed
Mean/Median ratio:	1.081	Kurtosis:	9.384 Leptokurtic
Mode:	324.4 µm		
d ₁₀ :	244.5 µm	d ₅₀ :	348.7 µm
		d ₉₀ :	530.5 µm
Folk and Ward Statistics (Phi)			
Mean:	1.50	Median:	1.52
Skewness:	-0.09	Deviation:	0.44
		Kurtosis:	1.02
<5%	<16%	<25%	<40%
224.5 µm	263.2 µm	287.0 µm	323.5 µm
<50%	<75%	<84%	<95%
348.7 µm	430.7 µm	479.1 µm	616.5 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _14.54.15 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	11.6
250	75.3
500	12.3
1000	0.81
2000	

Medium Sand_19 Mar 2020_14.54.15.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0		
2.423	0	161.2	0.042		
2.660	0	176.9	0.60		
2.920	0	194.2	2.10		
3.206	0	213.2	4.19		
3.519	0	234.1	6.74		
3.863	0	256.9	9.30		
4.241	0	282.1	11.3		
4.656	0	309.6	12.4		
5.111	0	339.9	12.3		
5.611	0	373.1	11.1		
6.159	0	409.6	9.18		
6.761	0	449.7	6.95		
7.422	0	493.6	4.84		
8.148	0	541.9	3.14		
8.944	0	594.9	1.93		
9.819	0	653.0	1.17		
10.78	0	716.9	0.75		
11.83	0	786.9	0.52		
12.99	0	863.9	0.38		
14.26	0	948.3	0.27		
15.65	0	1041	0.24		
17.18	0	1143	0.28		
18.86	0	1255	0.15		
20.71	0	1377	0.014		
22.73	0	1512	0		

File name:	C:\LS13320\Medium Sand_19 Mar 2020_15.15.43.\$ls		
	Medium Sand_19 Mar 2020_15.15.43.\$ls		
File ID:	Medium Sand		
Sample ID:	Medium Sand		
Operator:	1106		
Run number:	21		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	602383 , BATCH#029B		
Optical model:	Fraunhofer.rf780d		
Residual:	6.09%		
LS 13 320	Aqueous Liquid Module		
Start time:	15:14 19 Mar 2020	Run length:	60 seconds
Pump speed:	49		
Obscuration:	7%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00

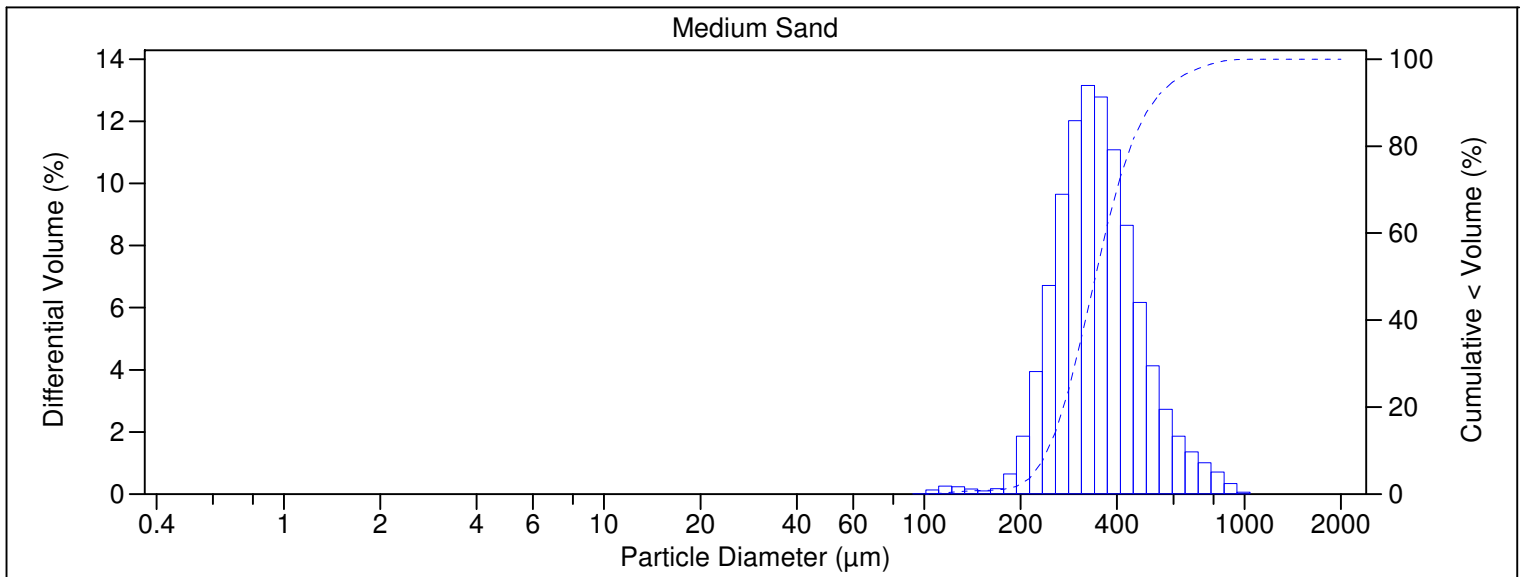


Volume Statistics (Arithmetic)		Medium Sand_19 Mar 2020_15.15.43.\$ls	
Calculations from 0.375 µm to 2000 µm			
Volume:	100%	S.D.:	141.2 µm
Mean:	379.6 µm	Variance:	19940 µm ²
Median:	351.1 µm	Skewness:	2.236 Right skewed
Mean/Median ratio:	1.081	Kurtosis:	8.814 Leptokurtic
Mode:	324.4 µm		
d ₁₀ :	243.1 µm	d ₅₀ :	351.1 µm
		d ₉₀ :	539.1 µm
Folk and Ward Statistics (Phi)			
Mean:	1.49	Median:	1.51
Skewness:	-0.09	Deviation:	0.45
Kurtosis:	1.01		
<5%	<16%	<25%	<40%
222.2 µm	262.5 µm	287.0 µm	324.9 µm
<50%	<75%	<84%	<95%
351.1 µm	436.4 µm	486.4 µm	627.2 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _15.15.43 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0
125	12.0
250	73.8
500	13.4
1000	0.79
2000	

Medium Sand_19 Mar 2020_15.15.43.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0		
1.520	0	101.1	0		
1.669	0	111.0	0		
1.832	0	121.8	0		
2.011	0	133.7	0		
2.208	0	146.8	0.0065		
2.423	0	161.2	0.15		
2.660	0	176.9	0.82		
2.920	0	194.2	2.21		
3.206	0	213.2	4.21		
3.519	0	234.1	6.62		
3.863	0	256.9	9.02		
4.241	0	282.1	10.9		
4.656	0	309.6	12.0		
5.111	0	339.9	12.0		
5.611	0	373.1	10.9		
6.159	0	409.6	9.19		
6.761	0	449.7	7.13		
7.422	0	493.6	5.13		
8.148	0	541.9	3.47		
8.944	0	594.9	2.22		
9.819	0	653.0	1.38		
10.78	0	716.9	0.85		
11.83	0	786.9	0.53		
12.99	0	863.9	0.34		
14.26	0	948.3	0.22		
15.65	0	1041	0.21		
17.18	0	1143	0.28		
18.86	0	1255	0.18		
20.71	0	1377	0.018		
22.73	0	1512	0		

File name: C:\LS13320\Medium Sand_19 Mar 2020_15.24.02.\$ls
 Medium Sand_19 Mar 2020_15.24.02.\$ls
 File ID: Medium Sand
 Sample ID: Medium Sand
 Operator: 1106
 Run number: 22
 Comment 1: ASTM D4464M , LPSA 1
 Comment 2: 602383 , BATCH#029B
 Optical model: Fraunhofer.rf780d
 Residual: 6.38%
 LS 13 320 Aqueous Liquid Module
 Start time: 15:22 19 Mar 2020 Run length: 60 seconds
 Pump speed: 49
 Obscuration: 13%
 Fluid: Water
 Software: 6.01 Firmware: 4.00



Volume Statistics (Arithmetic) Medium Sand_19 Mar 2020_15.24.02.\$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%	S.D.:	121.8 µm
Mean:	366.0 µm	Variance:	14823 µm ²
Median:	342.3 µm	Skewness:	1.408 Right skewed
Mean/Median ratio:	1.069	Kurtosis:	2.984 Leptokurtic
Mode:	324.4 µm		

d₁₀: 242.4 µm d₅₀: 342.3 µm d₉₀: 519.5 µm

Folk and Ward Statistics (Phi)

Mean:	1.53	Median:	1.55	Deviation:	0.43
Skewness:	-0.10	Kurtosis:	1.07		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
220.6 µm	261.4 µm	284.5 µm	319.0 µm	342.3 µm	419.1 µm	466.7 µm	605.8 µm

Particle Diameter µm	Medium Sand_19 Mar 2020 _15.24.02 .\$ls Volume
0.04	0
0.4	0
1.95	0
3.91	0
62.5	0.47
125	11.8
250	76.1
500	11.6
1000	0.027
2000	

Medium Sand_19 Mar 2020_15.24.02.\$ls					
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0		
1.047	0	69.62	0		
1.149	0	76.43	0		
1.261	0	83.90	0		
1.385	0	92.10	0.013		
1.520	0	101.1	0.13		
1.669	0	111.0	0.26		
1.832	0	121.8	0.24		
2.011	0	133.7	0.16		
2.208	0	146.8	0.10		
2.423	0	161.2	0.18		
2.660	0	176.9	0.65		
2.920	0	194.2	1.87		
3.206	0	213.2	3.95		
3.519	0	234.1	6.72		
3.863	0	256.9	9.65		
4.241	0	282.1	12.0		
4.656	0	309.6	13.2		
5.111	0	339.9	12.8		
5.611	0	373.1	11.1		
6.159	0	409.6	8.65		
6.761	0	449.7	6.17		
7.422	0	493.6	4.14		
8.148	0	541.9	2.73		
8.944	0	594.9	1.87		
9.819	0	653.0	1.35		
10.78	0	716.9	1.01		
11.83	0	786.9	0.72		
12.99	0	863.9	0.34		
14.26	0	948.3	0.058		
15.65	0	1041	0.0012		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

Reagent

MT_MS_ICs2_00002



SPEXertificate®

Certificate of Reference Material



Catalog Number: CL-CAL-2 **Lot No.** CL2-69WGY
Description: Instrument Calibration Standard 2
Matrix: 5% HNO₃ / Tr. Tart. Acid / Tr. HF

This CLARITAS PPT® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.6 µg/mL	±0.5 µg/mL	3151*	Mn	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3132*
Al	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3101a*	Mo	100 µg/mL	99.9 µg/mL	±0.5 µg/mL	3134*
As	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3103a*	Na	100 µg/mL	100 µg/mL	±0.5 µg/mL	3152a*
Ba	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3104a*	Ni	100 µg/mL	99.8 µg/mL	±0.5 µg/mL	3136*
Be	100 µg/mL	100 µg/mL	±0.5 µg/mL	3105a*	Pb	100 µg/mL	99.3 µg/mL	±0.5 µg/mL	3128*
Ca	100 µg/mL	100 µg/mL	±0.5 µg/mL	3109a*	Sb	100 µg/mL	100 µg/mL	±0.5 µg/mL	3102a*
Cd	100 µg/mL	99.0 µg/mL	±0.5 µg/mL	3108*	Se	100 µg/mL	100 µg/mL	±0.5 µg/mL	3149*
Co	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3113*	Sn	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3161a*
Cr	100 µg/mL	100 µg/mL	±0.5 µg/mL	3112a*	Sr	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3153a*
Cu	100 µg/mL	101 µg/mL	±0.5 µg/mL	3114*	Ti	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3162a*
Fe	100 µg/mL	99.5 µg/mL	±0.5 µg/mL	3126a*	Tl	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3158*
K	100 µg/mL	100 µg/mL	±0.5 µg/mL	3141a*	V	100 µg/mL	100 µg/mL	±0.5 µg/mL	3165*
Mg	100 µg/mL	99.7 µg/mL	±0.5 µg/mL	3131a*	Zn	100 µg/mL	99.4 µg/mL	±0.5 µg/mL	3168a*

* - indicates NIST SRM

† - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# CL5-135MKB, CL6-41MKB, CL-1-112YJ, CL1372YP

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.08	Eu	<0.1	In	<20	P	<400	Ru	2
B	<4	Ga	<0.01	Ir	<0.1	Pd	<50	Sc	<0.4
Bi	2	Gd	0.4	La	5	Pr	0.04	Si	<300
Ce	0.9	Ge	<0.7	Li	0.5	Pt	<0.1	Sm	3
Cs	0.3	Hf	0.07	Lu	<0.02	Rb	3	Ta	0.6
Dy	<0.01	Hg	<0.2	Nb	0.4	Re	1	Tb	<0.01
Er	<0.01	Ho	<0.01	Nd	0.1	Rh	4	Te	<1
								Zr	3



116696
 ID: MI_MS_JCS2_00002
 Exp: 08/30/20 Pppl U/LE Cph 0881319
 1000ppm Cal Std 2 SPEX

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: AUG -- 2019

Certifying Officer: Katherine Cullinan
 Katherine Cullinan, QC Manager

Page 1 of 2
 Rev. 0

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METALS

COVER PAGE
METALS

Lab Name: Eurofins Calscience _____ Job Number: 570-25593-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID
A2BMP0006S011 _____

Lab Sample ID
570-25593-1 _____

Comments:

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS

Client Sample ID: A2BMP0006S011

Lab Sample ID: 570-25593-1

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG ID.: _____

Matrix: Water

Date Sampled: 04/09/2020 07:55

Reporting Basis: WET

Date Received: 04/10/2020 18:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L			1	245.1

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: A2BMP0006S011

Lab Sample ID: 570-25593-1

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG ID.: _____

Matrix: Water

Date Sampled: 04/09/2020 07:55

Reporting Basis: WET

Date Received: 04/10/2020 18:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L			1	200.8
7440-50-8	Copper	0.00315	0.00100	0.000610	mg/L			1	200.8
7439-92-1	Lead	0.00104	0.00100	0.000190	mg/L			1	200.8

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: A2BMP0006S011

Lab Sample ID: 570-25593-1

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG ID.: _____

Matrix: Water

Date Sampled: 04/09/2020 07:55

Reporting Basis: WET

Date Received: 04/10/2020 18:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	ND	0.00100	0.000980	mg/L		H	1	200.8
7440-50-8	Copper	0.00244	0.00100	0.000610	mg/L		H	1	200.8
7439-92-1	Lead	ND	0.00100	0.000190	mg/L		H	1	200.8
7439-97-6	Mercury	ND	0.000200	0.000045 3	mg/L		H	1	245.1

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00004 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-63497/3 04/16/2020 09:32				CCV 570-63497/224 04/16/2020 19:39				CCV 570-63497/237 04/16/2020 20:15			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	101.7		100	102	100.5		100	101	99.66		100	100
Copper	98.63		100	99	101.9		100	102	100.3		100	100
Lead	98.29		100	98	100.2		100	100	98.03		100	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-63497/224 04/16/2020 19:39				ICVL 570-63497/226 04/16/2020 19:45				CCV 570-63497/237 04/16/2020 20:15			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	100.5		100	101	0.9936	J	1.00	99	99.66		100	100
Copper	101.9		100	102	0.9977	J	1.00	100	100.3		100	100
Lead	100.2		100	100	0.9604	J	1.00	96	98.03		100	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00004 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-63759/3 04/17/2020 09:30				CCV 570-63759/25 04/17/2020 10:45				CCV 570-63759/36 04/17/2020 11:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	105.1		100	105	99.84		100	100	103.7		100	104
Copper	102.2		100	102	98.69		100	99	98.39		100	98
Lead	97.61		100	98	101.1		100	101	99.54		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00004 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-63759/51 04/17/2020 12:04				CCV 570-63759/59 04/17/2020 13:00							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	100.3		100	100	98.44		100	98				
Copper	107.2		100	107	105.8		100	106				
Lead	98.52		100	99	98.24		100	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICVL 570-63759/10 04/17/2020 09:58				CCV 570-63759/25 04/17/2020 10:45				CCV 570-63759/36 04/17/2020 11:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	0.9852	J	1.00	99	99.84		100	100	103.7		100	104
Copper	0.9753	J	1.00	98	98.69		100	99	98.39		100	98
Lead	0.9857	J	1.00	99	101.1		100	101	99.54		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICVL 570-63759/42 04/17/2020 11:39				CCV 570-63759/51 04/17/2020 12:04				CCV 570-63759/59 04/17/2020 13:00			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	ND		1.00	95	100.3		100	100	98.44		100	98
Copper	1.070		1.00	107	107.2		100	107	105.8		100	106
Lead	0.9592	J	1.00	96	98.52		100	99	98.24		100	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: MT_MS_ICV1_00004 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	ICV 570-64006/3 04/20/2020 08:08				CCV 570-64006/6 04/20/2020 08:16				CCV 570-64006/16 04/20/2020 08:44			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	102.5		100	102	100.5		100	101	101.6		100	102
Copper	101.3		100	101	100.6		100	101	102.5		100	103
Lead	98.71		100	99	100.0		100	100	101.3		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: MT_MS_LL_00006 Concentration Units: ug/L

CCV Source: MT_MS_CCV_00005

Analyte	CCV 570-64006/6 04/20/2020 08:16				ICVL 570-64006/11 04/20/2020 08:30				CCV 570-64006/16 04/20/2020 08:44			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cadmium	100.5		100	101	ND		1.00	97	101.6		100	102
Copper	100.6		100	101	1.065		1.00	107	102.5		100	103
Lead	100.0		100	100	0.9864	J	1.00	99	101.3		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00016 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00013

Analyte	ICV 570-62937/2-A 04/15/2020 10:04				CCV 570-62937/10-A 04/15/2020 10:11				CCV 570-62937/10-A 04/15/2020 10:44			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00980 7		0.0100	98	0.00419 1		0.00400	105	0.00418 4		0.00400	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICV Source: HG_1ppm ICV_00016 Concentration Units: mg/L

CCV Source: HG_1ppm STD_00013

Analyte	ICV 570-63407/2-A 04/16/2020 11:13				CCV 570-63407/10-A 04/16/2020 11:20				CCV 570-63407/10-A 04/16/2020 11:48			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.01023		0.0100	102	0.00408 9		0.00400	102	0.00403 8		0.00400	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Method: 245.1 Instrument ID: HG7

Lab Sample ID: CRA 570-63162/12-A Concentration Units: mg/L

CRQL Check Standard Source: HG_1ppm STD_00013

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0005141		103	65-135

Lab Sample ID: CRA 570-63162/12-A Concentration Units: mg/L

CRQL Check Standard Source: HG_1ppm STD_00013

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0005480		110	65-135

Lab Sample ID: CRA 570-63407/12-A Concentration Units: mg/L

CRQL Check Standard Source: HG_1ppm STD_00013

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.000500	0.0004747		95	65-135

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-63497/5 04/16/2020 09:38		CCB 570-63497/225 04/16/2020 19:42		CCB 570-63497/238 04/16/2020 20:18		Found	C
		Found	C	Found	C	Found	C		
Cadmium	1.00	ND		ND		ND			
Copper	1.00	ND		ND		ND			
Lead	1.00	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-63759/5 04/17/2020 09:41		CCB 570-63759/26 04/17/2020 10:48		CCB 570-63759/37 04/17/2020 11:20		CCB 570-63759/52 04/17/2020 12:07	
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND		ND		ND		ND	
Copper	1.00	ND		ND		ND		ND	
Lead	1.00	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 570-63759/60 04/17/2020 13:03							
		Found	C	Found	C	Found	C	Found	C
Cadmium	1.00	ND							
Copper	1.00	ND							
Lead	1.00	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 570-64006/5 04/20/2020 08:13		CCB 570-64006/10 04/20/2020 08:27		CCB 570-64006/17 04/20/2020 08:47		Found	C
		Found	C	Found	C	Found	C		
Cadmium	1.00	ND		ND		ND			
Copper	1.00	ND		ND		ND			
Lead	1.00	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-62937/3-A 04/15/2020 10:06		CCB 570-62937/11-A 04/15/2020 10:13		CCB 570-62937/11-A 04/15/2020 10:47		Found	C
		Found	C	Found	C	Found	C		
Mercury	0.000200	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Concentration Units: mg/L

Analyte	RL	ICB 570-63407/3-A 04/16/2020 11:15		CCB 570-63407/11-A 04/16/2020 11:22		CCB 570-63407/11-A 04/16/2020 11:50		Found	C
		Found	C	Found	C	Found	C		
Mercury	0.000200	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job No.: 570-25593-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-63381/1-A
Instrument Code: ICPMS05 Batch No.: 63497

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-25593-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-63570/1-A
Instrument Code: ICPMS05 Batch No.: 63759

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	ND			200.8
7440-50-8	Copper	ND			200.8
7439-92-1	Lead	ND			200.8

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-63082/1-A
Instrument Code: HG7 Batch No.: 63244

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job No.: 570-25593-1
SDG No.: _____
Concentration Units: mg/L Lab Sample ID: MB 570-63413/1-B
Instrument Code: HG7 Batch No.: 63531

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			245.1

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Lab Sample ID: ICSA 570-63497/119

Instrument ID: ICPMS05

Lab File ID: 200416E1_iCal.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Cadmium		-0.0099	
Copper		-0.216	
Lead		0.0253	
<i>Aluminum</i>	<i>10000</i>	<i>10135</i>	<i>101</i>
<i>Antimony</i>		<i>0.308</i>	
<i>Barium</i>		<i>0.186</i>	
<i>Beryllium</i>		<i>0.0078</i>	
<i>Boron</i>		<i>1.04</i>	
<i>Calcium</i>	<i>30000</i>	<i>29247</i>	<i>97</i>
<i>Chromium</i>		<i>0.0128</i>	
<i>Iron</i>	<i>25000</i>	<i>25197</i>	<i>101</i>
<i>Manganese</i>		<i>0.882</i>	
<i>Molybdenum</i>	<i>200</i>	<i>198</i>	<i>99</i>
<i>Strontium</i>		<i>0.491</i>	
<i>Thallium</i>		<i>0.0157</i>	
<i>Tin</i>		<i>0.248</i>	
<i>Titanium</i>	<i>200</i>	<i>201</i>	<i>100</i>
<i>Zinc</i>		<i>0.428</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Lab Sample ID: ICSAB 570-63497/120

Instrument ID: ICPMS05

Lab File ID: 200416E1_iCal.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Cadmium	10.0	9.39	94
Copper	20.0	19.2	96
Lead		0.0172	
<i>Aluminum</i>	<i>10000</i>	<i>10338</i>	<i>103</i>
<i>Antimony</i>		<i>0.150</i>	
<i>Barium</i>		<i>0.179</i>	
<i>Beryllium</i>		<i>-0.0012</i>	
<i>Boron</i>		<i>5.19</i>	
<i>Calcium</i>	<i>30000</i>	<i>29763</i>	<i>99</i>
<i>Chromium</i>	<i>20.0</i>	<i>19.1</i>	<i>95</i>
<i>Iron</i>	<i>25000</i>	<i>25833</i>	<i>103</i>
<i>Manganese</i>	<i>20.0</i>	<i>19.0</i>	<i>95</i>
<i>Molybdenum</i>	<i>200</i>	<i>199</i>	<i>99</i>
<i>Strontium</i>		<i>0.460</i>	
<i>Thallium</i>		<i>0.0068</i>	
<i>Tin</i>		<i>0.0658</i>	
<i>Titanium</i>	<i>200</i>	<i>204</i>	<i>102</i>
<i>Zinc</i>	<i>10.0</i>	<i>10.6</i>	<i>106</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Lab Sample ID: ICSA 570-63759/8

Instrument ID: ICPMS05

Lab File ID: 200417E1_iCal.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Cadmium		-0.0639	
Copper		-0.176	
Lead		0.0245	
<i>Aluminum</i>	<i>10000</i>	<i>9677</i>	<i>97</i>
<i>Antimony</i>		<i>0.0959</i>	
<i>Arsenic</i>		<i>-0.0074</i>	
<i>Barium</i>		<i>0.196</i>	
<i>Beryllium</i>		<i>-0.0044</i>	
<i>Boron</i>		<i>-1.89</i>	
<i>Calcium</i>	<i>30000</i>	<i>29113</i>	<i>97</i>
<i>Chromium</i>		<i>-0.309</i>	
<i>Cobalt</i>		<i>0.0463</i>	
<i>Iron</i>	<i>25000</i>	<i>24490</i>	<i>98</i>
<i>Magnesium</i>	<i>10000</i>	<i>9804</i>	<i>98</i>
<i>Manganese</i>		<i>0.444</i>	
<i>Molybdenum</i>	<i>200</i>	<i>192</i>	<i>96</i>
<i>Nickel</i>		<i>0.238</i>	
<i>Potassium</i>	<i>10000</i>	<i>10126</i>	<i>101</i>
<i>Selenium</i>		<i>0.0638</i>	
<i>Silver</i>		<i>0.0359</i>	
<i>Sodium</i>	<i>25000</i>	<i>25095</i>	<i>100</i>
<i>Strontium</i>		<i>0.415</i>	
<i>Thallium</i>		<i>0.0173</i>	
<i>Tin</i>		<i>0.182</i>	
<i>Titanium</i>	<i>200</i>	<i>197</i>	<i>99</i>
<i>Vanadium</i>		<i>0.381</i>	
<i>Zinc</i>		<i>0.633</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Lab Sample ID: ICSAB 570-63759/9

Instrument ID: ICPMS05

Lab File ID: 200417E1_iCal.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Cadmium	10.0	9.34	93
Copper	20.0	18.2	91
Lead		0.0167	
<i>Aluminum</i>	<i>10000</i>	<i>9603</i>	<i>96</i>
<i>Antimony</i>		<i>0.0788</i>	
<i>Arsenic</i>	<i>10.0</i>	<i>9.50</i>	<i>95</i>
<i>Barium</i>		<i>0.159</i>	
<i>Beryllium</i>		<i>-0.0059</i>	
<i>Boron</i>		<i>2.29</i>	
<i>Calcium</i>	<i>30000</i>	<i>29444</i>	<i>98</i>
<i>Chromium</i>	<i>20.0</i>	<i>18.1</i>	<i>90</i>
<i>Cobalt</i>	<i>20.0</i>	<i>18.4</i>	<i>92</i>
<i>Iron</i>	<i>25000</i>	<i>24154</i>	<i>97</i>
<i>Magnesium</i>	<i>10000</i>	<i>9828</i>	<i>98</i>
<i>Manganese</i>	<i>20.0</i>	<i>18.0</i>	<i>90</i>
<i>Molybdenum</i>	<i>200</i>	<i>189</i>	<i>95</i>
<i>Nickel</i>	<i>20.0</i>	<i>18.9</i>	<i>94</i>
<i>Potassium</i>	<i>10000</i>	<i>10148</i>	<i>101</i>
<i>Selenium</i>	<i>10.0</i>	<i>9.26</i>	<i>93</i>
<i>Silver</i>	<i>5.00</i>	<i>4.56</i>	<i>91</i>
<i>Sodium</i>	<i>25000</i>	<i>25232</i>	<i>101</i>
<i>Strontium</i>		<i>0.386</i>	
<i>Thallium</i>		<i>0.0107</i>	
<i>Tin</i>		<i>0.0903</i>	
<i>Titanium</i>	<i>200</i>	<i>199</i>	<i>99</i>
<i>Vanadium</i>	<i>20.0</i>	<i>19.2</i>	<i>96</i>
<i>Zinc</i>	<i>10.0</i>	<i>10.0</i>	<i>100</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
 INTERFERENCE CHECK STANDARD
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1
 SDG No.: _____
 Lab Sample ID: ICSA 570-63759/81 Instrument ID: ICPMS05
 Lab File ID: 200417E1_iCal.rep ICS Source: MT_MS_ICA_A_00002
 Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
<i>Chromium</i>		<i>0.0827</i>	
<i>Iron</i>	<i>25000</i>	<i>23758</i>	<i>95</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
 INTERFERENCE CHECK STANDARD
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1
 SDG No.: _____
 Lab Sample ID: ICSAB 570-63759/82 Instrument ID: ICPMS05
 Lab File ID: 200417E1_iCal.rep ICS Source: MT_MS_ICS_AB_00002
 Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
<i>Chromium</i>	<i>20.0</i>	<i>18.6</i>	<i>93</i>
<i>Iron</i>	<i>25000</i>	<i>23735</i>	<i>95</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Lab Sample ID: ICSA 570-64006/8

Instrument ID: ICPMS05

Lab File ID: 200420E1_iCal.rep

ICS Source: MT_MS_ICS_A_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Cadmium		-0.0967	
Copper		-0.187	
Lead		0.0298	
<i>Aluminum</i>	<i>10000</i>	<i>10205</i>	<i>102</i>
<i>Antimony</i>		<i>0.0693</i>	
<i>Arsenic</i>		<i>0.167</i>	
<i>Barium</i>		<i>0.177</i>	
<i>Beryllium</i>		<i>0.0027</i>	
<i>Boron</i>		<i>0.430</i>	
<i>Calcium</i>	<i>30000</i>	<i>29373</i>	<i>98</i>
<i>Chromium</i>		<i>-0.0383</i>	
<i>Cobalt</i>		<i>0.0415</i>	
<i>Iron</i>	<i>25000</i>	<i>25334</i>	<i>101</i>
<i>Magnesium</i>	<i>10000</i>	<i>10129</i>	<i>101</i>
<i>Manganese</i>		<i>0.542</i>	
<i>Molybdenum</i>	<i>200</i>	<i>198</i>	<i>99</i>
<i>Nickel</i>		<i>0.260</i>	
<i>Potassium</i>	<i>10000</i>	<i>10125</i>	<i>101</i>
<i>Selenium</i>		<i>0.0273</i>	
<i>Silver</i>		<i>0.0278</i>	
<i>Sodium</i>	<i>25000</i>	<i>24986</i>	<i>100</i>
<i>Strontium</i>		<i>0.400</i>	
<i>Thallium</i>		<i>0.0225</i>	
<i>Tin</i>		<i>0.131</i>	
<i>Titanium</i>	<i>200</i>	<i>204</i>	<i>102</i>
<i>Vanadium</i>		<i>0.631</i>	
<i>Zinc</i>		<i>0.0953</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Lab Sample ID: ICSAB 570-64006/9

Instrument ID: ICPMS05

Lab File ID: 200420E1_iCal.rep

ICS Source: MT_MS_ICS_AB_00002

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Cadmium	10.0	9.37	94
Copper	20.0	18.6	93
Lead		0.0204	
<i>Aluminum</i>	<i>10000</i>	<i>9972</i>	<i>100</i>
<i>Antimony</i>		<i>0.0581</i>	
<i>Arsenic</i>	<i>10.0</i>	<i>9.43</i>	<i>94</i>
<i>Barium</i>		<i>0.187</i>	
<i>Beryllium</i>		<i>0.0040</i>	
<i>Boron</i>		<i>4.70</i>	
<i>Calcium</i>	<i>30000</i>	<i>29384</i>	<i>98</i>
<i>Chromium</i>	<i>20.0</i>	<i>18.7</i>	<i>94</i>
<i>Cobalt</i>	<i>20.0</i>	<i>18.1</i>	<i>91</i>
<i>Iron</i>	<i>25000</i>	<i>25351</i>	<i>101</i>
<i>Magnesium</i>	<i>10000</i>	<i>10250</i>	<i>102</i>
<i>Manganese</i>	<i>20.0</i>	<i>19.0</i>	<i>95</i>
<i>Molybdenum</i>	<i>200</i>	<i>196</i>	<i>98</i>
<i>Nickel</i>	<i>20.0</i>	<i>18.9</i>	<i>95</i>
<i>Potassium</i>	<i>10000</i>	<i>10263</i>	<i>103</i>
<i>Selenium</i>	<i>10.0</i>	<i>9.10</i>	<i>91</i>
<i>Silver</i>	<i>5.00</i>	<i>4.67</i>	<i>93</i>
<i>Sodium</i>	<i>25000</i>	<i>25228</i>	<i>101</i>
<i>Strontium</i>		<i>0.379</i>	
<i>Thallium</i>		<i>0.0139</i>	
<i>Tin</i>		<i>0.0456</i>	
<i>Titanium</i>	<i>200</i>	<i>203</i>	<i>101</i>
<i>Vanadium</i>	<i>20.0</i>	<i>19.0</i>	<i>95</i>
<i>Zinc</i>	<i>10.0</i>	<i>9.65</i>	<i>97</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: A2BMP0006S011 MS

Lab ID: 570-25593-1 MS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.1089	ND	0.100	109	80-120		200.8
Copper	0.1032	0.00244	0.100	101	80-120		200.8
Lead	0.1056	ND	0.100	106	80-120		200.8
Mercury	0.006256	ND	0.0100	63	57-141		245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS

Client ID: _____ Lab ID: 570-25445-H-1-B MS
 Lab Name: Eurofins Calscience Job No.: 570-25593-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.003766	ND	0.0100	38	57-141	F1	245.1

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-25110-G-1-B MS
 Lab Name: Eurofins Calscience Job No.: 570-25593-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	0.1046	ND	0.100	105	80-120		200.8
Copper	0.1291	0.0289	0.100	100	80-120		200.8
Lead	0.1197	0.0171	0.100	103	80-120		200.8

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - DISSOLVED

Client ID: A2BMP0006S011 MSD

Lab ID: 570-25593-1 MSD

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1091	0.100	109	80-120	0	20		200.8
Copper	0.1046	0.100	102	80-120	1	20		200.8
Lead	0.1067	0.100	107	80-120	1	20		200.8
Mercury	0.006319	0.0100	63	57-141	1	10		245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS

Client ID: _____ Lab ID: 570-25445-H-1-C MSD
 Lab Name: Eurofins Calscience Job No.: 570-25593-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.003788	0.0100	38	57-141	1	10	F1	245.1

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 570-25110-G-1-C MSD
 Lab Name: Eurofins Calscience Job No.: 570-25593-1
 SDG No.: _____
 Matrix: Water Concentration Units: mg/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1040	0.100	104	80-120	1	20		200.8
Copper	0.1294	0.100	100	80-120	0	20		200.8
Lead	0.1198	0.100	103	80-120	0	20		200.8

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 METALS - TOTAL RECOVERABLE

Lab ID: LCS 570-63381/2-A

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1058		106	80	120		200.8
Copper	0.100	0.1050		105	80	120		200.8
Lead	0.100	0.1040		104	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - TOTAL RECOVERABLE

Lab ID: LCSD 570-63381/3-A

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1058	0.100	106	80-120	0	20		200.8
Copper	0.1031	0.100	103	80-120	2	20		200.8
Lead	0.1028	0.100	103	80-120	1	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-63570/2-A

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00008

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	0.100	0.1063		106	80	120		200.8
Copper	0.100	0.1110		111	80	120		200.8
Lead	0.100	0.1043		104	80	120		200.8

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-63570/3-A

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

Sample Matrix: Water

LCS Source: MT_ICP_Spike1_00008

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	0.1090	0.100	109	80-120	2	20		200.8
Copper	0.1109	0.100	111	80-120	0	20		200.8
Lead	0.1048	0.100	105	80-120	0	20		200.8

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 570-63082/2-A

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00013

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.009862		99	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS

Lab ID: LCSD 570-63082/3-A

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00013

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.009891	0.0100	99	85-121	0	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS - DISSOLVED

Lab ID: LCS 570-63413/2-B

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00013

Analyte	Water (mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.0100	0.01059		106	85	121		245.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS - DISSOLVED

Lab ID: LCSD 570-63413/3-B

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

Sample Matrix: Water

LCS Source: HG_1ppm STD_00013

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.01062	0.0100	106	85-121	0	10		245.1

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience

Job Number: 570-25593-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 12/06/2019 00:00

Prep Method: 200.8

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.00098
Copper	65	0.001	0.00061
Lead	207	0.001	0.00019

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Calscience Job Number: 570-25593-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 12/06/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.9785
Copper	65	1	0.6066
Lead	207	1	0.1929

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-25593-1

SDG Number: _____

Matrix: Water

Instrument ID: ICPMS05

Method: 200.8

MDL Date: 12/06/2019 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cadmium	111	0.001	0.00098
Copper	65	0.001	0.00061
Lead	207	0.001	0.00019

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-25593-1
SDG Number: _____
Matrix: Water Instrument ID: ICPMS05
Method: 200.8 XMDL Date: 12/06/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cadmium	111	1	0.9785
Copper	65	1	0.6066
Lead	207	1	0.1929

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience

Job Number: 570-25593-1

SDG Number: _____

Matrix: Water

Instrument ID: HG7

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins Calscience

Job Number: 570-25593-1

SDG Number: _____

Matrix: Water

Instrument ID: HG7

Method: 245.1

XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience

Job Number: 570-25593-1

SDG Number: _____

Matrix: Water

Instrument ID: HG7

Method: 245.1

MDL Date: 12/11/2016 12:40

Prep Method: 245.1

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0000453

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Calscience Job Number: 570-25593-1
SDG Number: _____
Matrix: Water Instrument ID: HG7
Method: 245.1 XMDL Date: 11/07/2018 14:41

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0002	0.0000453

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05

Date: 04/17/2017 06:04

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Cadmium		10	200.8
Copper		50	200.8
Lead		20	200.8

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Calscience

Job No: 570-25593-1

SDG No.: _____

Instrument ID: HG7

Date: 04/17/2017 05:54

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Mercury		10	245.1

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Prep Method: 200.8

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-63381/1-A	04/15/2020 20:30	63381		50	50
LCS 570-63381/2-A	04/15/2020 20:30	63381		50	50
LCSD 570-63381/3-A	04/15/2020 20:30	63381		50	50
570-25110-G-1-B MS	04/15/2020 20:30	63381		50	50
570-25110-G-1-C MSD	04/15/2020 20:30	63381		50	50
570-25593-1	04/15/2020 20:30	63381		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-63082/1-A	04/14/2020 15:15	63082		50	100
LCS 570-63082/2-A	04/14/2020 15:15	63082		50	100
LCSD 570-63082/3-A	04/14/2020 15:15	63082		50	100
570-25445-H-1-B MS	04/14/2020 15:15	63082		50	100
570-25445-H-1-C MSD	04/14/2020 15:15	63082		50	100
570-25593-1	04/14/2020 15:15	63082		50	100

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Prep Method: 245.1

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 570-63413/1-B	04/16/2020 08:45	63414		50	100
LCS 570-63413/2-B	04/16/2020 08:45	63414		50	100
LCSD 570-63413/3-B	04/16/2020 08:45	63414		50	100
570-25593-1	04/16/2020 08:45	63414		50	100
570-25593-1 MS	04/16/2020 08:45	63414		50	100
570-25593-1 MSD	04/16/2020 08:45	63414		50	100

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/16/2020 09:27 End Date: 04/16/2020 21:33

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICIS 570-63497/1			09:27	X	X	X																									
IC 570-63497/2			09:30	X	X	X																									
ICV 570-63497/3	1		09:32	X	X	X																									
ICV 570-63497/4	1		09:35	X	X	X																									
ICB 570-63497/5	1		09:38	X	X	X																									
CCV 570-63497/6			09:41																												
CCB 570-63497/7			09:43																												
ICSA 570-63497/8			09:46																												
ICSAB 570-63497/9			09:49																												
CCB 570-63497/10			09:52																												
ICVL 570-63497/11			09:55																												
ZZZZZZ			09:57																												
ZZZZZZ			10:00																												
ZZZZZZ			10:03																												
ZZZZZZ			10:06																												
ZZZZZZ			10:08																												
ZZZZZZ			10:11																												
ZZZZZZ			10:14																												
ZZZZZZ			10:17																												
CCV 570-63497/20			10:19																												
CCB 570-63497/21			10:22																												
ZZZZZZ			10:25																												
ZZZZZZ			10:28																												
ZZZZZZ			10:30																												
ZZZZZZ			10:33																												
ZZZZZZ			10:36																												
CCV 570-63497/27			10:39																												
CCB 570-63497/28			10:41																												
ICSA 570-63497/29			10:44																												
ICSAB 570-63497/30			10:47																												
CCB 570-63497/31			10:50																												
ICVL 570-63497/32			10:53																												
ICIS 570-63497/33			10:57	X	X	X																									
IC 570-63497/34			11:00	X	X	X																									
CCV 570-63497/35			11:02																												
CCB 570-63497/36			11:05																												
ICVL 570-63497/37			11:08																												
ZZZZZZ			11:11																												
ZZZZZZ			11:13																												
ZZZZZZ			11:16																												
ZZZZZZ			11:19																												
ZZZZZZ			11:22																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/16/2020 09:27 End Date: 04/16/2020 21:33

Lab Sample Id	D/F	Type	Time	Analytes																											
				C	C	P																									
ZZZZZZ			11:24																												
ZZZZZZ			11:27																												
CCV 570-63497/45			11:30																												
CCB 570-63497/46			11:33																												
ZZZZZZ			11:41																												
ZZZZZZ			11:44																												
ZZZZZZ			11:46																												
ZZZZZZ			11:49																												
ZZZZZZ			11:52																												
ZZZZZZ			11:55																												
ZZZZZZ			11:57																												
ZZZZZZ			12:00																												
ZZZZZZ			12:03																												
CCV 570-63497/56			12:06																												
CCB 570-63497/57			12:08																												
ZZZZZZ			12:11																												
ZZZZZZ			12:14																												
ZZZZZZ			12:17																												
ZZZZZZ			12:19																												
ZZZZZZ			12:22																												
ZZZZZZ			12:25																												
ZZZZZZ			12:28																												
ZZZZZZ			12:30																												
ZZZZZZ			12:33																												
ZZZZZZ			12:36																												
CCV 570-63497/68			12:39																												
CCB 570-63497/69			12:41																												
ICIS 570-63497/70			12:44					X	X	X																					
IC 570-63497/71			12:47					X	X	X																					
CCV 570-63497/72			12:50																												
CCB 570-63497/73			12:53																												
ICVL 570-63497/74			12:55																												
ZZZZZZ			12:58																												
ZZZZZZ			13:01																												
ZZZZZZ			13:04																												
ZZZZZZ			13:06																												
ZZZZZZ			13:09																												
ZZZZZZ			13:12																												
ZZZZZZ			13:15																												
ZZZZZZ			13:17																												
ZZZZZZ			13:20																												
ZZZZZZ			13:23																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/16/2020 09:27 End Date: 04/16/2020 21:33

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
CCV 570-63497/85			13:26																												
CCB 570-63497/86			13:28																												
ZZZZZZ			13:31																												
ZZZZZZ			13:34																												
ZZZZZZ			13:37																												
ZZZZZZ			13:39																												
ZZZZZZ			13:42																												
ZZZZZZ			13:45																												
ZZZZZZ			13:48																												
ZZZZZZ			13:51																												
ZZZZZZ			13:53																												
ZZZZZZ			13:56																												
CCV 570-63497/97			13:59																												
CCB 570-63497/98			14:02																												
ZZZZZZ			14:04																												
ZZZZZZ			14:07																												
ZZZZZZ			14:10																												
ZZZZZZ			14:13																												
ZZZZZZ			14:15																												
ZZZZZZ			14:18																												
CCV 570-63497/105			14:21																												
CCB 570-63497/106			14:24																												
ZZZZZZ			14:32																												
ZZZZZZ			14:33																												
ZZZZZZ			14:35																												
ZZZZZZ			14:36																												
ZZZZZZ			14:37																												
ZZZZZZ			14:39																												
ZZZZZZ			14:40																												
ZZZZZZ			14:42																												
ZZZZZZ			14:43																												
ZZZZZZ			14:45																												
CCV 570-63497/117			14:46																												
CCB 570-63497/118			14:48																												
ICSA 570-63497/119		1	14:49	X	X	X																									
ICSAB 570-63497/120		1	14:50	X	X	X																									
CCB 570-63497/121			14:52																												
ICVL 570-63497/122			14:53																												
ICIS 570-63497/123			14:59	X	X	X																									
IC 570-63497/124			15:02	X	X	X																									
CCV 570-63497/125			15:05																												
CCB 570-63497/126			15:07																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/16/2020 09:27 End Date: 04/16/2020 21:33

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ICVL 570-63497/127			15:10																												
ZZZZZZ			15:13																												
ZZZZZZ			15:16																												
ZZZZZZ			15:19																												
ZZZZZZ			15:22																												
ZZZZZZ			15:25																												
ZZZZZZ			15:27																												
ZZZZZZ			15:30																												
ZZZZZZ			15:33																												
ZZZZZZ			15:36																												
ZZZZZZ			15:38																												
CCV 570-63497/138			15:41																												
CCB 570-63497/139			15:44																												
ICIS 570-63497/140			15:47					X	X	X																					
IC 570-63497/141			15:49					X	X	X																					
CCV 570-63497/142			15:52																												
CCB 570-63497/143			15:55																												
ICVL 570-63497/144			15:58																												
ZZZZZZ			16:01																												
ZZZZZZ			16:03																												
ZZZZZZ			16:06																												
ZZZZZZ			16:09																												
ZZZZZZ			16:12																												
ZZZZZZ			16:14																												
ZZZZZZ			16:17																												
ZZZZZZ			16:20																												
ZZZZZZ			16:23																												
ZZZZZZ			16:25																												
CCV 570-63497/155			16:28																												
CCB 570-63497/156			16:31																												
ZZZZZZ			16:34																												
ZZZZZZ			16:37																												
ZZZZZZ			16:39																												
ZZZZZZ			16:42																												
ZZZZZZ			16:45																												
ZZZZZZ			16:48																												
ZZZZZZ			16:50																												
ZZZZZZ			16:53																												
ZZZZZZ			16:56																												
ZZZZZZ			16:59																												
CCV 570-63497/167			17:01																												
CCB 570-63497/168			17:04																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/16/2020 09:27 End Date: 04/16/2020 21:33

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			17:07																												
ZZZZZZ			17:10																												
ZZZZZZ			17:12																												
ZZZZZZ			17:15																												
ZZZZZZ			17:18																												
ZZZZZZ			17:21																												
ZZZZZZ			17:24																												
ZZZZZZ			17:26																												
ZZZZZZ			17:29																												
ZZZZZZ			17:32																												
CCV 570-63497/179			17:35																												
CCB 570-63497/180			17:37																												
ICIS 570-63497/181			17:40			X	X	X																							
IC 570-63497/182			17:43			X	X	X																							
CCV 570-63497/183			17:46																												
CCB 570-63497/184			17:49																												
ICVL 570-63497/185			17:51																												
ZZZZZZ			17:54																												
ZZZZZZ			17:57																												
ZZZZZZ			18:00																												
ZZZZZZ			18:02																												
ZZZZZZ			18:05																												
ZZZZZZ			18:08																												
ZZZZZZ			18:11																												
ZZZZZZ			18:13																												
ZZZZZZ			18:16																												
ZZZZZZ			18:19																												
CCV 570-63497/196			18:22																												
CCB 570-63497/197			18:25																												
ZZZZZZ			18:27																												
ZZZZZZ			18:30																												
ZZZZZZ			18:33																												
ZZZZZZ			18:36																												
ZZZZZZ			18:38																												
ZZZZZZ			18:41																												
ZZZZZZ			18:44																												
ZZZZZZ			18:47																												
ZZZZZZ			18:49																												
ZZZZZZ			18:52																												
CCV 570-63497/208			18:55																												
CCB 570-63497/209			18:58																												
ZZZZZZ			19:00																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05

Analysis Method: 200.8

Start Date: 04/16/2020 09:27

End Date: 04/16/2020 21:33

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			19:03																												
ZZZZZZ			19:06																												
ZZZZZZ			19:09																												
ZZZZZZ			19:12																												
ZZZZZZ			19:14																												
ZZZZZZ			19:17																												
ZZZZZZ			19:20																												
ZZZZZZ			19:23																												
ZZZZZZ			19:25																												
CCV 570-63497/220			19:28																												
CCB 570-63497/221			19:31																												
ICIS 570-63497/222			19:34					X	X	X																					
IC 570-63497/223	1		19:36					X	X	X																					
CCV 570-63497/224	1		19:39					X	X	X																					
CCB 570-63497/225	1		19:42					X	X	X																					
ICVL 570-63497/226	1		19:45					X	X	X																					
MB 570-63381/1-A	1	R	19:48					X	X	X																					
LCS 570-63381/2-A	1	R	19:50					X	X	X																					
LCSD 570-63381/3-A	1	R	19:53					X	X	X																					
ZZZZZZ			19:56																												
570-25110-G-1-B MS	1	R	19:59					X	X	X																					
570-25110-G-1-C MSD	1	R	20:01					X	X	X																					
ZZZZZZ			20:04																												
ZZZZZZ			20:07																												
ZZZZZZ			20:10																												
ZZZZZZ			20:12																												
CCV 570-63497/237	1		20:15					X	X	X																					
CCB 570-63497/238	1		20:18					X	X	X																					
ZZZZZZ			20:21																												
ZZZZZZ			20:24																												
ZZZZZZ			20:26																												
ZZZZZZ			20:29																												
ZZZZZZ			20:32																												
ZZZZZZ			20:35																												
ZZZZZZ			20:37																												
ZZZZZZ			20:40																												
ZZZZZZ			20:43																												
ZZZZZZ			20:46																												
CCV 570-63497/249			20:48																												
CCB 570-63497/250			20:51																												
ZZZZZZ			20:54																												
ZZZZZZ			20:57																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/16/2020 09:27 End Date: 04/16/2020 21:33

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			21:00																												
ZZZZZZ			21:02																												
ZZZZZZ			21:05																												
ZZZZZZ			21:08																												
ZZZZZZ			21:11																												
ZZZZZZ			21:13																												
ZZZZZZ			21:16																												
ZZZZZZ			21:19																												
CCV 570-63497/261			21:22																												
CCB 570-63497/262			21:24																												
ZZZZZZ			21:27																												
ZZZZZZ			21:30																												
CCB 570-63497/265			21:33																												

Prep Types: _____
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/17/2020 09:24 End Date: 04/17/2020 22:31

Lab Sample Id	D/F	Type	Time	Analytes																											
				C	C	P																									
ICIS 570-63759/1			09:24	X	X	X																									
IC 570-63759/2	1		09:27	X	X	X																									
ICV 570-63759/3	1		09:30	X	X	X																									
ICV 570-63759/4	1		09:39	X	X	X																									
ICB 570-63759/5	1		09:41	X	X	X																									
CCV 570-63759/6			09:44																												
CCB 570-63759/7			09:47																												
ICSA 570-63759/8	1		09:50	X	X	X																									
ICSAB 570-63759/9	1		09:52	X	X	X																									
ICVL 570-63759/10	1		09:58	X	X	X																									
ZZZZZZ			10:04																												
ZZZZZZ			10:06																												
ZZZZZZ			10:09																												
ZZZZZZ			10:12																												
CCV 570-63759/15			10:15																												
CCB 570-63759/16			10:17																												
ZZZZZZ			10:23																												
ZZZZZZ			10:26																												
ZZZZZZ			10:28																												
ZZZZZZ			10:31																												
ZZZZZZ			10:34																												
ZZZZZZ			10:37																												
ZZZZZZ			10:39																												
ZZZZZZ			10:42																												
CCV 570-63759/25	1		10:45	X	X	X																									
CCB 570-63759/26	1		10:48	X	X	X																									
570-25593-1	1	R	10:53	X	X	X																									
ZZZZZZ			10:55																												
ZZZZZZ			10:58																												
ZZZZZZ			11:01																												
ZZZZZZ			11:04																												
ZZZZZZ			11:06																												
ZZZZZZ			11:09																												
ZZZZZZ			11:12																												
ZZZZZZ			11:15																												
CCV 570-63759/36	1		11:17	X	X	X																									
CCB 570-63759/37	1		11:20	X	X	X																									
ICIS 570-63759/38			11:28	X	X	X																									
IC 570-63759/39	1		11:31	X	X	X																									
CCV 570-63759/40			11:34																												
CCB 570-63759/41			11:37																												
ICVL 570-63759/42	1		11:39	X	X	X																									

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/17/2020 09:24 End Date: 04/17/2020 22:31

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			11:42																												
ZZZZZZ			11:45																												
ZZZZZZ			11:48																												
ZZZZZZ			11:50																												
ZZZZZZ			11:53																												
ZZZZZZ			11:56																												
ZZZZZZ			11:59																												
ZZZZZZ			12:02																												
CCV 570-63759/51	1		12:04	X	X	X																									
CCB 570-63759/52	1		12:07	X	X	X																									
MB 570-63570/1-A	1	D	12:43	X	X	X																									
LCS 570-63570/2-A	1	D	12:46	X	X	X																									
LCSD 570-63570/3-A	1	D	12:49	X	X	X																									
570-25593-1	1	D	12:52	X	X	X																									
ZZZZZZ			12:54																												
ZZZZZZ			12:57																												
CCV 570-63759/59	1		13:00	X	X	X																									
CCB 570-63759/60	1		13:03	X	X	X																									
ICIS 570-63759/61			13:33	X	X	X																									
IC 570-63759/62			13:35	X	X	X																									
CCV 570-63759/63			13:38																												
CCB 570-63759/64			13:41																												
ICVL 570-63759/65			13:44																												
ZZZZZZ			13:47																												
ZZZZZZ			13:49																												
ZZZZZZ			13:52																												
ZZZZZZ			13:55																												
ZZZZZZ			13:58																												
ZZZZZZ			14:00																												
ZZZZZZ			14:03																												
ZZZZZZ			14:06																												
ZZZZZZ			14:09																												
CCV 570-63759/75			14:11																												
CCB 570-63759/76			14:14																												
ICIS 570-63759/77			14:23	X	X	X																									
IC 570-63759/78			14:24	X	X	X																									
CCV 570-63759/79			14:26																												
CCB 570-63759/80			14:27																												
ICSA 570-63759/81	1		14:28																												
ICSAB 570-63759/82	1		14:29																												
ICVL 570-63759/83			14:30																												
ZZZZZZ			14:31																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/17/2020 09:24 End Date: 04/17/2020 22:31

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			14:33																												
ZZZZZZ			14:34																												
ZZZZZZ			14:35																												
ZZZZZZ			14:36																												
ZZZZZZ			14:37																												
ZZZZZZ			14:38																												
ZZZZZZ			14:40																												
ZZZZZZ			14:41																												
CCV 570-63759/93			14:42																												
CCB 570-63759/94			14:43																												
ZZZZZZ			14:44																												
ZZZZZZ			14:45																												
ZZZZZZ			14:47																												
ZZZZZZ			14:48																												
ZZZZZZ			14:49																												
CCV 570-63759/100			14:50																												
CCB 570-63759/101			14:51																												
ICSA 570-63759/102			14:52																												
ICSAB 570-63759/103			14:54																												
ICVL 570-63759/104			14:55																												
ICIS 570-63759/105			20:54					X	X	X																					
IC 570-63759/106			20:56					X	X	X																					
CCV 570-63759/107			20:59																												
CCB 570-63759/108			21:02																												
ICVL 570-63759/109			21:05																												
ZZZZZZ			21:08																												
ZZZZZZ			21:10																												
ZZZZZZ			21:13																												
ZZZZZZ			21:16																												
ZZZZZZ			21:19																												
ZZZZZZ			21:21																												
ZZZZZZ			21:24																												
ZZZZZZ			21:27																												
ZZZZZZ			21:30																												
ZZZZZZ			21:32																												
CCV 570-63759/120			21:35																												
CCB 570-63759/121			21:38																												
ZZZZZZ			21:41																												
ZZZZZZ			21:43																												
ZZZZZZ			21:46																												
ZZZZZZ			21:49																												
ZZZZZZ			21:52																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/17/2020 09:24 End Date: 04/17/2020 22:31

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			21:55																												
ZZZZZZ			21:57																												
ZZZZZZ			22:00																												
ZZZZZZ			22:03																												
ZZZZZZ			22:06																												
CCV 570-63759/132			22:08																												
CCB 570-63759/133			22:11																												
ZZZZZZ			22:14																												
ZZZZZZ			22:17																												
CCV 570-63759/136			22:19																												
CCB 570-63759/137			22:22																												
ICSA 570-63759/138			22:25																												
ICSAB 570-63759/139			22:28																												
CCB 570-63759/140			22:31																												

Prep Types: _____
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/20/2020 08:02 End Date: 04/20/2020 18:18

Lab Sample Id	D/F	Type	Time	Analytes																											
				C	C	P																									
ICIS 570-64006/1			08:02	X	X	X																									
IC 570-64006/2			08:05	X	X	X																									
ICV 570-64006/3	1		08:08	X	X	X																									
ICV 570-64006/4	1		08:11	X	X	X																									
ICB 570-64006/5	1		08:13	X	X	X																									
CCV 570-64006/6	1		08:16	X	X	X																									
CCB 570-64006/7			08:19																												
ICSA 570-64006/8	1		08:22	X	X	X																									
ICSAB 570-64006/9	1		08:24	X	X	X																									
CCB 570-64006/10	1		08:27	X	X	X																									
ICVL 570-64006/11	1		08:30	X	X	X																									
ZZZZZZ			08:33																												
ZZZZZZ			08:36																												
570-25593-1 MS	1	D	08:38	X	X	X																									
570-25593-1 MSD	1	D	08:41	X	X	X																									
CCV 570-64006/16	1		08:44	X	X	X																									
CCB 570-64006/17	1		08:47	X	X	X																									
ICIS 570-64006/18			09:46	X	X	X																									
IC 570-64006/19			09:49	X	X	X																									
CCV 570-64006/20			09:51																												
CCB 570-64006/21			09:54																												
ICVL 570-64006/22			09:57																												
ZZZZZZ			10:00																												
ZZZZZZ			10:02																												
ZZZZZZ			10:05																												
ZZZZZZ			10:08																												
ZZZZZZ			10:11																												
ZZZZZZ			10:13																												
ZZZZZZ			10:16																												
ZZZZZZ			10:19																												
ZZZZZZ			10:22																												
CCV 570-64006/32			10:24																												
CCB 570-64006/33			10:27																												
ZZZZZZ			10:30																												
ZZZZZZ			10:33																												
ZZZZZZ			10:36																												
ZZZZZZ			10:38																												
ZZZZZZ			10:41																												
ZZZZZZ			10:44																												
ZZZZZZ			10:47																												
ZZZZZZ			10:49																												
ZZZZZZ			10:52																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/20/2020 08:02 End Date: 04/20/2020 18:18

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			10:55																												
CCV 570-64006/44			10:58																												
CCB 570-64006/45			11:00																												
ZZZZZZ			11:15																												
CCV 570-64006/47			11:18																												
CCB 570-64006/48			11:20																												
ICIS 570-64006/49			11:27			X	X	X																							
IC 570-64006/50			11:29			X	X	X																							
CCV 570-64006/51			11:32																												
CCB 570-64006/52			11:35																												
ICVL 570-64006/53			11:38																												
ZZZZZZ			11:43																												
ZZZZZZ			11:45																												
ZZZZZZ			11:48																												
ZZZZZZ			11:51																												
ZZZZZZ			11:54																												
ZZZZZZ			11:56																												
ZZZZZZ			11:59																												
ZZZZZZ			12:02																												
ZZZZZZ			12:05																												
CCV 570-64006/63			12:07																												
CCB 570-64006/64			12:10																												
ZZZZZZ			12:13																												
ZZZZZZ			12:16																												
ZZZZZZ			12:19																												
ZZZZZZ			12:21																												
ZZZZZZ			12:24																												
ZZZZZZ			12:27																												
ZZZZZZ			12:30																												
ZZZZZZ			12:32																												
ZZZZZZ			12:35																												
ZZZZZZ			12:38																												
CCV 570-64006/75			12:41																												
CCB 570-64006/76			12:43																												
ICIS 570-64006/77			12:46			X	X	X																							
IC 570-64006/78			12:49			X	X	X																							
CCV 570-64006/79			12:52																												
CCB 570-64006/80			12:55																												
ICVL 570-64006/81			12:57																												
ZZZZZZ			13:00																												
ZZZZZZ			13:03																												
ZZZZZZ			13:06																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/20/2020 08:02 End Date: 04/20/2020 18:18

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			13:08																												
ZZZZZZ			13:11																												
ZZZZZZ			13:14																												
ZZZZZZ			13:17																												
ZZZZZZ			13:19																												
ZZZZZZ			13:22																												
ZZZZZZ			13:25																												
CCV 570-64006/92			13:28																												
CCB 570-64006/93			13:30																												
ZZZZZZ			13:36																												
ZZZZZZ			13:39																												
ZZZZZZ			13:42																												
ZZZZZZ			13:45																												
ZZZZZZ			13:47																												
ZZZZZZ			13:50																												
ZZZZZZ			13:53																												
ZZZZZZ			13:56																												
ZZZZZZ			13:58																												
CCV 570-64006/103			14:01																												
CCB 570-64006/104			14:04																												
ZZZZZZ			14:07																												
ZZZZZZ			14:09																												
ZZZZZZ			14:12																												
ZZZZZZ			14:15																												
CCV 570-64006/109			14:23																												
CCB 570-64006/110			14:26																												
ZZZZZZ			14:30																												
ZZZZZZ			14:33																												
ZZZZZZ			14:35																												
ZZZZZZ			14:38																												
ZZZZZZ			14:41																												
ZZZZZZ			14:44																												
ZZZZZZ			14:46																												
ZZZZZZ			14:49																												
CCV 570-64006/119			14:52																												
CCB 570-64006/120			14:55																												
ICIS 570-64006/121			15:09					X	X	X																					
IC 570-64006/122			15:12					X	X	X																					
CCV 570-64006/123			15:15																												
CCB 570-64006/124			15:17																												
ICVL 570-64006/125			15:20																												
ZZZZZZ			15:23																												

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ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/20/2020 08:02 End Date: 04/20/2020 18:18

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			15:26																												
ZZZZZZ			15:29																												
ZZZZZZ			15:31																												
ZZZZZZ			15:34																												
ZZZZZZ			15:37																												
ZZZZZZ			15:40																												
ZZZZZZ			15:42																												
ZZZZZZ			15:45																												
CCV 570-64006/135			15:48																												
CCB 570-64006/136			15:51																												
ZZZZZZ			15:53																												
ZZZZZZ			15:56																												
ZZZZZZ			15:59																												
ZZZZZZ			16:02																												
ZZZZZZ			16:05																												
ZZZZZZ			16:07																												
ZZZZZZ			16:10																												
ZZZZZZ			16:13																												
ZZZZZZ			16:16																												
ZZZZZZ			16:18																												
CCV 570-64006/176			16:21																												
CCB 570-64006/177			16:24																												
ZZZZZZ			16:27																												
ZZZZZZ			16:29																												
ZZZZZZ			16:32																												
ZZZZZZ			16:35																												
ZZZZZZ			16:38																												
ZZZZZZ			16:41																												
ZZZZZZ			16:43																												
ZZZZZZ			16:46																												
ZZZZZZ			16:49																												
ZZZZZZ			16:52																												
CCV 570-64006/188			16:54																												
CCB 570-64006/189			16:57																												
ICIS 570-64006/137			17:00					X	X	X																					
IC 570-64006/138			17:03					X	X	X																					
CCV 570-64006/139			17:06																												
CCB 570-64006/140			17:08																												
ICVL 570-64006/141			17:11																												
ZZZZZZ			17:14																												
ZZZZZZ			17:17																												
ZZZZZZ			17:19																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: ICPMS05 Analysis Method: 200.8

Start Date: 04/20/2020 08:02 End Date: 04/20/2020 18:18

Lab Sample Id	D/F	Type	Time	Analytes																											
				Cd	Cu	Pb																									
ZZZZZZ			17:22																												
ZZZZZZ			17:25																												
ZZZZZZ			17:28																												
ZZZZZZ			17:31																												
ZZZZZZ			17:33																												
ZZZZZZ			17:36																												
ZZZZZZ			17:39																												
CCV 570-64006/152			17:42																												
CCB 570-64006/153			17:44																												
ZZZZZZ			17:47																												
ZZZZZZ			17:50																												
ZZZZZZ			17:53																												
ZZZZZZ			17:55																												
ZZZZZZ			17:58																												
ZZZZZZ			18:01																												
ZZZZZZ			18:04																												
ZZZZZZ			18:06																												
ZZZZZZ			18:09																												
ZZZZZZ			18:12																												
CCV 570-64006/164			18:15																												
CCB 570-64006/165			18:18																												

Prep Types: _____
D = Dissolved

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG No.: _____

Instrument ID: HG7

Analysis Method: 245.1

Start Date: 04/15/2020 09:04

End Date: 04/15/2020 12:27

Lab Sample Id	D/F	Type	Time	Hg	Analytes																			
ICIS 570-63162/1-A			09:04	X																				
IC 570-63162/4-A			09:06	X																				
IC 570-63162/5-A			09:08	X																				
IC 570-63162/6-A			09:11	X																				
IC 570-63162/7-A			09:13	X																				
IC 570-63162/8-A			09:15	X																				
IC 570-63162/9-A			09:18	X																				
ICV 570-62937/2-A	1		10:04	X																				
ICB 570-62937/3-A	1		10:06	X																				
CRA 570-63162/12-A	1		10:08	X																				
CCV 570-62937/10-A	1		10:11	X																				
CCB 570-62937/11-A	1		10:13	X																				
MB 570-63082/1-A	1	T	10:19	X																				
LCS 570-63082/2-A	1	T	10:21	X																				
LCSD 570-63082/3-A	1	T	10:23	X																				
ZZZZZZ			10:26																					
570-25445-H-1-B MS	1	T	10:31	X																				
570-25445-H-1-C MSD	1	T	10:33	X																				
ZZZZZZ			10:35																					
ZZZZZZ			10:37																					
CCV 570-62937/10-A	1		10:44	X																				
CCB 570-62937/11-A	1		10:47	X																				
ZZZZZZ			11:15																					
CRA 570-63162/12-A	1		11:19	X																				
CCV 570-62937/10-A			11:22																					
CCB 570-62937/11-A			11:24																					
ZZZZZZ			11:48																					
ZZZZZZ			11:50																					
ZZZZZZ			11:52																					
ZZZZZZ			11:54																					
ZZZZZZ			11:57																					
ZZZZZZ			11:59																					
ZZZZZZ			12:01																					
ZZZZZZ			12:07																					
ZZZZZZ			12:09																					
ZZZZZZ			12:11																					
CCV 570-62937/10-A			12:13																					
CCB 570-62937/11-A			12:16																					
ZZZZZZ			12:18																					
ZZZZZZ			12:21																					
CRA 570-63162/12-A			12:23																					
CCV 570-62937/10-A			12:25																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: HG7 Analysis Method: 245.1

Start Date: 04/15/2020 09:04 End Date: 04/15/2020 12:27

Lab Sample Id	D/F	Type	Time	Analytes																																				
				Hg																																				
CCB 570-62937/11-A			12:27																																					

Prep Types: _____
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: HG7 Analysis Method: 245.1

Start Date: 04/16/2020 10:51 End Date: 04/16/2020 14:55

Lab Sample Id	D/F	Type	Time	Hg	Analytes																			
ICIS 570-63407/1-A			10:51	X																				
IC 570-63407/4-A			10:54	X																				
IC 570-63407/5-A			10:56	X																				
IC 570-63407/6-A			10:58	X																				
IC 570-63407/7-A			11:00	X																				
IC 570-63407/8-A			11:03	X																				
IC 570-63407/9-A			11:05	X																				
ICV 570-63407/2-A	1		11:13	X																				
ICB 570-63407/3-A	1		11:15	X																				
CRA 570-63407/12-A	1		11:18	X																				
CCV 570-63407/10-A	1		11:20	X																				
CCB 570-63407/11-A	1		11:22	X																				
MB 570-63413/1-B	1	D	11:25	X																				
LCS 570-63413/2-B	1	D	11:27	X																				
LCSD 570-63413/3-B	1	D	11:30	X																				
570-25593-1	1	D	11:32	X																				
570-25593-1 MS	1	D	11:34	X																				
570-25593-1 MSD	1	D	11:37	X																				
ZZZZZZ			11:39																					
ZZZZZZ			11:41																					
570-25593-1	1	T	11:44	X																				
ZZZZZZ			11:46																					
CCV 570-63407/10-A	1		11:48	X																				
CCB 570-63407/11-A	1		11:50	X																				
ZZZZZZ			11:53																					
ZZZZZZ			11:55																					
ZZZZZZ			11:57																					
ZZZZZZ			12:00																					
ZZZZZZ			12:02																					
ZZZZZZ			12:04																					
ZZZZZZ			12:06																					
ZZZZZZ			12:09																					
ZZZZZZ			12:11																					
ZZZZZZ			12:13																					
CCV 570-63407/10-A			12:15																					
CCB 570-63407/11-A			12:18																					
ZZZZZZ			12:20																					
ZZZZZZ			12:22																					
ZZZZZZ			12:24																					
ZZZZZZ			12:27																					
ZZZZZZ			12:29																					
ZZZZZZ			12:31																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Instrument ID: HG7 Analysis Method: 245.1

Start Date: 04/16/2020 10:51 End Date: 04/16/2020 14:55

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			12:34																												
ZZZZZZ			12:36																												
ZZZZZZ			12:38																												
ZZZZZZ			12:40																												
CCV 570-63407/10-A			12:43																												
CCB 570-63407/11-A			12:45																												
ZZZZZZ			12:47																												
ZZZZZZ			12:49																												
CCV 570-63407/10-A			12:52																												
CCB 570-63407/11-A			12:54																												
ZZZZZZ			14:11																												
ZZZZZZ			14:13																												
ZZZZZZ			14:15																												
ZZZZZZ			14:18																												
ZZZZZZ			14:20																												
ZZZZZZ			14:22																												
CCV 570-63407/10-A			14:24																												
CCB 570-63407/11-A			14:27																												
ZZZZZZ			14:32																												
ZZZZZZ			14:34																												
ZZZZZZ			14:36																												
ZZZZZZ			14:46																												
ZZZZZZ			14:48																												
ZZZZZZ			14:50																												
CCV 570-63407/10-A			14:52																												
CCB 570-63407/11-A			14:55																												

Prep Types: _____
D = Dissolved
T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 04/16/2020 End Date: 04/16/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICV 570-63497/3	09:32			98				99		98	
ICV 570-63497/4	09:35			98				100		98	
ICB 570-63497/5	09:38			95				97		95	
ICSA 570-63497/119	14:49			103						100	
ICSAB 570-63497/120	14:50			103						101	
IC 570-63497/223	19:36										
CCV 570-63497/224	19:39			102				104		103	
CCB 570-63497/225	19:42			98				101		101	
ICVL 570-63497/226	19:45			99				100		103	
MB 570-63381/1-A	19:48			98				101		100	
LCS 570-63381/2-A	19:50			100				102		101	
LCSD 570-63381/3-A	19:53			100				103		102	
570-25110-G-1-B MS	19:59			100				102		101	
570-25110-G-1-C MSD	20:01			101				101		101	
CCV 570-63497/237	20:15			98				102		99	
CCB 570-63497/238	20:18			96				98		97	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 04/16/2020 End Date: 04/16/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-63497/3	09:32					100					
ICV 570-63497/4	09:35					100					
ICB 570-63497/5	09:38					99					
ICSA 570-63497/119	14:49					96					
ICSAB 570-63497/120	14:50					98					
IC 570-63497/223	19:36										
CCV 570-63497/224	19:39					101					
CCB 570-63497/225	19:42					101					
ICVL 570-63497/226	19:45					102					
MB 570-63381/1-A	19:48					99					
LCS 570-63381/2-A	19:50					101					
LCSD 570-63381/3-A	19:53					102					
570-25110-G-1-B MS	19:59					99					
570-25110-G-1-C MSD	20:01					99					
CCV 570-63497/237	20:15					99					
CCB 570-63497/238	20:18					96					

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 04/17/2020 End Date: 04/17/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
IC 570-63759/2	09:27										
ICV 570-63759/3	09:30	98		99		100					
ICV 570-63759/4	09:39	99		98		101					
ICB 570-63759/5	09:41	98		99		99					
ICSA 570-63759/8	09:50	107		101		101					
ICSAB 570-63759/9	09:52	107		104		103					
ICVL 570-63759/10	09:58	102		101		103					
CCV 570-63759/25	10:45	105		102		104					
CCB 570-63759/26	10:48	102		99		100					
570-25593-1	10:53	105		100		100					
CCV 570-63759/36	11:17	108		104		103					
CCB 570-63759/37	11:20	104		100		101					
IC 570-63759/39	11:31										
ICVL 570-63759/42	11:39	99		101		99		100			
CCV 570-63759/51	12:04	108		108		107		103			
CCB 570-63759/52	12:07	103		102		103		99			
MB 570-63570/1-A	12:43	100		102		99		97			
LCS 570-63570/2-A	12:46	105		109		104		102			
LCSD 570-63570/3-A	12:49	103		109		104		100			
570-25593-1	12:52	105		102		102		99			
CCV 570-63759/59	13:00	105		109		103		101			
CCB 570-63759/60	13:03	101		100		102		98			
ICSA 570-63759/81	14:28	105						100			
ICSAB 570-63759/82	14:29	107						101			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 04/17/2020 End Date: 04/17/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
IC 570-63759/2	09:27										
ICV 570-63759/3	09:30					101					
ICV 570-63759/4	09:39					98					
ICB 570-63759/5	09:41					97					
ICSA 570-63759/8	09:50					99					
ICSAB 570-63759/9	09:52					100					
ICVL 570-63759/10	09:58					99					
CCV 570-63759/25	10:45					101					
CCB 570-63759/26	10:48					99					
570-25593-1	10:53					97					
CCV 570-63759/36	11:17					103					
CCB 570-63759/37	11:20					101					
IC 570-63759/39	11:31										
ICVL 570-63759/42	11:39					99					
CCV 570-63759/51	12:04					102					
CCB 570-63759/52	12:07					99					
MB 570-63570/1-A	12:43					95					
LCS 570-63570/2-A	12:46					99					
LCSD 570-63570/3-A	12:49					98					
570-25593-1	12:52					97					
CCV 570-63759/59	13:00					98					
CCB 570-63759/60	13:03					96					
ICSA 570-63759/81	14:28					99					
ICSAB 570-63759/82	14:29					101					

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 04/20/2020 End Date: 04/20/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
		Sc		Ga		Ga		In			
ICV 570-64006/3	08:08			100				103		101	
ICV 570-64006/4	08:11			101				103		103	
ICB 570-64006/5	08:13			99				102		99	
CCV 570-64006/6	08:16			101				102		101	
ICSA 570-64006/8	08:22			106				105		107	
ICSAB 570-64006/9	08:24			108				107		105	
CCB 570-64006/10	08:27			103				103		103	
ICVL 570-64006/11	08:30			104				106		105	
570-25593-1 MS	08:38			107				106		103	
570-25593-1 MSD	08:41			108				106		102	
CCV 570-64006/16	08:44			104				107		103	
CCB 570-64006/17	08:47			102				105		100	

15-IN
 ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
 METALS

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

ICP-MS Instrument ID: ICPMS05 Start Date: 04/20/2020 End Date: 04/20/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICV 570-64006/3	08:08					103					
ICV 570-64006/4	08:11					104					
ICB 570-64006/5	08:13					101					
CCV 570-64006/6	08:16					101					
ICSA 570-64006/8	08:22					103					
ICSAB 570-64006/9	08:24					102					
CCB 570-64006/10	08:27					102					
ICVL 570-64006/11	08:30					104					
570-25593-1 MS	08:38					101					
570-25593-1 MSD	08:41					101					
CCV 570-64006/16	08:44					101					
CCB 570-64006/17	08:47					101					

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63381 Batch Start Date: 04/15/20 20:30 Batch Analyst: Munoz, Giovanni

Batch Method: 200.8 Batch End Date: 04/15/20 23:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MT: 1:1 HCl 00003	MT: 1:1 HNO3 00002	MT_ICP_Spike1 00008
MB 570-63381/1		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	
LCS 570-63381/2		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
LCSD 570-63381/3		200.8, 200.8			50 mL	50 mL	0.5 mL	1 mL	50 uL
570-25110-G-1 MS		200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	50 uL
570-25110-G-1 MSD		200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	50 uL
570-25593-B-1	A2BMP0006S011	200.8, 200.8	R	<2	50 mL	50 mL	0.5 mL	1 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00007	MT_MS_SPIKE_3 00002				
MB 570-63381/1		200.8, 200.8							
LCS 570-63381/2		200.8, 200.8		50 uL	0.25 mL				
LCSD 570-63381/3		200.8, 200.8		50 uL	0.25 mL				
570-25110-G-1 MS		200.8, 200.8	R	50 uL	0.25 mL				
570-25110-G-1 MSD		200.8, 200.8	R	50 uL	0.25 mL				
570-25593-B-1	A2BMP0006S011	200.8, 200.8	R						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63381 Batch Start Date: 04/15/20 20:30 Batch Analyst: Munoz, Giovanni

Batch Method: 200.8 Batch End Date: 04/15/20 23:00

Batch Notes	
Lot # of hydrochloric acid	MR060919B
Lot # of Nitric Acid	MR060919A
Hot Block ID	13
Oven, Bath or Block Temperature 1	95.8 Degrees C
Oven, Bath or Block Temperature 2	95.8 Degrees C
pH Paper ID	M006-47-07
Pipette ID	P-116/D-30/ MD-032
Thermometer ID	Y20-16
Digestion Tube/Cup ID	J23679876
Uncorrected Temperature	95 Degrees C
Uncorrected Temperature 2	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63570 Batch Start Date: 04/10/20 19:00 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00002	MT_ICP_Spike1 00008
MB 570-63570/1		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-63570/2		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
LCSD 570-63570/3		Filtration, 200.8		50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-25593-A-1	A2BMP0006S011	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-25593-A-1 MS	A2BMP0006S011	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL
570-25593-A-1 MSD	A2BMP0006S011	Filtration, 200.8	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	50 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_ICP_Spike2 00007	MT_MS_SPIKE_3 00002				
MB 570-63570/1		Filtration, 200.8							
LCS 570-63570/2		Filtration, 200.8		50 uL	0.25 mL				
LCSD 570-63570/3		Filtration, 200.8		50 uL	0.25 mL				
570-25593-A-1	A2BMP0006S011	Filtration, 200.8	D						
570-25593-A-1 MS	A2BMP0006S011	Filtration, 200.8	D	50 uL	0.25 mL				
570-25593-A-1 MSD	A2BMP0006S011	Filtration, 200.8	D	50 uL	0.25 mL				

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63759 Batch Start Date: 04/17/20 09:24 Batch Analyst: Lee, Francis

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_BLK_1 00002	MT_MS_CCV 00005	MT_MS_IC 00008	MT_MS_ICS_A 00002	MT_MS_ICS_AB 00002	MT_MS_ICV1 00004
IC 570-63759/2		200.8				# mL			
ICV 570-63759/3		200.8							# mL
ICV 570-63759/4		200.8							
ICB 570-63759/5		200.8		# mL					
ICSA 570-63759/8		200.8					# mL		
ICSAB 570-63759/9		200.8						# mL	
ICVL 570-63759/10		200.8							
CCV 570-63759/25		200.8			# mL				
CCB 570-63759/26		200.8		# mL					
CCV 570-63759/36		200.8			# mL				
CCB 570-63759/37		200.8		# mL					
IC 570-63759/39		200.8				# mL			
ICVL 570-63759/42		200.8							
CCV 570-63759/51		200.8			# mL				
CCB 570-63759/52		200.8		# mL					
CCV 570-63759/59		200.8			# mL				
CCB 570-63759/60		200.8		# mL					
ICSA 570-63759/81		200.8					# mL		
ICSAB 570-63759/82		200.8						# mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_ICV2 00004	MT_MS_LL 00006				
IC 570-63759/2		200.8							
ICV 570-63759/3		200.8							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63759 Batch Start Date: 04/17/20 09:24 Batch Analyst: Lee, Francis

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_ICV2 00004	MT_MS_LL 00006				
ICV 570-63759/4		200.8		# mL					
ICB 570-63759/5		200.8							
ICSA 570-63759/8		200.8							
ICSAB 570-63759/9		200.8							
ICVL 570-63759/10		200.8			# mL				
CCV 570-63759/25		200.8							
CCB 570-63759/26		200.8							
CCV 570-63759/36		200.8							
CCB 570-63759/37		200.8							
IC 570-63759/39		200.8							
ICVL 570-63759/42		200.8			# mL				
CCV 570-63759/51		200.8							
CCB 570-63759/52		200.8							
CCV 570-63759/59		200.8							
CCB 570-63759/60		200.8							
ICSA 570-63759/81		200.8							
ICSAB 570-63759/82		200.8							

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 64006 Batch Start Date: 04/20/20 08:02 Batch Analyst: Lee, Francis

Batch Method: 200.8 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_BLK_1 00002	MT_MS_CCV 00005	MT_MS_ICS_A 00002	MT_MS_ICS_AB 00002	MT_MS_ICV1 00004	MT_MS_ICV2 00004
ICV 570-64006/3		200.8						# mL	
ICV 570-64006/4		200.8							# mL
ICB 570-64006/5		200.8		# mL					
CCV 570-64006/6		200.8			# mL				
ICSA 570-64006/8		200.8				# mL			
ICSAB 570-64006/9		200.8					# mL		
CCB 570-64006/10		200.8		# mL					
ICVL 570-64006/11		200.8							
CCV 570-64006/16		200.8			# mL				
CCB 570-64006/17		200.8		# mL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_MS_LL 00006					
ICV 570-64006/3		200.8							
ICV 570-64006/4		200.8							
ICB 570-64006/5		200.8							
CCV 570-64006/6		200.8							
ICSA 570-64006/8		200.8							
ICSAB 570-64006/9		200.8							
CCB 570-64006/10		200.8							
ICVL 570-64006/11		200.8		# mL					
CCV 570-64006/16		200.8							
CCB 570-64006/17		200.8							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 64006 Batch Start Date: 04/20/20 08:02 Batch Analyst: Lee, Francis

Batch Method: 200.8 Batch End Date: _____

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

200.8

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 62937 Batch Start Date: 04/14/20 06:30 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 04/14/20 08:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00016	HG_1ppm STD 00013	Hg_H2SO4 00001	Hg_K2S2O3 00003
ICV 570-62937/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-62937/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-62937/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-62937/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00005	Hg_NaCl-NH2OH 00007	MT-HNO3 CON. 00001			
ICV 570-62937/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-62937/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-62937/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-62937/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 62937 Batch Start Date: 04/14/20 06:30 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 04/14/20 08:45

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	8:45
Digestion Start Time	6:45
Digestion Unit ID	16
Sulfuric Acid ID	022376
Nitric Acid ID	170341
Hydroxylamine ID	548442
Potassium Persulfate ID	532852
Potassium Permanganate ID	548814
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1220
Sufficient Volume for Batch QC	yes
Thermometer ID	Y20-16
Digestion Tube/Cup ID	191111
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	95 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63082 Batch Start Date: 04/14/20 15:15 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 04/14/20 17:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg_1ppm STD 00013	Hg_H2SO4 00001	Hg_K2S2O3 00003
MB 570-63082/1		245.1, 245.1			50 mL	100 mL		2.5 mL	4 mL
LCS 570-63082/2		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-63082/3		245.1, 245.1			50 mL	100 mL	500 uL	2.5 mL	4 mL
570-25445-H-1 MS		245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-25445-H-1 MSD		245.1, 245.1	T	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-25593-B-1	A2BMP0006S011	245.1, 245.1	T	<2	50 mL	100 mL		2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00005	Hg_NaCl-NH2OH 00007	MT-HNO3 CON. 00001			
MB 570-63082/1		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-63082/2		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-63082/3		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-25445-H-1 MS		245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-25445-H-1 MSD		245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			
570-25593-B-1	A2BMP0006S011	245.1, 245.1	T	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63082 Batch Start Date: 04/14/20 15:15 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 04/14/20 17:15

Batch Notes	
Batch Comment	-
Temperature - Corrected - End	95.5 Degrees C
Temperature - Corrected - Start	95.5 Degrees C
Digestion End Time	04/14/2020 17:15
Digestion Start Time	04/14/2020 15:15
Digestion Unit ID	Block 16
Sulfuric Acid Lot Number	022376
Nitric Acid ID	170341
Hydroxylamine ID	548442
Potassium Persulfate ID	532852
Potassium Permanganate ID	548814
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1220
Sufficient Volume for Batch QC	yes
Thermometer ID	Y20-16
Digestion Tube/Cup ID	191111
Temperature - Uncorrected - End	95.5 Degrees C
Temperature - Uncorrected - Start	95 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63162 Batch Start Date: 04/15/20 06:30 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 04/15/20 08:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg_1ppm STD 00013	Hg_H2SO4 00001	Hg_K2S2O3 00003	Hg_KMnO4 00005
CRA 570-63162/12		7470A, 245.1		50 mL	100 mL	25 uL	2.5 mL	4 mL	7.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_NaCl-NH2OH 00007	MT-HNO3 CON. 00001				
CRA 570-63162/12		7470A, 245.1		3 mL	1.25 mL				

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	8:45
Digestion Start Time	6:45
Digestion Unit ID	16
Sulfuric Acid ID	022376
Nitric Acid ID	170341
Hydroxylamine ID	548442
Potassium Persulfate ID	532852
Potassium Permanganate ID	548814
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1220
Sufficient Volume for Batch QC	yes
Thermometer ID	Y20-16
Digestion Tube/Cup ID	191111
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	95 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

245.1

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63407 Batch Start Date: 04/16/20 06:30 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 04/16/20 08:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HG_1ppm ICV 00016	HG_1ppm STD 00013	Hg_H2SO4 00001	Hg_K2S2O3 00003
ICV 570-63407/2		7470A, 245.1		50 mL	100 mL	500 uL		2.5 mL	4 mL
ICB 570-63407/3		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CCV 570-63407/10		7470A, 245.1		50 mL	100 mL		200 uL	2.5 mL	4 mL
CCB 570-63407/11		7470A, 245.1		50 mL	100 mL			2.5 mL	4 mL
CRA 570-63407/12		7470A, 245.1		50 mL	100 mL		25 uL	2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00005	Hg_NaCl-NH2OH 00007	MT-HNO3 CON. 00001			
ICV 570-63407/2		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
ICB 570-63407/3		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCV 570-63407/10		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CCB 570-63407/11		7470A, 245.1		7.5 mL	3 mL	1.25 mL			
CRA 570-63407/12		7470A, 245.1		7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63407 Batch Start Date: 04/16/20 06:30 Batch Analyst: Ardekani, Tetyana

Batch Method: 7470A Batch End Date: 04/16/20 08:45

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	8:45
Digestion Start Time	6:45
Digestion Unit ID	16
Sulfuric Acid ID	022376
Nitric Acid ID	170341
Hydroxylamine ID	548442
Potassium Persulfate ID	532852
Potassium Permanganate ID	548814
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1220
Sufficient Volume for Batch QC	yes
Thermometer ID	Y20-16
Digestion Tube/Cup ID	191111
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	95 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63413 Batch Start Date: 04/10/20 20:00 Batch Analyst: Rolin, Randy

Batch Method: Filtration Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	Final pH	MT: 1:1 HNO3 00002	
MB 570-63413/1		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCS 570-63413/2		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
LCSD 570-63413/3		Filtration, 245.1, 245.1		50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-25593-C-1	A2BMP0006S011	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-25593-C-1 MS	A2BMP0006S011	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	
570-25593-C-1 MSD	A2BMP0006S011	Filtration, 245.1, 245.1	D	50 mL	50 mL	>2 SU	<2 SU	1 mL	

Batch Notes	
Filter ID	R8NA47060
Nitric Acid ID	MR060519A
Pipette/Syringe/Dispenser ID	P-116/D-030

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63414 Batch Start Date: 04/16/20 08:45 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 04/16/20 11:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg_lppm STD 00013	Hg_H2SO4 00001	Hg_K2S2O3 00003
MB 570-63413/1-A		245.1, 245.1		<2	50 mL	100 mL		2.5 mL	4 mL
LCS 570-63413/2-A		245.1, 245.1		<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
LCSD 570-63413/3-A		245.1, 245.1		<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-25593-C-1-A	A2BMP0006S011	245.1, 245.1	D	<2	50 mL	100 mL		2.5 mL	4 mL
570-25593-C-1-B MS	A2BMP0006S011	245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL
570-25593-C-1-C MSD	A2BMP0006S011	245.1, 245.1	D	<2	50 mL	100 mL	500 uL	2.5 mL	4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	Hg_KMnO4 00005	Hg_NaCl-NH2OH 00007	MT-HNO3 CON. 00001			
MB 570-63413/1-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCS 570-63413/2-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
LCSD 570-63413/3-A		245.1, 245.1		7.5 mL	3 mL	1.25 mL			
570-25593-C-1-A	A2BMP0006S011	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-25593-C-1-B MS	A2BMP0006S011	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			
570-25593-C-1-C MSD	A2BMP0006S011	245.1, 245.1	D	7.5 mL	3 mL	1.25 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63414 Batch Start Date: 04/16/20 08:45 Batch Analyst: Rolin, Randy

Batch Method: 245.1 Batch End Date: 04/16/20 11:15

Batch Notes	
Batch Comment	-
Temperature - Corrected - End	95.5 Degrees C
Temperature - Corrected - Start	95.5 Degrees C
Digestion End Time	04/16/2020 11:15
Digestion Start Time	04/16/2020 08:45
Digestion Unit ID	Block 16
Sulfuric Acid Lot Number	022376
Nitric Acid ID	170341
Hydroxylamine ID	548442
Potassium Persulfate ID	532852
Potassium Permanganate ID	548814
Pipette/Syringe/Dispenser ID	Pipette:MP-59/MP-010 Dispenser:D-063/D-084/D-073/D-047/D-048
Analyst ID - Spike Analyst	1220
Sufficient Volume for Batch QC	yes
Thermometer ID	Y20-16
Digestion Tube/Cup ID	191111
Temperature - Uncorrected - End	95.5 Degrees C
Temperature - Uncorrected - Start	95 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Thursday, April 16, 2020 08:27:44

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2020\200416E1\STD Performance Check.005

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens. SD	Net Intens. RSD	Mode
Be	9.0		3151.6		3151.614	48.783	1.5	Standard
In	114.9		42624.7		42624.697	220.559	0.5	Standard
U	238.1		31927.6		31927.639	198.206	0.6	Standard
[CeO	155.9		555.9		0.017	0.000	1.4	Standard
> Ce	139.9		32785.6		32785.583	411.894	1.3	Standard
[Ce++	70.0		556.3		0.017	0.001	3.9	Standard
Bkgd	220.0		0.8		0.767	0.401	52.4	Standard

Current Conditions File Data

Current Value	Description
0.96	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.50	Deflector Voltage
1600.00	ICP RF Power
-1612.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-19.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-24.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.00	DRC Mode QRO
-2.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-12.00	KED Mode CRO
-22.50	KED Mode QRO
-15.00	KED Mode Cell Entrance Voltage
-38.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Thursday, April 16, 2020 08:29:48

Page 1

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, April 16, 2020 09:27:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICIS-23447.035

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		36181.321		ppb		1.332		
9	Be	|		14.444		ppb		35.251		
10	B	|		314.448		ppb		9.501		
27	Al	|		7678.731		ppb		2.898		
43	Ca-2	|		65.000		ppb		27.735		
49	Ti	|		240.002		ppb		13.249		
52	Cr	|		13894.534		ppb		2.206		
55	Mn	|		730.019		ppb		6.442		
57	Fe	|		9459.800		ppb		3.121		
45	Sc-IS	>		1688502.270		ppb		1.640		
66	Zn	|		893.361		ppb		7.119		
86	Sr	|		-12.662		ppb		430.009		
65	Cu	|		71.915		ppb		21.851		
69	Ga-IS	|		484617.027		ppb		2.452		
95	Mo	|		34.444		ppb		20.145		
115	In-IS	>		299287.457		ppb		0.880		
111	Cd	|		11.039		ppb		34.740		
118	Sn	|		382.227		ppb		14.834		
121	Sb	|		1387.845		ppb		5.645		
135	Ba	|		21.111		ppb		32.868		
165	Ho-IS	|		295390.505		ppb		0.415		
159	Tb-IS	|		267519.443		ppb		0.648		
207	Pb	|		157.778		ppb		3.227		
203	Tl	|		18.889		ppb		56.727		
209	Bi-IS	>		184936.150		ppb		1.304		
51	V	|		77.778		ppb		13.777		
59	Co	|		16.667		ppb		20.000		
60	Ni	|		54.445		ppb		12.745		
75	As	|		637.706		ppb		0.966		
71	Ga-ISK	>		116363.132		ppb		0.971		
82	Se-2	|		-0.136		ppb		3922.425		
107	Ag-1	|		22.222		ppb		31.225		
115	In-ISK	|		102405.699		ppb		2.288		
45	Sc-ISK	>		290123.615		ppb		1.703		
23	Na	|		3308.718		ppb		7.359		
39	K	|		124435.172		ppb		0.790		
24	Mg	|		111.667		ppb		31.767		
159	Tb-ISK	|		199027.657		ppb		1.332		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, April 16, 2020 09:30:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\IC-210761.036

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35061.869		ppb		1.496		36181.321
9	Be	|	335790.871	200.000000	ppb		1.033	1.435	14.444
10	B	|	191052.514	500.000000	ppb		1.245	2.118	314.448
27	Al	|	1584783.897	200.000000	ppb		0.897	2.196	7678.731
43	Ca-2	|	185020.656	10200.000000	ppb		1.686	0.877	65.000
49	Ti	|	133896.806	200.000000	ppb		0.661	2.022	240.002
52	Cr	|	1786666.918	200.000000	ppb		0.991	2.105	13894.534
55	Mn	|	2619949.353	200.000000	ppb		0.207	1.958	730.019
57	Fe	|	2577895.072	10200.000000	ppb		0.789	2.752	9459.800
45	Sc-IS	>	1653775.302		ppb		2.125		1688502.270
66	Zn	|	262457.126	200.000000	ppb		1.522	0.968	893.361
86	Sr	|	399806.669	200.000000	ppb		1.704	3.832	-12.662
65	Cu	|	389091.465	200.000000	ppb		0.221	2.075	71.915
69	Ga-IS	|	521387.688		ppb		0.696		484617.027
95	Mo	|	383319.062	200.000000	ppb		2.613	4.783	34.444
115	In-IS	>	295817.097		ppb		1.485		299287.457
111	Cd	|	375022.032	200.000000	ppb		1.695	0.799	11.039
118	Sn	|	1069370.219	200.000000	ppb		0.933	0.626	382.227
121	Sb	|	1179065.133	200.000000	ppb		1.245	1.874	1387.845
135	Ba	|	238179.212	200.000000	ppb		0.882	2.314	21.111
165	Ho-IS	|	299267.798		ppb		2.438		295390.505
159	Tb-IS	|	270475.570		ppb		1.090		267519.443
207	Pb	|	3401136.200	200.000000	ppb		1.155	1.141	157.778
203	Tl	|	1016802.432	200.000000	ppb		0.993	2.220	18.889
209	Bi-IS	>	181336.195		ppb		2.102		184936.150
51	V	|	142420.885	200.000000	ppb		0.830	2.160	77.778
59	Co	|	360307.401	200.000000	ppb		0.903	2.440	16.667
60	Ni	|	200012.768	200.000000	ppb		1.048	0.785	54.445
75	As	|	94863.694	200.000000	ppb		2.788	1.814	637.706
71	Ga-ISK	>	113587.643		ppb		1.615		116363.132
82	Se-2	|	8678.174	200.000000	ppb		1.208	2.519	-0.136
107	Ag-1	|	817336.661	200.000000	ppb		1.245	0.550	22.222
115	In-ISK	|	102690.510		ppb		0.862		102405.699
45	Sc-ISK	>	290875.150		ppb		1.387		290123.615
23	Na	|	5385332.033	10200.000000	ppb		1.266	0.579	3308.718
39	K	|	12217221.654	10200.000000	ppb		1.698	0.334	124435.172
24	Mg	|	6035825.398	10200.000000	ppb		1.670	0.448	111.667
159	Tb-ISK	|	204652.898		ppb		0.978		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-446960

Autosampler Position: 206

Sample Date/Time: Thursday, April 16, 2020 09:32:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICV-446960.037

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		35110.880		ppb		1.661		36181.321
9	Be	|		169556.992	100.890231	ppb		0.639	1.246	14.444
10	B	|		865.582	1.461593	ppb		10.786	18.554	314.448
27	Al	|		6720.472	-0.101678	ppb		4.900	52.700	7678.731
43	Ca-2	|		93141.167	5127.985917	ppb		3.042	2.500	65.000
49	Ti	|		66577.012	99.161112	ppb		1.120	1.000	240.002
52	Cr	|		897258.163	99.559941	ppb		2.088	1.432	13894.534
55	Mn	|		1235981.117	94.221839	ppb		1.250	1.312	730.019
57	Fe	|		1230517.566	4843.825191	ppb		1.956	1.960	9459.800
45	Sc-IS	>		1655213.686		ppb		1.479		1688502.270
66	Zn	|		133898.422	101.601457	ppb		3.509	2.956	893.361
86	Sr	|		192236.747	96.047501	ppb		1.165	1.943	-12.662
65	Cu	|		192141.787	98.632400	ppb		2.981	2.679	71.915
69	Ga-IS	|		470647.433		ppb		2.244		484617.027
95	Mo	|		189550.393	98.758358	ppb		0.721	2.128	34.444
115	In-IS	>		294486.688		ppb		1.086		299287.457
111	Cd	|		189931.521	101.748487	ppb		0.985	0.778	11.039
118	Sn	|		534654.080	100.407528	ppb		1.065	0.834	382.227
121	Sb	|		588530.824	100.149563	ppb		1.399	0.549	1387.845
135	Ba	|		71.111	0.042401	ppb		16.462	22.103	21.111
165	Ho-IS	|		296133.501		ppb		0.727		295390.505
159	Tb-IS	|		266828.866		ppb		0.171		267519.443
207	Pb	|		1698715.878	98.292514	ppb		0.299	1.737	157.778
203	Tl	|		495828.328	95.949126	ppb		0.962	1.314	18.889
209	Bi-IS	>		184281.136		ppb		1.474		184936.150
51	V	|		69896.159	96.405975	ppb		1.614	0.289	77.778
59	Co	|		173597.288	94.705315	ppb		0.339	1.585	16.667
60	Ni	|		101688.418	99.933960	ppb		0.472	1.752	54.445
75	As	|		47974.257	98.752730	ppb		2.408	0.629	637.706
71	Ga-ISK	>		115560.065		ppb		1.879		116363.132
82	Se-2	|		4316.499	97.766065	ppb		1.253	0.630	-0.136
107	Ag-1	|		413.339	0.094186	ppb		11.377	13.048	22.222
115	In-ISK	|		100787.076		ppb		1.588		102405.699
45	Sc-ISK	>		285842.834		ppb		1.346		290123.615
23	Na	|		3947.213	1.323617	ppb		4.252	17.043	3308.718
39	K	|		133788.018	9.617379	ppb		0.694	17.347	124435.172
24	Mg	|		2947081.725	5068.164408	ppb		1.194	0.790	111.667
159	Tb-ISK	|		200812.930		ppb		0.683		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-446961

Autosampler Position: 213

Sample Date/Time: Thursday, April 16, 2020 09:35:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICV-446961.038

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		35172.149		ppb				2.315		36181.321
9	Be	|		34.444	0.012098	ppb				20.145	34.553	14.444
10	B	|		38641.083	100.453569	ppb				1.152	0.931	314.448
27	Al	|		805489.838	101.172987	ppb				1.440	2.876	7678.731
43	Ca-2	|		88.334	1.383309	ppb				45.401	166.488	65.000
49	Ti	|		292.225	0.085250	ppb				11.254	53.558	240.002
52	Cr	|		10238.114	-0.380450	ppb				3.158	4.207	13894.534
55	Mn	|		741.130	0.002000	ppb				2.477	88.385	730.019
57	Fe	|		8714.880	-2.190775	ppb				2.177	7.303	9459.800
45	Sc-IS	>		1653993.609		ppb				1.786		1688502.270
66	Zn	|		897.806	0.017276	ppb				2.737	38.872	893.361
86	Sr	|		39.061	0.025852	ppb				54.109	42.589	-12.662
65	Cu	|		128.128	0.029658	ppb				6.467	14.874	71.915
69	Ga-IS	|		498546.064		ppb				0.965		484617.027
95	Mo	|		434.451	0.208869	ppb				4.226	2.969	34.444
115	In-IS	>		292630.161		ppb				0.948		299287.457
111	Cd	|		31.310	0.011071	ppb				16.384	25.616	11.039
118	Sn	|		5015.325	0.877789	ppb				2.890	2.772	382.227
121	Sb	|		2116.824	0.130498	ppb				8.480	24.417	1387.845
135	Ba	|		124101.478	105.328613	ppb				3.019	3.640	21.111
165	Ho-IS	|		295387.212		ppb				0.844		295390.505
159	Tb-IS	|		264749.939		ppb				1.451		267519.443
207	Pb	|		1031.125	0.050530	ppb				9.242	12.804	157.778
203	Tl	|		321.115	0.058433	ppb				5.717	7.691	18.889
209	Bi-IS	>		184606.459		ppb				1.685		184936.150
51	V	|		46.667	-0.042693	ppb				24.744	36.745	77.778
59	Co	|		43.333	0.014461	ppb				33.530	54.998	16.667
60	Ni	|		55.556	0.001038	ppb				24.249	1238.316	54.445
75	As	|		683.870	0.095922	ppb				10.418	159.583	637.706
71	Ga-ISK	>		116373.192		ppb				0.529		116363.132
82	Se-2	|		2.515	0.060079	ppb				235.024	221.129	-0.136
107	Ag-1	|		194693.436	46.497500	ppb				1.383	1.902	22.222
115	In-ISK	|		102651.839		ppb				0.041		102405.699
45	Sc-ISK	>		285454.400		ppb				1.897		290123.615
23	Na	|		524698.397	1007.034008	ppb				1.500	0.399	3308.718
39	K	|		1301744.781	1013.879486	ppb				0.645	1.729	124435.172
24	Mg	|		518.343	0.705065	ppb				14.735	20.578	111.667
159	Tb-ISK	|		201388.311		ppb				0.903		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Thursday, April 16, 2020 09:38:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICB-23446.039

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34589.611		ppb		1.766		36181.321
9	Be	|		28.889	0.009327	ppb	26.647	52.568		14.444
10	B	|		652.237	0.953855	ppb	7.923	16.572		314.448
27	Al	|		13420.747	0.798593	ppb	1.931	6.831		7678.731
43	Ca-2	|		145.001	4.726243	ppb	5.973	12.495		65.000
49	Ti	|		256.669	0.043654	ppb	9.091	81.465		240.002
52	Cr	|		10531.660	-0.312095	ppb	2.696	5.199		13894.534
55	Mn	|		1295.614	0.047251	ppb	1.040	2.992		730.019
57	Fe	|		8806.048	-0.795804	ppb	2.854	67.701		9459.800
45	Sc-IS	>		1606362.061		ppb	1.395			1688502.270
66	Zn	|		1123.378	0.215281	ppb	5.723	23.299		893.361
86	Sr	|		65.804	0.040122	ppb	15.389	14.110		-12.662
65	Cu	|		142.732	0.039315	ppb	2.439	2.006		71.915
69	Ga-IS	|		462897.117		ppb	2.362			484617.027
95	Mo	|		130.001	0.052265	ppb	11.177	16.342		34.444
115	In-IS	>		285104.935		ppb	0.938			299287.457
111	Cd	|		28.616	0.010001	ppb	26.795	41.684		11.039
118	Sn	|		2170.165	0.350431	ppb	6.863	7.183		382.227
121	Sb	|		1370.066	0.008405	ppb	8.709	238.480		1387.845
135	Ba	|		105.556	0.074383	ppb	11.090	12.678		21.111
165	Ho-IS	|		285628.388		ppb	0.790			295390.505
159	Tb-IS	|		258757.601		ppb	2.217			267519.443
207	Pb	|		523.337	0.021501	ppb	5.838	7.882		157.778
203	Tl	|		127.778	0.021354	ppb	27.152	32.005		18.889
209	Bi-IS	>		182348.636		ppb	0.321			184936.150
51	V	|		44.445	-0.043520	ppb	24.109	37.415		77.778
59	Co	|		35.556	0.010874	ppb	35.493	65.323		16.667
60	Ni	|		75.556	0.023094	ppb	9.184	32.898		54.445
75	As	|		614.798	-0.005867	ppb	4.656	628.787		637.706
71	Ga-ISK	>		112644.686		ppb	1.839			116363.132
82	Se-2	|		-2.831	-0.063029	ppb	123.493	130.655		-0.136
107	Ag-1	|		223.335	0.049728	ppb	12.217	11.440		22.222
115	In-ISK	|		100118.401		ppb	0.511			102405.699
45	Sc-ISK	>		282899.255		ppb	0.488			290123.615
23	Na	|		5654.452	4.731225	ppb	1.586	3.085		3308.718
39	K	|		130757.965	8.175227	ppb	1.145	20.278		124435.172
24	Mg	|		945.031	1.453302	ppb	9.885	11.550		111.667
159	Tb-ISK	|		196311.809		ppb	1.398			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 09:41:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.040

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34170.820		ppb		0.562		36181.321
9	Be	|	168382.210	101.763520	ppb		1.406	1.739	14.444
10	B	|	97756.840	259.166873	ppb		2.800	2.194	314.448
27	Al	|	794061.961	101.216350	ppb		1.813	2.595	7678.731
43	Ca-2	|	92476.819	5171.244298	ppb		2.588	1.709	65.000
49	Ti	|	66443.046	100.521521	ppb		0.405	0.655	240.002
52	Cr	|	899580.298	101.422234	ppb		0.321	0.742	13894.534
55	Mn	|	1251954.235	96.939162	ppb		0.478	0.612	730.019
57	Fe	|	1232160.308	4927.229717	ppb		0.441	1.092	9459.800
45	Sc-IS	>	1629576.224		ppb		1.056		1688502.270
66	Zn	|	129669.331	99.946995	ppb		2.045	2.599	893.361
86	Sr	|	199263.921	101.111863	ppb		0.832	0.659	-12.662
65	Cu	|	193100.347	100.680402	ppb		1.872	1.209	71.915
69	Ga-IS	|	484747.193		ppb		1.528		484617.027
95	Mo	|	189422.065	100.229507	ppb		0.901	1.207	34.444
115	In-IS	>	290267.446		ppb		1.255		299287.457
111	Cd	|	186610.571	101.425171	ppb		0.941	0.951	11.039
118	Sn	|	526565.143	100.331828	ppb		1.086	1.464	382.227
121	Sb	|	586548.746	101.274415	ppb		0.965	1.201	1387.845
135	Ba	|	119085.611	101.869180	ppb		2.542	1.628	21.111
165	Ho-IS	|	289797.709		ppb		0.519		295390.505
159	Tb-IS	|	263086.363		ppb		1.607		267519.443
207	Pb	|	1704399.898	99.814809	ppb		1.885	1.042	157.778
203	Tl	|	509293.081	99.765390	ppb		1.652	1.897	18.889
209	Bi-IS	>	182039.251		ppb		1.073		184936.150
51	V	|	69317.900	96.333601	ppb		3.452	3.168	77.778
59	Co	|	177074.667	97.319112	ppb		3.016	2.655	16.667
60	Ni	|	99272.737	98.281701	ppb		2.248	1.777	54.445
75	As	|	47322.695	98.160029	ppb		0.727	1.040	637.706
71	Ga-ISK	>	114680.705		ppb		0.706		116363.132
82	Se-2	|	4280.178	97.673359	ppb		3.627	3.304	-0.136
107	Ag-1	|	408021.947	98.881264	ppb		1.105	0.429	22.222
115	In-ISK	|	100948.836		ppb		1.070		102405.699
45	Sc-ISK	>	282417.662		ppb		0.582		290123.615
23	Na	|	2733672.133	5329.692593	ppb		1.219	1.283	3308.718
39	K	|	6198969.089	5280.390087	ppb		0.432	0.364	124435.172
24	Mg	|	3003565.006	5227.727947	ppb		0.997	0.605	111.667
159	Tb-ISK	|	198047.377		ppb		0.580		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 09:43:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.041

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		34396.917		ppb			0.510			36181.321
9	Be	|		23.333	0.006134	ppb	51.508	122.801				14.444
10	B	|		644.459	0.961176	ppb	9.272	17.477				314.448
27	Al	|		6600.414	-0.077436	ppb	2.291	28.320				7678.731
43	Ca-2	|		90.000	1.685374	ppb	5.556	17.908				65.000
49	Ti	|		252.225	0.043188	ppb	23.984	216.912				240.002
52	Cr	|		9426.443	-0.421861	ppb	2.300	5.471				13894.534
55	Mn	|		887.805	0.016357	ppb	8.516	35.826				730.019
57	Fe	|		8513.650	-1.401908	ppb	3.960	93.943				9459.800
45	Sc-IS	>		1579751.486		ppb			0.255			1688502.270
66	Zn	|		608.902	-0.181659	ppb	10.334	27.358				893.361
86	Sr	|		37.389	0.025780	ppb	65.142	49.618				-12.662
65	Cu	|		93.898	0.014324	ppb	8.990	32.126				71.915
69	Ga-IS	|		452575.598		ppb			2.016			484617.027
95	Mo	|		372.227	0.185620	ppb	4.932	5.677				34.444
115	In-IS	>		283989.727		ppb			2.426			299287.457
111	Cd	|		25.885	0.008517	ppb	38.552	62.208				11.039
118	Sn	|		3769.386	0.664381	ppb	1.875	4.738				382.227
121	Sb	|		1295.615	-0.003928	ppb	12.920	699.806				1387.845
135	Ba	|		35.556	0.013676	ppb	28.641	69.538				21.111
165	Ho-IS	|		282262.367		ppb			0.273			295390.505
159	Tb-IS	|		256245.627		ppb			0.871			267519.443
207	Pb	|		761.119	0.036180	ppb	6.074	6.350				157.778
203	Tl	|		107.778	0.017782	ppb	17.586	19.929				18.889
209	Bi-IS	>		179185.850		ppb			1.648			184936.150
51	V	|		25.556	-0.070232	ppb	32.825	16.816				77.778
59	Co	|		14.444	-0.000902	ppb	35.251	314.242				16.667
60	Ni	|		27.778	-0.024881	ppb	36.661	42.675				54.445
75	As	|		636.840	0.051198	ppb	5.279	164.748				637.706
71	Ga-ISK	>		111909.993		ppb			1.103			116363.132
82	Se-2	|		3.883	0.094046	ppb	143.280	137.855				-0.136
107	Ag-1	|		242.224	0.054928	ppb	18.480	21.440				22.222
115	In-ISK	|		98622.922		ppb			0.379			102405.699
45	Sc-ISK	>		280498.182		ppb			0.625			290123.615
23	Na	|		3690.477	0.966183	ppb	0.949	8.517				3308.718
39	K	|		132752.857	10.891059	ppb	0.335	9.431				124435.172
24	Mg	|		360.005	0.441968	ppb	9.722	14.787				111.667
159	Tb-ISK	|		195783.171		ppb			0.738			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Thursday, April 16, 2020 09:46:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICSA-30518.042

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		33253.117		ppb				2.473		36181.321
9	Be	|		20.000	0.003418	ppb			33.333	116.112		14.444
10	B	|		477.786	0.435610	ppb			6.988	15.419		314.448
27	Al	|		80502763.405	10136.303250	ppb			0.933	2.588		7678.731
43	Ca-2	|		537903.138	29451.389566	ppb			2.300	0.960		65.000
49	Ti	|		138021.549	204.676721	ppb			2.281	0.979		240.002
52	Cr	|		11471.275	-0.250266	ppb			3.811	12.208		13894.534
55	Mn	|		8704.874	0.605517	ppb			2.030	3.486		730.019
57	Fe	|		6427534.866	25301.372548	ppb			1.400	0.368		9459.800
45	Sc-IS	>		1665296.997		ppb			1.640			1688502.270
66	Zn	|		1354.509	0.358899	ppb			6.315	13.478		893.361
86	Sr	|		916.214	0.461012	ppb			5.232	4.252		-12.662
65	Cu	|		-218.926	-0.148127	ppb			30.011	23.288		71.915
69	Ga-IS	|		471842.384		ppb			2.156			484617.027
95	Mo	|		387150.346	200.510204	ppb			0.376	2.023		34.444
115	In-IS	>		292671.511		ppb			0.793			299287.457
111	Cd	|		-106.332	-0.063184	ppb			19.585	18.255		11.039
118	Sn	|		1581.199	0.228302	ppb			8.320	10.780		382.227
121	Sb	|		1390.068	0.005603	ppb			10.674	442.338		1387.845
135	Ba	|		227.780	0.175866	ppb			8.942	10.609		21.111
165	Ho-IS	|		307259.119		ppb			2.271			295390.505
159	Tb-IS	|		276985.122		ppb			0.838			267519.443
207	Pb	|		752.230	0.035837	ppb			5.766	7.781		157.778
203	Tl	|		76.667	0.011664	ppb			8.696	10.326		18.889
209	Bi-IS	>		178533.160		ppb			0.830			184936.150
51	V	|		220.002	0.201190	ppb			5.249	8.153		77.778
59	Co	|		102.223	0.047541	ppb			21.217	26.116		16.667
60	Ni	|		325.559	0.271064	ppb			8.587	9.585		54.445
75	As	|		602.455	-0.047699	ppb			4.369	104.279		637.706
71	Ga-ISK	>		114036.694		ppb			0.767			116363.132
82	Se-2	|		2.158	0.051463	ppb			451.661	433.192		-0.136
107	Ag-1	|		141.112	0.029086	ppb			10.911	12.908		22.222
115	In-ISK	|		101510.744		ppb			1.275			102405.699
45	Sc-ISK	>		287095.347		ppb			1.323			290123.615
23	Na	|		13208849.638	25357.669659	ppb			0.709	0.739		3308.718
39	K	|		12233912.580	10351.879555	ppb			0.956	1.985		124435.172
24	Mg	|		5892160.718	10089.520394	ppb			2.024	2.311		111.667
159	Tb-ISK	|		203867.791		ppb			0.981			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Thursday, April 16, 2020 09:49:28

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICSAB-30517.043

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34913.729		ppb	1.442		36181.321
9	Be	21.111	0.003654	ppb	18.232	51.685	14.444
10	B	2249.066	4.874078	ppb	2.345	1.969	314.448
27	Al	82145215.669	10041.703224	ppb	0.832	3.823	7678.731
43	Ca-2	567637.443	30172.384456	ppb	1.390	2.003	65.000
49	Ti	141328.191	203.399128	ppb	2.686	0.650	240.002
52	Cr	184706.100	18.537212	ppb	3.218	0.349	13894.534
55	Mn	251986.345	18.483567	ppb	2.827	0.592	730.019
57	Fe	6530472.324	24951.426494	ppb	1.891	1.735	9459.800
45	Sc-IS	> 1716080.244		ppb	2.941		1688502.270
66	Zn	14450.645	9.977845	ppb	3.766	2.686	893.361
86	Sr	875.625	0.427061	ppb	15.654	12.912	-12.662
65	Cu	37480.245	18.529454	ppb	2.511	0.564	71.915
69	Ga-IS	485339.324		ppb	1.706		484617.027
95	Mo	393072.305	197.610284	ppb	0.779	2.698	34.444
115	In-IS	> 294164.915		ppb	0.813		299287.457
111	Cd	17830.055	9.557612	ppb	1.034	1.832	11.039
118	Sn	945.587	0.107240	ppb	11.512	19.315	382.227
121	Sb	1260.056	-0.017769	ppb	3.051	34.053	1387.845
135	Ba	234.446	0.180567	ppb	14.799	17.054	21.111
165	Ho-IS	310371.037		ppb	0.849		295390.505
159	Tb-IS	280861.885		ppb	0.602		267519.443
207	Pb	510.003	0.020418	ppb	3.268	4.000	157.778
203	Tl	77.778	0.011403	ppb	19.325	24.789	18.889
209	Bi-IS	> 184222.463		ppb	0.555		184936.150
51	V	13721.032	18.978126	ppb	1.629	0.863	77.778
59	Co	33676.313	18.498526	ppb	0.112	1.329	16.667
60	Ni	19234.051	18.996611	ppb	0.269	1.383	54.445
75	As	5279.350	9.776506	ppb	3.185	4.656	637.706
71	Ga-ISK	> 114714.338		ppb	1.232		116363.132
82	Se-2	416.207	9.496589	ppb	5.171	4.401	-0.136
107	Ag-1	19343.087	4.681785	ppb	0.046	1.225	22.222
115	In-ISK	101434.034		ppb	1.497		102405.699
45	Sc-ISK	> 290093.864		ppb	3.628		290123.615
23	Na	13382633.947	25433.384396	ppb	2.147	1.527	3308.718
39	K	12117762.175	10146.593975	ppb	2.545	1.113	124435.172
24	Mg	5826805.962	9877.585473	ppb	2.326	2.190	111.667
159	Tb-ISK	203749.589		ppb	1.539		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, April 16, 2020 09:52:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.044

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34825.739		ppb				1.684		36181.321
9	Be	|		8.889	-0.003112	ppb				43.301	73.028	14.444
10	B	|		452.229	0.382903	ppb				7.882	18.631	314.448
27	Al	|		17840.077	1.317996	ppb				8.678	12.737	7678.731
43	Ca-2	|		181.668	6.553458	ppb				15.890	23.738	65.000
49	Ti	|		361.116	0.190773	ppb				9.474	22.749	240.002
52	Cr	|		10222.546	-0.376087	ppb				1.569	4.613	13894.534
55	Mn	|		1286.725	0.044035	ppb				8.964	15.894	730.019
57	Fe	|		9580.994	1.426540	ppb				4.543	70.610	9459.800
45	Sc-IS	>		1645726.145		ppb				1.935		1688502.270
66	Zn	|		1185.605	0.241939	ppb				3.712	12.550	893.361
86	Sr	|		7.912	0.010211	ppb				252.769	97.560	-12.662
65	Cu	|		201.425	0.067922	ppb				7.472	13.706	71.915
69	Ga-IS	|		465145.327		ppb				1.202		484617.027
95	Mo	|		594.457	0.293481	ppb				12.643	11.449	34.444
115	In-IS	>		293944.702		ppb				0.295		299287.457
111	Cd	|		16.529	0.003051	ppb				10.861	30.676	11.039
118	Sn	|		1032.260	0.123657	ppb				4.728	7.110	382.227
121	Sb	|		766.687	-0.101894	ppb				11.330	14.796	1387.845
135	Ba	|		103.334	0.069793	ppb				14.783	18.545	21.111
165	Ho-IS	|		289823.935		ppb				1.018		295390.505
159	Tb-IS	|		263587.510		ppb				1.176		267519.443
207	Pb	|		242.223	0.005095	ppb				8.408	25.820	157.778
203	Tl	|		32.222	0.002652	ppb				46.647	108.896	18.889
209	Bi-IS	>		182088.741		ppb				0.915		184936.150
51	V	|		51.111	-0.036042	ppb				32.171	62.406	77.778
59	Co	|		22.222	0.003119	ppb				52.678	205.882	16.667
60	Ni	|		104.445	0.049612	ppb				14.391	29.221	54.445
75	As	|		660.376	0.057941	ppb				3.427	74.553	637.706
71	Ga-ISK	>		115430.025		ppb				0.291		116363.132
82	Se-2	|		-0.464	-0.007159	ppb				1532.412	2248.595	-0.136
107	Ag-1	|		101.111	0.019047	ppb				18.746	24.299	22.222
115	In-ISK	|		101522.225		ppb				1.099		102405.699
45	Sc-ISK	>		286539.655		ppb				0.614		290123.615
23	Na	|		7558.666	8.255352	ppb				1.676	3.306	3308.718
39	K	|		131715.552	7.551997	ppb				0.575	9.321	124435.172
24	Mg	|		1021.703	1.563637	ppb				4.753	5.418	111.667
159	Tb-ISK	|		199081.077		ppb				1.402		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, April 16, 2020 09:55:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICVL-210771.045

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34491.600		ppb			2.025			36181.321
9	Be	|		1654.540	0.990408	ppb			3.717	4.339		14.444
10	B	|		19504.421	51.005411	ppb			2.113	2.791		314.448
27	Al	|		412592.482	52.060713	ppb			0.840	1.464		7678.731
43	Ca-2	|		975.034	51.004969	ppb			15.521	16.970		65.000
49	Ti	|		914.474	1.034951	ppb			2.946	4.297		240.002
52	Cr	|		19414.296	0.684269	ppb			1.461	2.891		13894.534
55	Mn	|		13311.759	0.975525	ppb			3.076	3.936		730.019
57	Fe	|		20579.261	46.027254	ppb			2.247	5.195		9459.800
45	Sc-IS	>		1631677.943		ppb			0.661			1688502.270
66	Zn	|		7725.424	5.318369	ppb			4.252	5.508		893.361
86	Sr	|		2014.749	1.027255	ppb			2.189	2.820		-12.662
65	Cu	|		2083.280	1.049141	ppb			2.689	3.278		71.915
69	Ga-IS	|		476010.117		ppb			1.172			484617.027
95	Mo	|		2066.816	1.074857	ppb			1.699	2.367		34.444
115	In-IS	>		293404.524		ppb			1.027			299287.457
111	Cd	|		1871.338	1.000390	ppb			2.259	1.915		11.039
118	Sn	|		5837.860	1.030564	ppb			2.210	2.783		382.227
121	Sb	|		6533.716	0.885760	ppb			0.780	2.249		1387.845
135	Ba	|		1288.947	1.073741	ppb			2.347	3.105		21.111
165	Ho-IS	|		293953.950		ppb			1.493			295390.505
159	Tb-IS	|		262448.927		ppb			0.759			267519.443
207	Pb	|		16803.904	0.966361	ppb			1.673	0.972		157.778
203	Tl	|		5076.458	0.981943	ppb			1.901	1.729		18.889
209	Bi-IS	>		183666.505		ppb			0.762			184936.150
51	V	|		758.909	0.952543	ppb			5.849	8.121		77.778
59	Co	|		1874.568	1.024137	ppb			4.842	5.484		16.667
60	Ni	|		1027.815	0.967570	ppb			5.583	6.051		54.445
75	As	|		1131.982	1.062751	ppb			6.831	11.476		637.706
71	Ga-ISK	>		114409.750		ppb			1.896			116363.132
82	Se-2	|		41.539	0.952819	ppb			27.740	27.660		-0.136
107	Ag-1	|		4057.243	0.980759	ppb			1.698	3.489		22.222
115	In-ISK	|		101028.779		ppb			1.193			102405.699
45	Sc-ISK	>		287874.959		ppb			0.456			290123.615
23	Na	|		31225.762	53.510950	ppb			1.631	2.257		3308.718
39	K	|		188726.260	55.618809	ppb			0.757	1.937		124435.172
24	Mg	|		29503.782	50.195798	ppb			2.587	3.055		111.667
159	Tb-ISK	|		199381.759		ppb			0.692			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23763-B-2-B

Autosampler Position: 131

Sample Date/Time: Thursday, April 16, 2020 09:57:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23763-B-2-B.046

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		35029.564		ppb				0.937		36181.321
9	Be	|		13.333	-0.000260	ppb				86.603	2726.098	14.444
10	B	|		40977.579	109.382223	ppb				0.898	1.117	314.448
27	Al	|		32282.962	3.247755	ppb				20.015	26.405	7678.731
43	Ca-2	|		1093.375	58.351562	ppb				1.848	1.626	65.000
49	Ti	|		416.674	0.287407	ppb				51.270	113.410	240.002
52	Cr	|		11223.297	-0.236000	ppb				1.624	9.318	13894.534
55	Mn	|		3080.332	0.186692	ppb				3.036	3.897	730.019
57	Fe	|		8411.365	-2.520471	ppb				2.464	29.520	9459.800
45	Sc-IS	>		1611760.933		ppb				0.371		1688502.270
66	Zn	|		2246.843	1.093605	ppb				0.771	1.839	893.361
86	Sr	|		846.771	0.440652	ppb				7.278	7.470	-12.662
65	Cu	|		285.938	0.114569	ppb				6.116	7.576	71.915
69	Ga-IS	|		471775.186		ppb				1.103		484617.027
95	Mo	|		92.223	0.031749	ppb				2.087	2.682	34.444
115	In-IS	>		296243.260		ppb				0.175		299287.457
111	Cd	|		8.695	-0.001188	ppb				22.156	86.287	11.039
118	Sn	|		738.908	0.067366	ppb				7.445	15.500	382.227
121	Sb	|		571.123	-0.136086	ppb				1.783	1.306	1387.845
135	Ba	|		210.002	0.158527	ppb				9.655	10.584	21.111
165	Ho-IS	|		289326.112		ppb				0.695		295390.505
159	Tb-IS	|		261359.194		ppb				0.641		267519.443
207	Pb	|		786.675	0.037346	ppb				1.847	3.374	157.778
203	Tl	|		27.778	0.001829	ppb				48.497	142.560	18.889
209	Bi-IS	>		180637.211		ppb				1.271		184936.150
51	V	|		83.334	0.006153	ppb				8.000	140.910	77.778
59	Co	|		13.333	-0.001890	ppb				25.000	96.076	16.667
60	Ni	|		72.222	0.016407	ppb				14.836	59.495	54.445
75	As	|		646.796	0.002157	ppb				3.271	2488.760	637.706
71	Ga-ISK	>		117856.410		ppb				0.979		116363.132
82	Se-2	|		7.552	0.170128	ppb				75.549	73.325	-0.136
107	Ag-1	|		31.111	0.002020	ppb				43.301	155.162	22.222
115	In-ISK	|		102800.831		ppb				0.806		102405.699
45	Sc-ISK	>		290760.784		ppb				1.646		290123.615
23	Na	|		1000800.417	1891.199107	ppb				1.652	1.024	3308.718
39	K	|		236134.475	94.062773	ppb				0.092	3.414	124435.172
24	Mg	|		12136.822	20.337778	ppb				2.232	3.741	111.667
159	Tb-ISK	|		201234.826		ppb				0.837		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63368_1-A

Autosampler Position: 109

Sample Date/Time: Thursday, April 16, 2020 10:00:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\MB 570-63368_1-A.047

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		35242.309		ppb			1.005			36181.321
9	Be	|		16.667	0.001681	ppb		52.915	318.280			14.444
10	B	|		424.451	0.327168	ppb		7.546	31.199			314.448
27	Al	|		4065.024	-0.428356	ppb		5.554	6.702			7678.731
43	Ca-2	|		73.334	0.598749	ppb		27.555	178.922			65.000
49	Ti	|		246.669	0.024467	ppb		8.861	146.480			240.002
52	Cr	|		11357.849	-0.229870	ppb		2.542	5.983			13894.534
55	Mn	|		512.232	-0.014733	ppb		13.166	36.163			730.019
57	Fe	|		8173.451	-3.727067	ppb		4.239	31.488			9459.800
45	Sc-IS	>		1623231.319		ppb		1.489				1688502.270
66	Zn	|		765.576	-0.072479	ppb		1.096	21.220			893.361
86	Sr	|		14.093	0.013257	ppb		310.079	168.871			-12.662
65	Cu	|		54.205	-0.007856	ppb		17.811	60.370			71.915
69	Ga-IS	|		464794.801		ppb		2.710				484617.027
95	Mo	|		45.556	0.006605	ppb		4.225	11.407			34.444
115	In-IS	>		292574.627		ppb		1.060				299287.457
111	Cd	|		12.127	0.000684	ppb		79.334	743.677			11.039
118	Sn	|		573.345	0.037777	ppb		1.007	2.949			382.227
121	Sb	|		566.678	-0.135677	ppb		8.882	5.767			1387.845
135	Ba	|		18.889	-0.001472	ppb		20.377	228.438			21.111
165	Ho-IS	|		288411.143		ppb		0.273				295390.505
159	Tb-IS	|		259827.503		ppb		1.575				267519.443
207	Pb	|		103.333	-0.002963	ppb		14.783	28.294			157.778
203	Tl	|		17.778	-0.000110	ppb		43.301	1377.311			18.889
209	Bi-IS	>		179436.789		ppb		1.806				184936.150
51	V	|		48.889	-0.039905	ppb		17.159	28.581			77.778
59	Co	|		7.778	-0.004837	ppb		49.487	42.759			16.667
60	Ni	|		33.333	-0.020774	ppb		43.589	67.706			54.445
75	As	|		653.047	0.025815	ppb		6.336	316.791			637.706
71	Ga-ISK	>		116866.074		ppb		0.274				116363.132
82	Se-2	|		-2.815	-0.059930	ppb		107.510	113.032			-0.136
107	Ag-1	|		24.444	0.000513	ppb		69.976	796.699			22.222
115	In-ISK	|		101739.644		ppb		1.522				102405.699
45	Sc-ISK	>		288933.815		ppb		0.563				290123.615
23	Na	|		3068.663	-0.431926	ppb		2.452	35.038			3308.718
39	K	|		127147.768	2.738733	ppb		0.133	18.441			124435.172
24	Mg	|		141.667	0.051903	ppb		11.346	54.770			111.667
159	Tb-ISK	|		198392.798		ppb		0.682				199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63368_2-A

Autosampler Position: 110

Sample Date/Time: Thursday, April 16, 2020 10:03:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCS 570-63368_2-A.048

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35245.649		ppb		0.771		36181.321
9	Be	|	177690.635	107.320740	ppb	1.460	2.487		14.444
10	B	|	38153.109	100.596382	ppb	1.435	1.824		314.448
27	Al	|	840901.204	107.171813	ppb	0.760	2.539		7678.731
43	Ca-2	|	96519.972	5394.574843	ppb	0.530	1.592		65.000
49	Ti	|	71664.878	108.372339	ppb	1.208	1.659		240.002
52	Cr	|	947327.558	106.804410	ppb	1.080	1.002		13894.534
55	Mn	|	1289460.073	99.757181	ppb	2.019	0.282		730.019
57	Fe	|	1296829.871	5182.910234	ppb	2.226	0.540		9459.800
45	Sc-IS	>	1630905.410		ppb	1.832			1688502.270
66	Zn	|	141515.715	109.020304	ppb	3.151	1.498		893.361
86	Sr	|	204956.145	103.924221	ppb	1.979	1.992		-12.662
65	Cu	|	202743.927	105.608901	ppb	3.473	1.895		71.915
69	Ga-IS	|	495098.317		ppb	1.838			484617.027
95	Mo	|	201693.892	106.653266	ppb	0.787	1.881		34.444
115	In-IS	>	293106.786		ppb	1.420			299287.457
111	Cd	|	201792.032	108.619823	ppb	0.363	1.098		11.039
118	Sn	|	653334.645	123.284825	ppb	1.588	0.405		382.227
121	Sb	|	621230.761	106.233294	ppb	0.935	0.692		1387.845
135	Ba	|	123729.372	104.821242	ppb	2.981	2.449		21.111
165	Ho-IS	|	291947.865		ppb	1.477			295390.505
159	Tb-IS	|	262083.657		ppb	1.440			267519.443
207	Pb	|	1789832.285	104.323282	ppb	0.261	1.567		157.778
203	Tl	|	517888.130	100.952549	ppb	0.572	0.918		18.889
209	Bi-IS	>	182936.201		ppb	1.315			184936.150
51	V	|	74664.611	101.109176	ppb	0.281	1.822		77.778
59	Co	|	183926.497	98.507307	ppb	0.853	2.832		16.667
60	Ni	|	109699.590	105.818841	ppb	0.617	1.463		54.445
75	As	|	51948.998	105.087939	ppb	0.660	2.625		637.706
71	Ga-ISK	>	117732.156		ppb	2.002			116363.132
82	Se-2	|	4710.313	104.743414	ppb	0.489	2.464		-0.136
107	Ag-1	|	200158.206	47.252955	ppb	1.437	1.169		22.222
115	In-ISK	|	104454.219		ppb	1.400			102405.699
45	Sc-ISK	>	294485.854		ppb	1.499			290123.615
23	Na	|	541049.623	1006.352024	ppb	3.444	2.186		3308.718
39	K	|	1351389.596	1020.666820	ppb	1.950	0.502		124435.172
24	Mg	|	3138326.919	5238.800427	ppb	1.089	0.855		111.667
159	Tb-ISK	|	203255.120		ppb	0.786			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63368_3-A

Autosampler Position: 111

Sample Date/Time: Thursday, April 16, 2020 10:06:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCSD 570-63368_3-A.049

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35284.633		ppb		0.311		36181.321
9	Be	|	179127.262	107.687539	ppb	1.266	2.572		14.444
10	B	|	38780.352	101.792793	ppb	1.532	2.558		314.448
27	Al	|	825974.049	104.753734	ppb	1.768	2.838		7678.731
43	Ca-2	|	96412.628	5362.823841	ppb	1.529	1.090		65.000
49	Ti	|	70346.128	105.868829	ppb	1.312	1.222		240.002
52	Cr	|	936402.514	105.055165	ppb	0.780	0.521		13894.534
55	Mn	|	1283488.532	98.841614	ppb	1.032	0.260		730.019
57	Fe	|	1287466.625	5121.679732	ppb	1.124	0.399		9459.800
45	Sc-IS	>	1638452.454		ppb	1.289			1688502.270
66	Zn	|	139351.142	106.853457	ppb	2.760	1.972		893.361
86	Sr	|	202920.103	102.406182	ppb	1.342	0.315		-12.662
65	Cu	|	199732.848	103.571896	ppb	2.211	1.133		71.915
69	Ga-IS	|	490852.922		ppb	2.193			484617.027
95	Mo	|	198957.045	104.702411	ppb	0.930	0.366		34.444
115	In-IS	>	290131.529		ppb	0.725			299287.457
111	Cd	|	198284.614	107.814400	ppb	0.910	0.262		11.039
118	Sn	|	660199.608	125.863984	ppb	0.196	0.532		382.227
121	Sb	|	630306.565	108.890684	ppb	0.807	0.398		1387.845
135	Ba	|	123824.514	105.974310	ppb	2.329	1.722		21.111
165	Ho-IS	|	293203.951		ppb	0.556			295390.505
159	Tb-IS	|	261150.933		ppb	0.160			267519.443
207	Pb	|	1766956.551	102.782673	ppb	2.049	1.399		157.778
203	Tl	|	508899.394	99.008140	ppb	1.641	0.881		18.889
209	Bi-IS	>	183284.049		ppb	1.735			184936.150
51	V	|	75314.690	104.025653	ppb	1.058	1.727		77.778
59	Co	|	184047.080	100.520518	ppb	1.658	1.950		16.667
60	Ni	|	106916.394	105.191652	ppb	0.839	1.279		54.445
75	As	|	52008.489	107.323023	ppb	1.005	1.774		637.706
71	Ga-ISK	>	115413.243		ppb	0.859			116363.132
82	Se-2	|	4504.560	102.146474	ppb	1.475	1.104		-0.136
107	Ag-1	|	198261.927	47.743126	ppb	0.942	1.331		22.222
115	In-ISK	|	102204.343		ppb	2.341			102405.699
45	Sc-ISK	>	291291.015		ppb	0.756			290123.615
23	Na	|	541195.922	1017.913112	ppb	0.602	0.375		3308.718
39	K	|	1337742.241	1021.634916	ppb	0.847	1.491		124435.172
24	Mg	|	3111180.522	5250.686378	ppb	1.425	2.147		111.667
159	Tb-ISK	|	201639.158		ppb	0.973			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-2-A

Autosampler Position: 122

Sample Date/Time: Thursday, April 16, 2020 10:08:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-2-A.050

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47879.019		ppb	2.400			36181.321
9	Be	|	28.889	0.008124	ppb	43.684	87.549		14.444
10	B	|	40379.236	101.168402	ppb	2.711	4.215		314.448
27	Al	|	337961.937	40.308379	ppb	3.556	2.372		7678.731
43	Ca-2	|	1417325.362	75289.042813	ppb	0.890	1.058		65.000
49	Ti	|	3013.653	3.987671	ppb	9.248	8.554		240.002
52	Cr	|	608451.746	64.563206	ppb	1.178	0.652		13894.534
55	Mn	|	34813.485	2.505411	ppb	1.447	0.398		730.019
57	Fe	|	70289.244	231.957636	ppb	2.665	1.462		9459.800
45	Sc-IS	>	1716818.857		ppb	1.486			1688502.270
66	Zn	|	4711.888	2.801175	ppb	1.204	0.921		893.361
86	Sr	|	2529023.063	1218.039654	ppb	1.042	0.606		-12.662
65	Cu	|	2013.419	0.960342	ppb	4.508	3.283		71.915
69	Ga-IS	|	494522.762		ppb	2.094			484617.027
95	Mo	|	13464.124	6.745490	ppb	3.357	2.996		34.444
115	In-IS	>	285685.457		ppb	2.440			299287.457
111	Cd	|	31.725	0.011889	ppb	67.506	103.457		11.039
118	Sn	|	4968.644	0.891494	ppb	6.036	4.931		382.227
121	Sb	|	3978.332	0.466822	ppb	0.097	3.525		1387.845
135	Ba	|	145550.108	126.529538	ppb	1.893	0.545		21.111
165	Ho-IS	|	294690.988		ppb	1.233			295390.505
159	Tb-IS	|	267889.659		ppb	0.819			267519.443
207	Pb	|	2081.171	0.116475	ppb	11.864	11.169		157.778
203	Tl	|	252.224	0.047371	ppb	11.992	14.393		18.889
209	Bi-IS	>	176533.080		ppb	1.456			184936.150
51	V	|	5168.713	7.134303	ppb	3.013	1.016		77.778
59	Co	|	1533.416	0.840415	ppb	7.937	9.223		16.667
60	Ni	|	1040.038	0.986418	ppb	9.998	12.990		54.445
75	As	|	1025.529	0.850729	ppb	5.068	15.227		637.706
71	Ga-ISK	>	113890.150		ppb	2.528			116363.132
82	Se-2	|	325.150	7.471662	ppb	5.064	2.629		-0.136
107	Ag-1	|	177.779	0.038147	ppb	7.578	11.239		22.222
115	In-ISK	|	100235.474		ppb	1.636			102405.699
45	Sc-ISK	>	297571.738		ppb	0.362			290123.615
23	Na	|	26098670.797	48340.428326	ppb	1.877	1.601		3308.718
39	K	|	7948257.435	6448.532018	ppb	0.259	0.620		124435.172
24	Mg	|	12417966.850	20513.964046	ppb	0.377	0.710		111.667
159	Tb-ISK	|	200925.154		ppb	0.650			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-3-A

Autosampler Position: 123

Sample Date/Time: Thursday, April 16, 2020 10:11:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-3-A.051

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	35045.194		ppb	3.696		36181.321
9	Be	22.222	0.004785	ppb	31.225	88.300	14.444
10	B	73486.307	191.126674	ppb	0.662	1.644	314.448
27	Al	36463.147	3.653499	ppb	1.220	2.751	7678.731
43	Ca-2	2403183.118	132061.930879	ppb	0.614	0.879	65.000
49	Ti	1526.748	1.923910	ppb	3.595	3.051	240.002
52	Cr	5476748.120	613.963310	ppb	0.656	1.043	13894.534
55	Mn	4546.279	0.291286	ppb	2.919	3.679	730.019
57	Fe	103899.831	374.220653	ppb	1.199	0.930	9459.800
45	Sc-IS	> 1659541.115		ppb	1.007		1688502.270
66	Zn	6429.225	4.229277	ppb	3.322	3.857	893.361
86	Sr	1887392.718	940.380248	ppb	1.098	1.180	-12.662
65	Cu	1519.964	0.742000	ppb	7.892	7.408	71.915
69	Ga-IS	486604.402		ppb	1.575		484617.027
95	Mo	9719.972	5.033510	ppb	0.539	0.749	34.444
115	In-IS	> 278139.078		ppb	0.894		299287.457
111	Cd	32.921	0.012854	ppb	10.013	14.320	11.039
118	Sn	1964.580	0.320211	ppb	6.449	7.713	382.227
121	Sb	1620.092	0.059735	ppb	3.926	23.617	1387.845
135	Ba	256407.965	228.967745	ppb	2.148	2.685	21.111
165	Ho-IS	287242.485		ppb	0.753		295390.505
159	Tb-IS	255390.615		ppb	1.189		267519.443
207	Pb	5640.438	0.342692	ppb	0.570	0.571	157.778
203	Tl	46.667	0.006097	ppb	24.744	40.076	18.889
209	Bi-IS	> 170955.739		ppb	0.661		184936.150
51	V	5155.375	7.267343	ppb	1.644	0.940	77.778
59	Co	618.902	0.340589	ppb	8.245	7.678	16.667
60	Ni	13283.953	13.474995	ppb	2.291	1.945	54.445
75	As	874.096	0.568437	ppb	5.131	19.415	637.706
71	Ga-ISK	> 111548.272		ppb	0.742		116363.132
82	Se-2	150.826	3.541242	ppb	4.357	3.868	-0.136
107	Ag-1	52.222	0.007723	ppb	32.127	55.198	22.222
115	In-ISK	98035.419		ppb	0.522		102405.699
45	Sc-ISK	> 294560.347		ppb	0.672		290123.615
23	Na	29830197.881	55821.743752	ppb	0.599	1.079	3308.718
39	K	5899197.061	4808.804167	ppb	0.711	1.086	124435.172
24	Mg	21883500.928	36524.211050	ppb	2.082	2.737	111.667
159	Tb-ISK	201493.148		ppb	1.124		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-4-A @5

Autosampler Position: 358

Sample Date/Time: Thursday, April 16, 2020 10:14:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-4-A @5.052

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34757.790		ppb	0.948		36181.321
9	Be	31.111	0.011029	ppb	43.301	75.704	14.444
10	B	11047.604	29.624789	ppb	1.133	1.881	314.448
27	Al	1295271.521	171.639270	ppb	0.966	1.898	7678.731
43	Ca-2	316364.737	18332.658859	ppb	0.546	0.819	65.000
49	Ti	11757.063	18.138571	ppb	3.734	4.800	240.002
52	Cr	30149.560	2.039071	ppb	0.507	2.560	13894.534
55	Mn	544636.366	43.643856	ppb	1.095	1.164	730.019
57	Fe	80476.138	298.932690	ppb	2.586	1.883	9459.800
45	Sc-IS	> 1573504.957		ppb	0.956		1688502.270
66	Zn	4152.826	2.668257	ppb	3.399	4.710	893.361
86	Sr	294679.248	154.849321	ppb	0.978	0.363	-12.662
65	Cu	1407.479	0.723941	ppb	5.387	4.964	71.915
69	Ga-IS	445414.995		ppb	1.584		484617.027
95	Mo	5448.817	2.969046	ppb	1.820	2.538	34.444
115	In-IS	> 281084.831		ppb	0.232		299287.457
111	Cd	25.224	0.008354	ppb	73.696	125.228	11.039
118	Sn	1952.356	0.313736	ppb	3.711	4.805	382.227
121	Sb	2127.937	0.147388	ppb	8.595	22.770	1387.845
135	Ba	39254.975	34.668518	ppb	1.170	1.375	21.111
165	Ho-IS	283697.459		ppb	1.533		295390.505
159	Tb-IS	252042.844		ppb	0.090		267519.443
207	Pb	2064.504	0.114449	ppb	5.503	4.864	157.778
203	Tl	65.556	0.009486	ppb	20.550	28.577	18.889
209	Bi-IS	> 178115.811		ppb	1.082		184936.150
51	V	1103.376	1.433758	ppb	4.283	4.843	77.778
59	Co	441.118	0.234211	ppb	4.617	4.184	16.667
60	Ni	567.789	0.511114	ppb	5.455	5.651	54.445
75	As	773.308	0.310227	ppb	5.052	29.887	637.706
71	Ga-ISK	> 114301.016		ppb	0.760		116363.132
82	Se-2	82.195	1.885226	ppb	5.746	5.940	-0.136
107	Ag-1	42.222	0.004956	ppb	24.119	49.358	22.222
115	In-ISK	100382.129		ppb	2.227		102405.699
45	Sc-ISK	> 290619.066		ppb	1.663		290123.615
23	Na	5193536.382	9847.249186	ppb	0.483	2.103	3308.718
39	K	1374399.099	1055.296462	ppb	0.657	1.593	124435.172
24	Mg	3346157.233	5661.274409	ppb	0.977	2.537	111.667
159	Tb-ISK	198193.473		ppb	1.165		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-4-A

Autosampler Position: 124

Sample Date/Time: Thursday, April 16, 2020 10:17:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-4-A.053

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34215.375		ppb		1.412		36181.321
9	Be	|	73.334	0.036751	ppb	7.873	7.522		14.444
10	B	|	50994.196	137.570965	ppb	1.308	2.478		314.448
27	Al	|	6623215.449	868.278768	ppb	1.094	0.754		7678.731
43	Ca-2	|	1557447.126	88905.828819	ppb	1.550	0.305		65.000
49	Ti	|	56957.856	87.833543	ppb	3.477	1.681		240.002
52	Cr	|	53411.900	4.700900	ppb	1.501	0.716		13894.534
55	Mn	|	2816851.590	222.554587	ppb	1.783	1.037		730.019
57	Fe	|	346569.533	1387.279703	ppb	2.436	1.085		9459.800
45	Sc-IS	>	1597536.741		ppb	1.825			1688502.270
66	Zn	|	15940.003	11.945134	ppb	2.701	1.318		893.361
86	Sr	|	1445963.233	748.395590	ppb	1.619	0.338		-12.662
65	Cu	|	6003.999	3.156951	ppb	5.137	3.393		71.915
69	Ga-IS	|	466142.316		ppb	3.170			484617.027
95	Mo	|	25808.852	13.914519	ppb	1.666	0.161		34.444
115	In-IS	>	276222.098		ppb	1.211			299287.457
111	Cd	|	71.358	0.034833	ppb	38.045	43.183		11.039
118	Sn	|	1592.311	0.248160	ppb	9.139	10.317		382.227
121	Sb	|	2359.084	0.195895	ppb	6.227	11.126		1387.845
135	Ba	|	195698.563	175.924675	ppb	2.591	1.396		21.111
165	Ho-IS	|	282737.438		ppb	1.224			295390.505
159	Tb-IS	|	252572.070		ppb	0.139			267519.443
207	Pb	|	8464.326	0.520501	ppb	0.929	1.543		157.778
203	Tl	|	77.778	0.012631	ppb	8.921	11.299		18.889
209	Bi-IS	>	170419.382		ppb	0.596			184936.150
51	V	|	5113.137	7.271465	ppb	1.311	0.581		77.778
59	Co	|	1843.452	1.041715	ppb	3.671	2.803		16.667
60	Ni	|	2529.113	2.545082	ppb	2.273	1.770		54.445
75	As	|	1001.725	0.863006	ppb	4.663	12.372		637.706
71	Ga-ISK	>	110575.203		ppb	0.900			116363.132
82	Se-2	|	194.499	4.606191	ppb	7.333	7.169		-0.136
107	Ag-1	|	31.111	0.002502	ppb	22.304	67.156		22.222
115	In-ISK	|	97539.152		ppb	1.565			102405.699
45	Sc-ISK	>	286384.564		ppb	1.195			290123.615
23	Na	|	25373499.871	48836.442328	ppb	0.732	0.526		3308.718
39	K	|	6426713.930	5400.934110	ppb	1.172	0.596		124435.172
24	Mg	|	16255732.037	27898.215910	ppb	3.186	2.033		111.667
159	Tb-ISK	|	198329.235		ppb	0.458			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 10:19:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.054

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		32867.771		ppb		1.362		36181.321
9	Be	|		156313.168	102.557295	ppb		2.723	3.745	14.444
10	B	|		88330.266	254.242784	ppb		3.734	4.552	314.448
27	Al	|		764243.463	105.773892	ppb		0.493	1.510	7678.731
43	Ca-2	|		83862.118	5090.426504	ppb		1.170	0.287	65.000
49	Ti	|		62221.884	102.187512	ppb		0.897	1.682	240.002
52	Cr	|		836380.041	102.357876	ppb		1.360	0.485	13894.534
55	Mn	|		1166877.648	98.066606	ppb		0.957	0.423	730.019
57	Fe	|		1158284.296	5027.567673	ppb		2.215	1.536	9459.800
45	Sc-IS	>		1501339.133		ppb		1.025		1688502.270
66	Zn	|		118565.764	99.167250	ppb		2.589	1.619	893.361
86	Sr	|		192402.802	105.959823	ppb		1.999	1.085	-12.662
65	Cu	|		176612.564	99.944695	ppb		2.151	1.178	71.915
69	Ga-IS	|		449519.781		ppb		2.358		484617.027
95	Mo	|		181259.437	104.098112	ppb		1.122	0.688	34.444
115	In-IS	>		279670.615		ppb		1.186		299287.457
111	Cd	|		176524.797	99.573175	ppb		1.547	0.962	11.039
118	Sn	|		510810.280	101.008121	ppb		1.648	0.921	382.227
121	Sb	|		566638.214	101.538603	ppb		1.310	0.841	1387.845
135	Ba	|		110649.195	98.241616	ppb		1.998	1.164	21.111
165	Ho-IS	|		280106.166		ppb		0.665		295390.505
159	Tb-IS	|		247125.966		ppb		0.988		267519.443
207	Pb	|		1649647.123	97.602823	ppb		1.160	0.424	157.778
203	Tl	|		491905.442	97.342512	ppb		1.302	1.034	18.889
209	Bi-IS	>		180188.181		ppb		0.752		184936.150
51	V	|		67306.019	95.956968	ppb		2.404	2.436	77.778
59	Co	|		171123.785	96.471705	ppb		2.799	2.181	16.667
60	Ni	|		95425.475	96.918169	ppb		1.500	1.757	54.445
75	As	|		46263.393	98.446563	ppb		0.317	1.418	637.706
71	Ga-ISK	>		111803.643		ppb		1.542		116363.132
82	Se-2	|		4199.141	98.305838	ppb		1.554	1.759	-0.136
107	Ag-1	|		389664.276	96.870296	ppb		0.984	0.719	22.222
115	In-ISK	|		99728.752		ppb		2.174		102405.699
45	Sc-ISK	>		280203.684		ppb		2.670		290123.615
23	Na	|		2572087.625	5055.530415	ppb		1.077	1.965	3308.718
39	K	|		6059074.046	5202.242484	ppb		0.709	1.998	124435.172
24	Mg	|		2903444.087	5094.624920	ppb		1.483	1.438	111.667
159	Tb-ISK	|		198534.049		ppb		0.436		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 10:22:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.055

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31769.739		ppb	1.870			36181.321
9	Be	|	16.667	0.002616	ppb	34.641	142.423		14.444
10	B	|	602.235	0.953600	ppb	9.624	20.874		314.448
27	Al	|	6156.883	-0.083830	ppb	3.188	21.077		7678.731
43	Ca-2	|	118.334	3.737013	ppb	21.683	38.155		65.000
49	Ti	|	258.891	0.079810	ppb	4.875	21.293		240.002
52	Cr	|	10184.742	-0.255017	ppb	2.313	3.161		13894.534
55	Mn	|	898.918	0.022135	ppb	16.486	67.338		730.019
57	Fe	|	9425.334	4.895873	ppb	3.860	13.078		9459.800
45	Sc-IS	>	1484467.417		ppb	2.761			1688502.270
66	Zn	|	594.457	-0.162374	ppb	10.893	34.720		893.361
86	Sr	|	58.563	0.039145	ppb	65.640	57.225		-12.662
65	Cu	|	134.015	0.040505	ppb	5.242	5.779		71.915
69	Ga-IS	|	420837.744		ppb	5.072			484617.027
95	Mo	|	313.337	0.164214	ppb	12.083	11.086		34.444
115	In-IS	>	274490.798		ppb	1.141			299287.457
111	Cd	|	19.342	0.005307	ppb	16.910	36.589		11.039
118	Sn	|	3410.407	0.616945	ppb	3.548	3.955		382.227
121	Sb	|	1528.971	0.046825	ppb	9.594	55.753		1387.845
135	Ba	|	28.889	0.008585	ppb	40.522	121.222		21.111
165	Ho-IS	|	273327.875		ppb	0.730			295390.505
159	Tb-IS	|	242955.290		ppb	0.812			267519.443
207	Pb	|	617.783	0.028909	ppb	5.100	6.850		157.778
203	Tl	|	126.667	0.022427	ppb	12.059	14.485		18.889
209	Bi-IS	>	173322.879		ppb	0.423			184936.150
51	V	|	55.556	-0.026662	ppb	3.464	10.189		77.778
59	Co	|	32.222	0.009335	ppb	29.863	60.768		16.667
60	Ni	|	35.556	-0.016676	ppb	51.634	113.678		54.445
75	As	|	683.350	0.165501	ppb	3.713	36.022		637.706
71	Ga-ISK	>	110824.929		ppb	1.290			116363.132
82	Se-2	|	4.560	0.109717	ppb	164.682	160.003		-0.136
107	Ag-1	|	222.224	0.050275	ppb	32.669	34.607		22.222
115	In-ISK	|	97837.633		ppb	0.668			102405.699
45	Sc-ISK	>	279377.968		ppb	1.462			290123.615
23	Na	|	3615.458	0.845364	ppb	4.131	23.853		3308.718
39	K	|	132155.153	10.837196	ppb	0.804	10.566		124435.172
24	Mg	|	1010.036	1.588630	ppb	6.002	7.540		111.667
159	Tb-ISK	|	193955.107		ppb	0.107			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-4-B MS

Autosampler Position: 125

Sample Date/Time: Thursday, April 16, 2020 10:25:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-4-B MS.056

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32647.283		ppb		2.908		36181.321
9	Be	|	164401.706	102.539349	ppb	0.695	1.101		14.444
10	B	|	83846.522	229.339966	ppb	2.109	2.132		314.448
27	Al	|	4121619.162	546.295607	ppb	1.332	1.457		7678.731
43	Ca-2	|	1625226.329	93863.385450	ppb	0.915	0.700		65.000
49	Ti	|	89358.614	139.655805	ppb	0.811	0.820		240.002
52	Cr	|	897619.238	104.492578	ppb	0.358	1.353		13894.534
55	Mn	|	3080273.732	246.232964	ppb	0.336	0.805		730.019
57	Fe	|	1354315.509	5594.057192	ppb	0.624	1.038		9459.800
45	Sc-IS	>	1579001.249		ppb	1.055			1688502.270
66	Zn	|	130258.158	103.616063	ppb	2.927	1.972		893.361
86	Sr	|	1633535.639	855.396444	ppb	1.645	1.489		-12.662
65	Cu	|	176262.760	94.844577	ppb	1.657	1.108		71.915
69	Ga-IS	|	478262.657		ppb	1.369			484617.027
95	Mo	|	209896.378	114.622181	ppb	0.948	1.147		34.444
115	In-IS	>	277539.720		ppb	1.426			299287.457
111	Cd	|	174619.748	99.269652	ppb	0.127	1.556		11.039
118	Sn	|	378097.857	75.323394	ppb	1.567	0.838		382.227
121	Sb	|	483706.461	87.321985	ppb	0.920	1.774		1387.845
135	Ba	|	302517.672	270.763073	ppb	1.320	2.620		21.111
165	Ho-IS	|	285047.562		ppb	1.976			295390.505
159	Tb-IS	|	251683.432		ppb	1.106			267519.443
207	Pb	|	1643598.000	102.845248	ppb	1.700	1.591		157.778
203	Tl	|	479587.707	100.395041	ppb	2.287	3.590		18.889
209	Bi-IS	>	170406.190		ppb	2.196			184936.150
51	V	|	74331.887	108.433839	ppb	3.023	2.321		77.778
59	Co	|	170253.453	98.220459	ppb	2.743	2.784		16.667
60	Ni	|	94438.915	98.145986	ppb	0.740	1.444		54.445
75	As	|	50270.387	109.593639	ppb	1.636	1.257		637.706
71	Ga-ISK	>	109262.955		ppb	1.154			116363.132
82	Se-2	|	4535.254	108.646470	ppb	2.148	2.695		-0.136
107	Ag-1	|	178834.731	45.492753	ppb	1.204	2.099		22.222
115	In-ISK	|	96715.521		ppb	0.827			102405.699
45	Sc-ISK	>	288195.831		ppb	0.706			290123.615
23	Na	|	25487867.455	48746.762563	ppb	1.158	1.047		3308.718
39	K	|	7356002.929	6157.954476	ppb	1.104	1.837		124435.172
24	Mg	|	18525280.368	31599.595193	ppb	0.458	1.026		111.667
159	Tb-ISK	|	199443.927		ppb	0.462			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-4-C MSD

Autosampler Position: 126

Sample Date/Time: Thursday, April 16, 2020 10:28:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-4-C MSD.057

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33223.032		ppb		0.522		36181.321
9	Be	|	164392.963	105.038686	ppb	2.107	2.849		14.444
10	B	|	83248.555	233.267891	ppb	1.397	1.853		314.448
27	Al	|	4079725.004	553.956038	ppb	1.245	2.114		7678.731
43	Ca-2	|	1617934.839	95715.210975	ppb	0.809	0.538		65.000
49	Ti	|	89389.961	143.101029	ppb	1.686	0.798		240.002
52	Cr	|	892476.036	106.435632	ppb	1.669	0.812		13894.534
55	Mn	|	3081294.012	252.301425	ppb	0.631	0.485		730.019
57	Fe	|	1349632.844	5710.537831	ppb	1.655	0.772		9459.800
45	Sc-IS	>	1541494.007		ppb	0.946			1688502.270
66	Zn	|	128144.667	104.421516	ppb	2.693	1.759		893.361
86	Sr	|	1628830.270	873.689507	ppb	0.887	0.800		-12.662
65	Cu	|	176236.691	97.132556	ppb	2.268	1.384		71.915
69	Ga-IS	|	471811.495		ppb	0.611			484617.027
95	Mo	|	211240.388	118.158922	ppb	0.785	0.310		34.444
115	In-IS	>	272824.403		ppb	0.226			299287.457
111	Cd	|	174837.395	101.096828	ppb	0.443	0.527		11.039
118	Sn	|	378206.736	76.648857	ppb	0.737	0.958		382.227
121	Sb	|	484442.954	88.960601	ppb	1.689	1.920		1387.845
135	Ba	|	301701.283	274.644556	ppb	2.167	2.393		21.111
165	Ho-IS	|	280243.493		ppb	1.312			295390.505
159	Tb-IS	|	247478.543		ppb	0.388			267519.443
207	Pb	|	1627824.241	102.555903	ppb	1.535	1.173		157.778
203	Tl	|	480619.106	101.291657	ppb	0.716	2.237		18.889
209	Bi-IS	>	169233.365		ppb	1.759			184936.150
51	V	|	71856.961	105.437659	ppb	1.525	2.019		77.778
59	Co	|	164695.099	95.559538	ppb	1.078	1.659		16.667
60	Ni	|	94643.622	98.934885	ppb	1.326	2.794		54.445
75	As	|	49868.929	109.340654	ppb	1.384	1.497		637.706
71	Ga-ISK	>	108647.203		ppb	1.551			116363.132
82	Se-2	|	4539.902	109.361955	ppb	1.347	0.247		-0.136
107	Ag-1	|	174186.666	44.564965	ppb	0.886	2.255		22.222
115	In-ISK	|	96621.979		ppb	0.788			102405.699
45	Sc-ISK	>	282796.306		ppb	1.086			290123.615
23	Na	|	25526522.338	49755.630556	ppb	0.548	0.986		3308.718
39	K	|	7431717.771	6343.077296	ppb	1.370	1.600		124435.172
24	Mg	|	18539033.500	32229.997102	ppb	1.021	2.032		111.667
159	Tb-ISK	|	196413.767		ppb	0.932			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-4-A PDS

Autosampler Position: 359

Sample Date/Time: Thursday, April 16, 2020 10:30:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-4-A PDS.058

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		32599.376		ppb			0.748			36181.321
9	Be	|		164432.273	104.464795	ppb			1.998	3.406		14.444
10	B	|		82721.095	230.400690	ppb			2.055	1.422		314.448
27	Al	|		7165296.864	968.010636	ppb			1.044	2.330		7678.731
43	Ca-2	|		1567446.059	92168.469705	ppb			3.371	2.189		65.000
49	Ti	|		120706.752	192.237740	ppb			1.272	0.868		240.002
52	Cr	|		902857.943	107.055551	ppb			1.475	0.439		13894.534
55	Mn	|		3938875.210	320.623971	ppb			1.826	0.387		730.019
57	Fe	|		1502682.837	6324.211894	ppb			2.567	0.901		9459.800
45	Sc-IS	>		1550633.178		ppb			1.687			1688502.270
66	Zn	|		132848.332	107.645691	ppb			1.945	0.300		893.361
86	Sr	|		1595408.196	850.800137	ppb			1.747	1.940		-12.662
65	Cu	|		175260.183	96.018019	ppb			2.987	1.314		71.915
69	Ga-IS	|		474839.931		ppb			1.912			484617.027
95	Mo	|		214349.820	119.211759	ppb			1.845	2.429		34.444
115	In-IS	>		271073.467		ppb			1.076			299287.457
111	Cd	|		180522.340	105.059677	ppb			0.965	0.479		11.039
118	Sn	|		612948.227	125.061726	ppb			1.739	0.667		382.227
121	Sb	|		592202.071	109.508600	ppb			0.226	0.860		1387.845
135	Ba	|		301158.415	275.879071	ppb			2.790	1.783		21.111
165	Ho-IS	|		277858.828		ppb			1.583			295390.505
159	Tb-IS	|		245589.971		ppb			1.453			267519.443
207	Pb	|		1653575.173	104.810652	ppb			1.874	0.763		157.778
203	Tl	|		476125.502	100.970354	ppb			0.450	2.791		18.889
209	Bi-IS	>		168222.888		ppb			2.618			184936.150
51	V	|		74265.921	108.763084	ppb			1.950	1.894		77.778
59	Co	|		168708.712	97.692015	ppb			3.008	2.640		16.667
60	Ni	|		96027.274	100.169612	ppb			1.630	1.326		54.445
75	As	|		50057.541	109.555743	ppb			1.023	1.729		637.706
71	Ga-ISK	>		108847.574		ppb			1.050			116363.132
82	Se-2	|		4438.499	106.730345	ppb			2.213	2.592		-0.136
107	Ag-1	|		148919.086	38.022869	ppb			14.933	15.025		22.222
115	In-ISK	|		96152.522		ppb			2.280			102405.699
45	Sc-ISK	>		279669.888		ppb			0.099			290123.615
23	Na	|		24536342.171	48357.144207	ppb			0.344	0.397		3308.718
39	K	|		7404564.196	6390.996615	ppb			1.337	1.438		124435.172
24	Mg	|		18163255.389	31925.205788	ppb			1.193	1.207		111.667
159	Tb-ISK	|		195224.348		ppb			1.213			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-4-A PDS

Autosampler Position: 360

Sample Date/Time: Thursday, April 16, 2020 10:33:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-4-A PDS.059

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32293.135		ppb		1.990		36181.321
9	Be	|	161883.165	104.592843	ppb	0.313	2.246		14.444
10	B	|	80822.433	229.016599	ppb	0.495	2.536		314.448
27	Al	|	7111187.183	977.260449	ppb	0.891	3.079		7678.731
43	Ca-2	|	1544006.311	92348.150197	ppb	2.171	0.673		65.000
49	Ti	|	119042.921	192.815013	ppb	1.731	0.487		240.002
52	Cr	|	898132.597	108.335391	ppb	1.505	1.075		13894.534
55	Mn	|	3891515.221	322.190638	ppb	1.648	0.732		730.019
57	Fe	|	1483314.149	6350.279461	ppb	1.690	0.913		9459.800
45	Sc-IS	>	1524693.652		ppb	2.205			1688502.270
66	Zn	|	130399.866	107.443515	ppb	4.402	3.175		893.361
86	Sr	|	1590332.686	862.636959	ppb	1.340	2.128		-12.662
65	Cu	|	173520.109	96.684829	ppb	3.618	2.191		71.915
69	Ga-IS	|	464106.691		ppb	3.241			484617.027
95	Mo	|	215619.612	121.991660	ppb	1.157	3.156		34.444
115	In-IS	>	269623.298		ppb	0.287			299287.457
111	Cd	|	180619.790	105.679874	ppb	0.735	0.611		11.039
118	Sn	|	617294.564	126.631228	ppb	1.032	0.770		382.227
121	Sb	|	593309.469	110.293093	ppb	2.836	2.565		1387.845
135	Ba	|	300259.063	276.548835	ppb	3.901	3.635		21.111
165	Ho-IS	|	279657.437		ppb	0.278			295390.505
159	Tb-IS	|	242720.192		ppb	0.596			267519.443
207	Pb	|	1639267.895	104.399728	ppb	0.511	2.553		157.778
203	Tl	|	474819.036	101.161348	ppb	1.002	3.720		18.889
209	Bi-IS	>	167488.947		ppb	3.073			184936.150
51	V	|	75555.945	110.449700	ppb	0.261	1.208		77.778
59	Co	|	169736.861	98.113175	ppb	0.109	1.328		16.667
60	Ni	|	97558.663	101.587935	ppb	0.709	1.897		54.445
75	As	|	50738.945	110.843235	ppb	0.866	0.672		637.706
71	Ga-ISK	>	109058.083		ppb	1.407			116363.132
82	Se-2	|	4392.500	105.425451	ppb	0.259	1.546		-0.136
107	Ag-1	|	149038.371	37.967201	ppb	15.104	14.646		22.222
115	In-ISK	|	95377.070		ppb	1.327			102405.699
45	Sc-ISK	>	283036.478		ppb	0.890			290123.615
23	Na	|	24606834.836	47918.636136	ppb	1.069	0.251		3308.718
39	K	|	7446972.226	6350.599988	ppb	0.552	0.504		124435.172
24	Mg	|	18350182.195	31873.426976	ppb	1.213	1.962		111.667
159	Tb-ISK	|	195832.625		ppb	1.370			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-H-5-C

Autosampler Position: 127

Sample Date/Time: Thursday, April 16, 2020 10:36:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-H-5-C.060

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32103.815		ppb		1.369		36181.321
9	Be	|	33.333	0.013731	ppb		0.000	0.976	14.444
10	B	|	49302.726	143.406709	ppb		1.790	2.019	314.448
27	Al	|	224824.307	30.857084	ppb		1.028	1.365	7678.731
43	Ca-2	|	2256474.992	138873.832274	ppb		0.921	0.585	65.000
49	Ti	|	2886.959	4.468713	ppb		3.717	4.208	240.002
52	Cr	|	61743.157	6.236546	ppb		1.404	1.529	13894.534
55	Mn	|	66366.025	5.599949	ppb		0.678	0.728	730.019
57	Fe	|	103799.106	423.092457	ppb		1.253	1.177	9459.800
45	Sc-IS	>	1481723.440		ppb		0.606		1688502.270
66	Zn	|	6402.546	4.794117	ppb		0.807	0.275	893.361
86	Sr	|	1912214.078	1067.030096	ppb		1.379	1.107	-12.662
65	Cu	|	2370.095	1.323525	ppb		4.841	5.286	71.915
69	Ga-IS	|	454025.718		ppb		1.793		484617.027
95	Mo	|	10669.540	6.191914	ppb		2.082	1.772	34.444
115	In-IS	>	261810.632		ppb		0.587		299287.457
111	Cd	|	55.372	0.027532	ppb		13.119	15.251	11.039
118	Sn	|	6290.274	1.258963	ppb		0.765	0.381	382.227
121	Sb	|	2406.870	0.228833	ppb		3.471	6.617	1387.845
135	Ba	|	313556.208	297.424570	ppb		3.322	3.100	21.111
165	Ho-IS	|	266791.541		ppb		0.459		295390.505
159	Tb-IS	|	232458.258		ppb		0.284		267519.443
207	Pb	|	1697.817	0.103055	ppb		3.119	3.512	157.778
203	Tl	|	144.445	0.028287	ppb		16.694	19.372	18.889
209	Bi-IS	>	161416.841		ppb		0.653		184936.150
51	V	|	6134.652	9.038291	ppb		4.762	5.250	77.778
59	Co	|	156.668	0.083162	ppb		16.618	17.693	16.667
60	Ni	|	1578.976	1.622622	ppb		5.182	5.698	54.445
75	As	|	1216.224	1.417187	ppb		4.409	7.252	637.706
71	Ga-ISK	>	107054.078		ppb		0.652		116363.132
82	Se-2	|	217.843	5.327458	ppb		8.047	7.616	-0.136
107	Ag-1	|	417.784	0.103162	ppb		9.976	10.523	22.222
115	In-ISK	|	94799.045		ppb		0.747		102405.699
45	Sc-ISK	>	283256.228		ppb		0.504		290123.615
23	Na	|	26432294.673	51434.116509	ppb		1.402	1.214	3308.718
39	K	|	6516729.154	5539.490261	ppb		2.286	2.070	124435.172
24	Mg	|	22755862.528	39490.425478	ppb		1.564	1.287	111.667
159	Tb-ISK	|	195386.420		ppb		0.293		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 10:39:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.061

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29687.482		ppb		0.263		36181.321
9	Be	|	146836.397	103.962658	ppb	1.171	1.597		14.444
10	B	|	84121.576	261.267737	ppb	3.348	2.729		314.448
27	Al	|	722593.408	107.951723	ppb	1.142	0.781		7678.731
43	Ca-2	|	76862.924	5035.416121	ppb	1.608	0.440		65.000
49	Ti	|	58898.968	104.397431	ppb	1.649	1.017		240.002
52	Cr	|	794058.742	104.932809	ppb	0.467	0.986		13894.534
55	Mn	|	1119933.236	101.595015	ppb	0.982	1.432		730.019
57	Fe	|	1087740.828	5096.365805	ppb	1.831	0.876		9459.800
45	Sc-IS	>	1391040.917		ppb	1.334			1688502.270
66	Zn	|	109000.223	98.378108	ppb	3.871	2.579		893.361
86	Sr	|	188180.934	111.852917	ppb	2.144	1.147		-12.662
65	Cu	|	162925.138	99.496154	ppb	4.013	2.859		71.915
69	Ga-IS	|	410785.057		ppb	2.061			484617.027
95	Mo	|	177122.596	109.784460	ppb	1.732	0.498		34.444
115	In-IS	>	265455.493		ppb	1.843			299287.457
111	Cd	|	166022.625	98.678325	ppb	0.701	1.181		11.039
118	Sn	|	496450.731	103.439842	ppb	2.326	2.281		382.227
121	Sb	|	552586.391	104.338960	ppb	1.053	0.910		1387.845
135	Ba	|	107270.578	100.323364	ppb	4.124	2.632		21.111
165	Ho-IS	|	262697.982		ppb	1.086			295390.505
159	Tb-IS	|	230255.235		ppb	0.337			267519.443
207	Pb	|	1577012.953	97.268578	ppb	0.797	1.081		157.778
203	Tl	|	467226.533	96.388404	ppb	0.341	1.383		18.889
209	Bi-IS	>	172867.575		ppb	1.602			184936.150
51	V	|	66957.666	97.398559	ppb	0.693	1.435		77.778
59	Co	|	168632.832	97.007088	ppb	0.803	1.563		16.667
60	Ni	|	91570.324	94.892153	ppb	0.490	1.930		54.445
75	As	|	45660.478	99.143318	ppb	0.539	1.852		637.706
71	Ga-ISK	>	109593.336		ppb	2.112			116363.132
82	Se-2	|	4087.118	97.641159	ppb	0.645	2.774		-0.136
107	Ag-1	|	377477.044	95.762465	ppb	1.271	2.891		22.222
115	In-ISK	|	96312.871		ppb	1.078			102405.699
45	Sc-ISK	>	276043.888		ppb	1.017			290123.615
23	Na	|	2479324.779	4944.966061	ppb	1.350	1.150		3308.718
39	K	|	5968812.264	5200.667129	ppb	1.146	1.872		124435.172
24	Mg	|	2780213.525	4951.345323	ppb	0.763	1.772		111.667
159	Tb-ISK	|	191501.031		ppb	0.641			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message
Sr 86

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 10:41:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.062

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		28996.074		ppb			2.225			36181.321
9	Be	|		23.333	0.008519	ppb			24.744	50.871		14.444
10	B	|		656.682	1.288764	ppb			11.475	19.328		314.448
27	Al	|		6077.960	-0.015205	ppb			2.992	244.170		7678.731
43	Ca-2	|		128.334	5.104263	ppb			15.746	26.229		65.000
49	Ti	|		256.669	0.115155	ppb			13.683	49.464		240.002
52	Cr	|		9239.655	-0.266409	ppb			2.419	4.801		13894.534
55	Mn	|		896.695	0.028762	ppb			3.546	11.938		730.019
57	Fe	|		9134.031	7.358047	ppb			2.064	9.294		9459.800
45	Sc-IS	>		1358662.632		ppb			2.044			1688502.270
66	Zn	|		673.349	-0.042525	ppb			6.474	78.481		893.361
86	Sr	|		99.699	0.067068	ppb			35.441	33.219		-12.662
65	Cu	|		116.182	0.036401	ppb			10.292	16.735		71.915
69	Ga-IS	|		384557.259		ppb			1.871			484617.027
95	Mo	|		374.449	0.219804	ppb			10.432	9.185		34.444
115	In-IS	>		261209.876		ppb			2.026			299287.457
111	Cd	|		18.103	0.005088	ppb			21.110	40.702		11.039
118	Sn	|		4794.140	0.944546	ppb			6.667	5.484		382.227
121	Sb	|		2484.661	0.244670	ppb			7.476	12.401		1387.845
135	Ba	|		53.333	0.033114	ppb			16.536	23.024		21.111
165	Ho-IS	|		259325.390		ppb			1.984			295390.505
159	Tb-IS	|		228165.548		ppb			1.017			267519.443
207	Pb	|		725.563	0.036634	ppb			4.269	4.131		157.778
203	Tl	|		113.334	0.020277	ppb			8.824	12.253		18.889
209	Bi-IS	>		169142.289		ppb			1.728			184936.150
51	V	|		48.889	-0.034041	ppb			32.222	69.575		77.778
59	Co	|		31.111	0.009174	ppb			34.442	66.144		16.667
60	Ni	|		31.111	-0.020205	ppb			30.930	51.668		54.445
75	As	|		634.075	0.101431	ppb			5.788	94.688		637.706
71	Ga-ISK	>		107499.644		ppb			1.008			116363.132
82	Se-2	|		2.531	0.065040	ppb			99.477	94.702		-0.136
107	Ag-1	|		1031.149	0.261217	ppb			15.586	15.664		22.222
115	In-ISK	|		94068.958		ppb			0.906			102405.699
45	Sc-ISK	>		269511.955		ppb			0.758			290123.615
23	Na	|		4307.316	2.522125	ppb			3.445	9.416		3308.718
39	K	|		133820.529	16.599628	ppb			0.414	8.516		124435.172
24	Mg	|		1553.418	2.644695	ppb			5.806	6.673		111.667
159	Tb-ISK	|		188444.136		ppb			0.819			199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Thursday, April 16, 2020 10:44:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICSA-30518.063

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31429.002		ppb			3.157			36181.321
9	Be	|		14.444	0.000790	ppb	48.038	548.561				14.444
10	B	|		564.456	0.785289	ppb	3.842	9.588				314.448
27	Al	|		79281578.979	10816.623609	ppb	0.758	2.134				7678.731
43	Ca-2	|		494272.821	29328.813879	ppb	1.264	0.870				65.000
49	Ti	|		128860.804	207.110141	ppb	0.569	1.151				240.002
52	Cr	|		11345.615	-0.157706	ppb	1.187	10.185				13894.534
55	Mn	|		8760.463	0.665262	ppb	0.991	2.722				730.019
57	Fe	|		6020085.740	25675.709558	ppb	2.814	1.305				9459.800
45	Sc-IS	>		1536780.027		ppb	1.527					1688502.270
66	Zn	|		1305.616	0.404614	ppb	9.710	23.301				893.361
86	Sr	|		902.880	0.491877	ppb	10.198	9.732				-12.662
65	Cu	|		-260.842	-0.180465	ppb	9.339	7.311				71.915
69	Ga-IS	|		429290.669		ppb	4.153					484617.027
95	Mo	|		375745.213	210.854550	ppb	0.617	1.133				34.444
115	In-IS	>		280413.978		ppb	1.431					299287.457
111	Cd	|		-67.936	-0.044231	ppb	50.821	45.474				11.039
118	Sn	|		2549.117	0.432213	ppb	5.512	4.794				382.227
121	Sb	|		2339.081	0.186138	ppb	6.848	15.780				1387.845
135	Ba	|		246.669	0.200924	ppb	5.890	5.754				21.111
165	Ho-IS	|		290409.904		ppb	0.047					295390.505
159	Tb-IS	|		252913.856		ppb	1.352					267519.443
207	Pb	|		680.006	0.031898	ppb	5.943	7.000				157.778
203	Tl	|		78.889	0.012269	ppb	13.583	17.782				18.889
209	Bi-IS	>		176827.668		ppb	0.515					184936.150
51	V	|		511.120	0.631041	ppb	5.272	4.720				77.778
59	Co	|		101.111	0.048453	ppb	18.157	17.985				16.667
60	Ni	|		286.670	0.241830	ppb	4.028	8.256				54.445
75	As	|		750.714	0.316394	ppb	6.778	34.669				637.706
71	Ga-ISK	>		110546.326		ppb	3.021					116363.132
82	Se-2	|		8.515	0.203826	ppb	27.094	24.724				-0.136
107	Ag-1	|		315.559	0.074113	ppb	2.199	5.541				22.222
115	In-ISK	|		96247.353		ppb	3.271					102405.699
45	Sc-ISK	>		279264.799		ppb	3.924					290123.615
23	Na	|		12471700.726	24647.872625	ppb	2.431	5.831				3308.718
39	K	|		11962226.760	10422.310103	ppb	2.396	6.477				124435.172
24	Mg	|		5591125.166	9855.098469	ppb	1.522	5.343				111.667
159	Tb-ISK	|		196187.503		ppb	3.180					199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Thursday, April 16, 2020 10:47:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICSAB-30517.064

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32347.695		ppb	1.009		36181.321
9	Be	10.000	-0.002143	ppb	33.333	97.277	14.444
10	B	2090.153	4.969051	ppb	7.418	7.894	314.448
27	Al	78830134.797	10541.698984	ppb	2.961	3.713	7678.731
43	Ca-2	514582.222	29926.527223	ppb	1.703	1.078	65.000
49	Ti	132444.593	208.639726	ppb	1.843	1.938	240.002
52	Cr	176536.486	19.464717	ppb	1.597	1.625	13894.534
55	Mn	243178.090	19.526901	ppb	1.381	1.419	730.019
57	Fe	6176320.333	25823.758192	ppb	1.736	1.527	9459.800
45	Sc-IS	> 1567834.202		ppb	0.739		1688502.270
66	Zn	13142.713	9.928387	ppb	2.842	2.315	893.361
86	Sr	855.562	0.457341	ppb	3.726	3.117	-12.662
65	Cu	34723.039	18.787061	ppb	2.168	1.478	71.915
69	Ga-IS	441469.558		ppb	1.443		484617.027
95	Mo	391405.949	215.272155	ppb	1.623	1.563	34.444
115	In-IS	> 287488.380		ppb	0.499		299287.457
111	Cd	17097.059	9.377124	ppb	2.195	2.551	11.039
118	Sn	1697.879	0.256148	ppb	4.614	5.642	382.227
121	Sb	1886.791	0.096712	ppb	2.674	7.463	1387.845
135	Ba	231.113	0.182049	ppb	14.519	15.366	21.111
165	Ho-IS	296399.165		ppb	1.315		295390.505
159	Tb-IS	261479.402		ppb	1.445		267519.443
207	Pb	474.448	0.019374	ppb	3.995	4.652	157.778
203	Tl	57.778	0.007959	ppb	41.736	61.078	18.889
209	Bi-IS	> 177659.168		ppb	1.606		184936.150
51	V	13959.042	19.465314	ppb	2.628	3.070	77.778
59	Co	33054.871	18.297792	ppb	1.647	0.224	16.667
60	Ni	18287.255	18.202592	ppb	1.664	2.391	54.445
75	As	5244.840	9.786874	ppb	3.776	3.581	637.706
71	Ga-ISK	> 113820.606		ppb	1.704		116363.132
82	Se-2	402.188	9.254768	ppb	3.005	4.441	-0.136
107	Ag-1	18949.227	4.622300	ppb	1.248	1.016	22.222
115	In-ISK	101101.820		ppb	1.391		102405.699
45	Sc-ISK	> 289604.000		ppb	1.055		290123.615
23	Na	12944742.443	24634.559367	ppb	0.714	0.631	3308.718
39	K	12226751.669	10254.058072	ppb	1.161	1.259	124435.172
24	Mg	5763626.048	9783.176009	ppb	1.419	1.247	111.667
159	Tb-ISK	204665.701		ppb	0.698		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, April 16, 2020 10:50:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.065

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		31357.720		ppb			1.995			36181.321
9	Be	|		11.111	-0.001192	ppb	45.826	279.230				14.444
10	B	|		441.118	0.455863	ppb	13.030	36.044				314.448
27	Al	|		17301.582	1.442781	ppb	0.937	1.253				7678.731
43	Ca-2	|		180.001	7.333225	ppb	12.108	17.814				65.000
49	Ti	|		284.447	0.113252	ppb	1.790	8.077				240.002
52	Cr	|		9081.775	-0.415719	ppb	1.619	4.882				13894.534
55	Mn	|		1204.495	0.045871	ppb	2.386	4.818				730.019
57	Fe	|		9017.293	2.328431	ppb	4.493	76.401				9459.800
45	Sc-IS	>		1513715.132		ppb	0.193					1688502.270
66	Zn	|		1072.263	0.226650	ppb	8.251	32.441				893.361
86	Sr	|		14.093	0.013893	ppb	59.384	32.816				-12.662
65	Cu	|		181.591	0.065768	ppb	2.823	4.629				71.915
69	Ga-IS	|		422970.696		ppb	1.941					484617.027
95	Mo	|		605.568	0.327415	ppb	5.623	6.033				34.444
115	In-IS	>		274262.492		ppb	1.013					299287.457
111	Cd	|		13.173	0.001750	ppb	53.107	229.742				11.039
118	Sn	|		1517.858	0.235566	ppb	3.200	3.114				382.227
121	Sb	|		1243.387	-0.005221	ppb	3.349	123.216				1387.845
135	Ba	|		102.223	0.075124	ppb	11.452	15.231				21.111
165	Ho-IS	|		275907.710		ppb	2.453					295390.505
159	Tb-IS	|		243210.720		ppb	0.926					267519.443
207	Pb	|		265.557	0.007303	ppb	7.247	15.703				157.778
203	Tl	|		14.444	-0.000668	ppb	58.076	254.180				18.889
209	Bi-IS	>		172634.684		ppb	1.053					184936.150
51	V	|		54.445	-0.029623	ppb	12.745	32.401				77.778
59	Co	|		15.556	-0.000289	ppb	86.603	2616.490				16.667
60	Ni	|		54.445	0.001692	ppb	3.535	87.447				54.445
75	As	|		678.127	0.129230	ppb	5.375	70.579				637.706
71	Ga-ISK	>		112757.722		ppb	0.943					116363.132
82	Se-2	|		3.198	0.076948	ppb	110.086	105.087				-0.136
107	Ag-1	|		1023.370	0.246997	ppb	2.280	3.288				22.222
115	In-ISK	|		99202.640		ppb	1.302					102405.699
45	Sc-ISK	>		280758.885		ppb	0.976					290123.615
23	Na	|		5892.882	5.285295	ppb	1.451	5.221				3308.718
39	K	|		132341.332	10.422559	ppb	1.101	11.345				124435.172
24	Mg	|		1178.382	1.874034	ppb	1.296	1.275				111.667
159	Tb-ISK	|		200002.307		ppb	0.278					199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, April 16, 2020 10:53:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICVL-210771.066

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		31417.846		ppb		1.104		36181.321
9	Be	|		1550.084	1.008185	ppb		1.707	2.311	14.444
10	B	|		18072.536	51.347869	ppb		0.712	0.825	314.448
27	Al	|		386838.769	53.052156	ppb		0.473	1.780	7678.731
43	Ca-2	|		940.031	53.629503	ppb		9.411	11.650	65.000
49	Ti	|		837.802	1.027489	ppb		9.249	10.880	240.002
52	Cr	|		18030.263	0.704207	ppb		2.138	4.860	13894.534
55	Mn	|		12824.647	1.023227	ppb		3.176	1.794	730.019
57	Fe	|		19634.601	49.033345	ppb		2.508	1.848	9459.800
45	Sc-IS	>		1501908.793		ppb		1.492		1688502.270
66	Zn	|		7178.470	5.374746	ppb		0.123	1.567	893.361
86	Sr	|		1754.079	0.973123	ppb		12.593	13.883	-12.662
65	Cu	|		1923.306	1.052273	ppb		1.331	0.187	71.915
69	Ga-IS	|		424226.957		ppb		1.818		484617.027
95	Mo	|		1984.582	1.122132	ppb		2.127	2.865	34.444
115	In-IS	>		277646.259		ppb		1.039		299287.457
111	Cd	|		1653.706	0.933912	ppb		3.382	3.540	11.039
118	Sn	|		6166.887	1.158741	ppb		3.027	3.833	382.227
121	Sb	|		6834.968	1.003784	ppb		1.425	2.791	1387.845
135	Ba	|		1184.494	1.042491	ppb		7.083	7.951	21.111
165	Ho-IS	|		277893.753		ppb		1.194		295390.505
159	Tb-IS	|		248411.208		ppb		0.534		267519.443
207	Pb	|		16390.336	0.990752	ppb		2.463	3.670	157.778
203	Tl	|		4921.959	1.000308	ppb		0.980	1.347	18.889
209	Bi-IS	>		174834.573		ppb		1.306		184936.150
51	V	|		790.022	0.998839	ppb		2.349	3.772	77.778
59	Co	|		1812.337	0.992333	ppb		5.045	3.978	16.667
60	Ni	|		1033.371	0.976029	ppb		5.192	5.064	54.445
75	As	|		1157.344	1.125576	ppb		1.469	5.794	637.706
71	Ga-ISK	>		114055.763		ppb		1.237		116363.132
82	Se-2	|		46.203	1.064291	ppb		12.724	13.860	-0.136
107	Ag-1	|		4120.595	0.999073	ppb		4.298	4.951	22.222
115	In-ISK	|		98941.234		ppb		1.016		102405.699
45	Sc-ISK	>		281255.206		ppb		1.066		290123.615
23	Na	|		28899.209	50.351330	ppb		2.009	1.064	3308.718
39	K	|		186881.103	57.811848	ppb		0.506	4.271	124435.172
24	Mg	|		28388.188	49.435457	ppb		2.349	3.065	111.667
159	Tb-ISK	|		197258.857		ppb		1.862		199027.657

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, April 16, 2020 10:57:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICIS-23447.067

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30847.727		ppb		2.441		
9	Be	|		15.556		ppb		44.607		
10	B	|		317.781		ppb		8.797		
27	Al	|		7676.508		ppb		3.111		
43	Ca-2	|		90.000		ppb		19.245		
49	Ti	|		198.890		ppb		10.102		
52	Cr	|		9512.056		ppb		2.746		
55	Mn	|		726.685		ppb		3.008		
57	Fe	|		7990.013		ppb		3.503		
45	Sc-IS	>		1465711.044		ppb		2.053		
66	Zn	|		691.128		ppb		10.029		
86	Sr	|		20.160		ppb		99.331		
65	Cu	|		106.188		ppb		9.759		
69	Ga-IS	|		416966.918		ppb		3.918		
95	Mo	|		74.445		ppb		13.679		
115	In-IS	>		275360.306		ppb		0.594		
111	Cd	|		4.288		ppb		44.504		
118	Sn	|		1082.263		ppb		1.456		
121	Sb	|		1043.372		ppb		6.220		
135	Ba	|		22.222		ppb		60.622		
165	Ho-IS	|		275484.201		ppb		0.414		
159	Tb-IS	|		241104.310		ppb		0.745		
207	Pb	|		184.445		ppb		5.521		
203	Tl	|		21.111		ppb		18.232		
209	Bi-IS	>		172319.940		ppb		1.751		
51	V	|		41.111		ppb		24.771		
59	Co	|		10.000		ppb		57.735		
60	Ni	|		31.111		ppb		16.366		
75	As	|		670.629		ppb		4.837		
71	Ga-ISK	>		112808.131		ppb		1.166		
82	Se-2	|		4.205		ppb		96.432		
107	Ag-1	|		64.445		ppb		7.901		
115	In-ISK	|		98394.491		ppb		0.939		
45	Sc-ISK	>		280005.730		ppb		1.630		
23	Na	|		2205.170		ppb		1.416		
39	K	|		127332.775		ppb		1.003		
24	Mg	|		185.001		ppb		7.151		
159	Tb-ISK	|		193019.402		ppb		1.434		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, April 16, 2020 11:00:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\IC-210761.068

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	30934.570		ppb		0.961		30847.727
9	Be	|	300948.039	200.000000	ppb		0.376	1.008	15.556
10	B	|	172018.709	500.000000	ppb		2.282	3.591	317.781
27	Al	|	1508436.775	200.000000	ppb		0.841	1.944	7676.508
43	Ca-2	|	167319.222	10200.000000	ppb		1.095	0.691	90.000
49	Ti	|	123414.220	200.000000	ppb		1.620	0.332	198.890
52	Cr	|	1671880.914	200.000000	ppb		1.612	0.804	9512.056
55	Mn	|	2437924.226	200.000000	ppb		1.141	0.523	726.685
57	Fe	|	2408235.968	10200.000000	ppb		2.390	1.112	7990.013
45	Sc-IS	>	1468279.412		ppb		1.304		1465711.044
66	Zn	|	231373.868	200.000000	ppb		2.545	1.376	691.128
86	Sr	|	390005.281	200.000000	ppb		0.709	1.512	20.160
65	Cu	|	345448.846	200.000000	ppb		3.199	1.928	106.188
69	Ga-IS	|	463141.029		ppb		2.141		416966.918
95	Mo	|	369054.376	200.000000	ppb		1.068	0.618	74.445
115	In-IS	>	275686.647		ppb		1.351		275360.306
111	Cd	|	347380.807	200.000000	ppb		0.224	1.556	4.288
118	Sn	|	1018308.861	200.000000	ppb		0.737	0.650	1082.263
121	Sb	|	1133102.721	200.000000	ppb		1.236	1.113	1043.372
135	Ba	|	222888.488	200.000000	ppb		2.896	1.614	22.222
165	Ho-IS	|	279579.356		ppb		0.770		275484.201
159	Tb-IS	|	245295.933		ppb		0.967		241104.310
207	Pb	|	3236327.357	200.000000	ppb		0.660	1.835	184.445
203	Tl	|	957092.905	200.000000	ppb		0.125	1.059	21.111
209	Bi-IS	>	172900.107		ppb		1.178		172319.940
51	V	|	140783.826	200.000000	ppb		2.048	3.293	41.111
59	Co	|	354799.076	200.000000	ppb		2.435	3.617	10.000
60	Ni	|	190533.340	200.000000	ppb		0.713	1.172	31.111
75	As	|	95032.071	200.000000	ppb		1.466	0.896	670.629
71	Ga-ISK	>	114137.530		ppb		1.321		112808.131
82	Se-2	|	8497.389	200.000000	ppb		0.353	0.973	4.205
107	Ag-1	|	787220.192	200.000000	ppb		0.687	1.995	64.445
115	In-ISK	|	100617.475		ppb		0.934		98394.491
45	Sc-ISK	>	289301.146		ppb		0.598		280005.730
23	Na	|	5146910.963	10200.000000	ppb		0.157	0.690	2205.170
39	K	|	12127838.906	10200.000000	ppb		0.254	0.418	127332.775
24	Mg	|	5767255.998	10200.000000	ppb		1.418	0.846	185.001
159	Tb-ISK	|	200704.051		ppb		0.354		193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 11:02:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.069

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31464.625		ppb			2.328			30847.727
9	Be	|		152145.973	100.687096	ppb			1.155	1.055		15.556
10	B	|		85678.432	247.470044	ppb			1.727	1.058		317.781
27	Al	|		759075.575	99.699393	ppb			1.789	0.478		7676.508
43	Ca-2	|		82675.257	5016.166639	ppb			1.759	0.591		90.000
49	Ti	|		62046.696	99.979726	ppb			1.599	1.093		198.890
52	Cr	|		832584.681	98.595141	ppb			2.707	0.575		9512.056
55	Mn	|		1173029.128	95.803355	ppb			1.611	0.948		726.685
57	Fe	|		1151729.961	4839.840947	ppb			2.904	1.152		7990.013
45	Sc-IS	>		1474480.766		ppb			2.174			1465711.044
66	Zn	|		115644.393	99.243047	ppb			3.714	2.635		691.128
86	Sr	|		195625.765	99.884374	ppb			3.372	2.822		20.160
65	Cu	|		174983.051	100.846028	ppb			4.504	3.059		106.188
69	Ga-IS	|		437670.037		ppb			2.834			416966.918
95	Mo	|		185635.185	100.165076	ppb			1.548	1.010		74.445
115	In-IS	>		274757.550		ppb			0.912			275360.306
111	Cd	|		172817.236	99.819645	ppb			0.760	0.284		4.288
118	Sn	|		509592.753	100.323060	ppb			1.203	1.929		1082.263
121	Sb	|		569044.846	100.684725	ppb			0.852	0.633		1043.372
135	Ba	|		111259.434	100.181775	ppb			1.711	2.025		22.222
165	Ho-IS	|		280230.819		ppb			0.749			275484.201
159	Tb-IS	|		244965.846		ppb			0.753			241104.310
207	Pb	|		1606868.517	99.314299	ppb			0.881	1.314		184.445
203	Tl	|		487208.161	101.833225	ppb			1.027	1.484		21.111
209	Bi-IS	>		172850.545		ppb			0.485			172319.940
51	V	|		67934.501	97.469462	ppb			1.464	1.256		41.111
59	Co	|		172802.761	98.395563	ppb			2.920	2.309		10.000
60	Ni	|		95040.672	100.788839	ppb			0.957	0.144		31.111
75	As	|		47575.305	100.483120	ppb			1.709	2.588		670.629
71	Ga-ISK	>		112946.983		ppb			0.890			112808.131
82	Se-2	|		4328.841	102.916020	ppb			1.251	2.148		4.205
107	Ag-1	|		392998.025	100.872941	ppb			0.669	0.473		64.445
115	In-ISK	|		101235.636		ppb			1.114			98394.491
45	Sc-ISK	>		284174.557		ppb			1.488			280005.730
23	Na	|		2564131.876	5171.601597	ppb			0.415	1.559		2205.170
39	K	|		6171836.954	5230.924819	ppb			1.201	1.475		127332.775
24	Mg	|		2888157.614	5200.860018	ppb			0.238	1.377		185.001
159	Tb-ISK	|		198971.433		ppb			0.705			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 11:05:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.070

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30636.167		ppb			2.933			30847.727
9	Be	|		35.556	0.013389	ppb			53.309	90.919		15.556
10	B	|		715.573	1.180569	ppb			3.962	11.018		317.781
27	Al	|		6522.605	-0.145762	ppb			7.545	49.947		7676.508
43	Ca-2	|		75.000	-0.872867	ppb			23.094	123.878		90.000
49	Ti	|		232.224	0.057456	ppb			4.614	18.801		198.890
52	Cr	|		8949.470	-0.058237	ppb			2.463	7.855		9512.056
55	Mn	|		888.917	0.013959	ppb			7.698	35.143		726.685
57	Fe	|		8694.870	3.321848	ppb			3.780	17.543		7990.013
45	Sc-IS	>		1452778.850		ppb			2.232			1465711.044
66	Zn	|		563.344	-0.105943	ppb			7.391	44.415		691.128
86	Sr	|		17.338	-0.001079	ppb			228.543	1931.379		20.160
65	Cu	|		152.898	0.027988	ppb			20.977	68.858		106.188
69	Ga-IS	|		410204.797		ppb			3.393			416966.918
95	Mo	|		408.895	0.183595	ppb			11.098	13.495		74.445
115	In-IS	>		268394.241		ppb			1.406			275360.306
111	Cd	|		24.697	0.012151	ppb			15.849	20.503		4.288
118	Sn	|		4231.742	0.641051	ppb			9.986	12.042		1082.263
121	Sb	|		1443.407	0.077437	ppb			13.063	44.866		1043.372
135	Ba	|		33.333	0.010841	ppb			26.458	78.483		22.222
165	Ho-IS	|		268971.319		ppb			1.939			275484.201
159	Tb-IS	|		237204.329		ppb			0.996			241104.310
207	Pb	|		766.674	0.036410	ppb			3.765	4.765		184.445
203	Tl	|		164.445	0.030280	ppb			7.119	8.291		21.111
209	Bi-IS	>		171191.847		ppb			0.150			172319.940
51	V	|		33.333	-0.010811	ppb			51.962	226.225		41.111
59	Co	|		30.000	0.011586	ppb			22.222	32.328		10.000
60	Ni	|		45.556	0.016016	ppb			27.702	88.871		31.111
75	As	|		665.714	0.006329	ppb			1.354	488.585		670.629
71	Ga-ISK	>		111507.999		ppb			1.389			112808.131
82	Se-2	|		2.518	-0.038881	ppb			219.053	345.173		4.205
107	Ag-1	|		274.447	0.054847	ppb			15.852	21.230		64.445
115	In-ISK	|		97944.237		ppb			1.865			98394.491
45	Sc-ISK	>		273561.330		ppb			1.215			280005.730
23	Na	|		2861.954	1.482284	ppb			4.799	15.905		2205.170
39	K	|		135688.076	10.159793	ppb			1.200	20.372		127332.775
24	Mg	|		626.680	0.833728	ppb			7.371	9.144		185.001
159	Tb-ISK	|		192169.964		ppb			0.937			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, April 16, 2020 11:08:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICVL-210771.071

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31210.731		ppb			1.872			30847.727
9	Be	|		1495.634	0.972689	ppb			1.815	1.847		15.556
10	B	|		17919.009	50.669424	ppb			0.667	1.271		317.781
27	Al	|		382306.040	49.360558	ppb			0.927	1.409		7676.508
43	Ca-2	|		913.363	49.581097	ppb			5.538	5.073		90.000
49	Ti	|		833.358	1.014243	ppb			4.060	4.253		198.890
52	Cr	|		17389.468	0.922776	ppb			1.667	2.790		9512.056
55	Mn	|		12476.558	0.952802	ppb			1.798	0.911		726.685
57	Fe	|		19619.026	48.441410	ppb			2.977	3.880		7990.013
45	Sc-IS	>		1484567.868		ppb			1.004			1465711.044
66	Zn	|		6691.569	5.136795	ppb			4.776	4.307		691.128
86	Sr	|		1947.070	0.977177	ppb			3.941	4.098		20.160
65	Cu	|		1814.299	0.977786	ppb			0.707	0.740		106.188
69	Ga-IS	|		415902.466		ppb			2.203			416966.918
95	Mo	|		1872.345	0.963162	ppb			4.230	3.755		74.445
115	In-IS	>		276150.505		ppb			0.830			275360.306
111	Cd	|		1802.849	1.033520	ppb			7.498	7.238		4.288
118	Sn	|		6843.861	1.130212	ppb			1.572	1.401		1082.263
121	Sb	|		6831.634	1.020219	ppb			2.260	1.732		1043.372
135	Ba	|		1105.598	0.970566	ppb			3.981	3.583		22.222
165	Ho-IS	|		273776.633		ppb			1.489			275484.201
159	Tb-IS	|		241410.495		ppb			0.560			241104.310
207	Pb	|		16211.372	0.978595	ppb			1.568	0.958		184.445
203	Tl	|		4747.456	0.976145	ppb			3.832	4.322		21.111
209	Bi-IS	>		174941.346		ppb			0.772			172319.940
51	V	|		651.126	0.892532	ppb			5.978	5.964		41.111
59	Co	|		1673.431	0.964784	ppb			4.323	4.845		10.000
60	Ni	|		1013.369	1.061351	ppb			7.032	6.865		31.111
75	As	|		1078.117	0.913504	ppb			3.797	11.515		670.629
71	Ga-ISK	>		110931.273		ppb			0.728			112808.131
82	Se-2	|		41.195	0.896822	ppb			29.171	31.967		4.205
107	Ag-1	|		3948.325	1.015564	ppb			6.840	7.150		64.445
115	In-ISK	|		98616.216		ppb			1.364			98394.491
45	Sc-ISK	>		281429.889		ppb			1.466			280005.730
23	Na	|		27379.550	51.284931	ppb			1.547	1.045		2205.170
39	K	|		192316.960	56.257074	ppb			0.064	4.537		127332.775
24	Mg	|		27838.767	50.283280	ppb			0.913	1.353		185.001
159	Tb-ISK	|		195098.831		ppb			1.883			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63378_1-A

Autosampler Position: 136

Sample Date/Time: Thursday, April 16, 2020 11:11:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\MB 570-63378_1-A.072

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30618.348		ppb	2.675		30847.727
9	Be	22.222	0.004775	ppb	31.225	98.060	15.556
10	B	424.451	0.340218	ppb	8.827	31.246	317.781
27	Al	4058.374	-0.468429	ppb	22.923	29.646	7676.508
43	Ca-2	51.667	-2.268972	ppb	31.109	44.044	90.000
49	Ti	193.335	-0.002346	ppb	20.904	2584.402	198.890
52	Cr	9154.044	-0.016770	ppb	1.735	175.349	9512.056
55	Mn	505.565	-0.017273	ppb	14.982	31.504	726.685
57	Fe	8262.392	1.981523	ppb	4.702	58.475	7990.013
45	Sc-IS	> 1431892.408		ppb	2.169		1465711.044
66	Zn	526.676	-0.132301	ppb	7.133	19.484	691.128
86	Sr	-4.322	-0.012465	ppb	560.107	100.807	20.160
65	Cu	83.057	-0.012168	ppb	17.542	77.479	106.188
69	Ga-IS	403435.339		ppb	3.148		416966.918
95	Mo	91.111	0.010046	ppb	26.968	126.675	74.445
115	In-IS	> 271493.645		ppb	1.184		275360.306
111	Cd	15.364	0.006507	ppb	44.985	62.140	4.288
118	Sn	1363.399	0.059050	ppb	6.267	23.384	1082.263
121	Sb	790.022	-0.042859	ppb	7.098	21.238	1043.372
135	Ba	13.333	-0.007782	ppb	43.301	69.484	22.222
165	Ho-IS	265642.653		ppb	0.487		275484.201
159	Tb-IS	236451.921		ppb	0.548		241104.310
207	Pb	245.556	0.003887	ppb	23.090	90.983	184.445
203	Tl	37.778	0.003547	ppb	5.094	14.492	21.111
209	Bi-IS	> 171268.428		ppb	1.318		172319.940
51	V	27.778	-0.018620	ppb	24.980	54.218	41.111
59	Co	13.333	0.001988	ppb	75.000	289.782	10.000
60	Ni	22.222	-0.009104	ppb	17.321	47.176	31.111
75	As	621.097	-0.088470	ppb	9.437	136.545	670.629
71	Ga-ISK	> 111292.953		ppb	0.591		112808.131
82	Se-2	-2.831	-0.168779	ppb	88.231	35.967	4.205
107	Ag-1	75.556	0.003117	ppb	9.184	56.304	64.445
115	In-ISK	97792.113		ppb	1.919		98394.491
45	Sc-ISK	> 276924.384		ppb	1.769		280005.730
23	Na	1918.462	-0.544582	ppb	5.957	35.958	2205.170
39	K	133679.218	6.901671	ppb	0.466	24.755	127332.775
24	Mg	141.667	-0.076135	ppb	14.264	50.551	185.001
159	Tb-ISK	192207.090		ppb	0.675		193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63378_2-A

Autosampler Position: 137

Sample Date/Time: Thursday, April 16, 2020 11:13:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCS 570-63378_2-A.073

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31717.399		ppb		1.542		30847.727
9	Be	|	162809.243	108.123762	ppb	1.238	1.437		15.556
10	B	|	35338.122	101.864744	ppb	2.896	1.158		317.781
27	Al	|	790402.931	104.237974	ppb	0.989	1.548		7676.508
43	Ca-2	|	86145.667	5245.455057	ppb	1.590	1.016		90.000
49	Ti	|	65083.489	105.264624	ppb	1.235	1.566		198.890
52	Cr	|	871461.936	103.649050	ppb	0.932	1.747		9512.056
55	Mn	|	1189235.081	97.487707	ppb	1.506	2.608		726.685
57	Fe	|	1189353.972	5018.616269	ppb	1.582	2.678		7990.013
45	Sc-IS	>	1469361.499		ppb	2.242			1465711.044
66	Zn	|	124222.434	107.034041	ppb	2.571	1.571		691.128
86	Sr	|	197116.345	101.022202	ppb	0.670	2.053		20.160
65	Cu	|	178881.884	103.493581	ppb	2.750	2.799		106.188
69	Ga-IS	|	433830.503		ppb	1.202			416966.918
95	Mo	|	192127.831	104.046080	ppb	0.823	1.813		74.445
115	In-IS	>	273695.192		ppb	1.428			275360.306
111	Cd	|	182446.046	105.794791	ppb	1.150	0.911		4.288
118	Sn	|	631056.571	124.752263	ppb	1.847	0.555		1082.263
121	Sb	|	598849.383	106.402027	ppb	1.598	2.694		1043.372
135	Ba	|	115194.991	104.140625	ppb	2.478	3.058		22.222
165	Ho-IS	|	275211.508		ppb	1.311			275484.201
159	Tb-IS	|	242429.831		ppb	0.909			241104.310
207	Pb	|	1697634.390	104.937515	ppb	0.355	0.742		184.445
203	Tl	|	486219.553	101.635788	ppb	0.809	0.605		21.111
209	Bi-IS	>	172831.485		ppb	1.035			172319.940
51	V	|	71995.422	102.838308	ppb	1.170	1.340		41.111
59	Co	|	177268.775	100.508650	ppb	1.462	2.438		10.000
60	Ni	|	100895.069	106.523755	ppb	1.110	1.365		31.111
75	As	|	49648.318	104.453030	ppb	0.705	2.477		670.629
71	Ga-ISK	>	113465.582		ppb	1.767			112808.131
82	Se-2	|	4431.555	104.908299	ppb	2.500	3.933		4.205
107	Ag-1	|	189273.492	48.358858	ppb	1.158	1.892		64.445
115	In-ISK	|	100116.222		ppb	0.650			98394.491
45	Sc-ISK	>	286236.265		ppb	1.557			280005.730
23	Na	|	505712.721	1008.893286	ppb	1.068	0.490		2205.170
39	K	|	1303531.202	1008.415672	ppb	0.967	0.893		127332.775
24	Mg	|	2981847.889	5330.766197	ppb	0.756	1.195		185.001
159	Tb-ISK	|	196607.682		ppb	0.444			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63378_3-A

Autosampler Position: 138

Sample Date/Time: Thursday, April 16, 2020 11:16:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCSD 570-63378_3-A.074

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31277.539		ppb	1.104			30847.727
9	Be	|	160165.089	108.602646	ppb	0.604	1.778		15.556
10	B	|	34672.025	102.070624	ppb	0.575	1.623		317.781
27	Al	|	784394.838	105.625622	ppb	1.601	2.063		7676.508
43	Ca-2	|	86241.203	5361.752558	ppb	0.579	1.112		90.000
49	Ti	|	65493.144	108.145279	ppb	1.625	1.124		198.890
52	Cr	|	874637.100	106.220423	ppb	1.643	1.195		9512.056
55	Mn	|	1203902.987	100.743862	ppb	1.239	1.367		726.685
57	Fe	|	1201489.970	5176.277784	ppb	1.762	1.861		7990.013
45	Sc-IS	>	1439064.532		ppb	1.222			1465711.044
66	Zn	|	124414.320	109.474606	ppb	3.599	3.698		691.128
86	Sr	|	198165.685	103.676436	ppb	0.757	1.234		20.160
65	Cu	|	180499.536	106.613452	ppb	3.213	3.052		106.188
69	Ga-IS	|	432864.184		ppb	3.116			416966.918
95	Mo	|	190784.615	105.489219	ppb	1.622	2.709		74.445
115	In-IS	>	271807.082		ppb	0.849			275360.306
111	Cd	|	183816.276	107.322201	ppb	1.195	0.385		4.288
118	Sn	|	633644.546	126.145048	ppb	0.306	0.596		1082.263
121	Sb	|	599839.485	107.299868	ppb	0.964	1.160		1043.372
135	Ba	|	116357.789	105.894610	ppb	3.028	2.421		22.222
165	Ho-IS	|	277190.139		ppb	0.789			275484.201
159	Tb-IS	|	242752.940		ppb	0.419			241104.310
207	Pb	|	1680730.529	105.364997	ppb	1.466	1.685		184.445
203	Tl	|	487627.912	103.376173	ppb	1.221	1.369		21.111
209	Bi-IS	>	170417.172		ppb	0.964			172319.940
51	V	|	71536.448	102.605521	ppb	0.715	0.645		41.111
59	Co	|	178246.258	101.470225	ppb	0.646	0.662		10.000
60	Ni	|	99406.916	105.386890	ppb	1.182	1.263		31.111
75	As	|	50099.446	105.837709	ppb	1.222	1.006		670.629
71	Ga-ISK	>	112989.558		ppb	1.187			112808.131
82	Se-2	|	4476.884	106.389429	ppb	0.853	0.673		4.205
107	Ag-1	|	189539.805	48.633730	ppb	2.928	3.751		64.445
115	In-ISK	|	99311.781		ppb	0.453			98394.491
45	Sc-ISK	>	281843.430		ppb	1.370			280005.730
23	Na	|	505267.868	1023.902389	ppb	1.411	2.273		2205.170
39	K	|	1303070.546	1025.608074	ppb	0.741	2.300		127332.775
24	Mg	|	2996508.508	5441.337515	ppb	1.603	2.938		185.001
159	Tb-ISK	|	194818.854		ppb	1.147			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25455-A-1-A @5

Autosampler Position: 343

Sample Date/Time: Thursday, April 16, 2020 11:19:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25455-A-1-A @5.075

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34336.782		ppb	1.912		30847.727
9	Be	24.444	0.005115	ppb	28.386	86.918	15.556
10	B	29770.989	81.569690	ppb	0.609	1.197	317.781
27	Al	36601.273	3.617671	ppb	0.581	1.787	7676.508
43	Ca-2	91884.552	5328.907937	ppb	0.337	0.756	90.000
49	Ti	730.019	0.804841	ppb	4.404	7.491	198.890
52	Cr	24095.872	1.612866	ppb	3.054	4.854	9512.056
55	Mn	87137.265	6.745594	ppb	2.379	1.572	726.685
57	Fe	15885.499	30.235053	ppb	2.957	4.428	7990.013
45	Sc-IS	> 1542621.083		ppb	0.963		1465711.044
66	Zn	10768.509	8.286132	ppb	5.397	5.450	691.128
86	Sr	117302.922	57.239557	ppb	1.831	1.175	20.160
65	Cu	1393.168	0.706041	ppb	9.476	9.274	106.188
69	Ga-IS	418809.633		ppb	3.509		416966.918
95	Mo	5389.906	2.739978	ppb	2.296	1.356	74.445
115	In-IS	> 277457.342		ppb	0.951		275360.306
111	Cd	32.015	0.015778	ppb	55.315	63.414	4.288
118	Sn	5581.091	0.877325	ppb	3.857	5.059	1082.263
121	Sb	4871.945	0.670610	ppb	7.700	9.594	1043.372
135	Ba	8165.669	7.262827	ppb	4.416	4.633	22.222
165	Ho-IS	279650.627		ppb	0.100		275484.201
159	Tb-IS	244591.675		ppb	0.327		241104.310
207	Pb	773.342	0.037956	ppb	9.335	13.888	184.445
203	Tl	158.890	0.029841	ppb	6.409	5.959	21.111
209	Bi-IS	> 167455.873		ppb	1.475		172319.940
51	V	247.780	0.293669	ppb	19.603	23.422	41.111
59	Co	397.783	0.218998	ppb	3.489	4.305	10.000
60	Ni	1312.283	1.346830	ppb	13.371	13.131	31.111
75	As	1588.107	1.937598	ppb	35.581	62.189	670.629
71	Ga-ISK	> 113891.094		ppb	0.739		112808.131
82	Se-2	6866.510	161.946463	ppb	1.297	1.988	4.205
107	Ag-1	110.000	0.011443	ppb	9.091	22.508	64.445
115	In-ISK	100180.101		ppb	1.829		98394.491
45	Sc-ISK	> 289948.488		ppb	0.450		280005.730
23	Na	31284887.299	61884.679725	ppb	1.057	1.440	2205.170
39	K	2237977.641	1786.767680	ppb	0.608	0.890	127332.775
24	Mg	1192711.787	2104.527294	ppb	1.578	1.527	185.001
159	Tb-ISK	201583.776		ppb	1.255		193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25595-A-2-A

Autosampler Position: 139

Sample Date/Time: Thursday, April 16, 2020 11:22:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25595-A-2-A.076

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		33223.046		ppb			2.337			30847.727
9	Be	|		35.556	0.012696	ppb			32.924	58.445		15.556
10	B	|		12287.506	34.027377	ppb			2.355	3.171		317.781
27	Al	|		856706.175	110.506608	ppb			1.282	1.234		7676.508
43	Ca-2	|		88605.795	5274.869119	ppb			3.261	3.423		90.000
49	Ti	|		2926.967	4.318104	ppb			2.411	1.634		198.890
52	Cr	|		21332.583	1.361400	ppb			0.485	2.763		9512.056
55	Mn	|		425931.886	34.087101	ppb			1.633	0.617		726.685
57	Fe	|		107142.538	410.865000	ppb			1.132	0.109		7990.013
45	Sc-IS	>		1502832.456		ppb			1.035			1465711.044
66	Zn	>		487915.851	412.698970	ppb			2.606	1.760		691.128
86	Sr	|		103456.583	51.821344	ppb			1.077	0.801		20.160
65	Cu	|		619885.777	350.713757	ppb			2.472	1.696		106.188
69	Ga-IS	|		430787.171		ppb			2.636			416966.918
95	Mo	|		1774.555	0.899669	ppb			5.315	6.475		74.445
115	In-IS	>		277992.463		ppb			1.196			275360.306
111	Cd	|		182.941	0.102033	ppb			9.005	10.107		4.288
118	Sn	|		4266.193	0.618737	ppb			2.071	1.939		1082.263
121	Sb	|		4102.812	0.534113	ppb			4.737	5.278		1043.372
135	Ba	|		38847.221	34.555964	ppb			2.887	2.478		22.222
165	Ho-IS	|		279688.060		ppb			0.505			275484.201
159	Tb-IS	|		244912.778		ppb			0.978			241104.310
207	Pb	|		42650.787	2.564438	ppb			1.551	2.205		184.445
203	Tl	|		120.001	0.020068	ppb			5.556	5.046		21.111
209	Bi-IS	>		176930.166		ppb			1.435			172319.940
51	V	|		828.913	1.117328	ppb			9.935	10.696		41.111
59	Co	|		794.467	0.441509	ppb			5.476	5.565		10.000
60	Ni	|		2738.041	2.838162	ppb			5.508	5.750		31.111
75	As	|		985.137	0.647516	ppb			2.338	7.597		670.629
71	Ga-ISK	>		114268.520		ppb			0.271			112808.131
82	Se-2	|		25.539	0.500165	ppb			28.307	33.618		4.205
107	Ag-1	|		143.334	0.019807	ppb			2.326	4.684		64.445
115	In-ISK	|		101492.820		ppb			0.458			98394.491
45	Sc-ISK	>		286839.995		ppb			0.383			280005.730
23	Na	|		4552906.376	9099.454642	ppb			0.814	0.593		2205.170
39	K	|		1780026.470	1414.605154	ppb			1.012	1.117		127332.775
24	Mg	|		813274.099	1450.464377	ppb			0.450	0.434		185.001
159	Tb-ISK	|		199665.015		ppb			0.746			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25595-A-2-B MS

Autosampler Position: 140

Sample Date/Time: Thursday, April 16, 2020 11:24:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25595-A-2-B MS.077

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32334.341		ppb		2.223		30847.727
9	Be	|	163016.033	105.054925	ppb	1.286	1.650		15.556
10	B	|	46500.011	130.361565	ppb	1.454	1.869		317.781
27	Al	|	1589575.806	204.385104	ppb	0.544	0.234		7676.508
43	Ca-2	|	175072.944	10350.132328	ppb	0.773	0.388		90.000
49	Ti	|	68767.351	107.929846	ppb	1.075	0.711		198.890
52	Cr	|	859055.389	99.086288	ppb	1.229	0.821		9512.056
55	Mn	|	1595687.457	126.925387	ppb	1.432	1.023		726.685
57	Fe	|	1278227.067	5234.440174	ppb	0.427	0.205		7990.013
45	Sc-IS	>	1513984.411		ppb	0.421			1465711.044
66	Zn	|	607514.953	510.229203	ppb	2.791	2.387		691.128
86	Sr	|	295188.416	146.780341	ppb	2.134	1.747		20.160
65	Cu	|	777557.195	436.705922	ppb	2.126	1.719		106.188
69	Ga-IS	|	457038.524		ppb	3.249			416966.918
95	Mo	|	183860.220	96.606099	ppb	1.525	1.401		74.445
115	In-IS	>	274716.146		ppb	0.369			275360.306
111	Cd	|	176415.710	101.912345	ppb	0.746	0.635		4.288
118	Sn	|	549262.303	108.154446	ppb	0.433	0.127		1082.263
121	Sb	|	557882.456	98.719914	ppb	1.359	1.377		1043.372
135	Ba	|	154889.819	139.494949	ppb	2.008	2.330		22.222
165	Ho-IS	|	281412.562		ppb	0.588			275484.201
159	Tb-IS	|	248927.960		ppb	0.980			241104.310
207	Pb	|	1668729.355	100.443407	ppb	0.321	0.589		184.445
203	Tl	|	473684.204	96.419960	ppb	0.639	0.943		21.111
209	Bi-IS	>	177482.368		ppb	0.324			172319.940
51	V	|	71027.244	100.834215	ppb	0.222	1.866		41.111
59	Co	|	174806.452	98.483637	ppb	1.290	1.205		10.000
60	Ni	|	98514.115	103.360413	ppb	1.501	1.470		31.111
75	As	|	50519.595	105.621070	ppb	1.029	0.857		670.629
71	Ga-ISK	>	114173.401		ppb	1.660			112808.131
82	Se-2	|	4631.959	108.974161	ppb	2.115	3.647		4.205
107	Ag-1	|	203030.353	51.551705	ppb	0.308	1.343		64.445
115	In-ISK	|	101680.081		ppb	0.720			98394.491
45	Sc-ISK	>	288469.033		ppb	0.677			280005.730
23	Na	|	5002450.538	9941.678196	ppb	1.265	0.624		2205.170
39	K	|	3079363.242	2513.879952	ppb	1.119	0.571		127332.775
24	Mg	|	3781641.771	6707.206416	ppb	2.447	1.913		185.001
159	Tb-ISK	|	201793.404		ppb	1.388			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25595-A-2-C MSD

Autosampler Position: 141

Sample Date/Time: Thursday, April 16, 2020 11:27:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25595-A-2-C MSD.078

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33099.422		ppb		2.021		30847.727
9	Be	|	163005.899	104.555086	ppb	1.151	2.046		15.556
10	B	|	45971.633	128.259558	ppb	1.070	2.044		317.781
27	Al	|	1597150.598	204.380221	ppb	0.990	0.639		7676.508
43	Ca-2	|	173703.001	10220.551000	ppb	0.241	0.722		90.000
49	Ti	|	70772.664	110.556068	ppb	1.043	0.489		198.890
52	Cr	|	871748.498	100.079164	ppb	1.682	0.816		9512.056
55	Mn	|	1609528.888	127.416534	ppb	1.273	0.557		726.685
57	Fe	|	1292447.780	5267.246487	ppb	2.131	1.310		7990.013
45	Sc-IS	>	1521256.247		ppb	0.960			1465711.044
66	Zn	|	606959.287	507.284537	ppb	3.141	2.194		691.128
86	Sr	|	296574.990	146.779926	ppb	0.266	0.938		20.160
65	Cu	|	777227.994	434.417857	ppb	2.271	1.314		106.188
69	Ga-IS	|	455049.406		ppb	3.113			416966.918
95	Mo	|	187298.773	97.944812	ppb	0.802	0.326		74.445
115	In-IS	>	278377.766		ppb	1.106			275360.306
111	Cd	|	178139.877	101.554951	ppb	1.133	0.310		4.288
118	Sn	|	562934.848	109.390048	ppb	1.797	1.293		1082.263
121	Sb	|	567033.560	99.017711	ppb	1.370	0.370		1043.372
135	Ba	|	155736.805	138.393861	ppb	2.306	1.253		22.222
165	Ho-IS	|	280957.224		ppb	1.115			275484.201
159	Tb-IS	|	247920.718		ppb	1.143			241104.310
207	Pb	|	1662962.323	101.896173	ppb	0.228	1.093		184.445
203	Tl	|	472162.389	97.845983	ppb	1.331	2.357		21.111
209	Bi-IS	>	174362.186		ppb	1.309			172319.940
51	V	|	71720.728	101.335184	ppb	1.656	3.222		41.111
59	Co	|	175864.985	98.611384	ppb	1.766	2.763		10.000
60	Ni	|	98563.385	102.894620	ppb	2.046	0.802		31.111
75	As	|	50991.708	106.088641	ppb	1.372	0.522		670.629
71	Ga-ISK	>	114733.409		ppb	1.576			112808.131
82	Se-2	|	4616.260	108.023085	ppb	2.428	1.009		4.205
107	Ag-1	|	199596.920	50.431654	ppb	0.306	1.320		64.445
115	In-ISK	|	102037.061		ppb	1.073			98394.491
45	Sc-ISK	>	289142.110		ppb	2.144			280005.730
23	Na	|	4996180.580	9908.310894	ppb	0.788	1.414		2205.170
39	K	|	3113206.050	2537.588473	ppb	0.515	2.735		127332.775
24	Mg	|	3796255.451	6718.586981	ppb	1.395	0.753		185.001
159	Tb-ISK	|	200545.021		ppb	2.391			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 11:30:28

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.079

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31928.975		ppb		0.281		30847.727
9	Be	|	153392.527	99.207999	ppb	1.117	2.096		15.556
10	B	|	87624.644	247.374379	ppb	1.926	2.923		317.781
27	Al	|	764321.593	98.100497	ppb	0.928	1.844		7676.508
43	Ca-2	|	85064.176	5044.148004	ppb	0.476	1.316		90.000
49	Ti	|	62570.071	98.530752	ppb	1.136	1.869		198.890
52	Cr	|	846709.390	97.989628	ppb	1.604	0.601		9512.056
55	Mn	|	1202114.610	95.944026	ppb	1.499	1.368		726.685
57	Fe	|	1180837.106	4849.769329	ppb	3.028	2.566		7990.013
45	Sc-IS	>	1508709.490		ppb	1.029			1465711.044
66	Zn	|	118059.619	99.018359	ppb	3.786	3.447		691.128
86	Sr	|	195103.048	97.357952	ppb	0.872	1.018		20.160
65	Cu	|	178053.613	100.306809	ppb	3.158	2.911		106.188
69	Ga-IS	|	450004.318		ppb	2.177			416966.918
95	Mo	|	183961.687	97.001434	ppb	2.137	2.143		74.445
115	In-IS	>	278467.689		ppb	1.759			275360.306
111	Cd	|	174434.683	99.425694	ppb	0.817	1.483		4.288
118	Sn	|	513436.096	99.736099	ppb	0.538	1.266		1082.263
121	Sb	|	575525.757	100.471129	ppb	1.938	0.454		1043.372
135	Ba	|	111323.496	98.909282	ppb	3.326	3.439		22.222
165	Ho-IS	|	282081.343		ppb	1.269			275484.201
159	Tb-IS	|	248260.913		ppb	0.850			241104.310
207	Pb	|	1617867.118	98.791132	ppb	0.155	2.071		184.445
203	Tl	|	478684.607	98.857096	ppb	0.669	2.770		21.111
209	Bi-IS	>	175002.397		ppb	2.239			172319.940
51	V	|	69355.741	98.276399	ppb	1.074	2.242		41.111
59	Co	|	175977.376	98.973111	ppb	1.354	2.534		10.000
60	Ni	|	96418.764	100.966582	ppb	1.260	0.150		31.111
75	As	|	47669.806	99.381532	ppb	2.131	1.002		670.629
71	Ga-ISK	>	114382.803		ppb	1.180			112808.131
82	Se-2	|	4310.543	101.194133	ppb	2.268	2.816		4.205
107	Ag-1	|	393147.113	99.652199	ppb	1.500	1.941		64.445
115	In-ISK	|	102487.868		ppb	0.896			98394.491
45	Sc-ISK	>	289877.231		ppb	1.041			280005.730
23	Na	|	2645478.667	5230.001538	ppb	1.053	0.439		2205.170
39	K	|	6272679.304	5211.295800	ppb	0.064	1.123		127332.775
24	Mg	|	2958112.393	5222.050610	ppb	1.051	2.027		185.001
159	Tb-ISK	|	202451.835		ppb	0.794			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 11:33:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.080

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		31648.354		ppb			1.092			30847.727
9	Be	|		28.889	0.008497	ppb		74.182	162.307			15.556
10	B	|		637.792	0.904245	ppb		10.193	22.688			317.781
27	Al	|		6619.312	-0.155248	ppb		2.466	22.037			7676.508
43	Ca-2	|		83.334	-0.493058	ppb		30.199	301.049			90.000
49	Ti	|		254.447	0.083549	ppb		4.211	18.374			198.890
52	Cr	|		9808.923	0.016747	ppb		2.577	248.416			9512.056
55	Mn	|		934.475	0.015864	ppb		4.790	28.932			726.685
57	Fe	|		9735.538	6.761405	ppb		0.428	12.653			7990.013
45	Sc-IS	|>		1490145.540		ppb		1.689				1465711.044
66	Zn	|		658.904	-0.037401	ppb		2.281	14.295			691.128
86	Sr	|		35.741	0.007677	ppb		48.079	110.954			20.160
65	Cu	|		199.504	0.052334	ppb		10.166	24.024			106.188
69	Ga-IS	|		417667.181		ppb		3.199				416966.918
95	Mo	|		526.676	0.240695	ppb		7.299	6.758			74.445
115	In-IS	|>		272646.291		ppb		1.903				275360.306
111	Cd	|		26.672	0.013010	ppb		25.783	28.956			4.288
118	Sn	|		5996.820	0.978571	ppb		8.368	8.862			1082.263
121	Sb	|		4925.295	0.694868	ppb		5.868	5.327			1043.372
135	Ba	|		33.333	0.010263	ppb		17.321	48.807			22.222
165	Ho-IS	|		276288.402		ppb		0.439				275484.201
159	Tb-IS	|		242847.204		ppb		1.898				241104.310
207	Pb	|		810.009	0.039474	ppb		5.006	5.991			184.445
203	Tl	|		174.446	0.032637	ppb		7.955	8.000			21.111
209	Bi-IS	|>		169974.154		ppb		0.896				172319.940
51	V	|		28.889	-0.017822	ppb		6.662	18.456			41.111
59	Co	|		35.556	0.014303	ppb		62.422	85.896			10.000
60	Ni	|		42.222	0.011420	ppb		12.059	37.911			31.111
75	As	|		677.778	0.006064	ppb		1.327	857.926			670.629
71	Ga-ISK	|>		113597.830		ppb		2.492				112808.131
82	Se-2	|		5.849	0.035912	ppb		123.725	468.492			4.205
107	Ag-1	|		240.002	0.044499	ppb		22.352	27.712			64.445
115	In-ISK	|		100592.218		ppb		0.967				98394.491
45	Sc-ISK	|>		283831.394		ppb		1.859				280005.730
23	Na	|		3607.122	2.773837	ppb		1.258	5.874			2205.170
39	K	|		138700.105	8.370179	ppb		0.918	28.712			127332.775
24	Mg	|		641.681	0.819851	ppb		18.707	27.603			185.001
159	Tb-ISK	|		196799.637		ppb		0.514				193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23763-B-2-B

Autosampler Position: 131

Sample Date/Time: Thursday, April 16, 2020 11:41:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23763-B-2-B.081

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31767.505		ppb				0.706		30847.727
9	Be	|		14.444	-0.000998	ppb			48.038	442.459		15.556
10	B	|		37606.103	106.109492	ppb			1.067	3.017		317.781
27	Al	|		23783.123	2.072248	ppb			2.539	0.562		7676.508
43	Ca-2	|		806.690	42.649465	ppb			6.828	10.154		90.000
49	Ti	|		320.004	0.184323	ppb			1.042	3.312		198.890
52	Cr	|		10474.953	0.085268	ppb			3.196	36.812		9512.056
55	Mn	|		1851.231	0.088659	ppb			6.915	9.209		726.685
57	Fe	|		9624.354	5.963949	ppb			2.745	18.289		7990.013
45	Sc-IS	>		1502395.148		ppb			2.225			1465711.044
66	Zn	|		1042.260	0.282150	ppb			8.703	20.816		691.128
86	Sr	|		846.209	0.413529	ppb			8.200	7.319		20.160
65	Cu	|		243.451	0.075940	ppb			16.163	25.333		106.188
69	Ga-IS	|		420018.225		ppb			1.529			416966.918
95	Mo	|		90.000	0.007186	ppb			18.519	113.039		74.445
115	In-IS	>		273939.909		ppb			0.657			275360.306
111	Cd	|		9.811	0.003218	ppb			34.332	61.582		4.288
118	Sn	|		1335.618	0.051177	ppb			7.992	39.153		1082.263
121	Sb	|		2536.893	0.266509	ppb			9.975	16.937		1043.372
135	Ba	|		187.779	0.149757	ppb			16.494	19.338		22.222
165	Ho-IS	|		274200.275		ppb			1.631			275484.201
159	Tb-IS	|		240861.543		ppb			1.346			241104.310
207	Pb	|		258.890	0.004611	ppb			6.351	25.742		184.445
203	Tl	|		24.444	0.000704	ppb			56.773	415.597		21.111
209	Bi-IS	>		172460.385		ppb			1.119			172319.940
51	V	|		66.667	0.036865	ppb			20.000	52.335		41.111
59	Co	|		18.889	0.005081	ppb			10.189	21.407		10.000
60	Ni	|		28.889	-0.002330	ppb			40.522	533.412		31.111
75	As	|		700.795	0.066510	ppb			4.325	95.773		670.629
71	Ga-ISK	>		112669.224		ppb			0.110			112808.131
82	Se-2	|		1.854	-0.056053	ppb			299.894	236.635		4.205
107	Ag-1	|		31.111	-0.008556	ppb			24.744	23.269		64.445
115	In-ISK	|		99526.657		ppb			1.256			98394.491
45	Sc-ISK	>		283774.680		ppb			1.788			280005.730
23	Na	|		940184.184	1896.511823	ppb			1.639	3.293		2205.170
39	K	|		240274.941	96.463533	ppb			0.674	4.559		127332.775
24	Mg	|		11616.391	20.618795	ppb			3.436	4.957		185.001
159	Tb-ISK	|		195458.137		ppb			0.996			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-24981-A-14-A

Autosampler Position: 112

Sample Date/Time: Thursday, April 16, 2020 11:44:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-24981-A-14-A.082

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32545.926		ppb		1.556		30847.727
9	Be	|	15.556	-0.000622	ppb	68.883	1080.362		15.556
10	B	|	72112.710	196.466059	ppb	2.012	2.434		317.781
27	Al	|	42215.629	4.264293	ppb	1.702	2.419		7676.508
43	Ca-2	|	1362674.769	78137.693955	ppb	0.803	0.562		90.000
49	Ti	|	1328.951	1.704759	ppb	1.815	1.844		198.890
52	Cr	|	21747.653	1.313630	ppb	0.937	1.064		9512.056
55	Mn	|	5052.005	0.330004	ppb	4.217	4.504		726.685
57	Fe	|	60254.601	206.747289	ppb	1.492	1.261		7990.013
45	Sc-IS	>	1561642.778		ppb	0.414			1465711.044
66	Zn	|	1815.671	0.880009	ppb	2.940	5.517		691.128
86	Sr	|	1118815.097	539.380771	ppb	1.489	1.079		20.160
65	Cu	|	1341.420	0.669005	ppb	3.822	4.613		106.188
69	Ga-IS	|	450852.946		ppb	2.788			416966.918
95	Mo	|	2245.732	1.104081	ppb	1.832	2.182		74.445
115	In-IS	>	268769.883		ppb	0.328			275360.306
111	Cd	|	25.284	0.012458	ppb	69.473	83.330		4.288
118	Sn	|	837.802	-0.044080	ppb	3.191	11.540		1082.263
121	Sb	|	1341.174	0.058489	ppb	1.763	7.193		1043.372
135	Ba	|	215817.774	198.663950	ppb	2.911	2.852		22.222
165	Ho-IS	|	275419.046		ppb	1.801			275484.201
159	Tb-IS	|	243462.871		ppb	1.357			241104.310
207	Pb	|	511.115	0.021979	ppb	3.985	6.242		184.445
203	Tl	|	24.444	0.000979	ppb	39.365	217.722		21.111
209	Bi-IS	>	163432.897		ppb	0.573			172319.940
51	V	|	1353.397	1.911047	ppb	3.448	3.310		41.111
59	Co	|	85.556	0.043739	ppb	22.154	25.594		10.000
60	Ni	|	730.019	0.752279	ppb	2.416	2.683		31.111
75	As	|	855.155	0.419225	ppb	5.810	25.778		670.629
71	Ga-ISK	>	111383.652		ppb	0.462			112808.131
82	Se-2	|	102.828	2.380540	ppb	10.169	10.347		4.205
107	Ag-1	|	30.000	-0.008758	ppb	50.918	45.183		64.445
115	In-ISK	|	97517.681		ppb	1.127			98394.491
45	Sc-ISK	>	289446.501		ppb	1.259			280005.730
23	Na	|	22365117.807	44321.747966	ppb	0.811	2.043		2205.170
39	K	|	4015491.554	3301.210643	ppb	1.125	2.325		127332.775
24	Mg	|	14325177.275	25326.435990	ppb	0.856	1.365		185.001
159	Tb-ISK	|	197485.006		ppb	0.595			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-24981-A-14-B MS

Autosampler Position: 113

Sample Date/Time: Thursday, April 16, 2020 11:46:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-24981-A-14-B MS.083

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31871.070		ppb		0.969		30847.727
9	Be	|		159471.841	98.520298	ppb		0.593	1.637	15.556
10	B	|		102454.975	276.412005	ppb		0.338	2.437	317.781
27	Al	|		807030.786	98.969715	ppb		0.545	2.742	7676.508
43	Ca-2	|		1418608.121	80427.483709	ppb		1.636	0.658	90.000
49	Ti	|		71286.337	107.244602	ppb		1.596	0.608	198.890
52	Cr	|		862963.013	95.371414	ppb		1.508	0.722	9512.056
55	Mn	|		1170924.702	89.268874	ppb		1.081	1.135	726.685
57	Fe	|		1214114.914	4762.663001	ppb		1.686	0.551	7990.013
45	Sc-IS	>		1579605.834		ppb		2.200		1465711.044
66	Zn	|		119520.536	95.711861	ppb		3.554	1.527	691.128
86	Sr	|		1290792.735	615.326392	ppb		1.238	1.085	20.160
65	Cu	|		168202.457	90.496260	ppb		2.498	0.499	106.188
69	Ga-IS	|		478110.582		ppb		2.319		416966.918
95	Mo	|		185761.229	93.562148	ppb		1.453	1.154	74.445
115	In-IS	>		269612.763		ppb		0.590		275360.306
111	Cd	|		171802.658	101.130321	ppb		1.213	1.537	4.288
118	Sn	|		628781.467	126.190860	ppb		0.773	0.248	1082.263
121	Sb	|		596437.929	107.562137	ppb		2.538	2.789	1043.372
135	Ba	|		328248.767	301.256167	ppb		3.314	3.675	22.222
165	Ho-IS	|		278175.746		ppb		0.975		275484.201
159	Tb-IS	|		246236.265		ppb		0.572		241104.310
207	Pb	|		1582129.081	102.710373	ppb		0.370	1.217	184.445
203	Tl	|		464034.226	101.866829	ppb		0.939	0.495	21.111
209	Bi-IS	>		164573.755		ppb		1.361		172319.940
51	V	|		70958.062	104.030511	ppb		2.074	1.650	41.111
59	Co	|		168542.287	98.062416	ppb		2.925	2.150	10.000
60	Ni	|		92354.275	100.086400	ppb		1.504	1.975	31.111
75	As	|		49904.793	107.792182	ppb		1.845	1.681	670.629
71	Ga-ISK	>		110536.029		ppb		1.183		112808.131
82	Se-2	|		4462.193	108.414568	ppb		1.741	2.814	4.205
107	Ag-1	|		183252.367	48.058676	ppb		0.905	1.766	64.445
115	In-ISK	|		97474.062		ppb		0.996		98394.491
45	Sc-ISK	>		291331.956		ppb		1.090		280005.730
23	Na	|		22150992.824	43609.748255	ppb		0.233	1.256	2205.170
39	K	|		5205896.526	4283.973060	ppb		0.385	1.256	127332.775
24	Mg	|		16979234.374	29824.365038	ppb		1.819	2.158	185.001
159	Tb-ISK	|		198920.080		ppb		0.858		193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-24981-A-14-C MSD

Autosampler Position: 114

Sample Date/Time: Thursday, April 16, 2020 11:49:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-24981-A-14-C MSD.084

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32156.162		ppb		2.259		30847.727
9	Be	|	161786.533	99.727406	ppb	0.492	0.545		15.556
10	B	|	103854.001	279.535932	ppb	1.929	1.842		317.781
27	Al	|	827184.365	101.222023	ppb	0.042	0.206		7676.508
43	Ca-2	|	1421547.796	80425.731605	ppb	1.153	1.032		90.000
49	Ti	|	70237.804	105.441277	ppb	0.634	0.555		198.890
52	Cr	|	870267.953	95.984366	ppb	0.949	0.969		9512.056
55	Mn	|	1178529.890	89.655456	ppb	1.198	1.278		726.685
57	Fe	|	1225601.368	4798.060517	ppb	2.017	2.104		7990.013
45	Sc-IS	>	1582764.625		ppb	0.182			1465711.044
66	Zn	|	122607.494	98.020822	ppb	2.783	2.803		691.128
86	Sr	|	1306572.007	621.502523	ppb	2.001	1.867		20.160
65	Cu	|	170066.072	91.321016	ppb	2.989	3.017		106.188
69	Ga-IS	|	479186.164		ppb	2.895			416966.918
95	Mo	|	191050.276	96.020958	ppb	1.311	1.158		74.445
115	In-IS	>	271076.481		ppb	1.670			275360.306
111	Cd	|	173013.941	101.297713	ppb	0.925	0.763		4.288
118	Sn	|	646006.334	128.950940	ppb	2.109	1.052		1082.263
121	Sb	|	603903.240	108.317542	ppb	1.531	0.316		1043.372
135	Ba	|	331903.064	302.878193	ppb	3.395	1.765		22.222
165	Ho-IS	|	279533.033		ppb	1.143			275484.201
159	Tb-IS	|	246409.261		ppb	0.837			241104.310
207	Pb	|	1602498.737	100.687551	ppb	1.218	1.670		184.445
203	Tl	|	470872.390	100.050958	ppb	0.643	1.326		21.111
209	Bi-IS	>	170047.383		ppb	1.719			172319.940
51	V	|	70926.756	104.058718	ppb	0.895	0.214		41.111
59	Co	|	168903.860	98.351680	ppb	1.347	1.190		10.000
60	Ni	|	93226.560	101.102544	ppb	1.097	1.805		31.111
75	As	|	50094.262	108.277152	ppb	1.793	1.141		670.629
71	Ga-ISK	>	110459.883		ppb	1.107			112808.131
82	Se-2	|	4535.891	110.261267	ppb	1.232	0.850		4.205
107	Ag-1	|	189770.445	49.791571	ppb	2.548	1.437		64.445
115	In-ISK	|	97156.813		ppb	2.740			98394.491
45	Sc-ISK	>	290395.589		ppb	1.478			280005.730
23	Na	|	22410782.030	44264.172046	ppb	1.303	1.638		2205.170
39	K	|	5244777.700	4331.130185	ppb	0.786	1.167		127332.775
24	Mg	|	16920795.300	29816.808007	ppb	1.328	1.190		185.001
159	Tb-ISK	|	197184.152		ppb	2.649			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25533-B-1-A

Autosampler Position: 115

Sample Date/Time: Thursday, April 16, 2020 11:52:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25533-B-1-A.085

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32300.927		ppb		1.580		30847.727
9	Be	|	41.111	0.016933	ppb	4.681	7.353		15.556
10	B	|	6652.660	18.417570	ppb	0.972	0.449		317.781
27	Al	|	51748.001	5.862686	ppb	0.366	0.396		7676.508
43	Ca-2	|	45106.135	2742.211263	ppb	2.829	2.248		90.000
49	Ti	|	565.567	0.593745	ppb	7.275	11.734		198.890
52	Cr	|	15382.723	0.702185	ppb	1.077	2.509		9512.056
55	Mn	|	178437.868	14.564879	ppb	2.290	1.650		726.685
57	Fe	|	15638.556	32.367812	ppb	1.409	1.545		7990.013
45	Sc-IS	>	1469975.799		ppb	0.659			1465711.044
66	Zn	>	548890.478	474.729894	ppb	3.652	3.105		691.128
86	Sr	|	29940.045	15.324187	ppb	1.359	0.787		20.160
65	Cu	|	103526.183	59.828805	ppb	3.216	2.657		106.188
69	Ga-IS	|	407642.042		ppb	2.475			416966.918
95	Mo	|	1595.645	0.823339	ppb	3.988	3.594		74.445
115	In-IS	>	271198.308		ppb	1.169			275360.306
111	Cd	|	890.010	0.518408	ppb	0.735	1.519		4.288
118	Sn	|	8446.944	1.475191	ppb	4.421	5.015		1082.263
121	Sb	|	4517.381	0.626651	ppb	3.407	3.685		1043.372
135	Ba	|	5060.898	4.597635	ppb	5.392	5.422		22.222
165	Ho-IS	|	270241.017		ppb	0.349			275484.201
159	Tb-IS	|	237747.630		ppb	0.700			241104.310
207	Pb	|	10363.688	0.639418	ppb	1.639	1.853		184.445
203	Tl	|	267.780	0.052433	ppb	11.566	12.383		21.111
209	Bi-IS	>	170128.145		ppb	0.279			172319.940
51	V	|	1483.410	2.070267	ppb	3.023	2.298		41.111
59	Co	|	371.116	0.205644	ppb	8.537	8.782		10.000
60	Ni	|	1486.745	1.545401	ppb	9.663	10.963		31.111
75	As	|	827.101	0.333013	ppb	8.984	45.923		670.629
71	Ga-ISK	>	112949.238		ppb	1.143			112808.131
82	Se-2	|	22.205	0.426750	ppb	40.722	49.082		4.205
107	Ag-1	|	273.336	0.053566	ppb	9.207	10.774		64.445
115	In-ISK	|	100176.277		ppb	0.328			98394.491
45	Sc-ISK	>	284998.305		ppb	1.062			280005.730
23	Na	|	3349399.759	6736.757380	ppb	0.824	1.360		2205.170
39	K	|	652995.262	451.760529	ppb	0.447	0.916		127332.775
24	Mg	|	427790.760	767.800316	ppb	0.428	1.379		185.001
159	Tb-ISK	|	195587.871		ppb	0.849			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-H-1-A

Autosampler Position: 116

Sample Date/Time: Thursday, April 16, 2020 11:55:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-H-1-A.086

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32134.995		ppb		1.287		30847.727
9	Be	|	17.778	0.001573	ppb	78.063	586.311		15.556
10	B	|	35755.804	104.433520	ppb	0.877	1.700		317.781
27	Al	|	119221.060	15.052359	ppb	1.693	0.576		7676.508
43	Ca-2	|	105201.027	6488.208401	ppb	1.917	1.037		90.000
49	Ti	|	785.577	0.966792	ppb	6.154	7.068		198.890
52	Cr	|	20641.578	1.366658	ppb	3.102	3.641		9512.056
55	Mn	|	19851.573	1.588660	ppb	3.537	2.491		726.685
57	Fe	|	19900.524	51.580967	ppb	2.576	3.643		7990.013
45	Sc-IS	>	1450747.222		ppb	1.158			1465711.044
66	Zn	|	10967.546	9.022364	ppb	3.852	2.900		691.128
86	Sr	|	72107.774	37.412482	ppb	1.004	0.319		20.160
65	Cu	|	9022.119	5.226370	ppb	3.811	2.745		106.188
69	Ga-IS	|	405622.647		ppb	1.937			416966.918
95	Mo	|	1633.427	0.855514	ppb	5.207	4.911		74.445
115	In-IS	>	270462.921		ppb	0.500			275360.306
111	Cd	|	37.681	0.019657	ppb	26.730	30.505		4.288
118	Sn	|	4841.934	0.757093	ppb	7.115	8.507		1082.263
121	Sb	|	7503.084	1.166405	ppb	4.974	5.325		1043.372
135	Ba	|	8462.507	7.721651	ppb	2.777	2.490		22.222
165	Ho-IS	|	271564.719		ppb	0.713			275484.201
159	Tb-IS	|	237780.557		ppb	1.328			241104.310
207	Pb	|	4575.839	0.272992	ppb	1.288	1.892		184.445
203	Tl	|	90.000	0.014484	ppb	18.519	23.789		21.111
209	Bi-IS	>	171894.675		ppb	0.556			172319.940
51	V	|	1173.382	1.621210	ppb	3.202	3.755		41.111
59	Co	|	121.112	0.063186	ppb	16.127	19.056		10.000
60	Ni	|	921.141	0.941589	ppb	0.753	0.743		31.111
75	As	|	1054.322	0.814440	ppb	5.084	14.799		670.629
71	Ga-ISK	>	113249.402		ppb	1.450			112808.131
82	Se-2	|	13.877	0.229406	ppb	33.053	47.650		4.205
107	Ag-1	|	103.334	0.009858	ppb	14.783	35.949		64.445
115	In-ISK	|	99261.856		ppb	2.152			98394.491
45	Sc-ISK	>	286257.756		ppb	1.478			280005.730
23	Na	|	2625012.577	5255.063141	ppb	1.807	0.749		2205.170
39	K	|	1901715.090	1522.425127	ppb	0.496	1.063		127332.775
24	Mg	|	573979.623	1025.834252	ppb	1.094	1.998		185.001
159	Tb-ISK	|	196044.704		ppb	0.598			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-G-3-A

Autosampler Position: 117

Sample Date/Time: Thursday, April 16, 2020 11:57:48

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-G-3-A.087

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31839.889		ppb			0.924			30847.727
9	Be	|		15.556	0.000087	ppb			12.372	1569.500		15.556
10	B	|		21923.481	63.494750	ppb			2.110	0.586		317.781
27	Al	|		155399.659	19.877651	ppb			1.506	0.716		7676.508
43	Ca-2	|		54651.038	3359.004854	ppb			2.261	0.651		90.000
49	Ti	|		1021.148	1.347621	ppb			14.179	15.667		198.890
52	Cr	|		16760.940	0.889156	ppb			1.627	0.544		9512.056
55	Mn	|		22547.782	1.808109	ppb			1.224	0.942		726.685
57	Fe	|		16336.009	36.049716	ppb			3.558	3.485		7990.013
45	Sc-IS	>		1454595.162		ppb			1.860			1465711.044
66	Zn	|		24013.534	20.408883	ppb			5.071	3.348		691.128
86	Sr	|		42172.112	21.815082	ppb			2.976	1.137		20.160
65	Cu	|		6599.962	3.794914	ppb			7.122	5.565		106.188
69	Ga-IS	|		403602.986		ppb			1.709			416966.918
95	Mo	|		2077.929	1.096761	ppb			1.447	2.701		74.445
115	In-IS	>		269913.574		ppb			0.231			275360.306
111	Cd	|		40.081	0.021096	ppb			31.476	35.189		4.288
118	Sn	|		2919.188	0.373129	ppb			4.694	7.027		1082.263
121	Sb	|		5508.840	0.809469	ppb			0.403	0.465		1043.372
135	Ba	|		6275.826	5.733035	ppb			5.663	5.607		22.222
165	Ho-IS	|		270310.256		ppb			1.072			275484.201
159	Tb-IS	|		237162.481		ppb			0.769			241104.310
207	Pb	|		4505.844	0.268930	ppb			1.078	0.062		184.445
203	Tl	|		48.889	0.005870	ppb			20.830	37.532		21.111
209	Bi-IS	>		171705.808		ppb			1.031			172319.940
51	V	|		641.126	0.855612	ppb			14.746	16.607		41.111
59	Co	|		66.667	0.032026	ppb			13.229	16.551		10.000
60	Ni	|		647.792	0.649544	ppb			4.781	5.994		31.111
75	As	|		914.412	0.507216	ppb			4.118	19.460		670.629
71	Ga-ISK	>		113751.115		ppb			1.087			112808.131
82	Se-2	|		1.203	-0.072016	ppb			191.254	74.905		4.205
107	Ag-1	|		93.334	0.007250	ppb			12.877	46.021		64.445
115	In-ISK	|		99899.169		ppb			1.712			98394.491
45	Sc-ISK	>		288025.793		ppb			0.729			280005.730
23	Na	|		1197973.988	2380.951723	ppb			2.623	2.127		2205.170
39	K	|		1583742.161	1240.640251	ppb			1.492	0.965		127332.775
24	Mg	|		225572.518	400.383843	ppb			2.206	1.701		185.001
159	Tb-ISK	|		196236.645		ppb			0.588			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-G-5-A

Autosampler Position: 118

Sample Date/Time: Thursday, April 16, 2020 12:00:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-G-5-A.088

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31702.928		ppb			2.183			30847.727
9	Be	|		34.444	0.013183	ppb			33.986	62.205		15.556
10	B	|		23521.576	69.312307	ppb			2.111	2.134		317.781
27	Al	|		107860.169	13.716795	ppb			1.645	1.122		7676.508
43	Ca-2	|		72114.954	4505.793024	ppb			2.220	1.285		90.000
49	Ti	|		621.125	0.711555	ppb			6.753	11.903		198.890
52	Cr	|		17842.248	1.055518	ppb			1.400	2.740		9512.056
55	Mn	|		33213.023	2.736357	ppb			2.379	3.244		726.685
57	Fe	|		16231.443	36.744828	ppb			2.701	5.351		7990.013
45	Sc-IS	>		1431504.069		ppb			1.517			1465711.044
66	Zn	|		40120.711	35.085636	ppb			1.373	1.831		691.128
86	Sr	|		44169.828	23.219585	ppb			3.512	2.912		20.160
65	Cu	|		11830.865	6.967573	ppb			2.145	1.981		106.188
69	Ga-IS	|		398762.573		ppb			2.735			416966.918
95	Mo	|		1286.725	0.674764	ppb			3.816	2.467		74.445
115	In-IS	>		269927.257		ppb			1.091			275360.306
111	Cd	|		90.632	0.050799	ppb			16.103	16.477		4.288
118	Sn	|		2764.712	0.341964	ppb			4.996	6.430		1082.263
121	Sb	|		6201.347	0.934129	ppb			4.311	3.994		1043.372
135	Ba	|		8844.962	8.086793	ppb			3.757	2.951		22.222
165	Ho-IS	|		266831.160		ppb			0.461			275484.201
159	Tb-IS	|		232593.045		ppb			1.819			241104.310
207	Pb	|		4271.366	0.257560	ppb			1.831	1.820		184.445
203	Tl	|		151.112	0.027755	ppb			3.370	3.935		21.111
209	Bi-IS	>		169649.162		ppb			0.113			172319.940
51	V	|		892.250	1.229893	ppb			11.530	13.191		41.111
59	Co	|		152.223	0.081499	ppb			5.511	7.021		10.000
60	Ni	|		1000.035	1.033945	ppb			3.844	5.005		31.111
75	As	|		959.687	0.628842	ppb			0.904	6.312		670.629
71	Ga-ISK	>		112336.654		ppb			1.070			112808.131
82	Se-2	|		7.208	0.070861	ppb			141.010	339.183		4.205
107	Ag-1	|		80.000	0.004059	ppb			19.094	91.665		64.445
115	In-ISK	|		99184.818		ppb			1.411			98394.491
45	Sc-ISK	>		283097.620		ppb			0.711			280005.730
23	Na	|		1501150.661	3037.080138	ppb			1.071	1.636		2205.170
39	K	|		1965035.126	1595.600437	ppb			1.215	1.619		127332.775
24	Mg	|		296306.542	535.270901	ppb			0.921	1.639		185.001
159	Tb-ISK	|		194812.666		ppb			0.327			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-D-8-A

Autosampler Position: 119

Sample Date/Time: Thursday, April 16, 2020 12:03:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-D-8-A.089

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		32431.215		ppb		0.273		30847.727
9	Be	|		18.889	0.002447	ppb	40.754	213.890		15.556
10	B	|		38167.600	112.376657	ppb	2.096	3.462		317.781
27	Al	|		135997.663	17.452928	ppb	1.172	2.810		7676.508
43	Ca-2	|		146586.908	9107.708850	ppb	2.639	1.276		90.000
49	Ti	|		933.364	1.221647	ppb	5.038	7.503		198.890
52	Cr	|		17947.942	1.054516	ppb	3.237	4.163		9512.056
55	Mn	|		13701.012	1.086454	ppb	1.007	0.879		726.685
57	Fe	|		21566.268	59.428669	ppb	1.164	2.515		7990.013
45	Sc-IS	>		1440331.934		ppb	1.499			1465711.044
66	Zn	|		16729.797	14.185461	ppb	3.185	2.181		691.128
86	Sr	|		117310.116	61.316443	ppb	0.680	0.892		20.160
65	Cu	|		7283.218	4.238149	ppb	3.248	1.780		106.188
69	Ga-IS	|		397686.573		ppb	3.731			416966.918
95	Mo	|		3632.684	1.967260	ppb	1.095	2.569		74.445
115	In-IS	>		267713.203		ppb	1.374			275360.306
111	Cd	|		50.149	0.027193	ppb	25.247	26.312		4.288
118	Sn	|		1859.010	0.163260	ppb	4.977	9.365		1082.263
121	Sb	|		7251.842	1.134435	ppb	4.337	3.762		1043.372
135	Ba	|		11368.971	10.486752	ppb	3.816	3.126		22.222
165	Ho-IS	|		266828.495		ppb	2.157			275484.201
159	Tb-IS	|		231036.589		ppb	0.344			241104.310
207	Pb	|		5350.389	0.326421	ppb	1.245	1.621		184.445
203	Tl	|		31.111	0.002206	ppb	48.313	143.827		21.111
209	Bi-IS	>		169201.695		ppb	0.502			172319.940
51	V	|		1226.719	1.720101	ppb	2.157	4.280		41.111
59	Co	|		113.334	0.059417	ppb	7.782	6.388		10.000
60	Ni	|		973.367	1.009314	ppb	3.704	1.466		31.111
75	As	|		1047.311	0.826628	ppb	4.034	8.169		670.629
71	Ga-ISK	>		111864.202		ppb	2.327			112808.131
82	Se-2	|		3.515	-0.015578	ppb	255.019	1387.272		4.205
107	Ag-1	|		66.667	0.000739	ppb	15.000	381.378		64.445
115	In-ISK	|		97525.162		ppb	1.379			98394.491
45	Sc-ISK	>		286522.943		ppb	1.382			280005.730
23	Na	|		4390153.644	8783.454074	ppb	1.791	0.449		2205.170
39	K	|		2209226.798	1785.014703	ppb	0.682	1.759		127332.775
24	Mg	|		1110888.057	1983.654514	ppb	1.203	0.954		185.001
159	Tb-ISK	|		194731.562		ppb	0.026			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 12:06:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.090

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31183.999		ppb		0.543		30847.727
9	Be	|		150679.429	101.481237	ppb	1.059	1.585		15.556
10	B	|		86919.229	255.525629	ppb	1.731	1.617		317.781
27	Al	|		756178.337	101.095669	ppb	0.968	1.050		7676.508
43	Ca-2	|		81691.278	5044.093597	ppb	1.590	0.867		90.000
49	Ti	|		59942.172	98.289459	ppb	1.168	0.842		198.890
52	Cr	|		813255.726	98.011334	ppb	2.190	1.363		9512.056
55	Mn	|		1157223.711	96.177681	ppb	1.860	1.017		726.685
57	Fe	|		1144479.204	4895.328531	ppb	1.985	1.147		7990.013
45	Sc-IS	>		1448728.876		ppb	0.859			1465711.044
66	Zn	|		112311.591	98.076252	ppb	4.984	4.254		691.128
86	Sr	|		191330.362	99.426829	ppb	1.111	1.146		20.160
65	Cu	|		168982.001	99.124453	ppb	3.436	2.617		106.188
69	Ga-IS	|		429690.709		ppb	3.216			416966.918
95	Mo	|		180893.794	99.330710	ppb	1.434	1.179		74.445
115	In-IS	>		270620.201		ppb	0.602			275360.306
111	Cd	|		168673.677	98.923219	ppb	2.073	2.547		4.288
118	Sn	|		498348.354	99.603240	ppb	1.782	2.136		1082.263
121	Sb	|		555767.522	99.838768	ppb	1.703	1.873		1043.372
135	Ba	|		108406.744	99.099957	ppb	3.391	3.399		22.222
165	Ho-IS	|		276236.345		ppb	0.680			275484.201
159	Tb-IS	|		239814.114		ppb	1.273			241104.310
207	Pb	|		1597355.340	98.883614	ppb	0.520	0.779		184.445
203	Tl	|		476670.245	99.785461	ppb	0.952	0.519		21.111
209	Bi-IS	>		172577.334		ppb	1.074			172319.940
51	V	|		68530.655	98.304209	ppb	0.704	1.076		41.111
59	Co	|		173912.393	99.023318	ppb	1.719	2.480		10.000
60	Ni	|		93705.208	99.352210	ppb	0.081	0.872		31.111
75	As	|		47826.664	100.989524	ppb	0.913	1.664		670.629
71	Ga-ISK	>		112976.103		ppb	0.927			112808.131
82	Se-2	|		4199.777	99.826056	ppb	2.309	3.245		4.205
107	Ag-1	|		389160.669	99.866782	ppb	0.717	1.277		64.445
115	In-ISK	|		100017.170		ppb	2.059			98394.491
45	Sc-ISK	>		287105.408		ppb	1.004			280005.730
23	Na	|		2633071.840	5256.152913	ppb	0.923	1.518		2205.170
39	K	|		6281544.683	5270.375135	ppb	0.481	1.455		127332.775
24	Mg	|		2992064.948	5332.610231	ppb	0.047	0.985		185.001
159	Tb-ISK	|		197412.080		ppb	1.075			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 12:08:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.091

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		30915.638		ppb			0.304			30847.727
9	Be	|		23.333	0.005928	ppb			37.796	104.384		15.556
10	B	|		557.789	0.778767	ppb			5.866	14.929		317.781
27	Al	|		6206.904	-0.156381	ppb			2.589	13.835		7676.508
43	Ca-2	|		78.334	-0.475699	ppb			20.518	226.227		90.000
49	Ti	|		251.113	0.104694	ppb			8.637	37.725		198.890
52	Cr	|		9437.562	0.045879	ppb			2.373	87.145		9512.056
55	Mn	|		801.134	0.009246	ppb			8.263	53.612		726.685
57	Fe	|		8429.155	3.593946	ppb			3.324	35.586		7990.013
45	Sc-IS	|>		1398586.752		ppb			1.063			1465711.044
66	Zn	|		582.234	-0.070173	ppb			4.297	37.805		691.128
86	Sr	|		34.617	0.008363	ppb			71.320	160.049		20.160
65	Cu	|		103.947	0.001580	ppb			23.230	922.496		106.188
69	Ga-IS	|		394520.665		ppb			2.828			416966.918
95	Mo	|		391.116	0.182257	ppb			8.622	11.612		74.445
115	In-IS	|>		266838.674		ppb			1.169			275360.306
111	Cd	|		26.956	0.013563	ppb			14.541	17.323		4.288
118	Sn	|		3993.894	0.598166	ppb			7.402	9.754		1082.263
121	Sb	|		2061.260	0.191637	ppb			6.759	12.633		1043.372
135	Ba	|		32.222	0.009910	ppb			29.863	89.878		22.222
165	Ho-IS	|		265767.192		ppb			0.662			275484.201
159	Tb-IS	|		233228.469		ppb			0.576			241104.310
207	Pb	|		531.115	0.022168	ppb			6.318	7.584		184.445
203	Tl	|		97.778	0.016504	ppb			16.817	21.276		21.111
209	Bi-IS	|>		168790.309		ppb			1.358			172319.940
51	V	|		20.000	-0.030100	ppb			44.096	43.020		41.111
59	Co	|		28.889	0.010876	ppb			6.662	8.077		10.000
60	Ni	|		52.222	0.022848	ppb			36.295	88.870		31.111
75	As	|		656.030	-0.021052	ppb			2.650	265.292		670.629
71	Ga-ISK	|>		112032.093		ppb			1.586			112808.131
82	Se-2	|		2.190	-0.045992	ppb			298.572	343.544		4.205
107	Ag-1	|		251.113	0.048357	ppb			12.045	14.236		64.445
115	In-ISK	|		97330.530		ppb			1.323			98394.491
45	Sc-ISK	|>		279673.531		ppb			1.166			280005.730
23	Na	|		2660.248	0.937941	ppb			5.058	26.188		2205.170
39	K	|		136732.361	8.413963	ppb			0.606	22.612		127332.775
24	Mg	|		513.343	0.601386	ppb			4.055	7.509		185.001
159	Tb-ISK	|		192506.393		ppb			0.471			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25132-C-1-A

Autosampler Position: 120

Sample Date/Time: Thursday, April 16, 2020 12:11:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25132-C-1-A.092

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31542.570		ppb			1.871			30847.727
9	Be	|		17.778	0.001852	ppb	21.651	151.294				15.556
10	B	|		23359.085	69.184680	ppb	1.423	1.721				317.781
27	Al	|		141660.202	18.435268	ppb	2.030	1.809				7676.508
43	Ca-2	|		80818.046	5075.979818	ppb	2.397	1.532				90.000
49	Ti	|		763.354	0.954121	ppb	3.881	5.254				198.890
52	Cr	|		17432.858	1.015527	ppb	2.696	2.232				9512.056
55	Mn	|		60897.334	5.091764	ppb	2.036	0.822				726.685
57	Fe	|		21131.180	58.553320	ppb	2.698	1.297				7990.013
45	Sc-IS	>		1424471.652		ppb	2.635					1465711.044
66	Zn	|		61354.897	54.229797	ppb	3.241	0.720				691.128
86	Sr	|		58463.894	30.894822	ppb	2.156	1.261				20.160
65	Cu	|		14666.237	8.693673	ppb	3.370	0.863				106.188
69	Ga-IS	|		402340.374		ppb	3.501					416966.918
95	Mo	|		2182.389	1.178816	ppb	5.206	4.473				74.445
115	In-IS	>		269437.816		ppb	0.905					275360.306
111	Cd	|		69.862	0.038674	ppb	6.963	7.107				4.288
118	Sn	|		1735.661	0.136063	ppb	8.217	20.224				1082.263
121	Sb	|		6290.275	0.952451	ppb	4.620	5.337				1043.372
135	Ba	|		11251.099	10.311538	ppb	3.453	2.999				22.222
165	Ho-IS	|		271901.021		ppb	0.691					275484.201
159	Tb-IS	|		236893.628		ppb	0.756					241104.310
207	Pb	|		9491.236	0.580234	ppb	2.743	2.302				184.445
203	Tl	|		40.000	0.004007	ppb	8.333	17.820				21.111
209	Bi-IS	>		171375.154		ppb	0.530					172319.940
51	V	|		967.811	1.307694	ppb	5.043	5.092				41.111
59	Co	|		212.224	0.113222	ppb	4.799	5.701				10.000
60	Ni	|		1592.311	1.628658	ppb	2.524	2.289				31.111
75	As	|		930.891	0.523726	ppb	3.931	17.106				670.629
71	Ga-ISK	>		114810.629		ppb	0.638					112808.131
82	Se-2	|		6.185	0.045267	ppb	135.470	436.375				4.205
107	Ag-1	|		104.445	0.009810	ppb	4.875	11.962				64.445
115	In-ISK	|		98649.488		ppb	1.719					98394.491
45	Sc-ISK	>		284370.953		ppb	1.995					280005.730
23	Na	|		1907238.781	3843.140176	ppb	0.623	1.668				2205.170
39	K	|		3264024.698	2712.492096	ppb	0.673	2.767				127332.775
24	Mg	|		325041.478	584.706294	ppb	1.033	2.399				185.001
159	Tb-ISK	|		196953.927		ppb	1.536					193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25132-C-3-A

Autosampler Position: 121

Sample Date/Time: Thursday, April 16, 2020 12:14:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25132-C-3-A.093

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31159.532		ppb		3.746		30847.727
9	Be	|		28.889	0.009090	ppb	43.684	90.498		15.556
10	B	|		26324.250	76.965695	ppb	3.404	4.525		317.781
27	Al	|		141320.151	18.108012	ppb	1.796	0.826		7676.508
43	Ca-2	|		70172.012	4342.589502	ppb	2.819	1.167		90.000
49	Ti	|		751.131	0.914250	ppb	9.747	10.988		198.890
52	Cr	|		16973.412	0.928541	ppb	1.513	1.688		9512.056
55	Mn	|		27152.448	2.204496	ppb	0.970	1.716		726.685
57	Fe	|		15634.106	33.501381	ppb	0.990	2.344		7990.013
45	Sc-IS	>		1445114.353		ppb	1.838			1465711.044
66	Zn	|		41067.870	35.574806	ppb	3.043	1.410		691.128
86	Sr	|		44537.634	23.190343	ppb	3.036	1.222		20.160
65	Cu	|		11733.969	6.842454	ppb	3.918	2.355		106.188
69	Ga-IS	|		404852.254		ppb	3.088			416966.918
95	Mo	|		1217.830	0.630799	ppb	4.937	7.217		74.445
115	In-IS	>		270623.442		ppb	1.727			275360.306
111	Cd	|		72.998	0.040293	ppb	13.194	12.467		4.288
118	Sn	|		1344.508	0.056310	ppb	5.238	26.640		1082.263
121	Sb	|		4730.783	0.666956	ppb	0.994	1.895		1043.372
135	Ba	|		8673.745	7.912215	ppb	2.580	3.183		22.222
165	Ho-IS	|		269905.979		ppb	0.839			275484.201
159	Tb-IS	|		237288.996		ppb	0.745			241104.310
207	Pb	|		7746.388	0.467961	ppb	1.421	2.791		184.445
203	Tl	|		98.889	0.016220	ppb	31.320	38.572		21.111
209	Bi-IS	>		172680.843		ppb	1.359			172319.940
51	V	|		858.915	1.152425	ppb	4.914	6.861		41.111
59	Co	|		135.556	0.070076	ppb	3.756	2.240		10.000
60	Ni	|		883.361	0.887183	ppb	3.459	3.843		31.111
75	As	|		962.936	0.587276	ppb	10.414	36.159		670.629
71	Ga-ISK	>		115035.839		ppb	1.699			112808.131
82	Se-2	|		-2.839	-0.165634	ppb	159.812	64.008		4.205
107	Ag-1	|		84.445	0.004707	ppb	29.627	131.952		64.445
115	In-ISK	|		100108.096		ppb	1.098			98394.491
45	Sc-ISK	>		288306.124		ppb	1.488			280005.730
23	Na	|		1387705.950	2756.378593	ppb	1.030	0.624		2205.170
39	K	|		1736262.520	1369.703854	ppb	0.474	1.628		127332.775
24	Mg	|		255519.997	453.263132	ppb	0.761	2.201		185.001
159	Tb-ISK	|		197106.491		ppb	0.518			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25181-G-1-A

Autosampler Position: 128

Sample Date/Time: Thursday, April 16, 2020 12:17:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25181-G-1-A.094

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33879.029		ppb		2.385		30847.727
9	Be	|	20.000	0.002921	ppb	16.667	83.402		15.556
10	B	|	20189.822	57.663180	ppb	3.165	3.161		317.781
27	Al	|	101713.040	12.487045	ppb	0.573	2.062		7676.508
43	Ca-2	|	137466.832	8351.478471	ppb	2.476	1.549		90.000
49	Ti	|	1358.954	1.876529	ppb	3.489	5.956		198.890
52	Cr	|	25254.544	1.882325	ppb	3.597	5.517		9512.056
55	Mn	|	101303.543	8.226745	ppb	1.740	1.395		726.685
57	Fe	|	24750.325	70.831977	ppb	3.185	4.119		7990.013
45	Sc-IS	>	1473063.698		ppb	1.767			1465711.044
66	Zn	|	25221.162	21.194148	ppb	4.444	3.619		691.128
86	Sr	|	203392.309	103.949549	ppb	2.004	1.353		20.160
65	Cu	|	8425.525	4.801956	ppb	5.013	4.166		106.188
69	Ga-IS	|	395982.828		ppb	3.462			416966.918
95	Mo	|	1874.568	0.972345	ppb	6.916	7.049		74.445
115	In-IS	>	268760.397		ppb	1.484			275360.306
111	Cd	|	54.952	0.029869	ppb	35.107	36.806		4.288
118	Sn	|	1457.853	0.080744	ppb	9.794	30.797		1082.263
121	Sb	|	6722.694	1.033399	ppb	3.969	2.960		1043.372
135	Ba	|	12607.785	11.586592	ppb	2.172	0.707		22.222
165	Ho-IS	|	269093.222		ppb	1.247			275484.201
159	Tb-IS	|	231950.662		ppb	2.148			241104.310
207	Pb	|	4424.709	0.276433	ppb	2.213	3.026		184.445
203	Tl	|	16.667	-0.000750	ppb	52.915	261.300		21.111
209	Bi-IS	>	164243.247		ppb	0.847			172319.940
51	V	|	2025.700	2.826012	ppb	9.515	10.869		41.111
59	Co	|	187.779	0.100237	ppb	9.109	8.277		10.000
60	Ni	|	1088.930	1.111980	ppb	3.245	2.577		31.111
75	As	|	1095.060	0.887734	ppb	4.097	13.217		670.629
71	Ga-ISK	>	113938.165		ppb	1.258			112808.131
82	Se-2	|	63.489	1.399640	ppb	18.644	21.034		4.205
107	Ag-1	|	31.111	-0.008619	ppb	50.634	47.129		64.445
115	In-ISK	|	99302.854		ppb	0.626			98394.491
45	Sc-ISK	>	295514.127		ppb	0.368			280005.730
23	Na	|	50477598.573	97971.124208	ppb	1.140	1.448		2205.170
39	K	|	7011410.888	5724.565552	ppb	1.811	2.217		127332.775
24	Mg	|	6833006.341	11831.304136	ppb	0.563	0.585		185.001
159	Tb-ISK	|	200909.009		ppb	1.137			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25181-E-3-A

Autosampler Position: 129

Sample Date/Time: Thursday, April 16, 2020 12:19:54

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25181-E-3-A.095

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33275.380		ppb		1.401		30847.727
9	Be	|	15.556	-0.000113	ppb	24.744	2176.480		15.556
10	B	|	20440.176	58.105456	ppb	2.894	3.389		317.781
27	Al	|	103813.738	12.695834	ppb	2.204	1.623		7676.508
43	Ca-2	|	137912.733	8337.294893	ppb	2.309	0.915		90.000
49	Ti	|	1321.172	1.804593	ppb	2.698	4.835		198.890
52	Cr	|	26251.881	1.986372	ppb	1.626	0.370		9512.056
55	Mn	|	107611.696	8.699527	ppb	2.204	1.858		726.685
57	Fe	|	27331.691	81.189144	ppb	2.895	2.490		7990.013
45	Sc-IS	>	1480264.941		ppb	1.421			1465711.044
66	Zn	|	26768.429	22.414629	ppb	4.868	3.578		691.128
86	Sr	|	205767.489	104.641378	ppb	2.205	0.854		20.160
65	Cu	|	9370.673	5.321553	ppb	2.825	1.546		106.188
69	Ga-IS	|	395293.147		ppb	3.951			416966.918
95	Mo	|	1936.798	1.001152	ppb	3.438	4.432		74.445
115	In-IS	>	271674.800		ppb	0.931			275360.306
111	Cd	|	43.711	0.023064	ppb	4.274	4.802		4.288
118	Sn	|	1035.593	-0.006290	ppb	11.563	406.703		1082.263
121	Sb	|	6420.333	0.966271	ppb	4.380	4.474		1043.372
135	Ba	|	12731.229	11.575961	ppb	2.921	3.076		22.222
165	Ho-IS	|	271227.389		ppb	1.049			275484.201
159	Tb-IS	|	232167.017		ppb	0.965			241104.310
207	Pb	|	4241.363	0.263574	ppb	0.505	1.535		184.445
203	Tl	|	20.000	-0.000033	ppb	16.667	2468.131		21.111
209	Bi-IS	>	164806.536		ppb	1.943			172319.940
51	V	|	2143.494	2.977591	ppb	1.382	1.214		41.111
59	Co	|	186.668	0.099176	ppb	4.725	3.977		10.000
60	Ni	|	1122.266	1.141743	ppb	1.636	0.810		31.111
75	As	|	1071.974	0.829152	ppb	9.902	29.469		670.629
71	Ga-ISK	>	114456.710		ppb	0.952			112808.131
82	Se-2	|	58.830	1.282662	ppb	16.222	18.382		4.205
107	Ag-1	|	35.556	-0.007559	ppb	21.651	25.581		64.445
115	In-ISK	|	99192.496		ppb	0.994			98394.491
45	Sc-ISK	>	297510.752		ppb	1.205			280005.730
23	Na	|	51471046.808	99227.539341	ppb	1.018	0.313		2205.170
39	K	|	7150073.138	5800.218934	ppb	0.829	1.326		127332.775
24	Mg	|	7003786.126	12046.940283	ppb	1.141	1.817		185.001
159	Tb-ISK	|	199635.967		ppb	0.885			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23763-B-1-B

Autosampler Position: 130

Sample Date/Time: Thursday, April 16, 2020 12:22:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23763-B-1-B.096

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33019.228		ppb		0.857		30847.727
9	Be	|	15.556	-0.000688	ppb	24.744	338.899		15.556
10	B	|	17585.262	46.995674	ppb	1.045	1.961		317.781
27	Al	|	43610.925	4.414979	ppb	1.832	2.907		7676.508
43	Ca-2	|	830710.693	47406.021808	ppb	3.035	0.691		90.000
49	Ti	|	1534.527	2.007662	ppb	2.509	0.795		198.890
52	Cr	|	14353.874	0.470411	ppb	0.163	8.991		9512.056
55	Mn	|	214606.952	16.423620	ppb	1.794	1.464		726.685
57	Fe	|	47244.702	153.912372	ppb	2.860	2.936		7990.013
45	Sc-IS	>	1568971.873		ppb	2.544			1465711.044
66	Zn	|	3490.427	2.231655	ppb	3.227	1.291		691.128
86	Sr	|	348505.516	167.245727	ppb	2.164	1.210		20.160
65	Cu	|	2379.192	1.228443	ppb	5.599	6.072		106.188
69	Ga-IS	|	422891.408		ppb	3.753			416966.918
95	Mo	|	8366.895	4.204908	ppb	1.930	2.627		74.445
115	In-IS	>	273419.902		ppb	0.619			275360.306
111	Cd	|	23.541	0.011173	ppb	42.879	51.803		4.288
118	Sn	|	1267.834	0.038291	ppb	1.297	4.531		1082.263
121	Sb	|	1711.214	0.120242	ppb	9.348	23.354		1043.372
135	Ba	|	68931.496	62.359312	ppb	1.812	1.565		22.222
165	Ho-IS	|	281532.613		ppb	0.157			275484.201
159	Tb-IS	|	245215.896		ppb	1.569			241104.310
207	Pb	|	1037.793	0.054497	ppb	5.838	6.818		184.445
203	Tl	|	62.222	0.008936	ppb	13.482	19.390		21.111
209	Bi-IS	>	168157.255		ppb	0.584			172319.940
51	V	|	10957.536	15.781716	ppb	2.889	3.621		41.111
59	Co	|	214.446	0.117315	ppb	17.051	18.331		10.000
60	Ni	|	720.018	0.736068	ppb	1.669	2.468		31.111
75	As	|	1055.265	0.837665	ppb	5.032	14.050		670.629
71	Ga-ISK	>	112183.223		ppb	0.910			112808.131
82	Se-2	|	42.836	0.925898	ppb	16.837	18.613		4.205
107	Ag-1	|	52.222	-0.003061	ppb	25.797	115.298		64.445
115	In-ISK	|	98996.737		ppb	0.224			98394.491
45	Sc-ISK	>	294529.650		ppb	0.275			280005.730
23	Na	|	27827242.038	54187.651340	ppb	1.343	1.579		2205.170
39	K	|	3291124.673	2636.779093	ppb	0.386	0.688		127332.775
24	Mg	|	15839586.374	27518.561197	ppb	1.769	1.885		185.001
159	Tb-ISK	|	200172.073		ppb	0.974			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23763-B-3-B

Autosampler Position: 132

Sample Date/Time: Thursday, April 16, 2020 12:25:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23763-B-3-B.097

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		32712.968		ppb			0.573			30847.727
9	Be	|		15.556	-0.000695	ppb	44.607	602.765				15.556
10	B	|		10911.948	28.861713	ppb	4.074	4.891				317.781
27	Al	|		243782.647	29.432930	ppb	1.203	2.181				7676.508
43	Ca-2	|		870157.381	49749.575083	ppb	1.678	0.868				90.000
49	Ti	|		3431.523	4.898237	ppb	2.304	1.367				198.890
52	Cr	|		14613.027	0.502130	ppb	1.714	8.578				9512.056
55	Mn	|		729726.804	56.081297	ppb	1.415	1.294				726.685
57	Fe	|		68596.574	239.281237	ppb	2.218	1.432				7990.013
45	Sc-IS	>		1566158.223		ppb	1.244					1465711.044
66	Zn	|		1901.238	0.944844	ppb	3.946	4.401				691.128
86	Sr	|		467441.870	224.725459	ppb	1.412	1.799				20.160
65	Cu	|		2514.111	1.303301	ppb	5.188	4.504				106.188
69	Ga-IS	|		422814.496		ppb	2.814					416966.918
95	Mo	|		7595.352	3.819684	ppb	1.527	2.306				74.445
115	In-IS	>		273553.618		ppb	0.957					275360.306
111	Cd	|		21.828	0.010229	ppb	75.706	94.846				4.288
118	Sn	|		784.466	-0.057559	ppb	3.948	12.723				1082.263
121	Sb	|		1452.297	0.073926	ppb	11.955	40.197				1043.372
135	Ba	|		60400.862	54.607795	ppb	3.583	2.963				22.222
165	Ho-IS	|		279756.019		ppb	0.388					275484.201
159	Tb-IS	|		242694.201		ppb	0.599					241104.310
207	Pb	|		1112.239	0.058918	ppb	9.441	11.443				184.445
203	Tl	|		21.111	0.000097	ppb	36.464	1740.247				21.111
209	Bi-IS	>		168929.634		ppb	0.730					172319.940
51	V	|		4820.814	6.837539	ppb	2.604	2.413				41.111
59	Co	|		343.337	0.189303	ppb	7.330	9.083				10.000
60	Ni	|		1158.936	1.190813	ppb	13.706	12.767				31.111
75	As	|		869.064	0.416631	ppb	2.078	4.611				670.629
71	Ga-ISK	>		113349.088		ppb	1.574					112808.131
82	Se-2	|		42.875	0.914861	ppb	20.285	21.093				4.205
107	Ag-1	|		32.222	-0.008332	ppb	15.802	14.479				64.445
115	In-ISK	|		100436.342		ppb	1.467					98394.491
45	Sc-ISK	>		298234.646		ppb	1.470					280005.730
23	Na	|		26483075.419	50935.815117	ppb	0.474	1.648				2205.170
39	K	|		2977877.697	2344.507619	ppb	0.886	1.438				127332.775
24	Mg	|		15481629.443	26566.557708	ppb	0.995	1.961				185.001
159	Tb-ISK	|		202501.178		ppb	0.679					193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23763-B-4-B

Autosampler Position: 133

Sample Date/Time: Thursday, April 16, 2020 12:28:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23763-B-4-B.098

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		32173.982		ppb				2.408		30847.727
9	Be	|		24.444	0.005386	ppb			78.730	232.590		15.556
10	B	|		10981.997	29.919687	ppb			0.699	2.450		317.781
27	Al	|		189623.777	23.361330	ppb			1.706	4.350		7676.508
43	Ca-2	|		869106.221	51134.484407	ppb			2.829	3.194		90.000
49	Ti	|		2929.189	4.262367	ppb			2.621	0.346		198.890
52	Cr	|		13975.723	0.476213	ppb			1.720	12.537		9512.056
55	Mn	|		652528.913	51.619874	ppb			3.943	5.510		726.685
57	Fe	|		65556.861	234.832325	ppb			3.453	5.190		7990.013
45	Sc-IS	>		1522440.620		ppb			2.845			1465711.044
66	Zn	|		1340.063	0.518500	ppb			11.866	19.487		691.128
86	Sr	|		475158.060	235.147111	ppb			3.145	4.938		20.160
65	Cu	|		3451.321	1.867889	ppb			1.837	4.487		106.188
69	Ga-IS	|		407701.746		ppb			3.132			416966.918
95	Mo	|		7934.426	4.109104	ppb			2.750	3.733		74.445
115	In-IS	>		265292.138		ppb			2.135			275360.306
111	Cd	|		10.004	0.003553	ppb			62.389	108.728		4.288
118	Sn	|		750.020	-0.059646	ppb			7.595	23.469		1082.263
121	Sb	|		1200.050	0.035810	ppb			3.481	22.414		1043.372
135	Ba	|		60569.386	56.494623	ppb			4.106	4.924		22.222
165	Ho-IS	|		276685.506		ppb			1.970			275484.201
159	Tb-IS	|		241031.731		ppb			2.648			241104.310
207	Pb	|		697.785	0.033500	ppb			4.174	5.489		184.445
203	Tl	|		16.667	-0.000792	ppb			20.000	94.150		21.111
209	Bi-IS	>		165970.379		ppb			3.376			172319.940
51	V	|		4823.037	6.789313	ppb			2.847	3.177		41.111
59	Co	|		352.227	0.192754	ppb			10.382	11.200		10.000
60	Ni	|		1078.930	1.098765	ppb			5.023	4.646		31.111
75	As	|		854.259	0.370826	ppb			9.678	44.269		670.629
71	Ga-ISK	>		114202.448		ppb			0.606			112808.131
82	Se-2	|		39.857	0.838353	ppb			15.305	17.740		4.205
107	Ag-1	|		27.778	-0.009514	ppb			13.856	10.011		64.445
115	In-ISK	|		100717.504		ppb			0.778			98394.491
45	Sc-ISK	>		297167.882		ppb			0.117			280005.730
23	Na	|		26784092.555	51691.821901	ppb			0.106	0.174		2205.170
39	K	|		2968862.238	2345.583384	ppb			1.090	1.073		127332.775
24	Mg	|		15535249.445	26749.875520	ppb			1.850	1.879		185.001
159	Tb-ISK	|		204098.545		ppb			1.627			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23763-B-5-B

Autosampler Position: 134

Sample Date/Time: Thursday, April 16, 2020 12:30:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23763-B-5-B.099

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34154.112		ppb				0.205		30847.727
9	Be	|		16.667	-0.000046	ppb				52.91511464	0.84	15.556
10	B	|		53140.879	143.806153	ppb				0.474	2.293	317.781
27	Al	|		41918.079	4.200126	ppb				0.816	1.452	7676.508
43	Ca-2	|		1227009.768	69987.078329	ppb				2.334	0.634	90.000
49	Ti	|		2076.818	2.829005	ppb				3.586	2.104	198.890
52	Cr	|		16931.138	0.759259	ppb				0.303	4.771	9512.056
55	Mn	|		479057.300	36.711196	ppb				1.904	1.581	726.685
57	Fe	|		75205.280	264.910494	ppb				2.274	0.427	7990.013
45	Sc-IS	>		1569861.399		ppb				1.957		1465711.044
66	Zn	|		4115.037	2.737343	ppb				0.939	1.346	691.128
86	Sr	|		815952.879	391.391459	ppb				0.672	1.435	20.160
65	Cu	|		3953.299	2.079550	ppb				3.881	2.048	106.188
69	Ga-IS	|		415658.574		ppb				2.648		416966.918
95	Mo	|		16057.911	8.100261	ppb				1.814	0.429	74.445
115	In-IS	>		274993.560		ppb				1.310		275360.306
111	Cd	|		21.834	0.010067	ppb				128.465	160.521	4.288
118	Sn	|		680.016	-0.079063	ppb				8.837	13.354	1082.263
121	Sb	|		2335.747	0.229131	ppb				1.667	1.740	1043.372
135	Ba	|		63134.866	56.780866	ppb				3.415	2.537	22.222
165	Ho-IS	|		277844.974		ppb				1.022		275484.201
159	Tb-IS	|		243009.562		ppb				0.929		241104.310
207	Pb	|		1022.237	0.054140	ppb				5.945	8.296	184.445
203	Tl	|		22.222	0.000401	ppb				31.225	386.118	21.111
209	Bi-IS	>		166620.549		ppb				0.923		172319.940
51	V	|		5611.102	7.972273	ppb				2.528	1.827	41.111
59	Co	|		793.355	0.444779	ppb				3.590	3.398	10.000
60	Ni	|		1721.215	1.787179	ppb				6.337	5.860	31.111
75	As	|		1309.976	1.360580	ppb				6.872	15.566	670.629
71	Ga-ISK	>		113275.113		ppb				0.717		112808.131
82	Se-2	|		64.531	1.429276	ppb				24.763	25.729	4.205
107	Ag-1	|		21.111	-0.011158	ppb				9.116	4.699	64.445
115	In-ISK	|		97881.163		ppb				1.662		98394.491
45	Sc-ISK	>		302617.251		ppb				0.643		280005.730
23	Na	|		64353740.326	121971.115252	ppb				0.179	0.470	2205.170
39	K	|		9970282.154	7992.233982	ppb				0.984	0.346	127332.775
24	Mg	|		25239311.952	42678.565657	ppb				1.151	1.518	185.001
159	Tb-ISK	|		203464.036		ppb				0.579		193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-21-D

Autosampler Position: 135

Sample Date/Time: Thursday, April 16, 2020 12:33:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-21-D.100

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34800.116		ppb			1.001			30847.727
9	Be	|		17.778	0.000585	ppb	10.825	175.859				15.556
10	B	|		33122.810	88.442904	ppb	2.012	0.942				317.781
27	Al	|		28572.994	2.504207	ppb	1.272	0.787				7676.508
43	Ca-2	|	1047130.221		59186.959969	ppb	1.920	0.197				90.000
49	Ti	|		1595.645	2.076152	ppb	5.433	4.304				198.890
52	Cr	|		16245.900	0.665197	ppb	1.500	0.745				9512.056
55	Mn	|		8355882.249	635.421365	ppb	2.312	0.992				726.685
57	Fe	|		54371.122	180.139766	ppb	3.268	2.920				7990.013
45	Sc-IS	>		1584192.074		ppb			1.733			1465711.044
66	Zn	|		2662.472	1.537305	ppb	11.034	13.361				691.128
86	Sr	|		453126.061	215.309450	ppb	3.846	2.708				20.160
65	Cu	|		1702.913	0.852086	ppb	8.731	8.163				106.188
69	Ga-IS	|		453311.825		ppb	4.050					416966.918
95	Mo	|		19600.113	9.804812	ppb	3.235	2.088				74.445
115	In-IS	>		275400.451		ppb			0.628			275360.306
111	Cd	|		63.285	0.034007	ppb	26.033	28.137				4.288
118	Sn	|		482.230	-0.118150	ppb	8.101	6.010				1082.263
121	Sb	|		718.907	-0.057439	ppb	7.553	15.527				1043.372
135	Ba	|		215603.224	193.662421	ppb	4.093	3.501				22.222
165	Ho-IS	|		280225.179		ppb	0.836					275484.201
159	Tb-IS	|		243826.672		ppb	1.037					241104.310
207	Pb	|		522.226	0.021539	ppb	5.503	7.937				184.445
203	Tl	|		34.444	0.002935	ppb	20.145	51.617				21.111
209	Bi-IS	>		169197.288		ppb	1.264					172319.940
51	V	|		3772.721	5.316980	ppb	4.430	4.315				41.111
59	Co	|		544.455	0.302174	ppb	12.158	12.791				10.000
60	Ni	|		746.686	0.753402	ppb	8.268	9.024				31.111
75	As	|		1115.302	0.933049	ppb	1.886	3.883				670.629
71	Ga-ISK	>		113784.684		ppb	0.380					112808.131
82	Se-2	|		97.172	2.194249	ppb	16.644	17.087				4.205
107	Ag-1	|		16.667	-0.012318	ppb	34.641	11.905				64.445
115	In-ISK	|		99431.165		ppb	1.404					98394.491
45	Sc-ISK	>		301170.469		ppb	0.570					280005.730
23	Na	|		82119947.419	156390.451923	ppb	0.715	0.584				2205.170
39	K	|		7061044.148	5655.399116	ppb	0.595	1.084				127332.775
24	Mg	|		21057859.295	35777.011417	ppb	1.073	0.798				185.001
159	Tb-ISK	|		204595.326		ppb	0.162					193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, April 16, 2020 12:36:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\b.101

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		33149.534		ppb		1.565		30847.727
9	Be	|		12.222	-0.002070	ppb	41.660	167.895		15.556
10	B	|		438.896	0.376982	ppb	4.883	20.274		317.781
27	Al	|		12755.695	0.709155	ppb	2.563	7.480		7676.508
43	Ca-2	|		196.668	6.741559	ppb	23.623	43.502		90.000
49	Ti	|		321.115	0.208240	ppb	6.754	17.114		198.890
52	Cr	|		13936.800	0.563981	ppb	3.378	10.899		9512.056
55	Mn	|		1715.659	0.083873	ppb	0.978	2.510		726.685
57	Fe	|		12579.982	20.518086	ppb	1.232	3.519		7990.013
45	Sc-IS	|>		1439542.328		ppb	1.195			1465711.044
66	Zn	|		908.918	0.202873	ppb	11.767	41.939		691.128
86	Sr	|		77.452	0.030296	ppb	62.269	84.728		20.160
65	Cu	|		148.589	0.026181	ppb	4.645	16.424		106.188
69	Ga-IS	|		397781.512		ppb	3.337			416966.918
95	Mo	|		253.336	0.099566	ppb	7.326	8.620		74.445
115	In-IS	|>		271263.303		ppb	1.240			275360.306
111	Cd	|		9.468	0.003075	ppb	35.356	65.086		4.288
118	Sn	|		673.349	-0.078490	ppb	2.756	4.010		1082.263
121	Sb	|		1027.815	-0.000000	ppb	7.13858	165.986		1043.372
135	Ba	|		51.111	0.026699	ppb	13.576	25.274		22.222
165	Ho-IS	|		268435.266		ppb	0.613			275484.201
159	Tb-IS	|		234099.592		ppb	1.839			241104.310
207	Pb	|		156.667	-0.001907	ppb	5.629	27.449		184.445
203	Tl	|		11.111	-0.002136	ppb	45.826	50.003		21.111
209	Bi-IS	|>		175653.367		ppb	1.011			172319.940
51	V	|		122.223	0.112731	ppb	8.332	12.453		41.111
59	Co	|		17.778	0.004228	ppb	47.186	111.990		10.000
60	Ni	|		71.111	0.040835	ppb	16.462	29.741		31.111
75	As	|		686.023	0.000617	ppb	5.15711	1023.395		670.629
71	Ga-ISK	|>		115332.581		ppb	0.510			112808.131
82	Se-2	|		22.518	0.424406	ppb	12.790	15.417		4.205
107	Ag-1	|		60.000	-0.001474	ppb	19.245	199.800		64.445
115	In-ISK	|		99891.851		ppb	1.682			98394.491
45	Sc-ISK	|>		292850.441		ppb	1.357			280005.730
23	Na	|		16180.826	27.177087	ppb	1.438	2.015		2205.170
39	K	|		143016.791	8.273972	ppb	0.784	9.042		127332.775
24	Mg	|		3783.835	6.274924	ppb	2.252	3.386		185.001
159	Tb-ISK	|		197563.864		ppb	2.313			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 12:39:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.102

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31237.449		ppb		0.393		30847.727
9	Be	|		152994.093	100.350055	ppb	2.425	3.591		15.556
10	B	|		87544.102	250.628513	ppb	0.933	2.507		317.781
27	Al	|		763028.523	99.333799	ppb	1.336	2.920		7676.508
43	Ca-2	|		82896.650	4983.006389	ppb	3.212	1.717		90.000
49	Ti	|		61956.323	98.914298	ppb	2.145	0.988		198.890
52	Cr	|		838348.866	98.393871	ppb	0.844	0.789		9512.056
55	Mn	|		1191124.853	96.390620	ppb	1.893	0.499		726.685
57	Fe	|		1162488.537	4841.034026	ppb	2.228	0.848		7990.013
45	Sc-IS	>		1487922.582		ppb	1.587			1465711.044
66	Zn	|		115784.414	98.453764	ppb	3.730	2.665		691.128
86	Sr	|		194918.666	98.618840	ppb	1.767	0.291		20.160
65	Cu	|		173448.092	99.061250	ppb	3.282	1.763		106.188
69	Ga-IS	|		432134.534		ppb	3.797			416966.918
95	Mo	|		183832.086	98.288147	ppb	1.536	0.993		74.445
115	In-IS	>		280657.704		ppb	1.592			275360.306
111	Cd	|		174677.866	98.789128	ppb	0.372	1.657		4.288
118	Sn	|		509711.953	98.232950	ppb	0.763	1.114		1082.263
121	Sb	|		571165.340	98.931672	ppb	1.747	0.941		1043.372
135	Ba	|		111627.938	98.386598	ppb	2.464	1.190		22.222
165	Ho-IS	|		279087.554		ppb	0.132			275484.201
159	Tb-IS	|		245225.775		ppb	0.595			241104.310
207	Pb	|		1619655.579	98.579449	ppb	0.532	0.611		184.445
203	Tl	|		483747.662	99.567668	ppb	1.637	1.560		21.111
209	Bi-IS	>		175518.318		ppb	0.080			172319.940
51	V	|		70413.137	98.755502	ppb	1.702	1.198		41.111
59	Co	|		176663.519	98.341819	ppb	1.208	0.359		10.000
60	Ni	|		95664.810	99.179264	ppb	0.758	1.303		31.111
75	As	|		48535.513	100.197576	ppb	1.235	1.656		670.629
71	Ga-ISK	>		115545.454		ppb	1.398			112808.131
82	Se-2	|		4339.499	100.829314	ppb	2.224	1.218		4.205
107	Ag-1	|		393901.449	98.836211	ppb	0.949	1.072		64.445
115	In-ISK	|		102031.066		ppb	0.698			98394.491
45	Sc-ISK	>		289279.667		ppb	0.825			280005.730
23	Na	|		2644088.629	5237.982929	ppb	1.148	0.607		2205.170
39	K	|		6364763.474	5300.128026	ppb	1.424	1.034		127332.775
24	Mg	|		2978280.524	5267.835049	ppb	1.176	0.959		185.001
159	Tb-ISK	|		198732.175		ppb	0.962			193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 12:41:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.103

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		30814.315		ppb				1.746		30847.727
9	Be	|		23.333	0.005485	ppb				24.744	66.217	15.556
10	B	|		563.345	0.753500	ppb				11.289	26.213	317.781
27	Al	|		7912.388	0.050938	ppb				36.743	736.660	7676.508
43	Ca-2	|		88.334	0.019376	ppb				3.268	924.419	90.000
49	Ti	|		300.003	0.175200	ppb				4.006	6.528	198.890
52	Cr	|		10239.224	0.115484	ppb				1.315	23.117	9512.056
55	Mn	|		910.029	0.016818	ppb				8.158	43.331	726.685
57	Fe	|		10005.727	9.535643	ppb				2.848	11.197	7990.013
45	Sc-IS	|>		1433641.347		ppb				1.703		1465711.044
66	Zn	|		580.012	-0.084922	ppb				3.982	33.988	691.128
86	Sr	|		42.420	0.011819	ppb				86.329	160.970	20.160
65	Cu	|		132.849	0.017297	ppb				34.856	161.583	106.188
69	Ga-IS	|		401728.114		ppb				2.570		416966.918
95	Mo	|		407.784	0.185782	ppb				8.229	7.963	74.445
115	In-IS	|>		270261.190		ppb				1.879		275360.306
111	Cd	|		19.144	0.008774	ppb				17.634	22.583	4.288
118	Sn	|		3362.618	0.461234	ppb				3.163	1.943	1082.263
121	Sb	|		1391.179	0.065940	ppb				8.793	26.579	1043.372
135	Ba	|		34.444	0.011598	ppb				20.145	56.068	22.222
165	Ho-IS	|		269624.087		ppb				0.922		275484.201
159	Tb-IS	|		234656.313		ppb				1.652		241104.310
207	Pb	|		554.449	0.023117	ppb				4.003	4.885	184.445
203	Tl	|		112.223	0.019263	ppb				22.294	28.470	21.111
209	Bi-IS	|>		171430.457		ppb				1.807		172319.940
51	V	|		51.111	0.013605	ppb				20.964	107.076	41.111
59	Co	|		25.556	0.008741	ppb				30.123	50.137	10.000
60	Ni	|		27.778	-0.003780	ppb				24.980	197.690	31.111
75	As	|		695.018	0.037987	ppb				3.346	80.755	670.629
71	Ga-ISK	|>		113882.167		ppb				1.277		112808.131
82	Se-2	|		1.182	-0.072652	ppb				597.836	227.924	4.205
107	Ag-1	|		211.113	0.037087	ppb				23.008	31.593	64.445
115	In-ISK	|		99044.595		ppb				0.456		98394.491
45	Sc-ISK	|>		286639.671		ppb				1.334		280005.730
23	Na	|		4989.205	5.468653	ppb				1.819	5.318	2205.170
39	K	|		143671.072	11.448433	ppb				0.589	17.406	127332.775
24	Mg	|		993.368	1.435905	ppb				5.382	7.709	185.001
159	Tb-ISK	|		195550.687		ppb				0.751		193019.402

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, April 16, 2020 12:44:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICIS-23447.104

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		29960.283		ppb		2.253		
9	Be	|		17.778		ppb		21.651		
10	B	|		314.448		ppb		4.413		
27	Al	|		7435.270		ppb		3.968		
43	Ca-2	|		76.667		ppb		35.919		
49	Ti	|		266.669		ppb		16.394		
52	Cr	|		10232.554		ppb		2.934		
55	Mn	|		796.689		ppb		9.421		
57	Fe	|		9621.019		ppb		3.117		
45	Sc-IS	>		1417039.819		ppb		1.537		
66	Zn	|		615.569		ppb		17.517		
86	Sr	|		12.369		ppb		235.782		
65	Cu	|		121.922		ppb		8.414		
69	Ga-IS	|		399607.267		ppb		2.958		
95	Mo	|		102.223		ppb		12.345		
115	In-IS	>		269274.354		ppb		0.320		
111	Cd	|		16.452		ppb		81.023		
118	Sn	|		1354.509		ppb		7.418		
121	Sb	|		963.366		ppb		9.763		
135	Ba	|		25.556		ppb		15.061		
165	Ho-IS	|		269082.939		ppb		1.000		
159	Tb-IS	|		234048.375		ppb		0.520		
207	Pb	|		238.890		ppb		9.899		
203	Tl	|		30.000		ppb		29.397		
209	Bi-IS	>		169956.130		ppb		0.531		
51	V	|		42.222		ppb		16.434		
59	Co	|		12.222		ppb		15.746		
60	Ni	|		34.444		ppb		36.638		
75	As	|		678.637		ppb		8.115		
71	Ga-ISK	>		112992.958		ppb		1.664		
82	Se-2	|		-3.508		ppb		185.814		
107	Ag-1	|		61.111		ppb		31.961		
115	In-ISK	|		99481.096		ppb		0.968		
45	Sc-ISK	>		281723.006		ppb		0.424		
23	Na	|		3325.387		ppb		1.695		
39	K	|		139408.066		ppb		1.020		
24	Mg	|		410.006		ppb		3.659		
159	Tb-ISK	|		195327.744		ppb		1.198		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, April 16, 2020 12:47:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\IC-210761.105

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	30191.877		ppb		1.699		29960.283
9	Be	|	291099.586	200.000000	ppb		1.254	1.681	17.778
10	B	|	170633.147	500.000000	ppb		1.492	0.677	314.448
27	Al	|	1490302.402	200.000000	ppb		1.219	3.003	7435.270
43	Ca-2	|	161762.791	10200.000000	ppb		2.670	0.688	76.667
49	Ti	|	121749.948	200.000000	ppb		0.519	2.277	266.669
52	Cr	|	1631719.286	200.000000	ppb		0.537	1.685	10232.554
55	Mn	|	2451045.506	200.000000	ppb		1.426	1.204	796.689
57	Fe	|	2392005.064	10200.000000	ppb		2.564	2.661	9621.019
45	Sc-IS	>	1436894.022		ppb		1.993		1417039.819
66	Zn	|	219344.196	200.000000	ppb		2.843	2.221	615.569
86	Sr	|	383790.647	200.000000	ppb		2.044	1.833	12.369
65	Cu	|	334977.912	200.000000	ppb		3.262	2.138	121.922
69	Ga-IS	|	441416.133		ppb		3.977		399607.267
95	Mo	|	365919.532	200.000000	ppb		2.065	0.820	102.223
115	In-IS	>	270623.236		ppb		1.978		269274.354
111	Cd	|	337895.955	200.000000	ppb		1.346	0.681	16.452
118	Sn	|	1007414.741	200.000000	ppb		1.482	1.027	1354.509
121	Sb	|	1116663.741	200.000000	ppb		1.344	1.058	963.366
135	Ba	|	218112.353	200.000000	ppb		3.072	1.259	25.556
165	Ho-IS	|	274872.680		ppb		0.838		269082.939
159	Tb-IS	|	241263.018		ppb		2.094		234048.375
207	Pb	|	3172680.362	200.000000	ppb		1.128	1.010	238.890
203	Tl	|	946237.288	200.000000	ppb		1.255	1.277	30.000
209	Bi-IS	>	170736.464		ppb		0.541		169956.130
51	V	|	138531.794	200.000000	ppb		0.577	1.943	42.222
59	Co	|	351239.068	200.000000	ppb		0.969	2.030	12.222
60	Ni	|	186909.275	200.000000	ppb		0.785	1.450	34.444
75	As	|	93764.842	200.000000	ppb		0.199	1.322	678.637
71	Ga-ISK	>	113164.281		ppb		1.383		112992.958
82	Se-2	|	8377.313	200.000000	ppb		0.312	1.349	-3.508
107	Ag-1	|	760136.924	200.000000	ppb		0.925	1.920	61.111
115	In-ISK	|	100702.548		ppb		0.958		99481.096
45	Sc-ISK	>	288177.892		ppb		1.239		281723.006
23	Na	|	5125646.341	10200.000000	ppb		0.323	1.390	3325.387
39	K	|	12195771.081	10200.000000	ppb		0.145	1.396	139408.066
24	Mg	|	5689587.574	10200.000000	ppb		0.682	1.920	410.006
159	Tb-ISK	|	197142.347		ppb		0.800		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 12:50:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.106

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30464.677		ppb		1.615		29960.283
9	Be	|		147376.337	102.244823	ppb		0.952	1.970	17.778
10	B	|		85022.302	251.177408	ppb		1.645	3.029	314.448
27	Al	|		742465.139	100.078018	ppb		1.650	1.079	7435.270
43	Ca-2	|		80006.762	5092.917516	ppb		1.064	1.239	76.667
49	Ti	|		60047.104	99.346306	ppb		2.662	1.224	266.669
52	Cr	|		808992.106	99.468581	ppb		1.949	0.531	10232.554
55	Mn	|		1150931.561	94.786119	ppb		2.194	0.844	796.689
57	Fe	|		1132601.124	4854.539346	ppb		1.827	0.656	9621.019
45	Sc-IS	>		1422890.861		ppb		1.449		1417039.819
66	Zn	|		111442.697	102.296695	ppb		5.336	3.947	615.569
86	Sr	|		191161.737	100.587895	ppb		1.243	0.683	12.369
65	Cu	|		168116.800	101.313570	ppb		3.545	2.111	121.922
69	Ga-IS	|		422312.830		ppb		3.085		399607.267
95	Mo	|		180193.059	99.423398	ppb		2.359	1.521	102.223
115	In-IS	>		270679.600		ppb		1.648		269274.354
111	Cd	|		169195.440	100.125484	ppb		0.472	1.229	16.452
118	Sn	|		506655.739	100.417278	ppb		2.798	2.059	1354.509
121	Sb	|		556479.219	99.556138	ppb		1.325	1.010	963.366
135	Ba	|		109163.583	100.066290	ppb		3.352	2.179	25.556
165	Ho-IS	|		273773.336		ppb		1.673		269082.939
159	Tb-IS	|		240676.164		ppb		1.131		234048.375
207	Pb	|		1591180.664	101.007558	ppb		1.427	0.470	238.890
203	Tl	|		472823.148	100.652210	ppb		0.794	1.496	30.000
209	Bi-IS	>		169532.304		ppb		1.057		169956.130
51	V	|		68722.694	98.570303	ppb		1.160	2.011	42.222
59	Co	|		171912.162	97.282110	ppb		3.056	3.552	12.222
60	Ni	|		94556.486	100.520658	ppb		2.615	1.885	34.444
75	As	|		47296.110	99.531978	ppb		0.542	1.432	678.637
71	Ga-ISK	>		113863.107		ppb		0.983		112992.958
82	Se-2	|		4199.123	99.655632	ppb		2.877	2.135	-3.508
107	Ag-1	|		382286.502	99.945329	ppb		0.665	0.614	61.111
115	In-ISK	|		99737.175		ppb		1.303		99481.096
45	Sc-ISK	>		284878.485		ppb		1.682		281723.006
23	Na	|		2565004.347	5159.863955	ppb		1.686	1.391	3325.387
39	K	|		6173809.421	5163.903749	ppb		1.830	1.019	139408.066
24	Mg	|		2889362.382	5238.969425	ppb		1.298	0.647	410.006
159	Tb-ISK	|		197307.253		ppb		0.693		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 12:53:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.107

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		29426.948		ppb		1.510		29960.283
9	Be	|		35.556	0.012798	ppb	19.516	42.279		17.778
10	B	|		700.017	1.177877	ppb	6.751	13.064		314.448
27	Al	|		6236.918	-0.151318	ppb	3.885	30.824		7435.270
43	Ca-2	|		68.334	-0.461865	ppb	44.708	431.188		76.667
49	Ti	|		221.113	-0.070538	ppb	6.093	40.315		266.669
52	Cr	|		9126.248	-0.122275	ppb	1.938	3.099		10232.554
55	Mn	|		913.363	0.010655	ppb	8.947	51.630		796.689
57	Fe	|		8878.316	-2.688782	ppb	3.438	23.126		9621.019
45	Sc-IS	>		1397362.038		ppb		1.928		1417039.819
66	Zn	|		530.010	-0.073334	ppb	18.753	117.360		615.569
86	Sr	|		17.313	0.002549	ppb	162.986	591.184		12.369
65	Cu	|		122.885	0.001381	ppb	28.350	1463.803		121.922
69	Ga-IS	|		392360.688		ppb		4.390		399607.267
95	Mo	|		460.007	0.202009	ppb	7.354	9.716		102.223
115	In-IS	>		265927.431		ppb		0.649		269274.354
111	Cd	|		24.590	0.005018	ppb	15.925	45.610		16.452
118	Sn	|		4066.134	0.551879	ppb	2.326	2.564		1354.509
121	Sb	|		1327.839	0.068680	ppb	0.882	5.132		963.366
135	Ba	|		33.333	0.007566	ppb	30.000	123.524		25.556
165	Ho-IS	|		266464.701		ppb		1.412		269082.939
159	Tb-IS	|		230543.244		ppb		0.908		234048.375
207	Pb	|		680.006	0.028288	ppb	9.352	12.853		238.890
203	Tl	|		163.334	0.028631	ppb	8.163	10.984		30.000
209	Bi-IS	>		168493.450		ppb		1.027		169956.130
51	V	|		36.667	-0.007928	ppb	18.182	111.683		42.222
59	Co	|		46.667	0.019766	ppb	18.898	26.217		12.222
60	Ni	|		34.444	0.000099	ppb	22.349	7970.608		34.444
75	As	|		743.535	0.146500	ppb	4.686	63.217		678.637
71	Ga-ISK	>		112566.296		ppb		1.863		112992.958
82	Se-2	|		4.187	0.185078	ppb	199.927	107.832		-3.508
107	Ag-1	|		225.557	0.043640	ppb	9.501	15.684		61.111
115	In-ISK	|		98740.537		ppb		1.560		99481.096
45	Sc-ISK	>		279002.584		ppb		0.095		281723.006
23	Na	|		3185.356	-0.221974	ppb	6.993	206.171		3325.387
39	K	|		139219.556	1.012404	ppb	0.791	105.467		139408.066
24	Mg	|		681.683	0.510307	ppb	6.815	16.654		410.006
159	Tb-ISK	|		192930.856		ppb		1.309		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, April 16, 2020 12:55:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICVL-210771.108

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29781.013		ppb	1.342		29960.283
9	Be	1366.732	0.946668	ppb	5.869	6.728	17.778
10	B	16755.380	49.292305	ppb	2.432	2.951	314.448
27	Al	372777.089	50.304395	ppb	1.237	0.547	7435.270
43	Ca-2	900.028	53.066158	ppb	7.093	7.318	76.667
49	Ti	762.243	0.835863	ppb	11.238	17.107	266.669
52	Cr	17079.097	0.871066	ppb	2.651	5.997	10232.554
55	Mn	12185.195	0.949610	ppb	0.171	1.282	796.689
57	Fe	19886.056	45.168790	ppb	1.662	3.849	9621.019
45	Sc-IS	> 1407239.971		ppb	1.050		1417039.819
66	Zn	6292.497	5.303788	ppb	2.684	2.090	615.569
86	Sr	1928.547	1.020022	ppb	6.381	7.275	12.369
65	Cu	1839.330	1.047913	ppb	2.082	1.357	121.922
69	Ga-IS	396572.038		ppb	1.453		399607.267
95	Mo	1989.027	1.053739	ppb	1.776	2.021	102.223
115	In-IS	> 263724.456		ppb	0.853		269274.354
111	Cd	1611.470	0.969011	ppb	1.057	1.468	16.452
118	Sn	6763.825	1.109386	ppb	4.615	6.507	1354.509
121	Sb	6410.329	1.005274	ppb	4.606	4.479	963.366
135	Ba	1140.046	1.049602	ppb	8.291	8.688	25.556
165	Ho-IS	272654.099		ppb	0.839		269082.939
159	Tb-IS	236464.374		ppb	0.720		234048.375
207	Pb	16049.134	0.990045	ppb	1.032	0.627	238.890
203	Tl	4749.678	0.991033	ppb	0.999	1.132	30.000
209	Bi-IS	> 171858.712		ppb	0.791		169956.130
51	V	673.349	0.913802	ppb	6.878	7.606	42.222
59	Co	1655.652	0.938112	ppb	4.909	5.087	12.222
60	Ni	957.810	0.990860	ppb	7.675	8.303	34.444
75	As	1090.929	0.889847	ppb	6.507	17.958	678.637
71	Ga-ISK	> 112875.289		ppb	0.361		112992.958
82	Se-2	50.549	1.292851	ppb	17.025	15.774	-3.508
107	Ag-1	3832.736	0.994832	ppb	1.482	1.445	61.111
115	In-ISK	99528.142		ppb	0.533		99481.096
45	Sc-ISK	> 279177.520		ppb	1.611		281723.006
23	Na	27414.616	49.573182	ppb	1.416	0.340	3325.387
39	K	194406.118	49.163535	ppb	0.793	5.679	139408.066
24	Mg	27608.321	50.347653	ppb	1.119	2.576	410.006
159	Tb-ISK	194830.936		ppb	0.614		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25445-H-1-D

Autosampler Position: 142

Sample Date/Time: Thursday, April 16, 2020 12:58:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25445-H-1-D.109

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	37424.522		ppb	1.731		29960.283
9	Be	18.889	0.000168	ppb	26.956	1909.993	17.778
10	B	131939.825	374.673721	ppb	0.446	1.987	314.448
27	Al	19344.205	1.512475	ppb	2.489	4.022	7435.270
43	Ca-2	688385.402	42105.202802	ppb	2.203	1.610	76.667
49	Ti	2768.046	3.973667	ppb	1.452	3.423	266.669
52	Cr	27075.646	1.958651	ppb	2.644	5.481	10232.554
55	Mn	1215241.284	96.100240	ppb	2.669	2.232	796.689
57	Fe	85851.825	314.539132	ppb	3.288	2.306	9621.019
45	Sc-IS	> 1482126.123		ppb	2.357		1417039.819
66	Zn	3447.083	2.484415	ppb	5.921	5.967	615.569
86	Sr	1138626.341	575.247426	ppb	2.961	2.392	12.369
65	Cu	2328.457	1.272585	ppb	12.935	11.521	121.922
69	Ga-IS	373071.673		ppb	4.118		399607.267
95	Mo	7477.513	3.909912	ppb	3.309	5.549	102.223
115	In-IS	> 262837.748		ppb	1.590		269274.354
111	Cd	14.297	-0.001053	ppb	40.049	335.991	16.452
118	Sn	1586.755	0.054202	ppb	4.264	26.292	1354.509
121	Sb	1165.603	0.041400	ppb	9.573	42.313	963.366
135	Ba	13815.576	13.019142	ppb	4.652	3.132	25.556
165	Ho-IS	245650.252		ppb	2.190		269082.939
159	Tb-IS	209798.696		ppb	2.219		234048.375
207	Pb	1094.461	0.061858	ppb	4.886	6.291	238.890
203	Tl	60.000	0.007773	ppb	9.623	16.179	30.000
209	Bi-IS	> 153035.440		ppb	1.446		169956.130
51	V	6232.471	9.224598	ppb	1.437	2.318	42.222
59	Co	96.667	0.049721	ppb	15.802	16.412	12.222
60	Ni	685.572	0.720521	ppb	3.518	6.046	34.444
75	As	3787.939	6.945413	ppb	8.802	12.922	678.637
71	Ga-ISK	> 109701.961		ppb	2.259		112992.958
82	Se-2	390.115	9.687403	ppb	4.100	3.872	-3.508
107	Ag-1	52.222	-0.001935	ppb	13.287	92.745	61.111
115	In-ISK	94602.743		ppb	1.713		99481.096
45	Sc-ISK	> 305869.956		ppb	0.882		281723.006
23	Na	376293528.548	705839.698837	ppb	2.203	1.377	3325.387
39	K	30814096.761	24443.937447	ppb	1.679	1.101	139408.066
24	Mg	47881128.320	80868.149638	ppb	1.989	1.984	410.006
159	Tb-ISK	198703.098		ppb	0.898		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25056-C-1-A

Autosampler Position: 143

Sample Date/Time: Thursday, April 16, 2020 13:01:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25056-C-1-A.110

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		32330.991		ppb		0.970		29960.283
9	Be	|		15.556	-0.001750	ppb	65.465	397.695		17.778
10	B	|		861.137	1.574923	ppb	10.433	16.082		314.448
27	Al	|		151414.948	19.265468	ppb	1.268	0.809		7435.270
43	Ca-2	|		4454.028	274.247060	ppb	1.997	0.843		76.667
49	Ti	|		663.349	0.639550	ppb	3.015	4.413		266.669
52	Cr	|		16626.338	0.757335	ppb	1.830	2.244		10232.554
55	Mn	|		13445.215	1.024146	ppb	2.083	1.039		796.689
57	Fe	|		25322.434	65.923604	ppb	2.676	3.125		9621.019
45	Sc-IS	>		1446372.540		ppb	1.226			1417039.819
66	Zn	>		541308.223	491.096753	ppb	2.641	1.437		615.569
86	Sr	|		2874.915	1.481914	ppb	0.758	1.783		12.369
65	Cu	|		2833.361	1.606896	ppb	5.626	4.624		121.922
69	Ga-IS	|		397698.776		ppb	1.875			399607.267
95	Mo	|		328.893	0.121954	ppb	10.932	15.826		102.223
115	In-IS	>		273729.834		ppb	0.973			269274.354
111	Cd	|		109.310	0.054203	ppb	5.325	7.456		16.452
118	Sn	|		897.806	-0.094151	ppb	7.107	13.255		1354.509
121	Sb	|		880.027	-0.017664	ppb	8.529	67.430		963.366
135	Ba	|		1854.565	1.658088	ppb	1.325	0.359		25.556
165	Ho-IS	|		263147.529		ppb	1.711			269082.939
159	Tb-IS	|		229754.017		ppb	0.924			234048.375
207	Pb	|		4040.221	0.237561	ppb	2.435	1.922		238.890
203	Tl	|		34.444	0.000862	ppb	31.109	266.248		30.000
209	Bi-IS	>		172085.851		ppb	0.629			169956.130
51	V	|		178.890	0.193682	ppb	11.232	13.602		42.222
59	Co	|		87.778	0.042388	ppb	24.117	28.550		12.222
60	Ni	|		383.338	0.367889	ppb	3.135	2.959		34.444
75	As	|		1326.635	1.353783	ppb	4.567	12.234		678.637
71	Ga-ISK	>		114677.409		ppb	1.613			112992.958
82	Se-2	|		47.172	1.196170	ppb	21.272	20.465		-3.508
107	Ag-1	|		36.667	-0.006580	ppb	32.778	47.207		61.111
115	In-ISK	|		98766.479		ppb	1.374			99481.096
45	Sc-ISK	>		294737.265		ppb	0.638			281723.006
23	Na	|		189277.494	361.728740	ppb	1.442	1.851		3325.387
39	K	|		212429.121	55.099963	ppb	1.565	6.985		139408.066
24	Mg	|		19832.091	34.007584	ppb	1.196	0.855		410.006
159	Tb-ISK	|		194907.951		ppb	0.305			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25056-C-2-A

Autosampler Position: 144

Sample Date/Time: Thursday, April 16, 2020 13:04:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25056-C-2-A.111

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31892.227		ppb		0.708			29960.283
9	Be	|		41.111	0.016067	ppb	24.771	44.272			17.778
10	B	|		10041.308	28.756558	ppb	2.985	1.881			314.448
27	Al	|		3340301.761	452.738980	ppb	1.257	1.041			7435.270
43	Ca-2	|		51753.605	3284.432645	ppb	2.174	1.028			76.667
49	Ti	|		6638.209	10.560727	ppb	2.641	1.252			266.669
52	Cr	|		569150.699	69.438431	ppb	1.279	0.993			10232.554
55	Mn	|		373515.644	30.646865	ppb	1.977	1.713			796.689
57	Fe	|		122110.829	484.939342	ppb	1.231	1.619			9621.019
45	Sc-IS	>		1426415.760		ppb	2.266				1417039.819
66	Zn	|		496831.638	457.012913	ppb	4.242	3.121			615.569
86	Sr	|		24787.378	13.010689	ppb	1.006	3.146			12.369
65	Cu	|		12157.437	7.241421	ppb	3.051	2.152			121.922
69	Ga-IS	|		398269.308		ppb	3.350				399607.267
95	Mo	|		418.895	0.174224	ppb	11.319	16.217			102.223
115	In-IS	>		267850.049		ppb	1.865				269274.354
111	Cd	|		173.566	0.094051	ppb	2.882	4.601			16.452
118	Sn	|		1000.035	-0.069799	ppb	5.196	11.826			1354.509
121	Sb	|		1643.428	0.123879	ppb	7.740	14.467			963.366
135	Ba	|		22453.195	20.781690	ppb	2.662	1.007			25.556
165	Ho-IS	|		263614.819		ppb	1.518				269082.939
159	Tb-IS	|		232465.198		ppb	1.181				234048.375
207	Pb	|		57427.807	3.640440	ppb	2.067	2.563			238.890
203	Tl	|		78.889	0.010520	ppb	19.968	36.112			30.000
209	Bi-IS	>		169142.498		ppb	2.478				169956.130
51	V	|		1175.604	1.583466	ppb	6.971	7.455			42.222
59	Co	|		1015.592	0.553131	ppb	1.480	0.430			12.222
60	Ni	|		1136.712	1.141128	ppb	6.180	5.563			34.444
75	As	|		1190.153	1.017614	ppb	3.793	12.049			678.637
71	Ga-ISK	>		116821.308		ppb	1.194				112992.958
82	Se-2	|		7.200	0.251153	ppb	71.483	48.195			-3.508
107	Ag-1	|		46.667	-0.004217	ppb	12.372	32.567			61.111
115	In-ISK	|		100850.854		ppb	0.721				99481.096
45	Sc-ISK	>		291949.091		ppb	1.626				281723.006
23	Na	|		812849.659	1590.942087	ppb	0.691	0.952			3325.387
39	K	|		1273514.379	943.140541	ppb	0.576	1.390			139408.066
24	Mg	|		186852.486	329.969028	ppb	1.161	2.732			410.006
159	Tb-ISK	|		196501.128		ppb	1.677				195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25056-C-3-A

Autosampler Position: 145

Sample Date/Time: Thursday, April 16, 2020 13:06:54

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25056-C-3-A.112

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31547.017		ppb			0.303			29960.283
9	Be	|		66.667	0.033032	ppb	27.839	36.632				17.778
10	B	|		4085.029	10.984821	ppb	3.912	4.924				314.448
27	Al	|		9324479.816	1248.502024	ppb	1.301	0.531				7435.270
43	Ca-2	|		58938.005	3690.824463	ppb	1.083	0.609				76.667
49	Ti	|		15317.097	24.610260	ppb	1.334	0.530				266.669
52	Cr	|		114180.126	12.714942	ppb	1.711	0.579				10232.554
55	Mn	|		768409.253	62.262521	ppb	1.911	1.340				796.689
57	Fe	|		338351.519	1397.722519	ppb	2.454	1.479				9621.019
45	Sc-IS	>		1445793.486		ppb	1.412					1417039.819
66	Zn	>		584470.520	530.475932	ppb	3.568	2.308				615.569
86	Sr	|		41017.591	21.237433	ppb	0.824	1.248				12.369
65	Cu	|		25899.025	15.297723	ppb	3.665	2.322				121.922
69	Ga-IS	|		408192.465		ppb	3.696					399607.267
95	Mo	|		535.566	0.234257	ppb	5.294	5.368				102.223
115	In-IS	>		269103.798		ppb	0.718					269274.354
111	Cd	|		327.768	0.185294	ppb	2.104	1.469				16.452
118	Sn	|		927.808	-0.085137	ppb	5.085	10.608				1354.509
121	Sb	|		3582.672	0.472307	ppb	3.821	5.630				963.366
135	Ba	|		65890.620	60.753097	ppb	3.531	3.558				25.556
165	Ho-IS	|		266335.360		ppb	2.657					269082.939
159	Tb-IS	|		234349.939		ppb	0.615					234048.375
207	Pb	|		178139.486	11.226365	ppb	0.537	1.571				238.890
203	Tl	|		106.667	0.016195	ppb	11.267	15.466				30.000
209	Bi-IS	>		170586.972		ppb	1.060					169956.130
51	V	|		2536.892	3.603340	ppb	1.719	2.228				42.222
59	Co	|		2266.847	1.283938	ppb	3.341	2.972				12.222
60	Ni	|		2644.689	2.793805	ppb	2.979	2.404				34.444
75	As	|		1164.138	1.040561	ppb	8.433	18.459				678.637
71	Ga-ISK	>		113130.646		ppb	0.804					112992.958
82	Se-2	|		5.872	0.223342	ppb	89.029	55.630				-3.508
107	Ag-1	|		74.445	0.003482	ppb	11.268	60.573				61.111
115	In-ISK	|		98364.466		ppb	1.506					99481.096
45	Sc-ISK	>		287577.584		ppb	2.049					281723.006
23	Na	|		627270.604	1245.096050	ppb	0.260	1.819				3325.387
39	K	|		1221993.092	915.680618	ppb	1.068	1.807				139408.066
24	Mg	|		427492.163	767.312427	ppb	0.734	1.398				410.006
159	Tb-ISK	|		195102.681		ppb	1.108					195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25056-C-4-A

Autosampler Position: 146

Sample Date/Time: Thursday, April 16, 2020 13:09:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25056-C-4-A.113

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31276.432		ppb		2.093		29960.283
9	Be	|		50.000	0.021601	ppb	53.333	82.131		17.778
10	B	|		5102.022	13.972563	ppb	1.769	2.996		314.448
27	Al	|		4132666.150	553.654520	ppb	0.795	2.447		7435.270
43	Ca-2	|		30275.407	1895.560666	ppb	3.544	1.817		76.667
49	Ti	|		8476.960	13.438656	ppb	2.325	0.793		266.669
52	Cr	|		109621.260	12.174896	ppb	1.423	0.655		10232.554
55	Mn	|		401998.059	32.587207	ppb	1.116	0.758		796.689
57	Fe	|		168627.289	676.679499	ppb	1.357	0.578		9621.019
45	Sc-IS	>		1443899.239		ppb	1.848			1417039.819
66	Zn	|		503412.546	457.499281	ppb	2.290	0.988		615.569
86	Sr	|		24441.210	12.669851	ppb	0.493	1.525		12.369
65	Cu	|		26058.921	15.412703	ppb	3.646	1.848		121.922
69	Ga-IS	|		414108.256		ppb	2.852			399607.267
95	Mo	|		403.339	0.162760	ppb	2.980	2.576		102.223
115	In-IS	>		267945.284		ppb	0.635			269274.354
111	Cd	|		172.487	0.093313	ppb	33.514	36.930		16.452
118	Sn	|		792.244	-0.111561	ppb	5.682	7.566		1354.509
121	Sb	|		2502.442	0.279405	ppb	6.397	9.608		963.366
135	Ba	|		51622.014	47.795155	ppb	1.982	1.578		25.556
165	Ho-IS	|		265931.319		ppb	0.679			269082.939
159	Tb-IS	|		232916.746		ppb	0.269			234048.375
207	Pb	|		105164.632	6.644517	ppb	1.636	1.642		238.890
203	Tl	|		53.333	0.004945	ppb	6.250	9.708		30.000
209	Bi-IS	>		170001.414		ppb	2.213			169956.130
51	V	|		1135.601	1.559548	ppb	1.794	2.879		42.222
59	Co	|		1047.816	0.582583	ppb	4.953	5.102		12.222
60	Ni	|		1556.752	1.609875	ppb	5.430	6.375		34.444
75	As	|		929.977	0.512895	ppb	10.919	38.565		678.637
71	Ga-ISK	>		114518.321		ppb	1.096			112992.958
82	Se-2	|		10.205	0.323366	ppb	116.575	85.950		-3.508
107	Ag-1	|		27.778	-0.008877	ppb	24.980	20.407		61.111
115	In-ISK	|		99131.826		ppb	1.488			99481.096
45	Sc-ISK	>		289243.399		ppb	0.858			281723.006
23	Na	|		471814.952	929.259803	ppb	0.631	1.346		3325.387
39	K	|		646870.486	424.687016	ppb	0.650	0.930		139408.066
24	Mg	|		221367.012	394.639167	ppb	0.850	1.534		410.006
159	Tb-ISK	|		196435.998		ppb	0.235			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25056-C-5-A

Autosampler Position: 147

Sample Date/Time: Thursday, April 16, 2020 13:12:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25056-C-5-A.114

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31051.515		ppb			3.471			29960.283
9	Be	|		41.111	0.015813	ppb		33.757	62.173			17.778
10	B	|		4310.652	11.675274	ppb		5.444	7.113			314.448
27	Al	|		3102461.525	415.695371	ppb		1.423	1.509			7435.270
43	Ca-2	|		42439.616	2662.659041	ppb		0.904	1.890			76.667
49	Ti	|		8753.794	13.905473	ppb		2.909	2.114			266.669
52	Cr	|		323913.757	38.512406	ppb		1.447	0.376			10232.554
55	Mn	|		260870.613	21.139857	ppb		3.013	1.934			796.689
57	Fe	|		161872.368	648.474179	ppb		2.710	1.961			9621.019
45	Sc-IS	>		1442474.139		ppb		1.115				1417039.819
66	Zn	>		1057325.706	962.367036	ppb		2.986	1.910			615.569
86	Sr	|		20419.341	10.592098	ppb		1.972	1.310			12.369
65	Cu	|		16056.053	9.478279	ppb		3.045	1.957			121.922
69	Ga-IS	|		406284.613		ppb		4.401				399607.267
95	Mo	|		528.899	0.231325	ppb		3.584	3.287			102.223
115	In-IS	>		270378.746		ppb		1.653				269274.354
111	Cd	|		196.668	0.106745	ppb		8.518	9.414			16.452
118	Sn	|		866.693	-0.098058	ppb		4.819	10.934			1354.509
121	Sb	|		2117.935	0.206268	ppb		5.364	6.919			963.366
135	Ba	|		28134.362	25.800238	ppb		3.204	1.697			25.556
165	Ho-IS	|		269068.189		ppb		0.898				269082.939
159	Tb-IS	|		233837.173		ppb		0.461				234048.375
207	Pb	|		75171.884	4.754010	ppb		1.413	1.337			238.890
203	Tl	|		81.111	0.010887	ppb		26.739	42.609			30.000
209	Bi-IS	>		169658.158		ppb		0.170				169956.130
51	V	|		884.472	1.195658	ppb		4.652	4.471			42.222
59	Co	|		966.699	0.534712	ppb		4.066	4.254			12.222
60	Ni	|		1394.513	1.431637	ppb		2.666	2.303			34.444
75	As	|		938.789	0.525771	ppb		9.026	37.211			678.637
71	Ga-ISK	>		114988.731		ppb		0.891				112992.958
82	Se-2	|		0.190	0.087418	ppb		3432.931	175.071			-3.508
107	Ag-1	|		43.333	-0.004906	ppb		40.704	91.757			61.111
115	In-ISK	|		99579.072		ppb		1.258				99481.096
45	Sc-ISK	>		287665.862		ppb		1.858				281723.006
23	Na	|		584716.620	1159.772074	ppb		2.208	2.825			3325.387
39	K	|		849978.084	599.948269	ppb		0.914	1.858			139408.066
24	Mg	|		143369.204	256.764646	ppb		0.997	2.025			410.006
159	Tb-ISK	|		196749.220		ppb		1.821				195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25117-B-1-A

Autosampler Position: 148

Sample Date/Time: Thursday, April 16, 2020 13:15:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25117-B-1-A.115

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31283.119		ppb			2.579			29960.283
9	Be	|		53.333	0.024097	ppb	28.641	44.652				17.778
10	B	|		4219.512	11.374071	ppb	3.001	2.655				314.448
27	Al	|		6591199.743	882.343470	ppb	2.132	2.541				7435.270
43	Ca-2	|		39995.917	2503.031103	ppb	1.307	0.259				76.667
49	Ti	|		9744.435	15.494153	ppb	2.478	1.823				266.669
52	Cr	|		24803.741	1.760604	ppb	1.696	1.851				10232.554
55	Mn	|		357197.249	28.909074	ppb	2.034	1.809				796.689
57	Fe	|		196034.130	792.345441	ppb	2.361	2.275				9621.019
45	Sc-IS	>		1445732.653		ppb	1.144					1417039.819
66	Zn	|		80077.269	72.203862	ppb	2.959	2.795				615.569
86	Sr	|		21159.853	10.952480	ppb	0.694	0.593				12.369
65	Cu	|		18014.444	10.621162	ppb	2.638	2.647				121.922
69	Ga-IS	|		400949.436		ppb	2.844					399607.267
95	Mo	|		206.668	0.055582	ppb	8.980	16.527				102.223
115	In-IS	>		269420.942		ppb	1.662					269274.354
111	Cd	|		244.013	0.135252	ppb	12.708	13.148				16.452
118	Sn	|		783.355	-0.114259	ppb	9.206	11.311				1354.509
121	Sb	|		1256.722	0.052551	ppb	8.501	29.833				963.366
135	Ba	|		19570.072	18.003864	ppb	3.345	2.214				25.556
165	Ho-IS	|		267271.527		ppb	0.618					269082.939
159	Tb-IS	|		232708.229		ppb	1.812					234048.375
207	Pb	|		71139.629	4.551847	ppb	0.729	1.360				238.890
203	Tl	|		82.222	0.011298	ppb	23.052	34.139				30.000
209	Bi-IS	>		167684.067		ppb	1.396					169956.130
51	V	|		1695.656	2.374202	ppb	1.009	0.641				42.222
59	Co	|		1077.818	0.603288	ppb	4.334	3.646				12.222
60	Ni	|		1662.319	1.732607	ppb	2.316	2.789				34.444
75	As	|		1951.714	2.710661	ppb	1.455	3.002				678.637
71	Ga-ISK	>		113772.377		ppb	0.769					112992.958
82	Se-2	|		1.833	0.127936	ppb	429.180	146.400				-3.508
107	Ag-1	|		46.667	-0.003891	ppb	21.429	67.386				61.111
115	In-ISK	|		99787.725		ppb	1.655					99481.096
45	Sc-ISK	>		287100.927		ppb	1.134					281723.006
23	Na	|		419299.667	831.158269	ppb	2.202	1.114				3325.387
39	K	|		943595.142	680.765243	ppb	1.231	0.844				139408.066
24	Mg	|		273746.411	491.813272	ppb	1.000	0.395				410.006
159	Tb-ISK	|		195278.462		ppb	1.426					195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25117-B-2-A

Autosampler Position: 149

Sample Date/Time: Thursday, April 16, 2020 13:17:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25117-B-2-A.116

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		30756.410		ppb		1.265		29960.283
9	Be	|		40.000	0.015106	ppb	30.046	55.210		17.778
10	B	|		4990.873	13.710898	ppb	4.108	4.607		314.448
27	Al	|		6363281.238	856.661488	ppb	1.010	0.776		7435.270
43	Ca-2	|		58149.830	3662.863435	ppb	2.640	2.963		76.667
49	Ti	|		7887.733	12.533706	ppb	2.405	2.836		266.669
52	Cr	|		24202.713	1.704110	ppb	2.196	3.221		10232.554
55	Mn	|		404121.611	32.905332	ppb	1.559	1.378		796.689
57	Fe	|		200685.800	817.078607	ppb	2.232	2.164		9621.019
45	Sc-IS	>		1437369.114		ppb	0.356			1417039.819
66	Zn	|		105791.597	96.127208	ppb	2.888	2.600		615.569
86	Sr	|		33359.865	17.370526	ppb	1.320	0.977		12.369
65	Cu	|		20298.623	12.045935	ppb	3.761	3.422		121.922
69	Ga-IS	|		398630.342		ppb	2.872			399607.267
95	Mo	|		157.779	0.029536	ppb	12.909	36.607		102.223
115	In-IS	>		266287.798		ppb	1.370			269274.354
111	Cd	|		347.451	0.199136	ppb	5.274	4.157		16.452
118	Sn	|		666.682	-0.136002	ppb	8.322	6.943		1354.509
121	Sb	|		1144.490	0.034949	ppb	8.240	48.649		963.366
135	Ba	|		20816.282	19.377140	ppb	3.929	3.101		25.556
165	Ho-IS	|		264979.506		ppb	0.968			269082.939
159	Tb-IS	|		230766.854		ppb	1.084			234048.375
207	Pb	|		64922.281	4.200172	ppb	1.285	0.590		238.890
203	Tl	|		93.334	0.013988	ppb	18.898	29.363		30.000
209	Bi-IS	>		165784.337		ppb	1.561			169956.130
51	V	|		1841.230	2.572279	ppb	0.636	0.943		42.222
59	Co	|		1142.268	0.637184	ppb	1.987	1.953		12.222
60	Ni	|		1964.580	2.045331	ppb	3.727	3.564		34.444
75	As	|		1963.853	2.718835	ppb	1.697	2.807		678.637
71	Ga-ISK	>		114249.480		ppb	0.287			112992.958
82	Se-2	|		6.216	0.230809	ppb	65.190	41.605		-3.508
107	Ag-1	|		54.445	-0.001915	ppb	12.745	93.784		61.111
115	In-ISK	|		97609.835		ppb	1.097			99481.096
45	Sc-ISK	>		287257.674		ppb	1.716			281723.006
23	Na	|		423948.720	840.024577	ppb	2.073	0.631		3325.387
39	K	|		946320.076	682.629990	ppb	2.232	1.616		139408.066
24	Mg	|		300819.574	540.254679	ppb	1.286	0.630		410.006
159	Tb-ISK	|		192341.611		ppb	1.091			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-1-A @5

Autosampler Position: 150

Sample Date/Time: Thursday, April 16, 2020 13:20:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-1-A @5.117

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31631.676		ppb		3.463		29960.283
9	Be	|		15.556	-0.001696	ppb	12.372	81.444		17.778
10	B	|		11660.315	33.290288	ppb	3.088	4.373		314.448
27	Al	|		152981.623	19.607194	ppb	1.934	3.425		7435.270
43	Ca-2	|		131973.591	8317.692967	ppb	1.811	0.906		76.667
49	Ti	|		1202.273	1.532929	ppb	1.121	0.377		266.669
52	Cr	|		14051.352	0.452522	ppb	1.420	0.228		10232.554
55	Mn	|		23314.582	1.835787	ppb	3.625	2.700		796.689
57	Fe	|		18757.864	38.502796	ppb	1.459	0.437		9621.019
45	Sc-IS	>		1437516.786		ppb	1.362			1417039.819
66	Zn	|		805.578	0.165186	ppb	6.728	24.206		615.569
86	Sr	|		112023.054	58.338664	ppb	2.375	1.566		12.369
65	Cu	|		1160.141	0.618972	ppb	1.157	2.688		121.922
69	Ga-IS	|		396202.029		ppb	4.606			399607.267
95	Mo	|		1201.162	0.599416	ppb	8.074	7.670		102.223
115	In-IS	>		264354.129		ppb	0.549			269274.354
111	Cd	|		55.255	0.023691	ppb	29.478	41.543		16.452
118	Sn	|		521.121	-0.164549	ppb	2.663	1.764		1354.509
121	Sb	|		1254.500	0.056631	ppb	3.365	11.838		963.366
135	Ba	|		9035.080	8.459820	ppb	2.446	2.367		25.556
165	Ho-IS	|		265059.733		ppb	0.347			269082.939
159	Tb-IS	|		229829.609		ppb	0.638			234048.375
207	Pb	|		713.340	0.031405	ppb	7.418	9.938		238.890
203	Tl	|		11.111	-0.003939	ppb	34.641	21.428		30.000
209	Bi-IS	>		164949.080		ppb	0.774			169956.130
51	V	|		375.561	0.479615	ppb	16.872	17.538		42.222
59	Co	|		90.000	0.044255	ppb	16.973	20.841		12.222
60	Ni	|		377.783	0.367048	ppb	9.268	11.529		34.444
75	As	|		873.605	0.414374	ppb	3.207	20.998		678.637
71	Ga-ISK	>		113353.564		ppb	1.530			112992.958
82	Se-2	|		5.854	0.223067	ppb	29.051	17.723		-3.508
107	Ag-1	|		21.111	-0.010562	ppb	18.232	9.196		61.111
115	In-ISK	|		98748.734		ppb	1.556			99481.096
45	Sc-ISK	>		288317.180		ppb	0.867			281723.006
23	Na	|		2990873.502	5945.421530	ppb	1.758	1.485		3325.387
39	K	|		1208280.424	901.260396	ppb	1.378	1.589		139408.066
24	Mg	|		1178616.695	2110.947740	ppb	1.993	1.527		410.006
159	Tb-ISK	|		193471.418		ppb	1.269			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-2-A

Autosampler Position: 151

Sample Date/Time: Thursday, April 16, 2020 13:23:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-2-A.118

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34004.869		ppb		0.726		29960.283
9	Be	|	8.889	-0.006536	ppb	21.651	18.771		17.778
10	B	|	49042.930	137.099302	ppb	0.729	0.922		314.448
27	Al	|	92369.979	10.925720	ppb	2.161	3.012		7435.270
43	Ca-2	|	813363.615	49195.123327	ppb	1.513	1.255		76.667
49	Ti	|	1992.361	2.698338	ppb	4.300	4.085		266.669
52	Cr	|	37812.202	3.191376	ppb	1.134	1.159		10232.554
55	Mn	|	25152.124	1.902431	ppb	1.040	1.948		796.689
57	Fe	|	43744.669	137.775094	ppb	2.000	1.608		9621.019
45	Sc-IS	>	1498693.561		ppb	0.842			1417039.819
66	Zn	|	18381.825	15.542434	ppb	2.932	2.173		615.569
86	Sr	|	720827.064	360.104111	ppb	1.741	1.208		12.369
65	Cu	|	6739.838	3.785192	ppb	4.593	3.852		121.922
69	Ga-IS	|	400612.886		ppb	3.069			399607.267
95	Mo	|	3395.959	1.723437	ppb	2.022	2.066		102.223
115	In-IS	>	264984.891		ppb	1.618			269274.354
111	Cd	|	47.313	0.018771	ppb	17.937	25.290		16.452
118	Sn	|	603.346	-0.148156	ppb	8.613	6.388		1354.509
121	Sb	|	7069.527	1.120576	ppb	1.613	0.339		963.366
135	Ba	|	23023.001	21.538517	ppb	4.004	2.886		25.556
165	Ho-IS	|	274251.912		ppb	0.107			269082.939
159	Tb-IS	|	239810.522		ppb	0.313			234048.375
207	Pb	|	684.451	0.029258	ppb	9.572	13.956		238.890
203	Tl	|	47.778	0.004004	ppb	14.523	33.583		30.000
209	Bi-IS	>	165964.273		ppb	1.949			169956.130
51	V	|	1871.234	2.675134	ppb	7.860	7.783		42.222
59	Co	|	143.334	0.075703	ppb	10.657	12.030		12.222
60	Ni	|	1116.710	1.173473	ppb	3.102	3.380		34.444
75	As	|	1150.082	1.042047	ppb	2.823	5.275		678.637
71	Ga-ISK	>	111731.916		ppb	0.622			112992.958
82	Se-2	|	52.190	1.345057	ppb	16.683	15.634		-3.508
107	Ag-1	|	30.000	-0.008095	ppb	40.062	40.087		61.111
115	In-ISK	|	97510.514		ppb	1.760			99481.096
45	Sc-ISK	>	288310.278		ppb	0.483			281723.006
23	Na	|	17275346.273	34375.035679	ppb	0.861	1.102		3325.387
39	K	|	3176207.059	2565.725256	ppb	0.880	1.183		139408.066
24	Mg	|	7503139.017	13443.015641	ppb	0.897	0.453		410.006
159	Tb-ISK	|	195296.812		ppb	1.787			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 13:26:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.119

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	30667.329		ppb		1.221		29960.283
9	Be	|	150137.069	102.444047	ppb		0.772	1.066	17.778
10	B	|	87096.942	253.039385	ppb		1.100	1.045	314.448
27	Al	|	771946.347	102.367771	ppb		1.511	0.661	7435.270
43	Ca-2	|	81711.498	5114.855642	ppb		3.054	1.406	76.667
49	Ti	|	62147.128	101.154582	ppb		1.487	0.333	266.669
52	Cr	|	838637.457	101.445702	ppb		2.122	0.552	10232.554
55	Mn	|	1187162.391	96.157939	ppb		3.060	1.470	796.689
57	Fe	|	1159168.672	4886.235440	ppb		3.651	2.103	9621.019
45	Sc-IS	>	1446650.239		ppb		1.713		1417039.819
66	Zn	|	114007.075	102.948128	ppb		4.598	3.347	615.569
86	Sr	|	195448.490	101.151167	ppb		1.858	0.747	12.369
65	Cu	|	171703.039	101.779901	ppb		4.108	3.065	121.922
69	Ga-IS	|	429603.660		ppb		3.597		399607.267
95	Mo	|	183815.406	99.755271	ppb		2.224	0.647	102.223
115	In-IS	>	271214.315		ppb		0.093		269274.354
111	Cd	|	172139.634	101.652755	ppb		1.327	1.235	16.452
118	Sn	|	500890.526	99.077917	ppb		1.058	0.970	1354.509
121	Sb	|	555940.988	99.255975	ppb		1.273	1.183	963.366
135	Ba	|	108749.285	99.501361	ppb		3.111	3.041	25.556
165	Ho-IS	|	275072.496		ppb		1.853		269082.939
159	Tb-IS	|	238766.577		ppb		0.166		234048.375
207	Pb	|	1586060.339	100.067289	ppb		0.102	0.358	238.890
203	Tl	|	478457.352	101.216539	ppb		0.885	0.732	30.000
209	Bi-IS	>	170580.162		ppb		0.439		169956.130
51	V	|	68536.308	99.636117	ppb		2.650	2.953	42.222
59	Co	|	172650.497	99.035702	ppb		1.451	2.785	12.222
60	Ni	|	94353.949	101.675597	ppb		1.519	0.968	34.444
75	As	|	47290.350	100.898034	ppb		1.181	2.222	678.637
71	Ga-ISK	>	112343.425		ppb		1.711		112992.958
82	Se-2	|	4245.152	102.109941	ppb		2.409	0.692	-3.508
107	Ag-1	|	385306.669	102.113822	ppb		1.529	2.247	61.111
115	In-ISK	|	98079.034		ppb		2.044		99481.096
45	Sc-ISK	>	285985.329		ppb		0.330		281723.006
23	Na	|	2654720.940	5319.534579	ppb		0.521	0.326	3325.387
39	K	|	6361847.654	5303.629397	ppb		1.024	0.743	139408.066
24	Mg	|	2988341.119	5397.179625	ppb		0.825	0.637	410.006
159	Tb-ISK	|	196823.424		ppb		1.314		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 13:28:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.120

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		31057.062		ppb		1.743		29960.283
9	Be	|		31.111	0.009269	ppb	50.634	118.006		17.778
10	B	|		552.233	0.711291	ppb	4.531	14.435		314.448
27	Al	|		7219.602	-0.027851	ppb	2.037	108.286		7435.270
43	Ca-2	|		121.667	2.910691	ppb	24.772	69.916		76.667
49	Ti	|		261.114	-0.009089	ppb	10.319	411.622		266.669
52	Cr	|		9744.434	-0.058977	ppb	1.061	55.935		10232.554
55	Mn	|		962.255	0.013840	ppb	6.083	38.692		796.689
57	Fe	|		9430.892	-0.762830	ppb	3.523	200.044		9621.019
45	Sc-IS	>		1415083.726		ppb		1.776		1417039.819
66	Zn	|		605.569	-0.008875	ppb	13.420	794.654		615.569
86	Sr	|		38.537	0.013711	ppb	81.850	120.065		12.369
65	Cu	|		156.047	0.020700	ppb	30.793	139.578		121.922
69	Ga-IS	|		390451.008		ppb		2.801		399607.267
95	Mo	|		431.118	0.182625	ppb	6.930	8.358		102.223
115	In-IS	>		263664.507		ppb		0.589		269274.354
111	Cd	|		20.206	0.002486	ppb	37.929	186.675		16.452
118	Sn	|		4016.121	0.548710	ppb	3.657	4.753		1354.509
121	Sb	|		1206.718	0.048440	ppb	4.856	20.571		963.366
135	Ba	|		34.444	0.008836	ppb	27.936	100.808		25.556
165	Ho-IS	|		264181.452		ppb		0.196		269082.939
159	Tb-IS	|		231204.836		ppb		0.375		234048.375
207	Pb	|		552.226	0.020532	ppb	5.737	11.040		238.890
203	Tl	|		115.556	0.018671	ppb	16.902	23.759		30.000
209	Bi-IS	>		166734.164		ppb		1.443		169956.130
51	V	|		18.889	-0.033593	ppb	53.913	42.984		42.222
59	Co	|		20.000	0.004560	ppb	28.868	73.952		12.222
60	Ni	|		31.111	-0.003237	ppb	12.372	126.442		34.444
75	As	|		722.864	0.111742	ppb	8.969	134.849		678.637
71	Ga-ISK	>		111851.780		ppb		1.355		112992.958
82	Se-2	|		6.226	0.233593	ppb	144.413	92.792		-3.508
107	Ag-1	|		200.001	0.037144	ppb	13.642	19.902		61.111
115	In-ISK	|		96988.600		ppb		0.630		99481.096
45	Sc-ISK	>		279607.801		ppb		1.124		281723.006
23	Na	|		7061.745	7.719918	ppb	0.465	2.300		3325.387
39	K	|		136353.203	-1.742331	ppb	0.524	77.250		139408.066
24	Mg	|		916.697	0.943358	ppb	18.914	35.127		410.006
159	Tb-ISK	|		191934.190		ppb		1.114		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-2-B MS

Autosampler Position: 152

Sample Date/Time: Thursday, April 16, 2020 13:31:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-2-B MS.121

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33341.094		ppb		1.997		29960.283
9	Be	|	161678.680	104.465216	ppb	0.806	0.913		17.778
10	B	|	82325.440	226.388019	ppb	1.145	1.033		314.448
27	Al	|	924846.260	116.286256	ppb	0.858	1.472		7435.270
43	Ca-2	|	916864.112	54397.657494	ppb	2.542	0.915		76.667
49	Ti	|	46427.543	71.440511	ppb	0.090	1.686		266.669
52	Cr	|	842307.066	96.428921	ppb	1.403	0.419		10232.554
55	Mn	|	1215984.764	93.276296	ppb	2.017	0.733		796.689
57	Fe	|	1017763.627	4056.599126	ppb	1.139	0.555		9621.019
45	Sc-IS	>	1527700.401		ppb	1.684			1417039.819
66	Zn	|	160874.486	137.776921	ppb	2.606	1.298		615.569
86	Sr	|	922233.604	452.031153	ppb	0.915	0.942		12.369
65	Cu	|	176904.186	99.301793	ppb	2.884	1.419		121.922
69	Ga-IS	|	434824.462		ppb	2.577			399607.267
95	Mo	|	173287.025	89.068832	ppb	1.452	2.285		102.223
115	In-IS	>	269764.617		ppb	1.054			269274.354
111	Cd	|	174326.670	103.504004	ppb	1.121	1.334		16.452
118	Sn	|	7090.649	1.143628	ppb	1.953	3.589		1354.509
121	Sb	|	560704.413	100.651182	ppb	0.708	0.692		963.366
135	Ba	|	135079.116	124.263518	ppb	1.981	1.655		25.556
165	Ho-IS	|	281186.000		ppb	0.813			269082.939
159	Tb-IS	|	245023.514		ppb	0.869			234048.375
207	Pb	|	1589000.405	101.372735	ppb	1.126	0.875		238.890
203	Tl	|	465533.314	99.582371	ppb	1.281	0.883		30.000
209	Bi-IS	>	168709.451		ppb	1.791			169956.130
51	V	|	60880.562	89.229236	ppb	0.309	0.787		42.222
59	Co	|	168682.312	97.538794	ppb	0.918	0.176		12.222
60	Ni	|	93248.946	101.318131	ppb	1.461	1.167		34.444
75	As	|	45858.126	98.599112	ppb	1.789	0.736		678.637
71	Ga-ISK	>	111415.034		ppb	1.083			112992.958
82	Se-2	|	3897.042	94.543489	ppb	1.180	2.011		-3.508
107	Ag-1	|	181010.682	48.359227	ppb	0.521	1.600		61.111
115	In-ISK	|	96527.917		ppb	0.126			99481.096
45	Sc-ISK	>	286208.894		ppb	1.242			281723.006
23	Na	|	17599372.973	35275.845118	ppb	1.408	0.283		3325.387
39	K	|	4351593.414	3586.802862	ppb	1.174	0.094		139408.066
24	Mg	|	10302206.380	18595.353356	ppb	2.004	2.146		410.006
159	Tb-ISK	|	196017.872		ppb	1.619			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-2-C MSD

Autosampler Position: 153

Sample Date/Time: Thursday, April 16, 2020 13:34:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-2-C MSD.122

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33876.787		ppb		0.640		29960.283
9	Be	|	165605.461	103.568152	ppb	0.075	1.035		17.778
10	B	|	82433.843	219.368089	ppb	1.222	0.492		314.448
27	Al	|	931808.730	113.376197	ppb	1.601	2.210		7435.270
43	Ca-2	|	945681.521	54311.766849	ppb	1.884	1.252		76.667
49	Ti	|	48275.877	71.896464	ppb	0.092	0.901		266.669
52	Cr	|	853217.704	94.515737	ppb	1.332	0.359		10232.554
55	Mn	|	1229951.098	91.324411	ppb	1.214	0.926		796.689
57	Fe	|	1049819.160	4049.629416	ppb	1.946	0.980		9621.019
45	Sc-IS	>	1578303.825		ppb	0.982			1417039.819
66	Zn	|	166135.411	137.714216	ppb	2.859	1.901		615.569
86	Sr	|	938408.588	445.137415	ppb	2.113	1.183		12.369
65	Cu	|	181170.684	98.434562	ppb	2.940	1.982		121.922
69	Ga-IS	|	449959.693		ppb	2.718			399607.267
95	Mo	|	176614.191	87.849343	ppb	1.942	1.594		102.223
115	In-IS	>	278139.531		ppb	0.467			269274.354
111	Cd	|	178923.992	103.029569	ppb	1.160	1.106		16.452
118	Sn	|	7896.629	1.256502	ppb	3.878	4.135		1354.509
121	Sb	|	579634.465	100.914455	ppb	0.557	0.700		963.366
135	Ba	|	140416.145	125.277189	ppb	3.472	3.183		25.556
165	Ho-IS	|	285213.208		ppb	2.192			269082.939
159	Tb-IS	|	252202.468		ppb	1.112			234048.375
207	Pb	|	1616528.415	101.107013	ppb	0.859	0.417		238.890
203	Tl	|	475275.581	99.679482	ppb	0.166	1.002		30.000
209	Bi-IS	>	172071.288		ppb	1.098			169956.130
51	V	|	63634.779	94.271046	ppb	1.843	2.617		42.222
59	Co	|	169432.395	99.038009	ppb	1.863	3.097		12.222
60	Ni	|	94750.988	104.079282	ppb	1.158	3.178		34.444
75	As	|	45828.831	99.639544	ppb	1.888	3.651		678.637
71	Ga-ISK	>	110255.072		ppb	2.157			112992.958
82	Se-2	|	3934.737	96.467833	ppb	4.251	4.357		-3.508
107	Ag-1	|	187644.501	50.662420	ppb	1.478	1.591		61.111
115	In-ISK	|	97327.834		ppb	2.628			99481.096
45	Sc-ISK	>	281837.275		ppb	2.321			281723.006
23	Na	|	18002853.646	36662.745082	ppb	1.005	3.176		3325.387
39	K	|	4448587.310	3729.497311	ppb	0.977	2.438		139408.066
24	Mg	|	10538559.969	19323.514251	ppb	1.623	3.056		410.006
159	Tb-ISK	|	196590.169		ppb	0.933			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-3-A @5

Autosampler Position: 154

Sample Date/Time: Thursday, April 16, 2020 13:37:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-3-A @5.123

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33933.591		ppb		1.161		29960.283
9	Be	|	40.000	0.013572	ppb	8.333	17.690		17.778
10	B	|	13744.387	37.157750	ppb	1.051	1.742		314.448
27	Al	|	54235.006	5.887792	ppb	2.061	3.057		7435.270
43	Ca-2	|	135317.941	8054.699142	ppb	1.367	0.213		76.667
49	Ti	|	1224.497	1.458453	ppb	4.087	7.035		266.669
52	Cr	|	16560.705	0.648913	ppb	1.211	7.679		10232.554
55	Mn	|	21996.923	1.629191	ppb	0.769	2.098		796.689
57	Fe	|	27780.344	70.491096	ppb	3.783	4.520		9621.019
45	Sc-IS	>	1522092.447		ppb	1.489			1417039.819
66	Zn	|	8249.049	6.550565	ppb	3.396	3.785		615.569
86	Sr	|	132666.605	65.256454	ppb	1.420	0.972		12.369
65	Cu	|	2186.965	1.158926	ppb	5.816	4.963		121.922
69	Ga-IS	|	414622.413		ppb	3.141			399607.267
95	Mo	|	3234.811	1.612860	ppb	4.408	4.300		102.223
115	In-IS	>	274832.260		ppb	0.563			269274.354
111	Cd	|	36.540	0.011502	ppb	23.325	42.764		16.452
118	Sn	|	1825.673	0.086746	ppb	7.227	29.509		1354.509
121	Sb	|	3693.811	0.478419	ppb	2.929	4.073		963.366
135	Ba	|	5077.570	4.561931	ppb	4.528	4.304		25.556
165	Ho-IS	|	281453.347		ppb	0.554			269082.939
159	Tb-IS	|	244322.700		ppb	0.456			234048.375
207	Pb	|	2834.554	0.159933	ppb	1.746	2.117		238.890
203	Tl	|	356.671	0.067494	ppb	4.673	5.615		30.000
209	Bi-IS	>	174287.851		ppb	0.501			169956.130
51	V	|	694.461	0.914527	ppb	11.613	11.003		42.222
59	Co	|	91.111	0.043556	ppb	2.112	3.337		12.222
60	Ni	|	358.893	0.337047	ppb	2.681	1.392		34.444
75	As	|	807.916	0.229932	ppb	2.592	9.492		678.637
71	Ga-ISK	>	116207.478		ppb	1.605			112992.958
82	Se-2	|	7.869	0.266159	ppb	58.244	39.853		-3.508
107	Ag-1	|	367.783	0.078001	ppb	13.845	14.716		61.111
115	In-ISK	|	102015.050		ppb	1.077			99481.096
45	Sc-ISK	>	292692.742		ppb	1.215			281723.006
23	Na	|	5751252.108	11268.382119	ppb	0.643	0.573		3325.387
39	K	|	1031019.623	738.311219	ppb	1.081	1.030		139408.066
24	Mg	|	1566462.596	2763.950760	ppb	1.306	0.150		410.006
159	Tb-ISK	|	199776.628		ppb	1.146			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-4-A @5

Autosampler Position: 155

Sample Date/Time: Thursday, April 16, 2020 13:39:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-4-A @5.124

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32579.331		ppb		0.816		29960.283
9	Be	|	23.333	0.002983	ppb	14.286	68.207		17.778
10	B	|	11002.014	30.065330	ppb	2.282	3.704		314.448
27	Al	|	41582.676	4.365239	ppb	2.383	4.543		7435.270
43	Ca-2	|	111043.259	6718.182103	ppb	0.943	0.809		76.667
49	Ti	|	655.571	0.590116	ppb	11.732	19.851		266.669
52	Cr	|	17075.755	0.741319	ppb	0.765	2.688		10232.554
55	Mn	|	4866.384	0.315233	ppb	1.679	2.544		796.689
57	Fe	|	18546.484	34.413874	ppb	3.148	4.374		9621.019
45	Sc-IS	>	1497408.112		ppb	1.350			1417039.819
66	Zn	|	3093.670	2.142199	ppb	9.383	10.573		615.569
86	Sr	|	127081.214	63.531729	ppb	2.292	0.999		12.369
65	Cu	|	2232.315	1.205351	ppb	4.797	3.930		121.922
69	Ga-IS	|	412334.951		ppb	4.193			399607.267
95	Mo	|	900.028	0.415550	ppb	5.556	6.368		102.223
115	In-IS	>	272893.719		ppb	1.780			269274.354
111	Cd	|	16.999	0.000218	ppb	22.651	1123.305		16.452
118	Sn	|	950.032	-0.083304	ppb	7.599	16.979		1354.509
121	Sb	|	1706.769	0.129963	ppb	6.525	16.653		963.366
135	Ba	|	5694.469	5.155239	ppb	3.532	2.386		25.556
165	Ho-IS	|	274483.077		ppb	0.851			269082.939
159	Tb-IS	|	240740.469		ppb	0.728			234048.375
207	Pb	|	637.783	0.025234	ppb	8.657	14.330		238.890
203	Tl	|	63.333	0.007065	ppb	10.526	19.866		30.000
209	Bi-IS	>	170109.037		ppb	0.401			169956.130
51	V	|	471.119	0.608738	ppb	11.284	10.949		42.222
59	Co	|	56.667	0.024766	ppb	21.209	25.508		12.222
60	Ni	|	267.780	0.245304	ppb	9.176	9.063		34.444
75	As	|	826.026	0.289266	ppb	2.641	21.365		678.637
71	Ga-ISK	>	114821.884		ppb	1.483			112992.958
82	Se-2	|	4.541	0.190263	ppb	276.012	153.536		-3.508
107	Ag-1	|	68.889	0.001746	ppb	39.409	397.729		61.111
115	In-ISK	|	101261.750		ppb	0.360			99481.096
45	Sc-ISK	>	292388.673		ppb	0.810			281723.006
23	Na	|	4194690.660	8225.318855	ppb	0.966	1.259		3325.387
39	K	|	989561.075	704.633231	ppb	1.218	1.697		139408.066
24	Mg	|	1033540.356	1825.293129	ppb	0.875	0.435		410.006
159	Tb-ISK	|	197829.066		ppb	0.720			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-5-A @5

Autosampler Position: 156

Sample Date/Time: Thursday, April 16, 2020 13:42:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-5-A @5.125

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		32290.904		ppb			1.580			29960.283
9	Be	|		23.333	0.003232	ppb	14.286	67.953				17.778
10	B	|		8169.003	22.431507	ppb	3.315	4.105				314.448
27	Al	|		84330.475	10.063280	ppb	2.185	3.399				7435.270
43	Ca-2	|		103864.609	6379.035600	ppb	1.650	0.517				76.667
49	Ti	|		868.916	0.951440	ppb	25.570	39.619				266.669
52	Cr	|		15294.850	0.558145	ppb	0.697	2.353				10232.554
55	Mn	|		11139.898	0.819804	ppb	1.643	0.350				796.689
57	Fe	|		17152.520	29.763441	ppb	3.000	4.202				9621.019
45	Sc-IS	>		1474897.703		ppb	1.321					1417039.819
66	Zn	|		7119.554	5.769729	ppb	4.599	3.645				615.569
86	Sr	|		88426.991	44.884343	ppb	1.504	0.933				12.369
65	Cu	|		3811.618	2.143323	ppb	6.000	4.876				121.922
69	Ga-IS	|		402548.523		ppb	3.571					399607.267
95	Mo	|		790.022	0.364041	ppb	4.792	4.550				102.223
115	In-IS	>		270547.792		ppb	0.210					269274.354
111	Cd	|		16.119	-0.000242	ppb	66.714	2638.395				16.452
118	Sn	|		810.023	-0.109549	ppb	6.228	8.838				1354.509
121	Sb	|		2149.052	0.211755	ppb	10.108	18.325				963.366
135	Ba	|		5686.690	5.193440	ppb	5.798	5.702				25.556
165	Ho-IS	|		272470.607		ppb	0.678					269082.939
159	Tb-IS	|		238532.766		ppb	0.621					234048.375
207	Pb	|		803.342	0.035243	ppb	3.545	4.257				238.890
203	Tl	|		36.667	0.001331	ppb	27.273	155.136				30.000
209	Bi-IS	>		171642.803		ppb	0.761					169956.130
51	V	|		558.900	0.744769	ppb	6.377	9.159				42.222
59	Co	|		54.445	0.023925	ppb	30.816	38.894				12.222
60	Ni	|		383.339	0.371729	ppb	12.541	12.065				34.444
75	As	|		789.567	0.233849	ppb	6.734	65.040				678.637
71	Ga-ISK	>		113464.514		ppb	2.205					112992.958
82	Se-2	|		4.153	0.182316	ppb	120.965	64.641				-3.508
107	Ag-1	|		43.333	-0.004745	ppb	13.323	27.783				61.111
115	In-ISK	|		99067.912		ppb	1.423					99481.096
45	Sc-ISK	>		289033.566		ppb	0.492					281723.006
23	Na	|		3835469.384	7607.553989	ppb	0.190	0.663				3325.387
39	K	|		1080139.425	790.582488	ppb	0.991	0.691				139408.066
24	Mg	|		675772.472	1207.060666	ppb	0.221	0.278				410.006
159	Tb-ISK	|		195976.428		ppb	0.418					195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-6-A @5

Autosampler Position: 157

Sample Date/Time: Thursday, April 16, 2020 13:45:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-6-A @5.126

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32672.886		ppb		2.031		29960.283
9	Be	|	11.111	-0.004970	ppb	62.450	92.412		17.778
10	B	|	7802.130	21.475311	ppb	0.955	2.864		314.448
27	Al	|	236161.603	30.137905	ppb	0.395	1.920		7435.270
43	Ca-2	|	97605.809	6018.457975	ppb	2.778	1.501		76.667
49	Ti	|	1812.337	2.475005	ppb	5.052	7.843		266.669
52	Cr	|	13811.123	0.386206	ppb	3.464	7.921		10232.554
55	Mn	|	31230.788	2.427334	ppb	3.050	2.355		796.689
57	Fe	|	19157.295	38.432431	ppb	4.131	4.008		9621.019
45	Sc-IS	>	1469012.725		ppb	2.245			1417039.819
66	Zn	|	745.575	0.095932	ppb	6.201	35.299		615.569
86	Sr	|	95652.922	48.754302	ppb	1.305	1.178		12.369
65	Cu	|	1046.261	0.537867	ppb	6.956	9.177		121.922
69	Ga-IS	|	408278.559		ppb	3.821			399607.267
95	Mo	|	633.347	0.281910	ppb	6.381	6.184		102.223
115	In-IS	>	274053.042		ppb	0.613			269274.354
111	Cd	|	5.337	-0.006681	ppb	107.970	49.954		16.452
118	Sn	|	536.677	-0.165298	ppb	11.850	7.146		1354.509
121	Sb	|	1160.047	0.031798	ppb	3.314	22.722		963.366
135	Ba	|	9557.642	8.632255	ppb	2.499	1.897		25.556
165	Ho-IS	|	270262.059		ppb	2.011			269082.939
159	Tb-IS	|	238470.675		ppb	0.852			234048.375
207	Pb	|	637.784	0.024974	ppb	10.613	17.217		238.890
203	Tl	|	21.111	-0.001920	ppb	18.232	42.113		30.000
209	Bi-IS	>	171200.957		ppb	1.306			169956.130
51	V	|	430.007	0.557628	ppb	9.302	10.554		42.222
59	Co	|	71.111	0.033366	ppb	13.532	16.294		12.222
60	Ni	|	182.223	0.157415	ppb	16.598	20.745		34.444
75	As	|	842.057	0.342393	ppb	6.464	35.166		678.637
71	Ga-ISK	>	113581.966		ppb	0.223			112992.958
82	Se-2	|	1.158	0.111314	ppb	437.814	108.435		-3.508
107	Ag-1	|	34.444	-0.007071	ppb	20.145	25.983		61.111
115	In-ISK	|	99865.246		ppb	1.213			99481.096
45	Sc-ISK	>	288921.304		ppb	0.326			281723.006
23	Na	|	1645645.029	3261.437020	ppb	0.602	0.596		3325.387
39	K	|	1045144.813	761.420420	ppb	1.046	1.278		139408.066
24	Mg	|	640749.447	1144.911636	ppb	0.211	0.533		410.006
159	Tb-ISK	|	200098.349		ppb	0.748			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-7-A

Autosampler Position: 158

Sample Date/Time: Thursday, April 16, 2020 13:48:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-7-A.127

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc.	Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		35579.809			ppb				0.690		29960.283
9	Be	|		17.778	-0.001139		ppb	65.848	637.173				17.778
10	B	|		62336.851	169.128785		ppb	1.826	3.944				314.448
27	Al	|		113655.025	13.235058		ppb	6.786	9.574				7435.270
43	Ca-2	|		525060.756	30762.831884		ppb	2.596	0.539				76.667
49	Ti	|		2313.521	3.095654		ppb	5.378	8.718				266.669
52	Cr	|		23825.418	1.449560		ppb	2.881	3.271				10232.554
55	Mn	|		90618.766	6.804481		ppb	1.471	0.918				796.689
57	Fe	|		42557.757	127.470437		ppb	1.956	0.953				9621.019
45	Sc-IS	>		1546981.436			ppb	2.212					1417039.819
66	Zn	|		11539.105	9.229305		ppb	2.443	0.249				615.569
86	Sr	|		718080.541	347.542661		ppb	2.249	0.202				12.369
65	Cu	|		6930.391	3.770085		ppb	4.195	2.046				121.922
69	Ga-IS	|		423150.029			ppb	4.110					399607.267
95	Mo	|		4135.043	2.042866		ppb	3.167	1.107				102.223
115	In-IS	>		276298.190			ppb	0.596					269274.354
111	Cd	|		42.428	0.014862		ppb	55.250	92.455				16.452
118	Sn	|		434.451	-0.185998		ppb	4.992	2.426				1354.509
121	Sb	|		6441.453	0.957345		ppb	2.845	3.433				963.366
135	Ba	|		17277.108	15.497541		ppb	0.831	0.829				25.556
165	Ho-IS	|		284125.579			ppb	0.949					269082.939
159	Tb-IS	|		248563.841			ppb	0.606					234048.375
207	Pb	|		594.449	0.022205		ppb	8.584	15.366				238.890
203	Tl	|		30.000	-0.000055		ppb	40.062	4635.780				30.000
209	Bi-IS	>		171443.751			ppb	0.584					169956.130
51	V	|		647.792	0.874744		ppb	4.669	2.866				42.222
59	Co	|		160.001	0.084156		ppb	16.536	17.086				12.222
60	Ni	|		1028.926	1.063792		ppb	13.094	11.927				34.444
75	As	|		1032.469	0.758824		ppb	5.210	9.278				678.637
71	Ga-ISK	>		113069.159			ppb	2.079					112992.958
82	Se-2	|		13.192	0.396543		ppb	60.903	47.242				-3.508
107	Ag-1	|		27.778	-0.008779		ppb	36.661	30.572				61.111
115	In-ISK	|		98129.838			ppb	0.837					99481.096
45	Sc-ISK	>		288788.737			ppb	0.707					281723.006
23	Na	|		13526162.751	26867.527869		ppb	1.739	1.379				3325.387
39	K	|		3738713.769	3036.080962		ppb	1.433	0.888				139408.066
24	Mg	|		7224915.827	12923.893447		ppb	0.453	1.129				410.006
159	Tb-ISK	|		199674.429			ppb	0.130					195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-C-8-A @5

Autosampler Position: 159

Sample Date/Time: Thursday, April 16, 2020 13:51:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-C-8-A @5.128

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34361.282		ppb		1.646		29960.283
9	Be	|		17.778	-0.000953	ppb	21.651	256.094		17.778
10	B	|		14685.325	39.430172	ppb	2.525	1.202		314.448
27	Al	|		118748.259	13.976760	ppb	1.709	0.483		7435.270
43	Ca-2	|		117162.050	6916.746621	ppb	2.732	1.722		76.667
49	Ti	|		697.795	0.631764	ppb	6.961	15.396		266.669
52	Cr	|		15827.653	0.548336	ppb	1.539	2.591		10232.554
55	Mn	|		18301.720	1.332754	ppb	2.182	0.685		796.689
57	Fe	|		19031.560	34.542775	ppb	1.861	5.113		9621.019
45	Sc-IS	>		1534523.303		ppb	2.161			1417039.819
66	Zn	|		1999.029	1.140706	ppb	3.837	4.133		615.569
86	Sr	|		147230.074	71.856858	ppb	1.820	3.076		12.369
65	Cu	|		2820.417	1.503492	ppb	3.645	2.421		121.922
69	Ga-IS	|		416723.183		ppb	3.496			399607.267
95	Mo	|		1587.866	0.756386	ppb	0.675	1.594		102.223
115	In-IS	>		272581.329		ppb	0.906			269274.354
111	Cd	|		25.554	0.005208	ppb	30.211	85.320		16.452
118	Sn	|		1474.521	0.020466	ppb	5.992	92.330		1354.509
121	Sb	|		1548.973	0.102053	ppb	5.207	12.192		963.366
135	Ba	|		8550.341	7.761230	ppb	5.322	4.788		25.556
165	Ho-IS	|		276740.955		ppb	1.889			269082.939
159	Tb-IS	|		243072.836		ppb	0.881			234048.375
207	Pb	|		604.449	0.022068	ppb	4.423	9.007		238.890
203	Tl	|		23.333	-0.001570	ppb	42.857	128.451		30.000
209	Bi-IS	>		174966.111		ppb	0.939			169956.130
51	V	|		655.571	0.863090	ppb	9.994	10.572		42.222
59	Co	|		90.000	0.043036	ppb	20.621	23.528		12.222
60	Ni	|		333.337	0.311324	ppb	11.790	13.010		34.444
75	As	|		892.343	0.411492	ppb	4.645	20.053		678.637
71	Ga-ISK	>		115901.600		ppb	0.395			112992.958
82	Se-2	|		-1.180	0.055913	ppb	675.697	332.075		-3.508
107	Ag-1	|		50.000	-0.003258	ppb	11.547	45.792		61.111
115	In-ISK	|		101425.265		ppb	2.928			99481.096
45	Sc-ISK	>		298865.452		ppb	1.548			281723.006
23	Na	|		4350803.742	8347.109628	ppb	0.943	1.209		3325.387
39	K	|		1757872.079	1313.629407	ppb	1.485	1.083		139408.066
24	Mg	|		792753.327	1369.618126	ppb	0.917	0.821		410.006
159	Tb-ISK	|		200567.675		ppb	1.465			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25132-D-1-A

Autosampler Position: 160

Sample Date/Time: Thursday, April 16, 2020 13:53:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25132-D-1-A.129

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		32466.861		ppb			1.959			29960.283
9	Be	|		55.556	0.024132	ppb			6.928	7.697		17.778
10	B	|		25159.926	69.764207	ppb			2.887	1.217		314.448
27	Al	|		5152386.415	664.210837	ppb			0.779	1.975		7435.270
43	Ca-2	|		107430.959	6485.391028	ppb			2.667	3.203		76.667
49	Ti	|		9209.636	14.066216	ppb			2.908	2.165		266.669
52	Cr	|		28477.248	2.083165	ppb			1.527	3.127		10232.554
55	Mn	|		525679.584	41.015519	ppb			3.621	3.913		796.689
57	Fe	|		240114.858	942.433186	ppb			3.407	3.464		9621.019
45	Sc-IS	>		1500933.452		ppb			2.029			1417039.819
66	Zn	>		245275.460	214.158216	ppb			4.032	3.889		615.569
86	Sr	|		77741.185	38.793837	ppb			2.026	3.877		12.369
65	Cu	|		46350.325	26.434669	ppb			4.648	4.701		121.922
69	Ga-IS	|		428506.601		ppb			3.471			399607.267
95	Mo	|		1560.085	0.759446	ppb			6.017	4.340		102.223
115	In-IS	>		272943.389		ppb			1.924			269274.354
111	Cd	|		486.732	0.275750	ppb			4.787	3.060		16.452
118	Sn	|		967.811	-0.079829	ppb			3.484	8.221		1354.509
121	Sb	|		7218.490	1.109551	ppb			0.812	1.846		963.366
135	Ba	|		46255.914	42.063155	ppb			2.745	4.399		25.556
165	Ho-IS	|		276313.054		ppb			2.258			269082.939
159	Tb-IS	|		243168.301		ppb			2.167			234048.375
207	Pb	|		237989.883	14.744940	ppb			0.733	4.850		238.890
203	Tl	|		70.000	0.008110	ppb			20.757	30.329		30.000
209	Bi-IS	>		173782.905		ppb			4.106			169956.130
51	V	|		2150.162	2.992301	ppb			2.086	1.544		42.222
59	Co	|		1497.856	0.831952	ppb			5.711	6.264		12.222
60	Ni	|		3722.707	3.881568	ppb			0.186	1.398		34.444
75	As	|		1164.049	1.000941	ppb			7.290	20.769		678.637
71	Ga-ISK	>		115061.559		ppb			1.244			112992.958
82	Se-2	|		3.825	0.173501	ppb			249.725	129.089		-3.508
107	Ag-1	|		78.889	0.004273	ppb			24.026	108.621		61.111
115	In-ISK	|		100425.020		ppb			1.641			99481.096
45	Sc-ISK	>		289479.451		ppb			1.398			281723.006
23	Na	|		2064093.206	4083.941433	ppb			3.214	2.005		3325.387
39	K	|		3668326.731	2969.613864	ppb			0.525	1.001		139408.066
24	Mg	|		518548.313	924.600211	ppb			1.593	0.196		410.006
159	Tb-ISK	|		198632.202		ppb			1.304			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25132-D-3-A

Autosampler Position: 301

Sample Date/Time: Thursday, April 16, 2020 13:56:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25132-D-3-A.130

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32834.361		ppb		1.236		29960.283
9	Be	|	47.778	0.018913	ppb	22.427	37.818		17.778
10	B	|	27145.768	75.012063	ppb	0.937	1.668		314.448
27	Al	|	4345891.404	557.383537	ppb	1.572	0.852		7435.270
43	Ca-2	|	85937.855	5161.967655	ppb	2.900	2.572		76.667
49	Ti	|	8376.900	12.693989	ppb	1.868	1.547		266.669
52	Cr	|	23326.812	1.462038	ppb	1.934	3.624		10232.554
55	Mn	|	401530.424	31.164186	ppb	1.861	1.476		796.689
57	Fe	|	175449.119	673.992493	ppb	2.750	2.385		9621.019
45	Sc-IS	>	1507758.620		ppb	0.737			1417039.819
66	Zn	>	136942.939	118.750613	ppb	4.340	3.901		615.569
86	Sr	|	56499.408	28.050545	ppb	3.761	3.707		12.369
65	Cu	|	31683.971	17.962183	ppb	3.256	3.216		121.922
69	Ga-IS	|	423759.925		ppb	3.358			399607.267
95	Mo	|	827.802	0.374641	ppb	1.903	2.214		102.223
115	In-IS	>	273214.833		ppb	1.409			269274.354
111	Cd	|	256.042	0.140068	ppb	20.427	20.372		16.452
118	Sn	|	810.023	-0.111050	ppb	7.140	11.184		1354.509
121	Sb	|	5730.038	0.843898	ppb	0.321	1.578		963.366
135	Ba	|	31746.377	28.826954	ppb	3.621	4.587		25.556
165	Ho-IS	|	280797.292		ppb	0.560			269082.939
159	Tb-IS	|	245001.935		ppb	0.048			234048.375
207	Pb	|	188570.234	11.556845	ppb	1.448	1.720		238.890
203	Tl	|	61.111	0.006232	ppb	13.727	32.697		30.000
209	Bi-IS	>	175440.012		ppb	2.458			169956.130
51	V	|	1794.557	2.470892	ppb	5.822	6.169		42.222
59	Co	|	1133.378	0.623618	ppb	4.913	5.506		12.222
60	Ni	|	2150.162	2.211337	ppb	1.788	2.147		34.444
75	As	|	1211.417	1.082536	ppb	1.701	2.485		678.637
71	Ga-ISK	>	115822.080		ppb	0.690			112992.958
82	Se-2	|	6.867	0.244466	ppb	90.999	60.190		-3.508
107	Ag-1	|	191.112	0.033032	ppb	4.389	7.293		61.111
115	In-ISK	|	101840.864		ppb	0.586			99481.096
45	Sc-ISK	>	291021.662		ppb	1.780			281723.006
23	Na	|	1432976.758	2818.637350	ppb	1.866	1.171		3325.387
39	K	|	2071054.056	1614.066680	ppb	4.912	3.623		139408.066
24	Mg	|	419810.263	744.486318	ppb	1.718	1.188		410.006
159	Tb-ISK	|	198399.536		ppb	0.479			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 13:59:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.131

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31460.163		ppb		1.406		29960.283
9	Be	|		153535.188	102.950547	ppb		1.338	1.233	17.778
10	B	|		89044.473	254.217039	ppb		1.566	0.598	314.448
27	Al	|		784622.880	102.258247	ppb		0.626	0.884	7435.270
43	Ca-2	|		85144.714	5238.624237	ppb		1.968	1.063	76.667
49	Ti	|		62657.153	100.229183	ppb		2.252	2.452	266.669
52	Cr	|		846622.020	100.645126	ppb		1.975	1.872	10232.554
55	Mn	|		1197679.604	95.346806	ppb		2.355	1.585	796.689
57	Fe	|		1169865.831	4846.907351	ppb		2.622	2.187	9621.019
45	Sc-IS	>		1471978.175		ppb		0.970		1417039.819
66	Zn	|		116272.737	103.204527	ppb		3.431	2.883	615.569
86	Sr	|		195403.031	99.385657	ppb		1.241	0.272	12.369
65	Cu	|		173583.592	101.131405	ppb		2.601	1.847	121.922
69	Ga-IS	|		435587.661		ppb		2.779		399607.267
95	Mo	|		183173.906	97.695251	ppb		2.213	1.526	102.223
115	In-IS	>		275625.611		ppb		1.223		269274.354
111	Cd	|		173739.181	100.961939	ppb		1.764	1.847	16.452
118	Sn	|		510002.396	99.272142	ppb		1.089	1.146	1354.509
121	Sb	|		568134.964	99.815221	ppb		1.380	1.265	963.366
135	Ba	|		110442.223	99.427345	ppb		3.201	2.591	25.556
165	Ho-IS	|		276124.200		ppb		0.645		269082.939
159	Tb-IS	|		242983.506		ppb		0.624		234048.375
207	Pb	|		1614019.133	102.064048	ppb		0.241	0.976	238.890
203	Tl	|		482495.083	102.306419	ppb		0.486	1.238	30.000
209	Bi-IS	>		170201.301		ppb		1.062		169956.130
51	V	|		68378.839	98.400938	ppb		1.543	1.757	42.222
59	Co	|		174252.391	98.941155	ppb		2.790	3.412	12.222
60	Ni	|		95939.997	102.358168	ppb		1.174	2.169	34.444
75	As	|		47616.383	100.525601	ppb		2.901	0.700	678.637
71	Ga-ISK	>		113511.678		ppb		3.010		112992.958
82	Se-2	|		4345.194	103.511226	ppb		0.350	3.076	-3.508
107	Ag-1	|		389021.549	102.092818	ppb		0.976	3.728	61.111
115	In-ISK	|		99803.653		ppb		1.341		99481.096
45	Sc-ISK	>		288568.584		ppb		2.291		281723.006
23	Na	|		2721575.846	5405.286579	ppb		1.914	1.044	3325.387
39	K	|		6534406.313	5402.129879	ppb		1.056	1.516	139408.066
24	Mg	|		3082766.772	5518.243330	ppb		2.092	0.899	410.006
159	Tb-ISK	|		198159.272		ppb		2.084		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 14:02:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.132

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30678.481		ppb			3.048			29960.283
9	Be	|		20.000	0.001410	ppb	16.667	175.147				17.778
10	B	|		491.120	0.510107	ppb	6.933	21.555				314.448
27	Al	|		5785.617	-0.233921	ppb	3.644	18.393				7435.270
43	Ca-2	|		68.334	-0.561442	ppb	34.579	283.307				76.667
49	Ti	|		251.113	-0.030522	ppb	14.562	201.191				266.669
52	Cr	|		10011.287	-0.041882	ppb	3.158	57.004				10232.554
55	Mn	|		734.463	-0.005801	ppb	4.569	59.947				796.689
57	Fe	|		8932.793	-3.417715	ppb	1.834	24.668				9621.019
45	Sc-IS	>		1433219.829		ppb	2.125					1417039.819
66	Zn	|		593.346	-0.027228	ppb	10.405	182.431				615.569
86	Sr	|		50.248	0.019615	ppb	51.515	66.701				12.369
65	Cu	|		101.743	-0.012870	ppb	4.880	30.689				121.922
69	Ga-IS	|		398049.823		ppb	4.129					399607.267
95	Mo	|		391.116	0.157976	ppb	8.537	13.821				102.223
115	In-IS	>		261619.811		ppb	0.652					269274.354
111	Cd	|		22.512	0.004008	ppb	38.888	134.876				16.452
118	Sn	|		3279.266	0.403562	ppb	5.503	8.258				1354.509
121	Sb	|		1155.602	0.040685	ppb	4.509	20.418				963.366
135	Ba	|		35.556	0.010151	ppb	27.063	88.268				25.556
165	Ho-IS	|		264656.944		ppb	0.973					269082.939
159	Tb-IS	|		231652.284		ppb	1.575					234048.375
207	Pb	|		521.115	0.018615	ppb	3.856	4.441				238.890
203	Tl	|		105.556	0.016580	ppb	12.763	19.302				30.000
209	Bi-IS	>		166184.479		ppb	1.437					169956.130
51	V	|		27.778	-0.019933	ppb	30.199	61.046				42.222
59	Co	|		33.333	0.012540	ppb	40.000	62.864				12.222
60	Ni	|		38.889	0.005852	ppb	30.102	223.374				34.444
75	As	|		668.447	0.014300	ppb	5.615	639.630				678.637
71	Ga-ISK	>		110244.875		ppb	0.625					112992.958
82	Se-2	|		2.841	0.153419	ppb	1.114	0.616				-3.508
107	Ag-1	|		178.890	0.032218	ppb	5.693	9.258				61.111
115	In-ISK	|		98418.864		ppb	0.636					99481.096
45	Sc-ISK	>		278069.266		ppb	0.997					281723.006
23	Na	|		3267.042	-0.029501	ppb	8.250	1994.895				3325.387
39	K	|		140512.131	2.563743	ppb	0.941	73.844				139408.066
24	Mg	|		461.674	0.106112	ppb	3.804	37.919				410.006
159	Tb-ISK	|		189781.650		ppb	0.676					195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-1-A

Autosampler Position: 349

Sample Date/Time: Thursday, April 16, 2020 14:04:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-1-A.133

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34859.149		ppb			1.061		29960.283
9	Be	|		18.889	-0.000004	ppb			50.94158684	783	17.778
10	B	|		58106.865	161.749924	ppb			2.310	2.694	314.448
27	Al	|		423828.363	53.495657	ppb			2.822	3.935	7435.270
43	Ca-2	|		680977.666	40963.903942	ppb			2.212	0.942	76.667
49	Ti	|		5135.368	7.618819	ppb			3.831	5.379	266.669
52	Cr	|		33038.166	2.605909	ppb			1.705	1.133	10232.554
55	Mn	|		112089.447	8.656844	ppb			3.284	2.123	796.689
57	Fe	|		52969.168	174.473419	ppb			2.403	1.910	9621.019
45	Sc-IS	>		1506746.227		ppb			1.318		1417039.819
66	Zn	|		1668.987	0.884534	ppb			5.529	8.671	615.569
86	Sr	|		571213.980	283.861580	ppb			0.890	0.994	12.369
65	Cu	|		5156.798	2.863757	ppb			0.801	0.663	121.922
69	Ga-IS	|		416917.154		ppb			1.568		399607.267
95	Mo	|		5921.228	3.029983	ppb			3.260	2.015	102.223
115	In-IS	>		268610.427		ppb			1.377		269274.354
111	Cd	|		199.789	0.109468	ppb			9.342	11.753	16.452
118	Sn	|		685.572	-0.133208	ppb			7.920	9.226	1354.509
121	Sb	|		3576.003	0.472346	ppb			2.332	4.084	963.366
135	Ba	|		44873.747	41.435789	ppb			3.162	1.806	25.556
165	Ho-IS	|		277413.693		ppb			1.686		269082.939
159	Tb-IS	|		243498.804		ppb			0.395		234048.375
207	Pb	|		2250.070	0.129600	ppb			1.683	1.846	238.890
203	Tl	|		42.222	0.002742	ppb			16.434	56.803	30.000
209	Bi-IS	>		167342.215		ppb			0.622		169956.130
51	V	|		1655.652	2.387970	ppb			3.780	5.166	42.222
59	Co	|		420.006	0.237910	ppb			6.300	6.516	12.222
60	Ni	|		1700.101	1.825806	ppb			3.486	2.570	34.444
75	As	|		1329.303	1.463374	ppb			4.397	6.119	678.637
71	Ga-ISK	>		110512.528		ppb			1.367		112992.958
82	Se-2	|		31.208	0.844813	ppb			31.715	27.929	-3.508
107	Ag-1	|		47.778	-0.003240	ppb			14.523	54.778	61.111
115	In-ISK	|		97268.689		ppb			1.566		99481.096
45	Sc-ISK	>		286584.992		ppb			0.599		281723.006
23	Na	|		15228604.237	30484.153414	ppb			0.590	0.907	3325.387
39	K	|		5797218.399	4811.830241	ppb			1.441	1.062	139408.066
24	Mg	|		6222658.325	11215.668944	ppb			1.467	0.993	410.006
159	Tb-ISK	|		195544.575		ppb			0.480		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-3-A

Autosampler Position: 350

Sample Date/Time: Thursday, April 16, 2020 14:07:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-3-A.134

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		37622.817		ppb		1.442		29960.283
9	Be	|		34.444	0.009985	ppb	22.349	55.152		17.778
10	B	|		66226.495	182.302546	ppb	0.891	2.930		314.448
27	Al	|		231425.061	28.391291	ppb	0.653	2.450		7435.270
43	Ca-2	|		673130.599	40014.442565	ppb	1.408	1.717		76.667
49	Ti	|		3780.502	5.416207	ppb	6.971	6.642		266.669
52	Cr	|		39732.974	3.337294	ppb	2.236	1.881		10232.554
55	Mn	|		105485.893	8.045808	ppb	1.910	0.896		796.689
57	Fe	|		48054.069	152.061940	ppb	3.046	3.001		9621.019
45	Sc-IS	|>		1525110.542		ppb	2.101			1417039.819
66	Zn	|		31951.259	26.955128	ppb	2.276	0.782		615.569
86	Sr	|		647579.623	318.014306	ppb	0.851	2.360		12.369
65	Cu	|		9146.727	5.074004	ppb	1.853	1.044		121.922
69	Ga-IS	|		416582.016		ppb	2.299			399607.267
95	Mo	|		5442.148	2.746592	ppb	3.203	2.561		102.223
115	In-IS	|>		270795.877		ppb	1.154			269274.354
111	Cd	|		100.794	0.049869	ppb	13.711	17.218		16.452
118	Sn	|		494.453	-0.172296	ppb	9.939	6.276		1354.509
121	Sb	|		1832.340	0.154638	ppb	2.913	3.760		963.366
135	Ba	|		24435.341	22.370686	ppb	3.476	2.530		25.556
165	Ho-IS	|		276039.653		ppb	1.647			269082.939
159	Tb-IS	|		245823.947		ppb	1.460			234048.375
207	Pb	|		985.569	0.047653	ppb	6.367	7.631		238.890
203	Tl	|		155.556	0.026866	ppb	3.273	4.728		30.000
209	Bi-IS	|>		168931.881		ppb	0.720			169956.130
51	V	|		1497.856	2.123053	ppb	2.229	2.766		42.222
59	Co	|		346.671	0.192254	ppb	12.720	12.698		12.222
60	Ni	|		1627.871	1.722116	ppb	1.128	0.626		34.444
75	As	|		1327.831	1.420220	ppb	2.427	3.954		678.637
71	Ga-ISK	|>		112066.743		ppb	0.519			112992.958
82	Se-2	|		22.179	0.618804	ppb	32.069	28.175		-3.508
107	Ag-1	|		66.667	0.001604	ppb	31.225	342.298		61.111
115	In-ISK	|		96701.959		ppb	1.950			99481.096
45	Sc-ISK	|>		289251.211		ppb	0.307			281723.006
23	Na	|		28214604.187	55962.935054	ppb	0.239	0.353		3325.387
39	K	|		4702360.133	3843.520045	ppb	0.464	0.621		139408.066
24	Mg	|		7999253.117	14285.705964	ppb	0.756	0.976		410.006
159	Tb-ISK	|		197347.771		ppb	0.273			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-4-A

Autosampler Position: 351

Sample Date/Time: Thursday, April 16, 2020 14:10:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-4-A.135

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		34168.593		ppb		0.871		29960.283
9	Be	|		22.222	0.002070	ppb	37.749	255.141		17.778
10	B	|		53695.189	148.664166	ppb	1.831	1.846		314.448
27	Al	|		207522.954	25.556892	ppb	3.133	5.592		7435.270
43	Ca-2	|		573596.879	34339.139434	ppb	2.552	2.062		76.667
49	Ti	|		2067.928	2.789025	ppb	7.028	10.558		266.669
52	Cr	|		40895.144	3.506521	ppb	2.629	2.450		10232.554
55	Mn	|		22949.535	1.712092	ppb	1.934	3.200		796.689
57	Fe	|		35697.880	103.306003	ppb	0.092	3.280		9621.019
45	Sc-IS	>		1514244.751		ppb	2.364			1417039.819
66	Zn	|		14621.927	12.124358	ppb	2.541	4.600		615.569
86	Sr	|		632968.973	312.947497	ppb	3.062	1.189		12.369
65	Cu	|		9830.504	5.497806	ppb	4.553	3.743		121.922
69	Ga-IS	|		412274.364		ppb	2.975			399607.267
95	Mo	|		3759.385	1.892486	ppb	6.222	4.018		102.223
115	In-IS	>		269681.085		ppb	0.780			269274.354
111	Cd	|		42.105	0.015155	ppb	54.253	88.395		16.452
118	Sn	|		453.341	-0.180204	ppb	8.669	3.971		1354.509
121	Sb	|		2952.527	0.357487	ppb	2.605	3.010		963.366
135	Ba	|		28568.551	26.268117	ppb	2.716	1.944		25.556
165	Ho-IS	|		275897.871		ppb	1.264			269082.939
159	Tb-IS	|		242608.393		ppb	0.961			234048.375
207	Pb	|		761.120	0.033443	ppb	18.091	25.075		238.890
203	Tl	|		25.556	-0.000891	ppb	45.807	282.322		30.000
209	Bi-IS	>		168518.183		ppb	1.018			169956.130
51	V	|		1873.456	2.636002	ppb	2.864	4.400		42.222
59	Co	|		182.223	0.096612	ppb	16.598	19.503		12.222
60	Ni	|		1245.610	1.290597	ppb	9.288	8.215		34.444
75	As	|		1409.068	1.557733	ppb	3.893	9.161		678.637
71	Ga-ISK	>		113547.312		ppb	1.492			112992.958
82	Se-2	|		8.182	0.278165	ppb	39.459	27.062		-3.508
107	Ag-1	|		33.333	-0.007406	ppb	52.915	61.216		61.111
115	In-ISK	|		97573.395		ppb	1.284			99481.096
45	Sc-ISK	>		289725.192		ppb	0.705			281723.006
23	Na	|		20669848.325	40928.957793	ppb	1.515	1.334		3325.387
39	K	|		4616236.242	3764.777264	ppb	0.780	1.498		139408.066
24	Mg	|		5434724.367	9689.646858	ppb	0.361	0.344		410.006
159	Tb-ISK	|		197610.047		ppb	0.561			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-5-A

Autosampler Position: 352

Sample Date/Time: Thursday, April 16, 2020 14:13:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-5-A.136

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34404.729		ppb	2.471			29960.283
9	Be	|	32.222	0.008703	ppb	33.254	82.751		17.778
10	B	|	38545.265	106.544488	ppb	0.385	1.815		314.448
27	Al	|	412257.903	51.788210	ppb	2.183	3.316		7435.270
43	Ca-2	|	529833.450	31741.071933	ppb	1.802	0.209		76.667
49	Ti	|	3006.987	4.249552	ppb	12.811	12.322		266.669
52	Cr	|	34100.651	2.715225	ppb	0.196	2.795		10232.554
55	Mn	|	54692.287	4.173386	ppb	1.520	0.473		796.689
57	Fe	|	39220.476	117.670151	ppb	3.544	3.157		9621.019
45	Sc-IS	>	1513002.811		ppb	1.703			1417039.819
66	Zn	|	36453.125	31.088033	ppb	1.692	1.733		615.569
86	Sr	|	442331.927	218.900420	ppb	1.600	1.047		12.369
65	Cu	|	18230.800	10.266508	ppb	4.113	3.181		121.922
69	Ga-IS	|	407063.389		ppb	2.898			399607.267
95	Mo	|	3189.245	1.599202	ppb	2.470	1.692		102.223
115	In-IS	>	270926.817		ppb	1.194			269274.354
111	Cd	|	59.969	0.025687	ppb	5.822	9.615		16.452
118	Sn	|	524.454	-0.166466	ppb	2.232	0.966		1354.509
121	Sb	|	6471.466	0.984991	ppb	3.042	2.557		963.366
135	Ba	|	28845.768	26.402290	ppb	1.999	0.910		25.556
165	Ho-IS	|	276346.187		ppb	0.539			269082.939
159	Tb-IS	|	243555.376		ppb	0.793			234048.375
207	Pb	|	2160.062	0.122204	ppb	2.526	1.554		238.890
203	Tl	|	18.889	-0.002324	ppb	61.974	109.078		30.000
209	Bi-IS	>	169280.467		ppb	1.138			169956.130
51	V	|	2723.593	3.860893	ppb	5.448	5.107		42.222
59	Co	|	230.002	0.123689	ppb	8.816	9.853		12.222
60	Ni	|	1843.452	1.930584	ppb	1.725	0.277		34.444
75	As	|	1329.124	1.384849	ppb	9.272	14.913		678.637
71	Ga-ISK	>	113467.848		ppb	1.998			112992.958
82	Se-2	|	12.500	0.381858	ppb	12.337	11.107		-3.508
107	Ag-1	|	34.444	-0.007037	ppb	29.565	39.430		61.111
115	In-ISK	|	97963.860		ppb	1.499			99481.096
45	Sc-ISK	>	287917.819		ppb	2.234			281723.006
23	Na	|	19029160.010	37918.056197	ppb	1.975	0.559		3325.387
39	K	|	5094387.849	4195.292834	ppb	0.192	2.302		139408.066
24	Mg	|	3582651.639	6428.406665	ppb	1.441	1.493		410.006
159	Tb-ISK	|	197017.382		ppb	1.214			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-6-A

Autosampler Position: 353

Sample Date/Time: Thursday, April 16, 2020 14:15:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-D-6-A.137

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		33903.536		ppb				2.675		29960.283
9	Be	|		18.889	-0.000017	ppb				20.37715815	8.47	17.778
10	B	|		36183.550	100.020133	ppb				1.498	0.397	314.448
27	Al	|		1072359.108	136.456432	ppb				1.365	3.241	7435.270
43	Ca-2	|		495217.325	29690.125254	ppb				1.831	0.450	76.667
49	Ti	|		8339.103	12.601027	ppb				4.150	4.240	266.669
52	Cr	|		26890.847	1.872329	ppb				1.851	0.585	10232.554
55	Mn	|		161936.273	12.494960	ppb				2.214	0.809	796.689
57	Fe	|		53164.357	174.533902	ppb				3.006	2.279	9621.019
45	Sc-IS	>		1511850.932		ppb				1.836		1417039.819
66	Zn	|		1606.757	0.825715	ppb				4.211	6.847	615.569
86	Sr	|		479302.823	237.362437	ppb				2.040	0.562	12.369
65	Cu	|		4952.645	2.738698	ppb				1.019	2.782	121.922
69	Ga-IS	|		423125.749		ppb				2.819		399607.267
95	Mo	|		3101.448	1.554989	ppb				1.283	0.618	102.223
115	In-IS	>		273360.909		ppb				0.585		269274.354
111	Cd	|		30.154	0.007840	ppb				61.324	137.076	16.452
118	Sn	|		306.670	-0.210259	ppb				13.877	3.920	1354.509
121	Sb	|		2474.659	0.265533	ppb				5.287	8.163	963.366
135	Ba	|		49360.724	44.793003	ppb				2.615	2.097	25.556
165	Ho-IS	|		280257.231		ppb				1.582		269082.939
159	Tb-IS	|		245872.317		ppb				0.677		234048.375
207	Pb	|		2376.744	0.134141	ppb				6.392	8.059	238.890
203	Tl	|		15.556	-0.003100	ppb				44.607	46.298	30.000
209	Bi-IS	>		171472.052		ppb				1.761		169956.130
51	V	|		1590.089	2.230071	ppb				5.993	5.962	42.222
59	Co	|		280.003	0.152140	ppb				6.299	6.805	12.222
60	Ni	|		823.357	0.842132	ppb				9.338	9.259	34.444
75	As	|		1410.137	1.563625	ppb				6.648	13.496	678.637
71	Ga-ISK	>		113393.819		ppb				0.497		112992.958
82	Se-2	|		4.195	0.184371	ppb				229.816	124.790	-3.508
107	Ag-1	|		26.667	-0.009100	ppb				25.000	19.220	61.111
115	In-ISK	|		98647.214		ppb				0.289		99481.096
45	Sc-ISK	>		288295.684		ppb				0.990		281723.006
23	Na	|		8579920.021	17070.596109	ppb				0.255	0.861	3325.387
39	K	|		4893571.464	4018.482784	ppb				0.539	0.504	139408.066
24	Mg	|		3330667.358	5967.828383	ppb				0.291	1.222	410.006
159	Tb-ISK	|		198226.502		ppb				0.575		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-C-8-A

Autosampler Position: 354

Sample Date/Time: Thursday, April 16, 2020 14:18:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-C-8-A.138

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		33796.622		ppb			3.108			29960.283
9	Be	|		26.667	0.005035	ppb			25.000	92.044		17.778
10	B	|		69703.041	193.036279	ppb			2.552	1.746		314.448
27	Al	|		244365.604	30.217118	ppb			2.842	2.052		7435.270
43	Ca-2	|		564836.201	33780.901041	ppb			1.348	1.138		76.667
49	Ti	|		2221.286	3.024714	ppb			12.306	15.613		266.669
52	Cr	|		41358.692	3.555593	ppb			2.277	1.383		10232.554
55	Mn	|		84028.721	6.435923	ppb			2.407	2.226		796.689
57	Fe	|		35003.948	100.314206	ppb			1.260	2.231		9621.019
45	Sc-IS	>		1515709.570		ppb			1.701			1417039.819
66	Zn	|		5926.785	4.567924	ppb			2.794	3.758		615.569
86	Sr	|		713945.051	352.707809	ppb			1.037	1.118		12.369
65	Cu	|		12608.302	7.065724	ppb			2.723	2.171		121.922
69	Ga-IS	|		408357.899		ppb			3.139			399607.267
95	Mo	|		7288.526	3.722153	ppb			1.468	3.108		102.223
115	In-IS	>		270661.985		ppb			0.791			269274.354
111	Cd	|		40.250	0.014061	ppb			26.254	45.476		16.452
118	Sn	|		425.562	-0.186030	ppb			5.036	1.998		1354.509
121	Sb	|		3621.570	0.475540	ppb			3.084	4.451		963.366
135	Ba	|		40233.244	36.873246	ppb			0.646	0.494		25.556
165	Ho-IS	|		275624.721		ppb			0.765			269082.939
159	Tb-IS	|		244062.910		ppb			1.145			234048.375
207	Pb	|		1551.144	0.082200	ppb			4.034	4.687		238.890
203	Tl	|		31.111	0.000180	ppb			24.744	918.876		30.000
209	Bi-IS	>		171539.326		ppb			0.480			169956.130
51	V	|		2916.965	4.200160	ppb			2.395	1.824		42.222
59	Co	|		401.117	0.224455	ppb			11.067	13.236		12.222
60	Ni	|		1563.419	1.655062	ppb			7.768	6.956		34.444
75	As	|		1909.963	2.691752	ppb			2.520	4.310		678.637
71	Ga-ISK	>		111856.317		ppb			1.956			112992.958
82	Se-2	|		19.841	0.561979	ppb			26.520	21.866		-3.508
107	Ag-1	|		68.889	0.002261	ppb			22.349	189.172		61.111
115	In-ISK	|		98726.517		ppb			1.794			99481.096
45	Sc-ISK	>		288879.638		ppb			1.250			281723.006
23	Na	|		20749405.811	41209.580657	ppb			1.900	2.006		3325.387
39	K	|		8343554.729	6922.853737	ppb			1.271	1.828		139408.066
24	Mg	|		4042341.062	7228.883123	ppb			0.706	1.699		410.006
159	Tb-ISK	|		197375.620		ppb			1.263			195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 14:21:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.139

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32038.126		ppb		2.797		29960.283
9	Be	|	152120.262	100.830045	ppb		1.875	2.276	17.778
10	B	|	89091.412	251.430318	ppb		1.199	1.613	314.448
27	Al	|	864128.170	111.408174	ppb		0.431	0.513	7435.270
43	Ca-2	|	84906.767	5163.263883	ppb		3.410	2.669	76.667
49	Ti	|	62422.785	98.687335	ppb		1.942	1.624	266.669
52	Cr	|	842448.011	98.972708	ppb		1.005	0.991	10232.554
55	Mn	|	1196260.152	94.139749	ppb		1.935	1.685	796.689
57	Fe	|	1169913.445	4790.706350	ppb		1.780	1.179	9621.019
45	Sc-IS	>	1489161.516		ppb		0.774		1417039.819
66	Zn	|	117639.255	103.215515	ppb		2.566	2.047	615.569
86	Sr	|	198535.730	99.815588	ppb		0.828	0.295	12.369
65	Cu	|	174051.227	100.230847	ppb		2.933	2.218	121.922
69	Ga-IS	|	439408.079		ppb		2.483		399607.267
95	Mo	|	183132.557	96.541874	ppb		2.940	2.307	102.223
115	In-IS	>	274219.853		ppb		2.304		269274.354
111	Cd	|	173966.272	101.633107	ppb		0.677	1.763	16.452
118	Sn	|	506706.699	99.142444	ppb		1.585	0.911	1354.509
121	Sb	|	567866.957	100.292735	ppb		1.907	1.810	963.366
135	Ba	|	110285.345	99.821134	ppb		2.464	2.560	25.556
165	Ho-IS	|	281109.088		ppb		1.191		269082.939
159	Tb-IS	|	244817.880		ppb		1.121		234048.375
207	Pb	|	1651038.553	101.676603	ppb		0.643	2.100	238.890
203	Tl	|	488566.741	100.873853	ppb		1.033	1.302	30.000
209	Bi-IS	>	174806.657		ppb		2.135		169956.130
51	V	|	68920.330	99.394257	ppb		1.777	0.648	42.222
59	Co	|	173581.752	98.760422	ppb		1.763	0.372	12.222
60	Ni	|	95030.603	101.606070	ppb		0.882	0.843	34.444
75	As	|	47952.269	101.509837	ppb		0.682	1.369	678.637
71	Ga-ISK	>	113228.121		ppb		1.427		112992.958
82	Se-2	|	4286.495	102.292361	ppb		3.498	2.476	-3.508
107	Ag-1	|	391532.073	102.947105	ppb		0.948	1.637	61.111
115	In-ISK	|	101178.672		ppb		0.752		99481.096
45	Sc-ISK	>	290572.645		ppb		1.763		281723.006
23	Na	|	2733864.373	5392.676071	ppb		0.309	1.484	3325.387
39	K	|	6496704.331	5332.070845	ppb		0.654	1.415	139408.066
24	Mg	|	3044746.169	5413.209429	ppb		0.351	1.492	410.006
159	Tb-ISK		199219.487		ppb		0.357		195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

AI

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Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 14:24:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.140

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30609.425		ppb			0.419			29960.283
9	Be	|		23.333	0.003657	ppb	24.744	114.325				17.778
10	B	|		682.239	1.064376	ppb	6.451	12.593				314.448
27	Al	|		10212.735	0.357878	ppb	28.448	108.063				7435.270
43	Ca-2	|		98.334	1.296004	ppb	11.743	60.474				76.667
49	Ti	|		260.002	-0.017858	ppb	9.679	216.405				266.669
52	Cr	|		10025.741	-0.045067	ppb	3.244	54.893				10232.554
55	Mn	|		838.914	0.002459	ppb	1.960	85.221				796.689
57	Fe	|		9460.913	-1.326471	ppb	4.221	93.816				9621.019
45	Sc-IS	>		1438844.262		ppb	1.255					1417039.819
66	Zn	|		604.457	-0.018575	ppb	4.065	154.070				615.569
86	Sr	|		90.186	0.040420	ppb	8.815	11.098				12.369
65	Cu	|		144.930	0.012524	ppb	12.659	79.002				121.922
69	Ga-IS	|		404797.094		ppb	2.955					399607.267
95	Mo	|		486.675	0.209060	ppb	9.215	11.688				102.223
115	In-IS	>		268006.983		ppb	2.035					269274.354
111	Cd	|		23.422	0.004282	ppb	45.586	155.857				16.452
118	Sn	|		4021.679	0.536619	ppb	7.210	10.416				1354.509
121	Sb	|		1166.714	0.037477	ppb	7.619	32.662				963.366
135	Ba	|		37.778	0.011442	ppb	5.094	16.941				25.556
165	Ho-IS	|		267335.212		ppb	1.467					269082.939
159	Tb-IS	|		236908.419		ppb	1.178					234048.375
207	Pb	|		564.449	0.020820	ppb	8.061	14.996				238.890
203	Tl	|		132.223	0.021879	ppb	24.225	32.032				30.000
209	Bi-IS	>		169063.415		ppb	0.619					169956.130
51	V	|		34.444	-0.010966	ppb	39.111	180.465				42.222
59	Co	|		33.333	0.012127	ppb	30.000	47.441				12.222
60	Ni	|		31.111	-0.003410	ppb	26.964	266.799				34.444
75	As	|		669.093	-0.013603	ppb	4.577	520.406				678.637
71	Ga-ISK	>		112464.300		ppb	0.701					112992.958
82	Se-2	|		4.528	0.192434	ppb	135.122	76.555				-3.508
107	Ag-1	|		122.223	0.016268	ppb	11.022	23.009				61.111
115	In-ISK	|		98658.372		ppb	1.086					99481.096
45	Sc-ISK	>		281346.308		ppb	1.903					281723.006
23	Na	|		3887.196	1.157292	ppb	1.160	18.040				3325.387
39	K	|		139227.381	0.033795	ppb	0.030	6727.710				139408.066
24	Mg	|		668.349	0.476023	ppb	15.044	39.558				410.006
159	Tb-ISK	|		193708.487		ppb	0.561					195327.744

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, April 16, 2020 14:32:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\b.141

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		30625.015		ppb		0.944		29960.283
9	Be	|		18.889	0.000407	ppb	40.754	1300.512		17.778
10	B	|		308.892	-0.045264	ppb	22.671	432.894		314.448
27	Al	|		7812.136	0.019068	ppb	0.872	67.519		7435.270
43	Ca-2	|		80.000	0.052497	ppb	22.535	2077.687		76.667
49	Ti	|		255.558	-0.031886	ppb	13.387	159.575		266.669
52	Cr	|		10373.765	-0.021761	ppb	0.541	61.954		10232.554
55	Mn	|		844.469	0.001817	ppb	4.221	132.593		796.689
57	Fe	|		9502.048	-1.766536	ppb	1.446	52.582		9621.019
45	Sc-IS	|>		1461544.920		ppb		1.065		1417039.819
66	Zn	|		751.131	0.104738	ppb	6.909	48.757		615.569
86	Sr	|		15.191	0.001255	ppb	206.623	1282.129		12.369
65	Cu	|		124.119	-0.000876	ppb	14.868	1325.799		121.922
69	Ga-IS	|		413507.137		ppb		0.629		399607.267
95	Mo	|		64.445	-0.021993	ppb	28.487	46.013		102.223
115	In-IS	|>		264987.120		ppb		1.248		269274.354
111	Cd	|		5.420	-0.006501	ppb	71.609	36.517		16.452
118	Sn	|		996.702	-0.068294	ppb	17.302	51.037		1354.509
121	Sb	|		1012.260	0.011843	ppb	27.632	438.631		963.366
135	Ba	|		23.333	-0.001742	ppb	28.571	344.048		25.556
165	Ho-IS	|		269638.668		ppb		0.173		269082.939
159	Tb-IS	|		241345.124		ppb		1.247		234048.375
207	Pb	|		186.667	-0.002779	ppb	8.929	37.833		238.890
203	Tl	|		13.333	-0.003416	ppb	50.000	43.062		30.000
209	Bi-IS	|>		162641.746		ppb		0.844		169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63380_1-A

Autosampler Position: 337

Sample Date/Time: Thursday, April 16, 2020 14:33:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\MB 570-63380_1-A.142

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30851.066		ppb			2.296			29960.283
9	Be	|		15.556	-0.002068	ppb	61.859	302.418				17.778
10	B	|		256.669	-0.205329	ppb	1.299	4.725				314.448
27	Al	|		4055.020	-0.486229	ppb	2.401	3.834				7435.270
43	Ca-2	|		90.000	0.618193	ppb	43.390	398.136				76.667
49	Ti	|		258.891	-0.031683	ppb	3.934	67.473				266.669
52	Cr	|		10312.611	-0.046149	ppb	1.807	66.906				10232.554
55	Mn	|		567.789	-0.020983	ppb	7.752	17.691				796.689
57	Fe	|		9037.302	-4.245419	ppb	0.849	9.706				9621.019
45	Sc-IS	|>		1481781.002		ppb	1.259					1417039.819
66	Zn	|		787.800	0.127780	ppb	3.932	20.404				615.569
86	Sr	|		87.951	0.037864	ppb	12.410	13.065				12.369
65	Cu	|		108.613	-0.011008	ppb	17.778	96.274				121.922
69	Ga-IS	|		417927.562		ppb	0.802					399607.267
95	Mo	|		27.778	-0.041936	ppb	24.980	8.906				102.223
115	In-IS	|>		264966.742		ppb	1.559					269274.354
111	Cd	|		3.275	-0.007812	ppb	101.889	25.937				16.452
118	Sn	|		362.227	-0.197227	ppb	24.388	8.455				1354.509
121	Sb	|		377.783	-0.104487	ppb	21.691	13.678				963.366
135	Ba	|		14.444	-0.010023	ppb	48.038	65.305				25.556
165	Ho-IS	|		269079.591		ppb	1.134					269082.939
159	Tb-IS	|		239570.082		ppb	1.311					234048.375
207	Pb	|		126.667	-0.006832	ppb	6.963	9.824				238.890
203	Tl	|		8.889	-0.004420	ppb	43.301	18.966				30.000
209	Bi-IS	|>		164413.022		ppb	1.306					169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63380_2-A

Autosampler Position: 338

Sample Date/Time: Thursday, April 16, 2020 14:35:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCS 570-63380_2-A.143

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30734.142		ppb			1.696			29960.283
9	Be	|		157189.039	102.817924	ppb			1.247	1.262		17.778
10	B	|		33608.383	93.015725	ppb			1.607	1.853		314.448
27	Al	|		776966.432	98.741000	ppb			1.091	0.902		7435.270
43	Ca-2	|		87077.961	5226.862023	ppb			1.592	1.847		76.667
49	Ti	|		67173.119	104.840657	ppb			0.774	1.357		266.669
52	Cr	|		891253.928	103.392351	ppb			1.609	1.829		10232.554
55	Mn	|		1224492.640	95.111833	ppb			0.810	1.994		796.689
57	Fe	|		1222875.579	4944.187836	ppb			0.749	2.154		9621.019
45	Sc-IS	|>		1509018.016		ppb			1.384			1417039.819
66	Zn	|		129243.126	111.980081	ppb			0.627	1.994		615.569
86	Sr	|		205250.012	101.856099	ppb			1.032	2.412		12.369
65	Cu	|		183116.592	104.094158	ppb			0.956	1.949		121.922
69	Ga-IS	|		450393.458		ppb			0.952			399607.267
95	Mo	|		193975.857	100.939028	ppb			0.565	1.652		102.223
115	In-IS	|>		270177.825		ppb			1.833			269274.354
111	Cd	|		185014.943	109.693440	ppb			0.668	1.298		16.452
118	Sn	|		623510.057	123.888718	ppb			1.399	1.492		1354.509
121	Sb	|		578205.099	103.649324	ppb			0.744	1.117		963.366
135	Ba	|		117990.978	108.426706	ppb			2.243	3.974		25.556
165	Ho-IS	|		277721.663		ppb			1.407			269082.939
159	Tb-IS	|		248195.398		ppb			1.050			234048.375
207	Pb	|		1623574.413	103.995506	ppb			0.851	1.563		238.890
203	Tl	|		467623.245	100.429971	ppb			1.966	2.143		30.000
209	Bi-IS	|>		168042.734		ppb			1.621			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63380_3-A

Autosampler Position: 339

Sample Date/Time: Thursday, April 16, 2020 14:36:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCSD 570-63380_3-A.144

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31117.200		ppb			2.435			29960.283
9	Be	|		157796.761	104.854210	ppb			0.972	1.629		17.778
10	B	|		33806.625	95.071498	ppb			1.265	2.146		314.448
27	Al	|		782277.043	101.012102	ppb			1.089	0.963		7435.270
43	Ca-2	|		87882.843	5358.419792	ppb			1.041	0.411		76.667
49	Ti	|		65204.072	103.361845	ppb			2.268	1.930		266.669
52	Cr	|		879622.903	103.654679	ppb			1.120	0.546		10232.554
55	Mn	|		1224016.051	96.570614	ppb			0.387	0.781		796.689
57	Fe	|		1225060.291	5031.445403	ppb			0.962	0.991		9621.019
45	Sc-IS	|>		1485487.801		ppb			1.138			1417039.819
66	Zn	|		129487.600	113.958251	ppb			1.331	0.677		615.569
86	Sr	|		199135.076	100.365252	ppb			1.074	0.257		12.369
65	Cu	|		185336.633	107.014290	ppb			0.810	0.766		121.922
69	Ga-IS	|		452797.511		ppb			0.711			399607.267
95	Mo	|		190502.897	100.695023	ppb			0.155	0.993		102.223
115	In-IS	|>		274972.802		ppb			0.569			269274.354
111	Cd	|		185197.809	107.874653	ppb			0.453	1.018		16.452
118	Sn	|		633020.463	123.569919	ppb			0.794	0.618		1354.509
121	Sb	|		585487.155	103.109800	ppb			0.572	0.141		963.366
135	Ba	|		118181.381	106.654794	ppb			1.854	1.612		25.556
165	Ho-IS	|		280426.929		ppb			1.047			269082.939
159	Tb-IS	|		247194.812		ppb			0.447			234048.375
207	Pb	|		1625533.488	103.707596	ppb			0.418	0.634		238.890
203	Tl	|		469811.415	100.506622	ppb			1.493	1.925		30.000
209	Bi-IS	|>		168693.550		ppb			0.874			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-6-A SD @5

Autosampler Position: 346

Sample Date/Time: Thursday, April 16, 2020 14:37:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-6-A SD @5.145

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31755.256		ppb		0.800		29960.283
9	Be	|		27.778	0.005662	ppb	18.330	56.280		17.778
10	B	|		23738.597	65.011810	ppb	0.969	0.506		314.448
27	Al	|		162374.440	19.706448	ppb	4.650	5.437		7435.270
43	Ca-2	|		594810.495	35510.945952	ppb	0.247	0.717		76.667
49	Ti	|		1120.044	1.299675	ppb	1.191	2.428		266.669
52	Cr	|		13842.259	0.336018	ppb	0.534	5.279		10232.554
55	Mn	|		15054366.578	1162.745968	ppb	0.279	0.681		796.689
57	Fe	|		145106.590	546.128528	ppb	0.699	0.131		9621.019
45	Sc-IS	|>		1518317.990		ppb	0.655			1417039.819
66	Zn	|		1073.374	0.358301	ppb	5.819	16.445		615.569
86	Sr	|		406666.755	200.545064	ppb	0.978	1.388		12.369
65	Cu	|		405.100	0.155233	ppb	7.797	12.413		121.922
69	Ga-IS	|		431085.439		ppb	0.550			399607.267
95	Mo	|		2722.482	1.351882	ppb	2.950	2.791		102.223
115	In-IS	|>		265158.401		ppb	1.284			269274.354
111	Cd	|		28.727	0.007575	ppb	13.751	32.455		16.452
118	Sn	|		2583.568	0.253199	ppb	9.173	16.431		1354.509
121	Sb	|		7369.692	1.173600	ppb	10.283	10.387		963.366
135	Ba	|		83527.940	78.169270	ppb	0.963	0.627		25.556
165	Ho-IS	|		275205.753		ppb	1.093			269082.939
159	Tb-IS	|		243605.160		ppb	1.025			234048.375
207	Pb	|		928.901	0.047371	ppb	4.190	2.454		238.890
203	Tl	|		141.112	0.025465	ppb	16.592	20.050		30.000
209	Bi-IS	|>		159928.315		ppb	2.345			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-6-A

Autosampler Position: 340

Sample Date/Time: Thursday, April 16, 2020 14:39:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-6-A.146

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31759.726		ppb		2.715			29960.283
9	Be	|		36.667	0.011477	ppb	39.626	83.060			17.778
10	B	|		111889.901	309.753844	ppb	1.854	1.334			314.448
27	Al	|		758718.588	95.749284	ppb	2.259	1.909			7435.270
43	Ca-2	|		2951727.290	176170.557080	ppb	1.133	1.781			76.667
49	Ti	|		4016.120	5.807561	ppb	1.210	0.653			266.669
52	Cr	|		17786.622	0.795369	ppb	0.777	0.829			10232.554
55	Mn	|		71919322.267	5552.345607	ppb	1.290	0.987			796.689
57	Fe	|		653905.518	2606.302445	ppb	1.182	0.891			9621.019
45	Sc-IS	|>		1519002.081		ppb	0.674				1417039.819
66	Zn	|		2252.400	1.377361	ppb	2.909	3.460			615.569
86	Sr	|		1943467.738	957.988194	ppb	0.910	1.167			12.369
65	Cu	|		1625.967	0.845002	ppb	3.642	4.454			121.922
69	Ga-IS	|		466046.655		ppb	0.186				399607.267
95	Mo	|		11347.842	5.811484	ppb	3.391	2.887			102.223
115	In-IS	|>		257797.224		ppb	1.281				269274.354
111	Cd	|		18.392	0.001607	ppb	109.750	783.180			16.452
118	Sn	|		924.474	-0.077636	ppb	6.352	17.100			1354.509
121	Sb	|		1192.272	0.050909	ppb	6.191	31.758			963.366
135	Ba	|		392695.833	378.090862	ppb	1.260	1.184			25.556
165	Ho-IS	|		267841.398		ppb	1.785				269082.939
159	Tb-IS	|		234090.404		ppb	1.476				234048.375
207	Pb	|		1827.824	0.117304	ppb	2.908	3.547			238.890
203	Tl	|		44.445	0.004434	ppb	8.660	24.046			30.000
209	Bi-IS	|>		148576.511		ppb	1.447				169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-6-B MS

Autosampler Position: 341

Sample Date/Time: Thursday, April 16, 2020 14:40:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-6-B MS.147

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30844.385		ppb			2.259			29960.283
9	Be	|		152134.812	100.381844	ppb			1.616	1.703		17.778
10	B	|		140132.857	394.217459	ppb			0.673	0.803		314.448
27	Al	|		1398859.800	180.162235	ppb			2.208	2.315		7435.270
43	Ca-2	|		2929871.033	177559.755778	ppb			0.879	0.998		76.667
49	Ti	|		63272.030	99.588684	ppb			0.220	0.332		266.669
52	Cr	|		829846.079	97.029995	ppb			1.353	1.421		10232.554
55	Mn	|		72227541.833	5662.486548	ppb			0.309	0.334		796.689
57	Fe	|		1755875.325	7179.026370	ppb			1.143	1.289		9621.019
45	Sc-IS	>		1495853.569		ppb			0.147			1417039.819
66	Zn	|		106015.312	92.549153	ppb			1.506	1.648		615.569
86	Sr	|		2295708.212	1149.098634	ppb			1.002	1.066		12.369
65	Cu	|		157702.797	90.412690	ppb			0.582	0.690		121.922
69	Ga-IS	|		479510.432		ppb			0.541			399607.267
95	Mo	|		190475.920	99.975451	ppb			0.754	0.798		102.223
115	In-IS	>		255885.198		ppb			0.163			269274.354
111	Cd	|		158346.028	99.109451	ppb			0.176	0.036		16.452
118	Sn	|		357695.409	74.927824	ppb			3.046	3.131		1354.509
121	Sb	|		514088.888	97.279261	ppb			0.420	0.270		963.366
135	Ba	|		498233.498	483.276381	ppb			1.202	1.318		25.556
165	Ho-IS	|		266808.508		ppb			0.372			269082.939
159	Tb-IS	|		231610.318		ppb			0.994			234048.375
207	Pb	|		1466660.105	105.232278	ppb			0.066	0.987		238.890
203	Tl	|		429028.122	103.215540	ppb			0.300	1.076		30.000
209	Bi-IS	>		150005.718		ppb			0.969			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-6-C MSD

Autosampler Position: 342

Sample Date/Time: Thursday, April 16, 2020 14:42:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-6-C MSD.148

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30159.583		ppb			1.109			29960.283
9	Be	|		150475.107	102.064523	ppb			1.358	2.289		17.778
10	B	|		140984.553	407.719106	ppb			1.186	1.775		314.448
27	Al	|		1413174.281	187.151628	ppb			2.887	3.796		7435.270
43	Ca-2	|		2892699.444	180194.108295	ppb			0.266	0.747		76.667
49	Ti	|		62989.720	101.915990	ppb			2.205	2.128		266.669
52	Cr	|		819917.372	98.564638	ppb			0.196	1.186		10232.554
55	Mn	|		70898531.810	5713.379886	ppb			0.399	1.077		796.689
57	Fe	|		1742300.275	7322.725717	ppb			0.676	0.447		9621.019
45	Sc-IS	|>		1455345.736		ppb			1.007			1417039.819
66	Zn	|		106000.736	95.132835	ppb			1.162	1.539		615.569
86	Sr	|		2272952.977	1169.397019	ppb			1.363	1.251		12.369
65	Cu	|		155620.569	91.705030	ppb			0.985	0.834		121.922
69	Ga-IS	|		475726.816		ppb			1.439			399607.267
95	Mo	|		189092.139	102.018947	ppb			0.540	1.090		102.223
115	In-IS	|>		253117.203		ppb			0.661			269274.354
111	Cd	|		158242.212	100.128910	ppb			0.441	0.350		16.452
118	Sn	|		367414.197	77.820857	ppb			3.015	3.354		1354.509
121	Sb	|		519326.922	99.346775	ppb			1.573	1.167		963.366
135	Ba	|		496176.590	486.521513	ppb			1.617	1.034		25.556
165	Ho-IS	|		265729.996		ppb			1.182			269082.939
159	Tb-IS	|		227497.395		ppb			1.534			234048.375
207	Pb	|		1463826.723	104.289583	ppb			0.312	0.640		238.890
203	Tl	|		429168.028	102.522824	ppb			0.823	1.098		30.000
209	Bi-IS	|>		151062.284		ppb			0.504			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-6-A PDS

Autosampler Position: 347

Sample Date/Time: Thursday, April 16, 2020 14:43:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-6-A PDS.149

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30718.548		ppb			0.551			29960.283
9	Be	|		150124.749	102.415725	ppb			1.089	0.861		17.778
10	B	|		138105.509	401.744882	ppb			1.060	1.789		314.448
27	Al	|		1454410.157	193.733106	ppb			1.574	0.287		7435.270
43	Ca-2	|		2822121.285	176858.468692	ppb			0.346	2.059		76.667
49	Ti	|		66302.454	107.962791	ppb			2.434	3.606		266.669
52	Cr	|		828047.538	100.150736	ppb			0.746	1.383		10232.554
55	Mn	|		69260341.260	5614.485967	ppb			0.444	1.359		796.689
57	Fe	|		1710445.696	7232.187517	ppb			0.678	2.416		9621.019
45	Sc-IS	|>		1446890.000		ppb			1.750			1417039.819
66	Zn	|		104872.454	94.690913	ppb			1.172	2.776		615.569
86	Sr	|		2238504.584	1158.573651	ppb			0.384	1.477		12.369
65	Cu	|		156505.174	92.787677	ppb			0.712	2.261		121.922
69	Ga-IS	|		468234.622		ppb			0.880			399607.267
95	Mo	|		192498.379	104.470309	ppb			1.146	1.308		102.223
115	In-IS	|>		252591.816		ppb			1.041			269274.354
111	Cd	|		162595.964	103.106462	ppb			0.459	1.392		16.452
118	Sn	|		569179.027	120.951898	ppb			0.933	1.084		1354.509
121	Sb	|		539281.583	103.395718	ppb			0.522	1.193		963.366
135	Ba	|		485154.592	476.694043	ppb			1.855	0.833		25.556
165	Ho-IS	|		260451.684		ppb			0.311			269082.939
159	Tb-IS	|		226097.702		ppb			1.660			234048.375
207	Pb	|		1465226.748	105.310820	ppb			1.191	1.145		238.890
203	Tl	|		423496.677	102.060596	ppb			0.224	0.270		30.000
209	Bi-IS	|>		149737.320		ppb			0.050			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25083-I-6-A PDS

Autosampler Position: 348

Sample Date/Time: Thursday, April 16, 2020 14:45:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25083-I-6-A PDS.150

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29904.615		ppb			2.611			29960.283
9	Be	|		149503.833	102.412546	ppb			0.993	1.364		17.778
10	B	|		135898.900	396.905602	ppb			0.395	0.781		314.448
27	Al	|		1448855.927	193.797949	ppb			1.393	1.510		7435.270
43	Ca-2	|		2764944.043	173959.771614	ppb			0.291	0.672		76.667
49	Ti	|		67502.544	110.346829	ppb			3.168	3.059		266.669
52	Cr	|		832101.310	101.058204	ppb			1.234	1.218		10232.554
55	Mn	|		69395635.176	5647.979100	ppb			1.022	0.710		796.689
57	Fe	|		1717285.369	7289.777085	ppb			0.126	0.393		9621.019
45	Sc-IS	|>		1440876.559		ppb			0.426			1417039.819
66	Zn	|		106349.989	96.407269	ppb			1.237	1.332		615.569
86	Sr	|		2234932.603	1161.380643	ppb			0.383	0.786		12.369
65	Cu	|		156169.094	92.954353	ppb			0.822	1.235		121.922
69	Ga-IS	|		457506.939		ppb			1.392			399607.267
95	Mo	|		193662.777	105.528637	ppb			0.694	0.296		102.223
115	In-IS	|>		250640.684		ppb			1.229			269274.354
111	Cd	|		163998.402	104.802920	ppb			0.858	1.133		16.452
118	Sn	|		576237.574	123.417675	ppb			0.219	1.282		1354.509
121	Sb	|		547447.854	105.784188	ppb			0.230	1.116		963.366
135	Ba	|		481932.706	477.312551	ppb			1.168	2.094		25.556
165	Ho-IS	|		256979.875		ppb			1.256			269082.939
159	Tb-IS	|		221090.081		ppb			1.225			234048.375
207	Pb	|		1467206.060	107.248800	ppb			1.700	1.151		238.890
203	Tl	|		427282.614	104.748740	ppb			0.576	2.296		30.000
209	Bi-IS	|>		147238.365		ppb			1.748			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 14:46:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.151

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29868.974		ppb	1.204			29960.283
9	Be	|	143344.476	103.020966	ppb	0.463	0.342		17.778
10	B	|	81348.819	248.916944	ppb	2.318	2.139		314.448
27	Al	|	725752.620	101.369421	ppb	0.875	0.980		7435.270
43	Ca-2	|	77410.878	5105.085099	ppb	1.751	1.566		76.667
49	Ti	|	59158.910	101.431218	ppb	0.750	0.584		266.669
52	Cr	|	808258.592	103.017029	ppb	1.083	1.136		10232.554
55	Mn	|	1143891.641	97.615832	ppb	0.850	0.725		796.689
57	Fe	|	1113329.606	4945.103935	ppb	1.418	1.318		9621.019
45	Sc-IS	|>	1373305.063		ppb	0.194			1417039.819
66	Zn	|	109333.469	104.031654	ppb	0.711	0.624		615.569
86	Sr	|	188538.782	102.784973	ppb	1.360	1.172		12.369
65	Cu	|	165710.478	103.490352	ppb	1.471	1.343		121.922
69	Ga-IS	|	405529.593		ppb	1.577			399607.267
95	Mo	|	177652.345	101.566966	ppb	1.255	1.337		102.223
115	In-IS	|>	257441.543		ppb	0.262			269274.354
111	Cd	|	161186.499	100.276618	ppb	0.842	0.605		16.452
118	Sn	|	488262.063	101.753545	ppb	0.959	0.707		1354.509
121	Sb	|	551696.436	103.778775	ppb	1.724	1.905		963.366
135	Ba	|	106828.063	102.976238	ppb	2.159	2.230		25.556
165	Ho-IS	|	260968.831		ppb	0.689			269082.939
159	Tb-IS	|	223406.738		ppb	0.879			234048.375
207	Pb	|	1495272.421	99.621491	ppb	0.273	0.393		238.890
203	Tl	|	445348.902	99.488181	ppb	0.906	0.853		30.000
209	Bi-IS	|>	161535.947		ppb	0.562			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 14:48:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.152

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29778.796		ppb			2.579			29960.283
9	Be	|		17.778	0.000453	ppb	65.848	1848.812				17.778
10	B	|		898.917	1.842465	ppb	2.384	3.845				314.448
27	Al	|		4576.292	-0.367174	ppb	8.780	14.127				7435.270
43	Ca-2	|		285.003	14.027113	ppb	16.736	22.532				76.667
49	Ti	|		246.669	-0.017503	ppb	19.490	478.422				266.669
52	Cr	|		9653.261	-0.026186	ppb	1.381	47.816				10232.554
55	Mn	|		6082.406	0.456753	ppb	2.280	2.710				796.689
57	Fe	|		8237.932	-4.629591	ppb	3.270	28.915				9621.019
45	Sc-IS	|>		1364732.457		ppb		0.808				1417039.819
66	Zn	|		555.566	-0.036006	ppb	7.233	100.343				615.569
86	Sr	|		181.273	0.093093	ppb	34.521	37.608				12.369
65	Cu	|		130.706	0.008386	ppb	27.302	268.637				121.922
69	Ga-IS	|		381179.904		ppb		0.978				399607.267
95	Mo	|		486.675	0.223501	ppb	1.186	2.454				102.223
115	In-IS	|>		254047.986		ppb		0.112				269274.354
111	Cd	|		37.867	0.014086	ppb	20.361	34.413				16.452
118	Sn	|		3860.527	0.546844	ppb	12.836	19.163				1354.509
121	Sb	|		3639.358	0.521354	ppb	13.088	17.478				963.366
135	Ba	|		71.111	0.045929	ppb	31.211	47.303				25.556
165	Ho-IS	|		256960.735		ppb		1.473				269082.939
159	Tb-IS	|		220637.656		ppb		1.382				234048.375
207	Pb	|		717.785	0.033706	ppb	4.162	6.775				238.890
203	Tl	|		168.890	0.032203	ppb	12.689	17.129				30.000
209	Bi-IS	|>		158242.859		ppb		1.601				169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Thursday, April 16, 2020 14:49:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICSA-30518.153

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29846.713		ppb			2.336			29960.283
9	Be	|		30.000	0.007770	ppb			29.397	72.267		17.778
10	B	|		685.572	1.038849	ppb			3.649	7.079		314.448
27	Al	|		76587985.831	10135.206260	ppb			2.509	3.926		7435.270
43	Ca-2	|		472451.520	29247.052469	ppb			1.580	2.272		76.667
49	Ti	|		124474.433	200.589217	ppb			1.239	1.293		266.669
52	Cr	|		10677.322	0.012814	ppb			0.672	274.228		10232.554
55	Mn	|		11839.349	0.882476	ppb			0.774	3.005		796.689
57	Fe	|		6007013.546	25197.007253	ppb			0.117	2.184		9621.019
45	Sc-IS	|>		1464559.368		ppb			2.244			1417039.819
66	Zn	|		1112.266	0.428027	ppb			7.477	20.964		615.569
86	Sr	|		971.299	0.490840	ppb			9.656	11.728		12.369
65	Cu	|		-243.427	-0.216281	ppb			13.501	7.420		121.922
69	Ga-IS	|		407205.857		ppb			1.154			399607.267
95	Mo	|		368667.817	197.735103	ppb			0.901	1.487		102.223
115	In-IS	|>		269481.174		ppb			1.012			269274.354
111	Cd	|		-0.848	-0.009943	ppb			10474.376	533.977		16.452
118	Sn	|		2601.351	0.248282	ppb			14.448	28.445		1354.509
121	Sb	|		2675.809	0.307710	ppb			14.186	20.806		963.366
135	Ba	|		227.780	0.186130	ppb			9.409	9.550		25.556
165	Ho-IS	|		277449.478		ppb			0.484			269082.939
159	Tb-IS	|		243097.650		ppb			0.650			234048.375
207	Pb	|		613.339	0.025277	ppb			4.707	7.887		238.890
203	Tl	|		100.000	0.015683	ppb			25.166	34.514		30.000
209	Bi-IS	|>		163412.837		ppb			1.751			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Thursday, April 16, 2020 14:50:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICSAB-30517.154

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29656.325		ppb			3.034			29960.283
9	Be	|		16.667	-0.001187	ppb			52.915	491.944		17.778
10	B	|		2123.491	5.190349	ppb			3.472	5.684		314.448
27	Al	|		78051825.292	10338.140213	ppb			0.570	0.815		7435.270
43	Ca-2	|		480302.592	29762.514761	ppb			1.931	0.618		76.667
49	Ti	|		126330.590	203.826729	ppb			0.829	0.634		266.669
52	Cr	|		168207.993	19.099105	ppb			1.608	0.369		10232.554
55	Mn	|		237368.546	18.964535	ppb			2.049	0.748		796.689
57	Fe	|		6152387.040	25833.069200	ppb			1.347	0.506		9621.019
45	Sc-IS	|>		1462661.340		ppb			1.317			1417039.819
66	Zn	|		12485.454	10.645937	ppb			0.395	1.374		615.569
86	Sr	|		911.770	0.460145	ppb			3.845	3.137		12.369
65	Cu	|		32879.560	19.222688	ppb			0.481	1.754		121.922
69	Ga-IS	|		416226.751		ppb			0.806			399607.267
95	Mo	|		369838.572	198.607212	ppb			0.821	1.825		102.223
115	In-IS	|>		271887.339		ppb			0.658			269274.354
111	Cd	|		15954.242	9.389787	ppb			0.786	1.386		16.452
118	Sn	|		1700.102	0.065814	ppb			8.831	45.798		1354.509
121	Sb	|		1813.449	0.150043	ppb			8.402	18.579		963.366
135	Ba	|		222.224	0.179373	ppb			5.679	7.185		25.556
165	Ho-IS	|		285558.333		ppb			1.334			269082.939
159	Tb-IS	|		247520.570		ppb			1.249			234048.375
207	Pb	|		502.226	0.017192	ppb			7.097	10.589		238.890
203	Tl	|		61.111	0.006831	ppb			8.332	17.928		30.000
209	Bi-IS	|>		167164.713		ppb			1.467			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, April 16, 2020 14:52:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.155

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		28993.843		ppb			1.771			29960.283
9	Be	|		18.889	0.000596	ppb	26.956	568.546				17.778
10	B	|		516.676	0.583588	ppb	5.512	14.385				314.448
27	Al	|		17727.663	1.378041	ppb	2.263	2.872				7435.270
43	Ca-2	|		176.668	6.260591	ppb	5.892	9.663				76.667
49	Ti	|		278.892	0.014685	ppb	10.165	304.223				266.669
52	Cr	|		9295.250	-0.131433	ppb	4.859	33.434				10232.554
55	Mn	|		2581.344	0.145177	ppb	1.715	3.965				796.689
57	Fe	|		8309.084	-6.117969	ppb	2.781	22.045				9621.019
45	Sc-IS	>		1434220.042		ppb			1.041			1417039.819
66	Zn	|		1140.046	0.473922	ppb	5.098	12.747				615.569
86	Sr	|		95.817	0.043547	ppb	17.780	21.421				12.369
65	Cu	|		243.826	0.071976	ppb	16.730	32.638				121.922
69	Ga-IS	|		405302.572		ppb			0.740			399607.267
95	Mo	|		654.460	0.302041	ppb	9.479	12.374				102.223
115	In-IS	>		269152.854		ppb			1.095			269274.354
111	Cd	|		7.515	-0.005327	ppb	49.639	40.730				16.452
118	Sn	|		1554.530	0.039860	ppb	12.490	89.217				1354.509
121	Sb	|		1078.931	0.020662	ppb	19.717	175.594				963.366
135	Ba	|		130.001	0.096397	ppb	11.750	15.319				25.556
165	Ho-IS	|		269202.799		ppb			0.347			269082.939
159	Tb-IS	|		235604.781		ppb			0.668			234048.375
207	Pb	|		318.890	0.005898	ppb	15.656	59.981				238.890
203	Tl	|		30.000	0.000240	ppb	33.333	898.812				30.000
209	Bi-IS	>		163463.333		ppb			1.346			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, April 16, 2020 14:53:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICVL-210771.156

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		28992.726		ppb		0.984		29960.283
9	Be	|		1443.406	0.981878	ppb	5.461	5.588		17.778
10	B	|		16964.517	48.997754	ppb	2.878	2.963		314.448
27	Al	|		374106.435	49.560164	ppb	0.772	0.845		7435.270
43	Ca-2	|		910.029	52.663887	ppb	8.094	8.842		76.667
49	Ti	|		851.136	0.959557	ppb	2.887	4.159		266.669
52	Cr	|		17525.188	0.887495	ppb	0.517	1.126		10232.554
55	Mn	|		13181.635	1.012781	ppb	1.754	1.882		796.689
57	Fe	|		18993.731	39.765913	ppb	1.360	2.753		9621.019
45	Sc-IS	|>		1433050.962		ppb	0.057			1417039.819
66	Zn	|		6504.815	5.393074	ppb	3.054	3.317		615.569
86	Sr	|		1994.124	1.035362	ppb	3.999	4.064		12.369
65	Cu	|		1858.062	1.038997	ppb	3.559	3.854		121.922
69	Ga-IS	|		409176.243		ppb	0.744			399607.267
95	Mo	|		2054.592	1.069644	ppb	4.912	5.230		102.223
115	In-IS	|>		265050.246		ppb	1.160			269274.354
111	Cd	|		1634.668	0.978166	ppb	3.132	3.377		16.452
118	Sn	|		6011.265	0.949736	ppb	2.079	4.140		1354.509
121	Sb	|		6381.429	0.994892	ppb	6.405	8.697		963.366
135	Ba	|		1161.158	1.064094	ppb	5.517	6.111		25.556
165	Ho-IS	|		270725.619		ppb	0.346			269082.939
159	Tb-IS	|		235173.257		ppb	0.024			234048.375
207	Pb	|		15260.974	0.978294	ppb	1.655	1.940		238.890
203	Tl	|		4666.319	1.012121	ppb	4.361	4.716		30.000
209	Bi-IS	|>		165358.186		ppb	0.402			169956.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, April 16, 2020 14:59:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICIS-23447.158

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		28778.971		ppb			2.473	
9	Be	|		17.778		ppb			28.641	
10	B	|		274.447		ppb			11.021	
27	Al	|		7707.637		ppb			4.694	
43	Ca-2	|		58.333		ppb			19.795	
49	Ti	|		202.224		ppb			10.597	
52	Cr	|		9156.267		ppb			1.277	
55	Mn	|		854.470		ppb			2.822	
57	Fe	|		6995.047		ppb			4.127	
45	Sc-IS	>		1340170.407		ppb			1.780	
66	Zn	|		558.900		ppb			12.008	
86	Sr	|		6.889		ppb			85.690	
65	Cu	|		78.594		ppb			8.694	
69	Ga-IS	|		365683.403		ppb			4.702	
95	Mo	|		101.111		ppb			28.038	
115	In-IS	>		254798.624		ppb			2.031	
111	Cd	|		10.899		ppb			46.918	
118	Sn	|		1431.183		ppb			8.432	
121	Sb	|		1416.737		ppb			8.979	
135	Ba	|		21.111		ppb			18.232	
165	Ho-IS	|		254208.571		ppb			0.742	
159	Tb-IS	|		219653.582		ppb			0.400	
207	Pb	|		173.334		ppb			11.538	
203	Tl	|		11.111		ppb			75.498	
209	Bi-IS	>		161495.594		ppb			1.404	
51	V	|		25.556		ppb			19.924	
59	Co	|		15.556		ppb			32.733	
60	Ni	|		11.111		ppb			62.450	
75	As	|		697.990		ppb			3.819	
71	Ga-ISK	>		110007.508		ppb			0.833	
82	Se-2	|		1.515		ppb			366.143	
107	Ag-1	|		176.668		ppb			20.755	
115	In-ISK	|		95783.323		ppb			2.112	
45	Sc-ISK	>		275641.682		ppb			0.647	
23	Na	|		2976.977		ppb			1.691	
39	K	|		134490.119		ppb			0.685	
24	Mg	|		190.001		ppb			2.632	
159	Tb-ISK	|		188286.130		ppb			1.173	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, April 16, 2020 15:02:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\IC-210761.159

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28923.696		ppb		0.784		28778.971
9	Be	|	280345.297	200.000000	ppb		0.894	1.306	17.778
10	B	|	161174.181	500.000000	ppb		1.174	1.703	274.447
27	Al	|	1422663.538	200.000000	ppb		0.146	0.400	7707.637
43	Ca-2	|	148272.218	10200.000000	ppb		1.100	0.593	58.333
49	Ti	|	114313.357	200.000000	ppb		1.114	0.790	202.224
52	Cr	|	1540729.621	200.000000	ppb		0.336	0.415	9156.267
55	Mn	|	2342789.018	200.000000	ppb		1.728	1.515	854.470
57	Fe	|	2294668.241	10200.000000	ppb		3.644	3.230	6995.047
45	Sc-IS	>	1328627.137		ppb		0.529		1340170.407
66	Zn	|	203956.045	200.000000	ppb		4.030	3.579	558.900
86	Sr	|	368386.979	200.000000	ppb		2.510	2.033	6.889
65	Cu	|	313023.065	200.000000	ppb		4.575	4.175	78.594
69	Ga-IS	|	406741.006		ppb		2.872		365683.403
95	Mo	|	349247.219	200.000000	ppb		1.715	1.507	101.111
115	In-IS	>	255399.159		ppb		0.921		254798.624
111	Cd	|	315589.497	200.000000	ppb		1.091	0.754	10.899
118	Sn	|	957992.359	200.000000	ppb		2.609	1.787	1431.183
121	Sb	|	1067288.670	200.000000	ppb		2.564	1.671	1416.737
135	Ba	|	203547.574	200.000000	ppb		3.345	2.436	21.111
165	Ho-IS	|	255145.030		ppb		0.664		254208.571
159	Tb-IS	|	221728.647		ppb		0.737		219653.582
207	Pb	|	3055216.323	200.000000	ppb		0.466	1.483	173.334
203	Tl	|	904743.458	200.000000	ppb		0.752	1.886	11.111
209	Bi-IS	>	163661.108		ppb		1.175		161495.594
51	V	|	133008.615	200.000000	ppb		1.281	1.297	25.556
59	Co	|	332730.345	200.000000	ppb		0.690	0.584	15.556
60	Ni	|	178375.607	200.000000	ppb		0.186	0.933	11.111
75	As	|	91251.624	200.000000	ppb		1.117	0.774	697.990
71	Ga-ISK	>	109456.634		ppb		0.836		110007.508
82	Se-2	|	8137.165	200.000000	ppb		2.098	1.285	1.515
107	Ag-1	|	733365.153	200.000000	ppb		0.359	1.184	176.668
115	In-ISK	|	94774.396		ppb		0.338		95783.323
45	Sc-ISK	>	276230.615		ppb		0.286		275641.682
23	Na	|	4938139.105	10200.000000	ppb		1.227	1.204	2976.977
39	K	|	11988051.063	10200.000000	ppb		1.668	1.812	134490.119
24	Mg	|	5555811.380	10200.000000	ppb		0.837	1.083	190.001
159	Tb-ISK	|	191084.869		ppb		0.820		188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 15:05:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.160

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		28440.514		ppb			2.240			28778.971
9	Be	|		138980.640	100.265187	ppb			1.407	2.447		17.778
10	B	|		80428.041	251.891601	ppb			1.846	2.394		274.447
27	Al	|		713009.065	100.843417	ppb			1.432	2.695		7707.637
43	Ca-2	|		73225.576	5091.277490	ppb			2.057	0.220		58.333
49	Ti	|		57595.883	101.728227	ppb			1.215	1.251		202.224
52	Cr	|		774631.759	101.079467	ppb			2.419	0.592		9156.267
55	Mn	|		1083767.351	93.513402	ppb			1.560	0.444		854.470
57	Fe	|		1063249.664	4762.019168	ppb			3.036	1.214		6995.047
45	Sc-IS	>		1314033.038		ppb			1.839			1340170.407
66	Zn	>		101651.701	100.514945	ppb			2.999	1.369		558.900
86	Sr	|		183830.015	100.906717	ppb			2.564	0.733		6.889
65	Cu	|		155819.932	100.636240	ppb			3.009	1.246		78.594
69	Ga-IS	|		378850.869		ppb			3.117			365683.403
95	Mo	|		175805.285	101.776636	ppb			1.399	1.049		101.111
115	In-IS	>		256273.803		ppb			1.358			254798.624
111	Cd	|		160088.074	101.108352	ppb			0.988	0.867		10.899
118	Sn	|		484882.834	100.742837	ppb			1.553	0.424		1431.183
121	Sb	|		535648.049	99.907997	ppb			1.688	0.735		1416.737
135	Ba	|		101847.706	99.718143	ppb			4.019	3.043		21.111
165	Ho-IS	|		256737.628		ppb			0.658			254208.571
159	Tb-IS	|		219996.578		ppb			0.415			219653.582
207	Pb	|		1516460.622	99.501164	ppb			1.364	1.012		173.334
203	Tl	|		454492.310	100.706500	ppb			0.729	0.745		11.111
209	Bi-IS	>		163249.697		ppb			0.362			161495.594
51	V	|		66925.289	100.601693	ppb			0.410	1.278		25.556
59	Co	|		168551.844	101.295560	ppb			0.146	0.880		15.556
60	Ni	|		89945.658	100.835862	ppb			1.730	2.566		11.111
75	As	|		46374.578	100.876138	ppb			0.824	1.433		697.990
71	Ga-ISK	>		109475.671		ppb			0.903			110007.508
82	Se-2	|		4088.118	100.459748	ppb			1.174	1.766		1.515
107	Ag-1	|		374674.328	102.136974	ppb			0.692	1.126		176.668
115	In-ISK	|		97003.906		ppb			0.684			95783.323
45	Sc-ISK	>		274280.370		ppb			0.917			275641.682
23	Na	|		2474755.399	5144.911429	ppb			1.352	0.528		2976.977
39	K	|		6101921.593	5172.386635	ppb			0.782	1.201		134490.119
24	Mg	|		2802071.460	5181.210223	ppb			0.774	1.687		190.001
159	Tb-ISK	|		190682.158		ppb			0.260			188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 15:07:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.161

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		28141.029		ppb			1.830			28778.971
9	Be	|		31.111	0.010153	ppb	12.372	31.020				17.778
10	B	|		567.789	0.960301	ppb	4.745	13.042				274.447
27	Al	|		4688.548	-0.401555	ppb	3.737	11.603				7707.637
43	Ca-2	|		63.333	0.489572	ppb	19.868	194.674				58.333
49	Ti	|		192.224	-0.005493	ppb	14.748	1141.647				202.224
52	Cr	|		8557.007	-0.042265	ppb	1.670	96.111				9156.267
55	Mn	|		837.802	0.000921	ppb	6.432	702.230				854.470
57	Fe	|		7113.994	1.510241	ppb	3.270	43.307				6995.047
45	Sc-IS	>		1299904.286		ppb	4.010					1340170.407
66	Zn	|		575.567	0.032618	ppb	10.871	129.542				558.900
86	Sr	|		42.370	0.020221	ppb	77.804	96.303				6.889
65	Cu	|		107.336	0.020654	ppb	21.869	84.880				78.594
69	Ga-IS	|		358279.218		ppb	4.346					365683.403
95	Mo	|		548.899	0.263937	ppb	5.443	4.067				101.111
115	In-IS	>		252174.884		ppb	2.473					254798.624
111	Cd	|		22.181	0.007342	ppb	25.747	52.202				10.899
118	Sn	|		3949.436	0.536394	ppb	4.731	6.163				1431.183
121	Sb	|		1354.509	-0.009411	ppb	13.485	317.896				1416.737
135	Ba	|		30.000	0.009163	ppb	22.222	78.295				21.111
165	Ho-IS	|		249404.623		ppb	2.399					254208.571
159	Tb-IS	|		218393.442		ppb	0.907					219653.582
207	Pb	|		745.564	0.038164	ppb	5.409	8.381				173.334
203	Tl	|		198.890	0.042320	ppb	23.484	26.092				11.111
209	Bi-IS	>		160909.020		ppb	1.344					161495.594
51	V	|		26.667	0.002413	ppb	33.072	577.064				25.556
59	Co	|		36.667	0.012941	ppb	24.052	39.129				15.556
60	Ni	|		35.556	0.027890	ppb	14.321	19.983				11.111
75	As	|		726.576	0.087823	ppb	6.348	92.289				697.990
71	Ga-ISK	>		108263.176		ppb	1.334					110007.508
82	Se-2	|		3.507	0.050804	ppb	373.266	645.470				1.515
107	Ag-1	|		240.002	0.018207	ppb	11.024	37.622				176.668
115	In-ISK	|		93815.153		ppb	0.334					95783.323
45	Sc-ISK	>		268591.598		ppb	0.996					275641.682
23	Na	|		3497.095	1.268269	ppb	0.908	10.690				2976.977
39	K	|		134902.877	3.411379	ppb	0.763	8.930				134490.119
24	Mg	|		646.681	0.872309	ppb	9.942	15.306				190.001
159	Tb-ISK	|		183942.729		ppb	1.025					188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, April 16, 2020 15:10:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICVL-210771.162

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		28547.399		ppb			2.810			28778.971
9	Be	|		1375.622	0.982993	ppb			4.536	3.488		17.778
10	B	|		16639.687	51.631815	ppb			1.574	3.063		274.447
27	Al	|		348387.840	48.880037	ppb			1.838	0.165		7707.637
43	Ca-2	|		851.692	55.503258	ppb			0.339	1.943		58.333
49	Ti	|		745.575	0.974099	ppb			11.798	15.257		202.224
52	Cr	|		15944.449	0.927435	ppb			0.701	3.210		9156.267
55	Mn	|		11471.271	0.921828	ppb			1.062	2.158		854.470
57	Fe	|		17777.725	49.504111	ppb			2.281	1.633		6995.047
45	Sc-IS	>		1309508.772		ppb			1.912			1340170.407
66	Zn	|		5687.801	5.127688	ppb			5.385	4.013		558.900
86	Sr	|		1802.533	0.989334	ppb			1.622	0.944		6.889
65	Cu	|		1606.435	0.991840	ppb			4.160	3.321		78.594
69	Ga-IS	|		357967.593		ppb			3.591			365683.403
95	Mo	|		1811.226	0.994741	ppb			6.172	4.735		101.111
115	In-IS	>		254036.198		ppb			0.251			254798.624
111	Cd	|		1614.066	1.021430	ppb			3.280	3.049		10.899
118	Sn	|		6553.725	1.077803	ppb			1.069	1.573		1431.183
121	Sb	|		6152.436	0.894235	ppb			3.007	3.725		1416.737
135	Ba	|		1034.482	1.001246	ppb			10.419	10.442		21.111
165	Ho-IS	|		253306.030		ppb			0.432			254208.571
159	Tb-IS	|		216852.401		ppb			0.582			219653.582
207	Pb	|		15163.140	0.986714	ppb			1.073	1.618		173.334
203	Tl	|		4545.167	1.007831	ppb			1.028	1.417		11.111
209	Bi-IS	>		162742.868		ppb			0.624			161495.594
51	V	|		643.348	0.931095	ppb			2.259	1.210		25.556
59	Co	|		1755.664	1.049114	ppb			8.172	9.744		15.556
60	Ni	|		942.253	1.046398	ppb			2.073	3.228		11.111
75	As	|		1166.654	1.048467	ppb			3.299	10.349		697.990
71	Ga-ISK	>		109252.941		ppb			1.892			110007.508
82	Se-2	|		38.872	0.919251	ppb			13.636	12.783		1.515
107	Ag-1	|		3662.692	0.952938	ppb			2.185	0.709		176.668
115	In-ISK	|		94902.842		ppb			1.498			95783.323
45	Sc-ISK	>		267711.967		ppb			0.949			275641.682
23	Na	|		25688.080	48.613841	ppb			1.872	1.438		2976.977
39	K	|		187217.696	50.258199	ppb			0.579	2.671		134490.119
24	Mg	|		26554.658	49.957712	ppb			0.682	1.196		190.001
159	Tb-ISK	|		186672.441		ppb			0.868			188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, April 16, 2020 15:13:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\b.163

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		28062.001		ppb					3.468	28778.971
9	Be	|		8.889	-0.005996	ppb					57.282 64.210	17.778
10	B	|		377.783	0.363728	ppb					4.528 19.993	274.447
27	Al	|		6921.678	-0.073145	ppb					3.796 28.571	7707.637
43	Ca-2	|		66.667	0.756254	ppb					21.651 145.008	58.333
49	Ti	|		178.890	-0.028778	ppb					5.693 41.739	202.224
52	Cr	|		8917.231	0.012928	ppb					4.971 308.390	9156.267
55	Mn	|		828.913	0.000490	ppb					5.969 594.898	854.470
57	Fe	|		7063.969	1.497289	ppb					3.163 26.185	6995.047
45	Sc-IS	>		1290668.210		ppb					1.969	1340170.407
66	Zn	|		625.569	0.088476	ppb					2.682 19.656	558.900
86	Sr	|		3.455	-0.001662	ppb					519.073 599.086	6.889
65	Cu	|		76.311	0.000360	ppb					11.502 1377.188	78.594
69	Ga-IS	|		353200.716		ppb					4.867	365683.403
95	Mo	|		112.223	0.008873	ppb					12.004 104.123	101.111
115	In-IS	>		249035.507		ppb					1.644	254798.624
111	Cd	|		7.542	-0.001974	ppb					91.861 230.963	10.899
118	Sn	|		1376.733	-0.004796	ppb					8.328 480.895	1431.183
121	Sb	|		858.915	-0.101181	ppb					1.616 1.835	1416.737
135	Ba	|		27.778	0.007209	ppb					13.856 54.655	21.111
165	Ho-IS	|		246061.364		ppb					1.576	254208.571
159	Tb-IS	|		209541.135		ppb					0.238	219653.582
207	Pb	|		253.334	0.005635	ppb					4.558 17.944	173.334
203	Tl	|		42.222	0.007164	ppb					16.434 24.079	11.111
209	Bi-IS	>		158482.120		ppb					1.387	161495.594
51	V	|		26.667	0.002842	ppb					33.072 478.484	25.556
59	Co	|		28.889	0.008506	ppb					40.522 85.099	15.556
60	Ni	|		50.000	0.044769	ppb					35.277 43.470	11.111
75	As	|		686.929	0.020011	ppb					4.168 416.514	697.990
71	Ga-ISK	>		106923.191		ppb					1.930	110007.508
82	Se-2	|		1.869	0.009750	ppb					231.627 1110.043	1.515
107	Ag-1	|		106.667	-0.018199	ppb					16.238 24.282	176.668
115	In-ISK	|		94513.806		ppb					1.082	95783.323
45	Sc-ISK	>		269747.466		ppb					0.820	275641.682
23	Na	|		2698.588	-0.454851	ppb					3.479 38.610	2976.977
39	K	|		131700.963	0.081225	ppb					0.195 1113.164	134490.119
24	Mg	|		198.335	0.023340	ppb					17.160 274.315	190.001
159	Tb-ISK	|		184137.168		ppb					0.715	188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63366_1-A

Autosampler Position: 329

Sample Date/Time: Thursday, April 16, 2020 15:16:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\MB 570-63366_1-A.164

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS			28446.074		ppb			1.218			28778.971
9	Be			18.889	0.001411	ppb			10.189	70.338		17.778
10	B			284.447	0.074848	ppb			9.758	145.706		274.447
27	Al			3485.983	-0.567497	ppb			8.152	8.044		7707.637
43	Ca-2			71.667	1.118423	ppb			29.047	117.587		58.333
49	Ti			156.668	-0.066045	ppb			7.671	27.322		202.224
52	Cr			8554.785	-0.024271	ppb			3.539	63.197		9156.267
55	Mn			517.787	-0.026355	ppb			4.917	9.885		854.470
57	Fe			7191.812	2.400571	ppb			4.236	9.255		6995.047
45	Sc-IS	>		1278402.875		ppb			3.576			1340170.407
66	Zn			426.673	-0.109483	ppb			10.741	29.627		558.900
86	Sr			12.432	0.003792	ppb			294.863	562.812		6.889
65	Cu			80.902	0.003822	ppb			16.641	202.456		78.594
69	Ga-IS			351798.686		ppb			4.341			365683.403
95	Mo			86.667	-0.006032	ppb			30.769	248.015		101.111
115	In-IS	>		247933.239		ppb			1.759			254798.624
111	Cd			8.707	-0.001227	ppb			22.662	110.250		10.899
118	Sn			1058.928	-0.071932	ppb			3.936	7.202		1431.183
121	Sb			677.794	-0.135476	ppb			10.518	9.870		1416.737
135	Ba			20.000	-0.000516	ppb			16.667	710.574		21.111
165	Ho-IS			244502.312		ppb			2.780			254208.571
159	Tb-IS			211029.513		ppb			0.685			219653.582
207	Pb			232.223	0.003861	ppb			6.783	33.236		173.334
203	Tl			27.778	0.003736	ppb			66.091	110.896		11.111
209	Bi-IS	>		162112.546		ppb			1.527			161495.594
51	V			18.889	-0.009247	ppb			10.189	28.206		25.556
59	Co			10.000	-0.003168	ppb			66.667	127.931		15.556
60	Ni			17.778	0.007969	ppb			47.186	119.863		11.111
75	As			689.213	0.020757	ppb			3.880	234.915		697.990
71	Ga-ISK	>		107161.579		ppb			1.282			110007.508
82	Se-2			4.218	0.067390	ppb			178.648	279.639		1.515
107	Ag-1			73.334	-0.027572	ppb			34.318	24.619		176.668
115	In-ISK			95389.452		ppb			0.833			95783.323
45	Sc-ISK	>		268849.611		ppb			0.587			275641.682
23	Na			2753.599	-0.319912	ppb			6.442	106.923		2976.977
39	K			133032.156	1.642491	ppb			1.179	85.947		134490.119
24	Mg			101.667	-0.157867	ppb			34.892	42.292		190.001
159	Tb-ISK			185158.446		ppb			1.765			188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63366_2-A

Autosampler Position: 330

Sample Date/Time: Thursday, April 16, 2020 15:19:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCS 570-63366_2-A.165

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		28569.651		ppb		0.540		28778.971
9	Be	|		148592.181	107.279693	ppb		1.074	1.337	17.778
10	B	|		31876.650	99.410800	ppb		2.468	2.997	274.447
27	Al	|		743262.216	105.238056	ppb		1.138	0.693	7707.637
43	Ca-2	|		77394.102	5386.431649	ppb		1.301	0.542	58.333
49	Ti	|		59262.670	104.772751	ppb		0.475	0.744	202.224
52	Cr	|		804331.948	105.108785	ppb		0.811	0.393	9156.267
55	Mn	|		1100443.691	95.030613	ppb		2.419	1.555	854.470
57	Fe	|		1091483.202	4894.023192	ppb		2.561	1.446	6995.047
45	Sc-IS	>		1312826.844		ppb		1.189		1340170.407
66	Zn	|		108344.562	107.246437	ppb		5.506	4.431	558.900
86	Sr	|		188143.836	103.371306	ppb		2.117	0.955	6.889
65	Cu	|		161112.887	104.135788	ppb		4.963	3.825	78.594
69	Ga-IS	|		376510.176		ppb		4.874		365683.403
95	Mo	|		181954.035	105.417405	ppb		2.272	1.136	101.111
115	In-IS	>		253037.000		ppb		1.756		254798.624
111	Cd	|		171384.597	109.637175	ppb		1.878	2.141	10.899
118	Sn	|		590122.450	124.252350	ppb		1.472	0.371	1431.183
121	Sb	|		546836.857	103.327018	ppb		1.010	1.678	1416.737
135	Ba	|		104428.345	103.577194	ppb		3.290	3.078	21.111
165	Ho-IS	|		252430.778		ppb		0.668		254208.571
159	Tb-IS	|		218016.594		ppb		0.631		219653.582
207	Pb	|		1592765.123	104.081470	ppb		1.295	0.514	173.334
203	Tl	|		454327.868	100.251486	ppb		2.098	1.285	11.111
209	Bi-IS	>		163921.838		ppb		1.091		161495.594
51	V	|		68921.430	103.128664	ppb		1.314	1.533	25.556
59	Co	|		171118.783	102.373912	ppb		0.631	1.500	15.556
60	Ni	|		96668.213	107.863185	ppb		1.129	0.537	11.111
75	As	|		49191.786	106.597072	ppb		0.638	0.348	697.990
71	Ga-ISK	>		109976.159		ppb		0.873		110007.508
82	Se-2	|		4283.171	104.765713	ppb		1.865	1.576	1.515
107	Ag-1	|		179626.879	48.717014	ppb		1.587	1.517	176.668
115	In-ISK	|		94671.467		ppb		0.931		95783.323
45	Sc-ISK	>		277020.358		ppb		1.176		275641.682
23	Na	|		477488.852	977.985967	ppb		0.585	1.314	2976.977
39	K	|		1268226.178	972.306513	ppb		0.342	1.039	134490.119
24	Mg	|		2909968.610	5327.291280	ppb		0.467	0.835	190.001
159	Tb-ISK	|		189945.230		ppb		1.260		188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63366_3-A

Autosampler Position: 331

Sample Date/Time: Thursday, April 16, 2020 15:22:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCSD 570-63366_3-A.166

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	27968.467		ppb	1.541			28778.971
9	Be	|	144802.559	106.088990	ppb	1.848	1.399		17.778
10	B	|	31676.196	100.245391	ppb	1.486	0.783		274.447
27	Al	|	725614.957	104.265295	ppb	0.963	1.721		7707.637
43	Ca-2	|	75448.848	5328.429398	ppb	3.192	2.364		58.333
49	Ti	|	59704.515	107.135655	ppb	1.245	1.887		202.224
52	Cr	|	800934.803	106.221646	ppb	2.723	2.036		9156.267
55	Mn	|	1104408.372	96.788189	ppb	3.390	2.695		854.470
57	Fe	|	1096378.633	4989.888849	ppb	2.872	2.368		6995.047
45	Sc-IS	>	1293581.910		ppb	0.843			1340170.407
66	Zn	|	107858.211	108.383287	ppb	3.618	3.077		558.900
86	Sr	|	187839.071	104.748207	ppb	0.756	0.486		6.889
65	Cu	|	158360.044	103.899144	ppb	3.519	2.946		78.594
69	Ga-IS	|	380136.406		ppb	3.023			365683.403
95	Mo	|	182889.067	107.540566	ppb	1.855	1.158		101.111
115	In-IS	>	252959.873		ppb	1.264			254798.624
111	Cd	|	169862.178	108.685873	ppb	0.805	0.487		10.899
118	Sn	|	593907.935	125.081111	ppb	2.244	1.591		1431.183
121	Sb	|	561142.830	106.056055	ppb	1.160	0.882		1416.737
135	Ba	|	103339.266	102.511549	ppb	2.709	1.605		21.111
165	Ho-IS	|	251522.845		ppb	1.050			254208.571
159	Tb-IS	|	218435.130		ppb	0.572			219653.582
207	Pb	|	1584661.766	103.651072	ppb	0.536	0.934		173.334
203	Tl	|	455062.020	100.519902	ppb	0.206	1.530		11.111
209	Bi-IS	>	163779.140		ppb	1.332			161495.594
51	V	|	69266.430	106.338506	ppb	1.442	1.899		25.556
59	Co	|	170711.806	104.778821	ppb	1.210	1.678		15.556
60	Ni	|	93171.787	106.659280	ppb	1.593	1.253		11.111
75	As	|	48787.640	108.492255	ppb	0.709	0.704		697.990
71	Ga-ISK	>	107192.886		ppb	0.469			110007.508
82	Se-2	|	4233.808	106.245195	ppb	1.566	1.137		1.515
107	Ag-1	|	178221.497	49.590856	ppb	0.522	0.191		176.668
115	In-ISK	|	95311.830		ppb	0.389			95783.323
45	Sc-ISK	>	271101.726		ppb	1.112			275641.682
23	Na	|	465957.421	975.121555	ppb	0.776	0.407		2976.977
39	K	|	1249381.372	979.549591	ppb	0.284	1.222		134490.119
24	Mg	|	2862528.912	5354.486814	ppb	1.358	0.638		190.001
159	Tb-ISK	|	186536.737		ppb	1.185			188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-24980-F-1-A SD @5

Autosampler Position: 332

Sample Date/Time: Thursday, April 16, 2020 15:25:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-24980-F-1-A SD @5.167

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30508.100		ppb	1.253		28778.971
9	Be	24.444	0.004471	ppb	55.111	204.507	17.778
10	B	16412.757	49.429824	ppb	1.057	2.056	274.447
27	Al	9273.012	0.211481	ppb	4.213	17.495	7707.637
43	Ca-2	431301.739	29247.703970	ppb	2.606	0.415	58.333
49	Ti	962.255	1.309772	ppb	6.966	6.402	202.224
52	Cr	11789.307	0.332315	ppb	0.703	9.810	9156.267
55	Mn	2332918.400	196.287699	ppb	1.971	0.403	854.470
57	Fe	27572.161	90.218053	ppb	3.662	1.941	6995.047
45	Sc-IS	> 1348144.270		ppb	2.358		1340170.407
66	Zn	11187.717	10.294945	ppb	3.934	1.682	558.900
86	Sr	320865.730	171.669848	ppb	3.060	0.719	6.889
65	Cu	1057.065	0.615766	ppb	5.123	3.057	78.594
69	Ga-IS	359816.215		ppb	4.818		365683.403
95	Mo	1671.209	0.885765	ppb	5.052	3.605	101.111
115	In-IS	> 251517.653		ppb	1.316		254798.624
111	Cd	53.157	0.027243	ppb	24.966	30.186	10.899
118	Sn	5451.043	0.857323	ppb	6.852	8.810	1431.183
121	Sb	11760.414	1.974137	ppb	7.872	8.494	1416.737
135	Ba	20014.028	19.949487	ppb	4.471	3.649	21.111
165	Ho-IS	253694.198		ppb	1.400		254208.571
159	Tb-IS	218605.543		ppb	0.931		219653.582
207	Pb	5137.034	0.329058	ppb	0.562	1.682	173.334
203	Tl	181.112	0.038055	ppb	5.313	5.999	11.111
209	Bi-IS	> 161622.602		ppb	1.560		161495.594
51	V	186.668	0.245729	ppb	13.482	14.006	25.556
59	Co	267.780	0.153687	ppb	9.343	9.763	15.556
60	Ni	475.564	0.527949	ppb	7.495	8.894	11.111
75	As	693.264	0.016918	ppb	1.544	212.050	697.990
71	Ga-ISK	> 108089.660		ppb	1.507		110007.508
82	Se-2	20.862	0.483098	ppb	19.418	21.922	1.515
107	Ag-1	184.446	0.003021	ppb	4.548	94.088	176.668
115	In-ISK	94621.517		ppb	1.270		95783.323
45	Sc-ISK	> 273459.181		ppb	0.417		275641.682
23	Na	9844322.127	20546.123109	ppb	0.984	0.729	2976.977
39	K	1062872.482	807.928514	ppb	0.709	1.255	134490.119
24	Mg	6369859.077	11812.953736	ppb	1.344	1.351	190.001
159	Tb-ISK	189514.232		ppb	1.276		188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-24980-F-1-A

Autosampler Position: 333

Sample Date/Time: Thursday, April 16, 2020 15:27:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-24980-F-1-A.168

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		40129.628		ppb		1.624		28778.971
9	Be	|		18.889	-0.000471	ppb	26.956	726.407		17.778
10	B	|		81283.932	225.458138	ppb	0.663	1.549		274.447
27	Al	|		18722.270	1.290149	ppb	3.443	3.549		7707.637
43	Ca-2	|		2427560.023	149640.087224	ppb	2.854	0.994		58.333
49	Ti	|		3478.201	5.112013	ppb	2.353	4.076		202.224
52	Cr	|		12270.827	0.249820	ppb	3.289	8.271		9156.267
55	Mn	|		12002292.919	918.127430	ppb	2.093	0.194		854.470
57	Fe	|		91530.104	334.715812	ppb	1.456	0.792		6995.047
45	Sc-IS	>		1483130.978		ppb	1.901			1340170.407
66	Zn	|		51758.174	45.034665	ppb	4.696	2.862		558.900
86	Sr	|		1625029.943	790.394643	ppb	1.931	0.302		6.889
65	Cu	|		4109.409	2.303810	ppb	0.753	2.368		78.594
69	Ga-IS	|		396222.245		ppb	3.734			365683.403
95	Mo	|		5957.909	2.999633	ppb	2.694	0.896		101.111
115	In-IS	>		262408.918		ppb	1.044			254798.624
111	Cd	|		113.044	0.062784	ppb	6.526	6.353		10.899
118	Sn	|		1646.762	0.035098	ppb	4.379	31.975		1431.183
121	Sb	|		1368.955	-0.016491	ppb	3.045	30.424		1416.737
135	Ba	|		103846.225	99.305227	ppb	2.462	1.423		21.111
165	Ho-IS	|		267553.402		ppb	0.640			254208.571
159	Tb-IS	|		232528.298		ppb	0.535			219653.582
207	Pb	|		22294.589	1.478313	ppb	0.435	1.925		173.334
203	Tl	|		67.778	0.012834	ppb	25.237	31.319		11.111
209	Bi-IS	>		160360.867		ppb	2.210			161495.594
51	V	|		778.910	1.164831	ppb	8.795	9.633		25.556
59	Co	|		1122.266	0.683319	ppb	2.107	2.419		15.556
60	Ni	|		1738.995	1.990390	ppb	7.764	8.683		11.111
75	As	|		760.667	0.191057	ppb	6.815	62.300		697.990
71	Ga-ISK	>		106616.394		ppb	1.003			110007.508
82	Se-2	|		53.515	1.314338	ppb	8.494	9.579		1.515
107	Ag-1	|		45.556	-0.035162	ppb	40.299	14.953		176.668
115	In-ISK	|		93425.068		ppb	2.850			95783.323
45	Sc-ISK	>		282408.837		ppb	1.282			275641.682
23	Na	|		50109519.503	101304.922872	ppb	0.794	1.434		2976.977
39	K	|		5106061.850	4181.847581	ppb	1.021	0.662		134490.119
24	Mg	|		32021389.462	57503.242599	ppb	1.272	0.311		190.001
159	Tb-ISK	|		194519.380		ppb	0.381			188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-24980-F-1-B MS

Autosampler Position: 334

Sample Date/Time: Thursday, April 16, 2020 15:30:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-24980-F-1-B MS.169

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	39785.337		ppb		1.888		28778.971
9	Be	|	149823.776	92.205480	ppb	0.160	1.845		17.778
10	B	|	111565.074	298.213726	ppb	0.837	1.089		274.447
27	Al	|	920930.194	111.200441	ppb	1.543	0.898		7707.637
43	Ca-2	|	2532645.541	150334.969373	ppb	2.080	0.403		58.333
49	Ti	|	68211.354	102.787179	ppb	0.734	1.502		202.224
52	Cr	|	820314.263	91.215636	ppb	1.109	0.817		9156.267
55	Mn	|	13287193.614	978.675789	ppb	2.091	0.348		854.470
57	Fe	|	1246439.807	4762.674040	ppb	2.753	1.389		6995.047
45	Sc-IS	>	1540331.449		ppb	1.868			1340170.407
66	Zn	|	159104.072	134.394966	ppb	3.623	2.490		558.900
86	Sr	|	1824727.526	854.623484	ppb	1.363	0.565		6.889
65	Cu	|	156669.715	86.308494	ppb	3.435	1.701		78.594
69	Ga-IS	|	424184.732		ppb	3.019			365683.403
95	Mo	|	185153.252	91.447059	ppb	0.267	1.762		101.111
115	In-IS	>	265825.462		ppb	1.192			254798.624
111	Cd	|	163251.984	99.409118	ppb	0.460	1.632		10.899
118	Sn	|	520732.548	104.318848	ppb	2.572	2.481		1431.183
121	Sb	|	544455.781	97.905569	ppb	0.585	1.097		1416.737
135	Ba	|	214306.019	202.325882	ppb	2.267	1.120		21.111
165	Ho-IS	|	273896.380		ppb	0.700			254208.571
159	Tb-IS	|	237023.721		ppb	1.417			219653.582
207	Pb	|	1586179.041	103.790357	ppb	0.841	1.354		173.334
203	Tl	|	452445.401	99.972047	ppb	0.530	0.764		11.111
209	Bi-IS	>	163711.624		ppb	0.668			161495.594
51	V	|	67916.620	102.712259	ppb	0.589	1.917		25.556
59	Co	|	161116.880	97.423277	ppb	1.220	2.596		15.556
60	Ni	|	88503.304	99.806851	ppb	0.295	1.173		11.111
75	As	|	49371.119	108.140288	ppb	1.342	0.980		697.990
71	Ga-ISK	>	108826.326		ppb	1.411			110007.508
82	Se-2	|	4309.159	106.548816	ppb	1.925	3.289		1.515
107	Ag-1	|	116416.924	31.885537	ppb	6.104	5.618		176.668
115	In-ISK	|	96246.121		ppb	0.658			95783.323
45	Sc-ISK	>	285381.466		ppb	1.225			275641.682
23	Na	|	51693541.593	103420.938151	ppb	0.361	1.519		2976.977
39	K	|	6415801.044	5228.444127	ppb	0.173	1.425		134490.119
24	Mg	|	35374853.535	62871.282059	ppb	0.718	1.671		190.001
159	Tb-ISK	|	198484.066		ppb	0.778			188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-24980-F-1-C MSD

Autosampler Position: 335

Sample Date/Time: Thursday, April 16, 2020 15:33:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-24980-F-1-C MSD.170

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	39569.190		ppb	2.413			28778.971
9	Be	|	150122.467	92.177877	ppb	0.701	0.406		17.778
10	B	|	112533.736	300.155363	ppb	0.791	0.972		274.447
27	Al	|	930835.693	112.170851	ppb	1.080	1.368		7707.637
43	Ca-2	|	2577666.238	152695.210586	ppb	0.788	0.440		58.333
49	Ti	|	68552.979	103.073314	ppb	0.313	0.256		202.224
52	Cr	|	816637.901	90.602373	ppb	1.112	0.833		9156.267
55	Mn	|	13227922.445	972.338854	ppb	0.878	0.888		854.470
57	Fe	|	1254433.228	4783.740086	ppb	2.361	2.169		6995.047
45	Sc-IS	>	1543500.649		ppb	0.348			1340170.407
66	Zn	|	159594.648	134.543935	ppb	2.468	2.187		558.900
86	Sr	|	1855024.920	866.962231	ppb	1.016	0.731		6.889
65	Cu	|	157320.266	86.502911	ppb	2.442	2.269		78.594
69	Ga-IS	|	425141.729		ppb	2.066			365683.403
95	Mo	|	187155.839	92.227428	ppb	1.024	1.071		101.111
115	In-IS	>	268339.213		ppb	1.490			254798.624
111	Cd	|	164635.875	99.305166	ppb	0.956	0.538		10.899
118	Sn	|	551682.798	109.499258	ppb	1.275	0.686		1431.183
121	Sb	|	560009.137	99.778839	ppb	0.807	2.277		1416.737
135	Ba	|	214818.355	200.961919	ppb	2.792	3.314		21.111
165	Ho-IS	|	275568.178		ppb	1.045			254208.571
159	Tb-IS	|	239416.203		ppb	0.165			219653.582
207	Pb	|	1605397.963	105.382661	ppb	1.558	0.408		173.334
203	Tl	|	458200.325	101.579258	ppb	0.885	1.265		11.111
209	Bi-IS	>	163178.976		ppb	1.203			161495.594
51	V	|	68253.787	102.527084	ppb	1.135	2.201		25.556
59	Co	|	161195.527	96.807627	ppb	1.145	2.166		15.556
60	Ni	|	89254.643	99.969693	ppb	1.068	0.806		11.111
75	As	|	49289.038	107.217838	ppb	1.268	0.428		697.990
71	Ga-ISK	>	109561.894		ppb	1.078			110007.508
82	Se-2	|	4438.529	108.977170	ppb	2.721	2.437		1.515
107	Ag-1	|	132442.218	36.037436	ppb	5.262	4.719		176.668
115	In-ISK	|	97309.287		ppb	1.405			95783.323
45	Sc-ISK	>	287540.570		ppb	0.575			275641.682
23	Na	|	52184727.740	103605.705261	ppb	1.022	0.577		2976.977
39	K	|	6357345.285	5139.828234	ppb	1.673	2.287		134490.119
24	Mg	|	35035140.235	61796.189084	ppb	1.947	2.324		190.001
159	Tb-ISK	|	197756.066		ppb	0.727			188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-24980-F-1-A PDS

Autosampler Position: 336

Sample Date/Time: Thursday, April 16, 2020 15:36:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-24980-F-1-A PDS.171

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	39709.568		ppb		1.712		28778.971
9	Be	|	153313.920	94.828878	ppb		1.175	1.037	17.778
10	B	|	111113.873	298.526651	ppb		1.810	1.538	274.447
27	Al	|	812586.163	98.504239	ppb		1.048	0.412	7707.637
43	Ca-2	|	2506912.591	149592.609601	ppb		1.126	0.773	58.333
49	Ti	|	69374.720	105.084128	ppb		1.019	1.353	202.224
52	Cr	|	852161.042	95.295219	ppb		1.652	1.139	9156.267
55	Mn	|	13025800.169	964.437493	ppb		1.998	1.340	854.470
57	Fe	|	1248863.666	4797.321781	ppb		2.084	1.426	6995.047
45	Sc-IS	>	1532275.107		ppb		0.727		1340170.407
66	Zn	|	159615.347	135.536864	ppb		3.760	3.055	558.900
86	Sr	|	1826790.805	860.012828	ppb		1.248	0.594	6.889
65	Cu	|	161869.110	89.648462	ppb		3.426	2.718	78.594
69	Ga-IS	|	423459.895		ppb		3.279		365683.403
95	Mo	|	195704.798	97.149105	ppb		0.905	0.540	101.111
115	In-IS	>	265634.732		ppb		0.692		254798.624
111	Cd	|	174645.101	106.409208	ppb		0.853	0.254	10.899
118	Sn	|	595700.192	119.463859	ppb		0.774	0.645	1431.183
121	Sb	|	565214.644	101.714984	ppb		0.510	0.224	1416.737
135	Ba	|	211744.733	200.065801	ppb		1.865	1.667	21.111
165	Ho-IS	|	274359.531		ppb		0.408		254208.571
159	Tb-IS	|	238094.452		ppb		0.729		219653.582
207	Pb	|	1653126.103	109.258842	ppb		0.579	1.627	173.334
203	Tl	|	470418.168	104.995102	ppb		1.089	2.153	11.111
209	Bi-IS	>	162096.786		ppb		1.373		161495.594
51	V	|	72097.065	110.344066	ppb		1.781	1.416	25.556
59	Co	|	169117.426	103.487607	ppb		1.031	1.414	15.556
60	Ni	|	94535.123	107.894347	ppb		1.204	0.304	11.111
75	As	|	51134.210	113.438124	ppb		0.731	0.616	697.990
71	Ga-ISK	>	107517.553		ppb		0.953		110007.508
82	Se-2	|	4521.886	113.150063	ppb		2.197	2.686	1.515
107	Ag-1	|	148497.138	41.185480	ppb		2.951	2.581	176.668
115	In-ISK	|	96677.239		ppb		1.514		95783.323
45	Sc-ISK	>	285737.084		ppb		0.121		275641.682
23	Na	|	51442654.545	102779.367091	ppb		1.633	1.721	2976.977
39	K	|	6253372.716	5086.136680	ppb		1.673	1.828	134490.119
24	Mg	|	34781810.369	61732.887984	ppb		1.633	1.674	190.001
159	Tb-ISK	|	197585.706		ppb		0.473		188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, April 16, 2020 15:38:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\b.172

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32220.753		ppb	2.329		28778.971
9	Be	35.556	0.011592	ppb	27.063	56.360	17.778
10	B	770.021	1.436376	ppb	8.350	15.976	274.447
27	Al	7787.681	-0.031734	ppb	4.691	114.052	7707.637
43	Ca-2	328.337	17.565662	ppb	10.696	14.613	58.333
49	Ti	381.116	0.285306	ppb	8.405	20.745	202.224
52	Cr	13079.318	0.442090	ppb	0.972	9.604	9156.267
55	Mn	2303.519	0.115062	ppb	2.895	4.190	854.470
57	Fe	12273.049	21.209616	ppb	1.773	1.466	6995.047
45	Sc-IS	> 1394735.815		ppb	1.738		1340170.407
66	Zn	698.906	0.109405	ppb	7.455	34.416	558.900
86	Sr	215.144	0.107547	ppb	7.798	7.520	6.889
65	Cu	188.951	0.065311	ppb	7.110	14.091	78.594
69	Ga-IS	378283.503		ppb	3.926		365683.403
95	Mo	1334.507	0.669858	ppb	12.899	12.129	101.111
115	In-IS	> 260754.234		ppb	1.766		254798.624
111	Cd	20.531	0.005719	ppb	69.214	151.764	10.899
118	Sn	15558.496	2.884523	ppb	7.103	5.943	1431.183
121	Sb	19041.591	3.232181	ppb	4.859	3.408	1416.737
135	Ba	70.000	0.046641	ppb	16.496	24.688	21.111
165	Ho-IS	259326.011		ppb	0.807		254208.571
159	Tb-IS	222536.583		ppb	0.461		219653.582
207	Pb	1191.131	0.063124	ppb	8.785	9.578	173.334
203	Tl	210.002	0.041977	ppb	11.111	12.575	11.111
209	Bi-IS	> 170936.629		ppb	0.721		161495.594
51	V	73.334	0.069358	ppb	18.182	29.201	25.556
59	Co	24.444	0.005001	ppb	20.830	56.779	15.556
60	Ni	74.445	0.068948	ppb	9.321	10.602	11.111
75	As	735.429	0.049551	ppb	2.209	89.534	697.990
71	Ga-ISK	> 112295.211		ppb	0.947		110007.508
82	Se-2	4.520	0.071269	ppb	68.131	104.050	1.515
107	Ag-1	2076.819	0.503904	ppb	10.953	11.024	176.668
115	In-ISK	98003.986		ppb	1.632		95783.323
45	Sc-ISK	> 280404.071		ppb	0.091		275641.682
23	Na	13518.062	21.357095	ppb	2.576	3.248	2976.977
39	K	137288.847	0.403337	ppb	1.454	434.473	134490.119
24	Mg	6551.504	11.499482	ppb	4.238	4.333	190.001
159	Tb-ISK	191382.098		ppb	0.385		188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 15:41:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.173

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	30061.598		ppb		0.962		28778.971
9	Be	|	144884.482	97.014595	ppb	1.778	3.345		17.778
10	B	|	84001.860	244.099430	ppb	1.871	1.655		274.447
27	Al	|	748601.497	98.216823	ppb	0.547	1.200		7707.637
43	Ca-2	|	80663.917	5205.080587	ppb	3.238	2.680		58.333
49	Ti	|	59310.660	97.212009	ppb	1.409	2.286		202.224
52	Cr	|	804882.413	97.453664	ppb	1.666	2.436		9156.267
55	Mn	|	1148914.395	92.013328	ppb	1.933	2.508		854.470
57	Fe	|	1110827.748	4617.751333	ppb	2.421	2.967		6995.047
45	Sc-IS	>	1415904.065		ppb	1.634			1340170.407
66	Zn	|	108159.373	99.287259	ppb	3.655	4.349		558.900
86	Sr	|	190286.295	96.960852	ppb	1.431	2.137		6.889
65	Cu	|	163136.386	97.811926	ppb	3.313	3.750		78.594
69	Ga-IS	|	406776.732		ppb	2.453			365683.403
95	Mo	|	176986.325	95.100072	ppb	0.930	2.350		101.111
115	In-IS	>	267820.267		ppb	2.462			254798.624
111	Cd	|	167898.030	101.496953	ppb	0.828	2.115		10.899
118	Sn	|	495184.109	98.457106	ppb	1.603	1.071		1431.183
121	Sb	|	550459.292	98.265953	ppb	1.355	1.832		1416.737
135	Ba	|	104621.978	98.058407	ppb	3.296	3.504		21.111
165	Ho-IS	|	269426.279		ppb	1.666			254208.571
159	Tb-IS	|	234844.590		ppb	0.244			219653.582
207	Pb	|	1598409.468	99.281061	ppb	1.638	1.046		173.334
203	Tl	|	474576.406	99.549512	ppb	0.604	1.024		11.111
209	Bi-IS	>	172462.727		ppb	1.609			161495.594
51	V	|	67836.237	99.681543	ppb	0.423	0.451		25.556
59	Co	|	170460.993	100.144032	ppb	0.686	0.252		15.556
60	Ni	|	93395.519	102.350129	ppb	2.311	2.589		11.111
75	As	|	46475.256	98.802972	ppb	1.818	2.437		697.990
71	Ga-ISK	>	111983.887		ppb	0.837			110007.508
82	Se-2	|	4093.799	98.334005	ppb	1.382	0.566		1.515
107	Ag-1	|	383849.759	102.296206	ppb	0.520	1.281		176.668
115	In-ISK	|	98611.386		ppb	1.266			95783.323
45	Sc-ISK	>	283175.780		ppb	0.568			275641.682
23	Na	|	2574586.736	5184.649446	ppb	0.718	1.062		2976.977
39	K	|	6250832.094	5130.932647	ppb	1.346	1.116		134490.119
24	Mg	|	2914693.804	5219.759288	ppb	0.210	0.712		190.001
159	Tb-ISK	|	195810.231		ppb	0.924			188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 15:44:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.174

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29894.604		ppb			3.409			28778.971
9	Be	|		20.000	0.001306	ppb		44.096	462.138			17.778
10	B	|		614.458	1.017288	ppb		11.952	23.996			274.447
27	Al	|		5192.067	-0.365221	ppb		13.878	25.712			7707.637
43	Ca-2	|		105.000	3.053372	ppb		29.738	66.942			58.333
49	Ti	|		210.002	0.007215	ppb		8.399	375.796			202.224
52	Cr	|		9264.116	-0.006275	ppb		2.860	493.536			9156.267
55	Mn	|		1060.039	0.015917	ppb		5.773	35.434			854.470
57	Fe	|		9205.190	9.075671	ppb		3.705	11.472			6995.047
45	Sc-IS	>		1363181.658		ppb		1.188				1340170.407
66	Zn	|		580.012	0.010563	ppb		11.945	570.467			558.900
86	Sr	|		95.829	0.047138	ppb		36.779	40.904			6.889
65	Cu	|		138.355	0.036442	ppb		7.409	20.239			78.594
69	Ga-IS	|		367862.878		ppb		4.317				365683.403
95	Mo	|		497.787	0.220231	ppb		13.680	15.922			101.111
115	In-IS	>		259352.666		ppb		0.566				254798.624
111	Cd	|		21.177	0.006262	ppb		63.153	131.886			10.899
118	Sn	|		5995.706	0.934635	ppb		6.768	8.927			1431.183
121	Sb	|		3329.279	0.348595	ppb		9.386	15.817			1416.737
135	Ba	|		35.556	0.013551	ppb		51.634	129.694			21.111
165	Ho-IS	|		260997.175		ppb		0.913				254208.571
159	Tb-IS	|		226448.467		ppb		0.591				219653.582
207	Pb	|		584.450	0.025370	ppb		13.974	20.761			173.334
203	Tl	|		191.112	0.038220	ppb		14.834	16.150			11.111
209	Bi-IS	>		169869.567		ppb		0.700				161495.594
51	V	|		34.444	0.013184	ppb		14.783	55.818			25.556
59	Co	|		31.111	0.009283	ppb		26.964	54.755			15.556
60	Ni	|		40.000	0.032174	ppb		25.000	35.036			11.111
75	As	|		669.891	-0.064344	ppb		6.823	159.279			697.990
71	Ga-ISK	>		110210.159		ppb		0.459				110007.508
82	Se-2	|		8.862	0.179322	ppb		11.509	14.022			1.515
107	Ag-1	|		984.479	0.218725	ppb		7.739	9.237			176.668
115	In-ISK	|		96657.639		ppb		1.543				95783.323
45	Sc-ISK	>		276559.137		ppb		0.535				275641.682
23	Na	|		5032.555	4.223409	ppb		5.372	13.457			2976.977
39	K	|		139126.461	3.607156	ppb		1.115	54.657			134490.119
24	Mg	|		1446.740	2.304017	ppb		7.019	8.587			190.001
159	Tb-ISK	|		189989.757		ppb		0.934				188286.130

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, April 16, 2020 15:47:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICIS-23447.175

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29567.237		ppb	1.513		
9	Be	25.556		ppb	19.924		
10	B	402.228		ppb	17.072		
27	Al	7240.724		ppb	1.849		
43	Ca-2	98.334		ppb	25.083		
49	Ti	254.447		ppb	15.127		
52	Cr	9606.564		ppb	2.960		
55	Mn	897.806		ppb	6.002		
57	Fe	8749.349		ppb	4.934		
45	Sc-IS	> 1358185.143		ppb	2.403		
66	Zn	543.344		ppb	16.880		
86	Sr	9.086		ppb	276.340		
65	Cu	130.731		ppb	11.460		
69	Ga-IS	366045.570		ppb	2.533		
95	Mo	166.668		ppb	12.000		
115	In-IS	> 257435.514		ppb	2.782		
111	Cd	5.206		ppb	97.022		
118	Sn	3710.482		ppb	4.275		
121	Sb	2271.294		ppb	12.722		
135	Ba	27.778		ppb	36.661		
165	Ho-IS	257240.201		ppb	1.599		
159	Tb-IS	223779.136		ppb	0.715		
207	Pb	295.557		ppb	5.330		
203	Tl	54.445		ppb	30.201		
209	Bi-IS	> 168189.996		ppb	1.566		
51	V	37.778		ppb	30.987		
59	Co	16.667		ppb	34.641		
60	Ni	40.000		ppb	30.046		
75	As	719.384		ppb	1.122		
71	Ga-ISK	> 108559.824		ppb	0.692		
82	Se-2	5.192		ppb	109.472		
107	Ag-1	651.126		ppb	12.965		
115	In-ISK	94541.477		ppb	0.310		
45	Sc-ISK	> 271828.862		ppb	1.517		
23	Na	3697.146		ppb	6.137		
39	K	136946.608		ppb	0.253		
24	Mg	636.681		ppb	3.874		
159	Tb-ISK	189161.506		ppb	0.670		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, April 16, 2020 15:49:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\IC-210761.176

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28825.727		ppb		1.957		29567.237
9	Be	|	282046.049	200.000000	ppb	0.840	1.714		25.556
10	B	|	161666.360	500.000000	ppb	1.156	0.242		402.228
27	Al	|	1438399.658	200.000000	ppb	0.569	0.825		7240.724
43	Ca-2	|	153598.123	10200.000000	ppb	1.596	0.227		98.334
49	Ti	|	115349.772	200.000000	ppb	3.584	2.366		254.447
52	Cr	|	1551210.891	200.000000	ppb	2.409	1.069		9606.564
55	Mn	|	2365330.095	200.000000	ppb	2.101	0.760		897.806
57	Fe	|	2311761.714	10200.000000	ppb	2.746	1.397		8749.349
45	Sc-IS	>	1363287.268		ppb	1.371			1358185.143
66	Zn	|	204360.647	200.000000	ppb	4.012	2.716		543.344
86	Sr	|	370206.478	200.000000	ppb	0.516	1.099		9.086
65	Cu	|	311174.146	200.000000	ppb	3.493	2.146		130.731
69	Ga-IS	|	405925.477		ppb	3.562			366045.570
95	Mo	|	353815.712	200.000000	ppb	0.347	1.165		166.668
115	In-IS	>	260483.076		ppb	0.534			257435.514
111	Cd	|	326933.582	200.000000	ppb	0.562	0.275		5.206
118	Sn	|	974213.437	200.000000	ppb	0.906	1.178		3710.482
121	Sb	|	1090099.202	200.000000	ppb	1.338	1.526		2271.294
135	Ba	|	207548.654	200.000000	ppb	2.744	2.783		27.778
165	Ho-IS	|	263415.372		ppb	0.800			257240.201
159	Tb-IS	|	231336.976		ppb	0.599			223779.136
207	Pb	|	3134506.432	200.000000	ppb	0.528	0.861		295.557
203	Tl	|	927940.075	200.000000	ppb	1.231	0.936		54.445
209	Bi-IS	>	166272.139		ppb	1.334			168189.996
51	V	|	132876.307	200.000000	ppb	1.506	1.081		37.778
59	Co	|	333147.043	200.000000	ppb	1.555	0.885		16.667
60	Ni	|	178595.039	200.000000	ppb	0.842	1.520		40.000
75	As	|	92053.886	200.000000	ppb	0.829	0.767		719.384
71	Ga-ISK	>	109547.320		ppb	0.696			108559.824
82	Se-2	|	8154.179	200.000000	ppb	1.172	0.975		5.192
107	Ag-1	|	740561.063	200.000000	ppb	0.894	0.973		651.126
115	In-ISK	|	95426.071		ppb	1.134			94541.477
45	Sc-ISK	>	277441.712		ppb	1.075			271828.862
23	Na	|	4986243.288	10200.000000	ppb	1.433	2.497		3697.146
39	K	|	12053206.777	10200.000000	ppb	0.901	1.889		136946.608
24	Mg	|	5587354.399	10200.000000	ppb	0.759	1.589		636.681
159	Tb-ISK	|	193926.128		ppb	0.954			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 15:52:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.177

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28301.342		ppb		1.064		29567.237
9	Be	|	137484.086	99.274077	ppb		1.748	2.015	25.556
10	B	|	78610.256	247.014633	ppb		2.893	3.488	402.228
27	Al	|	718449.922	101.235020	ppb		1.542	1.391	7240.724
43	Ca-2	|	76284.811	5156.559526	ppb		0.784	1.234	98.334
49	Ti	|	57375.015	101.110452	ppb		1.973	1.132	254.447
52	Cr	|	768500.892	100.294958	ppb		2.362	1.533	9606.564
55	Mn	|	1099258.585	94.621899	ppb		2.422	1.581	897.806
57	Fe	|	1070813.290	4791.638390	ppb		2.105	1.270	8749.349
45	Sc-IS	>	1338565.418		ppb		0.855		1358185.143
66	Zn	|	103276.838	102.684786	ppb		4.152	3.335	543.344
86	Sr	|	182813.416	100.573111	ppb		1.211	0.394	9.086
65	Cu	|	155386.582	101.678061	ppb		3.695	2.888	130.731
69	Ga-IS	|	388327.011		ppb		4.753		366045.570
95	Mo	|	173502.901	99.827694	ppb		1.151	0.481	166.668
115	In-IS	>	256620.278		ppb		0.632		257435.514
111	Cd	|	161591.900	100.338025	ppb		0.938	0.322	5.206
118	Sn	|	485820.727	100.853264	ppb		0.759	0.674	3710.482
121	Sb	|	539658.908	100.283334	ppb		2.382	1.959	2271.294
135	Ba	|	100755.466	98.524973	ppb		3.550	2.935	27.778
165	Ho-IS	|	259397.205		ppb		0.349		257240.201
159	Tb-IS	|	223030.940		ppb		0.909		223779.136
207	Pb	|	1561123.543	100.082386	ppb		0.946	0.718	295.557
203	Tl	|	464250.767	100.544198	ppb		0.445	0.219	54.445
209	Bi-IS	>	165455.969		ppb		0.232		168189.996
51	V	|	66242.140	100.955165	ppb		1.579	1.488	37.778
59	Co	|	164552.443	100.046812	ppb		1.593	1.117	16.667
60	Ni	|	89361.961	101.327437	ppb		0.497	0.992	40.000
75	As	|	46295.805	101.083904	ppb		2.550	2.099	719.384
71	Ga-ISK	>	108162.375		ppb		0.492		108559.824
82	Se-2	|	4112.101	102.075031	ppb		4.094	3.615	5.192
107	Ag-1	|	375756.846	102.688201	ppb		1.040	0.595	651.126
115	In-ISK	|	95365.302		ppb		0.383		94541.477
45	Sc-ISK	>	273334.777		ppb		1.074		271828.862
23	Na	|	2497439.634	5181.429880	ppb		0.463	1.510	3697.146
39	K	|	6104065.578	5184.932791	ppb		0.685	1.672	136946.608
24	Mg	|	2805247.667	5196.485448	ppb		2.327	1.257	636.681
159	Tb-ISK	|	193304.380		ppb		0.234		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 15:55:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.178

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		28136.571		ppb		0.860		29567.237
9	Be	|		32.222	0.005719	ppb	29.863	126.615		25.556
10	B	|		643.348	0.833990	ppb	5.103	13.397		402.228
27	Al	|		4696.328	-0.329418	ppb	2.282	5.242		7240.724
43	Ca-2	|		63.333	-2.154384	ppb	37.309	77.125		98.334
49	Ti	|		216.668	-0.050058	ppb	11.615	93.971		254.447
52	Cr	|		8422.484	-0.108617	ppb	3.776	35.796		9606.564
55	Mn	|		853.359	-0.000759	ppb	2.376	198.729		897.806
57	Fe	|		8157.885	-1.119768	ppb	1.814	52.440		8749.349
45	Sc-IS	|>		1303870.788		ppb	0.381			1358185.143
66	Zn	|		515.565	-0.006240	ppb	7.714	642.255		543.344
86	Sr	|		54.131	0.025634	ppb	21.729	25.590		9.086
65	Cu	|		105.157	-0.013717	ppb	23.827	121.348		130.731
69	Ga-IS	|		356923.003		ppb	4.085			366045.570
95	Mo	|		550.011	0.230556	ppb	5.178	6.851		166.668
115	In-IS	|>		252610.290		ppb	0.484			257435.514
111	Cd	|		28.845	0.014951	ppb	50.174	60.442		5.206
118	Sn	|		4851.937	0.257309	ppb	5.928	23.295		3710.482
121	Sb	|		1723.438	-0.095837	ppb	8.186	26.917		2271.294
135	Ba	|		48.889	0.021492	ppb	14.193	31.843		27.778
165	Ho-IS	|		252766.959		ppb	1.616			257240.201
159	Tb-IS	|		218790.580		ppb	0.996			223779.136
207	Pb	|		726.674	0.028567	ppb	4.789	5.992		295.557
203	Tl	|		162.223	0.023992	ppb	23.816	35.049		54.445
209	Bi-IS	|>		163258.822		ppb	1.518			168189.996
51	V	|		22.222	-0.023109	ppb	95.263	141.183		37.778
59	Co	|		42.222	0.015908	ppb	19.868	32.870		16.667
60	Ni	|		42.222	0.003257	ppb	43.481	644.660		40.000
75	As	|		708.433	0.001289	ppb	2.163	2415.968		719.384
71	Ga-ISK	|>		106817.867		ppb	0.279			108559.824
82	Se-2	|		4.883	-0.005589	ppb	74.137	1634.659		5.192
107	Ag-1	|		525.566	-0.031955	ppb	21.975	99.289		651.126
115	In-ISK	|		93776.818		ppb	2.417			94541.477
45	Sc-ISK	|>		266598.119		ppb	1.038			271828.862
23	Na	|		3608.789	-0.035802	ppb	0.640	353.957		3697.146
39	K	|		139372.177	4.523558	ppb	1.164	54.353		136946.608
24	Mg	|		730.019	0.200558	ppb	1.812	7.859		636.681
159	Tb-ISK	|		185391.983		ppb	1.210			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, April 16, 2020 15:58:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICVL-210771.179

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		28236.795		ppb			3.842			29567.237
9	Be	|		1383.400	1.002829	ppb			4.873	1.753		25.556
10	B	|		16258.153	51.272980	ppb			5.365	6.427		402.228
27	Al	|		355799.191	50.757083	ppb			3.209	1.329		7240.724
43	Ca-2	|		903.362	56.025101	ppb			2.616	6.596		98.334
49	Ti	|		771.132	0.952162	ppb			5.964	8.743		254.447
52	Cr	|		15906.635	0.898152	ppb			3.231	4.725		9606.564
55	Mn	|		11436.800	0.932051	ppb			2.504	5.192		897.806
57	Fe	|		18317.293	45.633548	ppb			1.238	5.582		8749.349
45	Sc-IS	>		1309287.269		ppb			3.200			1358185.143
66	Zn	|		5543.298	5.132372	ppb			1.356	2.357		543.344
86	Sr	|		1790.823	1.002069	ppb			5.141	2.700		9.086
65	Cu	|		1590.442	0.981213	ppb			1.787	3.226		130.731
69	Ga-IS	|		358537.696		ppb			4.299			366045.570
95	Mo	|		1826.784	0.980895	ppb			3.948	1.685		166.668
115	In-IS	>		254638.515		ppb			1.319			257435.514
111	Cd	|		1521.801	0.949141	ppb			2.323	2.120		5.206
118	Sn	|		7251.842	0.755133	ppb			3.784	7.542		3710.482
121	Sb	|		6424.780	0.785720	ppb			4.751	6.694		2271.294
135	Ba	|		997.813	0.956447	ppb			8.714	8.540		27.778
165	Ho-IS	|		254551.878		ppb			2.162			257240.201
159	Tb-IS	|		222553.806		ppb			1.670			223779.136
207	Pb	|		15695.632	0.984331	ppb			1.790	0.774		295.557
203	Tl	|		4488.484	0.957796	ppb			5.544	6.719		54.445
209	Bi-IS	>		166028.288		ppb			1.709			168189.996
51	V	|		714.462	1.045776	ppb			2.812	4.336		37.778
59	Co	|		1663.430	1.014193	ppb			4.661	5.825		16.667
60	Ni	|		925.586	1.017127	ppb			5.454	4.138		40.000
75	As	|		1119.515	0.923762	ppb			1.409	4.202		719.384
71	Ga-ISK	>		106860.460		ppb			1.465			108559.824
82	Se-2	|		42.838	0.946799	ppb			24.750	26.323		5.192
107	Ag-1	|		4015.009	0.934576	ppb			4.956	4.164		651.126
115	In-ISK	|		94092.856		ppb			1.397			94541.477
45	Sc-ISK	>		265529.494		ppb			0.638			271828.862
23	Na	|		25888.437	47.642357	ppb			0.877	0.699		3697.146
39	K	|		191024.235	51.212906	ppb			0.192	1.552		136946.608
24	Mg	|		25721.472	47.879460	ppb			1.626	2.030		636.681
159	Tb-ISK	|		187238.386		ppb			0.211			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-2-B

Autosampler Position: 308

Sample Date/Time: Thursday, April 16, 2020 16:01:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-2-B.180

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		27441.889		ppb			1.070			29567.237
9	Be	|		50.000	0.019690	ppb			6.667	15.630		25.556
10	B	|		413.339	0.116797	ppb			3.515	53.542		402.228
27	Al	|		17529.639	1.599746	ppb			1.685	3.618		7240.724
43	Ca-2	|		615.013	37.096639	ppb			4.527	7.135		98.334
49	Ti	|		200.001	-0.072962	ppb			8.819	40.689		254.447
52	Cr	|		8802.712	-0.031793	ppb			2.137	76.248		9606.564
55	Mn	|		3030.321	0.197518	ppb			2.099	4.955		897.806
57	Fe	|		7894.405	-1.577870	ppb			3.999	68.735		8749.349
45	Sc-IS	>		1277069.467		ppb			1.631			1358185.143
66	Zn	|		1585.644	1.125818	ppb			5.403	6.900		543.344
86	Sr	|		232.885	0.129225	ppb			23.024	23.289		9.086
65	Cu	|		382.804	0.178330	ppb			7.761	10.168		130.731
69	Ga-IS	|		350086.316		ppb			5.593			366045.570
95	Mo	|		165.557	0.005256	ppb			9.300	144.620		166.668
115	In-IS	>		251772.028		ppb			0.689			257435.514
111	Cd	|		60.764	0.035247	ppb			22.220	24.345		5.206
118	Sn	|		1172.270	-0.523838	ppb			7.274	3.203		3710.482
121	Sb	|		561.122	-0.315781	ppb			2.807	1.104		2271.294
135	Ba	|		84.445	0.057012	ppb			27.725	40.076		27.778
165	Ho-IS	|		249132.497		ppb			0.539			257240.201
159	Tb-IS	|		213984.301		ppb			1.565			223779.136
207	Pb	|		511.115	0.014823	ppb			6.199	13.579		295.557
203	Tl	|		134.445	0.018153	ppb			21.087	35.017		54.445
209	Bi-IS	>		162018.031		ppb			0.606			168189.996
51	V	|		44.445	0.012074	ppb			35.444	202.116		37.778
59	Co	|		54.445	0.023837	ppb			34.814	49.078		16.667
60	Ni	|		63.333	0.028515	ppb			9.116	24.453		40.000
75	As	|		692.682	-0.013643	ppb			5.209	570.209		719.384
71	Ga-ISK	>		105426.480		ppb			0.455			108559.824
82	Se-2	|		2.883	-0.054430	ppb			297.109	401.401		5.192
107	Ag-1	|		211.113	-0.118321	ppb			15.816	7.822		651.126
115	In-ISK	|		93519.235		ppb			1.647			94541.477
45	Sc-ISK	>		264399.891		ppb			0.299			271828.862
23	Na	|		21763.242	39.016387	ppb			3.036	3.281		3697.146
39	K	|		138284.968	4.564102	ppb			0.399	4.629		136946.608
24	Mg	|		7648.715	13.465362	ppb			2.458	2.467		636.681
159	Tb-ISK	|		182638.081		ppb			0.413			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-12-B

Autosampler Position: 320

Sample Date/Time: Thursday, April 16, 2020 16:03:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-12-B.181

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27776.982		ppb	1.460		29567.237
9	Be	12.222	-0.008996	ppb	41.660	43.008	25.556
10	B	312.226	-0.225011	ppb	9.569	45.751	402.228
27	Al	9092.895	0.331602	ppb	3.093	10.869	7240.724
43	Ca-2	81.667	-0.818455	ppb	28.934	195.105	98.334
49	Ti	182.223	-0.107794	ppb	8.645	31.151	254.447
52	Cr	8995.054	-0.013720	ppb	2.144	100.412	9606.564
55	Mn	594.457	-0.022943	ppb	9.538	19.766	897.806
57	Fe	7916.642	-1.725333	ppb	5.563	107.091	8749.349
45	Sc-IS	> 1285790.292		ppb	1.558		1358185.143
66	Zn	567.789	0.055721	ppb	8.330	92.078	543.344
86	Sr	2.969	-0.003383	ppb	907.010	453.260	9.086
65	Cu	58.594	-0.044416	ppb	19.913	18.377	130.731
69	Ga-IS	344584.151		ppb	4.583		366045.570
95	Mo	66.667	-0.054633	ppb	8.660	6.161	166.668
115	In-IS	> 247011.832		ppb	1.402		257435.514
111	Cd	9.860	0.003152	ppb	33.913	69.866	5.206
118	Sn	1456.742	-0.456801	ppb	12.322	9.381	3710.482
121	Sb	586.679	-0.308707	ppb	5.905	2.650	2271.294
135	Ba	14.444	-0.012464	ppb	48.038	55.294	27.778
165	Ho-IS	247046.778		ppb	0.747		257240.201
159	Tb-IS	213410.037		ppb	0.642		223779.136
207	Pb	243.334	-0.002817	ppb	10.873	64.614	295.557
203	Tl	23.333	-0.006465	ppb	51.508	41.337	54.445
209	Bi-IS	> 163199.156		ppb	0.804		168189.996
51	V	14.444	-0.034649	ppb	74.182	47.961	37.778
59	Co	10.000	-0.003818	ppb	66.667	108.141	16.667
60	Ni	26.667	-0.013719	ppb	21.651	52.936	40.000
75	As	647.299	-0.097589	ppb	3.709	72.891	719.384
71	Ga-ISK	> 104109.137		ppb	1.393		108559.824
82	Se-2	-2.500	-0.194349	ppb	295.912	97.869	5.192
107	Ag-1	235.558	-0.110586	ppb	16.764	10.252	651.126
115	In-ISK	92905.560		ppb	0.653		94541.477
45	Sc-ISK	> 263619.098		ppb	0.872		271828.862
23	Na	2751.932	-1.794486	ppb	2.315	10.574	3697.146
39	K	132654.176	-0.134393	ppb	0.535	955.510	136946.608
24	Mg	1133.378	0.991910	ppb	4.330	11.479	636.681
159	Tb-ISK	184101.400		ppb	0.891		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25808-A-4-A MB @20

Autosampler Position: 344

Sample Date/Time: Thursday, April 16, 2020 16:06:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25808-A-4-A MB @20.182

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		29075.118		ppb		1.525		29567.237
9	Be	|		22.222	-0.002044	ppb	31.225	246.521		25.556
10	B	|		1568.975	3.732930	ppb	3.743	6.684		402.228
27	Al	|		124509.152	16.808862	ppb	0.905	2.321		7240.724
43	Ca-2	|		1056.706	65.380945	ppb	2.852	3.971		98.334
49	Ti	|		366.671	0.208223	ppb	13.757	39.321		254.447
52	Cr	|		12675.625	0.433264	ppb	3.162	8.768		9606.564
55	Mn	|		4083.917	0.277617	ppb	2.581	2.725		897.806
57	Fe	|		9907.884	6.044880	ppb	4.832	31.005		8749.349
45	Sc-IS	|>		1330981.500		ppb	1.308			1358185.143
66	Zn	|		3502.653	2.985110	ppb	6.122	6.273		543.344
86	Sr	|		422.978	0.229342	ppb	10.352	11.849		9.086
65	Cu	|		729.166	0.395497	ppb	15.093	17.013		130.731
69	Ga-IS	|		358710.574		ppb	4.623			366045.570
95	Mo	|		281.114	0.068276	ppb	2.738	9.565		166.668
115	In-IS	|>		255183.576		ppb	1.801			257435.514
111	Cd	|		26.076	0.013081	ppb	12.729	17.522		5.206
118	Sn	|		2360.197	-0.277777	ppb	11.164	16.902		3710.482
121	Sb	|		1799.002	-0.085039	ppb	6.323	19.612		2271.294
135	Ba	|		348.893	0.316204	ppb	1.459	2.328		27.778
165	Ho-IS	|		254447.336		ppb	1.186			257240.201
159	Tb-IS	|		221876.438		ppb	0.504			223779.136
207	Pb	|		3125.689	0.180554	ppb	3.295	2.465		295.557
203	Tl	|		201.113	0.031723	ppb	9.425	13.822		54.445
209	Bi-IS	|>		166450.850		ppb	1.219			168189.996
51	V	|		34.444	-0.004932	ppb	11.175	97.941		37.778
59	Co	|		28.889	0.007538	ppb	24.019	61.589		16.667
60	Ni	|		332.226	0.331826	ppb	1.533	3.026		40.000
75	As	|		704.659	-0.026361	ppb	1.599	96.793		719.384
71	Ga-ISK	|>		108147.939		ppb	2.140			108559.824
82	Se-2	|		-2.480	-0.190558	ppb	336.978	108.117		5.192
107	Ag-1	|		204.446	-0.121650	ppb	13.674	5.944		651.126
115	In-ISK	|		95179.251		ppb	2.004			94541.477
45	Sc-ISK	|>		270307.986		ppb	1.055			271828.862
23	Na	|		346869.271	721.003905	ppb	1.069	0.784		3697.146
39	K	|		136743.573	0.507818	ppb	0.480	363.593		136946.608
24	Mg	|		8360.781	14.477505	ppb	3.351	2.637		636.681
159	Tb-ISK	|		189969.453		ppb	0.654			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25808-A-5-A MB @20

Autosampler Position: 345

Sample Date/Time: Thursday, April 16, 2020 16:09:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25808-A-5-A MB @20.183

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	28784.541		ppb	2.823			29567.237
9	Be	|	15.556	-0.006938	ppb	75.255	121.057		25.556
10	B	|	2351.305	6.164189	ppb	5.366	5.144		402.228
27	Al	|	186293.895	25.471419	ppb	2.265	1.011		7240.724
43	Ca-2	|	1541.750	97.722580	ppb	8.322	9.296		98.334
49	Ti	|	425.562	0.308549	ppb	3.261	3.731		254.447
52	Cr	|	14713.132	0.691247	ppb	2.833	5.653		9606.564
55	Mn	|	5981.252	0.438760	ppb	0.582	3.164		897.806
57	Fe	|	10971.991	10.545861	ppb	2.485	3.225		8749.349
45	Sc-IS	>	1339903.718		ppb	2.095			1358185.143
66	Zn	|	5058.675	4.515490	ppb	5.089	4.361		543.344
86	Sr	|	685.150	0.371823	ppb	2.399	3.942		9.086
65	Cu	|	1052.861	0.603823	ppb	9.609	8.681		130.731
69	Ga-IS	|	360316.036		ppb	3.800			366045.570
95	Mo	|	344.449	0.103117	ppb	18.799	32.458		166.668
115	In-IS	>	258938.683		ppb	1.262			257435.514
111	Cd	|	28.166	0.014092	ppb	34.067	41.123		5.206
118	Sn	|	2456.878	-0.264419	ppb	4.140	6.951		3710.482
121	Sb	|	2207.949	-0.014447	ppb	9.764	243.290		2271.294
135	Ba	|	530.010	0.486729	ppb	9.497	9.790		27.778
165	Ho-IS	|	256902.096		ppb	1.835			257240.201
159	Tb-IS	|	220389.444		ppb	1.447			223779.136
207	Pb	|	4496.954	0.266607	ppb	0.842	0.760		295.557
203	Tl	|	254.447	0.042927	ppb	12.724	16.407		54.445
209	Bi-IS	>	167255.647		ppb	0.523			168189.996
51	V	|	42.222	0.006184	ppb	16.434	169.174		37.778
59	Co	|	54.445	0.022560	ppb	33.720	48.334		16.667
60	Ni	|	493.342	0.507757	ppb	12.838	14.696		40.000
75	As	|	754.879	0.064267	ppb	8.699	239.518		719.384
71	Ga-ISK	>	109530.525		ppb	0.711			108559.824
82	Se-2	|	4.182	-0.025774	ppb	36.919	149.785		5.192
107	Ag-1	|	203.335	-0.122638	ppb	19.876	8.884		651.126
115	In-ISK	|	95897.512		ppb	0.961			94541.477
45	Sc-ISK	>	274245.378		ppb	1.231			271828.862
23	Na	|	537017.555	1104.415449	ppb	0.554	1.721		3697.146
39	K	|	139785.026	1.416675	ppb	0.595	121.706		136946.608
24	Mg	|	12678.958	22.233984	ppb	0.981	2.286		636.681
159	Tb-ISK	|	193480.848		ppb	1.125			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63377_1-A

Autosampler Position: 302

Sample Date/Time: Thursday, April 16, 2020 16:12:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\MB 570-63377_1-A.184

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		28173.320		ppb			2.490			29567.237
9	Be	|		11.111	-0.009828	ppb			45.826	38.488		25.556
10	B	|		258.891	-0.397263	ppb			7.544	18.800		402.228
27	Al	|		3290.379	-0.526577	ppb			4.713	3.558		7240.724
43	Ca-2	|		40.000	-3.728412	ppb			12.500	10.374		98.334
49	Ti	|		200.001	-0.073914	ppb			14.434	74.509		254.447
52	Cr	|		9409.765	0.047994	ppb			1.235	71.250		9606.564
55	Mn	|		503.342	-0.030970	ppb			15.044	20.650		897.806
57	Fe	|		8349.107	0.440316	ppb			2.217	139.305		8749.349
45	Sc-IS	|>		1281533.235		ppb			1.456			1358185.143
66	Zn	|		492.231	-0.022016	ppb			15.057	321.070		543.344
86	Sr	|		-28.230	-0.021172	ppb			86.038	65.821		9.086
65	Cu	|		57.514	-0.045095	ppb			17.566	14.388		130.731
69	Ga-IS	|		347396.701		ppb			4.114			366045.570
95	Mo	|		74.445	-0.049754	ppb			14.394	14.294		166.668
115	In-IS	|>		247339.181		ppb			1.301			257435.514
111	Cd	|		9.844	0.003152	ppb			58.570	119.555		5.206
118	Sn	|		1165.603	-0.520796	ppb			7.787	3.521		3710.482
121	Sb	|		853.359	-0.257334	ppb			5.108	2.711		2271.294
135	Ba	|		14.444	-0.012414	ppb			13.323	16.904		27.778
165	Ho-IS	|		246907.200		ppb			2.180			257240.201
159	Tb-IS	|		212042.176		ppb			1.004			223779.136
207	Pb	|		94.445	-0.012440	ppb			13.362	6.475		295.557
203	Tl	|		24.444	-0.006195	ppb			20.830	15.693		54.445
209	Bi-IS	|>		161506.056		ppb			2.781			168189.996
51	V	|		30.000	-0.010639	ppb			19.245	84.642		37.778
59	Co	|		6.667	-0.005973	ppb			100.000	68.880		16.667
60	Ni	|		13.333	-0.029731	ppb			50.000	26.092		40.000
75	As	|		672.570	-0.064696	ppb			11.221	270.799		719.384
71	Ga-ISK	|>		105827.212		ppb			0.698			108559.824
82	Se-2	|		6.896	0.046777	ppb			43.563	163.917		5.192
107	Ag-1	|		180.001	-0.127202	ppb			22.453	9.098		651.126
115	In-ISK	|		93686.555		ppb			0.880			94541.477
45	Sc-ISK	|>		263248.001		ppb			1.177			271828.862
23	Na	|		2115.157	-3.160355	ppb			2.399	4.035		3697.146
39	K	|		133304.667	0.635361	ppb			1.049	419.086		136946.608
24	Mg	|		85.000	-1.022794	ppb			11.765	1.851		636.681
159	Tb-ISK	|		185995.705		ppb			0.909			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63377_2-A

Autosampler Position: 303

Sample Date/Time: Thursday, April 16, 2020 16:14:54

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCS 570-63377_2-A.185

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28648.706		ppb	2.145			29567.237
9	Be	|	146771.333	108.658064	ppb	1.498	1.606		25.556
10	B	|	31453.477	100.584553	ppb	0.412	0.845		402.228
27	Al	|	751979.424	108.711322	ppb	1.304	1.032		7240.724
43	Ca-2	|	77776.197	5390.542902	ppb	1.933	2.151		98.334
49	Ti	|	59269.381	107.120189	ppb	1.501	1.017		254.447
52	Cr	|	802969.711	107.541467	ppb	1.259	1.055		9606.564
55	Mn	|	1100254.440	97.109895	ppb	1.919	1.511		897.806
57	Fe	|	1088231.481	4994.608727	ppb	1.803	1.515		8749.349
45	Sc-IS	>	1305545.302		ppb	0.493			1358185.143
66	Zn	|	106479.290	108.594742	ppb	4.813	4.740		543.344
86	Sr	|	187600.318	105.822361	ppb	2.911	3.028		9.086
65	Cu	|	157058.243	105.387993	ppb	4.065	3.947		130.731
69	Ga-IS	|	374883.523		ppb	4.011			366045.570
95	Mo	|	180397.786	106.423600	ppb	2.197	1.869		166.668
115	In-IS	>	250413.468		ppb	0.920			257435.514
111	Cd	|	171046.970	108.854077	ppb	1.003	1.785		5.206
118	Sn	|	587500.435	125.176402	ppb	0.141	1.061		3710.482
121	Sb	|	544329.417	103.685525	ppb	1.081	1.594		2271.294
135	Ba	|	103108.837	103.354580	ppb	3.477	3.947		27.778
165	Ho-IS	|	252422.379		ppb	2.200			257240.201
159	Tb-IS	|	217422.500		ppb	2.058			223779.136
207	Pb	|	1610180.880	103.879332	ppb	0.298	0.673		295.557
203	Tl	|	461224.574	100.521909	ppb	1.221	1.719		54.445
209	Bi-IS	>	164426.447		ppb	0.847			168189.996
51	V	|	68481.539	103.420516	ppb	1.121	1.709		37.778
59	Co	|	168153.872	101.304819	ppb	0.428	0.423		16.667
60	Ni	|	95022.861	106.753333	ppb	2.227	1.798		40.000
75	As	|	49119.265	106.354656	ppb	0.977	0.710		719.384
71	Ga-ISK	>	109163.289		ppb	0.786			108559.824
82	Se-2	|	4208.805	103.540293	ppb	1.276	1.878		5.192
107	Ag-1	|	179081.254	48.401134	ppb	1.796	2.102		651.126
115	In-ISK	|	94141.137		ppb	0.980			94541.477
45	Sc-ISK	>	272271.277		ppb	0.546			271828.862
23	Na	|	471441.363	975.555305	ppb	2.000	1.962		3697.146
39	K	|	1262303.474	981.478382	ppb	0.906	0.779		136946.608
24	Mg	|	2900956.319	5395.228237	ppb	1.337	1.055		636.681
159	Tb-ISK	|	189262.155		ppb	0.628			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63377_3-A

Autosampler Position: 304

Sample Date/Time: Thursday, April 16, 2020 16:17:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCSD 570-63377_3-A.186

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28047.507		ppb		0.653		29567.237
9	Be	|	146717.414	110.359426	ppb	1.238	3.124		25.556
10	B	|	31197.381	101.397227	ppb	3.007	4.950		402.228
27	Al	|	736071.529	108.099266	ppb	0.510	2.066		7240.724
43	Ca-2	|	75225.929	5294.972868	ppb	2.003	0.137		98.334
49	Ti	|	59885.312	109.937369	ppb	2.594	1.406		254.447
52	Cr	|	797915.572	108.555327	ppb	1.756	1.144		9606.564
55	Mn	|	1086420.471	97.392311	ppb	1.975	0.318		897.806
57	Fe	|	1078248.595	5026.478871	ppb	2.622	1.665		8749.349
45	Sc-IS	>	1285442.090		ppb	1.937			1358185.143
66	Zn	|	107118.516	110.929856	ppb	4.900	3.070		543.344
86	Sr	|	185941.239	106.538128	ppb	1.396	1.517		9.086
65	Cu	|	155934.683	106.254640	ppb	4.111	2.790		130.731
69	Ga-IS	|	373237.633		ppb	3.911			366045.570
95	Mo	|	178067.610	106.711994	ppb	1.879	2.089		166.668
115	In-IS	>	252780.897		ppb	1.183			257435.514
111	Cd	|	170208.511	107.300536	ppb	0.900	0.944		5.206
118	Sn	|	590292.249	124.579903	ppb	1.782	1.169		3710.482
121	Sb	|	549953.414	103.761568	ppb	2.182	1.193		2271.294
135	Ba	|	102749.663	101.994458	ppb	3.863	2.789		27.778
165	Ho-IS	|	250964.304		ppb	1.187			257240.201
159	Tb-IS	|	216007.616		ppb	1.098			223779.136
207	Pb	|	1597440.446	103.518031	ppb	0.261	1.264		295.557
203	Tl	|	458954.027	100.464116	ppb	0.974	0.763		54.445
209	Bi-IS	>	163708.353		ppb	1.437			168189.996
51	V	|	68772.926	105.273536	ppb	0.692	2.529		37.778
59	Co	|	169734.621	103.654199	ppb	0.370	2.521		16.667
60	Ni	|	94048.574	107.101009	ppb	0.710	2.149		40.000
75	As	|	48978.348	107.499710	ppb	0.742	1.447		719.384
71	Ga-ISK	>	107729.240		ppb	2.169			108559.824
82	Se-2	|	4307.527	107.345176	ppb	4.947	3.437		5.192
107	Ag-1	|	178645.712	48.940775	ppb	1.153	2.474		651.126
115	In-ISK	|	95431.861		ppb	0.850			94541.477
45	Sc-ISK	>	268861.399		ppb	1.771			271828.862
23	Na	|	463542.713	971.462038	ppb	1.118	1.374		3697.146
39	K	|	1267585.786	1000.191922	ppb	2.089	2.081		136946.608
24	Mg	|	2877189.531	5419.333476	ppb	1.608	1.234		636.681
159	Tb-ISK	|	186561.842		ppb	1.680			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-1-D

Autosampler Position: 305

Sample Date/Time: Thursday, April 16, 2020 16:20:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-1-D.187

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	58250.745		ppb		0.701		29567.237
9	Be	|	46.667	0.012996	ppb	24.744	54.205		25.556
10	B	|	39078.958	113.254651	ppb	2.659	0.453		402.228
27	Al	|	32085.996	3.224905	ppb	1.278	5.474		7240.724
43	Ca-2	|	2081834.297	130651.978212	ppb	5.748	2.858		98.334
49	Ti	|	3598.231	5.465249	ppb	3.648	1.127		254.447
52	Cr	|	13664.311	0.424689	ppb	1.989	5.730		9606.564
55	Mn	|	1114948.906	89.063990	ppb	2.512	1.137		897.806
57	Fe	|	84806.606	316.166593	ppb	2.047	1.273		8749.349
45	Sc-IS	>	1442673.413		ppb	3.098			1358185.143
66	Zn	|	3033.656	2.277200	ppb	5.902	4.274		543.344
86	Sr	|	678443.383	346.367434	ppb	3.033	1.815		9.086
65	Cu	|	8208.877	4.903690	ppb	4.086	1.637		130.731
69	Ga-IS	|	364870.706		ppb	4.266			366045.570
95	Mo	|	35154.331	18.693568	ppb	2.548	1.379		166.668
115	In-IS	>	255617.759		ppb	1.685			257435.514
111	Cd	|	30.621	0.015857	ppb	6.848	6.625		5.206
118	Sn	|	5025.330	0.281302	ppb	5.343	15.113		3710.482
121	Sb	|	11376.763	1.707797	ppb	6.510	6.143		2271.294
135	Ba	|	6998.384	6.843063	ppb	5.381	3.737		27.778
165	Ho-IS	|	260556.244		ppb	1.749			257240.201
159	Tb-IS	|	224142.709		ppb	1.385			223779.136
207	Pb	|	1253.355	0.066487	ppb	5.604	7.543		295.557
203	Tl	|	196.668	0.033514	ppb	8.969	11.916		54.445
209	Bi-IS	>	156216.149		ppb	0.295			168189.996
51	V	|	1621.203	2.481454	ppb	5.766	7.487		37.778
59	Co	|	94.445	0.048921	ppb	14.264	18.721		16.667
60	Ni	|	1205.606	1.358643	ppb	2.384	3.743		40.000
75	As	|	1716.765	2.317489	ppb	4.644	7.309		719.384
71	Ga-ISK	>	105405.276		ppb	1.632			108559.824
82	Se-2	|	74.838	1.782813	ppb	10.429	12.792		5.192
107	Ag-1	|	195.557	-0.122713	ppb	10.275	3.881		651.126
115	In-ISK	|	92448.779		ppb	0.771			94541.477
45	Sc-ISK	>	280119.743		ppb	0.579			271828.862
23	Na	|	77037096.499	156167.942522	ppb	0.272	0.486		3697.146
39	K	|	9863833.283	8244.106810	ppb	1.548	1.891		136946.608
24	Mg	|	30538210.455	55217.437145	ppb	1.165	1.413		636.681
159	Tb-ISK	|	191994.276		ppb	0.831			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-1-E MS

Autosampler Position: 306

Sample Date/Time: Thursday, April 16, 2020 16:23:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-1-E MS.188

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	58530.776		ppb		0.814		29567.237
9	Be	|	151885.393	99.035927	ppb		0.602	2.547	25.556
10	B	|	70894.375	200.928365	ppb		0.954	3.060	402.228
27	Al	|	820080.461	104.390826	ppb		1.163	3.084	7240.724
43	Ca-2	|	2259920.942	138072.267760	ppb		1.832	0.310	98.334
49	Ti	|	71325.420	113.546309	ppb		1.574	1.311	254.447
52	Cr	|	821159.190	96.725422	ppb		0.942	1.202	9606.564
55	Mn	|	2424363.989	188.521204	ppb		0.632	1.501	897.806
57	Fe	|	1209275.521	4885.884097	ppb		2.391	0.295	8749.349
45	Sc-IS	>	1482766.005		ppb		2.100		1358185.143
66	Zn	|	103261.035	92.637424	ppb		3.434	1.896	543.344
86	Sr	|	889489.619	441.847567	ppb		1.412	1.455	9.086
65	Cu	|	156959.230	92.703980	ppb		4.122	2.402	130.731
69	Ga-IS	|	395286.268		ppb		4.325		366045.570
95	Mo	|	220806.291	114.710127	ppb		2.537	1.861	166.668
115	In-IS	>	263427.560		ppb		1.219		257435.514
111	Cd	|	163540.128	98.936742	ppb		0.457	1.531	5.206
118	Sn	|	662265.393	134.183480	ppb		1.122	0.351	3710.482
121	Sb	|	579450.452	104.916007	ppb		1.784	0.784	2271.294
135	Ba	|	113044.509	107.696180	ppb		1.985	1.066	27.778
165	Ho-IS	|	266543.629		ppb		0.344		257240.201
159	Tb-IS	|	230824.556		ppb		1.455		223779.136
207	Pb	|	1567550.219	103.063330	ppb		0.858	0.464	295.557
203	Tl	|	451951.588	100.380863	ppb		1.019	0.619	54.445
209	Bi-IS	>	161332.548		ppb		0.406		168189.996
51	V	|	72223.274	111.230948	ppb		2.156	2.667	37.778
59	Co	|	166970.175	102.579040	ppb		1.105	1.366	16.667
60	Ni	|	88688.973	101.604209	ppb		2.093	1.852	40.000
75	As	|	50819.523	112.296263	ppb		0.459	0.300	719.384
71	Ga-ISK	>	107049.596		ppb		0.516		108559.824
82	Se-2	|	4333.168	108.699570	ppb		1.136	0.628	5.192
107	Ag-1	|	178401.734	49.168716	ppb		1.853	1.652	651.126
115	In-ISK	|	94816.236		ppb		1.154		94541.477
45	Sc-ISK	>	286128.373		ppb		1.143		271828.862
23	Na	|	78262592.332	155325.625976	ppb		0.513	0.659	3697.146
39	K	|	11211596.058	9187.166280	ppb		0.802	0.661	136946.608
24	Mg	|	33946624.469	60088.481071	ppb		1.399	0.386	636.681
159	Tb-ISK	|	196921.289		ppb		0.426		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-1-F MSD

Autosampler Position: 307

Sample Date/Time: Thursday, April 16, 2020 16:25:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-1-F MSD.189

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	58808.595		ppb		1.579		29567.237
9	Be	|	152113.641	98.909867	ppb	2.386	3.397		25.556
10	B	|	69978.843	197.758354	ppb	2.782	3.894		402.228
27	Al	|	818205.315	103.830996	ppb	0.827	0.649		7240.724
43	Ca-2	|	2264770.798	137991.997077	ppb	1.512	0.455		98.334
49	Ti	|	71706.243	113.827435	ppb	2.319	1.316		254.447
52	Cr	|	835658.258	98.166853	ppb	2.163	1.125		9606.564
55	Mn	|	2458021.376	190.581001	ppb	1.988	1.006		897.806
57	Fe	|	1223158.484	4928.910064	ppb	2.526	1.505		8749.349
45	Sc-IS	>	1486708.109		ppb	1.065			1358185.143
66	Zn	|	104716.124	93.692716	ppb	3.980	2.951		543.344
86	Sr	|	897279.967	444.448527	ppb	1.685	0.632		9.086
65	Cu	|	159675.101	94.069918	ppb	2.817	1.791		130.731
69	Ga-IS	|	400767.438		ppb	3.204			366045.570
95	Mo	|	222535.866	115.291415	ppb	1.949	1.088		166.668
115	In-IS	>	265193.208		ppb	0.416			257435.514
111	Cd	|	164026.629	98.563241	ppb	1.357	1.767		5.206
118	Sn	|	677168.507	136.302578	ppb	1.678	1.794		3710.482
121	Sb	|	575418.622	103.494469	ppb	1.662	1.947		2271.294
135	Ba	|	114281.185	108.160690	ppb	3.379	3.603		27.778
165	Ho-IS	|	267985.979		ppb	1.117			257240.201
159	Tb-IS	|	233563.891		ppb	0.632			223779.136
207	Pb	|	1581141.614	103.485307	ppb	0.786	1.277		295.557
203	Tl	|	459448.221	101.583636	ppb	0.713	1.254		54.445
209	Bi-IS	>	162091.231		ppb	1.713			168189.996
51	V	|	71319.872	108.635566	ppb	2.353	1.960		37.778
59	Co	|	164217.545	99.791829	ppb	1.755	1.476		16.667
60	Ni	|	89935.551	101.932217	ppb	0.797	1.924		40.000
75	As	|	51485.950	112.540661	ppb	1.444	1.244		719.384
71	Ga-ISK	>	108228.497		ppb	1.665			108559.824
82	Se-2	|	4387.150	108.864439	ppb	1.254	0.857		5.192
107	Ag-1	|	180723.734	49.277044	ppb	0.221	1.801		651.126
115	In-ISK	|	95641.088		ppb	0.782			94541.477
45	Sc-ISK	>	288496.176		ppb	0.345			271828.862
23	Na	|	79777970.212	157028.139421	ppb	0.460	0.709		3697.146
39	K	|	11466987.590	9320.673056	ppb	0.507	0.236		136946.608
24	Mg	|	34381217.166	60358.161162	ppb	1.199	0.873		636.681
159	Tb-ISK	|	197639.840		ppb	0.941			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 16:28:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.190

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	29985.883		ppb		0.821		29567.237
9	Be	|	143226.689	99.403815	ppb	1.146	0.270		25.556
10	B	|	83904.592	253.420355	ppb	1.247	0.527		402.228
27	Al	|	755826.223	102.381933	ppb	1.716	1.360		7240.724
43	Ca-2	|	79941.405	5193.881617	ppb	1.258	0.394		98.334
49	Ti	|	59393.235	100.619530	ppb	1.791	2.064		254.447
52	Cr	|	802371.992	100.673813	ppb	0.908	1.233		9606.564
55	Mn	|	1143303.778	94.613104	ppb	1.649	2.029		897.806
57	Fe	|	1109971.786	4774.783783	ppb	2.441	2.654		8749.349
45	Sc-IS	>	1392561.122		ppb	0.967			1358185.143
66	Zn	|	107092.546	102.351921	ppb	3.955	3.218		543.344
86	Sr	|	190268.269	100.626149	ppb	1.064	1.653		9.086
65	Cu	|	161547.722	101.626840	ppb	2.960	2.819		130.731
69	Ga-IS	|	404980.392		ppb	2.622			366045.570
95	Mo	|	180666.373	99.924662	ppb	0.613	0.912		166.668
115	In-IS	>	267315.014		ppb	0.535			257435.514
111	Cd	|	167681.160	99.955532	ppb	0.397	0.348		5.206
118	Sn	|	509160.956	101.472617	ppb	1.101	0.812		3710.482
121	Sb	|	550992.795	98.289248	ppb	0.668	0.202		2271.294
135	Ba	|	104048.872	97.681562	ppb	2.966	2.656		27.778
165	Ho-IS	|	267323.636		ppb	0.775			257240.201
159	Tb-IS	|	233373.059		ppb	0.784			223779.136
207	Pb	|	1603212.941	99.794090	ppb	1.372	1.214		295.557
203	Tl	|	475176.621	99.907415	ppb	2.018	0.377		54.445
209	Bi-IS	>	170428.606		ppb	1.937			168189.996
51	V	|	69400.412	101.714634	ppb	1.456	1.381		37.778
59	Co	|	172272.877	100.732332	ppb	2.347	2.474		16.667
60	Ni	|	93024.111	101.439969	ppb	0.080	1.332		40.000
75	As	|	47810.916	100.383161	ppb	1.084	0.204		719.384
71	Ga-ISK	>	112478.889		ppb	1.243			108559.824
82	Se-2	|	4208.472	100.459499	ppb	2.284	1.080		5.192
107	Ag-1	|	388181.581	102.014505	ppb	1.246	0.652		651.126
115	In-ISK	|	98063.337		ppb	1.951			94541.477
45	Sc-ISK	>	279844.489		ppb	0.829			271828.862
23	Na	|	2608687.026	5286.046622	ppb	0.441	0.439		3697.146
39	K	|	6349348.219	5269.054034	ppb	1.622	1.255		136946.608
24	Mg	|	2936457.861	5313.528166	ppb	0.812	0.268		636.681
159	Tb-ISK	|	197707.462		ppb	1.103			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 16:31:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.191

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		28962.671		ppb		1.980		29567.237
9	Be	|		30.000	0.003363	ppb	11.111	83.044		25.556
10	B	|		586.679	0.592426	ppb	17.887	61.586		402.228
27	Al	|		4697.439	-0.351560	ppb	1.651	2.760		7240.724
43	Ca-2	|		148.334	3.462059	ppb	47.231	141.576		98.334
49	Ti	|		226.668	-0.045838	ppb	10.605	76.425		254.447
52	Cr	|		9168.497	-0.047735	ppb	1.926	33.537		9606.564
55	Mn	|		915.585	0.002186	ppb	7.862	335.849		897.806
57	Fe	|		9273.012	2.637293	ppb	4.067	36.871		8749.349
45	Sc-IS	>		1347746.446		ppb	1.898			1358185.143
66	Zn	|		656.682	0.117172	ppb	4.155	33.908		543.344
86	Sr	|		59.611	0.027307	ppb	84.878	100.136		9.086
65	Cu	|		167.097	0.024122	ppb	21.975	92.571		130.731
69	Ga-IS	|		369435.410		ppb	5.232			366045.570
95	Mo	|		618.902	0.259648	ppb	6.926	10.984		166.668
115	In-IS	>		256582.660		ppb	2.715			257435.514
111	Cd	|		29.811	0.015344	ppb	23.450	29.804		5.206
118	Sn	|		6682.679	0.623273	ppb	7.158	10.171		3710.482
121	Sb	|		2357.973	0.017378	ppb	6.274	109.629		2271.294
135	Ba	|		31.111	0.003591	ppb	43.301	388.762		27.778
165	Ho-IS	|		255285.430		ppb	1.199			257240.201
159	Tb-IS	|		221604.848		ppb	1.849			223779.136
207	Pb	|		651.117	0.022643	ppb	5.128	11.542		295.557
203	Tl	|		184.446	0.027943	ppb	12.033	19.502		54.445
209	Bi-IS	>		167409.815		ppb	1.643			168189.996
51	V	|		52.222	0.020953	ppb	19.500	71.897		37.778
59	Co	|		44.445	0.016519	ppb	26.339	43.066		16.667
60	Ni	|		36.667	-0.004336	ppb	59.613	558.912		40.000
75	As	|		767.131	0.084854	ppb	1.425	32.604		719.384
71	Ga-ISK	>		109902.243		ppb	0.394			108559.824
82	Se-2	|		11.192	0.144774	ppb	73.186	138.100		5.192
107	Ag-1	|		241.113	-0.112628	ppb	7.094	4.270		651.126
115	In-ISK	|		95989.084		ppb	0.907			94541.477
45	Sc-ISK	>		273096.589		ppb	2.360			271828.862
23	Na	|		10837.450	14.825971	ppb	5.057	9.415		3697.146
39	K	|		138684.363	0.998172	ppb	0.242	270.228		136946.608
24	Mg	|		2785.273	3.981981	ppb	7.700	10.670		636.681
159	Tb-ISK	|		190102.651		ppb	1.327			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-3-B

Autosampler Position: 309

Sample Date/Time: Thursday, April 16, 2020 16:34:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-3-B.192

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		33595.012		ppb		0.567		29567.237
9	Be	|		56.667	0.020455	ppb	5.882	10.491		25.556
10	B	|		47622.600	140.758812	ppb	2.019	1.048		402.228
27	Al	|		52513.008	6.043025	ppb	0.579	1.266		7240.724
43	Ca-2	|		828474.033	52940.653385	ppb	2.342	1.100		98.334
49	Ti	|		2486.883	3.714416	ppb	1.523	3.169		254.447
52	Cr	|		16388.287	0.793966	ppb	2.395	3.889		9606.564
55	Mn	|		347573.000	28.202439	ppb	2.038	1.093		897.806
57	Fe	|		47333.883	162.766780	ppb	2.754	3.054		8749.349
45	Sc-IS	>		1417399.266		ppb	1.411			1358185.143
66	Zn	|		6063.511	5.187408	ppb	4.840	4.108		543.344
86	Sr	|		956035.936	496.727610	ppb	2.031	1.416		9.086
65	Cu	|		3289.555	1.949852	ppb	7.576	7.208		130.731
69	Ga-IS	|		379721.002		ppb	3.953			366045.570
95	Mo	|		7664.278	4.073889	ppb	1.460	0.311		166.668
115	In-IS	>		261236.596		ppb	0.317			257435.514
111	Cd	|		55.016	0.030342	ppb	15.674	17.516		5.206
118	Sn	|		3329.279	-0.089561	ppb	8.877	68.336		3710.482
121	Sb	|		2728.039	0.077635	ppb	4.599	31.632		2271.294
135	Ba	|		38460.656	36.930997	ppb	4.304	4.191		27.778
165	Ho-IS	|		262146.706		ppb	0.243			257240.201
159	Tb-IS	|		226401.024		ppb	0.243			223779.136
207	Pb	|		1305.580	0.067445	ppb	4.598	6.865		295.557
203	Tl	|		285.558	0.051991	ppb	2.430	3.469		54.445
209	Bi-IS	>		160942.671		ppb	0.906			168189.996
51	V	|		5174.271	7.754247	ppb	3.368	5.772		37.778
59	Co	|		302.225	0.171810	ppb	2.776	5.070		16.667
60	Ni	|		907.807	0.972532	ppb	9.732	8.285		40.000
75	As	|		1492.267	1.684896	ppb	1.228	3.238		719.384
71	Ga-ISK	>		109348.164		ppb	2.357			108559.824
82	Se-2	|		31.172	0.639448	ppb	34.378	41.990		5.192
107	Ag-1	|		96.667	-0.151309	ppb	26.034	4.943		651.126
115	In-ISK	|		95502.280		ppb	1.001			94541.477
45	Sc-ISK	>		286574.750		ppb	0.384			271828.862
23	Na	|		62041338.393	122929.945873	ppb	1.205	0.856		3697.146
39	K	|		8281293.395	6743.817542	ppb	1.294	1.386		136946.608
24	Mg	|		23942731.178	42315.608963	ppb	0.117	0.499		636.681
159	Tb-ISK	|		194897.150		ppb	0.474			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-4-B

Autosampler Position: 310

Sample Date/Time: Thursday, April 16, 2020 16:37:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-4-B.193

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31893.341		ppb		0.630		29567.237
9	Be	|	23.333	-0.002874	ppb	51.508	286.419		25.556
10	B	|	24564.452	68.756650	ppb	3.485	5.812		402.228
27	Al	|	57814.538	6.405804	ppb	1.035	1.433		7240.724
43	Ca-2	|	2610562.297	159354.454630	ppb	0.777	1.418		98.334
49	Ti	|	4430.688	6.627199	ppb	4.722	3.471		254.447
52	Cr	|	17704.302	0.858939	ppb	2.507	5.618		9606.564
55	Mn	|	11291999.863	877.363141	ppb	1.342	1.003		897.806
57	Fe	|	106585.181	394.711430	ppb	2.436	0.355		8749.349
45	Sc-IS	>	1484331.546		ppb	2.175			1358185.143
66	Zn	|	4128.375	3.184976	ppb	5.159	3.972		543.344
86	Sr	|	1386267.491	687.985336	ppb	0.488	2.002		9.086
65	Cu	|	4648.840	2.660432	ppb	5.072	3.073		130.731
69	Ga-IS	|	405431.102		ppb	3.318			366045.570
95	Mo	|	9747.769	4.969457	ppb	0.414	2.036		166.668
115	In-IS	>	264656.902		ppb	0.554			257435.514
111	Cd	|	16.196	0.006553	ppb	144.156	215.424		5.206
118	Sn	|	2898.072	-0.185962	ppb	6.115	18.368		3710.482
121	Sb	|	1593.422	-0.134229	ppb	4.323	8.157		2271.294
135	Ba	|	133335.017	126.443160	ppb	1.665	1.247		27.778
165	Ho-IS	|	266306.016		ppb	0.826			257240.201
159	Tb-IS	|	230524.037		ppb	0.852			223779.136
207	Pb	|	1213.353	0.063181	ppb	5.495	5.276		295.557
203	Tl	|	53.333	0.000540	ppb	33.072	738.956		54.445
209	Bi-IS	>	157268.883		ppb	1.738			168189.996
51	V	|	2826.947	4.196092	ppb	5.687	5.402		37.778
59	Co	|	1757.886	1.044711	ppb	2.371	2.104		16.667
60	Ni	|	2150.162	2.361897	ppb	0.930	1.660		40.000
75	As	|	1330.988	1.324131	ppb	4.057	10.597		719.384
71	Ga-ISK	>	109607.785		ppb	0.800			108559.824
82	Se-2	|	122.175	2.868277	ppb	12.170	12.734		5.192
107	Ag-1	|	63.333	-0.160482	ppb	10.526	1.187		651.126
115	In-ISK	|	95792.818		ppb	2.138			94541.477
45	Sc-ISK	>	289098.478		ppb	1.322			271828.862
23	Na	|	107220689.327	210638.151844	ppb	0.569	1.847		3697.146
39	K	|	9954899.060	8059.243340	ppb	1.361	1.376		136946.608
24	Mg	|	46552550.783	81567.960687	ppb	0.239	1.493		636.681
159	Tb-ISK	|	200160.207		ppb	2.052			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-5-B

Autosampler Position: 311

Sample Date/Time: Thursday, April 16, 2020 16:39:48

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-5-B.194

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	38700.128		ppb	0.635		29567.237
9	Be	125.556	0.059481	ppb	1.533	5.231	25.556
10	B	29629.590	78.852113	ppb	1.686	1.128	402.228
27	Al	36023.142	3.374237	ppb	0.941	2.140	7240.724
43	Ca-2	3840080.408	222521.115754	ppb	1.383	1.770	98.334
49	Ti	6192.455	8.942322	ppb	4.458	5.107	254.447
52	Cr	15617.423	0.516041	ppb	2.109	9.202	9606.564
55	Mn	23101115.754	1703.923858	ppb	2.079	1.725	897.806
57	Fe	375218.140	1410.322308	ppb	3.232	2.893	8749.349
45	Sc-IS	> 1563716.722		ppb	2.563		1358185.143
66	Zn	15872.152	13.050653	ppb	3.207	3.746	543.344
86	Sr	1484695.702	699.506265	ppb	2.796	3.664	9.086
65	Cu	6217.895	3.401525	ppb	5.330	4.383	130.731
69	Ga-IS	396809.414		ppb	3.319		366045.570
95	Mo	5255.412	2.497805	ppb	4.404	5.784	166.668
115	In-IS	> 270267.183		ppb	0.716		257435.514
111	Cd	180.076	0.102977	ppb	6.179	6.929	5.206
118	Sn	2173.499	-0.341995	ppb	0.703	1.384	3710.482
121	Sb	987.812	-0.247473	ppb	9.841	7.045	2271.294
135	Ba	54246.204	50.359171	ppb	3.277	3.160	27.778
165	Ho-IS	270851.621		ppb	1.416		257240.201
159	Tb-IS	233720.060		ppb	1.706		223779.136
207	Pb	1726.708	0.097728	ppb	2.915	2.210	295.557
203	Tl	477.786	0.097206	ppb	1.756	3.195	54.445
209	Bi-IS	> 157400.218		ppb	1.124		168189.996
51	V	2853.618	4.255916	ppb	1.753	1.334	37.778
59	Co	3999.449	2.402626	ppb	2.770	5.737	16.667
60	Ni	4045.017	4.502132	ppb	2.815	0.634	40.000
75	As	995.957	0.597630	ppb	8.056	20.448	719.384
71	Ga-ISK	> 109148.978		ppb	3.068		108559.824
82	Se-2	122.138	2.883046	ppb	18.060	19.570	5.192
107	Ag-1	76.667	-0.156686	ppb	26.447	3.935	651.126
115	In-ISK	94934.507		ppb	2.824		94541.477
45	Sc-ISK	> 293165.336		ppb	2.393		271828.862
23	Na	145585645.786	282089.326643	ppb	0.423	2.076	3697.146
39	K	5790807.882	4574.174176	ppb	1.113	3.365	136946.608
24	Mg	66032930.589	114118.384759	ppb	0.368	2.030	636.681
159	Tb-ISK	200323.698		ppb	1.732		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-6-B

Autosampler Position: 312

Sample Date/Time: Thursday, April 16, 2020 16:42:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-6-B.195

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31560.381		ppb		0.838		29567.237
9	Be	|	10.000	-0.011998	ppb	57.735	30.263		25.556
10	B	|	59268.288	158.010469	ppb	2.265	1.264		402.228
27	Al	|	22282.930	1.683972	ppb	2.853	6.050		7240.724
43	Ca-2	|	4643353.663	267420.385971	ppb	2.168	1.302		98.334
49	Ti	|	7212.932	10.424716	ppb	0.998	2.831		254.447
52	Cr	|	15705.296	0.515474	ppb	1.064	8.470		9606.564
55	Mn	|	58249654.035	4271.456723	ppb	1.678	2.403		897.806
57	Fe	|	160825.895	578.716955	ppb	1.496	3.030		8749.349
45	Sc-IS	>	1573412.704		ppb	3.408			1358185.143
66	Zn	|	12207.443	9.843395	ppb	4.685	1.535		543.344
86	Sr	|	2620314.987	1226.763106	ppb	2.333	1.104		9.086
65	Cu	|	9452.708	5.182948	ppb	4.289	2.546		130.731
69	Ga-IS	|	414747.032		ppb	3.944			366045.570
95	Mo	|	40857.249	19.929636	ppb	2.142	1.337		166.668
115	In-IS	>	270799.763		ppb	1.641			257435.514
111	Cd	|	181.980	0.104054	ppb	14.847	17.096		5.206
118	Sn	|	1927.908	-0.391724	ppb	7.625	6.302		3710.482
121	Sb	|	1033.371	-0.239757	ppb	7.075	5.368		2271.294
135	Ba	|	161117.820	149.296307	ppb	4.134	2.668		27.778
165	Ho-IS	|	268304.183		ppb	1.346			257240.201
159	Tb-IS	|	233190.064		ppb	0.519			223779.136
207	Pb	|	8427.641	0.555239	ppb	2.751	1.988		295.557
203	Tl	|	32.222	-0.004177	ppb	21.535	40.265		54.445
209	Bi-IS	>	155787.117		ppb	1.071			168189.996
51	V	|	13617.599	20.212123	ppb	1.436	1.186		37.778
59	Co	|	5446.594	3.222762	ppb	1.111	0.866		16.667
60	Ni	|	2731.372	2.978983	ppb	3.186	2.817		40.000
75	As	|	1485.452	1.626033	ppb	2.444	3.694		719.384
71	Ga-ISK	>	110808.097		ppb	0.652			108559.824
82	Se-2	|	87.039	1.983708	ppb	15.035	16.171		5.192
107	Ag-1	|	40.000	-0.166905	ppb	14.434	0.958		651.126
115	In-ISK	|	96912.206		ppb	2.969			94541.477
45	Sc-ISK	>	298880.102		ppb	1.385			271828.862
23	Na	|	188618793.038	358440.689537	ppb	0.847	2.213		3697.146
39	K	|	1771025.267	1287.793642	ppb	0.936	0.959		136946.608
24	Mg	|	91454068.641	154986.804831	ppb	0.871	0.515		636.681
159	Tb-ISK	|	202420.029		ppb	0.584			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-7-B

Autosampler Position: 313

Sample Date/Time: Thursday, April 16, 2020 16:45:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-7-B.196

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31753.044		ppb		2.678		29567.237
9	Be	|	26.667	-0.001308	ppb	66.144	880.831		25.556
10	B	|	45219.244	122.921559	ppb	1.569	3.702		402.228
27	Al	|	32089.336	2.954514	ppb	1.110	1.700		7240.724
43	Ca-2	|	3313169.145	194911.438860	ppb	1.291	0.815		98.334
49	Ti	|	6119.089	8.968817	ppb	3.914	2.417		254.447
52	Cr	|	18330.646	0.854269	ppb	2.228	0.798		9606.564
55	Mn	|	2617351.197	195.922250	ppb	2.159	0.600		897.806
57	Fe	|	147637.051	539.987612	ppb	2.490	0.642		8749.349
45	Sc-IS	>	1540029.475		ppb	2.066			1358185.143
66	Zn	|	4455.140	3.334539	ppb	4.100	2.387		543.344
86	Sr	|	1743885.656	834.042835	ppb	1.804	1.732		9.086
65	Cu	|	12569.975	7.069193	ppb	4.825	2.837		130.731
69	Ga-IS	|	404245.777		ppb	3.678			366045.570
95	Mo	|	31336.572	15.590379	ppb	2.827	1.007		166.668
115	In-IS	>	272940.531		ppb	0.789			257435.514
111	Cd	|	34.194	0.016800	ppb	66.499	79.801		5.206
118	Sn	|	1375.622	-0.503220	ppb	6.580	3.241		3710.482
121	Sb	|	1373.399	-0.181565	ppb	2.799	2.995		2271.294
135	Ba	|	63267.702	58.162407	ppb	3.830	3.668		27.778
165	Ho-IS	|	270443.734		ppb	0.632			257240.201
159	Tb-IS	|	236352.481		ppb	0.113			223779.136
207	Pb	|	976.681	0.047457	ppb	8.367	11.838		295.557
203	Tl	|	31.111	-0.004487	ppb	6.186	10.585		54.445
209	Bi-IS	>	156772.218		ppb	0.757			168189.996
51	V	|	2641.355	3.787862	ppb	1.495	1.316		37.778
59	Co	|	796.689	0.452413	ppb	4.659	4.843		16.667
60	Ni	|	2144.605	2.277346	ppb	0.999	0.998		40.000
75	As	|	1205.798	0.963840	ppb	12.329	33.114		719.384
71	Ga-ISK	>	113295.258		ppb	0.221			108559.824
82	Se-2	|	69.437	1.519057	ppb	7.252	7.625		5.192
107	Ag-1	|	35.556	-0.168309	ppb	23.593	1.296		651.126
115	In-ISK	|	98264.212		ppb	1.545			94541.477
45	Sc-ISK	>	301605.153		ppb	0.904			271828.862
23	Na	|	149187411.356	280888.874924	ppb	0.787	0.122		3697.146
39	K	|	18909618.246	14771.019599	ppb	1.311	0.561		136946.608
24	Mg	|	61573990.120	103402.269116	ppb	1.491	1.320		636.681
159	Tb-ISK	|	205356.132		ppb	0.302			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-8-B

Autosampler Position: 314

Sample Date/Time: Thursday, April 16, 2020 16:48:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-8-B.197

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	36062.143		ppb	2.400			29567.237
9	Be	|	21.111	-0.005007	ppb	39.736	104.576		25.556
10	B	|	35430.552	95.382640	ppb	1.082	2.325		402.228
27	Al	|	26736.113	2.270089	ppb	2.016	0.834		7240.724
43	Ca-2	|	3433314.740	200649.232589	ppb	1.616	0.702		98.334
49	Ti	|	5206.505	7.517874	ppb	2.457	4.190		254.447
52	Cr	|	17743.235	0.773904	ppb	1.301	4.862		9606.564
55	Mn	|	56233.801	4.107930	ppb	0.930	1.332		897.806
57	Fe	|	123364.921	441.712055	ppb	1.732	1.162		8749.349
45	Sc-IS	>	1550157.781		ppb	1.946			1358185.143
66	Zn	|	7670.950	6.085442	ppb	4.214	3.488		543.344
86	Sr	|	1527783.225	725.875302	ppb	1.344	0.705		9.086
65	Cu	|	5446.094	2.995812	ppb	2.183	0.469		130.731
69	Ga-IS	|	411892.500		ppb	2.990			366045.570
95	Mo	|	8235.707	4.001715	ppb	1.604	1.901		166.668
115	In-IS	>	265815.042		ppb	1.526			257435.514
111	Cd	|	58.261	0.031595	ppb	34.514	36.673		5.206
118	Sn	|	1451.186	-0.480905	ppb	14.089	7.890		3710.482
121	Sb	|	736.686	-0.289883	ppb	8.478	3.285		2271.294
135	Ba	|	143455.981	135.467517	ppb	2.921	3.037		27.778
165	Ho-IS	|	267283.094		ppb	1.369			257240.201
159	Tb-IS	|	232310.368		ppb	0.647			223779.136
207	Pb	|	615.561	0.022955	ppb	5.424	11.759		295.557
203	Tl	|	32.222	-0.004242	ppb	26.034	45.613		54.445
209	Bi-IS	>	157065.473		ppb	1.280			168189.996
51	V	|	9496.489	13.876694	ppb	1.338	1.131		37.778
59	Co	|	298.892	0.164908	ppb	10.832	12.403		16.667
60	Ni	|	2001.252	2.138277	ppb	7.465	6.643		40.000
75	As	|	1080.466	0.716937	ppb	4.910	18.599		719.384
71	Ga-ISK	>	112410.557		ppb	0.937			108559.824
82	Se-2	|	154.157	3.560372	ppb	8.466	9.569		5.192
107	Ag-1	|	141.112	-0.140409	ppb	13.638	3.766		651.126
115	In-ISK	|	97925.640		ppb	0.847			94541.477
45	Sc-ISK	>	301863.944		ppb	1.091			271828.862
23	Na	|	115103298.329	216543.115386	ppb	0.485	1.161		3697.146
39	K	|	3197936.350	2396.561863	ppb	0.794	0.434		136946.608
24	Mg	|	61183128.939	102662.393862	ppb	0.331	0.781		636.681
159	Tb-ISK	|	204104.409		ppb	0.584			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-9-B

Autosampler Position: 315

Sample Date/Time: Thursday, April 16, 2020 16:50:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-9-B.198

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31003.608		ppb		0.826		29567.237
9	Be	|	16.667	-0.007697	ppb	40.000	54.084		25.556
10	B	|	48227.950	131.769428	ppb	1.548	0.403		402.228
27	Al	|	27292.718	2.377135	ppb	1.682	0.372		7240.724
43	Ca-2	|	3833954.275	226615.130272	ppb	2.407	0.814		98.334
49	Ti	|	7330.770	10.889594	ppb	2.517	1.346		254.447
52	Cr	|	30095.007	2.222575	ppb	1.803	1.386		9606.564
55	Mn	|	10520.540	0.715543	ppb	1.903	2.203		897.806
57	Fe	|	136175.985	497.772608	ppb	0.799	1.485		8749.349
45	Sc-IS	>	1532549.603		ppb	1.934			1358185.143
66	Zn	|	17841.162	15.033444	ppb	6.189	4.406		543.344
86	Sr	|	1841043.808	884.700782	ppb	1.825	0.134		9.086
65	Cu	|	23913.794	13.596043	ppb	3.148	2.302		130.731
69	Ga-IS	|	381491.932		ppb	3.064			366045.570
95	Mo	|	18636.600	9.278720	ppb	2.993	1.067		166.668
115	In-IS	>	264110.354		ppb	1.093			257435.514
111	Cd	|	44.197	0.023428	ppb	10.994	11.541		5.206
118	Sn	|	1450.074	-0.479137	ppb	8.131	4.350		3710.482
121	Sb	|	708.907	-0.294042	ppb	9.934	3.970		2271.294
135	Ba	|	48054.093	45.639988	ppb	3.713	2.644		27.778
165	Ho-IS	|	263410.003		ppb	1.563			257240.201
159	Tb-IS	|	227946.492		ppb	0.812			223779.136
207	Pb	|	931.123	0.045281	ppb	5.067	7.104		295.557
203	Tl	|	28.889	-0.004900	ppb	17.625	24.434		54.445
209	Bi-IS	>	154536.966		ppb	0.942			168189.996
51	V	|	16304.856	24.576297	ppb	1.129	1.649		37.778
59	Co	|	193.335	0.106320	ppb	14.731	15.584		16.667
60	Ni	|	2489.106	2.752191	ppb	4.832	4.976		40.000
75	As	|	1163.218	0.967153	ppb	10.139	28.034		719.384
71	Ga-ISK	>	109176.715		ppb	0.521			108559.824
82	Se-2	|	249.786	6.021157	ppb	9.863	9.650		5.192
107	Ag-1	|	180.001	-0.128772	ppb	9.623	3.752		651.126
115	In-ISK	|	96470.885		ppb	0.345			94541.477
45	Sc-ISK	>	295409.754		ppb	0.100			271828.862
23	Na	|	219184261.801	421338.558345	ppb	2.100	2.172		3697.146
39	K	|	2655336.544	2015.244297	ppb	1.326	1.502		136946.608
24	Mg	|	77065242.060	132130.468225	ppb	1.040	1.089		636.681
159	Tb-ISK	|	199966.529		ppb	0.796			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-10-D

Autosampler Position: 316

Sample Date/Time: Thursday, April 16, 2020 16:53:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-10-D.199

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	40763.657		ppb		2.598		29567.237
9	Be	|	20.000	-0.005405	ppb	16.667	43.735		25.556
10	B	|	38118.574	105.075873	ppb	1.505	1.258		402.228
27	Al	|	142648.689	16.923122	ppb	0.721	3.062		7240.724
43	Ca-2	|	2217069.917	132525.170291	ppb	2.327	1.267		98.334
49	Ti	|	4046.130	5.878853	ppb	5.352	3.344		254.447
52	Cr	|	198287.883	21.897975	ppb	1.171	2.104		9606.564
55	Mn	|	5059902.276	385.021822	ppb	1.218	1.336		897.806
57	Fe	|	95594.415	342.025141	ppb	2.016	0.933		8749.349
45	Sc-IS	>	1515604.762		ppb	2.503			1358185.143
66	Zn	|	22255.114	19.109578	ppb	3.561	1.097		543.344
86	Sr	|	978320.931	475.384321	ppb	2.929	1.768		9.086
65	Cu	|	3140.520	1.731963	ppb	4.979	3.536		130.731
69	Ga-IS	|	389727.761		ppb	3.080			366045.570
95	Mo	|	114517.211	58.173859	ppb	1.248	2.340		166.668
115	In-IS	>	266319.653		ppb	1.830			257435.514
111	Cd	|	42.850	0.022517	ppb	30.141	36.323		5.206
118	Sn	|	12525.492	1.750596	ppb	3.162	1.964		3710.482
121	Sb	|	4607.410	0.406312	ppb	1.506	6.579		2271.294
135	Ba	|	49414.288	46.545136	ppb	3.853	2.718		27.778
165	Ho-IS	|	274194.221		ppb	0.640			257240.201
159	Tb-IS	|	235018.571		ppb	0.638			223779.136
207	Pb	|	2328.963	0.135686	ppb	6.043	6.291		295.557
203	Tl	|	35.556	-0.003642	ppb	37.889	82.696		54.445
209	Bi-IS	>	160074.071		ppb	0.516			168189.996
51	V	|	7597.575	11.356927	ppb	0.408	0.831		37.778
59	Co	|	885.583	0.520338	ppb	7.427	7.193		16.667
60	Ni	|	2806.942	3.091766	ppb	1.170	1.110		40.000
75	As	|	2643.494	4.186865	ppb	1.112	2.186		719.384
71	Ga-ISK	>	109788.042		ppb	0.586			108559.824
82	Se-2	|	110.458	2.577127	ppb	9.977	10.843		5.192
107	Ag-1	|	137.778	-0.140437	ppb	23.498	6.251		651.126
115	In-ISK	|	97198.037		ppb	0.441			94541.477
45	Sc-ISK	>	298795.880		ppb	0.779			271828.862
23	Na	|	101487714.739	192874.579315	ppb	0.918	0.698		3697.146
39	K	|	8347960.619	6516.043488	ppb	1.020	0.768		136946.608
24	Mg	|	35303099.427	59840.843828	ppb	1.029	0.469		636.681
159	Tb-ISK	|	200591.823		ppb	0.340			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-11-B

Autosampler Position: 317

Sample Date/Time: Thursday, April 16, 2020 16:56:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-11-B.200

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	43714.579		ppb	2.120			29567.237
9	Be	|	24.444	-0.002432	ppb	41.660	270.616		25.556
10	B	|	35262.357	98.178914	ppb	0.707	1.700		402.228
27	Al	|	60496.745	6.673321	ppb	1.947	3.349		7240.724
43	Ca-2	|	2718024.883	164241.188146	ppb	1.001	0.844		98.334
49	Ti	|	3652.689	5.330171	ppb	2.292	3.379		254.447
52	Cr	|	17980.198	0.870624	ppb	1.244	5.270		9606.564
55	Mn	|	1031557.360	79.272239	ppb	2.656	2.159		897.806
57	Fe	|	103469.189	377.864425	ppb	3.364	3.347		8749.349
45	Sc-IS	>	1499179.855		ppb	0.992			1358185.143
66	Zn	|	5982.366	4.803235	ppb	5.011	4.794		543.344
86	Sr	|	1244926.936	611.571158	ppb	1.172	1.264		9.086
65	Cu	|	3668.893	2.061365	ppb	6.845	7.183		130.731
69	Ga-IS	|	388549.538		ppb	3.038			366045.570
95	Mo	|	18129.279	9.226807	ppb	2.595	1.611		166.668
115	In-IS	>	265945.422		ppb	1.283			257435.514
111	Cd	|	41.929	0.021902	ppb	28.859	33.022		5.206
118	Sn	|	1831.229	-0.404279	ppb	8.816	7.157		3710.482
121	Sb	|	1822.338	-0.094335	ppb	0.939	5.014		2271.294
135	Ba	|	74441.428	70.226003	ppb	3.954	2.695		27.778
165	Ho-IS	|	267388.128		ppb	0.637			257240.201
159	Tb-IS	|	231198.506		ppb	1.932			223779.136
207	Pb	|	1928.941	0.111133	ppb	8.040	10.637		295.557
203	Tl	|	42.222	-0.002019	ppb	31.906	148.664		54.445
209	Bi-IS	>	157793.403		ppb	1.079			168189.996
51	V	|	8398.024	12.554908	ppb	2.087	3.681		37.778
59	Co	|	801.134	0.469068	ppb	9.381	7.861		16.667
60	Ni	|	1827.895	1.995175	ppb	5.670	4.084		40.000
75	As	|	1427.227	1.527888	ppb	1.954	7.433		719.384
71	Ga-ISK	>	109869.855		ppb	1.754			108559.824
82	Se-2	|	92.523	2.136621	ppb	2.508	4.407		5.192
107	Ag-1	|	136.667	-0.140888	ppb	31.707	7.786		651.126
115	In-ISK	|	96687.299		ppb	1.170			94541.477
45	Sc-ISK	>	293114.419		ppb	0.769			271828.862
23	Na	|	87579143.698	169658.480779	ppb	1.587	0.817		3697.146
39	K	|	6505462.511	5151.678069	ppb	0.821	0.347		136946.608
24	Mg	|	40395419.324	69797.913892	ppb	1.519	0.750		636.681
159	Tb-ISK	|	199059.672		ppb	2.105			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-11-C MS

Autosampler Position: 318

Sample Date/Time: Thursday, April 16, 2020 16:59:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-11-C MS.201

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		44309.722		ppb			0.108			29567.237
9	Be	|		151615.953	96.623828	ppb			1.272	1.149		25.556
10	B	|		66301.291	183.536164	ppb			1.170	0.769		402.228
27	Al	|		824352.191	102.537415	ppb			0.971	0.848		7240.724
43	Ca-2	|		2768916.457	165376.983236	ppb			2.124	0.830		98.334
49	Ti	|		72941.314	113.515979	ppb			1.205	0.759		254.447
52	Cr	|		848727.562	97.735154	ppb			1.642	0.356		9606.564
55	Mn	|		2312975.479	175.793668	ppb			2.087	1.055		897.806
57	Fe	|		1233483.108	4872.219520	ppb			2.199	1.102		8749.349
45	Sc-IS	>		1516620.393		ppb			1.316			1358185.143
66	Zn	|		104523.535	91.669090	ppb			3.595	2.589		543.344
86	Sr	|		1449622.702	703.902790	ppb			1.467	0.195		9.086
65	Cu	|		152618.172	88.132093	ppb			2.981	1.728		130.731
69	Ga-IS	|		412460.115		ppb			3.188			366045.570
95	Mo	|		206188.667	104.710149	ppb			1.557	0.414		166.668
115	In-IS	>		268060.436		ppb			1.187			257435.514
111	Cd	|		164707.175	97.923424	ppb			0.903	1.973		5.206
118	Sn	|		675462.507	134.491387	ppb			2.198	1.796		3710.482
121	Sb	|		582720.112	103.694179	ppb			0.996	1.644		2271.294
135	Ba	|		182738.776	171.145907	ppb			3.164	3.903		27.778
165	Ho-IS	|		269109.014		ppb			1.101			257240.201
159	Tb-IS	|		232348.762		ppb			0.645			223779.136
207	Pb	|		1574174.978	103.835854	ppb			0.109	0.576		295.557
203	Tl	|		456432.225	101.709765	ppb			1.369	1.773		54.445
209	Bi-IS	>		160814.543		ppb			0.563			168189.996
51	V	|		79128.685	118.511361	ppb			3.146	3.144		37.778
59	Co	|		166850.075	99.687614	ppb			2.009	2.106		16.667
60	Ni	|		90181.538	100.478227	ppb			0.762	0.806		40.000
75	As	|		51096.811	109.774896	ppb			1.251	1.577		719.384
71	Ga-ISK	>		110073.553		ppb			0.318			108559.824
82	Se-2	|		4382.512	106.920764	ppb			1.257	1.569		5.192
107	Ag-1	|		183343.524	49.144350	ppb			0.896	1.195		651.126
115	In-ISK	|		96762.007		ppb			0.466			94541.477
45	Sc-ISK	>		293518.152		ppb			0.813			271828.862
23	Na	|		87116246.300	168547.619210	ppb			0.556	1.266		3697.146
39	K	|		7739658.383	6143.088620	ppb			0.864	0.060		136946.608
24	Mg	|		42672399.665	73632.019644	ppb			1.923	1.535		636.681
159	Tb-ISK	|		198091.337		ppb			0.773			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 17:01:54

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.202

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29988.110		ppb		0.918		29567.237
9	Be	|	142940.500	96.403901	ppb	1.048	1.695		25.556
10	B	|	83366.999	244.638050	ppb	0.785	1.237		402.228
27	Al	|	765781.933	100.790574	ppb	0.741	1.929		7240.724
43	Ca-2	|	82038.247	5179.035532	ppb	1.359	0.155		98.334
49	Ti	|	61230.986	100.778332	ppb	2.240	1.031		254.447
52	Cr	|	824493.444	100.499043	ppb	2.521	1.331		9606.564
55	Mn	|	1178964.438	94.778786	ppb	3.073	2.003		897.806
57	Fe	|	1144579.545	4783.181978	ppb	3.623	2.763		8749.349
45	Sc-IS	>	1433186.350		ppb	1.215			1358185.143
66	Zn	|	107040.181	99.380985	ppb	5.002	4.205		543.344
86	Sr	|	195131.842	100.253624	ppb	3.112	2.238		9.086
65	Cu	|	164538.262	100.547756	ppb	5.442	4.563		130.731
69	Ga-IS	|	407527.539		ppb	4.192			366045.570
95	Mo	|	181039.173	97.285924	ppb	2.236	1.927		166.668
115	In-IS	>	272400.637		ppb	2.031			257435.514
111	Cd	|	170183.190	99.568300	ppb	1.149	1.422		5.206
118	Sn	|	515377.801	100.788699	ppb	2.139	0.388		3710.482
121	Sb	|	562557.417	98.485158	ppb	1.930	1.099		2271.294
135	Ba	|	105281.701	96.954506	ppb	5.352	3.367		27.778
165	Ho-IS	|	272843.376		ppb	1.281			257240.201
159	Tb-IS	|	233920.935		ppb	1.302			223779.136
207	Pb	|	1626273.879	99.081799	ppb	0.930	2.647		295.557
203	Tl	|	483898.397	99.600559	ppb	0.963	2.986		54.445
209	Bi-IS	>	174163.292		ppb	2.066			168189.996
51	V	|	68013.764	99.119656	ppb	1.388	1.381		37.778
59	Co	|	172188.244	100.122713	ppb	1.123	2.044		16.667
60	Ni	|	92801.594	100.621330	ppb	1.303	1.371		40.000
75	As	|	48248.516	100.735347	ppb	1.812	1.368		719.384
71	Ga-ISK	>	113121.755		ppb	1.722			108559.824
82	Se-2	|	4201.149	99.763020	ppb	1.834	3.563		5.192
107	Ag-1	|	391811.935	102.405052	ppb	1.118	2.195		651.126
115	In-ISK	|	99683.974		ppb	1.823			94541.477
45	Sc-ISK	>	283604.144		ppb	0.521			271828.862
23	Na	|	2542689.803	5083.577895	ppb	0.862	0.582		3697.146
39	K	|	6167602.583	5045.541306	ppb	0.742	0.764		136946.608
24	Mg	|	2859024.132	5104.826927	ppb	0.436	0.529		636.681
159	Tb-ISK	|	198018.976		ppb	0.464			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 17:04:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.203

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		29193.151		ppb			3.174			29567.237
9	Be	|		25.556	-0.000166	ppb	30.123	3159.057				25.556
10	B	|		568.900	0.507332	ppb	3.227	14.701				402.228
27	Al	|		4919.736	-0.330214	ppb	1.862	2.252				7240.724
43	Ca-2	|		170.001	4.725036	ppb	18.368	47.387				98.334
49	Ti	|		226.668	-0.051223	ppb	5.302	33.046				254.447
52	Cr	|		9580.990	-0.011631	ppb	1.410	179.973				9606.564
55	Mn	|		933.364	0.002468	ppb	3.780	78.623				897.806
57	Fe	|		10907.500	9.262212	ppb	3.763	15.131				8749.349
45	Sc-IS	|>		1367422.930		ppb	1.502					1358185.143
66	Zn	|		655.571	0.105640	ppb	10.585	55.165				543.344
86	Sr	|		75.204	0.035677	ppb	38.284	44.908				9.086
65	Cu	|		222.807	0.058478	ppb	1.488	3.691				130.731
69	Ga-IS	|		369496.584		ppb	3.906					366045.570
95	Mo	|		612.235	0.250640	ppb	3.096	5.233				166.668
115	In-IS	|>		259384.234		ppb	0.559					257435.514
111	Cd	|		30.937	0.015786	ppb	61.157	73.846				5.206
118	Sn	|		5358.786	0.335060	ppb	6.883	20.923				3710.482
121	Sb	|		1227.831	-0.195862	ppb	4.414	4.461				2271.294
135	Ba	|		44.445	0.015962	ppb	21.651	59.634				27.778
165	Ho-IS	|		257979.949		ppb	1.419					257240.201
159	Tb-IS	|		223265.996		ppb	1.898					223779.136
207	Pb	|		593.338	0.018560	ppb	10.966	22.490				295.557
203	Tl	|		145.556	0.019236	ppb	9.534	16.427				54.445
209	Bi-IS	|>		169243.320		ppb	0.793					168189.996
51	V	|		66.667	0.041341	ppb	27.839	64.685				37.778
59	Co	|		32.222	0.008940	ppb	11.945	23.346				16.667
60	Ni	|		54.445	0.014764	ppb	17.674	67.797				40.000
75	As	|		769.129	0.069179	ppb	1.996	69.807				719.384
71	Ga-ISK	|>		111248.194		ppb	1.208					108559.824
82	Se-2	|		10.869	0.135463	ppb	101.309	199.038				5.192
107	Ag-1	|		254.447	-0.109876	ppb	12.172	7.420				651.126
115	In-ISK	|		96711.913		ppb	1.722					94541.477
45	Sc-ISK	|>		274068.479		ppb	0.484					271828.862
23	Na	|		16489.513	26.441652	ppb	1.607	1.533				3697.146
39	K	|		137220.336	-0.739155	ppb	0.532	102.875				136946.608
24	Mg	|		3483.758	5.251785	ppb	1.713	1.934				636.681
159	Tb-ISK	|		193446.283		ppb	0.269					189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-11-D MSD

Autosampler Position: 319

Sample Date/Time: Thursday, April 16, 2020 17:07:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-11-D MSD.204

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	43918.530		ppb		1.737		29567.237
9	Be	|	149708.194	97.834845	ppb		1.136	1.808	25.556
10	B	|	64909.387	184.231794	ppb		1.932	0.999	402.228
27	Al	|	817913.343	104.342366	ppb		1.090	1.862	7240.724
43	Ca-2	|	2731760.822	167269.276676	ppb		3.226	1.442	98.334
49	Ti	|	72274.665	115.330150	ppb		2.532	1.877	254.447
52	Cr	|	834102.423	98.498277	ppb		1.817	1.182	9606.564
55	Mn	|	2301669.349	179.383812	ppb		1.654	1.223	897.806
57	Fe	|	1221749.780	4947.698021	ppb		3.390	0.946	8749.349
45	Sc-IS	>	1479426.133		ppb		2.827		1358185.143
66	Zn	|	101958.620	91.651339	ppb		4.625	1.920	543.344
86	Sr	|	1436516.267	715.461084	ppb		0.689	2.865	9.086
65	Cu	|	150847.184	89.293941	ppb		3.976	1.189	130.731
69	Ga-IS	|	402333.679		ppb		3.561		366045.570
95	Mo	|	202166.262	105.273831	ppb		1.685	1.162	166.668
115	In-IS	>	264725.143		ppb		1.281		257435.514
111	Cd	|	162757.807	97.970265	ppb		1.256	0.575	5.206
118	Sn	|	667205.994	134.517209	ppb		2.065	1.238	3710.482
121	Sb	|	573403.352	103.308076	ppb		2.094	1.535	2271.294
135	Ba	|	178966.066	169.675998	ppb		3.548	3.036	27.778
165	Ho-IS	|	266001.590		ppb		1.017		257240.201
159	Tb-IS	|	226721.632		ppb		0.545		223779.136
207	Pb	|	1555217.065	104.713473	ppb		0.688	0.957	295.557
203	Tl	|	455157.524	103.526203	ppb		1.768	1.857	54.445
209	Bi-IS	>	157546.194		ppb		0.370		168189.996
51	V	|	77845.973	119.430938	ppb		0.593	1.387	37.778
59	Co	|	164648.965	100.766974	ppb		0.583	1.301	16.667
60	Ni	|	89089.171	101.676513	ppb		1.090	1.373	40.000
75	As	|	50414.986	110.946042	ppb		1.712	0.367	719.384
71	Ga-ISK	>	107469.453		ppb		1.531		108559.824
82	Se-2	|	4302.808	107.556354	ppb		2.474	3.843	5.192
107	Ag-1	|	179610.944	49.316169	ppb		0.274	1.255	651.126
115	In-ISK	|	93728.281		ppb		0.747		94541.477
45	Sc-ISK	>	288876.025		ppb		0.683		271828.862
23	Na	|	86735523.800	170497.961023	ppb		0.722	0.540	3697.146
39	K	|	7701013.047	6211.842750	ppb		1.248	0.708	136946.608
24	Mg	|	42934381.956	75275.468693	ppb		2.846	2.708	636.681
159	Tb-ISK	|	196132.553		ppb		0.475		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-13-B

Autosampler Position: 321

Sample Date/Time: Thursday, April 16, 2020 17:10:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-13-B.205

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	46717.382		ppb	1.224		29567.237
9	Be	27.778	0.000234	ppb	24.980	2042.897	25.556
10	B	39327.394	112.584806	ppb	0.869	0.662	402.228
27	Al	30411.242	2.951207	ppb	2.856	2.361	7240.724
43	Ca-2	1669948.801	103589.839464	ppb	1.336	0.255	98.334
49	Ti	3268.152	4.858890	ppb	3.176	3.262	254.447
52	Cr	25779.920	1.871276	ppb	2.916	3.412	9606.564
55	Mn	76908.782	5.997182	ppb	2.585	2.033	897.806
57	Fe	77175.896	280.216424	ppb	3.958	3.903	8749.349
45	Sc-IS	> 1460296.810		ppb	1.105		1358185.143
66	Zn	47434.273	42.924065	ppb	4.331	3.824	543.344
86	Sr	780356.506	393.512606	ppb	2.082	0.982	9.086
65	Cu	27764.160	16.583059	ppb	5.156	4.693	130.731
69	Ga-IS	378502.729		ppb	4.413		366045.570
95	Mo	7318.541	3.769120	ppb	1.992	2.119	166.668
115	In-IS	> 259579.881		ppb	0.616		257435.514
111	Cd	42.409	0.022748	ppb	60.237	68.011	5.206
118	Sn	9072.886	1.102385	ppb	5.672	9.199	3710.482
121	Sb	1235.609	-0.194572	ppb	6.832	7.918	2271.294
135	Ba	76302.259	73.761729	ppb	3.240	3.003	27.778
165	Ho-IS	264513.374		ppb	1.407		257240.201
159	Tb-IS	228572.981		ppb	0.265		223779.136
207	Pb	8591.011	0.552871	ppb	0.815	0.715	295.557
203	Tl	150.001	0.022124	ppb	21.430	33.116	54.445
209	Bi-IS	> 159479.697		ppb	0.449		168189.996
51	V	12260.817	18.468138	ppb	2.430	2.711	37.778
59	Co	380.005	0.218809	ppb	8.772	8.924	16.667
60	Ni	11702.570	13.110227	ppb	1.633	2.856	40.000
75	As	1028.938	0.669997	ppb	8.062	22.646	719.384
71	Ga-ISK	> 109176.793		ppb	1.753		108559.824
82	Se-2	115.521	2.717149	ppb	27.851	29.447	5.192
107	Ag-1	143.334	-0.138719	ppb	8.385	2.393	651.126
115	In-ISK	95579.404		ppb	1.067		94541.477
45	Sc-ISK	> 291127.691		ppb	0.583		271828.862
23	Na	80952345.184	157896.093039	ppb	0.780	0.211	3697.146
39	K	4070452.618	3201.237183	ppb	0.579	1.113	136946.608
24	Mg	31875002.320	55455.403667	ppb	0.912	1.238	636.681
159	Tb-ISK	198877.442		ppb	0.421		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-14-B

Autosampler Position: 322

Sample Date/Time: Thursday, April 16, 2020 17:12:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-14-B.206

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32950.180		ppb		0.766		29567.237
9	Be	|	22.222	-0.003220	ppb	8.660	37.167		25.556
10	B	|	58216.196	170.300908	ppb	2.251	2.839		402.228
27	Al	|	33574.967	3.443595	ppb	1.045	2.508		7240.724
43	Ca-2	|	400122.798	25258.259793	ppb	2.209	0.571		98.334
49	Ti	|	1202.273	1.540265	ppb	8.597	8.881		254.447
52	Cr	|	13040.399	0.356499	ppb	3.576	11.115		9606.564
55	Mn	|	1402057.792	112.619282	ppb	2.841	1.648		897.806
57	Fe	|	24958.460	66.151357	ppb	2.667	2.756		8749.349
45	Sc-IS	>	1434635.925		ppb	1.670			1358185.143
66	Zn	|	2692.477	1.975728	ppb	8.101	9.939		543.344
86	Sr	|	207821.425	106.689850	ppb	1.004	1.339		9.086
65	Cu	|	2369.538	1.364217	ppb	7.333	8.363		130.731
69	Ga-IS	|	365222.875		ppb	3.282			366045.570
95	Mo	|	34359.063	18.366896	ppb	2.427	0.888		166.668
115	In-IS	>	256230.855		ppb	0.794			257435.514
111	Cd	|	-1.043	-0.003879	ppb	640.627	106.673		5.206
118	Sn	|	3790.504	0.020236	ppb	6.450	232.037		3710.482
121	Sb	|	1107.821	-0.215506	ppb	4.507	3.654		2271.294
135	Ba	|	23487.083	22.981226	ppb	3.222	2.479		27.778
165	Ho-IS	|	265475.235		ppb	0.916			257240.201
159	Tb-IS	|	227684.602		ppb	0.885			223779.136
207	Pb	|	505.559	0.014643	ppb	8.976	20.180		295.557
203	Tl	|	47.778	-0.000978	ppb	40.280	435.653		54.445
209	Bi-IS	>	161128.031		ppb	0.253			168189.996
51	V	|	3672.694	5.595274	ppb	2.043	1.168		37.778
59	Co	|	117.778	0.062166	ppb	6.536	6.403		16.667
60	Ni	|	415.562	0.430593	ppb	2.451	2.162		40.000
75	As	|	1852.862	2.558189	ppb	2.592	3.467		719.384
71	Ga-ISK	>	107163.847		ppb	1.659			108559.824
82	Se-2	|	36.510	0.790055	ppb	30.662	37.000		5.192
107	Ag-1	|	92.223	-0.152130	ppb	13.684	2.183		651.126
115	In-ISK	|	94714.576		ppb	1.011			94541.477
45	Sc-ISK	>	283188.317		ppb	0.841			271828.862
23	Na	|	62428123.824	125176.913312	ppb	1.017	0.243		3697.146
39	K	|	6321669.369	5182.608365	ppb	0.254	1.093		136946.608
24	Mg	|	8691134.203	15544.116912	ppb	0.678	1.265		636.681
159	Tb-ISK	|	195093.797		ppb	0.336			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-15-B

Autosampler Position: 323

Sample Date/Time: Thursday, April 16, 2020 17:15:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-15-B.207

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30639.502		ppb			2.456			29567.237
9	Be	|		18.889	-0.005638	ppb		10.189	26.011			25.556
10	B	|		19177.310	54.413273	ppb		1.610	3.199			402.228
27	Al	|		25622.960	2.335853	ppb		0.997	2.376			7240.724
43	Ca-2	|		1363477.337	84786.115163	ppb		2.116	0.886			98.334
49	Ti	|		2184.612	3.109970	ppb		2.541	3.034			254.447
52	Cr	|		13503.046	0.388577	ppb		1.616	2.209			9606.564
55	Mn	|		781229.191	61.776032	ppb		1.268	0.647			897.806
57	Fe	|		102637.482	386.584205	ppb		1.984	0.853			8749.349
45	Sc-IS	>		1456716.952		ppb		1.854				1358185.143
66	Zn	|		24141.516	21.633691	ppb		4.199	2.407			543.344
86	Sr	|		775888.995	392.247836	ppb		2.406	1.517			9.086
65	Cu	|		4919.337	2.876741	ppb		1.626	1.559			130.731
69	Ga-IS	|		394656.831		ppb		4.277				366045.570
95	Mo	|		6694.905	3.447754	ppb		5.347	4.616			166.668
115	In-IS	>		260153.759		ppb		1.401				257435.514
111	Cd	|		62.608	0.035096	ppb		23.708	25.087			5.206
118	Sn	|		2705.812	-0.215492	ppb		3.982	7.619			3710.482
121	Sb	|		675.572	-0.298078	ppb		6.571	3.277			2271.294
135	Ba	|		151153.921	145.804973	ppb		3.622	2.447			27.778
165	Ho-IS	|		266695.775		ppb		1.718				257240.201
159	Tb-IS	|		229279.753		ppb		0.532				223779.136
207	Pb	|		434.447	0.009870	ppb		10.445	28.117			295.557
203	Tl	|		40.000	-0.002719	ppb		14.434	50.277			54.445
209	Bi-IS	>		161574.204		ppb		1.070				168189.996
51	V	|		1554.529	2.306368	ppb		2.856	1.930			37.778
59	Co	|		327.782	0.188804	ppb		16.471	17.952			16.667
60	Ni	|		1110.043	1.210947	ppb		4.063	5.145			40.000
75	As	|		752.642	0.076277	ppb		14.031	321.884			719.384
71	Ga-ISK	>		108457.959		ppb		1.022				108559.824
82	Se-2	|		64.844	1.477532	ppb		14.724	14.983			5.192
107	Ag-1	|		70.000	-0.158467	ppb		25.198	3.118			651.126
115	In-ISK	|		95338.651		ppb		0.359				94541.477
45	Sc-ISK	>		283052.749		ppb		1.727				271828.862
23	Na	|		35805201.723	71840.112965	ppb		1.065	2.001			3697.146
39	K	|		4191598.509	3398.278974	ppb		0.962	2.215			136946.608
24	Mg	|		24706585.421	44214.715867	ppb		0.798	1.391			636.681
159	Tb-ISK	|		196273.236		ppb		1.186				189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-16-B

Autosampler Position: 324

Sample Date/Time: Thursday, April 16, 2020 17:18:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-16-B.208

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	31679.543		ppb	2.251		29567.237
9	Be	20.000	-0.004900	ppb	16.667	43.547	25.556
10	B	29433.628	84.303387	ppb	1.377	1.180	402.228
27	Al	37676.301	3.921665	ppb	2.293	4.592	7240.724
43	Ca-2	1101196.548	68583.637525	ppb	2.526	0.604	98.334
49	Ti	1580.087	2.131680	ppb	1.477	4.357	254.447
52	Cr	13890.088	0.437997	ppb	3.354	5.615	9606.564
55	Mn	4962287.550	393.405062	ppb	2.610	1.353	897.806
57	Fe	70178.723	252.469237	ppb	2.989	1.482	8749.349
45	Sc-IS	> 1454350.614		ppb	2.105		1358185.143
66	Zn	9708.857	8.394968	ppb	4.102	2.264	543.344
86	Sr	545106.904	276.108528	ppb	0.360	2.189	9.086
65	Cu	4391.067	2.562346	ppb	4.814	3.856	130.731
69	Ga-IS	373514.659		ppb	3.877		366045.570
95	Mo	12498.799	6.532803	ppb	0.437	2.425	166.668
115	In-IS	> 257393.982		ppb	0.929		257435.514
111	Cd	75.975	0.043774	ppb	24.310	25.447	5.206
118	Sn	2081.263	-0.339666	ppb	8.510	10.783	3710.482
121	Sb	615.569	-0.307981	ppb	1.654	0.834	2271.294
135	Ba	71528.843	69.734626	ppb	4.276	4.127	27.778
165	Ho-IS	266535.763		ppb	0.685		257240.201
159	Tb-IS	228733.453		ppb	1.177		223779.136
207	Pb	1671.151	0.090162	ppb	3.592	4.427	295.557
203	Tl	25.556	-0.005980	ppb	19.924	18.876	54.445
209	Bi-IS	> 162953.007		ppb	0.410		168189.996
51	V	8270.172	12.490413	ppb	2.920	4.675	37.778
59	Co	661.126	0.389994	ppb	4.685	6.696	16.667
60	Ni	1011.147	1.095684	ppb	4.713	5.233	40.000
75	As	983.962	0.581182	ppb	3.802	16.692	719.384
71	Ga-ISK	> 108767.021		ppb	1.795		108559.824
82	Se-2	50.859	1.125517	ppb	22.711	23.523	5.192
107	Ag-1	65.556	-0.159748	ppb	2.936	0.435	651.126
115	In-ISK	95232.937		ppb	1.198		94541.477
45	Sc-ISK	> 282169.570		ppb	0.861		271828.862
23	Na	37057477.967	74570.115217	ppb	1.180	0.494	3697.146
39	K	3967391.244	3219.863075	ppb	0.489	0.450	136946.608
24	Mg	20635752.376	37039.553162	ppb	0.950	0.164	636.681
159	Tb-ISK	196888.875		ppb	0.707		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-17-B

Autosampler Position: 325

Sample Date/Time: Thursday, April 16, 2020 17:21:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-17-B.209

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		39282.833		ppb				1.564		29567.237
9	Be	|		16.667	-0.007011	ppb				52.915	82.513	25.556
10	B	|		65327.976	191.072431	ppb				2.394	1.690	402.228
27	Al	|		42905.474	4.677057	ppb				2.581	1.820	7240.724
43	Ca-2	|		259310.049	16354.229215	ppb				2.672	1.586	98.334
49	Ti	|		1125.600	1.413510	ppb				2.967	2.296	254.447
52	Cr	|		13582.010	0.422220	ppb				1.824	3.959	9606.564
55	Mn	|		188742.048	15.082320	ppb				3.810	2.881	897.806
57	Fe	|		26206.253	71.316013	ppb				3.133	3.516	8749.349
45	Sc-IS	>		1435683.992		ppb				1.224		1358185.143
66	Zn	|		1722.327	1.068758	ppb				10.370	13.818	543.344
86	Sr	|		61034.137	31.300614	ppb				3.096	2.389	9.086
65	Cu	|		645.841	0.310284	ppb				7.334	10.862	130.731
69	Ga-IS	|		355792.988		ppb				2.925		366045.570
95	Mo	|		33600.611	17.945741	ppb				3.425	2.720	166.668
115	In-IS	>		254963.439		ppb				0.462		257435.514
111	Cd	|		13.883	0.005445	ppb				156.269	249.501	5.206
118	Sn	|		1653.429	-0.425571	ppb				5.414	4.597	3710.482
121	Sb	|		578.901	-0.313779	ppb				10.370	3.648	2271.294
135	Ba	|		2314.632	2.251666	ppb				4.215	3.814	27.778
165	Ho-IS	|		259297.757		ppb				0.921		257240.201
159	Tb-IS	|		222492.590		ppb				0.602		223779.136
207	Pb	|		444.447	0.010729	ppb				9.644	28.809	295.557
203	Tl	|		27.778	-0.005397	ppb				30.199	35.544	54.445
209	Bi-IS	>		160632.587		ppb				1.253		168189.996
51	V	|		1166.714	1.735755	ppb				4.121	3.506	37.778
59	Co	|		24.444	0.004835	ppb				67.267	205.143	16.667
60	Ni	|		263.336	0.255670	ppb				16.456	18.382	40.000
75	As	|		1095.690	0.860084	ppb				7.536	21.618	719.384
71	Ga-ISK	>		107299.246		ppb				0.787		108559.824
82	Se-2	|		28.554	0.586656	ppb				7.387	8.029	5.192
107	Ag-1	|		56.667	-0.161957	ppb				5.882	0.637	651.126
115	In-ISK	|		94847.552		ppb				1.188		94541.477
45	Sc-ISK	>		274258.924		ppb				1.124		271828.862
23	Na	|		49026014.559	101510.626880	ppb				0.531	1.005	3697.146
39	K	|		1944774.462	1564.614779	ppb				0.375	0.808	136946.608
24	Mg	|		3240184.583	5982.680968	ppb				1.147	0.389	636.681
159	Tb-ISK	|		193203.128		ppb				1.129		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-18-B

Autosampler Position: 326

Sample Date/Time: Thursday, April 16, 2020 17:24:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-18-B.210

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30834.374		ppb	3.195		29567.237
9	Be	8.889	-0.012459	ppb	57.282	26.247	25.556
10	B	47627.043	133.519985	ppb	0.994	1.597	402.228
27	Al	24955.120	2.166804	ppb	2.510	3.335	7240.724
43	Ca-2	3646341.448	221126.369073	ppb	1.161	1.086	98.334
49	Ti	7720.975	11.805618	ppb	1.841	3.291	254.447
52	Cr	29666.328	2.262489	ppb	0.797	4.006	9606.564
55	Mn	9967.921	0.693468	ppb	0.831	2.905	897.806
57	Fe	132967.468	498.615561	ppb	3.179	3.260	8749.349
45	Sc-IS	> 1493961.565		ppb	1.825		1358185.143
66	Zn	16264.820	14.034119	ppb	4.112	4.296	543.344
86	Sr	1788359.699	881.711344	ppb	1.632	2.057	9.086
65	Cu	22639.743	13.204307	ppb	3.398	3.640	130.731
69	Ga-IS	364091.151		ppb	3.269		366045.570
95	Mo	17517.401	8.945832	ppb	0.871	1.227	166.668
115	In-IS	> 255813.169		ppb	1.334		257435.514
111	Cd	32.103	0.016816	ppb	22.430	28.282	5.206
118	Sn	1487.855	-0.461571	ppb	4.370	2.195	3710.482
121	Sb	511.120	-0.326805	ppb	3.012	1.237	2271.294
135	Ba	44221.731	43.361905	ppb	3.609	2.504	27.778
165	Ho-IS	260988.110		ppb	0.867		257240.201
159	Tb-IS	223080.553		ppb	0.679		223779.136
207	Pb	615.561	0.023923	ppb	4.509	4.265	295.557
203	Tl	30.000	-0.004588	ppb	11.111	17.767	54.445
209	Bi-IS	> 153372.495		ppb	2.146		168189.996
51	V	15413.868	24.091801	ppb	1.685	2.846	37.778
59	Co	215.557	0.124618	ppb	9.942	11.564	16.667
60	Ni	2377.976	2.726177	ppb	4.292	4.865	40.000
75	As	1087.001	0.887676	ppb	6.303	19.654	719.384
71	Ga-ISK	> 105298.909		ppb	1.198		108559.824
82	Se-2	213.137	5.313691	ppb	1.347	1.281	5.192
107	Ag-1	115.556	-0.145126	ppb	27.264	6.056	651.126
115	In-ISK	92443.277		ppb	0.260		94541.477
45	Sc-ISK	> 285350.652		ppb	0.614		271828.862
23	Na	207766727.348	413455.654396	ppb	1.311	0.808	3697.146
39	K	2525432.474	1982.339096	ppb	1.571	1.427	136946.608
24	Mg	73096798.655	129747.091556	ppb	0.802	1.000	636.681
159	Tb-ISK	195537.843		ppb	0.724		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-19-B

Autosampler Position: 327

Sample Date/Time: Thursday, April 16, 2020 17:26:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-19-B.211

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		39935.754		ppb		1.737		29567.237
9	Be	|		16.667	-0.007215	ppb	87.178	132.621		25.556
10	B	|		68047.280	196.386978	ppb	2.030	2.160		402.228
27	Al	|		48289.281	5.307123	ppb	2.200	4.215		7240.724
43	Ca-2	|		272385.917	16948.277642	ppb	1.365	0.727		98.334
49	Ti	|		1066.707	1.292801	ppb	3.480	4.604		254.447
52	Cr	|		12418.729	0.258364	ppb	0.279	7.421		9606.564
55	Mn	|		197090.398	15.540863	ppb	1.303	0.287		897.806
57	Fe	|		26544.643	71.234866	ppb	1.581	0.217		8749.349
45	Sc-IS	>		1455445.354		ppb	1.537			1358185.143
66	Zn	|		1693.434	1.021629	ppb	5.958	8.827		543.344
86	Sr	|		63436.735	32.094931	ppb	1.267	0.525		9.086
65	Cu	|		3127.345	1.799625	ppb	1.393	1.126		130.731
69	Ga-IS	|		370562.438		ppb	3.345			366045.570
95	Mo	|		35223.374	18.563173	ppb	1.034	0.614		166.668
115	In-IS	>		260720.853		ppb	0.682			257435.514
111	Cd	|		-7.302	-0.007656	ppb	277.715	162.198		5.206
118	Sn	|		1141.157	-0.538675	ppb	8.578	4.008		3710.482
121	Sb	|		518.898	-0.327221	ppb	3.538	0.880		2271.294
135	Ba	|		2417.983	2.301362	ppb	3.861	4.256		27.778
165	Ho-IS	|		265984.984		ppb	1.820			257240.201
159	Tb-IS	|		232233.567		ppb	0.571			223779.136
207	Pb	|		957.790	0.043598	ppb	9.315	12.819		295.557
203	Tl	|		15.556	-0.008182	ppb	53.927	22.621		54.445
209	Bi-IS	>		163228.343		ppb	0.327			168189.996
51	V	|		1154.491	1.668788	ppb	5.785	6.001		37.778
59	Co	|		41.111	0.014414	ppb	16.878	28.646		16.667
60	Ni	|		251.113	0.233956	ppb	23.906	28.165		40.000
75	As	|		1242.833	1.113193	ppb	2.800	7.393		719.384
71	Ga-ISK	>		110316.550		ppb	0.940			108559.824
82	Se-2	|		26.849	0.527260	ppb	45.190	57.285		5.192
107	Ag-1	|		58.889	-0.161758	ppb	42.860	4.252		651.126
115	In-ISK	|		97070.823		ppb	0.603			94541.477
45	Sc-ISK	>		289459.049		ppb	1.408			271828.862
23	Na	|		50822313.177	99710.276982	ppb	0.456	1.452		3697.146
39	K	|		2017531.313	1536.179702	ppb	4.357	5.300		136946.608
24	Mg	|		3360786.560	5881.078918	ppb	1.776	3.055		636.681
159	Tb-ISK	|		200441.765		ppb	0.631			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-23184-B-20-B

Autosampler Position: 328

Sample Date/Time: Thursday, April 16, 2020 17:29:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-23184-B-20-B.212

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29904.610		ppb	2.159			29567.237
9	Be	|	14.444	-0.008594	ppb	35.251	42.653		25.556
10	B	|	16377.162	46.011675	ppb	2.059	2.429		402.228
27	Al	|	21740.976	1.813202	ppb	0.926	5.551		7240.724
43	Ca-2	|	837209.494	51757.596563	ppb	3.234	0.686		98.334
49	Ti	|	1344.508	1.730355	ppb	4.092	3.212		254.447
52	Cr	|	15263.708	0.592070	ppb	2.225	5.045		9606.564
55	Mn	|	16712.005	1.238863	ppb	4.544	2.179		897.806
57	Fe	|	43418.147	140.051292	ppb	3.225	1.338		8749.349
45	Sc-IS	>	1465116.032		ppb	2.908			1358185.143
66	Zn	|	7847.715	6.628237	ppb	5.808	3.460		543.344
86	Sr	|	485815.191	244.244315	ppb	1.853	1.096		9.086
65	Cu	|	4576.750	2.653647	ppb	5.093	3.080		130.731
69	Ga-IS	|	386084.671		ppb	5.276			366045.570
95	Mo	|	10794.081	5.583753	ppb	3.993	1.166		166.668
115	In-IS	>	259815.558		ppb	1.640			257435.514
111	Cd	|	19.555	0.008727	ppb	48.514	65.077		5.206
118	Sn	|	1014.481	-0.564301	ppb	15.470	5.364		3710.482
121	Sb	|	535.566	-0.323876	ppb	9.689	2.565		2271.294
135	Ba	|	78836.029	76.127726	ppb	3.817	2.222		27.778
165	Ho-IS	|	267762.876		ppb	0.841			257240.201
159	Tb-IS	|	229803.600		ppb	0.262			223779.136
207	Pb	|	550.004	0.016987	ppb	5.284	10.831		295.557
203	Tl	|	15.556	-0.008201	ppb	32.733	13.370		54.445
209	Bi-IS	>	163763.320		ppb	0.632			168189.996
51	V	|	6473.689	9.745144	ppb	2.026	2.086		37.778
59	Co	|	96.667	0.048275	ppb	10.345	12.663		16.667
60	Ni	|	990.034	1.069912	ppb	2.630	2.371		40.000
75	As	|	919.561	0.435892	ppb	7.386	36.006		719.384
71	Ga-ISK	>	108927.038		ppb	0.374			108559.824
82	Se-2	|	118.526	2.797663	ppb	11.333	12.182		5.192
107	Ag-1	|	60.000	-0.161282	ppb	20.031	2.060		651.126
115	In-ISK	|	97106.990		ppb	0.548			94541.477
45	Sc-ISK	>	282960.804		ppb	1.468			271828.862
23	Na	|	29428373.424	59056.338573	ppb	1.030	1.092		3697.146
39	K	|	3169046.148	2540.939722	ppb	0.824	2.409		136946.608
24	Mg	|	15731657.931	28160.025040	ppb	0.902	0.912		636.681
159	Tb-ISK	|	196841.533		ppb	0.405			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, April 16, 2020 17:32:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\b.213

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30806.519		ppb				1.516		29567.237
9	Be	|		8.889	-0.011682	ppb	94.373	52.247				25.556
10	B	|		442.229	0.159821	ppb	3.794	44.683				402.228
27	Al	|		7336.330	0.039400	ppb	4.239	108.928				7240.724
43	Ca-2	|		166.668	4.839563	ppb	9.165	21.586				98.334
49	Ti	|		314.448	0.118785	ppb	12.241	60.213				254.447
52	Cr	|		13249.479	0.517674	ppb	3.262	6.375				9606.564
55	Mn	|		861.137	-0.001244	ppb	2.489	225.199				897.806
57	Fe	|		14893.321	28.974666	ppb	3.519	4.919				8749.349
45	Sc-IS	>		1324762.636		ppb	1.440					1358185.143
66	Zn	|		701.128	0.172280	ppb	10.431	37.462				543.344
86	Sr	|		92.383	0.046320	ppb	24.511	25.858				9.086
65	Cu	|		158.472	0.020496	ppb	9.902	50.330				130.731
69	Ga-IS	|		352217.488		ppb	5.473					366045.570
95	Mo	|		291.114	0.074762	ppb	4.335	6.936				166.668
115	In-IS	>		254769.098		ppb	0.916					257435.514
111	Cd	|		12.722	0.004728	ppb	90.637	152.145				5.206
118	Sn	|		1243.388	-0.511826	ppb	6.935	3.089				3710.482
121	Sb	|		581.123	-0.313377	ppb	14.310	4.693				2271.294
135	Ba	|		28.889	0.001381	ppb	37.091	763.237				27.778
165	Ho-IS	|		255744.798		ppb	1.562					257240.201
159	Tb-IS	|		217730.067		ppb	0.735					223779.136
207	Pb	|		274.445	-0.001653	ppb	10.886	103.074				295.557
203	Tl	|		17.778	-0.007871	ppb	43.301	21.005				54.445
209	Bi-IS	>		171263.873		ppb	0.949					168189.996
51	V	|		78.889	0.062805	ppb	57.523	108.714				37.778
59	Co	|		10.000	-0.003992	ppb	33.333	53.314				16.667
60	Ni	|		46.667	0.007985	ppb	37.797	263.876				40.000
75	As	|		723.453	0.015985	ppb	1.709	249.625				719.384
71	Ga-ISK	>		108108.704		ppb	1.646					108559.824
82	Se-2	|		5.872	0.018536	ppb	133.409	1054.628				5.192
107	Ag-1	|		73.334	-0.157539	ppb	16.389	1.931				651.126
115	In-ISK	|		95196.849		ppb	0.288					94541.477
45	Sc-ISK	>		270715.506		ppb	0.761					271828.862
23	Na	|		15276.505	24.323977	ppb	3.945	5.514				3697.146
39	K	|		133962.977	-2.117333	ppb	0.646	77.170				136946.608
24	Mg	|		3627.127	5.599496	ppb	2.562	2.618				636.681
159	Tb-ISK	|		189091.960		ppb	0.923					189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 17:35:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.214

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	29236.558		ppb		1.621		29567.237
9	Be	|	139694.128	99.142230	ppb	0.143	1.028		25.556
10	B	|	80582.190	248.858381	ppb	0.314	0.868		402.228
27	Al	|	733118.656	101.545507	ppb	0.490	1.655		7240.724
43	Ca-2	|	77977.247	5180.695003	ppb	0.857	1.243		98.334
49	Ti	|	57832.396	100.168816	ppb	1.467	0.367		254.447
52	Cr	|	784352.192	100.624480	ppb	0.764	0.507		9606.564
55	Mn	|	1121247.955	94.861932	ppb	2.151	1.133		897.806
57	Fe	|	1079379.538	4746.251333	ppb	3.521	2.404		8749.349
45	Sc-IS	>	1361919.015		ppb	1.153			1358185.143
66	Zn	|	101365.376	99.035887	ppb	3.882	2.811		543.344
86	Sr	|	185451.622	100.265298	ppb	2.808	1.761		9.086
65	Cu	|	152301.208	97.938571	ppb	4.452	3.368		130.731
69	Ga-IS	|	383899.099		ppb	3.810			366045.570
95	Mo	|	172925.612	97.772084	ppb	3.522	2.463		166.668
115	In-IS	>	261741.127		ppb	2.030			257435.514
111	Cd	|	164536.609	100.179770	ppb	1.613	1.327		5.206
118	Sn	|	494080.167	100.560729	ppb	2.143	1.159		3710.482
121	Sb	|	539361.338	98.261301	ppb	2.391	0.984		2271.294
135	Ba	|	98926.140	94.836480	ppb	3.960	2.498		27.778
165	Ho-IS	|	265621.124		ppb	0.311			257240.201
159	Tb-IS	|	227086.520		ppb	1.615			223779.136
207	Pb	|	1584286.582	98.462509	ppb	0.958	2.299		295.557
203	Tl	|	463570.326	97.318812	ppb	0.486	1.458		54.445
209	Bi-IS	>	170710.713		ppb	1.392			168189.996
51	V	|	66988.956	101.640283	ppb	1.923	2.722		37.778
59	Co	|	167160.486	101.177544	ppb	2.514	2.800		16.667
60	Ni	|	89187.560	100.673397	ppb	1.077	1.962		40.000
75	As	|	45927.194	99.785946	ppb	2.671	0.802		719.384
71	Ga-ISK	>	108672.997		ppb	1.990			108559.824
82	Se-2	|	4056.736	100.255752	ppb	1.176	1.727		5.192
107	Ag-1	|	378335.953	102.919993	ppb	1.224	0.800		651.126
115	In-ISK	|	95930.513		ppb	2.013			94541.477
45	Sc-ISK	>	276348.531		ppb	0.856			271828.862
23	Na	|	2448137.652	5023.037992	ppb	1.097	0.912		3697.146
39	K	|	5996834.152	5034.557804	ppb	1.273	1.513		136946.608
24	Mg	|	2759169.200	5056.263945	ppb	1.127	1.798		636.681
159	Tb-ISK	|	192662.637		ppb	1.446			189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 17:37:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.215

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		28576.348		ppb		3.021		29567.237
9	Be	|		32.222	0.005682	ppb	51.030	218.366		25.556
10	B	|		486.675	0.317007	ppb	10.365	64.080		402.228
27	Al	|		5324.356	-0.246003	ppb	21.471	59.523		7240.724
43	Ca-2	|		110.000	1.031723	ppb	12.026	95.802		98.334
49	Ti	|		258.891	0.023092	ppb	14.183	290.493		254.447
52	Cr	|		9582.102	0.038815	ppb	1.915	21.650		9606.564
55	Mn	|		782.244	-0.007589	ppb	3.141	10.971		897.806
57	Fe	|		10537.221	9.519787	ppb	3.320	10.183		8749.349
45	Sc-IS	>		1314107.158		ppb		2.555		1358185.143
66	Zn	|		588.901	0.063898	ppb	6.986	42.587		543.344
86	Sr	|		19.560	0.006317	ppb	201.946	348.945		9.086
65	Cu	|		142.990	0.011079	ppb	8.421	79.109		130.731
69	Ga-IS	|		351136.118		ppb		5.225		366045.570
95	Mo	|		401.117	0.140525	ppb	7.165	7.818		166.668
115	In-IS	>		253328.042		ppb		2.384		257435.514
111	Cd	|		21.380	0.010224	ppb	23.963	30.948		5.206
118	Sn	|		3323.721	-0.069636	ppb	4.902	30.649		3710.482
121	Sb	|		880.027	-0.256206	ppb	4.097	1.136		2271.294
135	Ba	|		22.222	-0.005121	ppb	22.913	92.025		27.778
165	Ho-IS	|		253903.879		ppb		2.242		257240.201
159	Tb-IS	|		218145.226		ppb		0.788		223779.136
207	Pb	|		462.225	0.011085	ppb	10.945	27.516		295.557
203	Tl	|		123.334	0.015178	ppb	23.562	40.571		54.445
209	Bi-IS	>		164879.392		ppb		0.749		168189.996
51	V	|		60.000	0.034933	ppb	16.667	42.545		37.778
59	Co	|		18.889	0.001478	ppb	53.913	418.584		16.667
60	Ni	|		34.444	-0.005680	ppb	48.709	342.393		40.000
75	As	|		727.583	0.039542	ppb	5.150	190.625		719.384
71	Ga-ISK	>		107115.647		ppb		0.612		108559.824
82	Se-2	|		9.213	0.103107	ppb	59.982	135.337		5.192
107	Ag-1	|		175.557	-0.129066	ppb	9.366	3.558		651.126
115	In-ISK	|		96177.902		ppb		0.992		94541.477
45	Sc-ISK	>		266918.546		ppb		1.256		271828.862
23	Na	|		6259.705	5.595914	ppb	1.328	5.091		3697.146
39	K	|		134726.760	0.240412	ppb	0.203	719.573		136946.608
24	Mg	|		1040.039	0.785617	ppb	17.154	40.889		636.681
159	Tb-ISK	|		188235.390		ppb		0.651		189161.506

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, April 16, 2020 17:40:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICIS-23447.216

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		28112.080		ppb		1.111		
9	Be	|		18.889		ppb		26.956		
10	B	|		366.671		ppb		4.811		
27	Al	|		7276.298		ppb		2.430		
43	Ca-2	|		88.334		ppb		17.293		
49	Ti	|		225.557		ppb		3.719		
52	Cr	|		9519.842		ppb		4.595		
55	Mn	|		776.688		ppb		13.011		
57	Fe	|		10593.935		ppb		5.482		
45	Sc-IS	>		1299865.170		ppb		0.496		
66	Zn	|		553.344		ppb		3.188		
86	Sr	|		20.135		ppb		132.801		
65	Cu	|		146.452		ppb		14.983		
69	Ga-IS	|		352174.337		ppb		3.802		
95	Mo	|		118.889		ppb		18.668		
115	In-IS	>		255185.519		ppb		2.417		
111	Cd	|		16.417		ppb		70.065		
118	Sn	|		1685.656		ppb		9.090		
121	Sb	|		597.790		ppb		9.436		
135	Ba	|		25.556		ppb		37.653		
165	Ho-IS	|		253811.546		ppb		0.385		
159	Tb-IS	|		218212.017		ppb		1.646		
207	Pb	|		226.667		ppb		5.302		
203	Tl	|		35.556		ppb		23.593		
209	Bi-IS	>		165062.642		ppb		1.102		
51	V	|		73.334		ppb		7.873		
59	Co	|		12.222		ppb		56.773		
60	Ni	|		27.778		ppb		6.928		
75	As	|		684.944		ppb		5.753		
71	Ga-ISK	>		106974.653		ppb		1.587		
82	Se-2	|		2.520		ppb		23.268		
107	Ag-1	|		97.778		ppb		18.776		
115	In-ISK	|		93702.469		ppb		1.690		
45	Sc-ISK	>		263953.217		ppb		1.543		
23	Na	|		4734.118		ppb		1.458		
39	K	|		130698.534		ppb		1.118		
24	Mg	|		441.673		ppb		2.614		
159	Tb-ISK	|		187178.287		ppb		0.473		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, April 16, 2020 17:43:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\IC-210761.217

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28517.346		ppb		3.438		28112.080
9	Be	|	270047.608	200.000000	ppb	1.147	1.253		18.889
10	B	|	154175.281	500.000000	ppb	0.574	1.875		366.671
27	Al	|	1435280.031	200.000000	ppb	1.635	0.896		7276.298
43	Ca-2	|	150941.594	10200.000000	ppb	0.796	0.733		88.334
49	Ti	|	113147.582	200.000000	ppb	2.297	1.029		225.557
52	Cr	|	1517389.952	200.000000	ppb	1.818	0.958		9519.842
55	Mn	|	2308182.534	200.000000	ppb	1.377	0.631		776.688
57	Fe	|	2239074.967	10200.000000	ppb	2.530	1.267		10593.935
45	Sc-IS	>	1326568.233		ppb	1.340			1299865.170
66	Zn	|	195139.049	200.000000	ppb	4.772	3.547		553.344
86	Sr	|	371593.010	200.000000	ppb	1.138	1.008		20.135
65	Cu	|	296953.439	200.000000	ppb	4.701	3.546		146.452
69	Ga-IS	|	391915.426		ppb	4.411			352174.337
95	Mo	|	341944.410	200.000000	ppb	1.232	1.560		118.889
115	In-IS	>	258362.048		ppb	1.627			255185.519
111	Cd	|	323716.070	200.000000	ppb	1.285	0.391		16.417
118	Sn	|	960767.186	200.000000	ppb	1.433	0.193		1685.656
121	Sb	|	1053293.045	200.000000	ppb	2.114	1.111		597.790
135	Ba	|	193658.595	200.000000	ppb	4.141	3.818		25.556
165	Ho-IS	|	260171.738		ppb	2.066			253811.546
159	Tb-IS	|	221990.532		ppb	1.147			218212.017
207	Pb	|	3122592.406	200.000000	ppb	1.210	1.016		226.667
203	Tl	|	913790.610	200.000000	ppb	2.064	1.730		35.556
209	Bi-IS	>	166241.697		ppb	0.585			165062.642
51	V	|	129533.505	200.000000	ppb	0.329	0.771		73.334
59	Co	|	324956.606	200.000000	ppb	0.496	0.980		12.222
60	Ni	|	176502.601	200.000000	ppb	0.802	0.385		27.778
75	As	|	90509.687	200.000000	ppb	0.959	0.962		684.944
71	Ga-ISK	>	109064.752		ppb	0.486			106974.653
82	Se-2	|	7935.394	200.000000	ppb	0.915	0.758		2.520
107	Ag-1	|	727167.091	200.000000	ppb	0.669	0.263		97.778
115	In-ISK	|	95261.550		ppb	1.716			93702.469
45	Sc-ISK	>	270808.624		ppb	1.476			263953.217
23	Na	|	4775223.709	10200.000000	ppb	1.217	2.116		4734.118
39	K	|	11738373.252	10200.000000	ppb	0.874	0.738		130698.534
24	Mg	|	5363408.356	10200.000000	ppb	0.488	1.000		441.673
159	Tb-ISK	|	192833.472		ppb	0.871			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 17:46:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.218

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		27752.507		ppb			3.396			28112.080
9	Be	|		135496.271	102.226750	ppb			1.231	4.850		18.889
10	B	|		78068.526	257.498052	ppb			4.103	7.781		366.671
27	Al	|		726501.956	102.618884	ppb			0.409	4.073		7276.298
43	Ca-2	|		75153.865	5167.539893	ppb			1.602	2.114		88.334
49	Ti	|		56858.489	102.191312	ppb			1.004	4.333		225.557
52	Cr	|		767558.708	102.393556	ppb			1.683	2.803		9519.842
55	Mn	|		1108047.788	97.720619	ppb			1.494	2.195		776.688
57	Fe	|		1070808.916	4940.338365	ppb			3.328	2.176		10593.935
45	Sc-IS	>		1303565.036		ppb			3.658			1299865.170
66	Zn	|		99372.732	103.397338	ppb			4.817	3.284		553.344
86	Sr	|		185246.499	101.549798	ppb			0.646	3.951		20.135
65	Cu	|		150909.693	103.425605	ppb			3.586	1.960		146.452
69	Ga-IS	|		365430.735		ppb			4.825			352174.337
95	Mo	|		171486.624	102.112359	ppb			1.557	3.738		118.889
115	In-IS	>		251801.316		ppb			1.464			255185.519
111	Cd	|		160577.336	101.804796	ppb			2.755	3.348		16.417
118	Sn	|		483735.181	103.154129	ppb			0.913	0.834		1685.656
121	Sb	|		536515.423	104.484715	ppb			1.161	1.358		597.790
135	Ba	|		97920.217	103.739129	ppb			3.118	2.167		25.556
165	Ho-IS	|		258135.390		ppb			2.230			253811.546
159	Tb-IS	|		222533.283		ppb			0.979			218212.017
207	Pb	|		1556981.606	100.346071	ppb			1.385	1.965		226.667
203	Tl	|		460703.688	101.468738	ppb			1.195	1.799		35.556
209	Bi-IS	>		165212.083		ppb			0.658			165062.642
51	V	|		66237.665	102.998014	ppb			1.238	0.921		73.334
59	Co	|		164409.562	101.967995	ppb			0.538	1.523		12.222
60	Ni	|		87807.974	100.239271	ppb			1.731	0.303		27.778
75	As	|		45334.300	100.170556	ppb			2.338	1.986		684.944
71	Ga-ISK	>		108238.554		ppb			1.444			106974.653
82	Se-2	|		4038.771	102.552356	ppb			0.365	1.608		2.520
107	Ag-1	|		367539.514	101.852420	ppb			1.239	1.077		97.778
115	In-ISK	|		94909.784		ppb			1.594			93702.469
45	Sc-ISK	>		267289.737		ppb			0.986			263953.217
23	Na	|		2383781.857	5152.894984	ppb			0.788	0.217		4734.118
39	K	|		5909756.188	5145.308605	ppb			0.724	1.646		130698.534
24	Mg	|		2670720.449	5145.099147	ppb			0.827	0.159		441.673
159	Tb-ISK	|		191030.831		ppb			0.896			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 17:49:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.219

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27326.137		ppb		3.924		28112.080
9	Be	|		24.444	0.004536	ppb	31.492	119.203		18.889
10	B	|		633.348	0.939507	ppb	13.654	37.812		366.671
27	Al	|		4755.238	-0.344984	ppb	5.840	7.666		7276.298
43	Ca-2	|		50.000	-2.577136	ppb	20.000	23.507		88.334
49	Ti	|		224.446	0.007615	ppb	0.857	197.548		225.557
52	Cr	|		8581.466	-0.099805	ppb	0.696	25.867		9519.842
55	Mn	|		822.246	0.005705	ppb	3.070	16.038		776.688
57	Fe	|		9675.501	-3.255864	ppb	3.758	23.047		10593.935
45	Sc-IS	>		1270614.860		ppb	2.849			1299865.170
66	Zn	|		550.011	0.008238	ppb	16.741	993.366		553.344
86	Sr	|		30.122	0.006126	ppb	78.836	224.588		20.135
65	Cu	|		140.688	-0.001793	ppb	6.749	256.041		146.452
69	Ga-IS	|		337447.247		ppb	4.866			352174.337
95	Mo	|		458.897	0.208385	ppb	23.078	28.192		118.889
115	In-IS	>		246025.100		ppb	1.452			255185.519
111	Cd	|		41.259	0.016481	ppb	44.511	71.331		16.417
118	Sn	|		4109.481	0.543887	ppb	4.661	6.213		1685.656
121	Sb	|		1016.703	0.087769	ppb	8.525	17.268		597.790
135	Ba	|		33.333	0.009503	ppb	36.056	140.557		25.556
165	Ho-IS	|		250978.932		ppb	0.957			253811.546
159	Tb-IS	|		213575.779		ppb	0.139			218212.017
207	Pb	|		665.562	0.028915	ppb	8.708	12.846		226.667
203	Tl	|		188.890	0.034436	ppb	19.835	25.296		35.556
209	Bi-IS	>		162768.757		ppb	1.031			165062.642
51	V	|		40.000	-0.051650	ppb	16.667	21.873		73.334
59	Co	|		38.889	0.017094	ppb	38.651	56.973		12.222
60	Ni	|		40.000	0.014652	ppb	28.868	91.130		27.778
75	As	|		688.462	0.027151	ppb	3.578	212.284		684.944
71	Ga-ISK	>		105685.077		ppb	1.175			106974.653
82	Se-2	|		10.544	0.208304	ppb	73.946	96.273		2.520
107	Ag-1	|		221.113	0.035352	ppb	6.093	11.096		97.778
115	In-ISK	|		92935.435		ppb	0.547			93702.469
45	Sc-ISK	>		263683.549		ppb	0.639			263953.217
23	Na	|		4517.381	-0.465763	ppb	3.181	60.707		4734.118
39	K	|		137149.651	5.947194	ppb	0.086	13.460		130698.534
24	Mg	|		695.017	0.496232	ppb	10.598	30.446		441.673
159	Tb-ISK	|		186752.114		ppb	0.667			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, April 16, 2020 17:51:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICVL-210771.220

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		26946.501		ppb		0.416		28112.080
9	Be	|		1274.502	0.981717	ppb	8.521	10.457		18.889
10	B	|		15103.536	50.530114	ppb	0.443	1.805		366.671
27	Al	|		343151.279	49.615812	ppb	2.865	2.614		7276.298
43	Ca-2	|		785.022	49.828791	ppb	6.464	6.343		88.334
49	Ti	|		736.686	0.965540	ppb	11.834	14.100		225.557
52	Cr	|		15851.012	0.927370	ppb	1.119	2.503		9519.842
55	Mn	|		11247.761	0.958692	ppb	1.947	0.293		776.688
57	Fe	|		19740.305	45.723079	ppb	3.193	2.329		10593.935
45	Sc-IS	>		1258849.638		ppb	2.117			1299865.170
66	Zn	|		5312.103	5.170632	ppb	8.338	7.350		553.344
86	Sr	|		1798.076	1.008248	ppb	5.769	3.758		20.135
65	Cu	|		1525.070	0.981797	ppb	8.938	8.369		146.452
69	Ga-IS	|		343783.604		ppb	4.840			352174.337
95	Mo	|		1684.544	0.967390	ppb	5.578	4.914		118.889
115	In-IS	>		251436.595		ppb	1.950			255185.519
111	Cd	|		1623.222	1.019673	ppb	6.229	4.435		16.417
118	Sn	|		6736.035	1.086962	ppb	5.184	4.700		1685.656
121	Sb	|		5761.162	1.009525	ppb	3.521	1.905		597.790
135	Ba	|		976.700	1.009637	ppb	3.936	2.199		25.556
165	Ho-IS	|		250673.642		ppb	0.962			253811.546
159	Tb-IS	|		215372.459		ppb	0.285			218212.017
207	Pb	|		15491.064	0.995560	ppb	1.230	2.257		226.667
203	Tl	|		4587.403	1.014414	ppb	0.333	2.000		35.556
209	Bi-IS	>		163328.547		ppb	1.744			165062.642
51	V	|		653.348	0.926888	ppb	4.535	4.810		73.334
59	Co	|		1591.200	1.003506	ppb	6.335	5.578		12.222
60	Ni	|		921.141	1.045687	ppb	10.453	10.196		27.778
75	As	|		1124.644	1.031989	ppb	1.845	6.993		684.944
71	Ga-ISK	>		105602.253		ppb	1.281			106974.653
82	Se-2	|		44.568	1.097181	ppb	18.710	20.825		2.520
107	Ag-1	|		3726.042	1.031555	ppb	3.670	4.971		97.778
115	In-ISK	|		93973.489		ppb	0.791			93702.469
45	Sc-ISK	>		260406.579		ppb	1.036			263953.217
23	Na	|		25870.071	47.136369	ppb	0.865	1.837		4734.118
39	K	|		188095.770	54.085304	ppb	0.397	4.529		130698.534
24	Mg	|		25299.049	49.173820	ppb	0.680	0.393		441.673
159	Tb-ISK	|		185764.786		ppb	1.245			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63539_1-A

Autosampler Position: 428

Sample Date/Time: Thursday, April 16, 2020 17:54:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\MB 570-63539_1-A.221

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		27007.733		ppb			1.831			28112.080
9	Be	|		11.111	-0.005404	ppb			34.641	60.047		18.889
10	B	|		334.448	-0.049388	ppb			13.532	361.636		366.671
27	Al	|		3418.187	-0.526568	ppb			5.220	7.843		7276.298
43	Ca-2	|		50.000	-2.480382	ppb			36.056	51.086		88.334
49	Ti	|		202.224	-0.023943	ppb			2.518	50.776		225.557
52	Cr	|		8552.560	-0.073311	ppb			1.471	27.290		9519.842
55	Mn	|		544.455	-0.018177	ppb			8.267	19.462		776.688
57	Fe	|		9692.177	-1.962784	ppb			2.590	52.980		10593.935
45	Sc-IS	>		1238617.923		ppb			3.006			1299865.170
66	Zn	|		477.786	-0.054448	ppb			4.539	36.129		553.344
86	Sr	|		34.730	0.008976	ppb			37.648	84.818		20.135
65	Cu	|		117.514	-0.015919	ppb			19.326	101.867		146.452
69	Ga-IS	|		332726.661		ppb			3.573			352174.337
95	Mo	|		81.111	-0.020277	ppb			14.432	28.561		118.889
115	In-IS	>		244034.772		ppb			2.932			255185.519
111	Cd	|		17.607	0.001165	ppb			66.555	648.390		16.417
118	Sn	|		1512.303	-0.021493	ppb			10.669	193.023		1685.656
121	Sb	|		538.899	-0.006730	ppb			12.500	165.608		597.790
135	Ba	|		15.556	-0.009672	ppb			49.487	88.059		25.556
165	Ho-IS	|		245884.700		ppb			0.315			253811.546
159	Tb-IS	|		209400.555		ppb			1.881			218212.017
207	Pb	|		174.445	-0.003121	ppb			14.469	53.908		226.667
203	Tl	|		35.556	0.000155	ppb			39.031	1991.706		35.556
209	Bi-IS	>		161527.063		ppb			1.434			165062.642
51	V	|		27.778	-0.071350	ppb			42.143	26.460		73.334
59	Co	|		14.444	0.001469	ppb			35.251	225.614		12.222
60	Ni	|		22.222	-0.006324	ppb			31.225	121.088		27.778
75	As	|		672.987	-0.017524	ppb			1.959	57.078		684.944
71	Ga-ISK	>		106301.879		ppb			1.568			106974.653
82	Se-2	|		-1.128	-0.093781	ppb			91.088	27.831		2.520
107	Ag-1	|		94.445	-0.000804	ppb			14.694	432.808		97.778
115	In-ISK	|		92355.655		ppb			0.821			93702.469
45	Sc-ISK	>		261630.711		ppb			0.275			263953.217
23	Na	|		3575.448	-2.471885	ppb			2.153	6.473		4734.118
39	K	|		134787.464	4.763212	ppb			1.809	40.500		130698.534
24	Mg	|		160.001	-0.546638	ppb			31.715	18.427		441.673
159	Tb-ISK	|		184586.304		ppb			1.145			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63539_2-A

Autosampler Position: 429

Sample Date/Time: Thursday, April 16, 2020 17:57:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCS 570-63539_2-A.222

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	27760.281		ppb		0.857		28112.080
9	Be	|	139682.970	108.925346	ppb	1.179	1.872		18.889
10	B	|	29752.076	100.607445	ppb	2.720	2.346		366.671
27	Al	|	711027.870	103.820877	ppb	2.386	1.697		7276.298
43	Ca-2	|	73951.109	5256.924011	ppb	3.938	2.205		88.334
49	Ti	|	58425.956	108.544445	ppb	2.692	0.851		225.557
52	Cr	|	778512.030	107.441026	ppb	2.200	0.354		9519.842
55	Mn	|	1080465.686	98.523308	ppb	2.682	0.842		776.688
57	Fe	|	1069926.944	5106.883930	ppb	2.924	1.085		10593.935
45	Sc-IS	>	1259967.695		ppb	1.865			1299865.170
66	Zn	|	101785.184	109.565934	ppb	4.705	2.889		553.344
86	Sr	|	185655.012	105.213829	ppb	0.471	1.437		20.135
65	Cu	|	149069.072	105.649899	ppb	4.638	2.814		146.452
69	Ga-IS	|	357339.635		ppb	4.429			352174.337
95	Mo	|	172507.693	106.196625	ppb	1.532	1.067		118.889
115	In-IS	>	249429.221		ppb	1.607			255185.519
111	Cd	|	168234.573	107.665223	ppb	0.638	1.085		16.417
118	Sn	|	583654.012	125.717212	ppb	1.674	0.971		1685.656
121	Sb	|	533806.095	104.937136	ppb	1.979	1.172		597.790
135	Ba	|	98257.062	105.072588	ppb	3.752	2.192		25.556
165	Ho-IS	|	252548.548		ppb	1.244			253811.546
159	Tb-IS	|	214525.408		ppb	0.210			218212.017
207	Pb	|	1598574.299	102.799977	ppb	0.848	1.325		226.667
203	Tl	|	454282.241	99.833557	ppb	0.273	0.948		35.556
209	Bi-IS	>	165576.313		ppb	1.104			165062.642
51	V	|	66593.754	103.783941	ppb	1.037	1.919		73.334
59	Co	|	163108.182	101.369873	ppb	1.249	1.361		12.222
60	Ni	|	93023.060	106.426930	ppb	1.832	1.529		27.778
75	As	|	48451.498	107.417918	ppb	0.402	2.142		684.944
71	Ga-ISK	>	108015.816		ppb	1.981			106974.653
82	Se-2	|	4171.501	106.129694	ppb	2.339	1.468		2.520
107	Ag-1	|	176287.890	48.939511	ppb	1.607	0.657		97.778
115	In-ISK	|	94105.963		ppb	1.453			93702.469
45	Sc-ISK	>	263652.344		ppb	1.848			263953.217
23	Na	|	450157.721	978.252677	ppb	0.765	1.371		4734.118
39	K	|	1234396.296	996.655551	ppb	1.004	0.997		130698.534
24	Mg	|	2747418.800	5366.469341	ppb	1.066	1.052		441.673
159	Tb-ISK	|	189352.760		ppb	1.189			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63539_3-A

Autosampler Position: 430

Sample Date/Time: Thursday, April 16, 2020 18:00:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCSD 570-63539_3-A.223

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26866.366		ppb		3.080		28112.080
9	Be	|	137412.558	108.306529	ppb		3.034	1.109	18.889
10	B	|	29753.174	101.767521	ppb		0.549	2.547	366.671
27	Al	|	713509.122	105.371034	ppb		0.656	1.603	7276.298
43	Ca-2	|	73843.755	5308.828478	ppb		2.215	1.139	88.334
49	Ti	|	57431.886	107.903972	ppb		0.918	1.169	225.557
52	Cr	|	782799.206	109.278717	ppb		1.172	1.988	9519.842
55	Mn	|	1080955.974	99.678495	ppb		1.578	0.970	776.688
57	Fe	|	1069246.855	5161.515145	ppb		1.767	0.257	10593.935
45	Sc-IS	>	1246169.494		ppb		1.993		1299865.170
66	Zn	>	101546.874	110.522058	ppb		4.908	3.009	553.344
86	Sr	|	180714.463	103.542070	ppb		1.072	0.927	20.135
65	Cu	|	148461.664	106.399702	ppb		3.757	2.001	146.452
69	Ga-IS	|	353251.101		ppb		5.706		352174.337
95	Mo	|	170065.869	105.831476	ppb		3.216	1.692	118.889
115	In-IS	>	244799.587		ppb		2.066		255185.519
111	Cd	|	164440.687	107.204952	ppb		2.870	1.042	16.417
118	Sn	|	578690.924	127.018357	ppb		1.468	0.904	1685.656
121	Sb	|	538733.906	107.917806	ppb		2.012	1.229	597.790
135	Ba	|	97835.352	106.601314	ppb		4.106	2.481	25.556
165	Ho-IS	|	253240.834		ppb		1.690		253811.546
159	Tb-IS	|	215501.160		ppb		1.082		218212.017
207	Pb	|	1597263.553	103.011622	ppb		0.835	1.468	226.667
203	Tl	|	454769.499	100.236699	ppb		1.503	2.449	35.556
209	Bi-IS	>	165111.066		ppb		1.637		165062.642
51	V	|	65718.609	104.534418	ppb		1.220	1.916	73.334
59	Co	|	164243.480	104.193617	ppb		2.107	2.772	12.222
60	Ni	|	90486.783	105.668738	ppb		0.305	0.881	27.778
75	As	|	48015.857	108.650229	ppb		0.901	0.468	684.944
71	Ga-ISK	>	105818.257		ppb		0.710		106974.653
82	Se-2	|	4200.828	109.093365	ppb		2.415	2.234	2.520
107	Ag-1	|	177039.177	50.166503	ppb		0.775	0.369	97.778
115	In-ISK	|	94053.788		ppb		0.764		93702.469
45	Sc-ISK	>	266488.669		ppb		1.788		263953.217
23	Na	|	458035.674	984.660035	ppb		2.061	0.284	4734.118
39	K	|	1238262.946	988.289846	ppb		0.633	1.410	130698.534
24	Mg	|	2725028.889	5265.817452	ppb		1.237	0.569	441.673
159	Tb-ISK	|	188421.141		ppb		0.569		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-1-A

Autosampler Position: 431

Sample Date/Time: Thursday, April 16, 2020 18:02:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-1-A.224

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30182.975		ppb		2.403		28112.080
9	Be	|		42.222	0.018140	ppb	24.119	46.914		18.889
10	B	|		48734.095	162.435878	ppb	0.270	1.960		366.671
27	Al	|		205984.540	28.765769	ppb	1.171	1.797		7276.298
43	Ca-2	|		569528.823	39770.375876	ppb	1.363	1.021		88.334
49	Ti	|		1846.786	2.969167	ppb	6.209	4.895		225.557
52	Cr	|		17109.131	1.055442	ppb	2.052	2.032		9519.842
55	Mn	|		407127.436	36.382276	ppb	1.582	0.992		776.688
57	Fe	|		39649.419	137.964284	ppb	2.797	1.185		10593.935
45	Sc-IS	>		1284402.049		ppb	2.163			1299865.170
66	Zn	|		3592.675	3.233569	ppb	4.890	4.043		553.344
86	Sr	|		512811.933	285.087561	ppb	3.286	3.039		20.135
65	Cu	|		4597.224	3.099522	ppb	3.032	1.963		146.452
69	Ga-IS	|		336928.163		ppb	4.233			352174.337
95	Mo	|		5335.441	3.153319	ppb	1.589	1.112		118.889
115	In-IS	>		245143.134		ppb	1.008			255185.519
111	Cd	|		213.242	0.128677	ppb	19.277	21.286		16.417
118	Sn	|		4766.357	0.691013	ppb	10.718	14.839		1685.656
121	Sb	|		13776.650	2.642945	ppb	4.880	4.091		597.790
135	Ba	|		38612.188	41.996549	ppb	4.706	3.809		25.556
165	Ho-IS	|		250542.528		ppb	1.115			253811.546
159	Tb-IS	|		212745.834		ppb	0.886			218212.017
207	Pb	|		2813.440	0.175153	ppb	4.002	2.638		226.667
203	Tl	|		188.890	0.035794	ppb	16.397	21.673		35.556
209	Bi-IS	>		157830.607		ppb	1.853			165062.642
51	V	|		1287.836	1.998363	ppb	3.088	1.401		73.334
59	Co	|		401.117	0.255050	ppb	6.293	9.239		12.222
60	Ni	|		1564.530	1.851562	ppb	4.078	2.234		27.778
75	As	|		1242.404	1.385298	ppb	1.793	3.991		684.944
71	Ga-ISK	>		102667.927		ppb	3.647			106974.653
82	Se-2	|		25.526	0.612548	ppb	53.318	55.456		2.520
107	Ag-1	|		107.778	0.004121	ppb	26.304	208.000		97.778
115	In-ISK	|		89905.274		ppb	3.316			93702.469
45	Sc-ISK	>		259390.825		ppb	3.166			263953.217
23	Na	|		13072625.927	29186.289923	ppb	1.181	3.395		4734.118
39	K	|		5146958.370	4608.461665	ppb	1.012	3.645		130698.534
24	Mg	|		5499609.733	10927.988529	ppb	1.039	4.162		441.673
159	Tb-ISK	|		182068.142		ppb	2.843			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-1-B MS

Autosampler Position: 432

Sample Date/Time: Thursday, April 16, 2020 18:05:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-1-B MS.225

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29700.856		ppb			2.526			28112.080
9	Be	|		110718.519	82.028469	ppb			0.689	2.174		18.889
10	B	|		58490.621	188.968871	ppb			1.352	0.841		366.671
27	Al	|		492749.173	68.004803	ppb			1.856	1.684		7276.298
43	Ca-2	|		764208.665	51676.143760	ppb			2.114	0.151		88.334
49	Ti	|		40774.780	71.851461	ppb			1.243	1.880		225.557
52	Cr	|		623103.232	81.388874	ppb			2.236	0.332		9519.842
55	Mn	|		871644.065	75.512804	ppb			1.054	1.166		776.688
57	Fe	|		746025.118	3366.311868	ppb			2.767	0.625		10593.935
45	Sc-IS	>		1326264.558		ppb			2.171			1299865.170
66	Zn	|		107790.376	110.223843	ppb			5.474	3.537		553.344
86	Sr	|		804521.700	433.113490	ppb			2.191	0.926		20.135
65	Cu	|		120380.263	81.031488	ppb			4.602	2.698		146.452
69	Ga-IS	|		352983.389		ppb			4.048			352174.337
95	Mo	|		137522.184	80.414258	ppb			1.435	1.061		118.889
115	In-IS	>		250214.172		ppb			1.010			255185.519
111	Cd	|		123419.042	78.722928	ppb			1.467	0.518		16.417
118	Sn	|		160484.401	34.198364	ppb			1.950	1.095		1685.656
121	Sb	|		419101.202	82.099779	ppb			1.862	0.856		597.790
135	Ba	|		76668.707	81.727791	ppb			3.750	2.802		25.556
165	Ho-IS	|		255010.631		ppb			1.317			253811.546
159	Tb-IS	|		217045.521		ppb			1.544			218212.017
207	Pb	|		1223689.879	81.701152	ppb			0.845	1.098		226.667
203	Tl	|		354544.769	80.895211	ppb			0.912	0.931		35.556
209	Bi-IS	>		159465.101		ppb			0.607			165062.642
51	V	|		53634.965	85.841737	ppb			1.916	0.840		73.334
59	Co	|		125999.971	80.444042	ppb			1.515	0.286		12.222
60	Ni	|		70326.084	82.652833	ppb			2.550	2.083		27.778
75	As	|		38598.867	87.629294	ppb			0.984	1.763		684.944
71	Ga-ISK	>		105127.657		ppb			1.229			106974.653
82	Se-2	|		3249.892	84.963383	ppb			2.465	3.618		2.520
107	Ag-1	|		63599.035	18.124793	ppb			0.472	1.569		97.778
115	In-ISK	|		91742.630		ppb			1.176			93702.469
45	Sc-ISK	>		269150.727		ppb			0.396			263953.217
23	Na	|		15556934.139	33452.597122	ppb			0.633	0.536		4734.118
39	K	|		3596235.224	3062.466295	ppb			0.458	0.538		130698.534
24	Mg	|		8444438.385	16157.211997	ppb			0.813	0.636		441.673
159	Tb-ISK	|		187698.407		ppb			0.763			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-1-C MSD

Autosampler Position: 433

Sample Date/Time: Thursday, April 16, 2020 18:08:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-1-C MSD.226

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30071.618		ppb		0.346		28112.080
9	Be	|		93756.665	69.397469	ppb		0.709	1.056	18.889
10	B	|		55358.163	178.651151	ppb		0.408	0.491	366.671
27	Al	|		386555.664	53.084277	ppb		0.330	0.546	7276.298
43	Ca-2	|		742688.425	50186.853382	ppb		1.760	1.286	88.334
49	Ti	|		34235.419	60.210699	ppb		0.751	0.307	225.557
52	Cr	|		516026.995	67.138817	ppb		0.550	0.261	9519.842
55	Mn	|		713590.380	61.756307	ppb		1.750	1.275	776.688
57	Fe	|		550827.886	2471.016416	ppb		2.708	2.241	10593.935
45	Sc-IS	>		1327096.404		ppb		0.527		1299865.170
66	Zn	|		88444.294	90.311232	ppb		3.671	3.226	553.344
86	Sr	|		778720.881	418.926615	ppb		2.173	1.675	20.135
65	Cu	|		98973.290	66.577065	ppb		3.694	3.272	146.452
69	Ga-IS	|		349539.265		ppb		3.627		352174.337
95	Mo	|		114025.846	66.607231	ppb		3.496	3.096	118.889
115	In-IS	>		249144.862		ppb		0.402		255185.519
111	Cd	|		101489.298	65.013910	ppb		1.502	1.594	16.417
118	Sn	|		133461.669	28.504993	ppb		0.941	0.919	1685.656
121	Sb	|		352224.817	69.279573	ppb		1.957	1.725	597.790
135	Ba	|		61657.399	66.008819	ppb		4.565	4.250	25.556
165	Ho-IS	|		256071.431		ppb		0.861		253811.546
159	Tb-IS	|		218078.814		ppb		1.402		218212.017
207	Pb	|		1004233.189	66.289232	ppb		1.063	0.144	226.667
203	Tl	|		285241.785	64.351975	ppb		0.246	1.065	35.556
209	Bi-IS	>		161279.776		ppb		0.926		165062.642
51	V	|		44308.613	71.180360	ppb		1.115	1.809	73.334
59	Co	|		103671.507	66.445598	ppb		1.060	0.676	12.222
60	Ni	|		57348.213	67.662266	ppb		0.415	1.277	27.778
75	As	|		31732.887	72.048097	ppb		0.527	1.625	684.944
71	Ga-ISK	>		104723.589		ppb		1.151		106974.653
82	Se-2	|		2665.778	69.934390	ppb		0.963	1.193	2.520
107	Ag-1	|		51448.077	14.709851	ppb		2.734	1.677	97.778
115	In-ISK	|		93803.871		ppb		0.840		93702.469
45	Sc-ISK	>		269720.194		ppb		0.290		263953.217
23	Na	|		15486929.466	33231.762842	ppb		1.114	1.127	4734.118
39	K	|		3402472.550	2884.757097	ppb		2.045	2.154	130698.534
24	Mg	|		8108840.071	15482.573483	ppb		2.306	2.382	441.673
159	Tb-ISK	|		188871.101		ppb		1.125		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-2-A

Autosampler Position: 434

Sample Date/Time: Thursday, April 16, 2020 18:11:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-2-A.227

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30445.745		ppb	1.122		28112.080
9	Be	28.889	0.007237	ppb	33.309	95.480	18.889
10	B	43023.612	139.707633	ppb	2.849	2.350	366.671
27	Al	75739.168	9.651210	ppb	1.628	1.499	7276.298
43	Ca-2	713776.601	48620.257622	ppb	2.667	0.854	88.334
49	Ti	1560.085	2.376352	ppb	5.133	4.710	225.557
52	Cr	19627.920	1.336166	ppb	0.666	6.393	9519.842
55	Mn	12846.889	1.053178	ppb	3.210	1.223	776.688
57	Fe	40618.801	137.866771	ppb	2.606	0.167	10593.935
45	Sc-IS	> 1316582.355		ppb	2.544		1299865.170
66	Zn	24921.747	25.231240	ppb	4.349	2.262	553.344
86	Sr	661096.130	358.616260	ppb	1.357	2.111	20.135
65	Cu	6851.843	4.548704	ppb	7.462	5.136	146.452
69	Ga-IS	340677.499		ppb	4.073		352174.337
95	Mo	3191.469	1.809622	ppb	6.382	4.941	118.889
115	In-IS	> 246056.033		ppb	1.254		255185.519
111	Cd	44.409	0.018565	ppb	42.255	65.822	16.417
118	Sn	2705.812	0.236484	ppb	3.393	5.640	1685.656
121	Sb	16723.125	3.220656	ppb	3.764	2.859	597.790
135	Ba	19834.906	21.476306	ppb	6.163	4.952	25.556
165	Ho-IS	254082.250		ppb	1.696		253811.546
159	Tb-IS	217251.898		ppb	1.358		218212.017
207	Pb	1617.814	0.092807	ppb	2.576	1.095	226.667
203	Tl	120.001	0.019418	ppb	9.623	15.057	35.556
209	Bi-IS	> 160342.760		ppb	1.652		165062.642
51	V	1802.336	2.796715	ppb	3.738	2.002	73.334
59	Co	152.223	0.090491	ppb	10.114	13.108	12.222
60	Ni	1164.492	1.348630	ppb	1.749	0.967	27.778
75	As	1133.668	1.087872	ppb	4.722	15.378	684.944
71	Ga-ISK	> 104252.440		ppb	1.887		106974.653
82	Se-2	34.166	0.838181	ppb	22.472	25.592	2.520
107	Ag-1	100.000	0.001284	ppb	24.037	506.539	97.778
115	In-ISK	92777.878		ppb	1.083		93702.469
45	Sc-ISK	> 271653.461		ppb	1.723		263953.217
23	Na	15559344.524	33148.167096	ppb	2.117	0.627	4734.118
39	K	2930967.298	2450.339025	ppb	1.681	1.043	130698.534
24	Mg	6783407.449	12861.281669	ppb	2.050	2.383	441.673
159	Tb-ISK	192740.640		ppb	2.357		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-3-A

Autosampler Position: 435

Sample Date/Time: Thursday, April 16, 2020 18:13:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-3-A.228

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		33219.699		ppb		1.775		28112.080
9	Be	|		20.000	0.000377	ppb	50.000	1975.338		18.889
10	B	|		57275.700	182.312199	ppb	0.233	1.371		366.671
27	Al	|		87998.488	11.115677	ppb	5.347	7.048		7276.298
43	Ca-2	|		572572.719	38154.928451	ppb	2.285	2.225		88.334
49	Ti	|		1621.204	2.420754	ppb	14.297	15.619		225.557
52	Cr	|		22622.349	1.669587	ppb	2.327	4.648		9519.842
55	Mn	|		43399.177	3.639428	ppb	2.228	2.294		776.688
57	Fe	|		39531.301	128.892576	ppb	2.030	2.265		10593.935
45	Sc-IS	>		1345798.721		ppb	1.138			1299865.170
66	Zn	|		52398.270	52.517084	ppb	4.490	3.884		553.344
86	Sr	|		578971.879	307.176231	ppb	1.260	1.585		20.135
65	Cu	|		7261.131	4.724022	ppb	2.941	3.325		146.452
69	Ga-IS	|		345228.296		ppb	4.088			352174.337
95	Mo	|		4568.509	2.564066	ppb	3.015	3.712		118.889
115	In-IS	>		246773.013		ppb	0.482			255185.519
111	Cd	|		67.073	0.033109	ppb	62.208	81.587		16.417
118	Sn	|		2185.723	0.121272	ppb	2.982	9.835		1685.656
121	Sb	|		4574.067	0.794703	ppb	6.087	6.420		597.790
135	Ba	|		20004.007	21.603617	ppb	3.466	3.030		25.556
165	Ho-IS	|		253948.179		ppb	2.513			253811.546
159	Tb-IS	|		217751.656		ppb	1.398			218212.017
207	Pb	|		1140.019	0.060461	ppb	4.595	5.748		226.667
203	Tl	|		68.889	0.007676	ppb	7.391	17.231		35.556
209	Bi-IS	>		161687.713		ppb	1.171			165062.642
51	V	|		1348.953	2.024032	ppb	0.868	4.088		73.334
59	Co	|		242.224	0.145147	ppb	9.763	8.307		12.222
60	Ni	|		1728.994	1.979114	ppb	1.792	3.082		27.778
75	As	|		1249.171	1.298840	ppb	7.333	15.258		684.944
71	Ga-ISK	>		106315.501		ppb	3.107			106974.653
82	Se-2	|		20.203	0.465141	ppb	66.611	77.080		2.520
107	Ag-1	|		80.000	-0.004881	ppb	11.024	36.803		97.778
115	In-ISK	|		92817.423		ppb	1.358			93702.469
45	Sc-ISK	>		268588.108		ppb	0.659			263953.217
23	Na	|		24743901.442	53326.535531	ppb	0.200	0.604		4734.118
39	K	|		4250043.549	3648.603005	ppb	0.633	0.886		130698.534
24	Mg	|		7162752.924	13734.039385	ppb	0.218	0.870		441.673
159	Tb-ISK	|		189695.836		ppb	0.476			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-4-A

Autosampler Position: 436

Sample Date/Time: Thursday, April 16, 2020 18:16:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-4-A.229

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		30258.691		ppb		2.470		28112.080
9	Be	|		25.556	0.004563	ppb	41.929	168.209		18.889
10	B	|		48553.515	156.613569	ppb	2.468	2.586		366.671
27	Al	|		129054.842	17.039014	ppb	1.516	2.299		7276.298
43	Ca-2	|		503825.122	34060.690515	ppb	2.316	2.360		88.334
49	Ti	|		1188.938	1.697506	ppb	4.472	3.425		225.557
52	Cr	|		23245.567	1.794810	ppb	1.513	0.615		9519.842
55	Mn	|		18597.657	1.543284	ppb	2.151	1.823		776.688
57	Fe	|		34961.653	110.521734	ppb	3.514	2.755		10593.935
45	Sc-IS	>		1326640.473		ppb	1.776			1299865.170
66	Zn	|		11030.927	10.758984	ppb	3.274	1.959		553.344
86	Sr	|		592532.098	318.887318	ppb	1.892	0.617		20.135
65	Cu	|		11753.061	7.816109	ppb	6.666	4.986		146.452
69	Ga-IS	|		343273.886		ppb	5.297			352174.337
95	Mo	|		3175.910	1.786765	ppb	7.155	6.914		118.889
115	In-IS	>		246598.189		ppb	0.578			255185.519
111	Cd	|		48.886	0.021342	ppb	28.235	41.136		16.417
118	Sn	|		1595.645	-0.007305	ppb	3.763	158.451		1685.656
121	Sb	|		4515.158	0.783720	ppb	3.592	3.698		597.790
135	Ba	|		24671.307	26.668487	ppb	3.948	3.432		25.556
165	Ho-IS	|		256201.916		ppb	3.297			253811.546
159	Tb-IS	|		219250.973		ppb	1.317			218212.017
207	Pb	|		1360.026	0.074910	ppb	4.828	6.865		226.667
203	Tl	|		24.444	-0.002358	ppb	20.830	42.830		35.556
209	Bi-IS	>		161831.804		ppb	2.354			165062.642
51	V	|		1883.458	2.877445	ppb	2.497	3.924		73.334
59	Co	|		208.890	0.124458	ppb	9.350	8.848		12.222
60	Ni	|		1164.492	1.325435	ppb	4.307	5.297		27.778
75	As	|		1303.418	1.429491	ppb	3.574	6.770		684.944
71	Ga-ISK	>		106064.549		ppb	1.294			106974.653
82	Se-2	|		17.536	0.389465	ppb	38.094	44.104		2.520
107	Ag-1	|		63.333	-0.009522	ppb	10.526	17.419		97.778
115	In-ISK	|		94162.984		ppb	0.418			93702.469
45	Sc-ISK	>		271945.434		ppb	1.394			263953.217
23	Na	|		19257362.823	40984.713652	ppb	1.854	0.468		4734.118
39	K	|		4315992.537	3660.065838	ppb	0.565	1.047		130698.534
24	Mg	|		4971326.761	9413.910803	ppb	1.356	0.368		441.673
159	Tb-ISK	|		191217.916		ppb	0.287			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-5-A

Autosampler Position: 437

Sample Date/Time: Thursday, April 16, 2020 18:19:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-5-A.230

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30501.417		ppb			0.510			28112.080
9	Be	|		33.333	0.010418	ppb	34.641	80.800				18.889
10	B	|		33795.483	108.865292	ppb	0.280	1.169				366.671
27	Al	|		869986.004	121.077569	ppb	0.479	1.279				7276.298
43	Ca-2	|		455297.559	30837.798165	ppb	2.408	1.505				88.334
49	Ti	|		2034.590	3.203131	ppb	4.434	4.341				225.557
52	Cr	|		23345.727	1.814608	ppb	0.506	1.239				9519.842
55	Mn	|		106813.501	9.207998	ppb	2.073	1.356				776.688
57	Fe	|		47040.679	166.282641	ppb	2.148	1.664				10593.935
45	Sc-IS	>		1323861.176		ppb	0.908					1299865.170
66	Zn	|		33787.730	34.224559	ppb	4.032	3.292				553.344
86	Sr	|		406524.409	219.230424	ppb	3.285	2.995				20.135
65	Cu	|		16301.409	10.906982	ppb	5.007	4.301				146.452
69	Ga-IS	|		346795.480		ppb	4.942					352174.337
95	Mo	|		2775.826	1.555998	ppb	4.220	3.471				118.889
115	In-IS	>		251397.568		ppb	2.491					255185.519
111	Cd	|		53.060	0.023334	ppb	34.150	47.292				16.417
118	Sn	|		1244.499	-0.089409	ppb	8.184	17.974				1685.656
121	Sb	|		7079.533	1.267063	ppb	3.983	2.122				597.790
135	Ba	|		27576.602	29.247546	ppb	2.539	1.359				25.556
165	Ho-IS	|		257736.652		ppb	1.233					253811.546
159	Tb-IS	|		221654.031		ppb	3.039					218212.017
207	Pb	|		9007.792	0.570723	ppb	0.481	1.453				226.667
203	Tl	|		31.111	-0.000944	ppb	22.304	153.420				35.556
209	Bi-IS	>		163893.852		ppb	1.725					165062.642
51	V	|		2574.677	3.992814	ppb	3.125	4.269				73.334
59	Co	|		342.226	0.209813	ppb	7.046	7.061				12.222
60	Ni	|		1667.875	1.920363	ppb	3.867	4.873				27.778
75	As	|		1187.074	1.174224	ppb	3.802	7.287				684.944
71	Ga-ISK	>		105622.393		ppb	1.155					106974.653
82	Se-2	|		15.497	0.337250	ppb	48.578	57.173				2.520
107	Ag-1	|		101.111	0.001281	ppb	10.597	215.414				97.778
115	In-ISK	|		93788.905		ppb	1.279					93702.469
45	Sc-ISK	>		266838.097		ppb	1.048					263953.217
23	Na	|		16458994.778	35701.170289	ppb	1.051	1.115				4734.118
39	K	|		4591784.090	3978.378766	ppb	0.976	1.573				130698.534
24	Mg	|		3174751.595	6126.943006	ppb	0.628	1.088				441.673
159	Tb-ISK	|		189514.377		ppb	1.836					187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 18:22:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.231

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28778.973		ppb		2.679		28112.080
9	Be	|	137319.096	103.939236	ppb	1.098	1.569		18.889
10	B	|	78553.254	259.736794	ppb	2.603	2.008		366.671
27	Al	|	719192.977	101.924745	ppb	1.306	1.237		7276.298
43	Ca-2	|	74569.309	5146.511253	ppb	3.899	3.337		88.334
49	Ti	|	56455.780	101.807562	ppb	0.526	0.716		225.557
52	Cr	|	761551.799	101.971777	ppb	1.918	2.029		9519.842
55	Mn	|	1083275.976	95.898458	ppb	2.319	1.993		776.688
57	Fe	|	1040968.376	4821.038437	ppb	3.738	3.400		10593.935
45	Sc-IS	>	1297889.067		ppb	0.714			1299865.170
66	Zn	|	96844.379	101.183329	ppb	5.094	4.768		553.344
86	Sr	|	179957.199	98.991813	ppb	2.740	2.931		20.135
65	Cu	|	145113.939	99.864092	ppb	4.711	4.442		146.452
69	Ga-IS	|	367460.883		ppb	4.463			352174.337
95	Mo	|	165844.255	99.101049	ppb	2.796	2.814		118.889
115	In-IS	>	251258.435		ppb	0.886			255185.519
111	Cd	|	157657.465	100.148440	ppb	1.132	0.348		16.417
118	Sn	|	472106.845	100.872481	ppb	1.780	0.972		1685.656
121	Sb	|	522221.609	101.902371	ppb	1.972	1.098		597.790
135	Ba	|	95289.296	101.161884	ppb	3.958	3.144		25.556
165	Ho-IS	|	257605.073		ppb	2.565			253811.546
159	Tb-IS	|	221065.372		ppb	1.585			218212.017
207	Pb	|	1572024.283	98.596526	ppb	0.786	0.445		226.667
203	Tl	|	460374.211	98.675001	ppb	0.983	0.646		35.556
209	Bi-IS	>	169753.746		ppb	0.555			165062.642
51	V	|	65528.836	103.350174	ppb	0.227	2.590		73.334
59	Co	|	165369.470	104.013801	ppb	0.921	2.525		12.222
60	Ni	|	87795.664	101.641139	ppb	1.517	1.560		27.778
75	As	|	44658.904	100.076214	ppb	0.670	1.909		684.944
71	Ga-ISK	>	106757.586		ppb	2.543			106974.653
82	Se-2	|	4002.109	103.044157	ppb	0.971	1.647		2.520
107	Ag-1	|	371775.045	104.492336	ppb	1.513	2.831		97.778
115	In-ISK	|	93659.380		ppb	0.232			93702.469
45	Sc-ISK	>	268106.583		ppb	2.212			263953.217
23	Na	|	2418488.440	5212.974937	ppb	1.088	1.288		4734.118
39	K	|	5941615.810	5158.034199	ppb	0.924	1.331		130698.534
24	Mg	|	2734338.461	5253.105380	ppb	1.462	2.460		441.673
159	Tb-ISK	|	189916.074		ppb	0.562			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 18:25:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.232

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		27399.592		ppb			2.186			28112.080
9	Be	|		24.444	0.004874	ppb			20.830	89.219		18.889
10	B	|		548.900	0.668990	ppb			15.380	47.088		366.671
27	Al	|		4997.542	-0.301906	ppb			5.200	8.437		7276.298
43	Ca-2	|		76.667	-0.644124	ppb			32.825	267.496		88.334
49	Ti	|		247.780	0.055681	ppb			19.324	164.103		225.557
52	Cr	|		9019.517	-0.026802	ppb			4.571	147.431		9519.842
55	Mn	|		713.351	-0.003354	ppb			15.041	324.424		776.688
57	Fe	|		9205.190	-5.044625	ppb			3.595	16.056		10593.935
45	Sc-IS	>		1257376.143		ppb			1.802			1299865.170
66	Zn	|		524.454	-0.011783	ppb			3.501	114.315		553.344
86	Sr	|		14.042	-0.003069	ppb			92.129	238.312		20.135
65	Cu	|		94.009	-0.033893	ppb			12.541	24.102		146.452
69	Ga-IS	|		332844.163		ppb			4.809			352174.337
95	Mo	|		538.899	0.261581	ppb			4.025	3.436		118.889
115	In-IS	>		244424.559		ppb			3.392			255185.519
111	Cd	|		14.424	-0.000797	ppb			48.344	600.794		16.417
118	Sn	|		3482.648	0.411599	ppb			5.909	7.831		1685.656
121	Sb	|		1205.607	0.127202	ppb			6.959	13.144		597.790
135	Ba	|		20.000	-0.004796	ppb			16.667	89.846		25.556
165	Ho-IS	|		251575.234		ppb			1.913			253811.546
159	Tb-IS	|		213273.667		ppb			1.126			218212.017
207	Pb	|		550.004	0.021419	ppb			6.990	10.464		226.667
203	Tl	|		137.778	0.022998	ppb			20.576	26.718		35.556
209	Bi-IS	>		162448.461		ppb			0.913			165062.642
51	V	|		32.222	-0.063920	ppb			11.945	10.504		73.334
59	Co	|		34.444	0.014322	ppb			31.109	49.108		12.222
60	Ni	|		46.667	0.022487	ppb			31.135	71.260		27.778
75	As	|		724.210	0.115282	ppb			4.839	85.367		684.944
71	Ga-ISK	>		105349.311		ppb			1.641			106974.653
82	Se-2	|		3.218	0.019507	ppb			203.482	885.720		2.520
107	Ag-1	|		180.001	0.023807	ppb			11.264	22.257		97.778
115	In-ISK	|		92217.258		ppb			1.306			93702.469
45	Sc-ISK	>		259147.408		ppb			1.281			263953.217
23	Na	|		4590.738	-0.123759	ppb			4.451	451.753		4734.118
39	K	|		135011.686	6.151522	ppb			0.903	9.504		130698.534
24	Mg	|		718.352	0.565574	ppb			9.852	23.888		441.673
159	Tb-ISK	|		185975.399		ppb			0.518			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-6-A

Autosampler Position: 438

Sample Date/Time: Thursday, April 16, 2020 18:27:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-6-A.233

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29187.577		ppb			2.546			28112.080
9	Be	|		27.778	0.007071	ppb			6.928	25.855		18.889
10	B	|		30868.909	102.799052	ppb			4.172	3.601		366.671
27	Al	|		234932.024	33.079320	ppb			1.926	2.096		7276.298
43	Ca-2	|		420616.696	29473.701158	ppb			2.624	0.534		88.334
49	Ti	|		1846.787	2.980350	ppb			10.450	10.020		225.557
52	Cr	|		17368.331	1.099899	ppb			1.609	1.398		9519.842
55	Mn	|		122064.853	10.901559	ppb			0.808	1.297		776.688
57	Fe	|		35459.518	118.807609	ppb			1.703	1.521		10593.935
45	Sc-IS	>		1279634.805		ppb			2.098			1299865.170
66	Zn	|		1982.360	1.532197	ppb			6.479	8.293		553.344
86	Sr	|		423767.641	236.451729	ppb			1.722	0.677		20.135
65	Cu	|		3776.934	2.537375	ppb			6.133	4.913		146.452
69	Ga-IS	|		345540.970		ppb			5.286			352174.337
95	Mo	|		2602.459	1.507694	ppb			1.831	2.183		118.889
115	In-IS	>		245799.166		ppb			2.426			255185.519
111	Cd	|		27.868	0.007921	ppb			31.785	77.253		16.417
118	Sn	|		1400.069	-0.049390	ppb			10.523	50.791		1685.656
121	Sb	|		2743.600	0.432281	ppb			12.666	13.659		597.790
135	Ba	|		41022.210	44.499146	ppb			3.998	1.608		25.556
165	Ho-IS	|		248326.713		ppb			1.531			253811.546
159	Tb-IS	|		216055.071		ppb			1.393			218212.017
207	Pb	|		2160.063	0.127776	ppb			2.484	4.027		226.667
203	Tl	|		46.667	0.002646	ppb			31.135	117.942		35.556
209	Bi-IS	>		161574.231		ppb			1.261			165062.642
51	V	|		1124.489	1.699007	ppb			1.811	2.770		73.334
59	Co	|		213.335	0.129416	ppb			21.137	22.047		12.222
60	Ni	|		815.579	0.933441	ppb			4.502	5.299		27.778
75	As	|		1247.260	1.345832	ppb			5.014	11.020		684.944
71	Ga-ISK	>		104430.324		ppb			0.776			106974.653
82	Se-2	|		0.164	-0.061446	ppb			6751.886	471.632		2.520
107	Ag-1	|		71.111	-0.006983	ppb			9.758	30.489		97.778
115	In-ISK	|		92588.937		ppb			0.475			93702.469
45	Sc-ISK	>		265451.381		ppb			0.563			263953.217
23	Na	|		7108668.450	15493.353417	ppb			0.750	0.279		4734.118
39	K	|		4249850.590	3692.894648	ppb			0.555	0.677		130698.534
24	Mg	|		2916602.657	5657.606331	ppb			2.042	1.799		441.673
159	Tb-ISK	|		188277.610		ppb			2.135			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-7-A

Autosampler Position: 439

Sample Date/Time: Thursday, April 16, 2020 18:30:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-7-A.234

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	31504.701		ppb	0.198		28112.080
9	Be	23.333	0.003026	ppb	65.465	365.940	18.889
10	B	53629.367	174.589798	ppb	0.695	1.186	366.671
27	Al	264793.160	36.362100	ppb	1.848	1.005	7276.298
43	Ca-2	440853.079	30052.899174	ppb	1.367	0.387	88.334
49	Ti	1732.327	2.686170	ppb	4.832	4.579	225.557
52	Cr	16888.871	0.970606	ppb	2.720	5.953	9519.842
55	Mn	20759.518	1.746091	ppb	0.798	1.623	776.688
57	Fe	38790.421	129.550961	ppb	3.780	3.510	10593.935
45	Sc-IS	> 1315502.057		ppb	1.690		1299865.170
66	Zn	19792.638	19.930158	ppb	7.204	5.985	553.344
86	Sr	638655.692	346.632713	ppb	2.395	1.979	20.135
65	Cu	5551.692	3.672346	ppb	4.426	3.852	146.452
69	Ga-IS	343322.016		ppb	5.411		352174.337
95	Mo	3238.145	1.838792	ppb	5.560	4.503	118.889
115	In-IS	> 249625.886		ppb	0.794		255185.519
111	Cd	43.200	0.017335	ppb	20.122	31.031	16.417
118	Sn	1098.932	-0.118850	ppb	12.286	22.987	1685.656
121	Sb	5661.124	0.998114	ppb	5.872	6.206	597.790
135	Ba	13534.196	14.439770	ppb	4.892	4.393	25.556
165	Ho-IS	256857.561		ppb	0.789		253811.546
159	Tb-IS	219796.886		ppb	0.537		218212.017
207	Pb	978.902	0.049402	ppb	7.871	11.023	226.667
203	Tl	31.111	-0.000889	ppb	16.366	125.820	35.556
209	Bi-IS	> 162877.807		ppb	1.310		165062.642
51	V	668.905	0.952116	ppb	6.803	7.858	73.334
59	Co	112.223	0.063600	ppb	17.149	18.169	12.222
60	Ni	1016.703	1.158635	ppb	6.885	7.810	27.778
75	As	997.034	0.739770	ppb	5.290	20.409	684.944
71	Ga-ISK	> 105579.867		ppb	1.301		106974.653
82	Se-2	10.518	0.206625	ppb	111.896	145.937	2.520
107	Ag-1	45.556	-0.014462	ppb	18.414	17.140	97.778
115	In-ISK	92171.643		ppb	1.363		93702.469
45	Sc-ISK	> 271395.331		ppb	1.793		263953.217
23	Na	11797946.413	25159.235811	ppb	1.392	1.147	4734.118
39	K	3344949.424	2815.987289	ppb	1.803	1.634	130698.534
24	Mg	6338675.925	12030.047361	ppb	1.392	2.174	441.673
159	Tb-ISK	187400.503		ppb	0.444		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-8-A

Autosampler Position: 440

Sample Date/Time: Thursday, April 16, 2020 18:33:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25122-A-8-A.235

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	31021.435		ppb	2.292		28112.080
9	Be	20.000	0.000938	ppb	44.096	737.974	18.889
10	B	61021.162	201.475385	ppb	0.642	1.989	366.671
27	Al	72998.311	9.407908	ppb	2.162	2.523	7276.298
43	Ca-2	484375.214	33454.596183	ppb	2.007	1.142	88.334
49	Ti	882.249	1.188821	ppb	2.458	1.268	225.557
52	Cr	22519.959	1.764412	ppb	0.572	4.548	9519.842
55	Mn	15392.737	1.294254	ppb	2.892	1.161	776.688
57	Fe	31620.537	98.373546	ppb	3.283	1.831	10593.935
45	Sc-IS	> 1298514.710		ppb	2.394		1299865.170
66	Zn	7072.865	6.844856	ppb	5.783	3.874	553.344
86	Sr	659472.515	362.633468	ppb	1.871	0.563	20.135
65	Cu	11255.642	7.647275	ppb	5.029	3.231	146.452
69	Ga-IS	343456.872		ppb	4.796		352174.337
95	Mo	6199.124	3.633997	ppb	3.804	2.774	118.889
115	In-IS	> 244418.318		ppb	0.488		255185.519
111	Cd	42.538	0.017532	ppb	26.476	42.530	16.417
118	Sn	1078.930	-0.118067	ppb	3.403	6.628	1685.656
121	Sb	3463.754	0.580748	ppb	4.329	5.731	597.790
135	Ba	33056.007	36.068720	ppb	3.389	3.857	25.556
165	Ho-IS	253872.748		ppb	1.014		253811.546
159	Tb-IS	219235.007		ppb	0.446		218212.017
207	Pb	2093.393	0.123739	ppb	4.552	4.755	226.667
203	Tl	30.000	-0.001078	ppb	22.222	129.521	35.556
209	Bi-IS	> 161114.733		ppb	1.776		165062.642
51	V	2579.122	4.033507	ppb	2.743	3.200	73.334
59	Co	290.003	0.178206	ppb	18.922	19.833	12.222
60	Ni	1468.965	1.700876	ppb	7.425	6.963	27.778
75	As	1764.030	2.535363	ppb	3.203	5.455	684.944
71	Ga-ISK	> 104745.950		ppb	0.604		106974.653
82	Se-2	12.515	0.263291	ppb	59.146	73.108	2.520
107	Ag-1	107.778	0.003453	ppb	4.724	46.773	97.778
115	In-ISK	93243.019		ppb	0.945		93702.469
45	Sc-ISK	> 271659.959		ppb	1.110		263953.217
23	Na	18536154.983	39492.593492	ppb	1.600	1.169	4734.118
39	K	7471510.138	6429.021332	ppb	0.646	1.315	130698.534
24	Mg	3603351.744	6830.103991	ppb	1.611	0.587	441.673
159	Tb-ISK	189381.227		ppb	1.596		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25055-B-1-A

Autosampler Position: 441

Sample Date/Time: Thursday, April 16, 2020 18:36:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25055-B-1-A.236

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29649.641		ppb				2.741		28112.080
9	Be	|		21.111	0.002071	ppb	24.119	191.640				18.889
10	B	|		12856.897	42.447828	ppb	2.747	2.893				366.671
27	Al	|		233271.642	33.098480	ppb	1.544	1.426				7276.298
43	Ca-2	|		56523.384	3985.283985	ppb	3.963	1.977				88.334
49	Ti	|		825.580	1.118090	ppb	10.624	11.527				225.557
52	Cr	|		71769.867	8.658340	ppb	1.757	1.569				9519.842
55	Mn	|		55990.723	4.999909	ppb	3.767	1.522				776.688
57	Fe	|		17947.942	36.326176	ppb	3.231	2.324				10593.935
45	Sc-IS	>		1269886.278		ppb				2.324		1299865.170
66	Zn	|		189553.016	202.909182	ppb	5.657	3.409				553.344
86	Sr	|		28245.493	15.870016	ppb	2.364	0.516				20.135
65	Cu	|		3901.655	2.645130	ppb	5.449	3.277				146.452
69	Ga-IS	|		338203.035		ppb				5.031		352174.337
95	Mo	|		553.344	0.266611	ppb	13.457	14.277				118.889
115	In-IS	>		247781.531		ppb				1.619		255185.519
111	Cd	|		159.950	0.092874	ppb	7.949	10.436				16.417
118	Sn	|		1070.041	-0.123417	ppb	12.727	21.999				1685.656
121	Sb	|		2695.810	0.419041	ppb	3.756	4.037				597.790
135	Ba	|		23927.814	25.739193	ppb	3.201	1.646				25.556
165	Ho-IS	|		251092.326		ppb				1.767		253811.546
159	Tb-IS	|		211515.578		ppb				1.060		218212.017
207	Pb	|		4362.487	0.266713	ppb	0.520	0.365				226.667
203	Tl	|		44.445	0.001945	ppb	36.997	183.186				35.556
209	Bi-IS	>		165122.183		ppb				0.863		165062.642
51	V	|		520.010	0.710767	ppb	8.672	11.667				73.334
59	Co	|		212.224	0.126552	ppb	15.733	16.451				12.222
60	Ni	|		621.125	0.691179	ppb	2.956	1.655				27.778
75	As	|		845.951	0.380266	ppb	4.779	18.353				684.944
71	Ga-ISK	>		106132.839		ppb				1.416		106974.653
82	Se-2	|		-0.136	-0.067474	ppb	2949.065	154.409				2.520
107	Ag-1	|		23.333	-0.020827	ppb	42.857	13.446				97.778
115	In-ISK	|		92816.937		ppb				0.870		93702.469
45	Sc-ISK	>		268368.467		ppb				0.582		263953.217
23	Na	|		1975414.491	4251.274439	ppb	1.119	1.434				4734.118
39	K	|		1078334.902	838.593475	ppb	2.156	2.809				130698.534
24	Mg	|		100955.476	192.880423	ppb	0.710	0.931				441.673
159	Tb-ISK	|		187609.995		ppb				1.213		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25055-B-2-A

Autosampler Position: 442

Sample Date/Time: Thursday, April 16, 2020 18:38:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25055-B-2-A.237

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29528.270		ppb				1.784		28112.080
9	Be	|		16.667	-0.001187	ppb			52.915	596.026		18.889
10	B	|		8797.153	28.913149	ppb			1.967	2.956		366.671
27	Al	|		214392.884	30.593240	ppb			2.310	1.126		7276.298
43	Ca-2	|		77839.966	5537.051701	ppb			3.178	1.308		88.334
49	Ti	|		811.134	1.107589	ppb			7.537	12.946		225.557
52	Cr	|		316272.439	42.907515	ppb			1.986	0.367		9519.842
55	Mn	|		117111.925	10.621416	ppb			4.053	2.137		776.688
57	Fe	|		18011.356	37.349247	ppb			3.333	3.511		10593.935
45	Sc-IS	>		1259319.565		ppb			1.947			1299865.170
66	Zn	|		485194.108	524.644209	ppb			6.188	4.314		553.344
86	Sr	|		35381.962	20.050628	ppb			1.460	0.489		20.135
65	Cu	|		6214.218	4.310492	ppb			3.907	2.287		146.452
69	Ga-IS	|		329985.398		ppb			5.200			352174.337
95	Mo	|		885.583	0.474635	ppb			7.717	7.986		118.889
115	In-IS	>		245234.834		ppb			1.449			255185.519
111	Cd	|		448.147	0.281472	ppb			7.078	7.419		16.417
118	Sn	|		982.256	-0.140149	ppb			4.297	4.534		1685.656
121	Sb	|		2270.181	0.339319	ppb			3.973	3.594		597.790
135	Ba	|		10413.799	11.302568	ppb			4.157	2.823		25.556
165	Ho-IS	|		246577.069		ppb			2.086			253811.546
159	Tb-IS	|		210507.547		ppb			1.189			218212.017
207	Pb	|		5251.491	0.324438	ppb			6.457	6.668		226.667
203	Tl	|		53.333	0.003932	ppb			12.500	38.489		35.556
209	Bi-IS	>		164928.934		ppb			1.394			165062.642
51	V	|		824.468	1.170443	ppb			11.495	12.337		73.334
59	Co	|		462.230	0.279569	ppb			10.921	10.978		12.222
60	Ni	|		748.909	0.824811	ppb			9.126	9.116		27.778
75	As	|		970.269	0.626726	ppb			4.860	16.396		684.944
71	Ga-ISK	>		108003.399		ppb			0.372			106974.653
82	Se-2	|		-0.487	-0.077456	ppb			1036.113	166.131		2.520
107	Ag-1	|		40.000	-0.016307	ppb			16.667	11.587		97.778
115	In-ISK	|		95136.777		ppb			1.040			93702.469
45	Sc-ISK	>		269378.488		ppb			1.158			263953.217
23	Na	|		1640618.583	3515.828758	ppb			1.174	1.420		4734.118
39	K	|		1572899.661	1272.025863	ppb			0.909	1.197		130698.534
24	Mg	|		141426.630	269.562403	ppb			0.753	1.864		441.673
159	Tb-ISK	|		189262.872		ppb			0.951			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25055-B-3-A

Autosampler Position: 443

Sample Date/Time: Thursday, April 16, 2020 18:41:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25055-B-3-A.238

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29316.719		ppb			0.951			28112.080
9	Be	|		14.444	-0.002952	ppb	48.038	189.192				18.889
10	B	|		5881.211	18.932354	ppb	2.383	3.773				366.671
27	Al	|		202041.396	28.776289	ppb	2.270	0.340				7276.298
43	Ca-2	|		52534.760	3736.918171	ppb	1.067	1.290				88.334
49	Ti	|		781.133	1.047859	ppb	12.503	14.570				225.557
52	Cr	|		273929.468	36.994798	ppb	2.904	1.349				9519.842
55	Mn	|		165968.978	15.087706	ppb	2.660	1.354				776.688
57	Fe	|		17332.737	34.105990	ppb	3.036	5.041				10593.935
45	Sc-IS	>		1259115.317		ppb	2.299					1299865.170
66	Zn	>		723251.421	782.634471	ppb	4.715	2.709				553.344
86	Sr	|		28409.708	16.100989	ppb	1.908	1.462				20.135
65	Cu	|		7320.802	5.096253	ppb	4.496	2.296				146.452
69	Ga-IS	|		329141.918		ppb	4.796					352174.337
95	Mo	|		874.471	0.468503	ppb	5.033	7.889				118.889
115	In-IS	>		246602.854		ppb	0.323					255185.519
111	Cd	|		141.498	0.081343	ppb	14.283	16.366				16.417
118	Sn	|		938.920	-0.150752	ppb	1.141	1.989				1685.656
121	Sb	|		2260.179	0.334903	ppb	5.335	7.142				597.790
135	Ba	|		12323.102	13.307388	ppb	5.807	5.569				25.556
165	Ho-IS	|		247268.344		ppb	0.762					253811.546
159	Tb-IS	|		211216.913		ppb	1.612					218212.017
207	Pb	|		5115.919	0.317666	ppb	3.684	2.704				226.667
203	Tl	|		57.778	0.005002	ppb	29.038	75.389				35.556
209	Bi-IS	>		163912.849		ppb	1.110					165062.642
51	V	|		663.349	0.939317	ppb	6.175	5.708				73.334
59	Co	|		577.790	0.358166	ppb	16.178	15.443				12.222
60	Ni	|		935.586	1.060716	ppb	6.236	8.378				27.778
75	As	|		860.550	0.418363	ppb	0.333	7.700				684.944
71	Ga-ISK	>		105930.275		ppb	1.906					106974.653
82	Se-2	|		1.185	-0.033861	ppb	244.856	222.281				2.520
107	Ag-1	|		27.778	-0.019602	ppb	48.497	18.798				97.778
115	In-ISK	|		93583.481		ppb	0.574					93702.469
45	Sc-ISK	>		263443.576		ppb	0.304					263953.217
23	Na	|		1040422.809	2276.002888	ppb	1.303	1.027				4734.118
39	K	|		1014054.967	798.320365	ppb	1.438	1.318				130698.534
24	Mg	|		122192.148	238.006427	ppb	1.905	1.629				441.673
159	Tb-ISK	|		187120.947		ppb	1.050					187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25055-B-4-A

Autosampler Position: 444

Sample Date/Time: Thursday, April 16, 2020 18:44:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25055-B-4-A.239

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29685.291		ppb				4.176		28112.080
9	Be	|		15.556	-0.001779	ppb			32.733	239.999		18.889
10	B	|		448.896	0.360080	ppb			17.101	76.763		366.671
27	Al	|		41911.426	5.300655	ppb			2.966	3.532		7276.298
43	Ca-2	|		6556.505	472.653072	ppb			2.213	0.950		88.334
49	Ti	|		308.892	0.181947	ppb			17.074	48.347		225.557
52	Cr	|		38974.226	4.295112	ppb			2.519	2.578		9519.842
55	Mn	|		12733.454	1.123744	ppb			3.068	4.499		776.688
57	Fe	|		10253.680	1.202522	ppb			2.463	82.736		10593.935
45	Sc-IS	>		1228365.823		ppb			2.128			1299865.170
66	Zn	|		85115.604	93.936432	ppb			5.838	5.710		553.344
86	Sr	|		3342.260	1.932735	ppb			3.948	5.335		20.135
65	Cu	|		1852.004	1.247675	ppb			1.036	2.090		146.452
69	Ga-IS	|		321224.249		ppb			4.701			352174.337
95	Mo	|		83.334	-0.018327	ppb			22.271	64.675		118.889
115	In-IS	>		236969.330		ppb			1.302			255185.519
111	Cd	|		599.838	0.393804	ppb			6.731	6.927		16.417
118	Sn	|		733.352	-0.189266	ppb			10.235	8.007		1685.656
121	Sb	|		682.239	0.026425	ppb			7.606	46.456		597.790
135	Ba	|		2077.929	2.312843	ppb			6.331	5.790		25.556
165	Ho-IS	|		240442.314		ppb			1.255			253811.546
159	Tb-IS	|		204339.974		ppb			0.679			218212.017
207	Pb	|		921.123	0.046086	ppb			5.771	6.435		226.667
203	Tl	|		12.222	-0.005089	ppb			31.492	16.527		35.556
209	Bi-IS	>		161519.131		ppb			0.982			165062.642
51	V	|		76.667	0.008726	ppb			23.007	323.089		73.334
59	Co	|		74.445	0.040414	ppb			15.725	18.618		12.222
60	Ni	|		175.557	0.176668	ppb			23.741	27.868		27.778
75	As	|		660.699	-0.011031	ppb			10.488	1459.958		684.944
71	Ga-ISK	>		103923.302		ppb			0.373			106974.653
82	Se-2	|		-1.451	-0.103708	ppb			691.839	256.439		2.520
107	Ag-1	|		44.445	-0.014594	ppb			8.660	7.302		97.778
115	In-ISK	|		91386.940		ppb			0.512			93702.469
45	Sc-ISK	>		262403.726		ppb			0.988			263953.217
23	Na	|		76522.802	158.456446	ppb			2.189	2.409		4734.118
39	K	|		187618.450	52.333492	ppb			0.484	2.111		130698.534
24	Mg	|		15488.393	29.540851	ppb			1.663	2.481		441.673
159	Tb-ISK	|		182469.965		ppb			0.574			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25055-B-4-B MS

Autosampler Position: 445

Sample Date/Time: Thursday, April 16, 2020 18:47:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25055-B-4-B MS.240

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		28471.686		ppb		2.158		28112.080
9	Be	|		102838.876	80.707967	ppb		1.425	4.521	18.889
10	B	|		14271.570	47.923687	ppb		1.232	2.162	366.671
27	Al	|		363517.262	52.900877	ppb		1.004	2.375	7276.298
43	Ca-2	|		32582.142	2326.486756	ppb		3.418	1.179	88.334
49	Ti	|		35910.645	66.970070	ppb		1.951	2.065	225.557
52	Cr	|		579097.080	80.095419	ppb		0.946	2.502	9519.842
55	Mn	|		772562.919	70.836775	ppb		3.183	0.697	776.688
57	Fe	|		368820.475	1738.162358	ppb		3.879	1.475	10593.935
45	Sc-IS	>		1252808.612		ppb		3.073		1299865.170
66	Zn	|		157166.970	170.454456	ppb		5.301	2.428	553.344
86	Sr	|		130970.552	74.646801	ppb		2.710	2.054	20.135
65	Cu	|		104736.316	74.604608	ppb		6.080	3.127	146.452
69	Ga-IS	|		335882.039		ppb		4.385		352174.337
95	Mo	|		118472.737	73.332985	ppb		2.354	0.849	118.889
115	In-IS	>		245399.346		ppb		0.128		255185.519
111	Cd	|		113352.300	73.721571	ppb		1.716	1.669	16.417
118	Sn	|		152459.251	33.116120	ppb		0.814	0.711	1685.656
121	Sb	|		374042.906	74.704000	ppb		1.277	1.161	597.790
135	Ba	|		45219.312	49.145492	ppb		4.099	3.988	25.556
165	Ho-IS	|		247588.549		ppb		1.623		253811.546
159	Tb-IS	|		212797.710		ppb		0.889		218212.017
207	Pb	|		1137818.085	73.210841	ppb		0.693	1.076	226.667
203	Tl	|		319515.003	70.267697	ppb		1.071	2.419	35.556
209	Bi-IS	>		165476.319		ppb		1.381		165062.642
51	V	|		47456.475	76.601139	ppb		0.887	0.477	73.334
59	Co	|		118893.883	76.563491	ppb		1.478	1.043	12.222
60	Ni	|		63591.240	75.384278	ppb		1.457	1.508	27.778
75	As	|		33287.266	76.014440	ppb		0.744	0.913	684.944
71	Ga-ISK	>		104225.494		ppb		0.497		106974.653
82	Se-2	|		2790.163	73.546769	ppb		2.817	2.825	2.520
107	Ag-1	|		83614.021	24.040710	ppb		1.563	1.377	97.778
115	In-ISK	|		92203.939		ppb		0.666		93702.469
45	Sc-ISK	>		261754.170		ppb		0.907		263953.217
23	Na	|		276950.609	602.170130	ppb		0.952	0.283	4734.118
39	K	|		690408.801	509.956105	ppb		1.163	1.043	130698.534
24	Mg	|		936748.444	1842.243165	ppb		0.735	0.239	441.673
159	Tb-ISK	|		186695.413		ppb		0.927		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25055-B-4-C MSD

Autosampler Position: 446

Sample Date/Time: Thursday, April 16, 2020 18:49:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25055-B-4-C MSD.241

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	27564.365		ppb		3.400		28112.080
9	Be	|	106815.720	84.482007	ppb	1.889	3.091		18.889
10	B	|	17704.298	60.236371	ppb	1.105	1.126		366.671
27	Al	|	445170.441	65.559763	ppb	2.009	3.083		7276.298
43	Ca-2	|	30437.403	2191.260710	ppb	2.417	1.413		88.334
49	Ti	|	36797.332	69.203357	ppb	0.770	1.718		225.557
52	Cr	|	598322.761	83.469473	ppb	1.248	1.015		9519.842
55	Mn	|	813874.392	75.242400	ppb	3.906	2.582		776.688
57	Fe	|	311371.694	1472.428827	ppb	3.525	2.642		10593.935
45	Sc-IS	>	1242357.520		ppb	1.674			1299865.170
66	Zn	|	159888.445	174.886719	ppb	5.849	4.445		553.344
86	Sr	|	140905.086	80.967600	ppb	1.780	0.370		20.135
65	Cu	|	111478.786	80.107071	ppb	4.877	3.450		146.452
69	Ga-IS	|	338383.664		ppb	6.449			352174.337
95	Mo	|	126667.152	79.054125	ppb	2.816	1.935		118.889
115	In-IS	>	247136.056		ppb	0.383			255185.519
111	Cd	|	120631.252	77.904173	ppb	1.394	1.178		16.417
118	Sn	|	162108.133	34.984347	ppb	1.921	1.852		1685.656
121	Sb	|	404692.840	80.263606	ppb	2.240	1.934		597.790
135	Ba	|	57063.943	61.585143	ppb	5.140	4.832		25.556
165	Ho-IS	|	247103.278		ppb	0.643			253811.546
159	Tb-IS	|	211906.786		ppb	0.572			218212.017
207	Pb	|	1196503.717	77.257952	ppb	0.662	0.609		226.667
203	Tl	|	348141.484	76.822760	ppb	1.305	1.311		35.556
209	Bi-IS	>	164889.549		ppb	1.105			165062.642
51	V	|	49645.021	79.676745	ppb	1.856	1.120		73.334
59	Co	|	124371.429	79.628265	ppb	2.148	1.143		12.222
60	Ni	|	67394.153	79.445292	ppb	0.461	1.735		27.778
75	As	|	36040.323	81.945208	ppb	1.697	1.123		684.944
71	Ga-ISK	>	104829.938		ppb	1.423			106974.653
82	Se-2	|	3056.508	80.113195	ppb	2.211	2.201		2.520
107	Ag-1	|	108463.534	31.017305	ppb	0.460	1.217		97.778
115	In-ISK	|	92879.917		ppb	0.666			93702.469
45	Sc-ISK	>	261121.868		ppb	1.508			263953.217
23	Na	|	378309.659	828.360344	ppb	1.747	0.257		4734.118
39	K	|	842961.270	650.670793	ppb	0.403	2.185		130698.534
24	Mg	|	813446.452	1603.963867	ppb	2.855	3.804		441.673
159	Tb-ISK	|	185585.703		ppb	0.373			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25056-A-2-A

Autosampler Position: 447

Sample Date/Time: Thursday, April 16, 2020 18:52:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25056-A-2-A.242

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27675.683		ppb	2.631		28112.080
9	Be	32.222	0.011304	ppb	21.535	45.174	18.889
10	B	8302.414	27.755896	ppb	3.897	2.385	366.671
27	Al	103515.979	14.532339	ppb	1.638	2.092	7276.298
43	Ca-2	44577.859	3229.394519	ppb	4.224	2.154	88.334
49	Ti	580.012	0.695869	ppb	6.968	11.777	225.557
52	Cr	494646.745	69.168808	ppb	2.462	0.464	9519.842
55	Mn	121562.913	11.246217	ppb	1.815	0.728	776.688
57	Fe	14040.244	19.491082	ppb	5.554	12.285	10593.935
45	Sc-IS	> 1235398.155		ppb	2.091		1299865.170
66	Zn	308870.772	340.289498	ppb	5.419	3.595	553.344
86	Sr	19817.386	11.438467	ppb	4.593	2.623	20.135
65	Cu	3866.551	2.697068	ppb	3.899	2.008	146.452
69	Ga-IS	321802.947		ppb	5.742		352174.337
95	Mo	954.476	0.528567	ppb	5.414	5.295	118.889
115	In-IS	> 242610.634		ppb	0.961		255185.519
111	Cd	80.218	0.042499	ppb	6.481	7.354	16.417
118	Sn	2496.886	0.198482	ppb	8.679	22.952	1685.656
121	Sb	12518.825	2.417609	ppb	4.956	4.642	597.790
135	Ba	6593.744	7.226527	ppb	3.008	3.188	25.556
165	Ho-IS	245667.833		ppb	1.092		253811.546
159	Tb-IS	206014.921		ppb	0.912		218212.017
207	Pb	3105.688	0.189812	ppb	4.936	3.957	226.667
203	Tl	178.890	0.032375	ppb	15.061	17.315	35.556
209	Bi-IS	> 161718.073		ppb	1.302		165062.642
51	V	447.785	0.604263	ppb	4.728	4.638	73.334
59	Co	258.891	0.158167	ppb	6.085	6.473	12.222
60	Ni	357.782	0.390242	ppb	13.576	15.702	27.778
75	As	846.218	0.406193	ppb	3.943	19.927	684.944
71	Ga-ISK	> 104800.824		ppb	1.235		106974.653
82	Se-2	0.513	-0.052546	ppb	1254.803	318.662	2.520
107	Ag-1	85.556	-0.002959	ppb	18.412	142.853	97.778
115	In-ISK	93026.551		ppb	2.506		93702.469
45	Sc-ISK	> 258035.360		ppb	1.369		263953.217
23	Na	635915.595	1416.760027	ppb	1.435	2.843	4734.118
39	K	966262.277	773.583323	ppb	0.998	2.111	130698.534
24	Mg	69635.978	138.135113	ppb	0.498	0.884	441.673
159	Tb-ISK	182188.638		ppb	1.832		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 18:55:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.243

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26949.846		ppb		1.810		28112.080
9	Be	|	130661.541	104.226535	ppb	1.231	1.149		18.889
10	B	|	75499.071	263.085679	ppb	2.661	1.206		366.671
27	Al	|	686469.630	102.511182	ppb	3.435	1.990		7276.298
43	Ca-2	|	69701.504	5068.443016	ppb	4.329	2.651		88.334
49	Ti	|	53279.174	101.255827	ppb	0.884	0.933		225.557
52	Cr	|	732523.493	103.389967	ppb	1.007	1.142		9519.842
55	Mn	|	1037667.853	96.817114	ppb	0.984	0.798		776.688
57	Fe	|	993577.617	4849.645427	ppb	2.095	0.374		10593.935
45	Sc-IS	>	1231606.594		ppb	1.745			1299865.170
66	Zn	|	90978.387	100.123809	ppb	6.138	4.512		553.344
86	Sr	|	172981.659	100.261871	ppb	2.513	0.814		20.135
65	Cu	|	138957.255	100.746698	ppb	4.757	3.089		146.452
69	Ga-IS	|	340071.172		ppb	5.050			352174.337
95	Mo	|	160157.766	100.837345	ppb	3.079	1.364		118.889
115	In-IS	>	242881.135		ppb	0.667			255185.519
111	Cd	|	151616.573	99.639012	ppb	1.686	1.958		16.417
118	Sn	|	458043.076	101.255507	ppb	1.716	2.081		1685.656
121	Sb	|	514317.786	103.837854	ppb	1.294	1.836		597.790
135	Ba	|	90288.017	99.186833	ppb	3.748	4.144		25.556
165	Ho-IS	|	247796.779		ppb	2.054			253811.546
159	Tb-IS	|	213269.028		ppb	0.232			218212.017
207	Pb	|	1509213.330	98.804851	ppb	0.483	2.475		226.667
203	Tl	|	446852.208	99.968108	ppb	0.232	2.030		35.556
209	Bi-IS	>	162682.412		ppb	2.029			165062.642
51	V	|	62889.241	103.668707	ppb	0.870	2.010		73.334
59	Co	|	157714.796	103.687124	ppb	1.311	2.383		12.222
60	Ni	|	86485.690	104.740253	ppb	3.752	6.113		27.778
75	As	|	44897.888	105.324864	ppb	4.332	6.725		684.944
71	Ga-ISK	>	102133.972		ppb	2.696			106974.653
82	Se-2	|	3994.413	107.607912	ppb	4.608	7.162		2.520
107	Ag-1	|	361076.558	106.124384	ppb	2.223	4.737		97.778
115	In-ISK	|	89470.145		ppb	2.217			93702.469
45	Sc-ISK	>	255537.366		ppb	2.645			263953.217
23	Na	|	2324720.035	5259.677624	ppb	1.714	3.797		4734.118
39	K	|	5828456.265	5314.689885	ppb	1.621	4.057		130698.534
24	Mg	|	2658797.939	5362.482758	ppb	2.522	5.141		441.673
159	Tb-ISK	|	182807.933		ppb	3.699			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 18:58:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.244

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		27037.796		ppb				2.638		28112.080
9	Be	|		24.444	0.005995	ppb				20.830	66.021	18.889
10	B	|		430.006	0.352044	ppb				8.093	41.686	366.671
27	Al	|		4395.122	-0.350296	ppb				5.210	5.291	7276.298
43	Ca-2	|		65.000	-1.145053	ppb				27.735	129.131	88.334
49	Ti	|		232.224	0.053118	ppb				15.214	122.958	225.557
52	Cr	|		8748.234	0.012284	ppb				2.113	68.076	9519.842
55	Mn	|		751.131	0.004388	ppb				8.609	173.624	776.688
57	Fe	|		8440.273	-6.191948	ppb				4.331	12.429	10593.935
45	Sc-IS	>		1183338.465		ppb				2.606		1299865.170
66	Zn	|		492.231	-0.013031	ppb				1.704	126.898	553.344
86	Sr	|		32.432	0.008771	ppb				85.822	195.812	20.135
65	Cu	|		88.551	-0.033762	ppb				5.741	15.075	146.452
69	Ga-IS	|		309905.847		ppb				5.730		352174.337
95	Mo	|		390.005	0.184704	ppb				6.838	7.439	118.889
115	In-IS	>		234829.733		ppb				2.928		255185.519
111	Cd	|		29.181	0.009739	ppb				52.535	112.130	16.417
118	Sn	|		3308.161	0.402869	ppb				5.291	6.035	1685.656
121	Sb	|		1881.236	0.277596	ppb				11.343	12.143	597.790
135	Ba	|		25.556	0.002341	ppb				71.838	878.095	25.556
165	Ho-IS	|		239881.692		ppb				0.145		253811.546
159	Tb-IS	|		201619.539		ppb				0.909		218212.017
207	Pb	|		576.671	0.024116	ppb				4.588	8.478	226.667
203	Tl	|		145.556	0.025568	ppb				1.322	2.090	35.556
209	Bi-IS	>		158553.937		ppb				0.682		165062.642
51	V	|		30.000	-0.066478	ppb				44.444	32.475	73.334
59	Co	|		24.444	0.008287	ppb				34.317	67.636	12.222
60	Ni	|		25.556	-0.001461	ppb				27.152	557.723	27.778
75	As	|		656.404	-0.007846	ppb				2.246	305.581	684.944
71	Ga-ISK	>		103030.214		ppb				0.806		106974.653
82	Se-2	|		1.515	-0.023824	ppb				537.816	909.292	2.520
107	Ag-1	|		142.223	0.013998	ppb				3.580	12.026	97.778
115	In-ISK	|		89429.202		ppb				1.883		93702.469
45	Sc-ISK	>		255055.741		ppb				0.929		263953.217
23	Na	|		2433.541	-4.861597	ppb				6.593	6.482	4734.118
39	K	|		134925.290	8.060948	ppb				0.329	10.554	130698.534
24	Mg	|		353.338	-0.147990	ppb				7.123	38.273	441.673
159	Tb-ISK	|		181967.604		ppb				0.377		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25056-A-3-A

Autosampler Position: 448

Sample Date/Time: Thursday, April 16, 2020 19:00:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25056-A-3-A.245

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		26984.353		ppb			1.155			28112.080
9	Be	|		22.222	0.003771	ppb			17.321	82.315		18.889
10	B	|		3220.363	10.263662	ppb			1.081	1.325		366.671
27	Al	|		126581.685	18.406344	ppb			0.782	1.702		7276.298
43	Ca-2	|		42732.156	3162.461598	ppb			1.254	0.803		88.334
49	Ti	|		542.233	0.645432	ppb			5.843	8.752		225.557
52	Cr	|		73804.640	9.448230	ppb			1.729	1.300		9519.842
55	Mn	|		138750.828	13.119485	ppb			2.477	1.671		776.688
57	Fe	|		13668.761	19.127052	ppb			2.557	7.317		10593.935
45	Sc-IS	>		1209610.330		ppb			0.826			1299865.170
66	Zn	|		268861.056	302.524184	ppb			4.627	3.819		553.344
86	Sr	|		29487.459	17.394474	ppb			1.124	0.823		20.135
65	Cu	|		4531.498	3.248283	ppb			4.586	3.955		146.452
69	Ga-IS	|		319330.170		ppb			5.622			352174.337
95	Mo	|		1223.386	0.713916	ppb			4.230	4.335		118.889
115	In-IS	>		239933.378		ppb			0.341			255185.519
111	Cd	|		65.209	0.033126	ppb			21.120	27.984		16.417
118	Sn	|		1470.076	-0.025699	ppb			11.139	147.360		1685.656
121	Sb	|		2768.046	0.451375	ppb			5.392	7.120		597.790
135	Ba	|		13303.975	14.771493	ppb			3.434	3.772		25.556
165	Ho-IS	|		243161.022		ppb			1.028			253811.546
159	Tb-IS	|		206933.617		ppb			0.935			218212.017
207	Pb	|		4753.643	0.299930	ppb			3.122	3.591		226.667
203	Tl	|		64.445	0.006738	ppb			13.017	29.099		35.556
209	Bi-IS	>		160935.890		ppb			0.428			165062.642
51	V	|		544.455	0.785921	ppb			6.040	8.495		73.334
59	Co	|		230.002	0.144042	ppb			7.246	8.870		12.222
60	Ni	|		586.679	0.680552	ppb			7.686	9.391		27.778
75	As	|		772.221	0.287868	ppb			7.489	55.223		684.944
71	Ga-ISK	>		101838.414		ppb			1.430			106974.653
82	Se-2	|		3.218	0.021865	ppb			218.835	876.160		2.520
107	Ag-1	|		60.000	-0.009791	ppb			30.932	53.183		97.778
115	In-ISK	|		90962.191		ppb			2.203			93702.469
45	Sc-ISK	>		255596.718		ppb			1.746			263953.217
23	Na	|		475930.381	1067.576758	ppb			2.201	0.605		4734.118
39	K	|		710977.351	544.217712	ppb			2.095	1.037		130698.534
24	Mg	|		101778.037	204.217640	ppb			2.047	1.312		441.673
159	Tb-ISK	|		181864.979		ppb			0.433			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25056-A-4-A

Autosampler Position: 449

Sample Date/Time: Thursday, April 16, 2020 19:03:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25056-A-4-A.246

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		27087.888		ppb				2.230		28112.080
9	Be	|		13.333	-0.003452	ppb				86.603	272.349	18.889
10	B	|		4092.809	13.342669	ppb				2.870	1.490	366.671
27	Al	|		53943.932	7.229164	ppb				2.827	1.700	7276.298
43	Ca-2	|		19304.719	1422.172009	ppb				4.502	3.264	88.334
49	Ti	|		345.560	0.261835	ppb				11.669	27.870	225.557
52	Cr	|		77262.835	9.930159	ppb				1.195	0.904	9519.842
55	Mn	|		118742.962	11.195582	ppb				3.498	2.745	776.688
57	Fe	|		11124.331	6.241411	ppb				2.497	10.353	10593.935
45	Sc-IS	>		1211991.480		ppb				1.506		1299865.170
66	Zn	>		228060.354	255.988508	ppb				5.241	3.911	553.344
86	Sr	|		16310.734	9.599134	ppb				1.943	2.438	20.135
65	Cu	|		12700.210	9.265220	ppb				5.765	4.499	146.452
69	Ga-IS	|		318378.961		ppb				6.701		352174.337
95	Mo	|		543.344	0.277192	ppb				11.461	15.509	118.889
115	In-IS	>		241640.284		ppb				2.488		255185.519
111	Cd	|		71.081	0.036639	ppb				9.930	10.016	16.417
118	Sn	|		1476.743	-0.026875	ppb				7.810	71.169	1685.656
121	Sb	|		1727.883	0.235708	ppb				7.728	7.883	597.790
135	Ba	|		11953.908	13.164313	ppb				7.685	5.526	25.556
165	Ho-IS	|		243571.283		ppb				1.120		253811.546
159	Tb-IS	|		206483.766		ppb				0.256		218212.017
207	Pb	|		1204.465	0.065591	ppb				3.243	2.461	226.667
203	Tl	|		36.667	0.000526	ppb				27.273	455.551	35.556
209	Bi-IS	>		159881.035		ppb				1.998		165062.642
51	V	|		275.558	0.327799	ppb				13.380	18.204	73.334
59	Co	|		193.335	0.116213	ppb				5.172	5.103	12.222
60	Ni	|		618.902	0.698360	ppb				6.426	7.091	27.778
75	As	|		711.468	0.094273	ppb				6.701	109.428	684.944
71	Ga-ISK	>		104745.947		ppb				0.503		106974.653
82	Se-2	|		-3.144	-0.147617	ppb				110.987	62.507	2.520
107	Ag-1	|		54.445	-0.011817	ppb				24.744	33.237	97.778
115	In-ISK	|		91454.037		ppb				0.625		93702.469
45	Sc-ISK	>		253792.417		ppb				0.895		263953.217
23	Na	|		369554.109	832.714524	ppb				0.780	1.695	4734.118
39	K	|		370291.171	229.455770	ppb				0.794	2.495	130698.534
24	Mg	|		79988.329	161.469412	ppb				1.157	1.790	441.673
159	Tb-ISK	|		182667.416		ppb				2.013		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25056-A-5-A

Autosampler Position: 450

Sample Date/Time: Thursday, April 16, 2020 19:06:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25056-A-5-A.247

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27860.501		ppb		3.889		28112.080
9	Be	|		20.000	0.002047	ppb	66.667	545.332		18.889
10	B	|		3554.887	11.377546	ppb	1.937	1.117		366.671
27	Al	|		112733.465	16.167100	ppb	3.712	2.500		7276.298
43	Ca-2	|		32410.119	2381.172199	ppb	5.085	3.135		88.334
49	Ti	|		497.787	0.551998	ppb	10.403	14.199		225.557
52	Cr	|		245789.096	34.239785	ppb	3.401	1.197		9519.842
55	Mn	|		90236.473	8.454760	ppb	2.884	1.103		776.688
57	Fe	|		13092.668	15.818064	ppb	3.165	3.204		10593.935
45	Sc-IS	>		1217255.468		ppb	2.434			1299865.170
66	Zn	>		531364.523	594.569817	ppb	5.420	3.342		553.344
86	Sr	|		15911.969	9.326066	ppb	0.142	2.516		20.135
65	Cu	|		3112.708	2.185718	ppb	2.642	1.144		146.452
69	Ga-IS	|		322554.080		ppb	5.312			352174.337
95	Mo	|		691.128	0.369927	ppb	1.214	4.346		118.889
115	In-IS	>		241600.833		ppb	1.652			255185.519
111	Cd	|		64.104	0.032079	ppb	3.027	2.146		16.417
118	Sn	|		953.365	-0.143399	ppb	6.984	8.308		1685.656
121	Sb	|		1697.879	0.229926	ppb	7.656	10.787		597.790
135	Ba	|		10973.114	12.087188	ppb	6.626	5.103		25.556
165	Ho-IS	|		243032.079		ppb	0.492			253811.546
159	Tb-IS	|		205736.449		ppb	0.490			218212.017
207	Pb	|		2701.215	0.161836	ppb	2.807	2.630		226.667
203	Tl	|		36.667	0.000363	ppb	56.773	1289.472		35.556
209	Bi-IS	>		162995.717		ppb	0.490			165062.642
51	V	|		227.780	0.250330	ppb	6.599	11.212		73.334
59	Co	|		325.559	0.200692	ppb	11.508	12.889		12.222
60	Ni	|		542.233	0.607024	ppb	8.873	10.754		27.778
75	As	|		770.855	0.228630	ppb	0.587	7.006		684.944
71	Ga-ISK	>		104969.851		ppb	1.450			106974.653
82	Se-2	|		8.567	0.161606	ppb	106.350	148.408		2.520
107	Ag-1	|		40.000	-0.015981	ppb	8.333	6.753		97.778
115	In-ISK	|		92622.826		ppb	0.734			93702.469
45	Sc-ISK	>		257545.256		ppb	0.334			263953.217
23	Na	|		472948.765	1052.796744	ppb	1.238	1.486		4734.118
39	K	|		648988.398	481.948428	ppb	1.026	1.657		130698.534
24	Mg	|		51961.036	103.049922	ppb	2.609	2.917		441.673
159	Tb-ISK	|		185173.750		ppb	0.493			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, April 16, 2020 19:09:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\b.248

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		26868.579		ppb			1.180			28112.080
9	Be	|		17.778	0.000437	ppb	47.186	1527.396				18.889
10	B	|		226.668	-0.386495	ppb	16.703	39.215				366.671
27	Al	|		6575.959	-0.005286	ppb	4.323	488.411				7276.298
43	Ca-2	|		56.667	-1.776119	ppb	28.364	72.766				88.334
49	Ti	|		253.336	0.096602	ppb	1.316	3.912				225.557
52	Cr	|		10677.323	0.303244	ppb	1.685	10.641				9519.842
55	Mn	|		743.353	0.003651	ppb	9.545	157.927				776.688
57	Fe	|		8442.501	-6.080031	ppb	6.378	34.599				10593.935
45	Sc-IS	>		1180410.172		ppb	1.909					1299865.170
66	Zn	|		557.789	0.064218	ppb	4.068	53.452				553.344
86	Sr	|		9.598	-0.005535	ppb	384.699	398.113				20.135
65	Cu	|		96.446	-0.027720	ppb	6.003	10.883				146.452
69	Ga-IS	|		311195.170		ppb	5.513					352174.337
95	Mo	|		62.222	-0.030048	ppb	20.282	28.277				118.889
115	In-IS	>		236182.979		ppb	2.280					255185.519
111	Cd	|		15.425	0.000196	ppb	33.178	1857.674				16.417
118	Sn	|		776.688	-0.179039	ppb	14.472	12.245				1685.656
121	Sb	|		620.013	0.013960	ppb	2.464	43.355				597.790
135	Ba	|		30.000	0.007084	ppb	19.245	82.347				25.556
165	Ho-IS	|		240024.332		ppb	1.455					253811.546
159	Tb-IS	|		202641.641		ppb	0.986					218212.017
207	Pb	|		354.446	0.009348	ppb	6.262	15.936				226.667
203	Tl	|		22.222	-0.002709	ppb	56.789	106.712				35.556
209	Bi-IS	>		157457.453		ppb	0.518					165062.642
51	V	|		24.444	-0.075167	ppb	47.889	27.023				73.334
59	Co	|		13.333	0.000971	ppb	50.000	433.154				12.222
60	Ni	|		51.111	0.029104	ppb	27.152	52.944				27.778
75	As	|		688.780	0.071470	ppb	8.648	203.463				684.944
71	Ga-ISK	>		102894.952		ppb	2.624					106974.653
82	Se-2	|		-0.797	-0.087514	ppb	383.322	95.027				2.520
107	Ag-1	|		62.222	-0.009220	ppb	16.366	37.711				97.778
115	In-ISK	|		91225.918		ppb	1.686					93702.469
45	Sc-ISK	>		256072.726		ppb	1.350					263953.217
23	Na	|		2311.854	-5.156987	ppb	3.152	2.700				4734.118
39	K	|		130562.849	3.505213	ppb	1.019	18.297				130698.534
24	Mg	|		258.336	-0.342559	ppb	9.932	13.367				441.673
159	Tb-ISK	|		181468.241		ppb	1.905					187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LB4 570-63534_1-B @20

Autosampler Position: 101

Sample Date/Time: Thursday, April 16, 2020 19:12:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LB4 570-63534_1-B @20.249

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26901.974		ppb	0.882		28112.080
9	Be	15.556	-0.001472	ppb	81.127	706.120	18.889
10	B	232.224	-0.379425	ppb	11.691	22.763	366.671
27	Al	4182.835	-0.390015	ppb	2.444	1.957	7276.298
43	Ca-2	56.667	-1.851984	ppb	28.364	62.017	88.334
49	Ti	257.780	0.099160	ppb	2.692	20.723	225.557
52	Cr	14104.738	0.787790	ppb	0.687	3.367	9519.842
55	Mn	725.574	0.001055	ppb	11.562	724.544	776.688
57	Fe	8018.921	-8.766838	ppb	5.383	20.822	10593.935
45	Sc-IS	> 1195407.756		ppb	1.398		1299865.170
66	Zn	447.785	-0.069533	ppb	12.126	91.361	553.344
86	Sr	37.363	0.011100	ppb	77.929	153.281	20.135
65	Cu	416.445	0.210560	ppb	8.027	9.811	146.452
69	Ga-IS	300260.786		ppb	4.847		352174.337
95	Mo	67.778	-0.026967	ppb	10.238	17.346	118.889
115	In-IS	> 229027.401		ppb	2.051		255185.519
111	Cd	8.747	-0.004153	ppb	22.050	34.967	16.417
118	Sn	718.907	-0.186473	ppb	11.861	12.413	1685.656
121	Sb	364.449	-0.036910	ppb	6.424	10.572	597.790
135	Ba	376.672	0.412380	ppb	1.533	3.769	25.556
165	Ho-IS	237041.968		ppb	1.829		253811.546
159	Tb-IS	200071.297		ppb	0.673		218212.017
207	Pb	177.778	-0.002280	ppb	7.806	50.994	226.667
203	Tl	36.667	0.000848	ppb	24.052	240.945	35.556
209	Bi-IS	> 153529.616		ppb	1.603		165062.642
51	V	30.000	-0.066093	ppb	38.490	28.777	73.334
59	Co	22.222	0.006915	ppb	37.749	79.718	12.222
60	Ni	451.118	0.512960	ppb	6.018	6.374	27.778
75	As	706.726	0.122817	ppb	8.630	118.786	684.944
71	Ga-ISK	> 102301.657		ppb	0.140		106974.653
82	Se-2	2.208	-0.005428	ppb	171.840	1879.559	2.520
107	Ag-1	98.889	0.001572	ppb	27.246	500.012	97.778
115	In-ISK	88715.066		ppb	0.169		93702.469
45	Sc-ISK	> 258379.006		ppb	0.397		263953.217
23	Na	21477741.292	48115.654253	ppb	0.753	1.147	4734.118
39	K	134689.790	6.224074	ppb	1.028	28.297	130698.534
24	Mg	158.334	-0.546019	ppb	20.547	12.058	441.673
159	Tb-ISK	183133.695		ppb	0.350		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63534_2-B @20

Autosampler Position: 102

Sample Date/Time: Thursday, April 16, 2020 19:14:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCS 570-63534_2-B @20.250

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26662.643		ppb		2.062		28112.080
9	Be	|	32283.119	26.879615	ppb		2.578	3.830	18.889
10	B	|	7536.434	26.338678	ppb		3.987	5.153	366.671
27	Al	|	172401.960	26.113716	ppb		1.414	0.361	7276.298
43	Ca-2	|	570.011	37.248837	ppb		2.321	3.439	88.334
49	Ti	|	12935.858	25.355334	ppb		3.338	2.557	225.557
52	Cr	|	179018.059	25.416502	ppb		0.816	0.880	9519.842
55	Mn	|	236519.899	22.983843	ppb		1.368	0.566	776.688
57	Fe	|	12657.833	15.648018	ppb		3.693	8.787	10593.935
45	Sc-IS	>	1179777.177		ppb		1.650		1299865.170
66	Zn	|	22791.538	25.757907	ppb		5.601	4.136	553.344
86	Sr	|	40189.132	24.311309	ppb		1.659	0.490	20.135
65	Cu	|	32647.687	24.631929	ppb		5.558	3.936	146.452
69	Ga-IS	|	307714.573		ppb		6.121		352174.337
95	Mo	|	35667.811	23.393563	ppb		1.528	0.884	118.889
115	In-IS	>	231917.045		ppb		1.619		255185.519
111	Cd	|	36305.818	24.979852	ppb		1.825	1.535	16.417
118	Sn	|	125217.991	28.727233	ppb		3.684	2.126	1685.656
121	Sb	|	118887.409	25.044425	ppb		3.120	1.535	597.790
135	Ba	|	22530.035	25.882374	ppb		7.154	5.585	25.556
165	Ho-IS	|	236001.399		ppb		1.282		253811.546
159	Tb-IS	|	200039.829		ppb		1.147		218212.017
207	Pb	|	348612.784	23.832400	ppb		0.507	0.906	226.667
203	Tl	|	96668.242	22.589460	ppb		1.620	2.068	35.556
209	Bi-IS	>	155672.506		ppb		0.688		165062.642
51	V	|	14927.795	24.208332	ppb		0.490	1.874	73.334
59	Co	|	36824.070	23.898193	ppb		1.142	2.395	12.222
60	Ni	|	20841.864	24.876009	ppb		2.135	1.053	27.778
75	As	|	11821.327	26.207419	ppb		1.397	1.367	684.944
71	Ga-ISK	>	103421.953		ppb		1.432		106974.653
82	Se-2	|	994.916	26.384893	ppb		2.997	2.026	2.520
107	Ag-1	|	41286.241	11.951245	ppb		0.571	1.849	97.778
115	In-ISK	|	90122.156		ppb		0.854		93702.469
45	Sc-ISK	>	259716.598		ppb		1.519		263953.217
23	Na	|	21444114.205	47794.826696	ppb		0.983	0.898	4734.118
39	K	|	403463.778	251.948947	ppb		0.643	2.003	130698.534
24	Mg	|	11908.301	22.752098	ppb		4.416	4.288	441.673
159	Tb-ISK	|	182608.366		ppb		0.317		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63534_3-B @20

Autosampler Position: 103

Sample Date/Time: Thursday, April 16, 2020 19:17:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCSD 570-63534_3-B @20.251

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		26363.203		ppb			2.602			28112.080
9	Be	|		31686.245	26.591828	ppb			3.704	2.346		18.889
10	B	|		7234.055	25.447709	ppb			3.176	2.885		366.671
27	Al	|		176320.985	26.963939	ppb			3.025	2.143		7276.298
43	Ca-2	|		588.345	39.040047	ppb			5.785	8.043		88.334
49	Ti	|		12674.518	25.043161	ppb			4.807	3.432		225.557
52	Cr	|		181308.926	25.987376	ppb			0.988	0.742		9519.842
55	Mn	|		236854.550	23.210933	ppb			2.026	0.807		776.688
57	Fe	|		12860.233	17.258828	ppb			2.755	4.980		10593.935
45	Sc-IS	>		1169826.164		ppb			1.479			1299865.170
66	Zn	|		22984.073	26.206192	ppb			5.911	4.619		553.344
86	Sr	|		40624.311	24.778000	ppb			3.777	2.329		20.135
65	Cu	|		32028.520	24.371284	ppb			5.704	4.511		146.452
69	Ga-IS	|		305388.933		ppb			6.221			352174.337
95	Mo	|		37202.884	24.605125	ppb			4.357	3.205		118.889
115	In-IS	>		233230.320		ppb			2.332			255185.519
111	Cd	|		36543.226	24.997700	ppb			3.005	0.796		16.417
118	Sn	|		127673.905	29.133574	ppb			3.119	0.808		1685.656
121	Sb	|		121261.423	25.411633	ppb			1.300	1.516		597.790
135	Ba	|		22952.896	26.227258	ppb			4.663	2.637		25.556
165	Ho-IS	|		238136.861		ppb			2.276			253811.546
159	Tb-IS	|		199921.443		ppb			0.671			218212.017
207	Pb	|		348388.070	24.098588	ppb			1.280	0.611		226.667
203	Tl	|		97431.168	23.035504	ppb			1.483	0.493		35.556
209	Bi-IS	>		153853.034		ppb			1.396			165062.642
51	V	|		15100.200	24.715374	ppb			1.342	1.506		73.334
59	Co	|		37335.399	24.452405	ppb			1.567	1.862		12.222
60	Ni	|		21032.140	25.340481	ppb			1.651	1.923		27.778
75	As	|		11750.162	26.297834	ppb			2.030	2.428		684.944
71	Ga-ISK	>		102463.927		ppb			0.301			106974.653
82	Se-2	|		1037.862	27.787790	ppb			1.340	1.549		2.520
107	Ag-1	|		42010.575	12.273082	ppb			1.190	0.938		97.778
115	In-ISK	|		89921.313		ppb			1.025			93702.469
45	Sc-ISK	>		259808.112		ppb			1.213			263953.217
23	Na	|		21793546.065	48555.902777	ppb			1.005	1.106		4734.118
39	K	|		408669.653	256.572132	ppb			0.310	1.516		130698.534
24	Mg	|		11879.941	22.683787	ppb			3.228	2.110		441.673
159	Tb-ISK	|		183191.089		ppb			0.316			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25903-A-1-B @20

Autosampler Position: 104

Sample Date/Time: Thursday, April 16, 2020 19:20:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25903-A-1-B @20.252

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26650.403		ppb	2.674		28112.080
9	Be	22.222	0.004352	ppb	8.660	46.457	18.889
10	B	621.125	1.064646	ppb	4.169	5.371	366.671
27	Al	3337.057	-0.511780	ppb	2.785	3.493	7276.298
43	Ca-2	186.668	8.103241	ppb	24.888	39.339	88.334
49	Ti	371.116	0.335111	ppb	9.175	19.474	225.557
52	Cr	11298.913	0.404966	ppb	2.547	5.639	9519.842
55	Mn	974.478	0.026727	ppb	3.179	1.607	776.688
57	Fe	8979.492	-3.056075	ppb	4.475	37.285	10593.935
45	Sc-IS	> 1174141.307		ppb	3.193		1299865.170
66	Zn	418.895	-0.092966	ppb	7.647	56.288	553.344
86	Sr	214.733	0.120389	ppb	30.527	36.898	20.135
65	Cu	175.525	0.032902	ppb	20.099	78.589	146.452
69	Ga-IS	306266.605		ppb	5.420		352174.337
95	Mo	1051.150	0.623615	ppb	9.828	9.707	118.889
115	In-IS	> 235071.516		ppb	1.870		255185.519
111	Cd	7.793	-0.004968	ppb	113.902	122.339	16.417
118	Sn	1164.492	-0.088934	ppb	7.662	23.804	1685.656
121	Sb	1771.221	0.254714	ppb	6.406	7.264	597.790
135	Ba	41.111	0.020010	ppb	32.769	77.960	25.556
165	Ho-IS	235151.447		ppb	2.468		253811.546
159	Tb-IS	198499.579		ppb	0.488		218212.017
207	Pb	1383.360	0.079023	ppb	5.367	6.201	226.667
203	Tl	120.001	0.019896	ppb	26.498	36.383	35.556
209	Bi-IS	> 157299.075		ppb	0.773		165062.642
51	V	24.444	-0.075993	ppb	55.111	28.824	73.334
59	Co	17.778	0.003750	ppb	43.301	129.771	12.222
60	Ni	15.556	-0.013650	ppb	53.927	73.346	27.778
75	As	672.370	0.011111	ppb	12.240	1819.216	684.944
71	Ga-ISK	> 104325.112		ppb	0.681		106974.653
82	Se-2	141.225	3.658818	ppb	7.872	8.664	2.520
107	Ag-1	82.222	-0.003767	ppb	14.237	91.795	97.778
115	In-ISK	91698.415		ppb	1.448		93702.469
45	Sc-ISK	> 258802.676		ppb	1.938		263953.217
23	Na	342370.931	755.604457	ppb	0.911	1.054	4734.118
39	K	138060.594	9.143260	ppb	0.480	23.198	130698.534
24	Mg	1725.104	2.570879	ppb	2.527	0.809	441.673
159	Tb-ISK	181336.322		ppb	0.423		187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25903-A-1-C MS @20

Autosampler Position: 105

Sample Date/Time: Thursday, April 16, 2020 19:23:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25903-A-1-C MS @20.253

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		26513.473		ppb			1.313			28112.080
9	Be	|		30258.679	25.169437	ppb			0.607	3.147		18.889
10	B	|		7110.660	24.770715	ppb			3.454	6.446		366.671
27	Al	|		151272.265	22.770355	ppb			0.477	3.052		7276.298
43	Ca-2	|		3472.089	257.703416	ppb			3.196	4.301		88.334
49	Ti	|		12653.382	24.772016	ppb			2.972	2.961		225.557
52	Cr	|		171168.436	24.219116	ppb			1.732	1.263		9519.842
55	Mn	|		223832.843	21.722974	ppb			2.496	0.812		776.688
57	Fe	|		53481.133	225.436570	ppb			3.890	1.612		10593.935
45	Sc-IS	>		1181099.700		ppb			2.614			1299865.170
66	Zn	|		22167.223	25.004808	ppb			5.752	3.313		553.344
86	Sr	|		38617.100	23.329474	ppb			4.224	2.424		20.135
65	Cu	|		30820.402	23.224535	ppb			4.319	1.736		146.452
69	Ga-IS	|		312091.897		ppb			6.242			352174.337
95	Mo	|		34852.488	22.829938	ppb			3.022	1.206		118.889
115	In-IS	>		237926.595		ppb			2.723			255185.519
111	Cd	|		34357.152	23.044529	ppb			2.134	1.801		16.417
118	Sn	|		110206.175	24.604749	ppb			4.211	4.159		1685.656
121	Sb	|		105612.359	21.680359	ppb			1.703	2.044		597.790
135	Ba	|		19830.443	22.223496	ppb			4.981	5.394		25.556
165	Ho-IS	|		235863.417		ppb			0.507			253811.546
159	Tb-IS	|		197858.537		ppb			0.180			218212.017
207	Pb	|		332756.638	22.178539	ppb			0.705	0.511		226.667
203	Tl	|		94091.072	21.438048	ppb			0.603	1.648		35.556
209	Bi-IS	>		159666.283		ppb			1.212			165062.642
51	V	|		14235.981	22.860014	ppb			2.290	2.431		73.334
59	Co	|		34953.831	22.467568	ppb			1.897	2.256		12.222
60	Ni	|		19182.872	22.680047	ppb			1.372	1.638		27.778
75	As	|		10941.002	23.897717	ppb			0.314	0.541		684.944
71	Ga-ISK	>		104401.212		ppb			0.355			106974.653
82	Se-2	|		1144.273	30.073992	ppb			1.182	1.511		2.520
107	Ag-1	|		40036.027	11.477799	ppb			1.117	1.290		97.778
115	In-ISK	|		90667.527		ppb			0.445			93702.469
45	Sc-ISK	>		256138.410		ppb			1.531			263953.217
23	Na	|		480970.951	1076.718401	ppb			1.804	0.508		4734.118
39	K	|		378386.912	233.798168	ppb			0.601	1.406		130698.534
24	Mg	|		122084.481	244.624995	ppb			1.067	0.805		441.673
159	Tb-ISK	|		183357.214		ppb			0.528			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25903-A-1-D MSD @20

Autosampler Position: 106

Sample Date/Time: Thursday, April 16, 2020 19:25:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25903-A-1-D MSD @20.254

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		26408.834		ppb		1.268		28112.080
9	Be	|		30528.142	25.730147	ppb	1.106	3.108		18.889
10	B	|		7033.953	24.814248	ppb	0.261	2.384		366.671
27	Al	|		152612.020	23.295335	ppb	1.184	1.988		7276.298
43	Ca-2	|		3623.795	272.591837	ppb	7.849	6.390		88.334
49	Ti	|		12311.971	24.416005	ppb	1.918	1.101		225.557
52	Cr	|		169015.256	24.231975	ppb	1.786	0.929		9519.842
55	Mn	|		224761.676	22.103725	ppb	2.443	0.281		776.688
57	Fe	|		55439.661	239.328958	ppb	3.196	1.140		10593.935
45	Sc-IS	>		1165563.554		ppb	2.316			1299865.170
66	Zn	|		21864.513	24.999813	ppb	3.765	1.539		553.344
86	Sr	|		37948.607	23.232066	ppb	3.198	0.904		20.135
65	Cu	|		30619.755	23.375457	ppb	6.201	4.134		146.452
69	Ga-IS	|		310382.234		ppb	5.053			352174.337
95	Mo	|		35152.117	23.332022	ppb	3.392	1.404		118.889
115	In-IS	>		235841.659		ppb	1.479			255185.519
111	Cd	|		33858.672	22.904184	ppb	2.547	1.233		16.417
118	Sn	|		114221.689	25.735233	ppb	2.641	1.460		1685.656
121	Sb	|		113328.945	23.472248	ppb	1.733	0.259		597.790
135	Ba	|		20242.130	22.870363	ppb	4.684	3.231		25.556
165	Ho-IS	|		234600.664		ppb	0.572			253811.546
159	Tb-IS	|		198651.717		ppb	0.857			218212.017
207	Pb	|		331279.914	22.208119	ppb	0.611	0.603		226.667
203	Tl	|		94116.807	21.566011	ppb	0.949	0.586		35.556
209	Bi-IS	>		158741.555		ppb	0.623			165062.642
51	V	|		13930.123	22.761198	ppb	1.919	3.473		73.334
59	Co	|		34990.597	22.889648	ppb	2.643	4.501		12.222
60	Ni	|		19121.678	23.003439	ppb	0.643	2.572		27.778
75	As	|		10943.091	24.343571	ppb	0.793	1.287		684.944
71	Ga-ISK	>		102638.600		ppb	1.971			106974.653
82	Se-2	|		1110.581	29.712822	ppb	6.518	7.999		2.520
107	Ag-1	|		40420.437	11.790646	ppb	0.512	2.074		97.778
115	In-ISK	|		91722.101		ppb	0.455			93702.469
45	Sc-ISK	>		255564.660		ppb	0.696			263953.217
23	Na	|		472887.346	1060.899118	ppb	1.634	1.747		4734.118
39	K	|		375017.480	231.423500	ppb	0.300	0.746		130698.534
24	Mg	|		120717.904	242.412514	ppb	0.226	0.475		441.673
159	Tb-ISK	|		181719.200		ppb	0.976			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 19:28:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.255

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		26201.789		ppb			1.646			28112.080
9	Be	|		127685.964	106.290259	ppb			1.596	1.406		18.889
10	B	|		73565.864	267.526491	ppb			4.610	3.795		366.671
27	Al	|		672789.345	104.884117	ppb			2.151	0.849		7276.298
43	Ca-2	|		66551.490	5050.269424	ppb			4.016	2.125		88.334
49	Ti	|		52639.042	104.405649	ppb			1.672	1.134		225.557
52	Cr	|		716668.586	105.578476	ppb			1.666	0.795		9519.842
55	Mn	|		1011476.084	98.461060	ppb			2.982	0.853		776.688
57	Fe	|		971549.683	4948.292111	ppb			4.116	1.982		10593.935
45	Sc-IS	>		1180251.450		ppb			2.214			1299865.170
66	Zn	|		87390.699	100.341318	ppb			7.064	4.980		553.344
86	Sr	|		172718.090	104.490237	ppb			1.276	1.080		20.135
65	Cu	|		132936.507	100.557603	ppb			5.722	3.532		146.452
69	Ga-IS	|		328135.286		ppb			5.485			352174.337
95	Mo	|		159447.405	104.776516	ppb			2.267	0.067		118.889
115	In-IS	>		238741.095		ppb			1.690			255185.519
111	Cd	|		148670.542	99.395997	ppb			1.395	0.425		16.417
118	Sn	|		458258.929	103.057356	ppb			2.400	1.454		1685.656
121	Sb	|		511574.632	105.057889	ppb			3.758	2.834		597.790
135	Ba	|		87472.950	97.727394	ppb			4.807	3.681		25.556
165	Ho-IS	|		242856.226		ppb			1.863			253811.546
159	Tb-IS	|		204707.364		ppb			0.292			218212.017
207	Pb	|		1489783.446	97.752230	ppb			0.744	1.456		226.667
203	Tl	|		433114.619	97.117685	ppb			0.983	1.505		35.556
209	Bi-IS	>		162276.530		ppb			0.970			165062.642
51	V	|		62823.395	101.214824	ppb			0.762	0.974		73.334
59	Co	|		159377.480	102.404499	ppb			0.800	0.349		12.222
60	Ni	|		85737.646	101.416773	ppb			1.123	1.082		27.778
75	As	|		43960.222	100.638606	ppb			2.425	1.458		684.944
71	Ga-ISK	>		104466.153		ppb			1.043			106974.653
82	Se-2	|		3850.739	101.309685	ppb			1.508	2.496		2.520
107	Ag-1	|		358072.607	102.823187	ppb			1.433	2.411		97.778
115	In-ISK	|		92679.327		ppb			1.710			93702.469
45	Sc-ISK	>		260923.554		ppb			0.609			263953.217
23	Na	|		2275048.362	5037.584459	ppb			0.489	0.355		4734.118
39	K	|		5754220.773	5131.320030	ppb			0.482	0.149		130698.534
24	Mg	|		2635453.602	5201.233033	ppb			0.927	1.380		441.673
159	Tb-ISK	|		184869.849		ppb			0.451			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 19:31:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.256

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		26058.189		ppb		0.636		28112.080
9	Be	|		17.778	0.000978	ppb	47.186	733.088		18.889
10	B	|		392.228	0.259292	ppb	4.192	31.524		366.671
27	Al	|		4681.887	-0.281694	ppb	12.873	33.355		7276.298
43	Ca-2	|		55.000	-1.804313	ppb	18.182	37.897		88.334
49	Ti	|		242.224	0.088565	ppb	5.562	28.090		225.557
52	Cr	|		8225.702	-0.026742	ppb	3.163	55.477		9519.842
55	Mn	|		620.014	-0.006554	ppb	7.233	59.226		776.688
57	Fe	|		8195.687	-6.112256	ppb	4.870	18.656		10593.935
45	Sc-IS	>		1146846.694		ppb	2.409			1299865.170
66	Zn	|		472.230	-0.019260	ppb	6.405	132.850		553.344
86	Sr	|		3.493	-0.008840	ppb	226.176	55.271		20.135
65	Cu	|		84.009	-0.035224	ppb	2.304	5.361		146.452
69	Ga-IS	|		298381.882		ppb	5.345			352174.337
95	Mo	|		436.674	0.223615	ppb	21.537	25.472		118.889
115	In-IS	>		234213.511		ppb	2.137			255185.519
111	Cd	|		10.194	-0.003370	ppb	66.527	135.507		16.417
118	Sn	|		4205.063	0.611503	ppb	1.747	1.715		1685.656
121	Sb	|		2177.945	0.340863	ppb	11.451	12.549		597.790
135	Ba	|		24.444	0.001164	ppb	7.873	237.998		25.556
165	Ho-IS	|		230152.831		ppb	1.706			253811.546
159	Tb-IS	|		197274.240		ppb	2.038			218212.017
207	Pb	|		536.671	0.021461	ppb	9.642	14.759		226.667
203	Tl	|		113.334	0.018201	ppb	8.824	11.237		35.556
209	Bi-IS	>		158314.970		ppb	2.483			165062.642
51	V	|		14.444	-0.091796	ppb	26.647	6.920		73.334
59	Co	|		15.556	0.002524	ppb	24.744	106.308		12.222
60	Ni	|		33.333	0.007903	ppb	30.000	144.340		27.778
75	As	|		694.792	0.088757	ppb	4.242	96.671		684.944
71	Ga-ISK	>		102695.641		ppb	1.592			106974.653
82	Se-2	|		2.237	-0.004033	ppb	342.802	5127.011		2.520
107	Ag-1	|		117.778	0.006997	ppb	1.634	15.524		97.778
115	In-ISK	|		89261.508		ppb	2.165			93702.469
45	Sc-ISK	>		252170.744		ppb	0.904			263953.217
23	Na	|		3342.058	-2.710172	ppb	0.691	4.027		4734.118
39	K	|		134380.246	8.990630	ppb	1.216	23.210		130698.534
24	Mg	|		261.669	-0.327764	ppb	19.518	30.769		441.673
159	Tb-ISK	|		179290.317		ppb	1.870			187178.287

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Thursday, April 16, 2020 19:34:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICIS-23447.257

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	25891.230		ppb		2.608	
9	Be	15.556		ppb		12.372	
10	B	271.114		ppb		3.952	
27	Al	6575.959		ppb		3.598	
43	Ca-2	35.000		ppb		14.286	
49	Ti	220.002		ppb		8.017	
52	Cr	8384.682		ppb		0.712	
55	Mn	683.350		ppb		10.897	
57	Fe	7888.845		ppb		1.941	
45	Sc-IS	> 1155169.664		ppb		2.614	
66	Zn	473.341		ppb		13.380	
86	Sr	-10.964		ppb		273.000	
65	Cu	103.094		ppb		3.180	
69	Ga-IS	301042.064		ppb		6.113	
95	Mo	128.889		ppb		11.945	
115	In-IS	> 229836.379		ppb		1.947	
111	Cd	11.952		ppb		70.159	
118	Sn	1960.135		ppb		5.613	
121	Sb	1151.158		ppb		8.264	
135	Ba	20.000		ppb		33.333	
165	Ho-IS	234084.803		ppb		1.593	
159	Tb-IS	196737.690		ppb		0.601	
207	Pb	258.890		ppb		5.947	
203	Tl	28.889		ppb		17.625	
209	Bi-IS	> 155849.992		ppb		0.811	
51	V	14.444		ppb		48.038	
59	Co	11.111		ppb		45.826	
60	Ni	28.889		ppb		17.625	
75	As	664.006		ppb		2.440	
71	Ga-ISK	> 100065.929		ppb		1.013	
82	Se-2	1.541		ppb		619.172	
107	Ag-1	83.334		ppb		27.713	
115	In-ISK	89051.045		ppb		1.108	
45	Sc-ISK	> 251872.292		ppb		1.167	
23	Na	3175.353		ppb		4.287	
39	K	133080.351		ppb		0.828	
24	Mg	115.000		ppb		7.531	
159	Tb-ISK	177663.426		ppb		1.532	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Thursday, April 16, 2020 19:36:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\IC-210761.258

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26110.514		ppb	2.170			25891.230
9	Be	|	251426.908	200.000000	ppb	1.523	2.374		15.556
10	B	|	139610.052	500.000000	ppb	1.286	2.779		271.114
27	Al	|	1305330.645	200.000000	ppb	2.403	0.555		6575.959
43	Ca-2	|	131258.826	10200.000000	ppb	2.455	0.716		35.000
49	Ti	|	103007.897	200.000000	ppb	1.819	0.168		220.002
52	Cr	|	1394192.178	200.000000	ppb	1.586	0.295		8384.682
55	Mn	|	2089053.486	200.000000	ppb	5.091	3.259		683.350
57	Fe	|	1907261.561	10200.000000	ppb	4.003	2.193		7888.845
45	Sc-IS	>	1172260.019		ppb	1.871			1155169.664
66	Zn	|	169321.947	200.000000	ppb	5.771	3.965		473.341
86	Sr	|	340812.325	200.000000	ppb	2.473	0.649		-10.964
65	Cu	|	260764.819	200.000000	ppb	5.597	3.774		103.094
69	Ga-IS	|	340168.327		ppb	5.213			301042.064
95	Mo	|	316024.919	200.000000	ppb	3.046	1.222		128.889
115	In-IS	>	234644.685		ppb	0.817			229836.379
111	Cd	|	292667.855	200.000000	ppb	1.743	2.039		11.952
118	Sn	|	883869.352	200.000000	ppb	1.687	1.662		1960.135
121	Sb	|	987293.729	200.000000	ppb	2.123	1.727		1151.158
135	Ba	|	171165.274	200.000000	ppb	4.760	4.545		20.000
165	Ho-IS	|	242467.426		ppb	1.749			234084.803
159	Tb-IS	|	205088.336		ppb	0.439			196737.690
207	Pb	|	2936521.509	200.000000	ppb	1.014	0.437		258.890
203	Tl	|	860964.065	200.000000	ppb	1.193	1.106		28.889
209	Bi-IS	>	157329.391		ppb	0.580			155849.992
51	V	|	124789.341	200.000000	ppb	0.570	1.309		14.444
59	Co	|	312700.119	200.000000	ppb	1.307	1.517		11.111
60	Ni	|	165506.683	200.000000	ppb	1.468	1.069		28.889
75	As	|	85853.064	200.000000	ppb	1.661	0.662		664.006
71	Ga-ISK	>	102263.665		ppb	1.531			100065.929
82	Se-2	|	7587.207	200.000000	ppb	1.149	1.658		1.541
107	Ag-1	|	694699.255	200.000000	ppb	0.262	1.783		83.334
115	In-ISK	|	89830.256		ppb	0.795			89051.045
45	Sc-ISK	>	256905.389		ppb	1.646			251872.292
23	Na	|	4394649.086	10200.000000	ppb	0.543	1.177		3175.353
39	K	|	11188591.095	10200.000000	ppb	0.462	1.786		133080.351
24	Mg	|	5085607.617	10200.000000	ppb	0.997	1.736		115.000
159	Tb-ISK	|	182582.762		ppb	0.894			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 19:39:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.259

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		26065.987		ppb			1.926			25891.230
9	Be	|		123697.777	98.316270	ppb			1.693	2.974		15.556
10	B	|		71337.712	254.714241	ppb			1.806	0.506		271.114
27	Al	|		657664.024	100.162652	ppb			3.019	1.156		6575.959
43	Ca-2	|		65717.597	5100.455684	ppb			3.452	1.481		35.000
49	Ti	|		52078.089	100.833011	ppb			0.816	1.680		220.002
52	Cr	|		709170.906	101.018653	ppb			3.258	1.142		8384.682
55	Mn	|		1008507.530	96.451846	ppb			3.519	1.334		683.350
57	Fe	|		971895.217	5171.478028	ppb			4.615	2.486		7888.845
45	Sc-IS	>		1173303.651		ppb			2.218			1155169.664
66	Zn	|		86063.614	101.272052	ppb			6.418	4.278		473.341
86	Sr	|		170849.466	100.201334	ppb			0.906	1.328		-10.964
65	Cu	|		133066.458	101.927352	ppb			5.435	3.270		103.094
69	Ga-IS	|		322074.355		ppb			6.079			301042.064
95	Mo	|		158281.123	100.058516	ppb			1.923	0.303		128.889
115	In-IS	>		235839.613		ppb			0.925			229836.379
111	Cd	|		147857.832	100.521171	ppb			0.643	0.284		11.952
118	Sn	|		447721.263	100.570318	ppb			0.782	0.336		1960.135
121	Sb	|		499140.563	100.474797	ppb			2.579	1.665		1151.158
135	Ba	|		87268.183	101.430725	ppb			3.548	2.703		20.000
165	Ho-IS	|		237736.271		ppb			2.941			234084.803
159	Tb-IS	|		203248.436		ppb			2.477			196737.690
207	Pb	|		1469937.361	100.229135	ppb			0.755	0.569		258.890
203	Tl	|		433400.270	100.791265	ppb			1.481	0.513		28.889
209	Bi-IS	>		157145.235		ppb			1.299			155849.992
51	V	|		62871.383	99.235768	ppb			0.735	1.737		14.444
59	Co	|		159577.449	100.521130	ppb			0.494	0.947		11.111
60	Ni	|		84659.000	100.747253	ppb			0.369	0.857		28.889
75	As	|		44028.330	100.233100	ppb			1.926	1.450		664.006
71	Ga-ISK	>		103825.958		ppb			1.093			100065.929
82	Se-2	|		3892.076	101.013883	ppb			1.808	0.800		1.541
107	Ag-1	|		353615.370	100.245441	ppb			0.646	0.622		83.334
115	In-ISK	|		91597.515		ppb			1.251			89051.045
45	Sc-ISK	>		256510.380		ppb			1.094			251872.292
23	Na	|		2235432.283	5192.074998	ppb			1.162	0.276		3175.353
39	K	|		5697994.758	5140.052208	ppb			1.454	0.368		133080.351
24	Mg	|		2596337.756	5214.552161	ppb			1.065	0.739		115.000
159	Tb-ISK	|		184603.217		ppb			1.301			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 19:42:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.260

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		25433.738		ppb				2.043		25891.230
9	Be	|		12.222	-0.002477	ppb				15.746	68.441	15.556
10	B	|		542.233	1.029847	ppb				5.578	16.584	271.114
27	Al	|		4355.109	-0.333106	ppb				2.916	7.684	6575.959
43	Ca-2	|		65.000	2.480128	ppb				7.692	22.340	35.000
49	Ti	|		191.112	-0.048878	ppb				18.650	153.975	220.002
52	Cr	|		7676.507	-0.080459	ppb				0.878	44.516	8384.682
55	Mn	|		1127.839	0.044259	ppb				75.252	183.104	683.350
57	Fe	|		7834.373	0.544285	ppb				5.005	178.769	7888.845
45	Sc-IS	>		1132412.854		ppb				2.905		1155169.664
66	Zn	|		416.673	-0.057094	ppb				6.974	89.703	473.341
86	Sr	|		-33.836	-0.014623	ppb				155.916	226.859	-10.964
65	Cu	|		95.138	-0.004349	ppb				29.741	560.961	103.094
69	Ga-IS	|		295572.856		ppb				6.184		301042.064
95	Mo	|		396.672	0.176826	ppb				10.223	11.007	128.889
115	In-IS	>		232653.373		ppb				1.327		229836.379
111	Cd	|		14.723	0.001827	ppb				72.946	405.181	11.952
118	Sn	|		4055.022	0.473230	ppb				6.650	10.527	1960.135
121	Sb	|		1014.481	-0.030890	ppb				5.890	34.318	1151.158
135	Ba	|		15.556	-0.005573	ppb				32.733	104.451	20.000
165	Ho-IS	|		231199.274		ppb				0.903		234084.803
159	Tb-IS	|		195707.255		ppb				1.764		196737.690
207	Pb	|		526.671	0.018030	ppb				4.778	8.364	258.890
203	Tl	|		125.556	0.022403	ppb				17.274	23.760	28.889
209	Bi-IS	>		157504.801		ppb				1.769		155849.992
51	V	|		17.778	0.005151	ppb				21.651	116.973	14.444
59	Co	|		15.556	0.002830	ppb				24.744	92.658	11.111
60	Ni	|		16.667	-0.015379	ppb				52.915	68.593	28.889
75	As	|		633.802	-0.086919	ppb				5.837	93.842	664.006
71	Ga-ISK	>		101021.589		ppb				2.100		100065.929
82	Se-2	|		2.869	0.037298	ppb				229.692	471.482	1.541
107	Ag-1	|		124.445	0.011739	ppb				10.141	29.651	83.334
115	In-ISK	|		88486.829		ppb				1.493		89051.045
45	Sc-ISK	>		250119.983		ppb				1.868		251872.292
23	Na	|		3610.459	1.096187	ppb				8.953	76.392	3175.353
39	K	|		134456.454	2.207488	ppb				0.252	94.366	133080.351
24	Mg	|		311.670	0.408050	ppb				32.458	52.313	115.000
159	Tb-ISK	|		178009.631		ppb				1.200		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Thursday, April 16, 2020 19:45:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICVL-210771.261

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	25155.465		ppb	1.576		25891.230
9	Be	1216.718	0.974843	ppb	2.373	1.951	15.556
10	B	14579.659	52.386186	ppb	0.848	1.484	271.114
27	Al	327568.894	50.454511	ppb	1.218	1.439	6575.959
43	Ca-2	681.683	51.305849	ppb	5.698	5.631	35.000
49	Ti	712.240	0.979605	ppb	3.186	3.685	220.002
52	Cr	14465.101	0.902127	ppb	2.640	4.844	8384.682
55	Mn	10183.629	0.929121	ppb	1.631	1.228	683.350
57	Fe	17204.801	51.299257	ppb	2.007	2.514	7888.845
45	Sc-IS	> 1148805.976		ppb	0.646		1155169.664
66	Zn	4746.347	5.168839	ppb	7.912	8.122	473.341
86	Sr	1730.362	1.042702	ppb	1.677	1.149	-10.964
65	Cu	1376.651	0.997684	ppb	8.382	8.390	103.094
69	Ga-IS	299964.516		ppb	5.810		301042.064
95	Mo	1678.988	1.002064	ppb	1.409	1.568	128.889
115	In-IS	> 236642.768		ppb	1.626		229836.379
111	Cd	1477.662	0.993644	ppb	5.746	7.260	11.952
118	Sn	6221.355	0.945205	ppb	2.375	2.824	1960.135
121	Sb	5336.553	0.834769	ppb	2.513	1.317	1151.158
135	Ba	833.358	0.942261	ppb	6.438	7.362	20.000
165	Ho-IS	232846.806		ppb	0.824		234084.803
159	Tb-IS	196866.165		ppb	1.001		196737.690
207	Pb	14539.604	0.960395	ppb	1.667	1.289	258.890
203	Tl	4151.715	0.946111	ppb	3.877	4.791	28.889
209	Bi-IS	> 159284.233		ppb	0.871		155849.992
51	V	638.903	1.020747	ppb	4.376	7.646	14.444
59	Co	1587.866	1.027050	ppb	8.304	7.781	11.111
60	Ni	875.582	1.043541	ppb	6.107	8.539	28.889
75	As	1090.390	1.015989	ppb	2.836	11.392	664.006
71	Ga-ISK	> 100447.912		ppb	4.399		100065.929
82	Se-2	44.536	1.154741	ppb	20.955	21.333	1.541
107	Ag-1	3457.085	0.990491	ppb	2.508	6.483	83.334
115	In-ISK	88029.455		ppb	3.088		89051.045
45	Sc-ISK	> 248461.629		ppb	2.243		251872.292
23	Na	23823.183	49.695720	ppb	1.403	1.658	3175.353
39	K	184525.203	50.855131	ppb	0.260	7.463	133080.351
24	Mg	23966.767	49.501171	ppb	3.141	5.453	115.000
159	Tb-ISK	176838.738		ppb	2.000		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63381_1-A

Autosampler Position: 401

Sample Date/Time: Thursday, April 16, 2020 19:48:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\MB 570-63381_1-A.262

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	25548.390		ppb	2.533		25891.230
9	Be	27.778	0.010432	ppb	38.575	89.089	15.556
10	B	301.114	0.132286	ppb	7.371	63.939	271.114
27	Al	5017.548	-0.227107	ppb	1.923	8.296	6575.959
43	Ca-2	245.002	16.975606	ppb	15.408	18.026	35.000
49	Ti	218.891	0.006535	ppb	17.650	1147.188	220.002
52	Cr	7849.935	-0.054289	ppb	2.249	44.412	8384.682
55	Mn	792.245	0.012333	ppb	15.032	107.097	683.350
57	Fe	7839.936	0.612294	ppb	7.086	448.140	7888.845
45	Sc-IS	> 1131603.372		ppb	1.731		1155169.664
66	Zn	508.898	0.055322	ppb	5.571	49.679	473.341
86	Sr	180.187	0.116165	ppb	25.032	23.790	-10.964
65	Cu	97.502	-0.002755	ppb	22.770	638.897	103.094
69	Ga-IS	293225.956		ppb	5.582		301042.064
95	Mo	116.667	-0.006253	ppb	2.857	55.799	128.889
115	In-IS	> 230589.816		ppb	2.290		229836.379
111	Cd	25.311	0.009233	ppb	15.207	24.921	11.952
118	Sn	1466.742	-0.115688	ppb	9.699	22.067	1960.135
121	Sb	605.568	-0.113490	ppb	8.059	6.438	1151.158
135	Ba	67.778	0.056769	ppb	2.839	5.190	20.000
165	Ho-IS	228596.870		ppb	1.253		234084.803
159	Tb-IS	195640.582		ppb	0.822		196737.690
207	Pb	424.447	0.011714	ppb	6.861	16.716	258.890
203	Tl	82.222	0.012725	ppb	15.348	23.301	28.889
209	Bi-IS	> 154089.910		ppb	0.307		155849.992
51	V	25.556	0.017526	ppb	32.825	75.571	14.444
59	Co	28.889	0.011403	ppb	46.632	77.881	11.111
60	Ni	42.222	0.015740	ppb	35.599	116.016	28.889
75	As	623.677	-0.117872	ppb	1.944	36.321	664.006
71	Ga-ISK	> 101514.985		ppb	0.948		100065.929
82	Se-2	3.192	0.043626	ppb	119.632	233.291	1.541
107	Ag-1	61.111	-0.006815	ppb	31.961	81.568	83.334
115	In-ISK	87834.838		ppb	0.889		89051.045
45	Sc-ISK	> 248849.859		ppb	0.555		251872.292
23	Na	5789.507	6.358396	ppb	3.495	7.092	3175.353
39	K	132396.235	0.873327	ppb	0.268	118.490	133080.351
24	Mg	2345.193	4.619951	ppb	4.265	4.392	115.000
159	Tb-ISK	175229.595		ppb	1.326		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63381_2-A

Autosampler Position: 402

Sample Date/Time: Thursday, April 16, 2020 19:50:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCS 570-63381_2-A.263

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		25448.202		ppb			0.431			25891.230
9	Be	|		129622.078	104.511474	ppb			0.155	1.736		15.556
10	B	|		27799.247	100.137079	ppb			1.248	2.960		271.114
27	Al	|		681676.939	105.408214	ppb			0.944	0.870		6575.959
43	Ca-2	|		66991.713	5276.797362	ppb			0.667	1.073		35.000
49	Ti	|		54210.503	106.478957	ppb			3.033	1.596		220.002
52	Cr	|		735796.762	106.408418	ppb			2.798	1.091		8384.682
55	Mn	|		1015702.822	98.574423	ppb			2.037	0.333		683.350
57	Fe	|		996313.062	5382.100657	ppb			2.330	0.918		7888.845
45	Sc-IS	>		1156429.486		ppb			1.721			1155169.664
66	Zn	|		90911.465	108.595446	ppb			6.823	5.518		473.341
86	Sr	|		172988.142	102.918662	ppb			1.468	0.265		-10.964
65	Cu	|		135144.444	105.038079	ppb			5.826	4.319		103.094
69	Ga-IS	|		320977.084		ppb			5.825			301042.064
95	Mo	|		161686.843	103.698446	ppb			2.356	1.350		128.889
115	In-IS	>		233054.504		ppb			1.602			229836.379
111	Cd	|		153707.762	105.750967	ppb			1.186	0.581		11.952
118	Sn	|		547369.671	124.532455	ppb			1.472	0.533		1960.135
121	Sb	|		508574.047	103.602923	ppb			2.691	1.104		1151.158
135	Ba	|		88516.199	104.082580	ppb			5.728	4.216		20.000
165	Ho-IS	|		233018.873		ppb			1.991			234084.803
159	Tb-IS	|		198334.135		ppb			1.433			196737.690
207	Pb	|		1519293.660	103.954736	ppb			0.477	0.429		258.890
203	Tl	|		424432.991	99.054023	ppb			0.811	0.823		28.889
209	Bi-IS	>		156595.843		ppb			0.599			155849.992
51	V	|		65602.517	105.152353	ppb			1.027	0.333		14.444
59	Co	|		162757.460	104.126514	ppb			0.325	1.090		11.111
60	Ni	|		87195.351	105.374848	ppb			1.767	0.480		28.889
75	As	|		45493.253	105.277683	ppb			0.485	1.610		664.006
71	Ga-ISK	>		102232.319		ppb			1.358			100065.929
82	Se-2	|		3884.054	102.404522	ppb			1.219	2.464		1.541
107	Ag-1	|		168568.778	48.520707	ppb			1.044	1.107		83.334
115	In-ISK	|		91288.655		ppb			1.967			89051.045
45	Sc-ISK	>		253611.570		ppb			1.219			251872.292
23	Na	|		418295.237	976.552132	ppb			1.813	1.332		3175.353
39	K	|		1181082.004	978.674690	ppb			1.085	0.584		133080.351
24	Mg	|		2616552.825	5315.192828	ppb			1.050	0.188		115.000
159	Tb-ISK	|		183813.712		ppb			0.743			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63381_3-A

Autosampler Position: 403

Sample Date/Time: Thursday, April 16, 2020 19:53:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\LCSD 570-63381_3-A.264

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		26395.476		ppb		1.088		25891.230
9	Be	|		130827.463	105.399763	ppb	0.846	1.304		15.556
10	B	|		28061.987	100.996620	ppb	2.029	2.185		271.114
27	Al	|		679908.740	105.053117	ppb	2.265	2.135		6575.959
43	Ca-2	|		67127.346	5283.490936	ppb	0.559	0.411		35.000
49	Ti	|		54693.437	107.370478	ppb	2.683	2.312		220.002
52	Cr	|		729608.787	105.448362	ppb	1.725	1.671		8384.682
55	Mn	|		1005384.843	97.513496	ppb	2.938	2.891		683.350
57	Fe	|		987115.256	5328.878028	ppb	4.428	4.434		7888.845
45	Sc-IS	>		1157165.926		ppb	0.492			1155169.664
66	Zn	|		90551.167	108.139625	ppb	5.839	5.733		473.341
86	Sr	|		171560.643	102.004954	ppb	2.419	2.581		-10.964
65	Cu	|		132724.162	103.127769	ppb	6.272	6.132		103.094
69	Ga-IS	|		317964.580		ppb	5.163			301042.064
95	Mo	|		161142.968	103.291040	ppb	2.350	2.583		128.889
115	In-IS	>		233474.401		ppb	1.513			229836.379
111	Cd	|		154134.705	105.845049	ppb	1.938	0.684		11.952
118	Sn	|		551180.913	125.182504	ppb	1.428	1.386		1960.135
121	Sb	|		517453.696	105.242251	ppb	1.926	1.601		1151.158
135	Ba	|		88853.544	104.319639	ppb	4.054	3.108		20.000
165	Ho-IS	|		237420.189		ppb	1.319			234084.803
159	Tb-IS	|		201026.754		ppb	0.154			196737.690
207	Pb	|		1527082.158	102.826824	ppb	1.211	0.708		258.890
203	Tl	|		424931.299	97.592397	ppb	1.363	0.660		28.889
209	Bi-IS	>		159121.313		ppb	0.781			155849.992
51	V	|		63857.967	101.733251	ppb	0.741	0.599		14.444
59	Co	|		158518.024	100.794264	ppb	1.058	1.393		11.111
60	Ni	|		87470.321	105.076517	ppb	1.008	1.512		28.889
75	As	|		45621.622	104.913499	ppb	1.568	1.213		664.006
71	Ga-ISK	>		102855.627		ppb	0.759			100065.929
82	Se-2	|		3889.055	101.901586	ppb	0.991	1.722		1.541
107	Ag-1	|		169651.586	48.536395	ppb	1.626	2.003		83.334
115	In-ISK	|		90635.390		ppb	0.243			89051.045
45	Sc-ISK	>		254352.310		ppb	1.118			251872.292
23	Na	|		420109.923	977.946202	ppb	1.168	0.444		3175.353
39	K	|		1174244.721	969.111916	ppb	0.640	0.716		133080.351
24	Mg	|		2624110.006	5314.744586	ppb	1.700	0.722		115.000
159	Tb-ISK	|		181549.760		ppb	1.148			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-G-1-A

Autosampler Position: 404

Sample Date/Time: Thursday, April 16, 2020 19:56:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-G-1-A.265

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26681.561		ppb		0.815		25891.230
9	Be	|	127.778	0.091402	ppb	14.368	16.976		15.556
10	B	|	30350.016	110.343983	ppb	3.920	4.511		271.114
27	Al	|	6129693.173	964.133903	ppb	2.897	2.632		6575.959
43	Ca-2	|	253378.485	20135.003182	ppb	2.885	2.930		35.000
49	Ti	|	5854.533	11.212883	ppb	2.421	2.731		220.002
52	Cr	|	24850.500	2.438690	ppb	3.283	4.544		8384.682
55	Mn	|	1038430.950	101.642634	ppb	3.994	3.665		683.350
57	Fe	|	248355.198	1320.869354	ppb	4.443	4.187		7888.845
45	Sc-IS	>	1146594.874		ppb	0.559			1155169.664
66	Zn	|	183651.704	221.910496	ppb	7.481	7.111		473.341
86	Sr	|	148107.970	88.865359	ppb	2.394	1.937		-10.964
65	Cu	|	36902.147	28.876695	ppb	6.693	6.326		103.094
69	Ga-IS	|	301969.004		ppb	4.529			301042.064
95	Mo	|	968.922	0.544389	ppb	5.222	5.672		128.889
115	In-IS	>	227229.914		ppb	2.752			229836.379
111	Cd	|	704.650	0.488767	ppb	15.620	15.544		11.952
118	Sn	|	4221.739	0.534920	ppb	9.885	18.003		1960.135
121	Sb	|	13347.349	2.558489	ppb	3.785	5.151		1151.158
135	Ba	|	49845.871	60.143943	ppb	5.464	5.496		20.000
165	Ho-IS	|	229646.064		ppb	2.103			234084.803
159	Tb-IS	|	194964.306		ppb	2.864			196737.690
207	Pb	|	243871.691	17.060463	ppb	1.044	2.870		258.890
203	Tl	|	177.779	0.035668	ppb	11.457	13.216		28.889
209	Bi-IS	>	153082.694		ppb	1.917			155849.992
51	V	|	3850.520	6.209988	ppb	5.499	5.518		14.444
59	Co	|	2875.845	1.850510	ppb	2.862	2.616		11.111
60	Ni	|	5292.091	6.424667	ppb	1.985	1.699		28.889
75	As	|	1384.175	1.689355	ppb	6.856	12.905		664.006
71	Ga-ISK	>	101239.689		ppb	0.309			100065.929
82	Se-2	|	11.877	0.275297	ppb	89.277	103.079		1.541
107	Ag-1	|	84.445	0.000049	ppb	20.2561	10274.040		83.334
115	In-ISK	|	89335.110		ppb	1.596			89051.045
45	Sc-ISK	>	255604.248		ppb	0.698			251872.292
23	Na	|	2111556.249	4921.453875	ppb	0.367	0.440		3175.353
39	K	|	2172628.969	1889.583086	ppb	0.876	0.743		133080.351
24	Mg	|	980519.729	1976.179413	ppb	1.259	1.537		115.000
159	Tb-ISK	|	179431.844		ppb	0.576			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-G-1-B MS

Autosampler Position: 405

Sample Date/Time: Thursday, April 16, 2020 19:59:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-G-1-B MS.266

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		26424.427		ppb		2.603		25891.230
9	Be	|		137484.086	110.848984	ppb		1.749	3.353	15.556
10	B	|		57205.432	207.073334	ppb		1.329	3.149	271.114
27	Al	|		8131708.111	1268.491285	ppb		0.672	1.559	6575.959
43	Ca-2	|		317161.815	24982.187644	ppb		2.507	0.661	35.000
49	Ti	|		43984.290	86.304219	ppb		1.869	0.438	220.002
52	Cr	|		732181.448	105.871811	ppb		1.808	0.465	8384.682
55	Mn	|		2235801.950	217.042052	ppb		1.395	0.659	683.350
57	Fe	|		1228567.187	6646.139374	ppb		1.819	1.267	7888.845
45	Sc-IS	>		1156678.110		ppb		1.907		1155169.664
66	Zn	|		272487.231	326.583358	ppb		4.974	3.115	473.341
86	Sr	|		320272.078	190.505268	ppb		1.928	1.422	-10.964
65	Cu	|		166048.695	129.064002	ppb		4.252	2.377	103.094
69	Ga-IS	|		327240.022		ppb		4.294		301042.064
95	Mo	|		143937.690	92.268942	ppb		3.657	1.872	128.889
115	In-IS	>		231825.301		ppb		0.934		229836.379
111	Cd	|		151168.881	104.550772	ppb		1.627	1.388	11.952
118	Sn	|		80250.351	17.966950	ppb		1.239	0.422	1960.135
121	Sb	|		439728.847	90.032495	ppb		1.898	1.647	1151.158
135	Ba	|		141280.704	167.071345	ppb		4.870	4.361	20.000
165	Ho-IS	|		233923.247		ppb		1.455		234084.803
159	Tb-IS	|		196205.985		ppb		0.331		196737.690
207	Pb	|		1716500.341	119.672239	ppb		0.558	0.311	258.890
203	Tl	|		415700.627	98.851519	ppb		0.772	0.787	28.889
209	Bi-IS	>		153690.117		ppb		0.855		155849.992
51	V	|		67269.130	108.462629	ppb		1.024	1.013	14.444
59	Co	|		161368.689	103.837439	ppb		1.784	1.365	11.111
60	Ni	|		89386.656	108.683797	ppb		2.337	3.005	28.889
75	As	|		46953.042	109.350996	ppb		0.996	1.361	664.006
71	Ga-ISK	>		101641.512		ppb		2.022		100065.929
82	Se-2	|		4075.769	108.102723	ppb		4.108	4.923	1.541
107	Ag-1	|		179393.921	51.947926	ppb		1.321	2.248	83.334
115	In-ISK	|		88172.275		ppb		0.922		89051.045
45	Sc-ISK	>		252494.730		ppb		2.165		251872.292
23	Na	|		2566823.226	6058.239304	ppb		1.868	0.816	3175.353
39	K	|		3373089.232	3041.921712	ppb		1.338	1.638	133080.351
24	Mg	|		3766621.286	7687.466866	ppb		0.654	2.098	115.000
159	Tb-ISK	|		181341.721		ppb		0.382		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-G-1-C MSD

Autosampler Position: 406

Sample Date/Time: Thursday, April 16, 2020 20:01:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-G-1-C MSD.267

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26201.795		ppb		2.530		25891.230
9	Be	|	133828.511	107.511291	ppb	1.824	4.946		15.556
10	B	|	56113.339	202.243075	ppb	1.526	2.275		271.114
27	Al	|	9701970.853	1507.172027	ppb	2.541	1.142		6575.959
43	Ca-2	|	315272.124	24723.112556	ppb	4.502	1.547		35.000
49	Ti	|	40043.857	78.203642	ppb	3.077	1.393		220.002
52	Cr	|	725061.742	104.389122	ppb	2.689	0.661		8384.682
55	Mn	|	2277811.399	220.208546	ppb	2.246	0.882		683.350
57	Fe	|	1278180.804	6885.678214	ppb	3.571	0.576		7888.845
45	Sc-IS	>	1161585.985		ppb	3.053			1155169.664
66	Zn	|	279039.661	332.927556	ppb	6.508	3.519		473.341
86	Sr	|	317693.042	188.105580	ppb	4.690	1.975		-10.964
65	Cu	|	167170.854	129.365455	ppb	5.335	2.329		103.094
69	Ga-IS	|	325382.834		ppb	5.736			301042.064
95	Mo	|	133534.158	85.229650	ppb	4.251	1.283		128.889
115	In-IS	>	232171.363		ppb	3.179			229836.379
111	Cd	|	150586.829	104.007472	ppb	2.616	1.076		11.952
118	Sn	|	64208.495	14.263933	ppb	2.868	0.374		1960.135
121	Sb	|	387467.404	79.200897	ppb	2.447	1.352		1151.158
135	Ba	|	141520.193	167.058854	ppb	5.816	3.477		20.000
165	Ho-IS	|	234377.536		ppb	2.060			234084.803
159	Tb-IS	[	197926.193		ppb	0.848			196737.690
207	Pb	|	1730791.705	119.778629	ppb	0.859	0.553		258.890
203	Tl	|	413579.447	97.613349	ppb	1.997	1.110		28.889
209	Bi-IS	>	154836.909		ppb	1.368			155849.992
51	V	|	66350.407	108.189992	ppb	1.194	2.588		14.444
59	Co	|	159183.125	103.590614	ppb	0.956	2.353		11.111
60	Ni	|	90456.594	111.204066	ppb	0.414	1.606		28.889
75	As	|	46768.130	110.136512	ppb	1.220	0.764		664.006
71	Ga-ISK	>	100516.880		ppb	1.437			100065.929
82	Se-2	|	4102.120	110.003090	ppb	2.141	2.994		1.541
107	Ag-1	|	169437.067	49.600140	ppb	2.466	1.993		83.334
115	In-ISK	|	88472.152		ppb	0.600			89051.045
45	Sc-ISK	>	257940.254		ppb	1.167			251872.292
23	Na	|	2578357.583	5956.519638	ppb	1.202	0.509		3175.353
39	K	|	3453799.559	3048.670788	ppb	1.237	0.444		133080.351
24	Mg	|	3818395.020	7626.572180	ppb	0.893	0.290		115.000
159	Tb-ISK	|	182343.792		ppb	1.226			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-F-3-A

Autosampler Position: 407

Sample Date/Time: Thursday, April 16, 2020 20:04:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-F-3-A.268

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26581.408		ppb	4.594		25891.230
9	Be	65.556	0.040682	ppb	15.534	22.226	15.556
10	B	18322.854	66.036038	ppb	0.527	1.914	271.114
27	Al	4875021.551	764.363075	ppb	2.495	1.215	6575.959
43	Ca-2	155999.192	12358.995751	ppb	2.674	1.474	35.000
49	Ti	9566.536	18.544636	ppb	1.692	1.911	220.002
52	Cr	23844.333	2.280598	ppb	2.034	2.905	8384.682
55	Mn	1012896.281	98.884446	ppb	0.470	1.776	683.350
57	Fe	229196.788	1212.155260	ppb	2.252	1.242	7888.845
45	Sc-IS	> 1149854.566		ppb	1.449		1155169.664
66	Zn	149794.135	180.336536	ppb	5.876	4.485	473.341
86	Sr	129739.051	77.613435	ppb	3.486	2.089	-10.964
65	Cu	22818.260	17.773425	ppb	3.666	2.249	103.094
69	Ga-IS	304851.808		ppb	6.124		301042.064
95	Mo	2027.922	1.226508	ppb	2.887	3.482	128.889
115	In-IS	> 231311.993		ppb	0.577		229836.379
111	Cd	333.523	0.222986	ppb	15.040	16.105	11.952
118	Sn	2744.708	0.177610	ppb	3.171	11.392	1960.135
121	Sb	6641.544	1.127981	ppb	2.715	2.597	1151.158
135	Ba	35487.410	42.044250	ppb	4.293	4.090	20.000
165	Ho-IS	233264.698		ppb	1.026		234084.803
159	Tb-IS	196754.681		ppb	1.188		196737.690
207	Pb	172216.835	11.829105	ppb	0.689	0.940	258.890
203	Tl	201.113	0.040365	ppb	21.884	24.848	28.889
209	Bi-IS	> 155789.332		ppb	0.775		155849.992
51	V	1855.676	2.960993	ppb	2.345	3.338	14.444
59	Co	1721.215	1.097265	ppb	3.797	3.882	11.111
60	Ni	5265.415	6.350098	ppb	2.135	2.810	28.889
75	As	1194.738	1.220797	ppb	4.765	9.218	664.006
71	Ga-ISK	> 101923.435		ppb	0.983		100065.929
82	Se-2	9.901	0.219654	ppb	90.089	107.436	1.541
107	Ag-1	338.893	0.073320	ppb	8.871	10.563	83.334
115	In-ISK	88609.482		ppb	0.449		89051.045
45	Sc-ISK	> 253514.310		ppb	1.218		251872.292
23	Na	1053796.064	2472.818237	ppb	1.183	1.700	3175.353
39	K	1677403.282	1443.414993	ppb	0.990	2.369	133080.351
24	Mg	482694.502	980.835742	ppb	0.612	1.716	115.000
159	Tb-ISK	179452.805		ppb	0.886		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-F-5-A

Autosampler Position: 408

Sample Date/Time: Thursday, April 16, 2020 20:07:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-F-5-A.269

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	25722.027		ppb	1.206		25891.230
9	Be	54.445	0.032287	ppb	30.201	43.513	15.556
10	B	18957.020	69.305006	ppb	2.756	3.881	271.114
27	Al	3487980.834	554.142647	ppb	1.266	1.835	6575.959
43	Ca-2	79884.441	6414.118116	ppb	1.721	1.289	35.000
49	Ti	5253.188	10.128489	ppb	1.004	1.037	220.002
52	Cr	20512.508	1.830595	ppb	3.826	4.620	8384.682
55	Mn	517777.004	51.189106	ppb	2.630	1.574	683.350
57	Fe	138389.059	725.033127	ppb	4.457	3.713	7888.845
45	Sc-IS	> 1134432.396		ppb	1.072		1155169.664
66	Zn	157728.296	192.518687	ppb	6.400	5.391	473.341
86	Sr	55124.503	33.435085	ppb	1.238	0.172	-10.964
65	Cu	29596.334	23.387705	ppb	6.518	5.517	103.094
69	Ga-IS	300499.582		ppb	5.607		301042.064
95	Mo	840.025	0.466816	ppb	1.730	1.166	128.889
115	In-IS	> 228380.888		ppb	1.041		229836.379
111	Cd	344.907	0.233851	ppb	7.676	8.101	11.952
118	Sn	2433.541	0.113002	ppb	6.766	29.558	1960.135
121	Sb	6631.539	1.143537	ppb	1.514	1.260	1151.158
135	Ba	31498.070	37.787009	ppb	4.686	3.710	20.000
165	Ho-IS	230787.051		ppb	0.375		234084.803
159	Tb-IS	195194.001		ppb	2.702		196737.690
207	Pb	163478.788	11.426268	ppb	0.205	0.194	258.890
203	Tl	77.778	0.011793	ppb	17.843	28.021	28.889
209	Bi-IS	> 153085.870		ppb	0.339		155849.992
51	V	1620.092	2.602543	ppb	2.968	3.407	14.444
59	Co	1476.743	0.948118	ppb	5.260	5.879	11.111
60	Ni	2424.650	2.927837	ppb	2.671	2.518	28.889
75	As	1114.624	1.053307	ppb	4.334	10.063	664.006
71	Ga-ISK	> 101117.727		ppb	0.660		100065.929
82	Se-2	2.536	0.026054	ppb	487.906	1269.937	1.541
107	Ag-1	88.889	0.001384	ppb	18.498	356.926	83.334
115	In-ISK	89799.413		ppb	0.221		89051.045
45	Sc-ISK	> 253563.858		ppb	0.231		251872.292
23	Na	1234504.016	2897.257782	ppb	1.923	1.801	3175.353
39	K	1883665.042	1635.618405	ppb	1.473	1.339	133080.351
24	Mg	387615.255	787.317835	ppb	1.061	0.838	115.000
159	Tb-ISK	179461.625		ppb	1.174		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25110-C-8-A

Autosampler Position: 409

Sample Date/Time: Thursday, April 16, 2020 20:10:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25110-C-8-A.270

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26460.040		ppb		1.193		25891.230
9	Be	|	74.445	0.047824	ppb	12.926	12.109		15.556
10	B	|	31201.840	113.424220	ppb	3.349	0.346		271.114
27	Al	|	5304317.659	834.162124	ppb	3.279	2.174		6575.959
43	Ca-2	|	166924.142	13257.177752	ppb	4.413	0.902		35.000
49	Ti	|	7599.799	14.688302	ppb	1.389	2.404		220.002
52	Cr	|	23054.146	2.174670	ppb	1.491	3.688		8384.682
55	Mn	|	750104.609	73.397918	ppb	3.003	0.698		683.350
57	Fe	|	209934.377	1109.894630	ppb	2.942	1.338		7888.845
45	Sc-IS	>	1146946.388		ppb	3.675			1155169.664
66	Zn	|	94210.317	113.485083	ppb	5.813	2.193		473.341
86	Sr	|	143570.361	86.143449	ppb	2.652	1.043		-10.964
65	Cu	|	20358.850	15.884921	ppb	5.753	2.272		103.094
69	Ga-IS	|	296727.718		ppb	4.701			301042.064
95	Mo	|	1682.322	1.005708	ppb	9.475	8.942		128.889
115	In-IS	>	231531.264		ppb	1.907			229836.379
111	Cd	|	368.694	0.246932	ppb	7.219	6.524		11.952
118	Sn	|	1311.171	-0.152479	ppb	2.646	3.501		1960.135
121	Sb	|	6351.413	1.066838	ppb	3.829	2.378		1151.158
135	Ba	|	32020.353	37.885181	ppb	5.160	3.392		20.000
165	Ho-IS	|	235209.773		ppb	1.707			234084.803
159	Tb-IS	|	198078.384		ppb	1.366			196737.690
207	Pb	|	125707.134	8.695228	ppb	0.562	1.711		258.890
203	Tl	|	71.111	0.010051	ppb	35.493	59.995		28.889
209	Bi-IS	>	154639.273		ppb	1.634			155849.992
51	V	|	2622.463	4.242945	ppb	1.731	1.875		14.444
59	Co	|	1653.429	1.066370	ppb	4.027	4.674		11.111
60	Ni	|	3115.896	3.788187	ppb	4.250	5.282		28.889
75	As	|	1240.462	1.362799	ppb	3.567	5.730		664.006
71	Ga-ISK	>	100744.001		ppb	0.959			100065.929
82	Se-2	|	9.534	0.212095	ppb	115.106	137.348		1.541
107	Ag-1	|	176.668	0.027118	ppb	9.434	18.274		83.334
115	In-ISK	|	87545.736		ppb	0.626			89051.045
45	Sc-ISK	>	250267.806		ppb	1.210			251872.292
23	Na	|	3656953.031	8711.036522	ppb	1.185	1.025		3175.353
39	K	|	2333728.026	2085.130101	ppb	1.133	0.233		133080.351
24	Mg	|	1250028.129	2573.120340	ppb	2.085	1.943		115.000
159	Tb-ISK	|	177256.356		ppb	1.232			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, April 16, 2020 20:12:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\b.271

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26324.234		ppb	1.359		25891.230
9	Be	10.000	-0.004210	ppb	57.735	114.605	15.556
10	B	360.005	0.368959	ppb	13.640	53.138	271.114
27	Al	7872.174	0.242956	ppb	6.455	21.499	6575.959
43	Ca-2	56.667	1.854016	ppb	36.735	90.830	35.000
49	Ti	272.225	0.120731	ppb	10.557	41.885	220.002
52	Cr	10300.380	0.331095	ppb	2.354	2.509	8384.682
55	Mn	690.017	0.002920	ppb	2.510	81.357	683.350
57	Fe	7980.010	1.936311	ppb	5.284	75.734	7888.845
45	Sc-IS	> 1117755.418		ppb	2.373		1155169.664
66	Zn	505.565	0.059109	ppb	9.608	99.435	473.341
86	Sr	27.451	0.023506	ppb	67.341	49.660	-10.964
65	Cu	96.212	-0.003355	ppb	44.318	964.526	103.094
69	Ga-IS	288822.210		ppb	5.744		301042.064
95	Mo	265.558	0.093004	ppb	21.934	36.980	128.889
115	In-IS	> 225633.126		ppb	3.138		229836.379
111	Cd	11.665	-0.000001	ppb	33.76380	131.406	11.952
118	Sn	1473.410	-0.106765	ppb	9.666	22.321	1960.135
121	Sb	1488.967	0.075682	ppb	4.788	14.846	1151.158
135	Ba	21.111	0.001846	ppb	9.116	161.888	20.000
165	Ho-IS	222764.108		ppb	2.505		234084.803
159	Tb-IS	188644.233		ppb	1.581		196737.690
207	Pb	610.005	0.026294	ppb	6.825	12.666	258.890
203	Tl	34.444	0.001682	ppb	48.709	239.736	28.889
209	Bi-IS	> 148304.801		ppb	1.303		155849.992
51	V	17.778	0.005899	ppb	39.031	196.553	14.444
59	Co	14.444	0.002312	ppb	13.323	55.062	11.111
60	Ni	43.333	0.018578	ppb	13.323	37.712	28.889
75	As	632.479	-0.054594	ppb	9.116	243.611	664.006
71	Ga-ISK	> 98668.463		ppb	0.506		100065.929
82	Se-2	5.232	0.101012	ppb	94.929	133.424	1.541
107	Ag-1	58.889	-0.006964	ppb	32.186	79.893	83.334
115	In-ISK	86030.588		ppb	0.610		89051.045
45	Sc-ISK	> 248301.710		ppb	1.190		251872.292
23	Na	2731.928	-0.956969	ppb	5.673	39.068	3175.353
39	K	126392.243	-4.576686	ppb	0.825	26.497	133080.351
24	Mg	248.336	0.280659	ppb	16.886	32.652	115.000
159	Tb-ISK	173043.118		ppb	0.911		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 20:15:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.272

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		25964.686		ppb			0.587		25891.230
9	Be	|		123275.230	101.403713	ppb			1.437	1.041	15.556
10	B	|		71533.111	264.459495	ppb			1.264	1.215	271.114
27	Al	|		648563.258	102.291929	ppb			2.213	1.642	6575.959
43	Ca-2	|		63808.928	5126.909444	ppb			2.788	0.356	35.000
49	Ti	|		50772.305	101.751206	ppb			1.764	0.827	220.002
52	Cr	|		686338.184	101.231216	ppb			1.821	0.897	8384.682
55	Mn	|		974284.557	96.467977	ppb			3.188	1.764	683.350
57	Fe	|		924301.713	5091.140194	ppb			3.784	1.486	7888.845
45	Sc-IS	>		1133474.897		ppb			2.462		1155169.664
66	Zn	|		81509.011	99.294255	ppb			5.563	3.685	473.341
86	Sr	|		168372.091	102.203838	ppb			2.972	2.144	-10.964
65	Cu	|		126463.678	100.289986	ppb			4.934	3.103	103.094
69	Ga-IS	|		306961.299		ppb			5.878		301042.064
95	Mo	|		152453.282	99.741796	ppb			3.862	2.186	128.889
115	In-IS	>		226556.847		ppb			1.148		229836.379
111	Cd	|		140818.137	99.657842	ppb			1.239	0.883	11.952
118	Sn	|		430132.951	100.578609	ppb			1.752	1.494	1960.135
121	Sb	|		475717.655	99.685583	ppb			2.958	2.376	1151.158
135	Ba	|		81812.968	98.993228	ppb			5.570	5.268	20.000
165	Ho-IS	|		228448.825		ppb			0.559		234084.803
159	Tb-IS	|		192031.069		ppb			1.286		196737.690
207	Pb	|		1405425.341	98.033671	ppb			1.499	0.916	258.890
203	Tl	|		409299.930	97.388908	ppb			1.066	1.503	28.889
209	Bi-IS	>		153616.147		ppb			1.883		155849.992
51	V	|		60660.753	97.293694	ppb			1.250	1.039	14.444
59	Co	|		153100.709	98.011362	ppb			2.124	2.376	11.111
60	Ni	|		82737.820	100.070380	ppb			1.349	2.197	28.889
75	As	|		42732.749	98.851001	ppb			0.739	0.951	664.006
71	Ga-ISK	>		102167.419		ppb			1.456		100065.929
82	Se-2	|		3729.005	98.353531	ppb			1.745	0.325	1.541
107	Ag-1	|		345738.550	99.611212	ppb			1.215	1.690	83.334
115	In-ISK	|		87135.787		ppb			1.035		89051.045
45	Sc-ISK	>		256505.847		ppb			1.068		251872.292
23	Na	|		2238448.961	5199.011307	ppb			1.850	1.101	3175.353
39	K	|		5766237.811	5203.584061	ppb			0.479	0.666	133080.351
24	Mg	|		2619838.556	5261.755346	ppb			1.065	0.264	115.000
159	Tb-ISK	|		177928.618		ppb			1.125		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 20:18:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.273

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		25531.686		ppb				1.094		25891.230
9	Be	|		16.667	0.001427	ppb				40.000	369.893	15.556
10	B	|		438.896	0.683830	ppb				5.751	7.983	271.114
27	Al	|		4267.304	-0.329475	ppb				2.635	9.701	6575.959
43	Ca-2	|		63.333	2.452683	ppb				31.906	65.641	35.000
49	Ti	|		204.446	-0.012494	ppb				10.856	295.319	220.002
52	Cr	|		7982.230	-0.004674	ppb				2.219	393.038	8384.682
55	Mn	|		580.012	-0.007436	ppb				6.055	43.421	683.350
57	Fe	|		7353.005	-1.068091	ppb				3.703	93.713	7888.845
45	Sc-IS	>		1104086.755		ppb				2.644		1155169.664
66	Zn	|		398.894	-0.067314	ppb				8.244	58.649	473.341
86	Sr	|		-3.174	0.005088	ppb				1534.033	598.980	-10.964
65	Cu	|		65.206	-0.027357	ppb				28.237	50.196	103.094
69	Ga-IS	|		283077.541		ppb				6.241		301042.064
95	Mo	|		346.671	0.150098	ppb				6.305	5.729	128.889
115	In-IS	>		221792.200		ppb				2.461		229836.379
111	Cd	|		18.161	0.004912	ppb				56.263	158.490	11.952
118	Sn	|		3073.665	0.283144	ppb				6.421	10.488	1960.135
121	Sb	|		1042.261	-0.014943	ppb				11.578	147.947	1151.158
135	Ba	|		20.000	0.000696	ppb				44.096	1499.474	20.000
165	Ho-IS	|		219669.876		ppb				2.151		234084.803
159	Tb-IS	|		186606.475		ppb				0.860		196737.690
207	Pb	|		468.892	0.015946	ppb				7.990	16.801	258.890
203	Tl	|		113.334	0.021054	ppb				14.706	19.921	28.889
209	Bi-IS	>		148893.043		ppb				0.822		155849.992
51	V	|		10.000	-0.006912	ppb				57.735	141.222	14.444
59	Co	|		18.889	0.005319	ppb				26.956	61.987	11.111
60	Ni	|		24.444	-0.004789	ppb				41.660	272.950	28.889
75	As	|		666.740	0.038969	ppb				4.575	160.273	664.006
71	Ga-ISK	>		98062.105		ppb				1.023		100065.929
82	Se-2	|		2.567	0.029006	ppb				22.842	54.502	1.541
107	Ag-1	|		188.890	0.032209	ppb				8.151	15.336	83.334
115	In-ISK	|		86130.074		ppb				0.347		89051.045
45	Sc-ISK	>		245666.606		ppb				0.707		251872.292
23	Na	|		2541.893	-1.349532	ppb				4.908	19.661	3175.353
39	K	|		130267.940	0.452398	ppb				0.843	243.711	133080.351
24	Mg	|		273.336	0.338704	ppb				29.797	51.261	115.000
159	Tb-ISK	|		172846.811		ppb				1.237		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-E-1-A

Autosampler Position: 412

Sample Date/Time: Thursday, April 16, 2020 20:21:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25554-E-1-A.274

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	25814.424		ppb	2.585			25891.230
9	Be	|	10.000	-0.004197	ppb	66.667	136.711		15.556
10	B	|	27578.821	102.102461	ppb	1.444	1.069		271.114
27	Al	|	822877.585	131.024890	ppb	1.839	1.064		6575.959
43	Ca-2	|	23706.332	1916.988449	ppb	3.066	1.083		35.000
49	Ti	|	3418.187	6.497929	ppb	0.282	2.899		220.002
52	Cr	|	15848.790	1.155550	ppb	2.435	5.154		8384.682
55	Mn	|	391330.294	38.999512	ppb	2.875	2.523		683.350
57	Fe	|	140389.191	742.637324	ppb	3.397	1.920		7888.845
45	Sc-IS	>	1125210.757		ppb	2.491			1155169.664
66	Zn	|	284788.126	350.877071	ppb	6.386	4.514		473.341
86	Sr	|	19310.593	11.812846	ppb	2.546	0.059		-10.964
65	Cu	|	162990.794	130.206276	ppb	6.094	4.111		103.094
69	Ga-IS	|	294020.460		ppb	5.856			301042.064
95	Mo	|	1003.369	0.578476	ppb	8.359	6.981		128.889
115	In-IS	>	226062.115		ppb	1.526			229836.379
111	Cd	|	976.815	0.684277	ppb	7.821	7.055		11.952
118	Sn	|	2290.184	0.085303	ppb	2.174	13.187		1960.135
121	Sb	|	5317.657	0.881397	ppb	3.473	5.288		1151.158
135	Ba	|	24059.190	29.160561	ppb	6.593	6.477		20.000
165	Ho-IS	|	228005.368		ppb	1.445			234084.803
159	Tb-IS	|	191764.053		ppb	0.305			196737.690
207	Pb	|	15625.592	1.079229	ppb	1.004	1.379		258.890
203	Tl	|	45.556	0.004133	ppb	4.225	11.349		28.889
209	Bi-IS	>	152645.642		ppb	0.366			155849.992
51	V	|	497.786	0.803761	ppb	3.688	3.342		14.444
59	Co	|	597.790	0.389370	ppb	2.807	3.839		11.111
60	Ni	|	7798.795	9.741080	ppb	0.816	1.439		28.889
75	As	|	980.776	0.795889	ppb	3.341	12.966		664.006
71	Ga-ISK	>	98600.260		ppb	1.479			100065.929
82	Se-2	|	8.872	0.199900	ppb	96.638	115.401		1.541
107	Ag-1	|	95.556	0.003998	ppb	19.836	138.672		83.334
115	In-ISK	|	86793.351		ppb	2.052			89051.045
45	Sc-ISK	>	249479.653		ppb	0.865			251872.292
23	Na	|	3463205.412	8275.324959	ppb	0.848	1.226		3175.353
39	K	|	1033506.439	856.827751	ppb	1.024	2.172		133080.351
24	Mg	|	348151.433	718.771113	ppb	0.801	1.348		115.000
159	Tb-ISK	|	176494.462		ppb	1.789			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-E-2-A

Autosampler Position: 413

Sample Date/Time: Thursday, April 16, 2020 20:24:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25554-E-2-A.275

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		26155.036		ppb				1.516		25891.230
9	Be	|		30.000	0.011949	ppb	61.864	126.243				15.556
10	B	|		29326.745	107.765353	ppb	1.844	3.754				271.114
27	Al	|		929956.518	146.953778	ppb	2.557	1.384				6575.959
43	Ca-2	|		38403.244	3081.421198	ppb	2.888	1.362				35.000
49	Ti	|		3464.865	6.531878	ppb	1.788	1.065				220.002
52	Cr	|		17945.715	1.447783	ppb	2.764	1.548				8384.682
55	Mn	|		381461.422	37.692708	ppb	2.620	1.241				683.350
57	Fe	|		135407.233	708.322823	ppb	4.226	2.319				7888.845
45	Sc-IS	>		1134636.331		ppb	2.374					1155169.664
66	Zn	>		257921.758	315.091521	ppb	5.962	4.123				473.341
86	Sr	|		31399.891	19.042719	ppb	3.073	0.701				-10.964
65	Cu	|		171345.224	135.756309	ppb	5.177	2.993				103.094
69	Ga-IS	|		291892.775		ppb	5.256					301042.064
95	Mo	|		1145.602	0.665279	ppb	16.732	16.464				128.889
115	In-IS	>		226270.212		ppb	1.384					229836.379
111	Cd	|		747.614	0.521650	ppb	8.158	8.852				11.952
118	Sn	|		2016.809	0.020392	ppb	4.218	74.018				1960.135
121	Sb	|		5911.223	1.005135	ppb	2.849	4.153				1151.158
135	Ba	|		24797.096	30.021275	ppb	5.162	4.238				20.000
165	Ho-IS	|		230536.612		ppb	1.408					234084.803
159	Tb-IS	|		194184.372		ppb	1.458					196737.690
207	Pb	|		21058.347	1.463486	ppb	0.961	1.816				258.890
203	Tl	|		44.445	0.003884	ppb	4.330	9.585				28.889
209	Bi-IS	>		152375.152		ppb	1.730					155849.992
51	V	|		661.126	1.066959	ppb	8.041	8.305				14.444
59	Co	|		732.241	0.474714	ppb	2.507	2.256				11.111
60	Ni	|		7963.330	9.870062	ppb	0.252	0.545				28.889
75	As	|		1160.478	1.211069	ppb	2.754	5.725				664.006
71	Ga-ISK	>		99358.775		ppb	0.305					100065.929
82	Se-2	|		5.520	0.108171	ppb	37.924	52.164				1.541
107	Ag-1	|		133.334	0.014997	ppb	17.500	46.503				83.334
115	In-ISK	|		87716.066		ppb	0.733					89051.045
45	Sc-ISK	>		252693.277		ppb	1.189					251872.292
23	Na	|		6047093.572	14272.003120	ppb	1.973	2.385				3175.353
39	K	|		1312525.049	1106.171370	ppb	1.152	2.488				133080.351
24	Mg	|		636708.300	1298.070143	ppb	0.638	1.739				115.000
159	Tb-ISK	|		174442.635		ppb	0.761					177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-A-3-A

Autosampler Position: 414

Sample Date/Time: Thursday, April 16, 2020 20:26:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25554-A-3-A.276

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		60923.044		ppb			3.060			25891.230
9	Be	|		42.222	0.009002	ppb	24.119	54.405				15.556
10	B	|		595145.355	1372.459870	ppb	1.335	0.623				271.114
27	Al	|		1072497.517	105.233367	ppb	2.011	1.569				6575.959
43	Ca-2	|		4288516.545	214469.259016	ppb	0.824	1.109				35.000
49	Ti	|		22591.209	27.834417	ppb	4.746	3.387				220.002
52	Cr	|		112378.214	9.200521	ppb	6.601	5.862				8384.682
55	Mn	|		208003.363	12.755143	ppb	0.439	1.594				683.350
57	Fe	|		248831.789	816.954552	ppb	0.663	0.878				7888.845
45	Sc-IS	>		1822288.400		ppb	1.439					1155169.664
66	Zn	|		88077.350	66.588980	ppb	0.196	1.584				473.341
86	Sr	|		6536286.565	2467.879876	ppb	0.391	1.296				-10.964
65	Cu	|		34737.603	17.081639	ppb	3.377	4.841				103.094
69	Ga-IS	|		410768.796		ppb	0.806					301042.064
95	Mo	|		51549.571	20.923280	ppb	3.223	4.412				128.889
115	In-IS	>		225182.202		ppb	0.321					229836.379
111	Cd	|		15.080	0.002381	ppb	87.208	391.791				11.952
118	Sn	|		2638.022	0.169613	ppb	3.542	13.885				1960.135
121	Sb	|		3031.433	0.402322	ppb	1.102	1.996				1151.158
135	Ba	|		14716.470	17.897714	ppb	2.978	3.062				20.000
165	Ho-IS	|		237054.142		ppb	1.185					234084.803
159	Tb-IS	|		225629.124		ppb	1.230					196737.690
207	Pb	|		29011.414	3.002585	ppb	1.398	1.195				258.890
203	Tl	|		66.667	0.016943	ppb	13.229	21.580				28.889
209	Bi-IS	>		102949.746		ppb	2.258					155849.992
51	V	|		45652.841	69.991802	ppb	1.533	2.542				14.444
59	Co	|		751.131	0.452421	ppb	2.600	3.230				11.111
60	Ni	|		3939.432	4.518143	ppb	3.425	1.327				28.889
75	As	|		2751.180	4.574222	ppb	17.519	20.995				664.006
71	Ga-ISK	>		106899.715		ppb	2.226					100065.929
82	Se-2	|		1292.510	32.535145	ppb	6.480	4.422				1.541
107	Ag-1	|		237.780	0.040841	ppb	15.442	21.406				83.334
115	In-ISK	|		85394.095		ppb	1.434					89051.045
45	Sc-ISK	>		330068.739		ppb	1.122					251872.292
23	Na	|		S	S	ppb	S	S				3175.353
39	K	|		266092076.866	190965.541146	ppb	1.315	0.371				133080.351
24	Mg	|		419396566.016	654599.504288	ppb	1.704	0.711				115.000
159	Tb-ISK	|		174437.198		ppb	0.176					177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-A-4-A

Autosampler Position: 415

Sample Date/Time: Thursday, April 16, 2020 20:29:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25554-A-4-A.277

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		57778.844		ppb			1.316			25891.230
9	Be	|		28.889	0.004408	ppb	40.522	155.958				15.556
10	B	|		674615.406	1783.782760	ppb	0.893	0.630				271.114
27	Al	|		677278.206	75.898502	ppb	1.391	0.896				6575.959
43	Ca-2	|		5569867.486	319298.360799	ppb	1.306	0.365				35.000
49	Ti	|		23201.050	32.857123	ppb	1.576	0.522				220.002
52	Cr	|		55571.365	4.685024	ppb	4.650	4.269				8384.682
55	Mn	|		117134.952	8.210252	ppb	0.886	1.210				683.350
57	Fe	|		304084.787	1161.671205	ppb	1.162	0.530				7888.845
45	Sc-IS	>		1589624.155		ppb	1.442					1155169.664
66	Zn	|		24538.847	20.882413	ppb	2.885	3.846				473.341
86	Sr	|		8216613.293	3556.345436	ppb	1.197	1.630				-10.964
65	Cu	|		69535.576	39.287321	ppb	0.766	1.227				103.094
69	Ga-IS	|		341650.484		ppb	0.431					301042.064
95	Mo	|		34708.788	16.124539	ppb	1.733	0.599				128.889
115	In-IS	>		187452.099		ppb	0.946					229836.379
111	Cd	|		94.890	0.072738	ppb	19.691	21.035				11.952
118	Sn	|		1990.139	0.111198	ppb	2.303	14.317				1960.135
121	Sb	|		3808.287	0.728707	ppb	6.628	9.300				1151.158
135	Ba	|		9498.714	13.873727	ppb	3.138	3.705				20.000
165	Ho-IS	|		207633.664		ppb	0.926					234084.803
159	Tb-IS	|		200882.647		ppb	1.159					196737.690
207	Pb	|		12362.058	1.712812	ppb	1.169	1.841				258.890
203	Tl	|		53.333	0.018679	ppb	10.825	14.096				28.889
209	Bi-IS	>		76555.696		ppb	0.657					155849.992
51	V	|		28296.888	46.510763	ppb	1.115	0.827				14.444
59	Co	|		551.122	0.354385	ppb	4.580	4.419				11.111
60	Ni	|		3854.965	4.744572	ppb	3.562	3.227				28.889
75	As	|		15614.685	36.030240	ppb	1.750	2.086				664.006
71	Ga-ISK	>		99661.988		ppb	0.366					100065.929
82	Se-2	|		-3011.875	-81.568132	ppb	33.019	33.320				1.541
107	Ag-1	|		206.668	0.036548	ppb	11.290	19.492				83.334
115	In-ISK	|		80671.336		ppb	1.630					89051.045
45	Sc-ISK	>		312865.634		ppb	0.687					251872.292
23	Na	|		S	S	ppb	S	S				3175.353
39	K	|		381104240.019	288606.172412	ppb	1.499	1.081				133080.351
24	Mg	|		597414095.996	983727.722752	ppb	2.164	1.797				115.000
159	Tb-ISK	|		165913.931		ppb	0.729					177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
Bi-IS 209
Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-A-4-B MS

Autosampler Position: 416

Sample Date/Time: Thursday, April 16, 2020 20:32:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25554-A-4-B MS.278

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		51392.277		ppb			0.550			25891.230
9	Be	|		106295.118	66.238622	ppb			0.882	1.043		15.556
10	B	|		611586.145	1718.350306	ppb			0.599	0.699		271.114
27	Al	|		1310118.370	157.100228	ppb			0.993	1.140		6575.959
43	Ca-2	|		5323162.999	324274.644266	ppb			0.424	0.301		35.000
49	Ti	|		89626.963	136.232390	ppb			1.056	0.929		220.002
52	Cr	|		805017.632	89.822471	ppb			0.689	0.539		8384.682
55	Mn	|		1077589.486	80.839963	ppb			0.287	0.118		683.350
57	Fe	|		1197558.472	4998.442977	ppb			0.714	0.568		7888.845
45	Sc-IS	>		1495873.292		ppb			0.169			1155169.664
66	Zn	|		89364.208	82.426076	ppb			0.920	0.820		473.341
86	Sr	|		8074709.472	3713.588617	ppb			0.732	0.896		-10.964
65	Cu	|		186017.421	111.822114	ppb			0.748	0.602		103.094
69	Ga-IS	|		338627.598		ppb			0.601			301042.064
95	Mo	|		162653.204	80.632034	ppb			2.075	2.234		128.889
115	In-IS	>		185708.497		ppb			0.499			229836.379
111	Cd	|		92609.888	79.958757	ppb			1.439	1.927		11.952
118	Sn	|		402572.429	114.906318	ppb			0.504	1.008		1960.135
121	Sb	|		319700.429	81.695449	ppb			1.471	1.958		1151.158
135	Ba	|		98090.056	144.821894	ppb			0.503	1.003		20.000
165	Ho-IS	|		202924.412		ppb			0.145			234084.803
159	Tb-IS	|		193511.924		ppb			1.086			196737.690
207	Pb	|		841117.725	118.587202	ppb			1.587	1.494		258.890
203	Tl	|		258964.034	124.531823	ppb			1.012	0.992		28.889
209	Bi-IS	>		75999.405		ppb			0.730			155849.992
51	V	|		87428.954	157.953695	ppb			0.884	1.015		14.444
59	Co	|		137387.490	99.054811	ppb			0.590	0.534		11.111
60	Ni	|		69651.608	94.869587	ppb			0.411	0.463		28.889
75	As	|		44950.502	117.404528	ppb			2.106	2.105		664.006
71	Ga-ISK	>		90705.943		ppb			0.159			100065.929
82	Se-2	|		-12790.642	-380.203872	ppb			8.452	8.474		1.541
107	Ag-1	|		121912.452	39.543117	ppb			0.849	0.786		83.334
115	In-ISK	|		75837.767		ppb			0.628			89051.045
45	Sc-ISK	>		278260.830		ppb			1.272			251872.292
23	Na	|		S	S	ppb			S	S		3175.353
39	K	|		344654345.515	293494.745301	ppb			0.316	1.018		133080.351
24	Mg	|		511078523.576	946329.723409	ppb			0.386	0.983		115.000
159	Tb-ISK	|		158030.622		ppb			0.567			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Bi-IS 209

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-A-4-C MSD

Autosampler Position: 417

Sample Date/Time: Thursday, April 16, 2020 20:35:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25554-A-4-C MSD.279

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	48222.383		ppb		1.922		25891.230
9	Be	|	98658.389	63.946050	ppb	0.198	1.606		15.556
10	B	|	564430.408	1649.325762	ppb	0.846	0.922		271.114
27	Al	|	1263939.928	157.646467	ppb	0.228	1.549		6575.959
43	Ca-2	|	5086317.758	322248.756726	ppb	1.025	0.649		35.000
49	Ti	|	85346.429	134.920305	ppb	1.228	1.435		220.002
52	Cr	|	755407.182	87.636409	ppb	0.530	1.158		8384.682
55	Mn	|	1029503.158	80.320265	ppb	1.391	0.331		683.350
57	Fe	|	1171739.056	5087.294457	ppb	1.138	1.089		7888.845
45	Sc-IS	>	1438409.873		ppb	1.677			1155169.664
66	Zn	|	90277.703	86.631803	ppb	0.920	0.768		473.341
86	Sr	|	7843902.809	3752.398085	ppb	0.539	2.120		-10.964
65	Cu	|	176791.791	110.525886	ppb	1.368	0.484		103.094
69	Ga-IS	|	328042.678		ppb	0.711			301042.064
95	Mo	|	155054.798	79.941664	ppb	1.294	1.407		128.889
115	In-IS	>	180802.715		ppb	0.098			229836.379
111	Cd	|	90276.338	80.053832	ppb	0.119	0.045		11.952
118	Sn	|	391697.327	114.831709	ppb	0.187	0.184		1960.135
121	Sb	|	312168.394	81.930824	ppb	0.651	0.685		1151.158
135	Ba	|	96544.035	146.403022	ppb	0.927	1.002		20.000
165	Ho-IS	|	199408.780		ppb	0.517			234084.803
159	Tb-IS	|	189772.208		ppb	0.799			196737.690
207	Pb	|	826199.852	119.232848	ppb	0.775	0.468		258.890
203	Tl	|	254657.800	125.350866	ppb	1.434	1.388		28.889
209	Bi-IS	>	74249.137		ppb	1.176			155849.992
51	V	|	78687.226	148.406266	ppb	0.341	1.422		14.444
59	Co	|	132650.809	99.838236	ppb	0.478	0.695		11.111
60	Ni	|	65263.183	92.792909	ppb	0.604	0.669		28.889
75	As	|	42385.570	115.535123	ppb	1.082	0.300		664.006
71	Ga-ISK	>	86895.721		ppb	1.076			100065.929
82	Se-2	|	-16329.506	-506.576705	ppb	3.342	2.296		1.541
107	Ag-1	|	115181.374	38.998999	ppb	0.658	0.465		83.334
115	In-ISK	|	72373.125		ppb	0.962			89051.045
45	Sc-ISK	>	263738.961		ppb	0.386			251872.292
23	Na	|		S	ppb		S	S	3175.353
39	K	|	320051438.559	287524.602520	ppb	0.768	0.749		133080.351
24	Mg	|	464350201.827	907073.510305	ppb	0.725	0.587		115.000
159	Tb-ISK	|	153949.763		ppb	0.658			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Bi-IS 209

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-A-5-A

Autosampler Position: 418

Sample Date/Time: Thursday, April 16, 2020 20:37:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25554-A-5-A.280

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	45730.864		ppb		1.203		25891.230
9	Be	|	25.556	0.005110	ppb	19.924	66.771		15.556
10	B	|	516539.407	1610.975267	ppb	0.447	0.729		271.114
27	Al	|	243398.512	31.585258	ppb	1.506	2.228		6575.959
43	Ca-2	|	4830009.282	326620.317688	ppb	0.134	0.641		35.000
49	Ti	|	17259.312	28.783107	ppb	2.324	2.985		220.002
52	Cr	|	18683.322	1.117801	ppb	1.531	4.081		8384.682
55	Mn	|	91696.687	7.576127	ppb	0.510	0.984		683.350
57	Fe	|	269996.990	1218.846250	ppb	1.813	2.596		7888.845
45	Sc-IS	>	1347587.789		ppb	0.728			1155169.664
66	Zn	|	21965.768	22.077817	ppb	2.103	2.585		473.341
86	Sr	|	7674302.293	3917.981813	ppb	0.426	1.121		-10.964
65	Cu	|	53870.709	35.897029	ppb	2.973	3.437		103.094
69	Ga-IS	|	299826.528		ppb	1.750			301042.064
95	Mo	|	20773.987	11.360110	ppb	2.173	2.038		128.889
115	In-IS	>	173695.885		ppb	1.565			229836.379
111	Cd	|	74.153	0.060149	ppb	32.456	36.977		11.952
118	Sn	|	3082.555	0.491167	ppb	5.310	12.914		1960.135
121	Sb	|	6528.160	1.551470	ppb	4.736	7.314		1151.158
135	Ba	|	8169.002	12.874729	ppb	1.258	1.901		20.000
165	Ho-IS	|	191654.963		ppb	1.313			234084.803
159	Tb-IS	|	181234.602		ppb	0.476			196737.690
207	Pb	|	16671.610	2.409145	ppb	2.085	1.326		258.890
203	Tl	|	143.334	0.064452	ppb	20.670	23.484		28.889
209	Bi-IS	>	73611.399		ppb	0.959			155849.992
51	V	|	6988.376	13.634377	ppb	1.659	2.192		14.444
59	Co	|	268.891	0.202387	ppb	21.839	22.440		11.111
60	Ni	|	2023.477	2.946077	ppb	3.710	3.466		28.889
75	As	|	11254.388	30.629361	ppb	0.970	0.372		664.006
71	Ga-ISK	>	83867.691		ppb	0.620			100065.929
82	Se-2	|	-21226.939	-682.380826	ppb	1.907	1.860		1.541
107	Ag-1	|	136.667	0.023467	ppb	13.580	28.159		83.334
115	In-ISK	|	71183.792		ppb	0.565			89051.045
45	Sc-ISK	>	249944.234		ppb	0.192			251872.292
23	Na	|	S	S	ppb	S	S		3175.353
39	K	|	313294132.812	296992.656748	ppb	0.426	0.580		133080.351
24	Mg	|	450511265.811	928615.338433	ppb	0.129	0.316		115.000
159	Tb-ISK	|	148664.913		ppb	0.882			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Bi-IS 209

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-A-6-A

Autosampler Position: 419

Sample Date/Time: Thursday, April 16, 2020 20:40:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25554-A-6-A.281

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		45174.647		ppb			0.271		25891.230
9	Be	|		25.556	0.005264	ppb	39.849	136.789			15.556
10	B	|		498513.625	1564.498409	ppb	0.723	0.236			271.114
27	Al	|		340362.633	44.862243	ppb	0.818	1.036			6575.959
43	Ca-2	|		4585729.723	312048.345962	ppb	0.786	0.242			35.000
49	Ti	|		17208.146	28.873594	ppb	3.922	3.488			220.002
52	Cr	|		15607.414	0.743692	ppb	2.730	5.815			8384.682
55	Mn	|		102931.739	8.566239	ppb	1.000	0.459			683.350
57	Fe	|		273078.960	1241.126501	ppb	1.359	0.844			7888.845
45	Sc-IS	>		1339126.253		ppb	0.545				1155169.664
66	Zn	|		22011.392	22.265574	ppb	1.517	1.005			473.341
86	Sr	|		7280984.504	3740.595264	ppb	0.798	1.162			-10.964
65	Cu	|		48511.756	32.517736	ppb	1.622	1.082			103.094
69	Ga-IS	|		302364.219		ppb	0.713				301042.064
95	Mo	|		17943.484	9.863589	ppb	0.614	0.693			128.889
115	In-IS	>		178057.518		ppb	0.134				229836.379
111	Cd	|		83.430	0.066770	ppb	37.847	42.453			11.952
118	Sn	|		1742.329	0.066894	ppb	7.093	55.617			1960.135
121	Sb	|		6042.390	1.376673	ppb	3.951	4.729			1151.158
135	Ba	|		9570.983	14.716023	ppb	0.579	0.550			20.000
165	Ho-IS	|		196247.743		ppb	1.005				234084.803
159	Tb-IS	|		183144.438		ppb	1.496				196737.690
207	Pb	|		22095.501	3.138838	ppb	0.770	0.737			258.890
203	Tl	|		60.000	0.022459	ppb	9.623	12.475			28.889
209	Bi-IS	>		75011.978		ppb	0.055				155849.992
51	V	|		5275.419	10.435444	ppb	2.659	1.604			14.444
59	Co	|		290.003	0.222001	ppb	19.942	19.924			11.111
60	Ni	|		1827.895	2.697795	ppb	1.933	2.553			28.889
75	As	|		10032.273	27.549489	ppb	1.884	0.945			664.006
71	Ga-ISK	>		82658.466		ppb	1.145				100065.929
82	Se-2	|		-20828.856	-679.486960	ppb	1.301	2.310			1.541
107	Ag-1	|		96.667	0.009856	ppb	24.866	83.797			83.334
115	In-ISK	|		70051.886		ppb	0.933				89051.045
45	Sc-ISK	>		243935.040		ppb	0.379				251872.292
23	Na	|		S	S	ppb	S	S			3175.353
39	K	|		287550014.628	279292.142799	ppb	0.674	0.352			133080.351
24	Mg	|		408533907.793	862825.188133	ppb	0.930	0.731			115.000
159	Tb-ISK	|		149323.733		ppb	0.904				177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Bi-IS 209

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25593-B-1-A

Autosampler Position: 420

Sample Date/Time: Thursday, April 16, 2020 20:43:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25593-B-1-A.282

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		32317.660		ppb			3.784			25891.230
9	Be	|		87.778	0.032701	ppb			4.385	8.698		15.556
10	B	|		24899.502	56.841087	ppb			5.476	3.433		271.114
27	Al	|		1894380.919	187.976215	ppb			2.324	2.144		6575.959
43	Ca-2	|		382582.262	19255.107717	ppb			4.043	1.921		35.000
49	Ti	|		8868.307	10.749286	ppb			0.470	3.876		220.002
52	Cr	|		27340.590	1.328057	ppb			2.078	2.871		8384.682
55	Mn	|		262466.381	16.222797	ppb			1.894	1.384		683.350
57	Fe	|		111976.261	346.573054	ppb			2.828	0.518		7888.845
45	Sc-IS	|>		1810184.262		ppb			3.198			1155169.664
66	Zn	|		30497.023	22.854472	ppb			5.292	6.451		473.341
86	Sr	|		37563.844	14.274241	ppb			8.300	6.319		-10.964
65	Cu	|		25100.787	12.406175	ppb			1.663	3.565		103.094
69	Ga-IS	|		479681.544		ppb			3.640			301042.064
95	Mo	|		1007.813	0.331066	ppb			5.009	9.644		128.889
115	In-IS	|>		274076.380		ppb			1.176			229836.379
111	Cd	|		85.662	0.041741	ppb			19.316	22.404		11.952
118	Sn	|		1145.603	-0.231070	ppb			19.158	19.591		1960.135
121	Sb	|		3194.802	0.316382	ppb			1.466	1.348		1151.158
135	Ba	|		32356.615	32.348387	ppb			2.329	1.696		20.000
165	Ho-IS	|		266539.834		ppb			2.140			234084.803
159	Tb-IS	|		242125.893		ppb			1.064			196737.690
207	Pb	|		13827.071	0.996225	ppb			0.622	0.657		258.890
203	Tl	|		55.556	0.007132	ppb			29.597	58.494		28.889
209	Bi-IS	|>		146134.813		ppb			1.168			155849.992
51	V	|		2885.847	3.539753	ppb			2.749	2.658		14.444
59	Co	|		783.355	0.378966	ppb			5.850	7.299		11.111
60	Ni	|		3464.865	3.190922	ppb			0.873	1.781		28.889
75	As	|		5340.764	8.075415	ppb			4.097	7.247		664.006
71	Ga-ISK	|>		132750.804		ppb			2.180			100065.929
82	Se-2	|		-5677.597	-115.409193	ppb			1.902	4.025		1.541
107	Ag-1	|		44.445	-0.014708	ppb			37.749	23.949		83.334
115	In-ISK	|		107073.456		ppb			1.653			89051.045
45	Sc-ISK	|>		358074.002		ppb			1.708			251872.292
23	Na	|		8181200.967	13628.654240	ppb			1.327	2.836		3175.353
39	K	|		3312285.808	2067.717745	ppb			1.764	2.185		133080.351
24	Mg	|		3777636.308	5436.475790	ppb			1.439	2.678		115.000
159	Tb-ISK	|		205047.087		ppb			0.474			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
Ga-ISK 71
Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25632-A-1-A

Autosampler Position: 421

Sample Date/Time: Thursday, April 16, 2020 20:46:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25632-A-1-A.283

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32221.861		ppb		1.761		25891.230
9	Be	|	80.000	0.031182	ppb	15.023	24.704		15.556
10	B	|	102482.965	251.078480	ppb	0.807	2.077		271.114
27	Al	|	6497305.759	685.050876	ppb	1.215	2.033		6575.959
43	Ca-2	|	322392.416	17178.948605	ppb	0.958	1.639		35.000
49	Ti	|	17901.211	23.443782	ppb	1.598	1.201		220.002
52	Cr	|	44366.592	3.160857	ppb	2.456	0.131		8384.682
55	Mn	|	626414.297	41.064158	ppb	3.527	1.811		683.350
57	Fe	|	295318.342	1044.290473	ppb	2.814	0.485		7888.845
45	Sc-IS	>	1710309.518		ppb	2.461			1155169.664
66	Zn	|	178101.199	144.076552	ppb	4.079	2.395		473.341
86	Sr	|	163311.453	65.692184	ppb	4.051	2.910		-10.964
65	Cu	|	43610.558	22.864855	ppb	2.990	1.527		103.094
69	Ga-IS	|	464701.009		ppb	2.823			301042.064
95	Mo	|	6374.756	2.684643	ppb	1.866	2.421		128.889
115	In-IS	>	270252.742		ppb	2.429			229836.379
111	Cd	|	371.063	0.211770	ppb	7.910	7.226		11.952
118	Sn	|	766.687	-0.302850	ppb	9.436	4.605		1960.135
121	Sb	|	6879.435	0.972877	ppb	3.559	1.580		1151.158
135	Ba	|	65688.517	66.633142	ppb	2.473	1.474		20.000
165	Ho-IS	|	257276.650		ppb	2.048			234084.803
159	Tb-IS	|	235104.672		ppb	1.565			196737.690
207	Pb	|	118640.538	8.923887	ppb	0.575	0.576		258.890
203	Tl	|	61.111	0.008917	ppb	46.390	81.022		28.889
209	Bi-IS	>	142189.684		ppb	0.364			155849.992
51	V	|	6215.797	7.778244	ppb	3.330	3.480		14.444
59	Co	|	2061.260	1.025152	ppb	1.356	1.510		11.111
60	Ni	|	4229.515	3.967596	ppb	2.017	2.240		28.889
75	As	|	3764.845	5.330347	ppb	4.468	6.139		664.006
71	Ga-ISK	>	130581.874		ppb	0.344			100065.929
82	Se-2	|	-4141.461	-85.546487	ppb	1.263	1.601		1.541
107	Ag-1	|	112.223	0.000793	ppb	34.427	1104.162		83.334
115	In-ISK	|	104798.072		ppb	1.754			89051.045
45	Sc-ISK	>	359205.636		ppb	2.083			251872.292
23	Na	|	19539658.811	32452.110352	ppb	1.526	1.349		3175.353
39	K	|	2034681.366	1217.105937	ppb	4.647	3.429		133080.351
24	Mg	|	2431957.324	3488.094743	ppb	1.537	0.551		115.000
159	Tb-ISK	|	198769.337		ppb	0.861			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
 Ga-ISK 71
 Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 20:48:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.284

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		31205.174		ppb		2.864		25891.230
9	Be	|		175231.862	96.764945	ppb		2.270	0.442	15.556
10	B	|		100225.966	248.814880	ppb		1.558	3.643	271.114
27	Al	|		786900.782	83.142900	ppb		2.104	1.929	6575.959
43	Ca-2	|		96130.901	5185.624629	ppb		3.150	0.755	35.000
49	Ti	|		76804.872	103.341796	ppb		2.303	0.141	220.002
52	Cr	|		1013068.176	100.326106	ppb		0.942	1.557	8384.682
55	Mn	|		1388974.490	92.346543	ppb		1.926	0.547	683.350
57	Fe	|		1369993.481	5067.219165	ppb		2.675	0.642	7888.845
45	Sc-IS	|>		1688197.497		ppb		2.440		1155169.664
66	Zn	|		144257.043	118.093599	ppb		5.086	2.741	473.341
86	Sr	|		118573.327	48.317366	ppb		4.759	3.323	-10.964
65	Cu	|		220476.356	117.401525	ppb		4.605	2.260	103.094
69	Ga-IS	|		477580.506		ppb		4.903		301042.064
95	Mo	|		192381.260	84.535135	ppb		1.141	2.340	128.889
115	In-IS	|>		265776.056		ppb		2.223		229836.379
111	Cd	|		172138.486	103.861611	ppb		1.169	1.112	11.952
118	Sn	|		491058.177	97.880875	ppb		1.331	1.026	1960.135
121	Sb	|		542609.871	96.933780	ppb		1.510	0.717	1151.158
135	Ba	|		115499.820	119.125740	ppb		3.363	1.216	20.000
165	Ho-IS	|		253104.981		ppb		1.369		234084.803
159	Tb-IS	|		230439.358		ppb		0.873		196737.690
207	Pb	|		1368930.526	100.388274	ppb		0.248	1.360	258.890
203	Tl	|		418267.553	104.621441	ppb		1.138	1.777	28.889
209	Bi-IS	|>		146126.993		ppb		1.454		155849.992
51	V	|		85941.116	108.954007	ppb		1.756	1.154	14.444
59	Co	|		205483.960	103.976227	ppb		0.426	0.394	11.111
60	Ni	|		107401.138	102.671812	ppb		1.154	1.398	28.889
75	As	|		57022.157	104.352361	ppb		0.889	1.167	664.006
71	Ga-ISK	|>		129245.367		ppb		0.608		100065.929
82	Se-2	|		1615.124	33.653211	ppb		5.650	6.035	1.541
107	Ag-1	|		397027.131	90.410476	ppb		0.584	0.376	83.334
115	In-ISK	|		102732.626		ppb		0.254		89051.045
45	Sc-ISK	|>		344983.586		ppb		0.305		251872.292
23	Na	|		4126120.387	7128.454451	ppb		1.061	0.858	3175.353
39	K	|		7807665.597	5239.486684	ppb		0.680	0.985	133080.351
24	Mg	|		3450799.945	5153.170809	ppb		1.072	1.071	115.000
159	Tb-ISK	|		193567.343		ppb		1.134		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Al	27
Sc-IS	45
Zn	66
Sr	86
Cu	65
Mo	95
Ba	135
Ga-ISK	71

Se-2 82
Sc-ISK 45
Na 23

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 20:51:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.285

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30589.395		ppb		2.448		25891.230
9	Be	|		16.667	-0.002708	ppb	40.000	155.331		15.556
10	B	|		2252.400	4.973570	ppb	1.728	1.750		271.114
27	Al	|		5694.486	-0.381095	ppb	15.412	25.014		6575.959
43	Ca-2	|		885.027	48.045062	ppb	6.367	8.943		35.000
49	Ti	|		2795.829	3.578838	ppb	2.751	3.147		220.002
52	Cr	|		18767.879	0.769964	ppb	2.112	2.831		8384.682
55	Mn	|		3584.894	0.187068	ppb	1.037	5.645		683.350
57	Fe	|		10578.361	-1.091787	ppb	2.419	32.161		7888.845
45	Sc-IS	>		1589574.584		ppb	3.063			1155169.664
66	Zn	|		12096.232	10.010304	ppb	2.279	4.372		473.341
86	Sr	|		-75699.398	-32.763877	ppb	1.835	1.324		-10.964
65	Cu	|		10811.030	6.038415	ppb	5.208	3.260		103.094
69	Ga-IS	|		420847.061		ppb	4.529			301042.064
95	Mo	|		588.901	0.192307	ppb	0.865	3.240		128.889
115	In-IS	>		255408.617		ppb	1.649			229836.379
111	Cd	|		18.763	0.003344	ppb	81.357	280.530		11.952
118	Sn	|		3082.555	0.188519	ppb	5.124	18.018		1960.135
121	Sb	|		1960.135	0.126602	ppb	9.502	23.575		1151.158
135	Ba	|		34.444	0.013272	ppb	53.299	152.884		20.000
165	Ho-IS	|		241548.038		ppb	2.522			234084.803
159	Tb-IS	|		218750.409		ppb	2.235			196737.690
207	Pb	|		346.668	0.008545	ppb	2.544	11.999		258.890
203	Tl	|		82.222	0.014502	ppb	22.328	31.245		28.889
209	Bi-IS	>		141057.530		ppb	1.506			155849.992
51	V	|		1502.302	1.897639	ppb	10.437	11.596		14.444
59	Co	|		51.111	0.018833	ppb	22.904	32.672		11.111
60	Ni	|		511.120	0.456770	ppb	3.217	2.349		28.889
75	As	|		2044.605	2.236154	ppb	7.629	14.376		664.006
71	Ga-ISK	>		128259.909		ppb	1.086			100065.929
82	Se-2	|		-2642.142	-55.565610	ppb	5.306	4.549		1.541
107	Ag-1	|		167.779	0.014034	ppb	13.955	41.040		83.334
115	In-ISK	|		103366.208		ppb	0.535			89051.045
45	Sc-ISK	>		344402.026		ppb	0.306			251872.292
23	Na	|		959107.859	1654.085583	ppb	1.126	1.431		3175.353
39	K	|		238648.043	39.010075	ppb	0.844	3.691		133080.351
24	Mg	|		1626.760	2.198018	ppb	7.507	8.081		115.000
159	Tb-ISK	|		191494.426		ppb	1.478			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
Ga-ISK 71
Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25638-A-1-A @5

Autosampler Position: 422

Sample Date/Time: Thursday, April 16, 2020 20:54:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25638-A-1-A @5.286

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		38578.705		ppb			2.224			25891.230
9	Be	|		22.222	-0.000151	ppb			31.225	2449.744		15.556
10	B	|		102897.116	258.562237	ppb			1.966	3.380		271.114
27	Al	|		290441.696	30.427295	ppb			0.484	3.178		6575.959
43	Ca-2	|		292663.855	15982.789050	ppb			3.994	1.592		35.000
49	Ti	|		3623.793	4.526218	ppb			3.270	6.414		220.002
52	Cr	|		22752.553	1.080482	ppb			1.890	4.734		8384.682
55	Mn	|		328566.131	22.063255	ppb			1.621	1.950		683.350
57	Fe	|		37899.126	100.071537	ppb			3.070	1.240		7888.845
45	Sc-IS	>		1668275.216		ppb			3.495			1155169.664
66	Zn	|		17945.733	14.368572	ppb			5.663	2.718		473.341
86	Sr	|		307176.705	126.736304	ppb			2.407	2.689		-10.964
65	Cu	|		11988.297	6.386273	ppb			4.086	2.131		103.094
69	Ga-IS	|		426691.627		ppb			3.616			301042.064
95	Mo	|		12555.524	5.502097	ppb			4.951	1.973		128.889
115	In-IS	>		260249.838		ppb			2.048			229836.379
111	Cd	|		14.745	0.000700	ppb			46.054	568.278		11.952
118	Sn	|		1608.980	-0.125012	ppb			7.852	17.213		1960.135
121	Sb	|		3282.600	0.361766	ppb			5.278	6.808		1151.158
135	Ba	|		31493.600	33.157210	ppb			3.878	2.898		20.000
165	Ho-IS	|		249366.286		ppb			2.544			234084.803
159	Tb-IS	|		224884.996		ppb			2.911			196737.690
207	Pb	|		682.229	0.035768	ppb			1.493	1.375		258.890
203	Tl	|		34.444	0.002467	ppb			45.734	172.738		28.889
209	Bi-IS	>		136474.357		ppb			0.616			155849.992
51	V	|		1986.805	2.599050	ppb			1.768	2.619		14.444
59	Co	|		720.018	0.371934	ppb			7.451	7.335		11.111
60	Ni	|		3797.171	3.744127	ppb			2.271	2.899		28.889
75	As	|		2532.741	3.302456	ppb			8.342	11.308		664.006
71	Ga-ISK	>		124176.269		ppb			0.835			100065.929
82	Se-2	|		-2525.880	-54.884869	ppb			1.800	2.381		1.541
107	Ag-1	|		55.556	-0.011354	ppb			17.321	19.385		83.334
115	In-ISK	|		100639.467		ppb			1.462			89051.045
45	Sc-ISK	>		351071.522		ppb			0.576			251872.292
23	Na	|		71976205.220	122319.764173	ppb			0.794	1.177		3175.353
39	K	|		13267024.069	8832.726194	ppb			0.709	1.104		133080.351
24	Mg	|		5612075.613	8235.570129	ppb			0.272	0.435		115.000
159	Tb-ISK	|		192982.113		ppb			0.777			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
Ga-ISK 71
Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25640-B-1-A @5

Autosampler Position: 423

Sample Date/Time: Thursday, April 16, 2020 20:57:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25640-B-1-A @5.287

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		37309.822		ppb		4.088		25891.230
9	Be	|		30.000	0.004468	ppb	29.397	112.363		15.556
10	B	|		85413.492	217.494157	ppb	1.170	1.085		271.114
27	Al	|		515406.003	55.561803	ppb	2.719	0.942		6575.959
43	Ca-2	|		313417.499	17365.885289	ppb	2.797	1.182		35.000
49	Ti	|		3708.259	4.709737	ppb	2.838	1.868		220.002
52	Cr	|		23235.554	1.163004	ppb	2.327	3.615		8384.682
55	Mn	|		281906.485	19.186165	ppb	3.469	1.698		683.350
57	Fe	|		54550.725	165.878416	ppb	3.888	2.884		7888.845
45	Sc-IS	>		1644203.074		ppb	1.850			1155169.664
66	Zn	|		20633.796	16.860648	ppb	4.059	2.374		473.341
86	Sr	|		311289.216	130.276869	ppb	0.380	1.502		-10.964
65	Cu	|		12363.052	6.682926	ppb	6.177	4.700		103.094
69	Ga-IS	|		434875.759		ppb	4.679			301042.064
95	Mo	|		12866.903	5.727460	ppb	0.232	1.969		128.889
115	In-IS	>		266064.053		ppb	0.466			229836.379
111	Cd	|		22.980	0.005522	ppb	43.761	110.214		11.952
118	Sn	|		1104.487	-0.232958	ppb	5.143	4.467		1960.135
121	Sb	|		2882.514	0.277191	ppb	6.335	11.424		1151.158
135	Ba	|		36365.145	37.452923	ppb	3.140	2.692		20.000
165	Ho-IS	|		248921.301		ppb	1.351			234084.803
159	Tb-IS	|		227457.743		ppb	1.083			196737.690
207	Pb	|		1571.145	0.102433	ppb	1.804	3.117		258.890
203	Tl	|		37.778	0.003075	ppb	22.205	69.340		28.889
209	Bi-IS	>		140056.572		ppb	0.864			155849.992
51	V	|		2140.160	2.802346	ppb	3.748	3.742		14.444
59	Co	|		611.124	0.314797	ppb	3.507	4.076		11.111
60	Ni	|		2864.732	2.817288	ppb	3.292	3.937		28.889
75	As	|		2196.539	2.655312	ppb	8.695	13.355		664.006
71	Ga-ISK	>		124122.466		ppb	0.737			100065.929
82	Se-2	|		-2323.942	-50.516903	ppb	3.914	3.824		1.541
107	Ag-1	|		37.778	-0.015561	ppb	13.478	7.430		83.334
115	In-ISK	|		100822.781		ppb	0.890			89051.045
45	Sc-ISK	>		345578.814		ppb	0.217			251872.292
23	Na	|		46417741.587	80131.293398	ppb	1.697	1.504		3175.353
39	K	|		7331422.137	4903.486506	ppb	1.896	1.935		133080.351
24	Mg	|		4762667.192	7100.068720	ppb	0.350	0.471		115.000
159	Tb-ISK	|		191033.026		ppb	1.671			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
 Ga-ISK 71
 Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25641-A-1-A @5

Autosampler Position: 424

Sample Date/Time: Thursday, April 16, 2020 21:00:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25641-A-1-A @5.288

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		33868.992		ppb		0.751		25891.230
9	Be	|		10.000	-0.006901	ppb	33.333	30.408		15.556
10	B	|		31467.968	78.534075	ppb	2.550	3.771		271.114
27	Al	|		194608.813	20.089476	ppb	0.458	3.746		6575.959
43	Ca-2	|		84865.090	4639.642654	ppb	5.085	1.787		35.000
49	Ti	|		3055.883	3.753666	ppb	3.671	4.565		220.002
52	Cr	|		38440.548	2.679650	ppb	1.715	3.702		8384.682
55	Mn	|		183343.788	12.304632	ppb	2.045	2.207		683.350
57	Fe	|		246276.174	888.397909	ppb	3.295	0.868		7888.845
45	Sc-IS	>		1665415.470		ppb	3.968			1155169.664
66	Zn	|		55755.444	45.927527	ppb	5.081	1.190		473.341
86	Sr	|		28557.710	11.796218	ppb	6.188	2.257		-10.964
65	Cu	|		14518.569	7.764903	ppb	3.994	1.340		103.094
69	Ga-IS	|		426188.449		ppb	4.424			301042.064
95	Mo	|		3103.671	1.301465	ppb	2.638	3.638		128.889
115	In-IS	>		268644.411		ppb	2.002			229836.379
111	Cd	|		24.593	0.006376	ppb	16.318	41.615		11.952
118	Sn	|		951.143	-0.265596	ppb	9.497	5.459		1960.135
121	Sb	|		2106.822	0.134829	ppb	2.848	3.126		1151.158
135	Ba	|		7964.446	8.103388	ppb	5.256	3.856		20.000
165	Ho-IS	|		252605.464		ppb	2.021			234084.803
159	Tb-IS	|		228266.283		ppb	1.786			196737.690
207	Pb	|		642.228	0.029670	ppb	2.340	3.614		258.890
203	Tl	|		14.444	-0.003133	ppb	13.323	15.595		28.889
209	Bi-IS	>		144977.488		ppb	0.088			155849.992
51	V	|		2133.493	2.684399	ppb	4.299	5.355		14.444
59	Co	|		422.229	0.206647	ppb	14.671	15.643		11.111
60	Ni	|		1817.893	1.703937	ppb	0.741	1.766		28.889
75	As	|		2294.843	2.670448	ppb	8.906	12.663		664.006
71	Ga-ISK	>		129169.153		ppb	1.018			100065.929
82	Se-2	|		4242.208	88.497733	ppb	1.946	1.615		1.541
107	Ag-1	|		27.778	-0.018202	ppb	48.497	16.674		83.334
115	In-ISK	|		102067.401		ppb	0.721			89051.045
45	Sc-ISK	>		353498.162		ppb	0.848			251872.292
23	Na	|		33110095.747	55883.457215	ppb	1.526	2.321		3175.353
39	K	|		2315664.949	1427.691863	ppb	1.116	2.126		133080.351
24	Mg	|		1163252.863	1695.111968	ppb	1.116	0.728		115.000
159	Tb-ISK	|		194494.383		ppb	0.467			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
Ga-ISK 71
Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25642-A-1-A @5

Autosampler Position: 425

Sample Date/Time: Thursday, April 16, 2020 21:02:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25642-A-1-A @5.289

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	33752.064		ppb		2.545		25891.230
9	Be	|	17.778	-0.002598	ppb	65.848	250.834		15.556
10	B	|	34491.609	86.405624	ppb	2.746	1.987		271.114
27	Al	|	148191.424	15.093830	ppb	1.401	0.710		6575.959
43	Ca-2	|	100870.111	5535.288918	ppb	3.238	2.430		35.000
49	Ti	|	2821.390	3.443178	ppb	3.662	3.630		220.002
52	Cr	|	38010.577	2.646542	ppb	4.765	6.157		8384.682
55	Mn	|	245393.246	16.538111	ppb	4.236	3.550		683.350
57	Fe	|	191454.034	683.362544	ppb	4.740	4.353		7888.845
45	Sc-IS	>	1659552.932		ppb	0.840			1155169.664
66	Zn	|	79583.582	66.039176	ppb	4.533	3.744		473.341
86	Sr	|	48149.035	19.959869	ppb	6.589	5.791		-10.964
65	Cu	|	12709.175	6.809799	ppb	4.256	3.476		103.094
69	Ga-IS	|	422944.189		ppb	6.499			301042.064
95	Mo	|	2106.822	0.859494	ppb	1.825	1.366		128.889
115	In-IS	>	265582.887		ppb	0.935			229836.379
111	Cd	|	22.242	0.005080	ppb	25.631	66.249		11.952
118	Sn	|	797.800	-0.293934	ppb	4.429	2.846		1960.135
121	Sb	|	2039.034	0.127002	ppb	1.808	2.867		1151.158
135	Ba	|	8494.754	8.744717	ppb	6.482	5.766		20.000
165	Ho-IS	|	251890.907		ppb	2.218			234084.803
159	Tb-IS	|	225830.359		ppb	2.055			196737.690
207	Pb	|	448.892	0.015571	ppb	4.774	10.425		258.890
203	Tl	|	15.556	-0.002836	ppb	44.607	61.235		28.889
209	Bi-IS	>	144152.555		ppb	0.626			155849.992
51	V	|	2377.976	2.999552	ppb	4.701	4.991		14.444
59	Co	|	423.340	0.207449	ppb	5.512	5.124		11.111
60	Ni	|	1875.679	1.762103	ppb	4.200	3.700		28.889
75	As	|	1930.092	1.997687	ppb	26.979	47.698		664.006
71	Ga-ISK	>	128930.322		ppb	0.690			100065.929
82	Se-2	|	2730.971	57.071430	ppb	2.903	3.568		1.541
107	Ag-1	|	22.222	-0.019451	ppb	56.789	14.650		83.334
115	In-ISK	|	104435.709		ppb	1.073			89051.045
45	Sc-ISK	>	355760.890		ppb	0.199			251872.292
23	Na	|	34507630.948	57864.239755	ppb	1.135	0.971		3175.353
39	K	|	2604416.893	1610.060233	ppb	0.841	1.120		133080.351
24	Mg	|	1400624.097	2028.045211	ppb	1.437	1.241		115.000
159	Tb-ISK	|	194306.679		ppb	1.433			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
 Ga-ISK 71
 Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25643-B-1-A @5

Autosampler Position: 426

Sample Date/Time: Thursday, April 16, 2020 21:05:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25643-B-1-A @5.290

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		35364.837		ppb		1.442		25891.230
9	Be	|		8.889	-0.007699	ppb	57.282	35.171		15.556
10	B	|		40202.044	99.090585	ppb	0.516	3.227		271.114
27	Al	|		95006.052	9.122151	ppb	1.864	1.421		6575.959
43	Ca-2	|		133917.005	7215.619943	ppb	3.766	1.160		35.000
49	Ti	|		2949.193	3.545773	ppb	2.480	1.221		220.002
52	Cr	|		39698.444	2.745586	ppb	2.784	0.635		8384.682
55	Mn	|		246730.723	16.330085	ppb	1.949	0.787		683.350
57	Fe	|		342911.398	1234.668625	ppb	2.204	0.474		7888.845
45	Sc-IS	>		1690257.282		ppb	2.655			1155169.664
66	Zn	>		143245.958	117.111366	ppb	5.373	2.768		473.341
86	Sr	|		73628.024	29.963944	ppb	4.511	1.901		-10.964
65	Cu	|		12671.749	6.664812	ppb	3.763	1.356		103.094
69	Ga-IS	|		430633.776		ppb	4.806			301042.064
95	Mo	|		2331.302	0.940894	ppb	6.110	5.597		128.889
115	In-IS	>		264162.075		ppb	1.967			229836.379
111	Cd	|		29.549	0.009522	ppb	44.915	82.734		11.952
118	Sn	|		860.026	-0.280443	ppb	5.069	4.191		1960.135
121	Sb	|		2241.287	0.165564	ppb	1.527	7.343		1151.158
135	Ba	|		8210.138	8.497581	ppb	3.486	1.992		20.000
165	Ho-IS	|		253524.757		ppb	1.814			234084.803
159	Tb-IS	|		229890.912		ppb	1.769			196737.690
207	Pb	|		670.006	0.032123	ppb	6.214	11.711		258.890
203	Tl	|		21.111	-0.001422	ppb	45.580	170.343		28.889
209	Bi-IS	>		143919.213		ppb	1.607			155849.992
51	V	|		2494.663	3.170400	ppb	5.406	5.248		14.444
59	Co	|		652.237	0.325860	ppb	5.812	4.744		11.111
60	Ni	|		2442.431	2.322633	ppb	4.261	4.303		28.889
75	As	|		2128.286	2.396501	ppb	8.695	12.500		664.006
71	Ga-ISK	>		128008.802		ppb	1.294			100065.929
82	Se-2	|		3194.040	67.234149	ppb	0.122	1.410		1.541
107	Ag-1	|		31.111	-0.017362	ppb	26.964	11.020		83.334
115	In-ISK	|		103844.061		ppb	0.867			89051.045
45	Sc-ISK	>		354479.914		ppb	1.020			251872.292
23	Na	|		41823666.430	70393.946708	ppb	0.897	1.519		3175.353
39	K	|		3847210.146	2447.341610	ppb	1.135	0.388		133080.351
24	Mg	|		2037323.977	2960.035441	ppb	5.911	5.113		115.000
159	Tb-ISK	|		196517.784		ppb	0.344			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
Ga-ISK 71
Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25445-H-1-E

Autosampler Position: 427

Sample Date/Time: Thursday, April 16, 2020 21:08:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25445-H-1-E.291

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		46479.941		ppb		1.125		25891.230
9	Be	|		21.111	0.001866	ppb	79.472	609.813		15.556
10	B	|		654511.024	2037.211867	ppb	1.093	1.126		271.114
27	Al	|		98030.765	12.080289	ppb	0.607	2.226		6575.959
43	Ca-2	|		6141623.958	414387.159598	ppb	1.862	0.295		35.000
49	Ti	|		12347.562	20.414506	ppb	3.946	2.319		220.002
52	Cr	|		18114.820	1.042926	ppb	3.451	12.145		8384.682
55	Mn	|		10105674.856	840.457152	ppb	0.659	1.521		683.350
57	Fe	|		576628.030	2645.153882	ppb	3.187	1.182		7888.845
45	Sc-IS	>		1350618.464		ppb	2.116			1155169.664
66	Zn	|		21626.358	21.685051	ppb	0.736	2.957		473.341
86	Sr	|		7714477.486	3930.173435	ppb	0.863	1.342		-10.964
65	Cu	|		42464.453	28.207570	ppb	3.335	1.239		103.094
69	Ga-IS	|		320144.149		ppb	2.194			301042.064
95	Mo	|		12707.875	6.900778	ppb	2.739	0.745		128.889
115	In-IS	>		182929.296		ppb	0.992			229836.379
111	Cd	|		78.869	0.060690	ppb	31.145	34.714		11.952
118	Sn	|		1048.928	-0.148833	ppb	9.262	17.385		1960.135
121	Sb	|		5791.174	1.268151	ppb	2.628	2.248		1151.158
135	Ba	|		109642.510	164.335798	ppb	1.099	0.574		20.000
165	Ho-IS	|		198416.606		ppb	2.138			234084.803
159	Tb-IS	|		183316.665		ppb	1.656			196737.690
207	Pb	|		2655.652	0.320466	ppb	1.781	1.102		258.890
203	Tl	|		23.333	0.003362	ppb	24.744	74.573		28.889
209	Bi-IS	>		84128.107		ppb	0.755			155849.992
51	V	|		6732.699	12.383617	ppb	3.888	3.491		14.444
59	Co	|		532.232	0.384215	ppb	7.955	8.312		11.111
60	Ni	|		3340.391	4.606514	ppb	3.026	2.707		28.889
75	As	|		19802.535	51.878720	ppb	0.119	0.617		664.006
71	Ga-ISK	>		88929.275		ppb	0.560			100065.929
82	Se-2	|		-14508.831	-439.905754	ppb	2.663	2.929		1.541
107	Ag-1	|		43.333	-0.010178	ppb	15.385	21.126		83.334
115	In-ISK	|		74811.183		ppb	2.333			89051.045
45	Sc-ISK	>		263261.497		ppb	0.924			251872.292
23	Na	|		S	S	ppb	S	S		3175.353
39	K	|		249864755.780	224844.339588	ppb	1.385	0.571		133080.351
24	Mg	|		370020539.582	724073.465704	ppb	2.188	1.432		115.000
159	Tb-ISK	|		156726.547		ppb	1.842			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Bi-IS 209

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25191-B-1-A @10

Autosampler Position: 410

Sample Date/Time: Thursday, April 16, 2020 21:11:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25191-B-1-A @10.292

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		37054.670		ppb		1.670		25891.230
9	Be	|		31.111	0.004716	ppb	37.627	140.461		15.556
10	B	|		10189.189	24.507974	ppb	1.932	2.970		271.114
27	Al	|		536295.433	56.588896	ppb	1.875	3.293		6575.959
43	Ca-2	|		125835.308	6819.928190	ppb	2.322	3.052		35.000
49	Ti	|		4196.172	5.262811	ppb	3.460	5.697		220.002
52	Cr	|		27221.479	1.511720	ppb	2.674	4.186		8384.682
55	Mn	|		53289.255	3.493988	ppb	2.732	2.566		683.350
57	Fe	|		39849.984	106.260275	ppb	3.135	2.937		7888.845
45	Sc-IS	>		1681122.748		ppb	1.953			1155169.664
66	Zn	|		65293.476	53.394744	ppb	4.008	4.020		473.341
86	Sr	|		47733.510	19.551989	ppb	3.458	5.129		-10.964
65	Cu	|		21260.368	11.298537	ppb	5.200	4.461		103.094
69	Ga-IS	|		426379.234		ppb	3.640			301042.064
95	Mo	|		1443.407	0.554551	ppb	8.327	9.549		128.889
115	In-IS	>		267776.151		ppb	0.922			229836.379
111	Cd	|		22.524	0.005160	ppb	31.782	83.801		11.952
118	Sn	|		668.905	-0.320971	ppb	14.221	5.625		1960.135
121	Sb	|		2020.143	0.120685	ppb	6.173	18.515		1151.158
135	Ba	|		13180.529	13.475361	ppb	4.238	4.560		20.000
165	Ho-IS	|		254147.565		ppb	0.998			234084.803
159	Tb-IS	|		232905.563		ppb	0.975			196737.690
207	Pb	|		1651.148	0.103794	ppb	1.992	1.747		258.890
203	Tl	|		27.778	0.000234	ppb	54.111	1642.789		28.889
209	Bi-IS	>		145524.250		ppb	1.657			155849.992
51	V	|		1035.593	1.338006	ppb	4.089	4.423		14.444
59	Co	|		252.224	0.124956	ppb	13.499	13.316		11.111
60	Ni	|		1184.494	1.139207	ppb	5.966	7.217		28.889
75	As	|		4678.749	7.421429	ppb	3.684	5.595		664.006
71	Ga-ISK	>		124662.713		ppb	1.018			100065.929
82	Se-2	|		-5102.189	-110.382348	ppb	0.710	0.509		1.541
107	Ag-1	|		16.667	-0.020594	ppb	52.915	9.965		83.334
115	In-ISK	|		101825.352		ppb	0.342			89051.045
45	Sc-ISK	>		337765.253		ppb	0.334			251872.292
23	Na	|		33371555.955	58940.556668	ppb	1.046	0.754		3175.353
39	K	|		62182703.165	43514.111735	ppb	0.373	0.707		133080.351
24	Mg	|		1743705.830	2659.431035	ppb	0.635	0.314		115.000
159	Tb-ISK	|		197735.099		ppb	0.614			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
 Ga-ISK 71
 Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25191-B-2-A @10

Autosampler Position: 411

Sample Date/Time: Thursday, April 16, 2020 21:13:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\570-25191-B-2-A @10.293

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31861.070		ppb		3.207		25891.230
9	Be	|		66.667	0.025817	ppb	15.000	21.173		15.556
10	B	|		7050.628	17.332177	ppb	0.304	2.830		271.114
27	Al	|		34625.266	2.832961	ppb	2.796	1.773		6575.959
43	Ca-2	|		76053.637	4277.559549	ppb	2.159	0.351		35.000
49	Ti	|		3029.210	3.834044	ppb	3.736	4.534		220.002
52	Cr	|		23792.028	1.257830	ppb	2.728	0.926		8384.682
55	Mn	|		44705.437	3.034178	ppb	2.960	0.854		683.350
57	Fe	|		25208.910	55.015114	ppb	3.713	2.551		7888.845
45	Sc-IS	>		1619203.175		ppb		2.357		1155169.664
66	Zn	|		45924.963	38.814868	ppb	5.566	3.391		473.341
86	Sr	|		2680.577	1.123818	ppb	135.048	134.203		-10.964
65	Cu	|		17320.073	9.539664	ppb	6.109	3.813		103.094
69	Ga-IS	|		417248.502		ppb	5.744			301042.064
95	Mo	|		2109.045	0.885041	ppb	4.449	7.388		128.889
115	In-IS	>		260892.457		ppb	3.246			229836.379
111	Cd	|		61.127	0.029213	ppb	6.592	5.469		11.952
118	Sn	|		797.800	-0.291256	ppb	7.594	2.516		1960.135
121	Sb	|		1874.567	0.103860	ppb	0.513	12.147		1151.158
135	Ba	|		6400.323	6.704185	ppb	2.879	1.140		20.000
165	Ho-IS	|		244167.070		ppb	1.626			234084.803
159	Tb-IS	|		223445.726		ppb	2.471			196737.690
207	Pb	|		1620.036	0.103010	ppb	2.426	4.507		258.890
203	Tl	|		121.112	0.024004	ppb	22.247	27.868		28.889
209	Bi-IS	>		143758.720		ppb	1.604			155849.992
51	V	|		1261.167	1.666309	ppb	6.235	7.053		14.444
59	Co	|		857.804	0.451303	ppb	1.917	2.305		11.111
60	Ni	|		1643.428	1.624697	ppb	2.729	3.542		28.889
75	As	|		3165.695	4.621452	ppb	5.526	8.385		664.006
71	Ga-ISK	>		122352.857		ppb	0.806			100065.929
82	Se-2	|		-4355.652	-96.023623	ppb	2.165	2.697		1.541
107	Ag-1	|		45.556	-0.013573	ppb	36.829	29.088		83.334
115	In-ISK	|		101468.235		ppb	0.851			89051.045
45	Sc-ISK	>		339099.778		ppb	0.782			251872.292
23	Na	|		13859461.299	24379.505052	ppb	0.947	1.435		3175.353
39	K	|		32838158.266	22830.857427	ppb	0.967	1.550		133080.351
24	Mg	|		1412622.343	2146.078307	ppb	0.240	1.013		115.000
159	Tb-ISK	|		190393.215		ppb	1.599			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
Ga-ISK 71
Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, April 16, 2020 21:16:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\b.294

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		31466.864		ppb		3.270		25891.230
9	Be	|		6.667	-0.008706	ppb	50.000	20.764		15.556
10	B	|		1561.197	3.135252	ppb	3.916	10.323		271.114
27	Al	|		7937.761	-0.129167	ppb	2.551	23.082		6575.959
43	Ca-2	|		1006.702	54.795449	ppb	7.100	8.831		35.000
49	Ti	|		2983.645	3.832938	ppb	2.929	4.025		220.002
52	Cr	|		17943.486	0.675346	ppb	1.730	6.247		8384.682
55	Mn	|		4787.469	0.270702	ppb	1.778	3.360		683.350
57	Fe	|		9127.363	-6.991745	ppb	4.181	1.688		7888.845
45	Sc-IS	|>		1595867.454		ppb	3.857			1155169.664
66	Zn	|		12008.393	9.877876	ppb	6.559	3.333		473.341
86	Sr	|		-92742.882	-39.998068	ppb	1.512	2.434		-10.964
65	Cu	|		9925.103	5.513517	ppb	6.334	3.443		103.094
69	Ga-IS	|		409185.772		ppb	5.028			301042.064
95	Mo	|		186.668	0.004392	ppb	15.872	388.365		128.889
115	In-IS	|>		261201.748		ppb	2.210			229836.379
111	Cd	|		18.497	0.003066	ppb	57.665	217.654		11.952
118	Sn	|		545.566	-0.342706	ppb	7.160	2.067		1960.135
121	Sb	|		1371.177	0.011488	ppb	6.695	140.898		1151.158
135	Ba	|		26.667	0.004093	ppb	12.500	71.512		20.000
165	Ho-IS	|		239867.762		ppb	2.390			234084.803
159	Tb-IS	|		217312.918		ppb	1.671			196737.690
207	Pb	|		301.112	0.004220	ppb	3.382	12.789		258.890
203	Tl	|		13.333	-0.003455	ppb	25.000	22.778		28.889
209	Bi-IS	|>		146514.261		ppb	1.438			155849.992
51	V	|		1357.842	1.727370	ppb	2.846	2.739		14.444
59	Co	|		25.556	0.005911	ppb	52.715	118.059		11.111
60	Ni	|		895.584	0.834823	ppb	9.822	9.389		28.889
75	As	|		2293.910	2.739621	ppb	6.042	8.457		664.006
71	Ga-ISK	|>		127093.982		ppb	0.800			100065.929
82	Se-2	|		-3524.498	-74.803578	ppb	0.679	0.326		1.541
107	Ag-1	|		60.000	-0.010576	ppb	58.002	76.944		83.334
115	In-ISK	|		102005.967		ppb	0.765			89051.045
45	Sc-ISK	|>		338518.479		ppb	0.840			251872.292
23	Na	|		870702.471	1527.221724	ppb	1.335	1.858		3175.353
39	K	|		277682.064	69.221752	ppb	1.503	6.576		133080.351
24	Mg	|		1456.742	1.983269	ppb	11.962	14.240		115.000
159	Tb-ISK	|		188507.711		ppb	1.276			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
Ga-ISK 71
Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Thursday, April 16, 2020 21:19:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\b.295

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS			30725.240		ppb			2.299			25891.230
9	Be			16.667	-0.002746	ppb			34.641	121.044		15.556
10	B			1342.285	2.587691	ppb			5.588	9.843		271.114
27	Al			7941.096	-0.120534	ppb			2.199	5.235		6575.959
43	Ca-2			895.028	48.906467	ppb			4.029	7.018		35.000
49	Ti			2784.716	3.584628	ppb			3.058	1.734		220.002
52	Cr			18474.163	0.749916	ppb			1.915	2.364		8384.682
55	Mn			4103.923	0.225178	ppb			3.803	3.033		683.350
57	Fe			9439.789	-5.404128	ppb			4.738	17.213		7888.845
45	Sc-IS	>		1580497.938		ppb			2.823			1155169.664
66	Zn			10916.398	9.033503	ppb			4.736	6.482		473.341
86	Sr			-80835.170	-35.192331	ppb			1.529	2.429		-10.964
65	Cu			9427.521	5.290184	ppb			2.386	3.741		103.094
69	Ga-IS			408349.070		ppb			5.874			301042.064
95	Mo			140.001	-0.017086	ppb			4.124	4.997		128.889
115	In-IS	>		263170.838		ppb			1.056			229836.379
111	Cd			15.262	0.000939	ppb			45.389	438.934		11.952
118	Sn			495.564	-0.353684	ppb			9.133	2.286		1960.135
121	Sb			1286.725	-0.005743	ppb			6.570	236.259		1151.158
135	Ba			28.889	0.006266	ppb			13.323	68.720		20.000
165	Ho-IS			240451.061		ppb			4.035			234084.803
159	Tb-IS			217543.883		ppb			3.226			196737.690
207	Pb			280.001	0.003305	ppb			4.124	25.708		258.890
203	Tl			8.889	-0.004495	ppb			57.282	28.692		28.889
209	Bi-IS	>		142169.554		ppb			1.270			155849.992
51	V			1461.186	1.859642	ppb			7.775	7.419		14.444
59	Co			35.556	0.011016	ppb			23.593	38.174		11.111
60	Ni			1084.486	1.018655	ppb			5.786	6.152		28.889
75	As			1701.047	1.618014	ppb			5.360	7.767		664.006
71	Ga-ISK	>		127147.868		ppb			1.643			100065.929
82	Se-2			-3042.315	-64.545448	ppb			1.994	0.555		1.541
107	Ag-1			37.778	-0.015777	ppb			35.660	19.410		83.334
115	In-ISK			101401.624		ppb			1.773			89051.045
45	Sc-ISK	>		340120.308		ppb			0.846			251872.292
23	Na			758659.157	1323.426024	ppb			0.632	1.404		3175.353
39	K			226993.679	32.966362	ppb			0.546	6.397		133080.351
24	Mg			975.034	1.242696	ppb			14.676	18.258		115.000
159	Tb-ISK			188913.594		ppb			0.702			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
 Ga-ISK 71
 Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Thursday, April 16, 2020 21:22:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCV-210770.296

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30570.493		ppb		4.322		25891.230
9	Be	|		171602.323	101.532322	ppb		0.781	3.080	15.556
10	B	|		98589.135	262.213490	ppb		2.230	4.555	271.114
27	Al	|		790650.188	89.587922	ppb		3.265	5.003	6575.959
43	Ca-2	|		93094.160	5380.271383	ppb		2.739	3.082	35.000
49	Ti	|		75988.340	109.580872	ppb		2.887	4.357	220.002
52	Cr	|		995506.841	105.672932	ppb		3.697	4.847	8384.682
55	Mn	|		1343538.431	95.695992	ppb		3.198	4.052	683.350
57	Fe	|		1301927.294	5159.004820	ppb		3.471	3.464	7888.845
45	Sc-IS	>		1576440.313		ppb		2.809		1155169.664
66	Zn	|		131365.971	115.262460	ppb		5.951	6.743	473.341
86	Sr	|		126587.522	55.274477	ppb		2.568	3.611	-10.964
65	Cu	|		201130.656	114.782043	ppb		3.588	4.347	103.094
69	Ga-IS	|		435262.980		ppb		5.240		301042.064
95	Mo	|		190765.494	89.773428	ppb		1.699	2.351	128.889
115	In-IS	>		260997.671		ppb		3.874		229836.379
111	Cd	|		171593.213	105.474243	ppb		1.747	2.406	11.952
118	Sn	|		488773.653	99.308778	ppb		1.785	4.560	1960.135
121	Sb	|		544837.852	99.230229	ppb		3.275	5.727	1151.158
135	Ba	|		109708.174	115.374030	ppb		5.203	6.800	20.000
165	Ho-IS	|		241922.599		ppb		4.316		234084.803
159	Tb-IS	|		219585.398		ppb		5.110		196737.690
207	Pb	|		1389696.693	103.561285	ppb		1.538	3.519	258.890
203	Tl	|		423665.527	107.704466	ppb		2.673	4.714	28.889
209	Bi-IS	>		143847.452		ppb		1.997		155849.992
51	V	|		85856.306	113.079918	ppb		3.381	4.119	14.444
59	Co	|		203790.428	107.103622	ppb		2.265	2.270	11.111
60	Ni	|		106520.158	105.778179	ppb		1.511	2.568	28.889
75	As	|		55333.616	105.183689	ppb		0.834	0.495	664.006
71	Ga-ISK	>		124440.795		ppb		1.071		100065.929
82	Se-2	|		2045.808	44.257323	ppb		8.540	7.538	1.541
107	Ag-1	|		392543.868	92.840529	ppb		1.146	0.165	83.334
115	In-ISK	|		101738.651		ppb		0.380		89051.045
45	Sc-ISK	>		342117.627		ppb		1.575		251872.292
23	Na	|		3561587.561	6204.392145	ppb		0.681	0.981	3175.353
39	K	|		7500711.218	5072.558783	ppb		0.308	1.731	133080.351
24	Mg	|		3368594.082	5074.182890	ppb		1.536	3.103	115.000
159	Tb-ISK	|		188316.427		ppb		0.405		177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS	45
Zn	66
Sr	86
Cu	65
Ba	135
V	51
Ga-ISK	71
Se-2	82

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Thursday, April 16, 2020 21:24:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.297

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		30882.250		ppb		2.753		25891.230
9	Be	|		18.889	-0.001410	ppb	10.189	101.484		15.556
10	B	|		1390.068	2.706336	ppb	6.913	11.197		271.114
27	Al	|		5398.799	-0.412346	ppb	3.772	5.300		6575.959
43	Ca-2	|		778.355	42.121216	ppb	9.317	13.028		35.000
49	Ti	|		2532.447	3.215395	ppb	3.464	6.299		220.002
52	Cr	|		18535.355	0.751876	ppb	2.431	3.949		8384.682
55	Mn	|		3642.687	0.191943	ppb	2.080	4.355		683.350
57	Fe	|		10043.533	-3.085219	ppb	4.123	29.461		7888.845
45	Sc-IS	>		1584182.511		ppb	3.016			1155169.664
66	Zn	|		9351.964	7.626045	ppb	8.607	7.201		473.341
86	Sr	|		-64369.122	-27.951749	ppb	2.186	1.172		-10.964
65	Cu	|		8442.726	4.714732	ppb	4.295	2.266		103.094
69	Ga-IS	|		406174.836		ppb	5.025			301042.064
95	Mo	|		466.674	0.135397	ppb	13.382	16.585		128.889
115	In-IS	>		259887.972		ppb	2.095			229836.379
111	Cd	|		23.464	0.006169	ppb	30.068	72.012		11.952
118	Sn	|		3048.104	0.170022	ppb	7.157	21.158		1960.135
121	Sb	|		1396.735	0.017569	ppb	7.671	124.329		1151.158
135	Ba	|		27.778	0.005603	ppb	42.143	231.946		20.000
165	Ho-IS	|		233967.329		ppb	1.551			234084.803
159	Tb-IS	|		214756.854		ppb	1.492			196737.690
207	Pb	|		294.446	0.004243	ppb	9.220	49.548		258.890
203	Tl	|		87.778	0.015648	ppb	7.905	12.773		28.889
209	Bi-IS	>		143175.098		ppb	1.426			155849.992
51	V	|		1511.191	1.928491	ppb	3.215	5.047		14.444
59	Co	|		47.778	0.017293	ppb	22.427	29.204		11.111
60	Ni	|		1246.721	1.179344	ppb	6.968	9.020		28.889
75	As	|		1395.224	1.045828	ppb	2.576	5.958		664.006
71	Ga-ISK	>		126951.713		ppb	1.818			100065.929
82	Se-2	|		-2291.553	-48.730688	ppb	3.136	4.745		1.541
107	Ag-1	|		177.779	0.016700	ppb	10.662	25.031		83.334
115	In-ISK	|		100556.407		ppb	1.781			89051.045
45	Sc-ISK	>		338367.111		ppb	0.668			251872.292
23	Na	|		639664.808	1120.408526	ppb	0.919	0.815		3175.353
39	K	|		201547.451	15.951725	ppb	1.073	10.349		133080.351
24	Mg	|		990.034	1.272167	ppb	3.312	3.749		115.000
159	Tb-ISK	|		187192.475		ppb	0.529			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
 Ga-ISK 71
 Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Thursday, April 16, 2020 21:27:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICSA-30518.298

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		33020.350		ppb			1.946			25891.230
9	Be	|		21.111	-0.001242	ppb			9.116	110.063		15.556
10	B	|		1266.723	2.069594	ppb			2.294	5.762		271.114
27	Al	|		83948103.516	8691.300778	ppb			2.326	0.762		6575.959
43	Ca-2	|		564428.406	29492.096901	ppb			2.876	0.779		35.000
49	Ti	|		152039.239	198.529771	ppb			0.613	2.568		220.002
52	Cr	|		25566.191	1.253630	ppb			0.945	5.462		8384.682
55	Mn	|		13582.014	0.809424	ppb			3.438	7.060		683.350
57	Fe	|		6901389.768	24877.924434	ppb			3.268	1.225		7888.845
45	Sc-IS	>		1743938.119		ppb			3.084			1155169.664
66	Zn	|		7575.345	5.463148	ppb			5.384	3.217		473.341
86	Sr	|		-61277.180	-24.182102	ppb			1.281	3.434		-10.964
65	Cu	|		7369.389	3.720321	ppb			5.655	2.645		103.094
69	Ga-IS	|		445190.072		ppb			5.433			301042.064
95	Mo	|		390970.780	166.335902	ppb			2.943	0.251		128.889
115	In-IS	>		275719.909		ppb			2.556			229836.379
111	Cd	|		-57.685	-0.042314	ppb			79.228	65.563		11.952
118	Sn	|		1362.287	-0.191170	ppb			8.681	8.546		1960.135
121	Sb	|		1661.208	0.048627	ppb			2.672	30.983		1151.158
135	Ba	|		218.891	0.194308	ppb			17.518	21.665		20.000
165	Ho-IS	|		265290.257		ppb			2.191			234084.803
159	Tb-IS	|		239552.132		ppb			1.634			196737.690
207	Pb	|		344.446	0.006926	ppb			12.100	44.683		258.890
203	Tl	|		38.889	0.002746	ppb			21.571	75.891		28.889
209	Bi-IS	>		149336.522		ppb			0.787			155849.992
51	V	|		2196.836	2.822295	ppb			4.230	3.697		14.444
59	Co	|		151.112	0.070872	ppb			5.551	6.259		11.111
60	Ni	|		1568.975	1.497268	ppb			0.649	0.350		28.889
75	As	|		1443.944	1.147735	ppb			4.521	11.094		664.006
71	Ga-ISK	>		126498.731		ppb			0.758			100065.929
82	Se-2	|		-2318.868	-49.456436	ppb			3.100	2.558		1.541
107	Ag-1	|		195.557	0.020982	ppb			11.350	23.779		83.334
115	In-ISK	|		102189.441		ppb			0.814			89051.045
45	Sc-ISK	>		349007.682		ppb			1.132			251872.292
23	Na	|		15157135.588	25906.006238	ppb			1.125	1.446		3175.353
39	K	|		14647814.937	9823.990150	ppb			0.312	1.120		133080.351
24	Mg	|		6548712.372	9667.256871	ppb			0.489	0.651		115.000
159	Tb-ISK	|		193367.895		ppb			0.163			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
 Ga-ISK 71
 Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Thursday, April 16, 2020 21:30:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\ICSAB-30517.299

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33848.950		ppb		1.705		25891.230
9	Be	|	10.000	-0.007231	ppb	88.192	66.097		15.556
10	B	|	3149.236	6.511215	ppb	2.511	4.602		271.114
27	Al	|	86359452.082	8824.753276	ppb	0.428	1.660		6575.959
43	Ca-2	|	577034.844	29751.975767	ppb	3.009	1.330		35.000
49	Ti	|	156739.884	201.896424	ppb	2.198	0.914		220.002
52	Cr	|	217334.085	19.576373	ppb	4.581	3.286		8384.682
55	Mn	|	279355.653	17.685335	ppb	4.075	2.411		683.350
57	Fe	|	7001520.835	24906.621172	ppb	3.140	1.676		7888.845
45	Sc-IS	>	1766949.265		ppb	1.694			1155169.664
66	Zn	|	18039.187	13.607256	ppb	5.983	4.521		473.341
86	Sr	|	-57531.098	-22.390495	ppb	3.140	1.994		-10.964
65	Cu	|	44814.695	22.734437	ppb	5.016	3.354		103.094
69	Ga-IS	|	447463.484		ppb	3.976			301042.064
95	Mo	|	396753.126	166.587687	ppb	1.957	0.275		128.889
115	In-IS	>	278471.905		ppb	2.262			229836.379
111	Cd	|	16656.407	9.586606	ppb	0.516	2.814		11.952
118	Sn	|	906.696	-0.280786	ppb	10.509	5.164		1960.135
121	Sb	|	1574.531	0.030788	ppb	6.493	57.332		1151.158
135	Ba	|	240.002	0.212276	ppb	10.486	9.972		20.000
165	Ho-IS	|	264941.706		ppb	2.266			234084.803
159	Tb-IS	|	240847.208		ppb	2.111			196737.690
207	Pb	|	288.890	0.002413	ppb	8.347	67.288		258.890
203	Tl	|	45.556	0.004100	ppb	18.414	49.267		28.889
209	Bi-IS	>	153127.423		ppb	0.340			155849.992
51	V	|	18402.958	23.622507	ppb	1.378	1.198		14.444
59	Co	|	38813.768	19.894518	ppb	0.461	0.530		11.111
60	Ni	|	21551.802	20.846269	ppb	1.296	0.797		28.889
75	As	|	6761.915	11.137240	ppb	2.403	3.217		664.006
71	Ga-ISK	>	127554.717		ppb	0.596			100065.929
82	Se-2	|	-1671.388	-35.366784	ppb	0.671	0.286		1.541
107	Ag-1	|	18921.413	4.342429	ppb	1.315	0.912		83.334
115	In-ISK	|	103431.040		ppb	0.483			89051.045
45	Sc-ISK	>	350838.153		ppb	0.684			251872.292
23	Na	|	15429405.558	26231.612045	ppb	1.044	0.368		3175.353
39	K	|	14869749.578	9921.395803	ppb	1.115	1.132		133080.351
24	Mg	|	6720837.741	9869.583501	ppb	1.145	1.510		115.000
159	Tb-ISK	|	198009.792		ppb	1.813			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS	45
Zn	66
In-IS	115
Ga-ISK	71
Se-2	82
Sc-ISK	45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Thursday, April 16, 2020 21:33:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200416E1\CCB-23446.300

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		33025.918		ppb		1.949		25891.230
9	Be	|		8.889	-0.007552	ppb	43.301	28.091		15.556
10	B	|		1062.262	1.718043	ppb	6.660	13.401		271.114
27	Al	|		14944.486	0.604578	ppb	3.426	9.101		6575.959
43	Ca-2	|		700.017	35.784645	ppb	11.339	10.482		35.000
49	Ti	|		1927.908	2.226611	ppb	0.853	3.174		220.002
52	Cr	|		20869.681	0.907945	ppb	1.933	2.331		8384.682
55	Mn	|		3719.375	0.186111	ppb	6.886	7.109		683.350
57	Fe	|		11513.534	0.838830	ppb	4.808	161.425		7888.845
45	Sc-IS	>		1653090.646		ppb	1.777			1155169.664
66	Zn	|		6608.199	4.981443	ppb	6.119	4.895		473.341
86	Sr	|		-54909.970	-22.843765	ppb	2.365	1.049		-10.964
65	Cu	|		6740.554	3.588024	ppb	4.021	2.365		103.094
69	Ga-IS	|		425190.840		ppb	4.826			301042.064
95	Mo	|		787.800	0.270616	ppb	9.745	10.688		128.889
115	In-IS	>		265042.007		ppb	3.432			229836.379
111	Cd	|		13.901	0.000010	ppb	35.46927875	0.76		11.952
118	Sn	|		994.479	-0.254433	ppb	11.089	6.777		1960.135
121	Sb	|		1022.259	-0.054470	ppb	5.312	28.356		1151.158
135	Ba	|		110.000	0.089866	ppb	13.887	16.115		20.000
165	Ho-IS	|		247370.501		ppb	1.880			234084.803
159	Tb-IS	|		225682.726		ppb	2.489			196737.690
207	Pb	|		186.667	-0.004401	ppb	11.152	31.519		258.890
203	Tl	|		15.556	-0.002959	ppb	61.859	80.143		28.889
209	Bi-IS	>		149196.198		ppb	0.999			155849.992
51	V	|		1800.113	2.292932	ppb	2.253	2.299		14.444
59	Co	|		41.111	0.013850	ppb	30.697	46.825		11.111
60	Ni	|		998.924	0.933887	ppb	11.358	12.032		28.889
75	As	|		1367.137	0.984761	ppb	12.375	32.939		664.006
71	Ga-ISK	>		127357.402		ppb	0.247			100065.929
82	Se-2	|		-1931.172	-40.920656	ppb	1.569	1.551		1.541
107	Ag-1	|		107.778	0.000400	ppb	6.438	416.338		83.334
115	In-ISK	|		102733.287		ppb	1.074			89051.045
45	Sc-ISK	>		342657.011		ppb	2.597			251872.292
23	Na	|		582153.700	1006.747163	ppb	0.915	3.499		3175.353
39	K	|		205706.025	17.133015	ppb	0.574	25.490		133080.351
24	Mg	|		1533.416	2.075016	ppb	9.369	13.137		115.000
159	Tb-ISK	|		190727.450		ppb	0.627			177663.426

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45
Ga-ISK 71
Sc-ISK 45

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Thursday, April 16, 2020 08:21:47

File Name: Default.tun

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1239	2062	0.710	
Mg 24	23.985	23.975	4622	2062	0.698	
In 115	114.904	114.875	22798	2059	0.696	
U	238.050	238.075	47434	2049	0.704	

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Friday, April 17, 2020 07:29:54

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2020\200417E1\STD Performance Check.006

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens. SD	Net Intens. RSD	Mode
Be	9.0		2622.4		2622.441	32.625	1.2	Standard
In	114.9		36118.8		36118.806	354.723	1.0	Standard
U	238.1		25889.2		25889.239	224.172	0.9	Standard
[CeO	155.9		580.0		0.019	0.001	4.5	Standard
> Ce	139.9		30682.9		30682.916	182.834	0.6	Standard
[Ce++	70.0		306.9		0.010	0.000	3.4	Standard
Bkgd	220.0		0.4		0.400	0.253	63.2	Standard

Current Conditions File Data

Current Value	Description
0.96	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.50	Deflector Voltage
1600.00	ICP RF Power
-1612.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-19.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-24.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.00	DRC Mode QRO
-2.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-12.00	KED Mode CRO
-22.50	KED Mode QRO
-15.00	KED Mode Cell Entrance Voltage
-38.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Friday, April 17, 2020 07:31:58

Page 1

475.00 KED Mode Axial Field Voltage

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Friday, April 17, 2020 09:24:41

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICIS-23447.068

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		33322.200		ppb		4.354		
9	Be	|		14.444		ppb		48.038		
10	B	|		2425.762		ppb		3.015		
27	Al	|		3659.358		ppb		4.742		
43	Ca-2	|		148.334		ppb		37.130		
49	Ti	|		242.224		ppb		7.579		
52	Cr	|		13618.712		ppb		1.931		
55	Mn	|		580.012		ppb		8.107		
57	Fe	|		11030.926		ppb		2.703		
45	Sc-IS	|>		1599575.121		ppb		2.010		
66	Zn	|		504.454		ppb		16.800		
86	Sr	|		12.994		ppb		206.277		
65	Cu	|		80.792		ppb		8.585		
69	Ga-IS	|		458023.235		ppb		4.613		
95	Mo	|		55.556		ppb		15.100		
115	In-IS	|>		255368.612		ppb		1.678		
111	Cd	|		6.550		ppb		50.784		
118	Sn	|		454.452		ppb		9.768		
121	Sb	|		263.336		ppb		15.810		
135	Ba	|		18.889		ppb		53.913		
165	Ho-IS	|		272257.135		ppb		1.917		
159	Tb-IS	|		243881.123		ppb		1.598		
207	Pb	|		67.778		ppb		2.839		
203	Tl	|		8.889		ppb		57.282		
209	Bi-IS	|>		158124.761		ppb		0.477		
51	V	|		76.667		ppb		23.007		
59	Co	|		8.889		ppb		78.062		
60	Ni	|		31.111		ppb		22.304		
75	As	|		750.178		ppb		2.616		
71	Ga-ISK	|>		128019.987		ppb		1.005		
82	Se-2	|		-0.498		ppb		1641.429		
107	Ag-1	|		17.778		ppb		60.273		
115	In-ISK	|		111696.848		ppb		0.353		
45	Sc-ISK	|>		306767.810		ppb		0.927		
23	Na	|		3597.120		ppb		4.705		
39	K	|		133299.014		ppb		0.075		
24	Mg	|		96.667		ppb		24.444		
159	Tb-ISK	|		210493.839		ppb		2.019		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Friday, April 17, 2020 09:27:27

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\IC-210761.069

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31637.217		ppb		0.874		33322.200
9	Be	|	276506.314	200.000000	ppb	1.623	2.380		14.444
10	B	|	168559.965	500.000000	ppb	1.958	2.312		2425.762
27	Al	|	1413586.586	200.000000	ppb	0.565	1.872		3659.358
43	Ca-2	|	173013.407	10200.000000	ppb	2.318	0.888		148.334
49	Ti	|	134654.066	200.000000	ppb	2.248	0.904		242.224
52	Cr	|	1790767.939	200.000000	ppb	1.355	0.921		13618.712
55	Mn	|	2622096.687	200.000000	ppb	1.060	1.081		580.012
57	Fe	|	2596689.389	10200.000000	ppb	1.709	1.041		11030.926
45	Sc-IS	>	1591048.006		ppb	1.579			1599575.121
66	Zn	|	264788.375	200.000000	ppb	3.973	2.428		504.454
86	Sr	|	371139.684	200.000000	ppb	1.794	0.484		12.994
65	Cu	|	384156.758	200.000000	ppb	3.453	1.934		80.792
69	Ga-IS	|	495959.153		ppb	2.559			458023.235
95	Mo	|	340890.628	200.000000	ppb	2.278	0.758		55.556
115	In-IS	>	253352.024		ppb	0.862			255368.612
111	Cd	|	328951.227	200.000000	ppb	0.157	0.761		6.550
118	Sn	|	923587.918	200.000000	ppb	1.477	0.840		454.452
121	Sb	|	1008474.800	200.000000	ppb	1.108	0.574		263.336
135	Ba	|	208074.253	200.000000	ppb	3.177	2.330		18.889
165	Ho-IS	|	275293.900		ppb	0.257			272257.135
159	Tb-IS	|	249420.947		ppb	1.158			243881.123
207	Pb	|	2915410.574	200.000000	ppb	0.822	0.563		67.778
203	Tl	|	875018.980	200.000000	ppb	0.604	0.282		8.889
209	Bi-IS	>	155042.356		ppb	0.337			158124.761
51	V	|	148867.229	200.000000	ppb	0.923	0.933		76.667
59	Co	|	388490.486	200.000000	ppb	0.512	1.836		8.889
60	Ni	|	203447.362	200.000000	ppb	0.622	1.522		31.111
75	As	|	103461.322	200.000000	ppb	1.756	2.751		750.178
71	Ga-ISK	>	127708.357		ppb	1.340			128019.987
82	Se-2	|	9457.649	200.000000	ppb	2.142	2.738		-0.498
107	Ag-1	|	842388.850	200.000000	ppb	0.320	1.584		17.778
115	In-ISK	|	112517.137		ppb	1.169			111696.848
45	Sc-ISK	>	303529.666		ppb	0.740			306767.810
23	Na	|	5149469.224	10200.000000	ppb	0.953	0.216		3597.120
39	K	|	12439895.970	10200.000000	ppb	1.137	0.403		133299.014
24	Mg	|	5900656.680	10200.000000	ppb	0.259	0.865		96.667
159	Tb-ISK	|	212151.816		ppb	1.140			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-446960

Autosampler Position: 206

Sample Date/Time: Friday, April 17, 2020 09:30:14

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICV-446960.070

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		32295.354		ppb		0.895		33322.200
9	Be	|		140146.332	102.787395	ppb		0.828	1.523	14.444
10	B	|		2595.791	0.660571	ppb		1.636	5.753	2425.762
27	Al	|		6724.917	0.451615	ppb		3.468	11.747	3659.358
43	Ca-2	|		86251.420	5151.823115	ppb		3.059	1.477	148.334
49	Ti	|		66745.662	100.340492	ppb		3.126	1.168	242.224
52	Cr	|		908549.992	102.158070	ppb		1.439	0.766	13618.712
55	Mn	|		1238242.811	95.753922	ppb		1.258	1.224	580.012
57	Fe	|		1241082.885	4920.726780	ppb		2.541	0.599	11030.926
45	Sc-IS	>		1569037.613		ppb		2.059		1599575.121
66	Zn	|		137824.575	105.381208	ppb		3.996	1.989	504.454
86	Sr	|		182569.216	99.771087	ppb		1.388	0.782	12.994
65	Cu	|		193542.025	102.150464	ppb		3.815	1.841	80.792
69	Ga-IS	|		450489.039		ppb		2.596		458023.235
95	Mo	|		172729.253	102.759598	ppb		1.612	0.463	55.556
115	In-IS	>		254011.679		ppb		0.621		255368.612
111	Cd	|		173321.242	105.097873	ppb		1.164	0.968	6.550
118	Sn	|		474395.477	102.410076	ppb		2.830	2.385	454.452
121	Sb	|		503130.232	99.486383	ppb		3.236	2.708	263.336
135	Ba	|		56.667	0.036351	ppb		35.294	52.908	18.889
165	Ho-IS	|		271998.932		ppb		1.887		272257.135
159	Tb-IS	|		248098.152		ppb		0.970		243881.123
207	Pb	|		1461342.838	97.612478	ppb		1.137	0.693	67.778
203	Tl	|		422305.899	93.989566	ppb		0.992	1.024	8.889
209	Bi-IS	>		159228.056		ppb		0.861		158124.761
51	V	|		73511.997	99.878455	ppb		0.826	1.257	76.667
59	Co	|		189543.642	98.725900	ppb		0.752	1.702	8.889
60	Ni	|		103615.554	103.040021	ppb		1.181	1.163	31.111
75	As	|		52480.779	101.923150	ppb		0.590	0.660	750.178
71	Ga-ISK	>		126216.268		ppb		1.045		128019.987
82	Se-2	|		4726.612	101.127479	ppb		1.365	1.322	-0.498
107	Ag-1	|		294.447	0.066522	ppb		3.639	4.069	17.778
115	In-ISK	|		111773.939		ppb		2.287		111696.848
45	Sc-ISK	>		296748.741		ppb		1.664		306767.810
23	Na	|		4740.787	2.563064	ppb		4.250	21.846	3597.120
39	K	|		137214.755	7.019478	ppb		0.961	13.657	133299.014
24	Mg	|		2935894.593	5191.444943	ppb		0.628	1.344	96.667
159	Tb-ISK	|		210619.957		ppb		0.495		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-446961

Autosampler Position: 213

Sample Date/Time: Friday, April 17, 2020 09:39:07

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICV-446961.071

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		32279.778		ppb			2.570			33322.200
9	Be	|		5.556	-0.006369	ppb	69.282	43.763				14.444
10	B	|		34645.295	97.067002	ppb	0.848	0.507				2425.762
27	Al	|		743549.104	105.024604	ppb	2.082	2.480				3659.358
43	Ca-2	|		180.001	1.921410	ppb	5.556	27.399				148.334
49	Ti	|		156.668	-0.125263	ppb	7.370	12.836				242.224
52	Cr	|		9444.233	-0.460658	ppb	1.803	5.554				13618.712
55	Mn	|		1167.826	0.045141	ppb	3.592	6.525				580.012
57	Fe	|		7996.683	-11.713617	ppb	2.490	6.023				11030.926
45	Sc-IS	>		1589818.874		ppb	0.603					1599575.121
66	Zn	|		1046.706	0.412737	ppb	16.218	30.193				504.454
86	Sr	|		14.629	0.000920	ppb	80.320	687.219				12.994
65	Cu	|		150.645	0.036669	ppb	5.114	11.092				80.792
69	Ga-IS	|		477269.898		ppb	3.482					458023.235
95	Mo	|		71.111	0.009283	ppb	35.182	155.388				55.556
115	In-IS	>		257127.142		ppb	2.741					255368.612
111	Cd	|		9.851	0.001920	ppb	33.378	95.688				6.550
118	Sn	|		1338.953	0.187478	ppb	15.906	20.532				454.452
121	Sb	|		518.898	0.049515	ppb	10.164	17.294				263.336
135	Ba	|		106955.129	101.258849	ppb	5.104	2.594				18.889
165	Ho-IS	|		271154.084		ppb	1.685					272257.135
159	Tb-IS	|		245802.376		ppb	1.205					243881.123
207	Pb	|		263.334	0.013517	ppb	15.555	21.120				67.778
203	Tl	|		28.889	0.004620	ppb	26.647	38.777				8.889
209	Bi-IS	>		154994.070		ppb	0.580					158124.761
51	V	|		64.445	-0.014573	ppb	2.986	20.218				76.667
59	Co	|		6.667	-0.001072	ppb	50.000	162.837				8.889
60	Ni	|		46.667	0.016226	ppb	21.429	62.370				31.111
75	As	|		679.677	-0.109371	ppb	5.873	70.448				750.178
71	Ga-ISK	>		125395.722		ppb	0.408					128019.987
82	Se-2	|		1.182	0.036342	ppb	615.173	430.209				-0.498
107	Ag-1	|		199807.721	48.304856	ppb	1.125	1.437				17.778
115	In-ISK	|		109643.134		ppb	0.830					111696.848
45	Sc-ISK	>		298866.183		ppb	0.662					306767.810
23	Na	|		507255.259	1014.064012	ppb	1.666	1.080				3597.120
39	K	|		1336182.000	1015.285020	ppb	1.551	0.993				133299.014
24	Mg	|		263.336	0.296781	ppb	9.744	14.181				96.667
159	Tb-ISK	|		208013.748		ppb	1.604					210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Friday, April 17, 2020 09:41:54

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICB-23446.072

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31875.540		ppb			2.773			33322.200
9	Be	|		10.000	-0.003060	ppb			33.333	79.891		14.444
10	B	|		2053.482	-0.997715	ppb			8.064	43.068		2425.762
27	Al	|		13013.707	1.355096	ppb			3.267	3.026		3659.358
43	Ca-2	|		163.334	1.077557	ppb			14.467	140.578		148.334
49	Ti	|		215.557	-0.033224	ppb			11.811	116.703		242.224
52	Cr	|		9473.142	-0.443484	ppb			3.205	5.389		13618.712
55	Mn	|		1306.726	0.057107	ppb			3.093	7.467		580.012
57	Fe	|		8310.194	-10.038425	ppb			0.930	2.324		11030.926
45	Sc-IS	>		1568996.757		ppb			1.228			1599575.121
66	Zn	|		1157.825	0.508511	ppb			7.171	10.416		504.454
86	Sr	|		46.802	0.018559	ppb			74.124	102.299		12.994
65	Cu	|		124.991	0.024247	ppb			15.453	45.041		80.792
69	Ga-IS	|		448407.803		ppb			4.226			458023.235
95	Mo	|		73.334	0.011195	ppb			12.026	44.774		55.556
115	In-IS	>		252841.415		ppb			1.737			255368.612
111	Cd	|		13.179	0.004107	ppb			67.047	133.708		6.550
118	Sn	|		1064.484	0.133310	ppb			7.737	11.435		454.452
121	Sb	|		510.009	0.049404	ppb			14.245	25.431		263.336
135	Ba	|		91.111	0.069777	ppb			5.589	7.556		18.889
165	Ho-IS	|		265805.670		ppb			0.637			272257.135
159	Tb-IS	|		241348.916		ppb			2.130			243881.123
207	Pb	|		242.223	0.012260	ppb			13.366	16.689		67.778
203	Tl	|		50.000	0.009603	ppb			11.547	15.789		8.889
209	Bi-IS	>		153038.848		ppb			1.673			158124.761
51	V	|		52.222	-0.032189	ppb			43.448	94.339		76.667
59	Co	|		25.556	0.008691	ppb			54.304	83.375		8.889
60	Ni	|		71.111	0.039903	ppb			30.136	53.467		31.111
75	As	|		672.693	-0.137670	ppb			3.896	46.051		750.178
71	Ga-ISK	>		126816.006		ppb			1.240			128019.987
82	Se-2	|		-0.498	-0.000279	ppb			814.74831	153.982		-0.498
107	Ag-1	|		203.335	0.044416	ppb			4.337	5.773		17.778
115	In-ISK	|		111357.126		ppb			0.921			111696.848
45	Sc-ISK	>		298362.911		ppb			1.587			306767.810
23	Na	|		6144.655	5.341989	ppb			3.138	10.872		3597.120
39	K	|		133836.228	3.547034	ppb			0.331	40.001		133299.014
24	Mg	|		825.024	1.285677	ppb			1.604	2.300		96.667
159	Tb-ISK	|		207143.058		ppb			0.897			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 09:44:39

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.073

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31792.016		ppb		2.382		33322.200
9	Be	|		137073.458	99.392574	ppb	1.435	0.242		14.444
10	B	|		85244.708	249.946803	ppb	1.107	0.621		2425.762
27	Al	|		704894.080	99.751192	ppb	0.983	2.606		3659.358
43	Ca-2	|		85907.616	5074.222048	ppb	2.245	1.310		148.334
49	Ti	|		66702.064	99.163704	ppb	1.963	0.988		242.224
52	Cr	|		903870.281	100.456372	ppb	2.191	0.718		13618.712
55	Mn	|		1274181.398	97.419030	ppb	1.651	0.103		580.012
57	Fe	|		1258029.899	4932.185365	ppb	2.432	0.902		11030.926
45	Sc-IS	>		1586761.749		ppb	1.592			1599575.121
66	Zn	|		135051.614	102.101515	ppb	4.080	2.827		504.454
86	Sr	|		185581.407	100.290647	ppb	1.396	2.044		12.994
65	Cu	|		194258.880	101.383462	ppb	4.297	3.008		80.792
69	Ga-IS	|		472374.921		ppb	3.313			458023.235
95	Mo	|		170336.198	100.207825	ppb	0.822	1.175		55.556
115	In-IS	>		256738.039		ppb	0.628			255368.612
111	Cd	|		167003.663	100.190201	ppb	1.030	0.495		6.550
118	Sn	|		464452.759	99.203327	ppb	0.506	0.331		454.452
121	Sb	|		506317.000	99.061330	ppb	2.679	2.542		263.336
135	Ba	|		103555.679	98.228685	ppb	4.887	4.868		18.889
165	Ho-IS	|		273646.880		ppb	2.241			272257.135
159	Tb-IS	|		248201.130		ppb	1.288			243881.123
207	Pb	|		1458875.478	100.781379	ppb	0.282	1.696		67.778
203	Tl	|		435091.041	100.158460	ppb	0.887	2.772		8.889
209	Bi-IS	>		153994.639		ppb	1.906			158124.761
51	V	|		72167.385	97.238163	ppb	0.559	1.790		76.667
59	Co	|		188971.748	97.625805	ppb	1.101	3.022		8.889
60	Ni	|		101166.998	99.763748	ppb	1.388	1.140		31.111
75	As	|		51945.068	100.027990	ppb	0.671	2.117		750.178
71	Ga-ISK	>		127288.035		ppb	1.925			128019.987
82	Se-2	|		4704.289	99.811456	ppb	1.126	1.105		-0.498
107	Ag-1	|		416264.001	99.135646	ppb	2.270	0.477		17.778
115	In-ISK	|		110501.635		ppb	2.215			111696.848
45	Sc-ISK	>		302273.529		ppb	0.969			306767.810
23	Na	|		2581477.774	5131.226776	ppb	0.981	0.657		3597.120
39	K	|		6338017.257	5165.301853	ppb	1.372	1.422		133299.014
24	Mg	|		2944531.371	5110.888884	ppb	1.222	0.914		96.667
159	Tb-ISK	|		209350.895		ppb	0.896			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 09:47:25

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.074

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		31781.985		ppb			1.295			33322.200
9	Be	|		10.000	-0.002980	ppb		57.735	141.945			14.444
10	B	|		1876.790	-1.462722	ppb		3.896	10.532			2425.762
27	Al	|		3482.647	-0.008984	ppb		1.536	117.441			3659.358
43	Ca-2	|		103.334	-2.437171	ppb		19.555	52.379			148.334
49	Ti	|		197.779	-0.056483	ppb		11.472	57.046			242.224
52	Cr	|		8401.359	-0.553478	ppb		0.722	2.417			13618.712
55	Mn	|		615.569	0.004182	ppb		6.857	63.023			580.012
57	Fe	|		8187.903	-10.122438	ppb		3.379	6.856			11030.926
45	Sc-IS	|>		1549509.459		ppb		1.472				1599575.121
66	Zn	|		493.342	0.003456	ppb		6.757	603.987			504.454
86	Sr	|		1.870	-0.005834	ppb	1967.771	348.602				12.994
65	Cu	|		81.829	0.001876	ppb		10.116	208.272			80.792
69	Ga-IS	|		442627.235		ppb		3.276				458023.235
95	Mo	|		380.005	0.196693	ppb		5.263	7.770			55.556
115	In-IS	|>		249589.800		ppb		1.800				255368.612
111	Cd	|		18.091	0.007221	ppb		10.641	17.509			6.550
118	Sn	|		3132.567	0.590869	ppb		7.165	6.654			454.452
121	Sb	|		568.900	0.062756	ppb		8.314	15.438			263.336
135	Ba	|		14.444	-0.003902	ppb		26.647	98.421			18.889
165	Ho-IS	|		262643.930		ppb		1.688				272257.135
159	Tb-IS	|		238171.264		ppb		0.687				243881.123
207	Pb	|		334.446	0.018677	ppb		15.957	19.307			67.778
203	Tl	|		105.556	0.022422	ppb		33.470	35.808			8.889
209	Bi-IS	|>		153027.483		ppb		0.575				158124.761
51	V	|		51.111	-0.032964	ppb		29.408	62.537			76.667
59	Co	|		20.000	0.005900	ppb		0.000	1.074			8.889
60	Ni	|		26.667	-0.003889	ppb		66.144	452.967			31.111
75	As	|		731.360	-0.009494	ppb		2.260	410.019			750.178
71	Ga-ISK	|>		125637.843		ppb		0.607				128019.987
82	Se-2	|		-2.849	-0.050278	ppb	229.995	279.080				-0.498
107	Ag-1	|		171.112	0.037059	ppb		15.625	16.816			17.778
115	In-ISK	|		110153.463		ppb		0.977				111696.848
45	Sc-ISK	|>		296400.011		ppb		0.557				306767.810
23	Na	|		3430.412	-0.091664	ppb		4.555	341.322			3597.120
39	K	|		134585.467	4.921182	ppb		0.870	33.056			133299.014
24	Mg	|		233.335	0.247830	ppb		17.321	29.186			96.667
159	Tb-ISK	|		206359.170		ppb		0.913				210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Friday, April 17, 2020 09:50:11

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICSA-30518.075

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		33138.400		ppb			1.845			33322.200
9	Be	|		8.889	-0.004412	ppb		57.282	78.044			14.444
10	B	|		1923.463	-1.887820	ppb		5.730	15.049			2425.762
27	Al	|		73497047.363	9676.526013	ppb		2.650	2.612			3659.358
43	Ca-2	|		531572.630	29113.094925	ppb		0.107	0.504			148.334
49	Ti	|		143214.307	197.487067	ppb		0.735	0.486			242.224
52	Cr	|		11635.848	-0.308711	ppb		0.147	2.473			13618.712
55	Mn	|		6884.992	0.443582	ppb		1.930	1.761			580.012
57	Fe	|		6698880.093	24490.394024	ppb		1.268	1.749			11030.926
45	Sc-IS	>		1713784.580		ppb		0.480				1599575.121
66	Zn	|		1441.184	0.632774	ppb		6.486	9.666			504.454
86	Sr	|		842.475	0.414555	ppb		4.746	4.941			12.994
65	Cu	|		-276.661	-0.175500	ppb		32.338	24.374			80.792
69	Ga-IS	|		468343.081		ppb		3.318				458023.235
95	Mo	|		351812.770	191.632550	ppb		2.088	1.804			55.556
115	In-IS	>		259019.069		ppb		1.100				255368.612
111	Cd	|		-101.015	-0.063883	ppb		55.510	51.804			6.550
118	Sn	|		1320.061	0.181973	ppb		7.958	11.210			454.452
121	Sb	|		761.131	0.095855	ppb		4.824	7.134			263.336
135	Ba	|		227.780	0.196174	ppb		3.683	3.644			18.889
165	Ho-IS	|		292231.935		ppb		2.266				272257.135
159	Tb-IS	|		267117.010		ppb		1.952				243881.123
207	Pb	|		428.892	0.024473	ppb		10.262	12.057			67.778
203	Tl	|		85.556	0.017294	ppb		18.412	20.076			8.889
209	Bi-IS	>		157128.308		ppb		0.592				158124.761
51	V	|		364.449	0.381014	ppb		4.124	3.275			76.667
59	Co	|		100.000	0.046346	ppb		20.817	23.428			8.889
60	Ni	|		275.558	0.237590	ppb		12.707	16.508			31.111
75	As	|		754.052	-0.007367	ppb		9.484	1658.125			750.178
71	Ga-ISK	>		129278.044		ppb		2.129				128019.987
82	Se-2	|		2.523	0.063796	ppb		160.629	132.806			-0.498
107	Ag-1	|		171.112	0.035916	ppb		6.262	6.403			17.778
115	In-ISK	|		112124.990		ppb		0.397				111696.848
45	Sc-ISK	>		316752.056		ppb		0.498				306767.810
23	Na	|		13215755.464	25094.730686	ppb		1.605	1.241			3597.120
39	K	|		12888696.418	10126.444953	ppb		0.099	0.558			133299.014
24	Mg	|		5919009.835	9804.383968	ppb		0.339	0.638			96.667
159	Tb-ISK	|		217564.378		ppb		1.357				210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Friday, April 17, 2020 09:52:56

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICSAB-30517.076

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33508.146		ppb	1.390		33322.200
9	Be	6.667	-0.005929	ppb	50.000	37.709	14.444
10	B	3428.190	2.288127	ppb	4.761	16.795	2425.762
27	Al	73122877.996	9603.173687	ppb	4.020	4.817	3659.358
43	Ca-2	539142.010	29444.246994	ppb	1.692	0.838	148.334
49	Ti	144681.739	198.946431	ppb	3.411	2.926	242.224
52	Cr	188116.170	18.073958	ppb	1.347	1.178	13618.712
55	Mn	255372.532	17.992099	ppb	1.226	1.042	580.012
57	Fe	6625549.456	24154.037691	ppb	0.687	0.740	11030.926
45	Sc-IS	> 1718536.225		ppb	0.852		1599575.121
66	Zn	14866.630	10.036870	ppb	4.331	3.728	504.454
86	Sr	787.428	0.385956	ppb	6.156	6.530	12.994
65	Cu	37880.966	18.224425	ppb	2.761	2.754	80.792
69	Ga-IS	470413.043		ppb	2.630		458023.235
95	Mo	348394.586	189.249910	ppb	1.754	1.482	55.556
115	In-IS	> 262109.769		ppb	1.895		255368.612
111	Cd	15904.719	9.344582	ppb	0.582	1.687	6.550
118	Sn	897.806	0.090258	ppb	7.009	11.890	454.452
121	Sb	682.239	0.078786	ppb	15.181	22.429	263.336
135	Ba	190.001	0.158620	ppb	4.642	6.070	18.889
165	Ho-IS	292284.815		ppb	1.739		272257.135
159	Tb-IS	267338.360		ppb	0.807		243881.123
207	Pb	315.557	0.016653	ppb	6.099	10.239	67.778
203	Tl	56.667	0.010667	ppb	11.765	11.300	8.889
209	Bi-IS	> 158407.034		ppb	2.266		158124.761
51	V	14888.869	19.175421	ppb	2.495	2.075	76.667
59	Co	37211.736	18.449615	ppb	0.532	1.311	8.889
60	Ni	19936.127	18.850226	ppb	2.007	1.667	31.111
75	As	5842.919	9.501120	ppb	3.530	3.820	750.178
71	Ga-ISK	> 132566.750		ppb	1.196		128019.987
82	Se-2	454.179	9.259667	ppb	6.070	5.519	-0.498
107	Ag-1	19949.476	4.558256	ppb	0.724	0.560	17.778
115	In-ISK	113936.055		ppb	1.011		111696.848
45	Sc-ISK	> 314534.039		ppb	1.049		306767.810
23	Na	13194490.842	25231.830163	ppb	1.420	1.012	3597.120
39	K	12824955.734	10147.630122	ppb	1.092	0.775	133299.014
24	Mg	5891800.852	9827.757115	ppb	1.381	0.431	96.667
159	Tb-ISK	216447.050		ppb	1.728		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, April 17, 2020 09:58:13

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICVL-210771.077

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		32094.904		ppb			0.986			33322.200
9	Be	|		1401.180	0.983516	ppb			3.926	5.166		14.444
10	B	|		18449.688	47.182199	ppb			2.218	3.921		2425.762
27	Al	|		359443.573	49.465556	ppb			1.946	2.002		3659.358
43	Ca-2	|		1020.037	50.345619	ppb			7.121	9.763		148.334
49	Ti	|		805.578	0.817387	ppb			8.926	13.986		242.224
52	Cr	|		18906.943	0.561772	ppb			0.243	4.034		13618.712
55	Mn	|		15290.404	1.099515	ppb			2.327	1.551		580.012
57	Fe	|		20089.673	34.425117	ppb			1.115	4.567		11030.926
45	Sc-IS	>		1622838.909		ppb			1.320			1599575.121
66	Zn	|		7793.237	5.403579	ppb			2.621	2.274		504.454
86	Sr	|		1817.578	0.953025	ppb			7.218	6.385		12.994
65	Cu	|		1991.910	0.975272	ppb			1.319	0.346		80.792
69	Ga-IS	|		467432.699		ppb			3.604			458023.235
95	Mo	|		1793.446	0.999334	ppb			2.417	1.395		55.556
115	In-IS	>		262259.717		ppb			1.261			255368.612
111	Cd	|		1684.112	0.985215	ppb			6.175	6.134		6.550
118	Sn	|		5267.638	1.004977	ppb			0.415	1.781		454.452
121	Sb	|		5172.050	0.938904	ppb			6.256	5.311		263.336
135	Ba	|		1098.931	1.002236	ppb			7.482	6.646		18.889
165	Ho-IS	|		276052.051		ppb			1.538			272257.135
159	Tb-IS	|		249428.793		ppb			0.934			243881.123
207	Pb	|		14528.465	0.985695	ppb			1.714	2.159		67.778
203	Tl	|		4365.112	0.989382	ppb			3.242	3.857		8.889
209	Bi-IS	>		156065.685		ppb			1.048			158124.761
51	V	|		750.020	0.897989	ppb			6.900	8.648		76.667
59	Co	|		1891.236	0.961407	ppb			1.599	0.793		8.889
60	Ni	|		1063.373	1.007258	ppb			6.293	7.364		31.111
75	As	|		1145.619	0.756126	ppb			2.161	4.581		750.178
71	Ga-ISK	>		128698.254		ppb			0.875			128019.987
82	Se-2	|		56.187	1.188930	ppb			8.737	8.021		-0.498
107	Ag-1	|		4236.184	0.993703	ppb			3.706	3.661		17.778
115	In-ISK	|		112364.483		ppb			0.392			111696.848
45	Sc-ISK	>		305533.879		ppb			0.509			306767.810
23	Na	|		29532.163	51.098411	ppb			1.092	0.859		3597.120
39	K	|		191069.357	48.001729	ppb			0.997	1.633		133299.014
24	Mg	|		28015.782	47.942710	ppb			1.643	1.159		96.667
159	Tb-ISK	|		209970.599		ppb			1.102			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25181-E-3-A
 Autosampler Position: 125
 Sample Date/Time: Friday, April 17, 2020 10:04:09
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25181-E-3-A.078
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		36543.353		ppb		1.473		33322.200
9	Be	|		10.000	-0.003767	ppb	57.735	101.238		14.444
10	B	|		22117.108	53.721113	ppb	0.732	1.523		2425.762
27	Al	|		128359.693	16.165264	ppb	1.135	1.908		3659.358
43	Ca-2	|		154488.081	8342.862830	ppb	3.244	2.281		148.334
49	Ti	|		1266.723	1.368359	ppb	2.510	1.743		242.224
52	Cr	|		27208.115	1.281062	ppb	2.073	4.515		13618.712
55	Mn	|		115356.273	8.019233	ppb	2.398	2.384		580.012
57	Fe	|		27008.860	54.337891	ppb	3.328	5.768		11030.926
45	Sc-IS	>		1736544.983		ppb	1.511			1599575.121
66	Zn	|		31888.925	21.730621	ppb	4.113	2.803		504.454
86	Sr	|		198607.633	98.047111	ppb	3.660	2.884		12.994
65	Cu	|		10361.373	4.900968	ppb	4.724	3.329		80.792
69	Ga-IS	|		466885.949		ppb	3.803			458023.235
95	Mo	|		1610.091	0.833340	ppb	4.667	4.869		55.556
115	In-IS	>		253570.037		ppb	1.669			255368.612
111	Cd	|		46.619	0.024409	ppb	50.250	58.635		6.550
118	Sn	|		1038.927	0.126942	ppb	13.094	20.460		454.452
121	Sb	|		5158.710	0.970519	ppb	2.800	1.363		263.336
135	Ba	|		11843.802	11.356352	ppb	3.922	2.431		18.889
165	Ho-IS	|		278115.258		ppb	2.188			272257.135
159	Tb-IS	|		251977.305		ppb	0.576			243881.123
207	Pb	|		3724.637	0.261838	ppb	3.067	3.524		67.778
203	Tl	|		16.667	0.001957	ppb	80.000	161.101		8.889
209	Bi-IS	>		148735.933		ppb	1.429			158124.761
51	V	|		1635.649	2.084952	ppb	0.513	1.256		76.667
59	Co	|		218.891	0.107523	ppb	5.765	5.163		8.889
60	Ni	|		1103.376	1.048764	ppb	7.838	7.876		31.111
75	As	|		1134.011	0.740255	ppb	1.892	8.233		750.178
71	Ga-ISK	>		128341.735		ppb	0.882			128019.987
82	Se-2	|		57.489	1.218899	ppb	17.592	16.743		-0.498
107	Ag-1	|		31.111	0.003123	ppb	37.627	86.418		17.778
115	In-ISK	|		109916.787		ppb	1.321			111696.848
45	Sc-ISK	>		317734.109		ppb	2.787			306767.810
23	Na	|		51210651.310	96997.161616	ppb	1.929	2.512		3597.120
39	K	|		7280845.523	5658.735503	ppb	1.115	3.711		133299.014
24	Mg	|		6870103.810	11353.557871	ppb	1.553	4.320		96.667
159	Tb-ISK	|		210288.557		ppb	1.094			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25181-D-3-A

Autosampler Position: 126

Sample Date/Time: Friday, April 17, 2020 10:06:54

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25181-D-3-A.079

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		35244.545		ppb			1.981			33322.200
9	Be	|		64.445	0.032281	ppb		13.017	19.792			14.444
10	B	|		21747.652	52.556845	ppb		0.562	2.047			2425.762
27	Al	|		4596823.564	595.537800	ppb		1.179	3.262			3659.358
43	Ca-2	|		175631.725	9462.422480	ppb		2.258	0.178			148.334
49	Ti	|		8620.378	11.369698	ppb		1.025	3.395			242.224
52	Cr	|		39115.706	2.498786	ppb		1.248	1.767			13618.712
55	Mn	|		689708.056	48.042842	ppb		1.791	1.083			580.012
57	Fe	|		231385.939	790.873245	ppb		1.910	0.437			11030.926
45	Sc-IS	>		1741031.810		ppb		2.260				1599575.121
66	Zn	>		159718.470	110.088374	ppb		3.158	0.919			504.454
86	Sr	|		217397.162	107.083190	ppb		1.465	2.041			12.994
65	Cu	|		39410.083	18.716574	ppb		2.098	0.671			80.792
69	Ga-IS	|		476995.064		ppb		2.665				458023.235
95	Mo	|		998.924	0.503277	ppb		3.172	2.377			55.556
115	In-IS	>		252507.473		ppb		1.919				255368.612
111	Cd	|		244.571	0.145195	ppb		9.810	9.413			6.550
118	Sn	|		934.475	0.105613	ppb		4.998	12.946			454.452
121	Sb	|		4594.073	0.863180	ppb		3.801	5.911			263.336
135	Ba	|		31701.884	30.591136	ppb		5.880	7.670			18.889
165	Ho-IS	|		283426.797		ppb		1.839				272257.135
159	Tb-IS	|		257972.157		ppb		1.685				243881.123
207	Pb	|		129044.860	9.166144	ppb		1.251	1.209			67.778
203	Tl	|		38.889	0.007219	ppb		21.571	27.787			8.889
209	Bi-IS	>		149668.832		ppb		0.221				158124.761
51	V	|		3441.526	4.309214	ppb		1.941	1.526			76.667
59	Co	|		1708.991	0.834657	ppb		2.408	3.275			8.889
60	Ni	|		3371.509	3.130194	ppb		3.484	2.165			31.111
75	As	|		1451.345	1.237328	ppb		4.144	6.088			750.178
71	Ga-ISK	>		133895.744		ppb		1.368				128019.987
82	Se-2	|		50.461	1.029093	ppb		30.693	30.862			-0.498
107	Ag-1	|		23.333	0.001066	ppb		42.857	208.458			17.778
115	In-ISK	|		113858.990		ppb		1.227				111696.848
45	Sc-ISK	>		328245.310		ppb		1.286				306767.810
23	Na	|		52773172.175	96730.714152	ppb		0.385	1.053			3597.120
39	K	|		7675274.503	5772.929831	ppb		1.504	1.562			133299.014
24	Mg	|		7479278.351	11955.732448	ppb		1.165	1.363			96.667
159	Tb-ISK	|		217330.001		ppb		0.382				210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-A-4-A

Autosampler Position: 151

Sample Date/Time: Friday, April 17, 2020 10:09:40

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25122-A-4-A.080

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc.	Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34537.255			ppb				0.631		33322.200
9	Be	|		15.556		0.000359	ppb			32.733	976.142		14.444
10	B	|		54884.129		150.452801	ppb			1.372	1.724		2425.762
27	Al	|		136126.738		17.926171	ppb			1.779	3.681		3659.358
43	Ca-2	|		609022.740		34306.192188	ppb			2.088	0.354		148.334
49	Ti	|		2155.722		2.698170	ppb			18.494	18.888		242.224
52	Cr	|		46649.383		3.488989	ppb			1.290	2.626		13618.712
55	Mn	|		12359.790		0.856334	ppb			2.059	1.500		580.012
57	Fe	|		38685.659		102.448629	ppb			2.152	3.041		11030.926
45	Sc-IS	>		1666368.085			ppb			2.294			1599575.121
66	Zn	|		11143.236		7.673017	ppb			3.135	1.423		504.454
86	Sr	|		611284.811		314.523088	ppb			2.424	0.132		12.994
65	Cu	|		11972.103		5.912095	ppb			3.493	2.937		80.792
69	Ga-IS	|		454387.397			ppb			3.382			458023.235
95	Mo	|		3495.984		1.925921	ppb			4.914	3.448		55.556
115	In-IS	>		249251.542			ppb			0.294			255368.612
111	Cd	|		29.325		0.014164	ppb			29.179	37.064		6.550
118	Sn	|		698.906		0.056232	ppb			2.914	7.965		454.452
121	Sb	|		2928.078		0.538600	ppb			3.435	3.935		263.336
135	Ba	|		27096.821		26.459964	ppb			4.594	4.369		18.889
165	Ho-IS	|		276587.783			ppb			1.461			272257.135
159	Tb-IS	|		253584.281			ppb			0.708			243881.123
207	Pb	|		605.561		0.037955	ppb			8.263	8.980		67.778
203	Tl	|		23.333		0.003461	ppb			62.270	97.685		8.889
209	Bi-IS	>		151481.119			ppb			0.254			158124.761
51	V	|		1687.878		2.145589	ppb			6.024	4.915		76.667
59	Co	|		215.557		0.105412	ppb			13.860	13.937		8.889
60	Ni	|		1388.956		1.324237	ppb			3.880	5.957		31.111
75	As	|		1609.283		1.650117	ppb			0.618	4.541		750.178
71	Ga-ISK	>		128816.116			ppb			2.106			128019.987
82	Se-2	|		10.809		0.234946	ppb			97.843	93.571		-0.498
107	Ag-1	|		32.222		0.003393	ppb			23.890	56.267		17.778
115	In-ISK	|		112046.884			ppb			0.381			111696.848
45	Sc-ISK	>		311279.272			ppb			0.521			306767.810
23	Na	|		21527945.319		41604.306327	ppb			0.530	1.053		3597.120
39	K	|		4870952.419		3827.161361	ppb			1.140	1.608		133299.014
24	Mg	|		5670655.505		9558.306727	ppb			0.909	1.265		96.667
159	Tb-ISK	|		211345.879			ppb			0.314			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25122-D-4-A

Autosampler Position: 152

Sample Date/Time: Friday, April 17, 2020 10:12:25

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25122-D-4-A.081

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		34314.519		ppb			2.918			33322.200
9	Be	|		7.778	-0.004943	ppb			65.465	72.790		14.444
10	B	|		51055.562	140.821848	ppb			2.793	2.468		2425.762
27	Al	|		142701.332	18.999412	ppb			4.702	5.785		3659.358
43	Ca-2	|		582357.792	33116.192306	ppb			1.486	0.238		148.334
49	Ti	|		1971.251	2.472026	ppb			21.492	25.444		242.224
52	Cr	|		45060.977	3.363274	ppb			2.123	1.764		13618.712
55	Mn	|		11674.770	0.814411	ppb			2.216	0.834		580.012
57	Fe	|		37991.573	101.172195	ppb			1.825	0.889		11030.926
45	Sc-IS	|>		1650603.956		ppb			1.525			1599575.121
66	Zn	|		14562.979	10.245173	ppb			3.066	2.371		504.454
86	Sr	|		586484.057	304.630019	ppb			2.889	2.023		12.994
65	Cu	|		11496.457	5.728901	ppb			3.765	2.710		80.792
69	Ga-IS	|		456934.947		ppb			3.135			458023.235
95	Mo	|		3265.930	1.815154	ppb			7.864	8.099		55.556
115	In-IS	|>		250579.406		ppb			2.457			255368.612
111	Cd	|		23.142	0.010304	ppb			60.627	84.879		6.550
118	Sn	|		483.342	0.008144	ppb			6.130	52.622		454.452
121	Sb	|		2661.360	0.481928	ppb			7.155	7.429		263.336
135	Ba	|		25510.564	24.771899	ppb			4.346	1.876		18.889
165	Ho-IS	|		277557.555		ppb			1.681			272257.135
159	Tb-IS	|		250442.131		ppb			1.688			243881.123
207	Pb	|		623.339	0.039758	ppb			9.122	9.721		67.778
203	Tl	|		17.778	0.002217	ppb			39.031	73.671		8.889
209	Bi-IS	|>		149572.280		ppb			0.425			158124.761
51	V	|		1624.537	2.090878	ppb			1.745	3.490		76.667
59	Co	|		178.890	0.087839	ppb			8.402	6.990		8.889
60	Ni	|		1235.609	1.188414	ppb			8.584	7.082		31.111
75	As	|		1537.878	1.550059	ppb			1.641	2.510		750.178
71	Ga-ISK	|>		127164.706		ppb			1.816			128019.987
82	Se-2	|		13.151	0.288632	ppb			66.967	64.140		-0.498
107	Ag-1	|		36.667	0.004547	ppb			18.182	37.763		17.778
115	In-ISK	|		111284.903		ppb			1.562			111696.848
45	Sc-ISK	|>		306337.279		ppb			2.134			306767.810
23	Na	|		20273169.965	39814.875011	ppb			1.219	0.922		3597.120
39	K	|		4614885.532	3681.515299	ppb			0.303	2.501		133299.014
24	Mg	|		5333680.313	9138.145375	ppb			0.473	2.442		96.667
159	Tb-ISK	|		207845.418		ppb			1.878			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 10:15:11

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.082

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33000.297		ppb	1.111			33322.200
9	Be	|	141321.130	100.284140	ppb	0.386	1.341		14.444
10	B	|	87186.362	250.187545	ppb	0.739	1.906		2425.762
27	Al	|	714989.638	98.994033	ppb	0.832	1.933		3659.358
43	Ca-2	|	88556.980	5118.903444	ppb	0.850	0.300		148.334
49	Ti	|	67816.142	98.667729	ppb	0.338	1.331		242.224
52	Cr	|	902885.939	98.174580	ppb	0.213	0.936		13618.712
55	Mn	|	1278929.345	95.689557	ppb	0.732	0.645		580.012
57	Fe	|	1274510.655	4889.824993	ppb	1.607	1.338		11030.926
45	Sc-IS	>	1621519.640		ppb	1.130			1599575.121
66	Zn	|	135621.146	100.336459	ppb	3.185	2.303		504.454
86	Sr	|	187017.467	98.879848	ppb	2.379	1.745		12.994
65	Cu	|	197273.408	100.761111	ppb	2.913	1.918		80.792
69	Ga-IS	|	483791.465		ppb	3.692			458023.235
95	Mo	|	170280.028	98.024925	ppb	1.191	1.674		55.556
115	In-IS	>	256776.453		ppb	1.560			255368.612
111	Cd	|	167107.253	100.241194	ppb	1.341	0.314		6.550
118	Sn	|	466254.468	99.569535	ppb	2.192	1.160		454.452
121	Sb	|	503420.909	98.492202	ppb	2.403	2.613		263.336
135	Ba	|	105755.975	100.303805	ppb	3.994	3.782		18.889
165	Ho-IS	|	280517.761		ppb	1.463			272257.135
159	Tb-IS	|	255338.686		ppb	1.442			243881.123
207	Pb	|	1460142.378	98.129554	ppb	1.130	0.238		67.778
203	Tl	|	442921.385	99.177256	ppb	1.540	0.853		8.889
209	Bi-IS	>	158258.500		ppb	1.032			158124.761
51	V	|	73622.561	98.103556	ppb	0.647	1.409		76.667
59	Co	|	193104.145	98.641263	ppb	0.284	1.218		8.889
60	Ni	|	102319.613	99.795948	ppb	1.450	1.827		31.111
75	As	|	51572.558	98.178587	ppb	0.408	0.535		750.178
71	Ga-ISK	>	128692.653		ppb	0.935			128019.987
82	Se-2	|	4746.353	99.594438	ppb	1.497	1.378		-0.498
107	Ag-1	|	417328.770	98.316538	ppb	1.443	1.907		17.778
115	In-ISK	|	112195.857		ppb	0.405			111696.848
45	Sc-ISK	>	305892.869		ppb	1.326			306767.810
23	Na	|	2677863.592	5260.707585	ppb	0.336	1.654		3597.120
39	K	|	6472155.699	5213.535553	ppb	0.282	1.117		133299.014
24	Mg	|	3017881.406	5176.613223	ppb	1.244	1.530		96.667
159	Tb-ISK	|	208362.681		ppb	1.258			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 10:17:56

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.083

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		33135.060		ppb				1.992		33322.200
9	Be	|		14.444	0.000144	ppb	48.038	3590.824				14.444
10	B	|		1668.986	-2.223286	ppb	0.642	5.636				2425.762
27	Al	|		4125.040	0.070291	ppb	3.299	15.400				3659.358
43	Ca-2	|		73.334	-4.355874	ppb	23.945	25.214				148.334
49	Ti	|		246.669	0.008926	ppb	17.253	648.324				242.224
52	Cr	|		9429.780	-0.460522	ppb	2.954	2.694				13618.712
55	Mn	|		671.127	0.007320	ppb	8.778	59.852				580.012
57	Fe	|		9222.977	-6.800471	ppb	1.829	7.510				11030.926
45	Sc-IS	>		1586830.775		ppb	1.896					1599575.121
66	Zn	|		547.788	0.035799	ppb	4.608	31.203				504.454
86	Sr	|		17.426	0.002569	ppb	98.103	363.114				12.994
65	Cu	|		132.750	0.027354	ppb	15.298	33.642				80.792
69	Ga-IS	|		453336.045		ppb	4.087					458023.235
95	Mo	|		584.456	0.311256	ppb	10.537	10.543				55.556
115	In-IS	>		249213.790		ppb	2.485					255368.612
111	Cd	|		4.328	-0.001202	ppb	163.220	372.521				6.550
118	Sn	|		3772.723	0.732546	ppb	8.400	6.935				454.452
121	Sb	|		627.792	0.074618	ppb	13.182	19.059				263.336
135	Ba	|		24.444	0.005826	ppb	15.746	55.942				18.889
165	Ho-IS	|		271412.941		ppb	0.486					272257.135
159	Tb-IS	|		247500.149		ppb	1.024					243881.123
207	Pb	|		381.113	0.021767	ppb	16.254	18.419				67.778
203	Tl	|		96.667	0.020282	ppb	9.123	10.040				8.889
209	Bi-IS	>		153803.607		ppb	1.328					158124.761
51	V	|		55.556	-0.027301	ppb	3.464	10.313				76.667
59	Co	|		16.667	0.004117	ppb	40.000	85.016				8.889
60	Ni	|		51.111	0.020307	ppb	39.311	98.520				31.111
75	As	|		716.451	-0.046644	ppb	5.656	180.172				750.178
71	Ga-ISK	>		126323.844		ppb	0.343					128019.987
82	Se-2	|		4.171	0.099498	ppb	91.397	81.795				-0.498
107	Ag-1	|		117.778	0.024053	ppb	16.583	19.364				17.778
115	In-ISK	|		109868.583		ppb	0.314					111696.848
45	Sc-ISK	>		297329.131		ppb	0.924					306767.810
23	Na	|		4077.249	1.196716	ppb	2.133	19.622				3597.120
39	K	|		135312.254	5.178643	ppb	0.169	17.414				133299.014
24	Mg	|		318.337	0.396817	ppb	14.594	21.639				96.667
159	Tb-ISK	|		200953.543		ppb	0.600					210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, April 17, 2020 10:23:21

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\b.084

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		32769.766		ppb		0.904		33322.200
9	Be	|		8.889	-0.004043	ppb	43.301	65.663		14.444
10	B	|		1236.720	-3.572413	ppb	2.105	0.977		2425.762
27	Al	|		7430.821	0.528185	ppb	1.715	1.153		3659.358
43	Ca-2	|		83.334	-3.825711	ppb	27.056	35.717		148.334
49	Ti	|		232.224	-0.016281	ppb	8.162	139.949		242.224
52	Cr	|		9953.467	-0.414216	ppb	1.090	3.502		13618.712
55	Mn	|		922.252	0.025668	ppb	7.930	17.599		580.012
57	Fe	|		8836.066	-8.741211	ppb	2.269	2.827		11030.926
45	Sc-IS	>		1605448.750		ppb	1.556			1599575.121
66	Zn	|		935.586	0.322231	ppb	4.052	10.436		504.454
86	Sr	|		11.296	-0.000844	ppb	253.162	1800.183		12.994
65	Cu	|		143.984	0.032382	ppb	20.856	46.241		80.792
69	Ga-IS	|		452940.891		ppb	2.814			458023.235
95	Mo	|		88.889	0.019137	ppb	27.642	70.376		55.556
115	In-IS	>		252045.396		ppb	1.828			255368.612
111	Cd	|		2.036	-0.002707	ppb	97.027	44.615		6.550
118	Sn	|		2672.474	0.483811	ppb	10.768	11.268		454.452
121	Sb	|		848.914	0.117552	ppb	4.011	7.987		263.336
135	Ba	|		18.889	0.000225	ppb	36.735	2972.391		18.889
165	Ho-IS	|		272043.037		ppb	1.795			272257.135
159	Tb-IS	|		250656.069		ppb	2.119			243881.123
207	Pb	|		381.113	0.022241	ppb	3.641	1.855		67.778
203	Tl	|		22.222	0.003183	ppb	52.678	82.776		8.889
209	Bi-IS	>		151229.884		ppb	2.383			158124.761
51	V	|		42.222	-0.044327	ppb	39.736	51.903		76.667
59	Co	|		15.556	0.003660	ppb	81.127	180.407		8.889
60	Ni	|		46.667	0.016883	ppb	25.754	76.552		31.111
75	As	|		711.648	-0.029739	ppb	8.073	351.619		750.178
71	Ga-ISK	>		123938.712		ppb	1.430			128019.987
82	Se-2	|		-0.172	0.005488	ppb	3630.513	2503.699		-0.498
107	Ag-1	|		56.667	0.009659	ppb	15.563	22.883		17.778
115	In-ISK	|		110155.362		ppb	2.470			111696.848
45	Sc-ISK	>		289631.087		ppb	0.691			306767.810
23	Na	|		3862.189	0.969036	ppb	2.532	25.638		3597.120
39	K	|		135118.208	8.051247	ppb	0.123	10.830		133299.014
24	Mg	|		278.336	0.338723	ppb	8.101	11.105		96.667
159	Tb-ISK	|		200167.974		ppb	0.693			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-23184-B-4-B @10
 Autosampler Position: 127
 Sample Date/Time: Friday, April 17, 2020 10:26:07
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-23184-B-4-B @10.085
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34523.902		ppb			2.244			33322.200
9	Be	|		11.111	-0.002851	ppb			75.498	197.335		14.444
10	B	|		3900.533	3.842260	ppb			2.921	4.562		2425.762
27	Al	|		8567.017	0.632804	ppb			4.946	5.827		3659.358
43	Ca-2	|		272279.112	15191.787352	ppb			1.752	0.571		148.334
49	Ti	|		820.024	0.797235	ppb			7.088	13.247		242.224
52	Cr	|		15109.099	0.084158	ppb			1.823	6.456		13618.712
55	Mn	|		1178075.614	84.980342	ppb			1.600	0.638		580.012
57	Fe	|		27774.770	60.352787	ppb			3.212	2.527		11030.926
45	Sc-IS	>		1681813.114		ppb			1.960			1599575.121
66	Zn	|		1292.281	0.545090	ppb			6.046	7.025		504.454
86	Sr	|		132758.165	67.674157	ppb			2.589	1.354		12.994
65	Cu	|		835.923	0.369935	ppb			4.601	3.692		80.792
69	Ga-IS	|		464535.137		ppb			2.590			458023.235
95	Mo	|		708.906	0.361073	ppb			3.131	1.362		55.556
115	In-IS	>		252721.349		ppb			2.097			255368.612
111	Cd	|		7.400	0.000593	ppb			138.220	1070.299		6.550
118	Sn	|		528.899	0.017041	ppb			17.830	112.646		454.452
121	Sb	|		214.446	-0.009228	ppb			13.220	53.519		263.336
135	Ba	|		13361.814	12.856329	ppb			5.526	4.184		18.889
165	Ho-IS	|		277202.775		ppb			1.269			272257.135
159	Tb-IS	|		253451.890		ppb			0.067			243881.123
207	Pb	|		200.001	0.009491	ppb			15.275	21.160		67.778
203	Tl	|		17.778	0.002178	ppb			21.651	42.729		8.889
209	Bi-IS	>		151271.234		ppb			1.401			158124.761
51	V	|		336.671	0.352112	ppb			5.239	6.847		76.667
59	Co	|		221.113	0.109332	ppb			25.421	24.103		8.889
60	Ni	|		267.780	0.234120	ppb			1.437	1.641		31.111
75	As	|		787.443	0.084781	ppb			1.111	68.009		750.178
71	Ga-ISK	>		127077.448		ppb			2.851			128019.987
82	Se-2	|		12.841	0.284480	ppb			23.333	24.940		-0.498
107	Ag-1	|		16.667	-0.000235	ppb			40.000	662.869		17.778
115	In-ISK	|		110137.219		ppb			0.577			111696.848
45	Sc-ISK	>		307725.796		ppb			2.394			306767.810
23	Na	|		10656725.323	20828.459403	ppb			2.559	0.913		3597.120
39	K	|		1087618.274	779.936392	ppb			1.179	1.415		133299.014
24	Mg	|		4728323.479	8063.578177	ppb			0.947	1.525		96.667
159	Tb-ISK	|		205073.448		ppb			0.290			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-23184-B-5-B @10
 Autosampler Position: 128
 Sample Date/Time: Friday, April 17, 2020 10:28:52
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-23184-B-5-B @10.086
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	35104.203		ppb	2.252		33322.200
9	Be	16.667	0.000988	ppb	20.000	216.285	14.444
10	B	4397.344	5.248867	ppb	2.107	7.364	2425.762
27	Al	6274.712	0.325503	ppb	2.856	13.796	3659.358
43	Ca-2	396869.987	22119.022961	ppb	3.563	0.972	148.334
49	Ti	1047.816	1.114035	ppb	6.237	4.856	242.224
52	Cr	14418.384	0.009339	ppb	1.134	242.544	13618.712
55	Mn	2535218.632	182.727465	ppb	2.448	0.437	580.012
57	Fe	55342.607	163.012323	ppb	2.919	0.598	11030.926
45	Sc-IS	> 1683619.261		ppb	2.603		1599575.121
66	Zn	3198.137	1.907949	ppb	6.199	6.836	504.454
86	Sr	140741.352	71.670814	ppb	2.699	1.078	12.994
65	Cu	1111.307	0.504714	ppb	7.275	5.214	80.792
69	Ga-IS	457895.644		ppb	2.969		458023.235
95	Mo	461.119	0.223246	ppb	5.615	4.915	55.556
115	In-IS	> 251042.999		ppb	1.179		255368.612
111	Cd	17.921	0.007026	ppb	28.244	42.731	6.550
118	Sn	515.565	0.014959	ppb	11.130	74.676	454.452
121	Sb	130.001	-0.025789	ppb	4.441	5.630	263.336
135	Ba	5297.649	5.122145	ppb	2.019	1.833	18.889
165	Ho-IS	283138.324		ppb	0.069		272257.135
159	Tb-IS	258794.506		ppb	1.464		243881.123
207	Pb	253.334	0.013239	ppb	22.135	27.970	67.778
203	Tl	60.000	0.012079	ppb	33.793	39.215	8.889
209	Bi-IS	> 151088.231		ppb	1.588		158124.761
51	V	375.561	0.400626	ppb	6.542	9.860	76.667
59	Co	445.563	0.224107	ppb	3.024	4.475	8.889
60	Ni	552.233	0.510902	ppb	9.358	10.925	31.111
75	As	688.889	-0.120764	ppb	7.085	68.175	750.178
71	Ga-ISK	> 128141.118		ppb	1.541		128019.987
82	Se-2	17.851	0.387259	ppb	70.252	68.255	-0.498
107	Ag-1	27.778	0.002355	ppb	18.330	48.129	17.778
115	In-ISK	110230.341		ppb	0.573		111696.848
45	Sc-ISK	> 307404.027		ppb	1.835		306767.810
23	Na	14774978.687	28912.981799	ppb	1.991	1.774	3597.120
39	K	685578.551	451.841331	ppb	0.274	2.499	133299.014
24	Mg	6882714.759	11751.859768	ppb	1.804	3.451	96.667
159	Tb-ISK	207122.742		ppb	0.746		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-23184-B-6-B @10
 Autosampler Position: 129
 Sample Date/Time: Friday, April 17, 2020 10:31:37
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-23184-B-6-B @10.087
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	35575.389		ppb	3.530		33322.200
9	Be	6.667	-0.005964	ppb	132.288	98.802	14.444
10	B	8300.192	15.477371	ppb	4.861	6.706	2425.762
27	Al	5236.516	0.160167	ppb	2.547	16.485	3659.358
43	Ca-2	504130.299	27075.259992	ppb	2.192	1.709	148.334
49	Ti	1333.396	1.447949	ppb	2.385	2.627	242.224
52	Cr	14205.951	-0.068909	ppb	1.986	33.013	13618.712
55	Mn	6342323.452	440.431190	ppb	1.825	0.638	580.012
57	Fe	35951.886	85.815130	ppb	3.538	3.759	11030.926
45	Sc-IS	> 1747570.145		ppb	1.369		1599575.121
66	Zn	2690.253	1.474257	ppb	1.258	1.246	504.454
86	Sr	232636.119	114.125182	ppb	2.694	1.788	12.994
65	Cu	1561.532	0.698363	ppb	5.799	5.056	80.792
69	Ga-IS	467838.112		ppb	3.967		458023.235
95	Mo	3208.138	1.682069	ppb	1.743	3.108	55.556
115	In-IS	> 256349.578		ppb	1.135		255368.612
111	Cd	18.818	0.007358	ppb	10.521	16.348	6.550
118	Sn	416.673	-0.008534	ppb	12.316	117.298	454.452
121	Sb	164.445	-0.019592	ppb	15.482	25.020	263.336
135	Ba	16033.463	15.210418	ppb	6.590	5.498	18.889
165	Ho-IS	288193.538		ppb	2.504		272257.135
159	Tb-IS	263870.939		ppb	2.117		243881.123
207	Pb	858.899	0.053988	ppb	6.189	5.781	67.778
203	Tl	15.556	0.001550	ppb	68.883	157.500	8.889
209	Bi-IS	> 155990.407		ppb	0.880		158124.761
51	V	1501.190	1.910246	ppb	2.354	1.718	76.667
59	Co	635.570	0.321877	ppb	2.184	2.526	8.889
60	Ni	421.117	0.382593	ppb	3.296	3.895	31.111
75	As	766.611	0.032258	ppb	4.739	221.061	750.178
71	Ga-ISK	> 128000.958		ppb	1.333		128019.987
82	Se-2	9.520	0.211243	ppb	26.554	24.833	-0.498
107	Ag-1	11.111	-0.001574	ppb	17.321	31.286	17.778
115	In-ISK	112042.515		ppb	0.280		111696.848
45	Sc-ISK	> 311256.770		ppb	1.094		306767.810
23	Na	19682507.384	38042.847243	ppb	0.526	1.551	3597.120
39	K	307445.331	139.176383	ppb	0.415	1.279	133299.014
24	Mg	9831486.288	16574.402024	ppb	0.779	1.721	96.667
159	Tb-ISK	209463.196		ppb	0.928		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-23184-B-7-B @10
 Autosampler Position: 130
 Sample Date/Time: Friday, April 17, 2020 10:34:23
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-23184-B-7-B @10.088
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	36033.168		ppb	1.187		33322.200
9	Be	14.444	-0.000944	ppb	53.294	527.791	14.444
10	B	6484.805	10.415294	ppb	0.747	2.000	2425.762
27	Al	6249.149	0.286680	ppb	7.534	21.773	3659.358
43	Ca-2	354806.688	18955.300902	ppb	2.165	1.706	148.334
49	Ti	1034.482	1.035850	ppb	2.994	4.014	242.224
52	Cr	15373.825	0.042661	ppb	1.814	48.677	13618.712
55	Mn	267783.326	18.459541	ppb	1.072	0.657	580.012
57	Fe	35323.626	82.938817	ppb	1.705	2.936	11030.926
45	Sc-IS	> 1756485.266		ppb	0.486		1599575.121
66	Zn	1363.398	0.554983	ppb	2.001	2.910	504.454
86	Sr	162530.864	79.333053	ppb	1.102	1.084	12.994
65	Cu	1807.179	0.810675	ppb	2.945	2.704	80.792
69	Ga-IS	470594.040		ppb	2.479		458023.235
95	Mo	2221.284	1.148347	ppb	0.229	0.615	55.556
115	In-IS	> 253135.732		ppb	2.344		255368.612
111	Cd	13.113	0.003967	ppb	52.984	102.870	6.550
118	Sn	264.447	-0.040472	ppb	17.114	21.027	454.452
121	Sb	170.001	-0.018076	ppb	20.471	37.916	263.336
135	Ba	6157.997	5.903604	ppb	6.446	4.145	18.889
165	Ho-IS	288664.070		ppb	0.834		272257.135
159	Tb-IS	264652.416		ppb	0.971		243881.123
207	Pb	186.667	0.008178	ppb	12.500	18.529	67.778
203	Tl	10.000	0.000279	ppb	57.735	466.223	8.889
209	Bi-IS	> 155800.561		ppb	0.732		158124.761
51	V	351.115	0.360684	ppb	6.868	9.886	76.667
59	Co	85.556	0.038759	ppb	19.610	23.709	8.889
60	Ni	336.671	0.294862	ppb	18.890	21.915	31.111
75	As	752.565	-0.018654	ppb	5.425	407.910	750.178
71	Ga-ISK	> 130099.820		ppb	1.577		128019.987
82	Se-2	5.505	0.124866	ppb	93.475	85.041	-0.498
107	Ag-1	16.667	-0.000324	ppb	20.000	240.627	17.778
115	In-ISK	112533.610		ppb	1.326		111696.848
45	Sc-ISK	> 319419.637		ppb	1.195		306767.810
23	Na	15562568.229	29304.933061	ppb	1.730	0.563	3597.120
39	K	2060532.814	1513.006374	ppb	5.196	4.609	133299.014
24	Mg	6545395.348	10751.288362	ppb	1.141	0.260	96.667
159	Tb-ISK	212287.483		ppb	2.145		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-23184-B-8-B @10
 Autosampler Position: 131
 Sample Date/Time: Friday, April 17, 2020 10:37:08
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-23184-B-8-B @10.089
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	35651.166		ppb	4.865		33322.200
9	Be	7.778	-0.005252	ppb	137.766	133.996	14.444
10	B	5168.714	7.220016	ppb	4.738	9.576	2425.762
27	Al	5727.815	0.240053	ppb	1.567	1.752	3659.358
43	Ca-2	369803.796	20309.206432	ppb	0.813	1.299	148.334
49	Ti	877.805	0.857131	ppb	4.268	3.547	242.224
52	Cr	14121.421	-0.044603	ppb	1.296	83.268	13618.712
55	Mn	6459.238	0.414915	ppb	2.017	4.170	580.012
57	Fe	28672.102	61.993058	ppb	3.581	3.750	11030.926
45	Sc-IS	> 1709136.029		ppb	2.114		1599575.121
66	Zn	1727.882	0.837392	ppb	4.384	3.657	504.454
86	Sr	145906.171	73.218908	ppb	2.537	3.680	12.994
65	Cu	931.827	0.409978	ppb	3.947	4.137	80.792
69	Ga-IS	457308.871		ppb	2.731		458023.235
95	Mo	797.800	0.403492	ppb	1.277	1.991	55.556
115	In-IS	> 252760.808		ppb	1.466		255368.612
111	Cd	10.547	0.002467	ppb	18.287	44.645	6.550
118	Sn	272.225	-0.038568	ppb	1.870	0.714	454.452
121	Sb	114.445	-0.029071	ppb	4.449	3.227	263.336
135	Ba	15064.614	14.497453	ppb	4.032	3.294	18.889
165	Ho-IS	280957.191		ppb	1.030		272257.135
159	Tb-IS	260113.495		ppb	0.908		243881.123
207	Pb	136.667	0.004906	ppb	4.225	5.775	67.778
203	Tl	7.778	-0.000187	ppb	89.214	860.924	8.889
209	Bi-IS	> 153541.946		ppb	1.462		158124.761
51	V	1073.374	1.326917	ppb	3.765	5.157	76.667
59	Co	38.889	0.015284	ppb	17.843	24.040	8.889
60	Ni	304.448	0.266061	ppb	2.755	4.094	31.111
75	As	737.206	-0.035086	ppb	5.064	203.235	750.178
71	Ga-ISK	> 128912.408		ppb	1.053		128019.987
82	Se-2	14.507	0.313708	ppb	31.760	29.568	-0.498
107	Ag-1	30.000	0.002856	ppb	29.397	74.553	17.778
115	In-ISK	109873.027		ppb	1.239		111696.848
45	Sc-ISK	> 310603.977		ppb	1.245		306767.810
23	Na	11891818.332	23030.037928	ppb	0.166	1.196	3597.120
39	K	434259.399	242.411787	ppb	0.476	1.158	133299.014
24	Mg	6579879.878	11116.515797	ppb	1.628	2.488	96.667
159	Tb-ISK	209243.303		ppb	0.689		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-23184-B-9-B @10
 Autosampler Position: 132
 Sample Date/Time: Friday, April 17, 2020 10:39:54
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-23184-B-9-B @10.090
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	35572.012		ppb	0.785		33322.200
9	Be	11.111	-0.003103	ppb	17.321	42.490	14.444
10	B	7227.383	12.447479	ppb	0.573	2.119	2425.762
27	Al	5772.278	0.225654	ppb	2.545	9.297	3659.358
43	Ca-2	426249.534	22784.177829	ppb	1.188	1.214	148.334
49	Ti	1277.835	1.364890	ppb	0.839	3.254	242.224
52	Cr	16426.108	0.150366	ppb	2.362	6.048	13618.712
55	Mn	1581.199	0.065242	ppb	7.185	10.316	580.012
57	Fe	33951.420	78.070904	ppb	2.100	2.310	11030.926
45	Sc-IS	> 1755992.469		ppb	1.905		1599575.121
66	Zn	3659.359	2.128828	ppb	5.786	4.786	504.454
86	Sr	177286.369	86.547350	ppb	3.736	2.482	12.994
65	Cu	3449.022	1.584986	ppb	5.836	4.057	80.792
69	Ga-IS	470198.681		ppb	3.473		458023.235
95	Mo	1584.533	0.809787	ppb	6.327	5.318	55.556
115	In-IS	> 254125.682		ppb	1.637		255368.612
111	Cd	13.339	0.004197	ppb	91.069	177.967	6.550
118	Sn	287.781	-0.035582	ppb	10.763	16.224	454.452
121	Sb	127.778	-0.026622	ppb	26.130	23.504	263.336
135	Ba	5154.267	4.919005	ppb	7.894	6.409	18.889
165	Ho-IS	288972.743		ppb	1.516		272257.135
159	Tb-IS	268744.652		ppb	1.519		243881.123
207	Pb	205.556	0.009405	ppb	9.908	14.219	67.778
203	Tl	5.556	-0.000734	ppb	69.282	118.987	8.889
209	Bi-IS	> 156545.305		ppb	0.744		158124.761
51	V	1865.678	2.359388	ppb	5.058	6.675	76.667
59	Co	31.111	0.011144	ppb	6.186	6.968	8.889
60	Ni	373.338	0.329786	ppb	12.275	13.722	31.111
75	As	780.146	0.032123	ppb	10.548	417.600	750.178
71	Ga-ISK	> 130146.929		ppb	1.703		128019.987
82	Se-2	28.841	0.607610	ppb	46.757	45.513	-0.498
107	Ag-1	27.778	0.002267	ppb	6.928	24.605	17.778
115	In-ISK	113634.311		ppb	0.871		111696.848
45	Sc-ISK	> 317676.827		ppb	0.902		306767.810
23	Na	23789610.870	45050.775988	ppb	0.444	1.046	3597.120
39	K	394011.125	202.688728	ppb	1.016	0.770	133299.014
24	Mg	8423284.535	13913.049680	ppb	1.207	1.866	96.667
159	Tb-ISK	212160.499		ppb	0.459		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-23184-B-18-B @10
 Autosampler Position: 133
 Sample Date/Time: Friday, April 17, 2020 10:42:40
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-23184-B-18-B @10.091
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS			36345.070		ppb			1.429		33322.200
9	Be			8.889	-0.004723	ppb			57.282	68.896	14.444
10	B			7071.750	11.502273	ppb			1.634	2.429	2425.762
27	Al			5421.029	0.161748	ppb			3.129	14.377	3659.358
43	Ca-2			422846.885	21992.605198	ppb			0.649	0.129	148.334
49	Ti			1204.495	1.221726	ppb			6.904	8.663	242.224
52	Cr			16331.555	0.096038	ppb			2.037	25.064	13618.712
55	Mn			1696.768	0.070129	ppb			8.548	14.108	580.012
57	Fe			33436.872	73.017207	ppb			1.896	2.708	11030.926
45	Sc-IS	>		1804422.688		ppb			0.561		1599575.121
66	Zn			3472.644	1.937997	ppb			1.633	2.019	504.454
86	Sr			172775.193	82.092940	ppb			1.867	1.812	12.994
65	Cu			3458.171	1.546185	ppb			3.593	3.382	80.792
69	Ga-IS			474552.906		ppb			4.135		458023.235
95	Mo			1581.199	0.785778	ppb			1.082	1.433	55.556
115	In-IS	>		260399.636		ppb			0.853		255368.612
111	Cd			11.124	0.002642	ppb			34.366	87.253	6.550
118	Sn			248.891	-0.045247	ppb			10.908	11.654	454.452
121	Sb			117.778	-0.029100	ppb			8.170	5.991	263.336
135	Ba			4908.622	4.573130	ppb			3.624	3.234	18.889
165	Ho-IS			296206.331		ppb			1.303		272257.135
159	Tb-IS			271502.444		ppb			0.723		243881.123
207	Pb			135.556	0.004585	ppb			15.025	28.852	67.778
203	Tl			15.556	0.001508	ppb			49.487	115.237	8.889
209	Bi-IS	>		157626.251		ppb			2.293		158124.761
51	V			1840.119	2.290687	ppb			4.260	4.831	76.667
59	Co			31.111	0.010937	ppb			24.744	35.420	8.889
60	Ni			358.893	0.310808	ppb			10.018	10.575	31.111
75	As			784.931	0.021685	ppb			6.831	460.202	750.178
71	Ga-ISK	>		131981.314		ppb			0.381		128019.987
82	Se-2			27.143	0.565610	ppb			23.680	23.053	-0.498
107	Ag-1			21.111	0.000641	ppb			24.119	184.229	17.778
115	In-ISK			113252.538		ppb			1.227		111696.848
45	Sc-ISK	>		317218.875		ppb			0.295		306767.810
23	Na			24009473.455	45530.178096	ppb			0.735	0.641	3597.120
39	K			393731.046	202.917161	ppb			0.440	0.595	133299.014
24	Mg			8462447.320	13996.422613	ppb			1.243	1.056	96.667
159	Tb-ISK			212954.335		ppb			1.308		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 10:45:27

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.092

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33311.026		ppb		2.189		33322.200
9	Be	|	145768.107	99.562888	ppb		2.906	1.415	14.444
10	B	|	88966.174	245.653923	ppb		0.726	1.490	2425.762
27	Al	|	703321.538	93.719213	ppb		2.011	2.192	3659.358
43	Ca-2	|	91373.044	5084.478422	ppb		2.197	0.953	148.334
49	Ti	|	69085.540	96.763837	ppb		0.729	1.170	242.224
52	Cr	|	922283.307	96.513892	ppb		1.708	0.234	13618.712
55	Mn	|	1294199.331	93.213516	ppb		2.114	0.279	580.012
57	Fe	|	1285224.475	4745.997326	ppb		1.818	1.301	11030.926
45	Sc-IS	>	1684325.782		ppb		1.843		1599575.121
66	Zn	|	139941.508	99.666232	ppb		3.442	1.937	504.454
86	Sr	|	189853.524	96.626554	ppb		3.210	1.594	12.994
65	Cu	|	200732.867	98.691565	ppb		4.351	2.851	80.792
69	Ga-IS	|	491241.932		ppb		2.363		458023.235
95	Mo	|	174123.808	96.494225	ppb		1.604	0.506	55.556
115	In-IS	>	264579.279		ppb		1.248		255368.612
111	Cd	|	171516.968	99.841381	ppb		2.243	1.001	6.550
118	Sn	|	481408.714	99.782580	ppb		1.086	1.089	454.452
121	Sb	|	516492.998	98.066263	ppb		1.233	1.572	263.336
135	Ba	|	109338.156	100.637502	ppb		2.830	2.363	18.889
165	Ho-IS	|	289874.919		ppb		0.925		272257.135
159	Tb-IS	|	269773.516		ppb		0.857		243881.123
207	Pb	|	1518797.784	101.057200	ppb		0.684	1.093	67.778
203	Tl	|	456851.672	101.277143	ppb		1.095	0.839	8.889
209	Bi-IS	>	159868.626		ppb		1.777		158124.761
51	V	|	75791.656	99.801392	ppb		1.322	2.166	76.667
59	Co	|	196061.918	98.955566	ppb		1.181	0.658	8.889
60	Ni	|	103527.117	99.771974	ppb		0.713	0.908	31.111
75	As	|	52831.016	99.407106	ppb		0.084	1.671	750.178
71	Ga-ISK	>	130245.585		ppb		1.581		128019.987
82	Se-2	|	4831.665	100.201126	ppb		1.396	2.751	-0.498
107	Ag-1	|	432293.478	100.639931	ppb		0.772	2.039	17.778
115	In-ISK	|	114435.639		ppb		0.964		111696.848
45	Sc-ISK	>	313766.305		ppb		1.019		306767.810
23	Na	|	2771173.581	5306.979677	ppb		0.239	0.791	3597.120
39	K	|	6681430.106	5247.343051	ppb		0.835	0.444	133299.014
24	Mg	|	3140282.712	5250.898091	ppb		1.585	1.049	96.667
159	Tb-ISK	|	211557.703		ppb		0.808		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 10:48:13

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.093

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		32744.155		ppb			1.434			33322.200
9	Be	|		12.222	-0.001786	ppb		41.660	196.030			14.444
10	B	|		1274.501	-3.515205	ppb		0.799	2.240			2425.762
27	Al	|		3848.296	0.016823	ppb		3.433	139.907			3659.358
43	Ca-2	|		68.334	-4.764908	ppb		60.927	50.879			148.334
49	Ti	|		280.003	0.048257	ppb		2.062	5.964			242.224
52	Cr	|		9535.404	-0.476591	ppb		1.750	4.613			13618.712
55	Mn	|		526.676	-0.004768	ppb		4.564	45.553			580.012
57	Fe	|		10240.338	-3.846737	ppb		2.822	16.207			11030.926
45	Sc-IS	|>		1629590.535		ppb		1.365				1599575.121
66	Zn	|		571.123	0.042177	ppb		3.973	26.132			504.454
86	Sr	|		46.328	0.017454	ppb		66.078	93.524			12.994
65	Cu	|		121.787	0.019960	ppb		22.014	63.596			80.792
69	Ga-IS	|		461041.398		ppb		2.643				458023.235
95	Mo	|		443.340	0.221838	ppb		9.832	12.695			55.556
115	In-IS	|>		254627.173		ppb		2.112				255368.612
111	Cd	|		15.736	0.005514	ppb		42.835	70.347			6.550
118	Sn	|		3093.668	0.569247	ppb		3.041	2.801			454.452
121	Sb	|		611.124	0.068828	ppb		0.833	3.448			263.336
135	Ba	|		17.778	-0.001183	ppb		78.063	1086.384			18.889
165	Ho-IS	|		278115.698		ppb		0.955				272257.135
159	Tb-IS	|		256836.147		ppb		1.065				243881.123
207	Pb	|		360.002	0.019913	ppb		6.481	8.016			67.778
203	Tl	|		112.223	0.023425	ppb		16.890	18.357			8.889
209	Bi-IS	|>		156471.135		ppb		0.094				158124.761
51	V	|		53.333	-0.030764	ppb		39.031	91.039			76.667
59	Co	|		23.333	0.007543	ppb		37.796	62.902			8.889
60	Ni	|		32.222	0.001406	ppb		31.604	748.250			31.111
75	As	|		707.243	-0.073505	ppb		5.518	103.261			750.178
71	Ga-ISK	|>		127113.078		ppb		1.291				128019.987
82	Se-2	|		8.531	0.191738	ppb		48.745	45.875			-0.498
107	Ag-1	|		104.445	0.020693	ppb		14.391	16.759			17.778
115	In-ISK	|		111934.331		ppb		0.469				111696.848
45	Sc-ISK	|>		299584.531		ppb		1.196				306767.810
23	Na	|		2658.582	-1.718204	ppb		7.822	20.830			3597.120
39	K	|		134639.281	3.757626	ppb		0.453	40.465			133299.014
24	Mg	|		325.004	0.404039	ppb		16.209	23.330			96.667
159	Tb-ISK	|		207680.733		ppb		0.567				210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25593-B-1-A

Autosampler Position: 142

Sample Date/Time: Friday, April 17, 2020 10:53:06

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25593-B-1-A.094

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		33984.821		ppb		0.306		33322.200
9	Be	|		67.778	0.035976	ppb	15.809	18.785		14.444
10	B	|		20166.446	50.217467	ppb	0.574	3.789		2425.762
27	Al	|		1710371.430	229.428606	ppb	3.837	7.060		3659.358
43	Ca-2	|		350909.921	19611.416696	ppb	1.615	4.772		148.334
49	Ti	|		4337.325	5.755141	ppb	2.464	4.446		242.224
52	Cr	|		18059.188	0.399947	ppb	1.812	9.317		13618.712
55	Mn	|		229396.009	16.531549	ppb	0.103	3.191		580.012
57	Fe	|		97622.420	321.455211	ppb	0.233	3.331		11030.926
45	Sc-IS	>		1680845.606		ppb	3.116			1599575.121
66	Zn	|		10675.099	7.270573	ppb	2.127	1.063		504.454
86	Sr	|		163603.068	83.495165	ppb	0.712	2.651		12.994
65	Cu	|		6465.356	3.146891	ppb	3.645	3.957		80.792
69	Ga-IS	|		462948.774		ppb	5.157			458023.235
95	Mo	|		563.344	0.281133	ppb	8.005	12.038		55.556
115	In-IS	>		254200.660		ppb	1.830			255368.612
111	Cd	|		69.928	0.038351	ppb	16.791	16.731		6.550
118	Sn	|		915.585	0.100031	ppb	1.516	0.647		454.452
121	Sb	|		1081.152	0.162056	ppb	3.717	7.080		263.336
135	Ba	|		29042.836	27.809977	ppb	2.310	1.017		18.889
165	Ho-IS	|		285390.581		ppb	1.324			272257.135
159	Tb-IS	|		260677.217		ppb	1.566			243881.123
207	Pb	|		15067.574	1.040197	ppb	3.770	4.960		67.778
203	Tl	|		43.333	0.007992	ppb	27.735	33.392		8.889
209	Bi-IS	>		153464.468		ppb	1.553			158124.761
51	V	|		1290.058	1.630230	ppb	6.367	7.354		76.667
59	Co	|		746.686	0.379216	ppb	12.870	12.135		8.889
60	Ni	|		2840.282	2.759667	ppb	2.136	2.341		31.111
75	As	|		1153.964	0.787800	ppb	1.573	2.651		750.178
71	Ga-ISK	>		127809.214		ppb	0.872			128019.987
82	Se-2	|		9.489	0.210457	ppb	73.851	69.527		-0.498
107	Ag-1	|		58.889	0.009758	ppb	31.175	44.630		17.778
115	In-ISK	|		111799.111		ppb	1.014			111696.848
45	Sc-ISK	>		304303.601		ppb	0.559			306767.810
23	Na	|		4725478.099	9336.310341	ppb	0.784	1.322		3597.120
39	K	|		2458968.929	1923.450989	ppb	0.538	1.132		133299.014
24	Mg	|		3290753.549	5673.928010	ppb	0.679	1.181		96.667
159	Tb-ISK	|		208303.688		ppb	0.392			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25632-A-1-A

Autosampler Position: 143

Sample Date/Time: Friday, April 17, 2020 10:55:51

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25632-A-1-A.095

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34888.116		ppb			1.954			33322.200
9	Be	|		86.667	0.048185	ppb		11.538	15.197			14.444
10	B	|		93519.575	255.539249	ppb		1.042	1.774			2425.762
27	Al	|		5930760.839	785.094416	ppb		2.119	3.142			3659.358
43	Ca-2	|		315615.794	17381.967804	ppb		1.830	0.812			148.334
49	Ti	|		14758.732	20.150126	ppb		1.112	1.087			242.224
52	Cr	|		35329.196	2.188056	ppb		1.755	2.142			13618.712
55	Mn	|		593661.118	42.247219	ppb		0.685	0.493			580.012
57	Fe	|		277445.020	978.732826	ppb		0.802	0.601			11030.926
45	Sc-IS	>		1703819.722		ppb		1.034				1599575.121
66	Zn	|		175242.553	123.469405	ppb		3.623	2.699			504.454
86	Sr	|		251097.109	126.362201	ppb		0.239	0.837			12.994
65	Cu	|		30169.957	14.629670	ppb		2.873	1.862			80.792
69	Ga-IS	|		476800.619		ppb		3.905				458023.235
95	Mo	|		5383.237	2.917693	ppb		1.998	2.090			55.556
115	In-IS	>		258597.169		ppb		1.415				255368.612
111	Cd	|		359.811	0.210446	ppb		10.800	11.313			6.550
118	Sn	|		677.794	0.046216	ppb		3.945	13.627			454.452
121	Sb	|		5090.907	0.937508	ppb		2.253	0.964			263.336
135	Ba	|		61603.740	57.997863	ppb		3.175	1.839			18.889
165	Ho-IS	|		286488.865		ppb		1.235				272257.135
159	Tb-IS	|		266956.936		ppb		0.994				243881.123
207	Pb	|		133764.665	9.094447	ppb		0.412	0.683			67.778
203	Tl	|		65.556	0.012809	ppb		54.370	61.492			8.889
209	Bi-IS	>		156373.474		ppb		1.093				158124.761
51	V	|		4310.651	5.706265	ppb		2.901	2.875			76.667
59	Co	|		1944.577	0.999009	ppb		2.574	2.496			8.889
60	Ni	|		3469.310	3.389064	ppb		1.254	1.176			31.111
75	As	|		1601.707	1.669539	ppb		2.231	4.339			750.178
71	Ga-ISK	>		127373.095		ppb		0.090				128019.987
82	Se-2	|		44.846	0.961258	ppb		19.411	19.274			-0.498
107	Ag-1	|		127.778	0.026206	ppb		15.939	18.602			17.778
115	In-ISK	|		110711.129		ppb		0.355				111696.848
45	Sc-ISK	>		308072.190		ppb		1.129				306767.810
23	Na	|		16292796.527	31814.263178	ppb		0.568	1.103			3597.120
39	K	|		1589144.402	1188.339518	ppb		0.450	0.764			133299.014
24	Mg	|		2171054.630	3697.443897	ppb		0.897	0.636			96.667
159	Tb-ISK	|		210258.063		ppb		0.835				210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25638-A-1-A @5
 Autosampler Position: 144
 Sample Date/Time: Friday, April 17, 2020 10:58:37
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25638-A-1-A @5.096
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	43878.407		ppb	1.714		33322.200
9	Be	10.000	-0.003993	ppb	33.333	51.440	14.444
10	B	100595.334	261.423887	ppb	2.732	0.487	2425.762
27	Al	278803.278	34.601194	ppb	0.698	3.127	3659.358
43	Ca-2	313995.138	16437.825073	ppb	2.918	0.537	148.334
49	Ti	1613.424	1.773517	ppb	2.235	3.928	242.224
52	Cr	15894.394	0.063707	ppb	1.322	34.465	13618.712
55	Mn	330952.940	22.369199	ppb	2.082	0.885	580.012
57	Fe	40215.422	97.567202	ppb	1.420	2.060	11030.926
45	Sc-IS	> 1792329.285		ppb	2.407		1599575.121
66	Zn	7993.347	4.991842	ppb	1.998	1.323	504.454
86	Sr	372957.529	178.427713	ppb	2.036	1.033	12.994
65	Cu	1513.520	0.658325	ppb	2.042	4.282	80.792
69	Ga-IS	479159.773		ppb	2.019		458023.235
95	Mo	11775.963	6.103200	ppb	1.537	1.454	55.556
115	In-IS	> 253172.769		ppb	0.410		255368.612
111	Cd	4.159	-0.001420	ppb	44.004	78.324	6.550
118	Sn	953.365	0.109050	ppb	5.428	11.066	454.452
121	Sb	1909.016	0.327132	ppb	1.792	1.872	263.336
135	Ba	31188.480	29.990444	ppb	3.510	3.800	18.889
165	Ho-IS	297726.675		ppb	1.833		272257.135
159	Tb-IS	274206.907		ppb	1.311		243881.123
207	Pb	871.122	0.056426	ppb	3.093	2.698	67.778
203	Tl	10.000	0.000340	ppb	33.333	229.202	8.889
209	Bi-IS	> 151921.392		ppb	1.252		158124.761
51	V	716.685	0.844643	ppb	6.594	8.371	76.667
59	Co	673.349	0.336223	ppb	0.857	1.671	8.889
60	Ni	3357.061	3.214798	ppb	2.934	3.799	31.111
75	As	1473.540	1.362507	ppb	10.334	20.374	750.178
71	Ga-ISK	> 129899.053		ppb	0.924		128019.987
82	Se-2	147.868	3.084515	ppb	5.416	5.682	-0.498
107	Ag-1	20.000	0.000453	ppb	16.667	162.616	17.778
115	In-ISK	113443.003		ppb	0.168		111696.848
45	Sc-ISK	> 319757.921		ppb	0.507		306767.810
23	Na	68009880.037	127960.202339	ppb	0.571	0.617	3597.120
39	K	11919947.369	9268.282639	ppb	1.064	1.423	133299.014
24	Mg	5239285.954	8597.343153	ppb	1.856	2.320	96.667
159	Tb-ISK	211952.763		ppb	0.142		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25640-B-1-A @5
 Autosampler Position: 145
 Sample Date/Time: Friday, April 17, 2020 11:01:22
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25640-B-1-A @5.097
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	42893.207		ppb	2.192		33322.200
9	Be	20.000	0.002382	ppb	28.868	155.901	14.444
10	B	82697.598	212.395250	ppb	1.557	1.461	2425.762
27	Al	494577.522	61.404059	ppb	2.776	3.014	3659.358
43	Ca-2	332877.062	17330.948371	ppb	0.757	0.715	148.334
49	Ti	1524.526	1.644113	ppb	6.053	7.492	242.224
52	Cr	16056.798	0.070628	ppb	1.684	33.197	13618.712
55	Mn	283844.042	19.069853	ppb	2.106	1.997	580.012
57	Fe	56151.311	152.237223	ppb	2.909	3.468	11030.926
45	Sc-IS	> 1802387.623		ppb	0.214		1599575.121
66	Zn	11504.633	7.307197	ppb	3.020	2.976	504.454
86	Sr	364612.646	173.440971	ppb	2.417	2.222	12.994
65	Cu	2629.036	1.166822	ppb	4.750	4.787	80.792
69	Ga-IS	482580.006		ppb	3.286		458023.235
95	Mo	11739.266	6.048790	ppb	0.529	0.319	55.556
115	In-IS	> 262272.413		ppb	1.971		255368.612
111	Cd	17.570	0.006425	ppb	39.973	67.944	6.550
118	Sn	681.127	0.044743	ppb	10.316	28.100	454.452
121	Sb	1601.201	0.255175	ppb	2.413	5.207	263.336
135	Ba	36826.391	34.166950	ppb	5.532	3.605	18.889
165	Ho-IS	296408.333		ppb	1.480		272257.135
159	Tb-IS	277636.724		ppb	1.451		243881.123
207	Pb	1837.826	0.119621	ppb	1.361	0.985	67.778
203	Tl	21.111	0.002748	ppb	65.737	112.200	8.889
209	Bi-IS	> 157412.530		ppb	0.692		158124.761
51	V	611.124	0.694604	ppb	9.002	9.124	76.667
59	Co	547.788	0.269425	ppb	6.004	6.908	8.889
60	Ni	2422.428	2.282222	ppb	3.956	3.036	31.111
75	As	1323.133	1.045279	ppb	0.479	2.682	750.178
71	Ga-ISK	> 131478.976		ppb	1.074		128019.987
82	Se-2	70.185	1.450055	ppb	18.614	17.455	-0.498
107	Ag-1	22.222	0.000933	ppb	52.678	294.947	17.778
115	In-ISK	115525.489		ppb	1.237		111696.848
45	Sc-ISK	> 322732.875		ppb	1.199		306767.810
23	Na	44599498.116	83143.563618	ppb	0.786	1.271	3597.120
39	K	6680668.991	5098.505253	ppb	0.435	1.654	133299.014
24	Mg	4633537.961	7533.871471	ppb	0.808	1.977	96.667
159	Tb-ISK	217500.593		ppb	0.615		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25641-A-1-A @5
 Autosampler Position: 146
 Sample Date/Time: Friday, April 17, 2020 11:04:08
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25641-A-1-A @5.098
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	38062.869		ppb	1.396		33322.200
9	Be	10.000	-0.003831	ppb	57.735	100.182	14.444
10	B	29894.583	73.788547	ppb	1.220	0.890	2425.762
27	Al	182176.458	22.767884	ppb	0.296	2.361	3659.358
43	Ca-2	88298.798	4685.394260	ppb	2.213	0.204	148.334
49	Ti	745.575	0.641421	ppb	4.226	8.042	242.224
52	Cr	27328.342	1.246314	ppb	1.783	0.855	13618.712
55	Mn	183662.080	12.579881	ppb	1.247	0.844	580.012
57	Fe	249507.163	843.456906	ppb	1.832	0.663	11030.926
45	Sc-IS	> 1766020.276		ppb	2.012		1599575.121
66	Zn	52569.938	35.465717	ppb	2.975	1.043	504.454
86	Sr	92519.452	44.916840	ppb	1.421	0.897	12.994
65	Cu	5373.761	2.479079	ppb	4.030	2.379	80.792
69	Ga-IS	480741.580		ppb	2.886		458023.235
95	Mo	2894.738	1.498576	ppb	3.195	4.230	55.556
115	In-IS	> 261901.898		ppb	1.087		255368.612
111	Cd	9.477	0.001644	ppb	55.403	190.974	6.550
118	Sn	604.457	0.028962	ppb	6.463	24.534	454.452
121	Sb	1016.703	0.143231	ppb	5.801	6.948	263.336
135	Ba	7726.536	7.166394	ppb	4.162	3.208	18.889
165	Ho-IS	298321.619		ppb	2.417		272257.135
159	Tb-IS	276460.772		ppb	1.147		243881.123
207	Pb	710.007	0.042739	ppb	7.228	7.091	67.778
203	Tl	15.556	0.001459	ppb	44.607	105.395	8.889
209	Bi-IS	> 159614.649		ppb	1.526		158124.761
51	V	615.569	0.685913	ppb	8.771	11.037	76.667
59	Co	396.672	0.190077	ppb	6.563	7.928	8.889
60	Ni	1265.612	1.155224	ppb	3.076	4.308	31.111
75	As	1245.859	0.857714	ppb	42.232	115.684	750.178
71	Ga-ISK	> 134048.255		ppb	1.175		128019.987
82	Se-2	6983.891	140.701905	ppb	0.893	1.819	-0.498
107	Ag-1	25.556	0.001567	ppb	32.825	119.530	17.778
115	In-ISK	116436.973		ppb	2.484		111696.848
45	Sc-ISK	> 328033.745		ppb	1.074		306767.810
23	Na	31567848.731	57894.187187	ppb	1.108	1.142	3597.120
39	K	1937297.101	1376.392507	ppb	0.811	1.371	133299.014
24	Mg	1104649.178	1766.933931	ppb	1.180	2.178	96.667
159	Tb-ISK	216526.776		ppb	1.311		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25642-A-1-A @5
 Autosampler Position: 147
 Sample Date/Time: Friday, April 17, 2020 11:06:53
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25642-A-1-A @5.099
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	37405.582		ppb	1.584		33322.200
9	Be	8.889	-0.004661	ppb	21.651	24.958	14.444
10	B	32695.151	80.621571	ppb	0.822	1.797	2425.762
27	Al	139874.775	17.204466	ppb	0.300	1.514	3659.358
43	Ca-2	105928.115	5573.619940	ppb	2.580	0.941	148.334
49	Ti	816.690	0.727108	ppb	2.160	4.127	242.224
52	Cr	26265.235	1.115777	ppb	0.659	2.430	13618.712
55	Mn	245926.729	16.714544	ppb	1.257	1.812	580.012
57	Fe	193483.773	638.444101	ppb	1.106	0.758	11030.926
45	Sc-IS	> 1781385.631		ppb	1.675		1599575.121
66	Zn	82389.175	55.320665	ppb	1.906	0.875	504.454
86	Sr	107567.262	51.774674	ppb	0.625	1.183	12.994
65	Cu	4151.117	1.889514	ppb	0.700	1.801	80.792
69	Ga-IS	483449.620		ppb	2.001		458023.235
95	Mo	2007.919	1.020288	ppb	0.852	2.622	55.556
115	In-IS	> 262634.645		ppb	0.961		255368.612
111	Cd	23.561	0.009883	ppb	16.303	24.007	6.550
118	Sn	558.900	0.019134	ppb	3.285	20.887	454.452
121	Sb	1134.490	0.165286	ppb	1.912	2.905	263.336
135	Ba	8434.717	7.803706	ppb	5.538	5.165	18.889
165	Ho-IS	297470.365		ppb	1.912		272257.135
159	Tb-IS	273803.721		ppb	1.297		243881.123
207	Pb	604.449	0.036049	ppb	3.990	6.266	67.778
203	Tl	7.778	-0.000266	ppb	107.855	690.640	8.889
209	Bi-IS	> 158421.527		ppb	1.788		158124.761
51	V	621.125	0.700096	ppb	14.494	19.567	76.667
59	Co	410.006	0.198132	ppb	7.226	9.938	8.889
60	Ni	1284.502	1.180631	ppb	1.669	1.344	31.111
75	As	1356.012	1.071633	ppb	20.902	46.248	750.178
71	Ga-ISK	> 133178.172		ppb	2.608		128019.987
82	Se-2	5268.514	106.854390	ppb	1.618	1.996	-0.498
107	Ag-1	23.333	0.001095	ppb	14.286	61.804	17.778
115	In-ISK	115799.916		ppb	0.553		111696.848
45	Sc-ISK	> 322285.068		ppb	2.409		306767.810
23	Na	31913154.840	59585.801652	ppb	1.182	1.992	3597.120
39	K	2309007.875	1693.596612	ppb	0.157	2.518	133299.014
24	Mg	1327660.249	2162.204877	ppb	0.843	2.860	96.667
159	Tb-ISK	215145.968		ppb	0.176		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25643-B-1-A @5
 Autosampler Position: 148
 Sample Date/Time: Friday, April 17, 2020 11:09:38
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25643-B-1-A @5.100
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		38756.956		ppb		1.622			33322.200
9	Be	|		6.667	-0.006110	ppb	100.000	70.446			14.444
10	B	|		38159.790	94.915907	ppb	0.977	0.692			2425.762
27	Al	|		87824.712	10.569105	ppb	1.114	2.348			3659.358
43	Ca-2	|		138962.652	7288.269772	ppb	1.079	0.760			148.334
49	Ti	|		974.478	0.931796	ppb	4.619	6.197			242.224
52	Cr	|		26920.898	1.171550	ppb	0.802	2.925			13618.712
55	Mn	|		249107.793	16.866092	ppb	1.212	0.781			580.012
57	Fe	|		345862.736	1170.746108	ppb	1.389	0.938			11030.926
45	Sc-IS	|>		1788017.119		ppb	1.180				1599575.121
66	Zn	|		156502.965	105.026686	ppb	2.580	1.779			504.454
86	Sr	|		131616.836	63.112545	ppb	1.182	1.336			12.994
65	Cu	|		4666.899	2.121301	ppb	1.776	2.353			80.792
69	Ga-IS	|		481194.781		ppb	1.698				458023.235
95	Mo	|		2323.522	1.181000	ppb	3.963	4.249			55.556
115	In-IS	|>		265113.286		ppb	1.599				255368.612
111	Cd	|		25.121	0.010616	ppb	25.801	33.608			6.550
118	Sn	|		647.792	0.036423	ppb	5.550	18.270			454.452
121	Sb	|		1234.498	0.182135	ppb	5.266	5.251			263.336
135	Ba	|		8476.966	7.766484	ppb	6.755	5.301			18.889
165	Ho-IS	|		302253.449		ppb	1.605				272257.135
159	Tb-IS	|		278974.578		ppb	2.841				243881.123
207	Pb	|		694.451	0.041799	ppb	5.563	5.922			67.778
203	Tl	|		10.000	0.000229	ppb	57.735	558.191			8.889
209	Bi-IS	|>		159324.675		ppb	0.816				158124.761
51	V	|		730.019	0.839510	ppb	8.457	10.137			76.667
59	Co	|		573.345	0.278685	ppb	8.682	8.319			8.889
60	Ni	|		1671.209	1.546838	ppb	3.352	3.699			31.111
75	As	|		1448.747	1.250629	ppb	5.167	10.889			750.178
71	Ga-ISK	|>		133028.751		ppb	0.631				128019.987
82	Se-2	|		5901.725	119.792184	ppb	1.639	1.015			-0.498
107	Ag-1	|		38.889	0.004667	ppb	47.208	90.945			17.778
115	In-ISK	|		115036.454		ppb	0.926				111696.848
45	Sc-ISK	|>		322822.489		ppb	0.881				306767.810
23	Na	|		39571479.754	73747.381849	ppb	0.937	1.381			3597.120
39	K	|		3442061.239	2572.968633	ppb	1.135	1.589			133299.014
24	Mg	|		1889270.504	3070.516406	ppb	0.522	0.696			96.667
159	Tb-ISK	|		216714.175		ppb	0.998				210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25191-B-1-A @10
 Autosampler Position: 149
 Sample Date/Time: Friday, April 17, 2020 11:12:24
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25191-B-1-A @10.101
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	41879.085		ppb	1.738		33322.200
9	Be	16.667	0.000601	ppb	34.641	624.786	14.444
10	B	7654.273	13.773336	ppb	1.982	2.066	2425.762
27	Al	491734.319	63.186156	ppb	1.423	2.514	3659.358
43	Ca-2	127326.606	6853.309786	ppb	0.967	0.623	148.334
49	Ti	1077.818	1.105948	ppb	3.449	2.944	242.224
52	Cr	23510.441	0.892022	ppb	0.228	2.875	13618.712
55	Mn	45259.366	3.109336	ppb	1.200	1.351	580.012
57	Fe	41824.512	107.392084	ppb	3.236	4.216	11030.926
45	Sc-IS	> 1742157.779		ppb	1.263		1599575.121
66	Zn	56180.346	38.454781	ppb	3.606	3.144	504.454
86	Sr	174361.303	85.804619	ppb	2.881	2.395	12.994
65	Cu	6526.719	3.062012	ppb	3.665	2.476	80.792
69	Ga-IS	471803.593		ppb	2.265		458023.235
95	Mo	600.013	0.288834	ppb	12.814	12.804	55.556
115	In-IS	> 255351.027		ppb	0.721		255368.612
111	Cd	18.740	0.007350	ppb	30.561	46.818	6.550
118	Sn	393.339	-0.013106	ppb	6.111	43.558	454.452
121	Sb	418.895	0.030599	ppb	7.647	18.997	263.336
135	Ba	12846.898	12.237473	ppb	5.766	5.972	18.889
165	Ho-IS	297109.112		ppb	1.036		272257.135
159	Tb-IS	274224.758		ppb	0.413		243881.123
207	Pb	1898.938	0.126314	ppb	3.534	3.494	67.778
203	Tl	24.444	0.003625	ppb	20.830	32.850	8.889
209	Bi-IS	> 154331.440		ppb	1.049		158124.761
51	V	344.449	0.350991	ppb	12.630	15.103	76.667
59	Co	250.002	0.121522	ppb	23.702	23.994	8.889
60	Ni	851.137	0.790428	ppb	5.488	6.209	31.111
75	As	845.423	0.157572	ppb	0.630	5.713	750.178
71	Ga-ISK	> 130196.187		ppb	0.960		128019.987
82	Se-2	30.481	0.642368	ppb	13.355	12.558	-0.498
107	Ag-1	14.444	-0.000853	ppb	58.076	225.705	17.778
115	In-ISK	114090.028		ppb	1.243		111696.848
45	Sc-ISK	> 318382.221		ppb	0.766		306767.810
23	Na	31629069.548	59762.324995	ppb	1.179	0.795	3597.120
39	K	57335012.987	45190.334524	ppb	0.708	0.107	133299.014
24	Mg	1682877.646	2773.169495	ppb	0.587	0.583	96.667
159	Tb-ISK	214108.626		ppb	0.831		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25191-B-2-A @10
 Autosampler Position: 150
 Sample Date/Time: Friday, April 17, 2020 11:15:09
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25191-B-2-A @10.102
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	36120.056		ppb	1.402		33322.200
9	Be	56.667	0.027471	ppb	15.563	18.007	14.444
10	B	5943.459	9.309055	ppb	2.957	9.101	2425.762
27	Al	33380.067	3.868627	ppb	1.058	3.663	3659.358
43	Ca-2	79411.842	4329.656388	ppb	2.170	0.400	148.334
49	Ti	674.460	0.571086	ppb	6.355	11.572	242.224
52	Cr	19794.820	0.538994	ppb	2.151	15.271	13618.712
55	Mn	40362.508	2.806761	ppb	1.879	0.877	580.012
57	Fe	30532.598	68.243888	ppb	1.440	2.894	11030.926
45	Sc-IS	> 1718622.100		ppb	2.383		1599575.121
66	Zn	41271.770	28.543761	ppb	2.038	0.836	504.454
86	Sr	108847.222	54.311299	ppb	3.938	4.216	12.994
65	Cu	7380.646	3.517167	ppb	1.875	0.685	80.792
69	Ga-IS	472125.561		ppb	2.886		458023.235
95	Mo	1637.872	0.858402	ppb	7.589	9.558	55.556
115	In-IS	> 254446.983		ppb	1.656		255368.612
111	Cd	61.005	0.032934	ppb	13.966	13.962	6.550
118	Sn	603.346	0.032581	ppb	7.676	35.794	454.452
121	Sb	554.455	0.057528	ppb	16.469	28.484	263.336
135	Ba	6260.262	5.972706	ppb	4.743	3.118	18.889
165	Ho-IS	289508.838		ppb	3.633		272257.135
159	Tb-IS	268885.185		ppb	1.790		243881.123
207	Pb	1746.709	0.114059	ppb	2.582	2.492	67.778
203	Tl	113.334	0.023649	ppb	12.820	13.777	8.889
209	Bi-IS	> 156621.661		ppb	0.193		158124.761
51	V	186.668	0.142524	ppb	13.482	23.783	76.667
59	Co	867.804	0.432086	ppb	0.967	1.351	8.889
60	Ni	933.364	0.866436	ppb	1.429	1.797	31.111
75	As	817.362	0.098844	ppb	8.221	135.423	750.178
71	Ga-ISK	> 130650.274		ppb	0.375		128019.987
82	Se-2	15.218	0.325421	ppb	66.091	64.120	-0.498
107	Ag-1	35.556	0.004047	ppb	32.924	67.850	17.778
115	In-ISK	113521.490		ppb	2.138		111696.848
45	Sc-ISK	> 313787.687		ppb	0.425		306767.810
23	Na	12317613.549	23611.232931	ppb	0.900	1.266	3597.120
39	K	29978103.283	23922.878669	ppb	1.459	1.472	133299.014
24	Mg	1364318.550	2281.231039	ppb	2.734	3.069	96.667
159	Tb-ISK	212035.372		ppb	0.799		210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 11:17:55

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.103

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		33664.083		ppb			2.797			33322.200
9	Be	|		148029.850	98.757591	ppb			1.926	2.269		14.444
10	B	|		89676.150	241.671870	ppb			0.788	1.004		2425.762
27	Al	|		711383.750	92.558330	ppb			0.737	0.840		3659.358
43	Ca-2	|		93605.758	5086.734212	ppb			2.080	1.669		148.334
49	Ti	|		70052.500	95.805121	ppb			2.127	2.031		242.224
52	Cr	|		931548.225	95.178841	ppb			1.426	1.160		13618.712
55	Mn	|		1310628.911	92.189297	ppb			1.151	0.728		580.012
57	Fe	|		1302033.579	4694.741856	ppb			1.607	1.286		11030.926
45	Sc-IS	>		1724670.509		ppb			0.424			1599575.121
66	Zn	|		141656.951	98.533972	ppb			2.565	2.208		504.454
86	Sr	|		190609.861	94.749853	ppb			2.839	2.458		12.994
65	Cu	|		204868.110	98.386440	ppb			3.112	2.765		80.792
69	Ga-IS	|		500380.860		ppb			2.248			458023.235
95	Mo	|		173707.751	94.003722	ppb			1.910	1.489		55.556
115	In-IS	>		262326.334		ppb			0.505			255368.612
111	Cd	|		176562.998	103.673685	ppb			0.498	1.000		6.550
118	Sn	|		478879.995	100.105620	ppb			0.816	0.555		454.452
121	Sb	|		526459.718	100.803107	ppb			2.751	2.281		263.336
135	Ba	|		113065.972	104.966474	ppb			3.181	3.174		18.889
165	Ho-IS	|		294857.513		ppb			0.734			272257.135
159	Tb-IS	|		275539.776		ppb			0.778			243881.123
207	Pb	|		1526324.509	99.544646	ppb			0.547	0.585		67.778
203	Tl	|		457622.891	99.448472	ppb			1.469	2.111		8.889
209	Bi-IS	>		163083.386		ppb			0.640			158124.761
51	V	|		74264.871	95.433983	ppb			2.998	2.038		76.667
59	Co	|		193039.428	95.102934	ppb			2.654	1.888		8.889
60	Ni	|		105839.513	99.573840	ppb			0.215	0.849		31.111
75	As	|		53768.132	98.752379	ppb			1.291	2.090		750.178
71	Ga-ISK	>		133414.570		ppb			0.994			128019.987
82	Se-2	|		4922.347	99.639200	ppb			0.594	1.464		-0.498
107	Ag-1	|		430386.127	97.799089	ppb			0.879	0.842		17.778
115	In-ISK	|		114944.336		ppb			1.453			111696.848
45	Sc-ISK	>		315281.122		ppb			0.276			306767.810
23	Na	|		2759180.807	5258.163393	ppb			1.524	1.266		3597.120
39	K	|		6714147.322	5247.560360	ppb			0.942	0.727		133299.014
24	Mg	|		3125121.410	5200.465452	ppb			1.511	1.409		96.667
159	Tb-ISK	|		213985.461		ppb			0.796			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 11:20:40

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.104

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		32965.774		ppb		1.272		33322.200
9	Be	|		11.111	-0.002726	ppb	17.321	51.987		14.444
10	B	|		1192.272	-3.842681	ppb	2.443	1.938		2425.762
27	Al	|		3691.588	-0.017355	ppb	1.766	87.046		3659.358
43	Ca-2	|		103.334	-2.892154	ppb	10.073	22.891		148.334
49	Ti	|		212.224	-0.058001	ppb	15.733	75.566		242.224
52	Cr	|		9847.838	-0.468665	ppb	1.373	2.618		13618.712
55	Mn	|		683.350	0.005658	ppb	5.914	55.534		580.012
57	Fe	|		10815.204	-2.643073	ppb	1.812	11.650		11030.926
45	Sc-IS	|>		1670266.467		ppb	1.493			1599575.121
66	Zn	|		573.345	0.033244	ppb	10.220	107.862		504.454
86	Sr	|		19.074	0.002969	ppb	167.718	558.714		12.994
65	Cu	|		175.114	0.044980	ppb	16.242	30.304		80.792
69	Ga-IS	|		471290.202		ppb	3.043			458023.235
95	Mo	|		480.008	0.235852	ppb	5.243	5.091		55.556
115	In-IS	|>		257308.284		ppb	1.169			255368.612
111	Cd	|		6.770	0.000112	ppb	102.997	3754.495		6.550
118	Sn	|		3114.786	0.566692	ppb	8.298	9.360		454.452
121	Sb	|		545.566	0.054705	ppb	5.124	7.989		263.336
135	Ba	|		16.667	-0.002263	ppb	20.000	131.395		18.889
165	Ho-IS	|		285322.256		ppb	0.227			272257.135
159	Tb-IS	|		266563.989		ppb	0.172			243881.123
207	Pb	|		313.335	0.016388	ppb	10.478	12.597		67.778
203	Tl	|		84.445	0.016815	ppb	11.395	12.031		8.889
209	Bi-IS	|>		159037.041		ppb	0.686			158124.761
51	V	|		46.667	-0.040005	ppb	55.788	87.980		76.667
59	Co	|		18.889	0.005140	ppb	26.956	49.841		8.889
60	Ni	|		27.778	-0.003231	ppb	27.713	232.578		31.111
75	As	|		770.229	0.041477	ppb	4.452	166.254		750.178
71	Ga-ISK	|>		127811.443		ppb	0.646			128019.987
82	Se-2	|		11.554	0.254308	ppb	64.157	61.357		-0.498
107	Ag-1	|		144.445	0.030081	ppb	22.414	26.232		17.778
115	In-ISK	|		113605.517		ppb	1.272			111696.848
45	Sc-ISK	|>		305814.613		ppb	1.430			306767.810
23	Na	|		3497.095	-0.175374	ppb	2.360	39.314		3597.120
39	K	|		141211.212	6.875401	ppb	1.109	41.638		133299.014
24	Mg	|		343.338	0.423008	ppb	53.516	73.981		96.667
159	Tb-ISK	|		209593.854		ppb	1.348			210493.839

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Friday, April 17, 2020 11:28:51

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICIS-23447.106

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32283.111		ppb		1.850		
9	Be	|		10.000		ppb		88.192		
10	B	|		836.691		ppb		6.901		
27	Al	|		3498.206		ppb		1.679		
43	Ca-2	|		108.334		ppb		11.615		
49	Ti	|		214.446		ppb		8.839		
52	Cr	|		10496.077		ppb		1.362		
55	Mn	|		620.013		ppb		6.737		
57	Fe	|		10290.373		ppb		2.611		
45	Sc-IS	|		1662181.037		ppb		1.565		
66	Zn	|		455.563		ppb		5.492		
86	Sr	|		8.038		ppb		177.543		
65	Cu	|		117.502		ppb		27.331		
69	Ga-IS	|>		464511.859		ppb		3.913		
95	Mo	|		45.556		ppb		36.829		
115	In-IS	|>		254979.555		ppb		1.616		
111	Cd	|		8.793		ppb		87.913		
118	Sn	|		853.359		ppb		7.031		
121	Sb	|		321.115		ppb		14.094		
135	Ba	|		18.889		ppb		10.189		
165	Ho-IS	|		281428.592		ppb		1.120		
159	Tb-IS	|		260466.702		ppb		1.437		
207	Pb	|		74.445		ppb		6.840		
203	Tl	|		13.333		ppb		25.000		
209	Bi-IS	|>		156193.765		ppb		1.235		
51	V	|		34.444		ppb		33.986		
59	Co	|		10.000		ppb		33.333		
60	Ni	|		21.111		ppb		39.736		
75	As	|		743.137		ppb		3.546		
71	Ga-ISK	|>		127906.759		ppb		1.022		
82	Se-2	|		10.890		ppb		45.948		
107	Ag-1	|		25.556		ppb		32.825		
115	In-ISK	|		112524.603		ppb		1.133		
45	Sc-ISK	|>		302511.780		ppb		0.844		
23	Na	|		2413.538		ppb		8.913		
39	K	|		138365.773		ppb		0.895		
24	Mg	|		76.667		ppb		32.171		
159	Tb-ISK	|		206150.803		ppb		0.485		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Friday, April 17, 2020 11:31:37

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\IC-210761.107

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		32544.811		ppb			1.427		32283.111
9	Be	|		286543.004	200.000000	ppb			0.325	1.689	10.000
10	B	|		171784.581	500.000000	ppb			1.377	1.888	836.691
27	Al	|		1372891.431	200.000000	ppb			2.365	3.764	3498.206
43	Ca-2	|		181009.564	10200.000000	ppb			0.604	0.939	108.334
49	Ti	|		137521.023	200.000000	ppb			1.074	1.838	214.446
52	Cr	|		1816446.251	200.000000	ppb			0.554	0.838	10496.077
55	Mn	|		2691819.797	200.000000	ppb			1.429	0.107	620.013
57	Fe	|		2694111.255	10200.000000	ppb			1.717	0.430	10290.373
45	Sc-IS	|		1668182.052		ppb			0.291		1662181.037
66	Zn	|		278581.106	200.000000	ppb			2.471	1.112	455.563
86	Sr	|		381690.108	200.000000	ppb			2.483	1.146	8.038
65	Cu	|		400994.623	200.000000	ppb			2.648	1.346	117.502
69	Ga-IS	>		518232.320		ppb			1.375		464511.859
95	Mo	|		351278.926	200.000000	ppb			0.982	0.818	45.556
115	In-IS	>		258939.247		ppb			0.980		254979.555
111	Cd	|		341142.728	200.000000	ppb			0.705	1.405	8.793
118	Sn	|		944231.337	200.000000	ppb			0.808	1.543	853.359
121	Sb	|		1040692.333	200.000000	ppb			1.270	1.923	321.115
135	Ba	|		223386.090	200.000000	ppb			2.766	3.736	18.889
165	Ho-IS	|		292172.175		ppb			1.053		281428.592
159	Tb-IS	|		271115.182		ppb			0.678		260466.702
207	Pb	|		2915576.516	200.000000	ppb			0.739	1.482	74.445
203	Tl	|		886198.357	200.000000	ppb			2.046	1.880	13.333
209	Bi-IS	>		153193.901		ppb			2.031		156193.765
51	V	|		147797.332	200.000000	ppb			1.074	2.499	34.444
59	Co	|		383599.527	200.000000	ppb			1.642	2.910	10.000
60	Ni	|		203226.625	200.000000	ppb			1.403	0.087	21.111
75	As	|		103876.420	200.000000	ppb			0.903	0.635	743.137
71	Ga-ISK	>		129634.493		ppb			1.461		127906.759
82	Se-2	|		9620.026	200.000000	ppb			1.202	0.314	10.890
107	Ag-1	|		835856.359	200.000000	ppb			0.666	1.125	25.556
115	In-ISK	|		113056.252		ppb			0.737		112524.603
45	Sc-ISK	>		308022.048		ppb			0.624		302511.780
23	Na	|		5297212.504	10200.000000	ppb			0.871	0.683	2413.538
39	K	|		12992143.710	10200.000000	ppb			0.305	0.904	138365.773
24	Mg	|		6092809.362	10200.000000	ppb			1.048	0.978	76.667
159	Tb-ISK	|		211038.185		ppb			1.210		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 11:34:25

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.108

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32828.789		ppb		0.469		32283.111
9	Be	|		144237.861	107.209351	ppb		0.728	1.310	10.000
10	B	|		87527.326	270.067700	ppb		0.706	1.411	836.691
27	Al	|		691803.269	107.041672	ppb		0.865	1.406	3498.206
43	Ca-2	|		90695.440	5440.484400	ppb		2.508	3.275	108.334
49	Ti	|		68570.846	106.050633	ppb		0.640	2.185	214.446
52	Cr	|		923284.939	107.696624	ppb		1.016	2.922	10496.077
55	Mn	|		1296705.557	102.605007	ppb		0.551	2.249	620.013
57	Fe	|		1281720.756	5146.864810	ppb		1.286	0.897	10290.373
45	Sc-IS	|		1667223.923		ppb		1.066		1662181.037
66	Zn	|		141167.913	107.773445	ppb		3.353	2.877	455.563
86	Sr	|		187808.708	104.819398	ppb		1.160	0.996	8.038
65	Cu	|		202619.935	107.599297	ppb		2.989	2.079	117.502
69	Ga-IS	|>		486636.258		ppb		2.001		464511.859
95	Mo	|		170903.085	103.626467	ppb		1.818	2.576	45.556
115	In-IS	|>		255762.817		ppb		2.139		254979.555
111	Cd	|		167991.735	99.727110	ppb		0.679	2.009	8.793
118	Sn	|		477941.265	102.426632	ppb		0.320	2.358	853.359
121	Sb	|		515413.736	100.283435	ppb		1.753	3.370	321.115
135	Ba	|		111650.637	101.229540	ppb		4.064	5.479	18.889
165	Ho-IS	|		289455.474		ppb		1.042		281428.592
159	Tb-IS	|		265842.242		ppb		1.599		260466.702
207	Pb	|		1470314.663	97.779473	ppb		0.862	1.137	74.445
203	Tl	|		444773.475	97.348859	ppb		1.745	3.490	13.333
209	Bi-IS	|>		158007.001		ppb		1.922		156193.765
51	V	|		74824.361	100.861034	ppb		1.515	2.011	34.444
59	Co	|		193105.287	100.310251	ppb		0.515	1.489	10.000
60	Ni	|		101299.054	99.327709	ppb		1.579	0.448	21.111
75	As	|		52223.232	99.461105	ppb		1.323	0.168	743.137
71	Ga-ISK	|>		130089.685		ppb		1.172		127906.759
82	Se-2	|		4733.316	97.954145	ppb		0.798	1.776	10.890
107	Ag-1	|		415672.385	99.102523	ppb		1.214	1.042	25.556
115	In-ISK	|		111747.609		ppb		1.951		112524.603
45	Sc-ISK	|>		304058.445		ppb		0.477		302511.780
23	Na	|		2659068.505	5184.802458	ppb		1.273	1.699	2413.538
39	K	|		6506620.263	5119.810138	ppb		0.935	1.406	138365.773
24	Mg	|		3004222.153	5094.927047	ppb		1.313	1.421	76.667
159	Tb-ISK	|		208998.457		ppb		0.895		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 11:37:10

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.109

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		31611.610		ppb				1.694		32283.111
9	Be	|		12.222	0.001870	ppb			31.492	162.984		10.000
10	B	|		1281.169	1.521468	ppb			11.879	41.107		836.691
27	Al	|		3670.471	0.036868	ppb			0.240	46.503		3498.206
43	Ca-2	|		101.667	-0.305422	ppb			15.809	401.050		108.334
49	Ti	|		232.224	0.034804	ppb			11.602	145.618		214.446
52	Cr	|		9167.385	-0.147579	ppb			0.268	22.242		10496.077
55	Mn	|		685.572	0.006332	ppb			5.356	74.353		620.013
57	Fe	|		9618.798	-2.289769	ppb			5.163	38.473		10290.373
45	Sc-IS	|		1623425.875		ppb			1.236			1662181.037
66	Zn	|		535.566	0.069962	ppb			9.322	47.644		455.563
86	Sr	|		14.105	0.003843	ppb			243.701	540.563		8.038
65	Cu	|		120.663	0.003079	ppb			24.225	606.540		117.502
69	Ga-IS	|>		458039.267		ppb			3.053			464511.859
95	Mo	|		538.899	0.317970	ppb			7.249	4.826		45.556
115	In-IS	|>		253094.181		ppb			0.674			254979.555
111	Cd	|		7.757	-0.000584	ppb			25.852	204.499		8.793
118	Sn	|		4218.402	0.731166	ppb			5.428	6.666		853.359
121	Sb	|		626.681	0.060551	ppb			15.699	31.907		321.115
135	Ba	|		31.111	0.011325	ppb			6.186	16.238		18.889
165	Ho-IS	|		277091.623		ppb			0.905			281428.592
159	Tb-IS	|		257726.421		ppb			1.092			260466.702
207	Pb	|		405.558	0.022887	ppb			18.568	24.053		74.445
203	Tl	|		162.223	0.033680	ppb			20.582	22.014		13.333
209	Bi-IS	|>		153003.963		ppb			1.228			156193.765
51	V	|		51.111	0.024318	ppb			19.924	60.635		34.444
59	Co	|		16.667	0.003674	ppb			34.641	82.416		10.000
60	Ni	|		28.889	0.008340	ppb			24.019	84.707		21.111
75	As	|		720.843	-0.015790	ppb			4.411	341.595		743.137
71	Ga-ISK	|>		125408.101		ppb			1.235			127906.759
82	Se-2	|		8.208	-0.053812	ppb			79.364	259.362		10.890
107	Ag-1	|		146.667	0.030116	ppb			14.193	18.471		25.556
115	In-ISK	|		110489.150		ppb			1.086			112524.603
45	Sc-ISK	|>		297905.290		ppb			0.577			302511.780
23	Na	|		2891.960	1.025778	ppb			4.086	21.264		2413.538
39	K	|		140441.424	3.437063	ppb			0.724	39.950		138365.773
24	Mg	|		291.670	0.374204	ppb			1.980	2.964		76.667
159	Tb-ISK	|		203059.776		ppb			1.171			206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, April 17, 2020 11:39:57

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICVL-210771.110

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31673.964		ppb		0.381		32283.111
9	Be	|		1362.287	1.045532	ppb	6.293	5.419		10.000
10	B	|		17781.059	54.933481	ppb	0.634	0.751		836.691
27	Al	|		340229.382	54.504016	ppb	0.404	1.761		3498.206
43	Ca-2	|		1016.703	56.709079	ppb	7.030	7.458		108.334
49	Ti	|		860.026	1.039520	ppb	4.102	3.860		214.446
52	Cr	|		17863.386	0.896278	ppb	1.605	4.491		10496.077
55	Mn	|		15274.830	1.206956	ppb	1.706	3.044		620.013
57	Fe	|		21848.920	48.415381	ppb	1.323	0.309		10290.373
45	Sc-IS	|		1626472.206		ppb	0.890			1662181.037
66	Zn	|		7895.516	5.927851	ppb	2.741	1.945		455.563
86	Sr	|		1929.217	1.115836	ppb	2.551	2.804		8.038
65	Cu	|		2054.190	1.070065	ppb	6.433	5.605		117.502
69	Ga-IS	>		467625.639		ppb	1.332			464511.859
95	Mo	|		1851.231	1.139237	ppb	1.375	0.639		45.556
115	In-IS	>		254115.233		ppb	0.728			254979.555
111	Cd	|		1592.868	0.946334	ppb	3.039	3.216		8.793
118	Sn	|		6568.178	1.234866	ppb	4.258	4.122		853.359
121	Sb	|		5547.745	1.023823	ppb	4.527	4.306		321.115
135	Ba	|		1067.818	0.956703	ppb	8.202	7.993		18.889
165	Ho-IS	|		284295.685		ppb	1.214			281428.592
159	Tb-IS	|		260004.750		ppb	0.077			260466.702
207	Pb	|		14191.648	0.959239	ppb	1.676	0.317		74.445
203	Tl	|		4425.130	0.986581	ppb	3.247	4.096		13.333
209	Bi-IS	>		154635.872		ppb	1.446			156193.765
51	V	|		727.797	0.958927	ppb	17.347	18.854		34.444
59	Co	|		1990.139	1.053561	ppb	5.158	4.283		10.000
60	Ni	|		1031.149	1.015441	ppb	10.204	10.920		21.111
75	As	|		1214.301	0.944813	ppb	7.494	21.312		743.137
71	Ga-ISK	>		126972.918		ppb	0.892			127906.759
82	Se-2	|		50.192	0.837279	ppb	10.970	14.569		10.890
107	Ag-1	|		4047.240	0.982657	ppb	3.068	3.904		25.556
115	In-ISK	|		110195.776		ppb	1.588			112524.603
45	Sc-ISK	>		299355.146		ppb	0.641			302511.780
23	Na	|		27681.794	50.138722	ppb	0.268	0.951		2413.538
39	K	|		199231.873	50.888651	ppb	0.212	1.717		138365.773
24	Mg	|		27974.057	48.054824	ppb	3.888	3.687		76.667
159	Tb-ISK	|		201896.762		ppb	0.993			206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-E-1-A

Autosampler Position: 134

Sample Date/Time: Friday, April 17, 2020 11:42:44

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25554-E-1-A.111

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32813.204		ppb	1.678		32283.111
9	Be	20.000	0.007285	ppb	72.648	145.361	10.000
10	B	34792.317	108.263300	ppb	0.413	3.541	836.691
27	Al	921707.858	146.231525	ppb	2.034	5.083	3498.206
43	Ca-2	34431.457	2110.476397	ppb	2.202	5.256	108.334
49	Ti	4791.915	7.261015	ppb	0.383	3.298	214.446
52	Cr	19699.130	1.081407	ppb	1.566	4.084	10496.077
55	Mn	535145.987	43.299275	ppb	0.646	2.394	620.013
57	Fe	196077.767	768.864413	ppb	1.511	1.659	10290.373
45	Sc-IS	1674289.005		ppb	1.188		1662181.037
66	Zn	489478.815	383.301621	ppb	2.035	1.051	455.563
86	Sr	22650.544	12.932393	ppb	1.346	2.063	8.038
65	Cu	262641.446	142.745499	ppb	1.891	1.125	117.502
69	Ga-IS	> 475670.710		ppb	3.004		464511.859
95	Mo	1233.387	0.735807	ppb	5.866	3.457	45.556
115	In-IS	> 256538.818		ppb	0.984		254979.555
111	Cd	1253.021	0.736204	ppb	3.511	3.427	8.793
118	Sn	2403.536	0.330528	ppb	2.430	2.252	853.359
121	Sb	5755.604	1.053970	ppb	2.587	2.271	321.115
135	Ba	32727.453	29.556999	ppb	1.789	2.381	18.889
165	Ho-IS	286016.124		ppb	1.059		281428.592
159	Tb-IS	262838.250		ppb	2.813		260466.702
207	Pb	16268.119	1.103462	ppb	0.750	0.385	74.445
203	Tl	118.889	0.023708	ppb	12.950	14.851	13.333
209	Bi-IS	> 154202.252		ppb	0.778		156193.765
51	V	567.789	0.718324	ppb	5.129	6.975	34.444
59	Co	770.021	0.395024	ppb	12.747	14.657	10.000
60	Ni	9916.778	9.694775	ppb	4.255	2.283	21.111
75	As	1119.725	0.701099	ppb	3.738	5.248	743.137
71	Ga-ISK	> 130189.585		ppb	2.028		127906.759
82	Se-2	3.171	-0.165066	ppb	128.278	50.408	10.890
107	Ag-1	83.334	0.013618	ppb	20.785	28.366	25.556
115	In-ISK	112688.266		ppb	0.522		112524.603
45	Sc-ISK	> 306647.392		ppb	0.640		302511.780
23	Na	4208236.135	8138.354978	ppb	1.097	0.592	2413.538
39	K	1247961.161	883.095539	ppb	1.156	1.189	138365.773
24	Mg	431917.412	726.183576	ppb	0.855	0.310	76.667
159	Tb-ISK	206056.901		ppb	1.150		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-E-2-A

Autosampler Position: 135

Sample Date/Time: Friday, April 17, 2020 11:45:29

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25554-E-2-A.112

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		32927.915		ppb			1.965			32283.111
9	Be	|		15.556	0.003956	ppb	44.607	128.919				10.000
10	B	|		38719.106	120.253340	ppb	3.350	1.491				836.691
27	Al	|		1028215.039	162.563731	ppb	2.898	4.902				3498.206
43	Ca-2	|		56205.364	3434.076247	ppb	1.434	0.835				108.334
49	Ti	|		4846.378	7.318451	ppb	1.677	3.134				214.446
52	Cr	|		22493.251	1.408950	ppb	0.901	2.855				10496.077
55	Mn	|		521058.828	41.996020	ppb	1.825	1.736				620.013
57	Fe	|		188932.386	736.357644	ppb	1.314	0.781				10290.373
45	Sc-IS	|		1690095.400		ppb	1.390					1662181.037
66	Zn	|		448896.198	350.177285	ppb	2.370	0.446				455.563
86	Sr	|		36014.684	20.489015	ppb	1.393	1.597				8.038
65	Cu	|		277167.447	150.078542	ppb	2.554	1.148				117.502
69	Ga-IS	|>		477332.155		ppb	1.947					464511.859
95	Mo	|		1230.053	0.731545	ppb	1.692	1.521				45.556
115	In-IS	|>		259573.772		ppb	2.293					254979.555
111	Cd	|		948.560	0.549411	ppb	6.194	5.489				8.793
118	Sn	|		2066.816	0.253615	ppb	1.676	6.756				853.359
121	Sb	|		6124.647	1.112607	ppb	4.068	6.095				321.115
135	Ba	|		33353.384	29.796802	ppb	4.347	6.627				18.889
165	Ho-IS	|		285467.492		ppb	0.946					281428.592
159	Tb-IS	|		262651.419		ppb	0.378					260466.702
207	Pb	|		21299.597	1.446454	ppb	0.429	1.655				74.445
203	Tl	|		53.333	0.009006	ppb	10.825	14.400				13.333
209	Bi-IS	|>		154211.354		ppb	1.652					156193.765
51	V	|		763.354	0.995852	ppb	5.366	3.937				34.444
59	Co	|		852.248	0.443421	ppb	3.038	1.412				10.000
60	Ni	|		9983.488	9.908353	ppb	2.231	3.398				21.111
75	As	|		1401.210	1.284993	ppb	0.898	4.002				743.137
71	Ga-ISK	|>		128323.872		ppb	1.653					127906.759
82	Se-2	|		19.552	0.183500	ppb	46.035	107.729				10.890
107	Ag-1	|		136.667	0.026895	ppb	18.414	24.452				25.556
115	In-ISK	|		112693.550		ppb	0.161					112524.603
45	Sc-ISK	|>		306669.337		ppb	1.466					302511.780
23	Na	|		7504858.818	14515.998311	ppb	1.900	0.434				2413.538
39	K	|		1594207.886	1159.384726	ppb	1.392	3.111				138365.773
24	Mg	|		789563.528	1327.853702	ppb	1.781	2.948				76.667
159	Tb-ISK	|		205200.655		ppb	0.885					206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25554-A-3-A @50
 Autosampler Position: 136
 Sample Date/Time: Friday, April 17, 2020 11:48:14
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25554-A-3-A @50.113
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	37396.679		ppb	2.281		32283.111
9	Be	13.333	0.002036	ppb	43.301	200.395	10.000
10	B	19871.591	58.930661	ppb	1.470	3.235	836.691
27	Al	38627.720	5.412711	ppb	1.803	3.975	3498.206
43	Ca-2	86660.403	5174.075502	ppb	0.901	2.109	108.334
49	Ti	972.255	1.153011	ppb	0.714	1.575	214.446
52	Cr	21150.090	1.187606	ppb	1.016	5.620	10496.077
55	Mn	5882.322	0.412109	ppb	0.495	1.980	620.013
57	Fe	26150.592	61.753838	ppb	2.733	3.644	10290.373
45	Sc-IS	1867776.454		ppb	0.452		1662181.037
66	Zn	8013.360	5.743862	ppb	3.414	2.277	455.563
86	Sr	156359.541	86.854085	ppb	2.788	1.921	8.038
65	Cu	950.080	0.437324	ppb	6.776	8.405	117.502
69	Ga-IS	> 488874.960		ppb	1.862		464511.859
95	Mo	484.453	0.263189	ppb	13.170	13.342	45.556
115	In-IS	> 260900.252		ppb	1.056		254979.555
111	Cd	7.872	-0.000649	ppb	24.940	180.365	8.793
118	Sn	862.248	-0.002360	ppb	8.648	613.073	853.359
121	Sb	324.448	-0.000833	ppb	12.846	884.973	321.115
135	Ba	4848.603	4.289064	ppb	6.147	5.206	18.889
165	Ho-IS	295399.693		ppb	2.523		281428.592
159	Tb-IS	270987.478		ppb	1.382		260466.702
207	Pb	1155.573	0.077112	ppb	2.203	2.094	74.445
203	Tl	50.000	0.008745	ppb	6.667	10.200	13.333
209	Bi-IS	> 147854.607		ppb	1.248		156193.765
51	V	922.252	1.131219	ppb	6.159	7.034	34.444
59	Co	17.778	0.003523	ppb	57.282	145.039	10.000
60	Ni	100.000	0.071810	ppb	6.667	6.881	21.111
75	As	869.706	0.130591	ppb	8.020	81.614	743.137
71	Ga-ISK	> 137331.553		ppb	1.964		127906.759
82	Se-2	64.172	1.030730	ppb	3.945	2.524	10.890
107	Ag-1	28.889	0.000357	ppb	40.522	763.474	25.556
115	In-ISK	117136.239		ppb	1.180		112524.603
45	Sc-ISK	> 336738.164		ppb	0.619		302511.780
23	Na	66367949.561	116944.495518	ppb	1.145	0.827	2413.538
39	K	6022905.014	4260.850274	ppb	0.435	0.838	138365.773
24	Mg	8982265.622	13755.030836	ppb	2.380	2.374	76.667
159	Tb-ISK	216553.363		ppb	1.864		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25554-A-4-A @50
 Autosampler Position: 137
 Sample Date/Time: Friday, April 17, 2020 11:50:59
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25554-A-4-A @50.114
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS			39893.410		ppb			1.461		32283.111
9	Be			10.000	-0.000592	ppb			33.333	368.677	10.000
10	B			31039.246	91.590196	ppb			1.723	4.949	836.691
27	Al			24071.375	3.079922	ppb			0.557	4.361	3498.206
43	Ca-2			145357.444	8501.550700	ppb			0.523	3.246	108.334
49	Ti			1411.181	1.783660	ppb			4.241	1.933	214.446
52	Cr			23923.352	1.453772	ppb			1.732	4.441	10496.077
55	Mn			4781.912	0.317259	ppb			4.007	2.456	620.013
57	Fe			33900.219	90.118514	ppb			4.047	6.030	10290.373
45	Sc-IS			2024776.732		ppb			3.403		1662181.037
66	Zn			1860.121	1.024248	ppb			3.831	8.742	455.563
86	Sr			252929.581	137.494631	ppb			3.842	1.646	8.038
65	Cu			769.670	0.333655	ppb			4.385	9.075	117.502
69	Ga-IS	>		499536.017		ppb			3.199		464511.859
95	Mo			1013.369	0.569747	ppb			7.002	6.902	45.556
115	In-IS	>		258303.057		ppb			2.801		254979.555
111	Cd			6.761	-0.001275	ppb			57.331	174.299	8.793
118	Sn			740.019	-0.026478	ppb			4.004	9.992	853.359
121	Sb			245.558	-0.015269	ppb			8.832	35.722	321.115
135	Ba			265.558	0.221305	ppb			4.035	5.888	18.889
165	Ho-IS			301833.616		ppb			1.630		281428.592
159	Tb-IS			276391.460		ppb			0.293		260466.702
207	Pb			717.785	0.045640	ppb			9.811	10.791	74.445
203	Tl			35.556	0.005302	ppb			46.246	71.952	13.333
209	Bi-IS	>		148897.508		ppb			0.416		156193.765
51	V			1486.744	1.771572	ppb			2.341	2.904	34.444
59	Co			27.778	0.007829	ppb			36.661	62.270	10.000
60	Ni			151.112	0.113443	ppb			11.320	14.054	21.111
75	As			964.053	0.229347	ppb			1.500	7.280	743.137
71	Ga-ISK	>		143408.463		ppb			0.745		127906.759
82	Se-2			118.133	1.993617	ppb			6.798	8.317	10.890
107	Ag-1			27.778	-0.000200	ppb			38.575	1130.349	25.556
115	In-ISK			120517.951		ppb			0.345		112524.603
45	Sc-ISK	>		361905.551		ppb			1.812		302511.780
23	Na			115717384.527	189760.892617	ppb			0.630	1.616	2413.538
39	K			10211116.026	6787.190067	ppb			1.077	2.031	138365.773
24	Mg			15524359.593	22127.728219	ppb			1.315	3.012	76.667
159	Tb-ISK			224448.294		ppb			1.233		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25554-A-4-B MS @50

Autosampler Position: 138

Sample Date/Time: Friday, April 17, 2020 11:53:44

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25554-A-4-B MS @50.115

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		40861.697		ppb			1.434			32283.111
9	Be	|		3923.872	2.778681	ppb			2.842	4.989		10.000
10	B	|		32176.206	93.015843	ppb			2.181	1.839		836.691
27	Al	|		43866.168	5.948236	ppb			2.749	5.131		3498.206
43	Ca-2	|		152196.766	8718.566439	ppb			2.477	0.379		108.334
49	Ti	|		3352.616	4.620042	ppb			2.089	4.387		214.446
52	Cr	|		47949.239	4.106463	ppb			1.708	3.161		10496.077
55	Mn	|		36932.130	2.740295	ppb			1.603	2.558		620.013
57	Fe	|		67829.568	218.633163	ppb			1.695	1.786		10290.373
45	Sc-IS	|		2091598.902		ppb			4.021			1662181.037
66	Zn	|		5080.906	3.348577	ppb			6.251	4.745		455.563
86	Sr	|		252255.616	134.417456	ppb			2.114	0.803		8.038
65	Cu	|		5608.125	2.778715	ppb			6.272	4.712		117.502
69	Ga-IS	|>		509655.557		ppb			2.112			464511.859
95	Mo	|		4977.534	2.853678	ppb			1.355	2.198		45.556
115	In-IS	|>		259326.702		ppb			0.509			254979.555
111	Cd	|		3726.703	2.176309	ppb			2.931	3.113		8.793
118	Sn	|		13163.841	2.602602	ppb			1.511	1.074		853.359
121	Sb	|		11284.457	2.103230	ppb			2.454	2.620		321.115
135	Ba	|		2783.605	2.470710	ppb			2.817	2.319		18.889
165	Ho-IS	|		302263.603		ppb			1.515			281428.592
159	Tb-IS	|		278162.015		ppb			0.426			260466.702
207	Pb	|		32514.644	2.273153	ppb			1.239	1.040		74.445
203	Tl	|		9244.101	2.128276	ppb			0.686	1.614		13.333
209	Bi-IS	|>		149967.618		ppb			1.545			156193.765
51	V	|		3537.105	4.193058	ppb			3.242	3.966		34.444
59	Co	|		4753.013	2.189345	ppb			3.163	3.459		10.000
60	Ni	|		2558.007	2.209108	ppb			3.400	3.678		21.111
75	As	|		2540.941	2.905070	ppb			4.830	8.200		743.137
71	Ga-ISK	|>		146355.904		ppb			0.681			127906.759
82	Se-2	|		236.463	4.128757	ppb			4.683	4.233		10.890
107	Ag-1	|		4894.172	1.030969	ppb			3.262	3.090		25.556
115	In-ISK	|		121955.364		ppb			1.236			112524.603
45	Sc-ISK	|>		367776.166		ppb			0.323			302511.780
23	Na	|		119146430.498	192226.232352	ppb			1.503	1.240		2413.538
39	K	|		10462734.144	6843.039329	ppb			0.349	0.681		138365.773
24	Mg	|		16126759.270	22611.855872	ppb			1.194	1.390		76.667
159	Tb-ISK	|		227606.466		ppb			1.589			206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25554-A-4-C MSD @50
 Autosampler Position: 139
 Sample Date/Time: Friday, April 17, 2020 11:56:30
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25554-A-4-C MSD @50.116
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS			41447.825		ppb			1.290		32283.111
9	Be			3972.775	2.789208	ppb			1.469	5.013	10.000
10	B			32687.354	93.723668	ppb			0.412	3.503	836.691
27	Al			45763.222	6.174589	ppb			2.851	7.039	3498.206
43	Ca-2			153210.715	8701.099118	ppb			1.879	1.706	108.334
49	Ti			3313.718	4.514762	ppb			5.252	3.640	214.446
52	Cr			48317.139	4.100646	ppb			1.495	3.795	10496.077
55	Mn			37840.080	2.783049	ppb			3.046	2.269	620.013
57	Fe			68953.854	220.629688	ppb			2.423	2.466	10290.373
45	Sc-IS			2125688.865		ppb			1.121		1662181.037
66	Zn			5385.460	3.538699	ppb			2.791	1.720	455.563
86	Sr			255852.610	135.147029	ppb			2.257	1.898	8.038
65	Cu			5479.197	2.689664	ppb			4.005	2.443	117.502
69	Ga-IS	>		514309.285		ppb			3.513		464511.859
95	Mo			5158.710	2.931602	ppb			3.297	2.503	45.556
115	In-IS	>		261739.452		ppb			1.431		254979.555
111	Cd			3650.747	2.112358	ppb			0.857	1.718	8.793
118	Sn			13556.430	2.659549	ppb			1.055	1.182	853.359
121	Sb			11224.411	2.071548	ppb			3.396	2.489	321.115
135	Ba			2654.691	2.333378	ppb			3.328	1.913	18.889
165	Ho-IS			307519.573		ppb			3.559		281428.592
159	Tb-IS			281873.691		ppb			2.497		260466.702
207	Pb			32952.806	2.263859	ppb			1.555	1.672	74.445
203	Tl			9579.879	2.167399	ppb			2.861	3.276	13.333
209	Bi-IS	>		152604.094		ppb			0.442		156193.765
51	V			3514.877	4.151911	ppb			3.397	4.434	34.444
59	Co			4866.385	2.234120	ppb			3.007	3.994	10.000
60	Ni			2684.697	2.311490	ppb			1.180	2.461	21.111
75	As			2456.332	2.745007	ppb			2.863	6.228	743.137
71	Ga-ISK	>		146882.447		ppb			1.363		127906.759
82	Se-2			229.103	3.976751	ppb			8.128	7.476	10.890
107	Ag-1			4903.064	1.029269	ppb			2.389	2.682	25.556
115	In-ISK			124416.221		ppb			1.540		112524.603
45	Sc-ISK	>		374655.700		ppb			1.682		302511.780
23	Na			120402122.686	190711.286307	ppb			0.702	1.073	2413.538
39	K			10607571.072	6810.305603	ppb			0.971	0.755	138365.773
24	Mg			16062875.270	22111.403079	ppb			0.546	1.309	76.667
159	Tb-ISK			228547.122		ppb			0.978		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25554-A-5-A @50
 Autosampler Position: 140
 Sample Date/Time: Friday, April 17, 2020 11:59:15
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25554-A-5-A @50.117
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS			41385.418		ppb		0.863		32283.111
9	Be			10.000	-0.000803	ppb	57.735	487.502		10.000
10	B			32106.064	91.881872	ppb	3.355	5.994		836.691
27	Al			12953.648	1.334044	ppb	0.757	2.964		3498.206
43	Ca-2			153082.499	8680.615748	ppb	0.297	2.210		108.334
49	Ti			1292.281	1.545771	ppb	1.512	1.359		214.446
52	Cr			25165.480	1.508886	ppb	0.804	3.075		10496.077
55	Mn			6004.596	0.397628	ppb	3.967	3.973		620.013
57	Fe			37314.245	99.099534	ppb	2.523	0.874		10290.373
45	Sc-IS			2135223.477		ppb	0.757			1662181.037
66	Zn			1896.793	1.006375	ppb	7.643	8.032		455.563
86	Sr			254620.341	134.205589	ppb	4.361	1.962		8.038
65	Cu			1000.826	0.436954	ppb	4.655	3.717		117.502
69	Ga-IS	>		515071.133		ppb	2.427			464511.859
95	Mo			1091.153	0.597130	ppb	8.707	11.359		45.556
115	In-IS	>		258348.623		ppb	0.723			254979.555
111	Cd			8.820	-0.000047	ppb	59.950	6685.860		8.793
118	Sn			717.796	-0.031306	ppb	15.558	72.038		853.359
121	Sb			261.114	-0.012402	ppb	23.894	95.625		321.115
135	Ba			251.113	0.208117	ppb	6.681	7.056		18.889
165	Ho-IS			307680.429		ppb	0.847			281428.592
159	Tb-IS			281798.985		ppb	0.707			260466.702
207	Pb			855.566	0.054064	ppb	7.240	8.460		74.445
203	Tl			28.889	0.003572	ppb	35.251	59.801		13.333
209	Bi-IS	>		152255.197		ppb	2.610			156193.765
51	V			1532.304	1.744021	ppb	3.701	2.970		34.444
59	Co			23.333	0.005217	ppb	37.796	75.127		10.000
60	Ni			176.668	0.129268	ppb	8.224	10.793		21.111
75	As			1294.687	0.709065	ppb	1.495	7.679		743.137
71	Ga-ISK	>		150039.407		ppb	1.014			127906.759
82	Se-2			111.787	1.781064	ppb	6.190	7.610		10.890
107	Ag-1			26.667	-0.000680	ppb	45.069	365.599		25.556
115	In-ISK			124521.969		ppb	1.814			112524.603
45	Sc-ISK	>		384837.978		ppb	0.276			302511.780
23	Na			123793948.175	190875.958610	ppb	1.546	1.648		2413.538
39	K			10830052.429	6768.037515	ppb	1.145	1.316		138365.773
24	Mg			16520671.486	22136.745125	ppb	0.899	0.859		76.667
159	Tb-ISK			234081.673		ppb	1.006			206150.803

QC Out of Limits

AnalyteMassOut of Limits Message
 Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25554-A-6-A @50
 Autosampler Position: 141
 Sample Date/Time: Friday, April 17, 2020 12:02:01
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\570-25554-A-6-A @50.118
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	41540.330		ppb	2.318		32283.111
9	Be	10.000	-0.000762	ppb	33.333	302.272	10.000
10	B	29830.007	85.085551	ppb	1.758	1.771	836.691
27	Al	15397.182	1.693604	ppb	0.722	5.630	3498.206
43	Ca-2	142776.665	8095.161666	ppb	1.173	3.467	108.334
49	Ti	1243.388	1.476362	ppb	6.697	11.700	214.446
52	Cr	24230.532	1.404983	ppb	0.420	7.320	10496.077
55	Mn	5757.827	0.379392	ppb	1.213	5.321	620.013
57	Fe	36017.578	94.129756	ppb	1.725	2.540	10290.373
45	Sc-IS	2146474.320		ppb	1.247		1662181.037
66	Zn	1903.461	1.010235	ppb	10.229	11.183	455.563
86	Sr	240527.785	126.795360	ppb	3.048	2.446	8.038
65	Cu	931.730	0.402954	ppb	5.069	9.518	117.502
69	Ga-IS	> 515310.756		ppb	3.424		464511.859
95	Mo	941.142	0.510560	ppb	3.214	5.828	45.556
115	In-IS	> 264163.182		ppb	1.982		254979.555
111	Cd	10.246	0.000655	ppb	50.226	447.972	8.793
118	Sn	540.010	-0.071616	ppb	10.274	13.346	853.359
121	Sb	244.447	-0.016637	ppb	3.937	5.647	321.115
135	Ba	268.891	0.219046	ppb	8.438	10.871	18.889
165	Ho-IS	305732.077		ppb	1.879		281428.592
159	Tb-IS	278664.206		ppb	1.421		260466.702
207	Pb	965.569	0.061939	ppb	5.228	6.947	74.445
203	Tl	35.556	0.005172	ppb	23.593	38.795	13.333
209	Bi-IS	> 151615.943		ppb	1.199		156193.765
51	V	1432.294	1.600972	ppb	2.112	3.094	34.444
59	Co	22.222	0.004554	ppb	17.321	34.783	10.000
60	Ni	148.890	0.103550	ppb	9.048	11.129	21.111
75	As	1348.723	0.763358	ppb	4.237	12.670	743.137
71	Ga-ISK	> 152470.515		ppb	1.137		127906.759
82	Se-2	128.461	2.042310	ppb	8.299	7.931	10.890
107	Ag-1	15.556	-0.003033	ppb	32.733	34.237	25.556
115	In-ISK	125773.531		ppb	1.097		112524.603
45	Sc-ISK	> 381886.584		ppb	1.475		302511.780
23	Na	115096836.132	178871.953088	ppb	0.700	2.127	2413.538
39	K	10162490.439	6394.218296	ppb	0.774	0.732	138365.773
24	Mg	15382306.486	20773.873009	ppb	1.086	1.906	76.667
159	Tb-ISK	235031.668		ppb	0.609		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message
 Sc-ISK 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 12:04:47

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.119

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	33881.247		ppb		1.390		32283.111
9	Be	|	150843.415	108.733456	ppb		1.423	3.910	10.000
10	B	|	92290.586	276.268831	ppb		2.238	4.860	836.691
27	Al	|	708204.773	106.261203	ppb		1.231	3.675	3498.206
43	Ca-2	|	95718.021	5565.271853	ppb		2.068	1.734	108.334
49	Ti	|	70754.827	106.110887	ppb		1.891	4.047	214.446
52	Cr	|	952551.914	107.726595	ppb		1.358	3.679	10496.077
55	Mn	|	1350315.612	103.586154	ppb		0.356	2.611	620.013
57	Fe	|	1338183.445	5209.762568	ppb		1.629	1.304	10290.373
45	Sc-IS	|	1748615.371		ppb		1.004		1662181.037
66	Zn	|	144480.603	106.915075	ppb		2.636	0.814	455.563
86	Sr	|	190004.053	102.816261	ppb		0.595	2.090	8.038
65	Cu	|	208327.058	107.239189	ppb		2.622	0.423	117.502
69	Ga-IS	|>	502038.575		ppb		2.627		464511.859
95	Mo	|	174741.122	102.717567	ppb		0.583	2.224	45.556
115	In-IS	|>	261459.597		ppb		0.893		254979.555
111	Cd	|	172836.703	100.347019	ppb		0.228	1.084	8.793
118	Sn	|	473532.020	99.227438	ppb		2.431	1.965	853.359
121	Sb	|	519984.368	98.920054	ppb		3.362	2.985	321.115
135	Ba	|	112965.240	100.119116	ppb		3.492	2.814	18.889
165	Ho-IS	|	300100.702		ppb		2.576		281428.592
159	Tb-IS	|	270436.016		ppb		1.276		260466.702
207	Pb	|	1488913.512	98.518560	ppb		0.822	0.364	74.445
203	Tl	|	450657.090	98.117956	ppb		0.897	1.333	13.333
209	Bi-IS	|>	158783.135		ppb		0.758		156193.765
51	V	|	76660.726	98.198734	ppb		1.504	0.738	34.444
59	Co	|	199590.543	98.522000	ppb		2.059	1.304	10.000
60	Ni	|	107142.602	99.850816	ppb		1.916	1.570	21.111
75	As	|	55508.469	100.496861	ppb		1.244	1.417	743.137
71	Ga-ISK	|>	136874.837		ppb		0.769		127906.759
82	Se-2	|	5165.108	101.584309	ppb		3.148	2.942	10.890
107	Ag-1	|	445683.242	100.992952	ppb		0.400	1.154	25.556
115	In-ISK	|	120614.978		ppb		1.036		112524.603
45	Sc-ISK	|>	327592.495		ppb		0.624		302511.780
23	Na	|	2898909.188	5246.214282	ppb		0.853	0.708	2413.538
39	K	|	7073146.945	5166.757377	ppb		0.417	1.020	138365.773
24	Mg	|	3251653.349	5118.454052	ppb		0.466	0.859	76.667
159	Tb-ISK	|	221221.772		ppb		0.763		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

B

10

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 12:07:33

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.120

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		32849.971		ppb		3.042		32283.111
9	Be	|		10.000	-0.000169	ppb		0.000	124.055	10.000
10	B	|		1091.153	0.754394	ppb		9.882	49.426	836.691
27	Al	|		3694.923	0.018865	ppb		6.325	197.471	3498.206
43	Ca-2	|		130.001	1.194850	ppb		6.662	61.263	108.334
49	Ti	|		234.446	0.023821	ppb		8.687	106.625	214.446
52	Cr	|		10243.672	-0.059067	ppb		1.990	16.317	10496.077
55	Mn	|		993.368	0.029118	ppb		7.601	18.388	620.013
57	Fe	|		11485.728	4.023565	ppb		2.503	51.409	10290.373
45	Sc-IS	|		1666055.711		ppb		0.623		1662181.037
66	Zn	|		595.568	0.102050	ppb		4.524	25.256	455.563
86	Sr	|		24.592	0.008956	ppb	182.852	279.000		8.038
65	Cu	|		268.068	0.080710	ppb		8.767	18.713	117.502
69	Ga-IS	|>		475029.165		ppb		2.760		464511.859
95	Mo	|		495.564	0.279364	ppb		11.540	14.262	45.556
115	In-IS	|>		251991.210		ppb		0.770		254979.555
111	Cd	|		11.182	0.001495	ppb		18.210	78.944	8.793
118	Sn	|		3281.489	0.531218	ppb		4.783	6.985	853.359
121	Sb	|		543.344	0.044667	ppb		8.523	21.468	321.115
135	Ba	|		20.000	0.001241	ppb		28.868	433.190	18.889
165	Ho-IS	|		280543.540		ppb		0.769		281428.592
159	Tb-IS	|		260855.721		ppb		0.855		260466.702
207	Pb	|		321.112	0.016906	ppb		11.942	16.448	74.445
203	Tl	|		96.667	0.018755	ppb		12.433	15.300	13.333
209	Bi-IS	|>		154059.615		ppb		0.789		156193.765
51	V	|		65.556	0.040609	ppb		29.794	65.862	34.444
59	Co	|		11.111	0.000494	ppb		96.437	1143.921	10.000
60	Ni	|		22.222	0.000599	ppb		17.321	685.251	21.111
75	As	|		884.272	0.234101	ppb		3.819	22.604	743.137
71	Ga-ISK	|>		131165.048		ppb		1.549		127906.759
82	Se-2	|		6.513	-0.094871	ppb		62.522	90.893	10.890
107	Ag-1	|		154.445	0.030359	ppb		26.813	32.804	25.556
115	In-ISK	|		114848.932		ppb		1.258		112524.603
45	Sc-ISK	|>		310849.322		ppb		1.407		302511.780
23	Na	|		22454.315	38.148469	ppb		3.646	5.606	2413.538
39	K	|		160999.966	14.827644	ppb		0.787	18.797	138365.773
24	Mg	|		480.008	0.666879	ppb		17.148	22.195	76.667
159	Tb-ISK	|		208027.774		ppb		0.891		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63570_1-A

Autosampler Position: 319

Sample Date/Time: Friday, April 17, 2020 12:43:44

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\MB 570-63570_1-A.121

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		32665.123		ppb				4.124		32283.111
9	Be	|		8.889	-0.001064	ppb		78.062	473.259			10.000
10	B	|		561.122	-0.925397	ppb		6.010	18.266			836.691
27	Al	|		4836.452	0.200036	ppb		37.855	132.429			3498.206
43	Ca-2	|		53.333	-3.496539	ppb		19.516	21.845			108.334
49	Ti	|		247.780	0.049103	ppb		14.510	138.976			214.446
52	Cr	|		11919.417	0.152773	ppb		2.626	23.924			10496.077
55	Mn	|		762.243	0.010717	ppb		8.232	31.730			620.013
57	Fe	|		11446.809	4.133392	ppb		2.842	17.565			10290.373
45	Sc-IS	|		1675458.422		ppb		1.963				1662181.037
66	Zn	|		736.686	0.215598	ppb		7.851	13.922			455.563
86	Sr	|		12.369	0.002651	ppb		136.222	373.718			8.038
65	Cu	|		97.446	-0.011954	ppb		10.444	54.519			117.502
69	Ga-IS	|>		472128.932		ppb		3.561				464511.859
95	Mo	|		28.889	-0.010794	ppb		17.625	35.170			45.556
115	In-IS	|>		248465.685		ppb		0.811				254979.555
111	Cd	|		6.606	-0.001203	ppb		100.759	336.135			8.793
118	Sn	|		1196.717	0.080687	ppb		11.132	36.468			853.359
121	Sb	|		734.463	0.084474	ppb		9.589	17.071			321.115
135	Ba	|		8.889	-0.008854	ppb		86.603	81.367			18.889
165	Ho-IS	|		281526.290		ppb		1.619				281428.592
159	Tb-IS	|		256610.081		ppb		1.496				260466.702
207	Pb	|		65.556	-0.000353	ppb		10.585	124.281			74.445
203	Tl	|		10.000	-0.000609	ppb		33.333	129.147			13.333
209	Bi-IS	|>		147896.292		ppb		2.113				156193.765
51	V	|		34.444	0.000409	ppb		29.565	3418.580			34.444
59	Co	|		13.333	0.001823	ppb		43.301	168.345			10.000
60	Ni	|		27.778	0.006932	ppb		42.143	171.978			21.111
75	As	|		687.800	-0.095359	ppb		10.280	158.039			743.137
71	Ga-ISK	|>		126722.930		ppb		0.807				127906.759
82	Se-2	|		1.851	-0.190694	ppb		429.808	88.718			10.890
107	Ag-1	|		22.222	-0.000758	ppb		31.225	224.935			25.556
115	In-ISK	|		108645.450		ppb		0.756				112524.603
45	Sc-ISK	|>		302804.477		ppb		0.593				302511.780
23	Na	|		3117.007	1.373547	ppb		2.705	9.930			2413.538
39	K	|		138658.607	0.126254	ppb		1.075	440.765			138365.773
24	Mg	|		103.334	0.045320	ppb		5.587	23.583			76.667
159	Tb-ISK	|		196926.706		ppb		0.539				206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63570_2-A

Autosampler Position: 320

Sample Date/Time: Friday, April 17, 2020 12:46:29

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LCS 570-63570_2-A.122

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	33250.883		ppb		1.826		32283.111
9	Be	|	160260.580	114.302806	ppb	0.331	1.597		10.000
10	B	|	35270.163	102.731662	ppb	1.866	0.808		836.691
27	Al	|	720268.293	106.962237	ppb	1.868	3.553		3498.206
43	Ca-2	|	95414.252	5491.512406	ppb	0.686	1.584		108.334
49	Ti	|	75617.396	112.219057	ppb	1.135	1.126		214.446
52	Cr	|	990317.580	110.855366	ppb	0.645	1.331		10496.077
55	Mn	|	1361069.909	103.327179	ppb	1.246	1.678		620.013
57	Fe	|	1347180.272	5191.135481	ppb	1.262	0.836		10290.373
45	Sc-IS	|	1710345.100		ppb	1.692			1662181.037
66	Zn	|	156233.216	114.480562	ppb	1.981	1.865		455.563
86	Sr	|	197291.145	105.660818	ppb	0.483	1.231		8.038
65	Cu	|	217885.567	111.037401	ppb	1.776	1.335		117.502
69	Ga-IS	>	507145.430		ppb	1.708			464511.859
95	Mo	|	184099.787	107.105961	ppb	0.570	1.457		45.556
115	In-IS	>	260840.955		ppb	1.663			254979.555
111	Cd	|	182705.944	106.335785	ppb	0.859	1.349		8.793
118	Sn	|	595044.152	125.039411	ppb	1.624	0.056		853.359
121	Sb	|	545149.447	103.946924	ppb	3.013	1.400		321.115
135	Ba	|	118596.305	105.352915	ppb	3.953	2.714		18.889
165	Ho-IS	|	290004.011		ppb	0.188			281428.592
159	Tb-IS	|	267780.887		ppb	0.309			260466.702
207	Pb	|	1529675.711	104.332571	ppb	0.552	0.395		74.445
203	Tl	|	439797.319	98.697920	ppb	0.658	0.769		13.333
209	Bi-IS	>	154039.367		ppb	0.218			156193.765
51	V	|	80754.407	106.262457	ppb	3.031	3.191		34.444
59	Co	|	207741.081	105.335537	ppb	2.016	1.936		10.000
60	Ni	|	110041.099	105.344268	ppb	0.847	1.449		21.111
75	As	|	57801.353	107.590176	ppb	1.062	1.422		743.137
71	Ga-ISK	>	133258.655		ppb	0.599			127906.759
82	Se-2	|	5220.807	105.479023	ppb	1.894	1.930		10.890
107	Ag-1	|	206376.686	48.030308	ppb	0.365	0.962		25.556
115	In-ISK	|	115571.743		ppb	0.752			112524.603
45	Sc-ISK	>	316038.717		ppb	0.394			302511.780
23	Na	|	533347.333	996.661447	ppb	0.765	0.714		2413.538
39	K	|	1410133.682	978.977608	ppb	0.297	0.372		138365.773
24	Mg	|	3137482.017	5119.158584	ppb	0.556	0.557		76.667
159	Tb-ISK	|	208126.471		ppb	0.450			206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: LCSD 570-63570_3-A
 Autosampler Position: 321
 Sample Date/Time: Friday, April 17, 2020 12:49:15
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200417E1\LCSD 570-63570_3-A.123
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS			32870.000		ppb		1.523		32283.111
9	Be			158012.459	113.156834	ppb		0.969	0.661	10.000
10	B			35460.630	103.746602	ppb		1.531	0.863	836.691
27	Al			712183.687	106.194076	ppb		1.714	3.321	3498.206
43	Ca-2			95558.556	5522.879668	ppb		0.990	1.951	108.334
49	Ti			75436.437	112.422275	ppb		0.919	1.532	214.446
52	Cr			996815.887	112.064219	ppb		0.638	1.648	10496.077
55	Mn			1370014.059	104.447737	ppb		0.331	1.950	620.013
57	Fe			1349740.651	5223.282436	ppb		0.424	1.232	10290.373
45	Sc-IS			1691939.614		ppb		0.216		1662181.037
66	Zn			157764.285	116.079698	ppb		1.651	0.256	455.563
86	Sr			197786.850	106.355260	ppb		1.448	0.335	8.038
65	Cu			216760.452	110.911779	ppb		2.393	1.130	117.502
69	Ga-IS	>		505040.398		ppb		1.625		464511.859
95	Mo			183512.616	107.187144	ppb		2.089	0.464	45.556
115	In-IS	>		255351.348		ppb		1.537		254979.555
111	Cd			183278.874	108.960489	ppb		0.725	1.211	8.793
118	Sn			605823.064	130.042484	ppb		2.528	1.685	853.359
121	Sb			559681.492	109.022223	ppb		2.458	1.104	321.115
135	Ba			119359.568	108.294167	ppb		4.892	3.363	18.889
165	Ho-IS			293091.634		ppb		0.254		281428.592
159	Tb-IS			268456.263		ppb		2.023		260466.702
207	Pb			1526607.695	104.772144	ppb		0.570	1.561	74.445
203	Tl			446350.313	100.785324	ppb		0.534	0.691	13.333
209	Bi-IS	>		153101.639		ppb		0.983		156193.765
51	V			80709.612	106.776730	ppb		1.630	2.068	34.444
59	Co			205309.392	104.667671	ppb		1.268	1.705	10.000
60	Ni			110316.588	106.168985	ppb		1.502	1.300	21.111
75	As			57793.124	108.156774	ppb		0.648	0.412	743.137
71	Ga-ISK	>		132545.392		ppb		0.438		127906.759
82	Se-2			5155.106	104.712229	ppb		0.874	1.262	10.890
107	Ag-1			206615.847	48.344745	ppb		1.425	1.720	25.556
115	In-ISK			115992.542		ppb		0.744		112524.603
45	Sc-ISK	>		311973.436		ppb		1.409		302511.780
23	Na			525574.453	994.947438	ppb		1.335	0.727	2413.538
39	K			1423970.168	1004.176399	ppb		0.155	1.587	138365.773
24	Mg			3155240.611	5215.868124	ppb		0.693	1.537	76.667
159	Tb-ISK			210891.323		ppb		0.984		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25593-A-1-A

Autosampler Position: 322

Sample Date/Time: Friday, April 17, 2020 12:52:00

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25593-A-1-A.124

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS			34093.973		ppb		1.239		32283.111
9	Be			31.111	0.015838	ppb	32.733	46.132		10.000
10	B			19338.641	59.094369	ppb	2.419	0.318		836.691
27	Al			183144.454	28.669383	ppb	1.561	3.797		3498.206
43	Ca-2			332033.389	20450.622504	ppb	1.756	1.537		108.334
49	Ti			633.348	0.657913	ppb	14.191	18.473		214.446
52	Cr			17536.313	0.826078	ppb	1.108	5.112		10496.077
55	Mn			18643.270	1.462750	ppb	1.630	2.164		620.013
57	Fe			28792.321	75.982123	ppb	1.085	1.815		10290.373
45	Sc-IS			1762243.685		ppb	2.143			1662181.037
66	Zn			8628.161	6.416796	ppb	1.342	1.940		455.563
86	Sr			154123.083	88.262935	ppb	0.592	1.649		8.038
65	Cu			4600.596	2.442056	ppb	4.879	3.437		117.502
69	Ga-IS	>		474316.931		ppb	2.214			464511.859
95	Mo			1367.843	0.822040	ppb	3.047	2.360		45.556
115	In-IS	>		253529.197		ppb	1.970			254979.555
111	Cd			23.794	0.008982	ppb	27.680	41.594		8.793
118	Sn			5087.573	0.918022	ppb	2.271	3.229		853.359
121	Sb			13578.688	2.603623	ppb	6.086	6.428		321.115
135	Ba			23403.612	21.381999	ppb	3.110	2.927		18.889
165	Ho-IS			286958.586		ppb	1.961			281428.592
159	Tb-IS			265824.049		ppb	1.432			260466.702
207	Pb			1412.250	0.093439	ppb	6.422	7.161		74.445
203	Tl			124.445	0.025542	ppb	20.104	21.091		13.333
209	Bi-IS	>		150758.047		ppb	1.210			156193.765
51	V			652.237	0.827113	ppb	7.672	8.846		34.444
59	Co			292.225	0.145694	ppb	14.887	16.266		10.000
60	Ni			2263.513	2.185256	ppb	1.792	2.251		21.111
75	As			1165.294	0.777524	ppb	1.943	7.424		743.137
71	Ga-ISK	>		130908.204		ppb	0.944			127906.759
82	Se-2			19.815	0.178868	ppb	8.685	21.475		10.890
107	Ag-1			133.334	0.025367	ppb	18.028	21.634		25.556
115	In-ISK			114170.581		ppb	0.551			112524.603
45	Sc-ISK	>		317684.453		ppb	2.071			302511.780
23	Na			4604530.016	8597.009623	ppb	1.045	1.047		2413.538
39	K			2236927.088	1609.975094	ppb	0.614	1.943		138365.773
24	Mg			3137169.090	5092.514395	ppb	1.805	1.156		76.667
159	Tb-ISK			211946.064		ppb	0.817			206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25593-A-1-B MS

Autosampler Position: 323

Sample Date/Time: Friday, April 17, 2020 12:54:45

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25593-A-1-B MS.125

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		33679.674		ppb				2.693		32283.111
9	Be	|		37.778	0.020855	ppb				28.364	36.390	10.000
10	B	|		19121.684	58.237695	ppb				2.653	0.861	836.691
27	Al	|		156100.814	24.288909	ppb				2.555	4.794	3498.206
43	Ca-2	|		330645.136	20309.579655	ppb				1.832	0.527	108.334
49	Ti	|		666.682	0.709576	ppb				4.330	4.516	214.446
52	Cr	|		29257.718	2.235244	ppb				2.292	0.445	10496.077
55	Mn	|		15462.815	1.200693	ppb				3.492	1.989	620.013
57	Fe	|		27420.748	69.955142	ppb				2.656	0.892	10290.373
45	Sc-IS	|		1726788.829		ppb				1.475		1662181.037
66	Zn	|		3513.765	2.389547	ppb				1.491	3.186	455.563
86	Sr	|		154037.472	87.968728	ppb				1.793	1.267	8.038
65	Cu	|		4514.515	2.388982	ppb				4.278	3.152	117.502
69	Ga-IS	|>		475569.573		ppb				2.111		464511.859
95	Mo	|		1240.054	0.740708	ppb				6.912	7.453	45.556
115	In-IS	|>		248970.173		ppb				1.241		254979.555
111	Cd	|		18.507	0.006033	ppb				37.569	69.130	8.793
118	Sn	|		1347.841	0.113454	ppb				1.449	1.512	853.359
121	Sb	|		3238.145	0.584565	ppb				5.062	4.791	321.115
135	Ba	|		22580.057	21.006065	ppb				1.741	1.678	18.889
165	Ho-IS	|		290639.690		ppb				1.967		281428.592
159	Tb-IS	|		263977.986		ppb				1.256		260466.702
207	Pb	|		674.451	0.041956	ppb				8.231	8.344	74.445
203	Tl	|		25.556	0.002909	ppb				7.531	16.890	13.333
209	Bi-IS	|>		150838.917		ppb				1.375		156193.765
51	V	|		548.899	0.684023	ppb				8.378	9.287	34.444
59	Co	|		242.224	0.119037	ppb				12.334	13.285	10.000
60	Ni	|		2199.058	2.109444	ppb				2.069	2.273	21.111
75	As	|		1129.596	0.695742	ppb				1.152	4.711	743.137
71	Ga-ISK	|>		131698.724		ppb				0.375		127906.759
82	Se-2	|		15.828	0.094104	ppb				54.199	185.646	10.890
107	Ag-1	|		40.000	0.003228	ppb				22.048	65.218	25.556
115	In-ISK	|		113920.242		ppb				0.979		112524.603
45	Sc-ISK	|>		315166.639		ppb				1.037		302511.780
23	Na	|		4683643.874	8814.060079	ppb				0.396	1.102	2413.538
39	K	|		2315825.748	1684.684939	ppb				0.366	1.483	138365.773
24	Mg	|		3169181.499	5186.169864	ppb				1.816	2.827	76.667
159	Tb-ISK	|		206859.854		ppb				1.655		206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25593-A-1-C MSD

Autosampler Position: 324

Sample Date/Time: Friday, April 17, 2020 12:57:31

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25593-A-1-C MSD.126

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		33538.222		ppb		2.036		32283.111
9	Be	|		24.444	0.010809	ppb	20.830	35.701		10.000
10	B	|		19408.735	59.144388	ppb	2.006	1.236		836.691
27	Al	|		167332.499	26.079570	ppb	2.563	5.810		3498.206
43	Ca-2	|		335959.823	20634.770805	ppb	1.120	2.014		108.334
49	Ti	|		711.129	0.780293	ppb	22.232	31.788		214.446
52	Cr	|		28371.480	2.128398	ppb	0.898	3.572		10496.077
55	Mn	|		16014.530	1.245223	ppb	2.194	0.974		620.013
57	Fe	|		27505.343	70.328099	ppb	0.501	4.372		10290.373
45	Sc-IS	|		1725107.950		ppb	0.455			1662181.037
66	Zn	|		4330.657	3.028629	ppb	2.446	2.855		455.563
86	Sr	|		155532.880	88.779923	ppb	3.317	1.692		8.038
65	Cu	|		4479.900	2.370569	ppb	1.312	2.518		117.502
69	Ga-IS	|>		475771.920		ppb	3.051			464511.859
95	Mo	|		1064.484	0.631306	ppb	2.976	1.072		45.556
115	In-IS	|>		248996.494		ppb	1.164			254979.555
111	Cd	|		16.653	0.004871	ppb	70.077	144.685		8.793
118	Sn	|		840.025	0.001421	ppb	5.598	604.199		853.359
121	Sb	|		1955.691	0.327877	ppb	13.454	14.750		321.115
135	Ba	|		23373.560	21.739204	ppb	2.768	1.742		18.889
165	Ho-IS	|		288313.530		ppb	2.315			281428.592
159	Tb-IS	|		263926.839		ppb	0.470			260466.702
207	Pb	|		551.115	0.033486	ppb	7.659	9.318		74.445
203	Tl	|		27.778	0.003426	ppb	38.575	71.217		13.333
209	Bi-IS	|>		150462.670		ppb	0.449			156193.765
51	V	|		577.789	0.726495	ppb	5.544	5.934		34.444
59	Co	|		278.892	0.138453	ppb	12.032	11.388		10.000
60	Ni	|		2225.729	2.147301	ppb	3.303	4.398		21.111
75	As	|		1170.083	0.784965	ppb	1.553	5.371		743.137
71	Ga-ISK	|>		131004.653		ppb	1.132			127906.759
82	Se-2	|		22.169	0.227685	ppb	29.453	61.139		10.890
107	Ag-1	|		26.667	0.000108	ppb	25.000	1417.176		25.556
115	In-ISK	|		114586.027		ppb	0.852			112524.603
45	Sc-ISK	|>		314591.807		ppb	0.653			302511.780
23	Na	|		4615029.239	8700.197253	ppb	0.990	0.897		2413.538
39	K	|		2322439.943	1693.003025	ppb	1.204	1.572		138365.773
24	Mg	|		3207233.394	5257.270201	ppb	1.358	1.709		76.667
159	Tb-ISK	|		205843.289		ppb	1.538			206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 13:00:17

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.127

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32570.420		ppb		0.323		32283.111
9	Be	|	146684.821	105.198563	ppb	0.863	0.541		10.000
10	B	|	89512.949	266.439792	ppb	1.677	0.816		836.691
27	Al	|	691192.357	103.198351	ppb	2.209	3.580		3498.206
43	Ca-2	|	92657.888	5362.269824	ppb	1.312	1.039		108.334
49	Ti	|	68854.432	102.727011	ppb	0.932	0.607		214.446
52	Cr	|	926850.034	104.259036	ppb	0.318	1.228		10496.077
55	Mn	|	1311484.764	100.124687	ppb	0.329	1.476		620.013
57	Fe	|	1303096.045	5048.047182	ppb	1.763	0.664		10290.373
45	Sc-IS	|	1696272.299		ppb	0.255			1662181.037
66	Zn	|	144114.442	106.166183	ppb	1.167	0.443		455.563
86	Sr	|	190770.310	102.719852	ppb	2.922	1.707		8.038
65	Cu	|	206385.797	105.758843	ppb	2.135	1.063		117.502
69	Ga-IS	>	504286.179		ppb	1.335			464511.859
95	Mo	|	173245.665	101.335948	ppb	2.392	1.113		45.556
115	In-IS	>	256525.274		ppb	0.622			254979.555
111	Cd	|	166354.752	98.438753	ppb	2.069	2.237		8.793
118	Sn	|	470822.191	100.562575	ppb	1.016	0.408		853.359
121	Sb	|	520536.982	100.934515	ppb	1.220	0.639		321.115
135	Ba	|	111770.320	100.970878	ppb	3.427	3.066		18.889
165	Ho-IS	|	288384.363		ppb	2.864			281428.592
159	Tb-IS	|	265479.037		ppb	1.825			260466.702
207	Pb	|	1433516.795	98.241162	ppb	0.956	1.991		74.445
203	Tl	|	432481.681	97.500642	ppb	2.628	2.085		13.333
209	Bi-IS	>	153333.047		ppb	1.426			156193.765
51	V	|	74111.767	98.385976	ppb	1.402	2.750		34.444
59	Co	|	194018.722	99.254066	ppb	1.049	2.394		10.000
60	Ni	|	104654.219	101.050900	ppb	1.520	0.342		21.111
75	As	|	53713.970	100.757286	ppb	1.234	0.169		743.137
71	Ga-ISK	>	132109.220		ppb	1.331			127906.759
82	Se-2	|	5048.695	102.899240	ppb	1.089	2.117		10.890
107	Ag-1	|	425212.221	99.833228	ppb	0.633	1.174		25.556
115	In-ISK	|	116457.204		ppb	0.809			112524.603
45	Sc-ISK	>	317024.045		ppb	1.564			302511.780
23	Na	|	2763838.913	5168.317973	ppb	1.760	0.271		2413.538
39	K	|	6754347.047	5097.382247	ppb	0.279	1.350		138365.773
24	Mg	|	3120693.496	5076.807908	ppb	1.141	2.045		76.667
159	Tb-ISK	|	209149.911		ppb	0.276			206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 13:03:03

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.128

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		32204.052		ppb			2.638			32283.111
9	Be	|		8.889	-0.000875	ppb			21.651	182.627		10.000
10	B	|		838.914	-0.002662	ppb			2.395	3714.454		836.691
27	Al	|		4266.193	0.122356	ppb			2.885	12.103		3498.206
43	Ca-2	|		70.000	-2.401368	ppb			39.770	77.148		108.334
49	Ti	|		243.335	0.045347	ppb			2.373	4.483		214.446
52	Cr	|		10003.503	-0.065795	ppb			2.492	34.531		10496.077
55	Mn	|		598.902	-0.001860	ppb			11.053	349.145		620.013
57	Fe	|		8980.600	-5.692772	ppb			0.077	19.652		10290.373
45	Sc-IS	|		1656748.666		ppb			2.169			1662181.037
66	Zn	|		528.899	0.057271	ppb			7.305	55.259		455.563
86	Sr	|		-18.805	-0.015989	ppb			224.195	155.233		8.038
65	Cu	|		124.966	0.003790	ppb			8.625	107.459		117.502
69	Ga-IS	|>		466446.711		ppb			2.874			464511.859
95	Mo	|		566.678	0.329535	ppb			3.275	1.180		45.556
115	In-IS	|>		249642.868		ppb			1.136			254979.555
111	Cd	|		11.032	0.001439	ppb			75.787	350.172		8.793
118	Sn	|		4406.237	0.784693	ppb			7.239	7.590		853.359
121	Sb	|		1220.052	0.180495	ppb			5.879	6.654		321.115
135	Ba	|		37.778	0.017905	ppb			30.987	60.249		18.889
165	Ho-IS	|		276704.219		ppb			0.899			281428.592
159	Tb-IS	|		258682.245		ppb			0.684			260466.702
207	Pb	|		358.891	0.020028	ppb			12.814	15.124		74.445
203	Tl	|		98.889	0.019768	ppb			8.483	10.277		13.333
209	Bi-IS	|>		150522.218		ppb			0.960			156193.765
51	V	|		32.222	-0.003835	ppb			5.973	65.398		34.444
59	Co	|		22.222	0.006257	ppb			34.641	64.294		10.000
60	Ni	|		37.778	0.015984	ppb			35.660	83.206		21.111
75	As	|		755.660	-0.001614	ppb			6.271	5828.503		743.137
71	Ga-ISK	|>		130216.337		ppb			0.311			127906.759
82	Se-2	|		8.185	-0.060177	ppb			35.355	99.435		10.890
107	Ag-1	|		106.667	0.019209	ppb			23.593	31.222		25.556
115	In-ISK	|		112593.101		ppb			0.906			112524.603
45	Sc-ISK	|>		304588.433		ppb			0.406			302511.780
23	Na	|		3600.454	2.279886	ppb			2.074	5.858		2413.538
39	K	|		144104.309	3.843224	ppb			0.842	20.841		138365.773
24	Mg	|		360.005	0.478599	ppb			12.345	15.177		76.667
159	Tb-ISK	|		201191.559		ppb			0.856			206150.803

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Friday, April 17, 2020 13:33:09

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICIS-23447.129

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		32483.558		ppb		0.765		
9	Be	|		6.667		ppb		86.603		
10	B	|		393.339		ppb		12.712		
27	Al	|		3880.527		ppb		0.086		
43	Ca-2	|		61.667		ppb		40.810		
49	Ti	|		238.891		ppb		16.292		
52	Cr	|		11315.592		ppb		1.522		
55	Mn	|		520.010		ppb		12.611		
57	Fe	|		8712.657		ppb		2.309		
45	Sc-IS	>		1640877.000		ppb		0.980		
66	Zn	|		550.011		ppb		11.830		
86	Sr	|		36.378		ppb		80.840		
65	Cu	|		59.785		ppb		9.702		
69	Ga-IS	|		471472.863		ppb		3.425		
95	Mo	|		40.000		ppb		8.333		
115	In-IS	>		250982.454		ppb		1.315		
111	Cd	|		2.138		ppb		180.293		
118	Sn	|		1771.221		ppb		7.506		
121	Sb	|		957.810		ppb		4.700		
135	Ba	|		11.111		ppb		17.321		
165	Ho-IS	|		276846.102		ppb		1.564		
159	Tb-IS	|		258234.809		ppb		2.026		
207	Pb	|		92.222		ppb		22.085		
203	Tl	|		4.444		ppb		114.564		
209	Bi-IS	>		147407.779		ppb		1.044		
51	V	|		26.667		ppb		33.072		
59	Co	|		6.667		ppb		50.000		
60	Ni	|		16.667		ppb		0.000		
75	As	|		691.308		ppb		7.343		
71	Ga-ISK	>		124774.800		ppb		1.066		
82	Se-2	|		-2.826		ppb		506.599		
107	Ag-1	|		22.222		ppb		22.913		
115	In-ISK	|		107244.070		ppb		1.105		
45	Sc-ISK	>		294476.521		ppb		0.974		
23	Na	|		2181.833		ppb		4.253		
39	K	|		136650.460		ppb		0.316		
24	Mg	|		100.000		ppb		27.839		
159	Tb-ISK	|		194610.708		ppb		1.124		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Friday, April 17, 2020 13:35:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\IC-210761.130

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32873.337		ppb		0.843		32483.558
9	Be	|	293183.504	200.000000	ppb		0.368	0.696	6.667
10	B	|	177599.538	500.000000	ppb		1.578	2.106	393.339
27	Al	|	1359815.707	200.000000	ppb		2.090	2.792	3880.527
43	Ca-2	|	181766.049	10200.000000	ppb		2.092	1.396	61.667
49	Ti	|	139410.334	200.000000	ppb		1.256	1.392	238.891
52	Cr	|	1858666.698	200.000000	ppb		0.965	0.879	11315.592
55	Mn	|	2748255.535	200.000000	ppb		0.423	0.976	520.010
57	Fe	|	2733910.985	10200.000000	ppb		2.461	1.858	8712.657
45	Sc-IS	>	1685725.997		ppb		0.975		1640877.000
66	Zn	|	287175.002	200.000000	ppb		3.051	2.076	550.011
86	Sr	|	382953.632	200.000000	ppb		0.515	1.082	36.378
65	Cu	|	414011.773	200.000000	ppb		3.083	2.199	59.785
69	Ga-IS	|	522973.668		ppb		2.295		471472.863
95	Mo	|	347812.095	200.000000	ppb		0.488	1.459	40.000
115	In-IS	>	255019.625		ppb		0.965		250982.454
111	Cd	|	332236.482	200.000000	ppb		0.729	1.570	2.138
118	Sn	|	945591.480	200.000000	ppb		1.554	1.682	1771.221
121	Sb	|	1049299.267	200.000000	ppb		1.478	1.757	957.810
135	Ba	|	229443.137	200.000000	ppb		2.624	2.347	11.111
165	Ho-IS	|	290312.762		ppb		1.371		276846.102
159	Tb-IS	|	269157.558		ppb		0.621		258234.809
207	Pb	|	2841990.947	200.000000	ppb		0.637	1.186	92.222
203	Tl	|	858493.817	200.000000	ppb		1.125	0.761	4.444
209	Bi-IS	>	151797.946		ppb		1.743		147407.779
51	V	|	146865.518	200.000000	ppb		0.241	1.179	26.667
59	Co	|	381626.939	200.000000	ppb		0.527	0.929	6.667
60	Ni	|	202933.515	200.000000	ppb		0.963	0.436	16.667
75	As	|	105579.873	200.000000	ppb		0.551	1.119	691.308
71	Ga-ISK	>	129847.515		ppb		1.358		124774.800
82	Se-2	|	9530.687	200.000000	ppb		0.943	2.280	-2.826
107	Ag-1	|	827255.748	200.000000	ppb		1.129	0.701	22.222
115	In-ISK	|	111945.514		ppb		0.820		107244.070
45	Sc-ISK	>	314530.466		ppb		0.612		294476.521
23	Na	|	5309545.393	10200.000000	ppb		0.311	0.626	2181.833
39	K	|	12930332.613	10200.000000	ppb		0.438	0.606	136650.460
24	Mg	|	6008444.305	10200.000000	ppb		0.788	0.818	100.000
159	Tb-ISK	|	205350.416		ppb		1.970		194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 13:38:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.131

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32165.064		ppb		1.417		32483.558
9	Be	|	147242.747	100.672781	ppb	0.953	1.742		6.667
10	B	|	90676.872	255.286775	ppb	0.303	0.723		393.339
27	Al	|	673821.346	99.023771	ppb	1.719	2.056		3880.527
43	Ca-2	|	91715.166	5156.645340	ppb	1.291	0.480		61.667
49	Ti	|	69848.120	100.253132	ppb	0.425	0.530		238.891
52	Cr	|	925633.548	99.197644	ppb	0.061	0.878		11315.592
55	Mn	|	1308904.402	95.449050	ppb	0.618	1.395		520.010
57	Fe	|	1299360.090	4841.860744	ppb	1.119	1.782		8712.657
45	Sc-IS	>	1681941.483		ppb	0.810			1640877.000
66	Zn	|	144472.686	100.659991	ppb	2.387	2.200		550.011
86	Sr	|	193264.395	101.151024	ppb	0.868	1.396		36.378
65	Cu	|	206806.351	100.128592	ppb	1.460	1.493		59.785
69	Ga-IS	|	497363.055		ppb	1.971			471472.863
95	Mo	|	176496.259	101.707135	ppb	2.505	2.955		40.000
115	In-IS	>	254842.091		ppb	1.867			250982.454
111	Cd	|	167849.586	101.116142	ppb	0.760	1.101		2.138
118	Sn	|	478789.265	101.165443	ppb	0.834	1.761		1771.221
121	Sb	|	524640.582	99.972803	ppb	1.687	0.666		957.810
135	Ba	|	115323.035	100.566816	ppb	4.189	2.572		11.111
165	Ho-IS	|	291597.249		ppb	0.995			276846.102
159	Tb-IS	|	267228.721		ppb	1.285			258234.809
207	Pb	|	1425235.787	101.219626	ppb	0.497	1.236		92.222
203	Tl	|	435963.774	102.510318	ppb	0.956	1.837		4.444
209	Bi-IS	>	150403.207		ppb	1.057			147407.779
51	V	|	74719.346	101.365507	ppb	0.723	0.414		26.667
59	Co	|	195520.221	102.092578	ppb	1.582	0.924		6.667
60	Ni	|	101396.351	99.569525	ppb	0.357	0.603		16.667
75	As	|	53447.908	100.199136	ppb	1.656	1.286		691.308
71	Ga-ISK	>	130307.190		ppb	0.932			124774.800
82	Se-2	|	4855.352	101.543416	ppb	0.944	1.175		-2.826
107	Ag-1	|	419196.117	100.992565	ppb	0.743	1.645		22.222
115	In-ISK	|	113591.428		ppb	1.382			107244.070
45	Sc-ISK	>	308704.396		ppb	0.863			294476.521
23	Na	|	2686129.881	5255.674895	ppb	0.361	1.140		2181.833
39	K	|	6612994.095	5259.566713	ppb	0.541	1.298		136650.460
24	Mg	|	3054243.497	5283.011764	ppb	1.483	1.944		100.000
159	Tb-ISK	|	206922.603		ppb	1.098			194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 13:41:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.132

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS			31012.520		ppb				1.487		32483.558
9	Be			15.556	0.006346	ppb				49.487	86.076	6.667
10	B			907.807	1.518086	ppb				1.180	3.033	393.339
27	Al			3584.895	-0.039217	ppb				3.586	56.621	3880.527
43	Ca-2			61.667	0.032201	ppb				30.697	3376.489	61.667
49	Ti			203.335	-0.049595	ppb				13.012	76.230	238.891
52	Cr			8965.035	-0.251411	ppb				2.312	7.413	11315.592
55	Mn			548.899	0.002590	ppb				8.087	139.004	520.010
57	Fe			8368.007	-1.001869	ppb				2.962	78.776	8712.657
45	Sc-IS	>		1624403.057		ppb				0.580		1640877.000
66	Zn			494.453	-0.036275	ppb				3.186	25.804	550.011
86	Sr			0.147	-0.019394	ppb				17321.841	71.451	36.378
65	Cu			71.762	0.006281	ppb				19.320	107.646	59.785
69	Ga-IS			467931.656		ppb				1.781		471472.863
95	Mo			506.676	0.278729	ppb				1.316	1.400	40.000
115	In-IS	>		246868.763		ppb				0.506		250982.454
111	Cd			15.603	0.008394	ppb				0.090	0.686	2.138
118	Sn			4222.846	0.543059	ppb				1.941	3.817	1771.221
121	Sb			844.469	-0.019206	ppb				6.381	59.340	957.810
135	Ba			30.000	0.017196	ppb				29.397	46.790	11.111
165	Ho-IS			277983.034		ppb				0.482		276846.102
159	Tb-IS			256135.794		ppb				0.109		258234.809
207	Pb			455.559	0.026485	ppb				5.139	7.615	92.222
203	Tl			154.445	0.036327	ppb				22.151	25.509	4.444
209	Bi-IS	>		146808.770		ppb				3.178		147407.779
51	V			22.222	-0.007172	ppb				31.225	132.049	26.667
59	Co			22.222	0.008163	ppb				22.913	33.786	6.667
60	Ni			33.333	0.016222	ppb				30.000	63.159	16.667
75	As			720.192	0.018364	ppb				7.808	556.798	691.308
71	Ga-ISK	>		128243.071		ppb				0.786		124774.800
82	Se-2			3.177	0.129499	ppb				100.658	53.044	-2.826
107	Ag-1			122.223	0.024343	ppb				9.578	12.702	22.222
115	In-ISK			112628.291		ppb				0.762		107244.070
45	Sc-ISK	>		301138.926		ppb				1.187		294476.521
23	Na			2480.216	0.501822	ppb				4.545	55.074	2181.833
39	K			140366.236	0.535942	ppb				0.538	375.158	136650.460
24	Mg			333.337	0.409403	ppb				12.490	16.866	100.000
159	Tb-ISK			201503.972		ppb				1.153		194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, April 17, 2020 13:44:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICVL-210771.133

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		32544.810		ppb		1.261		32483.558
9	Be	|		1456.741	0.997737	ppb	6.221	7.853		6.667
10	B	|		18717.814	52.103360	ppb	2.196	3.366		393.339
27	Al	|		341707.304	50.215333	ppb	2.035	2.446		3880.527
43	Ca-2	|		991.701	52.571758	ppb	12.395	13.525		61.667
49	Ti	|		843.358	0.868747	ppb	2.468	1.394		238.891
52	Cr	|		18072.537	0.713650	ppb	1.404	1.751		11315.592
55	Mn	|		15285.952	1.082671	ppb	0.804	2.006		520.010
57	Fe	|		20842.977	45.138503	ppb	2.181	3.645		8712.657
45	Sc-IS	>		1672539.257		ppb		1.661		1640877.000
66	Zn	|		7972.226	5.212011	ppb	3.890	2.419		550.011
86	Sr	|		1779.233	0.917391	ppb	6.500	7.188		36.378
65	Cu	|		2121.818	1.003799	ppb	3.629	3.794		59.785
69	Ga-IS	|		479434.728		ppb		1.637		471472.863
95	Mo	|		1821.227	1.031414	ppb	6.055	4.633		40.000
115	In-IS	>		254960.445		ppb		0.859		250982.454
111	Cd	|		1560.706	0.938326	ppb	1.386	0.831		2.138
118	Sn	|		6625.982	1.022816	ppb	4.141	4.761		1771.221
121	Sb	|		5635.556	0.889629	ppb	1.960	1.572		957.810
135	Ba	|		1105.599	0.954576	ppb	8.667	9.428		11.111
165	Ho-IS	|		288729.696		ppb		0.176		276846.102
159	Tb-IS	|		264257.506		ppb		1.200		258234.809
207	Pb	|		14119.418	0.979414	ppb	1.784	1.198		92.222
203	Tl	|		4266.193	0.985764	ppb	2.356	4.201		4.444
209	Bi-IS	>		152950.162		ppb		1.853		147407.779
51	V	|		767.799	1.021239	ppb	11.725	13.514		26.667
59	Co	|		1822.339	0.962881	ppb	4.051	5.335		6.667
60	Ni	|		1046.705	1.026401	ppb	3.546	2.711		16.667
75	As	|		1220.132	0.981777	ppb	3.385	6.286		691.308
71	Ga-ISK	>		128354.105		ppb		1.329		124774.800
82	Se-2	|		48.508	1.090885	ppb	27.775	26.056		-2.826
107	Ag-1	|		3964.995	0.964026	ppb	3.052	2.000		22.222
115	In-ISK	|		111144.824		ppb		1.124		107244.070
45	Sc-ISK	>		304423.961		ppb		0.769		294476.521
23	Na	|		28261.283	51.634899	ppb	3.466	3.300		2181.833
39	K	|		199133.864	47.704686	ppb	0.392	1.480		136650.460
24	Mg	|		28144.373	49.179858	ppb	2.271	1.599		100.000
159	Tb-ISK	|		202095.479		ppb		0.556		194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63658_1-A

Autosampler Position: 301

Sample Date/Time: Friday, April 17, 2020 13:47:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\MB 570-63658_1-A.134

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		31519.182		ppb				1.376		32483.558
9	Be	|		4.444	-0.001556	ppb	114.564	228.434				6.667
10	B	|		605.568	0.620425	ppb	9.990	30.526				393.339
27	Al	|		3809.398	-0.009251	ppb	4.968	340.888				3880.527
43	Ca-2	|		78.334	0.975799	ppb	16.064	77.778				61.667
49	Ti	|		173.334	-0.096074	ppb	20.078	54.085				238.891
52	Cr	|		9140.704	-0.239550	ppb	4.069	14.965				11315.592
55	Mn	|		641.126	0.009148	ppb	11.407	56.207				520.010
57	Fe	|		8171.225	-2.004867	ppb	1.350	17.657				8712.657
45	Sc-IS	>		1636851.156		ppb	0.764					1640877.000
66	Zn	|		837.802	0.207691	ppb	5.178	12.951				550.011
86	Sr	|		6.877	-0.015805	ppb	78.479	18.617				36.378
65	Cu	|		57.483	-0.001075	ppb	3.353	76.811				59.785
69	Ga-IS	|		467742.969		ppb	3.380					471472.863
95	Mo	|		88.889	0.028939	ppb	30.078	53.508				40.000
115	In-IS	>		249979.822		ppb	0.877					250982.454
111	Cd	|		4.258	0.001291	ppb	120.113	240.661				2.138
118	Sn	|		1418.960	-0.074700	ppb	6.794	25.226				1771.221
121	Sb	|		395.561	-0.108707	ppb	10.737	7.206				957.810
135	Ba	|		17.778	0.005953	ppb	39.031	103.150				11.111
165	Ho-IS	|		281503.299		ppb	0.910					276846.102
159	Tb-IS	|		256839.064		ppb	2.329					258234.809
207	Pb	|		132.222	0.002901	ppb	21.441	73.905				92.222
203	Tl	|		25.556	0.005046	ppb	41.929	50.193				4.444
209	Bi-IS	>		147613.223		ppb	1.098					147407.779
51	V	|		32.222	0.006614	ppb	51.030	339.651				26.667
59	Co	|		16.667	0.005249	ppb	52.915	90.969				6.667
60	Ni	|		24.444	0.007366	ppb	15.746	53.949				16.667
75	As	|		748.340	0.075889	ppb	4.140	68.403				691.308
71	Ga-ISK	>		127974.008		ppb	0.793					124774.800
82	Se-2	|		2.901	0.123331	ppb	34.619	17.091				-2.826
107	Ag-1	|		24.444	0.000399	ppb	31.492	463.959				22.222
115	In-ISK	|		111224.361		ppb	0.308					107244.070
45	Sc-ISK	>		305633.709		ppb	0.150					294476.521
23	Na	|		2251.844	-0.025018	ppb	1.118	202.961				2181.833
39	K	|		139441.692	-1.959332	ppb	0.543	28.745				136650.460
24	Mg	|		120.001	0.028308	ppb	22.048	162.841				100.000
159	Tb-ISK	|		203117.174		ppb	0.748					194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63658_2-A

Autosampler Position: 302

Sample Date/Time: Friday, April 17, 2020 13:49:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LCS 570-63658_2-A.135

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32248.583		ppb	1.002			32483.558
9	Be	|	158272.009	109.103683	ppb	1.240	1.579		6.667
10	B	|	35891.706	101.193892	ppb	1.678	1.522		393.339
27	Al	|	696457.865	103.224898	ppb	1.616	2.264		3880.527
43	Ca-2	|	94082.178	5333.398840	ppb	1.724	0.850		61.667
49	Ti	|	74979.588	108.536503	ppb	0.402	0.551		238.891
52	Cr	|	981691.687	106.150401	ppb	1.778	0.904		11315.592
55	Mn	|	1354802.759	99.607671	ppb	0.778	0.546		520.010
57	Fe	|	1346401.890	5059.488990	ppb	1.389	0.466		8712.657
45	Sc-IS	>	1668173.112		ppb	0.927			1640877.000
66	Zn	>	156472.405	109.959695	ppb	1.611	1.501		550.011
86	Sr	|	197577.280	104.260113	ppb	0.448	0.733		36.378
65	Cu	|	217715.931	106.276495	ppb	2.217	1.768		59.785
69	Ga-IS	|	506485.379		ppb	2.789			471472.863
95	Mo	|	182137.119	105.814527	ppb	0.835	0.096		40.000
115	In-IS	>	251320.426		ppb	1.434			250982.454
111	Cd	|	178685.314	109.131753	ppb	1.974	0.547		2.138
118	Sn	|	593425.375	127.222756	ppb	1.007	0.447		1771.221
121	Sb	|	543105.057	104.945084	ppb	1.619	0.207		957.810
135	Ba	|	119528.153	105.713283	ppb	2.414	1.305		11.111
165	Ho-IS	|	290292.698		ppb	1.912			276846.102
159	Tb-IS	|	266720.259		ppb	0.636			258234.809
207	Pb	|	1490646.792	105.152461	ppb	1.233	0.665		92.222
203	Tl	|	437140.263	102.093206	ppb	1.208	1.058		4.444
209	Bi-IS	>	151422.910		ppb	1.871			147407.779
51	V	|	79817.927	106.471078	ppb	0.864	0.443		26.667
59	Co	|	202997.900	104.226773	ppb	1.577	1.395		6.667
60	Ni	|	108852.051	105.098902	ppb	1.038	0.481		16.667
75	As	|	57505.160	106.083973	ppb	1.071	1.052		691.308
71	Ga-ISK	>	132522.968		ppb	0.559			124774.800
82	Se-2	>	5160.106	106.109153	ppb	2.128	2.324		-2.826
107	Ag-1	|	203327.936	48.160538	ppb	0.868	1.218		22.222
115	In-ISK	|	115157.953		ppb	0.900			107244.070
45	Sc-ISK	>	310838.786		ppb	0.746			294476.521
23	Na	|	520931.734	1008.654907	ppb	0.937	1.652		2181.833
39	K	|	1404984.193	1017.816509	ppb	0.877	0.731		136650.460
24	Mg	|	3131458.177	5378.860459	ppb	1.203	0.522		100.000
159	Tb-ISK	|	206877.846		ppb	0.139			194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63658_3-A

Autosampler Position: 303

Sample Date/Time: Friday, April 17, 2020 13:52:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LCSD 570-63658_3-A.136

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32067.063		ppb		0.908		32483.558
9	Be	|	158491.093	109.505343	ppb	1.296	1.923		6.667
10	B	|	35378.208	99.969005	ppb	1.981	2.637		393.339
27	Al	|	687980.861	102.191013	ppb	2.036	2.472		3880.527
43	Ca-2	|	93966.389	5339.204584	ppb	1.218	1.052		61.667
49	Ti	|	74102.822	107.510195	ppb	1.088	1.557		238.891
52	Cr	|	968087.001	104.909590	ppb	0.365	0.419		11315.592
55	Mn	|	2040906.941	150.762559	ppb	59.425	60.090		520.010
57	Fe	|	1319370.590	4968.469889	ppb	1.904	1.307		8712.657
45	Sc-IS	>	1664388.232		ppb	0.626			1640877.000
66	Zn	|	156125.409	109.957132	ppb	2.107	1.534		550.011
86	Sr	|	195316.527	103.297336	ppb	1.144	0.978		36.378
65	Cu	|	216257.146	105.803796	ppb	1.806	1.336		59.785
69	Ga-IS	|	499714.881		ppb	1.783			471472.863
95	Mo	|	181257.496	105.539866	ppb	2.309	2.064		40.000
115	In-IS	>	252616.294		ppb	1.228			250982.454
111	Cd	|	180573.828	109.744540	ppb	0.956	2.179		2.138
118	Sn	|	600003.680	127.970659	ppb	1.414	0.784		1771.221
121	Sb	|	552316.866	106.181336	ppb	1.417	0.650		957.810
135	Ba	|	119843.135	105.439143	ppb	3.153	1.985		11.111
165	Ho-IS	|	287809.422		ppb	1.148			276846.102
159	Tb-IS	|	265421.098		ppb	1.420			258234.809
207	Pb	|	1504055.017	106.014615	ppb	0.704	0.866		92.222
203	Tl	|	437131.678	102.006965	ppb	0.408	0.268		4.444
209	Bi-IS	>	151533.917		ppb	0.675			147407.779
51	V	|	78239.309	105.319144	ppb	2.514	3.242		26.667
59	Co	|	200154.914	103.702847	ppb	1.739	2.477		6.667
60	Ni	|	109947.054	107.116447	ppb	0.999	1.409		16.667
75	As	|	57102.061	106.287188	ppb	1.193	0.918		691.308
71	Ga-ISK	>	131344.390		ppb	0.750			124774.800
82	Se-2	|	5195.781	107.790977	ppb	2.461	2.008		-2.826
107	Ag-1	|	200960.382	48.027458	ppb	1.094	1.433		22.222
115	In-ISK	|	111766.275		ppb	1.543			107244.070
45	Sc-ISK	>	309595.555		ppb	0.746			294476.521
23	Na	|	525821.443	1022.257219	ppb	1.214	1.707		2181.833
39	K	|	1394616.816	1014.003244	ppb	0.309	0.926		136650.460
24	Mg	|	3141534.419	5418.390930	ppb	1.434	1.989		100.000
159	Tb-ISK	|	206668.861		ppb	0.307			194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25672-D-1-A

Autosampler Position: 304

Sample Date/Time: Friday, April 17, 2020 13:55:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25672-D-1-A.137

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		38890.644		ppb		0.630		32483.558
9	Be	|		36.667	0.019162	ppb	32.778	41.192		6.667
10	B	|		30787.587	81.583589	ppb	1.093	0.810		393.339
27	Al	|		1582450.430	221.674543	ppb	1.360	0.941		3880.527
43	Ca-2	|		654656.877	34994.241198	ppb	2.169	1.801		61.667
49	Ti	|		3577.114	4.542993	ppb	0.652	1.199		238.891
52	Cr	|		22355.263	1.046344	ppb	2.555	4.802		11315.592
55	Mn	|		564463.629	39.085981	ppb	1.869	1.823		520.010
57	Fe	|		153451.161	513.532060	ppb	2.352	2.433		8712.657
45	Sc-IS	>		1770122.439		ppb	0.493			1640877.000
66	Zn	|		387019.539	256.828774	ppb	2.843	2.758		550.011
86	Sr	|		872302.340	433.833025	ppb	1.667	1.410		36.378
65	Cu	|		34633.376	15.908633	ppb	2.884	3.173		59.785
69	Ga-IS	|		489077.690		ppb	2.516			471472.863
95	Mo	|		3338.168	1.804540	ppb	2.298	2.686		40.000
115	In-IS	>		247250.473		ppb	0.630			250982.454
111	Cd	|		340.772	0.210342	ppb	8.912	9.567		2.138
118	Sn	|		4250.634	0.547881	ppb	5.752	10.703		1771.221
121	Sb	|		12526.616	2.279808	ppb	6.365	7.517		957.810
135	Ba	|		61527.883	55.320716	ppb	3.588	4.176		11.111
165	Ho-IS	|		298511.023		ppb	0.296			276846.102
159	Tb-IS	|		274265.686		ppb	1.034			258234.809
207	Pb	|		96215.283	6.985595	ppb	0.267	0.720		92.222
203	Tl	|		150.001	0.035002	ppb	11.759	11.426		4.444
209	Bi-IS	>		146985.679		ppb	0.989			147407.779
51	V	|		1644.539	2.170708	ppb	4.799	3.259		26.667
59	Co	|		1124.489	0.577220	ppb	6.402	4.119		6.667
60	Ni	|		2007.919	1.935691	ppb	1.080	3.004		16.667
75	As	|		1082.555	0.666214	ppb	4.698	20.227		691.308
71	Ga-ISK	>		131647.348		ppb	2.300			124774.800
82	Se-2	|		38.476	0.859507	ppb	13.152	14.308		-2.826
107	Ag-1	|		142.223	0.028256	ppb	15.249	15.585		22.222
115	In-ISK	|		112394.567		ppb	1.623			107244.070
45	Sc-ISK	>		319696.553		ppb	0.428			294476.521
23	Na	|		30563960.424	57787.228558	ppb	0.837	1.012		2181.833
39	K	|		4893807.302	3724.988109	ppb	0.913	1.177		136650.460
24	Mg	|		8894943.407	14855.774499	ppb	0.998	0.572		100.000
159	Tb-ISK	|		208316.734		ppb	1.443			194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25672-D-1-B MS

Autosampler Position: 305

Sample Date/Time: Friday, April 17, 2020 13:58:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25672-D-1-B MS.138

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		39037.727		ppb		2.181		32483.558
9	Be	|		162052.931	104.512367	ppb	1.194	0.770		6.667
10	B	|		66395.093	175.972934	ppb	2.193	1.837		393.339
27	Al	|		2254288.750	313.795285	ppb	1.870	2.311		3880.527
43	Ca-2	|		759223.841	40293.773024	ppb	1.554	1.181		61.667
49	Ti	|		61119.376	82.690432	ppb	1.564	1.132		238.891
52	Cr	|		936050.031	94.570950	ppb	0.596	0.515		11315.592
55	Mn	|		1845603.773	126.965486	ppb	1.288	0.894		520.010
57	Fe	|		1434512.392	5043.685214	ppb	1.225	1.043		8712.657
45	Sc-IS	>		1782909.888		ppb	0.441			1640877.000
66	Zn	|		528016.879	348.014779	ppb	1.525	1.109		550.011
86	Sr	|		1026277.515	506.733984	ppb	2.394	1.953		36.378
65	Cu	|		238692.168	109.017819	ppb	1.775	1.357		59.785
69	Ga-IS	|		505301.805		ppb	0.995			471472.863
95	Mo	|		165450.476	89.928034	ppb	1.434	1.023		40.000
115	In-IS	>		244905.336		ppb	1.021			250982.454
111	Cd	|		166138.388	104.126720	ppb	1.901	1.040		2.138
118	Sn	|		139184.031	30.328605	ppb	3.006	2.616		1771.221
121	Sb	|		409698.351	81.196381	ppb	2.372	1.832		957.810
135	Ba	|		179544.189	162.961022	ppb	3.185	2.796		11.111
165	Ho-IS	|		303135.850		ppb	2.399			276846.102
159	Tb-IS	|		280174.679		ppb	1.837			258234.809
207	Pb	|		1517465.018	109.475901	ppb	0.290	0.705		92.222
203	Tl	|		421457.064	100.672485	ppb	1.150	2.093		4.444
209	Bi-IS	>		148054.404		ppb	0.936			147407.779
51	V	|		77498.561	104.095147	ppb	1.475	2.272		26.667
59	Co	|		193798.051	100.190390	ppb	1.389	1.893		6.667
60	Ni	|		105090.755	102.157779	ppb	1.698	1.152		16.667
75	As	|		57964.927	107.682724	ppb	0.861	0.725		691.308
71	Ga-ISK	>		131626.995		ppb	1.054			124774.800
82	Se-2	|		5248.153	108.648785	ppb	1.096	0.389		-2.826
107	Ag-1	|		206505.465	49.245150	ppb	1.709	1.488		22.222
115	In-ISK	|		112476.582		ppb	1.656			107244.070
45	Sc-ISK	>		319635.824		ppb	1.678			294476.521
23	Na	|		31220220.963	59044.399221	ppb	1.470	1.544		2181.833
39	K	|		6171000.800	4728.959819	ppb	0.938	1.386		136650.460
24	Mg	|		12090504.633	20199.506562	ppb	1.011	1.364		100.000
159	Tb-ISK	|		210624.898		ppb	1.500			194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25672-D-1-C MSD

Autosampler Position: 306

Sample Date/Time: Friday, April 17, 2020 14:00:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25672-D-1-C MSD.139

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	39898.995		ppb		2.413		32483.558
9	Be	|	165531.317	104.884737	ppb	0.815	1.717		6.667
10	B	|	67158.680	174.840230	ppb	2.742	2.006		393.339
27	Al	|	2241716.175	306.602488	ppb	2.938	4.208		3880.527
43	Ca-2	|	766593.816	39966.136551	ppb	1.526	0.324		61.667
49	Ti	|	60559.200	80.491834	ppb	0.337	1.937		238.891
52	Cr	|	938116.244	93.099096	ppb	0.753	1.888		11315.592
55	Mn	|	1857376.586	125.534408	ppb	0.703	1.556		520.010
57	Fe	|	1443743.917	4986.788813	ppb	0.252	1.629		8712.657
45	Sc-IS	>	1815042.098		ppb	1.590			1640877.000
66	Zn	|	530684.555	343.581802	ppb	1.715	0.135		550.011
86	Sr	|	1043232.391	506.064587	ppb	0.698	0.930		36.378
65	Cu	|	239722.982	107.563773	ppb	0.753	0.883		59.785
69	Ga-IS	|	506163.844		ppb	1.071			471472.863
95	Mo	|	167057.926	89.199390	ppb	1.509	0.840		40.000
115	In-IS	>	250078.437		ppb	0.268			250982.454
111	Cd	|	167487.357	102.803226	ppb	1.852	1.614		2.138
118	Sn	|	139210.591	29.700788	ppb	0.931	1.060		1771.221
121	Sb	|	420280.455	81.575078	ppb	0.359	0.322		957.810
135	Ba	|	182062.206	161.828917	ppb	2.643	2.384		11.111
165	Ho-IS	|	308312.936		ppb	1.281			276846.102
159	Tb-IS	|	283159.961		ppb	0.756			258234.809
207	Pb	|	1536628.071	108.624535	ppb	1.653	0.776		92.222
203	Tl	|	431512.990	101.000329	ppb	1.211	1.680		4.444
209	Bi-IS	>	151088.163		ppb	1.114			147407.779
51	V	|	78458.248	106.097230	ppb	1.968	2.829		26.667
59	Co	|	195471.921	101.741912	ppb	2.002	2.772		6.667
60	Ni	|	105267.562	103.019674	ppb	1.090	0.390		16.667
75	As	|	57994.203	108.476453	ppb	0.657	1.261		691.308
71	Ga-ISK	>	130750.129		ppb	1.280			124774.800
82	Se-2	|	5247.782	109.375535	ppb	1.631	1.674		-2.826
107	Ag-1	|	209012.524	50.176759	ppb	1.290	0.165		22.222
115	In-ISK	|	113800.909		ppb	1.680			107244.070
45	Sc-ISK	>	320317.007		ppb	0.833			294476.521
23	Na	|	31528291.802	59497.028401	ppb	1.877	2.070		2181.833
39	K	|	6241269.919	4773.676628	ppb	1.415	2.255		136650.460
24	Mg	|	12205004.538	20346.639966	ppb	0.689	1.508		100.000
159	Tb-ISK	|	209950.931		ppb	0.849			194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25672-D-2-A

Autosampler Position: 307

Sample Date/Time: Friday, April 17, 2020 14:03:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25672-D-2-A.140

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		42149.873		ppb		1.129		32483.558
9	Be	|		41.111	0.020624	ppb	16.878	21.191		6.667
10	B	|		33321.038	83.619583	ppb	0.701	0.894		393.339
27	Al	|		1413607.206	187.387201	ppb	2.100	2.369		3880.527
43	Ca-2	|		696290.379	35237.540035	ppb	0.586	0.906		61.667
49	Ti	|		3480.424	4.156538	ppb	3.083	3.305		238.891
52	Cr	|		21333.696	0.823820	ppb	1.016	2.026		11315.592
55	Mn	|		572942.173	37.555754	ppb	1.213	0.938		520.010
57	Fe	|		144951.683	455.682654	ppb	0.471	0.044		8712.657
45	Sc-IS	>		1869814.624		ppb	0.458			1640877.000
66	Zn	|		387736.848	243.567332	ppb	1.689	1.599		550.011
86	Sr	|		855082.443	402.596149	ppb	0.842	0.391		36.378
65	Cu	|		34177.437	14.859599	ppb	2.612	2.701		59.785
69	Ga-IS	|		487338.469		ppb	2.463			471472.863
95	Mo	|		4173.943	2.140170	ppb	2.283	2.036		40.000
115	In-IS	>		249282.185		ppb	1.554			250982.454
111	Cd	|		365.684	0.224023	ppb	6.021	7.314		2.138
118	Sn	|		3452.640	0.367571	ppb	5.075	13.270		1771.221
121	Sb	|		17125.820	3.158065	ppb	2.710	4.483		957.810
135	Ba	|		62586.858	55.827422	ppb	2.536	3.995		11.111
165	Ho-IS	|		307289.010		ppb	1.297			276846.102
159	Tb-IS	|		283957.730		ppb	0.517			258234.809
207	Pb	|		100415.861	7.022774	ppb	0.317	0.508		92.222
203	Tl	|		153.334	0.034465	ppb	5.752	5.644		4.444
209	Bi-IS	>		152588.397		ppb	0.816			147407.779
51	V	|		1625.648	2.140306	ppb	5.226	5.763		26.667
59	Co	|		1112.266	0.569512	ppb	7.095	6.377		6.667
60	Ni	|		2071.261	1.990853	ppb	2.700	2.508		16.667
75	As	|		1201.155	0.880938	ppb	3.855	8.265		691.308
71	Ga-ISK	>		132009.365		ppb	0.734			124774.800
82	Se-2	|		30.828	0.698371	ppb	42.280	38.916		-2.826
107	Ag-1	|		182.223	0.037749	ppb	10.402	12.204		22.222
115	In-ISK	|		113409.438		ppb	0.642			107244.070
45	Sc-ISK	>		322504.488		ppb	1.231			294476.521
23	Na	|		31925576.455	59838.956331	ppb	1.397	1.526		2181.833
39	K	|		5016282.464	3786.926426	ppb	0.801	0.672		136650.460
24	Mg	|		9270189.542	15348.832992	ppb	0.718	0.867		100.000
159	Tb-ISK	|		210117.290		ppb	0.351			194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25680-A-1-A

Autosampler Position: 308

Sample Date/Time: Friday, April 17, 2020 14:06:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25680-A-1-A.141

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		35088.603		ppb		1.696		32483.558
9	Be	|		37.778	0.020094	ppb	33.405	41.222		6.667
10	B	|		3443.748	8.195895	ppb	1.867	1.836		393.339
27	Al	|		3456419.558	489.235379	ppb	2.943	2.729		3880.527
43	Ca-2	|		186274.954	10044.419769	ppb	0.746	0.485		61.667
49	Ti	|		11742.605	15.862692	ppb	3.097	3.309		238.891
52	Cr	|		37228.457	2.614681	ppb	1.861	2.959		11315.592
55	Mn	|		457604.359	31.964745	ppb	1.335	1.544		520.010
57	Fe	|		196398.804	672.948698	ppb	1.527	1.877		8712.657
45	Sc-IS	>		1754364.788		ppb	0.268			1640877.000
66	Zn	|		320035.925	214.227409	ppb	1.894	2.066		550.011
86	Sr	|		200048.046	100.373682	ppb	0.207	0.472		36.378
65	Cu	|		73788.367	34.231323	ppb	0.873	1.144		59.785
69	Ga-IS	|		491984.959		ppb	1.426			471472.863
95	Mo	|		1681.210	0.905311	ppb	0.998	1.114		40.000
115	In-IS	>		252113.243		ppb	0.285			250982.454
111	Cd	|		397.586	0.240770	ppb	2.565	2.584		2.138
118	Sn	|		4088.363	0.494938	ppb	2.172	3.544		1771.221
121	Sb	|		16591.865	3.016323	ppb	4.555	5.121		957.810
135	Ba	|		59616.408	52.561583	ppb	2.485	2.765		11.111
165	Ho-IS	|		292951.334		ppb	1.293			276846.102
159	Tb-IS	|		273938.293		ppb	0.740			258234.809
207	Pb	|		161434.039	11.014759	ppb	1.477	1.188		92.222
203	Tl	|		51.111	0.010440	ppb	38.214	40.022		4.444
209	Bi-IS	>		156471.372		ppb	2.045			147407.779
51	V	|		1316.727	1.688565	ppb	4.183	4.161		26.667
59	Co	|		8011.135	4.038274	ppb	0.838	1.637		6.667
60	Ni	|		2751.376	2.593006	ppb	3.938	3.084		16.667
75	As	|		1039.033	0.535151	ppb	3.207	5.096		691.308
71	Ga-ISK	>		134892.920		ppb	1.955			124774.800
82	Se-2	|		14.187	0.349367	ppb	31.654	27.658		-2.826
107	Ag-1	|		63.333	0.009185	ppb	18.977	33.263		22.222
115	In-ISK	|		116325.622		ppb	2.482			107244.070
45	Sc-ISK	>		319708.210		ppb	1.198			294476.521
23	Na	|		1337467.933	2524.226063	ppb	2.282	1.600		2181.833
39	K	|		935994.198	618.263789	ppb	0.537	0.783		136650.460
24	Mg	|		366941.698	612.674106	ppb	1.290	1.049		100.000
159	Tb-ISK	|		211667.370		ppb	1.116			194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25135-A-1-A

Autosampler Position: 309

Sample Date/Time: Friday, April 17, 2020 14:09:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25135-A-1-A.142

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	38577.579		ppb	1.302			32483.558
9	Be	|	84.445	0.048778	ppb	29.097	31.441		6.667
10	B	|	227932.300	595.824703	ppb	2.163	0.635		393.339
27	Al	|	9669760.391	1324.106556	ppb	2.975	4.854		3880.527
43	Ca-2	|	548610.399	28580.490370	ppb	3.119	0.859		61.667
49	Ti	|	6996.158	8.979169	ppb	2.695	0.410		238.891
52	Cr	|	63905.983	5.165269	ppb	1.758	1.972		11315.592
55	Mn	|	3888573.017	262.700601	ppb	1.583	0.798		520.010
57	Fe	|	851192.378	2924.017369	ppb	2.903	1.432		8712.657
45	Sc-IS	>	1816083.711		ppb	2.332			1640877.000
66	Zn	|	718462.837	465.090215	ppb	2.327	1.907		550.011
86	Sr	|	191525.905	92.842258	ppb	1.636	1.150		36.378
65	Cu	|	26358.101	11.791612	ppb	3.223	1.605		59.785
69	Ga-IS	|	497970.050		ppb	2.322			471472.863
95	Mo	|	6658.218	3.532546	ppb	2.244	4.396		40.000
115	In-IS	>	255085.529		ppb	0.912			250982.454
111	Cd	|	1681.674	1.010563	ppb	3.679	3.049		2.138
118	Sn	|	2792.495	0.210215	ppb	1.590	3.377		1771.221
121	Sb	|	6225.803	1.001722	ppb	5.188	6.026		957.810
135	Ba	|	83929.289	73.139439	ppb	2.864	3.016		11.111
165	Ho-IS	|	304883.863		ppb	2.658			276846.102
159	Tb-IS	|	283873.700		ppb	2.338			258234.809
207	Pb	|	1436862.466	98.000958	ppb	0.215	0.952		92.222
203	Tl	|	51.111	0.010478	ppb	3.765	5.189		4.444
209	Bi-IS	>	156608.250		ppb	1.112			147407.779
51	V	|	4085.029	5.500900	ppb	4.890	3.861		26.667
59	Co	|	6798.284	3.543852	ppb	2.057	1.261		6.667
60	Ni	|	22274.018	21.845020	ppb	0.717	0.717		16.667
75	As	|	1604.786	1.675481	ppb	2.203	2.162		691.308
71	Ga-ISK	>	130393.545		ppb	1.138			124774.800
82	Se-2	|	26.830	0.622134	ppb	3.699	3.629		-2.826
107	Ag-1	|	43.333	0.004822	ppb	26.647	54.853		22.222
115	In-ISK	|	114789.947		ppb	1.181			107244.070
45	Sc-ISK	>	315895.665		ppb	0.650			294476.521
23	Na	|	15846668.309	30316.653359	ppb	2.533	1.886		2181.833
39	K	|	9038645.491	7063.582526	ppb	1.200	0.658		136650.460
24	Mg	|	3942580.008	6663.941800	ppb	0.862	0.761		100.000
159	Tb-ISK	|	209094.435		ppb	0.124			194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 14:11:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.143

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34679.822		ppb		0.737		32483.558
9	Be	|	155537.721	101.327581	ppb		0.744	0.985	6.667
10	B	|	95206.196	255.404583	ppb		0.335	0.050	393.339
27	Al	|	658337.224	92.148582	ppb		1.763	2.054	3880.527
43	Ca-2	|	96843.877	5188.664339	ppb		1.708	1.634	61.667
49	Ti	|	71129.985	97.271688	ppb		0.909	0.915	238.891
52	Cr	|	931545.896	95.073275	ppb		0.492	0.516	11315.592
55	Mn	|	1325388.445	92.089912	ppb		0.804	0.596	520.010
57	Fe	|	1301847.539	4620.672707	ppb		0.964	0.707	8712.657
45	Sc-IS	>	1765078.631		ppb		0.287		1640877.000
66	Zn	|	145506.250	96.588588	ppb		1.383	1.180	550.011
86	Sr	|	187709.700	93.608131	ppb		1.923	1.816	36.378
65	Cu	|	207165.562	95.572842	ppb		1.665	1.480	59.785
69	Ga-IS	|	503615.108		ppb		1.171		471472.863
95	Mo	|	169038.681	92.809824	ppb		0.634	0.567	40.000
115	In-IS	>	256342.741		ppb		0.836		250982.454
111	Cd	|	169016.611	101.206976	ppb		1.465	0.872	2.138
118	Sn	|	472380.906	99.203059	ppb		0.499	0.594	1771.221
121	Sb	|	521239.686	98.741050	ppb		1.210	1.363	957.810
135	Ba	|	117909.196	102.254523	ppb		2.246	2.666	11.111
165	Ho-IS	|	305166.171		ppb		0.622		276846.102
159	Tb-IS	|	281672.244		ppb		1.194		258234.809
207	Pb	|	1474707.920	100.801129	ppb		0.556	1.212	92.222
203	Tl	|	442996.950	100.271625	ppb		2.187	3.564	4.444
209	Bi-IS	>	156273.541		ppb		1.383		147407.779
51	V	|	75958.074	101.889048	ppb		0.668	1.304	26.667
59	Co	|	194730.445	100.548981	ppb		0.318	1.798	6.667
60	Ni	|	105551.938	102.468025	ppb		1.945	0.310	16.667
75	As	|	54084.860	100.240378	ppb		2.040	0.434	691.308
71	Ga-ISK	>	131801.994		ppb		1.637		124774.800
82	Se-2	|	5021.708	103.826258	ppb		2.064	1.358	-2.826
107	Ag-1	|	430806.132	102.615443	ppb		0.638	1.257	22.222
115	In-ISK	|	115471.264		ppb		0.633		107244.070
45	Sc-ISK	>	317065.011		ppb		1.662		294476.521
23	Na	|	2829998.800	5390.839998	ppb		1.818	0.176	2181.833
39	K	|	6932019.111	5369.871775	ppb		1.781	0.128	136650.460
24	Mg	|	3228105.609	5437.085785	ppb		0.162	1.648	100.000
159	Tb-ISK	|	209160.068		ppb		0.421		194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 14:14:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.144

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33053.755		ppb	1.300		32483.558
9	Be	15.556	0.005796	ppb	24.744	45.556	6.667
10	B	1068.929	1.834567	ppb	12.287	20.942	393.339
27	Al	3770.498	-0.039613	ppb	4.835	78.256	3880.527
43	Ca-2	60.000	-0.238677	ppb	14.434	188.079	61.667
49	Ti	200.001	-0.069281	ppb	10.138	43.136	238.891
52	Cr	9820.041	-0.210567	ppb	1.122	3.052	11315.592
55	Mn	601.124	0.004260	ppb	8.023	86.499	520.010
57	Fe	8913.893	-0.611869	ppb	3.239	178.724	8712.657
45	Sc-IS	> 1710070.438		ppb	0.849		1640877.000
66	Zn	574.456	0.000805	ppb	6.205	2849.454	550.011
86	Sr	39.711	0.000881	ppb	66.127	1525.238	36.378
65	Cu	119.491	0.027265	ppb	7.395	17.100	59.785
69	Ga-IS	469860.941		ppb	2.195		471472.863
95	Mo	487.786	0.252941	ppb	15.826	17.607	40.000
115	In-IS	> 245506.024		ppb	1.505		250982.454
111	Cd	12.309	0.006370	ppb	26.741	30.458	2.138
118	Sn	3566.002	0.403491	ppb	7.815	14.696	1771.221
121	Sb	2016.810	0.213859	ppb	8.591	14.775	957.810
135	Ba	21.111	0.009240	ppb	24.119	46.999	11.111
165	Ho-IS	287507.328		ppb	2.083		276846.102
159	Tb-IS	266126.460		ppb	1.799		258234.809
207	Pb	504.448	0.029197	ppb	7.884	6.829	92.222
203	Tl	81.111	0.018047	ppb	37.290	39.868	4.444
209	Bi-IS	> 150052.015		ppb	2.441		147407.779
51	V	27.778	0.000263	ppb	6.928	927.385	26.667
59	Co	15.556	0.004593	ppb	65.465	118.706	6.667
60	Ni	34.444	0.017093	ppb	14.783	31.271	16.667
75	As	727.425	0.023754	ppb	4.893	270.118	691.308
71	Ga-ISK	> 129050.294		ppb	0.824		124774.800
82	Se-2	2.862	0.121742	ppb	106.481	52.520	-2.826
107	Ag-1	491.120	0.113881	ppb	0.392	0.822	22.222
115	In-ISK	112770.074		ppb	1.634		107244.070
45	Sc-ISK	> 306134.255		ppb	0.115		294476.521
23	Na	3970.552	3.361385	ppb	4.310	10.016	2181.833
39	K	142438.822	0.310093	ppb	0.542	171.290	136650.460
24	Mg	398.339	0.513419	ppb	12.573	16.941	100.000
159	Tb-ISK	203548.530		ppb	0.120		194610.708

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Friday, April 17, 2020 14:23:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICIS-23447.146

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32280.895		ppb		2.863		
52	Cr	|		10150.272		ppb		1.662		
57	Fe	|		8870.531		ppb		1.265		
45	Sc-IS	|>		1731437.868		ppb		1.280		
69	Ga-IS	|		487303.188		ppb		0.615		
115	In-IS	|>		239160.809		ppb		0.909		
165	Ho-IS	|		294929.426		ppb		1.684		
159	Tb-IS	|		278786.595		ppb		1.489		
209	Bi-IS	|>		145900.155		ppb		0.489		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Friday, April 17, 2020 14:24:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\IC-210761.147

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	32998.079		ppb	2.237			32280.895
52	Cr	|	1810014.719	200.000000	ppb	0.677	0.669		10150.272
57	Fe	|	2762886.062	10200.000000	ppb	0.814	0.587		8870.531
45	Sc-IS	|>	1744003.603		ppb	1.239			1731437.868
69	Ga-IS	|	530558.313		ppb	0.489			487303.188
115	In-IS	|>	238727.220		ppb	1.076			239160.809
165	Ho-IS	|	297990.417		ppb	0.747			294929.426
159	Tb-IS	|	284601.541		ppb	0.828			278786.595
209	Bi-IS	|>	143610.535		ppb	1.323			145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 14:26:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.148

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	32240.793		ppb	1.808			32280.895
52	Cr	|	917647.777	101.007339	ppb	1.362	0.917		10150.272
57	Fe	|	1296898.010	4778.712706	ppb	1.325	1.633		8870.531
45	Sc-IS	|>	1740991.076		ppb	0.936			1731437.868
69	Ga-IS	|	510767.456		ppb	0.639			487303.188
115	In-IS	|>	238303.989		ppb	0.407			239160.809
165	Ho-IS	|	304228.172		ppb	1.780			294929.426
159	Tb-IS	|	285218.235		ppb	1.183			278786.595
209	Bi-IS	|>	146241.523		ppb	1.675			145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 14:27:14

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.149

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		31542.568		ppb		1.588		32280.895
52	Cr	|		9028.408	-0.098850	ppb		2.197	33.824	10150.272
57	Fe	|		8296.854	-1.330708	ppb		1.794	17.710	8870.531
45	Sc-IS	|>		1687250.081		ppb		1.245		1731437.868
69	Ga-IS	|		487488.756		ppb		1.157		487303.188
115	In-IS	|>		237281.321		ppb		1.842		239160.809
165	Ho-IS	|		299244.072		ppb		2.535		294929.426
159	Tb-IS	|		280069.809		ppb		2.477		278786.595
209	Bi-IS	|>		144624.145		ppb		2.096		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Friday, April 17, 2020 14:28:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICSA-30518.150

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32729.672		ppb		0.123		32280.895
52	Cr	|		11457.930	0.082694	ppb		3.297	61.377	10150.272
57	Fe	|		6711685.013	23757.540959	ppb		0.566	1.230	8870.531
45	Sc-IS	|>		1822333.106		ppb		0.887		1731437.868
69	Ga-IS	|		488863.139		ppb		0.880		487303.188
115	In-IS	|>		239875.624		ppb		0.747		239160.809
165	Ho-IS	|		309767.582		ppb		1.798		294929.426
159	Tb-IS	|		292343.788		ppb		1.748		278786.595
209	Bi-IS	|>		144954.260		ppb		2.650		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Friday, April 17, 2020 14:29:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICSAB-30517.151

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	32191.787		ppb	0.759			32280.895
52	Cr	|	187602.889	18.580833	ppb	1.638	1.477		10150.272
57	Fe	|	6784760.524	23735.446550	ppb	0.473	1.188		8870.531
45	Sc-IS	|>	1843966.115		ppb	1.443			1731437.868
69	Ga-IS	|	498468.799		ppb	0.761			487303.188
115	In-IS	|>	242333.739		ppb	0.808			239160.809
165	Ho-IS	|	315324.373		ppb	0.690			294929.426
159	Tb-IS	|	300561.197		ppb	0.675			278786.595
209	Bi-IS	|>	146792.572		ppb	0.671			145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, April 17, 2020 14:30:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICVL-210771.152

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		31757.484		ppb		1.015		32280.895
52	Cr	|		18008.010	0.854594	ppb		0.637	1.938	10150.272
57	Fe	|		21227.983	45.123439	ppb		0.603	1.956	8870.531
45	Sc-IS	|>		1753121.791		ppb		0.658		1731437.868
69	Ga-IS	|		501103.327		ppb		1.036		487303.188
115	In-IS	|>		244245.319		ppb		2.456		239160.809
165	Ho-IS	|		304545.648		ppb		1.328		294929.426
159	Tb-IS	|		286922.747		ppb		0.410		278786.595
209	Bi-IS	|>		151548.512		ppb		0.638		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63664_1-A

Autosampler Position: 415

Sample Date/Time: Friday, April 17, 2020 14:31:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\MB 570-63664_1-A.153

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32418.972		ppb		1.667		32280.895
52	Cr	|		9006.172	-0.135760	ppb		1.412	9.813	10150.272
57	Fe	|		7702.076	-4.578135	ppb		0.568	4.753	8870.531
45	Sc-IS	|>		1744782.208		ppb		0.552		1731437.868
69	Ga-IS	|		493611.586		ppb		1.882		487303.188
115	In-IS	|>		243386.026		ppb		1.102		239160.809
165	Ho-IS	|		302884.305		ppb		1.485		294929.426
159	Tb-IS	|		286998.723		ppb		0.564		278786.595
209	Bi-IS	|>		150185.406		ppb		1.288		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63664_2-A

Autosampler Position: 416

Sample Date/Time: Friday, April 17, 2020 14:33:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LCS 570-63664_2-A.154

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	32808.755		ppb	2.226			32280.895
52	Cr	|	941153.935	101.903907	ppb	0.570	0.908		10150.272
57	Fe	|	1359344.786	4927.233623	ppb	1.025	1.096		8870.531
45	Sc-IS	|>	1770110.812		ppb	0.612			1731437.868
69	Ga-IS	|	529791.301		ppb	1.769			487303.188
115	In-IS	|>	246046.600		ppb	0.679			239160.809
165	Ho-IS	|	306029.872		ppb	0.452			294929.426
159	Tb-IS	|	290764.832		ppb	0.455			278786.595
209	Bi-IS	|>	150135.219		ppb	2.856			145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63664_3-A

Autosampler Position: 417

Sample Date/Time: Friday, April 17, 2020 14:34:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LCSD 570-63664_3-A.155

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32149.471		ppb		1.151		32280.895
52	Cr	|		942610.872	102.450142	ppb		0.506	1.059	10150.272
57	Fe	|		1365509.359	4967.996467	ppb		1.637	0.859	8870.531
45	Sc-IS	|>		1763564.824		ppb		1.039		1731437.868
69	Ga-IS	|		523960.557		ppb		0.849		487303.188
115	In-IS	|>		242346.446		ppb		1.208		239160.809
165	Ho-IS	|		304783.794		ppb		0.934		294929.426
159	Tb-IS	|		287717.413		ppb		0.584		278786.595
209	Bi-IS	|>		149036.936		ppb		2.058		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-I-2-A SD @5

Autosampler Position: 418

Sample Date/Time: Friday, April 17, 2020 14:35:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-I-2-A SD @5.156

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32835.495		ppb		3.158		32280.895
52	Cr	|		32848.841	2.443762	ppb		1.642	1.812	10150.272
57	Fe	|		26336.534	62.540132	ppb		5.998	7.618	8870.531
45	Sc-IS	|>		1778242.008		ppb		1.078		1731437.868
69	Ga-IS	|		500432.836		ppb		1.188		487303.188
115	In-IS	|>		240960.076		ppb		2.032		239160.809
165	Ho-IS	|		303995.987		ppb		0.205		294929.426
159	Tb-IS	|		286265.574		ppb		1.253		278786.595
209	Bi-IS	|>		147401.040		ppb		1.012		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-I-2-A

Autosampler Position: 419

Sample Date/Time: Friday, April 17, 2020 14:36:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-I-2-A.157

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		32868.903		ppb		3.013		32280.895
52	Cr	|		114821.819	11.094420	ppb		0.283	1.296	10150.272
57	Fe	|		87379.772	277.105660	ppb		1.075	0.486	8870.531
45	Sc-IS	|>		1819547.965		ppb		1.459		1731437.868
69	Ga-IS	|		519901.483		ppb		0.483		487303.188
115	In-IS	|>		229842.428		ppb		2.367		239160.809
165	Ho-IS	|		298244.002		ppb		1.878		294929.426
159	Tb-IS	|		284343.332		ppb		1.313		278786.595
209	Bi-IS	|>		134357.857		ppb		1.587		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-H-2-A MS

Autosampler Position: 420

Sample Date/Time: Friday, April 17, 2020 14:37:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-H-2-A MS.158

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		33440.205		ppb		0.646		32280.895
52	Cr	|		1010679.067	104.019822	ppb		0.754	1.739	10150.272
57	Fe	|		1359953.280	4682.906191	ppb		0.409	1.352	8870.531
45	Sc-IS	|>		1862782.977		ppb		1.003		1731437.868
69	Ga-IS	|		540995.568		ppb		0.236		487303.188
115	In-IS	|>		233211.894		ppb		0.143		239160.809
165	Ho-IS	|		306078.678		ppb		0.448		294929.426
159	Tb-IS	|		289360.151		ppb		0.789		278786.595
209	Bi-IS	|>		138970.542		ppb		1.406		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-H-2-B MSD

Autosampler Position: 421

Sample Date/Time: Friday, April 17, 2020 14:38:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-H-2-B MSD.159

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		33355.570		ppb		1.728		32280.895
52	Cr	|		1010594.382	104.152194	ppb		0.029	0.974	10150.272
57	Fe	|		1353194.416	4665.767703	ppb		0.680	0.787	8870.531
45	Sc-IS	|>		1860186.503		ppb		0.945		1731437.868
69	Ga-IS	|		541820.271		ppb		2.237		487303.188
115	In-IS	|>		235462.768		ppb		2.277		239160.809
165	Ho-IS	|		305744.438		ppb		1.719		294929.426
159	Tb-IS	|		290482.491		ppb		0.347		278786.595
209	Bi-IS	|>		139273.419		ppb		0.909		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-I-2-A PDS

Autosampler Position: 422

Sample Date/Time: Friday, April 17, 2020 14:40:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-I-2-A PDS.160

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		33717.533		ppb		2.092		32280.895
52	Cr	|		1026688.998	106.062618	ppb		1.006	0.855	10150.272
57	Fe	|		1412466.404	4882.429480	ppb		0.875	0.708	8870.531
45	Sc-IS	|>		1856143.975		ppb		1.522		1731437.868
69	Ga-IS	|		539037.547		ppb		1.008		487303.188
115	In-IS	|>		231521.924		ppb		3.259		239160.809
165	Ho-IS	|		304260.736		ppb		1.239		294929.426
159	Tb-IS	|		292550.995		ppb		1.218		278786.595
209	Bi-IS	|>		138173.921		ppb		0.780		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-I-2-A PSDS

Autosampler Position: 423

Sample Date/Time: Friday, April 17, 2020 14:41:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-I-2-A PSDS.161

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		33928.029		ppb	1.900			32280.895
52	Cr	|		1025907.463	105.944935	ppb	0.535	0.617		10150.272
57	Fe	|		1412470.680	4880.795226	ppb	0.273	0.483		8870.531
45	Sc-IS	|>		1856656.494		ppb	0.308			1731437.868
69	Ga-IS	|		543329.442		ppb	0.165			487303.188
115	In-IS	|>		232506.682		ppb	1.846			239160.809
165	Ho-IS	|		311045.694		ppb	1.311			294929.426
159	Tb-IS	|		293793.646		ppb	0.486			278786.595
209	Bi-IS	|>		140586.166		ppb	0.643			145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 14:42:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.162

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		33382.315		ppb		3.014		32280.895
52	Cr	|		929166.761	99.398666	ppb		0.817	1.319	10150.272
57	Fe	|		1314822.735	4708.481457	ppb		0.852	1.119	8870.531
45	Sc-IS	|>		1791150.920		ppb		0.671		1731437.868
69	Ga-IS	|		529661.412		ppb		0.337		487303.188
115	In-IS	|>		246143.891		ppb		1.125		239160.809
165	Ho-IS	|		312177.771		ppb		1.314		294929.426
159	Tb-IS	|		296819.809		ppb		0.913		278786.595
209	Bi-IS	|>		152889.447		ppb		1.462		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 14:43:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.163

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	32117.197		ppb	3.153			32280.895
52	Cr	|	10165.838	-0.007795	ppb	1.303	197.156		10150.272
57	Fe	|	9001.725	0.207529	ppb	2.448	386.177		8870.531
45	Sc-IS	|>	1746083.774		ppb	0.082			1731437.868
69	Ga-IS	|	496837.380		ppb	1.940			487303.188
115	In-IS	|>	240212.108		ppb	1.131			239160.809
165	Ho-IS	|	301239.658		ppb	0.452			294929.426
159	Tb-IS	|	285740.592		ppb	0.766			278786.595
209	Bi-IS	|>	150300.987		ppb	0.573			145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-I-3-A

Autosampler Position: 424

Sample Date/Time: Friday, April 17, 2020 14:44:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-I-3-A.164

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32499.150		ppb		1.167		32280.895
52	Cr	|		127289.124	12.353847	ppb		1.691	1.244	10150.272
57	Fe	|		121571.835	396.341561	ppb		1.433	0.960	8870.531
45	Sc-IS	|>		1828509.542		ppb		0.549		1731437.868
69	Ga-IS	|		519836.026		ppb		0.748		487303.188
115	In-IS	|>		226265.240		ppb		2.347		239160.809
165	Ho-IS	|		299335.154		ppb		2.824		294929.426
159	Tb-IS	|		282932.495		ppb		1.508		278786.595
209	Bi-IS	|>		129813.824		ppb		0.677		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-I-4-A

Autosampler Position: 425

Sample Date/Time: Friday, April 17, 2020 14:45:53

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-I-4-A.165

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		33375.611		ppb		0.869		32280.895
52	Cr	|		281047.797	28.772310	ppb		0.918	1.238	10150.272
57	Fe	|		52860.968	154.389188	ppb		1.545	1.069	8870.531
45	Sc-IS	|>		1821347.172		ppb		2.095		1731437.868
69	Ga-IS	|		506538.856		ppb		2.187		487303.188
115	In-IS	|>		231917.854		ppb		1.087		239160.809
165	Ho-IS	|		305972.232		ppb		1.160		294929.426
159	Tb-IS	|		288870.342		ppb		0.622		278786.595
209	Bi-IS	|>		140294.425		ppb		0.555		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-I-5-A

Autosampler Position: 426

Sample Date/Time: Friday, April 17, 2020 14:47:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-I-5-A.166

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	32509.175		ppb	1.491			32280.895
52	Cr	|	258923.275	26.976696	ppb	0.909	1.370		10150.272
57	Fe	|	40580.905	113.771189	ppb	1.999	3.184		8870.531
45	Sc-IS	|>	1784940.137		ppb	0.831			1731437.868
69	Ga-IS	|	495087.005		ppb	1.291			487303.188
115	In-IS	|>	230645.251		ppb	1.361			239160.809
165	Ho-IS	|	301193.843		ppb	1.891			294929.426
159	Tb-IS	|	287499.728		ppb	0.398			278786.595
209	Bi-IS	|>	139135.392		ppb	0.513			145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-I-6-A

Autosampler Position: 427

Sample Date/Time: Friday, April 17, 2020 14:48:12

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-I-6-A.167

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32521.445		ppb		3.220		32280.895
52	Cr	|		704900.446	74.848146	ppb		0.636	0.756	10150.272
57	Fe	|		37470.193	101.527632	ppb		1.378	1.322	8870.531
45	Sc-IS	|>		1797807.567		ppb		0.489		1731437.868
69	Ga-IS	|		492949.817		ppb		0.601		487303.188
115	In-IS	|>		233698.314		ppb		0.368		239160.809
165	Ho-IS	|		303086.224		ppb		1.360		294929.426
159	Tb-IS	|		288028.602		ppb		1.833		278786.595
209	Bi-IS	|>		141518.654		ppb		0.865		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25171-I-7-A

Autosampler Position: 428

Sample Date/Time: Friday, April 17, 2020 14:49:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25171-I-7-A.168

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		32715.213		ppb		2.713		32280.895
52	Cr	|		698671.768	74.517894	ppb		1.500	0.908	10150.272
57	Fe	|		37529.239	102.353560	ppb		1.615	1.181	8870.531
45	Sc-IS	|>		1789624.686		ppb		0.748		1731437.868
69	Ga-IS	|		492549.523		ppb		1.453		487303.188
115	In-IS	|>		230301.037		ppb		1.448		239160.809
165	Ho-IS	|		300683.726		ppb		0.640		294929.426
159	Tb-IS	|		284710.388		ppb		0.961		278786.595
209	Bi-IS	|>		139282.426		ppb		1.229		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 14:50:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.169

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|	32212.963		ppb	2.758			32280.895
52	Cr	|	905373.386	99.314208	ppb	1.702	0.738		10150.272
57	Fe	|	1280581.919	4702.692100	ppb	1.019	0.298		8870.531
45	Sc-IS	|>	1746614.187		ppb	1.221			1731437.868
69	Ga-IS	|	512718.934		ppb	0.729			487303.188
115	In-IS	|>	240446.138		ppb	1.067			239160.809
165	Ho-IS	|	303003.197		ppb	0.985			294929.426
159	Tb-IS	|	289390.679		ppb	0.443			278786.595
209	Bi-IS	|>	146133.690		ppb	1.164			145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 14:51:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.170

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		31925.687		ppb	4.735			32280.895
52	Cr	|		10712.911	0.072231	ppb	5.190	52.266		10150.272
57	Fe	|		8764.911	-0.123386	ppb	2.037	492.421		8870.531
45	Sc-IS	|>		1717532.807		ppb	2.491			1731437.868
69	Ga-IS	|		499883.883		ppb	1.003			487303.188
115	In-IS	|>		238332.415		ppb	1.470			239160.809
165	Ho-IS	|		303611.758		ppb	1.532			294929.426
159	Tb-IS	|		284197.249		ppb	1.534			278786.595
209	Bi-IS	|>		148657.273		ppb	0.820			145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Friday, April 17, 2020 14:52:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICSA-30518.171

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32706.287		ppb		0.673		32280.895
52	Cr	|		11383.423	0.053059	ppb		1.119	41.586	10150.272
57	Fe	|		6698880.093	23289.153467	ppb		0.404	0.695	8870.531
45	Sc-IS	|>		1855343.846		ppb		0.994		1731437.868
69	Ga-IS	|		502256.008		ppb		0.952		487303.188
115	In-IS	|>		243135.320		ppb		1.719		239160.809
165	Ho-IS	|		315562.896		ppb		0.717		294929.426
159	Tb-IS	|		298550.911		ppb		0.987		278786.595
209	Bi-IS	|>		144978.614		ppb		0.250		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Friday, April 17, 2020 14:54:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICSAB-30517.172

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		32267.533		ppb			2.991		32280.895
52	Cr	|		185448.154	18.341258	ppb			0.334	1.234	10150.272
57	Fe	|		6737622.871	23552.777669	ppb			0.627	1.223	8870.531
45	Sc-IS	|>		1845260.856		ppb			0.966		1731437.868
69	Ga-IS	|		501331.852		ppb			0.598		487303.188
115	In-IS	|>		241948.151		ppb			1.668		239160.809
165	Ho-IS	|		316845.346		ppb			0.940		294929.426
159	Tb-IS	|		299967.050		ppb			1.508		278786.595
209	Bi-IS	|>		147041.777		ppb			0.602		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, April 17, 2020 14:55:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICVL-210771.173

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		31072.648		ppb		1.146		32280.895
52	Cr	|		17783.285	0.828366	ppb		0.986	4.246	10150.272
57	Fe	|		21018.787	44.285514	ppb		1.638	1.448	8870.531
45	Sc-IS	|>		1754500.603		ppb		0.951		1731437.868
69	Ga-IS	|		499020.064		ppb		1.050		487303.188
115	In-IS	|>		242740.516		ppb		0.987		239160.809
165	Ho-IS	|		310043.946		ppb		0.499		294929.426
159	Tb-IS	|		293748.615		ppb		1.379		278786.595
209	Bi-IS	|>		151824.836		ppb		1.381		145900.155

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Friday, April 17, 2020 20:54:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICIS-23447.301

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34787.881		ppb		2.684		
9	Be	|		17.778		ppb		28.641		
10	B	|		2534.669		ppb		2.476		
27	Al	|		4165.052		ppb		4.418		
43	Ca-2	|		103.334		ppb		34.329		
49	Ti	|		224.446		ppb		6.002		
52	Cr	|		9056.204		ppb		2.063		
55	Mn	|		683.350		ppb		6.563		
57	Fe	|		8352.444		ppb		3.935		
45	Sc-IS	>		1757984.616		ppb		1.039		
66	Zn	|		685.572		ppb		3.415		
86	Sr	|		4.093		ppb		663.971		
65	Cu	|		124.107		ppb		19.008		
69	Ga-IS	|		451733.150		ppb		1.487		
95	Mo	|		137.778		ppb		12.415		
115	In-IS	>		242580.196		ppb		0.631		
111	Cd	|		7.488		ppb		92.242		
118	Sn	|		1440.073		ppb		9.022		
121	Sb	|		295.559		ppb		23.774		
135	Ba	|		20.000		ppb		44.096		
165	Ho-IS	|		310147.483		ppb		1.113		
159	Tb-IS	|		290896.036		ppb		2.088		
207	Pb	|		194.445		ppb		16.473		
203	Tl	|		42.222		ppb		32.868		
209	Bi-IS	>		166907.154		ppb		0.377		
51	V	|		41.111		ppb		12.385		
59	Co	|		21.111		ppb		32.868		
60	Ni	|		36.667		ppb		18.182		
75	As	|		754.334		ppb		2.638		
71	Ga-ISK	>		125407.005		ppb		1.484		
82	Se-2	|		-0.151		ppb		3044.137		
107	Ag-1	|		94.445		ppb		32.025		
115	In-ISK	|		110883.016		ppb		0.715		
45	Sc-ISK	>		293507.004		ppb		1.276		
23	Na	|		2830.281		ppb		5.478		
39	K	|		143751.866		ppb		0.272		
24	Mg	|		241.669		ppb		10.206		
159	Tb-ISK	|		201862.873		ppb		0.334		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Friday, April 17, 2020 20:56:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\IC-210761.302

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35300.227		ppb		0.242		34787.881
9	Be	|	318103.895	200.000000	ppb		0.748	1.059	17.778
10	B	|	192281.241	500.000000	ppb		1.925	1.279	2534.669
27	Al	|	1212081.163	200.000000	ppb		1.959	2.617	4165.052
43	Ca-2	|	204569.407	10200.000000	ppb		1.106	1.308	103.334
49	Ti	|	139157.835	200.000000	ppb		0.579	0.199	224.446
52	Cr	|	1777177.797	200.000000	ppb		0.681	1.355	9056.204
55	Mn	|	2690419.877	200.000000	ppb		0.516	0.829	683.350
57	Fe	|	2677297.205	10200.000000	ppb		1.311	1.140	8352.444
45	Sc-IS	>	1808495.946		ppb		0.686		1757984.616
66	Zn	|	278206.172	200.000000	ppb		2.526	2.093	685.572
86	Sr	|	356092.631	200.000000	ppb		0.772	0.203	4.093
65	Cu	|	393163.368	200.000000	ppb		2.488	2.089	124.107
69	Ga-IS	|	495639.669		ppb		0.907		451733.150
95	Mo	|	317581.243	200.000000	ppb		0.325	0.810	137.778
115	In-IS	>	246263.289		ppb		0.973		242580.196
111	Cd	|	331448.200	200.000000	ppb		0.551	1.452	7.488
118	Sn	|	914489.548	200.000000	ppb		1.667	2.217	1440.073
121	Sb	|	1006821.668	200.000000	ppb		1.644	1.663	295.559
135	Ba	|	236292.268	200.000000	ppb		2.465	2.138	20.000
165	Ho-IS	|	323016.846		ppb		0.967		310147.483
159	Tb-IS	|	303234.620		ppb		0.775		290896.036
207	Pb	|	3194000.444	200.000000	ppb		1.210	0.126	194.445
203	Tl	|	967636.087	200.000000	ppb		1.770	1.512	42.222
209	Bi-IS	>	170138.343		ppb		1.115		166907.154
51	V	|	145381.606	200.000000	ppb		0.933	2.205	41.111
59	Co	|	377069.351	200.000000	ppb		0.387	1.231	21.111
60	Ni	|	201442.672	200.000000	ppb		1.153	0.521	36.667
75	As	|	103066.888	200.000000	ppb		1.802	2.048	754.334
71	Ga-ISK	>	126803.679		ppb		1.281		125407.005
82	Se-2	|	9480.324	200.000000	ppb		2.612	3.633	-0.151
107	Ag-1	|	837964.418	200.000000	ppb		0.545	0.803	94.445
115	In-ISK	|	113380.251		ppb		2.396		110883.016
45	Sc-ISK	>	300992.263		ppb		0.118		293507.004
23	Na	|	5446671.150	10200.000000	ppb		0.898	0.780	2830.281
39	K	|	13136198.084	10200.000000	ppb		1.260	1.380	143751.866
24	Mg	|	6169539.006	10200.000000	ppb		2.013	2.035	241.669
159	Tb-ISK	|	206803.817		ppb		1.937		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 20:59:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.303

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35070.776		ppb		0.835		34787.881
9	Be	|	157039.566	99.861900	ppb		0.641	0.995	17.778
10	B	|	97270.166	252.485096	ppb		2.507	2.169	2534.669
27	Al	|	612434.544	101.860324	ppb		1.238	1.561	4165.052
43	Ca-2	|	103179.628	5200.899345	ppb		0.985	0.766	103.334
49	Ti	|	68693.660	99.697077	ppb		0.911	1.212	224.446
52	Cr	|	892689.919	101.089648	ppb		0.909	0.647	9056.204
55	Mn	|	1281763.090	96.346167	ppb		1.273	0.984	683.350
57	Fe	|	1261849.718	4845.358112	ppb		0.986	0.623	8352.444
45	Sc-IS	>	1787963.272		ppb		0.395		1757984.616
66	Zn	|	142026.237	103.029638	ppb		2.917	2.699	685.572
86	Sr	|	179598.092	102.027902	ppb		2.350	2.244	4.093
65	Cu	|	197314.494	101.494444	ppb		2.540	2.279	124.107
69	Ga-IS	|	481349.493		ppb		2.079		451733.150
95	Mo	|	162091.118	103.203800	ppb		1.044	0.928	137.778
115	In-IS	>	249280.348		ppb		2.227		242580.196
111	Cd	|	170966.439	101.941899	ppb		2.063	3.291	7.488
118	Sn	|	463827.031	100.044555	ppb		2.054	0.191	1440.073
121	Sb	|	509252.482	99.905974	ppb		2.035	0.310	295.559
135	Ba	|	120235.278	100.521757	ppb		3.048	1.341	20.000
165	Ho-IS	|	322462.234		ppb		0.800		310147.483
159	Tb-IS	|	304277.058		ppb		1.888		290896.036
207	Pb	|	1607260.411	100.447232	ppb		1.609	1.281	194.445
203	Tl	|	489864.473	101.047463	ppb		1.755	0.684	42.222
209	Bi-IS	>	170478.107		ppb		2.036		166907.154
51	V	|	73714.195	101.291774	ppb		2.148	3.058	41.111
59	Co	|	190275.615	100.834548	ppb		1.401	2.314	21.111
60	Ni	|	101626.879	100.809687	ppb		0.721	2.263	36.667
75	As	|	52317.638	100.690613	ppb		1.028	0.527	754.334
71	Ga-ISK	>	126920.291		ppb		1.549		125407.005
82	Se-2	|	4858.386	102.398317	ppb		2.380	3.224	-0.151
107	Ag-1	|	421837.216	100.577860	ppb		1.429	1.311	94.445
115	In-ISK	|	112834.292		ppb		0.771		110883.016
45	Sc-ISK	>	298191.442		ppb		1.301		293507.004
23	Na	|	2722463.105	5144.609166	ppb		1.154	2.370	2830.281
39	K	|	6626115.285	5137.337435	ppb		0.611	1.899	143751.866
24	Mg	|	3069702.079	5123.480669	ppb		0.825	2.125	241.669
159	Tb-ISK	|	205771.410		ppb		0.652		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 21:02:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.304

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		34288.892		ppb			2.209			34787.881
9	Be	|		30.000	0.008196	ppb	29.397	74.315				17.778
10	B	|		2979.200	1.305085	ppb	2.375	19.798				2534.669
27	Al	|		4222.846	0.018784	ppb	2.004	133.328				4165.052
43	Ca-2	|		126.667	1.262707	ppb	34.488	175.068				103.334
49	Ti	|		203.335	-0.027811	ppb	11.475	115.077				224.446
52	Cr	|		8408.030	-0.063523	ppb	2.044	31.755				9056.204
55	Mn	|		806.689	0.010181	ppb	1.653	4.196				683.350
57	Fe	|		8227.925	-0.094256	ppb	1.662	717.211				8352.444
45	Sc-IS	|>		1736967.099		ppb	1.421					1757984.616
66	Zn	|		746.686	0.052026	ppb	4.531	46.763				685.572
86	Sr	|		19.049	0.008759	ppb	121.699	153.470				4.093
65	Cu	|		112.812	-0.005083	ppb	20.667	259.346				124.107
69	Ga-IS	|		445484.791		ppb	2.186					451733.150
95	Mo	|		658.904	0.343248	ppb	6.869	10.423				137.778
115	In-IS	|>		243004.276		ppb	0.503					242580.196
111	Cd	|		37.505	0.018344	ppb	35.893	44.830				7.488
118	Sn	|		3912.760	0.548114	ppb	6.782	9.958				1440.073
121	Sb	|		728.908	0.087110	ppb	9.960	15.921				295.559
135	Ba	|		37.778	0.015237	ppb	18.368	39.793				20.000
165	Ho-IS	|		308300.366		ppb	1.126					310147.483
159	Tb-IS	|		290622.093		ppb	0.921					290896.036
207	Pb	|		607.783	0.027061	ppb	2.592	2.879				194.445
203	Tl	|		218.891	0.038038	ppb	3.832	5.385				42.222
209	Bi-IS	|>		164038.717		ppb	1.039					166907.154
51	V	|		60.000	0.026750	ppb	29.397	93.906				41.111
59	Co	|		40.000	0.010230	ppb	22.048	46.995				21.111
60	Ni	|		68.889	0.032700	ppb	15.554	34.428				36.667
75	As	|		736.912	-0.028463	ppb	6.778	333.567				754.334
71	Ga-ISK	|>		124880.143		ppb	0.836					125407.005
82	Se-2	|		4.185	0.093093	ppb	49.972	48.753				-0.151
107	Ag-1	|		302.225	0.050479	ppb	13.251	19.839				94.445
115	In-ISK	|		110333.779		ppb	0.891					110883.016
45	Sc-ISK	|>		294375.555		ppb	0.899					293507.004
23	Na	|		3678.807	1.610452	ppb	3.467	16.972				2830.281
39	K	|		144973.044	0.651139	ppb	0.968	322.290				143751.866
24	Mg	|		981.700	1.250327	ppb	4.241	6.795				241.669
159	Tb-ISK	|		199838.761		ppb	0.807					201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Friday, April 17, 2020 21:05:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICVL-210771.305

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34248.784		ppb		0.560		34787.881
9	Be	|		1527.860	0.970830	ppb	4.333	3.958		17.778
10	B	|		21100.017	50.014915	ppb	1.312	1.693		2534.669
27	Al	|		295500.575	49.329338	ppb	3.417	3.581		4165.052
43	Ca-2	|		1085.041	50.067281	ppb	7.095	8.408		103.334
49	Ti	|		874.471	0.954855	ppb	8.812	11.460		224.446
52	Cr	|		17176.988	0.933320	ppb	1.003	1.730		9056.204
55	Mn	|		13345.121	0.962614	ppb	1.783	2.451		683.350
57	Fe	|		19966.166	45.203591	ppb	0.701	0.953		8352.444
45	Sc-IS	>		1768359.871		ppb		0.546		1757984.616
66	Zn	|		7664.278	5.141041	ppb	1.480	1.309		685.572
86	Sr	|		1776.510	1.017894	ppb	7.317	6.956		4.093
65	Cu	|		2082.930	1.019032	ppb	4.257	4.420		124.107
69	Ga-IS	|		455412.394		ppb		1.141		451733.150
95	Mo	|		1774.555	1.054054	ppb	3.373	3.486		137.778
115	In-IS	>		249149.390		ppb		1.200		242580.196
111	Cd	|		1669.705	0.991151	ppb	1.973	1.087		7.488
118	Sn	|		6620.424	1.113612	ppb	3.914	6.485		1440.073
121	Sb	|		5269.861	0.975487	ppb	0.371	1.625		295.559
135	Ba	|		1165.604	0.959023	ppb	11.814	13.087		20.000
165	Ho-IS	|		314836.016		ppb		0.742		310147.483
159	Tb-IS	|		297183.769		ppb		0.216		290896.036
207	Pb	|		15810.099	0.992713	ppb	1.287	1.496		194.445
203	Tl	|		4720.780	0.981695	ppb	1.483	1.393		42.222
209	Bi-IS	>		167590.635		ppb		0.201		166907.154
51	V	|		735.575	0.965124	ppb	10.278	12.322		41.111
59	Co	|		1866.789	0.988237	ppb	3.273	4.819		21.111
60	Ni	|		1017.814	0.984332	ppb	11.847	13.867		36.667
75	As	|		1315.701	1.105381	ppb	2.758	10.160		754.334
71	Ga-ISK	>		125665.940		ppb		1.554		125407.005
82	Se-2	|		43.190	0.926524	ppb	43.655	45.139		-0.151
107	Ag-1	|		4168.386	0.981126	ppb	1.760	0.297		94.445
115	In-ISK	|		111511.062		ppb		1.089		110883.016
45	Sc-ISK	>		294336.216		ppb		1.608		293507.004
23	Na	|		28657.056	49.467959	ppb	2.129	0.583		2830.281
39	K	|		202610.020	46.961866	ppb	0.512	4.650		143751.866
24	Mg	|		28974.356	48.582697	ppb	1.228	1.328		241.669
159	Tb-ISK	|		204242.346		ppb		0.454		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63717_1-A

Autosampler Position: 115

Sample Date/Time: Friday, April 17, 2020 21:08:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\MB 570-63717_1-A.306

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34030.487		ppb	1.028		34787.881
9	Be	12.222	-0.003531	ppb	83.320	187.437	17.778
10	B	2559.118	0.119034	ppb	3.595	189.674	2534.669
27	Al	3438.198	-0.118870	ppb	15.010	78.418	4165.052
43	Ca-2	113.334	0.554778	ppb	11.103	109.811	103.334
49	Ti	184.446	-0.057082	ppb	4.174	23.693	224.446
52	Cr	8463.618	-0.061404	ppb	1.328	20.533	9056.204
55	Mn	647.793	-0.002358	ppb	8.858	174.593	683.350
57	Fe	7737.653	-2.182922	ppb	4.259	60.897	8352.444
45	Sc-IS	> 1744621.206		ppb	0.739		1757984.616
66	Zn	565.567	-0.085933	ppb	9.816	45.279	685.572
86	Sr	2.994	-0.000600	ppb	1004.520	2905.159	4.093
65	Cu	95.261	-0.014680	ppb	15.757	56.379	124.107
69	Ga-IS	448016.016		ppb	0.995		451733.150
95	Mo	124.445	-0.007914	ppb	30.462	320.780	137.778
115	In-IS	> 241187.668		ppb	2.092		242580.196
111	Cd	6.405	-0.000589	ppb	91.023	631.458	7.488
118	Sn	1423.405	-0.001937	ppb	7.578	1119.991	1440.073
121	Sb	242.224	-0.010498	ppb	11.208	48.164	295.559
135	Ba	18.889	-0.000880	ppb	10.189	152.304	20.000
165	Ho-IS	307075.727		ppb	1.498		310147.483
159	Tb-IS	289025.998		ppb	1.466		290896.036
207	Pb	168.889	-0.001260	ppb	9.736	92.367	194.445
203	Tl	37.778	-0.000665	ppb	22.205	277.081	42.222
209	Bi-IS	> 161431.458		ppb	0.752		166907.154
51	V	37.778	-0.004690	ppb	13.478	153.593	41.111
59	Co	5.556	-0.008351	ppb	69.282	24.491	21.111
60	Ni	30.000	-0.006721	ppb	33.333	150.182	36.667
75	As	728.676	-0.052372	ppb	1.916	62.117	754.334
71	Ga-ISK	> 125558.252		ppb	0.418		125407.005
82	Se-2	0.875	0.021704	ppb	719.147	616.737	-0.151
107	Ag-1	70.000	-0.005910	ppb	21.822	63.436	94.445
115	In-ISK	111164.319		ppb	0.964		110883.016
45	Sc-ISK	> 291645.905		ppb	0.685		293507.004
23	Na	2355.194	-0.884099	ppb	3.610	17.839	2830.281
39	K	141381.721	-1.177492	ppb	0.227	87.130	143751.866
24	Mg	128.334	-0.190846	ppb	13.683	15.210	241.669
159	Tb-ISK	200186.201		ppb	0.446		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63717_2-A

Autosampler Position: 116

Sample Date/Time: Friday, April 17, 2020 21:10:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LCS 570-63717_2-A.307

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34602.979		ppb		1.976		34787.881
9	Be	|		159727.993	101.932847	ppb	0.138	0.862		17.778
10	B	|		38672.274	96.617070	ppb	0.358	1.188		2534.669
27	Al	|		613825.152	102.456273	ppb	1.489	1.593		4165.052
43	Ca-2	|		101675.546	5143.468968	ppb	0.313	1.072		103.334
49	Ti	|		69443.954	101.141379	ppb	1.400	0.664		224.446
52	Cr	|		897021.148	101.949355	ppb	0.883	0.522		9056.204
55	Mn	|		1248430.044	94.176614	ppb	0.659	1.022		683.350
57	Fe	|		1260652.785	4858.430726	ppb	1.135	1.785		8352.444
45	Sc-IS	>		1781663.686		ppb	0.776			1757984.616
66	Zn	|		145559.248	106.000389	ppb	2.616	3.303		685.572
86	Sr	|		174967.621	99.756336	ppb	1.428	1.837		4.093
65	Cu	|		196845.310	101.624672	ppb	2.005	2.517		124.107
69	Ga-IS	|		478984.540		ppb	2.249			451733.150
95	Mo	|		160683.073	102.670546	ppb	0.508	0.398		137.778
115	In-IS	>		247435.683		ppb	1.136			242580.196
111	Cd	|		172732.416	103.727658	ppb	0.592	0.570		7.488
118	Sn	|		468295.063	101.784265	ppb	1.507	2.626		1440.073
121	Sb	|		493985.561	97.640368	ppb	1.404	2.047		295.559
135	Ba	|		120381.990	101.431846	ppb	2.670	3.773		20.000
165	Ho-IS	|		316566.931		ppb	0.588			310147.483
159	Tb-IS	|		299151.165		ppb	1.236			290896.036
207	Pb	|		1594174.515	101.333448	ppb	0.585	0.938		194.445
203	Tl	|		467203.234	98.019963	ppb	1.311	0.504		42.222
209	Bi-IS	>		167606.488		ppb	1.339			166907.154
51	V	|		72197.581	97.824608	ppb	1.997	1.483		41.111
59	Co	|		183617.158	95.958548	ppb	1.668	1.443		21.111
60	Ni	|		103120.853	100.874438	ppb	0.448	0.523		36.667
75	As	|		53265.628	101.126802	ppb	1.336	2.044		754.334
71	Ga-ISK	>		128675.821		ppb	0.705			125407.005
82	Se-2	|		4907.019	101.988773	ppb	0.778	0.418		-0.151
107	Ag-1	|		202666.363	47.647531	ppb	0.478	0.416		94.445
115	In-ISK	|		113214.559		ppb	1.012			110883.016
45	Sc-ISK	>		300091.440		ppb	0.534			293507.004
23	Na	|		519788.281	971.461828	ppb	1.259	1.625		2830.281
39	K	|		1391351.255	980.176570	ppb	0.958	1.628		143751.866
24	Mg	|		3102872.317	5145.196287	ppb	0.932	1.050		241.669
159	Tb-ISK	|		206285.586		ppb	1.486			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63717_3-A

Autosampler Position: 117

Sample Date/Time: Friday, April 17, 2020 21:13:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LCSD 570-63717_3-A.308

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34728.831		ppb		0.933		34787.881
9	Be	|	161493.240	102.088363	ppb	0.465	1.864		17.778
10	B	|	39325.167	97.366621	ppb	1.003	1.814		2534.669
27	Al	|	616852.965	102.004446	ppb	1.996	3.415		4165.052
43	Ca-2	|	101586.609	5089.738136	ppb	1.079	0.545		103.334
49	Ti	|	70797.222	102.152765	ppb	0.633	1.995		224.446
52	Cr	|	910059.428	102.448438	ppb	1.433	0.438		9056.204
55	Mn	|	1253720.305	93.674776	ppb	0.692	0.756		683.350
57	Fe	|	1271587.071	4853.676687	ppb	1.185	1.245		8352.444
45	Sc-IS	>	1798844.230		ppb	1.402			1757984.616
66	Zn	|	145976.605	105.271875	ppb	1.637	1.158		685.572
86	Sr	|	175864.978	99.310766	ppb	0.837	0.897		4.093
65	Cu	|	199589.579	102.051898	ppb	1.358	1.049		124.107
69	Ga-IS	|	483136.863		ppb	1.203			451733.150
95	Mo	|	162294.562	102.734403	ppb	1.338	2.737		137.778
115	In-IS	>	253539.797		ppb	1.335			242580.196
111	Cd	|	176079.645	103.203181	ppb	0.582	1.752		7.488
118	Sn	|	475301.036	100.803183	ppb	0.629	0.705		1440.073
121	Sb	|	509086.470	98.186405	ppb	1.927	0.589		295.559
135	Ba	|	121500.217	99.887746	ppb	2.226	2.311		20.000
165	Ho-IS	|	316853.218		ppb	0.734			310147.483
159	Tb-IS	|	300758.660		ppb	0.802			290896.036
207	Pb	|	1621303.988	102.573061	ppb	2.258	2.158		194.445
203	Tl	|	472723.716	98.714651	ppb	1.236	0.237		42.222
209	Bi-IS	>	168390.027		ppb	1.084			166907.154
51	V	|	73593.528	99.306986	ppb	0.916	1.703		41.111
59	Co	|	187947.203	97.812136	ppb	0.772	1.408		21.111
60	Ni	|	105056.028	102.339187	ppb	1.326	1.948		36.667
75	As	|	53577.039	101.272326	ppb	2.083	1.311		754.334
71	Ga-ISK	>	129224.075		ppb	0.789			125407.005
82	Se-2	|	4952.059	102.483844	ppb	1.566	0.780		-0.151
107	Ag-1	|	205028.666	47.997525	ppb	0.936	0.195		94.445
115	In-ISK	|	114721.324		ppb	1.344			110883.016
45	Sc-ISK	>	298718.735		ppb	0.777			293507.004
23	Na	|	518022.314	972.626919	ppb	1.127	1.522		2830.281
39	K	|	1380338.561	976.453705	ppb	0.683	0.382		143751.866
24	Mg	|	3131379.945	5216.172915	ppb	1.078	0.380		241.669
159	Tb-ISK	|	206025.003		ppb	0.436			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-A-4-A SD @5

Autosampler Position: 118

Sample Date/Time: Friday, April 17, 2020 21:16:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-A-4-A SD @5.309

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	38489.559		ppb	0.401		34787.881
9	Be	50.000	0.019569	ppb	29.059	44.573	17.778
10	B	34852.465	84.147359	ppb	0.878	2.181	2534.669
27	Al	16452.805	1.989008	ppb	2.250	3.291	4165.052
43	Ca-2	183534.891	9064.360912	ppb	1.171	1.777	103.334
49	Ti	403.339	0.242979	ppb	6.612	17.463	224.446
52	Cr	54589.663	5.063022	ppb	0.871	0.647	9056.204
55	Mn	1885.680	0.086608	ppb	2.211	3.049	683.350
57	Fe	18016.921	35.361975	ppb	3.915	6.652	8352.444
45	Sc-IS	> 1825866.859		ppb	1.355		1757984.616
66	Zn	1757.886	0.746299	ppb	5.709	7.985	685.572
86	Sr	255149.050	141.931384	ppb	2.376	1.335	4.093
65	Cu	2168.688	1.028612	ppb	3.734	5.301	124.107
69	Ga-IS	464919.781		ppb	2.195		451733.150
95	Mo	1047.816	0.564306	ppb	8.691	9.182	137.778
115	In-IS	> 245557.439		ppb	1.999		242580.196
111	Cd	24.466	0.010310	ppb	49.905	75.049	7.488
118	Sn	4429.576	0.652613	ppb	4.123	4.138	1440.073
121	Sb	11123.231	2.156191	ppb	6.811	5.909	295.559
135	Ba	40051.627	33.987788	ppb	1.170	0.886	20.000
165	Ho-IS	314510.092		ppb	0.822		310147.483
159	Tb-IS	296387.005		ppb	1.814		290896.036
207	Pb	751.119	0.036627	ppb	3.774	2.970	194.445
203	Tl	202.224	0.034726	ppb	10.469	14.379	42.222
209	Bi-IS	> 163152.075		ppb	1.610		166907.154
51	V	1542.306	2.014321	ppb	4.835	4.669	41.111
59	Co	91.111	0.035862	ppb	5.589	7.649	21.111
60	Ni	2167.943	2.065128	ppb	8.880	9.161	36.667
75	As	999.080	0.415571	ppb	6.374	28.153	754.334
71	Ga-ISK	> 129878.842		ppb	0.343		125407.005
82	Se-2	14.851	0.309211	ppb	35.611	35.529	-0.151
107	Ag-1	188.890	0.021239	ppb	14.264	30.250	94.445
115	In-ISK	112466.741		ppb	1.444		110883.016
45	Sc-ISK	> 308640.008		ppb	1.485		293507.004
23	Na	4058999.303	7412.920372	ppb	0.907	2.088	2830.281
39	K	283371.783	101.280863	ppb	0.238	3.262	143751.866
24	Mg	12097514.193	19506.524450	ppb	1.183	1.002	241.669
159	Tb-ISK	206488.305		ppb	0.612		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-A-4-A

Autosampler Position: 119

Sample Date/Time: Friday, April 17, 2020 21:19:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-A-4-A.310

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		47866.731		ppb		1.023		34787.881
9	Be	|		18.889	-0.000177	ppb	10.189	669.141		17.778
10	B	|		160458.405	396.354079	ppb	1.115	2.286		2534.669
27	Al	|		13985.952	1.501292	ppb	21.971	34.095		4165.052
43	Ca-2	|		912916.221	43402.045215	ppb	1.337	1.664		103.334
49	Ti	|		728.908	0.667514	ppb	5.261	6.873		224.446
52	Cr	|		211058.928	21.702043	ppb	1.191	0.873		9056.204
55	Mn	|		1217.830	0.034053	ppb	10.207	26.426		683.350
57	Fe	|		42577.808	122.259237	ppb	1.299	0.917		8352.444
45	Sc-IS	>		1897532.465		ppb	1.126			1757984.616
66	Zn	|		1738.995	0.686151	ppb	2.287	2.111		685.572
86	Sr	|		1241596.966	664.512244	ppb	3.798	2.816		4.093
65	Cu	|		9370.953	4.479327	ppb	3.442	2.549		124.107
69	Ga-IS	|		482703.703		ppb	1.901			451733.150
95	Mo	|		2136.827	1.193685	ppb	5.022	4.984		137.778
115	In-IS	>		239992.145		ppb	1.427			242580.196
111	Cd	|		22.179	0.009121	ppb	60.534	91.150		7.488
118	Sn	|		1406.736	-0.003953	ppb	4.571	415.114		1440.073
121	Sb	|		2124.603	0.373424	ppb	8.253	8.657		295.559
135	Ba	|		195154.826	169.447201	ppb	4.782	3.457		20.000
165	Ho-IS	|		314655.380		ppb	0.557			310147.483
159	Tb-IS	|		292172.349		ppb	1.411			290896.036
207	Pb	|		476.670	0.020464	ppb	11.929	18.903		194.445
203	Tl	|		57.778	0.004253	ppb	18.546	56.063		42.222
209	Bi-IS	>		154454.938		ppb	0.454			166907.154
51	V	|		7052.852	9.680387	ppb	2.344	1.987		41.111
59	Co	|		126.667	0.056001	ppb	19.868	22.563		21.111
60	Ni	|		10248.119	10.177501	ppb	1.436	2.606		36.667
75	As	|		1703.163	1.850110	ppb	1.297	1.518		754.334
71	Ga-ISK	>		126358.640		ppb	1.178			125407.005
82	Se-2	|		48.857	1.037288	ppb	19.574	19.532		-0.151
107	Ag-1	|		45.556	-0.011887	ppb	8.449	6.740		94.445
115	In-ISK	|		109991.544		ppb	1.258			110883.016
45	Sc-ISK	>		310155.495		ppb	1.235			293507.004
23	Na	|		20117604.024	36580.087416	ppb	1.700	2.267		2830.281
39	K	|		824962.832	512.992776	ppb	0.559	1.711		143751.866
24	Mg	|		59704722.065	95809.614880	ppb	0.822	1.870		241.669
159	Tb-ISK	|		206002.716		ppb	0.711			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-A-4-B MS

Autosampler Position: 120

Sample Date/Time: Friday, April 17, 2020 21:21:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-A-4-B MS.311

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	48425.276		ppb		1.059		34787.881
9	Be	|	163134.076	97.424362	ppb		1.517	2.043	17.778
10	B	|	191726.267	473.216165	ppb		2.443	2.131	2534.669
27	Al	|	641723.031	100.235762	ppb		2.882	3.719	4165.052
43	Ca-2	|	1006286.577	47676.752115	ppb		1.412	0.992	103.334
49	Ti	|	68060.689	92.728891	ppb		2.297	1.496	224.446
52	Cr	|	1092867.068	116.373947	ppb		1.652	0.921	9056.204
55	Mn	|	1248250.091	88.107258	ppb		1.260	0.510	683.350
57	Fe	|	1282637.275	4623.384230	ppb		2.265	1.428	8352.444
45	Sc-IS	>	1903933.514		ppb		0.853		1757984.616
66	Zn	|	138821.304	94.532327	ppb		1.235	0.860	685.572
86	Sr	|	1397590.996	745.581060	ppb		1.941	1.214	4.093
65	Cu	|	185156.222	89.428419	ppb		2.121	1.271	124.107
69	Ga-IS	|	496289.271		ppb		1.604		451733.150
95	Mo	|	156377.996	93.492015	ppb		1.304	0.729	137.778
115	In-IS	>	240452.544		ppb		1.810		242580.196
111	Cd	|	161089.605	99.551326	ppb		1.000	0.905	7.488
118	Sn	|	189659.629	42.229455	ppb		0.888	0.941	1440.073
121	Sb	|	497994.681	101.299558	ppb		0.408	1.449	295.559
135	Ba	|	302586.419	262.408510	ppb		2.207	3.541	20.000
165	Ho-IS	|	314673.549		ppb		0.547		310147.483
159	Tb-IS	|	291064.207		ppb		0.633		290896.036
207	Pb	|	1530051.912	102.188589	ppb		0.836	0.695	194.445
203	Tl	|	452256.651	99.703180	ppb		1.099	1.212	42.222
209	Bi-IS	>	159505.530		ppb		0.220		166907.154
51	V	|	80573.277	108.726106	ppb		1.354	2.708	41.111
59	Co	|	182610.876	95.031418	ppb		0.734	2.377	21.111
60	Ni	|	110204.640	107.323833	ppb		1.739	0.824	36.667
75	As	|	55642.474	105.231942	ppb		1.319	1.817	754.334
71	Ga-ISK	>	129253.305		ppb		1.637		125407.005
82	Se-2	|	4936.671	102.168820	ppb		1.280	2.350	-0.151
107	Ag-1	|	210146.826	49.186237	ppb		1.510	0.229	94.445
115	In-ISK	|	111237.936		ppb		0.989		110883.016
45	Sc-ISK	>	318591.237		ppb		0.731		293507.004
23	Na	|	20774145.528	36769.019577	ppb		0.950	0.509	2830.281
39	K	|	2252696.101	1555.557489	ppb		0.986	1.095	143751.866
24	Mg	|	61736978.027	96438.287669	ppb		0.423	1.049	241.669
159	Tb-ISK	|	208899.027		ppb		0.941		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-A-4-C MSD

Autosampler Position: 121

Sample Date/Time: Friday, April 17, 2020 21:24:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-A-4-C MSD.312

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47913.554		ppb		1.028		34787.881
9	Be	|	160979.778	97.240768	ppb	1.123	1.883		17.778
10	B	|	191317.094	477.747556	ppb	1.054	1.961		2534.669
27	Al	|	644837.589	101.887279	ppb	2.408	3.326		4165.052
43	Ca-2	|	990378.655	47461.911502	ppb	0.578	0.312		103.334
49	Ti	|	67479.005	93.005681	ppb	1.028	1.670		224.446
52	Cr	|	1084063.053	116.773472	ppb	0.426	1.017		9056.204
55	Mn	|	1233598.975	88.069781	ppb	1.390	0.508		683.350
57	Fe	|	1282722.825	4677.309629	ppb	1.414	0.719		8352.444
45	Sc-IS	>	1882367.925		ppb	0.888			1757984.616
66	Zn	|	138579.045	95.450427	ppb	1.808	1.224		685.572
86	Sr	|	1405698.419	758.513639	ppb	2.038	1.551		4.093
65	Cu	|	184133.552	89.956354	ppb	1.891	1.227		124.107
69	Ga-IS	|	495877.783		ppb	2.239			451733.150
95	Mo	|	160987.579	97.363352	ppb	0.435	1.327		137.778
115	In-IS	>	242787.114		ppb	0.820			242580.196
111	Cd	|	161966.542	99.128785	ppb	0.893	1.616		7.488
118	Sn	|	194736.198	42.944228	ppb	1.221	1.182		1440.073
121	Sb	|	502846.076	101.286294	ppb	1.616	1.500		295.559
135	Ba	|	306952.858	263.539138	ppb	2.489	2.372		20.000
165	Ho-IS	|	312936.947		ppb	2.118			310147.483
159	Tb-IS	|	293723.670		ppb	1.388			290896.036
207	Pb	|	1519272.034	102.126662	ppb	0.429	1.263		194.445
203	Tl	|	452696.992	100.450420	ppb	1.938	2.558		42.222
209	Bi-IS	>	158489.914		ppb	0.850			166907.154
51	V	|	79061.530	109.123608	ppb	1.322	2.171		41.111
59	Co	|	179163.296	95.368102	ppb	1.421	2.196		21.111
60	Ni	|	107397.868	106.986912	ppb	2.156	1.372		36.667
75	As	|	55494.392	107.391826	ppb	1.344	2.088		754.334
71	Ga-ISK	>	126348.534		ppb	0.954			125407.005
82	Se-2	|	5066.062	107.244896	ppb	0.890	1.758		-0.151
107	Ag-1	|	210281.193	50.345619	ppb	2.039	1.116		94.445
115	In-ISK	|	111609.308		ppb	1.279			110883.016
45	Sc-ISK	>	312261.753		ppb	1.231			293507.004
23	Na	|	20342553.557	36734.335412	ppb	1.488	0.323		2830.281
39	K	|	2232789.197	1574.430776	ppb	0.652	0.862		143751.866
24	Mg	|	61822594.791	98526.474487	ppb	1.049	0.322		241.669
159	Tb-ISK	|	209658.779		ppb	1.280			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-A-4-A PDS

Autosampler Position: 122

Sample Date/Time: Friday, April 17, 2020 21:27:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-A-4-A PDS.313

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	47479.899		ppb		1.820		34787.881
9	Be	|	160880.882	97.912747	ppb	1.018	0.922		17.778
10	B	|	189166.552	475.885195	ppb	1.248	0.561		2534.669
27	Al	|	634780.924	101.040471	ppb	3.154	3.265		4165.052
43	Ca-2	|	980398.395	47340.556471	ppb	0.850	0.253		103.334
49	Ti	|	71191.403	98.882483	ppb	1.008	0.620		224.446
52	Cr	|	1090965.301	118.425253	ppb	0.313	0.839		9056.204
55	Mn	|	1235479.197	88.881322	ppb	0.360	0.544		683.350
57	Fe	|	1323487.825	4864.279308	ppb	1.077	1.216		8352.444
45	Sc-IS	>	1868147.794		ppb	0.879			1757984.616
66	Zn	|	139761.530	97.014930	ppb	1.352	1.698		685.572
86	Sr	|	1394885.946	758.442594	ppb	0.987	0.773		4.093
65	Cu	|	193937.264	95.476696	ppb	2.291	2.240		124.107
69	Ga-IS	|	495161.680		ppb	1.893			451733.150
95	Mo	|	160005.543	97.504875	ppb	0.673	1.282		137.778
115	In-IS	>	240007.332		ppb	0.822			242580.196
111	Cd	|	165810.307	102.643185	ppb	1.730	0.917		7.488
118	Sn	|	432368.971	96.857519	ppb	0.646	1.473		1440.073
121	Sb	|	473607.885	96.508100	ppb	1.266	2.015		295.559
135	Ba	|	298771.487	259.527478	ppb	4.456	4.894		20.000
165	Ho-IS	|	310523.424		ppb	1.349			310147.483
159	Tb-IS	[	291284.292		ppb	0.991			290896.036
207	Pb	|	1510096.167	103.627786	ppb	0.432	0.932		194.445
203	Tl	|	446256.479	101.090432	ppb	0.776	1.897		42.222
209	Bi-IS	>	155251.351		ppb	1.231			166907.154
51	V	|	80072.677	110.373988	ppb	0.758	0.766		41.111
59	Co	|	178032.482	94.645852	ppb	0.305	1.225		21.111
60	Ni	|	107985.574	107.442093	ppb	1.842	0.918		36.667
75	As	|	54591.258	105.470320	ppb	2.023	1.126		754.334
71	Ga-ISK	>	126504.360		ppb	1.111			125407.005
82	Se-2	|	4974.700	105.195367	ppb	3.673	4.436		-0.151
107	Ag-1	|	184847.240	44.207062	ppb	1.343	2.016		94.445
115	In-ISK	|	109864.082		ppb	0.823			110883.016
45	Sc-ISK	>	312412.556		ppb	0.723			293507.004
23	Na	|	20166003.960	36397.494838	ppb	1.459	0.818		2830.281
39	K	|	2172896.967	1528.234723	ppb	0.752	0.844		143751.866
24	Mg	|	60624226.083	96565.245602	ppb	1.537	0.940		241.669
159	Tb-ISK	|	208295.161		ppb	1.675			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-B-2-A

Autosampler Position: 123

Sample Date/Time: Friday, April 17, 2020 21:30:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-B-2-A.314

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	51080.053		ppb		0.962		34787.881
9	Be	|	40.000	0.012662	ppb	50.690	98.064		17.778
10	B	|	358500.440	899.153771	ppb	0.632	0.379		2534.669
27	Al	|	16501.760	1.909397	ppb	4.373	5.077		4165.052
43	Ca-2	|	839590.006	40146.477650	ppb	0.703	0.557		103.334
49	Ti	|	1031.148	1.090754	ppb	7.332	9.664		224.446
52	Cr	|	636831.061	68.014542	ppb	1.391	2.058		9056.204
55	Mn	|	1747.885	0.072313	ppb	3.054	4.628		683.350
57	Fe	|	41464.548	119.091563	ppb	1.952	2.611		8352.444
45	Sc-IS	>	1886495.212		ppb	0.692			1757984.616
66	Zn	|	3797.171	2.115680	ppb	2.587	3.908		685.572
86	Sr	|	1294839.645	697.249412	ppb	1.520	2.114		4.093
65	Cu	|	1203.318	0.522194	ppb	4.356	5.677		124.107
69	Ga-IS	|	463520.463		ppb	1.957			451733.150
95	Mo	|	3393.737	1.960984	ppb	5.548	6.507		137.778
115	In-IS	>	235621.343		ppb	0.444			242580.196
111	Cd	|	33.984	0.016861	ppb	36.794	47.138		7.488
118	Sn	|	9197.409	1.785009	ppb	4.803	5.154		1440.073
121	Sb	|	11581.385	2.345027	ppb	9.150	9.042		295.559
135	Ba	|	153065.038	135.395803	ppb	3.070	2.722		20.000
165	Ho-IS	|	304747.515		ppb	1.028			310147.483
159	Tb-IS	|	286150.943		ppb	0.884			290896.036
207	Pb	|	1274.468	0.075489	ppb	5.311	5.609		194.445
203	Tl	|	260.002	0.050291	ppb	5.875	6.210		42.222
209	Bi-IS	>	154451.578		ppb	0.615			166907.154
51	V	|	7575.342	10.364202	ppb	2.762	3.072		41.111
59	Co	|	101.111	0.042324	ppb	25.607	32.850		21.111
60	Ni	|	1663.430	1.614658	ppb	2.628	2.415		36.667
75	As	|	1865.176	2.154213	ppb	4.158	6.538		754.334
71	Ga-ISK	>	126822.678		ppb	0.307			125407.005
82	Se-2	|	198.142	4.182405	ppb	13.869	14.076		-0.151
107	Ag-1	|	356.671	0.062328	ppb	9.847	13.467		94.445
115	In-ISK	|	110076.938		ppb	0.381			110883.016
45	Sc-ISK	>	311950.064		ppb	2.024			293507.004
23	Na	|	44557427.289	80572.632580	ppb	0.375	2.135		2830.281
39	K	|	1317078.707	882.358197	ppb	0.756	1.455		143751.866
24	Mg	|	64066091.968	102230.855754	ppb	0.600	2.167		241.669
159	Tb-ISK	|	208549.457		ppb	1.545			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-B-3-A

Autosampler Position: 124

Sample Date/Time: Friday, April 17, 2020 21:32:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-B-3-A.315

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48108.655		ppb	1.236		34787.881
9	Be	24.444	0.003299	ppb	20.830	99.293	17.778
10	B	158425.011	394.438749	ppb	2.271	1.064	2534.669
27	Al	12652.272	1.303918	ppb	3.761	6.295	4165.052
43	Ca-2	906135.593	43435.497283	ppb	0.805	0.906	103.334
49	Ti	765.576	0.727693	ppb	9.147	15.267	224.446
52	Cr	210266.273	21.803829	ppb	1.262	0.266	9056.204
55	Mn	1143.379	0.029471	ppb	4.817	17.075	683.350
57	Fe	42562.207	123.484092	ppb	1.390	0.528	8352.444
45	Sc-IS	> 1881973.413		ppb	1.357		1757984.616
66	Zn	2399.090	1.153570	ppb	1.024	2.764	685.572
86	Sr	1244610.512	671.680356	ppb	3.138	2.210	4.093
65	Cu	1668.678	0.750534	ppb	8.488	7.763	124.107
69	Ga-IS	476189.201		ppb	1.853		451733.150
95	Mo	2314.632	1.311506	ppb	6.346	5.518	137.778
115	In-IS	> 238099.669		ppb	1.350		242580.196
111	Cd	11.806	0.002816	ppb	77.215	204.165	7.488
118	Sn	3986.113	0.582475	ppb	6.329	8.124	1440.073
121	Sb	3519.323	0.663430	ppb	4.766	3.843	295.559
135	Ba	191165.354	167.308972	ppb	4.201	2.875	20.000
165	Ho-IS	304790.700		ppb	1.150		310147.483
159	Tb-IS	284959.660		ppb	0.739		290896.036
207	Pb	445.558	0.018415	ppb	7.642	12.511	194.445
203	Tl	67.778	0.006573	ppb	15.025	33.642	42.222
209	Bi-IS	> 153982.153		ppb	1.112		166907.154
51	V	7068.416	9.653632	ppb	2.360	1.682	41.111
59	Co	160.001	0.073376	ppb	15.023	16.658	21.111
60	Ni	10228.105	10.106173	ppb	0.296	0.877	36.667
75	As	1750.181	1.924944	ppb	7.198	12.043	754.334
71	Ga-ISK	> 126980.780		ppb	1.089		125407.005
82	Se-2	55.815	1.178855	ppb	16.427	16.519	-0.151
107	Ag-1	157.779	0.014765	ppb	19.170	45.961	94.445
115	In-ISK	111238.771		ppb	1.834		110883.016
45	Sc-ISK	> 306154.729		ppb	0.460		293507.004
23	Na	20154617.480	37121.676401	ppb	0.791	0.592	2830.281
39	K	827262.622	522.908616	ppb	1.384	1.374	143751.866
24	Mg	59372049.617	96508.930251	ppb	0.571	0.881	241.669
159	Tb-ISK	208192.940		ppb	1.411		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 21:35:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.316

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34163.026		ppb		1.194		34787.881
9	Be	|	156057.815	97.535595	ppb		0.986	0.314	17.778
10	B	|	95872.871	244.396412	ppb		0.941	0.311	2534.669
27	Al	|	627655.378	102.603125	ppb		1.656	1.040	4165.052
43	Ca-2	|	101274.383	5017.421003	ppb		0.543	0.396	103.334
49	Ti	|	70499.128	100.566953	ppb		2.003	1.895	224.446
52	Cr	|	906476.624	100.895006	ppb		1.847	1.883	9056.204
55	Mn	|	1291538.460	95.422360	ppb		1.255	1.256	683.350
57	Fe	|	1280593.330	4833.278501	ppb		1.355	1.421	8352.444
45	Sc-IS	>	1819088.238		ppb		0.671		1757984.616
66	Zn	|	141858.708	101.146509	ppb		1.265	1.597	685.572
86	Sr	|	179174.780	100.053165	ppb		1.377	1.824	4.093
65	Cu	|	197901.649	100.059961	ppb		1.349	1.463	124.107
69	Ga-IS	|	486841.944		ppb		1.348		451733.150
95	Mo	|	161975.351	101.363473	ppb		0.864	0.294	137.778
115	In-IS	>	255459.426		ppb		1.117		242580.196
111	Cd	|	169102.172	98.356518	ppb		0.748	0.385	7.488
118	Sn	|	467919.361	98.478180	ppb		1.244	0.480	1440.073
121	Sb	|	508634.426	97.360983	ppb		2.851	2.278	295.559
135	Ba	|	117935.010	96.213079	ppb		2.544	1.695	20.000
165	Ho-IS	|	317295.561		ppb		1.606		310147.483
159	Tb-IS	|	299917.012		ppb		1.307		290896.036
207	Pb	|	1580806.831	99.448210	ppb		1.641	0.936	194.445
203	Tl	|	479709.222	99.626664	ppb		1.607	2.168	42.222
209	Bi-IS	>	169334.426		ppb		1.083		166907.154
51	V	|	74934.917	99.315576	ppb		0.843	2.413	41.111
59	Co	|	193024.322	98.672448	ppb		1.283	2.902	21.111
60	Ni	|	103705.183	99.195714	ppb		2.265	1.468	36.667
75	As	|	53791.910	99.835808	ppb		1.756	0.586	754.334
71	Ga-ISK	>	131590.051		ppb		1.620		125407.005
82	Se-2	|	4970.048	101.035565	ppb		0.896	2.342	-0.151
107	Ag-1	|	426960.854	98.212031	ppb		1.657	3.168	94.445
115	In-ISK	|	113101.466		ppb		1.172		110883.016
45	Sc-ISK	>	307496.821		ppb		1.430		293507.004
23	Na	|	2832261.309	5189.710351	ppb		0.726	1.316	2830.281
39	K	|	6937196.836	5217.143491	ppb		0.765	1.106	143751.866
24	Mg	|	3191242.836	5164.890977	ppb		0.453	1.465	241.669
159	Tb-ISK	|	212594.928		ppb		0.787		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 21:38:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.317

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		33857.856		ppb		1.036		34787.881
9	Be	|		18.889	0.000758	ppb	20.377	348.588		17.778
10	B	|		3179.244	1.767749	ppb	7.221	41.016		2534.669
27	Al	|		4539.611	0.065316	ppb	3.047	49.860		4165.052
43	Ca-2	|		115.000	0.619739	ppb	26.447	263.852		103.334
49	Ti	|		241.113	0.025315	ppb	5.756	83.893		224.446
52	Cr	|		10213.651	0.136680	ppb	2.043	16.524		9056.204
55	Mn	|		787.800	0.008124	ppb	8.970	73.534		683.350
57	Fe	|		9701.071	5.363509	ppb	1.912	6.781		8352.444
45	Sc-IS	|>		1755101.754		ppb	1.147			1757984.616
66	Zn	|		818.913	0.099526	ppb	10.500	59.099		685.572
86	Sr	|		73.594	0.040273	ppb	31.836	33.957		4.093
65	Cu	|		136.250	0.006557	ppb	39.131	428.383		124.107
69	Ga-IS	|		455299.129		ppb	3.016			451733.150
95	Mo	|		771.132	0.411144	ppb	6.057	6.106		137.778
115	In-IS	|>		246387.346		ppb	1.175			242580.196
111	Cd	|		21.714	0.008428	ppb	79.889	121.502		7.488
118	Sn	|		5110.914	0.798822	ppb	2.528	4.249		1440.073
121	Sb	|		1891.237	0.316125	ppb	9.668	12.178		295.559
135	Ba	|		33.333	0.010955	ppb	36.056	90.515		20.000
165	Ho-IS	|		303356.331		ppb	1.391			310147.483
159	Tb-IS	|		287757.794		ppb	2.007			290896.036
207	Pb	|		497.781	0.020123	ppb	4.459	7.990		194.445
203	Tl	|		136.667	0.020598	ppb	12.195	18.299		42.222
209	Bi-IS	|>		163036.185		ppb	0.640			166907.154
51	V	|		50.000	0.010911	ppb	35.277	214.247		41.111
59	Co	|		34.444	0.006839	ppb	40.290	109.108		21.111
60	Ni	|		35.556	-0.001740	ppb	32.924	673.689		36.667
75	As	|		754.198	-0.028942	ppb	4.489	186.275		754.334
71	Ga-ISK	|>		127842.851		ppb	0.941			125407.005
82	Se-2	|		4.523	0.098209	ppb	126.610	122.224		-0.151
107	Ag-1	|		298.892	0.047962	ppb	4.643	6.339		94.445
115	In-ISK	|		113114.020		ppb	2.548			110883.016
45	Sc-ISK	|>		301426.860		ppb	0.338			293507.004
23	Na	|		4715.779	3.385549	ppb	4.333	11.897		2830.281
39	K	|		146346.908	-1.006301	ppb	0.394	45.990		143751.866
24	Mg	|		3673.808	5.656534	ppb	8.420	9.321		241.669
159	Tb-ISK	|		205126.268		ppb	0.904			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-B-5-A

Autosampler Position: 125

Sample Date/Time: Friday, April 17, 2020 21:41:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-B-5-A.318

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	45490.149		ppb	3.496		34787.881
9	Be	34.444	0.010053	ppb	62.965	135.411	17.778
10	B	250268.239	647.883338	ppb	2.109	1.900	2534.669
27	Al	13166.071	1.454462	ppb	3.981	6.975	4165.052
43	Ca-2	692308.565	34267.330328	ppb	1.352	0.281	103.334
49	Ti	1368.955	1.622802	ppb	5.259	5.106	224.446
52	Cr	65339.089	6.281484	ppb	0.888	0.697	9056.204
55	Mn	1642.317	0.068935	ppb	3.864	7.603	683.350
57	Fe	34418.081	97.719801	ppb	1.078	2.282	8352.444
45	Sc-IS	> 1822353.362		ppb	1.073		1757984.616
66	Zn	4340.660	2.596554	ppb	3.244	3.881	685.572
86	Sr	798911.310	445.343220	ppb	2.127	2.492	4.093
65	Cu	1233.164	0.557942	ppb	4.442	5.691	124.107
69	Ga-IS	444219.591		ppb	1.481		451733.150
95	Mo	3758.274	2.261822	ppb	6.940	8.290	137.778
115	In-IS	> 234876.410		ppb	0.475		242580.196
111	Cd	28.774	0.013603	ppb	44.503	59.079	7.488
118	Sn	1999.029	0.138836	ppb	6.276	20.213	1440.073
121	Sb	1984.583	0.353718	ppb	9.263	10.289	295.559
135	Ba	82927.933	73.581407	ppb	3.128	2.896	20.000
165	Ho-IS	308891.663		ppb	0.719		310147.483
159	Tb-IS	287175.752		ppb	1.158		290896.036
207	Pb	461.114	0.020726	ppb	4.357	8.415	194.445
203	Tl	125.556	0.020846	ppb	17.274	23.242	42.222
209	Bi-IS	> 148302.528		ppb	1.078		166907.154
51	V	8323.536	11.559018	ppb	2.235	1.942	41.111
59	Co	132.223	0.059817	ppb	1.456	1.638	21.111
60	Ni	907.807	0.877753	ppb	12.384	13.080	36.667
75	As	2498.930	3.464567	ppb	3.238	5.004	754.334
71	Ga-ISK	> 125003.416		ppb	0.370		125407.005
82	Se-2	105.516	2.261114	ppb	9.069	9.379	-0.151
107	Ag-1	95.556	0.000333	ppb	16.485	1116.266	94.445
115	In-ISK	109489.524		ppb	2.329		110883.016
45	Sc-ISK	> 307118.388		ppb	0.258		293507.004
23	Na	81642558.137	149919.258288	ppb	1.010	1.105	2830.281
39	K	1531337.612	1062.768920	ppb	1.305	1.231	143751.866
24	Mg	38012967.015	61594.254816	ppb	1.958	1.909	241.669
159	Tb-ISK	204203.970		ppb	1.400		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-F-6-A

Autosampler Position: 126

Sample Date/Time: Friday, April 17, 2020 21:43:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-F-6-A.319

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	49705.254		ppb		2.760		34787.881
9	Be	|	12.222	-0.004103	ppb	83.320	149.010		17.778
10	B	|	250188.585	630.457734	ppb	0.970	0.413		2534.669
27	Al	|	17159.188	2.035932	ppb	0.646	0.237		4165.052
43	Ca-2	|	860199.641	41460.817075	ppb	0.365	0.391		103.334
49	Ti	|	892.250	0.908680	ppb	3.531	4.084		224.446
52	Cr	|	416334.032	44.458233	ppb	0.273	0.802		9056.204
55	Mn	|	1096.709	0.026518	ppb	3.288	7.533		683.350
57	Fe	|	40965.337	118.446469	ppb	2.210	1.984		8352.444
45	Sc-IS	>	1871558.055		ppb	0.753			1757984.616
66	Zn	|	1701.212	0.676399	ppb	2.746	3.488		685.572
86	Sr	|	1252240.106	679.677157	ppb	2.893	3.143		4.093
65	Cu	|	1080.424	0.466180	ppb	8.533	9.193		124.107
69	Ga-IS	|	469293.600		ppb	1.428			451733.150
95	Mo	|	2026.811	1.144727	ppb	8.472	9.319		137.778
115	In-IS	>	238297.219		ppb	2.127			242580.196
111	Cd	|	14.633	0.004534	ppb	36.428	72.350		7.488
118	Sn	|	1607.868	0.043624	ppb	5.866	38.396		1440.073
121	Sb	|	727.796	0.089759	ppb	6.151	7.498		295.559
135	Ba	|	183247.571	160.293706	ppb	3.391	2.869		20.000
165	Ho-IS	|	307457.310		ppb	1.746			310147.483
159	Tb-IS	|	288564.183		ppb	0.225			290896.036
207	Pb	|	422.225	0.016335	ppb	7.586	14.339		194.445
203	Tl	|	38.889	-0.000161	ppb	21.571	1154.937		42.222
209	Bi-IS	>	156530.699		ppb	0.715			166907.154
51	V	|	8470.288	11.553277	ppb	1.381	3.065		41.111
59	Co	|	54.445	0.017473	ppb	17.674	30.491		21.111
60	Ni	|	1282.280	1.231062	ppb	3.806	2.315		36.667
75	As	|	1848.046	2.106535	ppb	2.784	2.049		754.334
71	Ga-ISK	>	127319.402		ppb	1.765			125407.005
82	Se-2	|	125.136	2.631483	ppb	6.056	5.513		-0.151
107	Ag-1	|	67.778	-0.006696	ppb	24.260	56.446		94.445
115	In-ISK	|	110406.125		ppb	0.568			110883.016
45	Sc-ISK	>	309922.677		ppb	1.102			293507.004
23	Na	|	33755664.823	61427.026168	ppb	0.432	1.471		2830.281
39	K	|	1322368.387	892.803971	ppb	0.367	0.840		143751.866
24	Mg	|	60807288.243	97644.702032	ppb	0.999	1.343		241.669
159	Tb-ISK	|	207543.427		ppb	0.581			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-A-7-A

Autosampler Position: 127

Sample Date/Time: Friday, April 17, 2020 21:46:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-A-7-A.320

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	47714.008		ppb	1.678		34787.881
9	Be	20.000	0.000748	ppb	28.868	484.937	17.778
10	B	244981.644	620.948939	ppb	0.624	0.842	2534.669
27	Al	17633.102	2.129293	ppb	2.328	4.620	4165.052
43	Ca-2	848301.560	41131.273240	ppb	0.904	0.634	103.334
49	Ti	844.469	0.849630	ppb	3.287	5.708	224.446
52	Cr	420336.478	45.172181	ppb	0.202	1.295	9056.204
55	Mn	1123.378	0.028908	ppb	3.706	7.080	683.350
57	Fe	40504.027	117.631088	ppb	2.392	1.790	8352.444
45	Sc-IS	> 1860517.368		ppb	1.403		1757984.616
66	Zn	2801.386	1.454247	ppb	2.296	1.888	685.572
86	Sr	1251813.608	683.427584	ppb	1.776	0.982	4.093
65	Cu	957.076	0.408143	ppb	12.662	13.582	124.107
69	Ga-IS	470561.528		ppb	2.330		451733.150
95	Mo	1821.227	1.026043	ppb	1.852	1.447	137.778
115	In-IS	> 237425.193		ppb	1.317		242580.196
111	Cd	13.953	0.004165	ppb	36.860	78.922	7.488
118	Sn	1333.396	-0.017216	ppb	2.411	57.641	1440.073
121	Sb	687.794	0.082116	ppb	7.194	11.889	295.559
135	Ba	181530.492	159.351369	ppb	3.773	3.078	20.000
165	Ho-IS	306914.774		ppb	1.822		310147.483
159	Tb-IS	285729.149		ppb	0.097		290896.036
207	Pb	448.892	0.019270	ppb	7.212	12.238	194.445
203	Tl	42.222	0.000936	ppb	12.059	123.331	42.222
209	Bi-IS	> 150978.065		ppb	0.457		166907.154
51	V	8371.341	11.471079	ppb	0.897	1.557	41.111
59	Co	54.445	0.017589	ppb	7.070	12.561	21.111
60	Ni	1271.168	1.226512	ppb	4.937	4.911	36.667
75	As	1934.884	2.294481	ppb	3.923	6.162	754.334
71	Ga-ISK	> 126700.563		ppb	1.433		125407.005
82	Se-2	125.143	2.643907	ppb	6.044	5.007	-0.151
107	Ag-1	60.000	-0.008469	ppb	14.699	23.768	94.445
115	In-ISK	110774.157		ppb	1.127		110883.016
45	Sc-ISK	> 312406.826		ppb	0.538		293507.004
23	Na	33450403.635	60382.398079	ppb	0.798	1.021	2830.281
39	K	1321674.045	884.239541	ppb	1.056	1.556	143751.866
24	Mg	60456168.762	96304.869442	ppb	0.213	0.729	241.669
159	Tb-ISK	209176.446		ppb	1.260		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-A-7-B MS

Autosampler Position: 128

Sample Date/Time: Friday, April 17, 2020 21:49:27

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-A-7-B MS.321

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	48357.274		ppb		1.491		34787.881
9	Be	|	156583.755	95.135705	ppb	2.253	2.160		17.778
10	B	|	277154.696	699.268080	ppb	2.272	2.276		2534.669
27	Al	|	642529.478	102.105604	ppb	3.134	3.084		4165.052
43	Ca-2	|	953361.237	45958.468733	ppb	0.427	0.601		103.334
49	Ti	|	67899.872	94.137929	ppb	0.416	0.515		224.446
52	Cr	|	1291169.639	140.111201	ppb	1.275	1.408		9056.204
55	Mn	|	1221183.704	87.704683	ppb	1.079	1.255		683.350
57	Fe	|	1273536.388	4671.506117	ppb	2.097	2.188		8352.444
45	Sc-IS	>	1871258.768		ppb	0.175			1757984.616
66	Zn	|	134611.483	93.261255	ppb	2.438	2.552		685.572
86	Sr	|	1413260.746	767.144538	ppb	1.256	1.219		4.093
65	Cu	|	181016.236	88.964033	ppb	2.683	2.835		124.107
69	Ga-IS	|	489037.222		ppb	1.308			451733.150
95	Mo	|	158023.652	96.129337	ppb	0.476	0.373		137.778
115	In-IS	>	236915.474		ppb	0.707			242580.196
111	Cd	|	159297.270	99.906636	ppb	0.183	0.770		7.488
118	Sn	|	208406.035	47.130520	ppb	1.485	1.853		1440.073
121	Sb	|	494248.755	102.021004	ppb	1.948	1.801		295.559
135	Ba	|	295350.983	259.868015	ppb	2.583	2.641		20.000
165	Ho-IS	|	312344.433		ppb	0.750			310147.483
159	Tb-IS	|	290762.665		ppb	0.852			290896.036
207	Pb	|	1494752.233	101.673660	ppb	0.384	1.308		194.445
203	Tl	|	443716.786	99.624721	ppb	0.466	1.355		42.222
209	Bi-IS	>	156628.451		ppb	0.951			166907.154
51	V	|	81380.057	112.086410	ppb	1.424	3.251		41.111
59	Co	|	180874.631	96.072259	ppb	1.269	3.054		21.111
60	Ni	|	98015.099	97.426614	ppb	0.462	1.466		36.667
75	As	|	54941.429	106.049212	ppb	1.434	1.450		754.334
71	Ga-ISK	>	126652.418		ppb	1.902			125407.005
82	Se-2	|	4971.709	105.025289	ppb	3.502	4.563		-0.151
107	Ag-1	|	199529.358	47.670055	ppb	0.723	2.013		94.445
115	In-ISK	|	111203.076		ppb	1.944			110883.016
45	Sc-ISK	>	310288.083		ppb	0.632			293507.004
23	Na	|	33923755.892	61653.263461	ppb	0.799	0.181		2830.281
39	K	|	2727277.972	1961.801977	ppb	1.519	1.664		143751.866
24	Mg	|	63157556.034	101294.740236	ppb	1.359	1.460		241.669
159	Tb-ISK	|	207480.589		ppb	1.000			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25721-A-7-C MSD

Autosampler Position: 129

Sample Date/Time: Friday, April 17, 2020 21:52:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25721-A-7-C MSD.322

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	48134.298		ppb		1.319		34787.881
9	Be	|	156536.543	95.955324	ppb	2.122	2.509		17.778
10	B	|	278057.497	707.843099	ppb	2.206	2.301		2534.669
27	Al	|	649139.288	104.095577	ppb	2.385	3.038		4165.052
43	Ca-2	|	935464.055	45493.589281	ppb	0.989	0.733		103.334
49	Ti	|	67226.711	94.024509	ppb	1.132	0.194		224.446
52	Cr	|	1275306.319	139.608424	ppb	1.285	1.285		9056.204
55	Mn	|	1202709.927	87.140971	ppb	1.419	1.491		683.350
57	Fe	|	1260950.125	4666.084992	ppb	1.868	1.750		8352.444
45	Sc-IS	>	1854905.994		ppb	0.953			1757984.616
66	Zn	|	134308.629	93.870760	ppb	2.327	1.927		685.572
86	Sr	|	1396198.827	764.555306	ppb	1.572	1.073		4.093
65	Cu	|	179760.672	89.119543	ppb	2.122	1.512		124.107
69	Ga-IS	|	489031.095		ppb	1.765			451733.150
95	Mo	|	157225.043	96.485542	ppb	1.591	1.055		137.778
115	In-IS	>	241046.269		ppb	0.313			242580.196
111	Cd	|	158041.784	97.416046	ppb	0.911	0.643		7.488
118	Sn	|	226955.578	50.464252	ppb	1.624	1.328		1440.073
121	Sb	|	495272.936	100.478208	ppb	1.751	1.579		295.559
135	Ba	|	290000.926	250.782731	ppb	1.290	1.327		20.000
165	Ho-IS	|	309297.050		ppb	0.964			310147.483
159	Tb-IS	|	287129.192		ppb	0.949			290896.036
207	Pb	|	1494121.968	101.316037	ppb	0.271	0.301		194.445
203	Tl	|	441035.632	98.716372	ppb	0.423	0.599		42.222
209	Bi-IS	>	157103.590		ppb	0.530			166907.154
51	V	|	81365.549	112.118613	ppb	1.805	3.560		41.111
59	Co	|	178443.133	94.816241	ppb	0.607	2.518		21.111
60	Ni	|	97358.468	96.804057	ppb	1.698	1.123		36.667
75	As	|	54789.391	105.816880	ppb	1.699	2.875		754.334
71	Ga-ISK	>	126600.881		ppb	2.089			125407.005
82	Se-2	|	4930.358	104.198382	ppb	1.152	3.164		-0.151
107	Ag-1	|	201368.257	48.125641	ppb	0.927	1.173		94.445
115	In-ISK	|	111128.831		ppb	1.262			110883.016
45	Sc-ISK	>	311803.295		ppb	1.676			293507.004
23	Na	|	33567743.534	60718.417228	ppb	0.862	1.424		2830.281
39	K	|	2697648.095	1929.421995	ppb	1.001	1.221		143751.866
24	Mg	|	63138373.623	100785.063428	ppb	0.316	1.371		241.669
159	Tb-ISK	|	208629.356		ppb	1.781			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Friday, April 17, 2020 21:55:00

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\b.323

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		34666.458		ppb		0.983		34787.881
9	Be	|		30.000	0.007943	ppb	40.062	98.445		17.778
10	B	|		4087.251	4.227827	ppb	2.044	6.044		2534.669
27	Al	|		6346.966	0.373239	ppb	2.971	8.012		4165.052
43	Ca-2	|		225.002	6.260526	ppb	21.431	39.456		103.334
49	Ti	|		446.674	0.330144	ppb	6.109	12.464		224.446
52	Cr	|		15460.587	0.747983	ppb	2.366	5.236		9056.204
55	Mn	|		1060.039	0.028937	ppb	1.964	5.636		683.350
57	Fe	|		15528.439	28.306623	ppb	2.617	5.395		8352.444
45	Sc-IS	>		1755326.196		ppb		0.277		1757984.616
66	Zn	|		911.140	0.168246	ppb	3.683	14.085		685.572
86	Sr	|		188.502	0.106717	ppb	31.513	32.169		4.093
65	Cu	|		185.691	0.032385	ppb	1.815	4.858		124.107
69	Ga-IS	|		452908.877		ppb	2.849			451733.150
95	Mo	|		2798.052	1.726811	ppb	5.348	5.418		137.778
115	In-IS	>		244300.686		ppb	0.290			242580.196
111	Cd	|		19.680	0.007386	ppb	42.597	69.296		7.488
118	Sn	|		8007.803	1.447661	ppb	5.150	5.933		1440.073
121	Sb	|		1697.880	0.280377	ppb	13.189	15.682		295.559
135	Ba	|		74.445	0.046326	ppb	9.321	12.420		20.000
165	Ho-IS	|		304000.610		ppb	0.659			310147.483
159	Tb-IS	|		283241.571		ppb	0.811			290896.036
207	Pb	|		1093.349	0.058192	ppb	5.564	4.937		194.445
203	Tl	|		227.780	0.039682	ppb	34.300	42.251		42.222
209	Bi-IS	>		164931.339		ppb	2.108			166907.154
51	V	|		122.223	0.108337	ppb	6.298	8.223		41.111
59	Co	|		53.333	0.016613	ppb	25.000	44.530		21.111
60	Ni	|		67.778	0.029262	ppb	28.817	60.991		36.667
75	As	|		791.872	0.034478	ppb	8.069	411.468		754.334
71	Ga-ISK	>		128781.307		ppb	1.742			125407.005
82	Se-2	|		7.877	0.167027	ppb	67.494	66.797		-0.151
107	Ag-1	|		377.783	0.066128	ppb	18.389	26.107		94.445
115	In-ISK	|		112844.385		ppb	0.357			110883.016
45	Sc-ISK	>		301439.648		ppb	1.255			293507.004
23	Na	|		11221.076	15.556893	ppb	3.546	4.896		2830.281
39	K	|		143328.765	-3.364881	ppb	0.480	49.681		143751.866
24	Mg	|		15061.298	24.458868	ppb	7.425	7.810		241.669
159	Tb-ISK	|		206261.101		ppb	0.904			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LB4 570-63819_1-B @20

Autosampler Position: 130

Sample Date/Time: Friday, April 17, 2020 21:57:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LB4 570-63819_1-B @20.324

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33964.781		ppb	1.756		34787.881
9	Be	10.000	-0.004949	ppb	33.333	44.660	17.778
10	B	3107.005	1.647123	ppb	6.052	29.984	2534.669
27	Al	5452.157	0.229492	ppb	8.881	34.048	4165.052
43	Ca-2	113.334	0.582993	ppb	14.182	149.028	103.334
49	Ti	327.782	0.158651	ppb	4.110	14.693	224.446
52	Cr	17316.044	0.984271	ppb	0.952	3.334	9056.204
55	Mn	717.796	0.003268	ppb	3.547	70.404	683.350
57	Fe	11975.018	14.783306	ppb	1.769	7.721	8352.444
45	Sc-IS	> 1738239.540		ppb	0.669		1757984.616
66	Zn	667.793	-0.007458	ppb	4.304	328.391	685.572
86	Sr	59.636	0.032424	ppb	51.802	55.018	4.093
65	Cu	140.805	0.009631	ppb	15.302	123.191	124.107
69	Ga-IS	439314.872		ppb	1.626		451733.150
95	Mo	255.558	0.078160	ppb	19.967	42.277	137.778
115	In-IS	> 238612.813		ppb	1.243		242580.196
111	Cd	9.463	0.001295	ppb	61.551	278.914	7.488
118	Sn	3000.316	0.357902	ppb	5.035	8.215	1440.073
121	Sb	413.339	0.025202	ppb	7.031	27.640	295.559
135	Ba	421.117	0.350622	ppb	4.837	3.905	20.000
165	Ho-IS	299558.298		ppb	0.872		310147.483
159	Tb-IS	278392.171		ppb	1.104		290896.036
207	Pb	290.001	0.007488	ppb	10.535	26.630	194.445
203	Tl	36.667	-0.000583	ppb	9.091	144.549	42.222
209	Bi-IS	> 155215.389		ppb	1.079		166907.154
51	V	62.222	0.029063	ppb	13.482	41.208	41.111
59	Co	15.556	-0.002986	ppb	65.465	184.463	21.111
60	Ni	462.230	0.425421	ppb	12.288	13.090	36.667
75	As	766.316	0.017834	ppb	3.817	324.069	754.334
71	Ga-ISK	> 125895.657		ppb	0.694		125407.005
82	Se-2	2.859	0.063027	ppb	333.431	321.042	-0.151
107	Ag-1	116.667	0.005280	ppb	20.603	112.749	94.445
115	In-ISK	110897.013		ppb	1.215		110883.016
45	Sc-ISK	> 302318.907		ppb	0.937		293507.004
23	Na	22704568.012	42349.627547	ppb	1.005	0.239	2830.281
39	K	148846.998	0.613922	ppb	0.648	163.371	143751.866
24	Mg	3128.677	4.742060	ppb	6.035	7.327	241.669
159	Tb-ISK	205528.099		ppb	1.424		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63819_2-B @20

Autosampler Position: 131

Sample Date/Time: Friday, April 17, 2020 22:00:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LCS 570-63819_2-B @20.325

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34413.624		ppb		0.578		34787.881
9	Be	|	37690.781	24.643576	ppb	2.132	2.738		17.778
10	B	|	11459.039	24.553520	ppb	0.767	1.714		2534.669
27	Al	|	162379.970	27.261255	ppb	1.342	1.969		4165.052
43	Ca-2	|	785.022	35.444985	ppb	7.346	8.909		103.334
49	Ti	|	16346.014	24.148721	ppb	1.164	1.693		224.446
52	Cr	|	220994.047	24.953027	ppb	0.645	0.360		9056.204
55	Mn	|	284616.306	21.962949	ppb	0.923	0.712		683.350
57	Fe	|	17459.554	36.575558	ppb	1.875	2.415		8352.444
45	Sc-IS	>	1738465.844		ppb	0.667			1757984.616
66	Zn	|	34876.996	25.639796	ppb	3.239	2.784		685.572
86	Sr	|	39005.886	22.786585	ppb	2.436	1.829		4.093
65	Cu	|	45034.270	23.774382	ppb	1.982	1.504		124.107
69	Ga-IS	|	448630.738		ppb	1.304			451733.150
95	Mo	|	34761.138	22.692049	ppb	1.722	1.063		137.778
115	In-IS	>	237837.767		ppb	0.279			242580.196
111	Cd	|	39272.223	24.531098	ppb	0.903	1.180		7.488
118	Sn	|	105358.266	23.574457	ppb	1.648	1.876		1440.073
121	Sb	|	111371.673	22.854263	ppb	3.457	3.582		295.559
135	Ba	|	29279.996	25.646686	ppb	3.214	3.274		20.000
165	Ho-IS	|	301934.292		ppb	1.080			310147.483
159	Tb-IS	|	284026.966		ppb	0.908			290896.036
207	Pb	|	352643.555	23.887769	ppb	0.154	0.095		194.445
203	Tl	|	103700.619	23.189602	ppb	1.291	1.448		42.222
209	Bi-IS	>	157203.557		ppb	0.219			166907.154
51	V	|	16962.287	23.507514	ppb	0.767	1.990		41.111
59	Co	|	42480.855	22.738565	ppb	1.452	2.040		21.111
60	Ni	|	24387.470	24.411762	ppb	1.840	1.162		36.667
75	As	|	13420.362	24.992569	ppb	2.063	0.764		754.334
71	Ga-ISK	>	125600.907		ppb	1.362			125407.005
82	Se-2	|	1221.905	26.021519	ppb	3.382	3.269		-0.151
107	Ag-1	|	48307.100	11.620392	ppb	1.126	2.471		94.445
115	In-ISK	|	110022.907		ppb	0.223			110883.016
45	Sc-ISK	>	302419.777		ppb	0.546			293507.004
23	Na	|	22490236.003	41934.848006	ppb	1.239	0.697		2830.281
39	K	|	458629.152	242.698232	ppb	0.655	1.366		143751.866
24	Mg	|	14742.606	23.851477	ppb	2.244	2.659		241.669
159	Tb-ISK	|	203606.053		ppb	0.697			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63819_3-B @20

Autosampler Position: 132

Sample Date/Time: Friday, April 17, 2020 22:03:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\LCSD 570-63819_3-B @20.326

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34073.922		ppb		0.526		34787.881
9	Be	|	37219.538	24.358568	ppb		1.208	2.190	17.778
10	B	|	11699.234	25.246443	ppb		2.059	3.862	2534.669
27	Al	|	162640.969	27.335486	ppb		2.524	3.449	4165.052
43	Ca-2	|	751.687	33.780845	ppb		13.735	17.142	103.334
49	Ti	|	16170.258	23.907802	ppb		0.250	0.945	224.446
52	Cr	|	216084.242	24.399281	ppb		0.705	0.591	9056.204
55	Mn	|	282078.063	21.786441	ppb		1.504	0.957	683.350
57	Fe	|	17133.606	35.339338	ppb		2.391	2.651	8352.444
45	Sc-IS	>	1736865.618		ppb		1.024		1757984.616
66	Zn	|	34756.677	25.576042	ppb		1.000	0.329	685.572
86	Sr	|	39692.199	23.212026	ppb		0.783	1.207	4.093
65	Cu	|	44378.633	23.448593	ppb		1.871	0.863	124.107
69	Ga-IS	|	449027.530		ppb		1.440		451733.150
95	Mo	|	36488.766	23.848218	ppb		1.035	1.007	137.778
115	In-IS	>	236887.121		ppb		0.557		242580.196
111	Cd	|	39625.138	24.851159	ppb		1.294	1.519	7.488
118	Sn	|	105879.822	23.789537	ppb		0.700	1.237	1440.073
121	Sb	|	114013.282	23.493476	ppb		2.040	2.596	295.559
135	Ba	|	29340.126	25.806302	ppb		3.717	4.264	20.000
165	Ho-IS	|	300497.322		ppb		2.070		310147.483
159	Tb-IS	|	279497.983		ppb		1.304		290896.036
207	Pb	|	351886.281	23.575509	ppb		1.803	2.171	194.445
203	Tl	|	103099.697	22.805046	ppb		2.136	3.075	42.222
209	Bi-IS	>	158959.594		ppb		1.324		166907.154
51	V	|	16943.376	23.651111	ppb		1.332	1.637	41.111
59	Co	|	42527.682	22.928608	ppb		2.675	2.759	21.111
60	Ni	|	23923.356	24.125314	ppb		2.505	2.998	36.667
75	As	|	13042.285	24.438857	ppb		0.661	1.451	754.334
71	Ga-ISK	>	124685.111		ppb		0.727		125407.005
82	Se-2	|	1200.547	25.755434	ppb		4.290	4.494	-0.151
107	Ag-1	|	48037.300	11.638616	ppb		0.855	1.509	94.445
115	In-ISK	|	107906.855		ppb		0.422		110883.016
45	Sc-ISK	>	298245.782		ppb		1.070		293507.004
23	Na	|	22074644.255	41739.097802	ppb		0.675	0.897	2830.281
39	K	|	455676.760	245.395802	ppb		0.383	1.767	143751.866
24	Mg	|	13975.169	22.914711	ppb		2.728	3.809	241.669
159	Tb-ISK	|	201480.198		ppb		0.392		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25991-A-1-B @20

Autosampler Position: 133

Sample Date/Time: Friday, April 17, 2020 22:06:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25991-A-1-B @20.327

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34052.760		ppb	0.172		34787.881
9	Be	21.111	0.002420	ppb	9.116	47.366	17.778
10	B	2755.822	0.746593	ppb	4.344	37.398	2534.669
27	Al	3716.039	-0.063820	ppb	2.154	31.004	4165.052
43	Ca-2	230.002	6.747210	ppb	15.676	29.784	103.334
49	Ti	354.449	0.202985	ppb	11.982	31.819	224.446
52	Cr	13430.756	0.540252	ppb	1.225	6.283	9056.204
55	Mn	1174.493	0.039345	ppb	1.639	2.165	683.350
57	Fe	12703.426	18.091256	ppb	2.808	5.419	8352.444
45	Sc-IS	> 1723846.327		ppb	0.998		1757984.616
66	Zn	607.791	-0.049221	ppb	20.887	186.694	685.572
86	Sr	176.342	0.101431	ppb	18.913	18.542	4.093
65	Cu	241.241	0.063735	ppb	11.731	21.901	124.107
69	Ga-IS	447158.337		ppb	2.297		451733.150
95	Mo	950.032	0.538153	ppb	12.549	13.508	137.778
115	In-IS	> 239372.042		ppb	0.234		242580.196
111	Cd	18.005	0.006585	ppb	36.208	61.254	7.488
118	Sn	1777.889	0.080389	ppb	4.131	19.477	1440.073
121	Sb	1867.901	0.322164	ppb	9.066	10.481	295.559
135	Ba	42.222	0.019591	ppb	55.451	104.057	20.000
165	Ho-IS	294309.790		ppb	0.939		310147.483
159	Tb-IS	274693.667		ppb	0.576		290896.036
207	Pb	945.568	0.049696	ppb	3.179	4.591	194.445
203	Tl	127.778	0.018755	ppb	24.657	34.627	42.222
209	Bi-IS	> 162231.595		ppb	1.096		166907.154
51	V	52.222	0.014732	ppb	9.750	54.252	41.111
59	Co	20.000	-0.000685	ppb	33.333	536.925	21.111
60	Ni	46.667	0.009558	ppb	53.927	260.231	36.667
75	As	745.621	-0.032958	ppb	15.663	699.611	754.334
71	Ga-ISK	> 126801.462		ppb	1.524		125407.005
82	Se-2	181.803	3.837764	ppb	6.221	6.094	-0.151
107	Ag-1	138.890	0.010400	ppb	11.085	40.439	94.445
115	In-ISK	111130.676		ppb	0.702		110883.016
45	Sc-ISK	> 302184.997		ppb	0.912		293507.004
23	Na	470542.502	872.698791	ppb	2.033	1.346	2830.281
39	K	145263.738	-2.137623	ppb	0.796	51.514	143751.866
24	Mg	1981.804	2.854757	ppb	3.332	4.833	241.669
159	Tb-ISK	202427.577		ppb	1.225		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 22:08:51

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.328

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		33556.033		ppb		0.922		34787.881
9	Be	|		151352.042	98.877442	ppb		1.086	0.899	17.778
10	B	|		93259.039	248.597756	ppb		1.867	1.274	2534.669
27	Al	|		615470.376	105.199592	ppb		1.482	2.348	4165.052
43	Ca-2	|		97822.145	5065.723792	ppb		1.229	1.032	103.334
49	Ti	|		68682.505	102.415538	ppb		1.282	1.055	224.446
52	Cr	|		885116.286	102.995179	ppb		0.863	0.024	9056.204
55	Mn	|		1254731.027	96.893837	ppb		1.454	0.665	683.350
57	Fe	|		1252843.383	4942.810727	ppb		2.205	1.479	8352.444
45	Sc-IS	>		1740340.935		ppb		0.846		1757984.616
66	Zn	|		136516.257	101.727072	ppb		3.085	2.266	685.572
86	Sr	|		176177.924	102.833310	ppb		1.557	2.038	4.093
65	Cu	|		194525.745	102.793854	ppb		2.398	1.589	124.107
69	Ga-IS	|		471046.699		ppb		1.512		451733.150
95	Mo	|		158815.717	103.891551	ppb		0.768	1.194	137.778
115	In-IS	>		246254.976		ppb		1.521		242580.196
111	Cd	|		166390.407	100.410792	ppb		0.335	1.683	7.488
118	Sn	|		453084.504	98.926078	ppb		1.105	0.417	1440.073
121	Sb	|		496679.192	98.633894	ppb		1.631	0.856	295.559
135	Ba	|		113704.274	96.227538	ppb		2.787	1.627	20.000
165	Ho-IS	|		307864.545		ppb		1.307		310147.483
159	Tb-IS	|		285637.620		ppb		1.221		290896.036
207	Pb	|		1542714.165	101.538247	ppb		0.595	0.707	194.445
203	Tl	|		464568.718	100.928581	ppb		0.610	0.631	42.222
209	Bi-IS	>		161865.271		ppb		1.227		166907.154
51	V	|		72662.154	100.354661	ppb		2.067	2.485	41.111
59	Co	|		188626.179	100.474387	ppb		1.415	1.963	21.111
60	Ni	|		100908.581	100.598534	ppb		2.188	1.962	36.667
75	As	|		52682.741	101.942905	ppb		0.604	0.998	754.334
71	Ga-ISK	>		126261.125		ppb		1.261		125407.005
82	Se-2	|		4730.618	100.202764	ppb		1.287	0.319	-0.151
107	Ag-1	|		412372.822	98.833435	ppb		0.628	0.799	94.445
115	In-ISK	|		110470.797		ppb		1.756		110883.016
45	Sc-ISK	>		301422.749		ppb		1.468		293507.004
23	Na	|		2749199.152	5138.691630	ppb		0.963	0.619	2830.281
39	K	|		6621226.998	5076.436116	ppb		1.763	1.214	143751.866
24	Mg	|		3067840.165	5064.712289	ppb		1.357	0.836	241.669
159	Tb-ISK	|		206097.596		ppb		1.580		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 22:11:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.329

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32659.519		ppb	1.698		34787.881
9	Be	23.333	0.004067	ppb	14.286	52.856	17.778
10	B	2519.111	0.174489	ppb	3.385	109.272	2534.669
27	Al	4183.947	0.025878	ppb	3.894	103.588	4165.052
43	Ca-2	93.334	-0.356539	ppb	24.157	342.648	103.334
49	Ti	242.224	0.037785	ppb	9.666	95.440	224.446
52	Cr	9321.930	0.065446	ppb	1.224	11.017	9056.204
55	Mn	713.351	0.004021	ppb	4.945	59.527	683.350
57	Fe	9762.224	6.763982	ppb	1.521	5.100	8352.444
45	Sc-IS	> 1703732.509		ppb	0.709		1757984.616
66	Zn	740.019	0.057752	ppb	4.129	33.672	685.572
86	Sr	13.506	0.005629	ppb	154.060	220.184	4.093
65	Cu	119.497	-0.000408	ppb	7.322	1216.281	124.107
69	Ga-IS	446791.954		ppb	2.475		451733.150
95	Mo	651.126	0.346095	ppb	5.639	6.575	137.778
115	In-IS	> 241535.501		ppb	1.009		242580.196
111	Cd	21.966	0.008920	ppb	14.857	21.648	7.488
118	Sn	3900.534	0.550525	ppb	6.498	8.682	1440.073
121	Sb	1025.592	0.148121	ppb	5.285	6.671	295.559
135	Ba	34.444	0.012515	ppb	20.145	46.497	20.000
165	Ho-IS	297762.814		ppb	1.604		310147.483
159	Tb-IS	279048.534		ppb	1.878		290896.036
207	Pb	484.448	0.019875	ppb	3.394	7.393	194.445
203	Tl	130.001	0.019704	ppb	4.441	7.982	42.222
209	Bi-IS	> 159916.847		ppb	1.264		166907.154
51	V	58.889	0.025416	ppb	8.646	30.760	41.111
59	Co	44.445	0.012697	ppb	18.875	35.673	21.111
60	Ni	53.333	0.017038	ppb	34.799	107.313	36.667
75	As	757.914	0.018506	ppb	3.873	247.482	754.334
71	Ga-ISK	> 124437.429		ppb	1.031		125407.005
82	Se-2	4.854	0.108212	ppb	169.309	163.430	-0.151
107	Ag-1	226.668	0.032331	ppb	5.302	8.259	94.445
115	In-ISK	107934.618		ppb	0.584		110883.016
45	Sc-ISK	> 289102.845		ppb	0.938		293507.004
23	Na	3677.141	1.735543	ppb	5.305	22.695	2830.281
39	K	145019.090	2.801578	ppb	1.219	44.692	143751.866
24	Mg	750.020	0.881574	ppb	5.457	8.777	241.669
159	Tb-ISK	197587.079		ppb	0.678		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25991-A-1-E MS @20

Autosampler Position: 134

Sample Date/Time: Friday, April 17, 2020 22:14:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25991-A-1-E MS @20.330

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		32089.342		ppb		1.868		34787.881
9	Be	|		31486.884	21.110336	ppb	0.448	0.819		17.778
10	B	|		9813.371	20.727774	ppb	2.928	4.015		2534.669
27	Al	|		129871.222	22.234150	ppb	2.440	3.033		4165.052
43	Ca-2	|		4719.113	245.882884	ppb	2.809	3.330		103.334
49	Ti	|		14316.060	21.657831	ppb	1.601	2.368		224.446
52	Cr	|		182778.521	21.006525	ppb	0.306	0.918		9056.204
55	Mn	|		244807.599	19.367889	ppb	0.688	0.116		683.350
57	Fe	|		62139.322	220.534821	ppb	1.681	1.223		8352.444
45	Sc-IS	>		1695123.130		ppb	0.732			1757984.616
66	Zn	|		30925.669	23.271278	ppb	1.981	1.471		685.572
86	Sr	|		34877.400	20.897198	ppb	0.953	0.779		4.093
65	Cu	|		38968.966	21.091507	ppb	1.866	1.509		124.107
69	Ga-IS	|		449793.276		ppb	2.642			451733.150
95	Mo	|		30177.397	20.196036	ppb	0.679	1.418		137.778
115	In-IS	>		243025.750		ppb	0.751			242580.196
111	Cd	|		33991.618	20.780127	ppb	1.189	1.905		7.488
118	Sn	|		89734.965	19.599532	ppb	6.052	6.505		1440.073
121	Sb	|		94406.599	18.947333	ppb	2.506	1.923		295.559
135	Ba	|		24700.262	21.166061	ppb	5.189	4.558		20.000
165	Ho-IS	|		298698.394		ppb	0.994			310147.483
159	Tb-IS	|		276210.799		ppb	1.825			290896.036
207	Pb	|		309276.495	20.533569	ppb	1.545	2.668		194.445
203	Tl	|		92844.196	20.353936	ppb	2.636	4.308		42.222
209	Bi-IS	>		160424.855		ppb	1.976			166907.154
51	V	|		14379.458	19.879057	ppb	2.321	3.327		41.111
59	Co	|		37222.884	19.881674	ppb	1.634	2.394		21.111
60	Ni	|		20129.731	20.100611	ppb	1.870	0.822		36.667
75	As	|		11645.719	21.446451	ppb	0.710	1.509		754.334
71	Ga-ISK	>		125860.931		ppb	1.048			125407.005
82	Se-2	|		1239.558	26.343575	ppb	1.729	1.977		-0.151
107	Ag-1	|		43132.829	10.350980	ppb	2.814	3.364		94.445
115	In-ISK	|		110516.899		ppb	1.332			110883.016
45	Sc-ISK	>		293219.095		ppb	1.527			293507.004
23	Na	|		497391.533	951.309527	ppb	1.172	1.155		2830.281
39	K	|		403736.891	209.717498	ppb	0.647	1.362		143751.866
24	Mg	|		129716.275	219.762268	ppb	0.632	0.958		241.669
159	Tb-ISK	|		202163.778		ppb	0.638			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25991-A-1-F MSD @20

Autosampler Position: 135

Sample Date/Time: Friday, April 17, 2020 22:17:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\570-25991-A-1-F MSD @20.331

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		32579.339		ppb		1.994		34787.881
9	Be	|		32672.877	21.941879	ppb	0.515	0.221		17.778
10	B	|		10340.408	22.258061	ppb	1.621	2.147		2534.669
27	Al	|		134734.941	23.129510	ppb	2.802	2.554		4165.052
43	Ca-2	|		4835.819	252.509851	ppb	2.037	2.361		103.334
49	Ti	|		14859.959	22.527099	ppb	4.953	4.760		224.446
52	Cr	|		188791.629	21.769207	ppb	1.191	0.942		9056.204
55	Mn	|		254240.639	20.149312	ppb	1.797	1.461		683.350
57	Fe	|		65753.209	235.732776	ppb	1.100	1.300		8352.444
45	Sc-IS	>		1692284.134		ppb	0.344			1757984.616
66	Zn	|		32204.048	24.297661	ppb	2.309	2.523		685.572
86	Sr	|		35726.165	21.442464	ppb	1.539	1.881		4.093
65	Cu	|		40750.547	22.096517	ppb	2.434	2.459		124.107
69	Ga-IS	|		450849.340		ppb	0.222			451733.150
95	Mo	|		32026.975	21.473513	ppb	1.258	0.921		137.778
115	In-IS	>		241282.039		ppb	1.255			242580.196
111	Cd	|		35129.384	21.632635	ppb	0.880	2.036		7.488
118	Sn	|		94166.263	20.746906	ppb	8.182	9.480		1440.073
121	Sb	|		102892.589	20.806937	ppb	1.341	0.428		295.559
135	Ba	|		25279.021	21.822309	ppb	2.342	1.628		20.000
165	Ho-IS	|		297877.358		ppb	1.557			310147.483
159	Tb-IS	|		275345.012		ppb	0.944			290896.036
207	Pb	|		320340.291	21.138310	ppb	0.688	0.897		194.445
203	Tl	|		94589.949	20.603365	ppb	1.562	0.108		42.222
209	Bi-IS	>		161380.999		ppb	1.535			166907.154
51	V	|		15096.862	20.910914	ppb	0.696	2.719		41.111
59	Co	|		38255.600	20.468422	ppb	0.829	1.648		21.111
60	Ni	|		20735.042	20.749897	ppb	2.257	3.646		36.667
75	As	|		12108.101	22.391947	ppb	2.710	0.767		754.334
71	Ga-ISK	>		125657.050		ppb	2.125			125407.005
82	Se-2	|		1277.610	27.202151	ppb	1.879	2.765		-0.151
107	Ag-1	|		45029.757	10.827462	ppb	1.498	3.103		94.445
115	In-ISK	|		109636.273		ppb	0.358			110883.016
45	Sc-ISK	>		291818.221		ppb	0.519			293507.004
23	Na	|		510794.972	981.765763	ppb	0.469	0.973		2830.281
39	K	|		410088.317	216.399059	ppb	0.189	0.511		143751.866
24	Mg	|		136460.358	232.296100	ppb	0.959	0.522		241.669
159	Tb-ISK	|		200186.876		ppb	0.441			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Friday, April 17, 2020 22:19:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCV-210770.332

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	32711.854		ppb		0.172		34787.881
9	Be	|	147853.426	98.828213	ppb	0.642	0.209		17.778
10	B	|	89694.063	244.528788	ppb	1.365	0.953		2534.669
27	Al	|	614179.864	107.410596	ppb	2.200	2.063		4165.052
43	Ca-2	|	97008.280	5140.227017	ppb	1.036	1.470		103.334
49	Ti	|	67720.134	103.325973	ppb	0.499	1.018		224.446
52	Cr	|	865482.199	103.046393	ppb	0.486	0.743		9056.204
55	Mn	|	1236928.779	97.737268	ppb	0.084	0.456		683.350
57	Fe	|	1236896.380	4993.633310	ppb	0.660	0.456		8352.444
45	Sc-IS	>	1700932.979		ppb	0.522			1757984.616
66	Zn	|	137187.896	104.626993	ppb	1.544	1.766		685.572
86	Sr	|	176631.279	105.482103	ppb	0.623	1.142		4.093
65	Cu	|	194636.560	105.249103	ppb	0.893	1.211		124.107
69	Ga-IS	|	470010.377		ppb	1.717			451733.150
95	Mo	|	159867.371	107.004095	ppb	0.970	1.388		137.778
115	In-IS	>	247561.700		ppb	2.136			242580.196
111	Cd	|	166282.755	99.805495	ppb	1.895	0.926		7.488
118	Sn	|	462655.851	100.507382	ppb	0.529	1.687		1440.073
121	Sb	|	506948.652	100.196093	ppb	1.722	3.835		295.559
135	Ba	|	113657.106	95.741963	ppb	1.860	3.947		20.000
165	Ho-IS	|	310416.860		ppb	1.597			310147.483
159	Tb-IS	|	284051.764		ppb	0.319			290896.036
207	Pb	|	1557797.146	101.128870	ppb	1.254	2.051		194.445
203	Tl	|	481341.460	103.135909	ppb	0.123	0.727		42.222
209	Bi-IS	>	164118.491		ppb	0.835			166907.154
51	V	|	72300.297	100.073492	ppb	1.413	2.158		41.111
59	Co	|	186962.212	99.794392	ppb	0.988	0.234		21.111
60	Ni	|	100327.739	100.239680	ppb	0.562	0.722		36.667
75	As	|	51121.063	99.099559	ppb	0.579	1.610		754.334
71	Ga-ISK	>	125986.479		ppb	1.091			125407.005
82	Se-2	|	4794.650	101.794063	ppb	0.785	1.869		-0.151
107	Ag-1	|	416548.694	100.045761	ppb	1.427	0.878		94.445
115	In-ISK	|	111972.447		ppb	1.095			110883.016
45	Sc-ISK	>	299668.377		ppb	0.949			293507.004
23	Na	|	2656953.873	4994.909595	ppb	1.920	1.637		2830.281
39	K	|	6613272.813	5101.086782	ppb	1.522	2.255		143751.866
24	Mg	|	3038143.414	5045.244908	ppb	0.193	1.144		241.669
159	Tb-ISK	|	205300.769		ppb	1.015			201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Friday, April 17, 2020 22:22:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.333

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		32265.339		ppb					4.738	34787.881
9	Be	|		20.000	0.002211	ppb				33.333	211.724	17.778
10	B	|		2306.853	-0.251777	ppb				2.787	60.791	2534.669
27	Al	|		4391.787	0.082180	ppb				5.469	42.255	4165.052
43	Ca-2	|		76.667	-1.126600	ppb				22.904	90.920	103.334
49	Ti	|		218.891	0.010920	ppb				3.170	151.508	224.446
52	Cr	|		9131.807	0.071233	ppb				2.093	46.260	9056.204
55	Mn	|		780.021	0.010945	ppb				6.410	47.091	683.350
57	Fe	|		9107.348	5.060374	ppb				2.449	7.331	8352.444
45	Sc-IS	|>		1660852.984		ppb				1.838		1757984.616
66	Zn	|		688.906	0.032644	ppb				2.794	75.471	685.572
86	Sr	|		1.233	-0.001471	ppb				3020.244	1564.479	4.093
65	Cu	|		123.898	0.003757	ppb				8.666	186.730	124.107
69	Ga-IS	|		444632.853		ppb				1.943		451733.150
95	Mo	|		685.572	0.381095	ppb				5.153	6.546	137.778
115	In-IS	|>		238039.810		ppb				0.803		242580.196
111	Cd	|		18.560	0.006963	ppb				65.068	107.548	7.488
118	Sn	|		3973.888	0.580634	ppb				8.077	13.610	1440.073
121	Sb	|		1979.026	0.347352	ppb				6.473	8.546	295.559
135	Ba	|		41.111	0.018837	ppb				44.656	85.537	20.000
165	Ho-IS	|		296647.478		ppb				1.117		310147.483
159	Tb-IS	|		275332.071		ppb				2.145		290896.036
207	Pb	|		513.337	0.021931	ppb				5.951	8.596	194.445
203	Tl	|		141.112	0.022290	ppb				9.547	14.636	42.222
209	Bi-IS	|>		159230.312		ppb				0.942		166907.154
51	V	|		52.222	0.016056	ppb				7.370	27.795	41.111
59	Co	|		30.000	0.004859	ppb				40.062	129.123	21.111
60	Ni	|		57.778	0.021733	ppb				29.605	80.809	36.667
75	As	|		713.243	-0.068963	ppb				2.897	47.746	754.334
71	Ga-ISK	|>		124319.761		ppb				1.241		125407.005
82	Se-2	|		11.224	0.243235	ppb				75.805	73.553	-0.151
107	Ag-1	|		235.557	0.034563	ppb				1.634	4.055	94.445
115	In-ISK	|		109244.795		ppb				1.120		110883.016
45	Sc-ISK	|>		289137.945		ppb				0.803		293507.004
23	Na	|		3100.336	0.608992	ppb				1.218	10.634	2830.281
39	K	|		141895.671	0.238007	ppb				0.339	501.406	143751.866
24	Mg	|		703.351	0.800723	ppb				5.920	8.607	241.669
159	Tb-ISK	|		197858.171		ppb				0.978		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Friday, April 17, 2020 22:25:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICSA-30518.334

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33786.587		ppb	2.311		34787.881
9	Be	17.778	-0.000440	ppb	39.031	969.910	17.778
10	B	2275.737	-0.930484	ppb	4.165	23.000	2534.669
27	Al	65640442.784	10767.132873	ppb	2.257	1.773	4165.052
43	Ca-2	592054.785	29258.502185	ppb	0.665	0.512	103.334
49	Ti	141176.376	201.040893	ppb	0.370	0.228	224.446
52	Cr	11368.967	0.220435	ppb	0.398	5.536	9056.204
55	Mn	6953.916	0.460019	ppb	3.621	3.771	683.350
57	Fe	6525965.089	24681.027677	ppb	0.569	0.315	8352.444
45	Sc-IS	> 1825251.117		ppb	0.596		1757984.616
66	Zn	1333.396	0.443893	ppb	3.783	7.934	685.572
86	Sr	730.721	0.404358	ppb	9.515	9.859	4.093
65	Cu	-444.794	-0.289253	ppb	4.624	3.690	124.107
69	Ga-IS	455792.314		ppb	1.403		451733.150
95	Mo	320606.608	200.039002	ppb	2.227	1.918	137.778
115	In-IS	> 248012.157		ppb	1.566		242580.196
111	Cd	-127.708	-0.081170	ppb	9.232	9.858	7.488
118	Sn	2275.737	0.174607	ppb	5.130	11.429	1440.073
121	Sb	1298.948	0.196715	ppb	4.748	6.774	295.559
135	Ba	213.335	0.162094	ppb	6.811	6.885	20.000
165	Ho-IS	324330.413		ppb	0.577		310147.483
159	Tb-IS	301549.733		ppb	1.294		290896.036
207	Pb	515.559	0.020246	ppb	3.561	7.226	194.445
203	Tl	75.556	0.006918	ppb	18.368	44.152	42.222
209	Bi-IS	> 168242.747		ppb	1.055		166907.154
51	V	553.344	0.694041	ppb	6.947	6.236	41.111
59	Co	117.778	0.050361	ppb	8.646	10.847	21.111
60	Ni	291.114	0.248736	ppb	3.681	6.293	36.667
75	As	787.757	0.029722	ppb	5.341	307.965	754.334
71	Ga-ISK	> 128451.700		ppb	1.801		125407.005
82	Se-2	3.518	0.078021	ppb	202.193	191.445	-0.151
107	Ag-1	224.446	0.030084	ppb	3.092	2.784	94.445
115	In-ISK	112518.605		ppb	0.947		110883.016
45	Sc-ISK	> 310416.884		ppb	1.631		293507.004
23	Na	13451692.211	24437.178252	ppb	1.194	1.668	2830.281
39	K	13106696.846	9866.409697	ppb	0.438	2.035	143751.866
24	Mg	6034385.934	9675.343967	ppb	0.604	1.762	241.669
159	Tb-ISK	211555.765		ppb	1.242		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Friday, April 17, 2020 22:28:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\ICSAB-30517.335

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	33177.381		ppb	2.064		34787.881
9	Be	16.667	-0.001003	ppb	20.000	195.306	17.778
10	B	3721.596	2.972500	ppb	1.677	8.443	2534.669
27	Al	64367226.072	10696.371124	ppb	1.530	3.067	4165.052
43	Ca-2	583392.215	29197.074279	ppb	1.545	0.709	103.334
49	Ti	141046.225	203.442144	ppb	0.676	1.678	224.446
52	Cr	177637.666	19.111487	ppb	0.911	1.081	9056.204
55	Mn	248349.080	18.478173	ppb	0.796	0.773	683.350
57	Fe	6453144.705	24720.164556	ppb	0.690	1.882	8352.444
45	Sc-IS	> 1802351.921		ppb	1.560		1757984.616
66	Zn	14207.062	9.767189	ppb	1.487	1.493	685.572
86	Sr	773.544	0.433710	ppb	4.969	5.568	4.093
65	Cu	35845.135	18.237618	ppb	2.073	0.948	124.107
69	Ga-IS	452572.863		ppb	1.768		451733.150
95	Mo	322463.411	203.807422	ppb	0.901	2.270	137.778
115	In-IS	> 253281.705		ppb	0.749		242580.196
111	Cd	15688.864	9.199235	ppb	1.151	0.718	7.488
118	Sn	1575.643	0.015394	ppb	7.120	160.732	1440.073
121	Sb	1012.258	0.135955	ppb	2.515	4.000	295.559
135	Ba	236.669	0.177692	ppb	11.000	12.663	20.000
165	Ho-IS	324266.861		ppb	0.841		310147.483
159	Tb-IS	303091.672		ppb	0.883		290896.036
207	Pb	376.669	0.011262	ppb	11.707	22.456	194.445
203	Tl	52.222	0.001942	ppb	25.797	144.011	42.222
209	Bi-IS	> 169393.155		ppb	2.268		166907.154
51	V	14081.389	18.943052	ppb	4.077	4.325	41.111
59	Co	34364.620	17.863509	ppb	1.151	1.615	21.111
60	Ni	19373.129	18.830128	ppb	1.534	2.106	36.667
75	As	5759.681	9.552314	ppb	2.224	3.730	754.334
71	Ga-ISK	> 129308.184		ppb	1.063		125407.005
82	Se-2	426.204	8.812279	ppb	10.176	9.159	-0.151
107	Ag-1	20065.197	4.673956	ppb	2.165	2.276	94.445
115	In-ISK	113586.114		ppb	1.163		110883.016
45	Sc-ISK	> 309190.480		ppb	1.263		293507.004
23	Na	13477629.726	24578.863524	ppb	2.147	1.945	2830.281
39	K	13041380.333	9854.273772	ppb	0.950	0.672	143751.866
24	Mg	5984129.895	9631.120902	ppb	1.937	1.502	241.669
159	Tb-ISK	212550.932		ppb	0.684		201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Friday, April 17, 2020 22:31:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200417E1\CCB-23446.336

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		31955.705		ppb			1.356			34787.881
9	Be	|		6.667	-0.007032	ppb	100.000		63.468			17.778
10	B	|		1965.691	-1.334660	ppb	1.929		6.504			2534.669
27	Al	|		14400.601	1.839746	ppb	5.206		7.741			4165.052
43	Ca-2	|		165.001	3.499681	ppb	13.209		34.436			103.334
49	Ti	|		282.225	0.101927	ppb	4.917		20.936			224.446
52	Cr	|		8806.048	0.011073	ppb	2.242	257.797				9056.204
55	Mn	|		1105.598	0.035593	ppb	6.567		15.180			683.350
57	Fe	|		9164.050	4.601406	ppb	1.984		16.145			8352.444
45	Sc-IS	|>		1691783.619		ppb	0.466					1757984.616
66	Zn	|		1065.595	0.312602	ppb	4.612		11.102			685.572
86	Sr	|		-4.784	-0.005263	ppb	290.483	159.088				4.093
65	Cu	|		171.597	0.028404	ppb	9.176		31.740			124.107
69	Ga-IS	|		449142.436		ppb	2.267					451733.150
95	Mo	|		956.699	0.555035	ppb	0.348		0.771			137.778
115	In-IS	|>		245402.060		ppb	0.318					242580.196
111	Cd	|		12.435	0.002952	ppb	67.425	172.622				7.488
118	Sn	|		1368.955	-0.019280	ppb	7.291	117.267				1440.073
121	Sb	|		451.118	0.030345	ppb	6.866	21.195				295.559
135	Ba	|		67.778	0.040395	ppb	5.679	8.529				20.000
165	Ho-IS	|		303040.587		ppb	0.832					310147.483
159	Tb-IS	|		282449.426		ppb	0.729					290896.036
207	Pb	|		263.334	0.004586	ppb	15.861	60.400				194.445
203	Tl	|		11.111	-0.006522	ppb	34.641	12.977				42.222
209	Bi-IS	|>		165123.387		ppb	1.419					166907.154
51	V	|		66.667	0.036364	ppb	48.218	121.585				41.111
59	Co	|		13.333	-0.004114	ppb	86.603	151.765				21.111
60	Ni	|		43.333	0.007147	ppb	33.530	204.139				36.667
75	As	|		758.221	0.024916	ppb	3.609	190.189				754.334
71	Ga-ISK	|>		123971.169		ppb	0.890					125407.005
82	Se-2	|		3.875	0.086266	ppb	138.058	133.344				-0.151
107	Ag-1	|		117.778	0.005922	ppb	23.735	110.460				94.445
115	In-ISK	|		111394.222		ppb	0.635					110883.016
45	Sc-ISK	|>		292972.606		ppb	0.538					293507.004
23	Na	|		6271.377	6.633305	ppb	2.832	4.431				2830.281
39	K	|		133551.355	-8.016430	ppb	0.163	7.254				143751.866
24	Mg	|		1636.761	2.370147	ppb	6.279	7.002				241.669
159	Tb-ISK	|		203095.586		ppb	1.043					201862.873

QC Out of Limits

AnalyteMassOut of Limits Message

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Friday, April 17, 2020 07:18:32

File Name: Default.tun

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1240	2062	0.705	
Mg 24	23.985	23.975	4620	2062	0.713	
In 115	114.904	114.925	22802	2059	0.701	
U	238.050	238.025	47429	2049	0.698	

Report Date/Time: Friday, April 17, 2020 07:18:55

Page 1

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Monday, April 20, 2020 07:44:25

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: U:\DataSet\2020\200417E1\STD Performance Check.342

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens. SD	Net Intens. RSD	Mode
Be	9.0		2883.6		2883.624	15.306	0.5	Standard
In	114.9		35885.8		35885.750	160.600	0.4	Standard
U	238.1		31172.1		31172.106	144.017	0.5	Standard
[CeO	155.9		464.2		0.016	0.000	2.5	Standard
> Ce	139.9		28684.0		28684.036	220.803	0.8	Standard
[Ce++	70.0		388.4		0.014	0.000	3.2	Standard
Bkgd	220.0		0.7		0.667	0.408	61.2	Standard

Current Conditions File Data

Current Value	Description
0.96	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
0.00	Makeup Gas Flow STD/KED [MGF]
-7.50	Deflector Voltage
1600.00	ICP RF Power
-1612.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-19.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-24.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.00	DRC Mode MGF
-9.00	DRC Mode QRO
-2.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
225.00	Axial Field Voltage
-12.00	KED Mode CRO
-22.50	KED Mode QRO
-15.00	KED Mode Cell Entrance Voltage
-38.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq

Sample ID: STD Performance Check

Report Date/Time: Monday, April 20, 2020 07:46:29

Page 1

475.00 KED Mode Axial Field Voltage

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Monday, April 20, 2020 08:02:49

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICIS-23447.006

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		35049.611		ppb		0.479		
9	Be	|		5.556		ppb		69.282		
10	B	|		1090.042		ppb		2.119		
27	Al	|		2910.297		ppb		2.103		
43	Ca-2	|		150.001		ppb		23.094		
49	Ti	|		155.556		ppb		12.917		
52	Cr	|		9458.688		ppb		2.953		
55	Mn	|		488.897		ppb		8.470		
57	Fe	|		13055.964		ppb		1.641		
45	Sc-IS	>		1497019.118		ppb		0.256		
66	Zn	|		1450.074		ppb		2.107		
86	Sr	|		34.156		ppb		75.092		
65	Cu	|		61.927		ppb		12.431		
69	Ga-IS	|		431750.490		ppb		1.622		
95	Mo	|		20.000		ppb		86.603		
115	In-IS	>		257434.927		ppb		0.496		
111	Cd	|		6.625		ppb		100.636		
118	Sn	|		850.026		ppb		14.313		
121	Sb	|		325.559		ppb		4.839		
135	Ba	|		14.444		ppb		48.038		
165	Ho-IS	|		254976.876		ppb		1.706		
159	Tb-IS	|		229504.586		ppb		1.253		
207	Pb	|		94.445		ppb		13.362		
203	Tl	|		10.000		ppb		88.192		
209	Bi-IS	>		177384.640		ppb		1.441		
51	V	|		50.000		ppb		29.059		
59	Co	|		8.889		ppb		78.062		
60	Ni	|		44.445		ppb		26.339		
75	As	|		513.883		ppb		13.049		
71	Ga-ISK	>		101565.388		ppb		1.686		
82	Se-2	|		-1.456		ppb		170.850		
107	Ag-1	|		42.222		ppb		19.868		
115	In-ISK	|		88912.314		ppb		1.725		
45	Sc-ISK	>		245622.811		ppb		1.597		
23	Na	|		1405.069		ppb		7.144		
39	K	|		91962.830		ppb		0.211		
24	Mg	|		81.667		ppb		9.352		
159	Tb-ISK	|		180827.939		ppb		0.436		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Monday, April 20, 2020 08:05:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\IC-210761.007

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33834.467		ppb		1.107		35049.611
9	Be	|	290787.661	200.000000	ppb		0.995	2.453	5.556
10	B	|	174343.018	500.000000	ppb		1.018	0.510	1090.042
27	Al	|	1226215.667	200.000000	ppb		3.372	4.911	2910.297
43	Ca-2	|	159834.214	10200.000000	ppb		0.864	0.732	150.001
49	Ti	|	112698.373	200.000000	ppb		1.047	0.930	155.556
52	Cr	|	1450108.951	200.000000	ppb		0.694	0.848	9458.688
55	Mn	|	2131163.899	200.000000	ppb		1.603	2.489	488.897
57	Fe	|	2108668.893	10200.000000	ppb		1.411	1.529	13055.964
45	Sc-IS	>	1514222.852		ppb		1.499		1497019.118
66	Zn	|	226203.671	200.000000	ppb		1.271	0.254	1450.074
86	Sr	|	340861.895	200.000000	ppb		1.348	1.662	34.156
65	Cu	|	323974.820	200.000000	ppb		1.733	0.410	61.927
69	Ga-IS	|	471464.899		ppb		0.792		431750.490
95	Mo	|	326573.023	200.000000	ppb		0.992	2.268	20.000
115	In-IS	>	263126.420		ppb		1.672		257434.927
111	Cd	|	315462.558	200.000000	ppb		1.668	0.802	6.625
118	Sn	|	916646.958	200.000000	ppb		0.503	1.920	850.026
121	Sb	|	1018446.193	200.000000	ppb		1.644	1.529	325.559
135	Ba	|	206456.029	200.000000	ppb		2.136	0.687	14.444
165	Ho-IS	|	264535.297		ppb		2.138		254976.876
159	Tb-IS	|	236241.426		ppb		2.448		229504.586
207	Pb	|	3122102.488	200.000000	ppb		1.521	0.985	94.445
203	Tl	|	942284.194	200.000000	ppb		1.519	2.760	10.000
209	Bi-IS	>	182088.024		ppb		2.479		177384.640
51	V	|	110897.802	200.000000	ppb		2.187	0.833	50.000
59	Co	|	290483.108	200.000000	ppb		1.813	2.119	8.889
60	Ni	|	159687.586	200.000000	ppb		0.846	0.920	44.445
75	As	|	77938.886	200.000000	ppb		0.467	1.466	513.883
71	Ga-ISK	>	100631.026		ppb		1.614		101565.388
82	Se-2	|	7193.010	200.000000	ppb		2.247	0.676	-1.456
107	Ag-1	|	678592.569	200.000000	ppb		0.718	1.254	42.222
115	In-ISK	|	87377.076		ppb		1.353		88912.314
45	Sc-ISK	>	247233.225		ppb		0.225		245622.811
23	Na	|	4283135.516	10200.000000	ppb		1.503	1.330	1405.069
39	K	|	9472845.399	10200.000000	ppb		1.305	1.095	91962.830
24	Mg	|	4726117.345	10200.000000	ppb		0.356	0.155	81.667
159	Tb-ISK	|	182298.514		ppb		0.993		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-446960

Autosampler Position: 206

Sample Date/Time: Monday, April 20, 2020 08:08:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICV-446960.008

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33042.619		ppb		1.383		35049.611
9	Be	|	146413.340	101.694011	ppb	2.057	1.345		5.556
10	B	|	1698.990	1.769782	ppb	3.457	4.659		1090.042
27	Al	|	4718.560	0.298587	ppb	7.685	24.327		2910.297
43	Ca-2	|	78164.943	5033.709035	ppb	1.142	0.790		150.001
49	Ti	|	56528.352	101.181191	ppb	2.962	2.035		155.556
52	Cr	|	737701.915	102.122208	ppb	2.333	1.946		9458.688
55	Mn	|	1024213.633	97.044818	ppb	1.865	0.408		488.897
57	Fe	|	1024962.234	4975.612367	ppb	1.186	1.750		13055.964
45	Sc-IS	>	1499095.249		ppb	1.809			1497019.118
66	Zn	|	117261.571	104.118474	ppb	1.327	1.978		1450.074
86	Sr	|	164943.035	97.742807	ppb	1.325	0.805		34.156
65	Cu	|	162376.977	101.256931	ppb	1.162	2.155		61.927
69	Ga-IS	|	431675.545		ppb	1.187			431750.490
95	Mo	|	162354.199	100.405681	ppb	1.743	0.066		20.000
115	In-IS	>	258803.150		ppb	1.370			257434.927
111	Cd	|	159023.199	102.495329	ppb	1.761	0.419		6.625
118	Sn	|	457963.787	101.486457	ppb	0.513	1.181		850.026
121	Sb	|	508732.714	101.548507	ppb	1.062	2.016		325.559
135	Ba	|	51.111	0.036213	ppb	35.919	51.957		14.444
165	Ho-IS	|	258743.543		ppb	1.342			254976.876
159	Tb-IS	|	230203.286		ppb	0.166			229504.586
207	Pb	|	1547987.828	98.711860	ppb	0.864	2.024		94.445
203	Tl	|	453305.775	95.770627	ppb	1.076	2.974		10.000
209	Bi-IS	>	182948.992		ppb	2.653			177384.640
51	V	|	55676.067	96.710842	ppb	0.905	0.555		50.000
59	Co	|	143551.321	95.217918	ppb	2.714	2.440		8.889
60	Ni	|	83079.833	100.228577	ppb	2.021	2.070		44.445
75	As	|	40678.018	99.913982	ppb	0.935	0.774		513.883
71	Ga-ISK	>	104437.051		ppb	1.026			101565.388
82	Se-2	|	3715.049	99.572691	ppb	1.250	2.193		-1.456
107	Ag-1	|	263.336	0.062349	ppb	22.785	26.276		42.222
115	In-ISK	|	89863.369		ppb	1.399			88912.314
45	Sc-ISK	>	247535.107		ppb	0.665			245622.811
23	Na	|	2683.586	3.016981	ppb	5.409	12.257		1405.069
39	K	|	99963.004	7.912739	ppb	1.276	17.465		91962.830
24	Mg	|	2401963.293	5177.499276	ppb	1.000	0.424		81.667
159	Tb-ISK	|	183861.626		ppb	0.403			180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICV-446961

Autosampler Position: 213

Sample Date/Time: Monday, April 20, 2020 08:11:07

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICV-446961.009

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34618.568		ppb		1.561		35049.611
9	Be	|	16.667	0.007620	ppb	52.915	79.850		5.556
10	B	|	35387.156	99.112452	ppb	4.074	4.160		1090.042
27	Al	|	636630.847	103.729101	ppb	1.632	1.943		2910.297
43	Ca-2	|	58.333	-5.959211	ppb	40.507	25.381		150.001
49	Ti	|	165.557	0.015090	ppb	2.325	50.843		155.556
52	Cr	|	7268.517	-0.317528	ppb	3.175	9.389		9458.688
55	Mn	|	544.455	0.004765	ppb	5.787	59.030		488.897
57	Fe	|	7184.028	-29.253785	ppb	1.258	1.099		13055.964
45	Sc-IS	>	1511744.517		ppb	0.341			1497019.118
66	Zn	|	1332.285	-0.117994	ppb	11.005	107.226		1450.074
86	Sr	|	-2.624	-0.021801	ppb	636.947	44.988		34.156
65	Cu	|	132.861	0.043504	ppb	11.578	22.147		61.927
69	Ga-IS	|	454687.537		ppb	1.058			431750.490
95	Mo	|	625.569	0.371263	ppb	7.096	7.156		20.000
115	In-IS	>	264043.105		ppb	0.886			257434.927
111	Cd	|	24.242	0.011082	ppb	65.316	91.901		6.625
118	Sn	|	3656.023	0.605877	ppb	1.319	2.448		850.026
121	Sb	|	1945.688	0.315496	ppb	3.328	3.874		325.559
135	Ba	|	107361.938	103.641864	ppb	0.808	0.303		14.444
165	Ho-IS	|	261263.097		ppb	0.969			254976.876
159	Tb-IS	|	232928.299		ppb	1.463			229504.586
207	Pb	|	521.115	0.026818	ppb	9.602	11.627		94.445
203	Tl	|	491.120	0.100946	ppb	7.719	7.979		10.000
209	Bi-IS	>	184000.724		ppb	0.224			177384.640
51	V	|	57.778	0.011367	ppb	40.522	365.805		50.000
59	Co	|	27.778	0.012359	ppb	54.111	80.611		8.889
60	Ni	|	44.445	-0.001502	ppb	15.613	513.168		44.445
75	As	|	525.603	-0.004429	ppb	5.031	1794.460		513.883
71	Ga-ISK	>	104278.144		ppb	1.436			101565.388
82	Se-2	|	-2.818	-0.036183	ppb	178.696	378.039		-1.456
107	Ag-1	|	169178.166	48.106764	ppb	1.211	1.474		42.222
115	In-ISK	|	89710.280		ppb	0.688			88912.314
45	Sc-ISK	>	249438.209		ppb	1.857			245622.811
23	Na	|	430960.903	1014.409146	ppb	0.951	1.801		1405.069
39	K	|	1048351.023	1029.451541	ppb	0.483	1.622		91962.830
24	Mg	|	356.671	0.586328	ppb	16.369	22.548		81.667
159	Tb-ISK	|	188799.570		ppb	1.464			180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICB-23446

Autosampler Position: 2

Sample Date/Time: Monday, April 20, 2020 08:13:54

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICB-23446.010

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		34298.904		ppb		0.493		35049.611
9	Be	|		30.000	0.017102	ppb	29.397	34.771		5.556
10	B	|		1485.633	1.183152	ppb	4.456	12.491		1090.042
27	Al	|		8800.489	0.983978	ppb	2.200	5.615		2910.297
43	Ca-2	|		118.334	-1.980456	ppb	31.994	126.575		150.001
49	Ti	|		166.668	0.022022	ppb	12.000	163.227		155.556
52	Cr	|		7699.855	-0.239654	ppb	4.073	17.614		9458.688
55	Mn	|		1001.146	0.049261	ppb	6.612	12.098		488.897
57	Fe	|		7058.411	-29.296177	ppb	2.332	0.711		13055.964
45	Sc-IS	>		1487041.143		ppb		1.758		1497019.118
66	Zn	|		1546.751	0.095847	ppb	5.819	65.220		1450.074
86	Sr	|		60.236	0.015586	ppb	44.996	101.181		34.156
65	Cu	|		137.219	0.047735	ppb	14.716	29.316		61.927
69	Ga-IS	|		424765.546		ppb		2.251		431750.490
95	Mo	|		206.668	0.116305	ppb	13.781	13.547		20.000
115	In-IS	>		254093.839		ppb		0.905		257434.927
111	Cd	|		31.788	0.016575	ppb	11.956	14.809		6.625
118	Sn	|		1972.359	0.256135	ppb	6.123	9.192		850.026
121	Sb	|		754.464	0.088068	ppb	4.887	7.045		325.559
135	Ba	|		74.445	0.060344	ppb	15.725	18.833		14.444
165	Ho-IS	|		255199.389		ppb		0.949		254976.876
159	Tb-IS	|		224680.997		ppb		1.145		229504.586
207	Pb	|		484.448	0.025284	ppb	1.732	2.039		94.445
203	Tl	|		318.892	0.066512	ppb	9.713	10.399		10.000
209	Bi-IS	>		179405.096		ppb		0.854		177384.640
51	V	|		72.222	0.037900	ppb	23.684	82.212		50.000
59	Co	|		37.778	0.019306	ppb	13.478	18.040		8.889
60	Ni	|		58.889	0.016921	ppb	29.047	127.064		44.445
75	As	|		572.210	0.126259	ppb	1.399	9.581		513.883
71	Ga-ISK	>		103184.665		ppb		1.010		101565.388
82	Se-2	|		1.208	0.072747	ppb	96.713	43.437		-1.456
107	Ag-1	|		187.779	0.041662	ppb	20.727	27.308		42.222
115	In-ISK	|		88428.641		ppb		0.504		88912.314
45	Sc-ISK	>		247836.598		ppb		2.449		245622.811
23	Na	|		3723.819	5.489384	ppb	3.914	10.140		1405.069
39	K	|		98383.180	6.119638	ppb	0.782	54.574		91962.830
24	Mg	|		853.359	1.661794	ppb	8.874	11.267		81.667
159	Tb-ISK	|		183347.783		ppb		0.761		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 08:16:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.011

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33484.755		ppb		0.864		35049.611
9	Be	|	145753.139	100.736141	ppb		0.912	1.545	5.556
10	B	|	88927.047	254.776294	ppb		0.875	1.289	1090.042
27	Al	|	620255.462	101.397717	ppb		1.045	1.478	2910.297
43	Ca-2	|	80345.305	5148.303472	ppb		0.258	0.533	150.001
49	Ti	|	57225.500	101.927572	ppb		0.468	0.295	155.556
52	Cr	|	737579.122	101.589255	ppb		1.283	1.509	9458.688
55	Mn	|	1039488.050	98.002798	ppb		1.048	0.714	488.897
57	Fe	|	1019646.754	4923.933087	ppb		0.921	1.211	13055.964
45	Sc-IS	>	1506583.685		ppb		0.716		1497019.118
66	Zn	|	115821.197	102.278858	ppb		2.845	2.286	1450.074
86	Sr	|	168113.113	99.118712	ppb		1.533	1.288	34.156
65	Cu	|	162130.512	100.575412	ppb		2.465	2.157	61.927
69	Ga-IS	|	456301.776		ppb		1.580		431750.490
95	Mo	|	162587.803	100.050359	ppb		0.841	0.666	20.000
115	In-IS	>	260582.302		ppb		1.635		257434.927
111	Cd	|	157028.423	100.530921	ppb		0.874	0.864	6.625
118	Sn	|	462745.905	101.841491	ppb		1.189	0.457	850.026
121	Sb	|	515145.232	102.118373	ppb		0.931	0.711	325.559
135	Ba	|	103081.763	100.846332	ppb		1.856	2.359	14.444
165	Ho-IS	|	259359.023		ppb		1.397		254976.876
159	Tb-IS	|	228297.606		ppb		0.898		229504.586
207	Pb	|	1538605.103	100.001206	ppb		0.711	1.658	94.445
203	Tl	|	467054.433	100.557041	ppb		0.488	1.321	10.000
209	Bi-IS	>	179452.364		ppb		0.948		177384.640
51	V	|	56377.757	98.524911	ppb		2.927	1.982	50.000
59	Co	|	148461.090	99.080135	ppb		2.513	1.845	8.889
60	Ni	|	82601.475	100.267149	ppb		1.264	1.131	44.445
75	As	|	40470.497	100.021912	ppb		1.085	0.994	513.883
71	Ga-ISK	>	103795.750		ppb		1.267		101565.388
82	Se-2	|	3757.734	101.336344	ppb		0.738	1.619	-1.456
107	Ag-1	|	351152.893	100.319862	ppb		1.484	0.649	42.222
115	In-ISK	|	90453.191		ppb		1.143		88912.314
45	Sc-ISK	>	252117.522		ppb		0.559		245622.811
23	Na	|	2217642.756	5177.488283	ppb		0.648	1.169	1405.069
39	K	|	4942775.927	5170.138285	ppb		0.835	1.058	91962.830
24	Mg	|	2482807.924	5254.682252	ppb		0.312	0.702	81.667
159	Tb-ISK	|	186977.034		ppb		0.725		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 08:19:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.012

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34014.896		ppb	1.220		35049.611
9	Be	14.444	0.006342	ppb	13.323	22.131	5.556
10	B	1410.070	0.998289	ppb	2.633	12.429	1090.042
27	Al	2546.894	-0.053547	ppb	1.587	12.034	2910.297
43	Ca-2	80.000	-4.442912	ppb	6.250	7.073	150.001
49	Ti	128.889	-0.044347	ppb	5.384	28.238	155.556
52	Cr	7015.056	-0.327851	ppb	1.821	5.964	9458.688
55	Mn	511.120	0.002854	ppb	7.154	118.300	488.897
57	Fe	6946.133	-29.547678	ppb	1.596	2.436	13055.964
45	Sc-IS	> 1474181.393		ppb	0.479		1497019.118
66	Zn	1032.260	-0.361642	ppb	1.305	4.638	1450.074
86	Sr	-2.612	-0.021866	ppb	1121.619	80.937	34.156
65	Cu	76.292	0.009691	ppb	15.108	73.627	61.927
69	Ga-IS	423617.325		ppb	1.120		431750.490
95	Mo	577.790	0.351210	ppb	20.980	22.145	20.000
115	In-IS	> 255741.694		ppb	0.588		257434.927
111	Cd	15.453	0.005785	ppb	56.170	97.962	6.625
118	Sn	2776.938	0.434317	ppb	9.569	14.366	850.026
121	Sb	516.676	0.039078	ppb	4.871	14.476	325.559
135	Ba	22.222	0.007818	ppb	37.749	105.413	14.444
165	Ho-IS	255844.307		ppb	1.503		254976.876
159	Tb-IS	225066.943		ppb	0.894		229504.586
207	Pb	438.892	0.022638	ppb	12.534	15.483	94.445
203	Tl	221.113	0.045951	ppb	26.386	27.335	10.000
209	Bi-IS	> 177385.629		ppb	0.463		177384.640
51	V	58.889	0.014507	ppb	31.175	214.718	50.000
59	Co	20.000	0.007447	ppb	16.667	32.344	8.889
60	Ni	25.556	-0.023847	ppb	27.152	34.231	44.445
75	As	576.410	0.143717	ppb	4.368	44.310	513.883
71	Ga-ISK	> 102703.449		ppb	1.208		101565.388
82	Se-2	-1.474	-0.000385	ppb	106.21811	1209.337	-1.456
107	Ag-1	167.779	0.036086	ppb	14.645	18.753	42.222
115	In-ISK	88499.437		ppb	0.614		88912.314
45	Sc-ISK	> 243738.504		ppb	0.978		245622.811
23	Na	2115.157	1.742419	ppb	5.371	16.272	1405.069
39	K	99216.682	8.785251	ppb	0.344	11.420	91962.830
24	Mg	290.003	0.456618	ppb	21.604	28.755	81.667
159	Tb-ISK	182187.730		ppb	0.567		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSA-30518

Autosampler Position: 202

Sample Date/Time: Monday, April 20, 2020 08:22:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICSA-30518.013

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34420.310		ppb			1.316			35049.611
9	Be	|		10.000	0.002700	ppb			33.333	77.751		5.556
10	B	|		1306.727	0.430159	ppb			5.560	59.923		1090.042
27	Al	|		65235685.920	10204.808517	ppb			1.408	2.470		2910.297
43	Ca-2	|		480622.124	29372.943287	ppb			1.368	1.005		150.001
49	Ti	|		120093.790	204.002583	ppb			0.326	1.566		155.556
52	Cr	|		9706.630	-0.038338	ppb			1.585	65.690		9458.688
55	Mn	|		6552.614	0.542189	ppb			2.260	2.290		488.897
57	Fe	|		5451554.619	25333.707321	ppb			1.067	1.363		13055.964
45	Sc-IS	>		1582130.879		ppb			1.643			1497019.118
66	Zn	|		1644.539	0.095312	ppb			5.000	66.366		1450.074
86	Sr	|		747.851	0.399903	ppb			3.794	5.402		34.156
65	Cu	|		-250.800	-0.187064	ppb			12.024	10.565		61.927
69	Ga-IS	|		451909.304		ppb			1.154			431750.490
95	Mo	|		337204.492	197.634185	ppb			0.492	1.411		20.000
115	In-IS	>		275441.083		ppb			0.461			257434.927
111	Cd	|		-152.563	-0.096717	ppb			25.547	24.579		6.625
118	Sn	|		1538.972	0.131328	ppb			4.951	12.608		850.026
121	Sb	|		717.796	0.069345	ppb			4.652	9.752		325.559
135	Ba	|		206.668	0.177021	ppb			8.980	10.138		14.444
165	Ho-IS	|		274648.501		ppb			1.058			254976.876
159	Tb-IS	|		243132.653		ppb			0.454			229504.586
207	Pb	|		564.449	0.029828	ppb			4.773	5.488		94.445
203	Tl	|		116.667	0.022497	ppb			2.857	2.812		10.000
209	Bi-IS	>		182662.631		ppb			0.630			177384.640
51	V	|		423.340	0.630687	ppb			7.511	8.626		50.000
59	Co	|		73.334	0.041533	ppb			16.389	18.853		8.889
60	Ni	|		266.669	0.259734	ppb			2.165	2.627		44.445
75	As	|		608.365	0.166601	ppb			11.963	109.567		513.883
71	Ga-ISK	>		106752.944		ppb			0.514			101565.388
82	Se-2	|		-0.490	0.027346	ppb			1160.898	544.126		-1.456
107	Ag-1	|		144.445	0.027806	ppb			7.050	10.583		42.222
115	In-ISK	|		91058.145		ppb			0.968			88912.314
45	Sc-ISK	>		263417.640		ppb			0.819			245622.811
23	Na	|		11176052.343	24986.041336	ppb			0.540	0.910		1405.069
39	K	|		10019840.375	10125.462337	ppb			1.206	0.760		91962.830
24	Mg	|		5000397.658	10129.142957	ppb			0.637	0.643		81.667
159	Tb-ISK	|		194325.545		ppb			1.191			180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICSAB-30517

Autosampler Position: 203

Sample Date/Time: Monday, April 20, 2020 08:24:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICSAB-30517.014

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34159.682		ppb	0.561		35049.611
9	Be	12.222	0.004032	ppb	41.660	80.799	5.556
10	B	2902.517	4.701559	ppb	3.744	7.268	1090.042
27	Al	64846650.185	9971.548350	ppb	1.520	1.919	2910.297
43	Ca-2	489043.464	29384.362289	ppb	0.719	1.288	150.001
49	Ti	121562.820	202.997135	ppb	0.780	1.283	155.556
52	Cr	153408.320	18.712186	ppb	1.590	1.848	9458.688
55	Mn	216219.789	19.047527	ppb	1.495	1.203	488.897
57	Fe	5549304.505	25351.494264	ppb	0.334	0.328	13055.964
45	Sc-IS	> 1609209.157		ppb	0.587		1497019.118
66	Zn	13083.767	9.650873	ppb	0.900	0.876	1450.074
86	Sr	723.517	0.379087	ppb	7.875	7.757	34.156
65	Cu	32068.543	18.593524	ppb	0.794	0.211	61.927
69	Ga-IS	453474.971		ppb	2.221		431750.490
95	Mo	340305.990	196.061694	ppb	1.259	0.696	20.000
115	In-IS	> 269729.792		ppb	1.155		257434.927
111	Cd	15159.728	9.372093	ppb	0.548	0.896	6.625
118	Sn	1105.599	0.045634	ppb	10.856	50.563	850.026
121	Sb	644.459	0.058144	ppb	0.790	3.804	325.559
135	Ba	213.335	0.187259	ppb	18.422	19.638	14.444
165	Ho-IS	278099.922		ppb	1.173		254976.876
159	Tb-IS	246508.756		ppb	0.930		229504.586
207	Pb	413.336	0.020372	ppb	5.036	6.496	94.445
203	Tl	75.556	0.013903	ppb	13.478	14.316	10.000
209	Bi-IS	> 181361.877		ppb	1.347		177384.640
51	V	11407.889	19.043759	ppb	3.161	3.496	50.000
59	Co	28336.980	18.123598	ppb	2.804	1.995	8.889
60	Ni	16304.856	18.927955	ppb	1.309	0.826	44.445
75	As	4475.410	9.428458	ppb	3.396	4.143	513.883
71	Ga-ISK	> 108272.105		ppb	0.884		101565.388
82	Se-2	350.567	9.097764	ppb	2.578	1.911	-1.456
107	Ag-1	17094.670	4.670384	ppb	2.462	2.670	42.222
115	In-ISK	93141.152		ppb	0.779		88912.314
45	Sc-ISK	> 262551.138		ppb	1.692		245622.811
23	Na	11247905.471	25227.893065	ppb	2.302	1.233	1405.069
39	K	10120371.847	10263.379862	ppb	0.805	1.074	91962.830
24	Mg	5041876.101	10249.606712	ppb	1.025	2.611	81.667
159	Tb-ISK	194676.883		ppb	0.819		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 1

Sample Date/Time: Monday, April 20, 2020 08:27:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.015

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34423.670		ppb	2.882		35049.611
9	Be	13.333	0.005139	ppb	25.000	42.130	5.556
10	B	1330.062	0.592950	ppb	2.052	19.228	1090.042
27	Al	13306.197	1.657585	ppb	2.446	4.788	2910.297
43	Ca-2	136.667	-1.127746	ppb	22.053	155.657	150.001
49	Ti	204.446	0.076917	ppb	25.590	112.211	155.556
52	Cr	7557.554	-0.296442	ppb	0.294	6.620	9458.688
55	Mn	1105.599	0.055598	ppb	9.753	17.500	488.897
57	Fe	7421.928	-28.755734	ppb	1.957	2.655	13055.964
45	Sc-IS	> 1540121.386		ppb	1.654		1497019.118
66	Zn	1488.967	-0.002359	ppb	3.301	1866.441	1450.074
86	Sr	21.271	-0.008195	ppb	194.209	291.773	34.156
65	Cu	137.133	0.044767	ppb	24.786	48.971	61.927
69	Ga-IS	440157.775		ppb	2.160		431750.490
95	Mo	970.033	0.571599	ppb	8.508	8.498	20.000
115	In-IS	> 265916.759		ppb	1.327		257434.927
111	Cd	12.407	0.003520	ppb	56.590	126.340	6.625
118	Sn	1052.261	0.037715	ppb	2.875	24.234	850.026
121	Sb	226.668	-0.021324	ppb	7.782	14.209	325.559
135	Ba	81.111	0.063396	ppb	18.531	21.739	14.444
165	Ho-IS	263181.038		ppb	0.412		254976.876
159	Tb-IS	233323.327		ppb	0.536		229504.586
207	Pb	255.556	0.010192	ppb	6.693	8.598	94.445
203	Tl	17.778	0.001595	ppb	28.641	65.076	10.000
209	Bi-IS	> 181629.704		ppb	1.402		177384.640
51	V	75.556	0.041440	ppb	2.547	7.511	50.000
59	Co	22.222	0.008633	ppb	22.913	39.936	8.889
60	Ni	44.445	-0.001726	ppb	4.330	147.157	44.445
75	As	620.746	0.223316	ppb	5.811	37.420	513.883
71	Ga-ISK	> 104861.237		ppb	0.645		101565.388
82	Se-2	1.544	0.081653	ppb	207.835	104.780	-1.456
107	Ag-1	87.778	0.012470	ppb	25.849	50.029	42.222
115	In-ISK	92931.755		ppb	1.192		88912.314
45	Sc-ISK	> 252692.576		ppb	2.081		245622.811
23	Na	5384.349	9.176628	ppb	4.426	3.309	1405.069
39	K	97544.110	3.150208	ppb	0.233	65.325	91962.830
24	Mg	838.358	1.594815	ppb	7.215	9.858	81.667
159	Tb-ISK	190286.952		ppb	0.459		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Monday, April 20, 2020 08:30:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICVL-210771.016

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		33668.536		ppb		2.702		35049.611
9	Be	|		1421.182	0.948820	ppb		2.254	2.698	5.556
10	B	|		18634.375	49.241332	ppb		3.022	3.234	1090.042
27	Al	|		317915.855	50.159380	ppb		1.687	1.261	2910.297
43	Ca-2	|		901.695	46.450711	ppb		3.153	3.856	150.001
49	Ti	|		766.687	1.048476	ppb		0.435	0.947	155.556
52	Cr	|		15201.419	0.729102	ppb		2.092	7.311	9458.688
55	Mn	|		11324.487	0.989563	ppb		1.179	0.903	488.897
57	Fe	|		24387.323	51.438950	ppb		2.175	6.023	13055.964
45	Sc-IS	>		1553400.900		ppb		0.516		1497019.118
66	Zn	|		6786.057	4.581286	ppb		3.505	4.351	1450.074
86	Sr	|		1743.075	0.976568	ppb		3.880	3.472	34.156
65	Cu	|		1833.983	1.065298	ppb		6.640	7.128	61.927
69	Ga-IS	|		450295.514		ppb		1.516		431750.490
95	Mo	|		1840.119	1.086000	ppb		4.721	4.901	20.000
115	In-IS	>		269148.638		ppb		2.429		257434.927
111	Cd	|		1577.334	0.973333	ppb		2.886	1.415	6.625
118	Sn	|		5378.790	0.958846	ppb		1.118	2.745	850.026
121	Sb	|		5398.798	0.971242	ppb		3.303	1.104	325.559
135	Ba	|		1053.372	0.982900	ppb		5.810	3.522	14.444
165	Ho-IS	|		267450.507		ppb		1.060		254976.876
159	Tb-IS	|		236133.514		ppb		1.148		229504.586
207	Pb	|		15620.021	0.986361	ppb		1.682	2.057	94.445
203	Tl	|		4749.678	0.997648	ppb		1.547	2.278	10.000
209	Bi-IS	>		183559.694		ppb		1.388		177384.640
51	V	|		633.347	0.978731	ppb		0.526	0.987	50.000
59	Co	|		1533.416	0.980448	ppb		8.184	7.866	8.889
60	Ni	|		960.032	1.068644	ppb		4.672	4.239	44.445
75	As	|		951.343	0.981073	ppb		5.865	12.741	513.883
71	Ga-ISK	>		107673.181		ppb		1.257		101565.388
82	Se-2	|		38.521	1.040602	ppb		14.777	13.690	-1.456
107	Ag-1	|		3662.692	0.996530	ppb		1.035	0.515	42.222
115	In-ISK	|		92238.488		ppb		1.267		88912.314
45	Sc-ISK	>		258976.415		ppb		0.783		245622.811
23	Na	|		24487.638	52.321871	ppb		1.133	1.023	1405.069
39	K	|		145144.730	50.023261	ppb		0.157	2.118	91962.830
24	Mg	|		24537.722	50.382819	ppb		0.466	1.134	81.667
159	Tb-ISK	|		191545.611		ppb		0.512		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25808-A-6-A MB

Autosampler Position: 412

Sample Date/Time: Monday, April 20, 2020 08:33:17

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25808-A-6-A MB.017

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	35535.253		ppb	0.169		35049.611
9	Be	14.444	0.005675	ppb	13.323	19.738	5.556
10	B	2990.313	5.116043	ppb	2.238	2.891	1090.042
27	Al	131407.270	20.178022	ppb	1.631	4.276	2910.297
43	Ca-2	1366.732	74.241765	ppb	7.901	8.550	150.001
49	Ti	344.449	0.309836	ppb	9.198	21.753	155.556
52	Cr	11939.432	0.266173	ppb	0.770	19.872	9458.688
55	Mn	4667.430	0.375061	ppb	4.429	7.006	488.897
57	Fe	8536.996	-24.325775	ppb	2.772	3.403	13055.964
45	Sc-IS	> 1575056.562		ppb	2.532		1497019.118
66	Zn	5125.364	3.081111	ppb	0.652	2.771	1450.074
86	Sr	499.210	0.261606	ppb	3.299	6.361	34.156
65	Cu	930.920	0.513621	ppb	6.436	4.677	61.927
69	Ga-IS	450651.433		ppb	0.983		431750.490
95	Mo	341.115	0.188870	ppb	12.754	16.064	20.000
115	In-IS	> 270720.740		ppb	0.844		257434.927
111	Cd	17.061	0.006224	ppb	23.046	39.230	6.625
118	Sn	1564.530	0.142298	ppb	5.875	13.014	850.026
121	Sb	992.257	0.124060	ppb	2.736	3.183	325.559
135	Ba	425.562	0.386393	ppb	5.215	5.048	14.444
165	Ho-IS	264444.152		ppb	0.920		254976.876
159	Tb-IS	236133.370		ppb	0.443		229504.586
207	Pb	3639.069	0.222821	ppb	2.118	2.679	94.445
203	Tl	188.890	0.037219	ppb	14.694	16.160	10.000
209	Bi-IS	> 185331.141		ppb	0.835		177384.640
51	V	72.222	0.030654	ppb	9.608	38.647	50.000
59	Co	42.222	0.020688	ppb	18.232	22.887	8.889
60	Ni	347.782	0.346282	ppb	10.688	13.215	44.445
75	As	614.080	0.145857	ppb	2.252	29.414	513.883
71	Ga-ISK	> 109265.174		ppb	0.762		101565.388
82	Se-2	4.185	0.148316	ppb	290.038	210.799	-1.456
107	Ag-1	68.889	0.006367	ppb	7.391	20.825	42.222
115	In-ISK	94411.179		ppb	1.413		88912.314
45	Sc-ISK	> 261720.334		ppb	1.234		245622.811
23	Na	388163.535	870.107085	ppb	2.668	2.029	1405.069
39	K	101248.639	3.357802	ppb	0.083	37.463	91962.830
24	Mg	9192.957	18.568546	ppb	1.268	2.380	81.667
159	Tb-ISK	192503.117		ppb	1.189		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25808-A-7-A MB

Autosampler Position: 413

Sample Date/Time: Monday, April 20, 2020 08:36:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25808-A-7-A MB.018

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		34938.228		ppb		0.673		35049.611
9	Be	|		12.222	0.004150	ppb	15.746	29.678		5.556
10	B	|		3750.492	7.142821	ppb	2.465	2.962		1090.042
27	Al	|		184049.287	28.209252	ppb	1.478	1.033		2910.297
43	Ca-2	|		1933.464	108.102161	ppb	4.571	4.510		150.001
49	Ti	|		452.229	0.486778	ppb	11.332	17.266		155.556
52	Cr	|		13837.811	0.504472	ppb	1.511	7.187		9458.688
55	Mn	|		6394.764	0.526100	ppb	0.999	1.273		488.897
57	Fe	|		9363.068	-20.803462	ppb	1.341	2.679		13055.964
45	Sc-IS	>		1587336.974		ppb		0.481		1497019.118
66	Zn	|		6447.011	4.168024	ppb	3.773	5.202		1450.074
86	Sr	|		648.556	0.342693	ppb	5.510	5.425		34.156
65	Cu	|		1256.959	0.701719	ppb	2.442	2.700		61.927
69	Ga-IS	|		457512.868		ppb		1.530		431750.490
95	Mo	|		392.228	0.216645	ppb	11.059	11.186		20.000
115	In-IS	>		274347.342		ppb		0.835		257434.927
111	Cd	|		28.065	0.012785	ppb	30.007	40.683		6.625
118	Sn	|		1762.331	0.179277	ppb	7.268	13.812		850.026
121	Sb	|		1304.504	0.180421	ppb	3.724	5.493		325.559
135	Ba	|		555.566	0.501994	ppb	2.107	2.728		14.444
165	Ho-IS	|		267684.706		ppb		0.586		254976.876
159	Tb-IS	|		235880.758		ppb		1.831		229504.586
207	Pb	|		5114.813	0.317469	ppb	4.707	4.043		94.445
203	Tl	|		297.781	0.060255	ppb	1.710	1.138		10.000
209	Bi-IS	>		184264.144		ppb		0.883		177384.640
51	V	|		73.334	0.030892	ppb	27.649	109.550		50.000
59	Co	|		50.000	0.025227	ppb	26.667	33.792		8.889
60	Ni	|		484.453	0.495978	ppb	4.833	6.061		44.445
75	As	|		629.583	0.160996	ppb	7.135	59.690		513.883
71	Ga-ISK	>		110830.491		ppb		0.631		101565.388
82	Se-2	|		1.520	0.078543	ppb	651.465	318.771		-1.456
107	Ag-1	|		58.889	0.003414	ppb	27.922	126.756		42.222
115	In-ISK	|		94160.564		ppb		1.152		88912.314
45	Sc-ISK	>		264996.511		ppb		1.051		245622.811
23	Na	|		548790.874	1216.431325	ppb	1.674	1.900		1405.069
39	K	|		102259.134	3.092840	ppb	0.282	28.410		91962.830
24	Mg	|		12907.495	25.815655	ppb	0.776	1.619		81.667
159	Tb-ISK	|		193203.034		ppb		0.435		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25593-A-1-B MS

Autosampler Position: 410

Sample Date/Time: Monday, April 20, 2020 08:38:48

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25593-A-1-B MS.019

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35534.154		ppb		2.259		35049.611
9	Be	|	161667.439	105.214802	ppb	0.767	2.255		5.556
10	B	|	56748.072	151.787241	ppb	1.941	0.437		1090.042
27	Al	|	892887.522	137.634549	ppb	1.715	3.189		2910.297
43	Ca-2	|	394133.925	23812.390887	ppb	1.654	1.024		150.001
49	Ti	|	61884.869	103.803744	ppb	0.844	2.203		155.556
52	Cr	|	808118.089	104.841621	ppb	0.839	1.238		9458.688
55	Mn	|	1129210.186	100.249740	ppb	0.234	1.537		488.897
57	Fe	|	1142109.050	5196.869811	ppb	0.446	1.815		13055.964
45	Sc-IS	>	1600251.451		ppb	1.770			1497019.118
66	Zn	|	133545.801	111.161379	ppb	1.142	1.196		1450.074
86	Sr	|	320600.432	178.006227	ppb	0.729	1.491		34.156
65	Cu	|	176725.745	103.240757	ppb	1.674	2.599		61.927
69	Ga-IS	|	466291.729		ppb	1.892			431750.490
95	Mo	|	175393.477	101.634191	ppb	0.421	1.875		20.000
115	In-IS	>	265885.427		ppb	0.279			257434.927
111	Cd	|	173654.103	108.947608	ppb	0.592	0.347		6.625
118	Sn	|	494341.124	106.629383	ppb	0.605	0.682		850.026
121	Sb	|	539875.550	104.880079	ppb	0.406	0.381		325.559
135	Ba	|	136970.345	131.311159	ppb	2.043	2.033		14.444
165	Ho-IS	|	268377.580		ppb	0.824			254976.876
159	Tb-IS	|	238411.908		ppb	0.757			229504.586
207	Pb	|	1617528.185	105.649293	ppb	0.810	0.420		94.445
203	Tl	|	475242.368	102.829861	ppb	0.449	0.784		10.000
209	Bi-IS	>	178559.090		ppb	1.188			177384.640
51	V	|	61951.827	104.764108	ppb	0.997	0.644		50.000
59	Co	|	155424.298	100.360930	ppb	0.992	0.611		8.889
60	Ni	|	91234.871	107.147876	ppb	1.032	0.752		44.445
75	As	|	44730.632	107.047470	ppb	0.533	0.691		513.883
71	Ga-ISK	>	107281.331		ppb	0.689			101565.388
82	Se-2	|	4107.773	107.157009	ppb	2.039	1.563		-1.456
107	Ag-1	|	169848.173	46.942355	ppb	0.157	0.803		42.222
115	In-ISK	|	91806.041		ppb	0.771			88912.314
45	Sc-ISK	>	263278.515		ppb	1.060			245622.811
23	Na	|	4335853.441	9697.235889	ppb	0.808	1.623		1405.069
39	K	|	2783064.470	2741.237017	ppb	1.693	1.408		91962.830
24	Mg	|	5253492.829	10646.775995	ppb	1.780	0.879		81.667
159	Tb-ISK	|	192206.680		ppb	1.888			180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25593-A-1-C MSD

Autosampler Position: 411

Sample Date/Time: Monday, April 20, 2020 08:41:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25593-A-1-C MSD.020

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35342.554		ppb		0.549		35049.611
9	Be	|	164275.842	105.977618	ppb		0.856	2.547	5.556
10	B	|	56584.083	149.986288	ppb		1.668	0.280	1090.042
27	Al	|	869437.292	132.811230	ppb		0.406	2.052	2910.297
43	Ca-2	|	396109.423	23719.976660	ppb		1.891	0.128	150.001
49	Ti	|	63006.420	104.746951	ppb		0.746	1.124	155.556
52	Cr	|	819645.818	105.421018	ppb		0.270	2.004	9458.688
55	Mn	|	1136665.480	100.020765	ppb		0.586	1.183	488.897
57	Fe	|	1170654.648	5280.045589	ppb		1.949	1.252	13055.964
45	Sc-IS	>	1614435.867		ppb		1.777		1497019.118
66	Zn	|	134309.545	110.815062	ppb		0.719	1.334	1450.074
86	Sr	|	322193.205	177.318358	ppb		0.603	1.408	34.156
65	Cu	|	180600.769	104.565285	ppb		1.376	1.457	61.927
69	Ga-IS	|	466032.258		ppb		1.040		431750.490
95	Mo	|	174228.335	100.085331	ppb		1.251	2.973	20.000
115	In-IS	>	262202.141		ppb		1.280		257434.927
111	Cd	|	171437.697	109.078509	ppb		0.349	1.109	6.625
118	Sn	|	493629.051	107.992665	ppb		1.369	2.364	850.026
121	Sb	|	547793.106	107.942890	ppb		1.914	3.129	325.559
135	Ba	|	134853.862	131.144972	ppb		2.922	4.203	14.444
165	Ho-IS	|	269536.789		ppb		0.367		254976.876
159	Tb-IS	|	235880.337		ppb		0.278		229504.586
207	Pb	|	1633054.757	106.658223	ppb		0.761	1.062	94.445
203	Tl	|	480962.789	104.056627	ppb		0.928	0.780	10.000
209	Bi-IS	>	178572.572		ppb		1.078		177384.640
51	V	|	61251.058	103.492417	ppb		1.839	2.515	50.000
59	Co	|	155670.611	100.428037	ppb		2.590	2.621	8.889
60	Ni	|	91568.112	107.440625	ppb		1.217	1.299	44.445
75	As	|	45507.024	108.817645	ppb		1.885	1.390	513.883
71	Ga-ISK	>	107385.464		ppb		1.141		101565.388
82	Se-2	|	3966.096	103.375970	ppb		1.501	1.918	-1.456
107	Ag-1	|	171225.951	47.273234	ppb		2.336	1.637	42.222
115	In-ISK	|	92026.514		ppb		1.011		88912.314
45	Sc-ISK	>	264901.482		ppb		1.172		245622.811
23	Na	|	4390183.219	9759.208859	ppb		1.175	2.216	1405.069
39	K	|	2781306.402	2722.374080	ppb		0.399	1.619	91962.830
24	Mg	|	5323666.657	10724.750469	ppb		0.534	1.686	81.667
159	Tb-ISK	|	193505.109		ppb		0.713		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 08:44:21

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.021

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34664.237		ppb			1.788		35049.611
9	Be	|		150590.762	100.532503	ppb			1.364	1.428	5.556
10	B	|		91601.679	253.471667	ppb			1.584	1.093	1090.042
27	Al	|		647260.794	102.206225	ppb			1.227	0.233	2910.297
43	Ca-2	|		83986.180	5198.303147	ppb			1.237	0.689	150.001
49	Ti	|		59493.640	102.370323	ppb			1.374	2.069	155.556
52	Cr	|		779851.092	103.784247	ppb			1.201	1.479	9458.688
55	Mn	|		1106652.757	100.794264	ppb			1.555	2.138	488.897
57	Fe	|		1079323.901	5036.326054	ppb			1.294	1.829	13055.964
45	Sc-IS	>		1559719.440		ppb			1.213		1497019.118
66	Zn	>		118812.191	101.356499	ppb			2.253	2.821	1450.074
86	Sr	|		175042.210	99.696271	ppb			0.305	0.914	34.156
65	Cu	|		171103.443	102.545242	ppb			2.130	2.777	61.927
69	Ga-IS	|		459133.977		ppb			0.805		431750.490
95	Mo	|		167351.235	99.476992	ppb			0.895	0.850	20.000
115	In-IS	>		265962.091		ppb			1.735		257434.927
111	Cd	|		161911.665	101.557247	ppb			1.374	0.734	6.625
118	Sn	|		474556.608	102.327441	ppb			2.067	1.478	850.026
121	Sb	|		528029.789	102.553770	ppb			1.640	1.204	325.559
135	Ba	|		104626.354	100.266131	ppb			2.625	1.549	14.444
165	Ho-IS	|		265058.790		ppb			1.131		254976.876
159	Tb-IS	|		233903.805		ppb			0.446		229504.586
207	Pb	|		1562877.832	101.304598	ppb			0.672	0.638	94.445
203	Tl	|		477455.370	102.524778	ppb			0.110	0.979	10.000
209	Bi-IS	>		179924.925		ppb			0.986		177384.640
51	V	|		58331.072	97.031743	ppb			0.766	2.017	50.000
59	Co	|		152887.103	97.118568	ppb			0.572	1.968	8.889
60	Ni	|		86464.206	99.884458	ppb			0.169	1.241	44.445
75	As	|		42308.387	99.487555	ppb			2.211	1.148	513.883
71	Ga-ISK	>		109073.758		ppb			1.417		101565.388
82	Se-2	|		3920.748	100.613340	ppb			0.724	1.152	-1.456
107	Ag-1	|		365669.847	99.426138	ppb			0.557	1.547	42.222
115	In-ISK	|		93216.982		ppb			0.562		88912.314
45	Sc-ISK	>		261325.444		ppb			1.286		245622.811
23	Na	|		2293458.970	5165.640405	ppb			1.207	0.121	1405.069
39	K	|		5174133.384	5222.436676	ppb			1.162	0.629	91962.830
24	Mg	|		2588326.830	5285.413114	ppb			0.633	1.365	81.667
159	Tb-ISK	|		191944.980		ppb			1.000		180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 08:47:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.022

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		34459.304		ppb					2.377	35049.611
9	Be	|		17.778	0.008207	ppb					28.641 40.035	5.556
10	B	|		1538.972	1.214677	ppb					7.087 25.614	1090.042
27	Al	|		2793.607	-0.029200	ppb					3.825 48.715	2910.297
43	Ca-2	|		101.667	-3.271417	ppb					15.809 28.216	150.001
49	Ti	|		160.001	0.001821	ppb					10.825 1648.365	155.556
52	Cr	|		7948.878	-0.235702	ppb					0.842 8.432	9458.688
55	Mn	|		502.231	0.000266	ppb					7.035 1368.197	488.897
57	Fe	|		7210.708	-29.535162	ppb					1.119 0.340	13055.964
45	Sc-IS	>		1529716.736		ppb					1.376	1497019.118
66	Zn	|		612.235	-0.765597	ppb					9.261 7.208	1450.074
86	Sr	|		25.216	-0.005463	ppb					196.545 533.184	34.156
65	Cu	|		94.088	0.018864	ppb					5.395 20.389	61.927
69	Ga-IS	|		430670.657		ppb					2.210	431750.490
95	Mo	|		988.923	0.586695	ppb					10.002 9.166	20.000
115	In-IS	>		258272.348		ppb					1.046	257434.927
111	Cd	|		19.034	0.007968	ppb					77.877 119.881	6.625
118	Sn	|		4142.824	0.731743	ppb					6.009 7.012	850.026
121	Sb	|		2692.476	0.473413	ppb					2.459 1.946	325.559
135	Ba	|		23.333	0.008693	ppb					24.744 63.423	14.444
165	Ho-IS	|		256919.832		ppb					0.995	254976.876
159	Tb-IS	|		226221.956		ppb					1.873	229504.586
207	Pb	|		537.782	0.028919	ppb					10.670 12.321	94.445
203	Tl	|		196.668	0.040380	ppb					10.585 10.700	10.000
209	Bi-IS	>		178496.071		ppb					1.089	177384.640
51	V	|		51.111	-0.002320	ppb					35.919 1346.042	50.000
59	Co	|		21.111	0.007661	ppb					39.736 71.190	8.889
60	Ni	|		24.444	-0.026250	ppb					20.830 22.916	44.445
75	As	|		587.993	0.118966	ppb					1.376 17.385	513.883
71	Ga-ISK	>		106571.591		ppb					0.067	101565.388
82	Se-2	|		-2.164	-0.016663	ppb					212.901 725.733	-1.456
107	Ag-1	|		255.558	0.058788	ppb					15.779 19.078	42.222
115	In-ISK	|		89404.797		ppb					0.862	88912.314
45	Sc-ISK	>		256306.613		ppb					0.370	245622.811
23	Na	|		2401.869	2.150023	ppb					1.795 4.074	1405.069
39	K	|		102183.051	6.525709	ppb					0.822 15.724	91962.830
24	Mg	|		366.671	0.586009	ppb					3.432 4.908	81.667
159	Tb-ISK	|		185508.727		ppb					0.560	180827.939

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Monday, April 20, 2020 09:46:15

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICIS-23447.051

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	36395.193		ppb	0.722		
9	Be	13.333		ppb	66.144		
10	B	1052.261		ppb	5.853		
27	Al	3991.718		ppb	36.563		
43	Ca-2	111.667		ppb	14.394		
49	Ti	197.779		ppb	4.242		
52	Cr	9914.551		ppb	1.194		
55	Mn	531.121		ppb	5.226		
57	Fe	7569.783		ppb	1.723		
45	Sc-IS	> 1628366.772		ppb	1.220		
66	Zn	457.785		ppb	4.267		
86	Sr	1.808		ppb	1681.959		
65	Cu	63.143		ppb	19.010		
69	Ga-IS	464006.496		ppb	0.704		
95	Mo	45.556		ppb	22.354		
115	In-IS	> 270500.848		ppb	1.773		
111	Cd	4.349		ppb	43.789		
118	Sn	1287.836		ppb	6.247		
121	Sb	390.005		ppb	14.829		
135	Ba	8.889		ppb	21.651		
165	Ho-IS	266136.161		ppb	0.520		
159	Tb-IS	238251.487		ppb	0.755		
207	Pb	106.667		ppb	20.492		
203	Tl	14.444		ppb	53.294		
209	Bi-IS	> 179606.508		ppb	0.965		
51	V	44.445		ppb	18.875		
59	Co	25.556		ppb	19.924		
60	Ni	46.667		ppb	7.143		
75	As	563.733		ppb	5.678		
71	Ga-ISK	> 113253.855		ppb	1.101		
82	Se-2	3.549		ppb	161.649		
107	Ag-1	43.333		ppb	20.352		
115	In-ISK	94813.137		ppb	0.922		
45	Sc-ISK	> 270273.987		ppb	0.961		
23	Na	1461.742		ppb	5.530		
39	K	104260.196		ppb	0.673		
24	Mg	110.000		ppb	25.308		
159	Tb-ISK	192403.275		ppb	1.806		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Monday, April 20, 2020 09:49:01

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\IC-210761.052

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35331.419		ppb		1.213		36395.193
9	Be	|	303892.908	200.000000	ppb		0.978	2.442	13.333
10	B	|	181516.546	500.000000	ppb		2.905	2.823	1052.261
27	Al	|	1317348.649	200.000000	ppb		1.096	2.441	3991.718
43	Ca-2	|	171161.061	10200.000000	ppb		1.424	0.560	111.667
49	Ti	|	121881.050	200.000000	ppb		0.134	1.759	197.779
52	Cr	|	1569309.918	200.000000	ppb		0.941	0.902	9914.551
55	Mn	|	2326310.305	200.000000	ppb		2.750	1.125	531.121
57	Fe	|	2323764.807	10200.000000	ppb		1.919	0.563	7569.783
45	Sc-IS	>	1611376.274		ppb		1.640		1628366.772
66	Zn	|	240412.781	200.000000	ppb		0.640	1.538	457.785
86	Sr	|	362463.168	200.000000	ppb		1.215	0.453	1.808
65	Cu	|	350144.183	200.000000	ppb		1.555	0.860	63.143
69	Ga-IS	|	493227.197		ppb		0.929		464006.496
95	Mo	|	345012.088	200.000000	ppb		0.524	1.781	45.556
115	In-IS	>	267061.231		ppb		0.524		270500.848
111	Cd	|	325201.912	200.000000	ppb		1.279	0.862	4.349
118	Sn	|	955003.102	200.000000	ppb		0.127	0.494	1287.836
121	Sb	|	1074792.035	200.000000	ppb		0.657	0.885	390.005
135	Ba	|	217856.549	200.000000	ppb		1.326	1.746	8.889
165	Ho-IS	|	273442.516		ppb		1.429		266136.161
159	Tb-IS	|	243133.828		ppb		0.732		238251.487
207	Pb	|	3108078.026	200.000000	ppb		0.455	2.268	106.667
203	Tl	|	959656.261	200.000000	ppb		1.249	0.749	14.444
209	Bi-IS	>	178412.998		ppb		1.905		179606.508
51	V	|	121240.078	200.000000	ppb		0.337	0.347	44.445
59	Co	|	319563.821	200.000000	ppb		1.001	0.479	25.556
60	Ni	|	174238.373	200.000000	ppb		0.612	1.101	46.667
75	As	|	86624.805	200.000000	ppb		1.113	1.647	563.733
71	Ga-ISK	>	112369.104		ppb		0.526		113253.855
82	Se-2	|	7945.750	200.000000	ppb		0.168	0.485	3.549
107	Ag-1	|	741897.298	200.000000	ppb		1.149	1.620	43.333
115	In-ISK	|	95788.041		ppb		1.250		94813.137
45	Sc-ISK	>	273090.422		ppb		1.626		270273.987
23	Na	|	4712317.102	10200.000000	ppb		1.224	1.014	1461.742
39	K	|	10670282.643	10200.000000	ppb		1.623	1.457	104260.196
24	Mg	|	5321757.804	10200.000000	ppb		0.795	1.988	110.000
159	Tb-ISK	|	197202.165		ppb		2.097		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 09:51:48

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.053

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		35726.869		ppb		3.108		36395.193
9	Be	|		156342.086	103.261204	ppb		1.527	0.903	13.333
10	B	|		92958.252	255.619283	ppb		2.481	1.716	1052.261
27	Al	|		669818.795	101.779880	ppb		1.488	2.145	3991.718
43	Ca-2	|		84980.402	5080.368930	ppb		1.889	1.336	111.667
49	Ti	|		60603.843	99.654963	ppb		1.134	0.611	197.779
52	Cr	|		794092.480	100.978870	ppb		0.091	1.381	9914.551
55	Mn	|		1136634.106	98.097853	ppb		0.543	1.394	531.121
57	Fe	|		1127643.176	4952.805771	ppb		0.633	1.783	7569.783
45	Sc-IS	>		1605163.562		ppb		1.323		1628366.772
66	Zn	|		123843.528	103.219592	ppb		2.079	0.817	457.785
86	Sr	|		180921.587	100.229922	ppb		1.197	2.374	1.808
65	Cu	|		176885.374	101.410707	ppb		1.131	0.976	63.143
69	Ga-IS	|		473874.996		ppb		2.283		464006.496
95	Mo	|		171419.003	99.737370	ppb		0.449	1.686	45.556
115	In-IS	>		266581.603		ppb		1.310		270500.848
111	Cd	|		163344.894	100.649591	ppb		0.570	1.325	4.349
118	Sn	|		479376.083	100.445601	ppb		0.623	0.803	1287.836
121	Sb	|		536973.692	100.071487	ppb		0.498	0.988	390.005
135	Ba	|		109338.198	100.532085	ppb		3.086	1.797	8.889
165	Ho-IS	|		270010.154		ppb		0.882		266136.161
159	Tb-IS	|		239484.118		ppb		0.989		238251.487
207	Pb	|		1575828.161	99.720295	ppb		0.409	1.052	106.667
203	Tl	|		476532.187	97.689385	ppb		1.628	2.083	14.444
209	Bi-IS	>		181378.731		ppb		1.219		179606.508
51	V	|		59706.734	96.186198	ppb		0.172	1.279	44.445
59	Co	|		157986.607	96.585982	ppb		0.854	0.568	25.556
60	Ni	|		88668.772	99.407243	ppb		0.425	1.653	46.667
75	As	|		44469.638	99.649539	ppb		0.872	1.109	563.733
71	Ga-ISK	>		115030.196		ppb		1.233		113253.855
82	Se-2	|		4013.115	98.642881	ppb		1.960	2.541	3.549
107	Ag-1	|		370641.098	97.600858	ppb		0.593	0.874	43.333
115	In-ISK	|		96321.871		ppb		1.354		94813.137
45	Sc-ISK	>		272100.386		ppb		0.937		270273.987
23	Na	|		2374406.495	5156.304964	ppb		0.957	0.614	1461.742
39	K	|		5370500.999	5101.828169	ppb		1.164	0.838	104260.196
24	Mg	|		2662114.962	5119.996817	ppb		0.813	0.921	110.000
159	Tb-ISK	|		196428.641		ppb		0.962		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 09:54:34

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.054

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34972.756		ppb	0.397		36395.193
9	Be	22.222	0.006398	ppb	34.641	84.923	13.333
10	B	1603.424	1.682895	ppb	11.759	36.826	1052.261
27	Al	3013.654	-0.130224	ppb	12.335	46.293	3991.718
43	Ca-2	108.334	0.054025	ppb	17.474	2330.920	111.667
49	Ti	184.446	-0.010278	ppb	12.033	387.973	197.779
52	Cr	7633.150	-0.253048	ppb	1.735	12.477	9914.551
55	Mn	590.012	0.006861	ppb	5.650	29.554	531.121
57	Fe	7254.064	-0.189975	ppb	0.463	326.856	7569.783
45	Sc-IS	> 1569870.462		ppb	1.977		1628366.772
66	Zn	438.896	-0.002116	ppb	3.162	363.099	457.785
86	Sr	23.569	0.012085	ppb	202.149	220.044	1.808
65	Cu	66.280	0.003192	ppb	13.248	168.504	63.143
69	Ga-IS	443811.740		ppb	2.222		464006.496
95	Mo	838.914	0.472800	ppb	7.891	7.143	45.556
115	In-IS	> 263593.593		ppb	0.640		270500.848
111	Cd	17.127	0.008046	ppb	58.705	78.604	4.349
118	Sn	3828.291	0.546728	ppb	1.929	2.743	1287.836
121	Sb	632.236	0.047544	ppb	4.899	11.015	390.005
135	Ba	23.333	0.013669	ppb	37.796	60.873	8.889
165	Ho-IS	262804.179		ppb	0.267		266136.161
159	Tb-IS	233636.151		ppb	0.503		238251.487
207	Pb	578.894	0.030215	ppb	13.084	15.169	106.667
203	Tl	186.668	0.035722	ppb	7.143	8.224	14.444
209	Bi-IS	> 179321.823		ppb	0.718		179606.508
51	V	55.556	0.019982	ppb	35.157	160.139	44.445
59	Co	33.333	0.005246	ppb	17.321	64.363	25.556
60	Ni	45.556	-0.000073	ppb	27.702	20596.950	46.667
75	As	551.923	0.000038	ppb	8.572	90356.156	563.733
71	Ga-ISK	> 110875.314		ppb	1.238		113253.855
82	Se-2	4.205	0.018359	ppb	112.264	657.995	3.549
107	Ag-1	230.002	0.051210	ppb	8.816	9.240	43.333
115	In-ISK	93211.326		ppb	0.877		94813.137
45	Sc-ISK	> 264401.277		ppb	1.291		270273.987
23	Na	2468.547	2.325091	ppb	6.058	16.785	1461.742
39	K	109692.862	7.688992	ppb	0.222	19.952	104260.196
24	Mg	388.339	0.556536	ppb	12.238	18.684	110.000
159	Tb-ISK	191078.071		ppb	0.414		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Monday, April 20, 2020 09:57:21

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICVL-210771.055

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		35876.106		ppb		1.039		36395.193
9	Be	|		1548.973	1.018373	ppb		1.512	0.656	13.333
10	B	|		19029.335	50.244448	ppb		1.677	2.258	1052.261
27	Al	|		337011.167	51.107398	ppb		0.652	1.678	3991.718
43	Ca-2	|		921.697	48.800861	ppb		8.144	9.405	111.667
49	Ti	|		818.912	1.034504	ppb		6.124	8.014	197.779
52	Cr	|		15565.148	0.753548	ppb		3.271	9.764	9914.551
55	Mn	|		11710.354	0.969742	ppb		1.275	1.325	531.121
57	Fe	|		17753.247	45.803961	ppb		0.759	2.432	7569.783
45	Sc-IS	>		1599020.006		ppb		1.089		1628366.772
66	Zn	|		6544.832	5.119420	ppb		1.282	2.201	457.785
86	Sr	|		1719.201	0.954831	ppb		4.675	4.239	1.808
65	Cu	|		1841.491	1.024680	ppb		2.125	3.305	63.143
69	Ga-IS	|		452801.866		ppb		1.565		464006.496
95	Mo	|		1876.790	1.070312	ppb		1.538	2.299	45.556
115	In-IS	>		269732.934		ppb		0.653		270500.848
111	Cd	|		1642.820	0.997730	ppb		4.047	4.031	4.349
118	Sn	|		6435.894	1.069646	ppb		2.010	2.636	1287.836
121	Sb	|		5485.497	0.939325	ppb		0.886	0.942	390.005
135	Ba	|		1167.826	1.053231	ppb		10.029	9.800	8.889
165	Ho-IS	|		266079.764		ppb		1.217		266136.161
159	Tb-IS	|		238334.039		ppb		1.094		238251.487
207	Pb	|		15777.921	0.998477	ppb		0.750	1.642	106.667
203	Tl	|		4698.550	0.966651	ppb		1.786	1.353	14.444
209	Bi-IS	>		180163.512		ppb		1.297		179606.508
51	V	|		628.903	0.961945	ppb		2.448	3.275	44.445
59	Co	|		1564.530	0.960152	ppb		6.013	5.579	25.556
60	Ni	|		897.806	0.974558	ppb		4.672	5.336	46.667
75	As	|		1031.067	1.088651	ppb		2.083	3.862	563.733
71	Ga-ISK	>		112719.630		ppb		0.613		113253.855
82	Se-2	|		43.885	1.013288	ppb		19.912	21.870	3.549
107	Ag-1	|		3597.119	0.955140	ppb		0.649	1.047	43.333
115	In-ISK	|		94229.363		ppb		1.787		94813.137
45	Sc-ISK	>		267707.356		ppb		0.634		270273.987
23	Na	|		24584.470	51.102222	ppb		1.026	1.563	1461.742
39	K	|		157785.499	53.691099	ppb		0.683	2.703	104260.196
24	Mg	|		25726.478	50.078375	ppb		0.747	0.270	110.000
159	Tb-ISK	|		191322.649		ppb		0.464		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63567_1-A

Autosampler Position: 301

Sample Date/Time: Monday, April 20, 2020 10:00:08

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\MB 570-63567_1-A.056

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34953.845		ppb	2.944		36395.193
9	Be	7.778	-0.003443	ppb	98.974	150.487	13.333
10	B	1256.722	0.679611	ppb	4.084	19.170	1052.261
27	Al	3283.711	-0.089492	ppb	0.203	4.233	3991.718
43	Ca-2	153.334	2.763409	ppb	26.558	87.870	111.667
49	Ti	161.112	-0.050686	ppb	17.228	89.876	197.779
52	Cr	8014.472	-0.205990	ppb	4.040	17.570	9914.551
55	Mn	683.350	0.015002	ppb	13.207	55.315	531.121
57	Fe	7089.537	-1.020301	ppb	1.005	41.179	7569.783
45	Sc-IS	> 1573792.800		ppb	0.631		1628366.772
66	Zn	545.566	0.088091	ppb	8.251	45.663	457.785
86	Sr	21.371	0.011165	ppb	156.912	170.297	1.808
65	Cu	66.403	0.003143	ppb	13.313	163.589	63.143
69	Ga-IS	446327.590		ppb	0.848		464006.496
95	Mo	126.667	0.049081	ppb	10.526	17.092	45.556
115	In-IS	> 261030.184		ppb	0.688		270500.848
111	Cd	7.512	0.002075	ppb	51.563	116.369	4.349
118	Sn	1352.286	0.023521	ppb	5.066	64.160	1287.836
121	Sb	286.670	-0.017037	ppb	17.208	57.461	390.005
135	Ba	14.444	0.005526	ppb	48.038	118.912	8.889
165	Ho-IS	259646.145		ppb	0.588		266136.161
159	Tb-IS	230490.313		ppb	1.393		238251.487
207	Pb	226.667	0.007876	ppb	4.412	8.394	106.667
203	Tl	45.556	0.006577	ppb	11.177	16.599	14.444
209	Bi-IS	> 177090.974		ppb	1.139		179606.508
51	V	42.222	-0.002058	ppb	16.434	560.238	44.445
59	Co	37.778	0.008124	ppb	30.987	91.173	25.556
60	Ni	55.556	0.011576	ppb	19.287	107.622	46.667
75	As	567.571	0.038855	ppb	9.792	334.163	563.733
71	Ga-ISK	> 110708.428		ppb	0.126		113253.855
82	Se-2	3.213	-0.006450	ppb	147.805	1882.151	3.549
107	Ag-1	56.667	0.003914	ppb	15.563	61.371	43.333
115	In-ISK	93733.076		ppb	0.881		94813.137
45	Sc-ISK	> 267784.273		ppb	0.177		270273.987
23	Na	1608.424	0.353550	ppb	3.683	36.375	1461.742
39	K	107159.309	3.800170	ppb	0.691	20.660	104260.196
24	Mg	190.001	0.158370	ppb	10.526	25.063	110.000
159	Tb-ISK	190383.559		ppb	0.450		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63567_2-A

Autosampler Position: 302

Sample Date/Time: Monday, April 20, 2020 10:02:54

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\LCS 570-63567_2-A.057

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		35763.608		ppb		1.743		36395.193
9	Be	|		157855.236	103.811288	ppb		1.392	0.508	13.333
10	B	|		37290.838	100.377311	ppb		1.535	1.173	1052.261
27	Al	|		694740.024	105.132228	ppb		0.193	1.586	3991.718
43	Ca-2	|		90945.396	5413.224709	ppb		2.898	1.523	111.667
49	Ti	|		61444.126	100.600727	ppb		2.374	1.859	197.779
52	Cr	|		805420.834	101.980113	ppb		1.509	0.983	9914.551
55	Mn	|		1123688.288	96.560194	ppb		0.735	1.228	531.121
57	Fe	|		1174400.890	5137.029970	ppb		0.532	1.453	7569.783
45	Sc-IS	>		1612133.015		ppb		1.520		1628366.772
66	Zn	|		126253.359	104.781240	ppb		1.945	0.473	457.785
86	Sr	|		177661.182	98.000154	ppb		0.931	2.251	1.808
65	Cu	|		175345.133	100.080672	ppb		2.223	0.710	63.143
69	Ga-IS	|		478992.510		ppb		0.749		464006.496
95	Mo	|		171865.542	99.562121	ppb		1.356	1.758	45.556
115	In-IS	>		268773.057		ppb		1.760		270500.848
111	Cd	|		168539.608	102.995545	ppb		1.550	0.245	4.349
118	Sn	|		487383.305	101.305581	ppb		1.367	2.113	1287.836
121	Sb	|		522699.924	96.626216	ppb		2.045	2.659	390.005
135	Ba	|		113293.319	103.371062	ppb		3.183	4.134	8.889
165	Ho-IS	|		270605.662		ppb		0.701		266136.161
159	Tb-IS	|		237613.763		ppb		2.192		238251.487
207	Pb	|		1568253.985	99.982840	ppb		0.708	1.435	106.667
203	Tl	|		458505.591	94.689301	ppb		1.047	1.070	14.444
209	Bi-IS	>		180032.930		ppb		0.922		179606.508
51	V	|		61555.697	101.256945	ppb		1.866	2.935	44.445
59	Co	|		158649.638	99.031550	ppb		1.993	2.512	25.556
60	Ni	|		88271.878	101.050168	ppb		0.204	2.632	46.667
75	As	|		44526.197	101.931115	ppb		0.806	3.453	563.733
71	Ga-ISK	>		112692.962		ppb		2.730		113253.855
82	Se-2	|		4030.776	101.146132	ppb		1.796	1.872	3.549
107	Ag-1	|		181023.040	48.671370	ppb		0.107	2.586	43.333
115	In-ISK	|		95593.589		ppb		0.972		94813.137
45	Sc-ISK	>		269610.728		ppb		1.484		270273.987
23	Na	|		473840.943	1036.019237	ppb		1.235	1.286	1461.742
39	K	|		1154727.171	1027.607491	ppb		0.203	1.568	104260.196
24	Mg	|		2765286.918	5367.788669	ppb		1.270	1.345	110.000
159	Tb-ISK	|		193810.591		ppb		1.039		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: LCSD 570-63567_3-A
 Autosampler Position: 303
 Sample Date/Time: Monday, April 20, 2020 10:05:40
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\LCSD 570-63567_3-A.058
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		34933.775		ppb		1.086		36395.193
9	Be	|		159405.705	105.839609	ppb		1.717	2.347	13.333
10	B	|		37348.767	101.556209	ppb		1.574	3.646	1052.261
27	Al	|		690802.157	105.567142	ppb		2.486	4.449	3991.718
43	Ca-2	|		88982.960	5347.658443	ppb		1.175	1.265	111.667
49	Ti	|		60784.655	100.527128	ppb		2.575	4.861	197.779
52	Cr	|		799579.183	102.251819	ppb		1.734	4.049	9914.551
55	Mn	|		1112958.857	96.570988	ppb		1.048	3.198	531.121
57	Fe	|		1168546.237	5160.287513	ppb		0.414	1.891	7569.783
45	Sc-IS	>		1597141.222		ppb		2.243		1628366.772
66	Zn	|		126404.625	105.916032	ppb		1.435	1.252	457.785
86	Sr	|		177450.355	98.808848	ppb		1.933	2.646	1.808
65	Cu	|		175241.826	100.979758	ppb		2.079	1.656	63.143
69	Ga-IS	|		469141.319		ppb		1.678		464006.496
95	Mo	|		172850.622	101.093433	ppb		1.158	2.417	45.556
115	In-IS	>		270567.094		ppb		0.894		270500.848
111	Cd	|		169335.868	102.790524	ppb		1.826	1.298	4.349
118	Sn	|		488177.039	100.778996	ppb		0.990	0.844	1287.836
121	Sb	|		534314.106	98.097912	ppb		1.189	0.297	390.005
135	Ba	|		113080.321	102.465406	ppb		1.751	2.147	8.889
165	Ho-IS	|		268052.902		ppb		1.429		266136.161
159	Tb-IS	|		238154.419		ppb		1.112		238251.487
207	Pb	|		1578407.321	100.527100	ppb		0.643	0.308	106.667
203	Tl	|		462316.591	95.384046	ppb		1.010	0.952	14.444
209	Bi-IS	>		180203.926		ppb		0.679		179606.508
51	V	|		60567.014	100.299209	ppb		0.667	1.219	44.445
59	Co	|		154161.846	96.886732	ppb		1.047	1.595	25.556
60	Ni	|		89964.627	103.670735	ppb		0.950	0.865	46.667
75	As	|		43808.131	100.918126	ppb		1.999	1.452	563.733
71	Ga-ISK	>		111899.892		ppb		0.668		113253.855
82	Se-2	|		3988.418	100.765935	ppb		2.705	2.585	3.549
107	Ag-1	|		179302.691	48.527711	ppb		0.667	0.235	43.333
115	In-ISK	|		94302.799		ppb		1.667		94813.137
45	Sc-ISK	>		269223.748		ppb		1.876		270273.987
23	Na	|		474196.357	1038.295304	ppb		1.635	1.230	1461.742
39	K	|		1152605.267	1027.290686	ppb		1.230	2.668	104260.196
24	Mg	|		2805012.972	5454.581124	ppb		1.715	3.483	110.000
159	Tb-ISK	|		195371.687		ppb		1.266		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-2-D

Autosampler Position: 304

Sample Date/Time: Monday, April 20, 2020 10:08:25

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-2-D .059

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	37472.446		ppb	3.066			36395.193
9	Be	|	30.000	0.009903	ppb	29.397	56.010		13.333
10	B	|	253214.567	656.651161	ppb	1.062	0.357		1052.261
27	Al	|	14423.947	1.463587	ppb	2.085	4.052		3991.718
43	Ca-2	|	4939880.841	276946.325324	ppb	1.126	0.607		111.667
49	Ti	|	1695.656	2.298164	ppb	2.084	1.907		197.779
52	Cr	|	14288.255	0.464569	ppb	1.995	6.090		9914.551
55	Mn	|	1700560.568	137.468448	ppb	0.598	0.656		531.121
57	Fe	|	195184.575	775.154934	ppb	1.614	1.207		7569.783
45	Sc-IS	>	1713858.856		ppb	1.136			1628366.772
66	Zn	|	8386.906	6.193711	ppb	1.750	1.359		457.785
86	Sr	|	3780059.730	1961.042412	ppb	0.574	0.574		1.808
65	Cu	|	53982.765	28.958745	ppb	1.581	0.793		63.143
69	Ga-IS	|	596491.801		ppb	1.707			464006.496
95	Mo	|	1902.349	1.011155	ppb	6.444	7.652		45.556
115	In-IS	>	266144.213		ppb	0.194			270500.848
111	Cd	|	128.228	0.076486	ppb	11.599	11.873		4.349
118	Sn	|	2084.597	0.172026	ppb	6.145	15.737		1287.836
121	Sb	|	8263.501	1.471859	ppb	2.236	2.432		390.005
135	Ba	|	815234.406	750.974519	ppb	2.092	2.067		8.889
165	Ho-IS	|	263822.821		ppb	0.919			266136.161
159	Tb-IS	|	230706.876		ppb	0.293			238251.487
207	Pb	|	1301.134	0.084724	ppb	5.731	5.038		106.667
203	Tl	|	233.335	0.050238	ppb	13.777	15.351		14.444
209	Bi-IS	>	163094.752		ppb	1.573			179606.508
51	V	|	1447.851	2.336329	ppb	2.363	1.218		44.445
59	Co	|	12227.454	7.702072	ppb	1.500	1.443		25.556
60	Ni	|	9228.536	10.631135	ppb	1.428	0.464		46.667
75	As	|	825.072	0.634781	ppb	6.516	23.549		563.733
71	Ga-ISK	>	111435.216		ppb	1.433			113253.855
82	Se-2	|	424.486	10.691633	ppb	3.569	3.911		3.549
107	Ag-1	|	127.778	0.023091	ppb	18.323	25.493		43.333
115	In-ISK	|	89930.603		ppb	0.652			94813.137
45	Sc-ISK	>	289414.199		ppb	2.137			270273.987
23	Na	|	34295945.925	70064.670588	ppb	1.829	0.320		1461.742
39	K	|	10143998.565	9141.307487	ppb	0.272	1.871		104260.196
24	Mg	|	29496977.924	53347.286805	ppb	0.810	1.325		110.000
159	Tb-ISK	|	193326.425		ppb	2.222			192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-K-3-B SD @5
 Autosampler Position: 305
 Sample Date/Time: Monday, April 20, 2020 10:11:10
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-K-3-B SD @5.060
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34385.787		ppb	1.820		36395.193
9	Be	14.444	0.001458	ppb	35.251	231.777	13.333
10	B	12367.581	33.813117	ppb	4.491	4.934	1052.261
27	Al	7199.597	0.573364	ppb	6.672	16.242	3991.718
43	Ca-2	379917.859	24257.123164	ppb	1.439	0.632	111.667
49	Ti	597.790	0.731353	ppb	8.536	14.129	197.779
52	Cr	21025.463	1.630066	ppb	1.339	3.903	9914.551
55	Mn	1101.154	0.056246	ppb	3.348	6.979	531.121
57	Fe	23751.958	79.043847	ppb	2.183	2.882	7569.783
45	Sc-IS	> 1504603.065		ppb	1.953		1628366.772
66	Zn	1001.146	0.516391	ppb	4.760	9.894	457.785
86	Sr	222561.539	131.523587	ppb	2.507	2.222	1.808
65	Cu	502.972	0.272035	ppb	4.541	4.745	63.143
69	Ga-IS	421364.364		ppb	2.015		464006.496
95	Mo	1280.057	0.768361	ppb	3.580	1.782	45.556
115	In-IS	> 253493.160		ppb	0.441		270500.848
111	Cd	15.090	0.007130	ppb	34.067	46.205	4.349
118	Sn	2862.510	0.365732	ppb	8.901	15.213	1287.836
121	Sb	6687.129	1.239683	ppb	9.208	9.677	390.005
135	Ba	14327.193	13.846925	ppb	5.151	4.767	8.889
165	Ho-IS	248002.010		ppb	0.766		266136.161
159	Tb-IS	214834.594		ppb	1.200		238251.487
207	Pb	372.224	0.018998	ppb	13.293	17.698	106.667
203	Tl	72.222	0.013234	ppb	18.653	22.553	14.444
209	Bi-IS	> 165463.842		ppb	0.371		179606.508
51	V	342.226	0.506013	ppb	11.289	14.813	44.445
59	Co	102.223	0.049607	ppb	16.086	21.012	25.556
60	Ni	235.558	0.223824	ppb	4.549	7.702	46.667
75	As	547.636	0.002418	ppb	8.684	4436.706	563.733
71	Ga-ISK	> 109795.958		ppb	1.776		113253.855
82	Se-2	79.555	1.957697	ppb	17.897	16.833	3.549
107	Ag-1	87.778	0.012577	ppb	19.487	33.988	43.333
115	In-ISK	89339.969		ppb	1.254		94813.137
45	Sc-ISK	> 275577.533		ppb	3.036		270273.987
23	Na	4359454.510	9354.055714	ppb	1.168	2.170	1461.742
39	K	1148821.624	997.913277	ppb	0.650	2.811	104260.196
24	Mg	2440484.578	4637.694432	ppb	0.640	3.601	110.000
159	Tb-ISK	185787.639		ppb	0.422		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-3-B

Autosampler Position: 306

Sample Date/Time: Monday, April 20, 2020 10:13:56

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-3-B.061

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32878.910		ppb	1.609		36395.193
9	Be	11.111	-0.000905	ppb	17.321	154.756	13.333
10	B	50999.785	147.285224	ppb	1.990	1.536	1052.261
27	Al	20980.952	2.793754	ppb	1.001	0.394	3991.718
43	Ca-2	1867131.081	118333.814853	ppb	1.184	0.266	111.667
49	Ti	2011.253	3.191563	ppb	3.708	4.198	197.779
52	Cr	60784.602	7.027669	ppb	0.686	1.536	9914.551
55	Mn	2363.529	0.170848	ppb	4.037	4.712	531.121
57	Fe	73758.844	312.314824	ppb	1.606	2.700	7569.783
45	Sc-IS	> 1515989.680		ppb	1.019		1628366.772
66	Zn	2361.306	1.714313	ppb	0.711	2.026	457.785
86	Sr	1083584.923	635.533628	ppb	1.782	2.018	1.808
65	Cu	1857.235	1.091851	ppb	6.258	5.932	63.143
69	Ga-IS	414591.849		ppb	2.208		464006.496
95	Mo	3634.907	2.213726	ppb	1.568	2.309	45.556
115	In-IS	> 247039.128		ppb	1.856		270500.848
111	Cd	13.478	0.006334	ppb	28.195	40.764	4.349
118	Sn	815.579	-0.081998	ppb	15.240	31.066	1287.836
121	Sb	1311.171	0.192174	ppb	5.964	7.672	390.005
135	Ba	70432.233	69.877370	ppb	3.567	1.872	8.889
165	Ho-IS	250265.858		ppb	1.903		266136.161
159	Tb-IS	218004.377		ppb	1.467		238251.487
207	Pb	380.002	0.020339	ppb	1.754	0.662	106.667
203	Tl	25.556	0.002896	ppb	41.929	82.633	14.444
209	Bi-IS	> 160614.724		ppb	1.867		179606.508
51	V	1281.169	2.149666	ppb	6.268	7.433	44.445
59	Co	67.778	0.028741	ppb	24.754	39.259	25.556
60	Ni	1047.816	1.210991	ppb	3.250	3.572	46.667
75	As	689.118	0.381805	ppb	10.908	43.968	563.733
71	Ga-ISK	> 106942.146		ppb	0.939		113253.855
82	Se-2	390.547	10.247537	ppb	3.986	4.812	3.549
107	Ag-1	28.889	-0.003416	ppb	17.625	40.088	43.333
115	In-ISK	89163.533		ppb	0.871		94813.137
45	Sc-ISK	> 269159.973		ppb	1.135		270273.987
23	Na	21183127.201	46530.346756	ppb	1.191	0.881	1461.742
39	K	5281279.050	5071.456115	ppb	0.649	0.592	104260.196
24	Mg	11697656.367	22743.736454	ppb	2.013	1.709	110.000
159	Tb-ISK	189702.053		ppb	1.365		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-3-C MS

Autosampler Position: 307

Sample Date/Time: Monday, April 20, 2020 10:16:41

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-3-C MS.062

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		32152.813		ppb		1.212		36395.193
9	Be	|		139377.999	98.255294	ppb		2.463	3.307	13.333
10	B	|		81524.230	239.074594	ppb		1.858	2.185	1052.261
27	Al	|		683989.952	110.954611	ppb		0.722	0.872	3991.718
43	Ca-2	|		1901650.827	121468.152090	ppb		1.367	0.674	111.667
49	Ti	|		57768.815	101.377773	ppb		1.799	1.846	197.779
52	Cr	|		776536.388	105.427261	ppb		0.697	1.434	9914.551
55	Mn	|		1006725.668	92.708075	ppb		1.364	1.143	531.121
57	Fe	|		1125420.304	5276.220322	ppb		1.174	0.257	7569.783
45	Sc-IS	>		1504166.057		ppb		0.939		1628366.772
66	Zn	|		108733.401	96.690582	ppb		1.421	0.556	457.785
86	Sr	|		1254255.709	741.394146	ppb		0.408	0.538	1.808
65	Cu	|		147587.820	90.283284	ppb		1.845	1.106	63.143
69	Ga-IS	|		437549.334		ppb		1.355		464006.496
95	Mo	|		159767.359	99.188179	ppb		0.849	0.872	45.556
115	In-IS	>		248542.407		ppb		0.798		270500.848
111	Cd	|		144172.826	95.278219	ppb		0.492	1.008	4.349
118	Sn	|		343048.032	77.033042	ppb		2.270	2.385	1287.836
121	Sb	|		491681.824	98.272890	ppb		0.809	0.529	390.005
135	Ba	|		175378.162	172.989586	ppb		2.498	2.377	8.889
165	Ho-IS	|		252894.409		ppb		0.568		266136.161
159	Tb-IS	|		218905.566		ppb		0.423		238251.487
207	Pb	|		1390554.374	98.438134	ppb		0.878	0.377	106.667
203	Tl	|		412499.967	94.605823	ppb		0.985	1.920	14.444
209	Bi-IS	>		162128.210		ppb		1.100		179606.508
51	V	|		58252.977	101.058761	ppb		0.808	0.819	44.445
59	Co	|		143245.712	94.313049	ppb		0.381	1.198	25.556
60	Ni	|		78625.791	94.914627	ppb		1.011	0.834	46.667
75	As	|		43919.458	106.082211	ppb		0.933	2.380	563.733
71	Ga-ISK	>		106819.043		ppb		1.493		113253.855
82	Se-2	|		4231.827	112.010653	ppb		2.221	1.546	3.549
107	Ag-1	|		66906.326	18.963262	ppb		1.252	1.010	43.333
115	In-ISK	|		88417.474		ppb		1.777		94813.137
45	Sc-ISK	>		269678.729		ppb		1.617		270273.987
23	Na	|		21173737.052	46421.971397	ppb		1.083	0.571	1461.742
39	K	|		6361568.936	6118.565541	ppb		1.938	2.660	104260.196
24	Mg	|		14067090.923	27301.962198	ppb		1.192	1.819	110.000
159	Tb-ISK	|		188611.693		ppb		1.044		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-K-3-D MSD
 Autosampler Position: 308
 Sample Date/Time: Monday, April 20, 2020 10:19:27
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-K-3-D MSD.063
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31538.114		ppb		1.631		36395.193
9	Be	|	137232.855	97.017356	ppb		2.092	2.374	13.333
10	B	|	81003.503	238.211237	ppb		1.866	1.065	1052.261
27	Al	|	679819.662	110.614712	ppb		0.415	1.936	3991.718
43	Ca-2	|	1897277.026	121547.033635	ppb		1.343	0.586	111.667
49	Ti	|	57658.360	101.484111	ppb		1.397	1.527	197.779
52	Cr	|	775939.451	105.645165	ppb		1.699	0.279	9914.551
55	Mn	|	1017278.985	93.961589	ppb		0.971	1.295	531.121
57	Fe	|	1134926.690	5336.603136	ppb		2.166	1.331	7569.783
45	Sc-IS	>	1499863.478		ppb		1.886		1628366.772
66	Zn	|	107227.907	95.621261	ppb		3.481	2.831	457.785
86	Sr	|	1252307.363	742.479616	ppb		0.964	1.724	1.808
65	Cu	|	146458.147	89.845099	ppb		3.687	2.762	63.143
69	Ga-IS	|	431915.960		ppb		2.586		464006.496
95	Mo	[	160913.445	100.201483	ppb		0.804	1.579	45.556
115	In-IS	>	245028.402		ppb		1.263		270500.848
111	Cd	|	142751.818	95.700923	ppb		0.752	1.778	4.349
118	Sn	|	355430.707	80.981203	ppb		2.080	2.722	1287.836
121	Sb	|	496362.660	100.644452	ppb		0.398	1.498	390.005
135	Ba	|	169791.251	169.932190	ppb		2.510	3.701	8.889
165	Ho-IS	[	248205.479		ppb		0.667		266136.161
159	Tb-IS	[	214033.682		ppb		0.408		238251.487
207	Pb	|	1366312.582	97.675621	ppb		0.318	0.099	106.667
203	Tl	|	404476.425	93.671147	ppb		0.926	1.105	14.444
209	Bi-IS	>	160542.612		ppb		0.407		179606.508
51	V	[	57665.058	101.137053	ppb		1.607	2.676	44.445
59	Co	|	142832.938	95.061669	ppb		2.186	2.624	25.556
60	Ni	|	77471.794	94.520604	ppb		2.309	0.938	46.667
75	As	|	43471.705	106.123534	ppb		0.800	1.168	563.733
71	Ga-ISK	>	105679.533		ppb		1.850		113253.855
82	Se-2	|	4186.162	112.024566	ppb		0.442	1.998	3.549
107	Ag-1	|	71226.642	20.380602	ppb		12.178	10.323	43.333
115	In-ISK	[	87983.896		ppb		0.791		94813.137
45	Sc-ISK	>	267283.960		ppb		0.513		270273.987
23	Na	|	20860002.547	46139.550161	ppb		1.589	1.103	1461.742
39	K	|	6300808.392	6113.336495	ppb		0.223	0.743	104260.196
24	Mg	|	13959537.992	27332.556045	ppb		0.337	0.774	110.000
159	Tb-ISK	[	185260.236		ppb		0.878		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-3-B PDS

Autosampler Position: 309

Sample Date/Time: Monday, April 20, 2020 10:22:12

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-3-B PDS.064

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31102.715		ppb		1.478		36395.193
9	Be	|		139587.758	100.318474	ppb	2.211	2.574		13.333
10	B	|		78736.396	235.365431	ppb	0.950	1.110		1052.261
27	Al	|		672180.491	111.181530	ppb	1.087	1.898		3991.718
43	Ca-2	|		1833370.574	119398.008492	ppb	1.552	1.000		111.667
49	Ti	|		59064.081	105.688374	ppb	1.137	0.549		197.779
52	Cr	|		797055.486	110.384515	ppb	0.983	1.148		9914.551
55	Mn	|		1038279.715	97.492309	ppb	0.917	1.385		531.121
57	Fe	|		1134034.576	5421.500203	ppb	2.095	1.706		7569.783
45	Sc-IS	>		1475309.884		ppb	1.044			1628366.772
66	Zn	|		110171.077	99.902217	ppb	2.005	1.855		457.785
86	Sr	|		1229927.326	741.218626	ppb	1.247	0.930		1.808
65	Cu	|		151784.243	94.668285	ppb	2.103	1.443		63.143
69	Ga-IS	|		426127.801		ppb	1.778			464006.496
95	Mo	|		168161.830	106.439839	ppb	1.236	0.553		45.556
115	In-IS	>		243810.471		ppb	0.525			270500.848
111	Cd	|		152376.810	102.647329	ppb	1.281	0.817		4.349
118	Sn	|		443707.957	101.650526	ppb	0.982	0.590		1287.836
121	Sb	|		498203.036	101.505935	ppb	2.123	1.708		390.005
135	Ba	|		165906.206	166.812173	ppb	3.133	2.774		8.889
165	Ho-IS	|		245760.367		ppb	0.335			266136.161
159	Tb-IS	|		213698.809		ppb	0.986			238251.487
207	Pb	|		1418447.552	102.120080	ppb	0.680	1.081		106.667
203	Tl	|		410798.771	95.806774	ppb	1.137	1.427		14.444
209	Bi-IS	>		159433.788		ppb	1.690			179606.508
51	V	|		60096.141	106.315269	ppb	0.492	0.472		44.445
59	Co	|		145690.270	97.808135	ppb	0.778	0.228		25.556
60	Ni	|		81278.425	100.045382	ppb	2.379	1.661		46.667
75	As	|		44755.109	110.258351	ppb	1.503	0.665		563.733
71	Ga-ISK	>		104749.321		ppb	0.951			113253.855
82	Se-2	|		4249.795	114.705217	ppb	2.145	1.400		3.549
107	Ag-1	|		148021.086	42.819496	ppb	11.849	12.548		43.333
115	In-ISK	|		86742.716		ppb	2.361			94813.137
45	Sc-ISK	>		266306.065		ppb	0.989			270273.987
23	Na	|		20182965.379	44813.167076	ppb	1.105	2.020		1461.742
39	K	|		6115557.340	5952.691179	ppb	0.803	0.295		104260.196
24	Mg	|		13465786.490	26462.043367	ppb	1.421	1.079		110.000
159	Tb-ISK	|		184608.004		ppb	1.565			192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 10:24:58

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.065

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	30087.209		ppb		1.322		36395.193
9	Be	|	134764.918	99.321535	ppb		0.768	1.965	13.333
10	B	|	79044.782	242.415345	ppb		1.580	2.617	1052.261
27	Al	|	646198.657	109.592512	ppb		0.448	1.388	3991.718
43	Ca-2	|	75495.676	5035.142273	ppb		1.930	0.795	111.667
49	Ti	|	56665.503	103.993997	ppb		1.014	2.583	197.779
52	Cr	|	744834.268	105.736302	ppb		0.552	2.024	9914.551
55	Mn	|	1073208.435	103.343688	ppb		0.210	1.609	531.121
57	Fe	|	1059670.506	5193.819221	ppb		0.692	0.890	7569.783
45	Sc-IS	>	1438771.171		ppb		1.573		1628366.772
66	Zn	|	110575.302	102.818944	ppb		2.080	0.510	457.785
86	Sr	|	171580.782	106.051970	ppb		1.380	2.519	1.808
65	Cu	|	158303.069	101.255525	ppb		0.977	0.788	63.143
69	Ga-IS	|	429213.948		ppb		1.920		464006.496
95	Mo	|	165067.289	107.146148	ppb		1.902	2.051	45.556
115	In-IS	>	254471.304		ppb		0.543		270500.848
111	Cd	|	151245.647	97.621572	ppb		0.264	0.735	4.349
118	Sn	|	464301.495	101.914992	ppb		0.823	0.817	1287.836
121	Sb	|	523968.422	102.290381	ppb		0.633	0.882	390.005
135	Ba	|	98438.431	94.834642	ppb		4.441	4.501	8.889
165	Ho-IS	|	244893.612		ppb		1.140		266136.161
159	Tb-IS	|	212516.838		ppb		0.334		238251.487
207	Pb	|	1431095.575	98.631289	ppb		1.071	0.816	106.667
203	Tl	|	432396.417	96.543032	ppb		0.581	1.194	14.444
209	Bi-IS	>	166539.761		ppb		1.774		179606.508
51	V	|	60064.928	101.643268	ppb		1.918	2.497	44.445
59	Co	|	155218.924	99.681083	ppb		2.034	2.481	25.556
60	Ni	|	82456.185	97.090676	ppb		0.989	1.343	46.667
75	As	|	42072.144	99.015127	ppb		0.679	0.684	563.733
71	Ga-ISK	>	109511.491		ppb		0.706		113253.855
82	Se-2	|	3789.048	97.820177	ppb		1.175	1.590	3.549
107	Ag-1	|	338764.348	93.699989	ppb		1.121	1.451	43.333
115	In-ISK	|	89593.633		ppb		1.492		94813.137
45	Sc-ISK	>	268049.206		ppb		0.489		270273.987
23	Na	|	2312165.331	5096.913069	ppb		0.668	0.295	1461.742
39	K	|	5423703.995	5232.820710	ppb		1.261	1.310	104260.196
24	Mg	|	2590564.257	5057.488105	ppb		0.634	0.266	110.000
159	Tb-ISK	|	186051.023		ppb		0.212		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 10:27:44

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.066

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30764.213		ppb	2.354		36395.193
9	Be	18.889	0.005415	ppb	40.754	105.396	13.333
10	B	1553.418	2.002665	ppb	5.399	14.324	1052.261
27	Al	2835.837	-0.111131	ppb	2.528	11.441	3991.718
43	Ca-2	81.667	-1.056474	ppb	30.201	159.624	111.667
49	Ti	236.669	0.120110	ppb	8.567	33.263	197.779
52	Cr	7879.951	-0.110714	ppb	2.379	25.768	9914.551
55	Mn	584.456	0.011867	ppb	3.438	13.804	531.121
57	Fe	8152.327	7.782631	ppb	3.349	20.338	7569.783
45	Sc-IS	> 1419124.408		ppb	0.643		1628366.772
66	Zn	498.898	0.094596	ppb	9.386	47.426	457.785
86	Sr	18.525	0.010689	ppb	153.397	167.069	1.808
65	Cu	104.046	0.031792	ppb	1.831	2.531	63.143
69	Ga-IS	405537.260		ppb	2.150		464006.496
95	Mo	1036.704	0.656442	ppb	7.269	8.194	45.556
115	In-IS	> 248469.039		ppb	0.995		270500.848
111	Cd	7.823	0.002531	ppb	2.023	5.598	4.349
118	Sn	6195.789	1.129845	ppb	3.449	4.102	1287.836
121	Sb	4404.013	0.809526	ppb	5.357	6.009	390.005
135	Ba	22.222	0.013829	ppb	31.225	47.756	8.889
165	Ho-IS	239202.797		ppb	0.991		266136.161
159	Tb-IS	205868.381		ppb	0.877		238251.487
207	Pb	532.226	0.030278	ppb	2.531	2.155	106.667
203	Tl	163.334	0.033880	ppb	5.400	4.966	14.444
209	Bi-IS	> 164667.003		ppb	1.099		179606.508
51	V	54.445	0.021644	ppb	21.501	93.167	44.445
59	Co	20.000	-0.002750	ppb	57.735	271.456	25.556
60	Ni	51.111	0.008417	ppb	41.419	299.964	46.667
75	As	580.253	0.117754	ppb	6.508	80.005	563.733
71	Ga-ISK	> 106897.363		ppb	0.826		113253.855
82	Se-2	3.862	0.013239	ppb	94.019	725.691	3.549
107	Ag-1	597.791	0.157950	ppb	19.231	21.190	43.333
115	In-ISK	87642.373		ppb	1.108		94813.137
45	Sc-ISK	> 261987.567		ppb	1.634		270273.987
23	Na	2235.175	1.846003	ppb	2.803	3.256	1461.742
39	K	112053.300	11.075108	ppb	0.346	13.479	104260.196
24	Mg	638.348	1.062586	ppb	4.314	6.156	110.000
159	Tb-ISK	180599.799		ppb	0.943		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-4-B

Autosampler Position: 310

Sample Date/Time: Monday, April 20, 2020 10:30:31

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-4-B.067

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	31039.253		ppb	2.507		36395.193
9	Be	10.000	-0.001583	ppb	0.000	3.371	13.333
10	B	42019.494	122.693233	ppb	1.561	0.969	1052.261
27	Al	17421.729	2.260134	ppb	1.503	2.267	3991.718
43	Ca-2	2647000.026	170276.807212	ppb	0.870	0.679	111.667
49	Ti	4868.608	8.308835	ppb	2.663	2.143	197.779
52	Cr	53612.640	6.158828	ppb	0.879	0.410	9914.551
55	Mn	1882.346	0.129427	ppb	4.354	5.252	531.121
57	Fe	99413.722	439.277485	ppb	2.337	1.738	7569.783
45	Sc-IS	> 1493634.126		ppb	0.750		1628366.772
66	Zn	2843.617	2.178870	ppb	4.703	5.251	457.785
86	Sr	1038313.260	617.992822	ppb	3.001	2.324	1.808
65	Cu	2207.561	1.324896	ppb	0.483	0.906	63.143
69	Ga-IS	404341.326		ppb	2.504		464006.496
95	Mo	4016.120	2.485185	ppb	2.615	2.066	45.556
115	In-IS	> 245828.647		ppb	2.159		270500.848
111	Cd	22.677	0.012531	ppb	9.049	13.091	4.349
118	Sn	2427.984	0.286354	ppb	5.072	7.141	1287.836
121	Sb	1268.946	0.184838	ppb	9.549	12.204	390.005
135	Ba	50636.298	50.494869	ppb	2.875	2.297	8.889
165	Ho-IS	249141.565		ppb	0.677		266136.161
159	Tb-IS	216806.204		ppb	0.907		238251.487
207	Pb	531.115	0.032165	ppb	9.770	13.111	106.667
203	Tl	84.445	0.017034	ppb	29.627	33.539	14.444
209	Bi-IS	> 156502.653		ppb	1.076		179606.508
51	V	1346.730	2.280088	ppb	5.709	5.251	44.445
59	Co	78.889	0.036441	ppb	8.796	13.673	25.556
60	Ni	1311.171	1.540928	ppb	1.202	1.073	46.667
75	As	792.185	0.651024	ppb	18.174	56.363	563.733
71	Ga-ISK	> 106117.136		ppb	0.895		113253.855
82	Se-2	927.234	24.638549	ppb	0.823	1.711	3.549
107	Ag-1	94.445	0.015339	ppb	20.377	34.089	43.333
115	In-ISK	88687.267		ppb	0.277		94813.137
45	Sc-ISK	> 270285.154		ppb	0.063		270273.987
23	Na	28778249.755	62950.244941	ppb	1.382	1.389	1461.742
39	K	5730583.335	5487.973537	ppb	1.067	1.096	104260.196
24	Mg	18613244.083	36039.018637	ppb	0.492	0.554	110.000
159	Tb-ISK	189475.701		ppb	1.153		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-5-B

Autosampler Position: 311

Sample Date/Time: Monday, April 20, 2020 10:33:17

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-5-B.068

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	31947.914		ppb	1.875		36395.193
9	Be	10.000	-0.001679	ppb	33.333	136.341	13.333
10	B	210717.136	619.502331	ppb	0.301	1.202	1052.261
27	Al	12473.225	1.423228	ppb	3.617	5.295	3991.718
43	Ca-2	4198427.290	266887.516536	ppb	1.490	0.600	111.667
49	Ti	1684.544	2.628823	ppb	5.055	4.660	197.779
52	Cr	13922.337	0.645198	ppb	1.433	1.926	9914.551
55	Mn	1609052.785	147.479631	ppb	1.708	0.725	531.121
57	Fe	180461.821	814.209129	ppb	1.867	0.940	7569.783
45	Sc-IS	> 1511449.630		ppb	0.996		1628366.772
66	Zn	6074.627	5.017774	ppb	5.657	5.054	457.785
86	Sr	3513470.974	2066.677530	ppb	2.088	1.534	1.808
65	Cu	3467.030	2.076027	ppb	0.644	1.236	63.143
69	Ga-IS	523829.331		ppb	2.534		464006.496
95	Mo	1565.641	0.941298	ppb	2.738	1.850	45.556
115	In-IS	> 239047.311		ppb	2.376		270500.848
111	Cd	81.157	0.052914	ppb	27.871	26.856	4.349
118	Sn	1462.298	0.075421	ppb	12.381	45.533	1287.836
121	Sb	912.251	0.118068	ppb	3.151	4.883	390.005
135	Ba	688091.977	705.533115	ppb	3.915	1.578	8.889
165	Ho-IS	235015.415		ppb	3.327		266136.161
159	Tb-IS	199309.634		ppb	0.527		238251.487
207	Pb	714.452	0.048677	ppb	9.588	10.428	106.667
203	Tl	40.000	0.007092	ppb	22.048	32.925	14.444
209	Bi-IS	> 147738.951		ppb	1.036		179606.508
51	V	1780.111	2.988353	ppb	0.858	1.636	44.445
59	Co	11719.250	7.628865	ppb	1.339	2.688	25.556
60	Ni	8105.634	9.642277	ppb	3.207	2.279	46.667
75	As	801.064	0.638992	ppb	9.126	25.347	563.733
71	Ga-ISK	> 107847.846		ppb	1.544		113253.855
82	Se-2	424.827	11.059673	ppb	5.663	6.042	3.549
107	Ag-1	82.222	0.011497	ppb	6.193	10.364	43.333
115	In-ISK	84861.373		ppb	2.111		94813.137
45	Sc-ISK	> 285545.590		ppb	0.565		270273.987
23	Na	33124380.604	68588.265085	ppb	0.701	1.269	1461.742
39	K	10007769.738	9138.462298	ppb	0.340	0.611	104260.196
24	Mg	27676948.897	50726.043779	ppb	0.961	1.292	110.000
159	Tb-ISK	186491.447		ppb	0.963		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-6-B

Autosampler Position: 312

Sample Date/Time: Monday, April 20, 2020 10:36:02

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-6-B.069

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		29841.148		ppb			2.518			36395.193
9	Be	|		8.889	-0.002109	ppb			78.062	239.693		13.333
10	B	|		40332.412	122.999851	ppb			0.801	2.109		1052.261
27	Al	|		15182.511	2.002464	ppb			2.545	3.256		3991.718
43	Ca-2	|		2516420.860	169004.787296	ppb			2.267	0.481		111.667
49	Ti	|		4809.699	8.579872	ppb			2.747	0.561		197.779
52	Cr	|		52418.266	6.312623	ppb			2.846	1.558		9914.551
55	Mn	|		1789.001	0.128217	ppb			4.143	7.754		531.121
57	Fe	|		98315.056	454.648412	ppb			2.445	0.153		7569.783
45	Sc-IS	|>		1430648.125		ppb			2.317			1628366.772
66	Zn	|		2256.845	1.740366	ppb			6.024	5.983		457.785
86	Sr	|		1013874.786	630.113102	ppb			2.507	1.559		1.808
65	Cu	|		2709.749	1.706134	ppb			9.157	7.199		63.143
69	Ga-IS	|		391562.786		ppb			3.675			464006.496
95	Mo	|		4343.995	2.809086	ppb			4.606	2.556		45.556
115	In-IS	|>		236877.766		ppb			1.812			270500.848
111	Cd	|		5.322	0.001118	ppb			151.966	512.891		4.349
118	Sn	|		1637.872	0.120306	ppb			8.055	20.297		1287.836
121	Sb	|		777.799	0.091554	ppb			2.025	0.469		390.005
135	Ba	|		48252.674	49.906710	ppb			6.213	4.448		8.889
165	Ho-IS	|		239229.135		ppb			1.910			266136.161
159	Tb-IS	|		204530.791		ppb			1.997			238251.487
207	Pb	|		286.668	0.014977	ppb			8.385	12.293		106.667
203	Tl	|		22.222	0.002481	ppb			22.913	50.133		14.444
209	Bi-IS	|>		150979.179		ppb			0.202			179606.508
51	V	|		1441.184	2.457337	ppb			4.114	4.913		44.445
59	Co	|		82.222	0.038915	ppb			23.052	33.315		25.556
60	Ni	|		1223.386	1.440631	ppb			5.591	5.446		46.667
75	As	|		729.524	0.503673	ppb			9.361	34.345		563.733
71	Ga-ISK	|>		105646.996		ppb			0.686			113253.855
82	Se-2	|		913.895	24.392295	ppb			2.658	3.321		3.549
107	Ag-1	|		70.000	0.008456	ppb			28.966	67.442		43.333
115	In-ISK	|		84651.648		ppb			0.831			94813.137
45	Sc-ISK	|>		269462.538		ppb			1.716			270273.987
23	Na	|		27666574.363	60724.317715	ppb			1.613	3.174		1461.742
39	K	|		5690941.046	5467.181216	ppb			0.542	1.565		104260.196
24	Mg	|		18281604.293	35515.513371	ppb			1.478	2.856		110.000
159	Tb-ISK	|		183646.295		ppb			1.089			192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-2-B

Autosampler Position: 313

Sample Date/Time: Monday, April 20, 2020 10:38:47

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-2-B.070

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29300.030		ppb	2.573		36395.193
9	Be	12.222	0.000573	ppb	78.730	1300.676	13.333
10	B	89294.974	279.253874	ppb	2.342	3.932	1052.261
27	Al	15786.496	2.139261	ppb	0.819	2.837	3991.718
43	Ca-2	2197989.565	149403.988102	ppb	2.409	0.485	111.667
49	Ti	1812.338	3.071069	ppb	7.968	6.718	197.779
52	Cr	12137.377	0.516324	ppb	1.732	0.838	9914.551
55	Mn	14843.271	1.409786	ppb	4.007	2.397	531.121
57	Fe	92921.483	433.441816	ppb	3.600	2.278	7569.783
45	Sc-IS	> 1413437.926		ppb	1.941		1628366.772
66	Zn	3427.078	2.877989	ppb	3.089	1.665	457.785
86	Sr	1657600.566	1042.636222	ppb	3.022	2.108	1.808
65	Cu	4389.784	2.822170	ppb	10.449	9.883	63.143
69	Ga-IS	431720.968		ppb	3.350		464006.496
95	Mo	3487.092	2.278580	ppb	2.191	2.313	45.556
115	In-IS	> 236845.466		ppb	2.133		270500.848
111	Cd	18.233	0.010026	ppb	56.298	70.889	4.349
118	Sn	1214.496	0.020564	ppb	10.618	145.914	1287.836
121	Sb	595.568	0.053201	ppb	12.035	24.864	390.005
135	Ba	284778.418	294.721650	ppb	5.027	3.908	8.889
165	Ho-IS	231164.301		ppb	1.035		266136.161
159	Tb-IS	195845.540		ppb	0.424		238251.487
207	Pb	383.335	0.023038	ppb	8.825	10.658	106.667
203	Tl	18.889	0.001768	ppb	36.735	96.502	14.444
209	Bi-IS	> 147329.176		ppb	0.826		179606.508
51	V	1675.654	2.880799	ppb	6.709	6.328	44.445
59	Co	2126.825	1.406777	ppb	6.229	6.954	25.556
60	Ni	5454.374	6.637311	ppb	0.543	0.376	46.667
75	As	674.820	0.375054	ppb	7.652	31.117	563.733
71	Ga-ISK	> 105177.998		ppb	0.671		113253.855
82	Se-2	198.176	5.244830	ppb	8.520	9.237	3.549
107	Ag-1	23.333	-0.004865	ppb	28.571	39.943	43.333
115	In-ISK	84818.137		ppb	1.062		94813.137
45	Sc-ISK	> 271981.551		ppb	1.119		270273.987
23	Na	18760956.639	40780.506847	ppb	1.302	0.203	1461.742
39	K	6185933.658	5895.015232	ppb	0.809	1.447	104260.196
24	Mg	17062441.601	32833.885399	ppb	0.427	1.517	110.000
159	Tb-ISK	182380.946		ppb	1.318		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-3-B

Autosampler Position: 314

Sample Date/Time: Monday, April 20, 2020 10:41:32

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-3-B.071

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28913.676		ppb		0.706		36395.193
9	Be	|	11.111	-0.000287	ppb	75.498	2221.993		13.333
10	B	|	66937.578	209.456603	ppb	1.049	0.596		1052.261
27	Al	|	25406.117	3.830270	ppb	11.884	14.596		3991.718
43	Ca-2	|	1745881.268	119199.390341	ppb	1.816	1.109		111.667
49	Ti	|	2164.609	3.751766	ppb	5.747	6.321		197.779
52	Cr	|	25665.260	2.510835	ppb	1.489	2.782		9914.551
55	Mn	|	1240.054	0.076893	ppb	6.356	9.152		531.121
57	Fe	|	75628.698	348.340082	ppb	3.350	2.911		7569.783
45	Sc-IS	>	1407189.626		ppb	0.710			1628366.772
66	Zn	|	2114.601	1.640329	ppb	2.777	3.123		457.785
86	Sr	|	1356073.466	856.736938	ppb	2.333	1.739		1.808
65	Cu	|	1779.067	1.127926	ppb	4.228	3.658		63.143
69	Ga-IS	|	413162.554		ppb	2.286			464006.496
95	Mo	|	6341.407	4.183117	ppb	1.735	1.650		45.556
115	In-IS	>	236562.882		ppb	1.593			270500.848
111	Cd	|	6.683	0.001978	ppb	96.297	222.396		4.349
118	Sn	|	1208.940	0.019712	ppb	4.018	77.609		1287.836
121	Sb	|	543.344	0.042377	ppb	12.678	29.908		390.005
135	Ba	|	191302.039	198.193962	ppb	4.769	3.390		8.889
165	Ho-IS	|	232565.559		ppb	0.490			266136.161
159	Tb-IS	|	197543.105		ppb	0.134			238251.487
207	Pb	|	231.112	0.010971	ppb	5.829	9.818		106.667
203	Tl	|	21.111	0.002273	ppb	18.232	42.274		14.444
209	Bi-IS	>	149146.754		ppb	0.401			179606.508
51	V	|	1685.655	2.886576	ppb	5.736	7.054		44.445
59	Co	|	274.447	0.166909	ppb	13.434	15.550		25.556
60	Ni	|	1706.769	2.030588	ppb	3.586	3.729		46.667
75	As	|	712.729	0.460792	ppb	5.019	14.866		563.733
71	Ga-ISK	>	105678.359		ppb	1.147			113253.855
82	Se-2	|	375.513	9.967852	ppb	5.739	6.137		3.549
107	Ag-1	|	51.111	0.003054	ppb	9.962	43.995		43.333
115	In-ISK	|	84977.852		ppb	2.051			94813.137
45	Sc-ISK	>	272457.039		ppb	0.764			270273.987
23	Na	|	16741379.492	36326.374047	ppb	1.457	0.927		1461.742
39	K	|	5289147.476	5016.375613	ppb	0.509	0.592		104260.196
24	Mg	|	14132101.459	27146.074732	ppb	0.476	1.233		110.000
159	Tb-ISK	|	181177.012		ppb	0.724			192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-4-B

Autosampler Position: 315

Sample Date/Time: Monday, April 20, 2020 10:44:17

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-4-B.072

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28853.556		ppb	1.191		36395.193
9	Be	7.778	-0.002795	ppb	24.744	54.750	13.333
10	B	53102.960	166.021088	ppb	0.424	1.818	1052.261
27	Al	213436.688	36.704121	ppb	2.675	2.974	3991.718
43	Ca-2	1207822.196	82676.820961	ppb	1.876	1.791	111.667
49	Ti	2675.807	4.724200	ppb	5.564	4.518	197.779
52	Cr	19729.170	1.646801	ppb	0.902	3.951	9914.551
55	Mn	14254.892	1.362655	ppb	3.481	4.670	531.121
57	Fe	65931.800	300.371523	ppb	0.710	1.971	7569.783
45	Sc-IS	> 1403671.805		ppb	1.366		1628366.772
66	Zn	3040.324	2.530593	ppb	4.883	4.843	457.785
86	Sr	1066974.998	675.856980	ppb	0.941	0.732	1.808
65	Cu	4197.456	2.716850	ppb	2.134	0.814	63.143
69	Ga-IS	415229.017		ppb	2.860		464006.496
95	Mo	5737.819	3.792547	ppb	0.856	1.816	45.556
115	In-IS	> 236067.335		ppb	2.058		270500.848
111	Cd	4.617	0.000598	ppb	143.643	784.536	4.349
118	Sn	1281.169	0.037130	ppb	8.021	52.589	1287.836
121	Sb	636.681	0.062219	ppb	12.739	23.064	390.005
135	Ba	179678.018	186.526299	ppb	4.934	2.962	8.889
165	Ho-IS	234392.815		ppb	0.219		266136.161
159	Tb-IS	199722.614		ppb	2.630		238251.487
207	Pb	962.235	0.065800	ppb	7.319	7.378	106.667
203	Tl	7.778	-0.001093	ppb	98.974	171.275	14.444
209	Bi-IS	> 152048.249		ppb	0.924		179606.508
51	V	1416.737	2.430290	ppb	3.653	3.737	44.445
59	Co	102.223	0.052654	ppb	16.086	21.258	25.556
60	Ni	678.905	0.781197	ppb	2.520	0.658	46.667
75	As	725.072	0.504493	ppb	1.688	10.330	563.733
71	Ga-ISK	> 104967.652		ppb	1.914		113253.855
82	Se-2	36.226	0.890021	ppb	15.969	19.725	3.549
107	Ag-1	92.223	0.014959	ppb	26.148	43.508	43.333
115	In-ISK	84033.080		ppb	0.973		94813.137
45	Sc-ISK	> 268146.764		ppb	1.201		270273.987
23	Na	13485526.324	29735.843319	ppb	0.398	1.577	1461.742
39	K	4619730.938	4440.440828	ppb	1.062	0.429	104260.196
24	Mg	9459541.530	18461.318802	ppb	1.497	0.709	110.000
159	Tb-ISK	180515.459		ppb	1.245		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-5-B

Autosampler Position: 316

Sample Date/Time: Monday, April 20, 2020 10:47:03

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-5-B.073

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		28545.160		ppb		1.176		36395.193
9	Be	|		5.556	-0.004490	ppb	34.641	31.948		13.333
10	B	|		50591.702	158.061326	ppb	3.039	3.346		1052.261
27	Al	|		43005.771	6.915880	ppb	2.417	1.688		3991.718
43	Ca-2	|	1149506.279		78705.813619	ppb	0.451	1.115		111.667
49	Ti	|		1406.736	2.332877	ppb	5.920	6.797		197.779
52	Cr	|		18503.092	1.466320	ppb	2.659	4.211		9914.551
55	Mn	|		2392.423	0.191095	ppb	1.686	3.140		531.121
57	Fe	|		54306.373	241.624444	ppb	1.415	1.417		7569.783
45	Sc-IS	>		1403307.349		ppb	0.864			1628366.772
66	Zn	|		1851.231	1.394286	ppb	2.999	4.775		457.785
86	Sr	|		1045857.715	662.646024	ppb	1.871	2.000		1.808
65	Cu	|		1681.490	1.067524	ppb	2.539	3.433		63.143
69	Ga-IS	|		411781.055		ppb	2.750			464006.496
95	Mo	|		5930.120	3.921317	ppb	2.474	2.850		45.556
115	In-IS	>		237949.222		ppb	2.838			270500.848
111	Cd	|		15.325	0.007997	ppb	64.553	86.606		4.349
118	Sn	|		1161.158	0.006521	ppb	5.555	118.527		1287.836
121	Sb	|		558.900	0.045161	ppb	5.379	15.919		390.005
135	Ba	|		176546.323	181.864533	ppb	3.762	1.106		8.889
165	Ho-IS	|		231596.832		ppb	1.228			266136.161
159	Tb-IS	|		196429.085		ppb	0.921			238251.487
207	Pb	|		1067.793	0.073846	ppb	5.319	6.138		106.667
203	Tl	|		7.778	-0.001088	ppb	49.487	86.334		14.444
209	Bi-IS	>		151957.250		ppb	0.377			179606.508
51	V	|		1431.183	2.448190	ppb	3.093	2.786		44.445
59	Co	|		43.333	0.013067	ppb	27.735	60.991		25.556
60	Ni	|		656.682	0.751527	ppb	5.300	5.075		46.667
75	As	|		665.906	0.352495	ppb	7.347	36.587		563.733
71	Ga-ISK	>		105265.301		ppb	0.563			113253.855
82	Se-2	|		29.526	0.705864	ppb	31.550	36.080		3.549
107	Ag-1	|		97.778	0.016575	ppb	26.037	45.077		43.333
115	In-ISK	|		85138.739		ppb	0.493			94813.137
45	Sc-ISK	>		271444.837		ppb	1.164			270273.987
23	Na	|		12932468.704	28165.988771	ppb	1.351	0.553		1461.742
39	K	|		4594324.712	4360.840517	ppb	0.620	1.156		104260.196
24	Mg	|		9335090.554	17999.542792	ppb	0.659	1.692		110.000
159	Tb-ISK	|		179594.655		ppb	1.385			192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-6-B

Autosampler Position: 317

Sample Date/Time: Monday, April 20, 2020 10:49:48

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-6-B.074

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28589.705		ppb	2.807		36395.193
9	Be	6.667	-0.003676	ppb	86.603	117.632	13.333
10	B	126678.320	398.188210	ppb	2.610	3.615	1052.261
27	Al	33666.302	5.255533	ppb	2.154	2.942	3991.718
43	Ca-2	2476632.902	168739.670315	ppb	0.603	0.587	111.667
49	Ti	1959.023	3.357309	ppb	1.913	3.097	197.779
52	Cr	12083.998	0.512620	ppb	0.486	5.097	9914.551
55	Mn	38035.040	3.692390	ppb	2.967	2.814	531.121
57	Fe	108783.900	514.332121	ppb	2.513	1.710	7569.783
45	Sc-IS	> 1410266.405		ppb	1.025		1628366.772
66	Zn	2616.908	2.114071	ppb	9.378	10.822	457.785
86	Sr	1812602.119	1142.731284	ppb	1.089	0.145	1.808
65	Cu	4280.567	2.758279	ppb	3.159	2.775	63.143
69	Ga-IS	413926.489		ppb	2.320		464006.496
95	Mo	2696.922	1.760290	ppb	4.130	4.438	45.556
115	In-IS	> 233363.474		ppb	0.937		270500.848
111	Cd	33.225	0.020789	ppb	55.305	62.889	4.349
118	Sn	1167.826	0.013686	ppb	6.474	140.955	1287.836
121	Sb	546.677	0.044746	ppb	5.817	12.645	390.005
135	Ba	235325.574	247.224545	ppb	2.746	2.652	8.889
165	Ho-IS	228295.288		ppb	0.552		266136.161
159	Tb-IS	193383.524		ppb	1.017		238251.487
207	Pb	478.892	0.030308	ppb	7.699	9.406	106.667
203	Tl	10.000	-0.000475	ppb	88.192	468.184	14.444
209	Bi-IS	> 148054.368		ppb	0.421		179606.508
51	V	1364.510	2.324587	ppb	5.763	7.551	44.445
59	Co	6246.922	4.145719	ppb	2.865	4.249	25.556
60	Ni	9503.163	11.560121	ppb	3.817	5.160	46.667
75	As	806.795	0.695510	ppb	1.088	8.654	563.733
71	Ga-ISK	> 105624.693		ppb	1.924		113253.855
82	Se-2	178.160	4.684769	ppb	4.840	4.953	3.549
107	Ag-1	27.778	-0.003656	ppb	34.641	72.354	43.333
115	In-ISK	82351.436		ppb	1.464		94813.137
45	Sc-ISK	> 274620.076		ppb	0.696		270273.987
23	Na	21507538.380	46303.629839	ppb	0.603	0.738	1461.742
39	K	6787578.820	6415.188397	ppb	1.805	2.513	104260.196
24	Mg	19058100.778	36320.734344	ppb	1.067	1.757	110.000
159	Tb-ISK	178577.991		ppb	1.189		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-7-B

Autosampler Position: 318

Sample Date/Time: Monday, April 20, 2020 10:52:33

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-7-B.075

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28623.101		ppb		2.314		36395.193
9	Be	|	7.778	-0.002791	ppb	24.744	53.777		13.333
10	B	|	90293.424	284.696835	ppb	2.092	1.170		1052.261
27	Al	|	30993.588	4.824003	ppb	1.285	1.621		3991.718
43	Ca-2	|	1953512.530	133920.028252	ppb	2.018	1.267		111.667
49	Ti	|	1995.696	3.447767	ppb	9.067	9.279		197.779
52	Cr	|	13558.656	0.740751	ppb	2.479	3.629		9914.551
55	Mn	|	106614.184	10.496948	ppb	1.448	0.733		531.121
57	Fe	|	97388.676	460.091211	ppb	1.740	0.715		7569.783
45	Sc-IS	>	1401492.558		ppb	1.138			1628366.772
66	Zn	|	15590.730	14.561749	ppb	3.063	3.310		457.785
86	Sr	|	1324645.024	840.336237	ppb	1.924	1.564		1.808
65	Cu	|	2998.738	1.933417	ppb	6.799	6.183		63.143
69	Ga-IS	|	403464.428		ppb	2.872			464006.496
95	Mo	|	4200.618	2.773348	ppb	1.949	1.265		45.556
115	In-IS	>	234893.923		ppb	0.762			270500.848
111	Cd	|	15.623	0.008271	ppb	32.741	42.352		4.349
118	Sn	|	915.585	-0.048317	ppb	4.523	21.246		1287.836
121	Sb	|	794.467	0.096467	ppb	9.442	16.488		390.005
135	Ba	|	150838.550	157.407592	ppb	4.025	3.424		8.889
165	Ho-IS	|	230574.761		ppb	0.155			266136.161
159	Tb-IS	|	194644.936		ppb	1.063			238251.487
207	Pb	|	574.449	0.037786	ppb	4.117	6.291		106.667
203	Tl	|	10.000	-0.000481	ppb	120.185	622.350		14.444
209	Bi-IS	>	147888.287		ppb	1.251			179606.508
51	V	|	1547.862	2.679730	ppb	4.846	5.344		44.445
59	Co	|	2999.204	2.007274	ppb	1.730	3.110		25.556
60	Ni	|	5213.174	6.396006	ppb	2.548	2.647		46.667
75	As	|	728.553	0.524913	ppb	8.021	29.848		563.733
71	Ga-ISK	>	104296.057		ppb	1.502			113253.855
82	Se-2	|	264.867	7.102908	ppb	6.458	7.966		3.549
107	Ag-1	|	31.111	-0.002591	ppb	48.313	163.102		43.333
115	In-ISK	|	83497.070		ppb	1.433			94813.137
45	Sc-ISK	>	276628.351		ppb	0.974			270273.987
23	Na	|	17669791.700	37764.742235	ppb	0.617	0.478		1461.742
39	K	|	5698863.072	5329.732232	ppb	0.555	0.540		104260.196
24	Mg	|	15722395.299	29744.206625	ppb	0.669	0.329		110.000
159	Tb-ISK	|	180108.282		ppb	0.632			192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25865-K-2-B

Autosampler Position: 319

Sample Date/Time: Monday, April 20, 2020 10:55:19

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25865-K-2-B.076

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		28228.983		ppb		2.178		36395.193
9	Be	|		12.222	0.000505	ppb	62.984	1134.021		13.333
10	B	|		56783.792	178.198622	ppb	2.594	2.842		1052.261
27	Al	|		29896.825	4.636665	ppb	2.954	1.654		3991.718
43	Ca-2	|		1293752.465	88780.252430	ppb	2.362	0.554		111.667
49	Ti	|		1351.175	2.232888	ppb	5.236	3.994		197.779
52	Cr	|		19603.443	1.635898	ppb	1.615	4.344		9914.551
55	Mn	|		5594.429	0.508735	ppb	2.759	3.918		531.121
57	Fe	|		60809.150	275.274044	ppb	0.608	1.413		7569.783
45	Sc-IS	>		1400018.533		ppb	1.842			1628366.772
66	Zn	|		2179.055	1.712988	ppb	4.539	5.886		457.785
86	Sr	|		1159590.535	736.552036	ppb	0.246	1.661		1.808
65	Cu	|		1964.836	1.255705	ppb	5.184	3.536		63.143
69	Ga-IS	|		404950.814		ppb	2.690			464006.496
95	Mo	|		4073.915	2.693751	ppb	4.883	6.526		45.556
115	In-IS	>		233820.034		ppb	0.433			270500.848
111	Cd	|		29.223	0.017883	ppb	17.846	20.239		4.349
118	Sn	|		898.917	-0.051309	ppb	11.799	49.793		1287.836
121	Sb	|		443.340	0.022588	ppb	2.711	12.301		390.005
135	Ba	|		170477.591	178.751653	ppb	3.629	3.779		8.889
165	Ho-IS	|		227806.553		ppb	1.019			266136.161
159	Tb-IS	|		192492.650		ppb	0.418			238251.487
207	Pb	|		476.670	0.029797	ppb	11.554	13.113		106.667
203	Tl	|		11.111	-0.000223	ppb	17.321	216.363		14.444
209	Bi-IS	>		149342.151		ppb	0.951			179606.508
51	V	|		1713.436	2.931252	ppb	5.059	6.470		44.445
59	Co	|		70.000	0.030752	ppb	25.198	39.665		25.556
60	Ni	|		1062.262	1.241440	ppb	5.073	3.928		46.667
75	As	|		810.143	0.697548	ppb	13.538	35.613		563.733
71	Ga-ISK	>		105825.006		ppb	1.319			113253.855
82	Se-2	|		29.219	0.692083	ppb	13.851	14.708		3.549
107	Ag-1	|		56.667	0.004629	ppb	11.765	40.774		43.333
115	In-ISK	|		84162.457		ppb	0.427			94813.137
45	Sc-ISK	>		273346.047		ppb	0.913			270273.987
23	Na	|		14587160.911	31549.945675	ppb	0.710	0.452		1461.742
39	K	|		5019037.485	4739.720506	ppb	1.215	2.158		104260.196
24	Mg	|		10110022.405	19358.347795	ppb	1.481	2.326		110.000
159	Tb-ISK	|		180380.374		ppb	0.848			192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 10:58:05

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.077

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	27861.590		ppb		1.256		36395.193
9	Be	|	123158.618	95.597592	ppb		0.658	1.445	13.333
10	B	|	74574.151	240.884358	ppb		0.962	2.633	1052.261
27	Al	|	626936.852	111.995036	ppb		1.102	0.897	3991.718
43	Ca-2	|	71130.017	4996.762556	ppb		1.885	1.093	111.667
49	Ti	|	55217.654	106.707845	ppb		2.197	0.618	197.779
52	Cr	|	742245.917	111.012428	ppb		2.263	0.497	9914.551
55	Mn	|	1080106.786	109.529277	ppb		1.896	0.324	531.121
57	Fe	|	1052690.148	5434.836620	ppb		2.554	0.725	7569.783
45	Sc-IS	>	1366069.646		ppb		1.984		1628366.772
66	Zn	|	106557.250	104.356392	ppb		2.827	1.019	457.785
86	Sr	|	172912.838	112.541401	ppb		1.789	0.645	1.808
65	Cu	|	154475.837	104.031839	ppb		4.248	2.506	63.143
69	Ga-IS	|	412113.351		ppb		3.509		464006.496
95	Mo	|	162032.894	110.766619	ppb		2.133	1.234	45.556
115	In-IS	>	244538.777		ppb		1.162		270500.848
111	Cd	|	144829.350	97.269056	ppb		2.006	0.997	4.349
118	Sn	|	438231.341	100.089728	ppb		1.706	0.554	1287.836
121	Sb	|	492575.491	100.052767	ppb		2.731	1.666	390.005
135	Ba	|	92975.337	93.184523	ppb		4.642	3.596	8.889
165	Ho-IS	|	236484.726		ppb		0.815		266136.161
159	Tb-IS	[	198034.309		ppb		0.588		238251.487
207	Pb	|	1350006.211	98.601168	ppb		1.026	2.214	106.667
203	Tl	|	402409.167	95.194384	ppb		1.919	1.598	14.444
209	Bi-IS	>	157169.990		ppb		1.547		179606.508
51	V	|	60939.775	103.435352	ppb		2.918	2.990	44.445
59	Co	|	158016.131	101.796492	ppb		2.479	3.139	25.556
60	Ni	|	81501.864	96.255121	ppb		1.535	0.963	46.667
75	As	|	42257.251	99.764636	ppb		1.278	0.962	563.733
71	Ga-ISK	>	109176.735		ppb		1.002		113253.855
82	Se-2	|	3715.344	96.200108	ppb		1.766	0.816	3.549
107	Ag-1	|	325304.425	90.266809	ppb		2.247	3.175	43.333
115	In-ISK	|	86370.968		ppb		1.073		94813.137
45	Sc-ISK	>	275131.991		ppb		0.622		270273.987
23	Na	|	2285547.585	4908.372968	ppb		0.942	0.324	1461.742
39	K	|	5442485.307	5113.679487	ppb		0.961	1.420	104260.196
24	Mg	|	2567438.969	4883.508264	ppb		0.667	1.117	110.000
159	Tb-ISK	|	180985.295		ppb		0.913		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Al	27
Cr	52
Sr	86
Mo	95

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 11:00:50

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.078

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		27803.698		ppb			0.638			36395.193
9	Be	|		13.333	0.001886	ppb	75.000	416.366				13.333
10	B	|		1347.841	1.614635	ppb	1.220	3.311				1052.261
27	Al	|		4785.581	0.273626	ppb	79.178	250.915				3991.718
43	Ca-2	|		93.334	0.127784	ppb	16.366	938.871				111.667
49	Ti	|		245.558	0.164700	ppb	8.832	26.680				197.779
52	Cr	|		8031.146	-0.017094	ppb	1.374	127.596				9914.551
55	Mn	|		538.899	0.010656	ppb	4.805	27.740				531.121
57	Fe	|		8769.361	13.532112	ppb	4.240	10.241				7569.783
45	Sc-IS	>		1337359.881		ppb	1.495					1628366.772
66	Zn	|		510.009	0.134391	ppb	9.150	31.845				457.785
86	Sr	|		23.007	0.014306	ppb	50.710	53.682				1.808
65	Cu	|		105.230	0.036765	ppb	22.498	44.392				63.143
69	Ga-IS	|		379213.932		ppb	4.574					464006.496
95	Mo	|		697.795	0.460781	ppb	10.750	9.887				45.556
115	In-IS	>		236787.091		ppb	1.936					270500.848
111	Cd	|		18.535	0.010296	ppb	47.138	61.701				4.349
118	Sn	|		2951.418	0.431412	ppb	8.850	13.875				1287.836
121	Sb	|		732.241	0.082203	ppb	5.692	14.258				390.005
135	Ba	|		20.000	0.012541	ppb	44.096	70.284				8.889
165	Ho-IS	|		228801.204		ppb	1.217					266136.161
159	Tb-IS	|		192643.755		ppb	1.590					238251.487
207	Pb	|		294.446	0.015251	ppb	2.357	2.601				106.667
203	Tl	|		116.667	0.025341	ppb	7.559	8.839				14.444
209	Bi-IS	>		153133.049		ppb	0.572					179606.508
51	V	|		73.334	0.050438	ppb	18.182	42.710				44.445
59	Co	|		14.444	-0.006646	ppb	35.251	49.590				25.556
60	Ni	|		35.556	-0.011505	ppb	44.305	161.946				46.667
75	As	|		586.998	0.090151	ppb	2.486	41.773				563.733
71	Ga-ISK	>		110285.192		ppb	0.832					113253.855
82	Se-2	|		-0.474	-0.101514	ppb	1972.494	236.755				3.549
107	Ag-1	|		157.779	0.031730	ppb	9.527	12.032				43.333
115	In-ISK	|		85515.060		ppb	0.530					94813.137
45	Sc-ISK	>		269701.100		ppb	0.998					270273.987
23	Na	|		2200.170	1.625484	ppb	4.563	12.975				1461.742
39	K	|		119745.337	15.356241	ppb	0.625	3.423				104260.196
24	Mg	|		606.680	0.964212	ppb	6.611	8.029				110.000
159	Tb-ISK	|		177739.548		ppb	0.530					192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Monday, April 20, 2020 11:15:24

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\b.079

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27941.752		ppb	2.095		36395.193
9	Be	7.778	-0.002234	ppb	49.487	146.471	13.333
10	B	1413.403	2.016387	ppb	6.333	19.428	1052.261
27	Al	4431.801	0.242274	ppb	7.638	24.905	3991.718
43	Ca-2	163.334	5.634239	ppb	16.860	43.231	111.667
49	Ti	305.559	0.307563	ppb	8.818	24.087	197.779
52	Cr	11174.369	0.534204	ppb	1.384	8.227	9914.551
55	Mn	590.012	0.018268	ppb	7.388	26.326	531.121
57	Fe	9846.727	21.234651	ppb	2.379	2.780	7569.783
45	Sc-IS	> 1288816.172		ppb	2.912		1628366.772
66	Zn	591.123	0.237693	ppb	13.550	31.139	457.785
86	Sr	45.741	0.030417	ppb	62.830	64.185	1.808
65	Cu	58.699	0.006135	ppb	14.501	79.882	63.143
69	Ga-IS	364675.016		ppb	3.445		464006.496
95	Mo	100.000	0.046412	ppb	6.667	12.413	45.556
115	In-IS	> 228625.168		ppb	0.377		270500.848
111	Cd	8.679	0.003591	ppb	22.175	37.938	4.349
118	Sn	786.688	-0.073907	ppb	4.887	13.325	1287.836
121	Sb	237.780	-0.019971	ppb	6.321	16.437	390.005
135	Ba	30.000	0.024140	ppb	33.333	44.927	8.889
165	Ho-IS	211763.674		ppb	1.129		266136.161
159	Tb-IS	175265.288		ppb	0.832		238251.487
207	Pb	172.223	0.006633	ppb	10.660	20.765	106.667
203	Tl	12.222	0.000103	ppb	56.773	1702.476	14.444
209	Bi-IS	> 146935.125		ppb	0.466		179606.508
51	V	81.111	0.069182	ppb	14.432	26.595	44.445
59	Co	8.889	-0.009966	ppb	43.301	25.481	25.556
60	Ni	24.444	-0.023442	ppb	43.835	54.004	46.667
75	As	565.282	0.095587	ppb	2.111	50.811	563.733
71	Ga-ISK	> 105820.545		ppb	1.539		113253.855
82	Se-2	1.528	-0.047316	ppb	150.373	130.051	3.549
107	Ag-1	53.333	0.003709	ppb	27.243	115.754	43.333
115	In-ISK	79629.757		ppb	1.648		94813.137
45	Sc-ISK	> 274677.978		ppb	1.136		270273.987
23	Na	3248.703	3.794311	ppb	3.512	4.839	1461.742
39	K	123563.269	16.908290	ppb	1.537	14.070	104260.196
24	Mg	1258.389	2.183854	ppb	6.237	5.951	110.000
159	Tb-ISK	168729.947		ppb	0.559		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 11:18:10

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.080

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27728.007		ppb			2.690		36395.193
9	Be	|		119766.684	94.350307	ppb			1.469	1.144	13.333
10	B	|		72682.375	238.144126	ppb			3.743	2.354	1052.261
27	Al	|		628687.598	113.974939	ppb			3.322	1.917	3991.718
43	Ca-2	|		68559.274	4887.262751	ppb			3.768	2.468	111.667
49	Ti	|		55075.977	108.042808	ppb			1.370	0.193	197.779
52	Cr	|		745477.175	113.199779	ppb			1.640	0.155	9914.551
55	Mn	|		1082605.530	111.425677	ppb			2.206	0.697	531.121
57	Fe	|		1057675.380	5542.806166	ppb			3.261	1.807	7569.783
45	Sc-IS	>		1345821.034		ppb			1.515		1628366.772
66	Zn	|		102583.110	101.944911	ppb			4.789	3.376	457.785
86	Sr	|		171215.727	113.106377	ppb			2.902	2.327	1.808
65	Cu	|		151423.773	103.508362	ppb			4.413	2.966	63.143
69	Ga-IS	|		399180.104		ppb			4.285		464006.496
95	Mo	|		158754.296	110.144558	ppb			2.634	1.376	45.556
115	In-IS	>		240696.632		ppb			1.489		270500.848
111	Cd	|		138631.656	94.592922	ppb			2.092	0.721	4.349
118	Sn	|		428777.940	99.485985	ppb			2.592	1.184	1287.836
121	Sb	|		481043.995	99.266673	ppb			2.972	1.572	390.005
135	Ba	|		89710.171	91.337167	ppb			5.116	3.712	8.889
165	Ho-IS	|		228823.878		ppb			1.504		266136.161
159	Tb-IS	|		187915.652		ppb			0.497		238251.487
207	Pb	|		1304764.843	97.621153	ppb			0.672	0.220	106.667
203	Tl	|		388354.575	94.121643	ppb			1.830	1.241	14.444
209	Bi-IS	>		153395.850		ppb			0.632		179606.508
51	V	|		61454.142	102.536912	ppb			1.573	2.012	44.445
59	Co	|		157254.109	99.573400	ppb			0.248	1.180	25.556
60	Ni	|		81443.768	94.552484	ppb			1.756	1.698	46.667
75	As	|		42512.296	98.655329	ppb			0.584	1.716	563.733
71	Ga-ISK	>		111067.906		ppb			1.142		113253.855
82	Se-2	|		3706.324	94.333121	ppb			2.306	1.833	3.549
107	Ag-1	|		313078.253	85.388739	ppb			1.282	2.111	43.333
115	In-ISK	|		84661.130		ppb			0.700		94813.137
45	Sc-ISK	>		283096.559		ppb			0.946		270273.987
23	Na	|		2353378.475	4912.033204	ppb			0.870	0.734	1461.742
39	K	|		5650730.601	5160.771534	ppb			0.570	0.383	104260.196
24	Mg	|		2662349.658	4921.825568	ppb			0.675	1.518	110.000
159	Tb-ISK	|		180466.762		ppb			0.609		192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Al	27
Cr	52
Mn	55
Sr	86
Ag-1	107

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 11:20:55

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.081

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		27132.411		ppb			1.308			36395.193
9	Be	|		7.778	-0.002434	ppb	65.465	163.393				13.333
10	B	|		1314.505	1.586453	ppb	5.125	20.462				1052.261
27	Al	|		2625.797	-0.110882	ppb	2.440	15.476				3991.718
43	Ca-2	|		68.333	-1.577183	ppb	15.232	56.891				111.667
49	Ti	|		222.224	0.125884	ppb	7.550	18.183				197.779
52	Cr	|		7917.753	-0.013422	ppb	4.987	228.171				9914.551
55	Mn	|		557.789	0.013536	ppb	11.438	38.361				531.121
57	Fe	|		8642.616	13.685526	ppb	3.676	6.975				7569.783
45	Sc-IS	|>		1313915.915		ppb	2.716					1628366.772
66	Zn	|		437.785	0.071034	ppb	14.771	105.937				457.785
86	Sr	|		14.642	0.008368	ppb	328.523	392.279				1.808
65	Cu	|		78.502	0.019554	ppb	23.450	73.549				63.143
69	Ga-IS	|		372094.423		ppb	4.116					464006.496
95	Mo	|		600.013	0.399215	ppb	18.783	17.598				45.556
115	In-IS	|>		233024.211		ppb	2.484					270500.848
111	Cd	|		16.518	0.009034	ppb	50.578	65.335				4.349
118	Sn	|		2776.938	0.400058	ppb	9.871	12.783				1287.836
121	Sb	|		495.564	0.034008	ppb	11.101	32.108				390.005
135	Ba	|		14.444	0.007068	ppb	58.076	123.169				8.889
165	Ho-IS	|		218603.355		ppb	1.216					266136.161
159	Tb-IS	|		181391.105		ppb	1.198					238251.487
207	Pb	|		291.112	0.015576	ppb	7.794	14.223				106.667
203	Tl	|		113.334	0.025217	ppb	2.941	3.653				14.444
209	Bi-IS	|>		149415.294		ppb	2.016					179606.508
51	V	|		72.222	0.047792	ppb	30.030	74.027				44.445
59	Co	|		25.556	0.000358	ppb	19.924	944.226				25.556
60	Ni	|		31.111	-0.016954	ppb	48.313	102.744				46.667
75	As	|		610.251	0.136685	ppb	5.892	51.961				563.733
71	Ga-ISK	|>		110898.817		ppb	1.067					113253.855
82	Se-2	|		2.218	-0.031318	ppb	561.918	1013.606				3.549
107	Ag-1	|		142.223	0.027207	ppb	19.656	26.712				43.333
115	In-ISK	|		84133.965		ppb	1.125					94813.137
45	Sc-ISK	|>		277351.053		ppb	0.975					270273.987
23	Na	|		1728.438	0.485936	ppb	5.796	37.585				1461.742
39	K	|		125887.845	17.978500	ppb	1.190	13.776				104260.196
24	Mg	|		435.007	0.607866	ppb	18.391	24.730				110.000
159	Tb-ISK	|		176785.864		ppb	0.922					192403.275

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Monday, April 20, 2020 11:27:08

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICIS-23447.082

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		26970.994		ppb			1.215	
9	Be	|		12.222		ppb			15.746	
10	B	|		986.701		ppb			8.466	
27	Al	|		2822.501		ppb			1.005	
43	Ca-2	|		101.667		ppb			46.484	
49	Ti	|		218.891		ppb			10.804	
52	Cr	|		8283.516		ppb			4.814	
55	Mn	|		566.678		ppb			4.118	
57	Fe	|		8395.802		ppb			3.277	
45	Sc-IS	>		1301517.458		ppb			2.278	
66	Zn	|		448.896		ppb			1.715	
86	Sr	|		-0.939		ppb		5806.986		
65	Cu	|		67.563		ppb			15.892	
69	Ga-IS	|		368301.447		ppb			3.215	
95	Mo	|		63.333		ppb			21.053	
115	In-IS	>		233523.706		ppb			1.596	
111	Cd	|		5.423		ppb		128.336		
118	Sn	|		951.143		ppb			6.579	
121	Sb	|		234.446		ppb			10.671	
135	Ba	|		17.778		ppb			84.548	
165	Ho-IS	|		218949.671		ppb			1.061	
159	Tb-IS	|		181061.377		ppb			1.023	
207	Pb	|		102.222		ppb			13.179	
203	Tl	|		14.444		ppb			53.294	
209	Bi-IS	>		148317.164		ppb			1.403	
51	V	|		51.111		ppb			3.765	
59	Co	|		22.222		ppb			22.913	
60	Ni	|		43.333		ppb			20.352	
75	As	|		604.447		ppb			3.670	
71	Ga-ISK	>		108945.014		ppb			1.550	
82	Se-2	|		0.224		ppb		1362.425		
107	Ag-1	|		60.000		ppb			20.031	
115	In-ISK	|		83129.898		ppb			0.657	
45	Sc-ISK	>		277538.050		ppb			1.198	
23	Na	|		1243.387		ppb			2.215	
39	K	|		122708.115		ppb			0.944	
24	Mg	|		161.668		ppb			7.143	
159	Tb-ISK	|		174683.545		ppb			0.689	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Monday, April 20, 2020 11:29:55

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\IC-210761.083

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	27075.650		ppb		3.042		26970.994
9	Be	|	237944.332	200.000000	ppb	1.238	2.442		12.222
10	B	|	140538.027	500.000000	ppb	1.678	1.997		986.701
27	Al	|	1239025.683	200.000000	ppb	1.852	3.774		2822.501
43	Ca-2	|	137310.270	10200.000000	ppb	2.143	0.405		101.667
49	Ti	|	108970.773	200.000000	ppb	1.635	0.688		218.891
52	Cr	|	1478489.565	200.000000	ppb	0.812	1.319		8283.516
55	Mn	|	2271001.621	200.000000	ppb	1.762	0.315		566.678
57	Fe	|	2223755.230	10200.000000	ppb	1.382	1.068		8395.802
45	Sc-IS	>	1325837.737		ppb	2.038			1301517.458
66	Zn	|	202898.767	200.000000	ppb	3.835	2.370		448.896
86	Sr	|	338902.446	200.000000	ppb	1.714	2.216		-0.939
65	Cu	|	295063.007	200.000000	ppb	3.510	2.315		67.563
69	Ga-IS	|	415520.047		ppb	3.911			368301.447
95	Mo	|	319254.102	200.000000	ppb	2.771	2.429		63.333
115	In-IS	>	239246.461		ppb	0.885			233523.706
111	Cd	|	274752.902	200.000000	ppb	1.363	1.187		5.423
118	Sn	|	861057.122	200.000000	ppb	2.506	1.743		951.143
121	Sb	|	960241.435	200.000000	ppb	2.895	2.154		234.446
135	Ba	|	179855.373	200.000000	ppb	4.328	3.628		17.778
165	Ho-IS	|	226691.169		ppb	0.650			218949.671
159	Tb-IS	|	188709.353		ppb	0.577			181061.377
207	Pb	|	2578473.090	200.000000	ppb	0.643	1.764		102.222
203	Tl	|	772123.779	200.000000	ppb	1.327	2.460		14.444
209	Bi-IS	>	151791.162		ppb	1.473			148317.164
51	V	|	122468.316	200.000000	ppb	1.253	1.277		51.111
59	Co	|	314990.550	200.000000	ppb	0.933	0.634		22.222
60	Ni	|	162456.480	200.000000	ppb	1.824	1.002		43.333
75	As	|	83652.644	200.000000	ppb	1.661	1.413		604.447
71	Ga-ISK	>	112337.783		ppb	1.218			108945.014
82	Se-2	|	7482.512	200.000000	ppb	1.836	0.707		0.224
107	Ag-1	|	638231.528	200.000000	ppb	0.824	0.672		60.000
115	In-ISK	|	86326.580		ppb	0.710			83129.898
45	Sc-ISK	>	284948.306		ppb	0.660			277538.050
23	Na	|	4595879.249	10200.000000	ppb	1.189	1.424		1243.387
39	K	|	11195065.931	10200.000000	ppb	0.820	1.215		122708.115
24	Mg	|	5237736.966	10200.000000	ppb	0.614	1.150		161.668
159	Tb-ISK	|	183537.524		ppb	0.711			174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 11:32:41

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.084

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27327.226		ppb		1.192		26970.994
9	Be	|		121306.188	101.908744	ppb		0.087	1.670	12.222
10	B	|		72675.517	256.711132	ppb		1.094	1.403	986.701
27	Al	|		618300.665	99.487922	ppb		1.347	0.464	2822.501
43	Ca-2	|		69028.145	5121.270732	ppb		3.149	1.643	101.667
49	Ti	|		55116.179	100.898113	ppb		2.939	1.430	218.891
52	Cr	|		736733.261	99.042618	ppb		1.101	1.532	8283.516
55	Mn	|		1082599.920	95.279168	ppb		1.354	0.448	566.678
57	Fe	|		1071497.692	4892.306523	ppb		1.328	0.945	8395.802
45	Sc-IS	>		1326332.607		ppb		1.683		1301517.458
66	Zn	|		104268.263	102.531034	ppb		3.108	2.220	448.896
86	Sr	|		171508.637	101.167914	ppb		1.015	1.304	-0.939
65	Cu	|		152795.901	103.516248	ppb		3.308	2.819	67.563
69	Ga-IS	|		398959.733		ppb		3.052		368301.447
95	Mo	|		161738.367	101.266192	ppb		1.671	1.616	63.333
115	In-IS	>		237806.646		ppb		1.444		233523.706
111	Cd	|		137738.935	100.872565	ppb		1.074	0.695	5.423
118	Sn	|		431906.413	100.831939	ppb		0.668	0.930	951.143
121	Sb	|		483719.391	101.340741	ppb		1.878	0.437	234.446
135	Ba	|		89544.605	100.159072	ppb		4.641	3.537	17.778
165	Ho-IS	|		223826.739		ppb		1.503		218949.671
159	Tb-IS	|		185388.533		ppb		0.736		181061.377
207	Pb	|		1297360.424	100.480893	ppb		0.311	0.850	102.222
203	Tl	|		383722.009	99.241267	ppb		0.669	0.686	14.444
209	Bi-IS	>		151995.493		ppb		1.135		148317.164
51	V	|		61778.865	100.345207	ppb		1.322	0.654	51.111
59	Co	|		159068.479	100.495778	ppb		0.359	0.335	22.222
60	Ni	|		82261.724	100.754347	ppb		0.465	0.516	43.333
75	As	|		42858.470	101.233115	ppb		0.380	1.056	604.447
71	Ga-ISK	>		112889.858		ppb		0.676		108945.014
82	Se-2	|		3774.044	100.380538	ppb		1.674	1.051	0.224
107	Ag-1	|		320945.022	100.061854	ppb		2.055	1.433	60.000
115	In-ISK	|		85579.842		ppb		1.025		83129.898
45	Sc-ISK	>		286582.737		ppb		0.649		277538.050
23	Na	|		2315300.310	5107.951165	ppb		0.804	1.448	1243.387
39	K	|		5644823.922	5055.678504	ppb		0.566	0.090	122708.115
24	Mg	|		2617397.727	5067.607472	ppb		1.065	0.591	161.668
159	Tb-ISK	|		183908.208		ppb		0.116		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 11:35:27

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.085

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26694.920		ppb	0.939		26970.994
9	Be	21.111	0.007755	ppb	63.812	149.872	12.222
10	B	1323.395	1.254358	ppb	7.421	35.506	986.701
27	Al	2614.684	-0.032294	ppb	0.531	29.873	2822.501
43	Ca-2	80.000	-1.599035	ppb	22.535	91.723	101.667
49	Ti	203.335	-0.027170	ppb	10.238	158.872	218.891
52	Cr	7642.045	-0.084437	ppb	2.845	24.617	8283.516
55	Mn	590.012	0.002310	ppb	6.291	129.495	566.678
57	Fe	7990.012	-1.746172	ppb	2.440	24.349	8395.802
45	Sc-IS	> 1296016.616		ppb	1.758		1301517.458
66	Zn	422.228	-0.025070	ppb	5.257	80.581	448.896
86	Sr	47.439	0.029258	ppb	19.937	21.128	-0.939
65	Cu	82.928	0.010666	ppb	35.727	186.796	67.563
69	Ga-IS	377351.815		ppb	4.034		368301.447
95	Mo	778.910	0.458443	ppb	12.421	12.436	63.333
115	In-IS	> 230267.177		ppb	1.949		233523.706
111	Cd	25.031	0.014931	ppb	68.512	87.678	5.423
118	Sn	3524.881	0.624933	ppb	6.946	8.645	951.143
121	Sb	532.232	0.065076	ppb	10.709	16.549	234.446
135	Ba	31.111	0.015643	ppb	16.366	33.751	17.778
165	Ho-IS	219552.026		ppb	0.215		218949.671
159	Tb-IS	181528.288		ppb	0.343		181061.377
207	Pb	507.781	0.032127	ppb	3.369	4.372	102.222
203	Tl	182.223	0.044369	ppb	13.730	14.352	14.444
209	Bi-IS	> 148557.335		ppb	0.571		148317.164
51	V	52.222	-0.000051	ppb	9.75016	145.585	51.111
59	Co	30.000	0.004660	ppb	29.397	120.448	22.222
60	Ni	30.000	-0.017701	ppb	40.062	85.381	43.333
75	As	673.504	0.135131	ppb	2.011	19.486	604.447
71	Ga-ISK	> 111363.499		ppb	0.571		108945.014
82	Se-2	5.547	0.143440	ppb	106.326	111.074	0.224
107	Ag-1	146.667	0.026987	ppb	18.039	31.270	60.000
115	In-ISK	83735.198		ppb	1.508		83129.898
45	Sc-ISK	> 280288.038		ppb	1.921		277538.050
23	Na	1526.748	0.612375	ppb	5.862	33.915	1243.387
39	K	124828.564	0.876606	ppb	0.363	265.136	122708.115
24	Mg	435.007	0.539088	ppb	8.289	16.355	161.668
159	Tb-ISK	176309.372		ppb	0.989		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Monday, April 20, 2020 11:38:15

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICVL-210771.086

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26643.718		ppb	1.893		26970.994
9	Be	1208.940	1.005800	ppb	3.370	4.431	12.222
10	B	15303.748	51.235097	ppb	0.448	1.285	986.701
27	Al	305635.702	48.968202	ppb	2.000	2.630	2822.501
43	Ca-2	733.352	46.799977	ppb	7.227	7.307	101.667
49	Ti	738.908	0.948947	ppb	1.450	2.554	218.891
52	Cr	14971.177	0.888557	ppb	2.313	3.026	8283.516
55	Mn	11426.791	0.955733	ppb	1.162	0.510	566.678
57	Fe	18323.968	44.990075	ppb	1.395	1.383	8395.802
45	Sc-IS	> 1325776.736		ppb	1.003		1301517.458
66	Zn	5591.095	5.071881	ppb	4.128	3.450	448.896
86	Sr	1773.152	1.047125	ppb	3.619	4.610	-0.939
65	Cu	1553.931	1.006673	ppb	7.559	7.084	67.563
69	Ga-IS	381939.116		ppb	3.017		368301.447
95	Mo	1816.782	1.097729	ppb	3.656	2.842	63.333
115	In-IS	> 238482.725		ppb	0.956		233523.706
111	Cd	1360.694	0.989482	ppb	3.252	2.346	5.423
118	Sn	5903.442	1.150681	ppb	1.449	1.546	951.143
121	Sb	5023.107	0.999662	ppb	5.321	4.782	234.446
135	Ba	944.476	1.033485	ppb	3.553	2.730	17.778
165	Ho-IS	222918.454		ppb	2.003		218949.671
159	Tb-IS	186294.617		ppb	0.335		181061.377
207	Pb	13107.965	1.013014	ppb	1.313	1.169	102.222
203	Tl	3902.756	1.011130	ppb	4.955	4.088	14.444
209	Bi-IS	> 151120.709		ppb	0.954		148317.164
51	V	601.124	0.912247	ppb	5.981	7.176	51.111
59	Co	1628.982	1.036947	ppb	2.372	3.584	22.222
60	Ni	862.248	1.023796	ppb	4.612	3.488	43.333
75	As	1007.553	0.965974	ppb	2.239	9.188	604.447
71	Ga-ISK	> 110537.163		ppb	1.379		108945.014
82	Se-2	32.213	0.870659	ppb	29.541	30.836	0.224
107	Ag-1	3143.679	0.982062	ppb	2.649	3.533	60.000
115	In-ISK	85466.993		ppb	1.214		83129.898
45	Sc-ISK	> 277781.451		ppb	0.757		277538.050
23	Na	23322.355	50.277574	ppb	0.217	0.813	1243.387
39	K	176347.328	50.603918	ppb	0.289	1.962	122708.115
24	Mg	25172.167	49.968055	ppb	2.479	3.137	161.668
159	Tb-ISK	177978.485		ppb	0.375		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63522_1-A

Autosampler Position: 326

Sample Date/Time: Monday, April 20, 2020 11:43:05

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\MB 570-63522_1-A.087

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26663.750		ppb	0.768		26970.994
9	Be	6.667	-0.004832	ppb	86.603	100.931	12.222
10	B	1007.813	0.023035	ppb	8.104	1476.098	986.701
27	Al	2886.959	0.003154	ppb	4.726	553.229	2822.501
43	Ca-2	80.000	-1.748481	ppb	34.799	115.934	101.667
49	Ti	185.557	-0.068723	ppb	31.646	151.986	218.891
52	Cr	7899.962	-0.070033	ppb	0.808	7.516	8283.516
55	Mn	643.348	0.005994	ppb	6.109	59.251	566.678
57	Fe	7659.832	-4.006660	ppb	2.619	21.156	8395.802
45	Sc-IS	> 1321963.269		ppb	1.294		1301517.458
66	Zn	441.118	-0.014854	ppb	7.021	177.626	448.896
86	Sr	0.797	0.001015	ppb	2207.326	1017.892	-0.939
65	Cu	72.063	0.002324	ppb	9.600	190.723	67.563
69	Ga-IS	376812.732		ppb	3.267		368301.447
95	Mo	58.889	-0.003416	ppb	8.646	93.320	63.333
115	In-IS	> 234036.660		ppb	0.584		233523.706
111	Cd	12.099	0.004948	ppb	42.130	76.118	5.423
118	Sn	915.585	-0.008978	ppb	5.204	116.320	951.143
121	Sb	192.224	-0.009106	ppb	20.024	89.706	234.446
135	Ba	14.444	-0.003826	ppb	13.323	59.685	17.778
165	Ho-IS	218939.667		ppb	1.575		218949.671
159	Tb-IS	181921.201		ppb	1.599		181061.377
207	Pb	151.111	0.003888	ppb	7.747	28.322	102.222
203	Tl	20.000	0.001440	ppb	44.096	155.875	14.444
209	Bi-IS	> 148359.997		ppb	2.308		148317.164
51	V	36.667	-0.023958	ppb	27.273	71.966	51.111
59	Co	23.333	0.000805	ppb	14.286	273.639	22.222
60	Ni	30.000	-0.016755	ppb	19.245	43.316	43.333
75	As	630.487	0.071991	ppb	10.284	212.214	604.447
71	Ga-ISK	> 108399.724		ppb	0.650		108945.014
82	Se-2	-3.146	-0.093094	ppb	230.029	215.924	0.224
107	Ag-1	55.556	-0.001383	ppb	48.867	626.868	60.000
115	In-ISK	82779.129		ppb	0.956		83129.898
45	Sc-ISK	> 276862.662		ppb	0.101		277538.050
23	Na	1245.054	0.010724	ppb	6.612	1753.971	1243.387
39	K	122921.019	0.485462	ppb	0.369	112.506	122708.115
24	Mg	126.667	-0.069346	ppb	19.868	72.923	161.668
159	Tb-ISK	172108.715		ppb	1.599		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: LCS 570-63522_2-A
 Autosampler Position: 327
 Sample Date/Time: Monday, April 20, 2020 11:45:51
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\LCS 570-63522_2-A.088
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27398.475		ppb		1.646		26970.994
9	Be	|		127819.312	104.383204	ppb		0.990	2.930	12.222
10	B	|		29874.542	100.399829	ppb		1.461	1.605	986.701
27	Al	|		653109.206	102.185231	ppb		1.190	3.136	2822.501
43	Ca-2	|		73280.885	5284.708011	ppb		2.522	0.913	101.667
49	Ti	|		56474.744	100.509907	ppb		0.503	1.454	218.891
52	Cr	|		770497.648	100.694455	ppb		0.622	1.357	8283.516
55	Mn	|		1098500.282	93.968733	ppb		1.038	0.936	566.678
57	Fe	|		1123998.665	4987.976255	ppb		2.508	0.949	8395.802
45	Sc-IS	>		1364675.522		ppb		1.920		1301517.458
66	Zn	|		110788.350	105.883114	ppb		3.837	2.351	448.896
86	Sr	|		172692.527	99.002185	ppb		2.205	2.002	-0.939
65	Cu	|		156961.847	103.332684	ppb		3.363	1.454	67.563
69	Ga-IS	|		406135.576		ppb		3.895		368301.447
95	Mo	|		167618.144	101.984798	ppb		2.855	1.700	63.333
115	In-IS	>		240606.284		ppb		0.800		233523.706
111	Cd	|		147172.728	106.514362	ppb		2.227	1.436	5.423
118	Sn	|		449852.095	103.804683	ppb		0.585	1.334	951.143
121	Sb	|		491666.002	101.814464	ppb		1.071	1.172	234.446
135	Ba	|		96103.604	106.254912	ppb		3.875	3.129	17.778
165	Ho-IS	|		226963.197		ppb		0.515		218949.671
159	Tb-IS	|		190052.683		ppb		1.431		181061.377
207	Pb	|		1338079.097	102.238189	ppb		1.051	0.962	102.222
203	Tl	|		382826.120	97.683231	ppb		0.354	1.337	14.444
209	Bi-IS	>		154075.459		ppb		1.678		148317.164
51	V	|		63192.803	100.942354	ppb		1.135	1.122	51.111
59	Co	|		159438.119	99.057986	ppb		0.283	0.701	22.222
60	Ni	|		86181.399	103.804524	ppb		0.575	0.692	43.333
75	As	|		45532.291	105.828038	ppb		0.184	0.619	604.447
71	Ga-ISK	>		114794.941		ppb		0.439		108945.014
82	Se-2	|		3906.754	102.186437	ppb		1.934	1.557	0.224
107	Ag-1	|		159357.229	48.851567	ppb		0.409	0.033	60.000
115	In-ISK	|		86863.967		ppb		1.373		83129.898
45	Sc-ISK	>		288528.023		ppb		0.814		277538.050
23	Na	|		460628.873	1007.032378	ppb		0.962	0.307	1243.387
39	K	|		1212111.049	987.017775	ppb		0.278	1.224	122708.115
24	Mg	|		2741348.020	5271.900919	ppb		1.147	0.861	161.668
159	Tb-ISK	|		183713.107		ppb		0.825		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: LCSD 570-63522_3-A
 Autosampler Position: 328
 Sample Date/Time: Monday, April 20, 2020 11:48:36
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\LCSD 570-63522_3-A.089
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27168.033		ppb		0.948		26970.994
9	Be	|		126810.378	103.750746	ppb		0.965	2.234	12.222
10	B	|		30250.888	101.937854	ppb		1.351	2.922	986.701
27	Al	|		647340.965	101.452671	ppb		1.223	1.453	2822.501
43	Ca-2	|		74255.873	5366.076328	ppb		2.016	0.877	101.667
49	Ti	|		56783.741	101.264123	ppb		0.213	1.624	218.891
52	Cr	|		772163.157	101.113382	ppb		1.510	1.787	8283.516
55	Mn	|		1102932.548	94.539715	ppb		1.327	1.857	566.678
57	Fe	|		1128779.768	5020.345701	ppb		2.012	2.222	8395.802
45	Sc-IS	>		1361928.717		ppb		1.484		1301517.458
66	Zn	|		110992.267	106.295455	ppb		4.352	3.442	448.896
86	Sr	|		171850.882	98.703159	ppb		2.607	1.711	-0.939
65	Cu	|		157760.044	104.073250	ppb		3.423	2.366	67.563
69	Ga-IS	|		406554.737		ppb		3.789		368301.447
95	Mo	|		166074.553	101.251697	ppb		2.388	1.643	63.333
115	In-IS	>		237987.897		ppb		1.540		233523.706
111	Cd	|		145697.356	106.621844	ppb		0.949	0.712	5.423
118	Sn	|		453939.768	105.890558	ppb		2.859	1.968	951.143
121	Sb	|		498458.757	104.341399	ppb		3.033	1.707	234.446
135	Ba	|		96137.312	107.452437	ppb		4.688	3.514	17.778
165	Ho-IS	|		227620.512		ppb		1.709		218949.671
159	Tb-IS	|		188265.788		ppb		0.658		181061.377
207	Pb	|		1331353.357	102.646554	ppb		1.014	1.039	102.222
203	Tl	|		382295.902	98.432915	ppb		3.379	3.662	14.444
209	Bi-IS	>		152680.475		ppb		0.703		148317.164
51	V	|		64772.066	104.167645	ppb		0.551	1.281	51.111
59	Co	|		161569.712	101.054283	ppb		1.094	0.883	22.222
60	Ni	|		85206.700	103.320669	ppb		0.959	1.149	43.333
75	As	|		44961.698	105.207869	ppb		1.831	2.730	604.447
71	Ga-ISK	>		114033.358		ppb		1.175		108945.014
82	Se-2	|		3920.101	103.236407	ppb		1.054	1.813	0.224
107	Ag-1	|		157201.357	48.514396	ppb		0.936	0.869	60.000
115	In-ISK	|		86713.075		ppb		1.046		83129.898
45	Sc-ISK	>		288691.545		ppb		1.442		277538.050
23	Na	|		457479.905	999.631701	ppb		0.760	0.683	1243.387
39	K	|		1207254.786	981.970223	ppb		1.417	1.402	122708.115
24	Mg	|		2730896.266	5249.050106	ppb		0.981	0.524	161.668
159	Tb-ISK	|		181556.625		ppb		1.676		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-L-2-A SD @5
 Autosampler Position: 329
 Sample Date/Time: Monday, April 20, 2020 11:51:22
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-L-2-A SD @5.090
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29086.257		ppb	2.219		26970.994
9	Be	20.000	0.005992	ppb	44.096	127.625	12.222
10	B	41650.644	141.559288	ppb	1.967	0.323	986.701
27	Al	6714.950	0.589505	ppb	19.266	31.561	2822.501
43	Ca-2	781578.476	56512.205756	ppb	2.105	0.192	101.667
49	Ti	560.011	0.592153	ppb	8.008	14.296	218.891
52	Cr	12016.164	0.442136	ppb	2.273	3.120	8283.516
55	Mn	308804.115	26.410037	ppb	2.251	1.299	566.678
57	Fe	47476.556	173.260574	ppb	1.894	1.045	8395.802
45	Sc-IS	> 1363007.132		ppb	2.218		1301517.458
66	Zn	1915.684	1.388952	ppb	3.985	2.378	448.896
86	Sr	676911.593	388.617850	ppb	0.775	2.179	-0.939
65	Cu	772.486	0.463289	ppb	5.179	7.676	67.563
69	Ga-IS	397658.553		ppb	3.020		368301.447
95	Mo	906.695	0.511936	ppb	5.094	3.213	63.333
115	In-IS	> 232371.614		ppb	1.269		233523.706
111	Cd	41.429	0.026895	ppb	48.808	54.730	5.423
118	Sn	3611.570	0.637683	ppb	8.423	10.051	951.143
121	Sb	10055.768	2.106575	ppb	5.644	4.948	234.446
135	Ba	135956.293	155.631597	ppb	5.532	4.526	17.778
165	Ho-IS	220345.499		ppb	1.618		218949.671
159	Tb-IS	181996.436		ppb	0.682		181061.377
207	Pb	577.782	0.039017	ppb	6.979	7.182	102.222
203	Tl	200.001	0.050523	ppb	30.414	31.560	14.444
209	Bi-IS	> 144263.742		ppb	1.387		148317.164
51	V	457.785	0.658343	ppb	1.112	1.889	51.111
59	Co	2433.541	1.523922	ppb	7.193	7.828	22.222
60	Ni	1916.795	2.294122	ppb	4.953	4.569	43.333
75	As	666.758	0.097372	ppb	9.726	161.651	604.447
71	Ga-ISK	> 112864.100		ppb	0.670		108945.014
82	Se-2	80.185	2.127572	ppb	2.641	3.291	0.224
107	Ag-1	98.889	0.011453	ppb	5.149	12.573	60.000
115	In-ISK	85343.580		ppb	0.606		83129.898
45	Sc-ISK	> 294636.321		ppb	0.617		277538.050
23	Na	6477842.647	13905.152737	ppb	0.744	1.159	1243.387
39	K	2198699.830	1843.326362	ppb	0.348	0.678	122708.115
24	Mg	5695251.549	10726.052318	ppb	0.877	1.039	161.668
159	Tb-ISK	182403.137		ppb	0.746		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-L-2-A

Autosampler Position: 330

Sample Date/Time: Monday, April 20, 2020 11:54:08

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-L-2-A.091

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28768.953		ppb	2.709		26970.994
9	Be	11.111	-0.001642	ppb	34.641	191.206	12.222
10	B	194808.285	653.946087	ppb	1.231	2.701	986.701
27	Al	18607.667	2.370317	ppb	1.129	4.026	2822.501
43	Ca-2	3938289.980	275728.270994	ppb	2.136	0.490	101.667
49	Ti	1547.862	2.271949	ppb	1.385	3.877	218.891
52	Cr	14815.461	0.749976	ppb	3.144	4.092	8283.516
55	Mn	1541662.819	127.841689	ppb	2.197	0.055	566.678
57	Fe	193565.147	799.931380	ppb	2.128	0.437	8395.802
45	Sc-IS	> 1407807.523		ppb	2.230		1301517.458
66	Zn	6694.905	5.775711	ppb	5.579	4.035	448.896
86	Sr	3492821.419	1940.921650	ppb	2.088	0.788	-0.939
65	Cu	3051.595	1.902090	ppb	2.644	1.945	67.563
69	Ga-IS	483752.562		ppb	4.010		368301.447
95	Mo	1367.843	0.766636	ppb	4.613	3.955	63.333
115	In-IS	> 227893.227		ppb	0.977		233523.706
111	Cd	94.906	0.068390	ppb	21.140	21.468	5.423
118	Sn	982.256	0.013110	ppb	6.790	107.664	951.143
121	Sb	1662.319	0.313470	ppb	6.512	6.740	234.446
135	Ba	629489.086	734.826037	ppb	5.451	4.497	17.778
165	Ho-IS	217192.228		ppb	1.710		218949.671
159	Tb-IS	178356.583		ppb	1.185		181061.377
207	Pb	844.454	0.064864	ppb	4.348	3.950	102.222
203	Tl	54.445	0.011876	ppb	28.278	37.050	14.444
209	Bi-IS	> 136195.057		ppb	0.839		148317.164
51	V	1657.874	2.653227	ppb	3.078	3.346	51.111
59	Co	12453.204	7.983199	ppb	1.581	2.145	22.222
60	Ni	9128.471	11.314334	ppb	0.477	0.812	43.333
75	As	966.330	0.851442	ppb	16.802	45.040	604.447
71	Ga-ISK	> 111076.836		ppb	0.565		108945.014
82	Se-2	451.523	12.201665	ppb	2.226	2.723	0.224
107	Ag-1	186.668	0.039827	ppb	24.808	37.520	60.000
115	In-ISK	80912.715		ppb	0.859		83129.898
45	Sc-ISK	> 304631.608		ppb	0.620		277538.050
23	Na	33131020.253	68791.793854	ppb	1.391	0.978	1243.387
39	K	10613595.671	9031.855653	ppb	1.404	1.241	122708.115
24	Mg	28609251.620	52112.930745	ppb	1.007	0.806	161.668
159	Tb-ISK	180422.937		ppb	1.067		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-L-2-B MS
 Autosampler Position: 331
 Sample Date/Time: Monday, April 20, 2020 11:56:53
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-L-2-B MS.092
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28568.540		ppb		1.189		26970.994
9	Be	|	126720.701	99.671154	ppb	0.996	2.529		12.222
10	B	|	218305.893	728.334352	ppb	2.207	1.335		986.701
27	Al	|	662642.652	99.816180	ppb	1.988	1.259		2822.501
43	Ca-2	|	3962076.607	275616.000007	ppb	2.683	1.541		101.667
49	Ti	|	55244.400	94.669527	ppb	1.220	0.546		218.891
52	Cr	|	773619.669	97.334222	ppb	1.424	0.404		8283.516
55	Mn	|	2790549.713	229.983295	ppb	1.738	0.589		566.678
57	Fe	|	1292239.118	5527.877771	ppb	2.491	1.016		8395.802
45	Sc-IS	>	1416745.471		ppb	1.584			1301517.458
66	Zn	|	96718.948	88.967171	ppb	4.412	3.370		448.896
86	Sr	|	3716903.050	2052.176089	ppb	2.723	1.666		-0.939
65	Cu	|	138021.821	87.523311	ppb	3.657	2.738		67.563
69	Ga-IS	|	506177.234		ppb	4.688			368301.447
95	Mo	|	158900.486	93.134291	ppb	3.039	2.938		63.333
115	In-IS	>	228259.149		ppb	0.657			233523.706
111	Cd	|	130159.735	99.300234	ppb	1.867	1.355		5.423
118	Sn	|	227938.672	55.317963	ppb	6.947	6.332		951.143
121	Sb	|	468261.072	102.202717	ppb	2.331	1.682		234.446
135	Ba	|	703869.862	820.412708	ppb	5.470	4.862		17.778
165	Ho-IS	|	214385.569		ppb	0.430			218949.671
159	Tb-IS	|	177699.485		ppb	0.300			181061.377
207	Pb	|	1207809.233	105.070510	ppb	1.367	0.946		102.222
203	Tl	|	345800.107	100.454837	ppb	1.351	1.027		14.444
209	Bi-IS	>	135311.140		ppb	0.445			148317.164
51	V	|	69004.041	114.818137	ppb	0.960	2.134		51.111
59	Co	|	172720.190	111.757307	ppb	1.285	1.319		22.222
60	Ni	|	89032.137	111.691446	ppb	0.655	1.436		43.333
75	As	|	45403.672	109.970484	ppb	1.430	2.334		604.447
71	Ga-ISK	>	110234.848		ppb	1.474			108945.014
82	Se-2	|	4069.687	110.873515	ppb	1.294	2.038		0.224
107	Ag-1	|	63058.966	20.125550	ppb	3.249	4.222		60.000
115	In-ISK	|	80712.393		ppb	0.680			83129.898
45	Sc-ISK	>	309916.501		ppb	2.021			277538.050
23	Na	|	33456170.813	68294.179833	ppb	0.872	1.146		1243.387
39	K	|	11746820.554	9837.811649	ppb	0.749	1.448		122708.115
24	Mg	|	31417112.225	56269.371127	ppb	0.674	2.418		161.668
159	Tb-ISK	|	178854.043		ppb	0.963			174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-L-2-C MSD

Autosampler Position: 332

Sample Date/Time: Monday, April 20, 2020 11:59:39

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-L-2-C MSD.093

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28921.485		ppb		2.957		26970.994
9	Be	|	127004.485	100.662739	ppb	2.358	1.023		12.222
10	B	|	216816.313	729.415368	ppb	0.650	2.693		986.701
27	Al	|	662884.289	100.654464	ppb	2.188	1.174		2822.501
43	Ca-2	|	3929068.874	275445.943827	ppb	3.508	0.378		101.667
49	Ti	|	56453.575	97.535511	ppb	1.942	2.035		218.891
52	Cr	|	779607.251	98.909036	ppb	1.219	2.129		8283.516
55	Mn	|	2805355.641	233.065973	ppb	1.947	1.379		566.678
57	Fe	|	1285787.079	5542.908274	ppb	3.747	0.459		8395.802
45	Sc-IS	>	1405860.377		ppb	3.298			1301517.458
66	Zn	|	96165.406	89.122332	ppb	5.287	2.125		448.896
86	Sr	|	3690889.327	2054.853014	ppb	1.432	2.701		-0.939
65	Cu	|	137452.425	87.816139	ppb	5.163	2.359		67.563
69	Ga-IS	|	499958.796		ppb	4.159			368301.447
95	Mo	|	162538.438	96.040022	ppb	1.428	1.908		63.333
115	In-IS	>	226782.648		ppb	3.072			233523.706
111	Cd	|	129506.334	99.463423	ppb	2.380	0.707		5.423
118	Sn	|	218655.206	53.459221	ppb	3.356	5.053		951.143
121	Sb	|	469197.009	103.106274	ppb	1.996	1.277		234.446
135	Ba	|	698720.139	819.325588	ppb	6.363	3.354		17.778
165	Ho-IS	|	214939.631		ppb	1.668			218949.671
159	Tb-IS	|	177417.352		ppb	1.810			181061.377
207	Pb	|	1196632.853	105.509519	ppb	0.786	0.563		102.222
203	Tl	|	343509.126	101.144484	ppb	1.321	1.531		14.444
209	Bi-IS	>	133506.522		ppb	0.834			148317.164
51	V	|	67527.098	112.129329	ppb	3.075	2.808		51.111
59	Co	|	170457.892	110.079029	ppb	2.123	1.557		22.222
60	Ni	|	87733.039	109.852091	ppb	1.103	1.429		43.333
75	As	|	44869.118	108.434195	ppb	1.468	0.744		604.447
71	Ga-ISK	>	110438.614		ppb	1.198			108945.014
82	Se-2	|	4117.448	111.943517	ppb	2.651	1.944		0.224
107	Ag-1	|	49300.603	15.693832	ppb	4.706	4.018		60.000
115	In-ISK	|	78584.577		ppb	1.804			83129.898
45	Sc-ISK	>	307936.462		ppb	1.881			277538.050
23	Na	|	33253683.701	68329.248730	ppb	0.829	2.651		1243.387
39	K	|	11811054.354	9956.854408	ppb	0.617	1.799		122708.115
24	Mg	|	31447935.512	56684.434920	ppb	1.152	2.441		161.668
159	Tb-ISK	|	178875.618		ppb	0.758			174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-L-2-A PDS
 Autosampler Position: 333
 Sample Date/Time: Monday, April 20, 2020 12:02:25
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-L-2-A PDS.094
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		28505.085		ppb		2.014		26970.994
9	Be	|		127413.460	101.789458	ppb		0.464	1.401	12.222
10	B	|		214879.657	728.416162	ppb		0.975	2.206	986.701
27	Al	|		675153.622	103.324714	ppb		1.836	0.738	2822.501
43	Ca-2	|		3837017.342	271177.671768	ppb		1.344	1.081	101.667
49	Ti	|		58599.946	102.050661	ppb		0.648	1.485	218.891
52	Cr	|		773419.361	98.871022	ppb		1.455	1.269	8283.516
55	Mn	|		2740045.837	229.421303	ppb		1.120	1.458	566.678
57	Fe	|		1297563.807	5639.547681	ppb		2.324	1.331	8395.802
45	Sc-IS	>		1394636.902		ppb		1.277		1301517.458
66	Zn	|		96690.032	90.351493	ppb		5.218	4.279	448.896
86	Sr	|		3670185.248	2058.736222	ppb		0.830	0.505	-0.939
65	Cu	|		135800.767	87.464650	ppb		5.644	4.681	67.563
69	Ga-IS	|		497433.259		ppb		4.260		368301.447
95	Mo	|		164335.628	97.840387	ppb		2.052	1.321	63.333
115	In-IS	>		229006.074		ppb		2.215		233523.706
111	Cd	|		133510.308	101.542860	ppb		1.714	1.524	5.423
118	Sn	|		405330.052	98.275289	ppb		0.827	1.870	951.143
121	Sb	|		449080.460	97.716439	ppb		1.582	1.477	234.446
135	Ba	|		682835.167	793.230607	ppb		5.250	3.807	17.778
165	Ho-IS	|		212693.058		ppb		1.719		218949.671
159	Tb-IS	|		175469.977		ppb		0.602		181061.377
207	Pb	|		1189729.285	103.716486	ppb		1.068	0.235	102.222
203	Tl	|		340259.205	99.055438	ppb		1.035	0.752	14.444
209	Bi-IS	>		135027.384		ppb		0.845		148317.164
51	V	|		69189.381	115.695175	ppb		1.059	0.901	51.111
59	Co	|		170131.603	110.636776	ppb		1.157	0.791	22.222
60	Ni	|		90439.830	114.025087	ppb		0.761	0.254	43.333
75	As	|		45525.950	110.841217	ppb		1.732	2.757	604.447
71	Ga-ISK	>		109674.974		ppb		1.001		108945.014
82	Se-2	|		4071.336	111.472196	ppb		2.098	2.176	0.224
107	Ag-1	|		119385.680	38.303912	ppb		0.641	0.755	60.000
115	In-ISK	|		79569.329		ppb		0.708		83129.898
45	Sc-ISK	>		307773.860		ppb		1.518		277538.050
23	Na	|		32662119.074	67139.781032	ppb		0.769	1.996	1243.387
39	K	|		11599389.403	9781.571488	ppb		0.570	2.124	122708.115
24	Mg	|		30999120.293	55902.086510	ppb		0.882	2.272	161.668
159	Tb-ISK	|		177038.277		ppb		0.776		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-L-3-A

Autosampler Position: 334

Sample Date/Time: Monday, April 20, 2020 12:05:10

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-L-3-A.095

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		27330.574		ppb		2.456		26970.994
9	Be	|		11.111	-0.001293	ppb	45.826	308.696		12.222
10	B	|		44141.425	152.699382	ppb	0.454	2.802		986.701
27	Al	|		44930.587	6.715533	ppb	2.976	4.088		2822.501
43	Ca-2	|	1588422.086		116662.011800	ppb	2.448	2.060		101.667
49	Ti	|		2014.587	3.251641	ppb	2.544	4.375		218.891
52	Cr	|		60382.910	6.968096	ppb	1.075	1.644		8283.516
55	Mn	|		13884.522	1.157644	ppb	1.036	1.563		566.678
57	Fe	|		83260.891	339.340266	ppb	2.147	1.043		8395.802
45	Sc-IS	>		1342081.967		ppb	2.339			1301517.458
66	Zn	|		1708.991	1.216869	ppb	1.577	3.311		448.896
86	Sr	|		1046356.556	609.977535	ppb	2.547	2.250		-0.939
65	Cu	|		1578.975	1.011066	ppb	4.446	4.296		67.563
69	Ga-IS	|		368476.416		ppb	5.165			368301.447
95	Mo	|		5727.818	3.503365	ppb	6.060	4.403		63.333
115	In-IS	>		225509.096		ppb	1.390			233523.706
111	Cd	|		22.416	0.013232	ppb	51.029	65.472		5.423
118	Sn	|		9036.193	2.002273	ppb	4.001	2.929		951.143
121	Sb	|		15043.501	3.273413	ppb	7.383	6.102		234.446
135	Ba	|		60278.336	71.082242	ppb	6.168	4.920		17.778
165	Ho-IS	|		217552.945		ppb	0.674			218949.671
159	Tb-IS	|		176742.175		ppb	0.511			181061.377
207	Pb	|		1225.577	0.095356	ppb	1.910	1.568		102.222
203	Tl	|		124.445	0.031253	ppb	20.806	23.226		14.444
209	Bi-IS	>		139434.960		ppb	0.545			148317.164
51	V	|		1546.750	2.551784	ppb	1.867	1.926		51.111
59	Co	|		98.889	0.051016	ppb	27.037	34.848		22.222
60	Ni	|		1043.372	1.286411	ppb	6.800	7.317		43.333
75	As	|		842.996	0.619061	ppb	11.723	41.523		604.447
71	Ga-ISK	>		107612.690		ppb	0.426			108945.014
82	Se-2	|		345.189	9.627261	ppb	5.950	6.206		0.224
107	Ag-1	|		1540.083	0.484559	ppb	8.795	9.536		60.000
115	In-ISK	|		80749.982		ppb	1.357			83129.898
45	Sc-ISK	>		286319.724		ppb	0.459			277538.050
23	Na	|		20296076.014	44836.652920	ppb	0.872	0.567		1243.387
39	K	|		5537839.054	4962.350822	ppb	0.234	0.375		122708.115
24	Mg	|		11433389.711	22157.675637	ppb	1.242	0.820		161.668
159	Tb-ISK	|		174445.346		ppb	0.857			174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 12:07:57

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.096

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27144.661		ppb		2.063		26970.994
9	Be	|		120125.211	100.546651	ppb	1.237	1.990		12.222
10	B	|		72315.913	254.492529	ppb	0.690	1.753		986.701
27	Al	|		619735.072	99.355146	ppb	1.238	0.573		2822.501
43	Ca-2	|		69029.802	5102.709641	ppb	2.874	1.219		101.667
49	Ti	|		54925.391	100.200178	ppb	0.926	0.849		218.891
52	Cr	|		745737.360	99.890442	ppb	1.102	0.665		8283.516
55	Mn	|		1099751.098	96.435626	ppb	1.379	0.504		566.678
57	Fe	|		1069571.590	4865.237939	ppb	1.564	0.458		8395.802
45	Sc-IS	>		1331203.179		ppb	1.728			1301517.458
66	Zn	|		102626.472	100.526142	ppb	3.368	1.667		448.896
86	Sr	|		170445.018	100.156993	ppb	2.082	0.386		-0.939
65	Cu	|		149753.469	101.064318	ppb	3.566	2.017		67.563
69	Ga-IS	|		395124.033		ppb	3.492			368301.447
95	Mo	|		161630.688	100.812538	ppb	2.462	1.005		63.333
115	In-IS	>		236076.829		ppb	0.948			233523.706
111	Cd	|		136817.169	100.919029	ppb	2.207	1.278		5.423
118	Sn	|		434285.635	102.116779	ppb	2.813	2.177		951.143
121	Sb	|		485848.347	102.530358	ppb	2.648	2.016		234.446
135	Ba	|		87725.680	98.845217	ppb	5.221	4.468		17.778
165	Ho-IS	|		223617.888		ppb	1.307			218949.671
159	Tb-IS	|		181663.462		ppb	1.398			181061.377
207	Pb	|		1282090.251	101.131127	ppb	0.992	1.310		102.222
203	Tl	|		374346.179	98.607615	ppb	1.181	1.671		14.444
209	Bi-IS	>		149249.062		ppb	1.684			148317.164
51	V	|		62678.311	102.610877	ppb	0.284	0.867		51.111
59	Co	|		160021.389	101.897630	ppb	1.547	2.260		22.222
60	Ni	|		81380.026	100.457608	ppb	0.167	1.128		43.333
75	As	|		42760.456	101.798562	ppb	0.227	0.845		604.447
71	Ga-ISK	>		112016.373		ppb	1.039			108945.014
82	Se-2	|		3688.345	98.881049	ppb	1.927	2.450		0.224
107	Ag-1	|		315601.872	99.169573	ppb	1.441	1.126		60.000
115	In-ISK	|		85145.600		ppb	0.478			83129.898
45	Sc-ISK	>		286659.867		ppb	0.830			277538.050
23	Na	|		2362665.111	5210.455483	ppb	1.941	1.108		1243.387
39	K	|		5721117.640	5124.336947	ppb	0.954	1.168		122708.115
24	Mg	|		2649003.331	5127.865672	ppb	1.146	1.691		161.668
159	Tb-ISK	|		179858.505		ppb	0.703			174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 12:10:43

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.097

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26230.728		ppb	0.896		26970.994
9	Be	20.000	0.006756	ppb	28.868	77.086	12.222
10	B	1606.757	2.282010	ppb	1.979	4.819	986.701
27	Al	2679.140	-0.022196	ppb	2.502	45.563	2822.501
43	Ca-2	93.334	-0.612848	ppb	24.744	280.792	101.667
49	Ti	227.780	0.017796	ppb	8.060	166.728	218.891
52	Cr	8223.481	-0.004887	ppb	5.089	1006.711	8283.516
55	Mn	570.011	0.000479	ppb	6.895	794.431	566.678
57	Fe	9058.429	3.235761	ppb	3.455	29.261	8395.802
45	Sc-IS	> 1297368.455		ppb	1.253		1301517.458
66	Zn	411.117	-0.036938	ppb	7.999	76.396	448.896
86	Sr	49.137	0.030083	ppb	77.266	75.483	-0.939
65	Cu	97.416	0.020746	ppb	28.777	90.767	67.563
69	Ga-IS	366712.365		ppb	3.182		368301.447
95	Mo	745.575	0.436735	ppb	7.172	6.553	63.333
115	In-IS	> 227596.241		ppb	2.198		233523.706
111	Cd	12.879	0.005829	ppb	30.612	53.021	5.423
118	Sn	4961.978	0.985356	ppb	9.247	9.263	951.143
121	Sb	2744.708	0.551082	ppb	2.446	0.590	234.446
135	Ba	32.222	0.017462	ppb	15.802	35.746	17.778
165	Ho-IS	215170.645		ppb	0.926		218949.671
159	Tb-IS	176410.321		ppb	0.302		181061.377
207	Pb	404.447	0.024500	ppb	6.662	8.899	102.222
203	Tl	182.223	0.045235	ppb	2.794	2.716	14.444
209	Bi-IS	> 145992.200		ppb	0.502		148317.164
51	V	52.222	-0.000317	ppb	18.426	5003.706	51.111
59	Co	27.778	0.003179	ppb	24.980	138.406	22.222
60	Ni	38.889	-0.006864	ppb	13.093	93.761	43.333
75	As	621.756	0.004305	ppb	3.614	1129.827	604.447
71	Ga-ISK	> 111735.269		ppb	0.385		108945.014
82	Se-2	-3.818	-0.108970	ppb	83.891	79.136	0.224
107	Ag-1	821.135	0.239326	ppb	15.050	16.272	60.000
115	In-ISK	84292.164		ppb	1.366		83129.898
45	Sc-ISK	> 279812.741		ppb	0.745		277538.050
23	Na	2641.911	3.139961	ppb	4.580	9.961	1243.387
39	K	126541.307	2.658401	ppb	0.136	39.437	122708.115
24	Mg	886.694	1.435618	ppb	4.233	6.096	161.668
159	Tb-ISK	175683.672		ppb	0.331		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-L-4-A
 Autosampler Position: 335
 Sample Date/Time: Monday, April 20, 2020 12:13:30
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-L-4-A.098
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28544.064		ppb	3.266		26970.994
9	Be	10.000	-0.002605	ppb	66.667	203.154	12.222
10	B	38999.867	127.056417	ppb	3.294	2.162	986.701
27	Al	22044.776	2.869183	ppb	1.361	1.311	2822.501
43	Ca-2	2467028.912	171506.443577	ppb	2.168	1.115	101.667
49	Ti	4897.506	8.013760	ppb	1.137	1.367	218.891
52	Cr	54862.958	5.832071	ppb	2.220	2.699	8283.516
55	Mn	3089.223	0.203629	ppb	2.899	2.758	566.678
57	Fe	108190.448	426.451574	ppb	1.830	0.099	8395.802
45	Sc-IS	> 1417738.467		ppb	1.914		1301517.458
66	Zn	2880.291	2.209427	ppb	3.895	3.519	448.896
86	Sr	1027715.413	567.162431	ppb	1.172	1.687	-0.939
65	Cu	1607.770	0.973841	ppb	7.473	9.462	67.563
69	Ga-IS	383637.511		ppb	4.138		368301.447
95	Mo	3997.226	2.302637	ppb	3.107	4.379	63.333
115	In-IS	> 233360.314		ppb	0.645		233523.706
111	Cd	10.495	0.003811	ppb	66.881	139.192	5.423
118	Sn	2032.367	0.257809	ppb	7.145	12.251	951.143
121	Sb	876.694	0.137193	ppb	4.626	5.467	234.446
135	Ba	46442.112	52.932665	ppb	3.939	3.306	17.778
165	Ho-IS	229943.992		ppb	1.802		218949.671
159	Tb-IS	189996.274		ppb	0.845		181061.377
207	Pb	448.892	0.028454	ppb	5.268	7.338	102.222
203	Tl	51.111	0.010106	ppb	33.467	47.609	14.444
209	Bi-IS	> 144540.936		ppb	1.117		148317.164
51	V	1372.288	2.210840	ppb	2.481	3.383	51.111
59	Co	67.778	0.029481	ppb	17.272	24.186	22.222
60	Ni	1381.178	1.686644	ppb	7.266	6.570	43.333
75	As	810.060	0.500748	ppb	22.351	93.545	604.447
71	Ga-ISK	> 109669.403		ppb	1.395		108945.014
82	Se-2	911.220	24.939534	ppb	3.758	2.539	0.224
107	Ag-1	620.014	0.179345	ppb	17.280	17.778	60.000
115	In-ISK	84901.058		ppb	0.541		83129.898
45	Sc-ISK	> 292167.463		ppb	0.460		277538.050
23	Na	29387145.492	63621.400840	ppb	1.073	0.719	1243.387
39	K	6133598.976	5395.908400	ppb	1.369	0.951	122708.115
24	Mg	19041500.013	36164.269291	ppb	0.637	0.234	161.668
159	Tb-ISK	183534.130		ppb	0.528		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-L-5-A
 Autosampler Position: 336
 Sample Date/Time: Monday, April 20, 2020 12:16:16
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-L-5-A.099
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29559.446		ppb	1.832		26970.994
9	Be	15.556	0.001637	ppb	32.733	242.913	12.222
10	B	196053.942	645.960178	ppb	0.605	2.460	986.701
27	Al	15043.472	1.784643	ppb	0.776	2.968	2822.501
43	Ca-2	3968170.833	272745.634307	ppb	1.379	1.478	101.667
49	Ti	1517.859	2.169832	ppb	4.175	3.065	218.891
52	Cr	13771.079	0.584249	ppb	1.168	5.544	8283.516
55	Mn	1613044.386	131.313481	ppb	1.584	1.002	566.678
57	Fe	186683.378	755.217204	ppb	2.270	1.500	8395.802
45	Sc-IS	> 1434163.613		ppb	1.937		1301517.458
66	Zn	4963.085	4.081252	ppb	3.658	2.708	448.896
86	Sr	3527738.071	1924.589705	ppb	0.585	1.540	-0.939
65	Cu	2965.260	1.811616	ppb	4.947	3.778	67.563
69	Ga-IS	493706.225		ppb	4.541		368301.447
95	Mo	1527.860	0.844304	ppb	7.880	7.385	63.333
115	In-IS	> 231467.951		ppb	1.083		233523.706
111	Cd	110.125	0.078809	ppb	18.850	19.840	5.423
118	Sn	1214.496	0.065270	ppb	7.165	30.392	951.143
121	Sb	691.128	0.098850	ppb	4.323	8.058	234.446
135	Ba	631609.041	726.008795	ppb	4.167	3.380	17.778
165	Ho-IS	221066.865		ppb	2.395		218949.671
159	Tb-IS	185857.918		ppb	0.826		181061.377
207	Pb	721.119	0.053124	ppb	7.628	8.874	102.222
203	Tl	30.000	0.004684	ppb	40.062	73.135	14.444
209	Bi-IS	> 138631.633		ppb	0.252		148317.164
51	V	1903.460	3.018930	ppb	1.401	0.420	51.111
59	Co	12537.724	7.936853	ppb	2.659	3.718	22.222
60	Ni	8438.048	10.322654	ppb	2.550	3.218	43.333
75	As	846.590	0.533461	ppb	9.763	32.481	604.447
71	Ga-ISK	> 112506.903		ppb	1.452		108945.014
82	Se-2	427.126	11.400163	ppb	6.545	7.539	0.224
107	Ag-1	213.335	0.047364	ppb	2.706	2.800	60.000
115	In-ISK	84102.413		ppb	0.618		83129.898
45	Sc-ISK	> 305028.969		ppb	0.993		277538.050
23	Na	33759184.281	70009.106939	ppb	0.374	0.637	1243.387
39	K	10543744.629	8960.477442	ppb	0.522	1.203	122708.115
24	Mg	28331607.344	51545.263896	ppb	0.705	1.620	161.668
159	Tb-ISK	182347.826		ppb	1.133		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-L-6-A

Autosampler Position: 337

Sample Date/Time: Monday, April 20, 2020 12:19:02

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-L-6-A.100

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28624.207		ppb	1.245		26970.994
9	Be	11.111	-0.001628	ppb	96.437	518.622	12.222
10	B	37941.433	125.900367	ppb	1.202	1.287	986.701
27	Al	15995.639	1.999947	ppb	6.115	8.349	2822.501
43	Ca-2	2439493.220	172749.185972	ppb	1.680	0.621	101.667
49	Ti	4949.746	8.261423	ppb	1.381	1.061	218.891
52	Cr	53532.372	5.788971	ppb	2.357	2.426	8283.516
55	Mn	1840.119	0.103544	ppb	5.226	7.107	566.678
57	Fe	104268.177	417.899750	ppb	2.499	1.745	8395.802
45	Sc-IS	> 1391761.551		ppb	1.065		1301517.458
66	Zn	2206.838	1.624528	ppb	7.895	8.838	448.896
86	Sr	1031018.407	579.559776	ppb	3.374	3.625	-0.939
65	Cu	1596.676	0.984681	ppb	1.812	1.626	67.563
69	Ga-IS	376209.522		ppb	4.266		368301.447
95	Mo	4070.580	2.389686	ppb	2.341	3.356	63.333
115	In-IS	> 231638.875		ppb	1.197		233523.706
111	Cd	9.230	0.002920	ppb	112.155	268.652	5.423
118	Sn	1508.969	0.135758	ppb	7.784	19.553	951.143
121	Sb	573.345	0.073300	ppb	6.153	8.879	234.446
135	Ba	46455.523	53.336975	ppb	4.724	3.781	17.778
165	Ho-IS	229784.463		ppb	0.732		218949.671
159	Tb-IS	190928.595		ppb	0.933		181061.377
207	Pb	373.335	0.022430	ppb	4.092	5.723	102.222
203	Tl	18.889	0.001336	ppb	50.943	197.999	14.444
209	Bi-IS	> 143897.769		ppb	0.299		148317.164
51	V	1444.518	2.348934	ppb	3.495	3.784	51.111
59	Co	82.222	0.039294	ppb	13.032	17.151	22.222
60	Ni	1252.277	1.536365	ppb	3.392	4.047	43.333
75	As	952.934	0.867327	ppb	3.999	11.962	604.447
71	Ga-ISK	> 108876.662		ppb	0.584		108945.014
82	Se-2	929.914	25.646925	ppb	4.934	5.488	0.224
107	Ag-1	386.672	0.105716	ppb	23.435	28.073	60.000
115	In-ISK	84318.872		ppb	1.874		83129.898
45	Sc-ISK	> 285512.667		ppb	0.182		277538.050
23	Na	29132162.269	64540.418042	ppb	0.528	0.518	1243.387
39	K	6138883.900	5529.441048	ppb	0.715	0.873	122708.115
24	Mg	19370605.096	37646.895904	ppb	1.196	1.146	161.668
159	Tb-ISK	185875.425		ppb	0.176		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25758-L-2-A
 Autosampler Position: 338
 Sample Date/Time: Monday, April 20, 2020 12:21:47
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25758-L-2-A.101
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28006.321		ppb	1.963		26970.994
9	Be	8.889	-0.003316	ppb	78.062	172.991	12.222
10	B	85793.514	287.159757	ppb	0.133	2.408	986.701
27	Al	17202.575	2.167075	ppb	1.609	4.684	2822.501
43	Ca-2	2168762.805	152470.758975	ppb	1.644	1.272	101.667
49	Ti	1768.999	2.668762	ppb	5.858	8.519	218.891
52	Cr	12987.012	0.522951	ppb	1.452	4.978	8283.516
55	Mn	13396.281	1.064967	ppb	2.512	0.894	566.678
57	Fe	98520.804	389.622505	ppb	1.098	1.448	8395.802
45	Sc-IS	> 1402108.322		ppb	2.255		1301517.458
66	Zn	1292.281	0.755029	ppb	5.941	6.419	448.896
86	Sr	1664967.105	929.026324	ppb	1.970	1.413	-0.939
65	Cu	2270.155	1.409129	ppb	1.919	2.014	67.563
69	Ga-IS	423382.774		ppb	3.526		368301.447
95	Mo	3348.170	1.943092	ppb	3.398	2.124	63.333
115	In-IS	> 230817.863		ppb	0.611		233523.706
111	Cd	11.858	0.004899	ppb	87.081	159.307	5.423
118	Sn	1024.481	0.020394	ppb	11.367	141.734	951.143
121	Sb	501.120	0.058169	ppb	6.663	12.000	234.446
135	Ba	275278.151	317.372971	ppb	5.153	5.323	17.778
165	Ho-IS	228367.889		ppb	1.789		218949.671
159	Tb-IS	187270.806		ppb	1.675		181061.377
207	Pb	488.892	0.032685	ppb	1.419	1.984	102.222
203	Tl	13.333	-0.000109	ppb	75.000	2571.132	14.444
209	Bi-IS	> 141070.899		ppb	0.443		148317.164
51	V	1889.014	3.046292	ppb	4.140	4.747	51.111
59	Co	2065.705	1.316459	ppb	1.912	0.833	22.222
60	Ni	4893.060	6.060582	ppb	0.633	1.532	43.333
75	As	720.788	0.258075	ppb	23.346	153.603	604.447
71	Ga-ISK	> 110697.265		ppb	1.109		108945.014
82	Se-2	218.858	5.932708	ppb	4.644	5.469	0.224
107	Ag-1	91.111	0.009550	ppb	22.053	64.428	60.000
115	In-ISK	85313.214		ppb	0.248		83129.898
45	Sc-ISK	> 291972.435		ppb	0.516		277538.050
23	Na	19604325.147	42471.206875	ppb	0.823	1.060	1243.387
39	K	6623381.704	5840.262276	ppb	0.291	0.440	122708.115
24	Mg	18017024.710	34242.106060	ppb	0.303	0.559	161.668
159	Tb-ISK	185246.709		ppb	0.725		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-L-3-A

Autosampler Position: 339

Sample Date/Time: Monday, April 20, 2020 12:24:33

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-L-3-A.102

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28527.346		ppb	1.073		26970.994
9	Be	8.889	-0.003324	ppb	21.651	48.403	12.222
10	B	64129.220	215.617826	ppb	2.232	1.220	986.701
27	Al	107983.459	16.200181	ppb	2.818	3.506	2822.501
43	Ca-2	1707430.447	121096.116154	ppb	2.467	1.129	101.667
49	Ti	2560.230	4.081228	ppb	4.733	3.854	218.891
52	Cr	27441.887	2.414398	ppb	0.249	2.136	8283.516
55	Mn	5547.744	0.415351	ppb	3.179	1.892	566.678
57	Fe	82847.350	324.582676	ppb	1.541	1.120	8395.802
45	Sc-IS	> 1389531.968		ppb	1.538		1301517.458
66	Zn	1031.149	0.520102	ppb	11.107	19.863	448.896
86	Sr	1381804.350	777.941744	ppb	1.283	0.351	-0.939
65	Cu	4243.025	2.698282	ppb	4.188	3.742	67.563
69	Ga-IS	403904.657		ppb	3.466		368301.447
95	Mo	6708.242	3.969844	ppb	1.688	0.205	63.333
115	In-IS	> 231612.895		ppb	0.658		233523.706
111	Cd	15.913	0.007920	ppb	19.757	29.799	5.423
118	Sn	1581.199	0.153171	ppb	4.394	9.525	951.143
121	Sb	593.346	0.077658	ppb	1.124	1.930	234.446
135	Ba	181075.997	208.014892	ppb	3.968	3.672	17.778
165	Ho-IS	224562.388		ppb	0.670		218949.671
159	Tb-IS	185745.476		ppb	1.475		181061.377
207	Pb	416.669	0.025518	ppb	8.653	10.298	102.222
203	Tl	11.111	-0.000841	ppb	69.282	243.596	14.444
209	Bi-IS	> 145787.953		ppb	1.082		148317.164
51	V	1800.114	2.921247	ppb	7.925	8.525	51.111
59	Co	327.782	0.198148	ppb	9.772	9.733	22.222
60	Ni	1751.219	2.149474	ppb	6.707	6.398	43.333
75	As	802.026	0.474615	ppb	7.530	34.314	604.447
71	Ga-ISK	> 109876.502		ppb	0.744		108945.014
82	Se-2	389.196	10.631419	ppb	2.748	3.102	0.224
107	Ag-1	382.227	0.102998	ppb	13.908	15.705	60.000
115	In-ISK	85347.737		ppb	1.042		83129.898
45	Sc-ISK	> 288060.894		ppb	0.564		277538.050
23	Na	17543475.705	38521.556136	ppb	0.567	0.300	1243.387
39	K	5610509.437	4997.912065	ppb	0.908	0.971	122708.115
24	Mg	14742105.256	28399.455701	ppb	1.542	1.917	161.668
159	Tb-ISK	184352.607		ppb	0.879		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-L-4-A

Autosampler Position: 340

Sample Date/Time: Monday, April 20, 2020 12:27:19

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-L-4-A.103

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	28149.935		ppb		1.713		26970.994
9	Be	|	6.667	-0.005091	ppb	100.000	106.032		12.222
10	B	|	51548.394	174.202753	ppb	0.706	1.871		986.701
27	Al	|	607460.418	94.092259	ppb	1.487	0.350		2822.501
43	Ca-2	|	1177867.715	84274.306436	ppb	2.452	1.447		101.667
49	Ti	|	4591.849	7.719666	ppb	2.257	2.940		218.891
52	Cr	|	22836.025	1.842645	ppb	2.883	5.229		8283.516
55	Mn	|	40770.320	3.406381	ppb	0.828	1.212		566.678
57	Fe	|	89478.354	357.148380	ppb	2.509	1.843		8395.802
45	Sc-IS	>	1377364.919		ppb	1.327			1301517.458
66	Zn	|	2434.652	1.863225	ppb	5.201	5.095		448.896
86	Sr	|	1095945.565	622.431365	ppb	1.511	0.382		-0.939
65	Cu	|	3413.522	2.180534	ppb	6.525	5.727		67.563
69	Ga-IS	|	406279.259		ppb	3.361			368301.447
95	Mo	|	5471.048	3.259341	ppb	1.892	1.850		63.333
115	In-IS	>	232899.354		ppb	1.080			233523.706
111	Cd	|	4.066	-0.000994	ppb	47.331	146.707		5.423
118	Sn	|	1087.819	0.033195	ppb	5.992	40.688		951.143
121	Sb	|	501.120	0.057275	ppb	11.906	23.712		234.446
135	Ba	|	175483.557	200.478532	ppb	4.156	3.801		17.778
165	Ho-IS	|	227519.773		ppb	0.826			218949.671
159	Tb-IS	|	190055.897		ppb	0.311			181061.377
207	Pb	|	1325.580	0.097991	ppb	4.904	4.777		102.222
203	Tl	|	7.778	-0.001748	ppb	24.744	30.074		14.444
209	Bi-IS	>	147051.875		ppb	0.500			148317.164
51	V	|	1631.204	2.668205	ppb	3.323	5.618		51.111
59	Co	|	192.224	0.111530	ppb	14.017	16.125		22.222
60	Ni	|	748.909	0.897631	ppb	5.565	6.136		43.333
75	As	|	736.900	0.330788	ppb	6.769	27.045		604.447
71	Ga-ISK	>	108777.141		ppb	2.194			108945.014
82	Se-2	|	28.539	0.781830	ppb	1.992	2.259		0.224
107	Ag-1	|	238.891	0.057993	ppb	17.558	24.484		60.000
115	In-ISK	|	86036.543		ppb	1.621			83129.898
45	Sc-ISK	>	285000.616		ppb	1.167			277538.050
23	Na	|	14102244.721	31299.465654	ppb	1.607	1.817		1243.387
39	K	|	4916372.748	4413.137393	ppb	1.530	0.406		122708.115
24	Mg	|	9743366.110	18971.770045	ppb	1.103	1.520		161.668
159	Tb-ISK	|	180541.716		ppb	0.767			174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-L-5-A

Autosampler Position: 341

Sample Date/Time: Monday, April 20, 2020 12:30:04

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-L-5-A .104

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		27881.641		ppb			2.884			26970.994
9	Be	|		18.889	0.004716	ppb			26.956	84.112		12.222
10	B	|		48249.130	161.988597	ppb			1.361	1.376		986.701
27	Al	|		213823.836	32.660890	ppb			3.181	3.678		2822.501
43	Ca-2	|		1125563.893	80139.940602	ppb			1.765	0.843		101.667
49	Ti	|		1855.676	2.858994	ppb			3.195	3.776		218.891
52	Cr	|		21062.186	1.596507	ppb			2.002	2.960		8283.516
55	Mn	|		14585.233	1.179647	ppb			5.154	4.889		566.678
57	Fe	|		64622.574	245.598173	ppb			2.777	2.542		8395.802
45	Sc-IS	|>		1384132.593		ppb			0.984			1301517.458
66	Zn	|		3896.088	3.234696	ppb			5.625	5.358		448.896
86	Sr	|		1075833.772	608.077503	ppb			1.053	1.587		-0.939
65	Cu	|		1583.680	0.981500	ppb			8.772	8.407		67.563
69	Ga-IS	|		403563.246		ppb			3.975			368301.447
95	Mo	|		5756.716	3.414149	ppb			2.662	1.819		63.333
115	In-IS	|>		232331.009		ppb			2.622			233523.706
111	Cd	|		10.133	0.003448	ppb			131.818	282.829		5.423
118	Sn	|		1563.419	0.147940	ppb			0.640	5.986		951.143
121	Sb	|		463.341	0.049475	ppb			3.807	12.788		234.446
135	Ba	|		169747.125	194.357199	ppb			4.359	2.086		17.778
165	Ho-IS	|		226276.069		ppb			1.712			218949.671
159	Tb-IS	|		188676.748		ppb			0.936			181061.377
207	Pb	|		3234.590	0.255464	ppb			2.493	1.750		102.222
203	Tl	|		10.000	-0.001090	ppb			66.667	170.076		14.444
209	Bi-IS	|>		144461.283		ppb			1.414			148317.164
51	V	|		1650.096	2.676705	ppb			8.751	8.340		51.111
59	Co	|		75.556	0.034656	ppb			10.189	15.141		22.222
60	Ni	|		696.684	0.824684	ppb			7.906	8.564		43.333
75	As	|		736.375	0.317625	ppb			3.647	24.986		604.447
71	Ga-ISK	|>		109569.714		ppb			0.723			108945.014
82	Se-2	|		25.521	0.693266	ppb			38.172	38.382		0.224
107	Ag-1	|		687.794	0.201593	ppb			3.917	4.059		60.000
115	In-ISK	|		86245.148		ppb			0.372			83129.898
45	Sc-ISK	|>		286531.328		ppb			2.070			277538.050
23	Na	|		13379306.728	29538.036292	ppb			1.470	1.376		1243.387
39	K	|		4839232.156	4319.293525	ppb			0.726	1.595		122708.115
24	Mg	|		9644762.885	18681.490566	ppb			0.733	1.409		161.668
159	Tb-ISK	|		181650.378		ppb			1.244			174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25758-L-6-A
 Autosampler Position: 342
 Sample Date/Time: Monday, April 20, 2020 12:32:50
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25758-L-6-A .105
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28527.345		ppb	0.773		26970.994
9	Be	12.222	-0.000624	ppb	56.773	914.580	12.222
10	B	124688.467	422.230900	ppb	0.583	1.936	986.701
27	Al	299970.275	45.767939	ppb	1.189	0.719	2822.501
43	Ca-2	2423651.422	171719.843929	ppb	1.055	0.867	101.667
49	Ti	3342.613	5.448704	ppb	1.190	1.008	218.891
52	Cr	14158.124	0.687810	ppb	0.397	2.786	8283.516
55	Mn	104117.121	8.688939	ppb	2.806	1.694	566.678
57	Fe	131613.666	538.105532	ppb	2.069	1.125	8395.802
45	Sc-IS	> 1391144.207		ppb	1.389		1301517.458
66	Zn	1386.734	0.853279	ppb	9.369	12.691	448.896
86	Sr	1835536.274	1032.168878	ppb	2.524	2.173	-0.939
65	Cu	3629.700	2.297963	ppb	6.655	5.571	67.563
69	Ga-IS	409045.578		ppb	2.366		368301.447
95	Mo	2730.261	1.589770	ppb	2.541	1.528	63.333
115	In-IS	> 232692.787		ppb	0.350		233523.706
111	Cd	24.266	0.014083	ppb	86.221	110.651	5.423
118	Sn	1152.270	0.048923	ppb	17.175	97.179	951.143
121	Sb	431.118	0.042332	ppb	17.034	37.672	234.446
135	Ba	225784.259	258.198227	ppb	4.986	5.045	17.778
165	Ho-IS	224105.430		ppb	1.275		218949.671
159	Tb-IS	183623.715		ppb	0.528		181061.377
207	Pb	936.679	0.070558	ppb	0.942	0.992	102.222
203	Tl	18.889	0.001478	ppb	71.320	256.424	14.444
209	Bi-IS	> 140164.271		ppb	0.606		148317.164
51	V	1518.970	2.447999	ppb	3.198	4.169	51.111
59	Co	6786.056	4.384919	ppb	0.847	1.371	22.222
60	Ni	9318.596	11.663874	ppb	3.111	4.038	43.333
75	As	867.120	0.631097	ppb	2.058	5.855	604.447
71	Ga-ISK	> 110033.271		ppb	1.022		108945.014
82	Se-2	184.189	5.021197	ppb	1.366	2.217	0.224
107	Ag-1	166.668	0.033901	ppb	11.136	15.912	60.000
115	In-ISK	83754.944		ppb	0.326		83129.898
45	Sc-ISK	> 293824.053		ppb	2.203		277538.050
23	Na	22301250.003	48022.161693	ppb	1.491	2.426	1243.387
39	K	7112832.113	6242.429243	ppb	0.643	2.676	122708.115
24	Mg	19738309.695	37295.296453	ppb	1.242	3.433	161.668
159	Tb-ISK	181828.514		ppb	0.333		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25758-L-7-A
 Autosampler Position: 343
 Sample Date/Time: Monday, April 20, 2020 12:35:35
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25758-L-7-A .106
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28115.436		ppb	3.179		26970.994
9	Be	6.667	-0.005128	ppb	100.000	103.945	12.222
10	B	88593.900	301.464438	ppb	1.449	1.389	986.701
27	Al	366883.844	56.560806	ppb	0.850	1.642	2822.501
43	Ca-2	1915469.054	136830.292257	ppb	2.476	1.097	101.667
49	Ti	4388.452	7.346725	ppb	2.335	2.662	218.891
52	Cr	17419.506	1.129262	ppb	2.026	1.483	8283.516
55	Mn	131258.250	11.059714	ppb	2.376	0.864	566.678
57	Fe	137410.248	568.537762	ppb	2.773	1.350	8395.802
45	Sc-IS	> 1379590.823		ppb	1.541		1301517.458
66	Zn	16759.832	15.460837	ppb	3.213	1.826	448.896
86	Sr	1372339.946	778.156865	ppb	1.580	0.231	-0.939
65	Cu	4783.212	3.069727	ppb	3.482	2.317	67.563
69	Ga-IS	393702.836		ppb	3.278		368301.447
95	Mo	3969.440	2.349970	ppb	1.064	1.522	63.333
115	In-IS	> 228341.742		ppb	1.556		233523.706
111	Cd	23.886	0.014113	ppb	48.668	61.175	5.423
118	Sn	1373.399	0.107941	ppb	4.204	8.254	951.143
121	Sb	956.699	0.158821	ppb	3.324	4.333	234.446
135	Ba	145735.084	169.789995	ppb	4.654	3.720	17.778
165	Ho-IS	229102.512		ppb	0.628		218949.671
159	Tb-IS	187304.353		ppb	0.203		181061.377
207	Pb	6873.986	0.558865	ppb	0.734	1.227	102.222
203	Tl	8.889	-0.001379	ppb	21.651	39.110	14.444
209	Bi-IS	> 142732.857		ppb	0.732		148317.164
51	V	1781.222	2.907291	ppb	1.948	1.867	51.111
59	Co	3164.795	2.052595	ppb	1.375	1.226	22.222
60	Ni	4941.966	6.205461	ppb	1.274	1.325	43.333
75	As	816.045	0.520851	ppb	3.000	12.816	604.447
71	Ga-ISK	> 109205.821		ppb	0.357		108945.014
82	Se-2	233.197	6.407764	ppb	9.732	10.114	0.224
107	Ag-1	275.558	0.069456	ppb	5.717	7.782	60.000
115	In-ISK	83171.532		ppb	0.768		83129.898
45	Sc-ISK	> 289357.819		ppb	0.541		277538.050
23	Na	18422349.330	40270.477736	ppb	0.272	0.291	1243.387
39	K	6002076.196	5330.285877	ppb	0.277	0.279	122708.115
24	Mg	16056679.320	30793.283131	ppb	1.659	2.030	161.668
159	Tb-ISK	180249.464		ppb	1.239		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25865-L-2-A

Autosampler Position: 344

Sample Date/Time: Monday, April 20, 2020 12:38:21

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25865-L-2-A.107

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27831.529		ppb	0.421		26970.994
9	Be	12.222	-0.000617	ppb	31.492	482.579	12.222
10	B	54450.269	183.822826	ppb	2.108	2.585	986.701
27	Al	88325.854	13.256882	ppb	4.154	4.306	2822.501
43	Ca-2	1257730.923	89783.289376	ppb	3.482	1.067	101.667
49	Ti	1480.077	2.205923	ppb	1.254	4.595	218.891
52	Cr	20730.587	1.561865	ppb	1.016	5.089	8283.516
55	Mn	14398.367	1.167234	ppb	2.880	0.303	566.678
57	Fe	64730.774	246.946475	ppb	0.918	1.995	8395.802
45	Sc-IS	> 1380422.746		ppb	2.604		1301517.458
66	Zn	2440.208	1.865476	ppb	1.230	4.646	448.896
86	Sr	1150891.715	652.316392	ppb	1.576	1.057	-0.939
65	Cu	1367.638	0.843638	ppb	7.067	5.856	67.563
69	Ga-IS	394443.207		ppb	2.925		368301.447
95	Mo	3959.438	2.342239	ppb	3.487	2.353	63.333
115	In-IS	> 227859.674		ppb	1.009		233523.706
111	Cd	10.574	0.004012	ppb	62.908	125.011	5.423
118	Sn	880.027	-0.011845	ppb	8.859	143.395	951.143
121	Sb	388.894	0.034999	ppb	6.928	14.519	234.446
135	Ba	162711.206	189.945626	ppb	5.813	4.832	17.778
165	Ho-IS	223951.995		ppb	1.449		218949.671
159	Tb-IS	185182.589		ppb	0.994		181061.377
207	Pb	506.670	0.033085	ppb	16.786	20.005	102.222
203	Tl	16.667	0.000696	ppb	20.000	125.284	14.444
209	Bi-IS	> 144673.345		ppb	0.758		148317.164
51	V	1664.541	2.682379	ppb	2.763	3.242	51.111
59	Co	111.112	0.057275	ppb	12.124	15.286	22.222
60	Ni	888.917	1.059392	ppb	3.145	3.537	43.333
75	As	833.550	0.542844	ppb	8.420	32.369	604.447
71	Ga-ISK	> 110356.866		ppb	1.055		108945.014
82	Se-2	31.205	0.841715	ppb	33.050	32.849	0.224
107	Ag-1	341.115	0.089438	ppb	2.821	3.645	60.000
115	In-ISK	84189.474		ppb	1.558		83129.898
45	Sc-ISK	> 286667.817		ppb	0.878		277538.050
23	Na	14855112.892	32775.802986	ppb	1.279	0.471	1243.387
39	K	5271288.079	4712.197757	ppb	0.393	0.820	122708.115
24	Mg	10429489.343	20189.571074	ppb	0.559	1.363	161.668
159	Tb-ISK	181782.710		ppb	1.235		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 12:41:08

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.108

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27990.737		ppb		2.214		26970.994
9	Be	|		121032.799	98.817772	ppb		0.893	2.156	12.222
10	B	|		74015.827	253.948188	ppb		3.279	0.701	986.701
27	Al	|		631379.948	98.751926	ppb		1.270	2.782	2822.501
43	Ca-2	|		69580.869	5015.695853	ppb		3.801	1.230	101.667
49	Ti	|		54925.412	97.715629	ppb		1.965	1.051	218.891
52	Cr	|		741022.483	96.780509	ppb		1.501	1.181	8283.516
55	Mn	|		1092743.474	93.457370	ppb		1.881	0.757	566.678
57	Fe	|		1074983.746	4769.142126	ppb		1.389	1.478	8395.802
45	Sc-IS	>		1364961.419		ppb		2.595		1301517.458
66	Zn	|		102247.417	97.644959	ppb		4.948	2.516	448.896
86	Sr	|		170328.690	97.628805	ppb		1.936	0.736	-0.939
65	Cu	|		151871.069	99.961431	ppb		3.510	0.941	67.563
69	Ga-IS	|		399196.672		ppb		2.733		368301.447
95	Mo	|		158256.434	96.280991	ppb		2.041	0.571	63.333
115	In-IS	>		238138.261		ppb		0.570		233523.706
111	Cd	|		137388.479	100.466152	ppb		1.893	1.341	5.423
118	Sn	|		426623.216	99.444410	ppb		1.662	1.109	951.143
121	Sb	|		485282.590	101.527559	ppb		1.458	0.894	234.446
135	Ba	|		89683.152	100.185755	ppb		4.042	3.510	17.778
165	Ho-IS	|		231106.674		ppb		0.864		218949.671
159	Tb-IS	|		189266.810		ppb		1.492		181061.377
207	Pb	|		1291916.018	99.667671	ppb		1.555	1.692	102.222
203	Tl	|		380467.358	98.013346	ppb		1.601	1.435	14.444
209	Bi-IS	>		152623.583		ppb		2.750		148317.164
51	V	|		62512.056	100.209264	ppb		1.739	3.191	51.111
59	Co	|		160659.821	100.159182	ppb		2.453	3.147	22.222
60	Ni	|		81680.628	98.713318	ppb		0.589	1.578	43.333
75	As	|		43340.376	100.999162	ppb		0.731	0.847	604.447
71	Ga-ISK	>		114423.146		ppb		1.456		108945.014
82	Se-2	|		3791.400	99.488946	ppb		3.120	2.434	0.224
107	Ag-1	|		326424.931	100.422067	ppb		2.067	2.256	60.000
115	In-ISK	|		88804.720		ppb		1.973		83129.898
45	Sc-ISK	>		288489.364		ppb		0.256		277538.050
23	Na	|		2400861.577	5261.463099	ppb		0.910	0.870	1243.387
39	K	|		5798547.670	5161.383904	ppb		0.318	0.064	122708.115
24	Mg	|		2711964.197	5216.055150	ppb		0.615	0.470	161.668
159	Tb-ISK	|		184907.892		ppb		1.742		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 12:43:54

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.109

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26762.828		ppb	1.797		26970.994
9	Be	14.444	0.001813	ppb	26.647	174.994	12.222
10	B	1310.060	1.153715	ppb	3.696	14.547	986.701
27	Al	3533.818	0.113657	ppb	40.545	205.300	2822.501
43	Ca-2	111.667	0.713439	ppb	9.321	115.897	101.667
49	Ti	252.224	0.059335	ppb	15.987	118.773	218.891
52	Cr	8101.186	-0.031357	ppb	1.323	69.918	8283.516
55	Mn	585.568	0.001422	ppb	7.208	288.218	566.678
57	Fe	9141.814	3.258414	ppb	2.524	22.513	8395.802
45	Sc-IS	> 1308760.278		ppb	1.071		1301517.458
66	Zn	386.672	-0.065063	ppb	11.207	60.465	448.896
86	Sr	39.699	0.024271	ppb	42.126	40.608	-0.939
65	Cu	106.360	0.026258	ppb	30.149	81.798	67.563
69	Ga-IS	371820.562		ppb	2.363		368301.447
95	Mo	562.233	0.316164	ppb	12.184	12.667	63.333
115	In-IS	> 232009.411		ppb	0.867		233523.706
111	Cd	8.819	0.002582	ppb	64.562	166.298	5.423
118	Sn	2779.160	0.439928	ppb	4.817	7.699	951.143
121	Sb	578.901	0.074367	ppb	5.768	10.628	234.446
135	Ba	21.111	0.003987	ppb	24.119	151.310	17.778
165	Ho-IS	219178.602		ppb	0.504		218949.671
159	Tb-IS	181070.443		ppb	1.375		181061.377
207	Pb	312.224	0.016300	ppb	5.374	6.416	102.222
203	Tl	127.778	0.029538	ppb	3.985	3.271	14.444
209	Bi-IS	> 150511.003		ppb	1.083		148317.164
51	V	76.667	0.037859	ppb	13.044	43.143	51.111
59	Co	24.444	0.000870	ppb	55.111	987.162	22.222
60	Ni	34.444	-0.012959	ppb	47.738	157.082	43.333
75	As	647.584	0.042056	ppb	4.679	140.837	604.447
71	Ga-ISK	> 113517.044		ppb	1.114		108945.014
82	Se-2	3.213	0.078226	ppb	342.405	373.728	0.224
107	Ag-1	192.224	0.040162	ppb	15.543	21.285	60.000
115	In-ISK	86055.850		ppb	0.252		83129.898
45	Sc-ISK	> 284181.380		ppb	1.529		277538.050
23	Na	2711.924	3.205867	ppb	4.824	11.459	1243.387
39	K	128459.451	2.618022	ppb	0.858	77.926	122708.115
24	Mg	713.351	1.071490	ppb	11.331	16.574	161.668
159	Tb-ISK	180047.511		ppb	0.487		174683.545

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Monday, April 20, 2020 12:46:41

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICIS-23447.110

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		26775.072		ppb			1.568	
9	Be	|		8.889		ppb			43.301	
10	B	|		1132.267		ppb			6.036	
27	Al	|		2950.305		ppb			3.667	
43	Ca-2	|		96.667		ppb			20.904	
49	Ti	|		223.335		ppb			3.949	
52	Cr	|		8577.019		ppb			1.661	
55	Mn	|		596.679		ppb			10.644	
57	Fe	|		9071.773		ppb			4.774	
45	Sc-IS	>		1308887.896		ppb			2.002	
66	Zn	|		388.894		ppb			10.887	
86	Sr	|		50.860		ppb			18.118	
65	Cu	|		81.461		ppb			8.950	
69	Ga-IS	|		369475.552		ppb			3.163	
95	Mo	|		124.445		ppb			5.576	
115	In-IS	>		232970.515		ppb			1.018	
111	Cd	|		8.628		ppb			118.044	
118	Sn	|		1487.855		ppb			3.363	
121	Sb	|		347.782		ppb			15.165	
135	Ba	|		17.778		ppb			39.031	
165	Ho-IS	|		219218.267		ppb			1.360	
159	Tb-IS	|		180211.876		ppb			1.201	
207	Pb	|		135.556		ppb			15.025	
203	Tl	|		35.556		ppb			35.493	
209	Bi-IS	>		147332.570		ppb			1.096	
51	V	|		57.778		ppb			17.625	
59	Co	|		24.444		ppb			34.317	
60	Ni	|		38.889		ppb			17.843	
75	As	|		617.379		ppb			6.686	
71	Ga-ISK	>		112075.703		ppb			0.556	
82	Se-2	|		0.216		ppb			3871.770	
107	Ag-1	|		126.667		ppb			7.895	
115	In-ISK	|		84206.392		ppb			0.845	
45	Sc-ISK	>		282584.215		ppb			0.445	
23	Na	|		1818.449		ppb			3.754	
39	K	|		126895.555		ppb			0.655	
24	Mg	|		358.338		ppb			2.905	
159	Tb-ISK	|		178233.633		ppb			0.302	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Monday, April 20, 2020 12:49:28

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\IC-210761.111

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26748.352		ppb		0.389		26775.072
9	Be	|	233495.246	200.000000	ppb		1.531	1.790	8.889
10	B	|	137230.513	500.000000	ppb		1.453	2.871	1132.267
27	Al	|	1251478.518	200.000000	ppb		1.632	1.468	2950.305
43	Ca-2	|	134915.815	10200.000000	ppb		1.229	0.509	96.667
49	Ti	|	108398.606	200.000000	ppb		0.679	1.125	223.335
52	Cr	|	1457337.494	200.000000	ppb		0.995	0.842	8577.019
55	Mn	|	2278535.086	200.000000	ppb		0.828	1.162	596.679
57	Fe	|	2255269.424	10200.000000	ppb		0.840	1.037	9071.773
45	Sc-IS	>	1325062.626		ppb		1.696		1308887.896
66	Zn	|	199099.904	200.000000	ppb		3.267	1.910	388.894
86	Sr	|	345611.316	200.000000	ppb		0.079	1.694	50.860
65	Cu	|	293543.656	200.000000	ppb		3.618	2.157	81.461
69	Ga-IS	|	410344.974		ppb		4.383		369475.552
95	Mo	|	320660.998	200.000000	ppb		2.083	0.410	124.445
115	In-IS	>	234447.397		ppb		1.755		232970.515
111	Cd	|	269943.736	200.000000	ppb		1.147	0.613	8.628
118	Sn	|	843113.413	200.000000	ppb		2.888	1.147	1487.855
121	Sb	|	954679.218	200.000000	ppb		3.485	1.882	347.782
135	Ba	|	177732.927	200.000000	ppb		5.158	3.661	17.778
165	Ho-IS	|	226447.481		ppb		1.245		219218.267
159	Tb-IS	|	186911.485		ppb		0.326		180211.876
207	Pb	|	2533331.540	200.000000	ppb		1.291	0.398	135.556
203	Tl	|	751119.545	200.000000	ppb		1.019	0.932	35.556
209	Bi-IS	>	149951.880		ppb		1.428		147332.570
51	V	|	125207.464	200.000000	ppb		1.239	0.861	57.778
59	Co	|	320172.650	200.000000	ppb		0.648	1.135	24.444
60	Ni	|	163044.063	200.000000	ppb		0.764	0.991	38.889
75	As	|	86878.139	200.000000	ppb		1.384	0.679	617.379
71	Ga-ISK	>	114516.134		ppb		1.715		112075.703
82	Se-2	|	7492.871	200.000000	ppb		3.395	1.754	0.216
107	Ag-1	|	639021.395	200.000000	ppb		0.920	1.430	126.667
115	In-ISK	|	87533.691		ppb		0.638		84206.392
45	Sc-ISK	>	295895.345		ppb		0.846		282584.215
23	Na	|	4655961.418	10200.000000	ppb		1.262	1.792	1818.449
39	K	|	11354814.277	10200.000000	ppb		0.854	1.308	126895.555
24	Mg	|	5325997.961	10200.000000	ppb		0.658	0.967	358.338
159	Tb-ISK	|	186543.408		ppb		0.611		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 12:52:14

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.112

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		26938.719		ppb			2.480			26775.072
9	Be	|		117933.733	101.841864	ppb			1.283	1.933		8.889
10	B	|		70785.069	257.934455	ppb			3.395	3.357		1132.267
27	Al	|		620320.670	99.714297	ppb			0.248	1.535		2950.305
43	Ca-2	|		68758.490	5236.777723	ppb			2.752	1.956		96.667
49	Ti	|		54184.799	100.574864	ppb			1.303	0.238		223.335
52	Cr	|		742631.912	102.173092	ppb			0.688	1.471		8577.019
55	Mn	|		1096547.425	97.010046	ppb			0.469	1.005		596.679
57	Fe	|		1066129.683	4839.379799	ppb			1.131	1.212		9071.773
45	Sc-IS	>		1314267.260		ppb			1.304			1308887.896
66	Zn	>		101750.454	102.866317	ppb			4.531	4.167		388.894
86	Sr	|		168790.759	98.452410	ppb			0.939	1.208		50.860
65	Cu	|		148610.624	102.069748	ppb			3.207	2.587		81.461
69	Ga-IS	|		393754.591		ppb			3.869			369475.552
95	Mo	|		157588.231	99.058846	ppb			2.884	2.421		124.445
115	In-IS	>		235311.295		ppb			2.591			232970.515
111	Cd	|		135995.616	100.378902	ppb			2.552	0.084		8.628
118	Sn	|		425684.633	100.450207	ppb			2.303	0.331		1487.855
121	Sb	|		474917.707	99.107674	ppb			2.737	0.554		347.782
135	Ba	|		87118.669	97.651014	ppb			5.367	2.880		17.778
165	Ho-IS	|		224090.655		ppb			0.860			219218.267
159	Tb-IS	|		182198.004		ppb			1.489			180211.876
207	Pb	|		1284518.888	101.617516	ppb			0.893	0.056		135.556
203	Tl	|		377894.958	100.822674	ppb			1.704	1.271		35.556
209	Bi-IS	>		149634.063		ppb			0.866			147332.570
51	V	|		61581.363	97.199353	ppb			1.851	1.839		57.778
59	Co	|		159180.863	98.289580	ppb			0.810	0.737		24.444
60	Ni	|		82001.414	99.416452	ppb			2.156	2.230		38.889
75	As	|		43740.371	98.816397	ppb			1.272	1.364		617.379
71	Ga-ISK	>		115825.426		ppb			0.076			112075.703
82	Se-2	|		3761.382	99.278638	ppb			2.541	2.485		0.216
107	Ag-1	|		319401.389	98.802047	ppb			1.063	1.128		126.667
115	In-ISK	|		87199.272		ppb			0.478			84206.392
45	Sc-ISK	>		293341.691		ppb			1.713			282584.215
23	Na	|		2350051.257	5191.131896	ppb			1.545	1.353		1818.449
39	K	|		5772991.364	5172.320350	ppb			1.075	0.850		126895.555
24	Mg	|		2645921.002	5111.806631	ppb			0.482	1.724		358.338
159	Tb-ISK	|		185002.328		ppb			1.288			178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 12:55:00

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.113

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26121.649		ppb	2.672		26775.072
9	Be	20.000	0.009766	ppb	50.000	88.370	8.889
10	B	1275.613	0.590641	ppb	5.371	50.254	1132.267
27	Al	3034.773	0.020671	ppb	17.570	473.518	2950.305
43	Ca-2	75.000	-1.579405	ppb	30.551	116.868	96.667
49	Ti	208.890	-0.022072	ppb	7.872	167.085	223.335
52	Cr	7708.746	-0.108633	ppb	1.735	16.945	8577.019
55	Mn	647.793	0.005300	ppb	15.483	185.301	596.679
57	Fe	8450.281	-2.420050	ppb	5.127	51.055	9071.773
45	Sc-IS	> 1293792.118		ppb	2.002		1308887.896
66	Zn	412.228	0.028516	ppb	5.384	55.411	388.894
86	Sr	48.013	-0.001363	ppb	9.155	154.289	50.860
65	Cu	104.064	0.016578	ppb	17.635	83.098	81.461
69	Ga-IS	369444.802		ppb	4.166		369475.552
95	Mo	637.792	0.328442	ppb	14.786	16.627	124.445
115	In-IS	> 228260.909		ppb	2.028		232970.515
111	Cd	10.883	0.001836	ppb	15.947	65.068	8.628
118	Sn	3285.934	0.445862	ppb	5.920	7.124	1487.855
121	Sb	623.347	0.060683	ppb	13.455	26.651	347.782
135	Ba	18.889	0.001704	ppb	10.189	131.954	17.778
165	Ho-IS	219011.683		ppb	0.878		219218.267
159	Tb-IS	179225.074		ppb	0.809		180211.876
207	Pb	396.669	0.021303	ppb	5.042	5.935	135.556
203	Tl	191.112	0.042687	ppb	10.657	12.641	35.556
209	Bi-IS	> 145818.284		ppb	1.285		147332.570
51	V	34.444	-0.038595	ppb	20.145	29.432	57.778
59	Co	18.889	-0.003651	ppb	26.956	88.793	24.444
60	Ni	36.667	-0.003237	ppb	24.052	333.888	38.889
75	As	656.911	0.079255	ppb	2.598	45.961	617.379
71	Ga-ISK	> 113119.434		ppb	0.461		112075.703
82	Se-2	6.557	0.171587	ppb	46.553	48.620	0.216
107	Ag-1	224.446	0.030625	ppb	14.271	33.720	126.667
115	In-ISK	85188.012		ppb	0.420		84206.392
45	Sc-ISK	> 282758.722		ppb	0.405		282584.215
23	Na	1620.092	-0.457462	ppb	1.235	9.520	1818.449
39	K	127590.594	0.587178	ppb	0.666	137.500	126895.555
24	Mg	415.006	0.113271	ppb	6.024	47.129	358.338
159	Tb-ISK	178895.843		ppb	0.468		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Monday, April 20, 2020 12:57:48

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICVL-210771.114

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26583.611		ppb	2.639		26775.072
9	Be	1104.487	0.940054	ppb	7.785	10.192	8.889
10	B	14920.014	50.609834	ppb	2.888	1.038	1132.267
27	Al	308995.045	49.047800	ppb	0.917	1.686	2950.305
43	Ca-2	843.359	56.291645	ppb	16.284	16.151	96.667
49	Ti	737.797	0.946163	ppb	8.481	10.987	223.335
52	Cr	15016.778	0.875595	ppb	1.112	3.460	8577.019
55	Mn	11333.383	0.942652	ppb	1.384	2.836	596.679
57	Fe	18622.132	42.914298	ppb	1.889	5.202	9071.773
45	Sc-IS	> 1324542.383		ppb	2.273		1308887.896
66	Zn	5587.761	5.229287	ppb	4.214	2.289	388.894
86	Sr	1723.121	0.967450	ppb	4.496	2.850	50.860
65	Cu	1487.515	0.958114	ppb	4.587	4.023	81.461
69	Ga-IS	376571.901		ppb	3.699		369475.552
95	Mo	1785.667	1.036833	ppb	3.159	5.478	124.445
115	In-IS	> 233964.324		ppb	1.936		232970.515
111	Cd	1400.764	1.033381	ppb	2.765	0.932	8.628
118	Sn	5857.869	1.039115	ppb	3.895	3.889	1487.855
121	Sb	5053.116	0.988097	ppb	2.767	2.660	347.782
135	Ba	897.806	0.992606	ppb	3.509	2.500	17.778
165	Ho-IS	221409.278		ppb	0.542		219218.267
159	Tb-IS	180526.857		ppb	0.708		180211.876
207	Pb	12855.623	1.009348	ppb	2.396	2.180	135.556
203	Tl	3762.718	0.997516	ppb	1.930	2.079	35.556
209	Bi-IS	> 149170.329		ppb	0.353		147332.570
51	V	638.903	0.946332	ppb	4.217	5.050	57.778
59	Co	1688.989	1.059562	ppb	5.421	5.294	24.444
60	Ni	855.581	1.020955	ppb	5.375	5.394	38.889
75	As	1076.117	1.080701	ppb	5.970	14.619	617.379
71	Ga-ISK	> 112360.141		ppb	0.380		112075.703
82	Se-2	34.539	0.933809	ppb	31.813	31.973	0.216
107	Ag-1	3052.548	0.933294	ppb	2.065	2.324	126.667
115	In-ISK	86858.670		ppb	0.562		84206.392
45	Sc-ISK	> 286273.214		ppb	2.449		282584.215
23	Na	23729.693	49.590880	ppb	0.977	1.609	1818.449
39	K	178997.764	47.454892	ppb	0.280	8.409	126895.555
24	Mg	25492.735	49.772350	ppb	2.522	4.034	358.338
159	Tb-ISK	180011.791		ppb	1.013		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-L-3-A
 Autosampler Position: 345
 Sample Date/Time: Monday, April 20, 2020 13:00:34
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-L-3-A .115
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27704.616		ppb	0.569		26775.072
9	Be	16.667	0.005973	ppb	40.000	92.869	8.889
10	B	50476.809	173.339844	ppb	1.402	0.614	1132.267
27	Al	56049.765	8.120297	ppb	1.865	2.529	2950.305
43	Ca-2	1202547.403	87106.012225	ppb	2.941	2.035	96.667
49	Ti	1293.392	1.871775	ppb	1.289	0.606	223.335
52	Cr	36302.738	3.600890	ppb	1.054	1.970	8577.019
55	Mn	28642.030	2.355480	ppb	2.530	3.616	596.679
57	Fe	117162.991	467.863876	ppb	1.356	2.725	9071.773
45	Sc-IS	> 1383711.760		ppb	1.398		1308887.896
66	Zn	1195.606	0.756664	ppb	5.480	9.613	388.894
86	Sr	1115565.668	618.189769	ppb	2.125	2.219	50.860
65	Cu	1430.382	0.877552	ppb	3.266	3.553	81.461
69	Ga-IS	394848.281		ppb	4.507		369475.552
95	Mo	6562.620	3.841887	ppb	4.069	2.798	124.445
115	In-IS	> 229577.842		ppb	1.437		232970.515
111	Cd	22.885	0.010949	ppb	39.696	65.410	8.628
118	Sn	1220.052	-0.059760	ppb	2.691	8.817	1487.855
121	Sb	360.005	0.003665	ppb	15.795	322.258	347.782
135	Ba	174861.322	200.950163	ppb	5.474	4.354	17.778
165	Ho-IS	221183.610		ppb	0.615		219218.267
159	Tb-IS	180352.438		ppb	0.556		180211.876
207	Pb	522.226	0.032803	ppb	7.259	9.223	135.556
203	Tl	71.111	0.010437	ppb	7.160	14.150	35.556
209	Bi-IS	> 141468.137		ppb	0.545		147332.570
51	V	1580.087	2.485126	ppb	2.078	0.857	57.778
59	Co	96.667	0.046016	ppb	15.031	18.336	24.444
60	Ni	724.463	0.859075	ppb	11.653	11.862	38.889
75	As	754.063	0.324021	ppb	6.201	36.417	617.379
71	Ga-ISK	> 112090.310		ppb	1.415		112075.703
82	Se-2	32.500	0.880361	ppb	19.911	19.864	0.216
107	Ag-1	127.778	0.000293	ppb	21.722	2909.839	126.667
115	In-ISK	84853.371		ppb	1.124		84206.392
45	Sc-ISK	> 292216.757		ppb	1.710		282584.215
23	Na	14053815.211	31187.007691	ppb	1.362	1.955	1818.449
39	K	5115238.107	4587.380628	ppb	1.279	1.354	126895.555
24	Mg	10203415.399	19788.567609	ppb	2.100	2.073	358.338
159	Tb-ISK	183898.824		ppb	0.952		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25865-L-4-A

Autosampler Position: 346

Sample Date/Time: Monday, April 20, 2020 13:03:20

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25865-L-4-A .116

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29416.929		ppb	1.704		26775.072
9	Be	21.111	0.009103	ppb	48.238	90.363	8.889
10	B	89197.616	299.053995	ppb	0.922	1.071	1132.267
27	Al	94237.374	13.479948	ppb	9.914	8.589	2950.305
43	Ca-2	4405088.563	308464.293591	ppb	2.386	2.416	96.667
49	Ti	2067.927	3.121008	ppb	0.246	2.183	223.335
52	Cr	22667.972	1.698161	ppb	1.187	3.789	8577.019
55	Mn	9894.537	0.751019	ppb	1.041	1.633	596.679
57	Fe	217453.387	871.986594	ppb	4.295	3.315	9071.773
45	Sc-IS	> 1431685.718		ppb	1.705		1308887.896
66	Zn	1567.865	1.063881	ppb	13.423	17.858	388.894
86	Sr	3938596.305	2109.018653	ppb	3.640	2.415	50.860
65	Cu	3056.329	1.871168	ppb	6.918	5.915	81.461
69	Ga-IS	457223.129		ppb	5.210		369475.552
95	Mo	2394.646	1.303596	ppb	6.628	5.320	124.445
115	In-IS	> 231975.787		ppb	2.744		232970.515
111	Cd	22.749	0.010594	ppb	7.288	9.122	8.628
118	Sn	971.144	-0.122560	ppb	6.498	11.736	1487.855
121	Sb	350.004	0.000729	ppb	9.943	827.276	347.782
135	Ba	458566.258	521.410898	ppb	6.230	3.693	17.778
165	Ho-IS	216296.654		ppb	1.929		219218.267
159	Tb-IS	179132.874		ppb	1.190		180211.876
207	Pb	526.670	0.034642	ppb	13.881	17.880	135.556
203	Tl	43.333	0.002993	ppb	27.735	114.996	35.556
209	Bi-IS	> 136904.037		ppb	1.175		147332.570
51	V	2000.140	3.155317	ppb	2.128	2.456	57.778
59	Co	736.686	0.452342	ppb	6.383	7.131	24.444
60	Ni	2771.380	3.407958	ppb	4.975	5.040	38.889
75	As	929.048	0.727190	ppb	21.033	63.247	617.379
71	Ga-ISK	> 112637.877		ppb	0.596		112075.703
82	Se-2	532.789	14.456669	ppb	3.584	3.842	0.216
107	Ag-1	472.230	0.109791	ppb	4.313	6.683	126.667
115	In-ISK	80918.376		ppb	1.580		84206.392
45	Sc-ISK	> 313049.783		ppb	1.134		282584.215
23	Na	29476270.580	61056.937460	ppb	1.318	1.646	1818.449
39	K	10357678.863	8778.285008	ppb	0.931	1.735	126895.555
24	Mg	32988912.093	59730.161864	ppb	1.774	2.891	358.338
159	Tb-ISK	183610.648		ppb	1.734		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25865-L-8-A

Autosampler Position: 347

Sample Date/Time: Monday, April 20, 2020 13:06:06

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25865-L-8-A.117

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27535.402		ppb	1.069		26775.072
9	Be	5.556	-0.003023	ppb	91.652	141.837	8.889
10	B	95988.076	347.530802	ppb	0.660	1.619	1132.267
27	Al	51279.673	7.715366	ppb	1.981	1.857	2950.305
43	Ca-2	2679481.295	202167.379830	ppb	2.563	0.343	96.667
49	Ti	1524.526	2.393450	ppb	1.911	2.019	223.335
52	Cr	23489.298	2.036293	ppb	1.453	3.229	8577.019
55	Mn	39726.286	3.426145	ppb	2.038	2.348	596.679
57	Fe	130797.481	550.642134	ppb	2.849	1.392	9071.773
45	Sc-IS	> 1328517.901		ppb	2.233		1308887.896
66	Zn	1437.850	1.047514	ppb	1.628	1.612	388.894
86	Sr	2525024.032	1457.396076	ppb	2.152	1.248	50.860
65	Cu	1658.037	1.070955	ppb	3.006	1.329	81.461
69	Ga-IS	404170.839		ppb	4.893		369475.552
95	Mo	1470.076	0.835838	ppb	7.972	7.143	124.445
115	In-IS	> 220567.196		ppb	2.965		232970.515
111	Cd	21.357	0.010365	ppb	73.147	117.404	8.628
118	Sn	814.468	-0.150163	ppb	10.808	13.760	1487.855
121	Sb	301.114	-0.006245	ppb	12.144	131.456	347.782
135	Ba	321527.142	384.549460	ppb	6.251	4.126	17.778
165	Ho-IS	212536.078		ppb	0.881		219218.267
159	Tb-IS	172044.277		ppb	0.942		180211.876
207	Pb	938.901	0.074028	ppb	6.511	6.860	135.556
203	Tl	8.889	-0.006929	ppb	43.301	16.581	35.556
209	Bi-IS	> 130864.460		ppb	0.757		147332.570
51	V	1214.496	1.976201	ppb	5.064	4.851	57.778
59	Co	490.008	0.310851	ppb	9.203	8.908	24.444
60	Ni	3162.572	4.090811	ppb	2.425	1.714	38.889
75	As	769.115	0.440182	ppb	1.509	5.941	617.379
71	Ga-ISK	> 107324.994		ppb	0.790		112075.703
82	Se-2	155.516	4.424409	ppb	2.606	2.706	0.216
107	Ag-1	230.002	0.036268	ppb	10.942	21.686	126.667
115	In-ISK	78617.357		ppb	1.598		84206.392
45	Sc-ISK	> 297564.977		ppb	0.593		282584.215
23	Na	22243903.547	48469.250153	ppb	0.545	0.284	1818.449
39	K	8165496.748	7259.362855	ppb	0.545	1.082	126895.555
24	Mg	20080416.886	38241.166211	ppb	1.728	1.581	358.338
159	Tb-ISK	176885.112		ppb	1.128		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-L-9-A
 Autosampler Position: 348
 Sample Date/Time: Monday, April 20, 2020 13:08:52
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-L-9-A.118
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28030.833		ppb	3.790		26775.072
9	Be	7.778	-0.001128	ppb	24.744	136.245	8.889
10	B	90376.148	324.439379	ppb	1.841	3.822	1132.267
27	Al	52832.668	7.892658	ppb	10.459	10.281	2950.305
43	Ca-2	2359167.490	176605.014789	ppb	2.178	0.919	96.667
49	Ti	1647.873	2.596380	ppb	3.447	2.898	223.335
52	Cr	13751.062	0.679919	ppb	2.357	5.442	8577.019
55	Mn	190298.442	16.479510	ppb	2.374	1.986	596.679
57	Fe	119727.868	496.216885	ppb	3.760	2.981	9071.773
45	Sc-IS	> 1339055.562		ppb	1.906		1308887.896
66	Zn	1283.391	0.882361	ppb	1.818	3.398	388.894
86	Sr	2237519.243	1281.222844	ppb	2.220	1.321	50.860
65	Cu	1985.165	1.281693	ppb	10.327	9.290	81.461
69	Ga-IS	406760.393		ppb	4.810		369475.552
95	Mo	2469.103	1.445348	ppb	5.591	4.202	124.445
115	In-IS	> 221976.360		ppb	2.811		232970.515
111	Cd	13.704	0.004315	ppb	56.844	142.649	8.628
118	Sn	661.127	-0.190229	ppb	13.267	9.196	1487.855
121	Sb	355.560	0.005259	ppb	12.485	155.060	347.782
135	Ba	318526.565	378.419812	ppb	7.028	4.259	17.778
165	Ho-IS	212889.082		ppb	3.434		219218.267
159	Tb-IS	174644.627		ppb	1.905		180211.876
207	Pb	571.116	0.039468	ppb	8.384	12.522	135.556
203	Tl	14.444	-0.005310	ppb	74.182	61.812	35.556
209	Bi-IS	> 134390.399		ppb	1.702		147332.570
51	V	1886.792	3.037936	ppb	9.779	9.764	57.778
59	Co	1280.057	0.815494	ppb	6.223	7.226	24.444
60	Ni	4514.047	5.704162	ppb	3.670	2.691	38.889
75	As	880.886	0.660079	ppb	11.189	36.780	617.379
71	Ga-ISK	> 110218.026		ppb	1.119		112075.703
82	Se-2	214.525	5.943143	ppb	5.156	4.143	0.216
107	Ag-1	591.123	0.151853	ppb	11.339	15.371	126.667
115	In-ISK	80305.354		ppb	0.592		84206.392
45	Sc-ISK	> 295377.314		ppb	1.501		282584.215
23	Na	23087582.595	50681.747801	ppb	1.519	1.003	1818.449
39	K	7584337.366	6785.254137	ppb	0.625	1.020	126895.555
24	Mg	19881270.290	38146.944582	ppb	1.076	1.559	358.338
159	Tb-ISK	177295.412		ppb	0.515		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-L-10-A
 Autosampler Position: 349
 Sample Date/Time: Monday, April 20, 2020 13:11:37
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-L-10-A.119
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27607.772		ppb	2.369		26775.072
9	Be	12.222	0.002555	ppb	15.746	69.003	8.889
10	B	70042.451	247.532258	ppb	2.128	0.476	1132.267
27	Al	268981.149	41.675440	ppb	3.892	2.649	2950.305
43	Ca-2	1831482.474	135580.537326	ppb	1.894	1.101	96.667
49	Ti	3169.242	5.314774	ppb	7.874	8.206	223.335
52	Cr	28528.462	2.656411	ppb	1.631	4.518	8577.019
55	Mn	21641.942	1.806753	ppb	2.288	3.637	596.679
57	Fe	101535.387	409.538668	ppb	3.422	4.225	9071.773
45	Sc-IS	> 1354104.512		ppb	1.658		1308887.896
66	Zn	9828.945	9.284959	ppb	6.422	6.266	388.894
86	Sr	1694904.872	959.850169	ppb	2.297	2.654	50.860
65	Cu	2269.958	1.458089	ppb	2.774	3.019	81.461
69	Ga-IS	408375.559		ppb	4.807		369475.552
95	Mo	4349.555	2.578103	ppb	9.688	10.445	124.445
115	In-IS	> 226516.321		ppb	1.028		232970.515
111	Cd	17.533	0.007029	ppb	22.260	44.148	8.628
118	Sn	801.134	-0.158760	ppb	2.053	3.383	1487.855
121	Sb	661.126	0.070081	ppb	6.079	12.715	347.782
135	Ba	284263.525	331.143286	ppb	5.435	4.785	17.778
165	Ho-IS	218915.921		ppb	1.412		219218.267
159	Tb-IS	177854.858		ppb	1.344		180211.876
207	Pb	2825.667	0.231576	ppb	1.558	3.183	135.556
203	Tl	14.444	-0.005473	ppb	48.038	35.688	35.556
209	Bi-IS	> 138019.291		ppb	2.212		147332.570
51	V	1993.473	3.229597	ppb	5.706	6.772	57.778
59	Co	472.230	0.292109	ppb	5.008	5.676	24.444
60	Ni	2903.629	3.666257	ppb	3.587	2.803	38.889
75	As	690.644	0.207288	ppb	9.892	77.145	617.379
71	Ga-ISK	> 109791.415		ppb	0.911		112075.703
82	Se-2	247.497	6.882644	ppb	10.413	9.682	0.216
107	Ag-1	90.000	-0.011133	ppb	7.407	18.307	126.667
115	In-ISK	81692.686		ppb	2.016		84206.392
45	Sc-ISK	> 295321.547		ppb	1.142		282584.215
23	Na	18888721.822	41472.062036	ppb	0.588	0.619	1818.449
39	K	6462304.086	5764.251730	ppb	0.909	0.447	126895.555
24	Mg	16475297.105	31615.923609	ppb	0.708	1.046	358.338
159	Tb-ISK	176517.868		ppb	0.455		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-L-11-A
 Autosampler Position: 350
 Sample Date/Time: Monday, April 20, 2020 13:14:22
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-L-11-A.120
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27888.324		ppb	3.129		26775.072
9	Be	13.333	0.003749	ppb	43.301	131.311	8.889
10	B	89521.872	326.161470	ppb	1.278	0.826	1132.267
27	Al	33847.980	4.968145	ppb	7.530	7.879	2950.305
43	Ca-2	2363650.415	179658.600845	ppb	2.717	2.723	96.667
49	Ti	1526.748	2.417688	ppb	4.002	4.439	223.335
52	Cr	12704.537	0.563500	ppb	1.604	5.438	8577.019
55	Mn	182956.669	16.084858	ppb	2.109	2.225	596.679
57	Fe	118058.186	496.915850	ppb	2.168	2.418	9071.773
45	Sc-IS	> 1318838.563		ppb	0.809		1308887.896
66	Zn	1277.836	0.896198	ppb	13.190	19.203	388.894
86	Sr	2248812.666	1307.454274	ppb	2.593	2.672	50.860
65	Cu	2282.177	1.506908	ppb	8.141	8.600	81.461
69	Ga-IS	405750.977		ppb	4.438		369475.552
95	Mo	3082.556	1.853791	ppb	8.413	8.614	124.445
115	In-IS	> 220543.548		ppb	1.767		232970.515
111	Cd	39.082	0.024330	ppb	50.237	63.880	8.628
118	Sn	524.454	-0.223262	ppb	4.685	3.719	1487.855
121	Sb	380.005	0.011367	ppb	5.752	51.735	347.782
135	Ba	305046.559	364.998087	ppb	5.480	4.823	17.778
165	Ho-IS	210281.103		ppb	1.810		219218.267
159	Tb-IS	173831.383		ppb	1.573		180211.876
207	Pb	428.891	0.027045	ppb	6.472	7.671	135.556
203	Tl	14.444	-0.005311	ppb	81.044	65.822	35.556
209	Bi-IS	> 133799.309		ppb	1.522		147332.570
51	V	1819.005	2.987878	ppb	1.009	1.962	57.778
59	Co	1134.490	0.735586	ppb	4.565	3.868	24.444
60	Ni	4416.238	5.695244	ppb	2.050	1.231	38.889
75	As	986.069	0.961734	ppb	2.257	6.760	617.379
71	Ga-ISK	> 108009.015		ppb	0.901		112075.703
82	Se-2	203.504	5.752945	ppb	5.700	4.814	0.216
107	Ag-1	440.007	0.105568	ppb	9.091	13.367	126.667
115	In-ISK	81036.406		ppb	0.249		84206.392
45	Sc-ISK	> 291708.192		ppb	0.267		282584.215
23	Na	23174312.086	51509.989397	ppb	0.999	0.803	1818.449
39	K	7631848.081	6915.290879	ppb	0.207	0.373	126895.555
24	Mg	20013278.447	38878.918716	ppb	0.252	0.395	358.338
159	Tb-ISK	179239.443		ppb	0.469		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Monday, April 20, 2020 13:17:08

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\b.121

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		27942.863		ppb		1.788		26775.072
9	Be	|		2.222	-0.005737	ppb	173.205	59.463		8.889
10	B	|		1443.407	1.334784	ppb	7.893	44.782		1132.267
27	Al	|		4190.615	0.222350	ppb	2.878	7.531		2950.305
43	Ca-2	|		270.003	13.990562	ppb	15.158	27.731		96.667
49	Ti	|		372.227	0.300688	ppb	5.963	15.762		223.335
52	Cr	|		11649.193	0.480531	ppb	1.158	7.835		8577.019
55	Mn	|		671.127	0.008476	ppb	3.307	18.835		596.679
57	Fe	|		10658.419	8.833291	ppb	0.878	11.458		9071.773
45	Sc-IS	>		1269487.287		ppb	2.834			1308887.896
66	Zn	|		566.678	0.198588	ppb	7.347	13.711		388.894
86	Sr	|		243.647	0.117160	ppb	16.489	18.404		50.860
65	Cu	|		79.742	0.000576	ppb	8.292	917.690		81.461
69	Ga-IS	|		356133.874		ppb	4.180			369475.552
95	Mo	|		261.114	0.091469	ppb	6.297	10.837		124.445
115	In-IS	>		224880.026		ppb	2.498			232970.515
111	Cd	|		6.118	-0.001746	ppb	54.427	141.492		8.628
118	Sn	|		817.801	-0.153249	ppb	3.295	1.369		1487.855
121	Sb	|		202.224	-0.029181	ppb	14.866	21.457		347.782
135	Ba	|		54.445	0.043781	ppb	18.704	27.167		17.778
165	Ho-IS	|		210054.173		ppb	0.601			219218.267
159	Tb-IS	|		169063.433		ppb	0.810			180211.876
207	Pb	|		171.111	0.003311	ppb	5.624	25.126		135.556
203	Tl	|		7.778	-0.007459	ppb	24.744	7.143		35.556
209	Bi-IS	>		142634.080		ppb	0.324			147332.570
51	V	|		78.889	0.037103	ppb	6.454	20.054		57.778
59	Co	|		62.222	0.024935	ppb	3.093	4.811		24.444
60	Ni	|		30.000	-0.010349	ppb	22.222	83.682		38.889
75	As	|		613.195	0.020212	ppb	5.220	376.909		617.379
71	Ga-ISK	>		109798.134		ppb	0.935			112075.703
82	Se-2	|		1.549	0.036611	ppb	320.215	377.537		0.216
107	Ag-1	|		73.334	-0.016576	ppb	15.746	22.418		126.667
115	In-ISK	|		82075.593		ppb	0.754			84206.392
45	Sc-ISK	>		286532.941		ppb	2.610			282584.215
23	Na	|		5442.704	8.154037	ppb	2.517	7.203		1818.449
39	K	|		130238.828	1.526708	ppb	1.331	227.088		126895.555
24	Mg	|		3066.998	5.356424	ppb	8.751	12.142		358.338
159	Tb-ISK	|		174581.036		ppb	1.192			178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25865-K-3-B

Autosampler Position: 320

Sample Date/Time: Monday, April 20, 2020 13:19:55

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25865-K-3-B.122

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27515.368		ppb	1.836		26775.072
9	Be	3.333	-0.004848	ppb	100.000	58.615	8.889
10	B	48071.872	172.424328	ppb	1.652	2.621	1132.267
27	Al	28038.621	4.013132	ppb	3.386	2.925	2950.305
43	Ca-2	1153426.402	87261.141587	ppb	2.293	1.151	96.667
49	Ti	1284.502	1.957694	ppb	2.521	4.379	223.335
52	Cr	19848.226	1.542368	ppb	1.655	4.881	8577.019
55	Mn	2370.197	0.155062	ppb	2.738	2.305	596.679
57	Fe	60069.479	231.072683	ppb	3.771	3.553	9071.773
45	Sc-IS	> 1324826.602		ppb	1.150		1308887.896
66	Zn	1113.377	0.724281	ppb	5.712	7.155	388.894
86	Sr	1093753.549	632.923999	ppb	2.611	1.478	50.860
65	Cu	1114.246	0.703516	ppb	0.440	1.344	81.461
69	Ga-IS	386620.746		ppb	4.836		369475.552
95	Mo	5661.122	3.454877	ppb	1.080	1.862	124.445
115	In-IS	> 222648.419		ppb	2.930		232970.515
111	Cd	15.889	0.005838	ppb	60.717	125.437	8.628
118	Sn	703.351	-0.179595	ppb	4.049	6.875	1487.855
121	Sb	241.113	-0.020081	ppb	21.698	58.523	347.782
135	Ba	172263.975	204.138732	ppb	4.818	2.734	17.778
165	Ho-IS	218829.060		ppb	1.444		219218.267
159	Tb-IS	177507.146		ppb	0.715		180211.876
207	Pb	252.223	0.010314	ppb	5.341	9.125	135.556
203	Tl	14.444	-0.005531	ppb	26.647	20.377	35.556
209	Bi-IS	> 140772.461		ppb	1.029		147332.570
51	V	1667.875	2.714941	ppb	1.700	2.166	57.778
59	Co	53.333	0.019485	ppb	16.536	28.558	24.444
60	Ni	677.794	0.827330	ppb	6.149	5.353	38.889
75	As	727.641	0.317091	ppb	8.175	53.387	617.379
71	Ga-ISK	> 108658.397		ppb	1.524		112075.703
82	Se-2	30.187	0.840143	ppb	48.573	47.488	0.216
107	Ag-1	115.556	-0.002346	ppb	23.494	393.241	126.667
115	In-ISK	83649.525		ppb	0.754		84206.392
45	Sc-ISK	> 294264.307		ppb	0.538		282584.215
23	Na	14115819.772	31103.047458	ppb	1.587	1.907	1818.449
39	K	5091161.151	4532.327198	ppb	0.750	1.226	126895.555
24	Mg	10170339.040	19586.845566	ppb	1.541	2.081	358.338
159	Tb-ISK	178114.218		ppb	0.956		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-K-4-B
 Autosampler Position: 321
 Sample Date/Time: Monday, April 20, 2020 13:22:40
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-K-4-B.123
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28303.599		ppb	4.232		26775.072
9	Be	7.778	-0.001404	ppb	65.465	290.189	8.889
10	B	85026.749	292.894693	ppb	1.115	0.600	1132.267
27	Al	28654.327	3.886031	ppb	5.730	4.913	2950.305
43	Ca-2	4192492.599	301717.762163	ppb	1.433	0.670	96.667
49	Ti	2272.403	3.578309	ppb	3.353	3.451	223.335
52	Cr	23606.159	1.901207	ppb	1.840	1.091	8577.019
55	Mn	4577.401	0.329136	ppb	3.887	2.759	596.679
57	Fe	214340.912	884.109447	ppb	2.117	1.286	9071.773
45	Sc-IS	> 1392954.690		ppb	1.537		1308887.896
66	Zn	2061.260	1.576772	ppb	5.229	4.671	388.894
86	Sr	3895238.529	2143.796652	ppb	3.422	2.181	50.860
65	Cu	3320.704	2.096069	ppb	5.841	4.470	81.461
69	Ga-IS	439852.124		ppb	5.325		369475.552
95	Mo	2443.543	1.371247	ppb	5.312	4.045	124.445
115	In-IS	> 227727.079		ppb	4.153		232970.515
111	Cd	25.980	0.013179	ppb	44.345	61.108	8.628
118	Sn	653.348	-0.196248	ppb	9.774	4.737	1487.855
121	Sb	335.560	-0.000741	ppb	6.387	1036.950	347.782
135	Ba	448900.723	519.972682	ppb	6.137	2.080	17.778
165	Ho-IS	211083.931		ppb	1.822		219218.267
159	Tb-IS	175774.838		ppb	0.940		180211.876
207	Pb	342.224	0.019627	ppb	3.688	6.836	135.556
203	Tl	16.667	-0.004633	ppb	52.915	56.954	35.556
209	Bi-IS	> 132778.673		ppb	0.805		147332.570
51	V	2193.502	3.527412	ppb	0.152	0.098	57.778
59	Co	738.908	0.461301	ppb	4.335	4.539	24.444
60	Ni	2885.847	3.609407	ppb	2.405	2.424	38.889
75	As	810.120	0.478183	ppb	6.419	25.860	617.379
71	Ga-ISK	> 110830.480		ppb	0.056		112075.703
82	Se-2	553.472	15.261857	ppb	2.399	2.346	0.216
107	Ag-1	428.895	0.098192	ppb	16.927	23.848	126.667
115	In-ISK	80468.330		ppb	0.323		84206.392
45	Sc-ISK	> 309422.964		ppb	0.673		282584.215
23	Na	29308209.086	61416.675240	ppb	1.256	1.259	1818.449
39	K	10332755.033	8859.708418	ppb	1.656	1.282	126895.555
24	Mg	32199397.855	58971.876345	ppb	0.578	0.463	358.338
159	Tb-ISK	179655.979		ppb	0.693		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-K-8-B
 Autosampler Position: 322
 Sample Date/Time: Monday, April 20, 2020 13:25:26
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-K-8-B.124
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27048.919		ppb	1.048		26775.072
9	Be	8.889	-0.000037	ppb	57.282117	10.126	8.889
10	B	92903.344	342.061454	ppb	0.847	1.124	1132.267
27	Al	20417.923	2.839449	ppb	3.041	1.638	2950.305
43	Ca-2	2596953.986	199301.124370	ppb	3.134	1.465	96.667
49	Ti	1534.527	2.459987	ppb	5.398	5.524	223.335
52	Cr	22673.541	1.976847	ppb	2.375	0.891	8577.019
55	Mn	25863.393	2.251368	ppb	1.253	2.853	596.679
57	Fe	125349.854	535.813134	ppb	1.609	0.659	9071.773
45	Sc-IS	> 1306010.764		ppb	1.945		1308887.896
66	Zn	2823.613	2.485814	ppb	6.545	5.408	388.894
86	Sr	2439701.616	1432.537896	ppb	0.860	1.197	50.860
65	Cu	3612.385	2.440951	ppb	8.372	7.406	81.461
69	Ga-IS	393673.043		ppb	4.823		369475.552
95	Mo	1381.178	0.796280	ppb	6.811	8.418	124.445
115	In-IS	> 218319.343		ppb	1.144		232970.515
111	Cd	22.655	0.011598	ppb	21.623	33.714	8.628
118	Sn	621.125	-0.197341	ppb	4.501	3.321	1487.855
121	Sb	265.558	-0.013539	ppb	11.390	54.438	347.782
135	Ba	314733.160	380.359940	ppb	5.249	4.140	17.778
165	Ho-IS	208851.220		ppb	0.919		219218.267
159	Tb-IS	168993.702		ppb	0.542		180211.876
207	Pb	720.008	0.054229	ppb	3.956	3.959	135.556
203	Tl	10.000	-0.006592	ppb	33.333	14.878	35.556
209	Bi-IS	> 130879.070		ppb	1.183		147332.570
51	V	1325.617	2.153215	ppb	7.529	6.938	57.778
59	Co	500.009	0.315663	ppb	10.089	9.421	24.444
60	Ni	2919.188	3.753563	ppb	5.981	6.671	38.889
75	As	815.433	0.544679	ppb	3.771	16.706	617.379
71	Ga-ISK	> 107892.599		ppb	1.165		112075.703
82	Se-2	150.191	4.249876	ppb	9.109	8.950	0.216
107	Ag-1	156.668	0.011457	ppb	22.416	96.983	126.667
115	In-ISK	78246.068		ppb	2.365		84206.392
45	Sc-ISK	> 294976.845		ppb	1.326		282584.215
23	Na	21888393.968	48111.395026	ppb	2.005	1.179	1818.449
39	K	7994921.276	7168.173648	ppb	1.878	1.134	126895.555
24	Mg	19805103.914	38050.938062	ppb	0.533	0.937	358.338
159	Tb-ISK	173343.376		ppb	0.766		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 13:28:13

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.125

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26819.598		ppb		0.965		26775.072
9	Be	|	115611.537	101.100101	ppb	1.348	1.598		8.889
10	B	|	70004.445	258.355088	ppb	0.894	1.475		1132.267
27	Al	|	614181.771	99.983822	ppb	0.569	1.703		2950.305
43	Ca-2	|	66425.790	5124.008048	ppb	2.166	2.356		96.667
49	Ti	|	53163.187	99.939843	ppb	0.857	1.489		223.335
52	Cr	|	731168.961	101.865470	ppb	1.034	1.151		8577.019
55	Mn	|	1086379.061	97.329786	ppb	1.510	1.595		596.679
57	Fe	|	1056603.432	4857.125200	ppb	1.585	1.471		9071.773
45	Sc-IS	>	1297768.510		ppb	1.179			1308887.896
66	Zn	|	97365.902	99.660689	ppb	5.971	5.430		388.894
86	Sr	|	168367.348	99.426086	ppb	3.890	2.744		50.860
65	Cu	|	144913.843	100.784286	ppb	4.432	3.637		81.461
69	Ga-IS	|	380486.439		ppb	5.057			369475.552
95	Mo	|	154556.735	98.374327	ppb	3.614	2.609		124.445
115	In-IS	>	229830.313		ppb	2.635			232970.515
111	Cd	|	131253.372	99.184337	ppb	2.867	0.319		8.628
118	Sn	|	418003.445	100.976871	ppb	3.186	0.598		1487.855
121	Sb	|	464216.995	99.175309	ppb	3.285	0.771		347.782
135	Ba	|	83645.796	95.992685	ppb	5.657	3.330		17.778
165	Ho-IS	|	218057.217		ppb	0.701			219218.267
159	Tb-IS	|	176926.727		ppb	1.083			180211.876
207	Pb	|	1226530.558	99.678279	ppb	1.078	1.370		135.556
203	Tl	|	359465.274	98.556456	ppb	1.993	3.767		35.556
209	Bi-IS	>	145685.992		ppb	2.218			147332.570
51	V	|	62592.394	101.374272	ppb	1.278	0.404		57.778
59	Co	|	159120.254	100.815483	ppb	1.306	0.886		24.444
60	Ni	|	81405.737	101.277425	ppb	0.798	1.564		38.889
75	As	|	43103.561	99.930926	ppb	1.892	1.438		617.379
71	Ga-ISK	>	112880.909		ppb	0.908			112075.703
82	Se-2	|	3757.689	101.782938	ppb	2.003	2.676		0.216
107	Ag-1	|	310598.100	98.586293	ppb	0.807	0.604		126.667
115	In-ISK	|	83410.021		ppb	0.761			84206.392
45	Sc-ISK	>	291717.697		ppb	1.509			282584.215
23	Na	|	2391855.906	5313.044298	ppb	1.119	1.301		1818.449
39	K	|	5847709.253	5270.893033	ppb	0.574	1.347		126895.555
24	Mg	|	2687540.262	5221.083315	ppb	0.700	1.893		358.338
159	Tb-ISK	|	179554.039		ppb	0.650			178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 13:30:59

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.126

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26057.086		ppb	2.538		26775.072
9	Be	17.778	0.008271	ppb	28.641	52.898	8.889
10	B	1217.830	0.492912	ppb	1.508	15.601	1132.267
27	Al	3478.234	0.107133	ppb	34.183	186.057	2950.305
43	Ca-2	148.334	4.425902	ppb	22.945	65.229	96.667
49	Ti	251.113	0.069993	ppb	5.986	36.738	223.335
52	Cr	7980.006	-0.040160	ppb	1.036	79.953	8577.019
55	Mn	641.126	0.006177	ppb	3.462	49.301	596.679
57	Fe	8332.431	-1.930578	ppb	3.042	29.632	9071.773
45	Sc-IS	> 1260399.659		ppb	1.734		1308887.896
66	Zn	376.672	0.002258	ppb	4.927	725.996	388.894
86	Sr	116.416	0.040857	ppb	23.073	37.304	50.860
65	Cu	66.378	-0.008700	ppb	17.949	91.323	81.461
69	Ga-IS	353602.698		ppb	4.436		369475.552
95	Mo	566.678	0.292543	ppb	16.249	18.477	124.445
115	In-IS	> 224096.783		ppb	0.670		232970.515
111	Cd	12.143	0.002984	ppb	27.119	86.624	8.628
118	Sn	2535.782	0.274541	ppb	8.011	17.501	1487.855
121	Sb	423.340	0.019420	ppb	17.537	81.055	347.782
135	Ba	26.667	0.011290	ppb	21.651	61.772	17.778
165	Ho-IS	211264.013		ppb	0.286		219218.267
159	Tb-IS	171573.214		ppb	1.577		180211.876
207	Pb	268.890	0.011548	ppb	3.120	8.734	135.556
203	Tl	98.889	0.018225	ppb	15.200	24.951	35.556
209	Bi-IS	> 141914.841		ppb	1.450		147332.570
51	V	88.889	0.052385	ppb	9.437	22.825	57.778
59	Co	32.222	0.005103	ppb	39.165	150.083	24.444
60	Ni	35.556	-0.003585	ppb	19.516	260.072	38.889
75	As	697.866	0.210387	ppb	4.567	41.758	617.379
71	Ga-ISK	> 110795.884		ppb	2.019		112075.703
82	Se-2	2.239	0.054402	ppb	298.254	336.549	0.216
107	Ag-1	176.668	0.016672	ppb	9.984	36.257	126.667
115	In-ISK	83103.311		ppb	1.098		84206.392
45	Sc-ISK	> 285050.455		ppb	1.096		282584.215
23	Na	3015.319	2.685273	ppb	5.503	12.419	1818.449
39	K	129520.071	1.438955	ppb	0.787	96.684	126895.555
24	Mg	1380.067	2.025948	ppb	4.626	7.478	358.338
159	Tb-ISK	176088.645		ppb	0.750		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25865-K-9-B

Autosampler Position: 323

Sample Date/Time: Monday, April 20, 2020 13:36:44

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25865-K-9-B.127

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27488.647		ppb	1.311		26775.072
9	Be	7.778	-0.001081	ppb	65.465	390.059	8.889
10	B	89956.794	326.003289	ppb	0.762	3.807	1132.267
27	Al	18372.923	2.461042	ppb	2.567	2.005	2950.305
43	Ca-2	2376939.657	179574.097297	ppb	2.878	0.351	96.667
49	Ti	1612.314	2.559985	ppb	9.943	11.697	223.335
52	Cr	12566.638	0.534246	ppb	2.111	6.581	8577.019
55	Mn	184858.643	16.156947	ppb	1.916	1.295	596.679
57	Fe	115315.130	481.103004	ppb	3.936	1.280	9071.773
45	Sc-IS	> 1326928.685		ppb	3.150		1308887.896
66	Zn	4063.913	3.687688	ppb	6.133	4.820	388.894
86	Sr	2230072.884	1289.162424	ppb	1.681	2.369	50.860
65	Cu	2788.417	1.841044	ppb	5.253	2.370	81.461
69	Ga-IS	399869.271		ppb	5.032		369475.552
95	Mo	2850.285	1.697293	ppb	3.765	1.540	124.445
115	In-IS	> 220681.355		ppb	2.851		232970.515
111	Cd	32.903	0.019478	ppb	21.079	27.857	8.628
118	Sn	634.459	-0.195887	ppb	11.137	7.015	1487.855
121	Sb	372.227	0.009707	ppb	8.321	96.598	347.782
135	Ba	296570.663	354.362746	ppb	7.658	4.899	17.778
165	Ho-IS	211291.191		ppb	3.480		219218.267
159	Tb-IS	172069.339		ppb	2.363		180211.876
207	Pb	426.669	0.027529	ppb	13.350	16.794	135.556
203	Tl	32.222	0.000149	ppb	56.975	3688.107	35.556
209	Bi-IS	> 131325.380		ppb	1.378		147332.570
51	V	1763.442	2.861410	ppb	2.726	3.754	57.778
59	Co	1132.267	0.726053	ppb	4.290	4.173	24.444
60	Ni	4652.980	5.937359	ppb	1.473	0.907	38.889
75	As	923.408	0.782580	ppb	8.566	24.142	617.379
71	Ga-ISK	> 109201.362		ppb	0.913		112075.703
82	Se-2	210.856	5.898938	ppb	6.595	7.072	0.216
107	Ag-1	415.562	0.095828	ppb	12.893	17.505	126.667
115	In-ISK	78443.787		ppb	0.624		84206.392
45	Sc-ISK	> 296498.011		ppb	1.591		282584.215
23	Na	23197395.587	50736.580075	ppb	1.158	1.860	1818.449
39	K	7783084.806	6939.845682	ppb	1.384	2.037	126895.555
24	Mg	20245032.012	38701.700709	ppb	0.797	2.096	358.338
159	Tb-ISK	176100.822		ppb	0.985		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-K-10-B
 Autosampler Position: 324
 Sample Date/Time: Monday, April 20, 2020 13:39:30
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-K-10-B.128
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27522.043		ppb	0.865		26775.072
9	Be	18.889	0.008737	ppb	44.411	86.155	8.889
10	B	68699.271	251.278494	ppb	1.852	1.428	1132.267
27	Al	32739.985	4.825817	ppb	10.759	10.153	2950.305
43	Ca-2	1765301.262	135195.274162	ppb	2.208	0.343	96.667
49	Ti	1861.232	3.065506	ppb	2.896	2.424	223.335
52	Cr	20502.480	1.667538	ppb	0.434	3.759	8577.019
55	Mn	12670.061	1.073248	ppb	1.500	2.012	596.679
57	Fe	91695.873	379.778413	ppb	3.981	3.248	9071.773
45	Sc-IS	> 1308822.935		ppb	1.884		1308887.896
66	Zn	3638.243	3.310649	ppb	6.965	6.853	388.894
86	Sr	1647143.811	964.857643	ppb	2.671	1.133	50.860
65	Cu	2992.584	2.009219	ppb	2.810	2.811	81.461
69	Ga-IS	399992.403		ppb	4.961		369475.552
95	Mo	4316.208	2.648095	ppb	2.204	1.358	124.445
115	In-IS	> 221227.042		ppb	1.366		232970.515
111	Cd	19.825	0.009124	ppb	9.077	13.708	8.628
118	Sn	615.569	-0.200874	ppb	6.984	4.558	1487.855
121	Sb	431.118	0.022391	ppb	8.482	34.505	347.782
135	Ba	274105.375	326.880620	ppb	6.050	4.841	17.778
165	Ho-IS	213545.548		ppb	1.446		219218.267
159	Tb-IS	173699.780		ppb	1.498		180211.876
207	Pb	758.897	0.055262	ppb	4.400	5.542	135.556
203	Tl	10.000	-0.006694	ppb	33.333	14.824	35.556
209	Bi-IS	> 135821.516		ppb	0.689		147332.570
51	V	1863.455	3.032288	ppb	6.383	6.167	57.778
59	Co	397.783	0.245270	ppb	8.477	8.565	24.444
60	Ni	2961.418	3.766690	ppb	0.957	1.270	38.889
75	As	776.044	0.426661	ppb	5.523	22.304	617.379
71	Ga-ISK	> 109047.959		ppb	0.508		112075.703
82	Se-2	268.534	7.522556	ppb	5.460	5.314	0.216
107	Ag-1	33.333	-0.029541	ppb	36.056	13.537	126.667
115	In-ISK	80725.580		ppb	1.080		84206.392
45	Sc-ISK	> 295716.413		ppb	1.446		282584.215
23	Na	18993314.778	41646.700249	ppb	1.014	0.874	1818.449
39	K	6600869.858	5883.099094	ppb	0.162	1.455	126895.555
24	Mg	16293517.945	31227.609523	ppb	0.447	1.481	358.338
159	Tb-ISK	177030.894		ppb	1.085		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25865-K-11-B

Autosampler Position: 325

Sample Date/Time: Monday, April 20, 2020 13:42:15

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25865-K-11-B.129

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28016.346		ppb	2.545		26775.072
9	Be	11.111	0.001810	ppb	17.321	80.845	8.889
10	B	90794.318	329.968553	ppb	1.423	1.523	1132.267
27	Al	17261.534	2.292836	ppb	1.073	3.489	2950.305
43	Ca-2	2348111.734	177931.920523	ppb	3.327	0.454	96.667
49	Ti	1536.749	2.427805	ppb	3.196	0.672	223.335
52	Cr	11981.695	0.457904	ppb	4.040	4.198	8577.019
55	Mn	177498.341	15.560231	ppb	1.782	1.290	596.679
57	Fe	115163.511	482.284443	ppb	1.527	1.527	9071.773
45	Sc-IS	> 1322743.716		ppb	2.900		1308887.896
66	Zn	1066.707	0.679382	ppb	2.864	0.624	388.894
86	Sr	2152346.436	1246.685839	ppb	6.802	4.009	50.860
65	Cu	1913.785	1.250339	ppb	4.067	1.480	81.461
69	Ga-IS	398899.590		ppb	4.081		369475.552
95	Mo	2774.714	1.655190	ppb	4.831	2.208	124.445
115	In-IS	> 218001.426		ppb	1.597		232970.515
111	Cd	20.840	0.010136	ppb	69.444	112.929	8.628
118	Sn	454.452	-0.239603	ppb	9.171	5.055	1487.855
121	Sb	362.227	0.008211	ppb	14.618	132.756	347.782
135	Ba	298483.314	361.173317	ppb	6.469	4.932	17.778
165	Ho-IS	214017.131		ppb	1.902		219218.267
159	Tb-IS	173275.676		ppb	0.799		180211.876
207	Pb	257.779	0.011738	ppb	14.932	25.648	135.556
203	Tl	15.556	-0.004996	ppb	49.487	46.799	35.556
209	Bi-IS	> 134640.564		ppb	2.010		147332.570
51	V	1795.668	2.932799	ppb	2.534	2.983	57.778
59	Co	1124.489	0.725309	ppb	1.633	1.203	24.444
60	Ni	4311.762	5.531701	ppb	2.371	2.764	38.889
75	As	949.498	0.859850	ppb	9.796	26.509	617.379
71	Ga-ISK	> 108558.697		ppb	0.458		112075.703
82	Se-2	230.181	6.476514	ppb	3.638	3.491	0.216
107	Ag-1	413.339	0.095921	ppb	11.631	15.977	126.667
115	In-ISK	80327.947		ppb	0.345		84206.392
45	Sc-ISK	> 294577.307		ppb	0.436		282584.215
23	Na	23122096.940	50893.566616	ppb	0.612	0.220	1818.449
39	K	7657618.784	6870.192132	ppb	1.170	0.980	126895.555
24	Mg	20009351.216	38492.617347	ppb	0.448	0.348	358.338
159	Tb-ISK	178246.483		ppb	0.647		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-4-B

Autosampler Position: 310

Sample Date/Time: Monday, April 20, 2020 13:45:02

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-4-B.130

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		27496.437		ppb		0.746		26775.072
9	Be	|		5.556	-0.003094	ppb	69.282	103.907		8.889
10	B	|		37252.955	128.252254	ppb	0.612	1.813		1132.267
27	Al	|		17249.297	2.196256	ppb	0.677	1.956		2950.305
43	Ca-2	|	2383305.093		174517.933847	ppb	0.948	0.483		96.667
49	Ti	|		5119.806	8.742815	ppb	1.978	1.137		223.335
52	Cr	|		53785.510	5.988342	ppb	0.828	0.749		8577.019
55	Mn	|		1933.464	0.111267	ppb	3.621	5.261		596.679
57	Fe	|		106181.084	424.919606	ppb	2.500	1.318		9071.773
45	Sc-IS	>		1368991.999		ppb	1.296			1308887.896
66	Zn	|		2574.676	2.112491	ppb	1.609	2.047		388.894
86	Sr	|		1020007.273	571.319412	ppb	2.601	2.809		50.860
65	Cu	|		2217.833	1.407454	ppb	1.959	3.316		81.461
69	Ga-IS	|		356329.367		ppb	4.881			369475.552
95	Mo	|		3861.634	2.254276	ppb	4.544	5.393		124.445
115	In-IS	>		224996.625		ppb	1.853			232970.515
111	Cd	|		14.113	0.004397	ppb	96.812	235.056		8.628
118	Sn	|		367.783	-0.264941	ppb	17.109	5.254		1487.855
121	Sb	|		163.334	-0.037698	ppb	5.400	3.871		347.782
135	Ba	|		43771.620	51.299157	ppb	7.031	5.509		17.778
165	Ho-IS	|		222843.698		ppb	1.277			219218.267
159	Tb-IS	|		181743.435		ppb	1.721			180211.876
207	Pb	|		296.668	0.014356	ppb	6.835	13.316		135.556
203	Tl	|		10.000	-0.006761	ppb	33.333	14.551		35.556
209	Bi-IS	>		139161.241		ppb	1.112			147332.570
51	V	|		1386.734	2.285582	ppb	7.240	8.565		57.778
59	Co	|		64.445	0.027726	ppb	45.191	72.426		24.444
60	Ni	|		1364.510	1.748409	ppb	0.564	1.756		38.889
75	As	|		484.515	-0.260841	ppb	39.959	179.693		617.379
71	Ga-ISK	>		106686.954		ppb	1.537			112075.703
82	Se-2	|		903.889	25.895181	ppb	2.323	1.063		0.216
107	Ag-1	|		47.778	-0.024446	ppb	10.657	7.639		126.667
115	In-ISK	|		81997.982		ppb	1.388			84206.392
45	Sc-ISK	>		288530.379		ppb	1.060			282584.215
23	Na	|	28989121.457		65145.454396	ppb	1.296	0.520		1818.449
39	K	|		6176703.801	5636.907806	ppb	0.620	1.348		126895.555
24	Mg	|		18916814.342	37155.173370	ppb	0.574	0.814		358.338
159	Tb-ISK	|		179616.200		ppb	1.070			178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-5-B

Autosampler Position: 311

Sample Date/Time: Monday, April 20, 2020 13:47:48

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-5-B.131

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28422.699		ppb	2.113		26775.072
9	Be	15.556	0.005322	ppb	32.733	81.578	8.889
10	B	186768.538	665.150525	ppb	0.555	2.682	1132.267
27	Al	11585.811	1.331412	ppb	3.359	2.318	2950.305
43	Ca-2	3724481.552	274854.643336	ppb	1.452	1.318	96.667
49	Ti	1683.433	2.617368	ppb	4.615	4.608	223.335
52	Cr	14075.824	0.696314	ppb	2.980	1.834	8577.019
55	Mn	1611412.982	137.909075	ppb	2.942	0.999	596.679
57	Fe	185355.357	779.109208	ppb	2.823	0.388	9071.773
45	Sc-IS	> 1358622.765		ppb	2.459		1308887.896
66	Zn	5279.865	4.787080	ppb	3.191	1.678	388.894
86	Sr	3463445.621	1954.972545	ppb	1.428	1.152	50.860
65	Cu	3194.347	2.066422	ppb	5.887	3.979	81.461
69	Ga-IS	466248.060		ppb	3.558		369475.552
95	Mo	1431.183	0.793007	ppb	4.525	6.581	124.445
115	In-IS	> 221266.673		ppb	2.043		232970.515
111	Cd	92.550	0.066400	ppb	20.489	24.495	8.628
118	Sn	383.339	-0.259563	ppb	21.353	7.200	1487.855
121	Sb	344.449	0.003110	ppb	4.871	69.860	347.782
135	Ba	578375.410	689.580052	ppb	5.716	3.900	17.778
165	Ho-IS	210578.793		ppb	1.859		219218.267
159	Tb-IS	174661.268		ppb	0.608		180211.876
207	Pb	521.115	0.035559	ppb	5.326	6.260	135.556
203	Tl	13.333	-0.005621	ppb	43.301	31.333	35.556
209	Bi-IS	> 132789.874		ppb	0.562		147332.570
51	V	1906.794	3.079425	ppb	4.367	3.935	57.778
59	Co	12150.722	7.891328	ppb	1.607	1.962	24.444
60	Ni	8183.456	10.410710	ppb	3.239	3.520	38.889
75	As	887.935	0.682040	ppb	4.336	13.033	617.379
71	Ga-ISK	> 109928.002		ppb	0.604		112075.703
82	Se-2	409.144	11.374455	ppb	2.269	2.820	0.216
107	Ag-1	60.000	-0.020918	ppb	38.490	36.397	126.667
115	In-ISK	81223.310		ppb	0.939		84206.392
45	Sc-ISK	> 302186.490		ppb	1.591		282584.215
23	Na	32851992.332	70502.262825	ppb	0.539	1.599	1818.449
39	K	10527729.059	9250.199602	ppb	0.219	1.743	126895.555
24	Mg	27797503.935	52137.740816	ppb	0.927	1.910	358.338
159	Tb-ISK	181994.001		ppb	0.995		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25670-K-6-B

Autosampler Position: 312

Sample Date/Time: Monday, April 20, 2020 13:50:34

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25670-K-6-B.132

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27357.283		ppb	1.239		26775.072
9	Be	5.556	-0.002945	ppb	34.641	57.470	8.889
10	B	37003.452	131.436649	ppb	3.290	3.972	1132.267
27	Al	14903.333	1.903225	ppb	3.766	3.562	2950.305
43	Ca-2	2324085.806	175418.068199	ppb	2.245	0.926	96.667
49	Ti	4731.895	8.312556	ppb	1.027	2.594	223.335
52	Cr	52179.570	5.989243	ppb	0.879	1.138	8577.019
55	Mn	1926.797	0.115812	ppb	2.397	5.610	596.679
57	Fe	99176.489	407.643118	ppb	1.960	1.505	9071.773
45	Sc-IS	> 1328040.255		ppb	1.811		1308887.896
66	Zn	2113.490	1.725849	ppb	4.397	3.394	388.894
86	Sr	1009645.590	582.879205	ppb	2.578	1.488	50.860
65	Cu	2522.170	1.658071	ppb	7.844	6.542	81.461
69	Ga-IS	352636.293		ppb	4.143		369475.552
95	Mo	4047.240	2.441255	ppb	1.436	0.417	124.445
115	In-IS	> 227403.603		ppb	1.841		232970.515
111	Cd	10.390	0.001598	ppb	93.783	480.217	8.628
118	Sn	417.784	-0.253652	ppb	16.397	5.999	1487.855
121	Sb	170.001	-0.036638	ppb	7.070	5.857	347.782
135	Ba	41827.925	48.507418	ppb	5.255	3.455	17.778
165	Ho-IS	221217.537		ppb	1.024		219218.267
159	Tb-IS	181147.993		ppb	0.824		180211.876
207	Pb	205.556	0.006717	ppb	10.551	28.358	135.556
203	Tl	12.222	-0.006109	ppb	41.660	23.822	35.556
209	Bi-IS	> 138221.037		ppb	0.736		147332.570
51	V	1454.519	2.389095	ppb	3.523	4.380	57.778
59	Co	96.667	0.048889	ppb	5.973	7.189	24.444
60	Ni	1354.509	1.726277	ppb	3.483	3.143	38.889
75	As	793.558	0.501607	ppb	20.310	77.923	617.379
71	Ga-ISK	> 107201.870		ppb	1.125		112075.703
82	Se-2	919.577	26.223992	ppb	1.031	2.121	0.216
107	Ag-1	50.000	-0.023780	ppb	41.633	29.591	126.667
115	In-ISK	81232.604		ppb	1.912		84206.392
45	Sc-ISK	> 288893.305		ppb	1.374		282584.215
23	Na	28341940.528	63617.203105	ppb	1.124	1.431	1818.449
39	K	6070683.727	5530.221859	ppb	2.426	1.601	126895.555
24	Mg	18712410.576	36708.718497	ppb	0.678	1.006	358.338
159	Tb-ISK	180094.800		ppb	0.817		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-2-B

Autosampler Position: 313

Sample Date/Time: Monday, April 20, 2020 13:53:20

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-2-B.133

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27884.967		ppb	0.715		26775.072
9	Be	7.778	-0.001212	ppb	65.465	347.374	8.889
10	B	81291.772	288.917301	ppb	1.283	1.812	1132.267
27	Al	15864.363	2.016225	ppb	2.639	3.595	2950.305
43	Ca-2	2027352.702	150457.365003	ppb	4.668	1.708	96.667
49	Ti	1795.669	2.839764	ppb	4.243	3.456	223.335
52	Cr	12352.008	0.475245	ppb	3.017	11.036	8577.019
55	Mn	15262.594	1.262352	ppb	1.448	2.135	596.679
57	Fe	92023.248	368.514547	ppb	1.271	2.217	9071.773
45	Sc-IS	> 1350252.244		ppb	3.020		1308887.896
66	Zn	3204.804	2.768991	ppb	4.417	2.328	388.894
86	Sr	1645775.704	934.718823	ppb	2.460	1.536	50.860
65	Cu	4053.585	2.653637	ppb	6.294	3.554	81.461
69	Ga-IS	399787.459		ppb	4.508		369475.552
95	Mo	3167.018	1.859777	ppb	5.342	2.447	124.445
115	In-IS	> 226190.285		ppb	2.992		232970.515
111	Cd	17.794	0.007248	ppb	58.922	110.581	8.628
118	Sn	372.227	-0.264218	ppb	6.601	1.397	1487.855
121	Sb	182.223	-0.033740	ppb	1.056	4.571	347.782
135	Ba	254243.489	296.558305	ppb	4.721	2.002	17.778
165	Ho-IS	219580.620		ppb	1.876		219218.267
159	Tb-IS	178906.826		ppb	1.636		180211.876
207	Pb	286.668	0.013832	ppb	3.076	3.962	135.556
203	Tl	7.778	-0.007379	ppb	65.465	19.976	35.556
209	Bi-IS	> 137256.348		ppb	1.696		147332.570
51	V	1790.112	2.920250	ppb	2.074	1.551	57.778
59	Co	2096.821	1.364952	ppb	2.675	3.426	24.444
60	Ni	5455.486	7.005346	ppb	1.034	1.611	38.889
75	As	731.235	0.324662	ppb	8.527	49.345	617.379
71	Ga-ISK	> 108660.590		ppb	0.797		112075.703
82	Se-2	217.525	6.113773	ppb	3.054	2.255	0.216
107	Ag-1	18.889	-0.034276	ppb	10.189	1.984	126.667
115	In-ISK	82929.832		ppb	1.336		84206.392
45	Sc-ISK	> 290861.467		ppb	1.236		282584.215
23	Na	19018882.602	42397.347232	ppb	1.268	0.873	1818.449
39	K	6547313.104	5933.712698	ppb	1.564	2.196	126895.555
24	Mg	17501915.956	34099.810750	ppb	1.714	1.472	358.338
159	Tb-ISK	180144.764		ppb	0.867		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-3-B

Autosampler Position: 314

Sample Date/Time: Monday, April 20, 2020 13:56:05

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-3-B.134

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27618.904		ppb	2.359		26775.072
9	Be	3.333	-0.004860	ppb	100.000	58.071	8.889
10	B	60726.621	218.576773	ppb	2.336	1.168	1132.267
27	Al	23928.938	3.350383	ppb	4.346	4.866	2950.305
43	Ca-2	1640445.029	123946.779159	ppb	2.393	1.058	96.667
49	Ti	2180.167	3.606503	ppb	5.907	5.301	223.335
52	Cr	25797.721	2.359627	ppb	1.737	4.683	8577.019
55	Mn	1366.732	0.066841	ppb	0.645	3.599	596.679
57	Fe	76220.597	304.008643	ppb	1.356	0.427	9071.773
45	Sc-IS	> 1326553.724		ppb	1.349		1308887.896
66	Zn	1901.238	1.514896	ppb	4.560	4.156	388.894
86	Sr	1349736.034	780.076237	ppb	3.037	2.308	50.860
65	Cu	1607.402	1.037794	ppb	6.416	5.540	81.461
69	Ga-IS	384442.065		ppb	4.524		369475.552
95	Mo	5963.467	3.638281	ppb	1.450	0.151	124.445
115	In-IS	> 224471.118		ppb	0.334		232970.515
111	Cd	16.366	0.006229	ppb	41.754	84.822	8.628
118	Sn	468.897	-0.239452	ppb	6.211	3.128	1487.855
121	Sb	171.112	-0.035896	ppb	5.624	6.165	347.782
135	Ba	170796.346	200.785098	ppb	6.145	5.881	17.778
165	Ho-IS	220636.426		ppb	1.005		219218.267
159	Tb-IS	179479.323		ppb	0.566		180211.876
207	Pb	204.445	0.006608	ppb	10.856	32.376	135.556
203	Tl	6.667	-0.007697	ppb	100.000	25.360	35.556
209	Bi-IS	> 138449.956		ppb	1.310		147332.570
51	V	1802.336	2.904663	ppb	6.029	6.187	57.778
59	Co	276.669	0.164364	ppb	11.493	12.680	24.444
60	Ni	1646.762	2.054972	ppb	1.127	1.213	38.889
75	As	944.165	0.817068	ppb	3.147	9.272	617.379
71	Ga-ISK	> 109975.019		ppb	0.191		112075.703
82	Se-2	383.539	10.657169	ppb	4.153	4.351	0.216
107	Ag-1	70.000	-0.017704	ppb	33.333	42.754	126.667
115	In-ISK	84144.467		ppb	0.963		84206.392
45	Sc-ISK	> 291203.617		ppb	0.343		282584.215
23	Na	17285934.221	38487.516410	ppb	1.204	1.105	1818.449
39	K	5660828.772	5107.033330	ppb	1.590	1.334	126895.555
24	Mg	14649979.615	28508.378278	ppb	1.064	0.726	358.338
159	Tb-ISK	182146.565		ppb	0.782		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-4-B

Autosampler Position: 315

Sample Date/Time: Monday, April 20, 2020 13:58:51

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-4-B.135

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27497.558		ppb	2.117		26775.072
9	Be	8.889	-0.000120	ppb	94.373	5980.404	8.889
10	B	48799.893	173.147103	ppb	1.807	0.896	1132.267
27	Al	210275.311	32.843211	ppb	3.574	2.405	2950.305
43	Ca-2	1110023.609	83071.324499	ppb	3.480	2.237	96.667
49	Ti	2623.574	4.381719	ppb	0.582	1.642	223.335
52	Cr	19783.704	1.503194	ppb	3.971	5.243	8577.019
55	Mn	14654.181	1.219858	ppb	2.086	1.239	596.679
57	Fe	66429.745	256.722153	ppb	3.067	2.120	9071.773
45	Sc-IS	> 1339146.509		ppb	1.307		1308887.896
66	Zn	2776.937	2.369010	ppb	6.177	6.285	388.894
86	Sr	1069158.025	612.065798	ppb	3.065	1.992	50.860
65	Cu	3842.956	2.535070	ppb	5.944	5.150	81.461
69	Ga-IS	385917.337		ppb	3.981		369475.552
95	Mo	5585.537	3.369802	ppb	3.047	2.434	124.445
115	In-IS	> 226802.622		ppb	1.610		232970.515
111	Cd	23.826	0.011953	ppb	70.490	109.147	8.628
118	Sn	522.232	-0.227635	ppb	8.082	3.770	1487.855
121	Sb	213.335	-0.027134	ppb	4.688	7.874	347.782
135	Ba	160173.867	186.348075	ppb	3.962	2.838	17.778
165	Ho-IS	219443.741		ppb	0.539		219218.267
159	Tb-IS	180649.623		ppb	1.441		180211.876
207	Pb	785.564	0.054393	ppb	5.063	4.907	135.556
203	Tl	8.889	-0.007136	ppb	43.301	15.567	35.556
209	Bi-IS	> 142416.419		ppb	1.083		147332.570
51	V	1485.633	2.405822	ppb	3.368	4.654	57.778
59	Co	115.556	0.060562	ppb	24.019	32.011	24.444
60	Ni	723.352	0.884948	ppb	7.995	7.057	38.889
75	As	734.927	0.331575	ppb	4.395	25.115	617.379
71	Ga-ISK	> 108775.939		ppb	1.345		112075.703
82	Se-2	26.849	0.749961	ppb	29.662	30.424	0.216
107	Ag-1	103.334	-0.006493	ppb	14.783	72.312	126.667
115	In-ISK	84490.697		ppb	1.927		84206.392
45	Sc-ISK	> 288571.218		ppb	1.123		282584.215
23	Na	14157861.024	31811.719961	ppb	0.690	1.039	1818.449
39	K	4933631.830	4477.477955	ppb	1.043	1.475	126895.555
24	Mg	9818499.827	19281.351730	ppb	0.823	0.446	358.338
159	Tb-ISK	182986.526		ppb	0.734		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 14:01:37

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.136

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		27151.336		ppb		1.245		26775.072
9	Be	|		118451.370	101.260501	ppb		1.755	1.959	8.889
10	B	|		72462.210	261.471246	ppb		0.851	1.165	1132.267
27	Al	|		631781.396	100.528672	ppb		1.639	0.687	2950.305
43	Ca-2	|		69567.311	5246.077534	ppb		0.453	0.769	96.667
49	Ti	|		54394.474	99.958955	ppb		0.671	1.131	223.335
52	Cr	|		745192.268	101.478252	ppb		1.765	1.015	8577.019
55	Mn	|		1103607.007	96.646969	ppb		1.717	0.796	596.679
57	Fe	|		1070774.237	4811.043567	ppb		1.914	0.780	9071.773
45	Sc-IS	>		1327546.313		ppb		1.201		1308887.896
66	Zn	|		99759.586	99.821939	ppb		3.341	2.165	388.894
86	Sr	|		170771.494	98.609247	ppb		0.656	0.759	50.860
65	Cu	|		147186.543	100.072155	ppb		2.987	1.850	81.461
69	Ga-IS	|		388377.304		ppb		2.519		369475.552
95	Mo	|		155626.477	96.851043	ppb		0.949	0.597	124.445
115	In-IS	>		234079.127		ppb		2.063		232970.515
111	Cd	|		134329.345	99.693089	ppb		1.230	2.045	8.628
118	Sn	|		426666.946	101.214084	ppb		1.825	0.671	1487.855
121	Sb	|		475213.133	99.688540	ppb		2.415	0.411	347.782
135	Ba	|		86238.897	97.187141	ppb		5.343	3.844	17.778
165	Ho-IS	|		225279.195		ppb		1.137		219218.267
159	Tb-IS	|		182498.394		ppb		1.111		180211.876
207	Pb	|		1270434.167	100.367788	ppb		0.376	0.695	135.556
203	Tl	|		371537.667	99.002491	ppb		2.281	2.834	35.556
209	Bi-IS	>		149839.512		ppb		0.585		147332.570
51	V	|		62373.718	98.792480	ppb		2.781	3.079	57.778
59	Co	|		160624.954	99.523641	ppb		2.333	2.586	24.444
60	Ni	|		82295.246	100.116440	ppb		0.076	1.167	38.889
75	As	|		44035.689	99.844388	ppb		1.414	2.101	617.379
71	Ga-ISK	>		115437.910		ppb		1.231		112075.703
82	Se-2	|		3769.702	99.845769	ppb		0.428	1.563	0.216
107	Ag-1	|		316591.208	98.262448	ppb		1.475	1.089	126.667
115	In-ISK	|		86730.143		ppb		1.147		84206.392
45	Sc-ISK	>		289583.447		ppb		0.602		282584.215
23	Na	|		2367249.279	5296.695230	ppb		1.291	1.269	1818.449
39	K	|		5825422.526	5289.336131	ppb		1.311	1.362	126895.555
24	Mg	|		2700730.126	5284.619594	ppb		1.688	1.884	358.338
159	Tb-ISK	|		185490.499		ppb		0.629		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 14:04:23

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.137

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		25862.281		ppb		1.337		26775.072
9	Be	|		12.222	0.003206	ppb	68.635	232.941		8.889
10	B	|		1181.160	0.339190	ppb	1.069	37.111		1132.267
27	Al	|		3208.159	0.062076	ppb	29.413	271.758		2950.305
43	Ca-2	|		116.667	1.825261	ppb	23.604	110.770		96.667
49	Ti	|		236.669	0.041400	ppb	12.519	156.454		223.335
52	Cr	|		8160.108	-0.017427	ppb	1.465	191.052		8577.019
55	Mn	|		647.792	0.006602	ppb	2.641	30.752		596.679
57	Fe	|		9493.154	3.490214	ppb	1.346	15.156		9071.773
45	Sc-IS	|>		1264018.970		ppb	1.785			1308887.896
66	Zn	|		418.895	0.045544	ppb	8.359	72.108		388.894
86	Sr	|		47.464	-0.001033	ppb	29.271	801.815		50.860
65	Cu	|		124.101	0.032677	ppb	23.479	68.229		81.461
69	Ga-IS	|		357567.692		ppb	4.518			369475.552
95	Mo	|		652.237	0.347579	ppb	12.376	13.513		124.445
115	In-IS	|>		227029.267		ppb	1.672			232970.515
111	Cd	|		11.964	0.002702	ppb	73.464	245.498		8.628
118	Sn	|		2391.312	0.230790	ppb	5.917	11.145		1487.855
121	Sb	|		381.116	0.009104	ppb	7.439	57.961		347.782
135	Ba	|		33.333	0.018621	ppb	10.000	21.042		17.778
165	Ho-IS	|		215273.225		ppb	0.547			219218.267
159	Tb-IS	|		172446.848		ppb	0.795			180211.876
207	Pb	|		325.557	0.015966	ppb	17.204	29.004		135.556
203	Tl	|		96.667	0.017303	ppb	19.199	32.184		35.556
209	Bi-IS	|>		143542.115		ppb	1.615			147332.570
51	V	|		74.445	0.026748	ppb	29.813	132.720		57.778
59	Co	|		36.667	0.007746	ppb	32.778	99.224		24.444
60	Ni	|		26.667	-0.015492	ppb	76.035	162.121		38.889
75	As	|		649.529	0.071594	ppb	4.559	98.932		617.379
71	Ga-ISK	|>		112415.028		ppb	0.765			112075.703
82	Se-2	|		6.581	0.172439	ppb	78.260	80.831		0.216
107	Ag-1	|		148.890	0.006943	ppb	9.321	58.741		126.667
115	In-ISK	|		84452.806		ppb	1.611			84206.392
45	Sc-ISK	|>		279498.962		ppb	0.922			282584.215
23	Na	|		3133.677	3.098154	ppb	1.208	4.478		1818.449
39	K	|		129892.340	4.222146	ppb	1.104	38.481		126895.555
24	Mg	|		943.365	1.196398	ppb	18.517	31.245		358.338
159	Tb-ISK	|		177422.297		ppb	0.368			178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-5-B

Autosampler Position: 316

Sample Date/Time: Monday, April 20, 2020 14:07:10

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-5-B.138

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26952.071		ppb	1.423		26775.072
9	Be	12.222	0.002911	ppb	56.773	210.930	8.889
10	B	45448.858	164.469011	ppb	1.446	0.631	1132.267
27	Al	43496.126	6.561457	ppb	1.472	0.705	2950.305
43	Ca-2	1076269.225	82263.829504	ppb	1.687	0.814	96.667
49	Ti	1330.062	2.066780	ppb	3.200	4.107	223.335
52	Cr	18834.634	1.428408	ppb	2.179	2.486	8577.019
55	Mn	2495.774	0.168380	ppb	5.027	6.762	596.679
57	Fe	56962.281	219.623534	ppb	2.670	2.000	9071.773
45	Sc-IS	> 1311356.969		ppb	1.007		1308887.896
66	Zn	1552.307	1.182600	ppb	3.055	3.618	388.894
86	Sr	1036522.169	606.000316	ppb	2.000	1.176	50.860
65	Cu	1606.117	1.049950	ppb	6.220	6.234	81.461
69	Ga-IS	377336.310		ppb	4.600		369475.552
95	Mo	5750.046	3.546891	ppb	1.031	0.786	124.445
115	In-IS	> 222800.494		ppb	2.048		232970.515
111	Cd	17.925	0.007625	ppb	49.073	92.784	8.628
118	Sn	1088.931	-0.083648	ppb	8.296	23.409	1487.855
121	Sb	250.002	-0.018251	ppb	7.055	16.202	347.782
135	Ba	155422.029	183.989720	ppb	6.375	4.367	17.778
165	Ho-IS	215886.794		ppb	0.068		219218.267
159	Tb-IS	176754.548		ppb	0.486		180211.876
207	Pb	1015.570	0.075100	ppb	2.110	2.346	135.556
203	Tl	38.889	0.001465	ppb	32.451	244.316	35.556
209	Bi-IS	> 139814.185		ppb	0.285		147332.570
51	V	1505.635	2.403924	ppb	5.762	7.436	57.778
59	Co	50.000	0.017010	ppb	46.188	90.814	24.444
60	Ni	658.904	0.789501	ppb	7.458	6.385	38.889
75	As	857.254	0.601519	ppb	5.763	25.859	617.379
71	Ga-ISK	> 110376.019		ppb	2.296		112075.703
82	Se-2	27.841	0.767149	ppb	54.424	55.693	0.216
107	Ag-1	103.334	-0.006983	ppb	8.535	31.113	126.667
115	In-ISK	83524.387		ppb	0.420		84206.392
45	Sc-ISK	> 289005.206		ppb	0.392		282584.215
23	Na	13358840.639	29969.856240	ppb	0.547	0.897	1818.449
39	K	4899960.540	4439.059304	ppb	0.985	1.410	126895.555
24	Mg	9600452.454	18824.604209	ppb	1.078	1.196	358.338
159	Tb-ISK	180830.672		ppb	0.780		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25758-K-6-B

Autosampler Position: 317

Sample Date/Time: Monday, April 20, 2020 14:09:55

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25758-K-6-B.139

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27042.268		ppb	4.245		26775.072
9	Be	14.444	0.004783	ppb	26.647	72.602	8.889
10	B	116567.056	426.995921	ppb	1.595	1.624	1132.267
27	Al	32508.084	4.764276	ppb	3.340	1.846	2950.305
43	Ca-2	2311546.377	176040.721300	ppb	3.599	1.016	96.667
49	Ti	1902.349	3.122786	ppb	4.496	3.794	223.335
52	Cr	12349.781	0.519144	ppb	1.081	13.263	8577.019
55	Mn	38828.260	3.379773	ppb	1.630	1.373	596.679
57	Fe	116085.498	489.181207	ppb	2.514	2.969	9071.773
45	Sc-IS	> 1316097.161		ppb	2.943		1308887.896
66	Zn	2411.315	2.046727	ppb	4.970	2.904	388.894
86	Sr	1811887.086	1055.606009	ppb	3.174	1.457	50.860
65	Cu	3923.645	2.635603	ppb	5.386	3.218	81.461
69	Ga-IS	376864.635		ppb	5.464		369475.552
95	Mo	2479.105	1.477574	ppb	8.106	6.012	124.445
115	In-IS	> 220279.125		ppb	1.165		232970.515
111	Cd	32.572	0.019216	ppb	31.824	41.364	8.628
118	Sn	860.026	-0.138342	ppb	4.084	5.230	1487.855
121	Sb	301.114	-0.006167	ppb	2.786	41.130	347.782
135	Ba	205554.123	246.168548	ppb	7.006	5.943	17.778
165	Ho-IS	212748.490		ppb	2.148		219218.267
159	Tb-IS	173872.946		ppb	1.327		180211.876
207	Pb	430.003	0.026742	ppb	10.741	14.177	135.556
203	Tl	17.778	-0.004380	ppb	28.641	35.144	35.556
209	Bi-IS	> 135204.609		ppb	0.913		147332.570
51	V	1414.515	2.299470	ppb	2.984	3.520	57.778
59	Co	6532.604	4.305469	ppb	0.312	0.766	24.444
60	Ni	9401.983	12.164604	ppb	1.906	0.906	38.889
75	As	859.565	0.647059	ppb	13.436	42.487	617.379
71	Ga-ISK	> 108145.605		ppb	1.047		112075.703
82	Se-2	173.490	4.893020	ppb	18.559	17.512	0.216
107	Ag-1	43.333	-0.026148	ppb	23.077	12.732	126.667
115	In-ISK	81463.352		ppb	1.679		84206.392
45	Sc-ISK	> 290001.906		ppb	0.936		282584.215
23	Na	21863047.959	48885.893607	ppb	0.908	1.611	1818.449
39	K	7199224.002	6555.938151	ppb	0.385	1.223	126895.555
24	Mg	19713682.359	38527.258983	ppb	1.260	2.183	358.338
159	Tb-ISK	177501.262		ppb	0.179		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25758-K-7-B
 Autosampler Position: 318
 Sample Date/Time: Monday, April 20, 2020 14:12:41
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25758-K-7-B.140
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26983.239		ppb	0.962		26775.072
9	Be	4.444	-0.003896	ppb	114.564	112.327	8.889
10	B	83022.818	303.360883	ppb	1.718	0.526	1132.267
27	Al	30678.471	4.477703	ppb	2.115	0.935	2950.305
43	Ca-2	1813823.704	138381.284416	ppb	2.469	0.913	96.667
49	Ti	2152.384	3.596295	ppb	1.008	2.767	223.335
52	Cr	13672.097	0.704778	ppb	2.418	2.113	8577.019
55	Mn	107690.057	9.481772	ppb	2.167	0.946	596.679
57	Fe	101162.659	421.539903	ppb	2.769	1.249	9071.773
45	Sc-IS	> 1313777.530		ppb	1.642		1308887.896
66	Zn	14153.681	13.972439	ppb	3.645	2.820	388.894
86	Sr	1339453.561	781.665528	ppb	2.838	1.853	50.860
65	Cu	2871.590	1.917346	ppb	6.153	5.175	81.461
69	Ga-IS	360577.303		ppb	4.408		369475.552
95	Mo	4043.907	2.465093	ppb	6.595	5.272	124.445
115	In-IS	> 220333.866		ppb	1.777		232970.515
111	Cd	19.286	0.008825	ppb	29.076	53.520	8.628
118	Sn	672.238	-0.186034	ppb	10.639	8.195	1487.855
121	Sb	560.011	0.051469	ppb	6.708	12.094	347.782
135	Ba	132080.512	158.114858	ppb	6.365	4.677	17.778
165	Ho-IS	214349.807		ppb	1.811		219218.267
159	Tb-IS	175873.797		ppb	0.719		180211.876
207	Pb	561.116	0.037754	ppb	5.390	8.058	135.556
203	Tl	7.778	-0.007369	ppb	107.855	32.984	35.556
209	Bi-IS	> 136604.495		ppb	0.854		147332.570
51	V	1652.318	2.689866	ppb	3.728	5.273	57.778
59	Co	3028.099	1.978156	ppb	1.558	1.990	24.444
60	Ni	5214.285	6.693100	ppb	2.085	0.749	38.889
75	As	750.196	0.373558	ppb	7.395	48.809	617.379
71	Ga-ISK	> 108670.846		ppb	2.678		112075.703
82	Se-2	230.504	6.484256	ppb	2.404	4.756	0.216
107	Ag-1	28.889	-0.030957	ppb	24.019	7.793	126.667
115	In-ISK	80902.803		ppb	1.297		84206.392
45	Sc-ISK	> 288593.931		ppb	1.212		282584.215
23	Na	18038698.878	40528.341240	ppb	0.843	0.379	1818.449
39	K	6020450.151	5489.429557	ppb	1.599	0.659	126895.555
24	Mg	16043645.920	31507.055243	ppb	0.306	1.478	358.338
159	Tb-ISK	176505.034		ppb	0.244		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25865-K-2-B

Autosampler Position: 319

Sample Date/Time: Monday, April 20, 2020 14:15:27

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25865-K-2-B.141

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	25796.606		ppb	1.301		26775.072
9	Be	8.889	0.000150	ppb	43.301	2316.622	8.889
10	B	51470.361	190.430366	ppb	2.116	1.583	1132.267
27	Al	28920.365	4.290738	ppb	2.254	1.566	2950.305
43	Ca-2	1184782.387	92268.818508	ppb	2.541	1.726	96.667
49	Ti	1262.278	1.984291	ppb	3.396	3.205	223.335
52	Cr	19414.295	1.560714	ppb	1.125	1.248	8577.019
55	Mn	5486.609	0.442836	ppb	1.918	0.270	596.679
57	Fe	59864.101	238.129755	ppb	2.306	0.774	9071.773
45	Sc-IS	> 1287075.699		ppb	1.690		1308887.896
66	Zn	1806.782	1.475457	ppb	9.748	11.491	388.894
86	Sr	1118679.966	666.398743	ppb	2.497	1.693	50.860
65	Cu	1786.329	1.196771	ppb	6.708	5.483	81.461
69	Ga-IS	361488.379		ppb	5.051		369475.552
95	Mo	3807.176	2.366508	ppb	7.282	6.802	124.445
115	In-IS	> 218911.702		ppb	2.848		232970.515
111	Cd	16.449	0.006589	ppb	95.379	189.118	8.628
118	Sn	590.012	-0.205699	ppb	4.413	2.072	1487.855
121	Sb	250.002	-0.017310	ppb	13.921	40.120	347.782
135	Ba	149265.835	179.854643	ppb	6.703	4.711	17.778
165	Ho-IS	215137.987		ppb	1.158		219218.267
159	Tb-IS	172345.625		ppb	0.668		180211.876
207	Pb	413.336	0.025039	ppb	2.908	2.915	135.556
203	Tl	12.222	-0.006064	ppb	62.984	36.930	35.556
209	Bi-IS	> 136171.508		ppb	0.937		147332.570
51	V	1647.873	2.733398	ppb	6.177	5.638	57.778
59	Co	63.333	0.026938	ppb	18.977	31.268	24.444
60	Ni	1117.822	1.424732	ppb	4.642	5.675	38.889
75	As	752.011	0.410768	ppb	5.742	28.972	617.379
71	Ga-ISK	> 106615.275		ppb	1.014		112075.703
82	Se-2	22.856	0.649980	ppb	11.537	12.442	0.216
107	Ag-1	58.889	-0.020699	ppb	8.646	9.188	126.667
115	In-ISK	81239.223		ppb	1.207		84206.392
45	Sc-ISK	> 285169.418		ppb	0.985		282584.215
23	Na	14701173.591	33423.971210	ppb	1.351	0.462	1818.449
39	K	5349447.064	4924.179830	ppb	1.052	0.689	126895.555
24	Mg	10428910.429	20725.835461	ppb	0.624	1.499	358.338
159	Tb-ISK	178695.370		ppb	0.628		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 14:23:44

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.142

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	25914.604		ppb	2.459			26775.072
9	Be	|	115074.976	104.390168	ppb	0.875	1.269		8.889
10	B	|	68889.041	263.811235	ppb	0.841	0.908		1132.267
27	Al	|	609521.277	102.927861	ppb	1.967	1.158		2950.305
43	Ca-2	|	65235.334	5219.440216	ppb	2.443	1.452		96.667
49	Ti	|	52896.645	103.170837	ppb	0.870	1.886		223.335
52	Cr	|	718969.987	103.939362	ppb	1.322	2.106		8577.019
55	Mn	|	1069996.887	99.444636	ppb	0.647	0.976		596.679
57	Fe	|	1046088.975	4990.044873	ppb	0.166	1.660		9071.773
45	Sc-IS	>	1251080.201		ppb	1.519			1308887.896
66	Zn	|	96015.227	101.949520	ppb	3.828	2.336		388.894
86	Sr	|	167863.475	102.831414	ppb	3.322	1.810		50.860
65	Cu	|	141467.279	102.054938	ppb	3.800	2.375		81.461
69	Ga-IS	|	369870.002		ppb	4.147			369475.552
95	Mo	|	153056.328	101.050287	ppb	3.804	2.303		124.445
115	In-IS	>	226317.446		ppb	1.721			232970.515
111	Cd	|	128985.790	98.983644	ppb	2.209	0.865		8.628
118	Sn	|	414702.794	101.741378	ppb	2.217	0.556		1487.855
121	Sb	|	464739.303	100.846096	ppb	1.372	0.764		347.782
135	Ba	|	82158.313	95.752744	ppb	5.765	4.165		17.778
165	Ho-IS	|	217519.139		ppb	0.888			219218.267
159	Tb-IS	|	173723.242		ppb	0.118			180211.876
207	Pb	|	1232632.111	99.894515	ppb	0.308	0.794		135.556
203	Tl	|	363710.926	99.408407	ppb	0.895	0.902		35.556
209	Bi-IS	>	146070.781		ppb	0.612			147332.570
51	V	|	61020.045	102.535160	ppb	0.482	1.708		57.778
59	Co	|	156073.607	102.589420	ppb	1.463	2.005		24.444
60	Ni	|	77477.357	99.984602	ppb	1.916	1.908		38.889
75	As	|	41455.541	99.700896	ppb	0.884	0.444		617.379
71	Ga-ISK	>	108818.479		ppb	1.282			112075.703
82	Se-2	|	3586.021	100.746743	ppb	2.966	2.726		0.216
107	Ag-1	|	304413.111	100.225960	ppb	1.710	0.577		126.667
115	In-ISK	|	82008.189		ppb	1.047			84206.392
45	Sc-ISK	>	281238.763		ppb	2.041			282584.215
23	Na	|	2285429.284	5265.458197	ppb	1.980	0.908		1818.449
39	K	|	5664119.790	5296.620905	ppb	0.752	1.577		126895.555
24	Mg	|	2577170.991	5193.684577	ppb	0.826	2.142		358.338
159	Tb-ISK	|	173392.666		ppb	1.016			178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 14:26:30

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.143

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		25670.822		ppb				0.683		26775.072
9	Be	|		12.222	0.003707	ppb	56.773	183.198				8.889
10	B	|		927.808	-0.521539	ppb	11.364	96.554				1132.267
27	Al	|		2628.020	-0.023809	ppb	3.819	40.013				2950.305
43	Ca-2	|		58.333	-2.637412	ppb	9.897	16.934				96.667
49	Ti	|		237.780	0.056331	ppb	9.334	61.244				223.335
52	Cr	|		7745.435	-0.043466	ppb	4.386	122.340				8577.019
55	Mn	|		633.347	0.007048	ppb	2.785	30.665				596.679
57	Fe	|		8757.128	1.255901	ppb	1.372	49.157				9071.773
45	Sc-IS	>		1226847.663		ppb	2.649					1308887.896
66	Zn	|		380.005	0.017466	ppb	6.140	207.613				388.894
86	Sr	|		33.581	-0.008673	ppb	40.038	103.653				50.860
65	Cu	|		85.292	0.006804	ppb	20.015	206.376				81.461
69	Ga-IS	|		343386.516		ppb	5.284					369475.552
95	Mo	|		567.789	0.303587	ppb	12.334	13.334				124.445
115	In-IS	>		221193.641		ppb	2.153					232970.515
111	Cd	|		14.363	0.004894	ppb	27.702	69.535				8.628
118	Sn	|		2695.811	0.322553	ppb	9.235	15.136				1487.855
121	Sb	|		408.895	0.017437	ppb	8.717	38.527				347.782
135	Ba	|		16.667	-0.000400	ppb	52.915	2553.016				17.778
165	Ho-IS	|		209387.821		ppb	0.515					219218.267
159	Tb-IS	|		167043.168		ppb	0.218					180211.876
207	Pb	|		283.335	0.012719	ppb	9.189	15.756				135.556
203	Tl	|		111.112	0.021631	ppb	15.395	23.518				35.556
209	Bi-IS	>		142011.291		ppb	0.934					147332.570
51	V	|		72.222	0.026015	ppb	29.312	139.729				57.778
59	Co	|		23.333	-0.000449	ppb	37.796	1264.941				24.444
60	Ni	|		26.667	-0.014699	ppb	25.000	57.843				38.889
75	As	|		649.478	0.104871	ppb	3.855	40.857				617.379
71	Ga-ISK	>		109994.094		ppb	1.209					112075.703
82	Se-2	|		3.911	0.102256	ppb	135.707	143.628				0.216
107	Ag-1	|		174.446	0.016418	ppb	20.252	73.216				126.667
115	In-ISK	|		82637.779		ppb	1.353					84206.392
45	Sc-ISK	>		277523.632		ppb	1.780					282584.215
23	Na	|		1968.469	0.428349	ppb	2.977	44.467				1818.449
39	K	|		131025.917	6.226663	ppb	0.494	30.803				126895.555
24	Mg	|		446.674	0.191913	ppb	20.712	91.351				358.338
159	Tb-ISK	|		174313.855		ppb	1.475					178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-K-2-D @5
 Autosampler Position: 351
 Sample Date/Time: Monday, April 20, 2020 14:30:23
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-K-2-D @5.144
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26645.941		ppb	1.416		26775.072
9	Be	11.111	0.002336	ppb	17.321	68.030	8.889
10	B	36768.385	138.514160	ppb	2.351	1.032	1132.267
27	Al	4870.830	0.346658	ppb	1.311	9.996	2950.305
43	Ca-2	700035.624	55950.175003	ppb	3.176	0.354	96.667
49	Ti	503.342	0.564850	ppb	5.960	6.711	223.335
52	Cr	10716.240	0.365661	ppb	1.063	16.704	8577.019
55	Mn	300017.233	27.777051	ppb	2.998	0.625	596.679
57	Fe	44921.691	173.803949	ppb	3.633	1.190	9071.773
45	Sc-IS	> 1253999.839		ppb	2.830		1308887.896
66	Zn	1728.994	1.440289	ppb	9.986	9.294	388.894
86	Sr	654807.169	400.492685	ppb	1.054	1.861	50.860
65	Cu	8632.037	6.156708	ppb	6.649	3.922	81.461
69	Ga-IS	358150.217		ppb	5.777		369475.552
95	Mo	413.339	0.193992	ppb	2.794	3.800	124.445
115	In-IS	> 219221.552		ppb	1.339		232970.515
111	Cd	21.354	0.010455	ppb	44.948	71.390	8.628
118	Sn	971.144	-0.109155	ppb	10.665	22.051	1487.855
121	Sb	230.002	-0.021790	ppb	21.052	49.726	347.782
135	Ba	116825.142	140.564614	ppb	7.189	5.951	17.778
165	Ho-IS	207226.748		ppb	1.124		219218.267
159	Tb-IS	168714.877		ppb	0.491		180211.876
207	Pb	255.557	0.011453	ppb	5.272	10.178	135.556
203	Tl	36.667	0.001176	ppb	24.052	220.014	35.556
209	Bi-IS	> 135390.772		ppb	0.252		147332.570
51	V	468.897	0.693923	ppb	6.831	8.529	57.778
59	Co	2425.762	1.578475	ppb	4.832	5.912	24.444
60	Ni	1782.333	2.250608	ppb	1.817	0.879	38.889
75	As	689.509	0.218912	ppb	7.019	56.276	617.379
71	Ga-ISK	> 108896.845		ppb	1.204		112075.703
82	Se-2	78.193	2.191847	ppb	12.805	13.991	0.216
107	Ag-1	47.778	-0.024813	ppb	29.047	17.652	126.667
115	In-ISK	81459.229		ppb	0.151		84206.392
45	Sc-ISK	> 289896.486		ppb	0.993		282584.215
23	Na	6185077.012	13830.739688	ppb	1.941	1.697	1818.449
39	K	2161308.726	1884.265833	ppb	1.264	0.897	126895.555
24	Mg	5522015.289	10794.196570	ppb	0.719	0.718	358.338
159	Tb-ISK	176329.812		ppb	1.910		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-L-5-A @5
 Autosampler Position: 352
 Sample Date/Time: Monday, April 20, 2020 14:33:09
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-L-5-A @5.145
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26661.532		ppb	2.338		26775.072
9	Be	7.778	-0.000515	ppb	65.465	956.301	8.889
10	B	36887.570	140.362642	ppb	1.539	2.591	1132.267
27	Al	5165.390	0.403317	ppb	13.969	27.300	2950.305
43	Ca-2	689653.131	55630.186675	ppb	3.859	0.880	96.667
49	Ti	617.791	0.801044	ppb	3.469	7.685	223.335
52	Cr	10893.045	0.404868	ppb	4.305	7.928	8577.019
55	Mn	311201.337	29.095830	ppb	1.453	1.995	596.679
57	Fe	44688.704	174.783332	ppb	2.402	2.733	9071.773
45	Sc-IS	> 1242385.932		ppb	3.046		1308887.896
66	Zn	1423.405	1.130906	ppb	8.197	8.434	388.894
86	Sr	641731.854	395.958135	ppb	3.885	0.856	50.860
65	Cu	678.160	0.436836	ppb	9.269	9.837	81.461
69	Ga-IS	353937.090		ppb	5.479		369475.552
95	Mo	372.227	0.169348	ppb	7.616	12.711	124.445
115	In-IS	> 216128.183		ppb	1.756		232970.515
111	Cd	28.107	0.016147	ppb	24.893	34.078	8.628
118	Sn	746.686	-0.163479	ppb	7.376	6.719	1487.855
121	Sb	206.668	-0.026409	ppb	12.802	20.628	347.782
135	Ba	113380.121	138.386856	ppb	5.391	3.812	17.778
165	Ho-IS	206994.468		ppb	0.810		219218.267
159	Tb-IS	166511.515		ppb	0.952		180211.876
207	Pb	196.667	0.006448	ppb	4.484	13.726	135.556
203	Tl	11.111	-0.006311	ppb	62.450	33.329	35.556
209	Bi-IS	> 134304.019		ppb	1.573		147332.570
51	V	485.564	0.708081	ppb	7.897	11.702	57.778
59	Co	2432.429	1.554126	ppb	1.736	4.248	24.444
60	Ni	1642.317	2.032162	ppb	0.620	2.237	38.889
75	As	707.532	0.233073	ppb	14.192	108.924	617.379
71	Ga-ISK	> 110919.118		ppb	2.493		112075.703
82	Se-2	74.221	2.035939	ppb	14.460	12.298	0.216
107	Ag-1	38.889	-0.027958	ppb	17.843	7.469	126.667
115	In-ISK	81677.601		ppb	1.398		84206.392
45	Sc-ISK	> 293007.002		ppb	1.476		282584.215
23	Na	6397767.593	14156.222090	ppb	0.365	1.252	1818.449
39	K	2188065.663	1887.667019	ppb	1.031	1.005	126895.555
24	Mg	5502066.208	10642.031610	ppb	0.261	1.320	358.338
159	Tb-ISK	177846.887		ppb	0.703		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-K-4-B @5
 Autosampler Position: 353
 Sample Date/Time: Monday, April 20, 2020 14:35:55
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-K-4-B @5.146
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27377.327		ppb	2.148		26775.072
9	Be	8.889	0.000312	ppb	94.373	2421.208	8.889
10	B	17093.562	62.895466	ppb	3.510	2.768	1132.267
27	Al	8482.524	0.975711	ppb	6.079	12.703	2950.305
43	Ca-2	766626.300	61966.850422	ppb	3.672	1.295	96.667
49	Ti	691.128	0.945855	ppb	10.167	11.392	223.335
52	Cr	12672.287	0.670954	ppb	2.668	1.208	8577.019
55	Mn	1381.178	0.076409	ppb	9.625	12.374	596.679
57	Fe	49173.442	196.898561	ppb	3.457	1.291	9071.773
45	Sc-IS	> 1239796.191		ppb	2.426		1308887.896
66	Zn	861.137	0.529450	ppb	8.702	11.914	388.894
86	Sr	706445.663	436.914589	ppb	2.024	0.874	50.860
65	Cu	691.414	0.447771	ppb	2.664	4.661	81.461
69	Ga-IS	341575.323		ppb	4.593		369475.552
95	Mo	441.118	0.215678	ppb	0.436	3.162	124.445
115	In-IS	> 214152.483		ppb	1.796		232970.515
111	Cd	7.963	-0.000021	ppb	63.908	19710.742	8.628
118	Sn	638.903	-0.189803	ppb	11.219	8.385	1487.855
121	Sb	176.668	-0.032772	ppb	9.434	13.701	347.782
135	Ba	84402.473	103.954969	ppb	5.734	3.987	17.778
165	Ho-IS	205049.089		ppb	1.506		219218.267
159	Tb-IS	164037.553		ppb	0.661		180211.876
207	Pb	143.334	0.001824	ppb	13.954	104.665	135.556
203	Tl	13.333	-0.005652	ppb	75.000	52.436	35.556
209	Bi-IS	> 133579.454		ppb	1.216		147332.570
51	V	535.566	0.785292	ppb	5.783	4.880	57.778
59	Co	168.890	0.092810	ppb	16.786	18.784	24.444
60	Ni	642.237	0.762084	ppb	7.979	9.793	38.889
75	As	661.171	0.112762	ppb	7.829	89.394	617.379
71	Ga-ISK	> 111371.402		ppb	1.603		112075.703
82	Se-2	110.198	3.020585	ppb	3.426	4.733	0.216
107	Ag-1	106.667	-0.006210	ppb	10.825	52.538	126.667
115	In-ISK	79659.791		ppb	0.179		84206.392
45	Sc-ISK	> 293603.193		ppb	0.769		282584.215
23	Na	5546606.001	12246.670440	ppb	0.490	1.230	1818.449
39	K	2080456.187	1785.098840	ppb	3.408	4.044	126895.555
24	Mg	6263964.658	12090.965908	ppb	1.699	2.375	358.338
159	Tb-ISK	175077.014		ppb	0.941		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-K-8-B @5
 Autosampler Position: 354
 Sample Date/Time: Monday, April 20, 2020 14:38:40
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-K-8-B @5.147
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26363.198		ppb	1.941		26775.072
9	Be	7.778	-0.000437	ppb	65.465	1077.842	8.889
10	B	19121.679	72.548234	ppb	1.049	1.329	1132.267
27	Al	6378.097	0.639054	ppb	8.660	17.687	2950.305
43	Ca-2	488643.225	40383.776576	ppb	3.089	1.768	96.667
49	Ti	520.009	0.632590	ppb	5.875	9.604	223.335
52	Cr	12708.990	0.718105	ppb	3.874	6.696	8577.019
55	Mn	5499.949	0.474460	ppb	4.417	3.480	596.679
57	Fe	33860.098	126.294403	ppb	2.612	1.697	9071.773
45	Sc-IS	> 1212562.656		ppb	1.387		1308887.896
66	Zn	965.588	0.666164	ppb	2.350	5.474	388.894
86	Sr	461172.324	291.574993	ppb	2.166	1.045	50.860
65	Cu	758.416	0.508205	ppb	11.409	11.244	81.461
69	Ga-IS	337494.489		ppb	5.095		369475.552
95	Mo	308.892	0.132015	ppb	5.100	7.777	124.445
115	In-IS	> 214963.838		ppb	1.764		232970.515
111	Cd	11.574	0.002866	ppb	72.510	234.888	8.628
118	Sn	527.788	-0.219244	ppb	14.627	8.070	1487.855
121	Sb	146.667	-0.039879	ppb	22.384	17.750	347.782
135	Ba	61546.132	75.498243	ppb	7.591	5.966	17.778
165	Ho-IS	203698.871		ppb	1.530		219218.267
159	Tb-IS	163409.297		ppb	0.582		180211.876
207	Pb	227.778	0.009180	ppb	11.177	23.864	135.556
203	Tl	3.333	-0.008646	ppb	100.000	11.465	35.556
209	Bi-IS	> 134316.264		ppb	0.505		147332.570
51	V	335.560	0.464976	ppb	4.900	6.738	57.778
59	Co	122.223	0.064030	ppb	18.159	22.774	24.444
60	Ni	636.681	0.765841	ppb	1.047	1.786	38.889
75	As	610.853	0.016001	ppb	9.574	1041.480	617.379
71	Ga-ISK	> 109825.068		ppb	1.760		112075.703
82	Se-2	26.864	0.744521	ppb	56.246	56.819	0.216
107	Ag-1	78.889	-0.014795	ppb	12.909	19.513	126.667
115	In-ISK	79616.280		ppb	0.362		84206.392
45	Sc-ISK	> 288528.345		ppb	2.869		282584.215
23	Na	4314337.430	9694.639053	ppb	1.929	1.925	1818.449
39	K	1657012.000	1424.247254	ppb	1.251	2.052	126895.555
24	Mg	3989910.182	7839.294179	ppb	0.980	2.440	358.338
159	Tb-ISK	173778.000		ppb	1.196		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-L-2-A @5
 Autosampler Position: 355
 Sample Date/Time: Monday, April 20, 2020 14:41:26
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-L-2-A @5.148
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26539.076		ppb	1.425		26775.072
9	Be	14.444	0.005783	ppb	48.038	114.902	8.889
10	B	37304.203	144.579427	ppb	1.260	3.491	1132.267
27	Al	6243.627	0.605360	ppb	21.078	35.517	2950.305
43	Ca-2	697727.724	57279.508987	ppb	2.819	1.059	96.667
49	Ti	515.565	0.615501	ppb	8.920	11.603	223.335
52	Cr	11378.985	0.505668	ppb	5.855	14.767	8577.019
55	Mn	296488.559	28.203512	ppb	0.820	1.723	596.679
57	Fe	43575.259	173.066579	ppb	1.756	0.930	9071.773
45	Sc-IS	> 1220846.694		ppb	2.107		1308887.896
66	Zn	1670.098	1.426382	ppb	9.914	10.110	388.894
86	Sr	647467.713	406.613351	ppb	2.592	1.417	50.860
65	Cu	704.239	0.465101	ppb	8.357	10.053	81.461
69	Ga-IS	349448.522		ppb	5.524		369475.552
95	Mo	352.227	0.159845	ppb	4.856	4.263	124.445
115	In-IS	> 212978.564		ppb	3.096		232970.515
111	Cd	27.038	0.015551	ppb	39.520	54.166	8.628
118	Sn	437.785	-0.241459	ppb	8.825	2.790	1487.855
121	Sb	154.445	-0.037800	ppb	14.043	10.550	347.782
135	Ba	115408.886	142.920134	ppb	6.395	3.837	17.778
165	Ho-IS	203112.682		ppb	0.855		219218.267
159	Tb-IS	162794.567		ppb	0.671		180211.876
207	Pb	208.890	0.007740	ppb	3.322	7.528	135.556
203	Tl	3.333	-0.008626	ppb	100.000	11.794	35.556
209	Bi-IS	> 132726.000		ppb	1.237		147332.570
51	V	468.897	0.687175	ppb	4.839	4.355	57.778
59	Co	2552.451	1.648278	ppb	4.862	5.758	24.444
60	Ni	1887.903	2.368090	ppb	2.827	3.671	38.889
75	As	660.001	0.135240	ppb	11.159	144.393	617.379
71	Ga-ISK	> 109765.669		ppb	1.034		112075.703
82	Se-2	86.185	2.396108	ppb	8.143	9.165	0.216
107	Ag-1	68.889	-0.018069	ppb	36.638	44.576	126.667
115	In-ISK	80256.893		ppb	2.154		84206.392
45	Sc-ISK	> 290272.216		ppb	1.810		282584.215
23	Na	6295170.968	14059.391687	ppb	1.415	0.404	1818.449
39	K	2185889.518	1904.695792	ppb	0.902	1.238	126895.555
24	Mg	5587260.521	10909.591948	ppb	0.640	1.887	358.338
159	Tb-ISK	175179.564		ppb	0.695		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25670-L-5-A @5
 Autosampler Position: 356
 Sample Date/Time: Monday, April 20, 2020 14:44:12
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25670-L-5-A @5.149
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27199.204		ppb	1.230		26775.072
9	Be	12.222	0.003657	ppb	31.492	89.282	8.889
10	B	36161.276	140.753553	ppb	1.899	3.944	1132.267
27	Al	4841.932	0.367704	ppb	2.310	4.831	2950.305
43	Ca-2	668993.989	55188.979280	ppb	3.413	0.880	96.667
49	Ti	531.121	0.650047	ppb	14.883	19.290	223.335
52	Cr	10780.733	0.425691	ppb	0.978	14.158	8577.019
55	Mn	306219.958	29.279688	ppb	1.633	2.642	596.679
57	Fe	43031.411	171.426876	ppb	2.731	1.368	9071.773
45	Sc-IS	> 1215009.441		ppb	3.340		1308887.896
66	Zn	1301.171	1.029923	ppb	10.268	9.747	388.894
86	Sr	621946.966	392.536881	ppb	2.530	0.834	50.860
65	Cu	622.829	0.407327	ppb	2.636	6.233	81.461
69	Ga-IS	345600.766		ppb	7.413		369475.552
95	Mo	318.892	0.138420	ppb	7.342	10.469	124.445
115	In-IS	> 212170.158		ppb	3.390		232970.515
111	Cd	22.664	0.012193	ppb	38.715	60.097	8.628
118	Sn	440.007	-0.240685	ppb	17.718	7.022	1487.855
121	Sb	132.223	-0.042722	ppb	2.911	2.243	347.782
135	Ba	110867.857	137.775101	ppb	7.355	4.103	17.778
165	Ho-IS	205357.743		ppb	0.651		219218.267
159	Tb-IS	164417.461		ppb	0.891		180211.876
207	Pb	182.223	0.005344	ppb	12.180	39.343	135.556
203	Tl	4.444	-0.008312	ppb	86.603	13.793	35.556
209	Bi-IS	> 132966.013		ppb	1.413		147332.570
51	V	470.008	0.696739	ppb	7.198	9.922	57.778
59	Co	2462.434	1.603296	ppb	1.964	2.778	24.444
60	Ni	1670.098	2.106423	ppb	8.014	7.212	38.889
75	As	618.646	0.047677	ppb	3.442	163.166	617.379
71	Ga-ISK	> 108828.613		ppb	1.936		112075.703
82	Se-2	79.206	2.221118	ppb	5.680	7.317	0.216
107	Ag-1	50.000	-0.024098	ppb	33.333	21.549	126.667
115	In-ISK	78335.417		ppb	1.478		84206.392
45	Sc-ISK	> 289822.995		ppb	1.426		282584.215
23	Na	6285292.827	14059.815276	ppb	0.907	1.326	1818.449
39	K	2161716.083	1885.390947	ppb	0.917	1.668	126895.555
24	Mg	5428403.246	10614.488053	ppb	0.496	0.947	358.338
159	Tb-ISK	172680.801		ppb	1.111		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-L-4-A @5
 Autosampler Position: 357
 Sample Date/Time: Monday, April 20, 2020 14:46:57
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-L-4-A @5.150
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	27169.150		ppb	1.792		26775.072
9	Be	3.333	-0.004575	ppb	100.000	67.405	8.889
10	B	17069.086	64.596743	ppb	3.015	2.359	1132.267
27	Al	19548.936	2.959914	ppb	4.016	6.082	2950.305
43	Ca-2	746592.397	61954.737759	ppb	4.420	1.906	96.667
49	Ti	654.460	0.908161	ppb	9.257	9.895	223.335
52	Cr	12400.937	0.680075	ppb	2.173	1.670	8577.019
55	Mn	2435.763	0.181722	ppb	0.778	3.327	596.679
57	Fe	48769.777	201.386730	ppb	0.937	2.277	9071.773
45	Sc-IS	> 1207511.449		ppb	2.655		1308887.896
66	Zn	661.127	0.333019	ppb	10.496	17.727	388.894
86	Sr	714764.014	453.915458	ppb	2.048	1.425	50.860
65	Cu	540.401	0.347189	ppb	14.104	13.559	81.461
69	Ga-IS	339866.019		ppb	6.080		369475.552
95	Mo	488.897	0.255447	ppb	17.521	20.232	124.445
115	In-IS	> 216198.831		ppb	1.897		232970.515
111	Cd	12.307	0.003504	ppb	48.088	141.031	8.628
118	Sn	458.896	-0.237675	ppb	11.943	5.449	1487.855
121	Sb	133.334	-0.043152	ppb	28.395	18.482	347.782
135	Ba	84332.034	102.893030	ppb	5.608	4.039	17.778
165	Ho-IS	205094.067		ppb	1.082		219218.267
159	Tb-IS	165158.193		ppb	1.189		180211.876
207	Pb	170.000	0.004370	ppb	11.927	40.074	135.556
203	Tl	4.444	-0.008293	ppb	114.564	18.443	35.556
209	Bi-IS	> 131827.718		ppb	1.008		147332.570
51	V	576.678	0.870762	ppb	7.581	9.105	57.778
59	Co	183.335	0.104262	ppb	7.925	8.525	24.444
60	Ni	651.126	0.787531	ppb	1.798	1.426	38.889
75	As	666.209	0.155030	ppb	4.647	57.127	617.379
71	Ga-ISK	> 109383.861		ppb	0.893		112075.703
82	Se-2	102.537	2.860703	ppb	9.018	9.350	0.216
107	Ag-1	122.223	-0.000480	ppb	17.534	1417.945	126.667
115	In-ISK	79196.593		ppb	2.491		84206.392
45	Sc-ISK	> 291194.661		ppb	0.838		282584.215
23	Na	5519618.563	12287.981930	ppb	0.879	1.456	1818.449
39	K	2102767.207	1821.281061	ppb	0.614	0.324	126895.555
24	Mg	6222924.313	12109.375404	ppb	1.626	0.986	358.338
159	Tb-ISK	175810.579		ppb	0.691		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1
 Operator Name: US26_USR_INS00175
Sample ID: 570-25865-L-8-A @5
 Autosampler Position: 358
 Sample Date/Time: Monday, April 20, 2020 14:49:43
 Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cel\300d\july2018-2\epa 200.8_6020.mth
 Dataset File: U:\DataSet\2020\200420E1\570-25865-L-8-A @5.151
 Initial Sample Quantity (mg):
 Sample Prep Volume (mL):
 Diluted to Volume (mL):
 Aliquot Volume (mL):
 Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	26821.830		ppb	2.146		26775.072
9	Be	2.222	-0.005678	ppb	86.603	30.948	8.889
10	B	19543.363	73.593358	ppb	2.057	2.705	1132.267
27	Al	11679.222	1.547978	ppb	4.131	1.478	2950.305
43	Ca-2	491702.077	40295.072017	ppb	3.031	0.406	96.667
49	Ti	523.343	0.631020	ppb	0.637	6.205	223.335
52	Cr	12670.065	0.697351	ppb	3.554	11.948	8577.019
55	Mn	8121.197	0.719886	ppb	0.451	3.389	596.679
57	Fe	33622.899	123.720022	ppb	4.130	4.251	9071.773
45	Sc-IS	> 1223041.906		ppb	3.076		1308887.896
66	Zn	648.904	0.311818	ppb	4.184	11.468	388.894
86	Sr	459206.768	287.878017	ppb	2.807	0.451	50.860
65	Cu	346.178	0.199202	ppb	10.278	10.367	81.461
69	Ga-IS	333813.744		ppb	6.587		369475.552
95	Mo	307.781	0.129503	ppb	6.346	9.735	124.445
115	In-IS	> 212231.391		ppb	3.081		232970.515
111	Cd	13.798	0.004883	ppb	60.548	138.755	8.628
118	Sn	401.117	-0.250543	ppb	3.460	0.782	1487.855
121	Sb	106.667	-0.048626	ppb	8.268	5.174	347.782
135	Ba	61753.792	76.695986	ppb	8.280	5.287	17.778
165	Ho-IS	202818.673		ppb	1.431		219218.267
159	Tb-IS	164521.021		ppb	1.817		180211.876
207	Pb	241.112	0.010622	ppb	11.919	20.928	135.556
203	Tl	8.889	-0.006971	ppb	57.282	21.665	35.556
209	Bi-IS	> 132523.068		ppb	1.666		147332.570
51	V	326.670	0.453246	ppb	7.070	6.951	57.778
59	Co	124.445	0.065973	ppb	6.186	7.108	24.444
60	Ni	625.569	0.756525	ppb	5.338	4.662	38.889
75	As	638.558	0.091083	ppb	9.470	155.185	617.379
71	Ga-ISK	> 109111.822		ppb	1.377		112075.703
82	Se-2	29.885	0.831100	ppb	20.416	20.072	0.216
107	Ag-1	64.445	-0.019349	ppb	5.973	5.083	126.667
115	In-ISK	79524.244		ppb	0.290		84206.392
45	Sc-ISK	> 289982.127		ppb	2.028		282584.215
23	Na	4355594.937	9736.131014	ppb	2.321	1.680	1818.449
39	K	1673060.917	1431.084537	ppb	0.970	1.183	126895.555
24	Mg	4059270.401	7933.589648	ppb	0.791	1.469	358.338
159	Tb-ISK	175563.706		ppb	1.549		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 14:52:30

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.152

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	25569.531		ppb	1.120			26775.072
9	Be	|	111688.305	103.946516	ppb	1.584	3.007		8.889
10	B	|	66770.141	262.266126	ppb	1.439	1.806		1132.267
27	Al	|	605315.371	104.876263	ppb	0.810	1.767		2950.305
43	Ca-2	|	62690.667	5144.116296	ppb	2.978	0.621		96.667
49	Ti	|	51674.406	103.394261	ppb	0.901	2.607		223.335
52	Cr	|	709323.434	105.196170	ppb	1.072	1.644		8577.019
55	Mn	|	1056641.914	100.742937	ppb	0.482	1.928		596.679
57	Fe	|	1037071.453	5074.635643	ppb	1.431	1.359		9071.773
45	Sc-IS	>	1219810.806		ppb	2.392			1308887.896
66	Zn	|	91924.380	100.071795	ppb	5.930	3.815		388.894
86	Sr	|	166710.102	104.775910	ppb	1.727	1.035		50.860
65	Cu	|	136285.706	100.826323	ppb	4.512	2.290		81.461
69	Ga-IS	|	349822.733		ppb	6.107			369475.552
95	Mo	|	150025.626	101.586626	ppb	4.079	1.878		124.445
115	In-IS	>	220796.695		ppb	2.577			232970.515
111	Cd	|	125581.869	98.794718	ppb	2.094	0.817		8.628
118	Sn	|	400809.024	100.793993	ppb	2.899	1.371		1487.855
121	Sb	|	453059.088	100.774237	ppb	2.384	1.434		347.782
135	Ba	|	77664.461	92.767184	ppb	6.490	4.404		17.778
165	Ho-IS	|	209324.741		ppb	0.909			219218.267
159	Tb-IS	|	167660.389		ppb	0.930			180211.876
207	Pb	|	1196110.720	99.896446	ppb	1.088	0.554		135.556
203	Tl	|	346853.930	97.701694	ppb	1.111	1.067		35.556
209	Bi-IS	>	141740.896		ppb	1.391			147332.570
51	V	|	62235.291	102.230175	ppb	1.601	2.175		57.778
59	Co	|	157142.949	100.974558	ppb	1.001	1.568		24.444
60	Ni	|	79607.882	100.427280	ppb	1.219	0.697		38.889
75	As	|	41858.940	98.388753	ppb	2.404	1.858		617.379
71	Ga-ISK	>	111309.750		ppb	0.597			112075.703
82	Se-2	|	3641.030	100.008362	ppb	1.896	2.280		0.216
107	Ag-1	|	302173.916	97.256570	ppb	2.735	2.210		126.667
115	In-ISK	|	82068.252		ppb	2.530			84206.392
45	Sc-ISK	>	287379.736		ppb	1.017			282584.215
23	Na	|	2330176.673	5254.092471	ppb	0.589	1.377		1818.449
39	K	|	5744529.959	5255.537045	ppb	0.336	1.376		126895.555
24	Mg	|	2650082.928	5224.991391	ppb	1.329	0.400		358.338
159	Tb-ISK	|	177076.111		ppb	1.048			178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 14:55:15

Method File: c:\users\public\documents\perkinelmer syngistix\icpms\cell\300d\july2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.153

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	25283.471		ppb	1.993		26775.072
9	Be	14.444	0.006222	ppb	70.501	157.927	8.889
10	B	955.588	-0.282396	ppb	9.428	156.305	1132.267
27	Al	3122.580	0.080428	ppb	27.065	187.140	2950.305
43	Ca-2	71.667	-1.313799	ppb	34.416	170.763	96.667
49	Ti	214.446	0.025484	ppb	9.370	188.987	223.335
52	Cr	8034.481	0.041147	ppb	0.495	79.710	8577.019
55	Mn	644.459	0.010239	ppb	2.849	31.987	596.679
57	Fe	8295.744	0.380626	ppb	3.733	190.282	9071.773
45	Sc-IS	> 1185915.907		ppb	2.502		1308887.896
66	Zn	388.894	0.041476	ppb	6.875	85.405	388.894
86	Sr	17.464	-0.018171	ppb	211.791	134.804	50.860
65	Cu	79.736	0.004636	ppb	23.212	321.958	81.461
69	Ga-IS	326466.776		ppb	5.150		369475.552
95	Mo	503.342	0.271855	ppb	10.658	10.755	124.445
115	In-IS	> 212534.736		ppb	2.637		232970.515
111	Cd	15.610	0.006242	ppb	42.014	81.359	8.628
118	Sn	2471.326	0.291643	ppb	7.917	13.327	1487.855
121	Sb	410.006	0.021272	ppb	12.700	45.586	347.782
135	Ba	16.667	0.000635	ppb	20.000	738.204	17.778
165	Ho-IS	202265.555		ppb	2.042		219218.267
159	Tb-IS	160431.401		ppb	0.800		180211.876
207	Pb	296.668	0.014735	ppb	14.864	25.160	135.556
203	Tl	90.000	0.016612	ppb	25.926	41.498	35.556
209	Bi-IS	> 136997.099		ppb	0.545		147332.570
51	V	58.889	0.005335	ppb	11.783	244.814	57.778
59	Co	35.556	0.007884	ppb	10.825	29.519	24.444
60	Ni	26.667	-0.014193	ppb	21.651	50.199	38.889
75	As	611.561	0.038049	ppb	4.178	195.946	617.379
71	Ga-ISK	> 108236.302		ppb	1.264		112075.703
82	Se-2	2.557	0.066387	ppb	23.118	25.549	0.216
107	Ag-1	123.334	0.000307	ppb	15.048	1913.955	126.667
115	In-ISK	78864.657		ppb	1.129		84206.392
45	Sc-ISK	> 278438.529		ppb	0.846		282584.215
23	Na	1775.111	-0.038363	ppb	5.862	654.268	1818.449
39	K	133859.791	8.533062	ppb	0.588	19.165	126895.555
24	Mg	576.678	0.454672	ppb	7.771	18.214	358.338
159	Tb-ISK	171558.220		ppb	1.891		178233.633

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Monday, April 20, 2020 15:09:35

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICIS-23447.155

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	25430.396		ppb		1.629	
9	Be	7.778		ppb		24.744	
10	B	510.009		ppb		4.935	
27	Al	2716.925		ppb		1.488	
43	Ca-2	85.000		ppb		47.059	
49	Ti	201.113		ppb		18.850	
52	Cr	8347.996		ppb		3.757	
55	Mn	556.678		ppb		5.186	
57	Fe	7832.147		ppb		1.095	
45	Sc-IS	> 1187581.035		ppb		1.937	
66	Zn	398.895		ppb		14.288	
86	Sr	5.279		ppb		841.776	
65	Cu	43.149		ppb		15.345	
69	Ga-IS	327008.223		ppb		5.294	
95	Mo	28.889		ppb		24.019	
115	In-IS	> 211478.638		ppb		1.925	
111	Cd	2.162		ppb		178.254	
118	Sn	883.361		ppb		5.283	
121	Sb	196.668		ppb		4.484	
135	Ba	14.444		ppb		35.251	
165	Ho-IS	202381.349		ppb		1.114	
159	Tb-IS	161992.242		ppb		1.148	
207	Pb	96.667		ppb		26.034	
203	Tl	8.889		ppb		43.301	
209	Bi-IS	> 135216.948		ppb		0.914	
51	V	30.000		ppb		19.245	
59	Co	23.333		ppb		28.571	
60	Ni	31.111		ppb		6.186	
75	As	666.032		ppb		6.846	
71	Ga-ISK	> 108493.800		ppb		1.261	
82	Se-2	3.560		ppb		155.170	
107	Ag-1	33.333		ppb		10.000	
115	In-ISK	79139.211		ppb		0.379	
45	Sc-ISK	> 279633.789		ppb		0.934	
23	Na	1230.053		ppb		2.151	
39	K	127163.510		ppb		1.134	
24	Mg	131.667		ppb		14.377	
159	Tb-ISK	168794.758		ppb		1.054	

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Monday, April 20, 2020 15:12:22

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\IC-210761.156

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	25346.915		ppb		1.655		25430.396
9	Be	|	215387.708	200.000000	ppb	2.353	3.319		7.778
10	B	|	129330.700	500.000000	ppb	1.872	3.645		510.009
27	Al	|	1168493.305	200.000000	ppb	1.167	0.761		2716.925
43	Ca-2	|	122019.287	10200.000000	ppb	3.408	2.285		85.000
49	Ti	|	100796.639	200.000000	ppb	1.708	1.391		201.113
52	Cr	|	1395034.029	200.000000	ppb	2.639	0.748		8347.996
55	Mn	|	2204564.763	200.000000	ppb	2.821	1.017		556.678
57	Fe	|	2124801.980	10200.000000	ppb	6.344	4.573		7832.147
45	Sc-IS	>	1205428.101		ppb	1.917			1187581.035
66	Zn	|	179519.854	200.000000	ppb	5.548	3.685		398.895
86	Sr	|	329308.979	200.000000	ppb	3.503	1.613		5.279
65	Cu	|	266929.942	200.000000	ppb	5.642	3.763		43.149
69	Ga-IS	|	363567.668		ppb	5.640			327008.223
95	Mo	|	298308.978	200.000000	ppb	4.648	2.821		28.889
115	In-IS	>	215768.029		ppb	3.097			211478.638
111	Cd	|	243183.659	200.000000	ppb	1.968	1.428		2.162
118	Sn	|	805612.547	200.000000	ppb	3.795	0.872		883.361
121	Sb	|	889059.120	200.000000	ppb	3.058	0.243		196.668
135	Ba	|	150319.590	200.000000	ppb	7.435	4.404		14.444
165	Ho-IS	|	209868.106		ppb	0.270			202381.349
159	Tb-IS	|	166853.328		ppb	1.478			161992.242
207	Pb	|	2315231.088	200.000000	ppb	0.345	0.589		96.667
203	Tl	|	666652.568	200.000000	ppb	0.341	0.135		8.889
209	Bi-IS	>	137561.367		ppb	0.456			135216.948
51	V	|	123634.953	200.000000	ppb	1.068	0.477		30.000
59	Co	|	313206.289	200.000000	ppb	0.611	0.867		23.333
60	Ni	|	151905.644	200.000000	ppb	1.030	0.796		31.111
75	As	|	82426.383	200.000000	ppb	0.929	2.082		666.032
71	Ga-ISK	>	109136.461		ppb	1.471			108493.800
82	Se-2	|	7112.658	200.000000	ppb	1.855	1.318		3.560
107	Ag-1	|	586443.341	200.000000	ppb	0.898	0.577		33.333
115	In-ISK	|	80197.511		ppb	1.034			79139.211
45	Sc-ISK	>	284332.375		ppb	1.934			279633.789
23	Na	|	4487130.967	10200.000000	ppb	0.939	2.244		1230.053
39	K	|	11072483.570	10200.000000	ppb	0.425	1.775		127163.510
24	Mg	|	5091803.567	10200.000000	ppb	0.542	2.054		131.667
159	Tb-ISK	|	173562.024		ppb	0.918			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 15:15:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.157

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		25419.291		ppb		4.401		25430.396
9	Be	|		107726.901	100.829091	ppb		0.997	2.198	7.778
10	B	|		65272.153	253.332587	ppb		2.113	2.549	510.009
27	Al	|		585301.865	100.756934	ppb		1.268	1.169	2716.925
43	Ca-2	|		60611.704	5104.128545	ppb		2.665	1.174	85.000
49	Ti	|		50209.218	100.218625	ppb		2.190	1.156	201.113
52	Cr	|		692177.210	99.445432	ppb		1.274	1.185	8347.996
55	Mn	|		1034192.809	94.568324	ppb		1.644	0.733	556.678
57	Fe	|		1003740.918	4840.279576	ppb		1.742	1.276	7832.147
45	Sc-IS	>		1195852.406		ppb		2.366		1187581.035
66	Zn	|		88649.076	99.334178	ppb		4.859	2.627	398.895
86	Sr	|		162941.844	99.778928	ppb		3.103	2.504	5.279
65	Cu	|		133586.452	100.887760	ppb		5.332	3.467	43.149
69	Ga-IS	|		340190.229		ppb		5.314		327008.223
95	Mo	|		147380.404	99.612410	ppb		3.844	2.248	28.889
115	In-IS	>		215702.121		ppb		2.019		211478.638
111	Cd	|		122124.236	100.436032	ppb		2.473	0.658	2.162
118	Sn	|		398543.661	98.862460	ppb		2.937	1.224	883.361
121	Sb	|		445049.153	100.118758	ppb		2.640	1.145	196.668
135	Ba	|		75153.685	100.015653	ppb		8.591	6.683	14.444
165	Ho-IS	|		203473.427		ppb		1.376		202381.349
159	Tb-IS	|		164750.157		ppb		0.953		161992.242
207	Pb	|		1150723.836	98.900351	ppb		1.400	1.425	96.667
203	Tl	|		334388.522	99.818972	ppb		0.987	1.609	8.889
209	Bi-IS	>		138256.931		ppb		0.631		135216.948
51	V	|		60825.884	96.622133	ppb		0.127	1.533	30.000
59	Co	|		153796.785	96.448330	ppb		0.494	1.339	23.333
60	Ni	|		78714.045	101.766091	ppb		0.689	1.043	31.111
75	As	|		42355.851	100.117700	ppb		0.726	1.501	666.032
71	Ga-ISK	>		111125.054		ppb		1.645		108493.800
82	Se-2	|		3593.015	99.191377	ppb		0.331	1.856	3.560
107	Ag-1	|		301203.428	100.895395	ppb		0.764	2.166	33.333
115	In-ISK	|		80692.576		ppb		0.636		79139.211
45	Sc-ISK	>		289181.236		ppb		1.315		279633.789
23	Na	|		2275018.787	5082.250385	ppb		0.824	0.525	1230.053
39	K	|		5630427.060	5038.517906	ppb		1.133	0.497	127163.510
24	Mg	|		2573916.553	5068.442583	ppb		0.886	0.523	131.667
159	Tb-ISK	|		175409.028		ppb		0.762		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 15:17:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.158

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	24302.887		ppb	2.744		25430.396
9	Be	14.444	0.006710	ppb	26.647	59.117	7.778
10	B	918.919	1.720089	ppb	8.747	26.637	510.009
27	Al	3001.443	0.062219	ppb	28.026	223.658	2716.925
43	Ca-2	45.000	-3.279829	ppb	19.245	25.251	85.000
49	Ti	233.335	0.080025	ppb	14.499	110.806	201.113
52	Cr	7093.983	-0.154038	ppb	1.351	30.587	8347.996
55	Mn	624.458	0.007887	ppb	7.048	62.056	556.678
57	Fe	7553.107	-0.328846	ppb	1.170	291.449	7832.147
45	Sc-IS	> 1155887.628		ppb	3.633		1187581.035
66	Zn	418.895	0.034721	ppb	14.766	170.207	398.895
86	Sr	-0.951	-0.003681	ppb	1936.431	314.483	5.279
65	Cu	68.520	0.020746	ppb	5.524	11.811	43.149
69	Ga-IS	315829.361		ppb	4.278		327008.223
95	Mo	576.678	0.383541	ppb	6.359	4.016	28.889
115	In-IS	> 211631.512		ppb	3.310		211478.638
111	Cd	17.678	0.012924	ppb	28.375	29.217	2.162
118	Sn	3140.347	0.570831	ppb	9.184	8.605	883.361
121	Sb	495.564	0.068442	ppb	11.850	16.717	196.668
135	Ba	15.556	0.001559	ppb	32.733	452.064	14.444
165	Ho-IS	199020.496		ppb	2.183		202381.349
159	Tb-IS	160094.453		ppb	1.706		161992.242
207	Pb	432.225	0.029950	ppb	4.385	6.290	96.667
203	Tl	210.002	0.062080	ppb	9.913	8.497	8.889
209	Bi-IS	> 133634.471		ppb	1.728		135216.948
51	V	41.111	0.018424	ppb	28.475	103.494	30.000
59	Co	23.333	0.000061	ppb	51.50812702	824	23.333
60	Ni	53.333	0.029721	ppb	38.017	89.731	31.111
75	As	624.328	-0.094218	ppb	2.126	29.093	666.032
71	Ga-ISK	> 107901.531		ppb	0.677		108493.800
82	Se-2	3.599	0.001758	ppb	57.966	3384.784	3.560
107	Ag-1	163.334	0.044908	ppb	3.535	4.588	33.333
115	In-ISK	78548.456		ppb	0.384		79139.211
45	Sc-ISK	> 276115.661		ppb	1.839		279633.789
23	Na	1473.409	0.608275	ppb	3.815	32.154	1230.053
39	K	132565.600	6.757291	ppb	0.860	47.624	127163.510
24	Mg	525.010	0.816134	ppb	13.093	19.399	131.667
159	Tb-ISK	169629.173		ppb	0.619		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Monday, April 20, 2020 15:20:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICVL-210771.159

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	25020.782		ppb	0.748		25430.396
9	Be	1107.821	1.048999	ppb	8.898	9.311	7.778
10	B	13405.176	51.403855	ppb	0.725	1.583	510.009
27	Al	290115.399	50.623237	ppb	2.700	0.940	2716.925
43	Ca-2	686.683	51.788235	ppb	11.771	13.617	85.000
49	Ti	654.459	0.930481	ppb	3.578	6.038	201.113
52	Cr	13970.161	0.847260	ppb	0.725	3.846	8347.996
55	Mn	11076.516	0.980900	ppb	2.134	1.430	556.678
57	Fe	17017.909	45.923452	ppb	1.270	1.946	7832.147
45	Sc-IS	> 1173987.330		ppb	1.801		1187581.035
66	Zn	4771.910	5.018629	ppb	5.786	4.402	398.895
86	Sr	1644.222	1.022375	ppb	1.700	1.319	5.279
65	Cu	1368.811	1.021030	ppb	8.160	8.356	43.149
69	Ga-IS	322656.845		ppb	5.052		327008.223
95	Mo	1638.983	1.109411	ppb	2.908	3.692	28.889
115	In-IS	> 212670.706		ppb	1.984		211478.638
111	Cd	1243.279	1.035931	ppb	2.831	4.663	2.162
118	Sn	5134.256	1.071263	ppb	0.811	3.399	883.361
121	Sb	4568.508	0.998124	ppb	1.298	2.978	196.668
135	Ba	732.241	0.969598	ppb	3.818	2.196	14.444
165	Ho-IS	201719.024		ppb	2.060		202381.349
159	Tb-IS	161666.424		ppb	1.544		161992.242
207	Pb	11586.307	1.007130	ppb	2.827	3.377	96.667
203	Tl	3349.282	1.016888	ppb	2.989	3.532	8.889
209	Bi-IS	> 135583.710		ppb	0.546		135216.948
51	V	617.791	0.964437	ppb	7.713	6.409	30.000
59	Co	1492.300	0.951840	ppb	1.230	2.668	23.333
60	Ni	801.134	1.029642	ppb	5.525	7.311	31.111
75	As	1001.709	0.845616	ppb	5.024	10.172	666.032
71	Ga-ISK	> 107593.722		ppb	1.597		108493.800
82	Se-2	47.578	1.261592	ppb	32.278	36.053	3.560
107	Ag-1	3010.317	1.030447	ppb	3.522	5.045	33.333
115	In-ISK	78453.144		ppb	1.393		79139.211
45	Sc-ISK	> 277389.479		ppb	0.673		279633.789
23	Na	23023.541	50.803325	ppb	1.469	1.203	1230.053
39	K	184041.247	55.307107	ppb	0.362	1.015	127163.510
24	Mg	24704.677	50.447385	ppb	0.966	0.459	131.667
159	Tb-ISK	169872.037		ppb	0.651		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25221-F-1-A

Autosampler Position: 402

Sample Date/Time: Monday, April 20, 2020 15:23:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25221-F-1-A.160

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28023.042		ppb	3.908		25430.396
9	Be	26.667	0.017796	ppb	12.500	16.862	7.778
10	B	69681.875	272.460803	ppb	3.293	0.481	510.009
27	Al	783356.218	135.942803	ppb	4.355	2.478	2716.925
43	Ca-2	296755.686	25193.921253	ppb	4.171	1.868	85.000
49	Ti	3004.761	5.665937	ppb	2.482	6.048	201.113
52	Cr	14660.853	0.925667	ppb	1.354	4.788	8347.996
55	Mn	1248904.678	115.077396	ppb	1.989	3.059	556.678
57	Fe	174496.309	815.976908	ppb	2.387	1.958	7832.147
45	Sc-IS	> 1187407.092		ppb	3.414		1187581.035
66	Zn	28943.787	32.372866	ppb	5.114	4.048	398.895
86	Sr	289708.242	178.755721	ppb	1.312	2.629	5.279
65	Cu	12957.895	9.825863	ppb	5.803	3.326	43.149
69	Ga-IS	322725.716		ppb	5.754		327008.223
95	Mo	4300.647	2.910067	ppb	1.628	2.182	28.889
115	In-IS	> 211141.746		ppb	1.963		211478.638
111	Cd	70.969	0.057811	ppb	4.672	3.987	2.162
118	Sn	1990.139	0.281321	ppb	4.690	4.971	883.361
121	Sb	3531.548	0.766934	ppb	1.464	0.571	196.668
135	Ba	28678.826	39.000379	ppb	5.969	4.782	14.444
165	Ho-IS	202221.538		ppb	1.858		202381.349
159	Tb-IS	162320.318		ppb	0.554		161992.242
207	Pb	45133.883	4.049695	ppb	2.373	3.246	96.667
203	Tl	155.556	0.045868	ppb	5.393	6.586	8.889
209	Bi-IS	> 132194.460		ppb	1.439		135216.948
51	V	1782.334	2.871102	ppb	5.178	6.615	30.000
59	Co	643.348	0.400728	ppb	5.839	5.913	23.333
60	Ni	2035.701	2.672938	ppb	4.773	6.214	31.111
75	As	1477.934	2.021024	ppb	3.995	9.579	666.032
71	Ga-ISK	> 107848.953		ppb	1.385		108493.800
82	Se-2	13.547	0.283485	ppb	47.381	62.306	3.560
107	Ag-1	54.445	0.007368	ppb	15.408	41.266	33.333
115	In-ISK	78041.912		ppb	0.127		79139.211
45	Sc-ISK	> 284133.604		ppb	1.181		279633.789
23	Na	16591713.819	37737.184795	ppb	2.179	1.076	1230.053
39	K	7860975.792	7210.222435	ppb	1.143	0.653	127163.510
24	Mg	3892668.189	7801.206432	ppb	1.307	0.244	131.667
159	Tb-ISK	172503.302		ppb	0.804		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25639-A-1-A @5

Autosampler Position: 403

Sample Date/Time: Monday, April 20, 2020 15:26:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25639-A-1-A @5.161

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	30442.403		ppb	0.923		25430.396
9	Be	11.111	0.002704	ppb	69.282	251.706	7.778
10	B	52165.082	196.041459	ppb	1.487	1.081	510.009
27	Al	353299.238	58.836156	ppb	1.405	1.410	2716.925
43	Ca-2	212884.761	17419.651511	ppb	1.689	0.742	85.000
49	Ti	1513.414	2.538078	ppb	9.143	10.279	201.113
52	Cr	13332.886	0.659983	ppb	0.499	5.293	8347.996
55	Mn	203307.710	18.004034	ppb	1.170	0.960	556.678
57	Fe	32293.128	114.024848	ppb	1.106	1.353	7832.147
45	Sc-IS	> 1231981.423		ppb	1.941		1187581.035
66	Zn	8174.564	8.482468	ppb	4.997	4.686	398.895
86	Sr	310922.357	184.797036	ppb	2.087	0.188	5.279
65	Cu	1092.886	0.768234	ppb	8.662	7.245	43.149
69	Ga-IS	327261.921		ppb	5.784		327008.223
95	Mo	9317.487	6.093075	ppb	4.891	3.142	28.889
115	In-IS	> 213914.014		ppb	2.779		211478.638
111	Cd	13.767	0.009622	ppb	24.697	29.902	2.162
118	Sn	1110.043	0.054181	ppb	11.305	52.795	883.361
121	Sb	1363.399	0.264252	ppb	6.371	6.327	196.668
135	Ba	23358.061	31.327620	ppb	8.477	5.930	14.444
165	Ho-IS	206709.988		ppb	2.809		202381.349
159	Tb-IS	167160.254		ppb	1.653		161992.242
207	Pb	3626.851	0.315475	ppb	3.632	2.572	96.667
203	Tl	51.111	0.013145	ppb	20.964	25.122	8.889
209	Bi-IS	> 133010.847		ppb	1.167		135216.948
51	V	676.683	1.032312	ppb	8.908	9.913	30.000
59	Co	465.563	0.278627	ppb	18.634	19.913	23.333
60	Ni	1894.570	2.421769	ppb	2.214	3.313	31.111
75	As	1111.032	1.042025	ppb	5.638	9.827	666.032
71	Ga-ISK	> 110579.758		ppb	1.870		108493.800
82	Se-2	28.534	0.689216	ppb	26.277	28.298	3.560
107	Ag-1	34.444	0.000127	ppb	31.109	2698.297	33.333
115	In-ISK	80641.508		ppb	0.632		79139.211
45	Sc-ISK	> 293377.623		ppb	1.064		279633.789
23	Na	30919129.888	68120.964202	ppb	0.072	1.097	1230.053
39	K	5382614.517	4741.377710	ppb	1.913	2.531	127163.510
24	Mg	3586484.992	6961.520840	ppb	0.306	0.757	131.667
159	Tb-ISK	177409.485		ppb	0.555		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25730-A-1-A @5

Autosampler Position: 404

Sample Date/Time: Monday, April 20, 2020 15:29:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25730-A-1-A @5.162

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	25903.465		ppb	0.977		25430.396
9	Be	12.222	0.004209	ppb	62.984	174.169	7.778
10	B	4631.862	16.168049	ppb	0.889	3.798	510.009
27	Al	129946.177	22.066399	ppb	1.292	1.491	2716.925
43	Ca-2	71284.170	6020.918570	ppb	2.849	0.648	85.000
49	Ti	383.339	0.363861	ppb	16.568	32.620	201.113
52	Cr	13414.075	0.734565	ppb	2.539	9.473	8347.996
55	Mn	2287788.791	209.834764	ppb	2.481	0.615	556.678
57	Fe	26545.780	91.009994	ppb	4.151	2.525	7832.147
45	Sc-IS	> 1192460.340		ppb	2.464		1187581.035
66	Zn	23862.203	26.473645	ppb	7.175	4.889	398.895
86	Sr	55603.091	34.135788	ppb	3.385	0.939	5.279
65	Cu	2078.499	1.542041	ppb	4.699	2.922	43.149
69	Ga-IS	315975.094		ppb	5.881		327008.223
95	Mo	347.782	0.215860	ppb	11.555	10.497	28.889
115	In-IS	> 212410.862		ppb	2.147		211478.638
111	Cd	17.047	0.012384	ppb	22.177	23.350	2.162
118	Sn	754.464	-0.033427	ppb	2.088	22.771	883.361
121	Sb	184.446	-0.003035	ppb	10.894	127.761	196.668
135	Ba	9702.190	13.099206	ppb	6.022	3.998	14.444
165	Ho-IS	203920.725		ppb	0.763		202381.349
159	Tb-IS	162449.706		ppb	1.678		161992.242
207	Pb	2743.439	0.238794	ppb	1.353	2.098	96.667
203	Tl	13.333	0.001461	ppb	0.000	2.851	8.889
209	Bi-IS	> 131850.145		ppb	0.996		135216.948
51	V	332.226	0.494489	ppb	11.278	14.199	30.000
59	Co	270.003	0.159113	ppb	4.938	6.563	23.333
60	Ni	545.566	0.683388	ppb	12.133	11.900	31.111
75	As	637.257	-0.064829	ppb	2.189	92.183	666.032
71	Ga-ISK	> 108126.617		ppb	1.643		108493.800
82	Se-2	6.581	0.086635	ppb	32.092	72.515	3.560
107	Ag-1	24.444	-0.003026	ppb	7.873	17.945	33.333
115	In-ISK	78317.340		ppb	0.675		79139.211
45	Sc-ISK	> 284055.763		ppb	1.821		279633.789
23	Na	3793886.549	8630.988660	ppb	1.645	1.850	1230.053
39	K	63138974.220	58783.382663	ppb	0.941	1.430	127163.510
24	Mg	2586386.684	5186.075143	ppb	0.940	2.368	131.667
159	Tb-ISK	172738.254		ppb	1.633		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25744-B-1-A @5

Autosampler Position: 405

Sample Date/Time: Monday, April 20, 2020 15:31:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25744-B-1-A @5.163

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32398.935		ppb	2.513		25430.396
9	Be	12.222	0.003608	ppb	31.492	85.543	7.778
10	B	64256.429	239.802865	ppb	1.459	3.942	510.009
27	Al	223367.940	36.671656	ppb	2.616	1.646	2716.925
43	Ca-2	232135.334	18807.536276	ppb	4.801	1.476	85.000
49	Ti	1175.604	1.861231	ppb	3.162	6.220	201.113
52	Cr	12834.654	0.572617	ppb	2.233	6.441	8347.996
55	Mn	358246.698	31.469027	ppb	2.288	2.185	556.678
57	Fe	102228.016	439.384352	ppb	2.999	1.529	7832.147
45	Sc-IS	> 1243981.914		ppb	3.903		1187581.035
66	Zn	4601.854	4.528637	ppb	5.326	3.514	398.895
86	Sr	358398.258	211.010919	ppb	3.056	0.860	5.279
65	Cu	1245.810	0.871478	ppb	7.413	4.071	43.149
69	Ga-IS	326864.080		ppb	4.931		327008.223
95	Mo	11702.573	7.588479	ppb	3.395	2.064	28.889
115	In-IS	> 217544.453		ppb	2.081		211478.638
111	Cd	16.536	0.011529	ppb	80.085	90.211	2.162
118	Sn	715.574	-0.047949	ppb	15.978	50.575	883.361
121	Sb	1250.055	0.233923	ppb	3.846	5.509	196.668
135	Ba	25112.130	33.133558	ppb	7.273	5.611	14.444
165	Ho-IS	209053.328		ppb	1.948		202381.349
159	Tb-IS	168460.886		ppb	1.282		161992.242
207	Pb	417.780	0.029025	ppb	10.833	12.938	96.667
203	Tl	12.222	0.001097	ppb	15.746	51.496	8.889
209	Bi-IS	> 132243.761		ppb	1.025		135216.948
51	V	738.908	1.142290	ppb	6.651	5.819	30.000
59	Co	561.122	0.342118	ppb	1.910	1.048	23.333
60	Ni	2149.051	2.778825	ppb	5.507	4.913	31.111
75	As	2304.847	3.981179	ppb	1.924	4.177	666.032
71	Ga-ISK	> 109498.078		ppb	1.139		108493.800
82	Se-2	80.237	2.149064	ppb	7.114	7.304	3.560
107	Ag-1	36.667	0.001026	ppb	9.091	104.744	33.333
115	In-ISK	80579.004		ppb	1.238		79139.211
45	Sc-ISK	> 293908.728		ppb	1.716		279633.789
23	Na	50123094.553	110237.514508	ppb	0.768	1.061	1230.053
39	K	8702672.271	7726.659389	ppb	0.028	1.769	127163.510
24	Mg	4759115.473	9222.835835	ppb	1.068	2.386	131.667
159	Tb-ISK	177615.352		ppb	0.539		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25746-B-1-A @5

Autosampler Position: 406

Sample Date/Time: Monday, April 20, 2020 15:34:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25746-B-1-A @5.164

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28449.423		ppb	2.574		25430.396
9	Be	5.556	-0.002296	ppb	69.282	157.329	7.778
10	B	24696.891	90.474121	ppb	2.121	0.564	510.009
27	Al	53850.197	8.447549	ppb	0.778	3.606	2716.925
43	Ca-2	63497.573	5119.096917	ppb	3.288	1.438	85.000
49	Ti	567.789	0.685845	ppb	9.689	19.404	201.113
52	Cr	21969.110	1.836351	ppb	2.651	2.464	8347.996
55	Mn	170701.607	14.905227	ppb	0.549	2.212	556.678
57	Fe	270109.881	1218.895187	ppb	1.151	2.427	7832.147
45	Sc-IS	> 1249058.270		ppb	2.654		1187581.035
66	Zn	74605.600	79.981855	ppb	3.808	2.912	398.895
86	Sr	74394.464	43.629242	ppb	1.695	2.964	5.279
65	Cu	3012.496	2.146891	ppb	3.741	2.774	43.149
69	Ga-IS	333823.660		ppb	4.946		327008.223
95	Mo	810.023	0.504105	ppb	10.724	8.883	28.889
115	In-IS	> 220059.263		ppb	2.037		211478.638
111	Cd	18.299	0.012872	ppb	78.423	88.729	2.162
118	Sn	630.014	-0.070618	ppb	9.699	17.525	883.361
121	Sb	646.681	0.097386	ppb	9.120	10.516	196.668
135	Ba	3784.948	4.919213	ppb	7.641	5.690	14.444
165	Ho-IS	215357.856		ppb	0.804		202381.349
159	Tb-IS	171089.528		ppb	0.356		161992.242
207	Pb	386.669	0.024706	ppb	3.108	4.406	96.667
203	Tl	11.111	0.000604	ppb	34.641	192.225	8.889
209	Bi-IS	> 138403.911		ppb	0.805		135216.948
51	V	487.786	0.716282	ppb	11.360	11.247	30.000
59	Co	388.894	0.225991	ppb	14.145	15.600	23.333
60	Ni	1058.928	1.311398	ppb	2.621	2.844	31.111
75	As	1123.192	1.025172	ppb	8.458	20.241	666.032
71	Ga-ISK	> 112513.580		ppb	0.822		108493.800
82	Se-2	4831.018	131.745358	ppb	2.971	3.434	3.560
107	Ag-1	32.222	-0.000797	ppb	43.069	567.301	33.333
115	In-ISK	81677.415		ppb	1.013		79139.211
45	Sc-ISK	> 297526.356		ppb	0.313		279633.789
23	Na	29211749.331	63455.842430	ppb	1.013	0.721	1230.053
39	K	1958550.116	1623.704707	ppb	1.115	1.177	127163.510
24	Mg	1119396.629	2142.162623	ppb	1.142	0.840	131.667
159	Tb-ISK	177912.329		ppb	0.217		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25210-I-4-A @50

Autosampler Position: 401

Sample Date/Time: Monday, April 20, 2020 15:37:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25210-I-4-A @50.165

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	28911.449		ppb	0.486		25430.396
9	Be	13.333	0.004537	ppb	25.000	64.813	7.778
10	B	14679.763	52.607748	ppb	1.941	4.722	510.009
27	Al	5423.252	0.418509	ppb	1.587	2.119	2716.925
43	Ca-2	58725.510	4700.285315	ppb	2.596	0.335	85.000
49	Ti	751.131	1.024753	ppb	3.615	1.611	201.113
52	Cr	17104.680	1.142294	ppb	1.788	2.399	8347.996
55	Mn	7872.170	0.633141	ppb	3.797	1.562	556.678
57	Fe	19998.446	54.035901	ppb	3.860	2.368	7832.147
45	Sc-IS	> 1258031.887		ppb	2.545		1187581.035
66	Zn	1862.344	1.541992	ppb	2.151	4.197	398.895
86	Sr	129839.031	75.579517	ppb	1.946	0.687	5.279
65	Cu	335.129	0.208057	ppb	3.609	5.630	43.149
69	Ga-IS	319625.214		ppb	6.303		327008.223
95	Mo	251.113	0.141622	ppb	6.273	4.418	28.889
115	In-IS	> 213059.750		ppb	3.887		211478.638
111	Cd	8.362	0.005183	ppb	23.140	34.344	2.162
118	Sn	480.008	-0.103299	ppb	13.394	13.701	883.361
121	Sb	170.001	-0.006268	ppb	10.189	88.864	196.668
135	Ba	386.672	0.501728	ppb	8.491	7.061	14.444
165	Ho-IS	205230.365		ppb	0.556		202381.349
159	Tb-IS	166044.963		ppb	0.051		161992.242
207	Pb	258.890	0.015614	ppb	4.139	7.490	96.667
203	Tl	6.667	-0.000557	ppb	0.000	2.879	8.889
209	Bi-IS	> 127635.441		ppb	0.745		135216.948
51	V	955.588	1.441354	ppb	6.704	6.807	30.000
59	Co	24.444	0.000055	ppb	15.746	4286.310	23.333
60	Ni	127.778	0.120988	ppb	10.861	14.786	31.111
75	As	624.588	-0.166235	ppb	7.525	66.384	666.032
71	Ga-ISK	> 113228.061		ppb	0.163		108493.800
82	Se-2	42.854	1.061556	ppb	35.313	38.780	3.560
107	Ag-1	53.333	0.006099	ppb	12.500	36.398	33.333
115	In-ISK	80791.058		ppb	0.117		79139.211
45	Sc-ISK	> 308586.986		ppb	1.931		279633.789
23	Na	53711151.984	112510.237498	ppb	1.058	0.962	1230.053
39	K	5093465.936	4253.576751	ppb	0.977	1.327	127163.510
24	Mg	7285967.840	13449.821560	ppb	0.935	2.867	131.667
159	Tb-ISK	177807.127		ppb	1.169		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25770-C-1-A @20

Autosampler Position: 407

Sample Date/Time: Monday, April 20, 2020 15:40:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25770-C-1-A @20.166

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29579.487		ppb	1.814		25430.396
9	Be	17.778	0.007306	ppb	28.641	61.388	7.778
10	B	10406251.348	35713.324888	ppb	1.482	4.368	510.009
27	Al	24201.596	3.197997	ppb	1.308	2.863	2716.925
43	Ca-2	5636.121	408.792218	ppb	11.233	8.152	85.000
49	Ti	196.668	-0.059876	ppb	8.475	57.681	201.113
52	Cr	23576.107	1.785063	ppb	1.426	4.860	8347.996
55	Mn	2094.598	0.116855	ppb	1.753	5.802	556.678
57	Fe	18128.166	38.939650	ppb	2.411	4.604	7832.147
45	Sc-IS	> 1363979.417		ppb	3.383		1187581.035
66	Zn	29767.700	28.939644	ppb	5.007	4.292	398.895
86	Sr	664.773	0.354008	ppb	1.559	4.779	5.279
65	Cu	696.080	0.428695	ppb	5.844	7.126	43.149
69	Ga-IS	376252.736		ppb	4.219		327008.223
95	Mo	274.447	0.143399	ppb	10.330	14.444	28.889
115	In-IS	> 241108.261		ppb	2.652		211478.638
111	Cd	9.424	0.005101	ppb	35.042	46.489	2.162
118	Sn	4529.607	0.783782	ppb	1.825	2.152	883.361
121	Sb	590.012	0.073432	ppb	13.358	17.292	196.668
135	Ba	43.333	0.031901	ppb	30.769	48.424	14.444
165	Ho-IS	226906.773		ppb	0.642		202381.349
159	Tb-IS	184261.865		ppb	0.659		161992.242
207	Pb	5211.492	0.394934	ppb	1.189	0.929	96.667
203	Tl	11.111	0.000268	ppb	62.450	690.879	8.889
209	Bi-IS	> 153509.275		ppb	0.530		135216.948
51	V	851.136	1.223916	ppb	4.151	3.794	30.000
59	Co	500.009	0.280090	ppb	10.975	11.390	23.333
60	Ni	130.001	0.116972	ppb	10.256	13.234	31.111
75	As	669.887	-0.124136	ppb	6.264	78.163	666.032
71	Ga-ISK	> 118073.730		ppb	0.590		108493.800
82	Se-2	10.250	0.165821	ppb	5.480	9.218	3.560
107	Ag-1	30.000	-0.001979	ppb	11.111	52.923	33.333
115	In-ISK	85902.550		ppb	0.881		79139.211
45	Sc-ISK	> 301405.306		ppb	0.372		279633.789
23	Na	1853371.988	3971.639295	ppb	1.080	1.144	1230.053
39	K	2414138.195	2001.720264	ppb	1.546	1.390	127163.510
24	Mg	14647.507	27.405061	ppb	1.781	1.568	131.667
159	Tb-ISK	185387.881		ppb	0.915		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25770-C-1-B MS @20

Autosampler Position: 408

Sample Date/Time: Monday, April 20, 2020 15:42:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25770-C-1-B MS @20.167

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29147.500		ppb	2.971		25430.396
9	Be	6410.328	5.237708	ppb	3.342	4.797	7.778
10	B	10092904.202	34509.309476	ppb	0.127	2.904	510.009
27	Al	54669.965	7.792503	ppb	0.442	3.235	2716.925
43	Ca-2	15286.513	1120.451866	ppb	3.005	5.840	85.000
49	Ti	2968.086	4.792948	ppb	1.934	1.954	201.113
52	Cr	63360.286	6.836085	ppb	3.082	6.498	8347.996
55	Mn	59101.007	4.678576	ppb	3.815	6.524	556.678
57	Fe	79430.487	299.348886	ppb	4.359	7.518	7832.147
45	Sc-IS	> 1368501.672		ppb	2.751		1187581.035
66	Zn	34772.384	33.806951	ppb	6.442	8.638	398.895
86	Sr	9663.024	5.170088	ppb	4.576	5.454	5.279
65	Cu	8312.778	5.464800	ppb	7.940	10.039	43.149
69	Ga-IS	391143.380		ppb	3.530		327008.223
95	Mo	8634.835	5.088660	ppb	4.462	7.302	28.889
115	In-IS	> 243083.129		ppb	2.058		211478.638
111	Cd	7439.370	5.429387	ppb	3.802	4.514	2.162
118	Sn	27154.716	5.769790	ppb	5.046	6.063	883.361
121	Sb	24980.731	4.944830	ppb	3.712	3.841	196.668
135	Ba	4909.733	5.786118	ppb	4.264	4.749	14.444
165	Ho-IS	227681.775		ppb	2.334		202381.349
159	Tb-IS	184336.234		ppb	3.977		161992.242
207	Pb	70307.463	5.458369	ppb	0.971	3.308	96.667
203	Tl	18675.537	5.041205	ppb	2.322	4.527	8.889
209	Bi-IS	> 152917.811		ppb	2.727		135216.948
51	V	3976.111	5.764001	ppb	7.391	7.244	30.000
59	Co	8393.578	4.828777	ppb	3.447	3.836	23.333
60	Ni	4450.693	5.255074	ppb	2.183	2.521	31.111
75	As	2982.230	4.952590	ppb	4.011	5.330	666.032
71	Ga-ISK	> 120775.071		ppb	0.805		108493.800
82	Se-2	192.543	4.793775	ppb	9.815	9.954	3.560
107	Ag-1	7001.721	2.145942	ppb	7.097	6.720	33.333
115	In-ISK	91403.852		ppb	0.373		79139.211
45	Sc-ISK	> 305761.056		ppb	1.033		279633.789
23	Na	1814761.187	3833.675138	ppb	0.836	1.432	1230.053
39	K	2359895.367	1924.723112	ppb	0.619	1.609	127163.510
24	Mg	152659.687	284.056929	ppb	0.526	0.639	131.667
159	Tb-ISK	194918.094		ppb	0.398		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25770-C-1-C MSD @20

Autosampler Position: 409

Sample Date/Time: Monday, April 20, 2020 15:45:38

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25770-C-1-C MSD @20.168

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29414.698		ppb	0.870		25430.396
9	Be	6388.095	4.978299	ppb	1.906	1.981	7.778
10	B	10074351.854	32863.607419	ppb	0.791	2.111	510.009
27	Al	54532.879	7.390315	ppb	3.892	3.179	2716.925
43	Ca-2	16184.171	1130.856910	ppb	3.682	2.727	85.000
49	Ti	3063.662	4.712404	ppb	3.973	1.671	201.113
52	Cr	64505.331	6.600354	ppb	1.637	1.278	8347.996
55	Mn	60790.182	4.587433	ppb	0.762	1.982	556.678
57	Fe	82833.929	297.419853	ppb	1.318	1.588	7832.147
45	Sc-IS	> 1434151.126		ppb	2.680		1187581.035
66	Zn	36762.887	34.050270	ppb	5.344	2.810	398.895
86	Sr	9783.674	4.993537	ppb	1.439	1.787	5.279
65	Cu	8721.916	5.462272	ppb	3.885	1.239	43.149
69	Ga-IS	409285.632		ppb	3.803		327008.223
95	Mo	8870.534	4.980524	ppb	3.921	1.941	28.889
115	In-IS	> 253916.997		ppb	0.789		211478.638
111	Cd	7691.230	5.372039	ppb	0.533	0.492	2.162
118	Sn	27780.332	5.643285	ppb	2.773	2.081	883.361
121	Sb	26506.799	5.022983	ppb	2.276	2.196	196.668
135	Ba	4898.618	5.524023	ppb	2.555	2.067	14.444
165	Ho-IS	236069.086		ppb	0.988		202381.349
159	Tb-IS	194456.877		ppb	1.224		161992.242
207	Pb	71648.136	5.394139	ppb	1.546	0.864	96.667
203	Tl	19000.415	4.972646	ppb	3.445	2.896	8.889
209	Bi-IS	> 157591.171		ppb	0.915		135216.948
51	V	4045.018	5.794606	ppb	3.614	4.256	30.000
59	Co	8862.749	5.037535	ppb	2.348	2.908	23.333
60	Ni	4630.751	5.402564	ppb	1.628	2.101	31.111
75	As	3029.908	4.977154	ppb	3.871	5.414	666.032
71	Ga-ISK	> 122256.472		ppb	0.601		108493.800
82	Se-2	226.549	5.590554	ppb	11.047	11.697	3.560
107	Ag-1	7405.254	2.243400	ppb	3.647	4.268	33.333
115	In-ISK	92734.681		ppb	0.700		79139.211
45	Sc-ISK	> 306391.979		ppb	0.561		279633.789
23	Na	1836633.777	3871.622053	ppb	0.738	0.592	1230.053
39	K	2419680.398	1972.004903	ppb	0.633	0.079	127163.510
24	Mg	155282.726	288.342110	ppb	0.412	0.759	131.667
159	Tb-ISK	193084.098		ppb	0.252		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 15:48:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.169

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26555.785		ppb		3.000		25430.396
9	Be	|	115163.558	93.949068	ppb	1.963	0.698		7.778
10	B	|	112466.581	381.634522	ppb	1.386	3.176		510.009
27	Al	|	635078.691	95.303143	ppb	1.719	2.884		2716.925
43	Ca-2	|	73244.067	5377.116341	ppb	3.059	0.832		85.000
49	Ti	|	56688.952	98.648909	ppb	2.016	1.748		201.113
52	Cr	|	776006.846	97.167082	ppb	1.565	1.177		8347.996
55	Mn	|	1146435.024	91.389239	ppb	1.893	0.735		556.678
57	Fe	|	1138959.265	4787.004184	ppb	2.660	0.519		7832.147
45	Sc-IS	>	1371665.500		ppb	2.271			1187581.035
66	Zn	|	104812.689	102.429777	ppb	5.276	4.265		398.895
86	Sr	|	176107.986	94.030363	ppb	0.924	1.378		5.279
65	Cu	|	153601.262	101.170919	ppb	3.994	3.258		43.149
69	Ga-IS	|	400191.402		ppb	5.017			327008.223
95	Mo	|	160927.378	94.858692	ppb	2.850	3.051		28.889
115	In-IS	>	239445.194		ppb	1.787			211478.638
111	Cd	|	137566.810	101.928128	ppb	1.600	0.903		2.162
118	Sn	|	437333.576	97.722834	ppb	2.948	1.375		883.361
121	Sb	|	486144.403	98.516856	ppb	2.486	0.985		196.668
135	Ba	|	86863.847	104.187631	ppb	5.669	4.179		14.444
165	Ho-IS	|	225602.478		ppb	2.298			202381.349
159	Tb-IS	|	184230.410		ppb	1.082			161992.242
207	Pb	|	1267296.017	100.411805	ppb	0.376	0.782		96.667
203	Tl	|	370847.779	102.046045	ppb	1.164	0.745		8.889
209	Bi-IS	>	149971.993		ppb	0.419			135216.948
51	V	|	66679.699	95.765361	ppb	0.236	0.326		30.000
59	Co	|	172022.869	97.538189	ppb	0.525	0.595		23.333
60	Ni	|	87661.483	102.473978	ppb	0.886	0.889		31.111
75	As	|	47309.032	101.123101	ppb	0.643	0.744		666.032
71	Ga-ISK	>	122888.514		ppb	0.099			108493.800
82	Se-2	|	4105.121	102.464612	ppb	1.874	1.974		3.560
107	Ag-1	|	340136.159	103.007075	ppb	0.655	0.619		33.333
115	In-ISK	|	89901.380		ppb	1.771			79139.211
45	Sc-ISK	>	313933.881		ppb	1.957			279633.789
23	Na	|	2516619.199	5178.835812	ppb	1.556	0.652		1230.053
39	K	|	6131776.589	5054.829924	ppb	2.119	1.011		127163.510
24	Mg	|	2804121.130	5087.213754	ppb	0.450	1.586		131.667
159	Tb-ISK	|	190037.077		ppb	1.114			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

B 10

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 15:51:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.170

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		26210.691		ppb			1.010			25430.396
9	Be	|		12.222	0.002909	ppb		31.492	121.436			7.778
10	B	|		21463.898	72.724566	ppb		2.791	4.869			510.009
27	Al	|		3118.119	0.006377	ppb		7.641	464.109			2716.925
43	Ca-2	|		2915.298	211.778446	ppb		4.457	7.502			85.000
49	Ti	|		121.112	-0.190599	ppb		22.247	22.443			201.113
52	Cr	|		8040.040	-0.181904	ppb		1.498	13.424			8347.996
55	Mn	|		720.018	0.007332	ppb		9.037	71.218			556.678
57	Fe	|		31443.479	97.620229	ppb		3.199	2.887			7832.147
45	Sc-IS	>		1344227.792		ppb		2.734				1187581.035
66	Zn	|		422.228	-0.029675	ppb		8.732	96.516			398.895
86	Sr	|		6.365	0.000493	ppb		458.041	3294.068			5.279
65	Cu	|		79.140	0.020227	ppb		22.157	52.368			43.149
69	Ga-IS	|		369594.524		ppb		4.708				327008.223
95	Mo	|		541.121	0.305992	ppb		7.800	8.795			28.889
115	In-IS	>		233795.147		ppb		0.697				211478.638
111	Cd	|		13.308	0.008289	ppb		14.582	18.309			2.162
118	Sn	|		2513.555	0.352444	ppb		7.600	11.531			883.361
121	Sb	|		494.453	0.057512	ppb		8.952	15.503			196.668
135	Ba	|		16.667	0.000860	ppb		20.000	479.801			14.444
165	Ho-IS	|		214540.308		ppb		1.510				202381.349
159	Tb-IS	|		174282.284		ppb		1.023				161992.242
207	Pb	|		241.112	0.011324	ppb		6.533	10.863			96.667
203	Tl	|		137.778	0.036607	ppb		11.433	11.640			8.889
209	Bi-IS	>		144546.516		ppb		0.770				135216.948
51	V	|		32.222	0.000633	ppb		36.330	2782.731			30.000
59	Co	|		42.222	0.010742	ppb		39.736	98.583			23.333
60	Ni	|		100.000	0.083887	ppb		20.000	28.585			31.111
75	As	|		679.360	-0.057864	ppb		2.668	90.116			666.032
71	Ga-ISK	>		114741.257		ppb		1.655				108493.800
82	Se-2	|		0.534	-0.087851	ppb		1387.714	223.289			3.560
107	Ag-1	|		155.556	0.038987	ppb		8.660	9.156			33.333
115	In-ISK	|		85627.563		ppb		0.356				79139.211
45	Sc-ISK	>		290724.123		ppb		0.878				279633.789
23	Na	|		1990.139	1.583964	ppb		9.133	28.045			1230.053
39	K	|		119430.510	-11.642697	ppb		0.914	6.476			127163.510
24	Mg	|		335.004	0.387612	ppb		13.266	21.190			131.667
159	Tb-ISK	|		178385.057		ppb		1.754				168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63734_1-A

Autosampler Position: 414

Sample Date/Time: Monday, April 20, 2020 15:53:58

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\MB 570-63734_1-A.171

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS			25927.962		ppb		2.471		25430.396
9	Be			8.889	0.000243	ppb	78.062	2413.129		7.778
10	B			13936.798	47.767529	ppb	2.808	3.472		510.009
27	Al			3424.855	0.067642	ppb	2.944	19.323		2716.925
43	Ca-2			1768.443	128.973431	ppb	4.022	4.685		85.000
49	Ti			111.112	-0.202431	ppb	8.660	9.314		201.113
52	Cr			8156.772	-0.139302	ppb	0.371	3.435		8347.996
55	Mn			961.143	0.029015	ppb	2.436	8.258		556.678
57	Fe			33043.741	108.294161	ppb	2.300	2.325		7832.147
45	Sc-IS	>		1309648.344		ppb		0.657		1187581.035
66	Zn			531.121	0.093556	ppb	12.400	69.056		398.895
86	Sr			15.254	0.005276	ppb	35.046	56.977		5.279
65	Cu			52.768	0.003565	ppb	16.753	167.792		43.149
69	Ga-IS			364407.880		ppb		5.721		327008.223
95	Mo			123.334	0.056456	ppb	32.433	43.752		28.889
115	In-IS	>		231548.330		ppb		2.077		211478.638
111	Cd			8.630	0.004702	ppb	117.688	162.564		2.162
118	Sn			1066.707	0.022789	ppb	9.688	83.416		883.361
121	Sb			221.113	0.001162	ppb	11.112	376.856		196.668
135	Ba			15.556	-0.000389	ppb	32.733	1559.590		14.444
165	Ho-IS			214322.559		ppb		1.260		202381.349
159	Tb-IS			174544.283		ppb		0.433		161992.242
207	Pb			140.000	0.003122	ppb	8.248	28.906		96.667
203	Tl			54.445	0.013000	ppb	15.408	20.024		8.889
209	Bi-IS	>		143171.699		ppb		1.166		135216.948
51	V			33.333	0.001808	ppb	36.056	1003.889		30.000
59	Co			24.444	-0.000332	ppb	41.660	1831.819		23.333
60	Ni			87.778	0.067368	ppb	15.347	24.881		31.111
75	As			688.239	-0.057689	ppb	7.957	213.263		666.032
71	Ga-ISK	>		116191.717		ppb		0.206		108493.800
82	Se-2			-3.138	-0.183584	ppb	169.031	76.394		3.560
107	Ag-1			71.111	0.011346	ppb	27.466	55.291		33.333
115	In-ISK			84389.961		ppb		0.133		79139.211
45	Sc-ISK	>		293233.507		ppb		0.817		279633.789
23	Na			1911.795	1.370567	ppb	2.225	4.739		1230.053
39	K			116616.267	-15.114616	ppb	0.268	5.143		127163.510
24	Mg			218.335	0.155920	ppb	8.043	22.249		131.667
159	Tb-ISK			178876.965		ppb		0.723		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63734_2-A

Autosampler Position: 415

Sample Date/Time: Monday, April 20, 2020 15:56:44

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\LCS 570-63734_2-A.172

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	25830.009		ppb		2.787		25430.396
9	Be	|	114632.598	99.709631	ppb	1.515	2.099		7.778
10	B	|	37461.287	134.186689	ppb	1.939	2.337		510.009
27	Al	|	638297.701	102.110998	ppb	2.627	1.472		2716.925
43	Ca-2	|	68805.367	5385.323443	ppb	2.509	0.772		85.000
49	Ti	|	52520.828	97.428816	ppb	1.540	1.518		201.113
52	Cr	|	724487.361	96.720101	ppb	0.841	2.403		8347.996
55	Mn	|	1056379.908	89.785941	ppb	1.234	1.949		556.678
57	Fe	|	1116448.504	5003.335803	ppb	3.259	0.480		7832.147
45	Sc-IS	>	1286874.161		ppb	3.010			1187581.035
66	Zn	|	99031.774	103.115724	ppb	6.000	3.184		398.895
86	Sr	|	165483.019	94.162355	ppb	2.874	0.145		5.279
65	Cu	|	141012.603	98.953958	ppb	5.253	2.287		43.149
69	Ga-IS	|	375834.265		ppb	3.831			327008.223
95	Mo	|	154415.816	97.032838	ppb	1.902	2.259		28.889
115	In-IS	>	230081.053		ppb	1.273			211478.638
111	Cd	|	132916.670	102.484695	ppb	2.450	2.020		2.162
118	Sn	|	417874.515	97.188846	ppb	1.556	1.336		883.361
121	Sb	|	452251.442	95.382966	ppb	2.684	2.333		196.668
135	Ba	|	85114.573	106.261338	ppb	6.264	5.551		14.444
165	Ho-IS	|	216240.036		ppb	1.308			202381.349
159	Tb-IS	|	172642.538		ppb	0.915			161992.242
207	Pb	|	1194746.938	98.252850	ppb	0.332	2.051		96.667
203	Tl	|	336842.803	96.209147	ppb	0.595	2.225		8.889
209	Bi-IS	>	144524.186		ppb	1.741			135216.948
51	V	|	62582.360	94.424139	ppb	1.639	2.564		30.000
59	Co	|	157849.738	94.029782	ppb	1.999	3.009		23.333
60	Ni	|	83029.496	101.950344	ppb	1.129	0.700		31.111
75	As	|	44259.595	99.345202	ppb	0.769	0.498		666.032
71	Ga-ISK	>	116993.811		ppb	1.038			108493.800
82	Se-2	|	3750.399	98.315197	ppb	2.042	1.035		3.560
107	Ag-1	|	152145.953	48.397631	ppb	0.980	1.917		33.333
115	In-ISK	|	85074.863		ppb	0.489			79139.211
45	Sc-ISK	>	294970.826		ppb	0.155			279633.789
23	Na	|	456162.166	996.713272	ppb	0.863	0.937		1230.053
39	K	|	1233239.014	987.288076	ppb	0.511	0.546		127163.510
24	Mg	|	2757150.822	5322.495552	ppb	1.172	1.167		131.667
159	Tb-ISK	|	183538.928		ppb	1.091			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63734_3-A

Autosampler Position: 416

Sample Date/Time: Monday, April 20, 2020 15:59:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\LCSD 570-63734_3-A.173

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	26318.670		ppb		1.713		25430.396
9	Be	|	114783.762	101.765709	ppb	0.936	0.865		7.778
10	B	|	34526.118	125.934224	ppb	0.917	0.144		510.009
27	Al	|	638812.859	104.187379	ppb	2.266	1.543		2716.925
43	Ca-2	|	67757.018	5406.479099	ppb	2.080	1.306		85.000
49	Ti	|	53230.101	100.667181	ppb	0.802	0.217		201.113
52	Cr	|	733455.705	99.831044	ppb	1.577	1.181		8347.996
55	Mn	|	1065814.670	92.328487	ppb	1.842	1.087		556.678
57	Fe	|	1118682.344	5112.469473	ppb	2.332	1.586		7832.147
45	Sc-IS	>	1262084.662		ppb	0.782			1187581.035
66	Zn	|	99098.752	105.257829	ppb	5.414	4.681		398.895
86	Sr	|	167352.789	97.077766	ppb	4.007	3.243		5.279
65	Cu	|	142320.812	101.858314	ppb	5.578	4.898		43.149
69	Ga-IS	|	372496.867		ppb	4.882			327008.223
95	Mo	|	155759.841	99.748707	ppb	3.932	3.177		28.889
115	In-IS	>	226990.276		ppb	1.567			211478.638
111	Cd	|	133011.337	103.953782	ppb	2.003	1.033		2.162
118	Sn	|	426136.364	100.467120	ppb	1.319	0.378		883.361
121	Sb	|	464646.853	99.321951	ppb	2.742	1.198		196.668
135	Ba	|	84548.094	106.956374	ppb	7.216	5.759		14.444
165	Ho-IS	|	215598.365		ppb	1.745			202381.349
159	Tb-IS	|	173534.598		ppb	2.070			161992.242
207	Pb	|	1207308.267	100.917623	ppb	1.324	1.936		96.667
203	Tl	|	340829.220	98.937342	ppb	1.031	0.692		8.889
209	Bi-IS	>	142168.407		ppb	1.036			135216.948
51	V	|	63640.329	97.628308	ppb	0.489	0.879		30.000
59	Co	|	159292.079	96.473229	ppb	0.658	1.018		23.333
60	Ni	|	82911.016	103.523019	ppb	0.384	0.456		31.111
75	As	|	44274.121	101.081629	ppb	0.716	0.870		666.032
71	Ga-ISK	>	115053.685		ppb	0.682			108493.800
82	Se-2	|	3780.720	100.785971	ppb	1.725	1.045		3.560
107	Ag-1	|	153713.672	49.715832	ppb	0.418	0.536		33.333
115	In-ISK	|	85311.962		ppb	0.977			79139.211
45	Sc-ISK	>	290201.334		ppb	0.510			279633.789
23	Na	|	457410.827	1015.933144	ppb	0.194	0.504		1230.053
39	K	|	1235801.642	1007.822591	ppb	0.842	0.417		127163.510
24	Mg	|	2745760.288	5387.457837	ppb	1.624	1.206		131.667
159	Tb-ISK	|	180422.202		ppb	0.588			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-1-A SD @5

Autosampler Position: 417

Sample Date/Time: Monday, April 20, 2020 16:02:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-1-A SD @5.174

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	29287.773		ppb	1.480		25430.396
9	Be	10.000	0.000979	ppb	0.000	11.280	7.778
10	B	72258.979	248.882159	ppb	1.463	1.450	510.009
27	Al	28534.030	3.907445	ppb	1.745	1.966	2716.925
43	Ca-2	360191.606	26950.405109	ppb	4.398	3.103	85.000
49	Ti	1896.793	2.968832	ppb	4.390	5.046	201.113
52	Cr	18533.130	1.170039	ppb	2.506	4.329	8347.996
55	Mn	2287682.018	185.737334	ppb	1.505	1.023	556.678
57	Fe	163312.960	666.176625	ppb	2.328	1.153	7832.147
45	Sc-IS	> 1347073.675		ppb	1.321		1187581.035
66	Zn	1271.168	0.818171	ppb	3.522	3.445	398.895
86	Sr	552020.190	300.046080	ppb	2.568	1.597	5.279
65	Cu	854.109	0.540409	ppb	2.966	4.571	43.149
69	Ga-IS	345888.685		ppb	5.475		327008.223
95	Mo	1822.339	1.073393	ppb	9.409	8.399	28.889
115	In-IS	> 223594.007		ppb	2.327		211478.638
111	Cd	9.506	0.005717	ppb	34.677	44.271	2.162
118	Sn	3259.261	0.557630	ppb	3.792	2.587	883.361
121	Sb	9574.324	2.032966	ppb	5.261	3.510	196.668
135	Ba	46143.546	59.243700	ppb	7.173	5.088	14.444
165	Ho-IS	211098.576		ppb	1.785		202381.349
159	Tb-IS	173761.574		ppb	1.157		161992.242
207	Pb	532.226	0.040781	ppb	12.656	15.150	96.667
203	Tl	116.667	0.034802	ppb	4.949	5.192	8.889
209	Bi-IS	> 128337.222		ppb	0.136		135216.948
51	V	1911.239	2.903215	ppb	1.484	0.094	30.000
59	Co	122.223	0.059529	ppb	12.597	15.908	23.333
60	Ni	486.675	0.570547	ppb	2.470	1.877	31.111
75	As	1730.311	2.401673	ppb	3.866	6.548	666.032
71	Ga-ISK	> 114323.458		ppb	1.391		108493.800
82	Se-2	107.860	2.794369	ppb	8.109	7.180	3.560
107	Ag-1	131.112	0.031198	ppb	26.705	35.283	33.333
115	In-ISK	81742.472		ppb	0.379		79139.211
45	Sc-ISK	> 317012.374		ppb	1.049		279633.789
23	Na	159237932.292	324717.735255	ppb	1.422	2.459	1230.053
39	K	21144390.629	17555.493164	ppb	1.641	2.668	127163.510
24	Mg	16840122.778	30253.680478	ppb	1.092	2.009	131.667
159	Tb-ISK	181854.203		ppb	0.730		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-1-A

Autosampler Position: 418

Sample Date/Time: Monday, April 20, 2020 16:05:01

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-1-A.175

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32770.885		ppb	1.675		25430.396
9	Be	6.667	-0.002084	ppb	50.000	133.007	7.778
10	B	295733.133	960.644884	ppb	2.500	0.693	510.009
27	Al	21844.473	2.671028	ppb	2.389	1.248	2716.925
43	Ca-2	1857367.230	130342.101703	ppb	3.215	0.794	85.000
49	Ti	6821.630	10.967669	ppb	4.418	1.536	201.113
52	Cr	27740.241	2.136340	ppb	0.708	4.103	8347.996
55	Mn	10911886.126	830.976892	ppb	1.532	1.823	556.678
57	Fe	716812.626	2861.086498	ppb	2.477	0.780	7832.147
45	Sc-IS	> 1436987.090		ppb	3.176		1187581.035
66	Zn	2986.979	2.347126	ppb	4.324	4.064	398.895
86	Sr	2825012.548	1439.964474	ppb	1.871	1.330	5.279
65	Cu	2832.227	1.747418	ppb	6.089	3.299	43.149
69	Ga-IS	392216.015		ppb	3.715		327008.223
95	Mo	5836.748	3.265264	ppb	2.022	1.283	28.889
115	In-IS	> 221052.611		ppb	1.992		211478.638
111	Cd	5.521	0.002630	ppb	71.097	120.686	2.162
118	Sn	1001.146	0.018649	ppb	9.325	98.082	883.361
121	Sb	1648.984	0.316985	ppb	4.721	4.595	196.668
135	Ba	230934.698	300.039875	ppb	5.877	3.913	14.444
165	Ho-IS	197940.153		ppb	2.362		202381.349
159	Tb-IS	164369.350		ppb	2.068		161992.242
207	Pb	344.446	0.025811	ppb	14.877	20.360	96.667
203	Tl	28.889	0.007279	ppb	13.323	18.944	8.889
209	Bi-IS	> 119364.392		ppb	0.641		135216.948
51	V	6521.489	10.837513	ppb	1.759	2.564	30.000
59	Co	468.897	0.293811	ppb	10.648	10.780	23.333
60	Ni	1824.561	2.436861	ppb	2.314	0.388	31.111
75	As	5131.512	11.302167	ppb	4.591	2.835	666.032
71	Ga-ISK	> 105813.915		ppb	2.390		108493.800
82	Se-2	436.471	12.568934	ppb	2.300	3.385	3.560
107	Ag-1	58.889	0.009286	ppb	6.536	15.402	33.333
115	In-ISK	73075.606		ppb	0.215		79139.211
45	Sc-ISK	> 317635.916		ppb	0.861		279633.789
23	Na	787237329.590	1602082.864275	ppb	1.390	2.065	1230.053
39	K	101990743.323	84962.401500	ppb	0.300	1.062	127163.510
24	Mg	81657176.407	146400.575170	ppb	1.734	1.973	131.667
159	Tb-ISK	169204.869		ppb	0.799		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-1-B MS

Autosampler Position: 419

Sample Date/Time: Monday, April 20, 2020 16:07:47

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-1-B MS.176

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	33464.711		ppb		1.379		25430.396
9	Be	|	126600.828	94.639223	ppb		1.714	2.781	7.778
10	B	|	328151.855	1023.328303	ppb		0.831	2.303	510.009
27	Al	|	702849.292	96.614961	ppb		1.460	1.651	2716.925
43	Ca-2	|	1993121.097	134226.911206	ppb		3.145	1.809	85.000
49	Ti	|	55455.249	88.350935	ppb		2.509	1.129	201.113
52	Cr	|	805955.740	92.380873	ppb		2.227	0.958	8347.996
55	Mn	|	12055015.311	880.827169	ppb		1.418	0.536	556.678
57	Fe	|	1773163.193	6844.984753	ppb		1.261	1.020	7832.147
45	Sc-IS	>	1497163.912		ppb		1.568		1187581.035
66	Zn	|	79231.552	70.794542	ppb		3.894	2.377	398.895
86	Sr	|	2944450.607	1440.309787	ppb		1.476	1.941	5.279
65	Cu	|	127916.693	77.182258	ppb		2.103	1.152	43.149
69	Ga-IS	|	420367.340		ppb		2.902		327008.223
95	Mo	|	166883.766	90.106691	ppb		1.880	1.352	28.889
115	In-IS	>	226968.287		ppb		1.155		211478.638
111	Cd	|	115408.907	90.211890	ppb		0.900	1.096	2.162
118	Sn	|	5757.827	1.136803	ppb		1.082	2.673	883.361
121	Sb	|	431072.867	92.166889	ppb		0.593	0.722	196.668
135	Ba	|	308032.702	389.915269	ppb		3.571	2.463	14.444
165	Ho-IS	|	205030.909		ppb		0.876		202381.349
159	Tb-IS	|	171063.863		ppb		1.743		161992.242
207	Pb	|	1050736.782	105.659703	ppb		0.537	1.056	96.667
203	Tl	|	303631.811	106.040768	ppb		0.768	1.171	8.889
209	Bi-IS	>	118171.199		ppb		0.629		135216.948
51	V	|	75736.952	122.841747	ppb		2.000	2.180	30.000
59	Co	|	155575.909	99.609251	ppb		0.709	0.885	23.333
60	Ni	|	77766.649	102.650931	ppb		0.208	0.199	31.111
75	As	|	45301.050	109.471025	ppb		1.277	1.101	666.032
71	Ga-ISK	>	108829.631		ppb		0.196		108493.800
82	Se-2	|	3395.689	95.702503	ppb		3.603	3.781	3.560
107	Ag-1	|	15952.236	5.444308	ppb		1.054	1.202	33.333
115	In-ISK	|	76752.658		ppb		0.303		79139.211
45	Sc-ISK	>	322372.362		ppb		0.464		279633.789
23	Na	|	788000711.770	1579966.079265	ppb		0.649	1.110	1230.053
39	K	|	101104055.313	82981.737493	ppb		0.805	1.257	127163.510
24	Mg	|	83988715.531	148366.955588	ppb		0.981	1.444	131.667
159	Tb-ISK	|	175654.016		ppb		0.810		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-1-C MSD

Autosampler Position: 420

Sample Date/Time: Monday, April 20, 2020 16:10:33

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-1-C MSD.177

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	34375.756		ppb		0.927		25430.396
9	Be	|	130400.264	95.196711	ppb	1.038	2.281		7.778
10	B	|	331603.494	1009.752265	ppb	0.723	1.294		510.009
27	Al	|	729749.079	97.983599	ppb	0.364	2.073		2716.925
43	Ca-2	|	2066399.172	135887.787228	ppb	3.859	2.145		85.000
49	Ti	|	57494.394	89.461950	ppb	2.320	0.751		201.113
52	Cr	|	830661.876	93.004671	ppb	1.153	1.024		8347.996
55	Mn	|	12274506.080	875.968579	ppb	0.581	1.312		556.678
57	Fe	|	1803842.237	6799.929244	ppb	1.428	0.455		7832.147
45	Sc-IS	>	1533081.531		ppb	1.821			1187581.035
66	Zn	|	81133.223	70.803318	ppb	3.152	1.709		398.895
86	Sr	|	2996397.697	1431.424424	ppb	0.453	1.372		5.279
65	Cu	|	130726.811	77.023353	ppb	2.735	1.019		43.149
69	Ga-IS	|	428604.958		ppb	2.532			327008.223
95	Mo	|	175436.524	92.500434	ppb	2.107	0.294		28.889
115	In-IS	>	227901.073		ppb	0.953			211478.638
111	Cd	|	117788.310	91.686379	ppb	1.792	1.113		2.162
118	Sn	|	6776.057	1.370084	ppb	7.172	7.341		883.361
121	Sb	|	436661.563	92.976142	ppb	1.262	0.966		196.668
135	Ba	|	310098.916	390.973870	ppb	3.551	3.198		14.444
165	Ho-IS	|	205204.587		ppb	1.344			202381.349
159	Tb-IS	|	174958.249		ppb	1.016			161992.242
207	Pb	|	1071970.203	108.112492	ppb	0.158	0.115		96.667
203	Tl	|	309341.220	108.352924	ppb	0.665	0.628		8.889
209	Bi-IS	>	117819.410		ppb	0.050			135216.948
51	V	|	74080.501	120.405083	ppb	1.588	1.654		30.000
59	Co	|	154822.261	99.335562	ppb	1.016	1.152		23.333
60	Ni	|	78052.655	103.244220	ppb	0.780	0.404		31.111
75	As	|	47617.654	115.400829	ppb	0.905	0.927		666.032
71	Ga-ISK	>	108601.239		ppb	0.382			108493.800
82	Se-2	|	3340.638	94.346092	ppb	1.550	1.766		3.560
107	Ag-1	|	18511.287	6.333439	ppb	22.746	22.858		33.333
115	In-ISK	|	77021.303		ppb	0.966			79139.211
45	Sc-ISK	>	318949.458		ppb	1.449			279633.789
23	Na	|	776594652.522	1573887.183227	ppb	0.569	0.883		1230.053
39	K	|	100312260.092	83217.134497	ppb	0.888	0.569		127163.510
24	Mg	|	82536093.823	147367.344574	ppb	0.884	0.613		131.667
159	Tb-ISK	|	173809.095		ppb	1.484			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-1-A PDS

Autosampler Position: 421

Sample Date/Time: Monday, April 20, 2020 16:13:19

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-1-A PDS.178

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	35544.182		ppb	2.526		25430.396
9	Be	136921.959	98.275208	ppb	0.873	0.347	7.778
10	B	334803.450	1002.444687	ppb	0.521	0.614	510.009
27	Al	802677.550	105.993207	ppb	1.838	0.908	2716.925
43	Ca-2	2115127.233	136806.855283	ppb	1.852	0.723	85.000
49	Ti	70505.853	107.965294	ppb	2.487	1.506	201.113
52	Cr	866995.271	95.484718	ppb	0.889	0.304	8347.996
55	Mn	12321403.384	864.608329	ppb	0.597	0.543	556.678
57	Fe	1884196.110	6985.413182	ppb	1.453	0.501	7832.147
45	Sc-IS	> 1558976.974		ppb	1.131		1187581.035
66	Zn	85725.551	73.581681	ppb	3.607	2.512	398.895
86	Sr	2955832.166	1388.376019	ppb	1.058	0.446	5.279
65	Cu	137685.746	79.775474	ppb	2.899	1.817	43.149
69	Ga-IS	434371.747		ppb	2.407		327008.223
95	Mo	180844.287	93.769180	ppb	1.447	0.317	28.889
115	In-IS	> 229940.447		ppb	1.565		211478.638
111	Cd	127194.042	98.137295	ppb	1.182	0.398	2.162
118	Sn	302865.702	70.428577	ppb	0.317	1.241	883.361
121	Sb	439241.947	92.707650	ppb	0.969	1.593	196.668
135	Ba	312140.458	390.038971	ppb	3.540	2.668	14.444
165	Ho-IS	213284.057		ppb	1.882		202381.349
159	Tb-IS	179681.829		ppb	0.328		161992.242
207	Pb	1141268.313	112.330610	ppb	0.327	0.900	96.667
203	Tl	323769.000	110.672601	ppb	0.568	0.118	8.889
209	Bi-IS	> 120730.239		ppb	0.576		135216.948
51	V	77208.079	124.869969	ppb	0.489	1.370	30.000
59	Co	160080.844	102.205291	ppb	0.891	1.840	23.333
60	Ni	83807.332	110.310025	ppb	0.203	0.859	31.111
75	As	50534.555	121.950856	ppb	1.170	1.241	666.032
71	Ga-ISK	> 109148.743		ppb	0.962		108493.800
82	Se-2	3446.700	96.852989	ppb	1.301	0.855	3.560
107	Ag-1	50511.104	17.203014	ppb	11.996	11.228	33.333
115	In-ISK	78018.445		ppb	1.005		79139.211
45	Sc-ISK	> 320669.117		ppb	0.498		279633.789
23	Na	778831962.835	1569818.609600	ppb	2.141	2.062	1230.053
39	K	99832961.453	82369.892783	ppb	0.668	0.527	127163.510
24	Mg	81513292.679	144754.180423	ppb	0.535	0.624	131.667
159	Tb-ISK	176435.547		ppb	0.695		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message
Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25730-A-2-A

Autosampler Position: 427

Sample Date/Time: Monday, April 20, 2020 16:16:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25730-A-2-A.179

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		31407.827		ppb		1.522		25430.396
9	Be	|		28.889	0.013617	ppb	17.625	28.784		7.778
10	B	|		10755.159	30.548951	ppb	1.813	3.281		510.009
27	Al	|		519881.153	69.112470	ppb	1.657	3.164		2716.925
43	Ca-2	|		94719.720	6173.384154	ppb	1.927	0.411		85.000
49	Ti	|		934.475	1.043367	ppb	2.677	3.850		201.113
52	Cr	|		17880.074	0.789586	ppb	1.802	3.789		8347.996
55	Mn	|		2665043.370	188.607470	ppb	1.208	0.425		556.678
57	Fe	|		56955.539	175.873273	ppb	0.820	1.415		7832.147
45	Sc-IS	>		1545445.783		ppb	1.616			1187581.035
66	Zn	|		33226.383	28.498254	ppb	2.027	0.742		398.895
86	Sr	|		64755.083	30.681707	ppb	0.760	0.948		5.279
65	Cu	|		4254.031	2.455307	ppb	1.586	2.276		43.149
69	Ga-IS	|		434303.396		ppb	1.995			327008.223
95	Mo	|		5521.068	2.868079	ppb	3.999	2.483		28.889
115	In-IS	>		258048.967		ppb	0.933			211478.638
111	Cd	|		25.072	0.015422	ppb	21.529	23.897		2.162
118	Sn	|		4821.928	0.777846	ppb	7.286	8.446		883.361
121	Sb	|		14228.204	2.631200	ppb	4.887	4.234		196.668
135	Ba	|		13627.609	15.157399	ppb	1.810	2.115		14.444
165	Ho-IS	|		239949.584		ppb	0.884			202381.349
159	Tb-IS	|		200128.731		ppb	0.368			161992.242
207	Pb	|		3624.625	0.272109	ppb	4.362	3.729		96.667
203	Tl	|		56.667	0.012542	ppb	26.956	33.543		8.889
209	Bi-IS	>		153475.615		ppb	0.934			135216.948
51	V	|		693.350	0.973895	ppb	7.082	8.986		30.000
59	Co	|		383.338	0.207965	ppb	2.301	0.952		23.333
60	Ni	|		944.476	1.092049	ppb	5.494	6.368		31.111
75	As	|		3337.203	5.799093	ppb	4.018	6.395		666.032
71	Ga-ISK	>		119811.500		ppb	1.441			108493.800
82	Se-2	|		23.729	0.506690	ppb	12.775	13.676		3.560
107	Ag-1	|		113.334	0.023643	ppb	58.750	85.455		33.333
115	In-ISK	|		89979.335		ppb	2.156			79139.211
45	Sc-ISK	>		309584.290		ppb	0.977			279633.789
23	Na	|		4563686.563	9525.739938	ppb	0.512	1.066		1230.053
39	K	|		70146718.893	59916.735880	ppb	0.837	0.463		127163.510
24	Mg	|		2912221.683	5357.068910	ppb	1.015	1.846		131.667
159	Tb-ISK	|		188705.300		ppb	2.407			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

In-IS 115

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-2-A

Autosampler Position: 422

Sample Date/Time: Monday, April 20, 2020 16:18:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-2-A.180

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34738.859		ppb	1.464		25430.396
9	Be	17.778	0.005275	ppb	54.127	130.198	7.778
10	B	277063.662	816.987853	ppb	1.685	0.758	510.009
27	Al	18679.983	1.968920	ppb	0.780	2.827	2716.925
43	Ca-2	982872.305	62633.471159	ppb	2.262	0.152	85.000
49	Ti	880.027	0.927422	ppb	5.096	7.979	201.113
52	Cr	20125.282	0.989342	ppb	2.211	0.961	8347.996
55	Mn	6206804.126	429.140315	ppb	1.093	1.099	556.678
57	Fe	60513.521	183.904449	ppb	2.878	0.902	7832.147
45	Sc-IS	> 1582315.480		ppb	2.178		1187581.035
66	Zn	1195.606	0.564937	ppb	4.024	3.639	398.895
86	Sr	1235318.607	571.677812	ppb	2.151	0.453	5.279
65	Cu	1626.042	0.895859	ppb	6.355	6.044	43.149
69	Ga-IS	416283.732		ppb	3.805		327008.223
95	Mo	1885.680	0.943528	ppb	4.709	2.686	28.889
115	In-IS	> 242610.865		ppb	2.255		211478.638
111	Cd	12.707	0.007503	ppb	26.384	33.971	2.162
118	Sn	427.784	-0.129487	ppb	5.304	2.794	883.361
121	Sb	1675.654	0.290247	ppb	6.665	7.874	196.668
135	Ba	143474.984	169.915712	ppb	2.634	0.663	14.444
165	Ho-IS	225442.741		ppb	0.546		202381.349
159	Tb-IS	189497.461		ppb	0.582		161992.242
207	Pb	340.002	0.021615	ppb	6.123	7.496	96.667
203	Tl	20.000	0.003440	ppb	0.000	1.683	8.889
209	Bi-IS	> 134153.662		ppb	0.942		135216.948
51	V	3722.708	5.381234	ppb	4.421	3.870	30.000
59	Co	144.445	0.068184	ppb	3.525	4.723	23.333
60	Ni	805.578	0.916276	ppb	10.998	12.994	31.111
75	As	2664.030	4.240108	ppb	4.533	8.825	666.032
71	Ga-ISK	> 121054.172		ppb	1.796		108493.800
82	Se-2	197.634	4.909475	ppb	10.095	9.294	3.560
107	Ag-1	47.778	0.003221	ppb	47.490	211.062	33.333
115	In-ISK	88985.985		ppb	0.820		79139.211
45	Sc-ISK	> 335974.950		ppb	0.617		279633.789
23	Na	295083804.544	567659.148046	ppb	1.458	0.904	1230.053
39	K	77442454.394	60953.304022	ppb	1.550	1.357	127163.510
24	Mg	41297227.333	69993.297352	ppb	1.395	0.886	131.667
159	Tb-ISK	196762.496		ppb	0.791		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 16:21:40

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.181

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		29788.809		ppb		1.594		25430.396
9	Be	|		133487.483	100.848869	ppb		1.152	3.085	7.778
10	B	|		82817.174	259.424593	ppb		1.506	0.573	510.009
27	Al	|		651012.543	90.394697	ppb		1.324	0.748	2716.925
43	Ca-2	|		77625.380	5276.337855	ppb		1.921	0.803	85.000
49	Ti	|		57785.537	93.065853	ppb		1.313	0.870	201.113
52	Cr	|		783394.297	90.740249	ppb		0.925	2.095	8347.996
55	Mn	|		1157903.635	85.460634	ppb		1.067	1.954	556.678
57	Fe	|		1142183.214	4442.523515	ppb		1.595	2.102	7832.147
45	Sc-IS	>		1481659.895		ppb		1.995		1187581.035
66	Zn	|		113958.561	103.141000	ppb		3.066	3.479	398.895
86	Sr	|		180479.534	89.215108	ppb		1.223	2.303	5.279
65	Cu	|		166134.531	101.308459	ppb		3.596	3.252	43.149
69	Ga-IS	|		440166.793		ppb		3.079		327008.223
95	Mo	|		169119.703	92.302272	ppb		1.219	2.958	28.889
115	In-IS	>		252996.155		ppb		2.055		211478.638
111	Cd	|		148815.203	104.370285	ppb		0.781	1.333	2.162
118	Sn	|		451834.134	95.568916	ppb		1.550	0.585	883.361
121	Sb	|		510198.634	97.877958	ppb		1.448	1.848	196.668
135	Ba	|		98661.084	112.025867	ppb		4.497	3.314	14.444
165	Ho-IS	|		241868.168		ppb		0.725		202381.349
159	Tb-IS	|		200558.083		ppb		0.885		161992.242
207	Pb	|		1335134.086	100.991586	ppb		0.682	1.150	96.667
203	Tl	|		403203.681	105.916055	ppb		1.260	0.105	8.889
209	Bi-IS	>		157103.678		ppb		1.350		135216.948
51	V	|		64554.468	95.687429	ppb		2.348	3.206	30.000
59	Co	|		166793.674	97.598590	ppb		1.014	1.759	23.333
60	Ni	|		88656.517	106.949160	ppb		1.605	1.776	31.111
75	As	|		47545.675	104.935341	ppb		0.820	1.115	666.032
71	Ga-ISK	>		119096.682		ppb		1.567		108493.800
82	Se-2	|		3973.690	102.323563	ppb		3.175	1.608	3.560
107	Ag-1	|		342628.233	107.080624	ppb		1.151	1.733	33.333
115	In-ISK	|		92319.366		ppb		1.535		79139.211
45	Sc-ISK	>		304152.820		ppb		1.033		279633.789
23	Na	|		2666832.015	5664.097571	ppb		1.957	1.175	1230.053
39	K	|		6073942.584	5171.030892	ppb		1.946	1.998	127163.510
24	Mg	|		2832331.478	5303.115436	ppb		1.363	1.978	131.667
159	Tb-ISK	|		193013.191		ppb		0.745		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Mn	55
Fe	57
Sc-IS	45
Sr	86
Ba	135
Na	23

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 16:24:26

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.182

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		29285.552		ppb			2.160			25430.396
9	Be	|		13.333	0.003083	ppb			25.000	78.303		7.778
10	B	|		4369.558	12.307363	ppb			3.565	6.721		510.009
27	Al	|		2890.292	-0.054554	ppb			1.171	25.074		2716.925
43	Ca-2	|		233.335	9.290049	ppb			19.444	37.499		85.000
49	Ti	|		277.781	0.059329	ppb			13.857	93.323		201.113
52	Cr	|		8492.524	-0.188212	ppb			1.569	19.012		8347.996
55	Mn	|		1540.083	0.066670	ppb			1.352	3.091		556.678
57	Fe	|		12702.316	13.334304	ppb			3.393	5.857		7832.147
45	Sc-IS	>		1428693.121		ppb			2.151			1187581.035
66	Zn	|		833.358	0.333903	ppb			5.382	17.044		398.895
86	Sr	|		-23.350	-0.015187	ppb			22.938	16.573		5.279
65	Cu	|		611.479	0.353614	ppb			8.556	7.104		43.149
69	Ga-IS	|		408879.590		ppb			3.308			327008.223
95	Mo	|		847.803	0.459812	ppb			6.630	4.732		28.889
115	In-IS	>		246077.612		ppb			0.363			211478.638
111	Cd	|		15.997	0.009731	ppb			66.591	79.216		2.162
118	Sn	|		2603.571	0.343510	ppb			5.957	10.389		883.361
121	Sb	|		1415.626	0.234138	ppb			6.683	7.939		196.668
135	Ba	|		22.222	0.006312	ppb			48.218	198.003		14.444
165	Ho-IS	|		229332.811		ppb			0.483			202381.349
159	Tb-IS	|		195249.731		ppb			0.809			161992.242
207	Pb	|		298.890	0.014775	ppb			16.778	24.379		96.667
203	Tl	|		145.556	0.036690	ppb			13.222	14.108		8.889
209	Bi-IS	>		152444.714		ppb			1.346			135216.948
51	V	|		86.667	0.084846	ppb			26.923	43.066		30.000
59	Co	|		32.222	0.004608	ppb			26.034	110.989		23.333
60	Ni	|		44.445	0.014566	ppb			31.225	120.705		31.111
75	As	|		1033.570	0.768978	ppb			4.663	14.833		666.032
71	Ga-ISK	>		114593.335		ppb			0.513			108493.800
82	Se-2	|		4.177	0.011006	ppb			112.395	1143.731		3.560
107	Ag-1	|		225.557	0.061826	ppb			0.853	0.936		33.333
115	In-ISK	|		89953.126		ppb			1.217			79139.211
45	Sc-ISK	>		286722.353		ppb			1.200			279633.789
23	Na	|		75705.080	167.819004	ppb			1.098	0.629		1230.053
39	K	|		149040.096	17.249168	ppb			0.450	9.112		127163.510
24	Mg	|		1206.718	2.127412	ppb			6.888	6.406		131.667
159	Tb-ISK	|		185300.718		ppb			0.544			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-3-A

Autosampler Position: 423

Sample Date/Time: Monday, April 20, 2020 16:27:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-3-A.183

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	36416.366		ppb	1.749		25430.396
9	Be	18.889	0.005441	ppb	36.735	87.412	7.778
10	B	136343.235	382.583850	ppb	1.798	1.772	510.009
27	Al	14704.233	1.360819	ppb	2.162	2.848	2716.925
43	Ca-2	5197992.060	316135.550329	ppb	1.529	0.992	85.000
49	Ti	3966.106	5.325749	ppb	2.962	2.231	201.113
52	Cr	26073.773	1.512405	ppb	0.592	2.814	8347.996
55	Mn	55058264.659	3632.710388	ppb	1.880	1.843	556.678
57	Fe	2356773.313	8222.406938	ppb	1.814	1.836	7832.147
45	Sc-IS	> 1658146.895		ppb	1.508		1187581.035
66	Zn	8130.096	6.149117	ppb	6.121	5.931	398.895
86	Sr	5003225.517	2209.957080	ppb	0.706	2.175	5.279
65	Cu	3915.845	2.101810	ppb	4.202	4.571	43.149
69	Ga-IS	538850.114		ppb	2.313		327008.223
95	Mo	5708.918	2.764265	ppb	1.499	1.482	28.889
115	In-IS	> 243928.119		ppb	0.943		211478.638
111	Cd	12.456	0.007288	ppb	102.239	127.302	2.162
118	Sn	983.367	-0.007792	ppb	8.529	240.034	883.361
121	Sb	921.141	0.138083	ppb	10.270	12.428	196.668
135	Ba	707623.707	833.486570	ppb	3.577	2.668	14.444
165	Ho-IS	219604.511		ppb	2.300		202381.349
159	Tb-IS	184460.069		ppb	1.379		161992.242
207	Pb	426.669	0.031656	ppb	3.125	5.330	96.667
203	Tl	58.889	0.016538	ppb	34.119	39.755	8.889
209	Bi-IS	> 126318.278		ppb	1.088		135216.948
51	V	5031.997	7.888243	ppb	1.494	0.982	30.000
59	Co	2005.696	1.233555	ppb	1.248	0.520	23.333
60	Ni	3846.073	4.895890	ppb	1.939	1.362	31.111
75	As	19191.943	44.122561	ppb	0.840	0.110	666.032
71	Ga-ISK	> 111948.049		ppb	0.758		108493.800
82	Se-2	393.056	10.672905	ppb	15.057	14.631	3.560
107	Ag-1	206.668	0.057283	ppb	2.794	3.778	33.333
115	In-ISK	81025.806		ppb	0.782		79139.211
45	Sc-ISK	> 332526.683		ppb	0.154		279633.789
23	Na	538691608.422	1047060.472548	ppb	1.469	1.322	1230.053
39	K	62663909.952	49810.815380	ppb	1.055	0.927	127163.510
24	Mg	98922050.335	169402.160036	ppb	0.957	0.848	131.667
159	Tb-ISK	185180.709		ppb	1.681		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message
Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-4-A

Autosampler Position: 424

Sample Date/Time: Monday, April 20, 2020 16:29:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-4-A.184

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	36074.380		ppb	0.679		25430.396
9	Be	12.222	0.000987	ppb	15.746	122.675	7.778
10	B	141783.519	401.719194	ppb	1.233	1.416	510.009
27	Al	13811.121	1.265690	ppb	2.789	3.658	2716.925
43	Ca-2	5233376.860	321297.418914	ppb	1.348	0.684	85.000
49	Ti	3589.340	4.830863	ppb	1.282	0.522	201.113
52	Cr	23699.647	1.286432	ppb	1.931	0.965	8347.996
55	Mn	55762447.897	3713.955013	ppb	0.862	0.734	556.678
57	Fe	2423859.427	8537.620123	ppb	1.194	0.747	7832.147
45	Sc-IS	> 1642618.255		ppb	1.518		1187581.035
66	Zn	7563.115	5.746866	ppb	4.495	3.843	398.895
86	Sr	5004721.666	2231.319670	ppb	0.694	1.432	5.279
65	Cu	4668.005	2.534169	ppb	8.448	7.506	43.149
69	Ga-IS	558769.722		ppb	2.330		327008.223
95	Mo	6420.333	3.140480	ppb	3.946	3.582	28.889
115	In-IS	> 238639.486		ppb	1.774		211478.638
111	Cd	16.517	0.010436	ppb	50.258	58.273	2.162
118	Sn	793.355	-0.045644	ppb	4.545	21.742	883.361
121	Sb	804.467	0.118562	ppb	13.007	18.163	196.668
135	Ba	803288.660	966.980409	ppb	4.525	2.790	14.444
165	Ho-IS	217252.924		ppb	0.952		202381.349
159	Tb-IS	185719.417		ppb	0.232		161992.242
207	Pb	286.668	0.018901	ppb	9.082	13.831	96.667
203	Tl	23.333	0.005036	ppb	14.286	23.454	8.889
209	Bi-IS	> 124387.008		ppb	1.225		135216.948
51	V	4253.967	6.611966	ppb	2.415	3.434	30.000
59	Co	1982.360	1.209431	ppb	3.762	2.454	23.333
60	Ni	3525.991	4.452020	ppb	4.840	5.502	31.111
75	As	21409.401	49.029072	ppb	0.391	1.522	666.032
71	Ga-ISK	> 112804.790		ppb	1.402		108493.800
82	Se-2	220.646	5.912364	ppb	17.092	18.428	3.560
107	Ag-1	157.779	0.040691	ppb	17.077	23.118	33.333
115	In-ISK	80243.407		ppb	1.379		79139.211
45	Sc-ISK	> 332815.783		ppb	1.034		279633.789
23	Na	539317864.845	1047504.425860	ppb	1.429	2.121	1230.053
39	K	62232046.988	49425.824793	ppb	0.590	0.609	127163.510
24	Mg	98778104.022	169019.020994	ppb	0.975	1.234	131.667
159	Tb-ISK	182428.089		ppb	0.400		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-5-A @50

Autosampler Position: 425

Sample Date/Time: Monday, April 20, 2020 16:32:45

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-5-A @50.185

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	34399.148		ppb	1.234		25430.396
9	Be	12.222	0.001079	ppb	15.746	109.861	7.778
10	B	29405.790	82.712207	ppb	0.801	3.029	510.009
27	Al	4735.233	0.130233	ppb	9.084	45.317	2716.925
43	Ca-2	122978.972	7628.946649	ppb	2.622	0.747	85.000
49	Ti	1007.813	1.081228	ppb	2.653	0.777	201.113
52	Cr	21687.563	1.100188	ppb	1.348	2.769	8347.996
55	Mn	2801855.842	188.721843	ppb	1.226	1.446	556.678
57	Fe	29758.753	68.165153	ppb	2.433	1.890	7832.147
45	Sc-IS	> 1624079.652		ppb	2.442		1187581.035
66	Zn	1561.197	0.842715	ppb	6.249	10.407	398.895
86	Sr	221861.221	100.047769	ppb	1.243	1.199	5.279
65	Cu	1193.055	0.631044	ppb	2.698	0.347	43.149
69	Ga-IS	444010.858		ppb	3.802		327008.223
95	Mo	813.357	0.385267	ppb	6.895	6.873	28.889
115	In-IS	> 265409.098		ppb	1.600		211478.638
111	Cd	13.848	0.007486	ppb	56.164	70.464	2.162
118	Sn	861.137	-0.050083	ppb	5.667	14.504	883.361
121	Sb	637.792	0.071493	ppb	4.506	5.617	196.668
135	Ba	1697.879	1.818299	ppb	5.586	4.653	14.444
165	Ho-IS	236568.255		ppb	0.448		202381.349
159	Tb-IS	196588.996		ppb	0.588		161992.242
207	Pb	176.667	0.006115	ppb	28.176	69.407	96.667
203	Tl	21.111	0.003337	ppb	9.116	14.980	8.889
209	Bi-IS	> 143962.979		ppb	1.572		135216.948
51	V	1342.285	1.854949	ppb	6.314	6.126	30.000
59	Co	688.906	0.370531	ppb	10.824	10.734	23.333
60	Ni	766.687	0.844087	ppb	10.659	11.526	31.111
75	As	2312.770	3.320793	ppb	1.950	3.229	666.032
71	Ga-ISK	> 124485.612		ppb	0.848		108493.800
82	Se-2	53.504	1.218549	ppb	14.899	15.816	3.560
107	Ag-1	98.889	0.018105	ppb	16.966	26.277	33.333
115	In-ISK	90058.015		ppb	1.335		79139.211
45	Sc-ISK	> 336870.594		ppb	2.565		279633.789
23	Na	103677675.038	198983.967589	ppb	0.704	1.848	1230.053
39	K	7422863.111	5720.149894	ppb	0.310	2.294	127163.510
24	Mg	12966683.940	21927.062181	ppb	0.400	2.227	131.667
159	Tb-ISK	194891.127		ppb	0.945		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

In-IS 115

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25125-G-6-A

Autosampler Position: 426

Sample Date/Time: Monday, April 20, 2020 16:35:31

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25125-G-6-A.186

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		33055.993		ppb		2.411		25430.396
9	Be	|		16.667	0.005034	ppb	40.000	98.873		7.778
10	B	|		53013.742	162.112991	ppb	0.662	1.522		510.009
27	Al	|		24735.848	2.913159	ppb	2.203	3.624		2716.925
43	Ca-2	|		770723.672	51435.193918	ppb	1.420	0.430		85.000
49	Ti	|		1025.592	1.220821	ppb	6.221	8.018		201.113
52	Cr	|		12858.009	0.257357	ppb	2.670	9.371		8347.996
55	Mn	|		4674782.048	338.439170	ppb	0.999	0.266		556.678
57	Fe	|		264933.281	980.715815	ppb	1.429	0.506		7832.147
45	Sc-IS	>		1510866.906		ppb	1.103			1187581.035
66	Zn	|		6495.926	5.334946	ppb	6.915	6.339		398.895
86	Sr	|		513960.173	249.079111	ppb	1.913	0.929		5.279
65	Cu	|		1546.954	0.892382	ppb	6.038	5.808		43.149
69	Ga-IS	|		428079.167		ppb	3.696			327008.223
95	Mo	|		697.795	0.353906	ppb	5.108	6.411		28.889
115	In-IS	>		247182.457		ppb	2.143			211478.638
111	Cd	|		14.090	0.008306	ppb	36.217	44.794		2.162
118	Sn	|		441.118	-0.128174	ppb	9.863	8.784		883.361
121	Sb	|		875.582	0.126918	ppb	4.760	7.942		196.668
135	Ba	|		82605.239	95.981691	ppb	5.240	3.558		14.444
165	Ho-IS	|		237501.513		ppb	1.285			202381.349
159	Tb-IS	|		201192.435		ppb	0.676			161992.242
207	Pb	|		436.669	0.026793	ppb	11.997	14.451		96.667
203	Tl	|		10.000	0.000093	ppb	33.333	997.913		8.889
209	Bi-IS	>		146943.025		ppb	1.023			135216.948
51	V	|		1433.405	2.146564	ppb	1.628	1.451		30.000
59	Co	|		137.778	0.068298	ppb	11.433	13.993		23.333
60	Ni	|		675.572	0.800915	ppb	6.914	7.309		31.111
75	As	|		2712.906	4.642296	ppb	3.444	4.488		666.032
71	Ga-ISK	>		115291.133		ppb	0.309			108493.800
82	Se-2	|		4.390	0.016453	ppb	137.393	979.455		3.560
107	Ag-1	|		26.667	-0.002828	ppb	12.500	37.198		33.333
115	In-ISK	|		88907.847		ppb	1.251			79139.211
45	Sc-ISK	>		302105.789		ppb	1.377			279633.789
23	Na	|		26680165.043	57085.525144	ppb	0.350	1.379		1230.053
39	K	|		11472604.831	9943.338522	ppb	0.514	1.904		127163.510
24	Mg	|		7656144.561	14432.408195	ppb	0.420	1.034		131.667
159	Tb-ISK	|		186912.226		ppb	0.958			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Monday, April 20, 2020 16:38:18

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\b.187

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		30872.220		ppb		1.992		25430.396
9	Be	|		7.778	-0.001550	ppb	24.744	88.525		7.778
10	B	|		3205.915	7.961530	ppb	1.769	2.653		510.009
27	Al	|		4794.138	0.186269	ppb	2.892	14.409		2716.925
43	Ca-2	|		166.668	3.938654	ppb	28.827	79.756		85.000
49	Ti	|		311.115	0.090095	ppb	10.732	61.993		201.113
52	Cr	|		12377.583	0.208720	ppb	1.113	2.469		8347.996
55	Mn	|		1747.885	0.075893	ppb	2.994	6.841		556.678
57	Fe	|		12126.256	8.529323	ppb	1.015	2.632		7832.147
45	Sc-IS	>		1504027.257		ppb		1.199		1187581.035
66	Zn	|		831.135	0.291998	ppb	1.621	7.103		398.895
86	Sr	|		30.097	0.011380	ppb	22.407	27.879		5.279
65	Cu	|		452.646	0.239171	ppb	6.749	7.670		43.149
69	Ga-IS	|		430006.381		ppb		3.512		327008.223
95	Mo	|		164.445	0.068675	ppb	10.402	11.961		28.889
115	In-IS	>		250651.380		ppb		1.438		211478.638
111	Cd	|		10.766	0.005800	ppb	47.474	61.485		2.162
118	Sn	|		631.125	-0.089102	ppb	11.624	15.746		883.361
121	Sb	|		420.006	0.036166	ppb	6.781	12.500		196.668
135	Ba	|		30.000	0.014763	ppb	66.667	153.948		14.444
165	Ho-IS	|		235679.737		ppb		1.903		202381.349
159	Tb-IS	|		201725.469		ppb		0.941		161992.242
207	Pb	|		174.445	0.005049	ppb	7.723	19.877		96.667
203	Tl	|		15.556	0.001486	ppb	32.733	93.631		8.889
209	Bi-IS	>		153029.724		ppb		0.488		135216.948
51	V	|		146.667	0.170602	ppb	6.013	8.265		30.000
59	Co	|		15.556	-0.005805	ppb	12.372	19.516		23.333
60	Ni	|		36.667	0.003469	ppb	45.455	587.384		31.111
75	As	|		941.922	0.491061	ppb	2.715	10.146		666.032
71	Ga-ISK	>		118050.201		ppb		0.521		108493.800
82	Se-2	|		3.528	-0.008862	ppb	99.325	1032.908		3.560
107	Ag-1	|		66.667	0.009598	ppb	21.795	48.571		33.333
115	In-ISK	|		91086.660		ppb		0.764		79139.211
45	Sc-ISK	>		293601.256		ppb		1.503		279633.789
23	Na	|		72952.498	157.796778	ppb	1.651	2.846		1230.053
39	K	|		140960.927	6.735918	ppb	0.249	24.503		127163.510
24	Mg	|		1608.424	2.854179	ppb	7.173	9.551		131.667
159	Tb-ISK	|		186627.160		ppb		0.633		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message
Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25228-A-1-B

Autosampler Position: 107

Sample Date/Time: Monday, April 20, 2020 16:41:04

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25228-A-1-B.188

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		31750.803		ppb			1.097			25430.396
9	Be	|		18.889	0.006544	ppb			56.727	121.205		7.778
10	B	|		8086.733	22.723894	ppb			0.847	1.890		510.009
27	Al	|		544160.149	73.113329	ppb			1.839	2.518		2716.925
43	Ca-2	|		65504.838	4312.386910	ppb			0.140	0.943		85.000
49	Ti	|		2444.654	3.425573	ppb			2.052	3.397		201.113
52	Cr	|		16707.555	0.677005	ppb			4.532	10.831		8347.996
55	Mn	|		199417.976	14.214382	ppb			1.498	1.918		556.678
57	Fe	|		36915.420	101.955528	ppb			1.575	2.340		7832.147
45	Sc-IS	>		1529375.463		ppb			1.003			1187581.035
66	Zn	>		1116903.451	982.944160	ppb			3.070	2.743		398.895
86	Sr	|		29113.366	13.937059	ppb			1.770	2.079		5.279
65	Cu	|		99867.779	58.986038	ppb			2.585	2.742		43.149
69	Ga-IS	|		435472.905		ppb			1.394			327008.223
95	Mo	|		716.685	0.359100	ppb			5.938	5.227		28.889
115	In-IS	>		255853.860		ppb			1.456			211478.638
111	Cd	|		185.163	0.126498	ppb			7.808	6.500		2.162
118	Sn	|		687.794	-0.079852	ppb			11.635	20.673		883.361
121	Sb	|		27742.481	5.218438	ppb			2.805	1.491		196.668
135	Ba	|		18984.833	21.302640	ppb			2.269	1.268		14.444
165	Ho-IS	|		242314.476		ppb			0.400			202381.349
159	Tb-IS	|		207444.311		ppb			1.101			161992.242
207	Pb	|		18297.948	1.364076	ppb			1.898	1.384		96.667
203	Tl	|		22.222	0.003068	ppb			22.913	41.234		8.889
209	Bi-IS	>		158427.130		ppb			1.721			135216.948
51	V	|		1277.835	1.852863	ppb			4.993	5.212		30.000
59	Co	|		424.451	0.234286	ppb			6.586	6.887		23.333
60	Ni	|		1358.954	1.604646	ppb			3.881	3.896		31.111
75	As	|		920.267	0.431508	ppb			6.150	29.148		666.032
71	Ga-ISK	>		118657.415		ppb			0.146			108493.800
82	Se-2	|		9.500	0.145114	ppb			63.724	107.936		3.560
107	Ag-1	|		83.334	0.014712	ppb			32.000	57.118		33.333
115	In-ISK	|		92460.218		ppb			1.075			79139.211
45	Sc-ISK	>		295167.107		ppb			0.600			279633.789
23	Na	|		3964521.091	8678.547361	ppb			0.762	0.576		1230.053
39	K	|		588726.231	407.992686	ppb			0.510	0.134		127163.510
24	Mg	|		561118.423	1082.213264	ppb			1.883	1.306		131.667
159	Tb-ISK	|		186976.995		ppb			0.199			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

In-IS 115

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25228-A-2-B

Autosampler Position: 108

Sample Date/Time: Monday, April 20, 2020 16:43:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25228-A-2-B.189

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	31132.789		ppb	2.458		25430.396
9	Be	14.444	0.003377	ppb	35.251	115.764	7.778
10	B	5553.303	15.147719	ppb	4.455	6.599	510.009
27	Al	153149.999	20.440533	ppb	1.493	2.883	2716.925
43	Ca-2	52996.475	3521.662877	ppb	1.822	2.350	85.000
49	Ti	1083.375	1.307270	ppb	7.461	8.042	201.113
52	Cr	14229.305	0.411415	ppb	0.674	6.280	8347.996
55	Mn	51658.810	3.680551	ppb	1.828	2.885	556.678
57	Fe	19879.399	37.938325	ppb	4.824	8.780	7832.147
45	Sc-IS	> 1514712.666		ppb	1.464		1187581.035
66	Zn	992537.665	881.882909	ppb	2.841	2.082	398.895
86	Sr	14316.811	6.918574	ppb	0.659	1.096	5.279
65	Cu	33688.292	20.069194	ppb	2.751	2.844	43.149
69	Ga-IS	432684.478		ppb	3.140		327008.223
95	Mo	232.224	0.104239	ppb	7.081	7.161	28.889
115	In-IS	> 251867.132		ppb	2.418		211478.638
111	Cd	90.624	0.061893	ppb	24.471	23.545	2.162
118	Sn	575.567	-0.101402	ppb	1.338	4.195	883.361
121	Sb	6212.462	1.152478	ppb	2.105	1.443	196.668
135	Ba	7908.857	9.002266	ppb	3.595	1.198	14.444
165	Ho-IS	241124.757		ppb	1.165		202381.349
159	Tb-IS	203506.051		ppb	1.131		161992.242
207	Pb	10423.724	0.779745	ppb	2.572	3.225	96.667
203	Tl	25.556	0.004008	ppb	49.382	83.614	8.889
209	Bi-IS	> 157168.753		ppb	0.639		135216.948
51	V	351.115	0.476729	ppb	7.615	8.629	30.000
59	Co	140.001	0.067706	ppb	0.000	1.206	23.333
60	Ni	283.336	0.304109	ppb	9.412	11.749	31.111
75	As	853.558	0.292357	ppb	1.910	11.123	666.032
71	Ga-ISK	> 117990.847		ppb	0.982		108493.800
82	Se-2	2.205	-0.042520	ppb	223.758	305.029	3.560
107	Ag-1	51.111	0.004670	ppb	38.214	129.764	33.333
115	In-ISK	92601.480		ppb	1.285		79139.211
45	Sc-ISK	> 293852.822		ppb	2.636		279633.789
23	Na	1937125.962	4258.276147	ppb	2.281	0.655	1230.053
39	K	386867.435	228.483453	ppb	0.777	3.710	127163.510
24	Mg	324624.194	629.112219	ppb	1.631	3.158	131.667
159	Tb-ISK	187835.610		ppb	1.275		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25228-A-3-B @10

Autosampler Position: 109

Sample Date/Time: Monday, April 20, 2020 16:46:36

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25228-A-3-B @10.190

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31309.855		ppb		3.422		25430.396
9	Be	|		7.778	-0.001497	ppb	107.855	422.587		7.778
10	B	|		3532.659	9.129198	ppb	4.253	4.533		510.009
27	Al	|		302391.034	41.692671	ppb	1.975	2.989		2716.925
43	Ca-2	|		17635.879	1191.936451	ppb	0.532	1.472		85.000
49	Ti	|		963.366	1.152488	ppb	9.050	14.694		201.113
52	Cr	|		13109.347	0.314731	ppb	1.854	12.515		8347.996
55	Mn	|		122882.973	9.011822	ppb	1.332	0.859		556.678
57	Fe	|		29870.085	78.713964	ppb	0.617	1.920		7832.147
45	Sc-IS	>		1483390.416		ppb	1.835			1187581.035
66	Zn	|		45657.330	40.994975	ppb	2.927	2.314		398.895
86	Sr	|		6644.570	3.277864	ppb	1.022	2.817		5.279
65	Cu	|		44057.244	26.807118	ppb	3.148	2.076		43.149
69	Ga-IS	|		424118.849		ppb	2.745			327008.223
95	Mo	|		186.668	0.082140	ppb	8.183	11.325		28.889
115	In-IS	>		250856.562		ppb	1.491			211478.638
111	Cd	|		152.942	0.106364	ppb	18.642	18.863		2.162
118	Sn	|		2286.850	0.265092	ppb	3.484	8.601		883.361
121	Sb	|		843.358	0.118099	ppb	0.395	2.589		196.668
135	Ba	|		3981.667	4.542161	ppb	4.952	5.107		14.444
165	Ho-IS	|		239061.503		ppb	0.672			202381.349
159	Tb-IS	|		202118.778		ppb	1.100			161992.242
207	Pb	|		4590.293	0.338411	ppb	1.842	2.889		96.667
203	Tl	|		10.000	-0.000079	ppb	57.735	1967.105		8.889
209	Bi-IS	>		157272.139		ppb	1.019			135216.948
51	V	|		470.008	0.656267	ppb	16.618	16.954		30.000
59	Co	|		237.780	0.126080	ppb	15.632	18.656		23.333
60	Ni	|		1001.146	1.183165	ppb	5.173	6.946		31.111
75	As	|		748.751	0.060405	ppb	5.383	113.031		666.032
71	Ga-ISK	>		117593.193		ppb	1.588			108493.800
82	Se-2	|		-3.810	-0.200463	ppb	118.877	59.655		3.560
107	Ag-1	|		63.333	0.008651	ppb	22.942	56.285		33.333
115	In-ISK	|		92519.573		ppb	1.340			79139.211
45	Sc-ISK	>		292733.047		ppb	2.141			279633.789
23	Na	|		615129.163	1355.323645	ppb	2.418	0.940		1230.053
39	K	|		226311.911	84.391173	ppb	0.762	3.340		127163.510
24	Mg	|		90656.804	176.097906	ppb	1.792	0.884		131.667
159	Tb-ISK	|		187143.274		ppb	1.257			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Monday, April 20, 2020 16:49:23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\b.191

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	|		31322.081		ppb		1.259		25430.396
9	Be	|		12.222	0.001752	ppb	56.773	290.663		7.778
10	B	|		2495.774	5.758600	ppb	5.684	8.969		510.009
27	Al	|		5804.514	0.325398	ppb	4.737	12.463		2716.925
43	Ca-2	|		136.667	1.953495	ppb	13.851	67.223		85.000
49	Ti	|		331.115	0.122100	ppb	9.881	44.231		201.113
52	Cr	|		11828.229	0.145855	ppb	2.064	23.697		8347.996
55	Mn	|		1213.385	0.036987	ppb	8.356	18.488		556.678
57	Fe	|		12095.120	8.426651	ppb	2.384	12.653		7832.147
45	Sc-IS	|>		1503457.626		ppb		1.012		1187581.035
66	Zn	|		763.354	0.231908	ppb	9.872	32.243		398.895
86	Sr	|		25.778	0.009269	ppb	142.297	191.947		5.279
65	Cu	|		355.817	0.181185	ppb	8.149	10.868		43.149
69	Ga-IS	|		419849.954		ppb		3.657		327008.223
95	Mo	|		105.556	0.037075	ppb	17.392	26.022		28.889
115	In-IS	|>		248894.463		ppb		2.412		211478.638
111	Cd	|		6.445	0.002820	ppb	51.232	87.282		2.162
118	Sn	|		744.464	-0.063479	ppb	3.301	13.592		883.361
121	Sb	|		370.005	0.026963	ppb	7.697	14.099		196.668
135	Ba	|		17.778	0.000857	ppb	47.186	1125.682		14.444
165	Ho-IS	|		238347.450		ppb		0.295		202381.349
159	Tb-IS	|		200680.888		ppb		0.804		161992.242
207	Pb	|		233.334	0.009386	ppb	6.227	14.696		96.667
203	Tl	|		6.667	-0.000942	ppb	86.603	162.535		8.889
209	Bi-IS	|>		155183.998		ppb		1.493		135216.948
51	V	|		72.222	0.059487	ppb	2.665	5.857		30.000
59	Co	|		11.111	-0.008386	ppb	62.450	49.652		23.333
60	Ni	|		35.556	0.002131	ppb	19.516	377.408		31.111
75	As	|		714.768	-0.018304	ppb	4.521	415.373		666.032
71	Ga-ISK	|>		117760.077		ppb		1.151		108493.800
82	Se-2	|		-2.133	-0.155823	ppb	124.307	44.206		3.560
107	Ag-1	|		83.334	0.014926	ppb	10.583	20.697		33.333
115	In-ISK	|		92075.706		ppb		0.981		79139.211
45	Sc-ISK	|>		293427.628		ppb		1.292		279633.789
23	Na	|		25936.857	54.296252	ppb	0.290	1.549		1230.053
39	K	|		132826.877	-0.533186	ppb	0.442	376.658		127163.510
24	Mg	|		726.685	1.141307	ppb	8.267	8.654		131.667
159	Tb-ISK	|		186321.459		ppb		1.885		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Monday, April 20, 2020 16:52:08

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\b.192

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		31725.206		ppb		2.809		25430.396
9	Be	|		8.889	-0.000528	ppb	78.062	1015.845		7.778
10	B	|		2441.320	5.767725	ppb	6.487	8.994		510.009
27	Al	|		4797.473	0.202417	ppb	3.038	7.595		2716.925
43	Ca-2	|		141.667	2.505321	ppb	14.264	53.080		85.000
49	Ti	|		304.448	0.091203	ppb	6.690	40.737		201.113
52	Cr	|		11337.831	0.120276	ppb	0.396	5.576		8347.996
55	Mn	|		1118.933	0.032067	ppb	8.621	21.662		556.678
57	Fe	|		11509.080	7.217948	ppb	1.972	7.602		7832.147
45	Sc-IS	>		1468457.134		ppb	0.772			1187581.035
66	Zn	|		723.352	0.211061	ppb	0.461	3.836		398.895
86	Sr	|		39.124	0.016313	ppb	95.189	114.029		5.279
65	Cu	|		227.067	0.106721	ppb	27.234	34.799		43.149
69	Ga-IS	|		420423.849		ppb	3.513			327008.223
95	Mo	|		81.111	0.024966	ppb	11.863	19.954		28.889
115	In-IS	>		248143.150		ppb	2.951			211478.638
111	Cd	|		3.163	0.000460	ppb	105.939	533.281		2.162
118	Sn	|		577.790	-0.099394	ppb	13.084	12.566		883.361
121	Sb	|		288.892	0.011298	ppb	12.710	52.601		196.668
135	Ba	|		26.667	0.011250	ppb	33.072	91.385		14.444
165	Ho-IS	|		237893.413		ppb	0.950			202381.349
159	Tb-IS	|		202260.861		ppb	1.484			161992.242
207	Pb	|		181.112	0.005652	ppb	4.250	12.993		96.667
203	Tl	|		6.667	-0.000926	ppb	86.603	163.097		8.889
209	Bi-IS	>		152195.561		ppb	2.150			135216.948
51	V	|		70.000	0.055329	ppb	26.513	49.276		30.000
59	Co	|		11.111	-0.008461	ppb	45.826	35.357		23.333
60	Ni	|		38.889	0.005920	ppb	13.093	106.413		31.111
75	As	|		682.492	-0.103212	ppb	11.527	165.961		666.032
71	Ga-ISK	>		118614.846		ppb	0.404			108493.800
82	Se-2	|		6.890	0.077897	ppb	58.109	133.919		3.560
107	Ag-1	|		77.778	0.012971	ppb	2.474	4.821		33.333
115	In-ISK	|		91173.979		ppb	0.935			79139.211
45	Sc-ISK	>		288052.137		ppb	1.394			279633.789
23	Na	|		21976.894	46.470066	ppb	1.469	0.704		1230.053
39	K	|		131145.928	0.154442	ppb	0.972	1137.681		127163.510
24	Mg	|		576.678	0.872231	ppb	3.504	5.647		131.667
159	Tb-ISK	|		185512.097		ppb	0.479			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 16:54:55

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.193

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	30847.732		ppb		2.826		25430.396
9	Be	|	135706.001	101.093121	ppb	0.970	2.722		7.778
10	B	|	83653.100	258.428280	ppb	0.359	1.584		510.009
27	Al	|	664841.840	91.046294	ppb	0.972	1.905		2716.925
43	Ca-2	|	80010.217	5364.885802	ppb	2.830	4.021		85.000
49	Ti	|	59997.961	95.319291	ppb	1.157	2.850		201.113
52	Cr	|	803221.669	91.771315	ppb	1.902	3.498		8347.996
55	Mn	|	1181546.357	86.011124	ppb	2.190	3.724		556.678
57	Fe	|	1139894.787	4372.104586	ppb	3.194	4.187		7832.147
45	Sc-IS	>	1502509.989		ppb	1.747			1187581.035
66	Zn	|	117826.653	105.178002	ppb	4.021	4.672		398.895
86	Sr	|	180528.833	88.002593	ppb	1.076	2.532		5.279
65	Cu	|	168080.480	101.093962	ppb	3.735	4.336		43.149
69	Ga-IS	|	447498.493		ppb	2.170			327008.223
95	Mo	|	167081.480	89.917304	ppb	1.203	2.738		28.889
115	In-IS	>	254718.303		ppb	2.765			211478.638
111	Cd	|	152475.721	106.283413	ppb	1.669	4.482		2.162
118	Sn	|	456375.578	95.934677	ppb	1.826	3.985		883.361
121	Sb	|	512788.202	97.733361	ppb	0.917	2.446		196.668
135	Ba	|	102195.784	115.399547	ppb	4.253	6.588		14.444
165	Ho-IS	|	246978.798		ppb	2.731			202381.349
159	Tb-IS	|	208989.018		ppb	1.828			161992.242
207	Pb	|	1406441.269	104.560313	ppb	1.134	2.855		96.667
203	Tl	|	424015.957	109.483352	ppb	1.497	3.126		8.889
209	Bi-IS	>	159891.166		ppb	2.077			135216.948
51	V	|	62114.749	91.517018	ppb	0.633	2.352		30.000
59	Co	|	161461.784	93.912396	ppb	0.579	1.746		23.333
60	Ni	|	86334.545	103.522380	ppb	0.704	1.216		31.111
75	As	|	45415.856	99.568584	ppb	0.674	2.621		666.032
71	Ga-ISK	>	119821.636		ppb	1.912			108493.800
82	Se-2	|	3924.090	100.460947	ppb	1.048	0.882		3.560
107	Ag-1	|	350036.966	108.744540	ppb	1.296	2.229		33.333
115	In-ISK	|	92266.433		ppb	0.784			79139.211
45	Sc-ISK	>	292894.875		ppb	1.700			279633.789
23	Na	|	2478821.999	5467.390606	ppb	1.549	0.157		1230.053
39	K	|	5806684.094	5132.864896	ppb	1.132	0.933		127163.510
24	Mg	|	2775191.050	5395.808211	ppb	1.239	1.235		131.667
159	Tb-ISK	|	192228.045		ppb	0.756			168794.758

QC Out of Limits

AnalyteMassOut of Limits Message

Mn	55
Fe	57
Sc-IS	45
Sr	86
Ba	135

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 16:57:41

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.194

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		31055.956		ppb		2.482		25430.396
9	Be	|		13.333	0.002829	ppb		0.000	6.238	7.778
10	B	|		2359.084	5.505049	ppb		2.267	5.378	510.009
27	Al	|		2859.175	-0.070717	ppb		3.576	10.643	2716.925
43	Ca-2	|		115.000	0.695086	ppb		18.952	232.999	85.000
49	Ti	|		236.669	-0.019666	ppb		4.225	94.686	201.113
52	Cr	|		8393.576	-0.228596	ppb		0.662	9.516	8347.996
55	Mn	|		983.367	0.021963	ppb		4.994	17.973	556.678
57	Fe	|		10086.894	1.577769	ppb		1.202	21.261	7832.147
45	Sc-IS	>		1469107.711		ppb		1.754		1187581.035
66	Zn	|		585.568	0.083997	ppb		14.629	87.997	398.895
86	Sr	|		11.896	0.002774	ppb		153.936	329.421	5.279
65	Cu	|		230.388	0.108711	ppb		13.711	15.709	43.149
69	Ga-IS	|		420512.505		ppb		2.845		327008.223
95	Mo	|		551.122	0.283056	ppb		19.188	18.661	28.889
115	In-IS	>		251626.840		ppb		1.545		211478.638
111	Cd	|		9.954	0.005267	ppb		85.407	116.409	2.162
118	Sn	|		2432.430	0.294176	ppb		6.723	9.307	883.361
121	Sb	|		483.342	0.048036	ppb		10.839	18.794	196.668
135	Ba	|		28.889	0.013234	ppb		40.522	97.626	14.444
165	Ho-IS	|		241053.491		ppb		0.878		202381.349
159	Tb-IS	|		205784.081		ppb		1.788		161992.242
207	Pb	|		281.112	0.012723	ppb		7.623	14.654	96.667
203	Tl	|		176.668	0.043533	ppb		9.804	9.061	8.889
209	Bi-IS	>		157548.520		ppb		1.228		135216.948
51	V	|		48.889	0.024911	ppb		10.415	36.524	30.000
59	Co	|		27.778	0.001605	ppb		36.661	395.400	23.333
60	Ni	|		46.667	0.016104	ppb		21.429	80.334	31.111
75	As	|		761.150	0.093615	ppb		8.082	139.387	666.032
71	Ga-ISK	>		117269.487		ppb		2.021		108493.800
82	Se-2	|		-1.797	-0.146262	ppb		253.302	80.826	3.560
107	Ag-1	|		176.668	0.044616	ppb		10.505	12.403	33.333
115	In-ISK	|		91503.353		ppb		2.070		79139.211
45	Sc-ISK	>		285079.760		ppb		0.579		279633.789
23	Na	|		21160.666	45.135420	ppb		2.357	2.722	1230.053
39	K	|		129854.172	0.201152	ppb		0.221	299.444	127163.510
24	Mg	|		715.018	1.159826	ppb		6.097	6.824	131.667
159	Tb-ISK	|		186178.758		ppb		1.067		168794.758

QC Out of Limits

AnalyteMassOut of Limits Message
Sc-IS 45

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICIS-23447

Autosampler Position: 207

Sample Date/Time: Monday, April 20, 2020 17:00:29

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICIS-23447.195

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		31686.219		ppb		1.596		
9	Be	|		7.778		ppb		24.744		
10	B	|		2036.812		ppb		4.112		
27	Al	|		3324.832		ppb		4.695		
43	Ca-2	|		143.334		ppb		14.523		
49	Ti	|		207.779		ppb		12.147		
52	Cr	|		8601.478		ppb		2.213		
55	Mn	|		922.252		ppb		2.713		
57	Fe	|		10303.717		ppb		2.899		
45	Sc-IS	>		1494228.559		ppb		2.080		
66	Zn	|		571.123		ppb		14.348		
86	Sr	|		21.896		ppb		93.433		
65	Cu	|		222.727		ppb		6.842		
69	Ga-IS	|		426141.079		ppb		2.193		
95	Mo	|		132.223		ppb		10.189		
115	In-IS	>		250787.190		ppb		3.035		
111	Cd	|		9.722		ppb		34.034		
118	Sn	|		1098.931		ppb		5.790		
121	Sb	|		258.891		ppb		10.798		
135	Ba	|		24.444		ppb		34.317		
165	Ho-IS	|		241740.460		ppb		0.628		
159	Tb-IS	|		206400.475		ppb		1.152		
207	Pb	|		133.334		ppb		20.463		
203	Tl	|		48.889		ppb		37.552		
209	Bi-IS	>		160316.837		ppb		1.181		
51	V	|		30.000		ppb		22.222		
59	Co	|		25.556		ppb		39.849		
60	Ni	|		40.000		ppb		8.333		
75	As	|		674.805		ppb		5.901		
71	Ga-ISK	>		113706.361		ppb		1.636		
82	Se-2	|		2.893		ppb		216.281		
107	Ag-1	|		95.556		ppb		16.485		
115	In-ISK	|		91580.658		ppb		1.090		
45	Sc-ISK	>		280248.911		ppb		0.602		
23	Na	|		18084.777		ppb		2.358		
39	K	|		126517.861		ppb		1.599		
24	Mg	|		441.674		ppb		18.819		
159	Tb-ISK	|		186946.011		ppb		1.045		

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: IC-210761

Autosampler Position: 204

Sample Date/Time: Monday, April 20, 2020 17:03:16

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\IC-210761.196

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31079.331		ppb		1.495		31686.219
9	Be	|	270779.010	200.000000	ppb		1.074	1.851	7.778
10	B	|	161267.373	500.000000	ppb		0.389	1.056	2036.812
27	Al	|	1307721.061	200.000000	ppb		1.043	1.185	3324.832
43	Ca-2	|	159537.646	10200.000000	ppb		1.288	1.044	143.334
49	Ti	|	118159.989	200.000000	ppb		0.443	0.608	207.779
52	Cr	|	1556920.359	200.000000	ppb		1.864	1.132	8601.478
55	Mn	|	2418230.443	200.000000	ppb		1.599	1.055	922.252
57	Fe	|	2356858.356	10200.000000	ppb		0.954	0.506	10303.717
45	Sc-IS	>	1520758.443		ppb		0.844		1494228.559
66	Zn	|	228545.629	200.000000	ppb		2.700	1.894	571.123
86	Sr	|	357923.980	200.000000	ppb		1.079	0.270	21.896
65	Cu	|	325817.342	200.000000	ppb		2.478	1.666	222.727
69	Ga-IS	|	464980.333		ppb		2.068		426141.079
95	Mo	|	330100.947	200.000000	ppb		1.657	0.834	132.223
115	In-IS	>	254705.365		ppb		1.325		250787.190
111	Cd	|	301410.378	200.000000	ppb		1.493	1.318	9.722
118	Sn	|	919118.936	200.000000	ppb		1.543	1.194	1098.931
121	Sb	|	1018709.325	200.000000	ppb		2.153	2.406	258.891
135	Ba	|	203097.402	200.000000	ppb		4.210	4.035	24.444
165	Ho-IS	|	252560.122		ppb		1.830		241740.460
159	Tb-IS	|	213657.101		ppb		1.080		206400.475
207	Pb	|	2782635.782	200.000000	ppb		0.583	2.171	133.334
203	Tl	|	840771.827	200.000000	ppb		1.184	2.261	48.889
209	Bi-IS	>	162168.761		ppb		1.666		160316.837
51	V	|	125056.229	200.000000	ppb		1.946	2.400	30.000
59	Co	|	321663.954	200.000000	ppb		1.705	2.160	25.556
60	Ni	|	167401.798	200.000000	ppb		0.651	1.112	40.000
75	As	|	88812.110	200.000000	ppb		0.658	0.454	674.805
71	Ga-ISK	>	117227.914		ppb		0.470		113706.361
82	Se-2	|	7849.395	200.000000	ppb		0.794	0.327	2.893
107	Ag-1	|	685792.389	200.000000	ppb		0.813	1.279	95.556
115	In-ISK	|	92897.137		ppb		1.588		91580.658
45	Sc-ISK	>	288826.185		ppb		2.563		280248.911
23	Na	|	4852208.147	10200.000000	ppb		1.518	1.057	18084.777
39	K	|	11305727.733	10200.000000	ppb		0.418	2.263	126517.861
24	Mg	|	5384703.023	10200.000000	ppb		0.796	2.514	441.674
159	Tb-ISK	|	191256.248		ppb		2.438		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 17:06:03

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.197

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31368.849		ppb		0.861		31686.219
9	Be	|	134164.900	99.573139	ppb	1.197	0.554		7.778
10	B	|	83895.653	258.276798	ppb	1.295	0.485		2036.812
27	Al	|	658278.977	100.914615	ppb	1.353	0.901		3324.832
43	Ca-2	|	80060.415	5139.340121	ppb	1.570	1.181		143.334
49	Ti	|	58982.630	100.149248	ppb	0.915	0.412		207.779
52	Cr	|	787205.928	101.076756	ppb	1.083	1.111		8601.478
55	Mn	|	1149723.540	95.518313	ppb	1.586	0.855		922.252
57	Fe	|	1120083.265	4847.162637	ppb	2.379	1.246		10303.717
45	Sc-IS	>	1513279.532		ppb	1.162			1494228.559
66	Zn	|	115165.124	101.014448	ppb	4.279	3.232		571.123
86	Sr	|	179345.366	100.705629	ppb	1.627	1.258		21.896
65	Cu	|	165437.339	101.975801	ppb	3.735	2.667		222.727
69	Ga-IS	|	446155.528		ppb	3.595			426141.079
95	Mo	|	164634.457	100.206386	ppb	1.407	1.058		132.223
115	In-IS	>	254798.994		ppb	1.339			250787.190
111	Cd	|	151109.580	100.230108	ppb	0.679	0.690		9.722
118	Sn	|	457418.835	99.367833	ppb	2.184	1.230		1098.931
121	Sb	|	507513.709	99.565081	ppb	1.699	0.802		258.891
135	Ba	|	101230.054	99.621195	ppb	4.289	3.475		24.444
165	Ho-IS	|	249663.217		ppb	1.889			241740.460
159	Tb-IS	|	212977.109		ppb	1.286			206400.475
207	Pb	|	1393888.157	99.900529	ppb	0.743	0.329		133.334
203	Tl	|	423239.097	100.387488	ppb	3.299	2.890		48.889
209	Bi-IS	>	162582.152		ppb	0.419			160316.837
51	V	|	61446.352	98.696819	ppb	2.234	2.081		30.000
59	Co	|	157432.823	98.331931	ppb	1.318	1.402		25.556
60	Ni	|	83922.474	100.705762	ppb	1.228	0.998		40.000
75	As	|	44652.655	100.244969	ppb	1.351	1.252		674.805
71	Ga-ISK	>	116682.374		ppb	0.749			113706.361
82	Se-2	|	3990.782	102.122168	ppb	1.057	0.533		2.893
107	Ag-1	|	347493.625	101.795671	ppb	1.081	0.629		95.556
115	In-ISK	|	94102.668		ppb	0.071			91580.658
45	Sc-ISK	>	282923.414		ppb	1.480			280248.911
23	Na	|	2410813.657	5153.852849	ppb	0.535	1.170		18084.777
39	K	|	5711276.747	5201.854794	ppb	1.088	2.550		126517.861
24	Mg	|	2735668.400	5288.473621	ppb	0.884	1.886		441.674
159	Tb-ISK	|	192844.378		ppb	1.362			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 17:08:50

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.198

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	31924.525		ppb	1.471		31686.219
9	Be	23.333	0.011694	ppb	37.796	56.302	7.778
10	B	2185.723	0.480205	ppb	1.714	25.261	2036.812
27	Al	3014.763	-0.048009	ppb	2.746	36.121	3324.832
43	Ca-2	121.667	-1.391760	ppb	38.185	220.417	143.334
49	Ti	181.112	-0.045854	ppb	13.315	90.246	207.779
52	Cr	8047.825	-0.072074	ppb	4.602	71.245	8601.478
55	Mn	898.917	-0.001906	ppb	5.035	219.253	922.252
57	Fe	9324.154	-4.311983	ppb	1.900	11.680	10303.717
45	Sc-IS	> 1493375.147		ppb	0.968		1494228.559
66	Zn	555.566	-0.013733	ppb	6.690	219.087	571.123
86	Sr	37.502	0.008836	ppb	44.982	107.111	21.896
65	Cu	194.936	-0.017304	ppb	0.958	4.038	222.727
69	Ga-IS	419882.390		ppb	3.399		426141.079
95	Mo	624.458	0.303851	ppb	2.523	2.112	132.223
115	In-IS	> 250666.340		ppb	3.056		250787.190
111	Cd	14.244	0.003136	ppb	54.199	171.052	9.722
118	Sn	3345.950	0.497005	ppb	9.177	10.668	1098.931
121	Sb	522.232	0.052502	ppb	6.457	7.541	258.891
135	Ba	23.333	-0.000876	ppb	51.508	1467.355	24.444
165	Ho-IS	244641.698		ppb	1.492		241740.460
159	Tb-IS	206195.359		ppb	1.302		206400.475
207	Pb	364.446	0.016812	ppb	13.138	22.242	133.334
203	Tl	243.335	0.046726	ppb	7.627	8.344	48.889
209	Bi-IS	> 160404.464		ppb	1.065		160316.837
51	V	40.000	0.015566	ppb	50.000	209.762	30.000
59	Co	27.778	0.001116	ppb	24.980	378.560	25.556
60	Ni	44.445	0.004557	ppb	17.321	193.420	40.000
75	As	747.532	0.142363	ppb	4.754	53.046	674.805
71	Ga-ISK	> 115535.344		ppb	0.997		113706.361
82	Se-2	6.232	0.084621	ppb	66.751	125.003	2.893
107	Ag-1	206.668	0.032381	ppb	15.554	27.729	95.556
115	In-ISK	90972.491		ppb	2.157		91580.658
45	Sc-ISK	> 281141.940		ppb	1.172		280248.911
23	Na	16731.465	-3.061666	ppb	3.131	27.859	18084.777
39	K	126956.075	0.041884	ppb	0.229	2774.041	126517.861
24	Mg	691.684	0.484281	ppb	8.922	26.921	441.674
159	Tb-ISK	187915.224		ppb	0.719		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: ICVL-210771

Autosampler Position: 205

Sample Date/Time: Monday, April 20, 2020 17:11:37

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\ICVL-210771.199

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	31342.125		ppb	1.268		31686.219
9	Be	1395.624	1.033587	ppb	3.071	4.171	7.778
10	B	18399.620	51.755435	ppb	0.901	2.424	2036.812
27	Al	326922.993	50.025388	ppb	0.690	2.308	3324.832
43	Ca-2	916.696	49.792491	ppb	3.004	1.788	143.334
49	Ti	742.242	0.909443	ppb	9.488	11.770	207.779
52	Cr	16134.665	0.970208	ppb	2.337	2.201	8601.478
55	Mn	12509.921	0.965751	ppb	2.256	1.584	922.252
57	Fe	20447.959	44.038033	ppb	1.504	4.651	10303.717
45	Sc-IS	> 1508568.084		ppb	1.602		1494228.559
66	Zn	6401.437	5.149764	ppb	5.946	5.013	571.123
86	Sr	1742.574	0.969048	ppb	3.743	2.624	21.896
65	Cu	1802.407	0.976176	ppb	8.456	8.019	222.727
69	Ga-IS	429337.162		ppb	2.846		426141.079
95	Mo	1835.674	1.040696	ppb	6.604	8.114	132.223
115	In-IS	> 256595.161		ppb	0.411		250787.190
111	Cd	1550.674	1.014734	ppb	6.728	6.582	9.722
118	Sn	5955.687	1.044667	ppb	3.947	4.379	1098.931
121	Sb	5367.675	0.994576	ppb	1.241	0.882	258.891
135	Ba	1076.707	1.028181	ppb	1.116	1.419	24.444
165	Ho-IS	248927.009		ppb	1.487		241740.460
159	Tb-IS	212226.027		ppb	1.180		206400.475
207	Pb	14027.180	0.982762	ppb	1.367	1.572	133.334
203	Tl	4162.829	0.962855	ppb	3.692	2.894	48.889
209	Bi-IS	> 164716.425		ppb	0.840		160316.837
51	V	661.126	1.009476	ppb	4.076	3.421	30.000
59	Co	1657.874	1.015667	ppb	5.124	3.963	25.556
60	Ni	872.249	0.993689	ppb	8.801	7.304	40.000
75	As	1162.305	1.065670	ppb	4.962	17.842	674.805
71	Ga-ISK	> 117073.557		ppb	2.763		113706.361
82	Se-2	40.534	0.961758	ppb	14.446	18.262	2.893
107	Ag-1	3444.860	0.977828	ppb	0.533	2.804	95.556
115	In-ISK	94079.551		ppb	0.252		91580.658
45	Sc-ISK	> 282352.053		ppb	2.669		280248.911
23	Na	38157.560	43.075660	ppb	0.542	6.111	18084.777
39	K	179451.178	48.587970	ppb	0.300	8.301	126517.861
24	Mg	25789.932	49.129115	ppb	2.089	4.315	441.674
159	Tb-ISK	190927.442		ppb	0.743		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63907_1-A

Autosampler Position: 101

Sample Date/Time: Monday, April 20, 2020 17:14:25

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\MB 570-63907_1-A.200

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	31041.467		ppb	0.724		31686.219
9	Be	13.333	0.004256	ppb	43.301	101.570	7.778
10	B	1887.903	-0.419268	ppb	2.277	39.205	2036.812
27	Al	2681.363	-0.096464	ppb	3.591	17.656	3324.832
43	Ca-2	105.000	-2.434069	ppb	17.169	48.375	143.334
49	Ti	208.890	0.005260	ppb	13.572	937.208	207.779
52	Cr	8492.524	-0.003955	ppb	1.769	402.796	8601.478
55	Mn	818.912	-0.008063	ppb	5.890	49.742	922.252
57	Fe	9916.776	-1.301659	ppb	2.660	95.496	10303.717
45	Sc-IS	> 1480433.137		ppb	0.456		1494228.559
66	Zn	575.567	0.008854	ppb	8.997	543.972	571.123
86	Sr	1.858	-0.011363	ppb	731.003	68.471	21.896
65	Cu	174.034	-0.029414	ppb	7.726	29.930	222.727
69	Ga-IS	417371.979		ppb	2.674		426141.079
95	Mo	134.445	0.002128	ppb	9.387	357.375	132.223
115	In-IS	> 251519.976		ppb	0.613		250787.190
111	Cd	11.940	0.001482	ppb	42.447	232.493	9.722
118	Sn	1163.381	0.013461	ppb	8.743	159.725	1098.931
121	Sb	252.224	-0.001486	ppb	7.515	239.416	258.891
135	Ba	13.333	-0.011176	ppb	50.000	58.962	24.444
165	Ho-IS	244384.876		ppb	0.562		241740.460
159	Tb-IS	205585.828		ppb	2.124		206400.475
207	Pb	141.111	0.000652	ppb	23.305	366.684	133.334
203	Tl	80.000	0.007609	ppb	25.345	60.252	48.889
209	Bi-IS	> 158906.832		ppb	1.577		160316.837
51	V	41.111	0.016953	ppb	12.385	60.034	30.000
59	Co	23.333	-0.001582	ppb	62.270	612.450	25.556
60	Ni	31.111	-0.012100	ppb	43.301	127.599	40.000
75	As	688.451	-0.005098	ppb	4.152	908.671	674.805
71	Ga-ISK	> 116382.416		ppb	2.935		113706.361
82	Se-2	5.581	0.068505	ppb	72.543	154.039	2.893
107	Ag-1	75.556	-0.006508	ppb	22.639	78.391	95.556
115	In-ISK	91569.137		ppb	0.802		91580.658
45	Sc-ISK	> 281798.555		ppb	2.082		280248.911
23	Na	13893.423	-9.259588	ppb	2.894	16.091	18084.777
39	K	126942.642	-0.216035	ppb	0.746	1404.066	126517.861
24	Mg	286.670	-0.305536	ppb	11.613	20.994	441.674
159	Tb-ISK	189994.632		ppb	1.619		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63907_2-A

Autosampler Position: 102

Sample Date/Time: Monday, April 20, 2020 17:17:10

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\LCS 570-63907_2-A.201

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31651.703		ppb		2.175		31686.219
9	Be	|	139933.247	104.647454	ppb	1.699	1.467		7.778
10	B	|	32813.220	97.842169	ppb	2.994	2.912		2036.812
27	Al	|	685164.934	105.866601	ppb	0.234	0.549		3324.832
43	Ca-2	|	82395.275	5330.061577	ppb	0.813	0.784		143.334
49	Ti	|	59956.670	102.590509	ppb	0.737	0.829		207.779
52	Cr	|	798725.329	103.363984	ppb	1.101	1.278		8601.478
55	Mn	|	1147146.022	96.037677	ppb	1.718	1.805		922.252
57	Fe	|	1183101.808	5162.495150	ppb	2.261	2.198		10303.717
45	Sc-IS	>	1501770.161		ppb	0.322			1494228.559
66	Zn	|	120606.113	106.655258	ppb	2.783	3.039		571.123
86	Sr	|	176774.236	100.026206	ppb	2.452	2.709		21.896
65	Cu	|	165570.389	102.866033	ppb	3.433	3.657		222.727
69	Ga-IS	|	451579.378		ppb	4.074			426141.079
95	Mo	|	168010.354	103.049907	ppb	2.454	2.691		132.223
115	In-IS	>	252788.074		ppb	1.337			250787.190
111	Cd	|	157682.129	105.421842	ppb	1.158	1.141		9.722
118	Sn	|	463164.534	101.431485	ppb	1.027	0.849		1098.931
121	Sb	|	497670.940	98.407874	ppb	1.805	0.557		258.891
135	Ba	|	103595.711	102.756217	ppb	3.676	2.394		24.444
165	Ho-IS	|	253247.080		ppb	2.616			241740.460
159	Tb-IS	|	211173.121		ppb	2.092			206400.475
207	Pb	|	1433676.497	101.404425	ppb	0.526	0.975		133.334
203	Tl	|	412902.889	96.660022	ppb	1.437	1.892		48.889
209	Bi-IS	>	164750.119		ppb	0.556			160316.837
51	V	|	63131.410	99.985835	ppb	0.186	0.874		30.000
59	Co	|	161520.305	99.476586	ppb	1.337	2.036		25.556
60	Ni	|	87783.332	103.863451	ppb	0.622	0.488		40.000
75	As	|	45877.448	101.574290	ppb	0.335	1.049		674.805
71	Ga-ISK	>	118342.612		ppb	0.697			113706.361
82	Se-2	|	3993.781	100.768964	ppb	0.601	1.026		2.893
107	Ag-1	|	169041.073	48.812940	ppb	1.601	1.975		95.556
115	In-ISK	|	93521.005		ppb	1.321			91580.658
45	Sc-ISK	>	289234.360		ppb	0.947			280248.911
23	Na	|	490221.121	993.534127	ppb	0.684	0.298		18084.777
39	K	|	1219356.596	992.038282	ppb	0.529	1.170		126517.861
24	Mg	|	2856160.852	5400.332049	ppb	0.414	0.894		441.674
159	Tb-ISK	|	193646.411		ppb	1.167			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63907_3-A

Autosampler Position: 103

Sample Date/Time: Monday, April 20, 2020 17:19:57

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\LCSD 570-63907_3-A.202

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31209.611		ppb		0.698		31686.219
9	Be	|	142037.071	106.233530	ppb	0.493	0.999		7.778
10	B	|	34484.906	103.178519	ppb	0.354	1.508		2036.812
27	Al	|	702787.724	108.613126	ppb	2.106	2.327		3324.832
43	Ca-2	|	85116.216	5506.852071	ppb	2.032	2.127		143.334
49	Ti	|	59839.523	102.406692	ppb	1.279	2.176		207.779
52	Cr	|	807552.082	104.533114	ppb	0.939	1.815		8601.478
55	Mn	|	1160652.712	97.184228	ppb	1.876	2.503		922.252
57	Fe	|	1198866.972	5232.801410	ppb	0.891	1.883		10303.717
45	Sc-IS	>	1501736.651		ppb	1.235			1494228.559
66	Zn	>	120907.644	106.915943	ppb	3.310	2.893		571.123
86	Sr	|	181611.847	102.760044	ppb	2.687	2.314		21.896
65	Cu	|	166047.560	103.153613	ppb	2.346	1.518		222.727
69	Ga-IS	|	442205.726		ppb	2.918			426141.079
95	Mo	|	170239.657	104.413531	ppb	1.736	0.869		132.223
115	In-IS	>	255669.234		ppb	1.860			250787.190
111	Cd	|	160612.296	106.173522	ppb	1.867	1.618		9.722
118	Sn	|	479034.850	103.735049	ppb	2.607	2.514		1098.931
121	Sb	|	515283.803	100.749785	ppb	3.310	2.895		258.891
135	Ba	|	105887.949	103.867810	ppb	3.417	2.907		24.444
165	Ho-IS	|	245650.348		ppb	2.342			241740.460
159	Tb-IS	|	208089.432		ppb	2.019			206400.475
207	Pb	|	1447055.610	103.116598	ppb	0.637	1.225		133.334
203	Tl	|	417885.007	98.553864	ppb	0.253	0.781		48.889
209	Bi-IS	>	163532.965		ppb	1.020			160316.837
51	V	|	62344.663	98.642933	ppb	1.824	2.421		30.000
59	Co	|	157831.866	97.100453	ppb	2.402	2.647		25.556
60	Ni	|	87473.657	103.392775	ppb	0.091	0.876		40.000
75	As	|	46744.420	103.407615	ppb	1.089	0.302		674.805
71	Ga-ISK	>	118465.854		ppb	0.794			113706.361
82	Se-2	|	4061.133	102.363966	ppb	1.258	1.550		2.893
107	Ag-1	|	171625.939	49.509234	ppb	0.793	1.559		95.556
115	In-ISK	|	94039.890		ppb	0.992			91580.658
45	Sc-ISK	>	283646.162		ppb	0.860			280248.911
23	Na	|	488731.318	1010.685979	ppb	0.629	0.546		18084.777
39	K	|	1232130.536	1025.751195	ppb	0.573	0.447		126517.861
24	Mg	|	2862466.326	5518.410287	ppb	1.724	1.038		441.674
159	Tb-ISK	|	192393.545		ppb	0.320			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25221-G-1-A

Autosampler Position: 104

Sample Date/Time: Monday, April 20, 2020 17:22:43

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25221-G-1-A.203

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	36731.616		ppb	1.746		31686.219
9	Be	20.000	0.009092	ppb	33.333	55.703	7.778
10	B	86536.891	267.831866	ppb	1.190	1.193	2036.812
27	Al	89728.734	13.371534	ppb	1.557	2.952	3324.832
43	Ca-2	372161.389	24029.014129	ppb	1.862	1.089	143.334
49	Ti	1364.510	1.977485	ppb	2.034	3.997	207.779
52	Cr	15775.375	0.925984	ppb	2.351	2.294	8601.478
55	Mn	1233200.864	102.914888	ppb	1.598	1.273	922.252
57	Fe	92399.070	359.823107	ppb	2.320	1.579	10303.717
45	Sc-IS	> 1506652.151		ppb	1.373		1494228.559
66	Zn	14695.334	12.504370	ppb	1.697	0.610	571.123
86	Sr	300054.265	169.231590	ppb	1.635	0.658	21.896
65	Cu	3387.284	1.960334	ppb	5.947	5.020	222.727
69	Ga-IS	417185.594		ppb	3.607		426141.079
95	Mo	6122.424	3.664007	ppb	4.036	3.604	132.223
115	In-IS	> 251631.359		ppb	0.786		250787.190
111	Cd	24.921	0.010145	ppb	59.109	96.637	9.722
118	Sn	3139.234	0.449117	ppb	1.136	1.467	1098.931
121	Sb	13816.692	2.693905	ppb	5.489	4.858	258.891
135	Ba	29528.302	29.406723	ppb	4.357	3.596	24.444
165	Ho-IS	245325.337		ppb	1.028		241740.460
159	Tb-IS	204271.180		ppb	0.113		206400.475
207	Pb	17205.152	1.275206	ppb	0.563	1.111	133.334
203	Tl	191.112	0.035489	ppb	14.206	19.276	48.889
209	Bi-IS	> 156054.446		ppb	0.995		160316.837
51	V	1446.740	2.322414	ppb	3.577	4.042	30.000
59	Co	397.783	0.237079	ppb	6.509	6.736	25.556
60	Ni	1811.226	2.168906	ppb	1.394	1.549	40.000
75	As	1509.846	1.931253	ppb	5.841	7.991	674.805
71	Ga-ISK	> 114398.539		ppb	1.802		113706.361
82	Se-2	18.229	0.399886	ppb	17.817	20.447	2.893
107	Ag-1	83.334	-0.003865	ppb	18.330	109.250	95.556
115	In-ISK	91926.209		ppb	1.528		91580.658
45	Sc-ISK	> 289841.046		ppb	1.256		280248.911
23	Na	17526277.684	36812.573460	ppb	1.539	1.856	18084.777
39	K	7599891.979	6791.035447	ppb	1.419	1.393	126517.861
24	Mg	3913540.404	7384.451229	ppb	1.569	1.591	441.674
159	Tb-ISK	189712.801		ppb	1.065		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25221-G-1-B MS

Autosampler Position: 105

Sample Date/Time: Monday, April 20, 2020 17:25:30

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25221-G-1-B MS.204

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	35055.198		ppb		2.532		31686.219
9	Be	|	143905.622	106.121090	ppb	0.144	1.165		7.778
10	B	|	114624.777	352.931936	ppb	1.712	1.486		2036.812
27	Al	|	763787.810	116.420365	ppb	1.416	1.814		3324.832
43	Ca-2	|	451827.576	28860.507180	ppb	0.801	0.560		143.334
49	Ti	|	55026.895	92.802235	ppb	1.143	0.763		207.779
52	Cr	|	802126.255	102.336984	ppb	1.196	0.637		8601.478
55	Mn	|	2522643.084	208.326245	ppb	0.694	0.327		922.252
57	Fe	|	1208927.699	5201.893436	ppb	0.710	0.883		10303.717
45	Sc-IS	>	1523109.545		ppb	1.020			1494228.559
66	Zn	|	134840.172	117.616376	ppb	1.755	1.234		571.123
86	Sr	|	474953.913	264.982822	ppb	1.837	1.175		21.896
65	Cu	|	164276.718	100.617722	ppb	2.337	1.629		222.727
69	Ga-IS	|	438325.197		ppb	2.817			426141.079
95	Mo	|	172113.943	104.090674	ppb	0.300	0.963		132.223
115	In-IS	>	250455.565		ppb	2.058			250787.190
111	Cd	|	152935.623	103.212148	ppb	1.083	1.430		9.722
118	Sn	|	176270.142	38.809423	ppb	2.458	1.033		1098.931
121	Sb	|	494746.057	98.737638	ppb	2.608	0.673		258.891
135	Ba	|	129825.964	129.954852	ppb	4.915	2.901		24.444
165	Ho-IS	|	249364.430		ppb	1.196			241740.460
159	Tb-IS	|	209692.354		ppb	1.186			206400.475
207	Pb	|	1411158.436	103.813562	ppb	0.560	0.394		133.334
203	Tl	|	402632.555	98.038517	ppb	1.468	1.997		48.889
209	Bi-IS	>	158396.658		ppb	0.764			160316.837
51	V	|	62974.076	105.177495	ppb	1.646	2.597		30.000
59	Co	|	154855.969	100.565655	ppb	1.124	2.203		25.556
60	Ni	|	84899.333	105.920344	ppb	1.264	1.503		40.000
75	As	|	48161.464	112.588918	ppb	2.387	1.845		674.805
71	Ga-ISK	>	112239.232		ppb	1.166			113706.361
82	Se-2	|	4066.769	108.200506	ppb	1.588	1.908		2.893
107	Ag-1	|	80449.222	24.479954	ppb	0.345	0.896		95.556
115	In-ISK	|	89671.608		ppb	2.014			91580.658
45	Sc-ISK	>	285078.577		ppb	2.471			280248.911
23	Na	|	17499482.486	37380.283823	ppb	0.992	2.244		18084.777
39	K	|	8620750.592	7852.580166	ppb	0.828	2.284		126517.861
24	Mg	|	6611876.640	12688.475291	ppb	0.751	2.091		441.674
159	Tb-ISK	|	188540.019		ppb	0.481			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25221-G-1-C MSD

Autosampler Position: 106

Sample Date/Time: Monday, April 20, 2020 17:28:15

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25221-G-1-C MSD.205

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	36037.621		ppb		0.548		31686.219
9	Be	|	146812.812	107.513856	ppb	1.067	2.383		7.778
10	B	|	118064.776	361.160206	ppb	0.787	1.987		2036.812
27	Al	|	780094.367	118.076614	ppb	0.376	1.267		3324.832
43	Ca-2	|	452490.250	28698.778629	ppb	1.335	0.987		143.334
49	Ti	|	55654.877	93.200078	ppb	1.151	0.205		207.779
52	Cr	|	815596.088	103.335133	ppb	1.012	0.670		8601.478
55	Mn	|	2535372.860	207.898300	ppb	1.364	0.915		922.252
57	Fe	|	1224241.835	5231.044958	ppb	0.904	1.302		10303.717
45	Sc-IS	>	1533953.351		ppb	1.352			1494228.559
66	Zn	|	136500.468	118.213111	ppb	2.750	1.458		571.123
86	Sr	|	478212.835	264.909647	ppb	2.507	1.688		21.896
65	Cu	|	165497.093	100.646808	ppb	2.250	0.943		222.727
69	Ga-IS	|	441672.865		ppb	2.888			426141.079
95	Mo	|	173449.033	104.147219	ppb	1.725	0.569		132.223
115	In-IS	>	252763.625		ppb	1.567			250787.190
111	Cd	|	153268.592	102.496430	ppb	0.804	2.131		9.722
118	Sn	|	178685.216	38.986581	ppb	1.745	1.622		1098.931
121	Sb	|	509942.173	100.861412	ppb	1.583	1.924		258.891
135	Ba	|	131935.133	130.898696	ppb	4.780	4.170		24.444
165	Ho-IS	|	251821.252		ppb	0.551			241740.460
159	Tb-IS	|	210761.169		ppb	0.809			206400.475
207	Pb	|	1413349.655	101.729544	ppb	1.105	0.103		133.334
203	Tl	|	408943.530	97.417413	ppb	1.353	0.484		48.889
209	Bi-IS	>	161888.839		ppb	1.002			160316.837
51	V	|	64207.300	105.983928	ppb	0.157	1.060		30.000
59	Co	|	157176.594	100.881989	ppb	0.105	1.181		25.556
60	Ni	|	86179.205	106.271314	ppb	1.646	1.862		40.000
75	As	|	47468.064	109.652005	ppb	0.270	0.855		674.805
71	Ga-ISK	>	113555.122		ppb	1.105			113706.361
82	Se-2	|	4106.467	107.988520	ppb	1.372	1.590		2.893
107	Ag-1	|	81162.126	24.410789	ppb	0.374	1.085		95.556
115	In-ISK	|	90577.492		ppb	1.395			91580.658
45	Sc-ISK	>	287638.171		ppb	0.958			280248.911
23	Na	|	17621598.791	37294.427192	ppb	0.602	0.493		18084.777
39	K	|	8676451.331	7830.537895	ppb	0.323	1.282		126517.861
24	Mg	|	6638115.550	12622.104585	ppb	1.036	1.447		441.674
159	Tb-ISK	|	192234.079		ppb	0.132			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: b

Autosampler Position: 7

Sample Date/Time: Monday, April 20, 2020 17:31:02

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\b.206

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	|		32950.182		ppb		1.103		31686.219
9	Be	|		12.222	0.003182	ppb	87.670	249.832		7.778
10	B	|		2335.747	0.788597	ppb	1.287	26.767		2036.812
27	Al	|		4930.851	0.233452	ppb	2.072	11.277		3324.832
43	Ca-2	|		100.000	-2.982439	ppb	22.913	45.934		143.334
49	Ti	|		266.669	0.091651	ppb	9.014	51.195		207.779
52	Cr	|		10410.459	0.206815	ppb	1.880	3.964		8601.478
55	Mn	|		1035.593	0.007567	ppb	1.967	9.600		922.252
57	Fe	|		11012.026	2.017136	ppb	4.328	68.033		10303.717
45	Sc-IS	|>		1528884.491		ppb	1.698			1494228.559
66	Zn	|		681.127	0.084535	ppb	2.207	17.773		571.123
86	Sr	|		21.321	-0.000580	ppb	15.546	351.602		21.896
65	Cu	|		202.665	-0.015325	ppb	16.739	138.561		222.727
69	Ga-IS	|		424718.892		ppb	4.091			426141.079
95	Mo	|		2594.681	1.482096	ppb	6.426	5.213		132.223
115	In-IS	|>		253893.008		ppb	2.469			250787.190
111	Cd	|		16.773	0.004603	ppb	41.965	99.509		9.722
118	Sn	|		4491.820	0.737833	ppb	7.722	7.497		1098.931
121	Sb	|		18307.304	3.552724	ppb	5.759	3.417		258.891
135	Ba	|		31.111	0.006192	ppb	26.964	124.975		24.444
165	Ho-IS	|		245087.961		ppb	0.957			241740.460
159	Tb-IS	|		205494.196		ppb	1.058			206400.475
207	Pb	|		688.895	0.040035	ppb	7.391	9.174		133.334
203	Tl	|		124.445	0.017969	ppb	17.835	29.478		48.889
209	Bi-IS	|>		161441.537		ppb	0.018			160316.837
51	V	|		53.333	0.035195	ppb	12.500	30.309		30.000
59	Co	|		25.556	-0.000616	ppb	7.531	180.508		25.556
60	Ni	|		36.667	-0.005716	ppb	27.273	214.267		40.000
75	As	|		721.471	0.046952	ppb	10.937	402.088		674.805
71	Ga-ISK	|>		118123.052		ppb	1.109			113706.361
82	Se-2	|		3.226	0.004357	ppb	206.937	3832.012		2.893
107	Ag-1	|		207.779	0.031426	ppb	18.732	36.430		95.556
115	In-ISK	|		93230.461		ppb	0.657			91580.658
45	Sc-ISK	|>		285406.396		ppb	1.213			280248.911
23	Na	|		16524.558	-4.044313	ppb	3.167	22.164		18084.777
39	K	|		126407.930	-2.233900	ppb	0.711	97.756		126517.861
24	Mg	|		1063.373	1.176519	ppb	4.215	9.000		441.674
159	Tb-ISK	|		190330.183		ppb	0.370			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: MB 570-63846_1-A

Autosampler Position: 110

Sample Date/Time: Monday, April 20, 2020 17:33:48

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\MB 570-63846_1-A.207

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	32598.262		ppb	0.546		31686.219
9	Be	5.556	-0.001748	ppb	69.282	161.215	7.778
10	B	1776.777	-0.922136	ppb	4.262	36.349	2036.812
27	Al	2980.311	-0.061403	ppb	1.025	17.928	3324.832
43	Ca-2	81.667	-4.095445	ppb	14.139	20.459	143.334
49	Ti	278.892	0.116164	ppb	25.109	109.764	207.779
52	Cr	10374.879	0.210277	ppb	2.644	5.957	8601.478
55	Mn	805.578	-0.010995	ppb	8.703	45.608	922.252
57	Fe	9305.256	-5.112251	ppb	4.522	27.120	10303.717
45	Sc-IS	> 1519586.502		ppb	1.775		1494228.559
66	Zn	586.679	0.005031	ppb	3.726	203.306	571.123
86	Sr	33.619	0.006334	ppb	11.611	30.718	21.896
65	Cu	160.707	-0.040414	ppb	13.325	33.241	222.727
69	Ga-IS	422362.613		ppb	4.063		426141.079
95	Mo	420.006	0.172946	ppb	13.562	18.164	132.223
115	In-IS	> 254498.620		ppb	1.540		250787.190
111	Cd	8.007	-0.001228	ppb	25.262	112.329	9.722
118	Sn	1996.807	0.191952	ppb	7.548	13.748	1098.931
121	Sb	4139.492	0.761256	ppb	9.545	8.753	258.891
135	Ba	15.556	-0.009107	ppb	12.372	21.997	24.444
165	Ho-IS	243743.281		ppb	1.681		241740.460
159	Tb-IS	206022.738		ppb	0.292		206400.475
207	Pb	227.779	0.006773	ppb	17.459	41.056	133.334
203	Tl	37.778	-0.002705	ppb	36.735	124.648	48.889
209	Bi-IS	> 161116.872		ppb	1.163		160316.837
51	V	37.778	0.010301	ppb	22.205	130.443	30.000
59	Co	13.333	-0.008185	ppb	43.301	43.342	25.556
60	Ni	31.111	-0.012529	ppb	26.964	78.750	40.000
75	As	727.919	0.054636	ppb	5.780	171.861	674.805
71	Ga-ISK	> 118553.225		ppb	0.365		113706.361
82	Se-2	-2.787	-0.146062	ppb	198.356	95.462	2.893
107	Ag-1	103.334	0.001075	ppb	11.175	317.601	95.556
115	In-ISK	93207.169		ppb	1.643		91580.658
45	Sc-ISK	> 287402.262		ppb	0.522		280248.911
23	Na	10930.848	-16.148255	ppb	1.615	1.565	18084.777
39	K	124112.364	-5.165878	ppb	0.349	4.037	126517.861
24	Mg	278.336	-0.332256	ppb	18.870	30.241	441.674
159	Tb-ISK	189391.201		ppb	0.798		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCS 570-63846_2-A

Autosampler Position: 111

Sample Date/Time: Monday, April 20, 2020 17:36:34

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\LCS 570-63846_2-A.208

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		32568.196		ppb			1.084			31686.219
9	Be	|		142887.877	105.295590	ppb			1.922	1.411		7.778
10	B	|		33617.289	98.845133	ppb			1.159	1.173		2036.812
27	Al	|		706204.844	107.523960	ppb			1.882	0.945		3324.832
43	Ca-2	|		84339.979	5375.702068	ppb			2.226	1.049		143.334
49	Ti	|		60787.955	102.509826	ppb			1.077	2.329		207.779
52	Cr	|		812878.651	103.671265	ppb			0.467	1.582		8601.478
55	Mn	|		1168820.265	96.428135	ppb			1.543	1.862		922.252
57	Fe	|		1184550.348	5093.133550	ppb			1.675	2.070		10303.717
45	Sc-IS	>		1524067.657		ppb			1.251			1494228.559
66	Zn	|		121120.346	105.543027	ppb			2.238	2.551		571.123
86	Sr	|		180005.734	100.370591	ppb			0.538	1.389		21.896
65	Cu	|		165657.956	101.424234	ppb			2.204	2.899		222.727
69	Ga-IS	|		454058.532		ppb			1.512			426141.079
95	Mo	|		170715.118	103.178193	ppb			0.751	0.786		132.223
115	In-IS	>		261388.674		ppb			0.568			250787.190
111	Cd	|		162520.351	105.075574	ppb			0.675	0.505		9.722
118	Sn	|		478577.911	101.356932	ppb			0.831	1.202		1098.931
121	Sb	|		514258.284	98.347650	ppb			0.627	0.807		258.891
135	Ba	|		104230.183	99.994894	ppb			2.936	2.390		24.444
165	Ho-IS	|		252535.182		ppb			1.712			241740.460
159	Tb-IS	|		212697.269		ppb			0.298			206400.475
207	Pb	|		1463049.045	101.375366	ppb			0.205	0.516		133.334
203	Tl	|		421108.337	96.568994	ppb			1.374	1.175		48.889
209	Bi-IS	>		168171.877		ppb			0.668			160316.837
51	V	|		64369.145	101.359154	ppb			0.885	1.100		30.000
59	Co	|		161631.463	98.963462	ppb			0.562	0.170		25.556
60	Ni	|		89411.166	105.182257	ppb			0.862	0.923		40.000
75	As	|		46664.879	102.743192	ppb			1.285	1.823		674.805
71	Ga-ISK	>		119027.150		ppb			0.629			113706.361
82	Se-2	|		4060.108	101.858244	ppb			1.264	1.889		2.893
107	Ag-1	|		173866.114	49.915320	ppb			0.749	0.518		95.556
115	In-ISK	|		95501.084		ppb			0.786			91580.658
45	Sc-ISK	>		292339.833		ppb			0.505			280248.911
23	Na	|		491479.933	985.199070	ppb			0.658	1.070		18084.777
39	K	|		1233076.370	992.535395	ppb			0.658	0.211		126517.861
24	Mg	|		2917134.633	5456.571730	ppb			2.061	1.726		441.674
159	Tb-ISK	|		197224.853		ppb			1.073			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: LCSD 570-63846_3-A

Autosampler Position: 112

Sample Date/Time: Monday, April 20, 2020 17:39:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\LCSD 570-63846_3-A.209

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc. RSD	Blank Intensity
6	Li-IS	[	31926.756		ppb	1.876		31686.219
9	Be	|	142500.625	105.352207	ppb	1.417	2.224	7.778
10	B	|	33510.372	98.843961	ppb	1.146	1.975	2036.812
27	Al	|	695075.753	106.167605	ppb	1.786	2.267	3324.832
43	Ca-2	|	85132.924	5443.871199	ppb	0.824	0.713	143.334
49	Ti	|	60493.380	102.323209	ppb	1.310	2.069	207.779
52	Cr	|	817306.478	104.564558	ppb	0.500	1.088	8601.478
55	Mn	|	1162940.477	96.244436	ppb	0.647	1.640	922.252
57	Fe	|	1183433.021	5104.107928	ppb	0.247	0.906	10303.717
45	Sc-IS	>	1519329.637		ppb	1.061		1494228.559
66	Zn	|	120358.372	105.186152	ppb	2.122	1.097	571.123
86	Sr	|	180794.082	101.109681	ppb	1.672	0.657	21.896
65	Cu	|	165935.659	101.885990	ppb	2.562	1.721	222.727
69	Ga-IS	|	449588.633		ppb	2.861		426141.079
95	Mo	|	170055.329	103.088217	ppb	2.019	1.102	132.223
115	In-IS	>	259065.564		ppb	1.817		250787.190
111	Cd	|	162863.358	106.261178	ppb	0.281	1.552	9.722
118	Sn	|	480246.163	102.634381	ppb	1.139	1.297	1098.931
121	Sb	|	523806.743	101.070298	ppb	2.305	1.302	258.891
135	Ba	|	104045.558	100.711120	ppb	3.247	2.042	24.444
165	Ho-IS	|	254129.519		ppb	1.151		241740.460
159	Tb-IS	|	213335.806		ppb	1.527		206400.475
207	Pb	|	1458495.847	101.568094	ppb	1.241	0.539	133.334
203	Tl	|	424736.372	97.901743	ppb	0.973	1.505	48.889
209	Bi-IS	>	167335.630		ppb	1.687		160316.837
51	V	|	64655.985	102.252406	ppb	0.442	1.830	30.000
59	Co	|	160598.798	98.765405	ppb	0.486	2.280	25.556
60	Ni	|	89512.914	105.769930	ppb	0.967	2.656	40.000
75	As	|	46637.839	103.135232	ppb	0.411	2.201	674.805
71	Ga-ISK	>	118535.399		ppb	1.780		113706.361
82	Se-2	|	4061.825	102.337049	ppb	0.835	1.894	2.893
107	Ag-1	|	172163.637	49.648975	ppb	1.790	3.286	95.556
115	In-ISK	|	94352.531		ppb	0.235		91580.658
45	Sc-ISK	>	287769.508		ppb	0.277		280248.911
23	Na	|	488317.977	994.748867	ppb	1.108	1.182	18084.777
39	K	|	1224347.694	1002.193425	ppb	0.821	0.714	126517.861
24	Mg	|	2874326.251	5462.012662	ppb	0.912	0.641	441.674
159	Tb-ISK	|	193918.089		ppb	1.307		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 17:42:06

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.210

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	31561.524		ppb		3.688		31686.219
9	Be	|	138537.393	103.358095	ppb	0.312	1.091		7.778
10	B	|	82312.082	254.638029	ppb	2.162	2.268		2036.812
27	Al	|	669942.324	103.258107	ppb	1.112	1.944		3324.832
43	Ca-2	|	80154.323	5171.531728	ppb	2.413	1.344		143.334
49	Ti	|	58795.188	100.355914	ppb	0.446	1.358		207.779
52	Cr	|	782111.856	100.934297	ppb	1.468	0.563		8601.478
55	Mn	|	1150876.691	96.110771	ppb	1.148	0.019		922.252
57	Fe	|	1125713.018	4897.275442	ppb	2.165	1.021		10303.717
45	Sc-IS	>	1505490.822		ppb	1.166			1494228.559
66	Zn	>	115137.970	101.525347	ppb	3.082	2.082		571.123
86	Sr	|	179348.005	101.225033	ppb	1.451	0.351		21.896
65	Cu	|	163661.188	101.405615	ppb	3.381	2.362		222.727
69	Ga-IS	|	443280.272		ppb	3.242			426141.079
95	Mo	|	163492.733	100.016618	ppb	2.167	1.009		132.223
115	In-IS	>	258196.268		ppb	1.811			250787.190
111	Cd	|	153791.611	100.666202	ppb	1.445	0.637		9.722
118	Sn	|	455740.070	97.696158	ppb	2.333	0.749		1098.931
121	Sb	|	517450.354	100.169120	ppb	2.765	0.967		258.891
135	Ba	|	97654.274	94.819451	ppb	4.891	3.294		24.444
165	Ho-IS	|	252697.699		ppb	0.855			241740.460
159	Tb-IS	|	212663.450		ppb	0.460			206400.475
207	Pb	|	1418896.752	99.320471	ppb	0.540	1.822		133.334
203	Tl	|	425449.983	98.565892	ppb	1.573	2.451		48.889
209	Bi-IS	>	166496.995		ppb	1.540			160316.837
51	V	|	61049.066	98.376670	ppb	1.108	1.139		30.000
59	Co	|	160271.852	100.430351	ppb	0.846	1.305		25.556
60	Ni	|	84247.709	101.431605	ppb	1.129	1.899		40.000
75	As	|	44961.550	101.275133	ppb	1.265	0.156		674.805
71	Ga-ISK	>	116310.493		ppb	1.116			113706.361
82	Se-2	|	4053.743	104.066131	ppb	2.087	1.660		2.893
107	Ag-1	|	352818.174	103.692923	ppb	2.038	2.145		95.556
115	In-ISK	|	94915.947		ppb	1.867			91580.658
45	Sc-ISK	>	286713.336		ppb	1.308			280248.911
23	Na	|	2455309.656	5179.686383	ppb	0.345	1.044		18084.777
39	K	|	5754113.574	5170.408410	ppb	0.740	1.845		126517.861
24	Mg	|	2756133.810	5257.343706	ppb	0.032	1.327		441.674
159	Tb-ISK	|	193376.687		ppb	0.334			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 17:44:52

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.211

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	[		30896.709		ppb			0.522			31686.219
9	Be	|		26.667	0.014710	ppb			33.072	47.384		7.778
10	B	|		1894.570	-0.307972	ppb			5.224	139.350		2036.812
27	Al	|		3673.839	0.070103	ppb			32.540	288.745		3324.832
43	Ca-2	|		75.000	-4.342813	ppb			17.638	18.760		143.334
49	Ti	|		215.557	0.022238	ppb			13.511	232.779		207.779
52	Cr	|		8142.320	-0.035259	ppb			1.640	18.908		8601.478
55	Mn	|		806.689	-0.008165	ppb			5.960	39.429		922.252
57	Fe	|		9246.325	-3.717715	ppb			1.362	4.962		10303.717
45	Sc-IS	>		1460003.297		ppb			1.659			1494228.559
66	Zn	|		536.677	-0.019968	ppb			9.762	200.951		571.123
86	Sr	|		52.034	0.017975	ppb			40.747	72.089		21.896
65	Cu	|		143.954	-0.047143	ppb			15.844	30.526		222.727
69	Ga-IS	|		410719.916		ppb			2.696			426141.079
95	Mo	|		575.567	0.281456	ppb			11.501	12.978		132.223
115	In-IS	>		250779.627		ppb			1.016			250787.190
111	Cd	|		11.014	0.000893	ppb			47.060	397.378		9.722
118	Sn	|		3647.134	0.563538	ppb			7.637	9.679		1098.931
121	Sb	|		3193.692	0.585008	ppb			8.428	8.147		258.891
135	Ba	|		16.667	-0.007797	ppb			20.000	40.834		24.444
165	Ho-IS	|		241542.749		ppb			0.813			241740.460
159	Tb-IS	|		202942.619		ppb			1.363			206400.475
207	Pb	|		363.335	0.016460	ppb			3.670	6.849		133.334
203	Tl	|		188.890	0.033237	ppb			7.347	10.418		48.889
209	Bi-IS	>		161937.164		ppb			1.039			160316.837
51	V	|		52.222	0.036166	ppb			9.750	28.190		30.000
59	Co	|		31.111	0.003302	ppb			43.301	244.104		25.556
60	Ni	|		28.889	-0.014124	ppb			35.251	82.045		40.000
75	As	|		657.507	-0.050807	ppb			2.679	138.298		674.805
71	Ga-ISK	>		114548.679		ppb			2.249			113706.361
82	Se-2	|		9.927	0.182049	ppb			46.129	64.817		2.893
107	Ag-1	|		206.668	0.032802	ppb			19.556	32.866		95.556
115	In-ISK	|		92318.948		ppb			1.697			91580.658
45	Sc-ISK	>		279861.529		ppb			0.969			280248.911
23	Na	|		10528.881	-16.392861	ppb			2.761	5.172		18084.777
39	K	|		126974.047	0.594987	ppb			0.999	100.248		126517.861
24	Mg	|		595.012	0.300589	ppb			5.042	16.174		441.674
159	Tb-ISK	|		188043.590		ppb			0.921			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-1-D

Autosampler Position: 113

Sample Date/Time: Monday, April 20, 2020 17:47:39

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-1-D.212

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	40850.553		ppb	1.338		31686.219
9	Be	16.667	0.006459	ppb	72.111	137.710	7.778
10	B	286629.771	892.730174	ppb	3.914	3.840	2036.812
27	Al	303758.880	46.006799	ppb	2.398	2.274	3324.832
43	Ca-2	328494.503	20989.759677	ppb	1.609	1.423	143.334
49	Ti	568.900	0.605039	ppb	2.440	3.661	207.779
52	Cr	22021.411	1.710973	ppb	2.469	3.799	8601.478
55	Mn	685685.731	56.596341	ppb	0.262	0.080	922.252
57	Fe	110996.212	436.424316	ppb	0.556	0.465	10303.717
45	Sc-IS	> 1522342.569		ppb	0.187		1494228.559
66	Zn	137314.805	119.845076	ppb	2.384	2.277	571.123
86	Sr	151482.019	84.549091	ppb	2.210	2.075	21.896
65	Cu	82026.954	50.198731	ppb	2.708	2.642	222.727
69	Ga-IS	428980.991		ppb	2.782		426141.079
95	Mo	51086.775	30.852289	ppb	2.497	2.468	132.223
115	In-IS	> 256605.632		ppb	1.624		250787.190
111	Cd	166.054	0.102860	ppb	10.812	12.055	9.722
118	Sn	2819.168	0.366324	ppb	7.852	12.011	1098.931
121	Sb	13176.076	2.517225	ppb	2.218	3.433	258.891
135	Ba	35032.939	34.230203	ppb	3.523	4.064	24.444
165	Ho-IS	250604.586		ppb	0.590		241740.460
159	Tb-IS	209848.950		ppb	0.433		206400.475
207	Pb	98152.901	7.001613	ppb	1.677	1.605	133.334
203	Tl	127.778	0.018458	ppb	15.061	25.211	48.889
209	Bi-IS	> 163140.689		ppb	0.451		160316.837
51	V	345.560	0.507956	ppb	18.960	21.026	30.000
59	Co	1987.916	1.229517	ppb	4.768	4.154	25.556
60	Ni	18251.653	21.940936	ppb	0.927	1.747	40.000
75	As	908.765	0.500081	ppb	4.643	16.741	674.805
71	Ga-ISK	> 116281.356		ppb	0.934		113706.361
82	Se-2	34.575	0.811054	ppb	26.920	28.405	2.893
107	Ag-1	53.333	-0.013040	ppb	18.750	23.079	95.556
115	In-ISK	93831.932		ppb	0.885		91580.658
45	Sc-ISK	> 285738.462		ppb	1.146		280248.911
23	Na	6688108.056	14224.445014	ppb	0.907	0.314	18084.777
39	K	5175977.211	4654.856046	ppb	1.175	1.576	126517.861
24	Mg	843472.523	1613.687534	ppb	0.787	0.541	441.674
159	Tb-ISK	194416.852		ppb	1.518		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-1-E MS

Autosampler Position: 114

Sample Date/Time: Monday, April 20, 2020 17:50:24

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-1-E MS.213

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		41018.813		ppb		1.458		31686.219
9	Be	|		151993.191	111.162391	ppb		0.503	0.518	7.778
10	B	|		309096.099	954.932543	ppb		0.953	1.935	2036.812
27	Al	|		975816.021	147.659236	ppb		1.099	1.584	3324.832
43	Ca-2	|		393645.128	24936.281033	ppb		1.016	0.040	143.334
49	Ti	|		59047.386	98.780354	ppb		2.516	1.646	207.779
52	Cr	|		854072.650	108.131751	ppb		1.877	1.249	8601.478
55	Mn	|		1920871.209	157.314209	ppb		0.537	0.581	922.252
57	Fe	|		873572.010	3714.800865	ppb		1.929	0.981	10303.717
45	Sc-IS	>		1535685.962		ppb		0.989		1494228.559
66	Zn	|		261482.718	226.661097	ppb		2.957	2.026	571.123
86	Sr	|		337815.140	186.938304	ppb		0.879	1.034	21.896
65	Cu	|		272573.554	165.649682	ppb		3.870	2.907	222.727
69	Ga-IS	|		447154.080		ppb		2.913		426141.079
95	Mo	|		226222.755	135.712083	ppb		0.850	0.370	132.223
115	In-IS	>		251719.447		ppb		0.641		250787.190
111	Cd	|		160759.920	107.933225	ppb		1.879	2.036	9.722
118	Sn	|		246439.032	54.081488	ppb		1.847	1.564	1098.931
121	Sb	|		551640.466	109.555380	ppb		2.673	2.736	258.891
135	Ba	|		136978.831	136.484845	ppb		4.326	4.378	24.444
165	Ho-IS	|		255355.448		ppb		0.850		241740.460
159	Tb-IS	|		212347.717		ppb		0.660		206400.475
207	Pb	|		1604778.295	114.268452	ppb		0.382	0.453	133.334
203	Tl	|		442182.479	104.209100	ppb		2.286	2.483	48.889
209	Bi-IS	>		163648.664		ppb		0.264		160316.837
51	V	|		65280.000	105.959304	ppb		2.795	3.974	30.000
59	Co	|		167267.085	105.570152	ppb		1.815	3.376	25.556
60	Ni	|		108683.035	131.760129	ppb		1.605	0.901	40.000
75	As	|		49829.967	113.206027	ppb		1.700	1.034	674.805
71	Ga-ISK	>		115513.014		ppb		1.824		113706.361
82	Se-2	|		4373.857	113.105559	ppb		1.132	2.870	2.893
107	Ag-1	|		24611.193	7.258317	ppb		2.779	3.704	95.556
115	In-ISK	|		92177.031		ppb		0.776		91580.658
45	Sc-ISK	>		286747.154		ppb		0.847		280248.911
23	Na	|		7305698.924	15486.906550	ppb		0.356	0.496	18084.777
39	K	|		6500081.108	5854.590661	ppb		0.988	0.726	126517.861
24	Mg	|		2852374.438	5440.057812	ppb		0.517	1.272	441.674
159	Tb-ISK	|		193598.317		ppb		0.157		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-1-F MSD

Autosampler Position: 115

Sample Date/Time: Monday, April 20, 2020 17:53:11

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-1-F MSD.214

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	40758.075		ppb		2.005		31686.219
9	Be	|	162296.715	118.942377	ppb	0.491	0.424		7.778
10	B	|	314992.725	975.199248	ppb	0.672	0.664		2036.812
27	Al	|	1074138.787	162.920281	ppb	0.630	0.887		3324.832
43	Ca-2	|	412178.495	26165.612915	ppb	0.728	0.876		143.334
49	Ti	|	63456.194	106.412266	ppb	1.325	1.008		207.779
52	Cr	|	913631.082	115.993747	ppb	1.767	1.308		8601.478
55	Mn	|	1977563.727	162.287882	ppb	1.091	0.564		922.252
57	Fe	|	1159627.180	4956.575695	ppb	1.944	1.380		10303.717
45	Sc-IS	>	1532499.865		ppb	0.585			1494228.559
66	Zn	|	266660.725	231.649581	ppb	3.176	2.675		571.123
86	Sr	|	350543.045	194.369267	ppb	2.147	1.754		21.896
65	Cu	|	282758.350	172.221477	ppb	2.569	2.000		222.727
69	Ga-IS	|	447122.003		ppb	2.919			426141.079
95	Mo	|	240954.846	144.844677	ppb	2.578	2.097		132.223
115	In-IS	>	256676.411		ppb	1.911			250787.190
111	Cd	|	170610.953	112.323715	ppb	2.580	0.970		9.722
118	Sn	|	284044.222	61.166537	ppb	1.484	0.452		1098.931
121	Sb	|	584321.081	113.804439	ppb	1.901	0.275		258.891
135	Ba	|	144475.606	141.126826	ppb	4.430	2.580		24.444
165	Ho-IS	|	252928.467		ppb	1.104			241740.460
159	Tb-IS	|	211154.669		ppb	0.637			206400.475
207	Pb	|	1658053.557	117.867817	ppb	0.487	1.107		133.334
203	Tl	|	430818.336	101.347127	ppb	2.205	1.377		48.889
209	Bi-IS	>	163927.431		ppb	0.873			160316.837
51	V	|	69874.971	113.183390	ppb	2.208	1.658		30.000
59	Co	|	178338.562	112.327494	ppb	1.066	0.585		25.556
60	Ni	|	113370.317	137.216001	ppb	0.899	1.435		40.000
75	As	|	51065.350	115.849319	ppb	2.914	2.854		674.805
71	Ga-ISK	>	115705.581		ppb	0.563			113706.361
82	Se-2	|	4458.550	115.064654	ppb	1.428	1.179		2.893
107	Ag-1	|	34455.958	10.153221	ppb	2.043	2.097		95.556
115	In-ISK	|	93061.993		ppb	0.246			91580.658
45	Sc-ISK	>	285412.979		ppb	0.565			280248.911
23	Na	|	7304264.523	15556.773068	ppb	0.780	1.346		18084.777
39	K	|	6570993.422	5948.217650	ppb	0.746	1.302		126517.861
24	Mg	|	3454774.115	6619.660597	ppb	1.406	1.561		441.674
159	Tb-ISK	|	193940.257		ppb	0.447			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-2-B

Autosampler Position: 116

Sample Date/Time: Monday, April 20, 2020 17:55:56

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-2-B.215

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[		41191.529		ppb		1.241		31686.219
9	Be	|		22.222	0.010388	ppb	60.622	94.180		7.778
10	B	|		287937.536	888.641789	ppb	1.182	1.850		2036.812
27	Al	|		126524.494	18.683854	ppb	0.243	0.896		3324.832
43	Ca-2	|		342002.740	21652.223665	ppb	1.621	0.977		143.334
49	Ti	|		483.342	0.452621	ppb	8.131	14.450		207.779
52	Cr	|		15061.269	0.794972	ppb	0.776	1.210		8601.478
55	Mn	|		992999.396	81.238103	ppb	2.657	2.119		922.252
57	Fe	|		25480.488	64.045593	ppb	2.001	2.650		10303.717
45	Sc-IS	>		1536435.782		ppb	0.665			1494228.559
66	Zn	|		13079.319	10.849013	ppb	1.127	1.083		571.123
86	Sr	|		159129.793	87.998933	ppb	2.562	2.010		21.896
65	Cu	|		3582.346	2.038421	ppb	6.832	6.625		222.727
69	Ga-IS	|		426765.306		ppb	0.652			426141.079
95	Mo	|		48675.027	29.121386	ppb	1.986	1.777		132.223
115	In-IS	>		255084.848		ppb	0.443			250787.190
111	Cd	|		12.227	0.001556	ppb	26.603	140.724		9.722
118	Sn	|		3075.887	0.425985	ppb	2.180	3.740		1098.931
121	Sb	|		22826.027	4.423230	ppb	4.769	4.378		258.891
135	Ba	|		35041.863	34.432275	ppb	4.165	3.769		24.444
165	Ho-IS	|		249691.247		ppb	1.389			241740.460
159	Tb-IS	|		211565.144		ppb	0.802			206400.475
207	Pb	|		10747.174	0.766607	ppb	2.250	2.383		133.334
203	Tl	|		106.667	0.013736	ppb	21.875	40.491		48.889
209	Bi-IS	>		161335.910		ppb	0.126			160316.837
51	V	|		203.335	0.274175	ppb	13.115	18.131		30.000
59	Co	|		2249.066	1.372553	ppb	5.447	6.251		25.556
60	Ni	|		16673.062	19.736129	ppb	2.630	3.229		40.000
75	As	|		965.502	0.597938	ppb	2.576	16.940		674.805
71	Ga-ISK	>		118083.973		ppb	2.303			113706.361
82	Se-2	|		34.539	0.800490	ppb	47.950	52.947		2.893
107	Ag-1	|		44.445	-0.015855	ppb	15.613	13.223		95.556
115	In-ISK	|		93019.387		ppb	1.015			91580.658
45	Sc-ISK	>		291742.297		ppb	0.719			280248.911
23	Na	|		8836115.830	18418.768488	ppb	0.926	1.634		18084.777
39	K	|		5544228.130	4889.361891	ppb	1.401	2.127		126517.861
24	Mg	|		909742.594	1704.722422	ppb	0.767	1.179		441.674
159	Tb-ISK	|		195514.289		ppb	1.286			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-3-B

Autosampler Position: 117

Sample Date/Time: Monday, April 20, 2020 17:58:42

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-3-B.216

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens. Mean	Conc. Mean	Report Unit	Meas. Intens.	RSIConc.	RSD	Blank Intensity
6	Li-IS	[	36076.631		ppb	2.830			31686.219
9	Be	|	16.667	0.006629	ppb	20.000	37.533		7.778
10	B	|	26692.701	78.461145	ppb	2.328	2.597		2036.812
27	Al	|	75655.423	11.238795	ppb	2.218	2.259		3324.832
43	Ca-2	|	316374.973	20511.458801	ppb	0.599	0.670		143.334
49	Ti	|	475.564	0.458721	ppb	8.450	14.945		207.779
52	Cr	|	15331.556	0.876649	ppb	0.852	2.142		8601.478
55	Mn	|	40066.109	3.282386	ppb	0.723	0.662		922.252
57	Fe	|	24872.756	64.004551	ppb	2.801	4.617		10303.717
45	Sc-IS	>	1500382.443		ppb	0.106			1494228.559
66	Zn	|	186310.130	165.178824	ppb	3.324	3.251		571.123
86	Sr	|	264179.190	149.619937	ppb	1.115	1.013		21.896
65	Cu	|	18725.199	11.519981	ppb	3.704	3.643		222.727
69	Ga-IS	|	437340.872		ppb	3.107			426141.079
95	Mo	|	11244.424	6.826761	ppb	0.937	0.863		132.223
115	In-IS	>	251657.621		ppb	0.855			250787.190
111	Cd	|	595.289	0.393157	ppb	4.464	3.760		9.722
118	Sn	|	2155.718	0.232143	ppb	2.111	2.593		1098.931
121	Sb	|	17716.544	3.468739	ppb	3.681	2.885		258.891
135	Ba	|	108689.138	108.294803	ppb	4.582	3.814		24.444
165	Ho-IS	|	242295.246		ppb	0.115			241740.460
159	Tb-IS	|	206737.495		ppb	1.041			206400.475
207	Pb	|	12306.515	0.880272	ppb	0.478	0.530		133.334
203	Tl	|	43.333	-0.001392	ppb	7.692	54.595		48.889
209	Bi-IS	>	161148.268		ppb	0.499			160316.837
51	V	|	481.119	0.723908	ppb	2.885	3.901		30.000
59	Co	|	147.779	0.075870	ppb	15.843	18.275		25.556
60	Ni	|	2655.803	3.139921	ppb	4.014	4.584		40.000
75	As	|	952.542	0.593075	ppb	2.010	4.503		674.805
71	Ga-ISK	>	116679.058		ppb	1.396			113706.361
82	Se-2	|	10.875	0.202279	ppb	115.563	159.757		2.893
107	Ag-1	|	128.889	0.008996	ppb	14.244	54.131		95.556
115	In-ISK	|	92693.887		ppb	1.549			91580.658
45	Sc-ISK	>	285083.273		ppb	0.966			280248.911
23	Na	|	2399663.779	5090.018410	ppb	1.469	0.823		18084.777
39	K	|	2578399.631	2264.394796	ppb	0.919	0.126		126517.861
24	Mg	|	234707.465	449.430698	ppb	0.930	0.514		441.674
159	Tb-ISK	|	190737.045		ppb	1.420			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-4-B

Autosampler Position: 118

Sample Date/Time: Monday, April 20, 2020 18:01:28

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-4-B.217

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	35965.220		ppb	1.226		31686.219
9	Be	11.111	0.002401	ppb	34.641	116.716	7.778
10	B	26492.325	77.283982	ppb	1.755	1.722	2036.812
27	Al	109480.200	16.389913	ppb	1.611	2.755	3324.832
43	Ca-2	320876.130	20668.573419	ppb	1.893	0.448	143.334
49	Ti	460.007	0.426666	ppb	5.471	7.761	207.779
52	Cr	12650.043	0.515095	ppb	0.155	4.979	8601.478
55	Mn	145816.078	12.073959	ppb	1.565	2.171	922.252
57	Fe	21012.116	46.392379	ppb	2.715	3.256	10303.717
45	Sc-IS	> 1510096.553		ppb	1.444		1494228.559
66	Zn	171075.250	150.645007	ppb	2.265	1.110	571.123
86	Sr	264499.126	148.852467	ppb	1.817	2.020	21.896
65	Cu	8971.902	5.411859	ppb	0.486	1.116	222.727
69	Ga-IS	433264.653		ppb	1.921		426141.079
95	Mo	10810.756	6.518864	ppb	1.496	2.440	132.223
115	In-IS	> 246740.004		ppb	1.602		250787.190
111	Cd	579.532	0.390657	ppb	9.312	10.277	9.722
118	Sn	1581.199	0.112371	ppb	3.912	8.045	1098.931
121	Sb	14390.580	2.865127	ppb	2.189	0.611	258.891
135	Ba	108694.594	110.452634	ppb	3.976	2.398	24.444
165	Ho-IS	245700.517		ppb	0.716		241740.460
159	Tb-IS	205401.864		ppb	1.445		206400.475
207	Pb	3881.322	0.270347	ppb	1.118	2.393	133.334
203	Tl	40.000	-0.002209	ppb	22.048	96.609	48.889
209	Bi-IS	> 161549.524		ppb	1.357		160316.837
51	V	301.114	0.443917	ppb	20.090	24.030	30.000
59	Co	426.673	0.254727	ppb	5.469	4.253	25.556
60	Ni	2885.847	3.476816	ppb	1.594	2.303	40.000
75	As	805.229	0.290084	ppb	2.951	26.923	674.805
71	Ga-ISK	> 114668.441		ppb	1.533		113706.361
82	Se-2	18.213	0.398205	ppb	41.222	48.642	2.893
107	Ag-1	114.445	0.005361	ppb	11.027	62.023	95.556
115	In-ISK	92129.486		ppb	1.447		91580.658
45	Sc-ISK	> 284720.867		ppb	1.552		280248.911
23	Na	3266308.027	6951.395808	ppb	1.895	0.831	18084.777
39	K	2604963.609	2292.018894	ppb	2.073	1.493	126517.861
24	Mg	263489.451	505.392069	ppb	0.588	2.038	441.674
159	Tb-ISK	189060.836		ppb	0.489		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-5-B

Autosampler Position: 119

Sample Date/Time: Monday, April 20, 2020 18:04:13

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-5-B.218

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	41195.993		ppb	1.815		31686.219
9	Be	23.333	0.010943	ppb	24.744	37.946	7.778
10	B	65614.795	194.257647	ppb	1.028	1.164	2036.812
27	Al	210502.094	30.927082	ppb	1.794	2.025	3324.832
43	Ca-2	1286304.353	80186.123519	ppb	0.420	0.554	143.334
49	Ti	2103.488	3.116270	ppb	1.039	1.075	207.779
52	Cr	46267.026	4.692444	ppb	0.657	0.820	8601.478
55	Mn	968934.762	78.027170	ppb	0.082	0.139	922.252
57	Fe	454787.675	1880.517026	ppb	1.378	1.322	10303.717
45	Sc-IS	> 1560950.002		ppb	0.207		1494228.559
66	Zn	57505.546	48.647081	ppb	2.207	2.200	571.123
86	Sr	701702.845	382.016155	ppb	1.419	1.396	21.896
65	Cu	13897.896	8.178928	ppb	1.768	2.008	222.727
69	Ga-IS	422827.162		ppb	1.595		426141.079
95	Mo	31471.309	18.503668	ppb	2.548	2.584	132.223
115	In-IS	> 251069.233		ppb	1.323		250787.190
111	Cd	306.137	0.199541	ppb	3.826	4.013	9.722
118	Sn	2194.613	0.241790	ppb	3.602	4.589	1098.931
121	Sb	6619.314	1.266582	ppb	5.151	4.178	258.891
135	Ba	39533.704	39.454251	ppb	7.205	5.910	24.444
165	Ho-IS	253229.419		ppb	1.463		241740.460
159	Tb-IS	215115.627		ppb	1.786		206400.475
207	Pb	32838.276	2.398633	ppb	1.333	2.262	133.334
203	Tl	48.889	0.000109	ppb	14.193	1588.741	48.889
209	Bi-IS	> 158929.284		ppb	1.474		160316.837
51	V	1381.178	2.294008	ppb	7.390	5.887	30.000
59	Co	2780.271	1.819513	ppb	2.789	4.643	25.556
60	Ni	10208.091	12.902297	ppb	0.997	2.599	40.000
75	As	1127.095	1.136380	ppb	6.361	14.767	674.805
71	Ga-ISK	> 110444.263		ppb	1.791		113706.361
82	Se-2	33.234	0.824244	ppb	14.316	16.711	2.893
107	Ag-1	64.445	-0.008784	ppb	11.945	26.511	95.556
115	In-ISK	90522.246		ppb	1.342		91580.658
45	Sc-ISK	> 283728.171		ppb	1.719		280248.911
23	Na	15616528.316	33504.823529	ppb	0.841	0.874	18084.777
39	K	15777202.087	14536.400572	ppb	0.549	1.221	126517.861
24	Mg	702087.344	1352.882570	ppb	0.576	2.275	441.674
159	Tb-ISK	191259.237		ppb	1.167		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-6-B

Autosampler Position: 120

Sample Date/Time: Monday, April 20, 2020 18:06:59

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-6-B.219

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	43006.875		ppb	1.859		31686.219
9	Be	17.778	0.006829	ppb	65.848	123.997	7.778
10	B	67125.211	195.835550	ppb	3.097	2.507	2036.812
27	Al	130279.231	18.655080	ppb	1.643	0.490	3324.832
43	Ca-2	1281247.651	78690.836162	ppb	1.817	0.920	143.334
49	Ti	1665.653	2.353902	ppb	4.961	7.186	207.779
52	Cr	24157.077	1.865453	ppb	1.438	4.388	8601.478
55	Mn	985511.541	78.198731	ppb	1.586	1.821	922.252
57	Fe	73219.396	259.973129	ppb	1.131	1.952	10303.717
45	Sc-IS	> 1584303.559		ppb	1.297		1494228.559
66	Zn	8878.315	6.966641	ppb	3.147	2.289	571.123
86	Sr	698710.056	374.761468	ppb	1.948	0.818	21.896
65	Cu	2159.073	1.133984	ppb	0.829	0.945	222.727
69	Ga-IS	426903.827		ppb	2.948		426141.079
95	Mo	31716.286	18.371561	ppb	1.737	0.634	132.223
115	In-IS	> 254706.053		ppb	0.927		250787.190
111	Cd	-17.715	-0.018314	ppb	36.047	23.164	9.722
118	Sn	1303.393	0.040723	ppb	5.533	32.361	1098.931
121	Sb	5497.725	1.027769	ppb	2.860	2.064	258.891
135	Ba	38547.555	37.931760	ppb	4.252	3.346	24.444
165	Ho-IS	255703.845		ppb	0.944		241740.460
159	Tb-IS	215158.157		ppb	0.324		206400.475
207	Pb	2113.394	0.144086	ppb	1.034	1.695	133.334
203	Tl	45.556	-0.000779	ppb	37.548	535.430	48.889
209	Bi-IS	> 160166.209		ppb	0.560		160316.837
51	V	343.337	0.521630	ppb	7.001	8.078	30.000
59	Co	2470.214	1.580147	ppb	3.801	2.758	25.556
60	Ni	9255.220	11.450269	ppb	2.088	2.476	40.000
75	As	986.378	0.747751	ppb	6.539	17.326	674.805
71	Ga-ISK	> 112756.614		ppb	1.143		113706.361
82	Se-2	20.203	0.457870	ppb	64.715	74.443	2.893
107	Ag-1	41.111	-0.016274	ppb	12.385	8.872	95.556
115	In-ISK	91389.823		ppb	1.489		91580.658
45	Sc-ISK	> 287731.147		ppb	1.012		280248.911
23	Na	17329128.909	36664.775464	ppb	0.312	1.180	18084.777
39	K	15668459.151	14230.590286	ppb	1.465	0.628	126517.861
24	Mg	702887.668	1335.281210	ppb	0.996	1.131	441.674
159	Tb-ISK	193518.705		ppb	1.206		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-7-B

Autosampler Position: 121

Sample Date/Time: Monday, April 20, 2020 18:09:46

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-7-B.220

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	47418.573		ppb	0.999		31686.219
9	Be	26.667	0.012804	ppb	12.500	19.410	7.778
10	B	124908.237	364.709362	ppb	1.646	2.042	2036.812
27	Al	663708.844	95.788919	ppb	1.496	2.475	3324.832
43	Ca-2	820602.383	49676.661623	ppb	2.651	2.150	143.334
49	Ti	2260.179	3.267446	ppb	1.929	1.001	207.779
52	Cr	72100.416	7.682424	ppb	1.800	1.162	8601.478
55	Mn	802265.544	62.734319	ppb	0.556	0.982	922.252
57	Fe	340382.183	1354.492648	ppb	1.204	0.238	10303.717
45	Sc-IS	> 1607240.678		ppb	1.297		1494228.559
66	Zn	402241.414	333.379399	ppb	3.669	2.658	571.123
86	Sr	557215.855	294.658052	ppb	0.917	1.864	21.896
65	Cu	20713.261	11.900035	ppb	1.943	0.705	222.727
69	Ga-IS	437932.503		ppb	1.787		426141.079
95	Mo	67038.043	38.369173	ppb	0.799	0.807	132.223
115	In-IS	> 258191.185		ppb	1.025		250787.190
111	Cd	683.689	0.440607	ppb	14.233	13.582	9.722
118	Sn	4766.351	0.781252	ppb	0.970	1.198	1098.931
121	Sb	20651.591	3.949439	ppb	2.920	3.590	258.891
135	Ba	40029.375	38.872458	ppb	3.179	3.643	24.444
165	Ho-IS	261263.645		ppb	2.100		241740.460
159	Tb-IS	219874.774		ppb	0.786		206400.475
207	Pb	109216.862	7.607542	ppb	0.484	0.293	133.334
203	Tl	33.333	-0.004050	ppb	55.678	107.372	48.889
209	Bi-IS	> 167092.665		ppb	0.762		160316.837
51	V	1136.712	1.806794	ppb	10.414	10.003	30.000
59	Co	4043.906	2.551648	ppb	2.267	1.753	25.556
60	Ni	22350.805	27.230531	ppb	0.855	0.329	40.000
75	As	1537.652	1.985973	ppb	1.163	3.546	674.805
71	Ga-ISK	> 114774.797		ppb	0.862		113706.361
82	Se-2	37.859	0.910733	ppb	21.121	23.752	2.893
107	Ag-1	87.778	-0.002630	ppb	30.929	300.440	95.556
115	In-ISK	94338.850		ppb	0.605		91580.658
45	Sc-ISK	> 287861.447		ppb	0.829		280248.911
23	Na	15661704.546	33116.481999	ppb	0.300	0.536	18084.777
39	K	19964748.463	18157.820632	ppb	0.417	0.418	126517.861
24	Mg	1257828.033	2389.109899	ppb	0.189	0.859	441.674
159	Tb-ISK	196828.170		ppb	1.375		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: 570-25781-A-8-B

Autosampler Position: 122

Sample Date/Time: Monday, April 20, 2020 18:12:32

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\570-25781-A-8-B.221

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas. Intens. Mean	Conc. Mean	Report Unit	Meas. Intens. RSI	Conc. RSD	Blank Intensity
6	Li-IS	48086.384		ppb	2.510		31686.219
9	Be	43.333	0.023982	ppb	40.704	51.128	7.778
10	B	123037.631	353.062815	ppb	1.356	1.079	2036.812
27	Al	3366171.837	479.777021	ppb	0.540	0.813	3324.832
43	Ca-2	831057.119	49477.420004	ppb	1.276	0.715	143.334
49	Ti	1376.733	1.813985	ppb	4.405	5.770	207.779
52	Cr	47821.019	4.618050	ppb	0.607	0.676	8601.478
55	Mn	867756.064	66.732413	ppb	0.873	0.376	922.252
57	Fe	402988.828	1584.552976	ppb	1.231	0.823	10303.717
45	Sc-IS	> 1634267.652		ppb	0.581		1494228.559
66	Zn	102985.604	83.570317	ppb	2.640	2.213	571.123
86	Sr	560091.453	291.233309	ppb	1.259	0.826	21.896
65	Cu	2057.506	1.036804	ppb	3.925	3.908	222.727
69	Ga-IS	446738.652		ppb	2.205		426141.079
95	Mo	45613.838	25.648747	ppb	2.085	2.504	132.223
115	In-IS	> 259725.744		ppb	1.471		250787.190
111	Cd	16.434	0.004002	ppb	206.899	546.041	9.722
118	Sn	1120.044	-0.003903	ppb	5.512	292.081	1098.931
121	Sb	23307.892	4.436510	ppb	1.868	0.767	258.891
135	Ba	42613.499	41.128006	ppb	2.943	1.742	24.444
165	Ho-IS	264014.135		ppb	1.078		241740.460
159	Tb-IS	223223.981		ppb	1.168		206400.475
207	Pb	6929.564	0.472238	ppb	1.802	1.645	133.334
203	Tl	22.222	-0.006643	ppb	31.225	24.364	48.889
209	Bi-IS	> 167561.415		ppb	0.424		160316.837
51	V	741.130	1.134348	ppb	9.980	9.185	30.000
59	Co	4448.471	2.747444	ppb	4.051	3.670	25.556
60	Ni	21828.893	26.015048	ppb	2.271	1.148	40.000
75	As	1486.492	1.793619	ppb	3.910	9.304	674.805
71	Ga-ISK	> 117311.970		ppb	1.180		113706.361
82	Se-2	45.221	1.075739	ppb	10.429	10.964	2.893
107	Ag-1	43.333	-0.016114	ppb	48.038	37.334	95.556
115	In-ISK	94755.337		ppb	0.844		91580.658
45	Sc-ISK	> 291553.295		ppb	1.535		280248.911
23	Na	19175675.916	40041.895897	ppb	1.153	0.388	18084.777
39	K	20041363.779	17997.392137	ppb	0.430	1.201	126517.861
24	Mg	1337286.386	2508.528438	ppb	1.509	2.949	441.674
159	Tb-ISK	200661.517		ppb	0.865		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCV-210770

Autosampler Position: 3

Sample Date/Time: Monday, April 20, 2020 18:15:20

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCV-210770.222

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas. Intens.	RSI	Conc. RSD	Blank Intensity
6	Li-IS	[		33836.695		ppb		1.139		31686.219
9	Be	|		142439.938	101.047759	ppb		0.405	0.868	7.778
10	B	|		86241.779	253.671219	ppb		1.146	1.542	2036.812
27	Al	|		677908.516	99.330104	ppb		1.074	1.603	3324.832
43	Ca-2	|		84824.487	5204.562582	ppb		2.013	1.682	143.334
49	Ti	|		59635.332	96.775816	ppb		0.917	1.441	207.779
52	Cr	|		790975.136	97.023925	ppb		1.221	0.818	8601.478
55	Mn	|		1155825.285	91.780202	ppb		1.563	1.203	922.252
57	Fe	|		1130352.631	4674.461943	ppb		1.043	1.148	10303.717
45	Sc-IS	>		1583206.770		ppb		0.558		1494228.559
66	Zn	|		117050.284	98.135620	ppb		3.945	3.698	571.123
86	Sr	|		177344.807	95.187171	ppb		2.902	3.114	21.896
65	Cu	|		165353.346	97.433535	ppb		2.518	2.409	222.727
69	Ga-IS	|		452826.513		ppb		2.919		426141.079
95	Mo	|		162188.827	94.354056	ppb		0.359	0.834	132.223
115	In-IS	>		258700.908		ppb		1.856		250787.190
111	Cd	|		155609.362	101.676087	ppb		0.769	2.056	9.722
118	Sn	|		454057.713	97.163725	ppb		0.747	1.232	1098.931
121	Sb	|		509134.535	98.388865	ppb		1.141	1.147	258.891
135	Ba	|		101157.184	98.045387	ppb		3.564	1.945	24.444
165	Ho-IS	|		256971.757		ppb		0.521		241740.460
159	Tb-IS	|		218824.413		ppb		0.938		206400.475
207	Pb	|		1456796.223	100.076264	ppb		0.860	1.518	133.334
203	Tl	|		436270.470	99.191276	ppb		0.601	1.449	48.889
209	Bi-IS	>		169635.717		ppb		0.846		160316.837
51	V	|		60028.085	96.386365	ppb		1.054	0.595	30.000
59	Co	|		157583.409	98.389648	ppb		1.615	1.184	25.556
60	Ni	|		85097.184	102.080716	ppb		1.519	1.023	40.000
75	As	|		44471.842	99.799014	ppb		0.803	0.140	674.805
71	Ga-ISK	>		116719.337		ppb		0.665		113706.361
82	Se-2	|		4043.472	103.448373	ppb		2.977	3.308	2.893
107	Ag-1	|		353032.488	103.385170	ppb		0.995	0.331	95.556
115	In-ISK	|		94996.857		ppb		1.997		91580.658
45	Sc-ISK	>		284529.073		ppb		1.021		280248.911
23	Na	|		2501018.242	5317.830526	ppb		0.931	1.871	18084.777
39	K	|		5794152.500	5248.076377	ppb		1.108	2.157	126517.861
24	Mg	|		2821942.310	5423.860375	ppb		0.385	0.752	441.674
159	Tb-ISK	|		196726.635		ppb		0.435		186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Quantitative Analysis - Summary Report

Cumulative Autodilution Factor: 1

Operator Name: US26_USR_INS00175

Sample ID: CCB-23446

Autosampler Position: 9

Sample Date/Time: Monday, April 20, 2020 18:18:05

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\CEL\300D\July2018-2\epa 200.8_6020.mth

Dataset File: U:\DataSet\2020\200420E1\CCB-23446.223

Initial Sample Quantity (mg):

Sample Prep Volume (mL):

Diluted to Volume (mL):

Aliquot Volume (mL):

Instrument Name: ICP-MS-05 US26INS00175

Summary

Mass	Analyte	InterrMeas.	Intens.	Mean	Conc. Mean	Report Unit	Meas.	Intens.	RSI	Conc.	RSD	Blank Intensity
6	Li-IS	|		32695.159		ppb			1.963			31686.219
9	Be	|		18.889	0.008426	ppb			20.377	32.556		7.778
10	B	|		2032.367	0.034631	ppb			4.279	1303.393		2036.812
27	Al	|		3343.733	0.005177	ppb			18.056	1618.578		3324.832
43	Ca-2	|		90.000	-3.415182	ppb			20.031	38.776		143.334
49	Ti	|		280.003	0.130191	ppb			24.600	103.539		207.779
52	Cr	|		8847.184	0.040655	ppb			1.755	135.904		8601.478
55	Mn	|		847.803	-0.005702	ppb			5.675	109.769		922.252
57	Fe	|		9097.342	-5.040372	ppb			2.936	46.958		10303.717
45	Sc-IS	>		1484932.408		ppb			2.900			1494228.559
66	Zn	|		577.789	0.009592	ppb			2.726	256.467		571.123
86	Sr	|		18.038	-0.002092	ppb			15.892	94.311		21.896
65	Cu	|		130.639	-0.057454	ppb			27.314	35.599		222.727
69	Ga-IS	|		419296.983		ppb			2.589			426141.079
95	Mo	|		628.903	0.309605	ppb			7.118	12.838		132.223
115	In-IS	>		248591.623		ppb			1.664			250787.190
111	Cd	|		13.124	0.002370	ppb			53.535	202.800		9.722
118	Sn	|		2635.800	0.344804	ppb			7.818	10.426		1098.931
121	Sb	|		806.690	0.110503	ppb			11.096	13.795		258.891
135	Ba	|		17.778	-0.006485	ppb			43.301	121.420		24.444
165	Ho-IS	|		245546.775		ppb			0.599			241740.460
159	Tb-IS	|		209280.726		ppb			0.623			206400.475
207	Pb	|		341.113	0.014569	ppb			4.406	8.136		133.334
203	Tl	|		116.667	0.015719	ppb			23.387	41.752		48.889
209	Bi-IS	>		163876.832		ppb			0.625			160316.837
51	V	|		31.111	0.001823	ppb			44.607	1276.189		30.000
59	Co	|		16.667	-0.005731	ppb			20.000	36.033		25.556
60	Ni	|		31.111	-0.010971	ppb			34.442	123.034		40.000
75	As	|		702.772	0.062153	ppb			5.349	155.094		674.805
71	Ga-ISK	>		113958.293		ppb			0.719			113706.361
82	Se-2	|		4.213	0.034587	ppb			96.644	308.034		2.893
107	Ag-1	|		193.335	0.029234	ppb			17.498	33.534		95.556
115	In-ISK	|		92094.356		ppb			0.688			91580.658
45	Sc-ISK	>		271856.888		ppb			0.805			280248.911
23	Na	|		7643.713	-22.187139	ppb			3.409	3.158		18084.777
39	K	|		128428.041	5.531037	ppb			0.486	25.702		126517.861
24	Mg	|		461.674	0.067482	ppb			12.506	181.993		441.674
159	Tb-ISK	|		187476.827		ppb			0.431			186946.011

QC Out of Limits

AnalyteMassOut of Limits Message

Instrument Tuning Report

Instrument Name: ICP-MS-05 US26INS00175

Analyst Name: US26_USR_INS00175

Sample Date/Time: Monday, April 20, 2020 07:31:35

File Name: Default.tun

File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.025	1241	2062	0.709	
Mg 24	23.985	23.975	4618	2062	0.710	
In 115	114.904	114.875	22796	2059	0.707	
U	238.050	238.075	47433	2049	0.710	

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icis 570-63162/1-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 4/15/2020 9:04:18 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icis 570-63162/1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	-0.0016	0.0000	9:05:23 AM	Yes
2		[0.00]	0.0000	-0.0012	0.0000	9:06:08 AM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	12.23				

Auto-zero performed.

=====
Sequence No.: 2
Sample ID: ic 570-63162/4-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 4/15/2020 9:06:34 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-63162/4-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0005	0.0007	0.0005	9:07:39 AM	Yes
2		[0.025]	0.0006	0.0020	0.0006	9:08:24 AM	Yes
Mean:		[0.025]	0.0006				
SD:		0.00000	0.0001				
%RSD:		0.00%	16.03				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.02220 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: ic 570-63162/5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 4/15/2020 9:08:51 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-63162/5-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0019	0.0078	0.0019	9:09:56 AM	Yes
2		[0.100]	0.0021	0.0087	0.0021	9:10:42 AM	Yes
Mean:		[0.100]	0.0020				
SD:		0.00000	0.0001				
%RSD:		0.00%	6.92				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.999464 Slope: 0.01961 Intercept: 0.00003

=====
Sequence No.: 4
Sample ID: ic 570-63162/6-a
Autosampler Location: 4
Date Collected: 4/15/2020 9:11:09 AM

Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Includes summary statistics like Mean, SD, %RSD and correlation data.

Sequence No.: 5 Autosampler Location: 5
Sample ID: ic 570-63162/7-a Date Collected: 4/15/2020 9:13:28 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Includes summary statistics like Mean, SD, %RSD and correlation data.

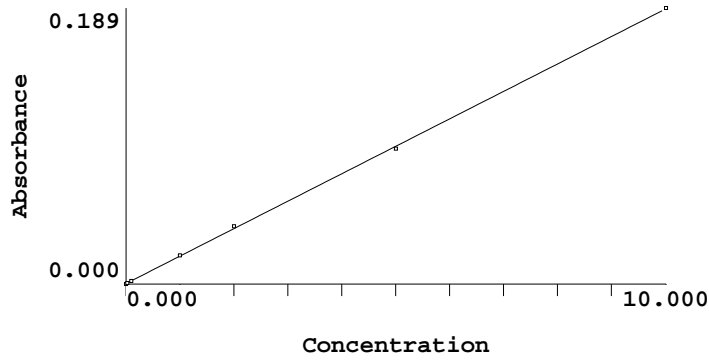
Sequence No.: 6 Autosampler Location: 6
Sample ID: ic 570-63162/8-a Date Collected: 4/15/2020 9:15:47 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Includes summary statistics like Mean, SD, %RSD and correlation data.

Sequence No.: 7 Autosampler Location: 7
Sample ID: ic 570-63162/9-a Date Collected: 4/15/2020 9:18:03 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Includes summary statistics like Mean, SD, %RSD and correlation data.

Correlation Coef.: 0.999896 Slope: 0.01882 Intercept: 0.00031



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-63162/1-a	0.0000	0	-0.0166	0.00	12.23
ic 570-63162/4-a	0.0006	0.025	0.0129	0.00	16.03
ic 570-63162/5-a	0.0020	0.100	0.0886	0.00	6.92
ic 570-63162/6-a	0.0195	1.000	1.0205	0.00	10.54
ic 570-63162/7-a	0.0395	2.000	2.0844	0.00	3.20
ic 570-63162/8-a	0.0927	5.000	4.9079	0.01	12.47
ic 570-63162/9-a	0.1891	10.00	10.0273	0.01	3.02

Correlation Coef.: 0.999896 Slope: 0.01882 Intercept: 0.00031

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-62937/2-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 4/15/2020 10:04:15 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-62937/2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0049 4.91 0.0928 0.4591 0.0928 10:05:20 AM Yes
2 0.0049 4.89 0.0925 0.4601 0.0925 10:06:06 AM Yes
Mean: 0.0049 4.90 0.0926
SD: 0.00001 0.012 0.0002
%RSD: 0.25% 0.25% 0.25
QC value within limits for Hg 253.7 Recovery = 98.07%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-62937/3-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 4/15/2020 10:06:32 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-62937/3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 -0.0000 -0.0123 0.0001 -0.0000 0.0001 10:07:36 AM Yes
2 -0.0000 -0.0116 0.0001 0.0003 0.0001 10:08:22 AM Yes
Mean: -0.0000 -0.0120 0.0001
SD: 0.00000 0.00053 0.0000
%RSD: 4.44% 4.44% 11.53
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-63162/12-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 4/15/2020 10:08:48 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-63162/12-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0005 0.257 0.0052 0.0251 0.0052 10:09:53 AM Yes
2 0.0005 0.257 0.0051 0.0249 0.0052 10:10:39 AM Yes
Mean: 0.0005 0.257 0.0052
SD: 0.00000 0.0003 0.0000
%RSD: 0.12% 0.12% 0.11

=====
Sequence No.: 4
Sample ID: ccv 570-62937/10-a
Analyst: 1220 HG-7
Autosampler Location: 5
Date Collected: 4/15/2020 10:11:05 AM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-62937/10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.08	0.0395	0.1935	0.0395	10:12:10 AM	Yes
2	0.0021	2.11	0.0400	0.1951	0.0400	10:12:56 AM	Yes
Mean:	0.0021	2.10	0.0398				
SD:	0.00002	0.018	0.0003				
%RSD:	0.87%	0.87%	0.86				

QC value within limits for Hg 253.7 Recovery = 104.78%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-62937/11-a Date Collected: 4/15/2020 10:13:23 AM
 Analyst: 1220 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-62937/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0132	0.0001	0.0002	0.0001	10:14:27 AM	Yes
2	-0.0000	-0.0119	0.0001	0.0005	0.0001	10:15:12 AM	Yes
Mean:	-0.0000	-0.0126	0.0001				
SD:	0.00000	0.00092	0.0000				
%RSD:	7.33%	7.33%	23.29				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-63082/1-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 4/15/2020 10:19:16 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-63082/1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0095	0.0001	0.0003	0.0002	10:20:21 AM	Yes
2	-0.0000	-0.0098	0.0001	0.0004	0.0002	10:21:08 AM	Yes
Mean:	-0.0000	-0.0097	0.0001				
SD:	0.00000	0.00024	0.0000				
%RSD:	2.47%	2.47%	3.47				

=====
Sequence No.: 2
Sample ID: lcs 570-63082/2-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 11
Date Collected: 4/15/2020 10:21:34 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-63082/2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.94	0.0934	0.4559	0.0934	10:22:40 AM	Yes
2	0.0049	4.92	0.0929	0.4586	0.0929	10:23:26 AM	Yes
Mean:	0.0049	4.93	0.0931				
SD:	0.00002	0.019	0.0004				
%RSD:	0.39%	0.39%	0.39				

=====
Sequence No.: 3
Sample ID: lcsd 570-63082/3-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 12
Date Collected: 4/15/2020 10:23:53 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-63082/3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.95	0.0935	0.4592	0.0936	10:24:59 AM	Yes
2	0.0049	4.94	0.0933	0.4608	0.0933	10:25:45 AM	Yes
Mean:	0.0049	4.95	0.0934				
SD:	0.00001	0.011	0.0002				
%RSD:	0.22%	0.22%	0.22				

=====
Sequence No.: 4
Sample ID: 570-25445-h-1-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 13
Date Collected: 4/15/2020 10:26:12 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25445-h-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0044	0.0002	0.0019	0.0003	10:27:18 AM	Yes
2	-0.0000	-0.0021	0.0003	0.0032	0.0003	10:28:04 AM	Yes
Mean:	-0.0000	-0.0033	0.0003				
SD:	0.00000	0.00168	0.0000				
%RSD:	51.51%	51.51%	12.63				

Sequence No.: 5

Autosampler Location: 14

Sample ID: 570-25445-h-1-b ms

Date Collected: 4/15/2020 10:28:31 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-25445-h-1-b ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.92	0.0364	0.2439	0.0364	10:29:36 AM	Yes

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-25445-h-1-b ms
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 14
Date Collected: 4/15/2020 10:31:08 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25445-h-1-b ms
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.87	0.0356	0.2391	0.0356	10:32:13 AM	Yes
2	0.0019	1.89	0.0359	0.2417	0.0360	10:32:59 AM	Yes
Mean:	0.0019	1.88	0.0358				
SD:	0.00001	0.013	0.0002				
%RSD:	0.66%	0.66%	0.66				

=====
Sequence No.: 2
Sample ID: 570-25445-h-1-c msd
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 15
Date Collected: 4/15/2020 10:33:25 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25445-h-1-c msd
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.84	0.0349	0.2310	0.0349	10:34:30 AM	Yes
2	0.0020	1.95	0.0371	0.2461	0.0371	10:35:16 AM	Yes
Mean:	0.0019	1.89	0.0360				
SD:	0.00008	0.083	0.0016				
%RSD:	4.41%	4.41%	4.37				

=====
Sequence No.: 3
Sample ID: 570-25449-u-1-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 16
Date Collected: 4/15/2020 10:35:41 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25449-u-1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0085	0.0005	0.0030	0.0005	10:36:46 AM	Yes
2	0.0000	0.0052	0.0004	0.0021	0.0004	10:37:32 AM	Yes
Mean:	0.0000	0.0069	0.0004				
SD:	0.00000	0.00228	0.0000				
%RSD:	33.27%	33.27%	9.74				

=====
Sequence No.: 4
Sample ID: 570-25609-a-1-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 17
Date Collected: 4/15/2020 10:37:58 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25609-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0075	0.0002	0.0007	0.0002	10:39:02 AM	Yes
2	-0.0000	-0.0070	0.0002	0.0009	0.0002	10:39:48 AM	Yes
Mean:	-0.0000	-0.0073	0.0002				
SD:	0.00000	0.00035	0.0000				
%RSD:	4.81%	4.81%	3.79				

Sequence No.: 5

Autosampler Location: 18

Sample ID: 570-18283-a-10-b

Date Collected: 4/15/2020 10:40:13 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-18283-a-10-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0017	1.74	0.0331	0.1628	0.0331	10:41:18 AM	Yes
2	0.0017	1.74	0.0331	0.1639	0.0331	10:42:03 AM	Yes
Mean:	0.0017	1.74	0.0331				
SD:	0.00000	0.000	0.0000				
%RSD:	0.02%	0.02%	0.02				

Sequence No.: 6

Autosampler Location: 19

Sample ID: 570-0/0-c

Date Collected: 4/15/2020 10:42:29 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-0/0-c

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.387	0.0076	0.0383	0.0076	10:43:33 AM	Yes
2	0.0004	0.386	0.0076	0.0386	0.0076	10:44:20 AM	Yes
Mean:	0.0004	0.386	0.0076				
SD:	0.00000	0.0001	0.0000				
%RSD:	0.02%	0.02%	0.02				

Sequence No.: 7

Autosampler Location: 5

Sample ID: ccv 570-62937/10-a

Date Collected: 4/15/2020 10:44:46 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-62937/10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.09	0.0396	0.1987	0.0396	10:45:51 AM	Yes
2	0.0021	2.10	0.0398	0.1991	0.0398	10:46:37 AM	Yes
Mean:	0.0021	2.09	0.0397				
SD:	0.00001	0.009	0.0002				
%RSD:	0.43%	0.43%	0.43				

QC value within limits for Hg 253.7 Recovery = 104.59%

All analyte(s) passed QC.

Sequence No.: 8

Autosampler Location: 1

Sample ID: ccb 570-62937/11-a

Date Collected: 4/15/2020 10:47:04 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-62937/11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0016	0.0003	0.0031	0.0003	10:48:09 AM	Yes
2	-0.0000	-0.0054	0.0002	0.0025	0.0002	10:48:55 AM	Yes
Mean:	-0.0000	-0.0035	0.0002				
SD:	0.00000	0.00266	0.0001				
%RSD:	75.46%	75.46%	20.39				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Reprocessing Begun
Logged In Analyst: us26_usr_instrument Technique: AA FIMS-MHS

Results Data Set (original): 200415G1
Results Library (original): C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb
Results Data Set (reprocessed): 200415G2
Results Library (reprocessed): W:\MERCURY_7\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: icis 570-63162/1-a Date Collected: 4/15/2020 9:04:18 AM
Analyst: Data Type: Reprocessed on 4/15/2020 10:54:29 AM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD.

Sequence No.: 2 Autosampler Location: 2
Sample ID: ic 570-63162/4-a Date Collected: 4/15/2020 9:06:34 AM
Analyst: Data Type: Reprocessed on 4/15/2020 10:54:29 AM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD. Includes correlation coefficient and intercept.

Sequence No.: 3 Autosampler Location: 3
Sample ID: ic 570-63162/5-a Date Collected: 4/15/2020 9:08:51 AM
Analyst: Data Type: Reprocessed on 4/15/2020 10:54:30 AM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicates 1 and 2, mean, SD, and %RSD. Includes correlation coefficient and intercept.

Sequence No.: 4 Autosampler Location: 4
Sample ID: ic 570-63162/6-a Date Collected: 4/15/2020 9:11:09 AM

Analyst: Data Type: Reprocessed on 4/15/2020 10:54:30 AM
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63162/6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0181	0.0796	0.0181	9:12:15 AM	Yes
2		[1.000]	0.0210	0.0981	0.0210	9:13:01 AM	Yes

 Mean: [1.000] 0.0195
 SD: 0.00000 0.0021
 %RSD: 0.00% 10.54
 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999908 Slope: 0.01859 Intercept: 0.00070

=====
 Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-63162/7-a Date Collected: 4/15/2020 9:13:28 AM
 Analyst: Data Type: Reprocessed on 4/15/2020 10:54:30 AM
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63162/7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0387	0.1801	0.0387	9:14:34 AM	Yes
2		[2.000]	0.0404	0.1956	0.0405	9:15:20 AM	Yes

 Mean: [2.000] 0.0395
 SD: 0.00000 0.0013
 %RSD: 0.00% 3.20
 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999923 Slope: 0.01859 Intercept: 0.00066

=====
 Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-63162/8-a Date Collected: 4/15/2020 9:15:47 AM
 Analyst: Data Type: Reprocessed on 4/15/2020 10:54:30 AM
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63162/8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0845	0.3749	0.0846	9:16:52 AM	Yes
2		[5.000]	0.1009	0.4812	0.1009	9:17:38 AM	Yes

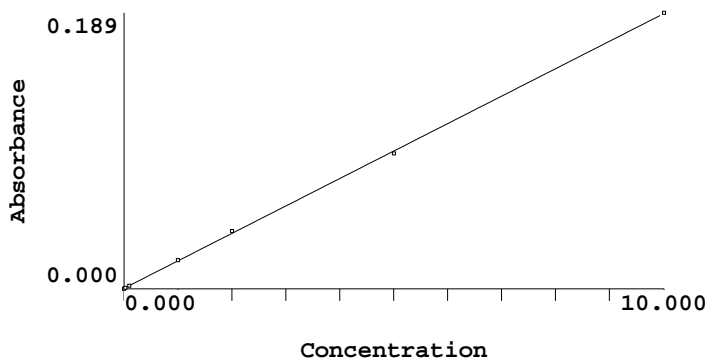
 Mean: [5.000] 0.0927
 SD: 0.00000 0.0116
 %RSD: 0.00% 12.47
 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999916 Slope: 0.01855 Intercept: 0.00058

=====
 Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-63162/9-a Date Collected: 4/15/2020 9:18:03 AM
 Analyst: Data Type: Reprocessed on 4/15/2020 10:54:31 AM
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63162/9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.00]	0.1850	0.9130	0.1851	9:19:08 AM	Yes
2		[10.00]	0.1931	0.9532	0.1931	9:19:53 AM	Yes

Mean: [10.00] 0.1891
 SD: 0.0000 0.0057
 %RSD: 0.00% 3.02
 Standard number 6 applied. [10.00]
 Correlation Coef.: 0.999896 Slope: 0.01882 Intercept: 0.00031



Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-63162/1-a	0.0000	0	-0.0166	0.00	2.83
ic 570-63162/4-a	0.0006	0.025	0.0129	0.00	16.03
ic 570-63162/5-a	0.0020	0.100	0.0886	0.00	6.92
ic 570-63162/6-a	0.0195	1.000	1.0205	0.00	10.54
ic 570-63162/7-a	0.0395	2.000	2.0844	0.00	3.20
ic 570-63162/8-a	0.0927	5.000	4.9079	0.01	12.47
ic 570-63162/9-a	0.1891	10.00	10.0273	0.01	3.02

Correlation Coef.: 0.999896 Slope: 0.01882 Intercept: 0.00031

Sequence No.: 8

Sample ID: icv 570-62937/2-a

Analyst: 1220 HG-7

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 8

Date Collected: 4/15/2020 10:04:15 AM

Data Type: Reprocessed on 4/15/2020 10:54:31 AM

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: icv 570-62937/2-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Std Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.91	0.0928	0.4591	0.0928	10:05:20 AM	Yes
2	0.0049	4.89	0.0925	0.4601	0.0925	10:06:06 AM	Yes
Mean:	0.0049	4.90	0.0926				
SD:	0.00001	0.012	0.0002				
%RSD:	0.25%	0.25%	0.25				

QC value within limits for Hg 253.7 Recovery = 98.07%

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: icb 570-62937/3-a

Analyst: 1220 HG-7

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 4/15/2020 10:06:32 AM

Data Type: Reprocessed on 4/15/2020 10:54:31 AM

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: icb 570-62937/3-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Std Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0123	0.0001	-0.0000	0.0001	10:07:36 AM	Yes
2	-0.0000	-0.0116	0.0001	0.0003	0.0001	10:08:22 AM	Yes
Mean:	-0.0000	-0.0120	0.0001				
SD:	0.00000	0.00053	0.0000				
%RSD:	4.44%	4.44%	11.53				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

```

=====
Sequence No.: 10                               Autosampler Location: 9
Sample ID: cra 570-63162/12-a                 Date Collected: 4/15/2020 10:08:48 AM
Analyst: 1220 HG-7                             Data Type: Reprocessed on 4/15/2020 10:54:32 AM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:                             Initial Sample Vol:
Dilution: 2X                                  Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

Replicate Data: cra 570-63162/12-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.257	0.0052	0.0251	0.0052	10:09:53 AM	Yes
2	0.0005	0.257	0.0051	0.0249	0.0052	10:10:39 AM	Yes
Mean:	0.0005	0.257	0.0052				
SD:	0.00000	0.0003	0.0000				
%RSD:	0.12%	0.12%	0.11				

```

=====
Sequence No.: 11                               Autosampler Location: 5
Sample ID: ccv 570-62937/10-a                 Date Collected: 4/15/2020 10:11:05 AM
Analyst: 1220 HG-7                             Data Type: Reprocessed on 4/15/2020 10:54:32 AM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

Replicate Data: ccv 570-62937/10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.08	0.0395	0.1935	0.0395	10:12:10 AM	Yes
2	0.0021	2.11	0.0400	0.1951	0.0400	10:12:56 AM	Yes
Mean:	0.0021	2.10	0.0398				
SD:	0.00002	0.018	0.0003				
%RSD:	0.87%	0.87%	0.86				

QC value within limits for Hg 253.7 Recovery = 104.78%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                               Autosampler Location: 1
Sample ID: ccb 570-62937/11-a                 Date Collected: 4/15/2020 10:13:23 AM
Analyst: 1220 HG-7                             Data Type: Reprocessed on 4/15/2020 10:54:32 AM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

Replicate Data: ccb 570-62937/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0132	0.0001	0.0002	0.0001	10:14:27 AM	Yes
2	-0.0000	-0.0119	0.0001	0.0005	0.0001	10:15:12 AM	Yes
Mean:	-0.0000	-0.0126	0.0001				
SD:	0.00000	0.00092	0.0000				
%RSD:	7.33%	7.33%	23.29				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 10
Sample ID: mb 570-63082/1-a                 Date Collected: 4/15/2020 10:19:16 AM
Analyst: 1220 HG-7                             Data Type: Reprocessed on 4/15/2020 10:54:32 AM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

Replicate Data: mb 570-63082/1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0132	0.0001	0.0002	0.0001	10:14:27 AM	Yes
2	-0.0000	-0.0119	0.0001	0.0005	0.0001	10:15:12 AM	Yes

#	mg/L	ug/L	Signal	Area	Height	Time	Stored
1	-0.0000	-0.0095	0.0001	0.0003	0.0002	10:20:21 AM	Yes
2	-0.0000	-0.0098	0.0001	0.0004	0.0002	10:21:08 AM	Yes
Mean:	-0.0000	-0.0097	0.0001				
SD:	0.00000	0.00024	0.0000				
%RSD:	2.47%	2.47%	3.47				

Sequence No.: 14
Sample ID: lcs 570-63082/2-a
Analyst: 1220 HG-7
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 11
Date Collected: 4/15/2020 10:21:34 AM
Data Type: Reprocessed on 4/15/2020 10:54:32 AM
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-63082/2-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.94	0.0934	0.4559	0.0934	10:22:40 AM	Yes
2	0.0049	4.92	0.0929	0.4586	0.0929	10:23:26 AM	Yes
Mean:	0.0049	4.93	0.0931				
SD:	0.00002	0.019	0.0004				
%RSD:	0.39%	0.39%	0.39				

Sequence No.: 15
Sample ID: lcsd 570-63082/3-a
Analyst: 1220 HG-7
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 12
Date Collected: 4/15/2020 10:23:53 AM
Data Type: Reprocessed on 4/15/2020 10:54:32 AM
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-63082/3-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	4.95	0.0935	0.4592	0.0936	10:24:59 AM	Yes
2	0.0049	4.94	0.0933	0.4608	0.0933	10:25:45 AM	Yes
Mean:	0.0049	4.95	0.0934				
SD:	0.00001	0.011	0.0002				
%RSD:	0.22%	0.22%	0.22				

Sequence No.: 16
Sample ID: 570-25445-h-1-a
Analyst: 1220 HG-7
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 13
Date Collected: 4/15/2020 10:26:12 AM
Data Type: Reprocessed on 4/15/2020 10:54:32 AM
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25445-h-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0044	0.0002	0.0019	0.0003	10:27:18 AM	Yes
2	-0.0000	-0.0021	0.0003	0.0032	0.0003	10:28:04 AM	Yes
Mean:	-0.0000	-0.0033	0.0003				
SD:	0.00000	0.00168	0.0000				
%RSD:	51.51%	51.51%	12.63				

Sequence No.: 17
Sample ID: 570-25445-h-1-b ms
Analyst: 1220 HG-7
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 14
Date Collected: 4/15/2020 10:28:31 AM
Data Type: Reprocessed on 4/15/2020 10:54:32 AM
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25445-h-1-b ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.92	0.0364	0.2439	0.0364	10:29:36 AM	Yes

Sequence No.: 18
 Sample ID: 570-25445-h-1-b ms
 Analyst: 1220 HG-7
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 14
 Date Collected: 4/15/2020 10:31:08 AM
 Data Type: Reprocessed on 4/15/2020 10:54:33 AM
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-25445-h-1-b ms Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.87	0.0356	0.2391	0.0356	10:32:13 AM	Yes
2	0.0019	1.89	0.0359	0.2417	0.0360	10:32:59 AM	Yes
Mean:	0.0019	1.88	0.0358				
SD:	0.00001	0.013	0.0002				
%RSD:	0.66%	0.66%	0.66				

Sequence No.: 19
 Sample ID: 570-25445-h-1-c msd
 Analyst: 1220 HG-7
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 15
 Date Collected: 4/15/2020 10:33:25 AM
 Data Type: Reprocessed on 4/15/2020 10:54:33 AM
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-25445-h-1-c msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.84	0.0349	0.2310	0.0349	10:34:30 AM	Yes
2	0.0020	1.95	0.0371	0.2461	0.0371	10:35:16 AM	Yes
Mean:	0.0019	1.89	0.0360				
SD:	0.00008	0.083	0.0016				
%RSD:	4.41%	4.41%	4.37				

Sequence No.: 20
 Sample ID: 570-25449-u-1-a
 Analyst: 1220 HG-7
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 16
 Date Collected: 4/15/2020 10:35:41 AM
 Data Type: Reprocessed on 4/15/2020 10:54:33 AM
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-25449-u-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0085	0.0005	0.0030	0.0005	10:36:46 AM	Yes
2	0.0000	0.0052	0.0004	0.0021	0.0004	10:37:32 AM	Yes
Mean:	0.0000	0.0069	0.0004				
SD:	0.00000	0.00228	0.0000				
%RSD:	33.27%	33.27%	9.74				

Sequence No.: 21
 Sample ID: 570-25609-a-1-a
 Analyst: 1220 HG-7
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 17
 Date Collected: 4/15/2020 10:37:58 AM
 Data Type: Reprocessed on 4/15/2020 10:54:33 AM
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Replicate Data: 570-25609-a-1-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0075	0.0002	0.0007	0.0002	10:39:02 AM	Yes

2 -0.0000 -0.0070 0.0002 0.0009 0.0002 10:39:48 AM Yes
 Mean: -0.0000 -0.0073 0.0002
 SD: 0.00000 0.00035 0.0000
 %RSD: 4.81% 4.81% 3.79

=====
 Sequence No.: 22 Autosampler Location: 18
 Sample ID: 570-18283-a-10-b Date Collected: 4/15/2020 10:40:13 AM
 Analyst: 1220 HG-7 Data Type: Reprocessed on 4/15/2020 10:54:33 AM
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-18283-a-10-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0017	1.74	0.0331	0.1628	0.0331	10:41:18 AM	Yes
2	0.0017	1.74	0.0331	0.1639	0.0331	10:42:03 AM	Yes
Mean:	0.0017	1.74	0.0331				
SD:	0.00000	0.000	0.0000				
%RSD:	0.02%	0.02%	0.02				

=====
 Sequence No.: 23 Autosampler Location: 19
 Sample ID: 570-0/0-c Date Collected: 4/15/2020 10:42:29 AM
 Analyst: 1220 HG-7 Data Type: Reprocessed on 4/15/2020 10:54:33 AM
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-0/0-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0004	0.387	0.0076	0.0383	0.0076	10:43:33 AM	Yes
2	0.0004	0.386	0.0076	0.0386	0.0076	10:44:20 AM	Yes
Mean:	0.0004	0.386	0.0076				
SD:	0.00000	0.0001	0.0000				
%RSD:	0.02%	0.02%	0.02				

=====
 Sequence No.: 24 Autosampler Location: 5
 Sample ID: ccv 570-62937/10-a Date Collected: 4/15/2020 10:44:46 AM
 Analyst: 1220 HG-7 Data Type: Reprocessed on 4/15/2020 10:54:33 AM
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccv 570-62937/10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.09	0.0396	0.1987	0.0396	10:45:51 AM	Yes
2	0.0021	2.10	0.0398	0.1991	0.0398	10:46:37 AM	Yes
Mean:	0.0021	2.09	0.0397				
SD:	0.00001	0.009	0.0002				
%RSD:	0.43%	0.43%	0.43				

QC value within limits for Hg 253.7 Recovery = 104.59%
 All analyte(s) passed QC.

=====
 Sequence No.: 25 Autosampler Location: 1
 Sample ID: ccb 570-62937/11-a Date Collected: 4/15/2020 10:47:04 AM
 Analyst: 1220 HG-7 Data Type: Reprocessed on 4/15/2020 10:54:34 AM
 Logged In Analyst (Original) : us26_usr_instrument
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

 Replicate Data: ccb 570-62937/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0016	0.0003	0.0031	0.0003	10:48:09 AM	Yes
2	-0.0000	-0.0054	0.0002	0.0025	0.0002	10:48:55 AM	Yes
Mean:	-0.0000	-0.0035	0.0002				
SD:	0.00000	0.00266	0.0001				
%RSD:	75.46%	75.46%	20.39				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-24921-i-5-c
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 20
Date Collected: 4/15/2020 11:15:22 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-24921-i-5-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.180	0.0037	0.0253	0.0037	11:16:27 AM	Yes
2	0.0001	0.0913	0.0020	0.0145	0.0021	11:17:13 AM	Yes
Mean:	0.0001	0.136	0.0029				
SD:	0.00006	0.0626	0.0012				
%RSD:	46.20%	46.20%	41.17				

=====
Sequence No.: 2
Sample ID: cra 570-63162/12-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 4/15/2020 11:17:39 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-63162/12-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0152	0.0006	0.0048	0.0006	11:18:44 AM	Yes

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: cra 570-63162/12-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 4/15/2020 11:19:50 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-63162/12-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.274	0.0055	0.0294	0.0055	11:20:55 AM	Yes
2	0.0005	0.274	0.0055	0.0288	0.0055	11:21:40 AM	Yes
Mean:	0.0005	0.274	0.0055				
SD:	0.00000	0.0005	0.0000				
%RSD:	0.17%	0.17%	0.16				

=====
Sequence No.: 2
Sample ID: ccv 570-62937/10-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 4/15/2020 11:22:06 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-62937/10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.09	0.0397	0.1996	0.0397	11:23:12 AM	Yes
2	0.0021	2.10	0.0399	0.1987	0.0399	11:23:58 AM	Yes
Mean:	0.0021	2.10	0.0398				
SD:	0.00001	0.008	0.0002				
%RSD:	0.40%	0.40%	0.40				

QC value within limits for Hg 253.7 Recovery = 104.90%
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: ccb 570-62937/11-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 4/15/2020 11:24:24 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-62937/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0099	0.0001	0.0010	0.0001	11:25:28 AM	Yes
2	-0.0000	-0.0112	0.0001	0.0007	0.0001	11:26:14 AM	Yes
Mean:	-0.0000	-0.0106	0.0001				
SD:	0.00000	0.00091	0.0000				
%RSD:	8.61%	8.61%	15.29				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:

Results Data Set: 200415G1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-63177/1-b
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 21
Date Collected: 4/15/2020 11:48:06 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-63177/1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0082	0.0002	0.0020	0.0002	11:49:11 AM	Yes
2	-0.0000	-0.0081	0.0002	0.0022	0.0002	11:49:57 AM	Yes
Mean:	-0.0000	-0.0082	0.0002				
SD:	0.00000	0.00008	0.0000				
%RSD:	1.01%	1.01%	0.99				

=====
Sequence No.: 2
Sample ID: lcs 570-63177/2-b
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 22
Date Collected: 4/15/2020 11:50:24 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-63177/2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	5.03	0.0949	0.4892	0.0949	11:51:29 AM	Yes
2	0.0050	5.03	0.0950	0.4899	0.0951	11:52:15 AM	Yes
Mean:	0.0050	5.03	0.0950				
SD:	0.00000	0.004	0.0001				
%RSD:	0.09%	0.09%	0.09				

=====
Sequence No.: 3
Sample ID: lcsd 570-63177/3-b
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 23
Date Collected: 4/15/2020 11:52:41 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-63177/3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0051	5.09	0.0961	0.4909	0.0962	11:53:47 AM	Yes
2	0.0051	5.06	0.0955	0.4873	0.0955	11:54:32 AM	Yes
Mean:	0.0051	5.07	0.0958				
SD:	0.00002	0.023	0.0004				
%RSD:	0.46%	0.46%	0.46				

=====
Sequence No.: 4
Sample ID: 570-24957-h-8-f@5
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 24
Date Collected: 4/15/2020 11:54:59 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

 Replicate Data: 570-24957-h-8-f@5 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0078	0.0002	0.0014	0.0002	11:56:05 AM	Yes
2	-0.0000	-0.0043	0.0002	0.0021	0.0003	11:56:50 AM	Yes
Mean:	-0.0000	-0.0061	0.0002				
SD:	0.00000	0.00250	0.0000				
%RSD:	41.09%	41.09%	23.85				

=====

Sequence No.: 5	Autosampler Location: 25
Sample ID: 570-24957-h-8-f	Date Collected: 4/15/2020 11:57:17 AM
Analyst: 1220 HG-7	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0047	0.0004	0.0030	0.0004	11:58:23 AM	Yes
2	0.0000	0.0049	0.0004	0.0031	0.0004	11:59:09 AM	Yes
Mean:	0.0000	0.0048	0.0004				
SD:	0.00000	0.00013	0.0000				
%RSD:	2.61%	2.61%	0.59				

=====

Sequence No.: 6	Autosampler Location: 26
Sample ID: 570-24957-h-8-g ms	Date Collected: 4/15/2020 11:59:37 AM
Analyst: 1220 HG-7	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.70	0.0887	0.4620	0.0888	12:00:42 PM	Yes
2	0.0047	4.70	0.0887	0.4624	0.0888	12:01:27 PM	Yes
Mean:	0.0047	4.70	0.0887				
SD:	0.00000	0.000	0.0000				
%RSD:	0.00%	0.00%	0.00				

=====

Sequence No.: 7	Autosampler Location: 27
Sample ID: 570-24957-h-8-h msd	Date Collected: 4/15/2020 12:01:53 PM
Analyst: 1220 HG-7	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.67	0.0882	0.4602	0.0883	12:02:57 PM	Yes
2	0.0047	4.68	0.0885	0.4612	0.0885	12:03:43 PM	Yes
Mean:	0.0047	4.68	0.0883				
SD:	0.00001	0.008	0.0002				
%RSD:	0.18%	0.18%	0.18				

=====

Sequence No.: 8	Autosampler Location: 28
Sample ID: 570-24957-h-8-f PDS	Date Collected: 4/15/2020 12:04:08 PM
Analyst: 1220 HG-7	Data Type: Original
Initial Sample Wt:	Initial Sample Vol:
Dilution:	Sample Prep Vol:
Wash Time (before sample): 0	Auto Dilution Factor: 1

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0046	4.64	0.0877	0.4593	0.0877	12:05:13 PM	Yes

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:

Results Data Set: 200415G1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1 Autosampler Location: 28
Sample ID: 570-24957-h-8-f PDS Date Collected: 4/15/2020 12:07:08 PM
Analyst: 1220 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1
=====

Replicate Data: 570-24957-h-8-f PDS Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.65	0.0878	0.4589	0.0878	12:08:12 PM	Yes
2	0.0046	4.61	0.0871	0.4570	0.0871	12:08:57 PM	Yes

Mean: 0.0046 4.63 0.0875
SD: 0.00003 0.026 0.0005
%RSD: 0.56% 0.56% 0.56

=====
Sequence No.: 2 Autosampler Location: 29
Sample ID: 570-24957-h-8-f PDS Date Collected: 4/15/2020 12:09:23 PM
Analyst: 1220 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1
=====

Replicate Data: 570-24957-h-8-f PDS Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.66	0.0880	0.4592	0.0880	12:10:27 PM	Yes
2	0.0046	4.64	0.0877	0.4583	0.0878	12:11:12 PM	Yes

Mean: 0.0047 4.65 0.0879
SD: 0.00001 0.010 0.0002
%RSD: 0.21% 0.21% 0.21

=====
Sequence No.: 3 Autosampler Location: 30
Sample ID: 570-24957-h-7-e Date Collected: 4/15/2020 12:11:38 PM
Analyst: 1220 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1
=====

Replicate Data: 570-24957-h-7-e Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0057	0.0002	0.0008	0.0002	12:12:42 PM	Yes
2	-0.0000	-0.0068	0.0002	0.0016	0.0002	12:13:28 PM	Yes

Mean: -0.0000 -0.0063 0.0002
SD: 0.00000 0.00073 0.0000
%RSD: 11.70% 11.70% 7.11

=====
Sequence No.: 4 Autosampler Location: 5
Sample ID: ccv 570-62937/10-a Date Collected: 4/15/2020 12:13:54 PM
Analyst: 1220 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-62937/10-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.12	0.0402	0.2043	0.0402	12:14:59 PM	Yes
2	0.0021	2.10	0.0399	0.2018	0.0399	12:15:44 PM	Yes
Mean:	0.0021	2.11	0.0400				
SD:	0.00001	0.009	0.0002				
%RSD:	0.42%	0.42%	0.42				

QC value within limits for Hg 253.7 Recovery = 105.51%
All analyte(s) passed QC.

=====

Sequence No.: 5

Autosampler Location: 1

Sample ID: ccb 570-62937/11-a

Date Collected: 4/15/2020 12:16:11 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-62937/11-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0098	0.0001	0.0012	0.0002	12:17:15 PM	Yes
2	-0.0000	-0.0121	0.0001	-0.0002	0.0001	12:18:00 PM	Yes
Mean:	-0.0000	-0.0109	0.0001				
SD:	0.00000	0.00161	0.0000				
%RSD:	14.71%	14.71%	28.68				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-24957-h-9-d
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 31
Date Collected: 4/15/2020 12:18:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-24957-h-9-d
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0091	0.0001	0.0010	0.0002	12:19:53 PM	Yes
2	-0.0000	-0.0099	0.0001	0.0003	0.0001	12:20:39 PM	Yes
Mean:	-0.0000	-0.0095	0.0001				
SD:	0.00000	0.00061	0.0000				
%RSD:	6.45%	6.45%	8.70				

=====
Sequence No.: 2
Sample ID: 570-24957-h-10-d
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 32
Date Collected: 4/15/2020 12:21:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-24957-h-10-d
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0107	0.0001	0.0006	0.0001	12:22:10 PM	Yes
2	-0.0000	-0.0122	0.0001	-0.0000	0.0001	12:22:56 PM	Yes
Mean:	-0.0000	-0.0114	0.0001				
SD:	0.00000	0.00107	0.0000				
%RSD:	9.39%	9.39%	20.89				

=====
Sequence No.: 3
Sample ID: cra 570-63162/12-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 4/15/2020 12:23:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-63162/12-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.261	0.0052	0.0256	0.0053	12:24:27 PM	Yes
2	0.0005	0.266	0.0053	0.0266	0.0053	12:25:13 PM	Yes
Mean:	0.0005	0.264	0.0053				
SD:	0.00001	0.0031	0.0001				
%RSD:	1.19%	1.19%	1.12				

=====
Sequence No.: 4
Sample ID: ccv 570-62937/10-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 4/15/2020 12:25:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-62937/10-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.13	0.0403	0.2030	0.0404	12:26:44 PM	Yes
2	0.0021	2.14	0.0407	0.2031	0.0407	12:27:30 PM	Yes
Mean:	0.0021	2.13	0.0405				
SD:	0.00001	0.012	0.0002				
%RSD:	0.58%	0.58%	0.57				

QC value within limits for Hg 253.7 Recovery = 106.74%
All analyte(s) passed QC.

=====

Sequence No.: 5
Sample ID: ccb 570-62937/11-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 4/15/2020 12:27:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-62937/11-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0136	0.0001	-0.0004	0.0001	12:29:01 PM	Yes
2	-0.0000	-0.0134	0.0001	0.0003	0.0001	12:29:46 PM	Yes
Mean:	-0.0000	-0.0135	0.0001				
SD:	0.00000	0.00015	0.0000				
%RSD:	1.08%	1.08%	4.71				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Reprocessing Begun
Logged In Analyst: us26_usr_instrument

Technique: AA FIMS-MHS

Results Data Set (original): 200415G1
Results Library (original): C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb
Results Data Set (reprocessed): 200415G2
Results Library (reprocessed): W:\MERCURY_7\Data\Results\results.mdb

Sequence No.: 1
Sample ID: 570-24921-i-5-c
Analyst: 1220 HG-7
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 20
Date Collected: 4/15/2020 11:15:22 AM
Data Type: Reprocessed on 4/15/2020 12:30:24 PM
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate 570-24921-i-5-c.

Sequence No.: 2
Sample ID: cra 570-63162/12-a
Analyst: 1220 HG-7
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 4/15/2020 11:17:39 AM
Data Type: Reprocessed on 4/15/2020 12:30:25 PM
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate cra 570-63162/12-a.

Sequence No.: 3
Sample ID: cra 570-63162/12-a
Analyst: 1220 HG-7
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 4/15/2020 11:19:50 AM
Data Type: Reprocessed on 4/15/2020 12:30:25 PM
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate cra 570-63162/12-a.

Sequence No.: 4
Sample ID: ccv 570-62937/10-a
Analyst: 1220 HG-7
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 4/15/2020 11:22:06 AM
Data Type: Reprocessed on 4/15/2020 12:30:25 PM
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Data for replicate ccv 570-62937/10-a.

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0021	2.09	0.0397	0.1996	0.0397	11:23:12 AM	Yes
2	0.0021	2.10	0.0399	0.1987	0.0399	11:23:58 AM	Yes
Mean:	0.0021	2.10	0.0398				
SD:	0.00001	0.008	0.0002				
%RSD:	0.40%	0.40%	0.40				

QC value within limits for Hg 253.7 Recovery = 104.90%

All analyte(s) passed QC.

```

=====
Sequence No.: 5                               Autosampler Location: 1
Sample ID: ccb 570-62937/11-a                 Date Collected: 4/15/2020 11:24:24 AM
Analyst: 1220 HG-7                           Data Type: Reprocessed on 4/15/2020 12:30:25 PM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

Replicate Data: ccb 570-62937/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0099	0.0001	0.0010	0.0001	11:25:28 AM	Yes
2	-0.0000	-0.0112	0.0001	0.0007	0.0001	11:26:14 AM	Yes
Mean:	-0.0000	-0.0106	0.0001				
SD:	0.00000	0.00091	0.0000				
%RSD:	8.61%	8.61%	15.29				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

```

=====
Sequence No.: 6                               Autosampler Location: 21
Sample ID: mb 570-63177/1-b                 Date Collected: 4/15/2020 11:48:06 AM
Analyst: 1220 HG-7                           Data Type: Reprocessed on 4/15/2020 12:30:25 PM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

Replicate Data: mb 570-63177/1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0082	0.0002	0.0020	0.0002	11:49:11 AM	Yes
2	-0.0000	-0.0081	0.0002	0.0022	0.0002	11:49:57 AM	Yes
Mean:	-0.0000	-0.0082	0.0002				
SD:	0.00000	0.00008	0.0000				
%RSD:	1.01%	1.01%	0.99				

```

=====
Sequence No.: 7                               Autosampler Location: 22
Sample ID: lcs 570-63177/2-b                 Date Collected: 4/15/2020 11:50:24 AM
Analyst: 1220 HG-7                           Data Type: Reprocessed on 4/15/2020 12:30:25 PM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

Replicate Data: lcs 570-63177/2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	5.03	0.0949	0.4892	0.0949	11:51:29 AM	Yes
2	0.0050	5.03	0.0950	0.4899	0.0951	11:52:15 AM	Yes
Mean:	0.0050	5.03	0.0950				
SD:	0.00000	0.004	0.0001				
%RSD:	0.09%	0.09%	0.09				

```

=====
Sequence No.: 8                               Autosampler Location: 23
Sample ID: lcsd 570-63177/3-b                 Date Collected: 4/15/2020 11:52:41 AM
Analyst: 1220 HG-7                           Data Type: Reprocessed on 4/15/2020 12:30:25 PM
Logged In Analyst (Original) : us26_usr_instrument
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
=====

```

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcsd 570-63177/3-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0051	5.09	0.0961	0.4909	0.0962	11:53:47 AM	Yes
2	0.0051	5.06	0.0955	0.4873	0.0955	11:54:32 AM	Yes
Mean:	0.0051	5.07	0.0958				
SD:	0.00002	0.023	0.0004				
%RSD:	0.46%	0.46%	0.46				

=====

Sequence No.: 9

Autosampler Location: 24

Sample ID: 570-24957-h-8-f@5

Date Collected: 4/15/2020 11:54:59 AM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:26 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-24957-h-8-f@5

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0078	0.0002	0.0014	0.0002	11:56:05 AM	Yes
2	-0.0000	-0.0043	0.0002	0.0021	0.0003	11:56:50 AM	Yes
Mean:	-0.0000	-0.0061	0.0002				
SD:	0.00000	0.00250	0.0000				
%RSD:	41.09%	41.09%	23.85				

=====

Sequence No.: 10

Autosampler Location: 25

Sample ID: 570-24957-h-8-f

Date Collected: 4/15/2020 11:57:17 AM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:26 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-24957-h-8-f

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0047	0.0004	0.0030	0.0004	11:58:23 AM	Yes
2	0.0000	0.0049	0.0004	0.0031	0.0004	11:59:09 AM	Yes
Mean:	0.0000	0.0048	0.0004				
SD:	0.00000	0.00013	0.0000				
%RSD:	2.61%	2.61%	0.59				

=====

Sequence No.: 11

Autosampler Location: 26

Sample ID: 570-24957-h-8-g ms

Date Collected: 4/15/2020 11:59:37 AM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:26 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-24957-h-8-g ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.70	0.0887	0.4620	0.0888	12:00:42 PM	Yes
2	0.0047	4.70	0.0887	0.4624	0.0888	12:01:27 PM	Yes
Mean:	0.0047	4.70	0.0887				
SD:	0.00000	0.000	0.0000				
%RSD:	0.00%	0.00%	0.00				

=====

Sequence No.: 12

Autosampler Location: 27

Sample ID: 570-24957-h-8-h msd

Date Collected: 4/15/2020 12:01:53 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:26 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-24957-h-8-h msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.67	0.0882	0.4602	0.0883	12:02:57 PM	Yes
2	0.0047	4.68	0.0885	0.4612	0.0885	12:03:43 PM	Yes
Mean:	0.0047	4.68	0.0883				
SD:	0.00001	0.008	0.0002				
%RSD:	0.18%	0.18%	0.18				

Sequence No.: 13

Autosampler Location: 28

Sample ID: 570-24957-h-8-f PDS

Date Collected: 4/15/2020 12:04:08 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:27 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-24957-h-8-f PDS

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.64	0.0877	0.4593	0.0877	12:05:13 PM	Yes

Sequence No.: 14

Autosampler Location: 28

Sample ID: 570-24957-h-8-f PDS

Date Collected: 4/15/2020 12:07:08 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:27 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-24957-h-8-f PDS

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0046	4.65	0.0878	0.4589	0.0878	12:08:12 PM	Yes
2	0.0046	4.61	0.0871	0.4570	0.0871	12:08:57 PM	Yes
Mean:	0.0046	4.63	0.0875				
SD:	0.00003	0.026	0.0005				
%RSD:	0.56%	0.56%	0.56				

Sequence No.: 15

Autosampler Location: 29

Sample ID: 570-24957-h-8-f PDS

Date Collected: 4/15/2020 12:09:23 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:27 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-24957-h-8-f PDS

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	4.66	0.0880	0.4592	0.0880	12:10:27 PM	Yes
2	0.0046	4.64	0.0877	0.4583	0.0878	12:11:12 PM	Yes
Mean:	0.0047	4.65	0.0879				
SD:	0.00001	0.010	0.0002				
%RSD:	0.21%	0.21%	0.21				

Sequence No.: 16

Autosampler Location: 30

Sample ID: 570-24957-h-7-e

Date Collected: 4/15/2020 12:11:38 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:27 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-24957-h-7-e

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blnk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0057	0.0002	0.0008	0.0002	12:12:42 PM	Yes
2	-0.0000	-0.0068	0.0002	0.0016	0.0002	12:13:28 PM	Yes
Mean:	-0.0000	-0.0063	0.0002				
SD:	0.00000	0.00073	0.0000				
%RSD:	11.70%	11.70%	7.11				

Sequence No.: 17

Autosampler Location: 5

Sample ID: ccv 570-62937/10-a

Date Collected: 4/15/2020 12:13:54 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:27 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-62937/10-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blnk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.12	0.0402	0.2043	0.0402	12:14:59 PM	Yes
2	0.0021	2.10	0.0399	0.2018	0.0399	12:15:44 PM	Yes
Mean:	0.0021	2.11	0.0400				
SD:	0.00001	0.009	0.0002				
%RSD:	0.42%	0.42%	0.42				

QC value within limits for Hg 253.7 Recovery = 105.51%
All analyte(s) passed QC.

Sequence No.: 18

Autosampler Location: 1

Sample ID: ccb 570-62937/11-a

Date Collected: 4/15/2020 12:16:11 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:27 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-62937/11-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blnk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0098	0.0001	0.0012	0.0002	12:17:15 PM	Yes
2	-0.0000	-0.0121	0.0001	-0.0002	0.0001	12:18:00 PM	Yes
Mean:	-0.0000	-0.0109	0.0001				
SD:	0.00000	0.00161	0.0000				
%RSD:	14.71%	14.71%	28.68				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 19

Autosampler Location: 31

Sample ID: 570-24957-h-9-d

Date Collected: 4/15/2020 12:18:48 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:27 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-24957-h-9-d

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blnk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0091	0.0001	0.0010	0.0002	12:19:53 PM	Yes
2	-0.0000	-0.0099	0.0001	0.0003	0.0001	12:20:39 PM	Yes
Mean:	-0.0000	-0.0095	0.0001				
SD:	0.00000	0.00061	0.0000				
%RSD:	6.45%	6.45%	8.70				

Sequence No.: 20

Autosampler Location: 32

Sample ID: 570-24957-h-10-d

Date Collected: 4/15/2020 12:21:05 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:27 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-24957-h-10-d

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0107	0.0001	0.0006	0.0001	12:22:10 PM	Yes
2	-0.0000	-0.0122	0.0001	-0.0000	0.0001	12:22:56 PM	Yes
Mean:	-0.0000	-0.0114	0.0001				
SD:	0.00000	0.00107	0.0000				
%RSD:	9.39%	9.39%	20.89				

Sequence No.: 21

Autosampler Location: 9

Sample ID: cra 570-63162/12-a

Date Collected: 4/15/2020 12:23:22 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:28 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution: 2X

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: cra 570-63162/12-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.261	0.0052	0.0256	0.0053	12:24:27 PM	Yes
2	0.0005	0.266	0.0053	0.0266	0.0053	12:25:13 PM	Yes
Mean:	0.0005	0.264	0.0053				
SD:	0.00001	0.0031	0.0001				
%RSD:	1.19%	1.19%	1.12				

Sequence No.: 22

Autosampler Location: 5

Sample ID: ccv 570-62937/10-a

Date Collected: 4/15/2020 12:25:39 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:28 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-62937/10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.13	0.0403	0.2030	0.0404	12:26:44 PM	Yes
2	0.0021	2.14	0.0407	0.2031	0.0407	12:27:30 PM	Yes
Mean:	0.0021	2.13	0.0405				
SD:	0.00001	0.012	0.0002				
%RSD:	0.58%	0.58%	0.57				

QC value within limits for Hg 253.7 Recovery = 106.74%
All analyte(s) passed QC.

Sequence No.: 23

Autosampler Location: 1

Sample ID: ccb 570-62937/11-a

Date Collected: 4/15/2020 12:27:57 PM

Analyst: 1220 HG-7

Data Type: Reprocessed on 4/15/2020 12:30:28 PM

Logged In Analyst (Original) : us26_usr_instrument

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-62937/11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0136	0.0001	-0.0004	0.0001	12:29:01 PM	Yes
2	-0.0000	-0.0134	0.0001	0.0003	0.0001	12:29:46 PM	Yes
Mean:	-0.0000	-0.0135	0.0001				
SD:	0.00000	0.00015	0.0000				
%RSD:	1.08%	1.08%	4.71				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icis 570-63306/1-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 4/15/2020 2:53:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icis 570-63306/1-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.00] 0.0001 0.0008 0.0001 2:54:41 PM Yes
2 [0.00] 0.0001 0.0002 0.0001 2:55:26 PM Yes
Mean: [0.00] 0.0001
SD: 0.0000 0.0000
%RSD: 0.00% 7.32
Auto-zero performed.

=====
Sequence No.: 2
Sample ID: ic 570-63306/4-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 4/15/2020 2:55:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-63306/4-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.050] 0.0010 0.0056 0.0011 2:56:57 PM Yes
2 [0.050] 0.0010 0.0057 0.0011 2:57:43 PM Yes
Mean: [0.050] 0.0010
SD: 0.00000 0.0000
%RSD: 0.00% 0.40
Standard number 1 applied. [0.050]
Correlation Coef.: 1.000000 Slope: 0.01931 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: ic 570-63306/5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 4/15/2020 2:58:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-63306/5-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.100] 0.0019 0.0109 0.0020 2:59:14 PM Yes
2 [0.100] 0.0019 0.0103 0.0020 2:59:59 PM Yes
Mean: [0.100] 0.0019
SD: 0.00000 0.0000
%RSD: 0.00% 0.30
Standard number 2 applied. [0.100]
Correlation Coef.: 0.999915 Slope: 0.01889 Intercept: 0.00001

=====
Sequence No.: 4
Sample ID: ic 570-63306/6-a
Autosampler Location: 4
Date Collected: 4/15/2020 3:00:26 PM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63306/6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0181	0.0920	0.0182	3:01:32 PM	Yes
2		[1.000]	0.0179	0.0906	0.0180	3:02:18 PM	Yes
Mean:		[1.000]	0.0180				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.52				

 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999989 Slope: 0.01794 Intercept: 0.00005

=====
 Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-63306/7-a Date Collected: 4/15/2020 3:02:44 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63306/7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0397	0.2020	0.0399	3:03:50 PM	Yes
2		[2.000]	0.0397	0.2029	0.0398	3:04:35 PM	Yes
Mean:		[2.000]	0.0397				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.10				

 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.998901 Slope: 0.01965 Intercept: -0.00027

=====
 Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-63306/8-a Date Collected: 4/15/2020 3:05:03 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63306/8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0956	0.4867	0.0958	3:06:07 PM	Yes
2		[5.000]	0.0954	0.4851	0.0956	3:06:52 PM	Yes
Mean:		[5.000]	0.0955				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.15				

 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999760 Slope: 0.01918 Intercept: -0.00004

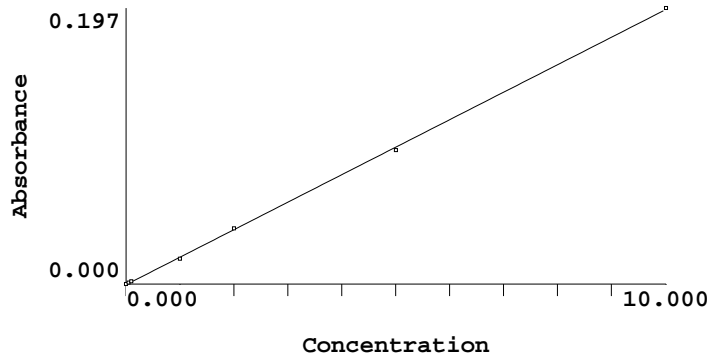
=====
 Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-63306/9-a Date Collected: 4/15/2020 3:07:18 PM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63306/9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.00]	0.1973	1.0098	0.1974	3:08:23 PM	Yes
2		[10.00]	0.1968	1.0106	0.1969	3:09:09 PM	Yes
Mean:		[10.00]	0.1970				
SD:		0.0000	0.0004				
%RSD:		0.00%	0.18				

 Standard number 6 applied. [10.00]

Correlation Coef.: 0.999864 Slope: 0.01965 Intercept: -0.00050



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-63306/1-a	0.0000	0	0.0257	0.00	7.32
ic 570-63306/4-a	0.0010	0.050	0.0748	0.00	0.40
ic 570-63306/5-a	0.0019	0.100	0.1218	0.00	0.30
ic 570-63306/6-a	0.0180	1.000	0.9410	0.00	0.52
ic 570-63306/7-a	0.0397	2.000	2.0462	0.00	0.10
ic 570-63306/8-a	0.0955	5.000	4.8882	0.00	0.15
ic 570-63306/9-a	0.1970	10.00	10.0522	0.00	0.18

Correlation Coef.: 0.999864 Slope: 0.01965 Intercept: -0.00050

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:

Results Data Set: 200415G1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====

Sequence No.: 1
Sample ID: ccv 570-63306/10-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.

Autosampler Location: 5
Date Collected: 4/15/2020 3:13:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-63306/2-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 4/15/2020 3:14:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-63306/2-a
Analyte: Hg 253.7
Repl # SampleConc mg/L StndConc ug/L BlnkCorr Signal Peak Area Peak Height Time Peak Stored
1 0.0151 15.1 0.2956 1.5153 0.2958 3:15:06 PM Yes
Sample concentration is greater than that of the highest standard.
2 0.0150 15.0 0.2951 1.5125 0.2952 3:15:52 PM Yes
Sample concentration is greater than that of the highest standard.
Mean: 0.0151 15.1 0.2953
SD: 0.00002 0.02 0.0004
%RSD: 0.14% 0.14% 0.14
Sample concentration is greater than that of the highest standard.
QC value greater than the upper limit for Hg 253.7 Recovery = 301.12%
QC Failed. Stop the analysis.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 2
Sample ID: icb 570-63306/3-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
User canceled analysis.
Autosampler Location: 1
Date Collected: 4/15/2020 3:16:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-63306/2-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 4/15/2020 3:19:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-63306/2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0051 5.11 0.0999 0.5027 0.1000 3:20:58 PM Yes
2 0.0051 5.07 0.0990 0.5020 0.0991 3:21:44 PM Yes
Mean: 0.0051 5.09 0.0994
SD: 0.00003 0.030 0.0006
%RSD: 0.59% 0.59% 0.60
QC value within limits for Hg 253.7 Recovery = 101.73%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-63306/3-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 4/15/2020 3:22:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-63306/3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0000 0.0273 0.0000 -0.0003 0.0002 3:23:14 PM Yes
2 0.0000 0.0299 0.0001 0.0003 0.0002 3:24:00 PM Yes
Mean: 0.0000 0.0286 0.0001
SD: 0.00000 0.00187 0.0000
%RSD: 6.55% 6.55% 64.08
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-63306/12-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 4/15/2020 3:24:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-63306/12-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0006 0.292 0.0052 0.0258 0.0054 3:25:32 PM Yes
2 0.0006 0.292 0.0052 0.0260 0.0054 3:26:17 PM Yes
Mean: 0.0006 0.292 0.0052
SD: 0.00000 0.0001 0.0000
%RSD: 0.05% 0.05% 0.05

=====
Sequence No.: 4
Sample ID: ccv 570-63306/10-a
Analyst: 1220 HG-7
Autosampler Location: 5
Date Collected: 4/15/2020 3:26:44 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63306/10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0021	2.06	0.0399	0.1998	0.0400	3:27:50 PM	Yes
2	0.0021	2.06	0.0399	0.2008	0.0400	3:28:36 PM	Yes
Mean:	0.0021	2.06	0.0399				
SD:	0.00000	0.000	0.0000				
%RSD:	0.02%	0.02%	0.02				

QC value within limits for Hg 253.7 Recovery = 102.83%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-63306/11-a Date Collected: 4/15/2020 3:29:03 PM
 Analyst: 1220 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63306/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0278	0.0000	0.0007	0.0002	3:30:07 PM	Yes
2	0.0000	0.0256	-0.0000	0.0000	0.0001	3:30:53 PM	Yes
Mean:	0.0000	0.0267	0.0000				
SD:	0.00000	0.00156	0.0000				
%RSD:	5.86%	5.86%	159.04				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-63329/1-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 4/15/2020 4:57:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-63329/1-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0248	-0.0000	0.0008	0.0001	4:58:41 PM	Yes
2	0.0000	0.0249	-0.0000	0.0010	0.0001	4:59:27 PM	Yes
Mean:	0.0000	0.0249	-0.0000				
SD:	0.00000	0.00010	0.0000				
%RSD:	0.42%	0.42%	12.45				

=====
Sequence No.: 2
Sample ID: lcs 570-63329/2-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 11
Date Collected: 4/15/2020 4:59:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-63329/2-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.92	0.0962	0.4877	0.0963	5:01:00 PM	Yes
2	0.0049	4.91	0.0961	0.4889	0.0962	5:01:46 PM	Yes
Mean:	0.0049	4.92	0.0961				
SD:	0.00000	0.004	0.0001				
%RSD:	0.09%	0.09%	0.09				

=====
Sequence No.: 3
Sample ID: lcsd 570-63329/3-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 12
Date Collected: 4/15/2020 5:02:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-63329/3-a
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.94	0.0966	0.4873	0.0967	5:03:19 PM	Yes
2	0.0049	4.93	0.0963	0.4868	0.0964	5:04:06 PM	Yes
Mean:	0.0049	4.93	0.0964				
SD:	0.00001	0.010	0.0002				
%RSD:	0.20%	0.20%	0.20				

=====
Sequence No.: 4
Sample ID: 570-13428-a-16-c mdl
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 13
Date Collected: 4/15/2020 5:04:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-13428-a-16-c mdls

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0568	0.0006	0.0030	0.0007	5:05:39 PM	Yes
2	0.0001	0.0600	0.0007	0.0040	0.0008	5:06:26 PM	Yes
Mean:	0.0001	0.0584	0.0006				
SD:	0.00000	0.00230	0.0000				
%RSD:	3.94%	3.94%	7.04				

Sequence No.: 5

Autosampler Location: 14

Sample ID: 570-13428-a-17-c mdls

Date Collected: 4/15/2020 5:06:54 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-13428-a-17-c mdls

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0563	0.0006	0.0036	0.0007	5:07:59 PM	Yes
2	0.0001	0.0564	0.0006	0.0037	0.0007	5:08:45 PM	Yes
Mean:	0.0001	0.0564	0.0006				
SD:	0.00000	0.00010	0.0000				
%RSD:	0.18%	0.18%	0.33				

Sequence No.: 6

Autosampler Location: 5

Sample ID: ccv 570-63306/10-a

Date Collected: 4/15/2020 5:09:11 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63306/10-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.01	0.0390	0.1954	0.0391	5:10:18 PM	Yes
2	0.0020	2.01	0.0389	0.1964	0.0391	5:11:04 PM	Yes
Mean:	0.0020	2.01	0.0390				
SD:	0.00000	0.002	0.0000				
%RSD:	0.11%	0.11%	0.12				

QC value within limits for Hg 253.7 Recovery = 100.44%

All analyte(s) passed QC.

Sequence No.: 7

Autosampler Location: 1

Sample ID: ccb 570-63306/11-a

Date Collected: 4/15/2020 5:11:31 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63306/11-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0293	0.0001	0.0021	0.0002	5:12:36 PM	Yes
2	0.0000	0.0306	0.0001	0.0018	0.0002	5:13:21 PM	Yes
Mean:	0.0000	0.0299	0.0001				
SD:	0.00000	0.00087	0.0000				
%RSD:	2.92%	2.92%	20.58				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:
Results Data Set: 200415G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: ccv 570-63306/10-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 4/15/2020 9:30:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63306/10-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0018 1.82 0.0352 0.1846 0.0353 9:31:37 PM Yes
2 0.0018 1.81 0.0350 0.1827 0.0351 9:32:23 PM Yes
Mean: 0.0018 1.81 0.0351
SD: 0.00001 0.007 0.0001
%RSD: 0.40% 0.40% 0.40
QC value within limits for Hg 253.7 Recovery = 90.62%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: ccb 570-63306/11-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 4/15/2020 9:32:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63306/11-a Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0000 0.0260 0.0000 0.0005 0.0001 9:33:55 PM Yes
2 0.0000 0.0264 0.0000 0.0008 0.0001 9:34:42 PM Yes
Mean: 0.0000 0.0262 0.0000
SD: 0.00000 0.00025 0.0000
%RSD: 0.95% 0.95% 48.26
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis BegunLogged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200415G1.sifx

Batch ID:

Results Data Set: 200415G1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-63387/1-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 15
Date Collected: 4/15/2020 9:52:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: mb 570-63387/1-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0000 0.0237 -0.0000 0.0003 0.0001 9:53:18 PM Yes
2 0.0000 0.0231 -0.0001 0.0000 0.0001 9:54:04 PM Yes
Mean: 0.0000 0.0234 -0.0000
SD: 0.00000 0.00044 0.0000
%RSD: 1.86% 1.86% 19.28=====
Sequence No.: 2
Sample ID: lcs 570-63387/2-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 16
Date Collected: 4/15/2020 9:54:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: lcs 570-63387/2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0041 4.12 0.0804 0.4099 0.0805 9:55:35 PM Yes
2 0.0041 4.14 0.0809 0.4116 0.0810 9:56:21 PM Yes
Mean: 0.0041 4.13 0.0806
SD: 0.00002 0.018 0.0004
%RSD: 0.43% 0.43% 0.44=====
Sequence No.: 3
Sample ID: lcsd 570-63387/3-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 17
Date Collected: 4/15/2020 9:56:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: lcsd 570-63387/3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0041 4.13 0.0806 0.4117 0.0807 9:57:51 PM Yes
2 0.0041 4.15 0.0810 0.4124 0.0812 9:58:36 PM Yes
Mean: 0.0041 4.14 0.0808
SD: 0.00002 0.017 0.0003
%RSD: 0.41% 0.41% 0.41=====
Sequence No.: 4
Sample ID: 570-13428-a-16-d mdlS
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 18
Date Collected: 4/15/2020 9:59:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-13428-a-16-d mdls

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0492	0.0005	0.0023	0.0006	10:00:07 PM	Yes
2	0.0000	0.0486	0.0005	0.0027	0.0006	10:00:52 PM	Yes
Mean:	0.0000	0.0489	0.0005				
SD:	0.00000	0.00045	0.0000				
%RSD:	0.92%	0.92%	1.93				

Sequence No.: 5

Autosampler Location: 19

Sample ID: 570-13428-a-17-d mdls

Date Collected: 4/15/2020 10:01:18 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-13428-a-17-d mdls

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0471	0.0004	0.0023	0.0005	10:02:23 PM	Yes
2	0.0000	0.0438	0.0004	0.0020	0.0005	10:03:10 PM	Yes
Mean:	0.0000	0.0455	0.0004				
SD:	0.00000	0.00234	0.0000				
%RSD:	5.14%	5.14%	11.83				

Sequence No.: 6

Autosampler Location: 20

Sample ID: mb 570-63388/1-a

Date Collected: 4/15/2020 10:03:36 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: mb 570-63388/1-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0228	-0.0001	-0.0004	0.0001	10:04:41 PM	Yes
2	0.0000	0.0228	-0.0001	-0.0000	0.0001	10:05:26 PM	Yes
Mean:	0.0000	0.0228	-0.0001				
SD:	0.00000	0.00001	0.0000				
%RSD:	0.05%	0.05%	0.36				

Sequence No.: 7

Autosampler Location: 21

Sample ID: lcs 570-63388/2-a

Date Collected: 4/15/2020 10:05:52 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcs 570-63388/2-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0041	4.15	0.0810	0.4076	0.0811	10:06:57 PM	Yes
2	0.0041	4.14	0.0809	0.4090	0.0810	10:07:43 PM	Yes
Mean:	0.0041	4.14	0.0809				
SD:	0.00000	0.003	0.0001				
%RSD:	0.07%	0.07%	0.07				

Sequence No.: 8

Autosampler Location: 22

Sample ID: lcsd 570-63388/3-a

Date Collected: 4/15/2020 10:08:09 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: lcsd 570-63388/3-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	------------------	----------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height	Time	Stored
1	0.0041	4.15	0.0810	0.4076	0.0811	10:09:13 PM	Yes
2	0.0042	4.15	0.0811	0.4097	0.0812	10:09:59 PM	Yes
Mean:	0.0041	4.15	0.0810				
SD:	0.00000	0.002	0.0000				
%RSD:	0.05%	0.05%	0.05				

```

=====
Sequence No.: 9                               Autosampler Location: 23
Sample ID: 570-13428-a-16-e mdlS             Date Collected: 4/15/2020 10:10:25 PM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-13428-a-16-e mdlS        Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal    Area  Height
1      0.0000      0.0451   0.0004   0.0016 0.0005 10:11:30 PM Yes
2      0.0000      0.0461   0.0004   0.0018 0.0005 10:12:16 PM Yes
Mean:  0.0000      0.0456   0.0004
SD:    0.00000     0.00065  0.0000
%RSD:  1.44%      1.44%    3.29
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 24
Sample ID: 570-13428-a-17-e mdlS             Date Collected: 4/15/2020 10:12:42 PM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-13428-a-17-e mdlS        Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal    Area  Height
1      0.0000      0.0424   0.0003   0.0012 0.0005 10:13:48 PM Yes
2      0.0000      0.0437   0.0004   0.0017 0.0005 10:14:33 PM Yes
Mean:  0.0000      0.0430   0.0003
SD:    0.00000     0.00092  0.0000
%RSD:  2.13%      2.13%    5.29
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-63306/10-a                Date Collected: 4/15/2020 10:15:00 PM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-63306/10-a          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal    Area  Height
1      0.0018      1.78     0.0346   0.1728 0.0347 10:16:06 PM Yes
2      0.0018      1.78     0.0345   0.1713 0.0346 10:16:52 PM Yes
Mean:  0.0018      1.78     0.0345
SD:    0.00000     0.003    0.0001
%RSD:  0.16%      0.16%    0.16
=====

```

QC value within limits for Hg 253.7 Recovery = 89.12%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-63306/11-a                Date Collected: 4/15/2020 10:17:19 PM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-63306/11-a          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal    Area  Height
=====

```

1	0.0000	0.0236	-0.0000	-0.0007	0.0001	10:18:23 PM	Yes
2	0.0000	0.0223	-0.0001	-0.0012	0.0001	10:19:10 PM	Yes
Mean:	0.0000	0.0229	-0.0001				
SD:	0.00000	0.00091	0.0000				
%RSD:	3.99%	3.99%	32.77				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 25
Sample ID: 4 PPB                               Date Collected: 4/15/2020 10:19:36 PM
Analyst: 1220 HG-7                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 4 PPB                          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0000     0.0454   0.0004   0.0014 0.0005 10:20:42 PM Yes
2      0.0000     0.0478   0.0004   0.0020 0.0006 10:21:28 PM Yes
Mean:  0.0000     0.0466   0.0004
SD:    0.00000     0.00165  0.0000
%RSD:  3.54%      3.54%    7.90
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 26
Sample ID: 5 PPB                               Date Collected: 4/15/2020 10:21:55 PM
Analyst: 1220 HG-7                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 5 PPB                          Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0001     0.0564   0.0006   0.0023 0.0007 10:23:00 PM Yes
2      0.0001     0.0559   0.0006   0.0022 0.0007 10:23:46 PM Yes
Mean:  0.0001     0.0561   0.0006
SD:    0.00000     0.00039  0.0000
%RSD:  0.69%      0.69%    1.27
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 5
Sample ID: ccv 570-63306/10-a                 Date Collected: 4/15/2020 10:24:12 PM
Analyst: 1220 HG-7                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====
  
```

```

-----
Replicate Data: ccv 570-63306/10-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L      Signal   Area  Height
1      0.0018     1.76     0.0340   0.1685 0.0341 10:25:18 PM Yes
2      0.0018     1.76     0.0341   0.1707 0.0342 10:26:03 PM Yes
Mean:  0.0018     1.76     0.0340
SD:    0.00000     0.002    0.0000
%RSD:  0.10%      0.10%    0.10
=====
  
```

QC value within limits for Hg 253.7 Recovery = 87.88%
 All analyte(s) passed QC.

```

=====
Sequence No.: 16                               Autosampler Location: 1
Sample ID: ccb 570-63306/11-a                 Date Collected: 4/15/2020 10:26:30 PM
Analyst: 1220 HG-7                            Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====
  
```

```

-----
Replicate Data: ccb 570-63306/11-a            Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
=====
  
```

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0000	0.0232	-0.0000	-0.0008	0.0001	10:27:34 PM	Yes
2	0.0000	0.0246	-0.0000	-0.0003	0.0001	10:28:20 PM	Yes
Mean:	0.0000	0.0239	-0.0000				
SD:	0.00000	0.00099	0.0000				
%RSD:	4.15%	4.15%	55.94				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:

Results Data Set: 200416G1

Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====

Sequence No.: 1

Autosampler Location: 5

Sample ID: ccv 570-63407/10-a

Date Collected: 4/16/2020 8:52:08 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

User canceled analysis.


```

=====
Sequence No.: 1                               Autosampler Location:
Sample ID: AutozeroRead                       Date Collected: 4/16/2020 8:52:27 AM
Analyst:                                       Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: AutozeroRead                   Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height             Stored
1      [0.00]     -0.0001  -0.0001  -0.0007 0.0000  8:52:51 AM  Yes
Auto-zero performed.

```

Analysis Begun

```

Logged In Analyst: us26_usr_instrument        Technique: AA FIMS-MHS
Spectrometer: FIMS-400, S/N B050-9560       Autosampler: S10

```

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\200416G1.sifx

```

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

```

```

=====
Sequence No.: 1                               Autosampler Location: 1
Sample ID: icis 570-63407/1-a                 Date Collected: 4/16/2020 9:01:51 AM
Analyst:                                       Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: icis 570-63407/1-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height             Stored
1      [0.00]     0.0001   0.0001  -0.0006 0.0001  9:02:55 AM  Yes
2      [0.00]     0.0001   0.0001  -0.0007 0.0001  9:03:41 AM  Yes
Mean:   [0.00]     0.0001
SD:     0.0000     0.0000
%RSD:   0.00%      14.94
Auto-zero performed.

```

```

=====
Sequence No.: 2                               Autosampler Location: 2
Sample ID: ic 570-63407/4-a                   Date Collected: 4/16/2020 9:04:07 AM
Analyst:                                       Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

```

-----
Replicate Data: ic 570-63407/4-a             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time      Peak
#      mg/L        ug/L      Signal   Area   Height             Stored
1      [0.025]     0.0005   0.0005  0.0020 0.0006  9:05:11 AM  Yes
2      [0.025]     0.0004   0.0004  0.0014 0.0005  9:05:57 AM  Yes
Mean:   [0.025]     0.0005
SD:     0.00000    0.0000
%RSD:   0.00%      8.09
Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000  Slope: 0.01893  Intercept: 0.00000

```

```

=====
Sequence No.: 3                               Autosampler Location: 3
Sample ID: ic 570-63407/5-a                   Date Collected: 4/16/2020 9:06:22 AM
Analyst:                                       Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1

```

Replicate Data: ic 570-63407/5-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0036	0.0171	0.0036	9:07:27 AM	Yes
2		[0.100]	0.0036	0.0169	0.0036	9:08:13 AM	Yes
Mean:		[0.100]	0.0036				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.39				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.992781 Slope: 0.03699 Intercept: -0.00019

=====

Sequence No.: 4 Autosampler Location: 4
Sample ID: ic 570-63407/6-a Date Collected: 4/16/2020 9:08:39 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-63407/6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0373	0.1803	0.0374	9:09:44 AM	Yes
2		[1.000]	0.0373	0.1817	0.0373	9:10:30 AM	Yes
Mean:		[1.000]	0.0373				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.00				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999944 Slope: 0.03749 Intercept: -0.00021

=====

Sequence No.: 5 Autosampler Location: 5
Sample ID: ic 570-63407/7-a Date Collected: 4/16/2020 9:10:56 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-63407/7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0727	0.3578	0.0728	9:12:01 AM	Yes
2		[2.000]	0.0727	0.3587	0.0728	9:12:46 AM	Yes
Mean:		[2.000]	0.0727				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.05				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999893 Slope: 0.03657 Intercept: -0.00005

=====

Sequence No.: 6 Autosampler Location: 6
Sample ID: ic 570-63407/8-a Date Collected: 4/16/2020 9:13:13 AM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-63407/8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.1785	0.8754	0.1785	9:14:16 AM	Yes
2		[5.000]	0.1762	0.8755	0.1763	9:15:01 AM	Yes
Mean:		[5.000]	0.1773				
SD:		0.00000	0.0016				
%RSD:		0.00%	0.90				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999899 Slope: 0.03552 Intercept: 0.00046

=====

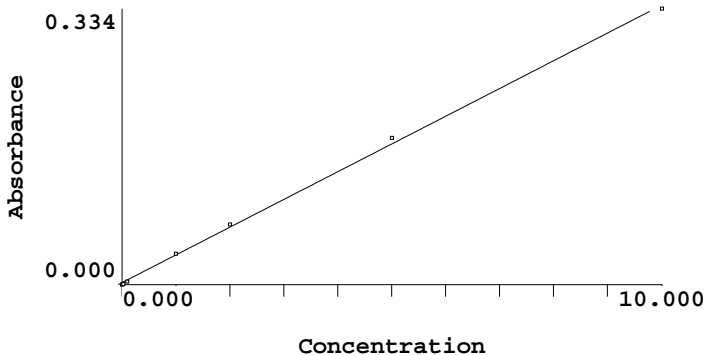
Sequence No.: 7 Autosampler Location: 7
Sample ID: ic 570-63407/9-a Date Collected: 4/16/2020 9:15:26 AM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63407/9-a Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Std Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1	[10.00]	0.3334	0.3334	1.6890	0.3335	9:16:31 AM	Yes
2	[10.00]	0.3334	0.3341	1.6928	0.3342	9:17:16 AM	Yes
Mean:	[10.00]	0.3338	0.3338				
SD:	0.0000	0.0005	0.0005				
%RSD:	0.00%	0.15	0.15				

 Standard number 6 applied. [10.00]
 Correlation Coef.: 0.999472 Slope: 0.03357 Intercept: 0.00239



 Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-63407/1-a	0.0000	0	-0.0712	0.00	14.94
ic 570-63407/4-a	0.0005	0.025	-0.0571	0.00	8.09
ic 570-63407/5-a	0.0036	0.100	0.0351	0.00	0.39
ic 570-63407/6-a	0.0373	1.000	1.0394	0.00	0.00
ic 570-63407/7-a	0.0727	2.000	2.0949	0.00	0.05
ic 570-63407/8-a	0.1773	5.000	5.2118	0.00	0.90
ic 570-63407/9-a	0.3338	10.00	9.8720	0.00	0.15

 Correlation Coef.: 0.999472 Slope: 0.03357 Intercept: 0.00239

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icis 570-63407/1-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 4/16/2020 9:36:56 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icis 570-63407/1-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.00] 0.0001 0.0008 0.0001 9:38:00 AM Yes
2 [0.00] 0.0001 0.0005 0.0001 9:38:46 AM Yes
Mean: [0.00] 0.0001
SD: 0.0000 0.0000
%RSD: 0.00% 6.56
Auto-zero performed.

=====
Sequence No.: 2
Sample ID: ic 570-63407/4-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 4/16/2020 9:39:11 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-63407/4-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.025] 0.0005 0.0030 0.0006 9:40:15 AM Yes
2 [0.025] 0.0005 0.0033 0.0006 9:41:00 AM Yes
Mean: [0.025] 0.0005
SD: 0.00000 0.0000
%RSD: 0.00% 3.60
Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.01886 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: ic 570-63407/5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 4/16/2020 9:41:25 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-63407/5-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 [0.100] 0.0034 0.0179 0.0036 9:42:30 AM Yes
2 [0.100] 0.0034 0.0183 0.0036 9:43:16 AM Yes
Mean: [0.100] 0.0034
SD: 0.00000 0.0000
%RSD: 0.00% 0.15
Standard number 2 applied. [0.100]
Correlation Coef.: 0.993280 Slope: 0.03565 Intercept: -0.00018

=====
Sequence No.: 4
Sample ID: ic 570-63407/6-a
Autosampler Location: 4
Date Collected: 4/16/2020 9:43:42 AM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-63407/6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0373	0.1790	0.0375	9:44:47 AM	Yes
2		[1.000]	0.0368	0.1798	0.0370	9:45:32 AM	Yes
Mean:		[1.000]	0.0371				
SD:		0.00000	0.0003				
%RSD:		0.00%	0.91				

Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999944 Slope: 0.03731 Intercept: -0.00025

=====

Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-63407/7-a Date Collected: 4/16/2020 9:45:58 AM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-63407/7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0721	0.3535	0.0722	9:47:04 AM	Yes
2		[2.000]	0.0721	0.3541	0.0722	9:47:50 AM	Yes
Mean:		[2.000]	0.0721				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.02				

Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999868 Slope: 0.03628 Intercept: -0.00006

=====

Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-63407/8-a Date Collected: 4/16/2020 9:48:16 AM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-63407/8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.1747	0.8667	0.1748	9:49:20 AM	Yes
2		[5.000]	0.1749	0.8691	0.1750	9:50:06 AM	Yes
Mean:		[5.000]	0.1748				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.07				

Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999855 Slope: 0.03502 Intercept: 0.00055

=====

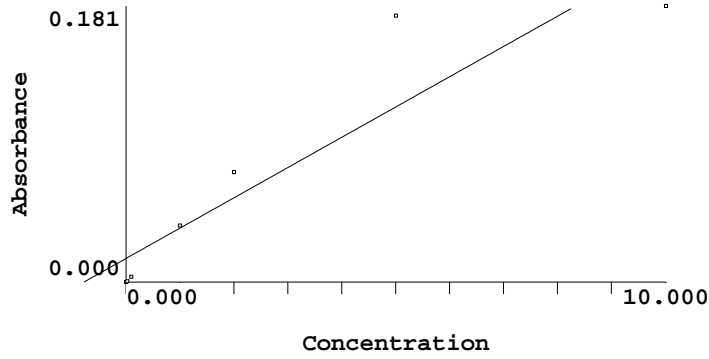
Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-63407/9-a Date Collected: 4/16/2020 9:50:31 AM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: ic 570-63407/9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.00]	0.1799	0.8931	0.1801	9:51:35 AM	Yes
2		[10.00]	0.1824	0.8956	0.1826	9:52:20 AM	Yes
Mean:		[10.00]	0.1812				
SD:		0.0000	0.0017				
%RSD:		0.00%	0.96				

Standard number 6 applied. [10.00]

Correlation Coef.: 0.923803 Slope: 0.01990 Intercept: 0.01549



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-63407/1-a	0.0000	0	-0.7787	0.00	6.56
ic 570-63407/4-a	0.0005	0.025	-0.7549	0.00	3.60
ic 570-63407/5-a	0.0034	0.100	-0.6055	0.00	0.15
ic 570-63407/6-a	0.0371	1.000	1.0847	0.00	0.91
ic 570-63407/7-a	0.0721	2.000	2.8441	0.00	0.02
ic 570-63407/8-a	0.1748	5.000	8.0072	0.00	0.07
ic 570-63407/9-a	0.1812	10.00	8.3281	0.00	0.96

Correlation Coef.: 0.923803 Slope: 0.01990 Intercept: 0.01549

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icis 570-63407/1-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 4/16/2020 10:51:44 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: icis 570-63407/1-a Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0002	0.0021	0.0002	10:52:49 AM	Yes
2		[0.00]	0.0002	0.0022	0.0002	10:53:34 AM	Yes
Mean:		[0.00]	0.0002				
SD:		0.0000	0.0000				
%RSD:		0.00%	21.35				

Auto-zero performed.

=====
Sequence No.: 2
Sample ID: ic 570-63407/4-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 4/16/2020 10:54:00 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-63407/4-a Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0004	0.0036	0.0006	10:55:04 AM	Yes
2		[0.025]	0.0005	0.0039	0.0007	10:55:49 AM	Yes
Mean:		[0.025]	0.0004				
SD:		0.00000	0.0000				
%RSD:		0.00%	5.13				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.01751 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: ic 570-63407/5-a
Analyst:
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 4/16/2020 10:56:15 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ic 570-63407/5-a Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0018	0.0100	0.0021	10:57:20 AM	Yes
2		[0.100]	0.0019	0.0106	0.0021	10:58:05 AM	Yes
Mean:		[0.100]	0.0019				
SD:		0.00000	0.0000				
%RSD:		0.00%	1.77				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.999856 Slope: 0.01880 Intercept: -0.00001

=====
Sequence No.: 4
Sample ID: ic 570-63407/6-a
Autosampler Location: 4
Date Collected: 4/16/2020 10:58:31 AM

Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63407/6-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0191	0.0931	0.0193	10:59:36 AM	Yes
2		[1.000]	0.0195	0.0952	0.0197	11:00:21 AM	Yes
Mean:		[1.000]	0.0193				
SD:		0.00000	0.0003				
%RSD:		0.00%	1.44				

 Standard number 3 applied. [1.000]
 Correlation Coef.: 0.999996 Slope: 0.01933 Intercept: -0.00003

=====
 Sequence No.: 5 Autosampler Location: 5
 Sample ID: ic 570-63407/7-a Date Collected: 4/16/2020 11:00:48 AM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63407/7-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0386	0.1855	0.0388	11:01:53 AM	Yes
2		[2.000]	0.0388	0.1878	0.0390	11:02:39 AM	Yes
Mean:		[2.000]	0.0387				
SD:		0.00000	0.0002				
%RSD:		0.00%	0.44				

 Standard number 4 applied. [2.000]
 Correlation Coef.: 0.999999 Slope: 0.01935 Intercept: -0.00004

=====
 Sequence No.: 6 Autosampler Location: 6
 Sample ID: ic 570-63407/8-a Date Collected: 4/16/2020 11:03:05 AM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63407/8-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0954	0.4606	0.0956	11:04:09 AM	Yes
2		[5.000]	0.0960	0.4657	0.0962	11:04:55 AM	Yes
Mean:		[5.000]	0.0957				
SD:		0.00000	0.0005				
%RSD:		0.00%	0.48				

 Standard number 5 applied. [5.000]
 Correlation Coef.: 0.999990 Slope: 0.01915 Intercept: 0.00006

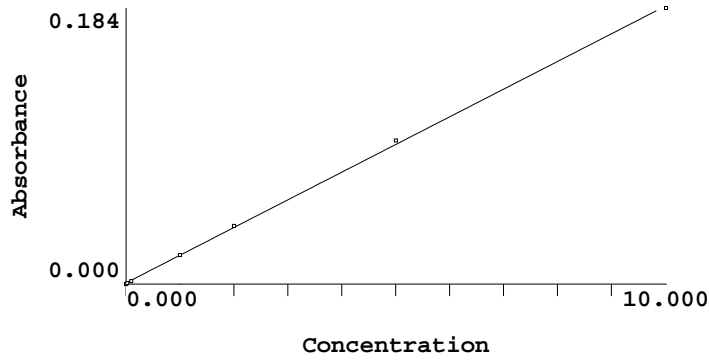
=====
 Sequence No.: 7 Autosampler Location: 7
 Sample ID: ic 570-63407/9-a Date Collected: 4/16/2020 11:05:20 AM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: ic 570-63407/9-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.00]	0.1824	0.8926	0.1826	11:06:24 AM	Yes
2		[10.00]	0.1857	0.9101	0.1859	11:07:10 AM	Yes
Mean:		[10.00]	0.1841				
SD:		0.0000	0.0023				
%RSD:		0.00%	1.27				

 Standard number 6 applied. [10.00]

Correlation Coef.: 0.999803 Slope: 0.01848 Intercept: 0.00072



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
icis 570-63407/1-a	0.0000	0	-0.0389	0.00	21.35
ic 570-63407/4-a	0.0004	0.025	-0.0153	0.00	5.13
ic 570-63407/5-a	0.0019	0.100	0.0623	0.00	1.77
ic 570-63407/6-a	0.0193	1.000	1.0052	0.00	1.44
ic 570-63407/7-a	0.0387	2.000	2.0534	0.00	0.44
ic 570-63407/8-a	0.0957	5.000	5.1380	0.00	0.48
ic 570-63407/9-a	0.1841	10.00	9.9203	0.00	1.27

Correlation Coef.: 0.999803 Slope: 0.01848 Intercept: 0.00072

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: icv 570-63407/2-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 4/16/2020 11:13:29 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icv 570-63407/2-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0051 5.13 0.0956 0.4700 0.0958 11:14:33 AM Yes
2 0.0051 5.10 0.0949 0.4669 0.0951 11:15:19 AM Yes
Mean: 0.0051 5.11 0.0953
SD: 0.00003 0.028 0.0005
%RSD: 0.55% 0.55% 0.54
QC value within limits for Hg 253.7 Recovery = 102.30%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: icb 570-63407/3-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 4/16/2020 11:15:45 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: icb 570-63407/3-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 -0.0000 -0.0433 -0.0001 0.0007 0.0001 11:16:49 AM Yes
2 -0.0000 -0.0402 -0.0000 0.0011 0.0002 11:17:34 AM Yes
Mean: -0.0000 -0.0417 -0.0001
SD: 0.00000 0.00223 0.0000
%RSD: 5.35% 5.35% 79.90
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: cra 570-63407/12-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 4/16/2020 11:18:00 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: cra 570-63407/12-a
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height
1 0.0005 0.235 0.0051 0.0260 0.0053 11:19:04 AM Yes
2 0.0005 0.240 0.0052 0.0264 0.0054 11:19:50 AM Yes
Mean: 0.0005 0.237 0.0051
SD: 0.00001 0.0035 0.0001
%RSD: 1.46% 1.46% 1.26

=====
Sequence No.: 4
Sample ID: ccv 570-63407/10-a
Analyst: 1220 HG-7
Autosampler Location: 5
Date Collected: 4/16/2020 11:20:16 AM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63407/10-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.03	0.0382	0.1886	0.0384	11:21:22 AM	Yes
2	0.0021	2.06	0.0388	0.1896	0.0390	11:22:07 AM	Yes
Mean:	0.0020	2.04	0.0385				
SD:	0.00002	0.025	0.0005				
%RSD:	1.21%	1.21%	1.19				

QC value within limits for Hg 253.7 Recovery = 102.22%
 All analyte(s) passed QC.

=====

Sequence No.: 5 Autosampler Location: 1
 Sample ID: ccb 570-63407/11-a Date Collected: 4/16/2020 11:22:34 AM
 Analyst: 1220 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63407/11-a Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0421	-0.0001	0.0000	0.0002	11:23:37 AM	Yes
2	-0.0000	-0.0457	-0.0001	-0.0007	0.0001	11:24:23 AM	Yes
Mean:	-0.0000	-0.0439	-0.0001				
SD:	0.00000	0.00259	0.0000				
%RSD:	5.90%	5.90%	52.44				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: mb 570-63413/1-b
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 33
Date Collected: 4/16/2020 11:25:40 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: mb 570-63413/1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0489	-0.0002	-0.0009	0.0000	11:26:45 AM	Yes
2	-0.0000	-0.0475	-0.0002	-0.0008	0.0000	11:27:31 AM	Yes
Mean:	-0.0000	-0.0482	-0.0002				
SD:	0.00000	0.00096	0.0000				
%RSD:	2.00%	2.00%	10.37				

=====
Sequence No.: 2
Sample ID: lcs 570-63413/2-b
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 34
Date Collected: 4/16/2020 11:27:58 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-63413/2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0053	5.26	0.0980	0.4810	0.0982	11:29:03 AM	Yes
2	0.0053	5.33	0.0992	0.4842	0.0994	11:29:49 AM	Yes
Mean:	0.0053	5.30	0.0986				
SD:	0.00004	0.045	0.0008				
%RSD:	0.84%	0.84%	0.84				

=====
Sequence No.: 3
Sample ID: lcsd 570-63413/3-b
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 35
Date Collected: 4/16/2020 11:30:15 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-63413/3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0053	5.26	0.0979	0.4762	0.0981	11:31:20 AM	Yes
2	0.0054	5.36	0.0998	0.4852	0.1000	11:32:06 AM	Yes
Mean:	0.0053	5.31	0.0988				
SD:	0.00007	0.075	0.0014				
%RSD:	1.40%	1.40%	1.39				

=====
Sequence No.: 4
Sample ID: 570-25593-c-1-d
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 36
Date Collected: 4/16/2020 11:32:32 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25593-c-1-d

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0341	0.0001	0.0006	0.0003	11:33:38 AM	Yes
2	-0.0000	-0.0394	-0.0000	0.0001	0.0002	11:34:24 AM	Yes
Mean:	-0.0000	-0.0368	0.0000				
SD:	0.00000	0.00374	0.0001				
%RSD:	10.19%	10.19%	171.71				

Sequence No.: 5

Autosampler Location: 37

Sample ID: 570-25593-c-1-e ms

Date Collected: 4/16/2020 11:34:51 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-25593-c-1-e ms

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0031	3.12	0.0584	0.2830	0.0586	11:35:57 AM	Yes
2	0.0031	3.14	0.0587	0.2860	0.0589	11:36:43 AM	Yes
Mean:	0.0031	3.13	0.0585				
SD:	0.00001	0.014	0.0003				
%RSD:	0.43%	0.43%	0.43				

Sequence No.: 6

Autosampler Location: 38

Sample ID: 570-25593-c-1-f msd

Date Collected: 4/16/2020 11:37:10 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-25593-c-1-f msd

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0031	3.14	0.0588	0.2876	0.0590	11:38:15 AM	Yes
2	0.0032	3.18	0.0594	0.2923	0.0596	11:39:01 AM	Yes
Mean:	0.0032	3.16	0.0591				
SD:	0.00002	0.023	0.0004				
%RSD:	0.71%	0.71%	0.70				

Sequence No.: 7

Autosampler Location: 39

Sample ID: 570-25554-f-1-a

Date Collected: 4/16/2020 11:39:27 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-25554-f-1-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0049	0.0008	0.0068	0.0010	11:40:32 AM	Yes
2	-0.0000	-0.0285	0.0002	0.0031	0.0004	11:41:18 AM	Yes
Mean:	-0.0000	-0.0118	0.0005				
SD:	0.00002	0.02362	0.0004				
%RSD:	200.62%	200.62%	86.92				

Sequence No.: 8

Autosampler Location: 40

Sample ID: 570-25554-f-2-a

Date Collected: 4/16/2020 11:41:44 AM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-25554-f-2-a

Analyte: Hg 253.7

Repl #	Sample Conc mg/L	Stnd Conc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
--------	------------------	----------------	----------------	-----------	-------------	------	-------------

#	mg/L	ug/L	Signal	Area	Height	Time	Stored
1	-0.0000	-0.0226	0.0003	0.0038	0.0005	11:42:48 AM	Yes
2	-0.0000	-0.0283	0.0002	0.0023	0.0004	11:43:35 AM	Yes
Mean:	-0.0000	-0.0255	0.0002				
SD:	0.00000	0.00403	0.0001				
%RSD:	15.80%	15.80%	29.95				

```

=====
Sequence No.: 9                               Autosampler Location: 41
Sample ID: 570-25593-b-1-b                   Date Collected: 4/16/2020 11:44:01 AM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-25593-b-1-b              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      -0.0000    -0.0312  0.0001   0.0023 0.0004 11:45:06 AM  Yes
2      -0.0000    -0.0357  0.0001   0.0014 0.0003 11:45:52 AM  Yes
Mean:  -0.0000    -0.0334  0.0001
SD:     0.00000    0.00316  0.0001
%RSD:   9.47%     9.47%    57.22
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 10
Sample ID: mb 570-63166/1-a                   Date Collected: 4/16/2020 11:46:18 AM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: mb 570-63166/1-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      -0.0000    -0.0366  0.0000   0.0021 0.0003 11:47:23 AM  Yes
2      -0.0000    -0.0404  -0.0000  0.0009 0.0002 11:48:09 AM  Yes
Mean:  -0.0000    -0.0385  0.0000
SD:     0.00000    0.00274  0.0001
%RSD:   7.12%     7.12%    620.51
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 5
Sample ID: ccv 570-63407/10-a                 Date Collected: 4/16/2020 11:48:36 AM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-63407/10-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.0020     1.99     0.0375   0.1856 0.0377 11:49:42 AM  Yes
2      0.0020     2.05     0.0386   0.1908 0.0388 11:50:28 AM  Yes
Mean:  0.0020     2.02     0.0380
SD:     0.00004    0.043    0.0008
%RSD:   2.11%     2.11%    2.07
=====

```

QC value within limits for Hg 253.7 Recovery = 100.94%
All analyte(s) passed QC.

```

=====
Sequence No.: 12                              Autosampler Location: 1
Sample ID: ccb 570-63407/11-a                 Date Collected: 4/16/2020 11:50:55 AM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-63407/11-a              Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
=====

```

1	-0.0000	-0.0314	0.0001	0.0016	0.0003	11:51:59 AM	Yes
2	-0.0000	-0.0355	0.0001	0.0011	0.0003	11:52:45 AM	Yes
Mean:	-0.0000	-0.0335	0.0001				
SD:	0.00000	0.00294	0.0001				
%RSD:	8.78%	8.78%	53.50				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

```

=====
Sequence No.: 13                               Autosampler Location: 11
Sample ID: lcs 570-63166/2-a                 Date Collected: 4/16/2020 11:53:11 AM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: lcs 570-63166/2-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0052     5.22      0.0972   0.4771 0.0974 11:54:16 AM  Yes
2      0.0053     5.31      0.0988   0.4876 0.0990 11:55:01 AM  Yes
Mean:  0.0053     5.26      0.0980
SD:    0.00006    0.062     0.0011
%RSD:  1.17%     1.17%     1.16
=====
  
```

```

=====
Sequence No.: 14                               Autosampler Location: 12
Sample ID: lcsd 570-63166/3-a                Date Collected: 4/16/2020 11:55:28 AM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: lcsd 570-63166/3-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0052     5.19      0.0966   0.4752 0.0968 11:56:33 AM  Yes
2      0.0053     5.33      0.0993   0.4886 0.0995 11:57:19 AM  Yes
Mean:  0.0053     5.26      0.0980
SD:    0.00010    0.103     0.0019
%RSD:  1.96%     1.96%     1.95
=====
  
```

```

=====
Sequence No.: 15                               Autosampler Location: 13
Sample ID: 570-25765-a-9-d                  Date Collected: 4/16/2020 11:57:45 AM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-25765-a-9-d             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0006     0.569     0.0112   0.0594 0.0114 11:58:51 AM  Yes
2      0.0005     0.493     0.0098   0.0509 0.0100 11:59:36 AM  Yes
Mean:  0.0005     0.531     0.0105
SD:    0.00005    0.0536    0.0010
%RSD:  10.09%    10.09%    9.40
=====
  
```

```

=====
Sequence No.: 16                               Autosampler Location: 14
Sample ID: 570-25765-a-9-e ms                Date Collected: 4/16/2020 12:00:03 PM
Analyst: 1220 HG-7                           Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====
  
```

```

-----
Replicate Data: 570-25765-a-9-e ms           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L       ug/L       Signal   Area  Height
1      0.0049     4.89      0.0911   0.4459 0.0913 12:01:07 PM  Yes
=====
  
```

2 0.0050 5.01 0.0933 0.4747 0.0935 12:01:52 PM Yes
 Mean: 0.0049 4.95 0.0922
 SD: 0.00008 0.083 0.0015
 %RSD: 1.67% 1.67% 1.66

=====
 Sequence No.: 17 Autosampler Location: 15
 Sample ID: 570-25765-a-9-f msd Date Collected: 4/16/2020 12:02:18 PM
 Analyst: 1220 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-25765-a-9-f msd Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.75	0.0886	0.4507	0.0888	12:03:21 PM	Yes
2	0.0049	4.94	0.0920	0.4690	0.0923	12:04:07 PM	Yes
Mean:	0.0048	4.85	0.0903				
SD:	0.00013	0.132	0.0024				
%RSD:	2.73%	2.73%	2.71				

=====
 Sequence No.: 18 Autosampler Location: 16
 Sample ID: 570-25765-a-10-c Date Collected: 4/16/2020 12:04:32 PM
 Analyst: 1220 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-25765-a-10-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.142	0.0033	0.0190	0.0036	12:05:36 PM	Yes
2	0.0001	0.0668	0.0020	0.0115	0.0022	12:06:22 PM	Yes
Mean:	0.0001	0.104	0.0027				
SD:	0.00005	0.0532	0.0010				
%RSD:	50.93%	50.93%	37.09				

=====
 Sequence No.: 19 Autosampler Location: 17
 Sample ID: 570-25765-a-11-b Date Collected: 4/16/2020 12:06:47 PM
 Analyst: 1220 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-25765-a-11-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0707	0.0020	0.0118	0.0022	12:07:51 PM	Yes
2	0.0001	0.0729	0.0021	0.0122	0.0023	12:08:36 PM	Yes
Mean:	0.0001	0.0718	0.0020				
SD:	0.00000	0.00156	0.0000				
%RSD:	2.17%	2.17%	1.41				

=====
 Sequence No.: 20 Autosampler Location: 18
 Sample ID: 570-25765-a-12-b Date Collected: 4/16/2020 12:09:02 PM
 Analyst: 1220 HG-7 Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time (before sample): 0 Auto Dilution Factor: 1

 Replicate Data: 570-25765-a-12-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0411	0.0015	0.0086	0.0017	12:10:06 PM	Yes
2	0.0000	0.0399	0.0015	0.0081	0.0017	12:10:52 PM	Yes
Mean:	0.0000	0.0405	0.0015				
SD:	0.00000	0.00084	0.0000				

%RSD: 2.07% 2.07% 1.06

```

=====
Sequence No.: 21                               Autosampler Location: 19
Sample ID: 570-25765-a-13-b                 Date Collected: 4/16/2020 12:11:17 PM
Analyst: 1220 HG-7                          Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                   Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-25765-a-13-b             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0001       0.0688   0.0020   0.0108    0.0022   12:12:22 PM  Yes
2      0.0001       0.0747   0.0021   0.0115    0.0023   12:13:07 PM  Yes
Mean:  0.0001       0.0717   0.0020
SD:    0.00000      0.00414  0.0001
%RSD:  5.77%      5.77%   3.74
=====

```

```

=====
Sequence No.: 22                               Autosampler Location: 20
Sample ID: 570-25765-a-14-b                 Date Collected: 4/16/2020 12:13:33 PM
Analyst: 1220 HG-7                          Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                   Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-25765-a-14-b             Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0000       0.0109   0.0009   0.0050    0.0011   12:14:37 PM  Yes
2      0.0000       0.0114   0.0009   0.0050    0.0011   12:15:23 PM  Yes
Mean:  0.0000       0.0112   0.0009
SD:    0.00000      0.00040  0.0000
%RSD:  3.56%      3.56%   0.79
=====

```

```

=====
Sequence No.: 23                               Autosampler Location: 5
Sample ID: ccv 570-63407/10-a              Date Collected: 4/16/2020 12:15:49 PM
Analyst: 1220 HG-7                          Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                   Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccv 570-63407/10-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      0.0020       1.97     0.0372   0.1810    0.0374   12:16:54 PM  Yes
2      0.0021       2.06     0.0387   0.1872    0.0389   12:17:40 PM  Yes
Mean:  0.0020       2.02     0.0380
SD:    0.00006      0.058    0.0011
%RSD:  2.86%      2.86%   2.81
=====

```

QC value within limits for Hg 253.7 Recovery = 100.77%
All analyte(s) passed QC.

```

=====
Sequence No.: 24                               Autosampler Location: 1
Sample ID: ccb 570-63407/11-a              Date Collected: 4/16/2020 12:18:06 PM
Analyst: 1220 HG-7                          Data Type: Original
Initial Sample Wt:                          Initial Sample Vol:
Dilution:                                   Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: ccb 570-63407/11-a           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L      Signal    Area      Height
1      -0.0000      -0.0407  -0.0000   0.0000    0.0002   12:19:10 PM  Yes
2      -0.0000      -0.0435  -0.0001  -0.0003   0.0001   12:19:56 PM  Yes
Mean:  -0.0000      -0.0421  -0.0001
SD:    0.00000      0.00198  0.0000
%RSD:  4.70%      4.70%  62.96
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 21
Sample ID: 570-25851-a-1-b Date Collected: 4/16/2020 12:20:21 PM
Analyst: 1220 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-25851-a-1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0224	0.0011	0.0059	0.0013	12:21:26 PM	Yes
2	0.0000	0.0257	0.0012	0.0069	0.0014	12:22:12 PM	Yes
Mean:	0.0000	0.0240	0.0012				
SD:	0.00000	0.00234	0.0000				
%RSD:	9.74%	9.74%	3.72				

Sequence No.: 26 Autosampler Location: 22
Sample ID: 570-25851-a-2-b Date Collected: 4/16/2020 12:22:38 PM
Analyst: 1220 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-25851-a-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0144	0.0010	0.0058	0.0012	12:23:43 PM	Yes
2	0.0000	0.0157	0.0010	0.0065	0.0012	12:24:28 PM	Yes
Mean:	0.0000	0.0151	0.0010				
SD:	0.00000	0.00095	0.0000				
%RSD:	6.30%	6.30%	1.76				

Sequence No.: 27 Autosampler Location: 23
Sample ID: 570-25772-a-1-f Date Collected: 4/16/2020 12:24:55 PM
Analyst: 1220 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-25772-a-1-f Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0222	0.0011	0.0076	0.0013	12:25:59 PM	Yes
2	0.0000	0.0231	0.0011	0.0076	0.0014	12:26:44 PM	Yes
Mean:	0.0000	0.0227	0.0011				
SD:	0.00000	0.00061	0.0000				
%RSD:	2.70%	2.70%	0.99				

Sequence No.: 28 Autosampler Location: 24
Sample ID: 570-25772-a-2-b Date Collected: 4/16/2020 12:27:11 PM
Analyst: 1220 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 570-25772-a-2-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0006	0.0007	0.0052	0.0009	12:28:16 PM	Yes
2	-0.0000	-0.0022	0.0007	0.0053	0.0009	12:29:01 PM	Yes
Mean:	-0.0000	-0.0014	0.0007				
SD:	0.00000	0.00115	0.0000				
%RSD:	81.97%	81.97%	3.06				

```

=====
Sequence No.: 29                               Autosampler Location: 25
Sample ID: 570-25789-a-1-b                    Date Collected: 4/16/2020 12:29:28 PM
Analyst: 1220 HG-7                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-25789-a-1-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0002       0.242     0.0052   0.0281    0.0054    12:30:33 PM  Yes
2      0.0003       0.263     0.0056   0.0296    0.0058    12:31:19 PM  Yes
Mean:  0.0003       0.253     0.0054
SD:     0.00001     0.0147    0.0003
%RSD:  5.83%       5.83%     5.05
=====

```

```

=====
Sequence No.: 30                               Autosampler Location: 26
Sample ID: 570-25787-a-1-a                    Date Collected: 4/16/2020 12:31:46 PM
Analyst: 1220 HG-7                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-25787-a-1-a                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      -0.0000       -0.0357   0.0001   0.0014    0.0003    12:32:50 PM  Yes
2      -0.0000       -0.0428   -0.0001   0.0003    0.0001    12:33:36 PM  Yes
Mean:  -0.0000       -0.0392   -0.0000
SD:     0.00001     0.00504   0.0001
%RSD:  12.84%       12.84%    >999.9%
=====

```

```

=====
Sequence No.: 31                               Autosampler Location: 27
Sample ID: 570-25853-a-1-b                    Date Collected: 4/16/2020 12:34:02 PM
Analyst: 1220 HG-7                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-25853-a-1-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0002       0.204     0.0045   0.0232    0.0047    12:35:07 PM  Yes
2      0.0002       0.216     0.0047   0.0239    0.0049    12:35:52 PM  Yes
Mean:  0.0002       0.210     0.0046
SD:     0.00001     0.0088    0.0002
%RSD:  4.20%       4.20%     3.54
=====

```

```

=====
Sequence No.: 32                               Autosampler Location: 28
Sample ID: 570-25736-a-1-b                    Date Collected: 4/16/2020 12:36:18 PM
Analyst: 1220 HG-7                            Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 570-25736-a-1-b                Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak      Peak      Time      Peak
#      mg/L        ug/L       Signal    Area      Height
1      0.0005       0.517     0.0103   0.0513    0.0105    12:37:22 PM  Yes
2      0.0005       0.541     0.0107   0.0536    0.0109    12:38:08 PM  Yes
Mean:  0.0005       0.529     0.0105
SD:     0.00002     0.0170    0.0003
%RSD:  3.22%       3.22%     3.00
=====

```

```

=====
Sequence No.: 33                               Autosampler Location: 29
Sample ID: 570-25773-a-2-b                    Date Collected: 4/16/2020 12:38:34 PM
=====

```

Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25773-a-2-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.177	0.0040	0.0197	0.0042	12:39:39 PM	Yes
2	0.0002	0.182	0.0041	0.0206	0.0043	12:40:25 PM	Yes
Mean:	0.0002	0.179	0.0040				
SD:	0.00000	0.0036	0.0001				
%RSD:	2.02%	2.02%	1.66				

Sequence No.: 34
Sample ID: 570-25775-a-2-b
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 30
Date Collected: 4/16/2020 12:40:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25775-a-2-b

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.109	0.0027	0.0143	0.0029	12:41:56 PM	Yes
2	0.0001	0.114	0.0028	0.0145	0.0030	12:42:42 PM	Yes
Mean:	0.0001	0.111	0.0028				
SD:	0.00000	0.0034	0.0001				
%RSD:	3.03%	3.03%	2.25				

Sequence No.: 35
Sample ID: ccv 570-63407/10-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 4/16/2020 12:43:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63407/10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.96	0.0369	0.1838	0.0371	12:44:14 PM	Yes
2	0.0020	2.01	0.0379	0.1884	0.0381	12:45:00 PM	Yes
Mean:	0.0020	1.98	0.0374				
SD:	0.00004	0.040	0.0007				
%RSD:	2.02%	2.02%	1.98				

QC value within limits for Hg 253.7 Recovery = 99.22%
All analyte(s) passed QC.

Sequence No.: 36
Sample ID: ccb 570-63407/11-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 4/16/2020 12:45:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63407/11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0358	0.0001	0.0019	0.0003	12:46:31 PM	Yes
2	-0.0000	-0.0406	-0.0000	0.0018	0.0002	12:47:17 PM	Yes
Mean:	-0.0000	-0.0382	0.0000				
SD:	0.00000	0.00339	0.0001				
%RSD:	8.88%	8.88%	432.58				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 37

Autosampler Location: 31

Sample ID: 570-25785-a-1-b
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 4/16/2020 12:47:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25785-a-1-b

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 38

Autosampler Location: 32

Sample ID: 570-25785-a-2-b
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 4/16/2020 12:49:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25785-a-2-b

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 39

Autosampler Location: 5

Sample ID: ccv 570-63407/10-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 4/16/2020 12:52:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63407/10-a

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

QC value within limits for Hg 253.7 Recovery = 98.28%
All analyte(s) passed QC.

Sequence No.: 40

Autosampler Location: 1

Sample ID: ccb 570-63407/11-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 4/16/2020 12:54:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63407/11-a

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: B
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 42
Date Collected: 4/16/2020 1:22:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: B
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0397	-0.0000	0.0021	0.0002	1:23:17 PM	Yes
2	-0.0000	-0.0423	-0.0001	0.0017	0.0001	1:24:02 PM	Yes
Mean:	-0.0000	-0.0410	-0.0000				
SD:	0.00000	0.00185	0.0000				
%RSD:	4.52%	4.52%	90.71				

=====
Sequence No.: 2
Sample ID: B
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 43
Date Collected: 4/16/2020 1:24:29 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: B
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0357	0.0001	0.0031	0.0003	1:25:34 PM	Yes
2	-0.0000	-0.0398	-0.0000	0.0023	0.0002	1:26:19 PM	Yes
Mean:	-0.0000	-0.0378	0.0000				
SD:	0.00000	0.00293	0.0001				
%RSD:	7.76%	7.76%	249.75				

=====
Sequence No.: 3
Sample ID: 570-18283-a-10-c
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 44
Date Collected: 4/16/2020 1:26:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-18283-a-10-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0011	1.07	0.0205	0.1059	0.0207	1:27:50 PM	Yes
2	0.0009	0.914	0.0176	0.0910	0.0178	1:28:35 PM	Yes
Mean:	0.0010	0.993	0.0191				
SD:	0.00011	0.1121	0.0021				
%RSD:	11.29%	11.29%	10.86				

=====
Sequence No.: 4
Sample ID: 570-25699-a-1-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 45
Date Collected: 4/16/2020 1:29:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25699-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.516	0.0103	0.0527	0.0105	1:30:06 PM	Yes
2	0.0005	0.500	0.0100	0.0519	0.0102	1:30:52 PM	Yes
Mean:	0.0005	0.508	0.0101				
SD:	0.00001	0.0113	0.0002				
%RSD:	2.22%	2.22%	2.06				

Sequence No.: 5

Autosampler Location: 5

Sample ID: ccv 570-63407/10-a

Date Collected: 4/16/2020 1:31:18 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63407/10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.93	0.0364	0.1825	0.0366	1:32:23 PM	Yes
2	0.0020	2.01	0.0378	0.1910	0.0380	1:33:08 PM	Yes
Mean:	0.0020	1.97	0.0371				
SD:	0.00005	0.053	0.0010				
%RSD:	2.70%	2.70%	2.65				

QC value within limits for Hg 253.7 Recovery = 98.49%
 All analyte(s) passed QC.

Sequence No.: 6

Autosampler Location: 1

Sample ID: ccb 570-63407/11-a

Date Collected: 4/16/2020 1:33:35 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63407/11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0219	0.0003	0.0033	0.0005	1:34:39 PM	Yes
2	-0.0000	-0.0322	0.0001	0.0019	0.0003	1:35:24 PM	Yes
Mean:	-0.0000	-0.0270	0.0002				
SD:	0.00001	0.00724	0.0001				
%RSD:	26.78%	26.78%	60.88				

QC value within limits for Hg 253.7 Recovery = Not calculated
 All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: B
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 42
Date Collected: 4/16/2020 1:47:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: B
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0248	0.0003	0.0048	0.0005	1:48:08 PM	Yes
2	-0.0000	-0.0272	0.0002	0.0040	0.0004	1:48:55 PM	Yes
Mean:	-0.0000	-0.0260	0.0002				
SD:	0.00000	0.00172	0.0000				
%RSD:	6.62%	6.62%	13.30				

=====
Sequence No.: 2
Sample ID: B
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 43
Date Collected: 4/16/2020 1:49:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: B
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0275	0.0002	0.0029	0.0004	1:50:26 PM	Yes
2	-0.0000	-0.0210	0.0003	0.0032	0.0005	1:51:12 PM	Yes
Mean:	-0.0000	-0.0243	0.0003				
SD:	0.00000	0.00463	0.0001				
%RSD:	19.07%	19.07%	31.55				

=====
Sequence No.: 3
Sample ID: 570-18283-a-10-c
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 44
Date Collected: 4/16/2020 1:51:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-18283-a-10-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0016	1.61	0.0305	0.1566	0.0307	1:52:43 PM	Yes
2	0.0015	1.48	0.0281	0.1440	0.0283	1:53:29 PM	Yes
Mean:	0.0015	1.55	0.0293				
SD:	0.00009	0.092	0.0017				
%RSD:	5.97%	5.97%	5.83				

=====
Sequence No.: 4
Sample ID: 570-25699-a-1-a
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 45
Date Collected: 4/16/2020 1:53:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25699-a-1-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0006	0.635	0.0125	0.0659	0.0127	1:54:59 PM	Yes
2	0.0006	0.601	0.0118	0.0616	0.0120	1:55:45 PM	Yes
Mean:	0.0006	0.618	0.0121				
SD:	0.00002	0.0239	0.0004				
%RSD:	3.86%	3.86%	3.64				

Sequence No.: 5

Autosampler Location: 5

Sample ID: ccv 570-63407/10-a

Date Collected: 4/16/2020 1:56:11 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63407/10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0019	1.95	0.0367	0.1874	0.0369	1:57:16 PM	Yes
2	0.0020	2.03	0.0383	0.1951	0.0385	1:58:01 PM	Yes
Mean:	0.0020	1.99	0.0375				
SD:	0.00006	0.059	0.0011				
%RSD:	2.99%	2.99%	2.93				

QC value within limits for Hg 253.7 Recovery = 99.53%
All analyte(s) passed QC.

Sequence No.: 6

Autosampler Location: 1

Sample ID: ccb 570-63407/11-a

Date Collected: 4/16/2020 1:58:28 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63407/11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0164	0.0010	0.0065	0.0012	1:59:32 PM	Yes
2	-0.0000	-0.0135	0.0005	0.0034	0.0007	2:00:17 PM	Yes
Mean:	0.0000	0.0015	0.0007				
SD:	0.00002	0.02115	0.0004				
%RSD:	>999.9%	>999.9%	52.30				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: lb 570-63025/1-b
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 46
Date Collected: 4/16/2020 2:11:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lb 570-63025/1-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0284	0.0002	0.0039	0.0004	2:12:16 PM	Yes
2	-0.0000	-0.0341	0.0001	0.0031	0.0003	2:13:02 PM	Yes
Mean:	-0.0000	-0.0313	0.0001				
SD:	0.00000	0.00407	0.0001				
%RSD:	13.02%	13.02%	53.03				

=====
Sequence No.: 2
Sample ID: lcs 570-63025/2-c
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 47
Date Collected: 4/16/2020 2:13:29 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-63025/2-c Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0048	4.77	0.0889	0.4473	0.0891	2:14:34 PM	Yes
2	0.0050	5.01	0.0933	0.4713	0.0935	2:15:19 PM	Yes
Mean:	0.0049	4.89	0.0911				
SD:	0.00017	0.167	0.0031				
%RSD:	3.42%	3.42%	3.40				

=====
Sequence No.: 3
Sample ID: lcsd 570-63025/3-b
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 48
Date Collected: 4/16/2020 2:15:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-63025/3-b Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.88	0.0910	0.4492	0.0912	2:16:50 PM	Yes
2	0.0049	4.92	0.0916	0.4611	0.0918	2:17:36 PM	Yes
Mean:	0.0049	4.90	0.0913				
SD:	0.00002	0.024	0.0004				
%RSD:	0.48%	0.48%	0.48				

=====
Sequence No.: 4
Sample ID: 570-25669-a-2-g
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 49
Date Collected: 4/16/2020 2:18:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25669-a-2-g

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0001	0.0747	0.0021	0.0119	0.0023	2:19:08 PM	Yes
2	-0.0000	-0.0204	0.0003	0.0037	0.0006	2:19:53 PM	Yes
Mean:	0.0000	0.0272	0.0012				
SD:	0.00007	0.06728	0.0012				
%RSD:	247.70%	247.70%	101.78				

Sequence No.: 5

Autosampler Location: 50

Sample ID: 570-25669-a-2-h ms

Date Collected: 4/16/2020 2:20:20 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-25669-a-2-h ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0037	3.68	0.0687	0.3433	0.0689	2:21:24 PM	Yes
2	0.0038	3.82	0.0713	0.3569	0.0715	2:22:10 PM	Yes
Mean:	0.0037	3.75	0.0700				
SD:	0.00010	0.100	0.0018				
%RSD:	2.66%	2.66%	2.63				

Sequence No.: 6

Autosampler Location: 51

Sample ID: 570-25669-a-2-i msd

Date Collected: 4/16/2020 2:22:36 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-25669-a-2-i msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0036	3.64	0.0681	0.3389	0.0683	2:23:40 PM	Yes
2	0.0037	3.72	0.0695	0.3490	0.0697	2:24:26 PM	Yes
Mean:	0.0037	3.68	0.0688				
SD:	0.00005	0.054	0.0010				
%RSD:	1.48%	1.48%	1.46				

Sequence No.: 7

Autosampler Location: 5

Sample ID: ccv 570-63407/10-a

Date Collected: 4/16/2020 2:24:52 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63407/10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	2.01	0.0379	0.1907	0.0381	2:25:57 PM	Yes
2	0.0021	2.06	0.0387	0.1944	0.0389	2:26:42 PM	Yes
Mean:	0.0020	2.03	0.0383				
SD:	0.00003	0.033	0.0006				
%RSD:	1.64%	1.64%	1.61				

QC value within limits for Hg 253.7 Recovery = 101.68%

All analyte(s) passed QC.

Sequence No.: 8

Autosampler Location: 1

Sample ID: ccb 570-63407/11-a

Date Collected: 4/16/2020 2:27:09 PM

Analyst: 1220 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63407/11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0153	0.0010	0.0072	0.0012	2:28:13 PM	Yes
2	-0.0000	-0.0146	0.0004	0.0031	0.0007	2:28:58 PM	Yes
Mean:	0.0000	0.0003	0.0007				
SD:	0.00002	0.02114	0.0004				
%RSD:	>999.9%	>999.9%	53.86				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: lb4 570-62875/1-c
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 52
Date Collected: 4/16/2020 2:32:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lb4 570-62875/1-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0289	0.0002	0.0027	0.0004	2:33:24 PM	Yes
2	-0.0000	-0.0279	0.0002	0.0039	0.0004	2:34:09 PM	Yes
Mean:	-0.0000	-0.0284	0.0002				
SD:	0.00000	0.00068	0.0000				
%RSD:	2.41%	2.41%	6.48				

=====
Sequence No.: 2
Sample ID: lcs 570-62875/2-c
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 53
Date Collected: 4/16/2020 2:34:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcs 570-62875/2-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0049	4.87	0.0907	0.4558	0.0909	2:35:42 PM	Yes
2	0.0050	4.96	0.0925	0.4702	0.0927	2:36:27 PM	Yes
Mean:	0.0049	4.92	0.0916				
SD:	0.00007	0.069	0.0013				
%RSD:	1.40%	1.40%	1.39				

=====
Sequence No.: 3
Sample ID: lcsd 570-62875/3-c
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 54
Date Collected: 4/16/2020 2:36:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: lcsd 570-62875/3-c
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0050	5.00	0.0932	0.4683	0.0934	2:38:00 PM	Yes
2	0.0051	5.08	0.0946	0.4769	0.0948	2:38:45 PM	Yes
Mean:	0.0050	5.04	0.0939				
SD:	0.00005	0.055	0.0010				
%RSD:	1.09%	1.09%	1.08				

=====
Sequence No.: 4
Sample ID: 570-25617-a-1-j
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 55
Date Collected: 4/16/2020 2:39:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25617-a-1-j

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0287	0.0013	0.0072	0.0015	2:40:17 PM	Yes
2	-0.0000	-0.0323	0.0001	0.0021	0.0003	2:41:03 PM	Yes
Mean:	-0.0000	-0.0018	0.0007				
SD:	0.00004	0.04316	0.0008				
%RSD:	>999.9%	>999.9%	116.09				

Sequence No.: 5

Autosampler Location: 56

Sample ID: 570-25617-a-1-k ms

Date Collected: 4/16/2020 2:41:30 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-25617-a-1-k ms

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0002	0.213	0.0047	0.0256	0.0049	2:42:36 PM	Yes
2	0.0002	0.199	0.0044	0.0238	0.0046	2:43:21 PM	Yes
Mean:	0.0002	0.206	0.0045				
SD:	0.00001	0.0099	0.0002				
%RSD:	4.78%	4.78%	4.02				

Sequence No.: 6

Autosampler Location: 57

Sample ID: 570-25617-a-1-l msd

Date Collected: 4/16/2020 2:43:48 PM

Analyst: 1174 HG-7

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 570-25617-a-1-l msd

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0005	0.479	0.0096	0.0498	0.0098	2:44:54 PM	Yes

User canceled analysis.

=====
Analysis Begun

Logged In Analyst: us26_usr_instrument
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
200416G1.sifx

Batch ID:
Results Data Set: 200416G1
Results Library: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Results\Results.mdb

=====
Sequence No.: 1
Sample ID: 570-25617-a-1-j
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 55
Date Collected: 4/16/2020 2:46:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25617-a-1-j
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0000	-0.0318	0.0001	0.0024	0.0003	2:47:12 PM	Yes
2	-0.0000	-0.0362	0.0000	0.0023	0.0003	2:47:57 PM	Yes
Mean:	-0.0000	-0.0340	0.0001				
SD:	0.00000	0.00314	0.0001				
%RSD:	9.22%	9.22%	63.77				

=====
Sequence No.: 2
Sample ID: 570-25617-a-1-k ms
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 56
Date Collected: 4/16/2020 2:48:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25617-a-1-k ms
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0017	1.73	0.0327	0.1656	0.0329	2:49:28 PM	Yes
2	0.0018	1.80	0.0341	0.1720	0.0343	2:50:13 PM	Yes
Mean:	0.0018	1.77	0.0334				
SD:	0.00005	0.053	0.0010				
%RSD:	3.01%	3.01%	2.95				

=====
Sequence No.: 3
Sample ID: 570-25617-a-1-l msd
Analyst: 1174 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 57
Date Collected: 4/16/2020 2:50:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 570-25617-a-1-l msd
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0018	1.75	0.0332	0.1683	0.0334	2:51:44 PM	Yes
2	0.0018	1.80	0.0339	0.1720	0.0341	2:52:30 PM	Yes
Mean:	0.0018	1.78	0.0335				
SD:	0.00003	0.030	0.0005				
%RSD:	1.67%	1.67%	1.63				

=====
Sequence No.: 4
Sample ID: ccv 570-63407/10-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 4/16/2020 2:52:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccv 570-63407/10-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0020	1.98	0.0373	0.1867	0.0375	2:54:01 PM	Yes
2	0.0021	2.07	0.0390	0.1953	0.0392	2:54:47 PM	Yes
Mean:	0.0020	2.02	0.0381				
SD:	0.00006	0.064	0.0012				
%RSD:	3.16%	3.16%	3.10				

QC value within limits for Hg 253.7 Recovery = 101.19%
All analyte(s) passed QC.

=====

Sequence No.: 5
Sample ID: ccb 570-63407/11-a
Analyst: 1220 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 4/16/2020 2:55:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ccb 570-63407/11-a

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0000	0.0030	0.0008	0.0061	0.0010	2:56:17 PM	Yes
2	-0.0000	-0.0028	0.0007	0.0050	0.0009	2:57:03 PM	Yes
Mean:	0.0000	0.0001	0.0007				
SD:	0.00000	0.00406	0.0001				
%RSD:	>999.9%	>999.9%	10.40				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience _____ Job Number: 570-25593-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID
A2BMP0006S011 _____

Lab Sample ID
570-25593-1 _____

Comments:

1B-IN
 INORGANIC ANALYSIS DATA SHEET
 GENERAL CHEMISTRY

Client Sample ID: A2BMP0006S011

Lab Sample ID: 570-25593-1

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG ID.: _____

Matrix: Water

Date Sampled: 04/09/2020 07:55

Reporting Basis: WET

Date Received: 04/10/2020 18:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Suspended Solids	29.4	1.54	1.27	mg/L			1	SM 2540D

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 62795 Date: 04/13/2020 12:53							
SM 2540D	MB 570-62795/1	Total Suspended Solids	ND		mg/L	1.00	1

6-IN
 DUPLICATE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 62795 Date: 04/13/2020 12:53								
SM 2540D		570-25523-A-3	Total Suspended Solids	4500	mg/L			
SM 2540D		570-25523-A-3 DU	Total Suspended Solids	4760	mg/L	6	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-25593-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 62795		Date: 04/13/2020 12:53									
						LCS Source: WC_TSS_STD_00017					
SM 2540D	LCS 570-62795/2	Total Suspended Solids	103.0		mg/L	100	103	85-115	0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
 LAB CONTROL SAMPLE DUPLICATE
 GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-25593-1
 SDG No.: _____
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 62795		Date: 04/13/2020 12:53									
						LCSD Source: WC_TSS_STD_00017					
SM 2540D	LCSD 570-62795/3	Total Suspended Solids	103.0		mg/L	100	103	85-115	0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-25593-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2540D MDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Suspended Solids		1	0.82873

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job Number: 570-25593-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2540D XMDL Date: 03/22/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Suspended Solids		1	0.82873

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Calscience Job No.: 570-25593-1
SDG No.: _____
Instrument ID: NOEQUIP Analysis Method: SM 2540D
Start Date: 04/13/2020 12:53 End Date: 04/13/2020 12:53

Lab Sample Id	D/F	T y p e	Time	T S S	Analytes																								
MB 570-62795/1	1	T	12:53	X																									
LCS 570-62795/2	1	T	12:53	X																									
LCSD 570-62795/3	1	T	12:53	X																									
ZZZZZZ			12:53																										
ZZZZZZ			12:53																										
ZZZZZZ			12:53																										
ZZZZZZ			12:53																										
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ZZZZZZ			12:53																										
ZZZZZZ			12:53																										
570-25523-A-3 DU	1	T	12:53	X																									
ZZZZZZ			12:53																										
ZZZZZZ			12:53																										
ZZZZZZ			12:53																										
ZZZZZZ			12:53																										
ZZZZZZ			12:53																										
570-25593-1	1	T	12:53	X																									
ZZZZZZ			12:53																										

Prep Types: _____
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 62795 Batch Start Date: 04/13/20 12:53 Batch Analyst: Pirir, Cynthia

Batch Method: SM 2540D Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	CrucibleID	TareWeight	InitialAmount	Weight1	Weight2	WeightOne%Diff
MB 570-62795/1		SM 2540D		C0636641 0.4175	0.4175 g	1000 mL	0.4177 g	0.4177 g	PASS <0.5mg
LCS 570-62795/2		SM 2540D		C0636642 0.4120	0.4120 g	100 mL	0.4223 g	0.4223 g	PASS <0.5mg
LCSD 570-62795/3		SM 2540D		C0636643 0.4135	0.4135 g	100 mL	0.4237 g	0.4238 g	PASS <0.5mg
570-25523-A-3 DU		SM 2540D	T	D0456962 0.4151	0.4151 g	10 mL	0.4627 g	0.4627 g	PASS <0.5mg
570-25593-D-1	A2BMP0006S011	SM 2540D	T	D0456968 0.4149	0.4149 g	650 mL	0.4340 g	0.4340 g	PASS <0.5mg

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue	Residue2	FinalAmount	ResDishWt	DishWeight	WC_TSS_STD 00017
MB 570-62795/1		SM 2540D		0.0002 g	0.0002 g	1000 mL	0.4177 g	0.4175 g	
LCS 570-62795/2		SM 2540D		0.0103 g	0.0103 g	1000 mL	0.4223 g	0.412 g	100 mL
LCSD 570-62795/3		SM 2540D		0.0102 g	0.0103 g	1000 mL	0.4238 g	0.4135 g	100 mL
570-25523-A-3 DU		SM 2540D	T	0.0476 g	0.0476 g	1000 mL	0.4627 g	0.4151 g	
570-25593-D-1	A2BMP0006S011	SM 2540D	T	0.0191 g	0.0191 g	1000 mL	0.434 g	0.4149 g	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 62795 Batch Start Date: 04/13/20 12:53 Batch Analyst: Pirir, Cynthia

Batch Method: SM 2540D Batch End Date: _____

Batch Notes	
Balance ID	87
Date/Time - In - CW (WT2)	04/14/2020 10:25
Date/Time - Out - CW (WT2)	04/14/2020 11:25
Temperature - Start - CW (WT2) - Correct	104 Celsius
Temperature - End - CW (WT2) - Correct	104 Celsius
Temperature - Start-CW(WT2) -Uncorrected	104 Celsius
Temperature - End-CW(WT2) -Uncorrected	104 Celsius
Temperature - Start - Corrected	104 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	04/13/2020 12:53
Date/Time - Out	04/14/2020 09:25
Filter ID	37634
Nominal Amount Used	1000 mL
Oven ID	IO-08
Perform Calculation (0=No, 1=Yes)	1
Thermometer ID	Y20-38
Temperature - Start - Uncorrected	104 Celsius
Temperature - End - Uncorrected	104 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

BALANCE CALIBRATION CHECK LOG

Eurofins Calscience

Date performed: 4/13/20 Initials: UAPD

ID	Class 2 Weight (g)	Reading (g)	Acceptance Range	Pass? (circle one)	Comment (If not passed, note removal or corrective action)
83	1	1.00	0.98 - 1.02	(Y)	IO Lab
	100	99.99	98.00 - 102.00	(Y)	
62	0.002	0.0018	0.0015 - 0.0025	(Y)	IO Lab
	1	1.00	0.9990 - 1.0010	(Y)	
	100	99.9922	99.9000 - 100.1000	(Y)	
11	1	1.00	0.98 - 1.02	(Y)	IO Lab
	100	100.00	98.00 - 102.00	(Y)	
55	1	0.99	0.98 - 1.02	(Y)	IO Lab
	100	99.99	98.00 - 102.00	(Y)	
	500	500.00	490.00 - 510.00	(Y)	
86	1	1.00	0.98 - 1.02	(Y)	IO Lab
	100	99.99	98.00 - 102.00	(Y)	
	500	499.98	490.00 - 510.00	(Y)	
71	0.002	0.0017	0.0015 - 0.0025	(Y)	BOD Room
	1	0.9991	0.9990 - 1.0010	(Y)	
	100	99.9923	99.9000 - 100.1000	(Y)	
63	0.1	*0.10 NOT IN	0.08 - 0.12	(Y)	BOD Room
	100	*99.99 USE	98.00 - 102.00	(Y)	
73	0.1	0.10	0.08 - 0.12	(Y)	Oil & Grease Room
	1	1.00	0.98 - 1.02	(Y)	
	100	99.99	98.00 - 102.00	(Y)	
87	0.002	0.0018	0.0015 - 0.0025	(Y)	Solids Room
	1	99.9992	0.9990 - 1.0010	(Y)	
	100	99.9924	99.9000 - 100.1000	(Y)	
				(Y)	
				(Y)	
				(Y)	
				(Y)	
				(Y)	
				(Y)	
				(Y)	
				(Y)	
				(Y)	

Comments: * 4/13/20 UAPD

WT SET ID USED: 2 mg	COMMENT:
WT SET ID USED: 10 mg - 100 g	
WT SET ID USED: 500 g	

BALANCE CALIBRATION CHECK LOG

Eurofins Calscience

Date performed: 4/14/2020 Initials: UAPD

ID	Class 2 Weight (g)	Reading (g)	Acceptance Range	Pass? (circle one)	Comment (If not passed, note removal or corrective action)
83	1	1.00	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
	100	99.98	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
62	0.002	0.0017	0.0015 - 0.0025	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
	1	0.9992	0.9990 - 1.0010	<input checked="" type="radio"/> Y <input type="radio"/> N	
	100	99.9925	99.9000 - 100.1000	<input checked="" type="radio"/> Y <input type="radio"/> N	
11	1	1.00	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
	100	99.99	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
55	1	0.99	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
	100	99.98	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
	500	499.98	490.00 - 510.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
86	1	0.99	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	IO Lab
	100	100.00	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
	500	500.00	490.00 - 510.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
71	0.002	0.0017	0.0015 - 0.0025	<input checked="" type="radio"/> Y <input type="radio"/> N	BOD Room
	1	0.9991	0.9990 - 1.0010	<input checked="" type="radio"/> Y <input type="radio"/> N	
	100	99.9921	99.9000 - 100.1000	<input checked="" type="radio"/> Y <input type="radio"/> N	
63	0.1	NOT IN USE	0.08 - 0.12	<input checked="" type="radio"/> Y <input type="radio"/> N	BOD Room
	100	USE	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
73	0.1	0.10	0.08 - 0.12	<input checked="" type="radio"/> Y <input type="radio"/> N	Oil & Grease Room
	1	1.00	0.98 - 1.02	<input checked="" type="radio"/> Y <input type="radio"/> N	
	100	99.99	98.00 - 102.00	<input checked="" type="radio"/> Y <input type="radio"/> N	
87	0.002	0.0017	0.0015 - 0.0025	<input checked="" type="radio"/> Y <input type="radio"/> N	Solids Room
	1	0.9993	0.9990 - 1.0010	<input checked="" type="radio"/> Y <input type="radio"/> N	
	100	99.9921	99.9000 - 100.1000	<input checked="" type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	

Comments:

WT SET ID USED: 2 mg	COMMENT:
WT SET ID USED: 10 mg - 100 g	
WT SET ID USED: 500 g	

COVER PAGE
GEOTECHNICAL

Lab Name: Eurofins Calscience _____ Job Number: 570-25593-1 _____

SDG No.: _____

Project: CH661 / 692670.61.SW _____

Client Sample ID
A2BMP0006S011 _____

Lab Sample ID
570-25593-1 _____

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GEOTECHNICAL

Client Sample ID: A2BMP0006S011

Lab Sample ID: 570-25593-1

Lab Name: Eurofins Calscience

Job No.: 570-25593-1

SDG ID.: _____

Matrix: Water

Date Sampled: 04/09/2020 07:55

Reporting Basis: WET

Date Received: 04/10/2020 18:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Clay(less than 0.00391 mm)	ND	0.01	0.01	%			1	D4464
	Coarse Sand (0.5mm to 1mm)	ND	0.01	0.01	%			1	D4464
	Fine Sand (0.125 to 0.25mm)	35.04	0.01	0.01	%			1	D4464
	Gravel (greater than 2 mm)	ND	0.01	0.01	%			1	D4464
	Medium Sand (0.25 to 0.5 mm)	0.49	0.01	0.01	%			1	D4464
	Silt (0.00391 to 0.0625mm)	30.11	0.01	0.01	%			1	D4464
	Total Silt and Clay (0 to 0.0626mm)	30.11	0.01	0.01	%			1	D4464
	Very Coarse Sand (1 to 2mm)	ND	0.01	0.01	%			1	D4464
	Very Fine Sand (0.0625 to 0.125 mm)	34.36	0.01	0.01	%			1	D4464

6-IN
DUPLICATE
GEOTECHNICAL

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 63641 Date: 04/16/2020 16:38								
D4464		440-264190-C-3	Clay(less than 0.00391 mm)	51.99	%			
D4464		440-264190-C-3 DU	Clay(less than 0.00391 mm)	58.03	%	11	20	
D4464		440-264190-C-3	Coarse Sand (0.5mm to 1mm)	ND	%			
D4464		440-264190-C-3 DU	Coarse Sand (0.5mm to 1mm)	ND	%	NC	20	
D4464		440-264190-C-3	Fine Sand (0.125 to 0.25mm)	ND	%			
D4464		440-264190-C-3 DU	Fine Sand (0.125 to 0.25mm)	ND	%	NC	20	
D4464		440-264190-C-3	Gravel (greater than 2 mm)	ND	%			
D4464		440-264190-C-3 DU	Gravel (greater than 2 mm)	ND	%	NC	20	
D4464		440-264190-C-3	Medium Sand (0.25 to 0.5 mm)	ND	%			
D4464		440-264190-C-3 DU	Medium Sand (0.25 to 0.5 mm)	ND	%	NC	20	
D4464		440-264190-C-3	Silt (0.00391 to 0.0625mm)	48.01	%			
D4464		440-264190-C-3 DU	Silt (0.00391 to 0.0625mm)	41.97	%	13	20	
D4464		440-264190-C-3	Total Silt and Clay (0 to 0.0626mm)	100.00	%			
D4464		440-264190-C-3 DU	Total Silt and Clay (0 to 0.0626mm)	100.00	%	0	20	
D4464		440-264190-C-3	Very Coarse Sand (1 to 2mm)	ND	%			
D4464		440-264190-C-3 DU	Very Coarse Sand (1 to 2mm)	ND	%	NC	20	
D4464		440-264190-C-3	Very Fine Sand (0.0625 to 0.125 mm)	ND	%			
D4464		440-264190-C-3 DU	Very Fine Sand (0.0625 to 0.125 mm)	ND	%	NC	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

GEOTECHNICAL BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 570-25593-1

SDG No.: _____

Batch Number: 63641 Batch Start Date: 04/16/20 15:31 Batch Analyst: Stratford, Jordan

Batch Method: D4464 Batch End Date: 04/16/20 16:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	MI_Fine Sand 00002				
CCV 570-63641/1		D4464		# g				
LCS 570-63641/6		D4464		# g				
LCSD 570-63641/8		D4464		# g				

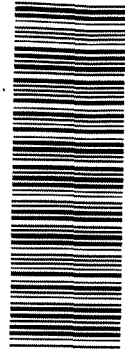
Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

Project Name	SSFL	Location	Santa Susana Field Lab
Project	CH661 PO 100067108373	Task Order	661
Project Number	692670.61.SW	Sample Date/Time	09-Apr-20 7:55
Project Manager	Randy Dean	Type	N
Sample Manager	Jamie Beckett	Matrix	Water
Turnaround Time	10 Days	Preservative	4C
PO Number	100067108373	# Containers	2
Sample ID	A2BMP0006S011	Field Filtered	<input type="checkbox"/>
Dioxins			<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg			<input type="checkbox"/>
Include Cd, Cu, Pb, Hg			<input checked="" type="checkbox"/>
Particle Size Distribution TSS			<input type="checkbox"/>
		Total Containers:	6



570-25593 Chain of Custody

MS = Matrix Spike SD = Matrix Spike Duplicate

Sampled by	<i>Bryan Person</i>	Signatures	<i>Bryan Person</i>	Date/Time	4/9/20 7:55	Shipping Details	Ship Method: FedEx
Relinquished by	<i>Bryan Person</i>		<i>Bryan Person</i>	4/9/20 12:00		Airbill No:	
Received by	<i>Deek Miles</i>		<i>Deek Miles</i>	4/9/20 12:00		Lab Name:	Eurofins Calscience Lab
Relinquished by	<i>[Signature]</i>		<i>[Signature]</i>	4/10/20 13:09		Lab Phone:	(949) 870-8766
Received by	<i>Santos</i>		<i>Santos</i>	4/10/20 13:09		On Ice:	yes / no Cooler Temp <i>24/24 SU</i>

Relinquished by: Santos
Received by: *Chanel Si* 4/10/20 18:00

Special Instructions:

ATTN: Sample Custody and

Report Copy to: Mark Fesler (530) 229-3273



Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler:	Lab P/N:	Carrier Tracking No(s):	COC No:
Cape Fear Analytical, LLC		Patel, Virendra	570-28643.1	State of Origin:	570-28643.1
3306 Kitty Hawk Road,		E-Mail:		Page:	Page 1 of 1
City: Wilmington		virendrapatel@eurofins.com		Job #:	570-25593-2
State: NC, 28405		Accreditations Required (See note):			
PO #: 570-25593		Preservation Codes:			
WO #: 570-25593		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
Project #: 570-25593		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
Site: CH661 / 692670.61.SW		Analysis Requested:			
Due Date Requested: 5/8/2020		EPA 1613B-Dioxins/Furans (Report with J - Level IV)			
TAT Requested (days):		Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>			
Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>			
Sample Date		Sample Time		Sample Date	
4/9/20		07:55 Pacific		4/9/20	
Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code	
G=grab		Water		W	
Total Number of Containers		Special Instructions/Note:			
2		Ch2m Hill Lab Spec 7 EDD, Standard TAT			

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client
 Disposal By Lab
 Archive For _____ Months

Special Instructions/QC Requirements:

Relinquished by:	Date:	Received by:	Date/Time:	Company
<i>[Signature]</i>	04/13/2020			Company
Relinquished by:	Date:	Received by:	Date/Time:	Company
				Company
Relinquished by:	Date:	Received by:	Date/Time:	Company
				Company

Custody Seals Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks:

SHIP DATE: 13APR20
ACTWGT: 25.00 LB
CAD: 1533735/NET4220

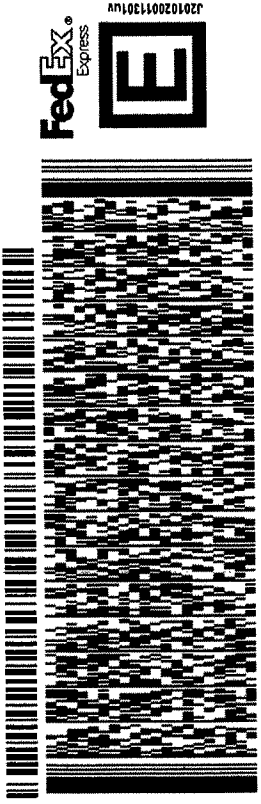
BILL SENDER

ORIGIN ID: APVA (714) 895-5494
NOEL CRUISE
CAL SCIENCE ENVIRONMENTAL LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92841
UNITED STATES US

TO
CYNDE LARKINS
CAPE FEAR ANALYTICAL
3306 KITTY HAWK ROAD
SUITE 120
WILMINGTON NC 28405
REF: VP25693

568J4783AF E4A

(910) 795-0421
INV. PO. DEPT.

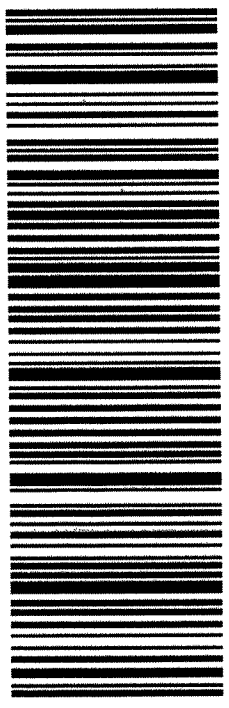


TUE - 14 APR 3:00P
STANDARD OVERNIGHT

TRK# 7702 2746 7009
0201

28405
RDU
NC-US

XHILMA



After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-25593-1

Login Number: 25593

List Source: Eurofins Calscience

List Number: 1

Creator: Cruise, Noel

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

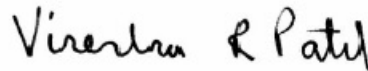
ANALYTICAL REPORT

Job Number: 570-25593-2

Job Description: CH661 / 692670.61.SW

For:

Jacobs Engineering Group, Inc.
4121 Carmichael Rd #400
Montgomery, AL 36106
Attention: Mr. Randy Dean



Approved for release.
Virendra Patel
Project Manager I
5/1/2020 3:03 PM

Virendra Patel, Project Manager I
7440 Lincoln Way, Garden Grove, CA, 92841
(714)895-5494
virendrapatel@eurofinsus.com
05/01/2020

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience LLC

7440 Lincoln Way, Garden Grove, CA 92841

Tel (714) 895-5494 Fax (714) 894-7501 www.EurofinsUS.com

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Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
570-25593-2

Comments

No additional comments.

Receipt

The sample was received on 4/10/2020 6:00 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Method EPA 1613B - Dioxins/Furans - Report with J - Level IV: This method was subcontracted to Cape Fear Analytical, LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-2

Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-29-20
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-29-20
Guam	State	20-003R	10-31-20
Nevada	State	CA00111	07-31-20
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-20

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-2

Method	Method Description	Protocol	Laboratory
1613B	EPA 1613B Dioxin/Furan	EPA	CFAnalytic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

CFAnalytic = Cape Fear Analytical, LLC, 3306 Kitty Hawk Road, Wilmington, NC 28405

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CH661 / 692670.61.SW

Job ID: 570-25593-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-25593-1	A2BMP0006S011	Water	04/09/20 07:55	04/10/20 18:00	

Subcontract Data

April 30, 2020

Mr. Virendra Patel
Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, California 92841-1432

Re: Stormwater RFP Boeing SSFL MECX DXN
Work Order: 16430
SDG: 570-25593

Dear Mr. Patel:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on April 14, 2020. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421 Ext. 2.

Sincerely,



Cynde Larkins
Project Manager

Purchase Order: 570-25593
Chain of Custody: 570-28643.1
Enclosures

SAMPLE RECEIPT CHECKLIST
Cape Fear Analytical

Client: <u>CALS</u>	Work Order: <u>16430</u>
Shipping Company: <u>FedEx</u>	Date/Time Received: <u>14 APR 20 0920</u>

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Samples < 2x background?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Air Witness: _____

#	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: seals broken damaged container leaking container other(describe)
2	Custody seal/s present on cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Seal intact? <u>Yes</u> No
3	Chain of Custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Samples requiring cold preservation within 0-6°C?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>ice bags</u> blue ice dry ice none other (describe) Temperature Blank present: <u>Yes</u> No <u>3.8° + 0.1 = 3.9°C</u>
5	Aqueous samples found to have visible solids?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: <u>Minimal (<1%) visible solids</u>
5	Samples requiring chemical preservation at proper pH?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected and pH observed: <u>pH = 7 on both</u> If preservative added, Lot#:
7	Samples requiring preservation have no residual chlorine?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected: If preservative added, Lot#:
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, tests affected:
9	Sample IDs on COC match IDs on containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
10	Date & time of COC match date & time on containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	List type and number of containers / Sample IDs, containers affected: <u>2-1L NMAG bottles</u>
12	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Comments:

High Resolution Dioxins and Furans Analysis

Case Narrative

**HDOX Case Narrative
Eurofins Calscience (CALs)
SDG 570-25593
Work Order 16430**

Method/Analysis Information

Product: Dioxins/Furans by EPA Method 1613B in Liquids
Analytical Method: EPA Method 1613B
Extraction Method: SW846 3520C
Analytical Batch Number: 43611
Clean Up Batch Number: 43606
Extraction Batch Number: 43605

Sample Analysis

Sample 16430001 was received at 3.9°C. The following samples were analyzed using the analytical protocol as established in EPA Method 1613B:

Sample ID	Client ID
12026457	Method Blank (MB)
12026458	Laboratory Control Sample (LCS)
12026459	Laboratory Control Sample Duplicate (LCSD)
16430001	A2BMP0006S011 (570-25593-1)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 15.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement

The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement

The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery

The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement

The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation

A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation

A NCR was not required for this SDG.

Manual Integrations

Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

System Configuration

This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP750_2	Primary Dioxin Analysis	Dioxin Analysis	DB-5MS	60m x 0.25mm, 0.25um

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report for

CALS001 Eurofins Calscience

Client SDG: 570-25593 CFA Work Order: 16430

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- J Value is estimated
- K Estimated Maximum Possible Concentration
- U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: 

Name: Heather Patterson

Date: 30 APR 2020

Title: Group Leader

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 570-25593	Client: CALS001	Project: CALS00214
Lab Sample ID: 16430001	Date Collected: 04/09/2020 07:55	Matrix: WATER
Client Sample: 1613B Water	Date Received: 04/14/2020 09:20	
Client ID: A2BMP0006S011 (570-25593-1)		Prep Basis: As Received
Batch ID: 43611	Method: EPA Method 1613B	
Run Date: 04/25/2020 14:31	Analyst: MLL	Instrument: HRP750
Data File: A25APR20A-5		Dilution: 1
Prep Batch: 43605	Prep Method: SW846 3520C	
Prep Date: 19-APR-20	Prep Aliquot: 1031.7 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00415	ng/L	0.00415	0.00969
40321-76-4	1,2,3,7,8-PeCDD	U	0.00165	ng/L	0.00165	0.0485
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00314	ng/L	0.00314	0.0485
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00293	ng/L	0.00293	0.0485
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00306	ng/L	0.00306	0.0485
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.00463	ng/L	0.00463	0.0485
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJK	0.0298	ng/L	0.00911	0.0969
51207-31-9	2,3,7,8-TCDF	U	0.00376	ng/L	0.00376	0.00969
57117-41-6	1,2,3,7,8-PeCDF	U	0.00238	ng/L	0.00238	0.0485
57117-31-4	2,3,4,7,8-PeCDF	U	0.00205	ng/L	0.00205	0.0485
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.00158	ng/L	0.00158	0.0485
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.00162	ng/L	0.00162	0.0485
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.00167	ng/L	0.00167	0.0485
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00271	ng/L	0.00271	0.0485
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.00189	ng/L	0.00189	0.0485
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00293	ng/L	0.00293	0.0485
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00710	ng/L	0.00710	0.0969
41903-57-5	Total TeCDD	U	0.00415	ng/L	0.00415	0.00969
36088-22-9	Total PeCDD	U	0.00165	ng/L	0.00165	0.0485
34465-46-8	Total HxCDD	U	0.00293	ng/L	0.00293	0.0485
37871-00-4	Total HpCDD	JK	0.00620	ng/L	0.00463	0.0485
30402-14-3	Total TeCDF	U	0.00376	ng/L	0.00376	0.00969
30402-15-4	Total PeCDF	JK	0.00318	ng/L	0.00177	0.0485
55684-94-1	Total HxCDF	U	0.00158	ng/L	0.00158	0.0485
38998-75-3	Total HpCDF	U	0.00189	ng/L	0.00189	0.0485
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		8.94E-06	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00433	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.31	1.94	ng/L	67.4	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.43	1.94	ng/L	74.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.14	1.94	ng/L	58.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.49	1.94	ng/L	76.7	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.40	1.94	ng/L	72.2	(23%-140%)
13C-OCDD		2.44	3.88	ng/L	62.8	(17%-157%)
13C-2,3,7,8-TCDF		1.27	1.94	ng/L	65.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.52	1.94	ng/L	78.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.45	1.94	ng/L	74.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.17	1.94	ng/L	60.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.35	1.94	ng/L	69.6	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.32	1.94	ng/L	68.0	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.21	1.94	ng/L	62.7	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-25593	Client: CALS001	Project: CALS00214
Lab Sample ID: 16430001	Date Collected: 04/09/2020 07:55	Matrix: WATER
Client Sample: 1613B Water	Date Received: 04/14/2020 09:20	
Client ID: A2BMP0006S011 (570-25593-1)		Prep Basis: As Received
Batch ID: 43611	Method: EPA Method 1613B	
Run Date: 04/25/2020 14:31	Analyst: MLL	Instrument: HRP750
Data File: A25APR20A-5		Dilution: 1
Prep Batch: 43605	Prep Method: SW846 3520C	
Prep Date: 19-APR-20	Prep Aliquot: 1031.7 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery% Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.25	1.94	ng/L	64.5 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.32	1.94	ng/L	68.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.202	0.194	ng/L	104 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 570-25593

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12026458	LCS for batch 43605	13C-2,3,7,8-TCDD		95.0	(20%-175%)
		13C-1,2,3,7,8-PeCDD		102	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		77.1	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		94.6	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		92.0	(22%-166%)
		13C-OCDD		84.7	(13%-199%)
		13C-2,3,7,8-TCDF		91.2	(22%-152%)
		13C-1,2,3,7,8-PeCDF		107	(21%-192%)
		13C-2,3,4,7,8-PeCDF		97.6	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		77.7	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		85.0	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		87.3	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		84.1	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		84.0	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		86.6	(20%-186%)
		37Cl-2,3,7,8-TCDD		102	(31%-191%)
		12026459	LCSD for batch 43605	13C-2,3,7,8-TCDD		85.3	(20%-175%)
13C-1,2,3,7,8-PeCDD				91.7	(21%-227%)
13C-1,2,3,4,7,8-HxCDD				70.2	(21%-193%)
13C-1,2,3,6,7,8-HxCDD				85.5	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD				83.9	(22%-166%)
13C-OCDD				76.7	(13%-199%)
13C-2,3,7,8-TCDF				84.2	(22%-152%)
13C-1,2,3,7,8-PeCDF				97.4	(21%-192%)
13C-2,3,4,7,8-PeCDF				88.6	(13%-328%)
13C-1,2,3,4,7,8-HxCDF				71.4	(19%-202%)
13C-1,2,3,6,7,8-HxCDF				78.2	(21%-159%)
13C-2,3,4,6,7,8-HxCDF				78.1	(22%-176%)
13C-1,2,3,7,8,9-HxCDF				76.3	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF				74.5	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF				80.6	(20%-186%)
37Cl-2,3,7,8-TCDD				101	(31%-191%)
12026457	MB for batch 43605			13C-2,3,7,8-TCDD		76.1	(25%-164%)
		13C-1,2,3,7,8-PeCDD		76.5	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		58.1	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		75.8	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		70.5	(23%-140%)
		13C-OCDD		63.6	(17%-157%)
		13C-2,3,7,8-TCDF		70.7	(24%-169%)
		13C-1,2,3,7,8-PeCDF		85.0	(24%-185%)
		13C-2,3,4,7,8-PeCDF		78.2	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		60.4	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		69.2	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		68.8	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		67.2	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		64.5	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		67.2	(26%-138%)
		37Cl-2,3,7,8-TCDD		101	(35%-197%)
		16430001	A2BMP0006S011 (570-25593-1)	13C-2,3,7,8-TCDD		67.4	(25%-164%)

**Hi-Res Dioxins/Furans
Surrogate Recovery Report**

SDG Number: 570-25593

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
16430001	A2BMP0006S011 (570-25593-1)	13C-1,2,3,7,8-PeCDD		74.0	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		58.8	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		76.7	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		72.2	(23%-140%)
		13C-OCDD		62.8	(17%-157%)
		13C-2,3,7,8-TCDF		65.3	(24%-169%)
		13C-1,2,3,7,8-PeCDF		78.2	(24%-185%)
		13C-2,3,4,7,8-PeCDF		74.8	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		60.3	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		69.6	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		68.0	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		62.7	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		64.5	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		68.3	(26%-138%)
		37Cl-2,3,7,8-TCDD		104	(35%-197%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-25593
Client ID: LCS for batch 43605
Lab Sample ID: 12026458
Instrument: HRP750
Analyst: MLL

Sample Type: Laboratory Control Sample
Matrix: WATER
Analysis Date: 04/25/2020 12:03
Prep Batch ID: 43605
Batch ID: 43611

Dilution: 1

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits
1746-01-6	LCS 2,3,7,8-TCDD	0.200	0.199	99.5	67-158
40321-76-4	LCS 1,2,3,7,8-PeCDD	1.00	1.01	101	70-142
39227-28-6	LCS 1,2,3,4,7,8-HxCDD	1.00	0.987	98.7	70-164
57653-85-7	LCS 1,2,3,6,7,8-HxCDD	1.00	0.986	98.6	74-134
19408-74-3	LCS 1,2,3,7,8,9-HxCDD	1.00	1.03	103	64-162
35822-46-9	LCS 1,2,3,4,6,7,8-HpCDD	1.00	0.912	91.2	70-140
3268-87-9	LCS 1,2,3,4,6,7,8,9-OCDD	2.00	1.88	93.9	78-144
51207-31-9	LCS 2,3,7,8-TCDF	0.200	0.177	88.3	75-158
57117-41-6	LCS 1,2,3,7,8-PeCDF	1.00	0.919	91.9	80-134
57117-31-4	LCS 2,3,4,7,8-PeCDF	1.00	1.05	105	68-160
70648-26-9	LCS 1,2,3,4,7,8-HxCDF	1.00	0.972	97.2	72-134
57117-44-9	LCS 1,2,3,6,7,8-HxCDF	1.00	0.996	99.6	84-130
60851-34-5	LCS 2,3,4,6,7,8-HxCDF	1.00	0.933	93.3	70-156
72918-21-9	LCS 1,2,3,7,8,9-HxCDF	1.00	0.970	97	78-130
67562-39-4	LCS 1,2,3,4,6,7,8-HpCDF	1.00	0.962	96.2	82-122
55673-89-7	LCS 1,2,3,4,7,8,9-HpCDF	1.00	0.927	92.7	78-138
39001-02-0	LCS 1,2,3,4,6,7,8,9-OCDF	2.00	1.83	91.6	63-170

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 570-25593

Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 43605

Matrix: WATER

Lab Sample ID: 12026459

Instrument: HRP750

Analysis Date: 04/25/2020 12:52

Dilution: 1

Analyst: MLL

Prep Batch ID: 43605

Batch ID: 43611

CAS No.	Parmname	Amount Added ng/L	Spike Conc. ng/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD 2,3,7,8-TCDD	0.200	0.195	97.6	67-158	1.94	0-20
40321-76-4	LCSD 1,2,3,7,8-PeCDD	1.00	1.04	104	70-142	2.58	0-20
39227-28-6	LCSD 1,2,3,4,7,8-HxCDD	1.00	0.985	98.5	70-164	0.148	0-20
57653-85-7	LCSD 1,2,3,6,7,8-HxCDD	1.00	0.995	99.5	74-134	0.899	0-20
19408-74-3	LCSD 1,2,3,7,8,9-HxCDD	1.00	1.05	105	64-162	2.20	0-20
35822-46-9	LCSD 1,2,3,4,6,7,8-HpCDD	1.00	0.894	89.4	70-140	2.00	0-20
3268-87-9	LCSD 1,2,3,4,6,7,8,9-OCDD	2.00	1.85	92.5	78-144	1.49	0-20
51207-31-9	LCSD 2,3,7,8-TCDF	0.200	0.180	89.9	75-158	1.78	0-20
57117-41-6	LCSD 1,2,3,7,8-PeCDF	1.00	0.930	93	80-134	1.15	0-20
57117-31-4	LCSD 2,3,4,7,8-PeCDF	1.00	1.02	102	68-160	2.52	0-20
70648-26-9	LCSD 1,2,3,4,7,8-HxCDF	1.00	0.972	97.2	72-134	0.0206	0-20
57117-44-9	LCSD 1,2,3,6,7,8-HxCDF	1.00	0.969	96.9	84-130	2.67	0-20
60851-34-5	LCSD 2,3,4,6,7,8-HxCDF	1.00	0.952	95.2	70-156	2.07	0-20
72918-21-9	LCSD 1,2,3,7,8,9-HxCDF	1.00	0.958	95.8	78-130	1.30	0-20
67562-39-4	LCSD 1,2,3,4,6,7,8-HpCDF	1.00	1.01	101	82-122	5.26	0-20
55673-89-7	LCSD 1,2,3,4,7,8,9-HpCDF	1.00	0.903	90.3	78-138	2.56	0-20
39001-02-0	LCSD 1,2,3,4,6,7,8,9-OCDF	2.00	1.88	93.8	63-170	2.33	0-20

Method Blank Summary

Page 1 of 1

SDG Number: 570-25593
Client ID: MB for batch 43605
Lab Sample ID: 12026457
Column:

Client: CALS001
Instrument ID: HRP750
Prep Date: 19-APR-20

Matrix: WATER
Data File: A25APR20A-4
Analyzed: 04/25/20 13:42

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 43605	12026458	b18apr20a_7-1	04/20/20	2319
02 LCSD for batch 43605	12026459	b18apr20a_7-2	04/21/20	0007
03 LCS for batch 43605	12026458	A25APR20A-2	04/25/20	1203
04 LCSD for batch 43605	12026459	A25APR20A-3	04/25/20	1252
05 A2BMP0006S011 (570-25593-1)	16430001	A25APR20A-5	04/25/20	1431

Sample Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-25593
Lab Sample ID: 16430001
Client Sample: 1613B Water
Client ID: A2BMP0006S011 (570-25593-1)
Batch ID: 43611
Run Date: 04/25/2020 14:31
Data File: A25APR20A-5
Prep Batch: 43605
Prep Date: 19-APR-20

Client: CALS001
Date Collected: 04/09/2020 07:55
Date Received: 04/14/2020 09:20
Method: EPA Method 1613B
Analyst: MLL
Prep Method: SW846 3520C
Prep Aliquot: 1031.7 mL

Project: CALS00214
Matrix: WATER
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00415	ng/L	0.00415	0.00969
40321-76-4	1,2,3,7,8-PeCDD	U	0.00165	ng/L	0.00165	0.0485
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00314	ng/L	0.00314	0.0485
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00293	ng/L	0.00293	0.0485
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00306	ng/L	0.00306	0.0485
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.00463	ng/L	0.00463	0.0485
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJK	0.0298	ng/L	0.00911	0.0969
51207-31-9	2,3,7,8-TCDF	U	0.00376	ng/L	0.00376	0.00969
57117-41-6	1,2,3,7,8-PeCDF	U	0.00238	ng/L	0.00238	0.0485
57117-31-4	2,3,4,7,8-PeCDF	U	0.00205	ng/L	0.00205	0.0485
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.00158	ng/L	0.00158	0.0485
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.00162	ng/L	0.00162	0.0485
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.00167	ng/L	0.00167	0.0485
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00271	ng/L	0.00271	0.0485
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.00189	ng/L	0.00189	0.0485
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00293	ng/L	0.00293	0.0485
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00710	ng/L	0.00710	0.0969
41903-57-5	Total TeCDD	U	0.00415	ng/L	0.00415	0.00969
36088-22-9	Total PeCDD	U	0.00165	ng/L	0.00165	0.0485
34465-46-8	Total HxCDD	U	0.00293	ng/L	0.00293	0.0485
37871-00-4	Total HpCDD	JK	0.00620	ng/L	0.00463	0.0485
30402-14-3	Total TeCDF	U	0.00376	ng/L	0.00376	0.00969
30402-15-4	Total PeCDF	JK	0.00318	ng/L	0.00177	0.0485
55684-94-1	Total HxCDF	U	0.00158	ng/L	0.00158	0.0485
38998-75-3	Total HpCDF	U	0.00189	ng/L	0.00189	0.0485
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		8.94E-06	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00433	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.31	1.94	ng/L	67.4	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.43	1.94	ng/L	74.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.14	1.94	ng/L	58.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.49	1.94	ng/L	76.7	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.40	1.94	ng/L	72.2	(23%-140%)
13C-OCDD		2.44	3.88	ng/L	62.8	(17%-157%)
13C-2,3,7,8-TCDF		1.27	1.94	ng/L	65.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.52	1.94	ng/L	78.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.45	1.94	ng/L	74.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.17	1.94	ng/L	60.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.35	1.94	ng/L	69.6	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.32	1.94	ng/L	68.0	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.21	1.94	ng/L	62.7	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-25593	Client: CALS001	Project: CALS00214
Lab Sample ID: 16430001	Date Collected: 04/09/2020 07:55	Matrix: WATER
Client Sample: 1613B Water	Date Received: 04/14/2020 09:20	
Client ID: A2BMP0006S011 (570-25593-1)		Prep Basis: As Received
Batch ID: 43611	Method: EPA Method 1613B	
Run Date: 04/25/2020 14:31	Analyst: MLL	Instrument: HRP750
Data File: A25APR20A-5		Dilution: 1
Prep Batch: 43605	Prep Method: SW846 3520C	
Prep Date: 19-APR-20	Prep Aliquot: 1031.7 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.25	1.94	ng/L	64.5 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.32	1.94	ng/L	68.3 (26%-138%)
37Cl-2,3,7,8-TCDD			0.202	0.194	ng/L	104 (35%-197%)

- Comments:**
- B** The target analyte was detected in the associated blank.
 - J** Value is estimated
 - K** Estimated Maximum Possible Concentration
 - U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Monday, April 27, 2020 13:14:48 Eastern Daylight Time
 Printed: Monday, April 27, 2020 13:16:07 Eastern Daylight Time

Method: Untitled 23 Apr 2020 09:24:32

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.214		2583			1416			
2	12378-PeCDD							NO		0.0853		1077			312			
3	123478-HxCDD							NO		0.162		913			1289			
4	123678-HxCDD							NO		0.151		913			1289			
5	123789-HxCDD							NO		0.158		913			1289			
6	1234678-HpCDD	1.65e2	1.17e2	2.82e2	40.28	1.000	1.41	YES	0.175	0.239	4.66e3	1198	3.9	4.06e3	794	5.1	MM	bb
7	OCDD	9.92e2	9.32e2	1.92e3	44.55	1.000	1.06	YES	1.538	0.470	1.33e4	1042	12.8	1.09e4	1190	9.2	MM	MM
8	2378-TCDF							NO		0.194		922			2742			
9	12378-PeCDF							NO		0.123		866			2211			
10	23478-PeCDF							NO		0.106		866			2211			
11	123478-HxCDF							NO		0.0817		1082			598			
12	123678-HxCDF							NO		0.0834		1082			598			
13	234678-HxCDF							NO		0.0859		1082			598			
14	123789-HxCDF							NO		0.140		1082			598			
15	1234678-HpCDF							NO		0.0976		617			689			
16	1234789-HpCDF							NO		0.151		617			689			
17	OCDF							NO		0.366		680			1346			
18	13C-2378-TCDD	1.31e5	1.71e5	3.02e5	31.40	1.015	0.77	NO	67.398	0.296	2.30e6	5745	399.9	2.99e6	3245	920.9	bd	bd
19	13C-12378-PeCDD	1.34e5	8.65e4	2.21e5	34.25	1.107	1.55	NO	74.011	0.367	2.90e6	4401	659.3	1.90e6	3002	634.4	bd	bd
20	13C-123478-HxCDD	9.41e4	7.40e4	1.68e5	36.87	0.991	1.27	NO	58.779	0.823	2.03e6	9493	213.7	1.54e6	4569	338.1	bd	bd
21	13C-123678-HxCDD	1.36e5	1.05e5	2.41e5	36.96	0.994	1.30	NO	76.693	0.748	2.18e6	9493	229.5	1.67e6	4569	366.1	dd	dd
22	13C-1234678-HpCDD	7.85e4	7.63e4	1.55e5	40.27	1.083	1.03	NO	72.195	0.693	1.02e6	4109	247.7	9.67e5	4770	202.7	bb	bd
23	13C-OCDD	1.21e5	1.36e5	2.57e5	44.53	1.197	0.89	NO	125.639	0.803	1.15e6	4317	266.6	1.27e6	5511	229.9	bd	bb
24	13C-2378-TCDF	1.42e5	1.82e5	3.24e5	30.73	0.993	0.78	NO	65.296	0.418	2.11e6	9377	225.4	2.62e6	4663	561.8	bb	bd
25	13C-12378-PeCDF	1.93e5	1.21e5	3.14e5	33.44	1.081	1.60	NO	78.222	0.487	4.08e6	6640	614.5	2.64e6	6576	401.1	bd	bd
26	13C-23478-PeCDF	1.95e5	1.21e5	3.16e5	34.05	1.100	1.61	NO	74.777	0.463	4.52e6	6640	681.2	2.91e6	6576	441.8	db	dd
27	13C-123478-HxCDF	7.16e4	1.42e5	2.14e5	36.16	0.972	0.50	NO	60.307	0.932	1.58e6	8726	181.6	3.05e6	11015	277.0	bd	bd
28	13C-123678-HxCDF	9.18e4	1.85e5	2.77e5	36.26	0.975	0.50	NO	69.634	0.830	1.60e6	8726	183.6	3.06e6	11015	277.4	dd	dd
29	13C-234678-HxCDF	8.09e4	1.54e5	2.35e5	36.74	0.988	0.53	NO	68.045	0.957	1.48e6	8726	169.9	2.88e6	11015	261.8	bb	bb
30	13C-123789-HxCDF	6.95e4	1.24e5	1.93e5	37.51	1.008	0.56	NO	62.653	1.07	1.02e6	8726	116.7	2.05e6	11015	186.2	bd	bd

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Monday, April 27, 2020 13:14:48 Eastern Daylight Time
 Printed: Monday, April 27, 2020 13:16:07 Eastern Daylight Time

Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
31	13C-1234678-HpCDF	5.31e4	1.26e5	1.79e5	39.02	1.049	0.42	NO	64.547	0.545	8.62e5	3847	224.2	1.91e6	5199	367.7	bd
32	13C-1234789-HpCDF	4.45e4	1.03e5	1.48e5	40.92	1.100	0.43	NO	68.322	0.700	5.42e5	3847	140.9	1.31e6	5199	252.4	bd
33	13C-1234-TCDD	1.75e5	2.23e5	3.97e5	30.94	0.000	0.78	NO	100.000	0.335	2.95e6	5745	514.0	3.73e6	3245	1148.4	bb
34	13C-123789-HxCDD	1.77e5	1.42e5	3.19e5	37.19	0.000	1.24	NO	100.000	0.737	2.64e6	9493	278.4	2.13e6	4569	465.3	dd
35	37Cl+2378-TCDD	4.39e4		4.39e4	31.41	1.015			10.415	0.0703	8.18e5	2005	407.8				bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Monday, April 27, 2020 13:14:48 Eastern Daylight Time
Printed: Monday, April 27, 2020 13:16:07 Eastern Daylight Time

Method: Untitled 23 Apr 2020 09:24:32
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	1.19e2	5.88e1	1.78e2	26.47	2.02	YES	0.067	0.214	2.78e3	2583	1.1	2.86e3	1416	2.0	bb	bb
2	Total-tetradioxins	1.41e2	1.02e2	2.43e2	26.82	1.38	YES	0.091	0.214	5.45e3	2583	2.1	3.90e3	1416	2.8	bd	bb
3	Total-tetradioxins	6.35e1	6.00e1	1.23e2	27.08	1.06	YES	0.046	0.214	3.19e3	2583	1.2	2.70e3	1416	1.9	db	bb
4	Total-tetradioxins	5.19e1	6.18e1	1.14e2	27.57	0.84	NO	0.043	0.214	2.71e3	2583	1.0	2.04e3	1416	1.4	bb	bd
5	Total-tetradioxins	1.19e2	5.01e1	1.69e2	28.24	2.37	YES	0.063	0.214	3.81e3	2583	1.5	1.10e3	1416	0.8	bb	bb
6	Total-tetradioxins	1.05e2	5.68e1	1.62e2	28.41	1.85	YES	0.061	0.214	2.39e3	2583	0.9	1.58e3	1416	1.1	bb	bb
7	Total-tetradioxins	9.83e1	7.72e1	1.75e2	29.84	1.27	YES	0.066	0.214	3.73e3	2583	1.4	4.27e3	1416	3.0	bb	bb
8	Total-tetradioxins	1.09e2	7.01e1	1.79e2	30.48	1.55	YES	0.067	0.214	6.09e3	2583	2.4	1.43e3	1416	1.0	bb	bb
9	Total-tetradioxins	5.57e1	6.45e1	1.20e2	31.17	0.86	NO	0.045	0.214	4.23e3	2583	1.6	2.15e3	1416	1.5	bb	bb
10	Total-tetradioxins	1.95e2	1.28e2	3.23e2	31.47	1.53	YES	0.121	0.214	4.12e3	2583	1.6	3.21e3	1416	2.3	bb	bb

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HPD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	3.07e2	2.08e2	5.15e2	39.37	1.47	YES	0.320	0.239	7.28e3	1198	6.1	3.34e3	794	4.2	MM	MM
2	1234678-HpCDD	1.65e2	1.17e2	2.82e2	40.28	1.41	YES	0.175	0.239	4.66e3	1198	3.9	4.06e3	794	5.1	MM	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Monday, April 27, 2020 13:14:48 Eastern Daylight Time
Printed: Monday, April 27, 2020 13:16:07 Eastern Daylight Time

Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	5.23e1	8.94e1	1.42e2	26.53	0.58	YES	0.045	0.194	3.76e3	922	4.1	2.73e3	2742	1.0	bd	bb
2	Total-tetrafurans	6.12e1	6.39e1	1.25e2	26.81	0.96	YES	0.039	0.194	1.24e3	922	1.3	2.88e3	2742	1.0	bb	db
3	Total-tetrafurans	5.82e1	1.14e2	1.72e2	27.18	0.51	YES	0.054	0.194	1.55e3	922	1.7	3.30e3	2742	1.2	bb	db

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	3.88e2	1.09e2	4.97e2	31.26	3.55	YES	0.164	0.0913	1.01e4	630	16.0	4.68e3	1826	2.6	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	9.94e1	8.29e1	1.82e2	34.58	1.20	YES	0.060	0.114	4.30e3	866	5.0	3.63e3	2211	1.6	bb	bb

HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

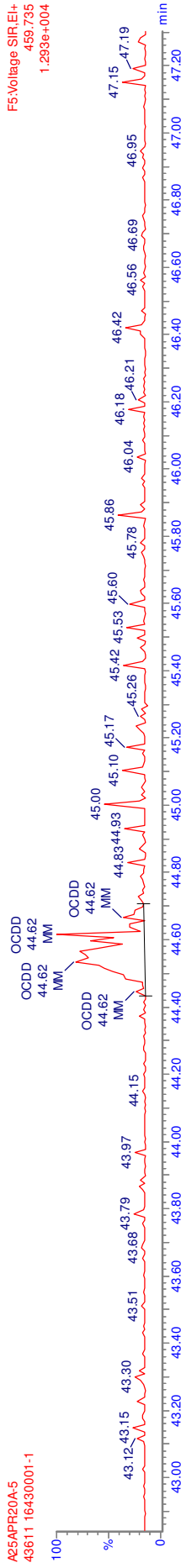
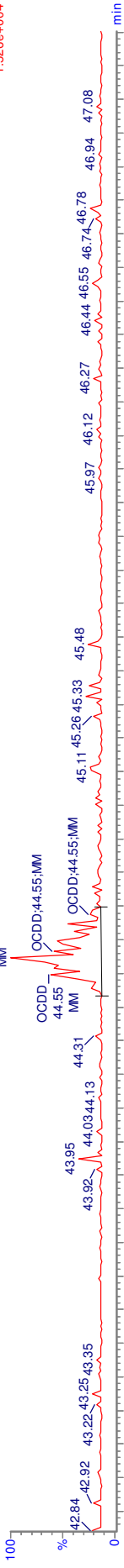
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

MANUAL INTEGRATION
 METHOD DLM
 HRP750_2

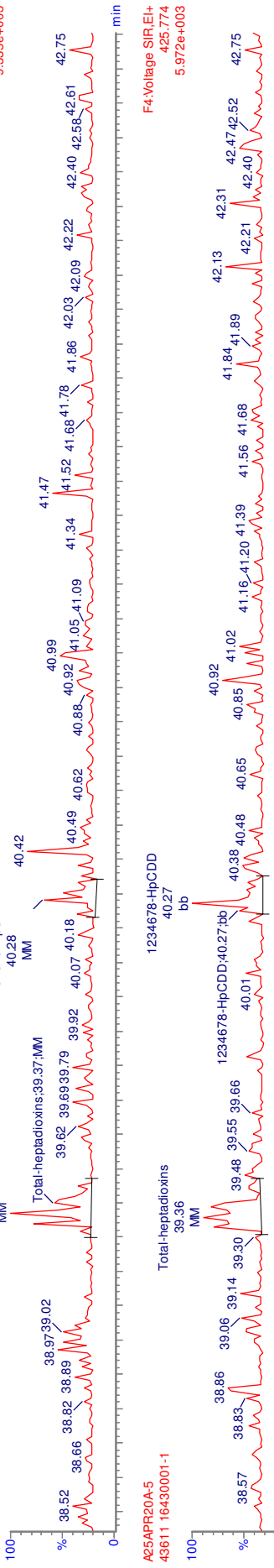
A25APR20A-5
 43611 16430001-1

F5:Voltage SIR,EI+
 457.738
 1.526e+004

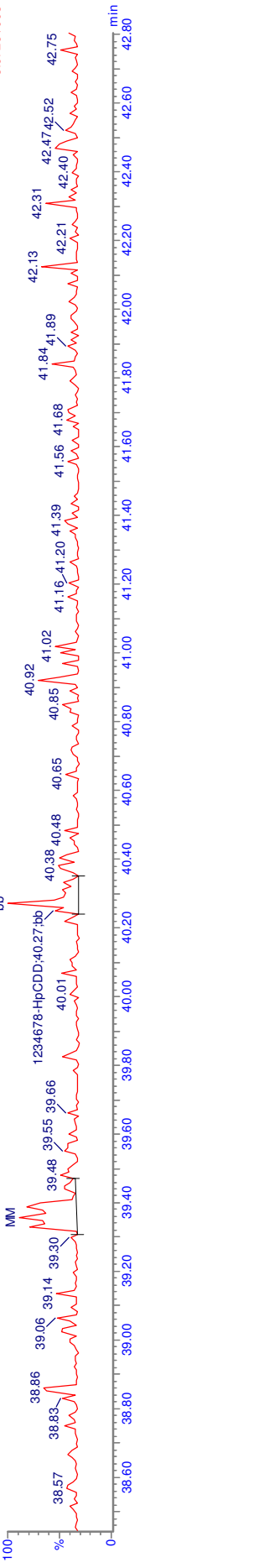


MANUAL INTEGRATION
 METHOD DLM
 HRP750_2

A25APR20A-5
 43611 16430001-1
 F4:Voltage SIR,EI+
 423.777
 9.335e+003



A25APR20A-5
 43611 16430001-1
 F4:Voltage SIR,EI+
 425.774
 5.972e+003



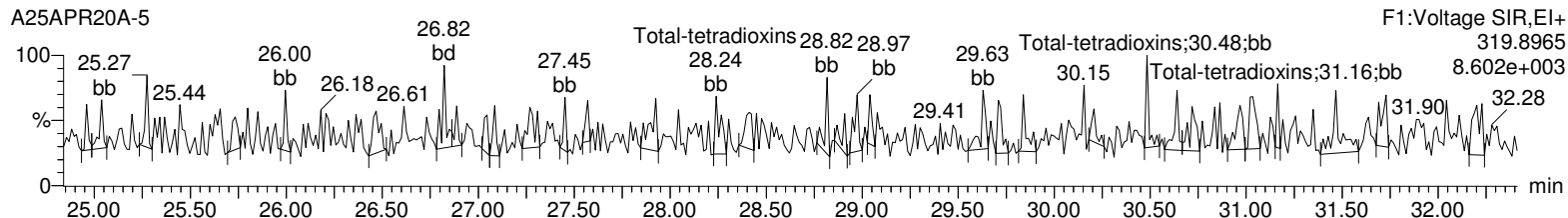
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Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

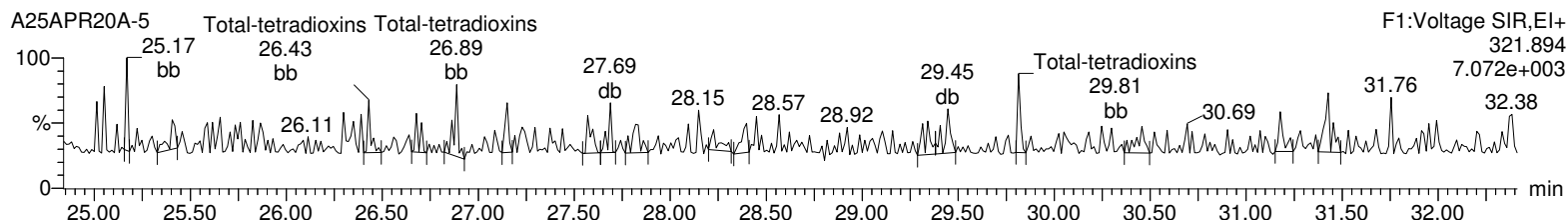
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Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

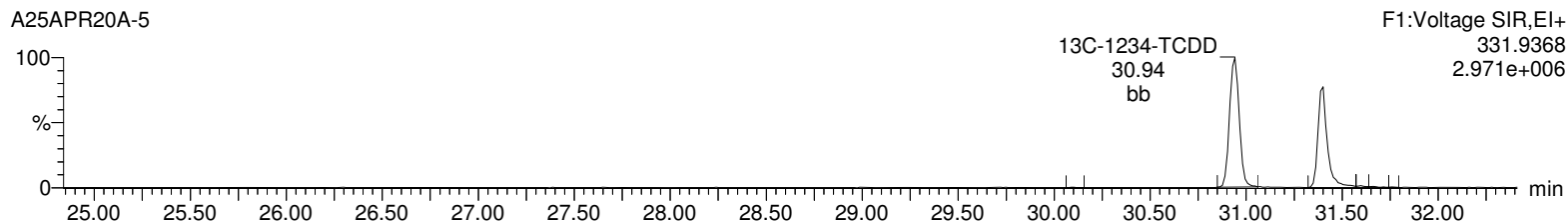
Total-tetradoxins



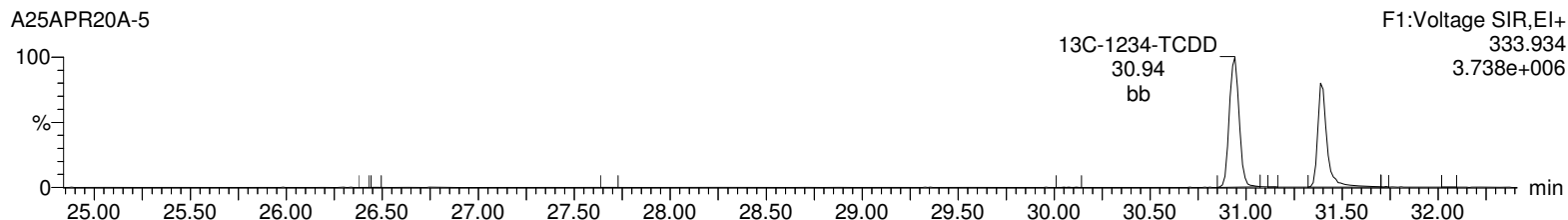
Total-tetradoxins



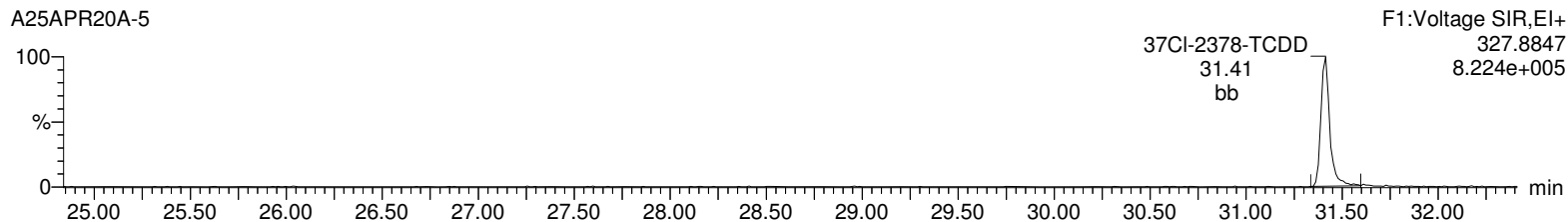
13C-2378-TCDD



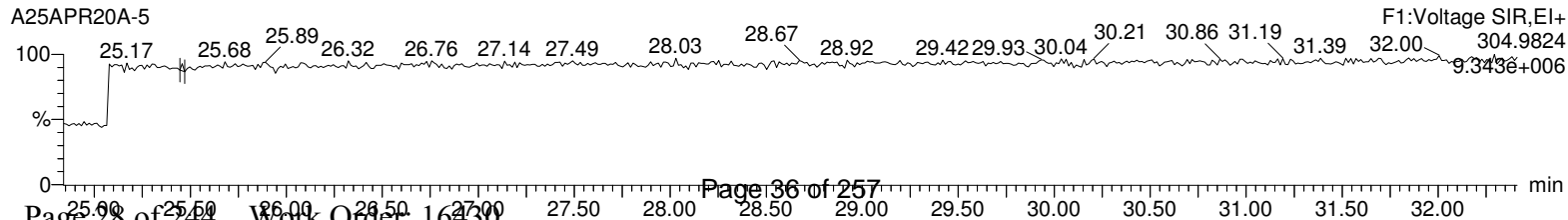
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

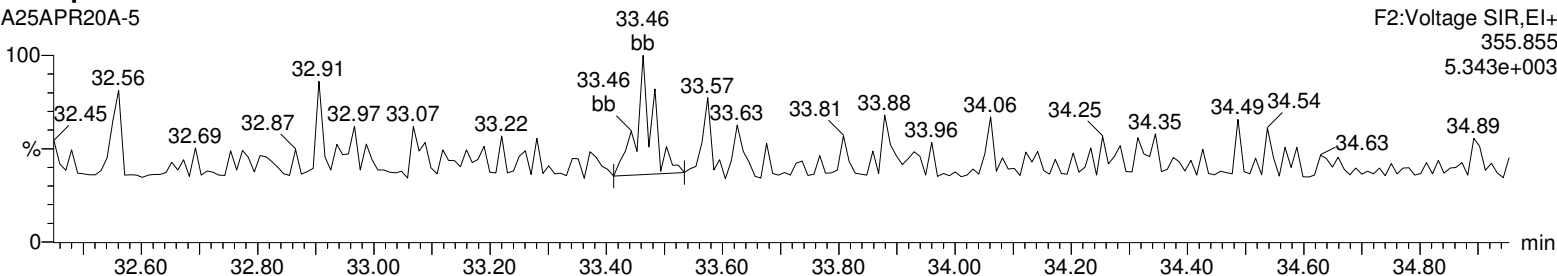
Total-pentadioxins

A25APR20A-5

F2:Voltage SIR,EI+

355.855

5.343e+003



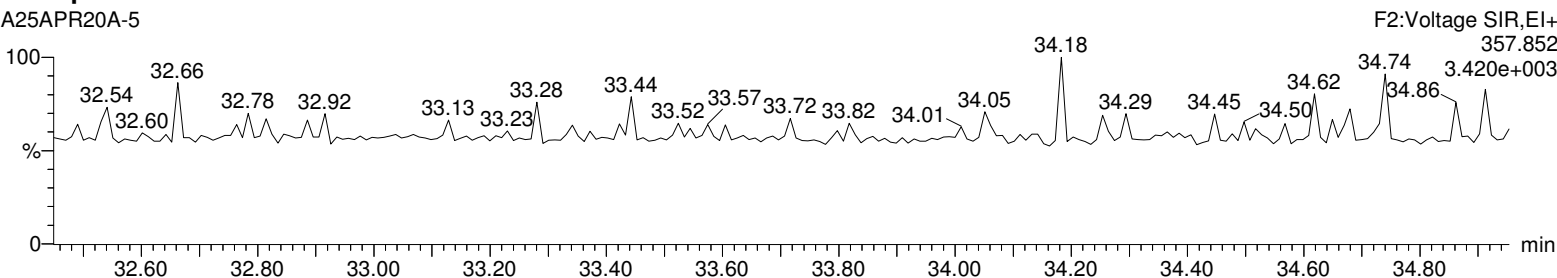
Total-pentadioxins

A25APR20A-5

F2:Voltage SIR,EI+

357.852

3.420e+003



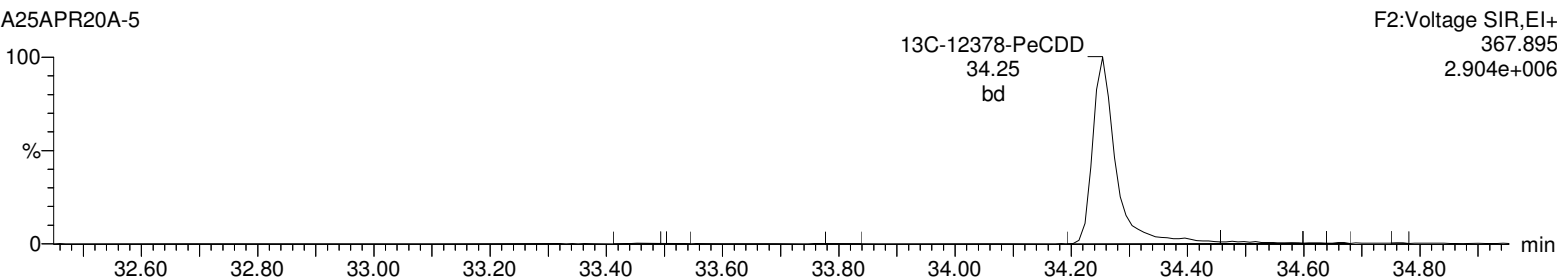
13C-12378-PeCDD

A25APR20A-5

F2:Voltage SIR,EI+

367.895

2.904e+006



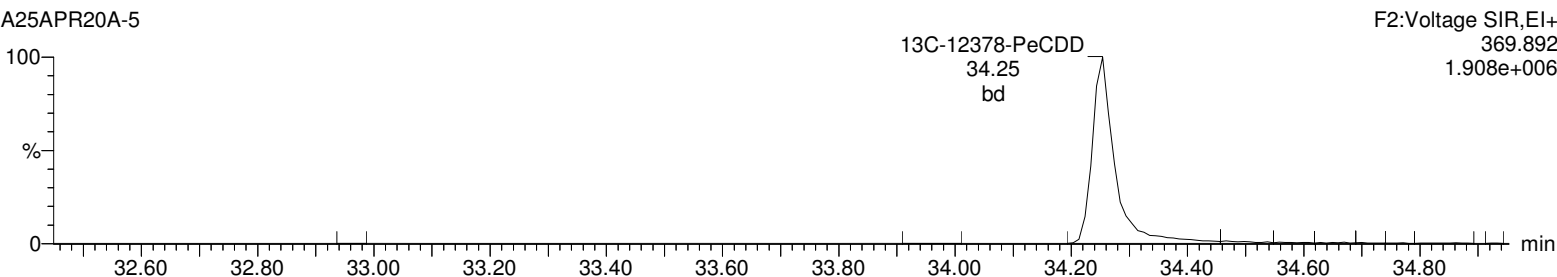
13C-12378-PeCDD

A25APR20A-5

F2:Voltage SIR,EI+

369.892

1.908e+006



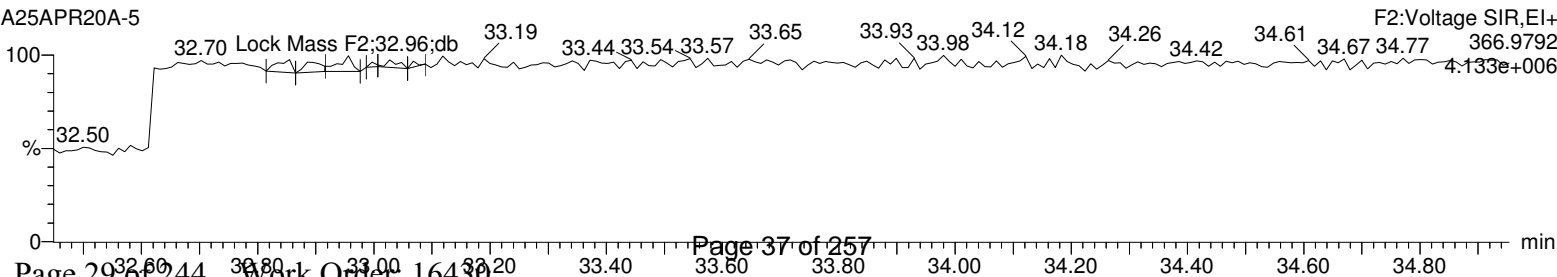
Lock Mass F2

A25APR20A-5

F2:Voltage SIR,EI+

366.9792

4.133e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

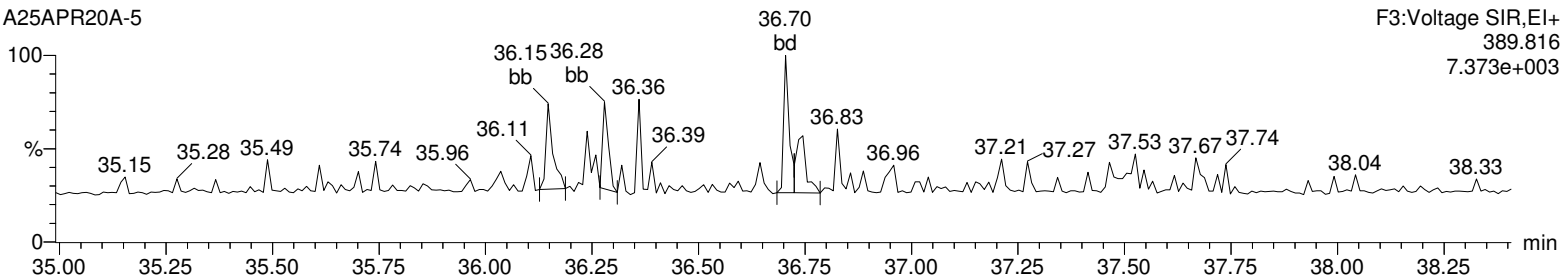
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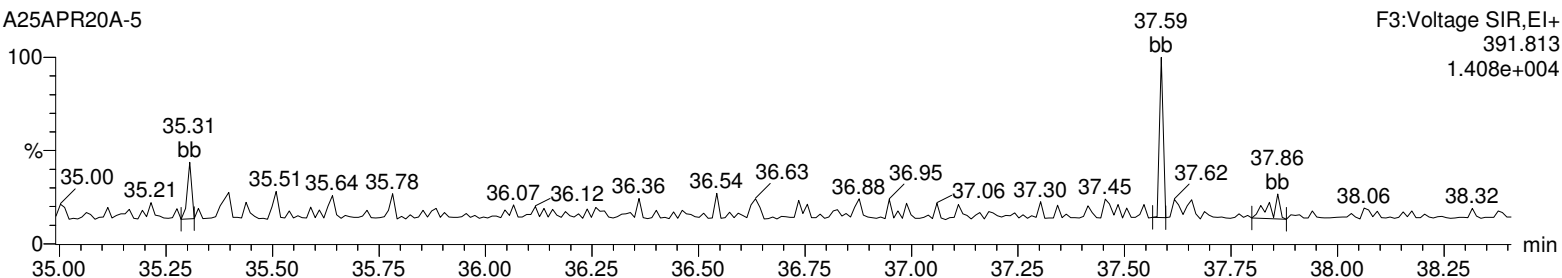
Total-hexadioxins

A25APR20A-5



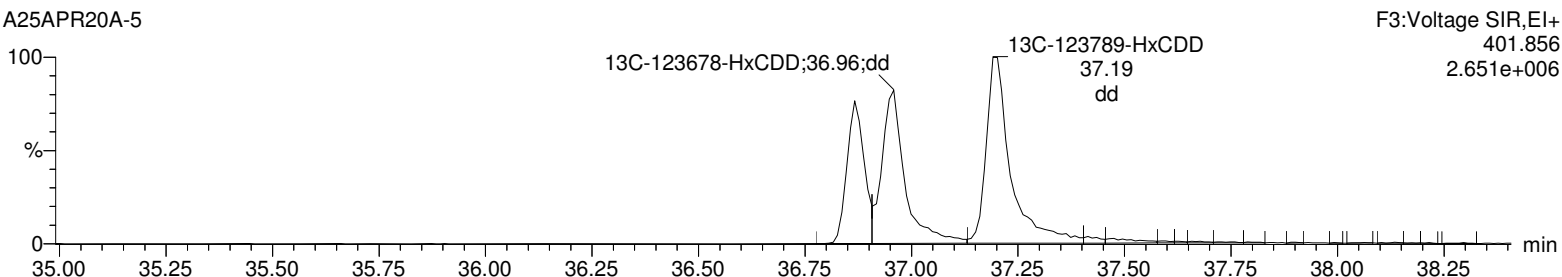
Total-hexadioxins

A25APR20A-5



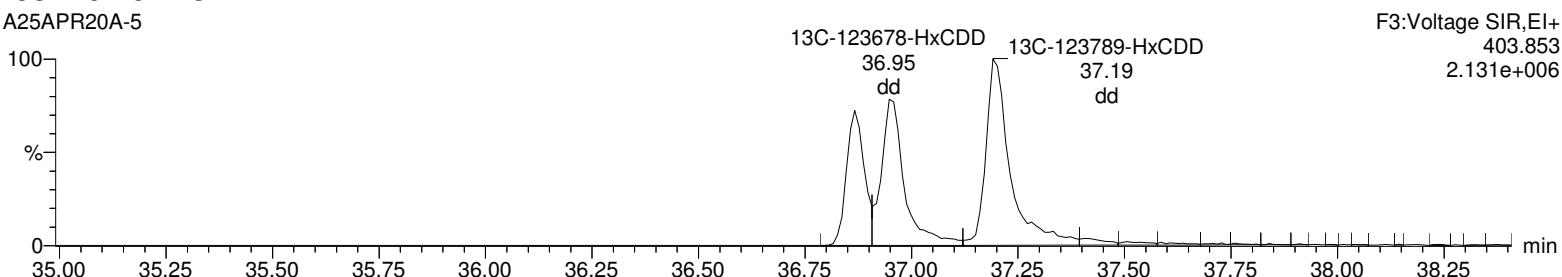
13C-123478-HxCDD

A25APR20A-5



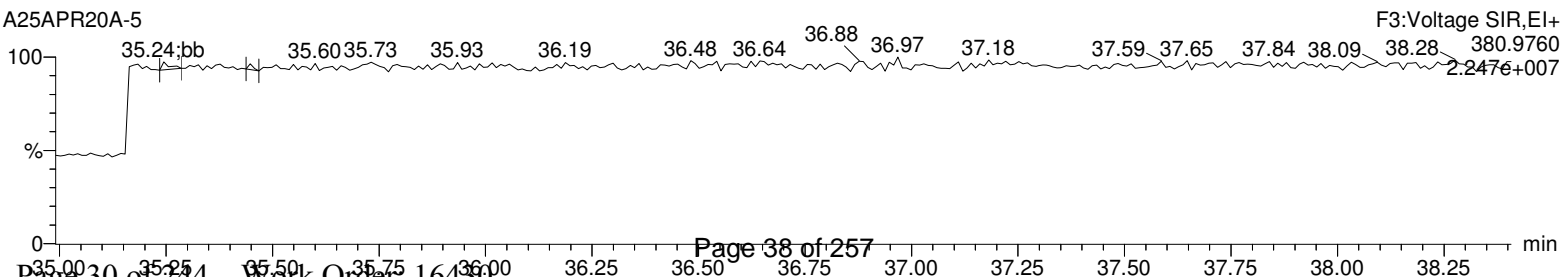
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A25APR20A-5



Lock Mass F3

A25APR20A-5



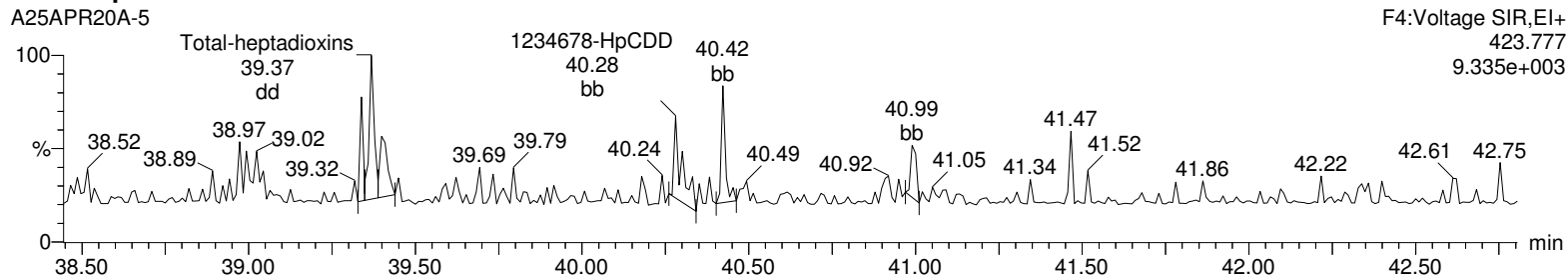
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Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

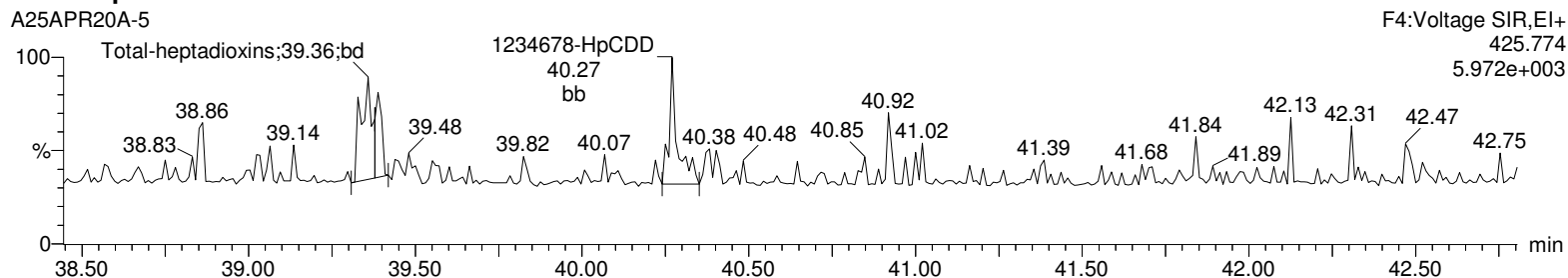
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Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

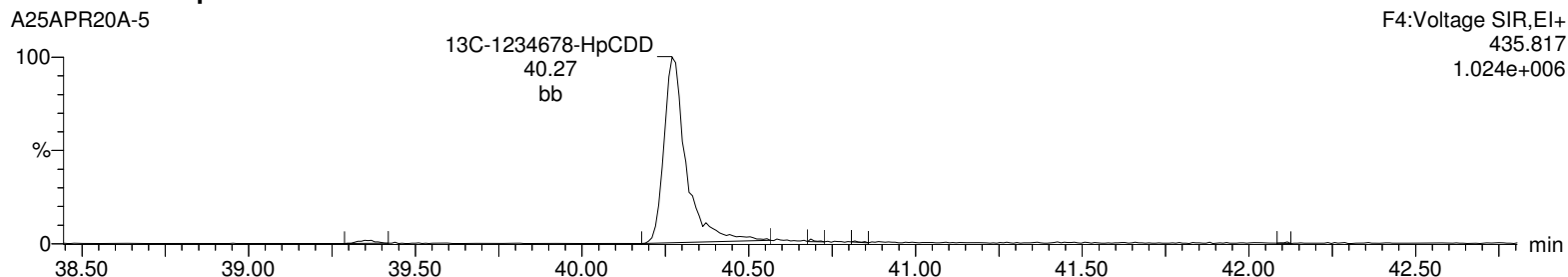
Total-heptadioxins



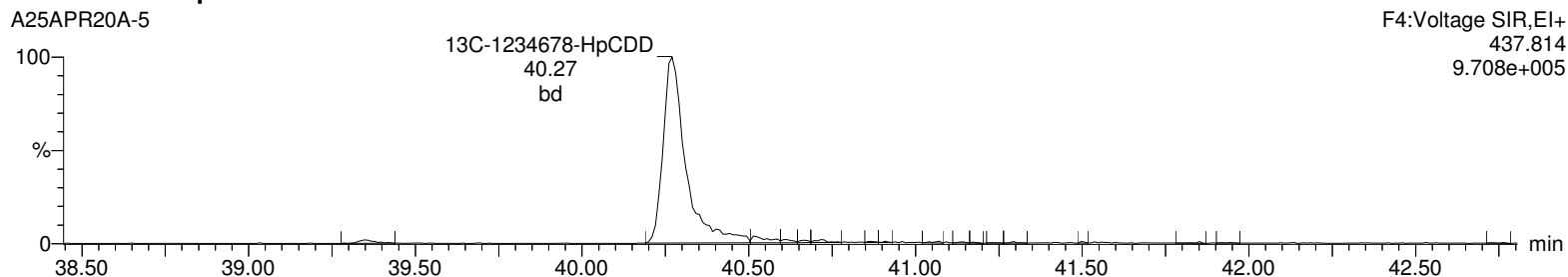
Total-heptadioxins



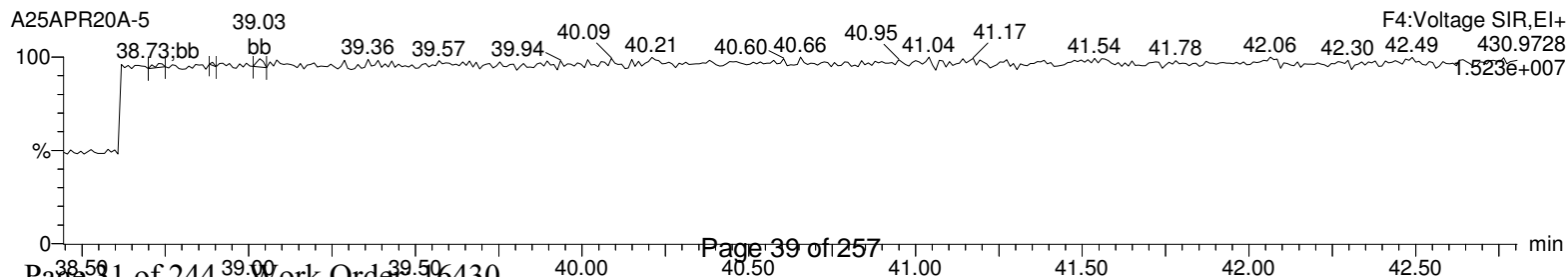
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

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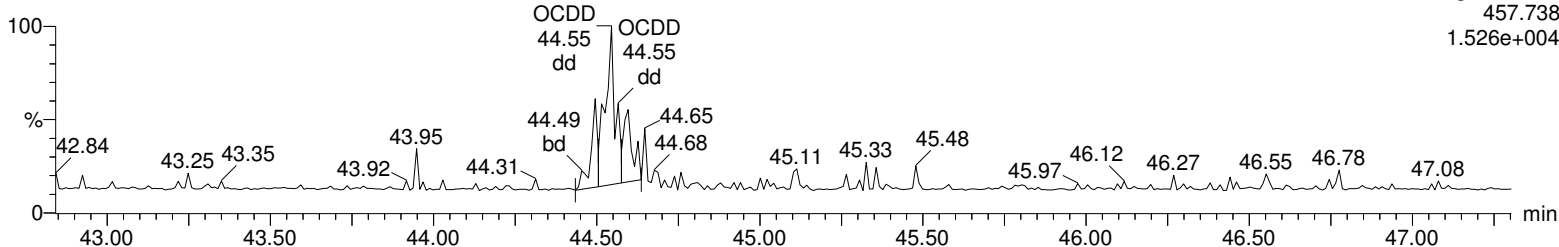
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OCDD

A25APR20A-5

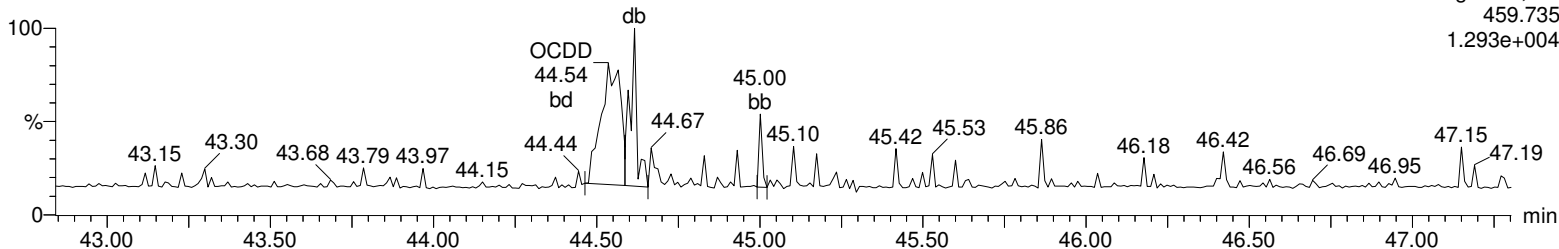
F5:Voltage SIR,EI+
457.738
1.526e+004



OCDD

A25APR20A-5

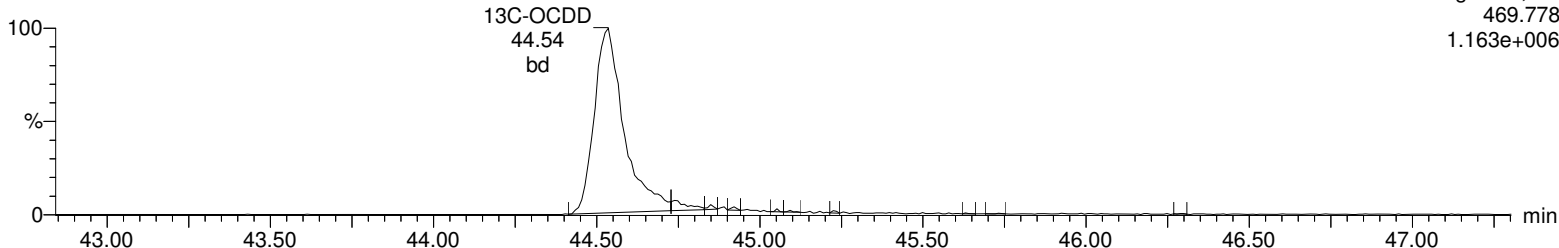
F5:Voltage SIR,EI+
459.735
1.293e+004



13C-OCDD

A25APR20A-5

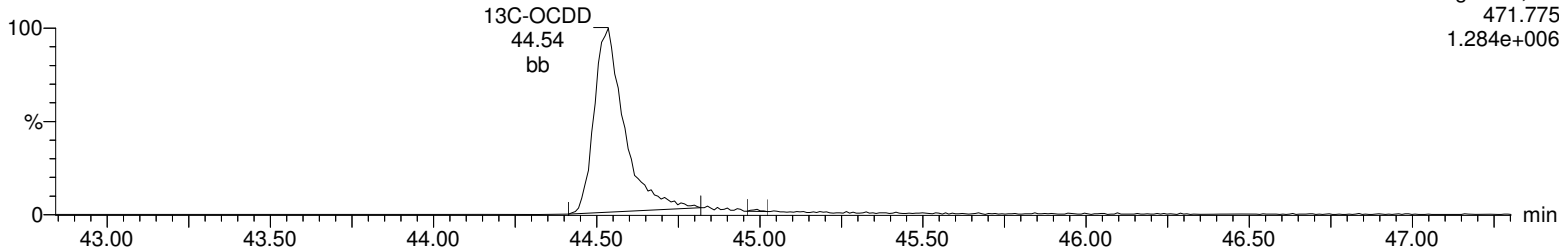
F5:Voltage SIR,EI+
469.778
1.163e+006



13C-OCDD

A25APR20A-5

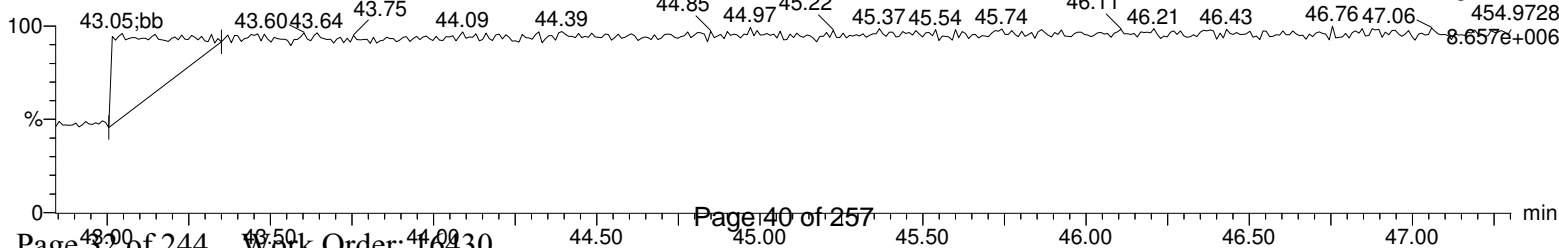
F5:Voltage SIR,EI+
471.775
1.284e+006



Lock Mass F5

A25APR20A-5

F5:Voltage SIR,EI+
454.9728
8.657e+006



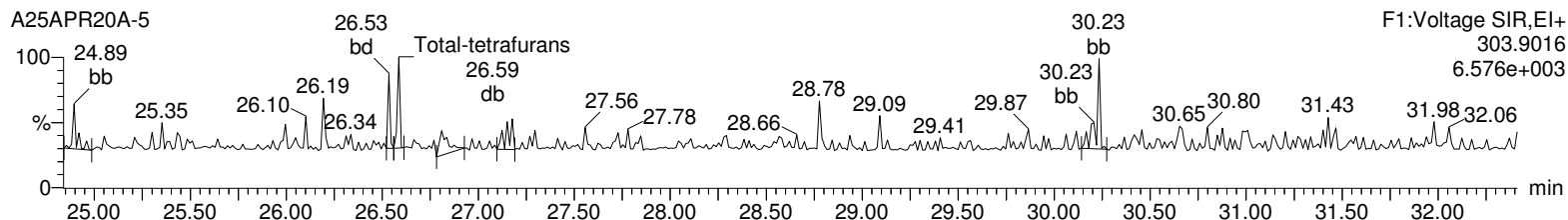
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Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

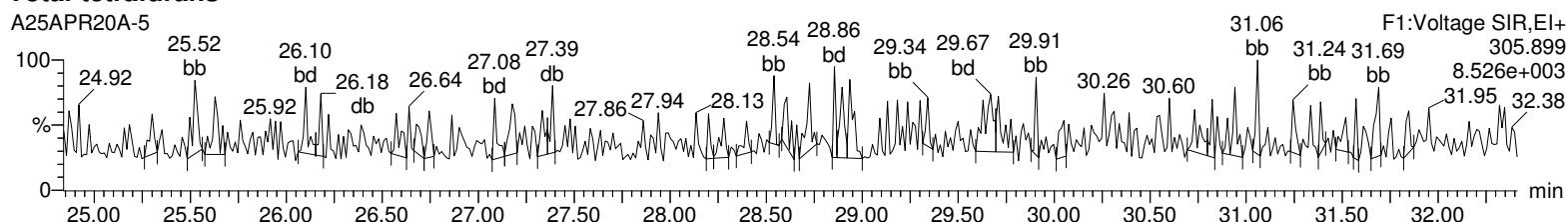
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Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

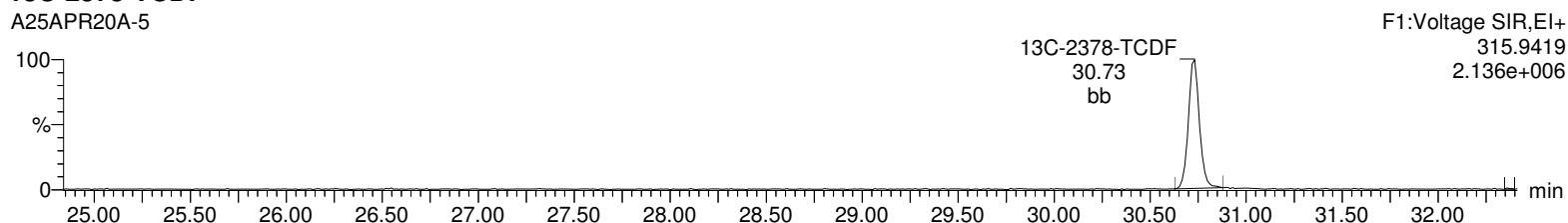
Total-tetrafurans



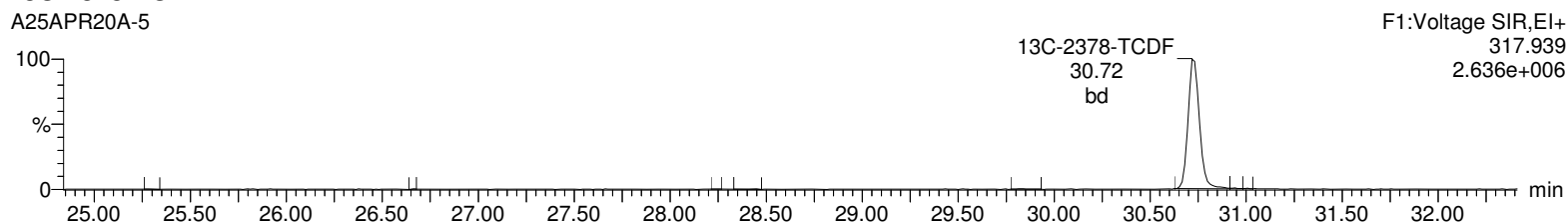
Total-tetrafurans



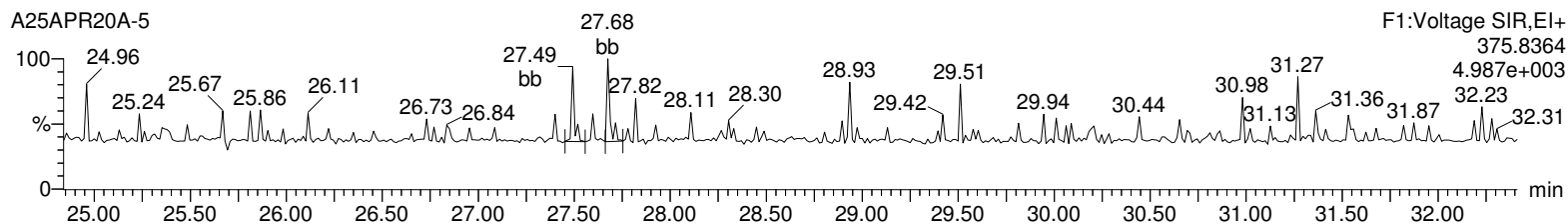
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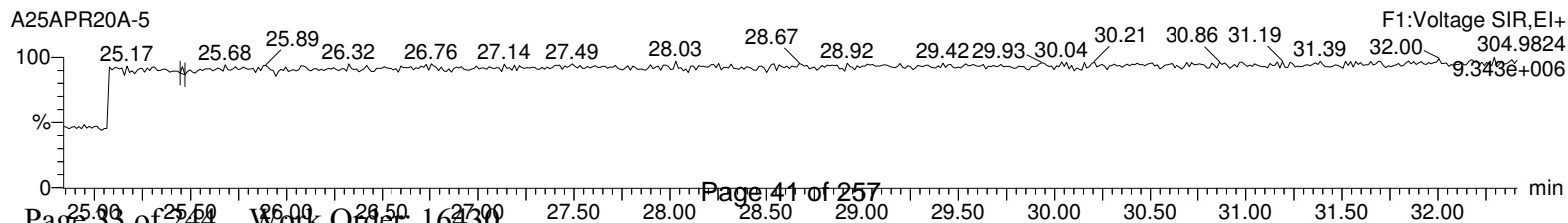
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

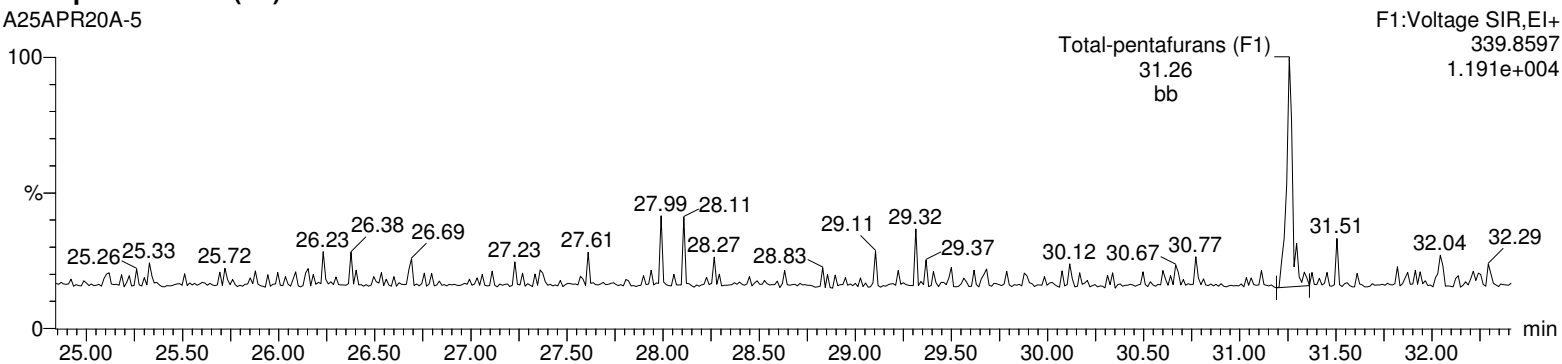
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Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

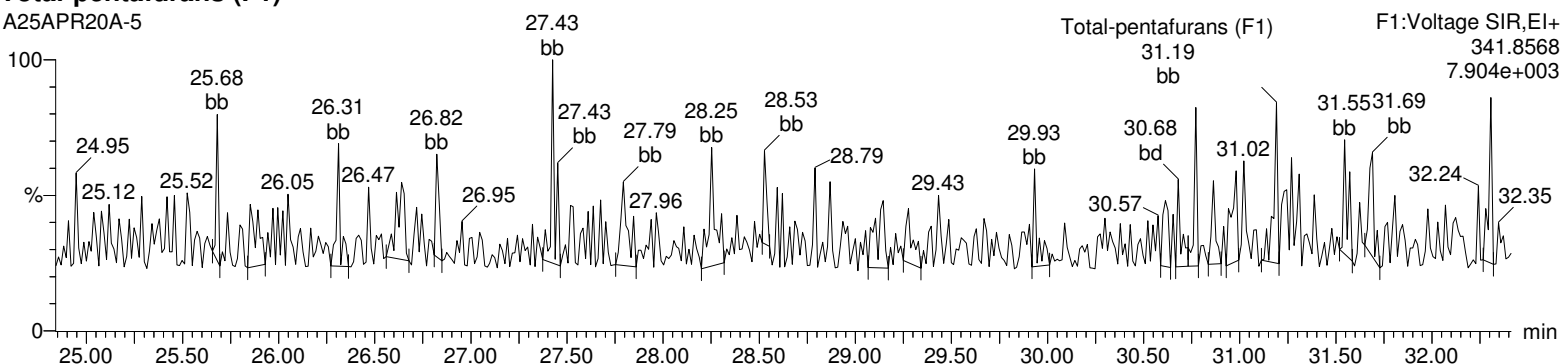
Total-pentafurans (F1)

A25APR20A-5



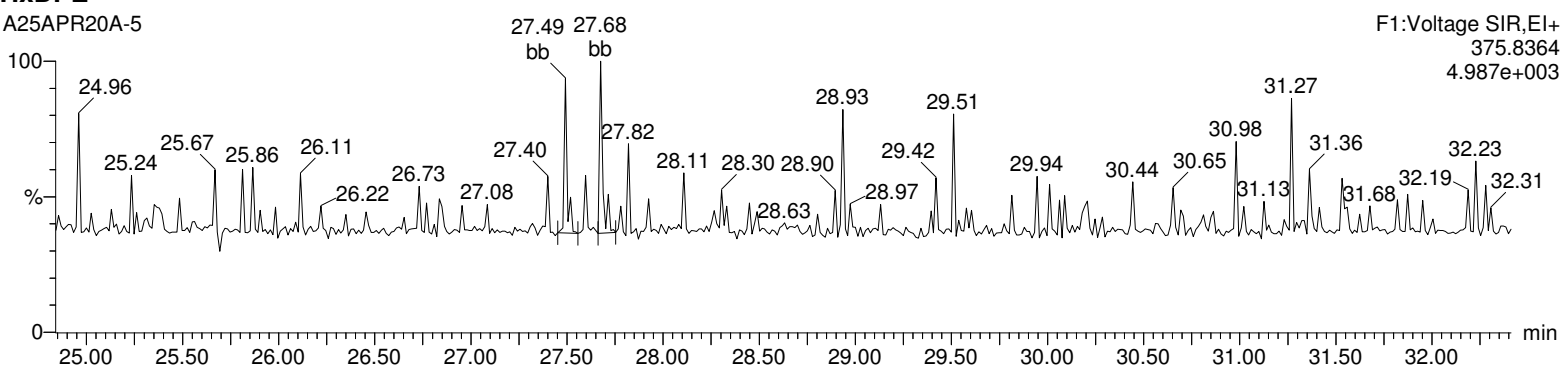
Total-pentafurans (F1)

A25APR20A-5



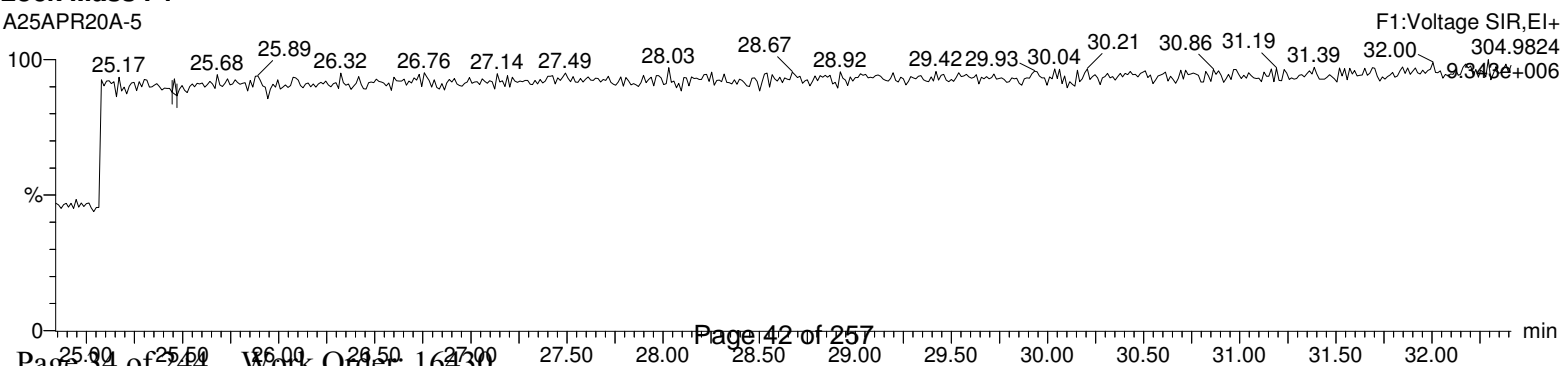
HxDPE

A25APR20A-5



Lock Mass F1

A25APR20A-5



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

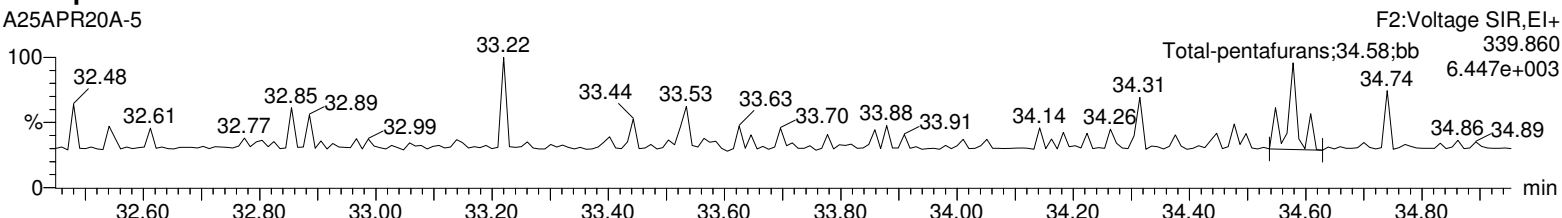
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

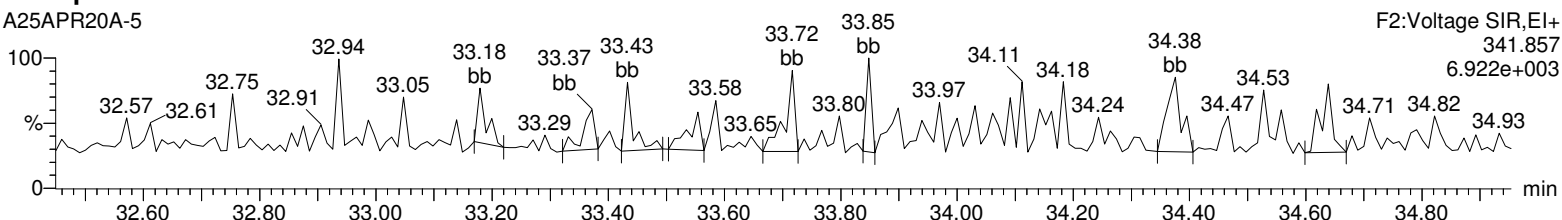
Total-pentafurans

A25APR20A-5



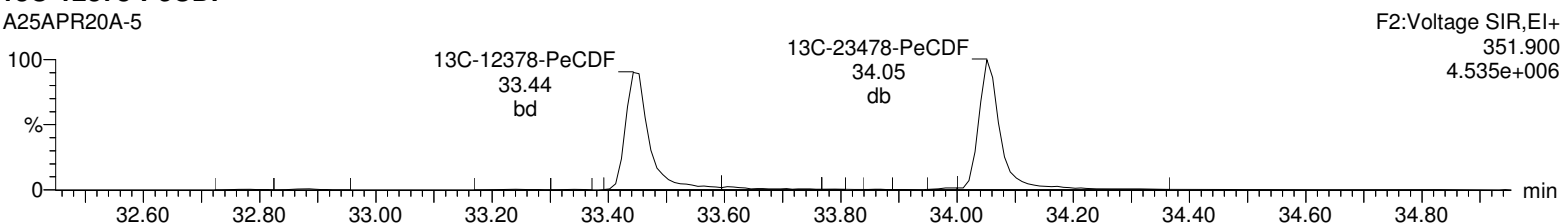
Total-pentafurans

A25APR20A-5



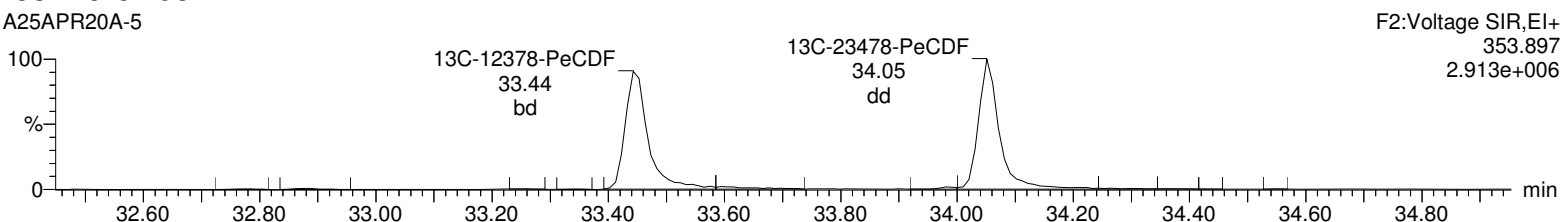
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A25APR20A-5



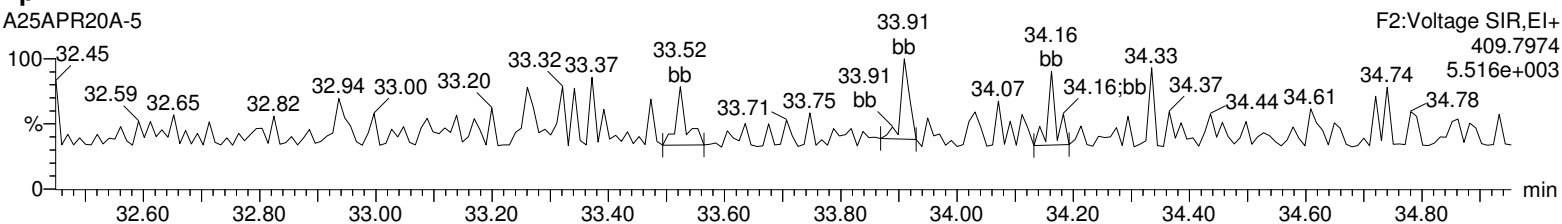
13C-12378-PeCDF

A25APR20A-5



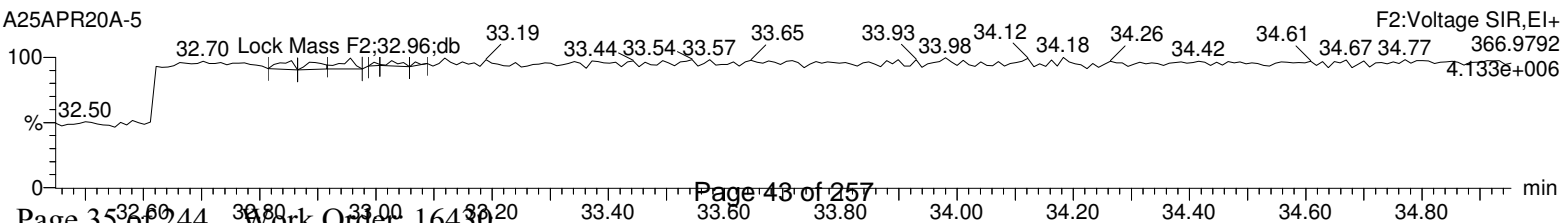
HpDPE

A25APR20A-5



Lock Mass F2

A25APR20A-5



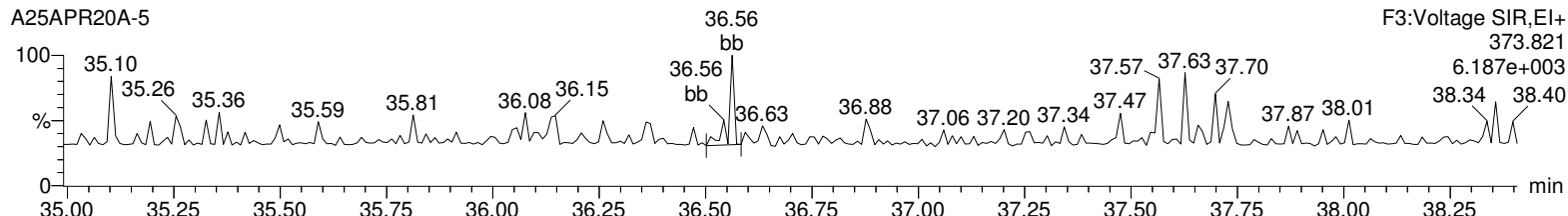
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Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

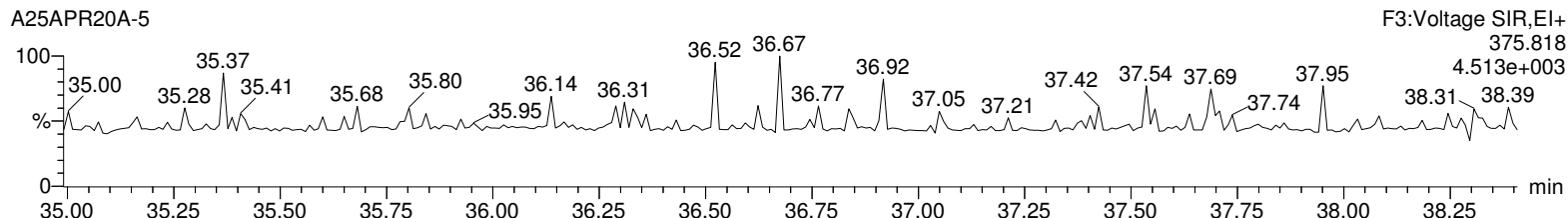
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Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

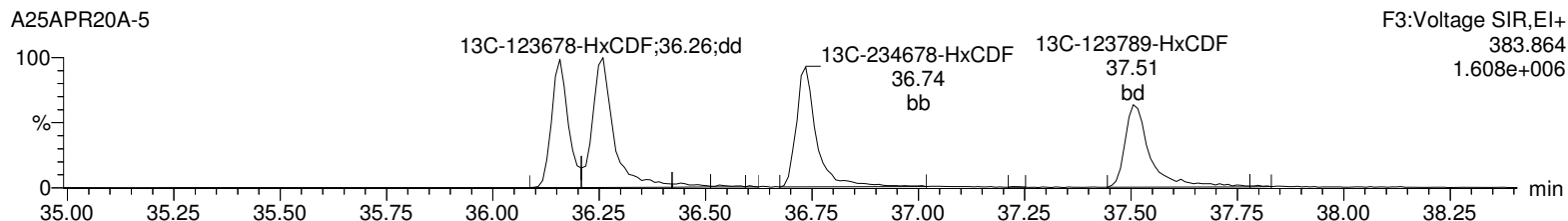
Total-hexafurans



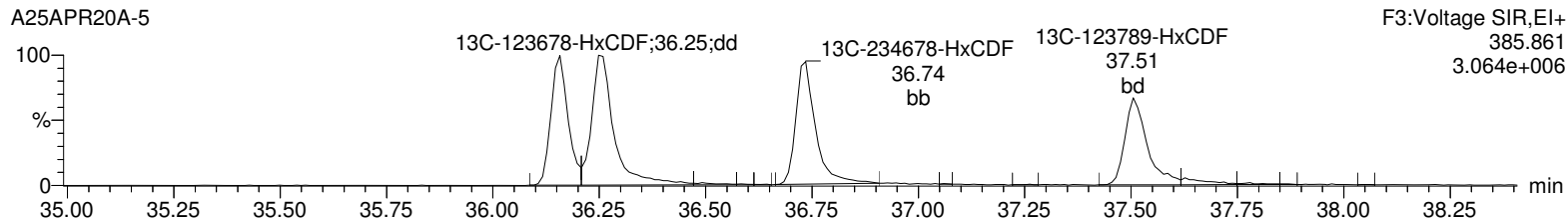
Total-hexafurans



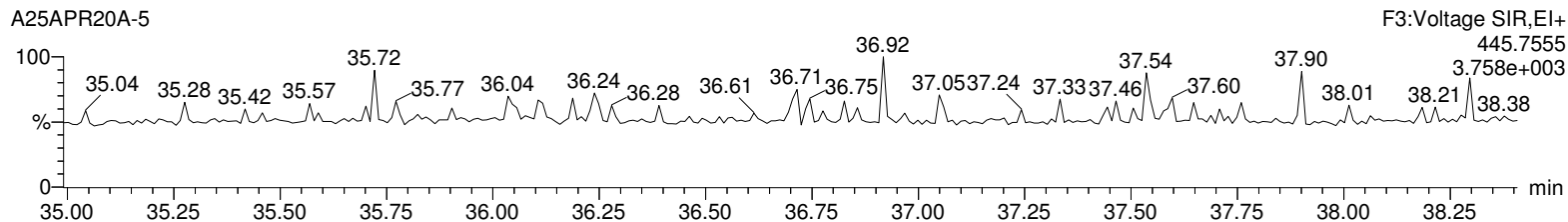
13C-123478-HxCDF



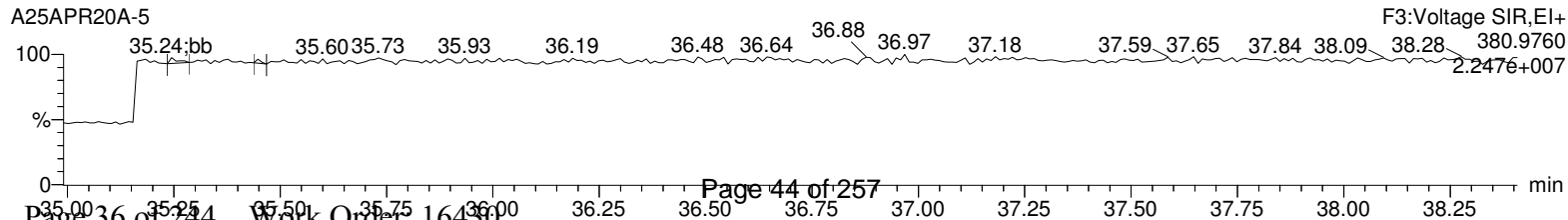
13C-123478-HxCDF



OcdPE



Lock Mass F3



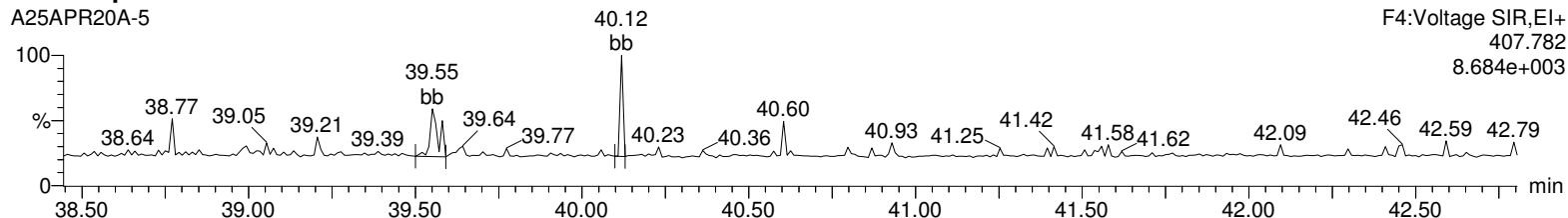
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Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

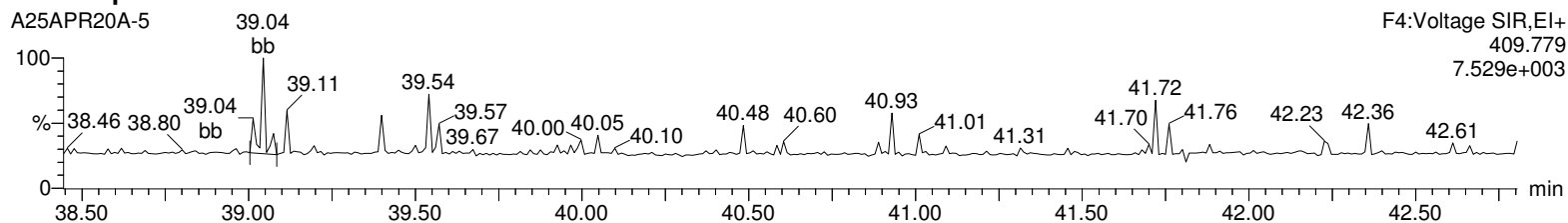
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

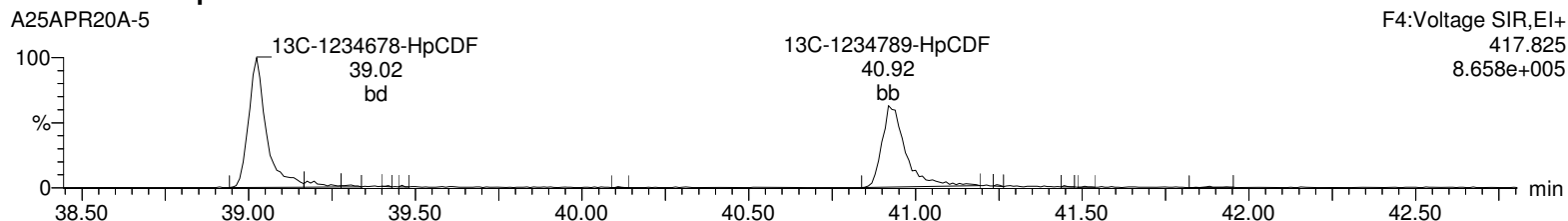
Total-heptafurans



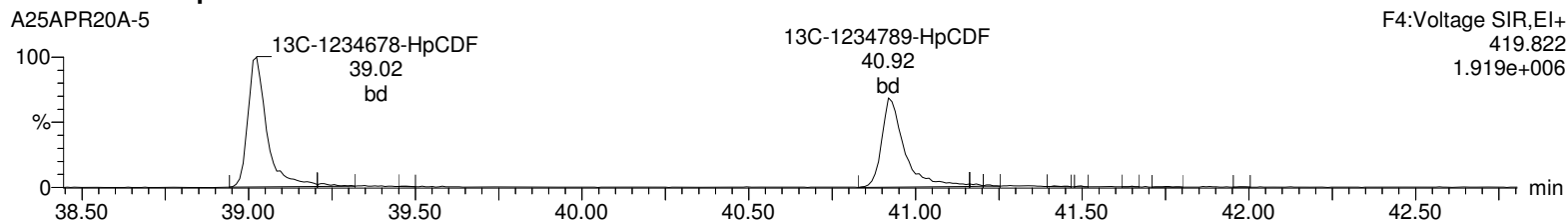
Total-heptafurans



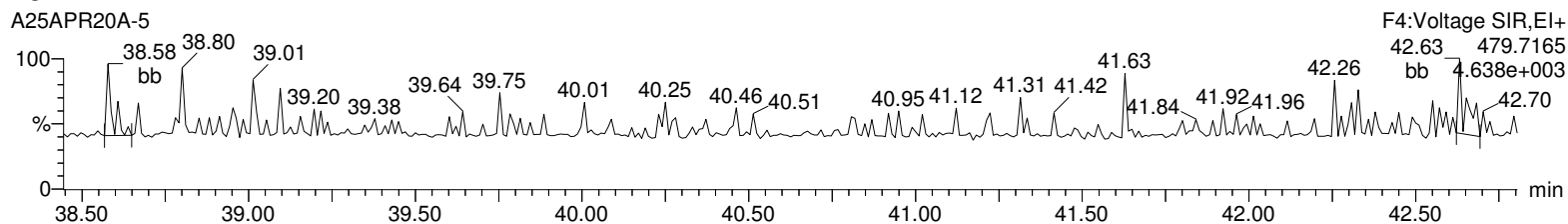
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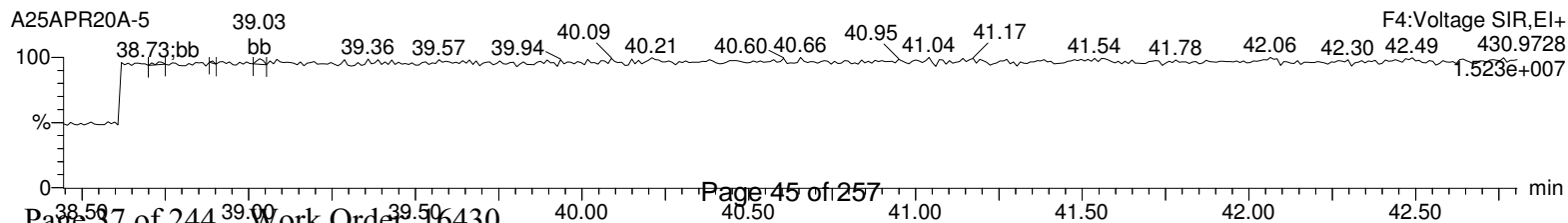
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

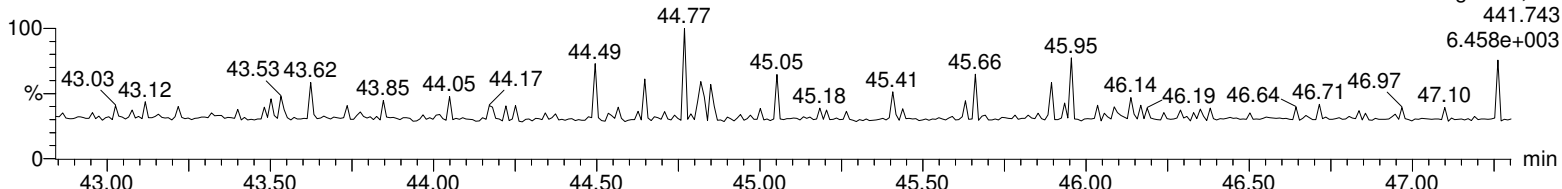
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-5, Date: 25-Apr-2020, Time: 14:31:53, ID: 16430001-1, Description: 43611, Job: HMS1613_1L, Task: HRP750_2, User: MLL

OCDF

A25APR20A-5

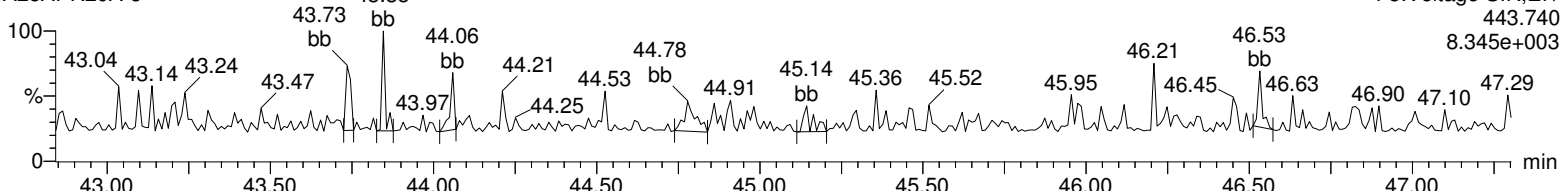
F5:Voltage SIR,EI+



OCDF

A25APR20A-5

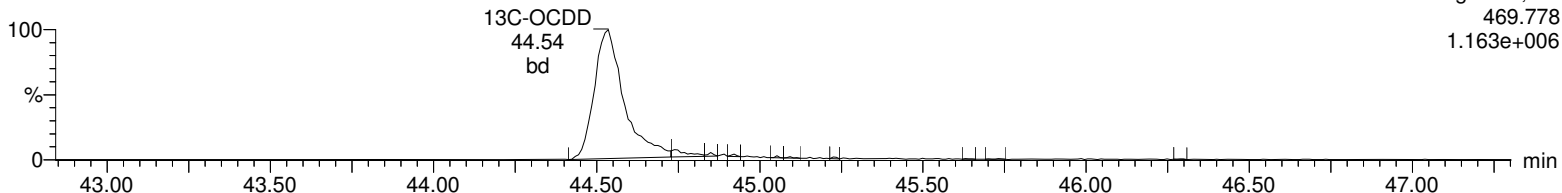
F5:Voltage SIR,EI+



13C-OCDD

A25APR20A-5

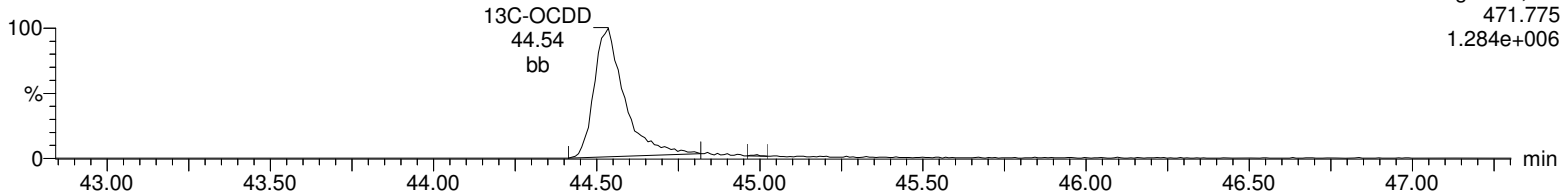
F5:Voltage SIR,EI+



13C-OCDD

A25APR20A-5

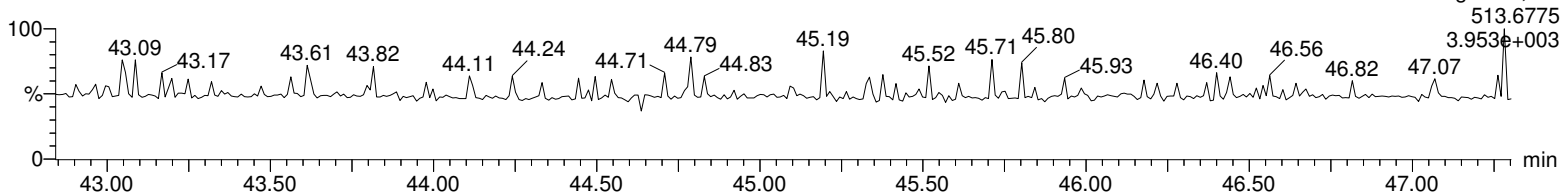
F5:Voltage SIR,EI+



DeDPE

A25APR20A-5

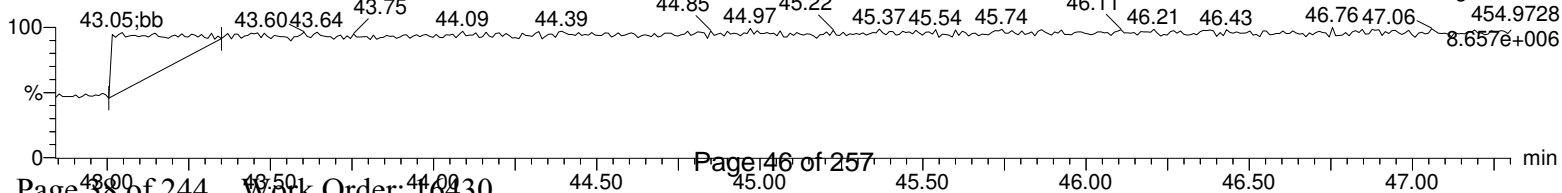
F5:Voltage SIR,EI+



Lock Mass F5

A25APR20A-5

F5:Voltage SIR,EI+



Quality Control Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-25593	Client: CALS001	Project: CALS00214
Lab Sample ID: 12026457		Matrix: WATER
Client Sample: QC for batch 43605		
Client ID: MB for batch 43605		Prep Basis: As Received
Batch ID: 43611	Method: EPA Method 1613B	
Run Date: 04/25/2020 13:42	Analyst: MLL	Instrument: HRP750
Data File: A25APR20A-4		Dilution: 1
Prep Batch: 43605	Prep Method: SW846 3520C	
Prep Date: 19-APR-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.00326	ng/L	0.00326	0.0100
40321-76-4	1,2,3,7,8-PeCDD	U	0.00198	ng/L	0.00198	0.0500
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.00252	ng/L	0.00252	0.0500
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.00232	ng/L	0.00232	0.0500
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.00244	ng/L	0.00244	0.0500
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.00348	ng/L	0.00348	0.0500
3268-87-9	1,2,3,4,6,7,8,9-OCDD	JK	0.00528	ng/L	0.00524	0.100
51207-31-9	2,3,7,8-TCDF	U	0.00354	ng/L	0.00354	0.0100
57117-41-6	1,2,3,7,8-PeCDF	U	0.00166	ng/L	0.00166	0.0500
57117-31-4	2,3,4,7,8-PeCDF	U	0.00153	ng/L	0.00153	0.0500
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.00170	ng/L	0.00170	0.0500
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.00179	ng/L	0.00179	0.0500
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.00174	ng/L	0.00174	0.0500
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.00262	ng/L	0.00262	0.0500
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.00157	ng/L	0.00157	0.0500
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.00216	ng/L	0.00216	0.0500
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.00676	ng/L	0.00676	0.100
41903-57-5	Total TeCDD	U	0.00326	ng/L	0.00326	0.0100
36088-22-9	Total PeCDD	U	0.00198	ng/L	0.00198	0.0500
34465-46-8	Total HxCDD	U	0.00232	ng/L	0.00232	0.0500
37871-00-4	Total HpCDD	U	0.00348	ng/L	0.00348	0.0500
30402-14-3	Total TeCDF	U	0.00354	ng/L	0.00354	0.0100
30402-15-4	Total PeCDF	U	0.00153	ng/L	0.00153	0.0500
55684-94-1	Total HxCDF	U	0.00170	ng/L	0.00170	0.0500
38998-75-3	Total HpCDF	U	0.00157	ng/L	0.00157	0.0500
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		1.58E-06	ng/L		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.00385	ng/L		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.52	2.00	ng/L	76.1	(25%-164%)
13C-1,2,3,7,8-PeCDD		1.53	2.00	ng/L	76.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		1.16	2.00	ng/L	58.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		1.52	2.00	ng/L	75.8	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		1.41	2.00	ng/L	70.5	(23%-140%)
13C-OCDD		2.54	4.00	ng/L	63.6	(17%-157%)
13C-2,3,7,8-TCDF		1.41	2.00	ng/L	70.7	(24%-169%)
13C-1,2,3,7,8-PeCDF		1.70	2.00	ng/L	85.0	(24%-185%)
13C-2,3,4,7,8-PeCDF		1.56	2.00	ng/L	78.2	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		1.21	2.00	ng/L	60.4	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		1.38	2.00	ng/L	69.2	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		1.38	2.00	ng/L	68.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		1.34	2.00	ng/L	67.2	(29%-147%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-25593	Client: CALS001	Project: CALS00214
Lab Sample ID: 12026457		Matrix: WATER
Client Sample: QC for batch 43605		
Client ID: MB for batch 43605		Prep Basis: As Received
Batch ID: 43611	Method: EPA Method 1613B	
Run Date: 04/25/2020 13:42	Analyst: MLL	Instrument: HRP750
Data File: A25APR20A-4		Dilution: 1
Prep Batch: 43605	Prep Method: SW846 3520C	
Prep Date: 19-APR-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
Surrogate/Tracer recovery						
		Qual	Result	Nominal	Units	Recovery%
						Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF			1.29	2.00	ng/L	64.5 (28%-143%)
13C-1,2,3,4,7,8,9-HpCDF			1.34	2.00	ng/L	67.2 (26%-138%)
37Cl-2,3,7,8-TCDD			0.202	0.200	ng/L	101 (35%-197%)

Comments:

- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report **MassLynx 4.1**

Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Monday, April 27, 2020 13:09:28 Eastern Daylight Time
 Printed: Monday, April 27, 2020 13:11:24 Eastern Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A23APR20.mdb 23 Apr 2020 09:24:32
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.45e2	1.04e2	2.49e2	31.41	1.001	1.40	YES	0.076	0.163	2.45e3	2691	0.9	2.77e3	1269	2.2	bb	bb
2	12378-PeCDD							NO	0.0989			1186			672			
3	123478-HxCDD							NO	0.126			741			1199			
4	123678-HxCDD							NO	0.116			741			1199			
5	123789-HxCDD							NO	0.122			741			1199			
6	1234678-HpCDD							NO	0.174			843			784			
7	OCDD	1.29e2	2.52e2	3.81e2	44.55	1.001	0.51	YES	0.264	0.262	4.10e3	618	6.6	3.26e3	806	4.0	MM	MM
8	2378-TCDF							NO	0.177			1062			2820			
9	12378-PeCDF							NO	0.0830			811			1643			
10	123478-PeCDF							NO	0.0764			811			1643			
11	123478-HxCDF							NO	0.0850			943			1071			
12	123678-HxCDF							NO	0.0897			943			1071			
13	234678-HxCDF							NO	0.0870			943			1071			
14	123789-HxCDF							NO	0.131			943			1071			
15	1234678-HpCDF							NO	0.0783			651			477			
16	1234789-HpCDF							NO	0.108			651			477			
17	OCDF							NO	0.338			619			1521			
18	13C-2378-TCDD	1.63e5	2.06e5	3.68e5	31.39	1.015	0.79	NO	76.146	0.284	3.04e6	5757	527.4	3.64e6	4182	869.2	bb	bd
19	13C-12378-PeCDD	1.51e5	9.55e4	2.46e5	34.24	1.107	1.58	NO	76.498	0.190	3.37e6	2585	1304.0	2.20e6	1836	1198.8	bb	bd
20	13C-123478-HxCDD	1.06e5	8.36e4	1.89e5	36.86	0.991	1.26	NO	58.107	0.706	2.28e6	9149	249.3	1.72e6	4661	369.6	bd	bd
21	13C-123678-HxCDD	1.50e5	1.21e5	2.72e5	36.95	0.993	1.24	NO	75.840	0.641	2.44e6	9149	267.1	1.99e6	4661	427.3	dd	dd
22	13C-1234678-HpCDD	8.90e4	8.31e4	1.72e5	40.26	1.083	1.07	NO	70.513	0.703	1.16e6	5527	210.1	1.07e6	4789	223.0	bd	bd
23	13C-OCDD	1.37e5	1.60e5	2.97e5	44.51	1.197	0.85	NO	127.201	0.680	1.29e6	5585	230.4	1.42e6	3949	359.0	bd	bd
24	13C-2378-TCDF	1.67e5	2.12e5	3.79e5	30.72	0.993	0.78	NO	70.702	0.396	2.46e6	9361	262.5	2.99e6	6007	497.9	bb	bb
25	13C-12378-PeCDF	2.25e5	1.43e5	3.68e5	33.44	1.081	1.57	NO	84.976	0.453	4.78e6	8672	551.0	3.12e6	5545	561.9	bd	bd
26	13C-23478-PeCDF	2.20e5	1.36e5	3.56e5	34.04	1.101	1.61	NO	78.209	0.431	5.03e6	8672	579.9	3.20e6	5545	577.4	bb	dd
27	13C-123478-HxCDF	8.33e4	1.60e5	2.44e5	36.15	0.972	0.52	NO	60.388	0.643	1.86e6	6623	281.3	3.47e6	8970	387.4	bd	bd
28	13C-123678-HxCDF	1.07e5	2.07e5	3.13e5	36.25	0.975	0.52	NO	69.216	0.573	1.84e6	6623	277.7	3.39e6	8970	377.7	dd	dd
29	13C-234678-HxCDF	9.21e4	1.78e5	2.71e5	36.72	0.987	0.52	NO	68.834	0.660	1.74e6	6623	262.0	3.26e6	8970	363.1	bb	bd
30	13C-123789-HxCDF	8.02e4	1.56e5	2.36e5	37.49	1.008	0.51	NO	67.237	0.738	1.23e6	6623	185.4	2.41e6	8970	268.7	bd	bd

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Monday, April 27, 2020 13:09:28 Eastern Daylight Time
 Printed: Monday, April 27, 2020 13:11:24 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	6.28e4	1.41e5	2.04e5	39.01	1.049	0.44	NO	64.548	0.592	9.65e5	4548	212.1	2.12e6	6698	316.3	bd	bb
32	13C-1234789-HpCDF	4.79e4	1.17e5	1.65e5	40.92	1.100	0.41	NO	67.197	0.760	6.31e5	4548	138.6	1.47e6	6698	218.9	bd	bd
33	13C-1234-TCDD	1.88e5	2.41e5	4.29e5	30.93	0.000	0.78	NO	100.000	0.320	3.40e6	5757	590.1	4.22e6	4182	1009.4	bb	bb
34	13C-123789-HxCDD	2.00e5	1.63e5	3.63e5	37.19	0.000	1.23	NO	100.000	0.632	3.01e6	9149	328.9	2.44e6	4661	524.3	dd	dd
35	37Cl+2378-TCDD	4.59e4		4.59e4	31.40	1.015			10.100	0.0733	8.41e5	2417	348.1				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Monday, April 27, 2020 13:09:28 Eastern Daylight Time
Printed: Monday, April 27, 2020 13:11:24 Eastern Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A23APR20.mdb 23 Apr 2020 09:24:32
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

TD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradoxins	7.11e1	5.05e1	1.22e2	25.52	1.41	YES	0.037	0.163	2.74e3	2691	1.0	1.03e3	1269	0.8	bb	bb
2	Total-tetradoxins	1.52e2	9.00e1	2.42e2	25.14	1.69	YES	0.074	0.163	3.04e3	2691	1.1	3.21e3	1269	2.5	db	bb
3	Total-tetradoxins	8.90e1	7.31e1	1.62e2	29.88	1.22	YES	0.050	0.163	3.75e3	2691	1.4	1.46e3	1269	1.2	bb	bb
4	Total-tetradoxins	5.30e1	6.55e1	1.18e2	29.68	0.81	NO	0.036	0.163	2.36e3	2691	0.9	3.51e3	1269	2.8	bb	bb
5	Total-tetradoxins	6.58e1	6.33e1	1.29e2	28.80	1.04	YES	0.040	0.163	3.64e3	2691	1.4	1.94e3	1269	1.5	bd	db
6	Total-tetradoxins	1.19e2	5.89e1	1.78e2	28.67	2.02	YES	0.055	0.163	3.01e3	2691	1.1	2.08e3	1269	1.6	db	bd
7	Total-tetradoxins	7.15e1	1.31e2	2.02e2	32.15	0.55	YES	0.062	0.163	4.54e3	2691	1.7	5.78e3	1269	4.6	bd	bb
8	2378-TCDD	1.45e2	1.04e2	2.49e2	31.41	1.40	YES	0.076	0.163	2.45e3	2691	0.9	2.77e3	1269	2.2	bb	bb
9	Total-tetradoxins	5.57e1	8.42e1	1.40e2	30.27	0.66	NO	0.043	0.163	4.26e3	2691	1.6	4.11e3	1269	3.2	bb	bb

PD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	6.54e1	5.67e1	1.22e2	37.49	1.15	NO	0.057	0.121	1.97e3	741	2.7	4.98e3	1199	4.2	bb	bb

HD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraturans	5.30e1	5.07e1	1.04e2	30.17	1.04	YES	0.028	0.177	2.52e3	1062	2.4	3.63e3	2820	1.3	bb	bb
2	Total-tetraturans	5.29e1	7.26e1	1.26e2	28.31	0.73	NO	0.034	0.177	2.60e3	1062	2.4	2.56e3	2820	0.9	bb	bb

HPD

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraturans	5.30e1	5.07e1	1.04e2	30.17	1.04	YES	0.028	0.177	2.52e3	1062	2.4	3.63e3	2820	1.3	bb	bb
2	Total-tetraturans	5.29e1	7.26e1	1.26e2	28.31	0.73	NO	0.034	0.177	2.60e3	1062	2.4	2.56e3	2820	0.9	bb	bb

TF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetraturans	5.30e1	5.07e1	1.04e2	30.17	1.04	YES	0.028	0.177	2.52e3	1062	2.4	3.63e3	2820	1.3	bb	bb
2	Total-tetraturans	5.29e1	7.26e1	1.26e2	28.31	0.73	NO	0.034	0.177	2.60e3	1062	2.4	2.56e3	2820	0.9	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Monday, April 27, 2020 13:09:28 Eastern Daylight Time
Printed: Monday, April 27, 2020 13:11:24 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

PF1

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.99e2	7.12e1	2.70e2	31.26	2.80	YES	0.077	0.0929	4.32e3	686	6.3	2.63e3	2178	1.2	bb	bb

PF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HPF

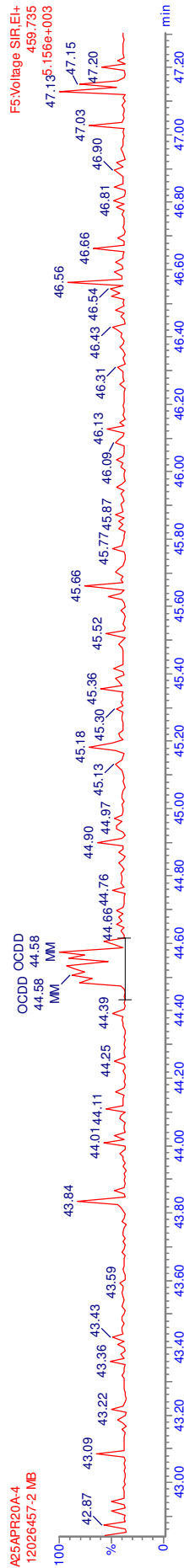
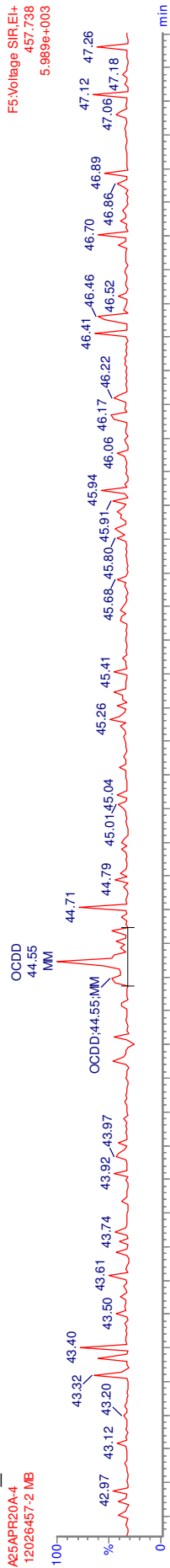
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1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HPF

1	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

MANUAL INTEGRATION
 METHOD DLM
 HRP750_2



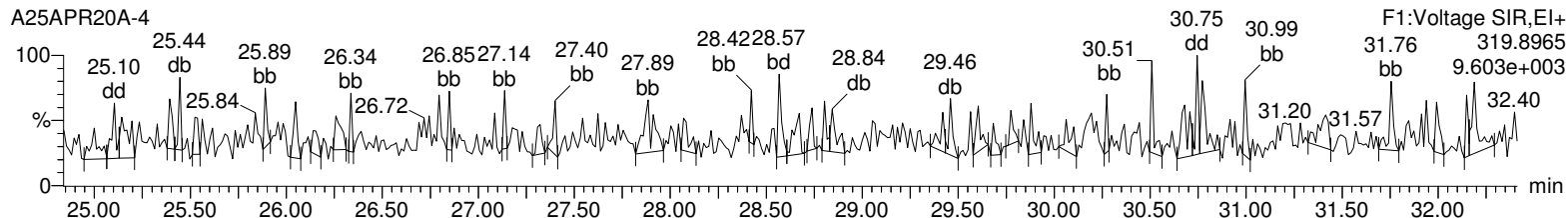
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

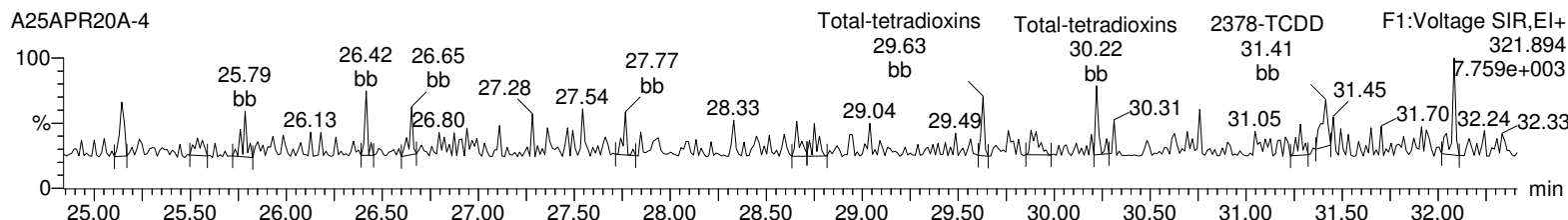
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

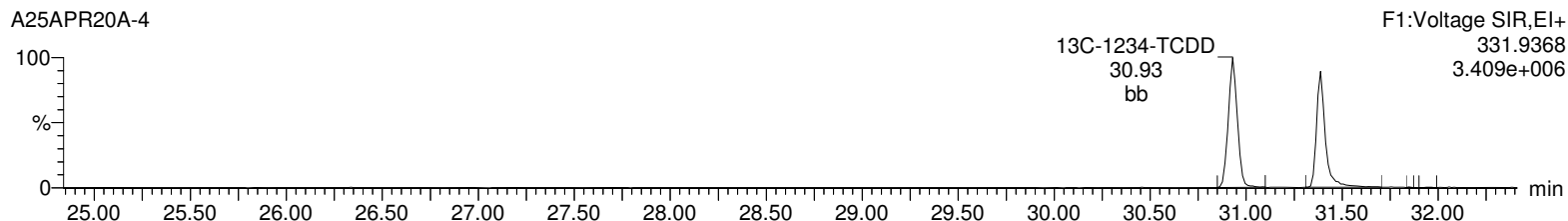
Total-tetradoxins



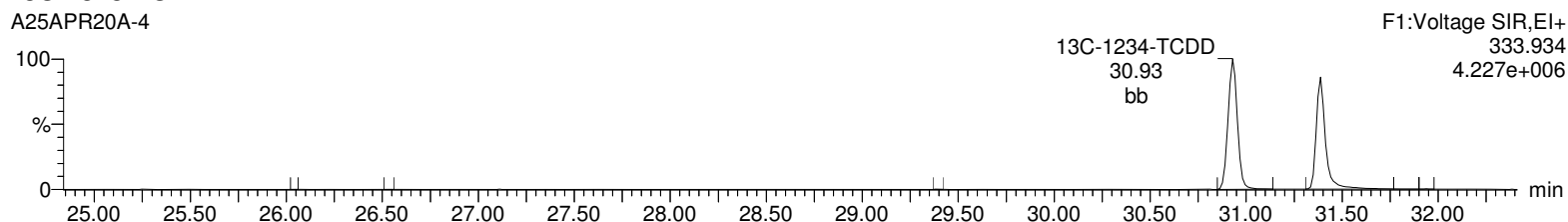
Total-tetradoxins



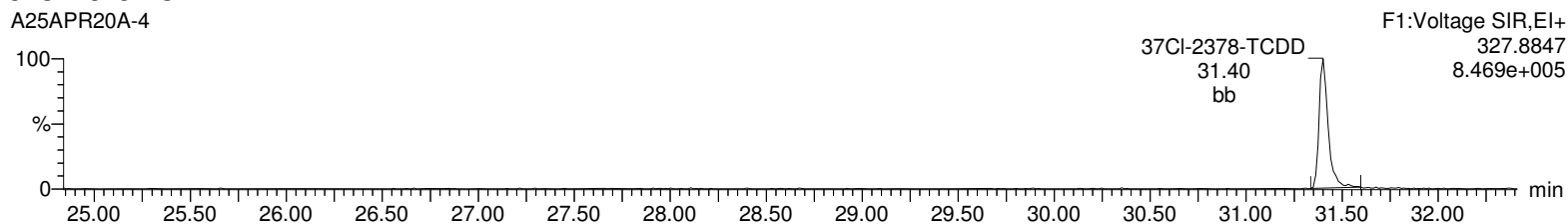
13C-2378-TCDD



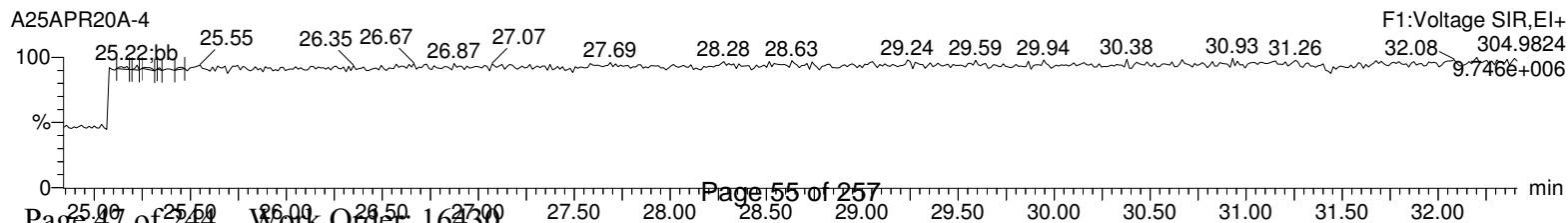
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

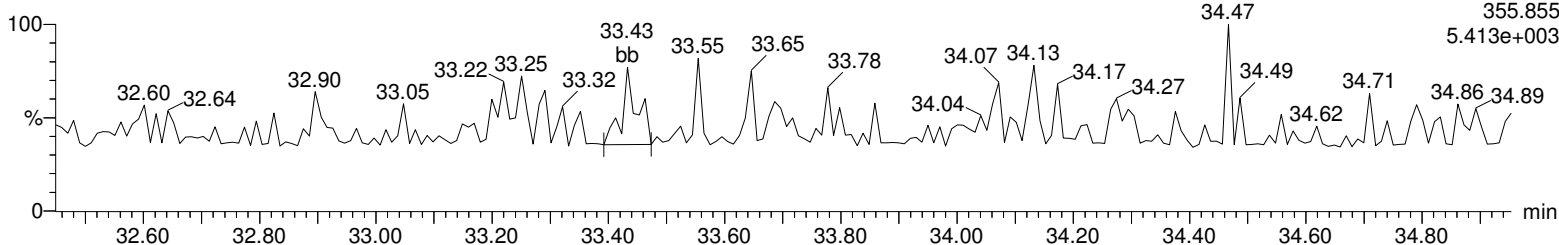
Total-pentadioxins

A25APR20A-4

F2:Voltage SIR,EI+

355.855

5.413e+003



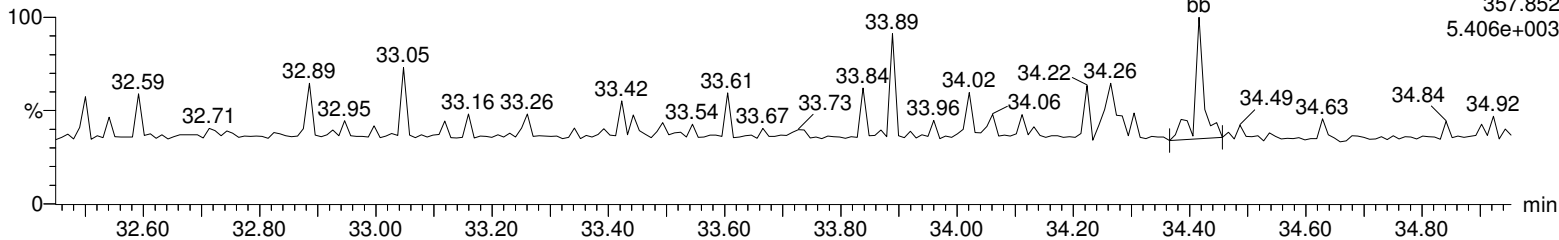
Total-pentadioxins

A25APR20A-4

F2:Voltage SIR,EI+

357.852

5.406e+003



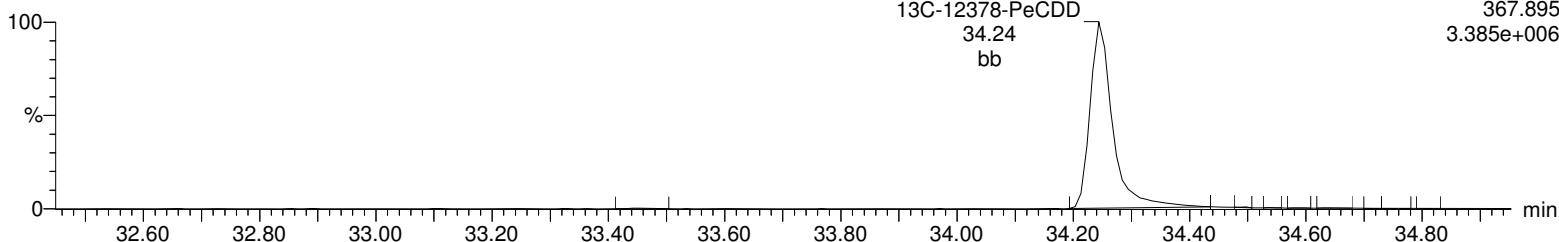
13C-12378-PeCDD

A25APR20A-4

F2:Voltage SIR,EI+

367.895

3.385e+006



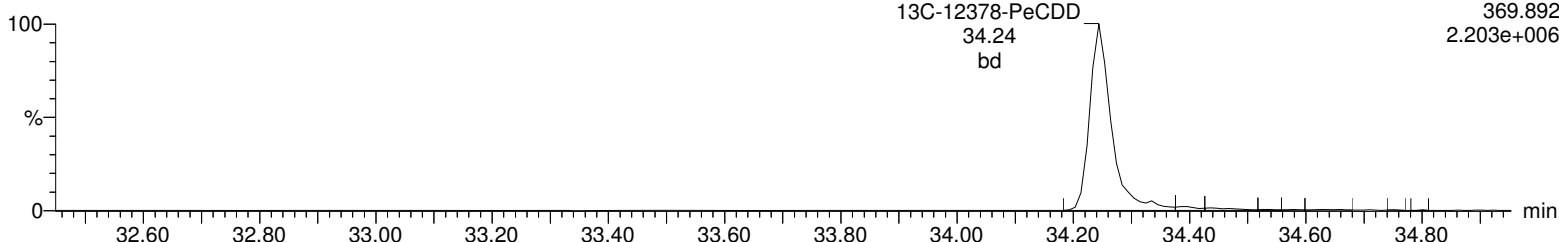
13C-12378-PeCDD

A25APR20A-4

F2:Voltage SIR,EI+

369.892

2.203e+006



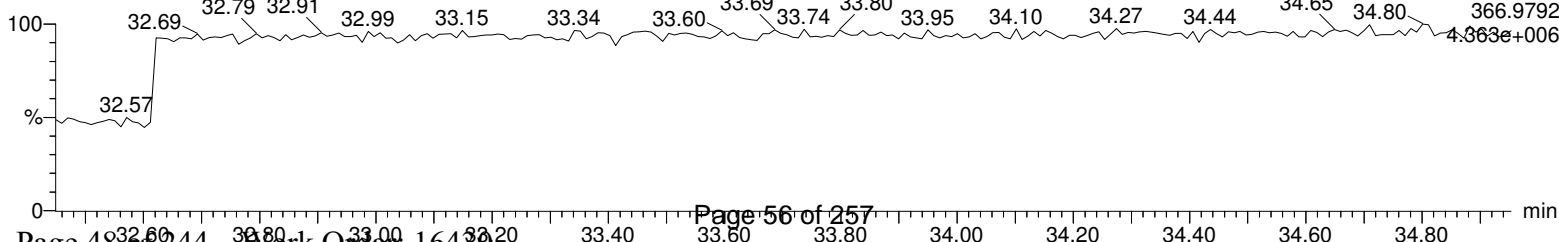
Lock Mass F2

A25APR20A-4

F2:Voltage SIR,EI+

366.9792

4.063e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

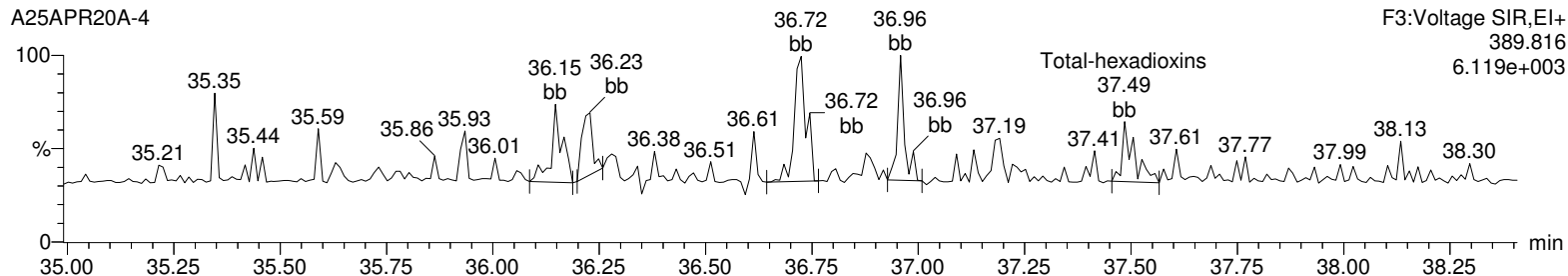
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

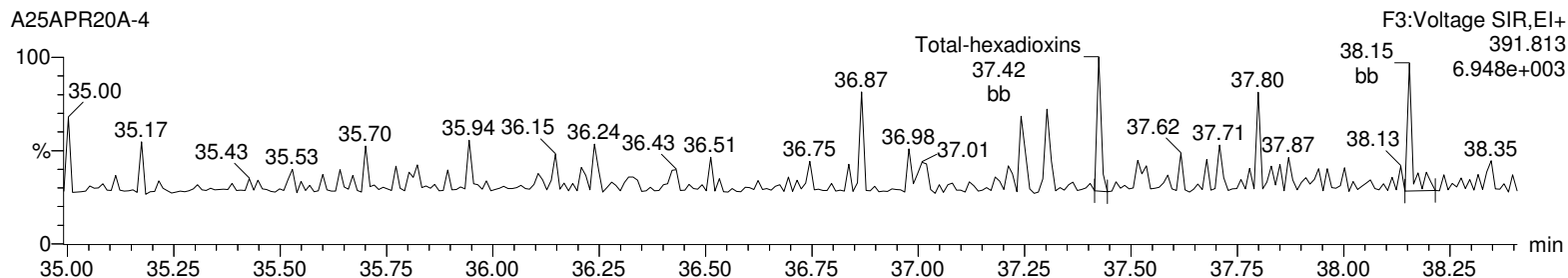
Total-hexadioxins

A25APR20A-4



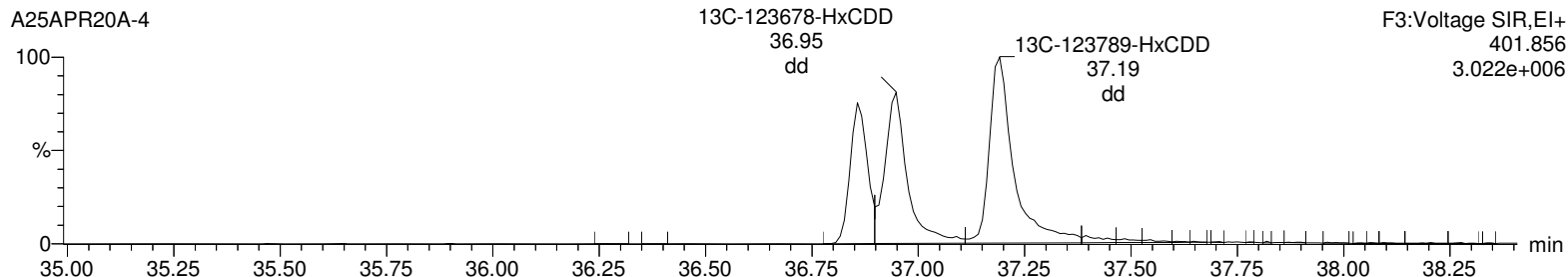
Total-hexadioxins

A25APR20A-4



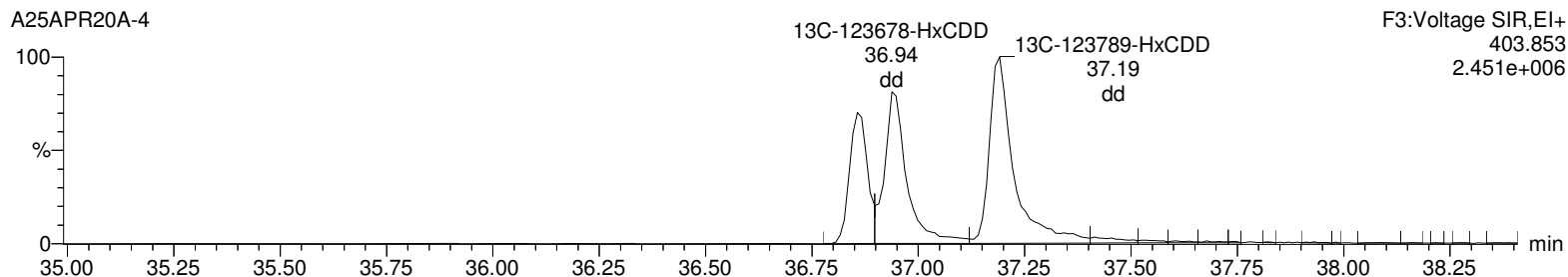
13C-123478-HxCDD

A25APR20A-4



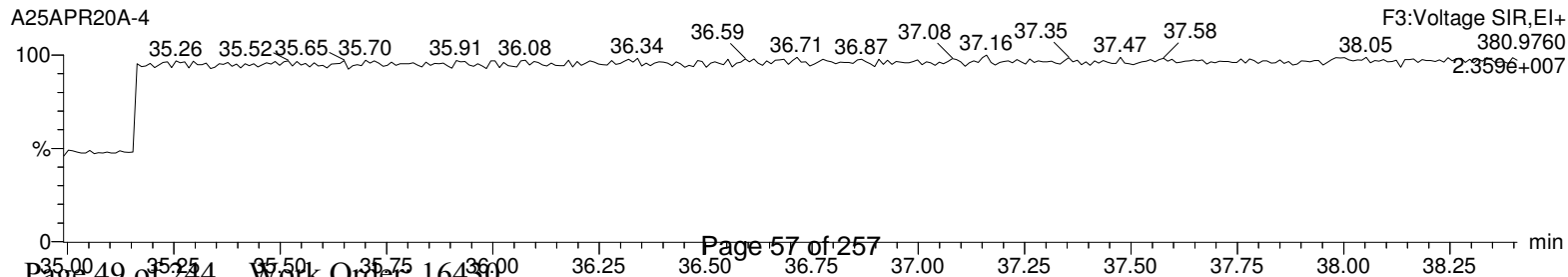
13C-123478-HxCDD

A25APR20A-4



Lock Mass F3

A25APR20A-4



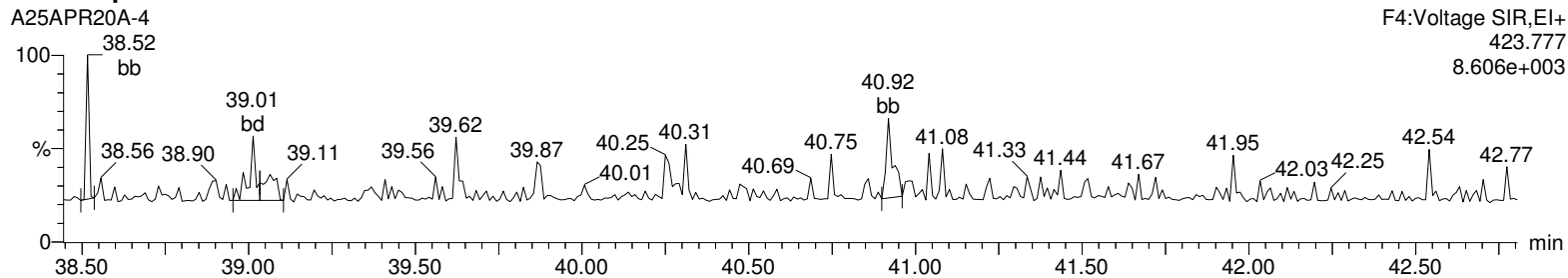
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

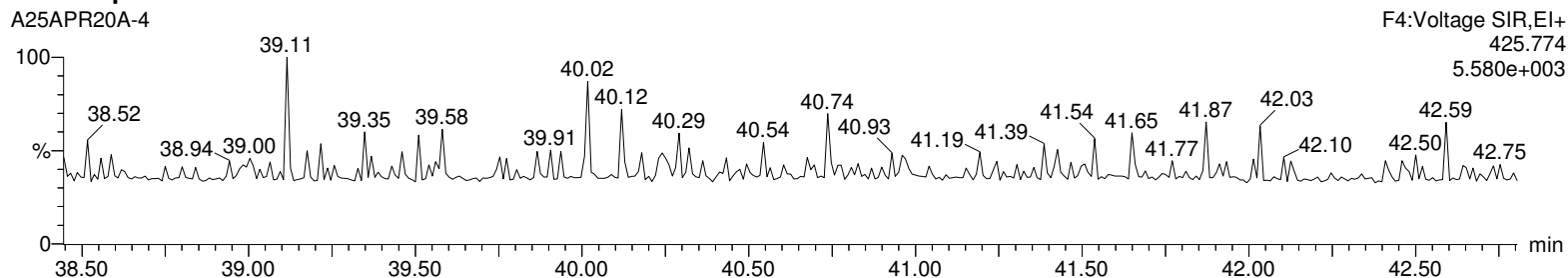
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

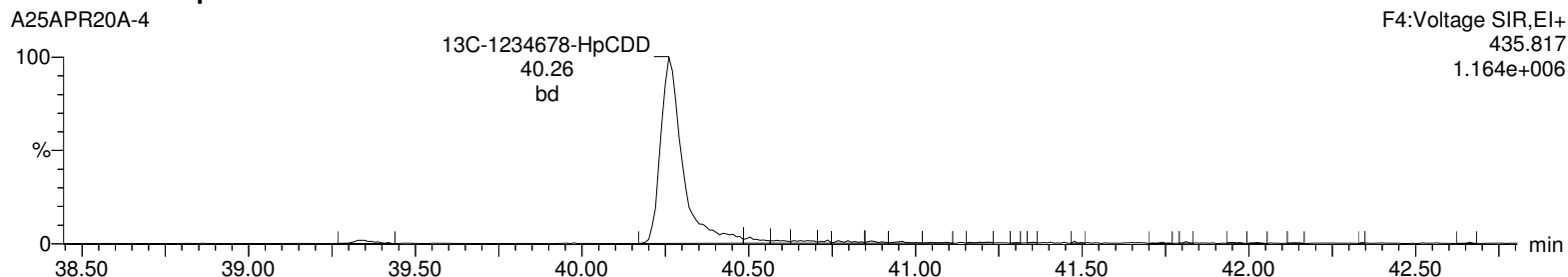
Total-heptadioxins



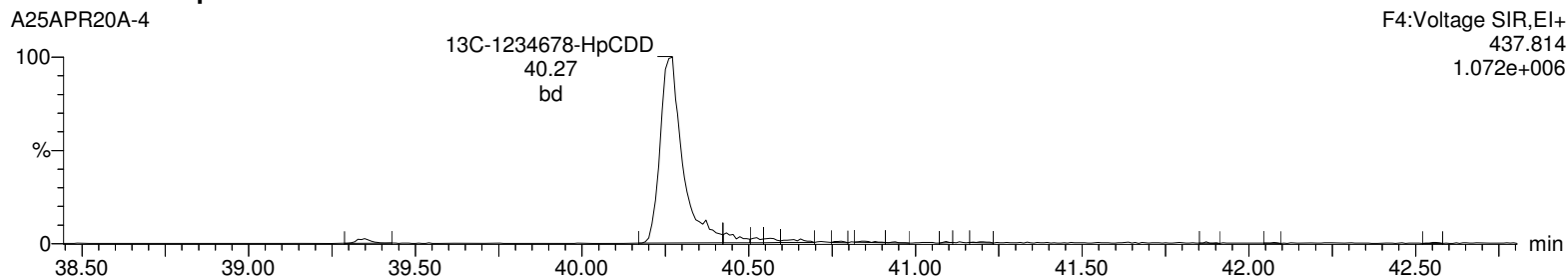
Total-heptadioxins



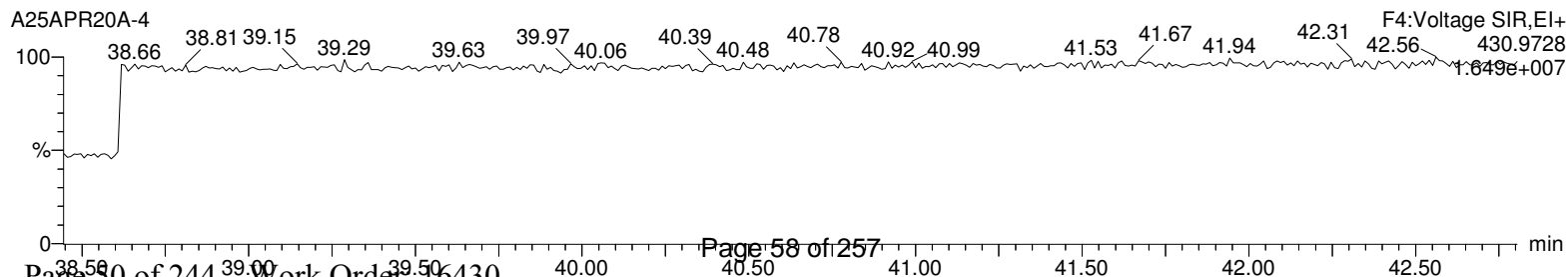
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

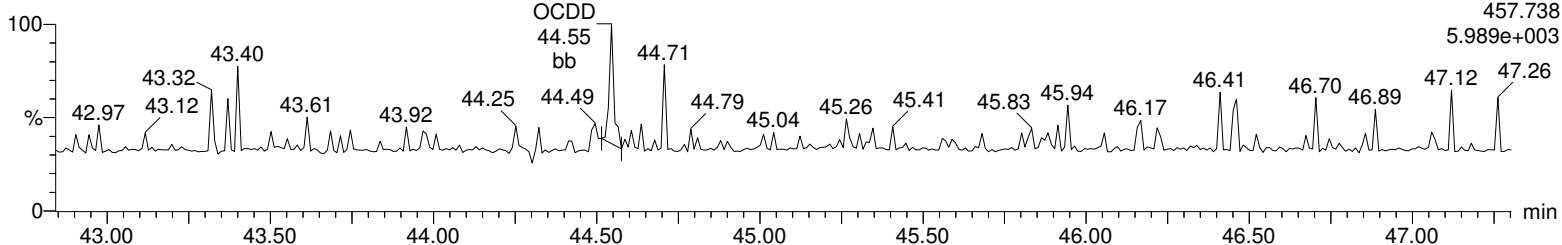
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

OCDD

A25APR20A-4

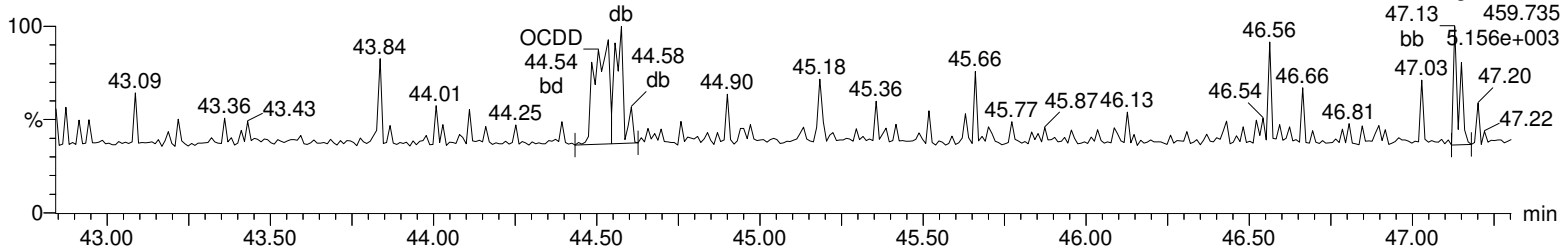
F5:Voltage SIR,EI+



OCDD

A25APR20A-4

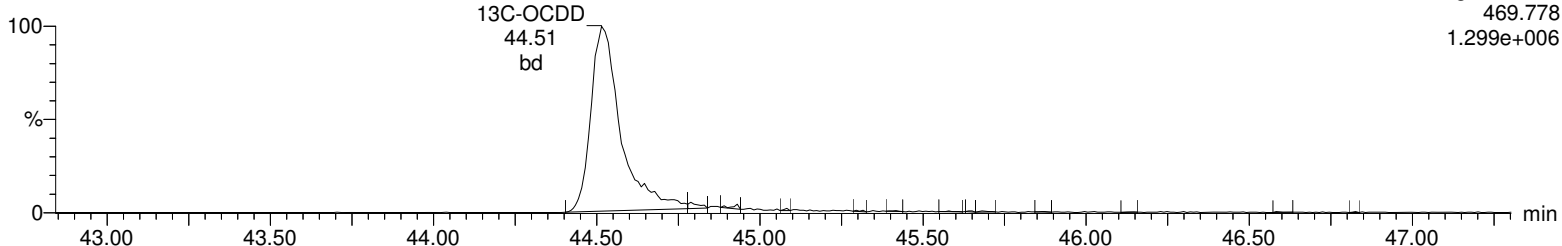
F5:Voltage SIR,EI+



13C-OCDD

A25APR20A-4

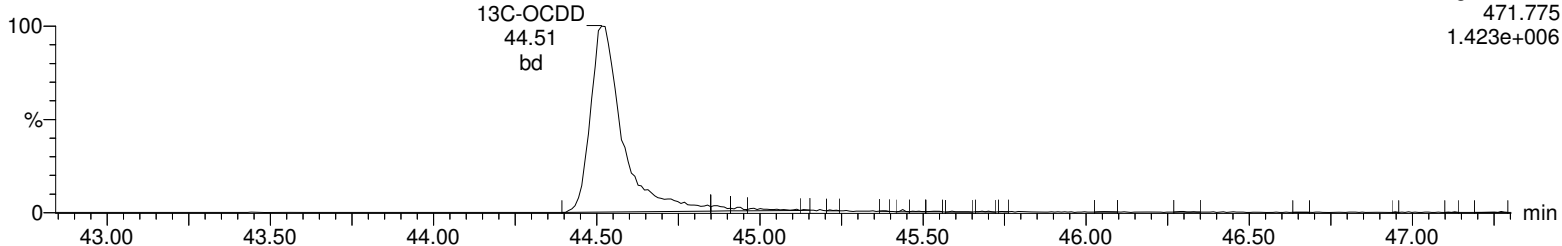
F5:Voltage SIR,EI+



13C-OCDD

A25APR20A-4

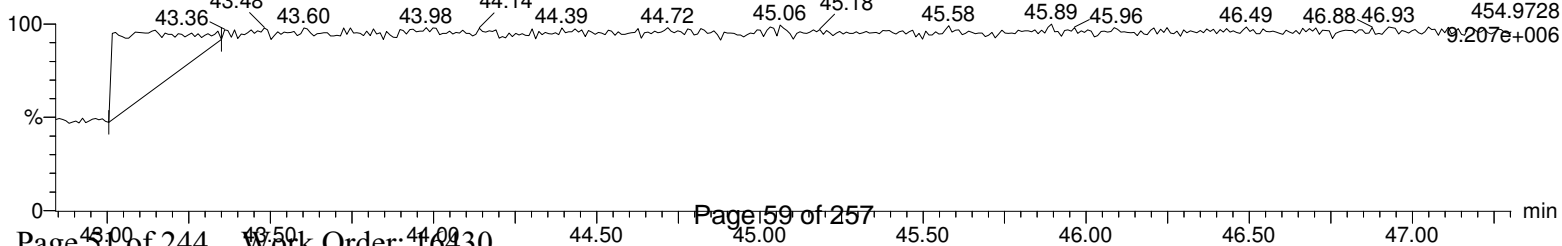
F5:Voltage SIR,EI+



Lock Mass F5

A25APR20A-4

F5:Voltage SIR,EI+



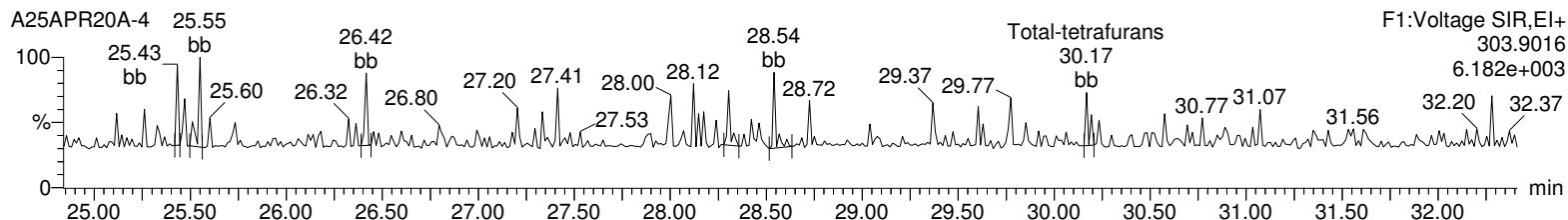
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Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

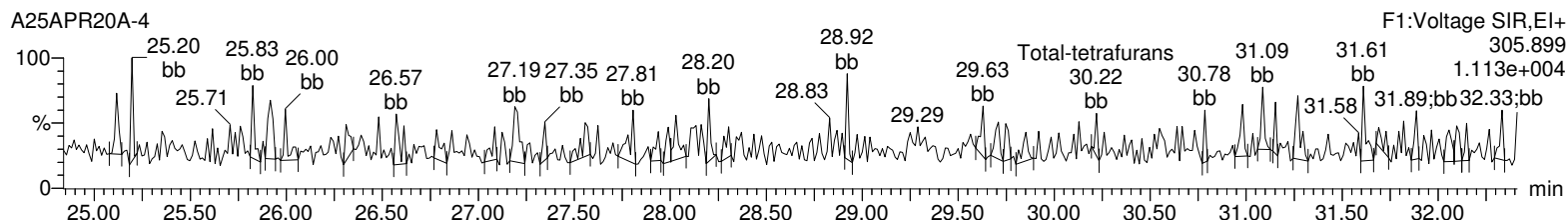
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

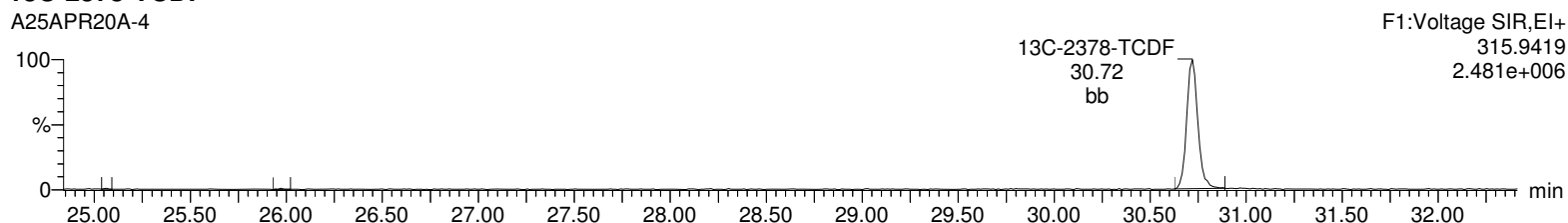
Total-tetrafurans



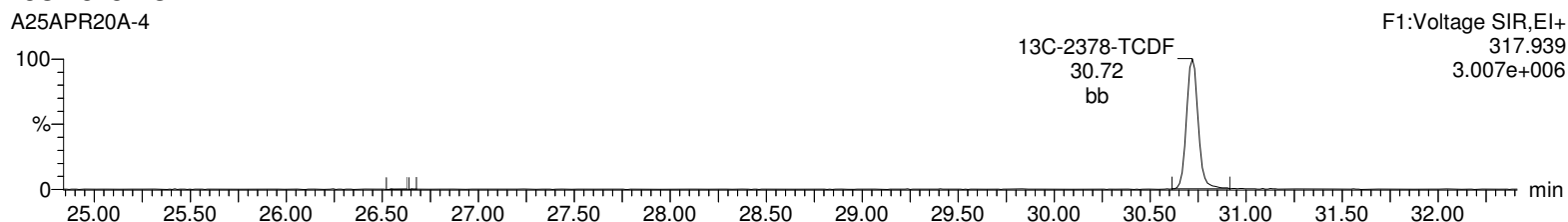
Total-tetrafurans



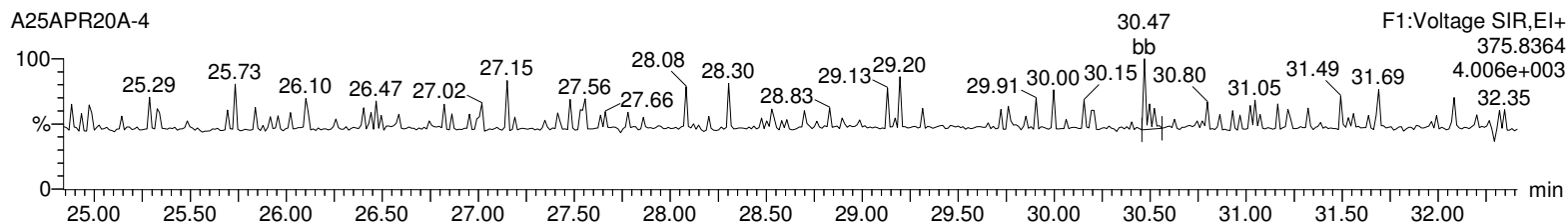
13C-2378-TCDF



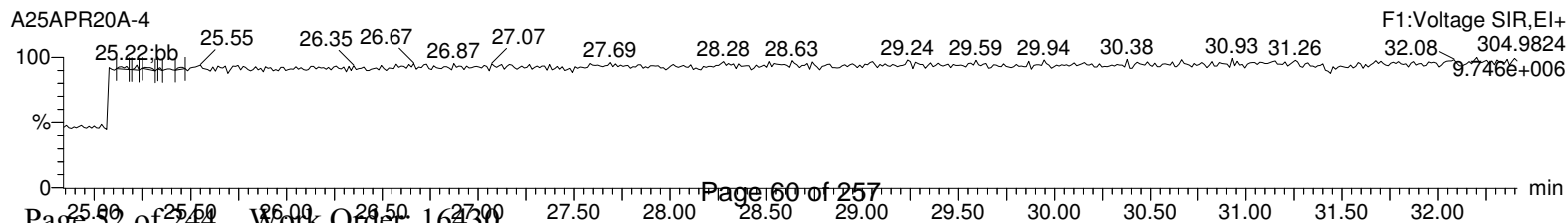
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

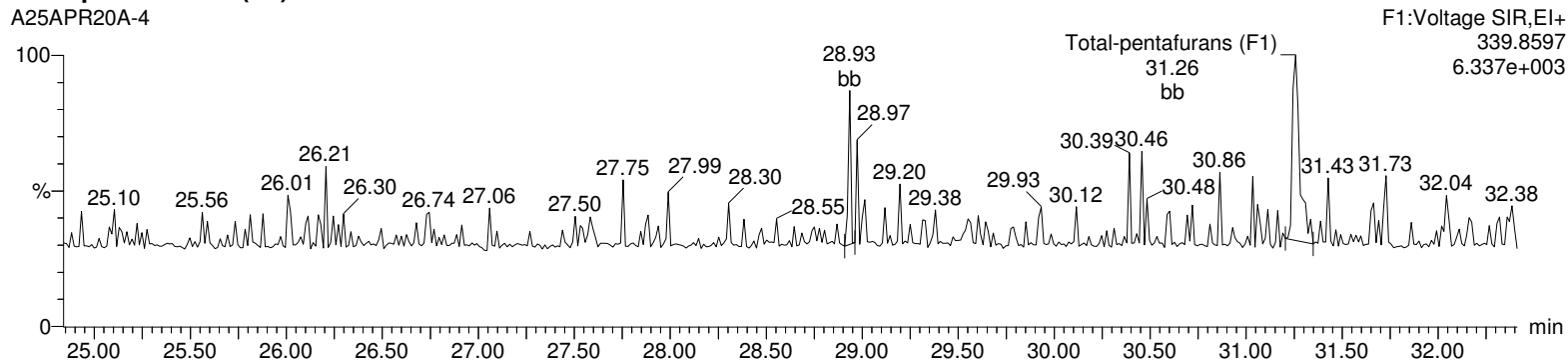
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Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

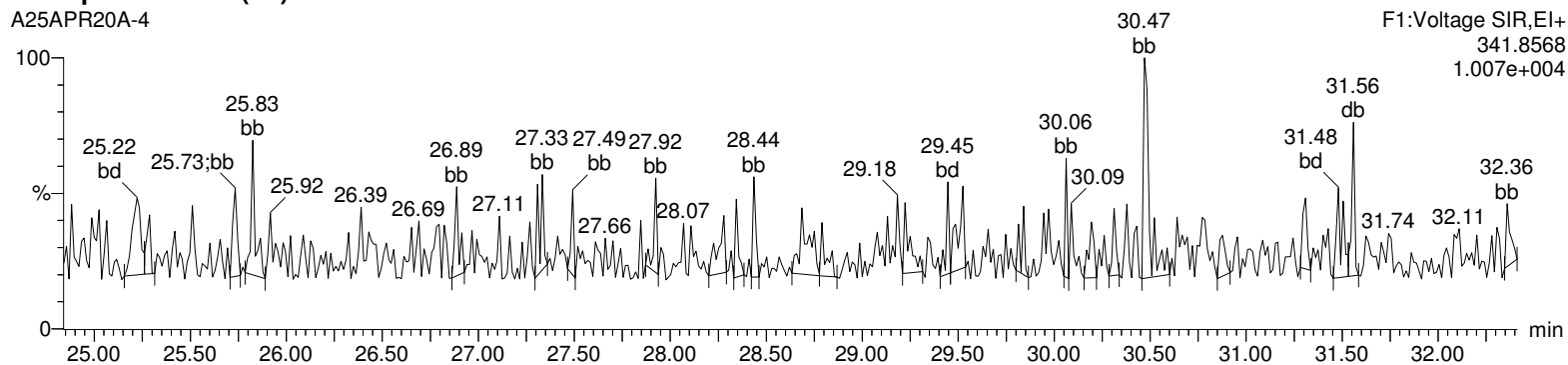
Total-pentafurans (F1)

A25APR20A-4



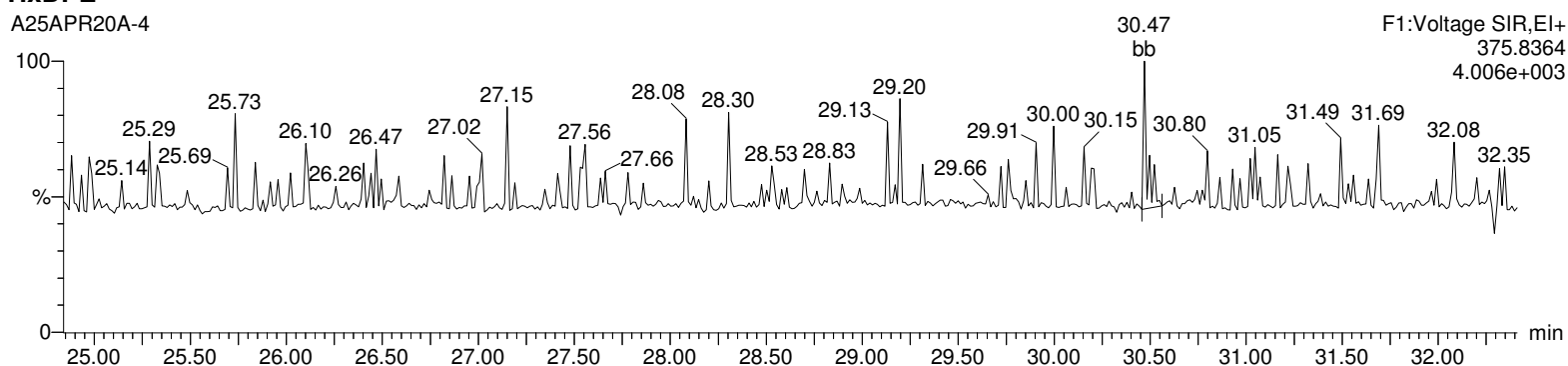
Total-pentafurans (F1)

A25APR20A-4



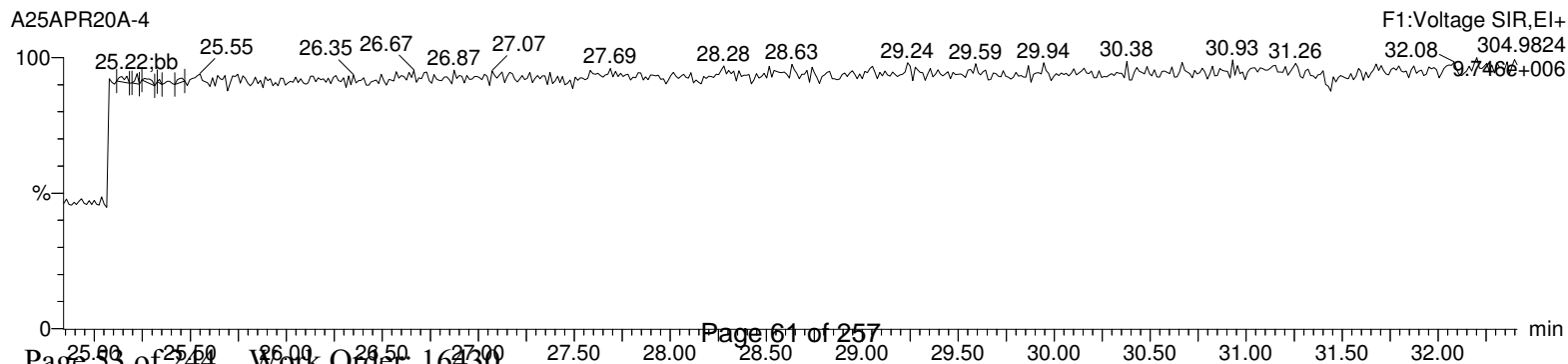
HxDPE

A25APR20A-4



Lock Mass F1

A25APR20A-4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

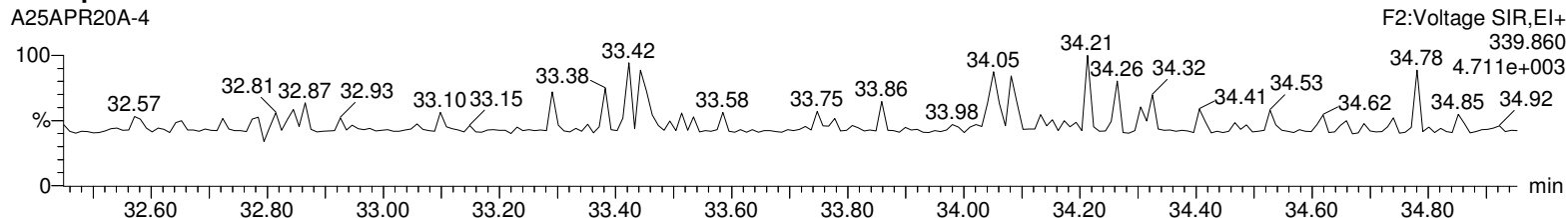
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

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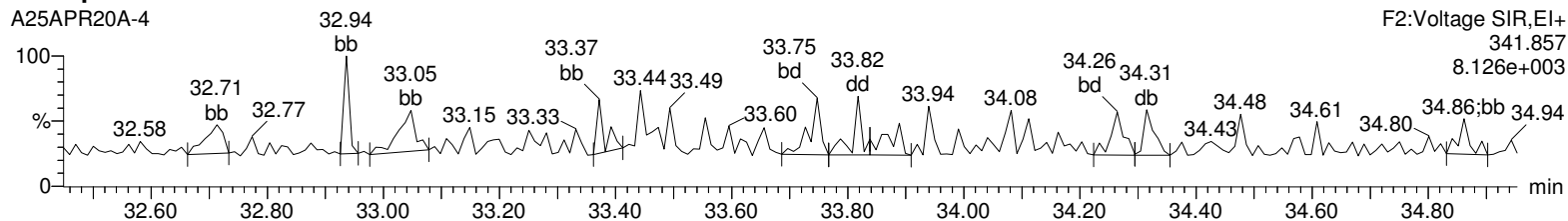
Total-pentafurans

A25APR20A-4



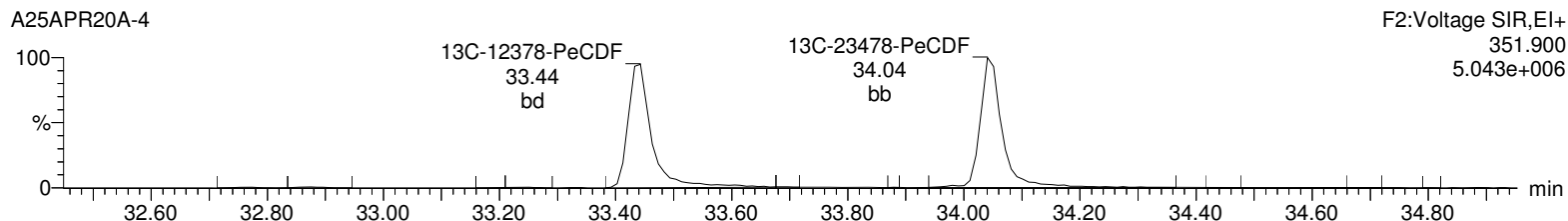
Total-pentafurans

A25APR20A-4



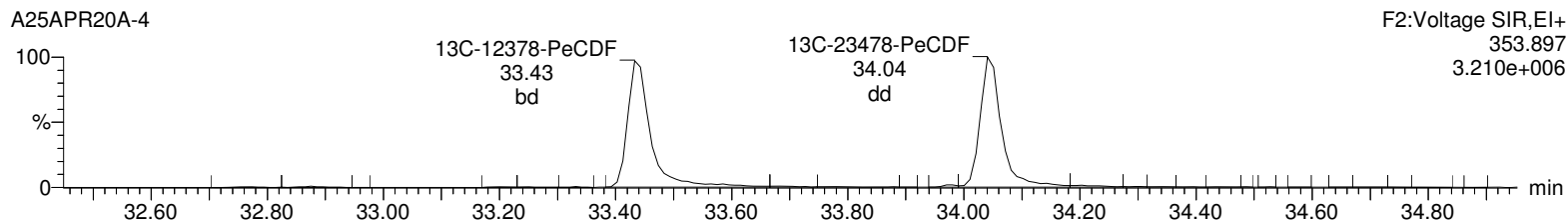
13C-12378-PeCDF

A25APR20A-4



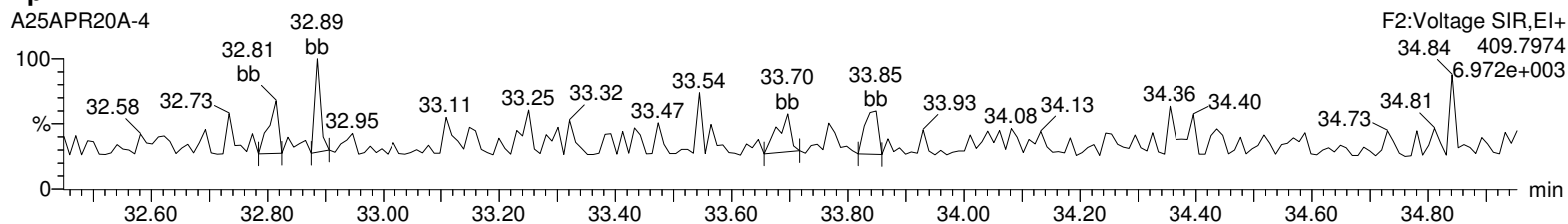
13C-12378-PeCDF

A25APR20A-4



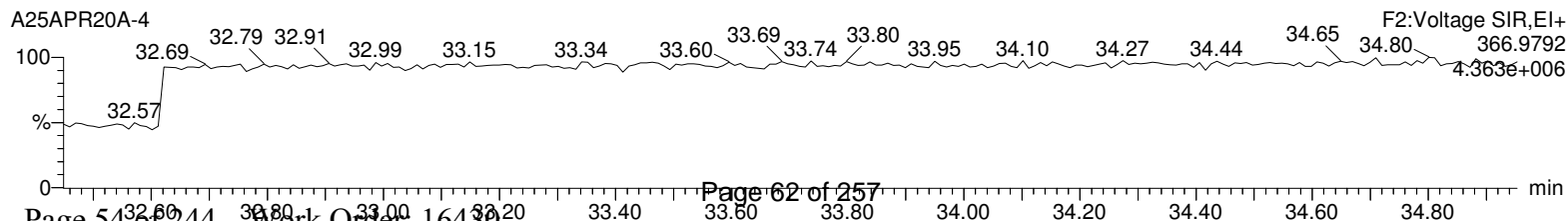
HpDPE

A25APR20A-4



Lock Mass F2

A25APR20A-4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

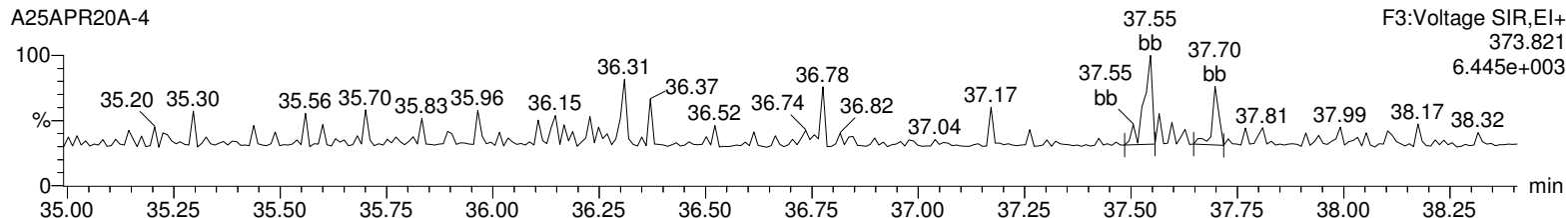
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

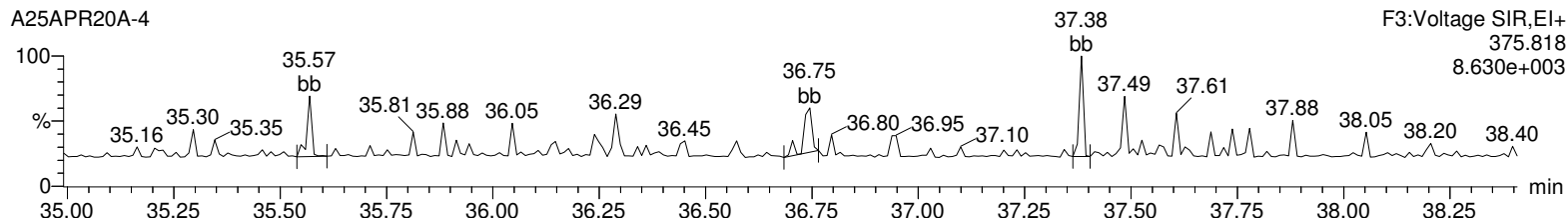
Total-hexafurans

A25APR20A-4



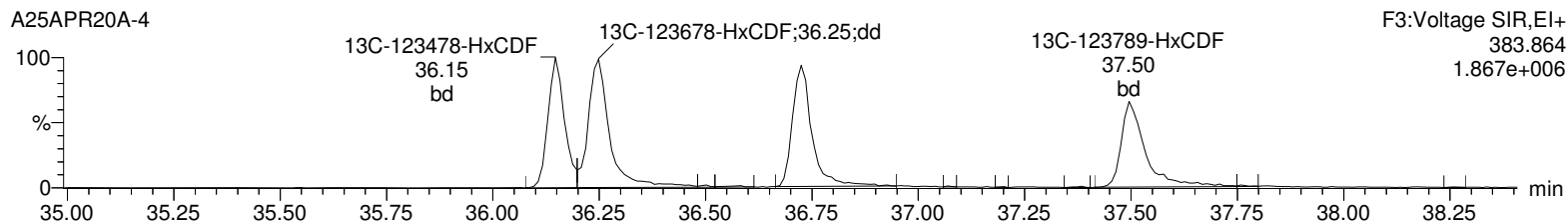
Total-hexafurans

A25APR20A-4



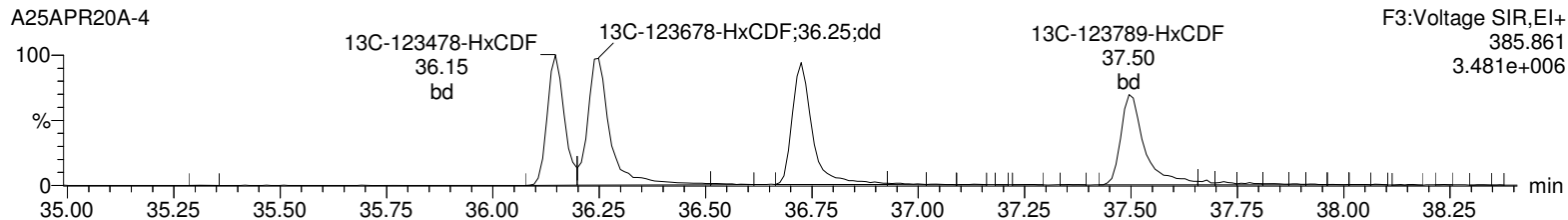
13C-123478-HxCDF

A25APR20A-4



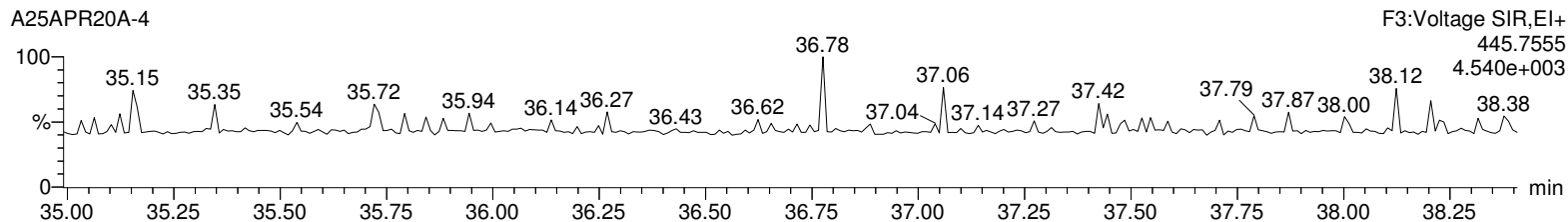
13C-123478-HxCDF

A25APR20A-4



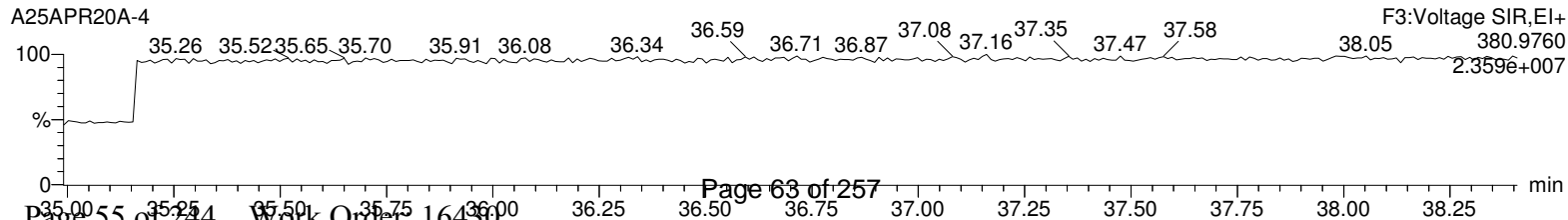
OcDPE

A25APR20A-4



Lock Mass F3

A25APR20A-4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

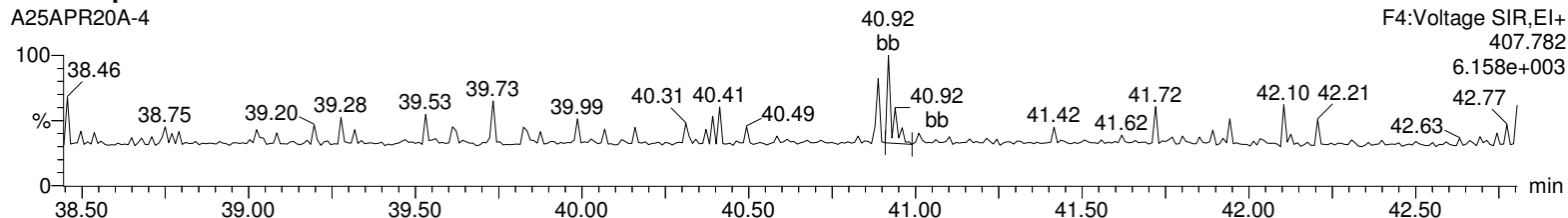
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-4, Date: 25-Apr-2020, Time: 13:42:22, ID: 12026457-2 MB, Description: , Job: %613%, Task: HRP750_2, User: MLL

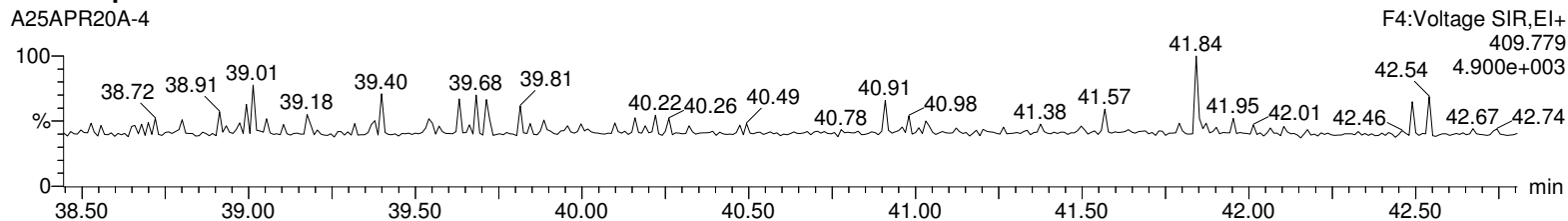
Total-heptafurans

A25APR20A-4



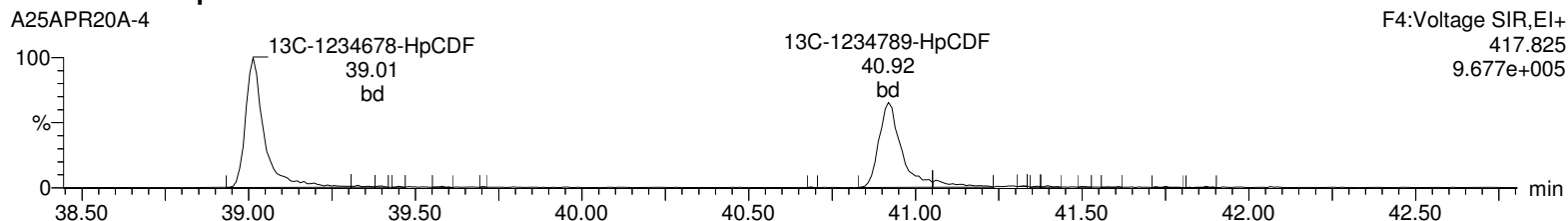
Total-heptafurans

A25APR20A-4



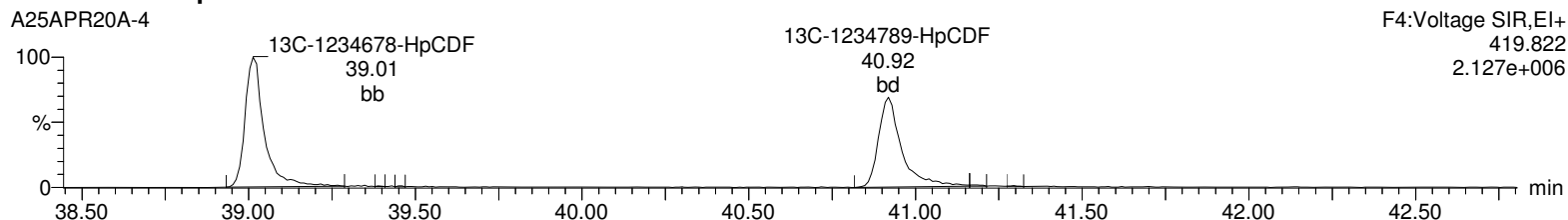
13C-1234678-HpCDF

A25APR20A-4



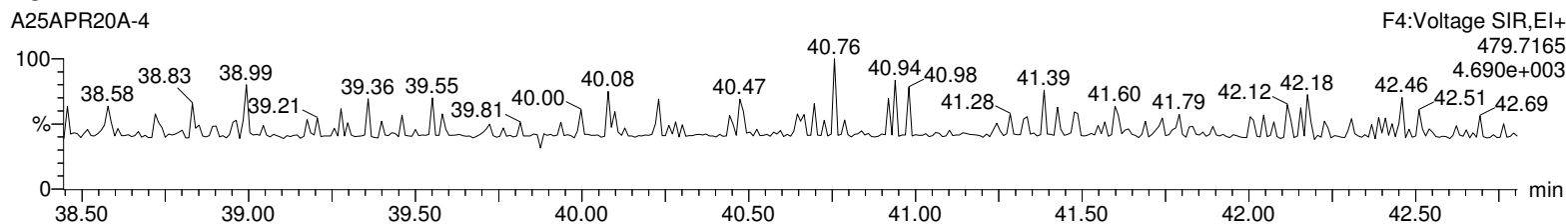
13C-1234678-HpCDF

A25APR20A-4



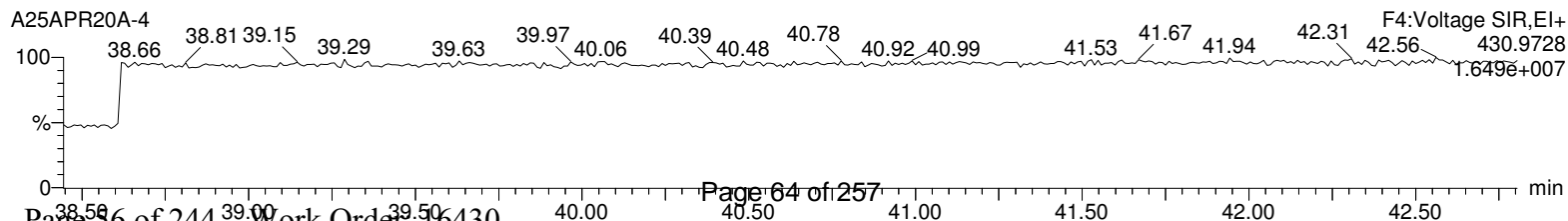
NoDPE

A25APR20A-4



Lock Mass F4

A25APR20A-4



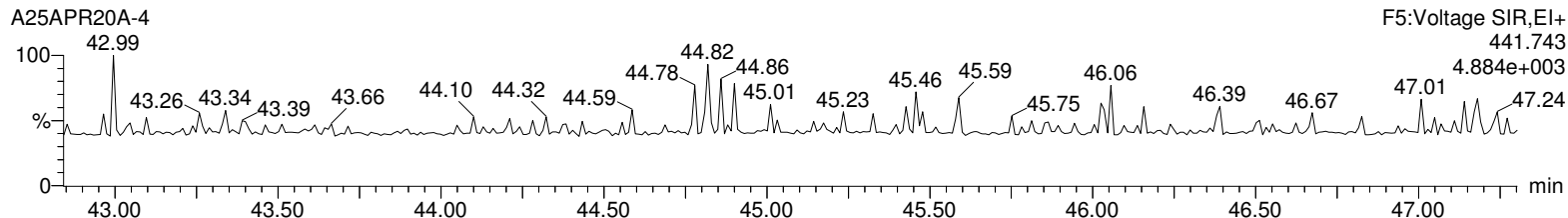
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

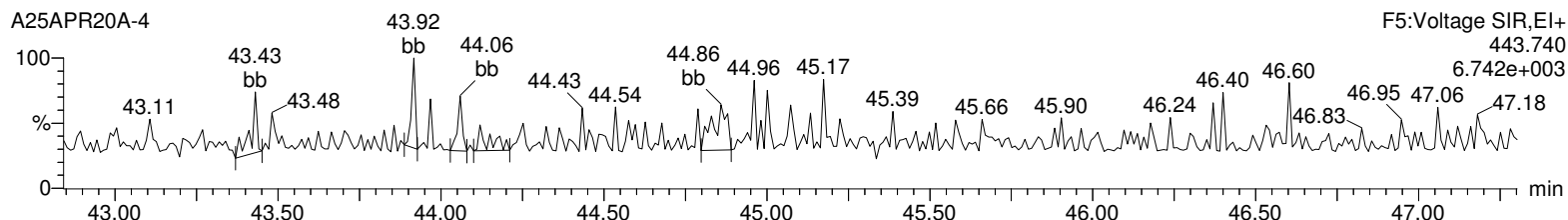
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

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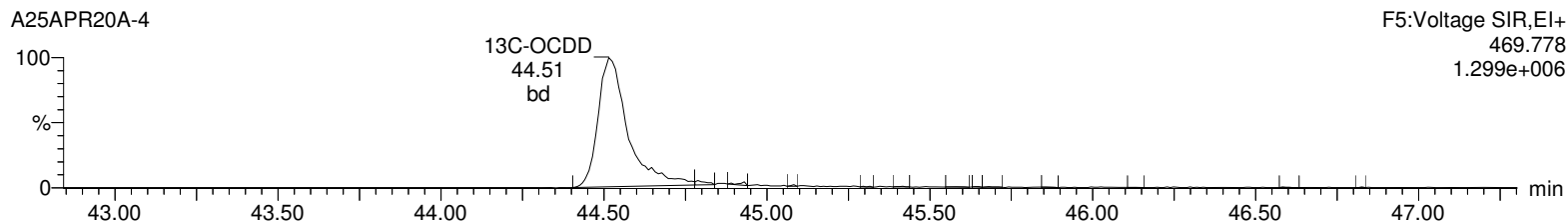
OCDF



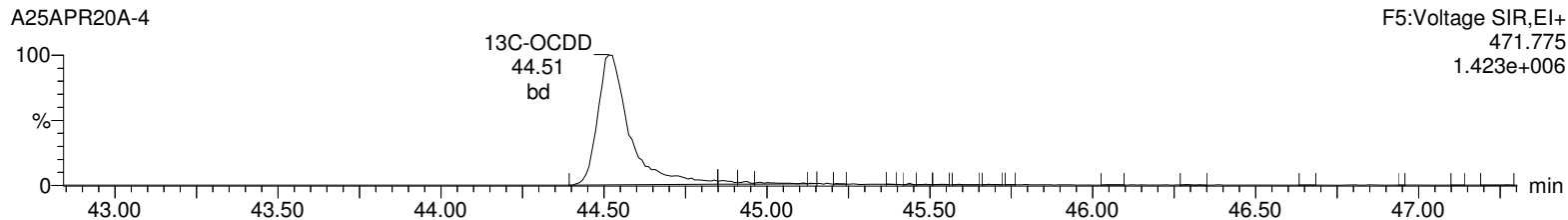
OCDF



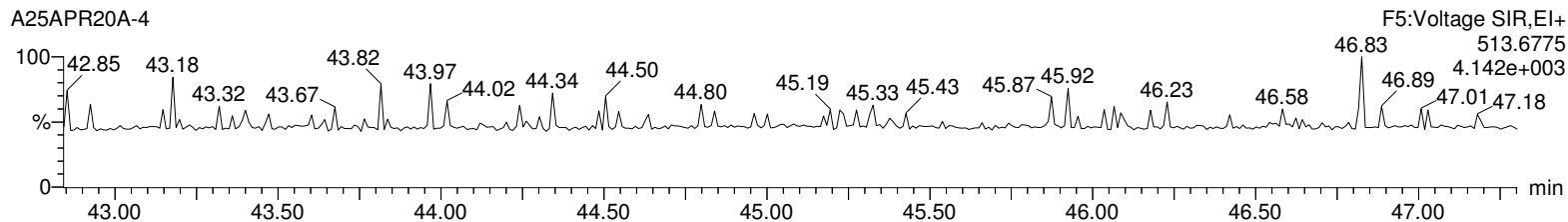
13C-OCDD



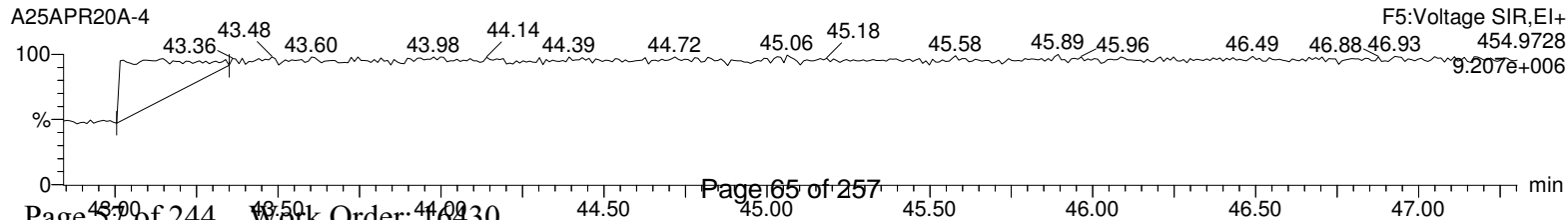
13C-OCDD



DeDPE



Lock Mass F5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-25593	Client: CALS001	Project: CALS00214
Lab Sample ID: 12026458		Matrix: WATER
Client Sample: QC for batch 43605		
Client ID: LCS for batch 43605		Prep Basis: As Received
Batch ID: 43611	Method: EPA Method 1613B	
Run Date: 04/25/2020 12:03	Analyst: MLL	Instrument: HRP750
Data File: A25APR20A-2		Dilution: 1
Prep Batch: 43605	Prep Method: SW846 3520C	
Prep Date: 19-APR-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.199	ng/L	0.00362	0.0100
40321-76-4	1,2,3,7,8-PeCDD		1.01	ng/L	0.00430	0.0500
39227-28-6	1,2,3,4,7,8-HxCDD		0.987	ng/L	0.00914	0.0500
57653-85-7	1,2,3,6,7,8-HxCDD		0.986	ng/L	0.00854	0.0500
19408-74-3	1,2,3,7,8,9-HxCDD		1.03	ng/L	0.00892	0.0500
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.912	ng/L	0.0102	0.0500
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1.88	ng/L	0.0256	0.100
51207-31-9	2,3,7,8-TCDF		0.177	ng/L	0.00412	0.0100
57117-41-6	1,2,3,7,8-PeCDF		0.919	ng/L	0.00848	0.0500
57117-31-4	2,3,4,7,8-PeCDF		1.05	ng/L	0.00770	0.0500
70648-26-9	1,2,3,4,7,8-HxCDF		0.972	ng/L	0.00996	0.0500
57117-44-9	1,2,3,6,7,8-HxCDF		0.996	ng/L	0.0101	0.0500
60851-34-5	2,3,4,6,7,8-HxCDF		0.933	ng/L	0.0101	0.0500
72918-21-9	1,2,3,7,8,9-HxCDF		0.970	ng/L	0.0142	0.0500
67562-39-4	1,2,3,4,6,7,8-HpCDF		0.962	ng/L	0.00978	0.0500
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.927	ng/L	0.0136	0.0500
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.83	ng/L	0.0218	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.90	2.00	ng/L	95.0	(20%-175%)
13C-1,2,3,7,8-PeCDD		2.03	2.00	ng/L	102	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.54	2.00	ng/L	77.1	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.89	2.00	ng/L	94.6	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.84	2.00	ng/L	92.0	(22%-166%)
13C-OCDD		3.39	4.00	ng/L	84.7	(13%-199%)
13C-2,3,7,8-TCDF		1.82	2.00	ng/L	91.2	(22%-152%)
13C-1,2,3,7,8-PeCDF		2.13	2.00	ng/L	107	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.95	2.00	ng/L	97.6	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.55	2.00	ng/L	77.7	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.70	2.00	ng/L	85.0	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.75	2.00	ng/L	87.3	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.68	2.00	ng/L	84.1	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.68	2.00	ng/L	84.0	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.73	2.00	ng/L	86.6	(20%-186%)
37Cl-2,3,7,8-TCDD		0.204	0.200	ng/L	102	(31%-191%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time
 Printed: Monday, April 27, 2020 13:05:34 Eastern Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A23APR20.mdb 23 Apr 2020 09:24:32
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.52e4	1.98e4	3.51e4	31.41	1.000	0.77	NO	9.950	0.181	3.24e5	3269	99.1	3.79e5	1559	243.3	bb	bb
2	12378-PeCDD	7.62e4	4.60e4	1.22e5	34.26	1.000	1.66	NO	50.455	0.215	1.81e6	3177	568.2	1.11e6	1715	650.1	bd	bd
3	123478-HxCDD	5.97e4	4.69e4	1.07e5	36.88	1.000	1.27	NO	49.333	0.457	1.26e6	5589	225.3	9.88e5	2791	354.0	bd	bd
4	123678-HxCDD	8.19e4	6.25e4	1.44e5	36.97	1.001	1.31	NO	49.281	0.427	1.39e6	5589	248.7	1.10e6	2791	394.6	dd	dd
5	123789-HxCDD	7.30e4	5.59e4	1.29e5	37.21	1.007	1.31	NO	51.447	0.446	1.17e6	5589	210.1	9.59e5	2791	343.5	dd	dd
6	1234678-HpCDD	4.99e4	4.77e4	9.75e4	40.28	1.000	1.04	NO	45.589	0.512	6.87e5	3627	189.5	6.35e5	2678	237.0	bd	bd
7	OCDD	7.86e4	8.65e4	1.65e5	44.54	1.000	0.91	NO	93.921	1.28	7.88e5	4879	161.5	8.58e5	3829	224.1	bd	bd
8	2378-TCDF	1.62e4	2.04e4	3.66e4	30.76	1.001	0.80	NO	8.829	0.206	2.26e5	1344	167.8	3.01e5	3622	83.0	bd	bb
9	12378-PeCDF	1.05e5	6.85e4	1.74e5	33.45	1.000	1.54	NO	45.964	0.424	2.45e6	8238	297.2	1.62e6	6653	243.6	bd	bd
10	23478-PeCDF	1.23e5	7.56e4	1.99e5	34.06	1.000	1.63	NO	52.370	0.385	2.97e6	8238	360.6	1.84e6	6653	275.9	bd	bb
11	123478-HxCDF	8.33e4	6.85e4	1.52e5	36.17	1.000	1.22	NO	48.601	0.498	1.89e6	6599	286.7	1.50e6	7054	212.4	bd	bd
12	123678-HxCDF	1.01e5	8.18e4	1.83e5	36.27	1.000	1.24	NO	49.779	0.507	1.97e6	6599	298.8	1.66e6	7054	236.0	dd	dd
13	234678-HxCDF	9.21e4	7.43e4	1.66e5	36.74	1.000	1.24	NO	46.634	0.506	1.90e6	6599	287.6	1.41e6	7054	199.3	bd	bd
14	123789-HxCDF	7.84e4	6.08e4	1.39e5	37.53	1.000	1.29	NO	48.506	0.710	1.21e6	6599	184.0	9.79e5	7054	138.8	bb	bd
15	1234678-HpCDF	6.90e4	6.55e4	1.35e5	39.03	1.000	1.05	NO	48.114	0.489	1.08e6	3834	282.7	1.11e6	4574	241.8	bd	bd
16	1234789-HpCDF	5.57e4	5.31e4	1.09e5	40.94	1.000	1.05	NO	46.340	0.682	7.47e5	3834	194.8	7.14e5	4574	156.1	bd	bd
17	OCDF	9.06e4	9.73e4	1.88e5	44.83	1.007	0.93	NO	91.598	1.09	8.73e5	4581	190.6	1.01e6	4025	250.0	bd	bb
18	13C-2378-TCDD	1.71e5	2.27e5	3.98e5	31.40	1.015	0.75	NO	95.036	0.326	3.25e6	6175	525.8	4.04e6	3088	1307.6	bb	bd
19	13C-12378-PeCDD	1.74e5	1.10e5	2.84e5	34.25	1.107	1.58	NO	101.668	0.341	4.08e6	3079	1326.3	2.56e6	3379	756.4	bb	bd
20	13C-123478-HxCDD	1.28e5	1.02e5	2.30e5	36.87	0.991	1.25	NO	77.064	0.703	2.72e6	7722	351.9	2.22e6	5583	397.0	bd	bd
21	13C-123678-HxCDD	1.72e5	1.39e5	3.10e5	36.95	0.993	1.24	NO	94.581	0.639	2.88e6	7722	372.4	2.32e6	5583	414.9	dd	dd
22	13C-1234678-HpCDD	1.05e5	1.01e5	2.06e5	40.27	1.082	1.05	NO	92.035	0.619	1.51e6	4663	324.7	1.46e6	4124	353.9	bd	bd
23	13C-OCDD	1.71e5	1.91e5	3.62e5	44.53	1.197	0.89	NO	169.414	0.785	1.65e6	4847	340.2	1.83e6	5800	316.1	bd	bd
24	13C-2378-TCDF	1.84e5	2.40e5	4.24e5	30.73	0.993	0.76	NO	91.231	0.487	2.68e6	10406	257.1	3.49e6	4950	704.3	bb	bb
25	13C-12378-PeCDF	2.46e5	1.54e5	4.00e5	33.44	1.081	1.60	NO	106.569	0.726	5.72e6	9790	584.3	3.60e6	8715	412.6	bd	bd
26	13C-23478-PeCDF	2.34e5	1.51e5	3.85e5	34.05	1.100	1.55	NO	97.562	0.691	5.96e6	9790	608.6	3.68e6	8715	421.7	bd	dd
27	13C-123478-HxCDF	9.78e4	1.89e5	2.87e5	36.16	0.972	0.52	NO	77.699	0.709	2.15e6	8273	259.8	4.13e6	8358	493.9	bd	bd
28	13C-123678-HxCDF	1.22e5	2.31e5	3.53e5	36.26	0.975	0.53	NO	85.043	0.632	2.24e6	8273	270.5	4.43e6	8358	530.6	dd	dd
29	13C-234678-HxCDF	1.10e5	2.04e5	3.14e5	36.74	0.988	0.54	NO	87.256	0.728	2.09e6	8273	252.5	3.79e6	8358	453.0	dd	bd
30	13C-123789-HxCDF	9.16e4	1.79e5	2.71e5	37.51	1.008	0.51	NO	84.097	0.814	1.54e6	8273	185.6	2.97e6	8358	355.1	bd	bd

Quantify Sample Summary Report
 Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time
 Printed: Monday, April 27, 2020 13:05:34 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	7.54e4	1.68e5	2.43e5	39.02	1.049	0.45	NO	83.980	0.584	1.16e6	4931	235.2	2.63e6	5793	453.8	bd	bd
32	13C-1234789-HpCDF	5.65e4	1.39e5	1.95e5	40.93	1.100	0.41	NO	86.626	0.750	7.43e5	4931	150.6	1.80e6	5793	310.8	bd	bd
33	13C-1234-TCDD	1.62e5	2.10e5	3.71e5	30.94	0.000	0.77	NO	100.000	0.368	2.74e6	6175	443.9	3.64e6	3088	1178.2	bb	bb
34	13C-123789-HxCDD	1.85e5	1.47e5	3.33e5	37.20	0.000	1.26	NO	100.000	0.630	2.94e6	7722	380.9	2.43e6	5583	436.0	dd	dd
35	37Cl-2378-TCDD	4.02e4		4.02e4	31.41	1.015			10.194	0.0796	8.28e5	2129	388.8				bb	

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

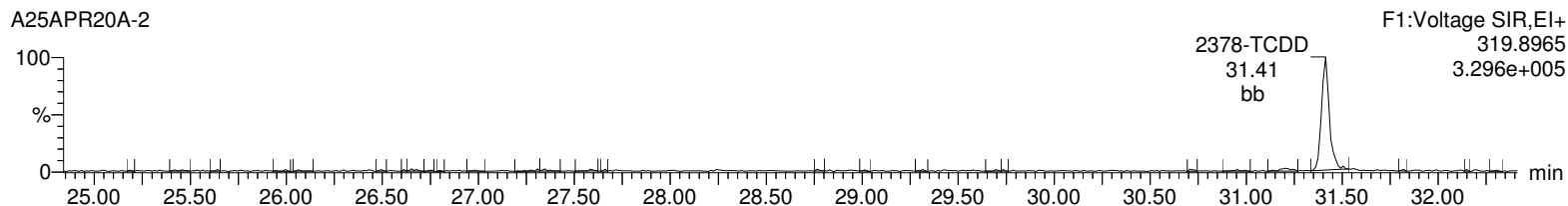
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A23APR20.mdb 23 Apr 2020 09:24:32

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

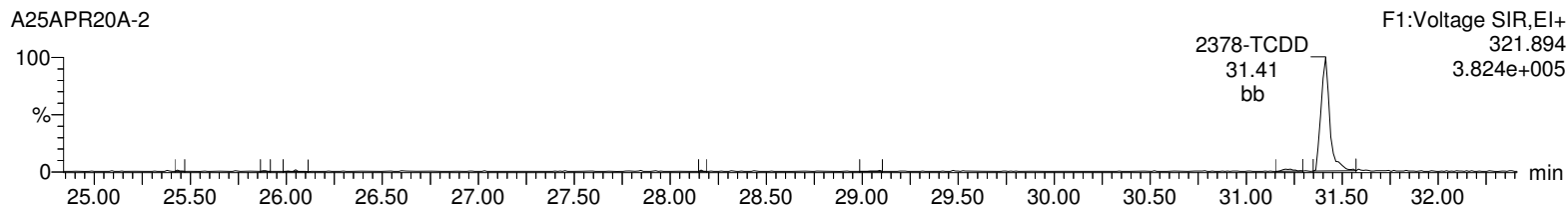
Total-tetradoxins

A25APR20A-2



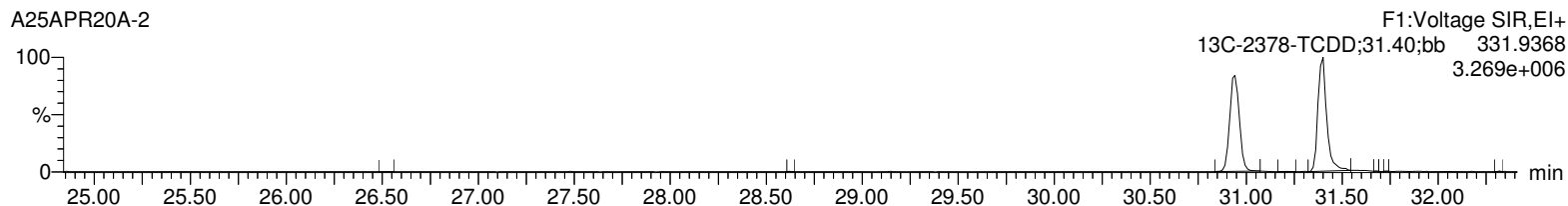
Total-tetradoxins

A25APR20A-2



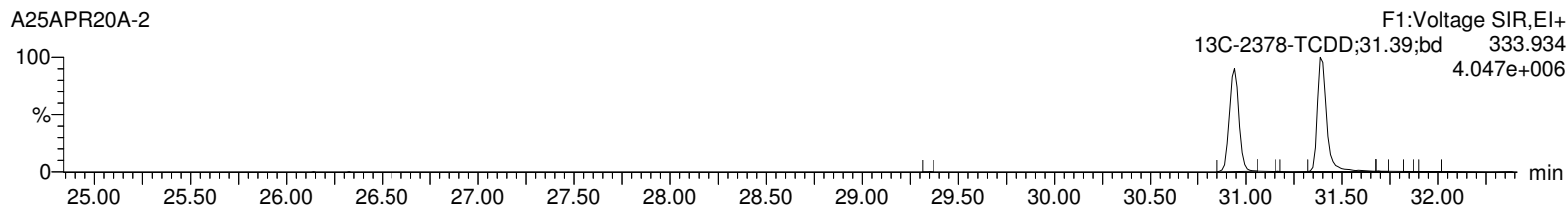
13C-2378-TCDD

A25APR20A-2



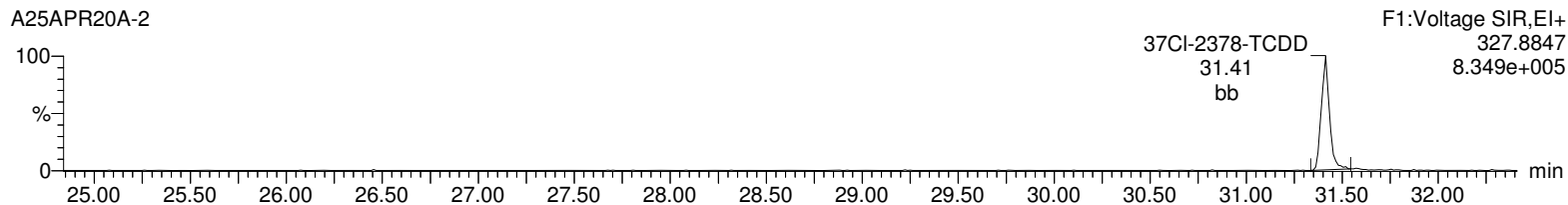
13C-2378-TCDD

A25APR20A-2



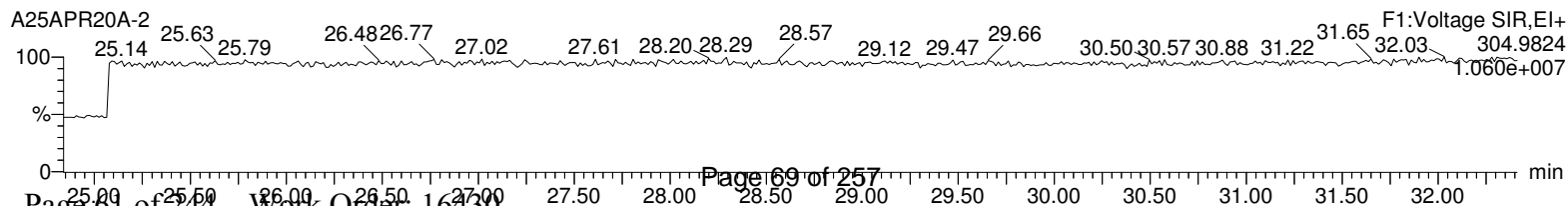
37Cl-2378-TCDD

A25APR20A-2



Lock Mass F1

A25APR20A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

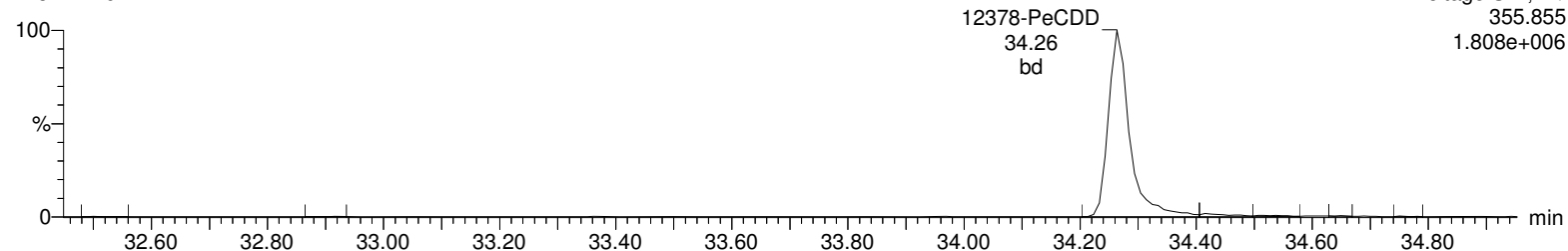
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

Total-pentadioxins

A25APR20A-2

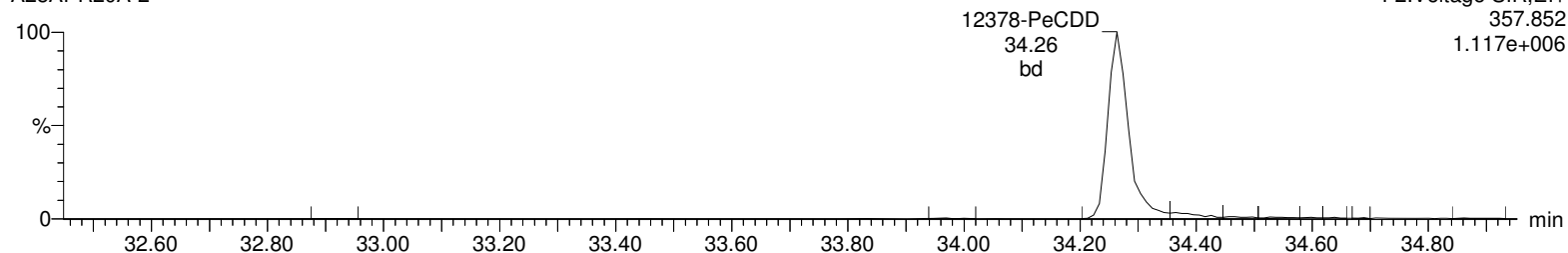
F2:Voltage SIR,EI+



Total-pentadioxins

A25APR20A-2

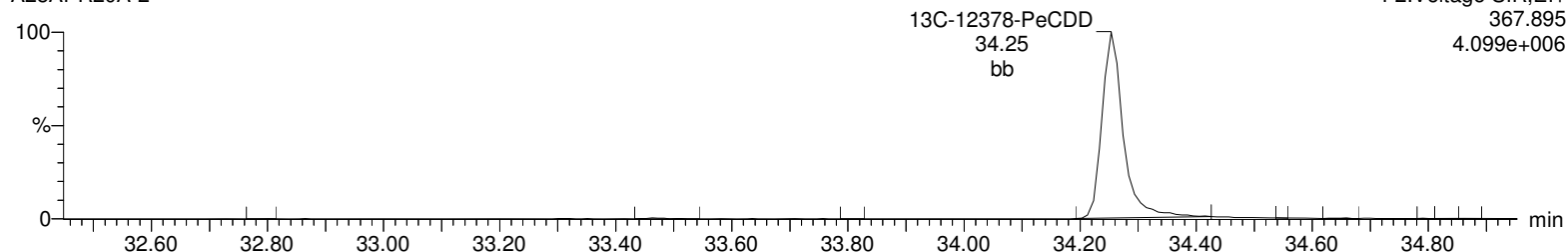
F2:Voltage SIR,EI+



13C-12378-PeCDD

A25APR20A-2

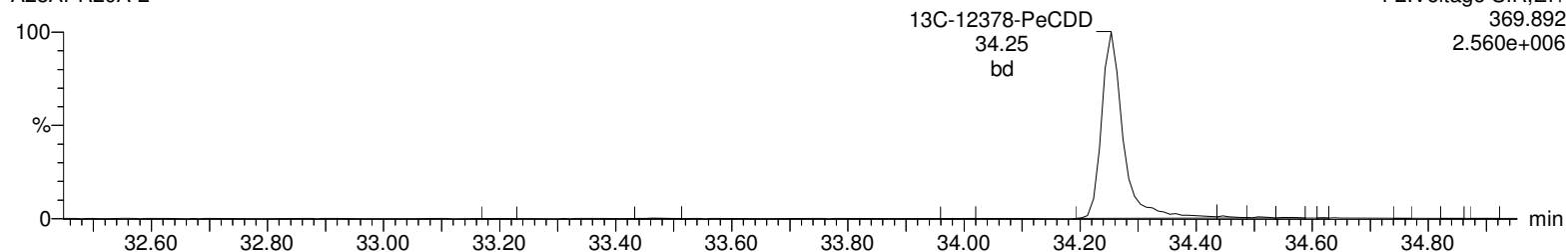
F2:Voltage SIR,EI+



13C-12378-PeCDD

A25APR20A-2

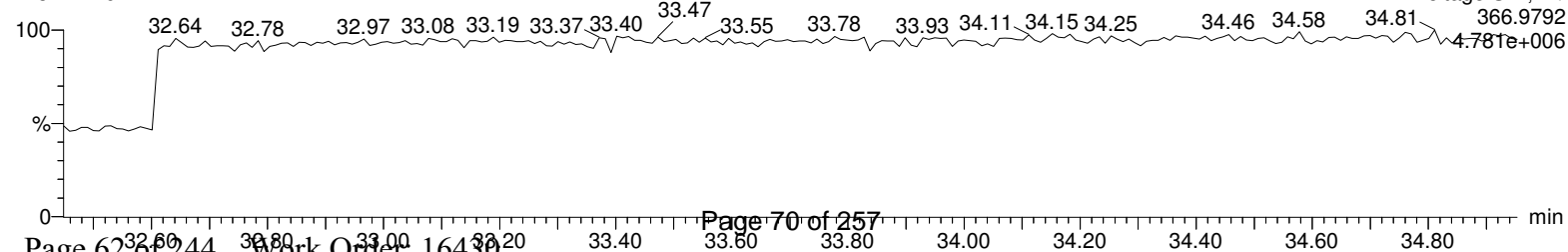
F2:Voltage SIR,EI+



Lock Mass F2

A25APR20A-2

F2:Voltage SIR,EI+



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

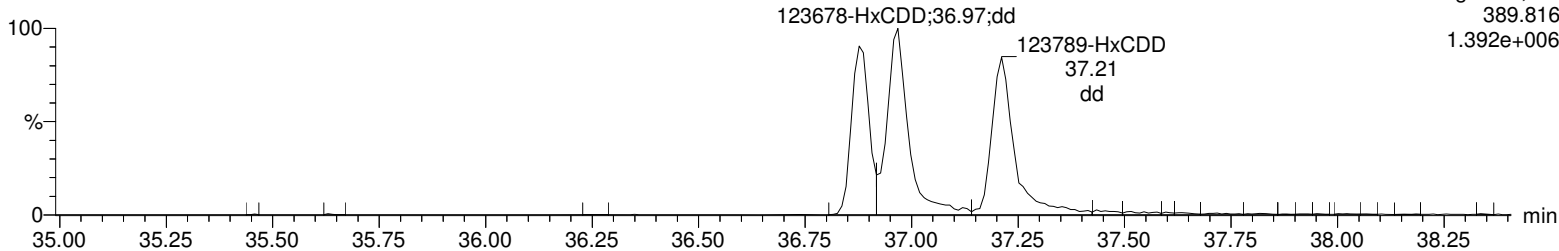
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

Total-hexadioxins

A25APR20A-2

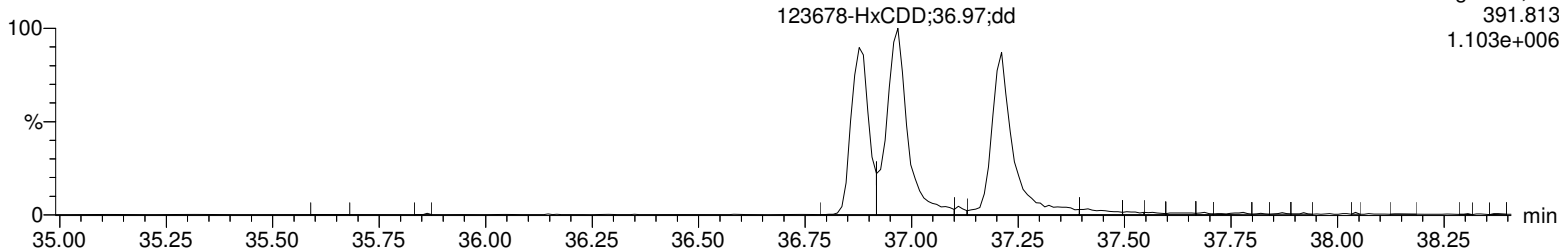
F3:Voltage SIR,EI+
389.816
1.392e+006



Total-hexadioxins

A25APR20A-2

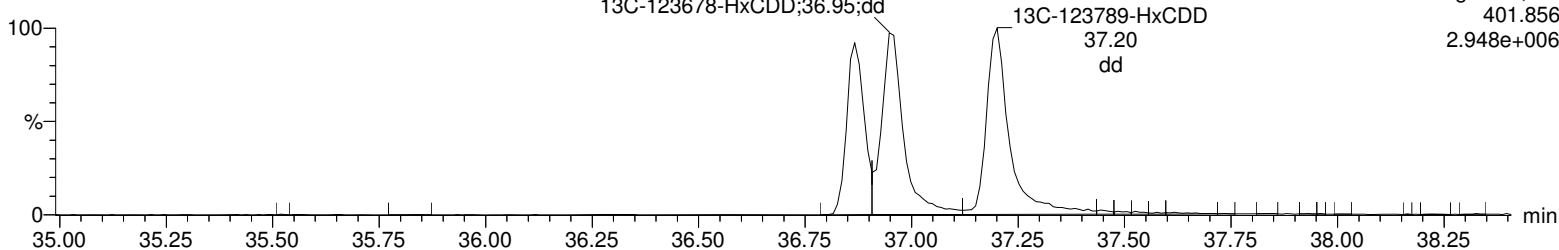
F3:Voltage SIR,EI+
391.813
1.103e+006



13C-123478-HxCDD

A25APR20A-2

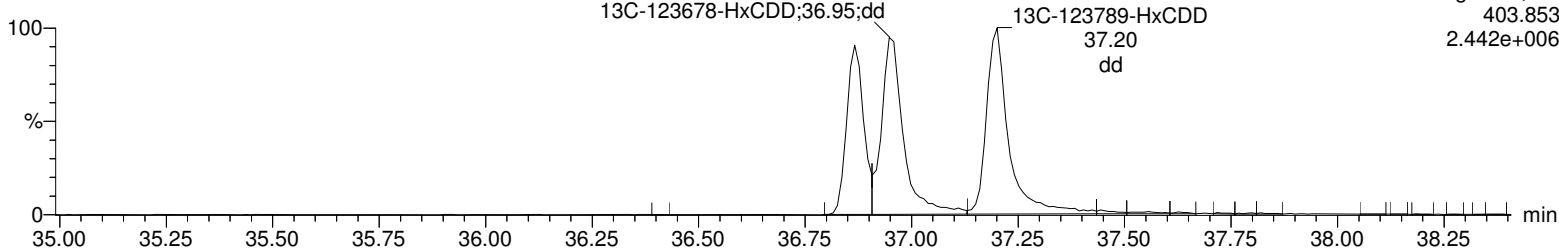
F3:Voltage SIR,EI+
401.856
2.948e+006



13C-123478-HxCDD

A25APR20A-2

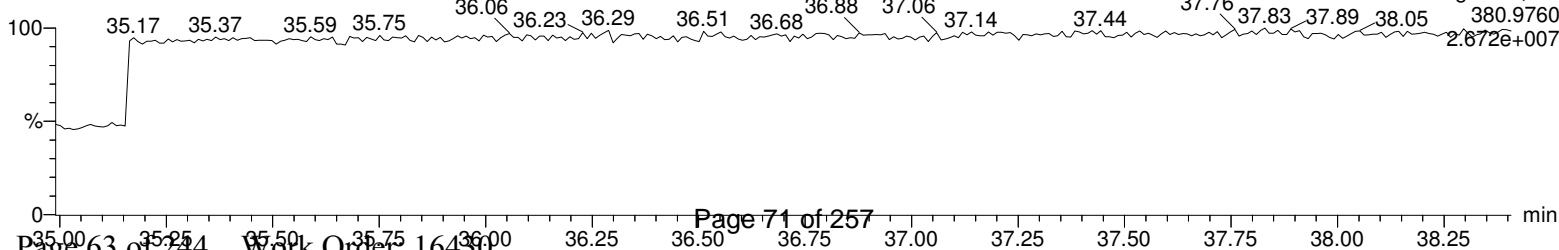
F3:Voltage SIR,EI+
403.853
2.442e+006



Lock Mass F3

A25APR20A-2

F3:Voltage SIR,EI+
380.9760
2.672e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

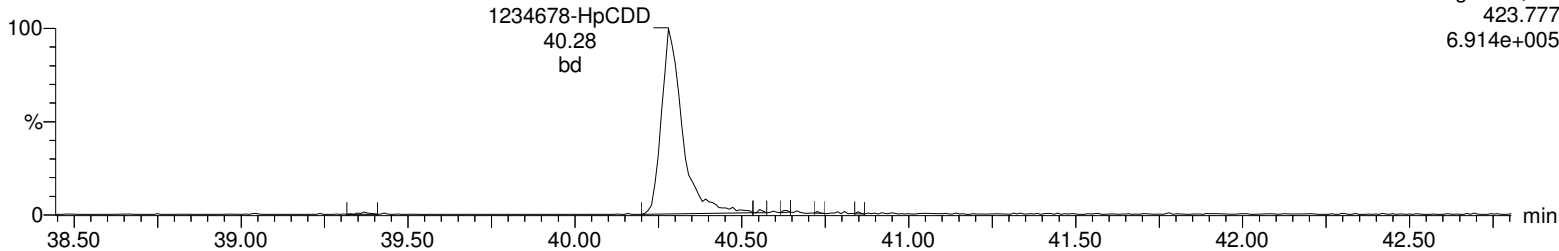
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

Total-heptadioxins

A25APR20A-2

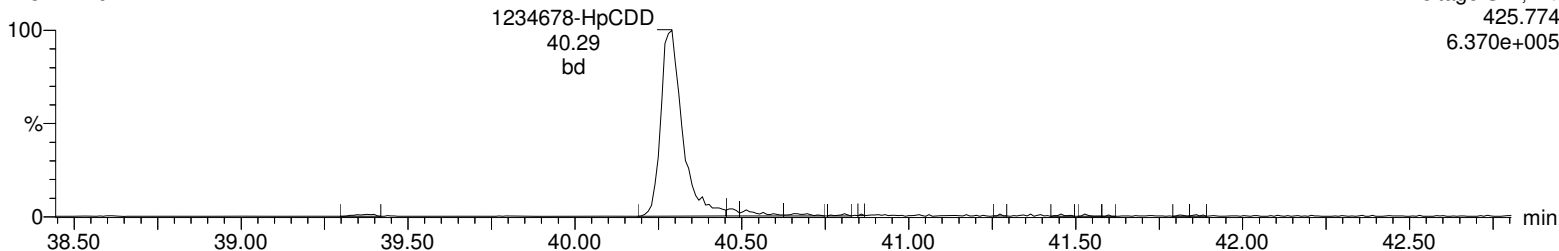
F4:Voltage SIR,EI+
423.777
6.914e+005



Total-heptadioxins

A25APR20A-2

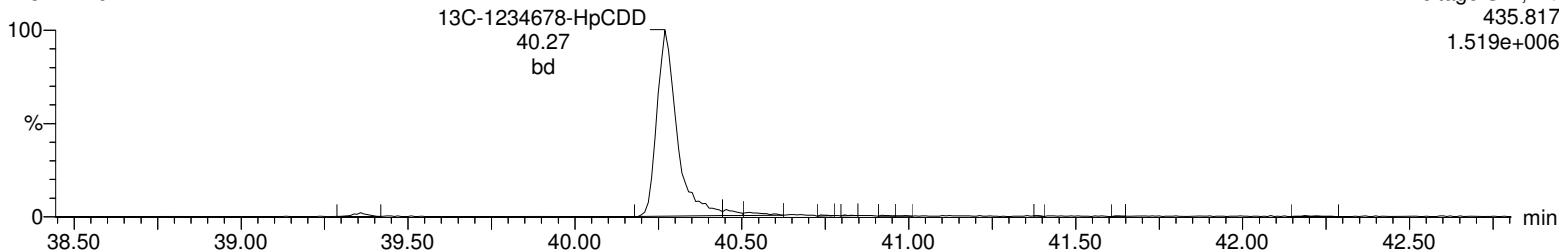
F4:Voltage SIR,EI+
425.774
6.370e+005



13C-1234678-HpCDD

A25APR20A-2

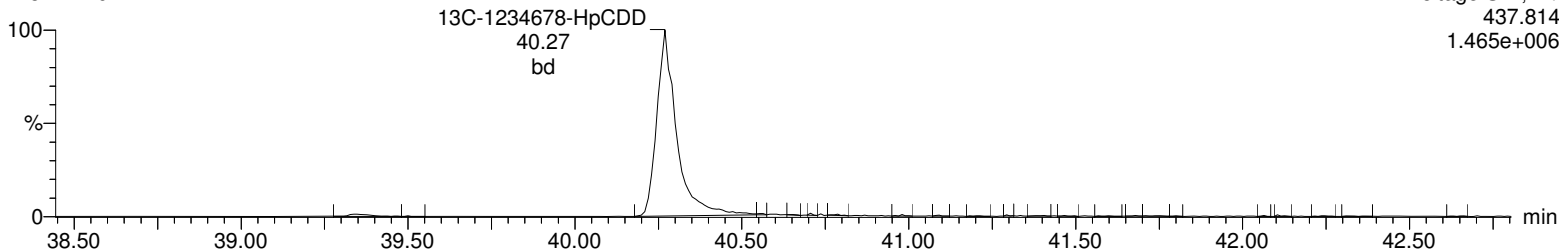
F4:Voltage SIR,EI+
435.817
1.519e+006



13C-1234678-HpCDD

A25APR20A-2

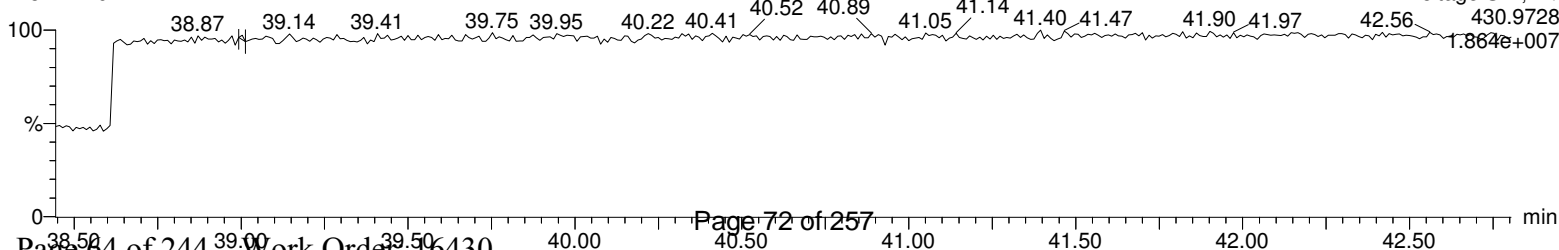
F4:Voltage SIR,EI+
437.814
1.465e+006



Lock Mass F4

A25APR20A-2

F4:Voltage SIR,EI+
430.9728
1.864e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

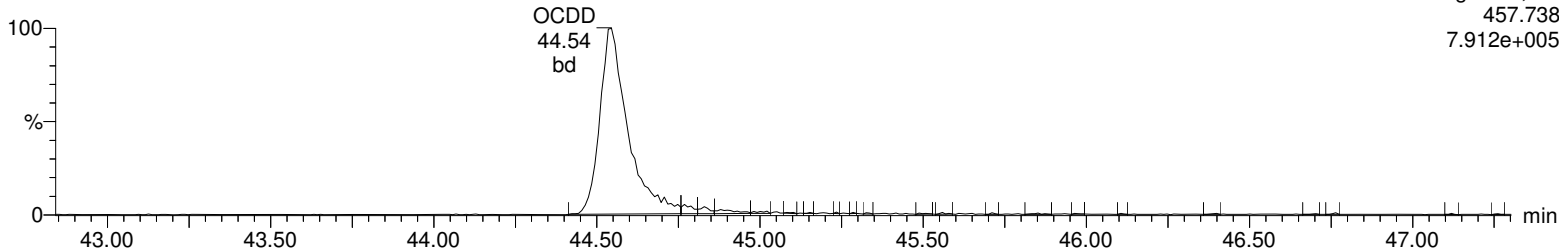
OCDD

A25APR20A-2

F5:Voltage SIR,EI+

457.738

7.912e+005



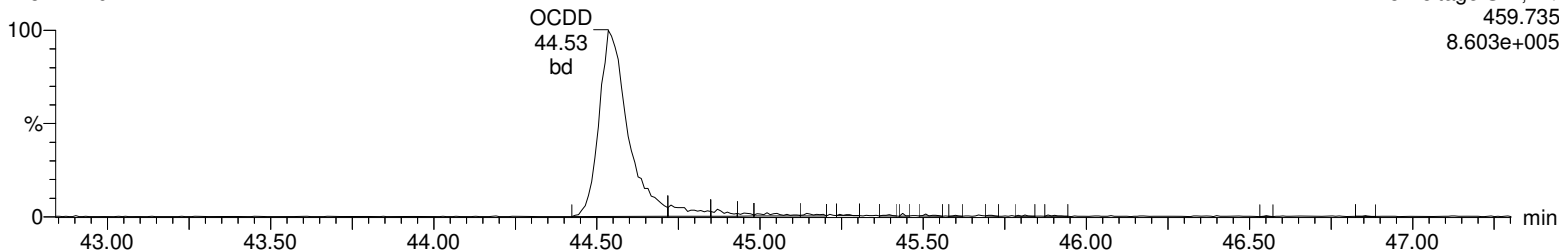
OCDD

A25APR20A-2

F5:Voltage SIR,EI+

459.735

8.603e+005



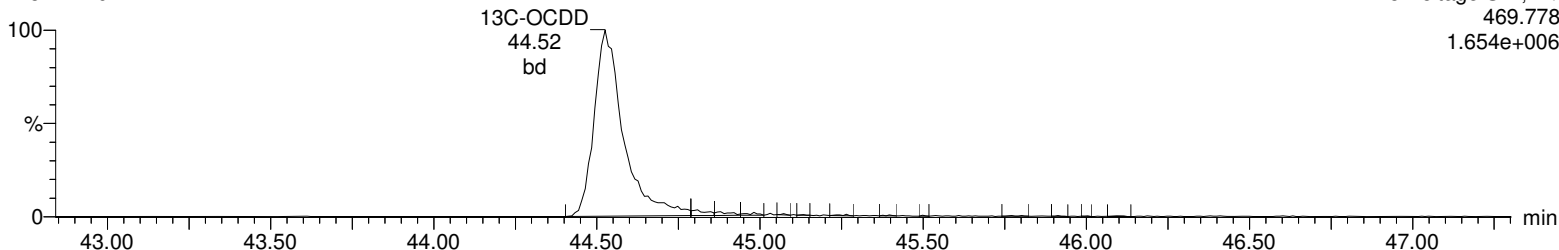
13C-OCDD

A25APR20A-2

F5:Voltage SIR,EI+

469.778

1.654e+006



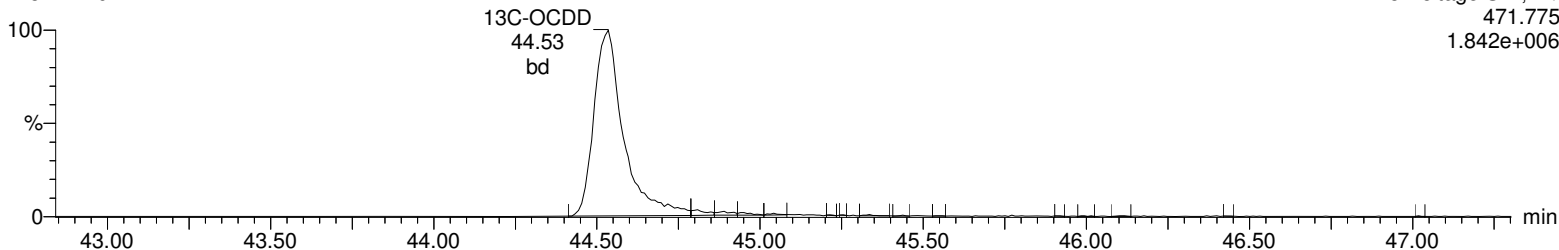
13C-OCDD

A25APR20A-2

F5:Voltage SIR,EI+

471.775

1.842e+006



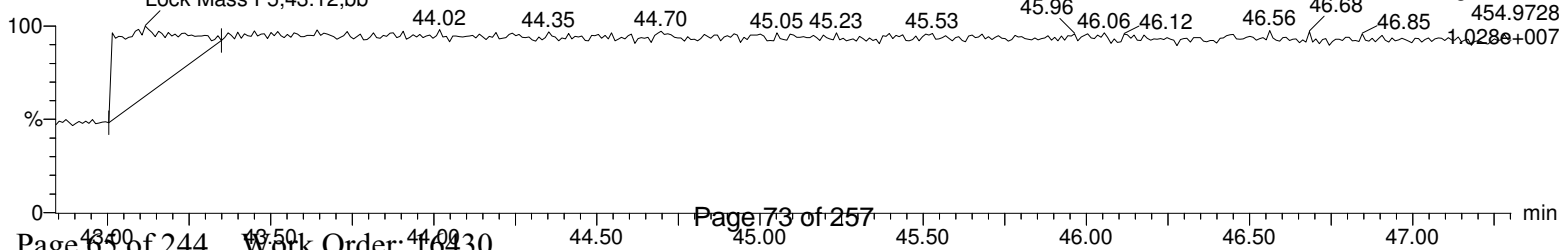
Lock Mass F5

A25APR20A-2 Lock Mass F5;43.12;bb

F5:Voltage SIR,EI+

454.9728

1.028e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

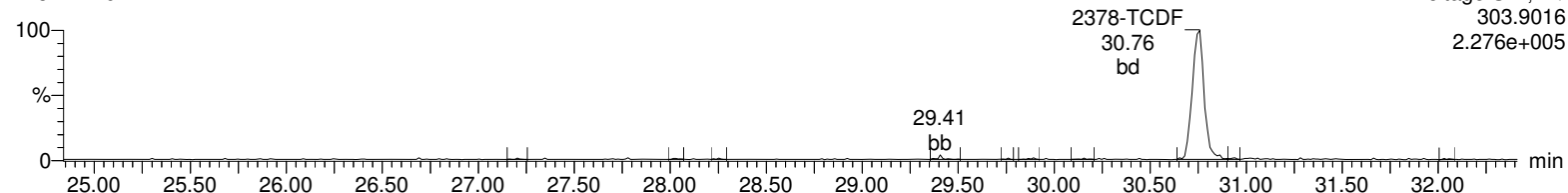
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

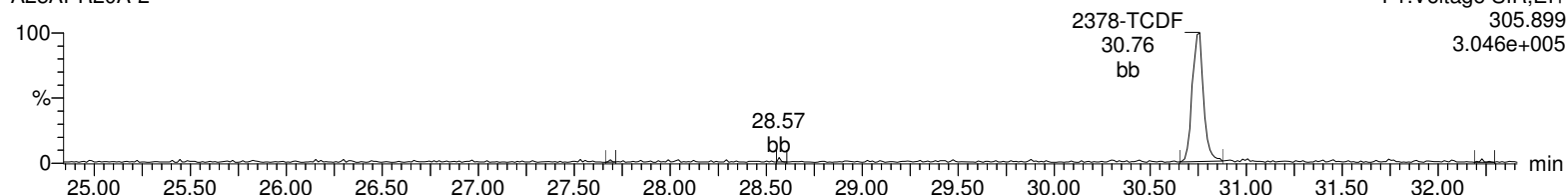
Total-tetrafurans

A25APR20A-2



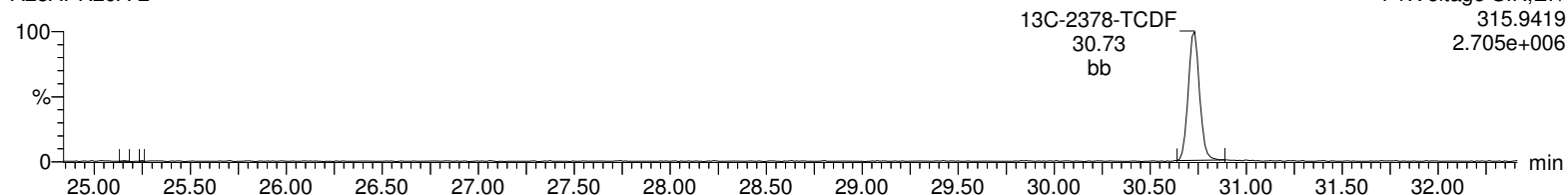
Total-tetrafurans

A25APR20A-2



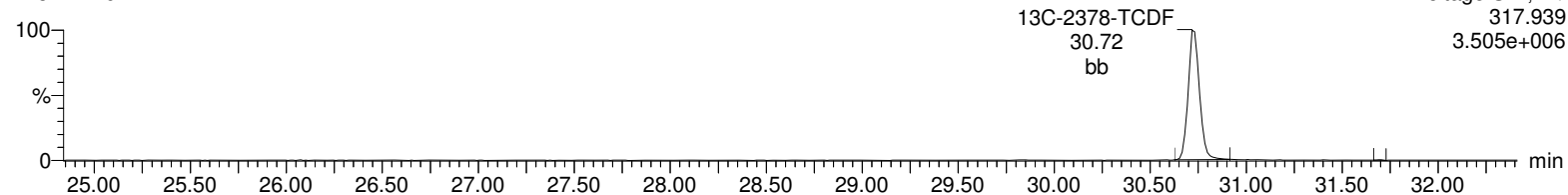
13C-2378-TCDF

A25APR20A-2



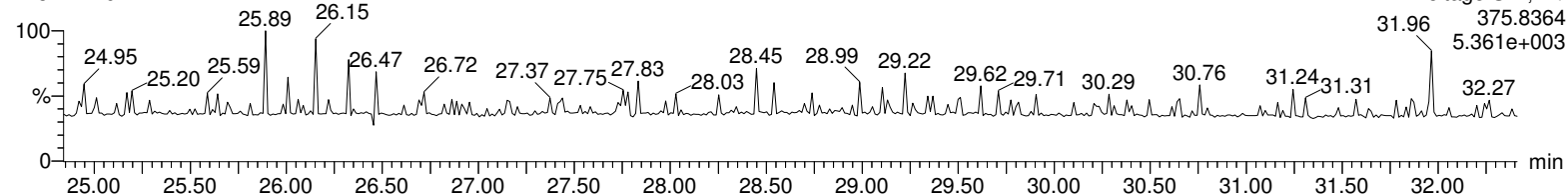
13C-2378-TCDF

A25APR20A-2



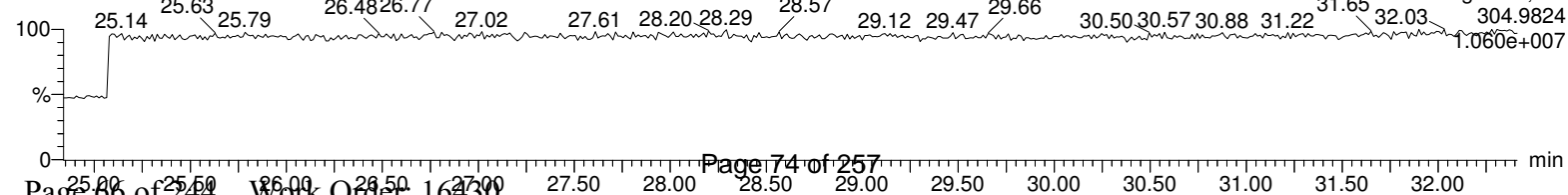
HxDPE

A25APR20A-2



Lock Mass F1

A25APR20A-2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

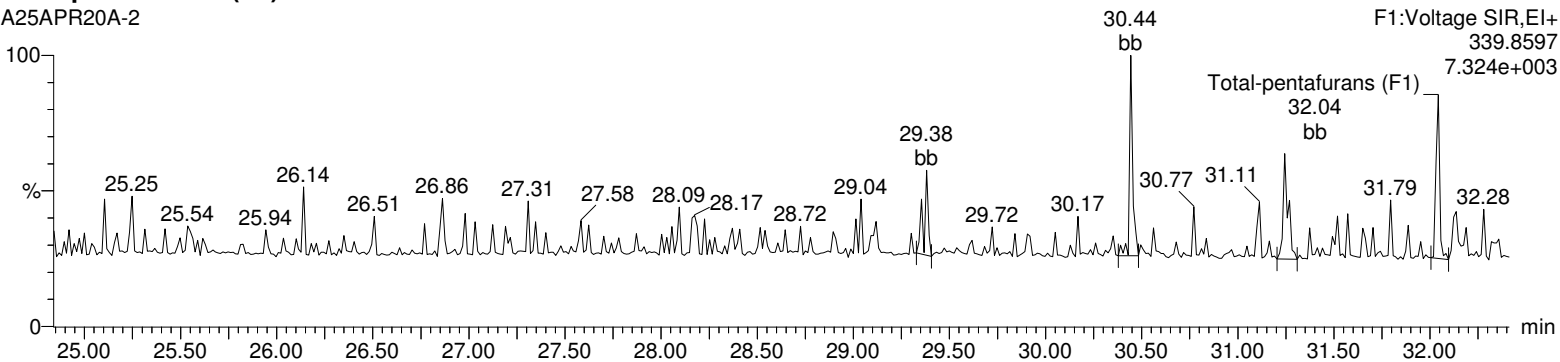
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

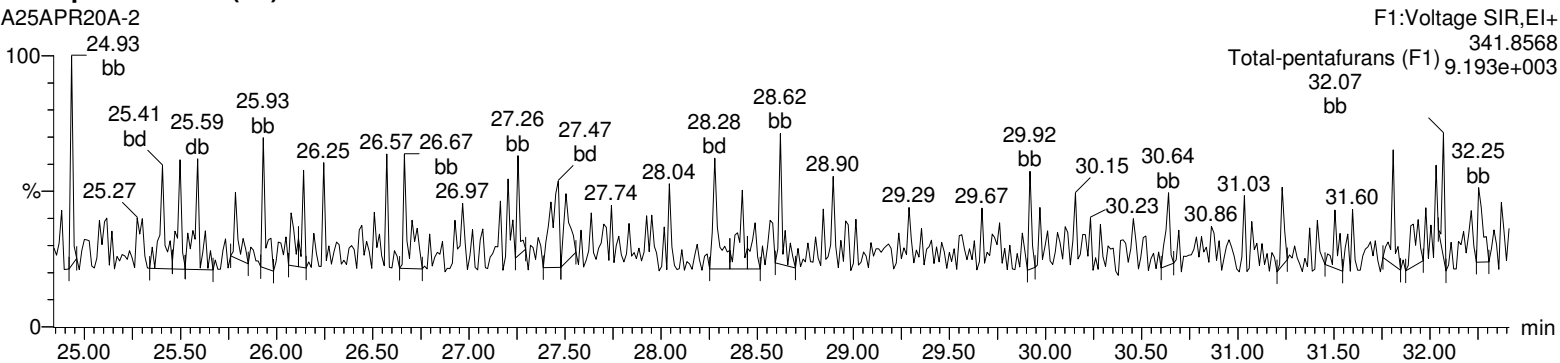
Total-pentafurans (F1)

A25APR20A-2



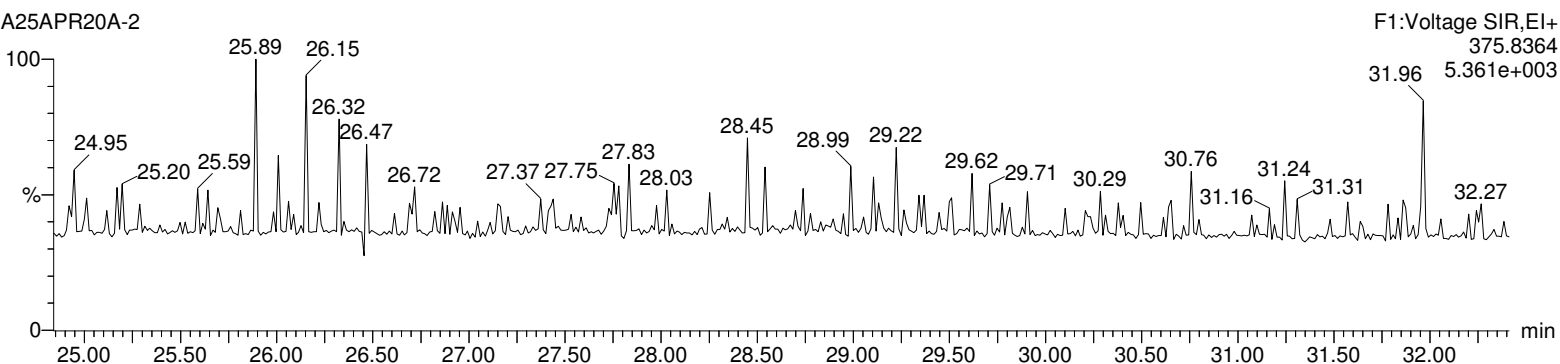
Total-pentafurans (F1)

A25APR20A-2



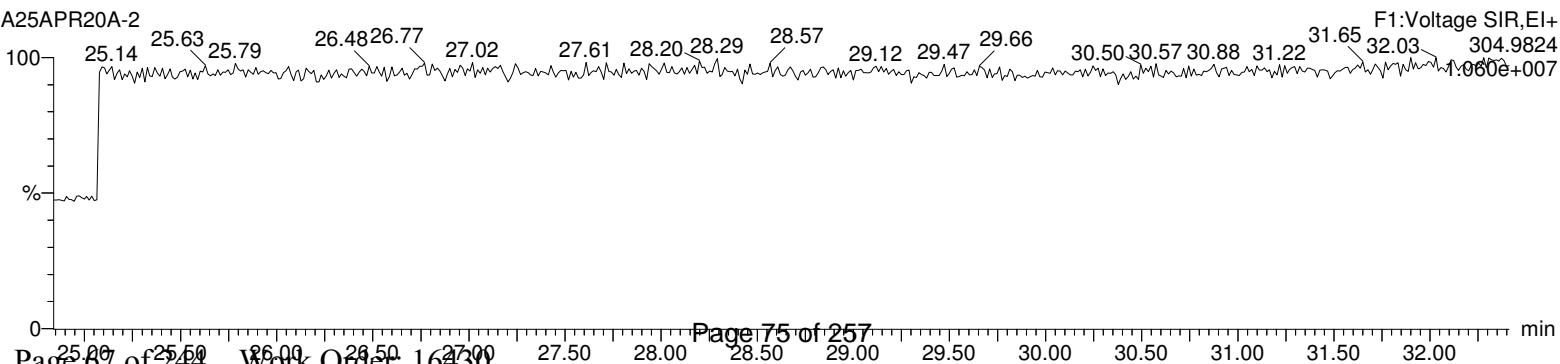
HxDPE

A25APR20A-2



Lock Mass F1

A25APR20A-2



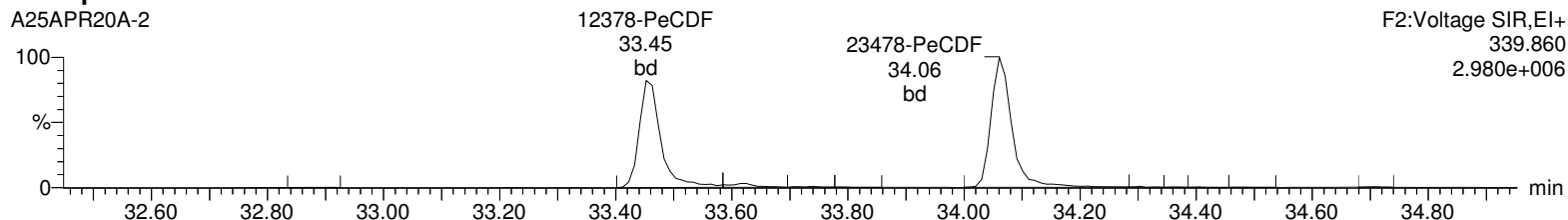
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

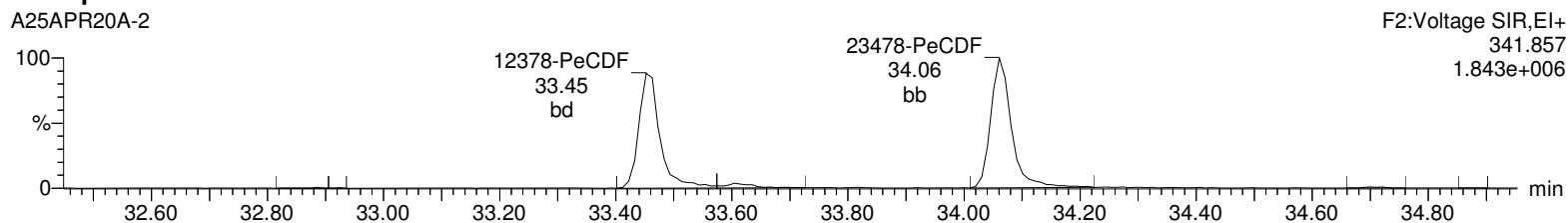
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

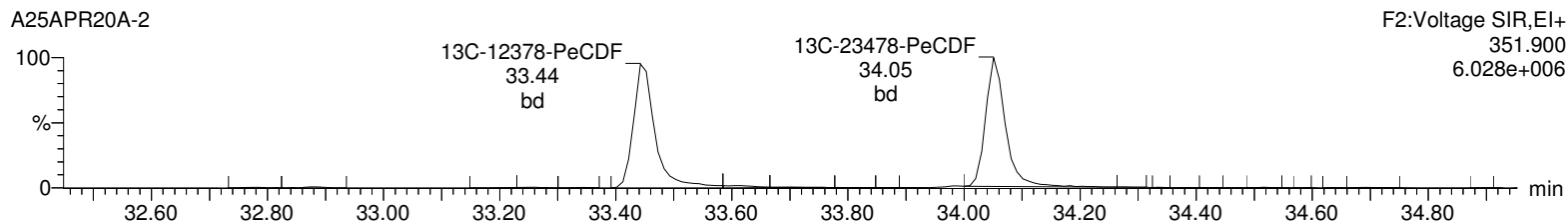
Total-pentafurans



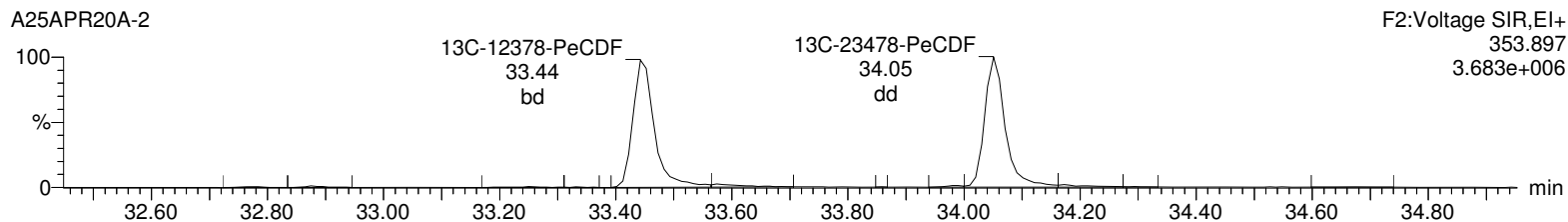
Total-pentafurans



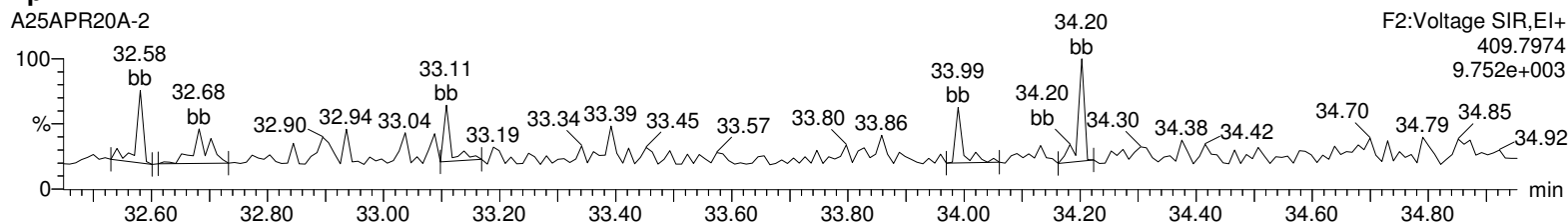
13C-12378-PeCDF



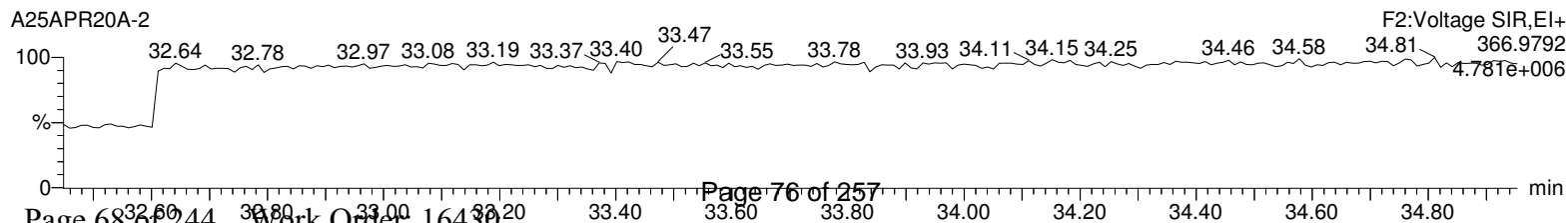
13C-12378-PeCDF



HpDPE



Lock Mass F2



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

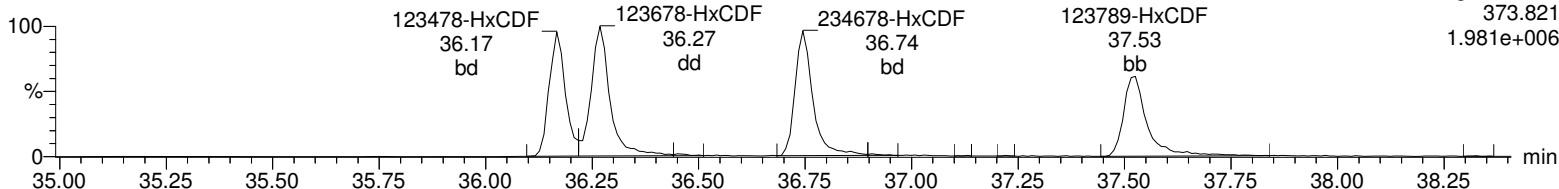
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

Total-hexafurans

A25APR20A-2

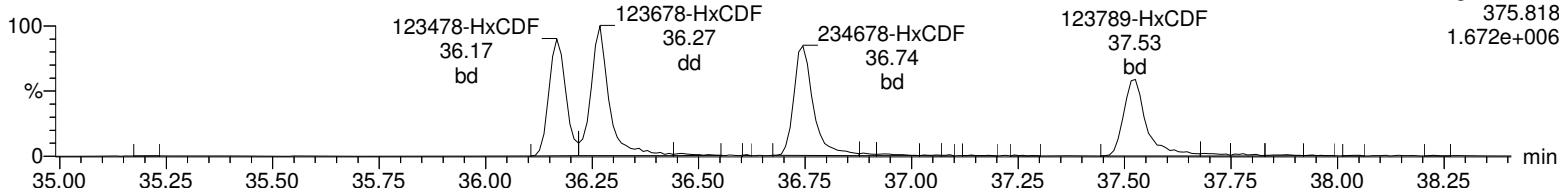
F3:Voltage SIR,EI+
373.821
1.981e+006



Total-hexafurans

A25APR20A-2

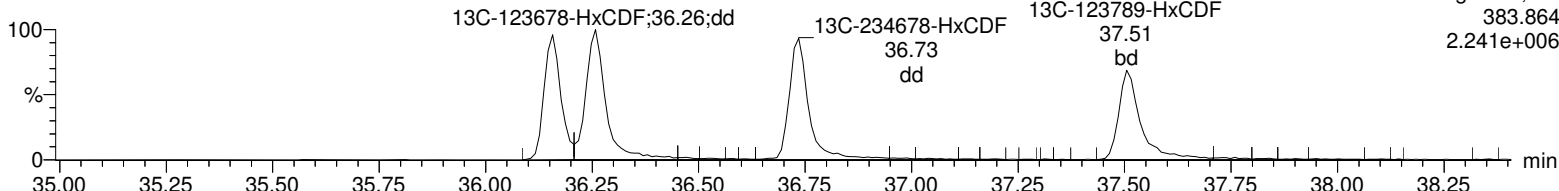
F3:Voltage SIR,EI+
375.818
1.672e+006



13C-123478-HxCDF

A25APR20A-2

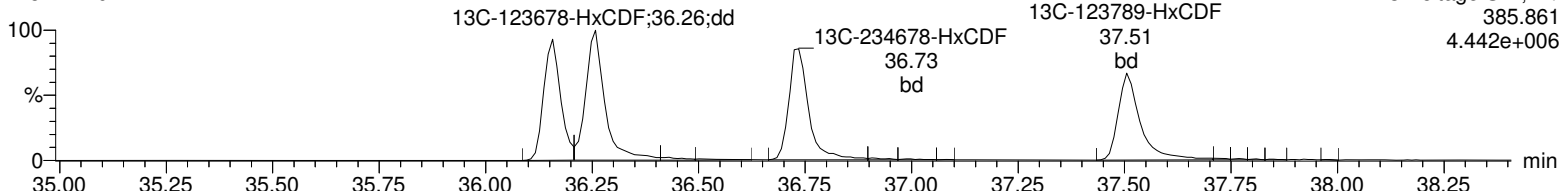
F3:Voltage SIR,EI+
383.864
2.241e+006



13C-123478-HxCDF

A25APR20A-2

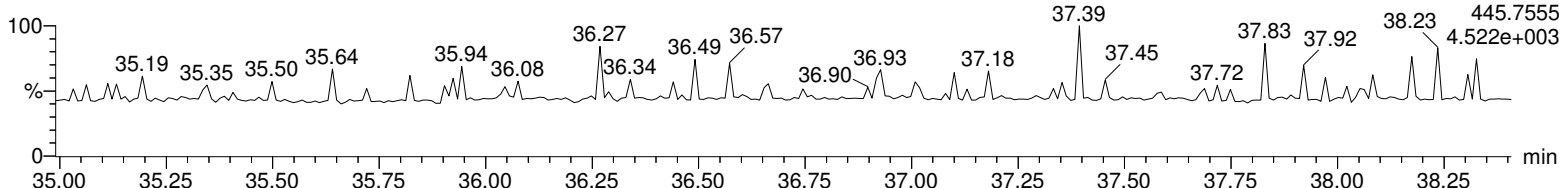
F3:Voltage SIR,EI+
385.861
4.442e+006



OcDPE

A25APR20A-2

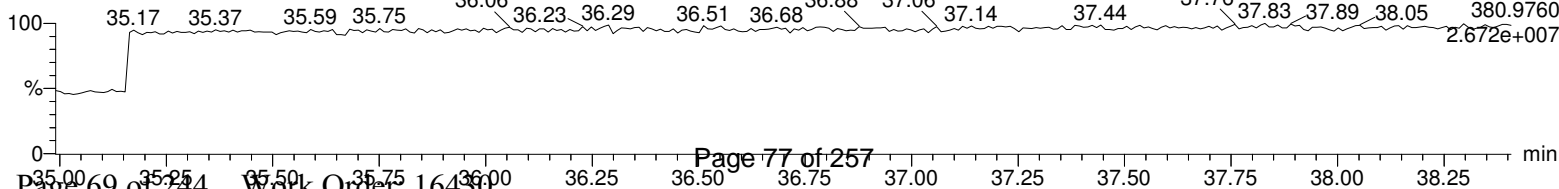
F3:Voltage SIR,EI+
445.7555
4.522e+003



Lock Mass F3

A25APR20A-2

F3:Voltage SIR,EI+
380.9760
2.672e+007



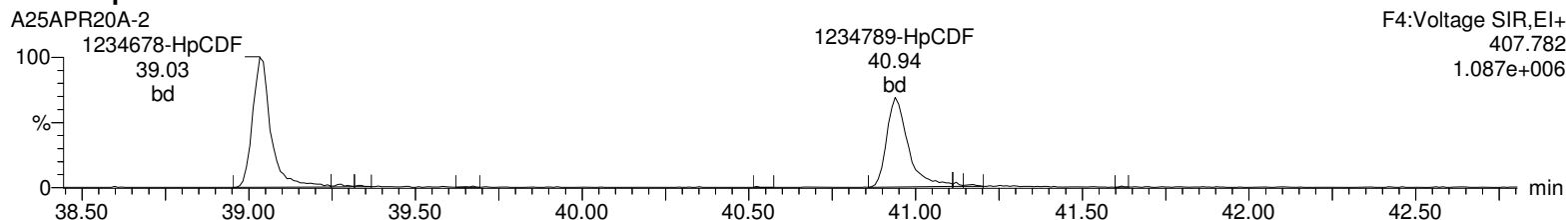
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

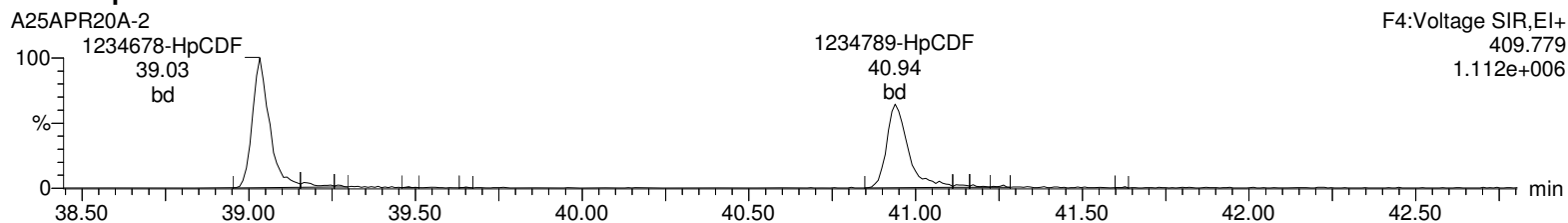
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

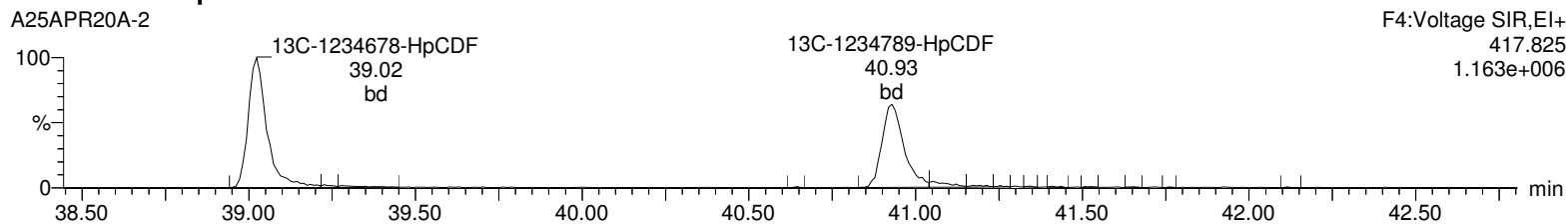
Total-heptafurans



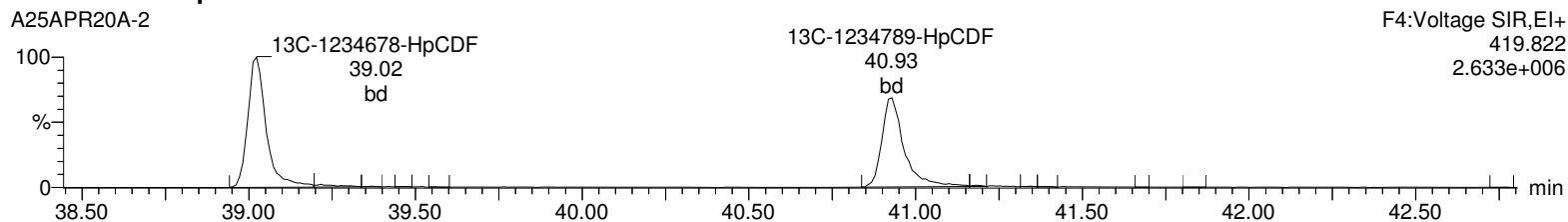
Total-heptafurans



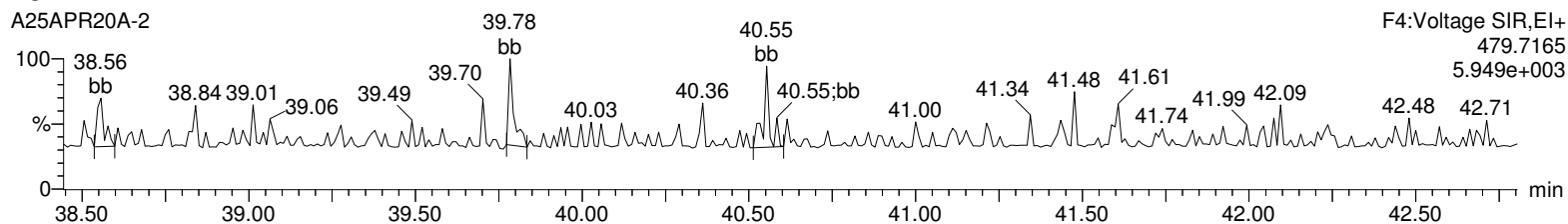
13C-1234678-HpCDF



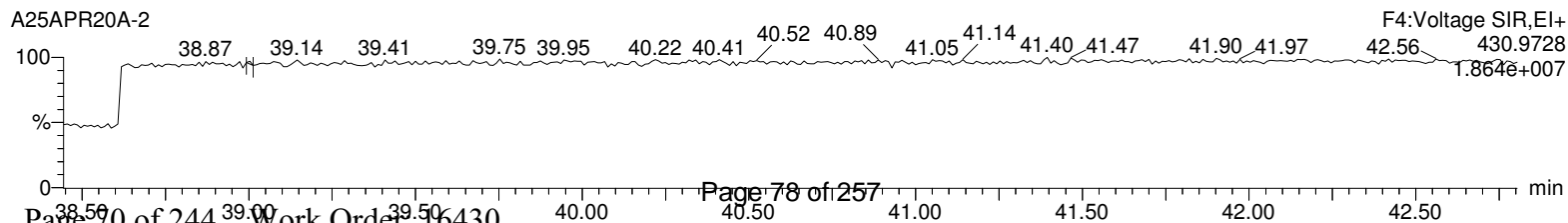
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

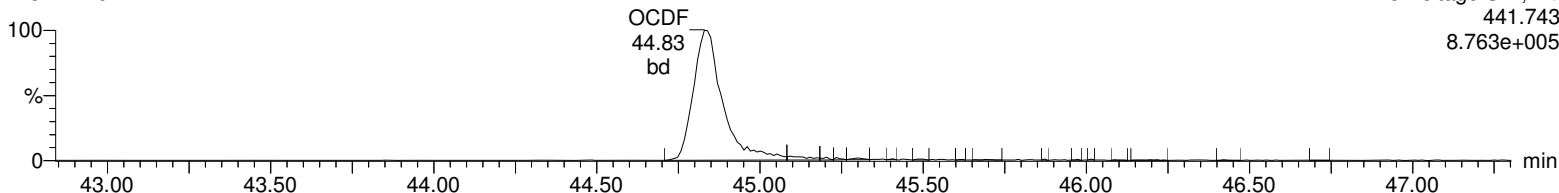
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-2, Date: 25-Apr-2020, Time: 12:03:20, ID: 12026458-2 LCS, Description: , Job: %613%, Task: HRP750_2, User: MLL

OCDF

A25APR20A-2

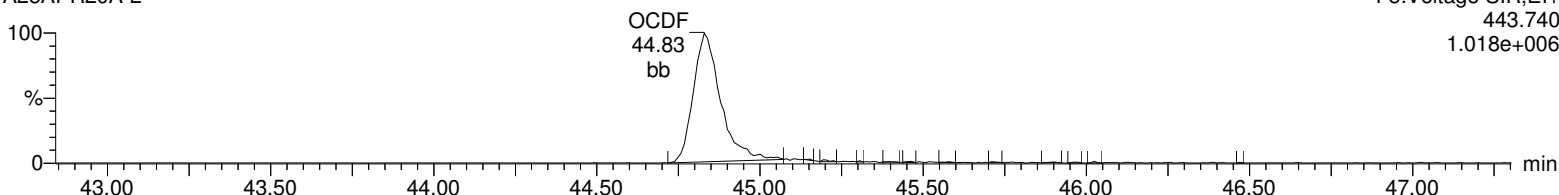
F5:Voltage SIR,EI+
441.743
8.763e+005



OCDF

A25APR20A-2

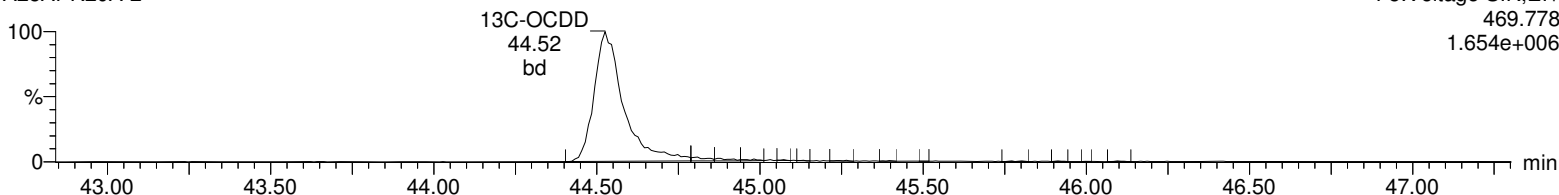
F5:Voltage SIR,EI+
443.740
1.018e+006



13C-OCDD

A25APR20A-2

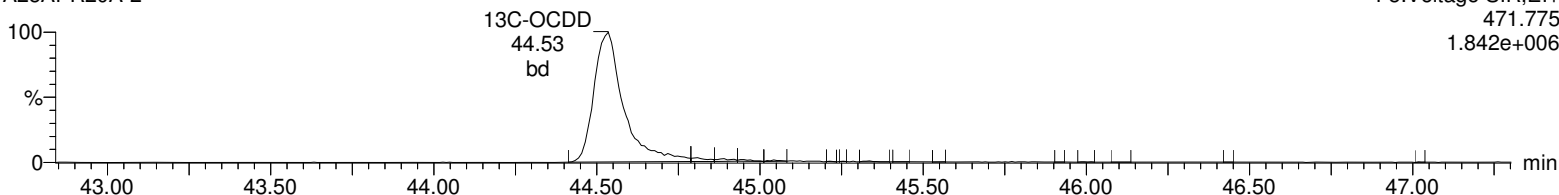
F5:Voltage SIR,EI+
469.778
1.654e+006



13C-OCDD

A25APR20A-2

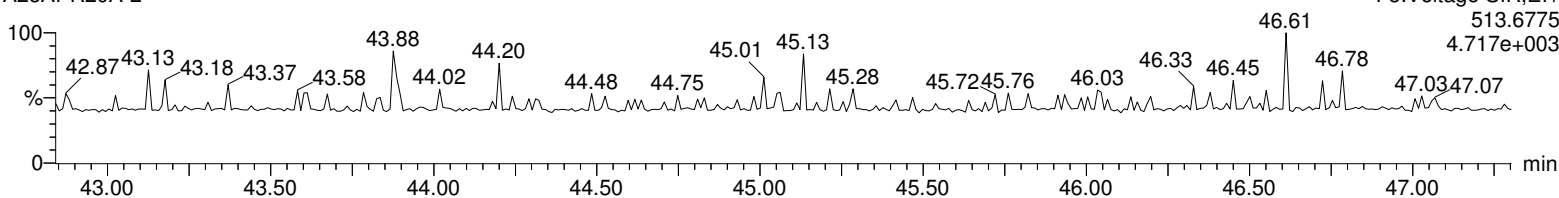
F5:Voltage SIR,EI+
471.775
1.842e+006



DeDPE

A25APR20A-2

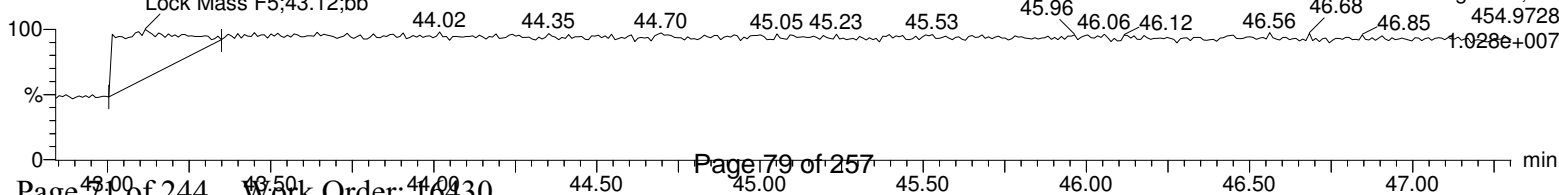
F5:Voltage SIR,EI+
513.6775
4.717e+003



Lock Mass F5

A25APR20A-2

F5:Voltage SIR,EI+
454.9728
1.028e+007



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 570-25593	Client: CALS001	Project: CALS00214
Lab Sample ID: 12026459		Matrix: WATER
Client Sample: QC for batch 43605		
Client ID: LCSD for batch 43605		Prep Basis: As Received
Batch ID: 43611	Method: EPA Method 1613B	
Run Date: 04/25/2020 12:52	Analyst: MLL	Instrument: HRP750
Data File: A25APR20A-3		Dilution: 1
Prep Batch: 43605	Prep Method: SW846 3520C	
Prep Date: 19-APR-20	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.195	ng/L	0.00380	0.0100
40321-76-4	1,2,3,7,8-PeCDD		1.04	ng/L	0.00422	0.0500
39227-28-6	1,2,3,4,7,8-HxCDD		0.985	ng/L	0.00802	0.0500
57653-85-7	1,2,3,6,7,8-HxCDD		0.995	ng/L	0.00738	0.0500
19408-74-3	1,2,3,7,8,9-HxCDD		1.05	ng/L	0.00778	0.0500
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.894	ng/L	0.0131	0.0500
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1.85	ng/L	0.0220	0.100
51207-31-9	2,3,7,8-TCDF		0.180	ng/L	0.00444	0.0100
57117-41-6	1,2,3,7,8-PeCDF		0.930	ng/L	0.0103	0.0500
57117-31-4	2,3,4,7,8-PeCDF		1.02	ng/L	0.00972	0.0500
70648-26-9	1,2,3,4,7,8-HxCDF		0.972	ng/L	0.0111	0.0500
57117-44-9	1,2,3,6,7,8-HxCDF		0.969	ng/L	0.0111	0.0500
60851-34-5	2,3,4,6,7,8-HxCDF		0.952	ng/L	0.0118	0.0500
72918-21-9	1,2,3,7,8,9-HxCDF		0.958	ng/L	0.0170	0.0500
67562-39-4	1,2,3,4,6,7,8-HpCDF		1.01	ng/L	0.0132	0.0500
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.903	ng/L	0.0170	0.0500
39001-02-0	1,2,3,4,6,7,8,9-OCDF		1.88	ng/L	0.0216	0.100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1.71	2.00	ng/L	85.3	(20%-175%)
13C-1,2,3,7,8-PeCDD		1.83	2.00	ng/L	91.7	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		1.40	2.00	ng/L	70.2	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		1.71	2.00	ng/L	85.5	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		1.68	2.00	ng/L	83.9	(22%-166%)
13C-OCDD		3.07	4.00	ng/L	76.7	(13%-199%)
13C-2,3,7,8-TCDF		1.68	2.00	ng/L	84.2	(22%-152%)
13C-1,2,3,7,8-PeCDF		1.95	2.00	ng/L	97.4	(21%-192%)
13C-2,3,4,7,8-PeCDF		1.77	2.00	ng/L	88.6	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		1.43	2.00	ng/L	71.4	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		1.56	2.00	ng/L	78.2	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		1.56	2.00	ng/L	78.1	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		1.53	2.00	ng/L	76.3	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		1.49	2.00	ng/L	74.5	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		1.61	2.00	ng/L	80.6	(20%-186%)
37Cl-2,3,7,8-TCDD		0.202	0.200	ng/L	101	(31%-191%)

Comments:
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time
 Printed: Monday, April 27, 2020 13:08:21 Eastern Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A23APR20.mdb 23 Apr 2020 09:24:32
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.44e4	1.95e4	3.39e4	31.40	1.000	0.74	NO	9.759	0.190	2.74e5	3047	89.9	3.61e5	1808	199.4	bd	bb
2	12378-PeCDD	7.69e4	4.72e4	1.24e5	34.26	1.000	1.63	NO	51.776	0.211	1.73e6	3023	571.2	1.01e6	1502	674.0	bd	bd
3	123478-HxCDD	5.83e4	4.49e4	1.03e5	36.87	1.000	1.30	NO	49.260	0.401	1.19e6	3761	317.3	9.33e5	3211	290.5	bd	bd
4	123678-HxCDD	7.89e4	6.12e4	1.40e5	36.97	1.001	1.29	NO	49.726	0.369	1.36e6	3761	360.9	9.91e5	3211	308.7	dd	dd
5	123789-HxCDD	7.10e4	5.61e4	1.27e5	37.20	1.007	1.26	NO	52.594	0.389	1.10e6	3761	292.0	8.77e5	3211	273.0	dd	dd
6	1234678-HpCDD	4.72e4	4.56e4	9.27e4	40.28	1.000	1.03	NO	44.685	0.655	6.33e5	3588	176.5	6.07e5	3752	161.8	bd	bb
7	OCDD	7.24e4	8.43e4	1.57e5	44.54	1.000	0.86	NO	92.535	1.10	6.88e5	3089	222.7	8.01e5	3841	208.5	bd	bd
8	2378-TCDF	1.66e4	2.11e4	3.77e4	30.75	1.000	0.79	NO	8.988	0.222	2.43e5	2216	109.7	3.06e5	3259	93.8	bb	db
9	12378-PeCDF	1.09e5	6.78e4	1.76e5	33.45	1.000	1.60	NO	46.495	0.516	2.53e6	10896	232.2	1.71e6	7759	220.0	bd	bd
10	23478-PeCDF	1.16e5	7.80e4	1.94e5	34.06	1.000	1.48	NO	51.067	0.486	2.91e6	10896	266.7	1.78e6	7759	229.7	bb	bd
11	123478-HxCDF	8.17e4	6.68e4	1.48e5	36.17	1.001	1.22	NO	48.611	0.555	1.73e6	7453	232.4	1.46e6	7481	195.0	bd	bd
12	123678-HxCDF	9.53e4	7.89e4	1.74e5	36.26	1.000	1.21	NO	48.468	0.555	1.78e6	7453	238.7	1.42e6	7481	190.0	db	db
13	234678-HxCDF	9.00e4	7.18e4	1.62e5	36.74	1.000	1.25	NO	47.611	0.591	1.74e6	7453	233.4	1.32e6	7481	176.7	bd	bb
14	123789-HxCDF	7.65e4	5.61e4	1.33e5	37.51	1.000	1.36	NO	47.881	0.849	1.20e6	7453	160.8	9.26e5	7481	123.8	bd	bd
15	1234678-HpCDF	6.87e4	6.52e4	1.34e5	39.03	1.000	1.05	NO	50.712	0.662	1.02e6	5122	198.4	1.00e6	5325	188.1	bb	bd
16	1234789-HpCDF	5.26e4	5.23e4	1.05e5	40.94	1.000	1.01	NO	45.168	0.851	6.97e5	5122	136.1	6.98e5	5325	131.1	bd	bd
17	OCDF	8.88e4	9.64e4	1.85e5	44.83	1.007	0.92	NO	93.762	1.08	8.70e5	2964	293.6	9.76e5	5023	194.4	bd	bd
18	13C-2378-TCDD	1.69e5	2.23e5	3.92e5	31.39	1.015	0.76	NO	85.282	0.292	3.11e6	5477	567.0	4.19e6	3883	1080.1	bd	bd
19	13C-12378-PeCDD	1.70e5	1.11e5	2.81e5	34.25	1.107	1.53	NO	91.705	0.288	3.80e6	3183	1193.2	2.41e6	2954	817.0	bd	bd
20	13C-123478-HxCDD	1.25e5	9.76e4	2.23e5	36.87	0.991	1.28	NO	70.232	0.618	2.60e6	7052	368.8	2.09e6	5172	404.1	bd	bd
21	13C-123678-HxCDD	1.65e5	1.33e5	2.98e5	36.95	0.993	1.24	NO	85.489	0.562	2.77e6	7052	392.9	2.27e6	5172	438.4	dd	dd
22	13C-1234678-HpCDD	1.04e5	9.56e4	2.00e5	40.27	1.083	1.09	NO	83.905	0.674	1.40e6	4979	281.7	1.30e6	5014	259.0	bd	bd
23	13C-OCDD	1.66e5	1.82e5	3.49e5	44.53	1.197	0.91	NO	153.334	0.748	1.55e6	4281	362.9	1.74e6	6322	275.3	bd	bd
24	13C-2378-TCDF	1.87e5	2.42e5	4.29e5	30.73	0.994	0.77	NO	84.165	0.433	2.75e6	9254	297.1	3.58e6	6112	586.4	bb	bb
25	13C-12378-PeCDF	2.46e5	1.56e5	4.02e5	33.44	1.081	1.58	NO	97.413	0.591	5.86e6	8833	663.4	3.67e6	8122	451.5	bd	bd
26	13C-23478-PeCDF	2.28e5	1.56e5	3.84e5	34.05	1.101	1.46	NO	88.627	0.562	5.77e6	8833	653.1	3.76e6	8122	463.5	bb	dd
27	13C-123478-HxCDF	9.44e4	1.86e5	2.81e5	36.15	0.972	0.51	NO	71.396	0.755	2.08e6	6772	307.2	3.85e6	11738	327.7	bd	bd
28	13C-123678-HxCDF	1.15e5	2.31e5	3.45e5	36.25	0.975	0.50	NO	78.227	0.673	2.15e6	6772	317.5	4.13e6	11738	352.2	dd	db
29	13C-234678-HxCDF	1.01e5	1.99e5	2.99e5	36.74	0.988	0.51	NO	78.094	0.775	1.87e6	6772	276.3	3.68e6	11738	313.7	bd	bd
30	13C-123789-HxCDF	8.57e4	1.75e5	2.61e5	37.51	1.008	0.49	NO	76.274	0.867	1.36e6	6772	200.9	2.72e6	11738	231.8	bb	bd

Quantify Sample Summary Report

Method 1613 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time
 Printed: Monday, April 27, 2020 13:08:21 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	6.84e4	1.61e5	2.30e5	39.02	1.049	0.43	NO	74.502	0.630	1.02e6	5362	190.9	2.44e6	6730	362.5	bd	bd
32	13C-1234789-HpCDF	5.73e4	1.36e5	1.93e5	40.93	1.100	0.42	NO	80.557	0.809	7.57e5	5362	141.2	1.71e6	6730	254.5	bd	bd
33	13C-1234-TCDD	1.79e5	2.29e5	4.08e5	30.93	0.000	0.78	NO	100.000	0.330	3.11e6	5477	567.5	4.01e6	3883	1033.8	bb	bb
34	13C-123789-HxCDD	1.98e5	1.56e5	3.54e5	37.19	0.000	1.27	NO	100.000	0.554	3.08e6	7052	437.3	2.49e6	5172	482.2	dd	dd
35	37Cl+2378-TCDD	4.37e4		4.37e4	31.40	1.015			10.092	0.0628	8.33e5	1891	440.4				bb	bb

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

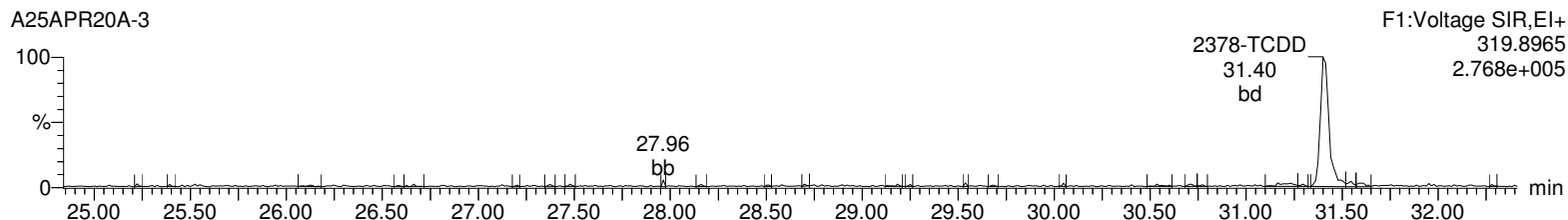
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

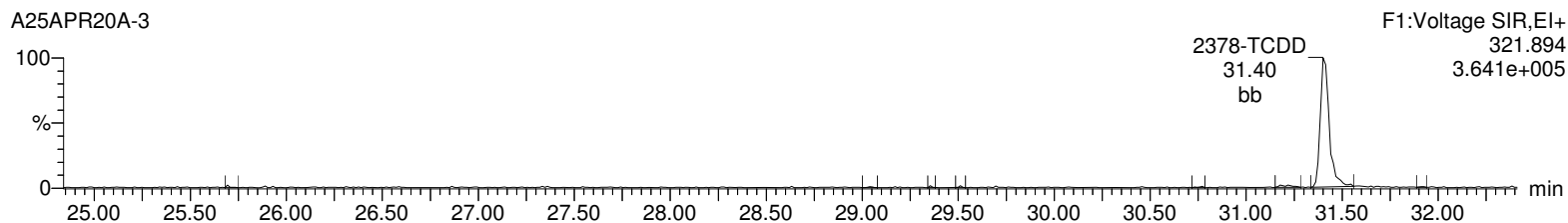
Total-tetradoxins

A25APR20A-3



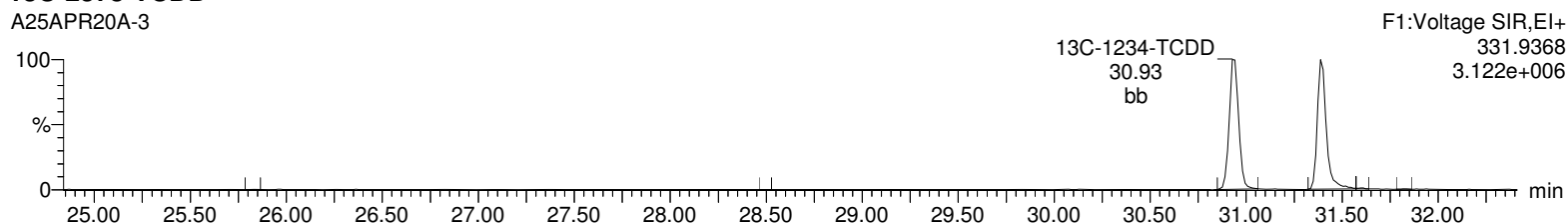
Total-tetradoxins

A25APR20A-3



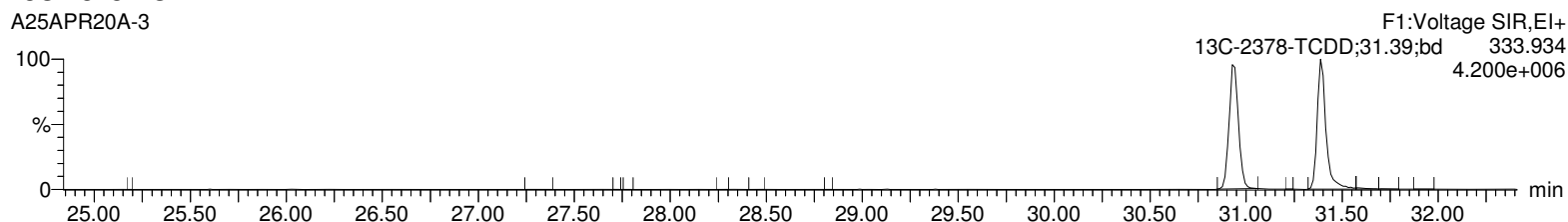
13C-2378-TCDD

A25APR20A-3



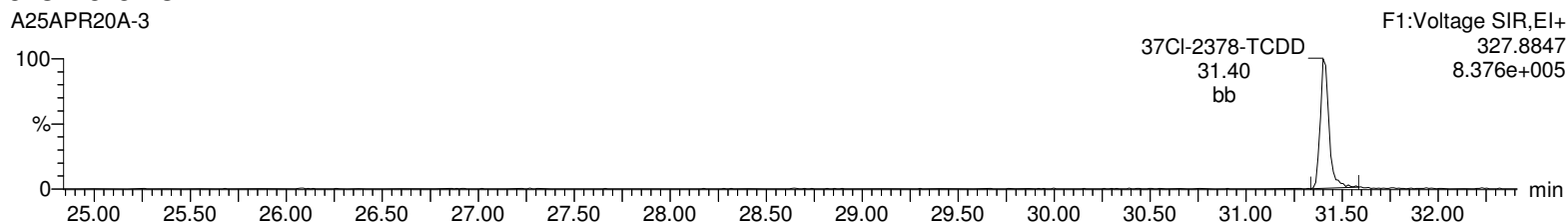
13C-2378-TCDD

A25APR20A-3



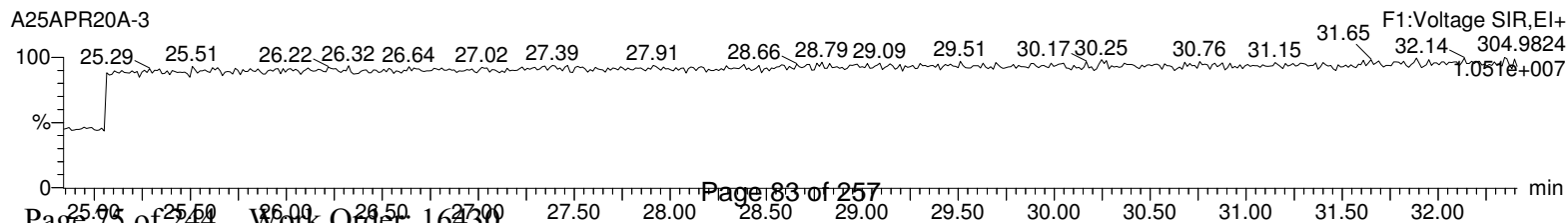
37Cl-2378-TCDD

A25APR20A-3



Lock Mass F1

A25APR20A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

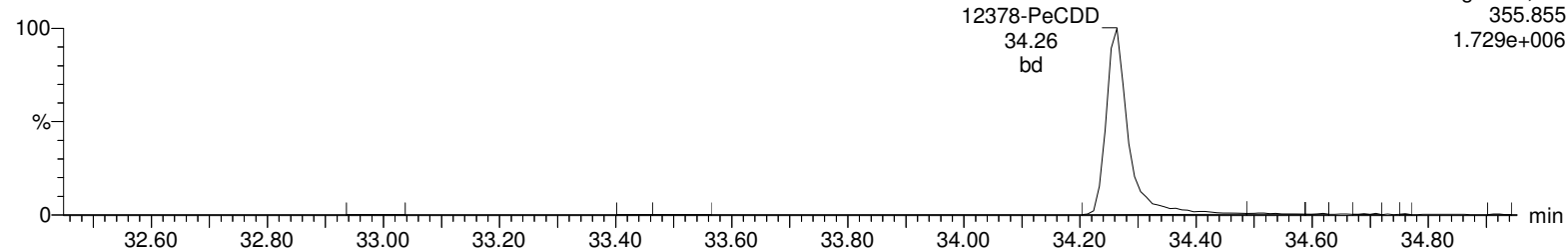
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

Total-pentadioxins

A25APR20A-3

F2:Voltage SIR,EI+

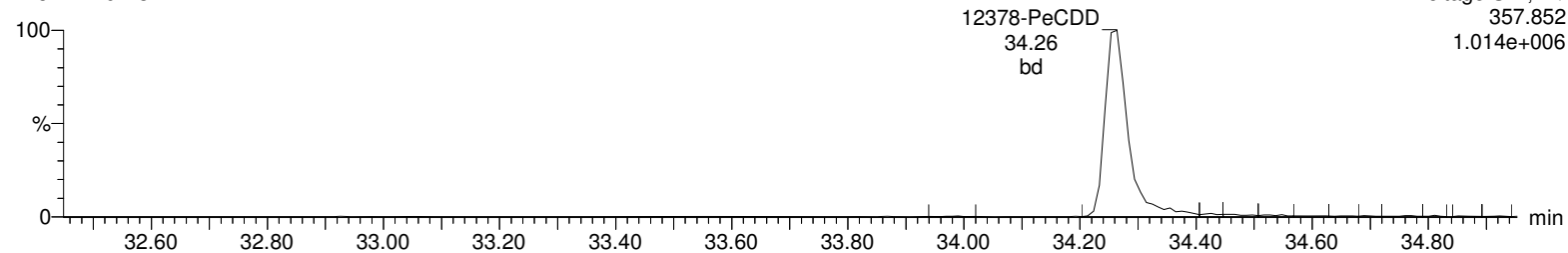


355.855
1.729e+006

Total-pentadioxins

A25APR20A-3

F2:Voltage SIR,EI+

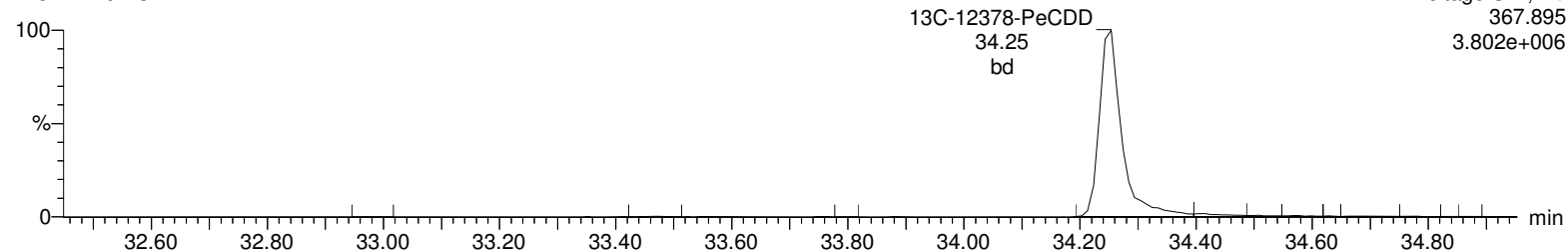


357.852
1.014e+006

13C-12378-PeCDD

A25APR20A-3

F2:Voltage SIR,EI+

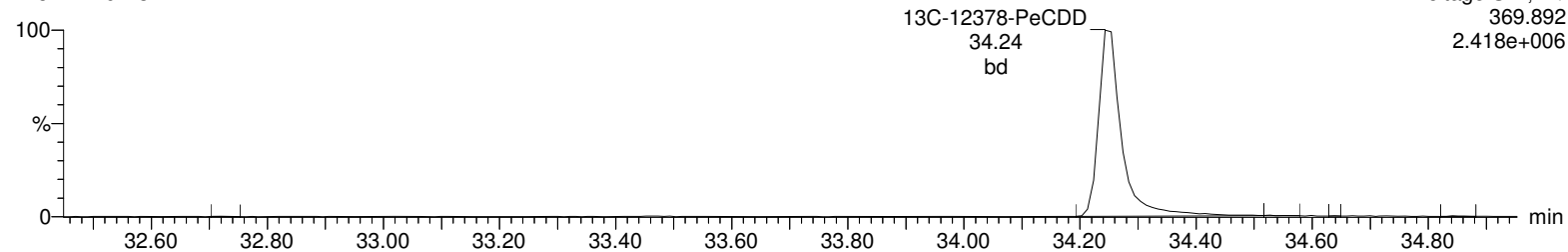


367.895
3.802e+006

13C-12378-PeCDD

A25APR20A-3

F2:Voltage SIR,EI+

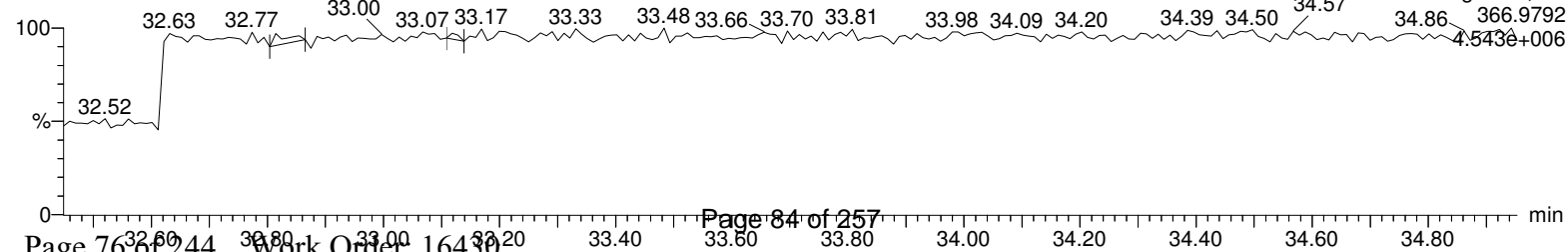


369.892
2.418e+006

Lock Mass F2

A25APR20A-3

F2:Voltage SIR,EI+



366.9792
4.543e+006

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

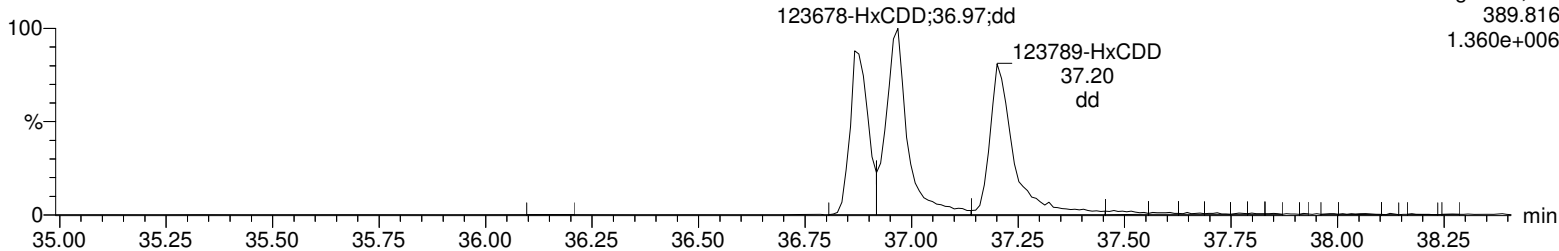
Total-hexadioxins

A25APR20A-3

F3:Voltage SIR,EI+

389.816

1.360e+006



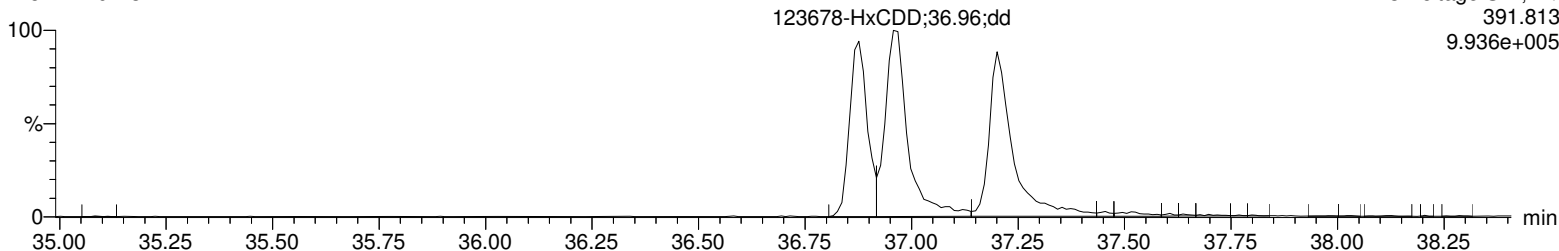
Total-hexadioxins

A25APR20A-3

F3:Voltage SIR,EI+

391.813

9.936e+005



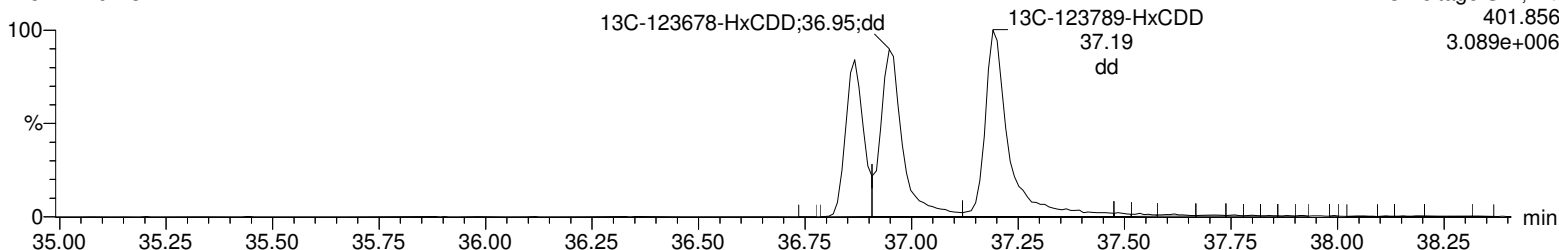
13C-123478-HxCDD

A25APR20A-3

F3:Voltage SIR,EI+

401.856

3.089e+006



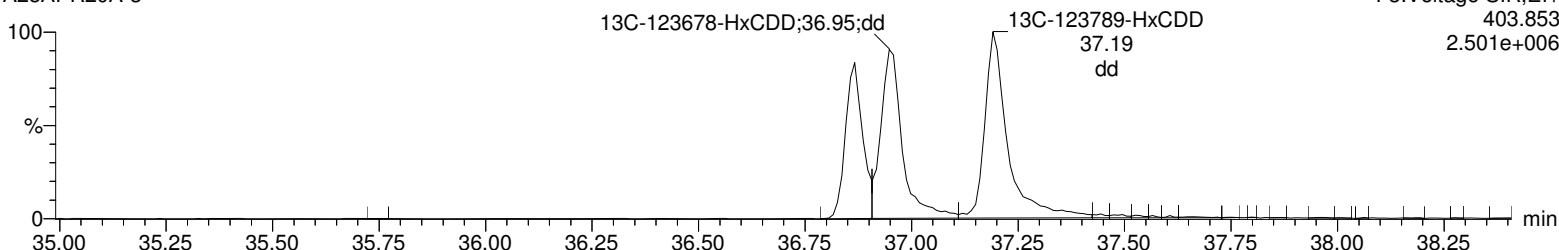
13C-123478-HxCDD

A25APR20A-3

F3:Voltage SIR,EI+

403.853

2.501e+006



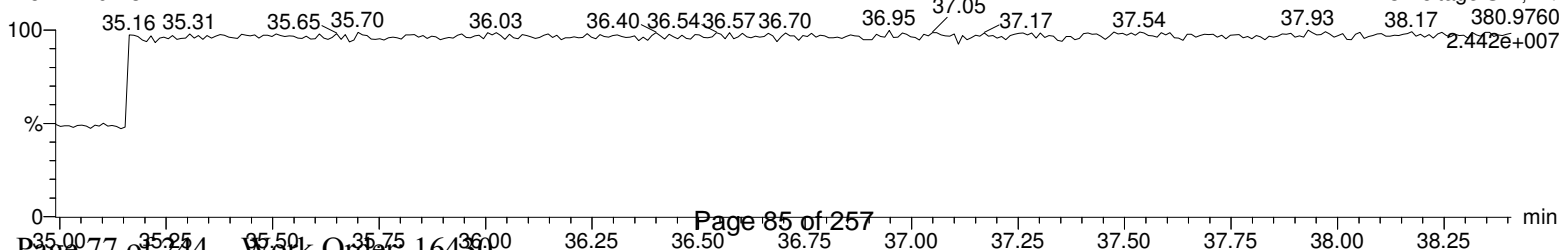
Lock Mass F3

A25APR20A-3

F3:Voltage SIR,EI+

380.9760

2.442e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

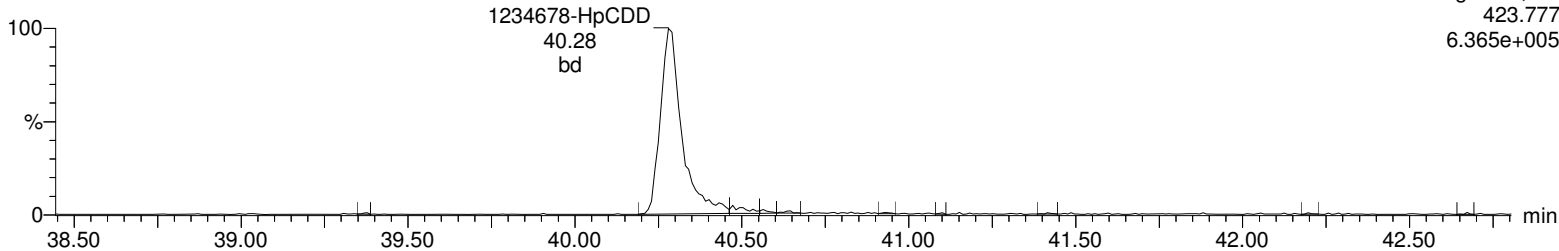
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

Total-heptadioxins

A25APR20A-3

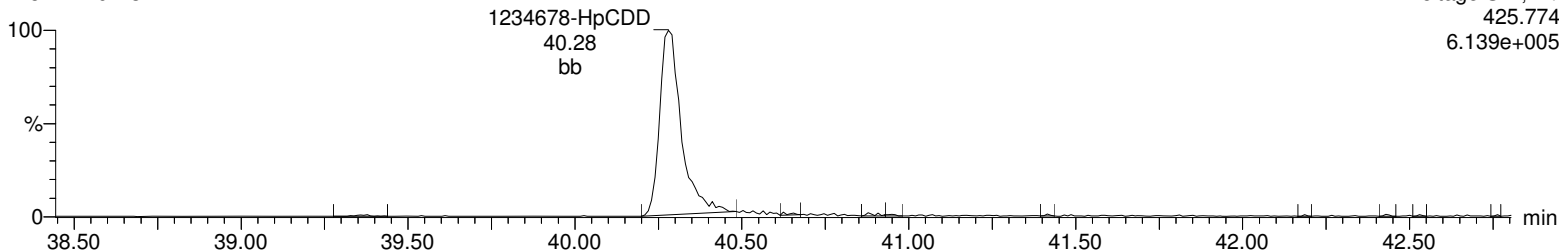
F4:Voltage SIR,EI+
423.777
6.365e+005



Total-heptadioxins

A25APR20A-3

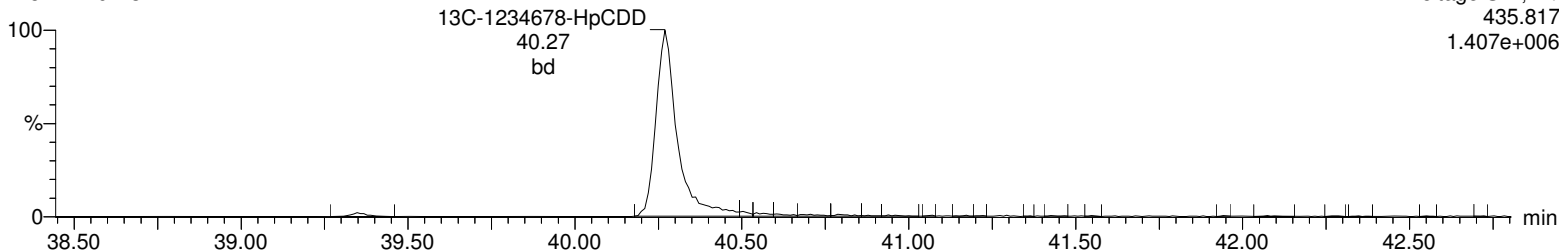
F4:Voltage SIR,EI+
425.774
6.139e+005



13C-1234678-HpCDD

A25APR20A-3

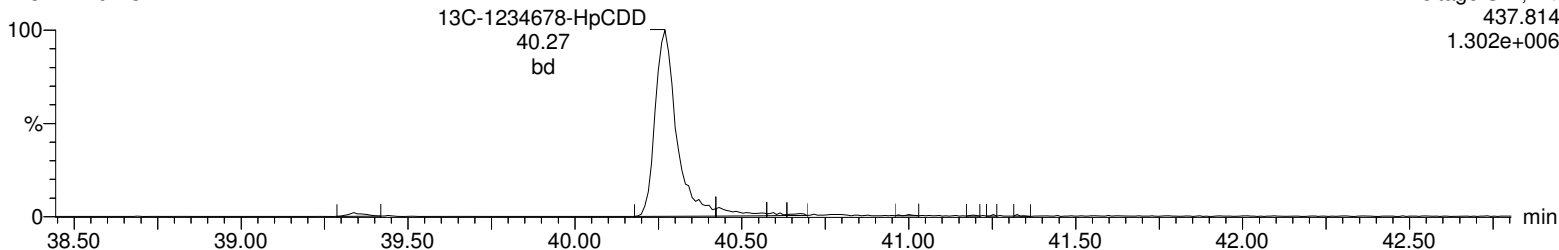
F4:Voltage SIR,EI+
435.817
1.407e+006



13C-1234678-HpCDD

A25APR20A-3

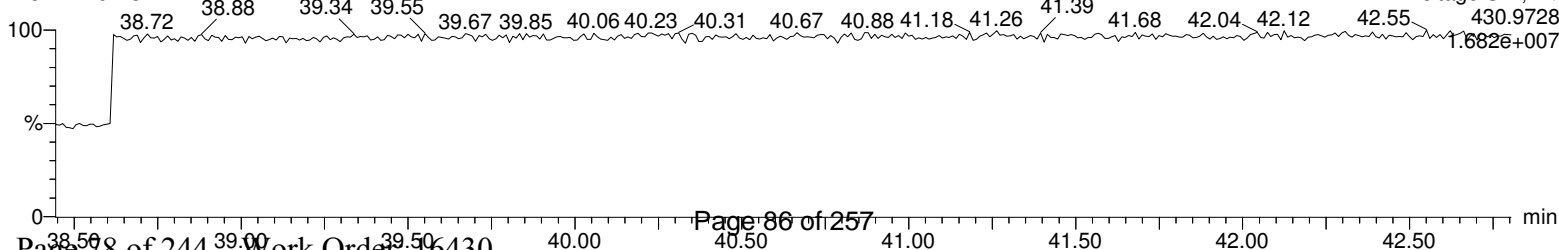
F4:Voltage SIR,EI+
437.814
1.302e+006



Lock Mass F4

A25APR20A-3

F4:Voltage SIR,EI+
430.9728
1.682e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

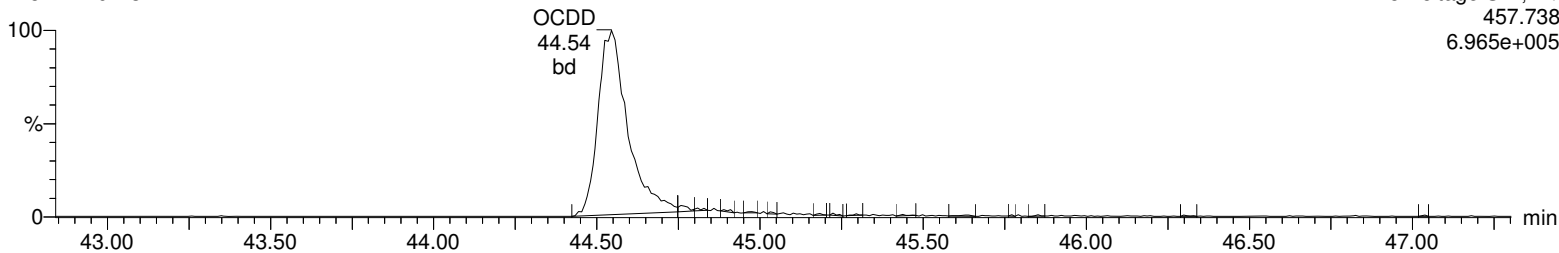
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

OCDD

A25APR20A-3

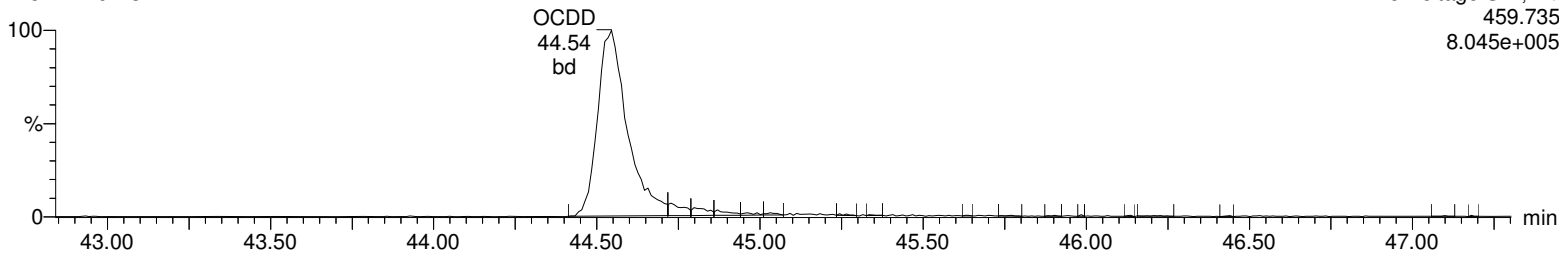
F5:Voltage SIR,EI+
457.738
6.965e+005



OCDD

A25APR20A-3

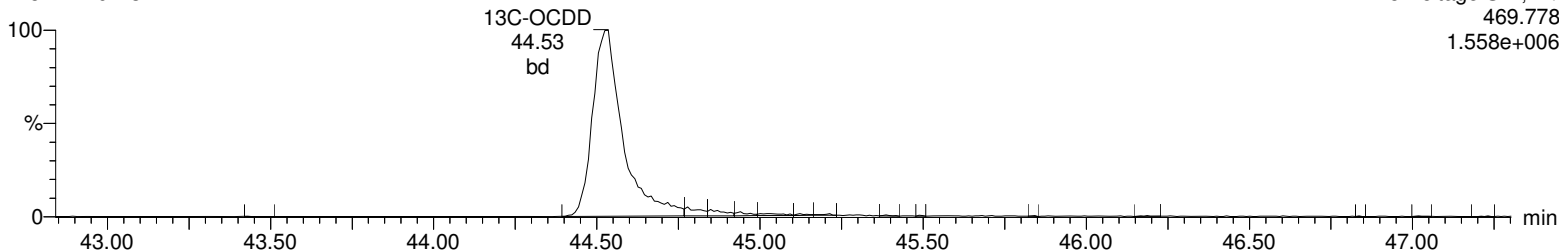
F5:Voltage SIR,EI+
459.735
8.045e+005



13C-OCDD

A25APR20A-3

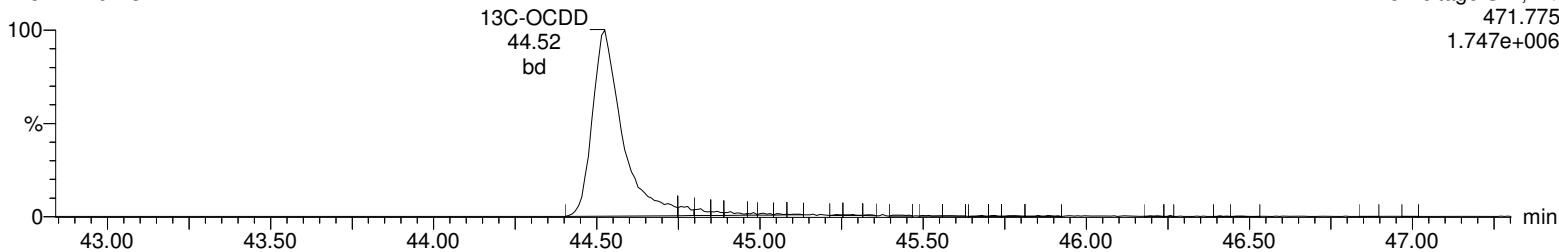
F5:Voltage SIR,EI+
469.778
1.558e+006



13C-OCDD

A25APR20A-3

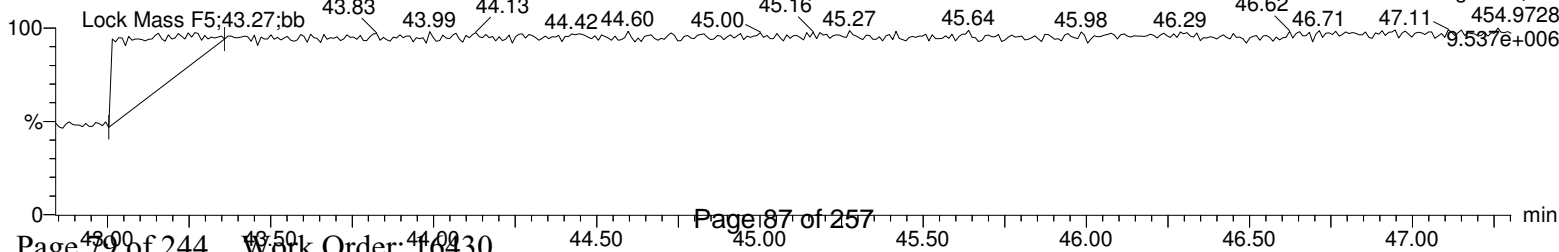
F5:Voltage SIR,EI+
471.775
1.747e+006



Lock Mass F5

A25APR20A-3

F5:Voltage SIR,EI+
454.9728
9.537e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

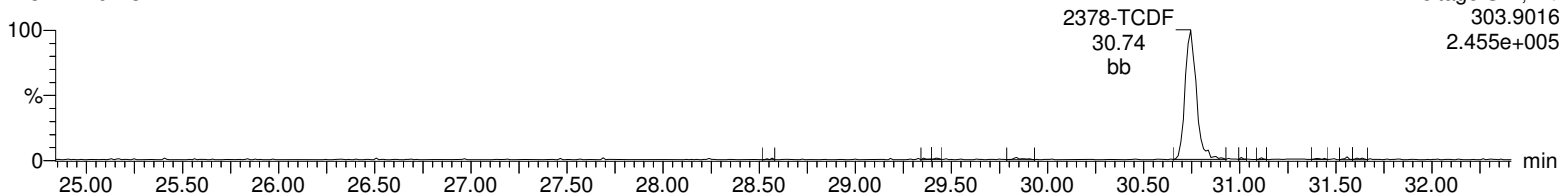
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

Total-tetrafurans

A25APR20A-3

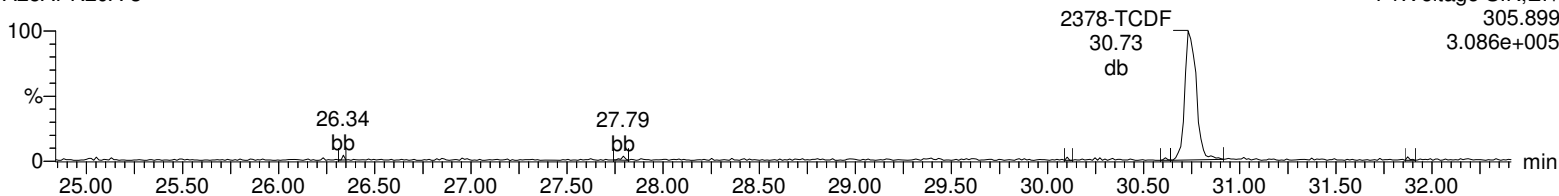
F1:Voltage SIR,EI+
303.9016
2.455e+005



Total-tetrafurans

A25APR20A-3

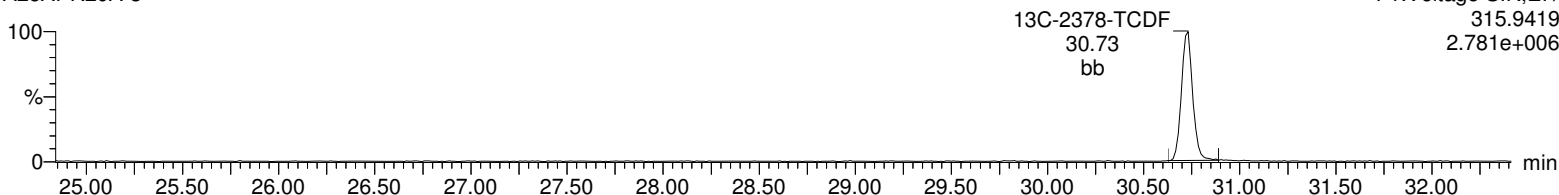
F1:Voltage SIR,EI+
305.899
3.086e+005



13C-2378-TCDF

A25APR20A-3

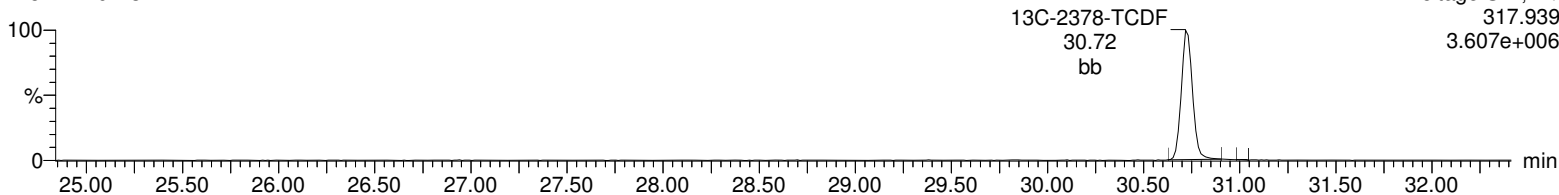
F1:Voltage SIR,EI+
315.9419
2.781e+006



13C-2378-TCDF

A25APR20A-3

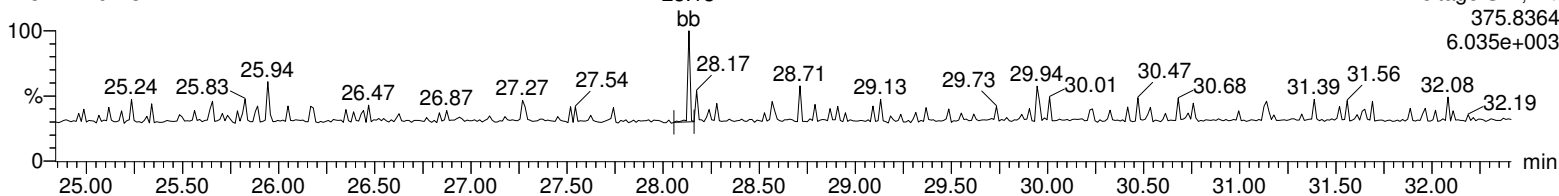
F1:Voltage SIR,EI+
317.939
3.607e+006



HxDPE

A25APR20A-3

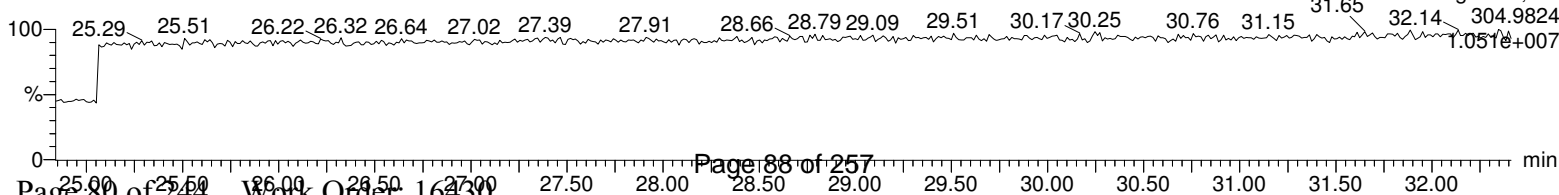
F1:Voltage SIR,EI+
375.8364
6.035e+003



Lock Mass F1

A25APR20A-3

F1:Voltage SIR,EI+
304.9824
1.051e+007



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

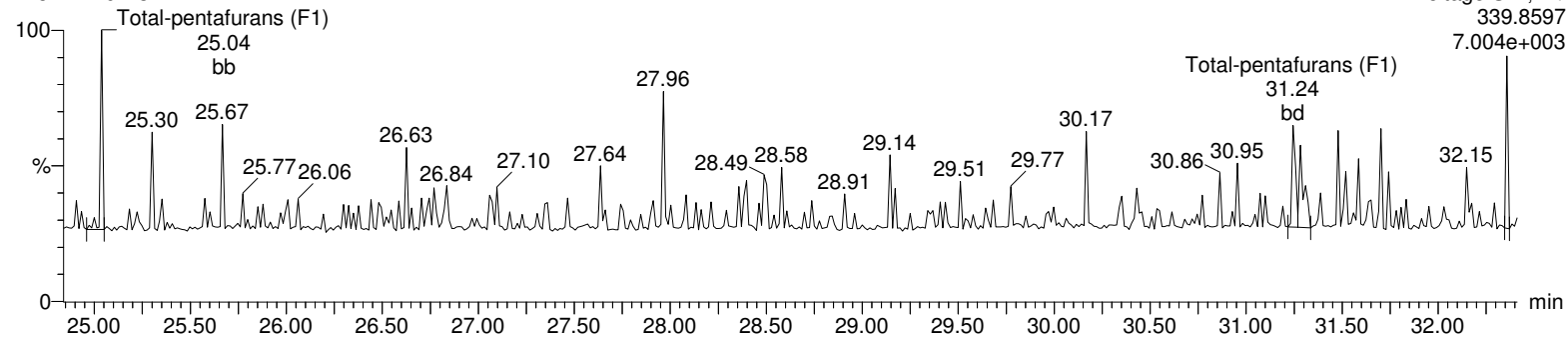
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

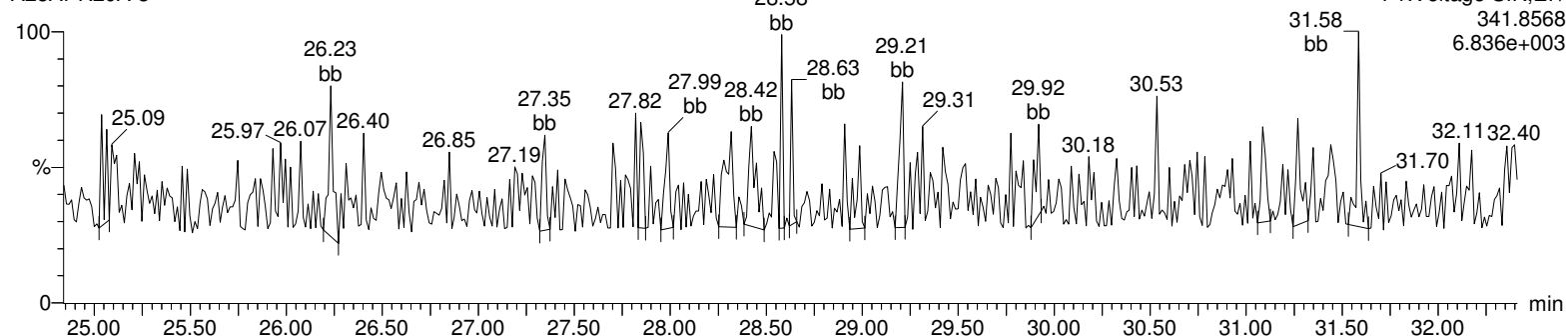
Total-pentafurans (F1)

A25APR20A-3



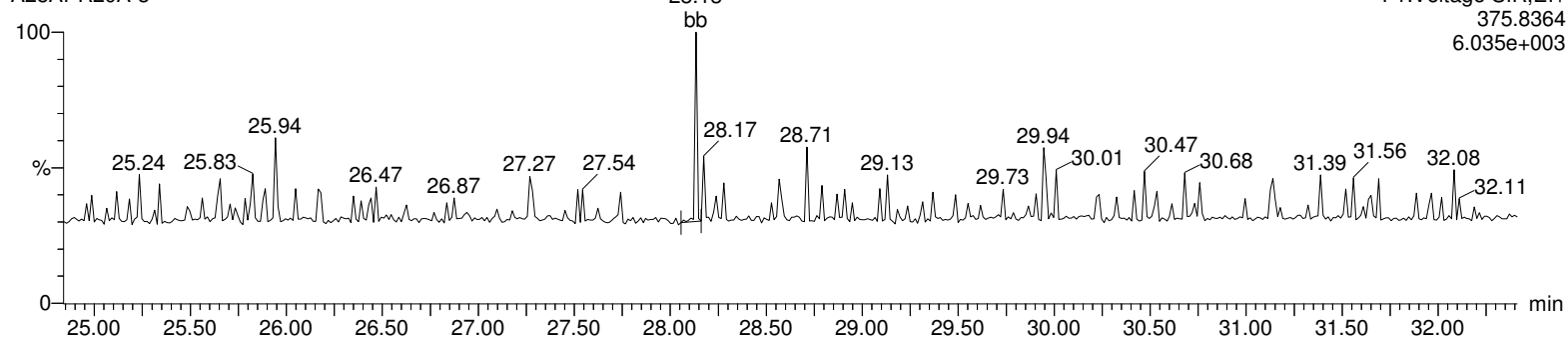
Total-pentafurans (F1)

A25APR20A-3



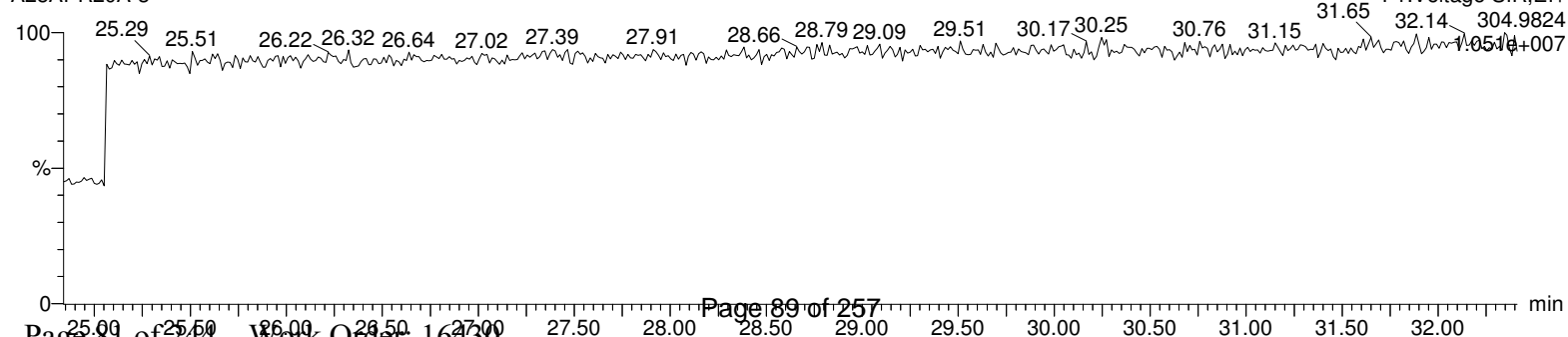
HxDPE

A25APR20A-3



Lock Mass F1

A25APR20A-3



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

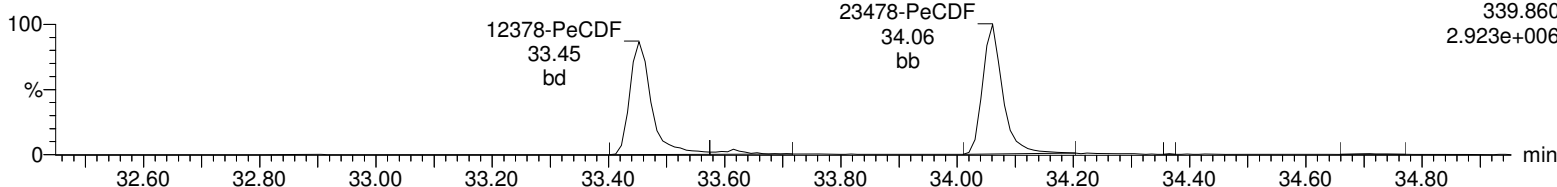
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

Total-pentafurans

A25APR20A-3

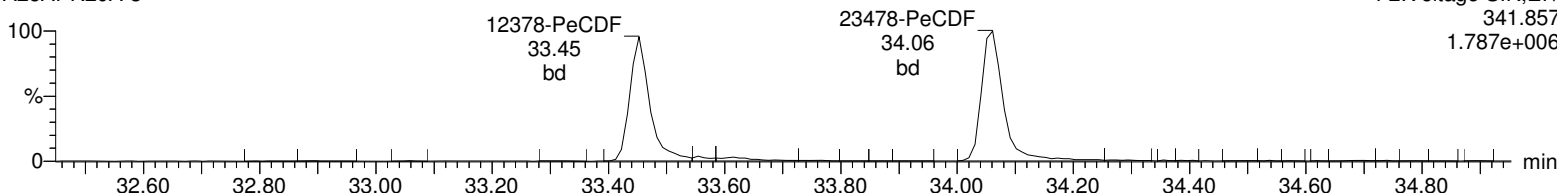
F2:Voltage SIR,EI+
339.860
2.923e+006



Total-pentafurans

A25APR20A-3

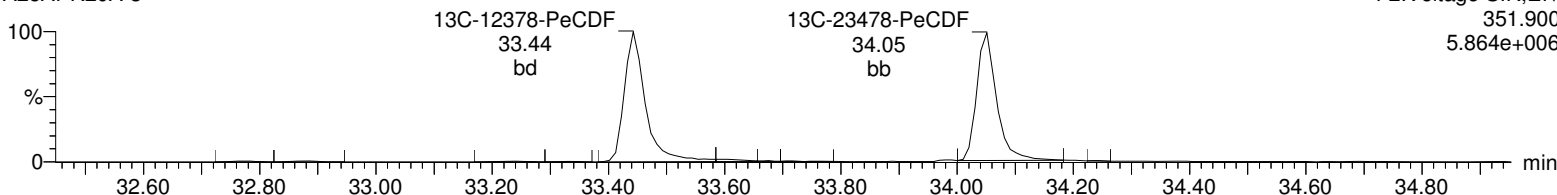
F2:Voltage SIR,EI+
341.857
1.787e+006



13C-12378-PeCDF

A25APR20A-3

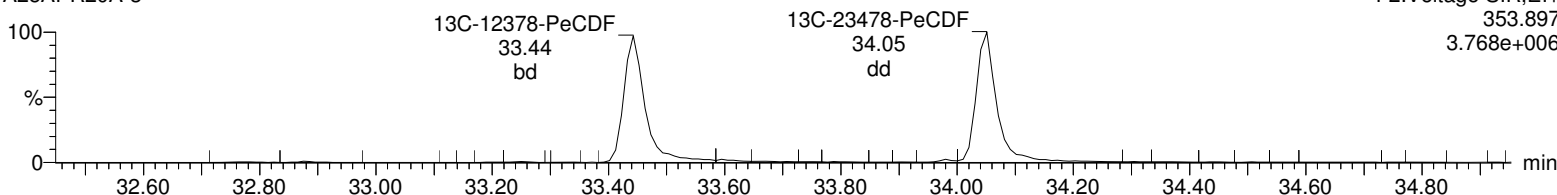
F2:Voltage SIR,EI+
351.900
5.864e+006



13C-12378-PeCDF

A25APR20A-3

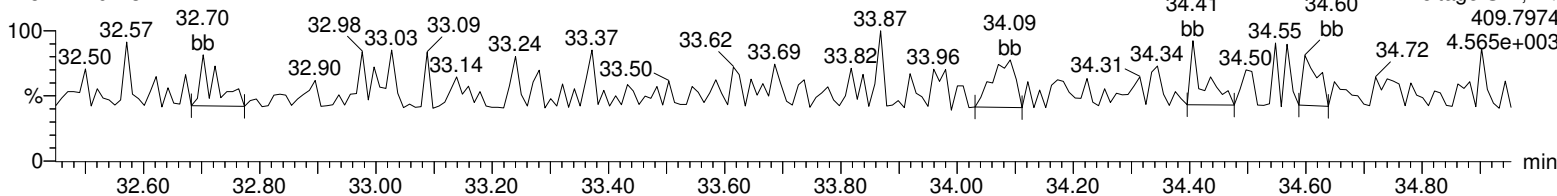
F2:Voltage SIR,EI+
353.897
3.768e+006



HpDPE

A25APR20A-3

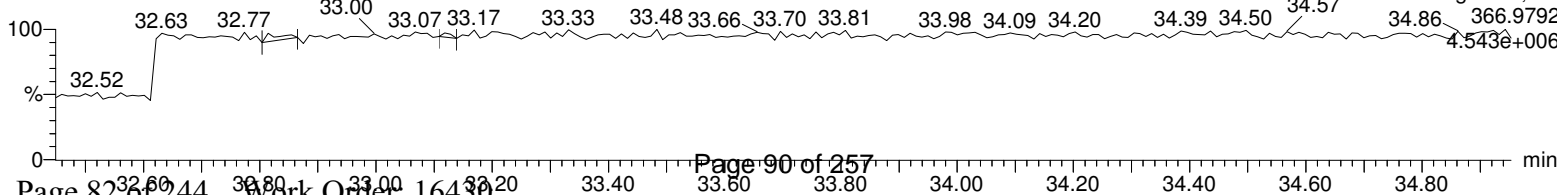
F2:Voltage SIR,EI+
409.7974
4.565e+003



Lock Mass F2

A25APR20A-3

F2:Voltage SIR,EI+
348.6
4.543e+006



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

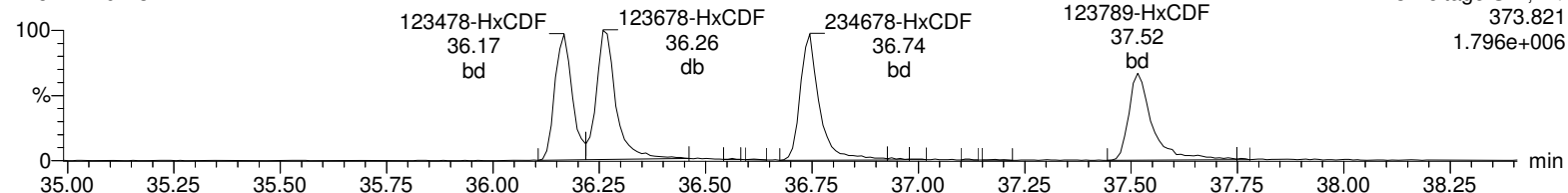
Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

Name: A25APR20A-3, Date: 25-Apr-2020, Time: 12:52:56, ID: 12026459-2 LCSD, Description: , Job: %613%, Task: HRP750_2, User: MLL

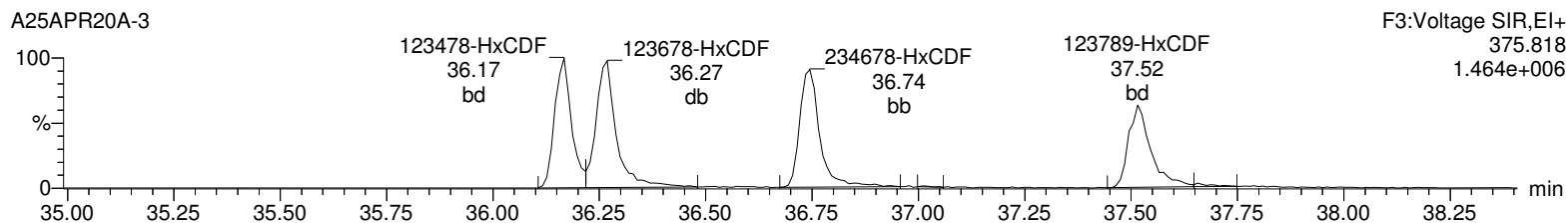
Total-hexafurans

A25APR20A-3



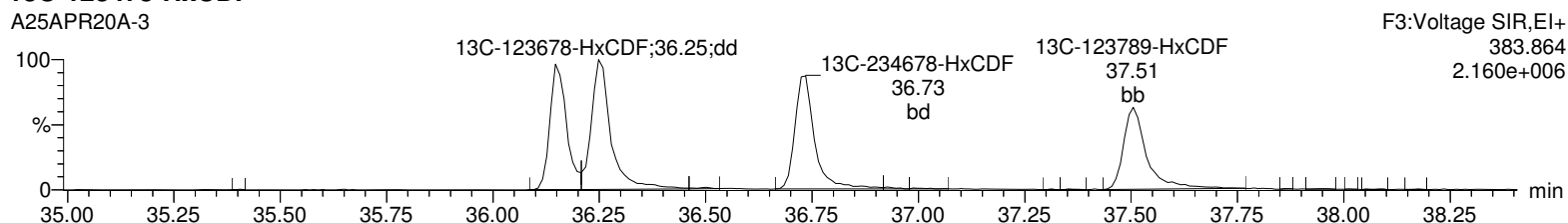
Total-hexafurans

A25APR20A-3



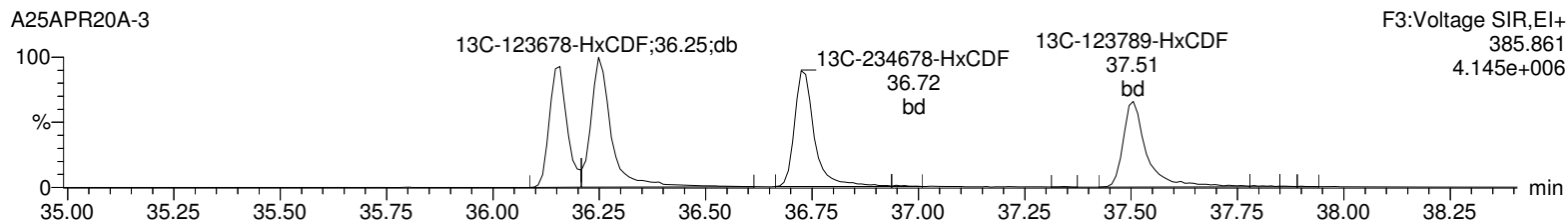
13C-123478-HxCDF

A25APR20A-3



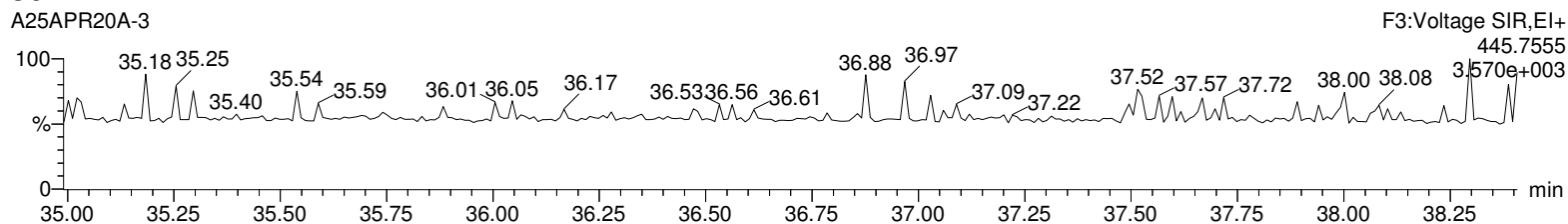
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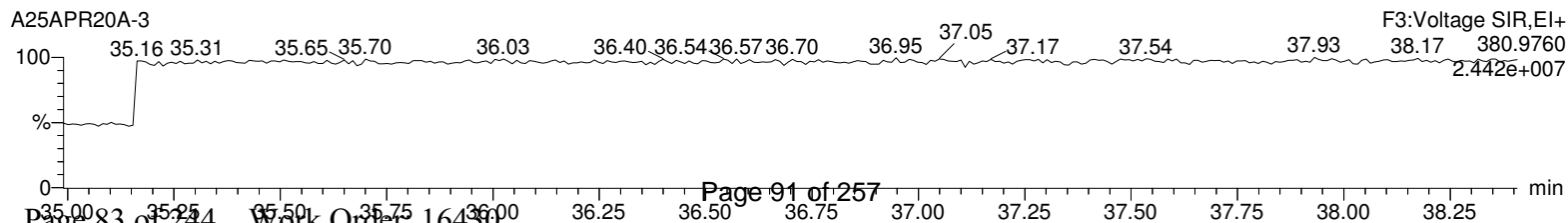
OcDPE

A25APR20A-3



Lock Mass F3

A25APR20A-3



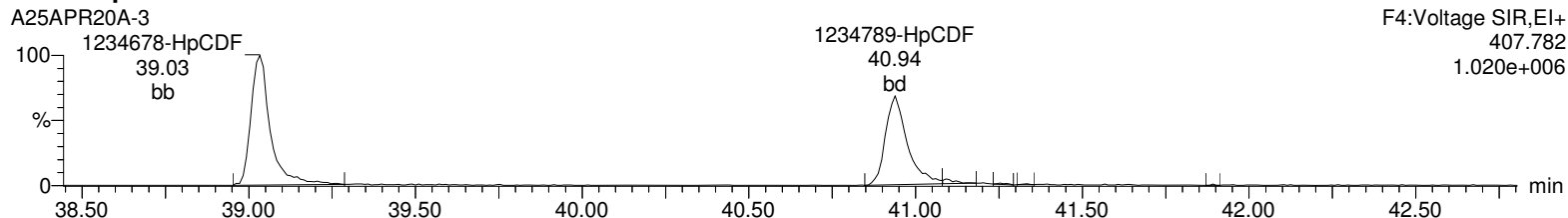
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Last Altered: Sunday, April 26, 2020 15:57:26 Eastern Daylight Time

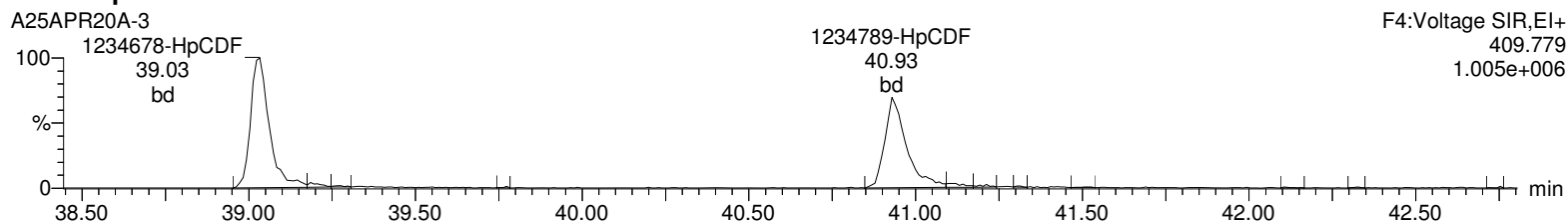
Printed: Sunday, April 26, 2020 15:58:05 Eastern Daylight Time

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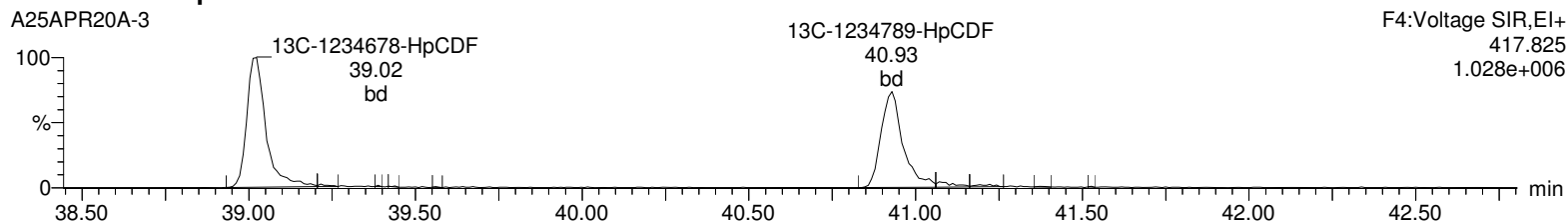
Total-heptafurans



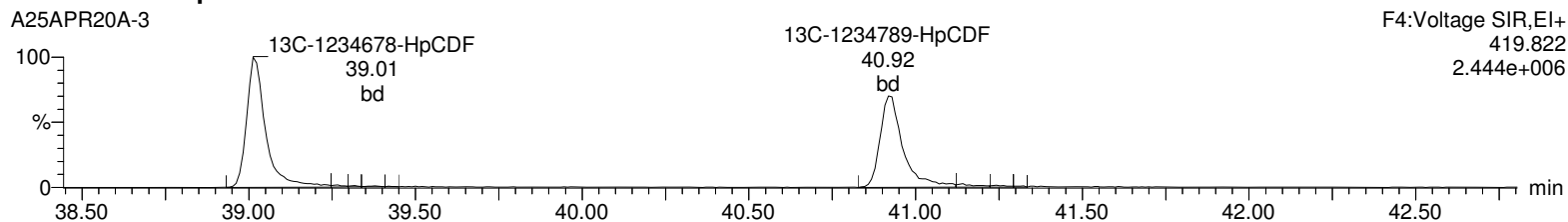
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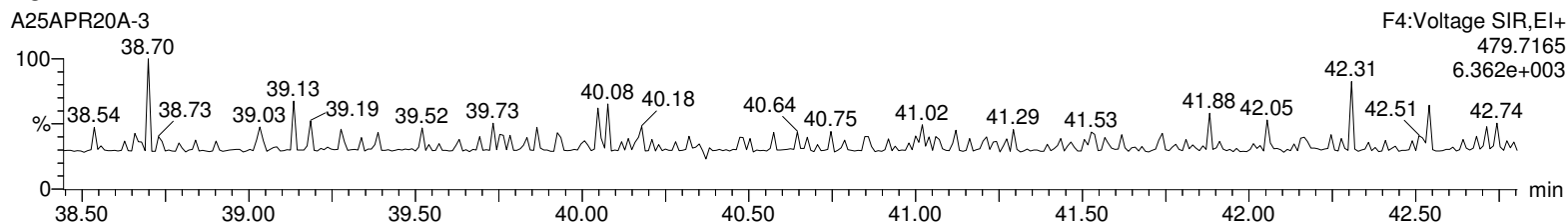
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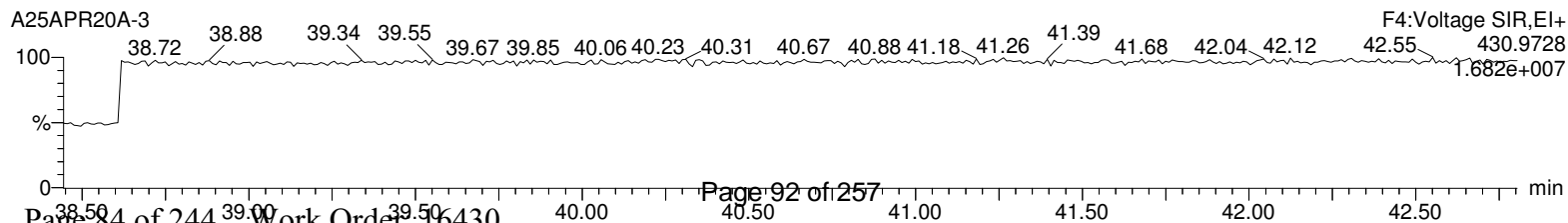
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\Sample Results\1613-A25APR20A.qld

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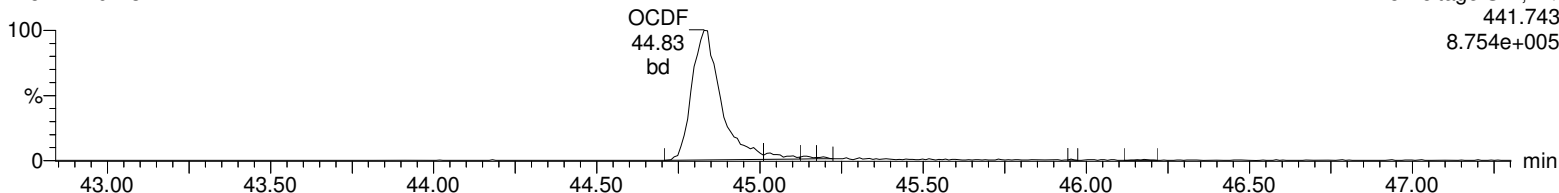
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OCDF

A25APR20A-3

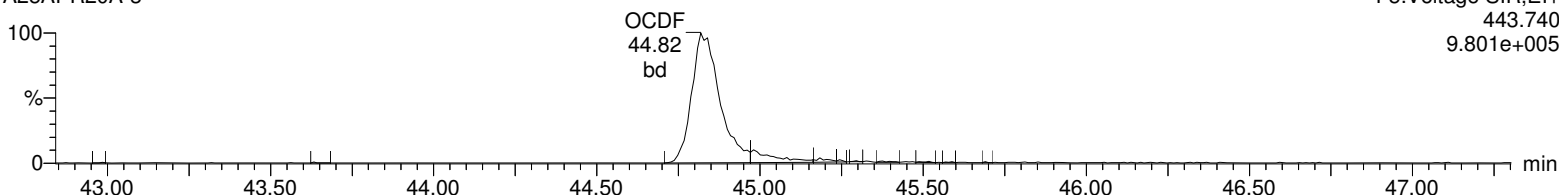
F5:Voltage SIR,EI+
441.743
8.754e+005



OCDF

A25APR20A-3

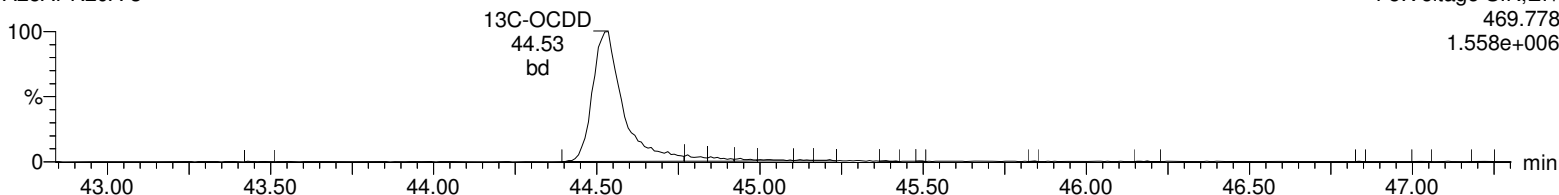
F5:Voltage SIR,EI+
443.740
9.801e+005



13C-OCDD

A25APR20A-3

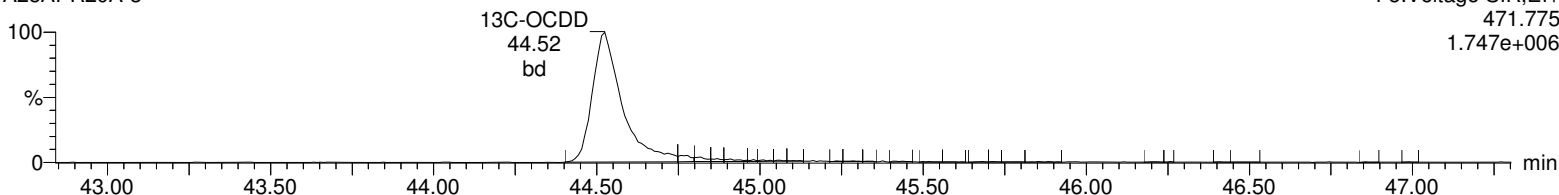
F5:Voltage SIR,EI+
469.778
1.558e+006



13C-OCDD

A25APR20A-3

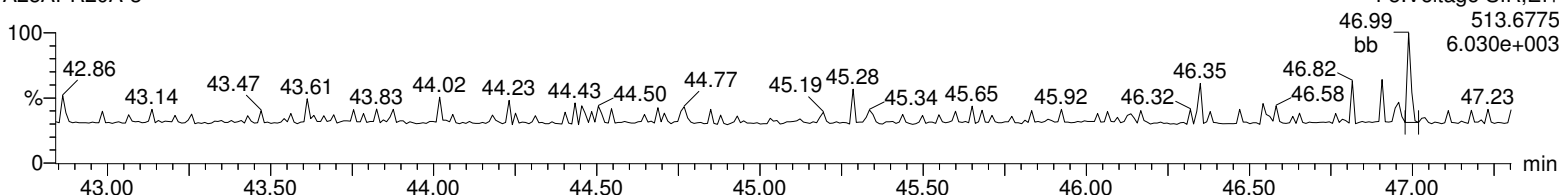
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1.747e+006



DeDPE

A25APR20A-3

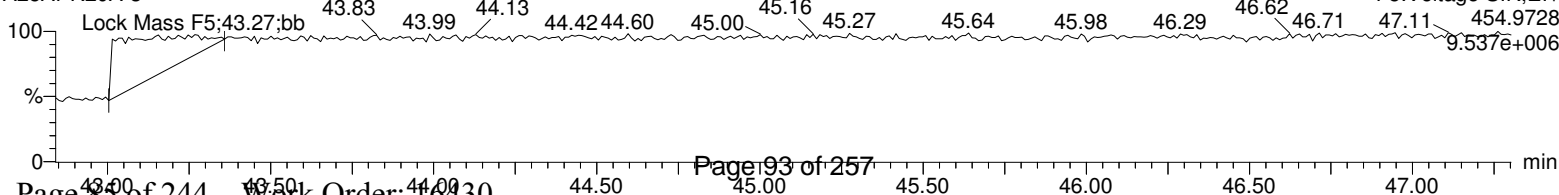
F5:Voltage SIR,EI+
513.6775
6.030e+003



Lock Mass F5

A25APR20A-3

F5:Voltage SIR,EI+
454.9728
9.537e+006



Logbooks

Prep Logbook

3520C Aqueous Extraction for Method 1613B

Batch ID: 43605 **Verified by:** _____
Analyst: Andrea Scarpello **Lab SOP:** CF-OA-E-002 REV# 15
Method: SW846 3520C **Instrument:** Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
12026457 MB	19-APR-2020 11:30	1400	400	1000	5	40			WD200416 N -06.1	
12026457 MB	19-APR-2020 11:30	1400	400	1000	5	40			.05 ng/uL WD200416 N -06.1	
12026458 LCS	19-APR-2020 11:30	1400	400	1000	5	40	40	WD200415 -01	.05 ng/uL WD200416 N -06.1	
12026458 LCS	19-APR-2020 11:30	1400	400	1000	5	40	40	WD200415 -01	.05 ng/uL WD200416 N -06.1	
12026459 LCSD	19-APR-2020 11:30	1400	400	1000	5	40	40	WD200415 -01	.05 ng/uL WD200416 N -06.1	
12026459 LCSD	19-APR-2020 11:30	1400	400	1000	5	40	40	WD200415 -01	.05 ng/uL WD200416 N -06.1	
16406001	19-APR-2020 11:30	1500.5	503.3	997.2	7	40		.005 ng/uL WD200416 N -06.1		
16415001	19-APR-2020 11:30	1309.4	410.1	899.3	7	40		.05 ng/uL WD200416 N -06.1		
16416001	19-APR-2020 11:30	1360.1	413	947.1	7	40		.05 ng/uL WD200416 N -06.1		
16417001	19-APR-2020 11:30	1452.4	442.9	1009.5	4	40		.05 ng/uL WD200416 N -06.1		
16418001	19-APR-2020 11:30	1475.7	442	1033.7	7	40		.05 ng/uL WD200416 N -06.1		
16427001	19-APR-2020 11:30	1371.9	411.3	960.6	7	40		.05 ng/uL WD200416 N -06.1		
16428001	19-APR-2020 11:30	1339.3	413.6	925.7	7	40		.05 ng/uL WD200416 N -06.1		
16429001	19-APR-2020 11:30	1726.7	719.7	1007	5	40		.05 ng/uL WD200416 N -06.1		
16429002	19-APR-2020 11:30	1839.5	718.7	1120.8	8	40		.05 ng/uL WD200416 N -06.1		
16429003	19-APR-2020 11:30	1730.7	716.2	1014.5	7	40		.05 ng/uL WD200416 N -06.1		

Prep Logbook

Batch ID: 43605 **Verified by:** _____
Analyst: Andrea Scarpello
Method: SW846 3520C
Lab SOP: CF-OA-E-002 REV# 15
Instrument: Ohaus Scout Pro 4000

Sample ID	Start Run Date	Initial Weight (g)	Final weight (g)	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#	Decanted? (Y/N)
16430001	19-APR-2020 11:30	1543.1	511.4	1031.7	7	40			WD200416 N -06.1	
16431001	19-APR-2020 11:30	144.8	453.8	-309	9	40			.05 ng/uL WD200416 N -06.1	
16431002	19-APR-2020 11:30	1435.1	452.2	982.9	9	40			.05 ng/uL WD200416 N -06.1	
16432001	19-APR-2020 11:30	1457.7	478.4	979.3	7	40			.05 ng/uL WD200416 N -06.1	
16434001	19-APR-2020 11:30	1400	400	1000	5	40	40	WD200416 -07	WD200416 N -06.1	
16438001	19-APR-2020 11:30	1400	400	1000	5	40	13.3	.0005 ng/uL WD200416 -07	WD200416 N -06.1	
16438002	19-APR-2020 11:30	1400	400	1000	5	40	20	.0005 ng/uL WD200416 -07	WD200416 N -06.1	

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Concentrated Sulfuric Acid	1153656-A.2			H2SO4 added to 16431001 and 16431002 to lower the pH
REAGENT		Acetone	1155209-A.11	100	uL	16406001 - Sample was composited prior to receipt. Sample was not bottle spiked, sample was spiked on CCLE.
REAGENT		Acetone	1155211-A.12	250	mL	WO#16429 - received #4-250mL containers per sample. All four containers were composited on CCLE. Samples were not bottle spiked, samples were spiked on CCLE. All four containers were rinsed with DCM.
REAGENT		Methylene Chloride	1155258-A	1	mL	
REAGENT		Methylene Chloride	1155258-A			
REAGENT		Salt	1155452	10	g	16429001 - #3 containers pH=5, #1 container pH=7 Finish Time: 20-APR-20 08:10:00

Prep Logbook

Cleanup Procedure for Liquids

Batch ID: 43606
 Analyst: Mike Medwedeff

Verified by: _____

Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#
12026457 MB	20-APR-2020 10:00	AB Silica Florisl	55	100	20	WD200415-03 .01 ng/uL
12026457 MB	20-APR-2020 10:00	AB Silica Florisl	55	100	20	WD200415-03 .01 ng/uL
12026458 LCS	20-APR-2020 10:00	AB Silica Florisl	151	100	20	WD200415-03 .01 ng/uL
12026458 LCS	20-APR-2020 10:00	AB Silica Florisl	151	100	20	WD200415-03 .01 ng/uL
12026459 LCSD	20-APR-2020 10:00	AB Silica Florisl	86	100	20	WD200415-03 .01 ng/uL
12026459 LCSD	20-APR-2020 10:00	AB Silica Florisl	86	100	20	WD200415-03 .01 ng/uL
16406001	20-APR-2020 10:00	AB Silica Florisl	84	100	20	WD200415-03 .01 ng/uL
16415001	20-APR-2020 10:00	AB Silica Florisl	113	100	20	WD200415-03 .01 ng/uL
16416001	20-APR-2020 10:00	AB Silica Florisl	30	100	20	WD200415-03 .01 ng/uL
16417001	20-APR-2020 10:00	AB Silica Florisl	22	100	20	WD200415-03 .01 ng/uL
16418001	20-APR-2020 10:00	AB Silica Florisl	34	100	20	WD200415-03 .01 ng/uL
16427001	20-APR-2020 10:00	AB Silica Florisl	127	100	20	WD200415-03 .01 ng/uL
16428001	20-APR-2020 10:00	AB Silica Florisl	178	100	20	WD200415-03 .01 ng/uL
16429001	20-APR-2020 10:00	AB Silica Florisl	70	100	20	WD200415-03 .01 ng/uL
16429002	20-APR-2020 10:00	AB Silica Florisl	50	100	20	WD200415-03 .01 ng/uL
16429003	20-APR-2020 10:00	AB Silica Florisl	64	100	20	WD200415-03 .01 ng/uL
16430001	20-APR-2020 10:00	AB Silica Florisl	134	100	20	WD200415-03 .01 ng/uL
16431001	20-APR-2020 10:00	AB Silica Florisl	172	100	20	WD200415-03 .01 ng/uL
16431002	20-APR-2020 10:00	AB Silica Florisl	154	100	20	WD200415-03 .01 ng/uL
16432001	20-APR-2020 10:00	AB Silica Florisl	138	100	20	WD200415-03 .01 ng/uL
16434001	20-APR-2020 10:00	AB Silica Florisl	143	100	20	WD200415-03 .01 ng/uL
16438001	20-APR-2020 10:00	AB Silica Florisl	121	100	20	WD200415-03 .01 ng/uL
16438002	20-APR-2020 10:00	AB Silica Florisl	36	100	20	WD200415-03 .01 ng/uL

Comments:

Serial Number

Spike Amt

Description

Prep Logbook

Batch ID: 43606 Verified by: _____
 Analyst: Mike Medwedeff

Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliquot Analyzed (percent)	CS Amount (uL)	CS Serial#	Units
REAGENT			1151777-A.1	1			each
REAGENT			1152566-C	3			g
REAGENT			1154064	7			g
REAGENT			1154711-A	2			g
REAGENT			1154745	1			g
REAGENT			1155149-A.1	130			mL
REAGENT			1155151-A.2	130			mL
REAGENT			1155153-A.3	130			mL
REAGENT			1155258-A	100			mL
REAGENT			1155452	1			g

Prep Logbook

Method 1613B HRMS Aqueous Analysis

Batch ID: 43611 Verified by: _____
Analyst: Mary Lanier **Lab SOP:** CF-OA-E-002 REV# 15
Method: EPA Method 1613B **Instrument:** Waters Autospec Premier High-Resolution GC/MS

Sample ID	Start Run Date	Final Volume (uL)	Prep Factor (Final Volume /Aliquot) (uL/uL)	Dilution	Dilution Type	Injection Volume (uL)	Vial Prep Date
12026458 - 2 LCS	25-APR-2020 12:03	20	2.00E-05	1	Internal	1	20-APR-2020
12026459 - 2 LCSD	25-APR-2020 12:52	20	2.00E-05	1	Internal	1	20-APR-2020
12026457 - 2 MB	25-APR-2020 13:42	20	2.00E-05	1	Internal	1	20-APR-2020
16430001	25-APR-2020 14:31	20	1.94E-05	1	Internal	1	20-APR-2020

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT	8290	Injection Standard	WD200420-04	20	uL	
STANDARD	8290	Injection Standard	WD200420-04	20	uL	

Initial Calibration Data

Runlog Information

16131CA

Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
• A08JUL19A-1	HRP750_2	08-JUL-2019 09:40	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYQ	1 uL
• A08JUL19A-2	HRP750_2	08-JUL-2019 10:28	A08JUL19A	Matt Cash		SB DIBLK2M	1 uL
• A08JUL19A-3	HRP750_2	08-JUL-2019 11:16	A08JUL19A	Matt Cash		CS0.5 UD190207-01	1 uL
• A08JUL19A-4	HRP750_2	08-JUL-2019 12:03	A08JUL19A	Matt Cash		CS1 UD190207-02 CS143	1 uL
• A08JUL19A-5	HRP750_2	08-JUL-2019 12:51	A08JUL19A	Matt Cash		CS2 UD190207-03 CS243	1 uL
• A08JUL19A-6	HRP750_2	08-JUL-2019 13:39	A08JUL19A	Matt Cash		CS3 UD190207-04 CS3KG	1 uL
• A08JUL19A-7	HRP750_2	08-JUL-2019 14:27	A08JUL19A	Matt Cash		CS4 UD190207-05 CS442	1 uL
• A08JUL19A-8	HRP750_2	08-JUL-2019 15:15	A08JUL19A	Matt Cash		CS5 UD190207-06 CS543	1 uL
• A08JUL19A-9	HRP750_2	08-JUL-2019 16:03	A08JUL19A	Matt Cash		SB DIBLK2N	1 uL
• A08JUL19A-10	HRP750_2	08-JUL-2019 16:51	A08JUL19A	Matt Cash		CS3WT UD190513-04.2 CPSYR	1 uL

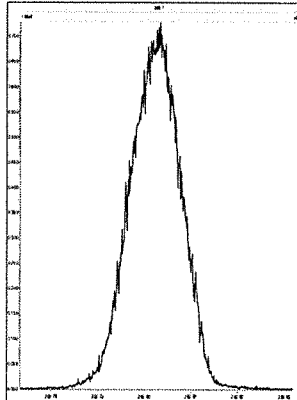
Experiment Calibration Report

MassLynx 4.1

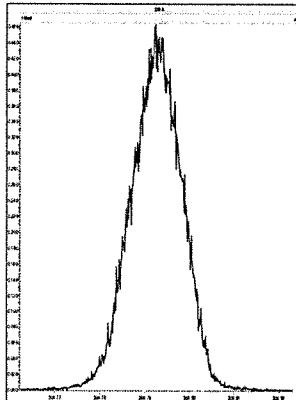
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 08, 2019 09:38:33 Eastern Standard Time

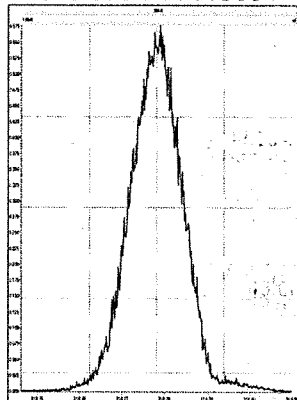
M 292.9824 R 12382



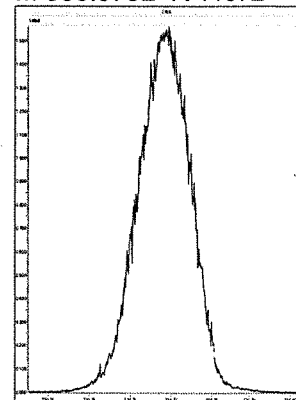
M 304.9824 R 11789



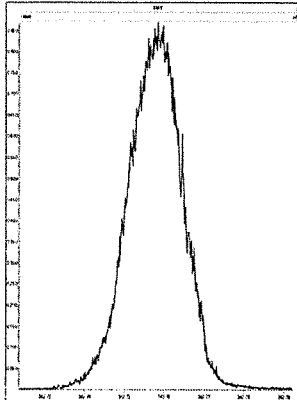
M 318.9792 R 11905



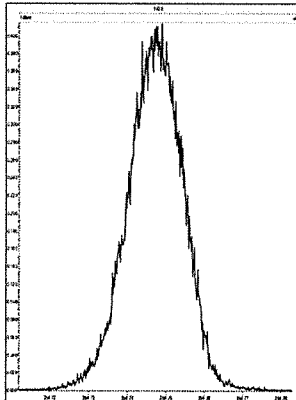
M 330.9792 R 11572



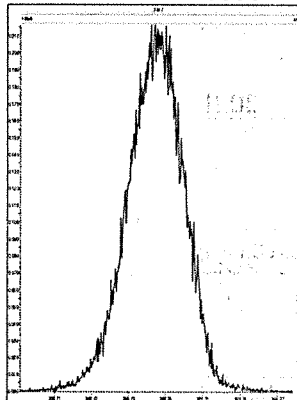
M 342.9792 R 10961



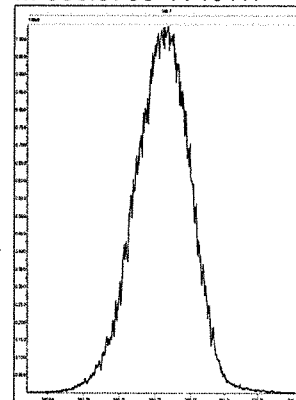
M 354.9792 R 10868



M 366.9792 R 10506



M 380.9760 R 10417



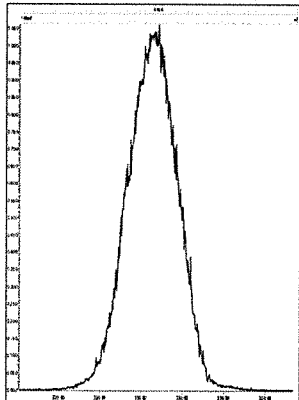
Experiment Calibration Report

MassLynx 4.1

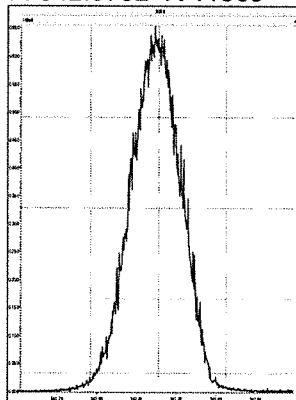
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Printed: Monday, July 08, 2019 09:38:55 Eastern Standard Time

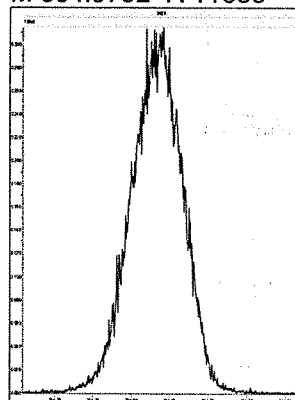
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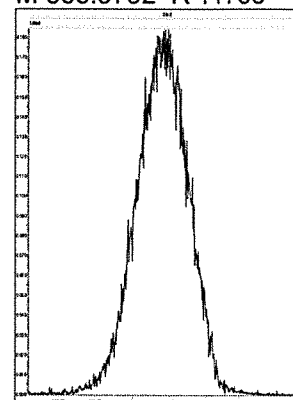
M 342.9792 R 11959



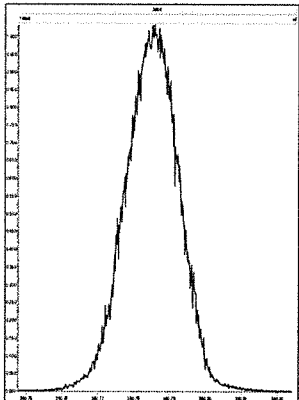
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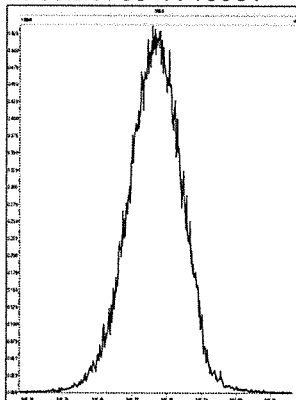
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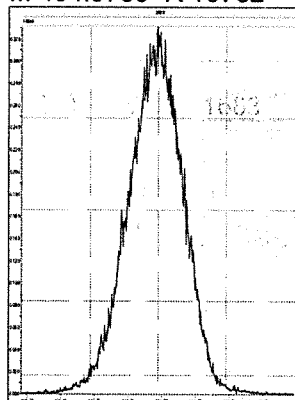
M 380.9760 R 11158



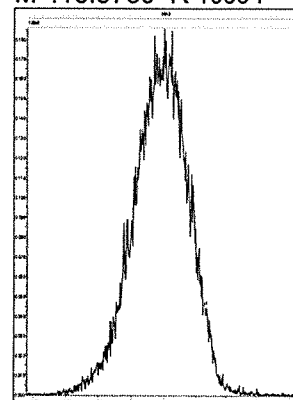
M 392.9760 R 10961



M 404.9760 R 10732



M 416.9760 R 10594



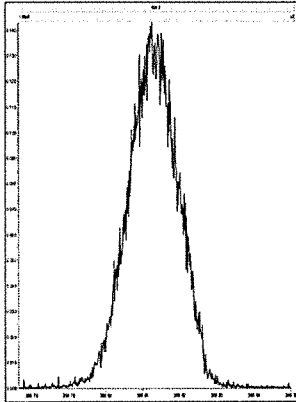
Experiment Calibration Report

MassLynx 4.1

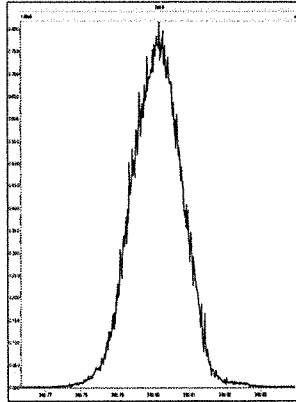
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Printed: Monday, July 08, 2019 09:39:18 Eastern Standard Time

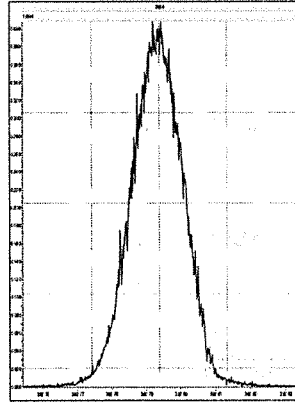
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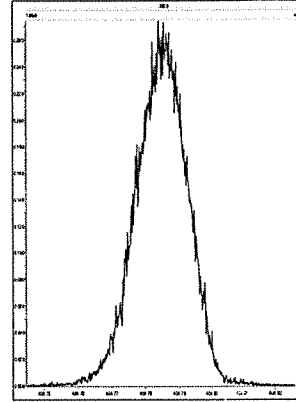
M 380.9760 R 12379



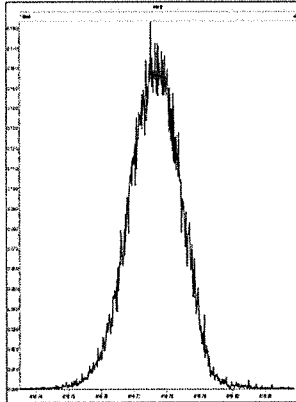
M 392.9760 R 11574



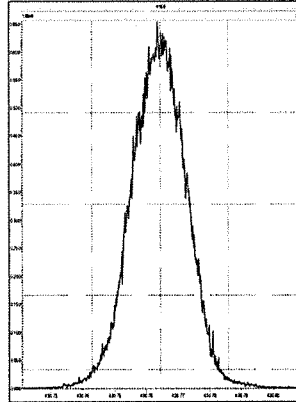
M 404.9760 R 11740



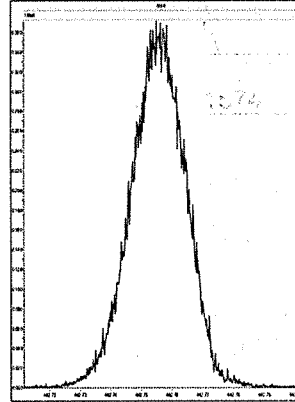
M 416.9760 R 11625



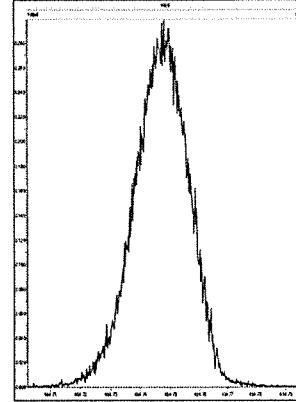
M 430.9728 R 10869



M 442.9728 R 11466



M 454.9728 R 10730



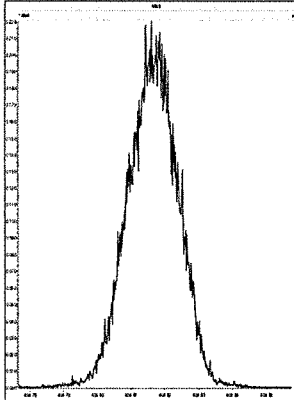
Experiment Calibration Report

MassLynx 4.1

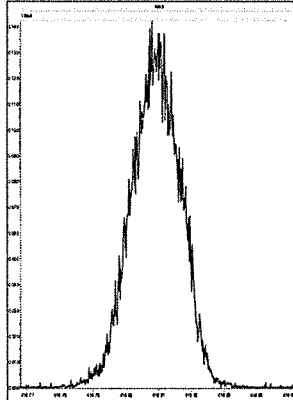
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, July 08, 2019 09:39:46 Eastern Standard Time

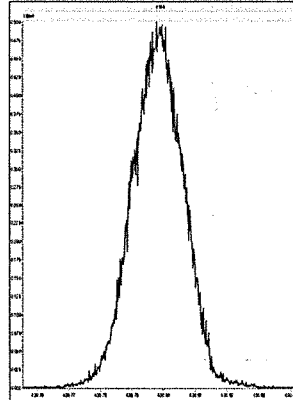
M 404.9760 R 12135



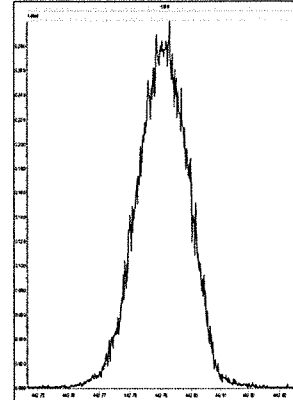
M 416.9760 R 12313



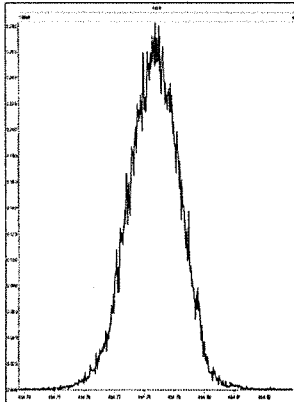
M 430.9728 R 12074



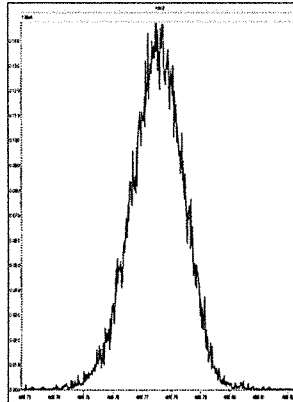
M 442.9728 R 11681



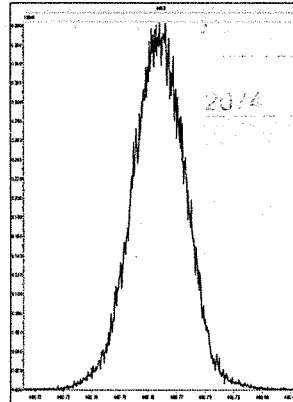
M 454.9728 R 11734



M 466.9728 R 11160



M 480.9696 R 10682



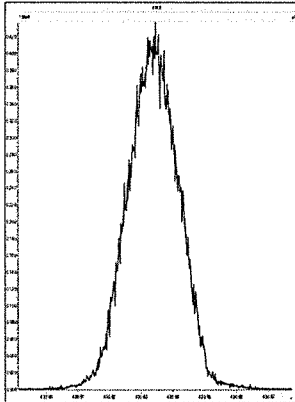
Experiment Calibration Report

MassLynx 4.1

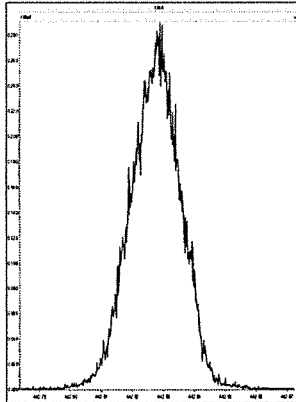
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, July 08, 2019 09:40:08 Eastern Standard Time

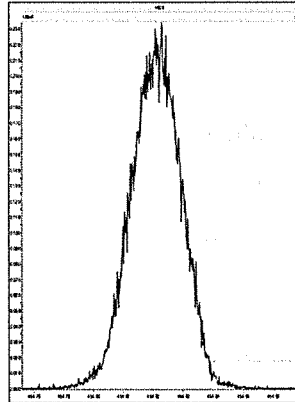
M 430.9728 R 12197



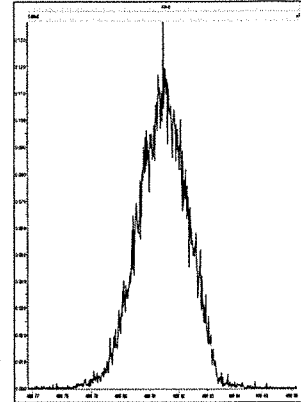
M 442.9728 R 11848



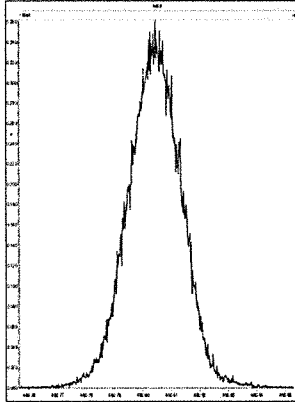
M 454.9728 R 12076



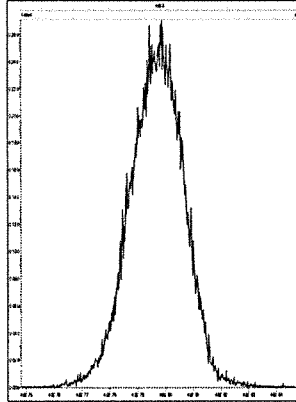
M 466.9728 R 12501



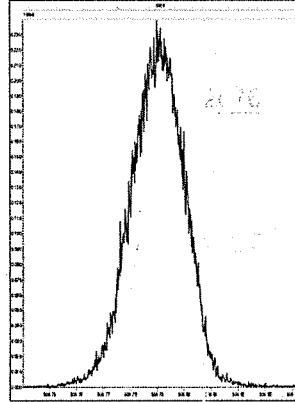
M 480.9696 R 11312



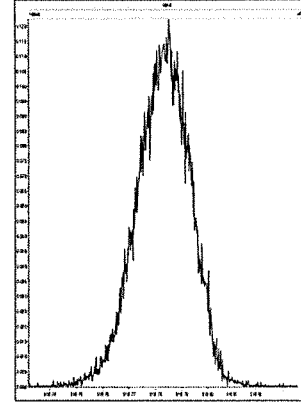
M 492.9696 R 11159



M 504.9696 R 11737



M 516.9697 R 11418

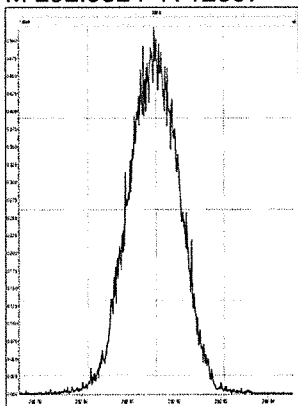


Resolution Check Report

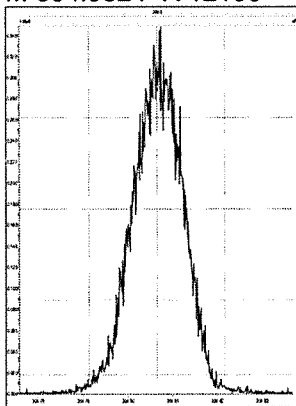
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

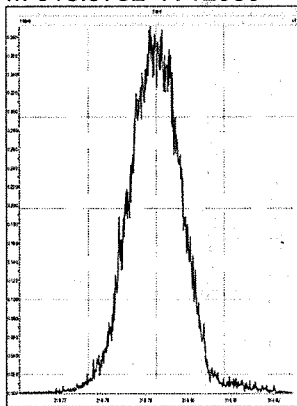
M 292.9824 R 12567



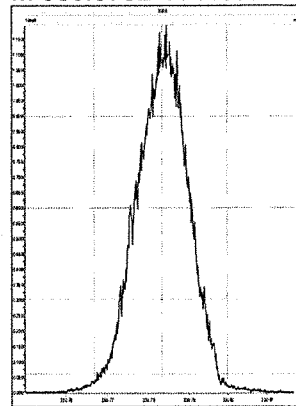
M 304.9824 R 12106



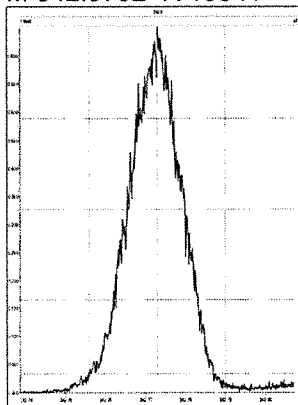
M 318.9792 R 12059



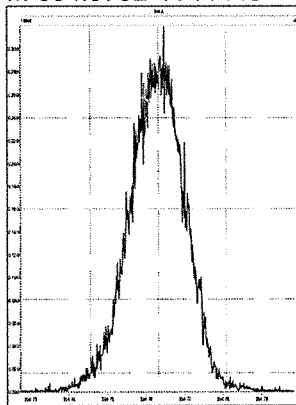
M 330.9792 R 11685



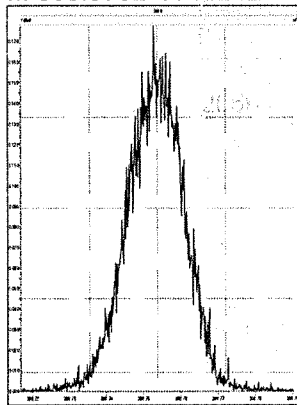
M 342.9792 R 10941



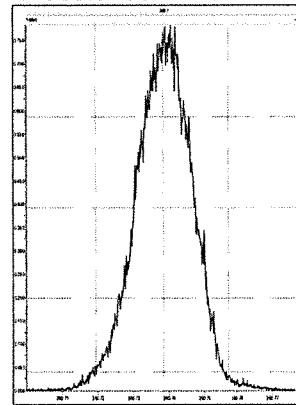
M 354.9792 R 11443



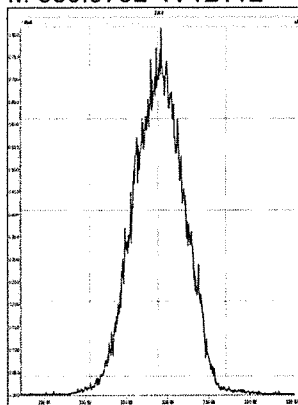
M 366.9792 R 11242



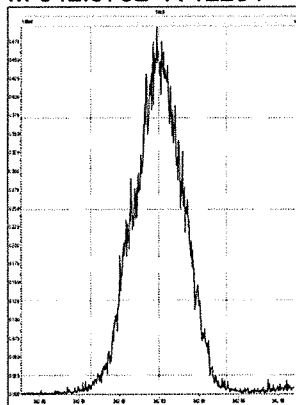
M 380.9760 R 10482



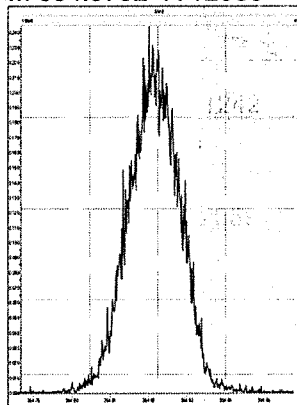
M 330.9792 R 12112



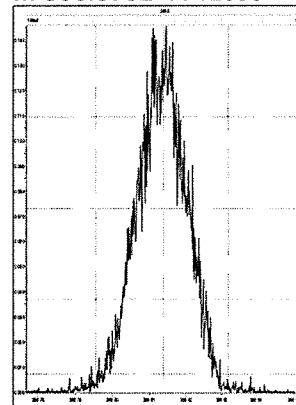
M 342.9792 R 12254



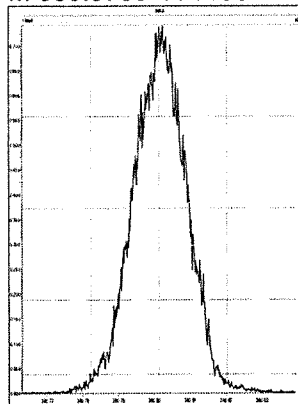
M 354.9792 R 12056



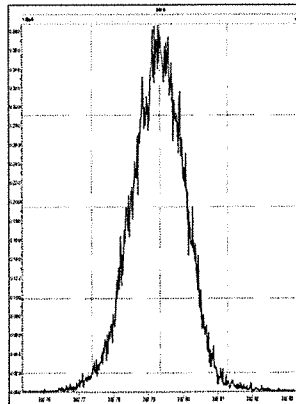
M 366.9792 R 12530



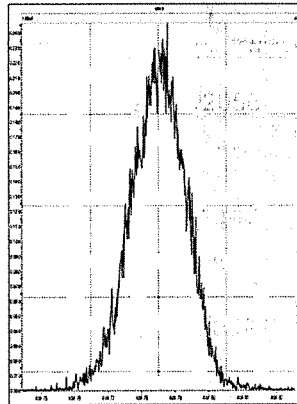
M 380.9760 R 11654



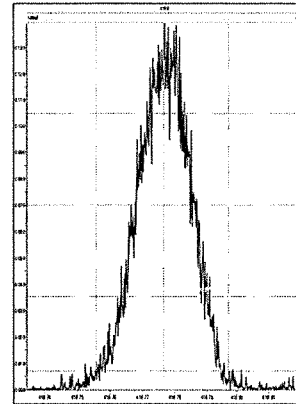
M 392.9760 R 11441



M 404.9760 R 11289



M 416.9760 R 11443

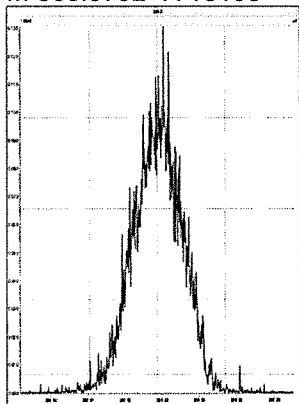


Resolution Check Report

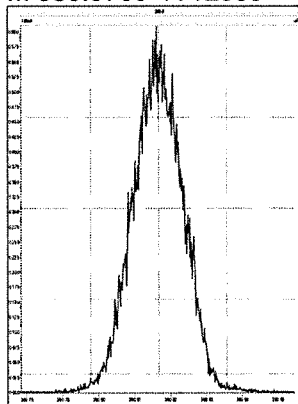
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

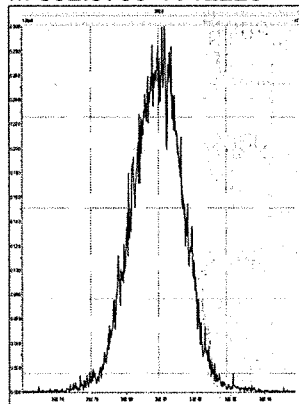
M 366.9792 R 13199



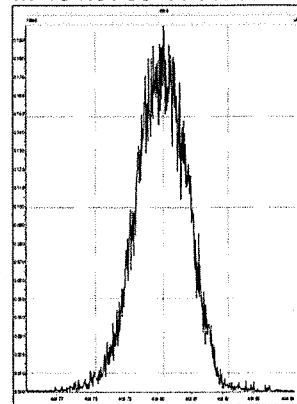
M 380.9760 R 12059



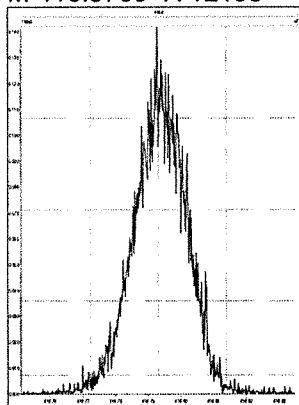
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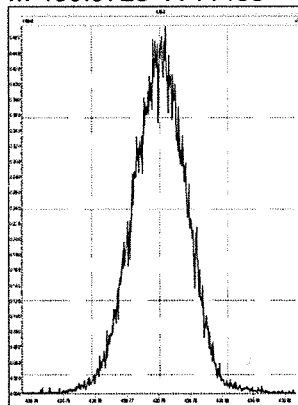
M 404.9760 R 11753



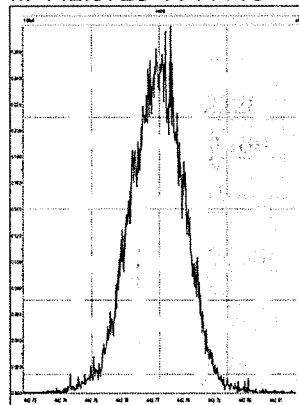
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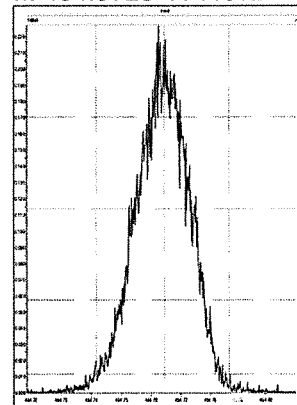
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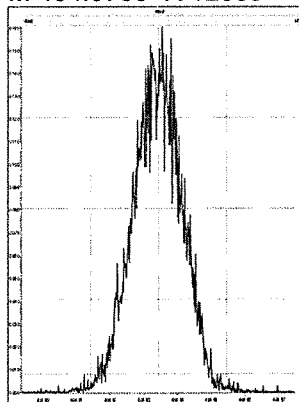
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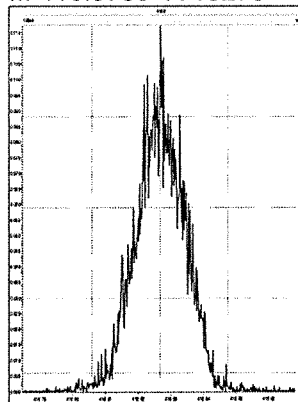
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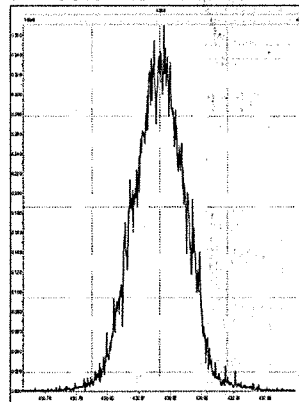
M 404.9760 R 12659



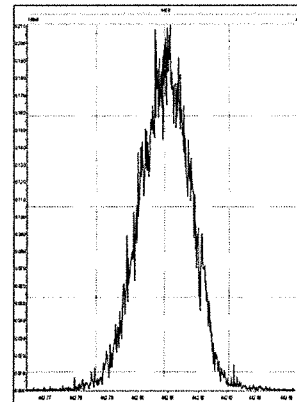
M 416.9760 R 13273



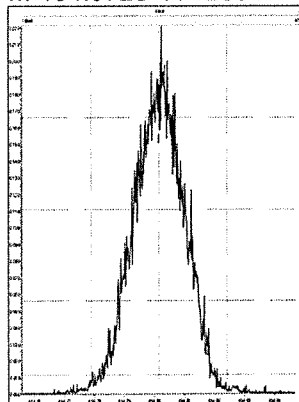
M 430.9728 R 12194



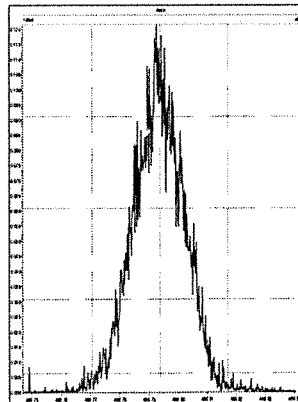
M 442.9728 R 12019



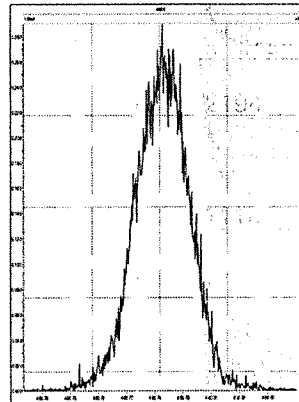
M 454.9728 R 12334



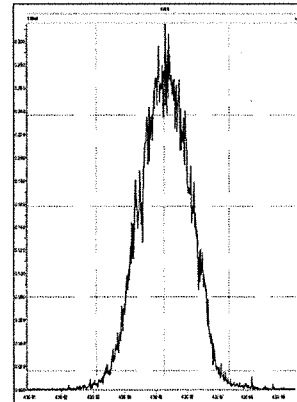
M 466.9728 R 12524



M 480.9696 R 11467



M 430.9728 R 11914

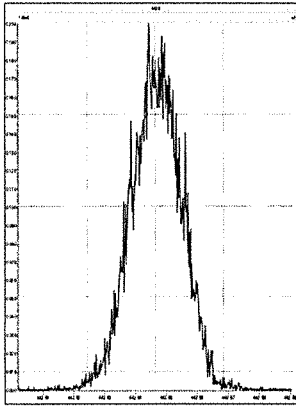


Resolution Check Report

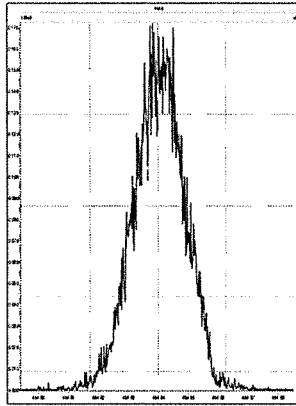
MassLynx 4.1

Printed: Monday, July 08, 2019 17:47:31 Eastern Standard Time

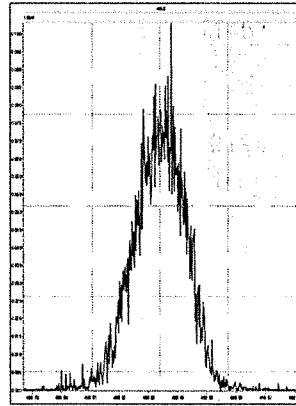
M 442.9728 R 13033



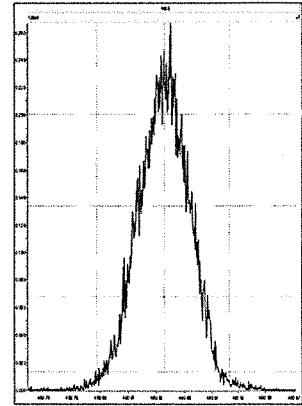
M 454.9728 R 12334



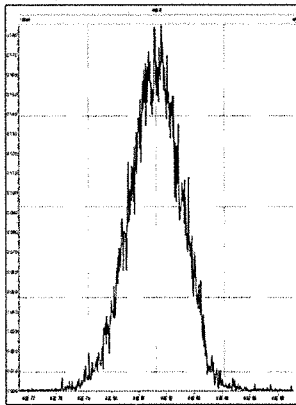
M 466.9728 R 12722



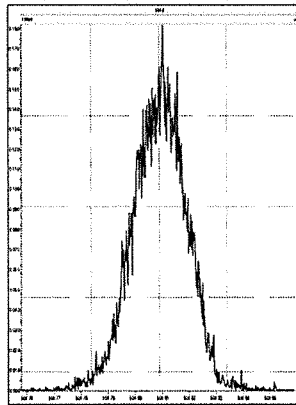
M 480.9696 R 11769



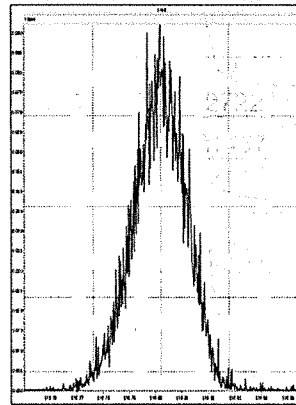
M 492.9696 R 11560



M 504.9696 R 11371



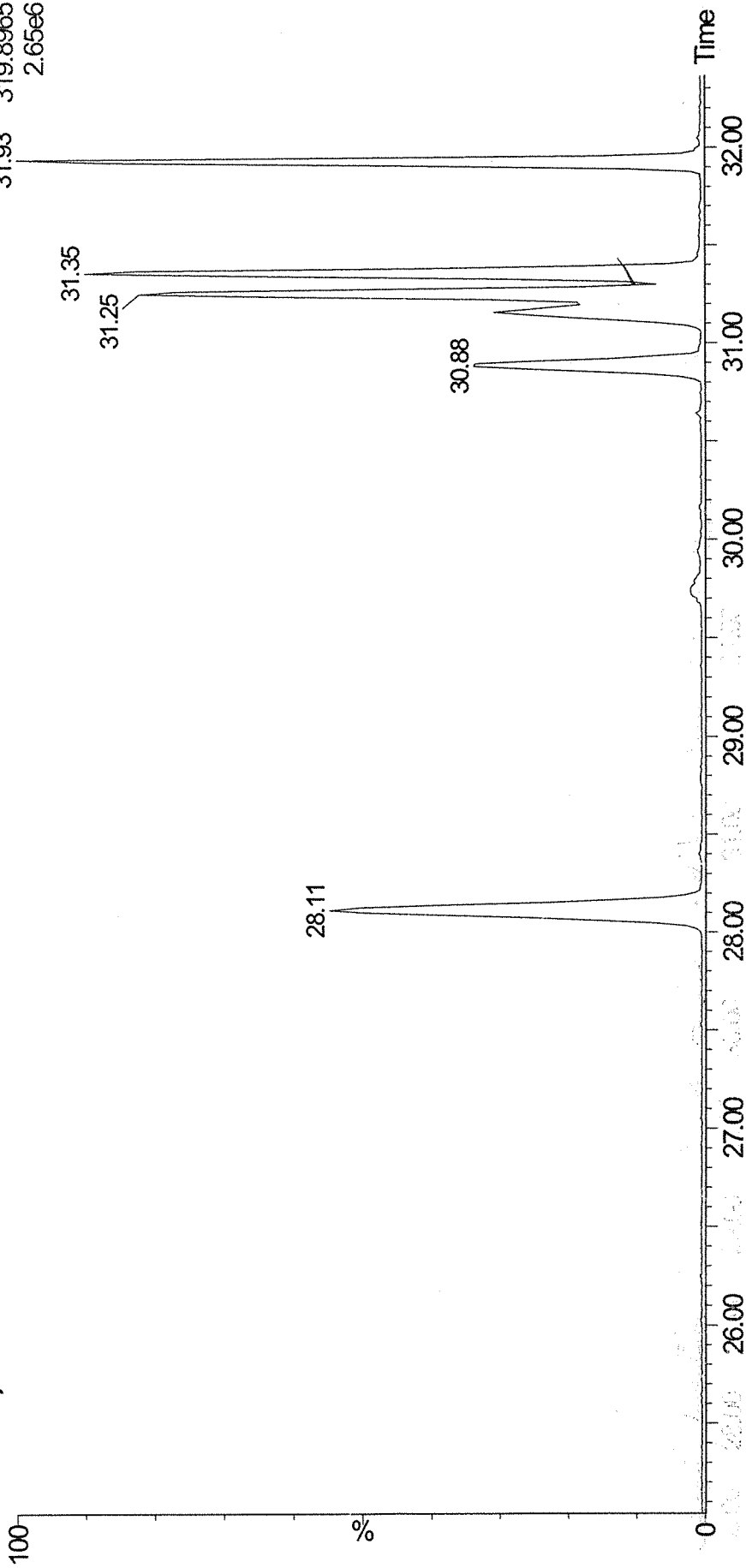
M 516.9697 R 11260



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYQ
A08JUL19A-1

HRP750_2

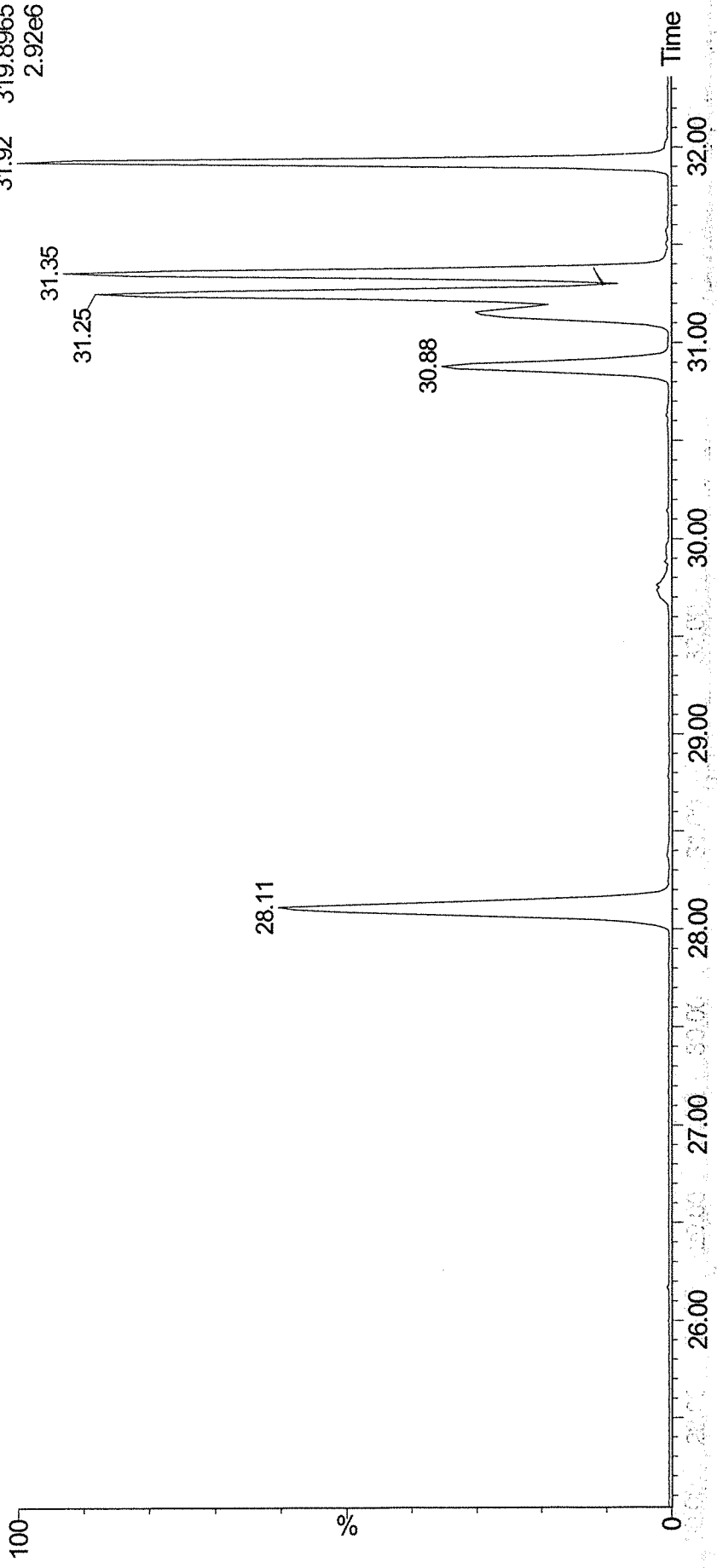
08-Jul-2019 09:40:54
1: Voltage SIR 13 Channels EI+
31.93 319.8965
2.65e6



COLUMN CHECK (2378-TCDD 8%)
CS3WT UD190513-04.2 CPSYR
A08JUL19A-10 ✓

HRP750_2

08-Jul-2019 16:51:30
1: Voltage SIR 13 Channels EI+
31.92 319.8965
2.92e6



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methodb\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.38
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.48
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.93
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.32
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

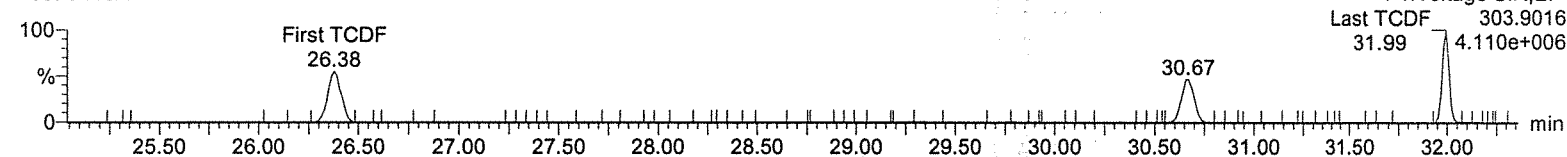
Method: C:\MassLynx\Default.pro\Methdb\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

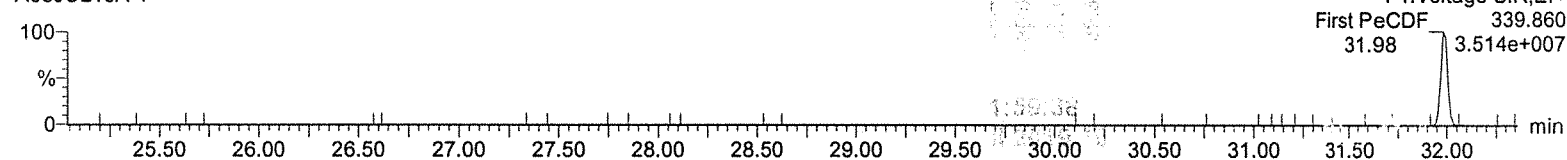
First TCDF

A08JUL19A-1



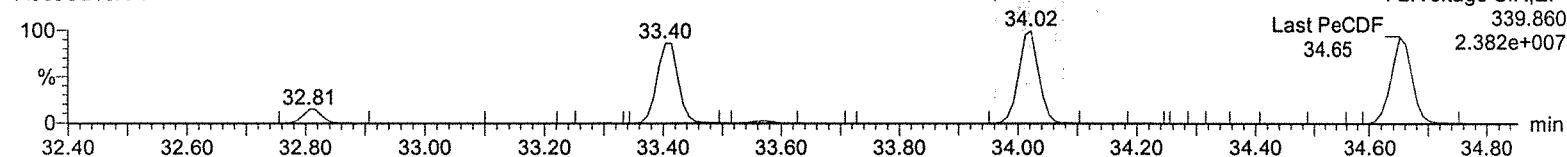
First PeCDF

A08JUL19A-1



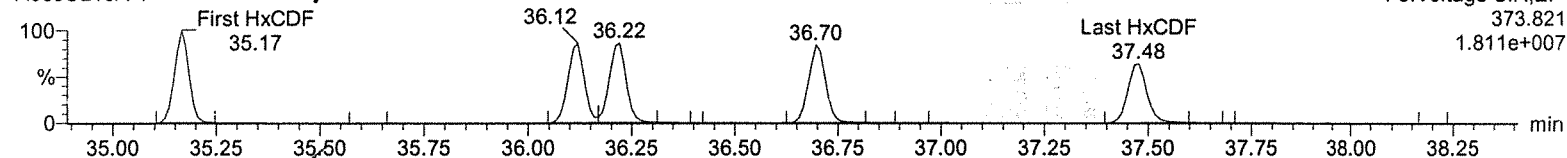
Last PeCDF

A08JUL19A-1



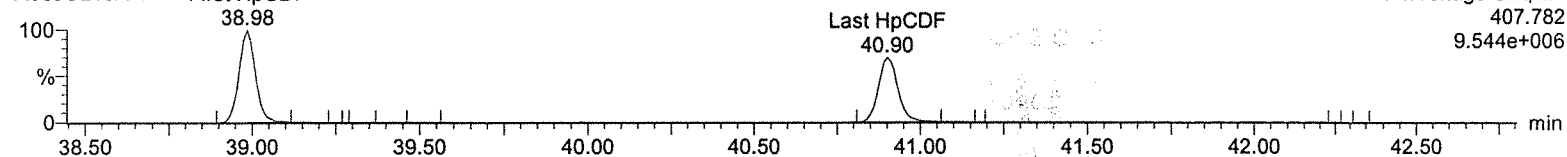
First HxCDF

A08JUL19A-1



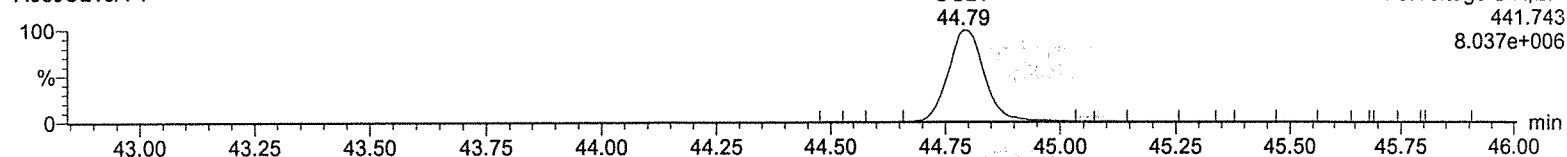
First HpCDF

A08JUL19A-1



OCDF

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-1.qld

Last Altered: Tuesday, July 09, 2019 08:40:10 Eastern Standard Time

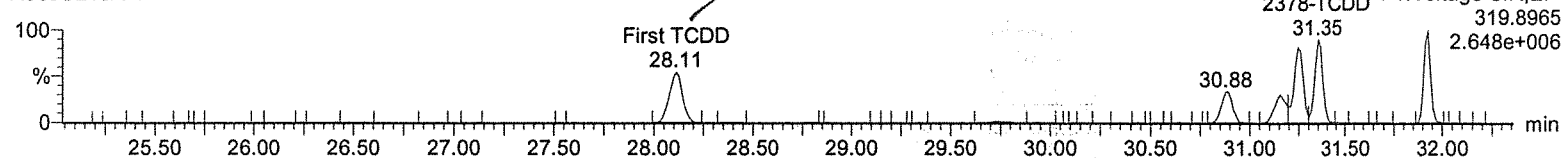
Printed: Tuesday, July 09, 2019 08:40:46 Eastern Standard Time

23209 JUL 19

Name: A08JUL19A-1, Date: 08-Jul-2019, Time: 09:40:54, ID: CS3WT UD190513-04.2 CPSYQ, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

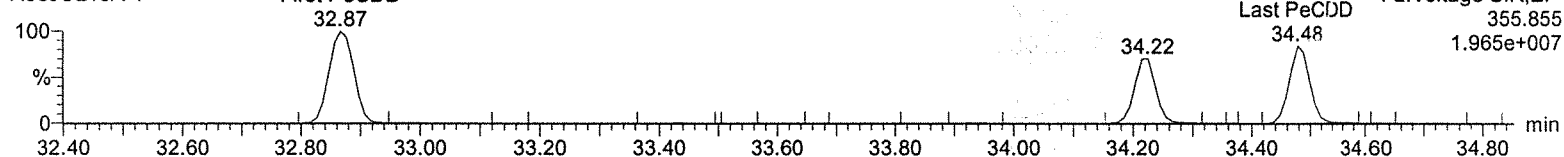
First TCDD

A08JUL19A-1



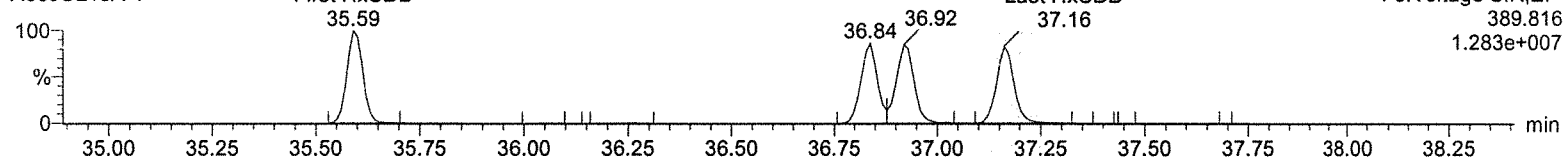
First PeCDD

A08JUL19A-1



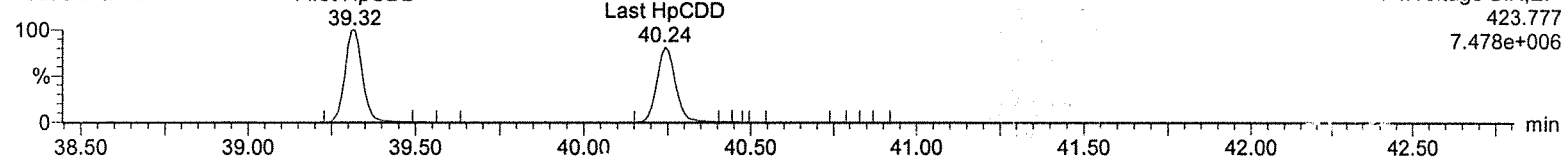
First HxCDD

A08JUL19A-1



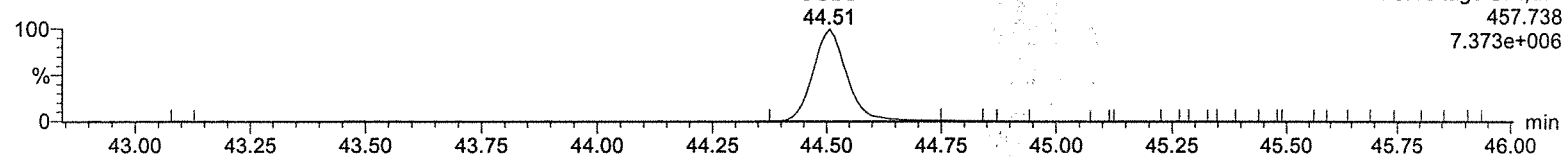
First HpCDD

A08JUL19A-1



OCDD

A08JUL19A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

	Name	RT
1	First TCDF	26.37
2	Last TCDF	31.99
3	First PeCDF	31.98
4	Last PeCDF	34.65
5	First HxCDF	35.17
6	Last HxCDF	37.47
7	First HpCDF	38.98
8	Last HpCDF	40.90
9	OCDF	44.79
10	First TCDD	28.11
11	2378-TCDD	31.35
12	Last TCDD	31.92
13	First PeCDD	32.87
14	Last PeCDD	34.48
15	First HxCDD	35.59
16	Last HxCDD	37.16
17	First HpCDD	39.31
18	Last HpCDD	40.24
19	OCDD	44.51

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:42:32 Eastern Standard Time

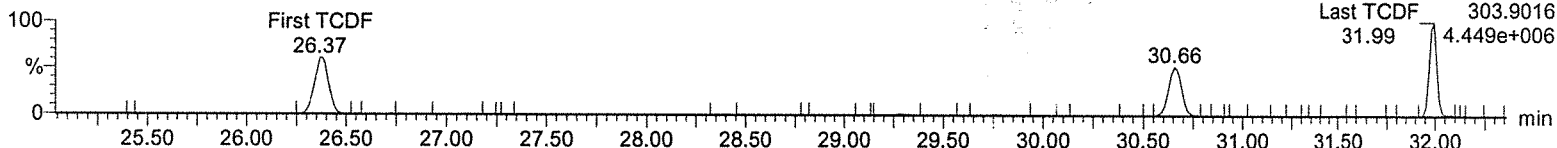
Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A07JUL19.mdb 08 Jul 2019 11:59:38

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 08 Jul 2019 16:30:50

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

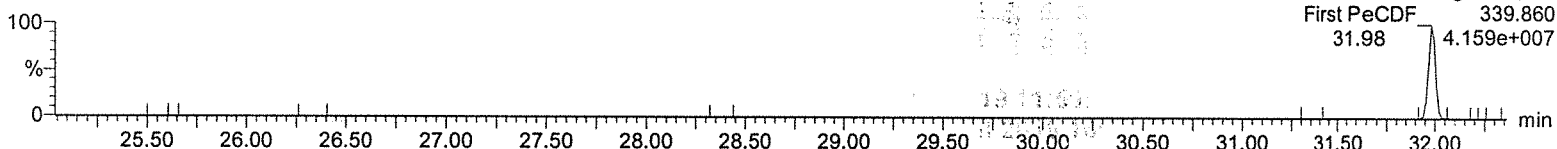
First TCDF

A08JUL19A-10



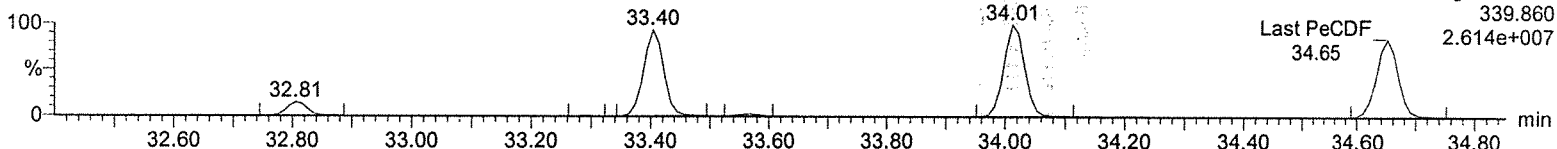
First PeCDF

A08JUL19A-10



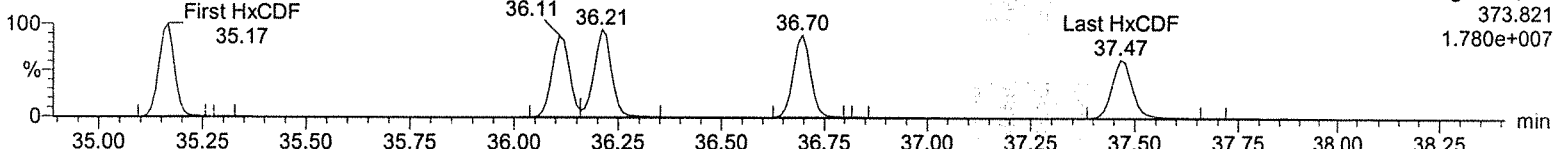
Last PeCDF

A08JUL19A-10



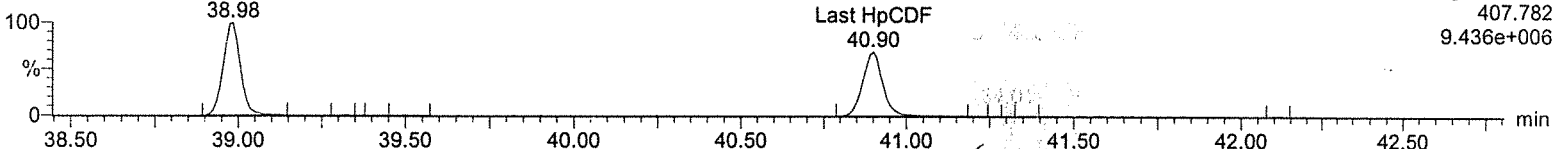
First HxCDF

A08JUL19A-10



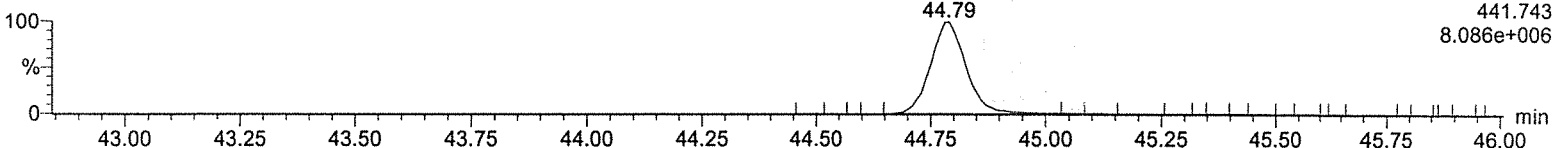
First HpCDF

A08JUL19A-10



OCDF

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 08:41:44 Eastern Standard Time

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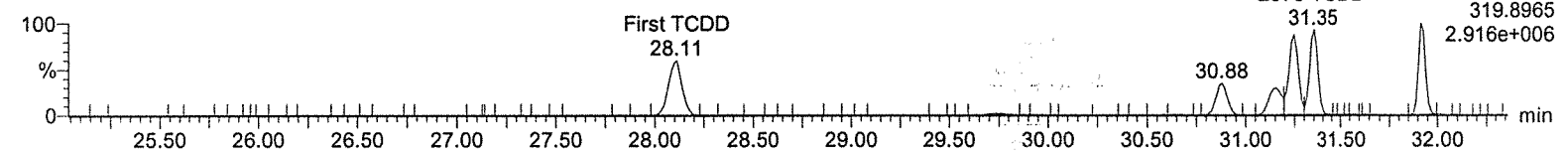
0809 JUL 19

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

LAST

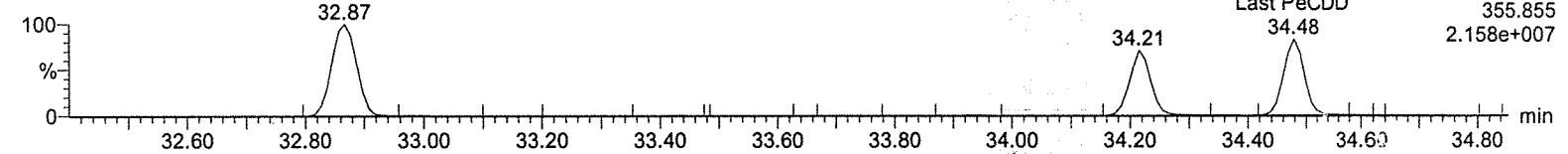
First TCDD

A08JUL19A-10



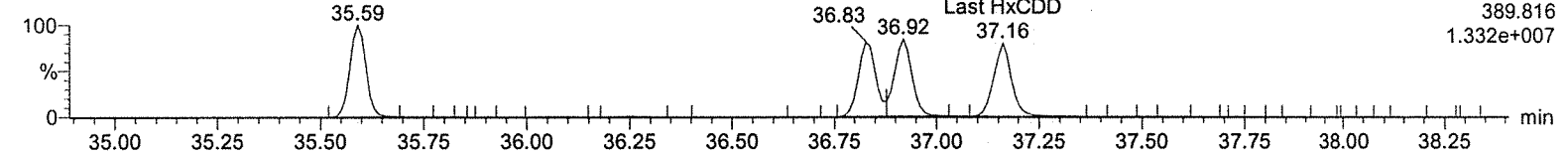
First PeCDD

A08JUL19A-10



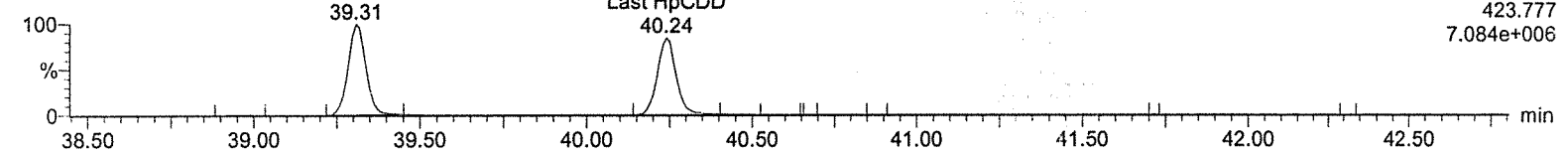
First HxCDD

A08JUL19A-10



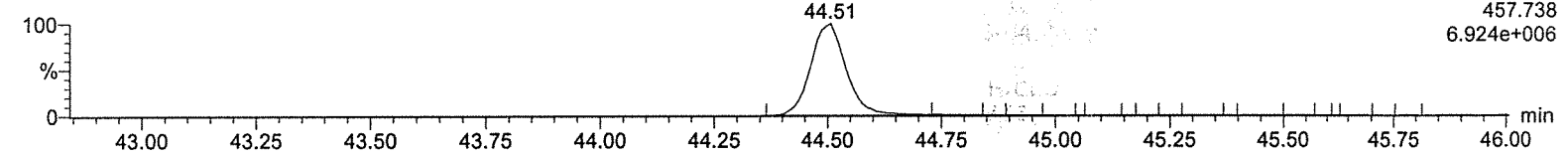
First HpCDD

A08JUL19A-10



OCDD

A08JUL19A-10



Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Date: 08-Jul-2019, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

	Name	ICAL RRF
1	2378-TCDD	0.884
2	12378-PeCDD	0.853
3	123478-HxCDD	0.940
4	123678-HxCDD	0.944
5	123789-HxCDD	0.927
6	1234678-HpCDD	1.040
7	OCDD	0.971
8	2378-TCDF	0.978
9	12378-PeCDF	0.945
10	23478-PeCDF	0.987
11	123478-HxCDF	1.087
12	123678-HxCDF	1.041
13	234678-HxCDF	1.136
14	123789-HxCDF	1.061
15	1234678-HpCDF	1.150
16	1234789-HpCDF	1.202
17	OCDF	1.133
18	13C-2378-TCDD	1.128
19	13C-12378-PeCDD	0.751
20	13C-123478-HxCDD	0.896
21	13C-123678-HxCDD	0.986
22	13C-1234678-HpCDD	0.672
23	13C-OCDD	0.642
24	13C-2378-TCDF	1.250
25	13C-12378-PeCDF	1.011
26	13C-23478-PeCDF	1.063
27	13C-123478-HxCDF	1.111
28	13C-123678-HxCDF	1.247
29	13C-234678-HxCDF	1.082
30	13C-123789-HxCDF	0.967
31	13C-1234678-HpCDF	0.870
32	13C-1234789-HpCDF	0.677
33	13C-1234-TCDD	1.000
34	13C-123789-HxCDD	1.000
35	37Cl-2378-TCDD	1.061

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

12 July 19

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36

Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Compound name: 2378-TCDD

Response Factor: 0.884458

RRF SD: 0.0448767, Relative SD: 5.07393

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

$$CS0.5 RRF = \frac{(5.2423)(100)}{(2.20124)(0.25)} = 0.952$$

$$RRFSD = \sqrt{\frac{0.010119}{5}} = 0.04499 \times 100 = 5.09$$

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.36	0.27	0.952	0.884	bd
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.36	0.47	0.823	0.884	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.93	0.852	0.884	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.35	9.94	0.879	0.884	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.31	0.891	0.884	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	205.76	0.910	0.884	bb

Compound name: 12378-PeCDD

Response Factor: 0.853475

RRF SD: 0.0140917, Relative SD: 1.65109

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.21	1.28	0.873	0.853	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.22	2.44	0.834	0.853	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.21	9.86	0.841	0.853	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.21	50.22	0.857	0.853	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.21	199.88	0.853	0.853	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.22	1009.56	0.862	0.853	bb

Compound name: 123478-HxCDD

Response Factor: 0.939643

RRF SD: 0.0292523, Relative SD: 3.11313

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.83	1.22	0.917	0.940	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.84	2.37	0.892	0.940	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.83	10.13	0.952	0.940	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.83	50.56	0.950	0.940	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.84	204.08	0.959	0.940	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.84	1030.90	0.969	0.940	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123678-HxCDD

Response Factor: 0.944066

RRF SD: 0.0242859, Relative SD: 2.57248

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.92	1.21	0.916	0.944	db
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.92	2.46	0.930	0.944	dd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.92	9.76	0.922	0.944	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.92	51.25	0.968	0.944	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.92	203.46	0.960	0.944	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.92	1026.32	0.969	0.944	dd

Compound name: 123789-HxCDD

Response Factor: 0.927099

RRF SD: 0.0305511, Relative SD: 3.29534

Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.15	1.21	0.900	0.927	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.16	2.38	0.881	0.927	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.16	10.00	0.927	0.927	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.16	51.43	0.954	0.927	db
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.16	204.71	0.949	0.927	dd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.16	1026.76	0.952	0.927	dd

Compound name: 1234678-HpCDD

Response Factor: 1.03994

RRF SD: 0.0299236, Relative SD: 2.87742

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.24	1.23	1.027	1.040	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.25	2.38	0.991	1.040	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.24	10.00	1.040	1.040	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.23	51.50	1.071	1.040	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.25	200.19	1.041	1.040	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.24	1029.04	1.070	1.040	bb

Compound name: OCDD

Response Factor: 0.971418

RRF SD: 0.0232154, Relative SD: 2.38985

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.49	2.48	0.962	0.971	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.49	4.96	0.946	0.971	bd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: OCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.49	19.47	0.945	0.971	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.49	102.63	0.997	0.971	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.51	407.18	0.989	0.971	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.51	2036.59	0.989	0.971	bb

Compound name: 2378-TCDF

Response Factor: 0.978424

RRF SD: 0.0546693, Relative SD: 5.58748

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	30.67	0.28	1.077	0.978	MM
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	30.67	0.47	0.916	0.978	bb
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	30.66	1.93	0.944	0.978	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	30.67	9.95	0.973	0.978	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	30.67	39.70	0.971	0.978	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	30.67	202.19	0.989	0.978	bb

Compound name: 12378-PeCDF

Response Factor: 0.945213

RRF SD: 0.032234, Relative SD: 3.41024

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	33.40	1.28	0.969	0.945	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	33.41	2.35	0.888	0.945	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	33.40	9.78	0.925	0.945	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	33.40	50.77	0.960	0.945	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	33.40	204.22	0.965	0.945	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	33.40	1020.23	0.964	0.945	bb

Compound name: 23478-PeCDF

Response Factor: 0.986747

RRF SD: 0.0368449, Relative SD: 3.73397

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	34.01	1.18	0.933	0.987	bb
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	34.02	2.46	0.973	0.987	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	34.01	9.78	0.965	0.987	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	34.01	50.78	1.002	0.987	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	34.02	205.34	1.013	0.987	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	34.02	1048.35	1.034	0.987	bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123478-HxCDF

Response Factor: 1.08717

RRF SD: 0.0419813, Relative SD: 3.86151

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.11	1.19	1.039	1.087	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.11	2.41	1.049	1.087	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.11	9.76	1.061	1.087	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.11	51.25	1.114	1.087	bd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.12	208.35	1.133	1.087	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.12	1036.34	1.127	1.087	bd

Compound name: 123678-HxCDF

Response Factor: 1.04051

RRF SD: 0.0335945, Relative SD: 3.22866

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.21	1.26	1.052	1.041	dd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.22	2.35	0.977	1.041	db
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.21	9.95	1.035	1.041	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.21	51.61	1.074	1.041	dd
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.21	202.58	1.054	1.041	db
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.22	1010.63	1.052	1.041	db

Compound name: 234678-HxCDF

Response Factor: 1.13575

RRF SD: 0.0360558, Relative SD: 3.17463

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	36.69	1.19	1.084	1.136	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	36.69	2.44	1.107	1.136	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	36.69	9.95	1.130	1.136	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	36.69	50.73	1.152	1.136	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	36.69	207.52	1.178	1.136	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	36.69	1024.66	1.164	1.136	bd

Compound name: 123789-HxCDF

Response Factor: 1.06073

RRF SD: 0.0242888, Relative SD: 2.28983

Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	37.46	1.21	1.029	1.061	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	37.47	2.44	1.034	1.061	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 123789-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	37.48	10.04	1.065	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	37.47	51.19	1.086	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	37.48	201.24	1.067	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	37.48	1021.59	1.084	1.061	bb

Compound name: 1234678-HpCDF

Response Factor: 1.14983

RRF SD: 0.0443867, Relative SD: 3.8603

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	38.97	1.17	1.074	1.150	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	38.98	2.45	1.126	1.150	bb
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	38.98	9.98	1.148	1.150	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	38.97	51.63	1.187	1.150	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	38.98	205.56	1.182	1.150	bb
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	38.98	1028.22	1.182	1.150	bb

Compound name: 1234789-HpCDF

Response Factor: 1.20215

RRF SD: 0.0229239, Relative SD: 1.90691

Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	1.250	40.90	1.25	1.200	1.202	bd
A08JUL19A-4	CS1 UD190207-02 CS143	2.500	40.89	2.47	1.188	1.202	bd
A08JUL19A-5	CS2 UD190207-03 CS243	10.000	40.90	9.74	1.171	1.202	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	50.000	40.89	49.74	1.196	1.202	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	40.91	204.32	1.228	1.202	bd
A08JUL19A-8	CS5 UD190207-06 CS543	1000.000	40.91	1022.70	1.229	1.202	bb

Compound name: OCDF

Response Factor: 1.13283

RRF SD: 0.076827, Relative SD: 6.78187

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	2.500	44.78	2.31	1.049	1.133	bb
A08JUL19A-4	CS1 UD190207-02 CS143	5.000	44.81	4.64	1.052	1.133	bd
A08JUL19A-5	CS2 UD190207-03 CS243	20.000	44.78	19.91	1.128	1.133	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	44.78	100.46	1.138	1.133	bd
A08JUL19A-7	CS4 UD190207-05 CS442	400.000	44.80	416.81	1.180	1.133	bd
A08JUL19A-8	CS5 UD190207-06 CS543	2000.000	44.80	2206.18	1.250	1.133	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-2378-TCDD

Response Factor: 1.12834

RRF SD: 0.0266676, Relative SD: 2.36343

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	31.34	100.14	1.130	1.128	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	31.34	96.74	1.092	1.128	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	31.34	99.09	1.118	1.128	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	31.34	102.35	1.155	1.128	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	31.34	98.65	1.113	1.128	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	31.34	103.02	1.162	1.128	bb

Compound name: 13C-12378-PeCDD

Response Factor: 0.75125

RRF SD: 0.0377537, Relative SD: 5.02545

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.20	103.04	0.774	0.751	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.21	93.93	0.706	0.751	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.20	96.78	0.727	0.751	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.20	99.64	0.749	0.751	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.20	98.42	0.739	0.751	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.21	108.20	0.813	0.751	bb

Compound name: 13C-123478-HxCDD

Response Factor: 0.896281

RRF SD: 0.0124016, Relative SD: 1.38367

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.82	99.03	0.888	0.896	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.83	101.29	0.908	0.896	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.82	99.74	0.894	0.896	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.82	97.87	0.877	0.896	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.83	100.73	0.903	0.896	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.83	101.35	0.908	0.896	bd

Compound name: 13C-123678-HxCDD

Response Factor: 0.985774

RRF SD: 0.00823518, Relative SD: 0.835403

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.91	98.89	0.975	0.986	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.91	100.38	0.990	0.986	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 13C-123678-HxCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.91	98.98	0.976	0.986	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.91	100.62	0.992	0.986	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.91	100.68	0.993	0.986	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.91	100.46	0.990	0.986	dd

Compound name: 13C-1234678-HpCDD

Response Factor: 0.671678

RRF SD: 0.00864315, Relative SD: 1.2868

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.22	99.85	0.671	0.672	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.23	101.04	0.679	0.672	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.23	101.05	0.679	0.672	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.22	99.38	0.667	0.672	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.23	100.89	0.678	0.672	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.23	97.79	0.657	0.672	bb

Compound name: 13C-OCDD

Response Factor: 0.64212

RRF SD: 0.0312445, Relative SD: 4.86583

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	200.000	44.47	190.01	0.610	0.642	bb
A08JUL19A-4	CS1 UD190207-02 CS143	200.000	44.49	195.03	0.626	0.642	bd
A08JUL19A-5	CS2 UD190207-03 CS243	200.000	44.49	191.09	0.614	0.642	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	200.000	44.47	212.75	0.683	0.642	bb
A08JUL19A-7	CS4 UD190207-05 CS442	200.000	44.49	210.31	0.675	0.642	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	44.49	200.81	0.645	0.642	bd

Compound name: 13C-2378-TCDF

Response Factor: 1.24989

RRF SD: 0.0235442, Relative SD: 1.8837

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.64	102.21	1.277	1.250	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.64	97.12	1.214	1.250	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.64	99.85	1.248	1.250	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.64	101.40	1.267	1.250	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.64	98.61	1.233	1.250	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.64	100.81	1.260	1.250	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 13C-12378-PeCDF

Response Factor: 1.0108

RRF SD: 0.042891, Relative SD: 4.24328

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	33.39	101.65	1.028	1.011	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	33.40	95.18	0.962	1.011	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	33.39	98.01	0.991	1.011	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	33.39	100.21	1.013	1.011	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	33.39	97.58	0.986	1.011	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	33.39	107.36	1.085	1.011	bb

Compound name: 13C-23478-PeCDF

Response Factor: 1.06317

RRF SD: 0.056146, Relative SD: 5.28101

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	34.00	105.12	1.118	1.063	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	34.01	92.69	0.985	1.063	db
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	34.00	98.16	1.044	1.063	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	34.00	99.71	1.060	1.063	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	34.01	97.32	1.035	1.063	db
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	34.01	107.01	1.138	1.063	db

Compound name: 13C-123478-HxCDF

Response Factor: 1.11071

RRF SD: 0.0157984, Relative SD: 1.42237

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.10	100.10	1.112	1.111	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.11	102.58	1.139	1.111	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.10	100.42	1.115	1.111	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.10	99.09	1.101	1.111	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.10	98.72	1.097	1.111	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.11	99.08	1.101	1.111	bd

Compound name: 13C-123678-HxCDF

Response Factor: 1.24684

RRF SD: 0.0132688, Relative SD: 1.0642

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.20	98.41	1.227	1.247	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.21	99.91	1.246	1.247	dd

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Compound name: 13C-123678-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.20	101.24	1.262	1.247	dd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.20	99.13	1.236	1.247	db
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.20	100.72	1.256	1.247	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.21	100.59	1.254	1.247	dd

Compound name: 13C-234678-HxCDF

Response Factor: 1.08201

RRF SD: 0.0109147, Relative SD: 1.00875

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	36.69	101.62	1.100	1.082	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	36.69	100.88	1.092	1.082	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	36.69	99.61	1.078	1.082	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	36.67	99.46	1.076	1.082	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	36.69	99.28	1.074	1.082	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	36.69	99.15	1.073	1.082	bb

Compound name: 13C-123789-HxCDF

Response Factor: 0.967011

RRF SD: 0.010414, Relative SD: 1.07693

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.46	101.72	0.984	0.967	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.46	99.20	0.959	0.967	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.46	100.57	0.973	0.967	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.46	100.32	0.970	0.967	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.47	99.37	0.961	0.967	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.47	98.82	0.956	0.967	bb

Compound name: 13C-1234678-HpCDF

Response Factor: 0.869967

RRF SD: 0.00962967, Relative SD: 1.1069

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	38.96	100.76	0.877	0.870	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	38.97	101.06	0.879	0.870	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	38.96	101.10	0.880	0.870	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	38.96	99.47	0.865	0.870	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	38.97	99.00	0.861	0.870	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	38.97	98.61	0.858	0.870	bb

Quantify Compound Summary Report MassLynx 4.1

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

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Compound name: 13C-1234789-HpCDF

Response Factor: 0.677351

RRF SD: 0.00683684, Relative SD: 1.00935

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	40.88	100.25	0.679	0.677	bd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	40.89	100.10	0.678	0.677	bd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	40.88	101.11	0.685	0.677	bd
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	40.88	100.56	0.681	0.677	bd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	40.89	99.85	0.676	0.677	bd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	40.89	98.14	0.665	0.677	bb

Compound name: 13C-1234-TCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	30.87	100.00	1.000	1.000	bb
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	30.87	100.00	1.000	1.000	bb

Compound name: 13C-123789-HxCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-4	CS1 UD190207-02 CS143	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-5	CS2 UD190207-03 CS243	100.000	37.15	100.00	1.000	1.000	db
A08JUL19A-6	CS3 UD190207-04 CS3KG	100.000	37.14	100.00	1.000	1.000	dd
A08JUL19A-7	CS4 UD190207-05 CS442	100.000	37.15	100.00	1.000	1.000	dd
A08JUL19A-8	CS5 UD190207-06 CS543	100.000	37.15	100.00	1.000	1.000	dd

Compound name: 37Cl-2378-TCDD

Response Factor: 1.06124

RRF SD: 0.0481575, Relative SD: 4.53786

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-3	CS0.5 UD190207-01	0.250	31.35	0.24	1.038	1.061	bb
A08JUL19A-4	CS1 UD190207-02 CS143	0.500	31.35	0.48	1.012	1.061	bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

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Compound name: 37CI-2378-TCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
A08JUL19A-5	CS2 UD190207-03 CS243	2.000	31.35	1.92	1.018	1.061	bb
A08JUL19A-6	CS3 UD190207-04 CS3KG	10.000	31.34	10.43	1.107	1.061	bb
A08JUL19A-7	CS4 UD190207-05 CS442	40.000	31.35	40.07	1.063	1.061	bb
A08JUL19A-8	CS5 UD190207-06 CS543	200.000	31.35	212.93	1.130	1.061	bb

Quantify Sample Summary Report
 Method 1613 ICAL Report

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Method: C:\MassLynx\Default.pro\Methd\CFIA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	SN1	Height2	Noise2	SN2	M	M2
1	2378-TCDD	2.36e3	2.88e3	5.24e3	31.36	1.001	0.82	NO	0.269	0.952	0.884	5.07	0.0280	5.51e4	2748	20.1	4.64e4	1441	32.2	bd	bb
2	12378-PeCDD	1.02e4	6.32e3	1.65e4	34.21	1.000	1.61	NO	1.279	0.873	0.853	1.65	0.0287	2.62e5	2362	110.9	1.76e5	1093	161.1	bd	bb
3	123478-HxCDD	8.05e3	6.32e3	1.44e4	36.83	1.000	1.27	NO	1.220	0.917	0.940	3.11	0.0368	1.82e5	1603	113.3	1.13e5	1951	57.9	bd	bd
4	123678-HxCDD	8.50e3	7.26e3	1.58e4	36.92	1.000	1.17	NO	1.212	0.916	0.944	2.57	0.0376	1.59e5	1603	99.1	1.28e5	1951	65.8	db	db
5	123789-HxCDD	8.04e3	6.76e3	1.48e4	37.15	1.007	1.19	NO	1.214	0.900	0.927	3.30	0.0378	1.53e5	1603	95.3	1.15e5	1951	58.8	bd	bb
6	1234678-HpCDD	6.04e3	6.12e3	1.22e4	40.24	1.000	0.99	NO	1.235	1.027	1.040	2.88	0.0649	1.03e5	1757	58.6	9.52e4	1920	49.6	bb	bd
7	OCDD	9.77e3	1.10e4	2.07e4	44.49	1.000	0.89	NO	2.477	0.962	0.971	2.39	0.0920	1.23e5	1257	98.1	1.39e5	1991	69.6	bb	bd
8	2378-TCDF	2.70e3	4.01e3	6.71e3	30.67	1.001	0.67	NO	0.275	1.077	0.978	5.59	0.0419	3.94e4	1747	22.5	4.74e4	3466	13.7	M...	db
9	12378-PeCDF	1.47e4	9.62e3	2.43e4	33.40	1.000	1.52	NO	1.281	0.969	0.945	3.41	0.0370	3.34e5	2702	123.5	2.39e5	4145	57.8	bb	bb
10	23478-PeCDF	1.50e4	1.04e4	2.54e4	34.01	1.000	1.45	NO	1.181	0.933	0.987	3.73	0.0321	3.89e5	2702	144.0	2.53e5	4145	61.0	bb	bb
11	123478-HxCDF	1.08e4	9.59e3	2.04e4	36.11	1.000	1.13	NO	1.194	1.039	1.087	3.86	0.0268	2.15e5	2156	99.8	2.06e5	1702	120.8	bd	bd
12	123678-HxCDF	1.26e4	1.02e4	2.28e4	36.21	1.000	1.24	NO	1.263	1.052	1.041	3.23	0.0263	2.63e5	2156	122.0	2.03e5	1702	119.1	dd	dd
13	234678-HxCDF	1.13e4	9.70e3	2.10e4	36.69	1.000	1.17	NO	1.192	1.084	1.136	3.17	0.0290	2.25e5	2156	104.4	1.97e5	1702	115.7	bd	bd
14	123789-HxCDF	9.32e3	8.55e3	1.79e4	37.46	1.000	1.09	NO	1.213	1.029	1.061	2.29	0.0371	1.72e5	2156	79.6	1.49e5	1702	87.4	bd	bd
15	1234678-HpCDF	8.42e3	8.19e3	1.66e4	38.97	1.000	1.03	NO	1.167	1.074	1.150	3.86	0.0282	1.38e5	1549	89.3	1.35e5	1086	124.8	bd	bd
16	1234789-HpCDF	7.33e3	7.06e3	1.44e4	40.90	1.000	1.04	NO	1.248	1.200	1.202	1.91	0.0417	1.12e5	1549	72.2	9.77e4	1086	90.0	bd	bd
17	OCDF	1.05e4	1.21e4	2.26e4	44.78	1.007	0.86	NO	2.315	1.049	1.133	6.78	0.102	1.13e5	2106	53.7	1.39e5	2087	66.4	bb	bb
18	13C-2378-TCDD	9.61e5	1.24e6	2.20e6	31.34	1.015	0.77	NO	100.141	1.130	1.128	2.36	0.101	1.84e7	8503	2165.5	2.38e7	4565	5220.0	bb	bb
19	13C-12378-PeCDD	9.14e5	5.96e5	1.51e6	34.20	1.108	1.53	NO	103.043	0.774	0.751	5.03	0.106	2.14e7	3266	6548.1	1.41e7	5905	2388.5	bb	bb
20	13C-123478-HxCDD	6.92e5	5.62e5	1.25e6	36.82	0.991	1.23	NO	99.030	0.888	0.896	1.38	0.123	1.42e7	5998	2362.3	1.14e7	4559	2506.6	bd	bd
21	13C-123678-HxCDD	7.61e5	6.16e5	1.38e6	36.91	0.994	1.24	NO	98.887	0.975	0.986	0.84	0.112	1.38e7	5998	2308.3	1.11e7	4559	2432.5	dd	dd
22	13C-1234678-HpCDD	4.84e5	4.64e5	9.47e5	40.22	1.083	1.04	NO	99.853	0.671	0.672	1.29	0.246	6.95e6	9910	701.2	6.93e6	5863	1181.6	bd	bb
23	13C-OCDD	7.96e5	9.26e5	1.72e6	44.47	1.197	0.86	NO	190.015	0.610	0.642	4.87	0.239	8.40e6	9103	923.0	9.66e6	5539	1744.6	bb	bd
24	13C-2378-TCDF	1.09e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	102.207	1.277	1.250	1.88	0.156	1.39e7	14607	949.6	1.80e7	7808	2301.1	bb	bb
25	13C-12378-PeCDF	1.23e6	7.70e5	2.00e6	33.39	1.082	1.60	NO	101.654	1.028	1.011	4.24	0.175	3.01e7	14002	2152.1	1.18e7	6379	2945.5	bb	bb
26	13C-23478-PeCDF	1.34e6	8.44e5	2.18e6	34.00	1.102	1.58	NO	105.121	1.118	1.063	5.28	0.166	3.31e7	14002	2361.9	2.10e7	6379	3289.0	bb	bb
27	13C-123478-HxCDF	5.36e5	1.03e6	1.57e6	36.10	0.972	0.52	NO	100.103	1.112	1.111	1.42	0.208	1.13e7	10560	1068.6	2.15e7	11523	1868.6	bd	bd
28	13C-123678-HxCDF	5.97e5	1.14e6	1.73e6	36.20	0.975	0.53	NO	98.415	1.227	1.247	1.06	0.185	1.21e7	10560	1148.5	2.26e7	11523	1961.5	dd	dd
29	13C-234678-HxCDF	5.42e5	1.01e6	1.55e6	36.69	0.988	0.54	NO	101.678	1.100	1.082	1.01	0.214	1.02e7	10560	967.2	1.97e7	11523	1710.4	bd	bd
30	13C-123789-HxCDF	4.77e5	9.12e5	1.39e6	37.46	1.008	0.52	NO	107.717	0.984	0.967	1.08	0.239	8.42e6	10560	797.3	1.58e7	11523	1371.7	bd	bd

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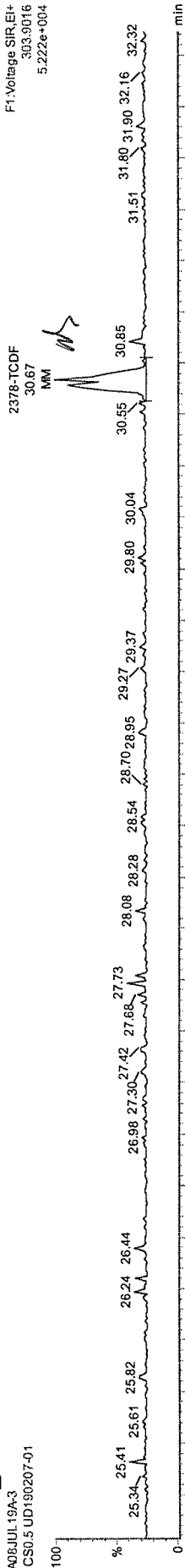
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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

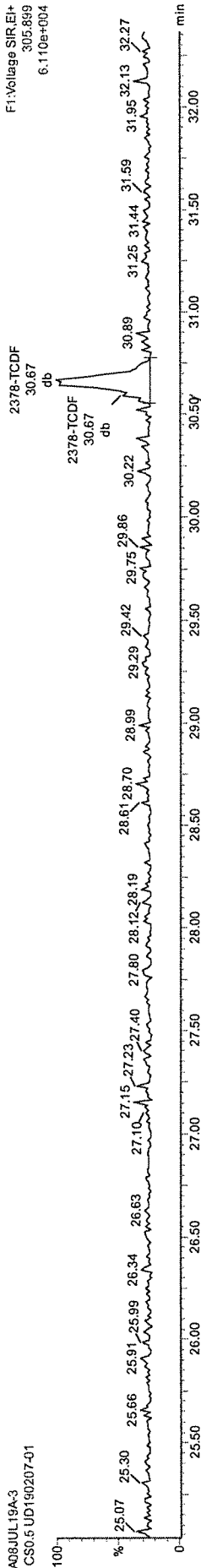
#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.76e5	8.62e5	1.24e6	38.96	1.049	0.44	NO	100.757	0.877	0.870	1.11	0.166	6.16e6	6681	922.6	1.42e7	7130	1992.4	bb	bb
32	13C-1234789-HpCDF	2.94e5	6.65e5	9.59e5	40.88	1.101	0.44	NO	100.246	0.679	0.677	1.01	0.213	4.03e6	6681	603.9	9.12e6	7130	1278.8	bd	bd
33	13C-1234-TCDD	8.61e5	1.09e6	1.95e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.113	1.27e7	8503	1493.6	1.61e7	4565	3518.9	bb	bb
34	13C-123789-HxCDD	7.78e5	6.34e5	1.41e6	37.14	0.000	1.23	NO	100.000	1.000	1.000	0.00	0.111	1.32e7	5998	2193.3	1.10e7	4559	2409.9	dd	dd
35	37Cl-2378-TCDD	5.06e3		5.06e3	31.35	1.016			0.244	1.038	1.061	4.54	0.0287	1.02e5	3507	29.0				bb	bb

MANUAL INTEGRATION
METHOD 1613
HRP750_2

A08JUL19A-3
CS0.5 UD190207-01



A08JUL19A-3
CS0.5 UD190207-01

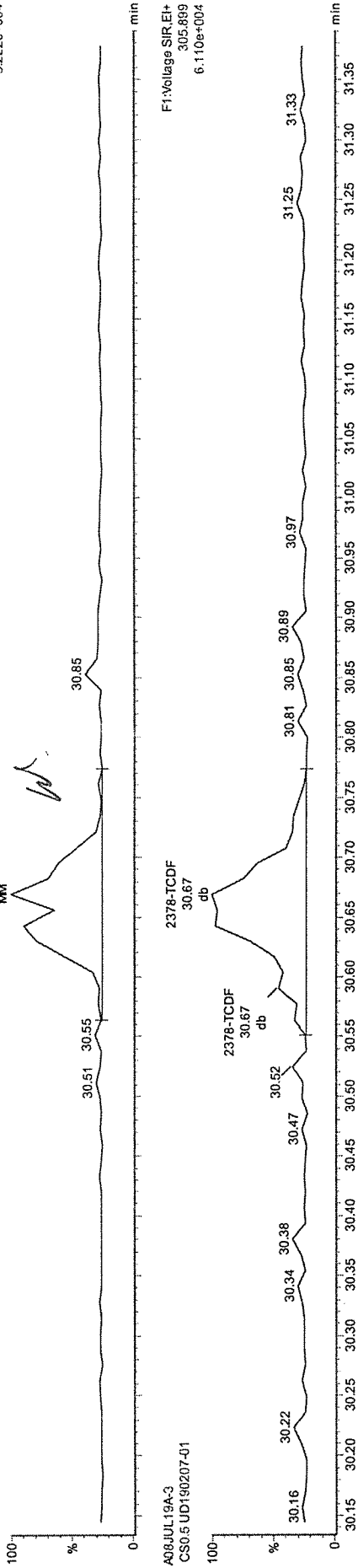


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7/9/19
[Signature]

MANUAL INTEGRATION
 METHOD 1613
 HRP750_2

A08JUL19A-3
 CS0.5 UD190207-01

F1:Voltage S1R.EI+
 303.9016
 5.222e+004



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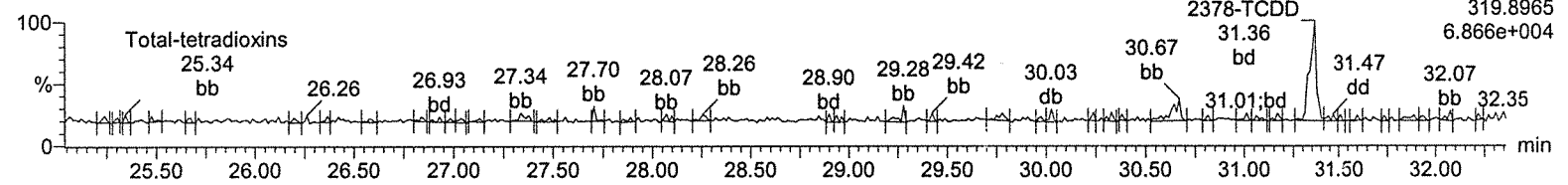
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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

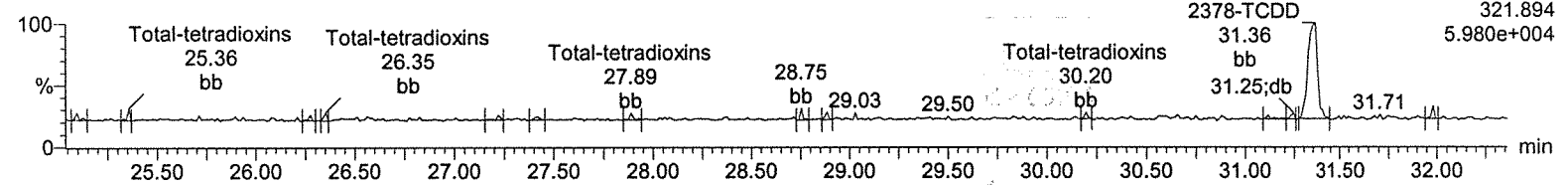
Total-tetradoxins

A08JUL19A-3



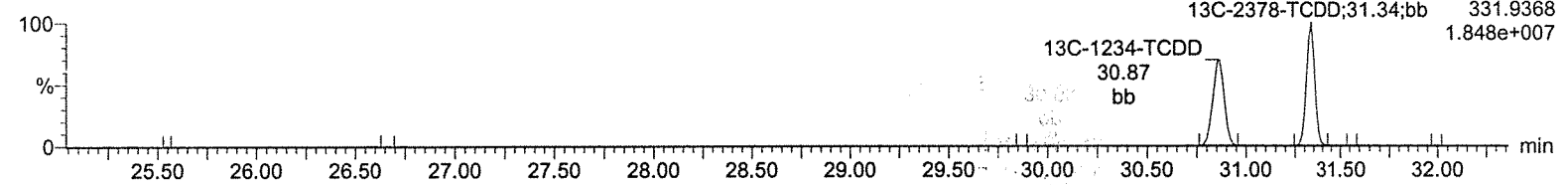
Total-tetradoxins

A08JUL19A-3



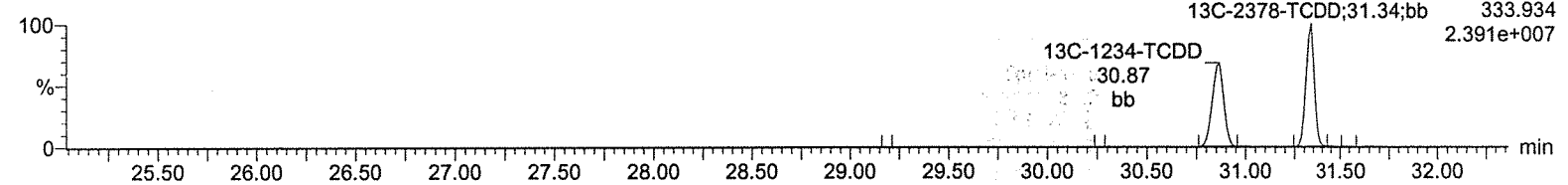
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A08JUL19A-3



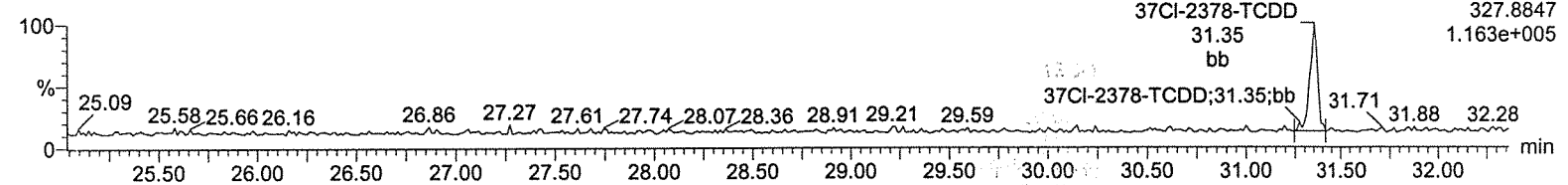
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A08JUL19A-3



37Cl-2378-TCDD

A08JUL19A-3



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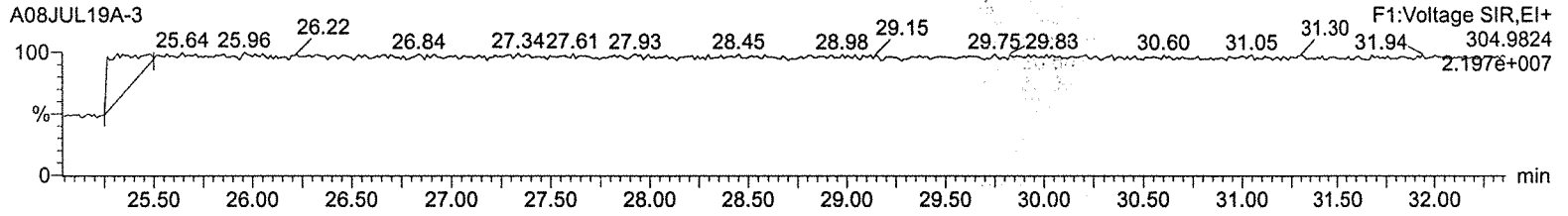
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Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

Lock Mass F1

A08JUL19A-3



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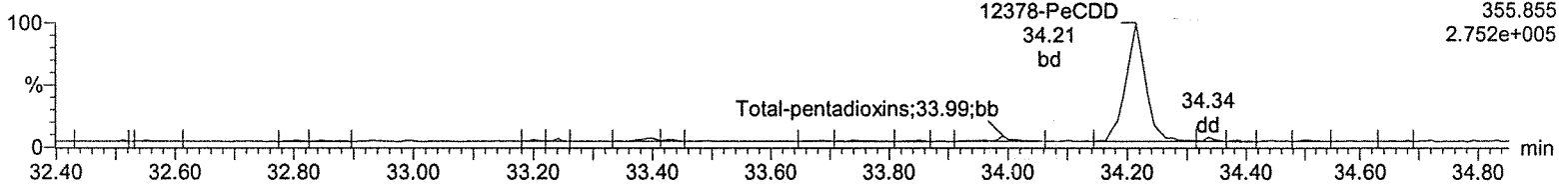
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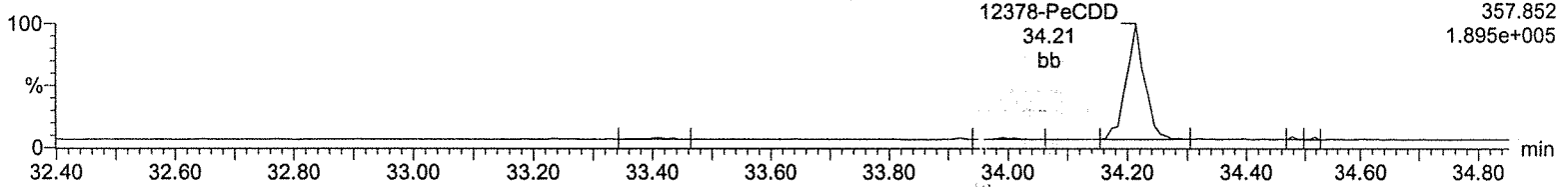
Total-pentadioxins

A08JUL19A-3



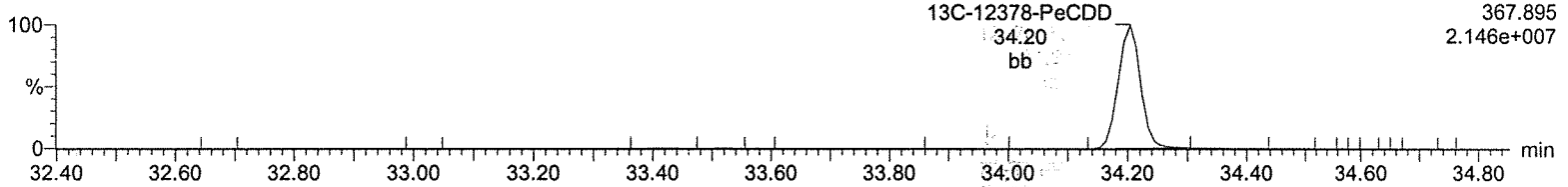
Total-pentadioxins

A08JUL19A-3



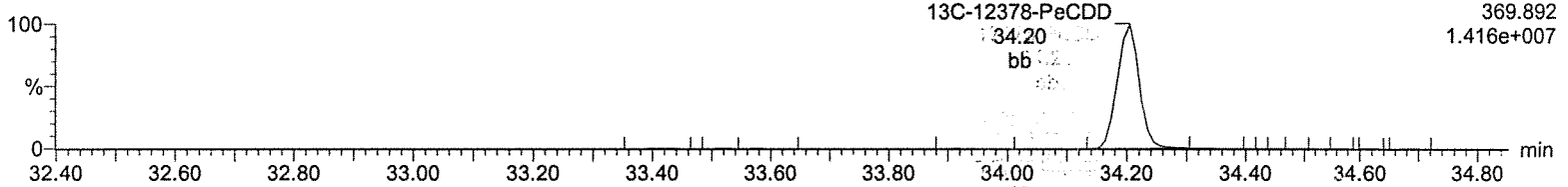
13C-12378-PeCDD

A08JUL19A-3



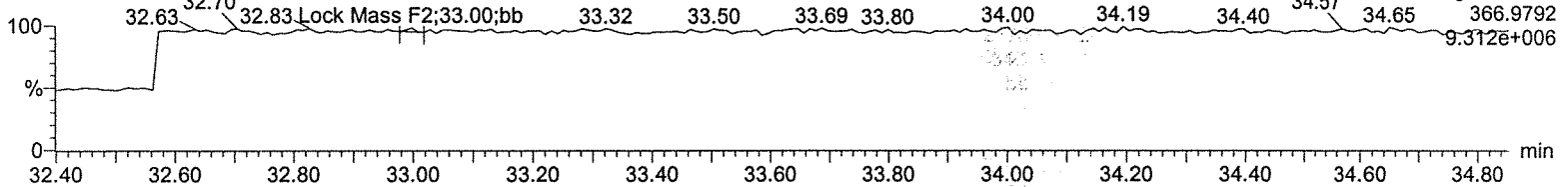
13C-12378-PeCDD

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



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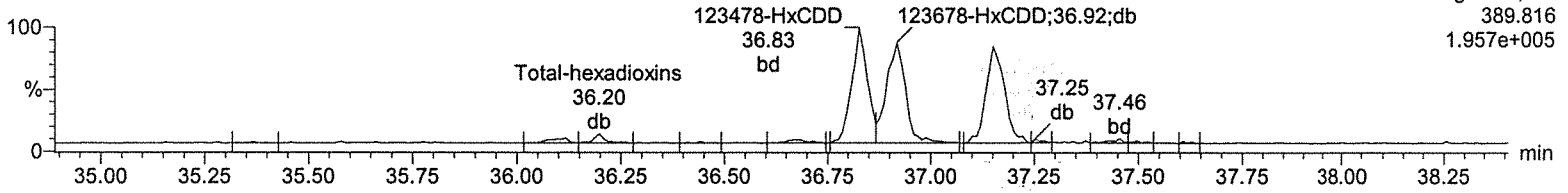
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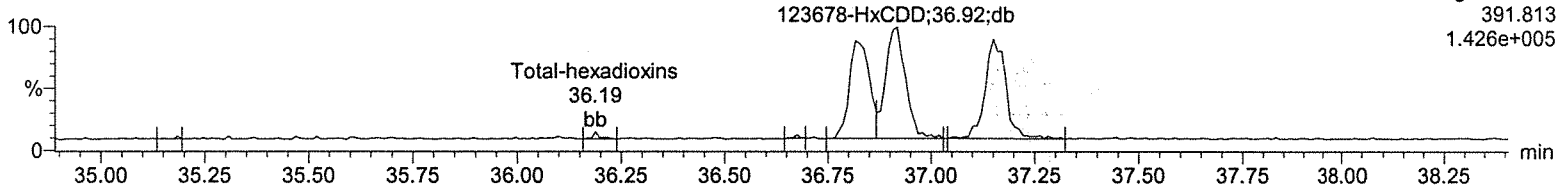
Total-hexadioxins

A08JUL19A-3



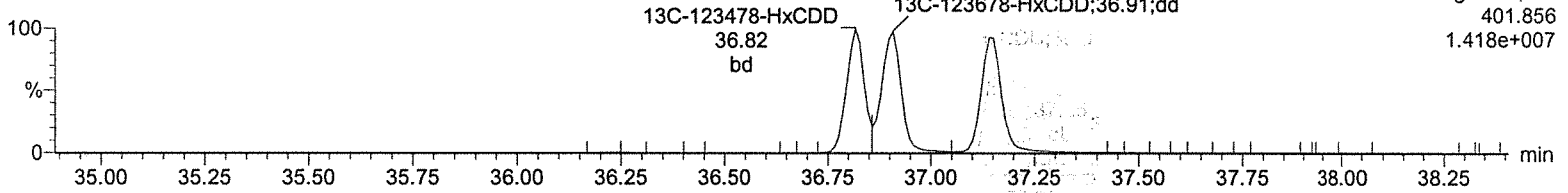
Total-hexadioxins

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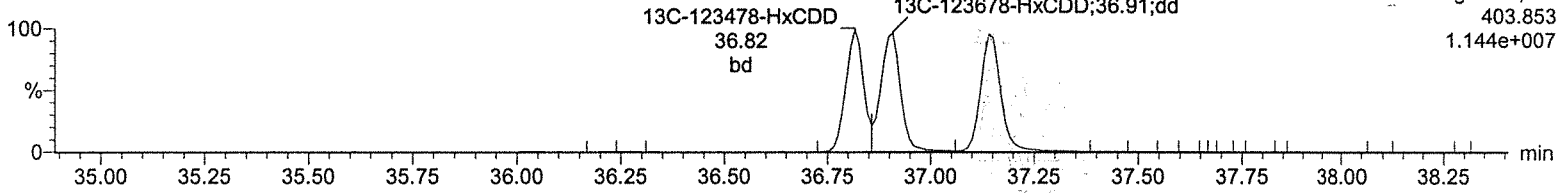
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A08JUL19A-3



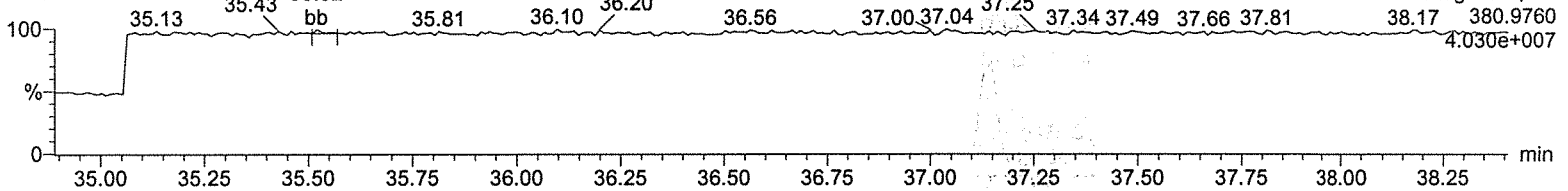
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A08JUL19A-3



Lock Mass F3

A08JUL19A-3



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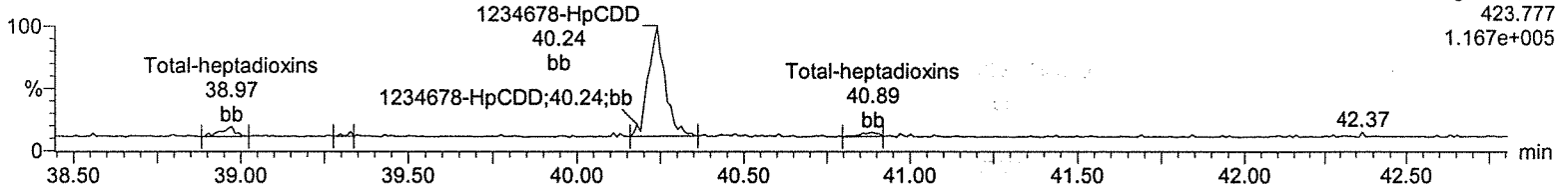
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Total-heptadioxins

A08JUL19A-3

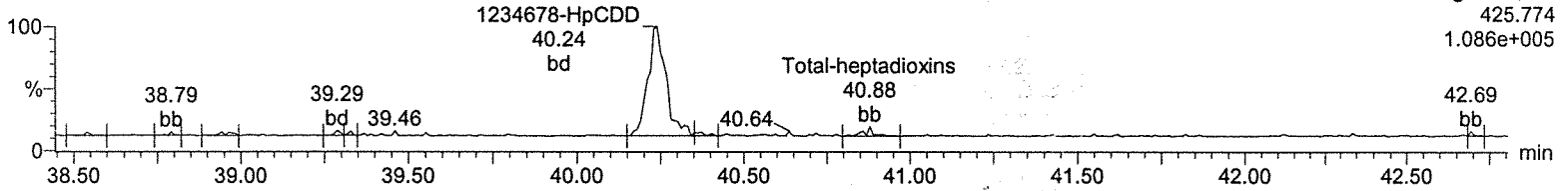
F4:Voltage SIR,EI+
423.777
1.167e+005



Total-heptadioxins

A08JUL19A-3

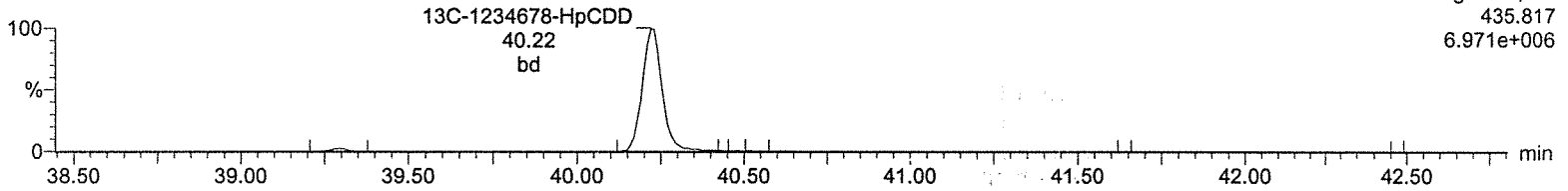
F4:Voltage SIR,EI+
425.774
1.086e+005



13C-1234678-HpCDD

A08JUL19A-3

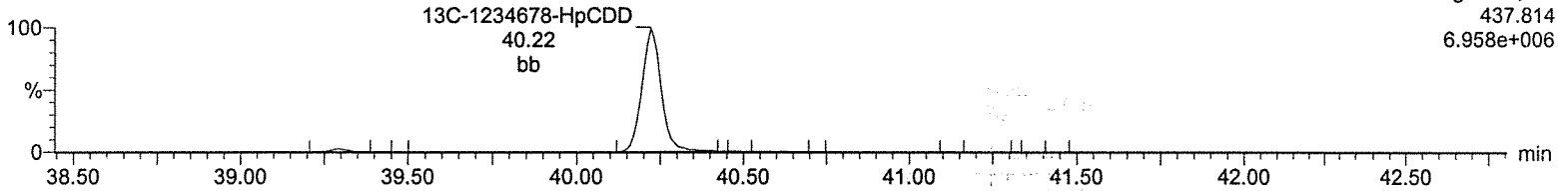
F4:Voltage SIR,EI+
435.817
6.971e+006



13C-1234678-HpCDD

A08JUL19A-3

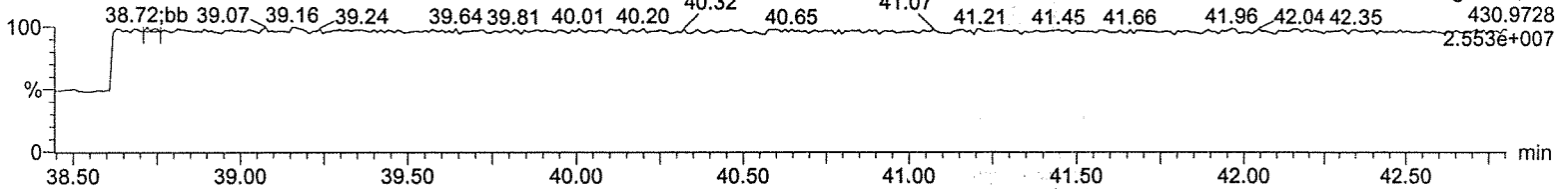
F4:Voltage SIR,EI+
437.814
6.958e+006



Lock Mass F4

A08JUL19A-3

F4:Voltage SIR,EI+
430.9728
2.553e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

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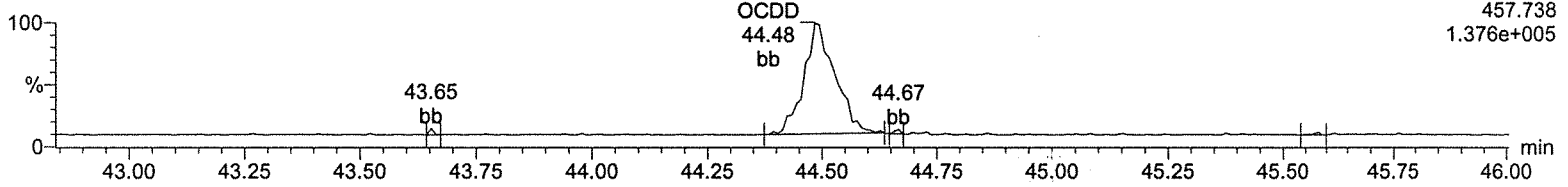
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OCDD

A08JUL19A-3

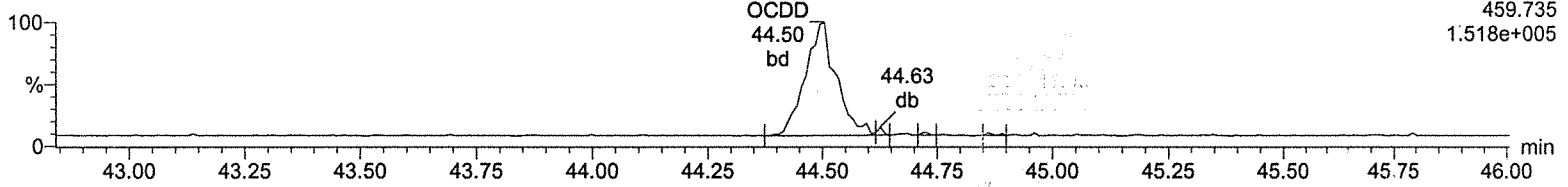
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1.376e+005



OCDD

A08JUL19A-3

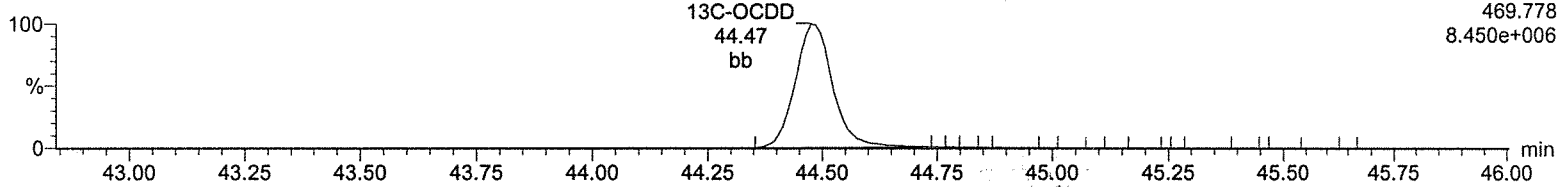
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13C-OCDD

A08JUL19A-3

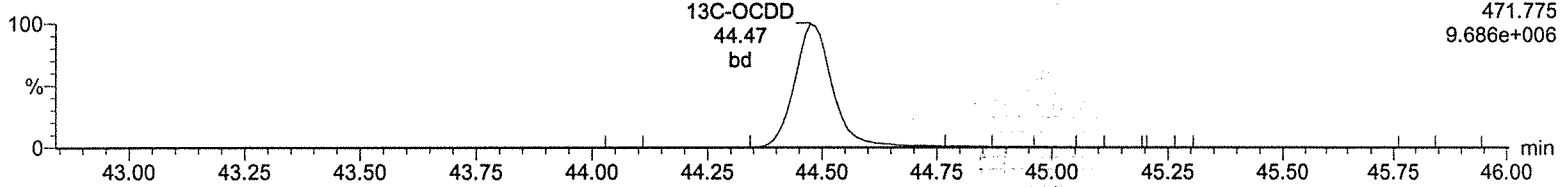
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469.778
8.450e+006



13C-OCDD

A08JUL19A-3

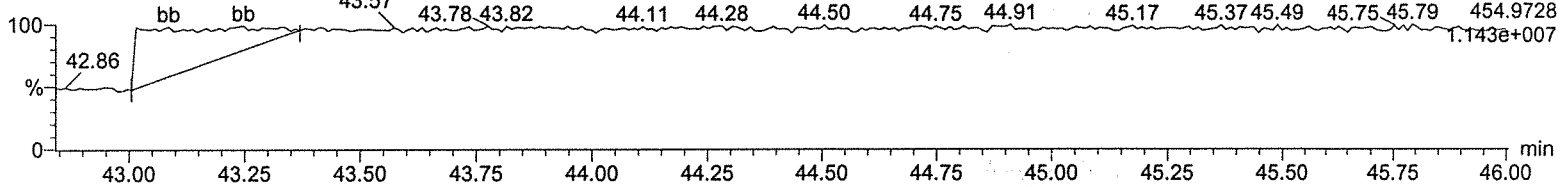
F5:Voltage SIR,EI+
471.775
9.686e+006



Lock Mass F5

A08JUL19A-3

F5:Voltage SIR,EI+
454.9728
1.143e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

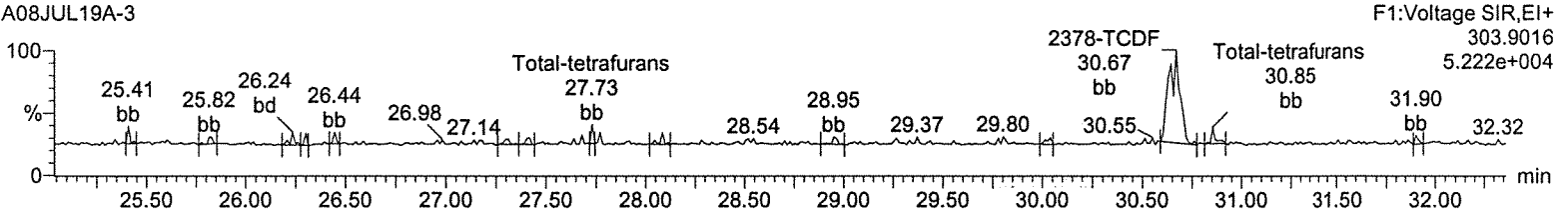
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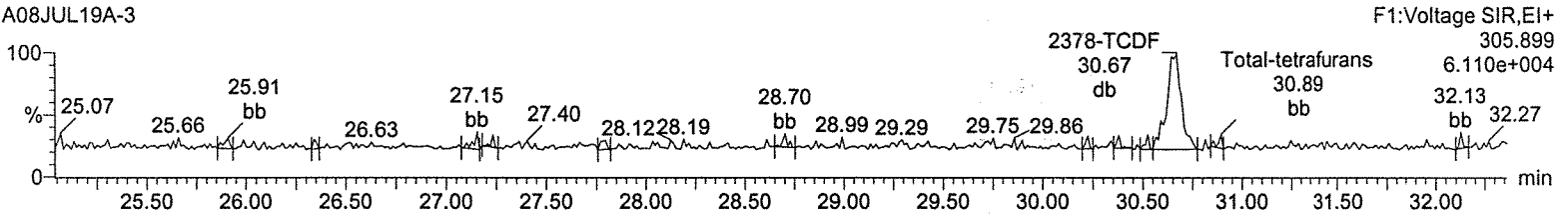
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A08JUL19A-3



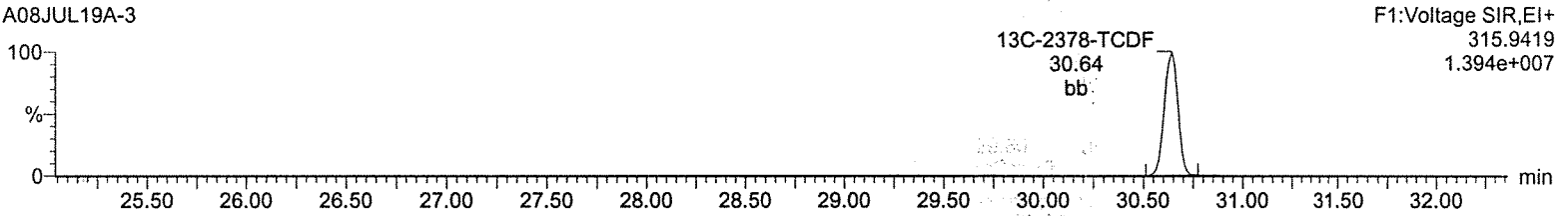
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A08JUL19A-3



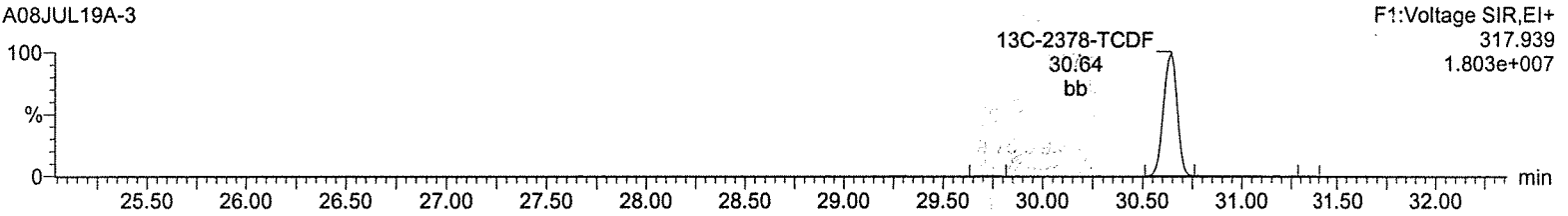
13C-2378-TCDF

A08JUL19A-3



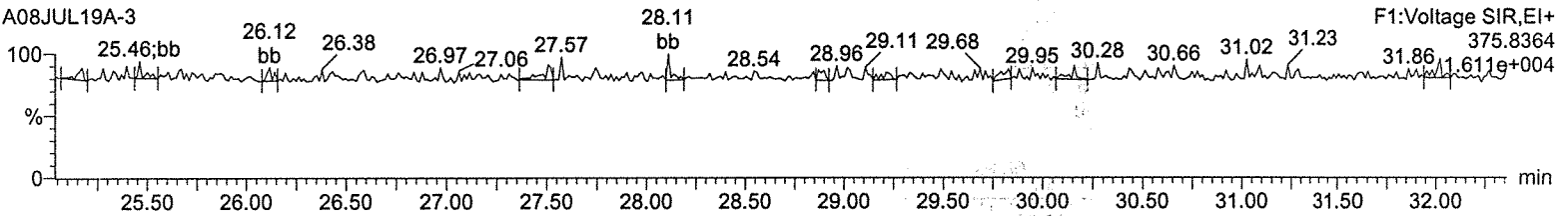
13C-2378-TCDF

A08JUL19A-3



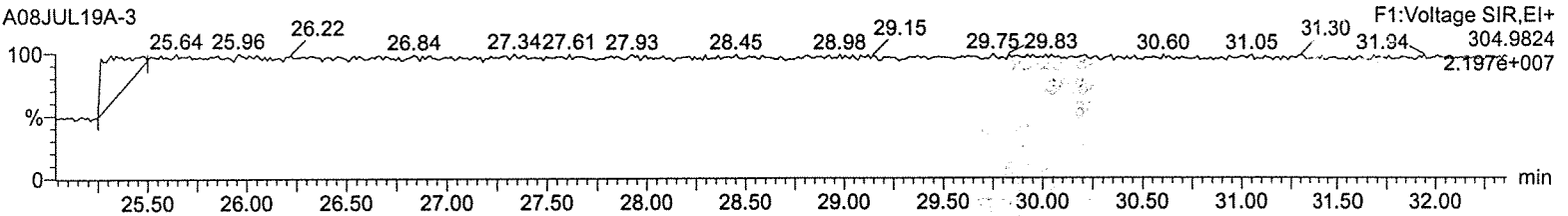
HxDPE

A08JUL19A-3



Lock Mass F1

A08JUL19A-3



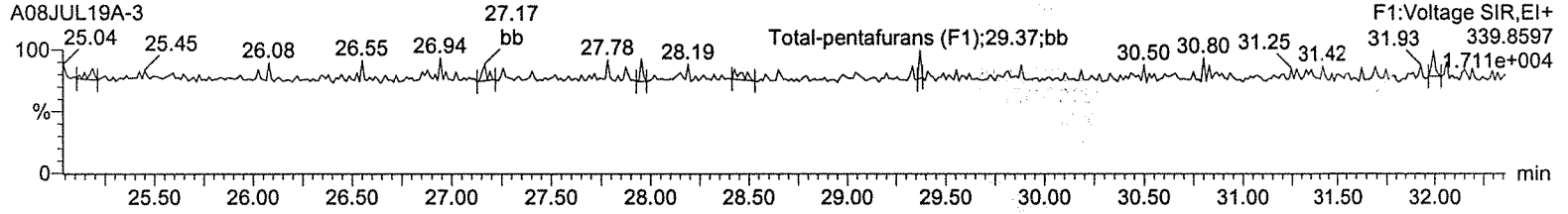
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

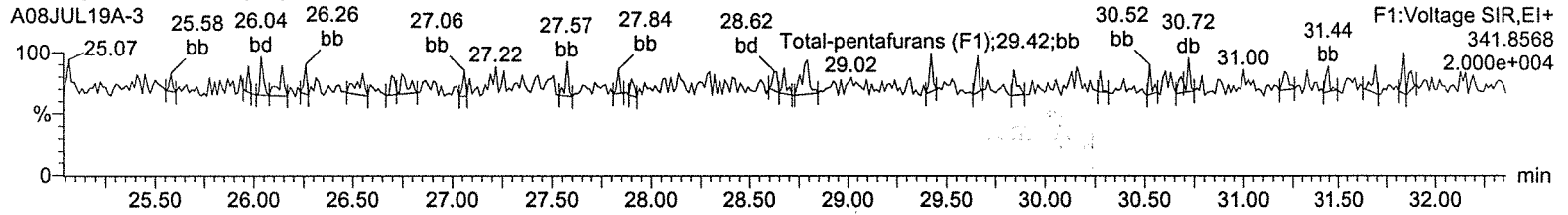
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

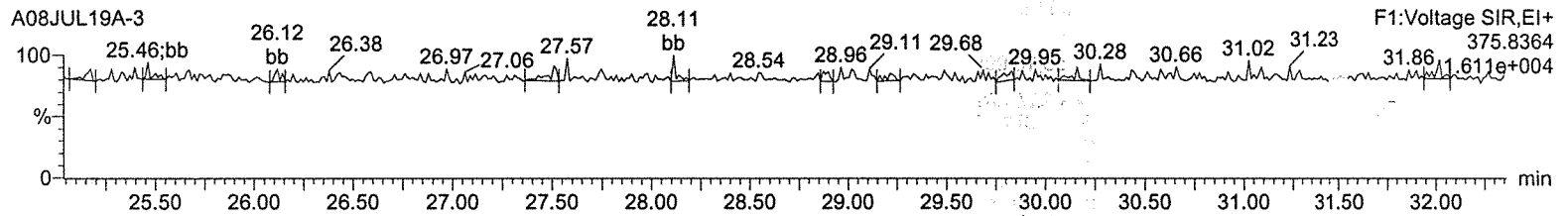
Total-pentafurans (F1)



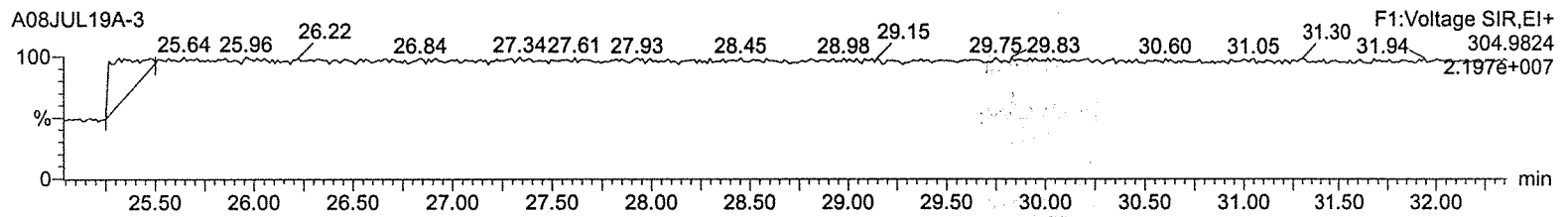
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

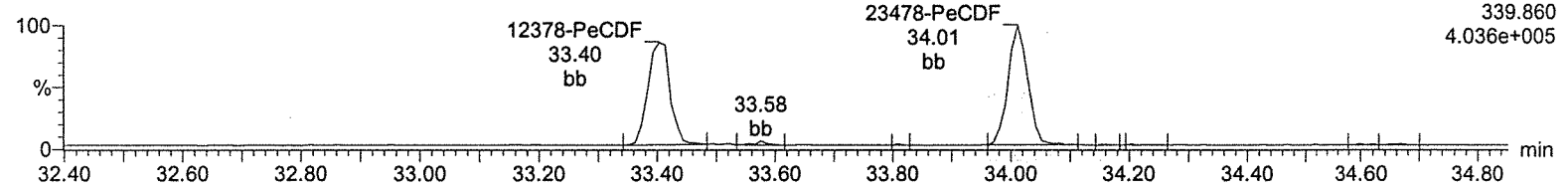
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

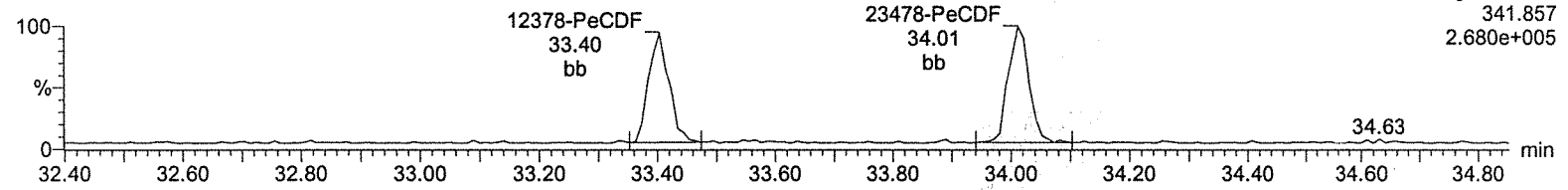
Total-pentafurans

A08JUL19A-3



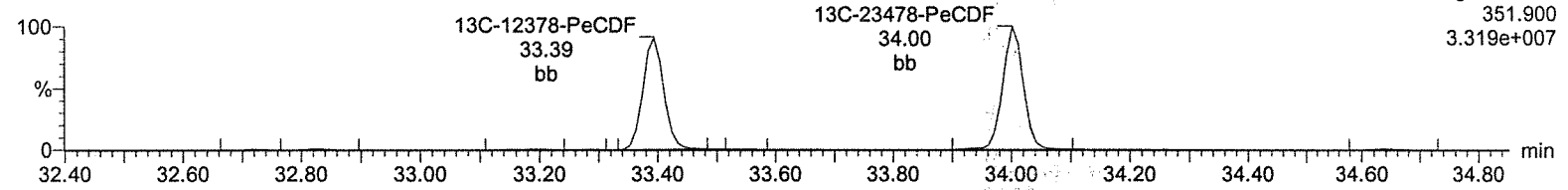
Total-pentafurans

A08JUL19A-3



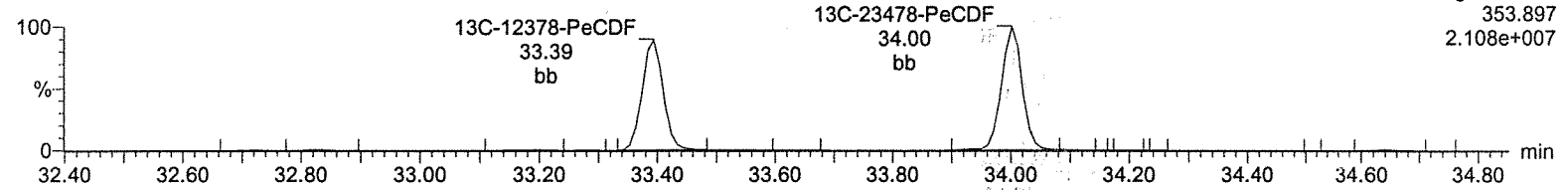
13C-12378-PeCDF

A08JUL19A-3



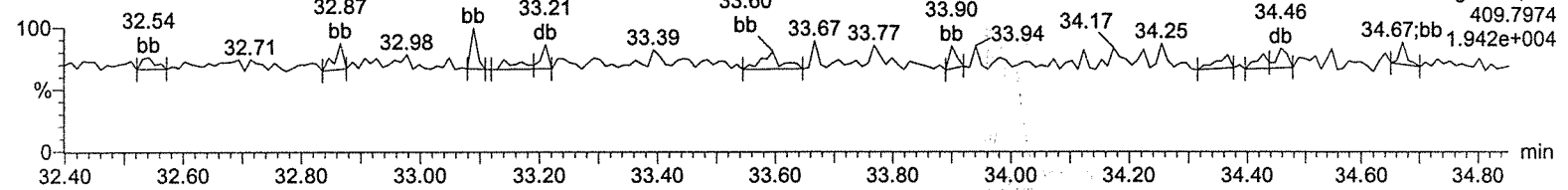
13C-12378-PeCDF

A08JUL19A-3



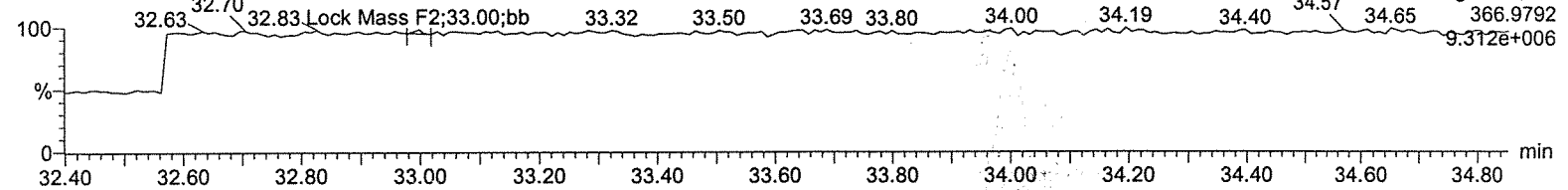
HpDPE

A08JUL19A-3



Lock Mass F2

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

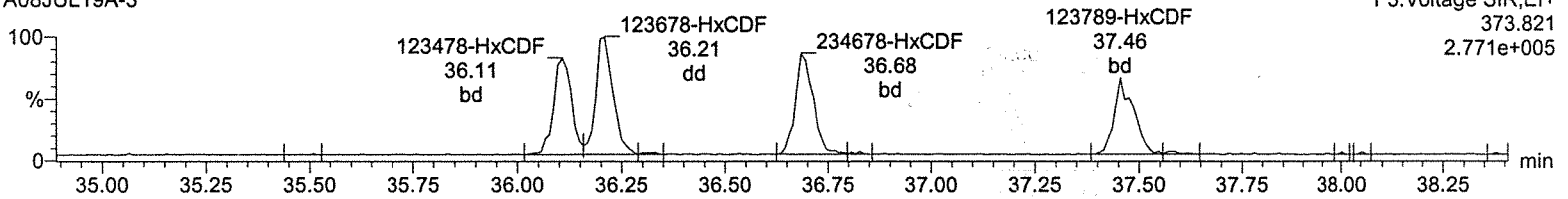
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

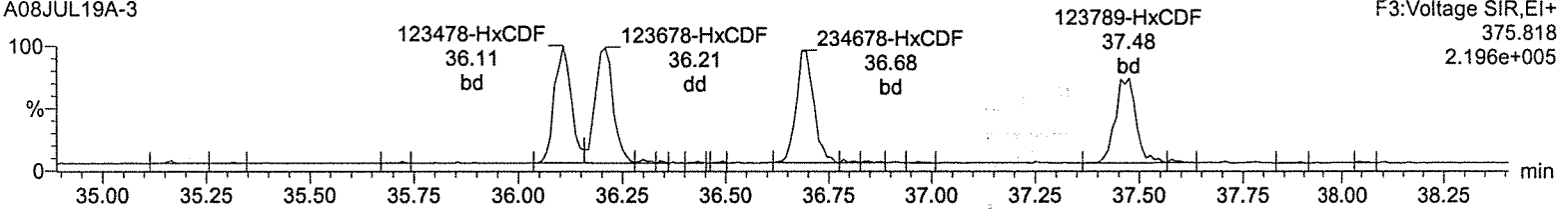
Total-hexafurans

A08JUL19A-3



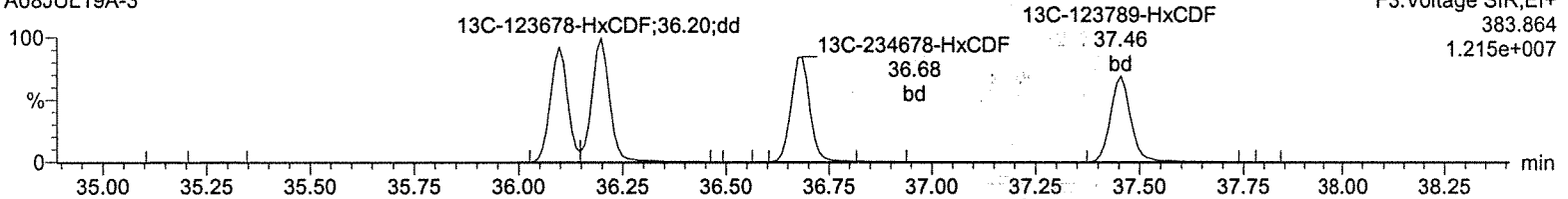
Total-hexafurans

A08JUL19A-3



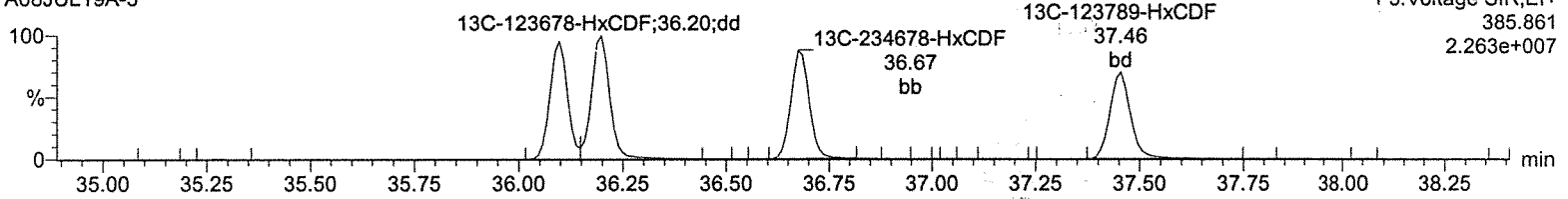
13C-123478-HxCDF

A08JUL19A-3



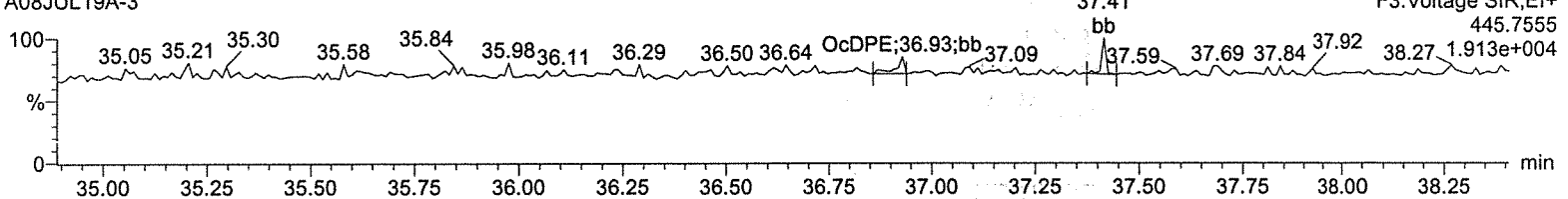
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A08JUL19A-3



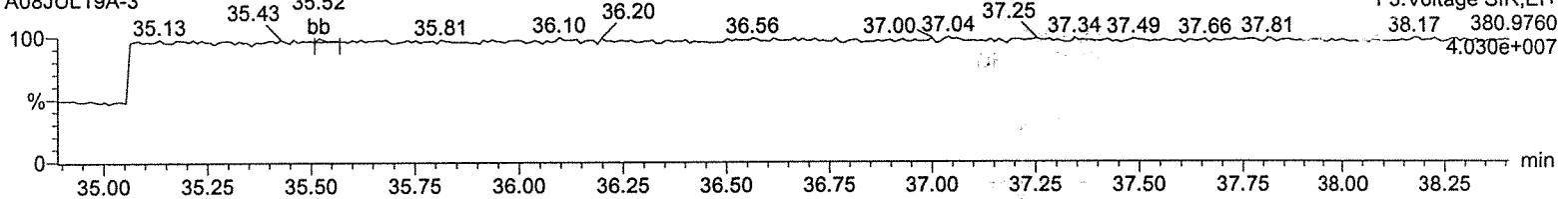
OcDPE

A08JUL19A-3



Lock Mass F3

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

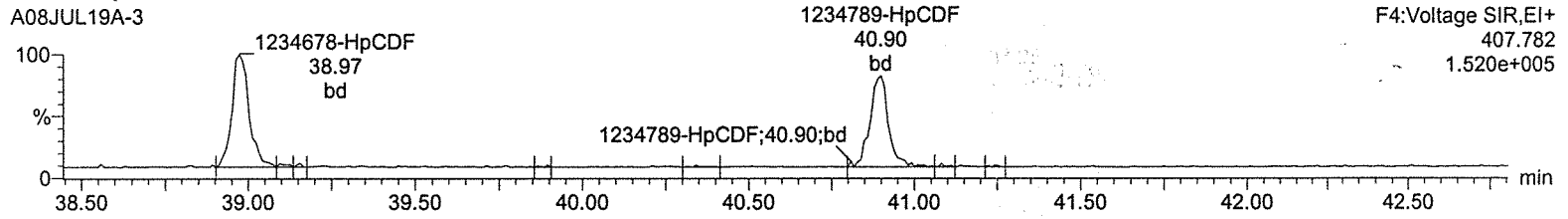
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

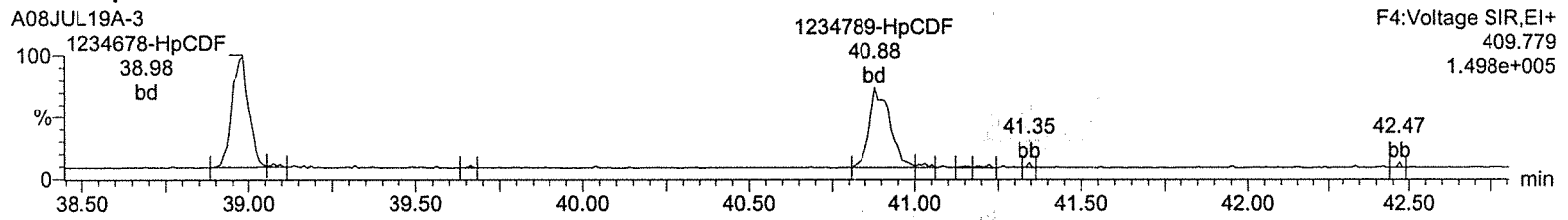
Total-heptafurans

A08JUL19A-3



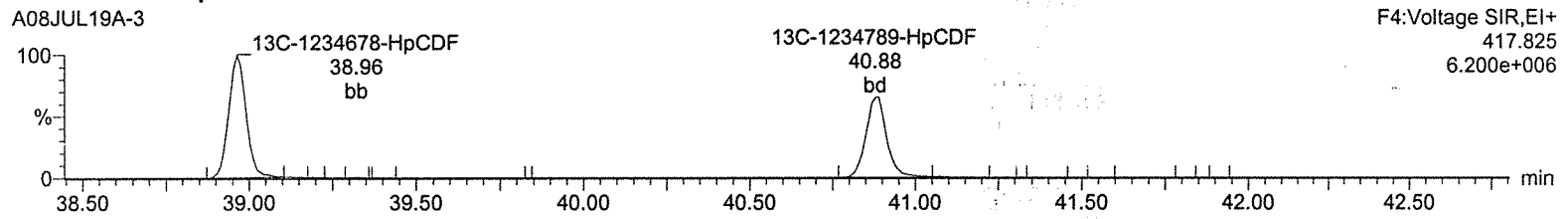
Total-heptafurans

A08JUL19A-3



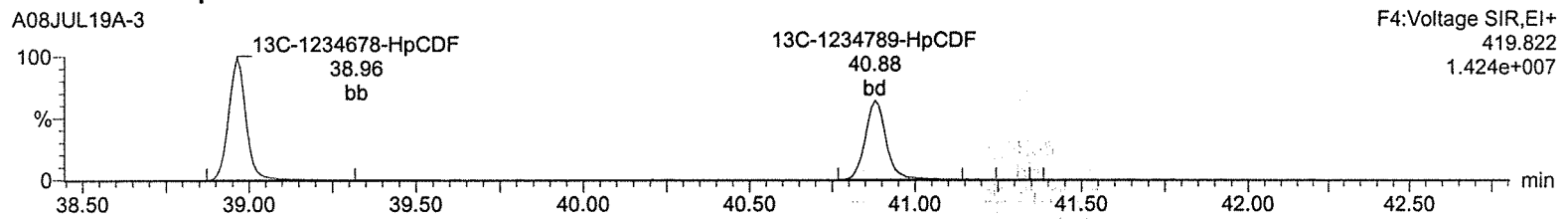
¹³C-1234678-HpCDF

A08JUL19A-3



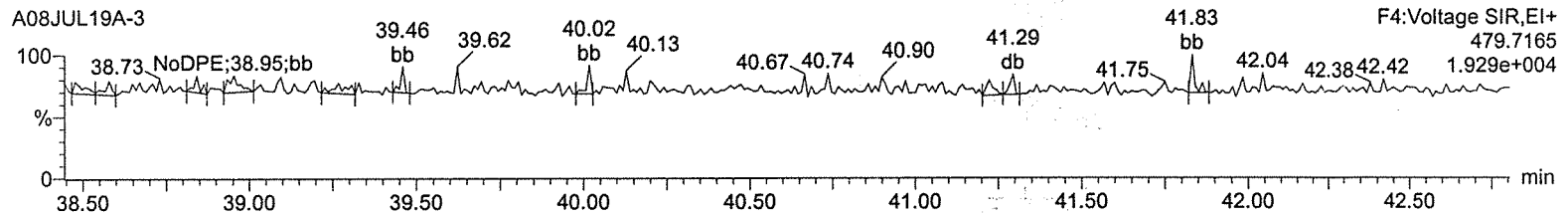
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A08JUL19A-3



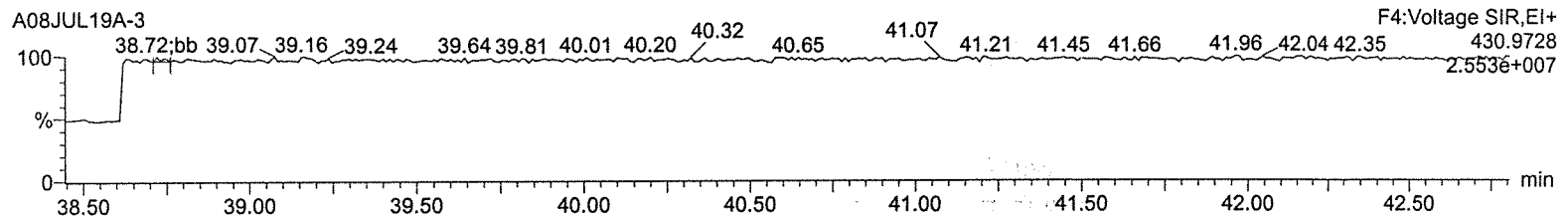
NoDPE

A08JUL19A-3



Lock Mass F4

A08JUL19A-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

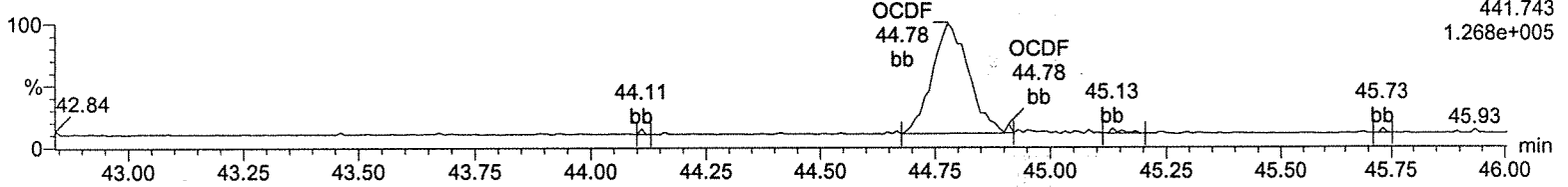
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-3, Date: 08-Jul-2019, Time: 11:16:00, ID: CS0.5 UD190207-01

OCDF

A08JUL19A-3

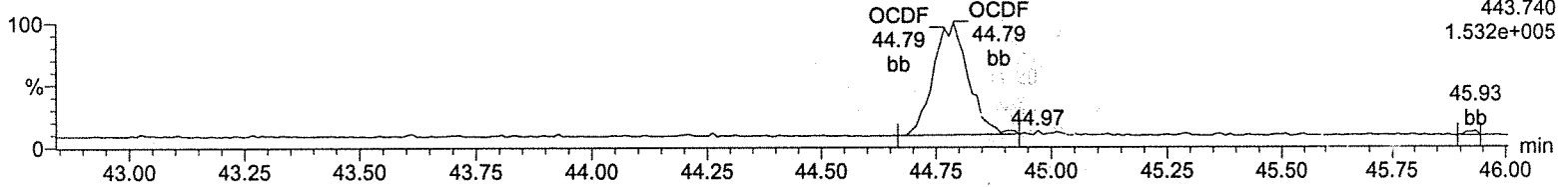
F5:Voltage SIR,EI+
441.743
1.268e+005



OCDF

A08JUL19A-3

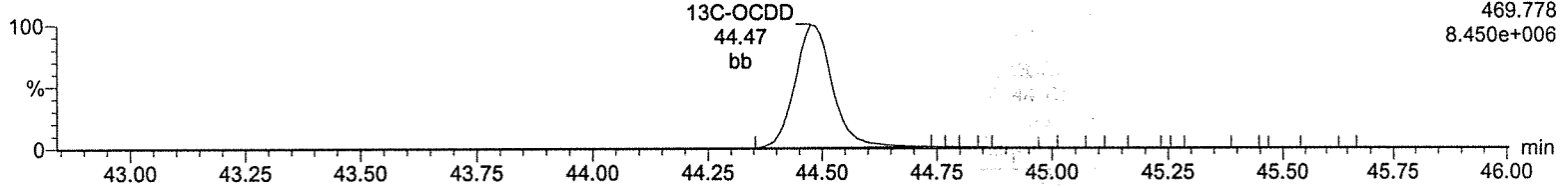
F5:Voltage SIR,EI+
443.740
1.532e+005



13C-OCDD

A08JUL19A-3

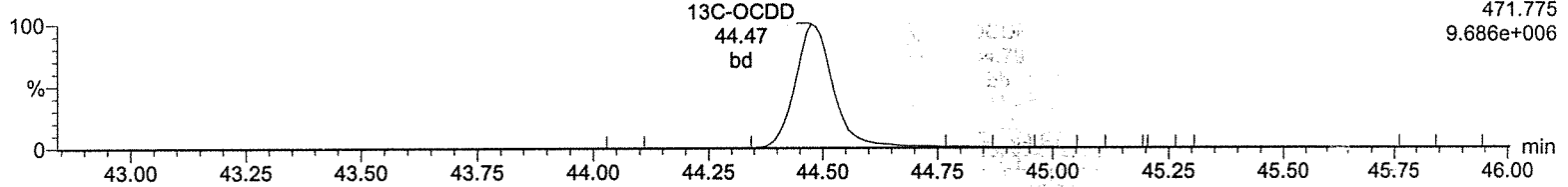
F5:Voltage SIR,EI+
469.778
8.450e+006



13C-OCDD

A08JUL19A-3

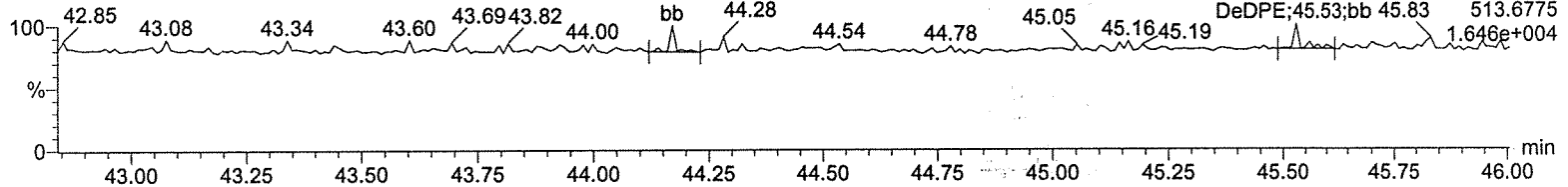
F5:Voltage SIR,EI+
471.775
9.686e+006



DeDPE

A08JUL19A-3

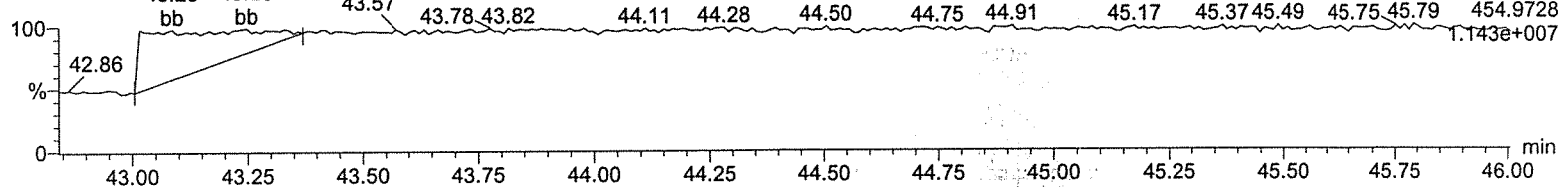
F5:Voltage SIR,EI+
513.6775
1.646e+004



Lock Mass F5

A08JUL19A-3

F5:Voltage SIR,EI+
454.9728
1.143e+007



Quantify Sample Summary Report

Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

7/31/19

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.57e3	4.22e3	7.80e3	31.36	1.001	0.85	NO	0.465	0.823	0.884	5.07	0.0381	8.65e4	2341	36.9	7.83e4	1703	45.9	bb	bd
2	12378-PeCDD	1.58e4	9.75e3	2.55e4	34.22	1.000	1.62	NO	2.444	0.834	0.853	1.65	0.0498	3.90e5	2742	142.4	2.48e5	1479	167.7	bd	bb
3	123478-HxCDD	1.23e4	1.02e4	2.25e4	36.84	1.000	1.21	NO	2.373	0.892	0.940	3.11	0.0590	2.55e5	2027	125.9	2.33e5	1848	125.8	bd	bd
4	123678-HxCDD	1.38e4	1.18e4	2.56e4	36.92	1.000	1.16	NO	2.463	0.930	0.944	2.57	0.0565	2.81e5	2027	138.8	2.54e5	1848	137.3	dd	dd
5	123789-HxCDD	1.28e4	1.04e4	2.32e4	37.16	1.007	1.24	NO	2.375	0.881	0.927	3.30	0.0586	2.66e5	2027	131.4	2.12e5	1848	114.5	bd	dd
6	1234678-HpCDD	9.30e3	9.39e3	1.87e4	40.25	1.000	0.99	NO	2.381	0.991	1.040	2.88	0.0813	1.41e5	1799	78.5	1.51e5	1462	103.4	bb	bd
7	OCDD	1.59e4	1.70e4	3.29e4	44.49	1.000	0.93	NO	4.867	0.946	0.971	2.39	0.153	1.93e5	1820	106.0	1.82e5	1858	97.7	bd	bb
8	2378-TCDF	4.46e3	5.19e3	9.65e3	30.67	1.001	0.86	NO	0.468	0.916	0.978	5.59	0.0667	7.01e4	2698	26.0	7.50e4	3399	22.1	bb	bb
9	12378-PeCDF	2.14e4	1.57e4	3.71e4	33.41	1.000	1.36	NO	2.350	0.888	0.945	3.41	0.0418	5.52e5	2463	223.9	3.85e5	3187	120.8	bd	bb
10	23478-PeCDF	2.55e4	1.61e4	4.16e4	34.02	1.000	1.58	NO	2.465	0.973	0.987	3.73	0.0389	6.39e5	2463	259.3	4.09e5	3187	128.4	bb	bd
11	123478-HxCDF	1.80e4	1.52e4	3.32e4	36.11	1.000	1.18	NO	2.413	1.049	1.087	3.86	0.0490	3.72e5	2602	143.0	3.37e5	2286	147.4	bd	bd
12	123678-HxCDF	1.83e4	1.55e4	3.38e4	36.22	1.000	1.18	NO	2.347	0.977	1.041	3.23	0.0513	4.45e5	2602	170.9	3.20e5	2286	139.8	db	db
13	234678-HxCDF	1.88e4	1.48e4	3.36e4	36.69	1.000	1.27	NO	2.436	1.107	1.136	3.17	0.0512	3.63e5	2602	139.4	3.00e5	2286	131.3	bd	bd
14	123789-HxCDF	1.51e4	1.25e4	2.76e4	37.47	1.000	1.21	NO	2.437	1.034	1.061	2.29	0.0691	2.81e5	2602	108.0	2.34e5	2286	102.5	bb	bd
15	1234678-HpCDF	1.32e4	1.44e4	2.75e4	38.98	1.000	0.92	NO	2.449	1.126	1.150	3.86	0.0571	2.36e5	1436	164.0	2.50e5	2218	112.8	bb	bd
16	1234789-HpCDF	1.11e4	1.12e4	2.24e4	40.89	1.000	0.99	NO	2.471	1.188	1.202	1.91	0.0865	1.56e5	1436	108.6	1.54e5	2218	69.5	bd	bd
17	OCDF	1.74e4	1.92e4	3.66e4	44.81	1.007	0.90	NO	4.644	1.052	1.133	6.78	0.201	1.76e5	3765	46.8	2.08e5	1885	110.1	bd	bb
18	13C-2378-TCDD	8.21e5	1.07e6	1.89e6	31.34	1.015	0.77	NO	96.744	1.092	1.128	2.36	0.138	1.56e7	9025	1728.5	2.08e7	4935	4206.5	bb	bb
19	13C-2378-PeCDD	7.37e5	4.88e5	1.22e6	34.21	1.109	1.51	NO	93.933	0.706	0.751	5.03	0.138	1.79e7	3968	4522.8	1.17e7	5328	2187.5	bb	bb
20	13C-123478-HxCDD	5.54e5	4.55e5	1.01e6	36.83	0.991	1.22	NO	101.285	0.908	0.896	1.38	0.180	1.15e7	5441	2114.1	9.33e6	5749	1623.8	bd	bd
21	13C-123678-HxCDD	6.06e5	4.95e5	1.10e6	36.91	0.993	1.22	NO	100.379	0.990	0.986	0.84	0.163	1.20e7	5441	2206.7	9.90e6	5749	1721.4	dd	dd
22	13C-1234678-HpCDD	3.80e5	3.75e5	7.55e5	40.23	1.083	1.01	NO	101.038	0.679	0.672	1.29	0.265	5.82e6	6152	946.8	5.53e6	6204	892.2	bb	bd
23	13C-OCDD	6.49e5	7.44e5	1.39e6	44.49	1.197	0.87	NO	195.027	0.626	0.642	4.87	0.267	6.93e6	5999	1155.6	8.01e6	5912	1355.8	bd	bd
24	13C-2378-TCDF	9.11e5	1.20e6	2.11e6	30.64	0.993	0.76	NO	97.118	1.214	1.250	1.88	0.194	1.21e7	14708	823.8	1.61e7	7000	2294.6	bb	bb
25	13C-12378-PeCDF	1.02e6	6.53e5	1.67e6	33.40	1.082	1.56	NO	95.178	0.962	1.011	4.24	0.227	2.62e7	15253	1715.1	1.64e7	5304	3093.6	bb	bd
26	13C-23478-PeCDF	1.05e6	6.60e5	1.71e6	34.01	1.102	1.59	NO	92.689	0.985	1.063	5.28	0.216	2.71e7	15253	1776.2	1.71e7	5304	3222.8	db	db
27	13C-123478-HxCDF	4.33e5	8.34e5	1.27e6	36.11	0.972	0.52	NO	102.576	1.139	1.111	1.42	0.257	9.40e6	8141	1154.2	1.76e7	11678	1502.8	bd	bd
28	13C-123678-HxCDF	4.78e5	9.08e5	1.39e6	36.21	0.975	0.53	NO	99.908	1.246	1.247	1.06	0.229	9.47e6	8141	1163.6	1.83e7	11678	1564.1	dd	db
29	13C-234678-HxCDF	4.19e5	7.95e5	1.21e6	36.69	0.988	0.53	NO	100.882	1.092	1.082	1.01	0.263	8.70e6	8141	1069.1	1.65e7	11678	1414.7	bb	bb
30	13C-123789-HxCDF	3.73e5	6.94e5	1.07e6	37.46	1.008	0.54	NO	99.201	0.959	0.967	1.08	0.295	6.99e6	8141	859.2	1.29e7	11678	1106.7	bd	bb
31	13C-1234678-HpCDF	3.03e5	6.75e5	9.78e5	38.97	1.049	0.45	NO	101.064	0.879	0.870	1.11	0.205	5.17e6	5374	961.9	1.14e7	7011	1632.7	bb	bb
32	13C-1234789-HpCDF	2.33e5	5.21e5	7.54e5	40.89	1.101	0.45	NO	100.102	0.678	0.677	1.01	0.263	3.26e6	5374	606.3	7.49e6	7011	1069.0	bd	bb
33	13C-1234-TCDD	7.57e5	9.78e5	1.74e6	30.87	0.000	0.77	NO	100.000	1.000	1.000	0.00	0.156	1.17e7	9025	1300.0	1.53e7	4935	3106.6	bb	bb
34	13C-123789-HxCDD	6.11e5	5.01e5	1.11e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.161	1.15e7	5441	2105.6	9.54e6	5749	1659.5	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	8.78e3	8.78e3	8.78e3	31.35	1.016			0.477	1.012	1.061	4.54	0.0460	1.91e5	4378	43.7						bb

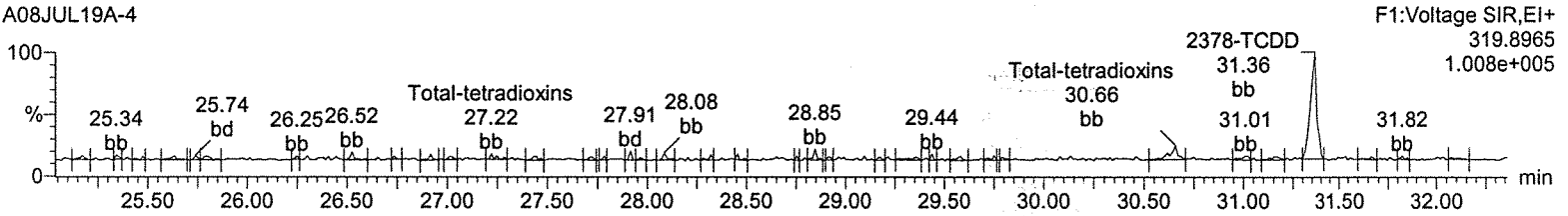
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

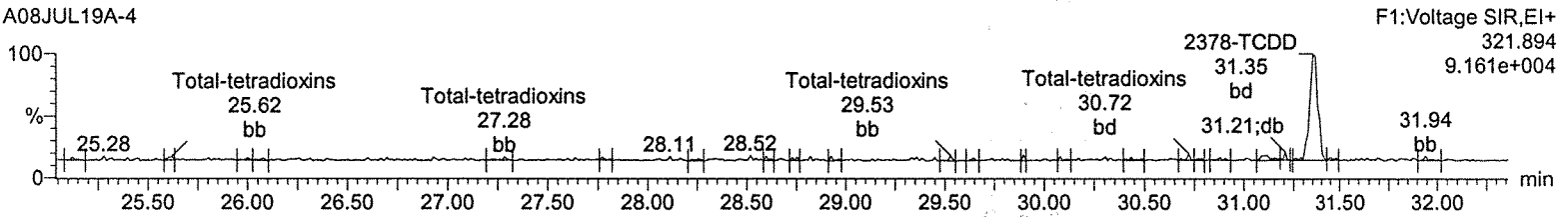
Total-tetradoxins

A08JUL19A-4



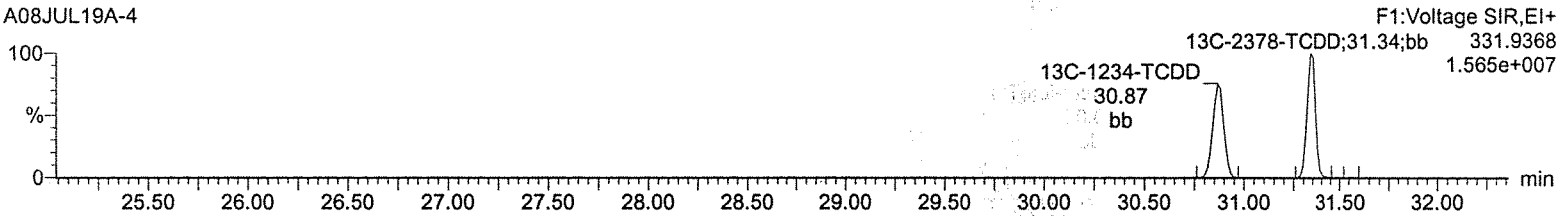
Total-tetradoxins

A08JUL19A-4



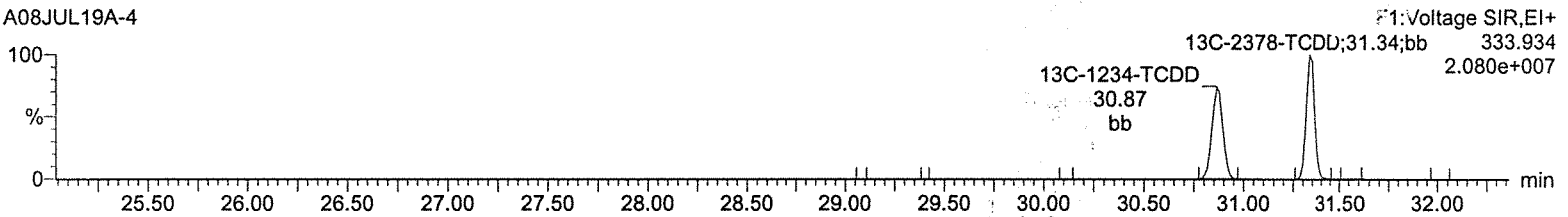
13C-2378-TCDD

A08JUL19A-4



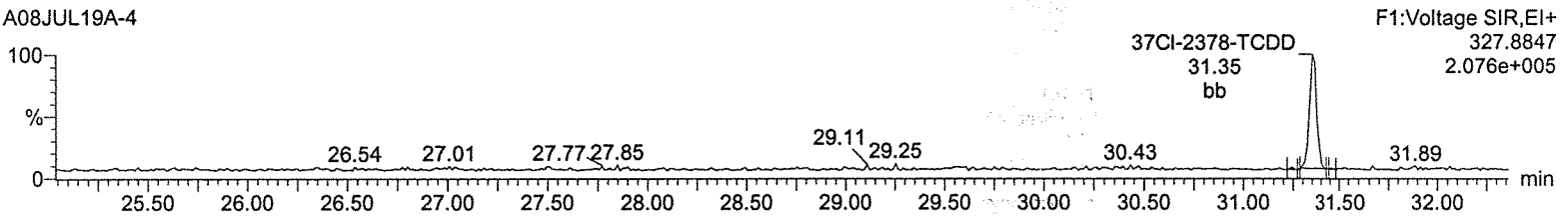
13C-2378-TCDD

A08JUL19A-4



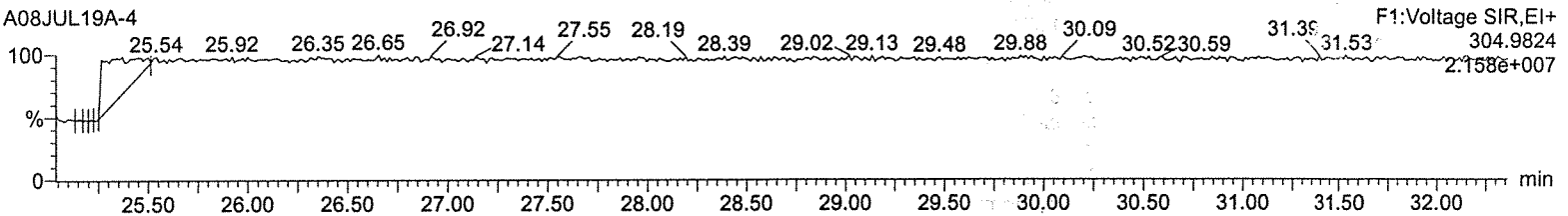
37Cl-2378-TCDD

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

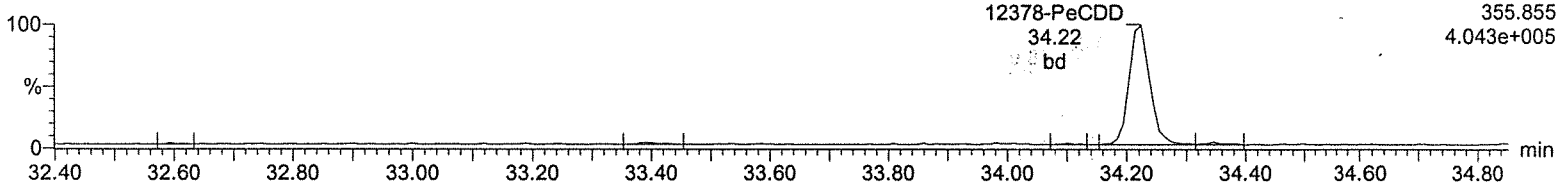
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

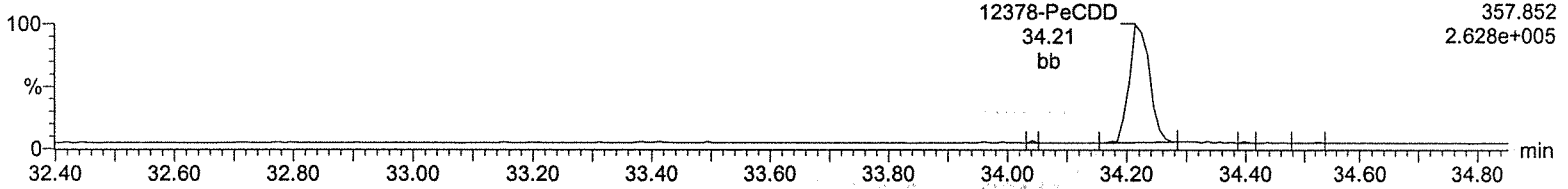
Total-pentadioxins

A08JUL19A-4



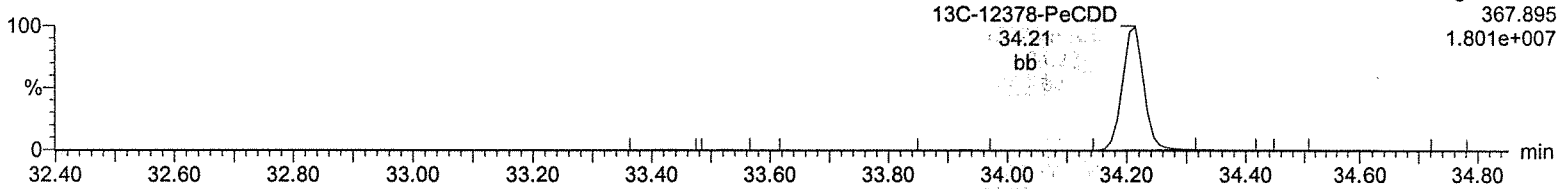
Total-pentadioxins

A08JUL19A-4



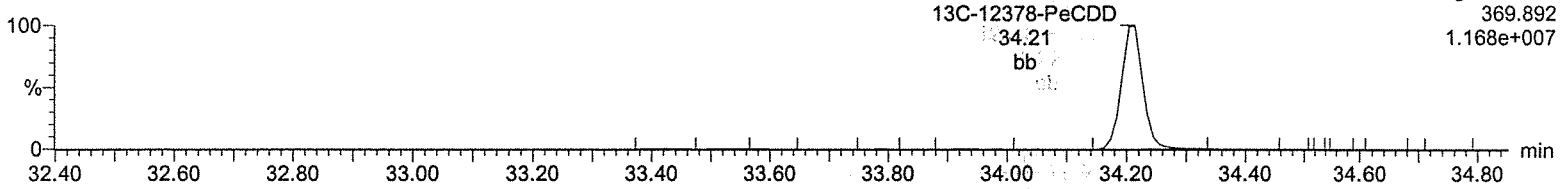
13C-12378-PeCDD

A08JUL19A-4



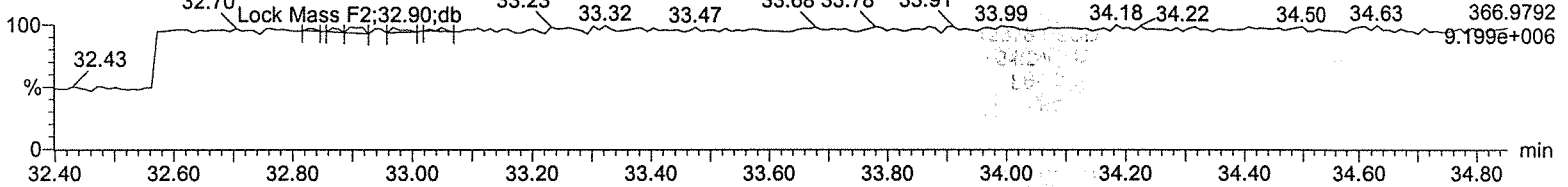
13C-12378-PeCDD

A08JUL19A-4



Lock Mass F2

A08JUL19A-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

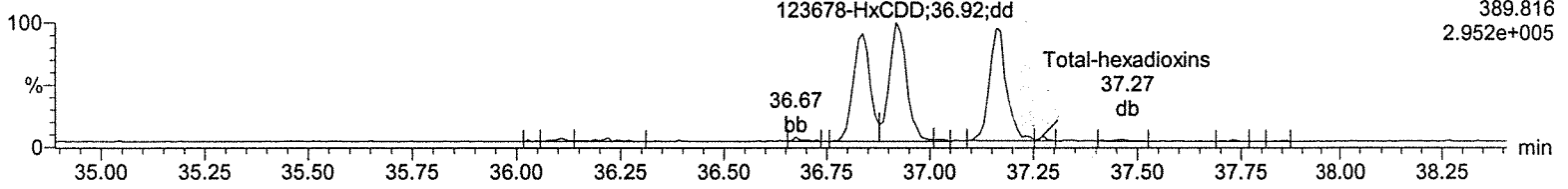
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexadioxins

A08JUL19A-4

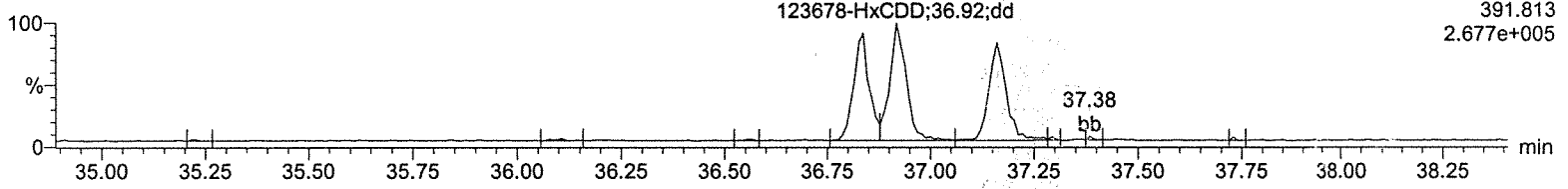
F3:Voltage SIR,EI+
389.816
2.952e+005



Total-hexadioxins

A08JUL19A-4

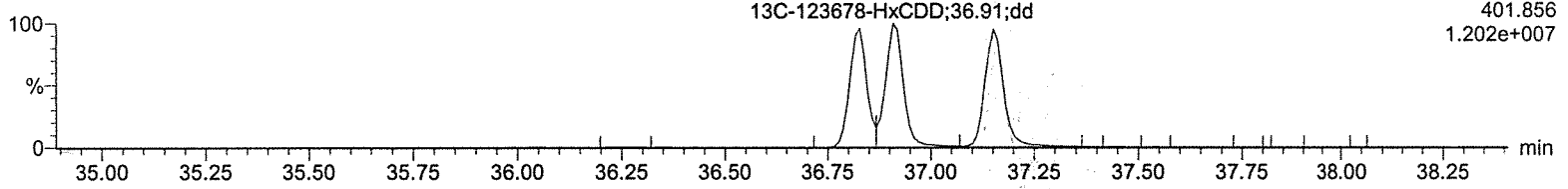
F3:Voltage SIR,EI+
391.813
2.677e+005



13C-123478-HxCDD

A08JUL19A-4

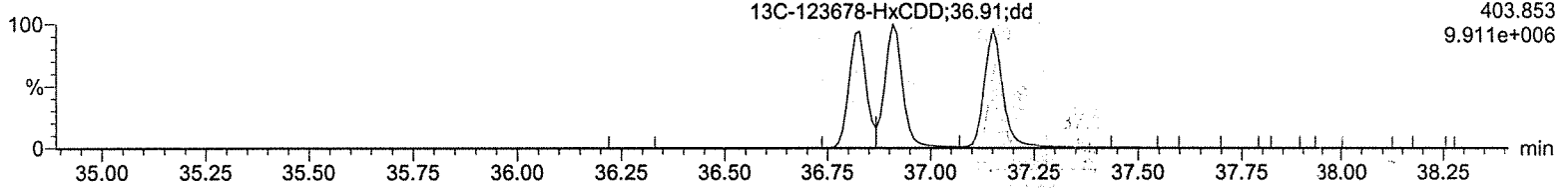
F3:Voltage SIR,EI+
401.856
1.202e+007



13C-123478-HxCDD

A08JUL19A-4

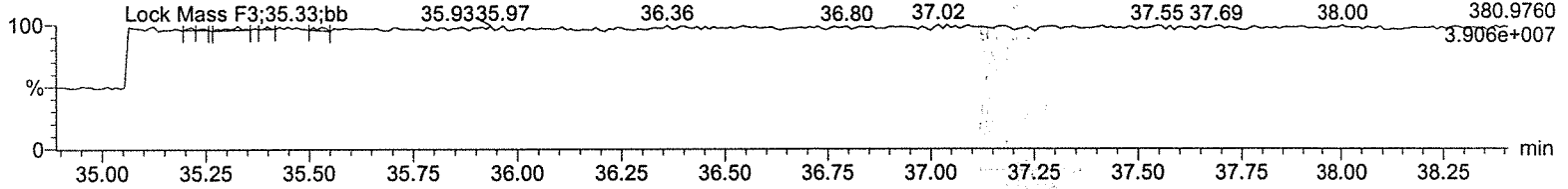
F3:Voltage SIR,EI+
403.853
9.911e+006



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

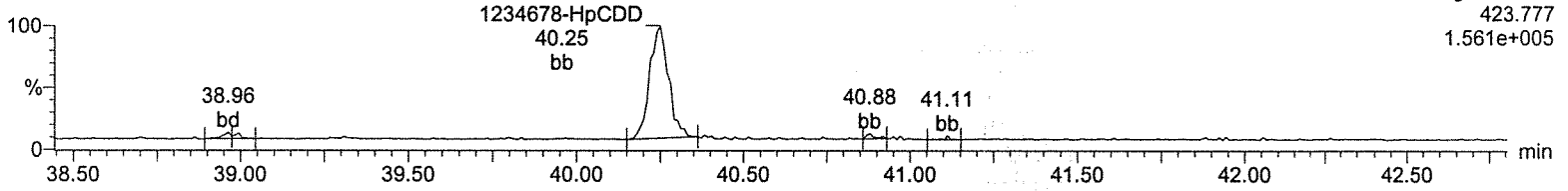
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptadioxins

A08JUL19A-4

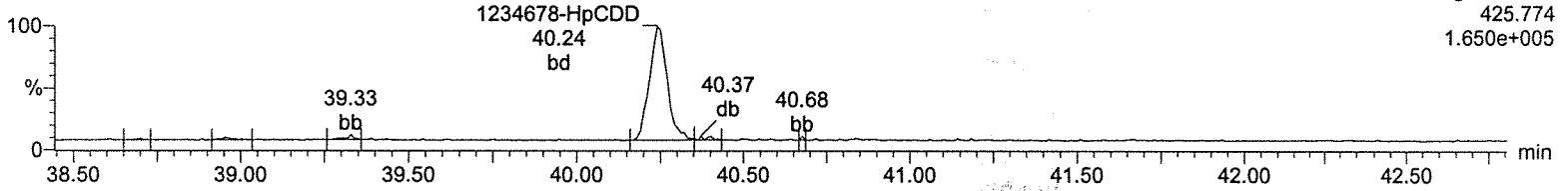
F4:Voltage SIR,EI+
423.777
1.561e+005



Total-heptadioxins

A08JUL19A-4

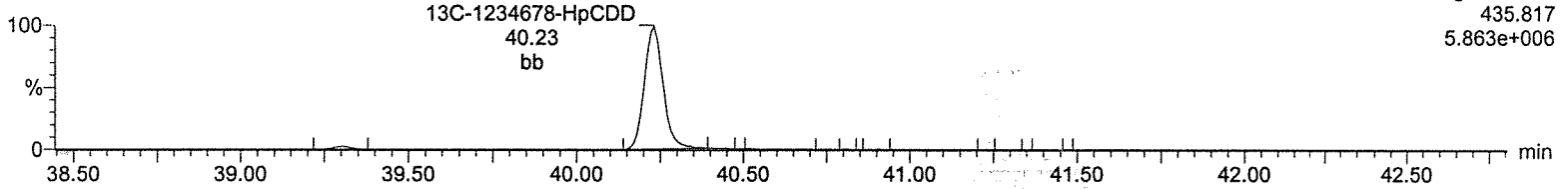
F4:Voltage SIR,EI+
425.774
1.650e+005



13C-1234678-HpCDD

A08JUL19A-4

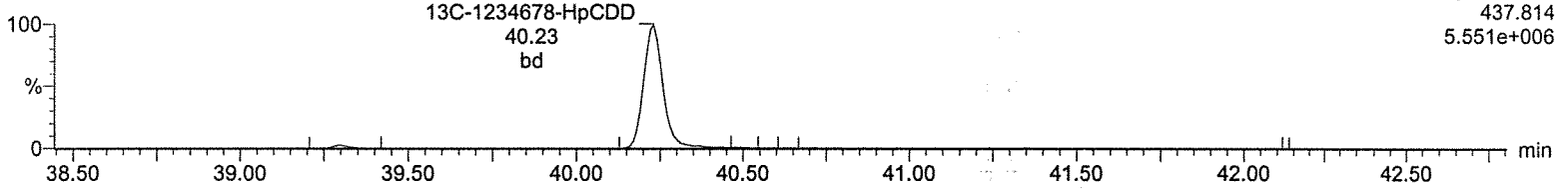
F4:Voltage SIR,EI+
435.817
5.863e+006



13C-1234678-HpCDD

A08JUL19A-4

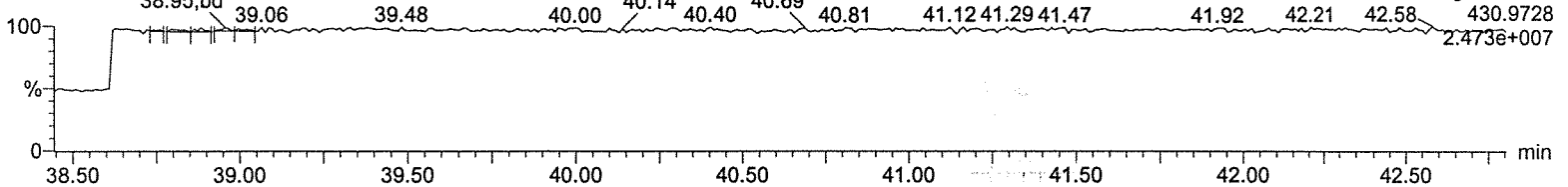
F4:Voltage SIR,EI+
437.814
5.551e+006



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

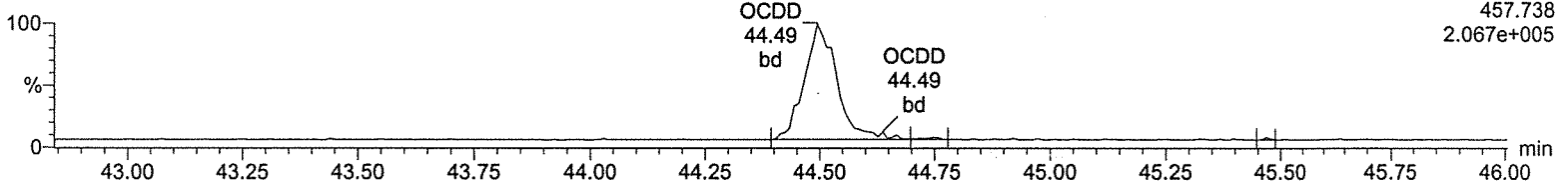
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

OCDD

A08JUL19A-4

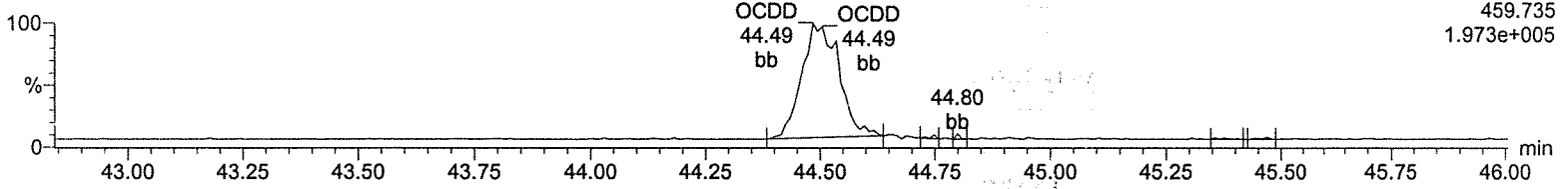
F5:Voltage SIR,EI+
457.738
2.067e+005



OCDD

A08JUL19A-4

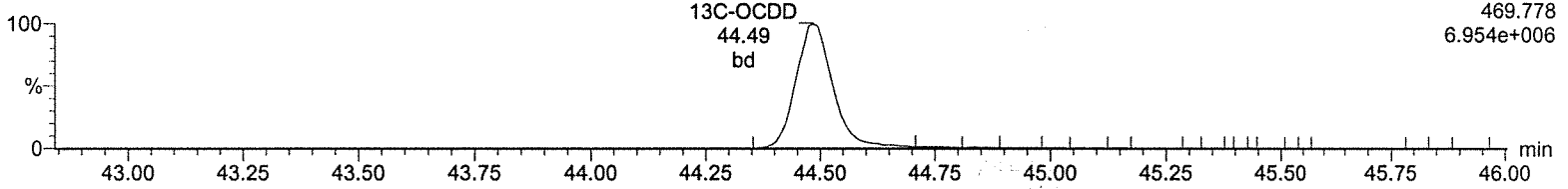
F5:Voltage SIR,EI+
459.735
1.973e+005



13C-OCDD

A08JUL19A-4

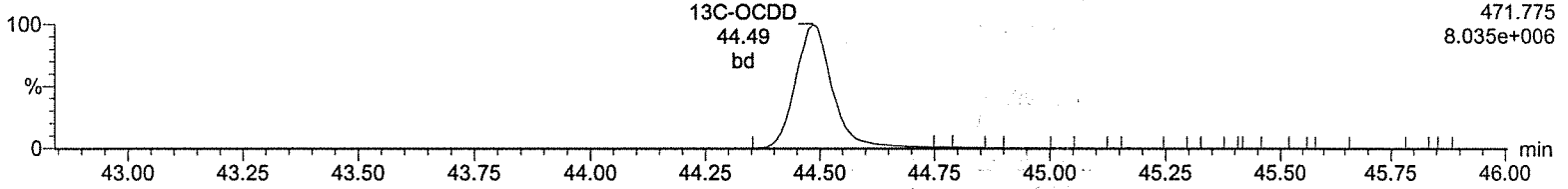
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

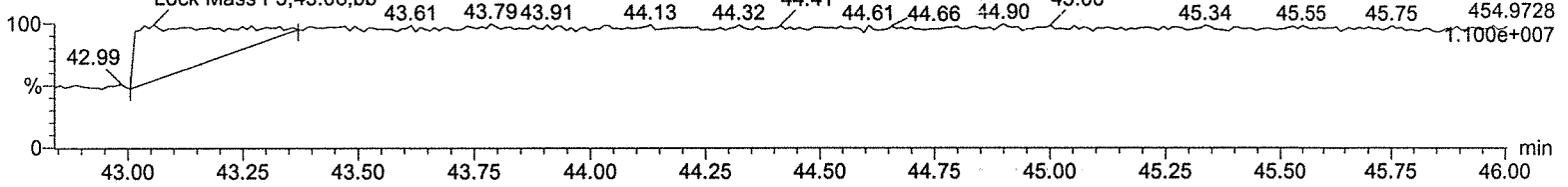
F5:Voltage SIR,EI+
471.775
8.035e+006



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
454.9728
1.100e+007



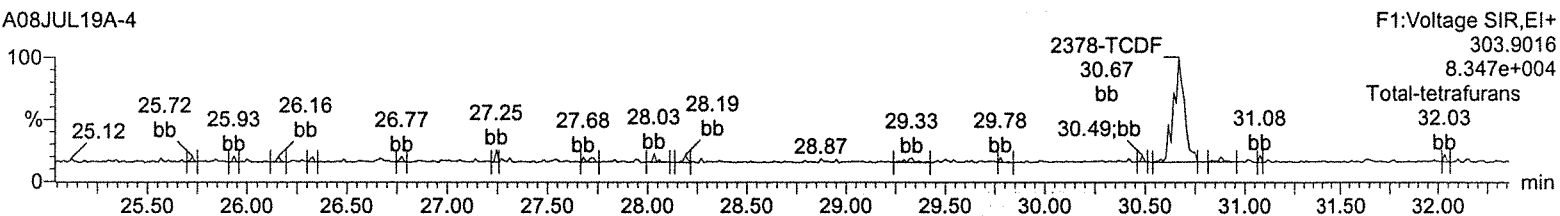
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

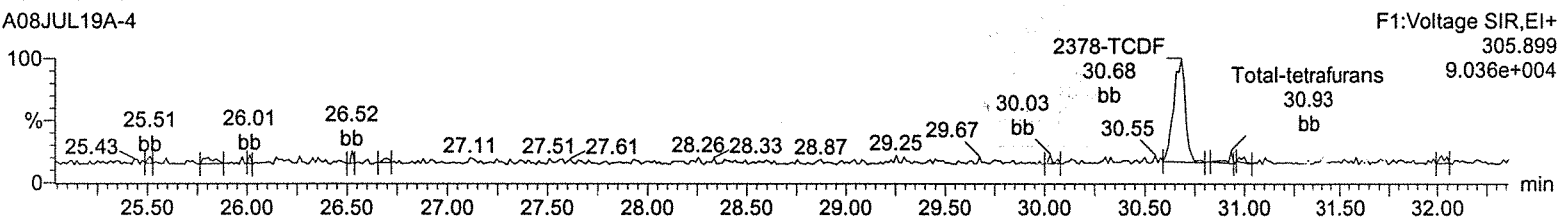
Total-tetrafurans

A08JUL19A-4



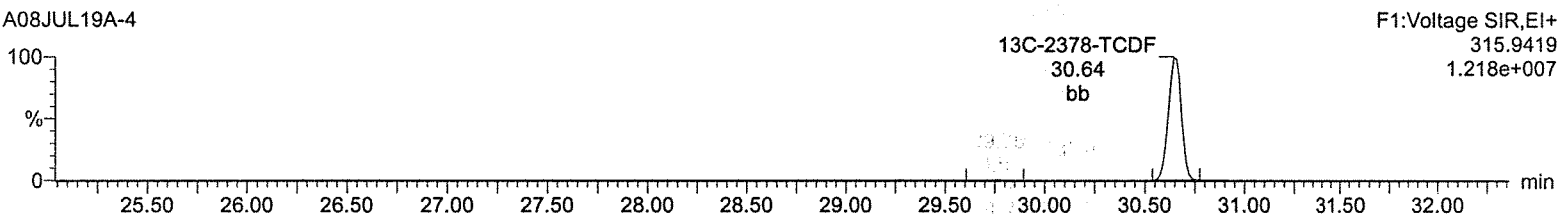
Total-tetrafurans

A08JUL19A-4



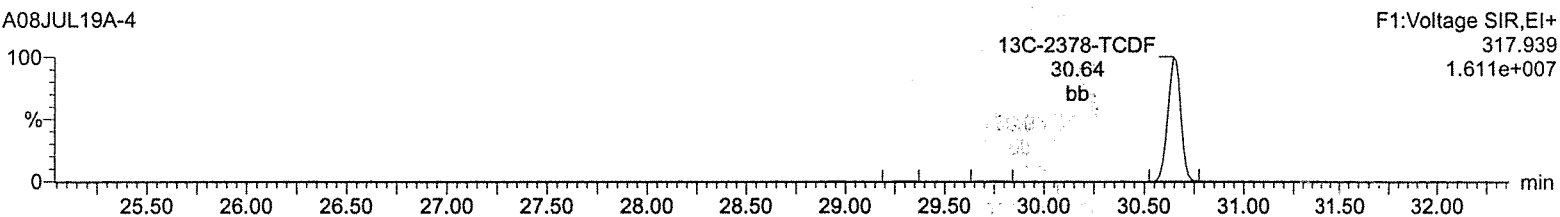
13C-2378-TCDF

A08JUL19A-4



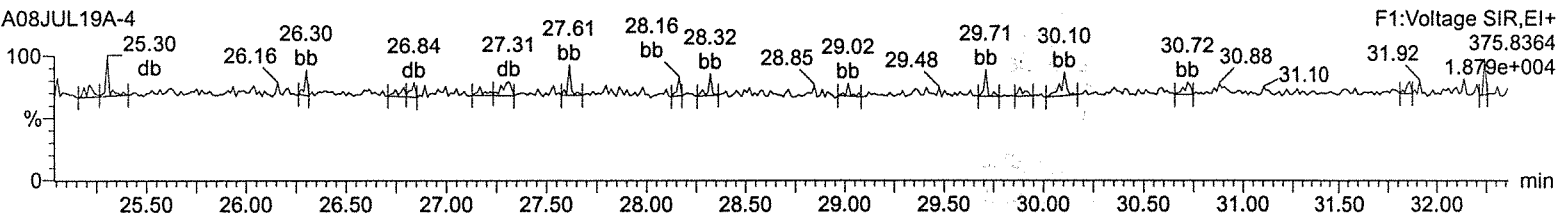
13C-2378-TCDF

A08JUL19A-4



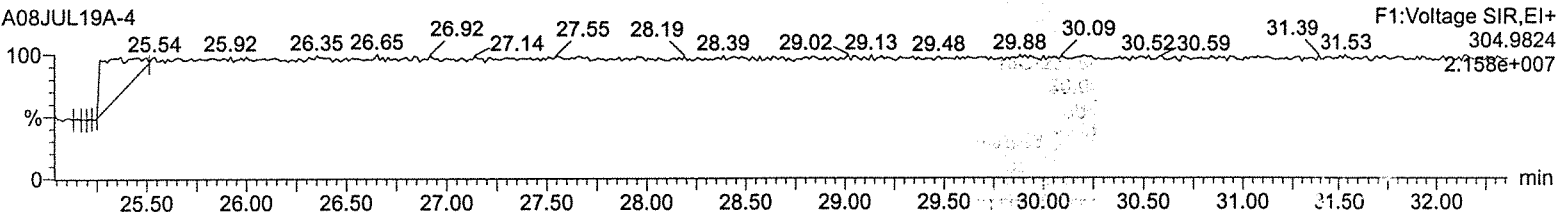
HxDPE

A08JUL19A-4



Lock Mass F1

A08JUL19A-4



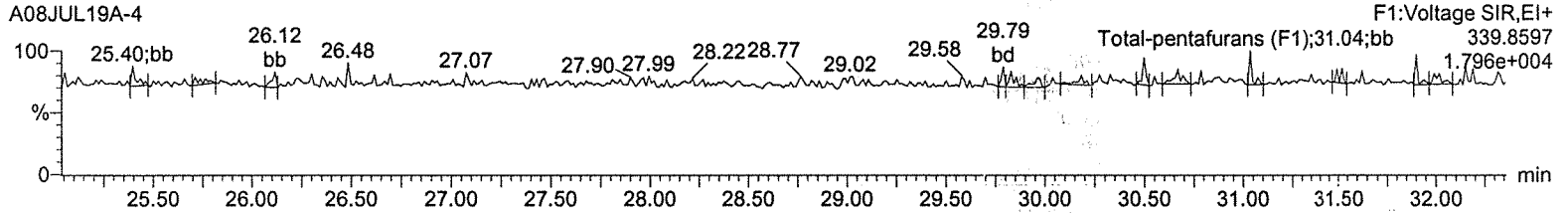
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

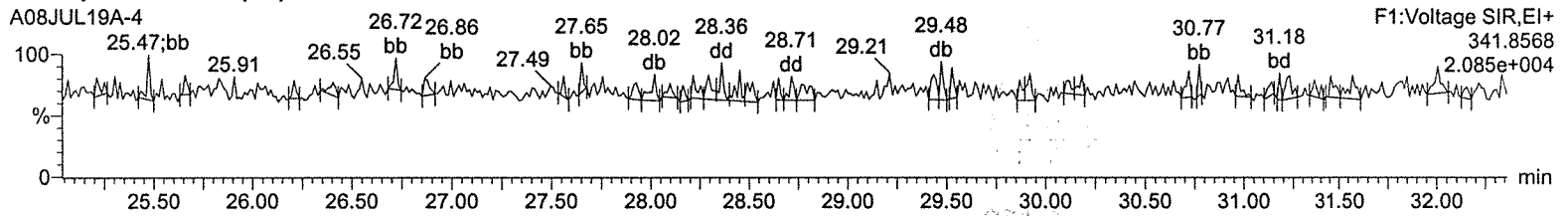
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

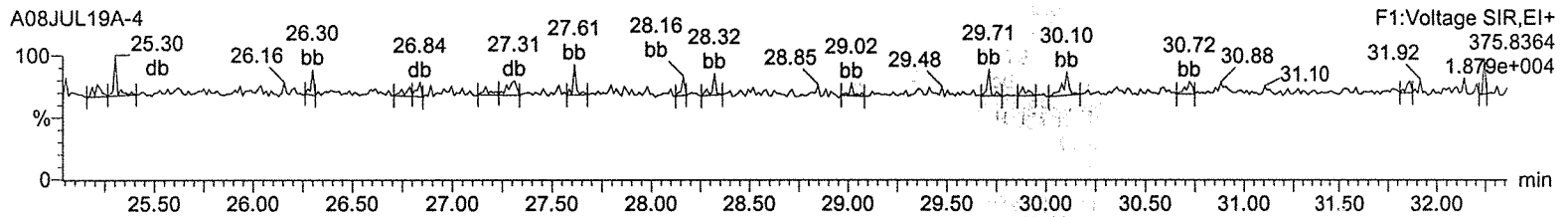
Total-pentafurans (F1)



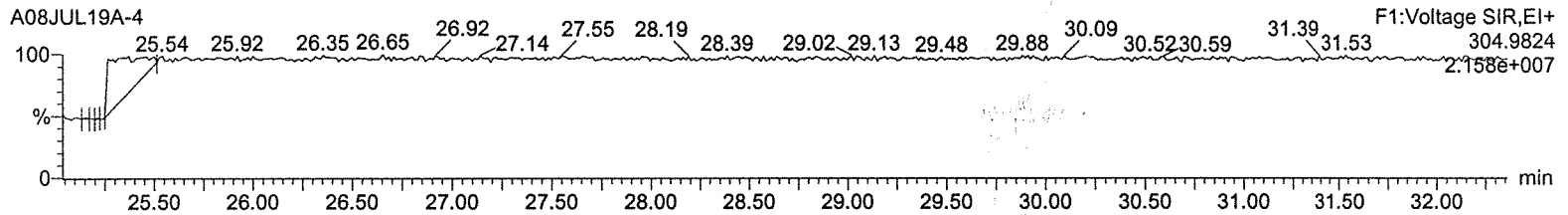
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

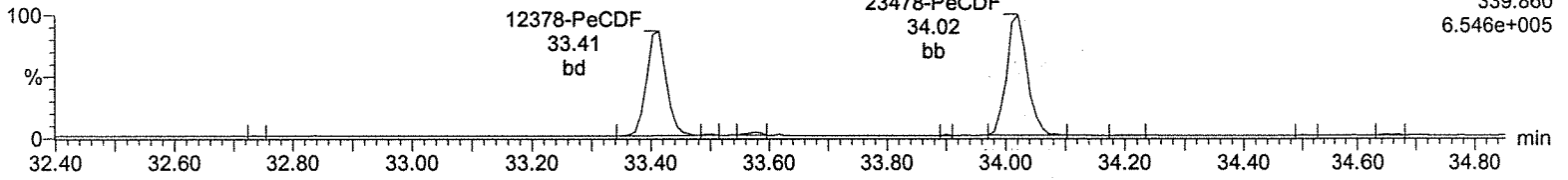
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-pentafurans

A08JUL19A-4

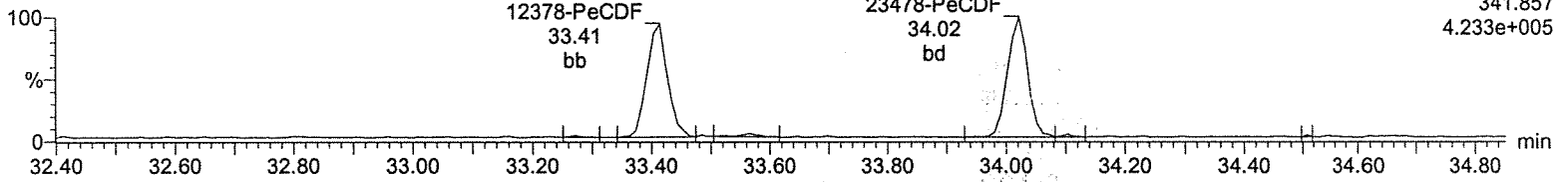
F2:Voltage SIR,EI+
339.860
6.546e+005



Total-pentafurans

A08JUL19A-4

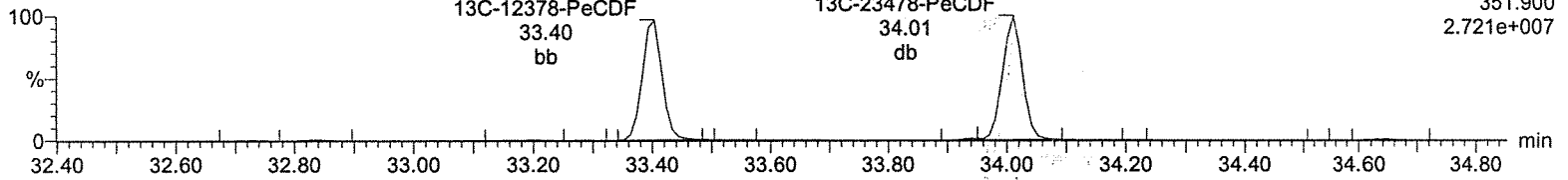
F2:Voltage SIR,EI+
341.857
4.233e+005



13C-12378-PeCDF

A08JUL19A-4

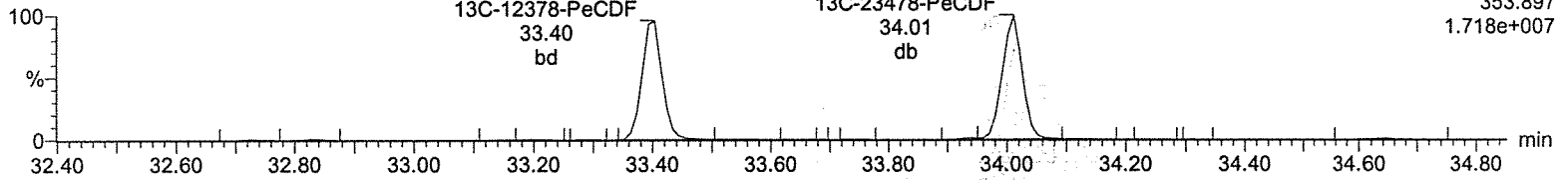
F2:Voltage SIR,EI+
351.900
2.721e+007



13C-12378-PeCDF

A08JUL19A-4

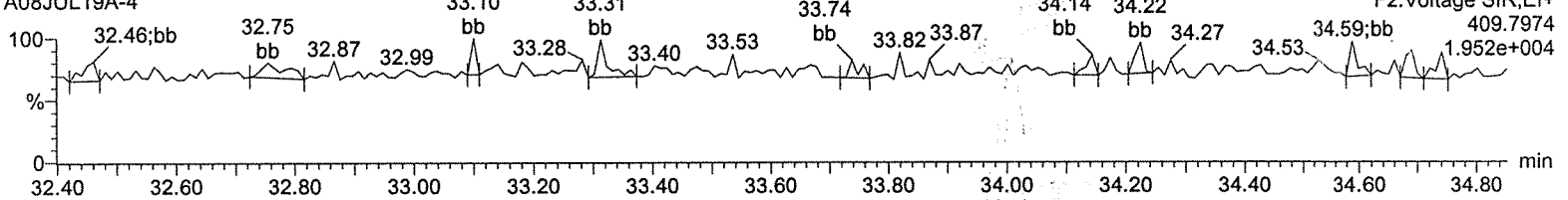
F2:Voltage SIR,EI+
353.897
1.718e+007



HpDPE

A08JUL19A-4

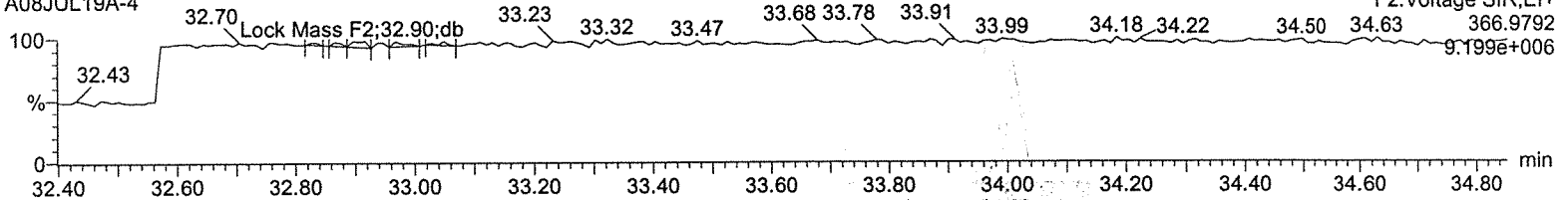
F2:Voltage SIR,EI+
409.7974
1.952e+004



Lock Mass F2

A08JUL19A-4

F2:Voltage SIR,EI+
366.9792
9.199e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

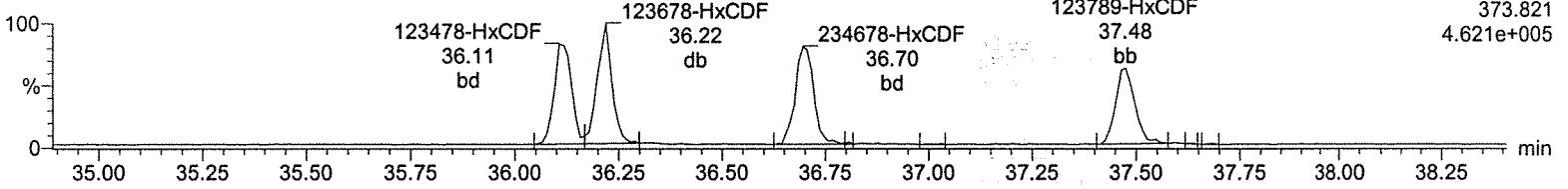
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-hexafurans

A08JUL19A-4

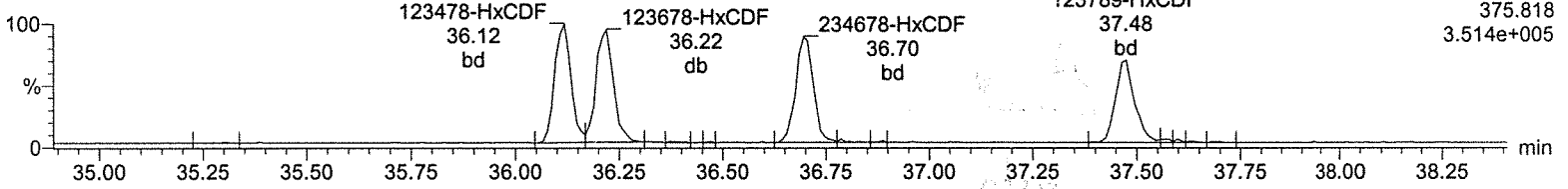
F3:Voltage SIR,EI+
373.821
4.621e+005



Total-hexafurans

A08JUL19A-4

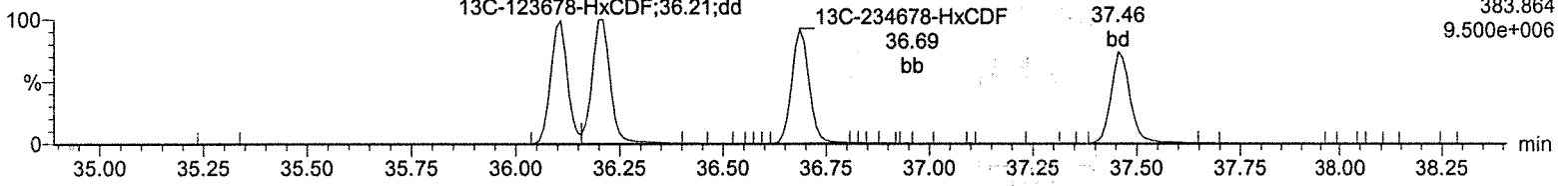
F3:Voltage SIR,EI+
375.818
3.514e+005



13C-123478-HxCDF

A08JUL19A-4

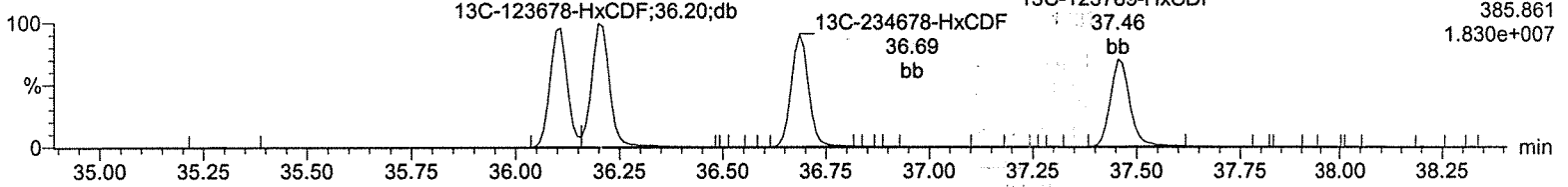
F3:Voltage SIR,EI+
383.864
9.500e+006



13C-123478-HxCDF

A08JUL19A-4

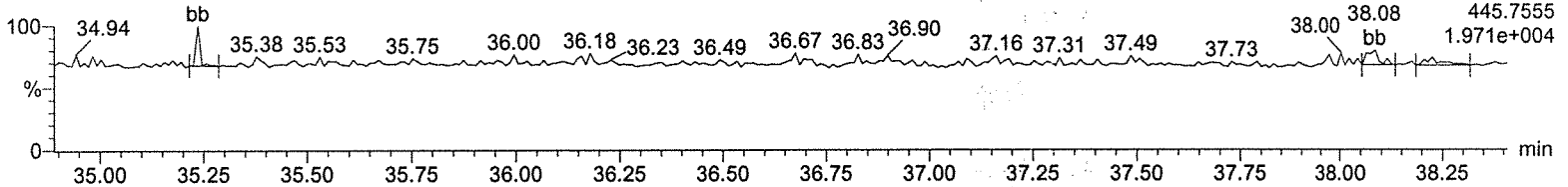
F3:Voltage SIR,EI+
385.861
1.830e+007



OcDPE

A08JUL19A-4

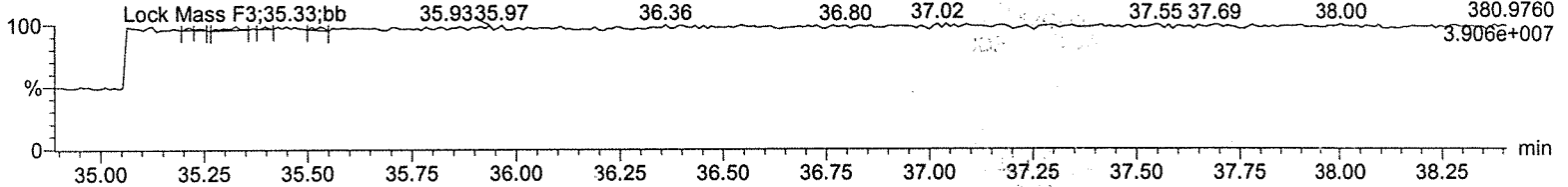
F3:Voltage SIR,EI+
445.7555
1.971e+004



Lock Mass F3

A08JUL19A-4

F3:Voltage SIR,EI+
380.9760
3.906e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

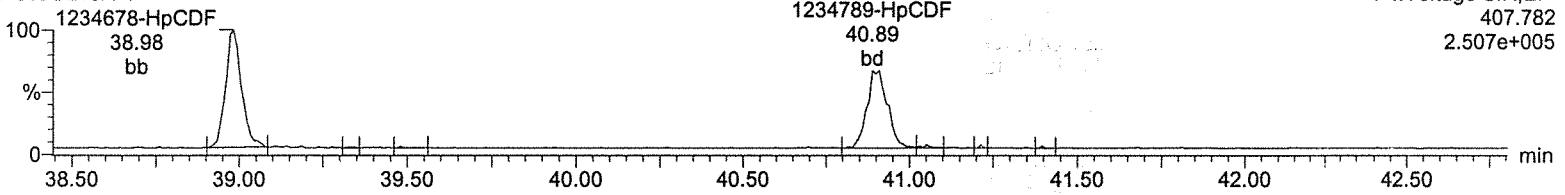
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

Total-heptafurans

A08JUL19A-4

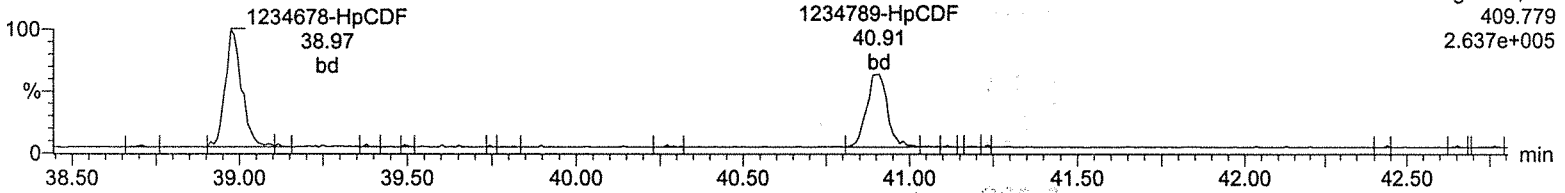
F4:Voltage SIR,EI+
407.782
2.507e+005



Total-heptafurans

A08JUL19A-4

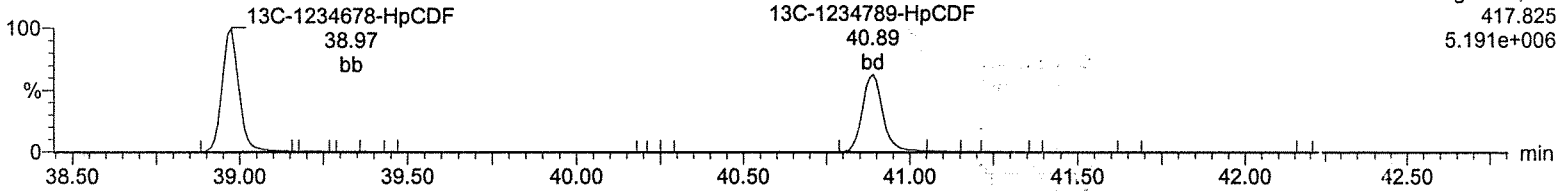
F4:Voltage SIR,EI+
409.779
2.637e+005



13C-1234678-HpCDF

A08JUL19A-4

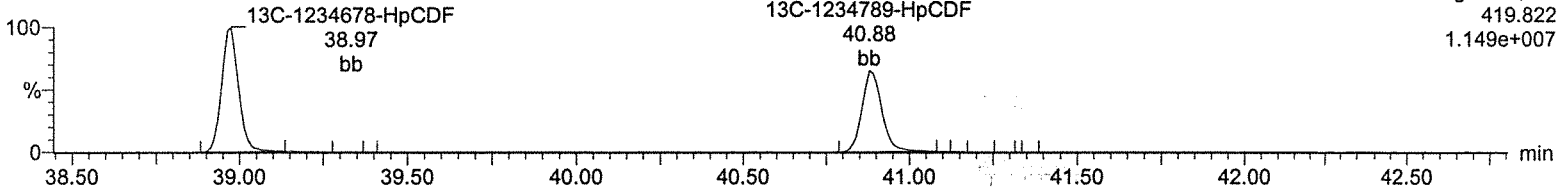
F4:Voltage SIR,EI+
417.825
5.191e+006



13C-1234678-HpCDF

A08JUL19A-4

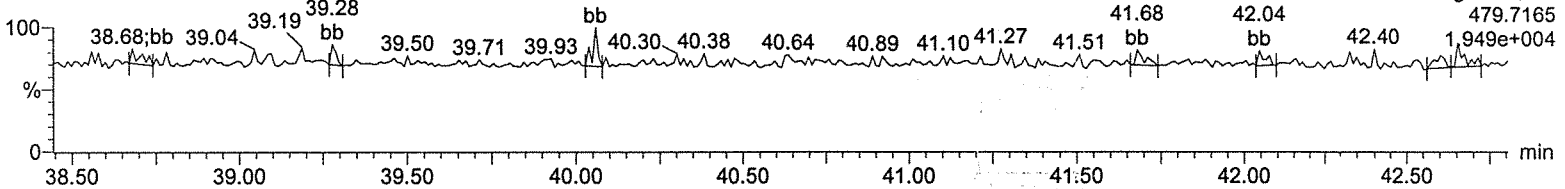
F4:Voltage SIR,EI+
419.822
1.149e+007



NoDPE

A08JUL19A-4

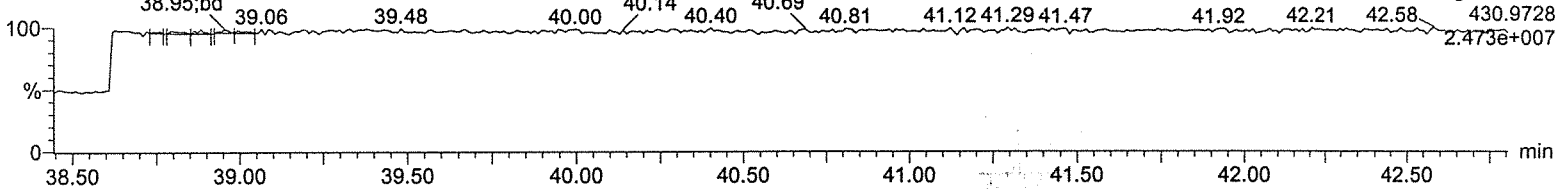
F4:Voltage SIR,EI+
479.7165
1.949e+004



Lock Mass F4

A08JUL19A-4

F4:Voltage SIR,EI+
430.9728
2.473e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

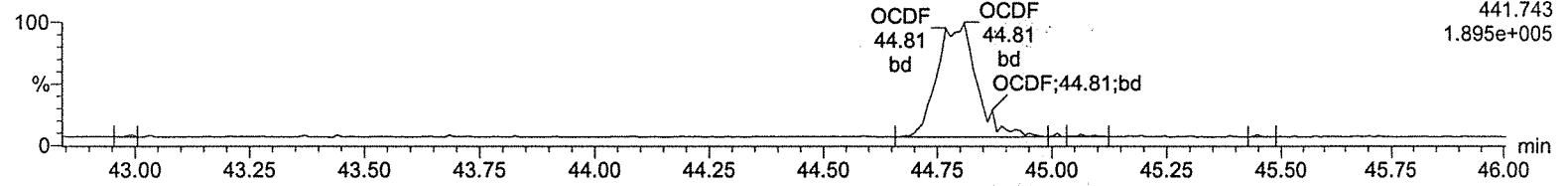
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-4, Date: 08-Jul-2019, Time: 12:03:54, ID: CS1 UD190207-02 CS143

OCDF

A08JUL19A-4

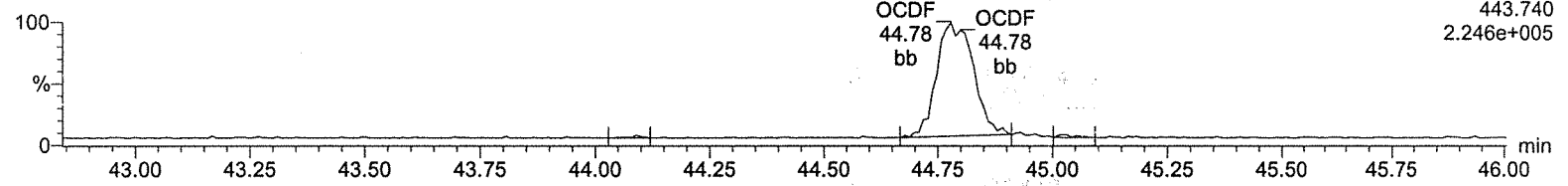
F5:Voltage SIR,EI+
441.743
1.895e+005



OCDF

A08JUL19A-4

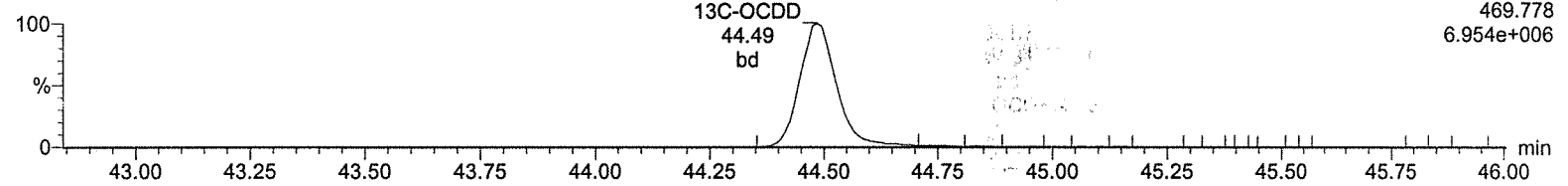
F5:Voltage SIR,EI+
443.740
2.246e+005



13C-OCDD

A08JUL19A-4

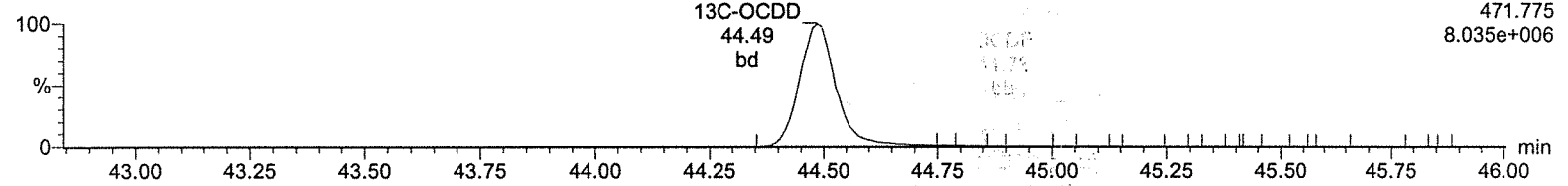
F5:Voltage SIR,EI+
469.778
6.954e+006



13C-OCDD

A08JUL19A-4

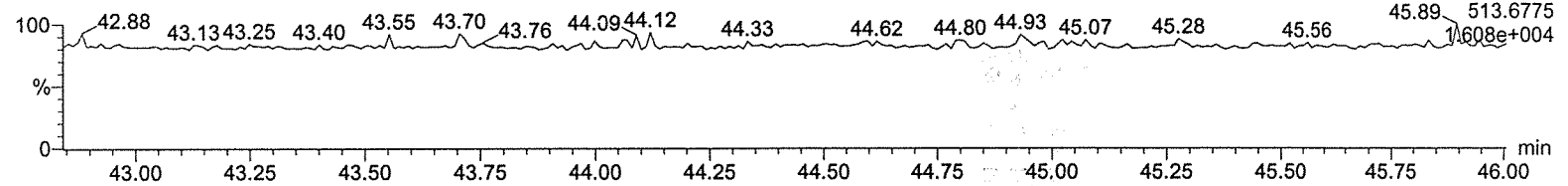
F5:Voltage SIR,EI+
471.775
8.035e+006



DeDPE

A08JUL19A-4

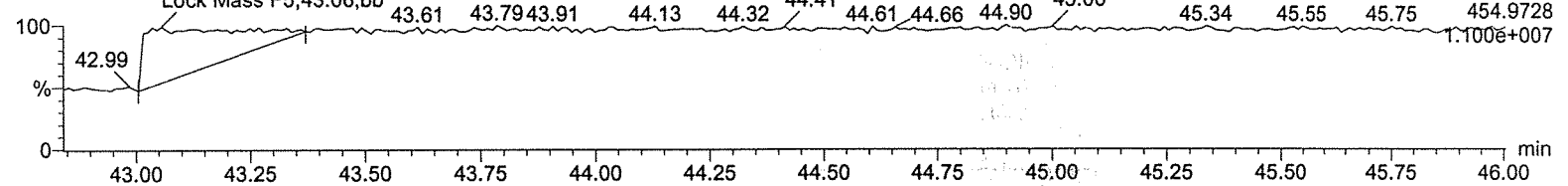
F5:Voltage SIR,EI+
45.89 513.6775
1.608e+004



Lock Mass F5

A08JUL19A-4

F5:Voltage SIR,EI+
45.75 454.9728
1.100e+007



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2019 July 9

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	SM2	M	M2
1	2378-TCDD	1.64e4	1.96e4	3.60e4	31.35	1.000	0.84	NO	1.926	0.852	0.884	5.07	0.0366	3.15e5	2708	116.2	3.71e5	1865	198.8	bd	bb
2	12378-PeCDD	7.01e4	4.54e4	1.16e5	34.21	1.000	1.54	NO	9.858	0.841	0.853	1.65	0.0620	1.64e6	4036	407.1	1.04e6	1793	580.0	bd	bd
3	123478-HxCDD	6.07e4	4.76e4	1.08e5	36.83	1.000	1.27	NO	10.128	0.952	0.940	3.11	0.0942	1.22e6	2456	497.4	9.73e5	4175	232.9	bd	bd
4	123678-HxCDD	6.34e4	5.11e4	1.15e5	36.92	1.000	1.24	NO	9.763	0.922	0.944	2.57	0.0868	1.18e6	2456	481.4	1.03e6	4175	246.2	dd	db
5	123789-HxCDD	6.39e4	4.66e4	1.10e5	37.16	1.007	1.37	NO	10.002	0.927	0.927	3.30	0.0918	1.18e6	2456	480.1	9.15e5	4175	219.1	dd	bb
6	1234678-HpCDD	4.59e4	4.40e4	8.99e4	40.24	1.000	1.04	NO	9.996	1.040	1.040	2.88	0.110	6.56e5	2814	233.2	6.28e5	2050	306.2	bd	bd
7	OCDD	7.02e4	7.76e4	1.48e5	44.49	1.000	0.90	NO	19.465	0.945	0.971	2.39	0.188	8.27e5	1894	436.6	8.97e5	3432	261.3	bb	bd
8	2378-TCDF	1.89e4	2.56e4	4.45e4	30.66	1.000	0.74	NO	1.930	0.944	0.978	5.59	0.0473	2.49e5	1586	157.1	3.39e5	3348	101.3	bb	bb
9	12378-PeCDF	1.06e5	6.71e4	1.73e5	33.40	1.000	1.58	NO	9.783	0.925	0.945	3.41	0.0636	2.70e6	3895	693.8	1.78e6	5562	320.5	bd	bb
10	123478-PeCDF	1.18e5	7.25e4	1.90e5	34.01	1.000	1.63	NO	9.783	0.965	0.987	3.73	0.0611	2.97e6	3895	763.7	1.80e6	5562	323.0	bb	bb
11	123478-HxCDF	8.27e4	6.81e4	1.51e5	36.11	1.000	1.21	NO	9.763	1.061	1.087	3.86	0.0759	1.84e6	4254	433.3	1.52e6	3988	381.2	bd	bd
12	123678-HxCDF	9.22e4	7.42e4	1.66e5	36.21	1.000	1.24	NO	9.951	1.035	1.041	3.23	0.0734	1.84e6	4254	432.3	1.62e6	3988	407.3	db	db
13	234678-HxCDF	8.43e4	7.08e4	1.55e5	36.69	1.000	1.19	NO	9.949	1.130	1.136	3.17	0.0789	1.74e6	4254	408.5	1.48e6	3988	370.3	bd	bd
14	123789-HxCDF	7.38e4	5.81e4	1.32e5	37.48	1.000	1.27	NO	10.037	1.065	1.061	2.29	0.105	1.25e6	4254	294.9	1.09e6	3988	272.3	bb	bb
15	1234678-HpCDF	6.54e4	6.32e4	1.29e5	38.98	1.000	1.03	NO	9.981	1.148	1.150	3.86	0.0875	1.11e6	3400	327.0	1.11e6	2921	379.1	bd	bd
16	1234789-HpCDF	5.22e4	4.99e4	1.02e5	40.90	1.000	1.04	NO	9.741	1.171	1.202	1.91	0.129	7.25e5	3400	213.2	7.43e5	2921	254.5	bd	bd
17	OCDF	8.37e4	9.25e4	1.76e5	44.78	1.007	0.90	NO	19.911	1.128	1.133	6.78	0.224	8.60e5	5124	167.8	1.02e6	2272	447.0	bd	bd
18	13C-2378-TCDD	9.19e5	1.19e6	2.11e6	31.34	1.015	0.77	NO	99.089	1.118	1.128	2.36	0.123	1.85e7	8904	2075.2	2.42e7	4676	5171.3	bb	bb
19	13C-12378-PeCDD	8.32e5	5.41e5	1.37e6	34.20	1.108	1.54	NO	96.776	0.727	0.751	5.03	0.0911	2.00e7	3434	5827.9	1.32e7	3264	4047.5	bb	bb
20	13C-123478-HxCDD	6.41e5	4.98e5	1.14e6	36.82	0.991	1.29	NO	99.739	0.894	0.896	1.38	0.237	1.27e7	7585	1668.3	1.03e7	8736	1182.7	bd	bd
21	13C-123678-HxCDD	6.70e5	5.73e5	1.24e6	36.91	0.993	1.17	NO	98.976	0.976	0.986	0.84	0.216	1.31e7	7585	1725.4	1.07e7	8736	1227.3	dd	dd
22	13C-1234678-HpCDD	4.39e5	4.25e5	8.65e5	40.23	1.083	1.03	NO	101.051	0.679	0.672	1.29	0.236	6.46e6	6562	985.2	6.05e6	5587	1082.0	bb	bd
23	13C-OCDD	7.21e5	8.42e5	1.58e6	44.49	1.197	0.86	NO	191.086	0.614	0.642	4.87	0.302	8.07e6	5375	1501.9	8.99e6	9504	945.8	bb	bd
24	13C-2378-TCDF	1.03e6	1.33e6	2.36e6	30.64	0.993	0.77	NO	99.848	1.248	1.250	1.88	0.185	1.40e7	15077	925.5	1.82e7	7573	2401.2	bb	bb
25	13C-12378-PeCDF	1.14e6	7.27e5	1.87e6	33.39	1.082	1.57	NO	98.012	0.991	1.011	4.24	0.186	2.88e7	10165	2836.7	1.87e7	8269	2257.4	bb	bb
26	13C-23478-PeCDF	1.20e6	7.67e5	1.97e6	34.00	1.102	1.57	NO	98.156	1.044	1.063	5.28	0.177	2.88e7	10165	2830.5	1.86e7	8269	2249.2	bb	bb
27	13C-123478-HxCDF	4.84e5	9.37e5	1.42e6	36.10	0.972	0.52	NO	100.421	1.115	1.111	1.42	0.255	1.02e7	10424	978.9	1.98e7	11320	1746.0	bd	bd
28	13C-123678-HxCDF	5.51e5	1.06e6	1.61e6	36.20	0.974	0.52	NO	101.235	1.262	1.247	1.06	0.227	1.11e7	10424	1065.6	2.11e7	11320	1864.5	dd	dd
29	13C-234678-HxCDF	4.74e5	8.99e5	1.37e6	36.69	0.987	0.53	NO	99.614	1.078	1.082	1.01	0.262	9.53e6	10424	914.6	1.83e7	11320	1619.4	bb	bb
30	13C-123789-HxCDF	4.34e5	8.05e5	1.24e6	37.46	1.008	0.54	NO	100.569	0.973	0.967	1.08	0.293	7.78e6	10424	746.4	1.45e7	11320	1279.8	bd	bb
31	13C-1234678-HpCDF	3.48e5	7.72e5	1.12e6	38.96	1.049	0.45	NO	101.100	0.880	0.870	1.11	0.203	5.86e6	7080	827.3	1.29e7	6451	1996.6	bd	bb
32	13C-1234789-HpCDF	2.69e5	6.03e5	8.72e5	40.88	1.100	0.45	NO	101.106	0.685	0.677	1.01	0.260	3.78e6	7080	534.3	8.61e6	6451	1355.0	bd	bb
33	13C-1234-TCDD	8.25e5	1.06e6	1.89e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.139	1.28e7	8904	1440.8	1.64e7	4676	3505.8	bb	bb
34	13C-123789-HxCDD	7.00e5	5.74e5	1.27e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.213	1.26e7	7585	1667.6	1.04e7	8736	1189.4	db	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

CP#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	3.85e4	3.85e4	3.85e4	31.35	1.016			1.919	1.018	1.061	4.54	0.0384	7.43e5	3989	186.2				M	M2	
																						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

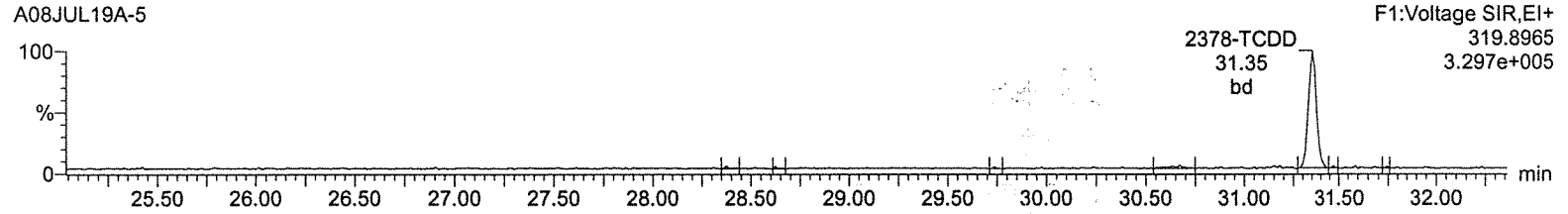
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

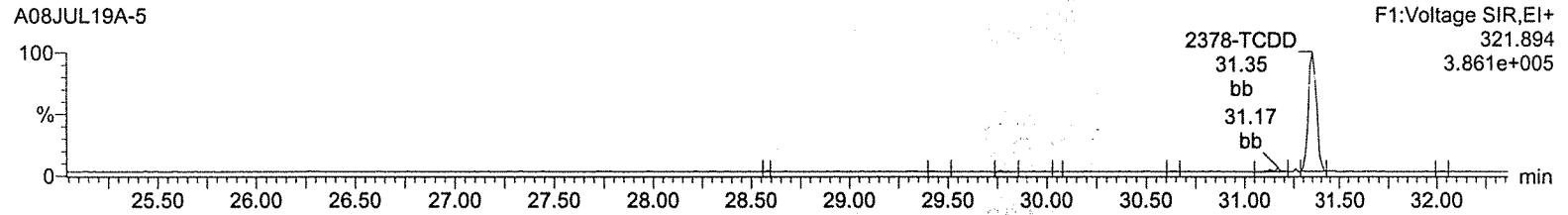
Total-tetradoxins

A08JUL19A-5



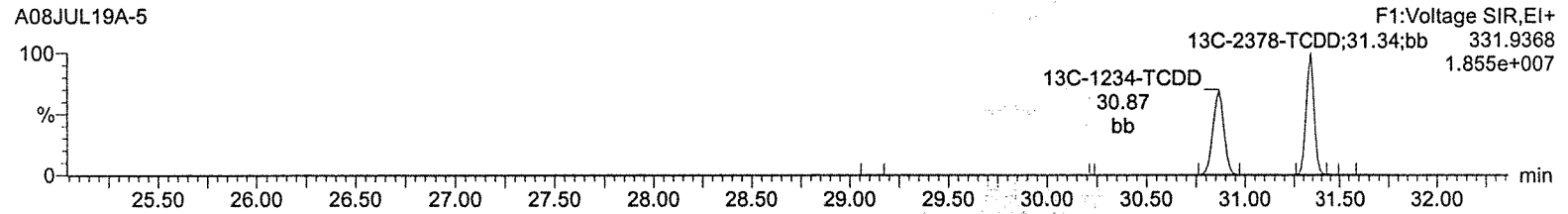
Total-tetradoxins

A08JUL19A-5



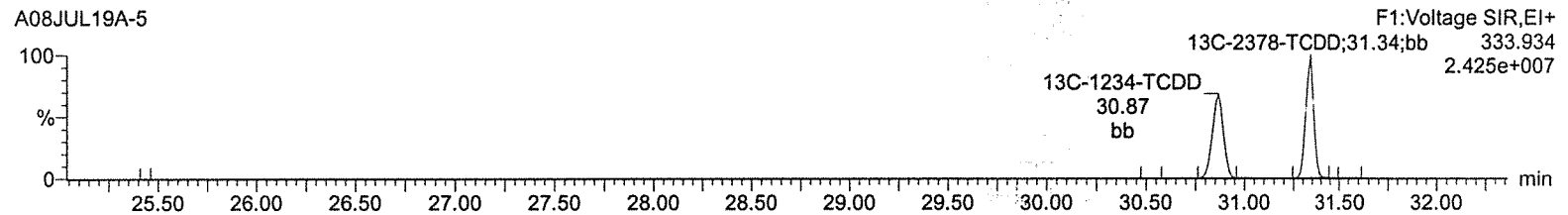
13C-2378-TCDD

A08JUL19A-5



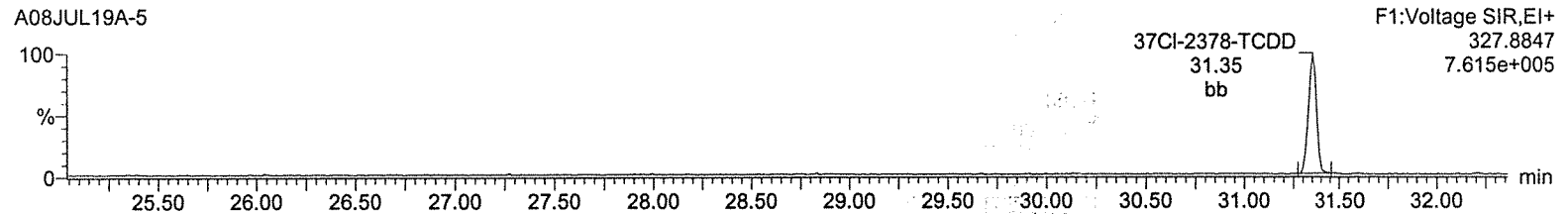
13C-2378-TCDD

A08JUL19A-5



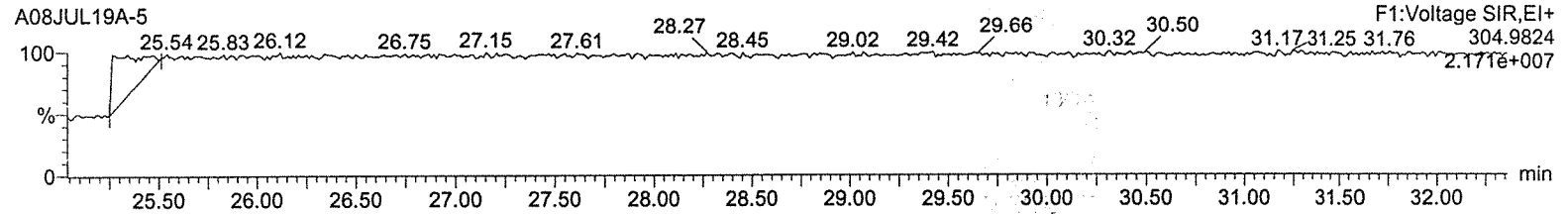
37Cl-2378-TCDD

A08JUL19A-5



Lock Mass F1

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

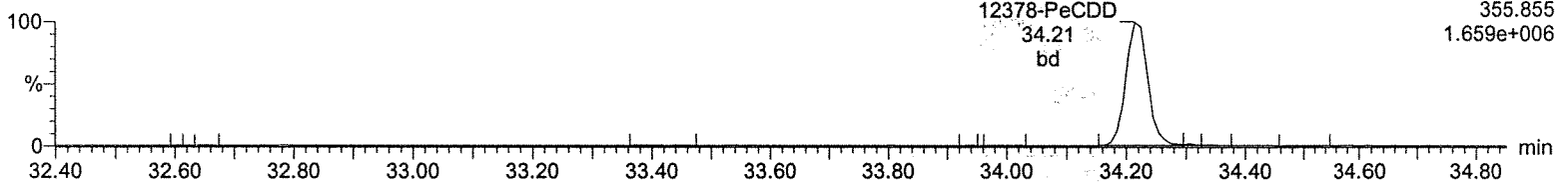
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-pentadioxins

A08JUL19A-5

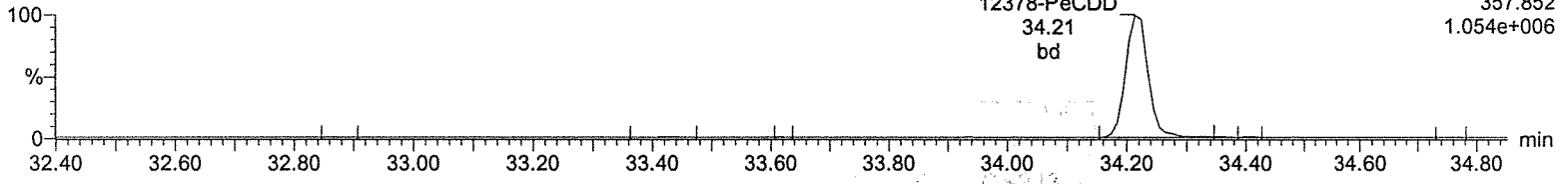
F2:Voltage SIR,EI+
355.855
1.659e+006



Total-pentadioxins

A08JUL19A-5

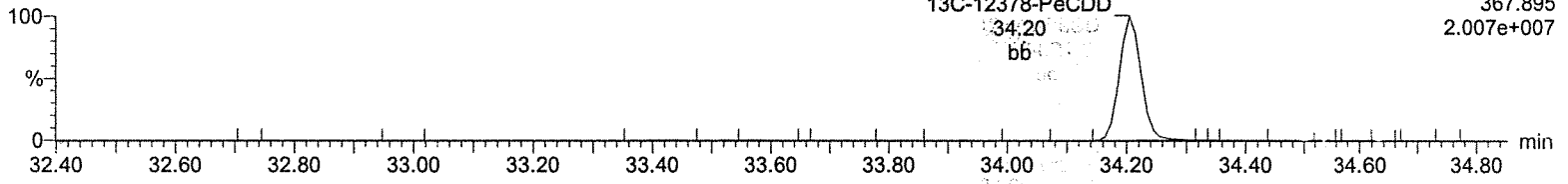
F2:Voltage SIR,EI+
357.852
1.054e+006



13C-12378-PeCDD

A08JUL19A-5

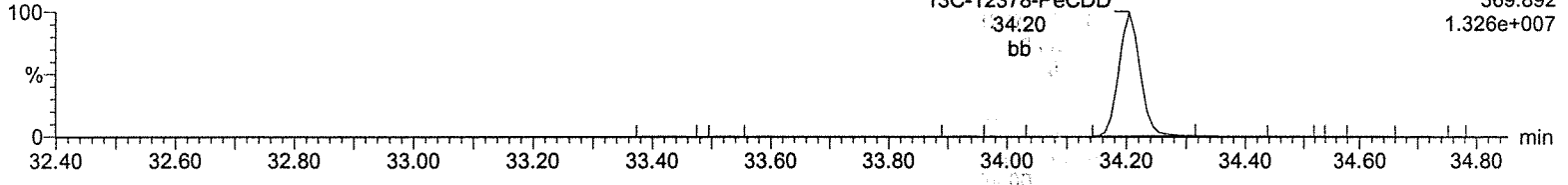
F2:Voltage SIR,EI+
367.895
2.007e+007



13C-12378-PeCDD

A08JUL19A-5

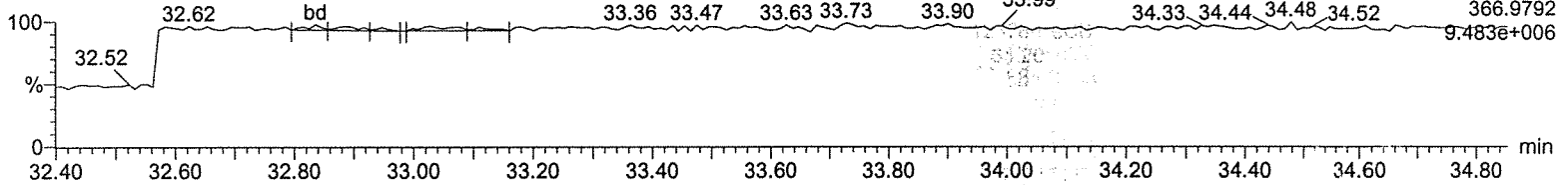
F2:Voltage SIR,EI+
369.892
1.326e+007



Lock Mass F2

A08JUL19A-5

F2:Voltage SIR,EI+
366.9792
9.483e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

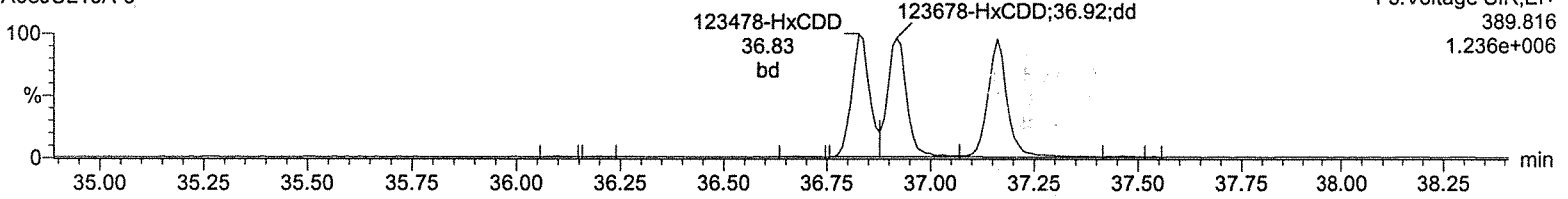
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

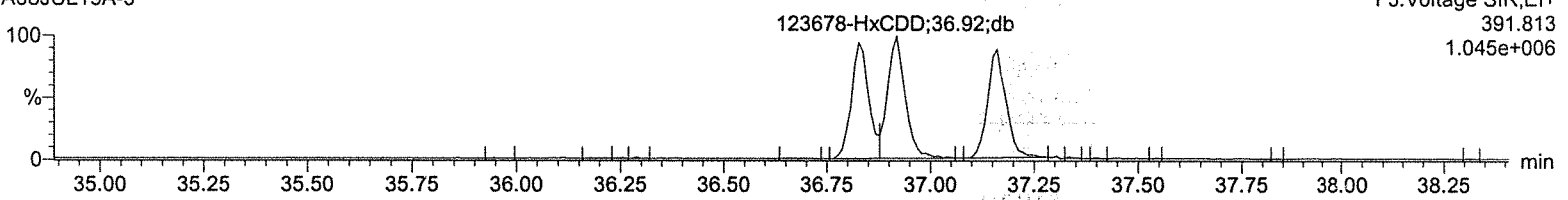
Total-hexadioxins

A08JUL19A-5



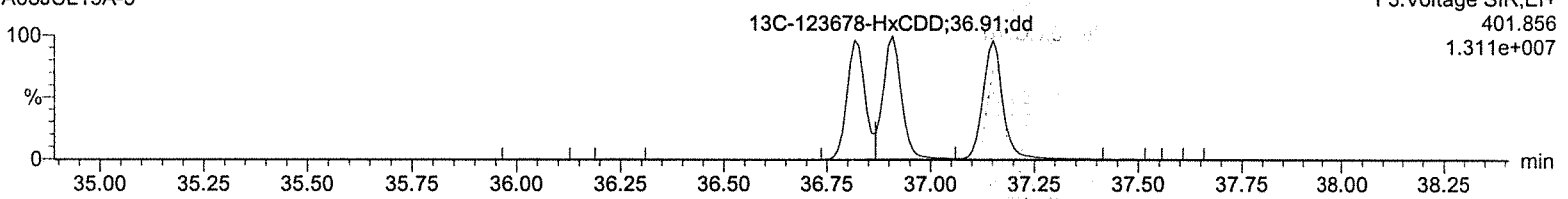
Total-hexadioxins

A08JUL19A-5



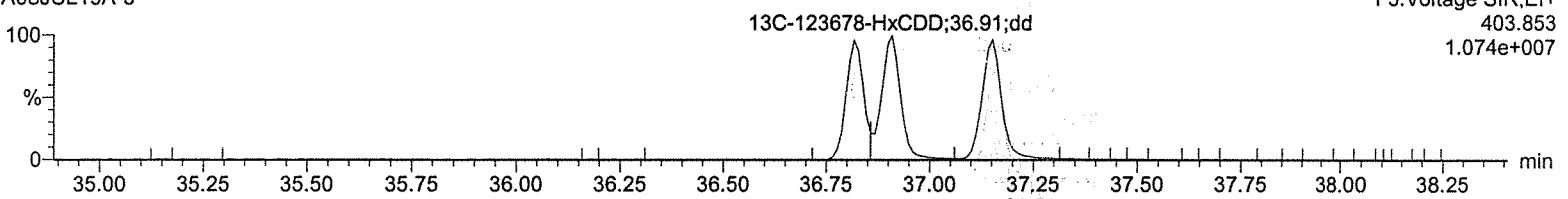
13C-123478-HxCDD

A08JUL19A-5



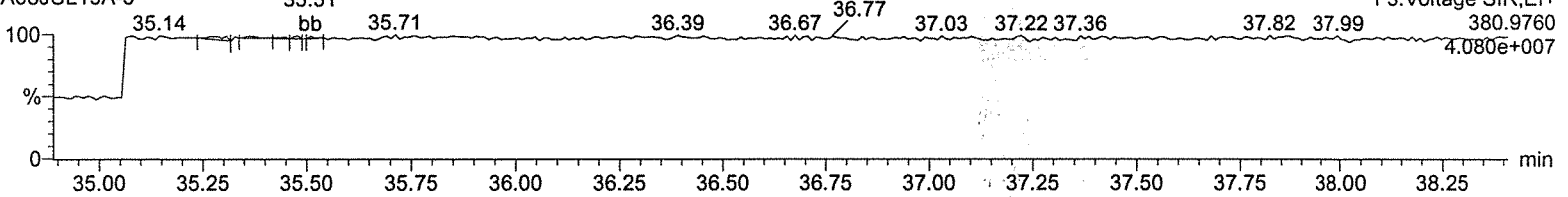
13C-123478-HxCDD

A08JUL19A-5



Lock Mass F3

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

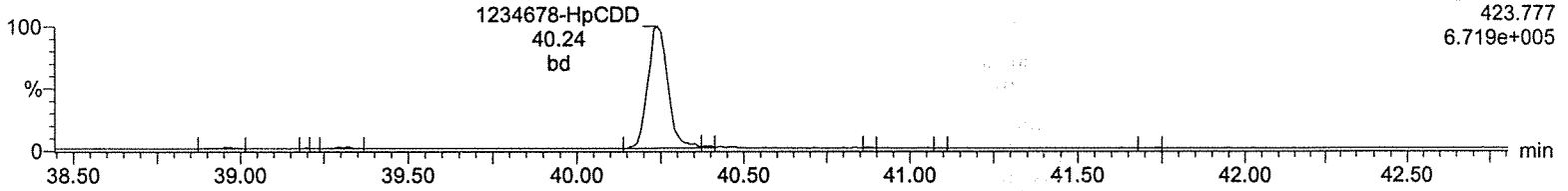
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-heptadioxins

A08JUL19A-5

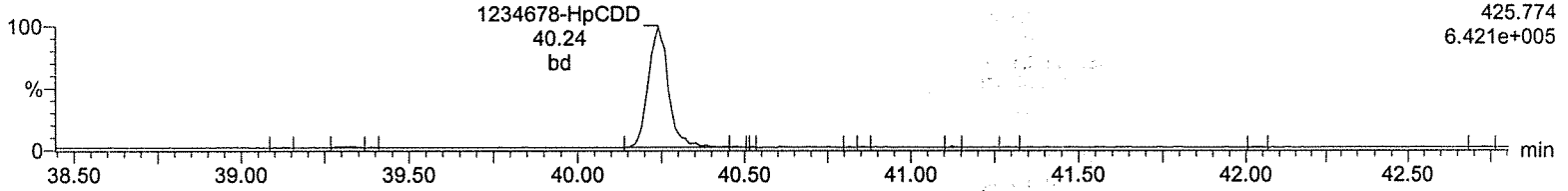
F4:Voltage SIR,EI+
423.777
6.719e+005



Total-heptadioxins

A08JUL19A-5

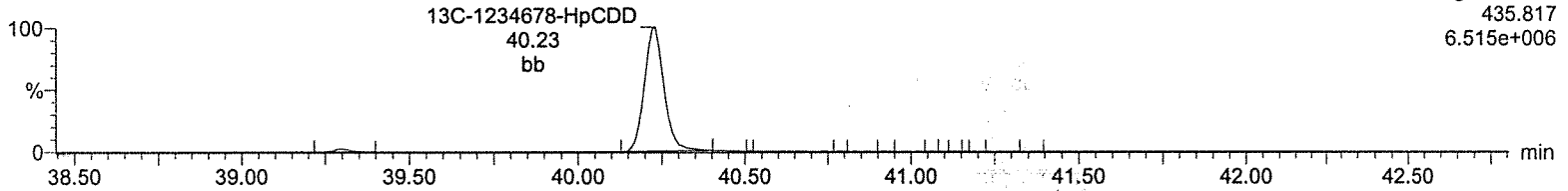
F4:Voltage SIR,EI+
425.774
6.421e+005



13C-1234678-HpCDD

A08JUL19A-5

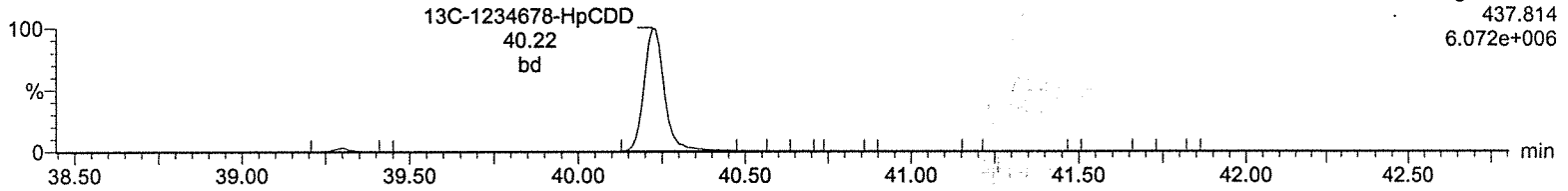
F4:Voltage SIR,EI+
435.817
6.515e+006



13C-1234678-HpCDD

A08JUL19A-5

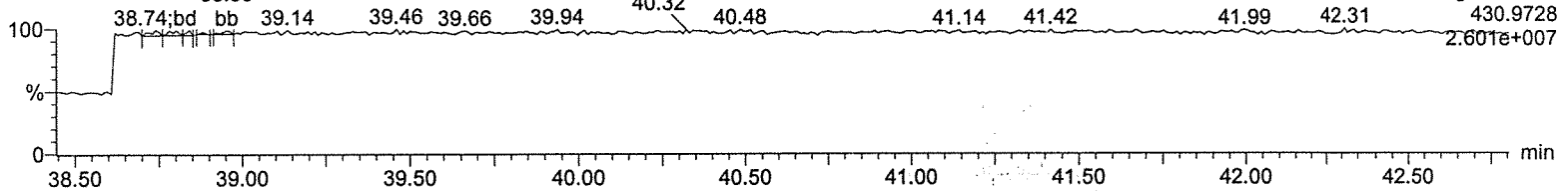
F4:Voltage SIR,EI+
437.814
6.072e+006



Lock Mass F4

A08JUL19A-5

F4:Voltage SIR,EI+
430.9728
2.601e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

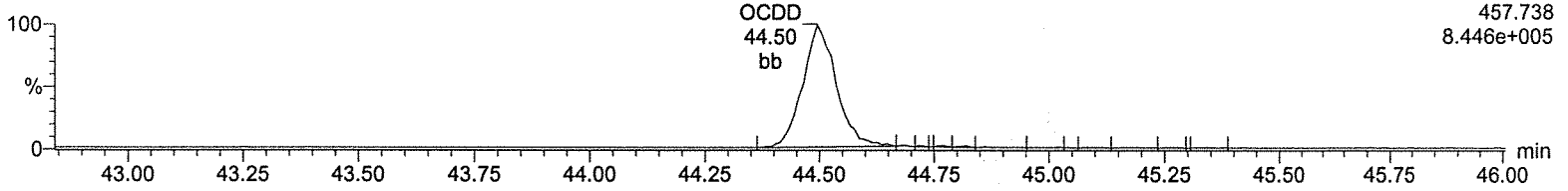
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

OCDD

A08JUL19A-5

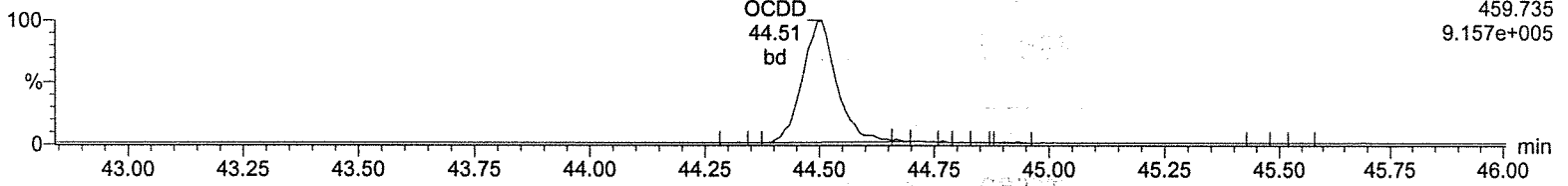
F5:Voltage SIR,EI+
457.738
8.446e+005



OCDD

A08JUL19A-5

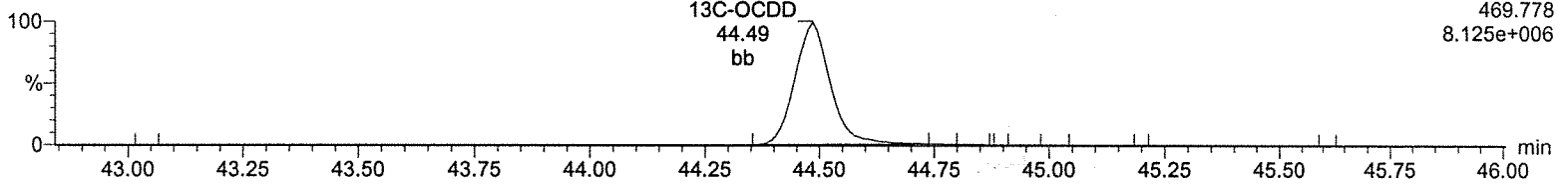
F5:Voltage SIR,EI+
459.735
9.157e+005



13C-OCDD

A08JUL19A-5

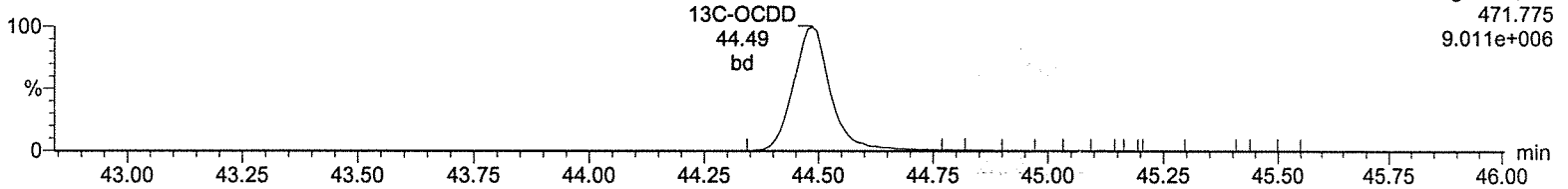
F5:Voltage SIR,EI+
469.778
8.125e+006



13C-OCDD

A08JUL19A-5

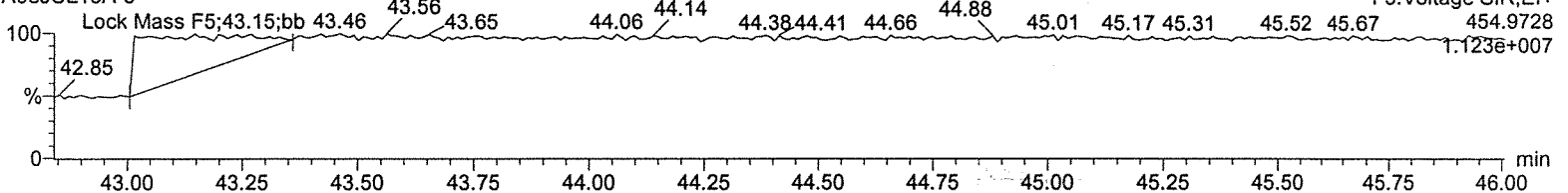
F5:Voltage SIR,EI+
471.775
9.011e+006



Lock Mass F5

A08JUL19A-5

F5:Voltage SIR,EI+
454.9728
1.123e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

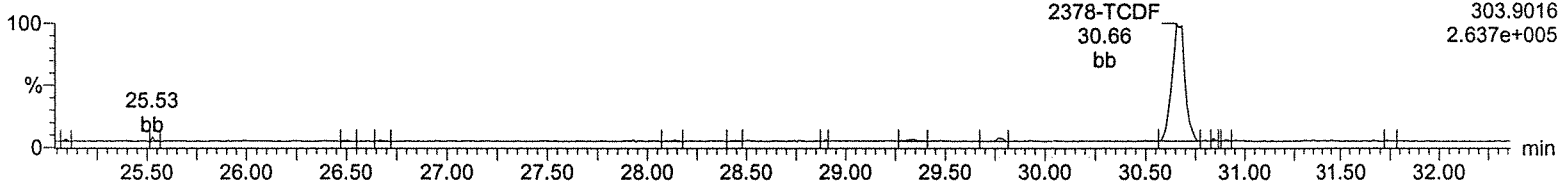
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-tetrafurans

A08JUL19A-5

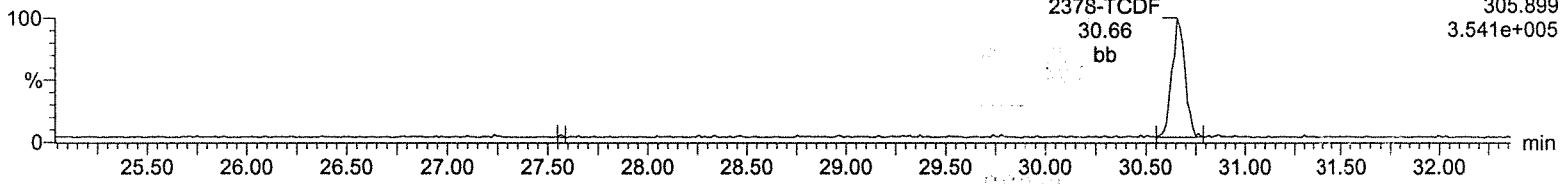
F1:Voltage SIR,EI+
303.9016
2.637e+005



Total-tetrafurans

A08JUL19A-5

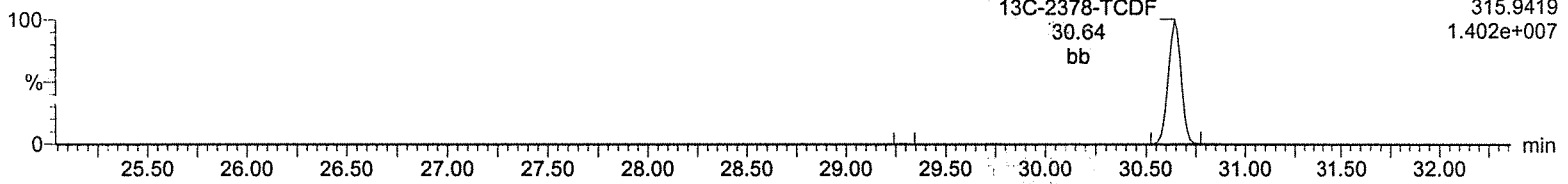
F1:Voltage SIR,EI+
305.899
3.541e+005



13C-2378-TCDF

A08JUL19A-5

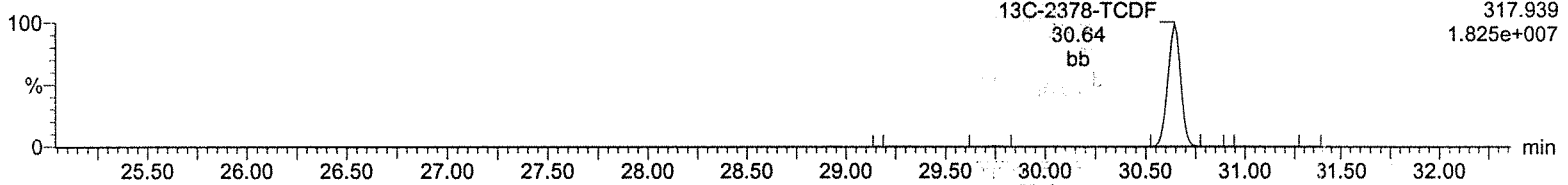
F1:Voltage SIR,EI+
315.9419
1.402e+007



13C-2378-TCDF

A08JUL19A-5

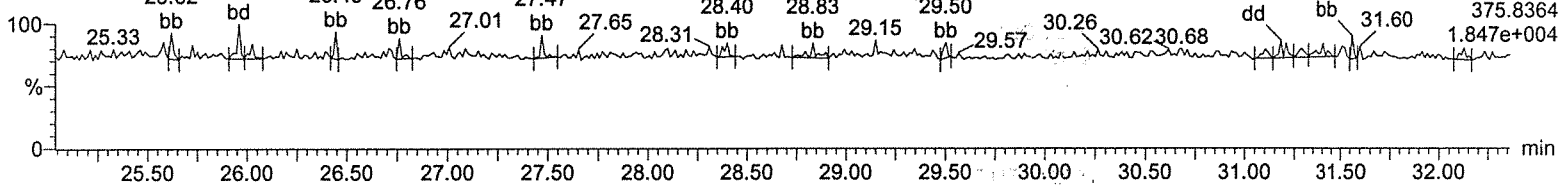
F1:Voltage SIR,EI+
317.939
1.825e+007



HxDPE

A08JUL19A-5

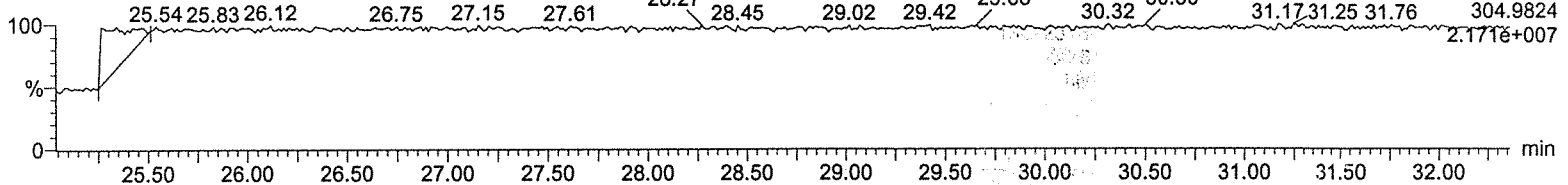
F1:Voltage SIR,EI+
375.8364
1.847e+004



Lock Mass F1

A08JUL19A-5

F1:Voltage SIR,EI+
304.9824
2.171e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

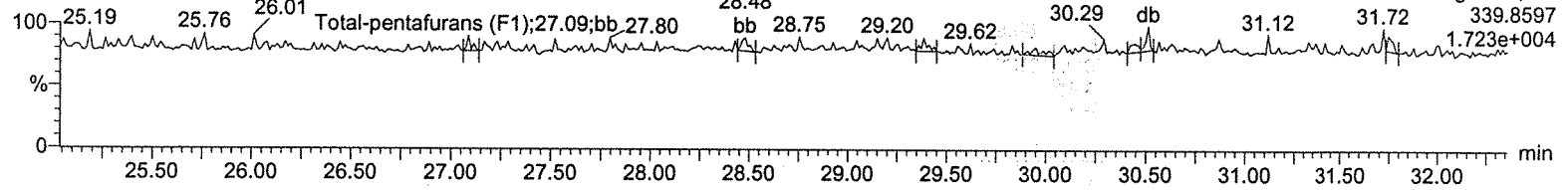
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

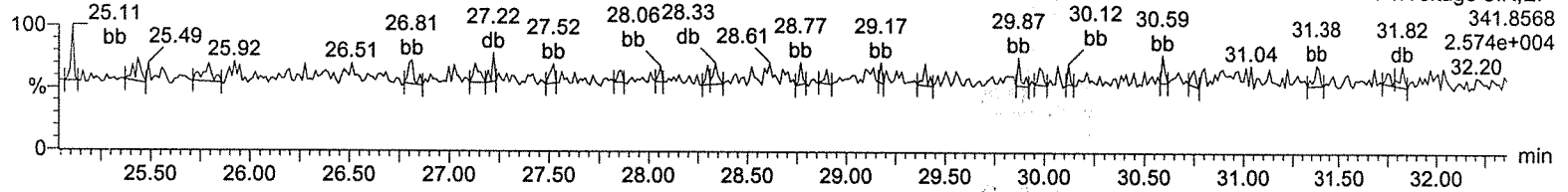
Total-pentafurans (F1)

A08JUL19A-5



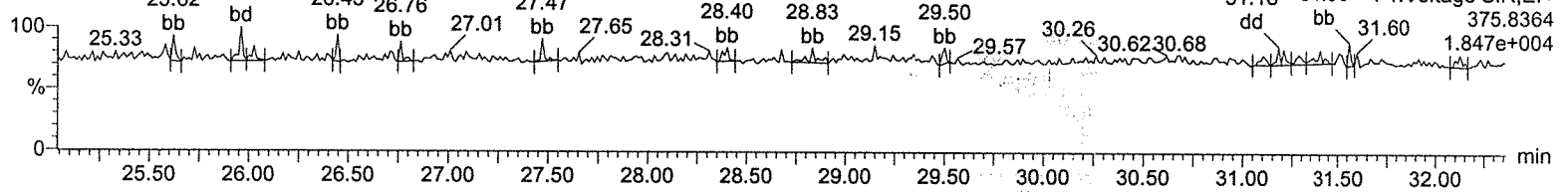
Total-pentafurans (F1)

A08JUL19A-5



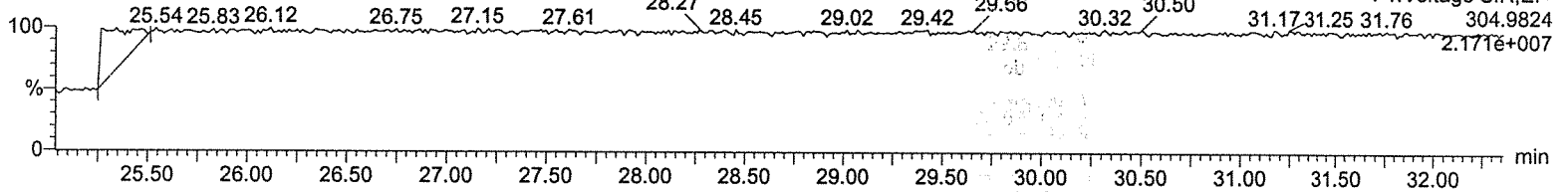
HxDPE

A08JUL19A-5



Lock Mass F1

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

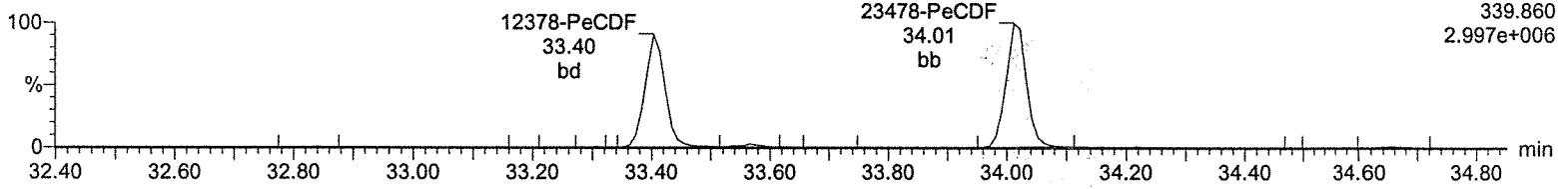
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-pentafurans

A08JUL19A-5

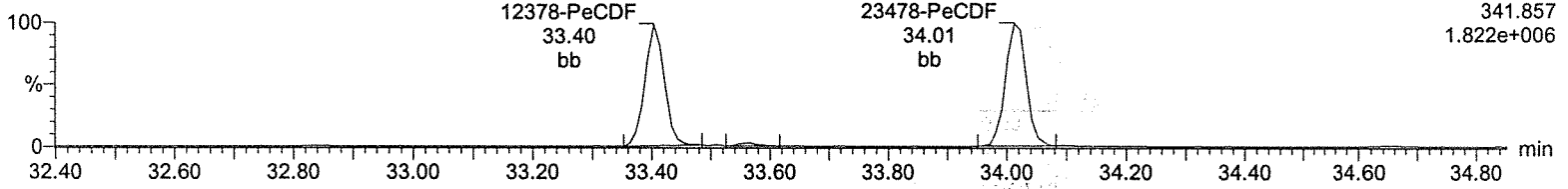
F2:Voltage SIR,EI+
339.860
2.997e+006



Total-pentafurans

A08JUL19A-5

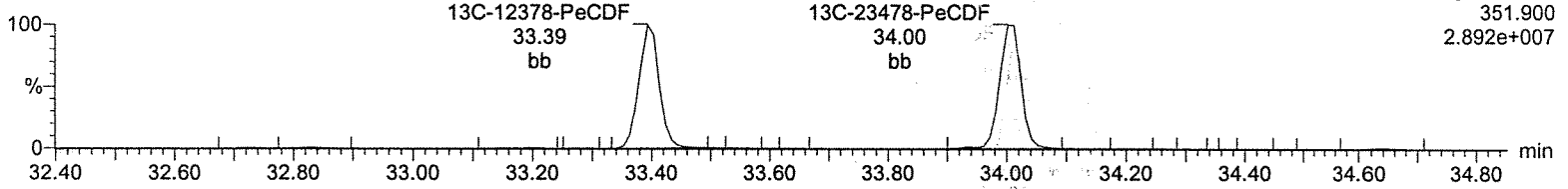
F2:Voltage SIR,EI+
341.857
1.822e+006



13C-12378-PeCDF

A08JUL19A-5

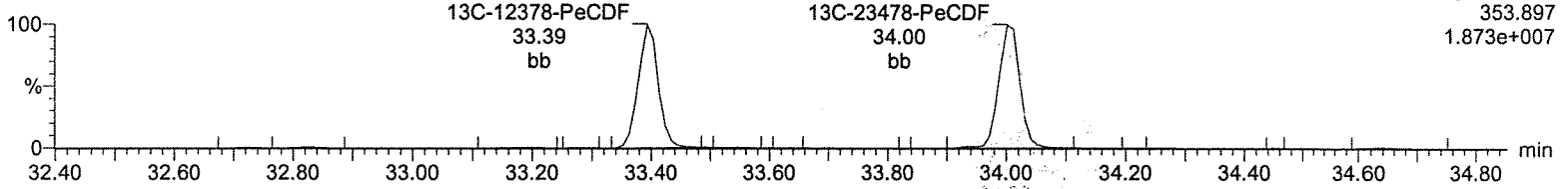
F2:Voltage SIR,EI+
351.900
2.892e+007



13C-12378-PeCDF

A08JUL19A-5

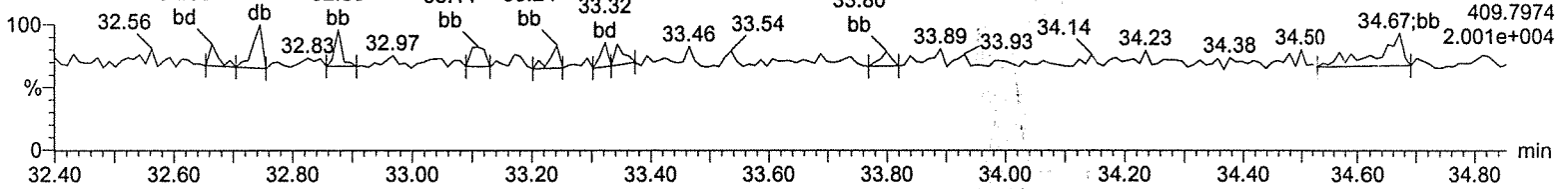
F2:Voltage SIR,EI+
353.897
1.873e+007



HpDPE

A08JUL19A-5

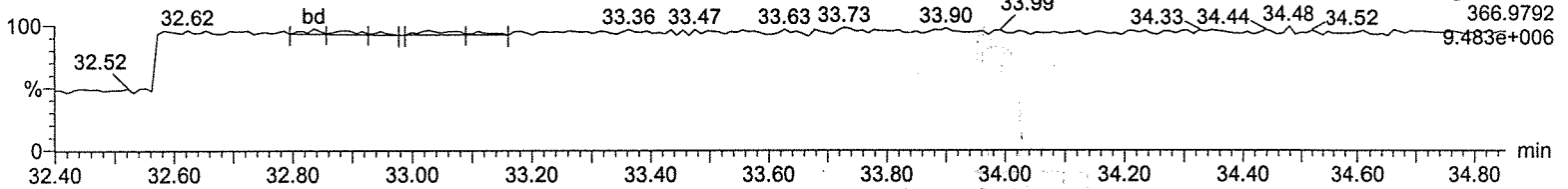
F2:Voltage SIR,EI+
409.7974
2.001e+004



Lock Mass F2

A08JUL19A-5

F2:Voltage SIR,EI+
366.9792
9.483e+006



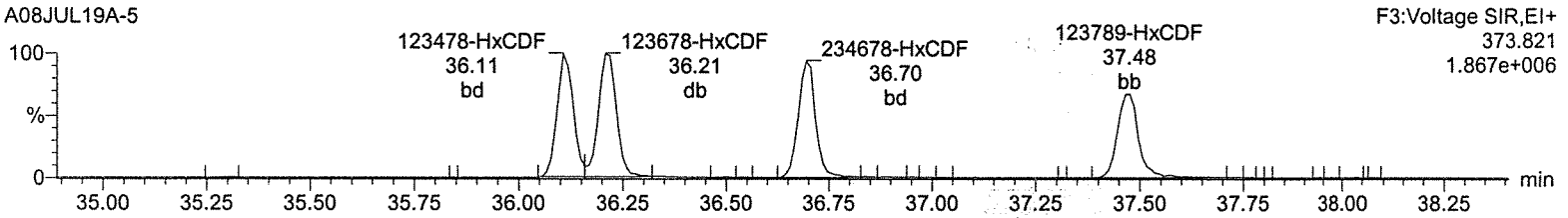
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

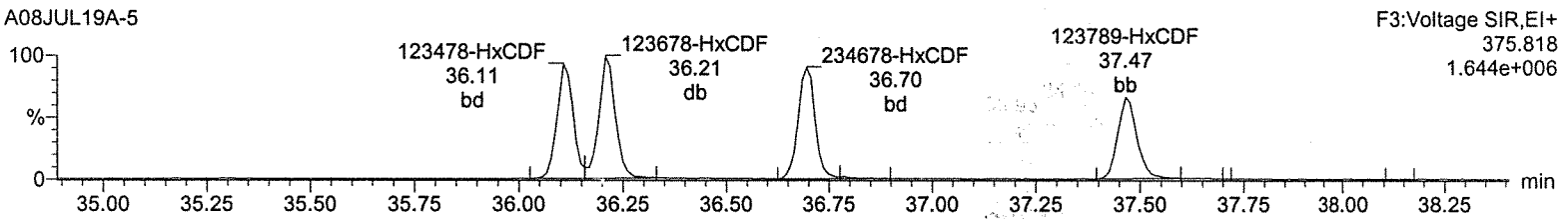
Total-hexafurans

A08JUL19A-5



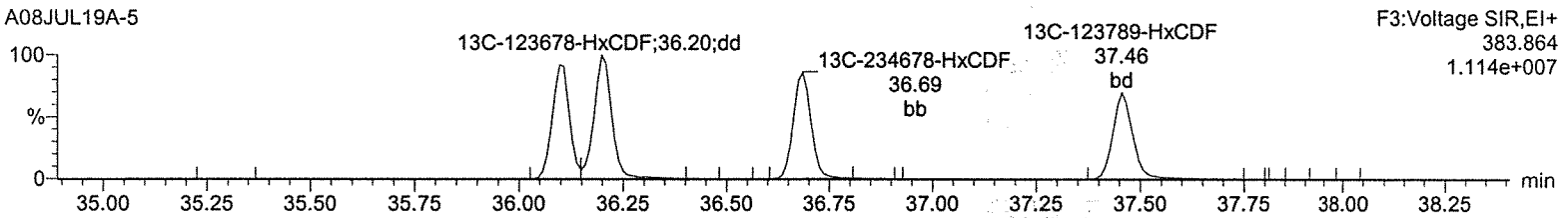
Total-hexafurans

A08JUL19A-5



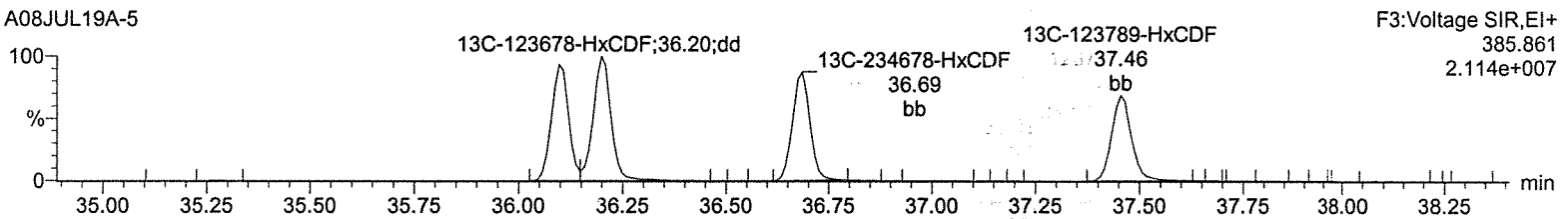
¹³C-123478-HxCDF

A08JUL19A-5



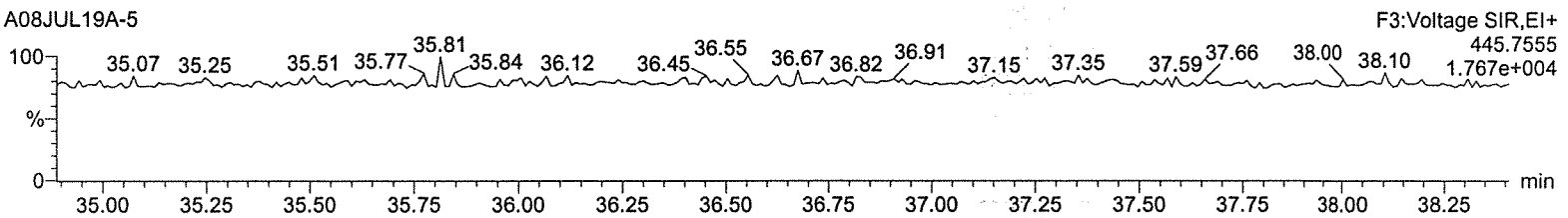
¹³C-123478-HxCDF

A08JUL19A-5



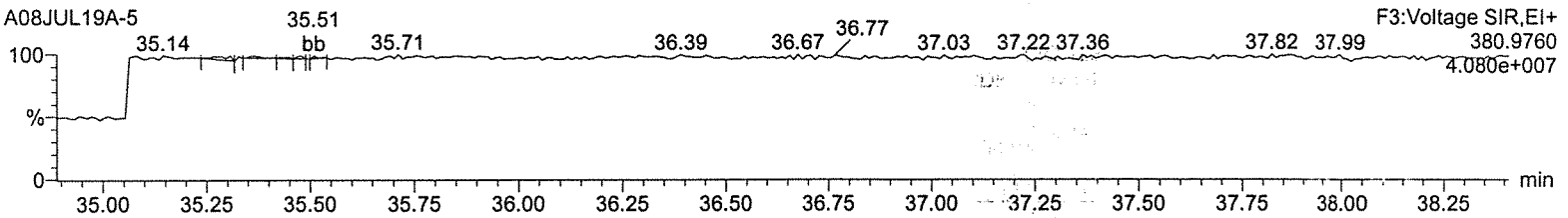
OcDPE

A08JUL19A-5



Lock Mass F3

A08JUL19A-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

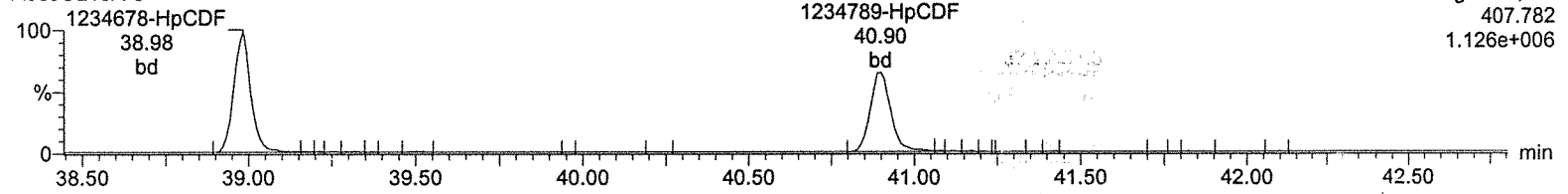
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

Total-heptafurans

A08JUL19A-5

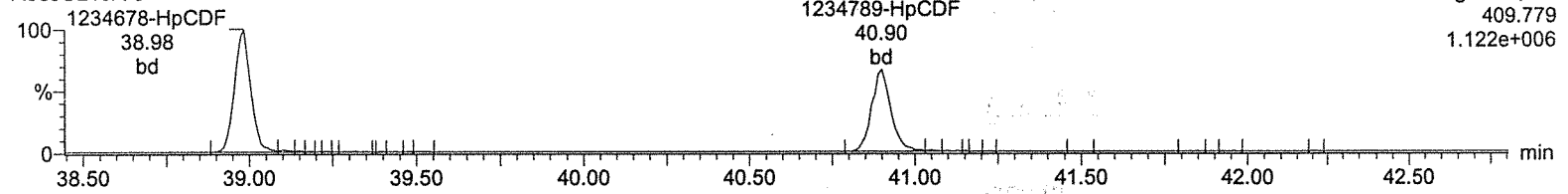
F4:Voltage SIR,EI+
407.782
1.126e+006



Total-heptafurans

A08JUL19A-5

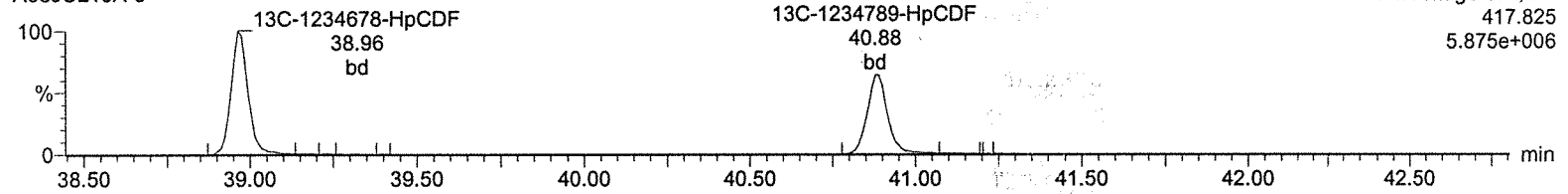
F4:Voltage SIR,EI+
409.779
1.122e+006



13C-1234678-HpCDF

A08JUL19A-5

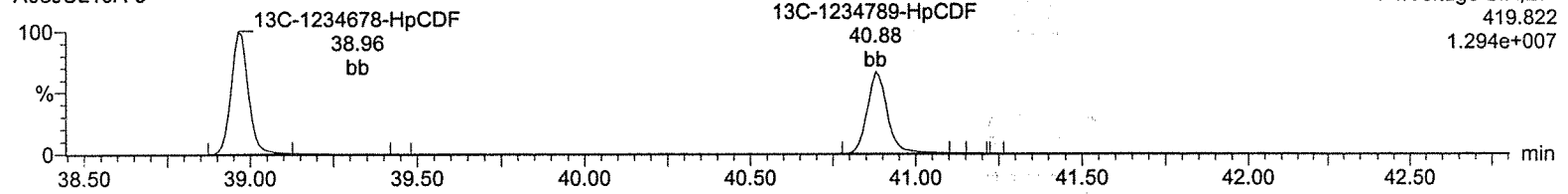
F4:Voltage SIR,EI+
417.825
5.875e+006



13C-1234678-HpCDF

A08JUL19A-5

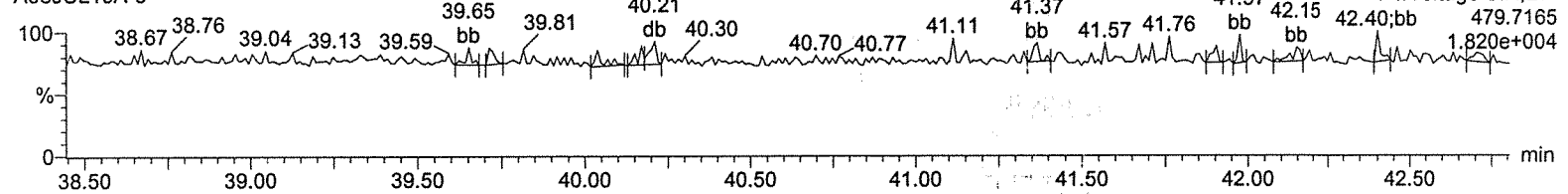
F4:Voltage SIR,EI+
419.822
1.294e+007



NoDPE

A08JUL19A-5

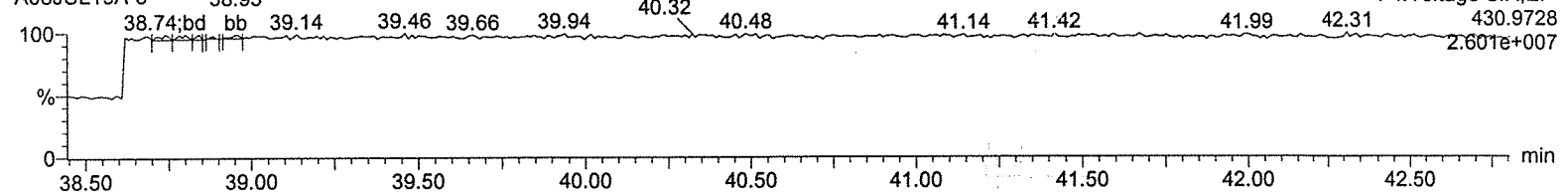
F4:Voltage SIR,EI+
479.7165
1.820e+004



Lock Mass F4

A08JUL19A-5

F4:Voltage SIR,EI+
430.9728
2.601e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

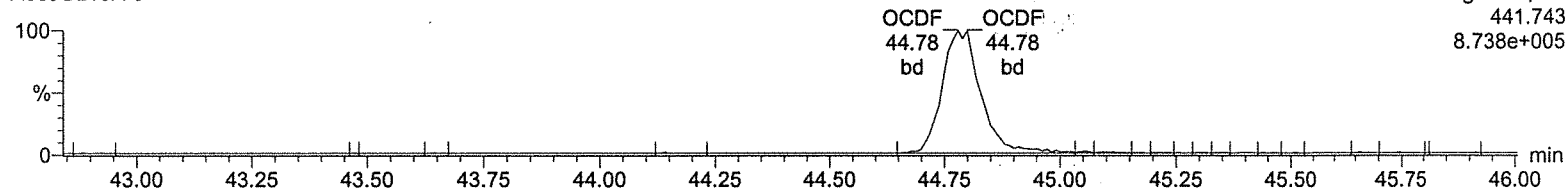
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

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Name: A08JUL19A-5, Date: 08-Jul-2019, Time: 12:51:47, ID: CS2 UD190207-03 CS243

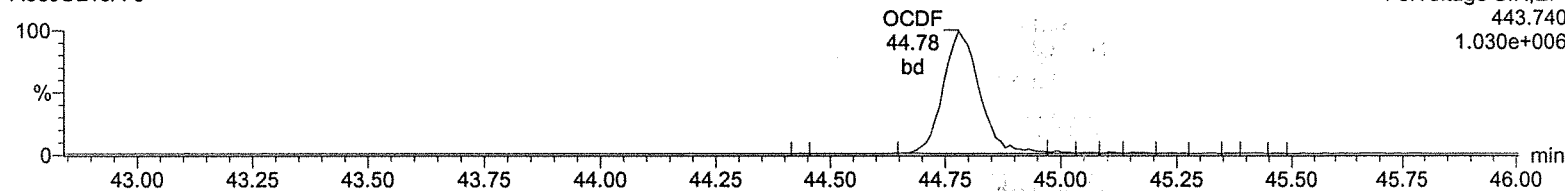
OCDF

A08JUL19A-5



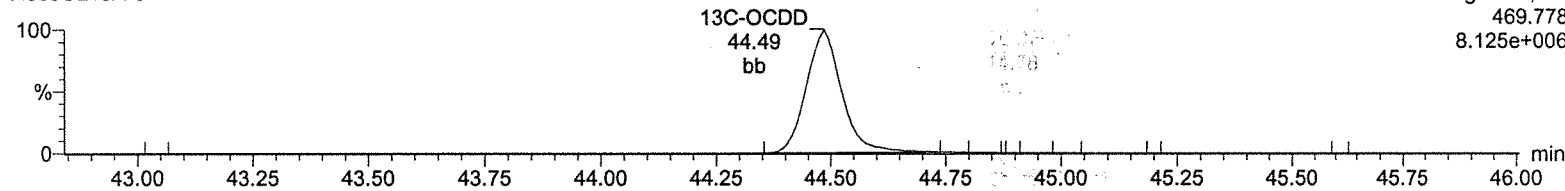
OCDF

A08JUL19A-5



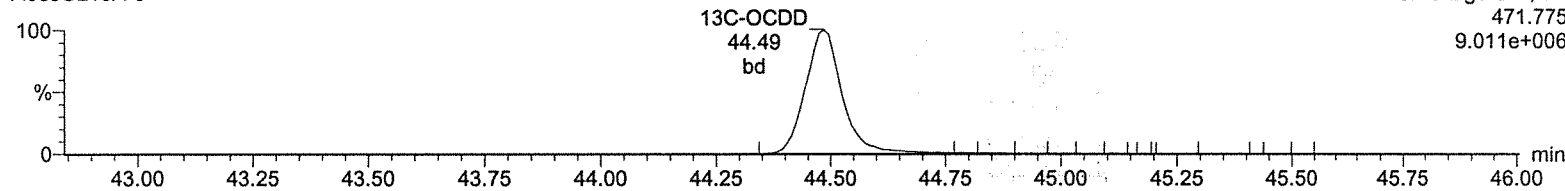
13C-OCDD

A08JUL19A-5



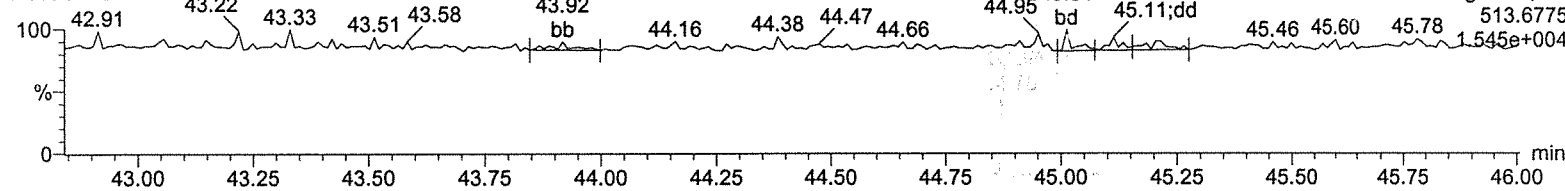
13C-OCDD

A08JUL19A-5



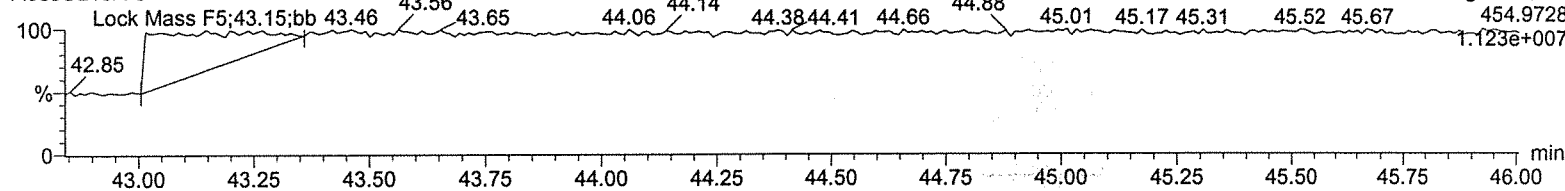
DeDPE

A08JUL19A-5



Lock Mass F5

A08JUL19A-5



Quantify Sample Summary Report
 Method 1613 ICAL Report

MassLynx 4.1
 C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Dataset: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
 Last Altered: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Handwritten signature

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	8.68e4	1.19e5	2.00e5	31.35	1.000	0.77	NO	9.942	0.879	0.884	5.07	0.0990	1.57e6	2450	641.8	2.15e6	2611	823.3	bb	bb
2	12378-PeCDD	3.84e5	2.47e5	6.31e5	34.21	1.000	1.55	NO	50.221	0.857	0.853	1.65	0.0618	9.31e6	2979	3125.8	6.05e6	3309	1827.4	bb	bb
3	123478-HxCDD	3.18e5	2.55e5	5.73e5	36.83	1.000	1.25	NO	50.558	0.950	0.940	3.11	0.139	6.71e6	4648	1442.7	5.39e6	6081	886.4	bd	bd
4	123678-HxCDD	3.66e5	2.94e5	6.60e5	36.92	1.000	1.25	NO	51.250	0.968	0.944	2.57	0.135	6.98e6	4648	1501.3	5.54e6	6081	911.6	dd	dd
5	123789-HxCDD	3.38e5	2.74e5	6.12e5	37.16	1.007	1.24	NO	51.427	0.954	0.927	3.30	0.139	6.19e6	4648	1331.0	5.01e6	6081	823.3	dd	dd
6	1234678-HpCDD	2.49e5	2.42e5	4.91e5	40.23	1.000	1.03	NO	51.498	1.071	1.040	2.88	0.178	3.60e6	4071	884.4	3.45e6	4114	898.4	bd	bd
7	OCDD	4.42e5	4.94e5	9.36e5	44.49	1.000	0.90	NO	102.635	0.997	0.971	2.39	0.414	4.83e6	5533	872.8	5.28e6	7922	666.2	bd	bd
8	2378-TCDF	1.06e5	1.37e5	2.43e5	30.67	1.001	0.77	NO	9.949	0.973	0.978	5.59	0.0625	1.36e6	2841	478.3	1.75e6	3684	475.9	bb	bb
9	12378-PeCDF	5.82e5	3.75e5	9.56e5	33.40	1.000	1.55	NO	50.773	0.960	0.945	3.41	0.103	1.43e7	8482	1685.4	9.31e6	7788	1195.1	bd	bb
10	123478-PeCDF	6.27e5	4.19e5	1.05e6	34.01	1.000	1.50	NO	50.780	1.002	0.987	3.73	0.0954	1.57e7	8482	1848.3	1.04e7	7788	1331.7	bb	bb
11	123478-HxCDF	4.65e5	3.78e5	8.43e5	36.11	1.000	1.23	NO	51.251	1.114	1.087	3.86	0.106	1.00e7	5453	1833.5	8.26e6	7295	1131.6	bd	bd
12	123678-HxCDF	5.03e5	4.09e5	9.12e5	36.21	1.000	1.23	NO	51.606	1.074	1.041	3.23	0.109	1.03e7	5453	1882.3	8.37e6	7295	1147.0	dd	db
13	1234678-HxCDF	4.63e5	3.89e5	8.52e5	36.69	1.001	1.19	NO	50.727	1.152	1.136	3.17	0.117	9.28e6	5453	1701.9	7.55e6	7295	1035.1	bb	bd
14	123789-HxCDF	3.95e5	3.29e5	7.24e5	37.47	1.000	1.20	NO	51.190	1.086	1.061	2.29	0.151	7.02e6	5453	1288.2	5.96e6	7295	817.0	bb	bb
15	1234678-HpCDF	3.50e5	3.56e5	7.06e5	38.97	1.000	0.98	NO	51.632	1.187	1.150	3.86	0.160	6.00e6	6270	956.4	6.00e6	6223	963.4	bb	bd
16	1234789-HpCDF	2.81e5	2.79e5	5.60e5	40.89	1.000	1.01	NO	49.736	1.196	1.202	1.91	0.237	4.07e6	6270	648.8	3.95e6	6223	634.8	bb	bb
17	OCDF	4.97e5	5.71e5	1.07e6	44.78	1.007	0.87	NO	100.464	1.138	1.133	6.78	0.245	5.22e6	4930	1059.5	5.92e6	4365	1356.2	bd	bb
18	13C-2378-TCDD	9.90e5	1.28e6	2.27e6	31.34	1.015	0.77	NO	102.354	1.155	1.128	2.36	0.127	1.92e7	8469	2264.4	2.44e7	5255	4640.6	bb	bb
19	13C-12378-PeCDD	8.92e5	5.81e5	1.47e6	34.20	1.108	1.54	NO	99.635	0.749	0.751	5.03	0.124	2.17e7	5732	3778.6	1.40e7	3222	4330.4	bb	bb
20	13C-123478-HxCDD	6.63e5	5.43e5	1.21e6	36.82	0.991	1.22	NO	97.866	0.877	0.896	1.38	0.150	1.36e7	6280	2158.5	1.10e7	4593	2391.6	bd	bd
21	13C-123678-HxCDD	7.53e5	6.11e5	1.36e6	36.91	0.994	1.23	NO	100.617	0.992	0.986	0.84	0.137	1.39e7	6280	2215.9	1.16e7	4593	2523.5	dd	dd
22	13C-1234678-HpCDD	4.70e5	4.47e5	9.17e5	40.22	1.083	1.05	NO	99.377	0.667	0.672	1.29	0.265	6.78e6	6524	1039.1	6.60e6	7834	842.1	bb	bb
23	13C-OCDD	8.79e5	9.99e5	1.88e6	44.47	1.197	0.88	NO	212.754	0.683	0.642	4.87	0.207	9.40e6	5805	1618.6	1.06e7	4926	2154.4	bb	bd
24	13C-2378-TCDF	1.08e6	1.41e6	2.49e6	30.64	0.993	0.77	NO	101.401	1.267	1.250	1.88	0.189	1.39e7	15695	887.2	1.76e7	6952	2535.5	bb	bb
25	13C-12378-PeCDF	1.22e6	7.73e5	1.99e6	33.39	1.082	1.58	NO	100.209	1.013	1.011	4.24	0.182	3.06e7	12046	2538.6	1.95e7	5629	3457.2	bb	bb
26	13C-23478-PeCDF	1.28e6	8.10e5	2.09e6	34.00	1.102	1.57	NO	99.710	1.060	1.063	5.28	0.173	3.17e7	12046	2632.4	2.00e7	5629	3558.0	bb	bb
27	13C-123478-HxCDF	5.20e5	9.92e5	1.51e6	36.10	0.972	0.52	NO	99.093	1.101	1.111	1.42	0.219	1.14e7	8433	1357.0	2.19e7	11233	1938.7	bd	bd
28	13C-123678-HxCDF	5.84e5	1.11e6	1.70e6	36.20	0.975	0.52	NO	99.133	1.236	1.247	1.06	0.196	1.17e7	8433	1381.4	2.19e7	11233	1948.6	db	dd
29	13C-234678-HxCDF	5.07e5	9.72e5	1.48e6	36.67	0.987	0.52	NO	99.455	1.076	1.082	1.01	0.225	9.88e6	8433	1171.9	1.91e7	11233	1703.9	bb	bb
30	13C-123789-HxCDF	4.66e5	8.67e5	1.33e6	37.46	1.008	0.54	NO	100.322	0.970	0.967	1.08	0.252	8.35e6	8433	990.6	1.57e7	11233	1400.3	bd	bb
31	13C-1234678-HpCDF	3.65e5	8.24e5	1.19e6	38.96	1.049	0.44	NO	99.467	0.865	0.870	1.11	0.193	6.26e6	5883	1064.8	1.38e7	7684	1800.2	bb	bd
32	13C-1234789-HpCDF	2.84e5	6.52e5	9.36e5	40.88	1.101	0.44	NO	100.559	0.681	0.677	1.01	0.248	4.00e6	5883	679.7	9.16e6	7684	1192.4	bd	bd
33	13C-1234-TCDD	8.63e5	1.10e6	1.97e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.143	1.26e7	8469	1491.7	1.63e7	5255	3108.4	bb	bb
34	13C-123789-HxCDD	7.56e5	6.18e5	1.37e6	37.14	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.135	1.33e7	6280	2120.3	1.08e7	4593	2349.2	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	2.18e5	2.18e5	2.18e5	31.34	1.015			10.427	1.107	1.061	4.54	0.0452	3.98e6	4599	864.6				M	M2	
																					bb	

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

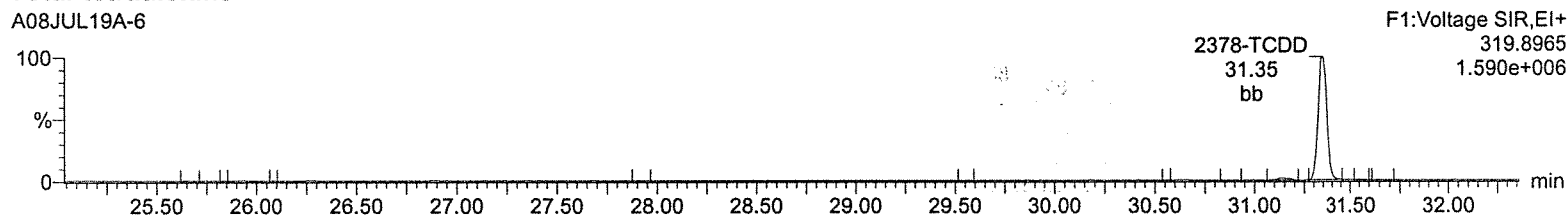
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

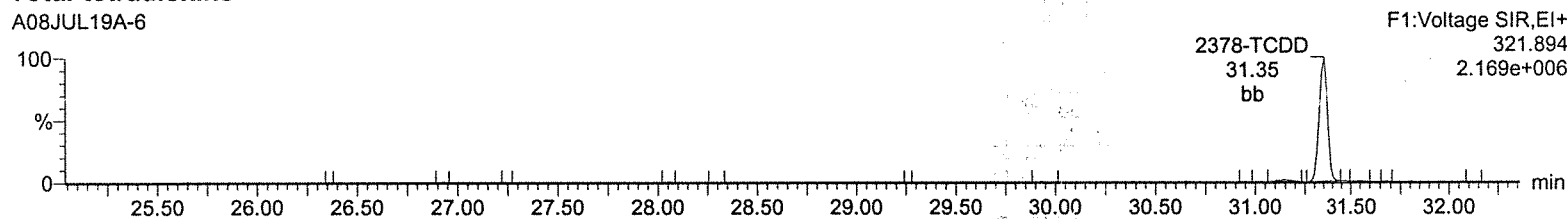
Total-tetradoxins

A08JUL19A-6



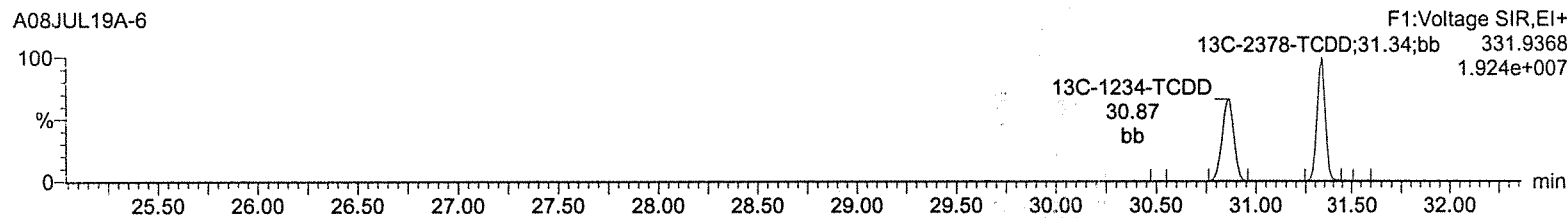
Total-tetradoxins

A08JUL19A-6



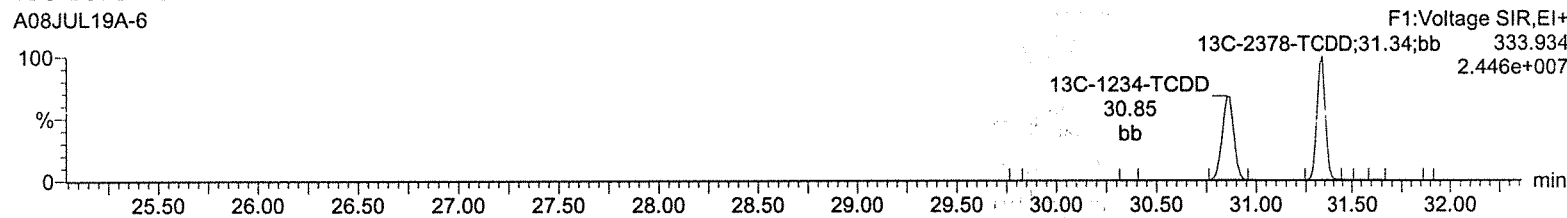
13C-2378-TCDD

A08JUL19A-6



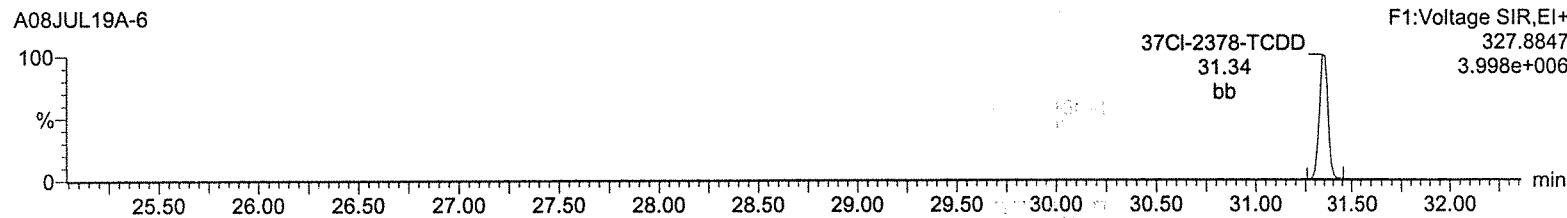
13C-2378-TCDD

A08JUL19A-6



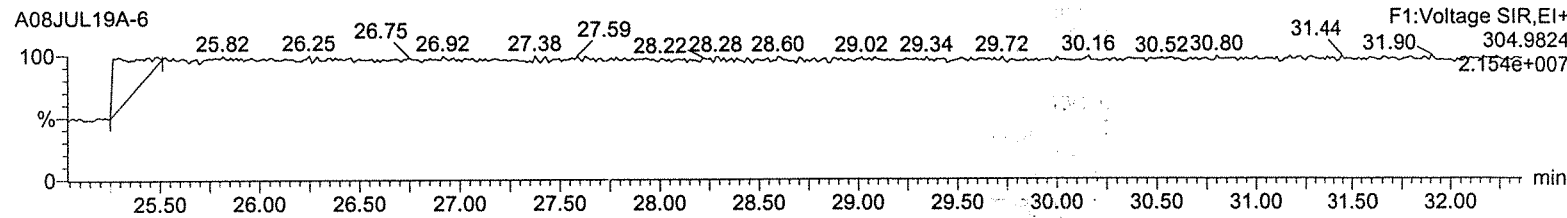
37Cl-2378-TCDD

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

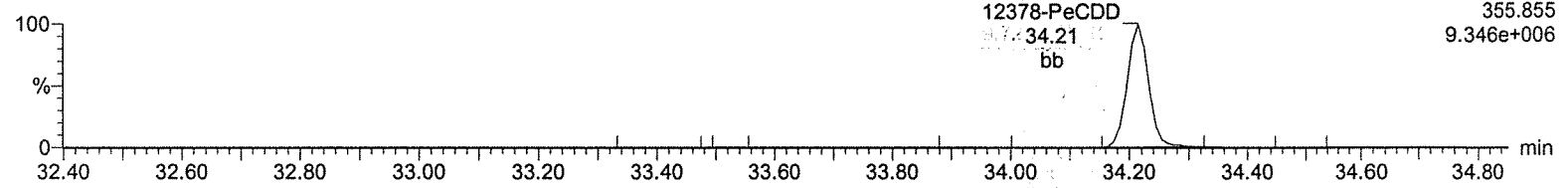
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

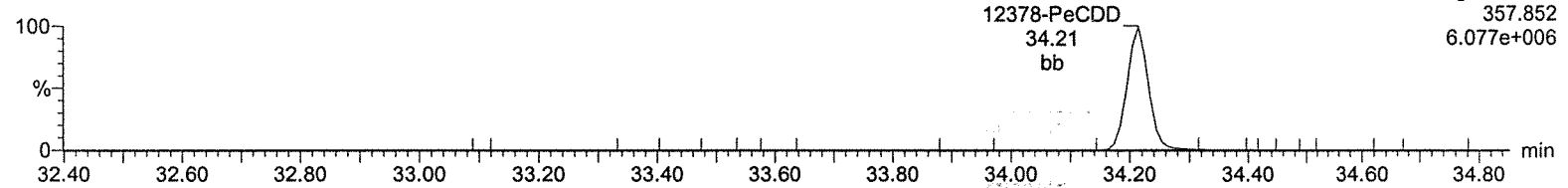
Total-pentadioxins

A08JUL19A-6



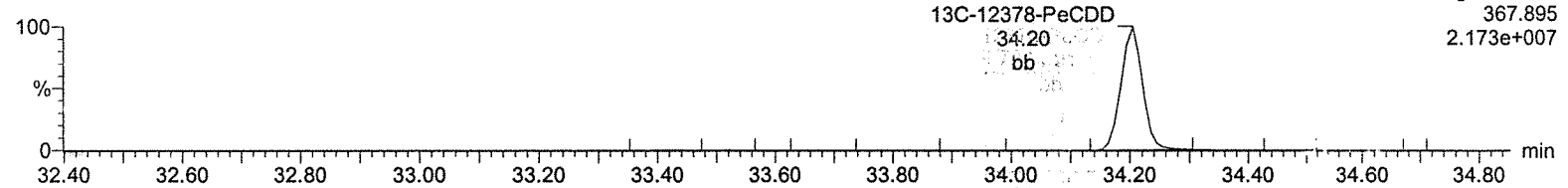
Total-pentadioxins

A08JUL19A-6



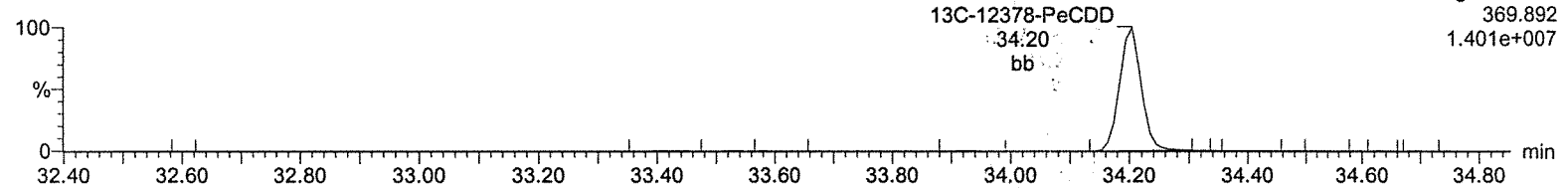
¹³C-12378-PeCDD

A08JUL19A-6



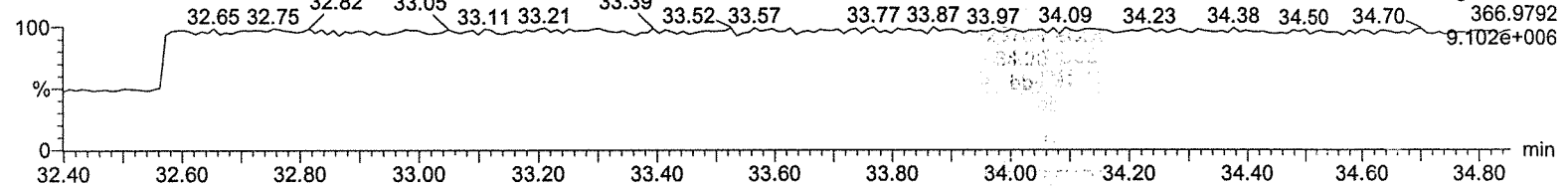
¹³C-12378-PeCDD

A08JUL19A-6



Lock Mass F2

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

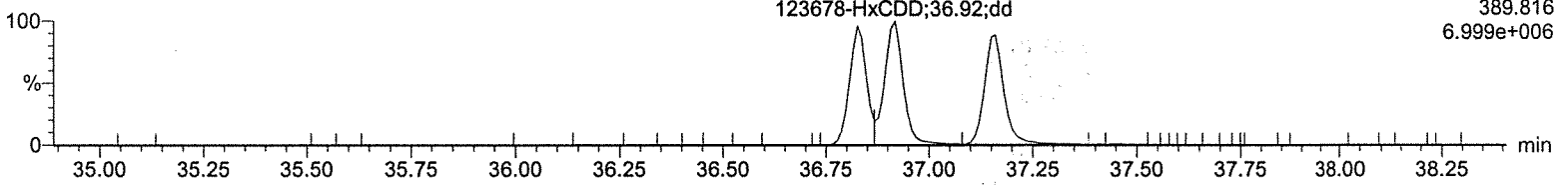
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

Total-hexadioxins

A08JUL19A-6

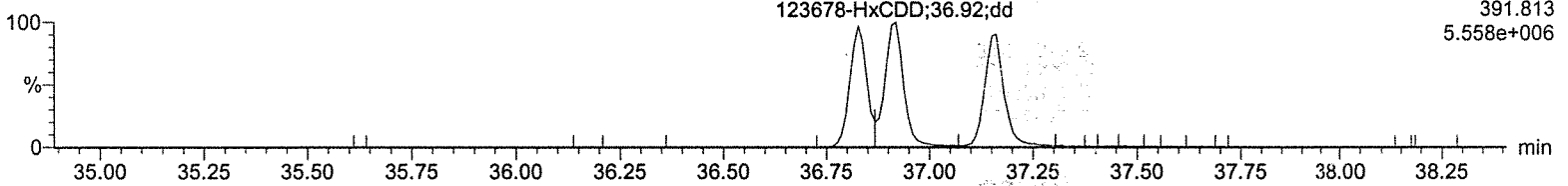
F3:Voltage SIR,EI+
389.816
6.999e+006



Total-hexadioxins

A08JUL19A-6

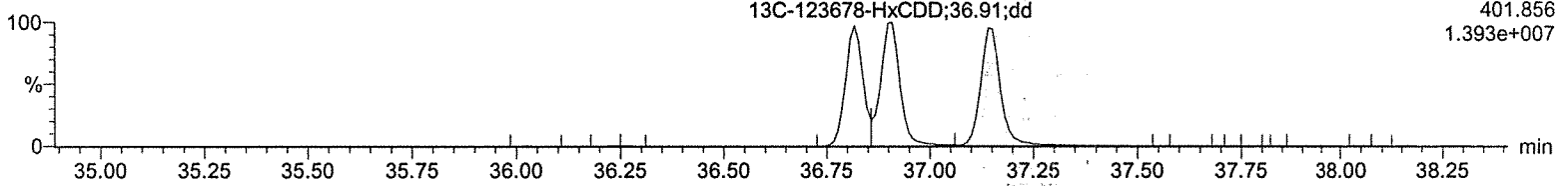
F3:Voltage SIR,EI+
391.813
5.558e+006



13C-123478-HxCDD

A08JUL19A-6

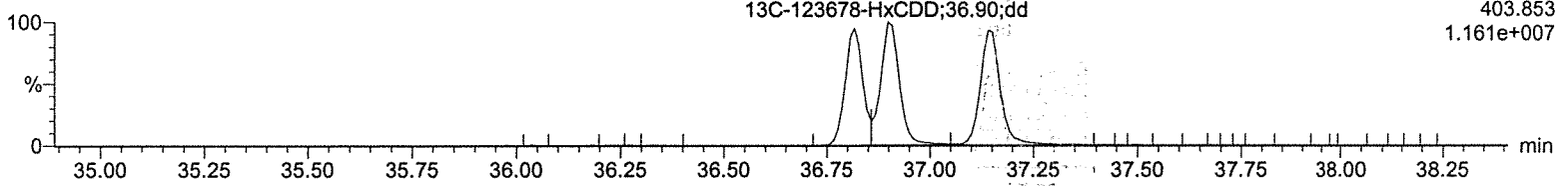
F3:Voltage SIR,EI+
401.856
1.393e+007



13C-123478-HxCDD

A08JUL19A-6

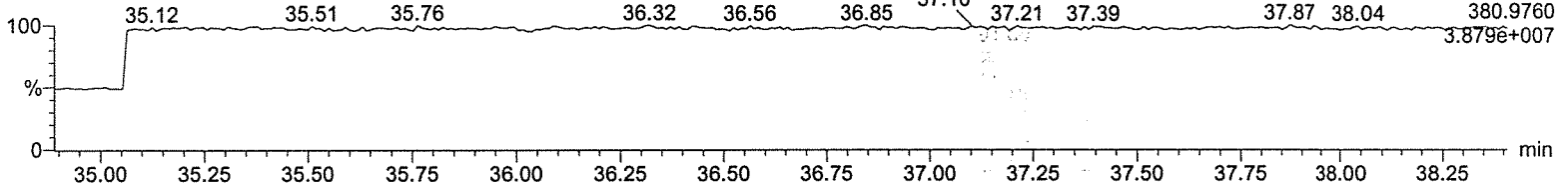
F3:Voltage SIR,EI+
403.853
1.161e+007



Lock Mass F3

A08JUL19A-6

F3:Voltage SIR,EI+
380.9760
3.879e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

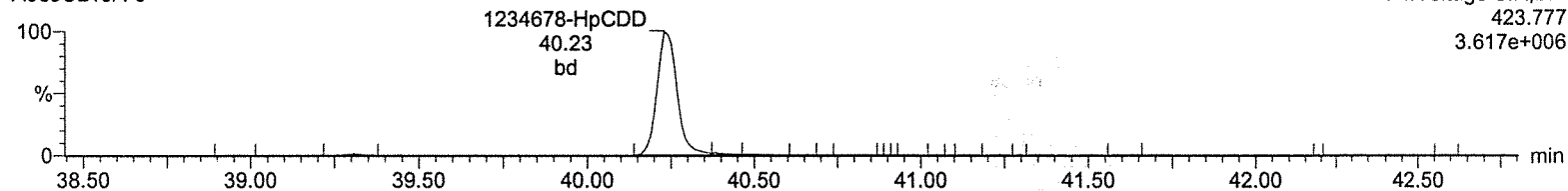
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

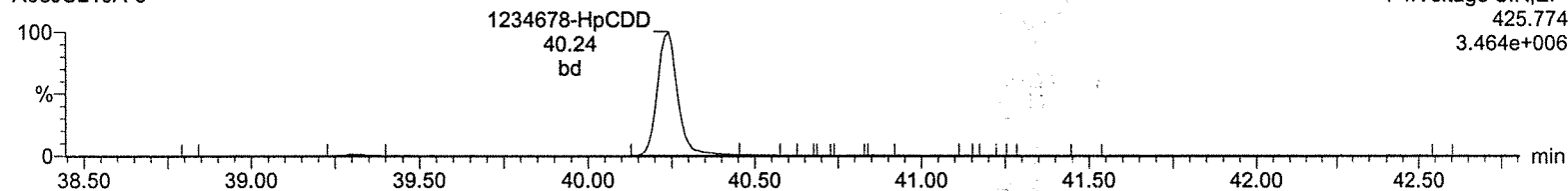
Total-heptadioxins

A08JUL19A-6



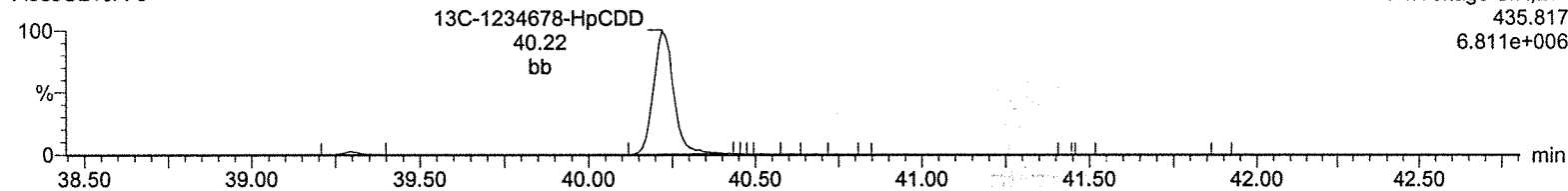
Total-heptadioxins

A08JUL19A-6



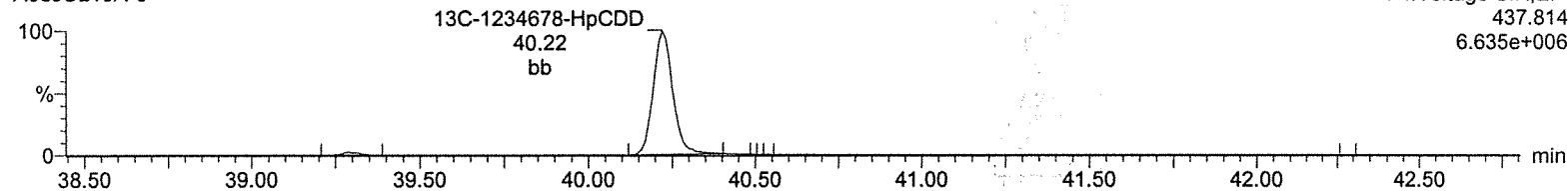
13C-1234678-HpCDD

A08JUL19A-6



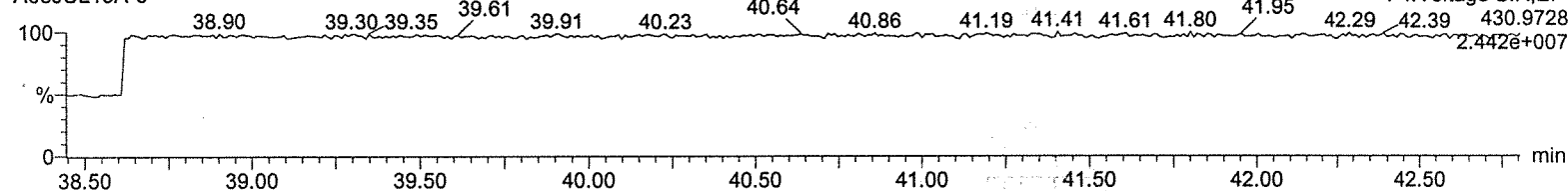
13C-1234678-HpCDD

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

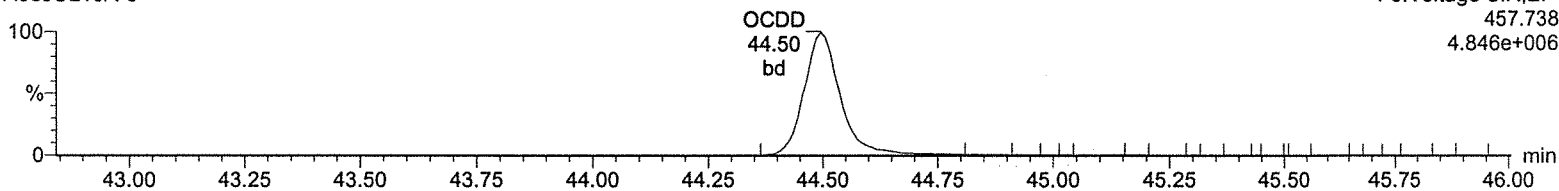
OCDD

A08JUL19A-6

F5:Voltage SIR,EI+

457.738

4.846e+006



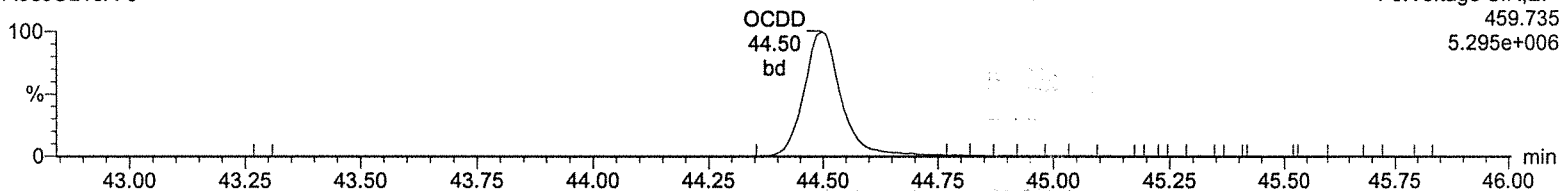
OCDD

A08JUL19A-6

F5:Voltage SIR,EI+

459.735

5.295e+006



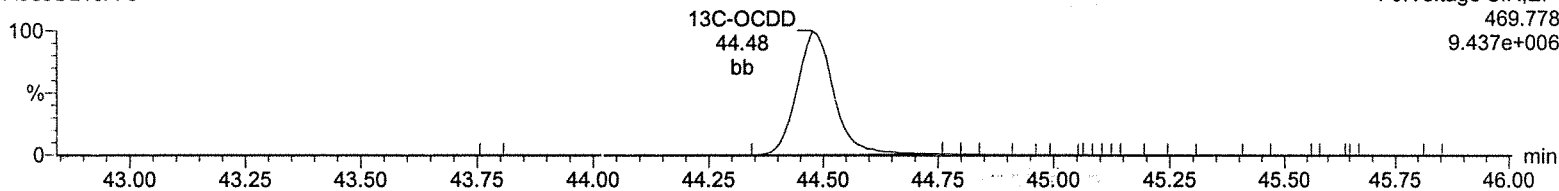
13C-OCDD

A08JUL19A-6

F5:Voltage SIR,EI+

469.778

9.437e+006



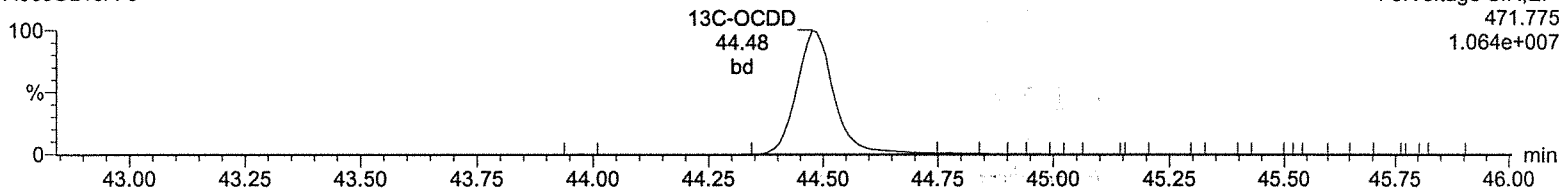
13C-OCDD

A08JUL19A-6

F5:Voltage SIR,EI+

471.775

1.064e+007



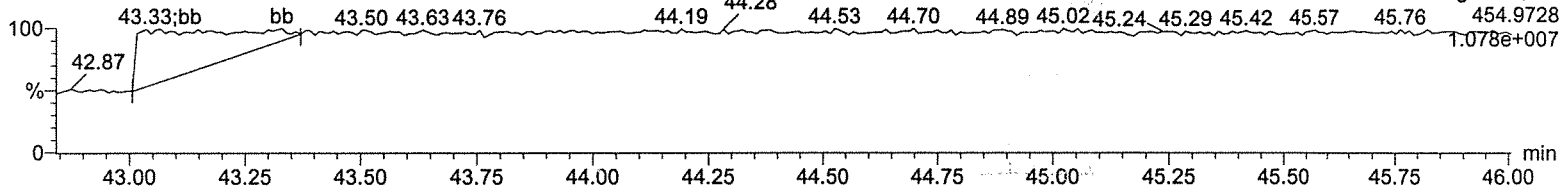
Lock Mass F5

A08JUL19A-6

F5:Voltage SIR,EI+

454.9728

1.078e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

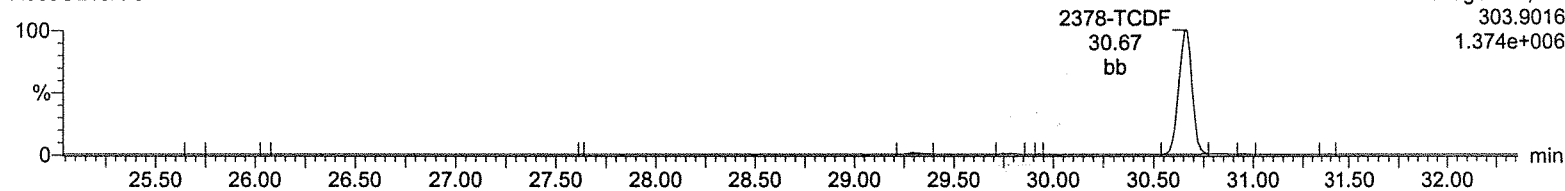
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

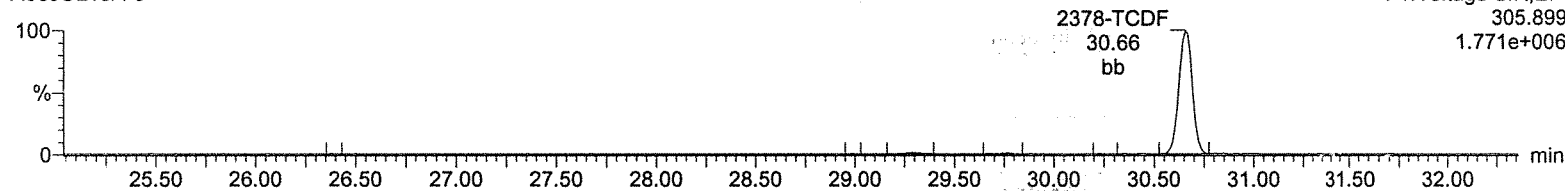
Total-tetrafurans

A08JUL19A-6



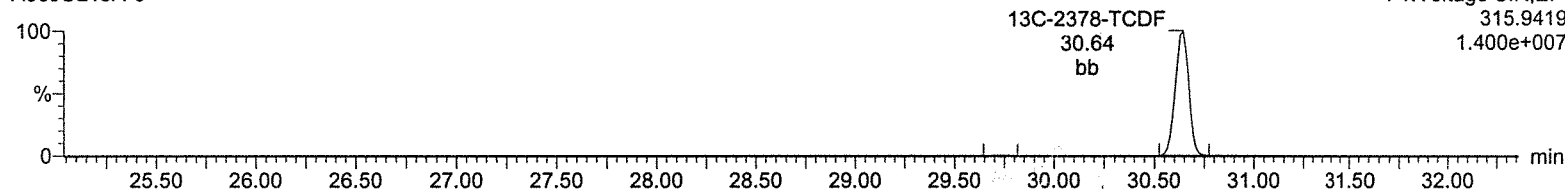
Total-tetrafurans

A08JUL19A-6



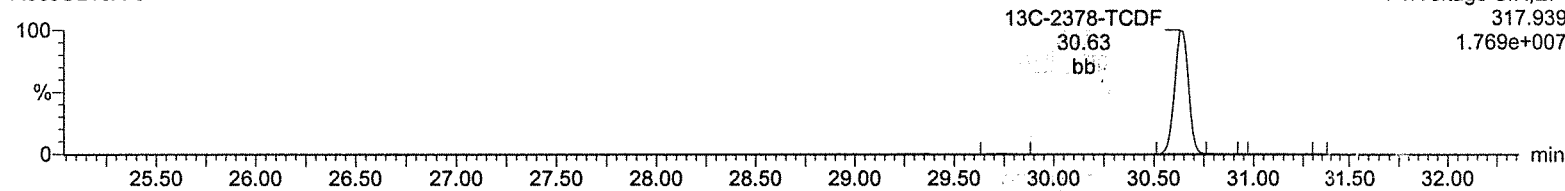
13C-2378-TCDF

A08JUL19A-6



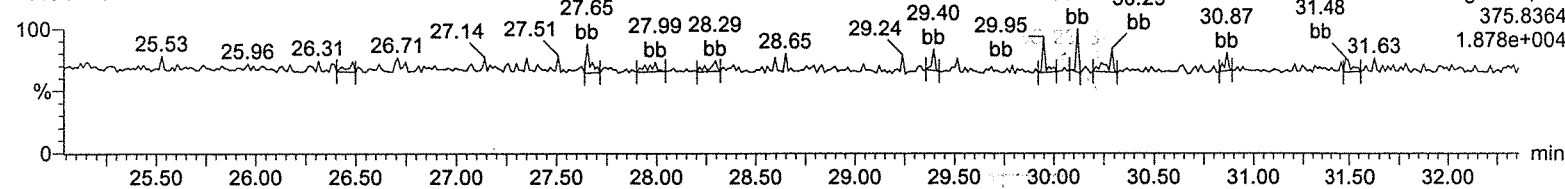
13C-2378-TCDF

A08JUL19A-6



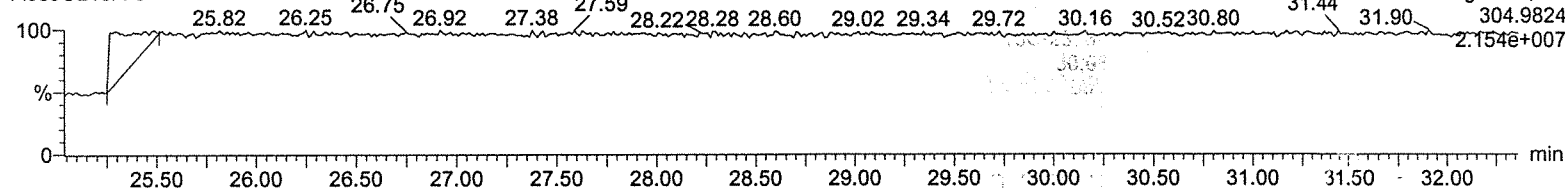
HxDPE

A08JUL19A-6



Lock Mass F1

A08JUL19A-6



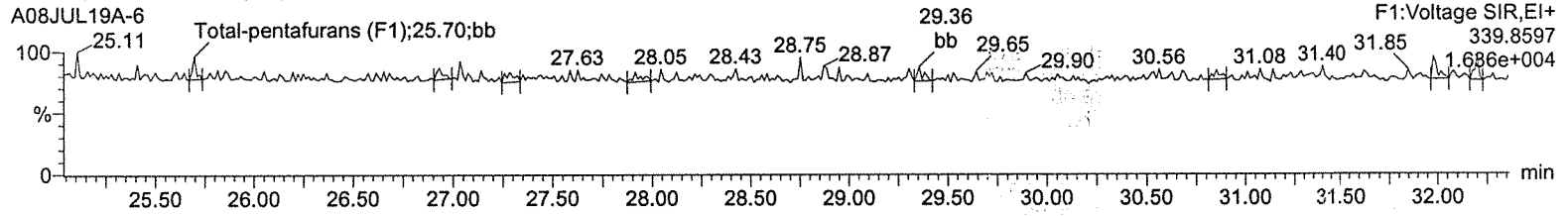
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

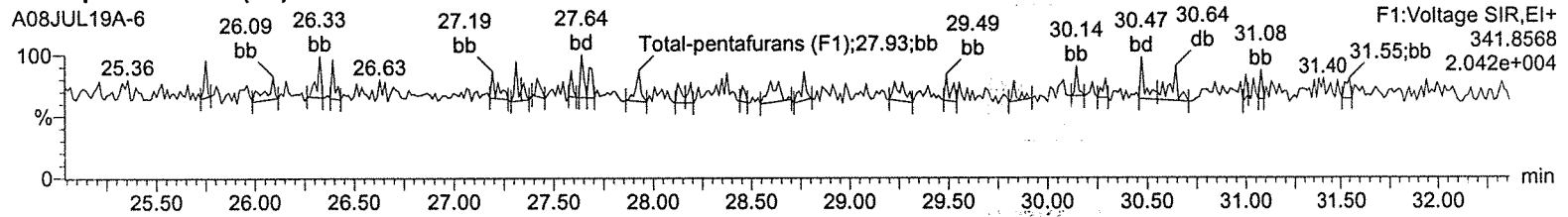
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

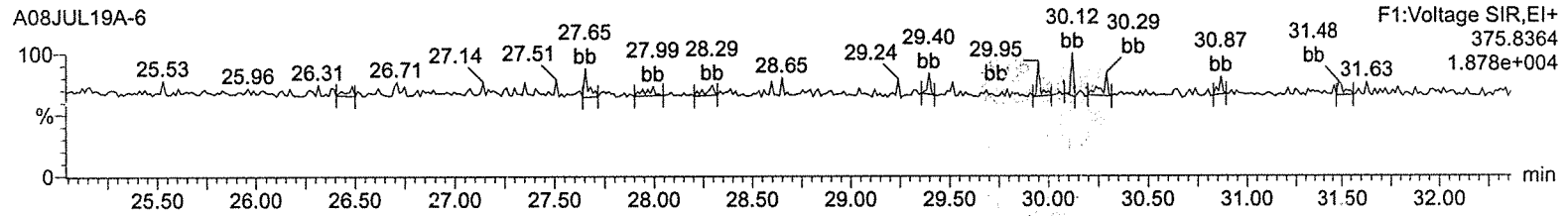
Total-pentafurans (F1)



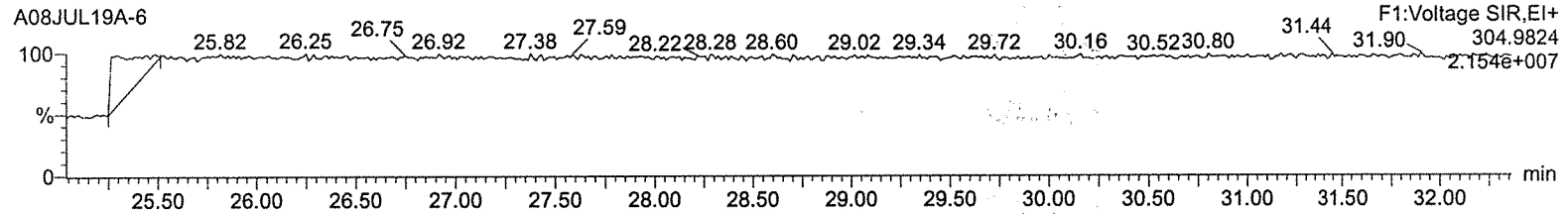
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

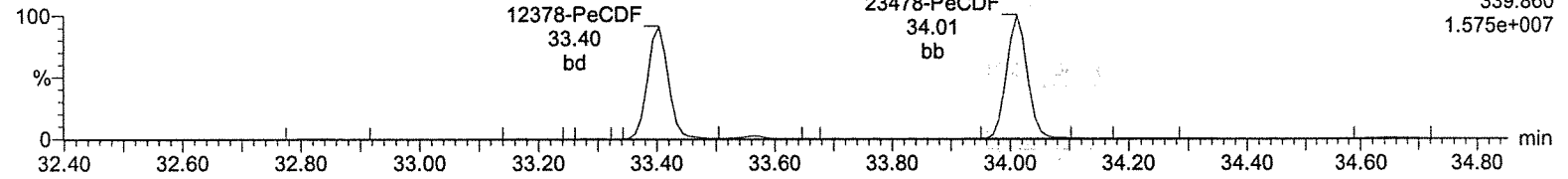
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

Total-pentafurans

A08JUL19A-6

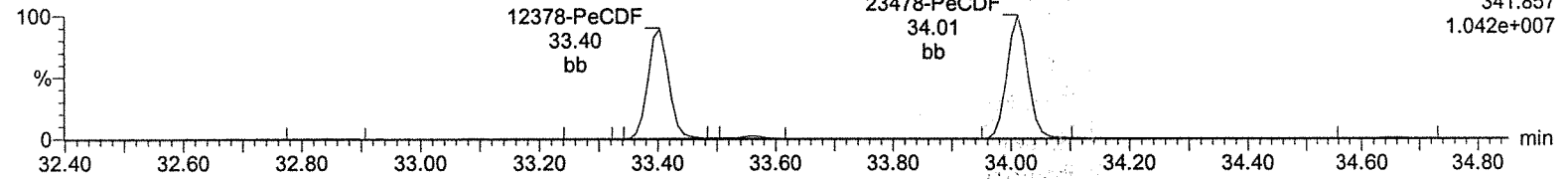
F2:Voltage SIR,EI+
339.860
1.575e+007



Total-pentafurans

A08JUL19A-6

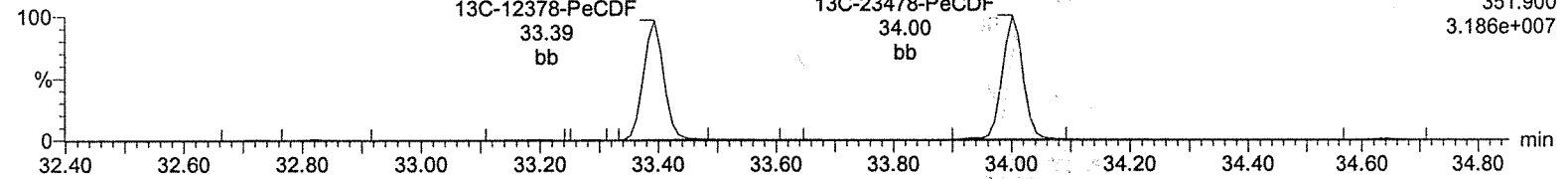
F2:Voltage SIR,EI+
341.857
1.042e+007



13C-12378-PeCDF

A08JUL19A-6

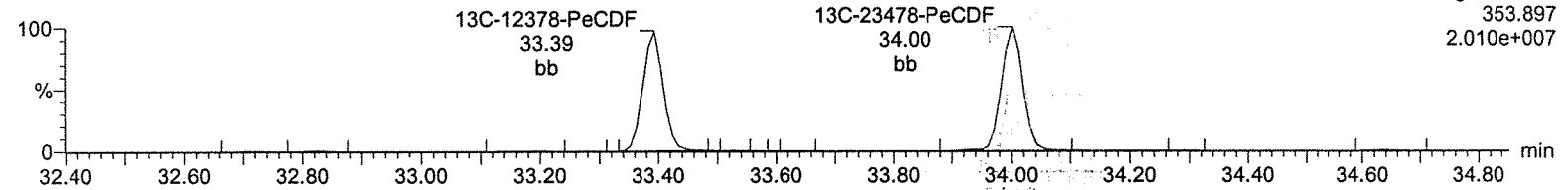
F2:Voltage SIR,EI+
351.900
3.186e+007



13C-12378-PeCDF

A08JUL19A-6

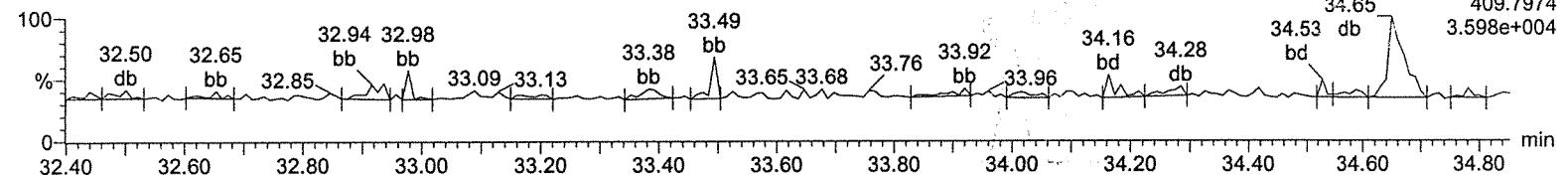
F2:Voltage SIR,EI+
353.897
2.010e+007



HpDPE

A08JUL19A-6

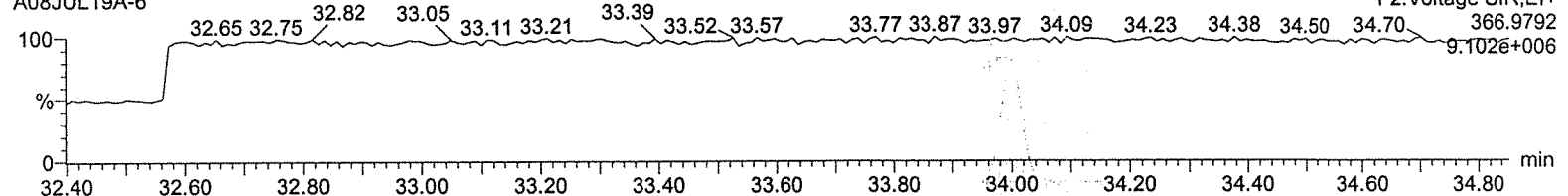
F2:Voltage SIR,EI+
409.7974
3.598e+004



Lock Mass F2

A08JUL19A-6

F2:Voltage SIR,EI+
366.9792
9.102e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

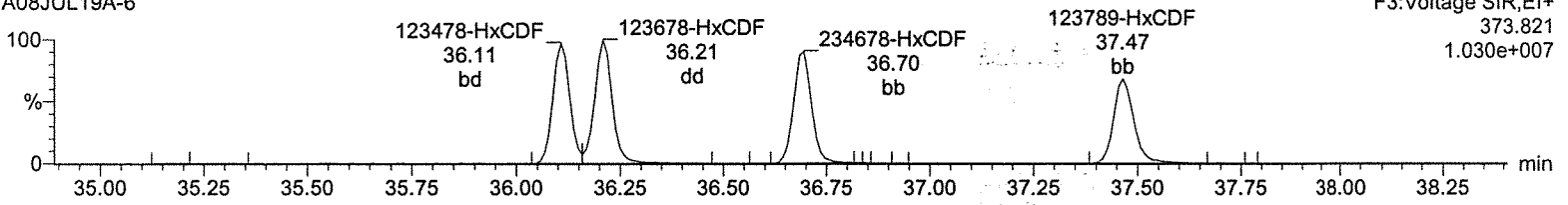
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

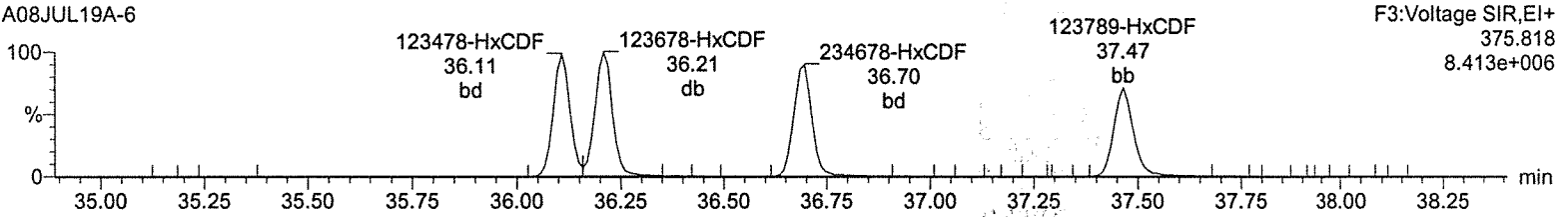
Total-hexafurans

A08JUL19A-6



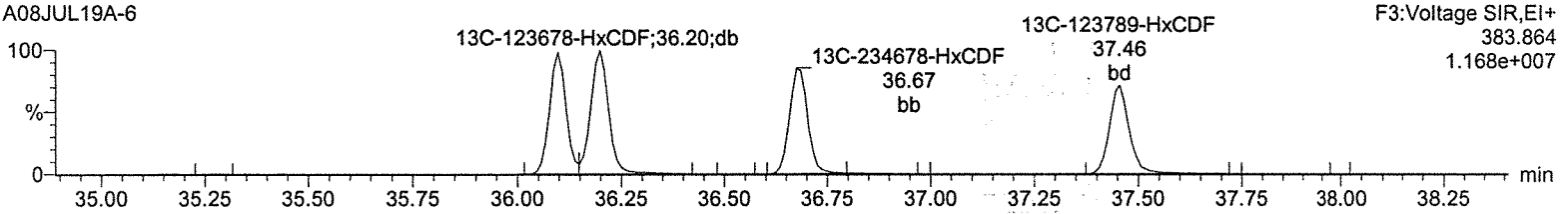
Total-hexafurans

A08JUL19A-6



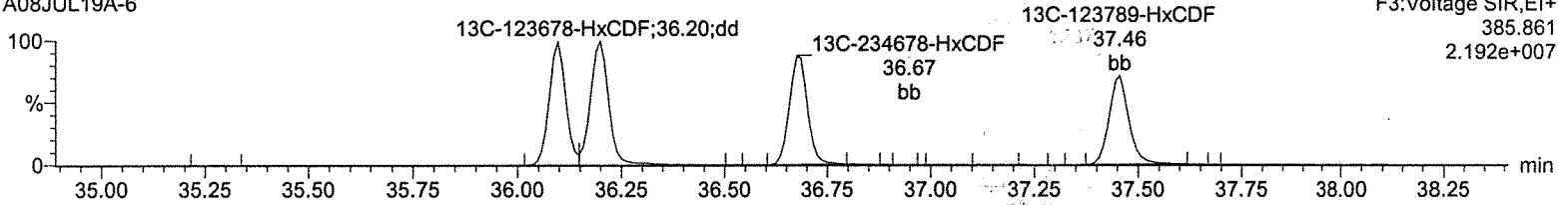
13C-123478-HxCDF

A08JUL19A-6



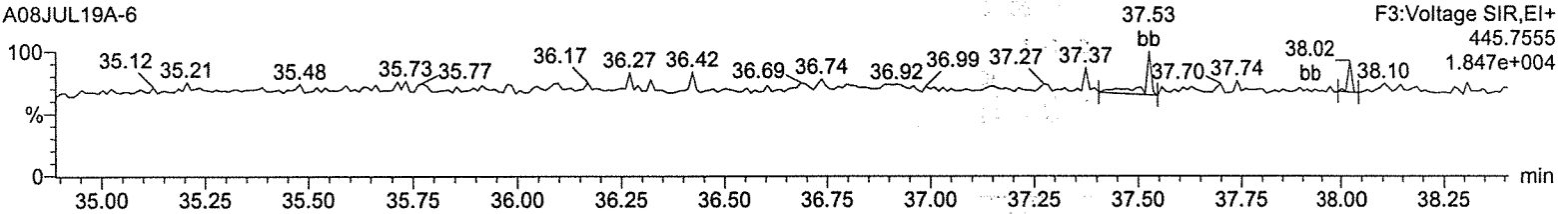
13C-123478-HxCDF

A08JUL19A-6



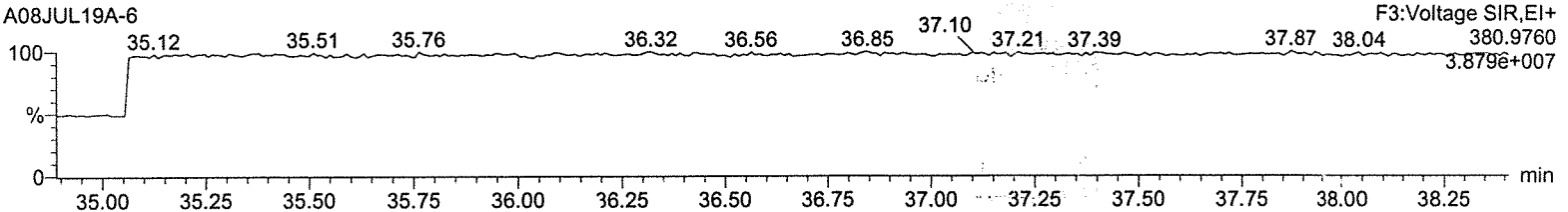
OcDPE

A08JUL19A-6



Lock Mass F3

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

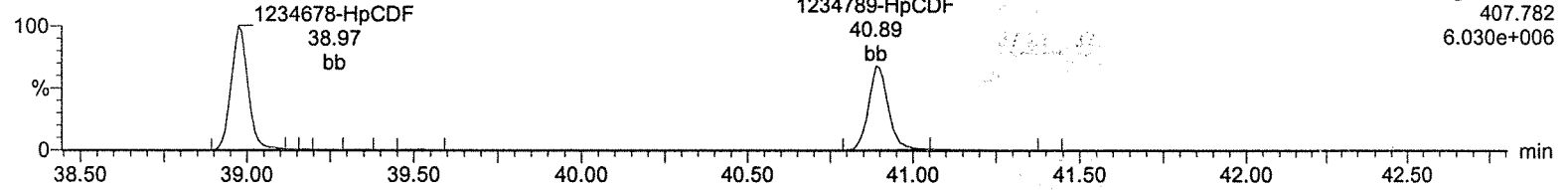
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

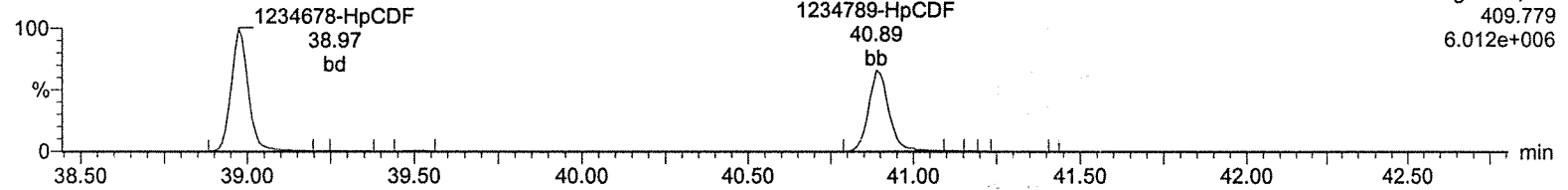
Total-heptafurans

A08JUL19A-6



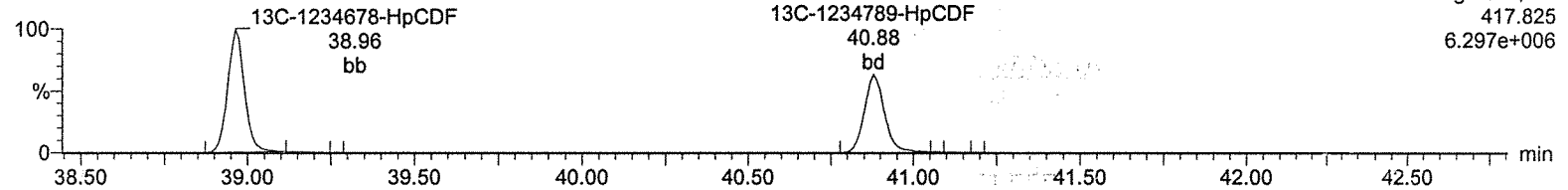
Total-heptafurans

A08JUL19A-6



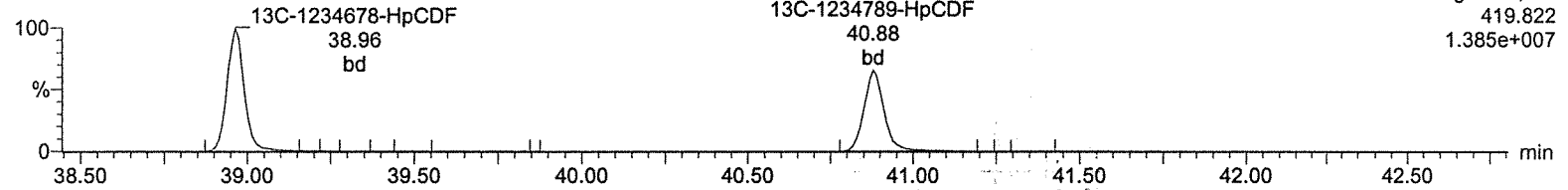
13C-1234678-HpCDF

A08JUL19A-6



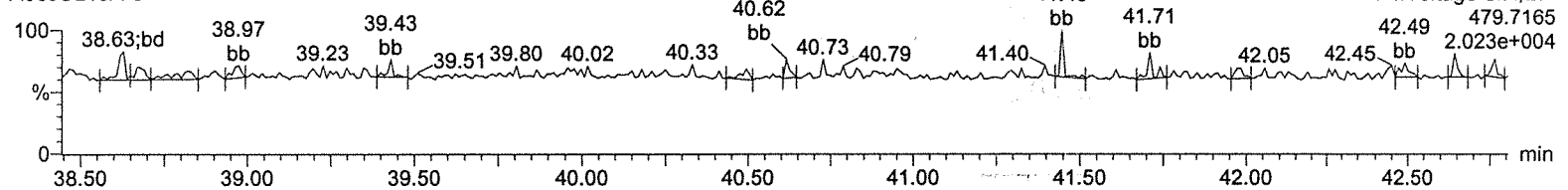
13C-1234678-HpCDF

A08JUL19A-6



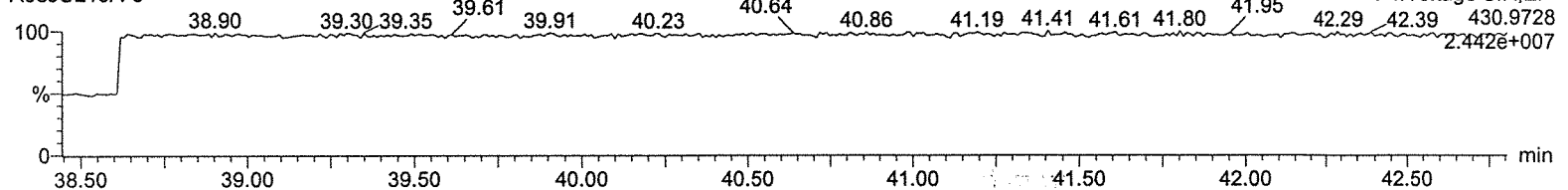
NoDPE

A08JUL19A-6



Lock Mass F4

A08JUL19A-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

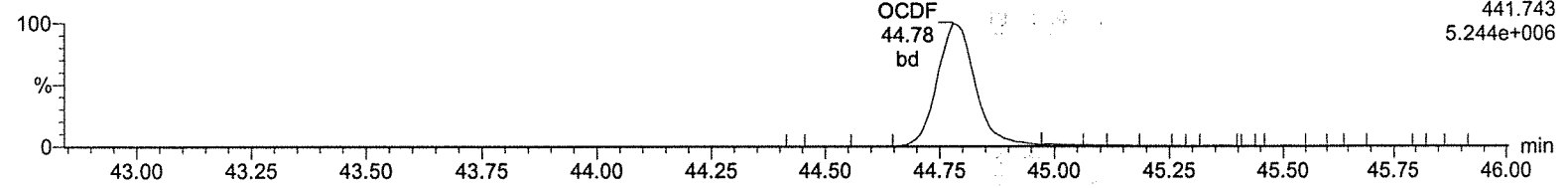
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-6, Date: 08-Jul-2019, Time: 13:39:40, ID: CS3 UD190207-04 CS3KG

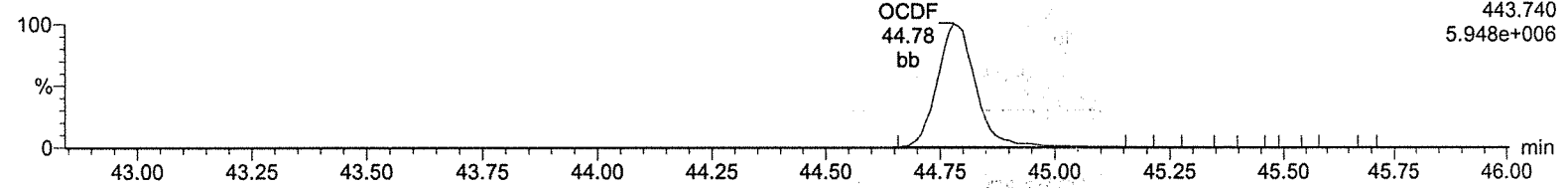
OCDF

A08JUL19A-6



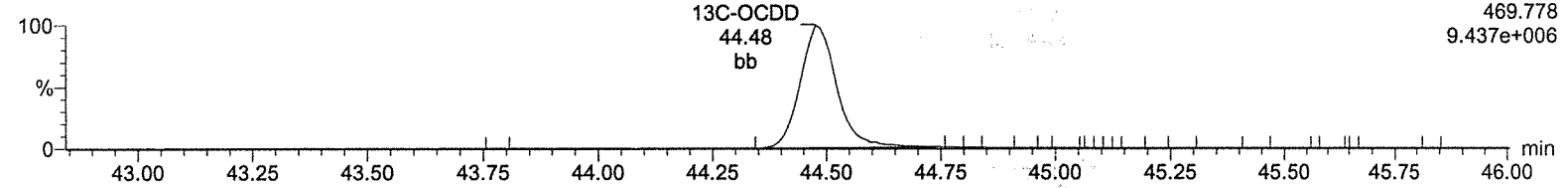
OCDF

A08JUL19A-6



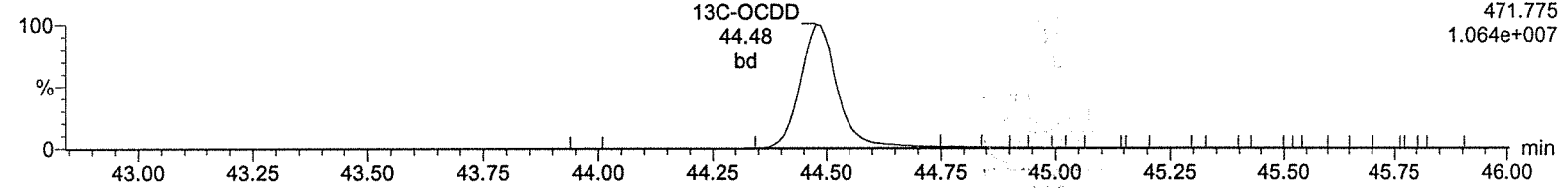
13C-OCDD

A08JUL19A-6



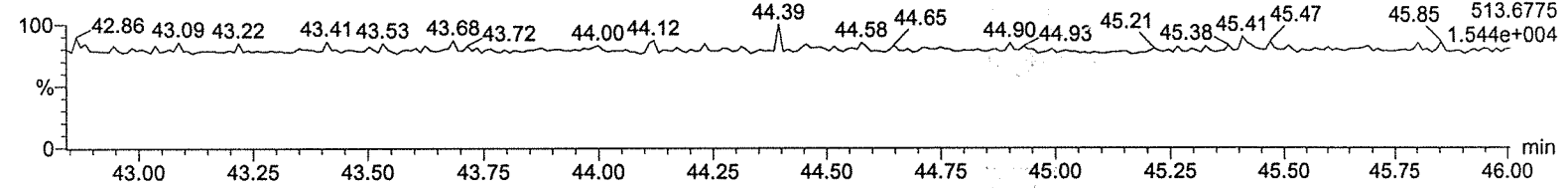
13C-OCDD

A08JUL19A-6



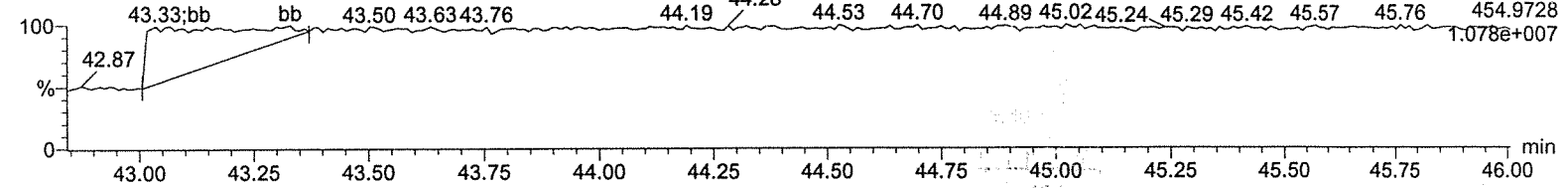
DeDPE

A08JUL19A-6



Lock Mass F5

A08JUL19A-6



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

2011/8/19

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.20e5	4.23e5	7.43e5	31.35	1.000	0.76	NO	40.313	0.891	0.884	5.07	0.0467	6.28e6	2669	2351.7	8.28e6	3196	2591.3	bb	bd
2	12378-PeCDD	1.43e6	9.27e5	2.36e6	34.21	1.000	1.55	NO	199.882	0.853	0.853	1.65	0.134	3.45e7	7066	4888.6	2.27e7	5786	3925.7	bb	bb
3	123478-HxCDD	1.20e6	9.61e5	2.16e6	36.84	1.000	1.25	NO	204.080	0.959	0.940	3.11	0.210	2.48e7	6620	3745.7	1.94e7	8330	2329.2	dd	bd
4	123678-HxCDD	1.32e6	1.06e6	2.38e6	36.92	1.000	1.25	NO	203.463	0.960	0.944	2.57	0.193	2.62e7	6620	3954.5	2.14e7	8330	2574.5	dd	dd
5	123789-HxCDD	1.25e6	9.97e5	2.25e6	37.16	1.007	1.25	NO	204.709	0.949	0.927	3.30	0.204	2.37e7	6620	3578.2	1.91e7	8330	2291.3	dd	dd
6	1234678-HpCDD	8.98e5	8.65e5	1.76e6	40.25	1.000	1.04	NO	200.188	1.041	1.040	2.88	0.324	1.35e7	6485	2081.7	1.29e7	7778	1662.5	bb	bd
7	OCDD	1.60e6	1.73e6	3.34e6	44.51	1.000	0.93	NO	407.176	0.989	0.971	2.39	0.535	1.76e7	8985	1960.9	1.94e7	7406	2624.3	bd	bb
8	2378-TCDF	3.91e5	5.06e5	8.96e5	30.67	1.001	0.77	NO	39.698	0.971	0.978	5.59	0.0830	5.42e6	3365	1611.9	6.79e6	5160	1315.9	bb	bb
9	12378-PeCDF	2.15e6	1.42e6	3.56e6	33.40	1.000	1.51	NO	204.220	0.965	0.945	3.41	0.104	5.57e7	6926	8041.1	3.68e7	8542	4302.7	bb	bd
10	123478-PeCDF	2.37e6	1.56e6	3.92e6	34.02	1.000	1.52	NO	205.338	1.013	0.987	3.73	0.0933	6.14e7	6926	8866.5	3.90e7	8542	4567.7	bb	bb
11	123478-HxCDF	1.70e6	1.40e6	3.10e6	36.12	1.001	1.22	NO	208.354	1.133	1.087	3.86	0.274	3.75e7	14090	2658.9	3.03e7	15421	1963.2	bd	bd
12	123678-HxCDF	1.82e6	1.49e6	3.31e6	36.21	1.000	1.22	NO	202.580	1.054	1.041	3.23	0.271	3.78e7	14090	2683.1	3.11e7	15421	2019.8	db	db
13	1234678-HxCDF	1.73e6	1.43e6	3.16e6	36.69	1.000	1.21	NO	207.523	1.178	1.136	3.17	0.277	3.67e7	14090	2608.0	3.05e7	15421	1976.9	bd	bd
14	123789-HxCDF	1.41e6	1.15e6	2.56e6	37.48	1.000	1.22	NO	201.238	1.067	1.061	2.29	0.378	2.64e7	14090	1872.9	2.13e7	15421	1383.0	bb	bb
15	1234678-HpCDF	1.28e6	1.26e6	2.54e6	38.98	1.000	1.01	NO	205.556	1.182	1.150	3.86	0.276	2.27e7	10691	2125.0	2.21e7	9042	2443.4	bb	bb
16	1234789-HpCDF	1.04e6	1.03e6	2.08e6	40.91	1.000	1.01	NO	204.324	1.228	1.202	1.91	0.419	1.49e7	10691	1395.5	1.48e7	9042	1631.4	bd	bd
17	OCDF	1.90e6	2.09e6	3.98e6	44.80	1.007	0.91	NO	416.811	1.180	1.133	6.78	0.402	2.07e7	8487	2437.5	2.34e7	5859	3990.3	bd	bb
18	13C-2378-TCDD	9.08e5	1.18e6	2.08e6	31.34	1.015	0.77	NO	98.652	1.113	1.128	2.36	0.112	1.86e7	7944	2339.0	2.37e7	4559	5208.0	bb	bb
19	13C-12378-PeCDD	8.37e5	5.47e5	1.38e6	34.20	1.108	1.53	NO	98.417	0.739	0.751	5.03	0.104	2.04e7	4338	4692.3	1.34e7	3347	4003.3	bb	bb
20	13C-123478-HxCDD	6.25e5	5.03e5	1.13e6	36.83	0.991	1.24	NO	100.728	0.903	0.896	1.38	0.172	1.26e7	6951	1815.9	1.00e7	5143	1950.2	bd	bd
21	13C-123678-HxCDD	6.83e5	5.57e5	1.24e6	36.91	0.993	1.23	NO	100.685	0.993	0.986	0.84	0.156	1.36e7	6951	1953.6	1.11e7	5143	2156.6	dd	dd
22	13C-1234678-HpCDD	4.33e5	4.13e5	8.47e5	40.23	1.083	1.05	NO	100.892	0.678	0.672	1.29	0.183	6.49e6	4520	1436.4	6.16e6	5151	1196.0	bd	bd
23	13C-OCDD	7.80e5	9.07e5	1.69e6	44.49	1.197	0.86	NO	210.311	0.675	0.642	4.87	0.272	8.74e6	8904	981.8	9.98e6	4818	2071.9	bb	bd
24	13C-2378-TCDF	1.01e6	1.30e6	2.31e6	30.64	0.993	0.77	NO	98.614	1.233	1.250	1.88	0.165	1.37e7	13730	999.5	1.79e7	6681	2683.0	bb	bb
25	13C-12378-PeCDF	1.13e6	7.17e5	1.85e6	33.39	1.082	1.58	NO	97.584	0.986	1.011	4.24	0.190	2.89e7	13181	2193.7	1.86e7	5800	3205.6	bb	bb
26	13C-23478-PeCDF	1.19e6	7.44e5	1.94e6	34.01	1.102	1.60	NO	97.318	1.035	1.063	5.28	0.181	3.10e7	13181	2355.2	1.88e7	5800	3248.7	db	bb
27	13C-123478-HxCDF	4.71e5	8.99e5	1.37e6	36.10	0.972	0.52	NO	98.724	1.097	1.111	1.42	0.276	1.02e7	10993	928.5	1.98e7	13101	1511.7	bd	bd
28	13C-123678-HxCDF	5.42e5	1.03e6	1.57e6	36.20	0.974	0.53	NO	100.717	1.256	1.247	1.06	0.246	1.08e7	10993	985.4	2.09e7	13101	1591.5	dd	dd
29	13C-234678-HxCDF	4.70e5	8.72e5	1.34e6	36.69	0.987	0.54	NO	99.282	1.074	1.082	1.01	0.284	9.85e6	10993	896.3	1.88e7	13101	1435.8	bd	bb
30	13C-123789-HxCDF	4.17e5	7.84e5	1.20e6	37.47	1.008	0.53	NO	99.370	0.961	0.967	1.08	0.317	7.67e6	10993	697.3	1.47e7	13101	1123.3	bd	bb
31	13C-1234678-HpCDF	3.30e5	7.46e5	1.08e6	38.97	1.049	0.44	NO	99.003	0.861	0.870	1.11	0.194	5.71e6	6045	944.3	1.31e7	7193	1816.3	bb	bb
32	13C-1234789-HpCDF	2.66e5	5.79e5	8.45e5	40.89	1.101	0.46	NO	99.849	0.676	0.677	1.01	0.249	3.70e6	6045	611.9	8.36e6	7193	1162.3	bd	bb
33	13C-1234-TCDD	8.26e5	1.05e6	1.87e6	30.87	0.000	0.79	NO	100.000	1.000	1.000	0.00	0.127	1.31e7	7944	1645.5	1.65e7	4559	3617.1	bb	bb
34	13C-123789-HxCDD	6.86e5	5.64e5	1.25e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.154	1.29e7	6951	1859.3	1.06e7	5143	2053.6	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	7.96e5	7.96e5	7.96e5	31.35	1.016			40.065	1.063	1.061	4.54	0.0384	1.57e7	4023	3910.2						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

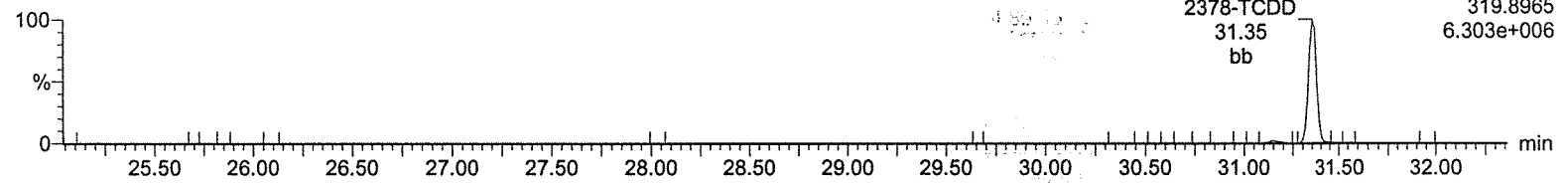
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

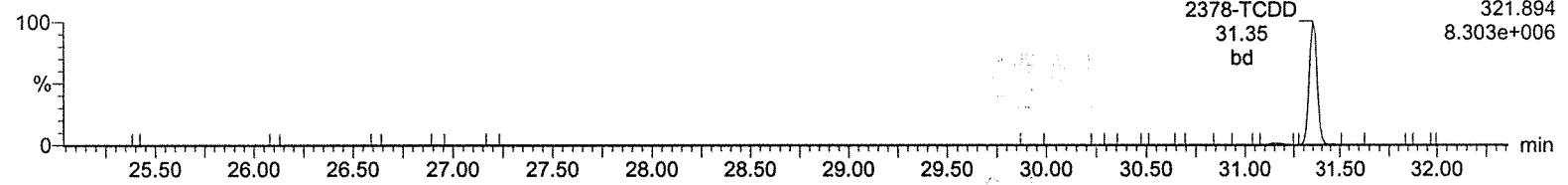
Total-tetradoxins

A08JUL19A-7



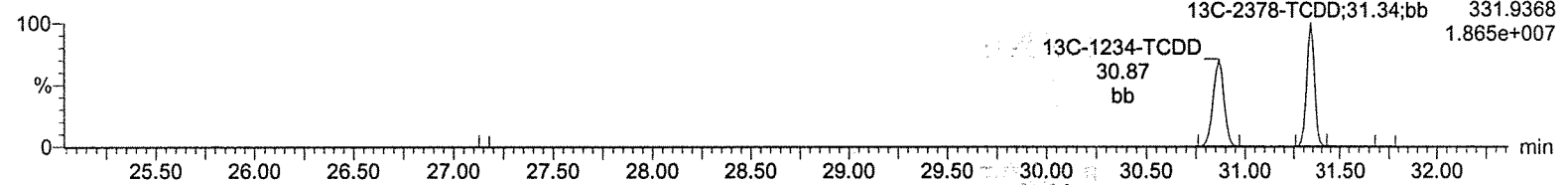
Total-tetradoxins

A08JUL19A-7



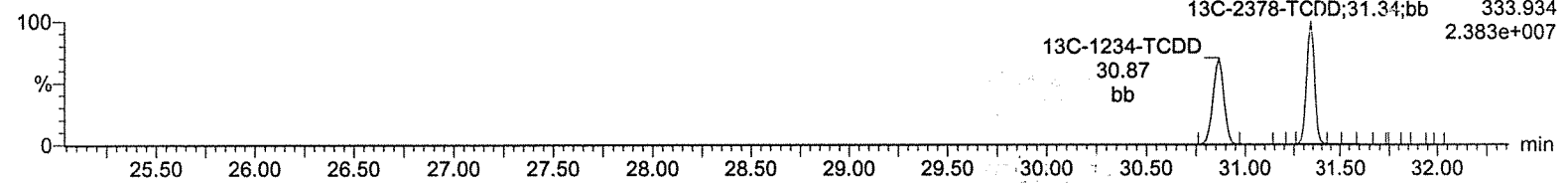
13C-2378-TCDD

A08JUL19A-7



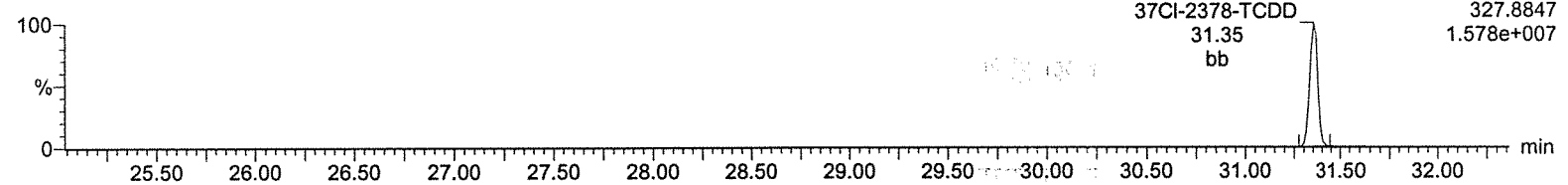
13C-2378-TCDD

A08JUL19A-7



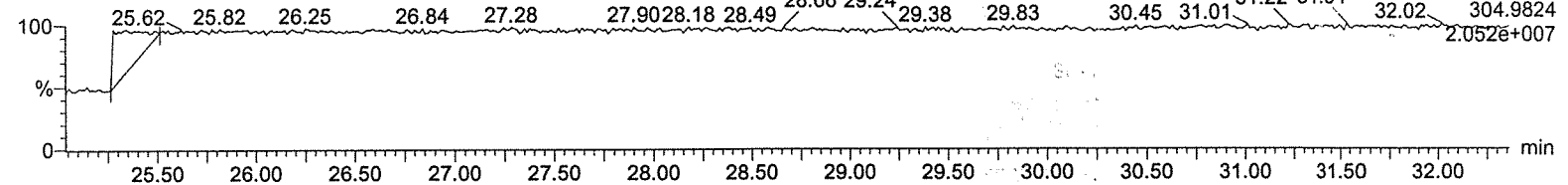
37Cl-2378-TCDD

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

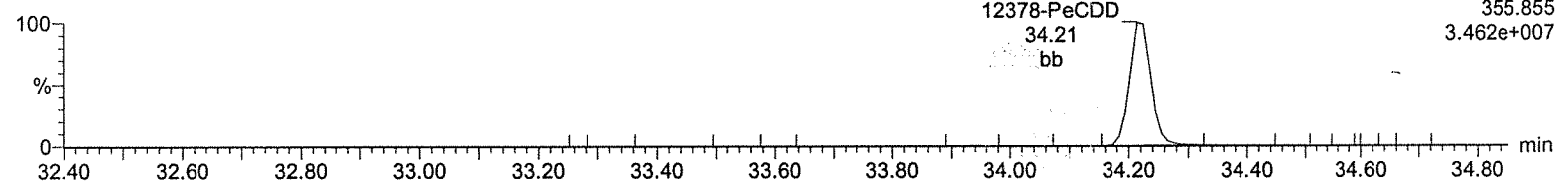
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

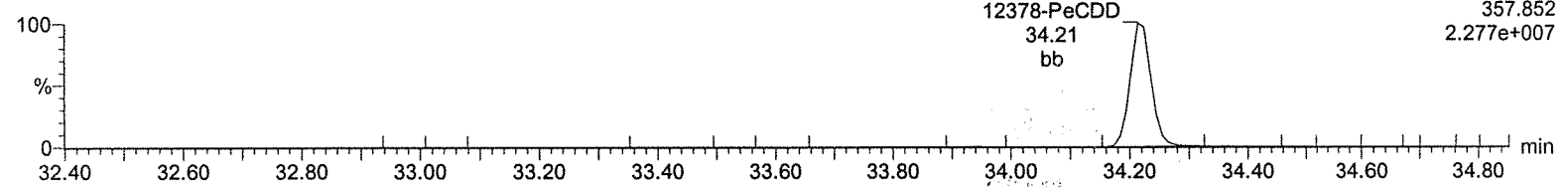
Total-pentadioxins

A08JUL19A-7



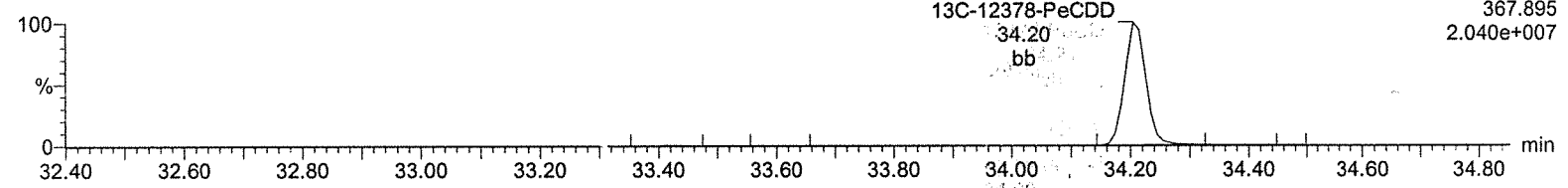
Total-pentadioxins

A08JUL19A-7



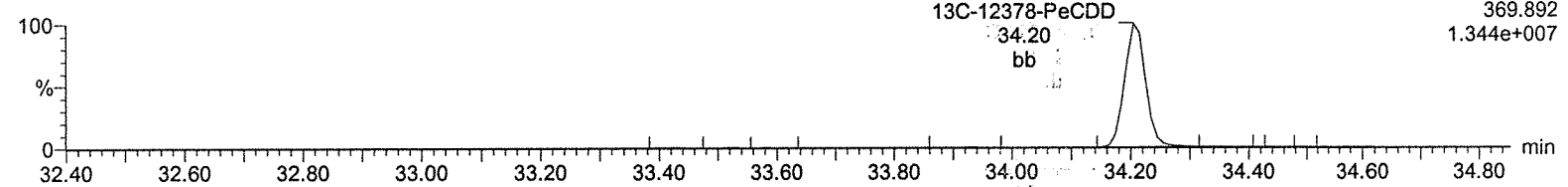
13C-12378-PeCDD

A08JUL19A-7



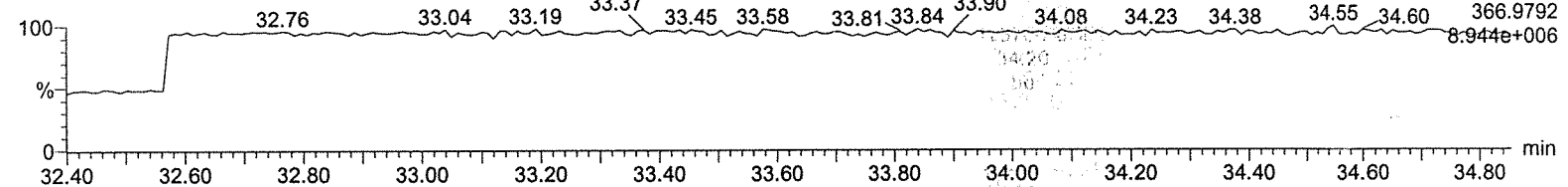
13C-12378-PeCDD

A08JUL19A-7



Lock Mass F2

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

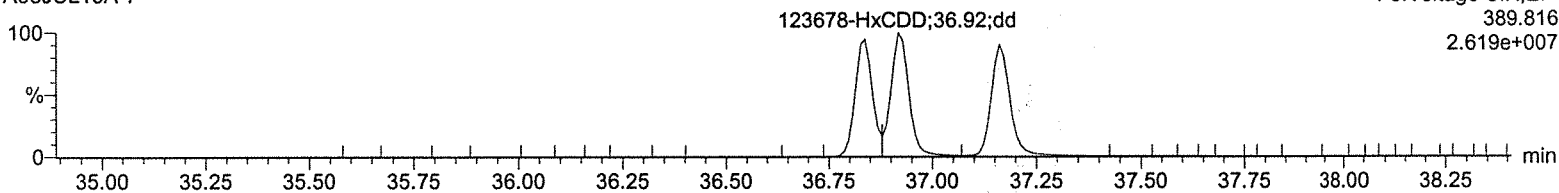
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

Total-hexadioxins

A08JUL19A-7

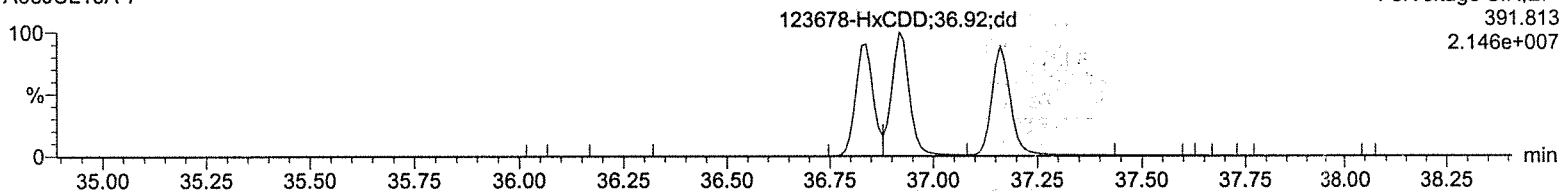
F3:Voltage SIR,EI+
389.816
2.619e+007



Total-hexadioxins

A08JUL19A-7

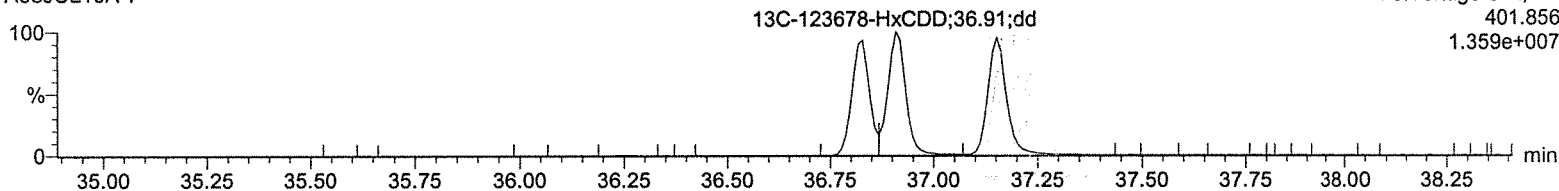
F3:Voltage SIR,EI+
391.813
2.146e+007



13C-123478-HxCDD

A08JUL19A-7

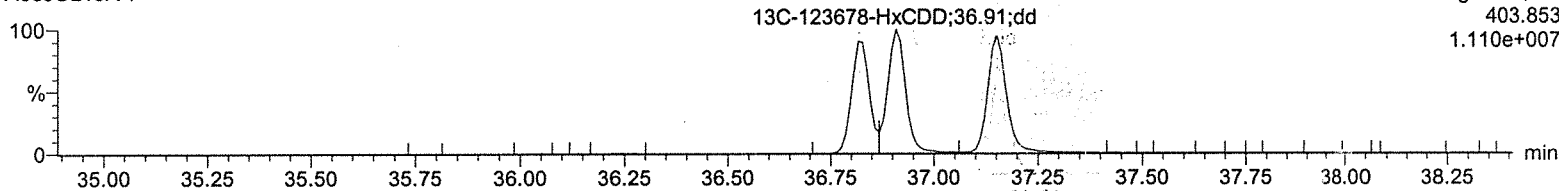
F3:Voltage SIR,EI+
401.856
1.359e+007



13C-123478-HxCDD

A08JUL19A-7

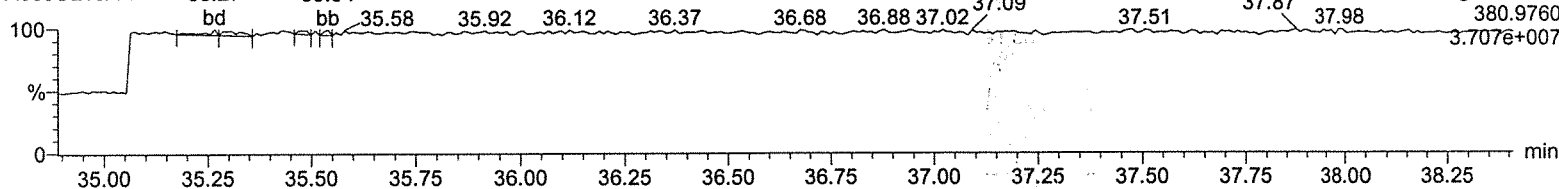
F3:Voltage SIR,EI+
403.853
1.110e+007



Lock Mass F3

A08JUL19A-7

F3:Voltage SIR,EI+
380.9760
3.707e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

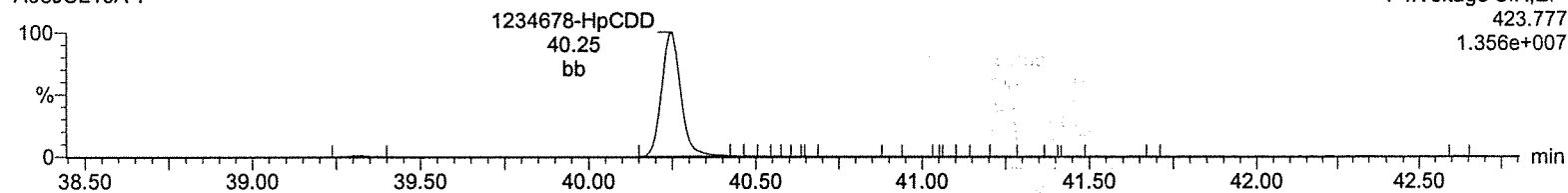
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

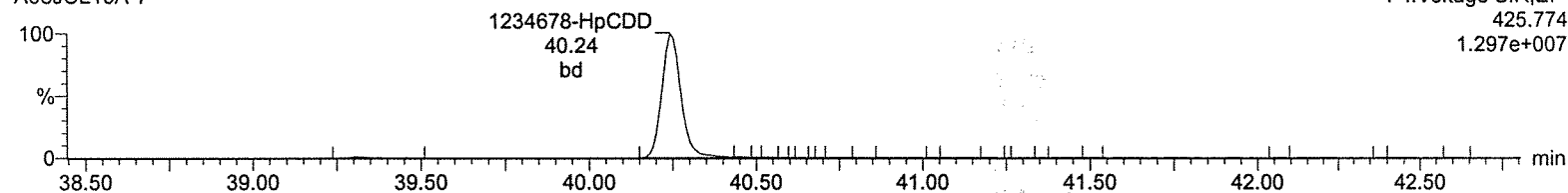
Total-heptadioxins

A08JUL19A-7



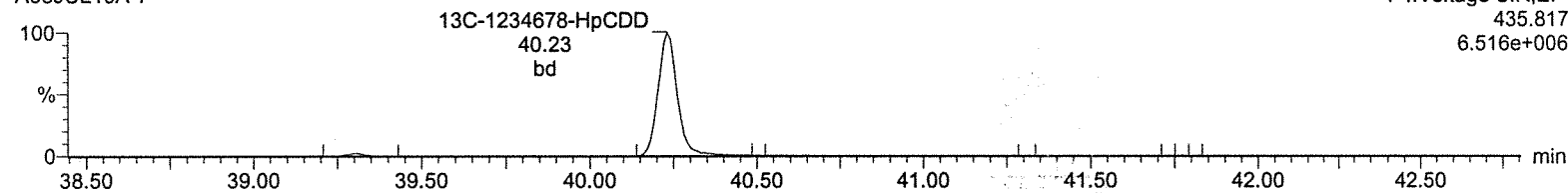
Total-heptadioxins

A08JUL19A-7



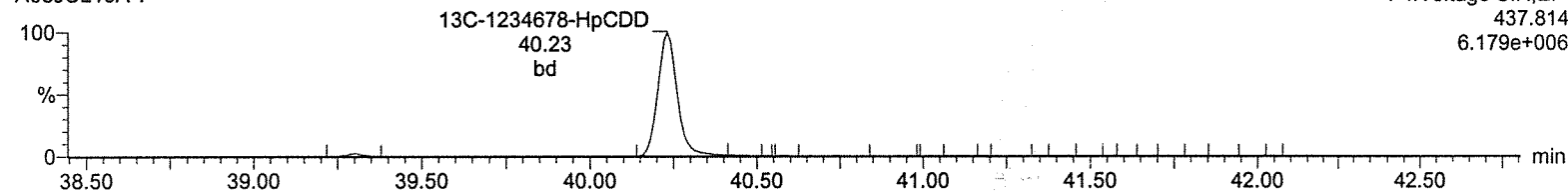
13C-1234678-HpCDD

A08JUL19A-7



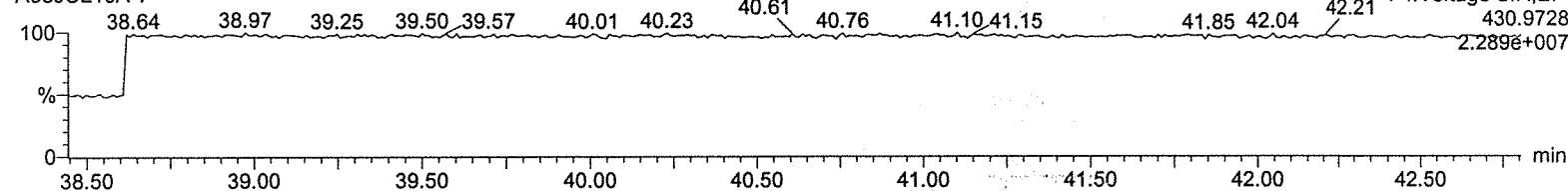
13C-1234678-HpCDD

A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

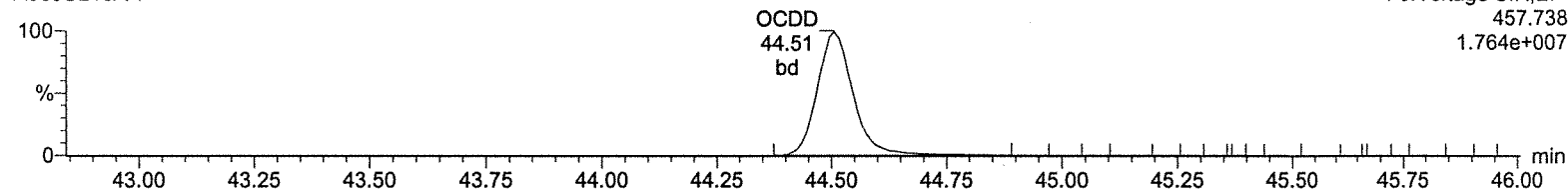
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

OCDD

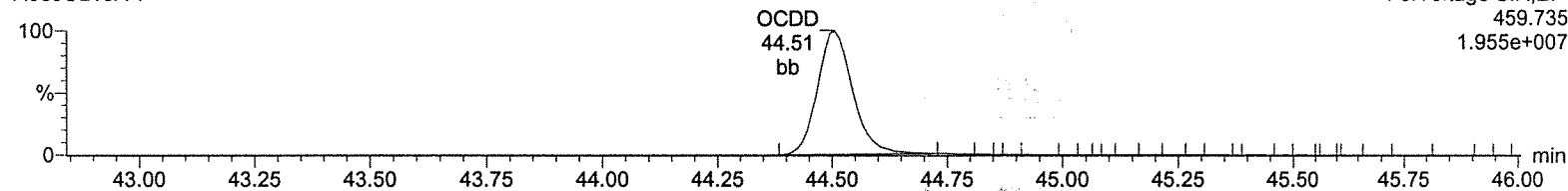
A08JUL19A-7



F5:Voltage SIR,EI+
457.738
1.764e+007

OCDD

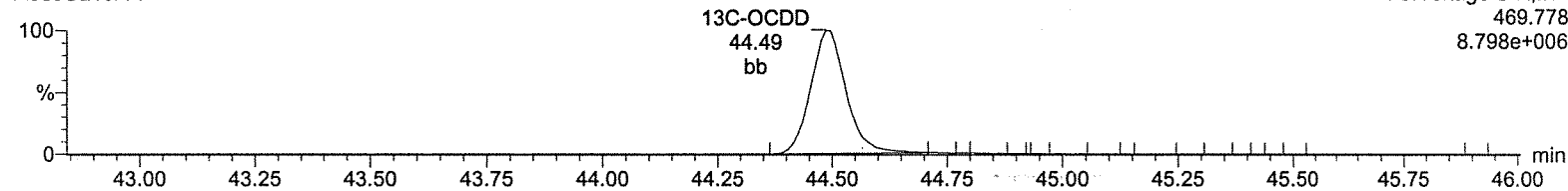
A08JUL19A-7



F5:Voltage SIR,EI+
459.735
1.955e+007

13C-OCDD

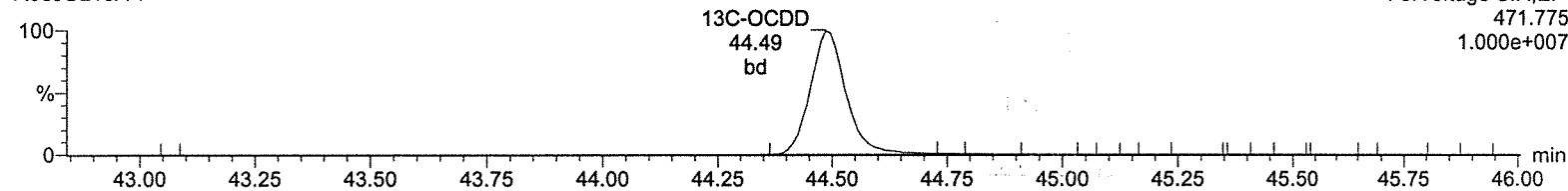
A08JUL19A-7



F5:Voltage SIR,EI+
469.778
8.798e+006

13C-OCDD

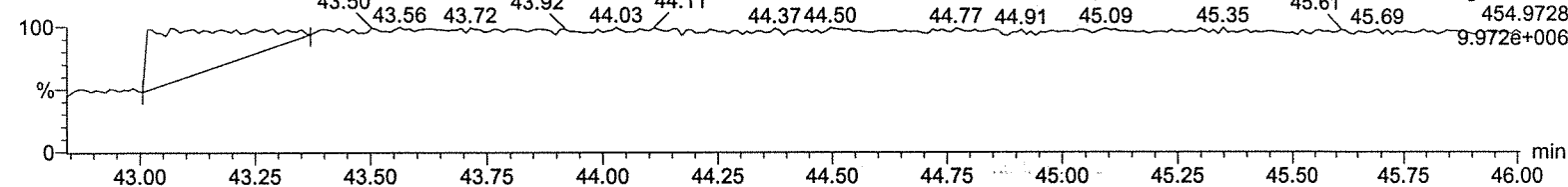
A08JUL19A-7



F5:Voltage SIR,EI+
471.775
1.000e+007

Lock Mass F5

A08JUL19A-7



F5:Voltage SIR,EI+
454.9728
9.972e+006

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qid

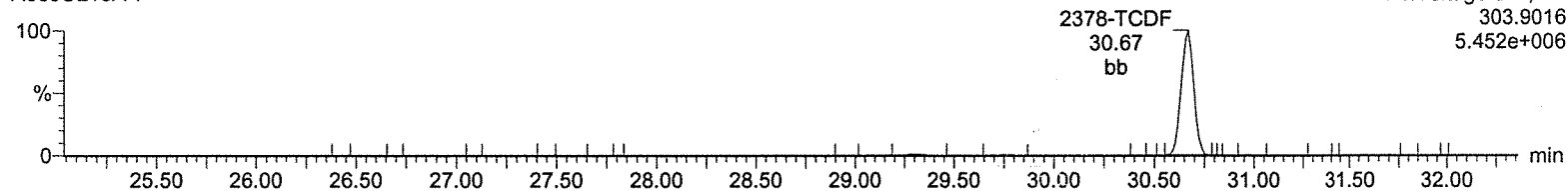
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

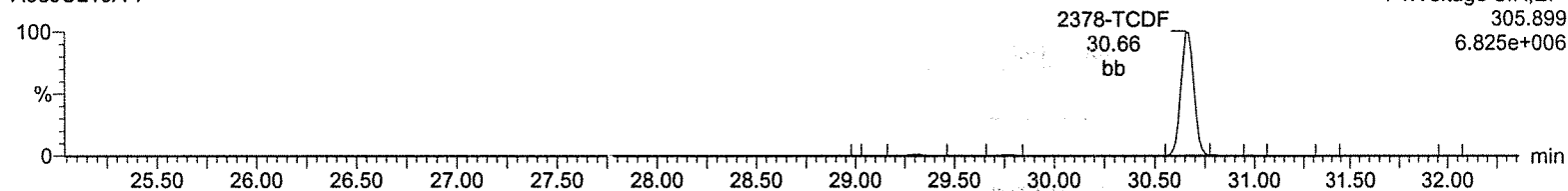
Total-tetrafurans

A08JUL19A-7



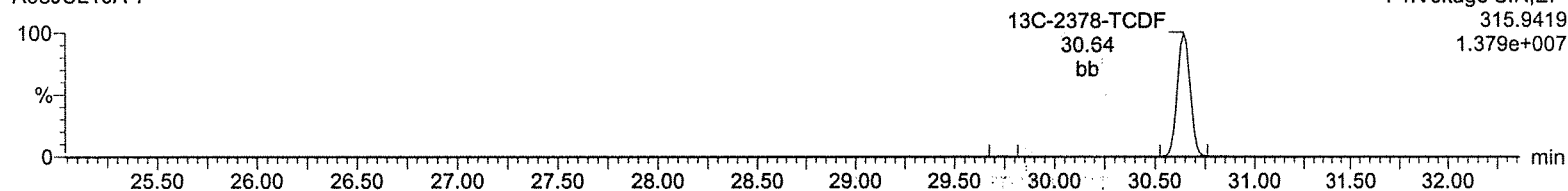
Total-tetrafurans

A08JUL19A-7



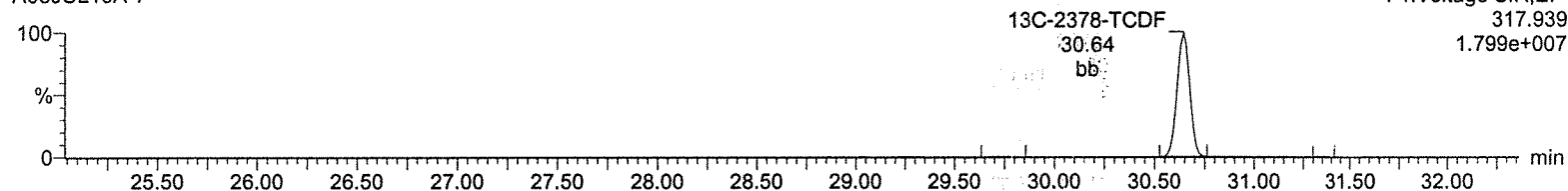
13C-2378-TCDF

A08JUL19A-7



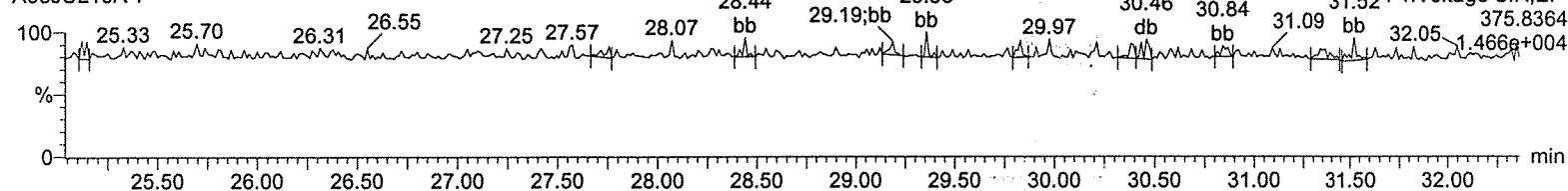
13C-2378-TCDF

A08JUL19A-7



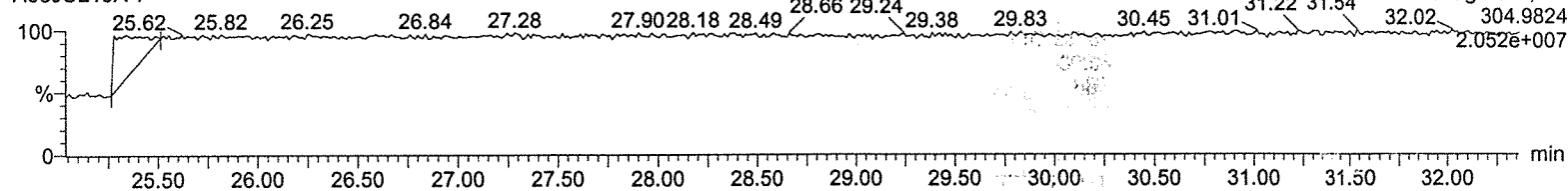
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

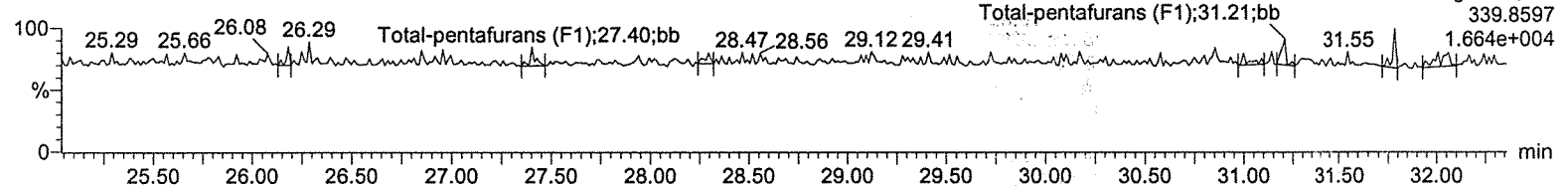
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

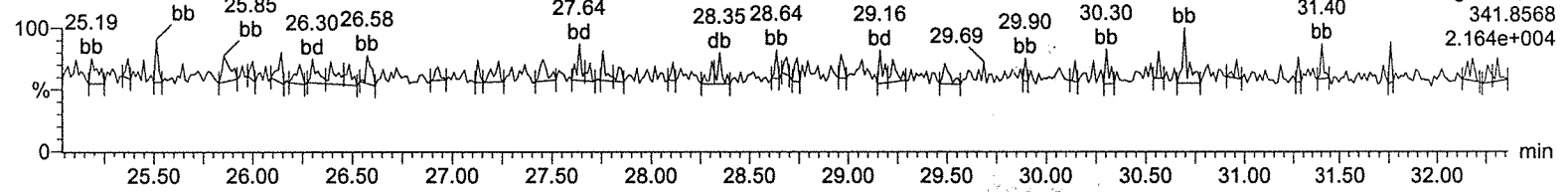
Total-pentafurans (F1)

A08JUL19A-7



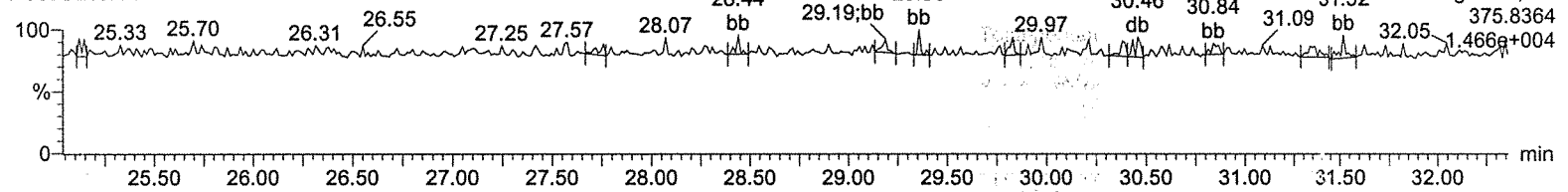
Total-pentafurans (F1)

A08JUL19A-7



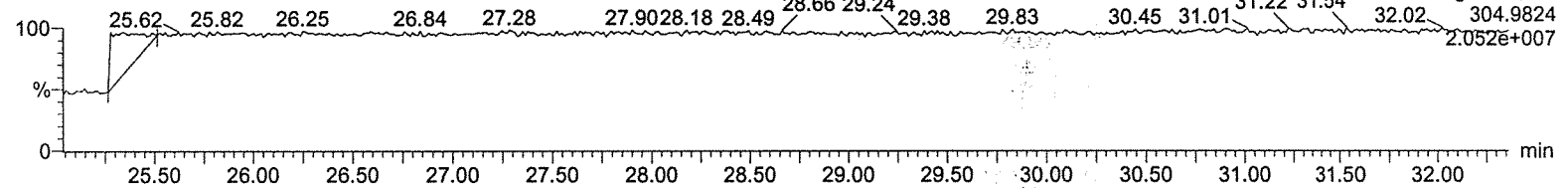
HxDPE

A08JUL19A-7



Lock Mass F1

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

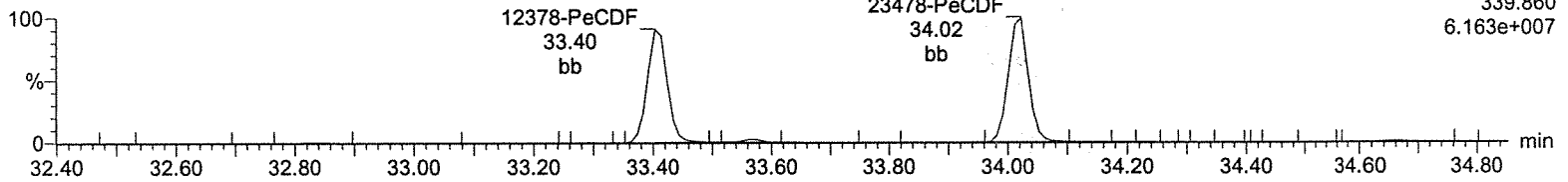
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

Total-pentafurans

A08JUL19A-7

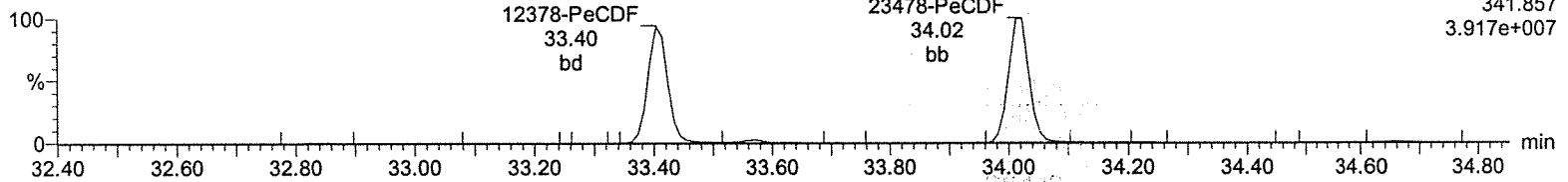
F2:Voltage SIR,EI+
339.860
6.163e+007



Total-pentafurans

A08JUL19A-7

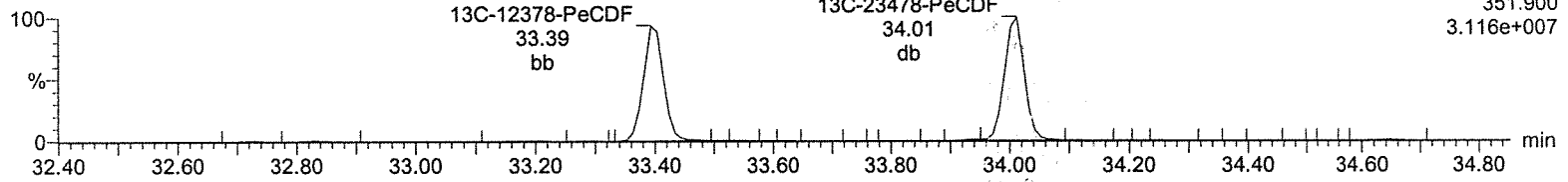
F2:Voltage SIR,EI+
341.857
3.917e+007



13C-12378-PeCDF

A08JUL19A-7

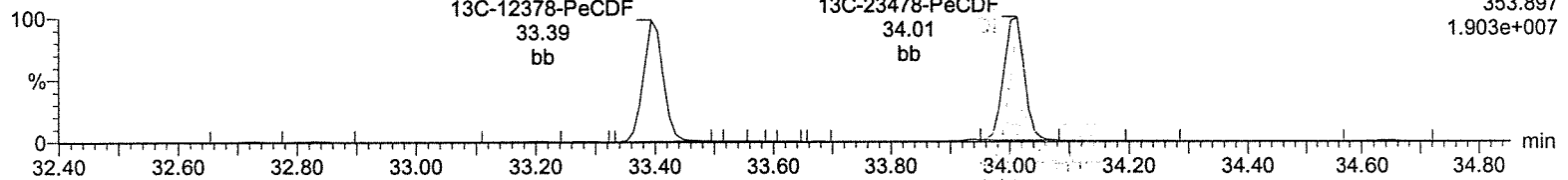
F2:Voltage SIR,EI+
351.900
3.116e+007



13C-12378-PeCDF

A08JUL19A-7

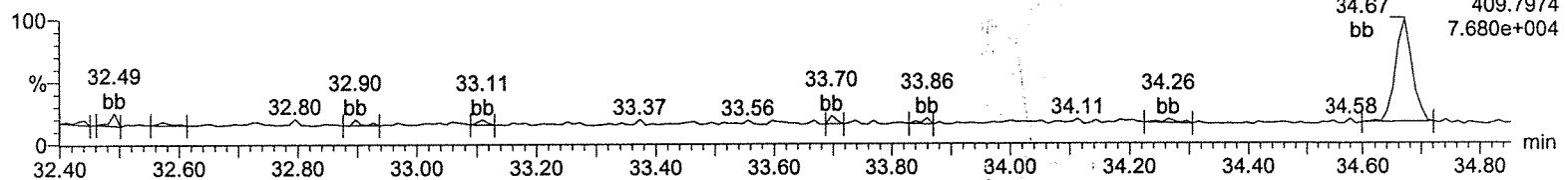
F2:Voltage SIR,EI+
353.897
1.903e+007



HpDPE

A08JUL19A-7

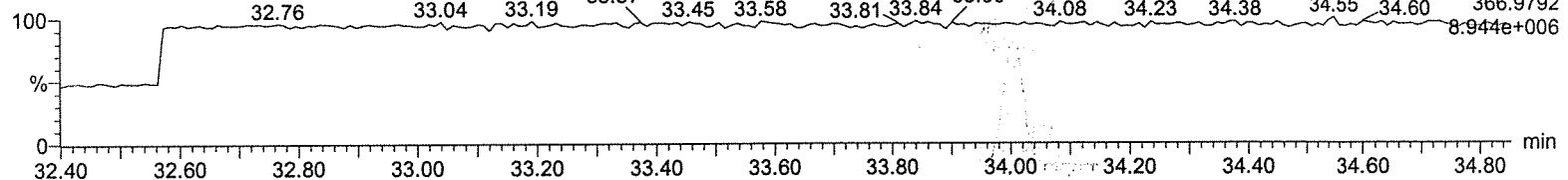
F2:Voltage SIR,EI+
34.67
409.7974
7.680e+004



Lock Mass F2

A08JUL19A-7

F2:Voltage SIR,EI+
366.9792
8.944e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

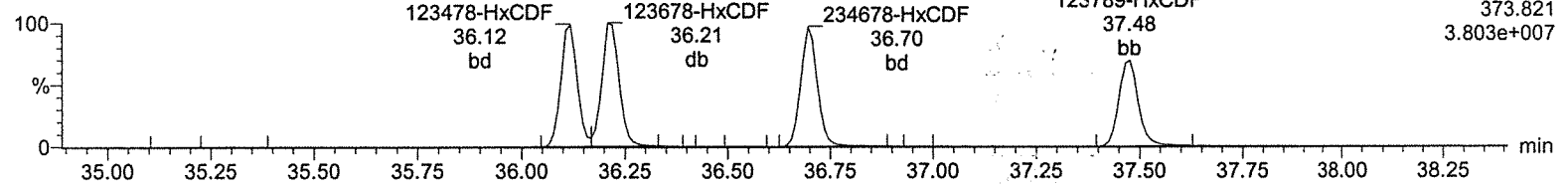
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

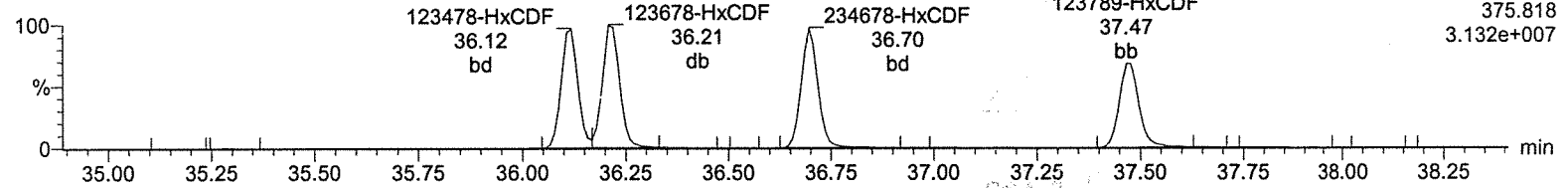
Total-hexafurans

A08JUL19A-7



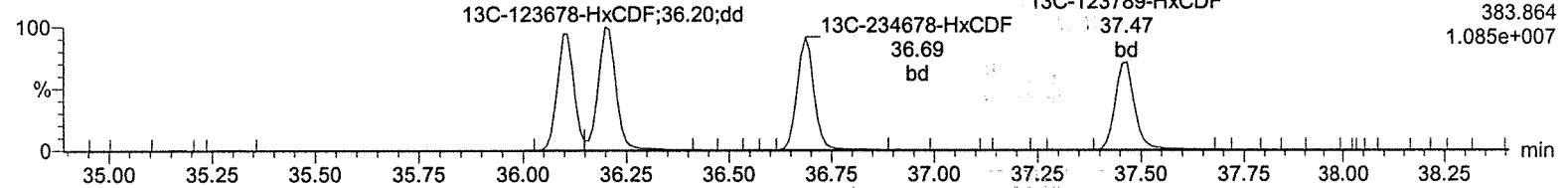
Total-hexafurans

A08JUL19A-7



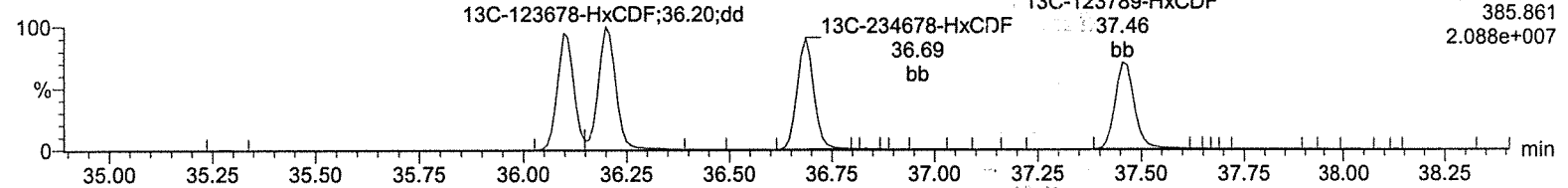
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A08JUL19A-7



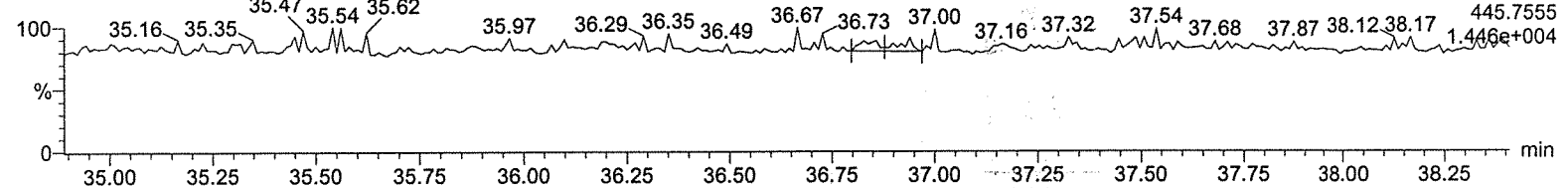
¹³C-123478-HxCDF

A08JUL19A-7



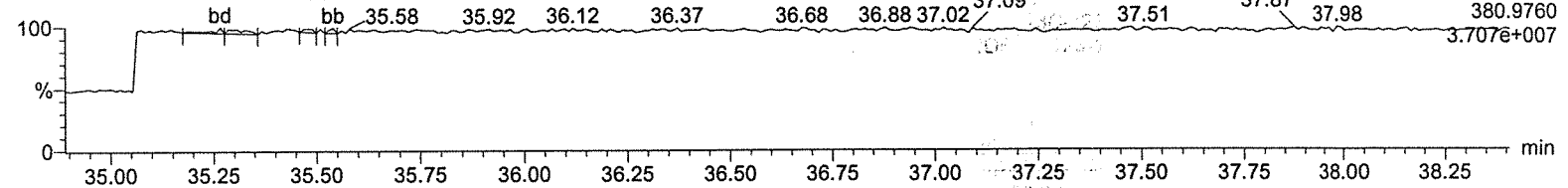
OcDPE

A08JUL19A-7



Lock Mass F3

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

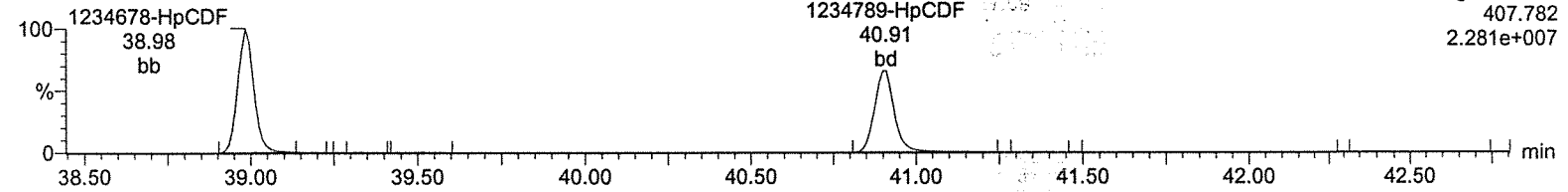
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

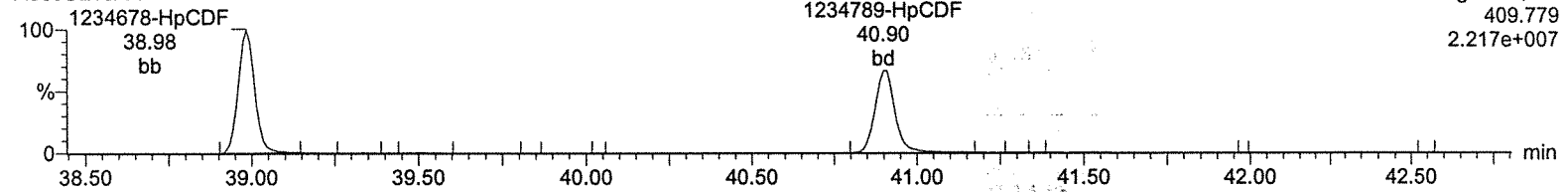
Total-heptafurans

A08JUL19A-7



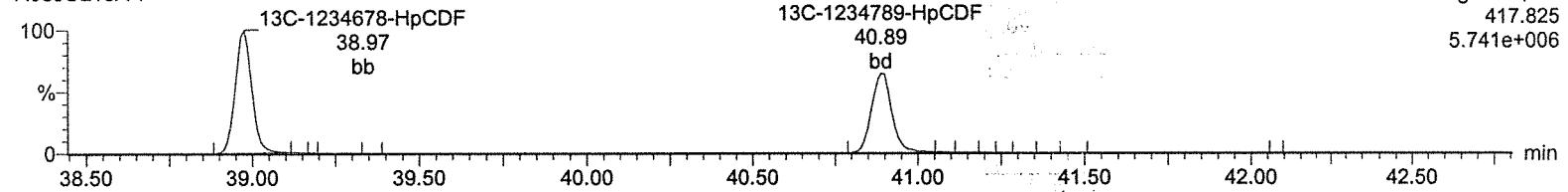
Total-heptafurans

A08JUL19A-7



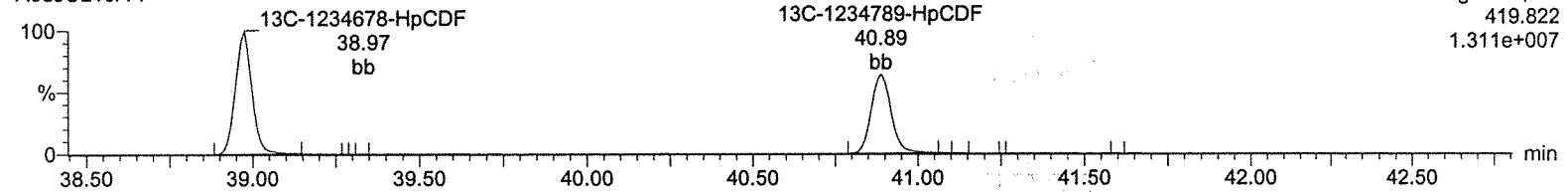
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A08JUL19A-7



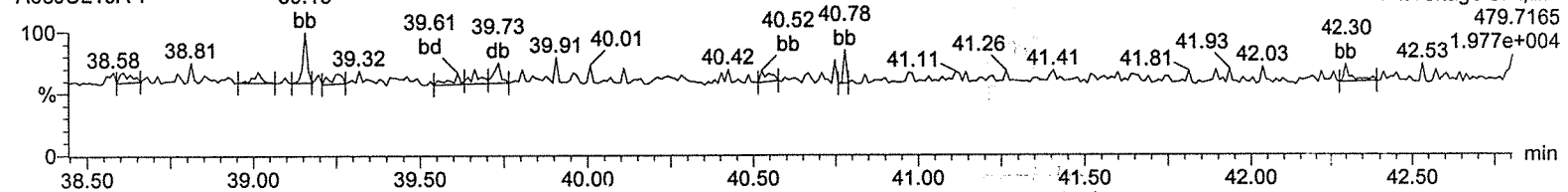
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A08JUL19A-7



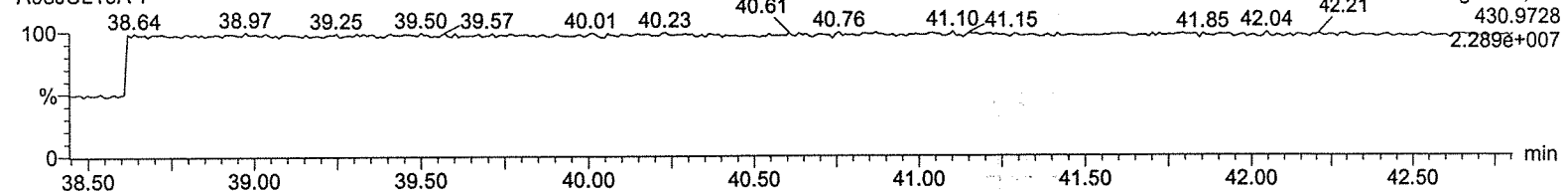
NoDPE

A08JUL19A-7



Lock Mass F4

A08JUL19A-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

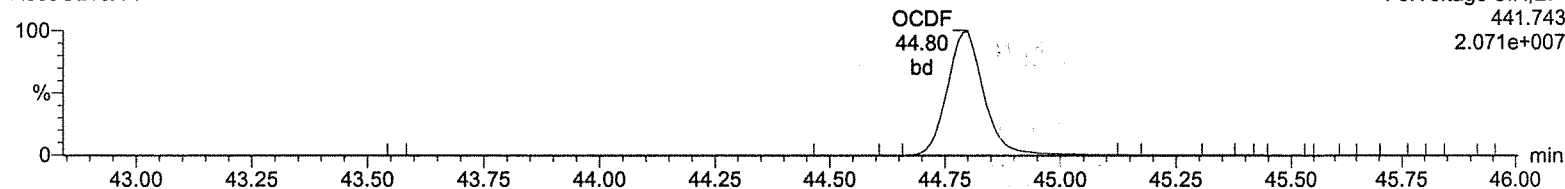
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-7, Date: 08-Jul-2019, Time: 14:27:42, ID: CS4 UD190207-05 CS442

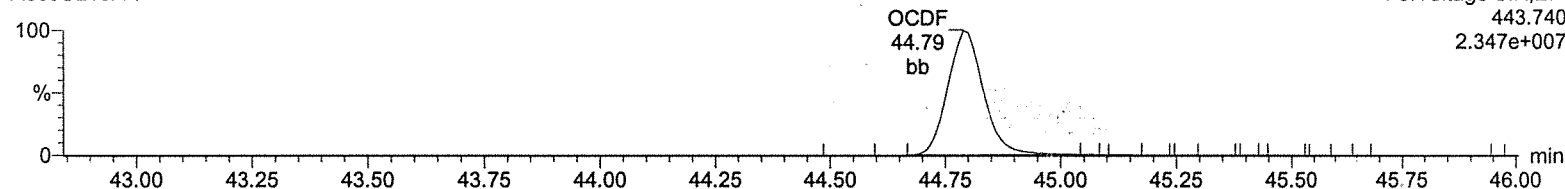
OCDF

A08JUL19A-7



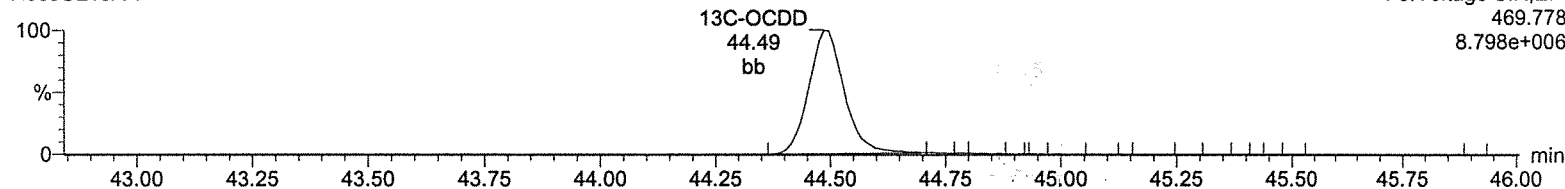
OCDF

A08JUL19A-7



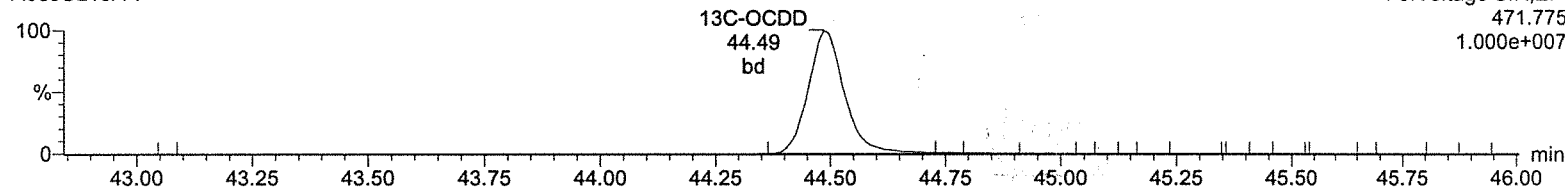
13C-OCDD

A08JUL19A-7



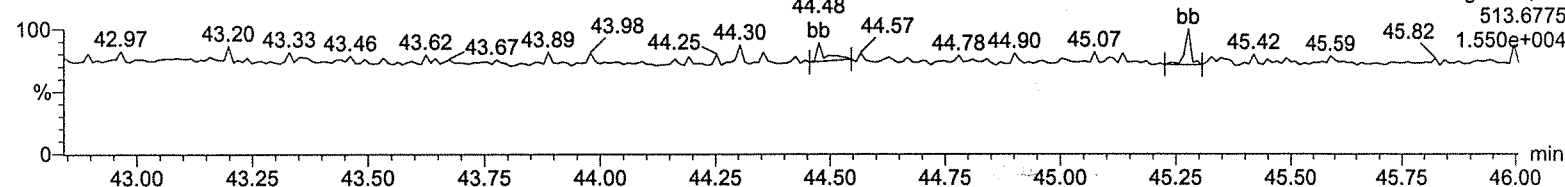
13C-OCDD

A08JUL19A-7



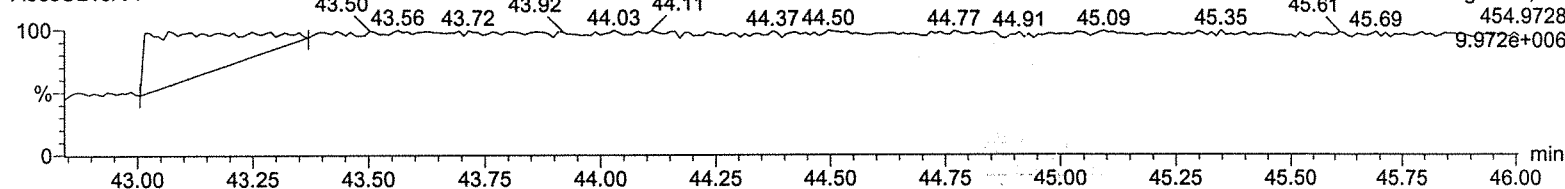
DeDPE

A08JUL19A-7



Lock Mass F5

A08JUL19A-7



Quantify Sample Summary Report
Method 1613 ICAL Report

MassLynx 4.1
C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Dataset: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

22818419

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noiset	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.78e6	2.34e6	4.12e6	31.35	1.000	0.76	NO	205.757	0.910	0.884	5.07	0.0469	3.47e7	3058	11358.0	4.56e7	3176	14350.1	bb	bb
2	12378-PeCDD	8.29e6	5.35e6	1.36e7	34.22	1.000	1.55	NO	1009.561	0.862	0.853	1.65	0.130	2.10e8	4103	51087.5	1.33e8	10010	13303.8	bb	bb
3	123478-HxCDD	7.14e6	5.72e6	1.29e7	36.84	1.000	1.25	NO	1030.901	0.969	0.940	3.11	0.258	1.49e8	10705	13935.4	1.18e8	11148	10602.9	bd	bd
4	123678-HxCDD	7.78e6	6.24e6	1.40e7	36.92	1.000	1.25	NO	1026.323	0.969	0.944	2.57	0.240	1.53e8	10705	14298.1	1.25e8	11148	1183.8	dd	dd
5	123789-HxCDD	7.35e6	5.86e6	1.32e7	37.16	1.007	1.25	NO	1026.758	0.952	0.927	3.30	0.253	1.43e8	10705	13389.8	1.15e8	11148	10340.8	dd	dd
6	1234678-HpCDD	5.26e6	5.01e6	1.03e7	40.24	1.000	1.05	NO	1029.037	1.070	1.040	2.88	0.612	8.19e7	13310	6152.6	7.83e7	18608	4207.3	bb	bb
7	OCDD	8.83e6	9.80e6	1.86e7	44.51	1.000	0.90	NO	2036.586	0.989	0.971	2.39	0.715	1.05e8	11377	9196.2	1.17e8	13516	8665.0	bb	bb
8	2378-TCDF	2.10e6	2.75e6	4.85e6	30.67	1.001	0.76	NO	202.186	0.989	0.978	5.59	0.0956	2.82e7	4854	5802.8	3.67e7	5522	6647.2	bb	bb
9	12378-PeCDF	1.23e7	8.04e6	2.04e7	33.40	1.000	1.54	NO	1020.233	0.964	0.945	3.41	0.271	3.19e8	31922	9979.2	2.11e8	13143	16048.5	bb	bb
10	123478-HxCDF	1.38e7	9.07e6	2.29e7	34.02	1.000	1.53	NO	1048.349	1.034	0.987	3.73	0.236	3.64e8	31922	11387.7	2.33e8	13143	17714.6	bb	bb
11	123678-HxCDF	9.95e6	8.17e6	1.81e7	36.12	1.000	1.22	NO	1036.336	1.127	1.087	3.86	0.482	2.21e8	28521	7761.7	1.79e8	32460	5528.1	bd	bd
12	123678-HxCDF	1.06e7	8.66e6	1.93e7	36.22	1.000	1.23	NO	1010.825	1.052	1.041	3.23	0.454	2.29e8	28521	8033.9	1.86e8	32460	5739.4	db	db
13	1234678-HxCDF	1.01e7	8.11e6	1.82e7	36.69	1.000	1.25	NO	1024.664	1.164	1.136	3.17	0.472	2.17e8	28521	7620.3	1.80e8	32460	5559.1	bd	bd
14	123789-HxCDF	8.33e6	6.80e6	1.51e7	37.48	1.000	1.23	NO	1021.587	1.084	1.061	2.29	0.652	1.66e8	28521	5836.8	1.34e8	32460	4119.4	bb	bb
15	1234678-HpCDF	7.47e6	7.34e6	1.48e7	38.98	1.000	1.02	NO	1028.218	1.182	1.150	3.86	0.526	1.33e8	22716	5841.8	1.30e8	21882	5933.2	bb	bb
16	1234789-HpCDF	6.03e6	5.91e6	1.19e7	40.91	1.000	1.02	NO	1022.696	1.229	1.202	1.91	0.765	8.92e7	22716	3925.2	8.80e7	21882	4023.5	bb	bb
17	OCDF	1.11e7	1.25e7	2.35e7	44.80	1.007	0.89	NO	2206.183	1.250	1.133	6.78	0.605	1.31e8	9724	13509.9	1.47e8	14872	9854.1	bb	bb
18	13C-2378-TCDD	9.90e5	1.27e6	2.26e6	31.34	1.015	0.78	NO	103.020	1.162	1.128	2.36	0.109	1.97e7	8334	2369.3	2.52e7	4305	5853.2	bb	bb
19	13C-12378-PeCDD	9.58e5	6.25e5	1.58e6	34.21	1.109	1.53	NO	108.196	0.813	0.751	5.03	0.0899	2.31e7	4492	5145.4	1.50e7	2453	6119.5	bb	bb
20	13C-123478-HxCDD	7.35e5	5.93e5	1.33e6	36.83	0.991	1.24	NO	101.352	0.908	0.896	1.38	0.166	1.50e7	7897	1897.6	1.22e7	6151	1976.9	bd	bd
21	13C-123678-HxCDD	7.98e5	6.49e5	1.45e6	36.91	0.993	1.23	NO	100.457	0.990	0.986	0.84	0.151	1.60e7	7897	2020.5	1.31e7	6151	2136.4	dd	dd
22	13C-1234678-HpCDD	4.87e5	4.73e5	9.60e5	40.23	1.083	1.03	NO	97.789	0.657	0.672	1.29	0.151	7.63e6	4493	1698.8	7.17e6	5124	1399.8	bb	bb
23	13C-OCDD	8.91e5	9.93e5	1.88e6	44.49	1.198	0.90	NO	200.806	0.645	0.642	4.87	0.183	1.02e7	6392	1591.5	1.14e7	4751	2406.3	bd	bd
24	13C-2378-TCDF	1.07e6	1.39e6	2.45e6	30.64	0.993	0.77	NO	100.812	1.260	1.250	1.88	0.164	1.45e7	13730	1053.1	1.91e7	7393	2582.1	bb	bb
25	13C-12378-PeCDF	1.29e6	8.22e5	2.11e6	33.39	1.082	1.57	NO	107.363	1.085	1.011	4.24	0.205	3.23e7	11309	2852.5	2.12e7	10040	2107.4	bb	bb
26	13C-23478-PeCDF	1.36e6	8.59e5	2.22e6	34.01	1.102	1.58	NO	107.006	1.138	1.063	5.28	0.195	3.55e7	11309	3143.2	2.23e7	10040	2223.5	db	bb
27	13C-123478-HxCDF	5.56e5	1.05e6	1.61e6	36.11	0.972	0.53	NO	99.083	1.101	1.111	1.42	0.196	1.21e7	11074	1089.3	2.33e7	9505	2456.5	bd	bd
28	13C-123678-HxCDF	6.26e5	1.21e6	1.83e6	36.21	0.975	0.52	NO	100.592	1.254	1.247	1.06	0.174	1.32e7	11074	1193.6	2.46e7	9505	2583.0	dd	dd
29	13C-234678-HxCDF	5.29e5	1.04e6	1.57e6	36.69	0.987	0.51	NO	99.147	1.073	1.082	1.01	0.201	1.15e7	11074	1041.6	2.24e7	9505	2355.3	bb	bd
30	13C-123789-HxCDF	4.81e5	9.15e5	1.40e6	37.47	1.008	0.53	NO	98.821	0.956	0.967	1.08	0.225	9.11e6	11074	822.3	1.74e7	9505	1832.5	bb	bb
31	13C-1234678-HpCDF	3.85e5	8.69e5	1.25e6	38.97	1.049	0.44	NO	98.609	0.858	0.870	1.11	0.141	6.80e6	5478	1240.5	1.53e7	6127	2499.4	bb	bb
32	13C-1234789-HpCDF	2.97e5	6.74e5	9.71e5	40.89	1.101	0.44	NO	98.139	0.665	0.677	1.01	0.181	4.44e6	5478	811.4	9.75e6	6127	1591.7	bb	bb
33	13C-1234-TCDD	8.51e5	1.10e6	1.95e6	30.87	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.123	1.35e7	8334	1618.7	1.69e7	4305	3920.6	bb	bb
34	13C-123789-HxCDD	8.04e5	6.57e5	1.46e6	37.15	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.148	1.56e7	7897	1978.2	1.28e7	6151	2088.1	dd	dd

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:53:23 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:59:39 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543, Job: A08JUL19A, User: MJC, Task: HRP750_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2	
35	37Cl-2378-TCDD	4.40e6	4.40e6	4.40e6	31.35	1.016			212.931	1.130	1.061	4.54	0.0449	8.48e7	4902	17292.5				M	M2	
																						bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

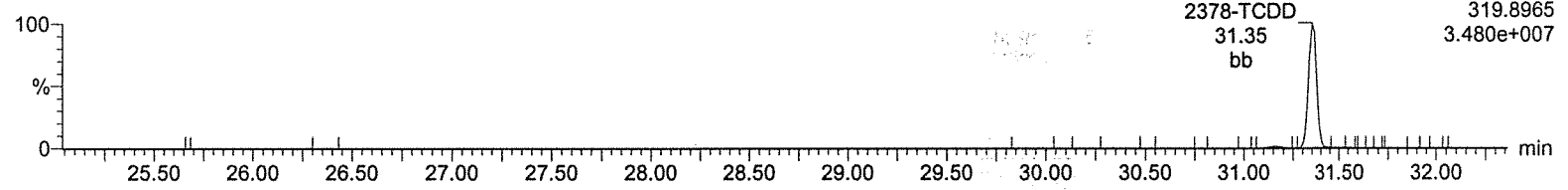
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

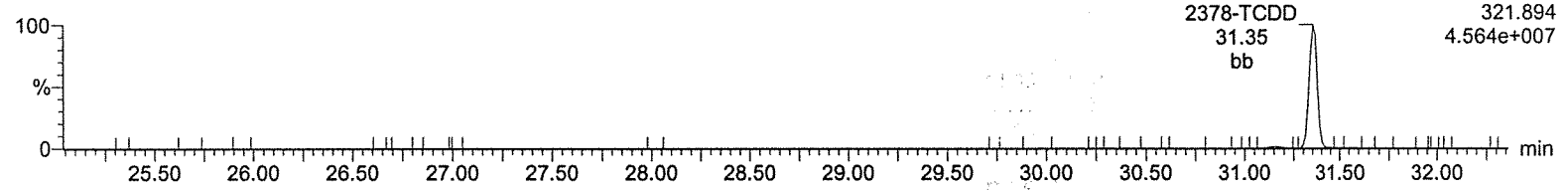
Total-tetradoxins

A08JUL19A-8



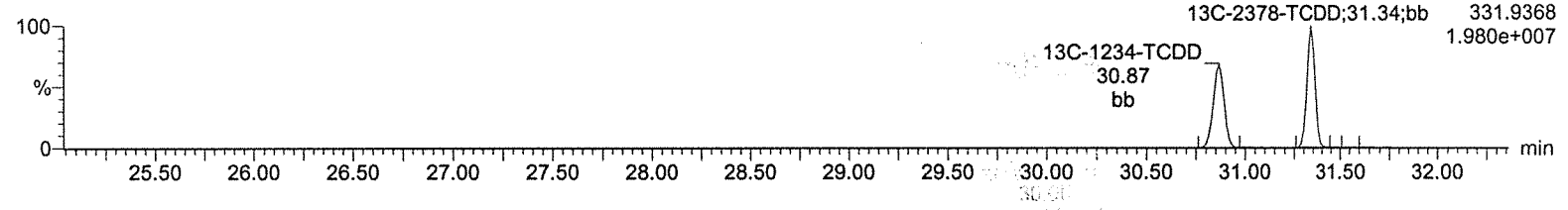
Total-tetradoxins

A08JUL19A-8



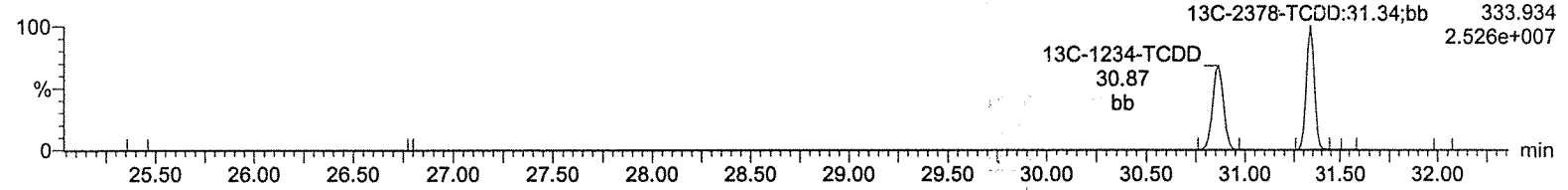
13C-2378-TCDD

A08JUL19A-8



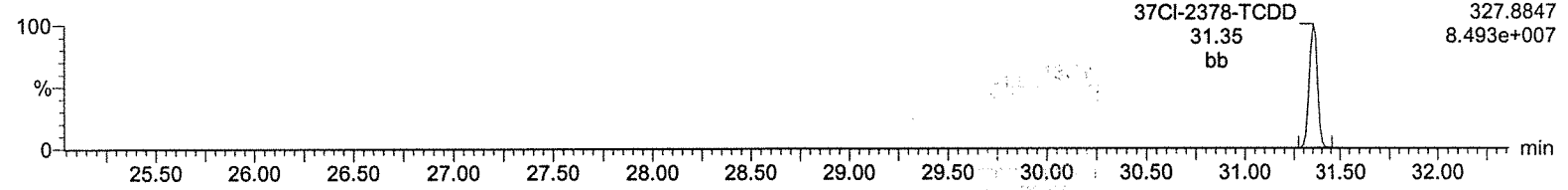
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A08JUL19A-8



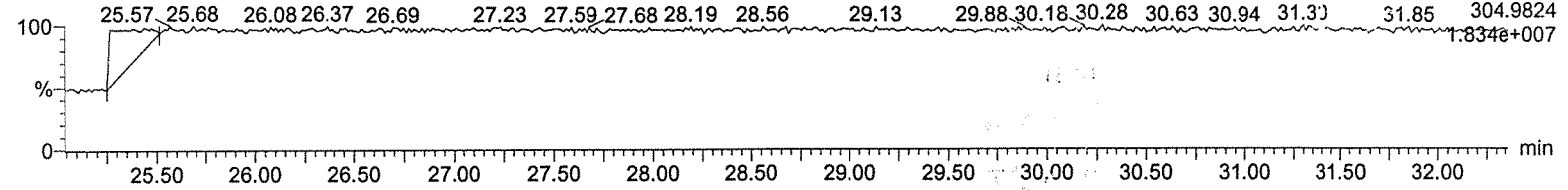
37Cl-2378-TCDD

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

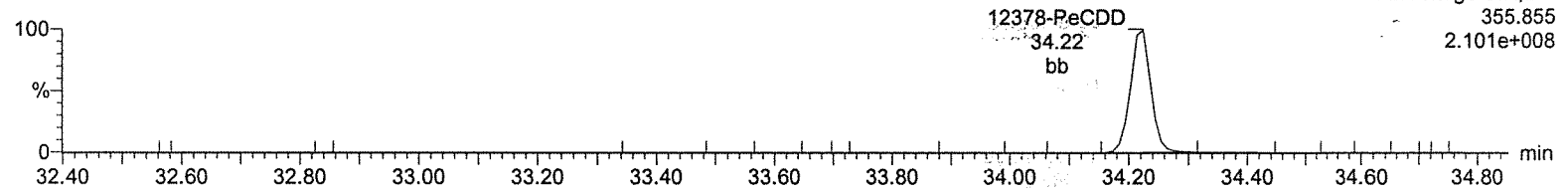
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

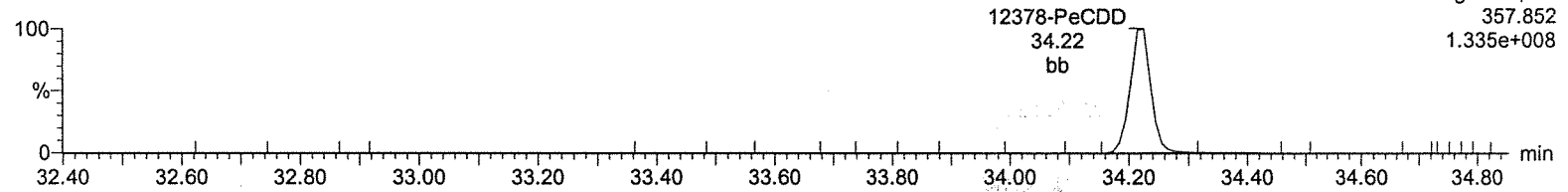
Total-pentadioxins

A08JUL19A-8



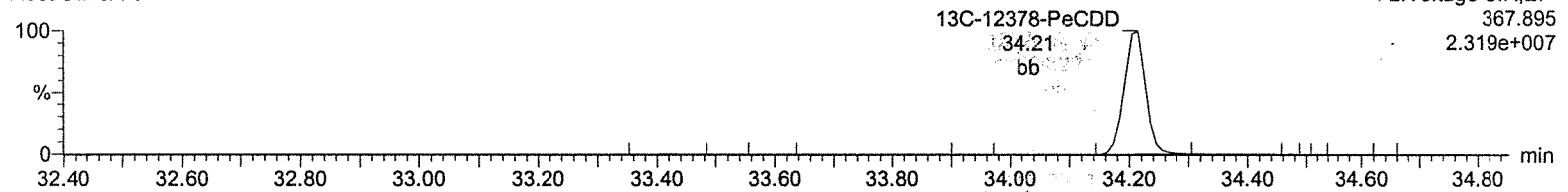
Total-pentadioxins

A08JUL19A-8



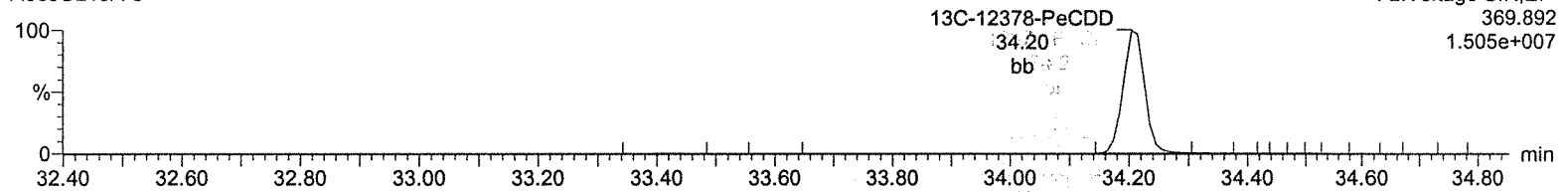
¹³C-12378-PeCDD

A08JUL19A-8



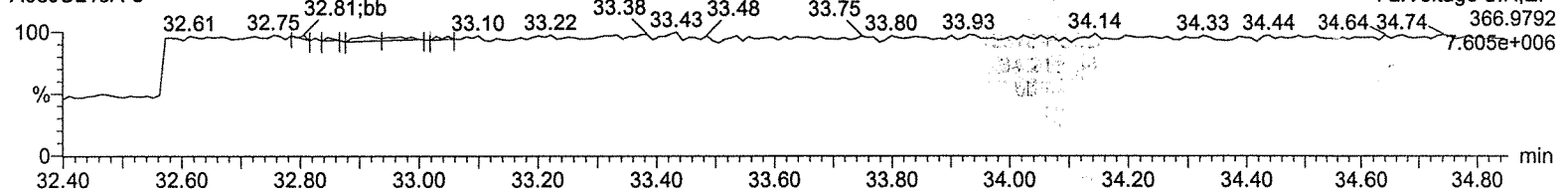
¹³C-12378-PeCDD

A08JUL19A-8



Lock Mass F2

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

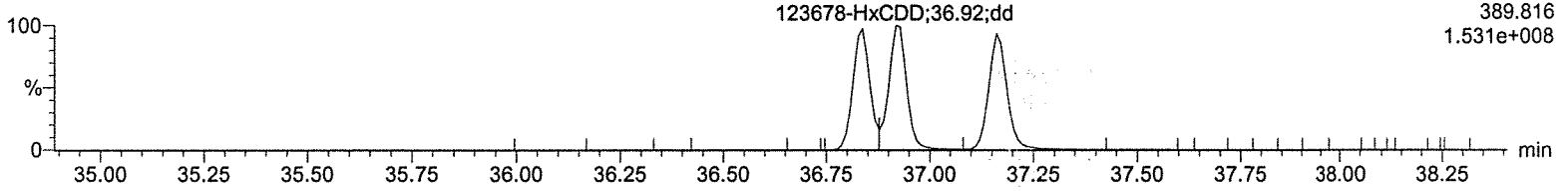
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-hexadioxins

A08JUL19A-8

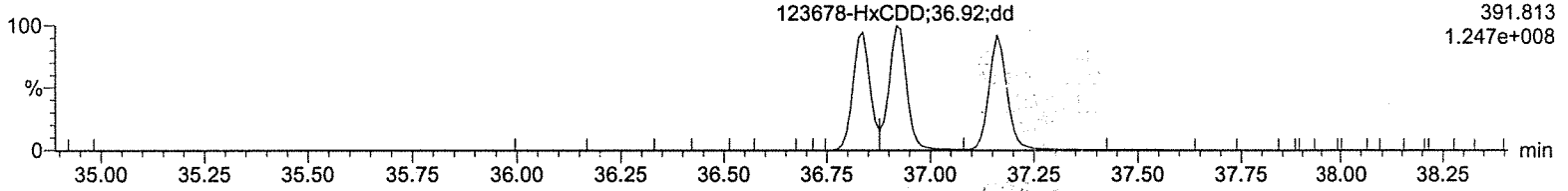
F3:Voltage SIR,EI+
389.816
1.531e+008



Total-hexadioxins

A08JUL19A-8

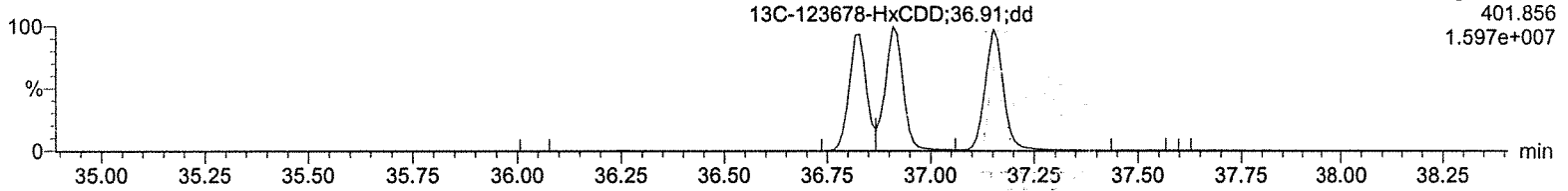
F3:Voltage SIR,EI+
391.813
1.247e+008



13C-123478-HxCDD

A08JUL19A-8

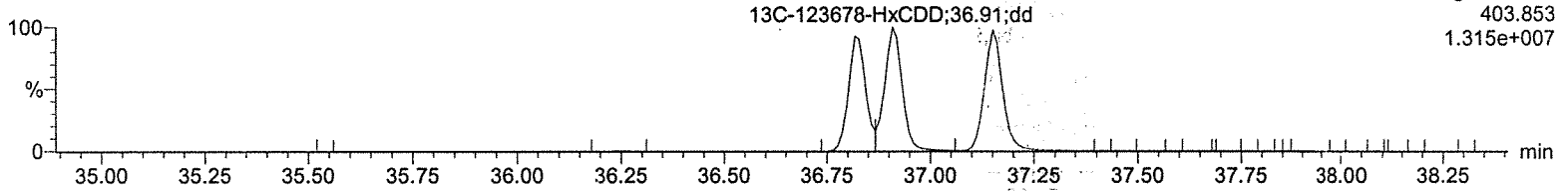
F3:Voltage SIR,EI+
401.856
1.597e+007



13C-123478-HxCDD

A08JUL19A-8

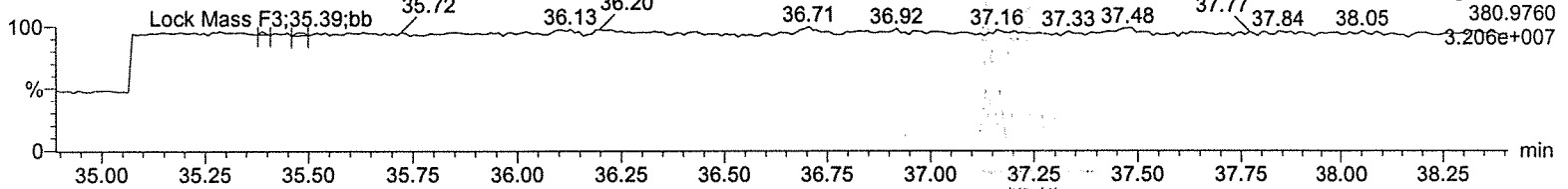
F3:Voltage SIR,EI+
403.853
1.315e+007



Lock Mass F3

A08JUL19A-8

F3:Voltage SIR,EI+
380.9760
3.206e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

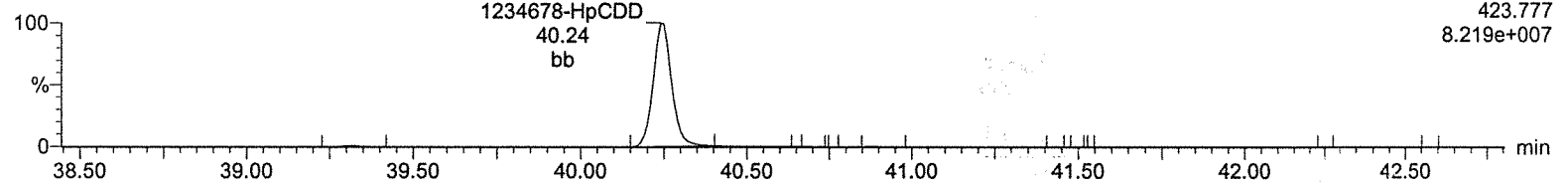
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-heptadioxins

A08JUL19A-8

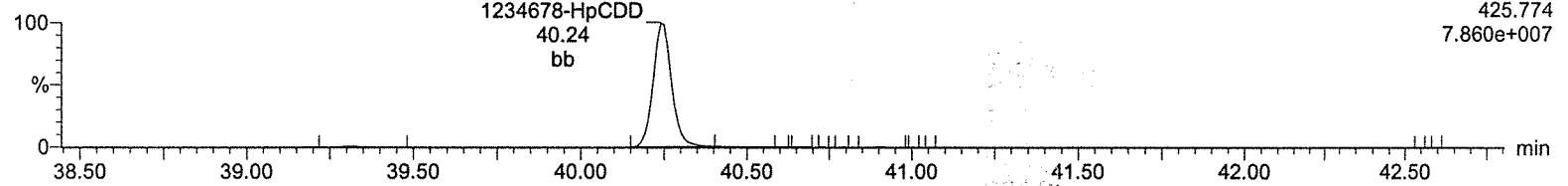
F4:Voltage SIR,EI+
423.777
8.219e+007



Total-heptadioxins

A08JUL19A-8

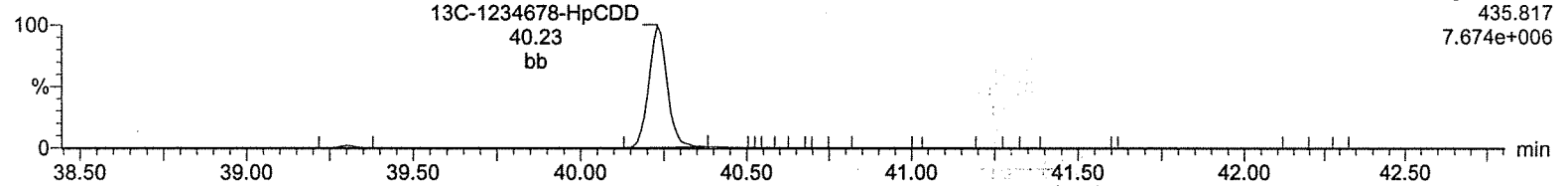
F4:Voltage SIR,EI+
425.774
7.860e+007



13C-1234678-HpCDD

A08JUL19A-8

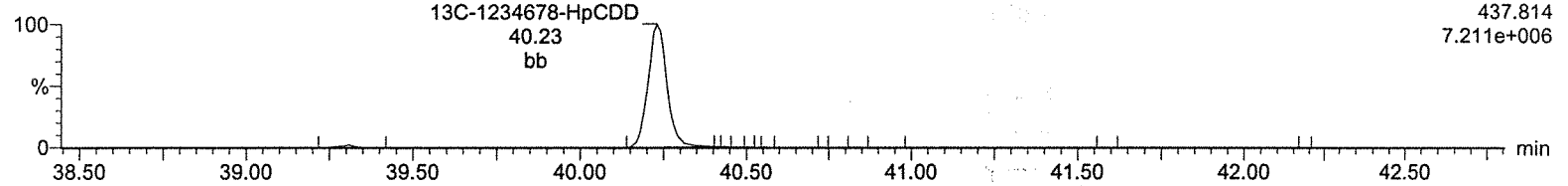
F4:Voltage SIR,EI+
435.817
7.674e+006



13C-1234678-HpCDD

A08JUL19A-8

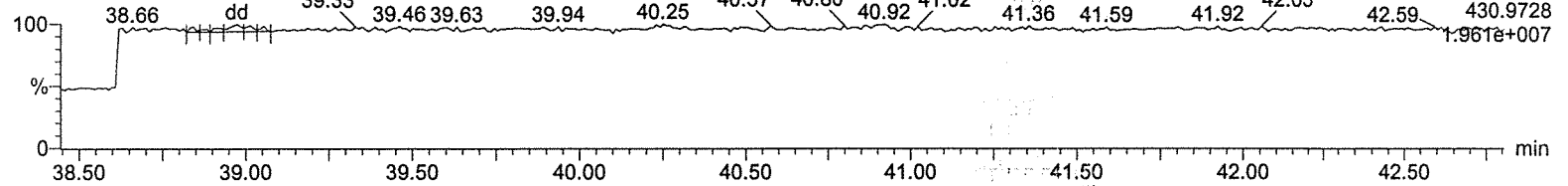
F4:Voltage SIR,EI+
437.814
7.211e+006



Lock Mass F4

A08JUL19A-8

F4:Voltage SIR,EI+
430.9728
1.961e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

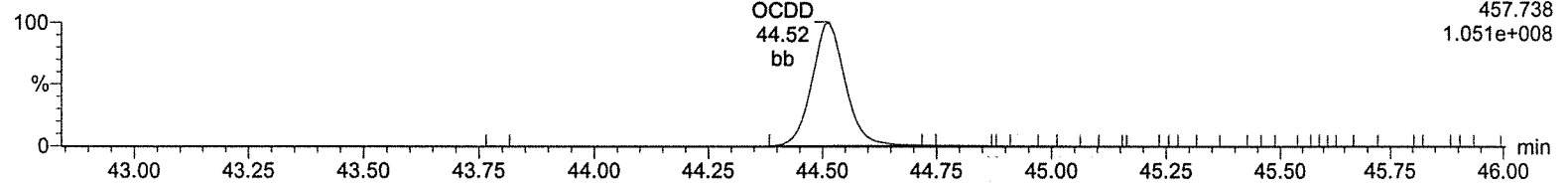
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDD

A08JUL19A-8

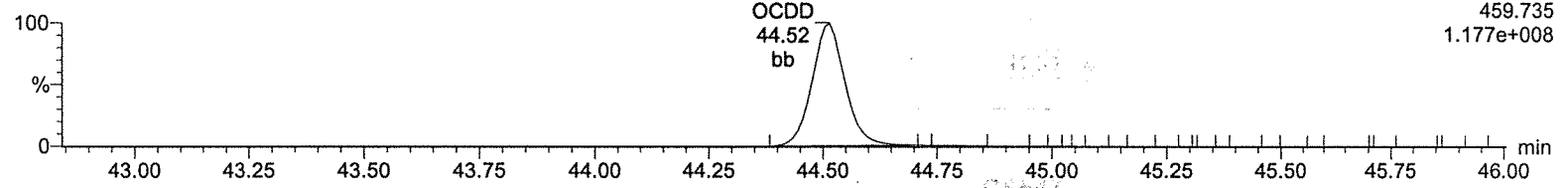
F5:Voltage SIR,EI+
457.738
1.051e+008



OCDD

A08JUL19A-8

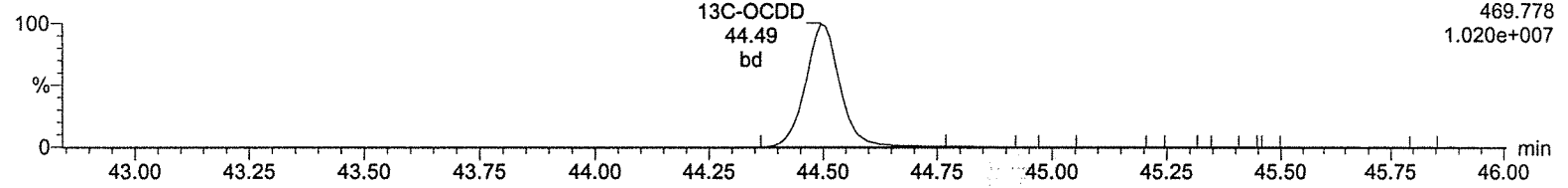
F5:Voltage SIR,EI+
459.735
1.177e+008



13C-OCDD

A08JUL19A-8

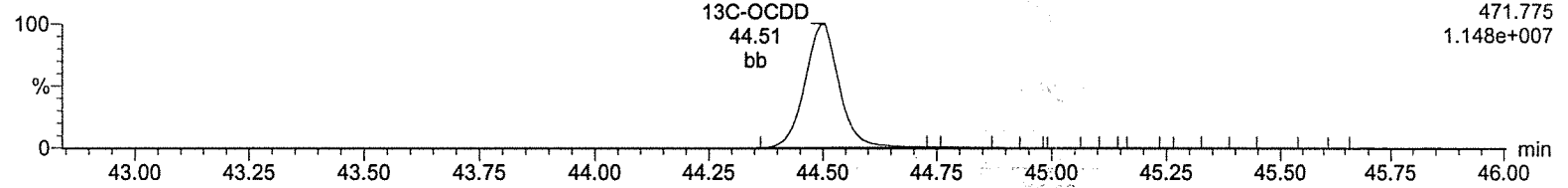
F5:Voltage SIR,EI+
469.778
1.020e+007



13C-OCDD

A08JUL19A-8

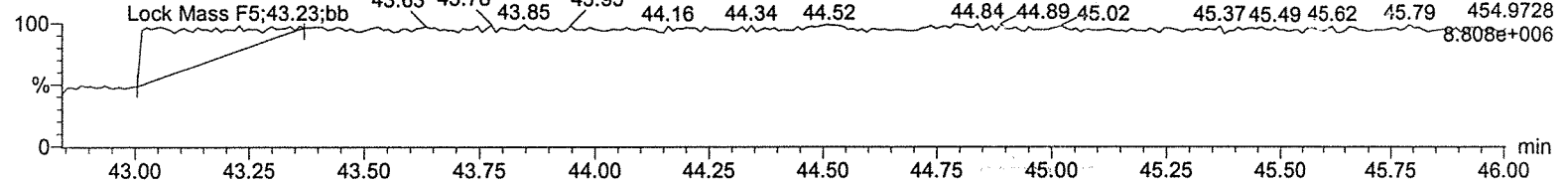
F5:Voltage SIR,EI+
471.775
1.148e+007



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
8.808e+006



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

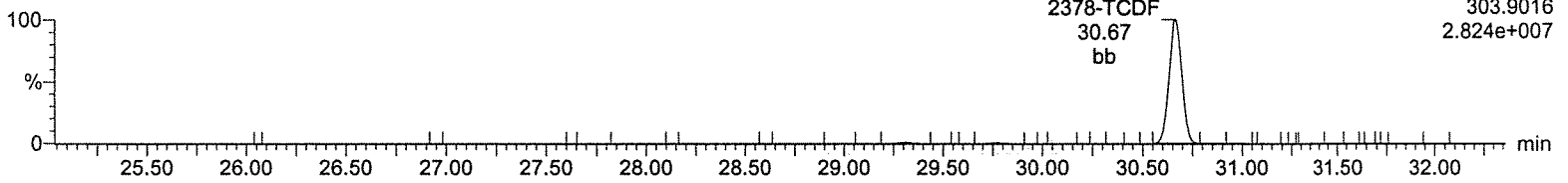
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-tetrafurans

A08JUL19A-8

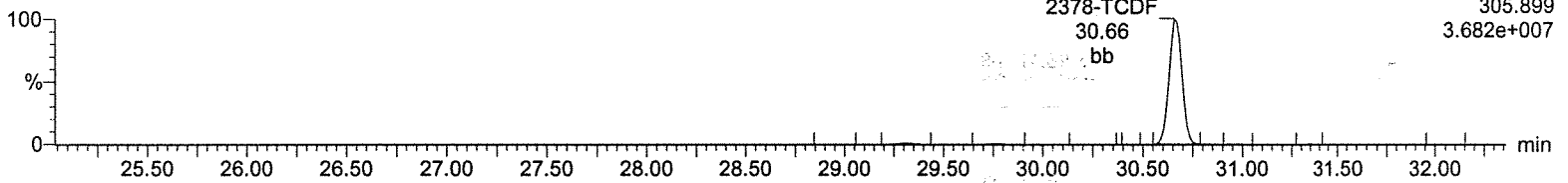
F1:Voltage SIR,EI+
303.9016
2.824e+007



Total-tetrafurans

A08JUL19A-8

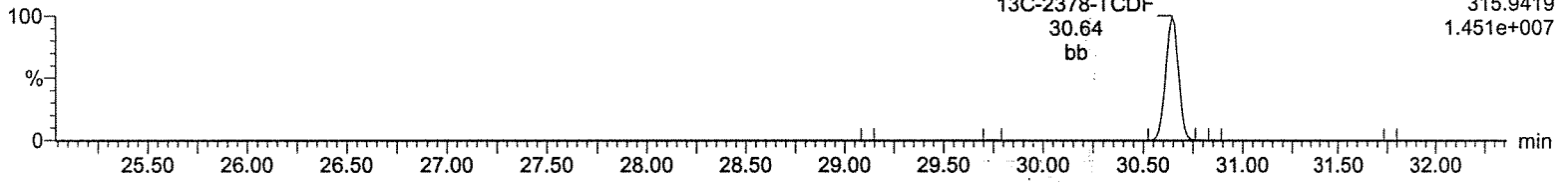
F1:Voltage SIR,EI+
305.899
3.682e+007



13C-2378-TCDF

A08JUL19A-8

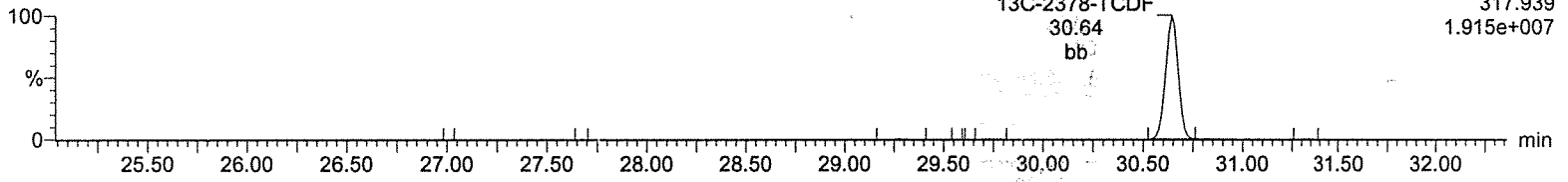
F1:Voltage SIR,EI+
315.9419
1.451e+007



13C-2378-TCDF

A08JUL19A-8

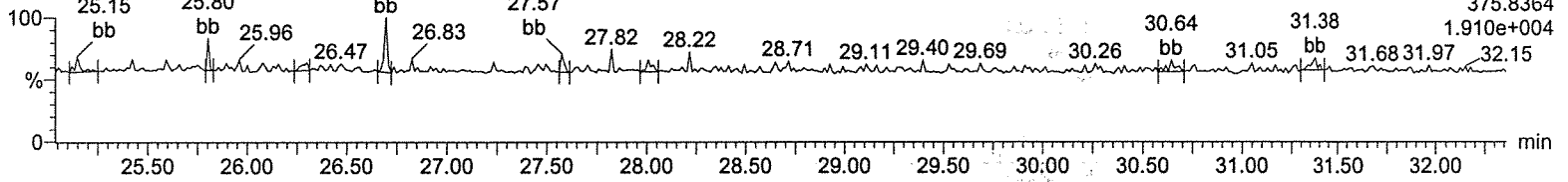
F1:Voltage SIR,EI+
317.939
1.915e+007



HxDPE

A08JUL19A-8

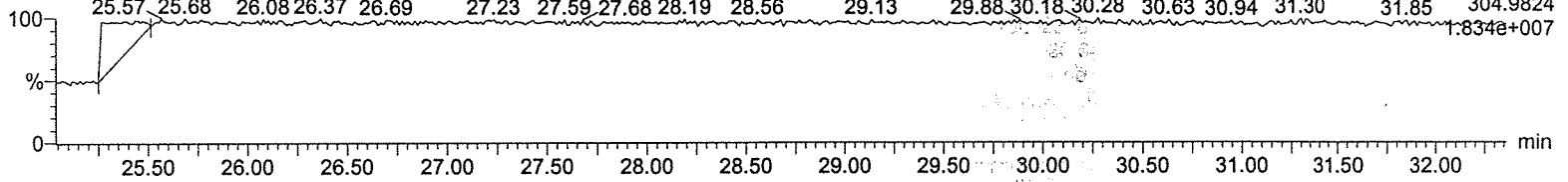
F1:Voltage SIR,EI+
375.8364
1.910e+004



Lock Mass F1

A08JUL19A-8

F1:Voltage SIR,EI+
304.9824
1.834e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

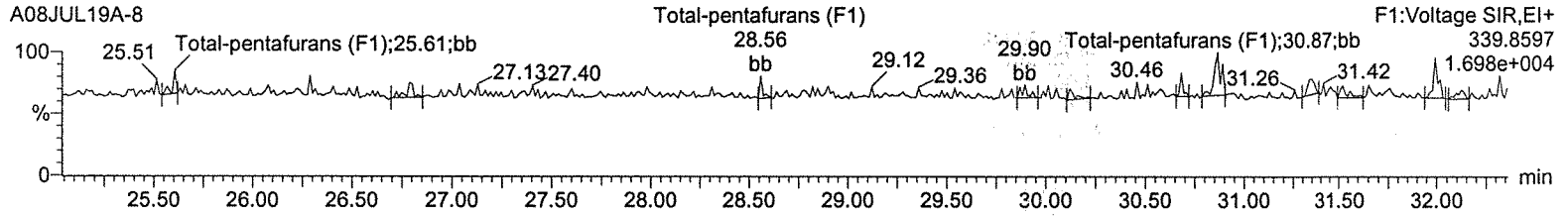
Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

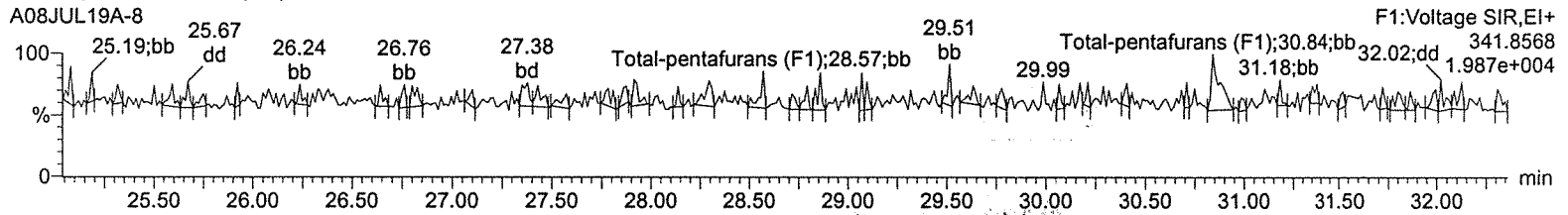
Total-pentafurans (F1)

A08JUL19A-8



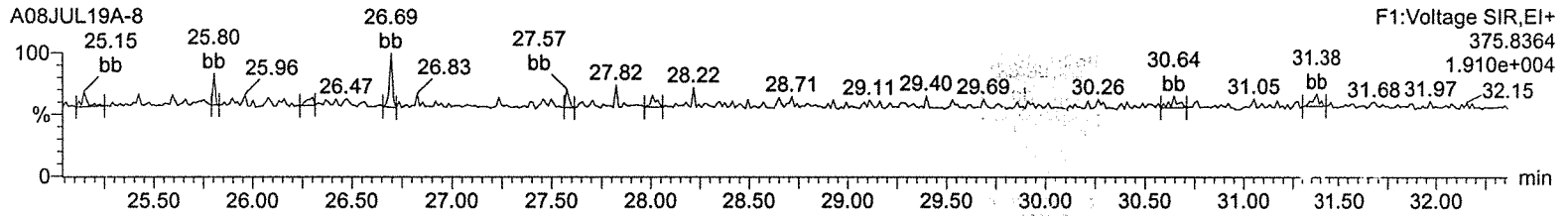
Total-pentafurans (F1)

A08JUL19A-8



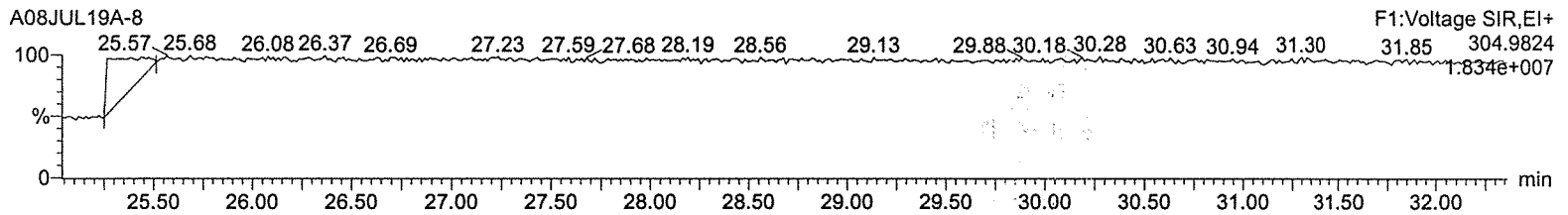
HxDPE

A08JUL19A-8



Lock Mass F1

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

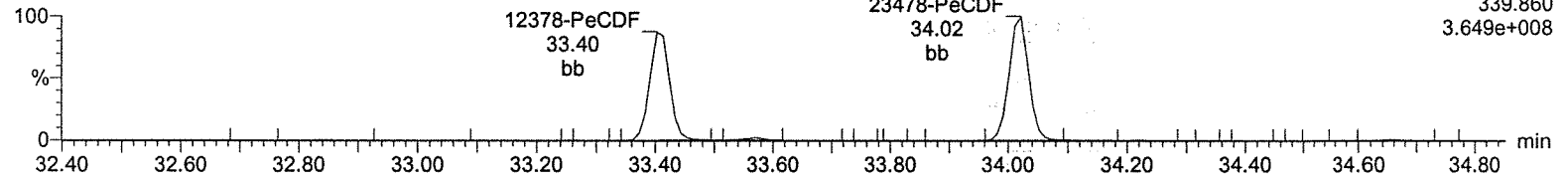
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

Total-pentafurans

A08JUL19A-8

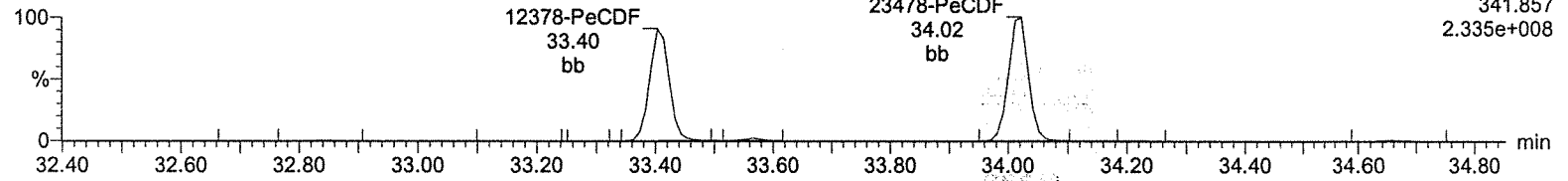
F2:Voltage SIR,EI+
339.860
3.649e+008



Total-pentafurans

A08JUL19A-8

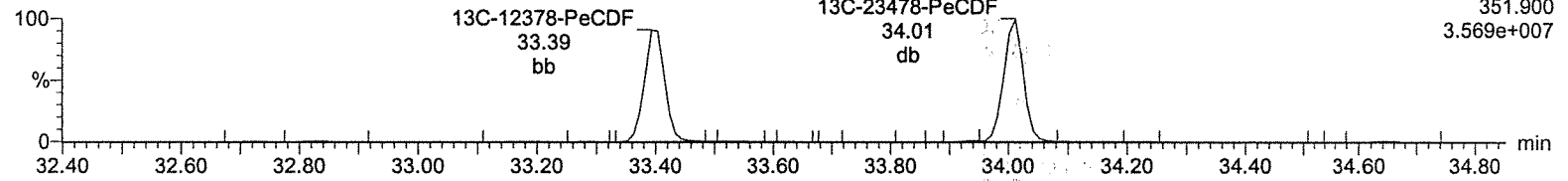
F2:Voltage SIR,EI+
341.857
2.335e+008



13C-12378-PeCDF

A08JUL19A-8

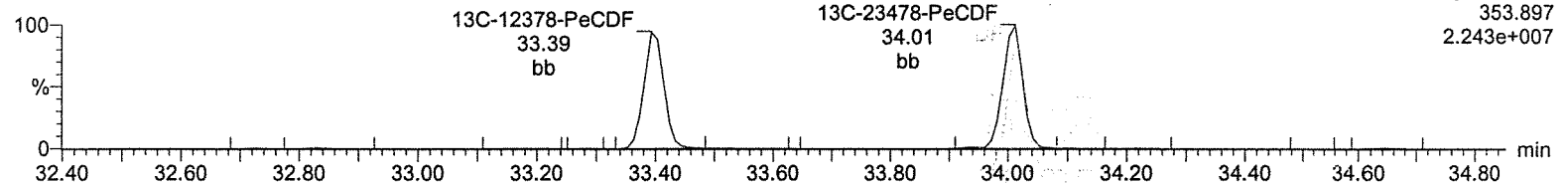
F2:Voltage SIR,EI+
351.900
3.569e+007



13C-12378-PeCDF

A08JUL19A-8

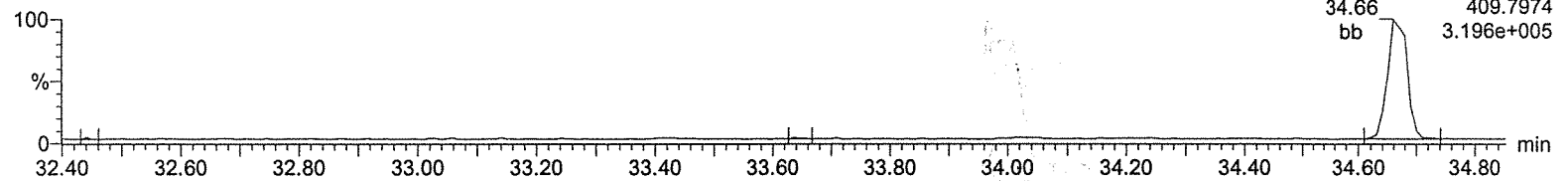
F2:Voltage SIR,EI+
353.897
2.243e+007



HpDPE

A08JUL19A-8

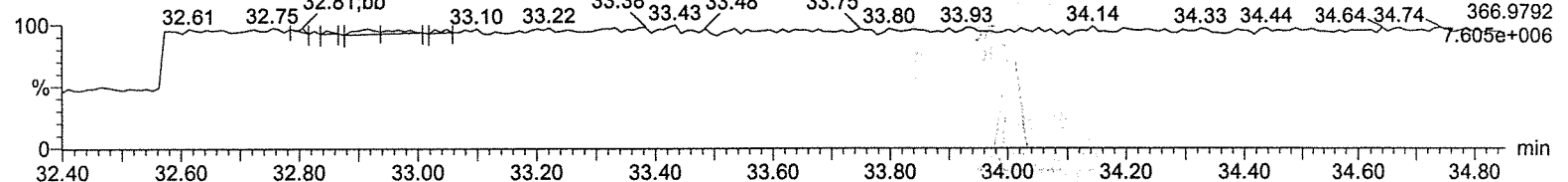
F2:Voltage SIR,EI+
34.66
409.7974
3.196e+005



Lock Mass F2

A08JUL19A-8

F2:Voltage SIR,EI+
366.9792
7.605e+006



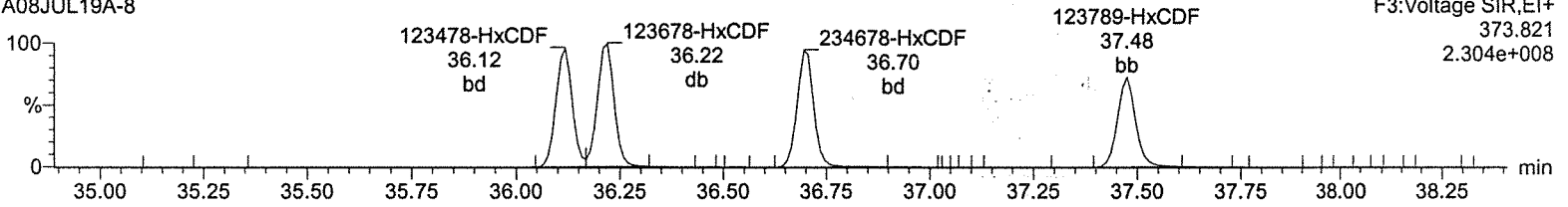
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

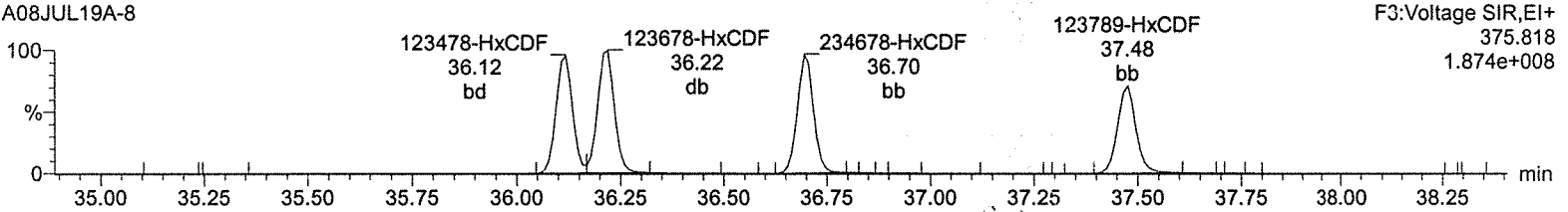
Total-hexafurans

A08JUL19A-8



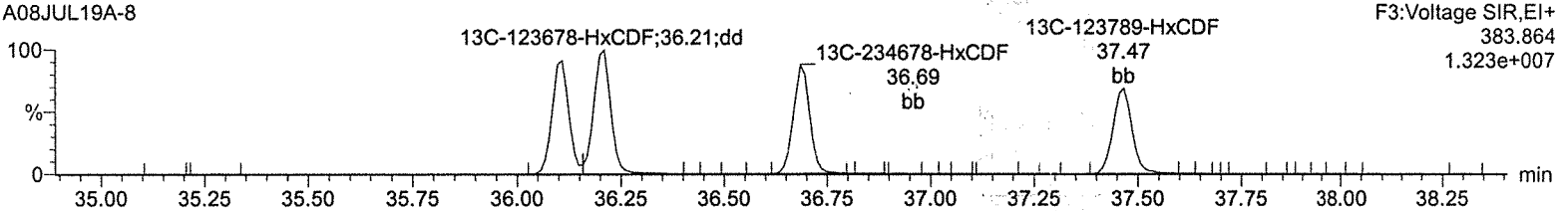
Total-hexafurans

A08JUL19A-8



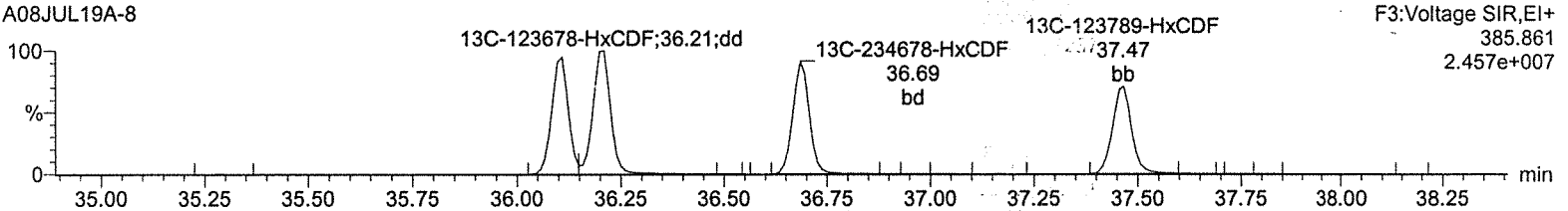
13C-123478-HxCDF

A08JUL19A-8



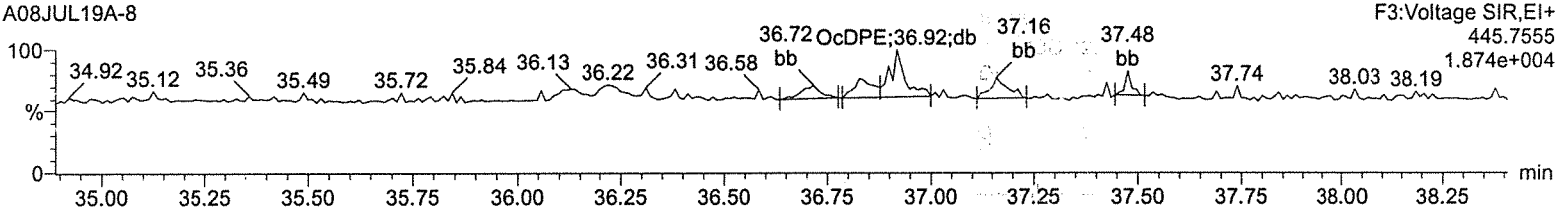
13C-123478-HxCDF

A08JUL19A-8



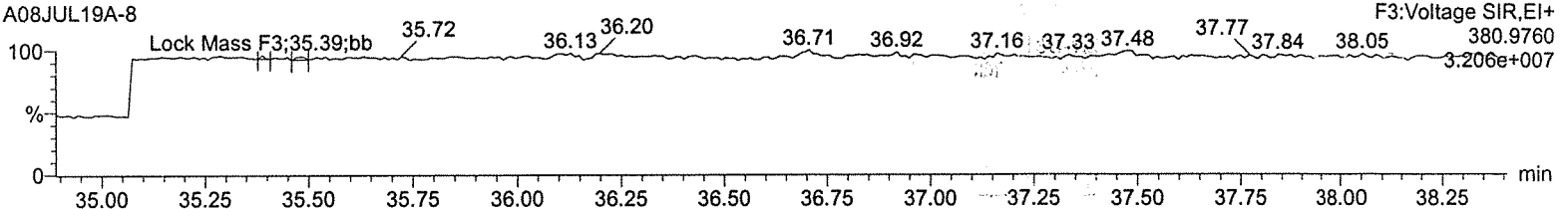
OcDPE

A08JUL19A-8



Lock Mass F3

A08JUL19A-8



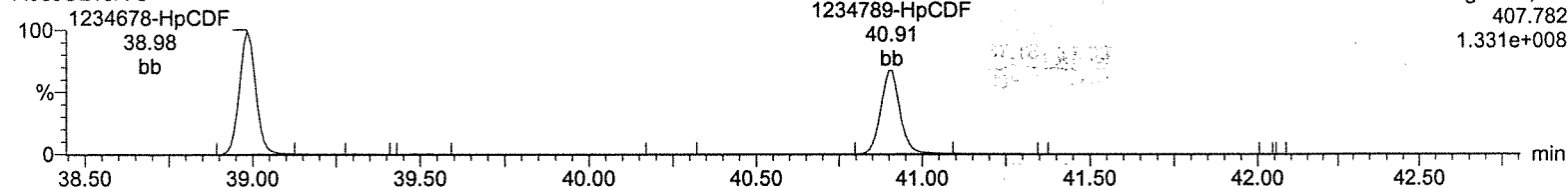
Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

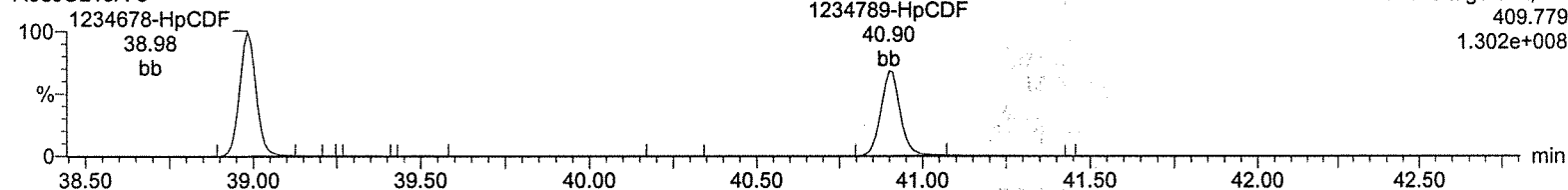
Total-heptafurans

A08JUL19A-8



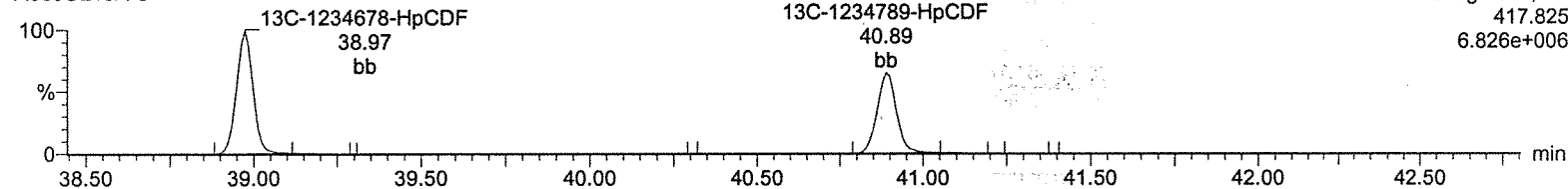
Total-heptafurans

A08JUL19A-8



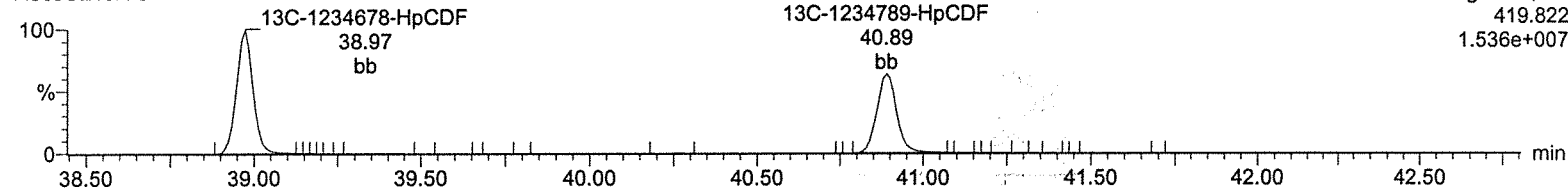
13C-1234678-HpCDF

A08JUL19A-8



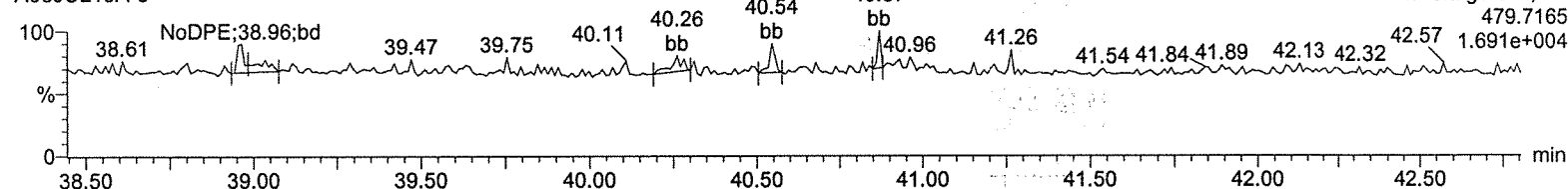
13C-1234678-HpCDF

A08JUL19A-8



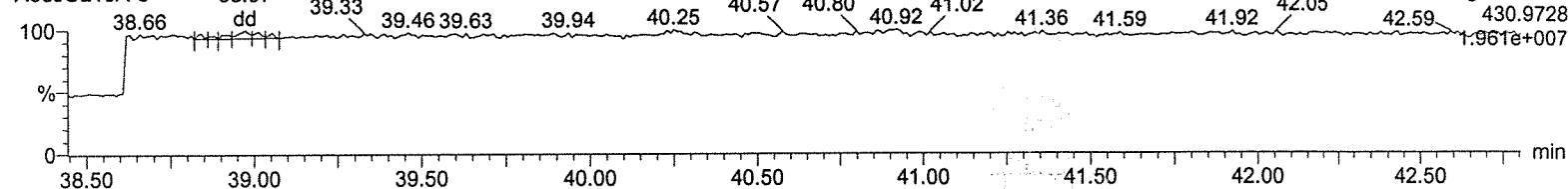
NoDPE

A08JUL19A-8



Lock Mass F4

A08JUL19A-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\1613-A08JUL19A.qld

Last Altered: Tuesday, July 09, 2019 08:43:28 Eastern Standard Time

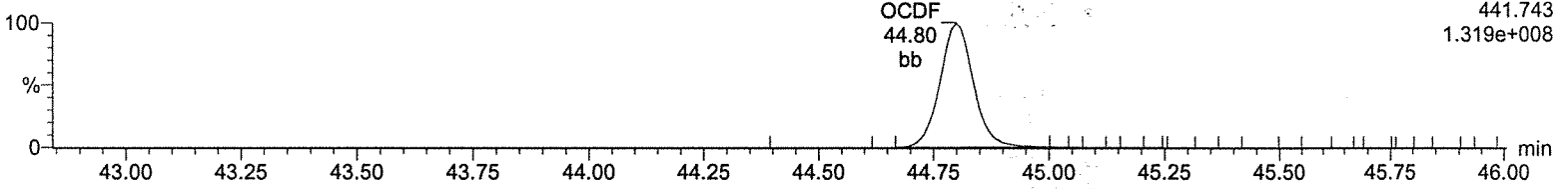
Printed: Tuesday, July 09, 2019 08:44:15 Eastern Standard Time

Name: A08JUL19A-8, Date: 08-Jul-2019, Time: 15:15:43, ID: CS5 UD190207-06 CS543

OCDF

A08JUL19A-8

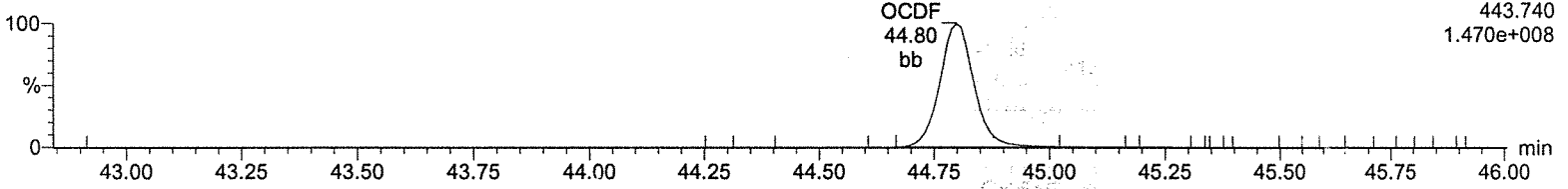
F5:Voltage SIR,EI+
441.743
1.319e+008



OCDF

A08JUL19A-8

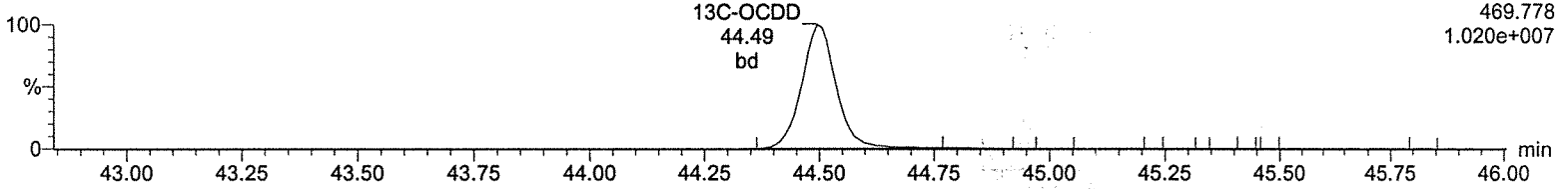
F5:Voltage SIR,EI+
443.740
1.470e+008



13C-OCDD

A08JUL19A-8

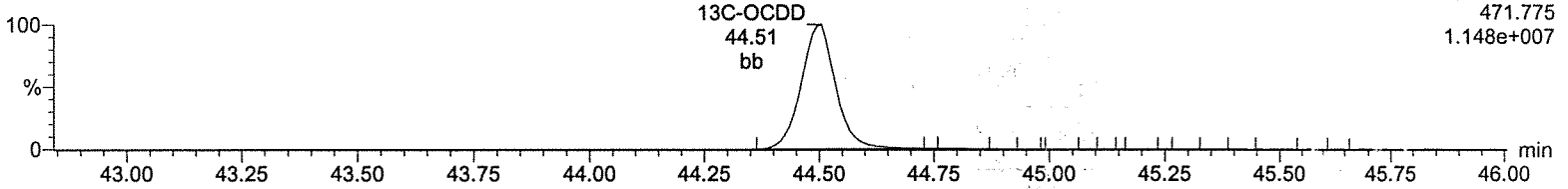
F5:Voltage SIR,EI+
469.778
1.020e+007



13C-OCDD

A08JUL19A-8

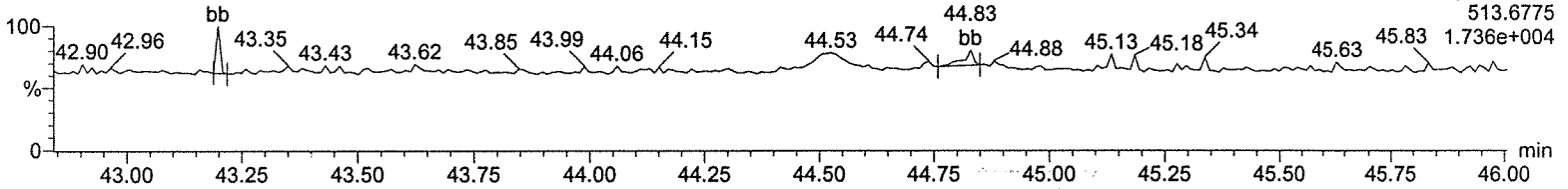
F5:Voltage SIR,EI+
471.775
1.148e+007



DeDPE

A08JUL19A-8

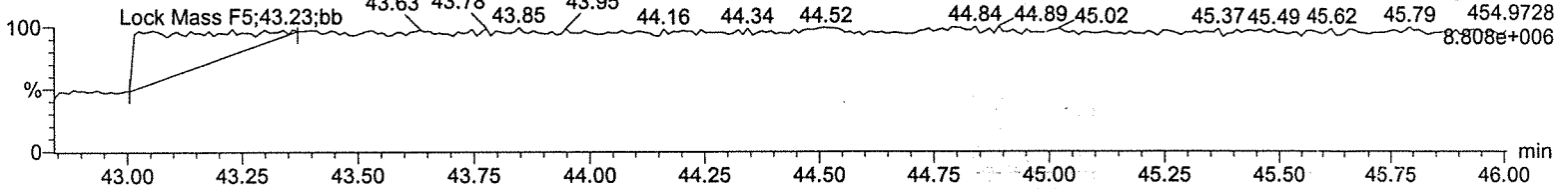
F5:Voltage SIR,EI+
513.6775
1.736e+004



Lock Mass F5

A08JUL19A-8

F5:Voltage SIR,EI+
454.9728
8.808e+006



Quantify Sample Summary Report
 Method 1613 CCAL Report
 MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Bill Gull

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_A07JUL19.mdb 08 Jul 2019 09:04:36
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.41e5	1.82e5	3.24e5	31.35	1.000	0.77	NO	9.832	0.0339	0.870	0.884	-1.7	2.69e6	3060	878.9	3.53e6	5470	645.8	db	db
2	12378-PeCDD	6.28e5	4.05e5	1.03e6	34.21	1.000	1.55	NO	49.971	0.0946	0.853	0.853	-0.1	1.53e7	12457	1224.5	9.64e6	6367	1513.5	bb	bb
3	123478-HxCDD	5.43e5	4.16e5	9.59e5	36.83	1.003	1.31	NO	51.806	0.105	0.974	0.940	3.6	1.08e7	8144	1328.2	8.57e6	8244	1039.0	bd	bd
4	123678-HxCDD	5.67e5	4.68e5	1.03e6	36.92	1.000	1.21	NO	49.386	0.103	0.932	0.944	-1.2	1.12e7	8144	1379.0	9.12e6	8244	1106.7	dd	dd
5	123789-HxCDD	5.58e5	4.36e5	9.94e5	37.16	1.007	1.28	NO	51.189	0.106	0.949	0.927	2.4	1.07e7	8144	1312.0	8.23e6	8244	998.2	dd	db
6	1234678-HpCDD	3.98e5	3.76e5	7.74e5	40.24	1.000	1.06	NO	49.581	0.150	1.031	1.040	-0.8	5.98e6	7083	844.3	5.67e6	6641	854.3	bd	bd
7	OCDD	6.28e5	7.01e5	1.33e6	44.51	1.000	0.90	NO	102.285	0.401	0.994	0.971	2.3	6.90e6	17082	404.1	7.71e6	5735	1344.7	bd	bd
8	2378-TCDF	1.72e5	2.22e5	3.94e5	30.66	1.000	0.77	NO	9.823	0.0430	0.961	0.978	-1.8	2.30e6	3145	731.2	2.96e6	5788	511.5	bb	bb
9	12378-PeCDF	9.44e5	6.09e5	1.55e6	33.40	1.000	1.55	NO	50.062	0.0563	0.946	0.945	0.1	2.45e7	10653	2295.4	1.55e7	7239	2135.3	bb	bb
10	23478-PeCDF	1.04e6	6.88e5	1.73e6	34.01	1.000	1.51	NO	50.564	0.0527	0.998	0.987	1.1	2.61e7	10653	2446.1	1.76e7	7239	2425.8	bb	bb
11	123478-HxCDF	7.43e5	6.15e5	1.36e6	36.11	1.000	1.21	NO	50.445	0.0894	1.097	1.087	0.9	1.57e7	9481	1652.2	1.28e7	11235	1143.5	bd	bd
12	123678-HxCDF	8.06e5	6.66e5	1.47e6	36.21	1.000	1.21	NO	50.994	0.0885	1.061	1.041	2.0	1.68e7	9481	1768.9	1.39e7	11235	1235.2	db	db
13	234678-HxCDF	7.55e5	6.18e5	1.37e6	36.70	1.000	1.22	NO	50.671	0.0922	1.151	1.136	1.3	1.58e7	9481	1664.0	1.25e7	11235	1111.0	bb	bb
14	123789-HxCDF	6.33e5	5.14e5	1.15e6	37.47	1.000	1.23	NO	50.766	0.123	1.077	1.061	1.5	1.12e7	9481	1180.5	9.35e6	11235	832.1	bd	bb
15	1234678-HpCDF	5.58e5	5.57e5	1.12e6	38.98	1.001	1.00	NO	50.942	0.0954	1.171	1.150	1.9	9.40e6	6651	1412.9	9.27e6	7143	1297.6	bb	bd
16	1234789-HpCDF	4.59e5	4.46e5	9.05e5	40.90	1.000	1.03	NO	50.253	0.138	1.208	1.202	0.5	6.56e6	6651	985.8	6.41e6	7143	896.9	bb	bd
17	OCDF	7.28e5	8.04e5	1.53e6	44.79	1.007	0.91	NO	101.154	0.168	1.146	1.133	1.2	8.07e6	4510	1788.9	8.87e6	6658	1332.1	bd	bb
18	13C-2378-TCDD	1.62e6	2.10e6	3.72e6	31.34	1.015	0.77	NO	100.391	0.0536	1.133	1.128	0.4	3.09e7	7595	4072.7	4.03e7	4391	9166.0	bb	bb
19	13C-12378-PeCDD	1.47e6	9.56e5	2.42e6	34.20	1.108	1.53	NO	98.091	0.0648	0.737	0.751	-1.9	3.53e7	4920	7177.0	2.29e7	4727	4839.8	bb	bb
20	13C-123478-HxCDD	1.09e6	8.81e5	1.97e6	36.82	0.991	1.24	NO	99.188	0.128	0.889	0.896	-0.8	2.29e7	5728	3998.3	1.85e7	12292	1505.5	bd	bd
21	13C-123678-HxCDD	1.22e6	9.99e5	2.22e6	36.91	0.993	1.22	NO	101.615	0.116	1.002	0.986	1.6	2.32e7	5728	4044.5	1.91e7	12292	1555.2	dd	dd
22	13C-1234678-HpCDD	7.66e5	7.34e5	1.50e6	40.23	1.083	1.04	NO	100.813	0.141	0.677	0.672	0.8	1.12e7	8086	1388.7	1.07e7	6816	1575.1	bd	bd
23	13C-OCDD	1.26e6	1.42e6	2.67e6	44.49	1.197	0.89	NO	187.951	0.195	0.603	0.642	-6.0	1.38e7	9703	1418.2	1.56e7	10005	1564.1	bb	bb
24	13C-2378-TCDF	1.79e6	2.31e6	4.10e6	30.64	0.993	0.78	NO	99.787	0.0758	1.247	1.250	-0.2	2.32e7	12127	1915.0	3.00e7	6648	4519.7	bb	bb
25	13C-12378-PeCDF	2.01e6	1.27e6	3.28e6	33.39	1.082	1.58	NO	98.830	0.132	0.999	1.011	-1.2	5.15e7	10054	5118.1	3.27e7	16300	2004.3	bb	bb
26	13C-23478-PeCDF	2.12e6	1.34e6	3.48e6	34.00	1.102	1.58	NO	99.016	0.125	1.053	1.063	-1.0	5.26e7	10054	5234.8	3.35e7	16300	2054.1	bb	bb
27	13C-123478-HxCDF	8.52e5	1.62e6	2.48e6	36.10	0.972	0.53	NO	100.589	0.156	1.117	1.111	0.6	1.83e7	10145	1807.7	3.44e7	17090	2014.8	bd	bd
28	13C-123678-HxCDF	9.54e5	1.82e6	2.77e6	36.20	0.974	0.52	NO	100.412	0.139	1.252	1.247	0.4	1.93e7	10145	1906.8	3.71e7	17090	2170.1	dd	dd
29	13C-234678-HxCDF	8.17e5	1.57e6	2.39e6	36.69	0.987	0.52	NO	99.533	0.160	1.077	1.082	-0.5	1.69e7	10145	1670.0	3.21e7	17090	1878.8	bb	bb
30	13C-123789-HxCDF	7.27e5	1.40e6	2.13e6	37.46	1.008	0.52	NO	99.456	0.179	0.962	0.967	-0.5	1.36e7	10145	1338.3	2.55e7	17090	1490.9	bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
 Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	5.97e5	1.31e6	1.90e6	38.96	1.049	0.46	NO	98.762	0.113	0.859	0.870	-1.2	9.86e6	5992	1645.9	2.20e7	9443	2325.7	bd	bb
32	13C-1234789-HpCDF	4.61e5	1.04e6	1.50e6	40.88	1.100	0.44	NO	99.800	0.145	0.676	0.677	-0.2	6.40e6	5992	1068.7	1.42e7	9443	1505.6	bd	bb
33	13C-1234-TCDD	1.43e6	1.85e6	3.29e6	30.87	0.000	0.77	NO	100.000	0.0605	1.000	1.000	0.0	2.16e7	7595	2846.5	2.76e7	4391	6279.9	bb	bb
34	13C-123789-HxCDD	1.22e6	9.94e5	2.22e6	37.15	0.000	1.23	NO	100.000	0.114	1.000	1.000	0.0	2.17e7	5728	3793.8	1.77e7	12292	1436.7	dd	dd
35	37Cl-2378-TCDD	3.41e5		3.41e5	31.35	1.016			9.764	0.0169	1.036	1.061	-2.4	6.62e6	3545	1868.0				db	

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

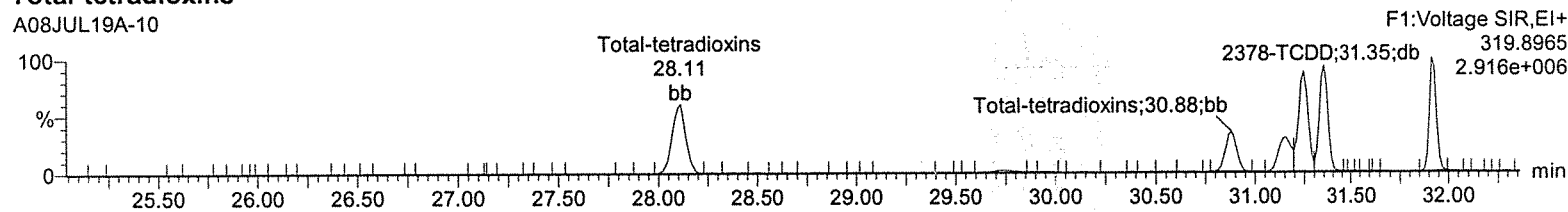
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 08:53:23

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

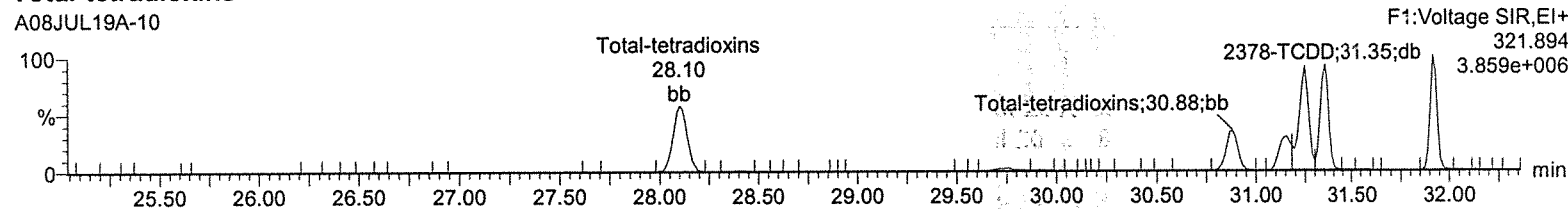
Total-tetradoxins

A08JUL19A-10



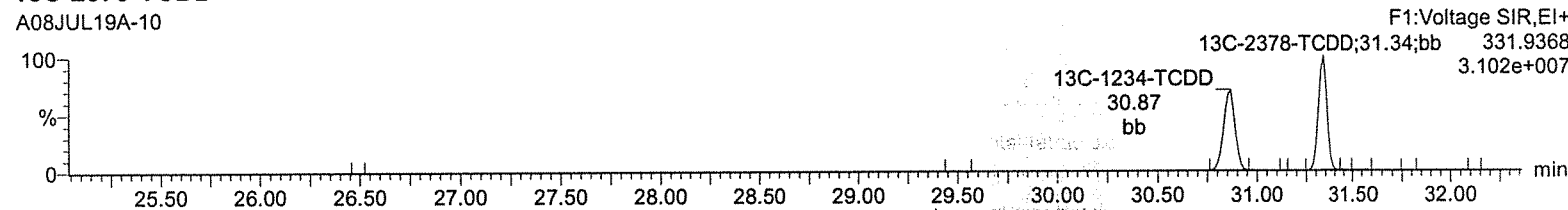
Total-tetradoxins

A08JUL19A-10



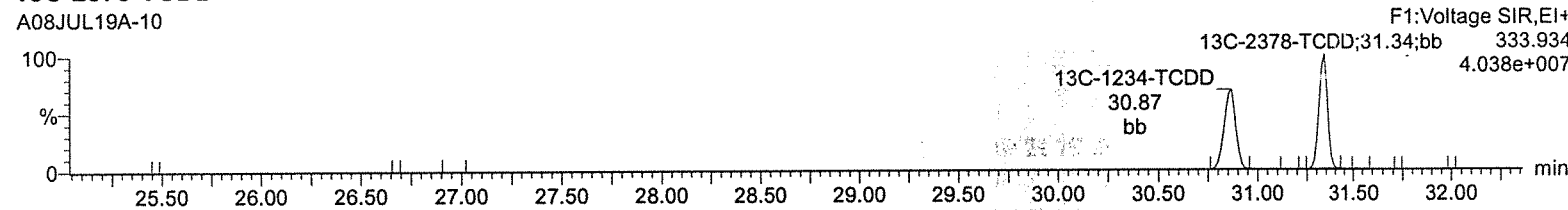
13C-2378-TCDD

A08JUL19A-10



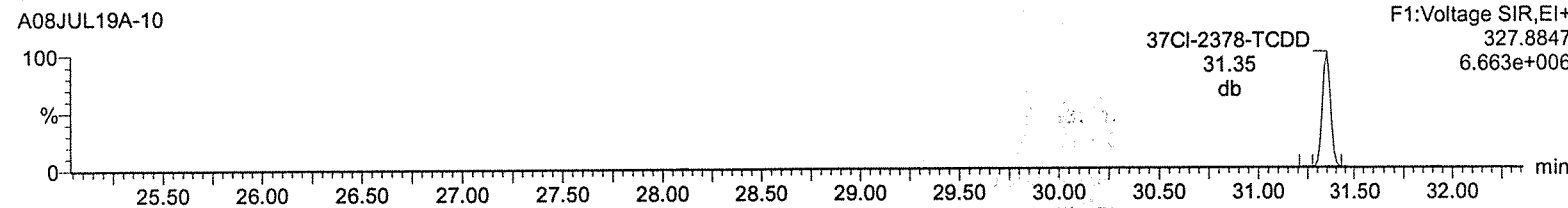
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A08JUL19A-10



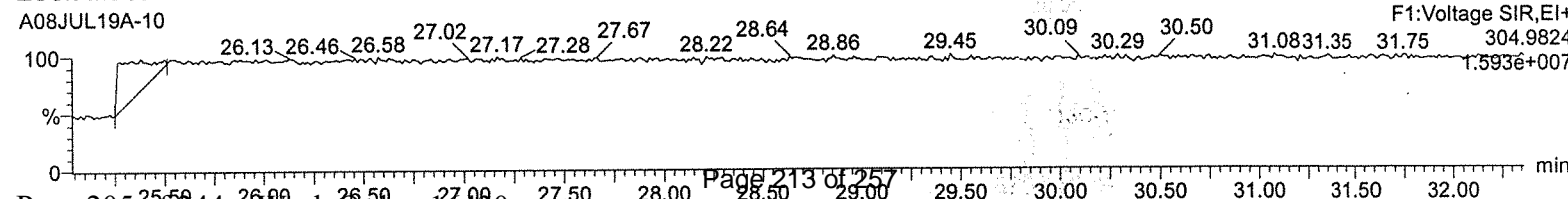
37Cl-2378-TCDD

A08JUL19A-10



Lock Mass F1

A08JUL19A-10

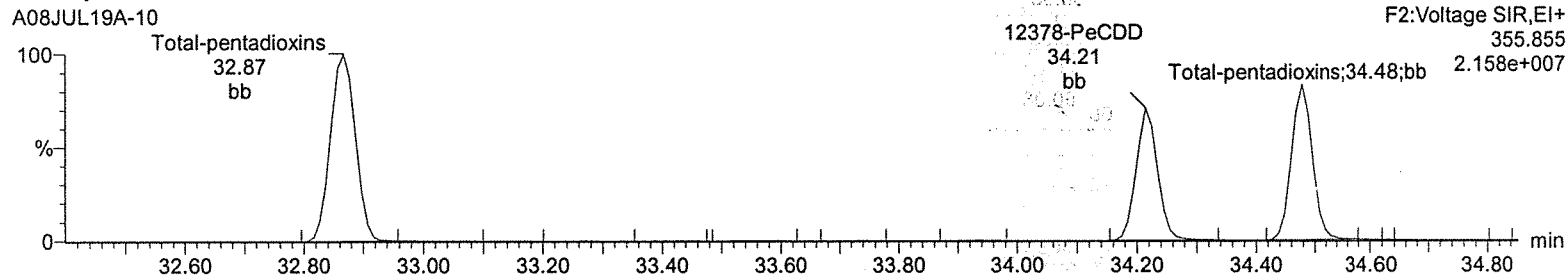


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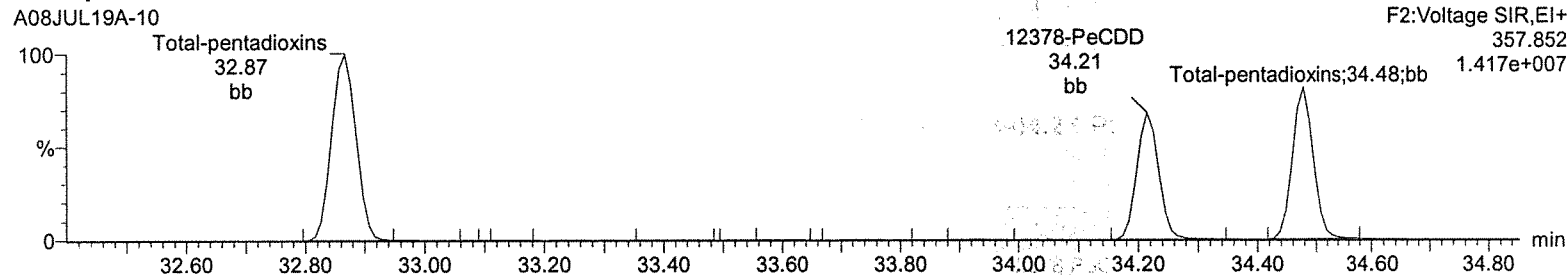
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

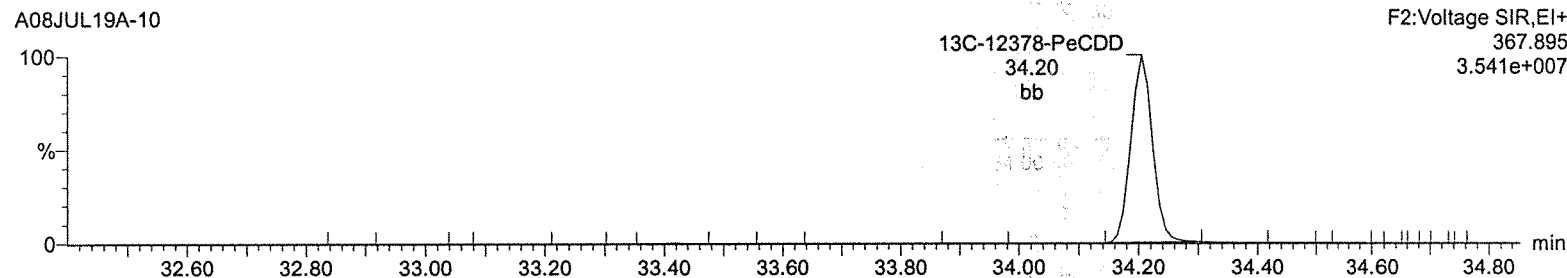
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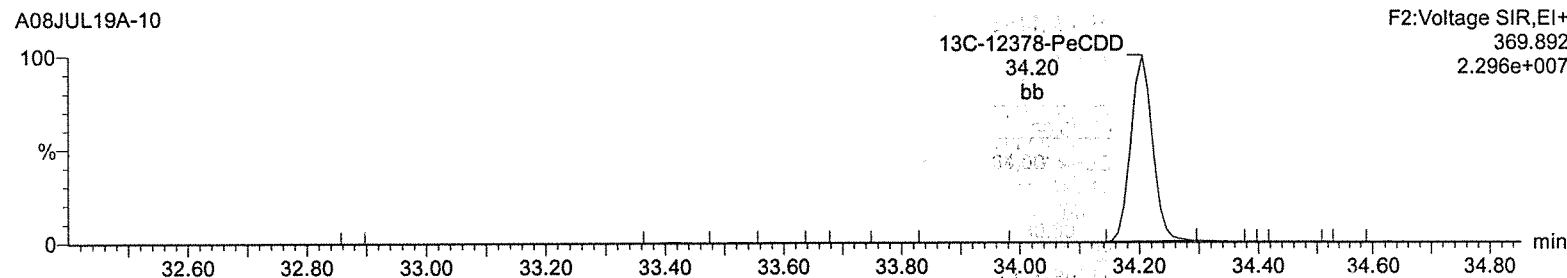
Total-pentadioxins



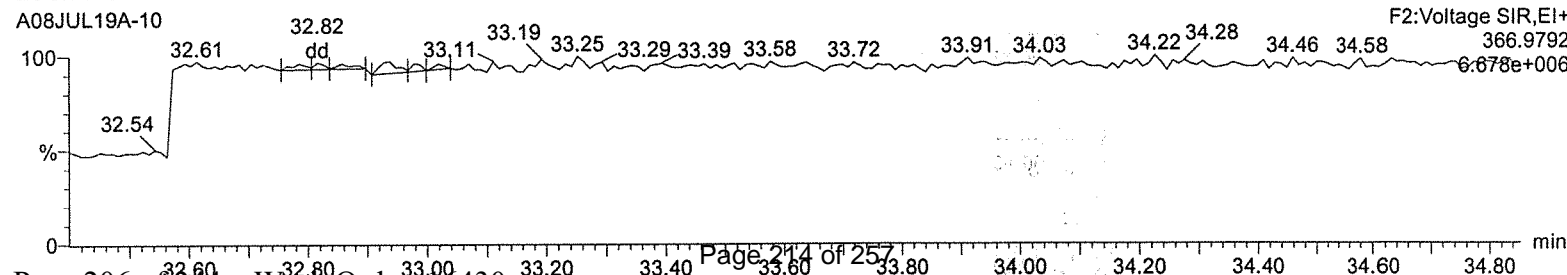
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

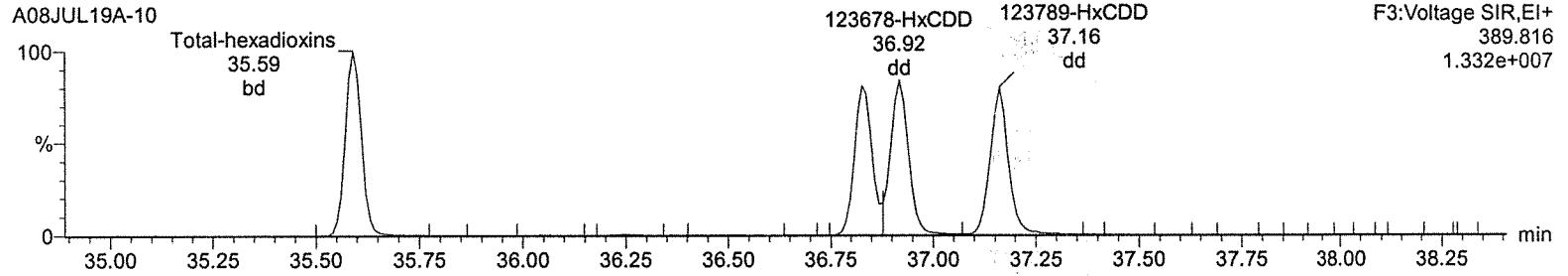
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Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

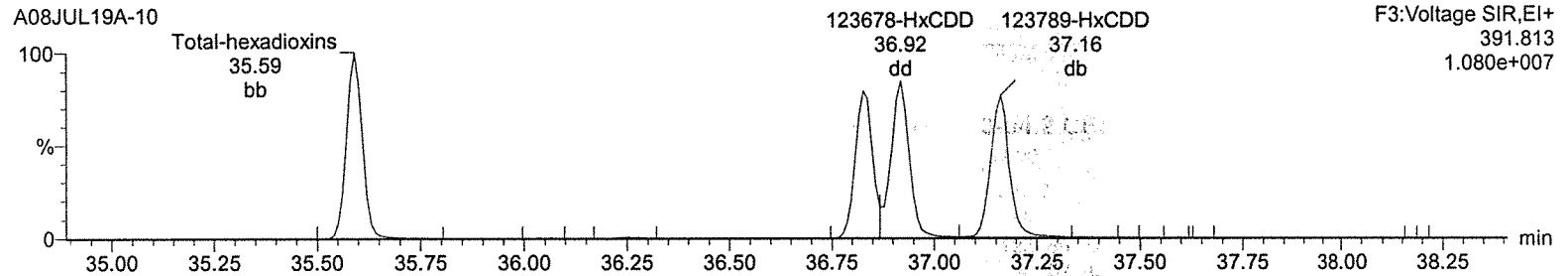
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A08JUL19A-10



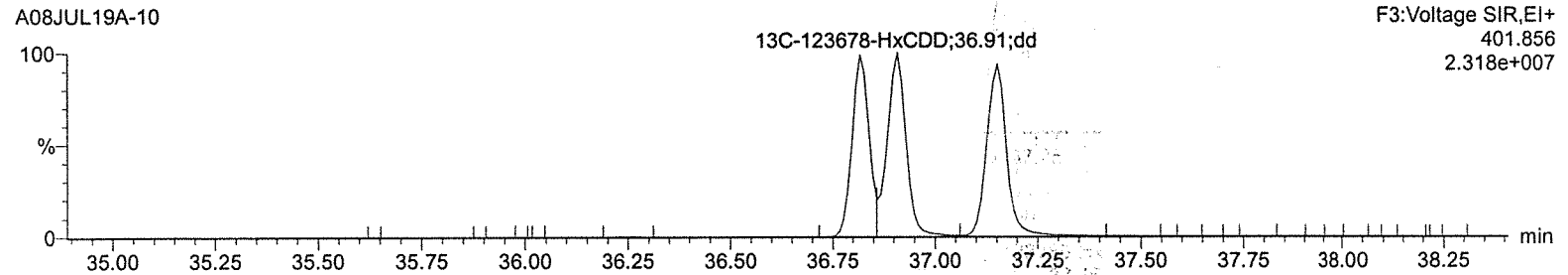
Total-hexadioxins

A08JUL19A-10



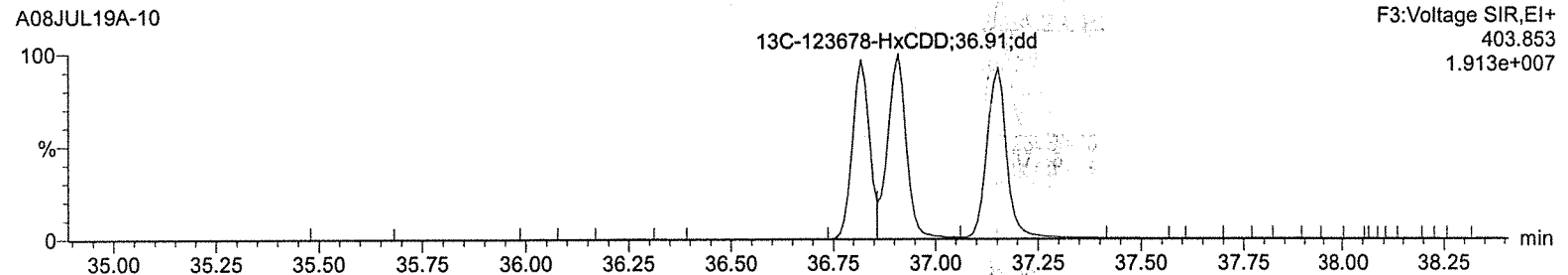
13C-123478-HxCDD

A08JUL19A-10



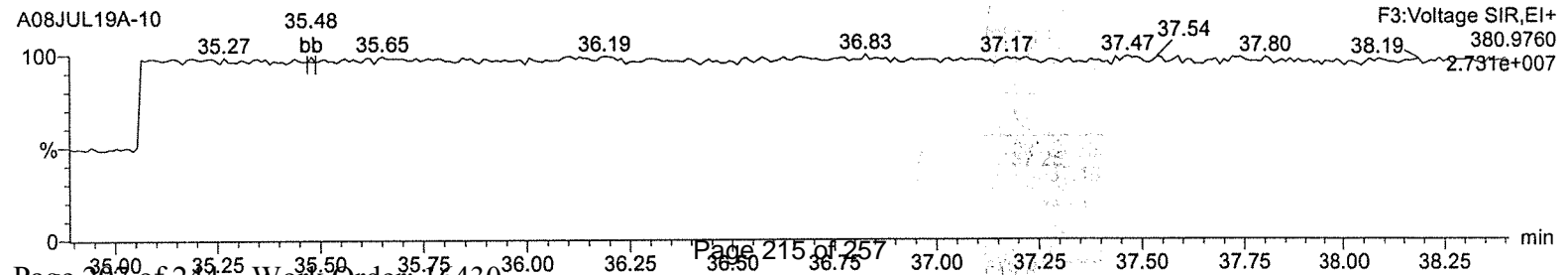
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A08JUL19A-10



Lock Mass F3

A08JUL19A-10



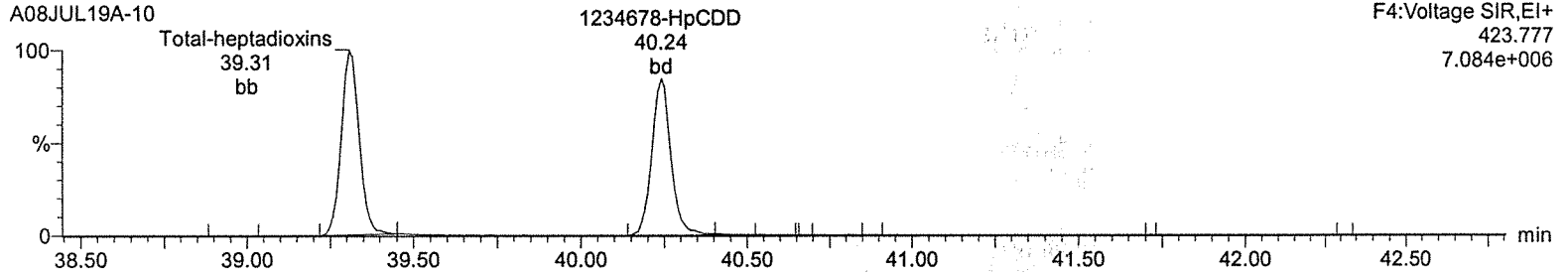
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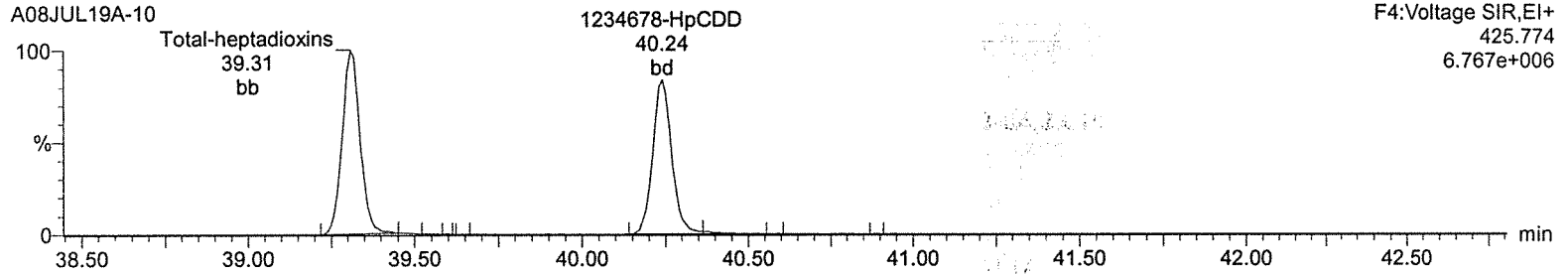
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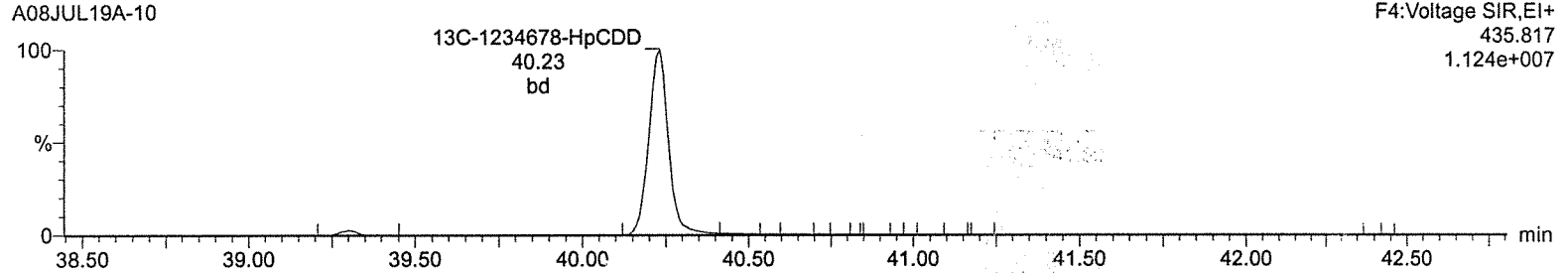
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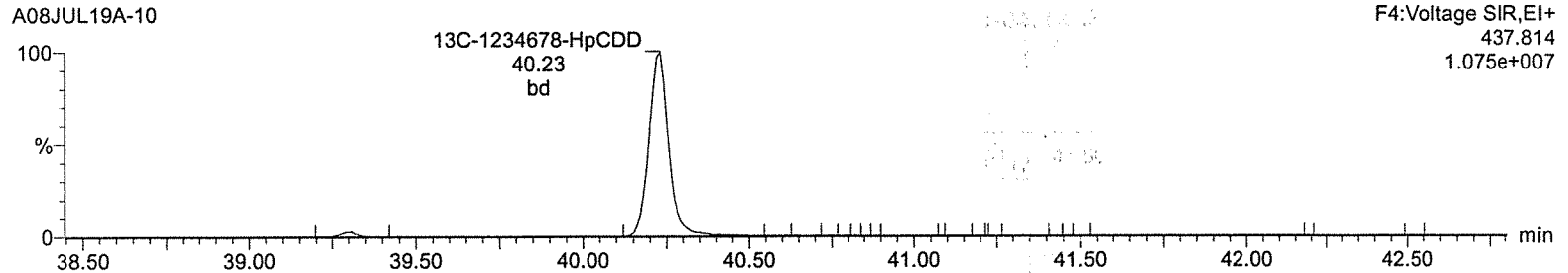
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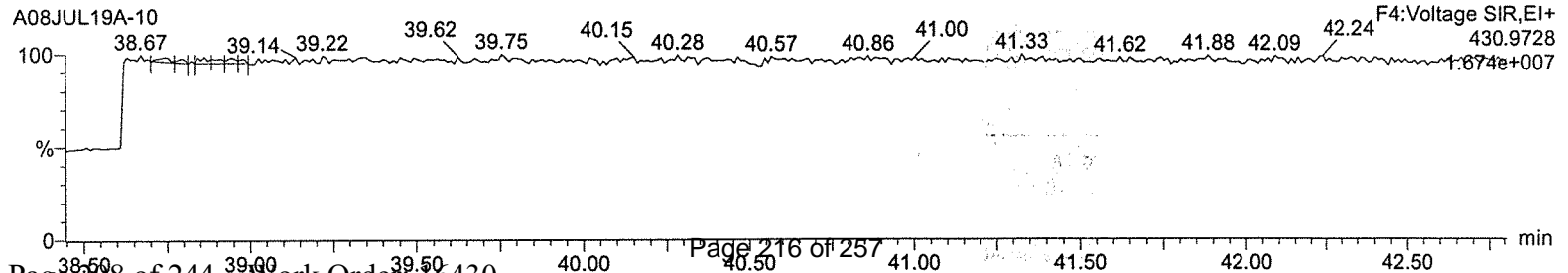
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

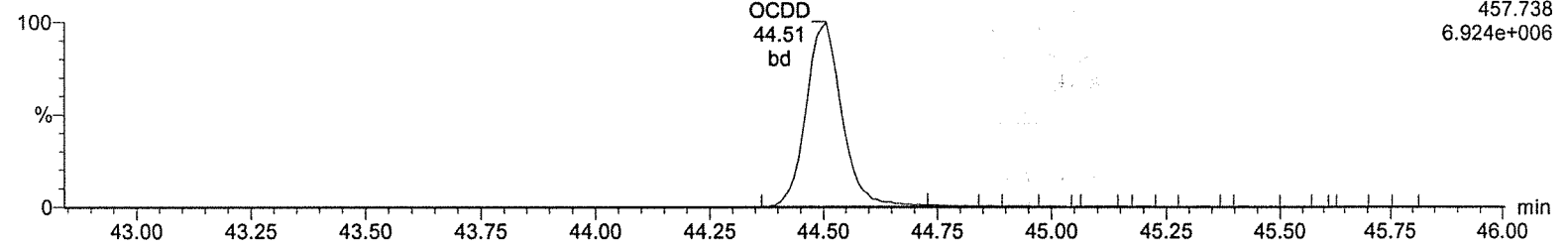
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Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A,
Task: HRP750_2, User: MJC

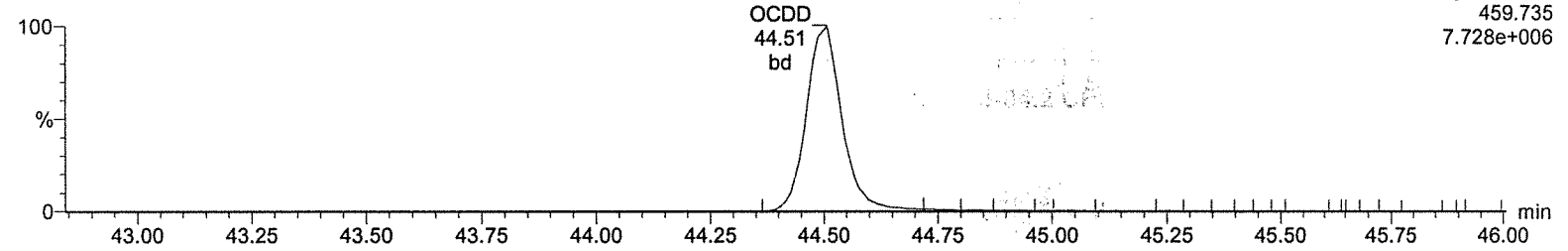
OCDD

A08JUL19A-10



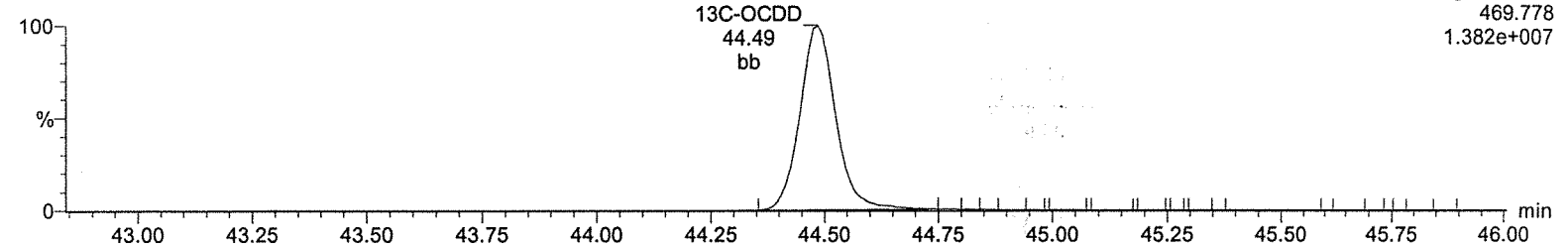
OCDD

A08JUL19A-10



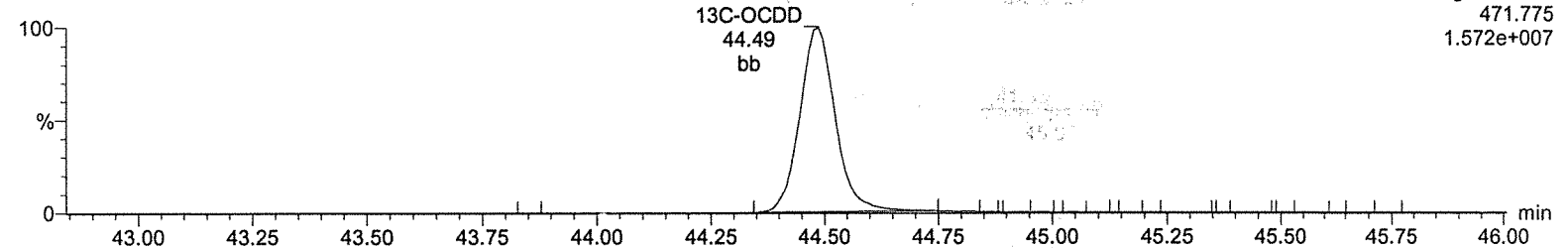
13C-OCDD

A08JUL19A-10



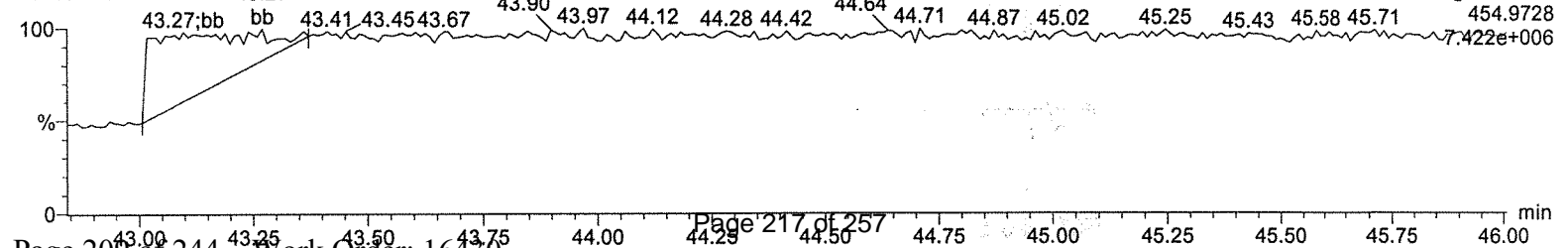
13C-OCDD

A08JUL19A-10



Lock Mass F5

A08JUL19A-10



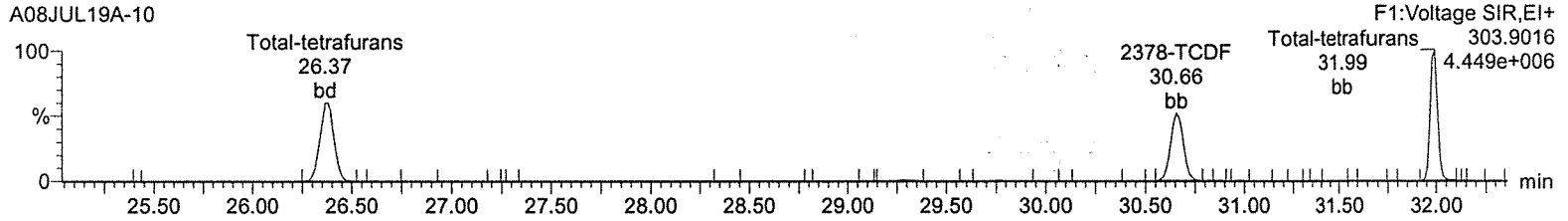
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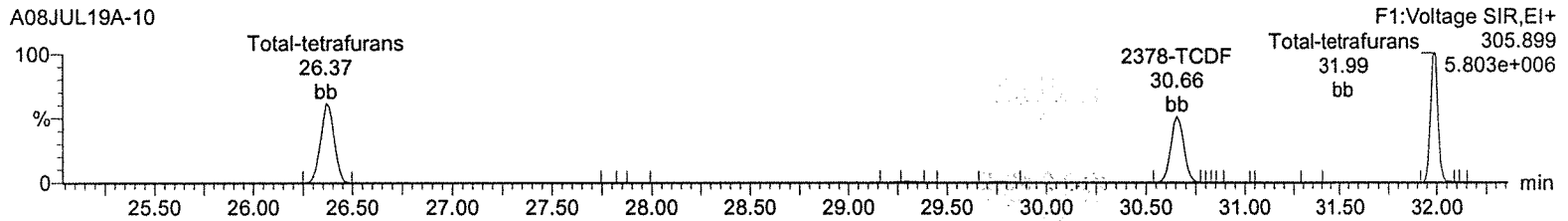
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Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

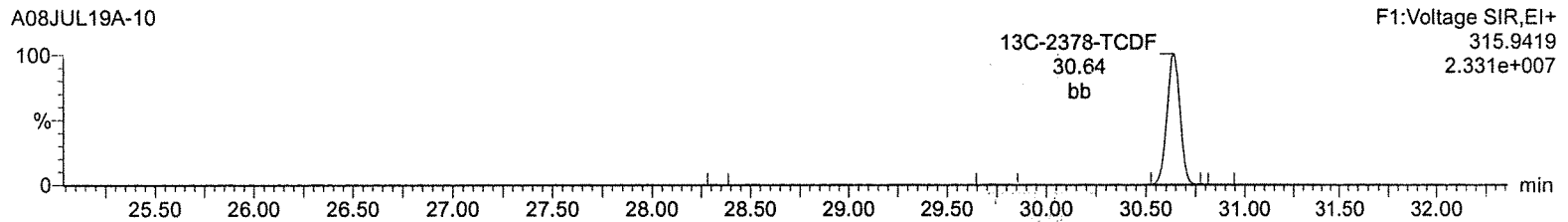
Total-tetrafurans



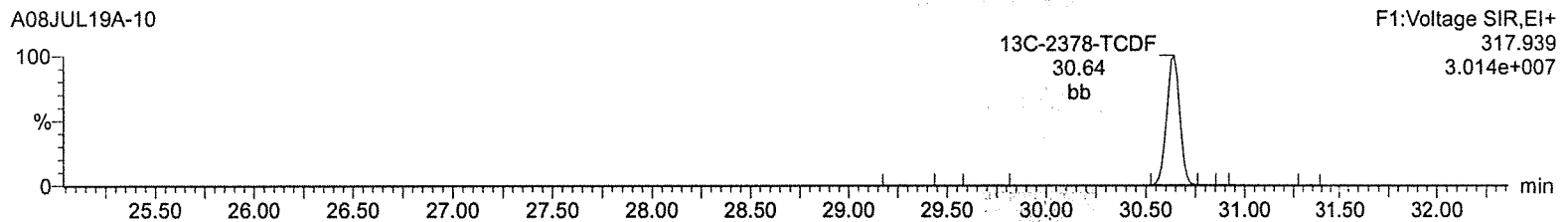
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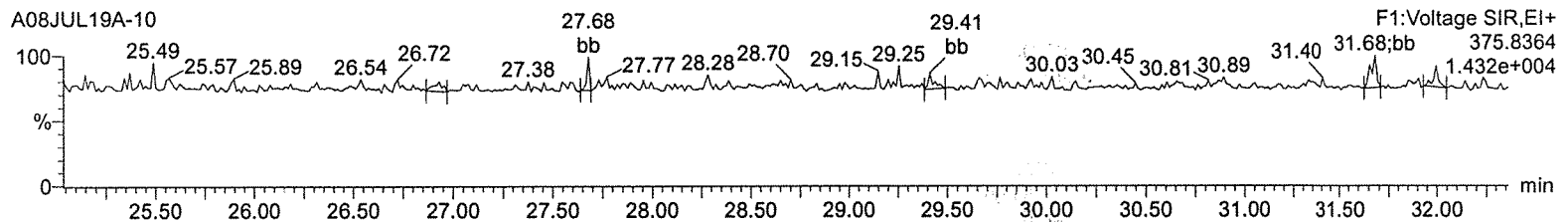
13C-2378-TCDF



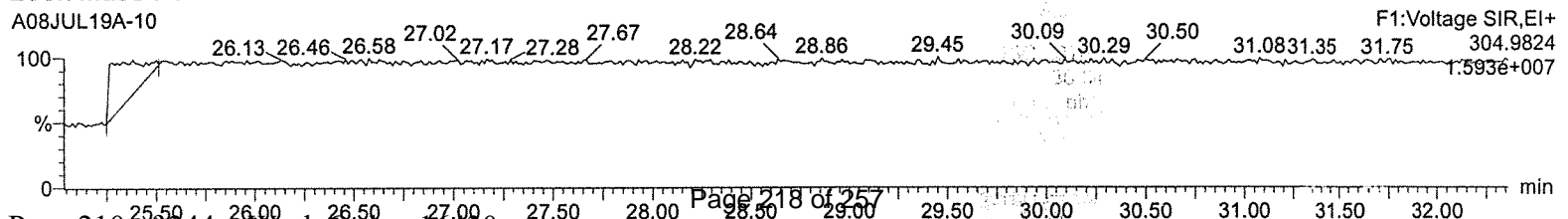
13C-2378-TCDF



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

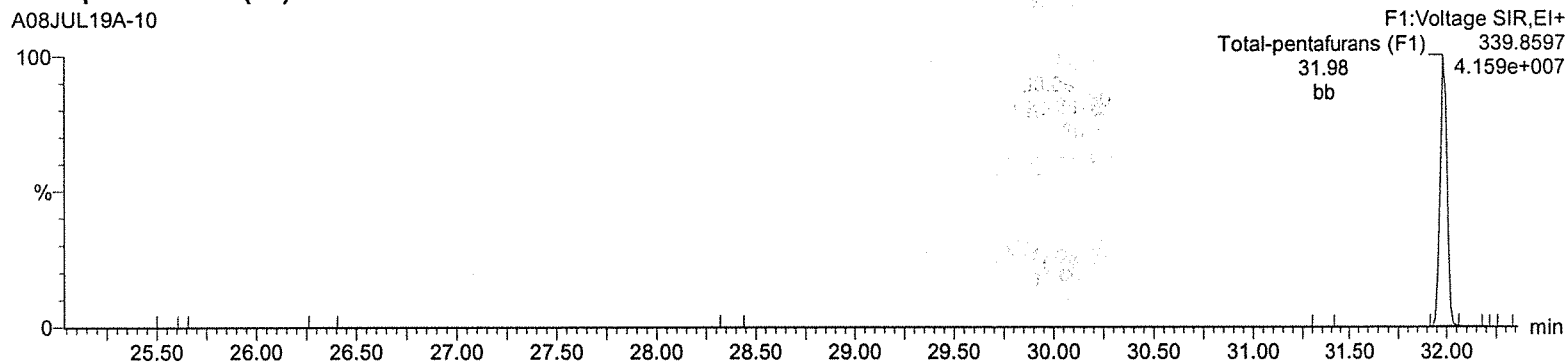
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

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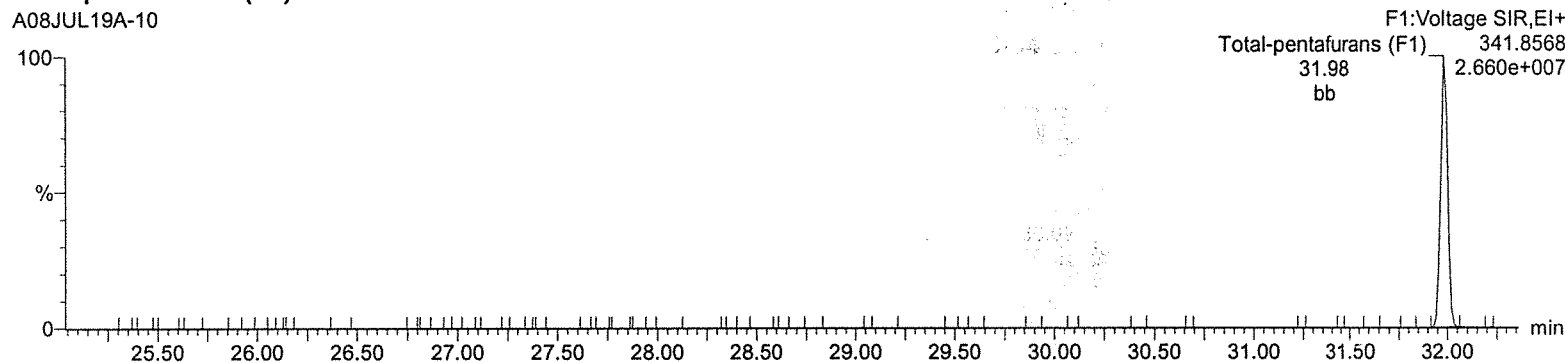
Total-pentafurans (F1)

A08JUL19A-10



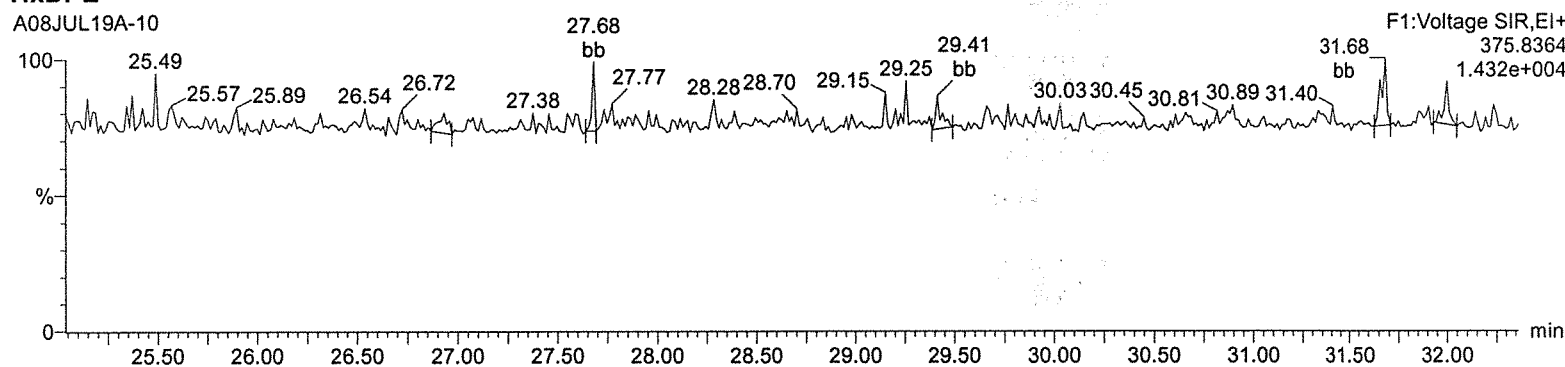
Total-pentafurans (F1)

A08JUL19A-10



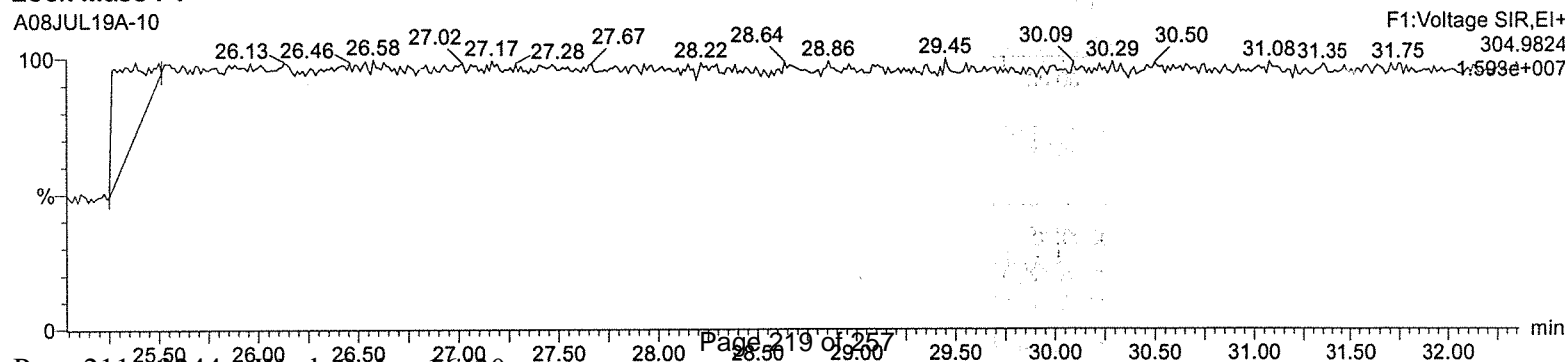
HxDPE

A08JUL19A-10



Lock Mass F1

A08JUL19A-10



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

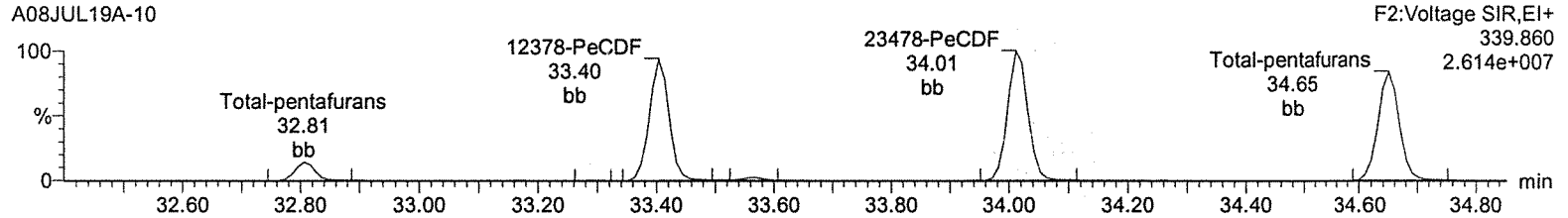
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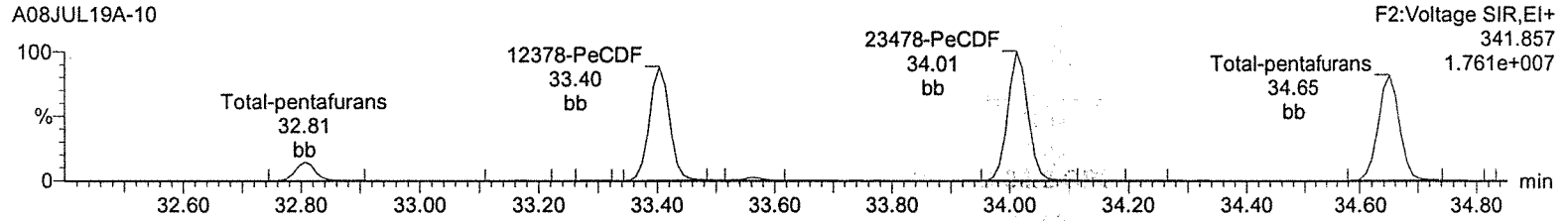
Total-pentafurans

A08JUL19A-10



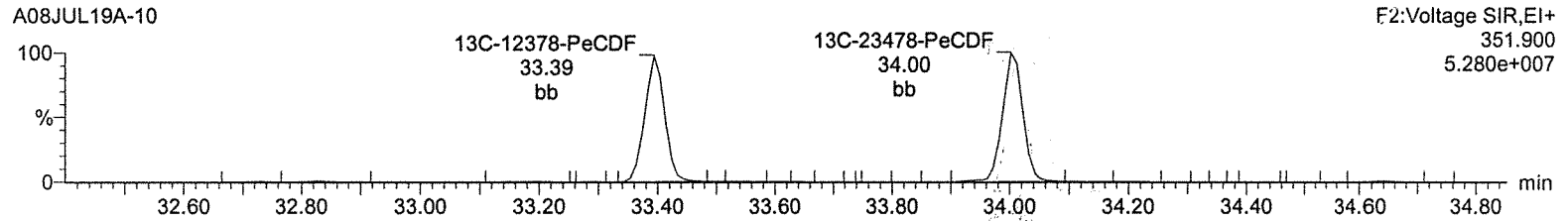
Total-pentafurans

A08JUL19A-10



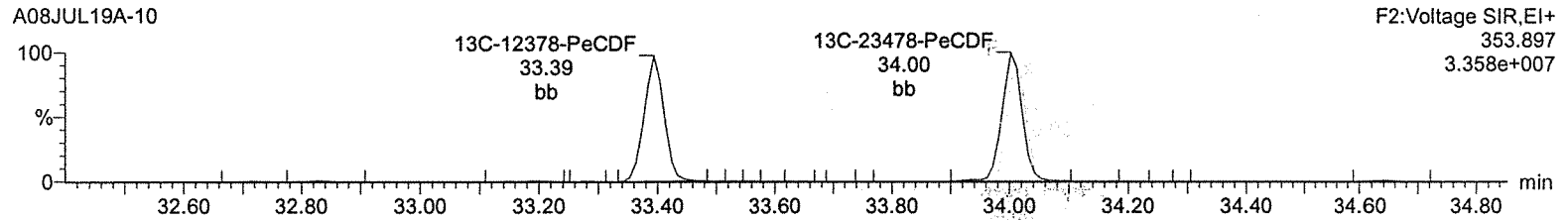
13C-12378-PeCDF

A08JUL19A-10



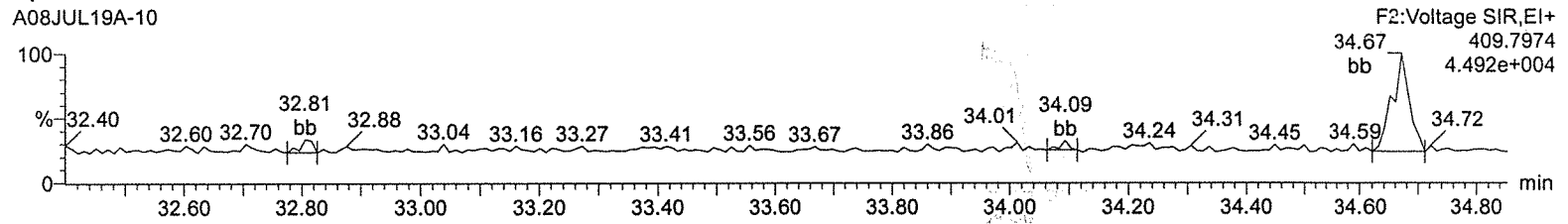
13C-12378-PeCDF

A08JUL19A-10



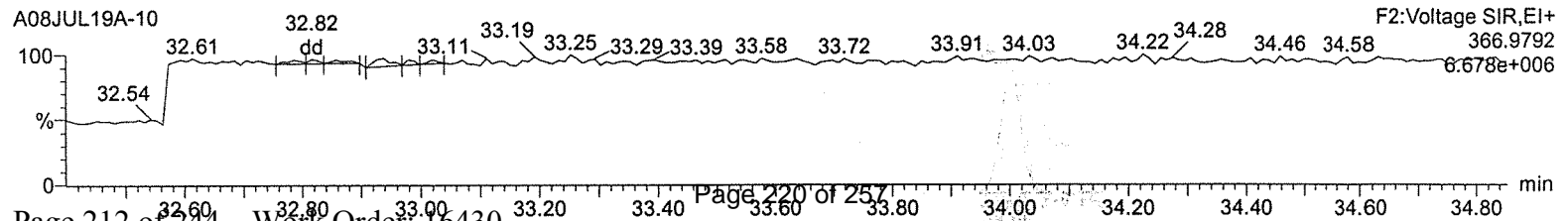
HpdPE

A08JUL19A-10



Lock Mass F2

A08JUL19A-10

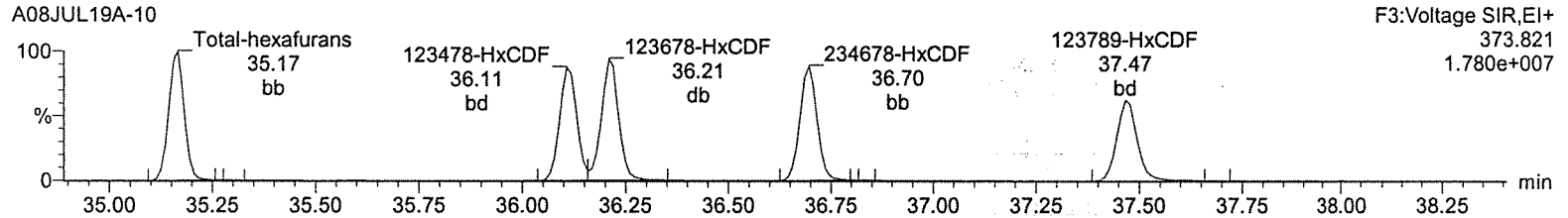


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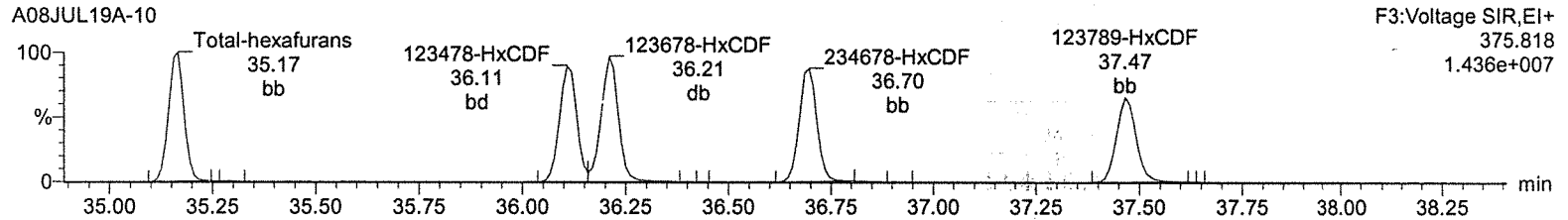
Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time
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Task: HRP750_2, User: MJC

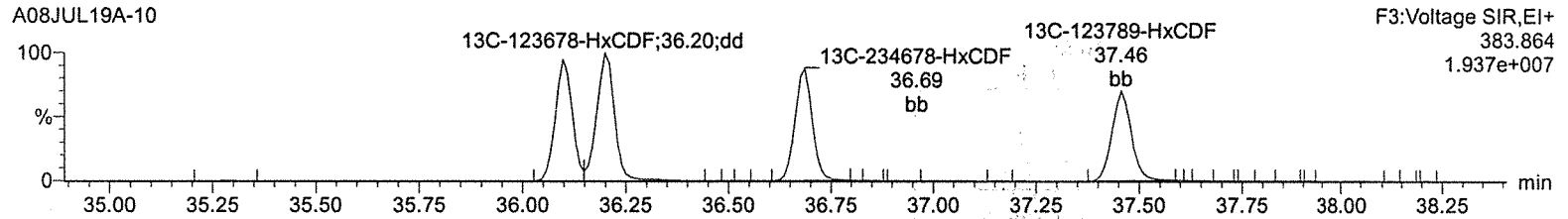
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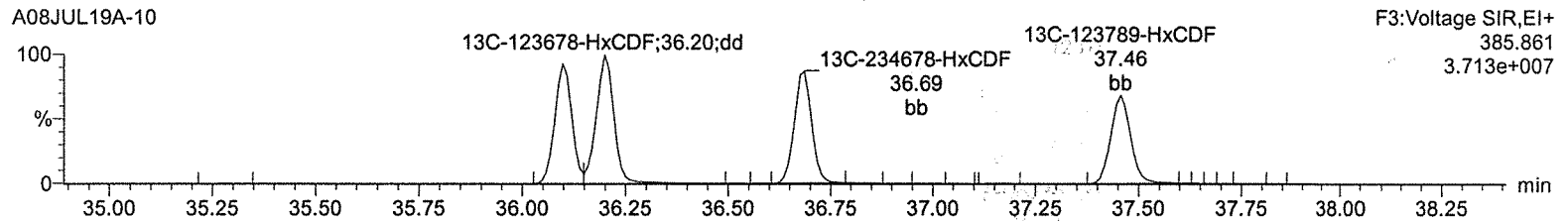
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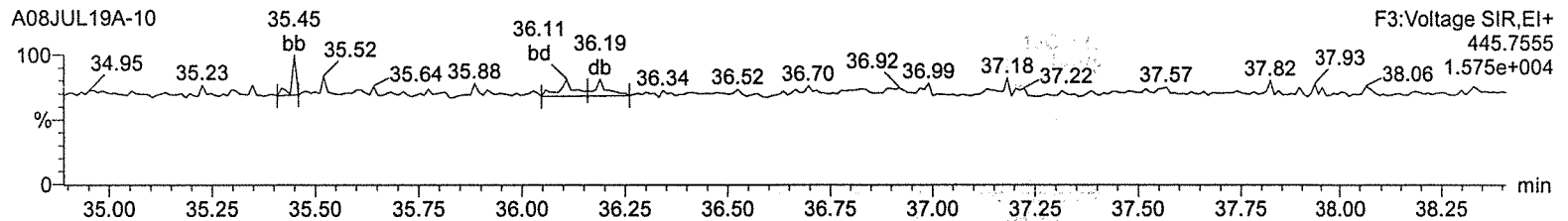
13C-123478-HxCDF



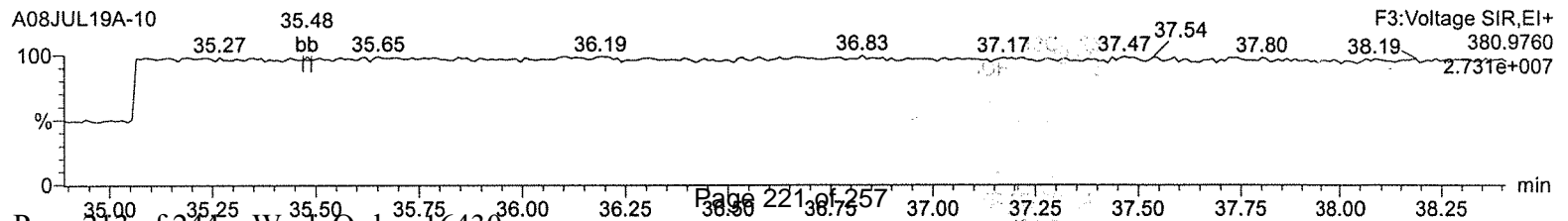
13C-123478-HxCDF



OcDPE



Lock Mass F3



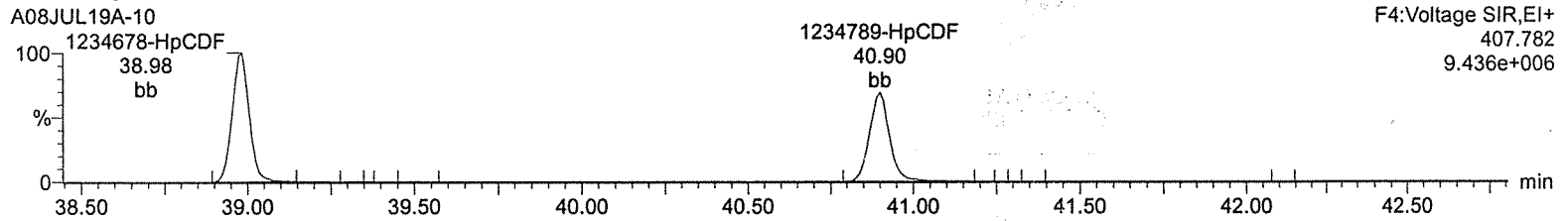
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

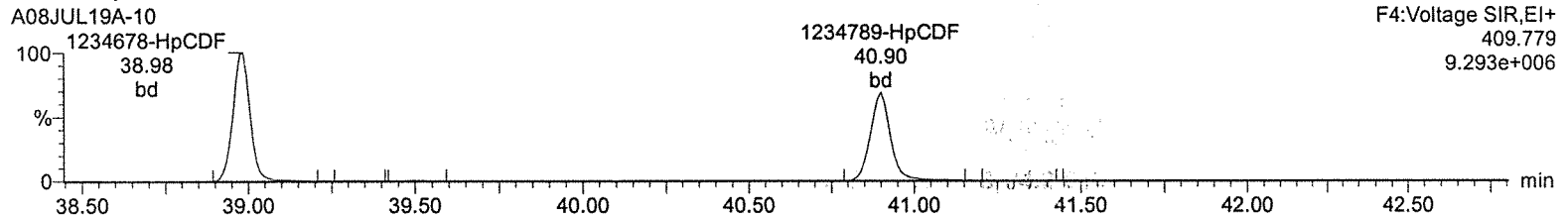
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

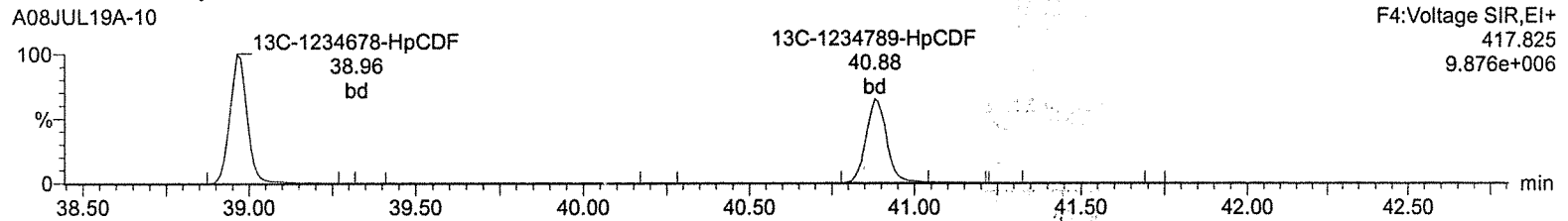
Total-heptafurans



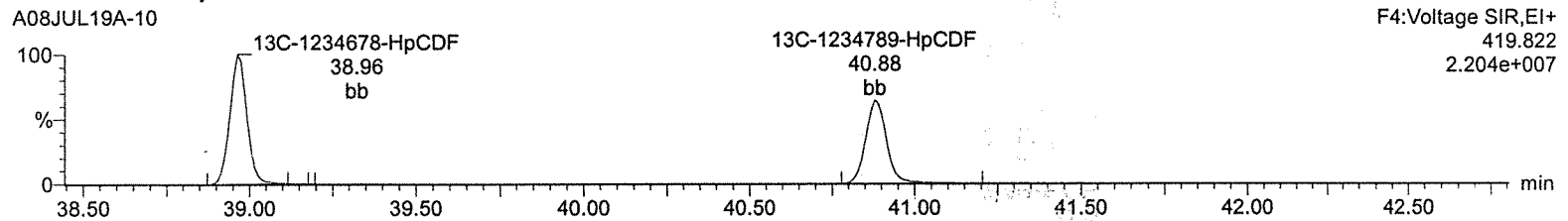
Total-heptafurans



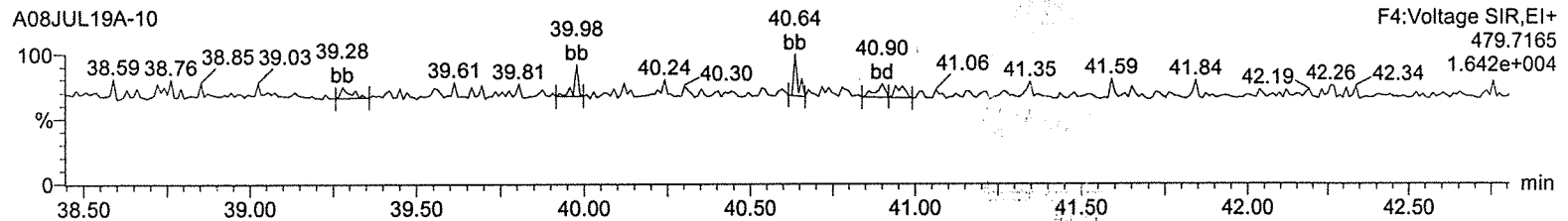
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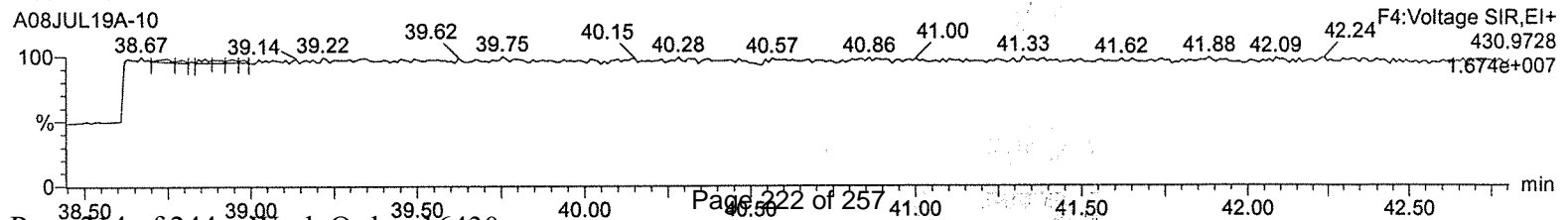
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A08JUL19A-10.qld

Last Altered: Tuesday, July 09, 2019 09:06:14 Eastern Standard Time

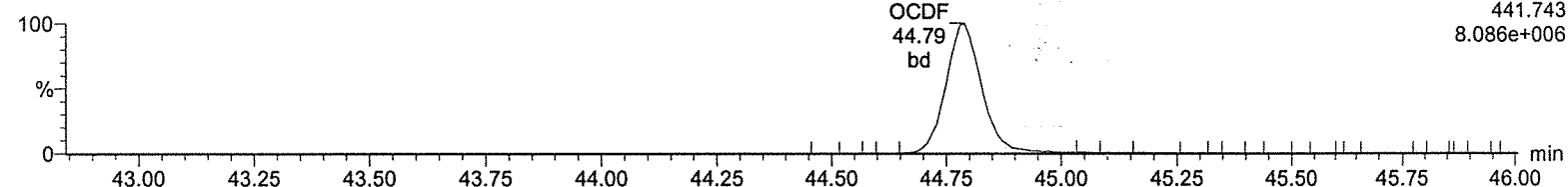
Printed: Tuesday, July 09, 2019 09:06:51 Eastern Standard Time

Name: A08JUL19A-10, Date: 08-Jul-2019, Time: 16:51:30, ID: CS3WT UD190513-04.2 CPSYR, Description: , Job: A08JUL19A, Task: HRP750_2, User: MJC

OCDF

A08JUL19A-10

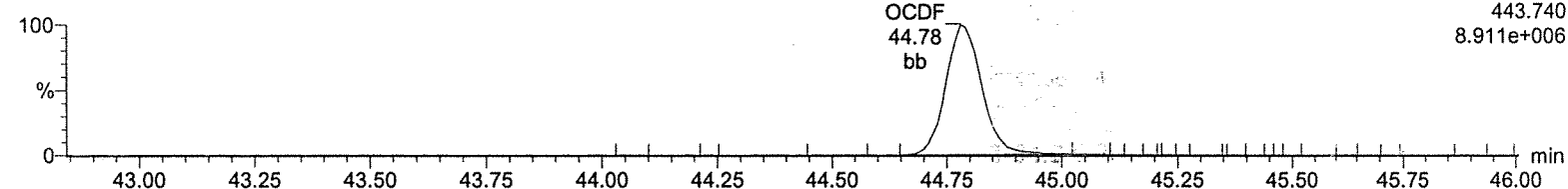
F5:Voltage SIR,EI+
441.743
8.086e+006



OCDF

A08JUL19A-10

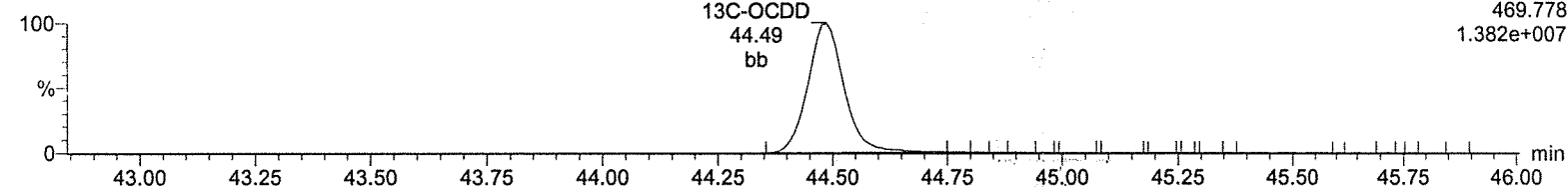
F5:Voltage SIR,EI+
443.740
8.911e+006



13C-OCDD

A08JUL19A-10

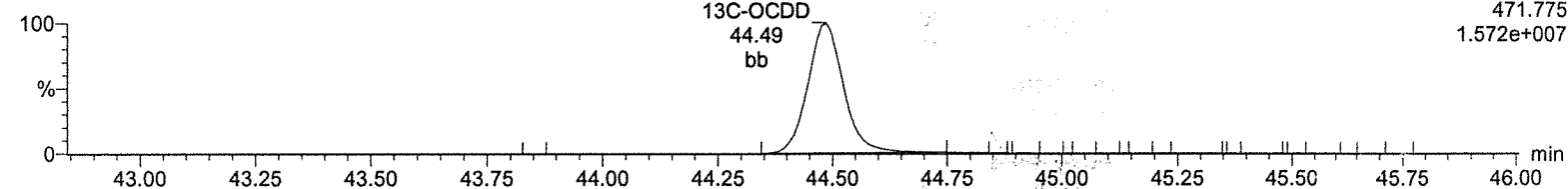
F5:Voltage SIR,EI+
469.778
1.382e+007



13C-OCDD

A08JUL19A-10

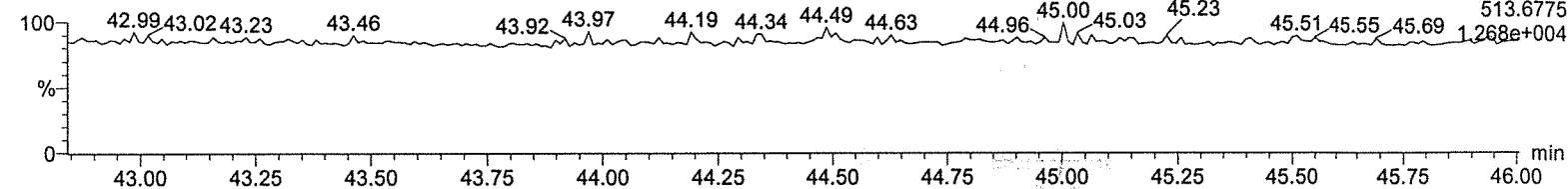
F5:Voltage SIR,EI+
471.775
1.572e+007



DeDPE

A08JUL19A-10

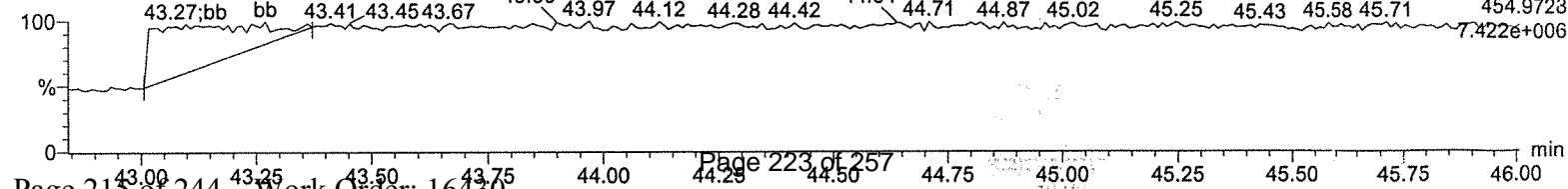
F5:Voltage SIR,EI+
513.6775
1.268e+004



Lock Mass F5

A08JUL19A-10

F5:Voltage SIR,EI+
454.9728
7.422e+006



Continuing Calibration Data

RUN LOG

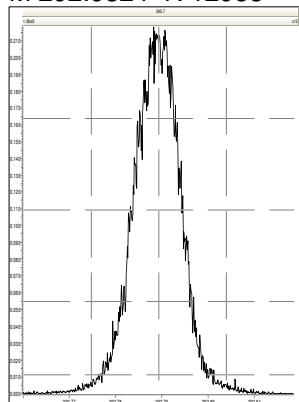
Instrument: HRP750_2

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
A25APR20A-1	25-APR-2020 11:15:05	Mary Lanier	CS3WT UD191224-01.1		1 uL	dioxin_db5ms	10K_dx
A25APR20A-2	25-APR-2020 12:03:20	Mary Lanier	12026458-2 LCS		1 uL	dioxin_db5ms	10K_dx
A25APR20A-3	25-APR-2020 12:52:56	Mary Lanier	12026459-2 LCSD		1 uL	dioxin_db5ms	10K_dx
A25APR20A-4	25-APR-2020 13:42:22	Mary Lanier	12026457-2 MB		1 uL	dioxin_db5ms	10K_dx
A25APR20A-5	25-APR-2020 14:31:53	Mary Lanier	16430001-1	43611	1 uL	dioxin_db5ms	10K_dx
A25APR20A-6	25-APR-2020 15:21:18	Mary Lanier	16409006-1	43592	1 uL	dioxin_db5ms	10K_dx
A25APR20A-7	25-APR-2020 16:10:49	Mary Lanier	16409007-1	43592	1 uL	dioxin_db5ms	10K_dx
A25APR20A-8	25-APR-2020 17:00:14	Mary Lanier	16409008-1	43592	1 uL	dioxin_db5ms	10K_dx
A25APR20A-9	25-APR-2020 17:49:38	Mary Lanier	16409009-1	43592	1 uL	dioxin_db5ms	10K_dx
A25APR20A-10	25-APR-2020 18:39:03	Mary Lanier	16409010-1	43592	1 uL	dioxin_db5ms	10K_dx
A25APR20A-11	25-APR-2020 19:28:28	Mary Lanier	16409011-1	43592	1 uL	dioxin_db5ms	10K_dx
A25APR20A-12	25-APR-2020 20:17:52	Mary Lanier	16409012-1	43592	1 uL	dioxin_db5ms	10K_dx
A25APR20A-13	25-APR-2020 21:07:15	Mary Lanier	CS3WT UD200325-01.1		1 uL	dioxin_db5ms	10K_dx
Ending CCAL failed high for 1613/8290			CPSCO				

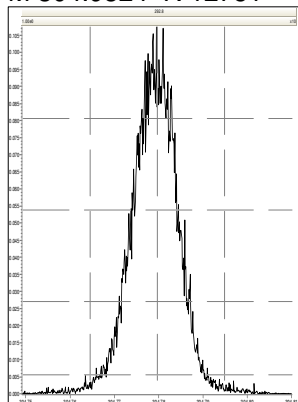
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Saturday, April 25, 2020 11:11:47 Eastern Daylight Time

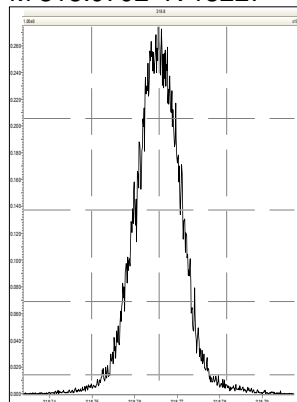
M 292.9824 R 12958



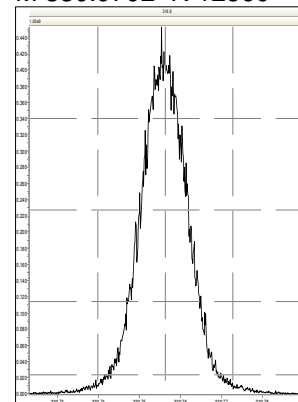
M 304.9824 R 12751



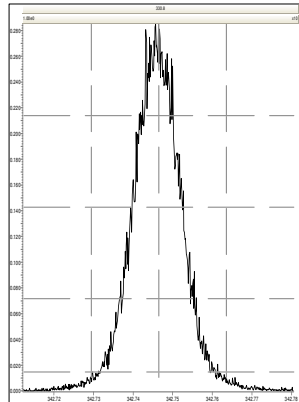
M 318.9792 R 13227



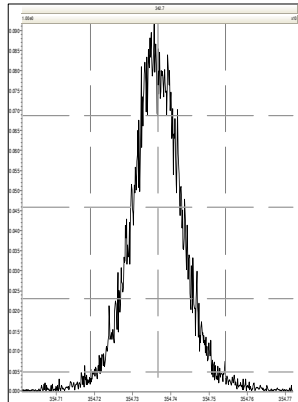
M 330.9792 R 12560



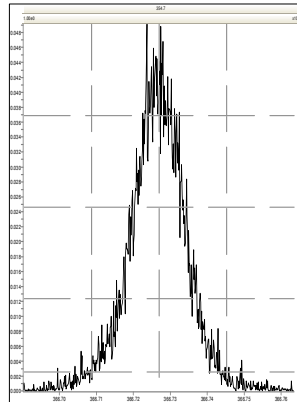
M 342.9792 R 11575



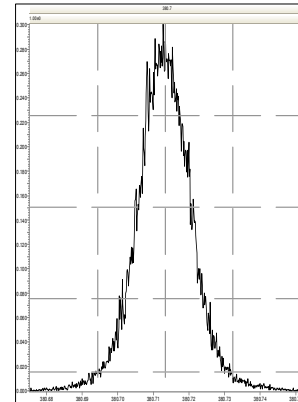
M 354.9792 R 11736



M 366.9792 R 10501



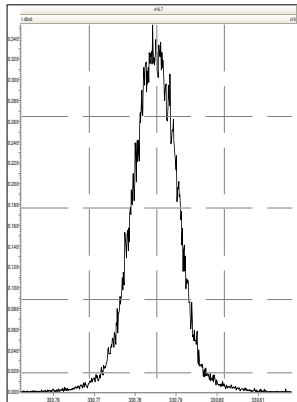
M 380.9760 R 10638



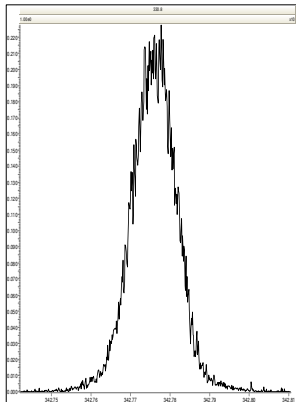
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Saturday, April 25, 2020 11:12:18 Eastern Daylight Time

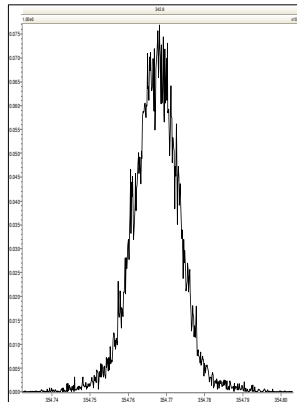
M 330.9792 R 13226



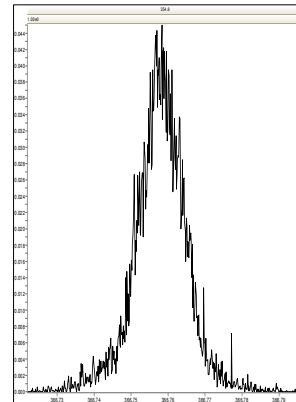
M 342.9792 R 13437



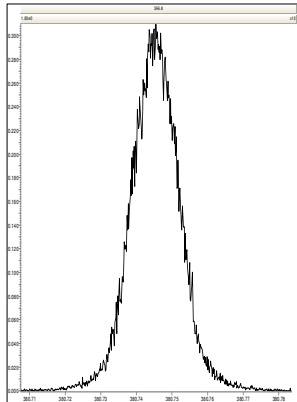
M 354.9792 R 13812



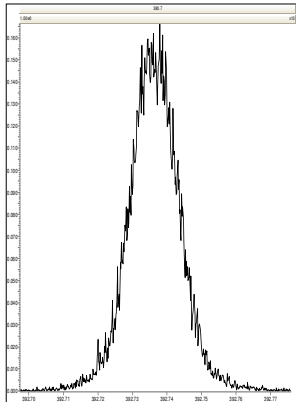
M 366.9792 R 12497



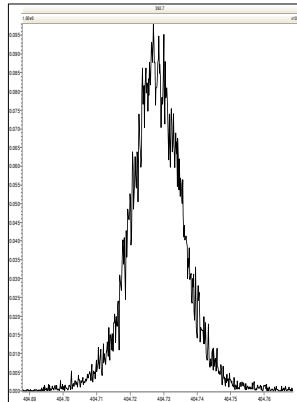
M 380.9760 R 11844



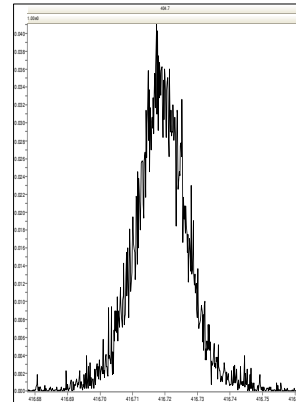
M 392.9760 R 11260



M 404.9760 R 10731



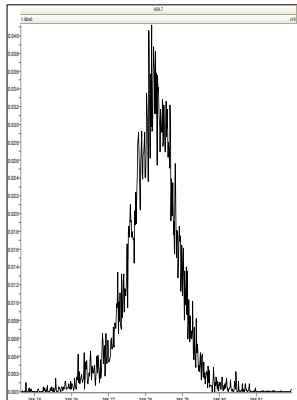
M 416.9760 R 12254



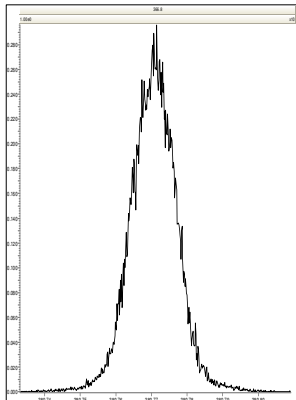
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Saturday, April 25, 2020 11:12:45 Eastern Daylight Time

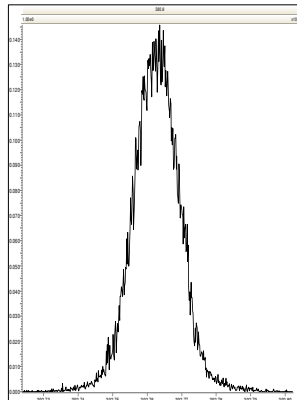
M 366.9792 R 13585



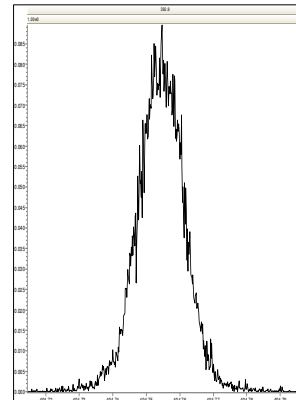
M 380.9760 R 12822



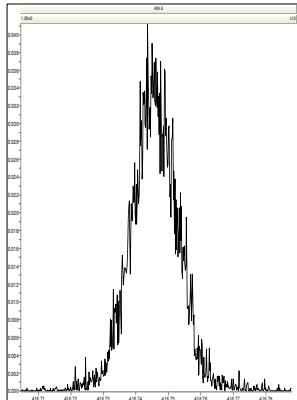
M 392.9760 R 13440



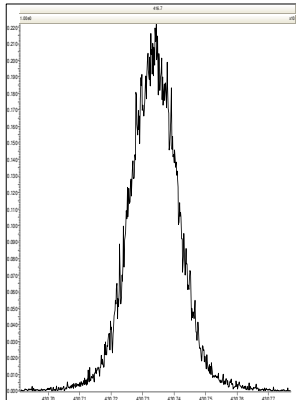
M 404.9760 R 12374



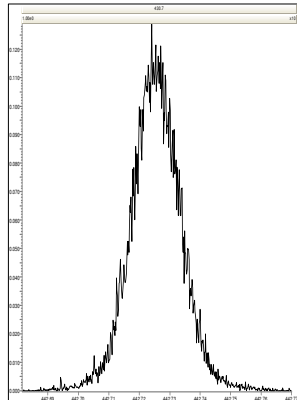
M 416.9760 R 13737



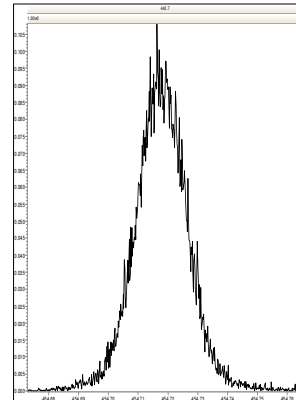
M 430.9728 R 12194



M 442.9728 R 11794



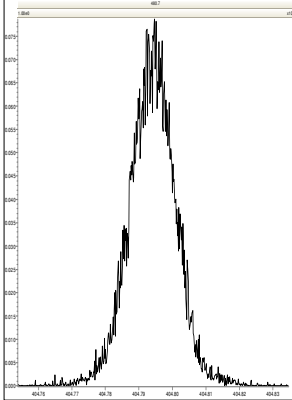
M 454.9728 R 11682



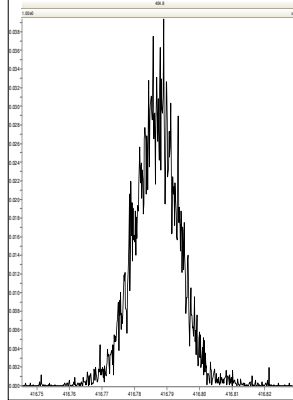
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Saturday, April 25, 2020 11:13:06 Eastern Daylight Time

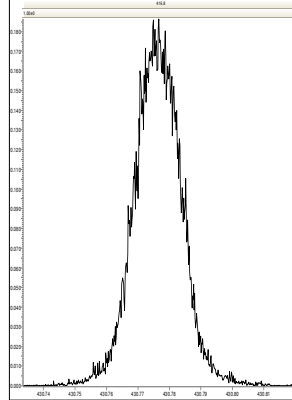
M 404.9760 R 12254



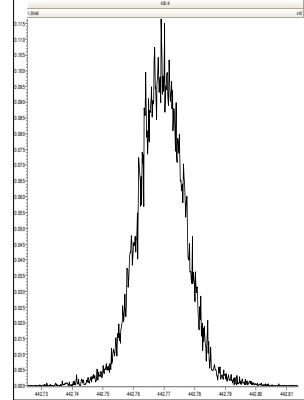
M 416.9760 R 15062



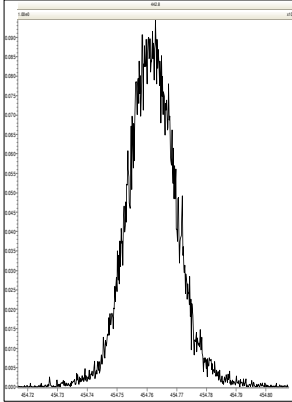
M 430.9728 R 12816



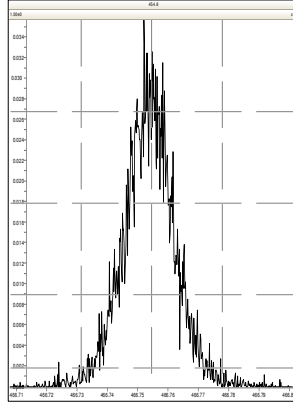
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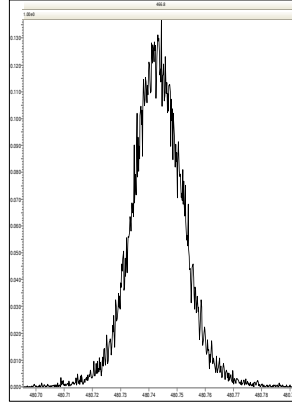
M 454.9728 R 13090



M 466.9728 R 12886



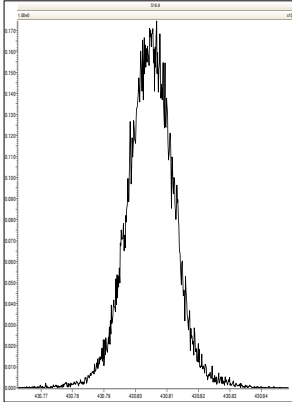
M 480.9696 R 11846



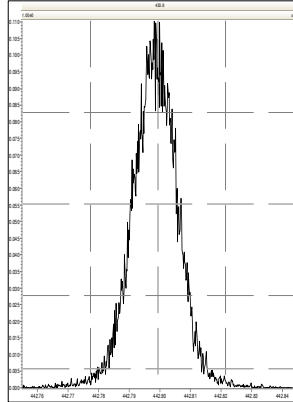
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Saturday, April 25, 2020 11:13:28 Eastern Daylight Time

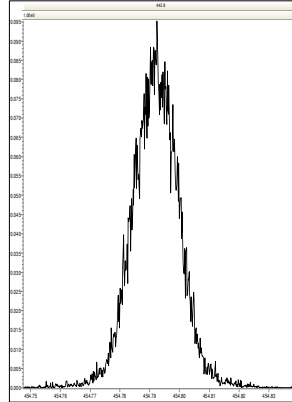
M 430.9728 R 12439



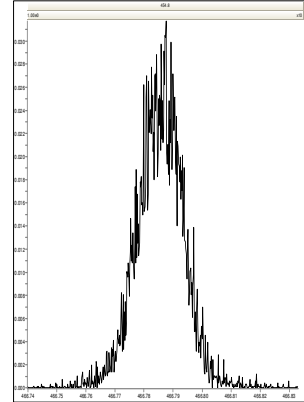
M 442.9728 R 14123



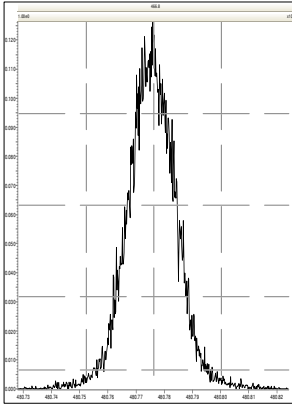
M 454.9728 R 13738



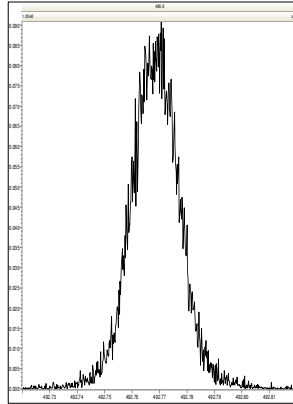
M 466.9728 R 13441



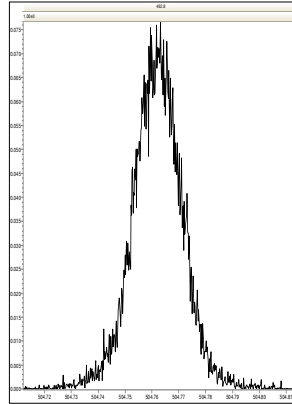
M 480.9696 R 12314



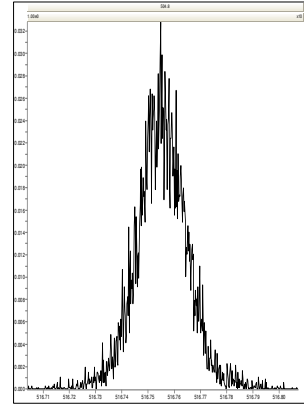
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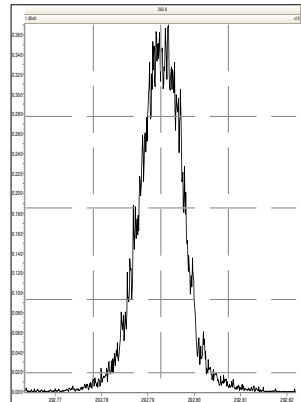
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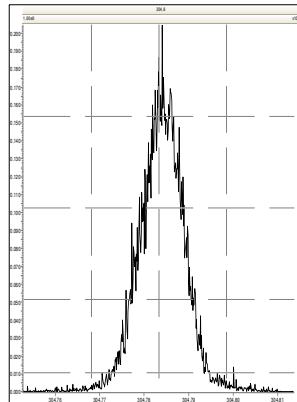
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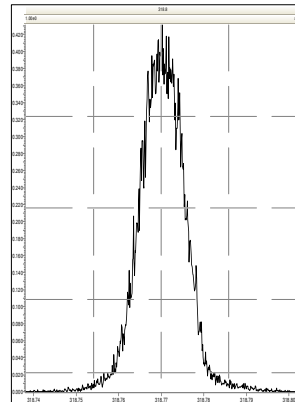
M 292.9824 R 13230



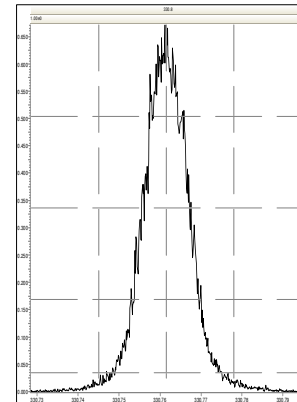
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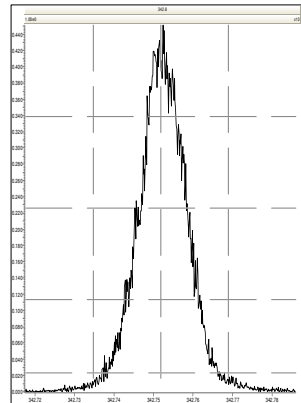
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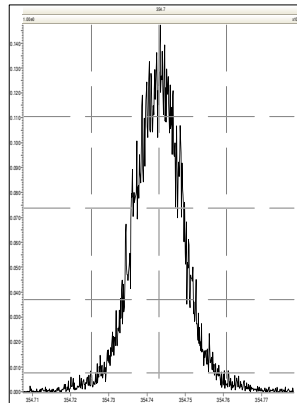
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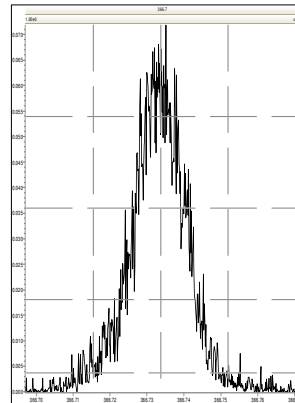
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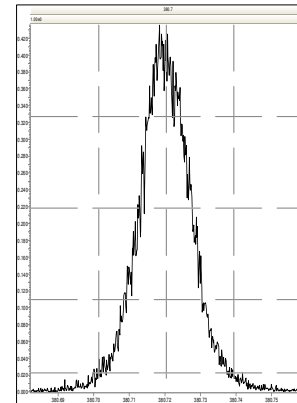
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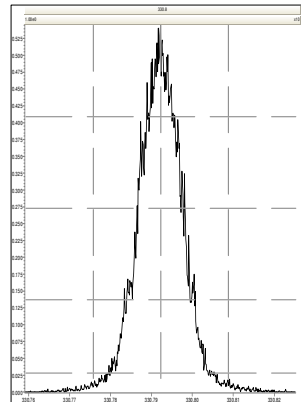
M 366.9792 R 11983



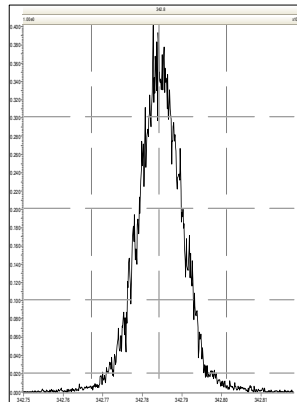
M 380.9760 R 10638



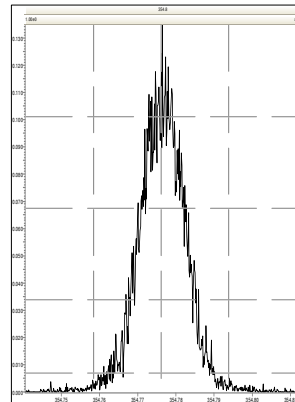
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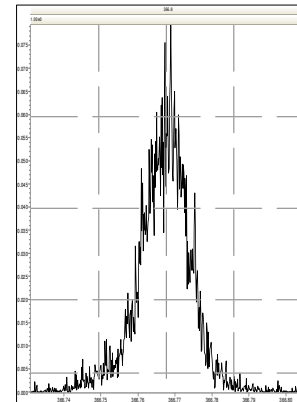
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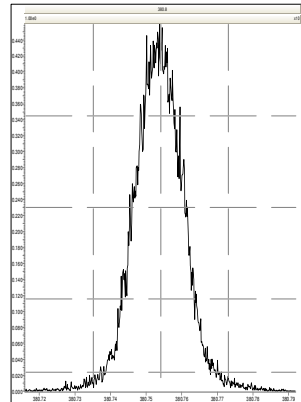
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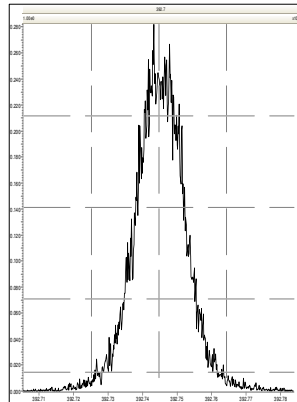
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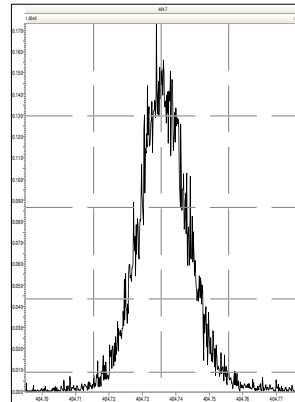
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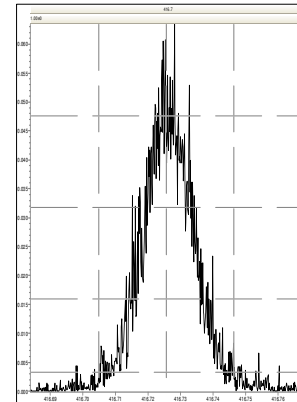
M 392.9760 R 11850



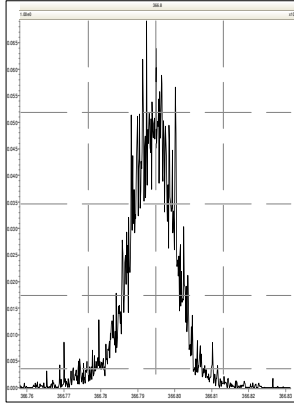
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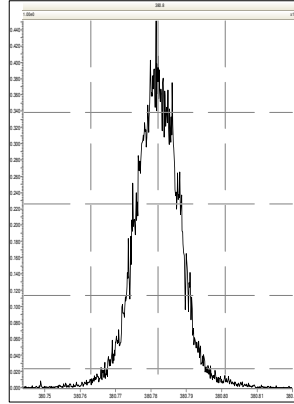
M 416.9760 R 13071



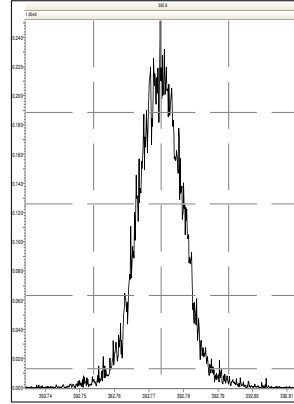
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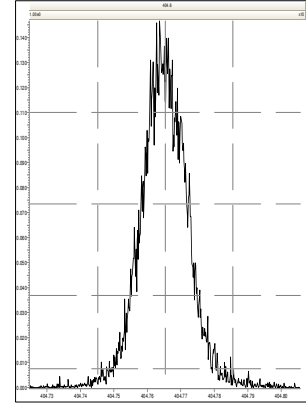
M 380.9760 R 13623



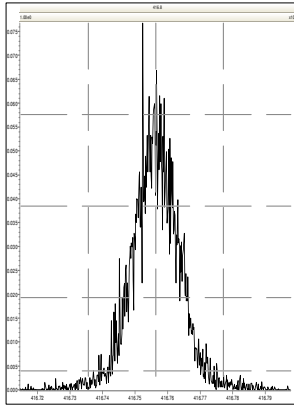
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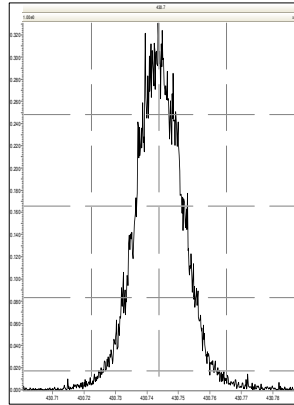
M 404.9760 R 13552



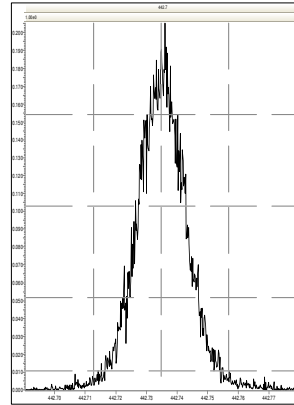
M 416.9760 R 14247



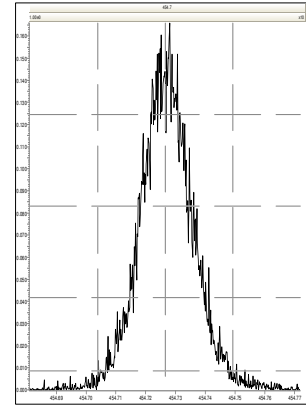
M 430.9728 R 12562



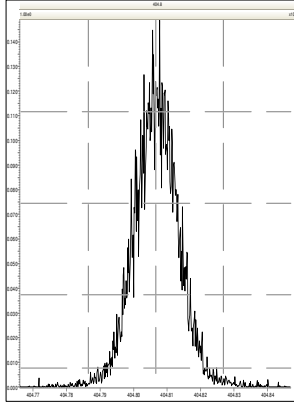
M 442.9728 R 11792



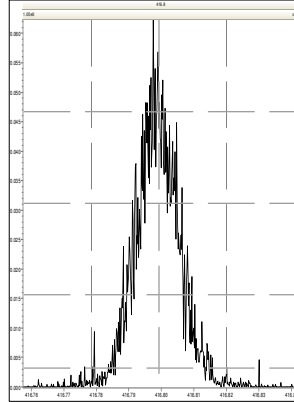
M 454.9728 R 11549



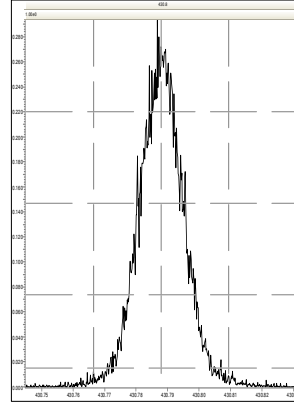
M 404.9760 R 14215



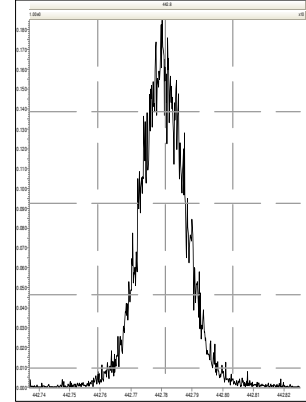
M 416.9760 R 14632



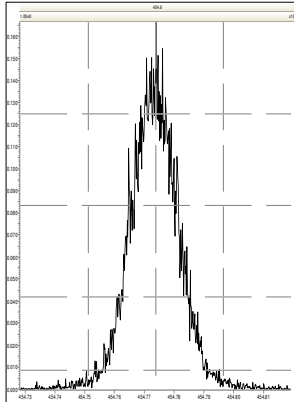
M 430.9728 R 13699



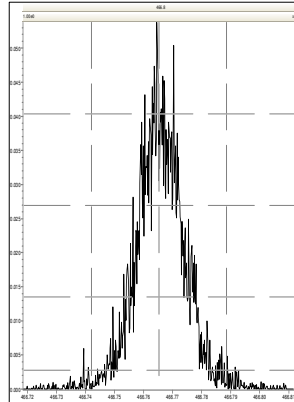
M 442.9728 R 13101



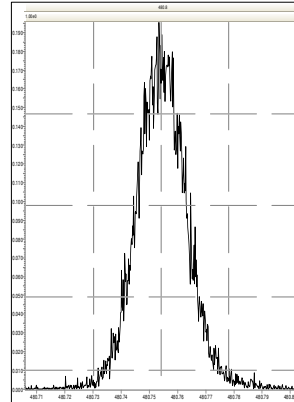
M 454.9728 R 12690



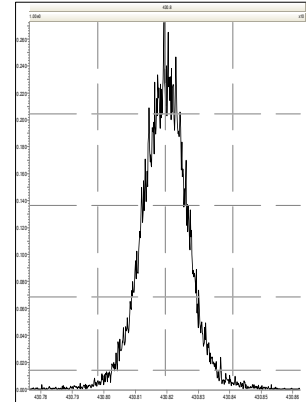
M 466.9728 R 14493



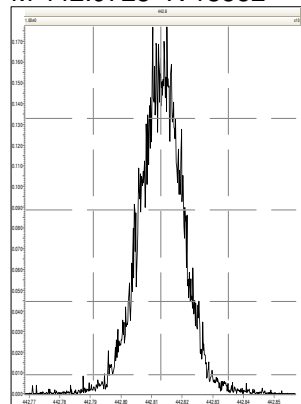
M 480.9696 R 12149



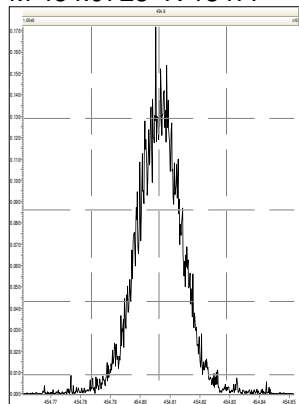
M 430.9728 R 12988



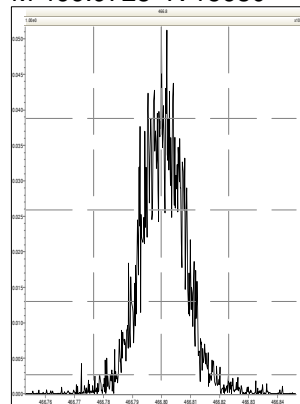
M 442.9728 R 13552



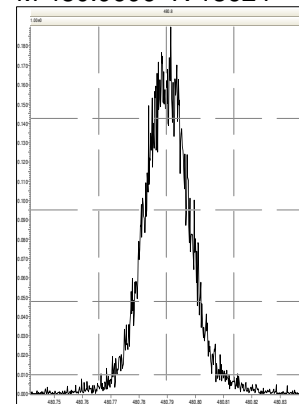
M 454.9728 R 13477



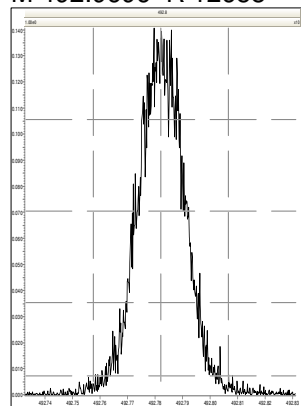
M 466.9728 R 15630



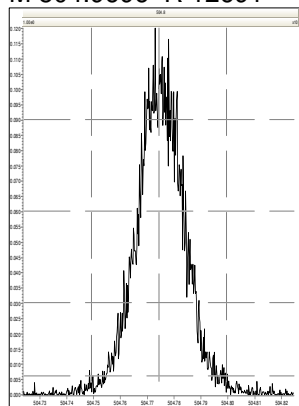
M 480.9696 R 13624



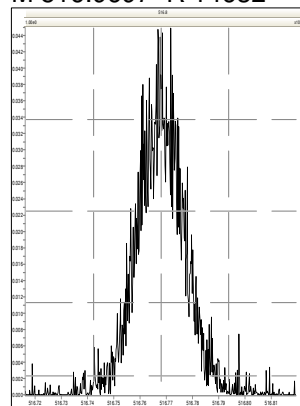
M 492.9696 R 12658



M 504.9696 R 12691



M 516.9697 R 14632



Quantify Sample Summary Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:51:29 Eastern Daylight Time
Printed: Sunday, April 26, 2020 15:52:16 Eastern Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A21APR20.mdb 21 Apr 2020 08:18:30
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

	Name	RT
1	First TCDF	26.47
2	Last TCDF	32.03
3	First PeCDF	32.03
4	Last PeCDF	34.70
5	First HxCDF	35.21
6	Last HxCDF	37.51
7	First HpCDF	39.02
8	Last HpCDF	40.93
9	OCDF	44.83
10	First TCDD	28.19
11	2378-TCDD	31.40
12	Last TCDD	31.96
13	First PeCDD	32.91
14	Last PeCDD	34.52
15	First HxCDD	35.64
16	Last HxCDD	37.20
17	First HpCDD	39.36
18	Last HpCDD	40.28
19	OCDD	44.54

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:51:29 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:52:16 Eastern Daylight Time

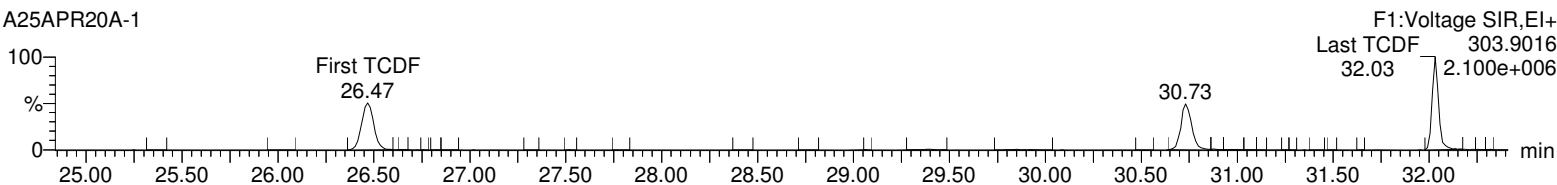
Method: C:\MassLynx\Default.pro\Methdb\WDM_A21APR20.mdb 21 Apr 2020 08:18:30

Calibration: C:\MassLynx\Default.pro\Curvedb\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

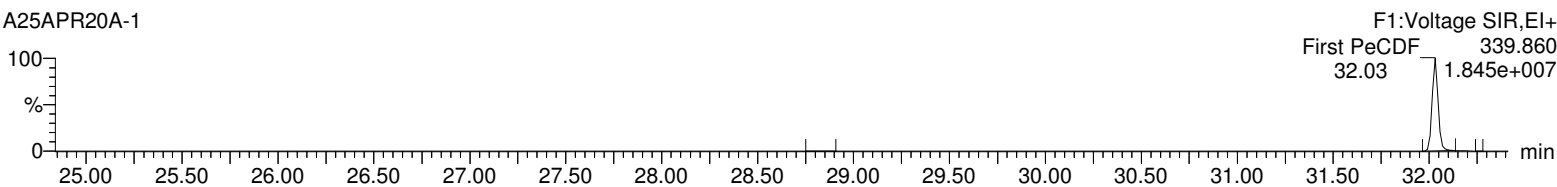
First TCDF

A25APR20A-1



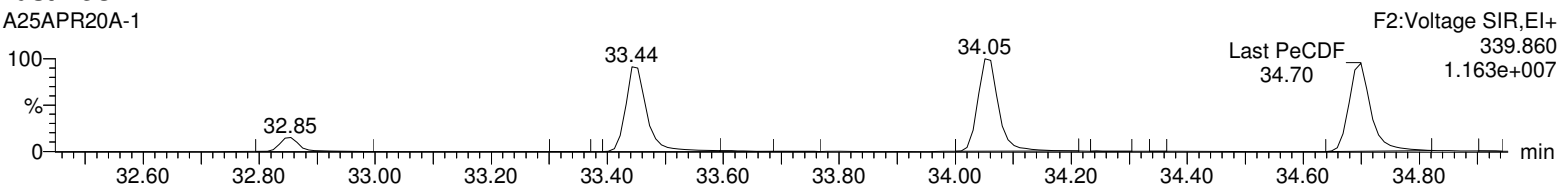
First PeCDF

A25APR20A-1



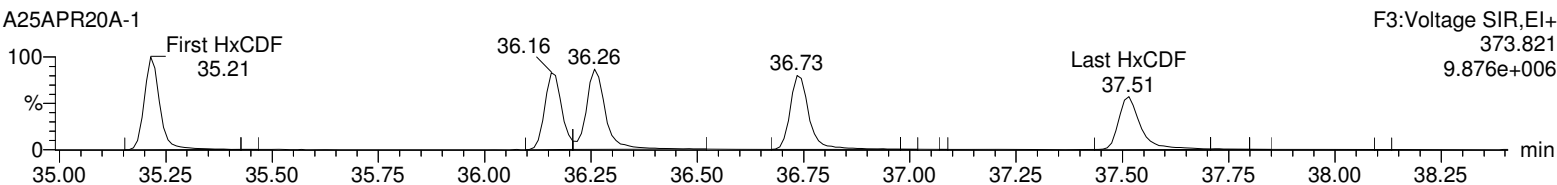
Last PeCDF

A25APR20A-1



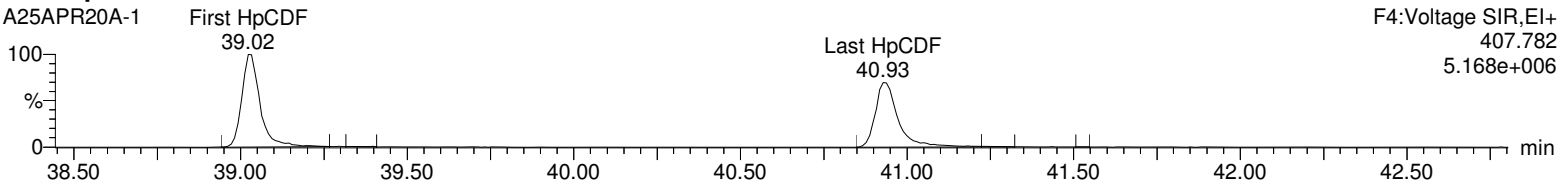
First HxCDF

A25APR20A-1



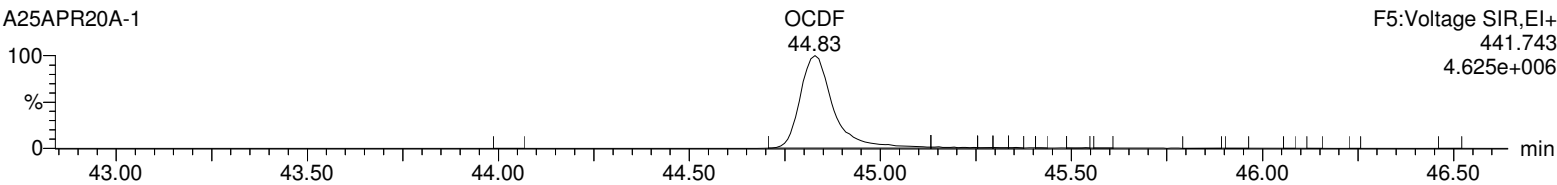
First HpCDF

A25APR20A-1



OCDF

A25APR20A-1



Dataset: C:\MassLynx\Default.pro\WDM Results\WDM-A25APR20A-1.qld

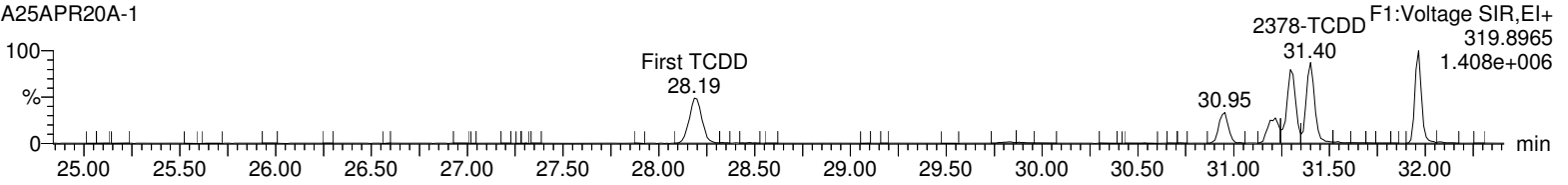
Last Altered: Sunday, April 26, 2020 15:51:29 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:52:16 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

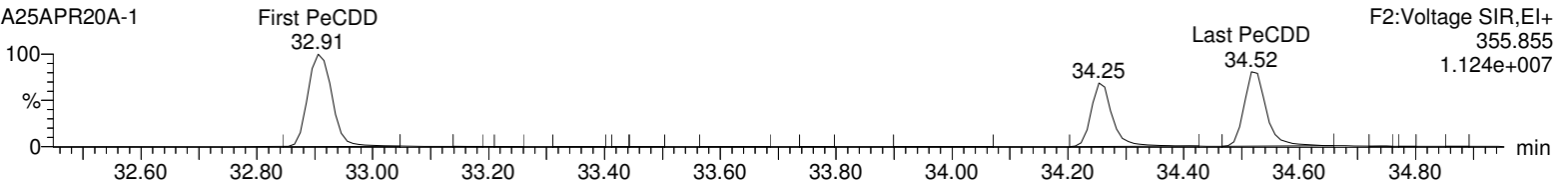
First TCDD

A25APR20A-1



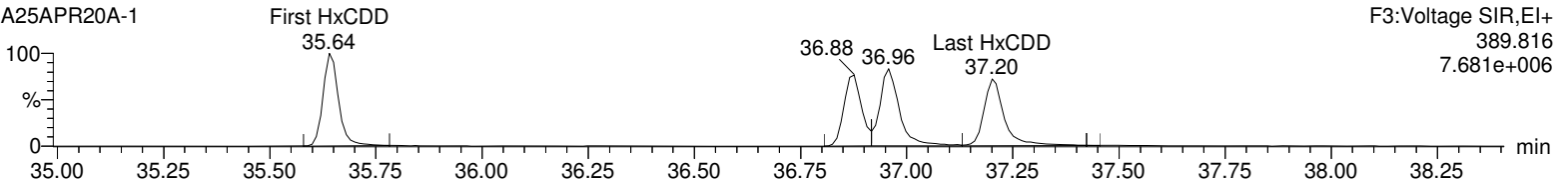
First PeCDD

A25APR20A-1



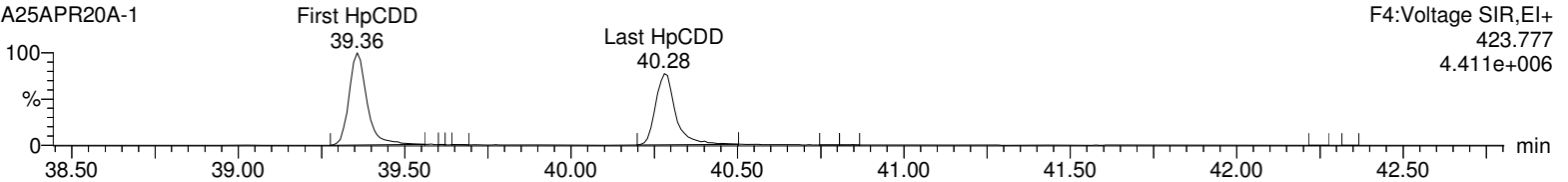
First HxCDD

A25APR20A-1



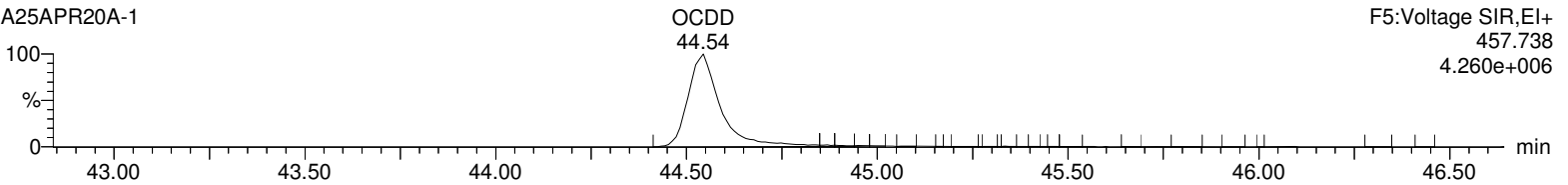
First HpCDD

A25APR20A-1



OCDD

A25APR20A-1



COLUMN CHECK (2378-TCDD 12%)

CS3WT UD191224-01.1

A25APR20A-1

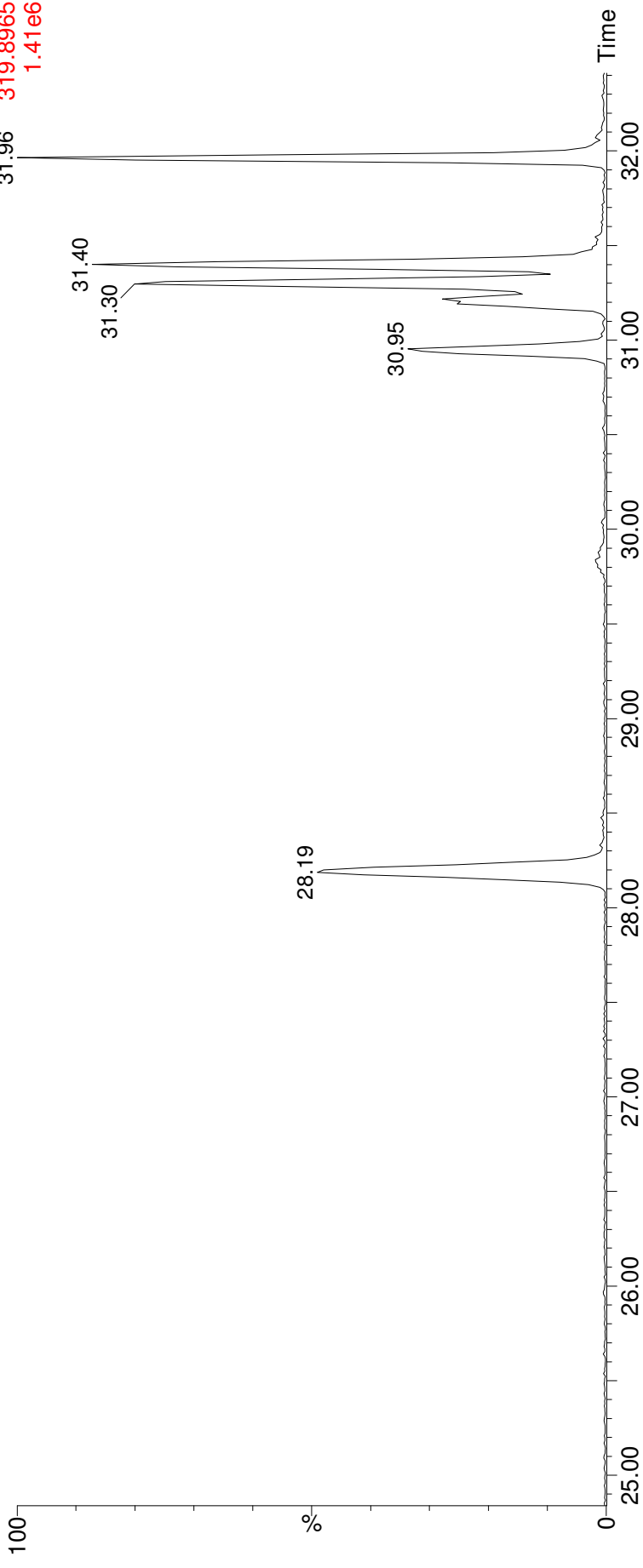
HRP750_2

25-Apr-2020 11:15:05

1: Voltage SIR 13 Channels EI+

31.96 319.8965

1.41e6



Quantify Sample Summary Report
Method 1613 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time
Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A23APR20.mdb 23 Apr 2020 09:24:32
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.34e4	8.09e4	1.44e5	31.40	1.000	0.78	NO	11.105	0.0639	0.982	0.884	11.1	1.22e6	3910	313.0	1.52e6	2684	566.6	dd	dd
2	12378-PeCDD	3.25e5	2.07e5	5.32e5	34.25	1.000	1.57	NO	54.280	0.110	0.927	0.853	8.6	7.73e6	4206	1838.1	4.91e6	6066	808.8	bb	bb
3	123478-HxCDD	2.89e5	2.26e5	5.10e5	36.88	1.001	1.25	NO	52.214	0.233	0.981	0.940	4.4	5.90e6	11587	509.3	4.64e6	6936	669.4	bd	bd
4	123678-HxCDD	3.41e5	2.73e5	6.14e5	36.96	1.000	1.25	NO	51.600	0.207	0.974	0.944	3.2	6.40e6	11587	552.3	5.12e6	6936	738.1	dd	dd
5	123789-HxCDD	3.08e5	2.50e5	5.58e5	37.20	1.007	1.23	NO	52.347	0.222	0.971	0.927	4.7	5.55e6	11587	479.0	4.61e6	6936	664.9	dd	dd
6	1234678-HpCDD	2.39e5	2.30e5	4.70e5	40.28	1.000	1.04	NO	48.299	0.242	1.005	1.040	-3.4	3.40e6	6991	486.5	3.21e6	5924	542.6	bb	bd
7	OCDD	4.12e5	4.69e5	8.81e5	44.54	1.000	0.88	NO	100.415	0.319	0.975	0.971	0.4	4.25e6	6800	625.3	4.73e6	4245	1114.4	bd	bd
8	2378-TCDF	6.69e4	9.07e4	1.58e5	30.73	1.000	0.74	NO	9.337	0.0674	0.914	0.978	-6.6	1.03e6	3052	338.6	1.38e6	3797	364.1	bd	bd
9	12378-PeCDF	4.44e5	2.84e5	7.29e5	33.44	1.000	1.56	NO	48.495	0.142	0.917	0.945	-3.0	1.06e7	9751	1087.2	6.96e6	10226	680.2	bd	bd
10	23478-PeCDF	4.78e5	3.06e5	7.84e5	34.05	1.000	1.56	NO	50.529	0.131	0.997	0.987	1.1	1.16e7	9751	1188.4	7.49e6	10226	732.8	bb	bb
11	123478-HxCDF	3.77e5	3.07e5	6.84e5	36.16	1.000	1.23	NO	51.086	0.225	1.111	1.087	2.2	8.23e6	15572	528.2	6.72e6	11885	565.3	bd	bd
12	123678-HxCDF	4.48e5	3.64e5	8.13e5	36.26	1.000	1.23	NO	51.636	0.217	1.075	1.041	3.3	8.58e6	15572	550.8	6.94e6	11885	583.8	db	dd
13	234678-HxCDF	4.06e5	3.32e5	7.37e5	36.73	1.000	1.22	NO	50.326	0.226	1.143	1.136	0.7	7.90e6	15572	507.5	6.56e6	11885	551.6	bd	bb
14	123789-HxCDF	3.40e5	2.68e5	6.08e5	37.51	1.001	1.27	NO	48.430	0.325	1.027	1.061	-3.1	5.66e6	15572	363.6	4.53e6	11885	380.8	bd	bb
15	1234678-HpCDF	3.23e5	3.16e5	6.39e5	39.02	1.000	1.02	NO	50.471	0.181	1.161	1.150	0.9	5.16e6	8029	642.1	5.02e6	6211	808.7	bb	bd
16	1234789-HpCDF	2.79e5	2.64e5	5.44e5	40.93	1.000	1.06	NO	48.503	0.239	1.166	1.202	-3.0	3.59e6	8029	447.3	3.58e6	6211	576.4	bd	bb
17	OCDF	4.64e5	5.17e5	9.81e5	44.83	1.007	0.90	NO	95.971	0.416	1.087	1.133	-4.0	4.61e6	6808	677.7	5.22e6	9979	522.7	bd	bd
18	13C-2378-TCDD	6.39e5	8.30e5	1.47e6	31.39	1.015	0.77	NO	102.164	0.107	1.153	1.128	2.2	1.27e7	6608	1919.9	1.61e7	4086	3933.8	bd	bd
19	13C-12378-PeCDD	7.10e5	4.38e5	1.15e6	34.24	1.107	1.62	NO	119.996	0.160	0.901	0.751	20.0	1.69e7	6160	2746.8	1.08e7	4478	2410.4	bb	bb
20	13C-123478-HxCDD	5.80e5	4.59e5	1.04e6	36.86	0.991	1.26	NO	91.366	0.162	0.819	0.896	-8.6	1.18e7	6024	1955.4	9.38e6	6486	1446.4	bd	bd
21	13C-123678-HxCDD	7.02e5	5.59e5	1.26e6	36.95	0.993	1.26	NO	100.767	0.147	0.993	0.986	0.8	1.32e7	6024	2192.3	1.06e7	6486	1627.5	dd	dd
22	13C-1234678-HpCDD	4.74e5	4.61e5	9.35e5	40.27	1.083	1.03	NO	109.674	0.267	0.737	0.672	9.7	6.51e6	8427	772.2	6.20e6	7001	885.1	bb	bd
23	13C-OCDD	8.56e5	9.49e5	1.81e6	44.52	1.197	0.90	NO	221.522	0.330	0.711	0.642	10.8	8.44e6	10360	814.8	9.56e6	7907	1209.7	bd	bd
24	13C-2378-TCDF	7.57e5	9.68e5	1.72e6	30.72	0.993	0.78	NO	108.288	0.132	1.353	1.250	8.3	1.14e7	9184	1241.6	1.45e7	5494	2634.8	bb	bb
25	13C-12378-PeCDF	9.79e5	6.11e5	1.59e6	33.44	1.081	1.60	NO	123.441	0.258	1.248	1.011	23.4	2.29e7	12318	1862.6	1.46e7	10776	1358.3	bd	bd
26	13C-23478-PeCDF	9.53e5	6.19e5	1.57e6	34.04	1.101	1.54	NO	116.085	0.245	1.234	1.063	16.1	2.34e7	12318	1895.6	1.49e7	10776	1383.7	db	dd
27	13C-123478-HxCDF	4.20e5	8.12e5	1.23e6	36.15	0.972	0.52	NO	87.372	0.278	0.970	1.111	-12.6	9.56e6	9850	970.2	1.81e7	16740	1082.6	bd	bd
28	13C-123678-HxCDF	5.02e5	1.01e6	1.51e6	36.25	0.975	0.50	NO	95.574	0.248	1.192	1.247	-4.4	1.01e7	9850	1025.3	1.93e7	16740	1154.1	db	db
29	13C-234678-HxCDF	4.38e5	8.52e5	1.29e6	36.72	0.987	0.51	NO	93.941	0.285	1.016	1.082	-6.1	9.08e6	9850	922.1	1.72e7	16740	1029.1	bb	bb
30	13C-123789-HxCDF	3.92e5	7.92e5	1.18e6	37.49	1.008	0.50	NO	96.489	0.319	0.933	0.967	-3.5	6.60e6	9850	670.2	1.27e7	16740	757.7	bb	bd

Quantify Sample Summary Report **MassLynx 4.1**
 Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time
 Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
31	13C-1234678-HpCDF	3.35e5	7.66e5	1.10e6	39.01	1.049	0.44	NO	99.732	0.203	0.868	0.870	-0.3	5.19e6	7025	739.4	1.19e7	8168	1460.7	bd	bd
32	13C-1234789-HpCDF	2.85e5	6.48e5	9.33e5	40.92	1.100	0.44	NO	108.473	0.260	0.735	0.677	8.5	3.79e6	7025	539.3	8.61e6	8168	1053.7	bd	bd
33	13C-1234-TCDD	5.59e5	7.16e5	1.27e6	30.93	0.000	0.78	NO	100.000	0.121	1.000	1.000	0.0	9.72e6	6608	1471.3	1.24e7	4086	3041.4	bb	bb
34	13C-123789-HxCDD	7.04e5	5.65e5	1.27e6	37.19	0.000	1.25	NO	100.000	0.145	1.000	1.000	0.0	1.20e7	6024	1984.0	9.64e6	6486	1485.9	dd	dd
35	37Cl+2378-TCDD	1.30e5		1.30e5	31.40	1.015			9.618	0.0272	1.021	1.061	-3.8	2.59e6	2557	1013.8				bb	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

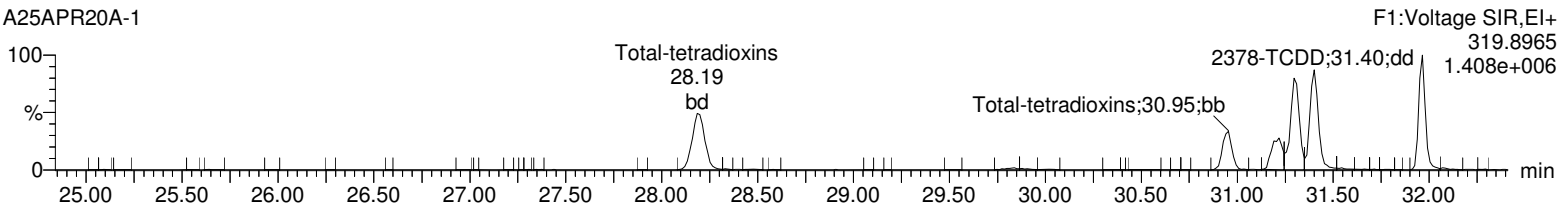
Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_A23APR20.mdb 23 Apr 2020 09:24:32

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-A08JUL19A.cdb 09 Jul 2019 09:53:23

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A,
Task: HRP750_2, User: MLL

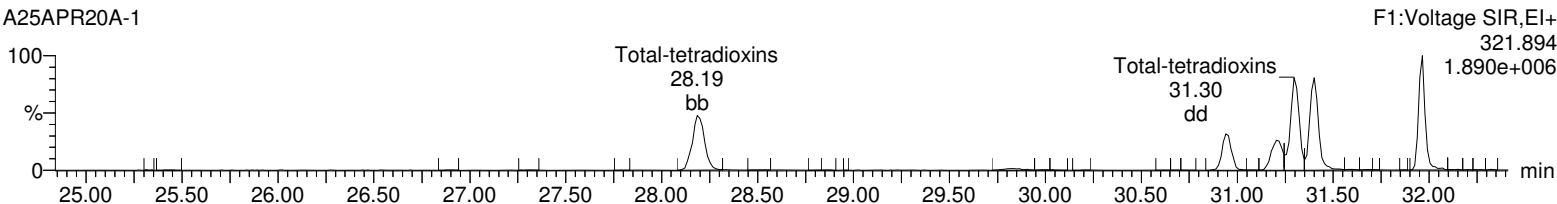
Total-tetradoxins

A25APR20A-1



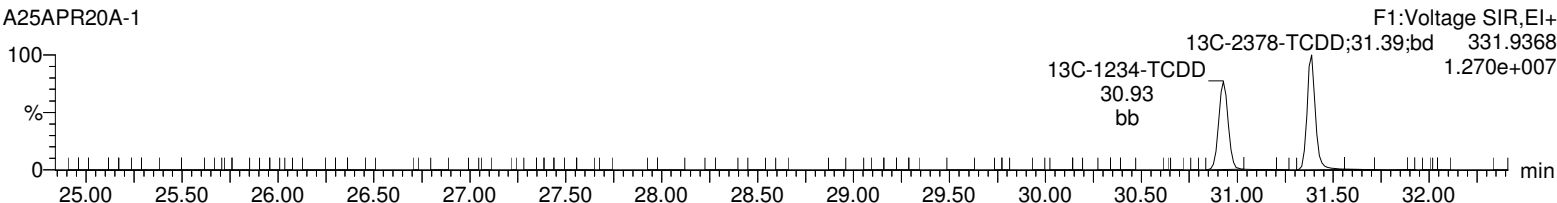
Total-tetradoxins

A25APR20A-1



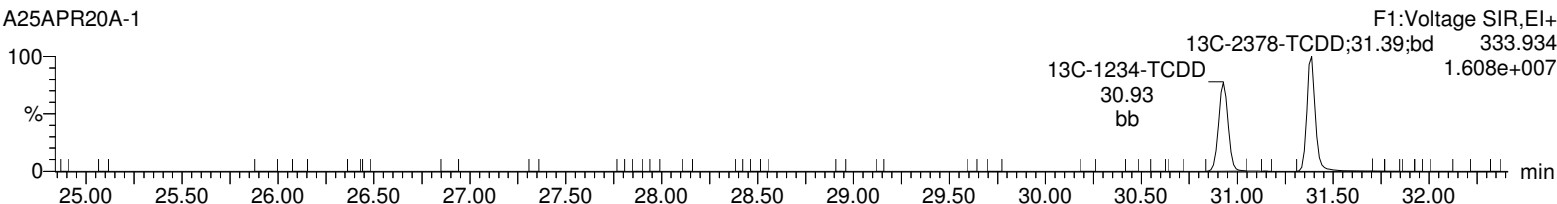
13C-2378-TCDD

A25APR20A-1



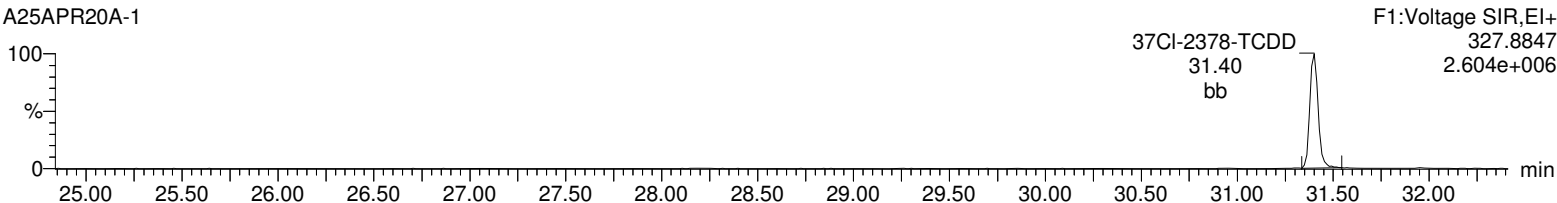
13C-2378-TCDD

A25APR20A-1



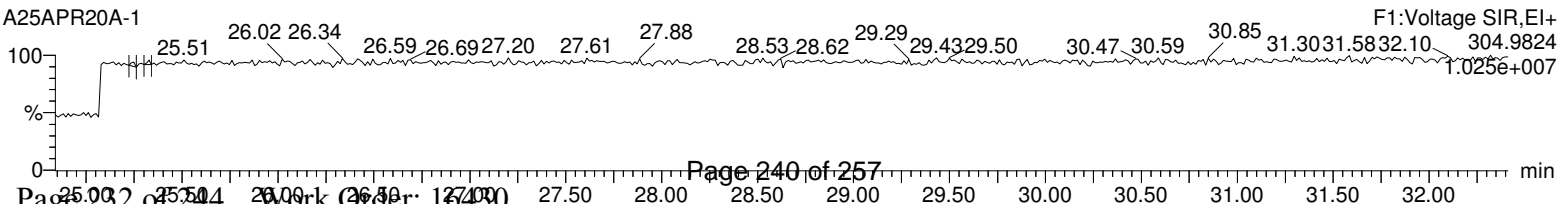
37Cl-2378-TCDD

A25APR20A-1



Lock Mass F1

A25APR20A-1



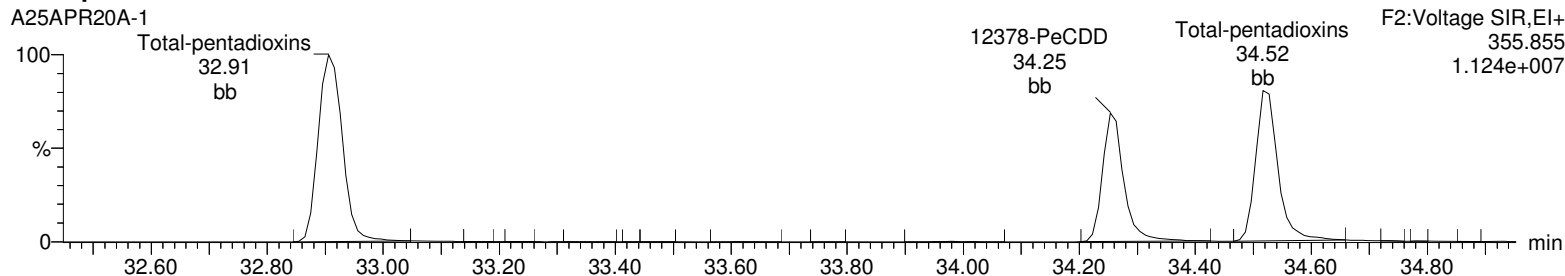
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

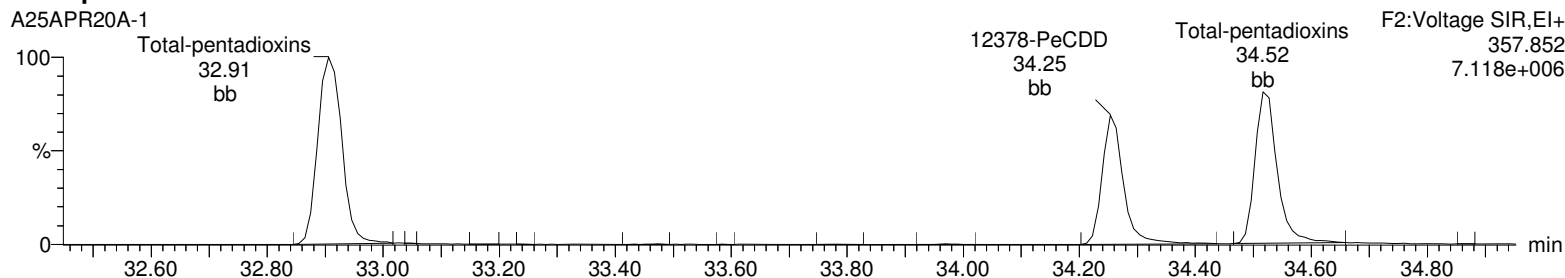
Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

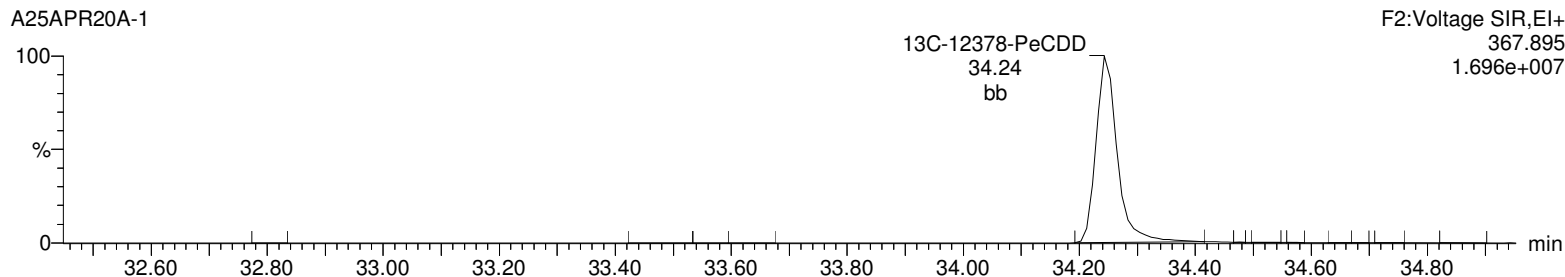
Total-pentadioxins



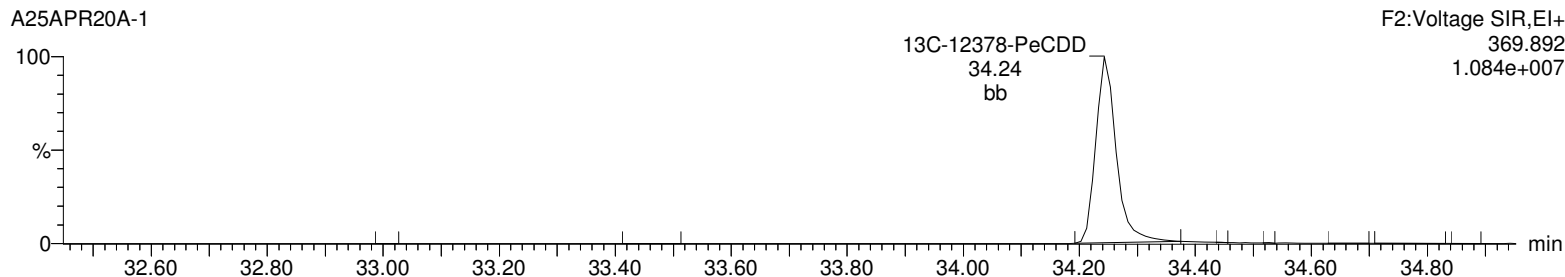
Total-pentadioxins



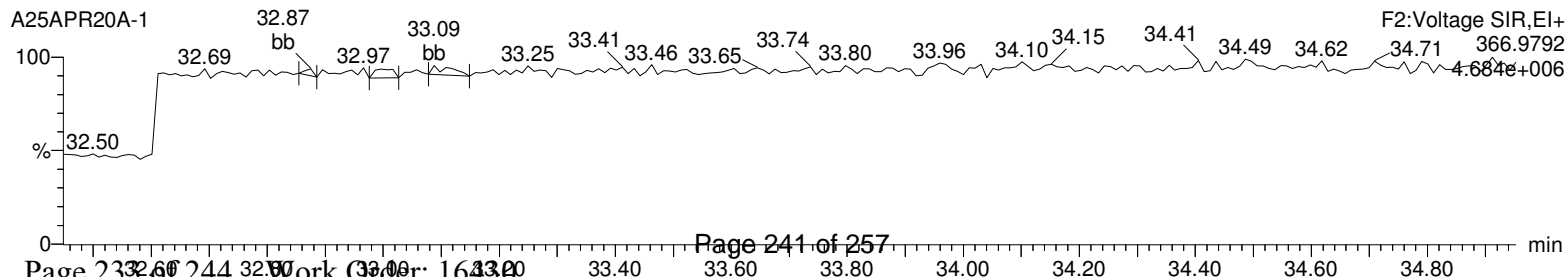
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

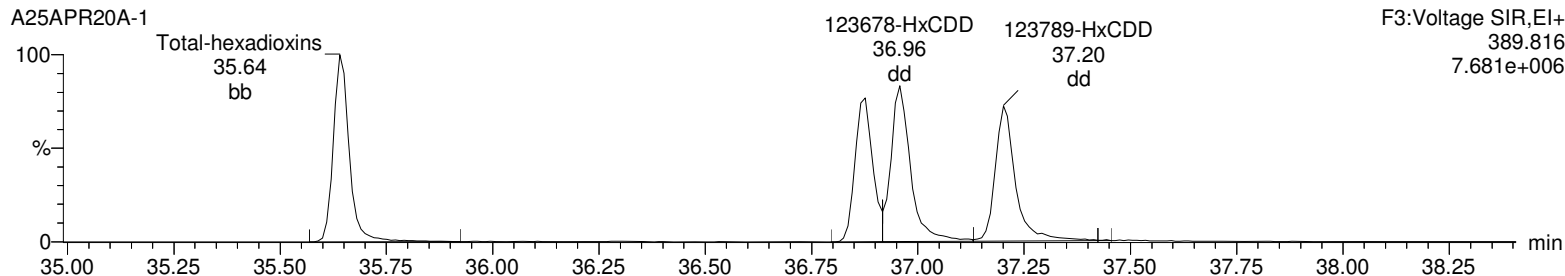
Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A,
Task: HRP750_2, User: MLL

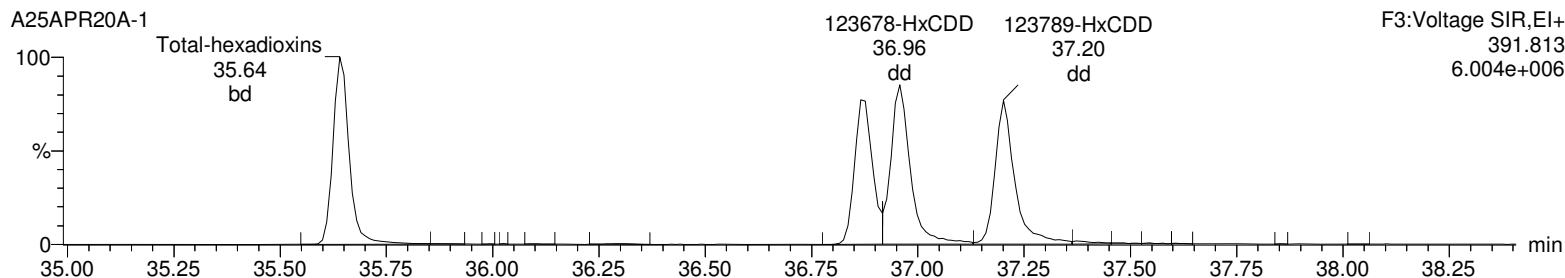
Total-hexadioxins

A25APR20A-1



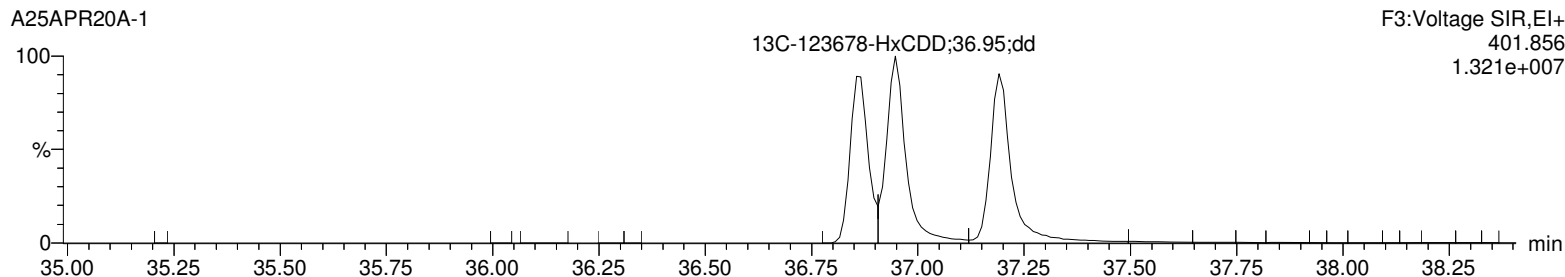
Total-hexadioxins

A25APR20A-1



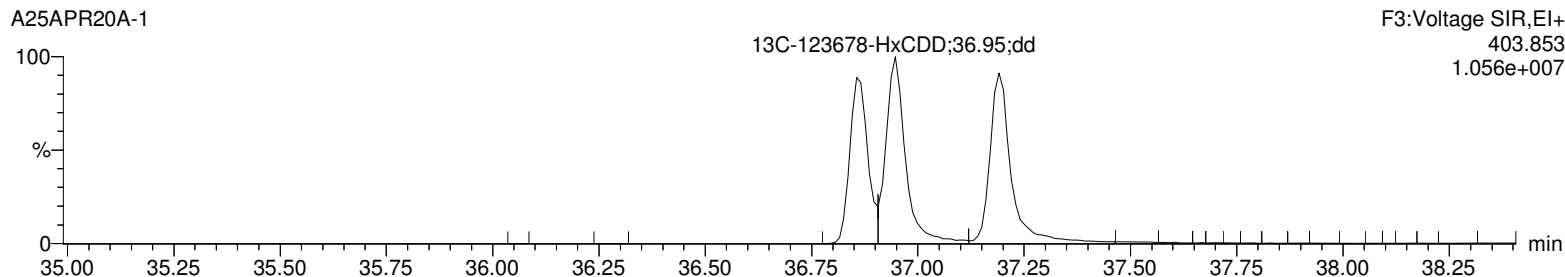
13C-123478-HxCDD

A25APR20A-1



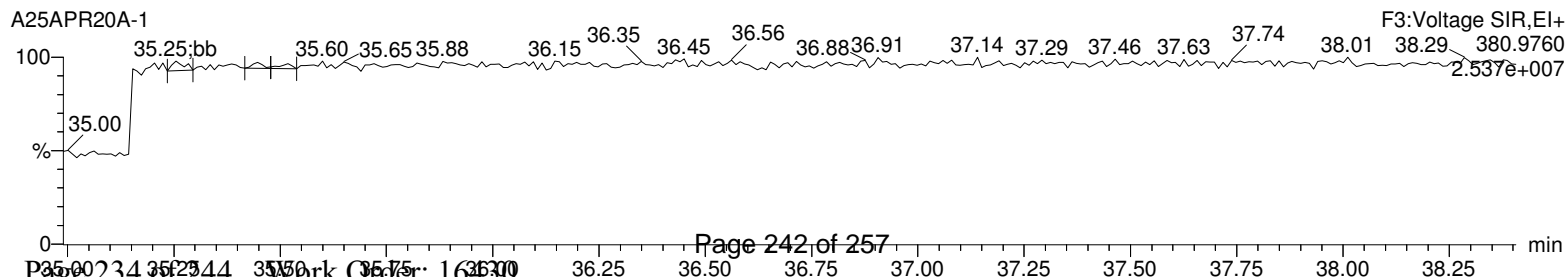
13C-123478-HxCDD

A25APR20A-1



Lock Mass F3

A25APR20A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

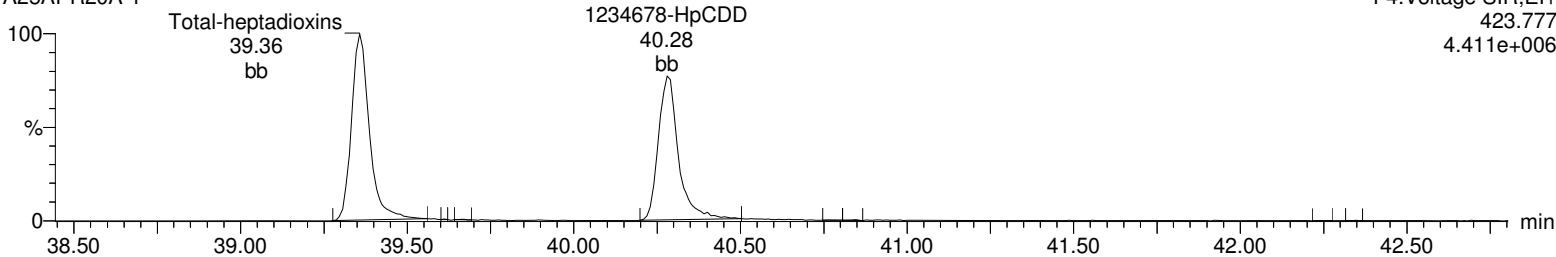
Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A,
Task: HRP750_2, User: MLL

Total-heptadioxins

A25APR20A-1

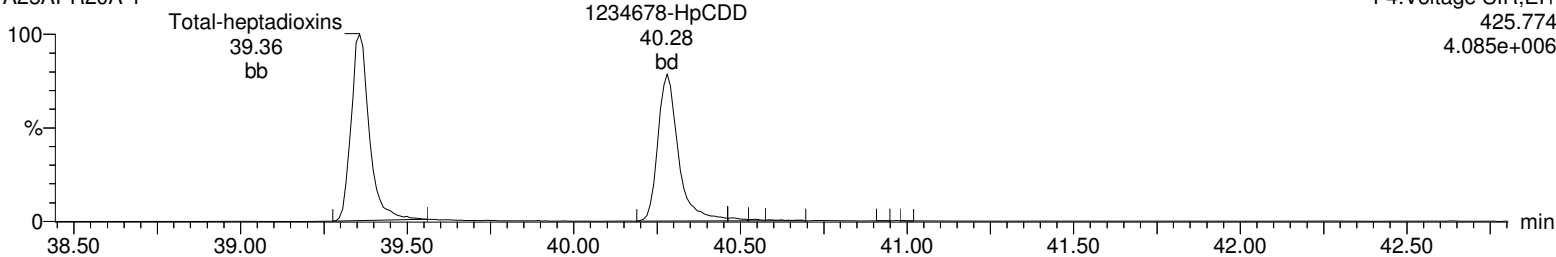
F4:Voltage SIR,EI+
423.777
4.411e+006



Total-heptadioxins

A25APR20A-1

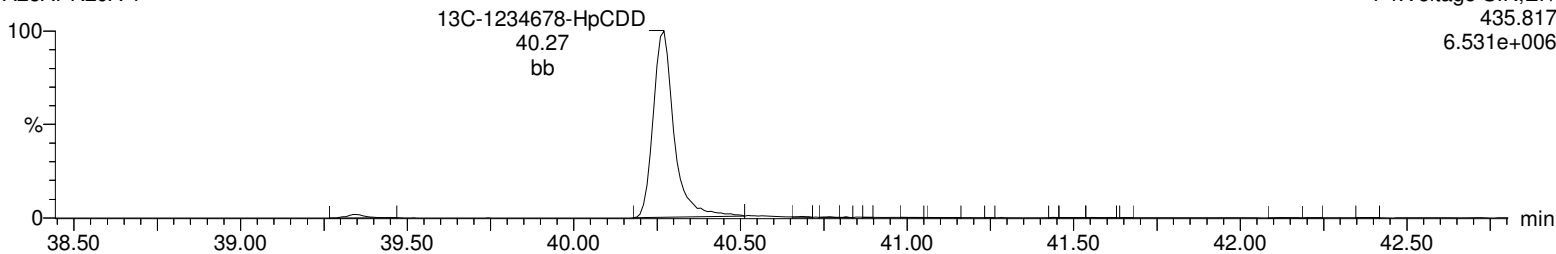
F4:Voltage SIR,EI+
425.774
4.085e+006



13C-1234678-HpCDD

A25APR20A-1

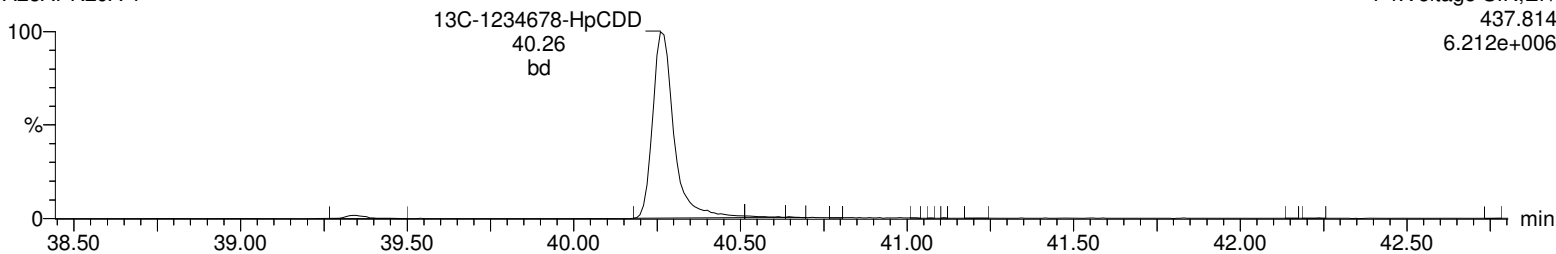
F4:Voltage SIR,EI+
435.817
6.531e+006



13C-1234678-HpCDD

A25APR20A-1

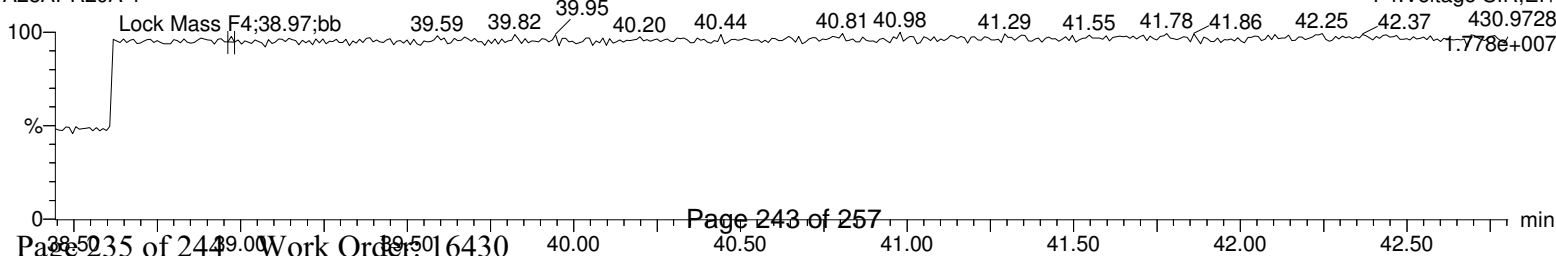
F4:Voltage SIR,EI+
437.814
6.212e+006



Lock Mass F4

A25APR20A-1

F4:Voltage SIR,EI+
430.9728
1.778e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

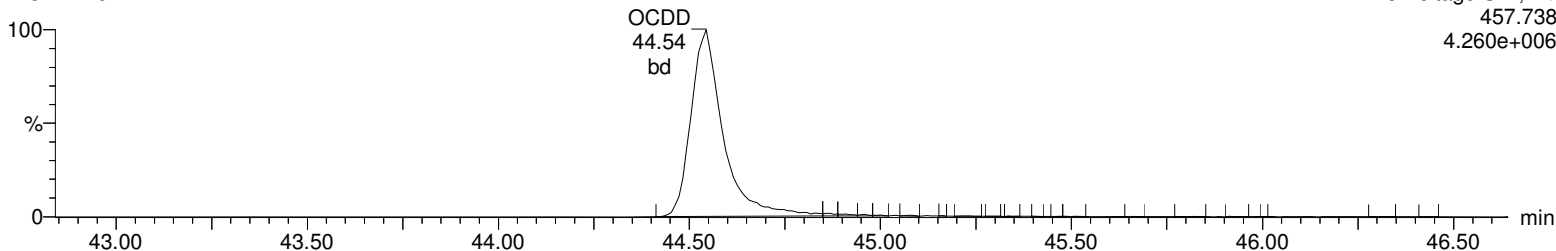
Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A,
Task: HRP750_2, User: MLL

OCDD

A25APR20A-1

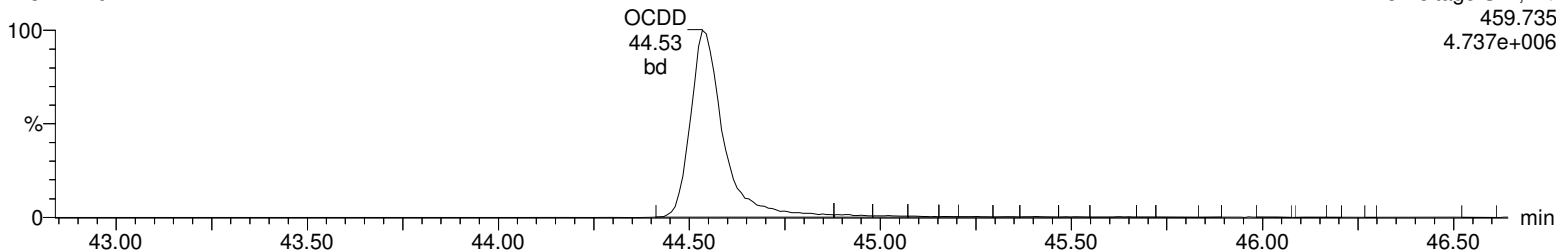
F5:Voltage SIR,EI+
457.738
4.260e+006



OCDD

A25APR20A-1

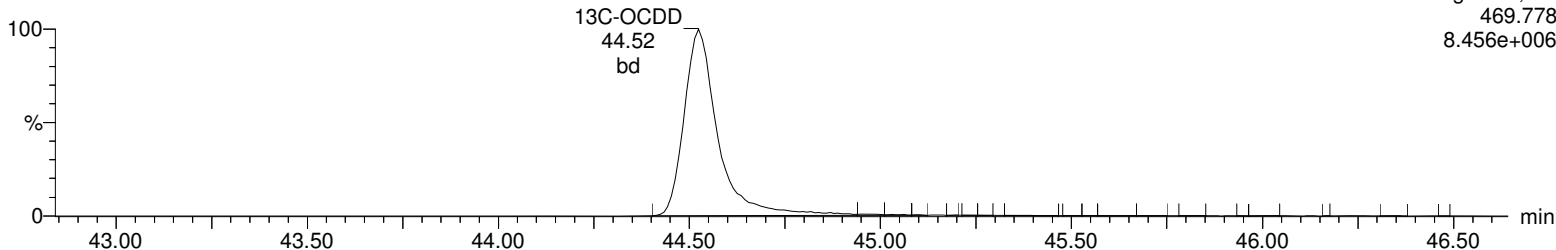
F5:Voltage SIR,EI+
459.735
4.737e+006



13C-OCDD

A25APR20A-1

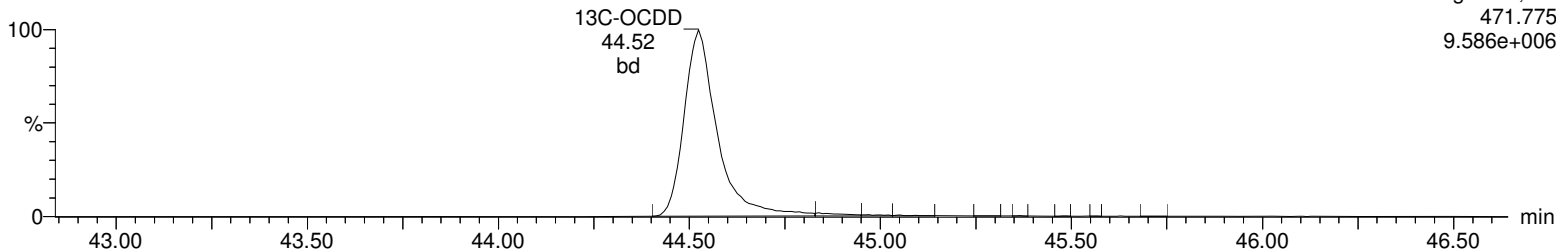
F5:Voltage SIR,EI+
469.778
8.456e+006



13C-OCDD

A25APR20A-1

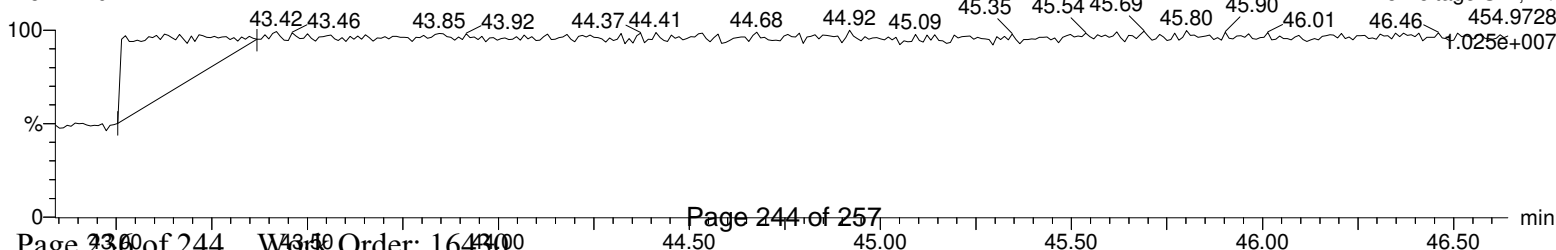
F5:Voltage SIR,EI+
471.775
9.586e+006



Lock Mass F5

A25APR20A-1

F5:Voltage SIR,EI+
454.9728
1.025e+007



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

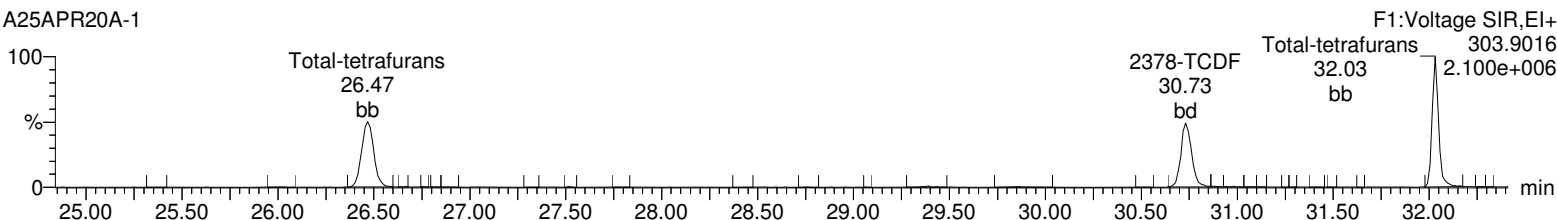
Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

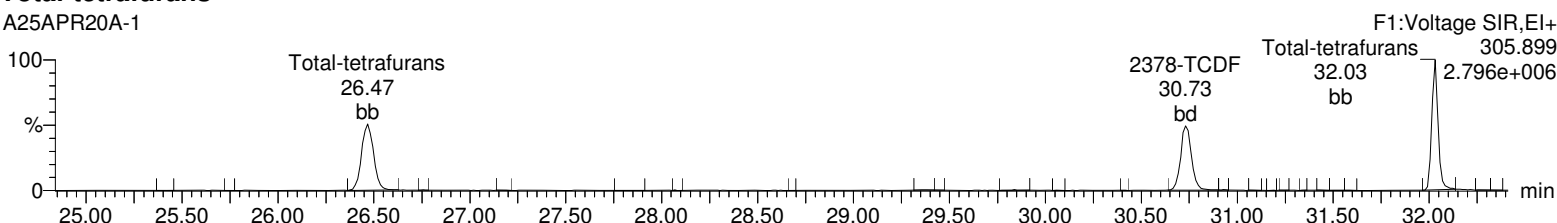
Total-tetrafurans

A25APR20A-1



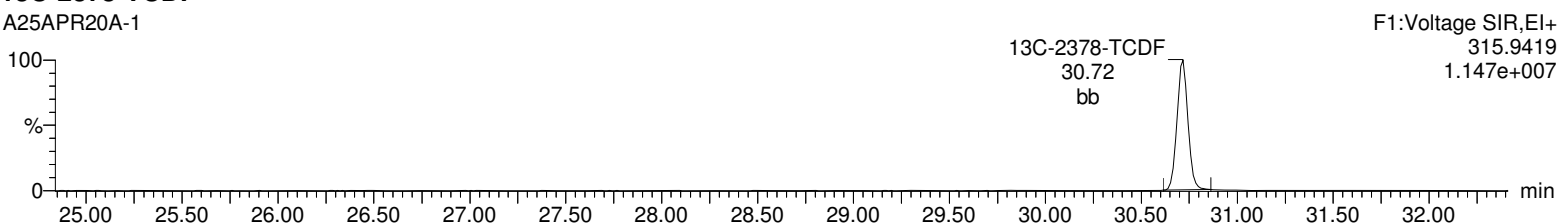
Total-tetrafurans

A25APR20A-1



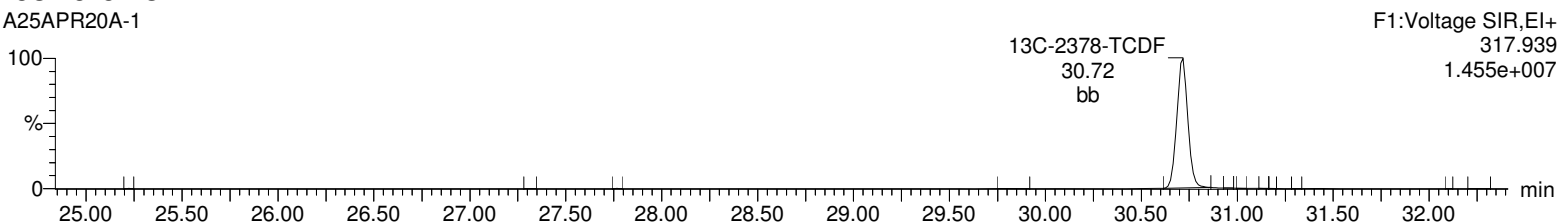
13C-2378-TCDF

A25APR20A-1



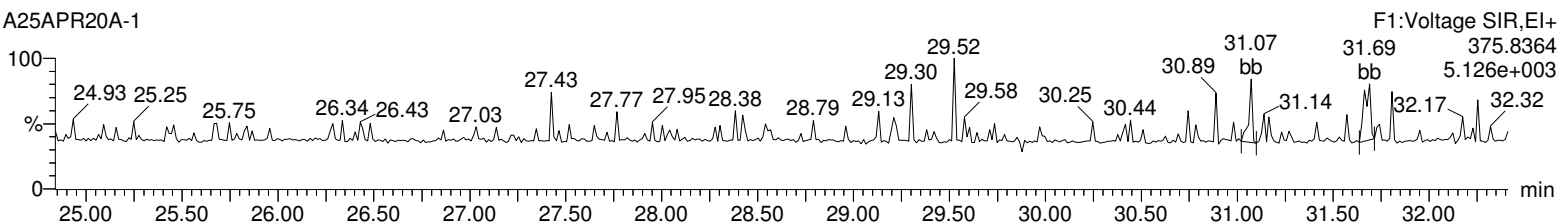
13C-2378-TCDF

A25APR20A-1



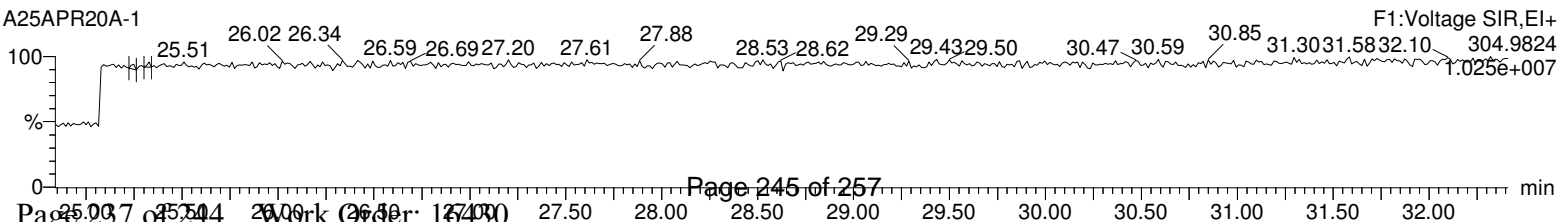
HxDPE

A25APR20A-1



Lock Mass F1

A25APR20A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

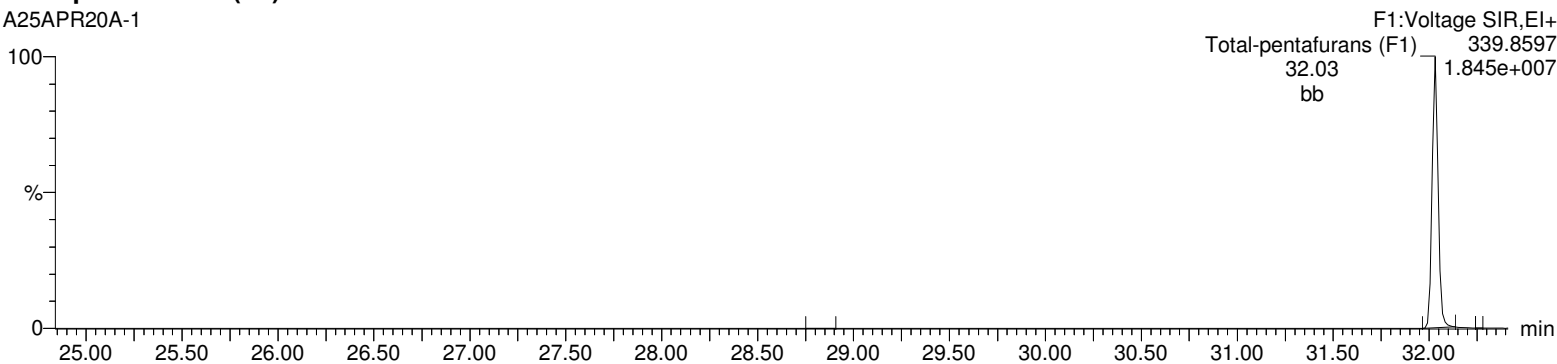
Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

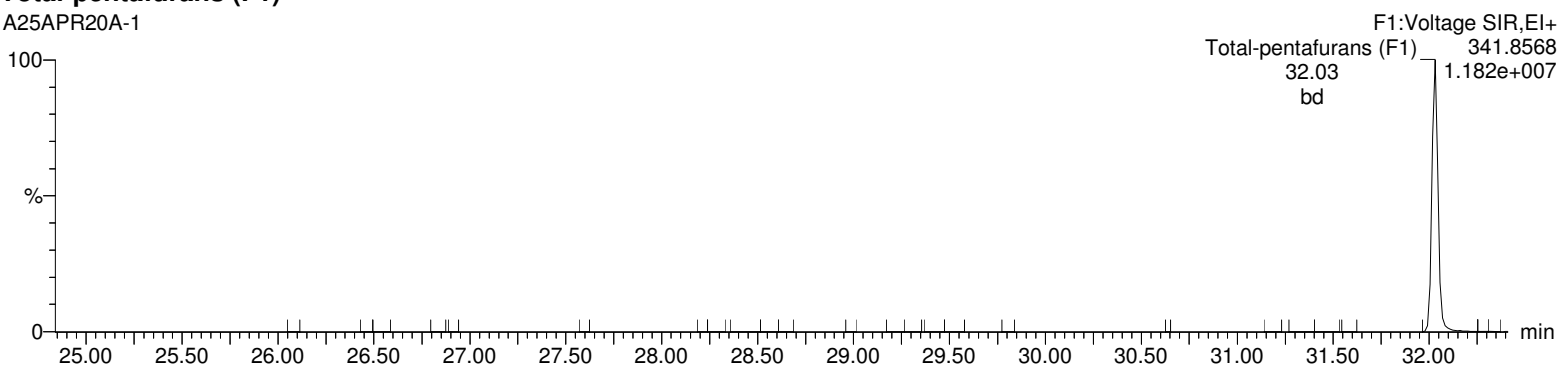
Total-pentafurans (F1)

A25APR20A-1



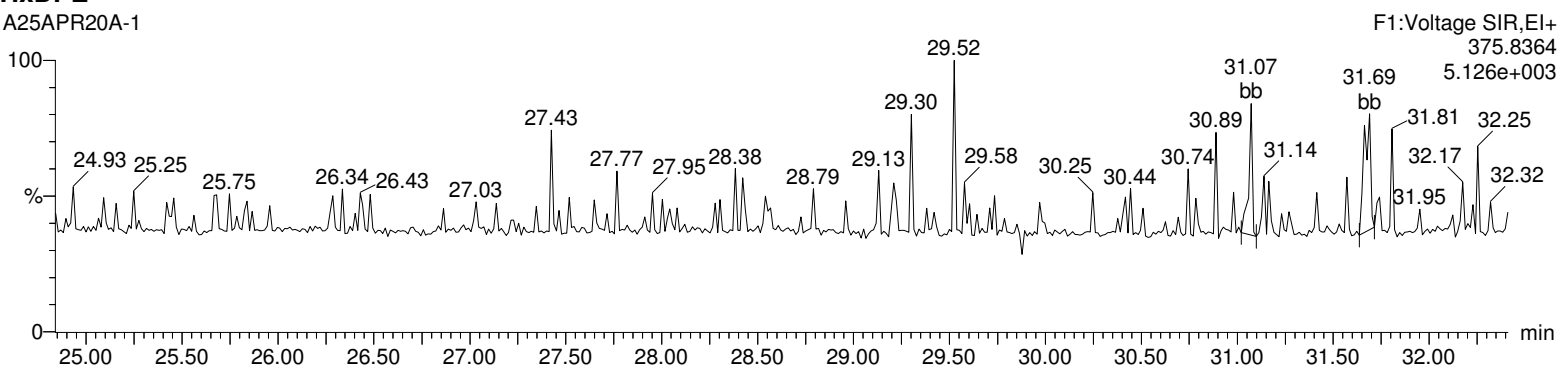
Total-pentafurans (F1)

A25APR20A-1



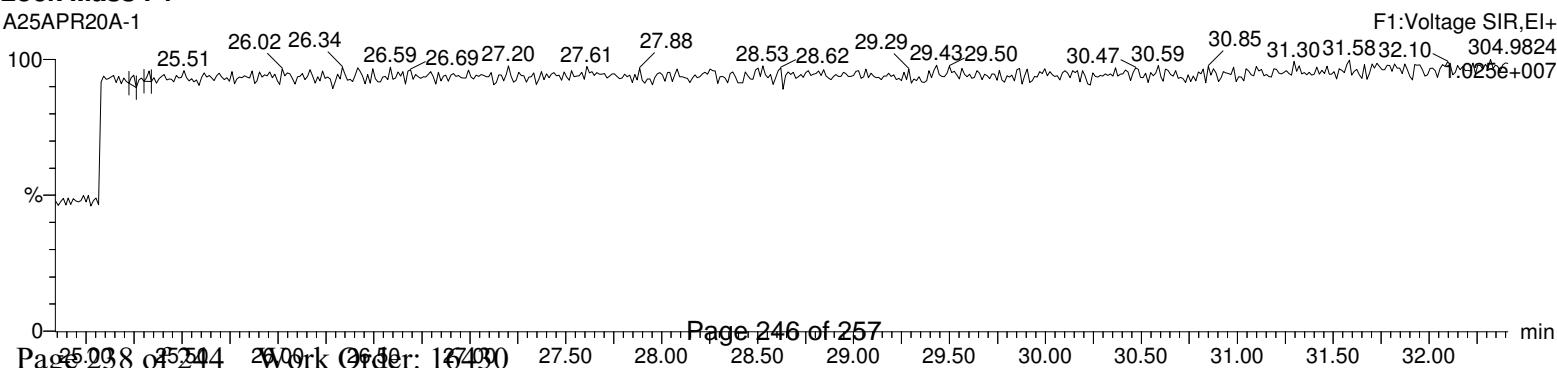
HxDPE

A25APR20A-1



Lock Mass F1

A25APR20A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

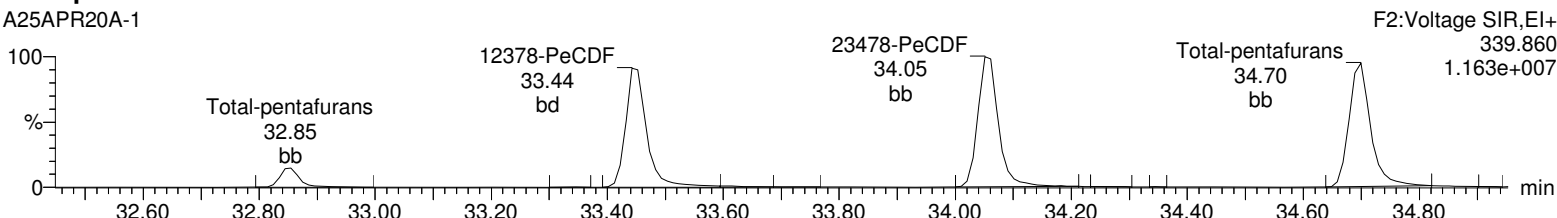
Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

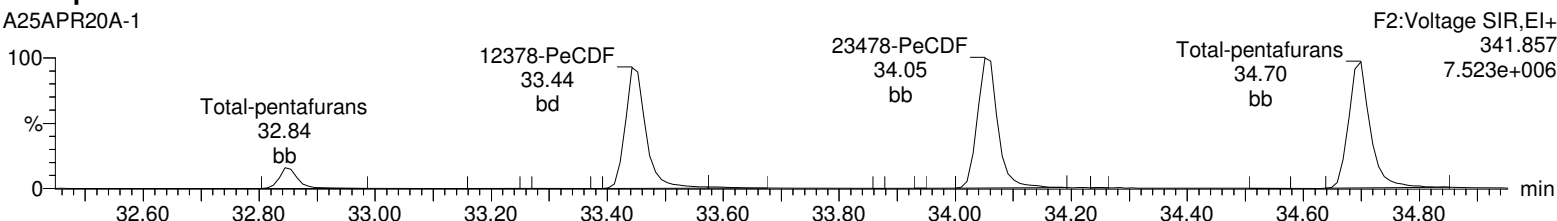
Total-pentafurans

A25APR20A-1



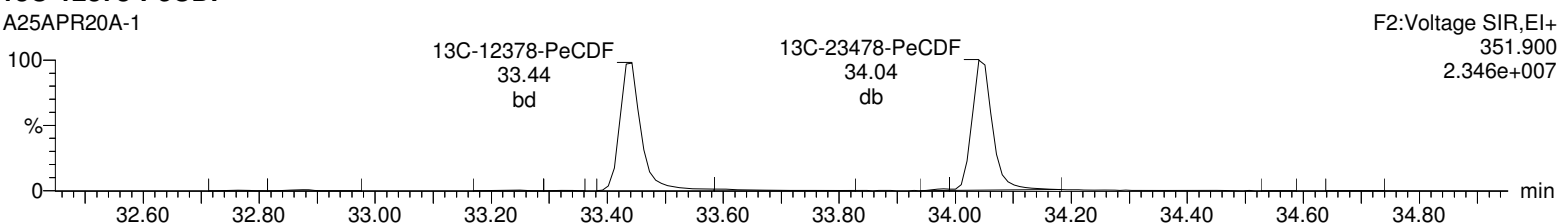
Total-pentafurans

A25APR20A-1



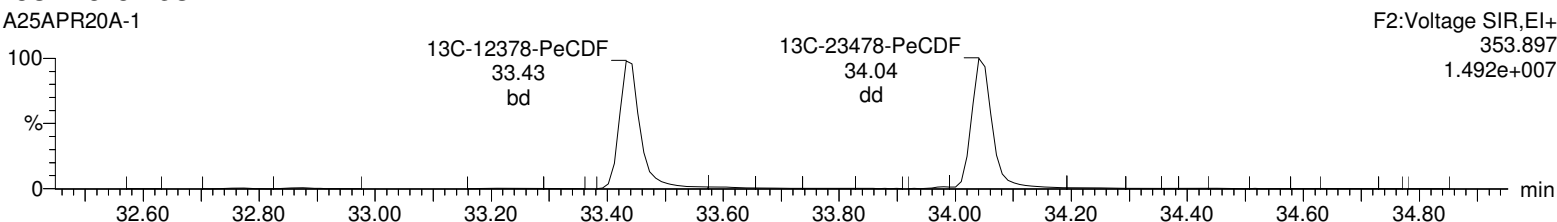
13C-12378-PeCDF

A25APR20A-1



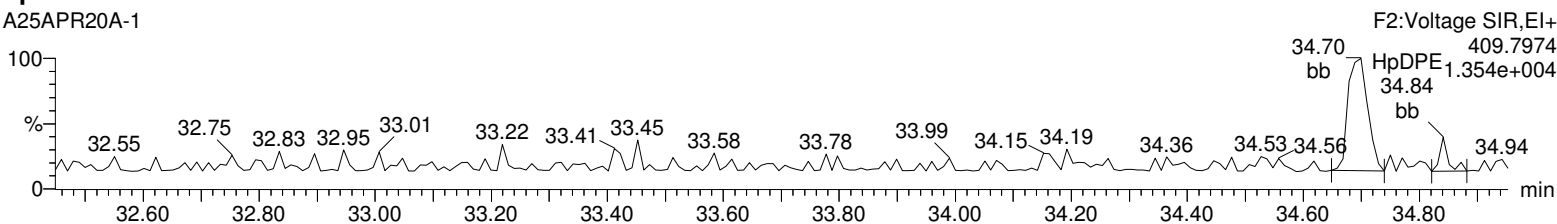
13C-12378-PeCDF

A25APR20A-1



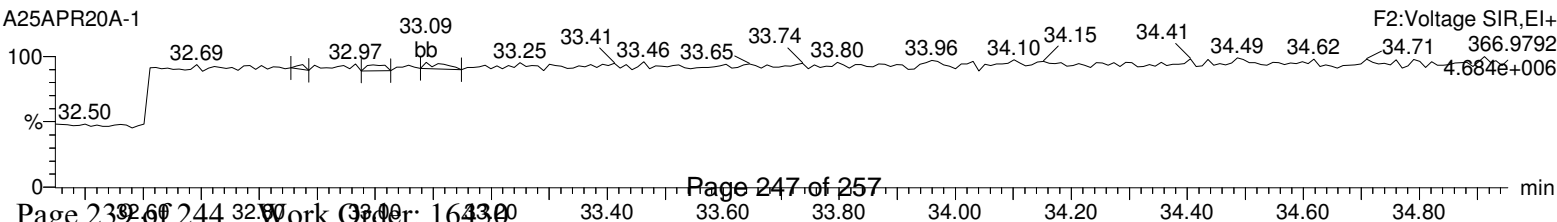
HpDPE

A25APR20A-1



Lock Mass F2

A25APR20A-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

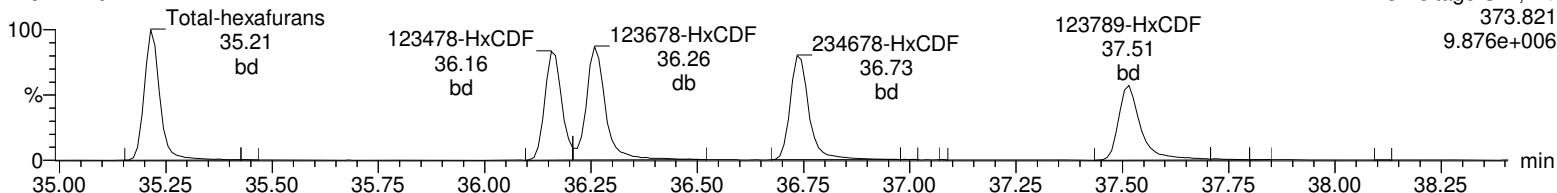
Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

Total-hexafurans

A25APR20A-1

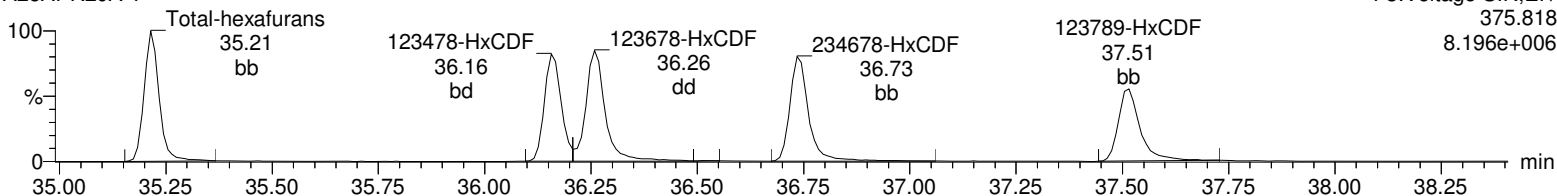
F3:Voltage SIR,EI+
373.821
9.876e+006



Total-hexafurans

A25APR20A-1

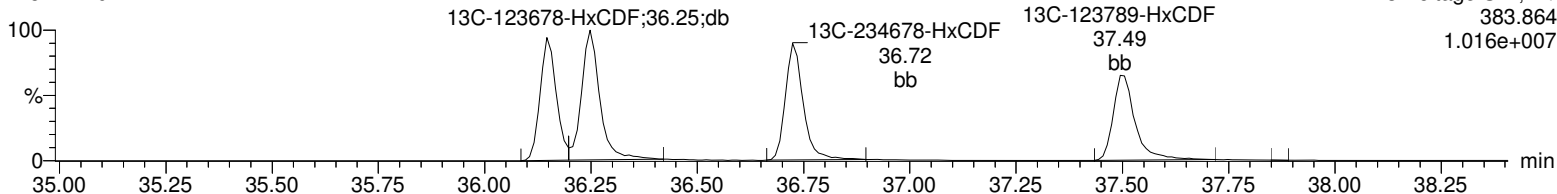
F3:Voltage SIR,EI+
375.818
8.196e+006



13C-123478-HxCDF

A25APR20A-1

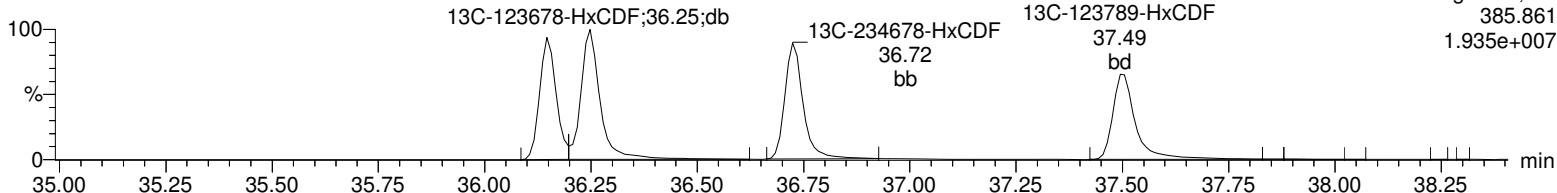
F3:Voltage SIR,EI+
383.864
1.016e+007



13C-123478-HxCDF

A25APR20A-1

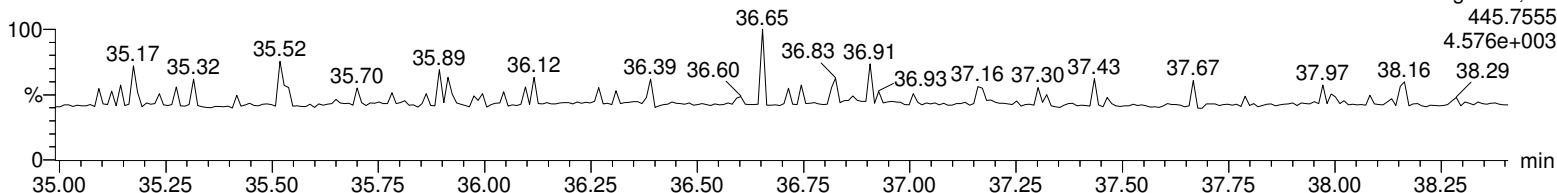
F3:Voltage SIR,EI+
385.861
1.935e+007



OcDPE

A25APR20A-1

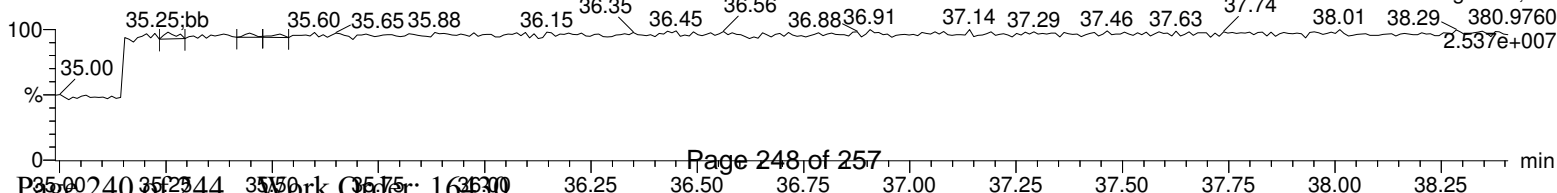
F3:Voltage SIR,EI+
445.7555
4.576e+003



Lock Mass F3

A25APR20A-1

F3:Voltage SIR,EI+
380.9760
2.537e+007



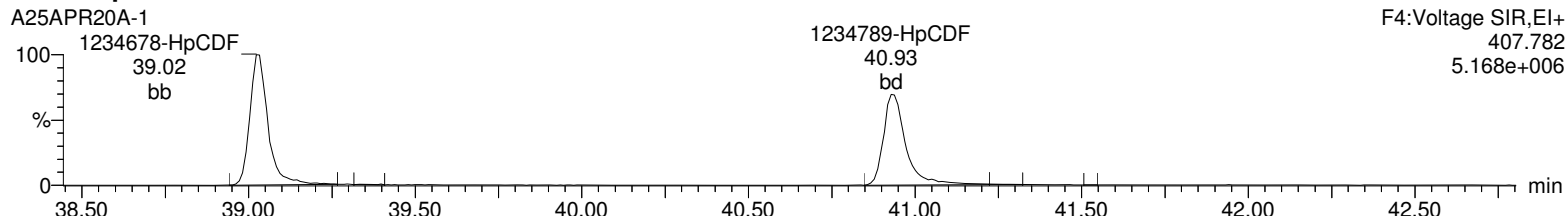
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

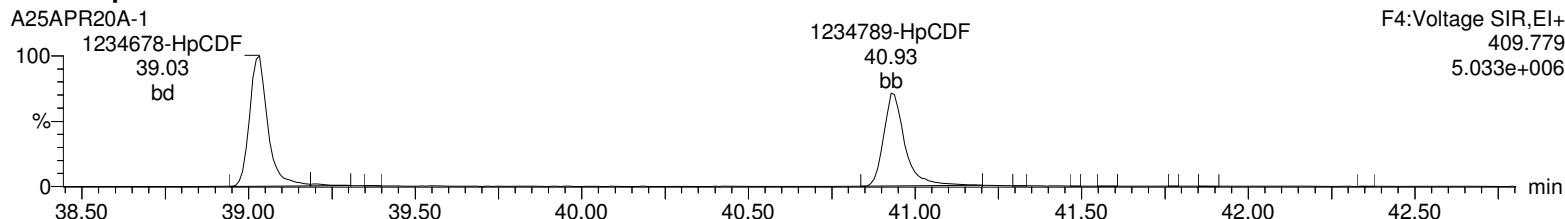
Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A, Task: HRP750_2, User: MLL

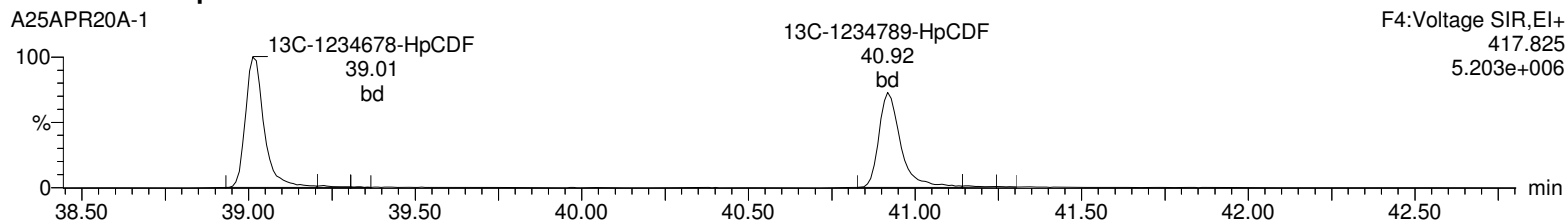
Total-heptafurans



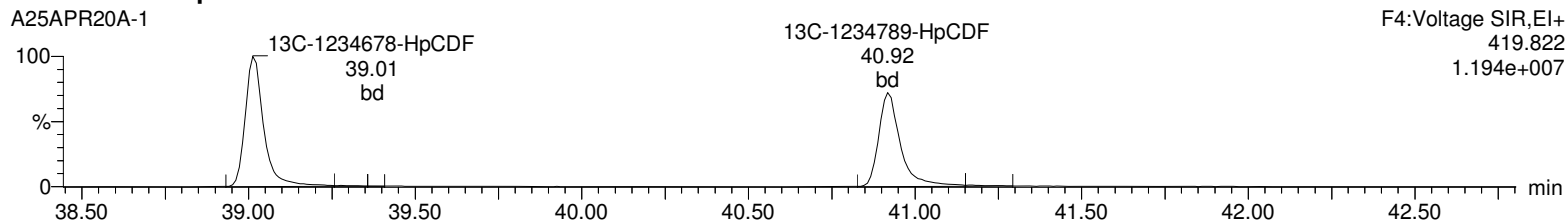
Total-heptafurans



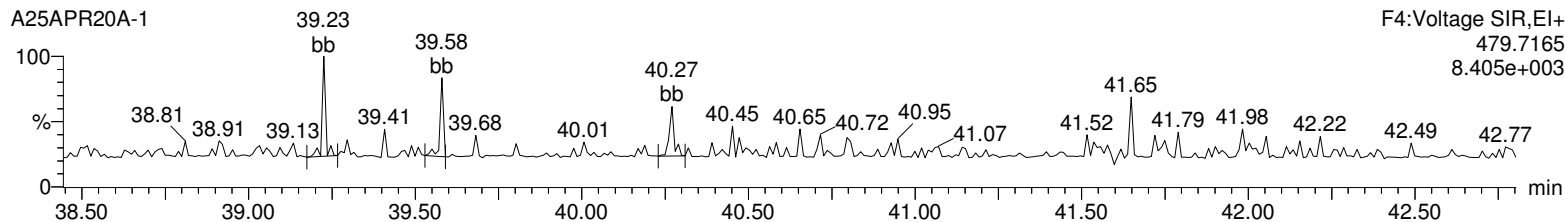
13C-1234678-HpCDF



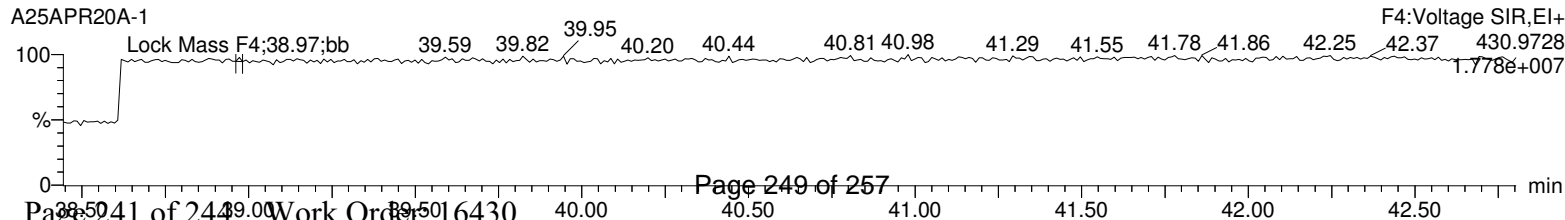
13C-1234678-HpCDF



NoDPE



Lock Mass F4



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-A25APR20A-1.qld

Last Altered: Sunday, April 26, 2020 15:54:55 Eastern Daylight Time

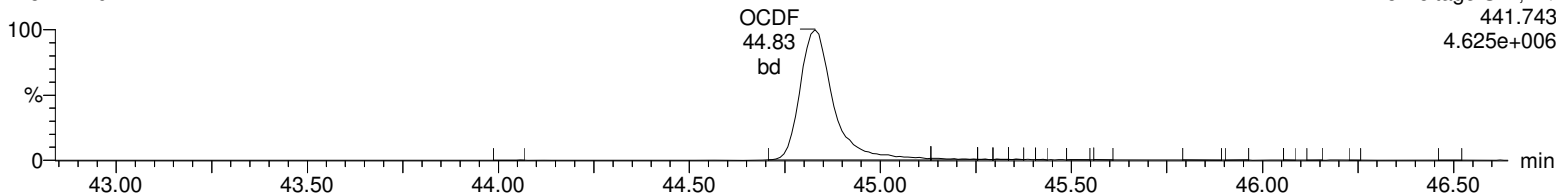
Printed: Sunday, April 26, 2020 15:55:53 Eastern Daylight Time

Name: A25APR20A-1, Date: 25-Apr-2020, Time: 11:15:05, ID: CS3WT UD191224-01.1, Description: , Job: A25APR20A,
Task: HRP750_2, User: MLL

OCDF

A25APR20A-1

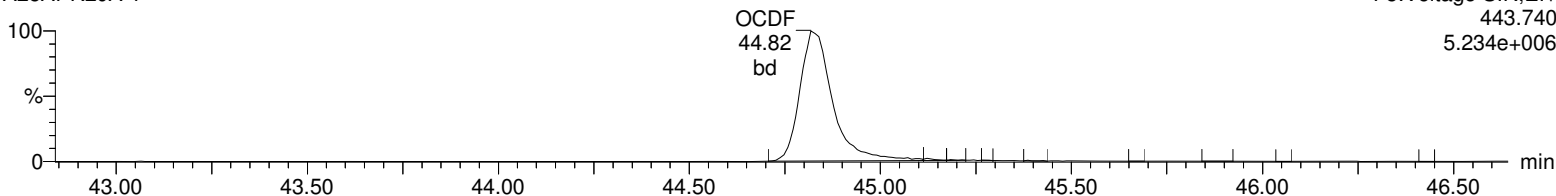
F5:Voltage SIR,EI+
441.743
4.625e+006



OCDF

A25APR20A-1

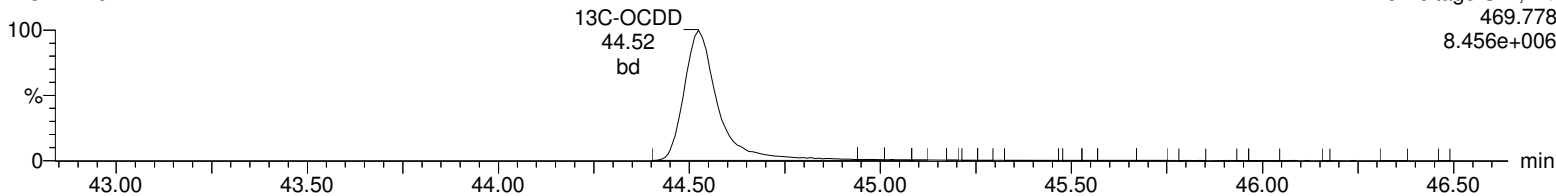
F5:Voltage SIR,EI+
443.740
5.234e+006



13C-OCDD

A25APR20A-1

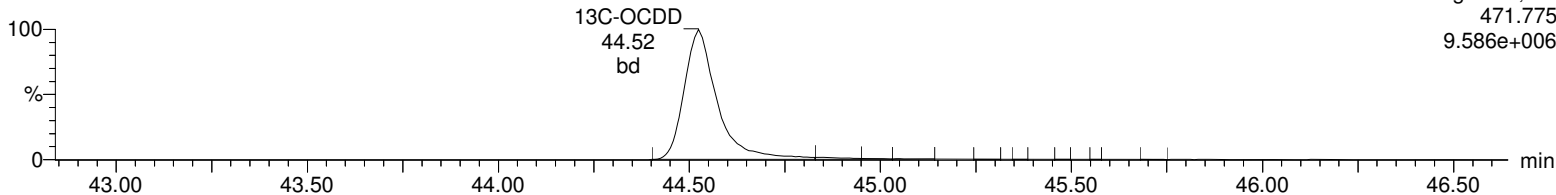
F5:Voltage SIR,EI+
469.778
8.456e+006



13C-OCDD

A25APR20A-1

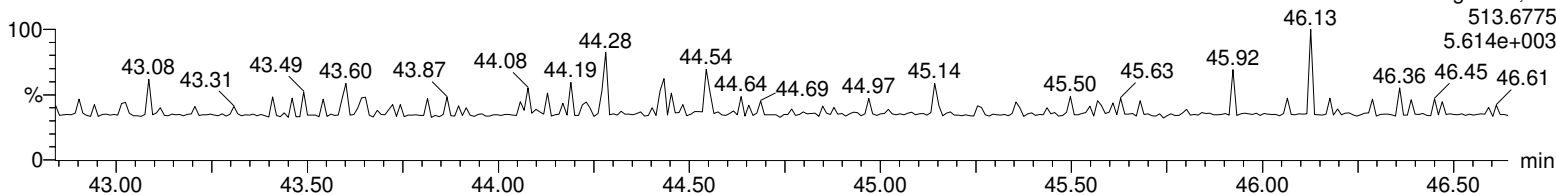
F5:Voltage SIR,EI+
471.775
9.586e+006



DeDPE

A25APR20A-1

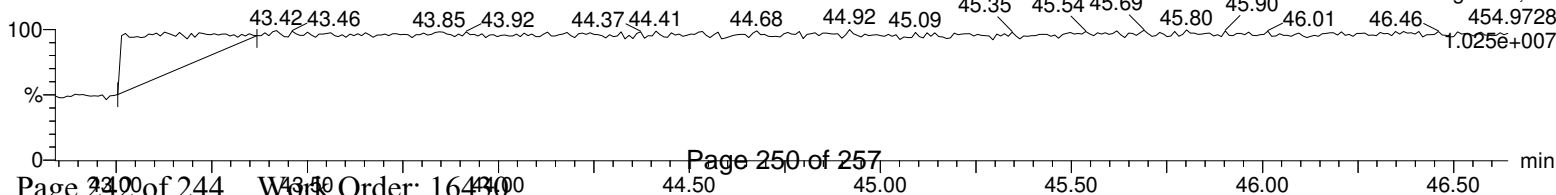
F5:Voltage SIR,EI+
513.6775
5.614e+003



Lock Mass F5

A25APR20A-1

F5:Voltage SIR,EI+
454.9728
1.025e+007



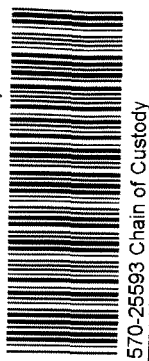
Miscellaneous

No non conformance reports were generated for this work order

Shipping and Receiving Documents

Project Name	SSFL	Location	Santa Susana Field Lab
Project	CH661 PO 100067108373	Task Order	661
Project Number	692670.61.SW	Sample Date/Time	09-Apr-20 7:55
Project Manager	Randy Dean	Type	N
Sample Manager	Jamie Beckett	Matrix	Water
Turnaround Time	10 Days	Preservative	
PO Number	100067108373		
Sample ID	A2BMP0006S011		
Dioxins		# Containers	2
		Field Filtered	<input type="checkbox"/>
LAB FILTER - Dissolved Cd, Cu, Pb, Hg		4C	<input type="checkbox"/>
Include Cd, Cu, Pb, Hg		4C	<input type="checkbox"/>
Particle Size Distribution TSS		HNO3, 4C	<input type="checkbox"/>
		4C	<input type="checkbox"/>
		Total Containers:	6

SW8290/1613B
 SM2540
 ASTM4464
 200.8/245.1F
 200.8/245.1



570-25593 Chain of Custody

MS = Matrix Spike SD = Matrix Spike Duplicate

Sampled by	<i>Bryan Person</i>	Signatures	Date/Time
Relinquished by	<i>Bryan Person</i>		4/9/20 7:55
Received by	<i>Deek Miles</i>		4/9/20 12:00
Relinquished by	<i>[Signature]</i>		4/9/20 13:09
Received by	<i>Santos</i>		4/10/20 13:09
Relinquished by	<i>Santos</i>		4/10/20 18:00
Received by	<i>Chanel Si</i>		4/10/20 18:00

Shipping Details

Shipment Method: FedEx
Airbill No:
Lab Name: Eurofins Calscience Lab
Lab Phone: (949) 870-8766
On Ice: yes / no **Cooler Temp** 24/24 SU

ATTN:

Sample Custody and

Special Instructions:

Report Copy to
 Mark Fesler
 (530) 229-3273



Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler: Patel, Virendra	Lab P/N: Virendra	Carrier Tracking No(s): 570-28643.1	COC No: 570-28643.1
Client Contact: Shipping/Receiving		Phone: virendrapatel@eurofins.com	E-Mail: virendrapatel@eurofins.com	State of Origin: California	Page: Page 1 of 1
Company: Cape Fear Analytical, LLC		Accreditations Required (See note):		Job #: 570-25593-2	Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, Other:
Address: 3306 Kitty Hawk Road, Wilmington, NC, 28405		Due Date Requested: 5/8/2020	Analysis Requested:		
City: Wilmington		TAT Requested (days):	M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2SO4, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)		
State: NC, 28405		PO #: 570-25593	Total Number of Containers: 2		
Phone: 570-25593		WO #: 570-25593	Special Instructions/Note: Ch2m Hill Lab Spec 7 EDD, Standard TAT		
Email: CH6611692670.61.SW		Project #: 570-25593	EPA 1613B-Dioxins/Furans (Report with J - Level IV)		
Site: CH6611692670.61.SW		SSOW#:	Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>		
Sample Identification - Client ID (Lab ID)		Sample Date: 4/9/20	Sample Time: 07:55 Pacific	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>	Special Instructions/Note:
A2BMP00065011 (570-25593-1)		Sample Date: 4/9/20	Sample Time: 07:55 Pacific	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>	Special Instructions/Note:
Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Sample Date: 4/9/20	Sample Time: 07:55 Pacific	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>	Special Instructions/Note:
Preservation Code: Water		Sample Date: 4/9/20	Sample Time: 07:55 Pacific	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>	Special Instructions/Note:

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: *Alma* Date: 04/13/2020 Company: ECI Company
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____ Company
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____ Company
 Custody Seals Intact: _____ Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: _____

SHIP DATE: 13APR20
ACTWGT: 25.00 LB
CAD: 1533735/NET4220

BILL SENDER

ORIGIN ID: APVA (714) 895-5494
NOEL CRUISE
CAL SCIENCE ENVIRONMENTAL LAB
7440 LINCOLN WAY

GARDEN GROVE, CA 92841
UNITED STATES US

TO **CYNDE LARKINS**
CAPE FEAR ANALYTICAL
3306 KITTY HAWK ROAD
SUITE 120

WILMINGTON NC 28405

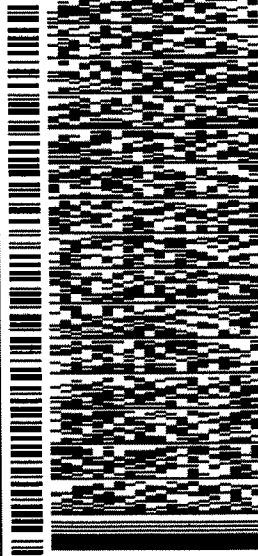
REF: VP25693

(910) 795-0421

INV:
P.O.

DEPT:

568J4783AF E4A



J2010200113011U

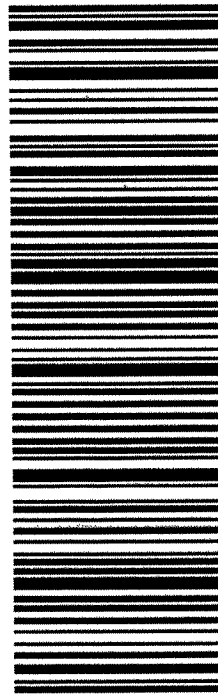
TUE - 14 APR 3:00P
STANDARD OVERNIGHT

TRK# 7702 2746 7009

0201

28405
RDU
NC-US

XHILMA



After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 570-25593-2

Login Number: 25593

List Source: Eurofins Calscience

List Number: 1

Creator: Cruise, Noel

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

VALIDATION REPORTS

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Boeing

1	440-255230-1 – November 20, 2019, MECx Data Validation Report
2	440-255714-1 – November 27, 2019, MECx Data Validation Report
3	440-255939-1 – November 28, 2019, MECx Data Validation Report
4	440-256482-1 – December 04, 2019, MECx Data Validation Report
5	440-256482-2 – December 04, 2019, MECx Data Validation Report
6	440-258024-1 – December 23, 2019, MECx Data Validation Report
7	440-258216-1 – December 26, 2019, MECx Data Validation Report
8	440-262590-1 – March 10, 2020, MECx Data Validation Report
9	440-262973-1 – March 12, 2020, MECx Data Validation Report
10	440-262973-2 – March 12, 2020, MECx Data Validation Report
11	440-264190-1 – April 06, 2020, MECx Data Validation Report

NASA

1	570-14206 – November 27, 2019, Jacobs Data Validation Report
2	570-14372 – November 28, 2019, Jacobs Data Validation Report
3	570-14631 – December 04, 2019, Jacobs Data Validation Report
4	570-16773 – December 26, 2019, Jacobs Data Validation Report
5	570-23510 – March 13, 2020, Jacobs Data Validation Report
6	570-25593 – April 09, 2020, Jacobs Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-255230-1

Prepared for

Haley & Aldrich, Inc.
600 South Meyer Avenue, Suite 100
Tucson, Arizona 85701

1 June 2020

MEC^x, Inc.
12269 East Vassar Drive
Aurora, Colorado 80014

www.mecx.net





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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference

**I. INTRODUCTION****Task Order Title:** Boeing SSFL NPDES**Contract:** 40458-078 and 40458-083**MEC^x Project No.:** 1272.003D.01 002**Sample Delivery Group:** 440-255230-1**Project Manager:** Katherine Miller**Matrix:** Water**QC Level:** II**No. of Samples:** 5**No. of Reanalyses/Dilutions:** 0**Laboratory:** TestAmerica-Irvine**TABLE 1 - SAMPLE IDENTIFICATION**

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
B1BMP0009_20191120	440-255230-1	N/A	WM	11/20/19 12:10 PM	E1613B, E200.8, E245.1	II
B1BMP0010_20191120	440-255230-2	N/A	WM	11/20/19 12:15 PM	E1613B, E200.8, E245.1	II
B1BMP0011_20191120	440-255230-3	N/A	WM	11/20/19 12:20 PM	E1613B, E200.8, E245.1	II
ILBMP0009_20191120	440-255230-4	N/A	WM	11/20/19 11:40 AM	E1613B, E200.8, E245.1	II
ILBMP0010_20191120	440-255230-5	N/A	WM	11/20/19 11:50 AM	E1613B, E200.8, E245.1	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-255230-1:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- The samples were transferred from TA-Irvine to TA-Sacramento for analysis of Method 1613B.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present (but with no number) upon receipt at TA-Sacramento.
- A field blank on the COC, FB_20191120, was listed on a hold status and was not analyzed. The narrative noted that although the COC listed two sample containers, one one-liter amber glass bottle was received.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

L. Calvin of MEC^x reviewed the SDG on June 9, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B* and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water samples were extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were not evaluated at a Stage II validation.

III.3. CALIBRATION

Calibration criteria were not evaluated at a Stage II validation.

III.4. QUALITY CONTROL SAMPLES

III.4.1. METHOD BLANKS

The method blank had detects above the EDL and below the reporting limit (RL) for isomers 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,7,8-TCDF, OCDD and OCDF, and for all totals except PeCDD and PeCDF. The sample results for the isomer method blank contaminants detected below the RL were qualified as nondetects (U) at the level of contamination. The method blank concentrations were not sufficient to qualify results above the RLs. Total detects for HpCDD, HpCDF, HxCDD, HxCDF, TCDD and TCDF were qualified as estimated (J), as only a portion of the totals was determined to be method blank contamination.

III.4.2. LABORATORY CONTROL SAMPLES

LCS recoveries were within the acceptance criteria listed in Table 6 of Method 1613B.

III.5. FIELD QC SAMPLES

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

Sample FB_20191120 associated with the site samples in this SDG was listed on a hold status on the COC and was not analyzed. Equipment blank samples were not identified for this SDG.

III.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.

III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were not evaluated at a Stage II validation.



III.7. COMPOUND IDENTIFICATION

Compound identification was not evaluated at a Stage II validation. Second-column confirmation analysis was performed for isomer 2,3,7,8-TCDF detected in the initial analyses of samples B1BMP0009_20191120 and ILBMP0010_20191120. The result in sample B1BMP0009_20191120 was confirmed and the result in sample ILBMP0010_20191120 was not confirmed. As the confirmation column is more specific for the detection of 2,3,7,8-TCDF, the initial results were rejected (R) as duplicate data in favor of the confirmation results.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was not evaluated at a Stage II validation. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, these samples had no reported detects below the EDL.

Isomers previously qualified as method blank contamination were not further qualified as EMPCs. Remaining isomers reported as EMPCs were qualified as estimated nondetects (UJ) at the level of the EMPC. Totals flagged by the laboratory as including one or more EMPC peaks were qualified as estimated (J).

IV. METHODS 200.8 AND 245.1— METALS AND MERCURY

M. Hilchey of MEC^x reviewed the SDG on June 1, 2020.

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Metals (DVP-5, Rev. 2)*, *EPA Methods 245.1 and 200.8* and the *National Functional Guidelines for Inorganic Method Data Review (2017)*.

IV.1. HOLDING TIMES

The analytical holding times, 28 days for mercury and six months for metals, were met. The samples designated for dissolved metals analysis were filtered and preserved within 24 hours of receipt, as required on the COC.

IV.2. CALIBRATION

Initial calibration and calibration verification criteria were not evaluated for Stage II validation.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. METHOD BLANKS

There were no target analyte detections in the method blanks (total and dissolved).

IV.3.2. INTERFERENCE CHECK SAMPLES:

ICSA/B data are not evaluated for Stage II validation.



IV.3.3. LABORATORY CONTROL SAMPLES

Laboratory control sample recoveries (total and dissolved) were within the QAPP control limits of 85-115%.

IV.3.4. LABORATORY DUPLICATES:

Laboratory duplicate analyses were not performed on a sample in this SDG.

IV.3.5. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on B1BMP0009_20191120 (total) and B1BMP0010_20191120 (dissolved) for Method 200.8 and on samples B1BMP0009_20191120 (total) and ILBMP0010_20191120 (dissolved) for Method 245.1. Recoveries were within the QAPP control limits of 70-130% for all target analytes and RPDs were $\leq 20\%$.

IV.3.6. SERIAL DILUTION

Serial dilution analyses were not performed.

IV.4. INTERNAL STANDARDS PERFORMANCE

ICP-MS internal standard data are not evaluated for Stage II validation.

IV.5. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Analyte quantification is not evaluated for Stage II validation. Results reported below the RL and above the MDL were qualified as estimated (J) and coded with a DNQ to comply with the NPDES permit reporting requirements. Nondetects are valid to the MDL.

IV.6. FIELD QC SAMPLES

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

IV.6.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

IV.6.2. FIELD DUPLICATES

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402552301

Analysis Method E1613B

Sample Name B1BMP0009_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 12:10:00 PM

Validation Level: 9

Lab Sample Name: 440-255230-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00028	0.00011	0.0000025	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0043	0.00011	0.0000039	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.00011	0.000054	0.0000028	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00034	0.000054	0.0000057	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000064	0.000054	0.0000031	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000055	0.000054	0.0000012	ug/L	J,DXMBq	U	B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.000010	0.000054	0.0000014	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000046	0.000054	0.0000012	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000015	0.000054	0.0000015	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000031	0.000054	0.00000090	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000016	0.000054	0.0000013	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000044	0.000054	0.0000018	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000060	0.000054	0.0000023	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000042	0.000054	0.00000097	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000027	0.000054	0.0000019	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.0000018	0.000011	0.00000087	ug/L	J,DX	J	DNQ
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.0000022	0.000011	0.0000011	ug/L	J,DXMB	R	D
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.0000013	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00033	0.000054	0.0000028	ug/L	J,DXMB	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0011	0.000054	0.0000057	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.00010	0.000054	0.00000090	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.00010	0.000054	0.0000013	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000013	0.000054	0.0000018	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.000010	0.000054	0.0000023	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000047	0.000011	0.0000011	ug/L	J,DXMB	J	B, DNQ

Analysis Method E1613B

Total Tetrachlorodibenzo-p-dioxin (TCDD) N 41903-57-5 ND 0.000011 0.0000013 ug/L U U

Sample Name B1BMP0010_20191120 Matrix Type: WM Result Type: TRG

Sample Date: 11/20/2019 12:15:00 PM Validation Level: 9

Lab Sample Name: 440-255230-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00014	0.00012	0.0000032	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0020	0.00012	0.0000040	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000045	0.000058	0.0000025	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00015	0.000058	0.0000035	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000036	0.000058	0.0000028	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000027	0.000058	0.0000013	ug/L	J,DXMB	U	B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000055	0.000058	0.0000016	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000025	0.000058	0.0000014	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000077	0.000058	0.0000017	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000018	0.000058	0.0000010	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000088	0.000058	0.0000016	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000058	0.0000017	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000058	0.0000024	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000017	0.000058	0.0000011	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000058	0.0000018	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000012	0.0000013	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000012	0.0000012	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00013	0.000058	0.0000025	ug/L	J,DXMBq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00049	0.000058	0.0000035	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000040	0.000058	0.0000010	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000051	0.000058	0.0000016	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000055	0.000058	0.0000017	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000026	0.000058	0.0000024	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000013	0.000012	0.0000013	ug/L	J,DXMBq	J	B, DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000012	0.0000012	ug/L	U	U	

Analysis Method E1613B

Sample Name B1BMP0011_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 12:20:00 PM

Validation Level: 9

Lab Sample Name: 440-255230-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000062	0.00011	0.0000019	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00089	0.00011	0.0000021	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000022	0.000056	0.0000014	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000068	0.000056	0.0000022	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000016	0.000056	0.0000015	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000018	0.000056	0.00000088	ug/L	J,DXMBq	U	B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000038	0.000056	0.0000011	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000012	0.000056	0.00000097	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000038	0.000056	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000016	0.000056	0.00000070	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000047	0.000056	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000056	0.0000013	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000056	0.0000016	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000011	0.000056	0.00000076	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000056	0.0000013	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000084	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.0000010	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000055	0.000056	0.0000014	ug/L	J,DXMBq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00021	0.000056	0.0000022	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000019	0.000056	0.00000070	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000025	0.000056	0.0000011	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000021	0.000056	0.0000013	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000056	0.0000016	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.00000084	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.0000010	ug/L	U	U	

Analysis Method E1613B

Sample Name ILBMP0009_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 11:40:00 AM

Validation Level: 9

Lab Sample Name: 440-255230-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00011	0.00010	0.0000018	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0021	0.00010	0.0000024	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000093	0.000050	0.0000017	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00016	0.000050	0.0000029	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000022	0.000050	0.0000018	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000027	0.000050	0.00000095	ug/L	J,DXMBq	U	B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000060	0.000050	0.00000090	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000041	0.000050	0.00000095	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000075	0.000050	0.00000095	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000012	0.000050	0.00000076	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000077	0.000050	0.00000087	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000050	0.0000012	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000050	0.0000016	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000036	0.000050	0.00000079	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000050	0.0000012	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000077	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.00000089	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00014	0.000050	0.0000017	ug/L	J,DXMBq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00045	0.000050	0.0000029	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000071	0.000050	0.00000076	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000073	0.000050	0.00000087	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000020	0.000050	0.0000012	ug/L	J,DX	J	DNQ
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000040	0.000050	0.0000016	ug/L	J,DX	J	DNQ
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000017	0.000010	0.00000077	ug/L	J,DXMB	J	B, DNQ
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000015	0.000010	0.00000089	ug/L	J,DXMBq	J	B, DNQ, *III

Analysis Method E1613B

Sample Name ILBMP0010_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 11:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255230-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00015	0.00011	0.0000016	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0030	0.00011	0.0000026	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.00014	0.000055	0.0000019	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00027	0.000055	0.0000035	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000032	0.000055	0.0000021	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000044	0.000055	0.00000075	ug/L	J,DXMB	U	B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000084	0.000055	0.00000097	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000055	0.000055	0.00000079	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000014	0.000055	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.00000059	0.000055	0.00000057	ug/L	J,DXqMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000013	0.000055	0.00000095	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000055	0.0000012	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000055	0.0000014	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000042	0.000055	0.00000063	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000055	0.0000012	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000055	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.0000011	0.000011	0.00000063	ug/L	J,DXqMB	R	D
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.00000079	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00021	0.000055	0.0000019	ug/L	J,DXMB	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00072	0.000055	0.0000035	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000094	0.000055	0.00000057	ug/L	J,DXqMB	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.00011	0.000055	0.00000095	ug/L	J,DXqMB	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000026	0.000055	0.0000012	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000061	0.000055	0.0000014	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000026	0.000011	0.00000063	ug/L	J,DXqMB	J	B, DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000012	0.000011	0.00000079	ug/L	J,DXqMB	J	B, DNQ, *III

Analysis Method E200.8

Sample Name B1BMP0009_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 12:10:00 PM

Validation Level: 9

Lab Sample Name: 440-255230-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	0.41	1.0	0.25	ug/L	J,DX	J	DNQ
Copper	D	7440-50-8	16	2.0	0.50	ug/L			
Copper	T	7440-50-8	30	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	8.4	1.0	0.50	ug/L			

Sample Name B1BMP0010_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 12:15:00 PM

Validation Level: 9

Lab Sample Name: 440-255230-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	0.33	1.0	0.25	ug/L	J,DX	J	DNQ
Copper	D	7440-50-8	21	2.0	0.50	ug/L			
Copper	T	7440-50-8	28	2.0	0.50	ug/L			
Lead	D	7439-92-1	0.64	1.0	0.50	ug/L	J,DX	J	DNQ
Lead	T	7439-92-1	5.4	1.0	0.50	ug/L			

Sample Name B1BMP0011_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 12:20:00 PM

Validation Level: 9

Lab Sample Name: 440-255230-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	16	2.0	0.50	ug/L			
Copper	T	7440-50-8	19	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	2.7	1.0	0.50	ug/L			

Sample Name ILBMP0009_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 11:40:00 AM

Validation Level: 9

Lab Sample Name: 440-255230-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	24	2.0	0.50	ug/L			
Copper	D	7440-50-8	16	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	4.0	1.0	0.50	ug/L			

Analysis Method E200.8

Sample Name ILBMP0010_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 11:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255230-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	25	2.0	0.50	ug/L			
Copper	D	7440-50-8	20	2.0	0.50	ug/L			
Lead	T	7439-92-1	3.9	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Analysis Method E245.1

Sample Name B1BMP0009_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 12:10:00 PM

Validation Level: 9

Lab Sample Name: 440-255230-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name B1BMP0010_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 12:15:00 PM

Validation Level: 9

Lab Sample Name: 440-255230-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name B1BMP0011_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 12:20:00 PM

Validation Level: 9

Lab Sample Name: 440-255230-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name ILBMP0009_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 11:40:00 AM

Validation Level: 9

Lab Sample Name: 440-255230-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	0.30	0.20	0.10	ug/L			
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Analysis Method E245.1

Sample Name ILBMP0010_20191120

Matrix Type: WM

Result Type: TRG

Sample Date: 11/20/2019 11:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255230-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-255714-1

Prepared for

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1 June 2020

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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference

**I. INTRODUCTION****Task Order Title:** Boeing SSFL NPDES**Contract:** 40458-078 and 40458-083**MEC^X Project No.:** 1272.003D.01 002**Sample Delivery Group:** 440-255714-1**Project Manager:** Katherine Miller**Matrix:** Water**QC Level:** II**No. of Samples:** 9**No. of Reanalyses/Dilutions:** 0**Laboratory:** TestAmerica-Irvine**TABLE 1 - SAMPLE IDENTIFICATION**

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
B1BMP0009_20191127	440-255714-1	N/A	WM	11/27/19 8:30 AM	E1613B, E200.8, E245.1	II
B1BMP0010_20191127	440-255714-2	N/A	WM	11/27/19 8:10 AM	E1613B, E200.8, E245.1	II
B1BMP0011_20191127	440-255714-3	N/A	WM	11/27/19 8:20 AM	E1613B, E200.8, E245.1	II
ILBMP0004_20191127	440-255714-4	N/A	WM	11/27/19 9:00 AM	E1613B, E200.8, E245.1	II
ILBMP0005_20191127	440-255714-5	N/A	WM	11/27/19 9:10 AM	E1613B, E200.8, E245.1	II
ILBMP0008_20191127	440-255714-7	N/A	WM	11/27/19 8:50 AM	E1613B, E200.8, E245.1	II
LPBMP0002_20191127	440-255714-8	N/A	WM	11/27/19 9:50 AM	E1613B, E200.8, E245.1	II
LPBMP0003_20191127	440-255714-9	N/A	WM	11/27/19 9:30 AM	E1613B, E200.8, E245.1	II
LPBMP0004_20191127	440-255714-10	N/A	WM	11/27/19 10:00 AM	E1613B, E200.8, E245.1	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-255714-1:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- The sample was transferred from TA-Irvine to TA-Sacramento for analysis of Method 1613B.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present upon receipt at TA-Sacramento; however, the seal had no number.
- The case narrative noted the collection times listed on the containers for the following samples did not match those on the COC: B1BMP0011_20191127, ILBMP0005_20191127, LPBMP0002_20191127, LPBMP0002_20191127 and LPBMP0003_20191127. The samples were logged per the COC.
- An equipment blank listed on the COC for Method 1613B analysis, EB_20191127, was not provided in the data package.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

L. Calvin of MEC^x reviewed the SDG on June 9, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B* and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water samples were extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were not evaluated at a Stage II validation.

III.3. CALIBRATION

Calibration criteria were not evaluated at a Stage II validation.

III.4. QUALITY CONTROL SAMPLES

III.4.1. METHOD BLANKS

The method blank had detects above the EDL and below the reporting limit (RL) for isomers 1,2,3,4,6,7,8-HpCDD and OCDF, and for total HpCDD. OCDD was detected above the RL in the method blank. The sample results for the isomer method blank contaminants detected below the RL were qualified as nondetects (U) at the level of contamination. All results above the RL and less than 10× the amount in the blank for OCDD were qualified as as nondetects (U) in samples LPBMP0002_20191127, LPBMP0003_20191127 and LPBMP0004_20191127. The method blank concentrations were not sufficient to qualify remaining results above the RLs. Total detects for HpCDD were qualified as estimated (J), as only a portion of the total was determined to be method blank contamination.

III.4.2. LABORATORY CONTROL SAMPLES

LCS recoveries were within the acceptance criteria listed in Table 6 of Method 1613B.

III.5. FIELD QC SAMPLES

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

A field blank was not identified for this SDG. Equipment blank COC EB_20191127 listed on the COC, was not analyzed or provided in the data package.

III.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.



III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were not evaluated at a Stage II validation.

III.7. COMPOUND IDENTIFICATION

Compound identification was not evaluated at a Stage II validation. Second-column confirmation analysis was performed for isomer 2,3,7,8-TCDF detected in the initial analyses of samples B1BMP0009_20191127, ILBMP0005_20191127 and LPBMP0002_20191127. None of the initial results were confirmed. As the confirmation column is more specific for the detection of 2,3,7,8-TCDF, the initial results were rejected (R) as duplicate data in favor of the confirmation results.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was not evaluated at a Stage II validation. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, these samples had no reported detects below the EDL.

Isomers previously qualified as method blank contamination were not further qualified as EMPCs. Remaining isomers reported as EMPCs were qualified as estimated nondetects (UJ) at the level of the EMPC. The total PeCDD result in sample B1BMP0009_20191127 and TCDD result in sample B1BMP0010_20191127 matched the associated qualified isomers and were also qualified as estimated nondetects (UJ). Remaining totals flagged by the laboratory as including one or more EMPC peaks were qualified as estimated (J).

IV. METHODS 200.8 AND 245.1— METALS AND METALS

M. Hilchey of MEC^x reviewed the SDG on June 1, 2020.

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Metals (DVP-5, Rev. 2)*, *EPA Methods 200.8 and 245.1* and the *National Functional Guidelines for Inorganic Method Data Review* (2017).

IV.1. HOLDING TIMES

The analytical holding times, 28 days for mercury and six months for metals, were met. The samples designated for dissolved metals analysis were not filtered and preserved within 24 hours of receipt at the laboratory, as required on the COC. The samples were filtered and preserved approximately 43 hours after receipt; therefore, all results for dissolved metals and mercury were qualified as estimated (J for detects; UJ for nondetects).

IV.2. CALIBRATION

Initial calibration and calibration verification criteria were not evaluated for Stage II validation.



IV.3. QUALITY CONTROL SAMPLES

IV.3.1. METHOD BLANKS

There were no target analyte detections in the method blanks (total and dissolved).

IV.3.2. INTERFERENCE CHECK SAMPLES:

ICSA/B data are not evaluated for Stage II validation.

IV.3.3. LABORATORY CONTROL SAMPLES

Laboratory control sample and laboratory control sample duplicate recoveries (total and dissolved) were within the QAPP control limits of 85-115%. RPDs, as applicable, were $\leq 20\%$.

IV.3.4. LABORATORY DUPLICATES:

Laboratory duplicate analyses were not performed on a sample in this SDG.

IV.3.5. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on samples B1BMP0009_20191127 (dissolved) and B1BMP0011_20191127 (total) for Method 200.8, and on sample LPBMP0004_20191127 (dissolved) for Method 245.1. Recoveries were within the QAPP control limits of 70-130% for all target analytes. RPDs were $\leq 20\%$. MS/MSD analyses were not performed on a sample from this SDG for Method 245.1 (total)

IV.3.6. SERIAL DILUTION

Serial dilution analyses were not performed.

IV.4. INTERNAL STANDARDS PERFORMANCE

ICP-MS internal standard data are not evaluated for Stage II validation.

IV.5. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Analyte quantification is not evaluated for Stage II validation. Results reported below the RL and above the MDL were qualified as estimated (J) and coded with a DNQ to comply with the NPDES permit reporting requirements. Nondetects are valid to the MDL.

IV.6. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

IV.6.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

IV.6.2. FIELD DUPLICATES

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402557141

Analysis Method E1613B

Sample Name B1BMP0009_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 8:30:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00021	0.00011	0.0000023	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0035	0.00011	0.0000031	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000073	0.000054	0.0000025	ug/L			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00032	0.000054	0.0000036	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000047	0.000054	0.0000028	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000031	0.000054	0.00000093	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000083	0.000054	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000030	0.000054	0.0000010	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000014	0.000054	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000013	0.000054	0.00000074	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000012	0.000054	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000054	0.0000013	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000034	0.000054	0.0000020	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000028	0.000054	0.00000077	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000054	0.0000013	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.0000013	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.0000011	0.000011	0.00000078	ug/L	J,DXq	R	D
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000031	0.000011	0.00000095	ug/L	J,DX	J	DNQ
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00022	0.000054	0.0000025	ug/L			
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00092	0.000054	0.0000036	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000070	0.000054	0.00000074	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000087	0.000054	0.0000011	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000049	0.000054	0.0000013	ug/L	J,DX	J	DNQ
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000034	0.000054	0.0000020	ug/L	J,DXq	UJ	*III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000011	0.000011	0.00000078	ug/L	J,DXq	J	DNQ, *III

Analysis Method E1613B

Total Tetrachlorodibenzo-p-dioxin (TCDD) N 41903-57-5 0.0000031 0.000011 0.00000095 ug/L J,DX J DNQ

Sample Name B1BMP0010_20191127 Matrix Type: WM Result Type: TRG

Sample Date: 11/27/2019 8:10:00 AM Validation Level: 9

Lab Sample Name: 440-255714-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000067	0.00011	0.0000019	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0014	0.00011	0.0000026	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000034	0.000053	0.0000017	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00013	0.000053	0.0000022	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000022	0.000053	0.0000020	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000020	0.000053	0.00000078	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000066	0.000053	0.00000095	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000014	0.000053	0.00000085	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000075	0.000053	0.0000010	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000016	0.000053	0.00000064	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000083	0.000053	0.00000093	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000053	0.0000013	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000045	0.000053	0.0000018	ug/L	J,DX	J	DNQ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	ND	0.000053	0.00000065	ug/L	U	U	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000053	0.0000014	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000078	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000015	0.000011	0.00000093	ug/L	J,DXq	UJ	*III
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000099	0.000053	0.0000017	ug/L	J,DX	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00034	0.000053	0.0000022	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000032	0.000053	0.00000064	ug/L	J,DX	J	DNQ
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000043	0.000053	0.00000093	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000053	0.0000013	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000045	0.000053	0.0000018	ug/L	J,DX	J	DNQ
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.00000078	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000015	0.000011	0.00000093	ug/L	J,DXq	UJ	*III

Analysis Method E1613B

Sample Name B1BMP0011_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 8:20:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00017	0.00011	0.0000026	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0013	0.00011	0.0000024	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000020	0.000054	0.0000016	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00010	0.000054	0.0000022	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000019	0.000054	0.0000018	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	ND	0.000054	0.00000093	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000046	0.000054	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	ND	0.000054	0.00000098	ug/L	U	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000032	0.000054	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	ND	0.000054	0.00000072	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000040	0.000054	0.0000010	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000054	0.0000012	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000054	0.0000019	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	ND	0.000054	0.00000075	ug/L	U	U	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000054	0.0000013	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000074	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.00000093	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000080	0.000054	0.0000016	ug/L	J,DXq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00022	0.000054	0.0000022	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000080	0.000054	0.00000072	ug/L	J,DX	J	DNQ
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000018	0.000054	0.0000010	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000054	0.0000012	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000054	0.0000019	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.00000074	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.00000093	ug/L	U	U	

Analysis Method E1613B

Sample Name ILBMP0004_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 9:00:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00012	0.00010	0.0000024	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0040	0.00010	0.0000038	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000041	0.000052	0.0000016	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00033	0.000052	0.0000036	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000062	0.000052	0.0000020	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000025	0.000052	0.0000011	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.000014	0.000052	0.0000014	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000029	0.000052	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000019	0.000052	0.0000015	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000017	0.000052	0.00000087	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000023	0.000052	0.0000013	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000052	0.0000012	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000071	0.000052	0.0000022	ug/L	J,DX	J	DNQ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000028	0.000052	0.00000088	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000052	0.0000013	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000073	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.00000079	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000080	0.000052	0.0000016	ug/L	J,DXq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00076	0.000052	0.0000036	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000031	0.000052	0.00000087	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.00012	0.000052	0.0000013	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000052	0.0000012	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000084	0.000052	0.0000022	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000010	0.00000073	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000013	0.000010	0.00000079	ug/L	J,DXq	J	DNQ, *III

Analysis Method E1613B

Sample Name ILBMP0005_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 9:10:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00014	0.00010	0.0000018	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0025	0.00010	0.0000025	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.00010	0.000052	0.0000019	ug/L			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00028	0.000052	0.0000030	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.000016	0.000052	0.0000022	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000090	0.000052	0.00000090	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.000018	0.000052	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000098	0.000052	0.00000097	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000024	0.000052	0.0000013	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000091	0.000052	0.00000070	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000026	0.000052	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000040	0.000052	0.0000013	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.000010	0.000052	0.0000017	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.000011	0.000052	0.00000075	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000041	0.000052	0.0000014	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.0000052	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.0000011	0.000010	0.00000063	ug/L	J,DXq	R	D
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000036	0.000010	0.00000076	ug/L	J,DX	J	DNQ
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00017	0.000052	0.0000019	ug/L	J,DXq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00065	0.000052	0.0000030	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.00010	0.000052	0.00000070	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.00013	0.000052	0.0000012	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000024	0.000052	0.0000013	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.000017	0.000052	0.0000017	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000036	0.000010	0.00000063	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000046	0.000010	0.00000076	ug/L	J,DXq	J	DNQ, *III

Analysis Method E1613B

Sample Name ILBMP0008_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 8:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-7

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00038	0.00011	0.0000023	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0035	0.00011	0.0000028	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.00018	0.000054	0.0000027	ug/L			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00033	0.000054	0.0000053	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000062	0.000054	0.0000034	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000061	0.000054	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000065	0.000054	0.0000017	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000091	0.000054	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000014	0.000054	0.0000017	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	ND	0.000054	0.00000088	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000012	0.000054	0.0000016	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000054	0.0000019	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000054	0.0000041	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000046	0.000054	0.00000093	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000054	0.0000019	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.0000010	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.0000011	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00043	0.000054	0.0000027	ug/L	J,DX	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0016	0.000054	0.0000053	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.00013	0.000054	0.00000088	ug/L	J,DX	J	DNQ
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.00011	0.000054	0.0000016	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000031	0.000054	0.0000019	ug/L	J,DX	J	DNQ
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000046	0.000054	0.0000041	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000019	0.000011	0.0000010	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.0000011	ug/L	U	U	

Analysis Method E1613B

Sample Name LPBMP0002_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 9:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-8

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000059	0.00011	0.0000023	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0010	0.00011	0.0000021	ug/L	MB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000038	0.000054	0.0000015	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00011	0.000054	0.0000021	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000058	0.000054	0.0000018	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000060	0.000054	0.00000095	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000094	0.000054	0.0000013	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000063	0.000054	0.0000010	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000012	0.000054	0.0000014	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000043	0.000054	0.00000073	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000013	0.000054	0.0000013	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000040	0.000054	0.0000015	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000065	0.000054	0.0000019	ug/L	J,DX	J	DNQ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000067	0.000054	0.00000077	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000045	0.000054	0.0000016	ug/L	J,DX	J	DNQ
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.0000016	0.000011	0.00000085	ug/L	J,DXq	R	D
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.0000013	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000016	0.000011	0.0000011	ug/L	J,DXq	UJ	*III
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000061	0.000054	0.0000015	ug/L	J,DXq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00025	0.000054	0.0000021	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000045	0.000054	0.00000073	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000060	0.000054	0.0000013	ug/L	J,DX	J	DNQ
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000015	0.000054	0.0000015	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000065	0.000054	0.0000019	ug/L	J,DX	J	DNQ
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000016	0.000011	0.00000085	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000028	0.000011	0.0000011	ug/L	J,DXq	J	DNQ, *III

Analysis Method E1613B

Sample Name LPBMP0003_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 9:30:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-9

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000021	0.00012	0.0000031	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00014	0.00012	0.0000023	ug/L	MB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000099	0.000060	0.0000019	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000018	0.000060	0.0000013	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	ND	0.000060	0.0000024	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000012	0.000060	0.00000099	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	ND	0.000060	0.0000015	ug/L	U	U	
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	ND	0.000060	0.0000011	ug/L	U	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	ND	0.000060	0.0000015	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	ND	0.000060	0.00000086	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	ND	0.000060	0.0000014	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000060	0.0000018	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000060	0.0000029	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	ND	0.000060	0.00000082	ug/L	U	U	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000060	0.0000018	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000012	0.00000085	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000012	0.0000015	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000014	0.000060	0.0000019	ug/L	J,DX	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000050	0.000060	0.0000013	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000045	0.000060	0.00000082	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000040	0.000060	0.0000014	ug/L	J,DX	J	DNQ
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000060	0.0000018	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000060	0.0000029	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000012	0.00000085	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000012	0.0000015	ug/L	U	U	

Analysis Method E1613B

Sample Name LPBMP0004_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 10:00:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-10

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000023	0.00010	0.0000024	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00039	0.00010	0.0000024	ug/L	MB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000010	0.000052	0.0000017	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000038	0.000052	0.0000013	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	ND	0.000052	0.0000020	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	ND	0.000052	0.00000079	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000031	0.000052	0.0000010	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	ND	0.000052	0.00000083	ug/L	U	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000024	0.000052	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	ND	0.000052	0.00000062	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000042	0.000052	0.00000098	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000052	0.0000013	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000052	0.0000019	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	ND	0.000052	0.00000064	ug/L	U	U	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000052	0.0000014	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000074	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.00000093	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000015	0.000052	0.0000017	ug/L	J,DXq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000081	0.000052	0.0000013	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000032	0.000052	0.00000062	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000018	0.000052	0.00000098	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000052	0.0000013	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000052	0.0000019	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000010	0.00000074	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000010	0.00000093	ug/L	U	U	

Analysis Method E200.8

Sample Name B1BMP0009_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 8:30:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	5.3	2.0	0.50	ug/L			
Copper	T	7440-50-8	13	2.0	0.50	ug/L			
Lead	T	7439-92-1	3.2	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Sample Name B1BMP0010_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 8:10:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	5.3	2.0	0.50	ug/L			
Copper	T	7440-50-8	7.5	2.0	0.50	ug/L			
Lead	T	7439-92-1	1.0	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Sample Name B1BMP0011_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 8:20:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	6.9	2.0	0.50	ug/L			
Copper	T	7440-50-8	8.3	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	1.2	1.0	0.50	ug/L			

Sample Name ILBMP0004_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 9:00:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	0.27	1.0	0.25	ug/L	J,DX	J	DNQ
Cadmium	T	7440-43-9	1.0	1.0	0.25	ug/L			
Copper	T	7440-50-8	14	2.0	0.50	ug/L			
Copper	D	7440-50-8	5.5	2.0	0.50	ug/L			
Lead	T	7439-92-1	4.2	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Analysis Method E200.8

Sample Name ILBMP0005_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 9:10:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	7.0	2.0	0.50	ug/L			
Copper	T	7440-50-8	10	2.0	0.50	ug/L			
Lead	T	7439-92-1	3.5	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Sample Name ILBMP0008_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 8:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-7

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	0.94	1.0	0.25	ug/L	J,DX	J	DNQ
Cadmium	D	7440-43-9	0.34	1.0	0.25	ug/L	J,DX	J	DNQ
Copper	T	7440-50-8	13	2.0	0.50	ug/L			
Copper	D	7440-50-8	6.1	2.0	0.50	ug/L			
Lead	T	7439-92-1	8.7	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Sample Name LPBMP0002_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 9:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-8

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	11	2.0	0.50	ug/L			
Copper	T	7440-50-8	15	2.0	0.50	ug/L			
Lead	T	7439-92-1	2.4	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Sample Name LPBMP0003_20191127

Matrix Type: WM

Result Type: TRG

Sample Date: 11/27/2019 9:30:00 AM

Validation Level: 9

Lab Sample Name: 440-255714-9

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	12	2.0	0.50	ug/L			
Copper	D	7440-50-8	13	2.0	0.50	ug/L			
Lead	T	7439-92-1	0.91	1.0	0.50	ug/L	J,DX	J	DNQ
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Analysis Method E200.8

Sample Name LPBMP0004_20191127 Matrix Type: WM Result Type: TRG

Sample Date: 11/27/2019 10:00:00 AM Validation Level: 9

Lab Sample Name: 440-255714-10

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	8.1	2.0	0.50	ug/L			
Copper	T	7440-50-8	9.0	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	0.71	1.0	0.50	ug/L	J,DX	J	DNQ

Analysis Method E245.1

Sample Name B1BMP0009_20191127 Matrix Type: WM Result Type: TRG

Sample Date: 11/27/2019 8:30:00 AM Validation Level: 9

Lab Sample Name: 440-255714-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name B1BMP0010_20191127 Matrix Type: WM Result Type: TRG

Sample Date: 11/27/2019 8:10:00 AM Validation Level: 9

Lab Sample Name: 440-255714-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name B1BMP0011_20191127 Matrix Type: WM Result Type: TRG

Sample Date: 11/27/2019 8:20:00 AM Validation Level: 9

Lab Sample Name: 440-255714-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name ILBMP0004_20191127 Matrix Type: WM Result Type: TRG

Sample Date: 11/27/2019 9:00:00 AM Validation Level: 9

Lab Sample Name: 440-255714-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Analysis Method E245.1

Sample Name ILBMP0005_20191127 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 11/27/2019 9:10:00 AM **Validation Level:** 9

Lab Sample Name: 440-255714-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name ILBMP0008_20191127 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 11/27/2019 8:50:00 AM **Validation Level:** 9

Lab Sample Name: 440-255714-7

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name LPBMP0002_20191127 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 11/27/2019 9:50:00 AM **Validation Level:** 9

Lab Sample Name: 440-255714-8

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name LPBMP0003_20191127 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 11/27/2019 9:30:00 AM **Validation Level:** 9

Lab Sample Name: 440-255714-9

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name LPBMP0004_20191127 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 11/27/2019 10:00:00 AM **Validation Level:** 9

Lab Sample Name: 440-255714-10

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-255939-1

Prepared for

Haley & Aldrich, Inc.

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Tucson, Arizona 85701

1 June 2020

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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference



I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^x Project No.: 1272.003D.01 002

Sample Delivery Group: 440-255939-1

Project Manager: Katherine Miller

Matrix: Water

QC Level: II

No. of Samples: 2

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica-Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
ILBMP0009_20191128	440-255939-1	N/A	WM	11/28/19 7:50 AM	E1613B, E200.8, E245.1	II
ILBMP0010_20191128	440-255939-2	N/A	WM	11/28/19 8:00 AM	E1613B, E200.8, E245.1	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-255939-1:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- The samples were transferred from TA-Irvine to TA-Sacramento for analysis of Method 1613B.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present (though without a number) upon receipt at TA-Sacramento.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

L. Calvin of MEC^X reviewed the SDG on June 9, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B* and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water samples were extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were not evaluated at a Stage II validation.

III.3. CALIBRATION

Calibration criteria were not evaluated at a Stage II validation.

III.4. QUALITY CONTROL SAMPLES

III.4.1. *METHOD BLANKS*

The method blank had detects above the EDL and below the reporting limit (RL) for isomers 1,2,3,4,6,7,8-HpCDD and OCDF, and for total HpCDD. OCDD was detected above the RL in the method blank. The isomer method blank concentrations were not sufficient to qualify sample results, all above the RL. Results for total HpCDD were qualified as estimated (J) as a portion of the total was considered possible method blank contamination.

III.4.2. *LABORATORY CONTROL SAMPLES*

LCS recoveries were within the acceptance criteria listed in Table 6 of Method 1613B.

III.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blanks and equipment blanks were not identified for this SDG.

III.5.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were not evaluated at a Stage II validation.



III.7. COMPOUND IDENTIFICATION

Compound identification was not evaluated at a Stage II validation. Second-column confirmation analysis for isomer 2,3,7,8-TCDF was not performed, as 2,3,7,8-TCDF was not detected in the initial analyses of the samples.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was not evaluated at a Stage II validation. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, these samples had no reported detects below the EDL.

Isomers reported as EMPCs were qualified as estimated nondetects (UJ) at the level of the EMPC. The total TCDD result in sample ILBMP0009_20191128 matched the associated qualified isomer and was also qualified as an estimated nondetect (UJ). Remaining totals flagged by the laboratory as including one or more EMPC peaks were qualified as estimated (J).

IV. METHODS 200.8 AND 245.1— METALS AND MERCURY

M. Hilchey of MEC^x reviewed the SDG on June 1, 2020.

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Metals (DVP-5, Rev. 2)*, *EPA Methods 200.8 and 245.1* and the *National Functional Guidelines for Inorganic Method Data Review (2017)*.

IV.1. HOLDING TIMES

The analytical holding times, 28 days for mercury and six months for metals, were met. The samples designated for dissolved metals analysis were filtered and preserved within 24 hours of receipt, as required on the COC.

IV.2. CALIBRATION

Initial calibration and calibration verification criteria were not evaluated for Stage II validation.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. METHOD BLANKS

There were no target analyte detections in the method blanks (total and dissolved).

IV.3.2. INTERFERENCE CHECK SAMPLES:

ICSA/B data are not evaluated for Stage II validation.

IV.3.3. LABORATORY CONTROL SAMPLES

Laboratory control sample recoveries (total and dissolved) were within the QAPP control limits of 85-115%.



IV.3.4. **LABORATORY DUPLICATES:**

Laboratory duplicate analyses were not performed on a sample in this SDG.

IV.3.5. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

MS/MSD analyses were performed on sample ILBMP0009_20191128 (dissolved) for Method 200.8 and on sample ILBMP0010_20191128 (dissolved) for Method 245.1. Recoveries were within the QAPP control limits of 70-130% for all target analytes and RPDs were $\leq 20\%$. MS/MSD analyses were not performed on a sample in this SDG for either method for total metals.

IV.3.6. **SERIAL DILUTION**

Serial dilution analyses were not performed.

IV.4. **INTERNAL STANDARDS PERFORMANCE**

ICP-MS internal standard data are not evaluated for Stage II validation.

IV.5. **COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS**

Analyte quantification is not evaluated for Stage II validation. Results reported below the RL and above the MDL were qualified as estimated (J) and coded with a DNQ to comply with the NPDES permit reporting requirements. Nondetects are valid to the MDL.

IV.6. **FIELD QC SAMPLES**

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

IV.6.1. **FIELD BLANKS AND EQUIPMENT BLANKS**

Field blank or equipment blank samples were not identified for this SDG.

IV.6.2. **FIELD DUPLICATES**

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402559391

Analysis Method E1613B

Sample Name ILBMP0009_20191128

Matrix Type: WM

Result Type: TRG

Sample Date: 11/28/2019 7:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255939-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00028	0.00013	0.0000034	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0041	0.00013	0.0000040	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.00021	0.000064	0.0000037	ug/L			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00045	0.000064	0.0000051	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.000010	0.000064	0.0000046	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.000013	0.000064	0.0000017	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.000018	0.000064	0.0000021	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.000015	0.000064	0.0000018	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000037	0.000064	0.0000022	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.000010	0.000064	0.0000014	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000033	0.000064	0.0000020	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000052	0.000064	0.0000020	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.000012	0.000064	0.0000027	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.000014	0.000064	0.0000014	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000051	0.000064	0.0000022	ug/L	J,DX	J	DNQ
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000013	0.0000011	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000029	0.000013	0.0000013	ug/L	J,DXq	UJ	*III
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00037	0.000064	0.0000037	ug/L	J,DXq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0011	0.000064	0.0000051	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.00021	0.000064	0.0000014	ug/L	J,DX	J	DNQ
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.00023	0.000064	0.0000020	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000046	0.000064	0.0000020	ug/L	J,DX	J	DNQ
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.000021	0.000064	0.0000027	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000042	0.000013	0.0000011	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000029	0.000013	0.0000013	ug/L	J,DXq	UJ	*III

Analysis Method E1613B

Sample Name ILBMP0010_20191128

Matrix Type: WM

Result Type: TRG

Sample Date: 11/28/2019 8:00:00 AM

Validation Level: 9

Lab Sample Name: 440-255939-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00063	0.00011	0.0000023	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0077	0.00011	0.0000045	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.00073	0.000054	0.0000059	ug/L			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0012	0.000054	0.0000076	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000090	0.000054	0.0000069	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.000018	0.000054	0.0000026	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.000034	0.000054	0.0000016	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.000028	0.000054	0.0000027	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000077	0.000054	0.0000018	ug/L			
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	ND	0.000054	0.0000021	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000069	0.000054	0.0000016	ug/L			
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000054	0.0000019	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.000019	0.000054	0.0000021	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.000023	0.000054	0.0000021	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000022	0.000054	0.0000019	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.0000011	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000020	0.000011	0.00000082	ug/L	J,DXq	UJ	*III
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0011	0.000054	0.0000059	ug/L	J,DX	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0028	0.000054	0.0000076	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.00051	0.000054	0.0000021	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.00059	0.000054	0.0000016	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.00012	0.000054	0.0000019	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.000059	0.000054	0.0000021	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000073	0.000011	0.0000011	ug/L	J,DX	J	DNQ
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000044	0.000011	0.00000082	ug/L	J,DXq	J	DNQ, *III

Analysis Method E200.8

Sample Name ILBMP0009_20191128

Matrix Type: WM

Result Type: TRG

Sample Date: 11/28/2019 7:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255939-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	3.2	2.0	0.50	ug/L			
Copper	T	7440-50-8	5.2	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	1.6	1.0	0.50	ug/L			

Sample Name ILBMP0010_20191128

Matrix Type: WM

Result Type: TRG

Sample Date: 11/28/2019 8:00:00 AM

Validation Level: 9

Lab Sample Name: 440-255939-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	3.2	2.0	0.50	ug/L			
Copper	T	7440-50-8	16	2.0	0.50	ug/L			
Lead	T	7439-92-1	5.1	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Analysis Method E245.1

Sample Name ILBMP0009_20191128

Matrix Type: WM

Result Type: TRG

Sample Date: 11/28/2019 7:50:00 AM

Validation Level: 9

Lab Sample Name: 440-255939-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name ILBMP0010_20191128

Matrix Type: WM

Result Type: TRG

Sample Date: 11/28/2019 8:00:00 AM

Validation Level: 9

Lab Sample Name: 440-255939-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-256482-1

Prepared for

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1 June 2020

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- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference



I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^X Project No.: 1272.003D.01 002

Sample Delivery Group: 440-256482-1

Project Manager: Katherine Miller

Matrix: Water

QC Level: II

No. of Samples: 3

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica-Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
A1BMP0002_20191204	440-256482-1	N/A	WM	12/4/19 9:45 AM	E200.8, E245.1	II
A1BMP0003_20191204	440-256482-2	N/A	WM	12/4/19 9:55 AM	E200.8, E245.1	II
ILBMP0002_20191204	440-256482-3	N/A	WM	12/4/19 9:50 AM	E200.8, E245.1	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklist and the chain-of-custody (COC) provided by the laboratory for sample delivery group (SDG) 440-256482-1:

- The laboratory received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratory received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.

**TABLE 3 - REASON CODE REFERENCE**

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. METHODS 200.8 AND 245.1— METALS AND MERCURY

M. Hilchey of MEC^X reviewed the SDG on June 1, 2020.

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for Metals (DVP-5, Rev. 2)*, *EPA Methods 200.8 and 245.1* and the *National Functional Guidelines for Inorganic Method Data Review (2017)*.

III.1. HOLDING TIMES

The analytical holding times, 28 days for mercury and six months for metals, were met. The samples designated for dissolved metals analysis were not filtered and preserved within 24 hours of receipt at the laboratory, as required on the COC. The samples were filtered and preserved approximately 96 hours after receipt; therefore, all dissolved results were qualified as estimated (J for detects; UJ for nondetects).

III.2. CALIBRATION

Initial calibration and calibration verification criteria were not evaluated for Stage II validation.

III.3. QUALITY CONTROL SAMPLES

III.3.1. METHOD BLANKS

There were no target analyte detections in the method blanks (total and dissolved).

III.3.2. INTERFERENCE CHECK SAMPLES:

ICSA/B data are not evaluated for Stage II validation.

III.3.3. LABORATORY CONTROL SAMPLES

Laboratory control sample recoveries (total and dissolved) were within the QAPP control limits of 85-115%.

III.3.4. LABORATORY DUPLICATES:

Laboratory duplicate analyses were not performed on a sample in this SDG.

III.3.5. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on sample A1BMP0002_20191204 for Method 245.1 (dissolved only). Recoveries were within the QAPP control limits of 70-130%. The RPD was $\leq 20\%$. MS/MSD analyses were not performed on a sample from this SDG for the remaining analyses.

III.3.6. SERIAL DILUTION

Serial dilution analyses were not performed.

III.4. INTERNAL STANDARDS PERFORMANCE

ICP-MS internal standard data are not evaluated for Stage II validation.

III.5. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Analyte quantification is not evaluated for Stage II validation. Results reported below the RL and above the MDL were qualified as estimated (J) and coded with a DNQ to comply with the NPDES permit reporting requirements. Nondetects are valid to the MDL.



III.6. FIELD QC SAMPLES

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.6.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

III.6.2. *FIELD DUPLICATES*

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402564821

Analysis Method E200.8

Sample Name A1BMP0002_20191204

Matrix Type: WM

Result Type: TRG

Sample Date: 12/4/2019 9:45:00 AM

Validation Level: 9

Lab Sample Name: 440-256482-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	0.34	1.0	0.25	ug/L	J,DX	J	H, DNQ
Cadmium	T	7440-43-9	0.38	1.0	0.25	ug/L	J,DX	J	DNQ
Copper	D	7440-50-8	11	2.0	0.50	ug/L		J	H
Copper	T	7440-50-8	12	2.0	0.50	ug/L			
Lead	T	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	UJ	H

Sample Name A1BMP0003_20191204

Matrix Type: WM

Result Type: TRG

Sample Date: 12/4/2019 9:55:00 AM

Validation Level: 9

Lab Sample Name: 440-256482-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	UJ	H
Copper	D	7440-50-8	3.1	2.0	0.50	ug/L		J	H
Copper	T	7440-50-8	4.7	2.0	0.50	ug/L			
Lead	D	7439-92-1	0.54	1.0	0.50	ug/L	J,DX	J	H, DNQ
Lead	T	7439-92-1	1.1	1.0	0.50	ug/L			

Sample Name ILBMP0002_20191204

Matrix Type: WM

Result Type: TRG

Sample Date: 12/4/2019 9:50:00 AM

Validation Level: 9

Lab Sample Name: 440-256482-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	UJ	H
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	2.5	2.0	0.50	ug/L		J	H
Copper	T	7440-50-8	3.8	2.0	0.50	ug/L			
Lead	D	7439-92-1	0.70	1.0	0.50	ug/L	J,DX	J	H, DNQ
Lead	T	7439-92-1	3.7	1.0	0.50	ug/L			

Analysis Method E245.1

Sample Name A1BMP0002_20191204

Matrix Type: WM

Result Type: TRG

Sample Date: 12/4/2019 9:45:00 AM

Validation Level: 9

Lab Sample Name: 440-256482-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	UJ	H
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Analysis Method E245.1

Sample Name A1BMP0003_20191204

Matrix Type: WM

Result Type: TRG

Sample Date: 12/4/2019 9:55:00 AM

Validation Level: 9

Lab Sample Name: 440-256482-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	UJ	H

Sample Name ILBMP0002_20191204

Matrix Type: WM

Result Type: TRG

Sample Date: 12/4/2019 9:50:00 AM

Validation Level: 9

Lab Sample Name: 440-256482-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	UJ	H
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-256482-2

Prepared for

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09 June 2020

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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference



I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^x Project No.: 1272.003D.01 002

Sample Delivery Group: 440-256482-2

Project Manager: Katherine Miller

Matrix: Water

QC Level: II

No. of Samples: 3

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica-Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
A1BMP0002_20191204	440-256482-1	N/A	WM	12/4/19 9:45 AM	E1613B	II
A1BMP0003_20191204	440-256482-2	N/A	WM	12/4/19 9:55 AM	E1613B	II
LLBMP0002_20191204	440-256482-3	N/A	WM	12/4/19 9:50 AM	E1613B	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-256482-2:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- The sample was transferred from TA-Irvine to TA-Sacramento for analysis of Method 1613B.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present (though with no number) upon receipt at TA-Sacramento.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

L. Calvin of MEC^x reviewed the SDG on June 9, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B* and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water samples were extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were not evaluated at a Stage II validation.

III.3. CALIBRATION

Calibration criteria were not evaluated at a Stage II validation.

III.4. QUALITY CONTROL SAMPLES

III.4.1. METHOD BLANKS

The method blank had detects above the EDL and below the reporting limit (RL) for isomers 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF and OCDD, and for totals HpCDD and HpCDF. The sample results for the isomer method blank contaminants detected below the RL were qualified as nondetects (U) at the level of contamination. The method blank concentration of OCDD was not sufficient to qualify the result above the RL in sample LLBMP0002_20191204. Total HpCDF in sample A1BMP0002_20191204 (containing both a qualified method blank isomer and a qualified EMPC isomer) was qualified as an estimated nondetect (UJ). Remaining total detects for HpCDD and HpCDF were qualified as estimated (J), as only a portion of the total was determined to be method blank contamination.

III.4.2. LABORATORY CONTROL SAMPLES

LCS recoveries were within the acceptance criteria listed in Table 6 of Method 1613B.

III.5. FIELD QC SAMPLES

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blanks and equipment blanks were not identified for this SDG.

III.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.

III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were not evaluated at a Stage II validation.



III.7. COMPOUND IDENTIFICATION

Compound identification was not evaluated at a Stage II validation. Second-column confirmation analysis for isomer 2,3,7,8-TCDF was not performed, as 2,3,7,8-TCDF was not detected in the initial analyses of the samples.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was not evaluated at a Stage II validation. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, these samples had no reported detects below the EDL.

Isomers previously qualified as method blank contamination were not further qualified as EMPCs. Remaining isomers reported as EMPCs were qualified as estimated nondetects (UJ) at the level of the EMPC. Total HpCDF in sample A1BMP0002_20191204 (containing both a qualified method blank isomer and a qualified EMPC isomer) was qualified as an estimated nondetect (UJ). The total HxCDD result in sample A1BMP0003_20191204 matched the sum of the associated qualified isomers and was also qualified as an estimated nondetect (UJ). Remaining totals flagged by the laboratory as including one or more EMPC peaks were qualified as estimated (J).

Validated Sample Result Forms: 4402564822

Analysis Method E1613B

Sample Name A1BMP0002_20191204

Matrix Type: WM

Result Type: TRG

Sample Date: 12/4/2019 9:45:00 AM

Validation Level: 9

Lab Sample Name: 440-256482-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000012	0.00010	0.0000018	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000026	0.00010	0.0000012	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000038	0.000051	0.0000013	ug/L	J,DXqMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000058	0.000051	0.00000079	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000029	0.000051	0.0000019	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000027	0.000051	0.00000092	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000038	0.000051	0.00000096	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000025	0.000051	0.00000092	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000027	0.000051	0.00000098	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000037	0.000051	0.00000076	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	ND	0.000051	0.00000086	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000051	0.0000011	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000051	0.0000014	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000026	0.000051	0.00000072	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000051	0.0000011	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000075	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.00000092	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000066	0.000051	0.0000013	ug/L	J,DXqMB	UJ	B, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0000090	0.000051	0.00000079	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000011	0.000051	0.00000072	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000098	0.000051	0.00000086	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000051	0.0000011	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000051	0.0000014	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000010	0.00000075	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000010	0.00000092	ug/L	U	U	

Analysis Method E1613B

Sample Name A1BMP0003_20191204

Matrix Type: WM

Result Type: TRG

Sample Date: 12/4/2019 9:55:00 AM

Validation Level: 9

Lab Sample Name: 440-256482-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000013	0.00011	0.0000023	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000084	0.00011	0.0000017	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000060	0.000053	0.0000017	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000092	0.000053	0.0000013	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	ND	0.000053	0.0000023	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	ND	0.000053	0.0000011	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000023	0.000053	0.0000012	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	ND	0.000053	0.0000011	ug/L	U	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000018	0.000053	0.0000013	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000025	0.000053	0.00000089	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000021	0.000053	0.0000011	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000053	0.0000013	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000053	0.0000018	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000011	0.000053	0.00000084	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000053	0.0000015	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000087	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.0000010	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000011	0.000053	0.0000017	ug/L	J,DXMB	J	B, DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000023	0.000053	0.0000013	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000036	0.000053	0.00000084	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000062	0.000053	0.0000011	ug/L	J,DXq	UJ	*III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000053	0.0000013	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000053	0.0000018	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.00000087	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.0000010	ug/L	U	U	

Analysis Method E1613B

Sample Name ILBMP0002_20191204

Matrix Type: WM

Result Type: TRG

Sample Date: 12/4/2019 9:50:00 AM

Validation Level: 9

Lab Sample Name: 440-256482-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000037	0.00011	0.0000019	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00046	0.00011	0.0000022	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000020	0.000055	0.0000017	ug/L	J,DXMB	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000052	0.000055	0.0000020	ug/L	J,DXMB	J	DNQ
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	ND	0.000055	0.0000021	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000020	0.000055	0.0000014	ug/L	J,DXq	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000037	0.000055	0.0000011	ug/L	J,DXq	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000018	0.000055	0.0000014	ug/L	J,DXq	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000049	0.000055	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000018	0.000055	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000034	0.000055	0.00000099	ug/L	J,DXq	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000055	0.0000015	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000055	0.0000018	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000017	0.000055	0.0000011	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000055	0.0000016	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000085	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.00000096	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000036	0.000055	0.0000017	ug/L	J,DXMB	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00011	0.000055	0.0000020	ug/L	J,DXMB	J	DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000022	0.000055	0.0000011	ug/L	J,DXq	J	DNQ
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000023	0.000055	0.00000099	ug/L	J,DXq	J	DNQ
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000039	0.000055	0.0000015	ug/L	J,DX	J	DNQ
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000055	0.0000018	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.00000085	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.00000096	ug/L	U	U	

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-258024-1

Prepared for

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1 June 2020

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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference



I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^X Project No.: 1272.003D.01 002

Sample Delivery Group: 440-258024-1

Project Manager: Katherine Miller

Matrix: Water

QC Level: II

No. of Samples: 4

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica-Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
LPBMP0002_20191223	440-258024-1	N/A	WM	12/23/19 6:50 AM	E1613B, E200.8, E245.1	II
LPBMP0003_20191223	440-258024-2	N/A	WM	12/23/19 7:00 AM	E1613B, E200.8, E245.1	II
LPBMP0004_20191223	440-258024-3	N/A	WM	12/23/19 7:10 AM	E1613B, E200.8, E245.1	II
EPSW002IE02_20191223	440-258024-4	N/A	WM	12/23/19 8:00 AM	E1613B, E200.8, E245.1	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-258024-1:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- The samples were transferred from TA-Irvine to TA-Sacramento for analysis of Method 1613B.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present upon receipt at TA-Sacramento.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

L. Calvin of MEC^X reviewed the SDG on June 10, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B* and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water samples were extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were not evaluated at a Stage II validation.

III.3. CALIBRATION

Calibration criteria were not evaluated at a Stage II validation.

III.4. QUALITY CONTROL SAMPLES

III.4.1. METHOD BLANKS

The method blank had detects above the EDL and below the reporting limit (RL) for isomers 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, OCDD and OCDF, and for totals HpCDD, HpCDF and HxCDD. The sample results for the isomer method blank contaminants detected below the RL were qualified as nondetects (U) at the level of contamination. The method blank concentrations were not sufficient to qualify results above the RL in the samples. Total detects for HpCDD, HpCDF and HxCDD were qualified as estimated (J), as only a portion of the total was determined to be method blank contamination.

III.4.2. LABORATORY CONTROL SAMPLES

LCS recoveries were within the acceptance criteria listed in Table 6 of Method 1613B, and RPDs were within the control limit of ≤50%.

III.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blanks and equipment blanks were not identified for this SDG.

III.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.

III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were not evaluated at a Stage II validation.



III.7. COMPOUND IDENTIFICATION

Compound identification was not evaluated at a Stage II validation. Second-column confirmation analysis was performed for isomer 2,3,7,8-TCDF detected in the initial analysis of sample LPBMP0002_20191223. The initial result was not confirmed. As the confirmation column is more specific for the detection of 2,3,7,8-TCDF, the initial result was rejected (R) as duplicate data in favor of the confirmation result.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was not evaluated at a Stage II validation. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, these samples had no reported detects below the EDL.

Isomers previously qualified as method blank contamination were not further qualified as EMPCs. Remaining isomers reported as EMPCs were qualified as estimated nondetects (UJ) at the level of the EMPC. Totals flagged by the laboratory as including one or more EMPC peaks were qualified as estimated (J).

IV. METHODS 200.8 AND 245.1— METALS AND MERCURY

M. Hilchey of MEC^x reviewed the SDG on June 1, 2020.

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Metals (DVP-5, Rev. 2)*, *EPA Methods 200.8 and 245.1* and the *National Functional Guidelines for Inorganic Method Data Review (2017)*.

IV.1. HOLDING TIMES

The analytical holding times, 28 days for mercury and six months for metals, were met. The samples designated for dissolved metals analysis were filtered and preserved within 24 hours of receipt, as required on the COC.

IV.2. CALIBRATION

Initial calibration and calibration verification criteria were not evaluated for Stage II validation.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. METHOD BLANKS

There were no target analyte detections in the method blanks (total and dissolved).

IV.3.2. INTERFERENCE CHECK SAMPLES:

ICSA/B data are not evaluated for Stage II validation.

IV.3.3. LABORATORY CONTROL SAMPLES

Laboratory control sample recoveries (total and dissolved) were within the QAPP control limits of 85-115%.



IV.3.4. **LABORATORY DUPLICATES:**

Laboratory duplicate analyses were not performed on a sample in this SDG.

IV.3.5. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

MS/MSD analyses were performed on sample EPSW002IE02_20191223 (dissolved only) for Method 200.8, and on sample LPBMP0002_20191223 (total and dissolved) for Method 245.1. Recoveries were within the QAPP control limits of 70-130% for all target analytes and RPDs were $\leq 20\%$. MS/MSD analyses were not performed on a sample in this SDG for total metals for Method 200.8.

IV.3.6. **SERIAL DILUTION**

Serial dilution analyses were not performed.

IV.4. **INTERNAL STANDARDS PERFORMANCE**

ICP-MS internal standard data are not evaluated for Stage II validation.

IV.5. **COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS**

Analyte quantification is not evaluated for Stage II validation. Results reported below the RL and above the MDL were qualified as estimated (J) and coded with a DNQ to comply with the NPDES permit reporting requirements. Nondetects are valid to the MDL.

IV.6. **FIELD QC SAMPLES**

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

IV.6.1. **FIELD BLANKS AND EQUIPMENT BLANKS**

Field blank or equipment blank samples were not identified for this SDG.

IV.6.2. **FIELD DUPLICATES**

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402580241

Analysis Method E1613B

Sample Name EPSW002IE02_20191223

Matrix Type: WM

Result Type: TRG

Sample Date: 12/23/2019 8:00:00 AM

Validation Level: 9

Lab Sample Name: 440-258024-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00025	0.00012	0.0000022	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0010	0.00012	0.0000030	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.00026	0.000061	0.0000028	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000049	0.000061	0.0000024	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000076	0.000061	0.0000034	ug/L	J,DXMB	U	B
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.000036	0.000061	0.0000027	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000022	0.000061	0.0000018	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000081	0.000061	0.0000027	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000023	0.000061	0.0000019	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	ND	0.000061	0.0000021	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	ND	0.000061	0.0000017	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000061	0.0000022	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000061	0.0000029	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000023	0.000061	0.0000022	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000061	0.0000021	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000012	0.0000012	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000022	0.000012	0.0000016	ug/L	J,DXq	UJ	*III
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00030	0.000061	0.0000028	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00021	0.000061	0.0000024	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000083	0.000061	0.0000021	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000014	0.000061	0.0000017	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000011	0.000061	0.0000021	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000061	0.0000029	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000012	0.0000012	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000022	0.000012	0.0000016	ug/L	J,DXq	J	DNQ

Analysis Method E1613B

Sample Name LPBMP0002_20191223

Matrix Type: WM

Result Type: TRG

Sample Date: 12/23/2019 6:50:00 AM

Validation Level: 9

Lab Sample Name: 440-258024-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00022	0.00010	0.0000029	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00037	0.00010	0.0000032	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.00025	0.000052	0.0000029	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000045	0.000052	0.0000018	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	ND	0.000052	0.0000033	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.000028	0.000052	0.0000034	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000036	0.000052	0.0000015	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.000011	0.000052	0.0000034	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000042	0.000052	0.0000015	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	ND	0.000052	0.0000025	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000025	0.000052	0.0000014	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000052	0.0000022	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000052	0.0000028	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	ND	0.000052	0.0000026	ug/L	U	U	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000027	0.000052	0.0000023	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000066	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.0000023	0.000010	0.0000012	ug/L	J,DX	R	D
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.0000016	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00027	0.000052	0.0000029	ug/L	MBq	J	B, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00011	0.000052	0.0000018	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000079	0.000052	0.0000025	ug/L	q	J	*III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000021	0.000052	0.0000014	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000015	0.000052	0.0000022	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000052	0.0000028	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000063	0.000010	0.0000012	ug/L	J,DX	J	DNQ
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000010	0.0000016	ug/L	U	U	

Analysis Method E1613B

Sample Name LPBMP0003_20191223

Matrix Type: WM

Result Type: TRG

Sample Date: 12/23/2019 7:00:00 AM

Validation Level: 9

Lab Sample Name: 440-258024-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000051	0.00010	0.0000018	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00063	0.00010	0.0000025	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000046	0.000050	0.0000015	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000076	0.000050	0.0000017	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000025	0.000050	0.0000018	ug/L	J,DXMB	U	B
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000049	0.000050	0.0000030	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000046	0.000050	0.0000016	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000043	0.000050	0.0000030	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000057	0.000050	0.0000016	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000047	0.000050	0.0000023	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000056	0.000050	0.0000014	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000018	0.000050	0.0000015	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000039	0.000050	0.0000022	ug/L	J,DX	J	DNQ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000044	0.000050	0.0000023	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000020	0.000050	0.0000014	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.0000012	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.0000017	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000061	0.000050	0.0000015	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00017	0.000050	0.0000017	ug/L	MB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000042	0.000050	0.0000023	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000032	0.000050	0.0000014	ug/L	J,DXMB	J	B, DNQ
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000061	0.000050	0.0000014	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000039	0.000050	0.0000022	ug/L	J,DX	J	DNQ
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000010	0.0000012	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000010	0.0000017	ug/L	U	U	

Analysis Method E1613B

Sample Name LPBMP0004_20191223

Matrix Type: WM

Result Type: TRG

Sample Date: 12/23/2019 7:10:00 AM

Validation Level: 9

Lab Sample Name: 440-258024-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000094	0.00012	0.0000026	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00023	0.00012	0.0000028	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000076	0.000061	0.0000015	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000019	0.000061	0.0000015	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000021	0.000061	0.0000018	ug/L	J,DXMB	U	B
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000060	0.000061	0.0000026	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000032	0.000061	0.0000023	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000035	0.000061	0.0000026	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	ND	0.000061	0.0000024	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000024	0.000061	0.0000021	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000030	0.000061	0.0000021	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000061	0.0000018	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000061	0.0000035	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	ND	0.000061	0.0000021	ug/L	U	U	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000061	0.0000018	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000012	0.0000017	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000012	0.0000024	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000086	0.000061	0.0000015	ug/L	J,DXMB	J	B, DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000044	0.000061	0.0000015	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000020	0.000061	0.0000021	ug/L	J,DXq	J	DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000078	0.000061	0.0000021	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000061	0.0000018	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000061	0.0000035	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000012	0.0000017	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000012	0.0000024	ug/L	U	U	

Analysis Method E200.8

Sample Name EPSW002IE02_20191223

Matrix Type: WM

Result Type: TRG

Sample Date: 12/23/2019 8:00:00 AM

Validation Level: 9

Lab Sample Name: 440-258024-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	D	7440-38-2	1.1	1.0	0.50	ug/L			
Arsenic	T	7440-38-2	1.2	1.0	0.50	ug/L			
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	2.6	2.0	0.50	ug/L			
Copper	D	7440-50-8	2.2	2.0	0.50	ug/L			
Iron	D	7439-89-6	81	20	8.0	ug/L			
Iron	T	7439-89-6	590	20	8.0	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	0.65	1.0	0.50	ug/L	J,DX	J	DNQ
Manganese	D	7439-96-5	3.7	1.0	0.50	ug/L			
Manganese	T	7439-96-5	44	1.0	0.50	ug/L			
Selenium	D	7782-49-2	ND	2.0	0.50	ug/L	U	U	
Selenium	T	7782-49-2	ND	2.0	0.50	ug/L	U	U	
Zinc	D	7440-66-6	12	20	2.5	ug/L	J,DX	J	DNQ
Zinc	T	7440-66-6	4.7	20	2.5	ug/L	J,DX	J	DNQ

Sample Name LPBMP0002_20191223

Matrix Type: WM

Result Type: TRG

Sample Date: 12/23/2019 6:50:00 AM

Validation Level: 9

Lab Sample Name: 440-258024-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	5.3	2.0	0.50	ug/L			
Copper	D	7440-50-8	4.4	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	1.0	1.0	0.50	ug/L			

Sample Name LPBMP0003_20191223

Matrix Type: WM

Result Type: TRG

Sample Date: 12/23/2019 7:00:00 AM

Validation Level: 9

Lab Sample Name: 440-258024-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	4.0	2.0	0.50	ug/L			
Copper	T	7440-50-8	4.2	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	1.0	1.0	0.50	ug/L			

Analysis Method E200.8

Sample Name LPBMP0004_20191223 Matrix Type: WM Result Type: TRG

Sample Date: 12/23/2019 7:10:00 AM Validation Level: 9

Lab Sample Name: 440-258024-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	3.2	2.0	0.50	ug/L			
Copper	T	7440-50-8	3.5	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Analysis Method E245.1

Sample Name EPSW002IE02_20191223 Matrix Type: WM Result Type: TRG

Sample Date: 12/23/2019 8:00:00 AM Validation Level: 9

Lab Sample Name: 440-258024-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name LPBMP0002_20191223 Matrix Type: WM Result Type: TRG

Sample Date: 12/23/2019 6:50:00 AM Validation Level: 9

Lab Sample Name: 440-258024-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name LPBMP0003_20191223 Matrix Type: WM Result Type: TRG

Sample Date: 12/23/2019 7:00:00 AM Validation Level: 9

Lab Sample Name: 440-258024-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name LPBMP0004_20191223 Matrix Type: WM Result Type: TRG

Sample Date: 12/23/2019 7:10:00 AM Validation Level: 9

Lab Sample Name: 440-258024-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-258216-1

Prepared for

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Tucson, Arizona 85701

1 June 2020

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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference

**I. INTRODUCTION****Task Order Title:** Boeing SSFL NPDES**Contract:** 40458-078 and 40458-083**MEC^X Project No.:** 1272.003D.01 002**Sample Delivery Group:** 440-258216-1**Project Manager:** Katherine Miller**Matrix:** Water**QC Level:** II**No. of Samples:** 6**No. of Reanalyses/Dilutions:** 0**Laboratory:** TestAmerica-Irvine**TABLE 1 - SAMPLE IDENTIFICATION**

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
A1BMP0002_20191226	440-258216-1	N/A	WM	12/26/19 8:40 AM	E1613B, E200.8, E245.1	II
A1BMP0003_20191226	440-258216-2	N/A	WM	12/26/19 8:20 AM	E1613B, E200.8, E245.1	II
EPSW001IE01_20191226	440-258216-5	N/A	WM	12/26/19 7:40 AM	E1613B, E200.8, E245.1	II
EPSW002BG01_20191226	440-258216-6	N/A	WM	12/26/19 7:30 AM	E1613B, E200.8, E245.1	II
LXBMP0011_20191226	440-258216-3	N/A	WM	12/26/19 9:20 AM	E1613B, E200.8, E245.1	II
LXBMP0012_20191226	440-258216-4	N/A	WM	12/26/19 9:00 AM	E1613B, E200.8, E245.1	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-258216-1:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- The samples were transferred from TA-Irvine to TA-Sacramento for analysis of Method 1613B.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present upon receipt at TA-Sacramento.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

L. Calvin of MEC^X reviewed the SDG on June 10, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B* and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water samples were extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were not evaluated at a Stage II validation.

III.3. CALIBRATION

Calibration criteria were not evaluated at a Stage II validation.

III.4. QUALITY CONTROL SAMPLES

III.4.1. METHOD BLANKS

The method blank had detects above the EDL and below the reporting limit (RL) for isomers 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, OCDD and OCDF, and for all totals except PeCDD, PeCDF and TCDD. The sample results for the isomer method blank contaminants detected below the RL were qualified as nondetects (U) at the level of contamination. Results for total HxCDD in samples A1BMP0002_20191226, A1BMP0003_20191226, EPSW001IE01_20191226 and LXBMP0012_20191226 matched the sum of qualified isomers and were also qualified as nondetects (U). Results for total HxCDF in samples A1BMP0002_20191226, EPSW001IE01_20191226 and LXBMP0012_20191226 (containing both qualified method blank isomers and qualified EMPC isomers) were qualified as estimated nondetects (UJ). Remaining total detects for HpCDD, HpCDF, HxCDD, HxCDF and TCDF were qualified as estimated (J), as only a portion of the totals was determined to be method blank contamination.

III.4.2. LABORATORY CONTROL SAMPLES

LCS recoveries were within the acceptance criteria listed in Table 6 of Method 1613B.

III.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blanks and equipment blanks were not identified for this SDG.

III.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.



III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were not evaluated at a Stage II validation.

III.7. COMPOUND IDENTIFICATION

Compound identification was not evaluated at a Stage II validation. Second-column confirmation analysis was performed for isomer 2,3,7,8-TCDF detected in the initial analyses of samples A1BMP0003_20191226, EPSW001IE01_20191226 and LXBMP0012_20191226 were not confirmed. As the confirmation column is more specific for the detection of 2,3,7,8-TCDF, the initial results were rejected (R) as duplicate data in favor of the confirmation results.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was not evaluated at a Stage II validation. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, these samples had no reported detects below the EDL.

Isomers previously qualified as method blank contamination were not further qualified as EMPCs. Remaining isomers reported as EMPCs were qualified as estimated nondetects (UJ) at the level of the EMPC. Results for total HxCDF in samples A1BMP0002_20191226, EPSW001IE01_20191226 and LXBMP0012_20191226 (containing both qualified method blank isomers and qualified EMPC isomers) were qualified as estimated nondetects (UJ). Results for Total PeCDF and PeCDD in samples A1BMP0002_20191226 and A1BMP0003_20191226, total PeCDF in sample LXBMP0011_20191226, total PeCDD and TCDD in sample EPSW001IE01_20191226 and total TCDD in sample EPSW001BG01_20191226 were qualified as estimated nondetects (UJ) as the total results matched the sum of the isomer results qualified as EMPCs. Remaining totals flagged by the laboratory as including one or more EMPC peaks were qualified as estimated (J).

IV. METHODS 200.8 AND 245.1— METALS AND MERCURY

M. Hilchey of MEC^X reviewed the SDG on June 1, 2020.

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for Metals (DVP-5, Rev. 2)*, EPA Methods 200.8 and 245.1 and the *National Functional Guidelines for Inorganic Method Data Review (2017)*.

IV.1. HOLDING TIMES

The analytical holding times, 28 days for mercury and six months for metals, were met. The samples designated for dissolved metals analysis were filtered and preserved within 24 hours of receipt, as required on the COC.

IV.2. CALIBRATION

Initial calibration and calibration verification criteria were not evaluated for Stage II validation.



IV.3. QUALITY CONTROL SAMPLES

IV.3.1. METHOD BLANKS

There were no target analyte detections in the method blanks (total and dissolved).

IV.3.2. INTERFERENCE CHECK SAMPLES:

ICSA/B data are not evaluated for Stage II validation.

IV.3.3. LABORATORY CONTROL SAMPLES

Laboratory control sample recoveries (total and dissolved) were within the QAPP control limits of 85-115%.

IV.3.4. LABORATORY DUPLICATES:

Laboratory duplicate analyses were not performed on a sample in this SDG.

IV.3.5. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on sample LXBMP0012_20191226 (total) for Method 200.8. Recoveries were within the QAPP control limits of 70-130% for all target analytes and RPDs were $\leq 20\%$. MS/MSD analyses were not performed on a sample from this SDG for the remaining analyses.

IV.3.6. SERIAL DILUTION

Serial dilution analyses were not performed.

IV.4. INTERNAL STANDARDS PERFORMANCE

ICP-MS internal standard data are not evaluated for Stage II validation.

IV.5. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Analyte quantification is not evaluated for Stage II validation. Results reported below the RL and above the MDL were qualified as estimated (J) and coded with a DNQ to comply with the NPDES permit reporting requirements. Nondetects are valid to the MDL.

IV.6. FIELD QC SAMPLES

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

IV.6.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

IV.6.2. FIELD DUPLICATES

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402582161

Analysis Method E1613B

Sample Name A1BMP0002_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 8:40:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.0000080	0.00010	0.00000066	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000053	0.00010	0.00000079	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000044	0.000051	0.00000048	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000088	0.000051	0.00000047	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000013	0.000051	0.00000059	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000074	0.000051	0.00000069	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000018	0.000051	0.00000051	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000010	0.000051	0.00000072	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000012	0.000051	0.00000057	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000010	0.000051	0.00000052	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000013	0.000051	0.00000049	ug/L	J,DXMBq	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000067	0.000051	0.00000056	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000082	0.000051	0.00000066	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000080	0.000051	0.00000052	ug/L	J,DXMB	U	B
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000075	0.000051	0.00000054	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000033	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.00000058	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000075	0.000051	0.00000048	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000016	0.000051	0.00000047	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000035	0.000051	0.00000052	ug/L	J,DXMBq	UJ	B, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000043	0.000051	0.00000049	ug/L	J,DXMBq	U	B
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000014	0.000051	0.00000054	ug/L	J,DXq	UJ	*III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000082	0.000051	0.00000066	ug/L	J,DXq	UJ	*III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000010	0.00000033	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000010	0.00000058	ug/L	U	U	

Analysis Method E1613B

Sample Name A1BMP0003_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 8:20:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.0000058	0.00011	0.00000067	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000035	0.00011	0.00000070	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000029	0.000055	0.00000041	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000057	0.000055	0.00000040	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.00000081	0.000055	0.00000047	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	ND	0.000055	0.00000064	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000022	0.000055	0.00000037	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.00000077	0.000055	0.00000065	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.00000073	0.000055	0.00000041	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000013	0.000055	0.00000046	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.00000087	0.000055	0.00000035	ug/L	J,DXMBq	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.00000055	0.000055	0.00000046	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.00000076	0.000055	0.00000074	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.00000072	0.000055	0.00000049	ug/L	J,DXMB	U	B
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.00000052	0.000055	0.00000045	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000054	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.00000057	0.000011	0.00000030	ug/L	J,DXMBq	R	D
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.00000049	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000047	0.000055	0.00000041	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000011	0.000055	0.00000040	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000034	0.000055	0.00000046	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000038	0.000055	0.00000035	ug/L	J,DXMBq	U	B
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000011	0.000055	0.00000045	ug/L	J,DXq	UJ	*III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.00000076	0.000055	0.00000074	ug/L	J,DXq	UJ	*III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.00000057	0.000011	0.00000030	ug/L	J,DXMBq	J	B, DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.00000049	ug/L	U	U	

Analysis Method E1613B

Sample Name EPSW001IE01_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 7:40:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.0000088	0.00011	0.00000093	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000077	0.00011	0.00000099	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000029	0.000053	0.00000046	ug/L	J,DXMBq	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000010	0.000053	0.00000050	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000013	0.000053	0.00000055	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.00000098	0.000053	0.00000053	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000021	0.000053	0.00000040	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.00000068	0.000053	0.00000054	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000012	0.000053	0.00000044	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000012	0.000053	0.00000039	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000014	0.000053	0.00000038	ug/L	J,DXMBq	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000010	0.000053	0.00000050	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000011	0.000053	0.00000066	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.00000075	0.000053	0.00000042	ug/L	J,DXMBq	U	B
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.00000084	0.000053	0.00000049	ug/L	J,DX	J	DNQ
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000069	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.00000075	0.000011	0.00000030	ug/L	J,DXMB	R	D
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000030	0.000011	0.00000049	ug/L	J,DXq	UJ	*III
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000075	0.000053	0.00000046	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000018	0.000053	0.00000050	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000036	0.000053	0.00000039	ug/L	J,DXMBq	UJ	B, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000046	0.000053	0.00000038	ug/L	J,DXMBq	U	B
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000019	0.000053	0.00000049	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000011	0.000053	0.00000066	ug/L	J,DXq	UJ	*III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.00000075	0.000011	0.00000030	ug/L	J,DXMB	J	B, DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000030	0.000011	0.00000049	ug/L	J,DXq	UJ	*III

Analysis Method E1613B

Sample Name EPSW002BG01_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 7:30:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-6

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000069	0.00010	0.00000076	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000017	0.00010	0.00000074	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000036	0.000052	0.00000078	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000023	0.000052	0.00000041	ug/L	J,DXMBq	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000012	0.000052	0.00000095	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000016	0.000052	0.00000068	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000018	0.000052	0.00000051	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.00000094	0.000052	0.00000072	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	ND	0.000052	0.00000056	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.00000090	0.000052	0.00000052	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000011	0.000052	0.00000048	ug/L	J,DXMB	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000011	0.000052	0.00000061	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000052	0.00000068	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.00000056	0.000052	0.00000054	ug/L	J,DXMBq	U	B
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000052	0.00000060	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000037	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000016	0.000010	0.00000058	ug/L	J,DXq	UJ	*III
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000039	0.000052	0.00000078	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0000049	0.000052	0.00000041	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000060	0.000052	0.00000052	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000034	0.000052	0.00000048	ug/L	J,DXMB	J	B, DNQ
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000017	0.000052	0.00000060	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000052	0.00000068	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000010	0.00000037	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000016	0.000010	0.00000058	ug/L	J,DXq	UJ	*III

Analysis Method E1613B

Sample Name LX BMP0011_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 9:20:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.0000081	0.00011	0.00000085	ug/L	J,DXMBq	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000015	0.00011	0.0000010	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000033	0.000054	0.00000052	ug/L	J,DXMBq	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000027	0.000054	0.00000046	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000010	0.000054	0.00000062	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000011	0.000054	0.00000085	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000026	0.000054	0.00000067	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	ND	0.000054	0.00000088	ug/L	U	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	ND	0.000054	0.00000073	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000011	0.000054	0.00000062	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000011	0.000054	0.00000063	ug/L	J,DXMBq	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.00000081	0.000054	0.00000067	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000054	0.0000010	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.00000083	0.000054	0.00000064	ug/L	J,DXMBq	U	B
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000054	0.00000071	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000046	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.00000075	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000043	0.000054	0.00000052	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0000051	0.000054	0.00000046	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000039	0.000054	0.00000062	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000043	0.000054	0.00000063	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.00000081	0.000054	0.00000067	ug/L	J,DXq	UJ	*III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000054	0.0000010	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.00000046	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.00000075	ug/L	U	U	

Analysis Method E1613B

Sample Name LXBMP0012_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 9:00:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000011	0.00010	0.00000055	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000015	0.00010	0.00000059	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000038	0.000051	0.00000041	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000037	0.000051	0.00000030	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000022	0.000051	0.00000049	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000012	0.000051	0.00000050	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000031	0.000051	0.00000045	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000012	0.000051	0.00000053	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000020	0.000051	0.00000046	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000019	0.000051	0.00000038	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000021	0.000051	0.00000041	ug/L	J,DXMB	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000016	0.000051	0.00000044	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000017	0.000051	0.00000055	ug/L	J,DX	J	DNQ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000013	0.000051	0.00000038	ug/L	J,DXMB	U	B
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000012	0.000051	0.00000044	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.00000063	0.000010	0.00000029	ug/L	J,DXMBq	R	D
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000054	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.00000044	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000060	0.000051	0.00000041	ug/L	J,DXMB	J	B, DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0000052	0.000051	0.00000030	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000055	0.000051	0.00000038	ug/L	J,DXMBq	UJ	B, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000071	0.000051	0.00000041	ug/L	J,DXMB	U	B
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000028	0.000051	0.00000044	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000017	0.000051	0.00000055	ug/L	J,DX	J	DNQ
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.00000063	0.000010	0.00000029	ug/L	J,DXMBq	J	B, DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000010	0.00000044	ug/L	U	U	

Analysis Method E200.8

Sample Name A1BMP0002_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 8:40:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	4.6	2.0	0.50	ug/L			
Copper	D	7440-50-8	4.7	2.0	0.50	ug/L			
Lead	T	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Sample Name A1BMP0003_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 8:20:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	7.1	2.0	0.50	ug/L			
Copper	D	7440-50-8	7.4	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Sample Name EPSW001IE01_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 7:40:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	D	7440-38-2	0.95	1.0	0.50	ug/L	J,DX	J	DNQ
Arsenic	T	7440-38-2	1.1	1.0	0.50	ug/L			
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	2.6	2.0	0.50	ug/L			
Copper	T	7440-50-8	6.2	2.0	0.50	ug/L			
Iron	T	7439-89-6	74	20	8.0	ug/L			
Iron	D	7439-89-6	35	20	8.0	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Manganese	T	7439-96-5	1.8	1.0	0.50	ug/L			
Manganese	D	7439-96-5	1.2	1.0	0.50	ug/L			
Selenium	T	7782-49-2	0.91	2.0	0.50	ug/L	J,DX	J	DNQ
Selenium	D	7782-49-2	ND	2.0	0.50	ug/L	U	U	
Zinc	D	7440-66-6	40	20	2.5	ug/L			
Zinc	T	7440-66-6	38	20	2.5	ug/L			

Analysis Method E200.8

Sample Name EPSW002BG01_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 7:30:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-6

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	T	7440-38-2	1.1	1.0	0.50	ug/L			
Arsenic	D	7440-38-2	1.1	1.0	0.50	ug/L			
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	1.6	2.0	0.50	ug/L	J,DX	J	DNQ
Copper	D	7440-50-8	1.6	2.0	0.50	ug/L	J,DX	J	DNQ
Iron	T	7439-89-6	37	20	8.0	ug/L			
Iron	D	7439-89-6	8.9	20	8.0	ug/L	J,DX	J	DNQ
Lead	T	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Manganese	D	7439-96-5	1.7	1.0	0.50	ug/L			
Manganese	T	7439-96-5	2.1	1.0	0.50	ug/L			
Selenium	D	7782-49-2	1.4	2.0	0.50	ug/L	J,DX	J	DNQ
Selenium	T	7782-49-2	2.1	2.0	0.50	ug/L			
Zinc	T	7440-66-6	67	20	2.5	ug/L			
Zinc	D	7440-66-6	69	20	2.5	ug/L			

Sample Name LXBMP0011_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 9:20:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	1.1	2.0	0.50	ug/L	J,DX	J	DNQ
Copper	D	7440-50-8	1.8	2.0	0.50	ug/L	J,DX	J	DNQ
Lead	T	7439-92-1	0.51	1.0	0.50	ug/L	J,DX	J	DNQ
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Sample Name LXBMP0012_20191226

Matrix Type: WM

Result Type: TRG

Sample Date: 12/26/2019 9:00:00 AM

Validation Level: 9

Lab Sample Name: 440-258216-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	1.2	2.0	0.50	ug/L	J,DX	J	DNQ
Copper	T	7440-50-8	1.4	2.0	0.50	ug/L	J,DX	J	DNQ
Lead	T	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Analysis Method E245.1

Sample Name A1BMP0002_20191226 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 12/26/2019 8:40:00 AM **Validation Level:** 9

Lab Sample Name: 440-258216-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name A1BMP0003_20191226 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 12/26/2019 8:20:00 AM **Validation Level:** 9

Lab Sample Name: 440-258216-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name EPSW001IE01_20191226 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 12/26/2019 7:40:00 AM **Validation Level:** 9

Lab Sample Name: 440-258216-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name EPSW002BG01_20191226 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 12/26/2019 7:30:00 AM **Validation Level:** 9

Lab Sample Name: 440-258216-6

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name LXBMP0011_20191226 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 12/26/2019 9:20:00 AM **Validation Level:** 9

Lab Sample Name: 440-258216-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	

Sample Name LXBMP0012_20191226 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 12/26/2019 9:00:00 AM **Validation Level:** 9

Lab Sample Name: 440-258216-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	D	7439-97-6	ND	0.20	0.10	ug/L	U	U	
Mercury	T	7439-97-6	ND	0.20	0.10	ug/L	U	U	

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-262590-1

Prepared for

Haley & Aldrich, Inc.

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27 May 2020

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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference



I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^x Project No.: 1272.003D.01 002

Sample Delivery Group: 440-262590-1

Project Manager: Katherine Miller

Matrix: Water

QC Level: II

No. of Samples: 3

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica-Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
ILBMP0004_20200310	440-262590-1	N/A	WM	3/10/20 8:00 AM	E1613B, E200.8	II
ILBMP0005_20200310	440-262590-2	N/A	WM	3/10/20 8:10 AM	E1613B, E200.8	II
ILBMP0008_20200310	440-262590-3	N/A	WM	3/10/20 7:50 AM	E1613B, E200.8	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-262590-1:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- The samples were transferred from TA-Irvine to TA-Sacramento for analysis of Method 1613B.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present upon receipt at TA-Sacramento.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

L. Calvin of MEC^X reviewed the SDG on June 2, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B* and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water samples were extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were not evaluated at a Stage II validation.

III.3. CALIBRATION

Calibration criteria were not evaluated at a Stage II validation.

III.4. QUALITY CONTROL SAMPLES

III.4.1. METHOD BLANKS

The method blank had detects above the EDL and below the reporting limit (RL) for isomers 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,7,8,9-HxCDF, OCDD and OCDF, and for totals HpCDD, HxCDD and HxCDF. The sample results for the isomer method blank contaminants detected below the RL were qualified as nondetects (U) at the level of contamination. OCDD detected above the RL in sample ILBMP0005_20200310 was also qualified as a nondetect (U) at the level of contamination. Method blank concentrations were not sufficient to qualify remaining sample results above the RLs. Sample totals for HpCDD, HxCDD and HxCDF were qualified as estimated (J), as only a portion of the total was determined to be method blank contamination.

III.4.2. LABORATORY CONTROL SAMPLES

LCS recoveries were within the acceptance criteria listed in Table 6 of Method 1613B.

III.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

III.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.

III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were not evaluated at a Stage II validation.



III.7. COMPOUND IDENTIFICATION

Compound identification was not evaluated at a Stage II validation. Second-column confirmation analysis for isomer 2,3,7,8-TCDF was performed for the initial detect in sample ILBMP0004_20200310, and both the initial and confirmation results were reported. The initial result was not confirmed; therefore, the initial result was rejected (R) as duplicate data in favor of the nondetect confirmation result.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was not evaluated at a Stage II validation. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, this sample had no reported detects below the EDL.

Isomers previously qualified as method blank contamination were not further qualified as EMPCs. Remaining isomers reported as EMPCs were qualified as estimated nondetects (UJ) at the level of the EMPC. Concentrations of total TCDD in sample ILBMP0004_20200310 and total PeCDD in sample ILBMP0005_20200310 matched qualified isomers and were therefore also qualified as estimated nondetects (UJ). Remaining totals flagged by the laboratory as including one or more EMPC peaks were qualified as estimated (J).

IV. METHOD 200.8— METALS

M. Hilchey of MEC^x reviewed the SDG on May 27, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Metals (DVP-5, Rev. 2)*, *EPA Method 200.8* and the *National Functional Guidelines for Inorganic Method Data Review (2017)*.

IV.1. HOLDING TIMES

The analytical holding time, six months for metals, was met. Sample fractions designated for dissolved metals analysis were filtered at the laboratory approximately 2 hours past the COC requirement of within 24 hours of receipt. All dissolved metals results were qualified as estimated (J).

IV.2. CALIBRATION

Initial calibration and calibration verification criteria were not evaluated for Stage II validation.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. METHOD BLANKS

There were no target analyte detections in the method blanks.

IV.3.2. INTERFERENCE CHECK SAMPLES:

ICP-AES and ICP-MS ICSAB data are not evaluated for Stage II validation.



IV.3.3. **LABORATORY CONTROL SAMPLES**

Laboratory control sample recoveries (total and dissolved) were within the QAPP control limits of 85-115%.

IV.3.4. **LABORATORY DUPLICATES:**

Laboratory duplicate analyses were not performed on a sample in this SDG.

IV.3.5. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

MS/MSD analyses were performed on sample 1LBMP0004_20200310 (total and dissolved). Recoveries were within the QAPP control limits of 70-130%. RPDs were $\leq 20\%$.

IV.3.6. **SERIAL DILUTION**

Serial dilution analyses were not performed.

IV.4. **INTERNAL STANDARDS PERFORMANCE**

ICP-MS internal standard data are not evaluated for Stage II validation.

IV.5. **COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS**

Analyte quantification is not evaluated for Stage II validation. Results reported below the RL and above the MDL were qualified as estimated (J) and coded with a DNQ to comply with the NPDES permit reporting requirements. Nondetects are valid to the MDL.

IV.6. **FIELD QC SAMPLES**

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

IV.6.1. **FIELD BLANKS AND EQUIPMENT BLANKS**

Field blank or equipment blank samples were not identified for this SDG.

IV.6.2. **FIELD DUPLICATES**

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402625901

Analysis Method E1613B

Sample Name ILBMP0004_20200310

Matrix Type: WM

Result Type: TRG

Sample Date: 3/10/2020 8:00:00 AM

Validation Level: 9

Lab Sample Name: 440-262590-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00012	0.00011	0.0000014	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0013	0.00011	0.0000020	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000098	0.000053	0.0000019	ug/L			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00014	0.000053	0.0000013	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000059	0.000053	0.0000021	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000088	0.000053	0.00000097	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000086	0.000053	0.0000014	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000084	0.000053	0.0000010	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000012	0.000053	0.0000015	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000036	0.000053	0.0000011	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000011	0.000053	0.0000013	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000038	0.000053	0.00000097	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000063	0.000053	0.0000013	ug/L	J,DX	J	DNQ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000071	0.000053	0.00000097	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000031	0.000053	0.0000010	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000077	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.0000019	0.000011	0.00000049	ug/L	J,DXq	R	D
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000040	0.000011	0.00000092	ug/L	J,DXq	UJ	*III
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00016	0.000053	0.0000019	ug/L	J,DXq	J	DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00038	0.000053	0.0000013	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000094	0.000053	0.00000097	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000086	0.000053	0.0000013	ug/L	J,DXMBq	J	B, DNQ, *III

Analysis Method E1613B

Total Tetrachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000023	0.000053	0.00000097	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000097	0.000053	0.0000013	ug/L	J,DX	J	DNQ
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000019	0.000011	0.00000049	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	0.0000040	0.000011	0.00000092	ug/L	J,DXq	UJ	*III

Sample Name ILBMP0005_20200310

Matrix Type: WM

Result Type: TRG

Sample Date: 3/10/2020 8:10:00 AM

Validation Level: 9

Lab Sample Name: 440-262590-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000013	0.00010	0.0000011	ug/L	J,DXqMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00014	0.00010	0.0000014	ug/L	MB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000076	0.000052	0.00000095	ug/L	J,DXq	UJ	*III
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000018	0.000052	0.00000045	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000022	0.000052	0.0000010	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000020	0.000052	0.00000064	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000034	0.000052	0.0000012	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000017	0.000052	0.00000068	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000026	0.000052	0.0000013	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000018	0.000052	0.00000071	ug/L	J,DXqMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000033	0.000052	0.0000011	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000052	0.0000011	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000016	0.000052	0.0000011	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000015	0.000052	0.00000064	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000052	0.0000012	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000024	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.00000091	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000015	0.000052	0.00000095	ug/L	J,DXq	J	DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000041	0.000052	0.00000045	ug/L	J,DXMB	J	B, DNQ

Analysis Method E1613B

Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000010	0.000052	0.00000064	ug/L	J,DXqMB	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000013	0.000052	0.0000011	ug/L	J,DXqMB	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000052	0.0000011	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000016	0.000052	0.0000011	ug/L	J,DXq	UJ	*III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000010	0.00000024	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000010	0.00000091	ug/L	U	U	

Sample Name ILBMP0008_20200310

Matrix Type: WM

Result Type: TRG

Sample Date: 3/10/2020 7:50:00 AM

Validation Level: 9

Lab Sample Name: 440-262590-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000097	0.00011	0.0000011	ug/L	J,DXMB	J	DNQ
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00038	0.00011	0.0000015	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000055	0.000053	0.0000016	ug/L			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000052	0.000053	0.00000067	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000030	0.000053	0.0000018	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000069	0.000053	0.00000084	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000032	0.000053	0.0000012	ug/L	J,DXqMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000041	0.000053	0.00000091	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000029	0.000053	0.0000014	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000015	0.000053	0.00000096	ug/L	J,DXqMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000040	0.000053	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000053	0.00000092	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000053	0.0000012	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000023	0.000053	0.00000086	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000015	0.000053	0.00000095	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000043	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.0000011	ug/L	U	U	

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Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00010	0.000053	0.0000016	ug/L	J,DXq	J	DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00021	0.000053	0.00000067	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000046	0.000053	0.00000084	ug/L	J,DXqMB	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000031	0.000053	0.0000012	ug/L	J,DXqMB	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000015	0.000053	0.00000092	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000018	0.000053	0.0000012	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000012	0.000011	0.00000043	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.0000011	ug/L	U	U	

Analysis Method E200.8

Sample Name ILBMP0004_20200310 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 3/10/2020 8:00:00 AM **Validation Level:** 9

Lab Sample Name: 440-262590-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	0.37	1.0	0.25	ug/L	J,DX	J	H, DNQ
Cadmium	T	7440-43-9	0.36	1.0	0.25	ug/L	J,DX	J	DNQ
Copper	D	7440-50-8	7.7	2.0	0.50	ug/L		J	H
Copper	T	7440-50-8	9.6	2.0	0.50	ug/L			
Lead	T	7439-92-1	2.7	1.0	0.50	ug/L			
Lead	D	7439-92-1	0.58	1.0	0.50	ug/L	J,DX	J	H, DNQ

Sample Name ILBMP0005_20200310 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 3/10/2020 8:10:00 AM **Validation Level:** 9

Lab Sample Name: 440-262590-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	0.50	1.0	0.25	ug/L	J,DX	J	DNQ
Cadmium	D	7440-43-9	0.78	1.0	0.25	ug/L	J,DX	J	H, DNQ
Copper	D	7440-50-8	19	2.0	0.50	ug/L		J	H
Copper	T	7440-50-8	21	2.0	0.50	ug/L			
Lead	D	7439-92-1	1.0	1.0	0.50	ug/L		J	H
Lead	T	7439-92-1	1.2	1.0	0.50	ug/L			

Sample Name ILBMP0008_20200310 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 3/10/2020 7:50:00 AM **Validation Level:** 9

Lab Sample Name: 440-262590-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	0.84	1.0	0.25	ug/L	J,DX	J	H, DNQ

<i>Analysis Method</i>	<i>E200.8</i>								
Cadmium	T	7440-43-9	0.94	1.0	0.25	ug/L	J,DX	J	DNQ
Copper	T	7440-50-8	14	2.0	0.50	ug/L			
Copper	D	7440-50-8	8.1	2.0	0.50	ug/L		J	H
Lead	D	7439-92-1	0.96	1.0	0.50	ug/L	J,DX	J	H, DNQ
Lead	T	7439-92-1	3.9	1.0	0.50	ug/L			

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-262973-1

Prepared for

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28 May 2020

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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference

**I. INTRODUCTION****Task Order Title:** Boeing SSFL NPDES**Contract:** 40458-078 and 40458-083**MEC^X Project No.:** 1272.003D.01 002**Sample Delivery Group:** 440-262973-1**Project Manager:** Katherine Miller**Matrix:** Water**QC Level:** II**No. of Samples:** 6**No. of Reanalyses/Dilutions:** 0**Laboratory:** TestAmerica-Irvine**TABLE 1 - SAMPLE IDENTIFICATION**

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
EPSW001BG01_20200313	440-262973-4	N/A	WM	3/13/20 9:20 AM	E1613B, E200.8, SM2540D	II
EPSW001IE01_20200313	440-262973-5	N/A	WM	3/13/20 9:10 AM	E1613B, E200.8	II
EPSW002IE02_20200313	440-262973-6	N/A	WM	3/13/20 9:40 AM	E1613B, E200.8	II
ILBMP0002_20200312	440-262973-1	N/A	WM	3/12/20 12:50 PM	E1613B, E200.8	II
LXBMP0011_20200313	440-262973-2	N/A	WM	3/13/20 8:30 AM	E1613B, E200.8	II
LXBMP0012_20200313	440-262973-3	N/A	WM	3/13/20 8:40 AM	E1613B, E200.8	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-262973-1:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- The samples were transferred from TA-Irvine to TA-Sacramento for analysis of Method 1613B.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present upon receipt at TA-Sacramento.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

L. Calvin of MEC^X reviewed the SDG on June 2, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B* and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water samples were extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were not evaluated at a Stage II validation.

III.3. CALIBRATION

Calibration criteria were not evaluated at a Stage II validation.

III.4. QUALITY CONTROL SAMPLES

III.4.1. METHOD BLANKS

The method blank had detects above the EDL and below the reporting limit (RL) for isomers 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,7,8,9-HxCDF, OCDD and OCDF, and for totals HpCDD, HxCDD and HxCDF. The sample results for the isomer method blank contaminants detected below the RL were qualified as nondetects (U) at the level of contamination. Method blank concentrations were not sufficient to qualify sample results above the RLs. Sample totals for HpCDD, HxCDD and HxCDF were qualified as estimated (J), as only a portion of the total was determined to be method blank contamination.

III.4.2. LABORATORY CONTROL SAMPLES

LCS recoveries were within the acceptance criteria listed in Table 6 of Method 1613B.

III.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

III.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.

III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were not evaluated at a Stage II validation.



III.7. COMPOUND IDENTIFICATION

Compound identification was not evaluated at a Stage II validation. Second-column confirmation analysis for isomer 2,3,7,8-TCDF was performed for the initial detect in sample EPSW001BG01_20200313, and both the initial and confirmation results were reported. The initial result was not confirmed; therefore, the initial result was rejected (R) as duplicate data in favor of the nondetect confirmation result.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was not evaluated at a Stage II validation. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, this sample had no reported detects below the EDL.

Isomers previously qualified as method blank contamination were not further qualified as EMPCs. Remaining isomers reported as EMPCs were qualified as estimated nondetects (UJ) at the level of the EMPC. The concentration of total PeCDD in sample ILBMP0002_20200312 matched the qualified isomer and was therefore also qualified as an estimated nondetect (UJ). Remaining totals flagged by the laboratory as including one or more EMPC peaks were qualified as estimated (J).

IV. METHOD 200.8— METALS

M. Hilchey of MEC^X reviewed the SDG on May 28, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for Metals (DVP-5, Rev. 2)*, *EPA Method 200.8* and the *National Functional Guidelines for Inorganic Method Data Review (2017)*.

IV.1. HOLDING TIMES

The analytical holding time, six months for metals, was met. The samples designated for dissolved metals analysis were filtered and preserved 68 hours after receipt, which exceeds the COC requirement of within 24 hours of receipt. All dissolved metals results for these samples were qualified as estimated (J for detects, UJ for nondetects).

IV.2. CALIBRATION

Initial calibration and calibration verification criteria were not evaluated for Stage II validation.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. METHOD BLANKS

There were no target analyte detections in the method blanks.

IV.3.2. INTERFERENCE CHECK SAMPLES:

ICSA/B data are not evaluated for Stage II validation.



IV.3.3. LABORATORY CONTROL SAMPLES

Laboratory control sample recoveries (total and dissolved) were within the QAPP control limits of 85-115%.

IV.3.4. LABORATORY DUPLICATES:

Laboratory duplicate analyses were not performed on a sample in this SDG.

IV.3.5. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on sample EPSW001BG01_20200313 (total metals only). Recoveries were within the QAPP control limits of 70-130% for all target analytes. RPDs were $\leq 20\%$ for all target analytes. MS/MSD analyses were not performed on a sample in this SDG for dissolved metals.

IV.3.6. SERIAL DILUTION

Serial dilution analyses were not performed.

IV.4. INTERNAL STANDARDS PERFORMANCE

ICP-MS internal standard data are not evaluated for Stage II validation.

IV.5. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Analyte quantification is not evaluated for Stage II validation. Results reported below the RL and above the MDL were qualified as estimated (J) and coded with a DNQ to comply with the NPDES permit reporting requirements. Nondetects are valid to the MDL.

IV.6. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

IV.6.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

IV.6.2. FIELD DUPLICATES

There were no field duplicate samples identified for this SDG.

V. VARIOUS METHODS — GENERAL CHEMISTRY

M. Hilchey of MEC^X reviewed the SDG on May 28, 2020.

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for General Minerals (DVP-6, Rev. 1)*, *Standard Methods for the Examination of Water and Wastewater 2450D* and the *National Functional Guidelines for Inorganic Superfund Data Review (2017)*.

V.1. HOLDING TIMES

The QAPP holding time requirement, 7 days for Total Suspended Solids (TSS), was met.



V.2. CALIBRATION

Instrument calibration review is not performed at Level II validation.

V.3. QUALITY CONTROL SAMPLES

V.3.1. *METHOD BLANKS*

The method blank had no detections.

V.3.2. *LABORATORY CONTROL SAMPLES*

Laboratory control sample recovery was within the laboratory control limits.

V.3.3. *LABORATORY DUPLICATES*

Laboratory duplicate analyses were not performed on the sample in this SDG.

V.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analysis is not applicable to this method.

V.4. SAMPLE RESULT VERIFICATION

Sample result verification is not performed at Level II validation. Reported nondetects are valid to the MDL.

V.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site sample. Findings associated with field QC samples are summarized below.

V.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

V.5.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

Validated Sample Result Forms: 4402629731

Analysis Method E1613B

Sample Name EPSW001BG01_20200313

Matrix Type: WM

Result Type: TRG

Sample Date: 3/13/2020 9:20:00 AM

Validation Level: 9

Lab Sample Name: 440-262973-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.00042	0.00011	0.0000018	ug/L	MB		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0035	0.00011	0.0000038	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.00021	0.000053	0.0000028	ug/L			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.00042	0.000053	0.0000031	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000099	0.000053	0.0000032	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.000014	0.000053	0.0000011	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000082	0.000053	0.0000019	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.000011	0.000053	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.000018	0.000053	0.0000021	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000050	0.000053	0.0000011	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.000014	0.000053	0.0000018	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000049	0.000053	0.0000012	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000048	0.000053	0.0000013	ug/L	J,DX	J	DNQ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000070	0.000053	0.0000013	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000038	0.000053	0.0000012	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000077	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.00000080	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.00035	0.000053	0.0000028	ug/L	J,DXq	J	DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0011	0.000053	0.0000031	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.00012	0.000053	0.0000011	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.00011	0.000053	0.0000018	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.000035	0.000053	0.0000012	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000083	0.000053	0.0000013	ug/L	J,DXq	J	DNQ, *III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000033	0.000011	0.00000031	ug/L	J,DXq	J	DNQ, *III

Analysis Method E1613B

Total Tetrachlorodibenzo-p-dioxin (TCDD) N 41903-57-5 ND 0.000011 0.00000080 ug/L U U

Sample Name EPSW001IE01_20200313 Matrix Type: WM Result Type: TRG

Sample Date: 3/13/2020 9:10:00 AM Validation Level: 9

Lab Sample Name: 440-262973-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000027	0.00012	0.0000011	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00036	0.00012	0.0000016	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000011	0.000059	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000044	0.000059	0.00000056	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000020	0.000059	0.0000012	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000012	0.000059	0.00000061	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000031	0.000059	0.0000010	ug/L	J,DXqMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000011	0.000059	0.00000066	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000034	0.000059	0.0000012	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000019	0.000059	0.00000057	ug/L	J,DXqMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000042	0.000059	0.00000098	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000059	0.00000067	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000059	0.0000010	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000016	0.000059	0.00000050	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000059	0.00000080	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000012	0.000000057	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000012	0.00000063	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000026	0.000059	0.0000012	ug/L	J,DXq	J	DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000081	0.000059	0.00000056	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000010	0.000059	0.00000050	ug/L	J,DXqMB	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000015	0.000059	0.00000098	ug/L	J,DXqMB	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000059	0.00000067	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000059	0.0000010	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000012	0.000000057	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000012	0.00000063	ug/L	U	U	

Analysis Method E1613B

Sample Name EPSW002IE02_20200313

Matrix Type: WM

Result Type: TRG

Sample Date: 3/13/2020 9:40:00 AM

Validation Level: 9

Lab Sample Name: 440-262973-6

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.0000098	0.00011	0.00000066	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000038	0.00011	0.00000093	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000026	0.000057	0.00000075	ug/L	J,DXq	UJ	*III
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000049	0.000057	0.00000024	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	ND	0.000057	0.00000088	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000010	0.000057	0.00000045	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000027	0.000057	0.00000081	ug/L	J,DXqMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000081	0.000057	0.00000043	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000014	0.000057	0.00000087	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	ND	0.000057	0.00000046	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	ND	0.000057	0.00000077	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000057	0.00000052	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000057	0.00000070	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000012	0.000057	0.00000047	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000057	0.00000060	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.000000054	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.00000050	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000026	0.000057	0.00000075	ug/L	J,DXq	J	DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0000093	0.000057	0.00000024	ug/L	J,DXMB	J	DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000030	0.000057	0.00000043	ug/L	J,DXqMB	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000041	0.000057	0.00000077	ug/L	J,DXqMB	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000057	0.00000052	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000057	0.00000070	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.000000054	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.00000050	ug/L	U	U	

Analysis Method E1613B

Sample Name ILBMP0002_20200312

Matrix Type: WM

Result Type: TRG

Sample Date: 3/12/2020 12:50:00 PM

Validation Level: 9

Lab Sample Name: 440-262973-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000063	0.00011	0.0000011	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.0013	0.00011	0.0000019	ug/L	MB		
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000034	0.000053	0.0000013	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000098	0.000053	0.0000011	ug/L	MB		
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000036	0.000053	0.0000015	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000044	0.000053	0.00000074	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000074	0.000053	0.0000013	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000045	0.000053	0.00000077	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000068	0.000053	0.0000014	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000028	0.000053	0.00000075	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000090	0.000053	0.0000013	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000053	0.00000088	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000031	0.000053	0.00000099	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000029	0.000053	0.00000076	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000028	0.000053	0.00000097	ug/L	J,DX	J	DNQ
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000012	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.00000069	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000057	0.000053	0.0000013	ug/L	J,DX	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.00022	0.000053	0.0000011	ug/L	MB	J	B
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000029	0.000053	0.00000074	ug/L	J,DXqMB	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000045	0.000053	0.0000013	ug/L	J,DXqMB	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000028	0.000053	0.00000088	ug/L	J,DX	J	DNQ
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000031	0.000053	0.00000099	ug/L	J,DXq	UJ	*III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.00000012	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.00000069	ug/L	U	U	

Analysis Method E1613B

Sample Name LXBMP0011_20200313

Matrix Type: WM

Result Type: TRG

Sample Date: 3/13/2020 8:30:00 AM

Validation Level: 9

Lab Sample Name: 440-262973-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000035	0.00010	0.0000011	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000089	0.00010	0.0000015	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000011	0.000052	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000018	0.000052	0.00000030	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000080	0.000052	0.0000012	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000063	0.000052	0.00000053	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000089	0.000052	0.00000097	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000054	0.000052	0.00000060	ug/L	J,DXq	UJ	*III
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000066	0.000052	0.0000012	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000056	0.000052	0.00000058	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000053	0.000052	0.00000097	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000039	0.000052	0.00000070	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000035	0.000052	0.0000010	ug/L	J,DX	J	DNQ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000053	0.000052	0.00000061	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000031	0.000052	0.00000075	ug/L	J,DX	J	DNQ
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000013	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.00000059	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000021	0.000052	0.0000012	ug/L	J,DXq	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000026	0.000052	0.00000030	ug/L	J,DXMB	J	DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000023	0.000052	0.00000053	ug/L	J,DXqMB	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000021	0.000052	0.00000097	ug/L	J,DXqMB	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000071	0.000052	0.00000070	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000035	0.000052	0.0000010	ug/L	J,DX	J	DNQ
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000010	0.00000013	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000010	0.00000059	ug/L	U	U	

Analysis Method E1613B

Sample Name LXBMP0012_20200313

Matrix Type: WM

Result Type: TRG

Sample Date: 3/13/2020 8:40:00 AM

Validation Level: 9

Lab Sample Name: 440-262973-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000018	0.00011	0.00000083	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00011	0.00011	0.0000011	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000070	0.000054	0.00000094	ug/L	J,DX	J	DNQ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000026	0.000054	0.00000033	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000017	0.000054	0.0000010	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000018	0.000054	0.00000043	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000027	0.000054	0.00000092	ug/L	J,DXqMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000016	0.000054	0.00000046	ug/L	J,DX	J	DNQ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000024	0.000054	0.0000012	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000020	0.000054	0.00000047	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	ND	0.000054	0.00000094	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000054	0.00000077	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000054	0.00000094	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000010	0.000054	0.00000043	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000054	0.00000067	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.000000094	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.00000075	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000013	0.000054	0.00000094	ug/L	J,DX	J	DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000039	0.000054	0.00000033	ug/L	J,DXMB	J	DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000065	0.000054	0.00000043	ug/L	J,DXMB	J	B, DNQ
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000051	0.000054	0.00000092	ug/L	J,DXqMB	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000054	0.00000067	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000054	0.00000094	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.000000094	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.00000075	ug/L	U	U	

Analysis Method E200.8

Sample Name EPSW001BG01_20200313

Matrix Type: WM

Result Type: TRG

Sample Date: 3/13/2020 9:20:00 AM

Validation Level: 9

Lab Sample Name: 440-262973-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	D	7440-38-2	0.76	1.0	0.50	ug/L	J,DX	J	H, DNQ
Arsenic	T	7440-38-2	5.6	1.0	0.50	ug/L			
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	0.27	1.0	0.25	ug/L	J,DX	J	DNQ
Copper	D	7440-50-8	2.2	2.0	0.50	ug/L		J	H
Copper	T	7440-50-8	18	2.0	0.50	ug/L			
Iron	D	7439-89-6	310	20	8.0	ug/L		J	H
Iron	T	7439-89-6	19000	20	8.0	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	9.2	1.0	0.50	ug/L			
Manganese	D	7439-96-5	5.8	1.0	0.50	ug/L		J	H
Manganese	T	7439-96-5	390	1.0	0.50	ug/L			
Selenium	T	7782-49-2	2.6	2.0	0.50	ug/L			
Selenium	D	7782-49-2	ND	2.0	0.50	ug/L	U	U	
Zinc	D	7440-66-6	ND	20	2.5	ug/L	U	U	
Zinc	T	7440-66-6	71	20	2.5	ug/L			

Sample Name EPSW001IE01_20200313

Matrix Type: WM

Result Type: TRG

Sample Date: 3/13/2020 9:10:00 AM

Validation Level: 9

Lab Sample Name: 440-262973-5

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	D	7440-38-2	0.77	1.0	0.50	ug/L	J,DX	J	H, DNQ
Arsenic	T	7440-38-2	1.0	1.0	0.50	ug/L			
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	2.4	2.0	0.50	ug/L		J	H
Copper	T	7440-50-8	2.9	2.0	0.50	ug/L			
Iron	T	7439-89-6	160	20	8.0	ug/L			
Iron	D	7439-89-6	51	20	8.0	ug/L		J	H
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Manganese	D	7439-96-5	1.2	1.0	0.50	ug/L		J	H
Manganese	T	7439-96-5	3.4	1.0	0.50	ug/L			
Selenium	T	7782-49-2	0.58	2.0	0.50	ug/L	J,DX	J	DNQ
Selenium	D	7782-49-2	0.52	2.0	0.50	ug/L	J,DX	J	H, DNQ
Zinc	D	7440-66-6	38	20	2.5	ug/L		J	H
Zinc	T	7440-66-6	48	20	2.5	ug/L			

Sample Name EPSW002IE02_20200313

Matrix Type: WM

Result Type: TRG

Sample Date: 3/13/2020 9:40:00 AM

Validation Level: 9

Lab Sample Name: 440-262973-6

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	D	7440-38-2	1.0	1.0	0.50	ug/L		J	H
Arsenic	T	7440-38-2	1.4	1.0	0.50	ug/L			

Analysis Method E200.8

Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	2.8	2.0	0.50	ug/L			
Copper	D	7440-50-8	2.0	2.0	0.50	ug/L		J	H
Iron	D	7439-89-6	140	20	8.0	ug/L		J	H
Iron	T	7439-89-6	930	20	8.0	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	0.88	1.0	0.50	ug/L	J,DX	J	DNQ
Manganese	D	7439-96-5	3.6	1.0	0.50	ug/L		J	H
Manganese	T	7439-96-5	16	1.0	0.50	ug/L			
Selenium	D	7782-49-2	0.63	2.0	0.50	ug/L	J,DX	J	H, DNQ
Selenium	T	7782-49-2	0.73	2.0	0.50	ug/L	J,DX	J	DNQ
Zinc	T	7440-66-6	8.9	20	2.5	ug/L	J,DX	J	DNQ
Zinc	D	7440-66-6	3.6	20	2.5	ug/L	J,DX	J	H, DNQ

Sample Name ILBMP0002_20200312**Matrix Type:** WM**Result Type:** TRG**Sample Date:** 3/12/2020 12:50:00 PM**Validation Level:** 9**Lab Sample Name:** 440-262973-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	4.6	2.0	0.50	ug/L		J	H
Copper	T	7440-50-8	6.9	2.0	0.50	ug/L			
Lead	D	7439-92-1	1.3	1.0	0.50	ug/L		J	H
Lead	T	7439-92-1	6.9	1.0	0.50	ug/L			

Sample Name LXBMP0011_20200313**Matrix Type:** WM**Result Type:** TRG**Sample Date:** 3/13/2020 8:30:00 AM**Validation Level:** 9**Lab Sample Name:** 440-262973-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	1.4	2.0	0.50	ug/L	J,DX	J	H, DNQ
Copper	T	7440-50-8	2.3	2.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	2.6	1.0	0.50	ug/L			

Sample Name LXBMP0012_20200313**Matrix Type:** WM**Result Type:** TRG**Sample Date:** 3/13/2020 8:40:00 AM**Validation Level:** 9**Lab Sample Name:** 440-262973-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	1.5	2.0	0.50	ug/L	J,DX	J	H, DNQ
Copper	T	7440-50-8	2.6	2.0	0.50	ug/L			
Lead	T	7439-92-1	3.5	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Analysis Method *SM2540D*

Sample Name EPSW001BG01_20200313

Matrix Type: WM

Result Type: TRG

Sample Date: 3/13/2020 9:20:00 AM

Validation Level: 9

Lab Sample Name: 440-262973-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids (TSS)	N	TSS	250	20	10	mg/L			

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-262973-2

Prepared for

Haley & Aldrich, Inc.
600 South Meyer Avenue, Suite 100
Tucson, Arizona 85701

5 June 2020

MEC^x, Inc.
8864 Interchange Drive
Houston, Texas 77054

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- 1 – Sample Identification
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I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^x Project No.: 1272.003H.01

Sample Delivery Group: 440-262973-2

Project Manager: Katherine Miller

Matrix: Water

QC Level: II

No. of Samples: 3

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica-Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method
EPSW001BG01_20200313	440-262973-4	N/A	WM	3/13/20 9:20 AM	E900
EPSW001IE01_20200313	440-262973-5	N/A	WM	3/13/20 9:10 AM	E900
EPSW002IE02_20200313	440-262973-6	N/A	WM	3/13/20 9:40 AM	E900



II. SAMPLE MANAGEMENT

According to the case narrative, sample condition upon receipt forms and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-262973-2:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact.
- The sample containers were received improperly preserved at TA-SL. The appropriate containers were preserved to $\text{pH} \leq 2$ upon receipt.
- Field and laboratory personnel signed and dated the COCs.
- Sample containers were transferred to TestAmerica – St. Louis laboratory for all radionuclide analyses.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present upon receipt at TA-SL.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For perchlorate, the associated value is the sample detection limit or the quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 900 —GROSS ALPHA

M. Hilchey of MEC^X reviewed the SDG on June 5, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *EPA Method 900* and the *National Functional Guidelines for Superfund Inorganic Method Data Review (2017)*.

III.1. HOLDING TIMES:

According to the case narrative, the samples were received properly preserved (except as noted in the Sample Management section above) and holding time requirements were met.

III.2. CALIBRATION:

The detector efficiencies for gross alpha for all samples were less than 20%; therefore, the detected sample results for gross alpha were qualified as estimated with potentially low bias (J-) and the nondetected sample results were qualified as estimated (UJ).

III.3. QUALITY CONTROL SAMPLES

III.3.1. *METHOD BLANKS*

Gross alpha was not detected in the method blanks above the MDC. However, a comparison normalized absolute difference of the sample results and the method blank results indicated the method blank and the sample result was not significantly different at the 1% level of confidence for gross alpha-dissolved for sample EPSW0021E02_20200313. The associated result was qualified as nondetect (U). It should be noted that this result was previously qualified as J- (See Calibration section above); therefore, the ultimate qualifier for this result is UJ.

III.3.2. *LABORATORY CONTROL SAMPLES:*

The recoveries were within laboratory-established control limits.

III.3.3. *LABORATORY DUPLICATES:*

Laboratory duplicates were not performed on a sample from this SDG.

III.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE:*

Matrix spike (MS)/MSD analyses were not performed on a sample from this SDG.

III.4. SAMPLE RESULT VERIFICATION:

An EPA Level II review was performed on the sample in this data package. Sample results are not verified at this level of validation. Reported nondetects are valid to the MDC.

III.5. FIELD QC SAMPLES:

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. The following are findings associated with field QC samples:

III.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS:*

This SDG had no identified field blank or equipment blank samples.



III.5.2. **FIELD DUPLICATES:**

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402629732

Analysis Method E900

Sample Name EPSW001BG01_20200313 Matrix Type: WM Result Type: TRG

Sample Date: 3/13/2020 9:20:00 AM Validation Level: 9

Lab Sample Name: 440-262973-4

Analyte	CAS No	Result Value	Total Uncert.	RL	MDC	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha Analytes	GROSSALPHA	8.30	2.50	3.00	2.13	pCi/L		J-	*III
Gross Alpha Analytes	GROSSALPHA	11.4	3.19	3.00	2.65	pCi/L		J-	*III

Sample Name EPSW001IE01_20200313 Matrix Type: WM Result Type: TRG

Sample Date: 3/13/2020 9:10:00 AM Validation Level: 9

Lab Sample Name: 440-262973-5

Analyte	CAS No	Result Value	Total Uncert.	RL	MDC	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha Analytes	GROSSALPHA	1.53	1.30	3.00	2.01	pCi/L	U	UJ	*III
Gross Alpha Analytes	GROSSALPHA	0.997	0.999	3.00	1.59	pCi/L	U	UJ	*III

Sample Name EPSW002IE02_20200313 Matrix Type: WM Result Type: TRG

Sample Date: 3/13/2020 9:40:00 AM Validation Level: 9

Lab Sample Name: 440-262973-6

Analyte	CAS No	Result Value	Total Uncert.	RL	MDC	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha Analytes	GROSSALPHA	1.83	1.04	3.00	1.30	pCi/L		UJ	*III, B
Gross Alpha Analytes	GROSSALPHA	1.32	1.04	3.00	1.53	pCi/L	U	UJ	*III, B

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-264190-1

Prepared for

Haley & Aldrich, Inc.
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Tucson, Arizona 85701

27 May 2020

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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference

**I. INTRODUCTION****Task Order Title:** Boeing SSFL NPDES**Contract:** 40458-078 and 40458-083**MEC^X Project No.:** 1272.003D.01 002**Sample Delivery Group:** 440-264190-1**Project Manager:** Katherine Miller**Matrix:** Water**QC Level:** II**No. of Samples:** 4**No. of Reanalyses/Dilutions:** 0**Laboratory:** TestAmerica-Irvine**TABLE 1 - SAMPLE IDENTIFICATION**

Sample Name	Lab Sample Name	Sub Lab Sample ID	Matrix	Collection	Method	Validation Level
EPSW002IE02_20200406	440-264190-4	N/A	WM	4/6/20 7:40 AM	E1613B, E200.8, E900	II
LXBMP0010_20200406	440-264190-1	N/A	WM	4/6/20 8:30 AM	E1613B, E200.8, SM2540D	II
LXBMP0011_20200406	440-264190-2	N/A	WM	4/6/20 8:40 AM	E1613B, E200.8	II
LXBMP0012_20200406	440-264190-3	N/A	WM	4/6/20 8:50 AM	E1613B, E200.8	II



II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-264190-1:

- The laboratories received the samples in this SDG on ice and within the temperature limits of ≤ 6 degrees Celsius ($^{\circ}\text{C}$) and $> 0^{\circ}\text{C}$.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Field and/or laboratory personnel signed and dated the original and transfer COCs.
- The samples were transferred from TA-Irvine to TA-Sacramento for analysis of Method 1613B, and to TA-STL for analysis of Method E900.
- According to the Login Sample Receipt Checklist, custody seals were absent on the coolers upon receipt at TA-Irvine. No evidence of tampering was noted. The Login Sample Receipt Checklist indicated a custody seal was present upon receipt at TA-Sacramento and TA-STL.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.



Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

L. Calvin of MEC^x reviewed the SDG on June 3, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B* and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water samples were extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were not evaluated at a Stage II validation.

III.3. CALIBRATION

Calibration criteria were not evaluated at a Stage II validation.

III.4. QUALITY CONTROL SAMPLES

III.4.1. *METHOD BLANKS*

The method blank had detects above the EDL and below the reporting limit (RL) for isomers 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, OCDD and OCDF, and for totals HpCDD, HpCDF, HxCDD and HxCDF. The sample results for the isomer method blank contaminants detected below the RL were qualified as nondetects (U) at the level of contamination. OCDD detected above the RL in sample LXBMP0010_20200406 was also qualified as a nondetect (U) at the level of contamination. Total HxCDD in sample LXBMP0012_20200406 (containing both qualified method blank isomers and a qualified EMPC isomer) was qualified as an estimated nondetect (UJ). Remaining sample totals for HpCDD, HpCDF, HxCDD and HxCDF were qualified as estimated (J), as only a portion of the total was determined to be method blank contamination.

III.4.2. *LABORATORY CONTROL SAMPLES*

LCS recoveries were within the acceptance criteria listed in Table 6 of Method 1613B.

III.5. FIELD QC SAMPLES

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

III.5.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.



III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were not evaluated at a Stage II validation.

III.7. COMPOUND IDENTIFICATION

Compound identification was not evaluated at a Stage II validation. Second-column confirmation analysis for isomer 2,3,7,8-TCDF was performed for the initial detect in sample EPSW002IE02_20200406, and both the initial and confirmation results were reported. The initial result was not confirmed; therefore, the initial result was rejected (R) as duplicate data in favor of the nondetect confirmation result.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was not evaluated at a Stage II validation. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, this sample had no reported detects below the EDL.

Isomers previously qualified as method blank contamination were not further qualified as EMPCs. Remaining isomers reported as EMPCs were qualified as estimated nondetects (UJ) at the level of the EMPC. The concentrations of totals PeCDD and TCDD in sample EPSW002IE02_20200406 matched the qualified isomers and were therefore also qualified as estimated nondetects (UJ). Total HxCDD in sample LXBMP0012_20200406 (containing a qualified EMPC isomer as well as qualified method blank isomers) was also qualified as an estimated nondetect (UJ). Remaining totals flagged by the laboratory as including one or more EMPC peaks were qualified as estimated (J).

IV. METHOD 200.8— METALS

M. Hilchey of MEC^x reviewed the SDG on May 27, 2020.

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Metals (DVP-5, Rev. 2)*, *EPA Method 200.8* and the *National Functional Guidelines for Inorganic Method Data Review (2017)*.

IV.1. HOLDING TIMES

The analytical holding time, six months for metals, was met. The samples designated for dissolved metals analysis were filtered and preserved within 24 hours of receipt, as required on the COC.

IV.2. CALIBRATION

Initial calibration and calibration verification criteria were not evaluated for Stage II validation.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. METHOD BLANKS

There were no target analyte detections in the method blank with the exception of dissolved zinc (2.69 µg/L). The associated sample result was a detect below the RL and was qualified as nondetect (U) at the level of contamination.

**IV.3.2. INTERFERENCE CHECK SAMPLES:**

ICP-AES and ICP-MS ICSA/B data are not evaluated for Stage II validation.

IV.3.3. LABORATORY CONTROL SAMPLES

Laboratory control sample recoveries (total and dissolved) were within the QAPP control limits of 85-115%.

IV.3.4. LABORATORY DUPLICATES:

Laboratory duplicate analyses were not performed on a sample in this SDG.

IV.3.5. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on sample EPSW002IE02_20200406 (total and dissolved). Recoveries were within the QAPP control limits of 70-130% for all target analytes. RPDs were $\leq 20\%$ for all target analytes except total zinc (28%). The associated sample result was qualified as estimated (J).

IV.3.6. SERIAL DILUTION

Serial dilution analyses were not performed.

IV.4. INTERNAL STANDARDS PERFORMANCE

ICP-MS internal standard data are not evaluated for Stage II validation.

IV.5. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Analyte quantification is not evaluated for Stage II validation. Results reported below the RL and above the MDL were qualified as estimated (J) and coded with a DNQ to comply with the NPDES permit reporting requirements. Nondetects are valid to the MDL.

IV.6. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

IV.6.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

IV.6.2. FIELD DUPLICATES

There were no field duplicate samples identified for this SDG.

V. VARIOUS EPA METHODS — RADIONUCLIDES

E. Wessling of MEC^X reviewed the SDG on June 8, 2020

The samples listed in Table 1 for this analyses were validated based on the guidelines outlined in the *EPA Methods 900* and the *National Functional Guidelines for Superfund Inorganic Method Data Review (2017)*.

**V.1. HOLDING TIMES:**

According to the case narrative, one sample container was received without proper preservation. The sample was preserved at the laboratory and both samples were analyzed within holding times.

V.2. CALIBRATION:

The detector efficiency for gross alpha was less than 20%; therefore, the detected results for gross alpha (total and dissolved) were qualified as an estimated nondetects (UJ). Calibration checks were not evaluated at Level II validation.

V.3. QUALITY CONTROL SAMPLES**V.3.1. METHOD BLANKS**

Target isotopes were not detected in the method blanks above the MDC.

V.3.2. LABORATORY CONTROL SAMPLES:

The recoveries were within laboratory-established control limits.

V.3.3. LABORATORY DUPLICATES:

Laboratory duplicates were not performed on the sample from this SDG.

V.3.4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE:

Matrix spike (MS)/MSD analyses were not performed on the sample from this SDG.

V.4. SAMPLE RESULT VERIFICATION:

An EPA Level II review was performed on the sample in this data package. Calculations were not verified at this validation level. Reported nondetects are valid to the MDC.

V.5. FIELD QC SAMPLES:

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. The following are findings associated with field QC samples:

V.5.1. FIELD BLANKS AND EQUIPMENT BLANKS:

This SDG had no identified field blank or equipment blank samples.

V.5.2. FIELD DUPLICATES:

There were no field duplicate samples identified for this SDG.

VI. VARIOUS METHODS — GENERAL CHEMISTRY

M. Hilchey of MEC^x reviewed the SDG on May 27, 2020.

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for General Minerals (DVP-6, Rev. 1)*, *Standard Methods for the Examination of Water*



and Wastewater 2540D and the National Functional Guidelines for Inorganic Superfund Data Review (2017).

VI.1. HOLDING TIMES

The QAPP holding time requirement, 7 days for Total Suspended Solids (TSS), was met.

VI.2. CALIBRATION

Instrument calibration review is not performed at Level II validation.

VI.3. QUALITY CONTROL SAMPLES

VI.3.1. METHOD BLANKS

The method blank had no detections.

VI.3.2. LABORATORY CONTROL SAMPLES

Laboratory control sample recovery was within the laboratory control limits.

VI.3.3. LABORATORY DUPLICATES

Laboratory duplicate analyses were not performed on a sample in this SDG.

VI.3.4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analysis is not applicable to this method.

VI.4. SAMPLE RESULT VERIFICATION

Sample result verification is not performed at Level II validation. Reported nondetects are valid to the MDL.

VI.5. FIELD QC SAMPLES

MEC^x evaluated field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site sample. Findings associated with field QC samples are summarized below.

VI.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

VI.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.

Validated Sample Result Forms: 4402641901

Analysis Method E1613B

Sample Name EPSW002IE02_20200406

Matrix Type: WM

Result Type: TRG

Sample Date: 4/6/2020 7:40:00 AM

Validation Level: 9

Lab Sample Name: 440-264190-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.0000080	0.00011	0.0000012	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000023	0.00011	0.00000097	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000027	0.000053	0.00000083	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000038	0.000053	0.00000033	ug/L	J,DXMBq	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000021	0.000053	0.00000086	ug/L	J,DX	J	DNQ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000018	0.000053	0.00000045	ug/L	J,DXMB	U	B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000034	0.000053	0.00000066	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000019	0.000053	0.00000047	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000027	0.000053	0.00000071	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000023	0.000053	0.00000043	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000021	0.000053	0.00000062	ug/L	J,DXMBq	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000023	0.000053	0.00000069	ug/L	J,DX	J	DNQ
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.0000024	0.000053	0.0000010	ug/L	J,DXq	UJ	*III
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000020	0.000053	0.00000043	ug/L	J,DX	J	DNQ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000019	0.000053	0.00000070	ug/L	J,DXq	UJ	*III
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	0.0000011	0.000011	0.00000030	ug/L	J,DX	R	D
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.0000010	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	0.0000032	0.000011	0.0000012	ug/L	J,DXq	UJ	*III
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000058	0.000053	0.00000083	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0000062	0.000053	0.00000033	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000079	0.000053	0.00000043	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000082	0.000053	0.00000062	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000041	0.000053	0.00000069	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.0000024	0.000053	0.0000010	ug/L	J,DXq	UJ	*III
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	0.0000011	0.000011	0.00000030	ug/L	J,DX	J	DNQ

Analysis Method E1613B

Total Tetrachlorodibenzo-p-dioxin (TCDD) N 41903-57-5 0.0000032 0.000011 0.0000012 ug/L J,DXq **UJ** ***III**

Sample Name LXBMP0010_20200406 **Matrix Type:** WM **Result Type:** TRG

Sample Date: 4/6/2020 8:30:00 AM **Validation Level:** 9

Lab Sample Name: 440-264190-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000052	0.00010	0.0000016	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00020	0.00010	0.0000015	ug/L	MB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.000018	0.000052	0.0000014	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000031	0.000052	0.00000073	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000017	0.000052	0.0000013	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000015	0.000052	0.00000062	ug/L	J,DXMB	U	B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000037	0.000052	0.00000091	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000013	0.000052	0.00000065	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000034	0.000052	0.00000098	ug/L	J,DX	J	DNQ
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000012	0.000052	0.00000059	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000022	0.000052	0.00000086	ug/L	J,DXMB	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000052	0.00000086	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000052	0.0000013	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000013	0.000052	0.00000056	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000052	0.00000086	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000010	0.00000046	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000010	0.0000018	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000038	0.000052	0.0000013	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000056	0.000052	0.00000073	ug/L	J,DXMB	J	B, DNQ, *III
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.000015	0.000052	0.00000056	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.000016	0.000052	0.00000086	ug/L	J,DXMBq	J	B, DNQ, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000052	0.00000086	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000052	0.0000013	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000010	0.00000046	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000010	0.0000018	ug/L	U	U	

Analysis Method E1613B

Sample Name LXBMP0011_20200406

Matrix Type: WM

Result Type: TRG

Sample Date: 4/6/2020 8:40:00 AM

Validation Level: 9

Lab Sample Name: 440-264190-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000012	0.00011	0.0000013	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000039	0.00011	0.0000011	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000035	0.000054	0.00000091	ug/L	J,DXMBq	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000059	0.000054	0.00000038	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000010	0.000054	0.00000092	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000010	0.000054	0.00000047	ug/L	J,DXMBq	U	B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000028	0.000054	0.00000080	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.00000098	0.000054	0.00000050	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	ND	0.000054	0.00000090	ug/L	U	U	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.00000098	0.000054	0.00000042	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	ND	0.000054	0.00000078	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	ND	0.000054	0.00000077	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000054	0.0000012	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000011	0.000054	0.00000045	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	ND	0.000054	0.00000078	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000039	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.0000015	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000082	0.000054	0.00000091	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000011	0.000054	0.00000038	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000041	0.000054	0.00000042	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000028	0.000054	0.00000078	ug/L	J,DXMB	J	B, DNQ
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	ND	0.000054	0.00000077	ug/L	U	U	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000054	0.0000012	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.00000039	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.0000015	ug/L	U	U	

Analysis Method E1613B

Sample Name LXBMP0012_20200406

Matrix Type: WM

Result Type: TRG

Sample Date: 4/6/2020 8:50:00 AM

Validation Level: 9

Lab Sample Name: 440-264190-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.0000086	0.00011	0.0000013	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.000025	0.00011	0.0000012	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000035	0.000055	0.00000083	ug/L	J,DXMBq	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.0000036	0.000055	0.00000035	ug/L	J,DXMBq	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000017	0.000055	0.00000088	ug/L	J,DXq	UJ	*III
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9	0.0000017	0.000055	0.00000049	ug/L	J,DXMB	U	B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000032	0.000055	0.00000083	ug/L	J,DXMBq	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9	0.0000018	0.000055	0.00000052	ug/L	J,DXMB	U	B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000015	0.000055	0.00000091	ug/L	J,DXq	UJ	*III
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000018	0.000055	0.00000045	ug/L	J,DXMBq	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000012	0.000055	0.00000079	ug/L	J,DXMBq	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6	0.0000016	0.000055	0.00000075	ug/L	J,DXq	UJ	*III
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	ND	0.000055	0.0000013	ug/L	U	U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5	0.0000014	0.000055	0.00000046	ug/L	J,DXq	UJ	*III
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4	0.0000014	0.000055	0.00000078	ug/L	J,DX	J	DNQ
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9	ND	0.000011	0.00000031	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6	ND	0.000011	0.0000015	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.0000074	0.000055	0.00000083	ug/L	J,DXMBq	J	B, DNQ, *III
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.0000057	0.000055	0.00000035	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000067	0.000055	0.00000045	ug/L	J,DXMBq	J	B, DNQ, *III
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000060	0.000055	0.00000079	ug/L	J,DXMBq	UJ	B, *III
Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000030	0.000055	0.00000075	ug/L	J,DXq	J	DNQ, *III
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	ND	0.000055	0.0000013	ug/L	U	U	
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5	ND	0.000011	0.00000031	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5	ND	0.000011	0.0000015	ug/L	U	U	

Analysis Method E200.8

Sample Name EPSW002IE02_20200406

Matrix Type: WM

Result Type: TRG

Sample Date: 4/6/2020 7:40:00 AM

Validation Level: 9

Lab Sample Name: 440-264190-4

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	D	7440-38-2	0.98	1.0	0.50	ug/L	J,DX	J	DNQ
Arsenic	T	7440-38-2	1.3	1.0	0.50	ug/L			
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	2.5	2.0	0.50	ug/L			
Copper	D	7440-50-8	1.5	2.0	0.50	ug/L	J,DX	J	DNQ
Iron	T	7439-89-6	930	20	8.0	ug/L			
Iron	D	7439-89-6	130	20	8.0	ug/L			
Lead	D	7439-92-1	0.64	1.0	0.50	ug/L	J,DX	J	DNQ
Lead	T	7439-92-1	0.67	1.0	0.50	ug/L	J,DX	J	DNQ
Manganese	D	7439-96-5	3.7	1.0	0.50	ug/L			
Manganese	T	7439-96-5	16	1.0	0.50	ug/L			
Selenium	T	7782-49-2	ND	2.0	0.50	ug/L	U	U	
Selenium	D	7782-49-2	0.54	2.0	0.50	ug/L	J,DX	J	DNQ
Zinc	T	7440-66-6	15	20	2.5	ug/L	J,DX	J	Q1, DNQ
Zinc	D	7440-66-6	5.6	20	2.5	ug/L	J,DXMB	U	B

Sample Name LXBMP0010_20200406

Matrix Type: WM

Result Type: TRG

Sample Date: 4/6/2020 8:30:00 AM

Validation Level: 9

Lab Sample Name: 440-264190-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	T	7440-50-8	2.2	2.0	0.50	ug/L			
Copper	D	7440-50-8	0.94	2.0	0.50	ug/L	J,DX	J	DNQ
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	
Lead	T	7439-92-1	2.4	1.0	0.50	ug/L			

Sample Name LXBMP0011_20200406

Matrix Type: WM

Result Type: TRG

Sample Date: 4/6/2020 8:40:00 AM

Validation Level: 9

Lab Sample Name: 440-264190-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	1.0	2.0	0.50	ug/L	J,DX	J	DNQ
Copper	T	7440-50-8	2.0	2.0	0.50	ug/L			
Lead	T	7439-92-1	1.1	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Analysis Method E200.8

Sample Name LXBMP0012_20200406

Matrix Type: WM

Result Type: TRG

Sample Date: 4/6/2020 8:50:00 AM

Validation Level: 9

Lab Sample Name: 440-264190-3

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	T	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Cadmium	D	7440-43-9	ND	1.0	0.25	ug/L	U	U	
Copper	D	7440-50-8	1.1	2.0	0.50	ug/L	J,DX	J	DNQ
Copper	T	7440-50-8	2.0	2.0	0.50	ug/L			
Lead	T	7439-92-1	2.0	1.0	0.50	ug/L			
Lead	D	7439-92-1	ND	1.0	0.50	ug/L	U	U	

Analysis Method SM2540D

Sample Name LXBMP0010_20200406

Matrix Type: WM

Result Type: TRG

Sample Date: 4/6/2020 8:30:00 AM

Validation Level: 9

Lab Sample Name: 440-264190-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids (TSS)	N	TSS	46	2.0	1.0	mg/L			

Validated Sample Result Forms: 4402641901

Analysis Method *E900*

Sample Name EPSW002IE02_20200406

Matrix Type: WM

Result Type: TRG

Sample Date: 4/6/2020 7:40:00 AM

Validation Level: 9

Lab Sample Name: 440-264190-4

Analyte	CAS No	Result Value	Total Uncert.	RL	MDC	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha Analytes	GROSSALPHA	0.984	1.06	3.00	1.69	pCi/L	U	UJ	*III
Gross Alpha Analytes	GROSSALPHA	0.414	0.774	3.00	1.36	pCi/L	U	UJ	*III

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14206-1

Reviewer: xayachl

Method D4464(M)

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0012S007	N	1			
EVBMP0003S029	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blanks were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

No spikes in this SDG. No spike dupes in this SDG.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Laboratory Control Sample: No spikes in this SDG. No spike dupes in this SDG.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0012S007

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	100			0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	0.01	U	U	0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.01	U	U	0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	0.01	U	U	0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	100			0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	0.01	U	U	0.01	0.01		PERCENT	

Field ID: EVBMP0003S029

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	5.71			0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	17.04			0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.01	U	U	0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	38.32			0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	44.03			0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	38.94			0.01	0.01		PERCENT	

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14206-1

Reviewer: xayachl

Method E200.8

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0012S007	N	5			
A2BMP0012S007	N	1			
EVBMP0003S029	N	5			
EVBMP0003S029	N	1			
FBQW1869Q001	EB	1			

1. Case Narrative

Items of Interest

The following items were noted CCB<RL.

2. Blank Summary

Field Blanks

No Field Blank detects were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0012S007

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.00403	U	J	0.00064	0.005		mg/L	CCB<RL (U)
Cadmium, Dissolved	0.000128	U	U H	0.000128	0.001		mg/L	InvalidLabFlag (U)
Copper	0.006			0.0007	0.005		mg/L	
Copper, Dissolved	0.000872	J	J H	0.00014	0.001		mg/L	InvalidLabFlag (J)
Lead	0.00352	J	J	0.000449	0.005		mg/L	
Lead, Dissolved	0.000518	J	J H	#####	0.001		mg/L	InvalidLabFlag (J)

Field ID: EVBMP0003S029

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.00373	U	J	0.00064	0.005		mg/L	CCB<RL (U)
Cadmium, Dissolved	0.000128	U	U H	0.000128	0.001		mg/L	InvalidLabFlag (U)
Copper	0.00622			0.0007	0.005		mg/L	
Copper, Dissolved	0.000811	J	J H	0.00014	0.001		mg/L	InvalidLabFlag (J)
Lead	0.00331	J	J	0.000449	0.005		mg/L	
Lead, Dissolved	0.0000898	U	U H	#####	0.001		mg/L	InvalidLabFlag (U)

Validation Flag Abbreviations

Abbreviation	Validation Reason	Category
CCB<RL	Continuing calibration blank concentration less than the reporting limit	Blank
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14206-1

Reviewer: xayachl

Method E245.1

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0012S007	N	1			
A2BMP0012S007MS	MS	1			
A2BMP0012S007SD	SD	1			
EVBMP0003S029	N	1			
FBQW1869Q001	EB	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blank detects were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

All MS acceptance criteria were met. All SD acceptance criteria were met. All RPD acceptance criteria were met.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0012S007

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U

Field ID: EVBMP0003S029

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000227	U	U	#####	0.0001		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14206-1

Reviewer: xayachl

Method E1613B

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0012S007	N	1			
EVBMP0003S029	N	1			
FBQW1869Q001	EB	1			

1. Case Narrative

Items of Interest

The following items were noted EMPC and LB<RL.

2. Blank Summary

Field Blanks

These analytes had Blank detects: 1,2,3,4,6,7,8,9-OCDD (EB), TEQ WHO2005 ND=0 with EMPCs (EB), TEQ WHO2005 ND=0.5 with EMPCs (EB), Total Hexachlorodibenzo-p-dioxin with EMPCs (EB). No flagging was applied for Total Dioxins, Furans, or EB>MDL.

Method Blanks

These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8,9-OCDF, 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 1,2,3,7,8-PeCDD, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, 2,3,7,8-TCDD, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Heptachlorodibenzo-p-dioxin with EMPCs, Total Hexachlorodibenzofuran with EMPCs, Total Pentachlorodibenzofuran with EMPCs, Total Pentachlorodibenzo-p-dioxin with EMPCs, Total Tetrachlorodibenzo-p-dioxin with EMPCs. No flagging was applied for Total Dioxins, Furans, or LB>MDL.

<u>Blank Type</u>	<u>Blank ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Report Limit</u>	<u>Lab Flag</u>	<u>Units</u>	<u>SDG</u>
EB	FBQW1869Q001	1,2,3,4,6,7,8,9-OCDD	0.00158	0.103	BJK	ng/L	570-14206-1
EB	FBQW1869Q001	TEQ WHO2005 ND=0 with EMPCs	0.000000475			ng/L	570-14206-1
EB	FBQW1869Q001	TEQ WHO2005 ND=0.5 with EMPCs	0.000837			ng/L	570-14206-1
EB	FBQW1869Q001	Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00202	0.0514	JK	ng/L	570-14206-1
LB	12025525	1,2,3,4,6,7,8,9-OCDD	0.00276	0.1	J	ng/L	570-14206-1
LB	12025525	1,2,3,4,6,7,8,9-OCDF	0.00208	0.1	J	ng/L	570-14206-1
LB	12025525	1,2,3,4,6,7,8-HpCDD	0.00116	0.05	JK	ng/L	570-14206-1
LB	12025525	1,2,3,4,6,7,8-HpCDF	0.0005	0.05	JK	ng/L	570-14206-1
LB	12025525	1,2,3,4,7,8,9-HpCDF	0.0008	0.05	J	ng/L	570-14206-1
LB	12025525	1,2,3,4,7,8-HxCDF	0.0009	0.05	J	ng/L	570-14206-1
LB	12025525	1,2,3,6,7,8-HxCDF	0.00078	0.05	JK	ng/L	570-14206-1
LB	12025525	1,2,3,7,8,9-HxCDF	0.00112	0.05	J	ng/L	570-14206-1
LB	12025525	1,2,3,7,8-PeCDD	0.00088	0.05	J	ng/L	570-14206-1
LB	12025525	1,2,3,7,8-PeCDF	0.00082	0.05	JK	ng/L	570-14206-1

LB	12025525	2,3,4,6,7,8-HxCDF	0.00102	0.05	J	ng/L	570-14206-1
LB	12025525	2,3,4,7,8-PeCDF	0.00086	0.05	JK	ng/L	570-14206-1
LB	12025525	2,3,7,8-TCDD	0.0005	0.01	JK	ng/L	570-14206-1
LB	12025525	TEQ WHO2005 ND=0 with EMPCs	0.00207			ng/L	570-14206-1
LB	12025525	TEQ WHO2005 ND=0.5 with EMPCs	0.00223			ng/L	570-14206-1
LB	12025525	Total Heptachlorodibenzofuran with EMPCs	0.0013	0.05	JK	ng/L	570-14206-1
LB	12025525	Total Heptachlorodibenzo-p-dioxin with EMPCs	0.00116	0.05	JK	ng/L	570-14206-1
LB	12025525	Total Hexachlorodibenzofuran with EMPCs	0.00382	0.05	JK	ng/L	570-14206-1
LB	12025525	Total Pentachlorodibenzofuran with EMPCs	0.00168	0.05	JK	ng/L	570-14206-1
LB	12025525	Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00088	0.05	J	ng/L	570-14206-1
LB	12025525	Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.0005	0.01	JK	ng/L	570-14206-1

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG. All reported EMPC values were flagged as estimated non-detects.

<i>Matrix</i>	<i>Sample ID</i>	<i>LR Type</i>	<i>Analyte</i>	<i>Result</i>	<i>MS/MSD Qualifier*</i>	<i>Criteria</i>
WATER			<u>1,2,3,4,7,8,9-HpCDF</u>			
	A2BMP0012S007			0.00521 ng/L	UJ	EMPC
WATER			<u>1,2,3,4,7,8-HxCDF</u>			
	A2BMP0012S007			0.00416 ng/L	UJ	EMPC
	EVBMP0003S029			0.00138 ng/L	UJ	EMPC
WATER			<u>1,2,3,6,7,8-HxCDF</u>			
	A2BMP0012S007			0.00344 ng/L	UJ	EMPC
WATER			<u>2,3,4,6,7,8-HxCDF</u>			
	A2BMP0012S007			0.00506 ng/L	UJ	EMPC
WATER			<u>2,3,4,7,8-PeCDF</u>			
	EVBMP0003S029			0.00044 ng/L	UJ	EMPC

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

All acceptance criteria were met.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

Initial Calibration was not examined by AutoDV.

Continuing Calibration

Continuing Calibration was not examined by AutoDV.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Blanks: These analytes had Blank detects: 1,2,3,4,6,7,8,9-OCDD (EB), TEQ WHO2005 ND=0 with EMPCs (EB), TEQ WHO2005 ND=0.5 with EMPCs (EB), Total Hexachlorodibenzo-p-dioxin with EMPCs (EB).

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Method Blanks: These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8,9-OCDF, 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 1,2,3,7,8-PeCDD, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, 2,3,7,8-TCDD, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Heptachlorodibenzo-p-dioxin with EMPCs, Total Hexachlorodibenzofuran with EMPCs, Total Pentachlorodibenzofuran with EMPCs, Total Pentachlorodibenzo-p-dioxin with EMPCs, Total Tetrachlorodibenzo-p-dioxin with EMPCs.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag.
All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0012S007

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reasor (Flag)
1,2,3,4,6,7,8,9-OCDD	4.08			0.0057	0.0976		ng/L	LB>MDL (None)
	4.08			0.0057	0.0976		ng/L	EB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.171			0.00191	0.0976		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDD	0.627			0.00373	0.0488		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDF	0.118			0.00148	0.0488		ng/L	LB>MDL (None)
1,2,3,4,7,8,9-HpCDF	0.00521	UJ	BJK	0.00186	0.0488		ng/L	LB>MDL (None)
	0.00521	UJ	BJK	0.00186	0.0488		ng/L	EMPC (UJ)
1,2,3,4,7,8-HxCDD	0.0177	J	J	0.00125	0.0488		ng/L	
1,2,3,4,7,8-HxCDF	0.00416	UJ	BJK	0.000935	0.0488		ng/L	LB<RL (U)
	0.00416	UJ	BJK	0.000935	0.0488		ng/L	EMPC (UJ)
1,2,3,6,7,8-HxCDD	0.0336	J	J	0.00126	0.0488		ng/L	
1,2,3,6,7,8-HxCDF	0.00344	UJ	BJK	0.000967	0.0488		ng/L	LB<RL (U)
	0.00344	UJ	BJK	0.000967	0.0488		ng/L	EMPC (UJ)
1,2,3,7,8,9-HxCDD	0.0333	J	J	0.00127	0.0488		ng/L	
1,2,3,7,8,9-HxCDF	0.00133	U	U	0.00133	0.0488		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.0125	J	J	0.000685	0.0488		ng/L	LB>MDL (None)
1,2,3,7,8-PeCDF	0.000707	U	U	0.000707	0.0488		ng/L	LB<RL (none)
2,3,4,6,7,8-HxCDF	0.00506	UJ	BJK	0.000961	0.0488		ng/L	LB<RL (U)
	0.00506	UJ	BJK	0.000961	0.0488		ng/L	EMPC (UJ)
2,3,4,7,8-PeCDF	0.000693	U	U	0.000693	0.0488		ng/L	LB<RL (none)
2,3,7,8-TCDD	0.00158	U	BJ	0.000676	0.00976		ng/L	LB<RL (U)
2,3,7,8-TCDF	0.00073	U	U	0.00073	0.00976		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.0325						ng/L	EB>MDL (None)
	0.0325						ng/L	LB>MDL (None)
TEQ WHO2005 ND=0.5 with EMPCs	0.0328						ng/L	EB>MDL (None)
	0.0328						ng/L	LB>MDL (None)
Total Heptachlorodibenzofuran with EMPCs	0.265	J	JK	0.00148	0.0488		ng/L	InvalidLabFlag (J)
	0.265	J	JK	0.00148	0.0488		ng/L	LB>MDL (None)
Total Heptachlorodibenzo-p-dioxin with EMPCs	1.06			0.00373	0.0488		ng/L	LB>MDL (None)
Total Hexachlorodibenzofuran with EMPCs	0.0927	J	JK	0.000935	0.0488		ng/L	InvalidLabFlag (J)
	0.0927	J	JK	0.000935	0.0488		ng/L	LB>MDL (None)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.186	J	J	0.00125	0.0488		ng/L	EB>MDL (None)
Total Pentachlorodibenzofuran with EMPCs	0.0156	J	BJK	0.000287	0.0488		ng/L	InvalidLabFlag (J)
	0.0156	J	BJK	0.000287	0.0488		ng/L	LB>MDL (None)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.0303	J	JK	0.000685	0.0488		ng/L	InvalidLabFlag (J)
	0.0303	J	JK	0.000685	0.0488		ng/L	LB>MDL (None)
Total Tetrachlorodibenzofuran with EMPCs	0.00073	U	U	0.00073	0.00976		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.00158	J	BJ	0.000676	0.00976		ng/L	LB<RL (NONE)
	0.00158	J	BJ	0.000676	0.00976		ng/L	InvalidLabFlag (J)

Field ID: EVBMP0003S029

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reasor (Flag)
1,2,3,4,6,7,8,9-OCDD	0.97			0.00366	0.0957		ng/L	EB>MDL (None)
	0.97			0.00366	0.0957		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.047	J	J	0.0032	0.0957		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDD	0.131			0.00205	0.0478		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDF	0.0428	J	J	0.000804	0.0478		ng/L	LB>MDL (None)
1,2,3,4,7,8,9-HpCDF	0.00151	U	BJ	0.00109	0.0478		ng/L	LB<RL (U)

Validated Form I

Field ID: EVBMP0003S029

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,7,8-HxCDD	0.00367	J	J	0.00107	0.0478		ng/L	
1,2,3,4,7,8-HxCDF	0.00138	UJ	BJK	0.000647	0.0478		ng/L	LB<RL (U)
	0.00138	UJ	BJK	0.000647	0.0478		ng/L	EMPC (UJ)
1,2,3,6,7,8-HxCDD	0.00863	J	J	0.001	0.0478		ng/L	
1,2,3,6,7,8-HxCDF	0.00159	U	BJ	0.000679	0.0478		ng/L	LB<RL (U)
1,2,3,7,8,9-HxCDD	0.00756	J	J	0.00105	0.0478		ng/L	
1,2,3,7,8,9-HxCDF	0.000875	U	U	0.000875	0.0478		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.003	U	BJ	0.000743	0.0478		ng/L	LB<RL (U)
1,2,3,7,8-PeCDF	0.000417	U	U	0.000417	0.0478		ng/L	LB<RL (none)
2,3,4,6,7,8-HxCDF	0.00216	U	BJ	0.000668	0.0478		ng/L	LB<RL (U)
2,3,4,7,8-PeCDF	0.00044	UJ	BJK	0.000417	0.0478		ng/L	EMPC (UJ)
	0.00044	UJ	BJK	0.000417	0.0478		ng/L	LB<RL (U)
2,3,7,8-TCDD	0.000494	U	U	0.000494	0.00957		ng/L	LB<RL (none)
2,3,7,8-TCDF	0.000574	U	U	0.000574	0.00957		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.0077						ng/L	EB>MDL (None)
TEQ WHO2005 ND=0.5 with EMPCs	0.00802						ng/L	EB>MDL (None)
Total Heptachlorodibenzofuran with EMPCs	0.0817	J	JK	0.000804	0.0478		ng/L	InvalidLabFlag (J)
	0.0817	J	JK	0.000804	0.0478		ng/L	LB>MDL (None)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.255			0.00205	0.0478		ng/L	LB>MDL (None)
Total Hexachlorodibenzofuran with EMPCs	0.0373	J	BJK	0.000647	0.0478		ng/L	InvalidLabFlag (J)
	0.0373	J	BJK	0.000647	0.0478		ng/L	LB>MDL (None)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.0517	J	JK	0.001	0.0478		ng/L	InvalidLabFlag (J)
	0.0517	J	JK	0.001	0.0478		ng/L	EB>MDL (None)
Total Pentachlorodibenzofuran with EMPCs	0.00951	J	BJK	0.000277	0.0478		ng/L	InvalidLabFlag (J)
	0.00951	J	BJK	0.000277	0.0478		ng/L	LB>MDL (None)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00938	J	JK	0.000743	0.0478		ng/L	InvalidLabFlag (J)
	0.00938	J	JK	0.000743	0.0478		ng/L	LB>MDL (None)
Total Tetrachlorodibenzofuran with EMPCs	0.000574	U	U	0.000574	0.00957		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.000494	U	U	0.000494	0.00957		ng/L	LB<RL (none)

Validation Flag Abbreviations

Abbreviation	Validation Reason	Category
LB<RL	Laboratory blank contamination less than the reporting limit	Blank
LB>MDL	Laboratory blank contamination greater than the method detection limit	Blank
EMPC	Estimated Maximum Possible Concentration	Matrix
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14372-1

Reviewer: xayachl

Method A2540D

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S018	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S018

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	7.71			1.18	1.43		mg/L	

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14372-1

Reviewer: xayachl

Method D4464(M)

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S018	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blanks were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

No spikes in this SDG. No spike dupes in this SDG.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Laboratory Control Sample: No spikes in this SDG. No spike dupes in this SDG.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S018

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	15.16			0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	0.01	U	U	0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.01	U	U	0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	84.84			0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	100			0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	0.01	U	U	0.01	0.01		PERCENT	

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14372-1

Reviewer: xayachl

Method E200.8

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S018	N	1			
A2BMP0007S018MS	MS	1			
A2BMP0007S018SD	SD	1			
FBQW1870Q001	EB	1			

1. Case Narrative

Items of Interest

The following items were noted MS<LCL, SD<LCL, and MSRPD.

2. Blank Summary

Field Blanks

No Field Blank detects were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

These MS's were out of control: Cadmium, Dissolved (MS - A2BMP0007S018MS), Copper, Dissolved (MS - A2BMP0007S018MS), Lead, Dissolved (MS - A2BMP0007S018MS). These SD's were out of control: Cadmium, Dissolved (SD - A2BMP0007S018SD), Copper, Dissolved (SD - A2BMP0007S018SD), Lead, Dissolved (SD - A2BMP0007S018SD). These MS/SD RPD's were out of control: Cadmium, Dissolved (A2BMP0007S018), Copper, Dissolved (A2BMP0007S018), Lead,

Matrix	Sample ID	LR Type	Analyte	Result	MS/MSD Qualifier*	Criteria
WATER			<u>Cadmium, Dissolved</u>			
	A2BMP0007S018			0.000128 mg/L	UJ	MS<LCL
	A2BMP0007S018			0.000128 mg/L	none	MSRPD
	A2BMP0007S018			0.000128 mg/L	UJ	SD<LCL
WATER			<u>Copper, Dissolved</u>			
	A2BMP0007S018			0.000538 mg/L	J	MS<LCL
	A2BMP0007S018			0.000538 mg/L	J	MSRPD
	A2BMP0007S018			0.000538 mg/L	J	SD<LCL

WATER	<u>Lead, Dissolved</u>			
A2BMP0007S018	0.0000898 mg/L	UJ		MS<LCL
A2BMP0007S018	0.0000898 mg/L	none		MSRPD
A2BMP0007S018	0.0000898 mg/L	UJ		SD<LCL

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Matrix Spike: These MS's were out of control: Cadmium, Dissolved (MS - A2BMP0007S018MS), Copper, Dissolved (MS - A2BMP0007S018MS), Lead, Dissolved (MS - A2BMP0007S018MS). These SD's were out of control: Cadmium, Dissolved (SD - A2BMP0007S018SD), Copper, Dissolved (SD - A2BMP0007S018SD), Lead, Dissolved (SD - A2BMP0007S018SD). These MS/SD RPD's were out of control: Cadmium, Dissolved (A2BMP0007S018), Copper, Dissolved (A2BMP0007S018), Lead, Dissolved (A2BMP0007S018).

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S018

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.000128	U	U	0.000128	0.001		mg/L	
Cadmium, Dissolved	0.000128	UJ	H F2 F	0.000128	0.001		mg/L	SD<LCL (UJ)
	0.000128	UJ	H F2 F	0.000128	0.001		mg/L	MS<LCL (UJ)
	0.000128	UJ	H F2 F	0.000128	0.001		mg/L	MSRPD (none)
Copper	0.00346			0.00014	0.001		mg/L	
Copper, Dissolved	0.000538	J	H F2 F	0.00014	0.001		mg/L	SD<LCL (J)
	0.000538	J	H F2 F	0.00014	0.001		mg/L	MSRPD (J)
	0.000538	J	H F2 F	0.00014	0.001		mg/L	MS<LCL (J)
Lead	0.000706	J	J	#####	0.001		mg/L	
Lead, Dissolved	0.0000898	UJ	H F2 F	#####	0.001		mg/L	SD<LCL (UJ)
	0.0000898	UJ	H F2 F	#####	0.001		mg/L	MS<LCL (UJ)
	0.0000898	UJ	H F2 F	#####	0.001		mg/L	MSRPD (none)

Validation Flag Abbreviations

Abbreviation	Validation Reason	Category
MS<LCL	Matrix spike recovery less than the lower control limit	Matrix
MSRPD	Matrix spike RPD criteria exceedance	Matrix
SD<LCL	Matrix spike duplicate recovery criteria less than the lower control limit	Matrix

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14372-1

Reviewer: xayachl

Method E245.1

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S018	N	1			
FBQW1870Q001	EB	1			
FBQW1870Q001MS	MS	1			
FBQW1870Q001SD	SD	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blank detects were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

All MS acceptance criteria were met. All SD acceptance criteria were met. All RPD acceptance criteria were met.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S018

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14372-1

Reviewer: xayachl

Method E1613B

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S018	N	1			
FBQW1870Q001	EB	1			

1. Case Narrative

Items of Interest

The following items were noted EMPC and LB<RL.

2. Blank Summary

Field Blanks

These analytes had Blank detects: TEQ WHO2005 ND=0 with EMPCs (EB), TEQ WHO2005 ND=0.5 with EMPCs (EB). No flagging was applied for Total Dioxins or Furans.

Method Blanks

These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8,9-OCDF, 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 1,2,3,7,8-PeCDD, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, 2,3,7,8-TCDD, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Heptachlorodibenzo-p-dioxin with EMPCs, Total Hexachlorodibenzofuran with EMPCs, Total Pentachlorodibenzofuran with EMPCs, Total Pentachlorodibenzo-p-dioxin with EMPCs, Total Tetrachlorodibenzo-p-dioxin with EMPCs. No flagging was applied for Total Dioxins or Furans.

Blank Type	Blank ID	Analyte	Result	Report Limit	Lab Flag	Units	SDG
EB	FBQW1870Q001	TEQ WHO2005 ND=0 with EMPCs				ng/L	570-14372-1
EB	FBQW1870Q001	TEQ WHO2005 ND=0.5 with EMPCs	0.000815			ng/L	570-14372-1
LB	12025525	1,2,3,4,6,7,8,9-OCDD	0.00276	0.1	J	ng/L	570-14372-1
LB	12025525	1,2,3,4,6,7,8,9-OCDF	0.00208	0.1	J	ng/L	570-14372-1
LB	12025525	1,2,3,4,6,7,8-HpCDD	0.00116	0.05	JK	ng/L	570-14372-1
LB	12025525	1,2,3,4,6,7,8-HpCDF	0.0005	0.05	JK	ng/L	570-14372-1
LB	12025525	1,2,3,4,7,8,9-HpCDF	0.0008	0.05	J	ng/L	570-14372-1
LB	12025525	1,2,3,4,7,8-HxCDF	0.0009	0.05	J	ng/L	570-14372-1
LB	12025525	1,2,3,6,7,8-HxCDF	0.00078	0.05	JK	ng/L	570-14372-1
LB	12025525	1,2,3,7,8,9-HxCDF	0.00112	0.05	J	ng/L	570-14372-1
LB	12025525	1,2,3,7,8-PeCDD	0.00088	0.05	J	ng/L	570-14372-1
LB	12025525	1,2,3,7,8-PeCDF	0.00082	0.05	JK	ng/L	570-14372-1
LB	12025525	2,3,4,6,7,8-HxCDF	0.00102	0.05	J	ng/L	570-14372-1
LB	12025525	2,3,4,7,8-PeCDF	0.00086	0.05	JK	ng/L	570-14372-1
LB	12025525	2,3,7,8-TCDD	0.0005	0.01	JK	ng/L	570-14372-1
LB	12025525	TEQ WHO2005 ND=0 with EMPCs	0.00207			ng/L	570-14372-1
LB	12025525	TEQ WHO2005 ND=0.5 with EMPCs	0.00223			ng/L	570-14372-1

LB	12025525	Total Heptachlorodibenzofuran with EMPCs	0.0013	0.05	JK	ng/L	570-14372-1
LB	12025525	Total Heptachlorodibenzo-p-dioxin with EMPCs	0.00116	0.05	JK	ng/L	570-14372-1
LB	12025525	Total Hexachlorodibenzofuran with EMPCs	0.00382	0.05	JK	ng/L	570-14372-1
LB	12025525	Total Pentachlorodibenzofuran with EMPCs	0.00168	0.05	JK	ng/L	570-14372-1
LB	12025525	Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00088	0.05	J	ng/L	570-14372-1
LB	12025525	Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.0005	0.01	JK	ng/L	570-14372-1

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG. All reported EMPC values were flagged as estimated non-detects.

Matrix	Sample ID	LR Type	Analyte	Result	MS/MSD Qualifier*	Criteria
WATER			<u>1,2,3,6,7,8-HxCDD</u>			
	A2BMP0007S018			0.00131 ng/L	UJ	EMPC
WATER			<u>1,2,3,7,8-PeCDF</u>			
	A2BMP0007S018			0.000453 ng/L	UJ	EMPC

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

All acceptance criteria were met.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

Initial Calibration was not examined by AutoDV.

Continuing Calibration

Continuing Calibration was not examined by AutoDV.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Blanks: These analytes had Blank detects: TEQ WHO2005 ND=0 with EMPCs (EB), TEQ WHO2005 ND=0.5 with EMPCs (EB).

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Method Blanks: These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8,9-OCDF, 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 1,2,3,7,8-PeCDD, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, 2,3,7,8-TCDD, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Heptachlorodibenzo-p-dioxin with EMPCs, Total Hexachlorodibenzofuran with EMPCs, Total Pentachlorodibenzofuran with EMPCs, Total Pentachlorodibenzo-p-dioxin with EMPCs, Total Tetrachlorodibenzo-p-dioxin with EMPCs.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S018

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.199			0.00249	0.126		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.00571	U	BJ	0.00132	0.126		ng/L	LB<RL (U)
1,2,3,4,6,7,8-HpCDD	0.0215	J	J	0.00118	0.0629		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDF	0.0034	J	BJ	0.000574	0.0629		ng/L	InvalidLabFlag (J)
	0.0034	J	BJ	0.000574	0.0629		ng/L	LB>MDL (None)
1,2,3,4,7,8,9-HpCDF	0.00073	U	U	0.00073	0.0629		ng/L	LB<RL (none)
1,2,3,4,7,8-HxCDD	0.00103	U	U	0.00103	0.0629		ng/L	
1,2,3,4,7,8-HxCDF	0.000415	U	U	0.000415	0.0629		ng/L	LB<RL (none)
1,2,3,6,7,8-HxCDD	0.00131	UJ	JK	0.000982	0.0629		ng/L	EMPC (UJ)
1,2,3,6,7,8-HxCDF	0.000433	U	U	0.000433	0.0629		ng/L	LB<RL (none)
1,2,3,7,8,9-HxCDD	0.00131	J	J	0.00102	0.0629		ng/L	
1,2,3,7,8,9-HxCDF	0.000574	U	U	0.000574	0.0629		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.000702	U	U	0.000702	0.0629		ng/L	LB<RL (none)
1,2,3,7,8-PeCDF	0.000453	UJ	BJK	0.000367	0.0629		ng/L	LB<RL (U)
	0.000453	UJ	BJK	0.000367	0.0629		ng/L	EMPC (UJ)
2,3,4,6,7,8-HxCDF	0.000408	U	U	0.000408	0.0629		ng/L	LB<RL (none)
2,3,4,7,8-PeCDF	0.00038	U	U	0.00038	0.0629		ng/L	LB<RL (none)
2,3,7,8-TCDD	0.000652	U	U	0.000652	0.0126		ng/L	LB<RL (none)
2,3,7,8-TCDF	0.000549	U	U	0.000549	0.0126		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.000585						ng/L	EB>MDL (None)
	0.000585						ng/L	LB>RL (NONE)
TEQ WHO2005 ND=0.5 with EMPCs	0.00149						ng/L	EB>RL (none)
	0.00149						ng/L	LB>RL (NONE)
Total Heptachlorodibenzofuran with EMPCs	0.00657	J	BJ	0.000574	0.0629		ng/L	LB>MDL (None)
	0.00657	J	BJ	0.000574	0.0629		ng/L	InvalidLabFlag (J)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.0406	J	J	0.00118	0.0629		ng/L	LB>MDL (None)
Total Hexachlorodibenzofuran with EMPCs	0.00148	J	BJ	0.000408	0.0629		ng/L	LB<RL (NONE)
	0.00148	J	BJ	0.000408	0.0629		ng/L	InvalidLabFlag (J)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00617	J	JK	0.000982	0.0629		ng/L	InvalidLabFlag (J)
Total Pentachlorodibenzofuran with EMPCs	0.000453	J	BJK	0.000365	0.0629		ng/L	InvalidLabFlag (J)
	0.000453	J	BJK	0.000365	0.0629		ng/L	LB<RL (NONE)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.000702	U	U	0.000702	0.0629		ng/L	LB<RL (none)
Total Tetrachlorodibenzofuran with EMPCs	0.000549	U	U	0.000549	0.0126		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.000652	U	U	0.000652	0.0126		ng/L	LB<RL (none)

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
EB>RL	Equipment blank concentration greater than the reporting limit	Blank
LB<RL	Laboratory blank contamination less than the reporting limit	Blank
LB>MDL	Laboratory blank contamination greater than the method detection limit	Blank
LB>RL	Laboratory blank contamination greater than the reporting limit	Blank
EMPC	Estimated Maximum Possible Concentration	Matrix
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14631-1

Reviewer: xayachl

Method A2130B

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0012S008	N	1			

1. Case Narrative

Items of Interest

The following items were noted LCS>UCL.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blanks were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

These LCS analytes were out of control: Turbidity (BS). No spike dupes in this SDG.

<u>Matrix</u>	<u>QAQC Type</u>	<u>Field ID</u>	<u>Analyte</u>	<u>Recovery</u>	<u>Lower Limit</u>	<u>Upper Limit</u>
WATER	BS	LCSSRM 570-37098/3	Turbidity	200	90	110

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

Initial Calibration was not examined by AutoDV.

Continuing Calibration

Continuing Calibration was not examined by AutoDV.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Laboratory Control Sample: These LCS analytes were out of control: Turbidity (BS). No spike dupes in this SDG.
VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0012S008

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Turbidity	5.73	J		0.0439	0.05		NTU	LCS>UCL (J)
	5.56	Exclude		0.0439	0.05		NTU	LCS>UCL (J)
	5.56	Exclude		0.0439	0.05		NTU	exclude (Exclude

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
exclude	Data not used; another value is appropriate or data was not requested	Exclude
LCS>UCL	LCS recovery greater than the upper control limit	LaboratoryControlSample

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14631-1

Reviewer: xayachl

Method A2540D

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S019	N	1			
A2BMP0012S008	N	1			
EVBMP0003S030	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag.
 All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S019

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	4.6			0.829	1		mg/L	

Field ID: A2BMP0012S008

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	4			0.829	1		mg/L	

Field ID: EVBMP0003S030

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	63			2.07	2.5		mg/L	

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14631-1

Reviewer: xayachl

Method D4464(M)

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S019	N	1			
A2BMP0012S008	N	1			
EVBMP0003S030	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blanks were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

No spikes in this SDG. No spike dupes in this SDG.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Laboratory Control Sample: No spikes in this SDG. No spike dupes in this SDG.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S019

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	0.01	U	U	0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	22.48			0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	47.69			0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	11.24			0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	11.24			0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	18.59			0.01	0.01		PERCENT	

Field ID: A2BMP0012S008

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	0.01	U	U	0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	30.79			0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	23.99			0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	16.64			0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	16.64			0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	28.58			0.01	0.01		PERCENT	

Field ID: EVBMP0003S030

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	2.66	Exclude	F3	0.01	0.01		PERCENT	exclude (Exclude)
	1.44			0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	Exclude	U	0.01	0.01		PERCENT	exclude (Exclude)
	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	20.58	Exclude	F3	0.01	0.01		PERCENT	exclude (Exclude)
	35.99			0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	Exclude	U	0.01	0.01		PERCENT	exclude (Exclude)
	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	5.71	Exclude		0.01	0.01		PERCENT	exclude (Exclude)
	6.84			0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	33.77	Exclude		0.01	0.01		PERCENT	exclude (Exclude)
	29.27			0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	30.71			0.01	0.01		PERCENT	
	36.43	Exclude		0.01	0.01		PERCENT	exclude (Exclude)
Very Coarse Sand (1 to 2mm)	0.01	Exclude	U	0.01	0.01		PERCENT	exclude (Exclude)
	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	37.28	Exclude	F3	0.01	0.01		PERCENT	exclude (Exclude)
	26.46			0.01	0.01		PERCENT	

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
exclude	Data not used; another value is appropriate or data was not requested	Exclude

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14631-1

Reviewer: xayachl

Method E200.8

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S019	N	1			
A2BMP0012S008	N	1			
EVBMP0003S030	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S019

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.000128	U	U	0.000128	0.001		mg/L	
Cadmium, Dissolved	0.000128	U	U H	0.000128	0.001		mg/L	InvalidLabFlag (U
Copper	0.00198			0.00014	0.001		mg/L	
Copper, Dissolved	0.00014	U	U H	0.00014	0.001		mg/L	InvalidLabFlag (U
Lead	0.000503	J	J	#####	0.001		mg/L	
Lead, Dissolved	0.0000898	U	U H	#####	0.001		mg/L	InvalidLabFlag (U

Field ID: A2BMP0012S008

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.000128	U	U	0.000128	0.001		mg/L	
Cadmium, Dissolved	0.000128	U	U H	0.000128	0.001		mg/L	InvalidLabFlag (U
Copper	0.00269			0.00014	0.001		mg/L	
Copper, Dissolved	0.000341	J	J H	0.00014	0.001		mg/L	InvalidLabFlag (J
Lead	0.00101			#####	0.001		mg/L	
Lead, Dissolved	0.0000898	U	U H	#####	0.001		mg/L	InvalidLabFlag (U

Field ID: EVBMP0003S030

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.000128	U	U	0.000128	0.001		mg/L	
Cadmium, Dissolved	0.000128	U	U H	0.000128	0.001		mg/L	InvalidLabFlag (U
Copper	0.00531			0.00014	0.001		mg/L	
Copper, Dissolved	0.00014	U	U H	0.00014	0.001		mg/L	InvalidLabFlag (U
Lead	0.00428			#####	0.001		mg/L	
Lead, Dissolved	0.0000898	U	U H	#####	0.001		mg/L	InvalidLabFlag (U

Validation Flag Abbreviations

Abbreviation	Validation Reason	Category
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14631-1

Reviewer: xayachl

Method E245.1

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S019	N	1			
A2BMP0012S008	N	1			
EVBMP0003S030	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S019

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U

Field ID: A2BMP0012S008

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U

Field ID: EVBMP0003S030

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-14631-1

Reviewer: xayachl

Method E1613B

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0007S019	N	1			
A2BMP0012S008	N	1			
EVBMP0003S030	N	1			

1. Case Narrative

Items of Interest

The following items were noted EMPC, LB<RL

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Heptachlorodibenzo-p-dioxin with EMPCs, Total Hexachlorodibenzofuran with EMPCs. No flagging was applied for Total Dioxins, Furans, or LB>MDL.

<u>Blank Type</u>	<u>Blank ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Report Limit</u>	<u>Lab Flag</u>	<u>Units</u>	<u>SDG</u>
LB	12025596	1,2,3,4,6,7,8,9-OCDD	0.00296	0.1	J	ng/L	570-14631-1
LB	12025596	1,2,3,4,6,7,8-HpCDD	0.00136	0.05	JK	ng/L	570-14631-1
LB	12025596	1,2,3,4,6,7,8-HpCDF	0.00106	0.05	J	ng/L	570-14631-1
LB	12025596	1,2,3,4,7,8,9-HpCDF	0.0011	0.05	JK	ng/L	570-14631-1
LB	12025596	1,2,3,7,8,9-HxCDF	0.00138	0.05	J	ng/L	570-14631-1
LB	12025596	2,3,4,6,7,8-HxCDF	0.0011	0.05	J	ng/L	570-14631-1
LB	12025596	TEQ WHO2005 ND=0 with EMPCs	0.000284			ng/L	570-14631-1
LB	12025596	TEQ WHO2005 ND=0.5 with EMPCs	0.0021			ng/L	570-14631-1
LB	12025596	Total Heptachlorodibenzofuran with EMPCs	0.00216	0.05	JK	ng/L	570-14631-1
LB	12025596	Total Heptachlorodibenzo-p-dioxin with EMPCs	0.00136	0.05	JK	ng/L	570-14631-1
LB	12025596	Total Hexachlorodibenzofuran with EMPCs	0.00248	0.05	J	ng/L	570-14631-1

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.
All reported EMPC values were flagged as estimated non-detects

<i>Matrix</i>	<i>Sample ID</i>	<i>LR Type</i>	<i>Analyte</i>	<i>Result</i>	<i>MS/MSD Qualifier*</i>	<i>Criteria</i>
WATER			<u>1,2,3,4,6,7,8-HpCDF</u>			
	A2BMP0007S019			0.00448 ng/L	UJ	EMPC
WATER			<u>1,2,3,4,7,8-HxCDD</u>			
	A2BMP0012S008			0.00285 ng/L	UJ	EMPC
WATER			<u>1,2,3,4,7,8-HxCDF</u>			
	EVBMP0003S030			0.00237 ng/L	UJ	EMPC
WATER			<u>1,2,3,7,8-PeCDD</u>			
	A2BMP0012S008			0.00191 ng/L	UJ	EMPC
	EVBMP0003S030			0.00384 ng/L	UJ	EMPC
WATER			<u>2,3,4,6,7,8-HxCDF</u>			
	EVBMP0003S030			0.0025 ng/L	UJ	EMPC
WATER			<u>2,3,4,7,8-PeCDF</u>			
	EVBMP0003S030			0.00128 ng/L	UJ	EMPC

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

All acceptance criteria were met.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

Initial Calibration was not examined by AutoDV.

Continuing Calibration

Continuing Calibration was not examined by AutoDV.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Method Blanks: These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Heptachlorodibenzo-p-dioxin with EMPCs, Total

Hexachlorodibenzofuran with EMPCs.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag.
All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0007S019

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.221			0.00311	0.0965		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.00807	J	J	0.00371	0.0965		ng/L	
1,2,3,4,6,7,8-HpCDD	0.0252	J	J	0.00214	0.0482		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDF	0.00448	UJ	BJK	0.0017	0.0482		ng/L	LB<RL (U)
	0.00448	UJ	BJK	0.0017	0.0482		ng/L	EMPC (UJ)
1,2,3,4,7,8,9-HpCDF	0.0023	U	U	0.0023	0.0482		ng/L	LB<RL (none)
1,2,3,4,7,8-HxCDD	0.00156	U	U	0.00156	0.0482		ng/L	
1,2,3,4,7,8-HxCDF	0.000647	U	U	0.000647	0.0482		ng/L	
1,2,3,6,7,8-HxCDD	0.00178	J	J	0.00152	0.0482		ng/L	
1,2,3,6,7,8-HxCDF	0.000672	U	U	0.000672	0.0482		ng/L	
1,2,3,7,8,9-HxCDD	0.00181	J	J	0.00156	0.0482		ng/L	
1,2,3,7,8,9-HxCDF	0.000905	U	U	0.000905	0.0482		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.000849	U	U	0.000849	0.0482		ng/L	
1,2,3,7,8-PeCDF	0.000664	U	U	0.000664	0.0482		ng/L	
2,3,4,6,7,8-HxCDF	0.000623	U	U	0.000623	0.0482		ng/L	LB<RL (none)
2,3,4,7,8-PeCDF	0.000631	U	U	0.000631	0.0482		ng/L	
2,3,7,8-TCDD	0.0017	U	U	0.0017	0.00965		ng/L	
2,3,7,8-TCDF	0.00158	U	U	0.00158	0.00965		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.000725						ng/L	LB>RL (none)
TEQ WHO2005 ND=0.5 with EMPCs	0.00241						ng/L	LB>RL (none)
Total Heptachlorodibenzofuran with EMPCs	0.00965	J	BJK	0.0017	0.0482		ng/L	InvalidLabFlag (J)
	0.00965	J	BJK	0.0017	0.0482		ng/L	LB<RL (none)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.0446	J	J	0.00214	0.0482		ng/L	LB>MDL (None)
Total Hexachlorodibenzofuran with EMPCs	0.00239	J	BJK	0.000623	0.0482		ng/L	InvalidLabFlag (J)
	0.00239	J	BJK	0.000623	0.0482		ng/L	LB<RL (none)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00697	J	JK	0.00152	0.0482		ng/L	InvalidLabFlag (J)
Total Pentachlorodibenzofuran with EMPCs	0.000631	U	U	0.000631	0.0482		ng/L	
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.000849	U	U	0.000849	0.0482		ng/L	
Total Tetrachlorodibenzofuran with EMPCs	0.00158	U	U	0.00158	0.00965		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.0017	U	U	0.0017	0.00965		ng/L	

Field ID: A2BMP0012S008

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.314			0.00478	0.0955		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.0182	J	J	0.00292	0.0955		ng/L	
1,2,3,4,6,7,8-HpCDD	0.0641			0.00168	0.0478		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDF	0.0137	J	J	0.00124	0.0478		ng/L	LB>MDL (None)
1,2,3,4,7,8,9-HpCDF	0.0016	U	U	0.0016	0.0478		ng/L	LB<RL (none)
1,2,3,4,7,8-HxCDD	0.00285	UJ	JK	0.00185	0.0478		ng/L	EMPC (UJ)
1,2,3,4,7,8-HxCDF	0.00123	U	U	0.00123	0.0478		ng/L	
1,2,3,6,7,8-HxCDD	0.0048	J	J	0.00179	0.0478		ng/L	
1,2,3,6,7,8-HxCDF	0.00121	U	U	0.00121	0.0478		ng/L	
1,2,3,7,8,9-HxCDD	0.00384	J	J	0.00184	0.0478		ng/L	
1,2,3,7,8,9-HxCDF	0.0016	U	U	0.0016	0.0478		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.00191	UJ	JK	0.000877	0.0478		ng/L	EMPC (UJ)
1,2,3,7,8-PeCDF	0.000766	U	U	0.000766	0.0478		ng/L	
2,3,4,6,7,8-HxCDF	0.00118	U	U	0.00118	0.0478		ng/L	LB<RL (none)
2,3,4,7,8-PeCDF	0.00078	U	U	0.00078	0.0478		ng/L	

Validated Form I

Field ID: A2BMP0012S008

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
2,3,7,8-TCDD	0.00153	U	U	0.00153	0.00955		ng/L	
2,3,7,8-TCDF	0.00137	U	U	0.00137	0.00955		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.00394						ng/L	LB>MDL (None)
TEQ WHO2005 ND=0.5 with EMPCs	0.00517						ng/L	LB>RL (none)
Total Heptachlorodibenzofuran with EMPCs	0.0331	J	J	0.00124	0.0478		ng/L	LB>MDL (None)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.1	J	J	0.00168	0.0478		ng/L	LB>MDL (None)
Total Hexachlorodibenzofuran with EMPCs	0.0114	J	BJK	0.00118	0.0478		ng/L	InvalidLabFlag (J)
	0.0114	J	BJK	0.00118	0.0478		ng/L	LB<RL (none)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.0225	J	JK	0.00179	0.0478		ng/L	InvalidLabFlag (J)
Total Pentachlorodibenzofuran with EMPCs	0.00145	J	JK	0.000621	0.0478		ng/L	InvalidLabFlag (J)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00191	J	JK	0.000877	0.0478		ng/L	InvalidLabFlag (J)
Total Tetrachlorodibenzofuran with EMPCs	0.00137	U	U	0.00137	0.00955		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.00153	U	U	0.00153	0.00955		ng/L	

Field ID: EVBMP0003S030

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	2.71			0.00815	0.0954		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.0958			0.00391	0.0954		ng/L	
1,2,3,4,6,7,8-HpCDD	0.261			0.00412	0.0477		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDF	0.0474	J	J	0.00138	0.0477		ng/L	LB>MDL (None)
1,2,3,4,7,8,9-HpCDF	0.00273	U	BJ	0.00173	0.0477		ng/L	LB<RL (U)
1,2,3,4,7,8-HxCDD	0.00632	J	J	0.00157	0.0477		ng/L	
1,2,3,4,7,8-HxCDF	0.00237	UJ	JK	0.00109	0.0477		ng/L	EMPC (UJ)
1,2,3,6,7,8-HxCDD	0.0137	J	J	0.00163	0.0477		ng/L	
1,2,3,6,7,8-HxCDF	0.0025	J	J	0.00103	0.0477		ng/L	
1,2,3,7,8,9-HxCDD	0.0119	J	J	0.00163	0.0477		ng/L	
1,2,3,7,8,9-HxCDF	0.00139	U	U	0.00139	0.0477		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.00384	UJ	JK	0.00127	0.0477		ng/L	EMPC (UJ)
1,2,3,7,8-PeCDF	0.000987	U	U	0.000987	0.0477		ng/L	
2,3,4,6,7,8-HxCDF	0.0025	UJ	BJK	0.00102	0.0477		ng/L	LB<RL (U)
	0.0025	UJ	BJK	0.00102	0.0477		ng/L	EMPC (UJ)
2,3,4,7,8-PeCDF	0.00128	UJ	JK	0.000941	0.0477		ng/L	EMPC (UJ)
2,3,7,8-TCDD	0.00155	U	U	0.00155	0.00954		ng/L	
2,3,7,8-TCDF	0.00169	U	U	0.00169	0.00954		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.0121						ng/L	LB>MDL (None)
TEQ WHO2005 ND=0.5 with EMPCs	0.013						ng/L	LB>MDL (None)
Total Heptachlorodibenzofuran with EMPCs	0.116	J	J	0.00138	0.0477		ng/L	LB>MDL (None)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.625			0.00412	0.0477		ng/L	LB>MDL (None)
Total Hexachlorodibenzofuran with EMPCs	0.0496	J	JK	0.00102	0.0477		ng/L	InvalidLabFlag (J)
	0.0496	J	JK	0.00102	0.0477		ng/L	LB>MDL (None)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.0874	J	JK	0.00157	0.0477		ng/L	InvalidLabFlag (J)
Total Pentachlorodibenzofuran with EMPCs	0.0111	J	JK	0.000706	0.0477		ng/L	InvalidLabFlag (J)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00836	J	JK	0.00127	0.0477		ng/L	InvalidLabFlag (J)
Total Tetrachlorodibenzofuran with EMPCs	0.00169	U	U	0.00169	0.00954		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.00155	U	U	0.00155	0.00954		ng/L	

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
LB<RL	Laboratory blank contamination less than the reporting limit	Blank
LB>MDL	Laboratory blank contamination greater than the method detection limit	Blank
LB>RL	Laboratory blank contamination greater than the reporting limit	Blank
EMPC	Estimated Maximum Possible Concentration	Matrix
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-16773-1

Reviewer: xayachl

Method A2130B

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0008S014	N	1			
EVBMP0009S012	N	1			

1. Case Narrative

Items of Interest

The following items were noted LCS>UCL.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blanks were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

These LCS analytes were out of control: Turbidity (BS). No spike dupes in this SDG.

<u>Matrix</u>	<u>QAQC Type</u>	<u>Field ID</u>	<u>Analyte</u>	<u>Recovery</u>	<u>Lower Limit</u>	<u>Upper Limit</u>
WATER	BS	LCSSRM 570-41681/3	Turbidity	150	90	110

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

Initial Calibration was not examined by AutoDV.

Continuing Calibration

Continuing Calibration was not examined by AutoDV.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Laboratory Control Sample: These LCS analytes were out of control: Turbidity (BS). No spike dupes in this SDG.
VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0008S014

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Turbidity	8.48	J		0.0439	0.05		NTU	LCS>UCL (J)

Field ID: EVBMP0009S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Turbidity	5.94	J		0.0439	0.05		NTU	LCS>UCL (J)
	5.88	Exclude		0.0439	0.05		NTU	LCS>UCL (J)
	5.88	Exclude		0.0439	0.05		NTU	exclude (Exclude)

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
exclude	Data not used; another value is appropriate or data was not requested	Exclude
LCS>UCL	LCS recovery greater than the upper control limit	LaboratoryControlSample

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-16773-1

Reviewer: xayachl

Method A2540D

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S011	N	1			
EVBMP0008S014	N	1			
EVBMP0009S012	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag.
 All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	7.05			0.872	1.05		mg/L	

Field ID: EVBMP0008S014

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	8.4			0.829	1		mg/L	

Field ID: EVBMP0009S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	6.74			0.872	1.05		mg/L	

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-16773-1

Reviewer: xayachl

Method D4464(M)

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S011	N	1			
EVBMP0008S014	N	1			
EVBMP0009S012	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blanks were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

No spikes in this SDG. No spike dupes in this SDG.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Laboratory Control Sample: No spikes in this SDG. No spike dupes in this SDG.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	0.01	U	U	0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	0.01	U	U	0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.01	U	U	0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	0.01	U	U	0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	0.01	U	U	0.01	0.01		PERCENT	

Field ID: EVBMP0008S014

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	0.01	U	U	0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	0.01	U	U	0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.01	U	U	0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	0.01	U	U	0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	0.01	U	U	0.01	0.01		PERCENT	

Field ID: EVBMP0009S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	0.01	U	U	0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	0.01	U	U	0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.01	U	U	0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	0.01	U	U	0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	0.01	U	U	0.01	0.01		PERCENT	

Validated Form I

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-16773-1

Reviewer: xayachl

Method E200.8

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S011	N	1			
EVBMP0007S011MS	MS	1			
EVBMP0007S011SD	SD	1			
EVBMP0008S014	N	1			
EVBMP0009S012	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

All MS acceptance criteria were met. All SD acceptance criteria were met. All RPD acceptance criteria were met.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.00098	U	U	0.00098	0.001		mg/L	
Cadmium, Dissolved	0.00098	U	U H	0.00098	0.001		mg/L	InvalidLabFlag (U
Copper	0.00163			0.00061	0.001		mg/L	
Copper, Dissolved	0.00177		H	0.00061	0.001		mg/L	InvalidLabFlag (H
Lead	0.00023	J	J	0.00019	0.001		mg/L	
Lead, Dissolved	0.000217	J	J H	0.00019	0.001		mg/L	InvalidLabFlag (J

Field ID: EVBMP0008S014

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.00098	U	U	0.00098	0.001		mg/L	
Cadmium, Dissolved	0.00098	U	U H	0.00098	0.001		mg/L	InvalidLabFlag (U
Copper	0.00184			0.00061	0.001		mg/L	
Copper, Dissolved	0.00179		H	0.00061	0.001		mg/L	InvalidLabFlag (H
Lead	0.000358	J	J	0.00019	0.001		mg/L	
Lead, Dissolved	0.00027	J	J H	0.00019	0.001		mg/L	InvalidLabFlag (J

Field ID: EVBMP0009S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.00098	U	U	0.00098	0.001		mg/L	
Cadmium, Dissolved	0.00098	U	U H	0.00098	0.001		mg/L	InvalidLabFlag (U
Copper	0.00164			0.00061	0.001		mg/L	
Copper, Dissolved	0.00169		H	0.00061	0.001		mg/L	InvalidLabFlag (H
Lead	0.000249	J	J	0.00019	0.001		mg/L	
Lead, Dissolved	0.000225	J	J H	0.00019	0.001		mg/L	InvalidLabFlag (J

Validation Flag Abbreviations

Abbreviation	Validation Reason	Category
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-16773-1

Reviewer: xayachl

Method E245.1

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S011	N	1			
EVBMP0007S011MS	MS	1			
EVBMP0007S011SD	SD	1			
EVBMP0008S014	N	1			
EVBMP0009S012	N	1			

1. Case Narrative

Items of Interest

The following items were noted CCB<RL, MS<LCL, SD<LCL, and MSRPD.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

These analytes had Method Blank detects: Mercury, Dissolved.

Blank

<u>Type</u>	<u>Blank ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Report Limit</u>	<u>Lab Flag</u>	<u>Units</u>	<u>SDG</u>
LB	MB 570-43350/1-B	Mercury, Dissolved	0.00007375	0.0002	J	mg/L	570-16773-1

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

These MS's were out of control: Mercury (MS - EVBMP0007S011MS), Mercury, Dissolved (MS - EVBMP0007S011MS). These SD's were out of control: Mercury (SD - EVBMP0007S011SD), Mercury, Dissolved (SD - EVBMP0007S011SD). These MS/SD RPD's were out of control: Mercury (EVBMP0007S011).

Matrix	Sample ID	LR Type	Analyte	Result	MS/MSD Qualifier*	Criteria
WATER			<u>Mercury</u>			
	EVBMP0007S011			0.0000598 mg/L	J	MS<LCL
	EVBMP0007S011			0.0000598 mg/L	J	MSRPD
	EVBMP0007S011			0.0000598 mg/L	J	SD<LCL
WATER			<u>Mercury, Dissolved</u>			
	EVBMP0007S011			0.0000453 mg/L	UJ	MS<LCL

EVBMP0007S011

0.0000453 mg/L

UJ

SD<LCL

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Method Blanks: These analytes had Method Blank detects: Mercury, Dissolved.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Matrix Spike: These MS's were out of control: Mercury (MS - EVBMP0007S011MS), Mercury, Dissolved (MS - EVBMP0007S011MS). These SD's were out of control: Mercury (SD - EVBMP0007S011SD), Mercury, Dissolved (SD - EVBMP0007S011SD). These MS/SD RPD's were out of control: Mercury (EVBMP0007S011).

VDMS4.48

Data Package Completeness Package was complete for level V validation..

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000598	U	J F2 F1	#####	0.0002		mg/L	CCB<RL (U)
	0.0000598	U	J F2 F1	#####	0.0002		mg/L	SD<LCL (J)
	0.0000598	U	J F2 F1	#####	0.0002		mg/L	MSRPD (J)
	0.0000598	U	J F2 F1	#####	0.0002		mg/L	MS<LCL (J)
Mercury, Dissolved	0.0000453	UJ	U H F1	#####	0.0002		mg/L	SD<LCL (UJ)
	0.0000453	UJ	U H F1	#####	0.0002		mg/L	MS<LCL (UJ)
	0.0000453	UJ	U H F1	#####	0.0002		mg/L	LB<RL (none)

Field ID: EVBMP0008S014

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U)
	0.0000453	U	U H	#####	0.0002		mg/L	LB<RL (none)

Field ID: EVBMP0009S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U)
	0.0000453	U	U H	#####	0.0002		mg/L	LB<RL (none)

Validation Flag Abbreviations

Abbreviation	Validation Reason	Category
CCB<RL	Continuing calibration blank concentration less than the reporting limit	Blank
LB<RL	Laboratory blank contamination less than the reporting limit	Blank
MS<LCL	Matrix spike recovery less than the lower control limit	Matrix
MSRPD	Matrix spike RPD criteria exceedance	Matrix
SD<LCL	Matrix spike duplicate recovery criteria less than the lower control limit	Matrix
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-16773-1

Reviewer: xayachl

Method E1613B

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S011	N	1			
EVBMP0008S014	N	1			
EVBMP0009S012	N	1			

1. Case Narrative

Items of Interest

The following items were noted EMPC and LB<RL.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDD, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8,9-HxCDF, 1,2,3,7,8-PeCDD, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Heptachlorodibenzo-p-dioxin with EMPCs, Total Hexachlorodibenzofuran with EMPCs, Total Hexachlorodibenzo-p-dioxin with EMPCs, Total Pentachlorodibenzofuran with EMPCs, Total Pentachlorodibenzo-p-dioxin with EMPCs. No flagging was applied for Total Dioxins, Furans, or LB>MDL.

<u>Blank Type</u>	<u>Blank ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Report Limit</u>	<u>Lab Flag</u>	<u>Units</u>	<u>SDG</u>
LB	12025720	1,2,3,4,6,7,8,9-OCDD	0.011	0.1	J	ng/L	570-16773-1
LB	12025720	1,2,3,4,6,7,8-HpCDD	0.0053	0.05	JK	ng/L	570-16773-1
LB	12025720	1,2,3,4,6,7,8-HpCDF	0.00394	0.05	J	ng/L	570-16773-1
LB	12025720	1,2,3,4,7,8,9-HpCDF	0.0045	0.05	JK	ng/L	570-16773-1
LB	12025720	1,2,3,4,7,8-HxCDD	0.00386	0.05	J	ng/L	570-16773-1
LB	12025720	1,2,3,4,7,8-HxCDF	0.00442	0.05	JK	ng/L	570-16773-1
LB	12025720	1,2,3,6,7,8-HxCDD	0.00348	0.05	JK	ng/L	570-16773-1
LB	12025720	1,2,3,6,7,8-HxCDF	0.00422	0.05	J	ng/L	570-16773-1
LB	12025720	1,2,3,7,8,9-HxCDD	0.00464	0.05	JK	ng/L	570-16773-1
LB	12025720	1,2,3,7,8,9-HxCDF	0.00468	0.05	JK	ng/L	570-16773-1
LB	12025720	1,2,3,7,8-PeCDD	0.00596	0.05	J	ng/L	570-16773-1
LB	12025720	1,2,3,7,8-PeCDF	0.00426	0.05	J	ng/L	570-16773-1
LB	12025720	2,3,4,6,7,8-HxCDF	0.00496	0.05	J	ng/L	570-16773-1
LB	12025720	2,3,4,7,8-PeCDF	0.00524	0.05	JK	ng/L	570-16773-1
LB	12025720	TEQ WHO2005 ND=0 with EMPCs	0.0108			ng/L	570-16773-1
LB	12025720	TEQ WHO2005 ND=0.5 with EMPCs	0.0121			ng/L	570-16773-1

LB	12025720	Total Heptachlorodibenzofuran with EMPCs	0.00844	0.05	JK	ng/L	570-16773-1
LB	12025720	Total Heptachlorodibenzo-p-dioxin with EMPCs	0.0053	0.05	JK	ng/L	570-16773-1
LB	12025720	Total Hexachlorodibenzofuran with EMPCs	0.0183	0.05	JK	ng/L	570-16773-1
LB	12025720	Total Hexachlorodibenzo-p-dioxin with EMPCs	0.012	0.05	JK	ng/L	570-16773-1
LB	12025720	Total Pentachlorodibenzofuran with EMPCs	0.0095	0.05	JK	ng/L	570-16773-1
LB	12025720	Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00596	0.05	J	ng/L	570-16773-1

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG. All reported EMPC values were flagged as estimated non-detects.

<i>Matrix</i>	<i>Sample ID</i>	<i>LR Type</i>	<i>Analyte</i>	<i>Result</i>	<i>MS/MSD Qualifier*</i>	<i>Criteria</i>
WATER			<u>1,2,3,6,7,8-HxCDD</u>			
	EVBMP0009S012			0.00162 ng/L	UJ	EMPC
WATER			<u>1,2,3,7,8,9-HxCDD</u>			
	EVBMP0007S011			0.00137 ng/L	UJ	EMPC
	EVBMP0009S012			0.00143 ng/L	UJ	EMPC

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

All acceptance criteria were met.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

Initial Calibration was not examined by AutoDV.

Continuing Calibration

Continuing Calibration was not examined by AutoDV.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Method Blanks: These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDD, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8,9-HxCDF, 1,2,3,7,8-PeCDD, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Heptachlorodibenzo-p-dioxin with EMPCs, Total Hexachlorodibenzofuran with EMPCs, Total Hexachlorodibenzo-p-dioxin with EMPCs, Total Pentachlorodibenzofuran with EMPCs, Total Pentachlorodibenzo-p-dioxin with EMPCs.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.35			0.00187	0.0961		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.0198	J	J	0.00117	0.0961		ng/L	
1,2,3,4,6,7,8-HpCDD	0.0299	J	BJ	0.00145	0.0481		ng/L	InvalidLabFlag (J)
	0.0299	J	BJ	0.00145	0.0481		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDF	0.00667	U	BJ	0.00065	0.0481		ng/L	LB<RL (U)
1,2,3,4,7,8,9-HpCDF	0.000823	U	U	0.000823	0.0481		ng/L	LB<RL (none)
1,2,3,4,7,8-HxCDD	0.000898	U	U	0.000898	0.0481		ng/L	LB<RL (none)
1,2,3,4,7,8-HxCDF	0.000481	U	U	0.000481	0.0481		ng/L	LB<RL (none)
1,2,3,6,7,8-HxCDD	0.00138	U	BJ	0.000902	0.0481		ng/L	LB<RL (U)
1,2,3,6,7,8-HxCDF	0.00051	U	U	0.00051	0.0481		ng/L	LB<RL (none)
1,2,3,7,8,9-HxCDD	0.00137	UJ	BJK	0.000915	0.0481		ng/L	EMPC (UJ)
	0.00137	UJ	BJK	0.000915	0.0481		ng/L	LB<RL (U)
1,2,3,7,8,9-HxCDF	0.000577	U	U	0.000577	0.0481		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.000838	U	U	0.000838	0.0481		ng/L	LB<RL (none)
1,2,3,7,8-PeCDF	0.000436	U	U	0.000436	0.0481		ng/L	LB<RL (none)
2,3,4,6,7,8-HxCDF	0.000488	U	U	0.000488	0.0481		ng/L	LB<RL (none)
2,3,4,7,8-PeCDF	0.000442	U	U	0.000442	0.0481		ng/L	LB<RL (none)
2,3,7,8-TCDD	0.00115	U	U	0.00115	0.00961		ng/L	
2,3,7,8-TCDF	0.000627	U	U	0.000627	0.00961		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.000752						ng/L	LB>RL (none)
TEQ WHO2005 ND=0.5 with EMPCs	0.002						ng/L	LB>RL (none)
Total Heptachlorodibenzofuran with EMPCs	0.018	J	BJ	0.00065	0.0481		ng/L	InvalidLabFlag (J)
	0.018	J	BJ	0.00065	0.0481		ng/L	LB<RL (none)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.0766	J	J	0.00145	0.0481		ng/L	LB>MDL (None)
Total Hexachlorodibenzofuran with EMPCs	0.00502	J	BJ	0.000481	0.0481		ng/L	LB<RL (none)
	0.00502	J	BJ	0.000481	0.0481		ng/L	InvalidLabFlag (J)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00923	J	BJK	0.000898	0.0481		ng/L	InvalidLabFlag (J)
	0.00923	J	BJK	0.000898	0.0481		ng/L	LB<RL (none)
Total Pentachlorodibenzofuran with EMPCs	0.00165	J	BJK	0.000273	0.0481		ng/L	InvalidLabFlag (J)
	0.00165	J	BJK	0.000273	0.0481		ng/L	LB<RL (none)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.000838	U	U	0.000838	0.0481		ng/L	LB<RL (none)
Total Tetrachlorodibenzofuran with EMPCs	0.000627	U	U	0.000627	0.00961		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.00115	U	U	0.00115	0.00961		ng/L	

Field ID: EVBMP0008S014

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.192			0.00165	0.0944		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.011	J	J	0.0021	0.0944		ng/L	
1,2,3,4,6,7,8-HpCDD	0.0148	U	BJ	0.000969	0.0472		ng/L	LB<RL (U)
1,2,3,4,6,7,8-HpCDF	0.00383	U	BJ	0.00077	0.0472		ng/L	LB<RL (U)
1,2,3,4,7,8,9-HpCDF	0.000982	U	U	0.000982	0.0472		ng/L	LB<RL (none)
1,2,3,4,7,8-HxCDD	0.00101	U	U	0.00101	0.0472		ng/L	LB<RL (none)
1,2,3,4,7,8-HxCDF	0.000549	U	U	0.000549	0.0472		ng/L	LB<RL (none)
1,2,3,6,7,8-HxCDD	0.00098	U	U	0.00098	0.0472		ng/L	LB<RL (none)
1,2,3,6,7,8-HxCDF	0.000544	U	U	0.000544	0.0472		ng/L	LB<RL (none)
1,2,3,7,8,9-HxCDD	0.00101	U	U	0.00101	0.0472		ng/L	LB<RL (none)
1,2,3,7,8,9-HxCDF	0.0007	U	U	0.0007	0.0472		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.000885	U	U	0.000885	0.0472		ng/L	LB<RL (none)

Validated Form I

Field ID: EVBMP0008S014

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,7,8-PeCDF	0.000498	U	U	0.000498	0.0472		ng/L	LB<RL (none)
2,3,4,6,7,8-HxCDF	0.000525	U	U	0.000525	0.0472		ng/L	LB<RL (none)
2,3,4,7,8-PeCDF	0.000495	U	U	0.000495	0.0472		ng/L	LB<RL (none)
2,3,7,8-TCDD	0.0011	U	U	0.0011	0.00944		ng/L	
2,3,7,8-TCDF	0.000789	U	U	0.000789	0.00944		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.000247						ng/L	LB>RL (none)
TEQ WHO2005 ND=0.5 with EMPCs	0.00163						ng/L	LB>RL (none)
Total Heptachlorodibenzofuran with EMPCs	0.00835	J	BJ	0.00077	0.0472		ng/L	InvalidLabFlag (J)
	0.00835	J	BJ	0.00077	0.0472		ng/L	LB<RL (none)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.0373	J	BJ	0.000969	0.0472		ng/L	InvalidLabFlag (J)
	0.0373	J	BJ	0.000969	0.0472		ng/L	LB>MDL (None)
Total Hexachlorodibenzofuran with EMPCs	0.00183	J	BJK	0.000525	0.0472		ng/L	InvalidLabFlag (J)
	0.00183	J	BJK	0.000525	0.0472		ng/L	LB<RL (none)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00423	J	BJK	0.00098	0.0472		ng/L	InvalidLabFlag (J)
	0.00423	J	BJK	0.00098	0.0472		ng/L	LB<RL (none)
Total Pentachlorodibenzofuran with EMPCs	0.000359	J	BJK	0.000344	0.0472		ng/L	InvalidLabFlag (J)
	0.000359	J	BJK	0.000344	0.0472		ng/L	LB<RL (none)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.000885	U	U	0.000885	0.0472		ng/L	LB<RL (none)
Total Tetrachlorodibenzofuran with EMPCs	0.000789	U	U	0.000789	0.00944		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.00126	J	JK	0.0011	0.00944		ng/L	InvalidLabFlag (J)

Field ID: EVBMP0009S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.359			0.00222	0.0941		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.023	J	J	0.00216	0.0941		ng/L	
1,2,3,4,6,7,8-HpCDD	0.0305	J	BJ	0.00124	0.0471		ng/L	InvalidLabFlag (J)
	0.0305	J	BJ	0.00124	0.0471		ng/L	LB>MDL (None)
1,2,3,4,6,7,8-HpCDF	0.00614	U	BJ	0.000518	0.0471		ng/L	LB<RL (U)
1,2,3,4,7,8,9-HpCDF	0.000666	U	U	0.000666	0.0471		ng/L	LB<RL (none)
1,2,3,4,7,8-HxCDD	0.000977	U	U	0.000977	0.0471		ng/L	LB<RL (none)
1,2,3,4,7,8-HxCDF	0.000491	U	U	0.000491	0.0471		ng/L	LB<RL (none)
1,2,3,6,7,8-HxCDD	0.00162	UJ	BJK	0.000915	0.0471		ng/L	LB<RL (U)
	0.00162	UJ	BJK	0.000915	0.0471		ng/L	EMPC (UJ)
1,2,3,6,7,8-HxCDF	0.000518	U	U	0.000518	0.0471		ng/L	LB<RL (none)
1,2,3,7,8,9-HxCDD	0.00143	UJ	BJK	0.00096	0.0471		ng/L	LB<RL (U)
	0.00143	UJ	BJK	0.00096	0.0471		ng/L	EMPC (UJ)
1,2,3,7,8,9-HxCDF	0.000655	U	U	0.000655	0.0471		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.000619	U	U	0.000619	0.0471		ng/L	LB<RL (none)
1,2,3,7,8-PeCDF	0.000361	U	U	0.000361	0.0471		ng/L	LB<RL (none)
2,3,4,6,7,8-HxCDF	0.000499	U	U	0.000499	0.0471		ng/L	LB<RL (none)
2,3,4,7,8-PeCDF	0.000367	U	U	0.000367	0.0471		ng/L	LB<RL (none)
2,3,7,8-TCDD	0.000975	U	U	0.000975	0.00941		ng/L	
2,3,7,8-TCDF	0.000623	U	U	0.000623	0.00941		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.000785						ng/L	LB>RL (none)
TEQ WHO2005 ND=0.5 with EMPCs	0.00183						ng/L	LB>RL (none)
Total Heptachlorodibenzofuran with EMPCs	0.0183	J	BJ	0.000518	0.0471		ng/L	LB<RL (none)
	0.0183	J	BJ	0.000518	0.0471		ng/L	InvalidLabFlag (J)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.0784	J	J	0.00124	0.0471		ng/L	LB>MDL (None)
Total Hexachlorodibenzofuran with EMPCs	0.00442	J	BJK	0.000491	0.0471		ng/L	InvalidLabFlag (J)
	0.00442	J	BJK	0.000491	0.0471		ng/L	LB<RL (none)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00947	J	BJK	0.000915	0.0471		ng/L	InvalidLabFlag (J)

Validated Form I

Field ID: EVBMP0009S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
	0.00947	J	BJK	0.000915	0.0471		ng/L	LB<RL (none)
Total Pentachlorodibenzofuran with EMPCs	0.00111	J	BJK	0.000275	0.0471		ng/L	InvalidLabFlag (J)
	0.00111	J	BJK	0.000275	0.0471		ng/L	LB<RL (none)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.000619	U	U	0.000619	0.0471		ng/L	LB<RL (none)
Total Tetrachlorodibenzofuran with EMPCs	0.000623	U	U	0.000623	0.00941		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.000975	U	U	0.000975	0.00941		ng/L	

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
LB<RL	Laboratory blank contamination less than the reporting limit	Blank
LB>MDL	Laboratory blank contamination greater than the method detection limit	Blank
LB>RL	Laboratory blank contamination greater than the reporting limit	Blank
EMPC	Estimated Maximum Possible Concentration	Matrix
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-23510-1

Reviewer: xayachl

Method A2130B

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0008S015	N	1			
EVBMP0009S013	N	1			

1. Case Narrative

Items of Interest

The following items were noted LCS>UCL.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blanks were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

These LCS analytes were out of control: Turbidity (BS). No spike dupes in this SDG.

<u>Matrix</u>	<u>QAQC Type</u>	<u>Field ID</u>	<u>Analyte</u>	<u>Recovery</u>	<u>Lower Limit</u>	<u>Upper Limit</u>
WATER	BS	LCSSRM 570-57531/3	Turbidity	150	90	110

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

Initial Calibration was not examined by AutoDV.

Continuing Calibration

Continuing Calibration was not examined by AutoDV.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Laboratory Control Sample: These LCS analytes were out of control: Turbidity (BS). No spike dupes in this SDG.
VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0008S015

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Turbidity	62.5	J		0.0439	0.05		NTU	LCS>UCL (J)

Field ID: EVBMP0009S013

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Turbidity	4.88	J		0.0439	0.05		NTU	LCS>UCL (J)

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
LCS>UCL	LCS recovery greater than the upper control limit	LaboratoryControlSample

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-23510-1

Reviewer: xayachl

Method A2540D

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S012	N	1			
EVBMP0008S015	N	1			
EVBMP0009S013	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag.
 All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	3.2			0.829	1		mg/L	

Field ID: EVBMP0008S015

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	47.4			1.66	2		mg/L	

Field ID: EVBMP0009S013

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	4			0.829	1		mg/L	

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-23510-1

Reviewer: xayachl

Method D4464(M)

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S012	N	1			
EVBMP0008S015	N	1			
EVBMP0009S013	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blanks were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

No spikes in this SDG. No spike dupes in this SDG.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Laboratory Control Sample: No spikes in this SDG. No spike dupes in this SDG.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	3.68			0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	0.01	U	U	0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.01	U	U	0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	84.45			0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	88.13			0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	11.87			0.01	0.01		PERCENT	

Field ID: EVBMP0008S015

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	38.64			0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	0.01	U	U	0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.01	U	U	0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	61.35			0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	100			0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	0.01	U	U	0.01	0.01		PERCENT	

Field ID: EVBMP0009S013

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	5.27			0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	0.01	U	U	0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.01	U	U	0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	94.73			0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	100			0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	0.01	U	U	0.01	0.01		PERCENT	

Validated Form I

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-23510-1

Reviewer: xayachl

Method E200.8

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S012	N	1			
EVBMP0007S012MS	MS	1			
EVBMP0007S012SD	SD	1			
EVBMP0008S015	N	1			
EVBMP0009S013	N	1			

1. Case Narrative

Items of Interest

The following items were noted MS<LCL, SD<LCL, and MSRPD.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

These MS's were out of control: Cadmium, Dissolved (MS - EVBMP0007S012MS), Copper, Dissolved (MS - EVBMP0007S012MS), Lead, Dissolved (MS - EVBMP0007S012MS). These SD's were out of control: Cadmium, Dissolved (SD - EVBMP0007S012SD), Copper, Dissolved (SD - EVBMP0007S012SD), Lead, Dissolved (SD - EVBMP0007S012SD). These MS/SD RPD's were out of control: Cadmium, Dissolved (EVBMP0007S012), Copper, Dissolved (EVBMP0007S012), Lead, Dissolved (EVBMP0007S012).

Matrix	Sample ID	LR Type	Analyte	Result	MS/MSD Qualifier*	Criteria
WATER			<u>Cadmium, Dissolved</u>			
	EVBMP0007S012			0.00098 mg/L	UJ	MS<LCL
	EVBMP0007S012			0.00098 mg/L	none	MSRPD
	EVBMP0007S012			0.00098 mg/L	UJ	SD<LCL
WATER			<u>Copper, Dissolved</u>			
	EVBMP0007S012			0.00164 mg/L	J	MS<LCL

	EVBMP0007S012	0.00164 mg/L	J	MSRPD
	EVBMP0007S012	0.00164 mg/L	J	SD<LCL
WATER	<u>Lead, Dissolved</u>			
	EVBMP0007S012	0.000274 mg/L	J	MS<LCL
	EVBMP0007S012	0.000274 mg/L	J	MSRPD
	EVBMP0007S012	0.000274 mg/L	J	SD<LCL

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Matrix Spike: These MS's were out of control: Cadmium, Dissolved (MS - EVBMP0007S012MS), Copper, Dissolved (MS - EVBMP0007S012MS), Lead, Dissolved (MS - EVBMP0007S012MS). These SD's were out of control: Cadmium, Dissolved (SD - EVBMP0007S012SD), Copper, Dissolved (SD - EVBMP0007S012SD), Lead, Dissolved (SD - EVBMP0007S012SD). These MS/SD RPD's were out of control: Cadmium, Dissolved (EVBMP0007S012), Copper, Dissolved (EVBMP0007S012), Lead, Dissolved (EVBMP0007S012).

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.00098	U	U	0.00098	0.001		mg/L	
Cadmium, Dissolved	0.00098	UJ	H F1 F	0.00098	0.001		mg/L	MSRPD (none)
	0.00098	UJ	H F1 F	0.00098	0.001		mg/L	MS<LCL (UJ)
	0.00098	UJ	H F1 F	0.00098	0.001		mg/L	SD<LCL (UJ)
Copper	0.00226			0.00061	0.001		mg/L	
Copper, Dissolved	0.00164	J	H F1 F2	0.00061	0.001		mg/L	MS<LCL (J)
	0.00164	J	H F1 F2	0.00061	0.001		mg/L	MSRPD (J)
	0.00164	J	H F1 F2	0.00061	0.001		mg/L	SD<LCL (J)
Lead	0.000686	J	J	0.00019	0.001		mg/L	
Lead, Dissolved	0.000274	J	H F1 F	0.00019	0.001		mg/L	SD<LCL (J)
	0.000274	J	H F1 F	0.00019	0.001		mg/L	MS<LCL (J)
	0.000274	J	H F1 F	0.00019	0.001		mg/L	MSRPD (J)

Field ID: EVBMP0008S015

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.00098	U	U	0.00098	0.001		mg/L	
Cadmium, Dissolved	0.00098	U	U H	0.00098	0.001		mg/L	InvalidLabFlag (U
Copper	0.00207			0.00061	0.001		mg/L	
Copper, Dissolved	0.00131		H	0.00061	0.001		mg/L	InvalidLabFlag (=
Lead	0.000498	J	J	0.00019	0.001		mg/L	
Lead, Dissolved	0.000516	J	J H	0.00019	0.001		mg/L	InvalidLabFlag (J

Field ID: EVBMP0009S013

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.00098	U	U	0.00098	0.001		mg/L	
Cadmium, Dissolved	0.00098	U	U H	0.00098	0.001		mg/L	InvalidLabFlag (U
Copper	0.00196			0.00061	0.001		mg/L	
Copper, Dissolved	0.00161		H	0.00061	0.001		mg/L	InvalidLabFlag (=
Lead	0.000544	J	J	0.00019	0.001		mg/L	
Lead, Dissolved	0.000375	J	J H	0.00019	0.001		mg/L	InvalidLabFlag (J

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
MS<LCL	Matrix spike recovery less than the lower control limit	Matrix
MSRPD	Matrix spike RPD criteria exceedance	Matrix
SD<LCL	Matrix spike duplicate recovery criteria less than the lower control limit	Matrix
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-23510-1

Reviewer: xayachl

Method E245.1

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S012	N	1			
EVBMP0007S012MS	MS	1			
EVBMP0007S012SD	SD	1			
EVBMP0008S015	N	1			
EVBMP0009S013	N	1			

1. Case Narrative

Items of Interest

The following items were noted MS<LCL and SD<LCL.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

These MS's were out of control: Mercury, Dissolved (MS - EVBMP0007S012MS). These SD's were out of control: Mercury, Dissolved (SD - EVBMP0007S012SD). These MS/SD RPD's were out of control: Mercury, Dissolved (EVBMP0007S012).

Matrix	Sample ID	LR Type	Analyte	Result	MS/MSD Qualifier*	Criteria
WATER			<u>Mercury, Dissolved</u>			
	EVBMP0007S012			0.0000453 mg/L	UJ	MS<LCL
	EVBMP0007S012			0.0000453 mg/L	none	MSRPD
	EVBMP0007S012			0.0000453 mg/L	UJ	SD<LCL

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Matrix Spike: These MS's were out of control: Mercury, Dissolved (MS - EVBMP0007S012MS). These SD's were out of control: Mercury, Dissolved (SD - EVBMP0007S012SD). These MS/SD RPD's were out of control: Mercury, Dissolved (EVBMP0007S012).

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S012

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	UJ	H F2 F	#####	0.0002		mg/L	SD<LCL (UJ)
	0.0000453	UJ	H F2 F	#####	0.0002		mg/L	MS<LCL (UJ)
	0.0000453	UJ	H F2 F	#####	0.0002		mg/L	MSRPD (none)

Field ID: EVBMP0008S015

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U

Field ID: EVBMP0009S013

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	U	U H	#####	0.0002		mg/L	InvalidLabFlag (U

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
MS<LCL	Matrix spike recovery less than the lower control limit	Matrix
MSRPD	Matrix spike RPD criteria exceedance	Matrix
SD<LCL	Matrix spike duplicate recovery criteria less than the lower control limit	Matrix
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-23510-2

Reviewer: xayachl

Method E1613B

Date: 4/22/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
EVBMP0007S012	N	1			
EVBMP0008S015	N	1			
EVBMP0009S013	N	1			

1. Case Narrative

Items of Interest

The following items were noted EMPC, HTp>UCL, and LB<RL.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8,9-HxCDF, 1,2,3,7,8-PeCDD, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Hexachlorodibenzofuran with EMPCs, Total Hexachlorodibenzo-p-dioxin with EMPCs, Total Pentachlorodibenzofuran with EMPCs, Total Pentachlorodibenzo-p-dioxin with EMPCs. No flagging was applied for Total Dioxins, Furans, or LB>MDL.

<u>Blank Type</u>	<u>Blank ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Report Limit</u>	<u>Lab Flag</u>	<u>Units</u>	<u>SDG</u>
LB	12026415	1,2,3,4,6,7,8,9-OCDD	0.0063	0.1	JK	ng/L	570-23510-2
LB	12026415	1,2,3,4,6,7,8-HpCDF	0.00208	0.05	JK	ng/L	570-23510-2
LB	12026415	1,2,3,4,7,8-HxCDF	0.00176	0.05	JK	ng/L	570-23510-2
LB	12026415	1,2,3,6,7,8-HxCDF	0.00144	0.05	J	ng/L	570-23510-2
LB	12026415	1,2,3,7,8,9-HxCDD	0.00204	0.05	JK	ng/L	570-23510-2
LB	12026415	1,2,3,7,8,9-HxCDF	0.0017	0.05	J	ng/L	570-23510-2
LB	12026415	1,2,3,7,8-PeCDD	0.00148	0.05	JK	ng/L	570-23510-2
LB	12026415	1,2,3,7,8-PeCDF	0.0015	0.05	JK	ng/L	570-23510-2
LB	12026415	2,3,4,6,7,8-HxCDF	0.0016	0.05	J	ng/L	570-23510-2
LB	12026415	2,3,4,7,8-PeCDF	0.00202	0.05	J	ng/L	570-23510-2
LB	12026415	TEQ WHO2005 ND=0 with EMPCs	0.00301			ng/L	570-23510-2
LB	12026415	TEQ WHO2005 ND=0.5 with EMPCs	0.00402			ng/L	570-23510-2
LB	12026415	Total Heptachlorodibenzofuran with EMPCs	0.00208	0.05	JK	ng/L	570-23510-2
LB	12026415	Total Hexachlorodibenzofuran with EMPCs	0.0065	0.05	JK	ng/L	570-23510-2
LB	12026415	Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00204	0.05	JK	ng/L	570-23510-2

LB	12026415	Total Pentachlorodibenzofuran with EMPCs	0.00352	0.05	JK	ng/L	570-23510-2
LB	12026415	Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00148	0.05	JK	ng/L	570-23510-2

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG. All reported EMPC values were flagged as estimated non-detects.

<i>Matrix</i>	<i>Sample ID</i>	<i>LR Type</i>	<i>Analyte</i>	<i>Result</i>	<i>MS/MSD Qualifier*</i>	<i>Criteria</i>
WATER			1,2,3,4,6,7,8-HpCDF			
	EV BMP0007S012			0.00334 ng/L	UJ	EMPC

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

All acceptance criteria were met.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

Initial Calibration was not examined by AutoDV.

Continuing Calibration

Continuing Calibration was not examined by AutoDV.

9. Holding Time

These NativeIDs exceeded holding time: EVBMP0007S012, EVBMP0008S015, EVBMP0009S013.

<u>Field ID</u>	<u>LabsampleID</u>	<u>AnalysisDate</u>	<u>ExtractDate</u>	<u>Sample Date</u>	<u>Method</u>	<u>Time Actual</u>	<u>HT</u>
EVBMP0007S012 (570-23510-1)	16343001	4/15/2020	4/14/2020	3/13/2020	30	32	
EVBMP0008S015 (570-23510-2)	16343002	4/15/2020	4/14/2020	3/13/2020	30	32	
EVBMP0009S013 (570-23510-3)	16343003	4/15/2020	4/14/2020	3/13/2020	30	32	

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Method Blanks: These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8-HxCDF,

1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8,9-HxCDF, 1,2,3,7,8-PeCDD, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs, Total Heptachlorodibenzofuran with EMPCs, Total Hexachlorodibenzofuran with EMPCs, Total Hexachlorodibenzo-p-dioxin with EMPCs, Total Pentachlorodibenzofuran with EMPCs, Total Pentachlorodibenzo-p-dioxin with EMPCs.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Holding Time: These NativeIDs exceeded holding time: EVBMP0007S012, EVBMP0008S015, EVBMP0009S013.
VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag.
All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: EVBMP0007S012								
Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.149	J		0.00762	0.0955		ng/L	LB>MDL (None)
	0.149	J		0.00762	0.0955		ng/L	HTp>UCL (J)
1,2,3,4,6,7,8,9-OCDF	0.00871	J	J	0.0042	0.0955		ng/L	HTp>UCL (J)
1,2,3,4,6,7,8-HpCDD	0.013	J	J	0.00395	0.0477		ng/L	HTp>UCL (J)
1,2,3,4,6,7,8-HpCDF	0.00334	UJ	BJK	0.00145	0.0477		ng/L	HTp>UCL (J)
	0.00334	UJ	BJK	0.00145	0.0477		ng/L	LB<RL (U)
	0.00334	UJ	BJK	0.00145	0.0477		ng/L	EMPC (UJ)
1,2,3,4,7,8,9-HpCDF	0.0019	UJ	U	0.0019	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,4,7,8-HxCDD	0.00172	UJ	U	0.00172	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,4,7,8-HxCDF	0.000911	UJ	U	0.000911	0.0477		ng/L	HTp>UCL (UJ)
	0.000911	UJ	U	0.000911	0.0477		ng/L	LB<RL (none)
1,2,3,6,7,8-HxCDD	0.0016	UJ	U	0.0016	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,6,7,8-HxCDF	0.000928	UJ	U	0.000928	0.0477		ng/L	LB<RL (none)
	0.000928	UJ	U	0.000928	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,7,8,9-HxCDD	0.00171	UJ	U	0.00171	0.0477		ng/L	HTp>UCL (UJ)
	0.00171	UJ	U	0.00171	0.0477		ng/L	LB<RL (none)
1,2,3,7,8,9-HxCDF	0.00145	UJ	U	0.00145	0.0477		ng/L	HTp>UCL (UJ)
	0.00145	UJ	U	0.00145	0.0477		ng/L	LB<RL (none)
1,2,3,7,8-PeCDD	0.00103	UJ	U	0.00103	0.0477		ng/L	LB<RL (none)
	0.00103	UJ	U	0.00103	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,7,8-PeCDF	0.000995	UJ	U	0.000995	0.0477		ng/L	LB<RL (none)
	0.000995	UJ	U	0.000995	0.0477		ng/L	HTp>UCL (UJ)
2,3,4,6,7,8-HxCDF	0.000987	UJ	U	0.000987	0.0477		ng/L	HTp>UCL (UJ)
	0.000987	UJ	U	0.000987	0.0477		ng/L	LB<RL (none)
2,3,4,7,8-PeCDF	0.000926	UJ	U	0.000926	0.0477		ng/L	LB<RL (none)
	0.000926	UJ	U	0.000926	0.0477		ng/L	HTp>UCL (UJ)
2,3,7,8-TCDD	0.00138	UJ	U	0.00138	0.00955		ng/L	HTp>UCL (UJ)
2,3,7,8-TCDF	0.00164	UJ	U	0.00164	0.00955		ng/L	HTp>UCL (UJ)
TEQ WHO2005 ND=0 with EMPCs	0.00021	J					ng/L	HTp>UCL (J)
	0.00021	J					ng/L	LB>RL (none)
TEQ WHO2005 ND=0.5 with EMPCs	0.00212	J					ng/L	HTp>UCL (J)
	0.00212	J					ng/L	LB>RL (none)
Total Heptachlorodibenzofuran with EMPCs	0.00768	J	BJK	0.00145	0.0477		ng/L	HTp>UCL (J)
	0.00768	J	BJK	0.00145	0.0477		ng/L	LB<RL (none)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.0351	J	J	0.00395	0.0477		ng/L	HTp>UCL (J)
Total Hexachlorodibenzofuran with EMPCs	0.000911	UJ	U	0.000911	0.0477		ng/L	LB<RL (none)
	0.000911	UJ	U	0.000911	0.0477		ng/L	HTp>UCL (UJ)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00174	J	BJ	0.0016	0.0477		ng/L	HTp>UCL (J)
	0.00174	J	BJ	0.0016	0.0477		ng/L	LB<RL (none)
Total Pentachlorodibenzofuran with EMPCs	0.00089	UJ	U	0.00089	0.0477		ng/L	HTp>UCL (UJ)
	0.00089	UJ	U	0.00089	0.0477		ng/L	LB<RL (none)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00103	UJ	U	0.00103	0.0477		ng/L	LB<RL (none)
	0.00103	UJ	U	0.00103	0.0477		ng/L	HTp>UCL (UJ)
Total Tetrachlorodibenzofuran with EMPCs	0.00164	UJ	U	0.00164	0.00955		ng/L	HTp>UCL (UJ)
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.00138	UJ	U	0.00138	0.00955		ng/L	HTp>UCL (UJ)

Field ID: EVBMP0008S015								
Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)

Validated Form I

Field ID: EVBMP0008S015

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.0703	J	J	0.00813	0.0952		ng/L	HTp>UCL (J)
	0.0703	J	J	0.00813	0.0952		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.00463	UJ	U	0.00463	0.0952		ng/L	HTp>UCL (UJ)
1,2,3,4,6,7,8-HpCDD	0.00604	UJ	U	0.00604	0.0476		ng/L	HTp>UCL (UJ)
1,2,3,4,6,7,8-HpCDF	0.00135	UJ	U	0.00135	0.0476		ng/L	HTp>UCL (UJ)
	0.00135	UJ	U	0.00135	0.0476		ng/L	LB<RL (none)
1,2,3,4,7,8,9-HpCDF	0.00192	UJ	U	0.00192	0.0476		ng/L	HTp>UCL (UJ)
1,2,3,4,7,8-HxCDD	0.00162	UJ	U	0.00162	0.0476		ng/L	HTp>UCL (UJ)
1,2,3,4,7,8-HxCDF	0.000942	UJ	U	0.000942	0.0476		ng/L	LB<RL (none)
	0.000942	UJ	U	0.000942	0.0476		ng/L	HTp>UCL (UJ)
1,2,3,6,7,8-HxCDD	0.00146	UJ	U	0.00146	0.0476		ng/L	HTp>UCL (UJ)
1,2,3,6,7,8-HxCDF	0.000933	UJ	U	0.000933	0.0476		ng/L	LB<RL (none)
	0.000933	UJ	U	0.000933	0.0476		ng/L	HTp>UCL (UJ)
1,2,3,7,8,9-HxCDD	0.00158	UJ	U	0.00158	0.0476		ng/L	HTp>UCL (UJ)
	0.00158	UJ	U	0.00158	0.0476		ng/L	LB<RL (none)
1,2,3,7,8,9-HxCDF	0.0014	UJ	U	0.0014	0.0476		ng/L	LB<RL (none)
	0.0014	UJ	U	0.0014	0.0476		ng/L	HTp>UCL (UJ)
1,2,3,7,8-PeCDD	0.00127	UJ	U	0.00127	0.0476		ng/L	LB<RL (none)
	0.00127	UJ	U	0.00127	0.0476		ng/L	HTp>UCL (UJ)
1,2,3,7,8-PeCDF	0.00126	UJ	U	0.00126	0.0476		ng/L	HTp>UCL (UJ)
	0.00126	UJ	U	0.00126	0.0476		ng/L	LB<RL (none)
2,3,4,6,7,8-HxCDF	0.00091	UJ	U	0.00091	0.0476		ng/L	LB<RL (none)
	0.00091	UJ	U	0.00091	0.0476		ng/L	HTp>UCL (UJ)
2,3,4,7,8-PeCDF	0.0012	UJ	U	0.0012	0.0476		ng/L	LB<RL (none)
	0.0012	UJ	U	0.0012	0.0476		ng/L	HTp>UCL (UJ)
2,3,7,8-TCDD	0.00219	UJ	U	0.00219	0.00952		ng/L	HTp>UCL (UJ)
2,3,7,8-TCDF	0.00238	UJ	U	0.00238	0.00952		ng/L	HTp>UCL (UJ)
TEQ WHO2005 ND=0 with EMPCs	0.0000211	J					ng/L	LB>RL (none)
	0.0000211	J					ng/L	HTp>UCL (J)
TEQ WHO2005 ND=0.5 with EMPCs	0.00256	J					ng/L	HTp>UCL (J)
	0.00256	J					ng/L	LB>RL (none)
Total Heptachlorodibenzofuran with EMPCs	0.00169	J	BJ	0.00135	0.0476		ng/L	HTp>UCL (J)
	0.00169	J	BJ	0.00135	0.0476		ng/L	LB<RL (none)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.00765	J	J	0.00604	0.0476		ng/L	HTp>UCL (J)
Total Hexachlorodibenzofuran with EMPCs	0.00091	UJ	U	0.00091	0.0476		ng/L	LB<RL (none)
	0.00091	UJ	U	0.00091	0.0476		ng/L	HTp>UCL (UJ)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00146	UJ	U	0.00146	0.0476		ng/L	LB<RL (none)
	0.00146	UJ	U	0.00146	0.0476		ng/L	HTp>UCL (UJ)
Total Pentachlorodibenzofuran with EMPCs	0.0012	UJ	U	0.0012	0.0476		ng/L	LB<RL (none)
	0.0012	UJ	U	0.0012	0.0476		ng/L	HTp>UCL (UJ)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00127	UJ	U	0.00127	0.0476		ng/L	LB<RL (none)
	0.00127	UJ	U	0.00127	0.0476		ng/L	HTp>UCL (UJ)
Total Tetrachlorodibenzofuran with EMPCs	0.00238	UJ	U	0.00238	0.00952		ng/L	HTp>UCL (UJ)
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.00219	UJ	U	0.00219	0.00952		ng/L	HTp>UCL (UJ)

Field ID: EVBMP0009S013

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.0563	J	BJ	0.00742	0.0953		ng/L	HTp>UCL (J)
	0.0563	J	BJ	0.00742	0.0953		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.00581	UJ	U	0.00581	0.0953		ng/L	HTp>UCL (UJ)
1,2,3,4,6,7,8-HpCDD	0.0056	J	J	0.00452	0.0477		ng/L	HTp>UCL (J)

Validated Form I

Field ID: EVBMP0009S013

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8-HpCDF	0.00144	UJ	U	0.00144	0.0477		ng/L	LB<RL (none)
	0.00144	UJ	U	0.00144	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,4,7,8,9-HpCDF	0.00208	UJ	U	0.00208	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,4,7,8-HxCDD	0.00181	UJ	U	0.00181	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,4,7,8-HxCDF	0.000884	UJ	U	0.000884	0.0477		ng/L	HTp>UCL (UJ)
	0.000884	UJ	U	0.000884	0.0477		ng/L	LB<RL (none)
1,2,3,6,7,8-HxCDD	0.0017	UJ	U	0.0017	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,6,7,8-HxCDF	0.000913	UJ	U	0.000913	0.0477		ng/L	LB<RL (none)
	0.000913	UJ	U	0.000913	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,7,8,9-HxCDD	0.00181	UJ	U	0.00181	0.0477		ng/L	LB<RL (none)
	0.00181	UJ	U	0.00181	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,7,8,9-HxCDF	0.00137	UJ	U	0.00137	0.0477		ng/L	LB<RL (none)
	0.00137	UJ	U	0.00137	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,7,8-PeCDD	0.00133	UJ	U	0.00133	0.0477		ng/L	LB<RL (none)
	0.00133	UJ	U	0.00133	0.0477		ng/L	HTp>UCL (UJ)
1,2,3,7,8-PeCDF	0.00124	UJ	U	0.00124	0.0477		ng/L	HTp>UCL (UJ)
	0.00124	UJ	U	0.00124	0.0477		ng/L	LB<RL (none)
2,3,4,6,7,8-HxCDF	0.000928	UJ	U	0.000928	0.0477		ng/L	LB<RL (none)
	0.000928	UJ	U	0.000928	0.0477		ng/L	HTp>UCL (UJ)
2,3,4,7,8-PeCDF	0.00108	UJ	U	0.00108	0.0477		ng/L	LB<RL (none)
	0.00108	UJ	U	0.00108	0.0477		ng/L	HTp>UCL (UJ)
2,3,7,8-TCDD	0.00174	UJ	U	0.00174	0.00953		ng/L	HTp>UCL (UJ)
2,3,7,8-TCDF	0.00227	UJ	U	0.00227	0.00953		ng/L	HTp>UCL (UJ)
TEQ WHO2005 ND=0 with EMPCs	0.0000729	J					ng/L	LB>RL (none)
	0.0000729	J					ng/L	HTp>UCL (J)
TEQ WHO2005 ND=0.5 with EMPCs	0.00239	J					ng/L	HTp>UCL (J)
	0.00239	J					ng/L	LB>RL (none)
Total Heptachlorodibenzofuran with EMPCs	0.00185	J	BJ	0.00144	0.0477		ng/L	HTp>UCL (J)
	0.00185	J	BJ	0.00144	0.0477		ng/L	LB<RL (none)
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.0135	J	JK	0.00452	0.0477		ng/L	HTp>UCL (J)
Total Hexachlorodibenzofuran with EMPCs	0.000884	UJ	U	0.000884	0.0477		ng/L	LB<RL (none)
	0.000884	UJ	U	0.000884	0.0477		ng/L	HTp>UCL (UJ)
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.0017	UJ	U	0.0017	0.0477		ng/L	HTp>UCL (UJ)
	0.0017	UJ	U	0.0017	0.0477		ng/L	LB<RL (none)
Total Pentachlorodibenzofuran with EMPCs	0.00108	UJ	U	0.00108	0.0477		ng/L	LB<RL (none)
	0.00108	UJ	U	0.00108	0.0477		ng/L	HTp>UCL (UJ)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00133	UJ	U	0.00133	0.0477		ng/L	LB<RL (none)
	0.00133	UJ	U	0.00133	0.0477		ng/L	HTp>UCL (UJ)
Total Tetrachlorodibenzofuran with EMPCs	0.00227	UJ	U	0.00227	0.00953		ng/L	HTp>UCL (UJ)
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.00174	UJ	U	0.00174	0.00953		ng/L	HTp>UCL (UJ)

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
LB<RL	Laboratory blank contamination less than the reporting limit	Blank
LB>MDL	Laboratory blank contamination greater than the method detection limit	Blank
LB>RL	Laboratory blank contamination greater than the reporting limit	Blank
HTp>UCL	Holding time exceeded	HoldingTime
EMPC	Estimated Maximum Possible Concentration	Matrix

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-25593-1

Reviewer: xayachl

Method A2540D

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0006S011	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag.
All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0006S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Total Suspended Solids	29.4			1.27	1.54		mg/L	

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-25593-1

Reviewer: xayachl

Method D4464(M)

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0006S011	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blanks were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

No spikes in this SDG. No spike dupes in this SDG.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

N/A

Continuing Calibration

N/A

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

Laboratory Control Sample: No spikes in this SDG. No spike dupes in this SDG.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0006S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Clay(less than 0.00391 mm)	0.01	U	U	0.01	0.01		PERCENT	
Coarse Sand (0.5mm to 1mm)	0.01	U	U	0.01	0.01		PERCENT	
Fine Sand (0.125 to 0.25mm)	35.04			0.01	0.01		PERCENT	
Gravel (greater than 2 mm)	0.01	U	U	0.01	0.01		PERCENT	
Medium Sand (0.25 to 0.5 mm)	0.49			0.01	0.01		PERCENT	
Silt (0.00391 to 0.0625mm)	30.11			0.01	0.01		PERCENT	
Total Silt and Clay (0 to 0.0626mm)	30.11			0.01	0.01		PERCENT	
Very Coarse Sand (1 to 2mm)	0.01	U	U	0.01	0.01		PERCENT	
Very Fine Sand (0.0625 to 0.125 mm)	34.36			0.01	0.01		PERCENT	

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-25593-1

Reviewer: xayachl

Method E200.8

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0006S011	N	1			

1. Case Narrative

Items of Interest

There were no items of concern.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG.

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0006S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Cadmium	0.00098	U	U	0.00098	0.001		mg/L	
Cadmium, Dissolved	0.00098	U	U H	0.00098	0.001		mg/L	InvalidLabFlag (U
Copper	0.00315			0.00061	0.001		mg/L	
Copper, Dissolved	0.00244		H	0.00061	0.001		mg/L	InvalidLabFlag (H
Lead	0.00104			0.00019	0.001		mg/L	
Lead, Dissolved	0.00019	U	U H	0.00019	0.001		mg/L	InvalidLabFlag (U

Validation Flag Abbreviations

Abbreviation	Validation Reason	Category
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-25593-1

Reviewer: xayachl

Method E245.1

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0006S011	N	1			
A2BMP0006S011MS	MS	1			
A2BMP0006S011SD	SD	1			

1. Case Narrative

Items of Interest

The following items were noted MS<LCL and SD<LCL.

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

No Method Blank detects were found.

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

These MS's were out of control: Mercury, Dissolved (MS - A2BMP0006S011MS). These SD's were out of control: Mercury, Dissolved (SD - A2BMP0006S011SD). All RPD acceptance criteria were met.

Matrix	Sample ID	LR Type	Analyte	Result	MS/MSD Qualifier*	Criteria
WATER			<u>Mercury, Dissolved</u>			
	A2BMP0006S011			0.0000453 mg/L	UJ	MS<LCL
	A2BMP0006S011			0.0000453 mg/L	UJ	SD<LCL

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

No surrogates in this SDG.

6. Tuning and Mass Calibration

N/A

7. Internal Standard

N/A

8. Calibration Information

Initial Calibration

There were no ICB detections found except for those specified on the Validated Form I.

Continuing Calibration

There were no CCB detections found except for those specified on the Validated Form I.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Surrogates: No surrogates in this SDG.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0006S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
Mercury	0.0000453	U	U	#####	0.0002		mg/L	
Mercury, Dissolved	0.0000453	UJ	U H	#####	0.0002		mg/L	SD<LCL (UJ)
	0.0000453	UJ	U H	#####	0.0002		mg/L	MS<LCL (UJ)

Validation Flag Abbreviations

<i>Abbreviation</i>	<i>Validation Reason</i>	<i>Category</i>
MS<LCL	Matrix spike recovery less than the lower control limit	Matrix
SD<LCL	Matrix spike duplicate recovery criteria less than the lower control limit	Matrix

CH661 PO 100067108373

Data Quality Evaluation

SDG 570-25593-2

Reviewer: xayachl

Method E1613B

Date: 5/4/2020

Matrix WATER

Reviewed: 6/2/2020

Field Samples

Field blank association lot values: LotNumber / FieldID / SDG

NativeID	QAQC Type	Dilution	ABLotValue	EBLotValue	TBLotValue
WATER					
A2BMP0006S011	N	1			

1. Case Narrative

Items of Interest

The following items were noted: EMPC

2. Blank Summary

Field Blanks

No Field Blanks were found.

Method Blanks

These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs. No flagging was applied for Total Dioxins, Furans, or LB>MDL.

Blank

<u>Type</u>	<u>Blank ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Report Limit</u>	<u>Lab Flag</u>	<u>Units</u>	<u>SDG</u>
LB	12026457	1,2,3,4,6,7,8,9-OCDD	0.00528	0.1	JK	ng/L	570-25593-2
LB	12026457	TEQ WHO2005 ND=0 with EMPCs	0.00000158			ng/L	570-25593-2
LB	12026457	TEQ WHO2005 ND=0.5 with EMPCs	0.00385			ng/L	570-25593-2

3. Spikes and Duplicates

Field Duplicates

No FD Associated.

Laboratory Duplicates

None in this SDG

Matrix Spike

No MS's for this SDG. No SD's for this SDG. MS RPD: None for this SDG. All reported EMPC values were flagged as estimated non-detects.

<u>Matrix</u>	<u>Sample ID</u>	<u>LR Type</u>	<u>Analyte</u>	<u>Result</u>	<u>MS/MSD Qualifier*</u>	<u>Criteria</u>
WATER			<u>1,2,3,4,6,7,8,9-OCDD</u>			
	A2BMP0006S011			0.0298 ng/L	UJ	EMPC

4. Laboratory Control Sample

All acceptance criteria were met.

5. Surrogates

All acceptance criteria were met.

6. Tuning and Mass Calibration

Tuning and Mass Calibration were not examined by AutoDV.

7. Internal Standard

Internal Standard Area/Retention Time was not examined by AutoDV.

8. Calibration Information

Initial Calibration

Initial Calibration was not examined by AutoDV.

Continuing Calibration

Continuing Calibration was not examined by AutoDV.

9. Holding Time

All acceptance criteria were met.

10. Confirmation

None for this SDG.

11. Summary

General Comments

Field Duplicates: No FD Associated.

Form I Review: No samples were excluded for dilutions or re-extractions.

Method Blanks: These analytes had Method Blank detects: 1,2,3,4,6,7,8,9-OCDD, TEQ WHO2005 ND=0 with EMPCs, TEQ WHO2005 ND=0.5 with EMPCs.

Tuning and Mass Calibration: Tuning and Mass Calibration were not examined by AutoDV.

Internal Standard Area/Retention Time: Internal Standard Area/Retention Time was not examined by AutoDV.

Initial Calibration: Initial Calibration was not examined by AutoDV.

Continuing Calibration: Continuing Calibration was not examined by AutoDV.

VDMS4.48

Data Package Completeness Package was complete for level V validation.

Forms Review/ Items of Interest

No samples were excluded for dilutions or re-extractions.

COC Review

No discrepancies.

Validated Form I

Final Data Flags*

Validated Form I

*When the data evaluation process results in multiple flags, the most severe flag becomes the final data flag. All flags are from the site-specific QAPP, except the "exclude" flag that is used to designate results that are not for risk assessment (for example, a result from a dilution where the original undiluted result is appropriate).

Field ID: A2BMP0006S011

Analyte	Result	Final Flag	Lab Flag	MDL	RL	LOD	Units	Validation Reason (Flag)
1,2,3,4,6,7,8,9-OCDD	0.0298	UJ	BJK	0.00911	0.0969		ng/L	EMPC (UJ)
	0.0298	UJ	BJK	0.00911	0.0969		ng/L	LB>MDL (None)
1,2,3,4,6,7,8,9-OCDF	0.0071	U	U	0.0071	0.0969		ng/L	
1,2,3,4,6,7,8-HpCDD	0.00463	U	U	0.00463	0.0485		ng/L	
1,2,3,4,6,7,8-HpCDF	0.00189	U	U	0.00189	0.0485		ng/L	
1,2,3,4,7,8,9-HpCDF	0.00293	U	U	0.00293	0.0485		ng/L	
1,2,3,4,7,8-HxCDD	0.00314	U	U	0.00314	0.0485		ng/L	
1,2,3,4,7,8-HxCDF	0.00158	U	U	0.00158	0.0485		ng/L	
1,2,3,6,7,8-HxCDD	0.00293	U	U	0.00293	0.0485		ng/L	
1,2,3,6,7,8-HxCDF	0.00162	U	U	0.00162	0.0485		ng/L	
1,2,3,7,8,9-HxCDD	0.00306	U	U	0.00306	0.0485		ng/L	
1,2,3,7,8,9-HxCDF	0.00271	U	U	0.00271	0.0485		ng/L	
1,2,3,7,8-PeCDD	0.00165	U	U	0.00165	0.0485		ng/L	
1,2,3,7,8-PeCDF	0.00238	U	U	0.00238	0.0485		ng/L	
2,3,4,6,7,8-HxCDF	0.00167	U	U	0.00167	0.0485		ng/L	
2,3,4,7,8-PeCDF	0.00205	U	U	0.00205	0.0485		ng/L	
2,3,7,8-TCDD	0.00415	U	U	0.00415	0.00969		ng/L	
2,3,7,8-TCDF	0.00376	U	U	0.00376	0.00969		ng/L	
TEQ WHO2005 ND=0 with EMPCs	0.00000894						ng/L	LB>MDL (None)
TEQ WHO2005 ND=0.5 with EMPCs	0.00433						ng/L	LB>RL (NONE)
Total Heptachlorodibenzofuran with EMPCs	0.00189	U	U	0.00189	0.0485		ng/L	
Total Heptachlorodibenzo-p-dioxin with EMPCs	0.0062	J	JK	0.00463	0.0485		ng/L	InvalidLabFlag (J)
Total Hexachlorodibenzofuran with EMPCs	0.00158	U	U	0.00158	0.0485		ng/L	
Total Hexachlorodibenzo-p-dioxin with EMPCs	0.00293	U	U	0.00293	0.0485		ng/L	
Total Pentachlorodibenzofuran with EMPCs	0.00318	J	JK	0.00177	0.0485		ng/L	InvalidLabFlag (J)
Total Pentachlorodibenzo-p-dioxin with EMPCs	0.00165	U	U	0.00165	0.0485		ng/L	
Total Tetrachlorodibenzofuran with EMPCs	0.00376	U	U	0.00376	0.00969		ng/L	
Total Tetrachlorodibenzo-p-dioxin with EMPCs	0.00415	U	U	0.00415	0.00969		ng/L	

Validation Flag Abbreviations

Abbreviation	Validation Reason	Category
LB>MDL	Laboratory blank contamination greater than the method detection limit	Blank
LB>RL	Laboratory blank contamination greater than the reporting limit	Blank
EMPC	Estimated Maximum Possible Concentration	Matrix
InvalidLabFlag	Removed invalid laboratory flag	Miscellaneous

Validated Form I

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Appendix C: 2019/20 Exceeding Constituent Source Investigation

Prepared by

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Acronyms

BEF	Bioaccumulation Equivalency Factor
BMP	Best Management Practice
DNQ	Detected not Quantified
DTSC	Department of Toxic Substances Control
ISRA	Interim Source Removal Action
MDL	Method Detection Limit
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NPDES	National Pollutant Discharge Elimination System
ND	Not Detected
pCi/L	picocuries per liter
PS	Particulate Strength
RFI	RCRA Facility Investigations
RCRA	Resource Conservation and Recovery Act
SSFL	Santa Susana Field Laboratory
SWTS	Stormwater Treatment System
TCDD	Tetrachlorodibenzo-p-dioxin
TSS	Total Suspended Solids
TEQ	Toxic Equivalence
Rv	volumetric runoff coefficient

1. Introduction

An analysis was conducted to evaluate potential sources that may have contributed to NPDES permit benchmark (benchmark) exceedances at the Santa Susana Field Laboratory (SSFL) National Pollutant Discharge Elimination System (NPDES) Outfalls during the 2019/20 rainy season. There were no NPDES permit limit exceedances during the 2019/20 rainy season, only exceedances of benchmarks, which apply to Outfalls 001 and 002 in the southern buffer zone area. SSFL NPDES Outfall locations are shown in Figure 1.

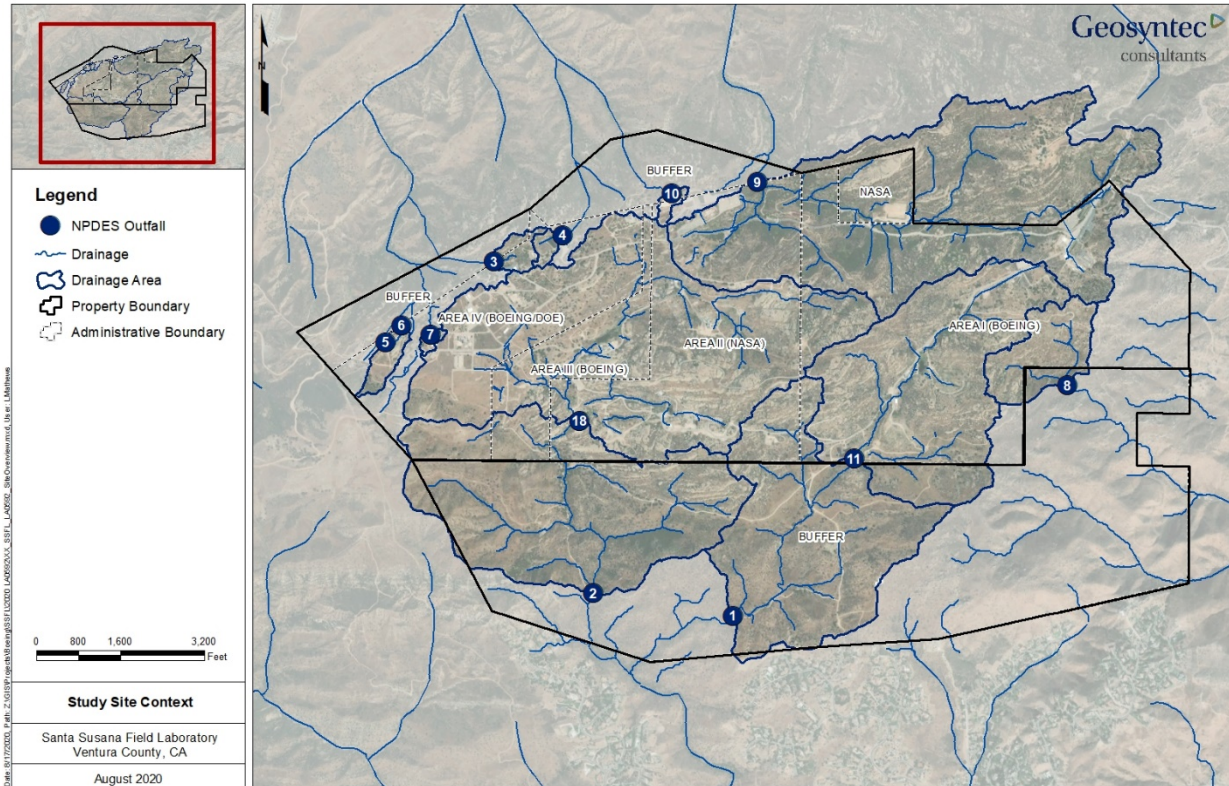


Figure 1. Santa Susana Field Laboratory (SSFL) National Pollutant Discharge Elimination System (NPDES) Outfalls

Both Outfalls with benchmark exceedances received runoff from watersheds that were almost completely burned in late 2018 in the Woolsey Fire. The intensity of the burned areas in the Outfall 001 and 002 were mostly low to moderate soil burn severity, as shown in Figure 2.

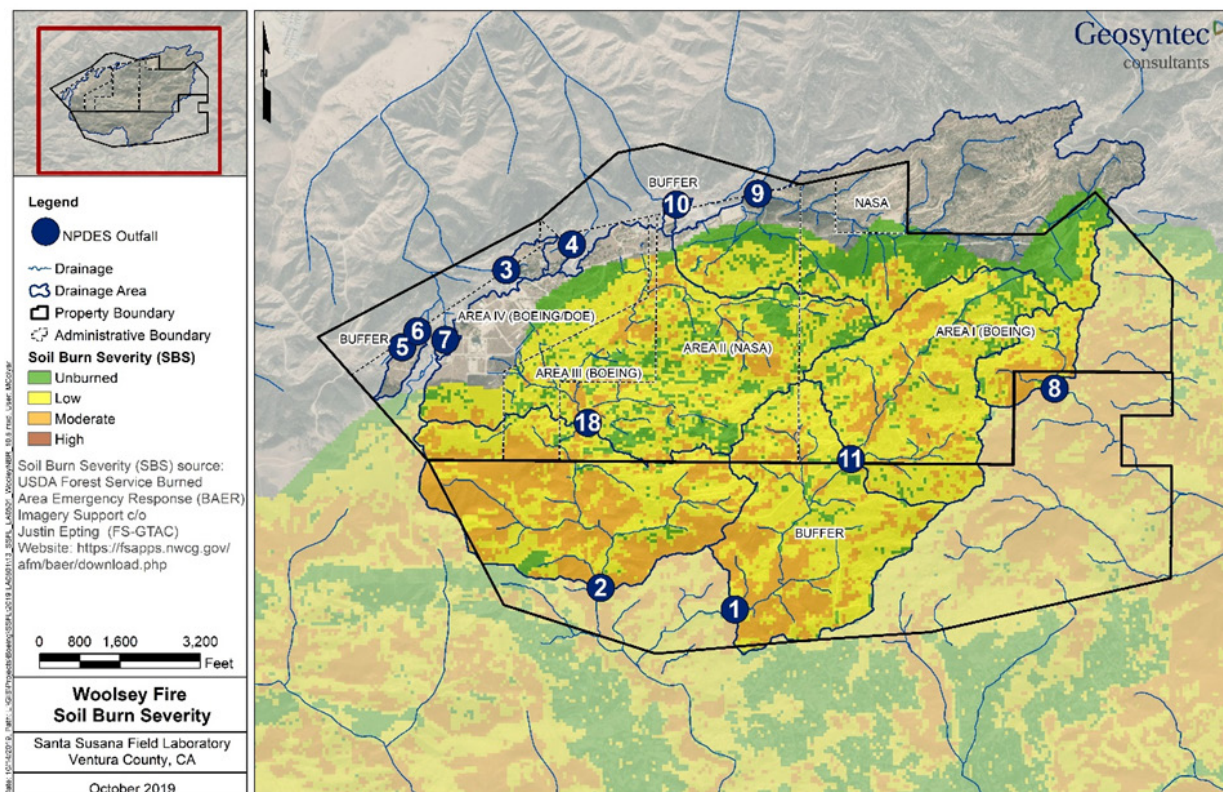


Figure 2. SSFL NPDES Outfalls Relative to Woolsey Fire Burn Area and Severity

Constituents that exceeded¹ a benchmark at least once in the 2019/20 rainy season were: iron, lead, manganese, and Tetrachlorodibenzo-p-dioxin Toxic Equivalence (TCDD TEQ) (no DNQ). The details of each exceedance are outlined in Table 1 below, along with the associated total suspended solids (TSS) concentration for each sample.

¹ Gross alpha in one Outfall 001 sample in December 2019 was indeterminate (14.1 +/-3.6 pCi/L) when compared to the daily maximum benchmark of 15 pCi/L, but the annual average for Outfall 001 (3.65 +/-0.64 pCi/L) was below the average annual benchmark so gross alpha at OF001 was in compliance for 2019, as reported in the quarterly monitoring report. Compliance for 2020 will be evaluated at the end of the calendar year. Therefore, gross alpha is not evaluated further in this report.

APPENDIX C: 2019/20 Exceeding Constituent Source Investigation

Table 1. 2019/2020 Benchmark Exceedances

Date	Outfall	Parameter	Units	Result	Limit	TSS (mg/L)
12/27/2019	001	Gross Alpha ¹	pCi/L	14.1 +/-3.6	15	190
12/27/2019	001	Iron	mg/L	14	0.3	190
12/27/2019	001	Lead	µg/L	6.6	5.2	190
12/27/2019	001	TCDD TEQ (no DNQ)	µg/L	5.08E-08	2.8E-08	190
3/24/2020	001	Iron	mg/L	5.4	0.3	43
3/24/2020	001	Manganese	µg/L	90	50	43
3/24/2020	001	TCDD TEQ (no DNQ)	µg/L	3.29E-08	2.8E-08	43
4/10/2020	001	Iron	mg/L	2.10	0.3	22
12/5/2019	002	Iron	mg/L	1.5	0.3	49
12/24/2019	002	Iron	mg/L	8.7	0.3	110
12/24/2019	002	TCDD TEQ (no DNQ)	µg/L	5.08E-08	2.8E-08	110
3/14/2020	002	Iron	mg/L	1.3	0.3	14

¹ Gross alpha was in compliance for 2019, as reported in the quarterly monitoring report. Therefore, gross alpha is not evaluated further in this report.

A variety of natural and anthropogenic sources present at the SSFL were evaluated to determine their potential to contribute to surface water benchmark exceedances at these outfalls. This evaluation was accomplished by performing various data analyses to establish a “weight of evidence” means of hypothesis testing. Various lines of evidence (LOEs), as described in sections below, were evaluated to determine the likelihood that a source was a major contributor to constituents exceeding the benchmarks at the outfalls. The potential sources evaluated, and the associated sampling performed for each, include:

- Impacted Surface Soils:** Soils from areas impacted by former operations were characterized for the Resource Conservation and Recovery Act (RCRA) program and other regulatory programs, such as the Interim Source Removal Action (ISRA) to support NPDES compliance, in the Outfall 008 and Outfall 009 watersheds between 1986 and 2013. The ISRA program was implemented in response to a Los Angeles Regional Water Quality Control Board (LARWQCB) Cleanup and Abatement Order (CAO), to improve surface water quality within the Outfall 008 and 009 watersheds by identifying and removing areas of contaminated soil potentially contributing to NPDES permit limit and benchmark exceedances. During ISRA implementation activities between 2009 and 2013, soils were tested and areas with elevated concentrations of arsenic, cadmium, copper, lead, zinc, TCDD TEQ (no DNQ), or mercury above ISRA soil remediation goals were identified. These areas were excavated, and removed soils were disposed offsite. Confirmation sampling was performed within excavations and additional soils were removed as necessary, prior to backfilling and restoration. Surface soils evaluated under ISRA but left in-place, were also included as a reference for potentially impacted soils that remain onsite. While these ISRA samples were only collected in Outfall 008 and 009 watersheds, these results are used as a comparison for watersheds across the site.
- Pavement solids:** Particulates on pavements were collected quarterly from six sites throughout the Outfall 009 watershed between 2016-2017. The collected samples were sieved into three size fractions for analyses. Only the <75 micrometer (µm) fraction is considered here, since this is the

most likely particle size to be mobilized by stormwater and was found to have the highest concentrations of constituents.

- Treated Wood:** Treated wood and adjacent soils were evaluated by collecting a shaved wood sample from a treated wood utility pole and sampling the soil adjacent to treated woods at several locations in 2016. While treated wood is the source of elevated constituents, the adjacent soils are what are likely to be mobilized rather than the treated wood itself.
- Atmospheric Deposition:** Dry atmospheric deposition samples were collected monthly at the SSFL Fire Station and Helipad over the course of a year between 2016-2017. Atmospheric deposition was (and continued to be) evaluated to determine whether typical dry deposition occurring at the site that is mobilized during wet weather may have contributed to exceedances.
- Background Soils:** Natural background soils were evaluated based on data collected during a number of previous soil studies. The first study considered was the Soil Background Report (MWH 2005), which characterized soils in undeveloped and unimpacted areas of SSFL to define ambient background concentrations of various constituents at SSFL. This report also included results from the Multi-Media Sampling Report for the Brandeis-Bardin Institute (BBI) and the Santa Monica Mountains Conservancy (SMMC) (McLaren/Hart 1993b), RCRA Facility Investigations (RFI) Work Plan Addendum (Ogden 1996), Former Sodium Disposal Facility (FSDF) Characterization Report (ICF 1997), Bell Canyon Area Soil Sampling Report (Ogden 1998b), and Standardized Risk Assessment Methodology (SRAM) Work Plan (Ogden 2000a). Offsite background soils were evaluated in the California Department of Toxic Substances Control (DTSC) SSFL Background Soils Study (DTSC 2012), which organizes its results by sample depth and between the Chatsworth and Santa Susana formations. Only surface soils were used to evaluate the solids concentration in the Chatsworth and Santa Susana formations. Figure 3 shows the formations underlying each watershed, the majority of which are exclusively Chatsworth formation.

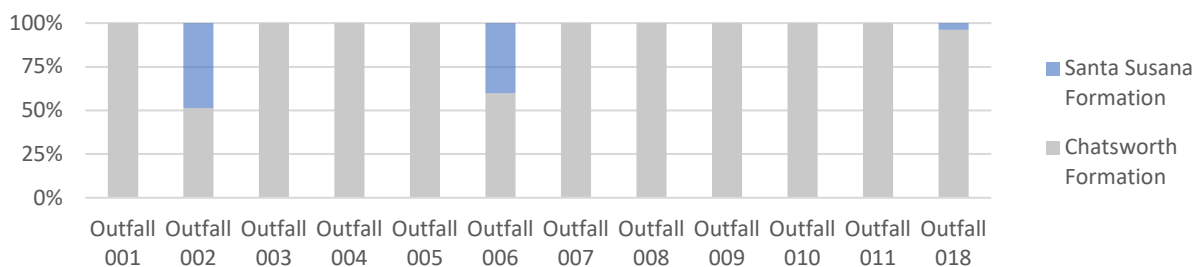


Figure 3. Geologic Formations Underlying SSFL Watersheds

Each LOE is described in detail below to help test the following questions:

- Have concentrations of COCs at the outfalls returned to normal compared to the 2018/19 post-wildfire year (i.e., there is no lingering water quality effect from the wildfire, and thus sources responsible for this year’s exceedances would be non-fire-related)?
- Are there local sources unique to particular watersheds where exceedances are occurring (i.e., pollutant-leaching materials or impacted soils explain concentration differences between outfalls, rather than sources that occur uniformly across the site and affect all outfalls, like natural soils and atmospheric deposition)?
- Can forensic and fingerprinting analyses independently determine if 2019/20 benchmark exceedances were caused by one or more of the potential sources investigated?

2. Lines of Evidence

One way to evaluate potential sources is to consider multiple lines of evidence (LOEs). This approach uses independent assessments and findings to see if they concur in the identification of potential source(s). Multiple LOEs were considered when investigating potential sources of exceedances. Each LOE and how it was used to support a particular source conclusion is summarized in Table 2 and described below. Where more than one LOE supports that a source may be a contributor for a particular constituent, then there is a greater likelihood that the hypothesized source contributed to or caused the exceedance.

Table 2. Questions and Lines of Evidence

Questions	Line of Evidence	Criteria to Answer 'Yes' to Questions
Have concentrations have returned to normal compared to the 2018/19 post-wildfire year?	Temporal Patterns	Concentrations in 2019/20 are similar to non-wildfire years
Are there local sources unique to particular watersheds where exceedances are occurring?	Spatial Patterns	Particulate strengths differ between watersheds (i.e. box plots do not overlap)
Can 2019/20 benchmark exceedances be the result of one or more of the potential sources investigated?	Particulate Strengths	The upper range (i.e. the upper bar in the box plots) of the solids concentration (i.e. soils, pavement solids, etc.) is greater than or equal to the stormwater particulate strength
	Fingerprinting: Metal Ratios	Stormwater results are within the 95 th percentile confidence interval for background soils
	Fingerprinting: Dioxin Congeners	Cluster and principle component analyses show similar patterns between stormwater samples and source samples
	Chemical Mass Balance	Chemical mass balance modeling calculates the relative contributions of likely sources affecting the outfalls

2.1. Temporal Patterns

Temporal patterns were used to evaluate whether concentrations have returned to normal compared to the 2018/19 post-wildfire year. Constituent-specific concentration timeseries plots are included and discussed in their respective results sections in Section 3. Each timeseries only considers the same outfalls that discharged in 2019/20 (Outfalls 001, 002, 008, 009, and 018) in order to provide a consistent comparison of watershed conditions. Appendix F contains full scale timeseries plots for the last four years for each of the constituents that exceeded benchmarks in 2019/20.

Rainfall patterns in the 2019/20 year were compared against rainfall patterns from 2016/17, 2017/18, and 2018/19 (the reporting year when the Woolsey Fire occurred) to investigate relationships between rainfall amounts and stormwater concentrations as shown in Figure 4. This comparison revealed that 2019/20 had a different rainfall pattern than 2016/17 and 2018/19, despite having similar amounts of total rainfall. 2016/17 and 2018/19 were similar rain years, but the impacts of the Woolsey Fire resulted in increases in both discharges and exceedances compared to the otherwise similar non-wildfire year. Despite the differences in rainfall patterns, 2016/17 and 2019/20 were similar in total rainfall as well as the total

number of discharges and exceedances. 2017/18 was a below average rainfall year, so it is expected that the stormwater concentrations and exceedances would follow a different pattern.

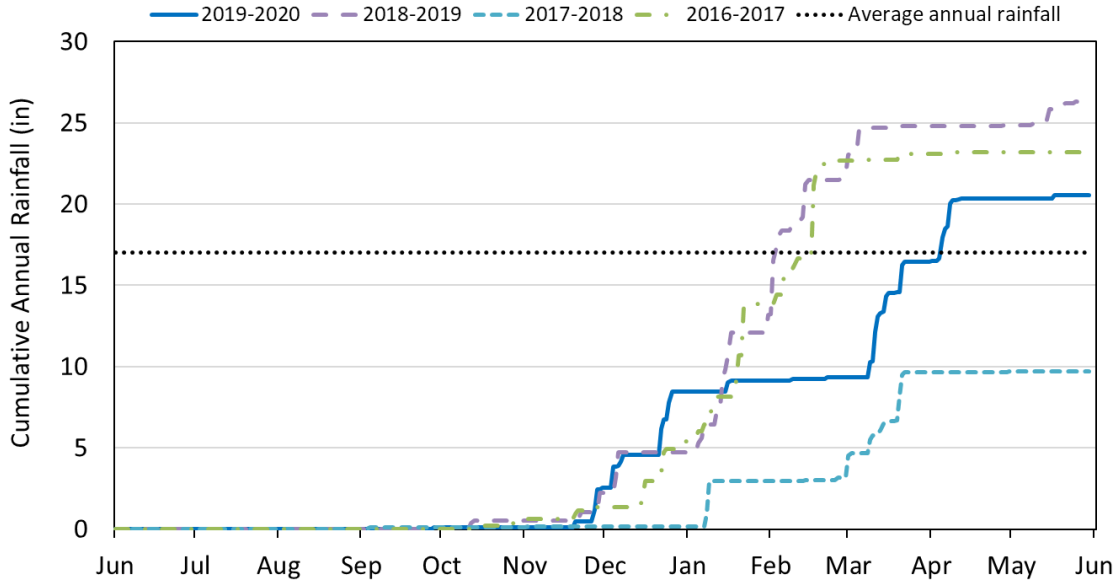


Figure 4. Cumulative Annual Rainfall for 2019/20 Compared to Previous Years

Volumetric runoff coefficients (Rv) were obtained by dividing the runoff amounts (inches of runoff) by the rainfall amount (inches) and compared between three time periods: pre-Woolsey Fire (2009-2018), the reporting year when the Woolsey Fire occurred (2018/19), and the 2019/20 year. The Rv values were grouped by time period, outfall, and rain event size and the groupings were evaluated for significant differences using the Mann-Whitney Rank Sum Test. P-values from the Mann-Whitney Rank Sum Test determined that median Rv values in the 2019/20 reporting year were significantly different from the 2018/19 reporting year during small storms (<2 inches of rainfall) at Outfalls 001, 002, and 008 (p < 0.05). Additionally, as shown in Table 3, none of the 2019/20 categories were significantly different from the pre-Woolsey Fire results (p > 0.05). While storm water runoff increased for small storms after the Woolsey Fire, the runoff in the 2019/20 season was most similar to the pre-Woolsey Fire period, and the runoff volume analysis indicates no significant runoff impacts from the Woolsey Fire remain.

Table 3. Runoff Volume Effects Following the Woolsey Fire Have Returned to Previous Levels

		Storm Size	
		<2 inches	>2 inches
2018/19 vs pre-fire years	Burned Watersheds	Significant increase (7x)	No significant difference
	Unburned Watersheds	No significant difference	No significant difference
2019/20 vs pre-fire years	Burned Watersheds	No significant difference	No significant difference
	Unburned Watersheds	No significant difference	No significant difference

The number of exceedances that occurred at each Outfall was tallied for each event and plotted with date, as shown in Figure 5. The plot below shows there was a marked decrease of exceedances over the course

of the 2019/20 rainy season, as there was during the 2016/17 and 2018/19 rainy seasons. In the 2018/19 post-wildfire season, however, the number of exceedances was notably higher at the beginning of the season followed by a steep decline. This presumably reflects regrowth of vegetation, which reduces soil mobilization following the fire. However, in 2016/17 and 2019/20, the more gradual downward trend may reflect a seasonal first flush pattern. The number of exceedances at the beginning of the 2019/20 rainy season was notably less than at the beginning of the 2018/19 rainy season but higher than the 2016/17 and 2017/18 rainy seasons, suggesting there may be some lingering water quality impacts from the Woolsey Fire.

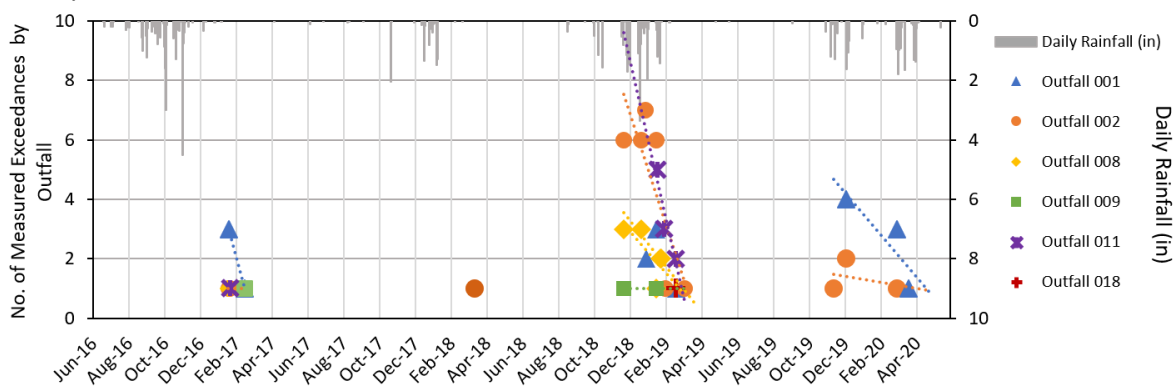


Figure 5. Temporal Trend of Outfall Exceedances in 2019/20 Compared to Previous Years (2016/17-2019/20)

The number of discharges and exceedances at Outfall 001 and 002 during the 2016/17, 2017/18, 2018/19 (immediately following the Woolsey Fire), and 2019/20 rainy seasons are shown in Table 4. While the overall number of exceedances in 2016/17 and 2019/20 was similar, the exceedances in 2019/20 were limited to Outfall 001 and 002. Outfall 001 and 002 had a similar number of discharges in 2016/17 and 2019/20, but twice as many exceedances in each watershed in 2019/20. This suggests that the limited lingering water quality impacts from the Woolsey Fire may be limited to these two watersheds. Constituent-specific concentration trends are discussed in their respective results sections in Section 3.

Table 4. Annual Rainfall Compared to Discharges and Exceedances at Outfall 001 and Outfall 002 (2016/17-2019/20)

Reporting Year	Annual Rainfall (in.)	Outfall 001		Outfall 002	
		Exceedances /Discharges	Exceeding Parameters ¹	Exceedances /Discharges	Exceeding Parameters ¹
2016/17	23.35	4/3	Iron Lead Manganese TCDD TEQ (no DNQ)	2/6	Chronic toxicity Iron
2017/18	9.77	0/0	N/A	1/1	Iron
2018/19 (Post-Woolsey Fire)	26.29	6/7	Iron Lead Manganese	27/10	Arsenic Copper Gross alpha Iron Lead Manganese Selenium Sulfate TCDD TEQ (no DNQ) Zinc
2019/20	20.54	8/3	Iron Lead TCDD TEQ (no DNQ)	4/8	Iron Manganese TCDD TEQ (no DNQ)

1. Parameters that exceeded at a given Outfall in 2019/20 are shown in **bold**.

2.2. Spatial Patterns

Spatial patterns were used to evaluate whether there are sources unique to particular watersheds that were responsible for benchmark exceedances. Box plots were used to illustrate the basic statistics of each watershed’s water quality and provide a visual comparison of results. As shown in Figure 6, the box plots reflect the median, 25th percentile, 75th percentile, 1.5 quartile values, in addition to outliers outside of the 1.5 quartiles, if applicable. The individual result concentrations are shown over the box plots to differentiate between detected (black border) and non-detected (gray border) results. A difference in concentration or particulate strengths may indicate there was a unique source within a particular watershed (particulate strengths are described in more detail in Section 2.3). Watershed conditions and Best Management Practices (BMPs) were considered in this analysis and results from each watershed are colored accordingly in the plots for each constituent with a benchmark exceedance in the 2019/20 rainy season.

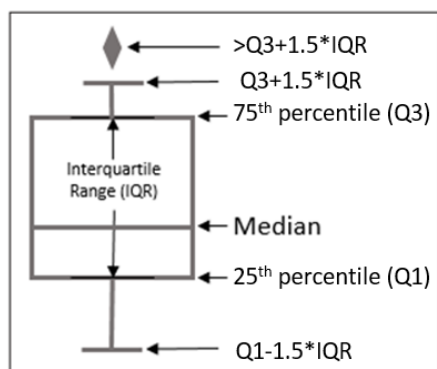


Figure 6. Box Plot Key

2.3. Particulate Strengths

Particulate strength (PS) calculations were used to determine if solids concentrations in potential sources are high enough to cause benchmark exceedances in stormwater. PS is the constituent concentration associated with particulate matter in stormwater and is a means to normalize stormwater constituent concentrations by TSS. Normalizing constituent concentrations by TSS is helpful for comparing solid concentrations of hypothesized sources with the particulate material in the aqueous stormwater samples. This tool is useful for the constituents that are highly associated with particulates and are not found in significant quantities in filtered (dissolved) forms. PS values have been previously used by the Surface Water Expert Panel and Geosyntec to assess sources of metals in SSFL NPDES outfall compliance monitoring data (SSFL Surface Water Expert Panel, 2009). PS is calculated by the following equation and applying the appropriate unit conversions.

$$PS = \frac{(\text{total concentration} - \text{filtered concentration})}{\text{total suspended solids concentration}}$$

Samples where both the total and filtered concentrations were detected were used to determine the average filtered fractions for each constituent at each sample location. This average filtered fraction was used in the PS calculations for samples with no filtered fraction reported or for filtered results below the detection limit. If the total concentration was below the detection limit, the detection limit was used for the non-detected values. TCDD TEQ is assumed to have a filtered fraction of zero because of the congeners' extremely low solubility and high partitioning coefficient to solids.

The solid source sample results represent bulk samples and include all particle sizes, with the exception of pavement solids, where the fine fraction (<75 μm) was considered separately. This is important to note, because the PS of the fine fraction is typically higher than the bulk fraction. Also, outfall stormwater samples typically contain a higher percent of the fine fraction compared to the original sources due to the selective mobilization of fine particles in stormwater runoff. For example, the fine fraction of sediments collected from the Outfall 009 watershed had a median lead solids concentration over four times higher than the rest of the sample (46.9 mg/kg in fine vs 10.2 and 10.7 mg/kg in medium and coarse, respectively). More importantly, as shown in Figure 7, the fine fraction concentration was over four times higher than the median bulk concentration of the soil sample calculated using the weighted average of each size fraction. This means the outfall sample PS is more influenced by the smaller particle sizes, which have a higher constituent PS. This needs to be considered when comparing the PS of outfall samples to the source samples that are based on bulk solids.

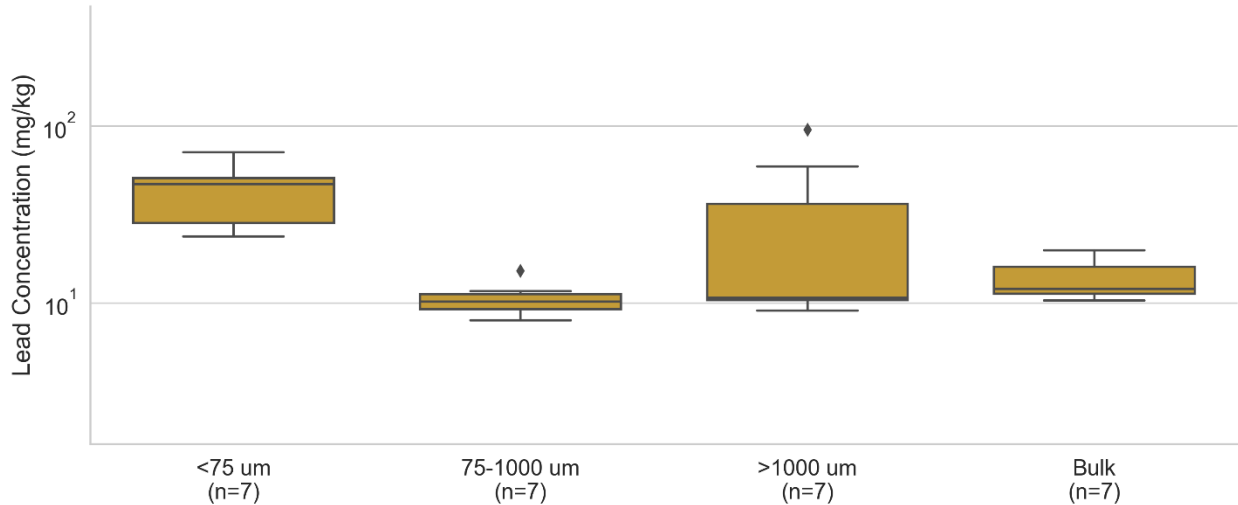


Figure 7. Lead Concentration in Northern Drainage Sediment by Size Fraction

If the upper range of the solids concentration (i.e. the upper bar in the box plots indicating the 75th percentile + 1.5 interquartile range [IQR]) was greater than or equal to the stormwater PS, a supporting LOE was found (i.e., supporting the hypothesis that the source material was likely contributing to the exceeding concentration). An example plot with annotations is shown in Figure 8.

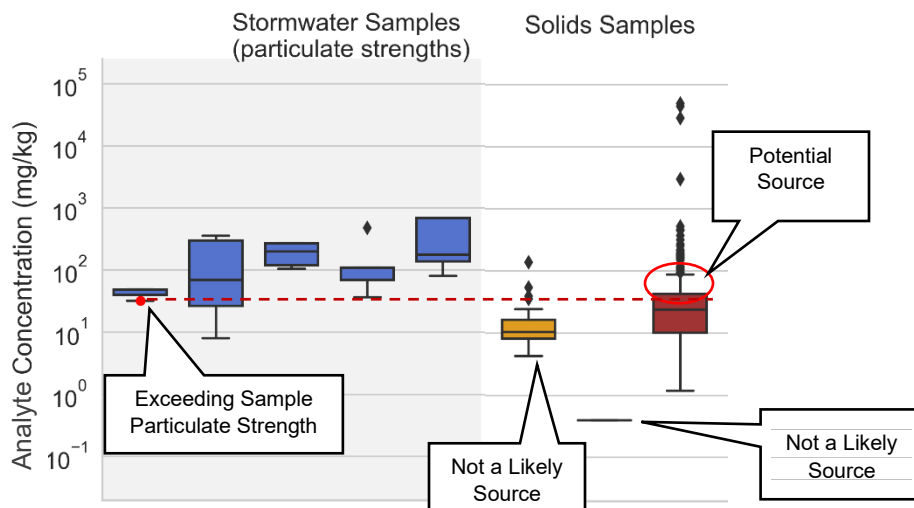
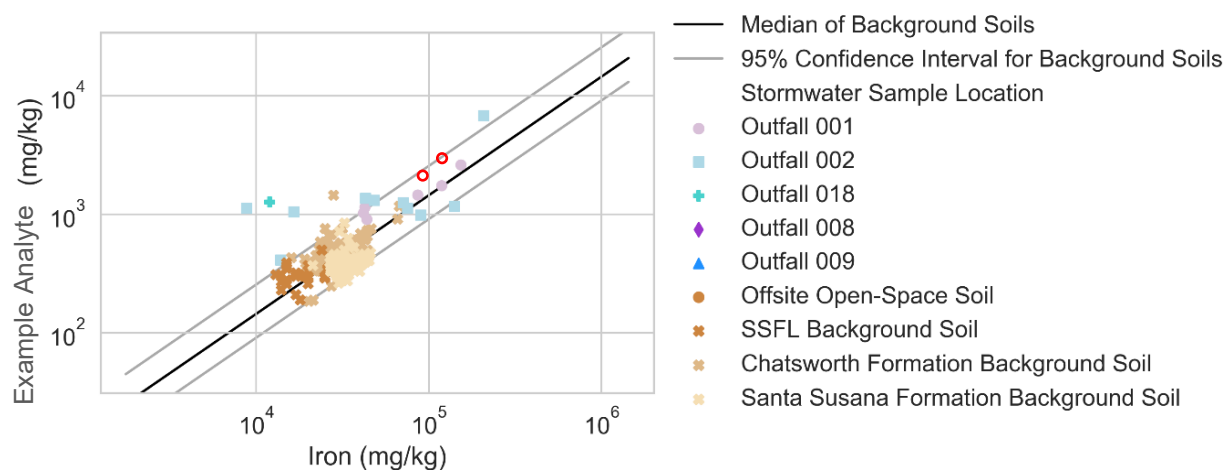


Figure 8. Example PS Plot

2.4. Fingerprinting: Metal Ratios

Metal ratio fingerprinting were used as a second LOE, in addition to PS, to determine if background soils could have caused 2019/20 benchmark exceedances. Metal ratios were used to identify potential constituent sources by the ratio of concentrations of multiple constituents in source material samples and benchmark exceedance samples. Iron and manganese were chosen to be the reference analytes because they are primarily soil derived and present at a relatively consistent concentration, and their PS results confirm this general understanding by matching levels in background soils. The ratios to iron and

manganese are presented in plots showing the median ratio and 95th percentile confidence interval for background soils compared to individual stormwater results. Figure 9 shows an example plot, which includes the individual background soil data points used to determine the median and confidence interval. Where stormwater results were within ranges found for background soils, as is the case for the exceeding samples outlined in red below, a supporting LOE was found (i.e., supporting the hypothesis that the source of exceedances was background soils). NPDES sampling frequency requirements differ between parameters and as a result, not all samples have concurrent iron and manganese samples².



Note: PS values of outfall samples whose stormwater concentration exceeded a benchmark are marked with a red border.

Figure 9. Example Analyte: 2019/20 Iron Metal Ratio Plot

2.5. Fingerprinting: Dioxin Congeners

Dioxin congener fingerprinting was used to determine if the 2019/20 benchmark exceedances for dioxin concentrations were caused by one or more of the material sources investigated. Under the NPDES Permit, dioxin concentrations in stormwater are evaluated against the effluent limits and benchmarks using TCDD TEQ no DNQ, which is a scaled sum of seventeen individual congeners excluding results detected below the quantifiable reporting limit. TCDD TEQ is calculated by multiplying the individual congener concentration by their corresponding 1998 World Health Organization toxic equivalency factor (WHO TEF) (Berg et al., 2006) and Great Lakes bioaccumulation equivalency factor (BEF) (Environmental Protection Agency, 1995) values listed in Table 5 below. For fingerprinting purposes, TCDD TEQ values were calculated to include DNQ results, as opposed to the NPDES reporting protocol, which excludes DNQ.

² For iron and manganese, the NPDES Permit for SSFL (NPDES NO. CA0001309) states that, “If the detected concentration exceeds the criteria, the frequency of analysis must be increased [from once per year] to once per discharge (once per month at Outfall 019/020). After four consecutive samplings demonstrate compliance, then the frequency reverts back to annual sampling.”

Table 5. TCDD TEQ: WHO TEF and BEF Values

Congener	1998 WHO TEF	BEF Great Lakes Water Quality Initiative
2,3,7,8-TCDD	1	1
1,2,3,7,8-PeCDD	1	0.9
1,2,3,4,7,8-HxCDD	0.1	0.3
1,2,3,6,7,8-HxCDD	0.1	0.1
1,2,3,7,8,9-HxCDD	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.05
OCDD	0.0001	0.01
2,3,7,8-TCDF	0.1	0.8
2,3,4,7,8-PeCDF	0.5	1.6
1,2,3,7,8-PeCDF	0.05	0.2
1,2,3,4,7,8-HxCDF	0.1	0.08
1,2,3,6,7,8-HxCDF	0.1	0.2
1,2,3,7,8,9-HxCDF	0.1	0.6
2,3,4,6,7,8-HxCDF	0.1	0.7
1,2,3,4,6,7,8-HpCDF	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.4
OCDF	0.0001	0.02

Evaluating the TCDD TEQ value of each of the seventeen congeners and their percent contribution to total TCDD TEQ in stormwater showed which congeners were contributing most to the overall TEQ and were therefore driving the exceedances. Additionally, cluster and principle component analyses were used to identify similar patterns between source congeners and outfall congeners in order to determine the likely major sources of TCDD TEQ congeners in outfall samples. Principal component analyses were performed using Minitab (version 16). The calculated eigenvalues indicate how the different variables (the congeners here) contribute to explaining the variability in the data set. The first principal component accounts for most of the variability, while the others contribute less amounts. The loading for each variable indicates the relative significance for each variable per principal component. The scree plot shows the relative contributions for each component. Usually, the first two or three principal components contribute most of the total explanation of the variability, as indicated by the additional components contributing very little. The score plot is a scatter plot of the loadings for the first two principle components and indicates how the outfall and sources are related.

These congener multivariate analyses identify the major source component. Mixtures of sources affect the relative abundance of congeners and therefore are not identified in this analysis. Dendrograms and score plots were used to illustrate the relationships between outfall and source samples for the congeners. Chemical mass balance calculations were also used to complement these multivariate analyses and allowed the likely components of the congeners, as well as selected metals, to be identified, as described below.

2.6. Chemical Mass Balancing Calculations

Chemical mass balance (CMB) calculations were used to quantify the likely sources of TCDD congener and selected heavy metals under a variety of scenarios for the SSFL outfalls. The CMB model is a chemical mass balance set of equations with Monte Carlo statistical simulations to determine the most likely source components of outfall discharges. A “Library” file describes the characteristics of each potential source, and includes the mean, coefficient of variation, and the type of distribution (Normal or Log-Normal). The set of simultaneous equations are then defined by the model relating the data from this “Library” file with the data at the outfall. These simultaneous equations are solved using the Gaussian-Elimination method. For the calculations described in this paper, 500 or 1,000 runs were used to estimate the mass contributions of each source for each outfall scenario. Each run generates a value of the contribution of each source based on the statistical parameters for the constituents, resulting in an equal number of values of mass contributions as there are runs, which are then summarized.

The most abundant TCDD congeners (those having the fewest non-detected values) for potential sources and the corresponding data for the 2019/2020 outfall observations are shown in Table 6, while Table 7 shows the source and outfall data for the metals and TCDD. In both cases, four potential sources and four analytes were used in the calculations, as all sources and outfalls must have complete data sets available, with no missing analytes, which means certain sources evaluated through other methods could not be included here (for example, atmospheric deposition or soils near treated woods).

Table 6. TCDD Congener Particulate Strength Values for Potential Sources and Outfalls

Median values, ng/kg	OCDD	1,2,3,4,6,7,8-HpCDF	OCDF	1,2,3,4,6,7,8-HpCDD
SSFL Background Soils	45.35	2.45	5.90	7.50
Pavement Solids Fines	2,250	66.2	158	296
SSFL ISRA Soil in place	114	4.85	9.48	13.00
SSFL ISRA Soil excavated	1,525	14.4	31.7	122
Outfall 001 (2019/2020)	4,105	17	28	526
Outfall 002 (2019/2020)	1,820	579	735	222
Outfall 008 (2019/2020)	0.57	192	0.57	124
Outfall 009 (2019/2020)	1,540	620	500	188
Outfall 018 (2019/2020)	678	615	1,127	512

Table 7. Metal and TCDD TEQ (No DNQ) Particulate Strength Values for Potential Sources and Outfalls

Median values, mg/kg	Copper	Lead	TCDD TEQ (No DNQ)	Zinc
Pavement Solids Fines	83.05	39.9	7.07E-06	196.5
SSFL Background Soils	9.75	14.0	1.11E-10	52.5
SSFL ISRA soil excavated	13.6	24.0	1.14E-07	71.85
SSFL ISRA soil in place	10.5	12.6	1.13E-08	60.9
Outfall 001 (2019/2020)	53.5	48.8	2.67E-07	241.1
Outfall 002 (2019/2020)	57.1	N/A	1.67E-09	N/A
Outfall 008 (2019/2020)	97.6	N/A	3.85E-10	N/A
Outfall 009 (2019/2020)	45.5	72.72	2.00E-09	N/A
Outfall 018 (2019/2020)	190.9	N/A	1.45E-09	N/A

N/A indicates the median value was no particulate present, i.e. the total and dissolved concentrations were equal or both were not detected.

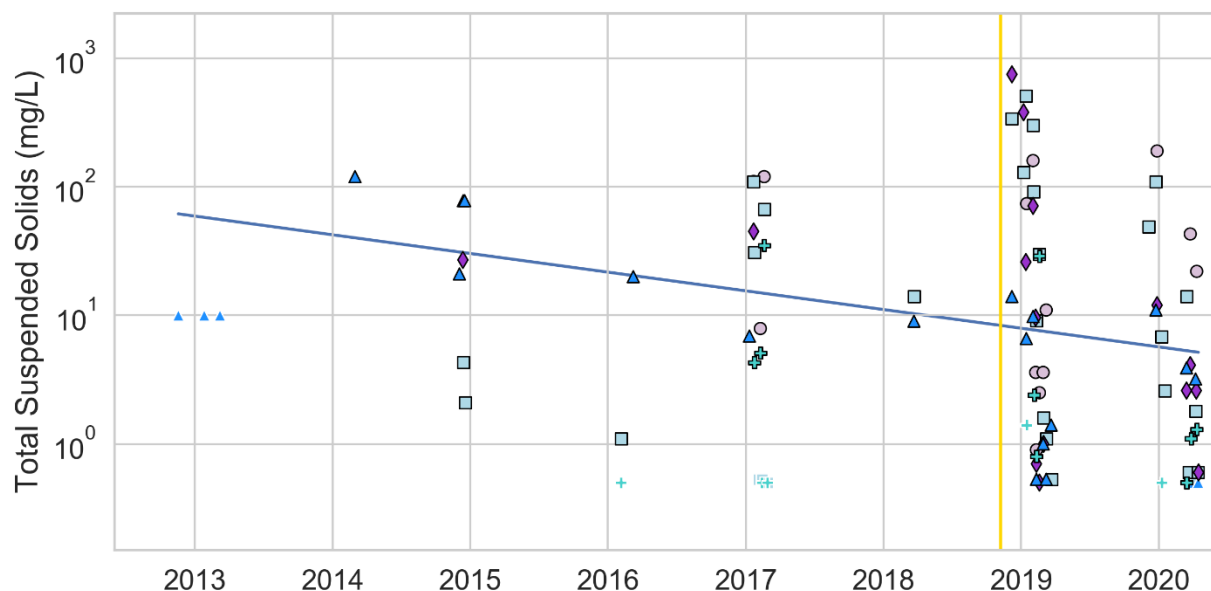
The congener data calculations had poor to fair reliability, while the metals and TCDD calculations had fair to good reliability, based on the amount and consistency of information available. Therefore, there is a moderate to large amount of uncertainty associated with the calculated relative contributions.

3. Results

This section presents the Outfall stormwater results for each constituent that exceeded benchmarks in 2019/20 according to the LOEs approaches described above.

3.1. Total Suspended Solids

TSS does not have a benchmark or permit limit defined, however, it is useful to interpret general trends. Stormwater concentrations of TSS in the 2019/20 season have decreased overall compared to the 2018/19 season, as shown in Figure 10. The concentrations are most similar to the 2016/17 season, which received a similar total rainfall depth. The long-term site-wide concentrations indicate that 2019/20 concentrations are generally in line with the range of concentrations in pre-fire years. **The temporal patterns of TSS concentrations indicate that concentrations in 2019/20 are similar to other non-wildfire years with similar rainfall (2016/17).**



Notes:

1. Markers with a black border signify detected results.
2. Markers without a border signify non-detected result and are shown at the method detection limit.
3. Regression line for long-term trend is statistically significant.

- Logarithmic Regression Model
- Start of Woolsey Fire (11/8/2018)
- Outfall 001
- Outfall 002
- + Outfall 018
- ◆ Outfall 008
- ▲ Outfall 009

Figure 10. Timeseries of TSS Concentrations 2012/13-2019/20

As shown in Figure 11, concentrations of TSS were highest at Outfall 001, which receives runoff from an undeveloped watershed³. The Outfall 002 watershed, which is also undeveloped, had several samples with TSS concentrations in the same range as Outfall 001. The highest TSS concentrations at Outfall 002 occurred when the discharge consisted purely of Outfall 002 watershed stormwater runoff (i.e. Outfall 018, which flows into the Outfall 002 watershed, was not discharging). **This spatial pattern suggests that areas with higher TSS concentrations may be associated with erosion of natural background soils in undeveloped watersheds without the stormwater treatment measures or significant BMPs that are prevalent in the more developed watersheds.** However, this alone does not indicate BMPs are necessary as these outfall concentrations are generally in line with or lower than natural watershed concentrations, and even the higher TSS concentrations measured this year are within the typical range of TSS concentrations for stormwater.

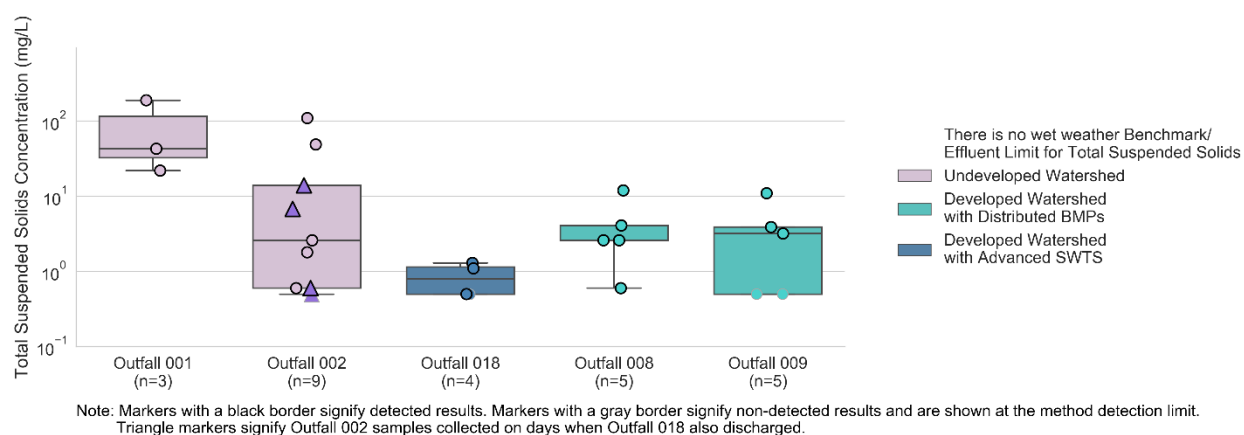


Figure 11. 2019/20 TSS Concentrations by Outfall

3.2. Iron

Iron concentrations were above the benchmark at Outfalls 001 and 002 a total of six times in the 2019/20 season (there is no limit for iron at Outfall 009). Stormwater concentrations of iron have decreased overall compared to the 2018/19 season, as shown in Figure 12. Notably, this year's iron concentrations at Outfall 002 and 008 were markedly lower than in 2018/19, while concentrations at Outfall 001 were relatively similar. On average, concentrations measured in 2019/20 were similar to the range of concentrations in 2016/17 and benchmark exceedances have occurred at Outfall 001 and/or Outfall 002 during most non-wildfire years. **The temporal patterns of iron concentrations indicate that concentrations in 2019/20 were similar to the range of concentrations observed in non-wildfire years.**

³ Although the median TSS concentration was highest at Outfall 001, the dataset is not sufficiently large to determine if this difference is statistically significant.

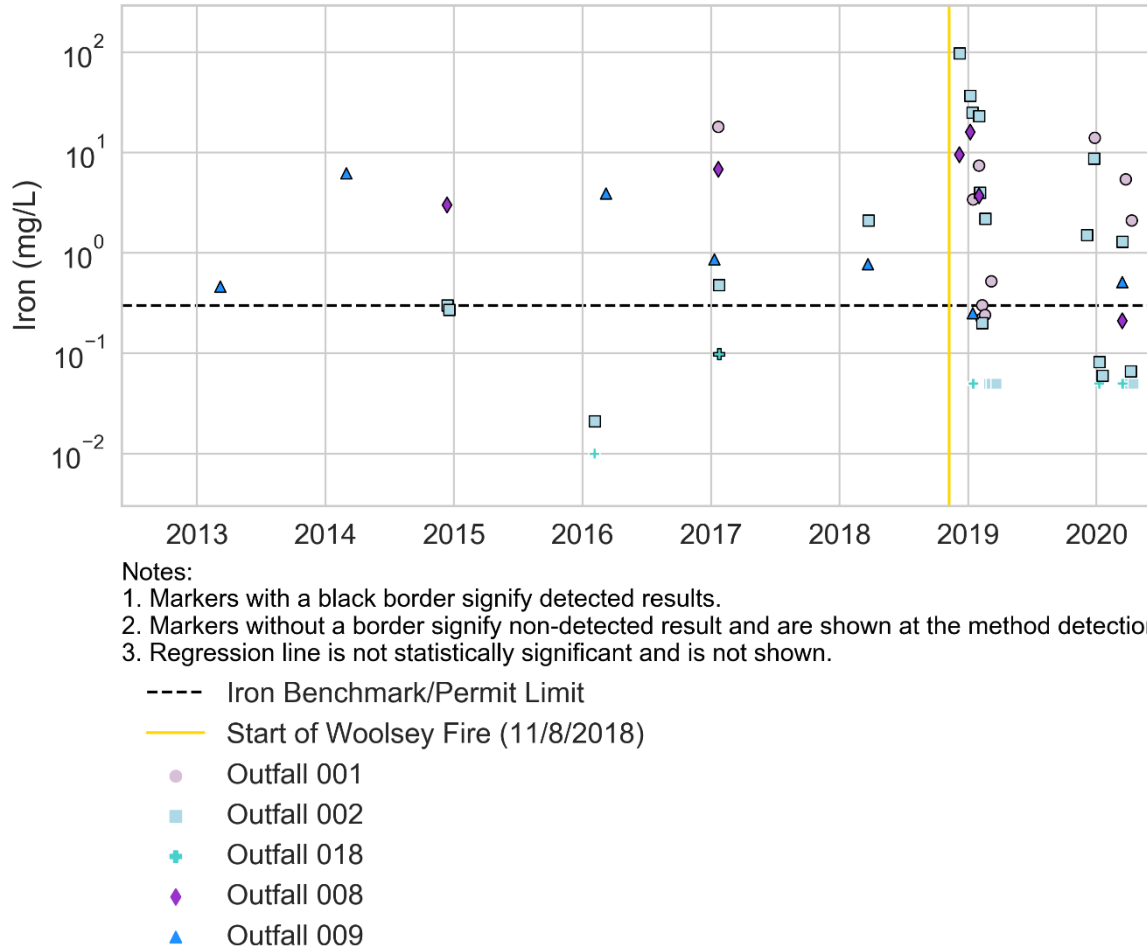


Figure 12. Timeseries of Iron Concentrations 2012/13-2019/20

As shown in Figure 13a, iron concentrations were highest at Outfall 001 and generally followed the same pattern as TSS for each outfall⁴. As shown in Figure 13b, the PS values were more consistent across outfalls, indicating the differences in concentrations were driven by TSS rather than a concentrated source. **The spatial pattern indicates that all outfalls likely shared the same diffuse, site-wide source of iron in stormwater.**

⁴ Although the median iron concentration was highest at Outfall 001, the dataset is not sufficiently large to determine if this difference is statistically significant.

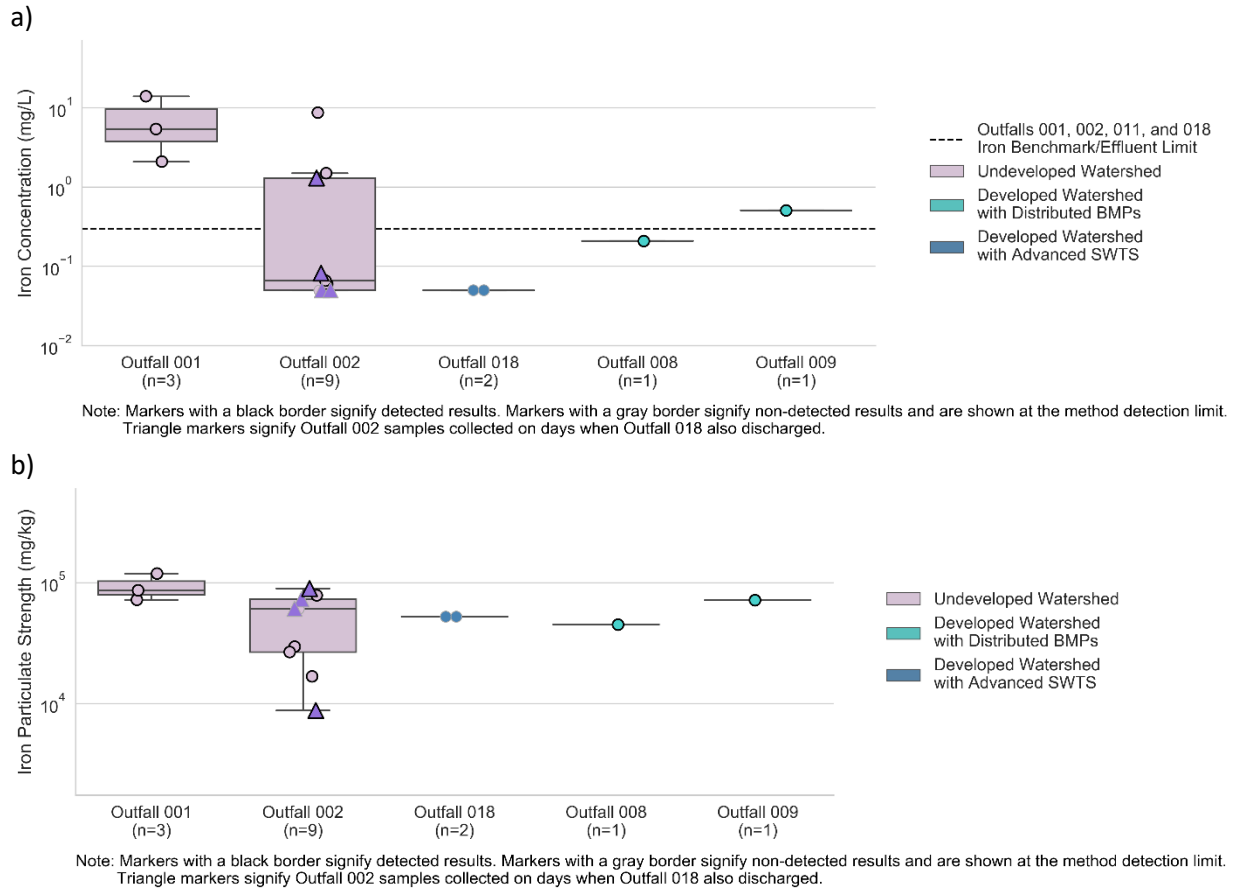
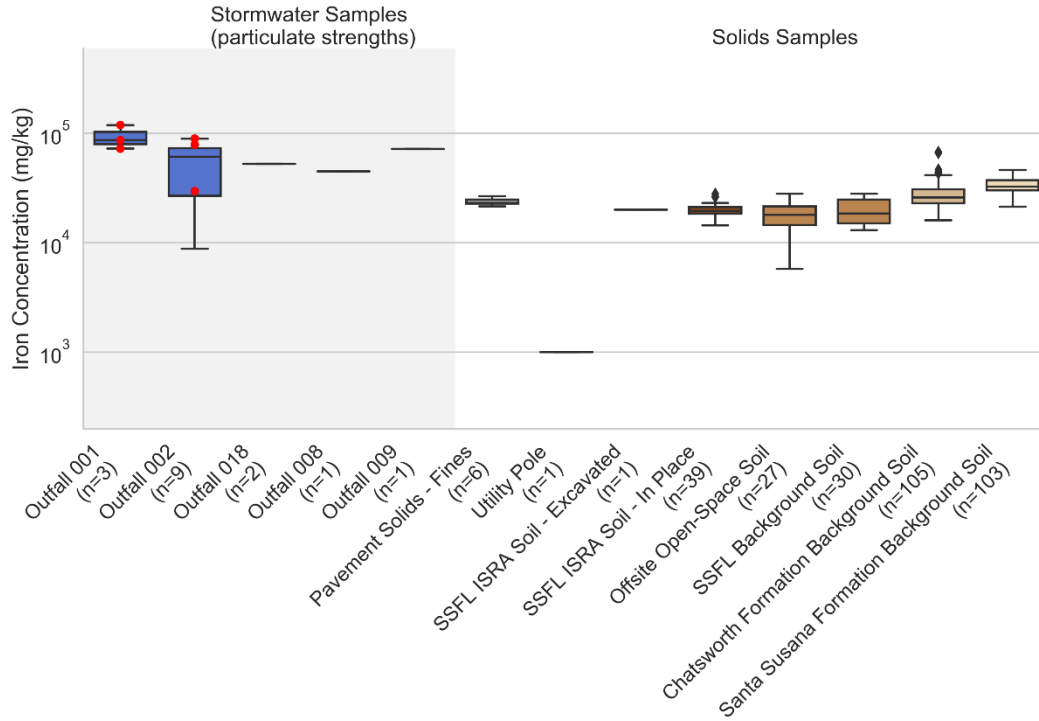


Figure 13. 2019/20 Iron Concentrations and Particulate Strengths by Outfall

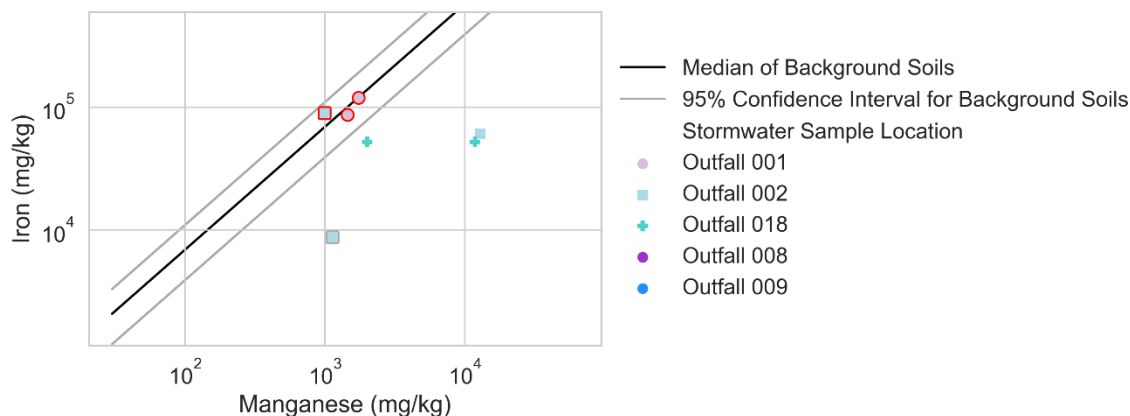
The PS of iron in stormwater, plotted in Figure 14, was compared to the concentration of iron in various solid source samples. With the exception of one sample at Outfall 002, which was in-line with the concentrations in background soils, the PS values of the exceeding samples were higher than the concentrations in the sources evaluated. Future analysis distinguishing the differences between particle sizes in background soils is recommended to determine if background soils, particularly in the fine fraction, are a contributing source. Research indicates that total iron concentrations increase in soils with higher clay and silt content (i.e., soils in the fine fraction; Sharma et al., 2008) suggesting that the concentrations in background soils in the fine fraction may be higher than in bulk samples. **The PS values of the exceeding samples could not be explained by the source samples evaluated, but background soils could not be ruled out as a potential source due to potentially elevated concentrations in soil fines.**



Note: Particulate strength values of outfall samples whose stormwater concentration exceeded a benchmark are marked with a red dot.

Figure 14. Iron Particulate Strength (2019/20 Outfall Stormwater Samples) vs. Solid Source Materials

The PS of iron was compared against manganese (both are found in relatively consistent concentrations in soils) to evaluate if any of the stormwater and soil patterns were similar. Figure 15 shows that the ratios found in the exceeding stormwater samples fall within the background soil 95% confidence interval, which supports **that background soils were a likely source of the iron exceedances** in the 2019/20 season.

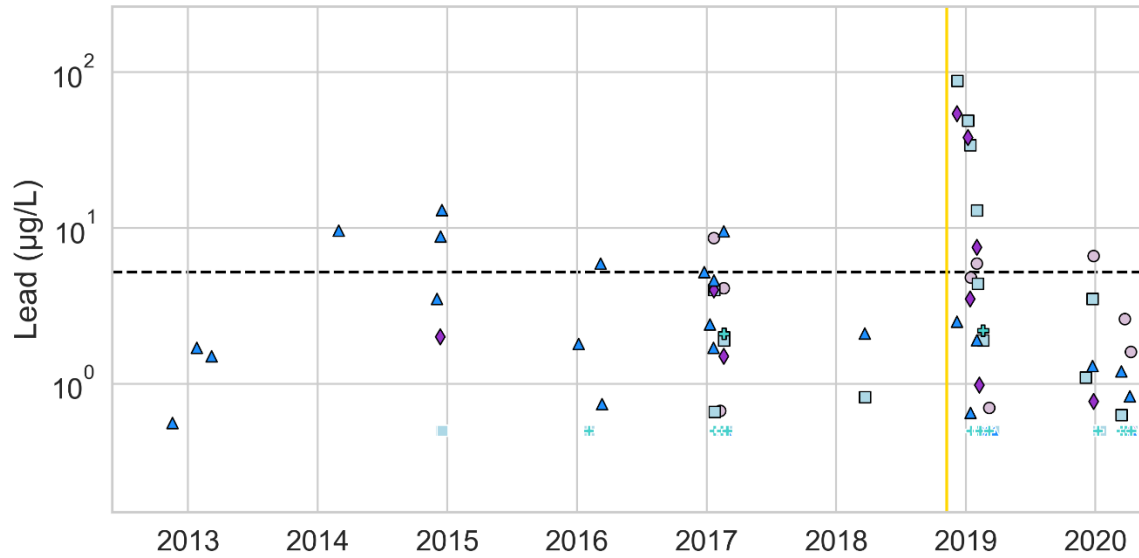


Note: PS values of outfall samples whose stormwater concentration exceeded a benchmark are marked with a red border. Markers with a black border signify detected results that did not exceed a benchmark. Markers with a gray border signify an estimated PS where the dissolved fraction or TSS was not detected. Markers without a border signify an estimated PS where the constituent under evaluation was not detected in the sample.

Figure 15. 2019/20 Iron:Manganese Metal Ratio Plot

3.3. Lead

Lead concentrations were above the benchmark at Outfall 001 once in 2019/20. Although benchmark/permit limit exceedances occurred in most years, the exceeding concentrations in the 2018/19 post-wildfire year were higher than in non-wildfire years, as shown in Figure 16. Stormwater concentrations of lead decreased over the course of the 2019/20 season and were notably lower than during 2018/19, suggesting that lead concentrations this year were not caused by post-wildfire conditions. Further supporting this, 2016/17, the most similar rain year, had similar concentrations to 2019/20. **The long-term temporal patterns of lead concentrations indicate that concentrations in 2019/20 were similar to other non-wildfire years.**



Notes:

1. Markers with a black border signify detected results.
2. Markers without a border signify non-detected result and are shown at the method detection limit.
3. Regression line is not statistically significant and is not shown.

- Lead Benchmark/Permit Limit
- Start of Woolsey Fire (11/8/2018)
- Outfall 001
- Outfall 002
- + Outfall 018
- ◆ Outfall 008
- ▲ Outfall 009

Figure 16. Timeseries of Lead Concentrations 2012/13-2019/20

As illustrated in Figure 17a, lead concentrations were highest at Outfall 001⁵. Figure 17b shows that the PS values of the detected results at Outfall 001 were similar to the detected results at Outfalls 002, 008, and 018. This indicates that the differences in concentrations between these outfalls were driven by TSS rather than a concentrated source. The detected results at Outfall 009 were notably higher, suggesting there may be a local source of lead in that watershed, such as pavement solids or the former shooting range. However, concentrations at Outfall 009 were not sufficiently high to cause exceedances in 2019/20. **The spatial pattern indicates that Outfall 001 shared the same diffuse, site-wide source of lead with other outfalls.**

⁵ Although the median lead concentration was highest at Outfall 001, the dataset is not sufficiently large to determine if this difference is statistically significant.

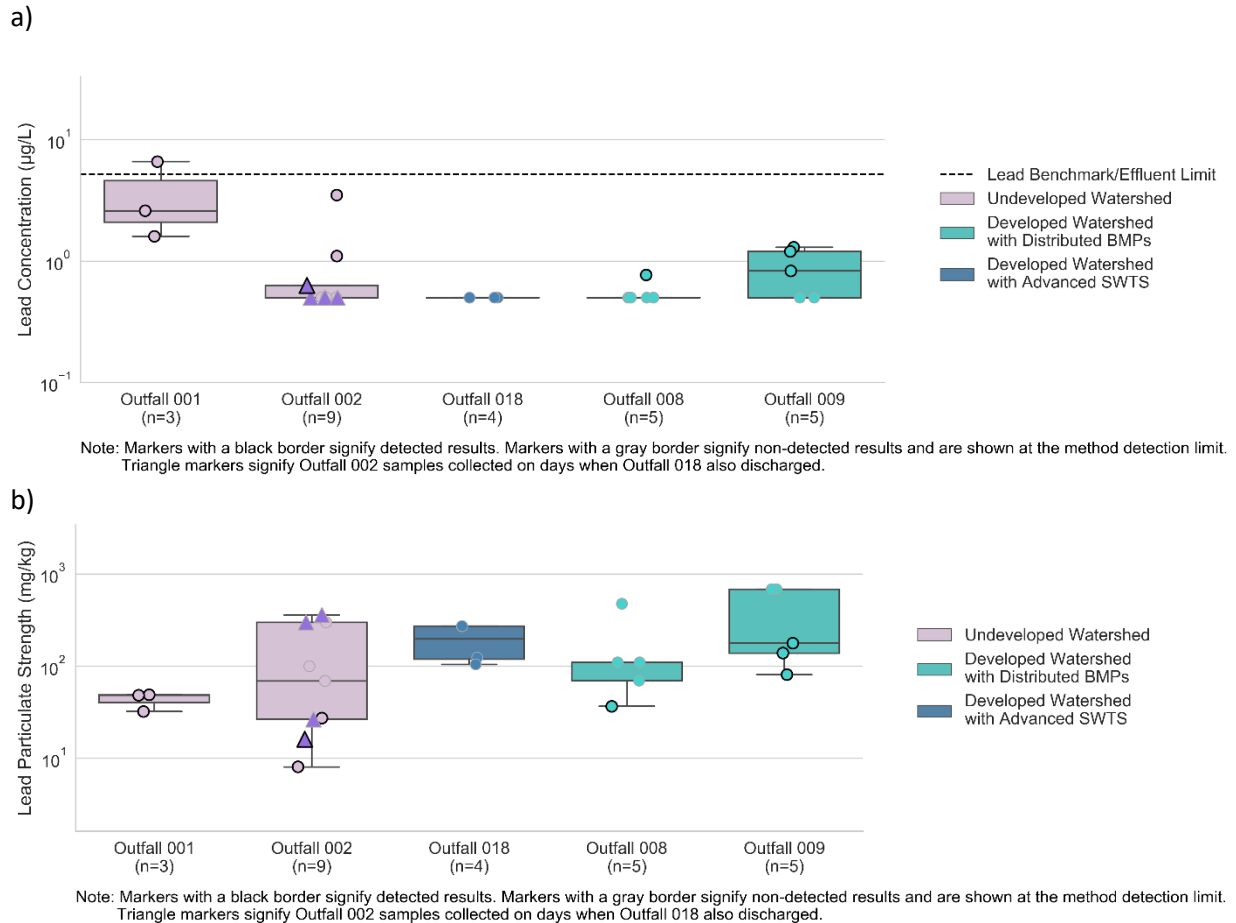
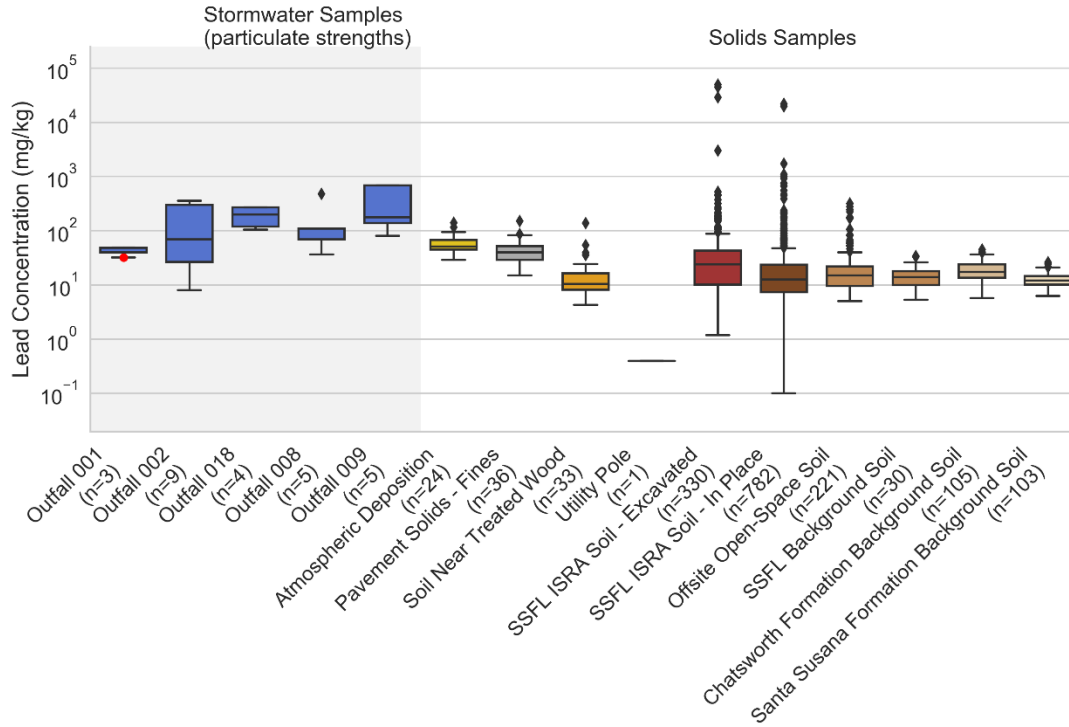


Figure 17. Lead Concentrations at Outfalls in 2019/20 Compared to Previous Years

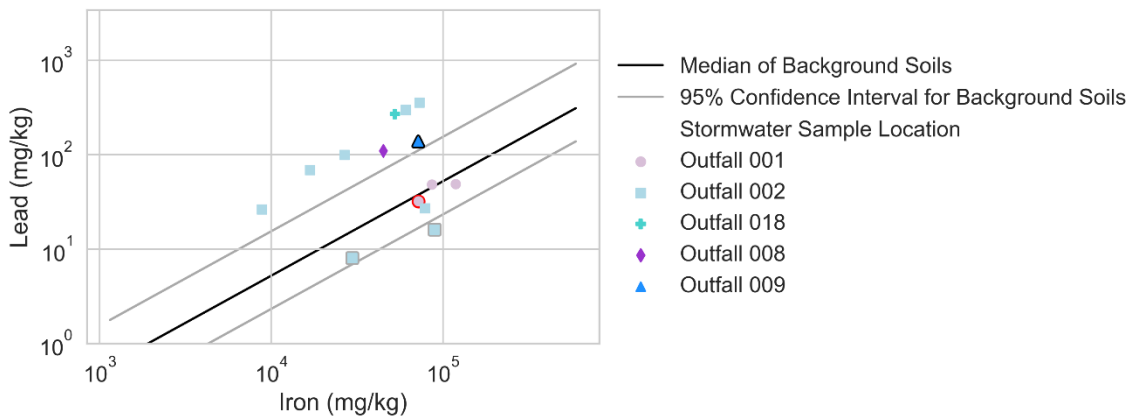
The PS of the outfall stormwater samples compared to the various potential sources are shown in Figure 18. The exceeding sample's PS was below the upper range for atmospheric deposition, fine pavement solids, impacted soils, and background soils. However, impacted soils are unlikely to be a source of the exceedance at Outfall 001 due to the relatively small quantity of impacted soils in the Outfall 001 watershed. Additionally, preliminary results of the buffer zone subarea (included in Appendix E) study found no elevated lead in stormwater from potentially impacted soil subareas in the buffer zone. This indicates the **lead exceedance in stormwater at Outfall 001 could have come from atmospheric deposition, pavement solids fines, and/or background soils.**

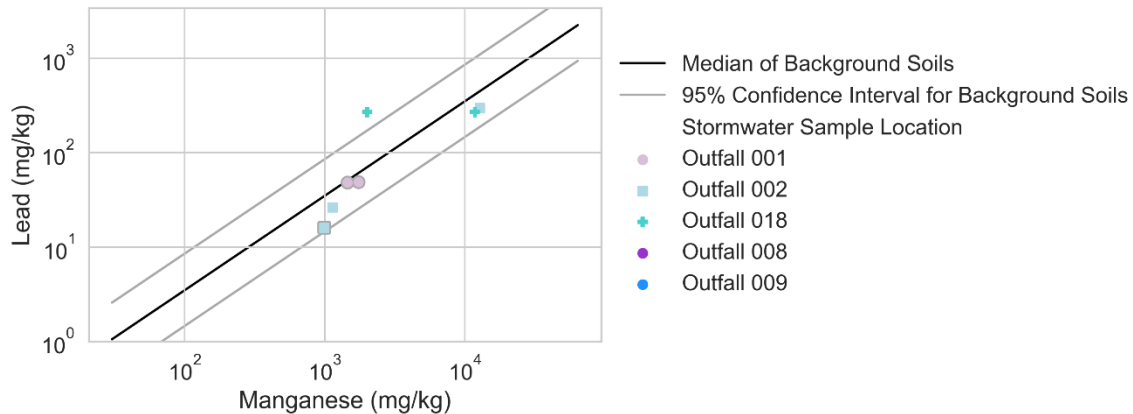


Note: Particulate strength values of outfall samples whose stormwater concentration exceeded a benchmark are marked with a red dot.

Figure 18. Lead PS (2019/20 Outfall Stormwater Samples) vs. Solid Source Materials

The PS of lead was compared against iron and manganese (which are soil-based) to evaluate if any of the outfall stormwater and soil samples exhibited a similar pattern. Figure 19 shows that the ratio found in the exceeding stormwater sample falls on the background soil median slope line for iron. The exceeding sample did not have a concurrent measurement of manganese to evaluate the ratio to manganese; however, most of the other stormwater samples fall within the 95% confidence interval for manganese. These results further **support background soils as a likely source of the lead exceedance** during the 2019/20 rainy season.



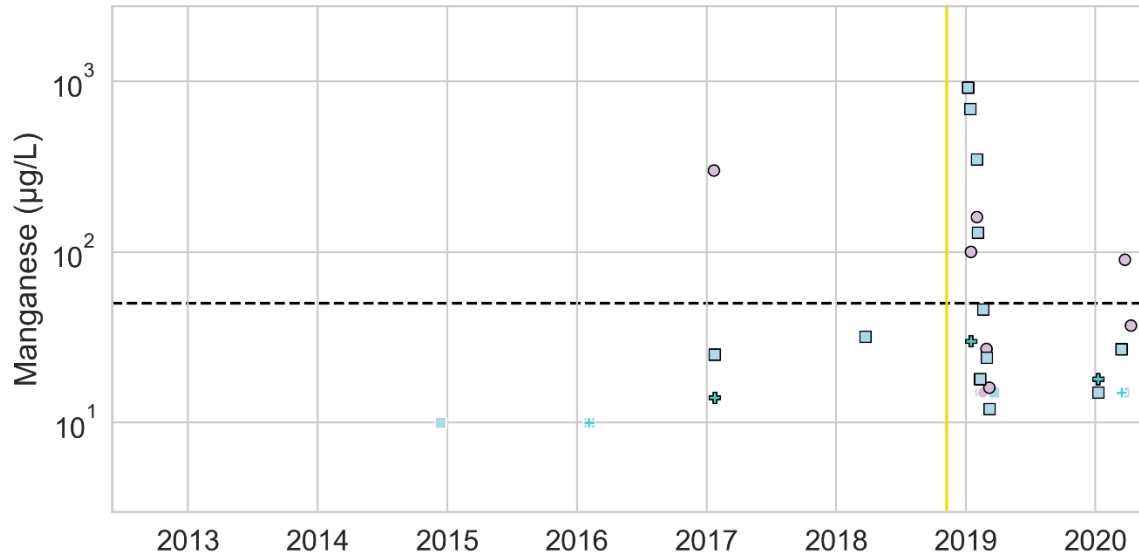


Note: No samples were analyzed for manganese concurrently with the exceeding lead sample. Markers with a black border signify detected results that did not exceed a benchmark. Markers with a gray border signify an estimated PS where the dissolved fraction or TSS was not detected. Markers without a border signify an estimated PS where the constituent under evaluation was not detected in the sample and PS was calculated using the detection limit resulting in a high estimate.

Figure 19. 2019/20 Lead Metal Ratio Plots

3.4. Manganese

Manganese concentrations were above the benchmark at Outfall 001 once in 2019/20. As shown in Figure 20, stormwater concentrations of manganese were notably lower than during 2018/19, suggesting that manganese concentrations this year were not caused by post-wildfire conditions. **The temporal patterns of iron concentrations indicate that concentrations in 2019/20 were similar to other non-wildfire years.**



Notes:

1. Markers with a black border signify detected results.
2. Markers without a border signify non-detected result and are shown at the method detection limit.
3. Regression line is not statistically significant and is not shown.

- Manganese Benchmark/Permit Limit
- Start of Woolsey Fire (11/8/2018)
- Outfall 001
- Outfall 002
- + Outfall 018
- Outfall 008
- Outfall 009

Figure 20. Timeseries of Manganese Concentrations 2012/13-2019/20

As illustrated in Figure 21a, manganese concentrations were highest at Outfall 001, which receives runoff from an undeveloped watershed. Figure 21b shows the detected particulate strengths were consistent across outfalls, indicating the differences in concentrations across outfalls were driven by TSS rather than a concentrated source. **The spatial pattern indicates that all outfalls likely shared the same diffuse, site-wide source of manganese in stormwater.**

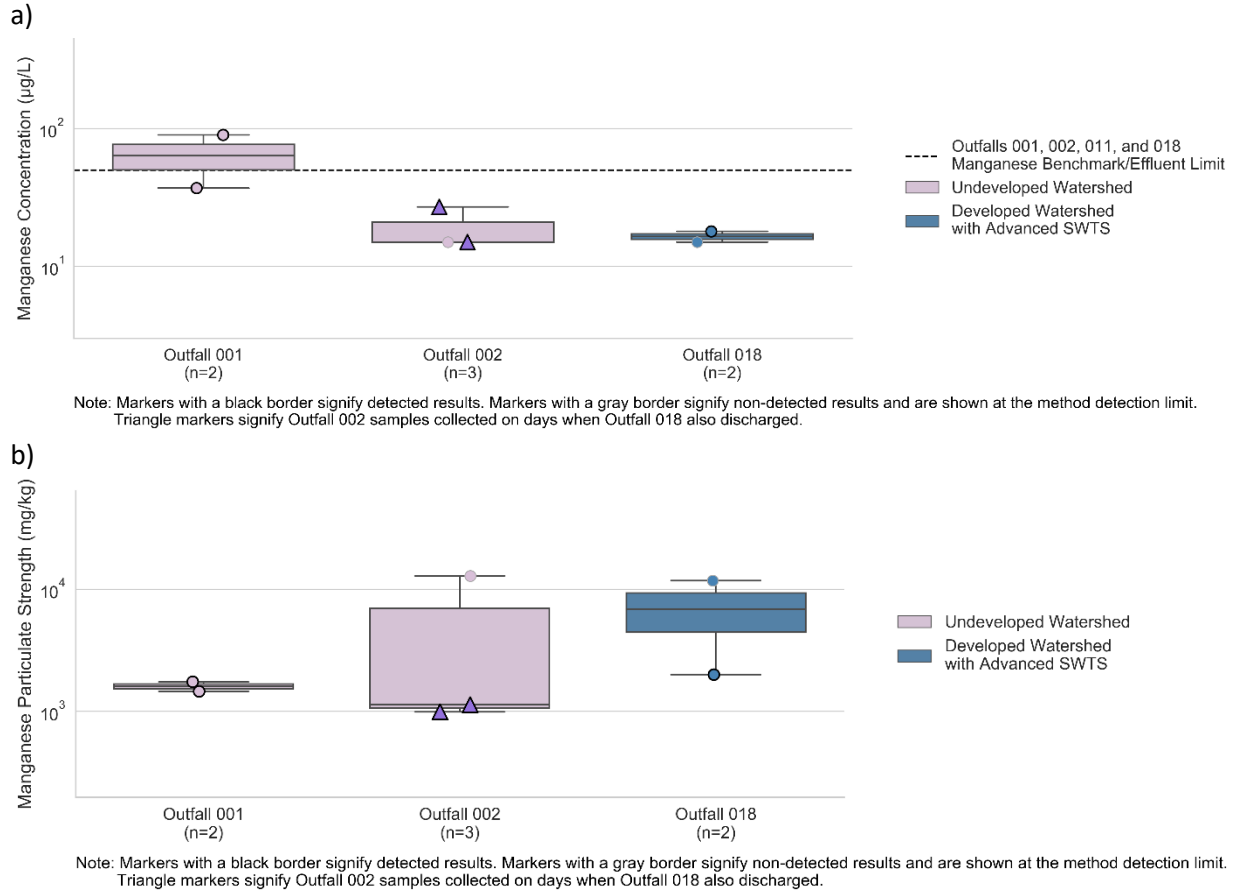
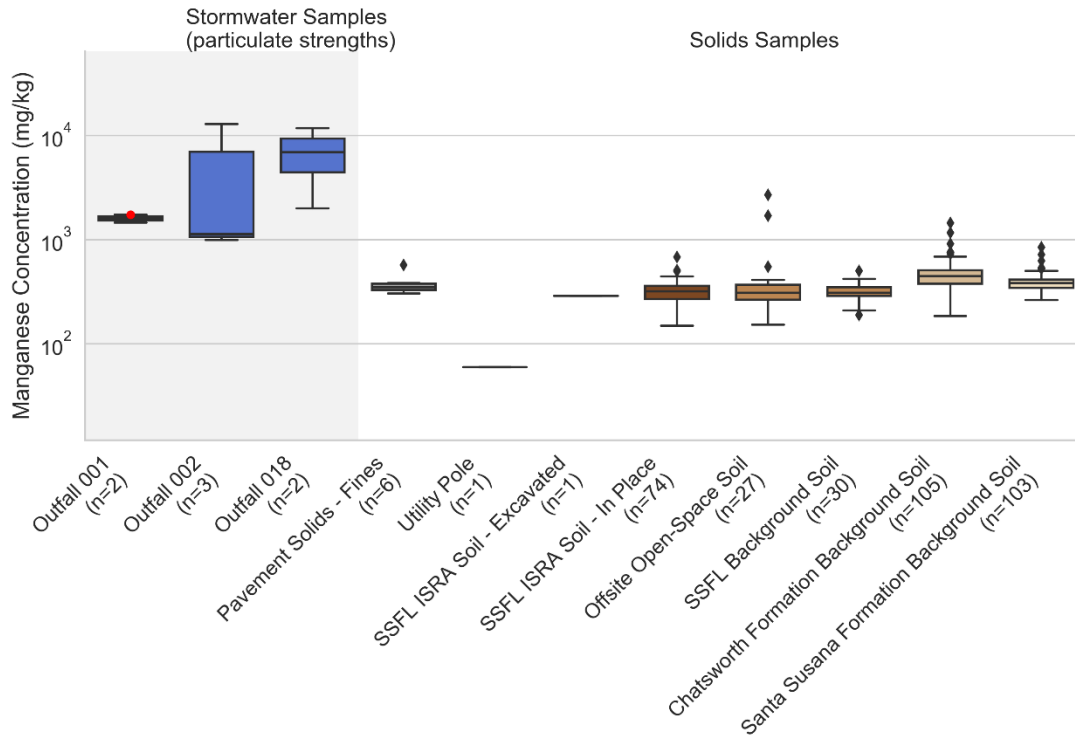


Figure 21. Manganese Concentrations at Outfalls in 2019/20 Compared to Previous Years

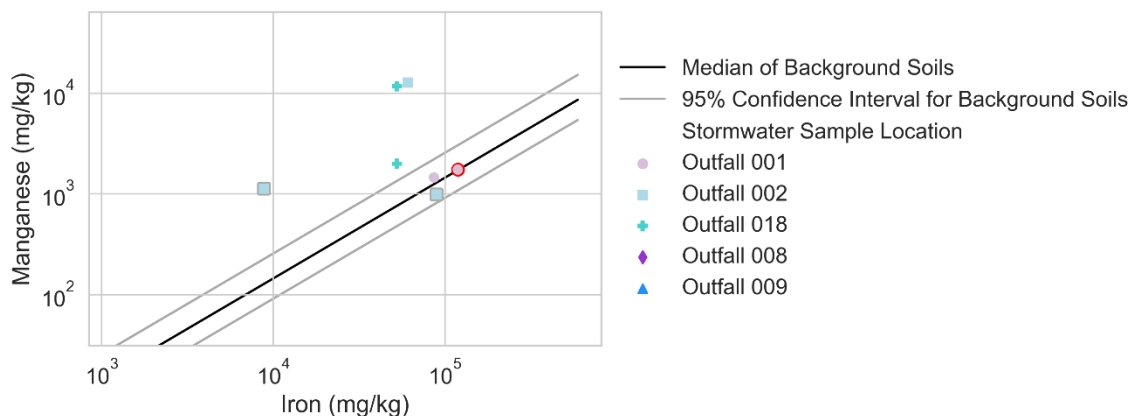
The PS of the outfall stormwater samples compared to the various potential sources are shown in Figure 22. The exceeding sample's PS is not below the upper range of any of the sources evaluated. Future analysis distinguishing between particle sizes in background soils is needed to determine if background soils, particularly in the fine fraction, are a contributing source. Research has found that manganese is strongly correlated with clay content (i.e., fine fraction; Ma et al., 1997), suggesting that the concentrations in background soils in the fine fraction may be higher than in bulk samples. **The PS values of the exceeding samples could not be explained by the source samples evaluated, but background soils could not be ruled out as a potential source due potentially elevated concentrations in soil fines.**



Note: Particulate strength values of outfall samples whose stormwater concentration exceeded a benchmark are marked with a red dot.

Figure 22. Manganese PS (2019/20 Outfall Stormwater Samples) vs. Solid Source Materials

The PS of manganese was compared against iron (both are soil-based) to evaluate if any of the stormwater and soil samples exhibited a similar pattern. Figure 23 shows that the exceeding stormwater sample fell on the background soil median slope line for background soils, which suggests that **background soils were a likely source of the manganese exceedance** in the 2019/20 rainy season.



Note: PS values of outfall samples whose stormwater concentration exceeded a benchmark are marked with a red border. Markers with a black border signify detected results that did not exceed a benchmark. Markers with a gray border signify an estimated PS where the dissolved fraction or TSS was not detected. Markers without a border signify an estimated PS where the constituent under evaluation was not detected in the sample and PS was calculated using the detection limit resulting in a high estimate.

Figure 23. 2019/20 Manganese:Iron Metal Ratio Plot

Chemical mass balance calculations were also conducted using copper, lead, and zinc heavy metal in addition to TCDD TEQ (no DNQ) particulate strength data for the potential source areas and the 2019/2020 outfalls. Additional TCDD analyses are discussed in the following section, but those data were used in the mass balance calculations to represent one of the four tracers need in the calculations. Table 8 illustrates the results of the chemical mass balance calculations to identify the major source contributions to the 001, 002, 008, and 009 outfalls. The calculated rankings of the relative contributions for these sources are indicated on the table. Only sources having at least 10% of the potential source contributions as the largest ranked source are ranked. Unranked sources are therefore likely to be only very small contributors to the outfall. Due to few data and relatively high variability, the reliability of these mass balances is fair for OF008 and 009, and good for OF001 and 002, indicating a moderate and low amount of uncertainty in the results, respectively. The major mass sources are seen to be the background soils (SSFL background soil and the ISRA in place soils). The watersheds are likely to have only small amounts of potential contributions of pavement fines and ISRA excavated soil material (although this material is no longer physically at the site, it is used as a proxy for potentially impacted soils).

Table 8. Chemical Mass Balance Calculation Results using 2019/2020 Copper, Lead, Zinc, and TCDD Particle Strength Data (source rankings shown)

	Pavement Fines	Santa Susana Field Lab background soil	ISRA in place soil	ISRA excavated soil	Reliability
OF001		1	2		good
OF002			1		good
OF008			1		fair
OF009			1		fair

3.5. TCDD TEQ (no DNQ)

The calculated TCDD TEQ (no DNQ) concentrations at Outfalls 001 and 002 were above the benchmark for these outfalls a total of three times in 2019/20. NPDES exceedances occurred in most years and the exceeding concentrations in the 2018/19 post-wildfire year were similar to non-wildfire years, as shown in Figure 24. Stormwater concentrations of TCDD TEQ (no DNQ) decreased over the course of the 2019/20 season at a similar rate as during the 2018/19 season. **Temporal patterns of TCDD TEQ (no DNQ) concentrations indicate that concentrations in 2019/20 were typical of pre-wildfire years for the site.**

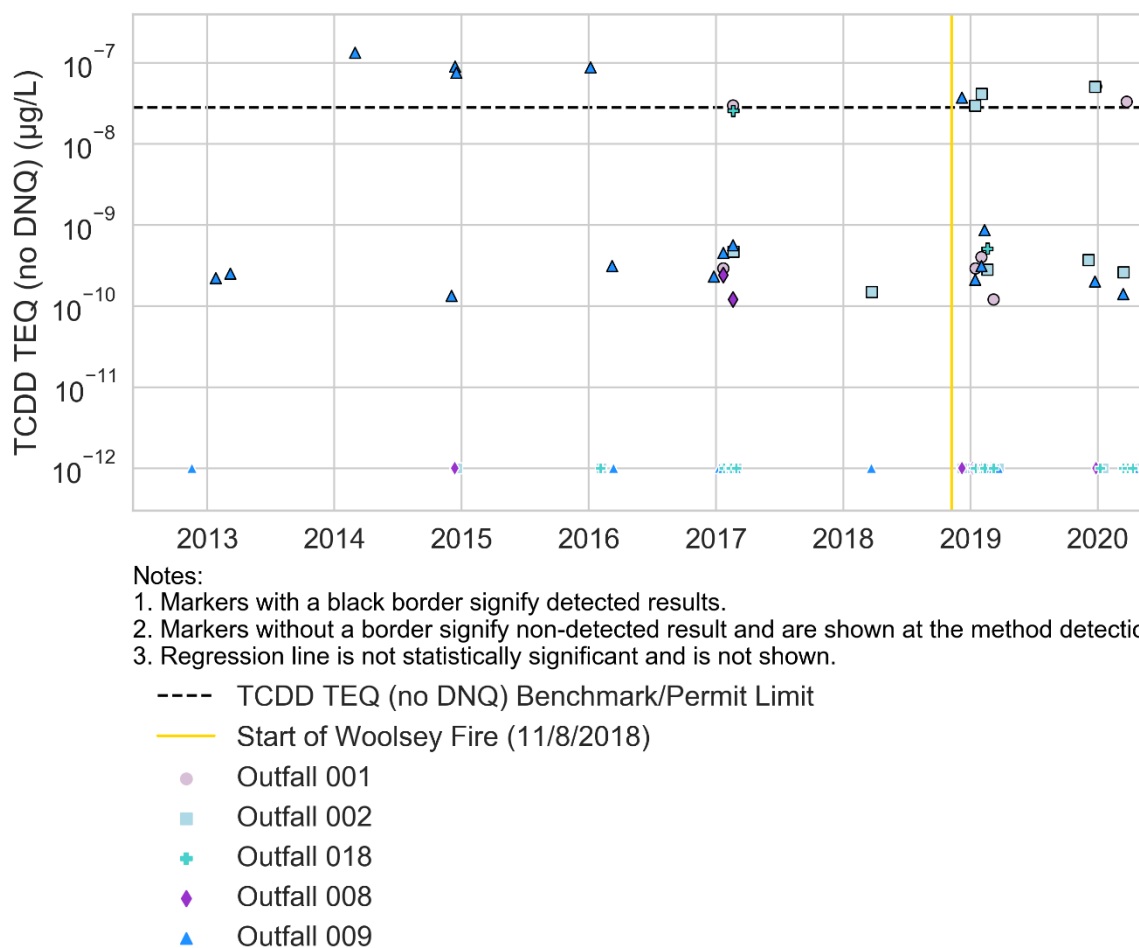


Figure 24. Timeseries of TCDD TEQ (no DNQ) Concentrations 2012/13-2019/20

As shown in Figure 25a, concentrations of TCDD TEQ (no DNQ) were highest at Outfall 001, which receives runoff from an undeveloped watershed⁶. Figure 25b shows that the PS values of TCDD TEQ (no DNQ) were also highest at Outfall 001 indicating the results are PS driven rather than TSS driven. This suggests that there is likely a concentrated source in the Outfall 001 and 002 watersheds. Utility poles are suspected to be a contributing source of TCDD TEQ (no DNQ) to stormwater and are further evaluated through particulate strengths in Figure 26 below. While both Outfall 001 and 002 watersheds have a similar total number of poles, at the beginning of the rainy season there were fewer BMPs installed around utility poles

⁶ Although the median TCDD TEQ (no DNQ) concentration was highest at Outfall 001, the dataset is not sufficiently large to determine if this difference is statistically significant.

in the Outfall 001 watershed than the Outfall 002 watershed. This difference in BMP application may have contributed to higher concentrations of TCDD TEQ (no DNQ) at Outfall 001. Similarly, pavement solids have an elevated concentration of TCDD TEQ (no DNQ) and the Outfall 001 watershed has two stretches of paved roads adjacent to drainages (totaling approximately 2 acres) while Outfall 002 watershed has no paved areas. **The spatial patterns indicate there was likely a local source contributing to elevated TCDD TEQ (no DNQ) concentrations.**

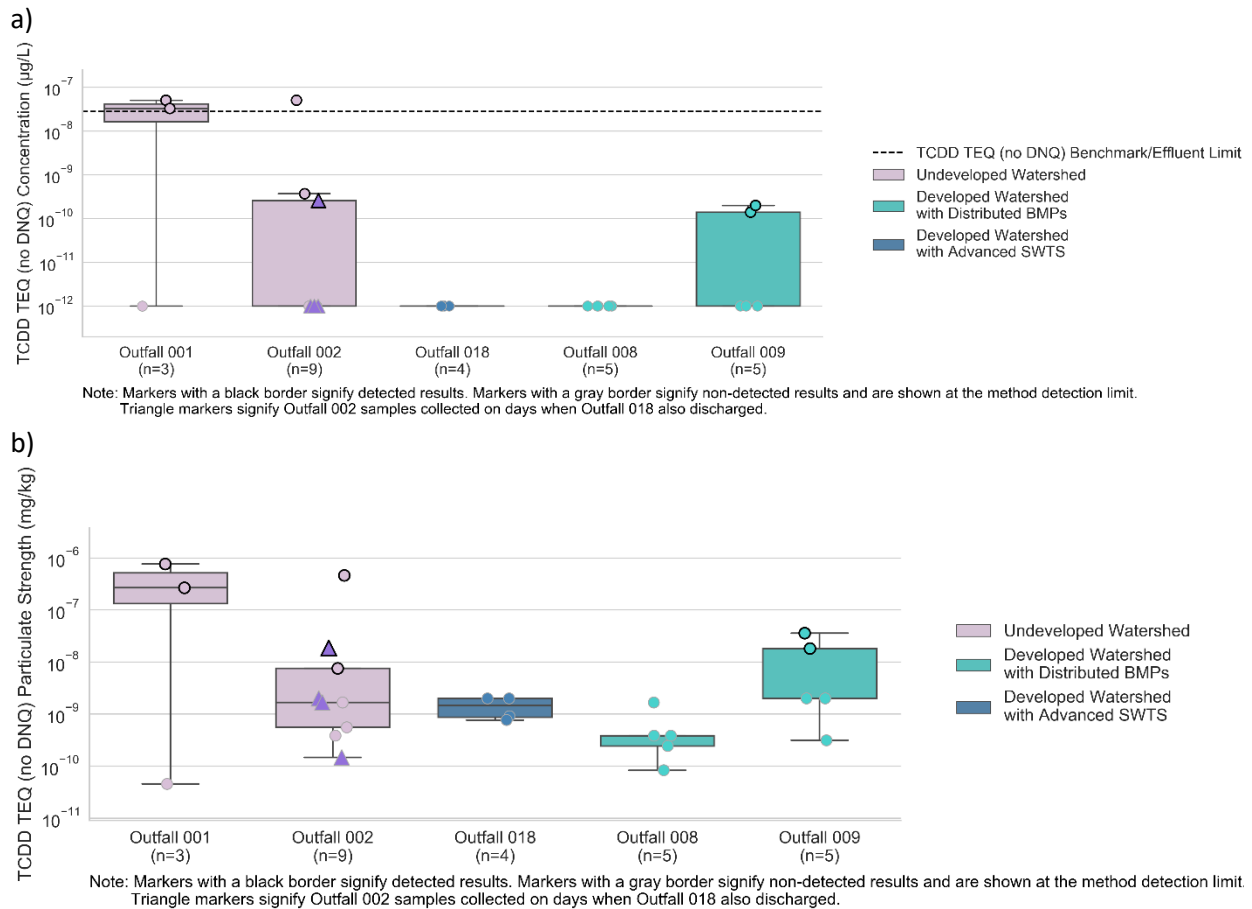
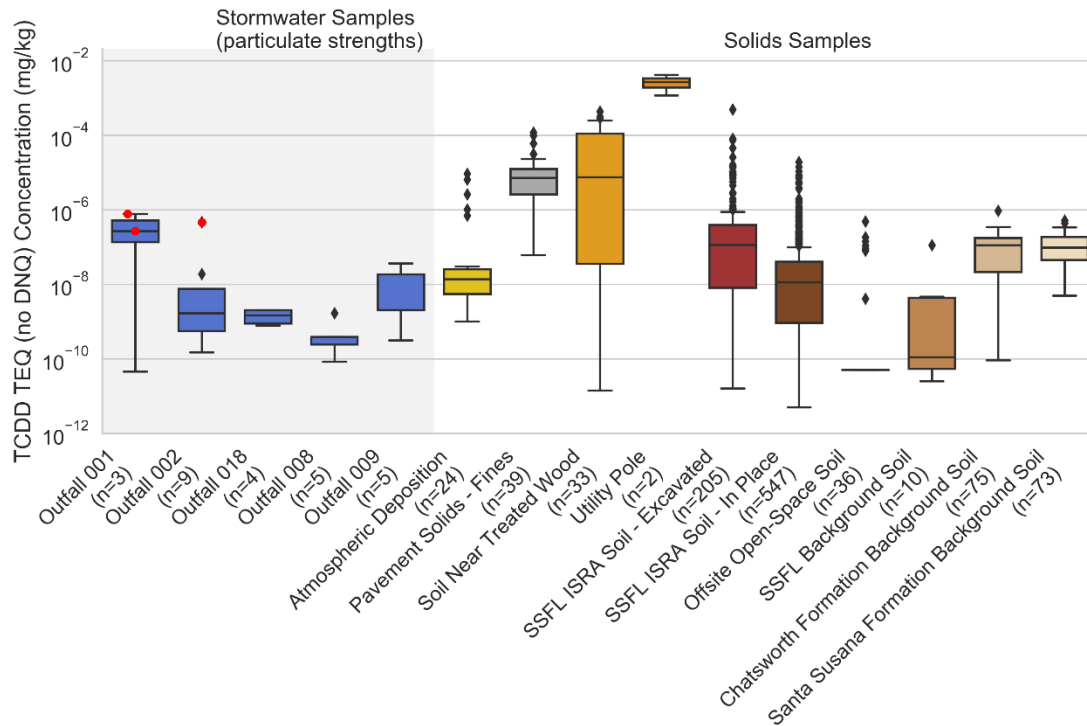


Figure 25. Dioxins Concentrations at Outfalls in 2019/20 Compared to Previous Years

All of the exceeding samples had PS values about 100x higher than the average for all outfalls, at approximately 10^{-7} mg/kg TCDD TEQ (no DNQ) or greater, as shown in Figure 26. This indicates that the exceedances were driven by PS rather than TSS and possibly came from similar sources. The exceeding samples had PS values that could have come from pavement solids fines, impacted soils, soils near treated wood, and treated wood utility poles. Of these sources, pavement solids in the Outfall 001 watershed and soils near treated wood in the Outfall 001 and 002 watersheds had sufficiently high particulate strength (about 10x the exceeding samples), quantity, and mobility onsite to be significant contributors of TCDD TEQ (no DNQ) in stormwater runoff. Impacted soils could not be ruled out, however, they are unlikely to be the sole source of the exceedances due to the relatively small quantity of potentially impacted soils in the Outfall 001 and 002 watersheds and their distance from the Outfalls (if any are present, it would be in the northern most distant edge of the watersheds). Additionally, preliminary results of the buffer zone subarea study (Appendix E) found no elevated TCDD TEQ (no DNQ) in stormwater from potentially impacted soil subareas in the buffer zone. This indicates the **TCDD TEQ (no DNQ) exceedances in**

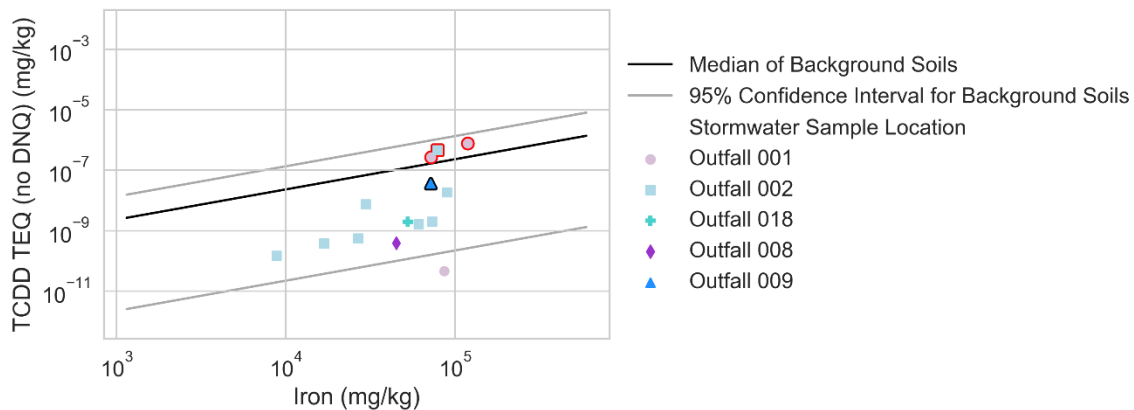
stormwater were likely from pavement solids fines (001 only) and/or soils near treated wood. Again, background soils could not be ruled out as a potential source due potentially elevated concentrations in soil fines.

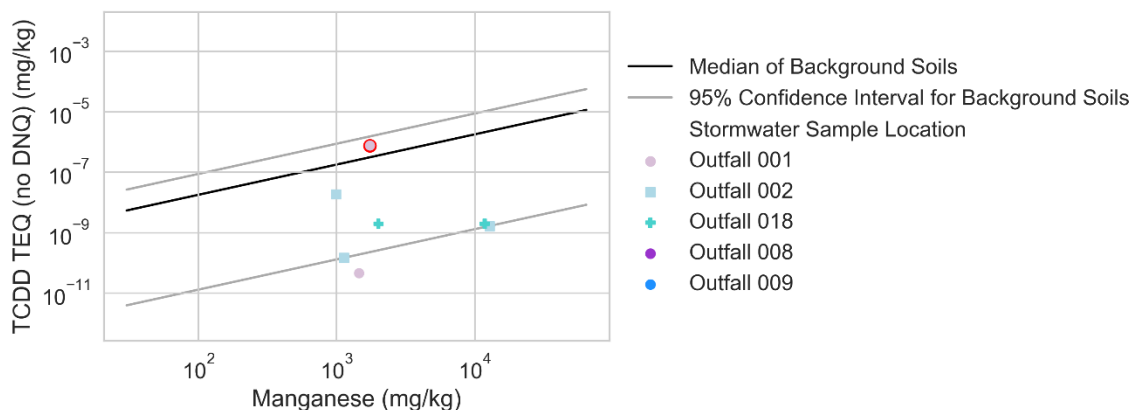


Note: Particulate strength values of outfall samples whose stormwater concentration exceeded a permit benchmark or effluent limit are marked with a red dot.

Figure 26. Dioxins PS (2019/20 Outfall Stormwater Samples) vs. Solid Source Materials

The PS of TCDD TEQ (no DNQ) was compared against iron and manganese (which are soil-based) to evaluate if any of the outfall stormwater and soil samples exhibited a similar pattern. Figure 27 shows that the ratios found in the exceeding stormwater samples fall within the background soil 95% confidence interval, which supports background soils as a potential source of the TCDD TEQ (no DNQ) exceedances during the 2019/20 rainy season.





Note: PS values of outfall samples whose stormwater concentration exceeded a benchmark are marked with a red border. Not all exceeding samples have concurrent manganese samples. Markers with a black border signify detected results that did not exceed a benchmark. Markers without a border signify an estimated PS where the constituent under evaluation was not detected in the sample and PS was calculated using the detection limit resulting in a high estimate.

Figure 27. 2019/20 Dioxins Metal Ratio Plots

The TCDD TEQ values of the seventeen congeners and their percent contribution to the total TCDD TEQ sum in each potential source material were compared to the percent contribution of each in the stormwater samples using multivariate fingerprinting analyses. Cluster and principle component analyses were used to identify the likely major sources of TCDD congeners detected at the outfalls. The dendrogram in Figure 28 shows the relationships between outfall and source samples for the congeners. The dendrogram shows that pavement solids fines, background soils (Outfall 002 subarea, and SSFL background soils), and impacted soils have a strong relationship with the outfalls with samples that exceeded the benchmark (Outfalls 001 and 002). The principle component analysis further supports that stormwater at Outfalls 001 and 002 was closely related to background soils, impacted soils, and pavement solids fines, as shown in Figure 29. However, due to the absence of significant paved areas in the Outfall 002 watershed, pavements solids were not a likely source at Outfall 002. Impacted soils are unlikely to be a source of the exceedances due to the relatively small quantity of impacted soils in the Outfall 001 and 002 watersheds. This is supported by the preliminary results of the buffer zone subarea study, which found no elevated TCDD TEQ (no DNQ) in stormwater from impacted soil subareas in the buffer zone. Therefore, the cluster and principle component analyses support **pavement solids fines (001 only) and background soils as likely sources of the TCDD TEQ (no DNQ) exceedances in stormwater** during the 2019/20 rainy season.

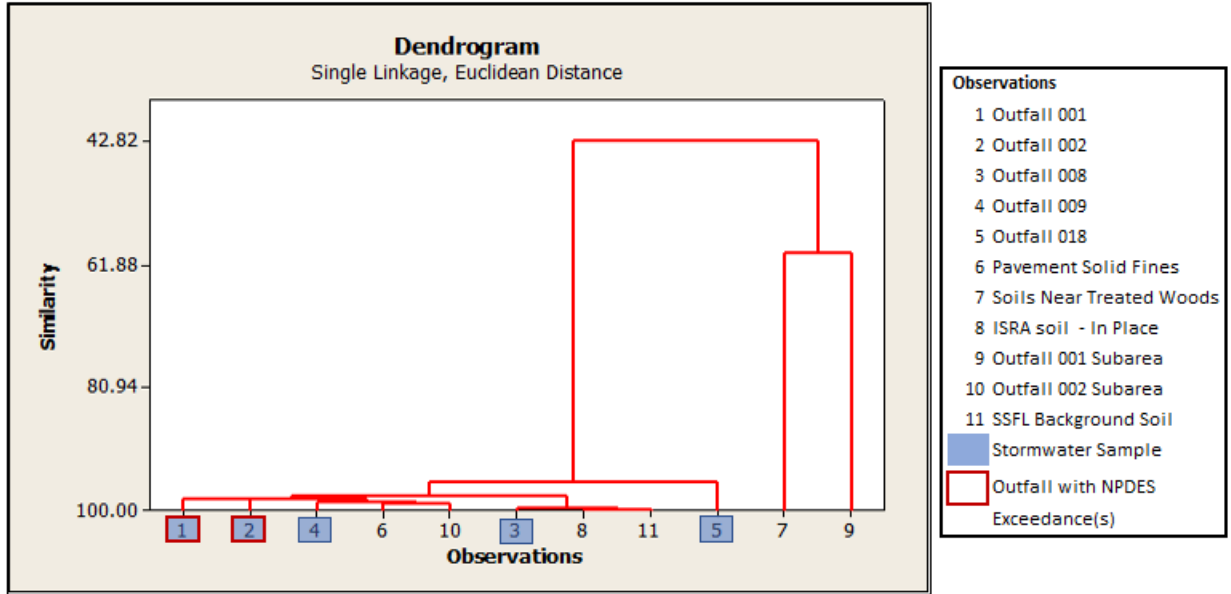


Figure 28. Dendrogram of Dioxin Congener Relationships in Outfall Samples and Source Samples

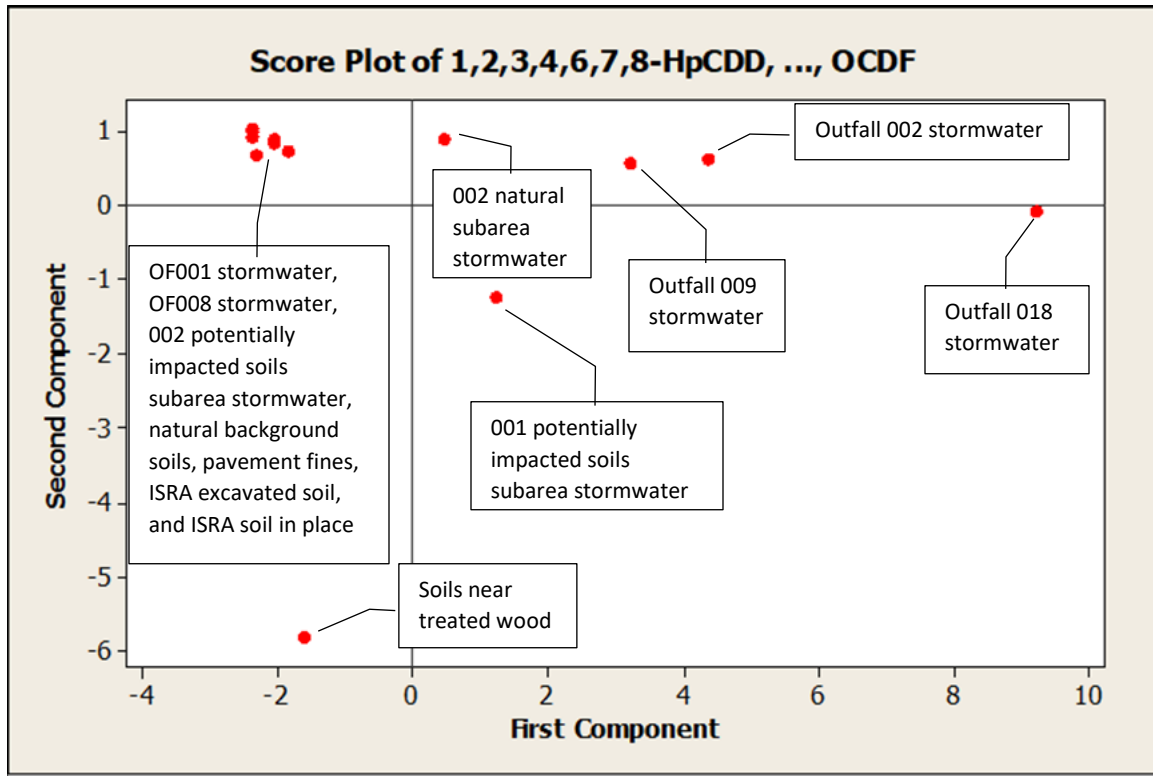


Figure 29. Score Plot of the First and Second Principle Components for Dioxin Congeners

Table 9 shows the calculated mass contributions from the mass balance modeling using the TCDD congener data for the four potential sources for outfalls 001, 002, 008, 009, and 018. Due to the few and highly variable congener data for the potential sources, the reliability of these calculations is poor to fair,

with a moderately large uncertainty in these results. Most of the material reaching these outfalls are seen to be background soils (as reflected by the ISRA in place soil categories). The ISRA excavated soils and pavement fines are ranked second for these outfalls. As there is a large gap in the potential contributions between ranking values, these sources are not expected to be present in large small amounts.

Table 9. Chemical Mass Balance Calculation Results using 2019/2020 TCDD Congener Particle Strength Data (source rankings shown)

Outfall	Pavement Fines	Santa Susana Field Lab background soil	ISRA in place soil	ISRA excavated soil	Reliability
OF001			1	2	poor
OF002			1	2	poor
OF008	2		1		fair
OF009			1	2	poor
OF018	3		1	2	poor

These patterns were considered in conjunction with the PS values above to identify sources having both a high enough concentration of dioxin and the same pattern of congeners as observed in the stormwater samples. The samples that were supported by the congener fingerprinting also had high PS values, which further **supports the conclusion that background soils, and pavement solids fines (Outfall 001 only due to lack of pavement in the Outfall 002 watershed), were the likely sources of the TCDD TEQ (no DNQ) exceedances** during the 2019/20 rainy season. Although, the mass of pavement fines affecting the outfalls is likely very small compared to the background soils the concentration in pavement fines is 100x that in background soils. As discussed previously, impacted soils are unlikely to be a source of the exceedances at Outfalls 001 and 002. The various LOEs used to evaluate the source materials are summarized in Table 10 below.

APPENDIX C: 2019/20 Exceeding Constituent Source Investigation

Table 10. Summary of Dioxin Sources and LOEs (sources with most supporting LOEs are highlighted in orange)

Sample Location	Line of Evidence	Atmospheric Deposition	Pavement Solids	Soil Around Treated Wood	Impacted Soils	Background Soils
Outfall 001	Physically exists in watershed	✓	✓	✓	✓ ¹	✓
	Particulate strength ²	X	✓	✓	✓	✓
	Metal ratios support	N/A	N/A	N/A	N/A	✓
	Congener fingerprinting	Not analyzed	✓	X	✓	✓
	Subarea stormwater samples ³	N/A	Not sampled	N/A	X	✓
Outfall 002	Physically exists in watershed	✓	X	✓	✓ ¹	✓
	Particulate strength ²	X	NP	✓	✓	✓
	Metal ratios support	N/A	NP	N/A	N/A	✓
	Congener fingerprinting	Not analyzed	NP	X	✓	✓
	Subarea stormwater samples ³	N/A	NP	NA	X	X

KEY:

✓ = Line of Evidence supports material as potential source of dioxin exceedance

X = Line of Evidence does not support material as potential source of dioxin exceedance

N/A = Line of Evidence is not applicable to a particular source material

NP = A particular source material is not present in that watershed

Orange cells indicate sources that had no lines of evidence against being a potential source and were therefore the most likely sources of exceedance.

¹ Stantec analysis of soil data in watershed confirms presence of chemical constituents in shallow soil

² Supported if 90th percentile concentration in source sample is greater than exceeding particulate strength

³ Preliminary conclusions based off first season of subarea sampling. This analysis will be strengthened with more sampling results.

4. Conclusions

The evaluation of 2019/2020 exceedances was accomplished through the analyses described above. The various LOEs provide a collective weight of evidence to determine which constituents, if any, continue to be impacted by the wildfire and which sources most likely explain each benchmark exceeding constituent in the 2019/20 stormwater monitoring results.

The temporal patterns revealed that the concentrations in stormwater observed at SSFL this year are not characteristic of post-wildfire concentrations but rather, concentrations have returned to levels typical for non-wildfire year at the site. Similarly, the hydrologic response, analyzed through runoff volumes, have returned to patterns typical of non-wildfire years.

The spatial patterns revealed that the elevated iron, lead, and manganese concentrations were likely attributable to diffuse sources present throughout SSFL, while TCDD TEQ (no DNQ) concentrations were likely affected by contributions from local, watershed-specific sources such as pavement solids or soils near treated woods, in addition to diffuse site-wide sources such as natural background soils. Additionally, impacted soils could not be ruled out as a potential source for dioxin exceedances; however, as shown in Appendix E, results of initial stormwater sampling data collected from subareas of the Outfall 001 and 002 watersheds suggest that the few impacted soil areas within these watersheds are not contributing dioxin to these outfalls at levels greater than background soils. More data are needed to confirm this finding over ensuing years.

Multiple LOEs pointed to natural background soils as likely sources of most of this year's exceedances. In most cases, one or more of the potential source materials evaluated was determined to be a potential source of the exceeding constituent found in stormwater. A summary of these analyses is presented in Table 11.

APPENDIX C: 2019/20 Exceeding Constituent Source Investigation

Table 11. Summary of LOEs by Outfall and Constituent

Parameter	Outfall (# of exceedances)	Temporal Pattern	Spatial Pattern	Outfall Particulate Strengths vs Solid Sources	Fingerprinting		Chemical Mass Balance ¹	Subarea Stormwater Particulate Strengths (PRELIMINARY) ²
					Comparison to Soil Fe and Mn Ratios	Congener Fingerprinting		
Iron	001 (3)	Typical of non-wildfire conditions	diffuse/site-wide source	<i>Additional data needed³</i>	natural background soils	N/A	natural background soils	diffuse/site-wide source, natural background soils
Iron	002 (3)	Typical of non-wildfire conditions	diffuse/site-wide source	<i>Additional data needed³</i>	natural background soils	N/A	natural background soils	diffuse/site-wide source, natural background soils
Lead	001 (1)	Typical of non-wildfire conditions	diffuse/site-wide source	atmospheric deposition, pavement solid fines, natural background soils	natural background soils	N/A	natural background soils	diffuse/site-wide source, natural background soils
Manganese	001 (1)	Typical of non-wildfire conditions	diffuse/site-wide source	<i>Additional data needed³</i>	natural background soils	N/A	natural background soils	diffuse/site-wide source, natural background soils
TCDD TEQ (no DNQ)	001 (2)	Typical of non-wildfire conditions	local/watershed-specific source	soil near treated wood, potentially impacted soils, natural background soils, pavement solid fines	natural background soils	pavement solid fines, natural background soils	natural background soils	diffuse/site-wide source, natural background soils
TCDD TEQ (no DNQ)	002 (1)	Typical of non-wildfire conditions	local/watershed-specific source	soil near treated wood, potentially impacted soils, natural background soils	natural background soils	natural background soils	natural background soils	diffuse/site-wide source, natural background soils

1. Chemical mass balance calculations considered copper, lead, zinc, and TCDD TEQ (no DNQ) concentrations at once rather than an individual constituent at a time.

2. Buffer zone subarea sampling conclusions are preliminary. More data, which will be obtained through additional sampling, are needed to confirm these conclusions.

3. Additional sampling with analysis by size fraction is recommended in order to evaluate potential sources since none of the bulk solids concentration met the threshold to be likely source.

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Appendix D: Best Management Practice (BMP) Performance Analysis

2019/2020 Reporting Year

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Acronyms

ANOVA	Analysis of Variance
BMP	Best Management Practice
CA	California
CM	Culvert Modification
COC	Constituent of Concern
COV	Coefficient of Variation
DNQ	Detected not Quantified
ELV	Expendable Launch Vehicle
ENTS	Engineered Natural Treatment Systems
GIS	Geographic Information System
HDPE	High Density Polyethylene
ISRA	Interim Source Removal Action
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
mg/L	milligram per liter
NASA	National Aeronautics and Space Administration
ND	Non-Detect
NPDES	National Pollutant Discharge Elimination System
POR	Period of Record
SSFL	Santa Susana Field Laboratory
SWMM	Storm Water Management Model
TCDD	Tetrachlorodibenzo- <i>p</i> -dioxin
TEQ	Toxic Equivalence
TSS	Total Suspended Solids

1. Introduction

The purpose of this memorandum is to evaluate the performance of existing stormwater treatment Best Management Practices (BMPs) in the Outfall 009 watershed of the Boeing Santa Susana Field Laboratory (Site). The BMPs have been installed at the direction of the Surface Water Expert Panel and have been in operation since 2011. The purpose of these BMPs is to reduce pollutants from stormwater prior to discharge at Outfall 009 to comply with the NPDES permit standards as issued to Boeing by the Los Angeles Regional Water Quality Control Board.

This is an update to the BMP performance analysis that is conducted annually, consistent with the *Site-Wide Stormwater Work Plan and 2014/15 Annual Report* ("2015 Work Plan") (Santa Susana Surface Water Expert Panel and Geosyntec Consultants, 2015). This memorandum incorporates 2019/2020 reporting year data into a dataset that initially began in December 2009. The National Pollutant Discharge Elimination System (NPDES) constituents of concern (COCs) addressed in this analysis include total suspended solids (TSS), total lead, total copper¹, and dioxins (TCDD TEQ, DNQ excluded, BAFs included). 2019/2020 data were collected to assess effectiveness of the culvert modification (CM) installations², upper lot media filter, lower parking lot sedimentation basin and biofilter (lower lot biofilter), ELV treatment BMP³, and B1436 detention bioswales⁴ (detention bioswales), and Boeing administrative area inlet filters (Boeing admin area inlet filters). This memorandum focuses on the performance of the BMPs listed above, which are located in Watershed 009. Although this memorandum currently only addresses BMPs in Watershed 009, Table 1 shows Permit Limits at all outfalls specified in the NPDES Permit for the aforementioned COCs, as context for goals for other potential BMPs constructed in other watersheds, if needed in the future.

Table 1. COC NPDES Permit Limits by Outfall

Outfall	NPDES Permit Limit			
	TSS (mg/L)	Total Lead (µg/L)	Total Copper (µg/L)	Dioxins (µg/L)
001	45	5.2	14	2.80 x 10 ⁻⁸
002	45	5.2	14	2.80 x 10 ⁻⁸
003	-	5.2	13	2.80 x 10 ⁻⁸
004	-	5.2	13	2.80 x 10 ⁻⁸
005	-	5.2	13	2.80 x 10 ⁻⁸
006	-	5.2	13	2.80 x 10 ⁻⁸
007	-	5.2	13	2.80 x 10 ⁻⁸
008	-	5.2	14	2.80 x 10 ⁻⁸

¹ Copper is not included as a pollutant of concern for the Outfall 009 watershed in the 2015 Work Plan. However, data for total copper are retained for the paired line plots.

² CM refers to a culvert modification BMP where detention and stormwater filtration occurs prior to entering culverts beneath roadways.

³ ELV refers to an area previously used by NASA to test the lunar lander engines.

⁴ Includes both the northern and southern detention bioswales. However, only the southern detention bioswale was sampled in 2017/2018, 2018/2019, and 2019/2020.

Outfall	NPDES Permit Limit			
	TSS (mg/L)	Total Lead (µg/L)	Total Copper (µg/L)	Dioxins (µg/L)
009	-	5.2	13	2.80 x 10 ⁻⁸
010	-	5.2	13	2.80 x 10 ⁻⁸
011 ¹	45	5.2	14	2.80 x 10 ⁻⁸
018 ¹	45	5.2	14	2.80 x 10 ⁻⁸
019	45	5.2	14	2.80 x 10 ⁻⁸
020	45	5.2	14	2.80 x 10 ⁻⁸

¹ Benchmark

Following the 2016/2017 reporting year, it was decided that BMP performance sampling would be reduced because of the recent slow-down in site activities particularly in the Outfall 009 watershed. Starting in 2017/2018, samples were only collected during two storm events per year at the upper lot media filter, southern detention bioswale, lower lot biofilter, CM-1 (influent-west and effluent), and the ELV Treatment BMP.

During 2019/2020, there was slightly higher than average total precipitation as compared to other reporting years. Long-term average annual rainfall at SSFL from 1958/1959 through 2019/2020 is 17.0 inches⁵, compared to 20.54 inches recorded in 2019/2020⁶. Nine rain events⁷ occurred in the 2019/2020 reporting year, with six of these storms being sampled at one or more BMP monitoring sites⁸. This is compared with between four and 14 total rain events per year in prior reporting years 2009/2010 through 2018/2019.

Table 2 summarizes rainfall events in which data were collected for the 2009/2010 through 2019/2020 reporting years (“non-qualifying rain events” represent precipitation events where samples were not collected). Not all BMPs had influent and effluent flows during each rain event.

⁵ Data from the Simi Hills – Rocketdyne Lab gauge (Ventura County Watershed Protection District site 249) was used to determine annual rainfall from 1958/1959 through 2000/2001. However, rainfall data were not available at this gauge from 1977/1978 through 1984/1985. Data from the Area 4 gauge (which was moved to Area 1 on January 1, 2013) were used to determine annual rainfall from 2001/2002 through 2019/2020. This results in a period of record (POR) of 54 years.

⁶ A water year is typically defined as October 1 through September 30. However, due to the reporting timeline for the Annual Report, reporting years have been defined as June 1 through May 31.

⁷ A “rain event” is defined as greater than 0.1 inches of rainfall in a 24-hour period and preceded by at least 72 hours of dry weather.

⁸ Monitoring occurs when rain events result in observable flow and the maximum number of sampled events planned for the particular BMP has not been reached.

Table 2. Sample Collection Event Rainfall Data Summary
 (gray cells indicate dates that did not have complete data pairs sampled at treatment devices)

Date(s)	Average Intensity (in/hr)	Max Intensity (in/hr)	Event Total (in)	Event Duration (hrs)	Cumulative Rainfall for Sampled Events (in)	Number of BMP Subarea Monitoring Samples ¹
10/13/2009 - 10/14/2009	0.05	0.24	2.48	35	2.48	- ¹
12/7/2009 - 12/13/2009	0.02	0.25	3.43	57	5.91	- ¹
1/17/2010 – 1/22/2010	0.05	0.52	6.88	123	12.79	- ¹
2/5/2010 – 2/6/2010	0.04	0.20	1.84	43	14.63	- ¹
2/9/2010	0.01	0.17	0.20	3	14.83	- ¹
2/19/2010	0.01	0.05	0.14	8	14.97	- ¹
2/24/2010	0.01	0.03	0.12	12	15.09	- ¹
2/27/2010	0.06	0.34	1.52	17	16.61	- ¹
3/6/2010	0.02	0.13	0.38	11	16.99	- ¹
4/4/2010 - 4/5/2010	0.03	0.23	0.86	13	17.85	- ¹
4/11/2010 - 4/12/2010	0.03	0.22	0.65	11	18.50	- ¹
<i>Non-qualifying rain event total²</i>			<i>0.89</i>			
Total for 2009/2010 reporting year			19.39			- ¹
10/5/2010 - 10/6/2010	0.049	0.18	0.93	20	0.93	- ¹
10/16/2010 - 10/25/2010	0.003	0.22	0.69	216	1.62	- ¹
11/17/2010 - 11/21/2010	0.011	0.23	0.97	89	2.59	- ¹
12/5/2010	0.018	0.09	0.41	10	3.0	- ¹
12/17/2010 – 12/22/2010	0.054	0.37	7.22	131	10.22	- ¹
12/25/2010 - 12/26/2010	0.030	0.22	0.57	9	10.79	- ¹
12/29/2010	0.043	0.10	0.43	7	11.22	- ¹
1/2/2011 - 1/3/2011	0.014	0.12	0.38	17	11.60	- ¹
2/15/2011 – 2/20/2011	0.019	0.45	2.33	121	13.93	- ¹
2/25/2011 - 2/26/2011	0.030	0.22	1.50	20	15.43	- ¹
3/2/2011 - 3/3/2011	0.007	0.03	0.13	8	15.56	- ¹
3/6/2011 - 3/7/2011	0.006	0.02	0.12	10	15.68	- ¹
3/18/2011 - 3/27/2011	0.030	--	6.00	197	21.68	- ¹
5/15/2011 - 5/18/2011	0.009	0.08	0.67	76	22.35	- ¹
<i>Non-qualifying rain event total²</i>			<i>1.04</i>			
Total for 2010/2011 reporting year			23.39			67
10/5/2011	0.090	0.18	0.90	9	0.90	- ¹
11/4/2011 - 11/6/2011	0.041	0.23	0.58	59	1.48	- ¹
11/11/2011 - 11/12/2011	0.035	0.26	0.76	22	2.24	- ¹
11/19/2011 - 11/21/2011	0.031	0.29	0.78	35	3.02	- ¹
12/12/2011 - 12/17/2011	0.006	0.21	0.80	137	3.82	- ¹
1/21/2012 – 1/23/2012	0.017	0.15	1.06	62	4.88	- ¹
2/27/2012	--	--	0.00	--	4.88	- ¹
3/16/2012 - 3/18/2012	0.052	0.31	1.51	29	6.39	- ¹

Date(s)	Average Intensity (in/hr)	Max Intensity (in/hr)	Event Total (in)	Event Duration (hrs)	Cumulative Rainfall for Sampled Events (in)	Number of BMP Subarea Monitoring Samples ¹
3/25/2012 – 3/26/2012	0.079	0.51	2.12	21	8.51	- ¹
4/10/2012 – 4/13/2012	0.034	0.36	2.37	64	10.88	- ¹
4/23/2012 – 4/26/2012	0.003	0.09	0.26	80	11.14	- ¹
<i>Non-qualifying rain event total²</i>			0.19			
Total for 2011/2012 reporting year			11.33			88
11/14/2012 – 11/18/2012	0.010	0.36	0.99	99	0.99	- ¹
11/28/2012 – 12/4/2012	0.011	0.12	1.49	139	2.48	- ¹
12/12/2012 – 12/18/2012	0.005	0.07	0.68	129	3.16	- ¹
12/22/2012 – 12/26/2012	0.013	0.18	1.13	87	4.29	- ¹
1/23/2013 – 1/27/2013	0.020	0.18	1.78	89	6.07	- ¹
2/8/2013 – 2/9/2013	0.008	0.07	0.12	15	6.19	- ¹
2/19/2013	0.025	0.09	0.25	10	6.44	- ¹
3/7/2013 – 3/8/2013	0.041	0.23	0.87	7	7.31	- ¹
5/5/2013 – 5/6/2013	0.040	0.16	0.48	7	7.79	- ¹
<i>Non-qualifying rain event total²</i>			0.31			
Total for 2012/2013 reporting year			8.10			29
11/20/2013 – 11/21/2013	0.013	0.12	0.47	17	0.47	- ¹
12/7/2013	0.070	0.09	0.28	4	0.75	- ¹
2/6/2014 – 2/7/2014	0.015	0.15	0.28	16	1.03	- ¹
2/26/2014 – 3/2/2014	0.052	0.47	4.62	89	5.65	- ¹
4/1/2014 – 4/2/2014	0.008	0.14	0.22	28	5.87	- ¹
<i>Non-qualifying rain event total²</i>			0.20			
Total for 2013/2014 reporting year			6.07			27
10/31/2014 – 11/1/2014	0.045	0.33	0.36	8	0.36	- ¹
11/30/2014 – 12/4/2014	0.033	0.40	3.20	97	3.56	- ¹
12/11/2014 – 12/12/2014	N/A ³	N/A ³	2.62	N/A ³	6.18	- ¹
12/15/2014 – 12/17/2014	0.025	0.33	0.91	36	7.09	- ¹
1/10/2015 – 1/11/2015	0.071	0.23	1.56	22	8.65	- ¹
1/26/2015 – 1/27/2015	0.015	0.06	0.25	17	8.90	- ¹
2/22/2015 – 2/23/2015	0.008	0.06	0.21	26	9.11	- ¹
3/1/2015 – 3/3/2015	0.024	0.22	1.44	60	10.55	- ¹
5/14/2015 – 5/15/2015	0.017	0.30	0.41	24	10.96	- ¹
<i>Non-qualifying rain event total²</i>			0.26			
Total for 2014/2015 reporting year			11.22			17
7/18/2015 – 7/19/2015	0.027	0.32	0.83	31	0.83	0
9/14/2015 – 9/15/2015	0.050	0.39	1.10	22	1.93	8
10/5/2015 – 10/6/2015	0.025	0.32	0.45	18	2.38	0
12/13/2015	0.055	0.06	0.11	2	2.49	0
12/19/2015 – 12/22/2015	0.008	0.08	0.52	65	3.01	6

Date(s)	Average Intensity (in/hr)	Max Intensity (in/hr)	Event Total (in)	Event Duration (hrs)	Cumulative Rainfall for Sampled Events (in)	Number of BMP Subarea Monitoring Samples ⁴
1/5/2016 – 1/10/2016	0.030	0.60	3.87	129	6.88	29
1/18/2016 – 1/20/2016	0.005	0.02	0.20	40	7.08	0
1/31/2016	0.108	0.27	0.86	8	7.94	0
2/17/2016 – 2/18/2016	0.027	0.10	0.57	21	8.51	17
3/5/2016 – 3/7/2016	0.029	0.29	1.57	54	10.08	4
3/11/2016	0.088	0.34	0.44	5	10.52	15
4/7/2016 – 4/9/2016	0.010	0.10	0.52	52	11.04	16
5/6/2016	0.128	0.22	0.77	6	11.81	0
<i>Non-qualifying rain event total²</i>			0.16			
Total for 2015/2016 reporting year			11.97			113
10/16/2016 – 10/17/2016 ⁴	0.008	0.05	0.22	28	0.22	0
10/28/2016 – 10/31/2016	0.006	0.16	0.41	68	0.63	5
11/20/2016 – 11/21/2016	0.024	0.18	0.53	22	1.16	3
11/26/2016	0.055	0.15	0.22	4	1.38	8
12/15/2016 – 12/16/2016	0.093	0.20	1.58	17	2.96	12
12/21/2016 – 12/24/2016	0.030	0.31	1.99	66	4.95	6
12/30/2016 – 12/31/2016	0.011	0.11	0.45	41	5.40	14
1/4/2017 – 1/13/2017	0.013	0.26	2.74	211	8.14	33
1/18/2017 – 1/23/2017	0.050	0.69	5.70	114	13.84	25
2/2/2017 – 2/11/2017	0.013	0.17	2.84	218	16.68	23
2/16/2017 – 2/21/2017	0.049	0.71	5.81	119	22.49	21
2/26/2017	0.022	0.05	0.20	9	22.69	0
3/21/2017 – 3/22/2017	0.028	0.07	0.36	13	23.05	0
4/7/2017 – 4/8/2017	0.024	0.08	0.17	7	23.22	0
<i>Non-qualifying rain event total²</i>			0.13			
Total for 2016/2017 reporting year			23.35			150
1/8/2018 – 1/9/2018	0.068	0.37	2.78	41	2.78	11
2/26/2018 – 3/3/2018	0.015	0.15	1.66	109	4.44	10
3/10/2018 – 3/16/2018	0.012	0.30	1.92	155	6.36	0
3/21/2018 – 3/23/2018	0.059	0.45	2.94	50	9.30	15
<i>Non-qualifying rain event total²</i>			0.45			
Total for 2017/2018 reporting year			9.75			36
10/12/2018 – 10/13/2018	0.037	0.13	0.48	13	0.48	0
11/21/2018 – 11/22/2018	0.092	0.26	0.55	6	1.03	0
11/28/2018 – 11/29/2018	0.045	0.30	1.17	26	2.20	14
12/5/2018 – 12/6/2018	0.068	0.44	2.51	37	4.71	16
1/5/2019 – 1/8/2019	0.030	0.31	1.69	57	6.40	12
1/12/2019 – 1/17/2019	0.043	0.34	5.68	133	12.08	8
1/31/2019 – 2/5/2019	0.053	0.56	6.27	119	18.35	8
2/9/2019 – 2/16/2019	0.018	0.39	3.12	172	21.47	8

Date(s)	Average Intensity (in/hr)	Max Intensity (in/hr)	Event Total (in)	Event Duration (hrs)	Cumulative Rainfall for Sampled Events (in)	Number of BMP Subarea Monitoring Samples ¹
2/27/2019 – 3/8/2019	0.016	0.25	3.21	195	24.68	11
3/20/2019 – 3/21/2019	0.0048	0.03	0.11	23	24.79	0
5/10/2019 – 5/11/2019	0.0045	0.04	0.13	29	24.92	0
5/16/2019 – 5/19/2019	0.014	0.21	1.17	82	25.96	9
<i>Non-qualifying rain event total²</i>			0.20			
Total for 2018/2019 reporting year			26.29			86
11/20/2019	0.185	0.33	0.37	2	0.37	5
11/27/2019 – 11/30/2019	0.023	0.28	2.10	90	2.47	14
12/4/2019 – 12/8/2019	0.018	0.31	2.01	109	4.48	5
12/22/2019 – 12/26/2019	0.044	0.49	3.88	89	8.36	10
1/16/2020 – 1/17/2020	0.064	0.31	0.70	11	9.06	0
2/22/2020	0.037	0.10	0.11	3	9.17	0
3/10/2020 – 3/23/2020	0.022	0.40	7.08	319	16.25	9
4/5/2020 – 4/13/2020	0.021	0.29	3.81	187	20.06	4
5/18/2020	0.031	0.07	0.22	7	20.28	0
<i>Non-qualifying rain event total²</i>			0.26			
Total for 2019/2020 reporting year			20.54			47

¹ Includes total samples (influent, effluent, BMP subarea, background, etc.). Annual totals only are shown for early reporting years (as available), consistent with what was reported in past annual reports.

² Rainfall was measured, but not considered a rain event per the NPDES definition.

³ Area I weather station malfunctioned during rain event, rainfall totals from Station 436 used but hourly rainfall not available.

⁴ Rainfall from Station 436 was used for hour 3:00 on 10/16/2016 when the Area I station was off-line.

2. Overview

2.1 BMPs

Influent and effluent results for each stormwater BMP for the same storm event were compared to assess concentration reductions through the system. Although split samples were periodically collected and used for QA/QC purposes, only the primary samples were used in these analyses. For each of the **six CM sites** discussed herein⁹, the number of paired samples per BMP ranges from 3 to 37 pairs for TSS, 0 to 37 pairs for dioxins¹⁰, 0 to 37 pairs for lead¹¹, and 0 to 33 pairs for copper¹² for 2011/2012 through 2019/2020. Seven new CM paired samples¹³ were collected during this reporting year, and it should be noted that sampling at the B-1 media filter ceased after the 2015/2016 reporting year due to sufficient data having been collected to quantify performance. However, periodic visual checks are made at all control locations to indicate any maintenance problems. The road runoff diversion to CM-1 was constructed during 2017/2018, and sampling to characterize road runoff influent to CM-1 began in 2018/2019. The road runoff inlet to CM-3 was completed on May 5, 2017. No effluent samples were collected during the one post-construction event during 2016/2017, no samples were collected in 2017/2018, and no effluent samples were collected during the one sampled event in 2018/2019. Paired influent and effluent data were collected for the first time in 2019/2020 (for three events). For two of these events, the influent sample included undeveloped area influent to CM-3. For one of these events, road runoff influent was sampled, in addition to undeveloped area influent to CM-3 (results from both locations were flow-weighted [based on drainage area size and estimated imperviousness] to determine the influent concentration).

Performance data for the **lower lot biofilter** (construction of which was completed in 2013) were collected from three locations within the system (influent, effluent, and a mid-point sample at the sedimentation basin outlet before the media filter inlet) during two storm events in the 2019/2020 sampling year. As a result, there are 28 total sample pairs associated with this location to date, including

⁹ Includes CM-1, CM-3, CM-8, CM-9, CM-11, and B-1. CM-3 pre-2016/2017 was excluded from this analysis due to post-storm dry weather flows observed at the outlet between February 2010 and March 2011 when no flows were observed entering the culvert, suggesting subsurface inflows were contributing to effluent samples, thus limiting the meaningfulness of an influent-effluent comparison. However, the road runoff inlet to CM-3 was completed on May 5, 2017. Therefore, CM-3 data starting in 2016/2017 are included in this memorandum. This includes single influent results for CM-3 road runoff from one event in 2016/2017 and one event in 2018/2019, in addition to paired influent and effluent data for three events in 2019/2020 (influent data also includes undeveloped area influent to CM-3).

¹⁰ There are no data pairs for dioxins at CM-8. Excluding CM-8, the lowest number of data pairs is three (CM-3).

¹¹ There are no data pairs for lead at CM-11. Excluding CM-11, the lowest number of data pairs is three (CM-3).

¹² There are no data pairs for copper at CM-8 and CM-11. Excluding CM-8 and CM-11, the lowest number of data pairs is three (CM-3).

¹³ CM-1 was sampled during three events in 2019/2020 but paired (influent and effluent) samples were only collected during two of these events. Three paired samples were collected at CM-3 in 2019/2020. CM-9 was sampled during three events in 2019/2020 but paired (influent and effluent) samples were only collected during two of these events.

one 2013/2014 biofilter effluent sample reflecting a blend of filtered underdrain flows and overflows that bypassed the filter media.

Performance data for the **ELV treatment BMP** (implemented during the 2013/2014 reporting year) includes paired data from 12 events through 2019/2020¹⁴. These data are shown in the paired line plots and statistical analyses in the following sections, though it should be noted that it is possible that the media bed for this system may have been flushing fines during the first sampling event in 2013/2014 since this was the first rain event it experienced. During this event, the ELV treatment BMP was also heavily loaded by sediments eroded from the denuded ELV channel prior to implementation of erosion control improvements. Recent data have also shown evidence of solids export through the underdrain, based on the dioxins particulate strength decreasing through the media layer.

The **B1436¹⁵ detention bioswales** (construction of which was completed in December 2014), were sampled for the first time during the 2015/2016 reporting year¹⁶. The detention bioswales are intended to capture and slowly release flow to the downstream lower lot biofilter, thus attenuating peak flowrates and distributing them over a longer period of time allowing more opportunity for the biofilter to treat these flows. Using the site-wide Stormwater Management Model (SWMM), the time period after completion of the detention bioswales (11/1/14) until 4/1/19 was simulated with and without the bioswales to estimate the increased biofilter runoff capture efficiency (i.e., the volume of treated water divided by the total runoff draining to the biofilter) due to implementation of the bioswales upstream. The model shows that installing the bioswales has increased the biofilter runoff capture efficiency from 59% to 73% (a 24% increase). When only considering the runoff from the lower parking lot (a priority treatment area), the runoff capture efficiency from this area has increased from 80% to 88% (a 8% increase).

Excellent treatment occurs in the bioswales, although the primary purpose was to slow the influent runoff to the lower lot biofilter and reduce flows that bypasses the lower lot biofilter during large storm events. Samples were collected at three locations at the southern detention bioswale, which includes two influent locations (results from both locations were flow-weighted [based on drainage area size and estimated imperviousness] to determine the influent concentrations) and the effluent. Paired influent and effluent performance data were collected during 19 events at the southern detention bioswale prior to the current reporting year, and two sample pairs were collected during 2019/2020, for a total of 21 sampled events through 2019/2020. Samples were also collected at both the influent and effluent locations of the northern detention bioswale during eight events during the 2015/2016 and 2016/2017 reporting years. Sampling was discontinued at the northern detention bioswale after the 2016/2017

¹⁴ The ELV treatment BMP has paired data from 12 events to date for TSS, dioxins, and lead. There are 11 data pairs for copper. Due to a power outage during the Woolsey wildfire, the ELV treatment BMP was not operational during 2018/2019 and therefore additional performance samples were not collected during the 2018/2019 reporting year. A generator has since been added at this location as the primary power source.

¹⁵ B1456 refers to a former building at this location that was demolished by Boeing as part of its effort to remove man-made structures at SSFL.

¹⁶ The effluent of the northern detention bioswale (ILBMP0007) was sampled in the 2014/2015 reporting year (May 2015). However, a paired influent sample was not collected during this event.

reporting year, as it was determined that sufficient data were collected at that location and the performance data for the detention bioswales are represented in the southern section.

Eight samples were collected from the **upper lot media filter** (construction of which was completed on May 16, 2017) during the 2016/2017 reporting year, but only at the influent location. Paired samples were collected for the first time at the upper lot media filter during 2017/2018 (for two events), and paired samples were collected during four events during the 2018/2019 reporting year¹⁷ and two events during the 2019/2020 reporting year.

The **Boeing admin area inlet filters** (filter basket with targeted media mix) were installed in 2017. The Boeing admin area inlet filters were sampled for the first time during the 2018/2019 reporting year (an influent and effluent sample were collected during one event). The filter lip was sealed in April 2019 to prevent bypass, but the samples from the 2018/2019 reporting year were collected before the lip was sealed. Paired samples were collected at the Boeing admin area inlet filters during two events during 2019/2020.

Table 3 shows a summary of the BMPs discussed herein, including various BMP characteristics/components and which implemented BMPs include the various components.

Table 3. BMP Summary

BMP Characteristic	BMP						
	CM Sites	B1 Media Filter	Upper Lot Media Filter	Lower Lot Biofilter	ELV Treatment BMP	Detention Bioswales	Boeing Admin Area Inlet Filters
Media filtration-based ¹	x	x	x	x	x		x
Subsurface storage-based						x	
Significant pretreatment incorporated		x		x	x		
Outlet controls				x	x	x	
Vegetation				x		x	
Vertical flow regime		x	x	x	x	x	x
Horizontal flow regime	x	x	x				

¹ Using the SSFL sand, zeolite, and granulated activated carbon (GAC) media mixture.

2.2 Sampling

Influent grab samples are collected from flowing surface water upstream of the maximum extent of ponding at each CM as observed before that date¹⁸. All sampled CMs include a media filter and a slipline

¹⁷ The upper lot media filter was also sampled during an additional event in 2018/2019, but only an effluent sample was collected (no paired influent sample).

¹⁸ When the extent of ponding increased at the CM-1 and CM-3 culvert basins on December 22, 2010 during a heavy rainfall, the influent sample locations were moved upstream a sufficient distance to remain above the maximum ponded water footprint.

HDPE lining through existing galvanized corrugated metal culvert pipes (zinc is not a COC at SSFL) with the exception of B-1, which is a media bed with no slipline element. Effluent grab samples at CM-1, CM-9, and B-1 are collected from the underdrain outlet (beginning in October 2011, rather than the culvert outlet), while other CM effluent grab samples are collected at the culvert outlets on the downstream side of the road, where the culvert pipes discharge to the Northern Drainage. Flows from the culvert outlets may represent treated runoff (via sedimentation and media filtration) and partially treated runoff (flowing through or over the weir boards); this is noted on the plots. At CM-3, the slipline HDPE pipes were inserted from both the influent and effluent sides and could not be sealed at the point where they meet, and subsurface flows through the road embankment are known to have entered the pipe during rain events from February 2010 through March 2011 because water was observed discharging from the HDPE pipe outlet when no water was flowing into the inlet. Therefore, CM-3 performance cannot be reliably assessed due to this bypassing of the media filter and sampling at this site was discontinued after the 2010/2011 reporting year. However, sampling was initiated during 2018/2019 after completion of the road runoff inlet and new sliplining, as previously described. Sampling to characterize road runoff influent to CM-1 began in 2018/2019.

At the lower lot biofilter, influent samples are collected in the cistern discharge pipeline, the mid-point samples are collected at the sediment basin outlet box, and effluent samples are collected from the discharge of the biofilter effluent pipe. The Boeing admin area inlet filters influent and effluent samples are collected from the filter basket influent and effluent, respectively. Influent samples for the southern detention bioswale are collected from both the east and west portions of the concrete swale diverting sheetflow into the rock crib, and effluent samples are collected from the underdrain. Influent samples for the northern detention bioswale were collected from the curb cut along the east side of the bioswale, and effluent samples were collected from the bioswale underdrain. For the ELV treatment BMP, influent samples are collected from the influent pipe, mid-point samples are a composite of samples from the eastern and western sample ports between the settling tanks and media filter, and the effluent samples are collected from the effluent pipe from the middle tank.

2.3 Drainage Areas

Several CM/media filter locations (CM-1, CM-9, CM-3, the B-1 media filter, and the upper lot media filter) and the southern detention bioswale have multiple influent drainage areas:

- CM-1 receives runoff from an eastern tributary that is considered to reflect background concentrations, a western tributary comprising paved road and ELV hillside runoff (ELV hillside runoff is only reflected in samples collected prior to November 2013), and another area mainly comprised of road runoff;
- CM-9 receives runoff from the Area I Landfill (A1LF) and former Building 1324 parking lot (demolished Summer/Fall 2011), as well as the paved road to the east (Area II road);
- B-1 receives runoff from the north, comprised of paved road runoff, and the south, comprised of the upper B-1 ISRA areas, the sedimentation basin, and paved road runoff.
- The southern detention bioswale receives runoff discharged from the rock crib swale and the paved area adjacent to the detention bioswales (contractor laydown area).

- The upper lot media filter receives runoff from the south/southeast of the road, which is predominately comprised of the hillside, and the southwest (via the culvert), which consists of both the parking lot and hillside.
- CM-3 receives runoff from the hillside south of the road (including a clean soil borrow area at the top of the watershed), in addition to a small portion of the road runoff (after the road runoff inlet was completed in May 2017).

Influent locations used in the paired analyses were evaluated on a case by case basis, with similar sample dates taking precedence (between influent and effluent); in instances when two or three influent samples were available for the same effluent-sampling storm event, an impervious area-weighted average (used as an estimate of proportioned flowrate from each influent stream) was used to represent a single composite influent value.

Background monitoring sites at CM-1 (influent-east), CM-3, CM-8, and CM-11 receive runoff from drainage areas that do not include any known historic industrial activities, although the CM-3 drainage area does include a clean soil borrow area at the top of the watershed. Therefore, influent sample results at these four CM locations (not including CM-1 influent-west, or CM-3 road runoff) are of relatively good quality and considered reflective of “background” stormwater concentrations, making it difficult to achieve additional COC reductions through these CMs. These “background” CM locations were therefore statistically evaluated separately from the other CM locations. Sampling at these background CM locations was discontinued following the 2010/2011 reporting year, with the exception of the road runoff inlet to CM-3, which was completed in May 2017 and sampling was initiated again during the 2016/2017 reporting year. The road runoff diversion to CM-1 was constructed during 2017/2018, and sampling to characterize road runoff influent to CM-1 began in 2018/2019.

The BMPs discussed in this memo and their respective drainage areas are shown in Table 4. The approximate percent impervious cover and portion of the drainage area burned during the Woolsey Fire is also shown in Table 4, for each BMP. While these areas are discussed specifically with respect to performance monitoring data, there are other areas of the SSFL site which are also addressed by BMPs, including CMs, asphalt removal, erosion control, and treatment control BMPs.

Table 4. BMP Sites and Drainage Areas

BMP	Drainage Area (acres)	Approximate Impervious Cover (%)	Approximate Portion of Drainage Area Burned by Woolsey Fire (%)
CM-1	52.8 (pre-ELV improvements)	6.5	87
	45.4 (post-ELV improvements)	10	
CM-3	16.6	6	89
	0.25 (road runoff)	100	0
CM-8	2.6	36	11
CM-9	10.2	48	0
CM-11	5.7	26	31
B-1 Media Filter	8.6	53	0
ELV Treatment BMP	15.6 (Helipad plug in place)	26	0
	6.6 (Helipad plug removed)	37	
Lower Lot Biofilter	29.9 ¹	53	38 ²
Northern Detention Bioswale	2.6	50	31
Southern Detention Bioswale	14.2		60
Upper Lot Media Filter	5.1	35	2
Boeing Admin Area Inlet Filters	0.86	82	0

¹ A portion of the 24-inch stormdrain drainage area is diverted to the lower lot biofilter for treatment. As a result, the percent of runoff volume captured and treated from the smaller (approximately 11.7 acre) lower lot drainage area is greater than the percent of long-term runoff volume captured and treated from the larger (approximately 18.2 acre) 24-inch stormdrain drainage area. The average impervious cover of the smaller lower lot drainage area of 11.7 acres is 60%.

² Represents the portion of the smaller lower lot drainage area (11.7 acres) that was burned.

Regarding COCs entering the BMPs following the Woolsey fire, elevated influent concentrations post-fire were observed for all four analytes (lead, TSS, copper, and dioxins) at CM-1¹⁹. CM-9 also exhibited higher influent concentration following the Woolsey fire, even though the drainage area was not burned, but the increases in influent concentrations were less than with CM-1²⁰. Elevated concentrations were also observed post-fire for dioxins only at the ELV treatment BMP and TSS only at the upper lot media filter²¹. Significant changes in influent concentrations were not observed pre vs. post fire at the southern detention bioswale, CM-3, or the lower lot biofilter, all of which had significant portions of the drainage area burned. Effects related to the Woolsey fire were discussed in more detail in the 2018/2019 annual report.

¹⁹ Influent concentrations pre vs. post fire at CM-1 are 24 vs. 40 mg/L for TSS, 2.9E-08 vs. 1.3E-05 µg/L for dioxins, 1.8 vs. 3.7 µg/L for lead, and 2.9 vs. 3.9 µg/L for copper.

²⁰ Influent concentrations pre vs. post fire at CM-9 are 27 vs. 44 mg/L for TSS, 6.4E-08 vs. 7.9E-08 µg/L for dioxins, 7.3 vs. 11.7 µg/L for lead, and 6.6 vs. 8.8 µg/L for copper.

²¹ Influent concentrations pre vs. post fire at the ELV treatment BMP are 1.0E-08 vs. 1.8E-07 µg/L for dioxins. Influent concentrations pre vs. post fire at the upper lot media filter are 15 vs. 30 mg/L for TSS.

3. Paired Line Plots

The log-scale line plots presented in this section illustrate the changes in measured concentrations between influent and effluent sample pairs at each treatment BMP. Paired data were obtained from CM/media filter locations B-1, CM-1, CM-3, CM-8, CM-9, CM-11, and the upper lot media filter, the ELV treatment BMP, the lower lot biofilter, the detention bioswales, and the Boeing admin area inlet filters. Data are presented by COC in Figure 1 through Figure 63, where paired data measured during the same event are represented by two points (influent and effluent) connected by a line, and single sample results (where either an influent or effluent sample were not collected for a single event) are shown by single points without any connected line. Points and lines are shaded based on the sampling year during which they were collected, where black lines and points represent data from the most recent 2019/2020 reporting year and data from all previous reporting years are shown in gray. In addition, different symbology is used for different influent and effluent sample collection locations, as defined on each graph. Additionally, non-detect results are displayed as the detection limit. The detection limit may vary slightly from year to year, but the typical detection limit is also shown as a black dotted line. The statistical analyses of the datasets are presented in Section 4.

In addition to evaluating BMP performance, the monitoring data have also been used in the site selection evaluations for consideration for enhancements to selected CMs for improved performance in areas where the effluent remains problematic. This was the case at CM-9 based on historical results, and upgradient improvements were added in 2013. Other examples of improvements include asphalt removal in the upper drainage area and filter fabric installation over the weir boards. For sites that were subject to such improvements impacting the quantity or quality of contributing runoff, separate graphs are shown for sample results that occurred before and after the improvements were made. At the B-1 media filter site, media washout was observed during initial sampling dates in the 2011/2012 reporting year. Results collected during this period were removed from the analysis. Additionally, preliminary samples were collected from the lower lot biofilter in 2012/2013 before the system was fully functional. These results were also removed from the complete analysis.

Monitoring data were first collected at the ELV treatment BMP during the 2013/2014 reporting year; since that was the first rain event that the system experienced. The monitoring data reflect media fines being washed from the system. In addition, during the February/March 2014 storm event, a plug in the storm drain under Helipad Road resulted in high flows from the Helipad Road being routed to the ELV sump and treatment system. Additionally, inadequate erosion controls along the earthen ELV channel resulted in sediment filling the sump, and a power outage resulted in the sump pump turning off. The influent-effluent pollutant concentration reduction performance of the ELV Treatment BMP is not expected to be affected by these conditions; however, the fraction of runoff volume captured from the ELV drainage area during each storm is expected to be reduced due to these factors. Although no overflow events as described previously were observed during the 2014/2015 reporting year, this plug was not removed for any storm events. Samples were not collected at the ELV treatment BMP during the 2018/2019 reporting year due to a long-term power failure associated with the Woolsey Fire, which destroyed the electrical infrastructure. To prevent future power outages at the ELV treatment location, a generator was added to the ELV system as the main power source, since electrical lines were not replaced in this area to reduce the risk of future fires. A portable generator is also on hand for the biofilter cistern pump as a backup power supply.

With regards to the line plots, the BMP effectiveness during events having influent concentrations above the outfall Permit Limit is the most important performance criterion since those below the Permit Limit are already of acceptable quality and are generally considered to be at levels unlikely to be further reduced using typical stormwater controls, especially considering the conditions that have been experienced to date in terms of precipitation and watershed erosion. However, the data were reviewed for these conditions to document any concentration increases due to media failure or washout. As with most stormwater quality controls, the water quality percentage improvements are the most substantial when the influent concentrations are high. This is because it is difficult to further reduce low concentrations, due to equilibrium concentrations with the media, media washout, resuspension of silts, etc.

These charts are included for general visual assessment purposes only; the statistical tests in later sections are used to make quantitative evaluations of BMP performance. It should be noted that the samples collected at the stormwater controls are all grab samples. Stormwater quality can be highly variable during storms and grab samples may represent collection times that vary throughout the storm event hydrograph. Therefore, relatively large numbers of samples for many storms are needed to represent the varying overall conditions with reasonable statistical confidence and power. The line and probability plots illustrate the influent and effluent variable concentrations.

Six CM effluent samples were collected during overflow/bypass conditions (over all reporting years) based on available field notes. These conditions are noted on the plots with red markers. No other sampling dates were noted as having overflows in the available field notes. In addition, observations of weir board overflows were collected starting in the 2011/2012 reporting year. It is unknown which prior samples, if any, were collected during overflow conditions. Sampling notes, which now more carefully track this information, have not noted any samples collected under overflow/bypass conditions since the 2011/2012 observations.

3.1 TSS Paired Line Plots

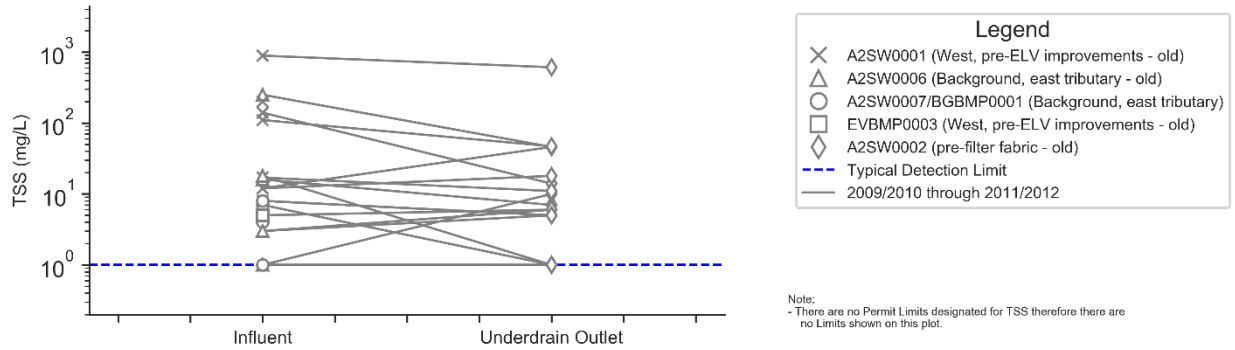


Figure 1. TSS at CM-1, pre filter fabric installation (filter fabric installed on 1/20/2012)

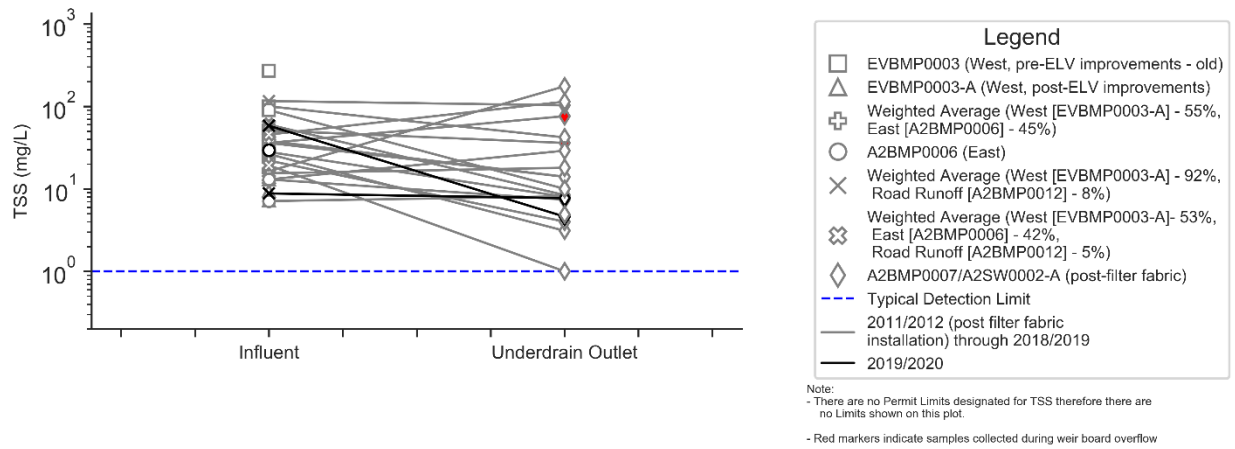


Figure 2. TSS at CM-1, post filter fabric installation (filter fabric installed on 1/20/2012)

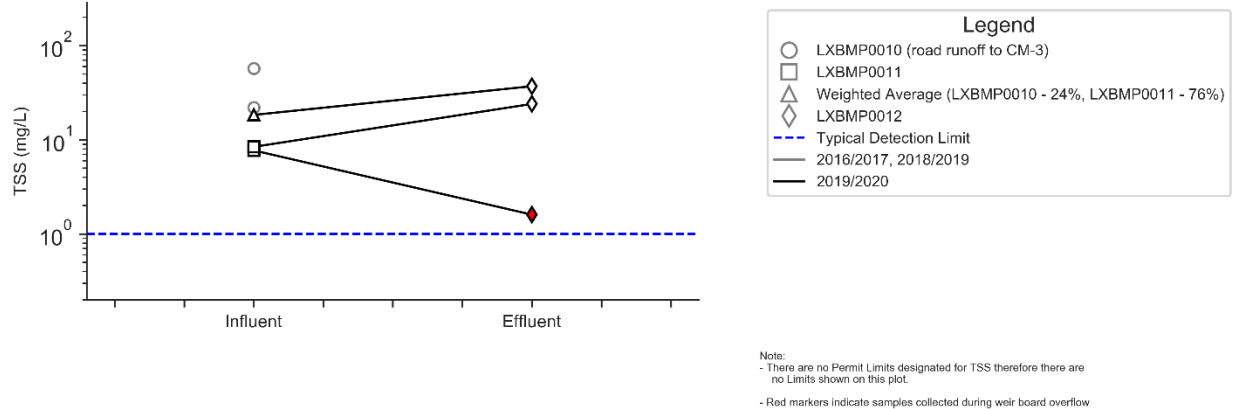


Figure 3. TSS at CM-3²²

²² CM-3 was reconstructed midway through the 2019/2020 reporting year. The sampling event with weir board overflow (as shown by the red marker) occurred before CM reconstruction, and the two sampling events with increases in TSS concentration occurred following CM reconstruction and occurred when the influent TSS concentrations were very low.

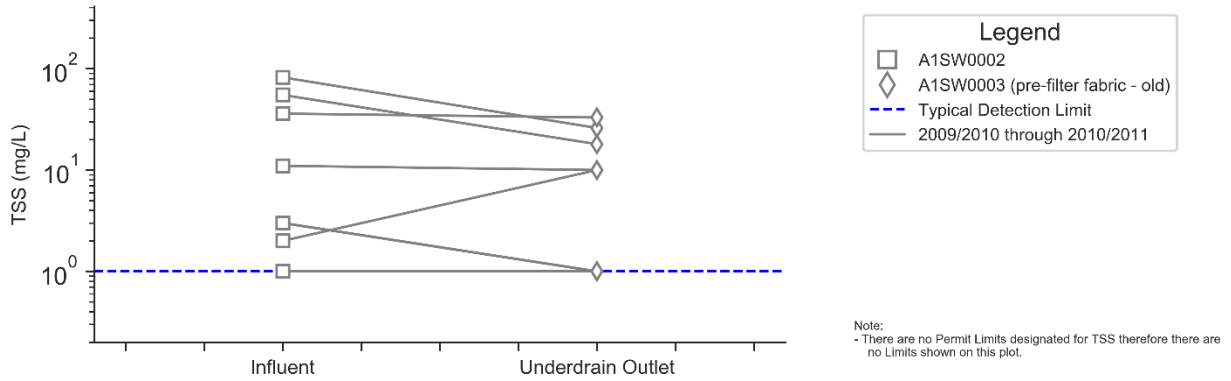


Figure 4. TSS at CM-8

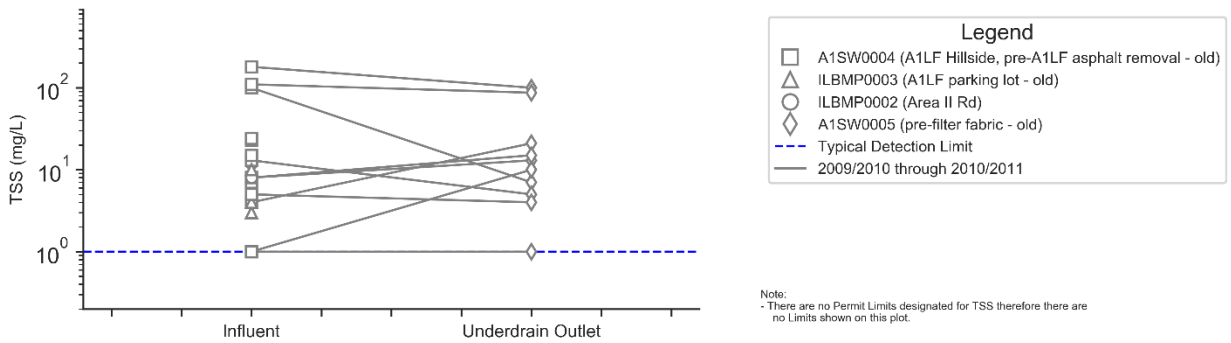


Figure 5. TSS at CM-9, pre improvements (removal of A1LF asphalt [9/1/2011] and addition of CM weir board filter fabric [1/20/2012])

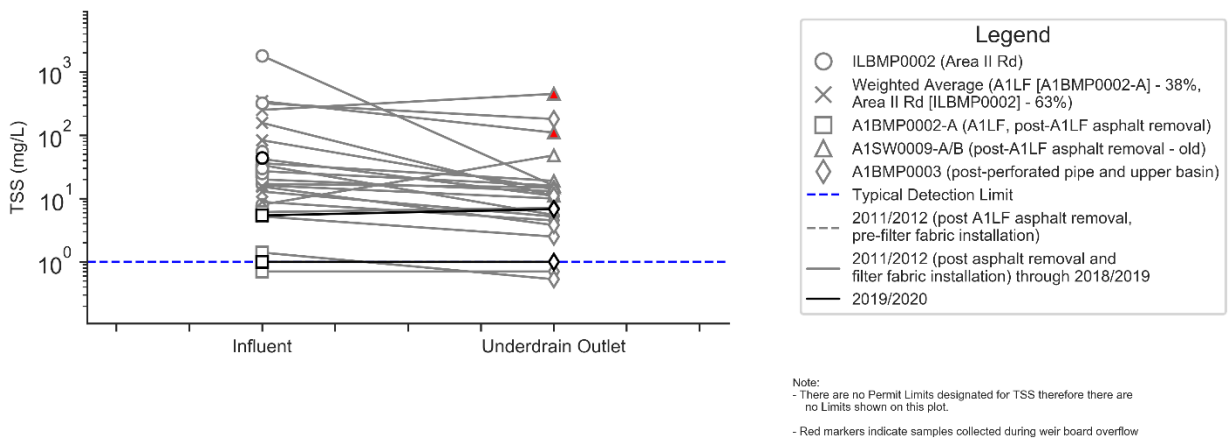


Figure 6. TSS at CM-9, post improvements (removal of A1LF asphalt [9/1/2011] and addition of CM weir board filter fabric [1/20/2012])

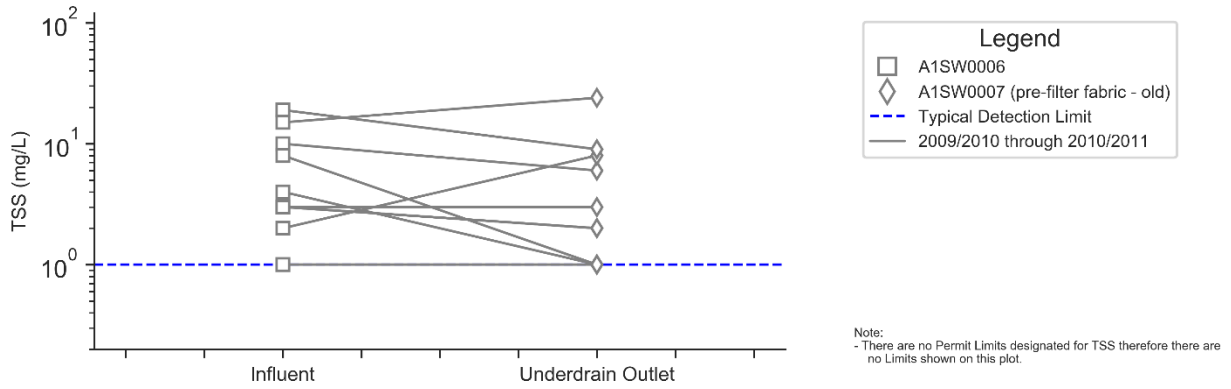


Figure 7. TSS at CM-11

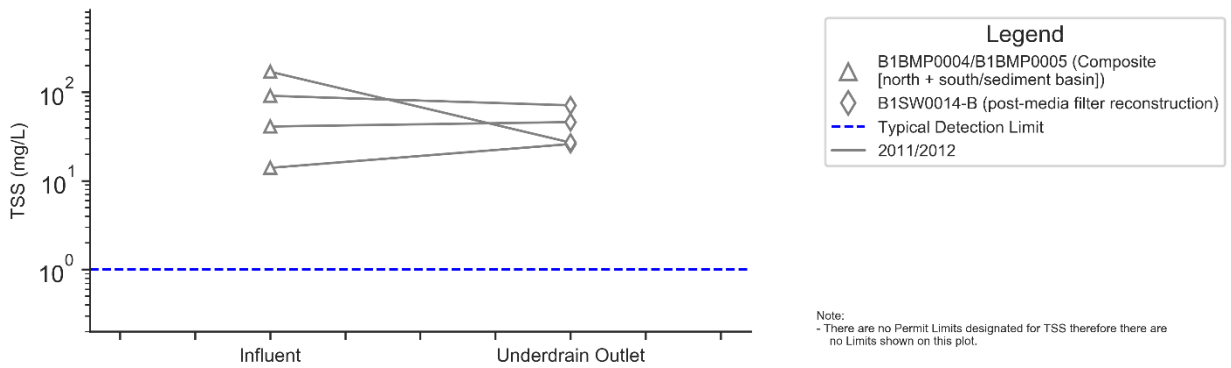


Figure 8. TSS at B-1 Media Filter (CM), pre curb cuts (curb cuts installed on 11/2/2012)

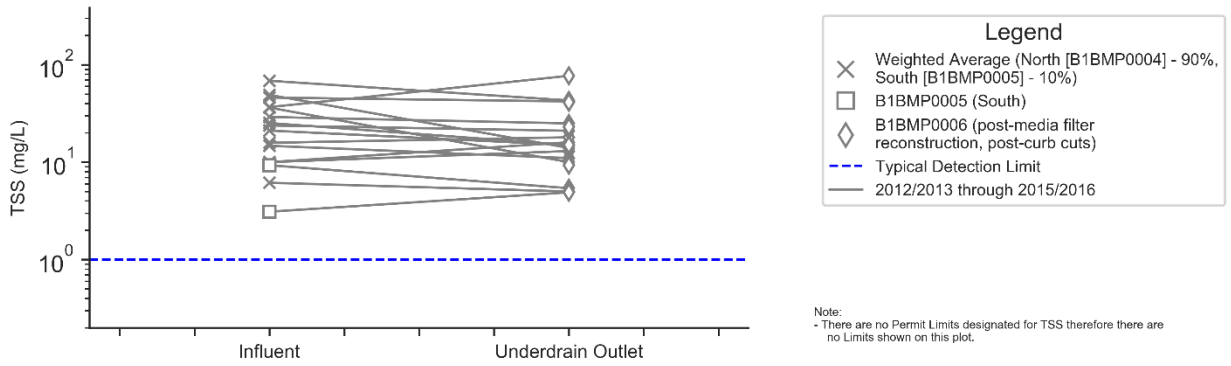


Figure 9. TSS at B-1 Media Filter (CM), post curb cuts (curb cuts installed on 11/2/2012)

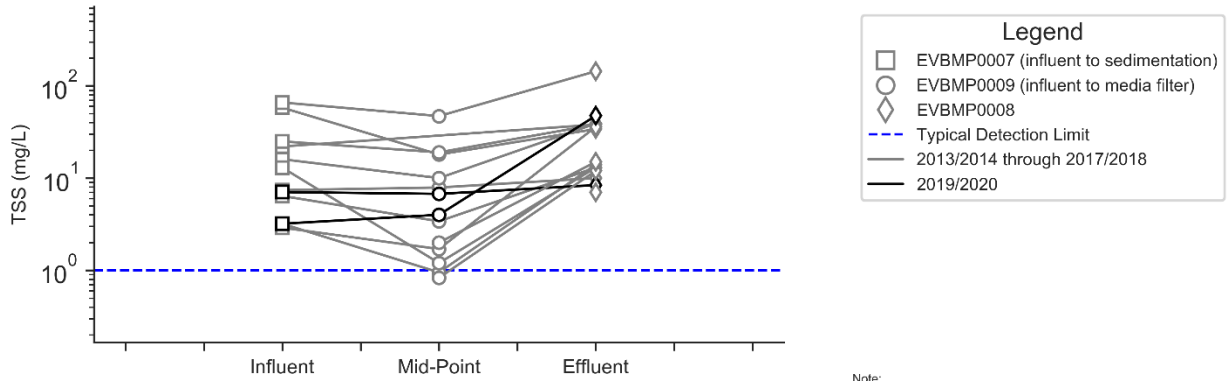


Figure 10. TSS at ELV Treatment BMP

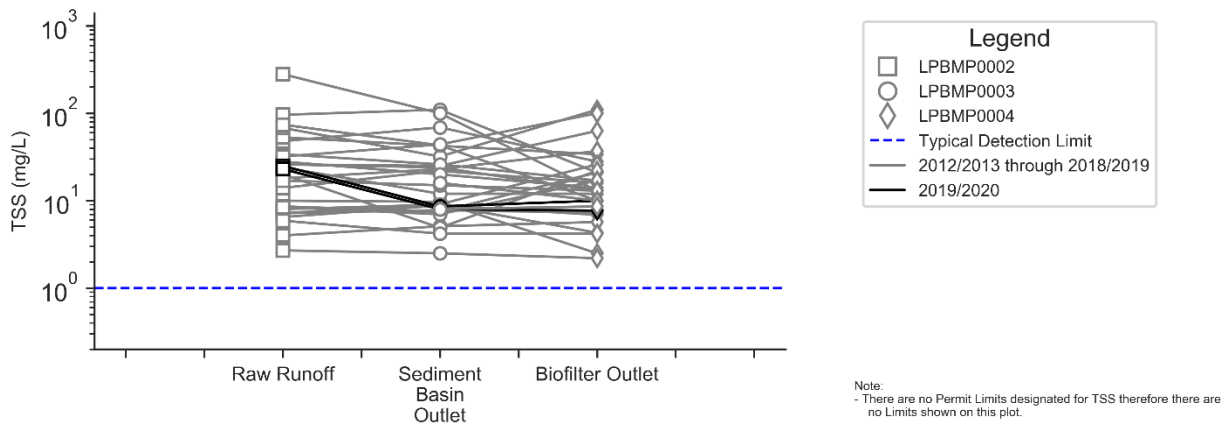


Figure 11. TSS at Lower Lot Biofilter²³

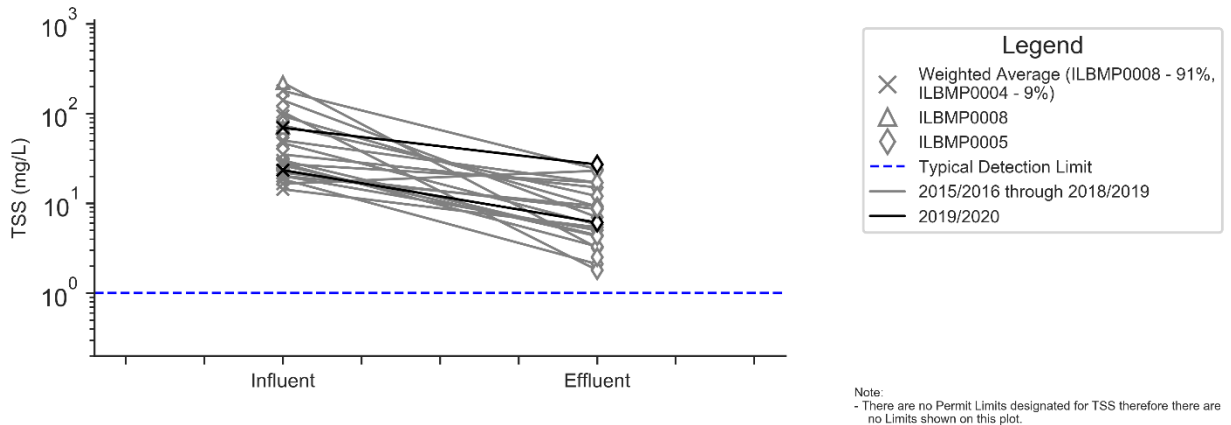


Figure 12. TSS at Southern Detention Bioswale

²³ A sample was not taken at the biofilter inlet (post-sedimentation basin) during the 2013/2014 sampling year due to the sample location being submerged and inaccessible. The biofilter outlet sample from the 2013/2014 reporting year reflects a mix of filtered underdrain flow and unfiltered overflow.

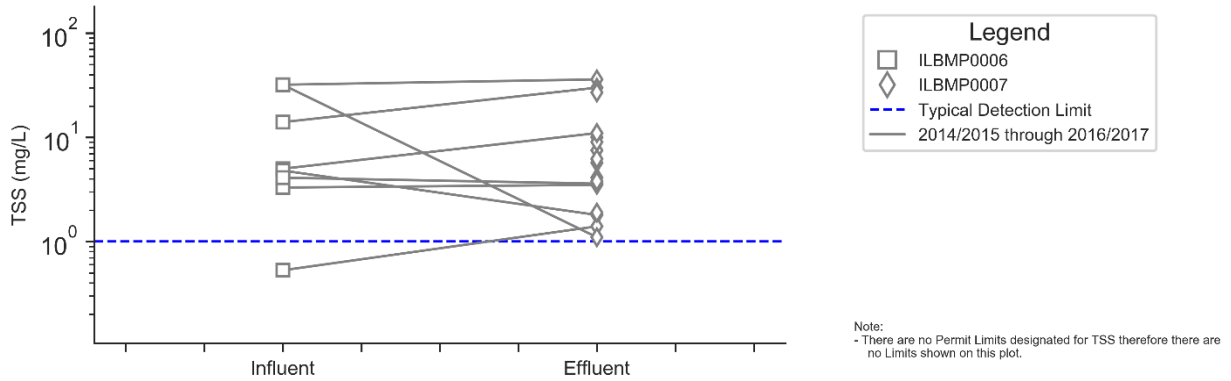


Figure 13. TSS at Northern Detention Bioswale

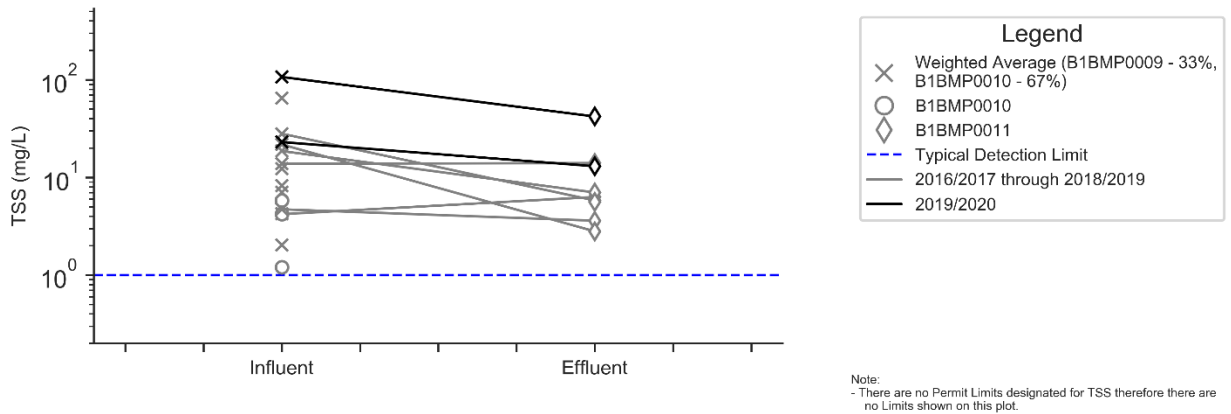


Figure 14. TSS at Upper Lot Media Filter

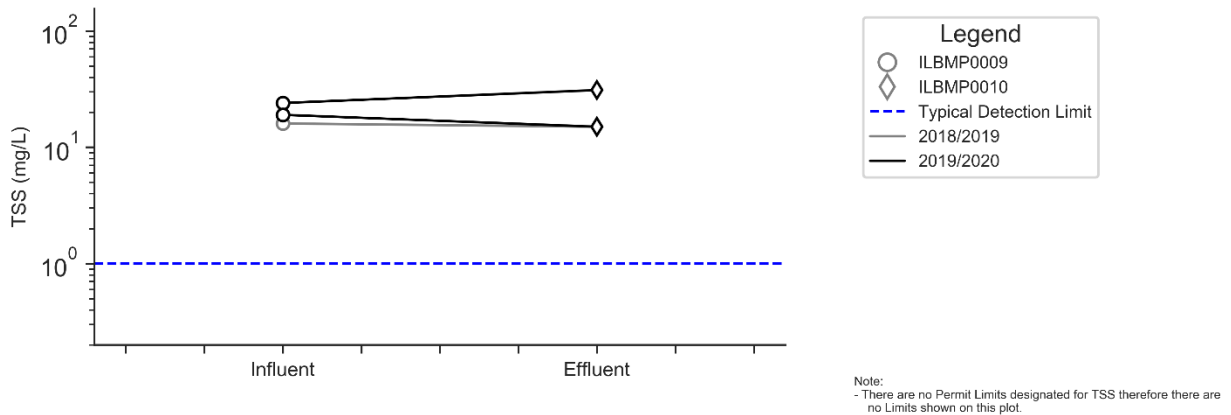


Figure 15. TSS at Boeing Admin Area Inlet Filters

3.2 Dioxins Paired Line Plots

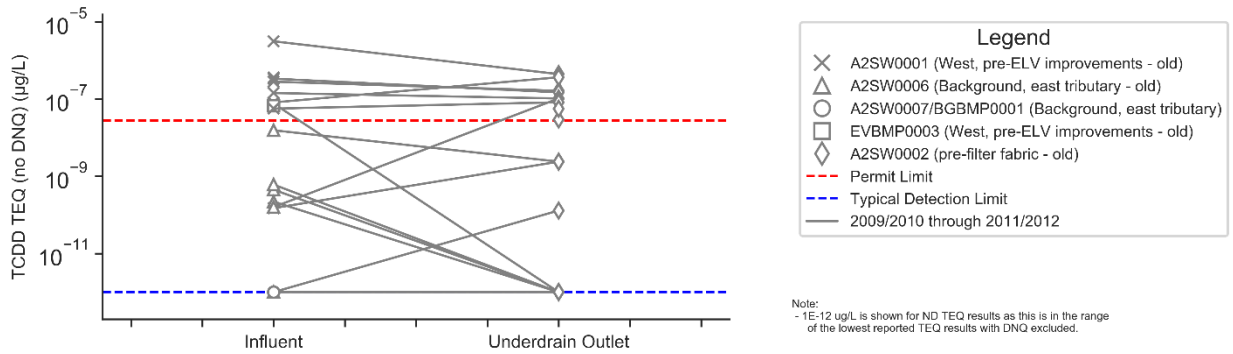


Figure 16. Dioxins at CM-1, pre filter fabric installation (filter fabric installed on 1/20/2012)

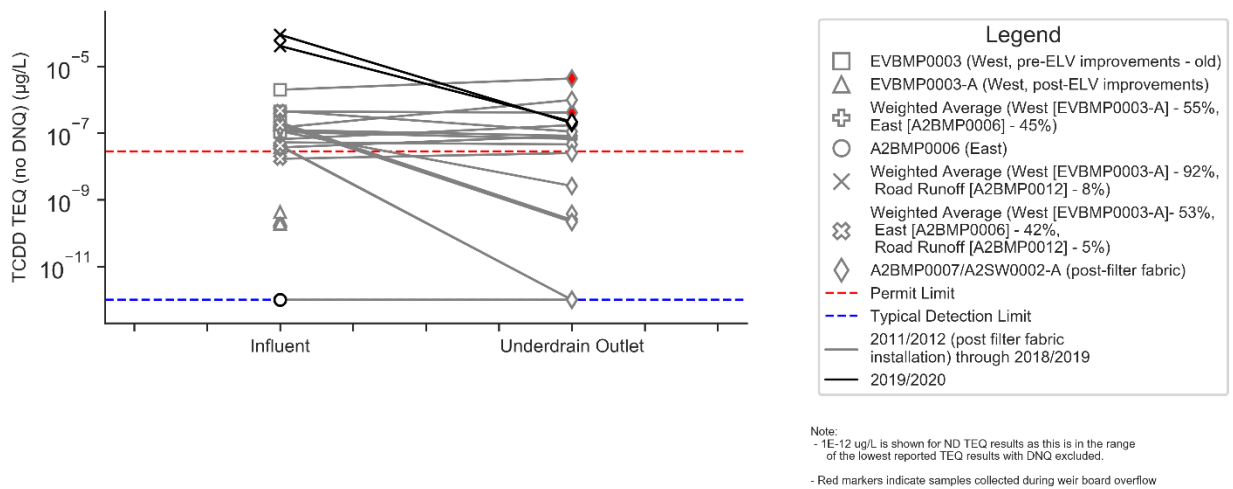


Figure 17. Dioxins at CM-1²⁴, post filter fabric installation (filter fabric installed on 1/20/2012)

²⁴ A leaking seal was noted at CM-1 on 3/3/2017. It is unclear if this condition was present during the 2/17/2017 sample that resulted in an exceedance of permit limits for dioxins. Additionally, unusually high influent concentrations were observed during some sampled events in recent reporting years. The road runoff diversion to CM-1 was constructed during 2017/2018, and sampling to characterize road runoff influent to CM-1 began in 2018/2019. Sampled events (during 2018/2019 and 2019/2020) where the road runoff location was sampled had higher influent dioxins concentrations. Therefore, the higher influent concentrations are likely due to road runoff contributions (which include several treated wood utility poles).

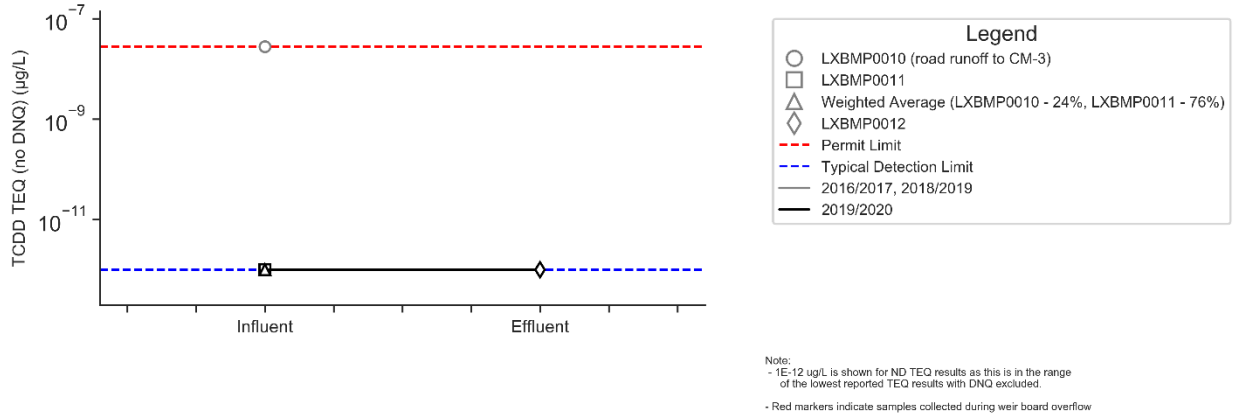


Figure 18. Dioxins at CM-3

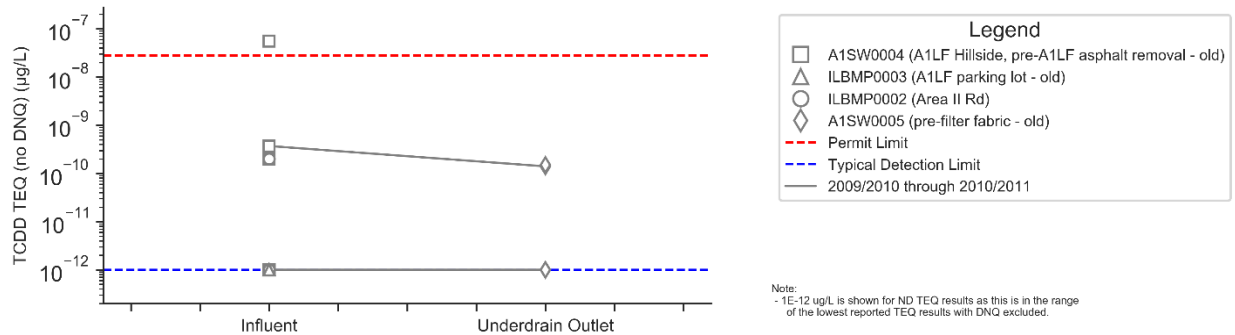


Figure 19. Dioxins at CM-9, pre improvements (removal of A1LF asphalt [9/1/2011] and addition of CM weir board filter fabric [1/20/2012])

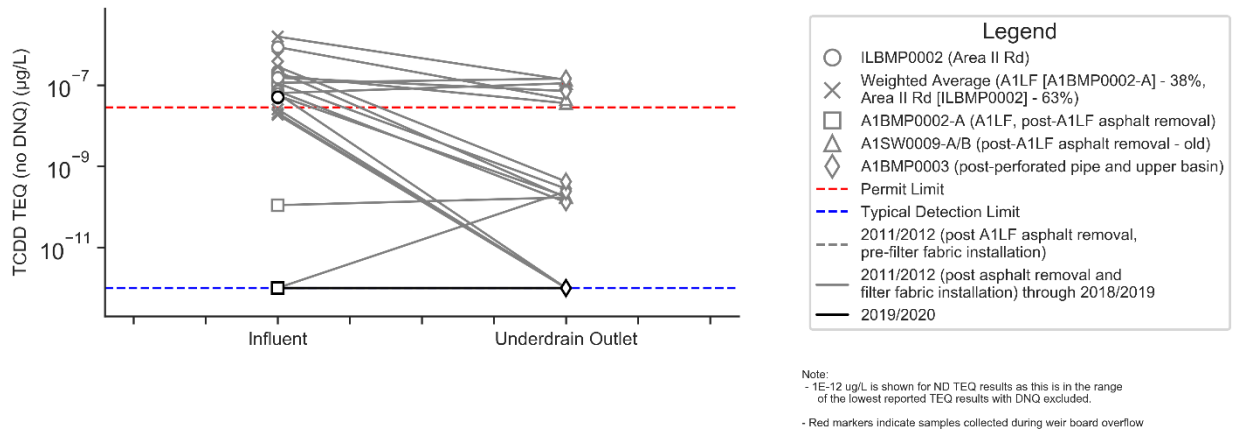


Figure 20. Dioxins at CM-9, post improvements (removal of A1LF asphalt [9/1/2011] and addition of CM weir board filter fabric [1/20/2012])

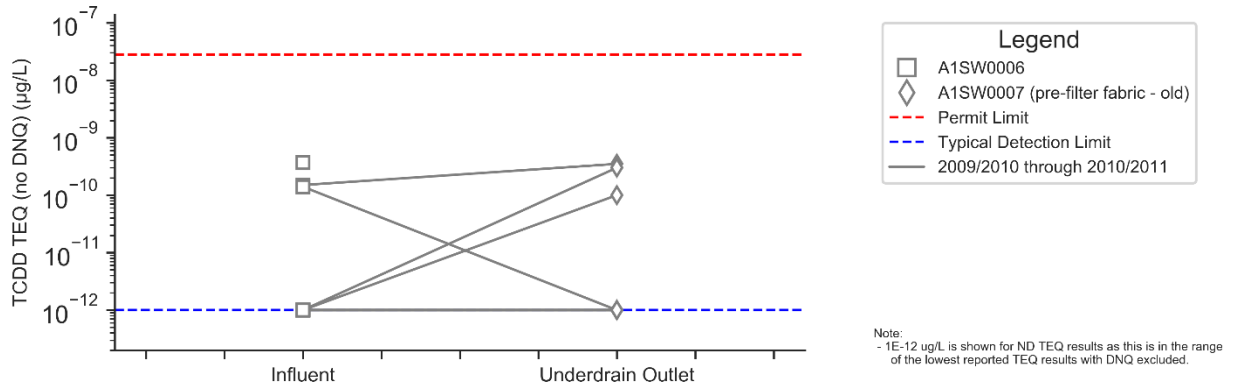


Figure 21. Dioxins at CM-11

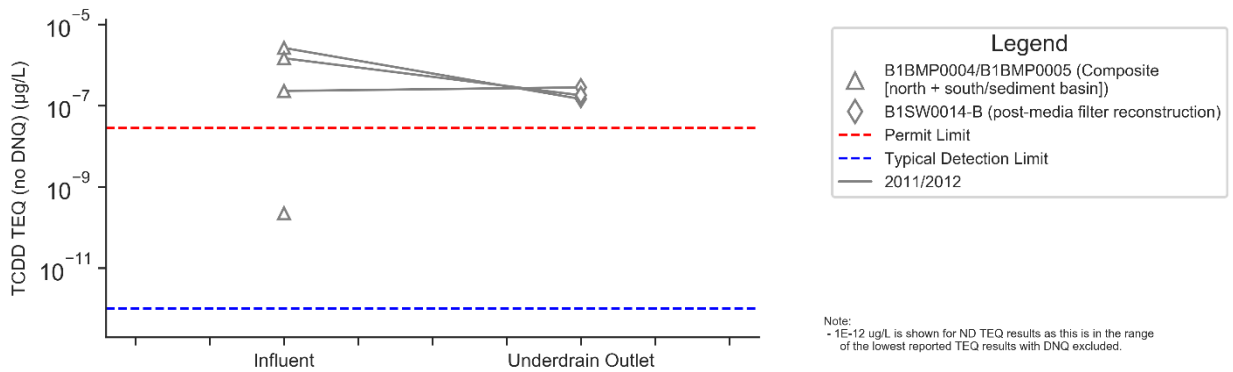


Figure 22. Dioxins at B-1 Media Filter (CM), pre curb cuts (curb cuts installed on 11/2/2012)

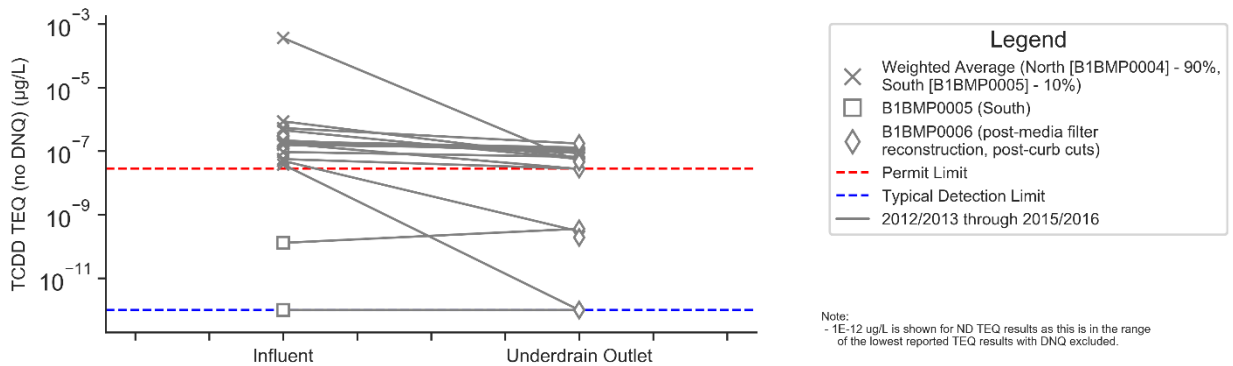


Figure 23. Dioxins at B-1 Media Filter (CM), post curb cuts (curb cuts installed on 11/2/2012)

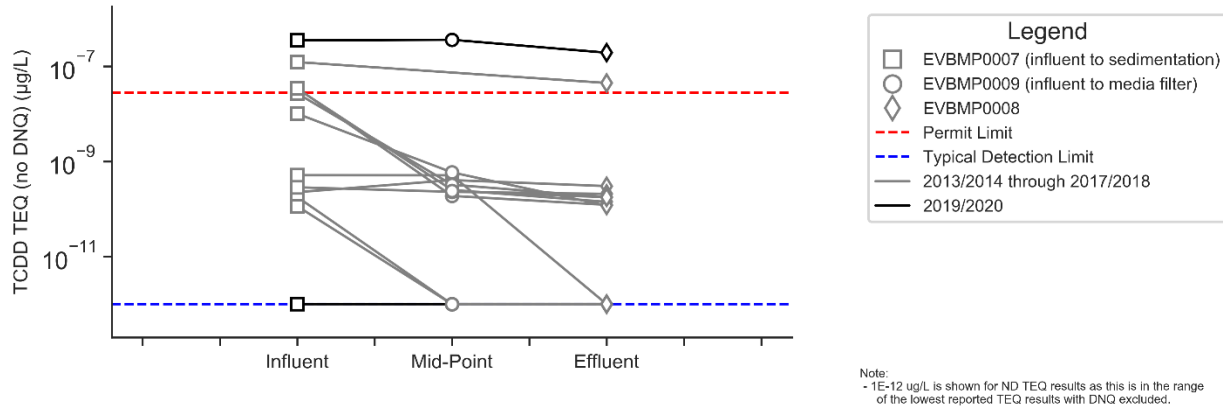


Figure 24. Dioxins at ELV Treatment BMP

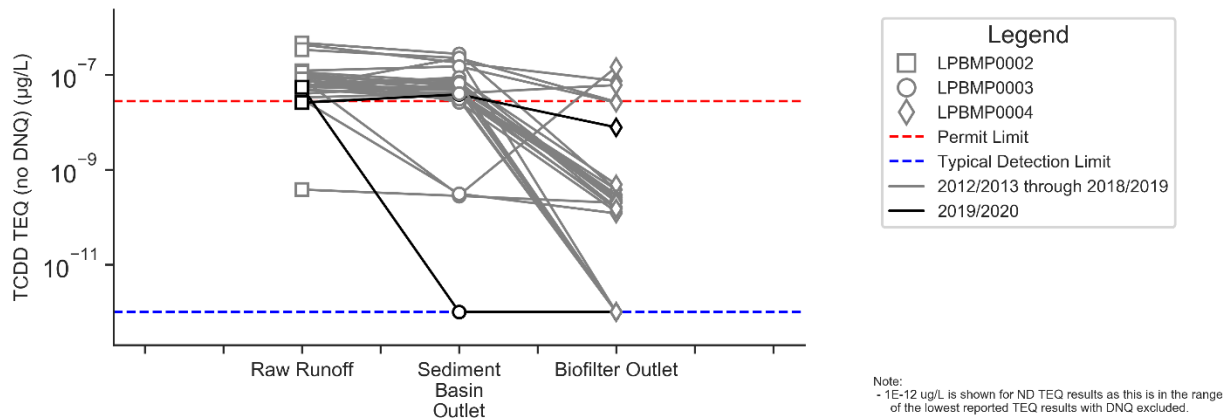


Figure 25. Dioxins at Lower Lot Biofilter²⁵

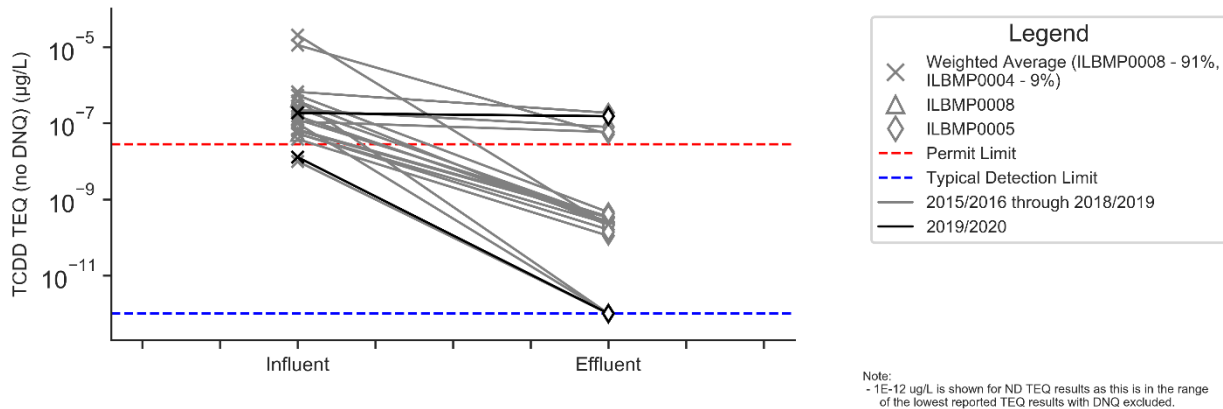


Figure 26. Dioxins at Southern Detention Bioswale

²⁵ Effluent result from the 1/8/18 - 1/9/18 event is not consistent with past performance observed from the biofilter, therefore the performance and effluent concentrations will be evaluated during subsequent monitoring events to make sure the biofilter is performing as designed. Additionally, the effluent result from 12/6/2018 may have been due to a power outage resulting in manual pumping from the cistern to the sediment basin, which could have overloaded the biofilter.

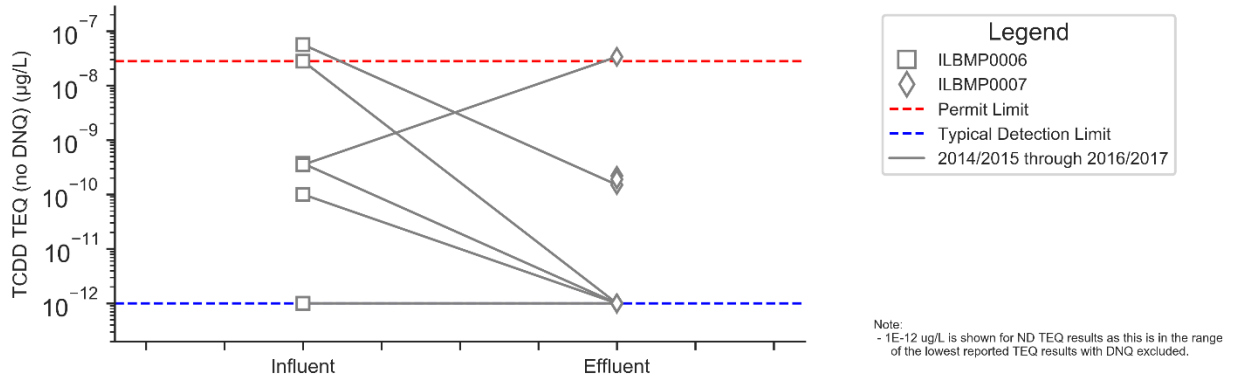


Figure 27. Dioxins at Northern Detention Bioswale

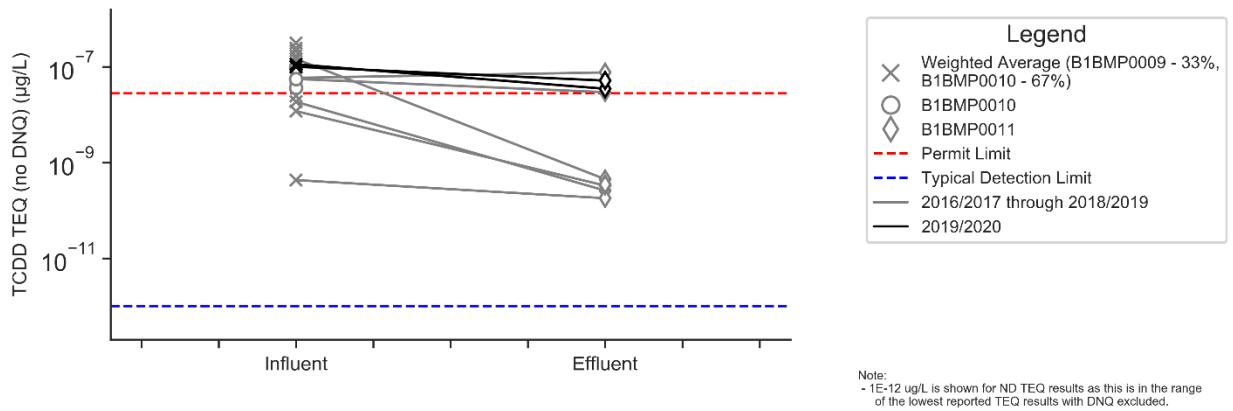


Figure 28. Dioxins at Upper Lot Media Filter

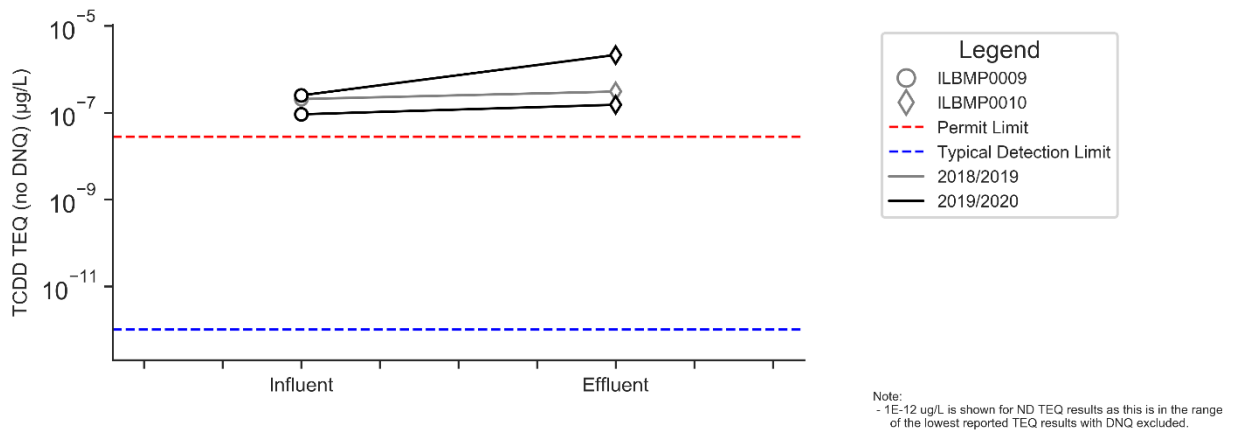


Figure 29. Dioxins at Boeing Admin Area Inlet Filters

3.3 Lead Paired Line Plots

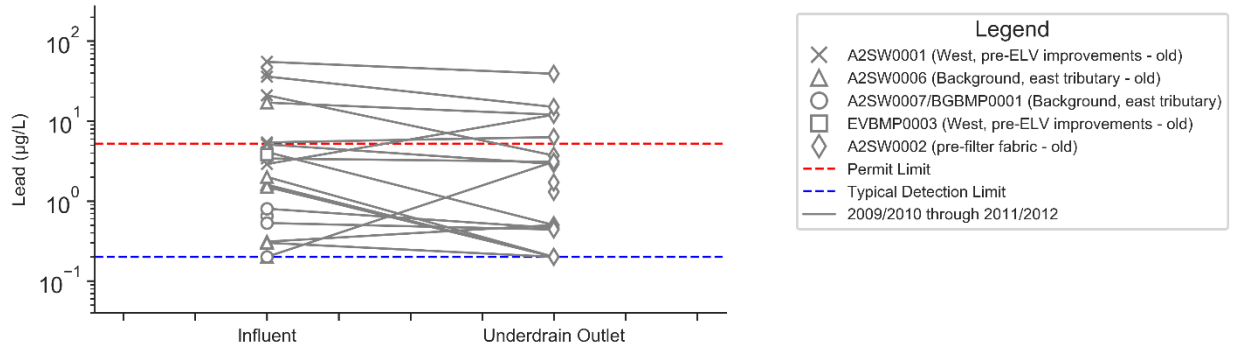
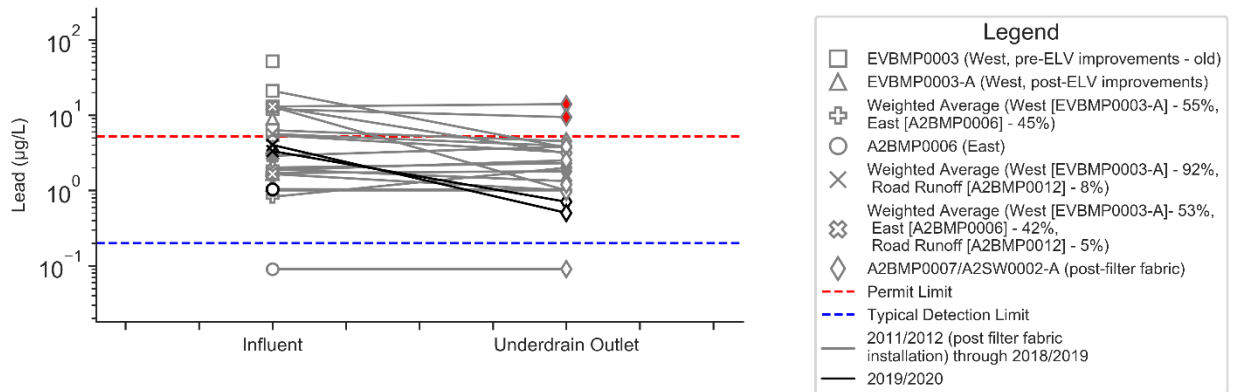
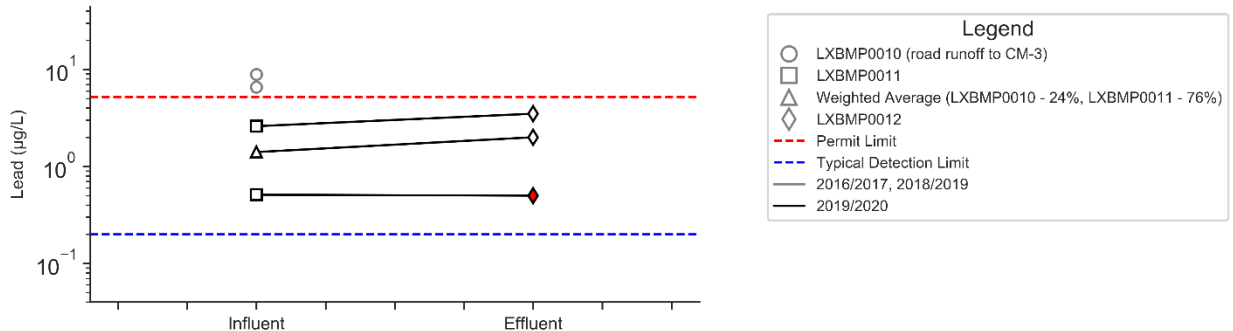


Figure 30. Lead at CM-1, pre filter fabric installation (filter fabric installed on 1/20/2012)



Note:
- Red markers indicate samples collected during weir board overflow

Figure 31. Lead at CM-1, post filter fabric installation (filter fabric installed on 1/20/2012)



Note:
- Red markers indicate samples collected during weir board overflow

Figure 32. Lead at CM-3

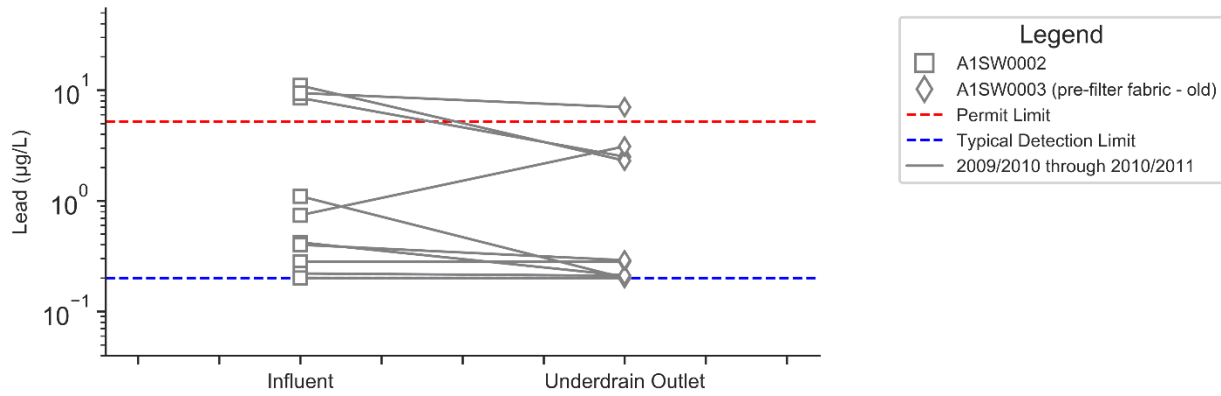


Figure 33. Lead at CM-8

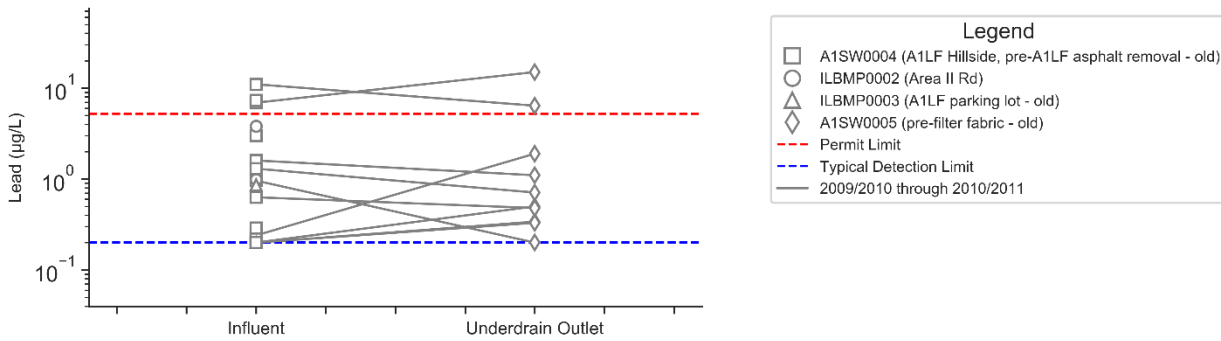


Figure 34. Lead at CM-9, pre improvements (removal of A1LF asphalt [9/1/2011] and addition of CM weir board filter fabric [1/20/2012])

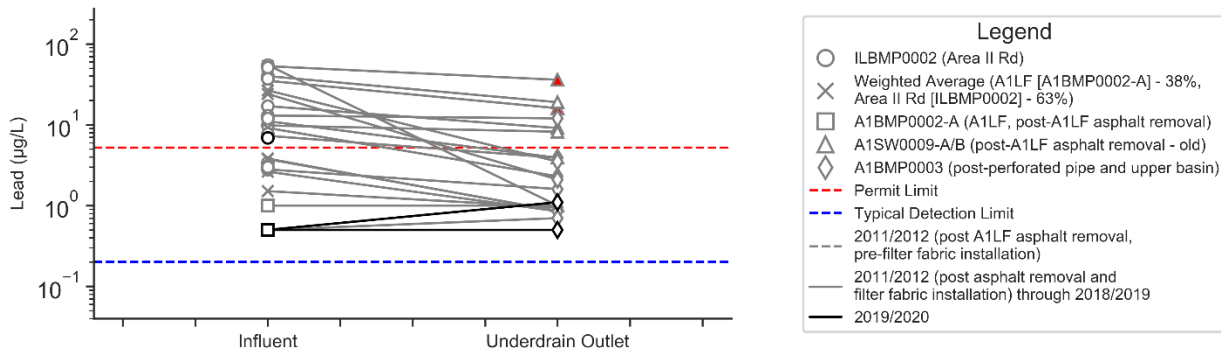


Figure 35. Lead at CM-9, post improvements (removal of A1LF asphalt [9/1/2011] and addition of CM weir board filter fabric [1/20/2012])

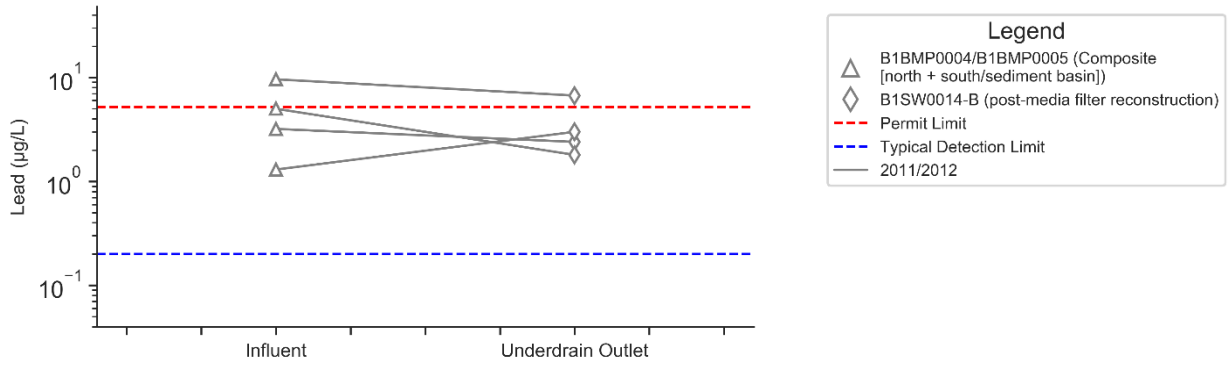


Figure 36. Lead at B-1 Media Filter (CM), pre curb cuts (curb cuts installed on 11/2/2012)

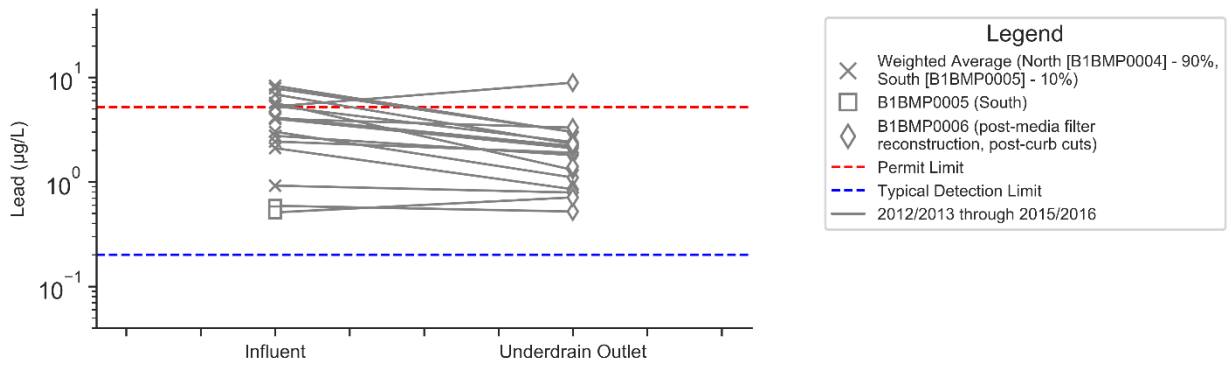


Figure 37. Lead at B-1 Media Filter (CM), post curb cuts (curb cuts installed on 11/2/2012)

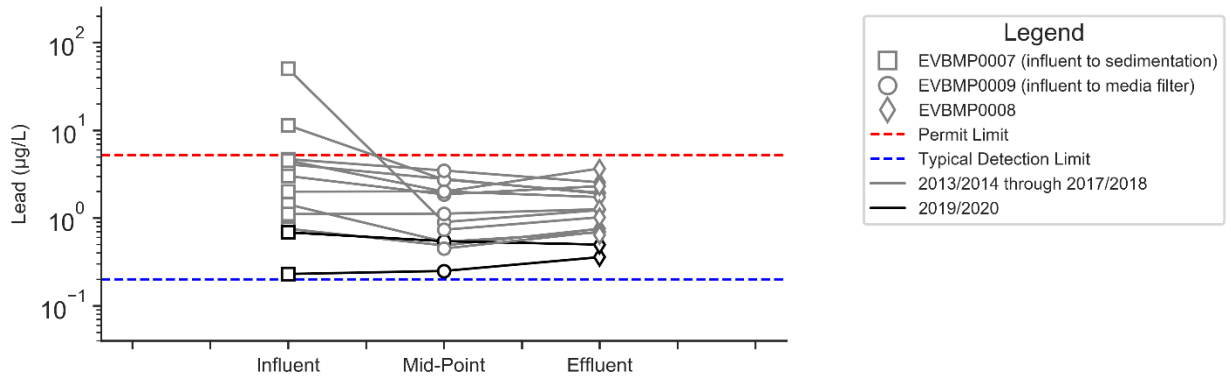


Figure 38. Lead at ELV Treatment BMP

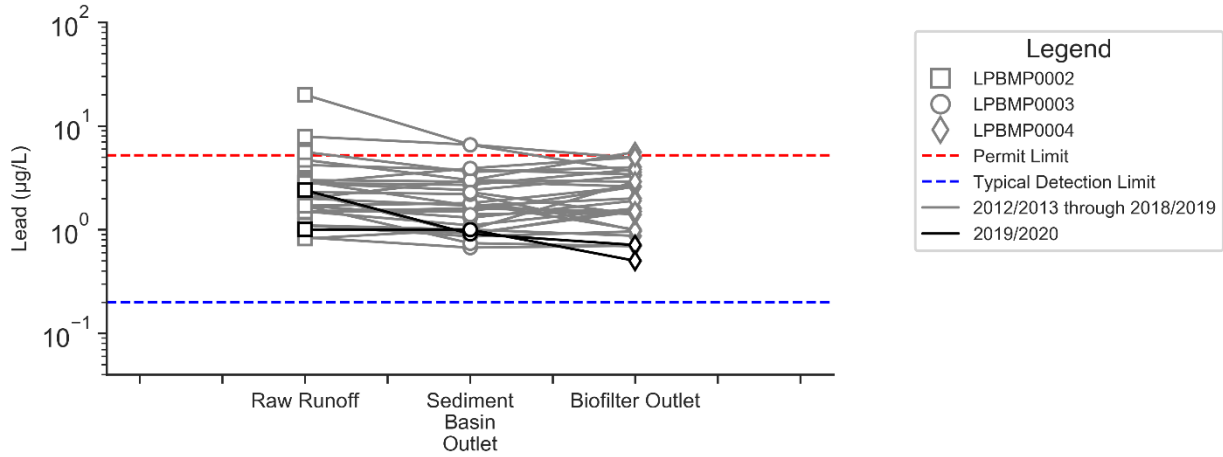


Figure 39. Lead at Lower Lot Biofilter

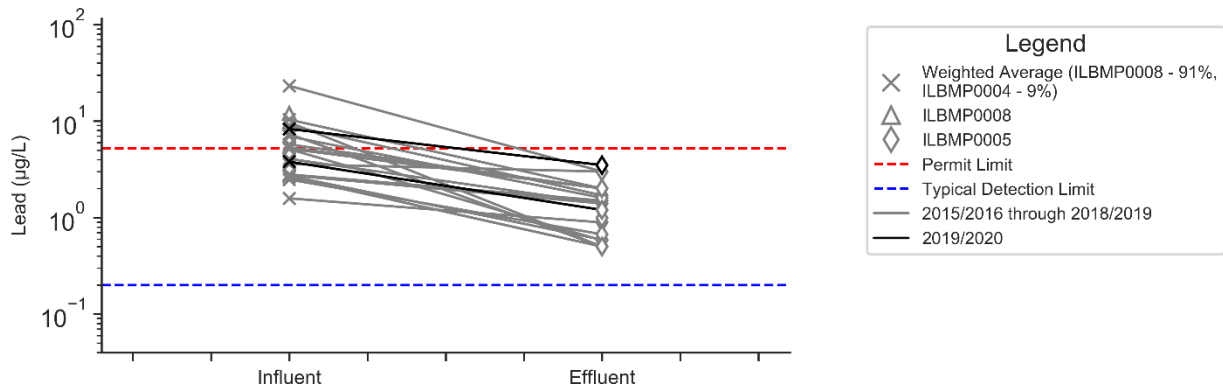


Figure 40. Lead at Southern Detention Bioswale

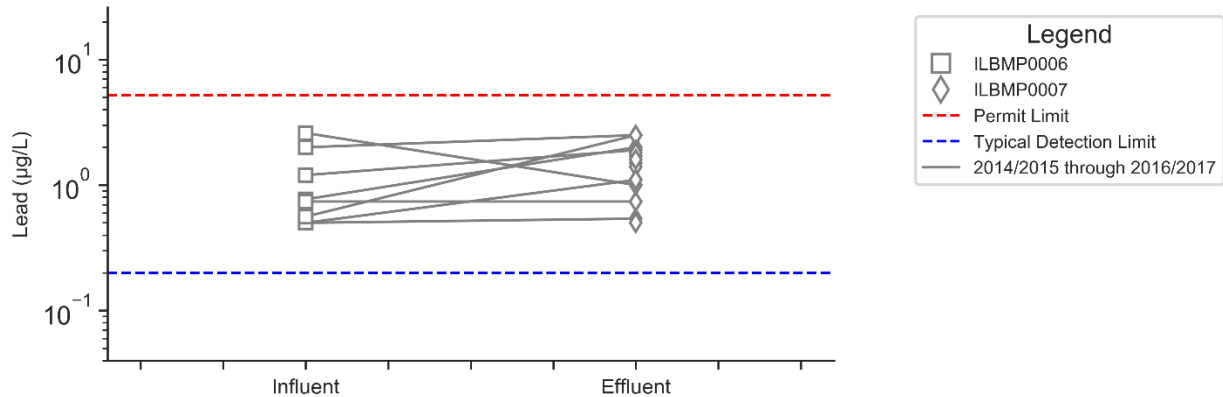


Figure 41. Lead at Northern Detention Bioswale

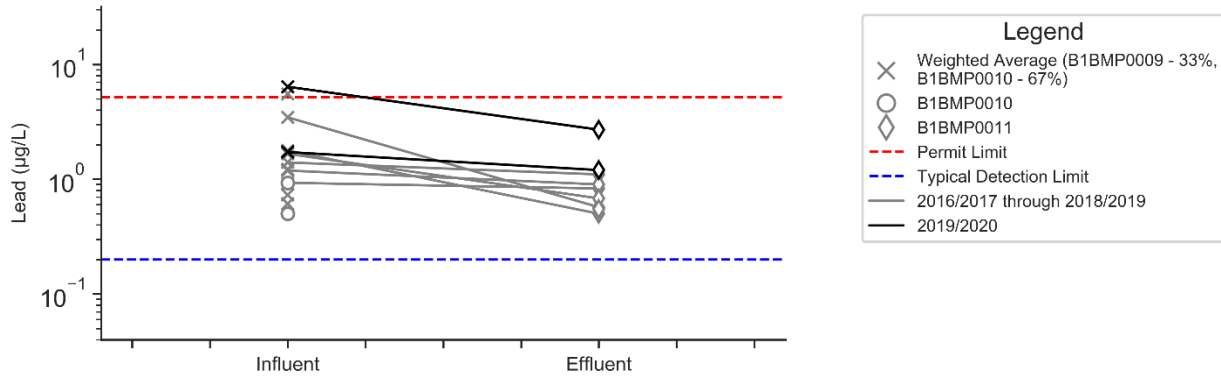


Figure 42. Lead at Upper Lot Media Filter

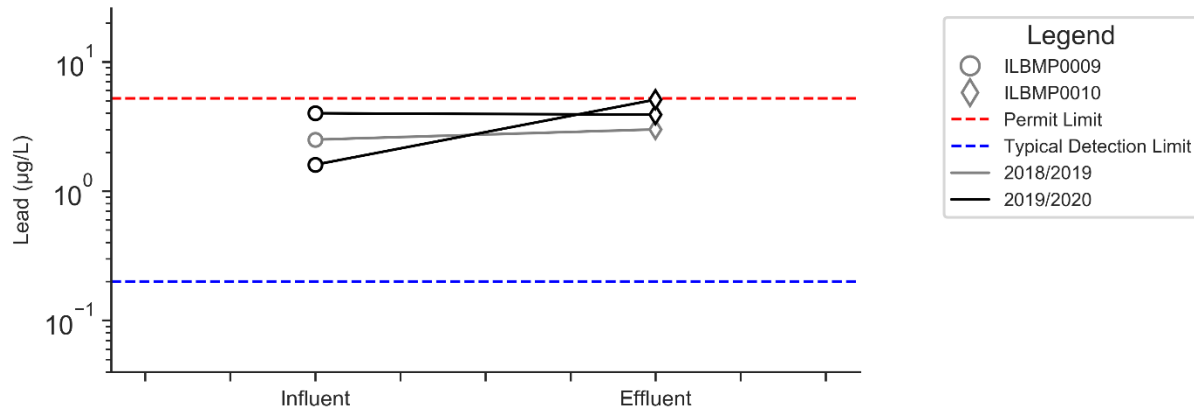


Figure 43. Lead at Boeing Admin Area Inlet Filters

3.4 Copper Paired Line Plots

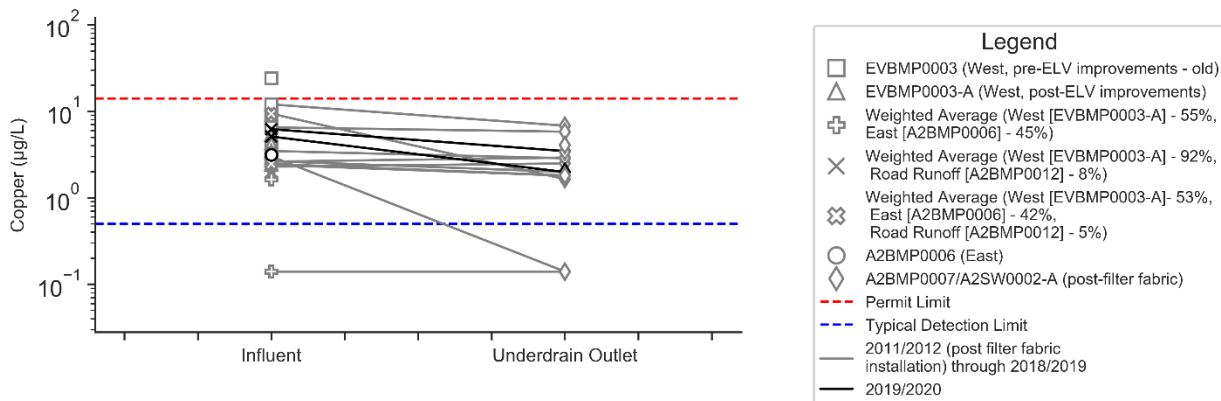


Figure 44. Copper at CM-1, post filter fabric installation (filter fabric installed on 1/20/2012)

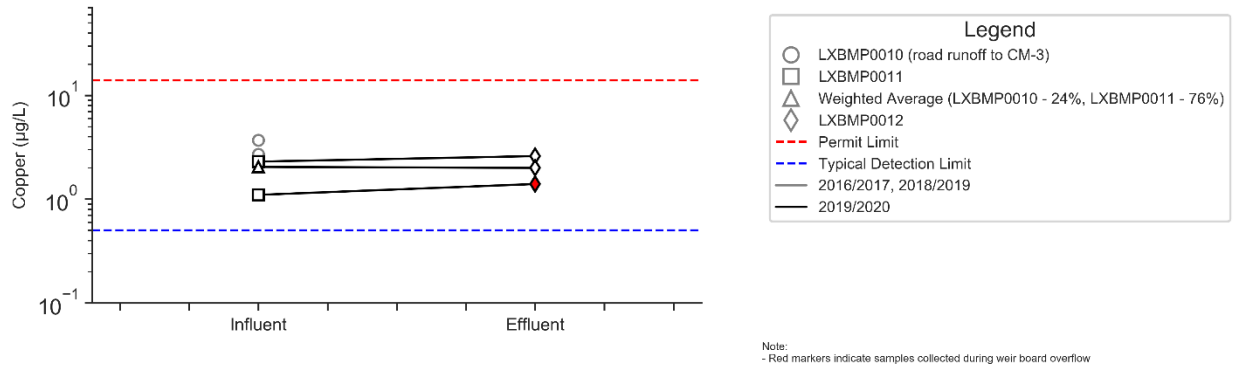


Figure 45. Copper at CM-3

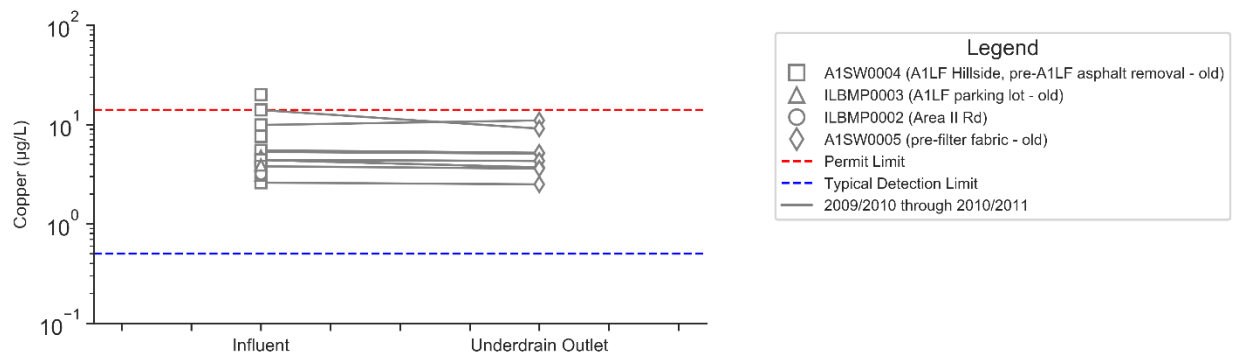


Figure 46. Copper at CM-9, pre improvements (removal of A1LF asphalt and addition of CM weir board filter fabric)

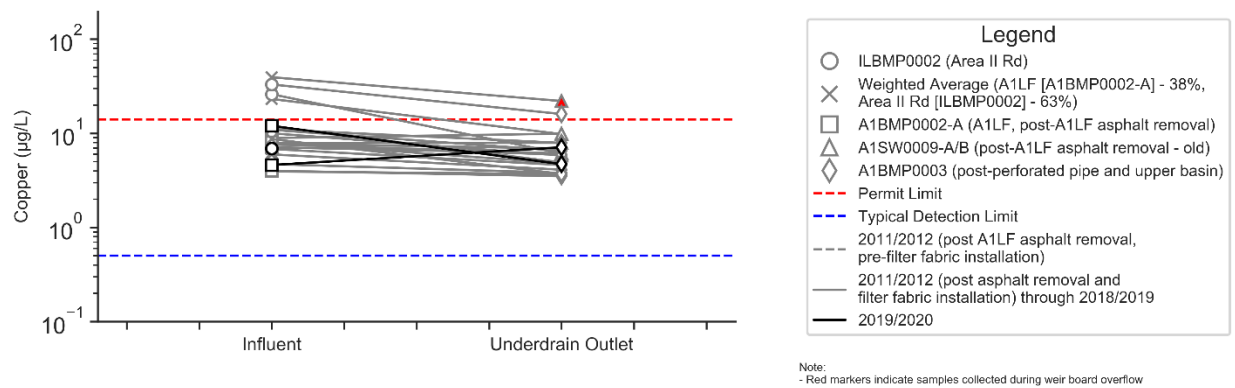


Figure 47. Copper at CM-9, post improvements (removal of A1LF asphalt [9/1/2011] and addition of CM weir board filter fabric [1/20/2012])

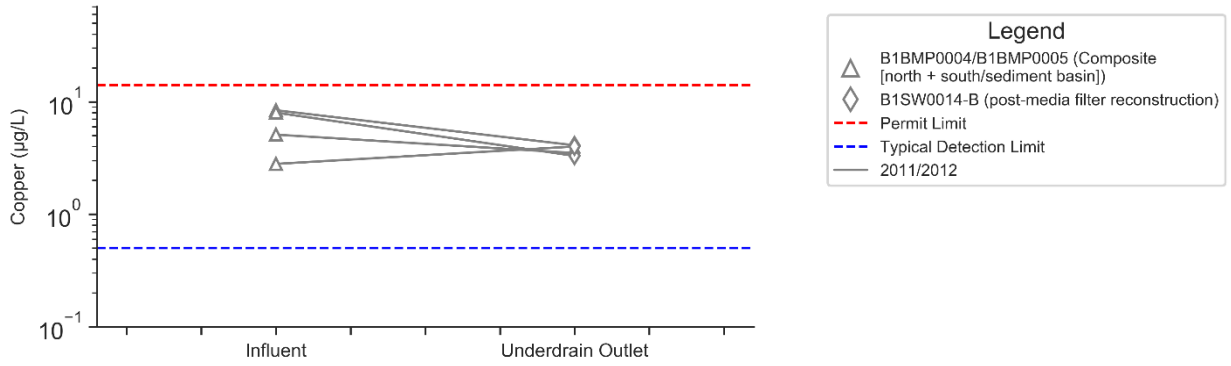


Figure 48. Copper at B-1 Media Filter (CM), pre curb cuts (curb cuts installed on 11/2/2012)

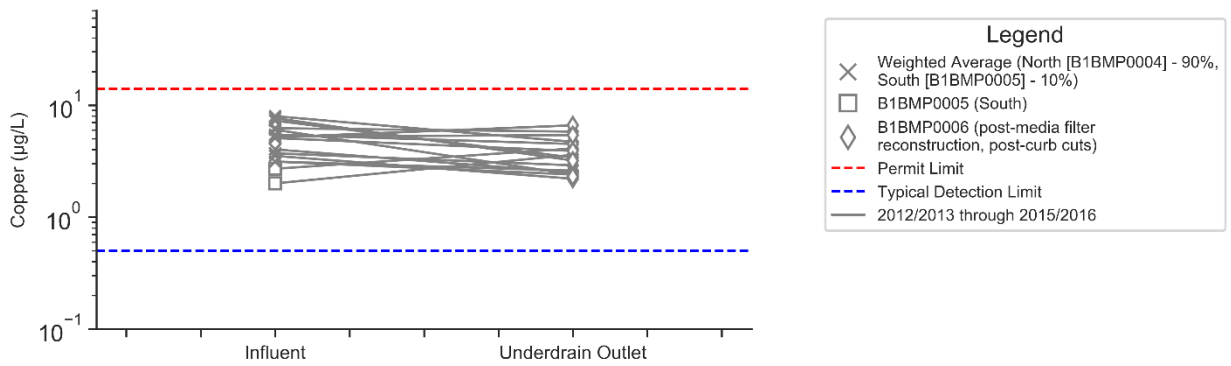


Figure 49. Copper at B-1 Media Filter (CM), post curb cuts (curb cuts installed on 11/2/2012)

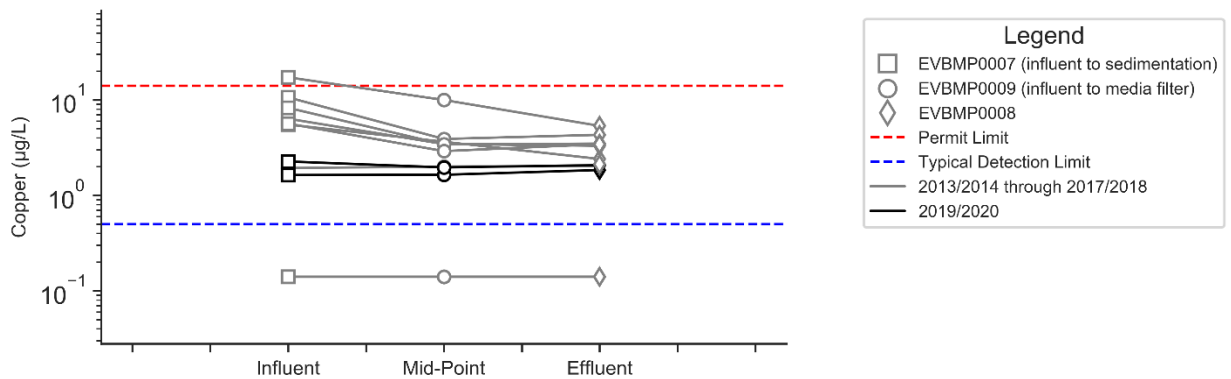


Figure 50. Copper at ELV Treatment BMP

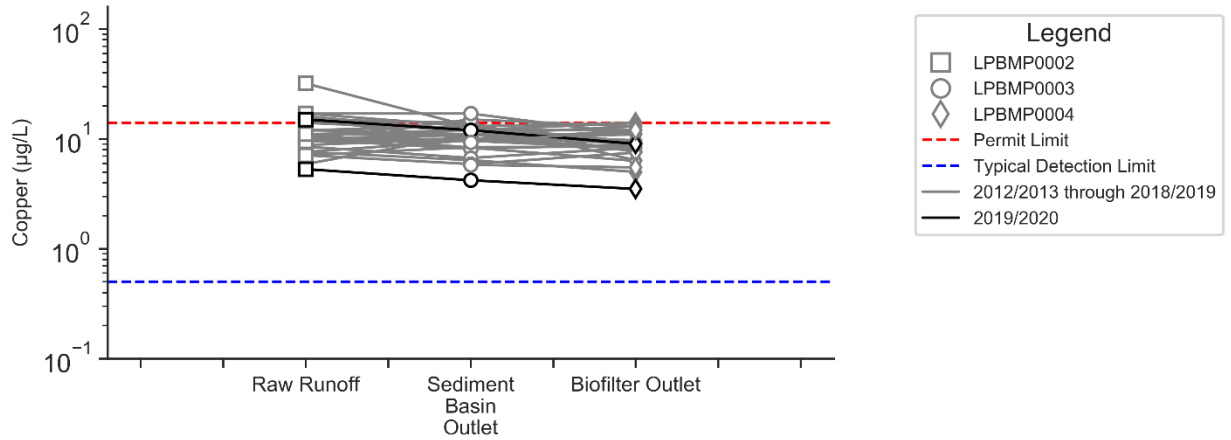


Figure 51. Copper at Lower Lot Biofilter

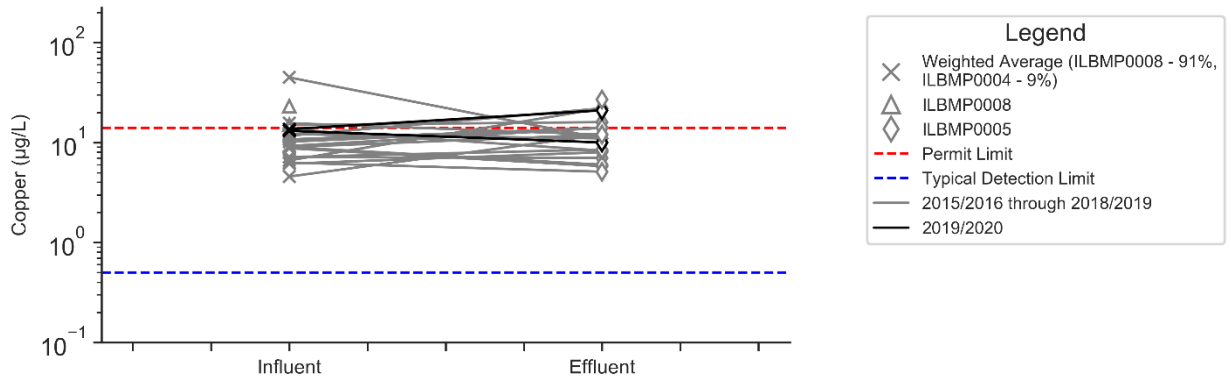


Figure 52. Copper at Southern Detention Bioswale²⁶

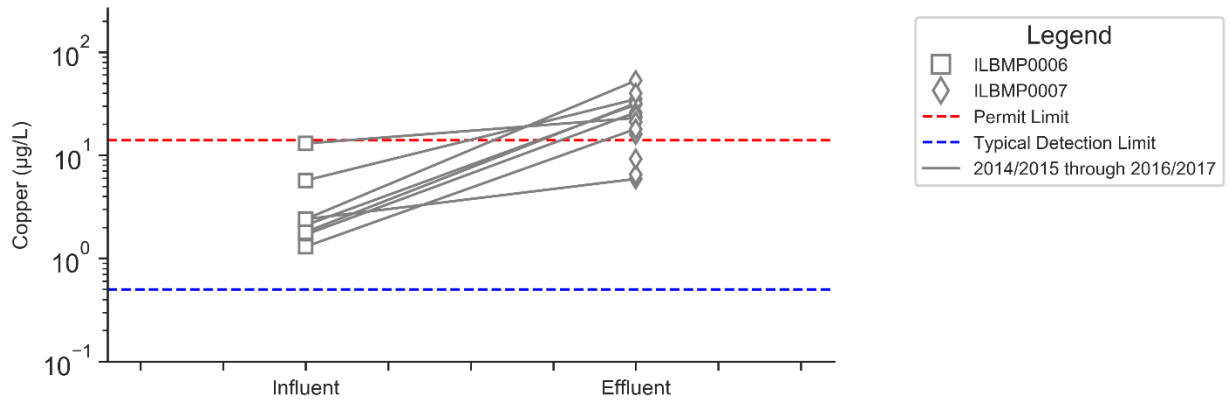


Figure 53. Copper at Northern Detention Bioswale¹⁵

²⁶ The permit limit does not apply to this location. No exceedances in permit limits for copper occurred at watershed 009 locations during the 2015/2016 reporting year.

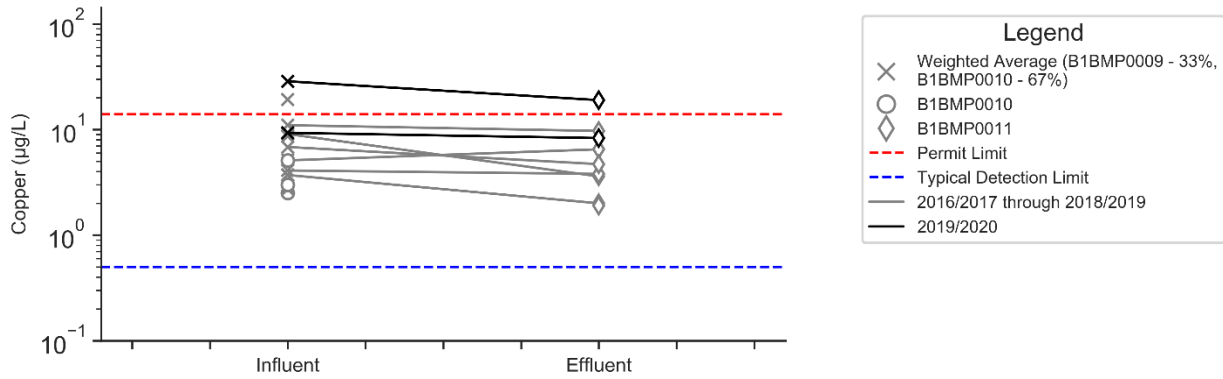


Figure 54. Copper at Upper Lot Media Filter

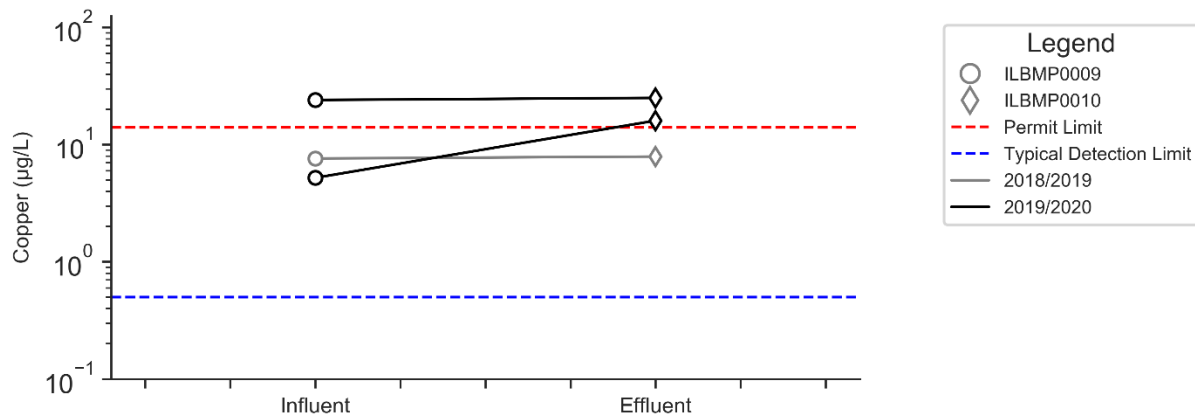


Figure 55. Copper at Boeing Admin Area Inlet Filters

4. Statistical Analysis

Statistical summaries of the Site cumulative paired data over the 2009-2020 sampling period using the non-parametric one-tailed sign test are shown for the paired datasets in Table 4 through Table 12. This test is used to evaluate statistical differences between paired data points, or in this case, between influent and effluent stormwater samples. The null hypothesis is that the number of data pairs showing an increase from influent to effluent concentrations equals the number of data pairs showing a decrease in concentration from the influent to effluent samples. If the p-value is less than 0.05, the null hypothesis is rejected with a 95 percent level of confidence. Rejection of the null hypothesis results in a statistically significant difference in the number of data pairs that show an increase in concentration from the influent to effluent and data pairs with a decrease in concentration from influent to effluent. If the p-value is greater than 0.05, there are insufficient numbers of paired data sets to indicate a significant difference. For this analysis, data pairs that were taken during observed bypass/overflow events were removed (specific locations, events, and rainfall characteristics were listed previously in Section 3). A statistical analysis is not performed on the Boeing admin area inlet filters because only three data pairs are currently available.

4.1 Culvert Modification/Media Filter Areas

At the monitored CMs and media filters (B-1, CM-1, CM-3, CM-8, CM-9, CM-11, and the upper lot media filter), the total number of combined influent and effluent data pairs ranged from 100 (for dioxins) to 117 (for TSS)²⁷. Table 4 and Table 5 summarize the paired data statistics for these locations. CM-8, CM-11, and select CM-1 paired statistics are presented separately from the other locations (Table 5) since the influent flows to these sites come largely from background sites, and therefore significant reduction of the COC concentrations (which are generally very low) in those flows by CMs is unlikely. No paired data were collected from these background sites in the 2019/2020 reporting year. Data from the CM-3 background site (pre-2016/2017) were excluded since post-storm dry weather flows were observed at the outlet between February 2010 and March 2011 when no flows were observed entering the culvert, suggesting subsurface inflows were contributing to effluent samples. Therefore, this CM cannot be reliably assessed based on the effluent sample results (pre-2016/2017). Samples collected for road runoff to CM-3 during 2019/2020 are included in the statistical analyses²⁸.

At the B-1 media filter site, media washout was observed during initial sampling dates in the 2011/2012 reporting year. Since this was a malfunction that was subsequently corrected, results from these sample dates were removed from the analysis. The CM-1 effluent sample collected on 2/28/2014 represented a blend of underdrain flow and seepage through the upstream weir boards. A leaking seal was noted at CM-1 on 3/3/2017. It is unclear if this condition was also present during the 2/17/2017 sample that resulted in an exceedance of permit limits for dioxins. These results were included in the analysis.

²⁷ Because copper is not included as a pollutant of concern in the Expert Panel Work Plan for watershed 009, which was submitted to the Regional Board in September 2015, results for copper are not included herein.

²⁸ Samples for road runoff to CM-3 from 2016/2017 and 2018/2019 are not included in the statistical analyses because an influent/effluent data pair was not collected. No samples were collected in 2017/2018. Severe sedimentation was observed at CM-3 during 2018/2019, which hindered sample collection until cleaned. Performance at CM-3 was also likely hindered due to the sedimentation.

Table 5 shows the number of influent samples with higher concentrations than their paired effluent samples, which shows an improvement in water quality from the influent to effluent of the CM/media filter. In the non-background CMs, the majority of sample pairs had higher influent concentrations than their paired effluent (67%, 65%, and 71% for TSS, dioxins, and lead, respectively). In addition, the number of data pairs with influent concentrations greater than the effluent concentrations were found to be statistically significant (p -value ≤ 0.05) for TSS, lead, and dioxins.

Table 5. CM-1 (“background” samples excluded), CM-9, CM-3, B-1, and Upper Lot Media Filter Combined Non-Background Statistical Analysis

	TSS (mg/L)		Dioxin (µg/L)		Lead (µg/L)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Minimum	0.70	0.53	1.0E-12	1.0E-12	0.09	0.09
Maximum	1,800	610	3.6E-04	9.8E-07	55	39
Average	68	30	6.3E-06	6.9E-08	6.7	3.3
Median	19	13	6.8E-08	1.4E-08	3.0	1.8
Standard Deviation	215	71	4.2E-05	1.3E-07	10	5.2
Coefficient of Variation (COV)	3.2	2.3	6.6	2.0	1.6	1.6
Total pairs of observations	87		80		87	
Number of influent samples having larger concentrations than effluent samples	58		52		62	
Number of effluent samples having larger concentrations than influent samples	26		14		20	
Number of samples having equal influent and effluent concentrations	3		14		5	
p-value by paired nonparametric sign test ¹	<0.001 (statistically significant removal)		<0.001 (statistically significant removal)		<0.001 (statistically significant removal)	

¹ One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

The number of data pairs with influent concentrations greater than their paired effluent concentrations was statistically significant (p -value ≤ 0.05) for TSS, lead, and dioxins at background sites, as shown in Table 6. It should be noted that no data were collected from these sites in the most recent reporting year. In addition, as noted earlier, the influent concentrations at these sites are very low (only one of the dioxins samples at these sites, either influent or effluent, were above Permit limits), so further reductions would be difficult to achieve.

Table 6. CM-1¹, CM-8 and CM-11 Combined Background Statistical Analysis²

	TSS (mg/L)		Dioxin (µg/L)		Lead (µg/L)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Minimum	1.0	1.0	1.0E-12	1.0E-12	0.20	0.20
Maximum	250	46	1.6E-08	1.0E-07	17	12
Average	19	8.1	8.7E-10	5.4E-09	3.0	1.8
Median	3.0	4.0	1.0E-12	1.0E-12	0.74	0.29
Standard Deviation	47	11	3.5E-09	2.3E-08	4.8	3.0
Coefficient of Variation (COV)	2.5	1.4	4.0	4.3	1.6	1.7
Total pairs of observations	30		20		19	
Number of influent samples having larger concentrations than effluent samples	18		5		14	
Number of effluent samples having larger concentrations than influent samples	6		5		3	
Number of samples having equal influent and effluent concentrations	6		10		2	
p-value by paired nonparametric sign test ³	<0.001 (statistically significant removal)		0.62 ⁴ (insufficient amount of data to show a significant difference)		0.0022 (statistically significant removal)	

¹ Only CM-1 samples that were taken from east/background tributary influent sites are included in this analysis.

² As noted earlier in this memorandum, the CM-3 performance (pre-2016/2017) cannot be reliably assessed based on the effluent sample results. For this reason, the CM-3 paired data were excluded from the statistical analysis presented in this table.

³ One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

⁴ Due to the high number of samples having equal influent and effluent concentrations (due to non-detects), the total pairs of observations was assumed to be 10 for purposes of calculating the p-value.

4.2 Lower Lot Biofilter Treatment Train

To date, samples were collected from the lower lot biofilter during 30 rain events that occurred after the construction was completed and fully functional, with samples collected at all three locations within the biofilter treatment train (influent, post-sedimentation basin, and post-biofilter) during 27 events from 2012/2013 through 2019/2020, two locations (influent and post-biofilter) for a single rain event in the 2013/2014 reporting year²⁹, and two locations (post-sedimentation basin and post-biofilter) for two events in 2018/2019. The post-biofilter samples collected in early 2014 represents a blend of filtered underdrain water and overflow. During one event in the 2014/2015 reporting year, unusually turbid water was observed in the biofilter; this may have been due to sediment-laden run-on from the Building 1436



Figure 56. A photo of the biofilter on 3/13/2018

²⁹ A sample was not taken at the biofilter inlet (post-sedimentation basin) during the 2013/2014 sampling year due to the sample location being submerged and inaccessible.

demolition area. Table 7, Table 8, and Table 9 summarize the paired sampling data for the biofilter.

For TSS, the majority of data pairs had higher influent concentrations than their paired effluent concentrations for all steps of the treatment train (influent runoff to the sedimentation basin outlet, the sedimentation basin outlet to the biofilter outlet, and influent to biofilter outlet), as shown in Table 7, Table 8, and Table 9, respectively.

The majority of data pairs also showed a decrease in dioxins concentration through all steps of the treatment train for all years. Across the system (influent runoff to the biofilter outlet), only one sample pair had effluent dioxins concentrations with higher concentrations than their paired influent sample.

For lead, the majority of samples from the influent runoff to the sedimentation basin outlet and across the system (influent runoff to biofilter outlet) exhibited a decrease in lead concentration, as shown in Table 6 and Table 8, respectively. However, for the sedimentation basin outlet to the biofilter outlet (Table 7), the majority of sample pairs showed higher effluent lead concentrations than their paired influent concentration.

Considering the entire system (influent runoff to the biofilter outlet), dioxin was the only COC to show a statistically significant (p -value ≤ 0.05) number of paired samples that decreased in concentration from the influent runoff to the biofilter outlet, based on the number of samples available.

Table 7. Lower Lot Biofilter Performance Data – Influent Runoff to Sedimentation Basin Outlet

	TSS (mg/L)		Dioxin (µg/L)		Lead (µg/L)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Minimum	2.7	2.5	3.8E-10	1.0E-12	0.8	0.7
Maximum	280	110	4.7E-07	2.8E-07	20	6.6
Average	34	24	9.0E-08	6.8E-08	3.0	2.1
Median	20	12	5.8E-08	4.7E-08	2.0	1.7
Standard Deviation	54	28	9.7E-08	7.1E-08	3.7	1.6
Coefficient of Variation (COV)	1.6	1.14	1.1	1.04	1.3	0.74
Total pairs of observations	27		27		27	
Number of influent samples having larger concentrations than effluent samples	17		19		19	
Number of effluent samples having larger concentrations than influent samples	10		8		6	
Number of samples having equal influent and effluent concentrations	0		0		2	
p-value by paired nonparametric sign test ¹	0.12 (insufficient amount of data to show a significant difference)		0.026 (statistically significant removal)		0.003 (statistically significant removal)	

¹ One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

Table 8. Lower Lot Biofilter Performance Data – Sedimentation Basin Outlet to Biofilter Outlet

	TSS (mg/L)		Dioxin (µg/L)		Lead (µg/L)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Minimum	2.5	2.2	1.0E-12	1.0E-12	0.7	0.5
Maximum	110	110	2.8E-07	1.5E-07	6.6	5.6
Average	23	21	6.7E-08	9.4E-09	2.1	2.2
Median	12	13	4.7E-08	2.1E-10	1.7	1.6
Standard Deviation	27	26	6.9E-08	2.9E-08	1.5	1.4
Coefficient of Variation (COV)	1.1	1.22	1.02	3.1	0.72	0.64
Total pairs of observations	29		29		29	
Number of influent samples having larger concentrations than effluent samples	16		26		13	
Number of effluent samples having larger concentrations than influent samples	11		2		16	
Number of samples having equal influent and effluent concentrations	2		1		0	
p-value by paired nonparametric sign test ¹	0.13 (insufficient amount of data to show a significant difference)		<0.001 (statistically significant removal)		0.36 (insufficient amount of data to show a significant difference)	

¹One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

Table 9. Overall Lower Lot Biofilter Performance Data – Influent Runoff to Biofilter Outlet

	TSS (mg/L)		Dioxin (µg/L)		Lead (µg/L)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Minimum	2.7	2.2	3.8E-10	1.0E-12	0.8	0.5
Maximum	280	110	4.7E-07	1.5E-07	20	5.6
Average	35	23	1.0E-07	1.0E-08	3.0	2.3
Median	22	14	6.2E-08	2.1E-10	2.0	2.0
Standard Deviation	53	27	1.2E-07	3.1E-08	3.7	1.4
Coefficient of Variation (COV)	1.5	1.16	1.1	3.0	1.2	0.62
Total pairs of observations	28		28		28	
Number of influent samples having larger concentrations than effluent samples	16		27		14	
Number of effluent samples having larger concentrations than influent samples	12		1		12	
Number of samples having equal influent and effluent concentrations	0		0		2	
p-value by paired nonparametric sign test ¹	0.29 (insufficient amount of data to show a significant difference)		<0.001 (statistically significant removal)		0.29 (insufficient amount of data to show a significant difference)	

¹One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

4.3 ELV Treatment BMP

To date, samples have been collected from the ELV treatment BMP during 15 events from 2013/2014 through 2019/2020. Sampling was not conducted during the 2018/2019 reporting year due to a power outage at the ELV treatment BMP associated with the Woolsey fire, which destroyed the electrical infrastructure. To prevent future power outages at the ELV treatment location, a generator was added to the ELV system as the main power source, since electrical lines were not replaced in this area to reduce the risk of future fires. Samples were collected at three locations within the ELV treatment train (influent, sedimentation tank outlet, and media tank effluent) during 11 of these events. Samples were only collected at two locations (influent and effluent) during one event, the effluent location only for one event, and the effluent and mid-point location during two events.

Extenuating circumstances relevant to this site during the February/March 2014 storm event included high flows from Helipad Road to the ELV treatment system (resulting in excess inflows to the sump), inadequate erosion controls along the earthen ELV channel (resulting in excess sediment in the sump [approximately one foot of deposited sediment in the sump and less than an inch in the sedimentation tanks]), and a power outage (resulting in the sump pump not operating during part of the storm). The February/March 2014 ELV treatment BMP effluent data are still considered representative for the analysis herein, although it is recognized that because this monitoring event was the first at the ELV, washout of fines from the media bed may have been occurring.

Table 10, Table 11, and Table 12 summarize the paired data for this location. The majority of data pairs from the influent to the sedimentation tank effluent showed a decrease in TSS concentrations. However, there were more effluent samples with higher TSS concentrations than their paired influent samples from the sedimentation tank effluent to the media tank effluent and from the influent to the media tank effluent. For one of the two cases where a net increase in TSS occurred during the 2013/2014 reporting year, the ELV treatment BMP was heavily loaded by sediments eroded from the denuded ELV channel prior to implementation of recent erosion control improvements.

For each step of the treatment train, the majority of sample pairs had influent dioxin concentrations higher than their paired effluent concentrations. For lead, the majority of sample pairs showed decreasing lead concentrations from the influent to the sedimentation tank effluent and influent to the media tank effluent. However, there were more sample pairs with higher media tank effluent lead concentrations when compared to their paired sedimentation basin tank effluent concentrations.

Across the system from the influent to the media tank effluent, the number of influent samples with higher concentrations than their paired effluent samples was statistically significant ($p\text{-value} \leq 0.05$) for dioxins and lead, while TSS showed a statistically significant number of effluent samples with higher TSS concentrations than their paired influent concentrations, based on the number of samples.

Table 10. ELV Treatment BMP Performance Data – Influent to Sedimentation Tank Effluent

	TSS (mg/L)		Dioxin (µg/L)		Lead (µg/L)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Minimum	2.9	1.0	1.0E-12	1.0E-12	0.2	0.2
Maximum	66	47	3.5E-07	3.6E-07	50	3.5
Average	19	11	4.1E-08	3.3E-08	7.3	1.4
Median	7	7	5.1E-10	2.5E-10	2.0	1.1
Standard Deviation	22	14	1.0E-07	1.1E-07	14.6	1.05
Coefficient of Variation (COV)	1.18	1.24	2.49	3.29	2.00	0.72
Total pairs of observations	11		11		11	
Number of influent samples having larger concentrations than effluent samples	9		8		8	
Number of effluent samples having larger concentrations than influent samples	2		2		3	
Number of samples having equal influent and effluent concentrations	0		1		0	
p-value by paired nonparametric sign test ¹	0.030 (statistically significant removal)		0.030 (statistically significant removal)		0.11 (insufficient amount of data to show a significant difference)	

¹One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

Table 11. ELV Treatment BMP Performance Data – Sedimentation Tank Effluent to Media Tank Effluent

	TSS (mg/L)		Dioxin (µg/L)		Lead (µg/L)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Minimum	0.8	8	1.0E-12	1.0E-12	0.2	0.4
Maximum	47	144	3.6E-07	1.9E-07	3.5	3.7
Average	9	36	2.8E-08	1.5E-08	1.3	1.4
Median	4	35	2.4E-10	1.2E-10	0.9	1.2
Standard Deviation	13	37	1.0E-07	5.3E-08	1.01	0.97
Coefficient of Variation (COV)	1.36	1.01	3.58	3.58	0.77	0.67
Total pairs of observations	13		13		13	
Number of influent samples having larger concentrations than effluent samples	0		9		4	
Number of effluent samples having larger concentrations than influent samples	13		0		9	
Number of samples having equal influent and effluent concentrations	0		4		0	
p-value by paired nonparametric sign test ¹	<0.001 ² (statistically significant increase)		<0.001 (statistically significant removal)		0.13 (insufficient amount of data to show a significant difference)	

¹One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

²The number of effluent samples with higher TSS concentrations than their paired influent samples is statistically significant (statistically significant increase in concentration from sedimentation tank effluent to media tank effluent).

Table 12. ELV Treatment BMP Performance Data – Influent to Media Tank Effluent

	TSS (mg/L)		Dioxin (µg/L)		Lead (µg/L)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Minimum	2.9	8	1.0E-12	1.0E-12	0.2	0.4
Maximum	66	144	3.5E-07	1.9E-07	50	3.7
Average	19	36	4.8E-08	2.0E-08	7.0	1.6
Median	10	35	5.3E-09	1.3E-10	2.5	1.5
Standard Deviation	21	37	1.0E-07	5.6E-08	13.9	0.98
Coefficient of Variation (COV)	1.11	1.01	2.1	2.8	1.99	0.62
Total pairs of observations	12		12		12	
Number of influent samples having larger concentrations than effluent samples	1		10		9	
Number of effluent samples having larger concentrations than influent samples	10		1		2	
Number of samples having equal influent and effluent concentrations	1		1		1	
p-value by paired nonparametric sign test ¹	0.003 ² (statistically significant increase)		0.003 (statistically significant removal)		0.019 (statistically significant removal)	

¹ One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

² The number of effluent samples with higher TSS concentrations than their paired influent samples is statistically significant (statistically significant increase in concentration from influent to media tank effluent).

4.4 Detention Bioswales

Influent and effluent sample pairs were collected from the detention bioswales for the first time during the 2015/2016 reporting year³⁰. Samples were collected at three locations representing the southern detention bioswale: two influent locations (the rock crib swale outlet and runoff from the adjacent contractor laydown area) and the effluent location. Results from the two influent locations were flow-weighted to determine a representative influent concentration. The southern detention bioswale was sampled during 25 rain events during the 2015/2016 through 2019/2020 reporting years. However, the effluent was not sampled for two of these events, the influent was not sampled for another two events, and only a single influent sample was collected for two events (so the influent sample was not flow-weighted and only represented runoff from the adjacent contractor laydown area). Therefore, a total of 21 data pairs representing the southern detention bioswale performance have been collected.

The northern detention bioswale was sampled during 18 rain events between 2014/2015 and 2016/2017. However, only the effluent location was sampled for 10 of these events, resulting in eight total sample pairs. Sampling at the northern detention bioswale was discontinued after 2016/2017.

Table 13 summarizes the paired data for this location. Performance data represents both the northern and southern detention bioswales combined. For TSS, dioxins, and lead, the majority of data pairs had influent concentrations that were higher than their paired effluent concentrations. The number of

³⁰ The effluent location for the northern detention bioswale (ILBMP0007) was sampled during the 2014/2015 reporting year. However, the influent location (ILBMP0006) was not sampled until 2015/2016.

influent samples with higher concentrations than their paired effluent samples were found to be statistically significant (p-value ≤ 0.05) for all three COCs.

The southern and northern detention bioswales were analyzed together in order to assess BMPs of a similar design. However, as shown in the paired line plots, the southern detention bioswale had a greater proportion of sample pairs that showed a decrease in concentration from the influent to effluent, for all three COCs, compared to the northern detention bioswale.

Table 13. Southern and Northern Detention Bioswale Combined Performance Data

	TSS (mg/L)		Dioxin (µg/L)		Lead (µg/L)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Minimum	0.5	1.1	1.0E-12	1.0E-12	0.50	0.50
Maximum	220	36	2.1E-05	1.9E-07	23	3.5
Average	47	10	1.2E-06	2.0E-08	4.6	1.5
Median	27	6	6.8E-08	2.1E-10	2.8	1.4
Standard Deviation	54	9.5	4.3E-06	4.7E-08	4.6	0.86
Coefficient of Variation (COV)	1.15	0.92	3.5	2.4	0.99	0.58
Total pairs of observations	29		29		29	
Number of influent samples having larger concentrations than effluent samples	23		25		22	
Number of effluent samples having larger concentrations than influent samples	6		1		6	
Number of samples having equal influent and effluent concentrations	0		3		1	
p-value by paired nonparametric sign test ¹	0.0012 (statistically significant removal)		<0.001 (statistically significant removal)		0.0012 (statistically significant removal)	

¹ One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

4.5 Statistical Analysis Summary

A summary of the statistical analyses performed on the paired data presented in this section is shown in Table 14. Based on the number of sample pairs available, a statistically significant difference indicated a decrease in concentrations from the influent to effluent locations for CM/media filter sites (both excluding background sites CM-8 and CM-11 and also for CM-8 and CM-11 background sites only) and the detention bioswales, for all three COCs. The lower lot biofilter (influent runoff to biofilter outlet) showed statistically significance reductions only for dioxins (while TSS and lead were not statistically significant based on the number of sample pairs available). The ELV treatment BMP (influent to media tank effluent) showed statistically significant differences for the number of influent samples with higher concentrations than their paired effluent for lead and dioxins. However, TSS at the ELV treatment BMP showed a statistically significant difference indicating higher concentrations than their paired influent samples (showing a net increase across the system). The statistical analysis was not performed on the Boeing admin area inlet filters because only three data pairs are currently available.

Table 14. Summary of Performance Data, 2009-2020

Location	TSS		Dioxins		Lead	
	p-value ¹	Statistically significant decrease observed?	p-value ¹	Statistically significant decrease observed?	p-value ¹	Statistically significant decrease observed?
CM/media filter non-background (CM-1 [background samples excluded], CM-9, CM-3, B-1, and Upper Lot Media Filter)	<0.001	Yes	<0.001	Yes	<0.001	Yes
CM-8, CM-11, and CM-1 background	<0.001	Yes	0.62	No	0.0022	Yes
Lower Lot Biofilter (Influent Runoff to Biofilter Outlet)	0.29	No	<0.001	Yes	0.29	No ²
ELV Treatment BMP (Influent to Media Tank Effluent)	0.003	No ³	0.003	Yes	0.019	Yes
Detention Bioswales	0.0012	Yes	<0.001	Yes	0.0012	Yes

¹ One-tail sign test used to evaluate data. P values of ≤ 0.05 are considered statistically significant.

² Can likely be attributed to the much lower influent concentrations to the lower lot biofilter in recent years (to be discussed further).

³ The number of effluent samples with higher TSS concentrations than their paired influent samples is statistically significant (instead of the number of influent samples with higher concentrations than their paired effluent).

5. Influent v. Effluent Correlation Charts

Figure 57 through Figure 59 compare influent to effluent concentrations for the paired data presented above for CM/media filter sites (B-1, upper lot media filter, CM-3 [post 2017/2018], CM-9, and CM-1 non-background sites; CM-1, CM-3, CM-8, and CM-11 background sites are excluded). Correlation charts for the lower lot biofilter are shown in Figure 60 through Figure 62, Figure 63 through Figure 65 for the ELV treatment BMP, and Figure 66 through Figure 68 for the detention bioswales. The plots reflect the same data pairs used to represent the influent and effluent locations in the statistical analyses in the previous section. For example, the lower lot biofilter plots reflect influent runoff samples for the influent and sedimentation basin outlet samples for the effluent, while the detention bioswales plots show the influent location as the flow-weighted average of the rock crib swale outlet and runoff from the adjacent contractor laydown area. Similar to the paired line plots, points are shaded based on the sampling year during which they were collected, where black points represent data from the most recent 2019/2020 reporting year and data from all previous reporting years are shown as gray.

A least-squares regression was used to fit a line to log-transformed data ($\log(y) = m \cdot \log(x) + b$). The resulting equation, including the slope of the lines, m , is shown in the least-squares regression equation in the upper left corner of the graph. In addition, the p -value is also shown to indicate the significance of the reported slope term. The null hypothesis is that the slope (m) is equal to 0. If the p -value is less than 0.05, the null hypothesis is rejected, which shows that the slope is non-zero and is statistically significant at the 95% confidence level. 1 minus the significant slope term also indicates the overall percentage reduction in concentrations (when multiplied by 100x). The p -value to indicate the significance of the reported y -intercept (also represented in the least-square regression equation) is also shown. If there is a significant y -intercept, the reduction varies for different influent concentrations; if the intercept is not significant, the reduction is the same irrespective of the influent concentrations.

A 1:1 line was also added to each plot. **Data above the 1:1 line indicate an effluent increase in concentrations, while data below the 1:1 line indicate an effluent decrease in concentrations (or positive BMP performance). Additionally, the location where the 1:1 line intersects the best-fit line represents the irreducible concentration for each constituent (e.g. ~ 7 mg/L for TSS at CM sites).** Pairs where one or both results were not detected were included on these graphs with different symbols.

If the regression equations and associated ANOVA analyses indicate non-significant equation intercepts (p -value >0.05), the regressions were re-calculated with the intercept equal to zero, and this result is shown on the plots below (with the intercept p -value shown as N/A). This indicates that in general, the performance of the controls did not change by influent concentration (the percent reduction was constant). In some other cases, both the slope and intercept terms were not significant, and the regression is therefore also not significant. In this case, the effluent concentrations are not related to the influent concentrations, and the regression equation and p -values are not shown on the plots below.

5.1 CM/Media Filter Influent v. Effluent Correlation Charts

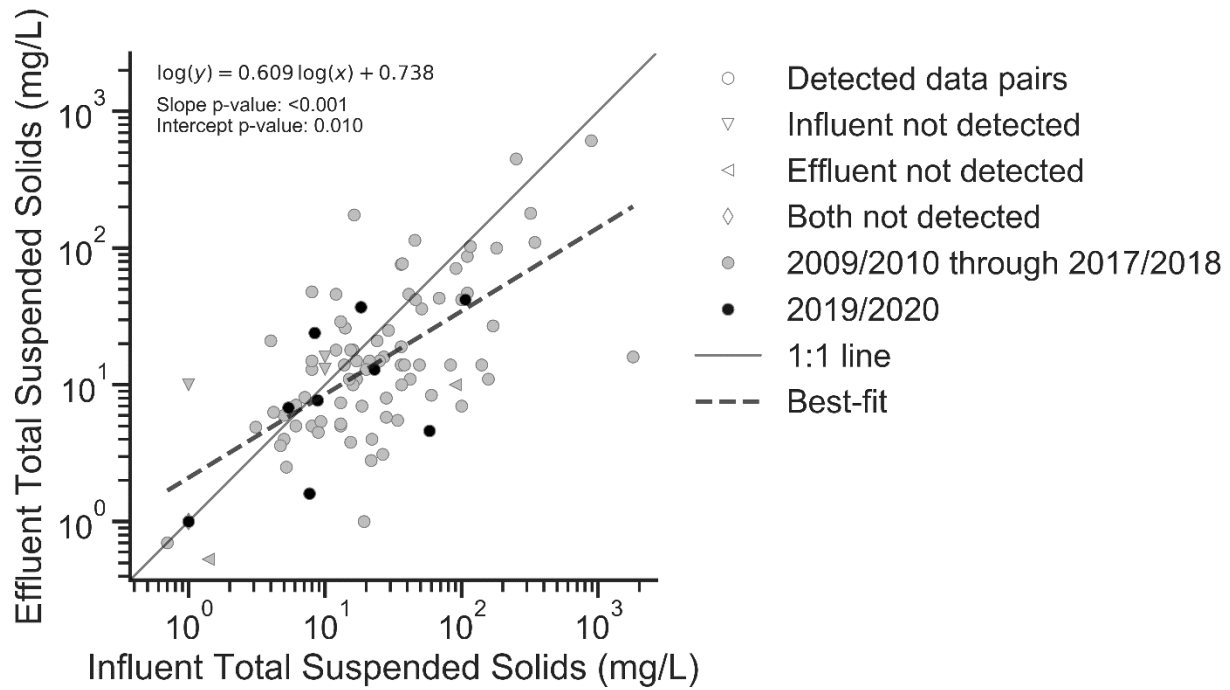


Figure 57. Paired TSS Concentrations at CM/Media Filter Sites

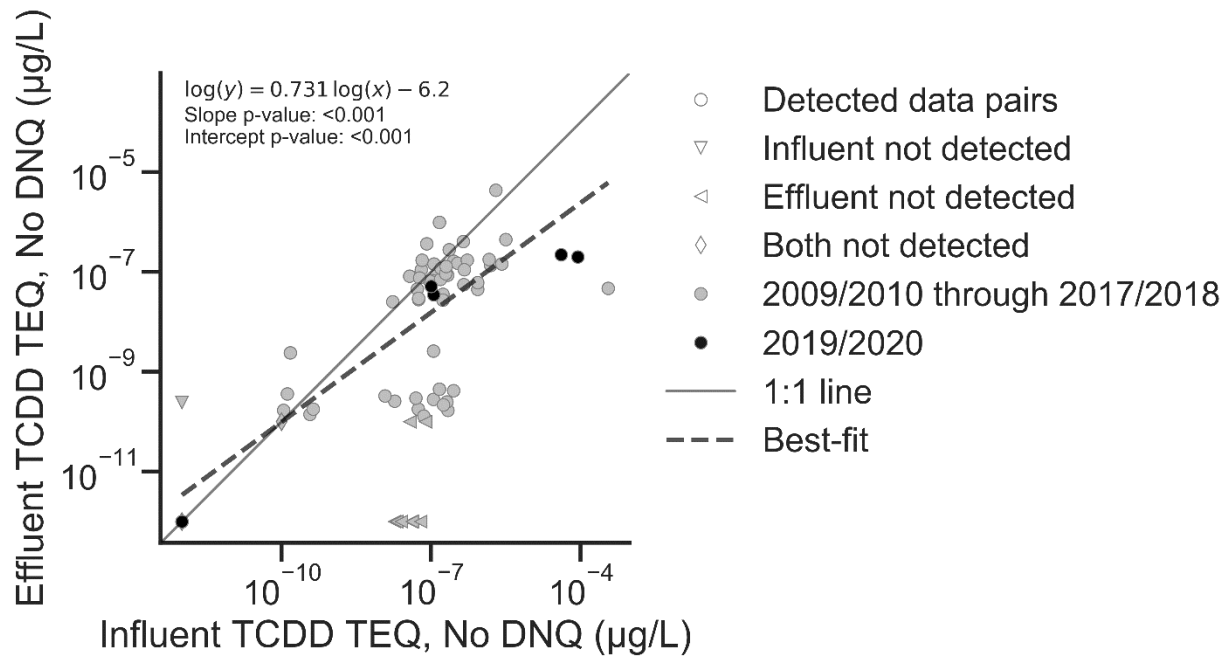


Figure 58. Paired Dioxins Concentrations at CM/Media Filter Sites

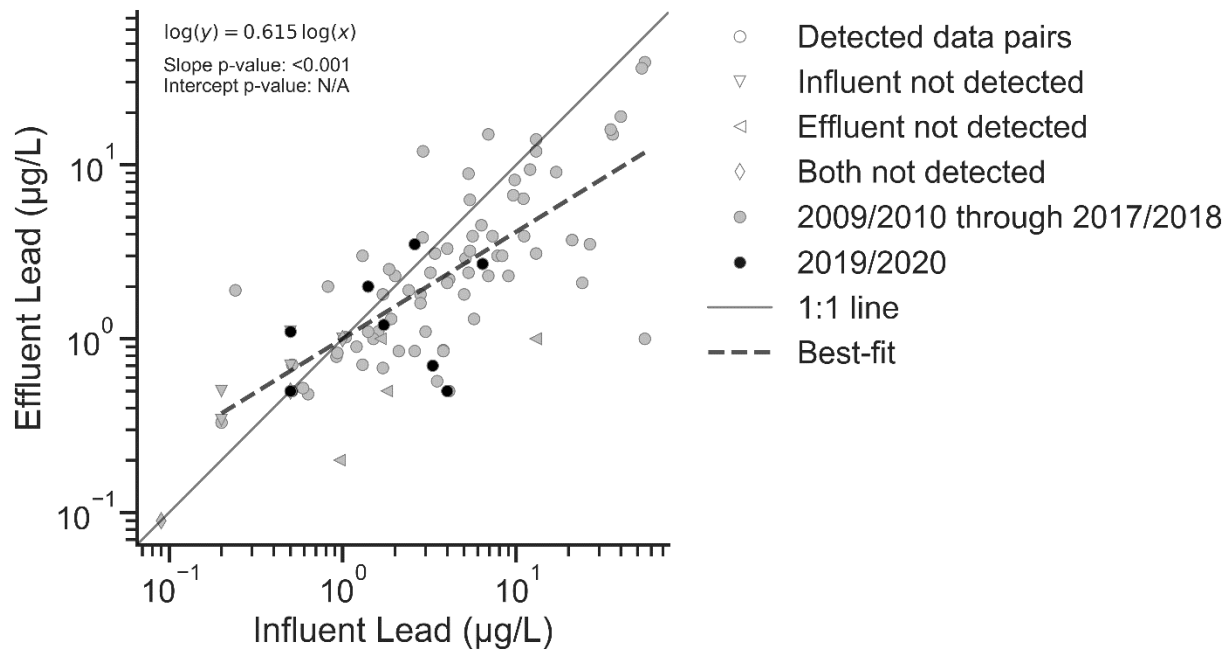


Figure 59. Paired Lead Concentrations at CM/Media Filter Sites

5.2 Lower Lot Biofilter Influent v. Effluent Correlation Charts

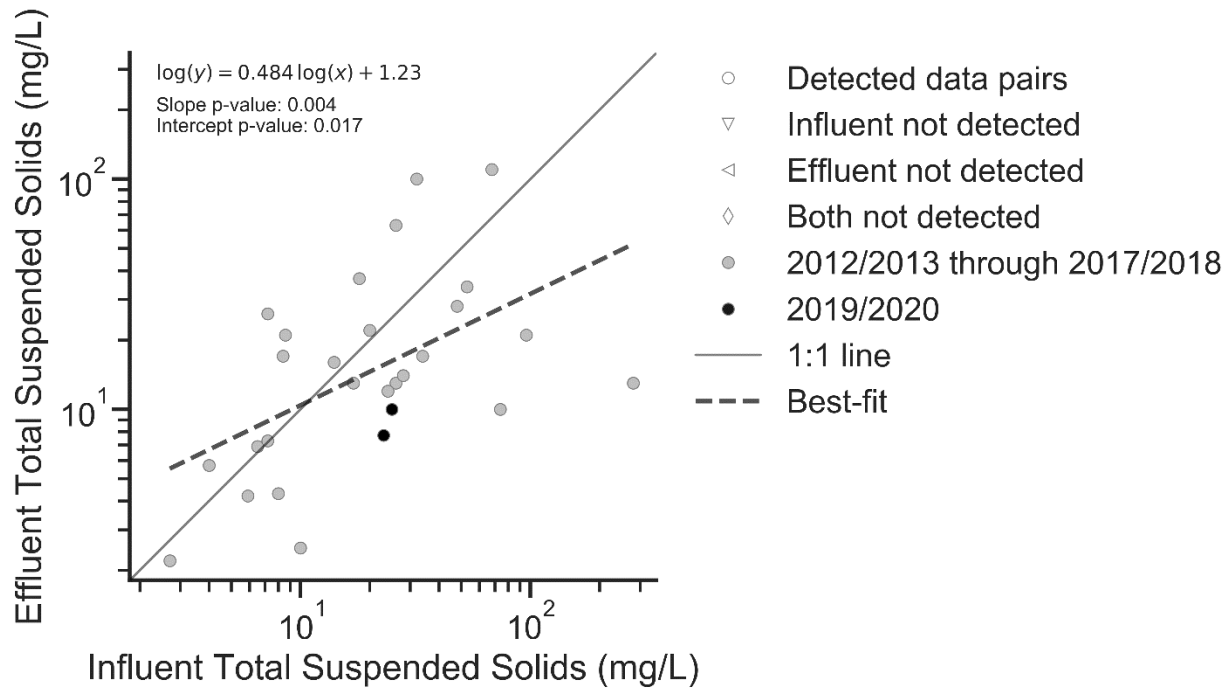


Figure 60. Paired TSS Concentrations at Lower Lot Biofilter

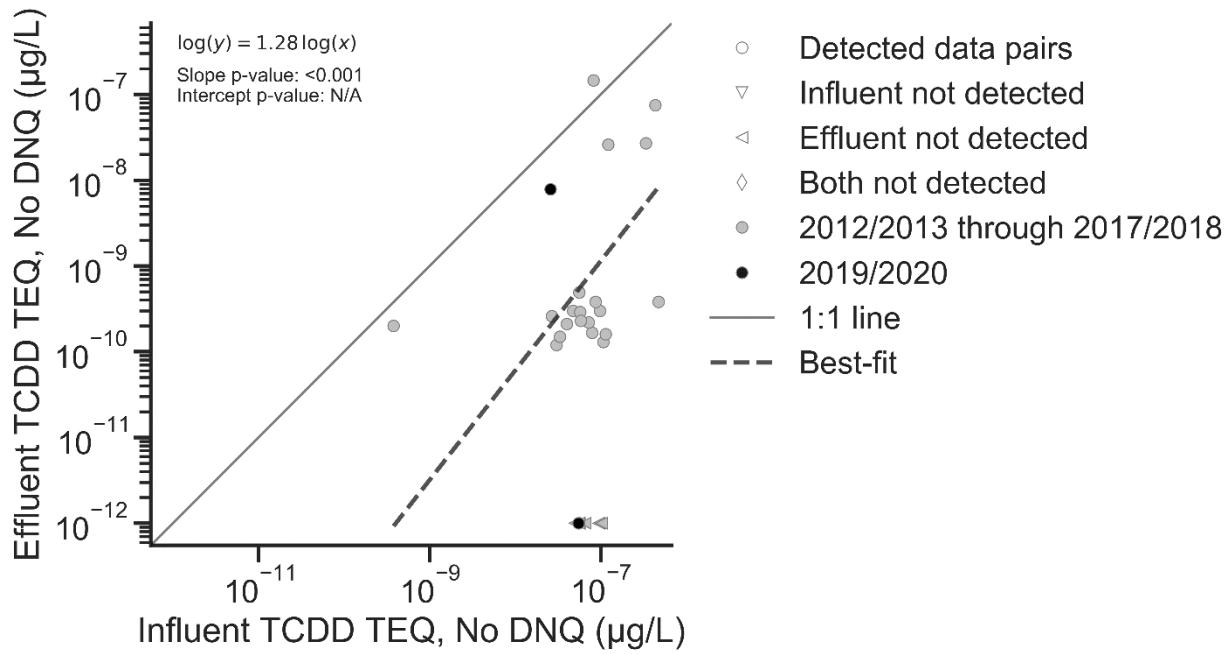


Figure 61. Paired Dioxins Concentrations at Lower Lot Biofilter

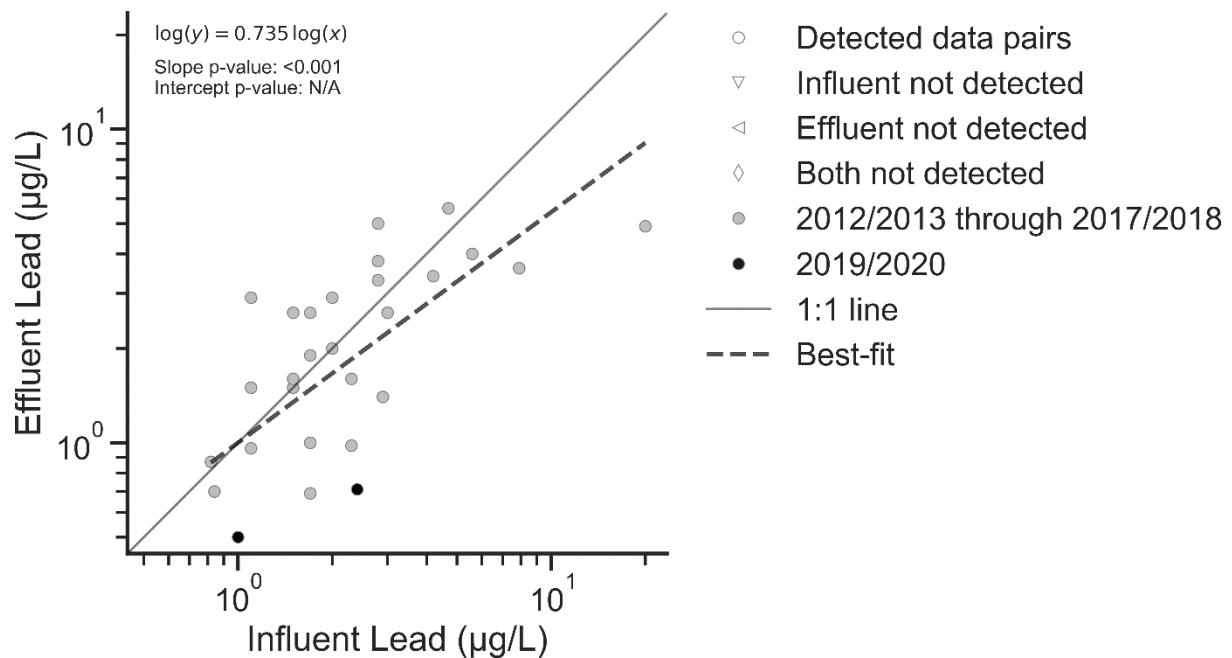


Figure 62. Paired Lead Concentrations at Lower Lot Biofilter

5.3 ELV Treatment BMP Influent v. Effluent Correlation Charts

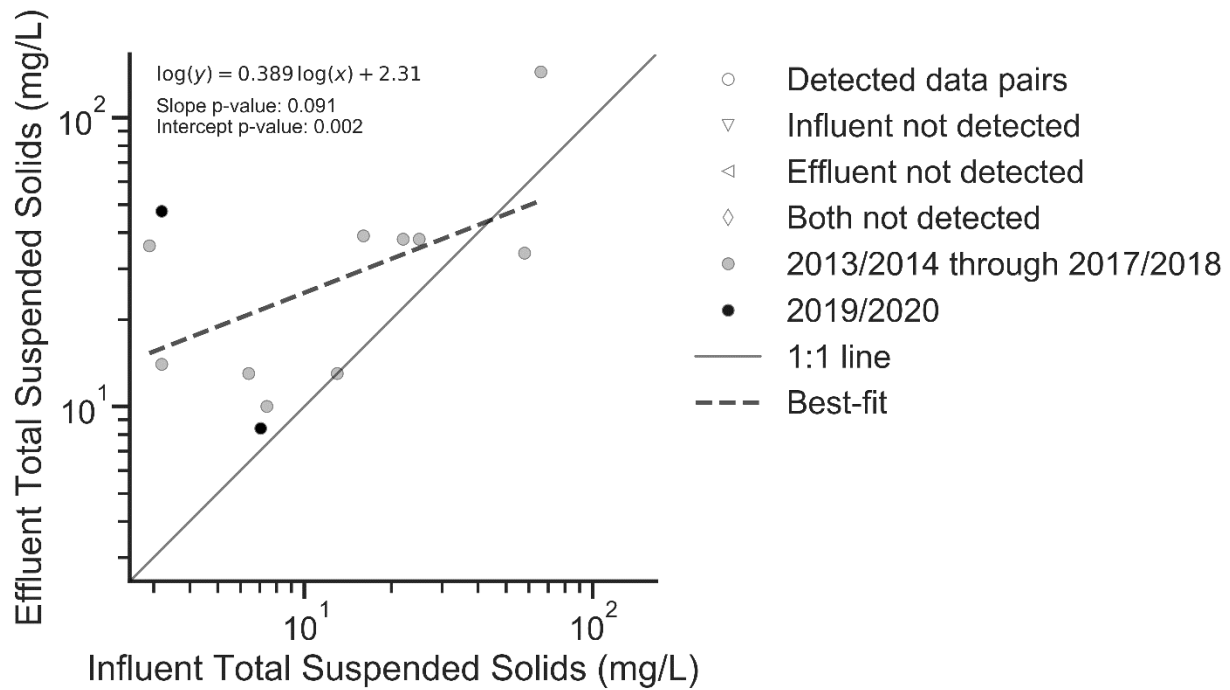


Figure 63. Paired TSS Concentrations at ELV Treatment BMP

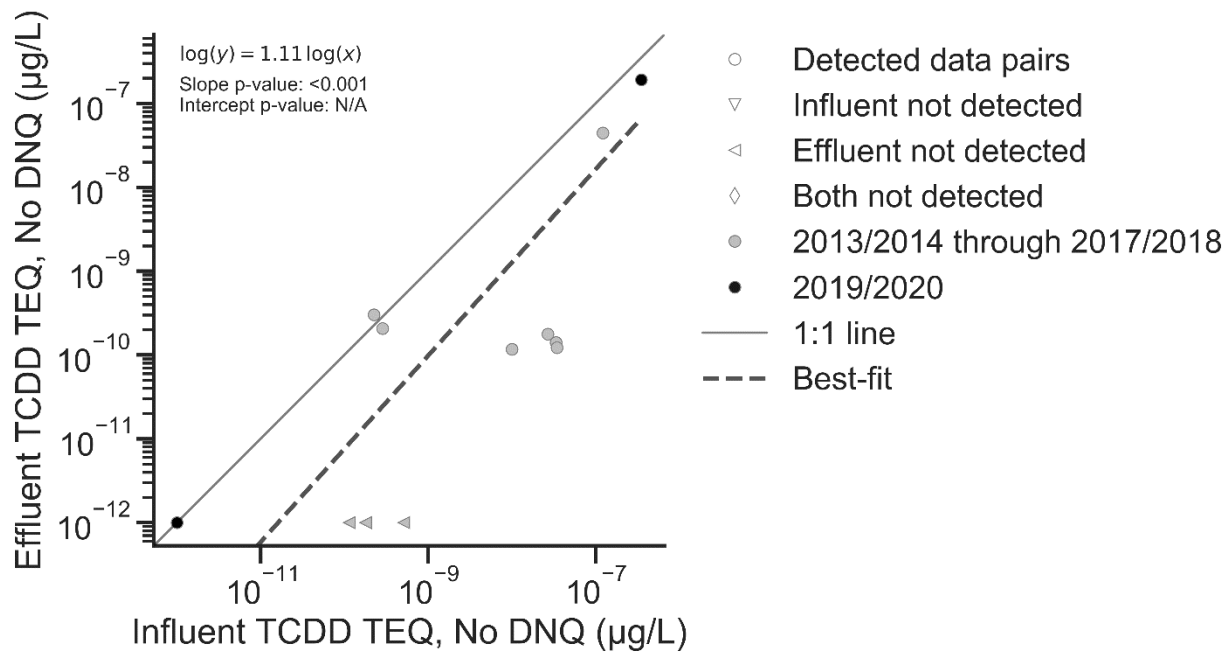


Figure 64. Paired Dioxins Concentrations at ELV Treatment BMP

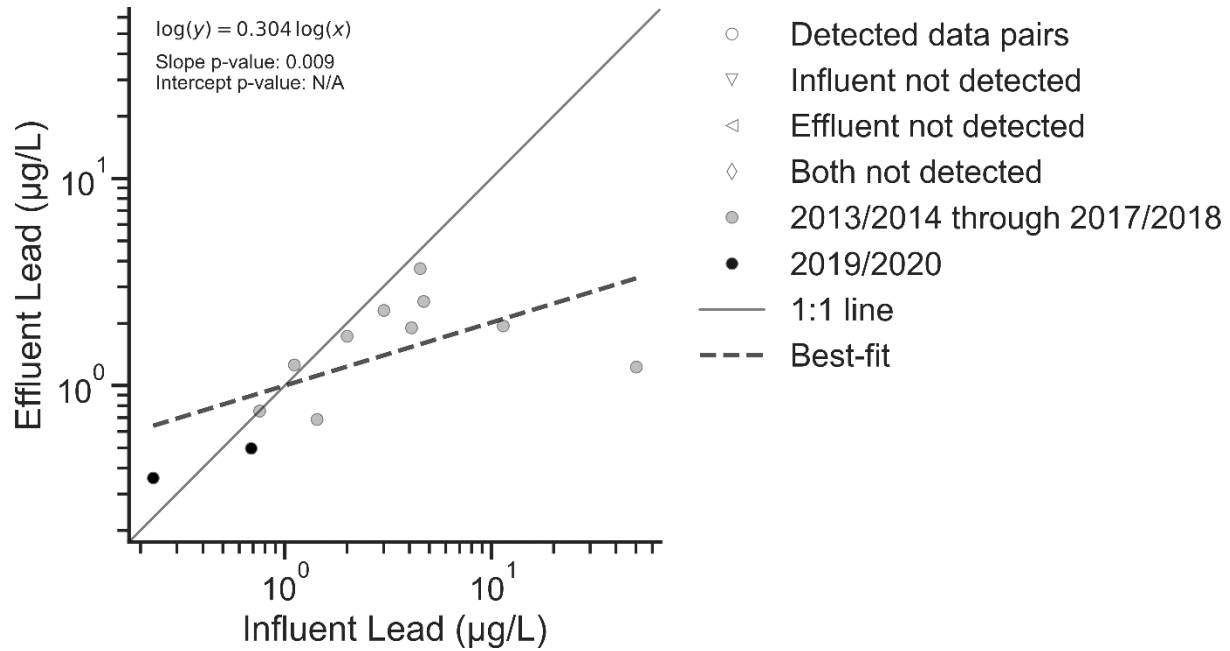


Figure 65. Paired Lead Concentrations at ELV Treatment BMP

5.4 Detention Bioswales Influent v. Effluent Correlation Charts

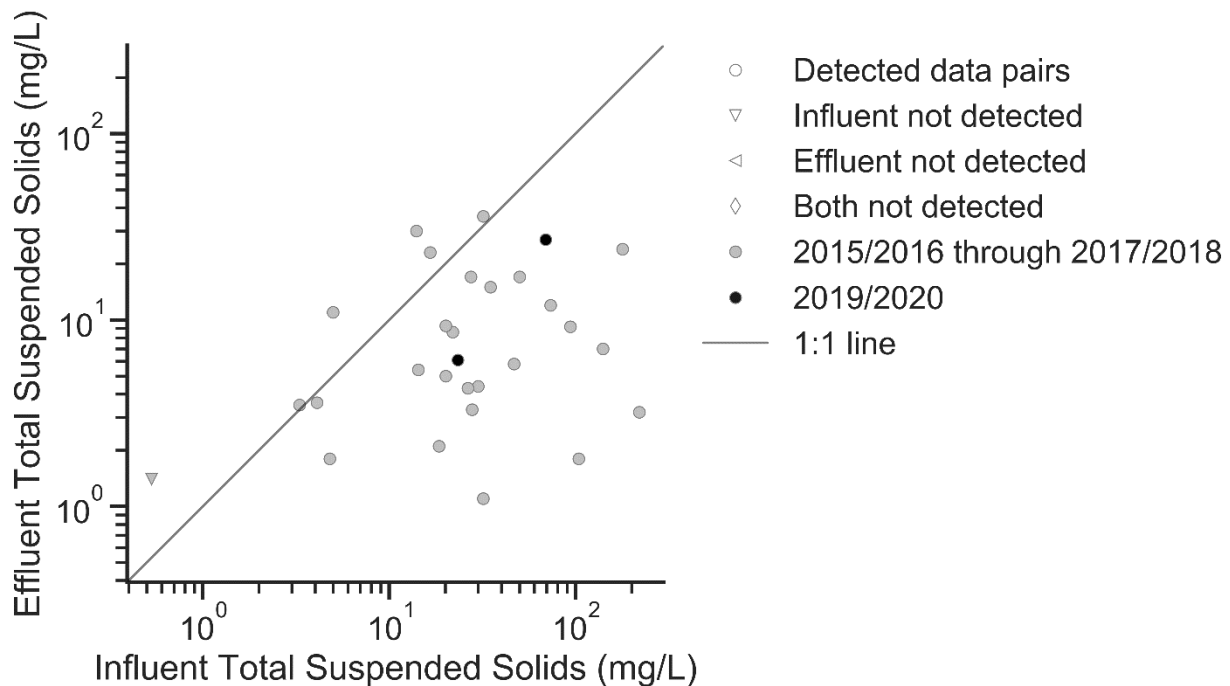


Figure 66. Paired TSS Concentrations at Detention Bioswales

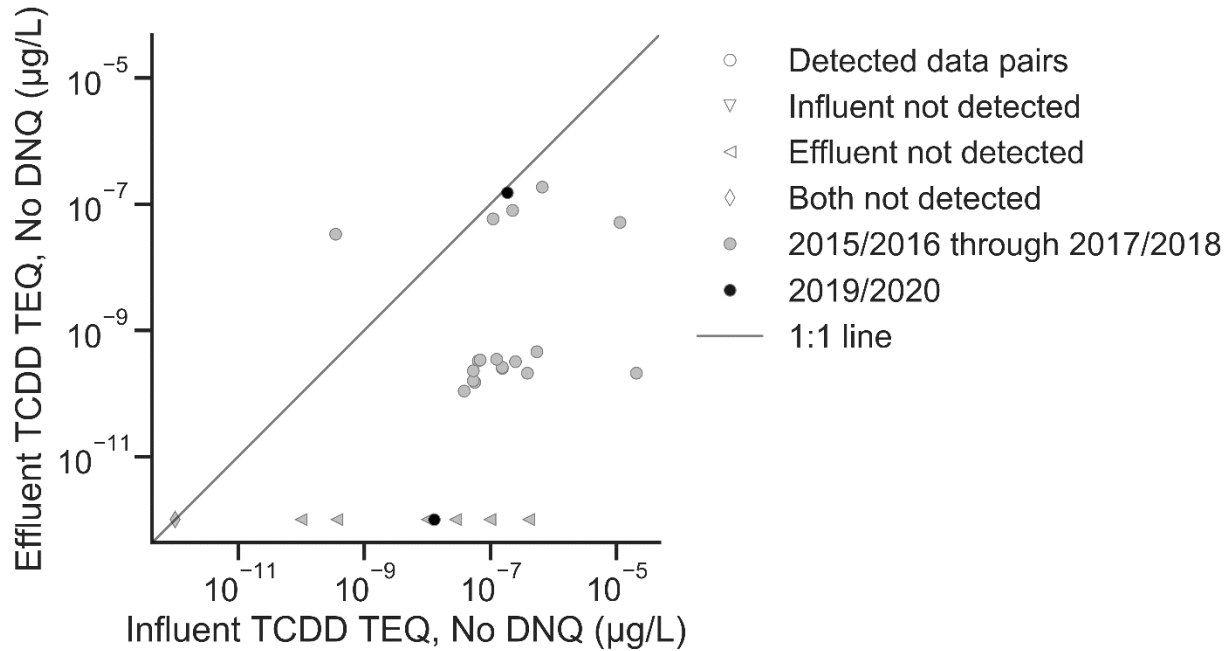


Figure 67. Paired Dioxins Concentrations at Detention Bioswales

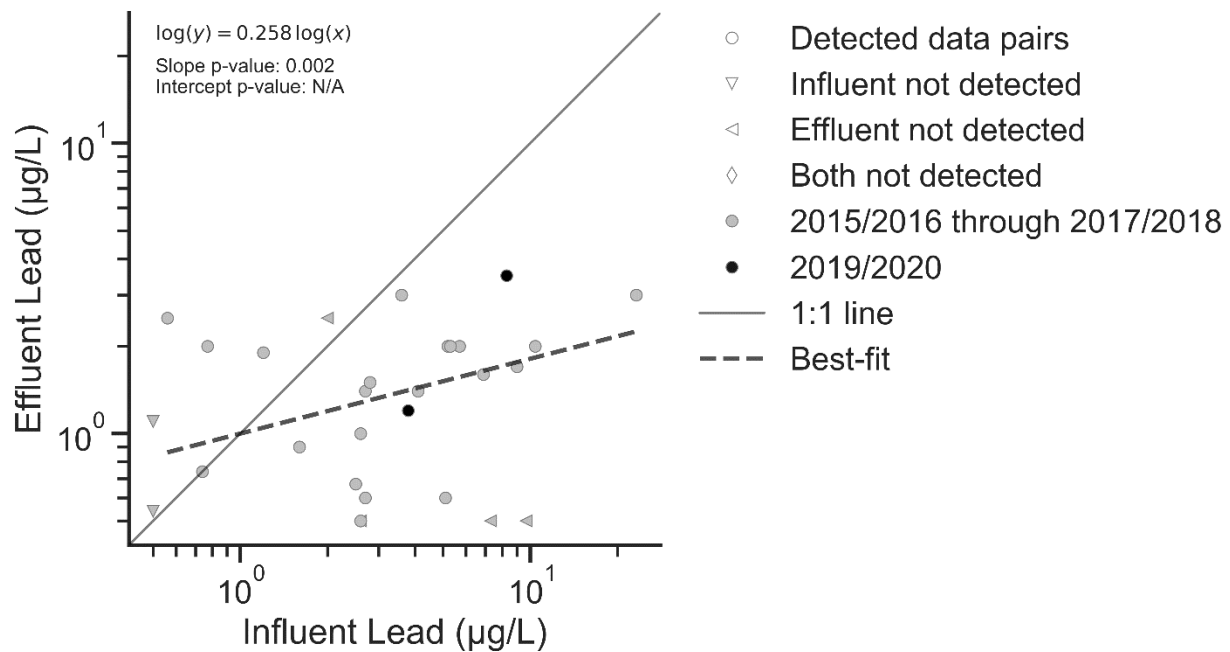


Figure 68. Paired Lead Concentrations at Detention Bioswales

6. Probability Plots

Probability plots for CM/media filter sites (B-1, upper lot media filter, CM-3 [post 2017/2018], CM-9, and CM-1 non-background sites, which excludes CM-1 background areas, CM-3, CM-8, and CM-11 (due to the substantial flows that they receive from background areas) are shown in Figure 69 through Figure 71. Probability plots for the lower lot biofilter are shown in Figure 72 through Figure 74, and plots for the ELV treatment BMP are displayed in Figure 75 through Figure 77. Probability plots for the detention bioswales are displayed in Figure 78 through Figure 80. These log-normal probability plots are prepared by ranking the available log-transformed data and calculating their probability of occurrence. These probability values (shown on the vertical axis) are plotted against their concurrent concentrations. While determining the plotting positions, non-detect (ND) data were assigned to the lowest positions, effectively truncating the probability plots at the fraction of non-detected samples. Therefore, only detected result positions are plotted, which leads to the correct probability of occurrence for the observed data, while values less than the detection limit show their unknown specific occurrences. These figures illustrate trends for influent concentrations as compared to effluent concentrations and vice versa and serve as a useful tool for predicting effluent concentrations at a given percentile.

These figures also contain some basic statistics describing the data shown on the graphs. For each influent and effluent dataset, the number of ND results is shown. The p-value resulting from an Anderson-Darling test for lognormal distributions is also shown. The Anderson-Darling test assesses if the data follows an examined distribution (p-values <0.05 indicate that the actual distribution is significantly different from log-normal distributions for these plots). The null hypothesis here is that the data comes from a lognormal distribution. If the p-value is less than 0.05, the null hypothesis is rejected, and it is concluded that the data are not lognormal distributed. The 95th percentile confidence intervals are also shown on the plots for both influent and effluent sample results. If all of the influent or effluent data points are located within the confidence interval and the p-value is greater than 0.05, one can be 95% confident that the lognormal distribution appears to fit the data fairly well, and the fitted line may be used to estimate concentrations at various percentiles.

Where influent data (blue circles) consistently fall above the effluent points (green squares), consistent water quality improvement is occurring at these areas. The vertical distance between the datasets (noting it is a log scale) also indicates the magnitude of the concentration change at these BMP types. Similar to previous plots, points are shaded based on the sampling year during which they were collected. Points that are shaded with blue or green represent data from the most recent 2019/2020 reporting year, while data from all previous reporting years are shown with blue or green outlined shapes but no fill.

The relative difference in the amount of scatter observed in these plots indicates that BMP effectiveness may vary depending on the location and constituent. These plots indicate the influent concentrations above which the BMPs are most effective (low concentrations are expected to represent concentrations unlikely to be significantly reduced by the BMP). The slope of the probability distribution also indicates the variability of the data. As an example, if the effluent slope is flatter than the influent slope, the control is reducing the variability of the effluent concentrations.

6.1 CM/Media Filter Probability Plots

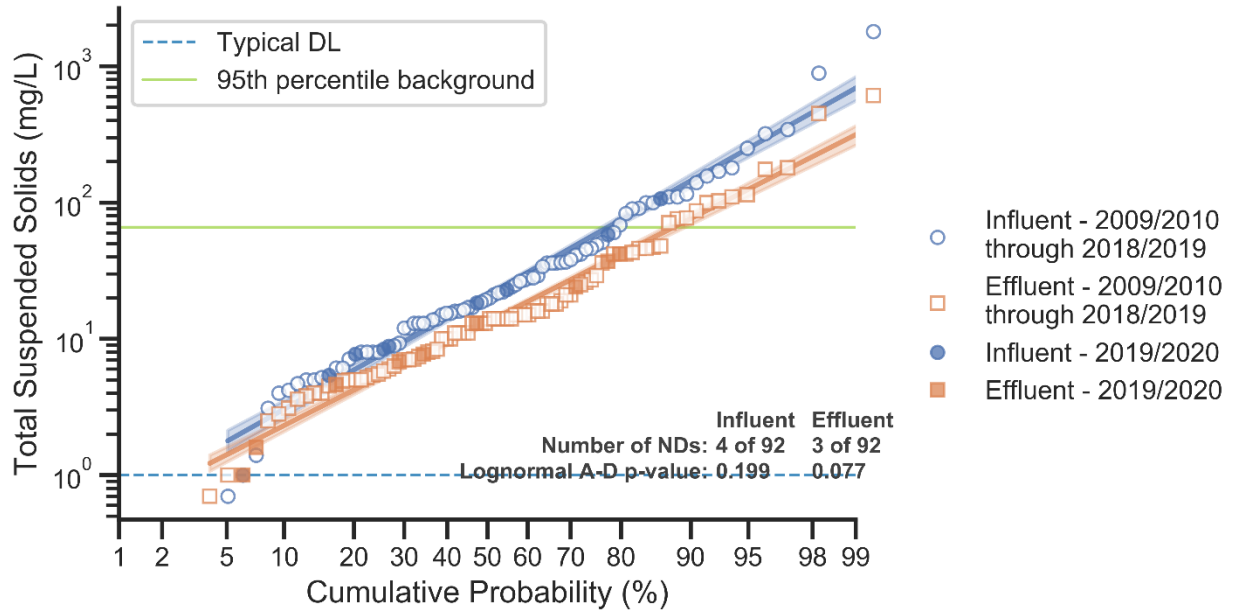


Figure 69. Log-normal Probability Plot of TSS at CM/Media Filter Locations

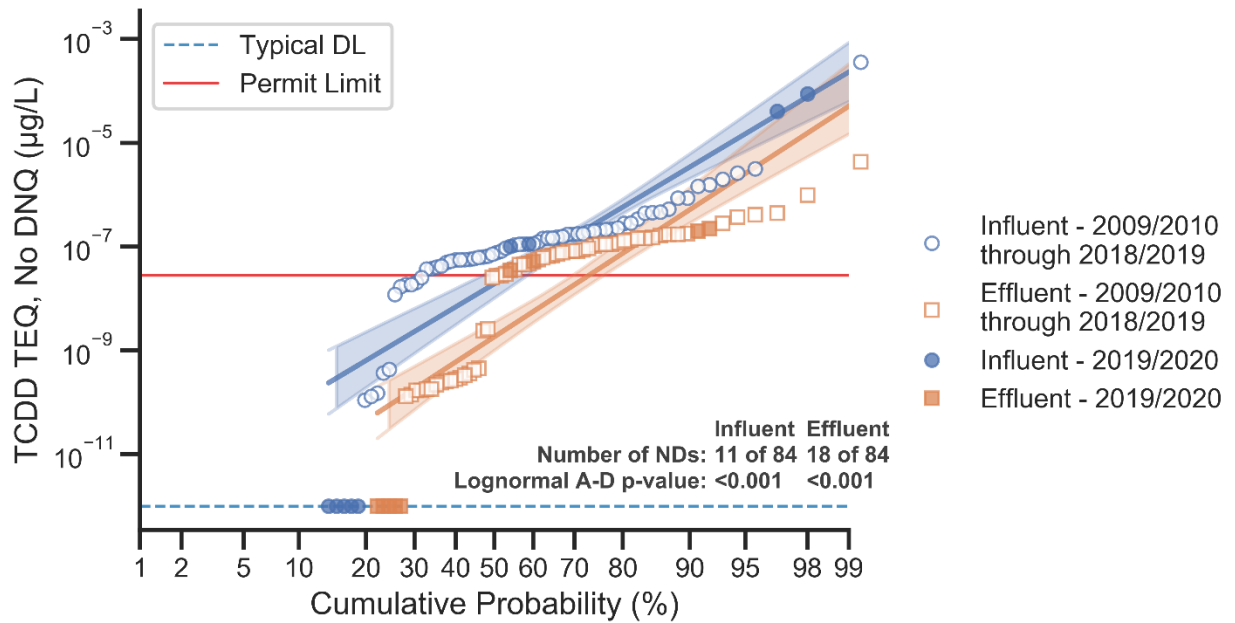


Figure 70. Log-normal Probability Plot of Dioxins at CM/Media Filter Locations

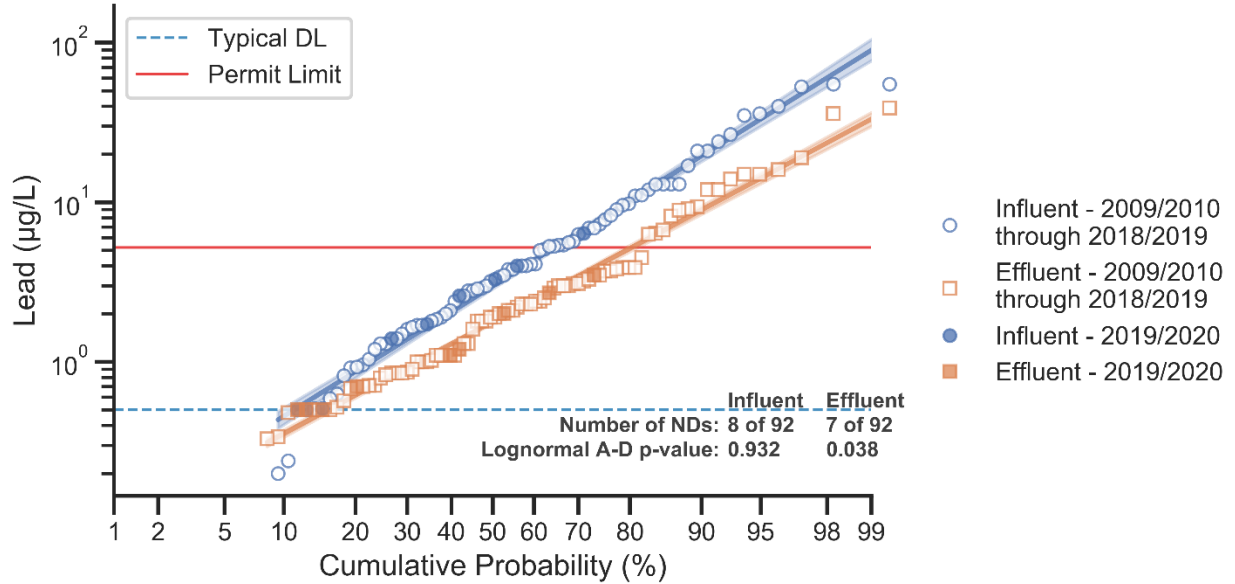


Figure 71. Log-normal Probability Plot of Lead at CM/Media Filter Locations

6.2 Lower Lot Biofilter Probability Plots

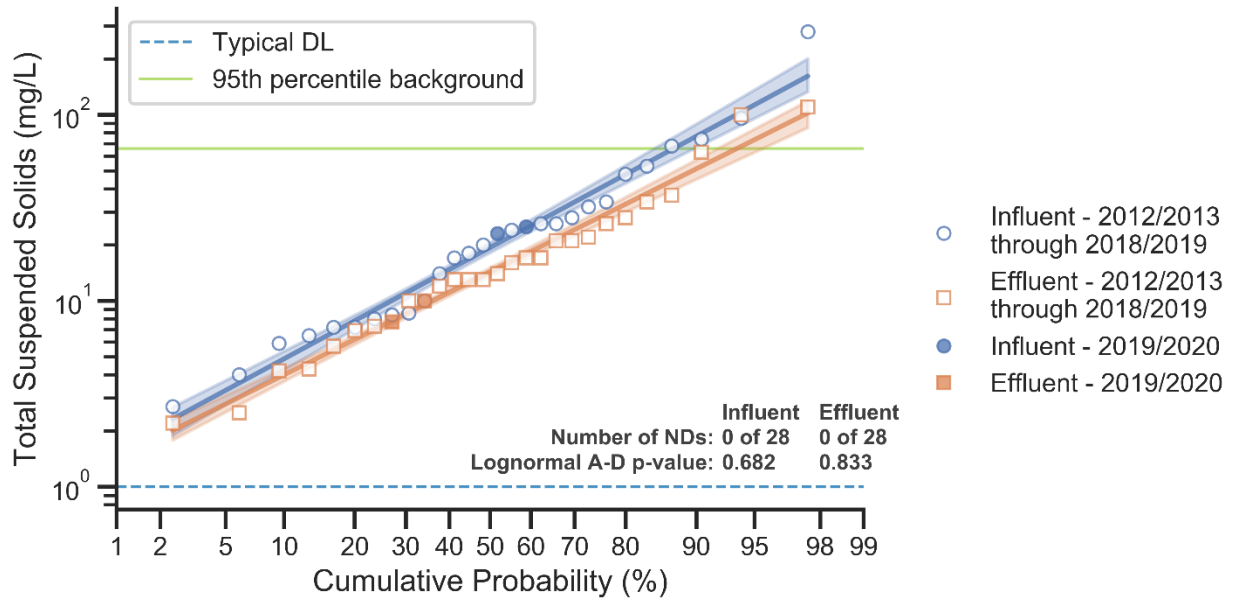


Figure 72. Log-normal Probability Plot of TSS at Lower Lot Biofilter

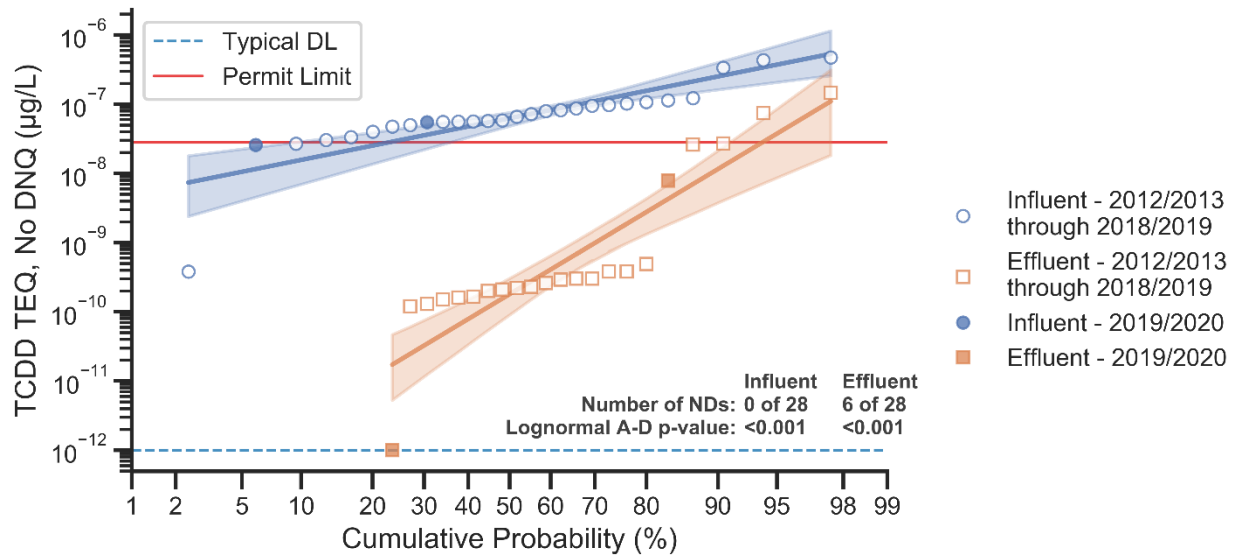


Figure 73. Log-normal Probability Plot of Dioxins at Lower Lot Biofilter

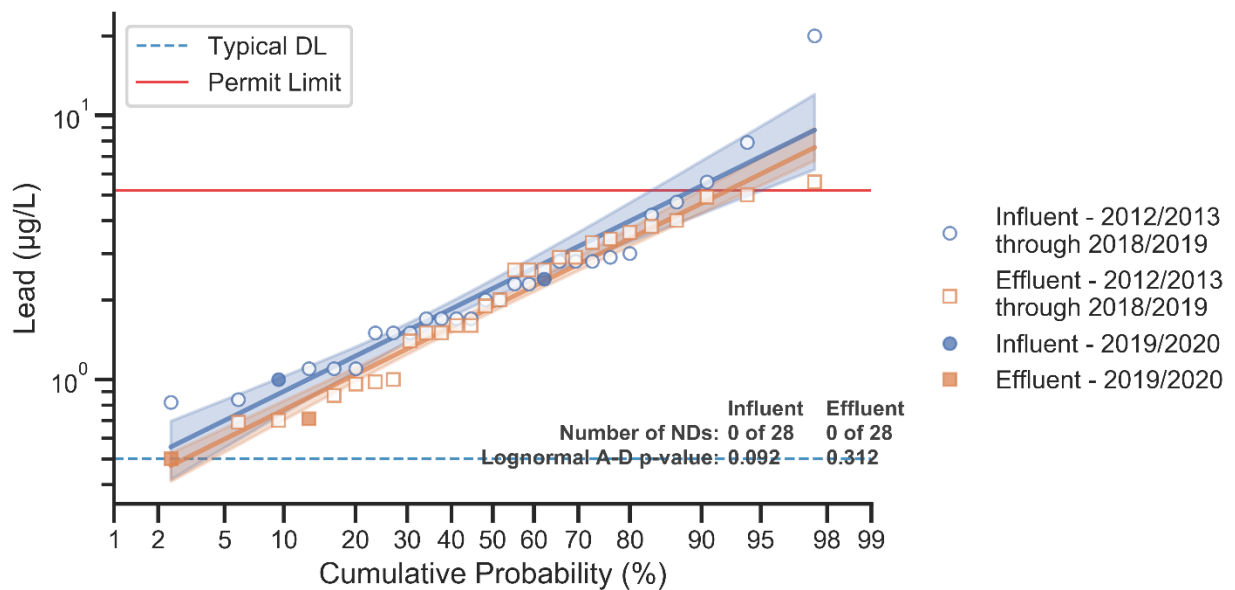


Figure 74. Log-normal Probability Plot of Lead at Lower Lot Biofilter

6.3 ELV Treatment BMP Probability Plots

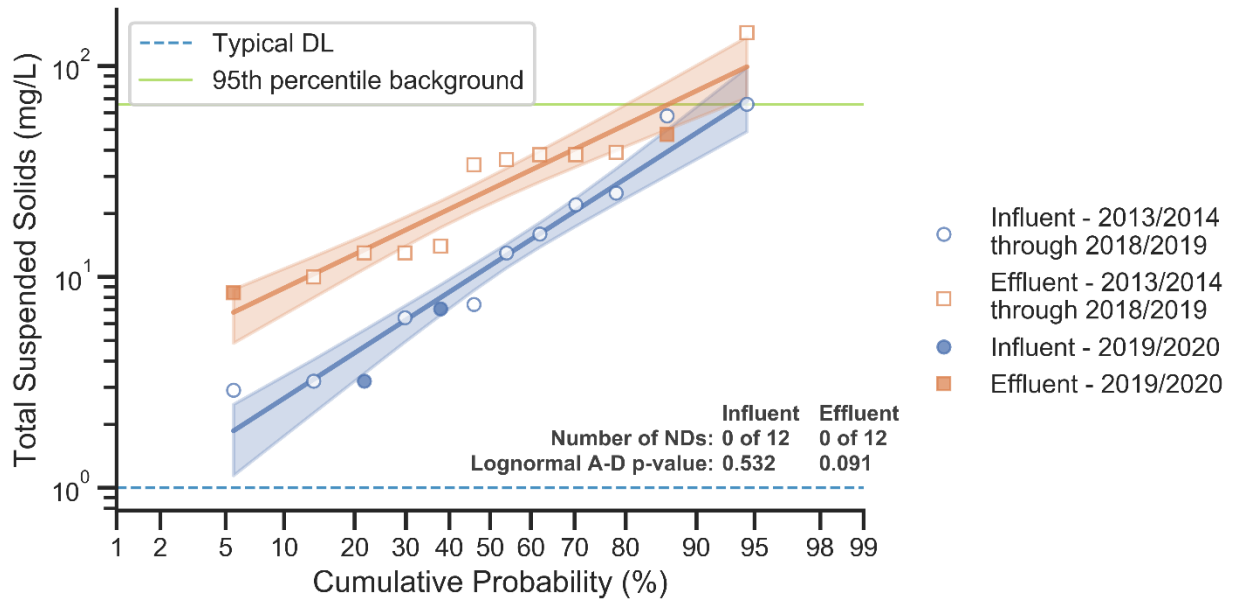


Figure 75. Log-normal Probability Plot of TSS at ELV Treatment BMP

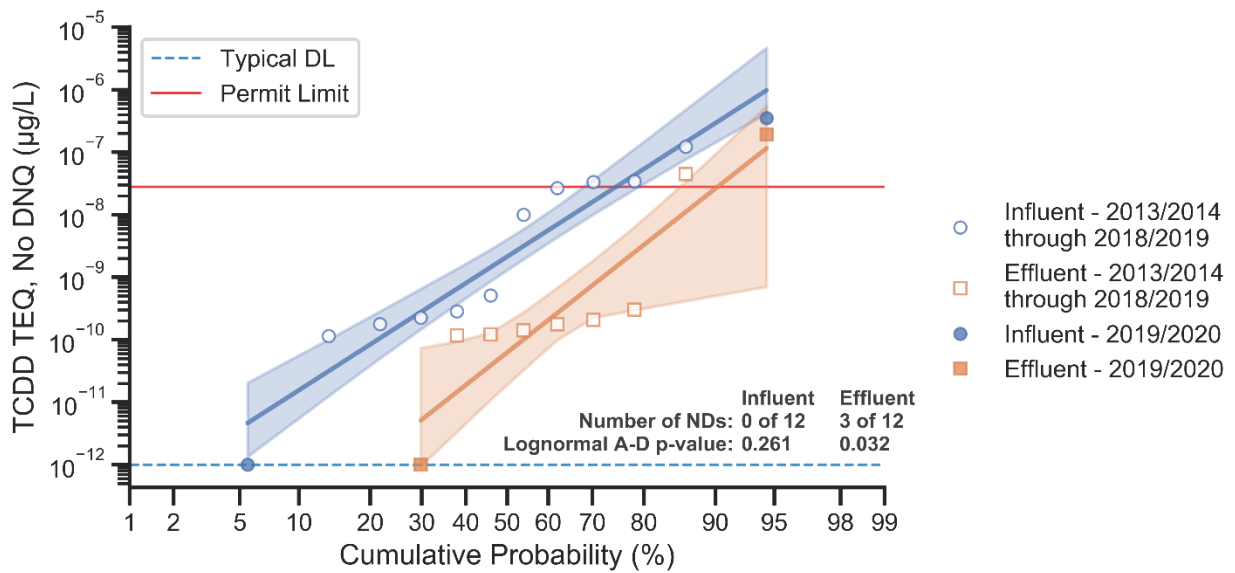


Figure 76. Log-normal Probability Plot of Dioxins at ELV Treatment BMP

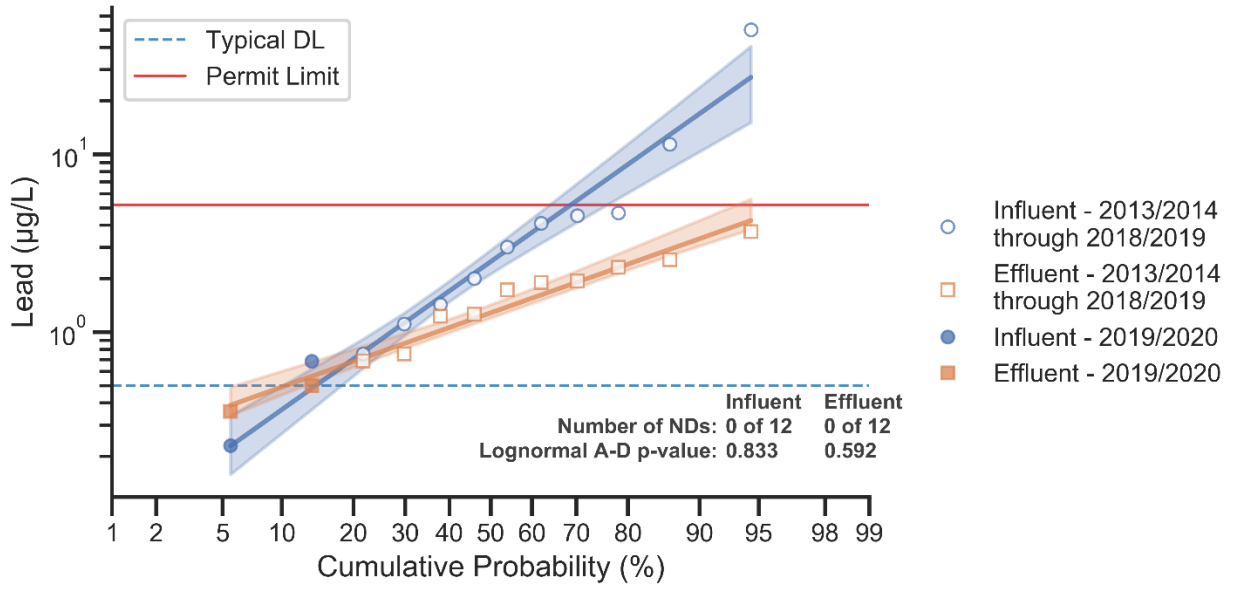


Figure 77. Log-normal Probability Plot of Lead at ELV Treatment BMP

6.4 Detention Bioswales Probability Plots

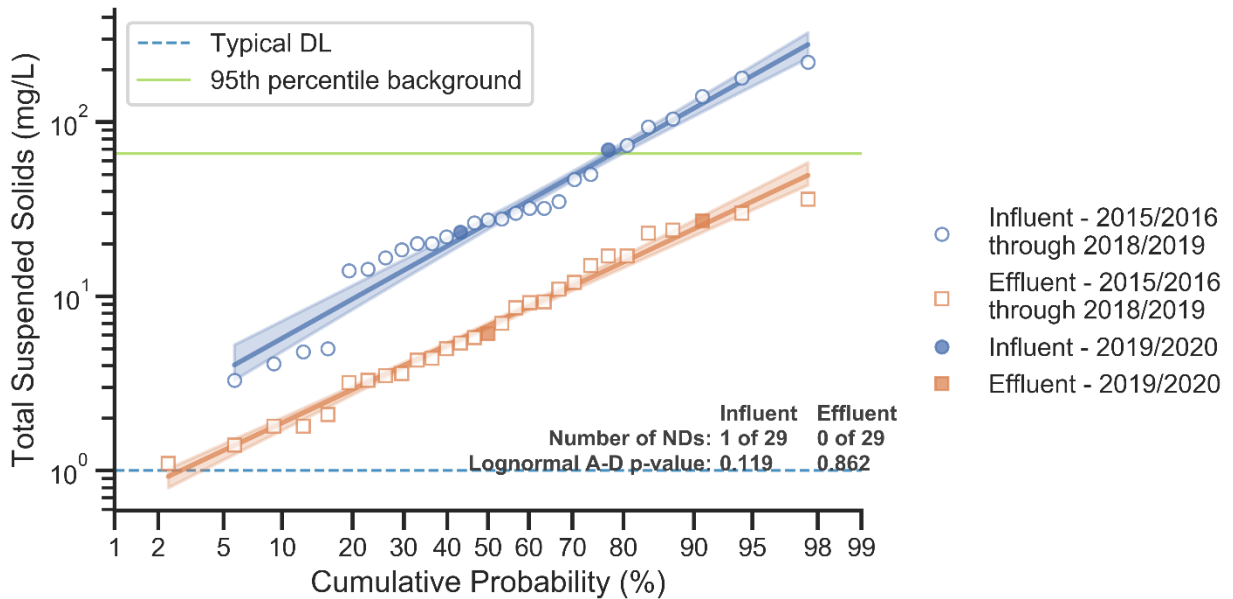


Figure 78. Log-normal Probability Plot of TSS at Detention Bioswales

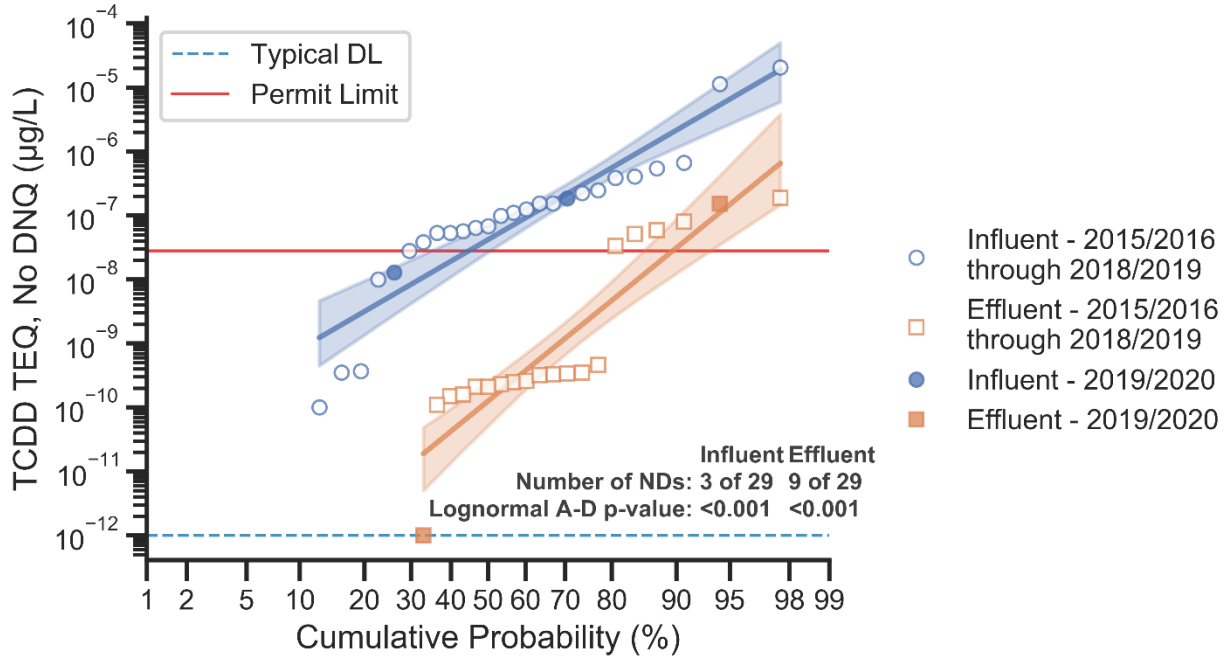


Figure 79. Log-normal Probability Plot of Dioxins at Detention Bioswales

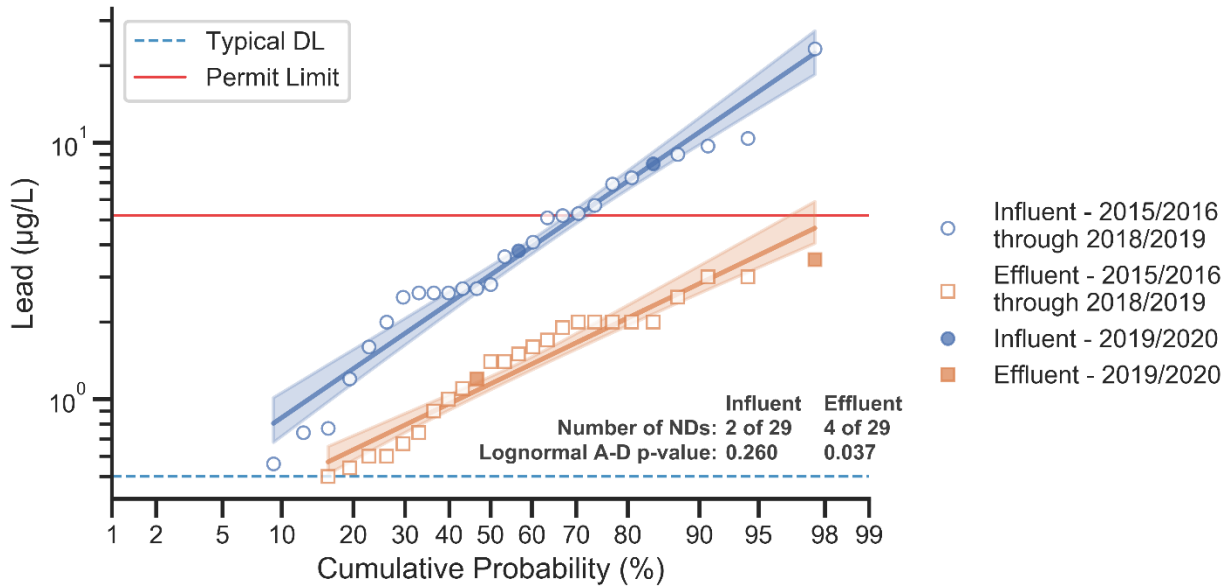


Figure 80. Log-normal Probability Plot of Lead at Detention Bioswales

7. Multiple BMP Box Plots

Multiple BMP box plots for TSS, dioxins, and lead for all BMPs presented herein are shown in Figure 82, Figure 83, and Figure 84, respectively. These plots illustrate basic statistics of influent and effluent performance data, relative to each of the CM/media filter sites (B-1, upper lot media filter, CM-3 [post 2017/2018], CM-9, and CM-1 non-background sites), the lower lot biofilter, ELV treatment BMP, and the detention bioswales. As shown in Figure 81, the box plots reflect the median, 25th percentile, 75th percentile, 1.5 quartile values, in addition to less common values outside of the 1.5 quartiles, if applicable (shown as diamonds). These plots reflect paired data results only (the same data used in the statistical analyses, influent vs. effluent correlation charts, and probability plots). These plots are intended to illustrate the range of influent and effluent concentrations at each BMP and also show how influent and effluent concentrations compare (i.e., overall lower, higher, or equal effluent concentrations compared to the influent concentrations). If very unequal sample numbers were included in these plots, the comparison between influent and effluent concentrations would be misleading, such as if there were a much larger number of influent or effluent sample results compared to the other.

The amount of overlap of the boxes indicate visual differences in the influent and effluent concentrations. Influent and effluent datasets that are widely separated (such as dioxins at the lower lot biofilter) indicate more robust controls. Influent and effluent datasets that have substantial overlaps³¹ (such as TSS also at the lower lot biofilter) indicate similar influent and effluent concentrations. The Admin area inlet filter only has three data pairs available. Although available data are shown in the box plot for this filter, it is not possible to make conclusions on their performance until additional data become available.

For TSS, the detention bioswales was the only BMP to show no overlap between the interquartile ranges (IQR) of the influent and effluent concentrations. Although an overall decrease was noted for the CM/media filter sites and the lower lot biofilter, the differences in the box plots are still significant due to the large number of observations available. The ELV treatment BMP also shows large overlaps between the influent and effluent boxes, with an overall significant increase in TSS concentration observed.

For dioxins, the lower lot biofilter and detention bioswales did not show any overlap in the IQR of the influent and effluent boxes, with a decrease in concentrations from the influent to effluent. The CM/media filter sites and ELV treatment BMP both show an overall decrease in concentrations from the influent to effluent locations, but with more overlap in the influent and effluent boxes.

For lead, the CM/media filter sites, ELV treatment BMP, and the detention bioswales all show an overall decrease in concentration from the influent to effluent, but with overlap in the boxes for the CM/media filter sites and ELV treatment BMP, and no overlap in the IQRs for the detention bioswales. The lower lot

³¹ For small to intermediate data sets, if the median value of one set was larger than the 75th percentile value of the other set, or smaller than the 25th percentile value of the other set, it is expected that the sets are statistically different. For large datasets, less overlap between the two datasets may be present and they may still be statistically different. However, wider separation generally results in more robust performance.

biofilter showed similar concentrations of lead in the influent and effluent, as also indicated by the large overlap in the boxes.

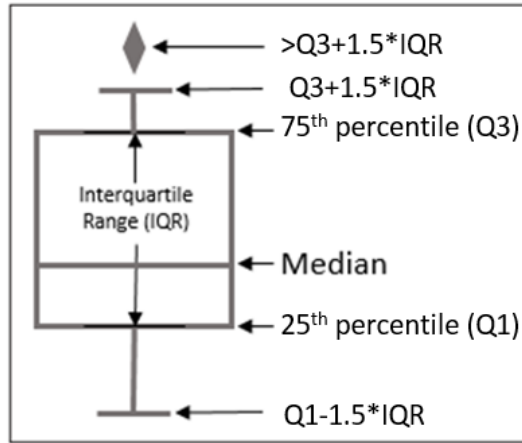


Figure 81. Box Plot Legend (example, not to scale)

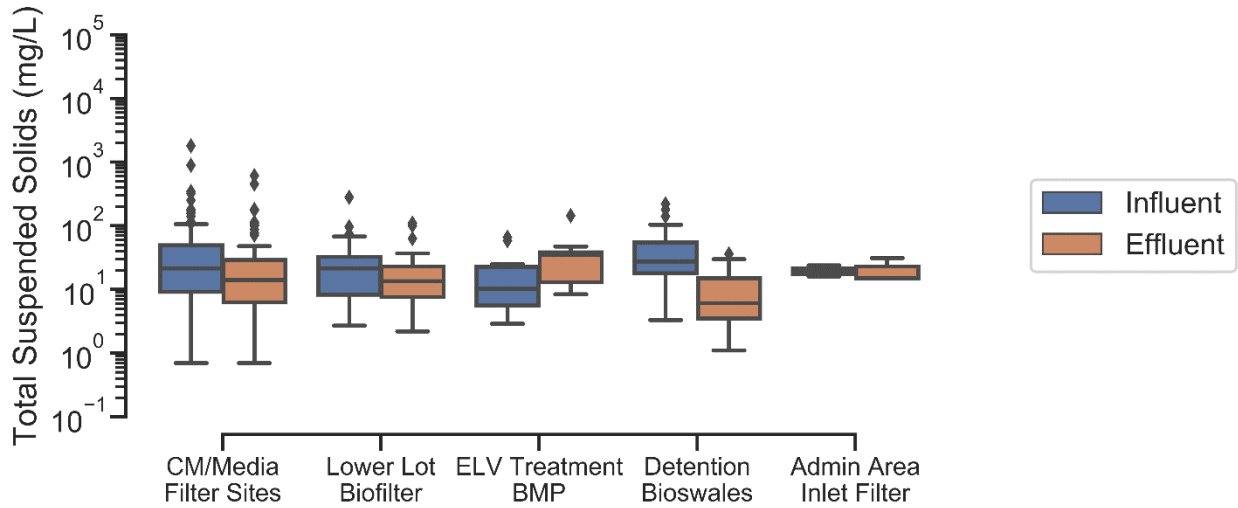


Figure 82. Multiple BMP Box Plot for TSS

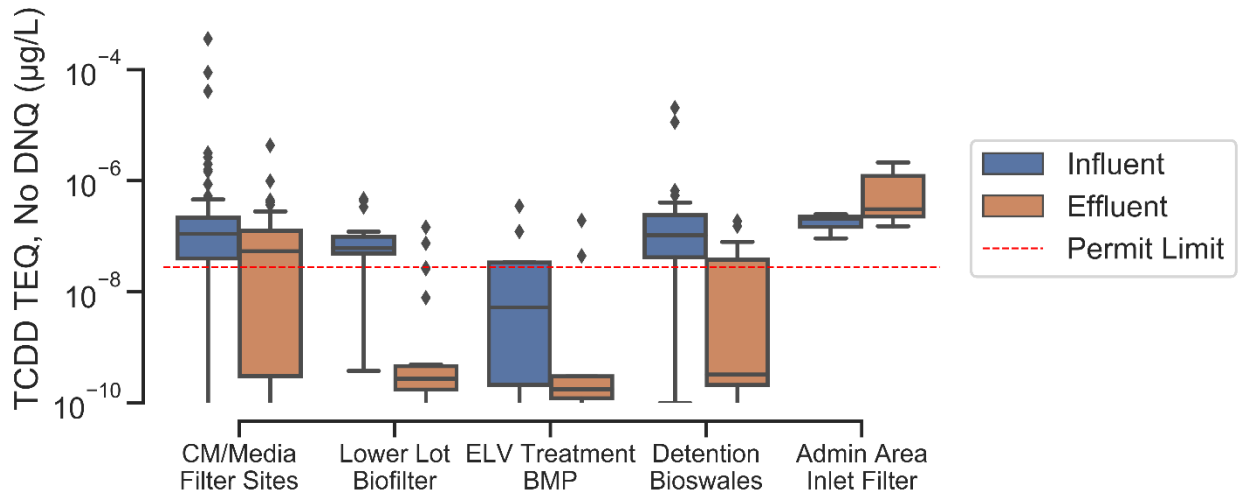


Figure 83. Multiple BMP Box Plot for Dioxins

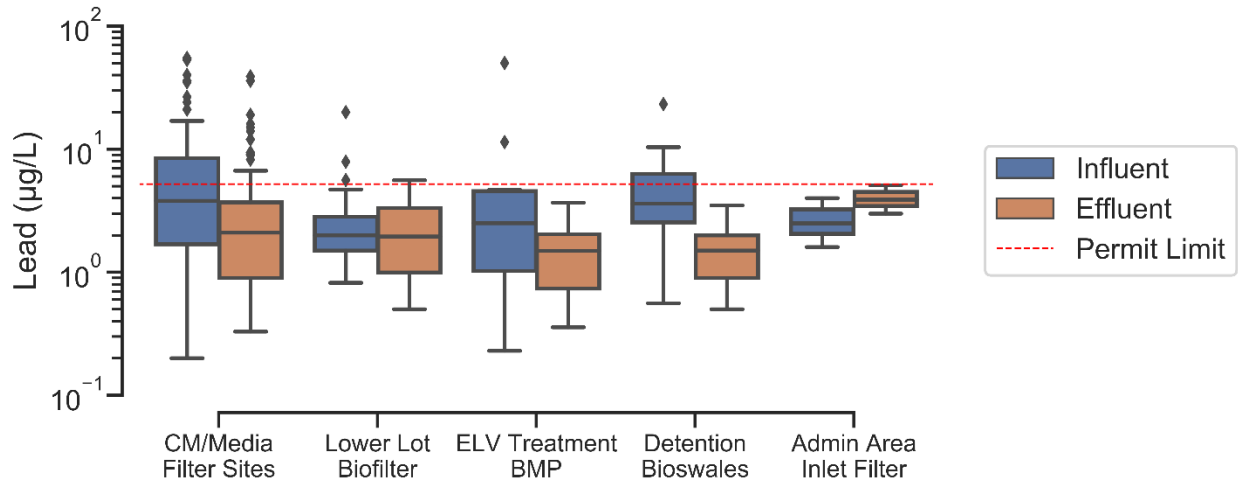


Figure 84. Multiple BMP Box Plot for Lead

8. Comparison to Permit Limits

The BMPs were constructed with the SSFL to reduce COCs prior to stormwater reaching Outfall 009, which is the compliance point for the NPDES permit. Permit limits do not apply to the effluent from these BMPs and they were not designed to serve that purpose. However, in this section, as a basis for evaluating effectiveness of the BMPs, we do compare the number of results greater than the Outfall 009 Permit limits for each of the influent and effluent samples at the CMs/media filters (B-1, CM-1, CM-9, upper lot media filter, and CM-3, excluding the background CMs), the lower lot biofilter, the ELV Treatment BMP, the detention bioswales, and the Boeing admin area inlet filters is shown in Table 15, Table 16, Table 17, Table 18, and Table 19, respectively. The analyses included in Table 15 through Table 19 include all data samples analyzed, not just paired samples. Because this analysis includes samples that do not have associated paired data, the number of influent sample results compared to Permit limits may be different than the number of effluent samples compared to limits. Only influent and effluent locations for the BMPs are included in this analysis; intermediate locations are not included (e.g., sedimentation basin effluent at the ELV Treatment BMP).

It should be noted that there is no limit for TSS; it is used to evaluate particulate strength or as a proxy for other constituents.

For all of the non-background CM/media filter sites analyzed, influent concentrations were more often higher than the Outfall 009 Permit limits as compared to effluent concentrations for both lead and dioxins, as shown in Table 15. The maximum and average ratios of observed concentrations to Permit limit, for results exceeding Permit limits, generally show a higher ratio for influent than effluent, for both lead and dioxins, with the exception of lead at B-1 (for the average exceedance ratio). This trend of effluent ratios lower than the influent ratios suggests lead and dioxins reductions through the CMs/media filters. These results enhance the weight of evidence that the BMPs are performing effectively and reducing concentrations, especially when not enough samples are available for all of the statistical tests.

It should be noted that dioxin results for B-1 are skewed by one exceptionally high influent result of 3.6×10^{-4} $\mu\text{g/L}$ on 12/2/2014. If that result is removed, then the maximum influent ratio drops to 94 and the average becomes 17. CM-1 is skewed by one dioxin effluent result of 4.3×10^{-6} $\mu\text{g/L}$ on 3/17/2012, where the maximum effluent ratio decreases to 35 and the average drops to 7.5 if that result is removed.

Table 15. Influent and Effluent Summary as compared to the Outfall 009 Permit Limits (B-1, CM-1, CM-9, Upper Lot Media Filter, CM-3 [post 2017/2018]), 2009-2020

BMP	Parameter	% of Samples Greater than Permit Limits		Maximum Exceedance Ratio (Exceeding Result : Permit Limit)		Average Exceedance Ratio (Exceeding Result : Permit Limit)	
		Influent	Effluent	Influent	Effluent	Influent	Effluent
B-1	Lead	35%	8.7%	1.8	1.7	1.3	1.5
	TCDD TEQ no DNQ	85%	68%	12,868	10	773	3.9
CM-1	Lead	37%	18%	11	7.5	3.9	3.1
	TCDD TEQ no DNQ	76%	58%	3,149	155	159	15
CM-9	Lead	41%	24%	11	6.9	4.2	2.9
	TCDD TEQ no DNQ	49%	22%	56	5.2	8.5	3.2
Upper Lot Media Filter	Lead	13%	0%	1.2	N/A ¹	1.1	N/A ¹
	TCDD TEQ no DNQ	75%	44%	11	2.7	4.8	1.7
CM-3	Lead	40%	0%	1.7	N/A ¹	1.5	N/A ¹
	TCDD TEQ no DNQ	0%	0%	N/A ¹	N/A ¹	N/A ¹	N/A ¹

¹Not calculated because there were no exceedances of Permit limits

The number of results exceeding the Permit limits for the influent and effluent samples at the lower lot biofilter are summarized in Table 16. Influent concentrations were more often higher than the Outfall 009 Permit limits as compared to effluent concentrations for lead (three influent vs. one effluent, out of 28 and 30 samples, respectively) and dioxins (25 influent vs. three effluent, out of 28 and 30 samples, respectively). Observation of the maximum and average ratios of observed concentrations to the Permit limit show that a higher ratio is calculated for influent than effluent samples for lead and dioxins, suggesting reduction in both pollutants through the lower lot biofilter. One exceedance may have been due to a power outage resulting in manual pumping from the cistern to the sediment basin, which could have overloaded the biofilter. A portable generator is now on hand for the biofilter cistern pump as a backup power supply.

Table 16. Influent and Effluent Summary as Compared to the Outfall 009 Permit Limits (Lower Lot Biofilter), 2013-2020

Parameter	% of Samples Greater than Permit Limits		Maximum Exceedance Ratio (Exceeding Result : Permit Limit)		Average Exceedance Ratio (Exceeding Result : Permit Limit)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Lead	11%	3.3%	3.8	1.1	2.1	1.1
TCDD TEQ no DNQ	89%	10%	17	5.2	4.0	3.3

Similar trends are observed for the ELV treatment BMP, as shown in Table 17. There were a greater number of influent sample concentrations exceeding the Outfall 009 Permit limits compared to effluent concentrations for lead and dioxins. Only two influent concentrations (out of 12 samples) of lead exceeded the Permit limit (no effluent samples exceeded), while there were four influent concentrations (out of 12 samples) of dioxins that exceeded the Permit limit and only two effluent concentrations (out of 15 samples) that exceeded the permit limit for dioxins. As observed with the CM sites and lower lot

biofilter, higher maximum and average ratios of observed concentrations to Permit limits were calculated for influent samples compared to effluent samples. This trend also suggests reduction in lead and dioxins through the ELV treatment BMP.

Table 17. Influent and Effluent Summary as compared to the Outfall 009 Permit Limits (ELV Treatment BMP), 2013-2020

Parameter	% of Samples Greater than Permit Limits		Maximum Exceedance Ratio (Exceeding Result : Permit Limit)		Average Exceedance Ratio (Exceeding Result : Permit Limit)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Lead	17%	0%	9.7	N/A ¹	5.9	N/A ¹
TCDD TEQ no DNQ	33%	13%	13	6.9	4.8	4.2

¹Not calculated because there were no exceedances of Permit limits

The number of results exceeding the Permit limits for the influent and effluent samples at the detention bioswales are shown in Table 18. Influent concentrations were more often higher than the Outfall 009 Permit limits as compared to effluent concentrations for both lead and dioxins. 11 influent concentrations (out of 31 samples) of lead exceeded the Permit limit, while no effluent concentrations (out of 41 samples) exceeded the Permit limit for lead. 23 influent concentrations (out of 31 samples) of dioxins exceeded the Permit limit, and six effluent concentrations (out of 41 samples) exceeded the Permit limit for dioxins. The maximum and average influent exceedance ratios for dioxins are greater than the effluent ratios, suggesting that dioxins are generally reduced through the detention bioswales.

Table 18. Influent and Effluent Summary as compared to the Outfall 009 Permit Limits (Detention Bioswales), 2015-2020

Parameter	% of Samples Greater than Permit Limits		Maximum Exceedance Ratio (Exceeding Result : Permit Limit)		Average Exceedance Ratio (Exceeding Result : Permit Limit)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Lead	35%	0%	4.5	N/A ¹	1.8	N/A ¹
TCDD TEQ no DNQ	74%	15%	737	6.7	56	3.4

¹Not calculated because there were no exceedances of Permit limits

The number of results exceeding the Permit limits for the influent and effluent samples at the Boeing admin area inlet filters are summarized in Table 19. Only three data pairs (influent and effluent samples) are available. For lead, all of the influent and effluent sample results were below the Outfall 009 Permit limits. For dioxins, all of the influent and effluent sample were above the Permit limit. The maximum and average ratio of observed concentrations to the Permit limit for dioxins show a higher ratio for effluent than influent samples, suggesting an increase in concentration through the inlet filter for the one data pair. Again, the few data available at this location prevents any statistical evaluations.

Table 19. Influent and Effluent Summary as compared to the Outfall 009 Permit Limits (Boeing Admin Area Inlet Filters) 2018-2020

Parameter	% of Samples Greater than Permit Limits		Maximum Exceedance Ratio (Exceeding Result : Permit Limit)		Average Exceedance Ratio (Exceeding Result : Permit Limit)	
	Influent	Effluent	Influent	Effluent	Influent	Effluent
Lead	0%	0%	N/A ¹	N/A ¹	N/A ¹	N/A ¹
TCDD TEQ no DNQ	100%	100%	9.0	76	6.5	31

¹Not calculated because there were no exceedances of Permit limits

9. Runoff Volume Discharge Analysis

In addition to water quality performance, the lower lot biofilter is also designed to reduce the frequency of smaller storms discharging untreated runoff to the Northern Drainage and thereby discharging via Outfall 009 by retaining the storm runoff and allowing evapotranspiration to take place. It was estimated in 2017 that the average volume pumped to the biofilter has increased from 52,000 gallons per inch of rainfall to 82,000 gallons per inch of rainfall since the detention bioswales were constructed. Similarly, the estimated percent of total runoff volume (from both the 24-inch drain and the lower lot drainage areas) increased from 22% to 44% on average since the detention bioswales were constructed.

To evaluate how many storms have been prevented from discharging to the Northern Drainage this year, a binned presence/absence of discharge plot was developed as shown in Figure 85. All storms sampled since the lower lot biofilter was constructed are included (3/8/2013 to present). The storm events with discharge to the Northern Drainage (i.e., bypass of the low flow diversion weir or treated effluent from the biofilter) were identified and counted. The total number of storm events compared to the number of events where discharge occurred were then binned based on storm depth in one-inch increments. Additionally, this plot shows the percent of discharging events (i.e., number of events with discharge divided by the number of total events for that storm depth bin). As is shown in Figure 85, **the lower lot biofilter successfully prevented just over half of all storms less than or equal to one inch from discharging to the Northern Drainage**, but had decreasing effects for larger rains, with no expected benefits for storms greater than 2 inches.

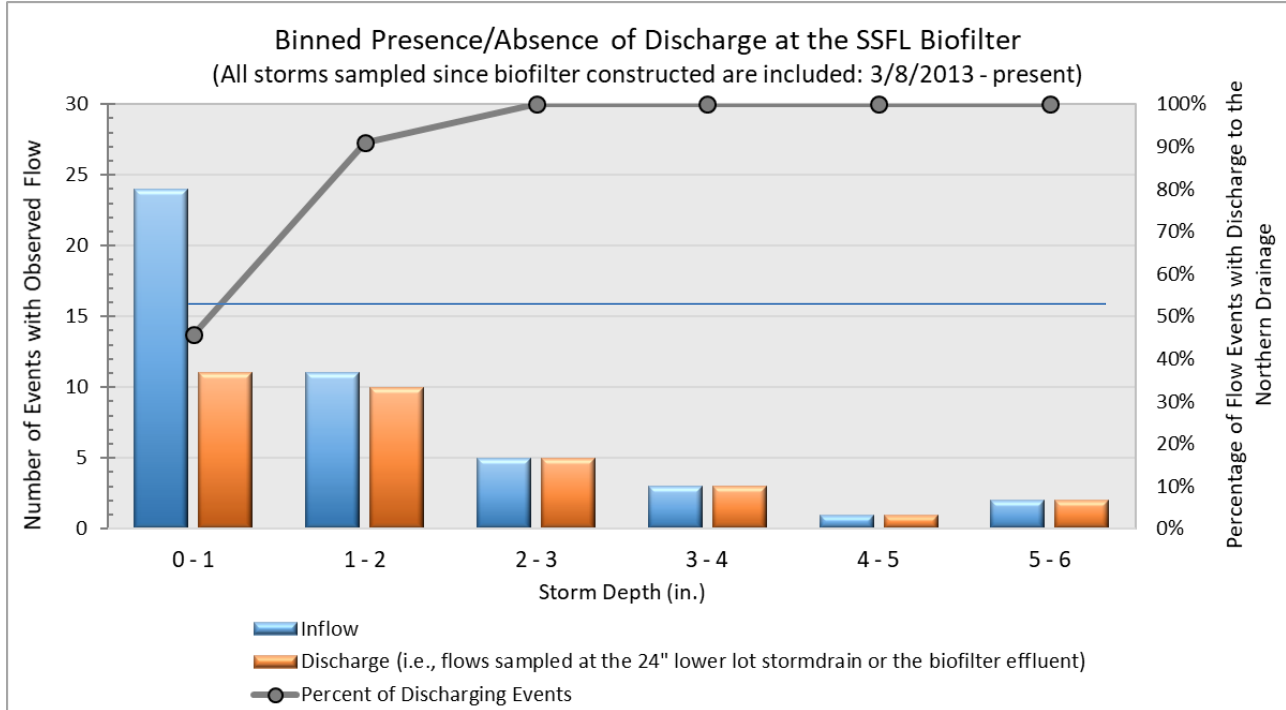


Figure 85. Binned Presence/Absence of Discharge at the SSFL Lower Lot Biofilter

10. Sampling Event Analysis

The Expert Panel evaluated the need for additional sampling at the BMPs in the context of the recent slow-down in site activities particularly in the Outfall 009 watershed. Following the 2016/2017 reporting year, it was decided that until site activities increase, samples would only be collected twice per year at the following BMPs: upper lot media filter, southern detention bioswale, lower lot biofilter, CM-1 (influent-west and effluent), Boeing admin area inlet filters, and the ELV Treatment BMP. The CM-1 influent-east (background) location will continue to be sampled during every storm, in order to collect more background data and because it was recently reconstructed with new media and the upstream ponding volume was increased. No further changes are proposed at this time.

11. Cumulative TSS Loading Analysis

An analysis was performed to calculate the cumulative TSS loading to each BMP thus far, based on historical storm event depths and the measured influent concentrations of TSS. These values were compared to the estimated sediment load that would result in highly reduced flows through the media which would cause larger volumes of bypassed flows, based on the lab column media performance study by Pitt and Clark (2010).

The estimated TSS loading to each BMP containing media and with sufficient data (ELV Treatment BMP, lower lot biofilter, B-1 media filter, CM-1, CM-9, and the upper lot media filter) was estimated for each storm event where a sample was collected (at either the influent or effluent location³²). Sampling was reduced at the lower lot biofilter, the ELV Treatment BMP, upper lot media filter, and CM-9 following the 2017/2018 reporting year. Therefore, TSS concentrations were estimated at these BMPs³³. The same methodology was followed for the B-1 media filter, where sample ceased following the 2015/2016 reporting year. The estimated cumulative TSS loading was determined using the following steps:

- The average annual percent capture and treatment (i.e., the percentage of incoming runoff that does not bypass the BMP) was determined using USEPA's Storm Water Management Model (SWMM) for each BMP.
- The runoff coefficient for each BMP's drainage area was determined using SWMM, simulated over the average annual year scenario.
- The total area of each BMP's drainage area was determined using available Geographic Information System (GIS) shapefiles.
- The runoff volume treated by each BMP during each individual storm event was calculated as follows:
 - Storm event volume treated = BMP drainage area x Storm event rainfall depth x Runoff coefficient of the BMP drainage area x Average annual percent capture
- The storm event TSS loading contributed to each BMP during each individual storm event was then calculated as follows:

³² In the event that an effluent sample was collected and an influent sample was **not** collected during the same storm event, the TSS influent concentration was estimated (to be discussed) to represent the influent loading of TSS during this specific event.

³³ Characteristics from storm events that previously resulted in discharge at each BMP were used to predict if the BMPs discharged during storm events (where samples were not collected, due to reduced sampling activities). If the storm event total depth, average intensity, or maximum intensity of an unsampled storm event exceeded the 10th percentile total depth, average intensity, or maximum intensity, respectively, of sampled historical storm events, that storm was considered to have resulted in BMP discharge and TSS loading was retroactively estimated. If TSS loadings were estimated for storm events that were not sampled for a given BMP, the average of all TSS influent samples from the three rainy seasons preceding and following at that BMP was used to represent the influent loading of TSS during this specific event.

- Storm event TSS loading = Storm event volume treated x Event-dependent TSS influent sample result (concentration)
- The cumulative TSS loading since implementation of the BMP was calculated by summing the storm event TSS loading results from all storms occurring since the BMP was constructed.
- The media area of each BMP was estimated from plans³⁴, and the cumulative TSS loading per unit area of media was calculated for each BMP.

For BMPs with pretreatment (ELV Treatment BMP and lower lot biofilter), the “influent” sample used was the sample collected at the effluent of the sedimentation basin or the influent to the media. The cumulative TSS loading per media unit area to each BMP was compared to the estimated sediment load to the media until initial maintenance is needed (about 50 kg/m²) (Pitt and Clark, 2010). The percentage of cumulative sediment loading until highly reduced treatment flows for each BMP is shown in Table 20.

The estimated number of years until media replacement is needed was calculated for each BMP, assuming an average rainfall amount during the reporting year for all subsequent years, and is also shown in Table 20. This was estimated using a similar procedure outlined above based on an average rainfall year. The long-term average annual rainfall of 17.0 inches was used as the storm event depth and the average TSS concentration from all sampled events was used as the TSS influent sample result. The estimated TSS loading to each BMP (per media area) during an average rainfall year and the number of average years until media replacement is needed is shown in Table 20. It should be noted that varying annual rainfall, in addition to smaller or larger storm events, will result in varying TSS loading and this serves as a rough estimate of when replacement may be expected.

Additional analyses and standing water depth and flow bypass observations were made during the 2016/2017, 2017/2018, 2018/2019, and 2019/2020 reporting years related to BMP clogging and maintenance.

An analysis of flow monitoring data obtained in 2017 show that CM-9 and CM-1 began with an estimated range of hydraulic conductivities that is close to or exceeds the “average flow rate before initial clogging” of 33 inches per hour from the Media Report (Pitt and Clark, 2010). Over time, these conductivities will be substantially reduced to well below this value suggesting that maintenance may be needed to remove sediment deposited over the rainy season. Since the media mounds of the CMs are covered with backfill and gravel, it is possible that these surface materials are clogged with sediment and the actual media itself may not be the limiting factor. Therefore, the 2017 analysis shows that media may actually be clogged more than results in Table 20 indicate. Conclusions of this analysis resulted in recommendations to either replace the media or design and construct a new engineered treatment system to better handle larger fractions of the annual flows. This was done at CM-1 in 2018. Since CM-1 was reconstructed and the media was replaced in August 2018, the analysis shown in Table 20 starts in 2018/2019 for CM-1.

³⁴ For CM-1 and CM-9, it was assumed that the front half of the media mound received flow, especially during small storm events. However, ponding can occur above the media filter, especially during large storm events, and infiltrate over a larger surface area. Therefore, the media area estimate is conservative for CM-1 and CM-9.

Maintenance observations of the BMPs performed during the 2018/2019 reporting year showed that ponding occurred during several storm events (a few inches deep in front of the weir boards) at CM-9. There were no observations of ponding during this 2019/2020 reporting year. However, due to the observed ponding at CM-9 during the 2018/2019 reporting year and estimated sediment loading until maintenance is needed, **it is recommended to replace the media at CM-9.**

This analysis did not evaluate the other CMs this year. However, based on a comparison of their pervious drainage areas compared to CM-1 and CM-9, it is estimated that **CM-3 may need maintenance soon** (potentially after the next rainy season), but CM-8 and CM-11 will not require maintenance in the near future.

Table 20. Percent of Cumulative Sediment Loading until Clogging

BMP	Wet Seasons in Operation	Cumulative TSS load (kg)	Cumulative TSS load per media area (kg/m ²)	% of "sediment load to the media until maintenance is needed"	TSS load per media area in average rainfall year (kg/m ²)	Number of average years until media replacement is expected
ELV Treatment BMP	7	90	4.5	9.2%	1.5	30
Lower Lot Biofilter	7	925	4.2	8.6%	1.2	36
B-1	9	458	24	49%	4.7	5
Upper Lot Media Filter	4	163	6.4	13%	1.6	27
CM-1 ¹	2	80	13	27%	6.2	6
CM-9	11	240	40	82%	6.4	1

¹Restarted in 2018/2019 after BMP reconstruction and media replacement. Prior to reconstruction (which occurred prior to the 2018/2019 rainy season, in August 2018), CM-1 was estimated to have approximately 400 kg of cumulative TSS loading (which represents approximately 136% of the estimated sediment load until maintenance is needed). CM-1 had been in operation nine rainy seasons before reconstruction occurred. As shown in the table, CM-1 is anticipated to need maintenance again in five years, which would result in a lifespan of seven years.

12. Discussion and Observations

The following general observations were made based on an evaluation of the aforementioned data summary charts and tables.

1. Are the CMs/media filters reducing the concentrations of lead, dioxin, and TSS between the untreated influent and the treated effluent?

Yes. The CMs were originally installed as provisional (pending further evaluation) stormwater controls that could be installed in areas where existing culverts carried the stormwater below the roads. As a result, they handle a wide range of flows during a typical rain year and experience relatively short treatment residence times and the weirs overflow during average to large size storms. However, the performance monitoring results indicate that statistically significant pollutant concentration reductions are occurring for TSS, dioxins, and lead at the non-background CMs/media filters (i.e., CM-1, CM-9, B-1, and upper lot media filter) as a result of their sedimentation and media treatment unit processes. Effluent concentrations of TSS, dioxins, and lead were also lower than corresponding influent samples for the CM background locations (i.e., CM-8 and CM-11), with statistically significant pollutant removal observed for all three COCs. Monitoring results show that the CMs are reducing the concentrations of TSS, dioxins, and lead between the influent and effluent at both the non-background and background CMs.

2. Are the detention bioswales, Lower Lot Biofilter, and ELV Treatment BMPs reducing the concentrations of lead, dioxin, and TSS between the untreated influent and the treated effluent?

Generally. Cumulative performance monitoring data (as summarized by the statistical analysis tables, correlation charts, and probability plots) indicate that detention bioswales effluent concentrations were lower than corresponding influent samples for all COCs evaluated. Statistically significant pollutant removals were observed for all three COCs. Effluent concentrations were generally lower (compared to influent runoff) at the lower lot biofilter for dioxins, with statistically significant pollutant removal observed. In contrast, for lead and TSS, there were only slightly more data pairs with higher effluent results compared to data pairs with higher influent results for the biofilter (see additional discussion on question #4 of this section).

Data from the ELV Treatment BMP showed that the majority of sample pairs had lower effluent concentrations for dioxins and lead than corresponding influent samples, with statistical significance shown for both dioxins and lead. However, the majority of data pairs had higher effluent TSS concentrations than influent concentrations (with statistical significance).

In addition, the number of results exceeding the Permit limits for both the influent and effluent samples show an improvement in water quality between the untreated influent and the treated effluent, as described in the subsequent observation below.

3. Are the treatment controls aiding in compliance with NPDES permit limits at Outfall 009?

Yes. Collectively, the treatment controls have resulted in water quality improvement and NPDES compliance at Outfall 009, where lead and dioxin compliance challenges persist. All COC-BMP

combinations had fewer effluent concentration results above Permit limits compared to the influent concentrations (with the exception of the Boeing admin area inlet filters, which only had three influent and effluent data pairs available, and all influent and effluent results exceeded permit limits). It is important to note that the discharge from the inlet filters flows to the lower lot biofilter for subsequent treatment. Most COC-BMP combinations also showed lower average and maximum exceedance ratios (i.e., exceeding sample concentrations divided by the Permit limit) for effluent results compared to the influent results³⁵. These observations show that the treatment controls are improving storm water quality prior to reaching Outfall 009. For example, average influent exceedance ratios for CM-9 were 4.2 and 8.5 for lead and dioxins, respectively, while the average effluent exceedance ratios were reduced to 2.9 and 3.2 for lead and dioxins, respectively, during this same time period. This not only demonstrates that the treatment controls are reducing NPDES COC concentrations in stormwater upstream of Outfall 009, but that the treatment control drainage areas (which include paved roads) are pollutant generating source areas that, without treatment, would have worsened water quality at the downstream NPDES compliance location.

4. Is there a reason why some recent monitoring data at the lower lot biofilter have shown net increases in pollutant concentrations across the system compared to prior years?

Yes. As previously noted, dioxin reductions across the system have been consistent, as 27 out of 28 sample pairs decreased in dioxin concentrations from the influent runoff to the biofilter outlet. However, 16 of the 28 paired samples had higher influent concentrations than their paired effluent concentrations for TSS, and 14 of the 28 samples had larger influent concentrations for lead. It should first be noted that there are no applicable permit limits for TSS for Outfall 009, only one effluent sample has exceeded permit limits for lead (sample collected on 12/2/2014), and three effluent samples have exceeded permit limits for dioxins. However, this pattern of net increases in lead concentrations (and in part, TSS concentrations) across the system can likely be attributed to the significantly lower influent concentrations to the lower lot biofilter in recent years. The B1436 detention bioswales, which were constructed in December 2014, slow and treat a portion of the drainage area which would have previously flowed to the lower lot biofilter. Significant pretreatment is being achieved by the detention bioswales, even though their primary purpose is to delay the influent runoff to the lower lot biofilter and reduce the portion of the total flow that bypasses the BMP during large storm events. As previously noted, the average volume pumped to the biofilter has increased since the detention bioswales were constructed. Similarly, the estimated percent of total runoff volume (from both the 24-inch drain and the lower lot drainage areas) has increased since the detention bioswales were constructed. The average influent TSS concentration to the Lower Lot biofilter for samples collected before or during December 2014 was 109 mg/L, and the average for samples collected after December 2014 was 19 mg/L. This trend of significantly lower TSS influent concentrations following construction of the detention bioswales was also observed for lead, where the average influent lead concentration before and after construction of the detention bioswales

³⁵ The only exceptions include the average exceedance ratio for lead at B-1 and dioxins for the Boeing Admin Area inlet filters (both average and maximum exceedance ratio).

was 8.0 µg/L and 2.0 µg/L, respectively. The average effluent concentrations of both TSS and lead were lower in post-detention bioswale samples when compared to pre-detention bioswale samples (i.e., 41 mg/L vs. 18 mg/L for TSS and 4.0 µg/L vs. 1.9 µg/L for lead). The number of sample pairs with higher effluent concentrations than their paired influent concentrations for TSS and lead can be explained by the significant reduction in average influent concentrations to the Lower Lot biofilter since construction of the detention bioswales. It is usually not possible to reduce low TSS influent concentrations compared to high TSS influent concentrations, especially with pre-treatment that has already removed the larger particles, leaving only small particles that are difficult to remove due to sedimentation and filtering in the media. Additionally, scour or leaching of previous captured material may also be contributing to this observation.

5. Is the lower lot biofilter preventing stormwater runoff from discharging to the Northern Drainage?

Yes. Monitoring data at the lower lot biofilter were examined to determine its ability to prevent smaller storms from discharging to the Northern Drainage. The lower lot biofilter successfully prevented just over half of all storms less than or equal to one inch originating in the lower lot tributary area from discharging to the Northern Drainage, which flows to Outfall 009.

6. Has an adequate number of samples been collected such that sampling can be potentially discontinued at some locations?

Yes. Following the 2016/2017 reporting year, the Expert Panel evaluated the need for continued sampling at the BMPs. It was decided that in the context of reduced site activities (e.g., reduced construction, demolition, etc.) anticipated for the 2017/2018 reporting year in the Outfall 009 watershed, samples would only be collected twice per year at the following BMPs: upper lot media filter, southern detention bioswale, lower lot biofilter, CM-1 (influent-west and effluent), and the ELV Treatment BMP. Two background locations are planned to continue to be sampled during every storm, in order to collect more background data. The Panel has committed to revisiting the monitoring frequency when Outfall 009 watershed site activities increase.

7. Is significant maintenance required for any of the BMPs?

Yes. Replacement of media at CM-9 is recommended soon, due to the observed ponding during the 2018/2019 reporting year and estimated sediment loading until maintenance is needed. Recent data have shown evidence of solids export through the underdrain of the ELV treatment BMP, based on the dioxins particulate strength decreasing through the media layer. The the ELV treatment BMP will be further investigated to better understand the recent performance and adding a bridging layer to keep media in place may be considered. The cumulative TSS loadings to the ELV Treatment BMP, lower lot biofilter, B-1 media filter, upper lot media filter, CM-1, and CM-9 were investigated and compared to the estimated value of cumulative sediment loading to the media before maintenance is needed (Pitt and Clark, 2010). The ELV Treatment BMP, lower lot biofilter, and upper lot media filter were only 9.2%, 8.6%, and 13%, respectively, towards requiring maintenance, and it was estimated that maintenance would not be needed for approximately 30 years, assuming average rainfall years. This long maintenance interval is due to significant pretreatment of the stormwater before the media treatment at those locations. However, calculations showed that CM-1 reached the cumulative sediment loading

where maintenance was needed (136%) during the 2017/2018 reporting year based on lab measurements of cumulative solids loading until media clogging. Some bypass/overflow potentially associated with media clogging at CM-1 was also observed during the 2016/2017 reporting year. Due to the estimated sediment loading and ponding observations, CM-1 was reconstructed, and the media replaced in August 2018. Cumulative solids loadings at B-1 and CM-9 were estimated to be 49% and 82% respectively, towards lab-based thresholds of media clogging, and initial maintenance is expected to be needed in approximately five and one years, respectively, assuming average rainfall years. Ponding was observed at CM-9 during several storm events during the 2018/2019 reporting year. However, ponding was not observed (at any of the CMs) during the 2019/2020 reporting year, after 72 hours following storm events. It should be noted that each BMP was observed (72 hours post storm event) during three storm events during 2019/2020. The Expert Panel recommends that observations of clogging, overflow, and underdrain flows should continue to be taken at BMPs -- stage recorders may also be used -- during storms when performance samples are collected (to confirm that underdrains are functioning properly and bypass through weir boards is not occurring) as well as following storms (to confirm that extended ponding is not occurring) so that this consideration is tracked and timely maintenance can be performed when needed.

8. Is pollutant removal performance deteriorating at any BMPs?

No. Based on long-term monitoring results of all BMPs, effluent concentrations tracked the influent concentrations, with no significant differences with time. Changes in influent concentrations due to altered site conditions had the strongest impact on effluent trends, however all effluent concentrations remained low. Based on these observations, it is not likely that chemical breakthrough occurred at any of the media treatment systems at SSFL.

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Appendix E: 2019/2020 Outfall 001 and 002 Subarea Monitoring

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Acronyms

BMP	Best Management Practice
COC	Contaminant of Concern
DNQ	Detected not Quantified
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
µg/L	micrograms per liter
mg/L	milligram per liter
ND	Non-Detect
NPDES	National Pollutant Discharge Elimination System
PS	Particulate Strength
SSFL	Santa Susana Field Laboratory
SWEP	Storm Water Expert Panel
TCDD	Tetrachlorodibenzo- <i>p</i> -dioxin
TEQ	Toxic Equivalence
TSS	Total Suspended Solids

1. Introduction

In the 2018/19 Santa Susana Field Laboratory (SSFL) Site-Wide Stormwater Annual Report, the Surface Water Expert Panel (SWEP) recommended new subarea monitoring in the Outfall 001 and 002 watersheds to determine the extent to which areas near potentially impacted soils, natural background areas, and areas with pavement may contribute to exceedances at the outfalls and where and how to control these sources. Table 1 describes each subarea and the number of samples collected this year. This appendix includes stormwater monitoring results at the subarea monitoring locations compared to the Outfall concentrations for constituents that exceeded Benchmarks at Outfalls in 2019/20. In the 2019/20 season (the first rain season for sampling at these locations), four of the six identified subareas had sampleable flows and these are indicated by the blue drainage areas shown in Figure 1. The two gray drainage areas were observed for flows but did not produce any sampleable flows during the rains.

Table 1. Subarea Descriptions

Outfall Watershed	Subarea	Description	Number of Samples Collected
001	EPSW001IE01	Potentially impacted soils near Area 1 Burn Pits	2
	EPSW001BG01	Background soils with potential impact from gravel road	1
	EPSW001PV01	Background soils with potential impact from paved road	0
002	EPSW002IE01	Potentially impacted soils near STL-IV	0
	EPSW002IE02	Potentially impacted soils near Coca	3
	EPSW002BG01	Background soils with potential impact from gravel/dirt road	1

According to the 2019/20 sampling plan (Appendix A), the filtered and total concentrations of each constituent were analyzed for each stormwater sample. Particulate strength (PS) is the constituent concentration associated with particulate matter in stormwater and is a means to normalize stormwater constituent concentrations by TSS. Normalizing constituent concentrations by TSS is helpful for comparing solid concentrations of hypothesized sources between sample locations. This tool is useful for the constituents that are highly associated with particulates and are not found in significant quantities in filtered (dissolved) forms. PS is calculated by the following equation and applying the appropriate unit conversions.

$$PS = \frac{(\text{total concentration} - \text{filtered concentration})}{\text{total suspended solids concentration}}$$

The 2019/20 monitoring results from these subareas are organized by constituent shown below, including a summary of the results and a comparison to their respective outfall concentrations and particulate strengths.

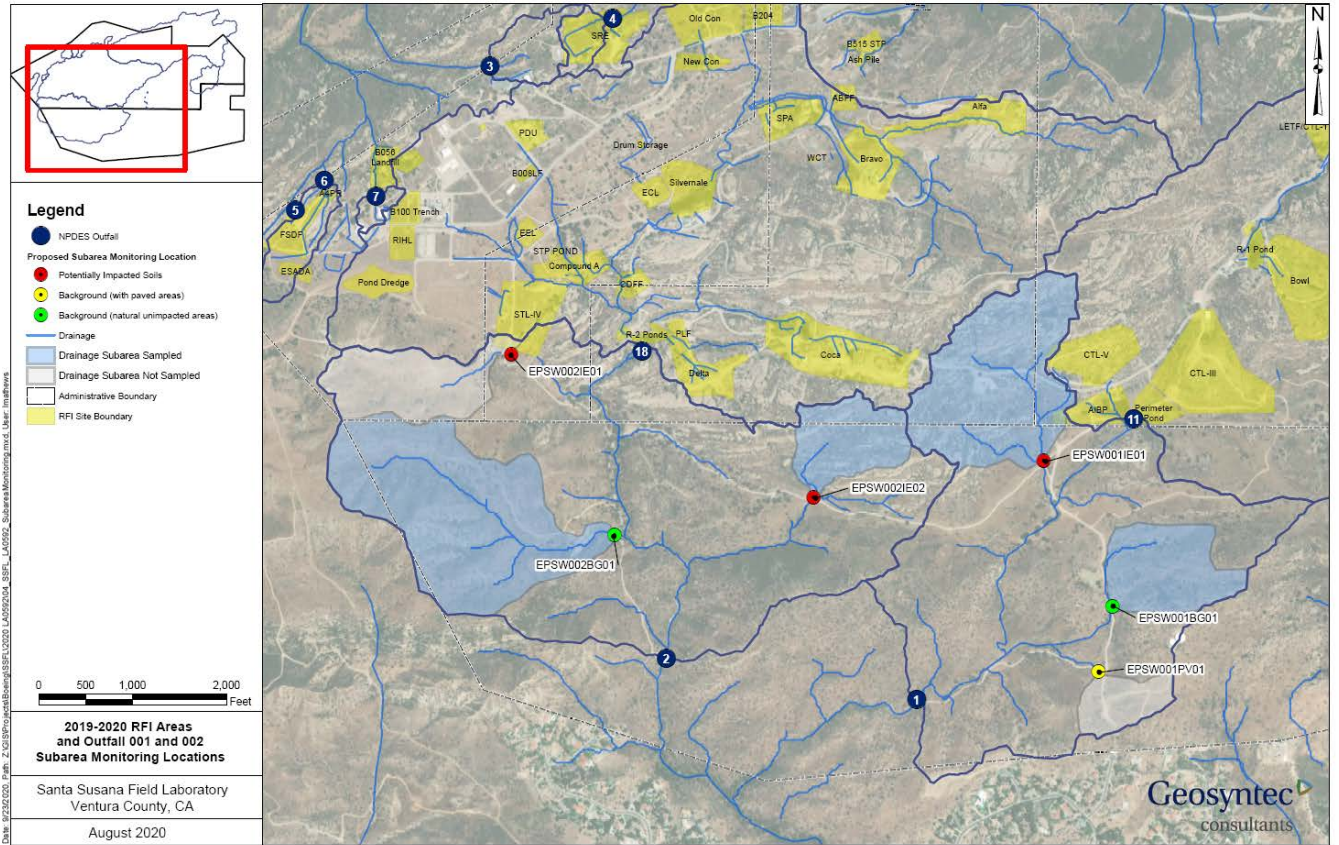


Figure 1. Subarea monitoring locations in the Outfall 001 and 002 watersheds.

Total suspended solids (TSS) does not have a NPDES Benchmark or Effluent Limit defined in the SSFL 2015 NPDES Permit; however, it can be used to recognize areas of excessive soil erosion and to analyze particulate-bound pollutants by the method of particulate strengths. As shown in Figure 2, the TSS concentrations vary depending on their location within the larger outfall watersheds, with some locations exhibiting higher erosion than others. The Outfall 001 Background Subarea (EPSW001BG01) and Outfall 002 Potentially Impacted Subarea (EPSW002IE02) had the highest TSS concentrations of the subarea samples. Areas with higher TSS concentrations will be evaluated for erosion control BMPs as needed.

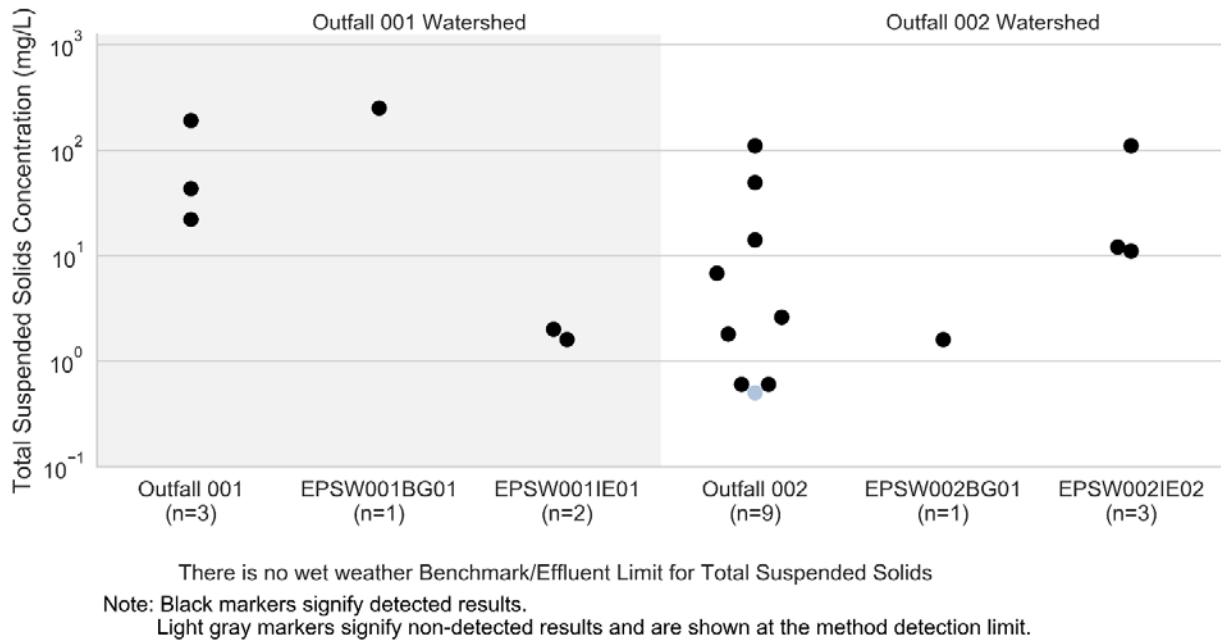


Figure 2. TSS concentrations at subarea monitoring locations, Outfall 001, and Outfall 002

2. Exceeding Constituent Results

Results for constituents that were reported to have exceeded Benchmarks at Outfalls in 2019/20 (iron, lead, manganese, gross alpha¹, and TCDD TEQ (no DNQ)) are shown in Figures 3-15. The concentrations varied between subareas and sampling events, however, the Outfall 001 Background Subarea (EPSW001BG01) consistently had the highest total concentrations. Gross Alpha activity was only detected in two of the subarea samples and in two Outfall 002 samples. TCDD TEQ (no DNQ) was detected in approximately half of the subarea samples. The pattern of filtered iron and manganese concentrations roughly follows the spatial trends of the total metals measured. Filtered lead was only detected in one subarea sample, at the potentially impacted soils area within Outfall 002 watershed (EPSW002IE02). The total concentration of each exceeding constituents generally followed TSS trends indicating soil erosion may be responsible for the elevated concentrations observed at these locations.

¹ Quarterly Monitoring Report reported one exceedance for gross alpha (14.1 +/- 3.6 pCi/L), but noted this result was indeterminate compared to the daily max benchmark (15 pCi/L) and that Outfall 001 annual average (3.65 +/- 0.64 pCi/L) was below, therefore concluding gross alpha at Outfall 001 was in compliance for the reporting year.

The calculated particulate strengths for iron, lead, and manganese were comparable to the range of soil concentrations found in natural background soils at approximately 10,000-100,000 mg/kg, 5-150 mg/kg, and 200-1,000 mg/kg, respectively (see Appendix C for more details). This consistent range of particulate strengths in combination with the TSS trends indicate soil erosion is the likely source of iron, lead, and manganese measured in stormwater at Outfall 001 and 002.

The calculated gross alpha particulate strengths across all detected samples were consistent at just under 100 pCi/g. Similarly, most of the detected TCDD TEQ (no DNQ) samples had a particulate strength between 10^{-7} - 10^{-6} mg/kg. This indicates these locations likely shared the same diffuse, site-wide source in stormwater. The consistent range of particulate strengths for detected samples, in combination with the TSS trends, indicate soil erosion is the likely responsible for the elevated concentrations observed at these subareas.

All conclusions herein are based on this preliminary dataset from 2019/20. Since subarea monitoring in Outfall 001 and 002 watersheds was only started this year, it is recommended that monitoring continues so that additional samples can enable a more robust analysis.

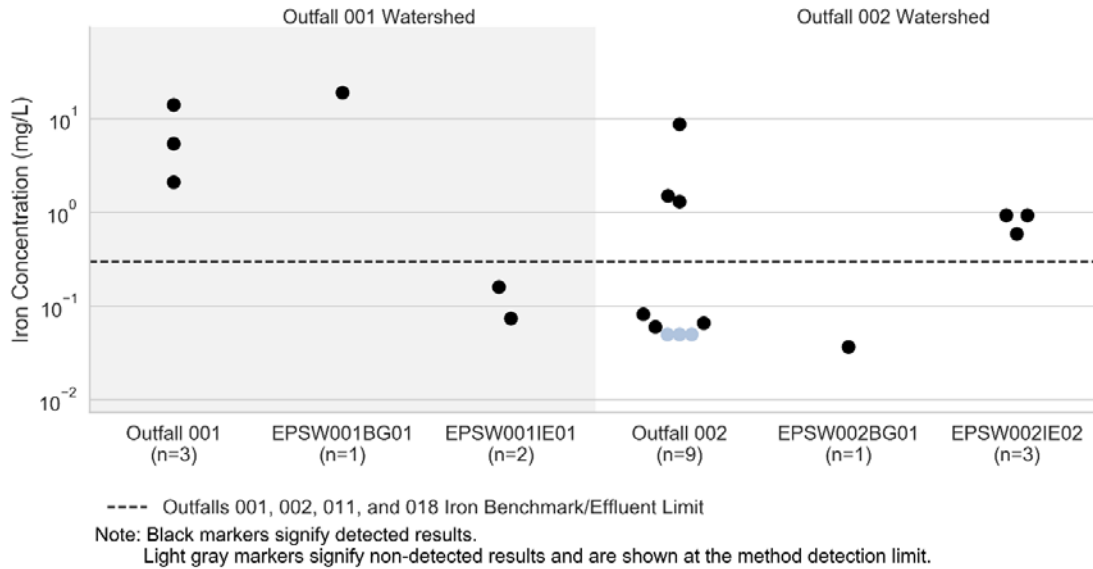


Figure 3. Iron concentrations at subarea monitoring locations, Outfall 001, and Outfall 002

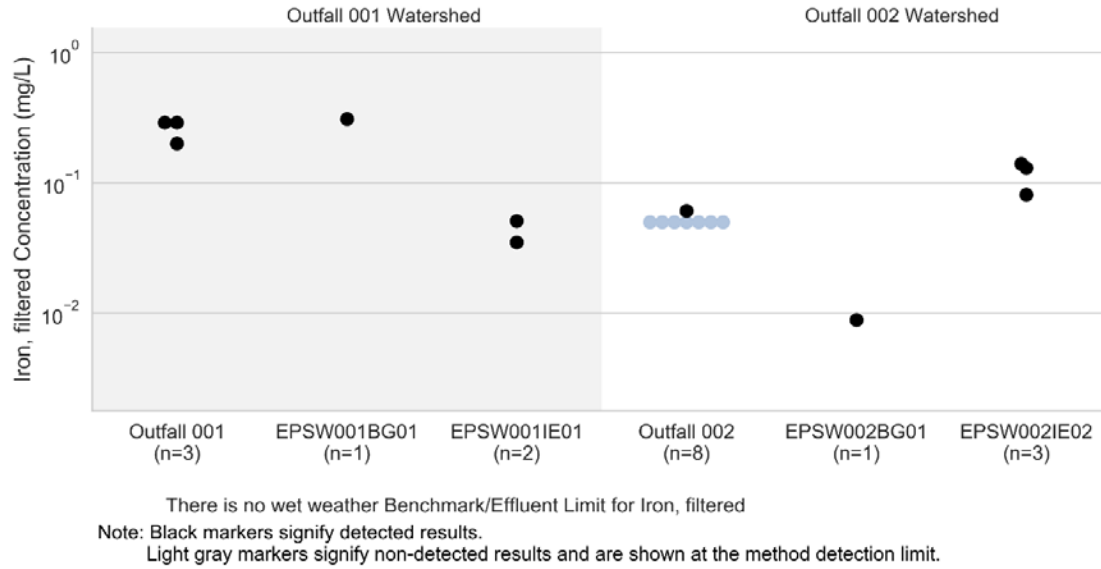


Figure 4. Filtered iron concentrations at subarea monitoring locations, Outfall 001, and Outfall 002.

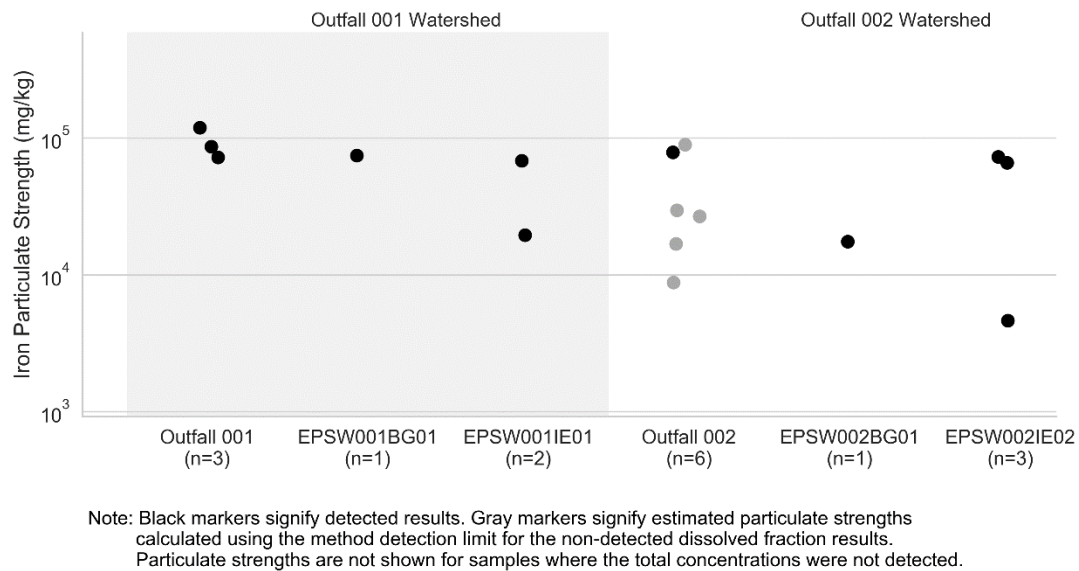


Figure 5. Iron particulate strengths concentrations at subarea monitoring locations, Outfall 001, and Outfall 002.

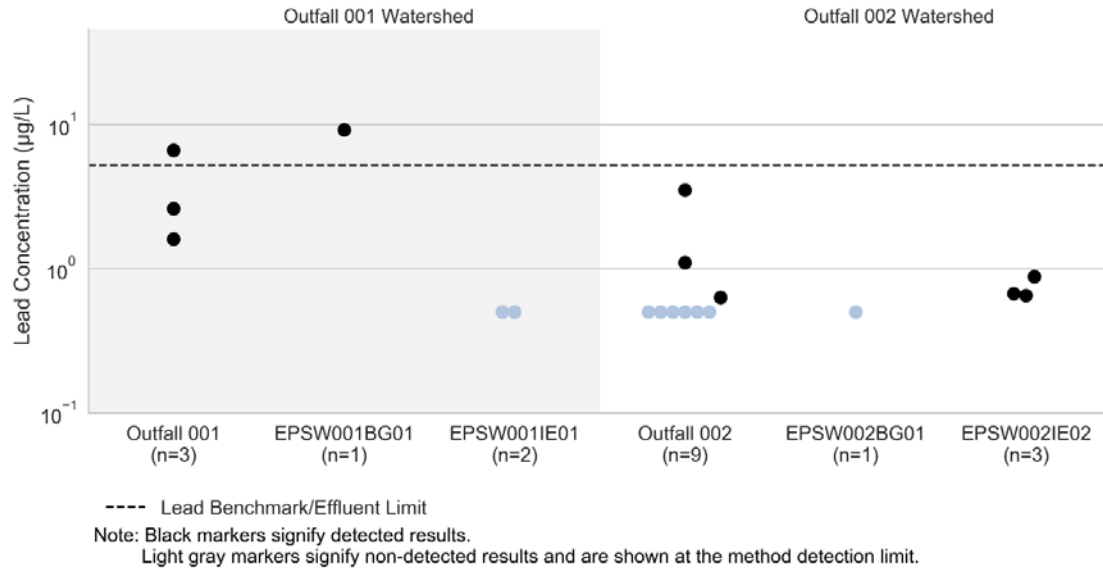


Figure 6. Lead concentrations at subarea monitoring locations, Outfall 001, and Outfall 002.

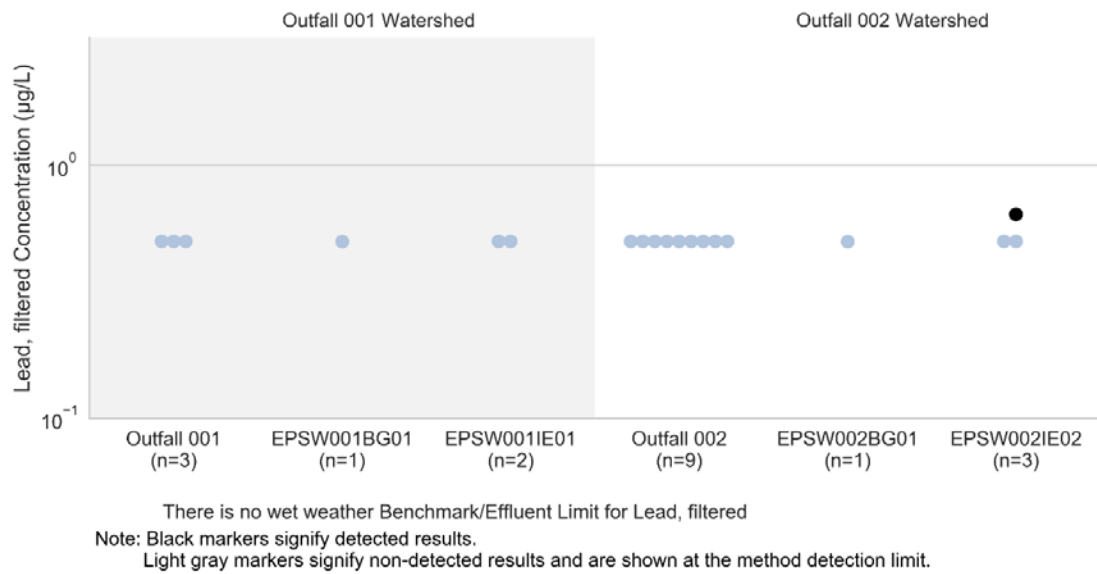


Figure 7. Filtered lead concentrations at subarea monitoring locations, Outfall 001, and Outfall 002.

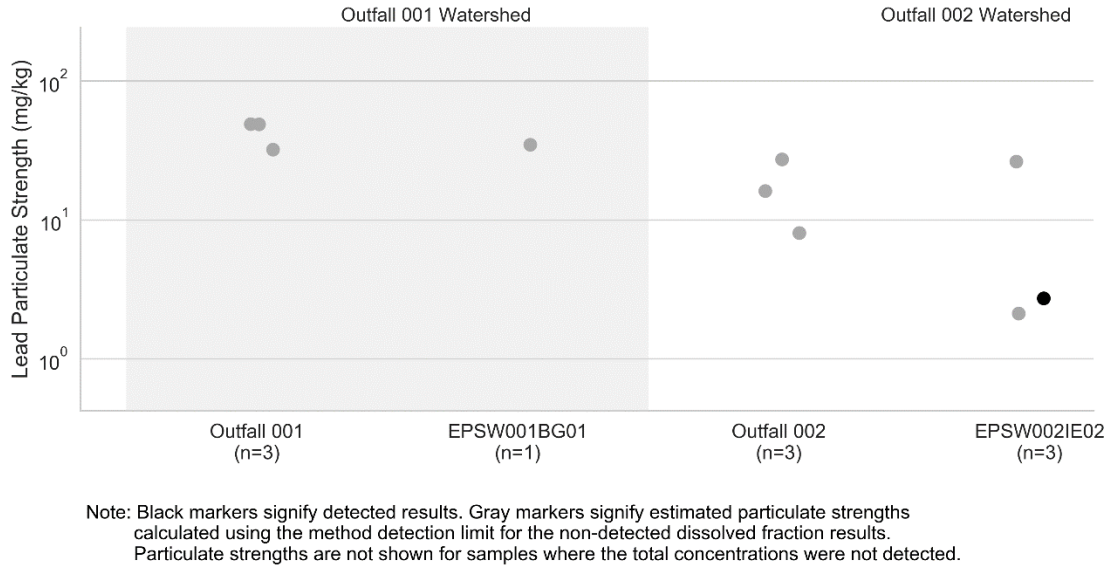


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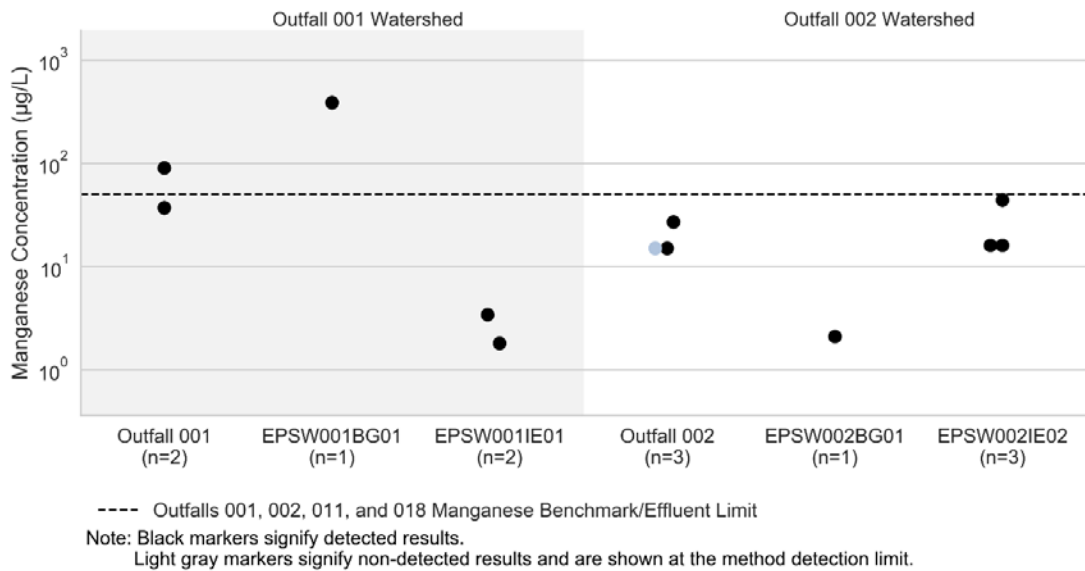


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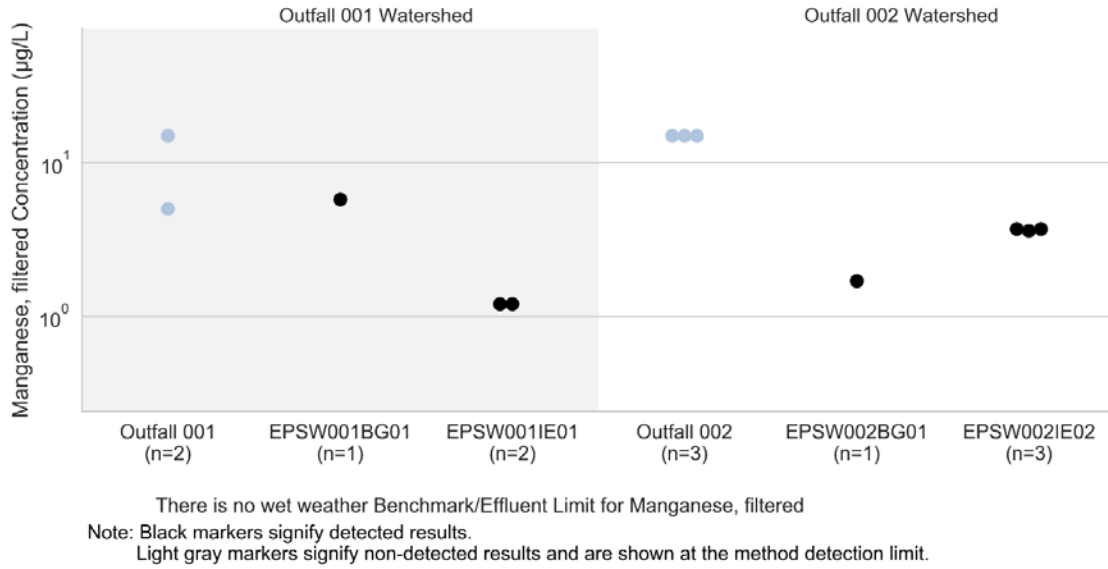


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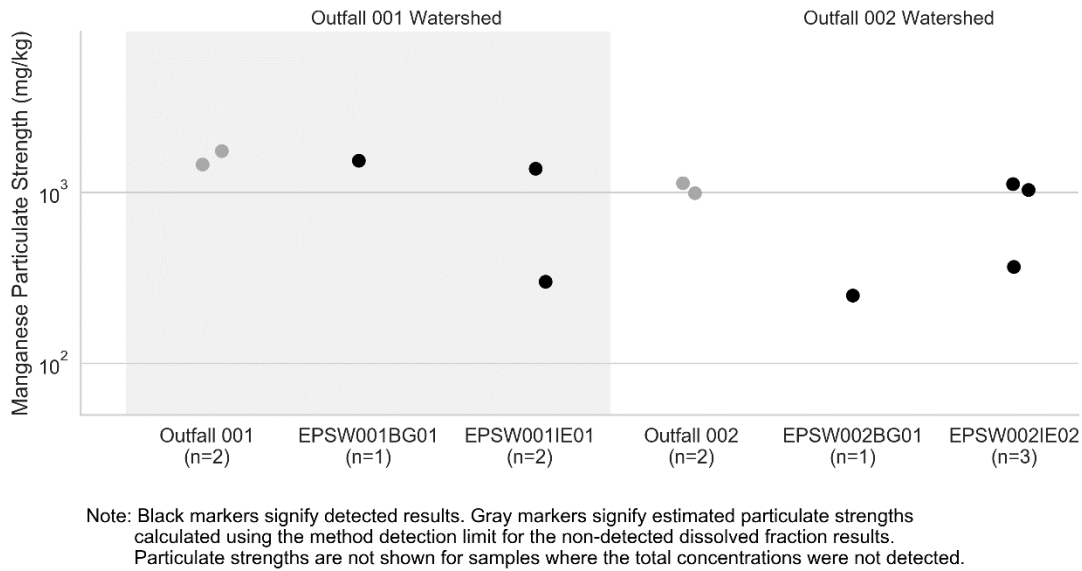


Figure 11. Manganese particulate strengths at subarea monitoring locations, Outfall 001, and Outfall 002.

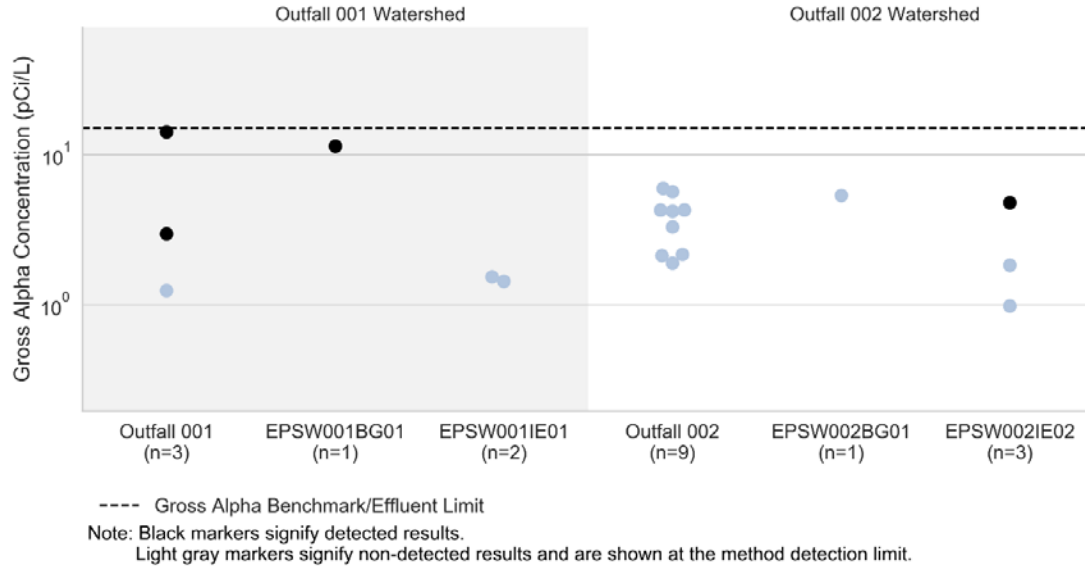


Figure 12. Gross alpha concentrations at subarea monitoring locations, Outfall 001, and Outfall 002.

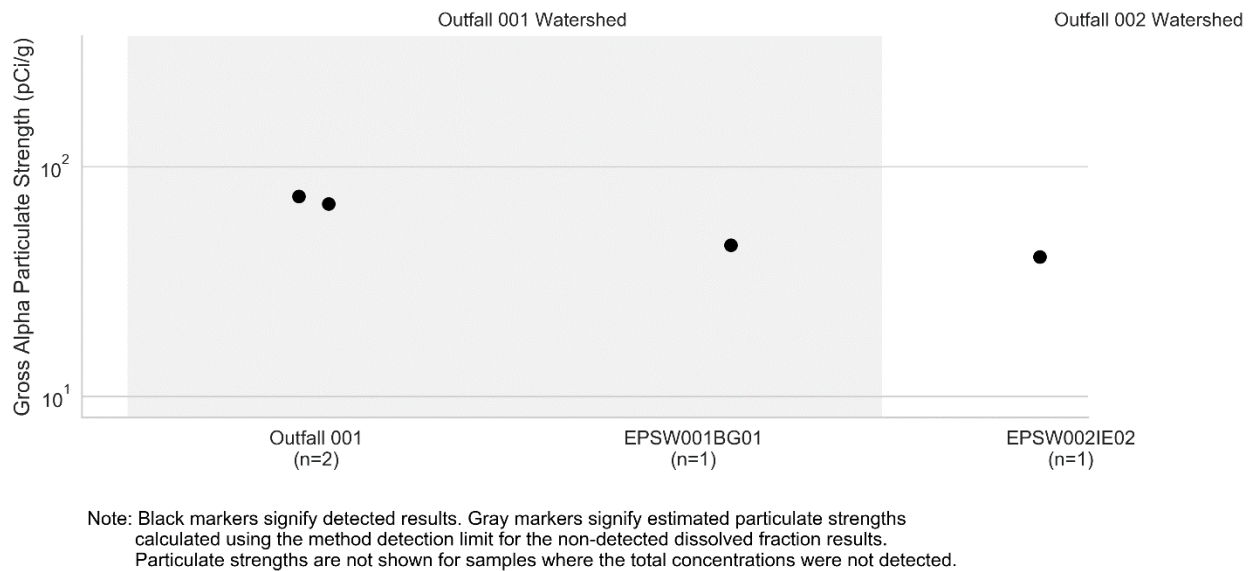


Figure 13. Gross alpha particulate strengths at subarea monitoring locations, Outfall 001, and Outfall 002.

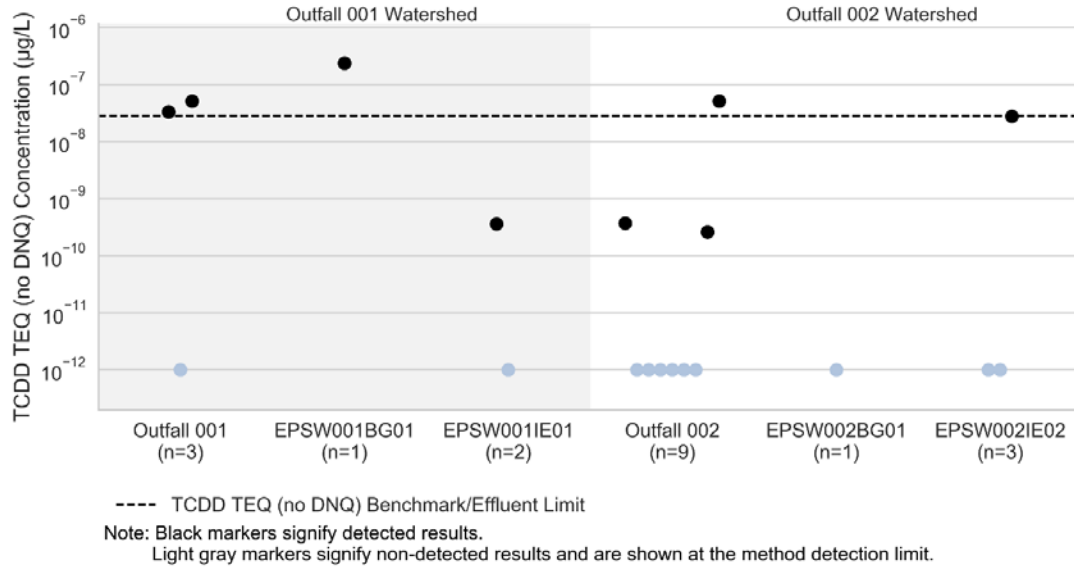


Figure 14. TCDD TEQ (no DNQ) concentrations at subarea monitoring locations, Outfall 001, and Outfall 002.

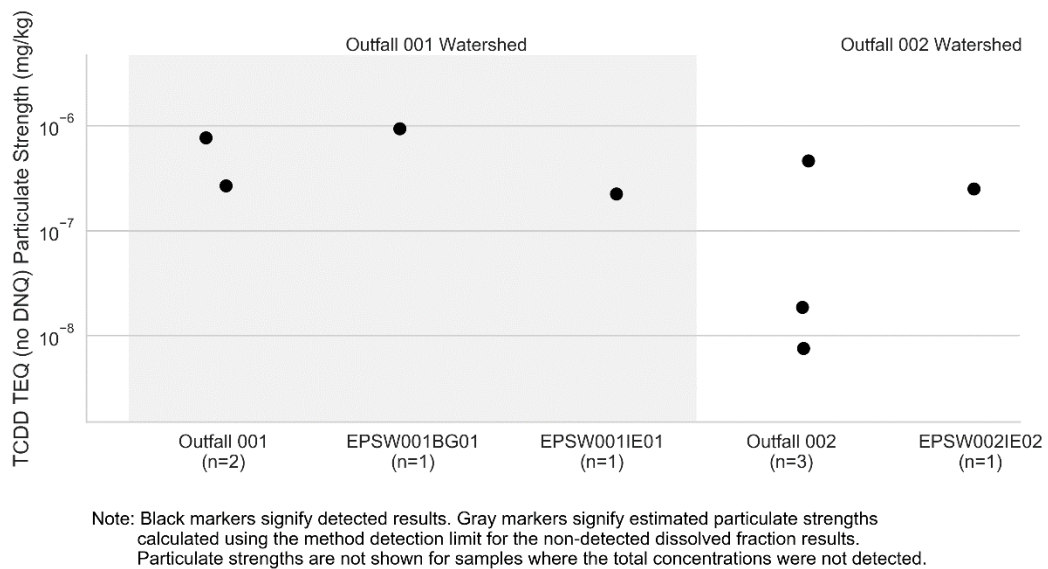


Figure 15. TCDD TEQ (no DNQ) particulate strengths at subarea monitoring locations, Outfall 001, and Outfall 002.

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Appendix F: 2019/20 Exceeding Constituent Timeseries Plot

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and

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October 2020

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Table 1. Historical Rainfall and Discharges at SSFL.....1

Abbreviations

ANOVA	Analysis of Variance
BMP	Best Management Practice
DNQ	Detected not Quantified
MDL	Method Detection Limit
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NPDES	National Pollutant Discharge Elimination System
ND	Not Detected
pCi/L	picocuries per liter
PS	Particulate Strength
SSFL	Santa Susana Field Laboratory
TCDD	Tetrachlorodibenzo-p-dioxin
TEQ	Toxic Equivalence
TSS	Total suspended solids

1. Introduction

Long-term trends and seasonal trends of 2019/20 exceeding constituents were evaluated to determine if the water quality at the site is changing over time and how this last year compares to previous years. Table 1 below summarizes annual rainfall and number of stormwater discharges at the site with outfalls that discharged in 2019/20 shaded in gray. Comparing the discharges in 2019/20 to 2018/19 and 2016/17, recent years with above average rainfall, reveals that the number of discharges at Outfalls 001, 008, 009, and 018 are more similar to 2016/17. Outfall 002 on the other hand had more discharges and was more similar to 2018/19 in the number of discharges. A lognormal regression model was determined using all detected results at Outfalls 001, 002, 008, 009, and 018 together, since these were the outfalls that discharged in 2019/20. The 2018/19 results were excluded from the long-term trend calculation since these were the post-wildfire conditions and not expected to be consistent with a long-term trend. An analysis of variance (ANOVA) test was conducted to determine if the trend was statistically significant ($p < 0.05$). Note 3 in each figure highlights if the trend was statistically significant or not. Figures 1-36 show the timeseries plots for the long-term (2013-2020) and intraseasonal trends (single seasons from 2015-2020).

Table 1. Historical Rainfall and Discharges at SSFL

Reporting Year	Annual Rainfall* (inches)	Number of Rain Events	Number of Outfall Discharges								
			001	002	004	006	008	009	010	011	018
2019/20	20.5	9	3	9			5	5			4
2018/19	26.3	12	7	10	1	1	9	9		3	5
2017/18	9.8	4		1				1			
2016/17	23.4	14	3	6	1	2	3	8		2	5
2015/16	12.0	13		1				3			1
2014/15	11.2	9		2			1	3			
2013/14	6.1	5						1	1		
2012/13	8.1	9						3			

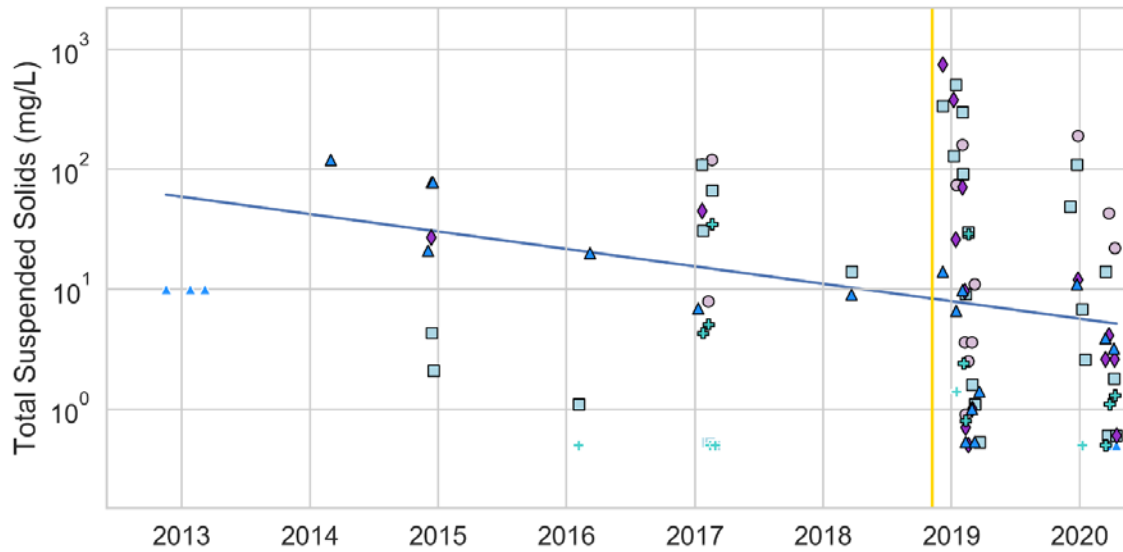
* Above average annual rainfall amounts are **bolded** (17.02 inches).

Total suspended solids (TSS) does not have a benchmark or limit defined, however, it is useful in order to interpret other constituent concentrations. There is a statistically significant trend that indicates site-wide TSS concentrations are decreasing. This is likely due to Best Management Practices (BMPs) that have been added each year. Some BMPs, such as wattles and rip-rap, are added to stabilize areas susceptible to erosion, while others are added to treat stormwater (i.e. filter media BMPs). On the other hand, there is no statistically significant long-trend for any of the exceeding constituents.

Intraseasonal trends were analyzed in the same way. In the three years leading up to the Woolsey Fire (2015/16, 2016/17, and 2017/18), there were no significant trends within the course of a single rainy season. However, in the months following the fire, during the 2018/19 rainy season, there was a statistically significant decreasing trend in concentrations for TSS, gross alpha, iron, lead, and manganese. This indicates the concentrations of these constituents were influenced by post-fire conditions. In 2019/20, only TSS still had a statistically significant decreasing trend, albeit with a smaller slope than immediately following the wildfire. Taken all together, these temporal trends indicate the site has mostly recovered from the wildfire as none of the exceeding constituents exhibited the decreasing trend that was observed in the season immediately after the fire.

2. Results

2.1. Total Suspended Solids



Notes:

1. Markers with a black border signify detected results.
2. Markers without a border signify non-detected result and are shown at the method detection limit.
3. Regression line for long-term trend is statistically significant.

- Logarithmic Regression Model
- Start of Woolsey Fire (11/8/2018)
- Outfall 001
- Outfall 002
- + Outfall 018
- ◆ Outfall 008
- ▲ Outfall 009

Figure 1. 2012/13-2019/20 Outfall TSS Concentrations and Long-Term Trends (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

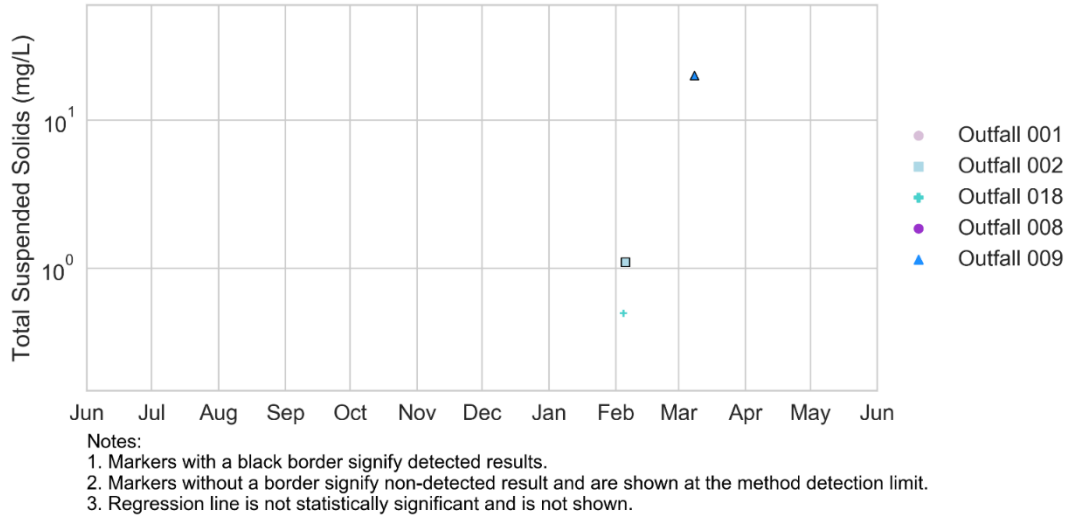


Figure 2. 2015/16 Outfall TSS Concentrations (only including outfalls which discharged in 2019/20)

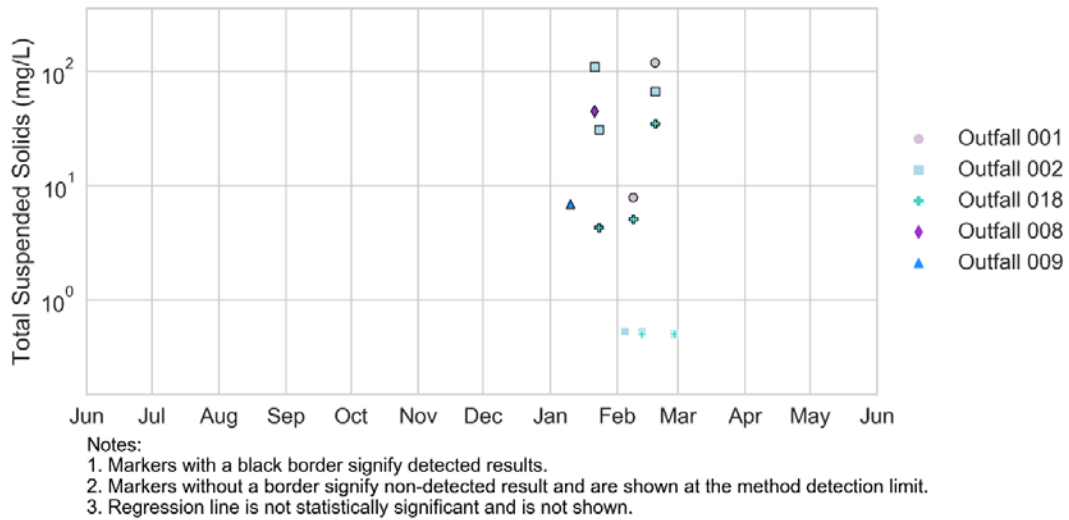


Figure 3. 2016/17 Outfall TSS Concentrations (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

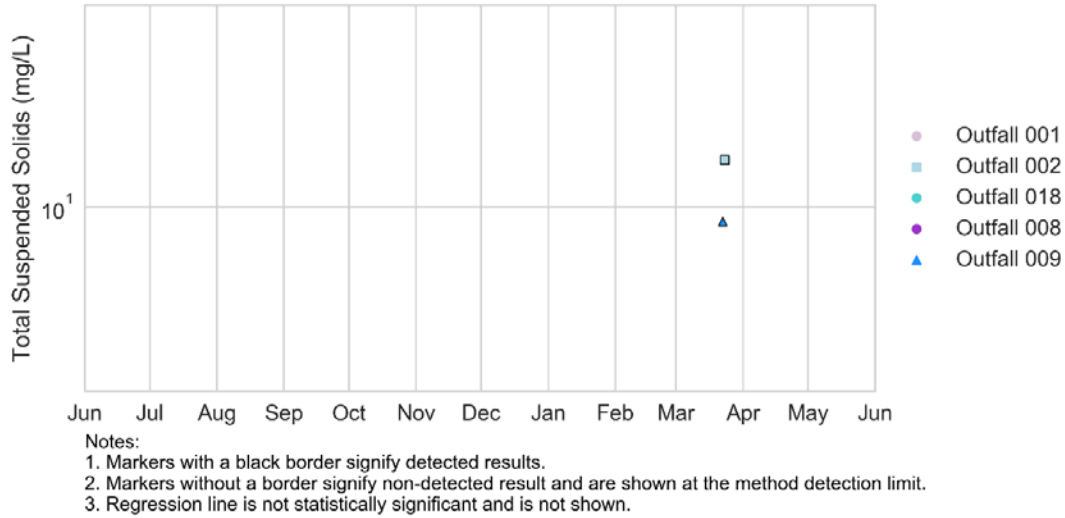


Figure 4. 2017/18 Outfall TSS Concentrations (only including outfalls which discharged in 2019/20)

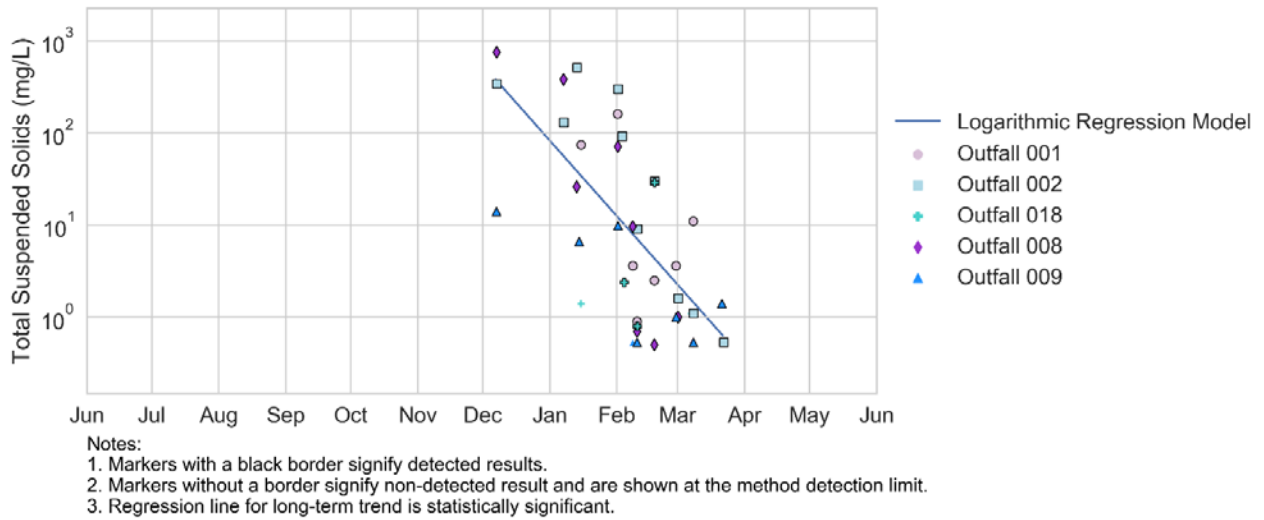


Figure 5. 2018/19 Outfall TSS Concentrations (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

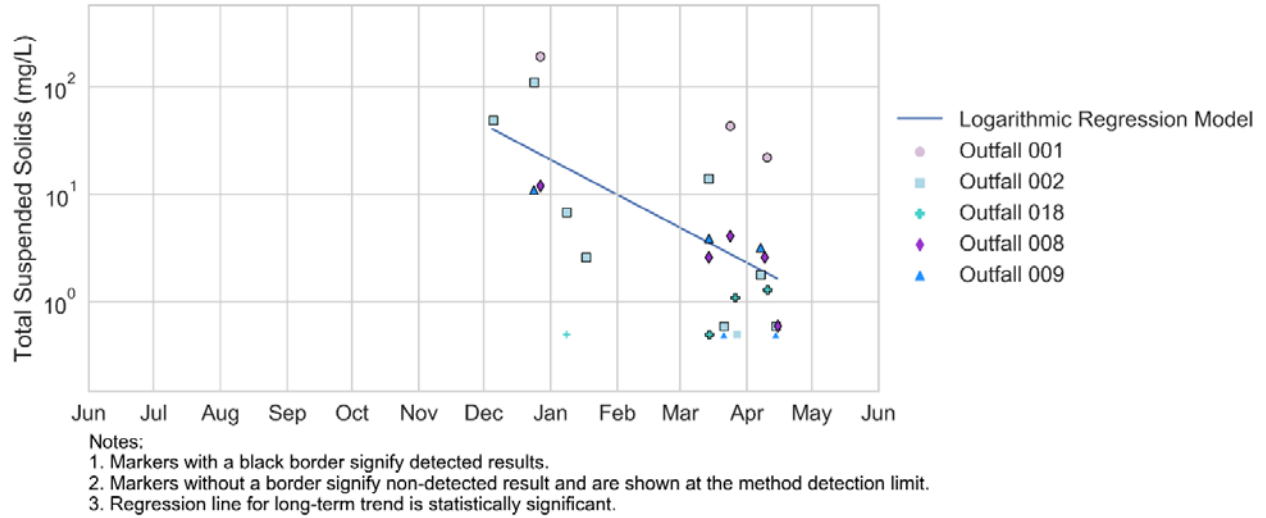


Figure 6. 2019/20 Outfall TSS Concentrations

2.2. Gross Alpha

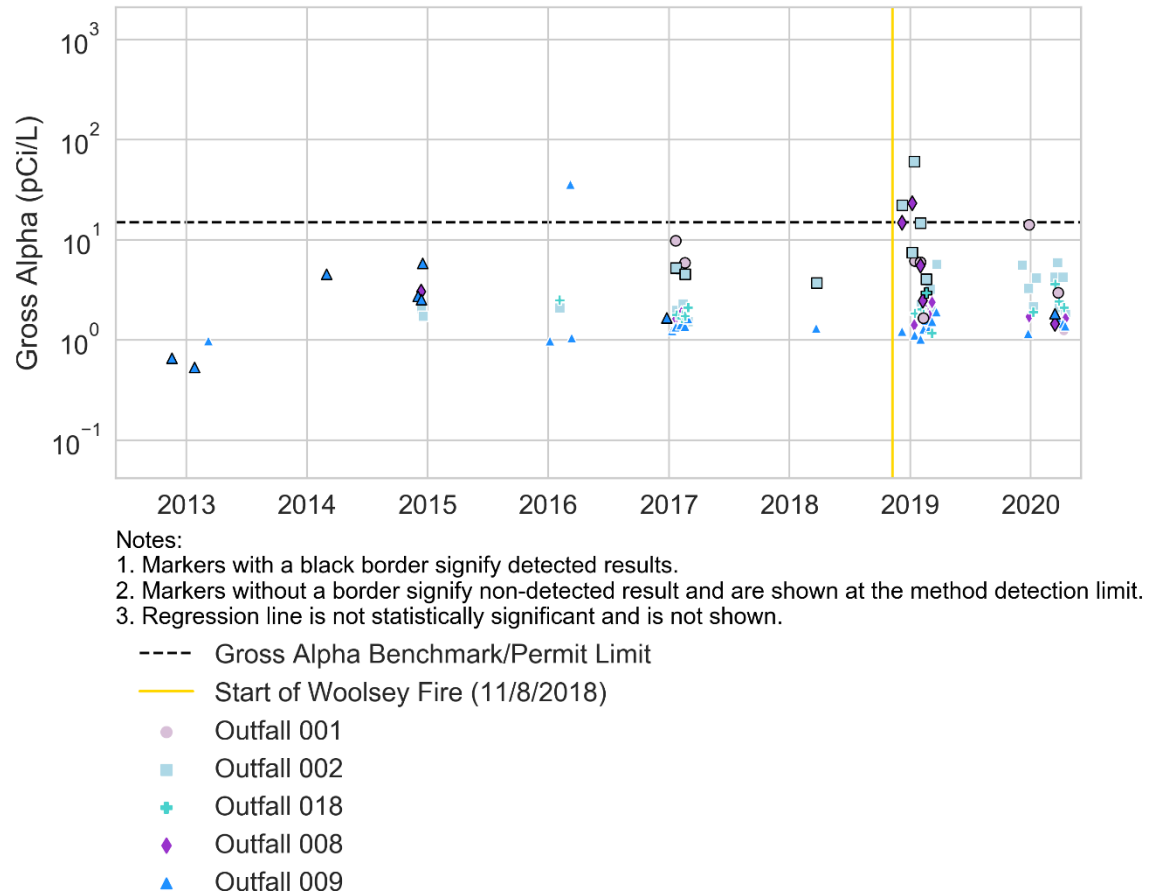


Figure 7. 2012/13-2019/20 Outfall Gross Alpha Concentrations and Long-Term Trends (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

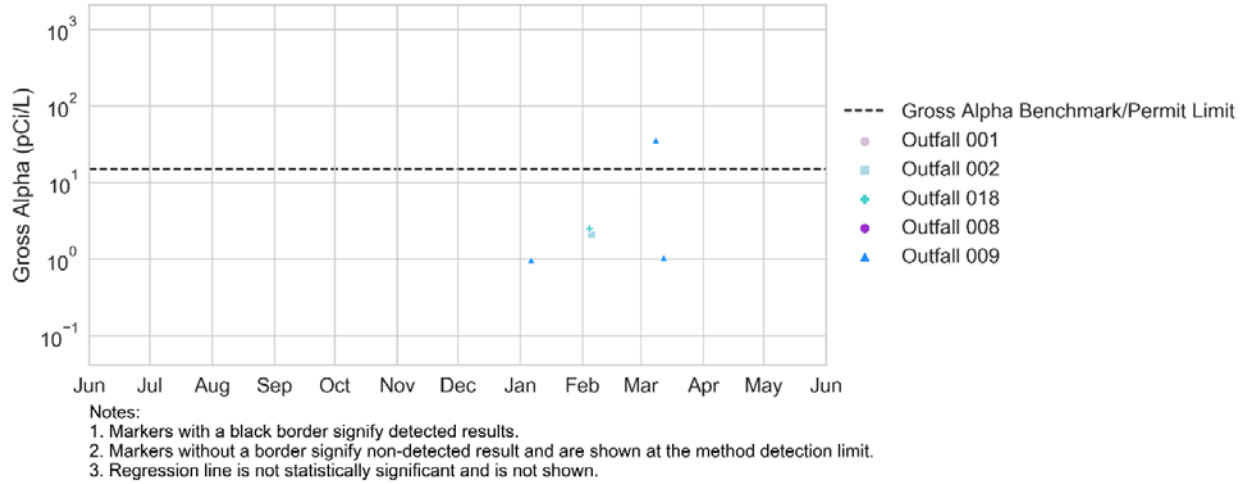


Figure 8. 2015/16 Outfall Gross Alpha Concentrations (only including outfalls which discharged in 2019/20)

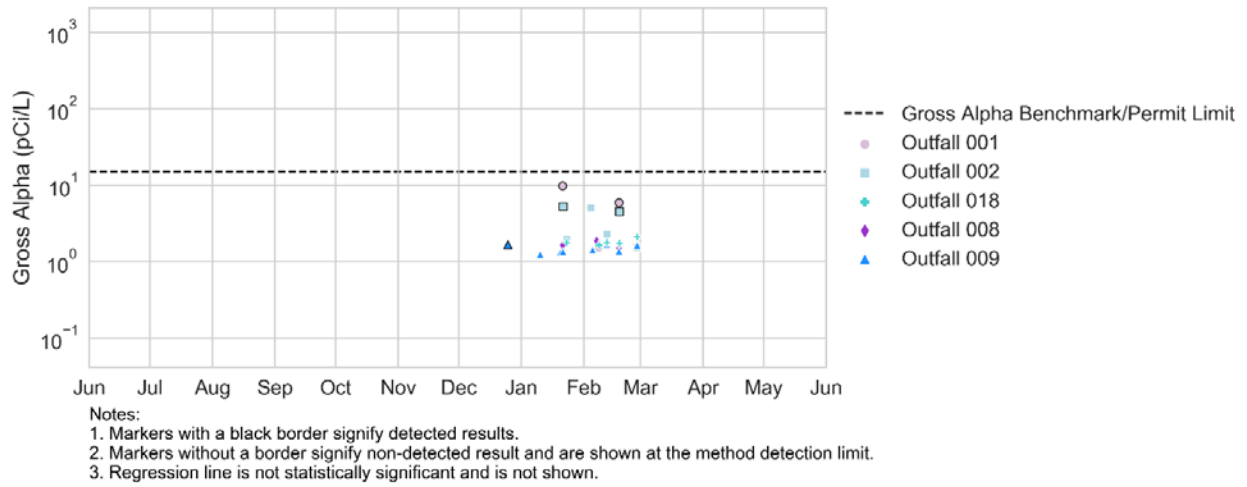


Figure 9. 2016/17 Outfall Gross Alpha Concentrations (only including outfalls which discharged in 2019/20)

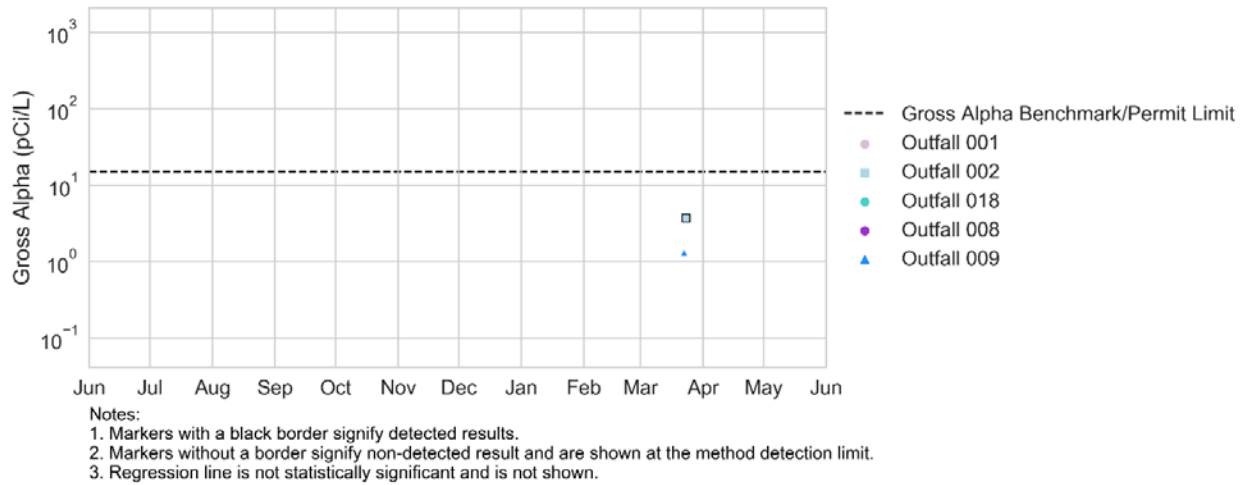


Figure 10. 2017/18 Outfall Gross Alpha Concentrations (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

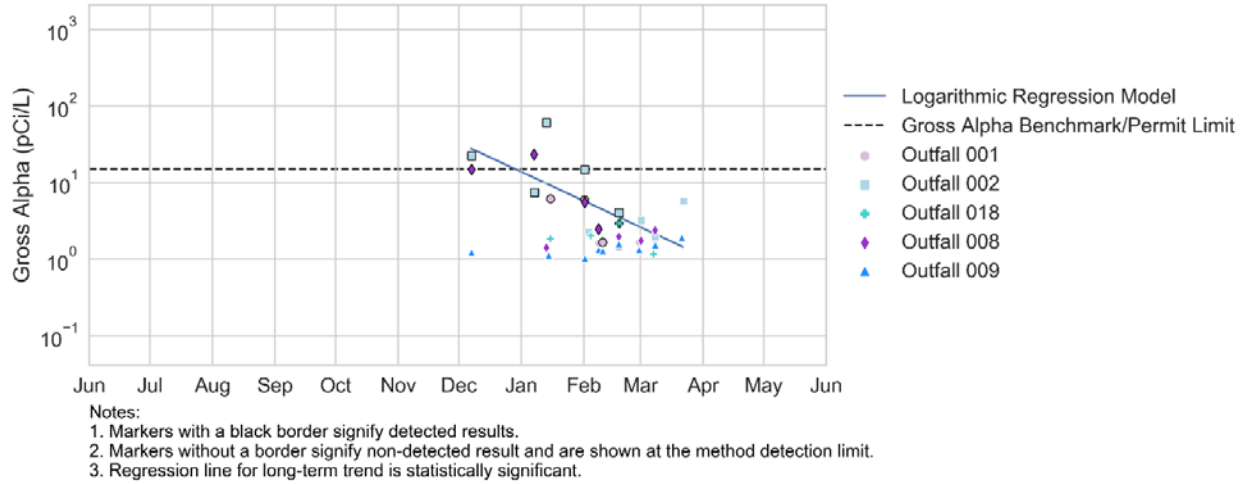


Figure 11. 2018/19 Outfall Gross Alpha Concentrations (only including outfalls which discharged in 2019/20)

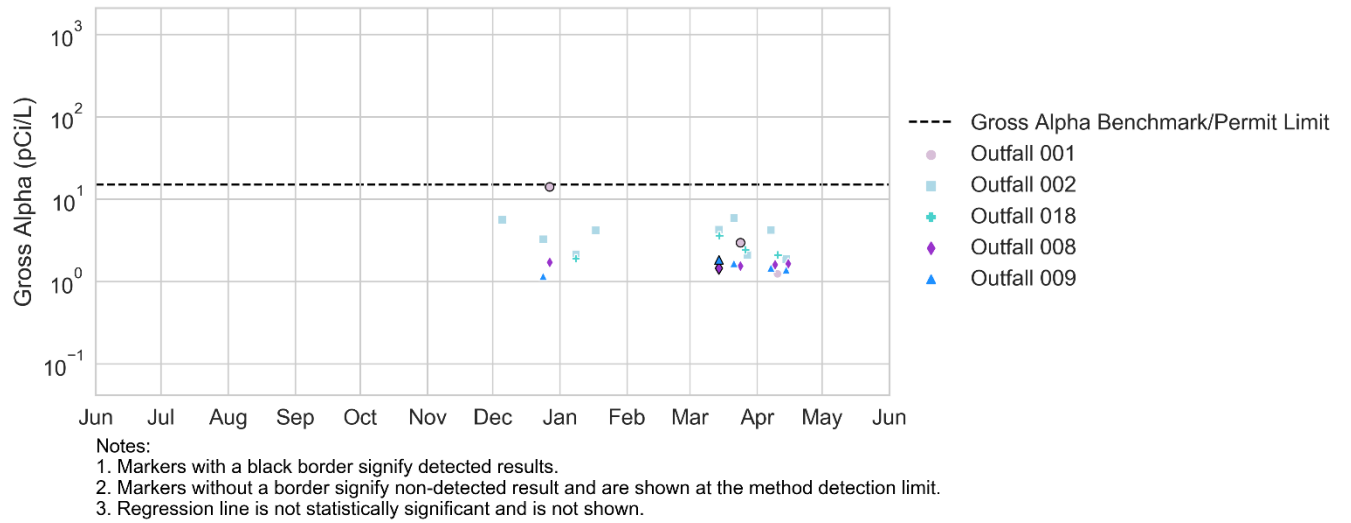


Figure 12. 2019/20 Outfall Gross Alpha Concentrations

2.3. Iron

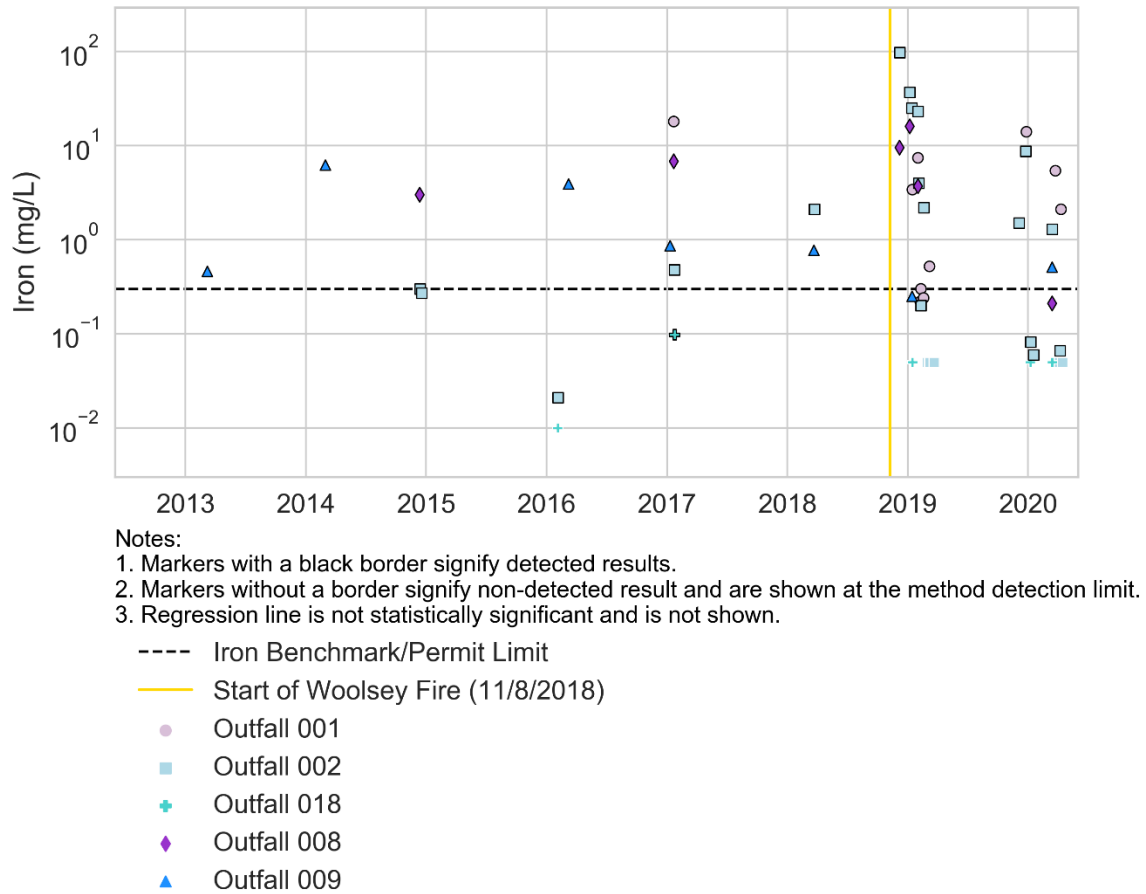


Figure 13. 2012/13-2019/20 Outfall Iron Concentrations and Long-Term Trends (only including outfalls which discharged in 2019/20)

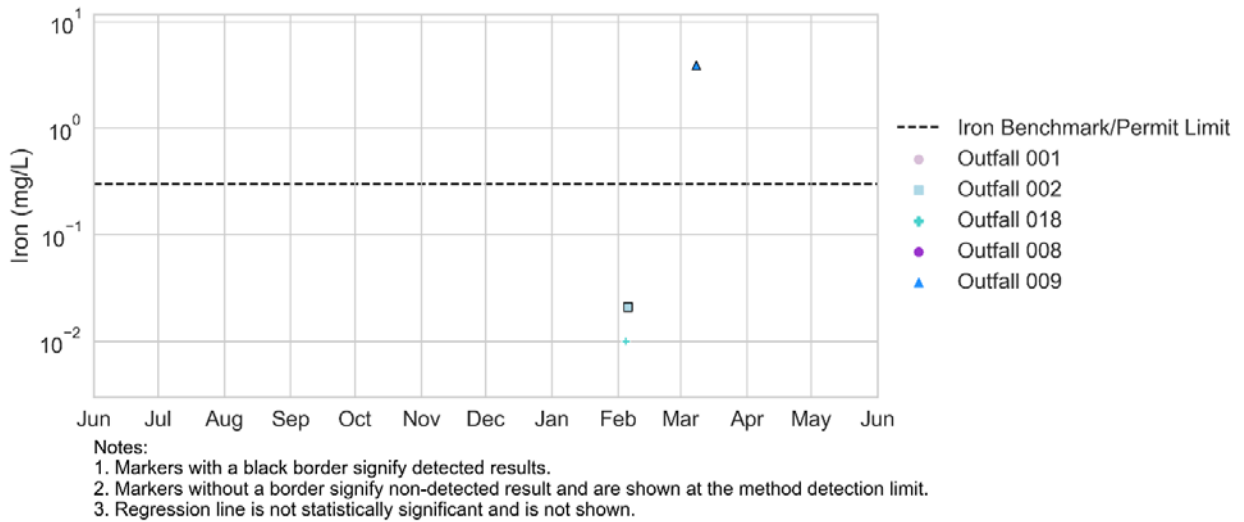


Figure 14. 2015/16 Outfall Iron Concentrations (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

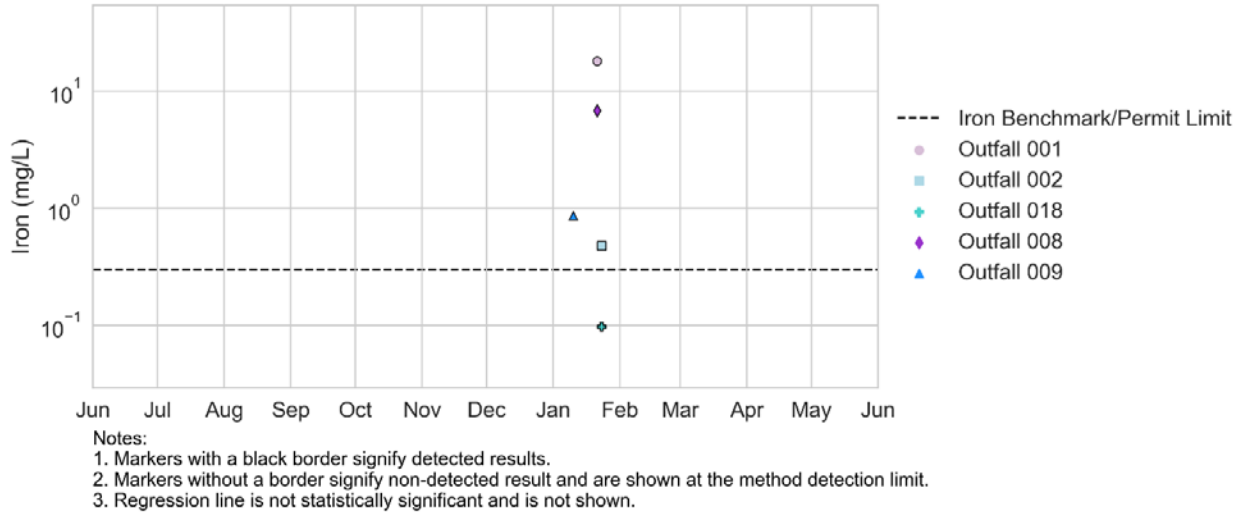


Figure 15. 2016/17 Outfall Iron Concentrations (only including outfalls which discharged in 2019/20)

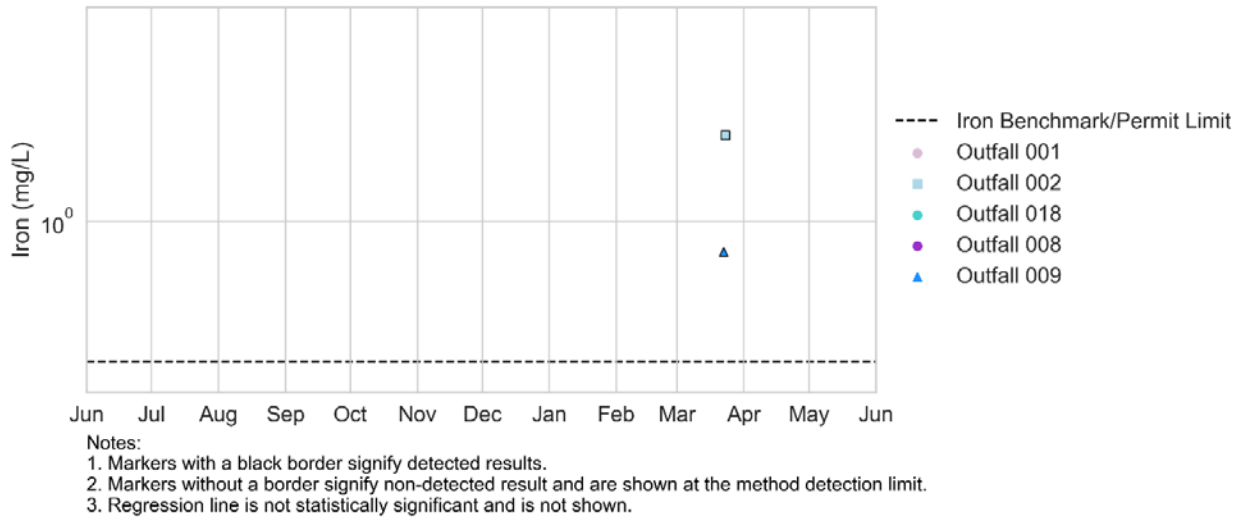


Figure 16. 2017/18 Outfall Iron Concentrations (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

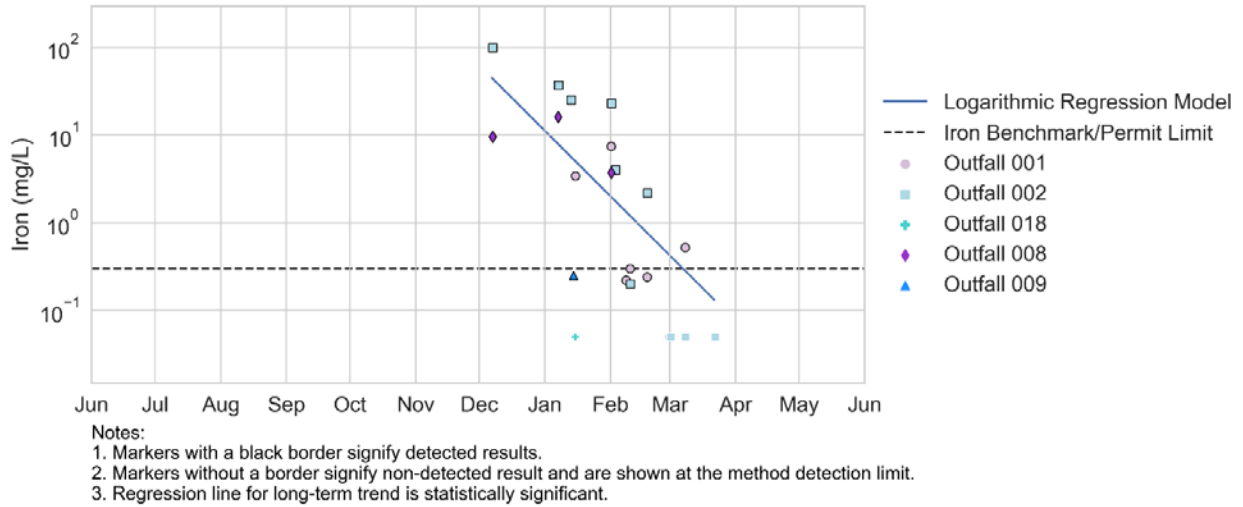


Figure 17. 2018/19 Outfall Iron Concentrations (only including outfalls which discharged in 2019/20)

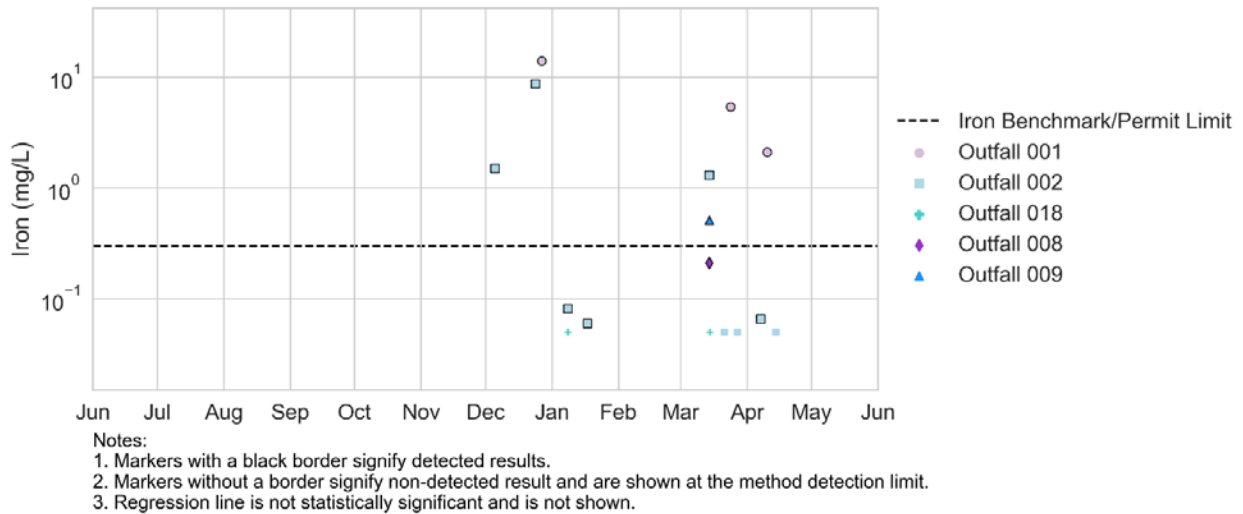


Figure 18. 2019/20 Outfall Iron Concentrations

2.4. Lead

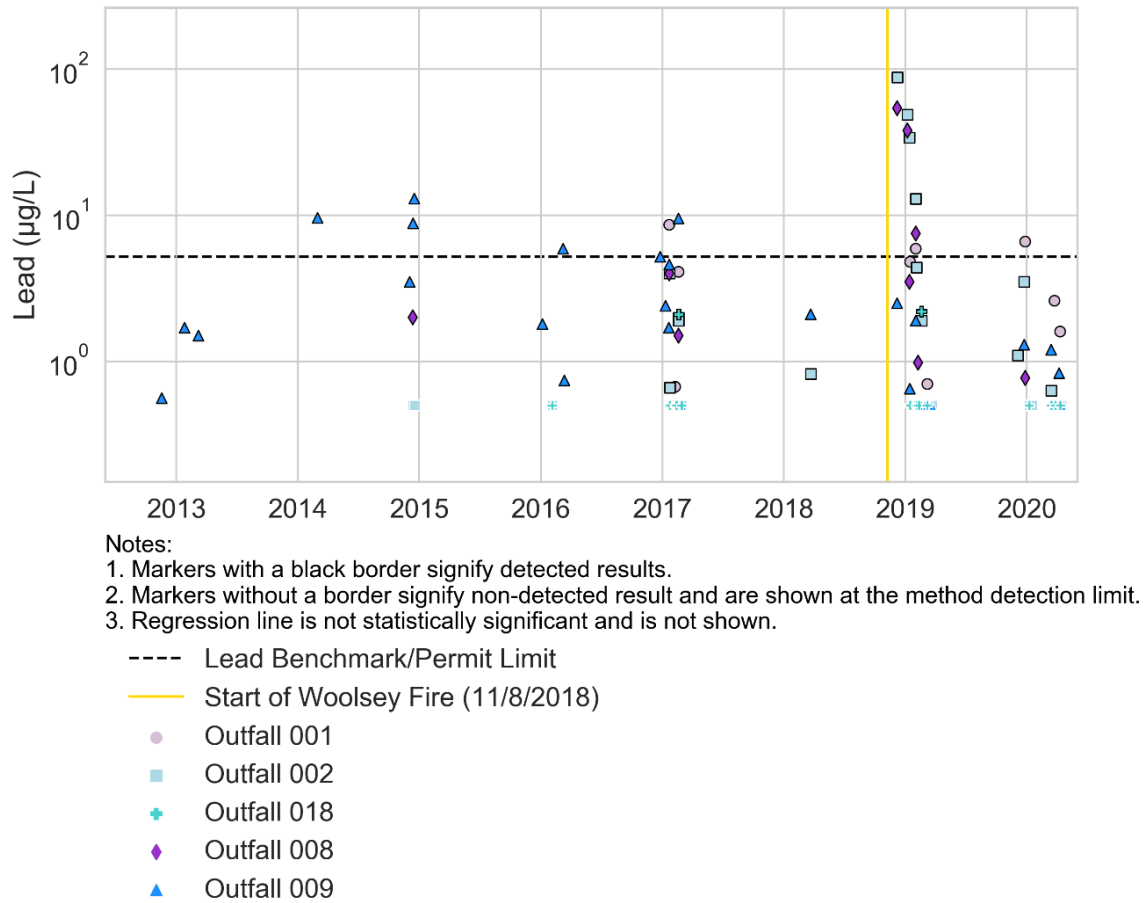


Figure 19. 2012/13-2019/20 Outfall Lead Concentrations and Long-Term Trends (only including outfalls which discharged in 2019/20)

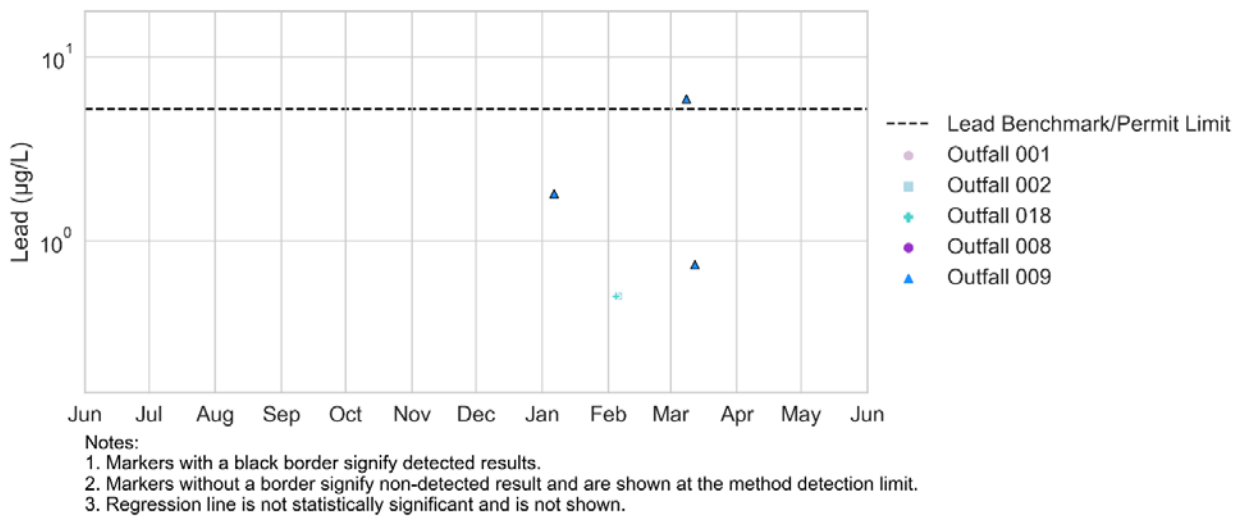


Figure 20. 2015/16 Outfall Lead Concentrations (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

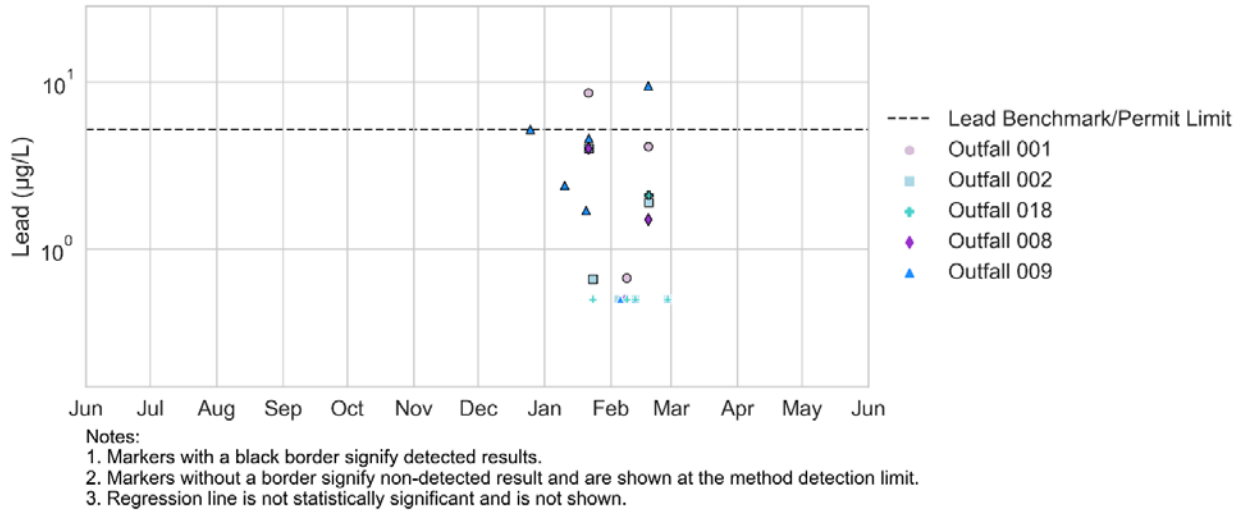


Figure 21. 2016/17 Outfall Lead Concentrations (only including outfalls which discharged in 2019/20)

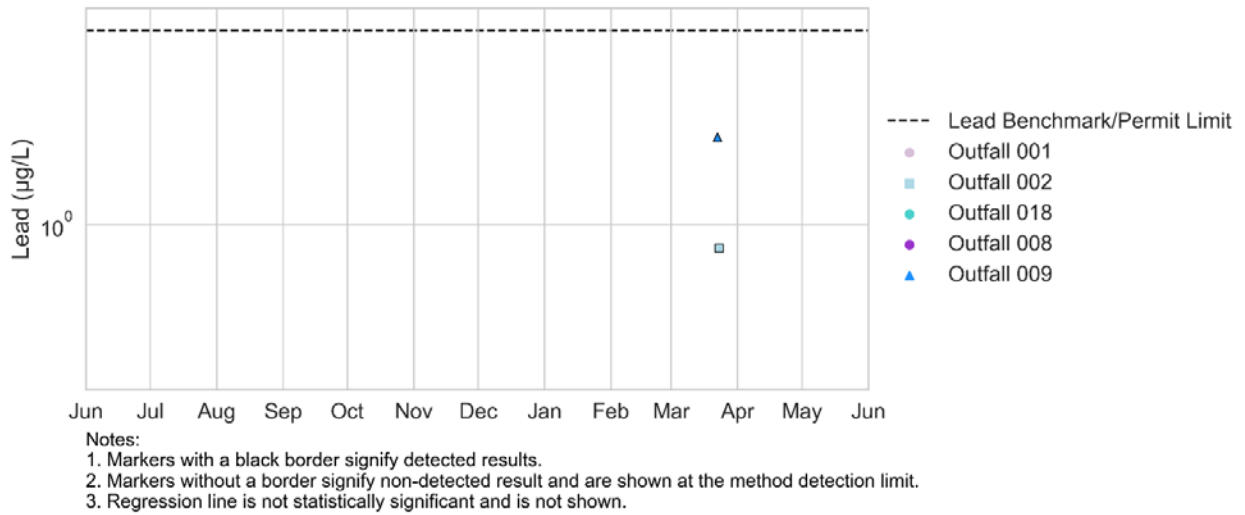


Figure 22. 2017/18 Outfall Lead Concentrations (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

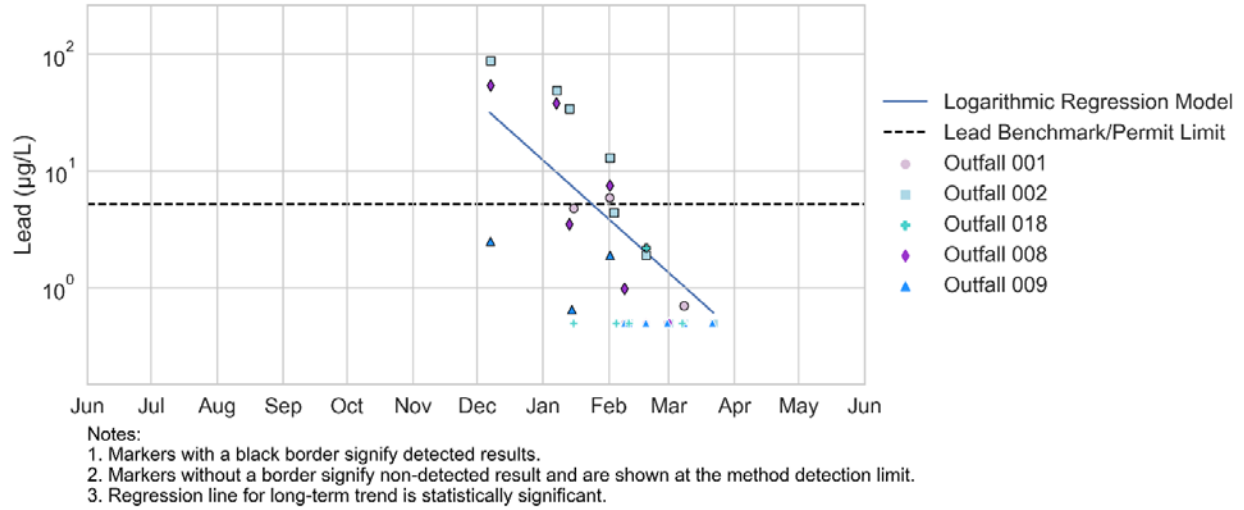


Figure 23. 2018/19 Outfall Lead Concentrations (only including outfalls which discharged in 2019/20)

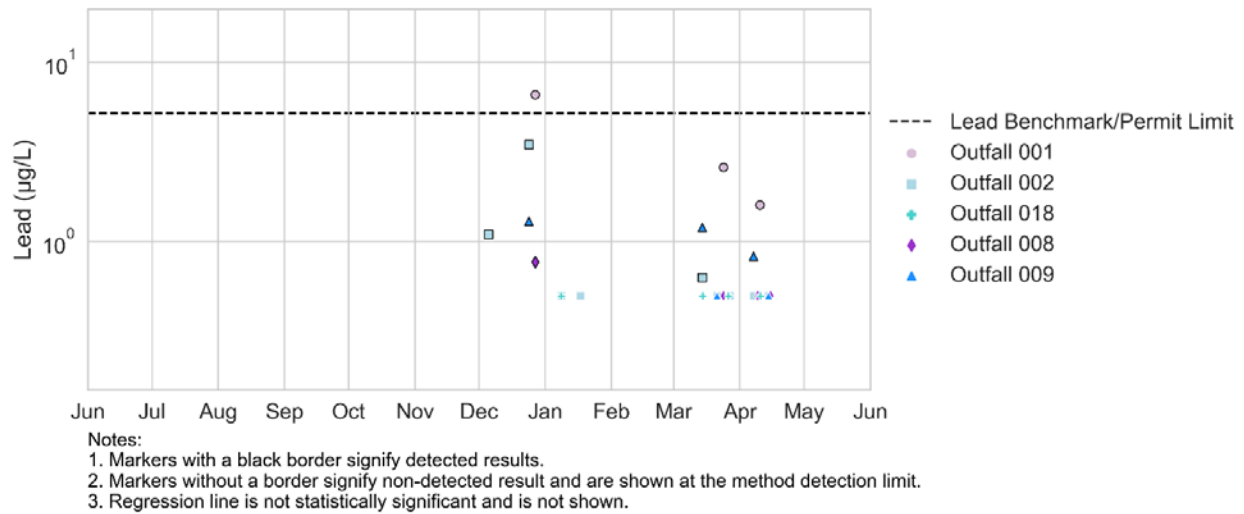


Figure 24. 2019/20 Outfall Lead Concentrations

2.5. Manganese

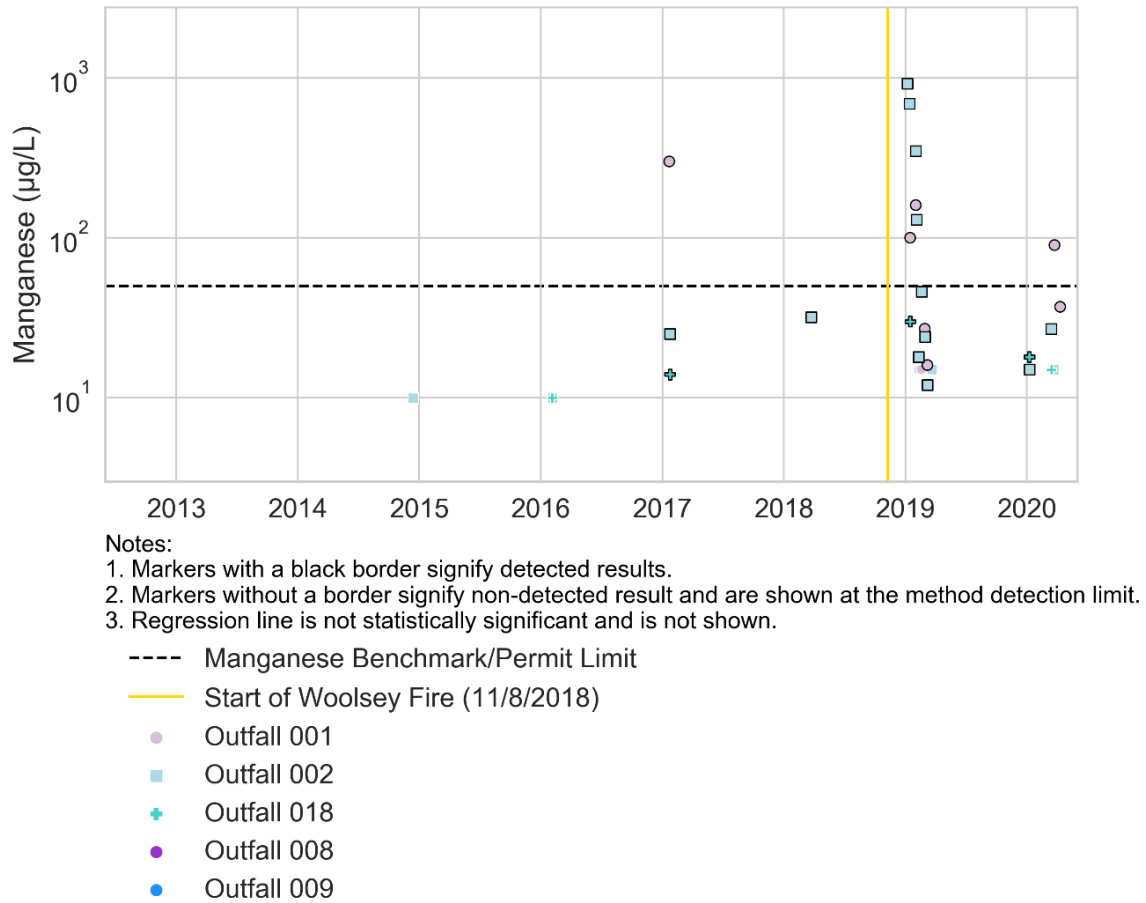


Figure 25. 2012/13-2019/20 Outfall Manganese Concentrations and Long-Term Trends (only including outfalls which discharged in 2019/20)

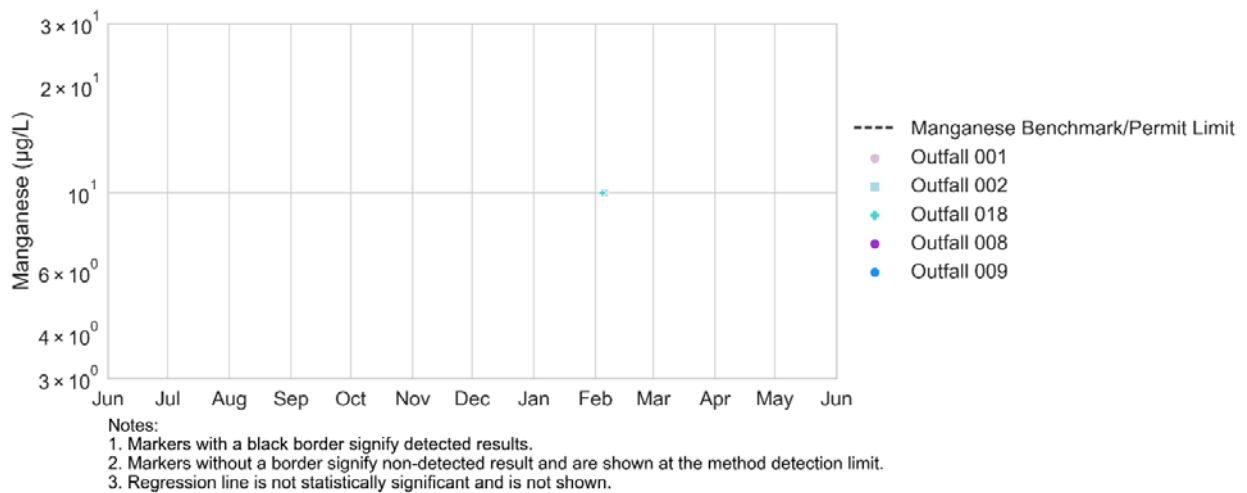


Figure 26. 2015/16 Outfall Manganese Concentrations (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

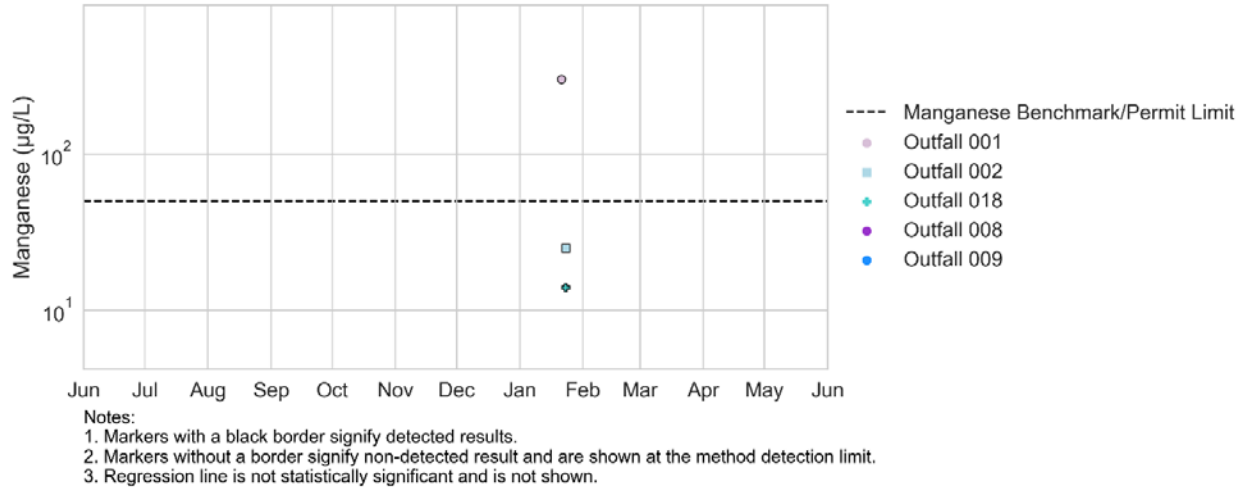


Figure 27. 2016/17 Outfall Manganese Concentrations (only including outfalls which discharged in 2019/20)

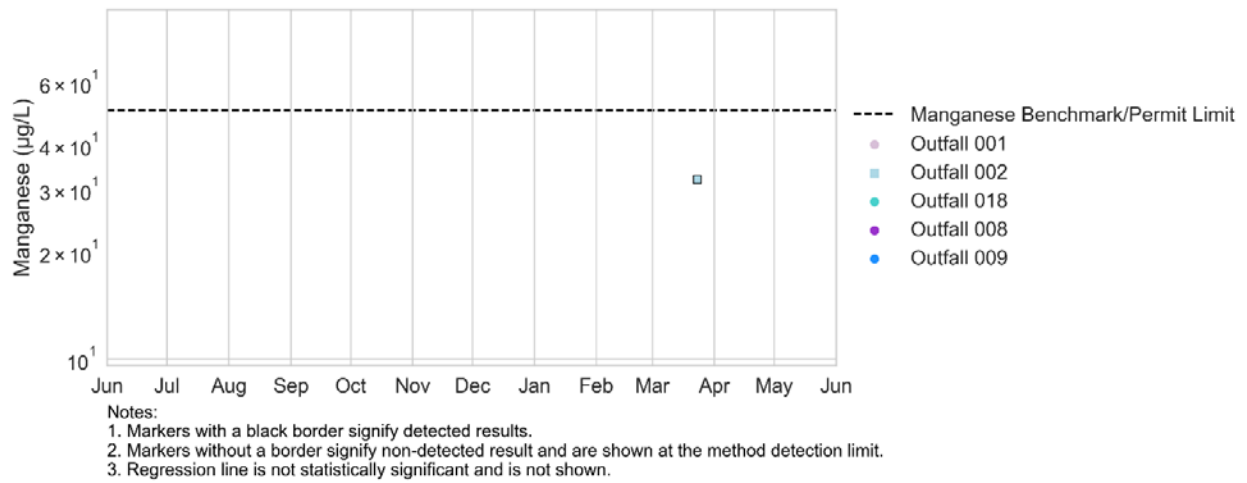


Figure 28. 2017/18 Outfall Manganese Concentrations (only including outfalls which discharged in 2019/20)

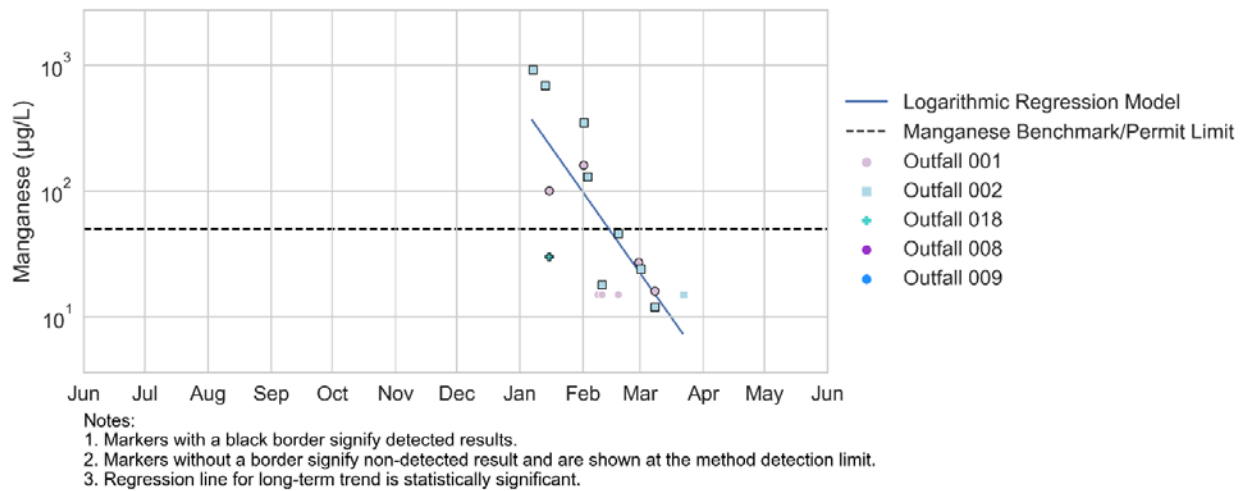


Figure 29. 2018/19 Outfall Manganese Concentrations (only including outfalls which discharged in 2019/20)

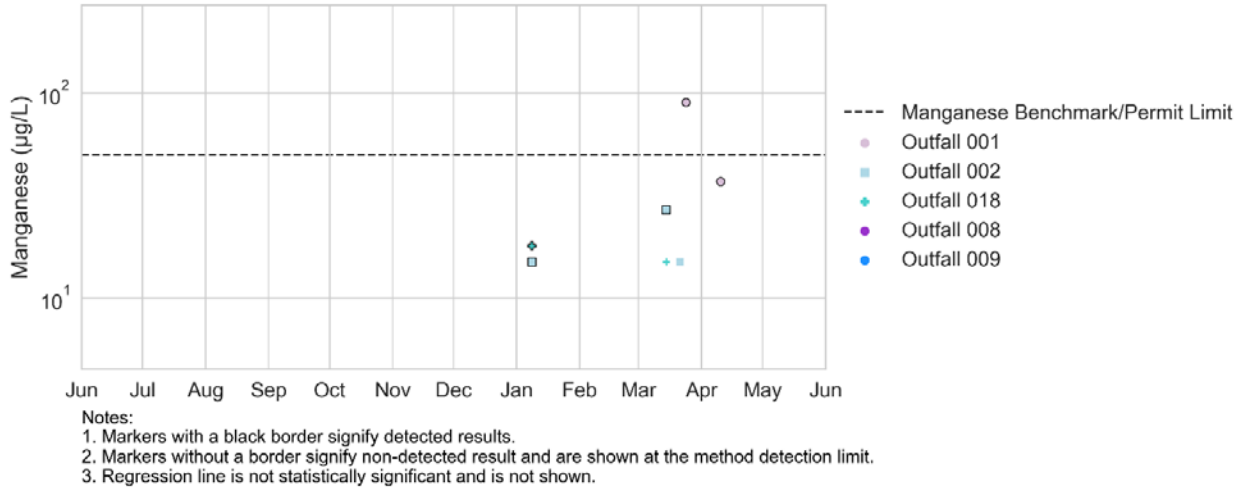


Figure 30. 2019/20 Outfall Manganese Concentrations

2.6. TCDD TEQ (no DNQ)

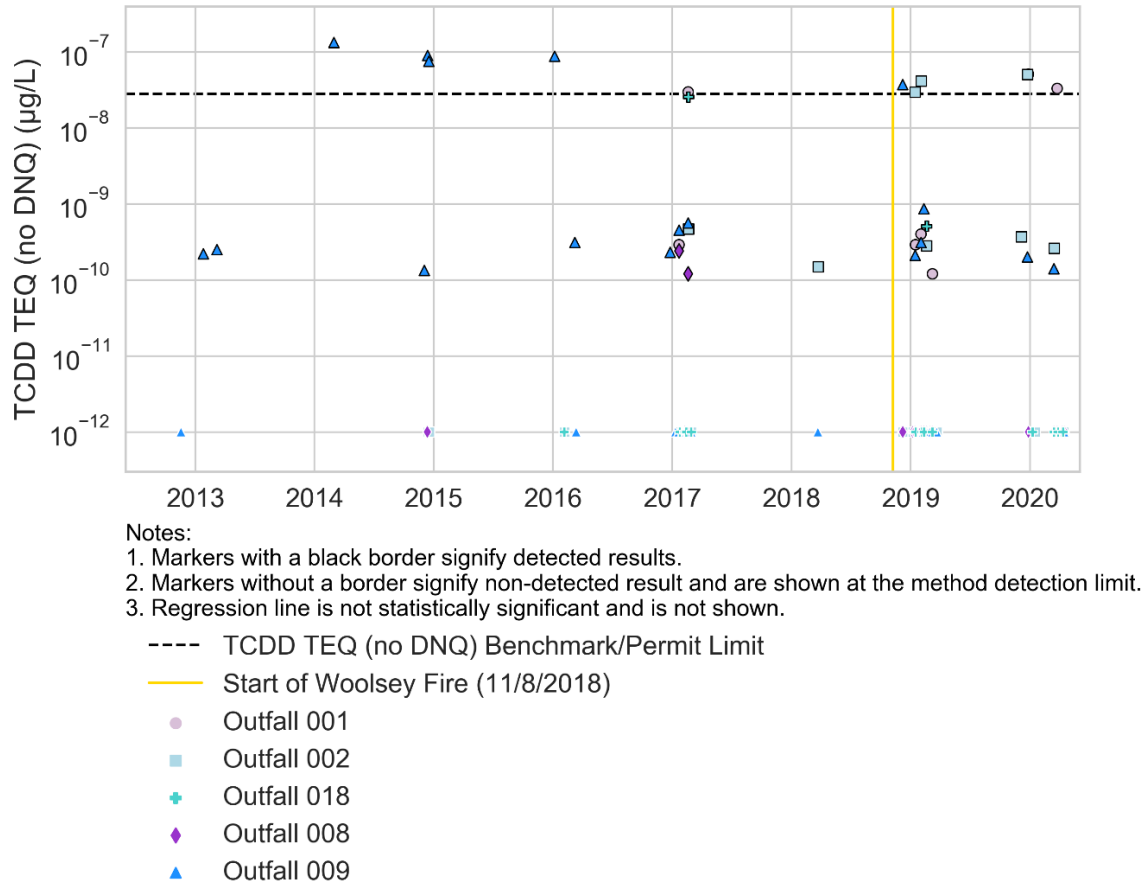


Figure 31. 2012/13-2019/20 Outfall TCDD TEQ (noDNQ) Concentrations and Long-Term Trends (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

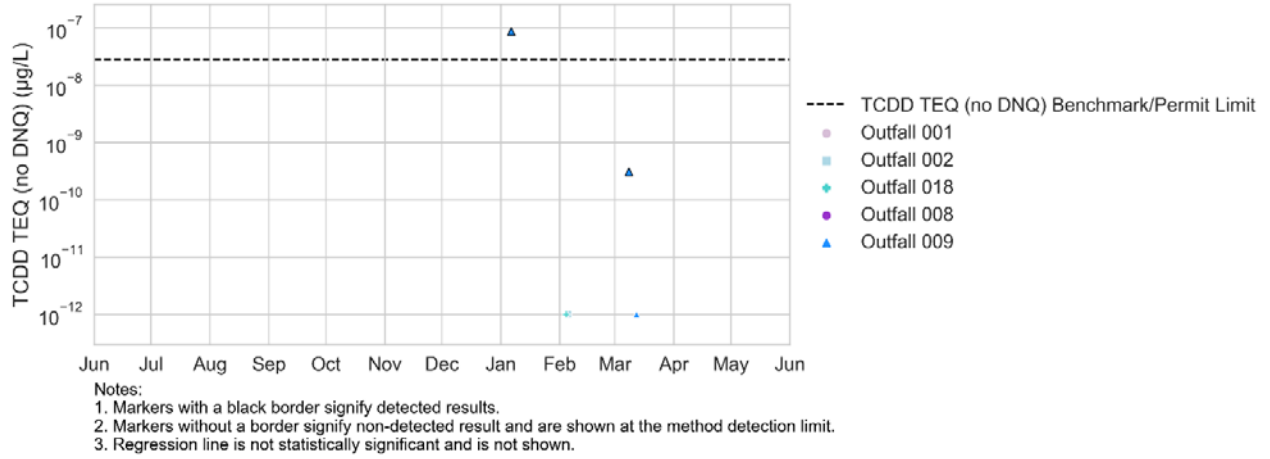


Figure 32. 2015/16 Outfall TCDD TEQ (noDNQ) Concentrations (only including outfalls which discharged in 2019/20)

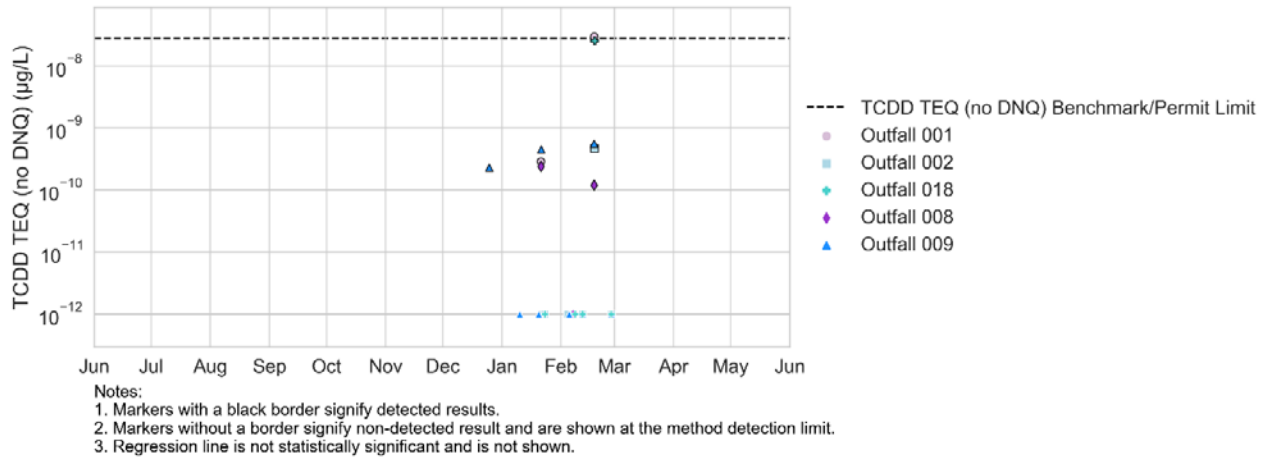


Figure 33. 2016/17 Outfall TCDD TEQ (noDNQ) Concentrations (only including outfalls which discharged in 2019/20)

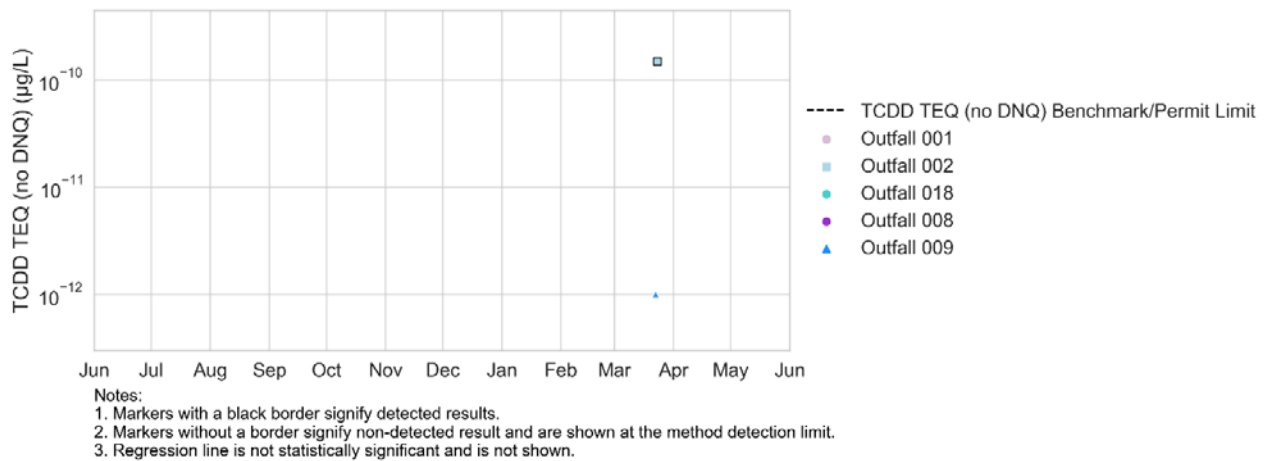


Figure 34. 2017/18 Outfall TCDD TEQ (noDNQ) Concentrations (only including outfalls which discharged in 2019/20)

APPENDIX F: 2019/20 Exceeding Constituent Timeseries Plots

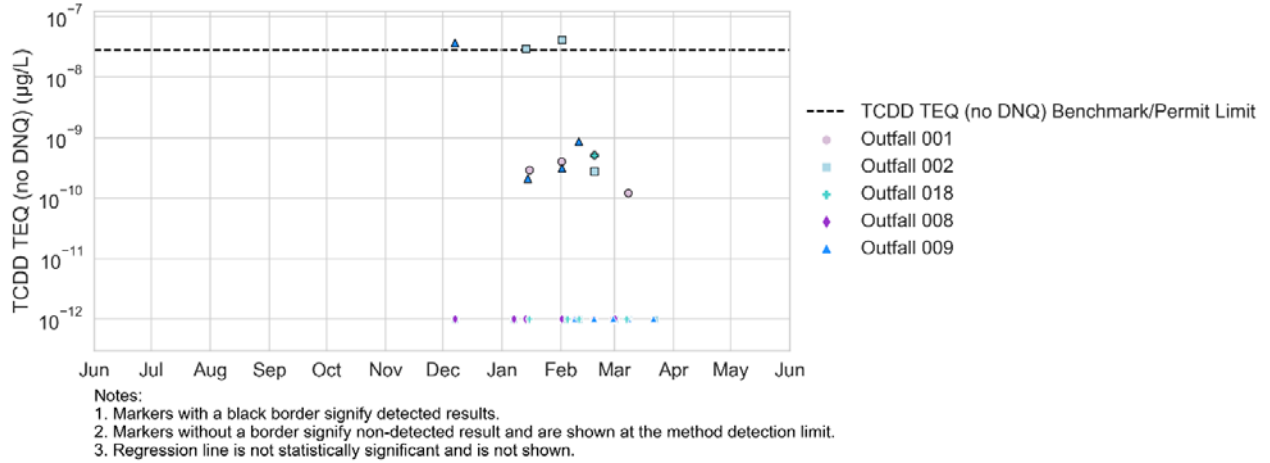


Figure 35. 2018/19 Outfall TCDD TEQ (noDNQ) Concentrations (only including outfalls which discharged in 2019/20)

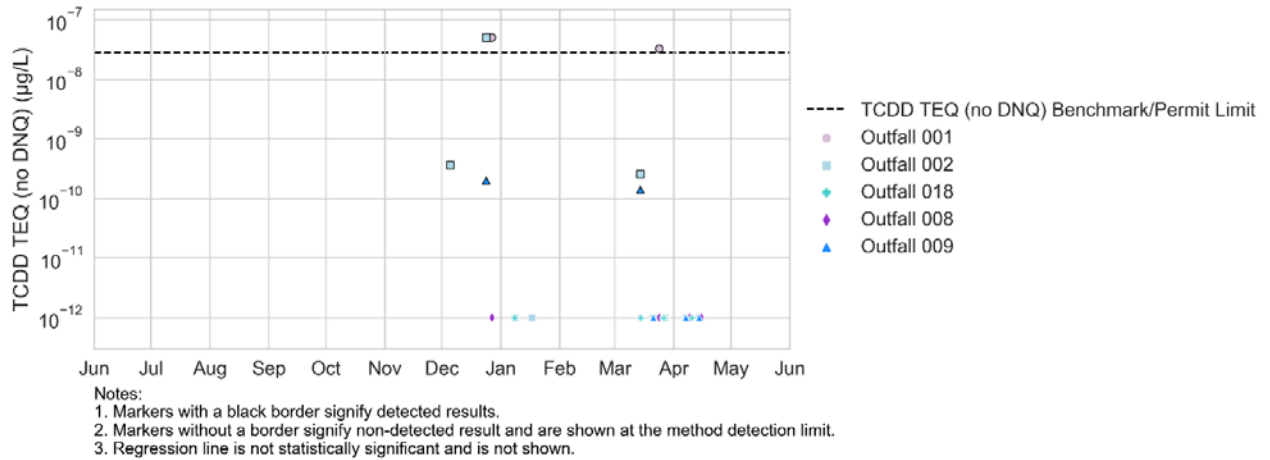


Figure 36. 2019/20 Outfall TCDD TEQ (noDNQ) Concentrations

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Appendix G: Regional Stormwater Comparison

Prepared by

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LA0592
October 2020

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Table 1. Summary of Method Detection Limits (MDLs)1

Acronyms

CEDEN	California Environmental Data Exchange Network
BMP	Best Management Practice
DNQ	Detected not Quantified
MDL	Method Detection Limit
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NPDES	National Pollutant Discharge Elimination System
ND	Not Detected
pCi/L	picocuries per liter
PS	Particulate Strength
POTW	Public Owned Treatment Works
SSFL	Santa Susana Field Laboratory
TCDD	Tetrachlorodibenzo-p-dioxin
TEQ	Toxic Equivalence
TSS	Total Suspended Solids

1. Introduction

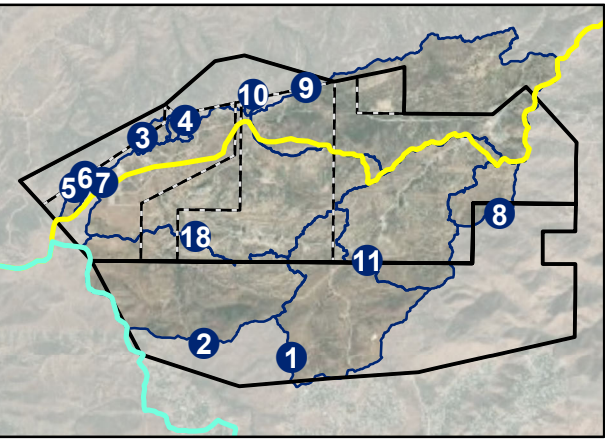
In order to answer a frequent question of how Santa Susana Field Lab (SSFL) stormwater quality compares to surrounding creeks and rivers, wet weather surface water quality monitoring results from regional monitoring programs were compiled. Constituents that have exceeded SSFL NPDES limits and benchmarks in the past two years were included. Publicly available data were mined from the California Environmental Data Exchange Network (CEDEN) and the Regional Water Quality Control Board that are reported for various surface water monitoring programs. Figure 1 shows the locations of the regional stormwater sampling locations that were used in this comparison. The Calleguas Creek, Los Angeles River, and Malibu Creek watersheds were selected based on their proximity to SSFL. SSFL Outfalls 001, 002, 008, 011, and 018 discharge into the Los Angeles River Watershed, while the rest of the site's outfalls discharge into the Calleguas Creek Watershed. As shown in Figure 1, the Los Angeles River Watershed is the most urbanized of these three. Malibu Creek Watershed has a mix of urban and open space, while the Calleguas Creek Watershed has more significant amounts of agriculture mixed in with urban areas. There were no regional stormwater results for gross alpha or dioxins (TCDD TEQ (no DNQ)), so for these parameters all available statewide results from CEDEN were used. All monitoring locations are shown in Figure 2.

The following boxplots reflect 2001 - 2020 wet weather sample results from the Calleguas Creek Watershed, 2006 - 2018 wet weather results from the Los Angeles River Watershed, and 2006 - 2019 wet weather results from the Malibu Creek Watershed (Figures 3-16). These data were compared to SSFL stormwater data from reporting year 2013/14 through reporting year 2019/20. Dry weather sampling results¹ were excluded from the offsite data presented here, to focus the comparison on wet weather (stormwater) conditions only, whereas dry weather samples can reflect other non-stormwater sources (e.g., POTW effluent, groundwater, and other NPDES discharges). SSFL data similarly reflect stormwater-only flows.

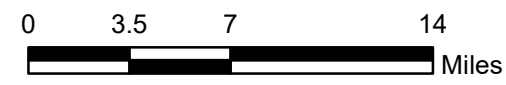
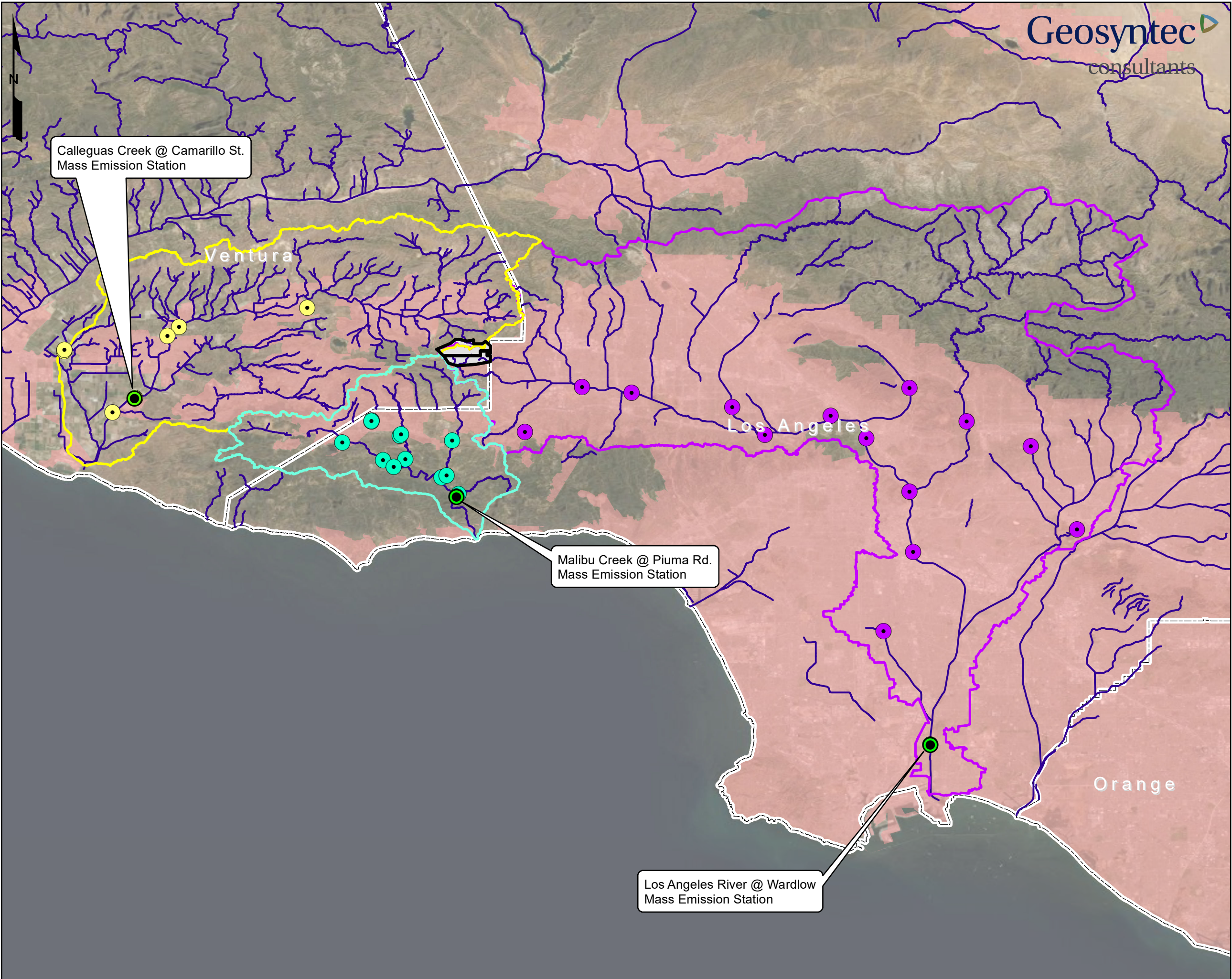
The concentration boxplots show non-detect results at the method detection limit (MDL) where available, or average MDL where no MDL was reported for the sample. A summary of the MDLs for SSFL samples and offsite receiving water samples is shown in Table 1. MDLs may vary for a constituent depending on the analytical method used and if any dilutions were necessary due to interferences in the sample.

Particulate strength (PS) is the constituent concentration associated with particulate matter in stormwater and is a means to normalize stormwater constituent concentrations by TSS. Normalizing constituent concentrations by TSS is helpful for comparing solid concentrations between sample locations. This tool is useful for the constituents that are highly associated with particulates and are not found in significant quantities in filtered (dissolved) forms. The particulate strength boxplots show the total minus dissolved concentration divided by the total suspended solids (TSS) concentration. These boxplots only show results where results for the concentration of the "total" fraction (e.g. total iron) were detected. For the few samples where the dissolved concentration was not detected in the sample, the MDL was used in the calculation. Where the dissolved concentration was greater than the total concentration, the average dissolved fraction for the watershed was used to estimate the dissolved concentration.

¹ Wet weather samples were differentiated from dry weather samples using historical precipitation data from several rain gauges unique to each watershed (NOAA CDO and MesoWest).



- Legend**
- Regional Stormwater Locations**
- Mass Emission Stations
 - Calleguas Creek Stations
 - LA River Stations
 - Malibu Creek Stations
 - California Counties
 - SSFL Property Boundary
 - Calleguas Creek
 - LA River
 - Malibu Creek
 - U.S. Census Urbanized Area

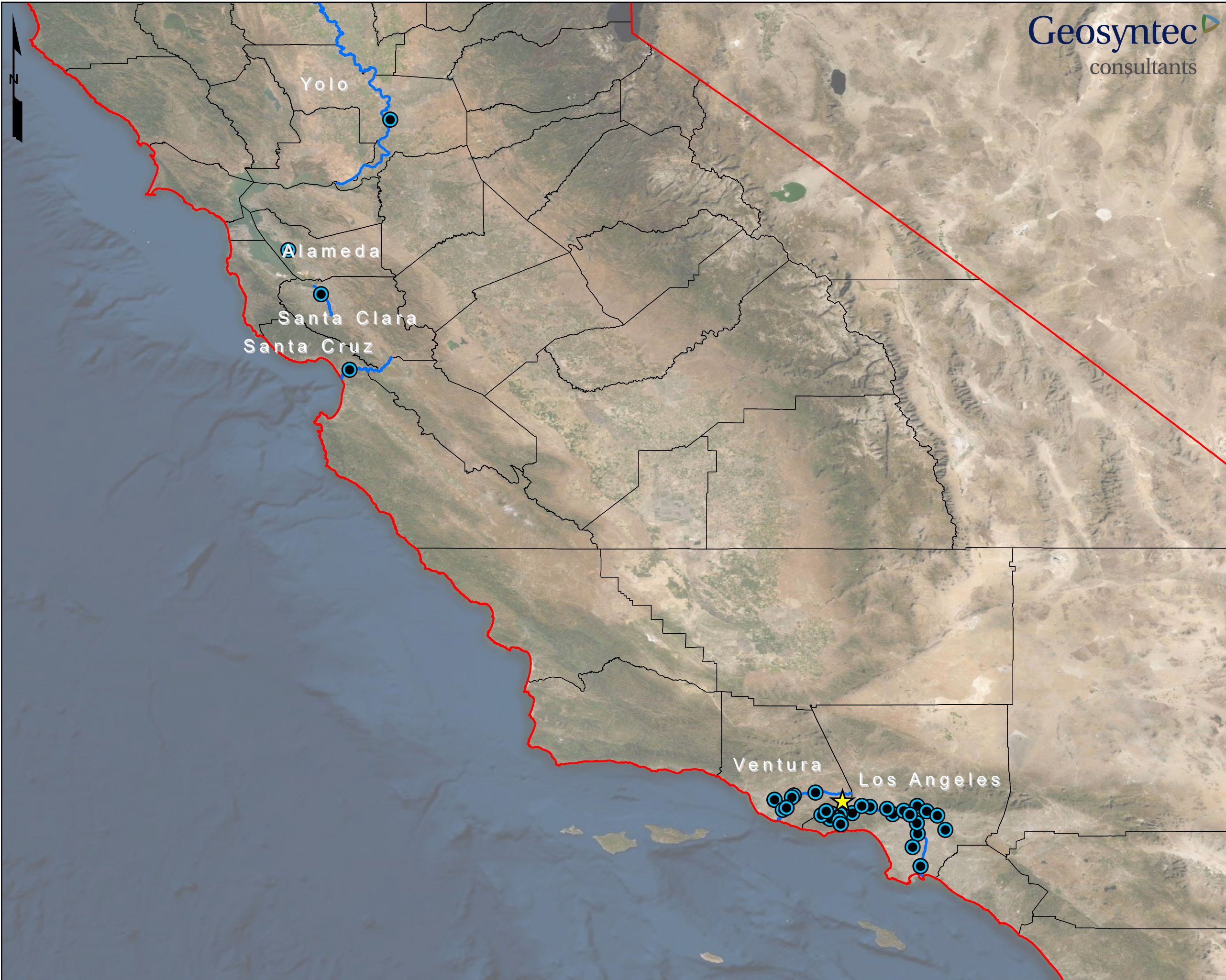


Los Angeles Area Regional Stormwater Monitoring Locations

Santa Susana Field Laboratory
Ventura County, CA

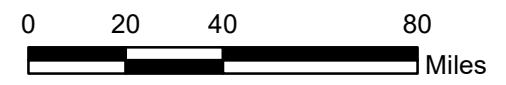
October 2020

Date: 10/21/2020, Path: Z:\GIS\Projects\Boeing\SSFL\2020 LA0592LXX_SSFL_LA0592LXX_SSFL_LA0592LXX_Update.mxd, User: lmathews



Legend

- Regional Stormwater Locations
- SSFL
- State Boundary
- California Counties all
- Recieving waters



**Statewide Regional Stormwater
Monitoring Locations**

Santa Susana Field Laboratory
Ventura County, CA

October 2020

Date: 10/4/2020, Path: Z:\GIS\Projects\Boeing\SSFL\2020 LA0592\SSFL_LA0592\SSFL_LA0592\RegionalComparison_CA.mxd, User: LMathews

APPENDIX G: Regional Stormwater Comparison

Table 1. Summary of Method Detection Limits (MDLs)

Analyte	Offsite Samples			SSFL Samples		
	Min	Mean	Max	Min	Mean	Max
Arsenic	0.012	0.16	0.37	0.5	6	8.9
Arsenic, dissolved	0.012	0.19	0.21	0.5	6	8.9
Copper	0.003	0.21	0.65	0.5	0.5	0.5
Copper, dissolved	0.009	0.21	0.5	0.5	0.5	0.5
Cyanide	0	0.0036	0.005	2.5	2.5	3
Gross Alpha	0.81	1.4	3	0	2.3	36
Iron	0.0013	33	50	0.008	5	50
Iron, dissolved	0.0013	47	50	0.008	0.94	50
Lead	0.006	0.074	0.2	0.5	0.5	0.5
Lead, dissolved	0.007	0.081	0.2	0.5	0.5	0.5
Manganese	0.003	0.052	0.1	0.5	10	20
Manganese, dissolved	Not sampled	Not sampled	Not sampled	0.05	9.7	15
Nickel	0.006	0.33	0.91	0.5	4.7	5
Nickel, dissolved	0.0061	0.48	0.5	0.5	4.6	5
Nitrate + Nitrite as Nitrogen (N)	0	3.9	83	0.055	0.066	0.28
Nitrate as Nitrogen (N)	0	0.028	0.3	0.055	0.061	0.28
Selenium	0.012	0.29	0.5	0.5	0.53	1.7
Selenium, dissolved	0.012	0.34	0.5	0.5	0.5	0.69
Sulfate	0	0.9	50	0.25	0.97	13
TCDD TEQ (no DNQ)	4.9E-09	1.5E-07	2.7E-07	1.0E-12	1.0E-12	1.0E-12
Zinc	0.02	0.62	4.7	2.5	11	12
Zinc, dissolved	0.074	0.62	2	0.012	11	12
Total Suspended Solids	0	1.5	13	0.5	2.6	33

2. Results

The following plots in Figures 3-15 show stormwater concentrations at SSFL Outfalls and nearby surface waters grouped by major watershed: Calleguas Creek, Los Angeles River, and Malibu Creek. SSFL Outfall 018 is shown separately because these samples are unique as they reflect stormwater treated by the Silvernale active stormwater treatment system.

Based on visual comparison of the grouped data plotted below, SSFL stormwater discharges have lower concentrations, on average, than regional surface waters for copper, cyanide, lead, manganese, nickel, nitrate + nitrite as nitrogen, selenium, sulfate, TCDD TEQ (no DNQ) (based on statewide data), and zinc.

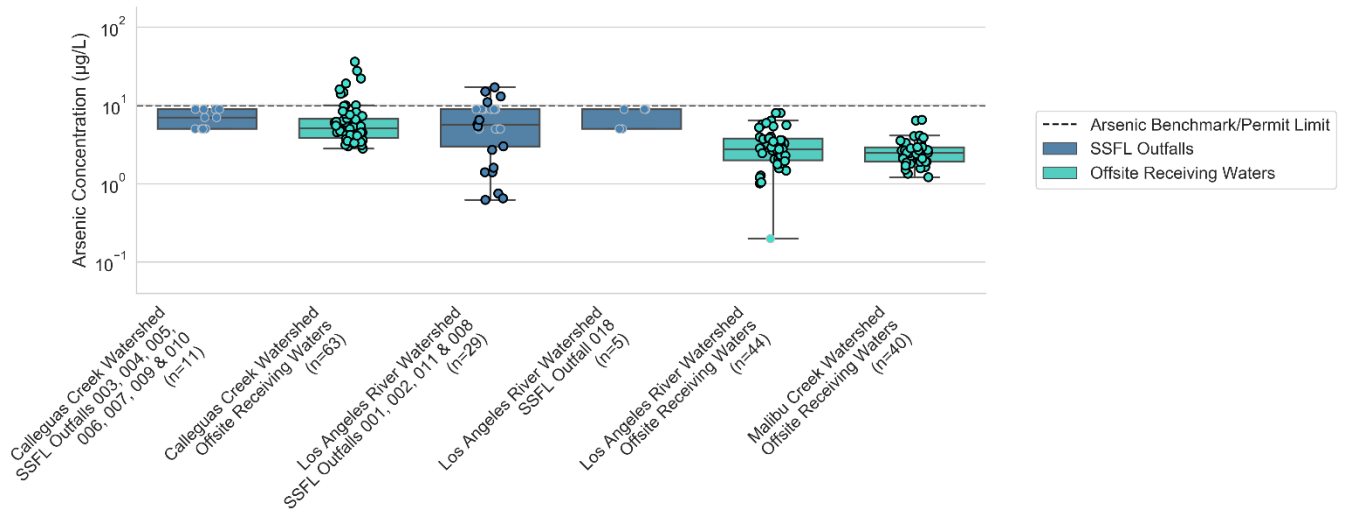
SSFL stormwater discharges also have lower particulate strengths, on average, than regional surface waters for arsenic, copper, cyanide, lead (except Outfall 009 which has an average about 1.5x the offsite average, but less than the 75th percentile of offsite concentrations), nickel (except for two unusually results at Outfall 009) and zinc.

SSFL discharges have slightly higher average concentrations for arsenic (though only relative to the Los Angeles River and Malibu Creek) and, potentially, gross alpha, though this dataset is very limited. For arsenic, the lower particulate strength in SSFL stormwater indicates these concentrations are likely TSS driven (i.e., there may be more soil in the SSFL samples than the creek/river samples, but this soil is lower in arsenic than elsewhere) and is consistent with the understanding of arsenic in stormwater being mostly from natural soils. For gross alpha, there is no particulate strength data for offsite locations, and the concentration data (6 samples, all from the Sacramento area in 2013) are too few to allow comparison. Similarly, there is no dioxin (TCDD TEQ (no DNQ)) particulate strength data for offsite locations, and the concentration data (from central and northern California area in 2009/10). More research should be done next year to identify comparable stormwater and/or wet weather creek and river data for these important parameters.

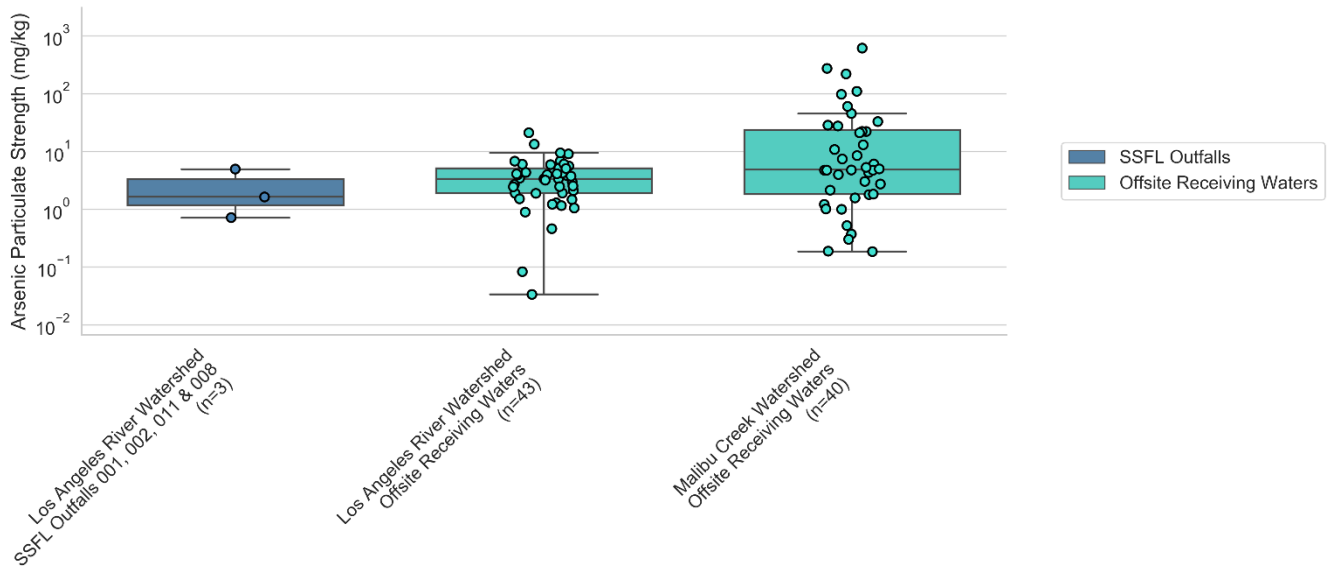
Iron particulate strengths in SSFL stormwater are slightly higher than nearby receiving waters. This may be due to differences in geology or sources of suspended solids (the other watersheds, particularly the Los Angeles River, have greater urban area, unlike SSFL, and lower percentages of undeveloped area that contributes iron-rich natural soils).

In summary, SSFL stormwater quality is comparable to or better than that of regional surface waters, with few exceptions as described above.

2.1. Arsenic



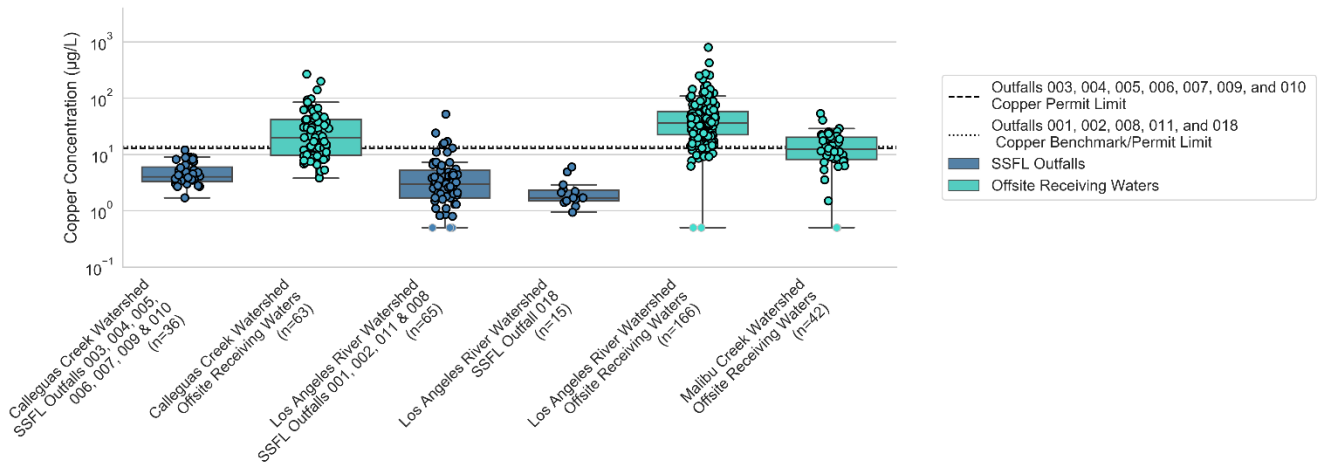
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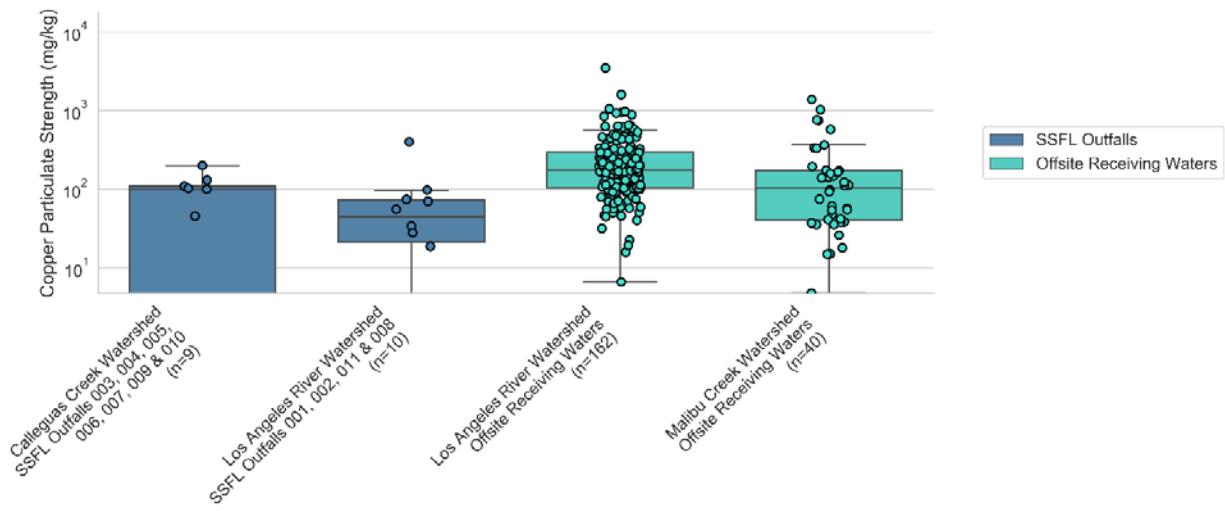
Note: Only detected results are shown.

Figure 3. Regional stormwater arsenic concentration and particulate strength

2.2. Copper



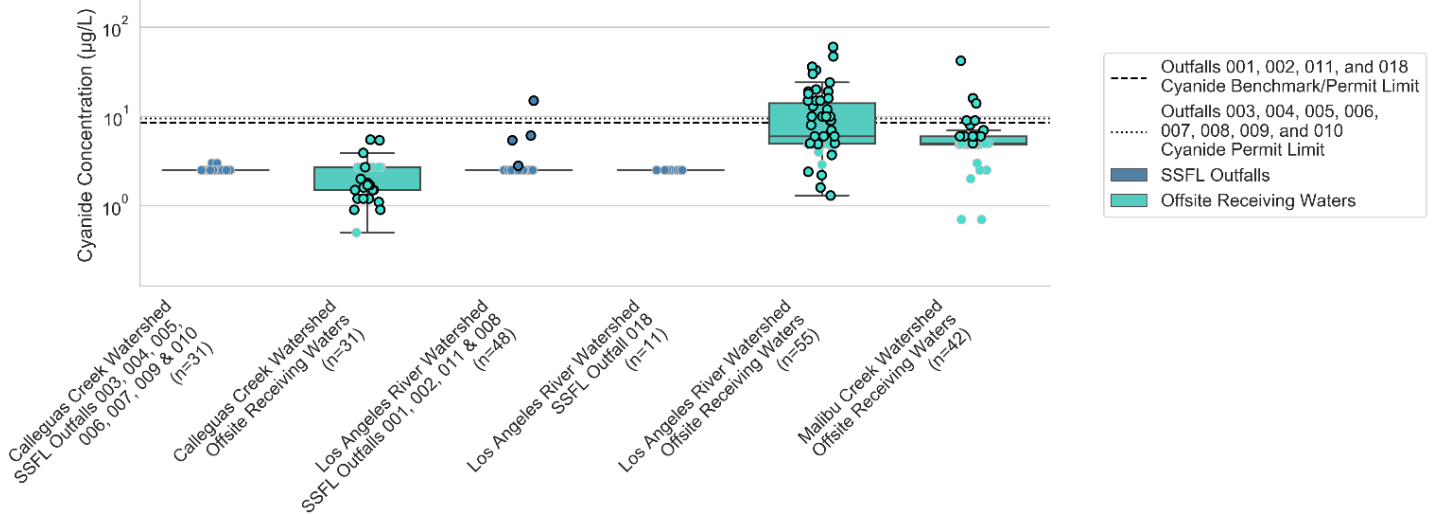
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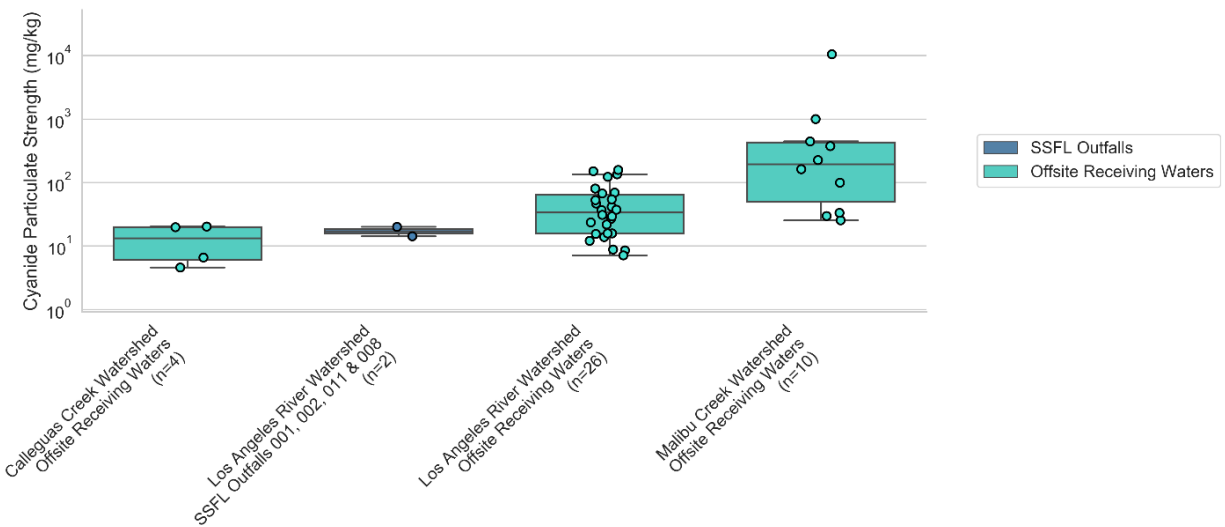
Note: Only detected results are shown.

Figure 4. Regional stormwater copper concentration and particulate strength

2.3. Cyanide



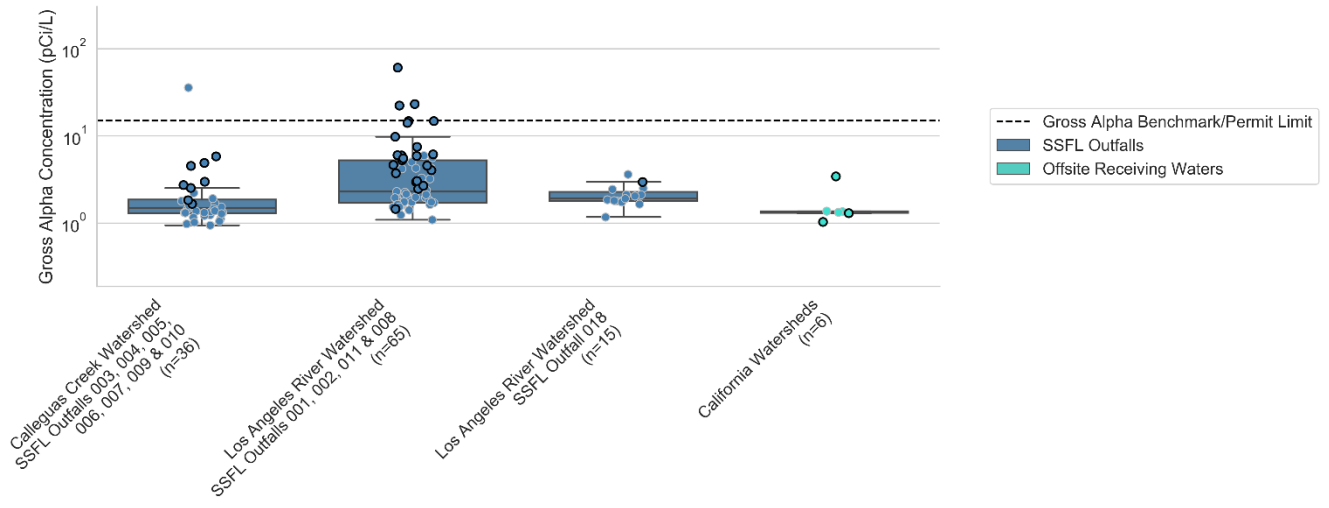
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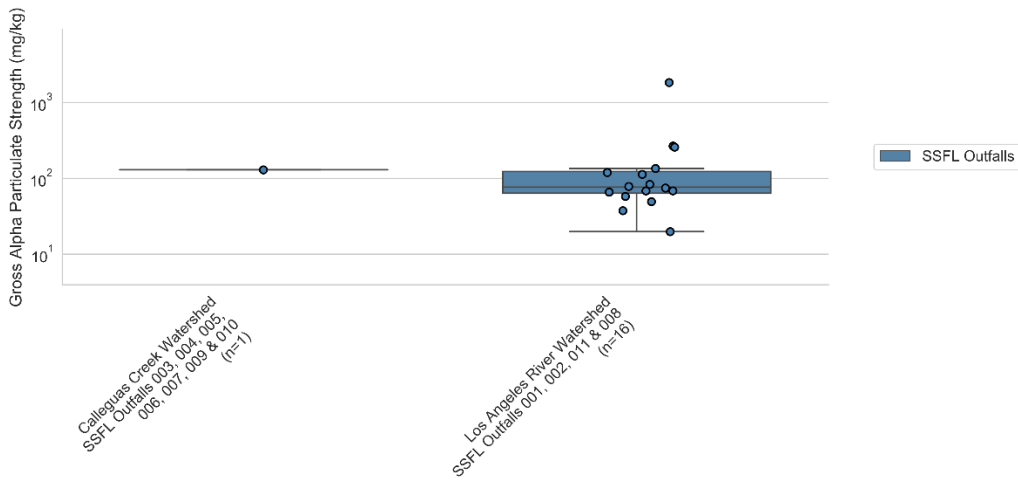
Note: Only detected results are shown.

Figure 5. Regional stormwater cyanide concentration and particulate strength

2.4. Gross Alpha



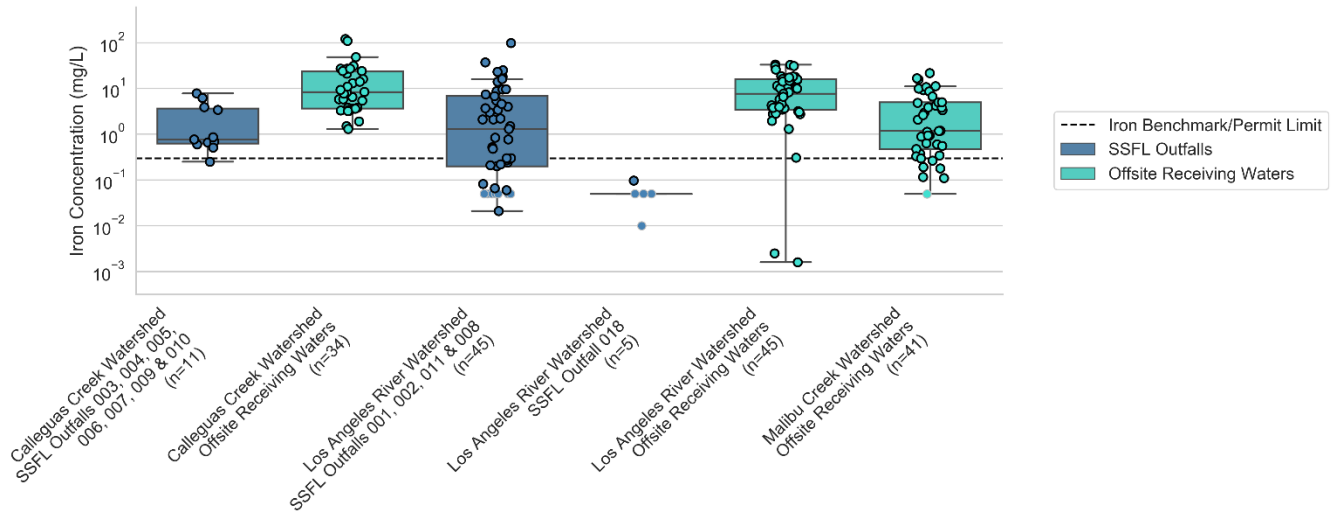
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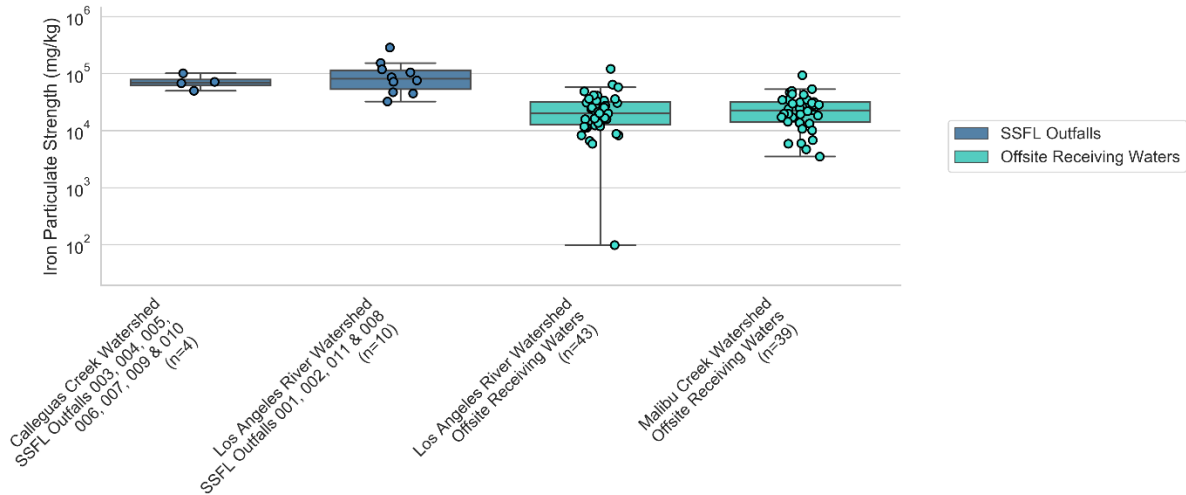
Note: Only detected results are shown.

Figure 6. Regional stormwater gross alpha concentration and particulate strength

2.5. Iron



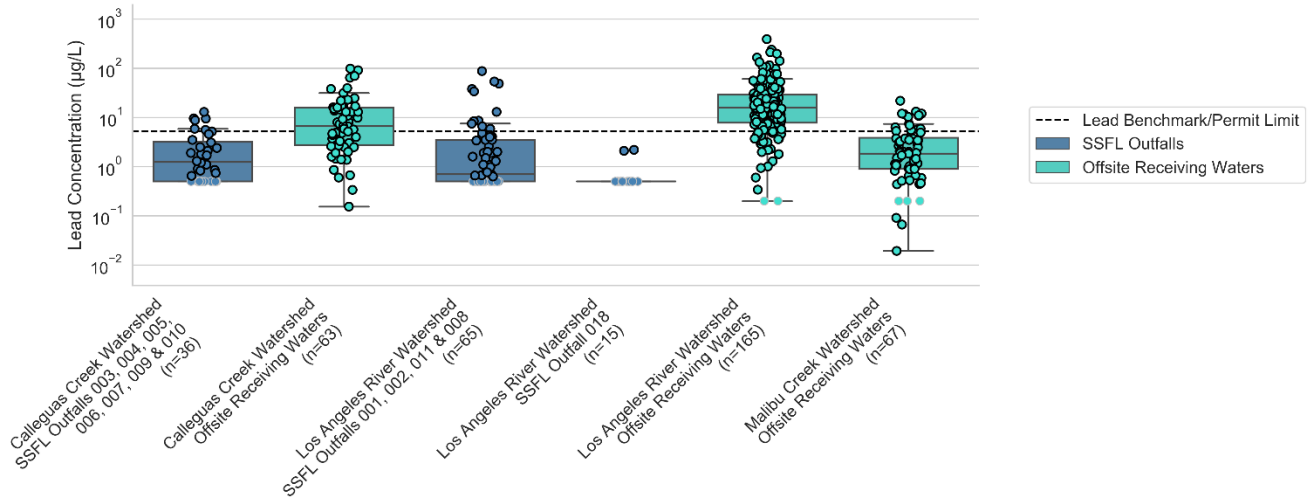
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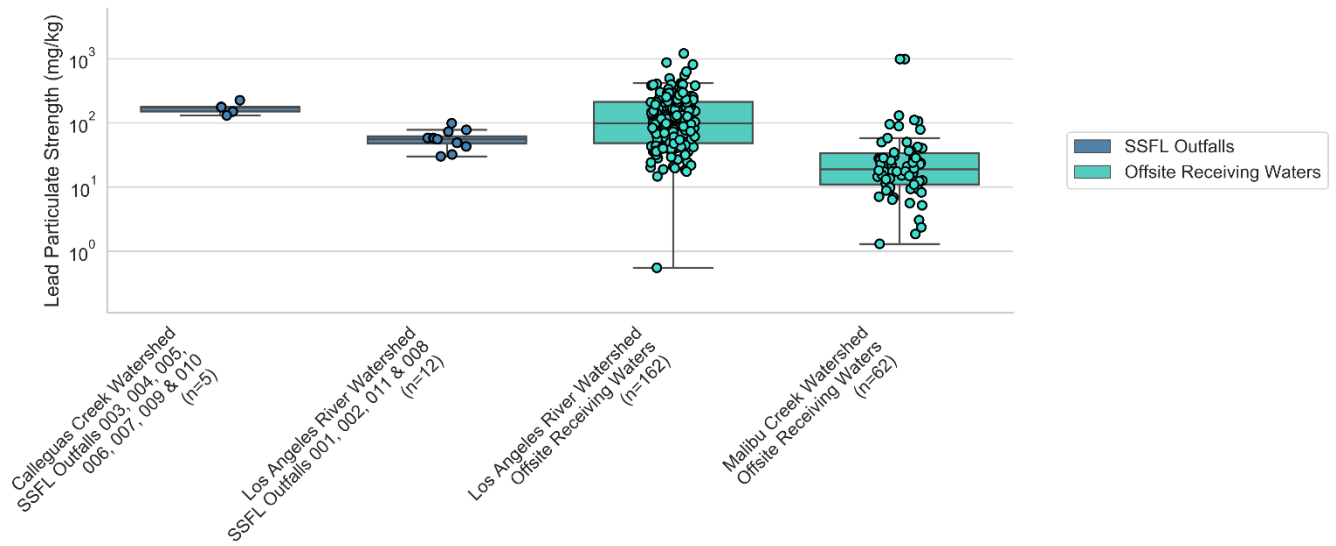
Note: Only detected results are shown.

Figure 7. Regional stormwater iron concentration and particulate strength

2.6. Lead



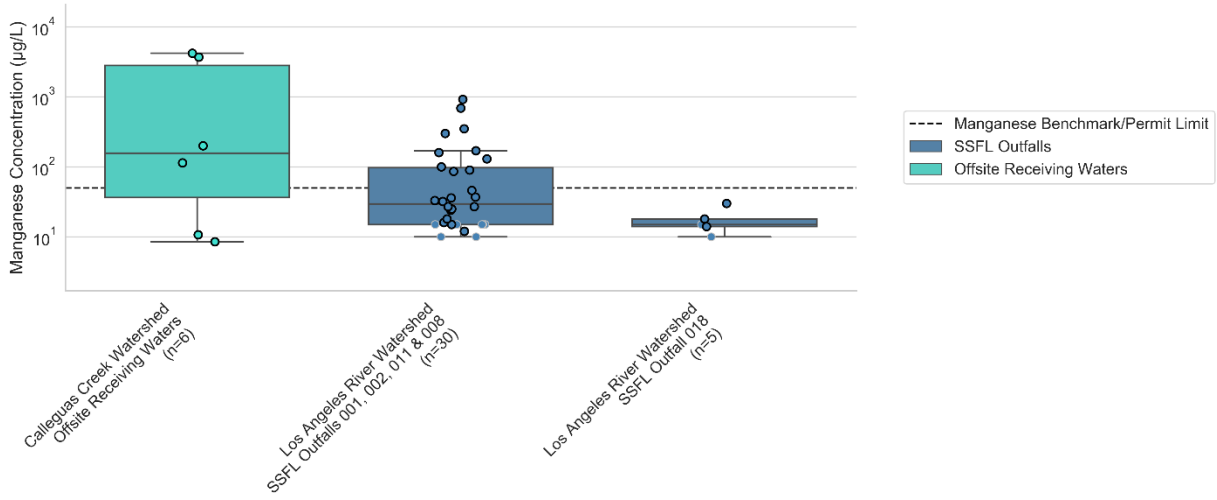
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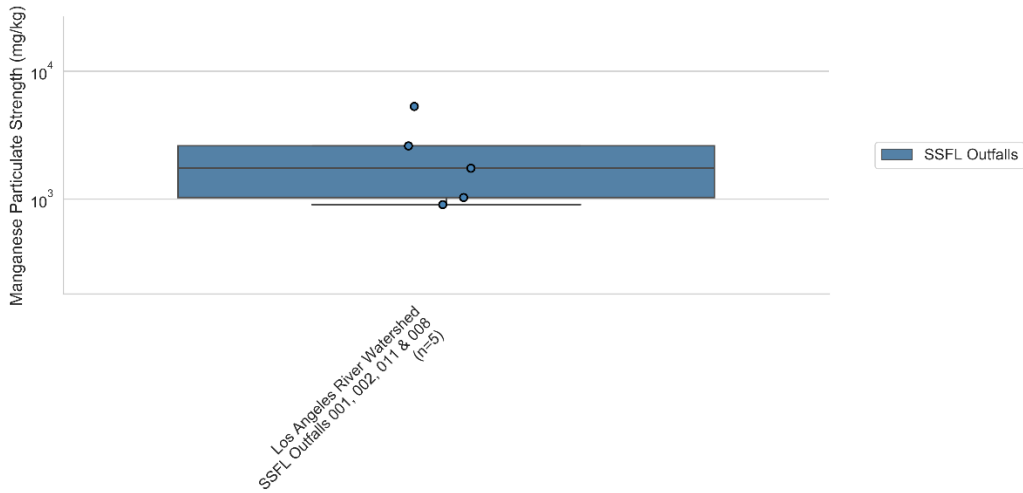
Note: Only detected results are shown.

Figure 8. Regional stormwater lead concentration and particulate strength

2.7. Manganese



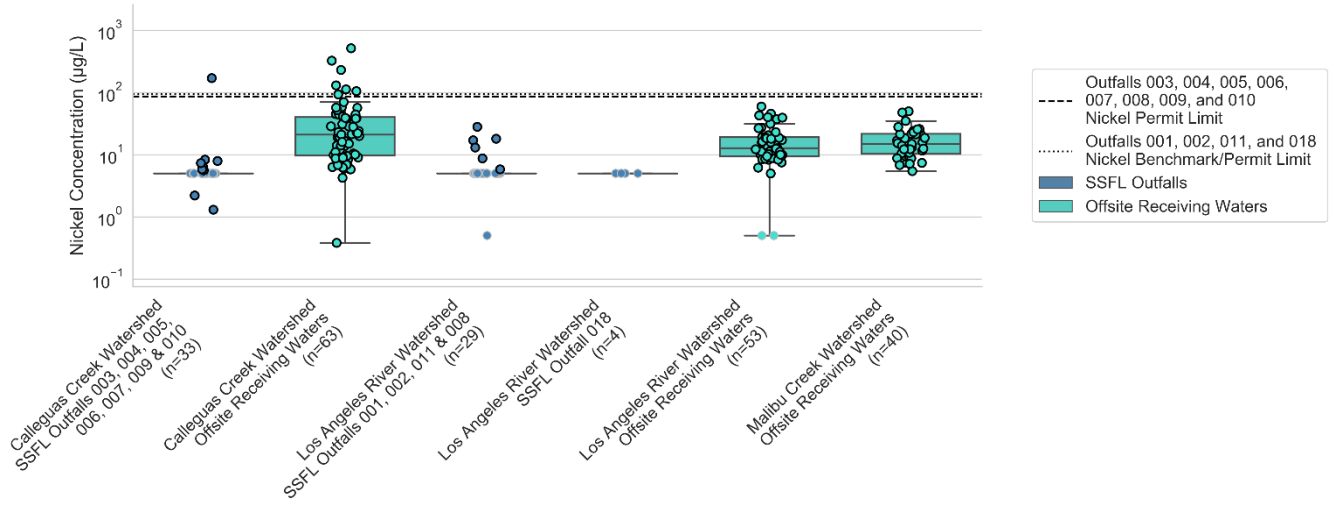
Note: Markers with a black border signify detected results. Markers with a gray border signify non-detected results and are shown at the method detection limit.



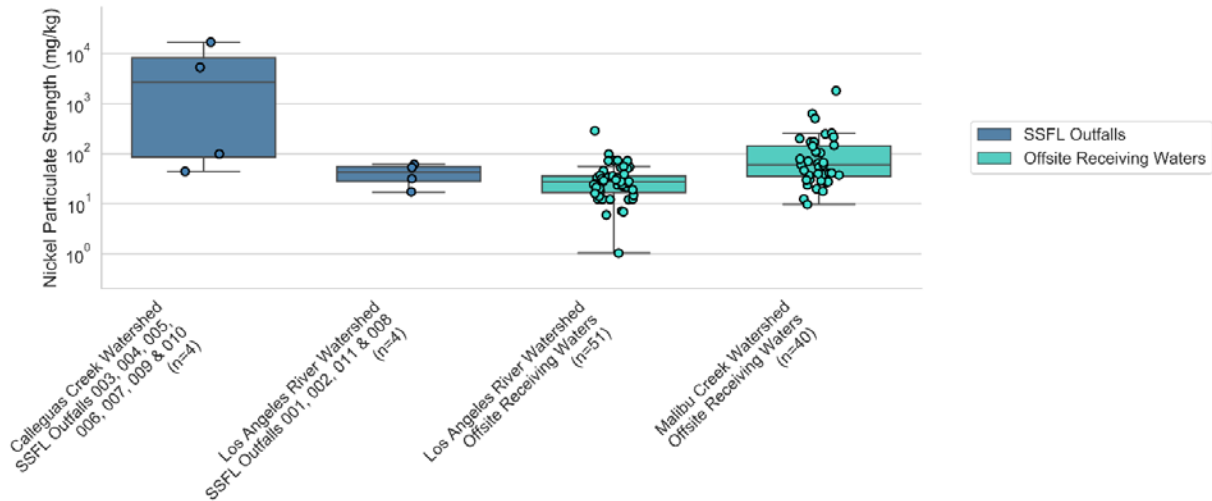
Note: Only detected results are shown.

Figure 9. Regional stormwater manganese concentration and particulate strength

2.8. Nickel



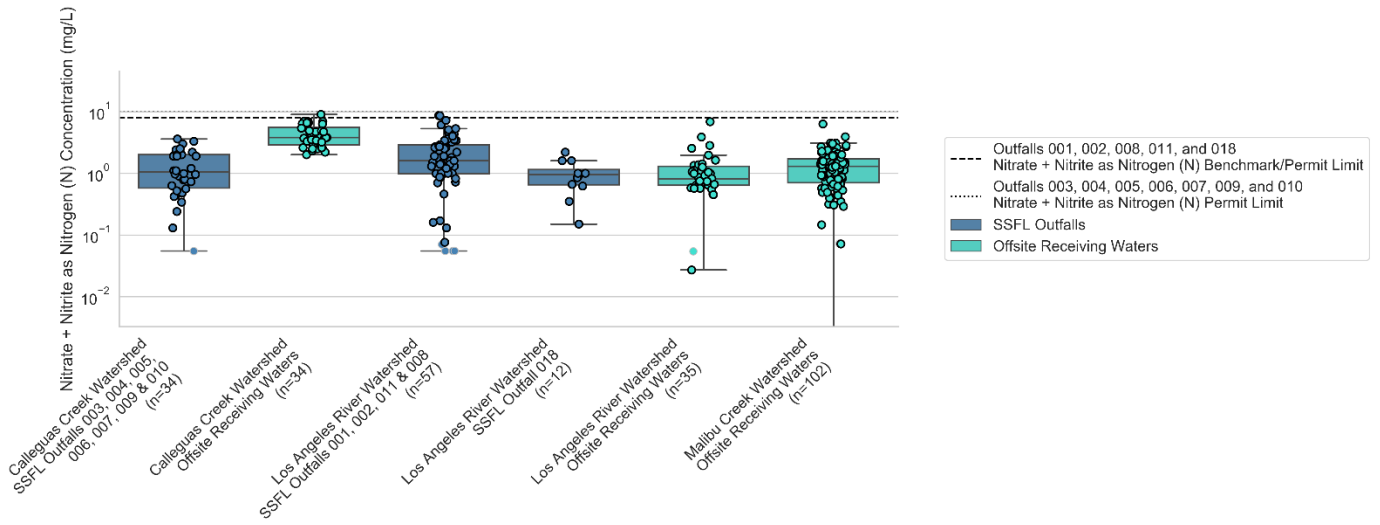
Note: Markers with a black border signify detected results. Markers with a gray border signify non-detected results and are shown at the method detection limit.



Note: Only detected results are shown.

Figure 10. Regional stormwater nickel concentration and particulate strength

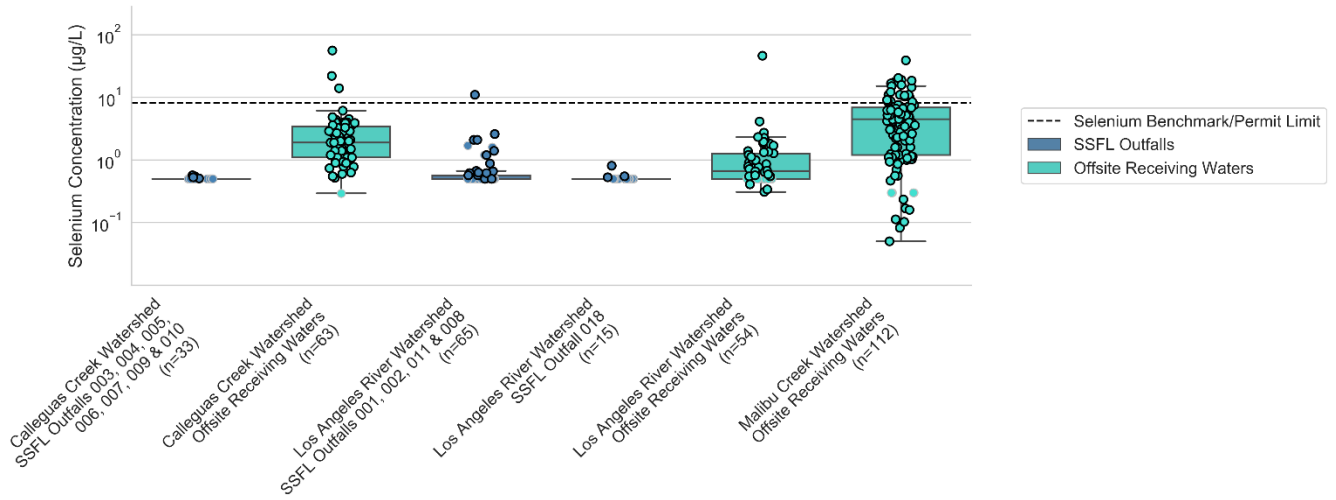
2.9. Nitrate + Nitrite as Nitrogen



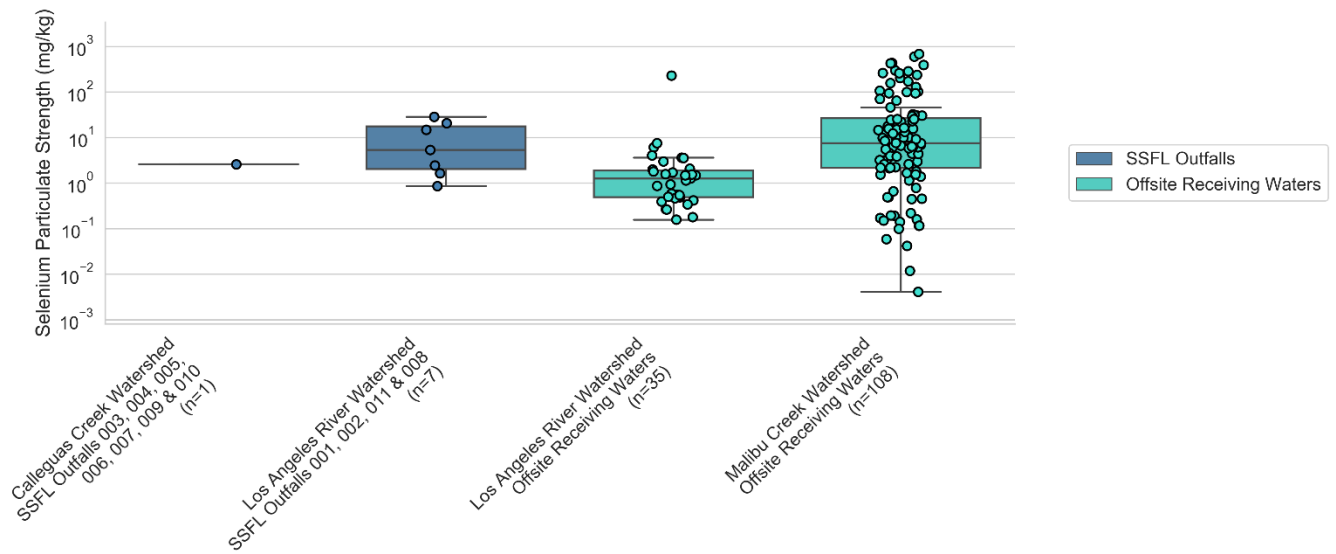
Note: Markers with a black border signify detected results. Markers with a gray border signify non-detected results and are shown at the method detection limit.

Figure 11. Regional stormwater nitrate + nitrite as nitrogen concentration

2.10. Selenium



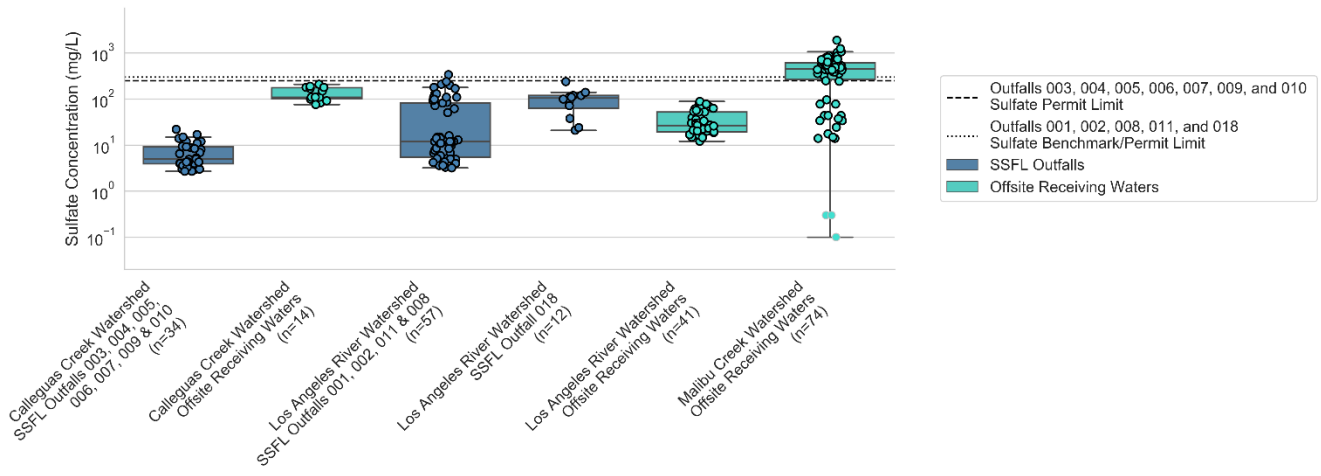
Note: Markers with a black border signify detected results. Markers with a gray border signify non-detected results and are shown at the method detection limit.



Note: Only detected results are shown.

Figure 12. Regional stormwater selenium concentration and particulate strength

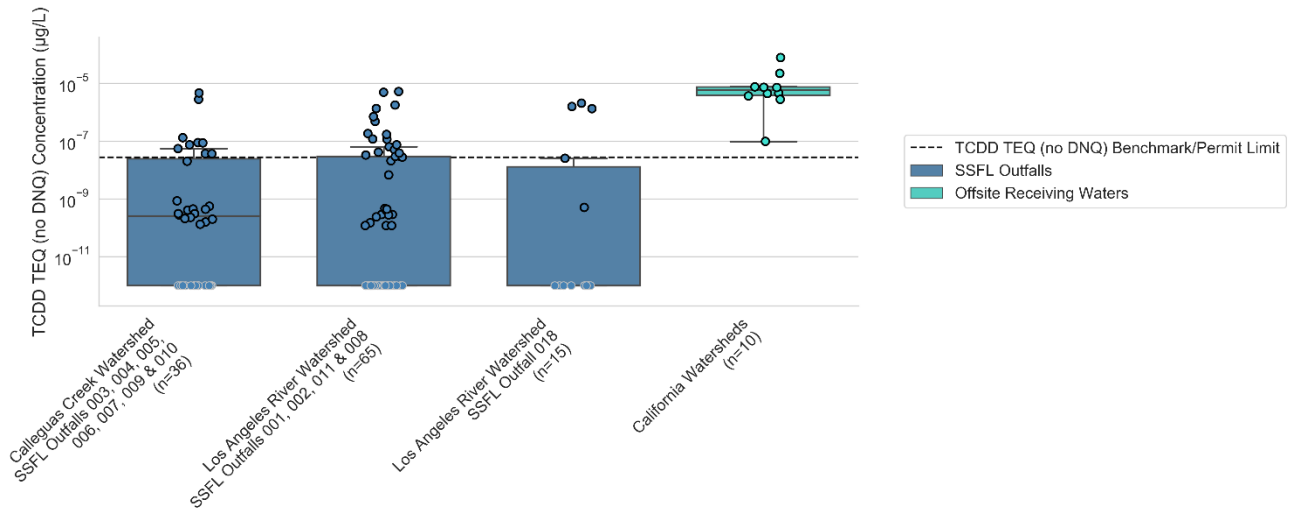
2.11. Sulfate



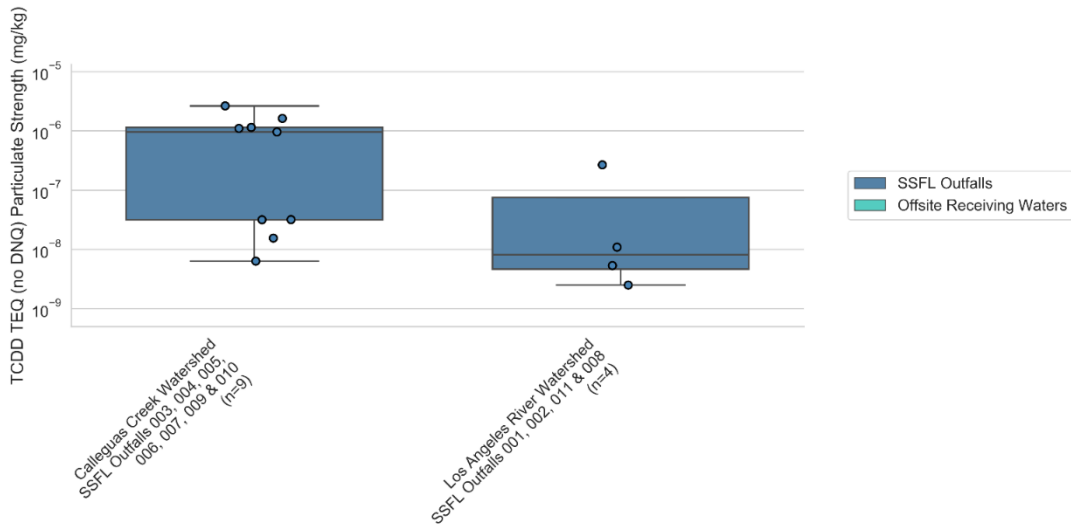
Note: Markers with a black border signify detected results. Markers with a gray border signify non-detected results and are shown at the method detection limit.

Figure 13. Regional stormwater sulfate concentration

2.12. TCDD TEQ (no DNQ)



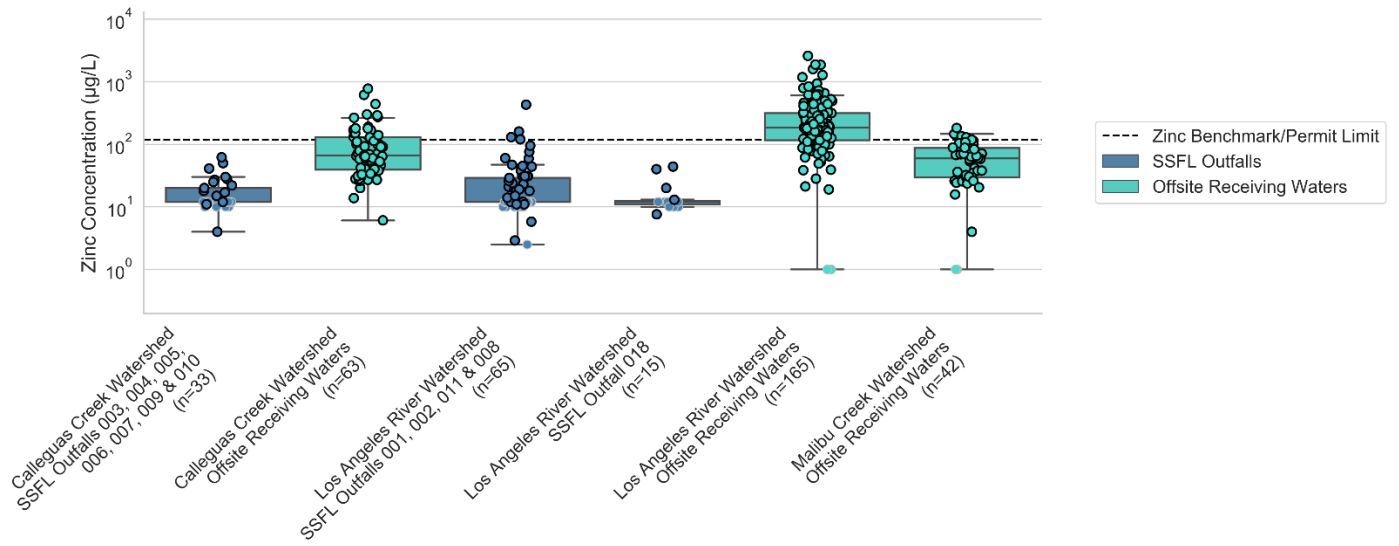
Note: Markers with a black border signify detected results. Markers with a gray border signify non-detected results and are shown at the method detection limit.



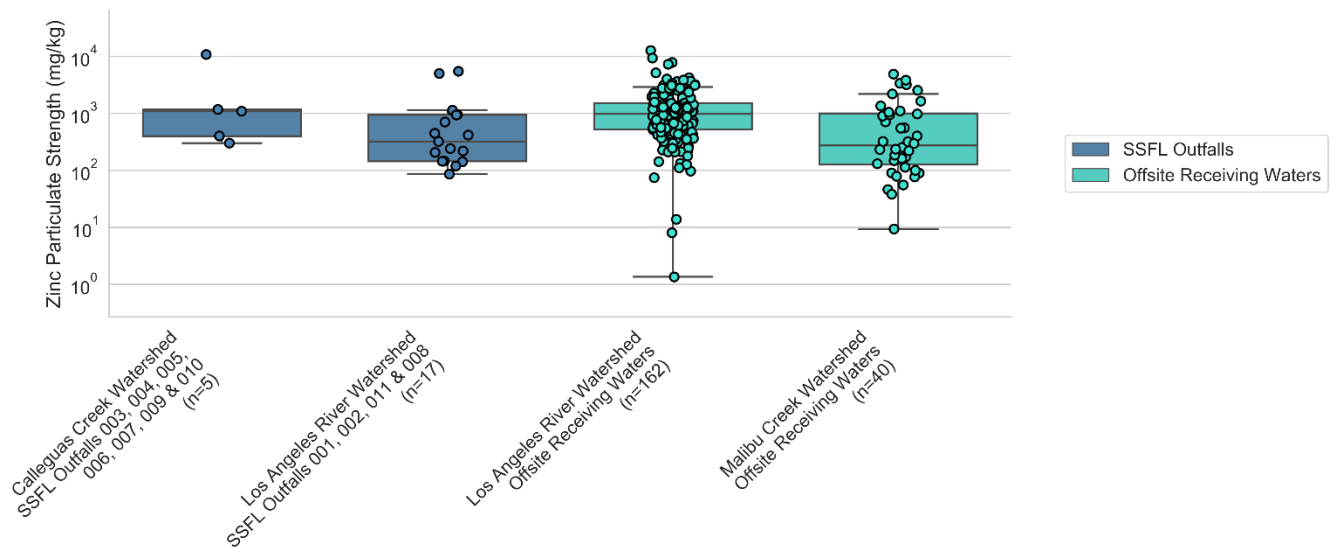
Note: Only detected results are shown.

Figure 14. Regional stormwater TCDD TEQ (no DNQ) concentration and particulate strength

2.13. Zinc



Note: Markers with a black border signify detected results. Markers with a gray border signify non-detected results and are shown at the method detection limit.



Note: Only detected results are shown.

Figure 15. Regional stormwater zinc concentration and particulate strength

Prepared for

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Santa Susana Site
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Appendix H: Response to Public Meeting Questions

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1. Questions and Responses from the August 11, 2020 Santa Susana Field Laboratory (SSFL) Stormwater Expert Panel Meeting

Some of the responses were provided during the meeting. We have added responses for the items we could not respond to at the meeting. There are some questions that require more effort to answer and we will answer them later. Slides from the public meeting are available online at:

<http://www.boeing.com/principles/environment/santa-susana/technical-reports.page>

Question 1:

I was not part of the community survey -- which is fascinating considering the number of years and quality of my comments for two decades.

The Expert Panel does not maintain any mailing list of its own. Boeing's community list was used for the distribution of the public survey prior to this meeting. Not being on this survey will not limit you from being able to submit questions for the Panel members to address, as you can see here.

Question 2:

What were the exceedances in? What toxic materials?

This year's exceedances are listed on slide 20; they are iron, lead, manganese, gross alpha, and dioxins, and are limited to Outfalls 001 and 002.

Question 3:

Are you seriously suggesting that the water doesn't flow past outfall 2 down Bell Canyon?? Why these inaccuracies?

We do not believe there are inaccuracies. Slide 15 depicts the outfalls that flow to Bell Creek; they are Outfalls 001, 002, 011, and 018. The Expert Panel released a memo on July 18, 2018 that analyzed flows from Outfall 002 with particular focus on the 2016/2017 rainy season. This memo discusses stormwater flows that occur at Outfall 002 (see below). In addition, there are a number of known seeps in this area, including ones downstream of the surface water Outfalls, which in addition to other offsite sources, may be contributing to flows observed in Bell Canyon downstream of Outfall 002 even when there is no flow at Outfall 002.

Question 4:

Is the ELV Treatment BMP actually turned on?

The ELV treatment BMP was operational this year.

Question 5:

Try looking where the water actually flows down Bell Canyon.

The Expert Panel's work is focused on treating surface water stormwater flows onsite before they leave the Site (which are regulated under the RWQCB NPDES permit)., In addition, the Expert Panel has conferred with the Groundwater Expert Panel to understand their studies and findings related to seeps offsite and downgradient of the site. The Groundwater Expert Panel has responsibility for analyzing and

reporting on these groundwater discharge features. The Expert Panel also visited the Bell Canyon area to see these perennially flowing drainages.

In 2018 the Expert Panel and Geosyntec analyzed the stormwater flow patterns of Outfall 002 during the 2016/2017 rainy season, which was the most available, complete yearly data at the time of the study. The report is dated 6 July 2018 and has been posted on the SSFL website (http://www.boeing.com/assets/pdf/aboutus/environment/santa_susana/water_quality/tech_reports/Final_Evaluation_of_Drainage_Patterns_at_Outfall_002_Memo_20180706.pdf). The 2016-2017 annual rainfall was 23.4 inches which means it was a wetter than average year. The report shows that Outfall 002 discharged four times during the 14 rainfall events and each was sampled at least once. There were two exceedances at Outfall 002 in the 2016/2017 season, one each for chronic toxicity and iron. There are additional conclusions in the report.

Question 6:

Why are you not monitoring where the water flows, DOWN HILL below 2 to Bell Creek? Water doesn't flow up to the BG01. This feels like intentional failure to look where the water flows....for 12 years, I feel like a broken record.

Flows in Bell Creek downstream of Outfall 002 include flows seeps and sources other than SSFL (see responses above). Surface water flows along with any contributions from onsite seeps are monitored at Outfall 002 and are under the regulatory responsibility of the Los Angeles Regional Water Quality Control Board. The Expert Panel advises Boeing and the Board on these flows. The Department of Toxic and Substance Control is responsible for any contaminant issues related to groundwater and any groundwater flow from the Site. Documents and status reports on the groundwater issues are regularly issued by the DTSC and the public is referred to the DTSC website for further information on this issue.

Question 7:

Sounds a lot like you are looking really hard for other reasons that exclude the obvious discharges for 70 years. Magic.

No surface water discharges that leave the property at major drainages are missed by the NPDES compliance sampling locations. We are not aware of any drainages that are not monitored by the NPDES permit.

Question 8:

Maybe that is why the creek is orange, Bell Creek, below outfall 2, where I have shown you many many times. But we will ignore that, and ignore me until I go away, and keep searching tirelessly for reasons to blame the roads for the 70 years of toxic operations. Deeply troubling indeed.

See prior responses. We agree that offsite perennial flows occur along Bell Creek. The orange color indicates iron-reducing bacteria deposits that are typical of exfiltrating groundwater.

Question 9:

I will say that I am deeply insulted about the way I have been treated and targeted and excluded despite my years of work. I was silenced and this panel helped them do so. Otherwise, I would have been

included in the survey after so many many many many years of work and substantive contribution. Shame on you.

We're sorry to hear this. We've always taken your comments and questions seriously, and investigated many of the fair issues you've raised, including discussion with Boeing and the Groundwater Expert Panel (GW EP), reviewing studies and monitoring reports on the seeps, and visiting the Bell Canyon drainages ourselves.

Question 10:

So the whole Q&A portion is for other people who received this in advance instead of allowing questions here at the end? I request that my questions be answered after sitting through this meeting, told questions would be answered.

No, just as you submitted questions to the Panel live now, others are doing the same.

Question 11:

How do contaminant concentrations in run-off compare to those in local streams -- LAR, Malibu Creek, etc.

Most of our stormwater concentrations are comparable or less concentrated to stormwater in natural reference watersheds, like those in the Santa Monica Mountains. Generally, SSFL's stormwater concentrations are better than urban stormwater quality like you'd find in the Lower LA River. To more completely answer your question, we will compare the SSFL stormwater quality to local streams in our annual report.

Question 12:

Some dioxin exceedances suggest turbidity breakthrough. Is that possible.

Generally, dioxins are associated with suspended solids. Also, many of the other contaminants are also associated with suspended solids. Turbidity is the result of suspended solids in the small particle range. So you are correct in your suggestion. Many or most of our BMPs are designed to remove suspended solids. In reviewing this past year's data, we noted that the ELV BMP may be experiencing media loss into the effluent, but not necessarily chemical breakthrough. We are evaluating this and will address as needed. We review all of the BMPs for maintenance needs and fix problems if they occur.

Question 13:

What material will be used for replacement stakes, if used?

At present we believe they would just be removed and not replaced.

Question 14:

How do the SSFL discharge limits compare to adjacent community drinking water standards?

SSFL stormwater discharge limits are generally equal to or more stringent than drinking water standards. The only drinking water standard exceedances in stormwater this year were for a single sample for gross alpha, but not for the annual average, and for iron and manganese. Iron and manganese are aesthetic (taste and appearance) based and are not human health based. All other regulated constituents (dozens of them) meet the most protective standards that are reflected in the NDPES permit. The measured gross

alpha value (14.1 +/- 3.6 pCi/L) did not exceed the permit, but the upper error bar did (17.1 pCi/L vs 15 pCi/L). The lower error bar was well below the permit (10.5 pCi/L vs 15 pCi/L). We believe gross alpha is associated with naturally occurring uranium in the soil and its decay products, and exceedances in the past have generally occurred when the suspended solids concentrations were very high. It is also important to note that exceeding stormwater concentrations are often short-term, whereas drinking water standards assume long-term, lifetime exposure (consumption).

Question 15:

Will the BMP's be required in perpetuity at the site?

We've tried to make all BMPs natural and passive where possible, but the structural treatment controls are not intended for use beyond site cleanup.

Question 16:

It was mentioned that 2.1% of water in LAR, as measured at Sepulveda Basin, originated from SSFL. Where was that measured in relation to Tillman?

The Tillman Water Reclamation Plant discharges downstream of the Sepulveda Basin.

Question 17:

Replacing all the burned power poles would be a terrible investment? How many people lost their homes to Woolsey fire that started at SSFL and I was threatened for saying so and no expertise in WATER. Look in the sky. The burned part too?

Many of the poles onsite don't belong to Boeing so they have no control over these. The power companies replaced their poles were burned in the fire. NASA has removed all unused poles. Boeing has removed most unused poles and is evaluating the feasibility of removing the rest.

Question 18:

Why/how were you previously only charged with addressing Outfalls 008 and 009, and when did this change to site-wide?

This charge originally came from the Regional Water Quality Control Board (RWQCB) in 2007 (presumably because more of the exceedances were occurring there), then it was updated to become site-wide in the 2015 NPDES permit.

Question 19:

Is the lead naturally occurring?

Our analysis suggests yes, but we have performed a special study using stable isotope analysis to help us understand source. We are waiting on additional lab results from UC Davis to confirm this. It has been delayed by work restrictions due to Covid-19.

Question 20:

Is the Silvernale Pond, where storm water is routed to, an unlined pond? Treatment was mentioned, how much do they treat this water, as it is my understanding that water here has the potential to seep into the groundwater.

The Ground Water Expert Panel has done water balance studies and found pond infiltration to be very minimal. The water level in the pond is kept as low as possible to provide storage for future storms. Lowering the level reduces infiltration. Pond water is treated prior to discharging to surface water drainages.

Question 21:

Have you looked at other studies on wildfire effects on stormwater quality?

Yes, we've reviewed several peer-reviewed studies and SSFL concentrations for many constituents, including dioxins and metals, are similar to stormwater concentrations found in natural burned watersheds.

Question 22:

If utility poles are dioxin sources then dioxin should be in stormwater everywhere? How do you expect us to believe this given SSFL's history with dioxin contamination?

Yes, dioxins are in stormwater everywhere, particularly in urban watersheds. Impacted soils are also another potential source that we considered. We look at dioxin congener fingerprints to determine sources of dioxins in SSFL stormwater. Professor Stenstrom's group at UCLA published the first journal paper identifying dioxins in urban stormwater. There is a "white paper" on the SSFL site which the Expert Panel and its consultants wrote comparing SSFL dioxin concentrations.

Question 23:

Are you aware of information showing background soil concentrations nearby offsite are lower than elsewhere?

We are aware of many sources of background soil data but perhaps not the ones you are referring. Please share your sources, and we'll look into it.

Question 24:

How can you dismiss the Radon in the exceedances at Outfall 001 as "Naturally Occurring" when this is the runoff from the AREA I Burn Pit on Boeing Property which Radium-226 and Radium 228 was discovered in 2009 - see link https://www.dtsc-ssfl.com/files/lib_rcra_soils/group_1b/rfireport/RFI-FILES/38138_Appendix_D_Area_I_Burn_Pit_1.pdf

Almost all of the Area 1 Burn Pits drain to Outfall 011 which did not discharge this year. A small portion of the Area 1 Burn Pits drains to Outfall 001 and runoff from this area is now sampled as part of the new southern buffer zone subarea monitoring. On December 27, 2019 a stormwater sample from Outfall 001 was collected and gross alpha was reported at 14.1+/-3.61 pCi/L. Additional analyses of the sample were conducted at an independent, State-certified laboratory for an additional 13 naturally occurring and 4 man-made alpha emitting radionuclides. This isotopic analysis found only naturally occurring radioactive material (NORM) was detected and no anthropogenic (man-made) alpha emitting radionuclides were detected.

Question 25:

Can the power poles be replaced?

Many of the poles onsite do not belong to Boeing so they have no control over these. BMPs are now in place to limit the migration of dioxins from these sources. NASA has removed all unused poles. Boeing has removed most unused poles and is evaluating the feasibility of removing the rest.

Question 26:

I was under the impression that exceedance indicate harm, so why would you view exceedances otherwise.

Exceedances are often short-term whereas the standards assume long-term, lifetime exposure. Also, a HHRA was also performed to assess this, and is publicly available.

2. Public Meeting Attendees

Surface Water Expert Panel members include Michael Stenstrom, Jonathan Jones, Michael Josselynn, Bob Gearheart, and Bob Pitt.

Below is the attendee list for the August 11, 2020 public meeting. These include a few RWQCB staff (Cris, Duong), Geosyntec staff (Brandon, Lauren, Maia, Tessa), Boeing staff (Jeff, Michael, Kamara, Paul), and a member of the Groundwater Expert Panel (Beth).

- Alec Uzemeck
- Amanda Pierce
- Beth Parker
- Bonnie Klea
- Brad Vanderhoof
- Brandon Steets
- Brian Sujata
- Brian Dow
- Chris Rowe
- Christina Walsh
- Cris Morris
- Donald Greenlee
- Duong Trinh
- Erin Donnette
- Jeff Wokurka
- jeni knack
- John Luker
- Julie Lincoln
- Kamara Sams
- Laura Rainey
- Lauren Mathews
- Leah Segedie
- Maia Colyar
- Marcela Solorzano
- Marcia Rubin
- Mark Osokow
- Mark Taylor
- Michael Bower
- Michael Collins
- Michelle Banks-Ordone
- Mindy Mathias
- Paul Costa
- Roger Paulson
- Ronald Ziman
- Sam Cohen
- Samantha Argabrite
- Sophie Froelich
- Steven Becker
- Tessa Reeder
- Thomas Seckington
- Tiffany Pitts
- Valerie Chenoweth
- Wendi Gladstone
- William Preston Bowling